



2022

PERAC **ANNUAL REPORT**

OCTOBER 2023

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CHAIR

Philip Y. Brown, Esq.

Principal/Founder, Brown Counsel



VICE CHAIR

The Honorable **Diana DiZoglio**

Auditor of the Commonwealth

PERAC Commissioners



Kathleen M. Fallon

Practice Area Director
Public Consulting Group



Kate Fitzpatrick

Town Manager
Town of Needham



Richard MacKinnon, Jr.

President, Professional
Firefighters of Massachusetts



James J. Guido

Lieutenant, Chelsea
Police Department



Jennifer F. Sullivan, Esq.

Governor's Appointee
Investment Professional



MISSION STATEMENT

**“PERAC’s mission is to provide regulatory oversight
and guidance for the effective, equitable,
and ethical operation of the Commonwealth of
Massachusetts’ public pension systems.”**



Letter from the Chair

Philip Y. Brown

“Through remote work, ingenuity, government stimulus and perseverance, we largely weathered what was forecast to be financial Armageddon.”

Over the last couple of years, it's only natural to have felt stressed, anxious, nervous, lonely, bored, overwhelmed or a host of other negative emotions as we endured a pandemic without a road map.

Through remote work, ingenuity, government stimulus, and perseverance, we largely weathered what was forecast to be financial Armageddon. It made a terrible situation somewhat more manageable. Investment returns for retirement systems boomed.

In 2022, we finally emerged from the worst of the pandemic with the health crisis largely mitigated and our daily lives returning to normal. However, the economy and financial markets went in the other direction as inflation rose, followed by interest rates, leading to double-digit investment losses for most systems.

It all reminds me of a favorite quote from former Red Sox General Manager Lou Gorman. A child of the Great Depression and a Navy veteran, Gorman brought some larger perspective to the spring of 1987. This was the season after the Red Sox lost a crushing seven-game World Series (which I unfortunately remember all too well) and Roger Clemens was the reigning Most Valuable Player and Cy Young Award winner as the American League's best pitcher. Clemens walked out of spring training in a contract dispute. After fielding questions from frenzied reporters preparing stories on the matter for a frenzied fan base, Gorman tried to bring some calm to the chaos when he said, *“The sun will rise, the sun will set, and I'll have lunch.”*

At the time, Gorman was derided, but Clemens was back with the team in a month and went on to win the Cy Young again in 1987. Life went on. Gorman's humor, perspective, and humanity endure today.

So, while it seems we weathered one storm only to encounter another, we have been here before; we pushed, we endured, we created, we rallied, we collaborated, we united, and we did it. And we will do it again. Already, the markets are showing signs of a bounce back with positive returns in the 1st and 2nd quarters of 2023. Careful and thoughtful long-term planning by retirement boards in vendor procurement, asset allocation, and portfolio structure have protected retirement fund assets as best as possible. Those assets will likewise be poised to recapture the gains.

Despite the market challenges, calendar year 2022 was still a time to celebrate. PERAC's live and in-person Emerging Issues Forum and Administrator Trainings returned and were well attended. We also returned to the much-loved MACRS conferences in Hyannis and Springfield. As much as the substance of each program was stellar, equally as important was reuniting — the human connection of being present with our colleagues who share this noble work of securing the promise of a well-earned retirement for public employees.



Letter from the Chair (cont'd.)

Our collaborations with the Inspector General, State Comptroller, and Executive Office of Technology Services and Security brought well-done and very welcome cyber security training opportunities. To our state partners and to all who participated, thank you.

State, Teachers', and many local systems enjoyed a 5% COLA thanks to enacted legislation and local approvals. Other legislation held retirees harmless from court decisions involving leave time used while on workers' compensation and payment in lieu of vacation. These measures also saved retirement boards from tasks that would have been extremely arduous, if not outright impossible.

We saw the lifting of temporary orders at two boards that worked diligently to improve their operations. We also saw the creation of an electronic signature regulation and the ongoing development of revised PERAC regulations.

We celebrated the tenures of two valuable contributors to PERAC, State Auditor and Vice Chair Suzanne Bump, and Compliance Director Tom O'Donnell. Thanks to both for their commitment to a fair, uniform, and strong public retirement system. We welcomed new State Auditor Diana DiZoglio to PERAC and embrace her dedication to equitable treatment for all.

Lastly, it's been a long goodbye, but this should be the last Annual Report from 5 Middlesex Avenue, Somerville. We are in the planning stage of an upcoming move and will be sure

to spread the word when plans are finalized and we move into our new space. It will be a time to celebrate for sure.

Thank you to all retirement board members, retirement board staff, PERAC staff, Commissioners, and

all members of the Massachusetts public retirement community for your continued dedication and diligence to operate, and advance, a well-run system.

Here's to you and to making time for lunch. ■

Sincerely,



Philip Y. Brown
Chair

“Despite the market challenges, calendar year 2022 was still a time to celebrate. PERAC’s live and in-person Emerging Issues Forum and Administrator Trainings returned and were well attended.”





Letter from the Executive Director

John W. Parsons

“The challenges brought about by the pandemic have been endless and we are all familiar with them. Again and again, the response of all in the retirement community was to remain focused on the mission of serving members.”

If ever there was proof of needing to play the long game, and the benefits of playing the long game, the last few years have been it.

The challenges brought about by the pandemic have been endless and we are all familiar with them. Again and again, the response of all in the retirement community was to remain focused on the mission of serving members. There was a collective realization that this too shall pass. In the meantime, actions reflected the dedicated level of commitment to getting checks out, counseling members, and the continued health of the public retirement system. Nothing about it was easy. There weren't any shortcuts. Laws, regulations and policies were followed, new procedures were created and the mission was fulfilled.

After three years of double-digit investment gains, 2022 brought double-digit investment losses. Predictably, the sensational headlines of the money lost in fund balances, the increases in unfunded liability, and the questioning of the need for defined benefit plans followed. Somehow public pension systems are to blame for Russia attacking Ukraine, supply chain issues, inflation, rising interest rates, and the fallout from the pandemic. While market conditions changed – and always will change – nothing else did. There was no

panic. Retirement boards did not waver from their prudent, carefully-constructed investment strategies, asset allocations, and diverse portfolios. There was no chasing the next big thing. Retirees continued to be paid and responsible investment return assumptions and funding schedules were maintained. Already, the 1st and 2nd quarters of 2023 have showed rebounds in returns. In short, the system and the process are working. The long game is prevailing.

A good example of that has been setting the Commonwealth investment return assumption. There was a push to lower the assumption during the period of strong returns, but the Commission held at 7.0% based on the data and recommendation of PERAC's

Actuarial Unit's analysis. Likewise, when the returns declined, there wasn't a kneejerk reaction to lower the assumption. Investment returns, and the strength of the public retirement system, are built for the long haul and to withstand temporary fluctuations.

A contributing factor to this resilience is education. Thanks to our partnership with the Office of the Inspector General, the State Comptroller, and the State Police, we were able to provide in-depth and useful training sessions on areas of need, including cybersecurity and internal controls. Further, a partnership with the Executive Office of Technology Services and Security gave retirement boards the opportunity to enroll in a year-long cybersecurity training program complete with testing of simulated phishing attacks.

We were also excited to bring back our most popular in-person sessions for the first time in three years, the Emerging Issues Forum at Holy Cross and Administrator Trainings in Northampton and Danvers. In addition, MACRS hosted its first two live conferences since the pandemic. Together, all of these events were welcome opportunities to re-connect, share and learn with, and from, our retirement community colleagues.



Letter from the Executive Director (cont'd.)

Additionally, PERAC joined the newly formed NCPERS Communications Roundtable to learn and share best practices in that space.

It was a busy year on the legislative front with the Legislature and Governor taking action on a number of matters relevant to the retirement community. A final Supreme Judicial Court decision in the *Vemava* case declared that no supplemental payments can be regular compensation when taken in conjunction with workers' compensation and that the decision was retroactive to the start of Chapter 32. Together, PERAC, MACRS, retirement boards, and Mass. Retirees lobbied the Legislature for a correction resulting in Section 149 of Chapter 126 of the Acts of 2022, which held retirees harmless and saved boards an inordinate task.

A second SJC decision, this time the *O'Leary* case, also prompted legislative action. The decision in *O'Leary* declared payments in lieu of vacation were not regular compensation and it was also retroactive. Chapter 107 of the Acts of 2022 created a new Section 106 in Chapter 32, holding retirees harmless and allowing those utilizing the benefit as of May 1, 2018, to continue to do so.

State and Teachers' retirees received a 5% COLA for fiscal year 2023 as a result of language included in the state budget. Many local systems also adopted a 5% COLA after local option legislation passed a couple months after the budget.

At the request of many boards, PERAC promulgated regulations on the use of electronic signatures. From initial internal review, to drafting, to seeking the Commission's approval, to getting signoff from both Administration and Finance and the Legislature, to receiving the valuable input of board staff and members, to re-drafting, it was a lengthy process which required the hard work of many but should have lasting impact. All PERAC regulations are in the process of being reviewed and updated.

“It was a busy year on the legislative front with the Legislature and Governor taking action on a number of matters relevant to the retirement community.”

With COVID restrictions lifting, we saw the return of in-person disability medical appointments. On the flip side, a necessity during COVID has proven to serve a purpose and a convenience – remote and hybrid meetings. The Open Meeting Law waivers, which continue to this day, allow for remote participation by board members and the public alike and have increased the public's access while adding flexibility.

Two key PERAC figures, Governor Charlie Baker and State Auditor Suzanne Bump, decided not to run for re-election and left office. They were both strong supporters of the public pension system and their appointments to the Commission have been proof positive. We welcome Governor Maura Healey and State Auditor Diana DiZoglio to the retirement community and look forward to building on the foundation of their predecessors. Additionally, on a staff level, we congratulated Compliance Director Tom O'Donnell on his retirement and his work on the implementation of pension investment reform. We miss his wit and charm and wish him well.

Every year has its hurdles, but we'll be hard pressed to come up with any hurdle higher than what we experienced over the last three years. I commend the boards, staff, practitioners, and PERAC staff for their remarkable performance in the face of adversity and for remaining dedicated and focused to the long-term health of our systems for the benefit of retirees and members.

With that, the Commission and staff are pleased to release this Annual Report on the Massachusetts Public Retirement Systems for 2022. Thank you for your contributions to the Massachusetts public retirement system and I am proud to continue working with you for an effective, equitable, and ethical system for all. ■

Sincerely,



John W. Parsons, Esq.
Executive Director



PERAC

Year in Review



Staff Update

In 2022, **Tom O'Donnell**, Compliance Director announced his retirement. We wish him a happy retirement. As a result of Tom's retirement, we are happy to announce that **John Galvin** will serve as PERAC's Compliance Manager.

While several PERAC staff resigned to accept other positions at retirement boards and state agencies, we welcomed **John Silva** to serve as a Field Auditor. ■





Actuarial Unit

As always, actuarial information details the fiscal condition of the systems, which can play a direct role in state and local budgets. The funded ratio indicates the extent to which assets cover system liabilities. When the system will pay off its unfunded liability and what type of funding technique is being used are also noted. PERAC has consistently urged boards to conduct actuarial valuations in order to provide an up-to-date assessment of the fiscal condition of the system.

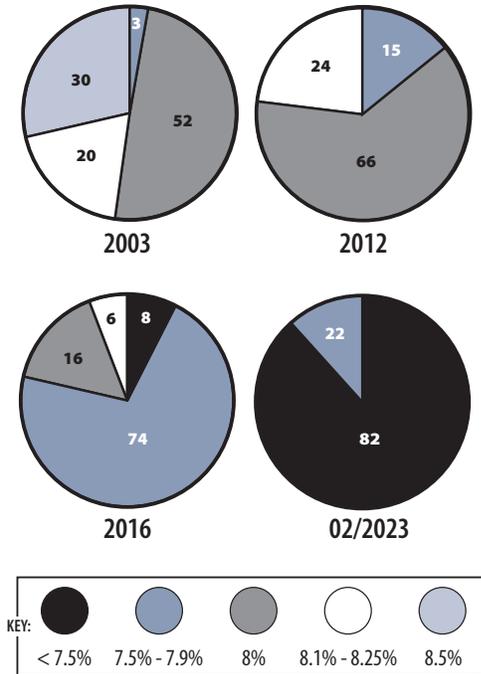
Actuarial Valuations and Funding Schedules (By Year)

YEAR	PERAC VALUATIONS	PRIVATE VALUATIONS	FUNDING SCHEDULES
2022	19	55	68
2021	20	23	38
2020	18	55	69
2019	17	22	36
2018	19	44	63
2017	22	24	46
2016	21	50	62
2015	24	24	40

In the actuarial area, PERAC approved 68 revised funding schedules and completed 19 actuarial valuations in 2022. The valuations complemented the 55 valuations performed by private actuaries. Throughout the year, PERAC responded to legislative and gubernatorial requests for analysis of legislation and made several presentations. ■

The Massachusetts Investment Return Assumptions from 2003 to present:

Investment Return Assumptions—Massachusetts



Audits

As in 2021, the audit unit continued to work in a hybrid fashion, but this year worked more in person than remote. PERAC issued 24 audits and 8 follow-up audits in 2022. Appreciation is extended to all retirement boards that underwent audits for their cooperation, courtesy, and accommodations.

We had some staff changes during the year as one auditor retired and one left for other employment. We hired two new auditors to replace them.

The Audit Unit worked closely with PERAC's IT Unit to integrate the Annual Statement submission

process into PROSPER. All Annual Statements will now be submitted and housed in PROSPER. Our goal is to introduce even more audit functionality into the PROSPER application to streamline the information gathering needed to complete our audits more efficiently.

The Audit Unit also participated in the internal working group reviewing all of

PERAC's regulations, conducted our annual seminar on the preparation and submission of the Annual Statement, presented at the fall MACRS conference and provided technical assistance to dozens of boards.

Monthly meetings of the full audit unit continued to provide opportunities for coaching, troubleshooting, and training for our staff. ■

Total PERAC Audits Conducted (By Year)





Education

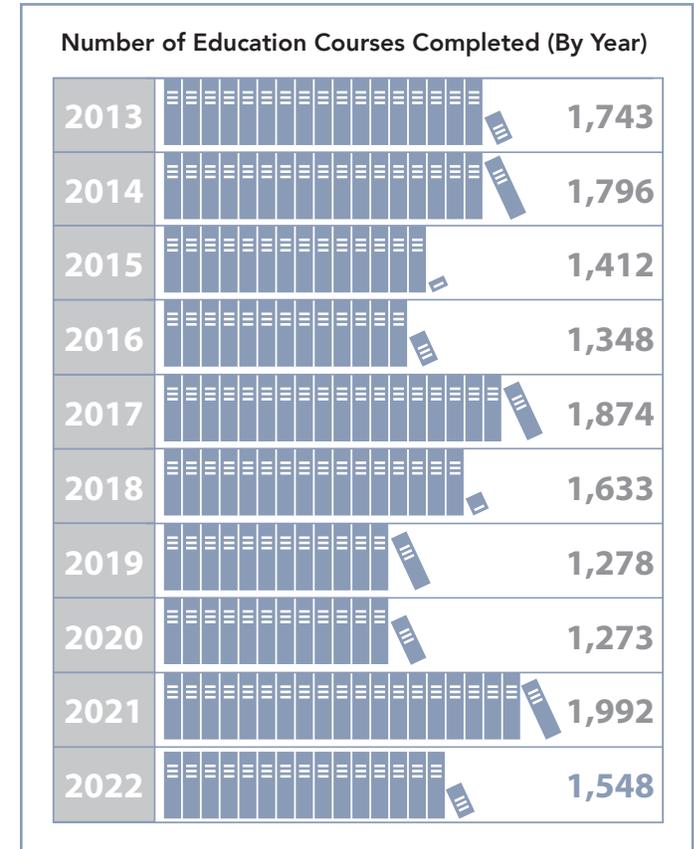
PERAC'S educational offerings began to get a pre-pandemic feel this past year! With the termination of the COVID-19 State of Emergency and the easing of public health guidelines, we were able to bring back several in-person events.

The *New Administrator Training* was held in person for the first time since 2019. This all day event covers topics to help new board staff learn some of the fundamentals of running a retirement system. Three training dates were held in Northampton, Danvers, and Norwood and all sessions were well attended. We plan to repeat these sessions in the upcoming year. Topics covered at last year's training included *Working After Retirement*, *Accidental Disability*, and *Monthly Meetings and Records*, among others.

While we held our annual Emerging Issues Forum virtually in 2020, we had not had an in person event since 2019. We were thrilled to host close to 200 participants at the College of the Holy last September. Please see the full Forum update in the Emerging Issues section.

PERAC staff also participated in the spring and fall MACRS Conferences, which were also held in person for the first time since before the pandemic.

In addition to the in-person events, we continued our virtual educational series with several webinars throughout the year. Our partnership with the Inspector General continued with a webinar on *Fiduciary Duty for Board Members | Fraud Prevention and Awareness* and another webinar on *Contract Administration*. Both sessions were very well attended by board members and staff alike. We hope to continue this partnership in the years to come.



PERAC staff also conducted webinars on *Recent Cases of Interest* and *Annual Statements and Cash Books*. Webinars offered by PERAC are typically recorded and posted to our website for board members to have another opportunity to earn credits if they are unable to attend the live sessions. The recordings are also a great opportunity for board staff to go back and brush up on information they may need for their day to day work.

As we closed out the year, we are appreciative of the steadfast interest in our education program. The improvement of the offerings from year to year is a direct result of the feedback we receive from attendees along with their enthusiastic participation and engagement. ■

(L-R) PERAC's Felicia McGinniss, John Galvin, Bill Keefe, and Chairman Phil Brown with Dr. Michael Goodman at the 2022 Forum.



Emerging Issues Forum

PERAC held its first in-person Emerging Issues Forum since the start of the pandemic at the College of the Holy Cross in September, 2022. The energy was palpable as almost 200 attendees returned to a familiar site to gather and learn from our guest speakers as well as each other. PERAC Executive Director John Parsons and Commission Chair Phil Brown were happy to welcome everyone back.

Dr. Michael Goodman, co-editor of *MassBenchmarks* and Senior Advisor to the Chancellor for Economic Development and Strategic Initiatives at the University of Massachusetts at Dartmouth was the keynote speaker. Dr. Goodman gave a presentation on *The State of the State Economy*. Attendees appreciated the presentation given the uncertain state of the economy last September. Attendees commented that “the state of the state was very well done, good timely info on the current status of MA,” the “economic update was very helpful” and to “keep the state of the state every year.”

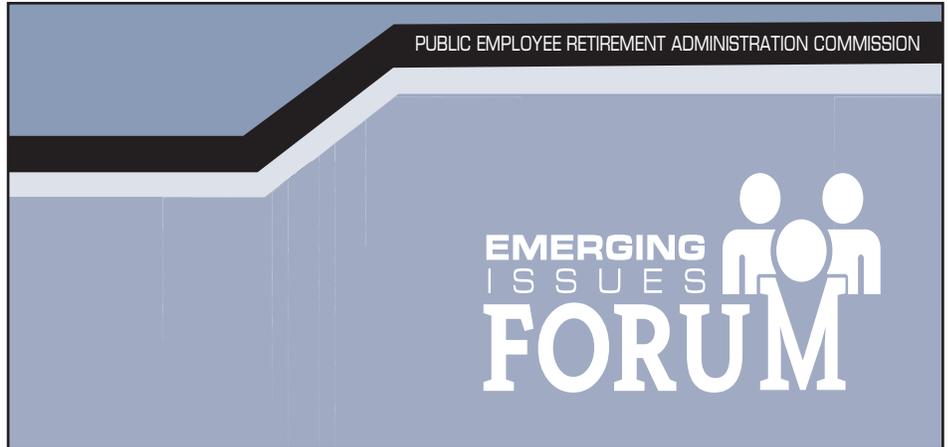
The Digital Asset Industry: Challenges, Trends, Future Directions presentation elicited the most commentary and provided insight to the emerging

technology of blockchain and bitcoin. Louis LaValle, Managing Director of 3iQ Digital Assets, David McConico, Trustee of the City of Aurora General Employees’ Retirement Plan, and David Wilson, President of Equifinancial, provided a demonstration of how this technology can be utilized and gave some attendees their first introduction to this emerging sector. According to attendees, they “found the digital asset industry [presentation] helpful because it’s a new topic that could bring good changes.”

We closed the Forum out with two PERAC presentations. Actuary John Boorack gave a presentation on *Revised*

ASOP 4 and Applicability to Chapter 32 Systems that attendees found very helpful. Communications Director Natacha Dunker, along with her counterpart from the Massachusetts Teachers’ Retirement System, Scott Olsen, finished out the day with a presentation on *Communications for Retirement Systems*.

It was a great return to in person events for us and based on feedback received, attendees will be back again! One attendee summed it up perfectly: “the entire program was informative and had many highlights! Kudos to all!” ■



Speakers at the 2022 Emerging Issues Forum
Above: (L-R) David McConico, Louis LaValle, and David Wilson
Left: Keynote speaker, Michael Goodman



Legislation

A number of important pieces of legislation impacting the retirement community became law in 2022.

The Open Meeting Law waivers, which have exempted public bodies from having a physical quorum for a meeting and the Chair being physically present as long as there is adequate alternate means of access to the public, were extended twice in 2022. In March, Sections 3, 4 and 5 of Chapter 22 of the Acts of 2022 extended the waivers to July 15, 2022. On July 16, the waivers were again extended to March 31, 2023, with the passage of Section 4 of Chapter 107 of the Acts of 2022. In early 2023, the waivers were extended to March 31, 2025.

The waiver exempting public retirees from the Section 91 hours and earnings limits of public sector work were extended with Chapter 80 of the Acts of 2022 and then expired. The statute passed in June and was made retroactive to January 1, with a termination of the end of the calendar year, or the end of the public health emergency, whichever came first. On December 31, 2022, the exemption ended.

Two Supreme Judicial Court decisions spurred legislative action. Included in the FY 23 budget act passed in July, Section 149 held retirees harmless from the *Vernava* decision, which ruled, retroactively, that accrued leave time taken in conjunction with workers' compensation was not regular compensation.

A week before the August SJC decision in the *O'Leary* case, Chapter 147 of the Acts of 2022 was signed into law and created a new Section 106 in Chapter 32. It also held retirees harmless, ensuring these retirees, with payment in lieu of vacation in their pension calculation, would not have any disruption. Additionally, it set parameters for those receiving the benefit as of May 1, 2018, to continue to do so.

The July FY 23 budget act included a one-time 5% COLA for retirees of the state and teachers' retirement boards. In November, a one-time local option 5% COLA was authorized for all other retirement boards in Chapter 268 of the Acts of 2022.

With the start of a new two-year legislative session beginning in 2023, PERAC filed seven bills in the House of Representatives in November of 2022. Five were refiles from the 2021-2022 session and there were two new bills. An Act to Provide for Payment of Creditable Service would

require the members of a public entity that joins Chapter 32 to purchase their prior service in line with other buybacks. The catalyst for An Act Clarifying the Chapter 32 Definition of Wages was the *Vernava* case, which hinged on the Chapter 32, Section 1 definition of regular compensation being tied to services performed. To ensure that usage of accrued leave time remains treated as regular compensation as it has since the beginning of the public retirement system in 1946, this bill adds vacation, sick and personal time to the definition of wages, excluding when used with workers comp benefits.

Four legislators also sponsored bills that PERAC had filed in the past. Rep. Jerry Parisella and Sen. John Velis, both veterans, filed An Act Relative to Veterans' Buyback. After being passed by the House in July 2022, the Senate passed Veterans' Buyback on the last day of the legislative session in January 2023, but it needed one more procedural vote in each chamber to get to the Governor before the clock ran out.

PERAC-Filed Bills

1	House 9 - An Act Relative to Pension Forfeiture
2	House 10 - An Act Relative to the Recovery of Overearning
3	House 11 - An Act Relative to Modifications of Retirement Allowances
4	House 12 - An Act Relative to Accidental Disability and Group 1 Emotional Distress
5	House 13 - An Act Providing for Statement of Financial Interests Flexibility
6	House 14 - An Act to Provide for Payment of Creditable Service
7	House 15 - An Act Clarifying the Chapter 32 Definition of Wages

Additionally, Rep. Jay Livingstone and Sen. Pat Jehlen, the authors of the Massachusetts Equal Pay Act which ensures people of different genders are paid comparably, filed An Act to Protect Gender Pay Equity, which would add an exemption to the anti-spiking statute for salary adjustments made in accordance with the Equal Pay Act.

The Actuarial Unit provided cost estimates on two dozen classification bills at the request of the Public Service Committee to aid in their deliberations. PERAC regularly reviewed legislation by legislative request for matters of equity, consistency and technicality. Additionally, PERAC regularly responded to legislative requests regarding retirement-related issues for constituents. ■

Legislator-Filed Bills

1	House 2588/S 1691 - An Act to Protect Gender Pay Equity
2	House 2627/S 1750 - An Act Relative to Veterans' Buyback

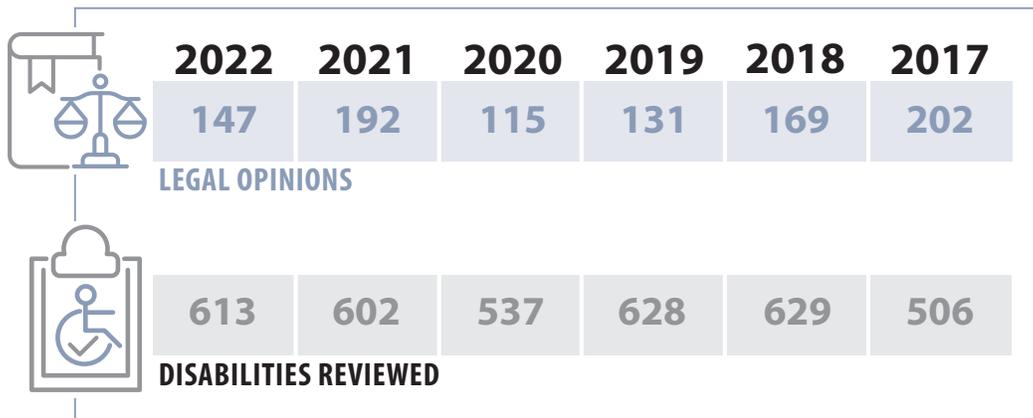


Legal Unit

PERAC's Legal Unit represented the Commission (both remotely and in person) this past year at the Division of Administrative Law Appeals. Cases also progressed through the Contributory Retirement Appeal Board, and to the Superior Court, where the Legal Unit assisted the Attorney General's office in ongoing cases. The Legal Unit also produced 147 Opinion Letters in 2022, including the statutorily required review of the supplemental

regulations of retirement boards, and conducted the statutory review of all accidental disability, accidental death, ordinary disability, and termination retirement allowance applications approved by the 104 retirement boards. The Legal department reviewed 613 disability transmittals and remanded 37 transmittals. Members of the Legal Unit also participated in, produced, and presented numerous educational webinars, and also returned to in-person training. ■

Total Legal Opinions and Disabilities Reviewed (By Year)



Information Technology

The Information Technology Unit has been busy with a number of ongoing projects to enhance internal PERAC functionality as well as improve many processes for retirement systems.

The cashbook and Annual statement submission applications have been rolled out for online submission via PROSPER. PERAC IT is looking into further automation of the processes within the PERAC Portal. The PERAC IT unit has also been busy preparing for the upcoming office move. ■





Medical Panels

In addition to the information detailed in the Profiles, PERAC, as always, has been busy assisting the boards in other areas. In 2022, 703 medical panel requests were initiated and processed. A total of 585 disability applications and 14 accidental death claims were approved in 2022. For Post-Retirement medical reviews, 578 disability retirees were eligible for comprehensive medical evaluations. Occupational Health Physicians conducted comprehensive medical evaluations on 26 retirees and 7 retirees were examined for restoration to service. ■

Medical Panels (By Year)

YEAR	MEDICAL PANEL REQUESTS	IN-HOUSE CME REVIEWS	DISABILITY APPROVALS	DEATH APPROVALS
2022	703	578	585	14
2021	806	1,116	600	16
2020	470	1,110	494	9
2019	768	1,424	628	23
2018	641	1,312	616	9
2017	523	1,315	456	53
2016	659	1,356	499	76
2015	648	1,398	543	66
2014	669	1,302	573	24

“In 2022, PERAC analyzed 12,789 earnings reports, 3,304 retirees reported earnings and 108 earned more than the statutory limits. An additional 67 retirees failed to comply with the reporting requirement.”



Post-Retirement Earnings

PERAC is responsible for the post-retirement monitoring of disabled retirees. One aspect of that task is enforcing the earnings limits set forth in Chapter 32. In 2022, PERAC analyzed 12,789 earnings reports, 3,304 retirees reported earnings and 108 earned more than the statutory limits. An additional 67 retirees failed to comply with the reporting requirement. This resulted in the identification of \$1,624,757 in excess earnings and \$827,719* for non-compliance. In addition, 20 retirees waived their allowance, saving \$463,090. ■

Post-Retirement Earnings (By Year)

YEAR	EARNINGS REPORTS ANALYZED	REPORTED EARNINGS	NUMBER OF EXCESS EARNERS	NON-COMPLIANT	WAIVED
2022	12,789	3,304	108	67	20
2021	12,733	3,344	87	178	21
2020	12,783	3,563	87	161	22
2019	12,859	3,473	87	92	23
2018	12,773	3,557	62	73	21
2017	15,576	3,720	59	135	21
2016	15,895	3,849	54	101	37
2015	15,887	3,845	146	84	36

YEAR	EXCESS EARNINGS AMOUNT	NON-COMPLIANCE AMOUNT	WAIVED AMOUNT
2022	\$1,624,757	\$827,719*	\$463,090
2021	\$1,189,525	\$5,624,045	\$438,967
2020	\$1,459,319	\$4,100,425	\$263,238
2019	\$1,222,947	\$2,401,351	\$356,167
2018	\$933,422	\$1,572,729	\$352,691
2017	\$858,781	\$4,418,867	\$400,867
2016	\$839,993	\$2,606,471	\$502,028
2015	\$1,459,550	\$2,176,174	\$556,935

* Not all boards reported Non-Compliance Amounts



PROFILES

MA Contributory Retirement Boards

Introduction

The Board Profile section of the PERAC Annual Report provides a detailed assessment of some of the important indicators relative to the financial health of the retirement systems. The information provided in this report can enable board members to provide factual comment and advice to policymakers as various proposals relative to the retirement law are assessed. Through this and other studies, PERAC seeks to provide objective, comprehensive, and accurate data for use by all interested parties. All actuarial information in this report is as of the date of the board's most recent valuation as of April 1, 2023.

Actuarial Valuations and Funding Schedules

The Funding Schedule on the board profile pages reflects the amortization schedule for the Unfunded Actuarial Liability (UAL). For example, "1.5% Increasing" with a year fully funded of 2030, means the UAL is being amortized on a 1.5% annually increasing basis to FY30.

A number of systems utilize phase-in schedules in which payments increase more rapidly over the first few years of the schedule than later in the schedule. We reflect those schedules using the ultimate amortization schedule and note there is a phase-in. For example, "4.0% Increasing Phase-In" with a year fully funded of 2035, means the total appropriation increases by a certain percent per year for a period of time and then the remaining unfunded liability is amortized on a 4% increasing basis until FY35.

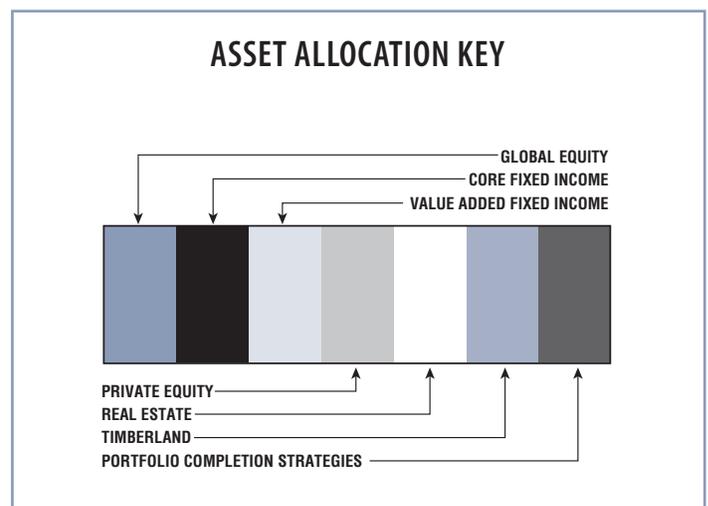
Schedules described as "Total Increasing" mean the annual appropriation increases by the amount indicated, which may vary, for the entire schedule.

A Word on Portfolio Valuations

In assessing investment performance, PERAC relies on the retirement boards to submit accurate and complete information about investment activity. PERAC numbers might differ from those provided to a board by its consultant because PERAC measures all assets, including monies not committed to investment management.

Asset allocation is presented in graph form. The way a retirement board allocates its assets among the various investment classes available to it has long been recognized as the prime determining factor in the generation of returns. Allocation information reported by the investment consultants advising the retirement boards, or PRIM, forms the basis of these graphs. PERAC has not independently confirmed the accuracy of this data.

The key used for the Asset Allocation graphs:



DISCLAIMER: In publishing this information PERAC makes no comment regarding any retirement board's asset allocation, investment strategy, or manager/fund commitments.

COMPOSITE

COMPOSITE INVESTMENT PROFILE

- Commonwealth of Massachusetts
- Public Employee Retirement Systems

\$108.4 B
Market Value

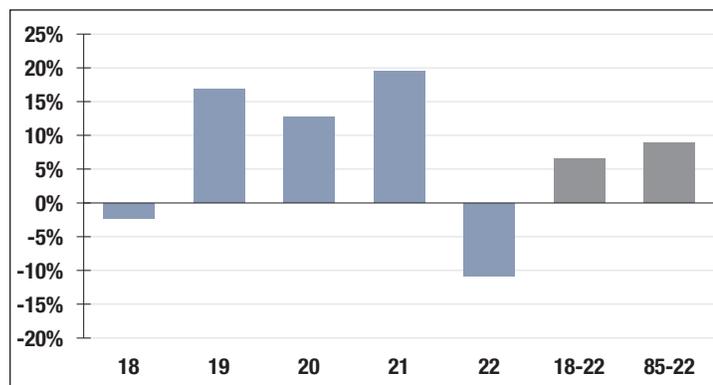
-10.84%
2022 Returns

8.18%
2013-2022
(Annualized)

8.99%
1985-2022
(Annualized)

Investment Returns

(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



Adams

CONTACT INFORMATION

44 Spring Street
Suite 19
Adams, MA 01220
Phone 413-743-5575

BOARD MEMBERS

Crystal Wojcik
Patricia Wol
George Haddad
Holli Havens-Jayko*
Beth Matson
*indicates Chairperson

BOARD ADMINISTRATOR

William Flynn

SYSTEM MEMBERS

Active Members 168
Total Payroll \$6.8 M
Average Salary \$40,600
Average Age 47
Average Service 9.6

Retired Members 177
Benefits Paid \$3.6 M
Average Benefit \$20,300
Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 4
Reported Earnings 0
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: PERAC



Click/Scan for Website

\$38.8 M
Market Value

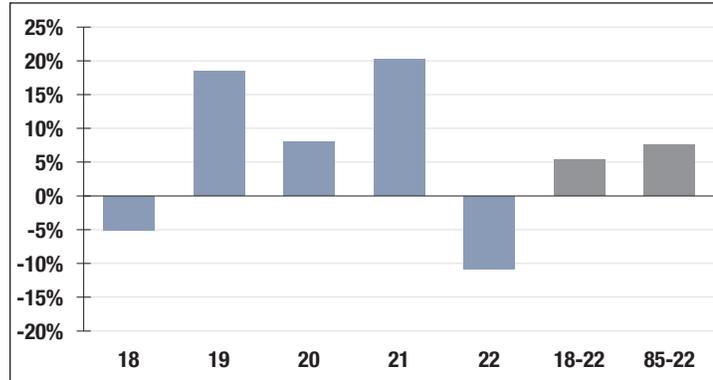
-10.81%
2022 Returns

6.13%
2013-2022
(Annualized)

7.55%
1985-2022
(Annualized)

Investment Returns

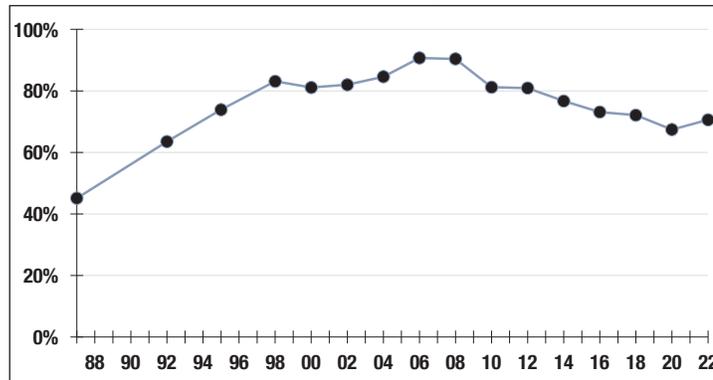
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



70.6%

Funded Ratio

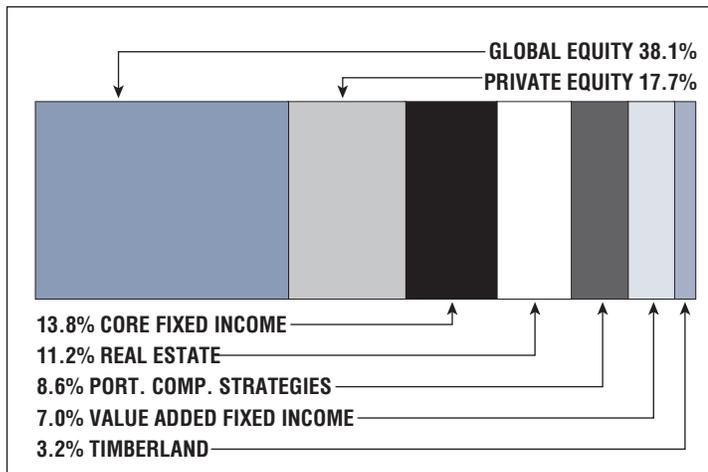
2036

Fully Funded

7.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$16.9 M

Unfunded Liability

\$2.1 M
(FY2023)

Total Pension Appropriation

Amesbury

CONTACT INFORMATION

City Hall
62 Friend Street
Amesbury, MA 01913-2825
Phone 978-388-8131
Fax 978-388-6727

BOARD MEMBERS

Marisa Batista
Craig Bailey
Donna Cornoni*
Shaunna Ring
David Van Dam
*indicates Chairperson

BOARD ADMINISTRATOR

Kevin Caira

SYSTEM MEMBERS

Active Members290
Total Payroll\$16.6 M
Average Salary\$57,300
Average AgeNA
Average ServiceNA

Retired Members267
Benefits Paid\$7.6 M
Average Benefit\$28,500
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees13
Reported Earnings3
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Sherman



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\$68.8 M
Market Value

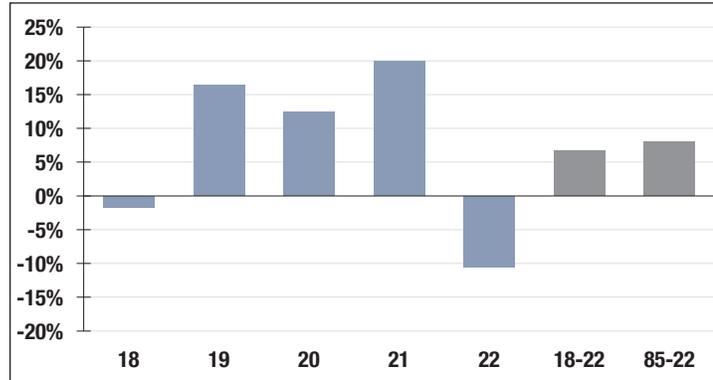
-10.59%
2022 Returns

8.24%
2013-2022
(Annualized)

8.00%
1985-2022
(Annualized)

Investment Returns

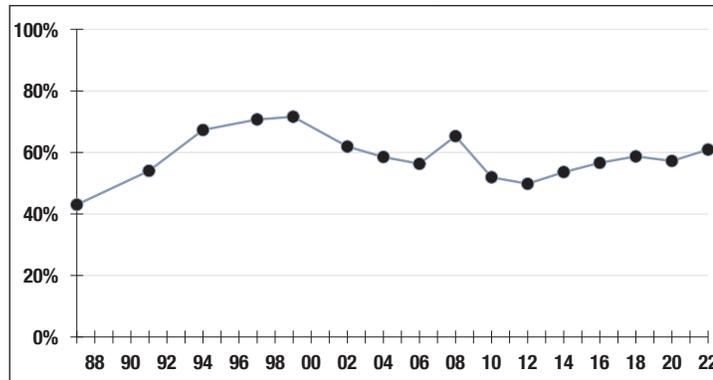
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



60.9%

Funded Ratio

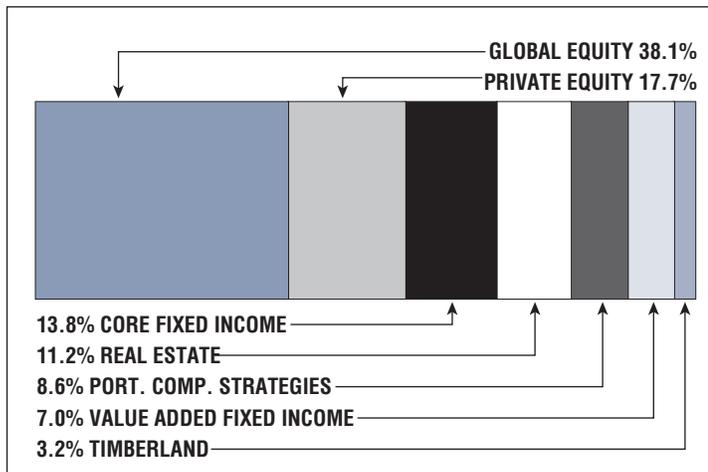
2035

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$45.2 M

Unfunded Liability

\$5.3 M
(FY2023)

Total Pension Appropriation

Andover

CONTACT INFORMATION

Town Offices
36 Bartlet Street
Andover, MA 01810
Phone 978-623-8540
Fax 978-623-8594

BOARD MEMBERS

Hayley Green*
Deidre Lockhart
Elena Kothman
Eric Teichert
Blackwell Taylor
*indicates Chairperson

BOARD ADMINISTRATOR

Elena Kothman

SYSTEM MEMBERS

Active Members739
Total Payroll\$45.8 M
Average Salary\$62,000
Average Age49
Average Service 12.3

Retired Members.....523
Benefits Paid\$16.6 M
Average Benefit\$31,700
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees36
Reported Earnings 11
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: KMS



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\$343.5 M
Market Value

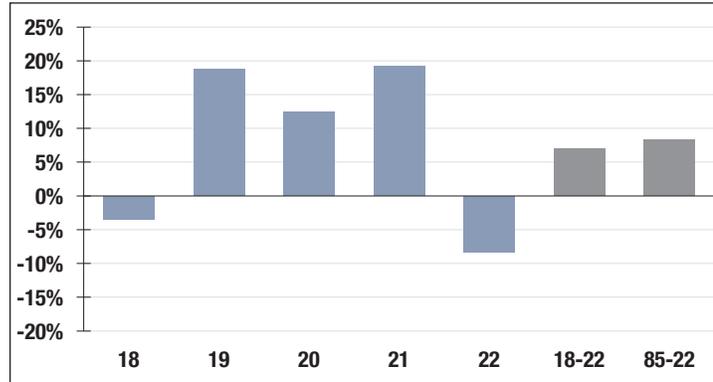
-8.37%
2022 Returns

8.51%
2013-2022
(Annualized)

8.36%
1985-2022
(Annualized)

Investment Returns

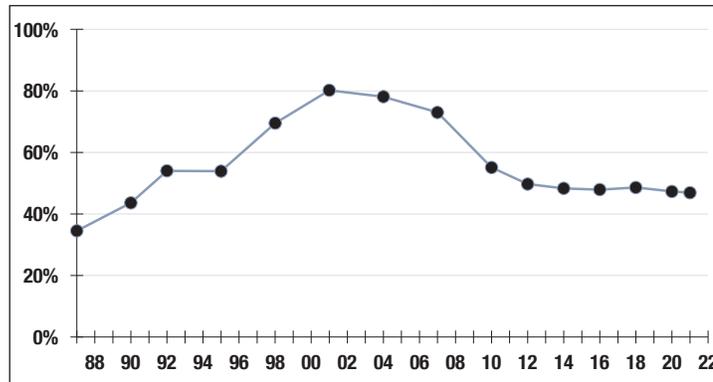
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



5.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



46.9%

Funded Ratio

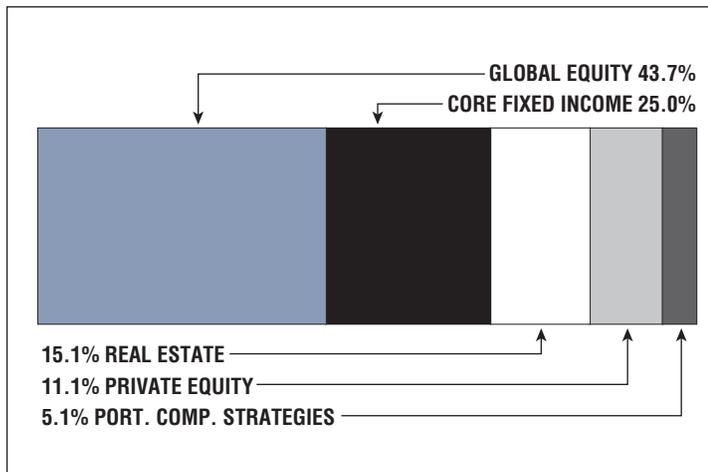
2040

Fully Funded

3.61% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$193.5 M

Unfunded Liability

\$6.4 M
(FY2023)

Total Pension Appropriation

Arlington

CONTACT INFORMATION

27 Maple Street
 Room 203
 Arlington, MA 02476
 Phone 781-316-3370
 Fax 781-316-3379

BOARD MEMBERS

Ida Cody
 Richard Keshian
 Kenneth Hughes*
 Robert Jefferson
 Alfred Fantini
 *indicates Chairperson

BOARD ADMINISTRATOR

Richard Greco

SYSTEM MEMBERS

Active Members808
 Total Payroll\$45.2 M
 Average Salary\$56,000
 Average Age46
 Average Service9.3

Retired Members619
 Benefits Paid\$20.3 M
 Average Benefit\$32,900
 Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees74
 Reported Earnings25
 Excess Earners1
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: Stone



\$199.0 M
 Market Value

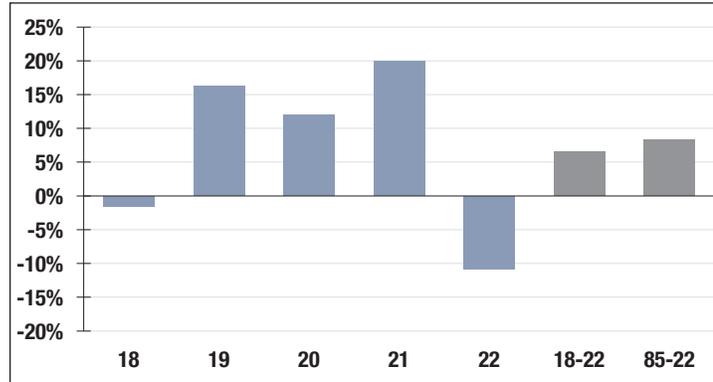
-10.82%
 2022 Returns

8.01%
 2013-2022
 (Annualized)

8.26%
 1985-2022
 (Annualized)

Investment Returns

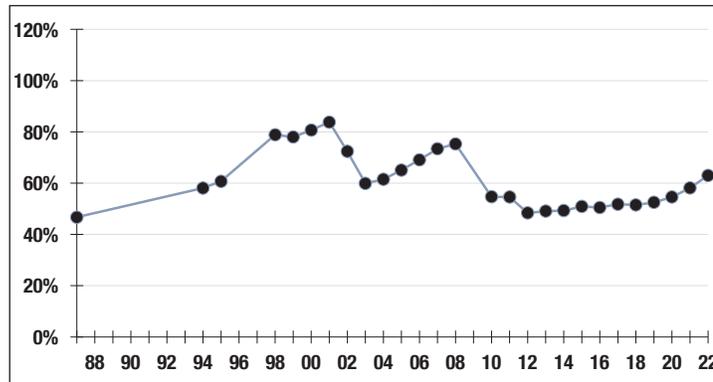
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



63.0%

Funded Ratio

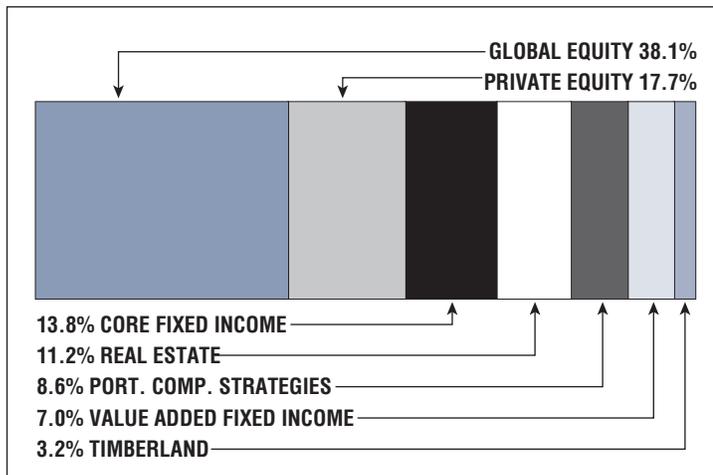
2033

Fully Funded

5.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$119.4 M

Unfunded Liability

\$15.4 M
 (FY2023)

Total Pension Appropriation

Attleboro

CONTACT INFORMATION

77 Park Street
Attleboro, MA 02703
Phone 508-223-2222
Fax 508-223-2063

BOARD MEMBERS

Deborah Gould
Barry Lacasse
Bruce Tondreau*
Scott Charette
Richard Boucher
*indicates Chairperson

BOARD ADMINISTRATOR

Kenneth Badertscher

SYSTEM MEMBERS

Active Members712
Total Payroll\$40.2 M
Average Salary\$56,500
Average Age46
Average Service10.8

Retired Members485
Benefits Paid\$15.9 M
Average Benefit\$32,800
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees40
Reported Earnings10
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



\$180.9 M
Market Value

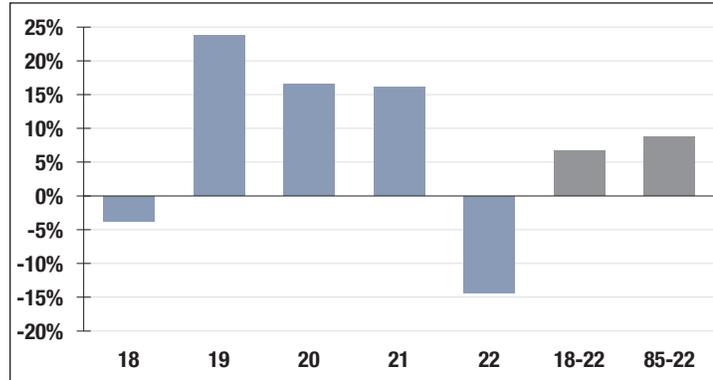
-14.42%
2022 Returns

8.24%
2013-2022
(Annualized)

8.72%
1985-2022
(Annualized)

Investment Returns

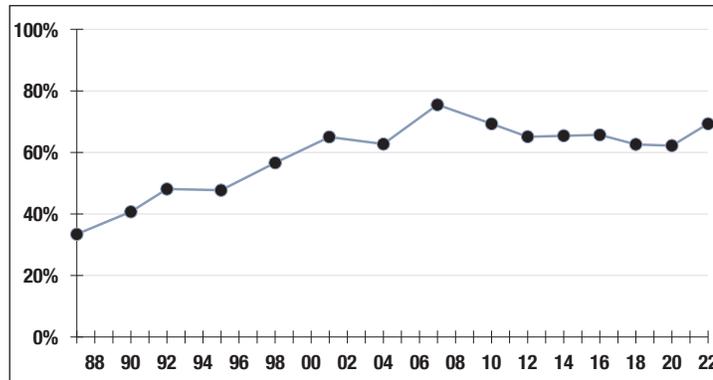
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



69.3%

Funded Ratio

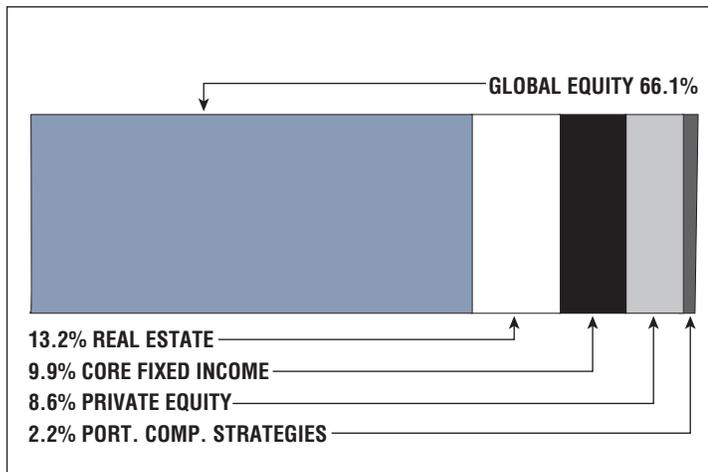
2037

Fully Funded

5.86% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$85.1 M

Unfunded Liability

\$9.4 M
(FY2023)

Total Pension Appropriation

Barnstable County

CONTACT INFORMATION

750 Attucks Lane
Hyannis, MA 02601
Phone 508-775-1110
Fax 508-775-1344

BOARD MEMBERS

Carol Coppola*
Ronald Bergstrom
Harold Brunelle
Robert Rolanti
TK Menesale
*indicates Chairperson

BOARD ADMINISTRATOR

Susy Bento Holmes

SYSTEM MEMBERS

Active Members 4,790
Total Payroll \$307.8 M
Average Salary \$64,300
Average Age 48
Average Service 11.1

Retired Members 3,510
Benefits Paid \$113.4 M
Average Benefit \$32,300
Average Age 71

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 328
Reported Earnings 126
Excess Earners 3
Refund Due \$46,189

Last Valuation: 1/1/22
Actuary: Segal



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\$1.5 B
Market Value

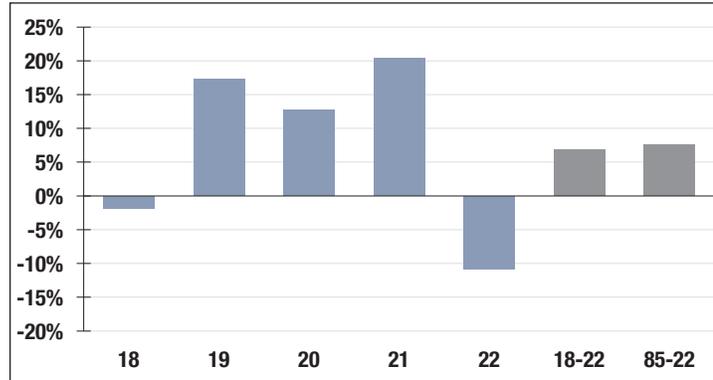
-10.86%
2022 Returns

8.40%
2013-2022
(Annualized)

7.60%
1985-2022
(Annualized)

Investment Returns

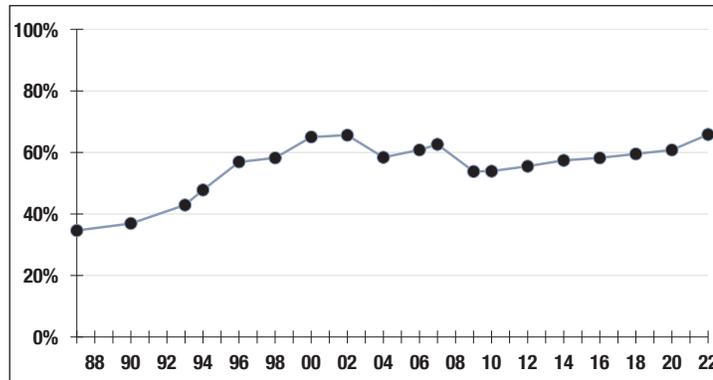
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



65.8%

Funded Ratio

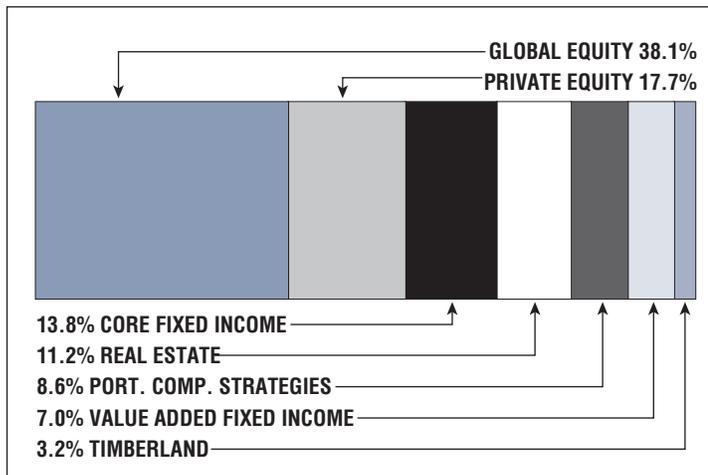
2037

Fully Funded

5.80% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$755.2 M

Unfunded Liability

\$78.8 M
(FY2023)

Total Pension Appropriation

Belmont

CONTACT INFORMATION

90 Concord Avenue
3rd Floor, Suite 3
Belmont, MA 02478-0900
Phone 617-993-2792
Fax 617-993-2793

BOARD MEMBERS

Donna Tuccinardi
Brian Antonellis
Ross Vona
Walter Wellman
Thomas Gibson*
*indicates Chairperson

BOARD ADMINISTRATOR

Ryan Horan

SYSTEM MEMBERS

Active Members460
Total Payroll\$28.6 M
Average Salary\$62,200
Average Age48
Average Service 11.3

Retired Members.....357
Benefits Paid\$12.4 M
Average Benefit\$34,800
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees38
Reported Earnings9
Excess Earners..... 1
Refund Due\$8,057

Last Valuation: 1/1/22
Actuary: Segal



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\$148.9 M
Market Value

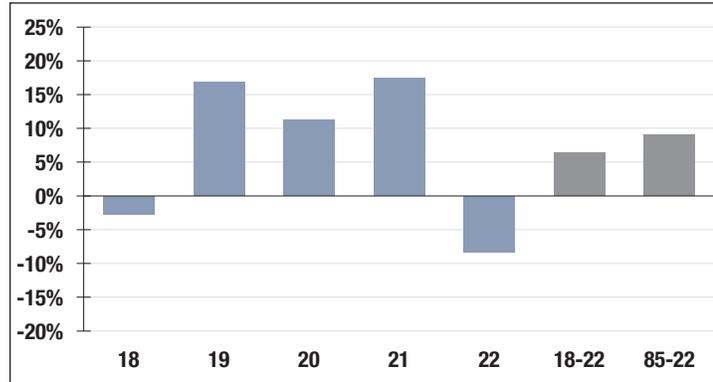
-8.32%
2022 Returns

7.95%
2013-2022
(Annualized)

9.07%
1985-2022
(Annualized)

Investment Returns

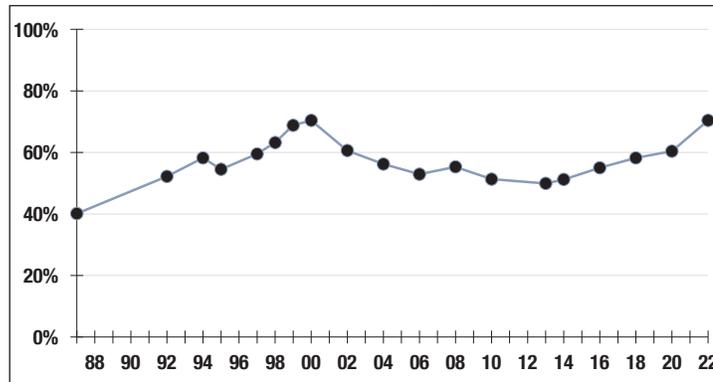
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



70.4%

Funded Ratio

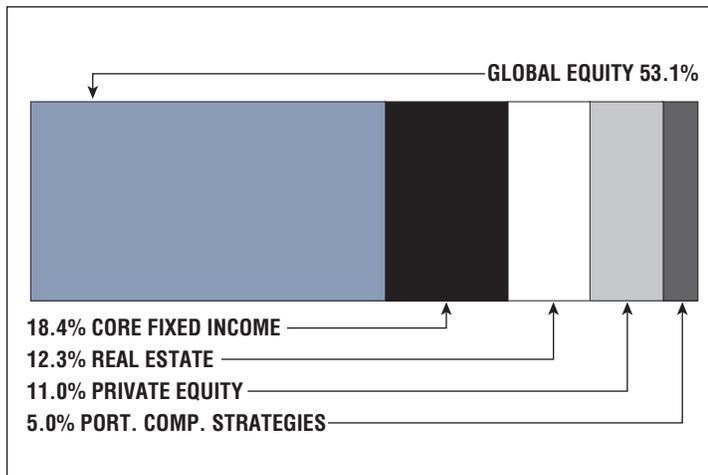
2030

Fully Funded

4.45% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$62.1 M

Unfunded Liability

\$11.8 M
(FY2023)

Total Pension Appropriation

Berkshire County

CONTACT INFORMATION

29 Dunham Mall
Pittsfield, MA 01201
Phone 413-499-1981
Fax 413-445-7990

BOARD MEMBERS

Sue Funk
Michael Ovitt*
Karen Williams
Mark Bashara
Beth Matson
*indicates Chairperson

BOARD ADMINISTRATOR

Sheila LaBarbera

SYSTEM MEMBERS

Active Members 1,172
Total Payroll\$51.4 M
Average Salary\$43,800
Average Age49
Average Service 10.5

Retired Members854
Benefits Paid\$16.8 M
Average Benefit\$19,600
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees24
Reported Earnings6
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



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\$315.0 M
Market Value

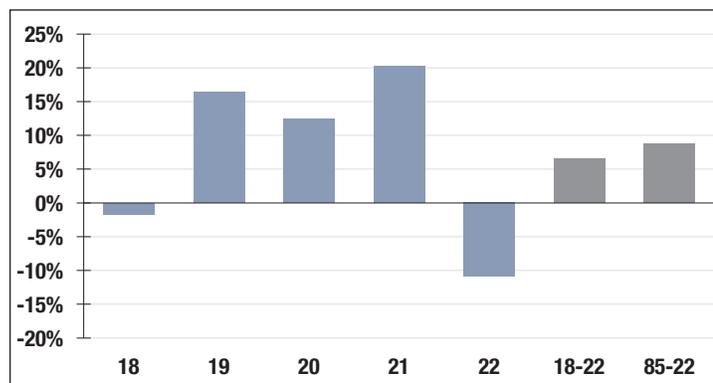
-10.92%
2022 Returns

8.23%
2013-2022
(Annualized)

8.84%
1985-2022
(Annualized)

Investment Returns

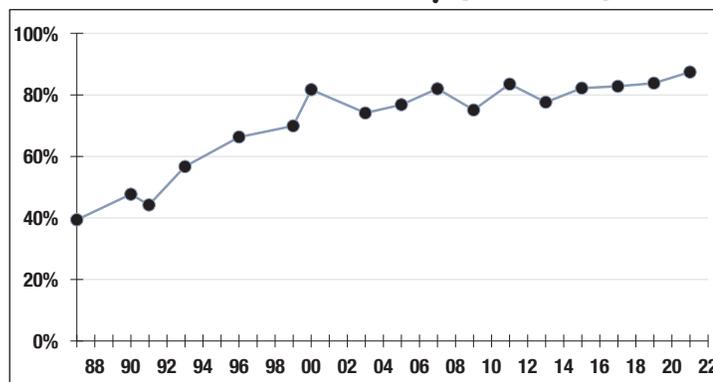
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



87.4%

Funded Ratio

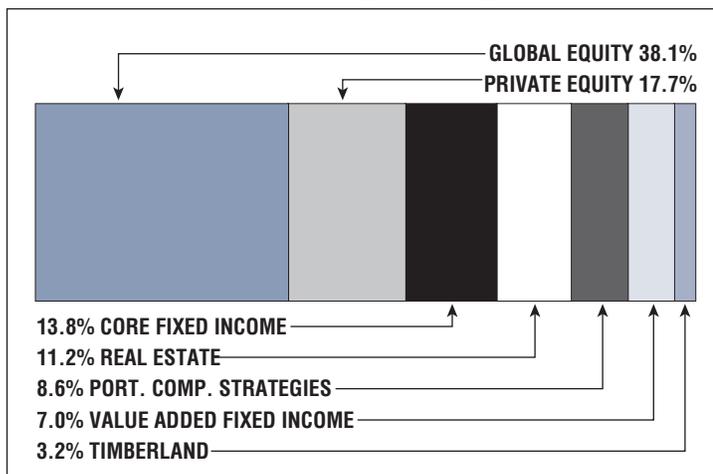
2028

Fully Funded

7.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$40.6 M

Unfunded Liability

\$12.5 M
(FY2023)

Total Pension Appropriation

Beverly

CONTACT INFORMATION

City Hall
191 Cabot Street
Beverly, MA 01915
Phone 978-605-2370
Fax 978-921-8582

BOARD MEMBERS

Carol Augulewicz
Bryant Ayles*
D. Wesley Slate
Kevin Smith
Adam Travinski
*indicates Chairperson

BOARD ADMINISTRATOR

Barbara Wells

SYSTEM MEMBERS

Active Members596
Total Payroll\$33.3 M
Average Salary\$55,800
Average Age48
Average Service 11.1

Retired Members.....476
Benefits Paid\$14.8 M
Average Benefit\$31,100
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees45
Reported Earnings 15
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



Click/Scan for Website

\$168.6 M
Market Value

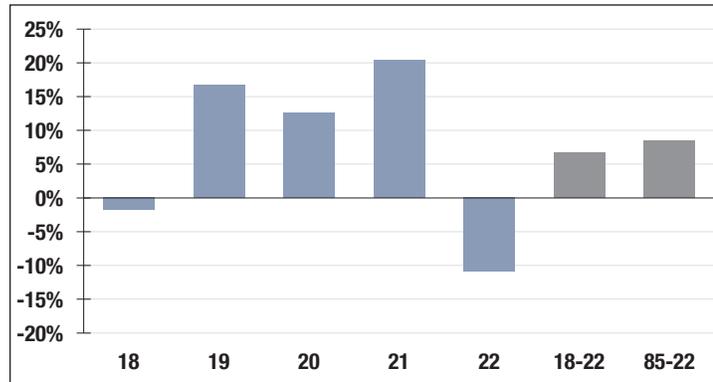
-10.91%
2022 Returns

8.34%
2013-2022
(Annualized)

8.49%
1985-2022
(Annualized)

Investment Returns

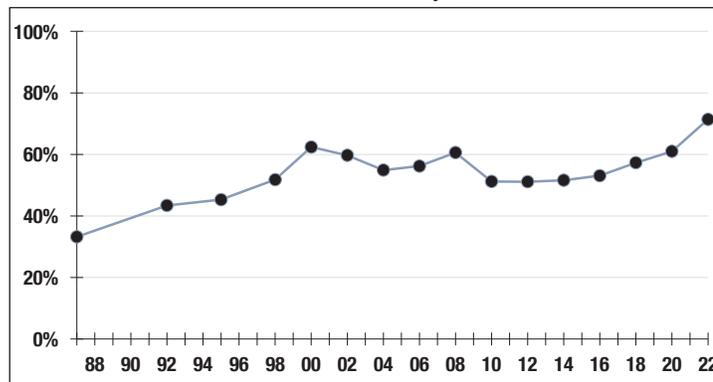
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



71.4%

Funded Ratio

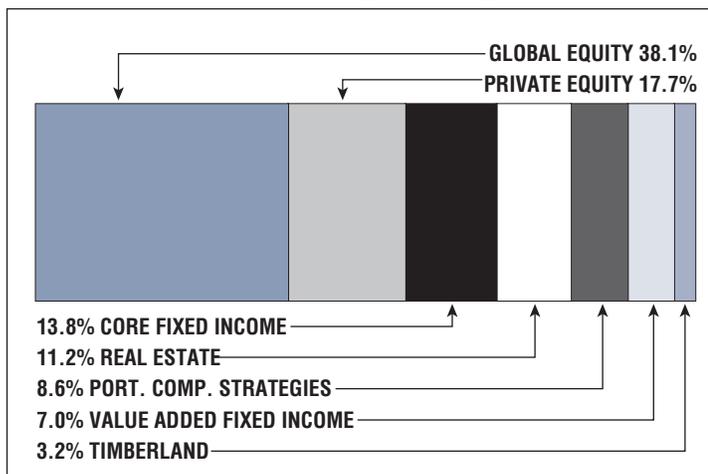
2031

Fully Funded

4.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$70.7 M

Unfunded Liability

\$13.1 M
(FY2023)

Total Pension Appropriation

Blue Hills Regional Vocational School

CONTACT INFORMATION

Employees' Retirement Board
800 Randolph Street
Canton, MA 02021
Phone 781-828-5800
Fax 781-828-0794

BOARD MEMBERS

Charles Gisondi*
Steven Moore
Kathleen Manning
Patricia Brooks
Lisa Maloney
*indicates Chairperson

BOARD ADMINISTRATOR

Frank Zecha

SYSTEM MEMBERS

Active Members48
Total Payroll\$2.6 M
Average Salary\$54,400
Average Age51
Average Service 10.4

Retired Members.....47
Benefits Paid\$1.1 M
Average Benefit\$22,900
Average Age78

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees0
Reported Earnings0
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$13.8 M
Market Value

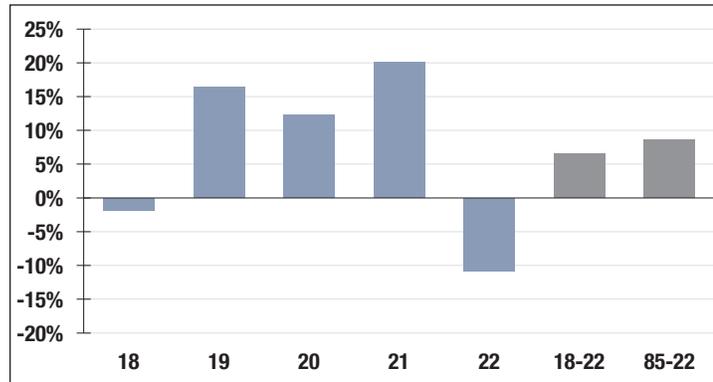
-10.85%
2022 Returns

8.20%
2013-2022
(Annualized)

8.55%
1985-2022
(Annualized)

Investment Returns

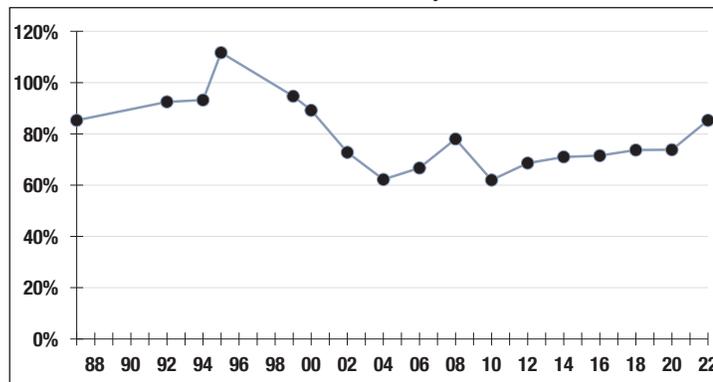
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



85.3%

Funded Ratio

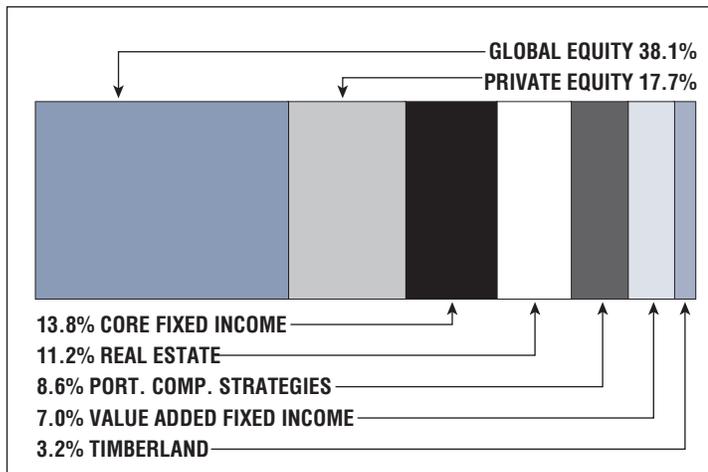
2029

Fully Funded

7.1% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$2.5 M

Unfunded Liability

\$686 K
(FY2023)

Total Pension Appropriation

Boston (City)

CONTACT INFORMATION

City Hall, Room 816
 Boston, MA 02201
 Phone 617-635-4305
 Fax 617-635-4318

BOARD MEMBERS

Maureen Joyce
 Daniel Greene*
 Karen Cross
 Michael O'Reilly
 Thomas Jackson
 *indicates Chairperson

BOARD ADMINISTRATOR

Timothy Smyth

SYSTEM MEMBERS

Active Members 14,581
 Total Payroll \$1.1 B
 Average Salary \$77,500
 Average Age 46
 Average Service 12.6

Retired Members 9,898
 Benefits Paid \$418.6 M
 Average Benefit \$42,300
 Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 1,495
 Reported Earnings 245
 Excess Earners 13
 Refund Due \$272,813

Last Valuation: 1/1/22
 Actuary: Segal



Click/Scan for Website

\$6.4 B
 Market Value

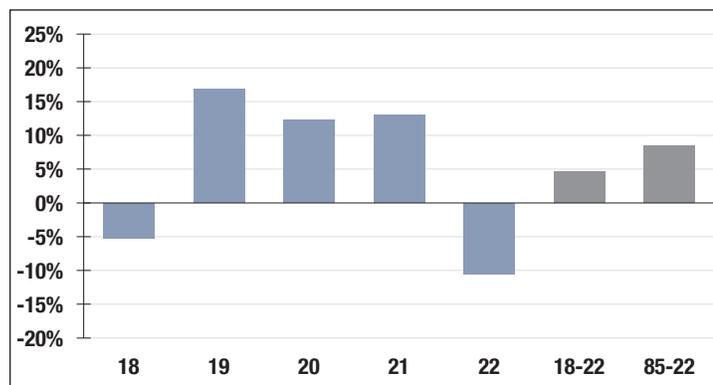
-10.55%
 2022 Returns

6.71%
 2013-2022
 (Annualized)

8.47%
 1985-2022
 (Annualized)

Investment Returns

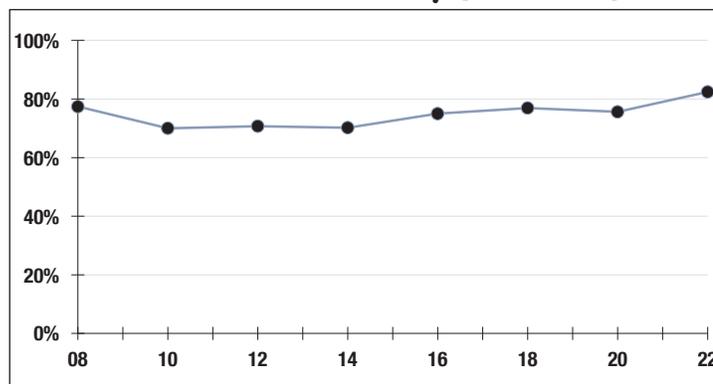
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (2008-2022)



82.4%

Funded Ratio

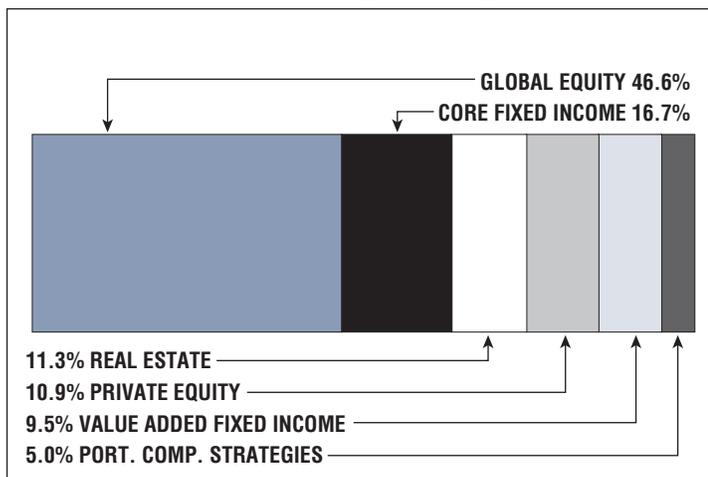
2027

Fully Funded

8.85% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$1.4 B

Unfunded Liability

\$403.7 M
 (FY2023)

Total Pension Appropriation

Boston (Teachers)

CONTACT INFORMATION

See Boston (City)

SYSTEM MEMBERS

Active Members6,659
 Total Payroll\$667.0 M
 Average Salary ...\$100,200
 Average Age43
 Average Service10.2

Retired Members4,816
 Benefits Paid\$269.1 M
 Average Benefit\$55,900
 Average Age74

Last Valuation: 1/1/22
 Actuary: PERAC

NOTES ON BOSTON (CITY) & BOSTON (TEACHERS):

The results for Boston Teachers and non-teachers (City) are separated in this report.

The liability for Boston Teachers has always been the responsibility of the Commonwealth.

In 2010, legislation was enacted that allocated assets to Boston Teachers and separate accounts have been maintained since that date. The actuarial information for the City now solely reflects liability that is the responsibility of the City.

The Funded Ratio chart for the City reflects information available since that allocation.

Please note the following when reviewing the charts on these pages:

- Boston Teachers' assets prior to 2010 were estimated as approximately 30% of Boston (System) total assets.
- The information with respect to Disability Retirees on the City Board Profile page reflects the entire system, including Boston Teachers.
- The information with respect to Investment Return History for the City reflects actual returns for Boston (City) for 2017-2021 and total returns for the Boston System prior to 2011.

\$2.1 B
Market Value

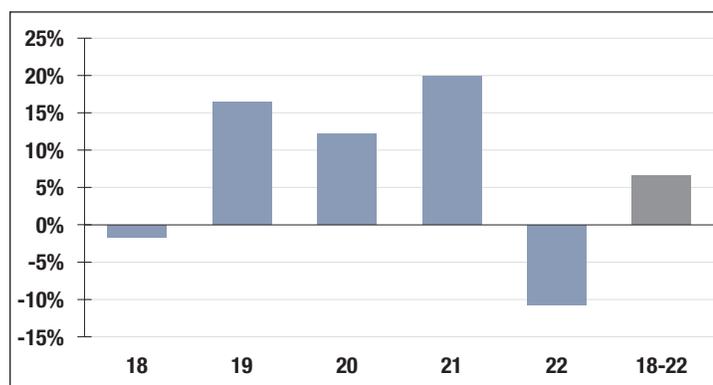
-10.70%
2022 Returns

8.21%
2013-2022
(Annualized)

NA
1985-2022
(Annualized)

Investment Returns

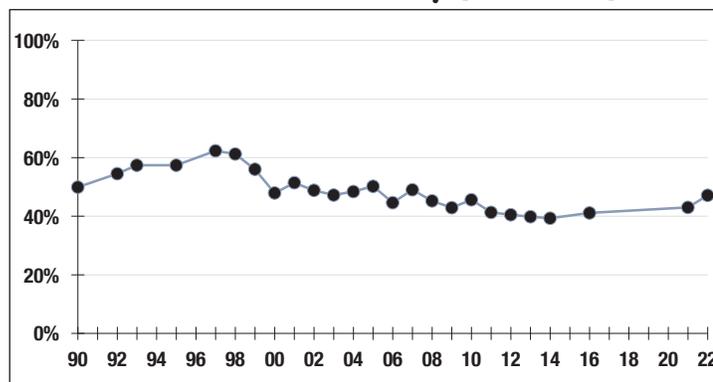
(2018-2022 & 5-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1990-2022)



47.1%

Funded Ratio

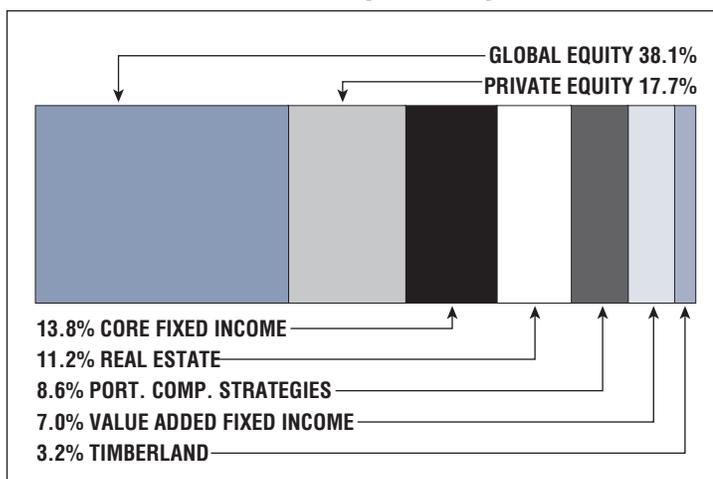
2036

Fully Funded

9.63% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$2.4 B

Unfunded Liability

\$196.8 M
(FY2023)

Total Pension Appropriation

Braintree

CONTACT INFORMATION

74 Pond Street
2nd Floor
Braintree, MA 02184
Phone 781-794-8211
Fax 781-794-8407

BOARD MEMBERS

Edward Spellman
Joseph Driscoll
Frederick Viola
Gerald Kenny*
David DelGallo
*indicates Chairperson

BOARD ADMINISTRATOR

Dennis Gallagher

SYSTEM MEMBERS

Active Members790
Total Payroll\$52.7 M
Average Salary\$66,800
Average Age49
Average Service11.9

Retired Members568
Benefits Paid\$20.5 M
Average Benefit\$36,000
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees54
Reported Earnings15
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: KMS



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\$252.0 M
Market Value

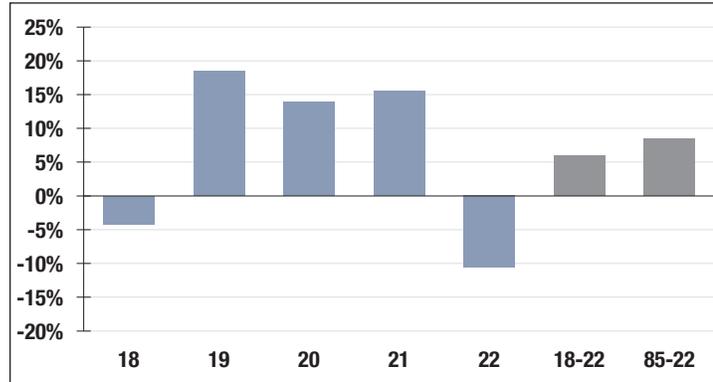
-10.62%
2022 Returns

7.25%
2013-2022
(Annualized)

8.41%
1985-2022
(Annualized)

Investment Returns

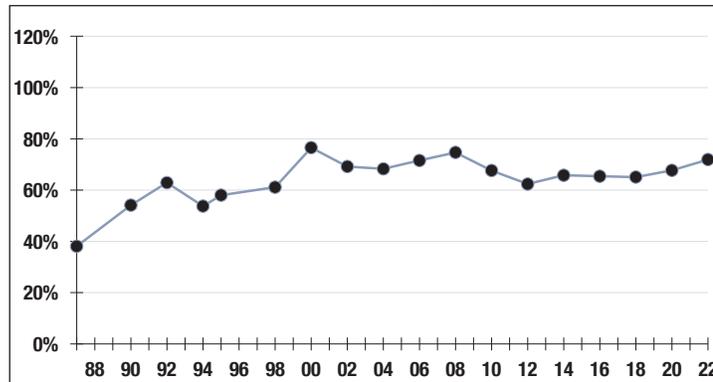
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



71.9%

Funded Ratio

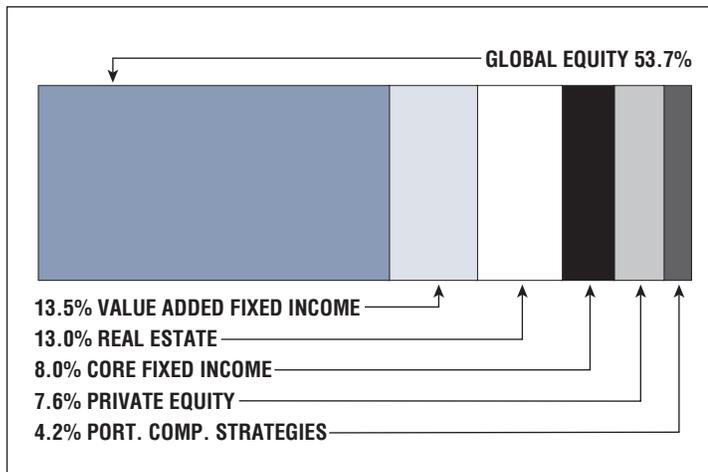
2033

Fully Funded

7.38% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$102.5 M

Unfunded Liability

\$13.6 M
(FY2023)

Total Pension Appropriation

Bristol County

CONTACT INFORMATION

County Crossing
645 County Street
Taunton, MA 02780
Phone 508-824-4029
Fax 508-880-8749

BOARD MEMBERS

Christopher Saunders*
John Saunders
Stephen Rivard
William Downey
Christine DeFontes
*indicates Chairperson

BOARD ADMINISTRATOR

Roxanne Donovan

SYSTEM MEMBERS

Active Members3,349
Total Payroll\$185.7 M
Average Salary\$55,500
Average Age48
Average Service 11.3

Retired Members.....2,743
Benefits Paid\$75.4 M
Average Benefit\$27,500
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees219
Reported Earnings59
Excess Earners.....2
Refund Due\$5,757

Last Valuation: 1/1/22

Actuary: Stone



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\$837.1 M
Market Value

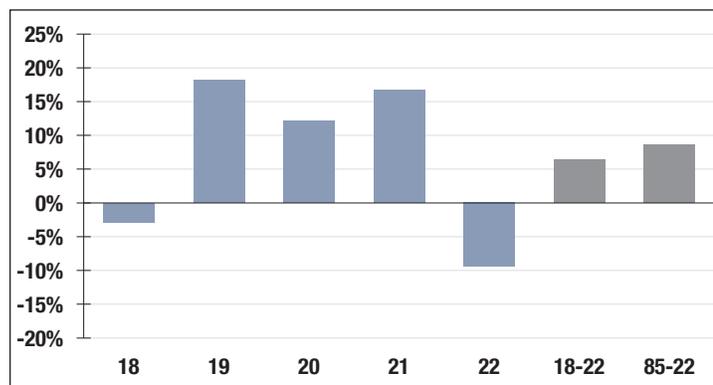
-9.46%
2022 Returns

7.88%
2013-2022
(Annualized)

8.66%
1985-2022
(Annualized)

Investment Returns

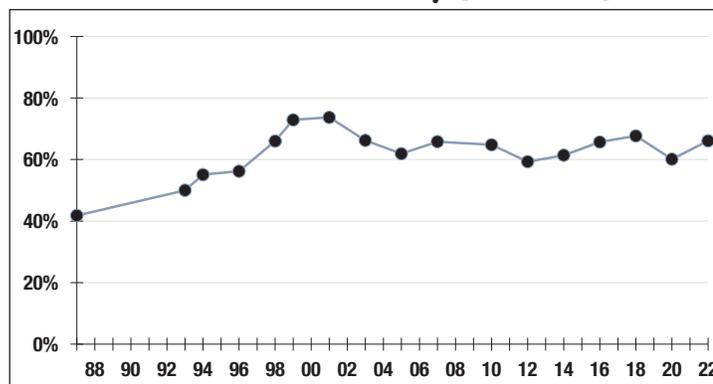
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.35%

Assumed Rate of Return

Funded Ratio History (1987-2022)



66.1%

Funded Ratio

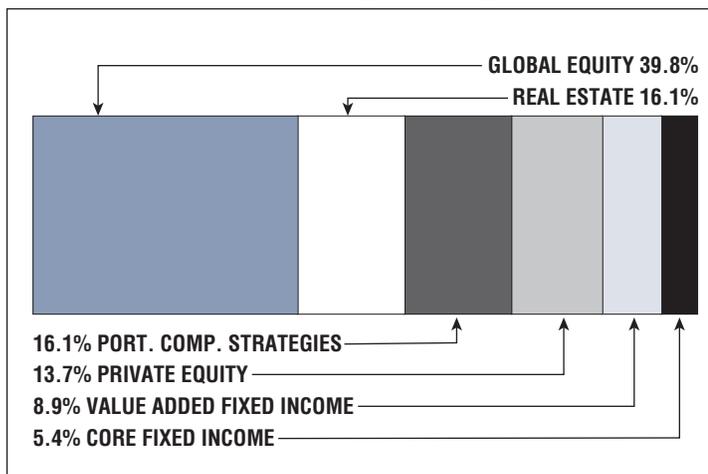
2034

Fully Funded

5.08% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$440.9 M

Unfunded Liability

\$51.8 M
(FY2023)

Total Pension Appropriation

Brockton

CONTACT INFORMATION

1322 Belmont Street
Suite 101
Brockton, MA 02301
Phone 508-580-7847
Fax 508-559-0559

BOARD MEMBERS

Karen Preval
John Condon
Archie Gormley
Scott Albanese
William Farmer*
*indicates Chairperson

BOARD ADMINISTRATOR

Jeanne Martineau

SYSTEM MEMBERS

Active Members 1,948
Total Payroll \$117.4 M
Average Salary \$60,200
Average Age 46
Average Service 10.2

Retired Members 1,319
Benefits Paid \$47.9 M
Average Benefit \$36,300
Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 155
Reported Earnings 36
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: KMS



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\$740.1 M
Market Value

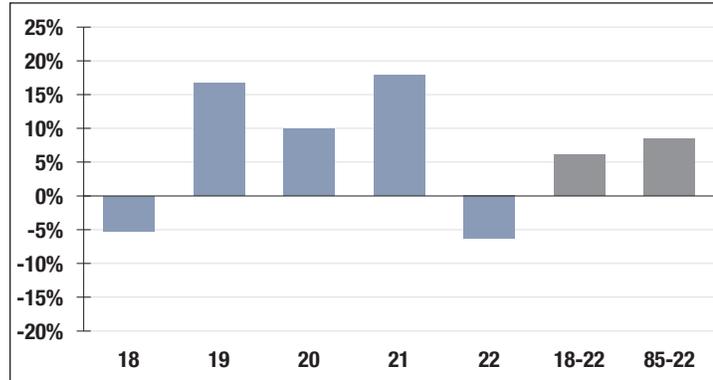
-6.33%
2022 Returns

7.13%
2013-2022
(Annualized)

8.46%
1985-2022
(Annualized)

Investment Returns

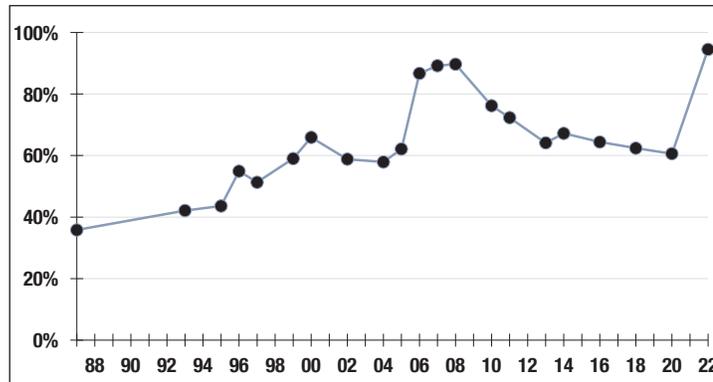
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



94.5%

Funded Ratio

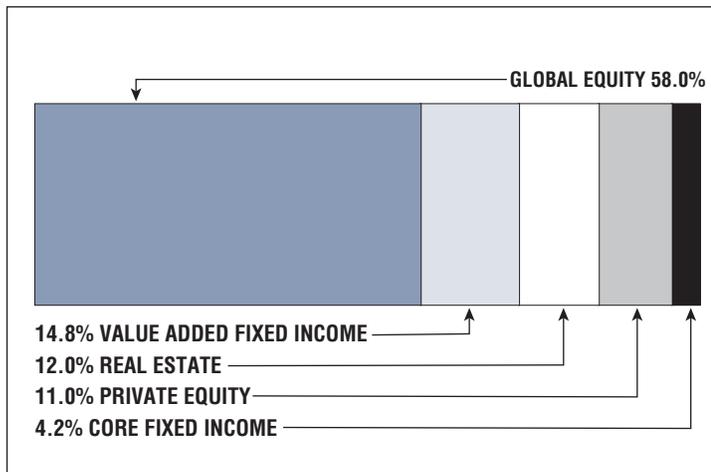
2035

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$46.1 M

Unfunded Liability

\$9.8 M
(FY2023)

Total Pension Appropriation

Brookline

CONTACT INFORMATION

Public Health Bldg.
Ground Floor
11 Pierce Street
Brookline, MA 02445
Phone 617-730-2028
Fax 617-730-2298

BOARD MEMBERS

Michael DiPietro
Lincoln Heineman
John Canney
Robert Ward
Gary Altman*
*indicates Chairperson

BOARD ADMINISTRATOR

Frank Zecha

SYSTEM MEMBERS

Active Members 1,347
Total Payroll \$81.2 M
Average Salary \$60,300
Average Age 43
Average Service 10.1

Retired Members 891
Benefits Paid \$33.5 M
Average Benefit \$37,600
Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 148
Reported Earnings 35
Excess Earners 1
Refund Due \$22,538

Last Valuation: 1/1/22
Actuary: Segal



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\$428.4 M
Market Value

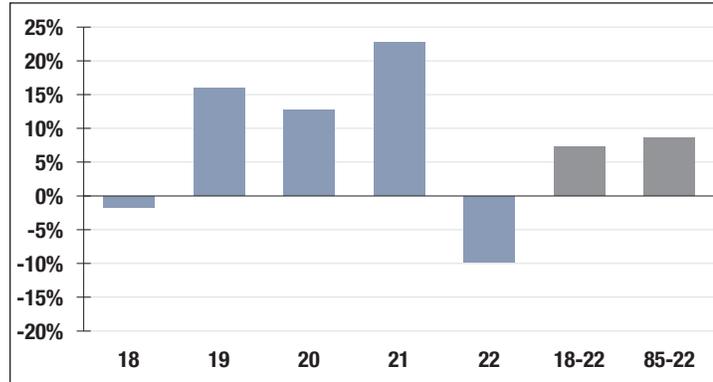
-9.75%
2022 Returns

8.01%
2013-2022
(Annualized)

8.58%
1985-2022
(Annualized)

Investment Returns

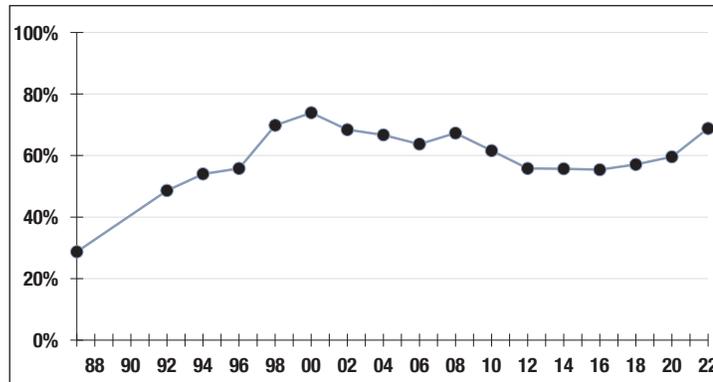
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



68.8%

Funded Ratio

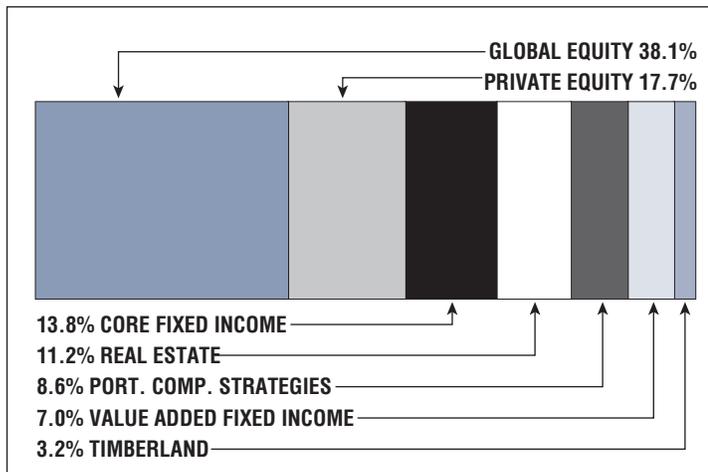
2030

Fully Funded

7.85% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$188.2 M

Unfunded Liability

\$31.9 M
(FY2023)

Total Pension Appropriation

Cambridge

CONTACT INFORMATION

125 CambridgePark Drive
Suite 104
Cambridge, MA 02140-2369
Phone 617-868-3401
Fax 617-868-3477

BOARD MEMBERS

Joseph McCann
Michael Gardner
Francis Murphy*
James Monagle
Nadia Chamblin-Foster
*indicates Chairperson

BOARD ADMINISTRATOR

Ellen Philbin

SYSTEM MEMBERS

Active Members3,156
Total Payroll\$247.8 M
Average Salary\$78,500
Average Age46
Average Service 12.9

Retired Members.....2,306
Benefits Paid\$96.6 M
Average Benefit\$41,900
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees219
Reported Earnings45
Excess Earners..... 1
Refund Due\$51,280

Last Valuation: 1/1/22
Actuary: Segal



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\$1.6 B
Market Value

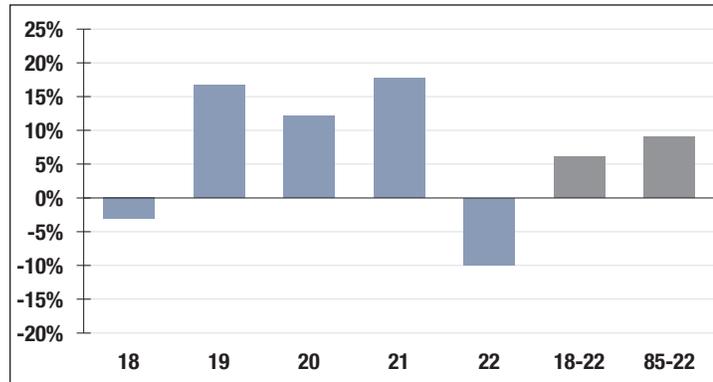
-9.99%
2022 Returns

8.22%
2013-2022
(Annualized)

9.00%
1985-2022
(Annualized)

Investment Returns

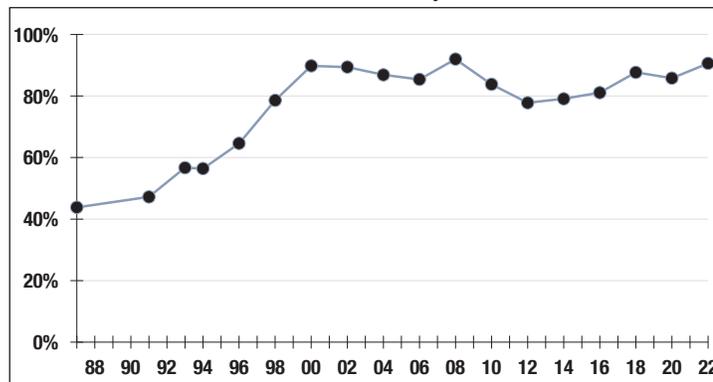
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.10%

Assumed Rate of Return

Funded Ratio History (1987-2022)



90.6%

Funded Ratio

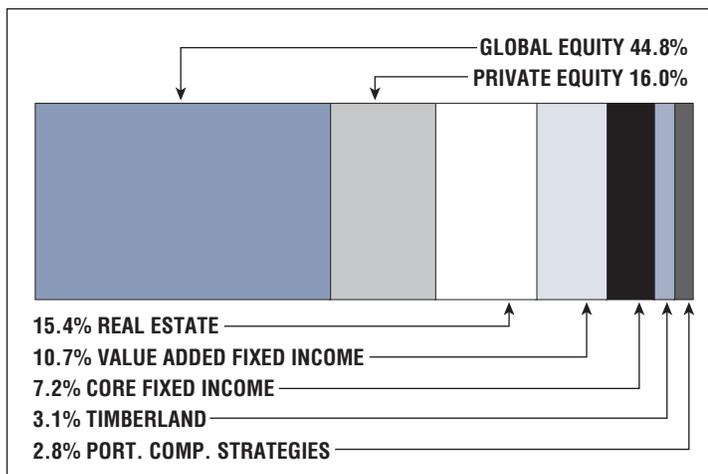
2026

Fully Funded

12.1% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$175.4 M

Unfunded Liability

\$60.4 M
(FY2023)

Total Pension Appropriation

Chelsea

CONTACT INFORMATION

90 Everett Ave
Suite 5
Chelsea, MA 02150
Phone 857-776-6544
Fax 617-466-4234

BOARD MEMBERS

Edward Dunn
Cheryl Watson Fisher
Joseph Siewko*
Richard Carroccino
Carolyn Russo
*indicates Chairperson

BOARD ADMINISTRATOR

Michael Nicolazzo

SYSTEM MEMBERS

Active Members758
Total Payroll\$44.1 M
Average Salary\$58,200
Average Age45
Average Service11.9

Retired Members395
Benefits Paid\$12.6 M
Average Benefit\$31,800
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees59
Reported Earnings17
Excess Earners1
Refund Due\$4,470

Last Valuation: 1/1/21
Actuary: PERAC



\$248.6 M
Market Value

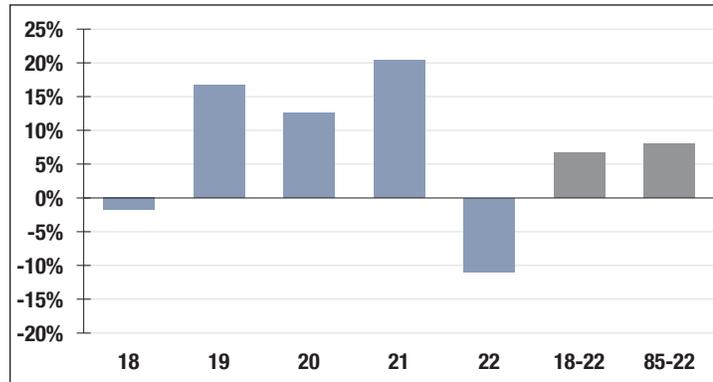
-11.01%
2022 Returns

8.30%
2013-2022
(Annualized)

7.97%
1985-2022
(Annualized)

Investment Returns

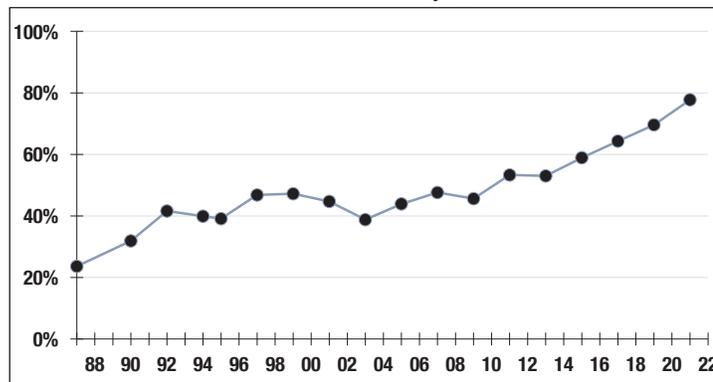
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



77.7%

Funded Ratio

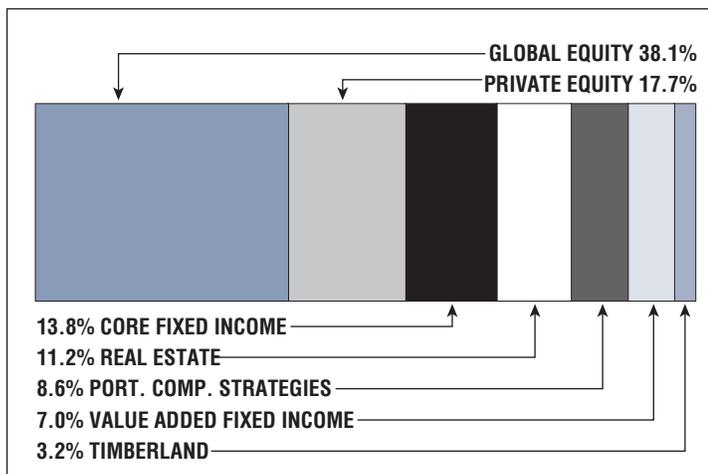
2028

Fully Funded

5.05% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$60.5 M

Unfunded Liability

\$15.2 M
(FY2023)

Total Pension Appropriation

Chicopee

CONTACT INFORMATION

274 Front Street
 City Hall, Market Square
 Chicopee, MA 01013
 Phone 413-594-1542
 Fax 413-594-1544

BOARD MEMBERS

Sharyn Riley
 Debra Boronski
 Paul Mailhott
 Timothy O'Shea*
 David Ference
 *indicates Chairperson

BOARD ADMINISTRATOR

Ana Gomes

SYSTEM MEMBERS

Active Members 1,177
 Total Payroll \$59.7 M
 Average Salary \$50,700
 Average Age 47
 Average Service 12.9
 Retired Members 885
 Benefits Paid \$25.1 M
 Average Benefit \$28,300
 Average Age 72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 91
 Reported Earnings 25
 Excess Earners 0
 Refund Due \$0

Last Valuation: 1/1/21
 Actuary: Stone



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\$409.9 M
 Market Value

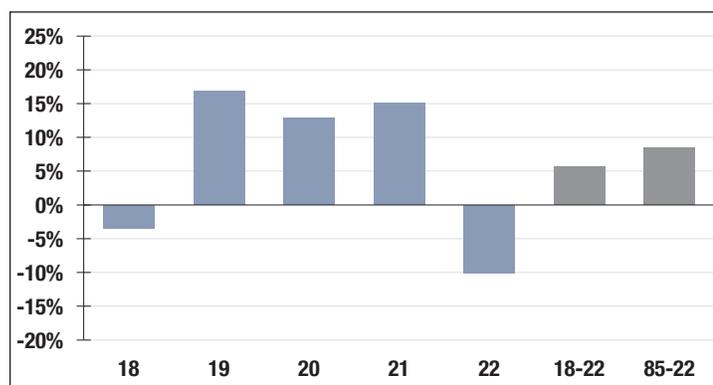
-10.04%
 2022 Returns

7.88%
 2013-2022
 (Annualized)

8.43%
 1985-2022
 (Annualized)

Investment Returns

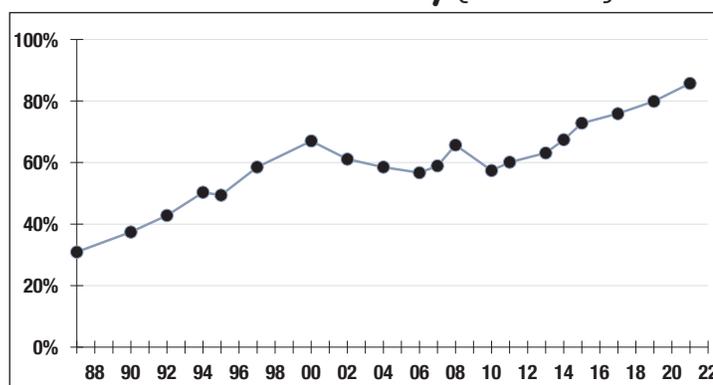
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



85.7%

Funded Ratio

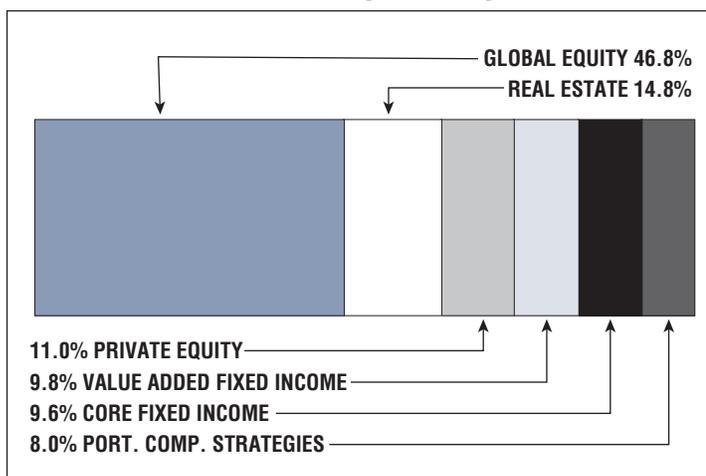
2026

Fully Funded

3.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$63.7 M

Unfunded Liability

\$20.6 M
 (FY2023)

Total Pension Appropriation

Clinton

CONTACT INFORMATION

242 Church Street
Clinton, MA 01510
Phone 978-365-4118
Fax 978-612-0215

BOARD MEMBERS

Diane Magliozzi
David Baird
James McNamara
Joseph Casasanto
Paul Cherubini*
*indicates Chairperson

BOARD ADMINISTRATOR

Patricia Hazel

SYSTEM MEMBERS

Active Members247
Total Payroll\$12.0 M
Average Salary\$48,500
Average Age48
Average Service11.8

Retired Members138
Benefits Paid\$4.0 M
Average Benefit\$29,000
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees12
Reported Earnings3
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



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\$68.6 M
Market Value

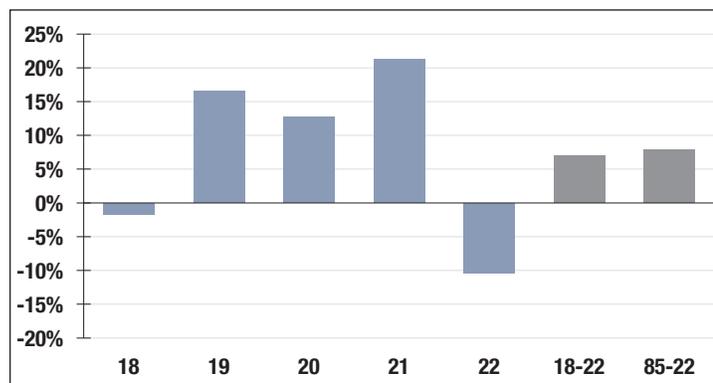
-10.44%
2022 Returns

8.46%
2013-2022
(Annualized)

7.81%
1985-2022
(Annualized)

Investment Returns

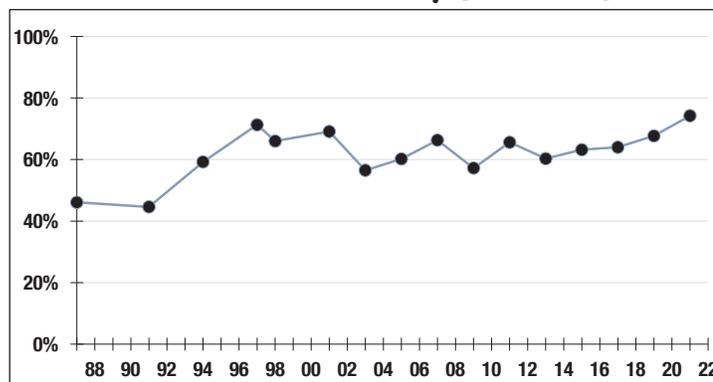
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



74.2%

Funded Ratio

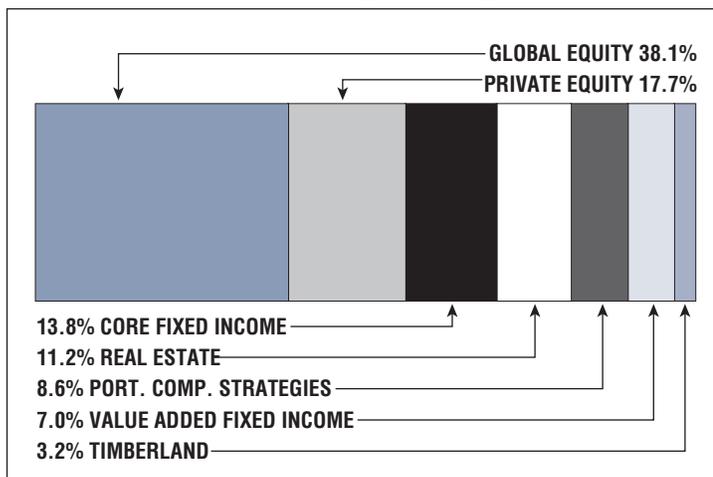
2034

Fully Funded

5.10% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$20.7 M

Unfunded Liability

\$3.5 M
(FY2023)

Total Pension Appropriation

Concord

CONTACT INFORMATION

2250 Main Street
West Concord, MA 01742
Phone 978-759-6057
Fax 978-610-6778

BOARD MEMBERS

Mary Barrett
Gail Dowd
Brian Whitney
Peter Fulton*
Eric Macy
*indicates Chairperson

BOARD ADMINISTRATOR

Linda Boucher

SYSTEM MEMBERS

Active Members567
Total Payroll\$37.7 M
Average Salary\$66,400
Average Age48
Average Service10.1

Retired Members351
Benefits Paid\$11.3 M
Average Benefit\$32,100
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees18
Reported Earnings6
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



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\$205.0 M
Market Value

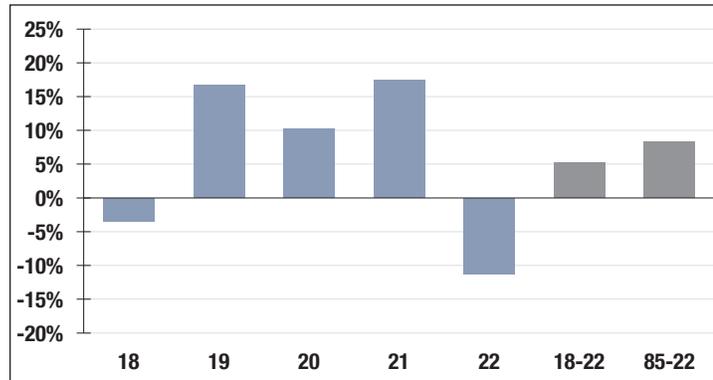
-11.27%
2022 Returns

7.53%
2013-2022
(Annualized)

8.30%
1985-2022
(Annualized)

Investment Returns

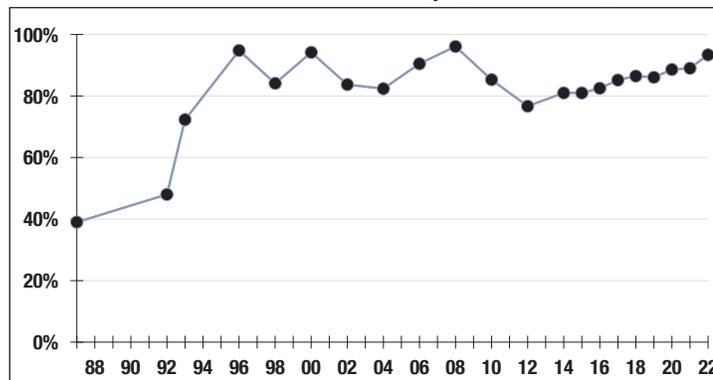
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



93.4%

Funded Ratio

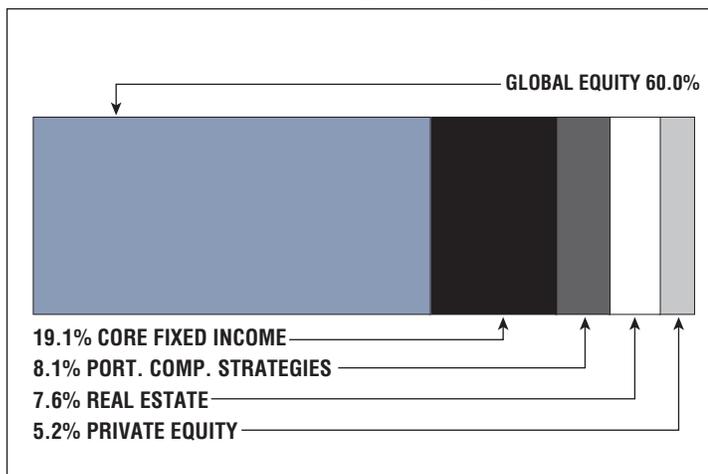
2028

Fully Funded

Level Dollar

Funding Schedule

Asset Allocation (12/31/22)



\$15.0 M

Unfunded Liability

\$6.7 M
(FY2023)

Total Pension Appropriation

Danvers

CONTACT INFORMATION

Town Hall
1 Sylvan Street
Danvers, MA 01923
Phone 978-777-0001
Fax 978-406-4196

BOARD MEMBERS

Heather Varney
Rodney Conley
Dana Hagan
Joseph Collins*
Stephen Swanson
*indicates Chairperson

BOARD ADMINISTRATOR

Corinna Grace

SYSTEM MEMBERS

Active Members466
Total Payroll\$30.9 M
Average Salary\$66,400
Average Age48
Average Service 12.5

Retired Members.....418
Benefits Paid\$13.6 M
Average Benefit\$32,600
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees28
Reported Earnings8
Excess Earners..... 1
Refund Due\$9,895

Last Valuation: 1/1/22
Actuary: KMS



\$132.8 M
Market Value

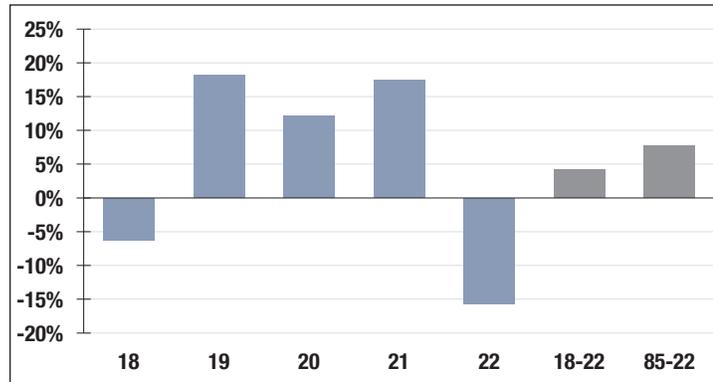
-15.68%
2022 Returns

6.69%
2013-2022
(Annualized)

7.68%
1985-2022
(Annualized)

Investment Returns

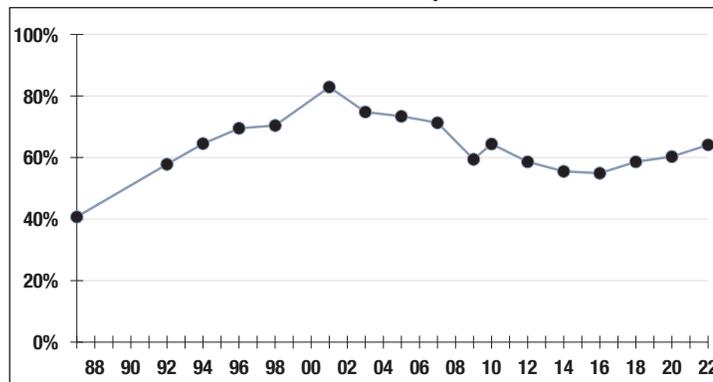
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.13%

Assumed Rate of Return

Funded Ratio History (1987-2022)



64.1%

Funded Ratio

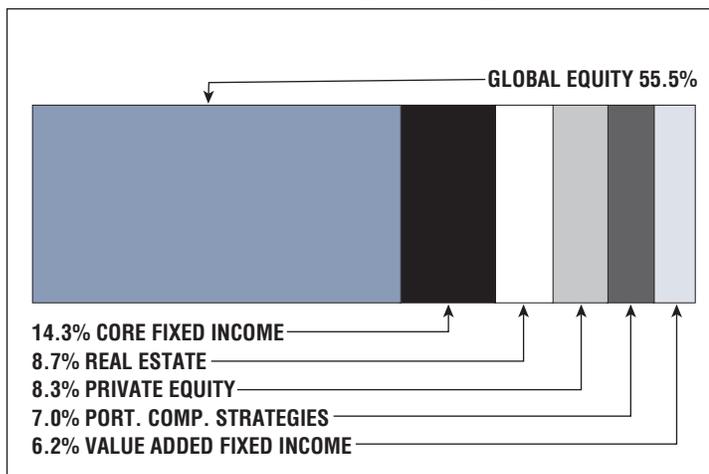
2035

Fully Funded

4.0% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$82.4 M

Unfunded Liability

\$9.3 M
(FY2023)

Total Pension Appropriation

Dedham

CONTACT INFORMATION

202 Bussey St.
Suite 101
Dedham, MA 02026
Phone 781-326-7693
Fax 781-329-4123

BOARD MEMBERS

Shannon MacKenzie
Adam Satriano
Michael Doyle
Stephen MacDougall
Thomas Rorrie*
*indicates Chairperson

BOARD ADMINISTRATOR

Barbara Isberg

SYSTEM MEMBERS

Active Members476
Total Payroll\$29.5 M
Average Salary\$62,000
Average Age47
Average Service 10.6

Retired Members.....326
Benefits Paid\$10.8 M
Average Benefit\$33,200
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees42
Reported Earnings7
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Segal



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\$175.3 M
Market Value

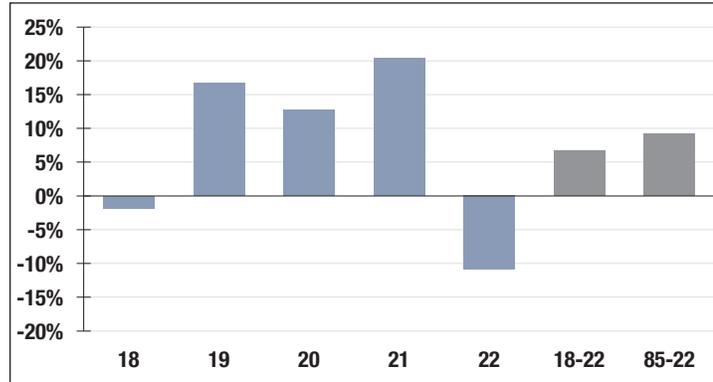
-10.91%
2022 Returns

8.38%
2013-2022
(Annualized)

9.29%
1985-2022
(Annualized)

Investment Returns

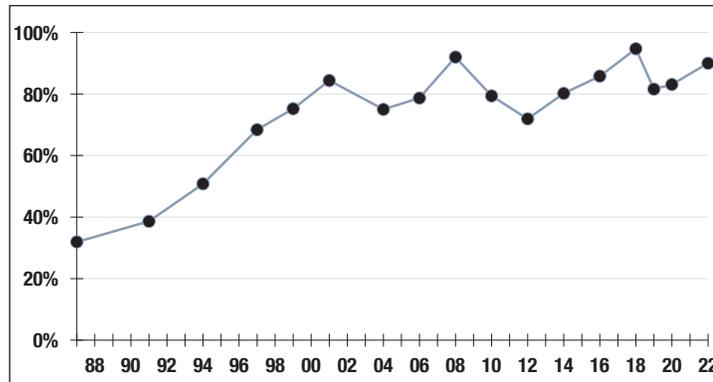
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



90.0%

Funded Ratio

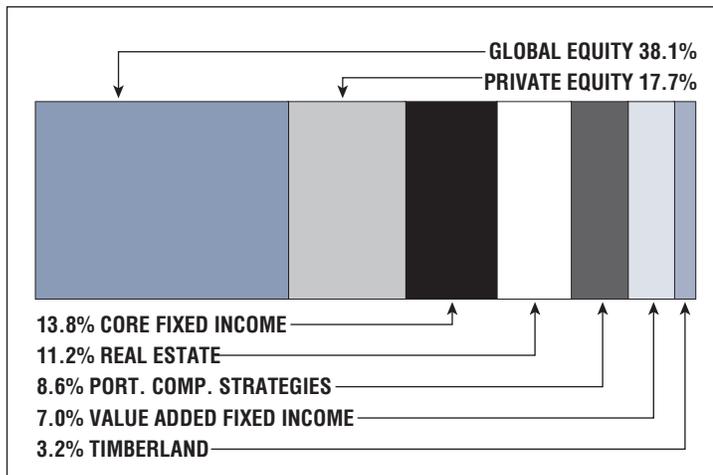
2029

Fully Funded

2.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$20.2 M

Unfunded Liability

\$4.7 M
(FY2023)

Total Pension Appropriation

Dukes County

CONTACT INFORMATION

9 Airport Road
Suite 1
Vineyard Haven, MA 02568
Phone 508-696-3846
Fax 508-696-3847

BOARD MEMBERS

Judith Soules*
James Hagerty
David Rossi
Jo Ann Murphy
Jonathan Snyder
*indicates Chairperson

BOARD ADMINISTRATOR

Kelly McCracken

SYSTEM MEMBERS

Active Members665
Total Payroll\$46.3 M
Average Salary\$69,600
Average Age49
Average Service 10.1

Retired Members.....398
Benefits Paid\$12.3 M
Average Benefit\$30,900
Average Age71

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees30
Reported Earnings 11
Excess Earners.....2
Refund Due\$29,855

Last Valuation: 1/1/22
Actuary: KMS



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\$210.3 M
Market Value

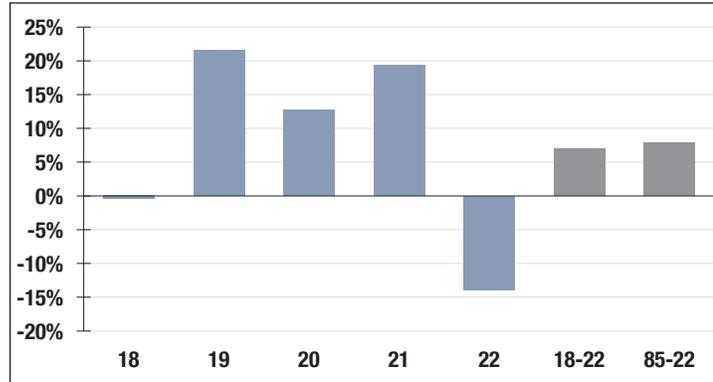
-13.86%
2022 Returns

9.02%
2013-2022
[Annualized]

7.91%
1985-2022
[Annualized]

Investment Returns

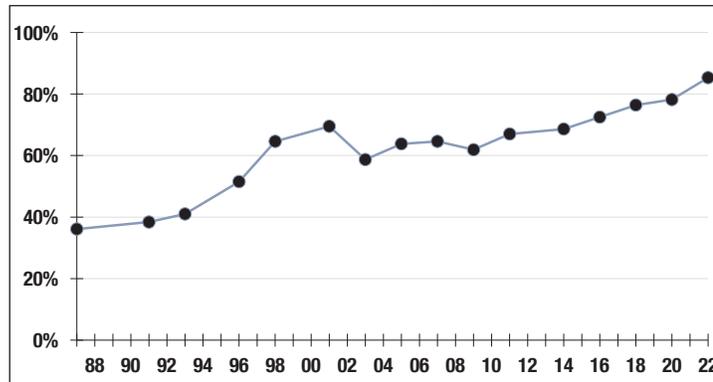
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



85.3%

Funded Ratio

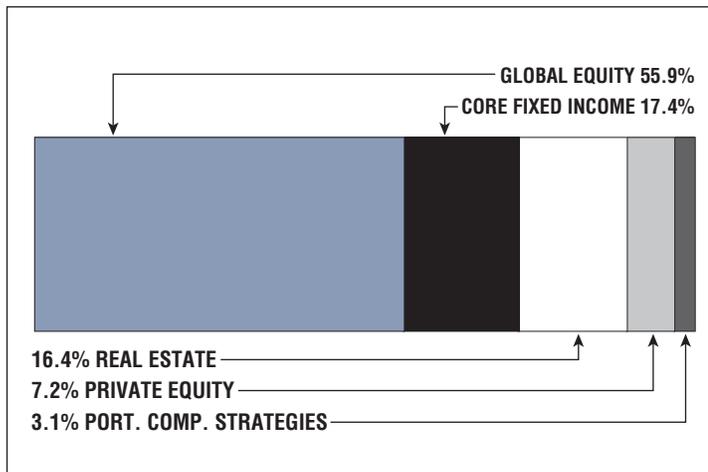
2031

Fully Funded

4.51% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$37.6 M

Unfunded Liability

\$8.5 M
[FY2023]

Total Pension Appropriation

Easthampton

CONTACT INFORMATION

199 Northampton Street
 Easthampton, MA 01027
 Phone 413-203-1307
 Fax 413-203-1308

BOARD MEMBERS

Hetal Patel
 Jessica Hebert
 David Mottor
 Donald Emerson*
 Cornelius Sullivan
 *indicates Chairperson

BOARD ADMINISTRATOR

Kymme Wood

SYSTEM MEMBERS

Active Members256
 Total Payroll\$12.8 M
 Average Salary\$49,900
 Average Age44
 Average Service9.4

Retired Members188
 Benefits Paid\$5.1 M
 Average Benefit\$27,100
 Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees16
 Reported Earnings5
 Excess Earners0
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: PERAC



\$69.1 M
 Market Value

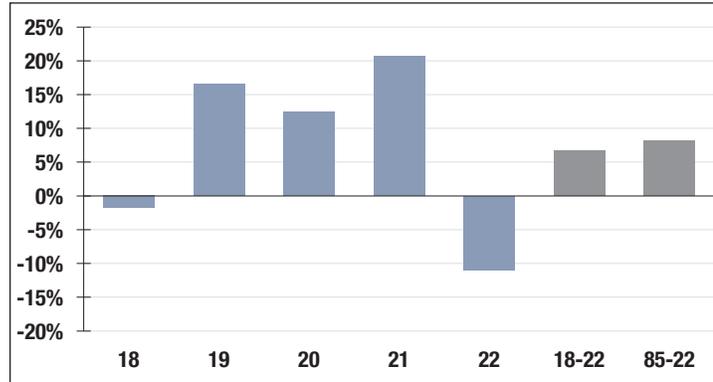
-10.97%
 2022 Returns

8.31%
 2013-2022
 (Annualized)

8.23%
 1985-2022
 (Annualized)

Investment Returns

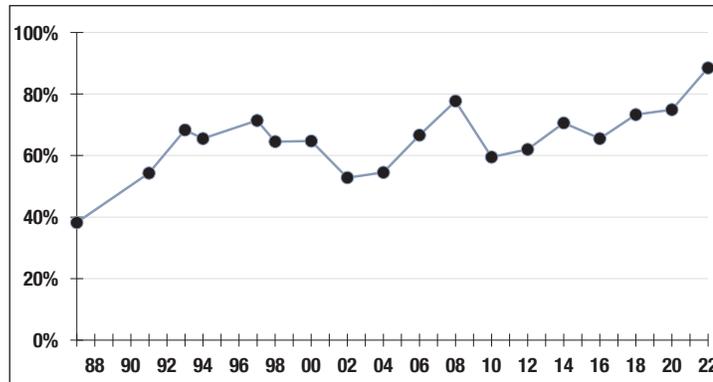
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.85%

Assumed Rate of Return

Funded Ratio History (1987-2022)



88.5%

Funded Ratio

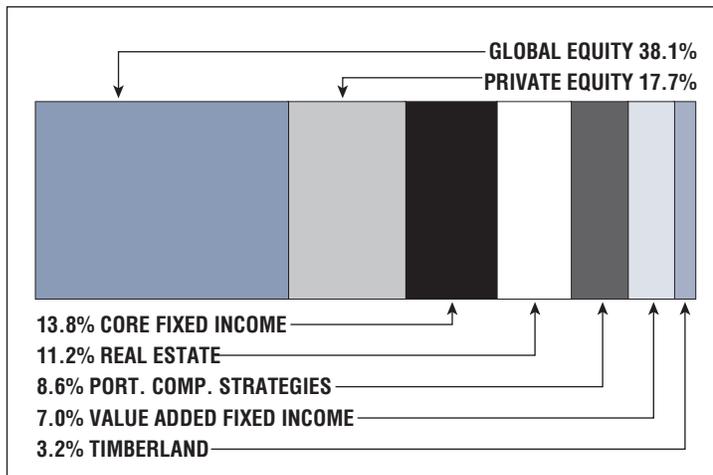
2028

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$10.2 M

Unfunded Liability

\$3.7 M
 (FY2023)

Total Pension Appropriation

Essex Regional

CONTACT INFORMATION

491 Maple Street
 Building 200, Suite 202
 Danvers, MA 01923
 Phone 978-739-9151
 Fax 978-750-0745

BOARD MEMBERS

Tracy Blais
 Kevin Merz
 Katherine Carleton
 Susan Yaskell*
 Vincent Malgeri
 *indicates Chairperson

BOARD ADMINISTRATOR

Charles Kostro

SYSTEM MEMBERS

Active Members2,933
 Total Payroll\$160.0 M
 Average Salary\$54,600
 Average Age48
 Average Service 10.3

 Retired Members.....2,000
 Benefits Paid\$82.6 M
 Average Benefit\$41,300
 Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees107
 Reported Earnings26
 Excess Earners.....0
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: Segal



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\$626.7 M
 Market Value

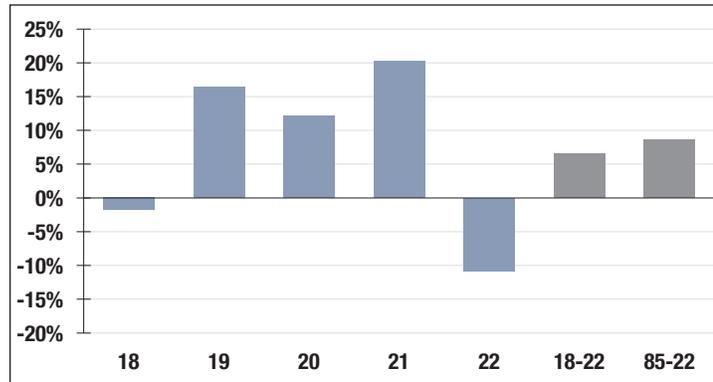
-10.80%
 2022 Returns

8.34%
 2013-2022
 (Annualized)

8.62%
 1985-2022
 (Annualized)

Investment Returns

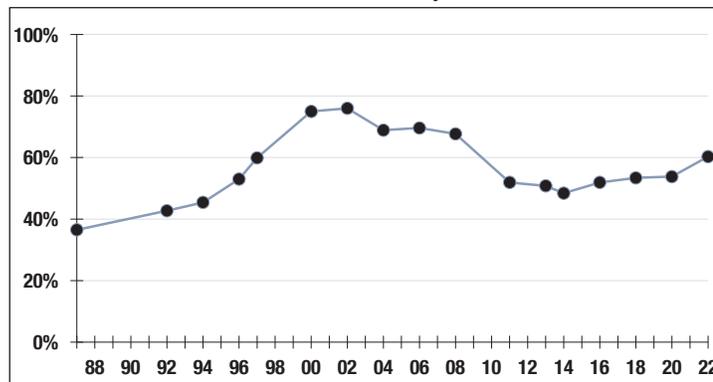
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



60.3%

Funded Ratio

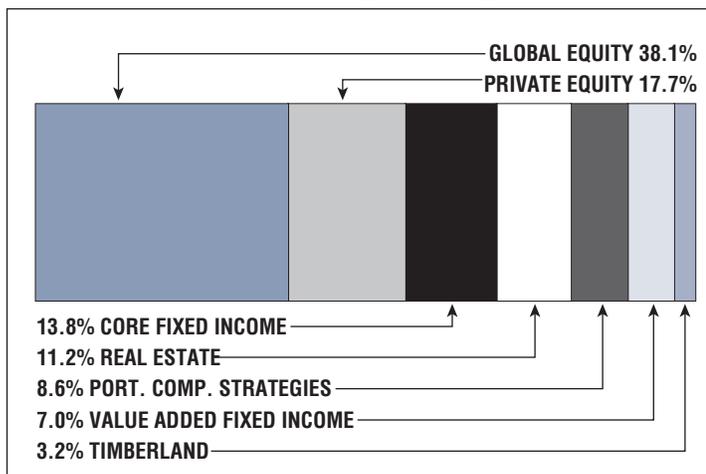
2035

Fully Funded

Varies Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$417.8 M

Unfunded Liability

\$44.5 M
 (FY2023)

Total Pension Appropriation

Everett

CONTACT INFORMATION

City Hall
484 Broadway, Room 30
Everett, MA 02149
Phone 617-394-2310
Fax 617-381-7016

BOARD MEMBERS

Eric Demas
Keith Slattery
Maria Bussell
William Pierce*
Peter Cocciardi
*indicates Chairperson

BOARD ADMINISTRATOR

Robert Shaw

SYSTEM MEMBERS

Active Members716
Total Payroll\$51.2 M
Average Salary\$71,500
Average Age46
Average Service11.2

Retired Members512
Benefits Paid\$16.3 M
Average Benefit\$31,900
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees55
Reported Earnings12
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



\$242.5 M
Market Value

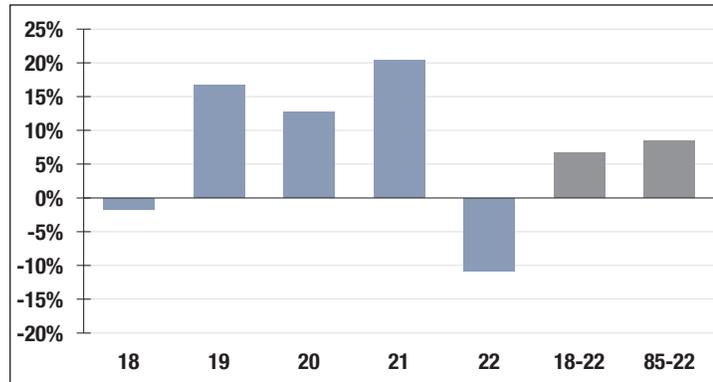
-10.82%
2022 Returns

8.40%
2013-2022
(Annualized)

8.40%
1985-2022
(Annualized)

Investment Returns

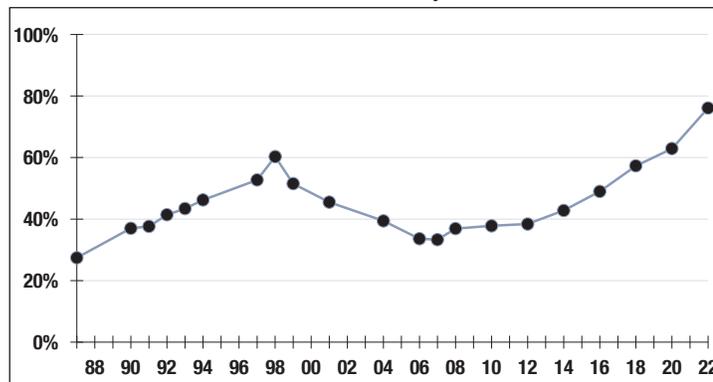
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



76.1%

Funded Ratio

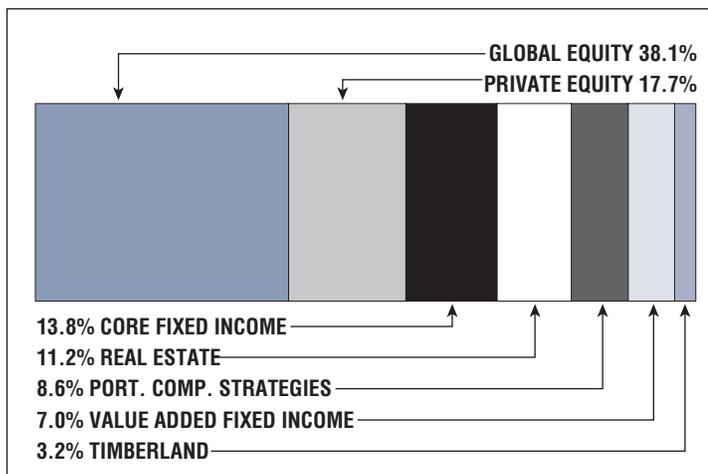
2028

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$75.2 M

Unfunded Liability

\$19.1 M
(FY2023)

Total Pension Appropriation

Fairhaven

CONTACT INFORMATION

Town Hall
40 Centre Street
Fairhaven, MA 02719
Phone 508-979-4023
Fax 508-993-9486

BOARD MEMBERS

Anne Carreiro*
Mark Rees
Timothy Cox
Wally Therrien
Alfred Robichaud
*indicates Chairperson

BOARD ADMINISTRATOR

Mary Sturgeon

SYSTEM MEMBERS

Active Members259
Total Payroll\$14.0 M
Average Salary\$54,200
Average Age46
Average Service 11.8

Retired Members204
Benefits Paid\$5.0 M
Average Benefit\$24,600
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees24
Reported Earnings 10
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$82.5 M
Market Value

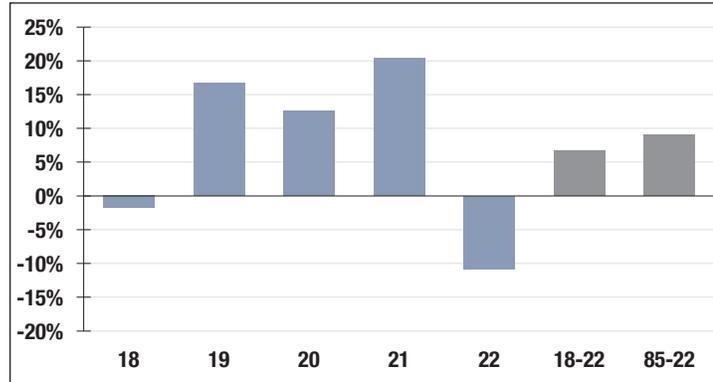
-10.87%
2022 Returns

8.30%
2013-2022
(Annualized)

9.10%
1985-2022
(Annualized)

Investment Returns

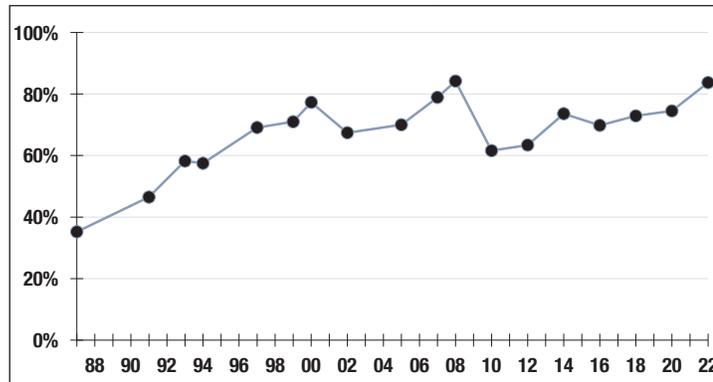
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



83.7%

Funded Ratio

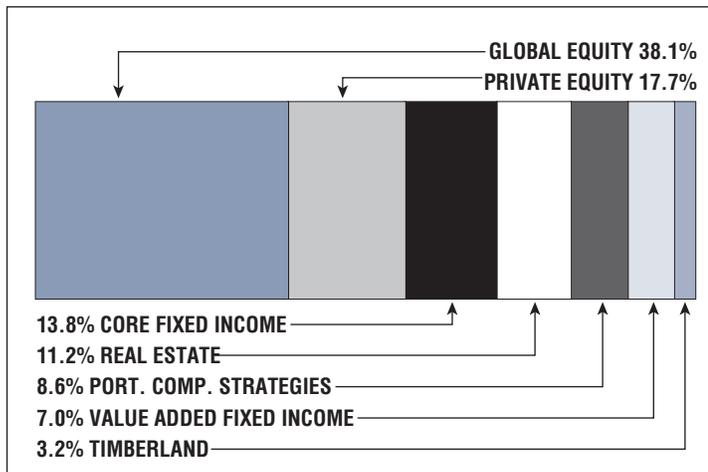
2031

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$16.4 M

Unfunded Liability

\$3.9 M
(FY2023)

Total Pension Appropriation

Fall River

CONTACT INFORMATION

21 Father Devalles Blvd.
Suite GR1, Box 14
Fall River, MA 02723
Phone 508-646-9120
Fax 508-646-9123

BOARD MEMBERS

Bridget Almon
Mark Nassiff
James Machado
Robert Camara
Arthur Viana*
*indicates Chairperson

BOARD ADMINISTRATOR

Michael Pasternak

SYSTEM MEMBERS

Active Members 1,662
Total Payroll \$84.6 M
Average Salary \$50,900
Average Age 45
Average Service 11.7

Retired Members 1,533
Benefits Paid \$43.0 M
Average Benefit \$28,000
Average Age 73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 191
Reported Earnings 51
Excess Earners 4
Refund Due \$127,239

Last Valuation: 1/1/21

Actuary: PERAC



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\$336.6 M
Market Value

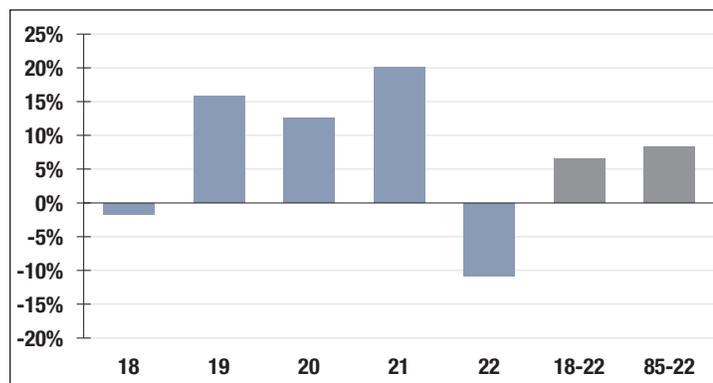
-10.82%
2022 Returns

8.11%
2013-2022
(Annualized)

8.28%
1985-2022
(Annualized)

Investment Returns

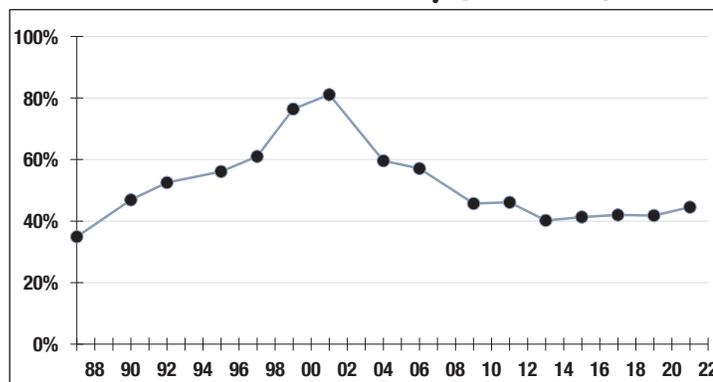
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



44.5%

Funded Ratio

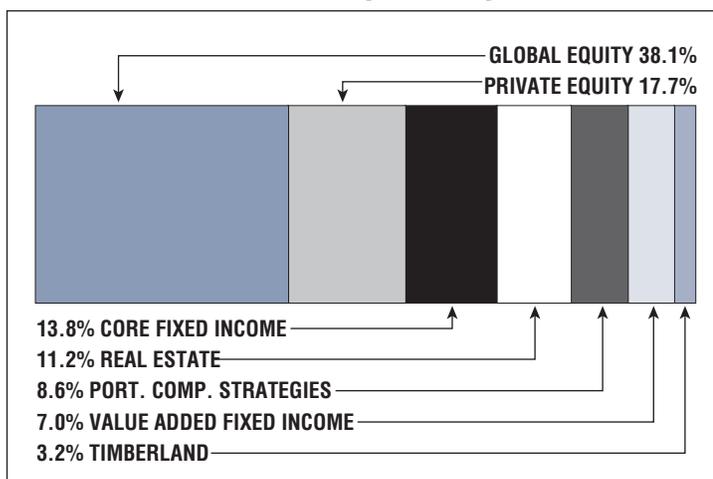
2035

Fully Funded

7.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$396.6 M

Unfunded Liability

\$40.5 M
(FY2023)

Total Pension Appropriation

Falmouth

CONTACT INFORMATION

80 Davis Straits
Suite 102
Falmouth, MA 02540
Phone 508-457-0578
Fax 508-540-9962

BOARD MEMBERS

Victoria Rose
Paul Slivinski
Craig O'Malley
Scott Starbard
Ellen Philbin*
*indicates Chairperson

BOARD ADMINISTRATOR

Francis St. Germaine

SYSTEM MEMBERS

Active Members644
Total Payroll\$35.7 M
Average Salary\$55,400
Average Age48
Average Service 11.4

Retired Members.....435
Benefits Paid\$13.7 M
Average Benefit\$31,500
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees39
Reported Earnings 14
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$181.7 M
Market Value

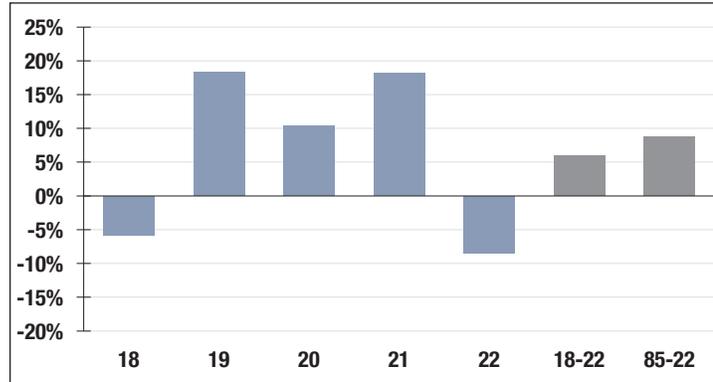
-8.49%
2022 Returns

8.09%
2013-2022
(Annualized)

8.73%
1985-2022
(Annualized)

Investment Returns

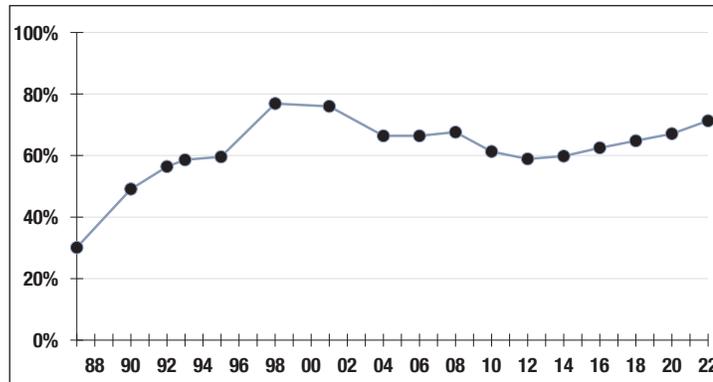
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



71.3%

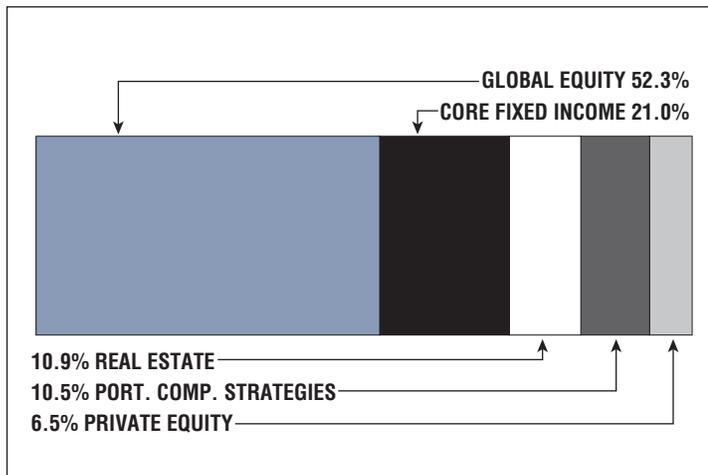
Funded Ratio

2033

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$72.7 M

Unfunded Liability

\$10.4 M
(FY2023)

Total Pension Appropriation

Fitchburg

CONTACT INFORMATION

718 Main Street
Fitchburg, MA 01420
Phone 978-829-1843
Fax 978 829-1973

BOARD MEMBERS

Jacquelyn Cronin

Mary Cringan

Anna Farrell

Thomas Dateo*

John Brown

*indicates Chairperson

BOARD ADMINISTRATOR

Tina Schneider

SYSTEM MEMBERS

Active Members643
Total Payroll\$34.5 M
Average Salary\$53,700
Average Age46
Average Service11

Retired Members601
Benefits Paid\$18.5 M
Average Benefit\$30,800
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees55
Reported Earnings14
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



\$157.3 M
Market Value

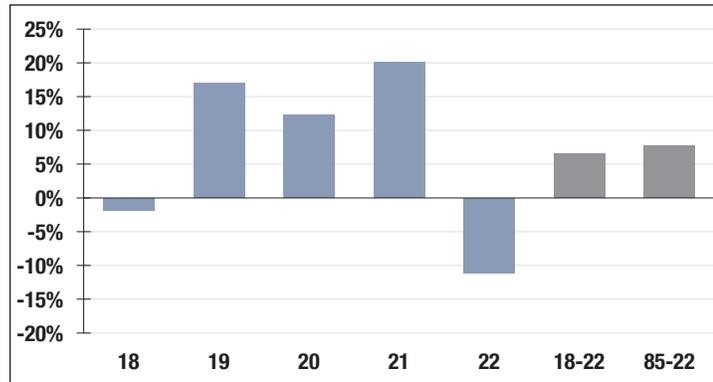
-11.12%
2022 Returns

8.15%
2013-2022
(Annualized)

7.68%
1985-2022
(Annualized)

Investment Returns

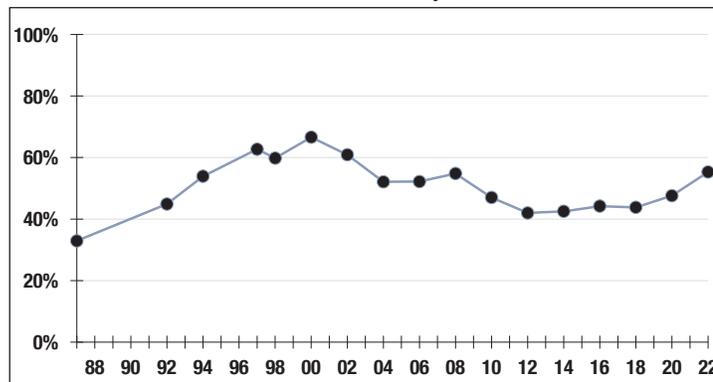
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



55.3%

Funded Ratio

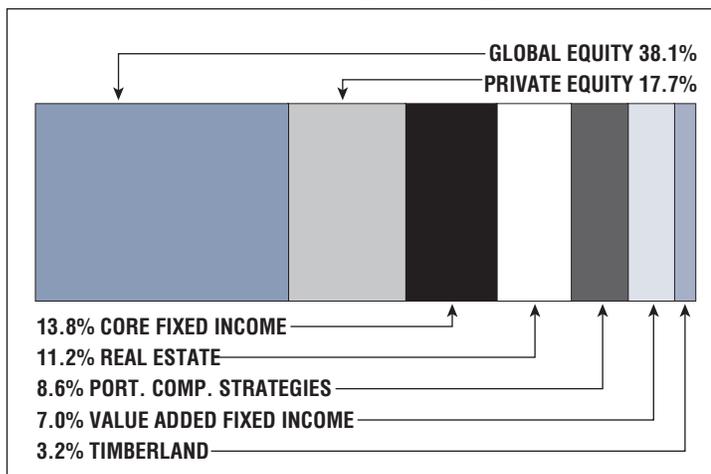
2033

Fully Funded

5.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$132.4 M

Unfunded Liability

\$16.2 M
(FY2023)

Total Pension Appropriation

Framingham

CONTACT INFORMATION

150 Concord Street
 Memorial Bldg, Room B-31
 Framingham, MA 01702
 Phone 508-532-5465
 Fax 508-532-5757

BOARD MEMBERS

Louise Miller
 Joseph Fonseca
 Peter Rovinelli
 John White
 *indicates Chairperson

BOARD ADMINISTRATOR

Laurie Lizak

SYSTEM MEMBERS

Active Members 1,271
 Total Payroll\$74.6 M
 Average Salary\$58,700
 Average Age46
 Average Service 10.2

Retired Members901
 Benefits Paid\$29.1 M
 Average Benefit\$32,300
 Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees64
 Reported Earnings 16
 Excess Earners0
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: PERAC



\$410.6 M
 Market Value

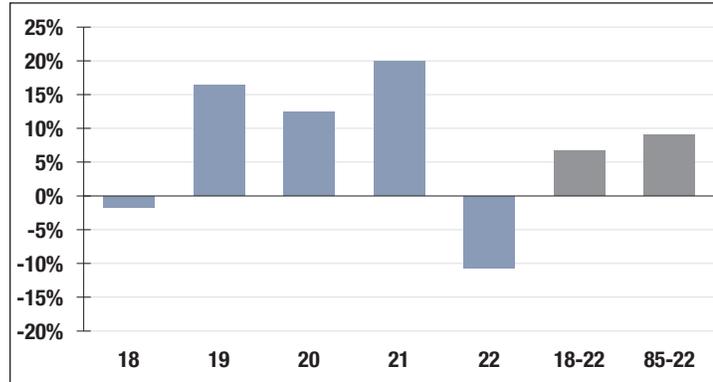
-10.65%
 2022 Returns

8.26%
 2013-2022
 (Annualized)

9.07%
 1985-2022
 (Annualized)

Investment Returns

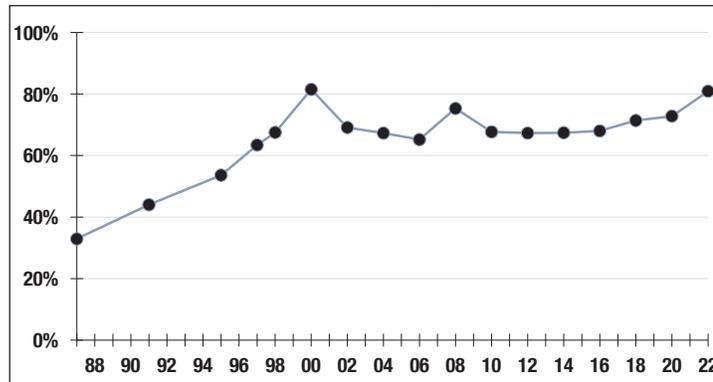
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



80.9%

Funded Ratio

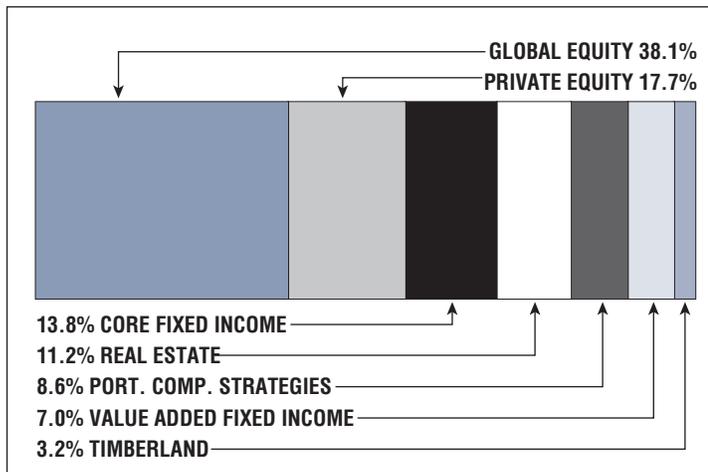
2030

Fully Funded

5.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$98.4 M

Unfunded Liability

\$21.2 M
 (FY2023)

Total Pension Appropriation

Franklin Regional

CONTACT INFORMATION

101 Munson Street
Suite 108
Greenfield, MA 01301
Phone 413-774-4837

BOARD MEMBERS

Sandra Hanks*
Angel Bragdon
Gabriele Voelker
Mary Stokarski
Paul Mokrzecki
*indicates Chairperson

BOARD ADMINISTRATOR

Dale Kowacki

SYSTEM MEMBERS

Active Members993
Total Payroll\$41.3 M
Average Salary\$41,600
Average Age48
Average Service9.5

Retired Members675
Benefits Paid\$12.3 M
Average Benefit\$18,300
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees25
Reported Earnings4
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: KMS



Click/Scan for Website

\$178.6 M
Market Value

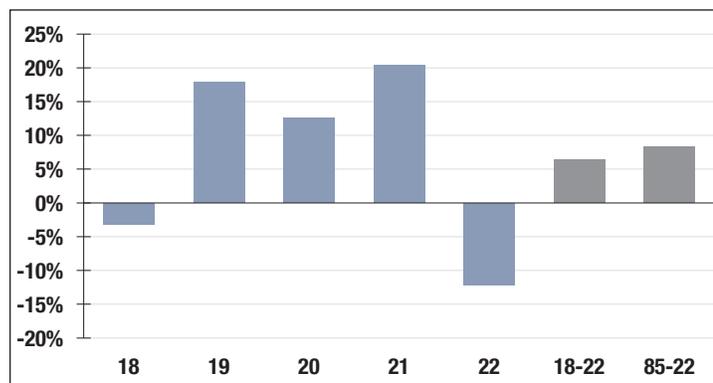
-12.16%
2022 Returns

8.45%
2013-2022
(Annualized)

8.28%
1985-2022
(Annualized)

Investment Returns

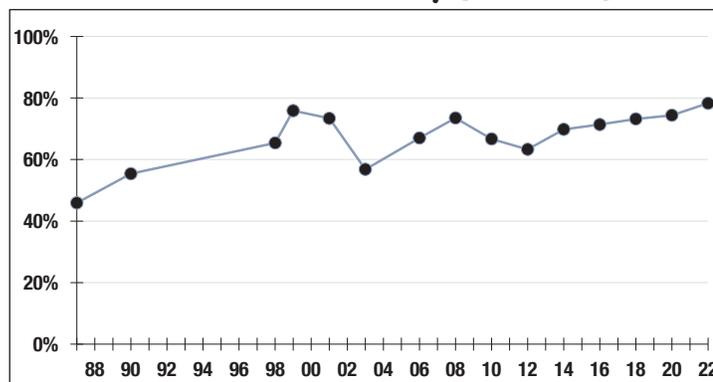
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



78.3%

Funded Ratio

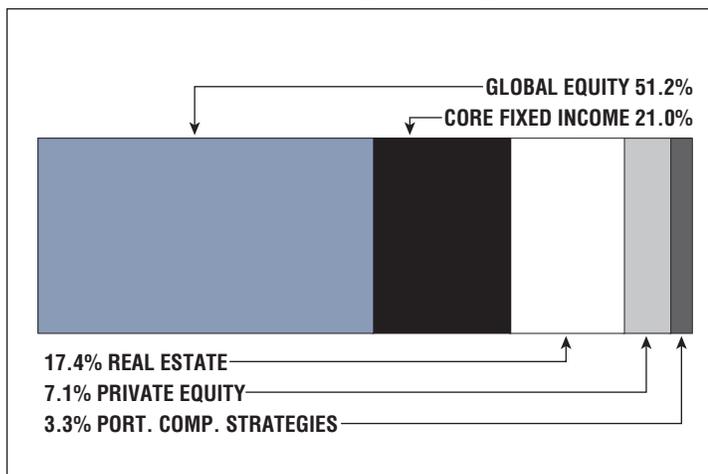
2034

Fully Funded

5.94% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$50.9 M

Unfunded Liability

\$8.3 M
(FY2023)

Total Pension Appropriation

Gardner

CONTACT INFORMATION

City Hall, Room 17
95 Pleasant Street
Gardner, MA 01440
Phone 978-630-4006
Fax 978-630-4012

BOARD MEMBERS

John Richard
Kevin McInerney
Denise Merriam*
Robert Newton
Neil Janssens
*indicates Chairperson

BOARD ADMINISTRATOR

Cheryl Bosse

SYSTEM MEMBERS

Active Members313
Total Payroll\$15.5 M
Average Salary\$49,500
Average Age44
Average Service8.9

Retired Members268
Benefits Paid\$7.0 M
Average Benefit\$26,200
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees19
Reported Earnings4
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



Click/Scan for Website

\$69.0 M
Market Value

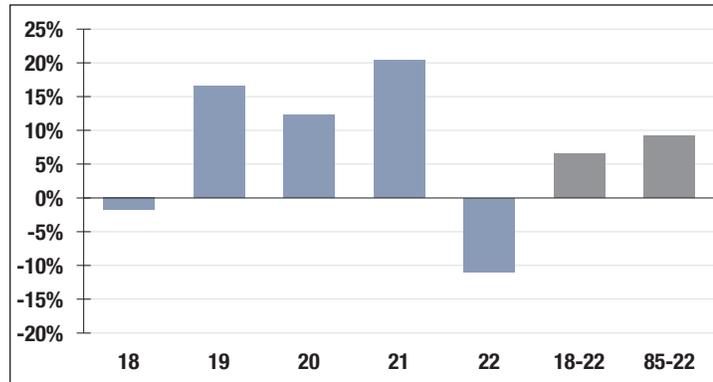
-11.04%
2022 Returns

8.27%
2013-2022
(Annualized)

9.17%
1985-2022
(Annualized)

Investment Returns

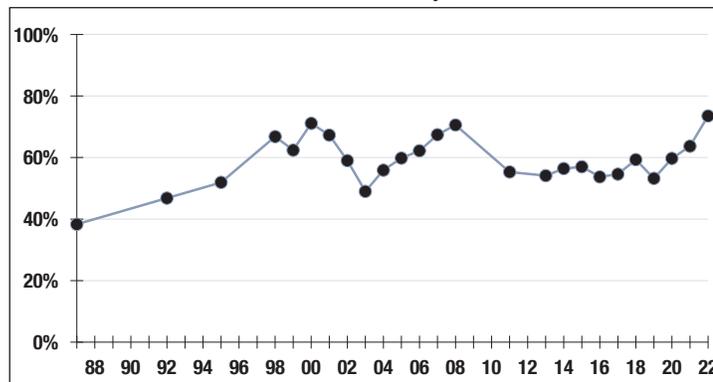
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



73.5%

Funded Ratio

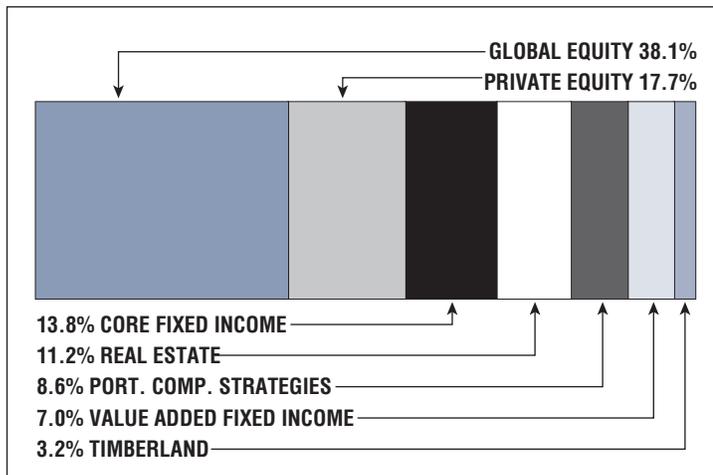
2029

Fully Funded

7.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$28.4 M

Unfunded Liability

\$5.4 M
(FY2023)

Total Pension Appropriation

Gloucester

CONTACT INFORMATION

P.O. Box 114
 Gloucester, MA 01931
 Phone 978-281-9744
 Fax 978-281-9817

BOARD MEMBERS

Kenny Costa
 Donna Leete
 Douglas MacArthur*
 James Hannon
 Juanita Escobar
 *indicates Chairperson

BOARD ADMINISTRATOR

Patricia Ivas

SYSTEM MEMBERS

Active Members555
 Total Payroll\$34.8 M
 Average Salary\$62,700
 Average Age49
 Average Service11.8

Retired Members491
 Benefits Paid\$14.4 M
 Average Benefit\$29,400
 Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees35
 Reported Earnings7
 Excess Earners0
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: Segal



\$143.3 M
 Market Value

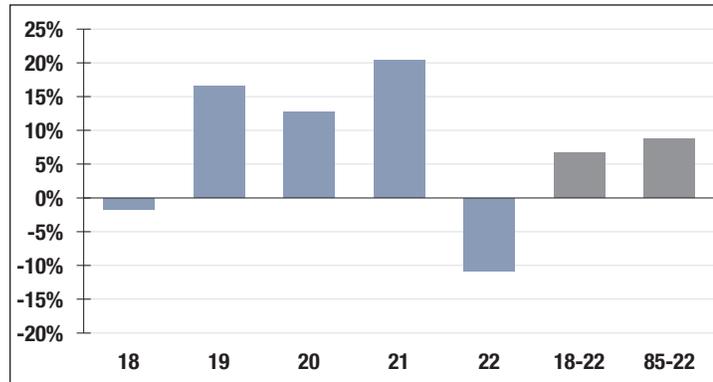
-10.78%
 2022 Returns

8.34%
 2013-2022
 (Annualized)

8.74%
 1985-2022
 (Annualized)

Investment Returns

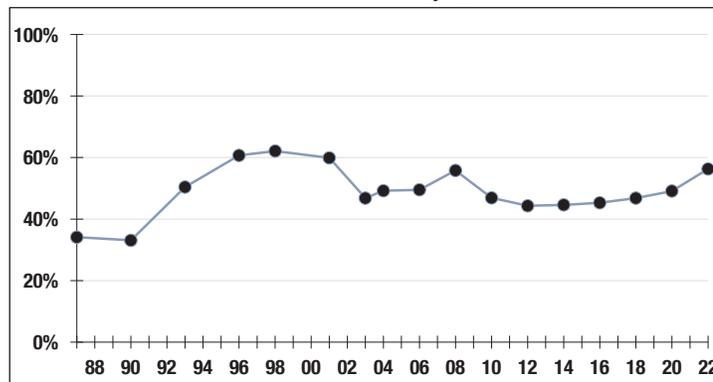
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



56.3%

Funded Ratio

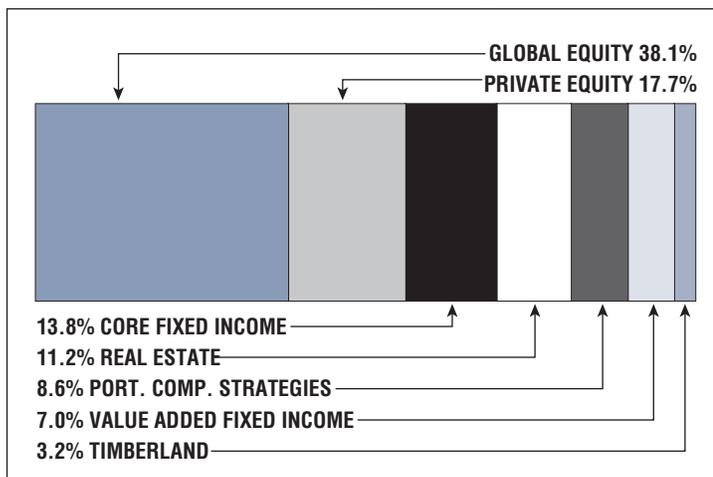
2034

Fully Funded

6.8% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$112.6 M

Unfunded Liability

\$12.4 M
 (FY2023)

Total Pension Appropriation

Greater Lawrence Sanitary District

CONTACT INFORMATION

240 Charles Street
 P.O. Box 187
 North Andover, MA 01845
 Phone 978-689-9464
 Fax 978-685-7790

BOARD MEMBERS

Joseph Quartarone
 Laurie Elliott
 Michael Gagnon
 Sandra Grenier*
 Ronald Pollone
 *indicates Chairperson

BOARD ADMINISTRATOR

Heather Thibeault

SYSTEM MEMBERS

Active Members40
 Total Payroll\$2.8 M
 Average Salary\$69,400
 Average Age48
 Average Service13.3
 Retired Members.....38
 Benefits Paid\$1.2 M
 Average Benefit\$31,800
 Average Age70

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees1
 Reported Earnings0
 Excess Earners.....0
 Refund Due\$0

Last Valuation: 1/1/21
 Actuary: PERAC



Click/Scan for Website

\$22.4 M
 Market Value

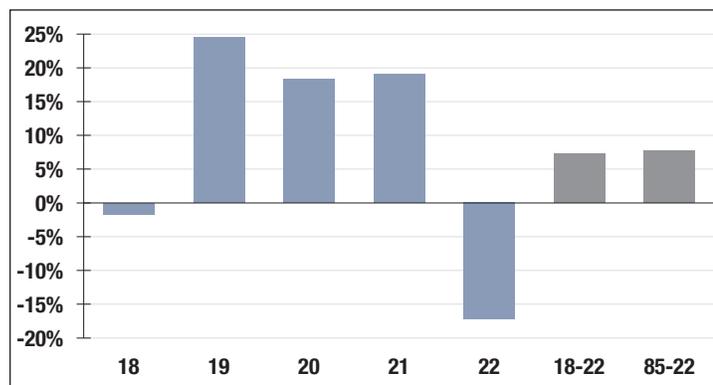
-17.25%
 2022 Returns

8.99%
 2013-2022
 (Annualized)

7.78%
 1985-2022
 (Annualized)

Investment Returns

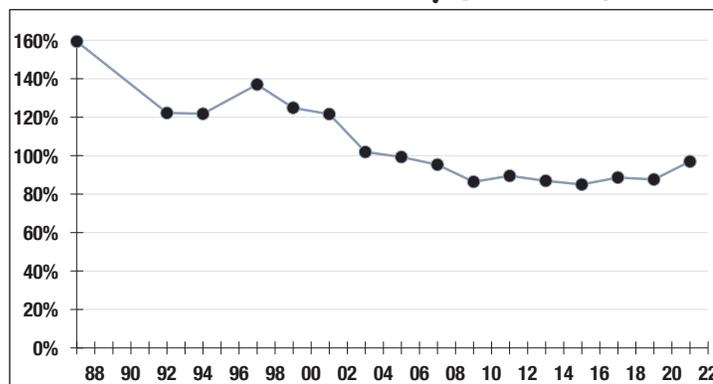
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



97.0%

Funded Ratio

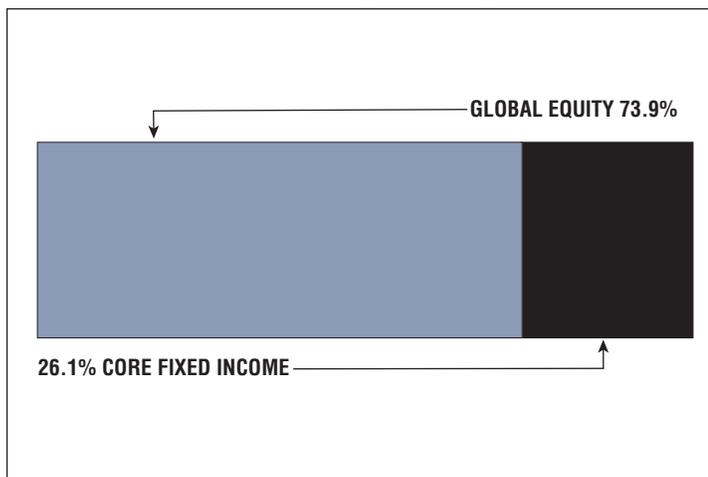
2027

Fully Funded

9.73% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$687 K

Unfunded Liability

\$472 K
 (FY2023)

Total Pension Appropriation

Greenfield

CONTACT INFORMATION

Town Hall
14 Court Square
Greenfield, MA 01301
Phone 413-772-1503
Fax 413-772-1582

BOARD MEMBERS

Angelica Desroches
Marianne Fiske
Kyle Phelps
William Devino*
Deborah Frenzoz
*indicates Chairperson

BOARD ADMINISTRATOR

Shari Hildreth

SYSTEM MEMBERS

Active Members451
Total Payroll\$20.0 M
Average Salary\$44,300
Average Age46
Average Service9

Retired Members308
Benefits Paid\$7.8 M
Average Benefit\$25,400
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees18
Reported Earnings8
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21

Actuary: PERAC



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\$90.2 M
Market Value

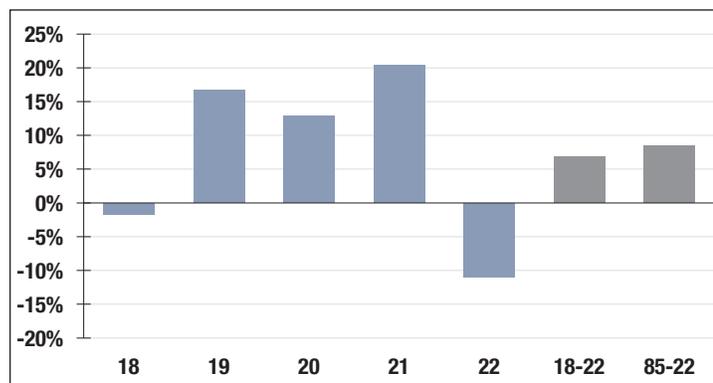
-10.95%
2022 Returns

8.39%
2013-2022
(Annualized)

8.44%
1985-2022
(Annualized)

Investment Returns

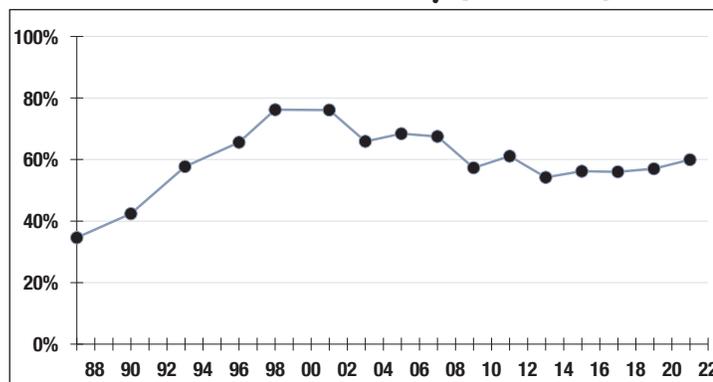
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



59.9%

Funded Ratio

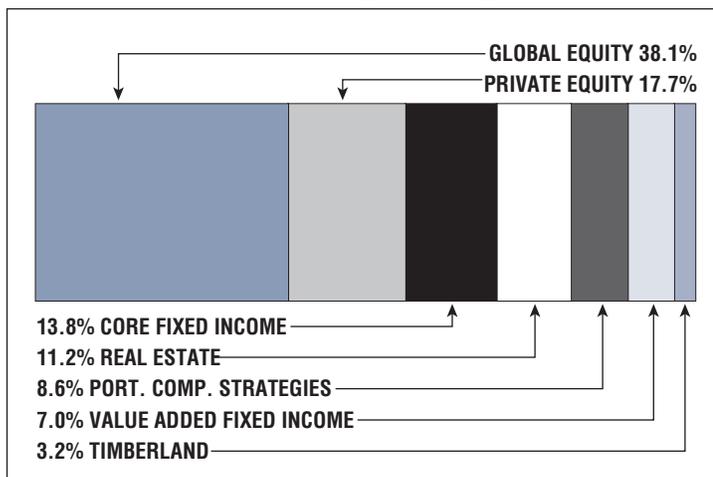
2035

Fully Funded

7.1% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$54.3 M

Unfunded Liability

\$6.5 M
(FY2023)

Total Pension Appropriation

Hampden County

CONTACT INFORMATION

Agawam Corporate Center
67 Hunt Street, Suite 116
Agawam, MA 01001
Phone 413-737-1344
Fax 413-732-7999

BOARD MEMBERS

Karl Schmaelzle*
Michelle Hill
Robert Taylor
Thomas Sullivan
Patrick O'Neil
*indicates Chairperson

BOARD ADMINISTRATOR

Karen Martin

SYSTEM MEMBERS

Active Members2,824
Total Payroll\$120.1 M
Average Salary\$42,500
Average Age48
Average Service 10.7

Retired Members 1,952
Benefits Paid\$48.6 M
Average Benefit\$24,900
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 102
Reported Earnings27
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22

Actuary: Segal



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\$476.0 M
Market Value

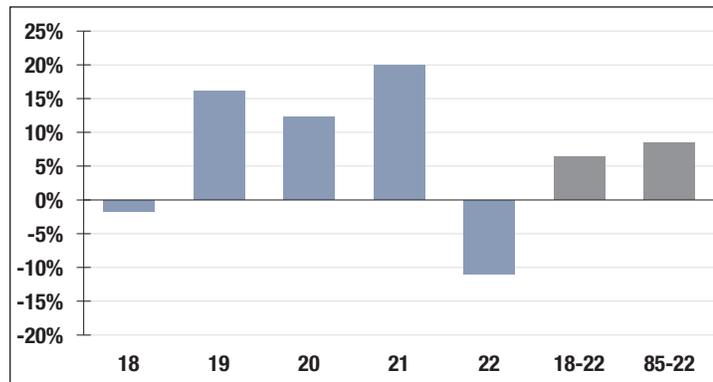
-10.94%
2022 Returns

8.11%
2013-2022
(Annualized)

8.47%
1985-2022
(Annualized)

Investment Returns

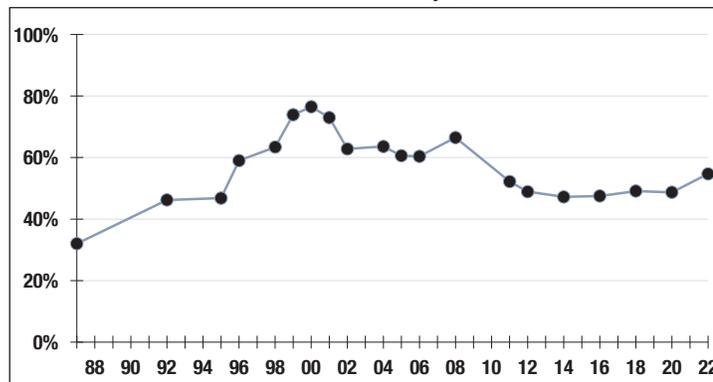
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



54.7%

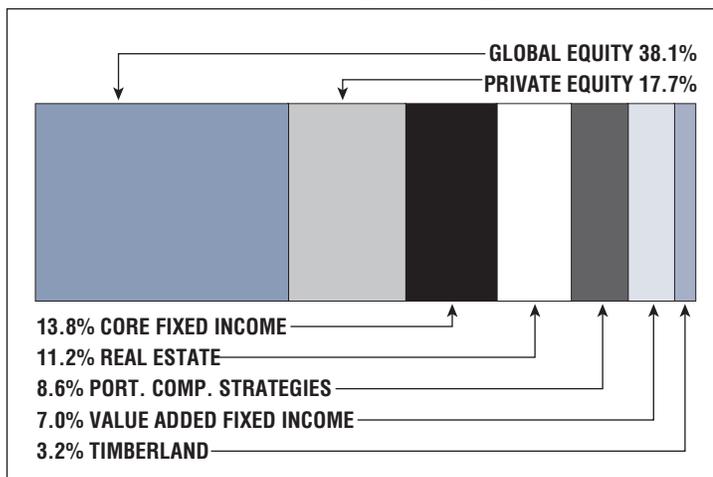
Funded Ratio

2036

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$401.7 M

Unfunded Liability

\$39.6 M
(FY2023)

Total Pension Appropriation

Hampshire County

CONTACT INFORMATION

99 Industrial Drive
Suite 2
Northampton, MA 01060-2326
Phone 413-584-9100
Fax 413-587-9396

BOARD MEMBERS

Patrick Brock*
Jane Wolfe
Harry Chadwick
Sean Mangano
Joe Cook
*indicates Chairperson

BOARD ADMINISTRATOR

Mary Baronas

SYSTEM MEMBERS

Active Members 1,981
Total Payroll \$96.0 M
Average Salary \$48,500
Average Age 47
Average Service 10.1

Retired Members 1,392
Benefits Paid \$33.4 M
Average Benefit \$24,000
Average Age 72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 77
Reported Earnings 29
Excess Earners 2
Refund Due \$32,941

Last Valuation: 1/1/22
Actuary: KMS



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\$427.4 M
Market Value

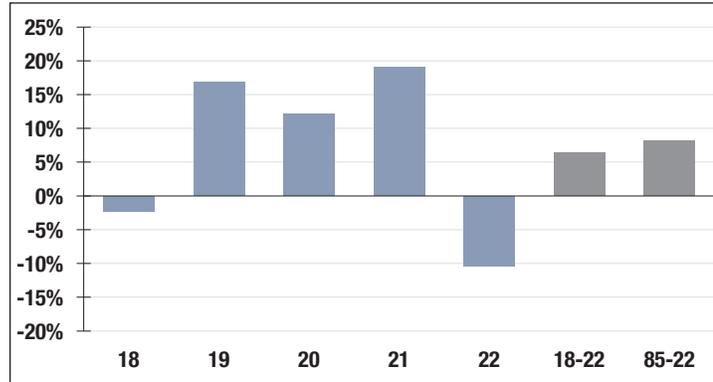
-10.39%
2022 Returns

7.44%
2013-2022
(Annualized)

8.18%
1985-2022
(Annualized)

Investment Returns

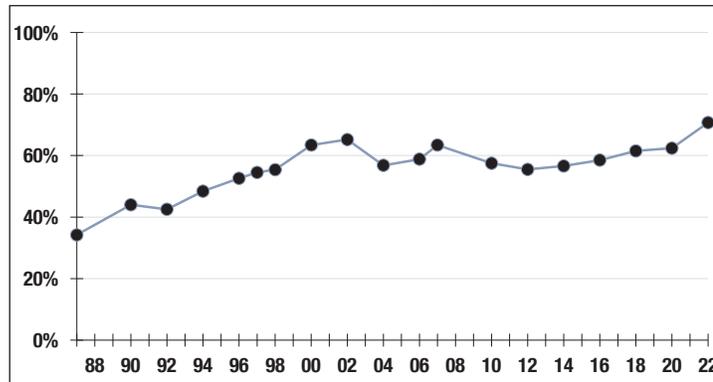
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



70.7%

Funded Ratio

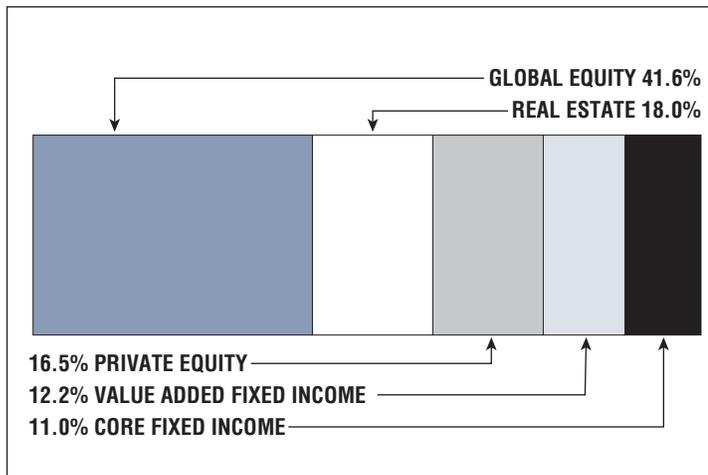
2032

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$177.4 M

Unfunded Liability

\$30.7 M
(FY2023)

Total Pension Appropriation

Haverhill

CONTACT INFORMATION

4 Summer Street
Room 303
Haverhill, MA 01830-5843
Phone 978-374-2358
Fax 978-374-2353

BOARD MEMBERS

Angel Perkins
Richard MacDonald
Anthony Haugh
William Klueber*
James Cleary
*indicates Chairperson

BOARD ADMINISTRATOR

David Van Dam

SYSTEM MEMBERS

Active Members 1,063
Total Payroll \$53.7 M
Average Salary \$50,500
Average Age 46
Average Service 10

Retired Members 1,064
Benefits Paid \$27.8 M
Average Benefit \$26,100
Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 57
Reported Earnings 15
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22

Actuary: KMS



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\$263.8 M
Market Value

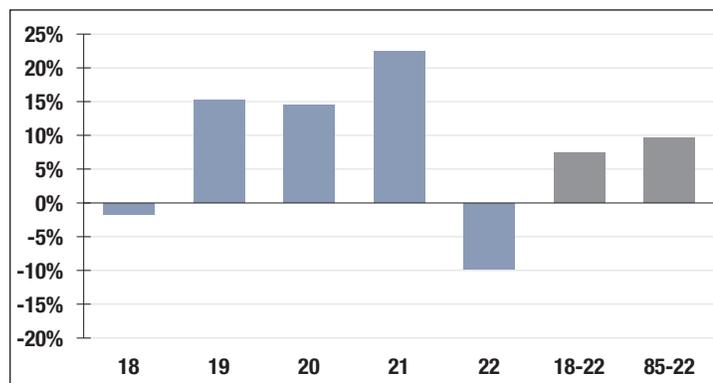
-9.75%
2022 Returns

8.49%
2013-2022
(Annualized)

9.71%
1985-2022
(Annualized)

Investment Returns

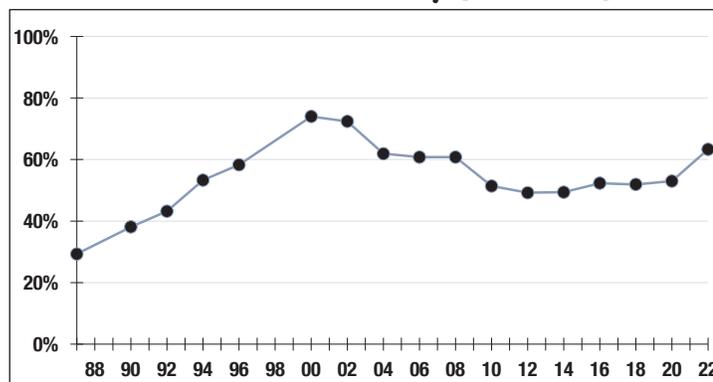
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



63.3%

Funded Ratio

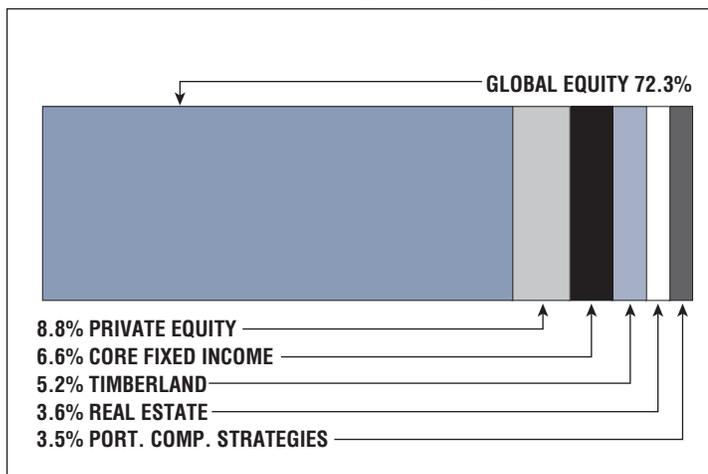
2032

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$153.8 M

Unfunded Liability

\$23.6 M
(FY2023)

Total Pension Appropriation

Hingham

CONTACT INFORMATION

210 Central Street
Hingham, MA 02043-2758
Phone 781-804-2478
Fax 781-804-2444

BOARD MEMBERS

Susan Nickerson*
Eileen McCracken
David Jones
Jean Montgomery
Charles Cristello
*indicates Chairperson

BOARD ADMINISTRATOR

Maressa Orellana

SYSTEM MEMBERS

Active Members610
Total Payroll\$35.7 M
Average Salary\$58,600
Average Age48
Average Service10.1

Retired Members359
Benefits Paid\$10.9 M
Average Benefit\$30,300
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees10
Reported Earnings1
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: KMS



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\$153.1 M
Market Value

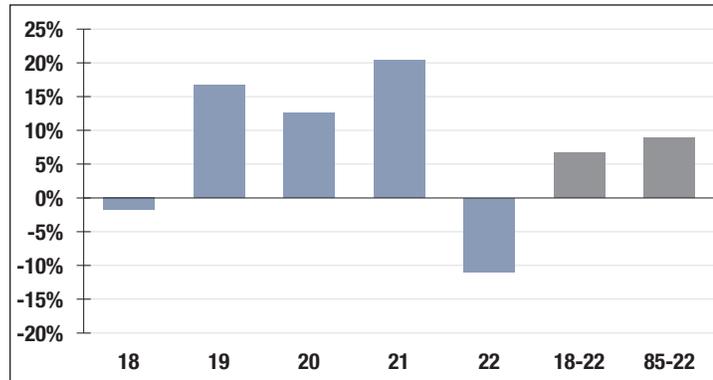
-10.94%
2022 Returns

7.85%
2013-2022
(Annualized)

8.93%
1985-2022
(Annualized)

Investment Returns

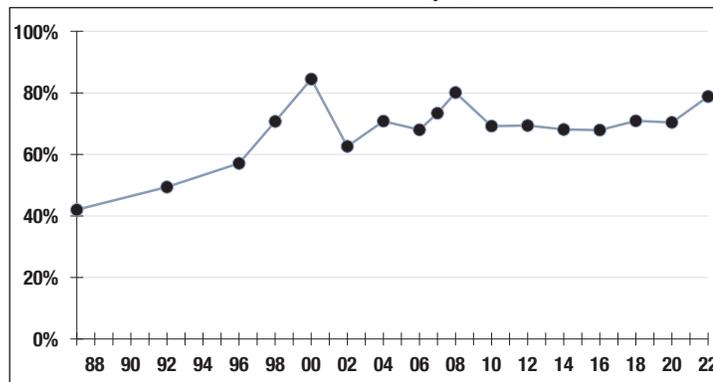
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



78.8%

Funded Ratio

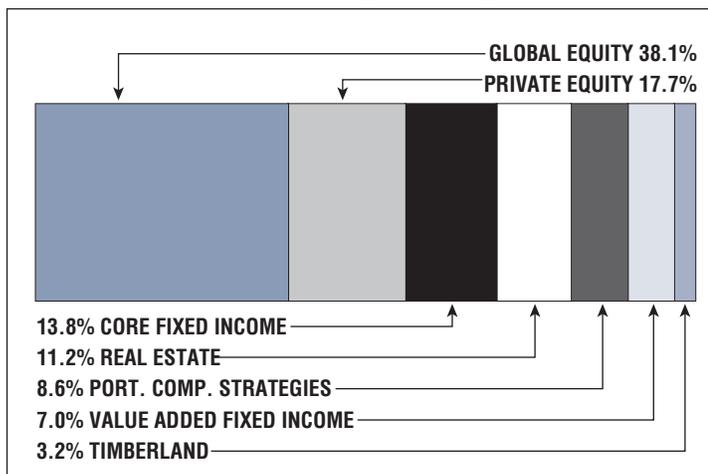
2033

Fully Funded

4.0% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$42.2 M

Unfunded Liability

\$6.6 M
(FY2023)

Total Pension Appropriation

Holyoke

CONTACT INFORMATION

20 Korean Veterans Plaza
Room 207
Holyoke, MA 01040-5044
Phone 413-322-5590
Fax 413-322-5591

BOARD MEMBERS

Tanya Wdowiak
Todd McGee
Cheryl Dugre
John McCarthy*
Michele Aubrey
*indicates Chairperson

BOARD ADMINISTRATOR

Anthony Dulude

SYSTEM MEMBERS

Active Members 1,168
Total Payroll \$66.2 M
Average Salary \$56,700
Average Age 44
Average Service 11

Retired Members 980
Benefits Paid \$29.7 M
Average Benefit \$30,300
Average Age 73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 74
Reported Earnings 15
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: Segal



\$370.2 M
Market Value

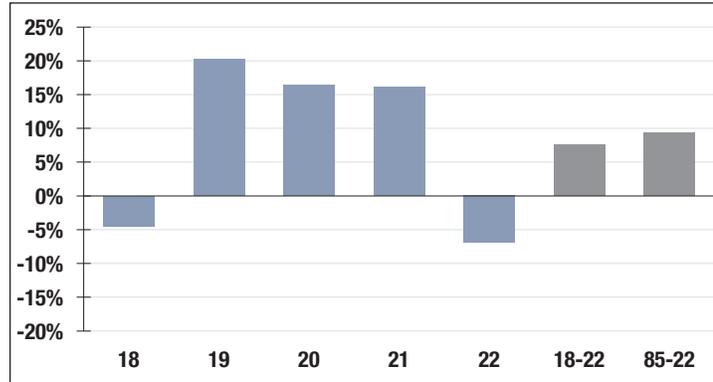
-6.92%
2022 Returns

9.37%
2013-2022
(Annualized)

9.32%
1985-2022
(Annualized)

Investment Returns

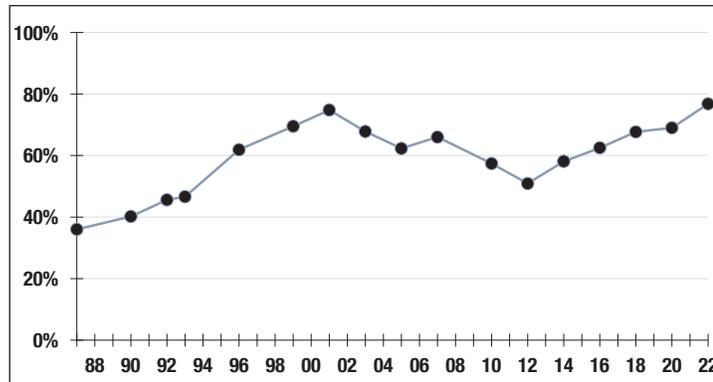
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



76.8%

Funded Ratio

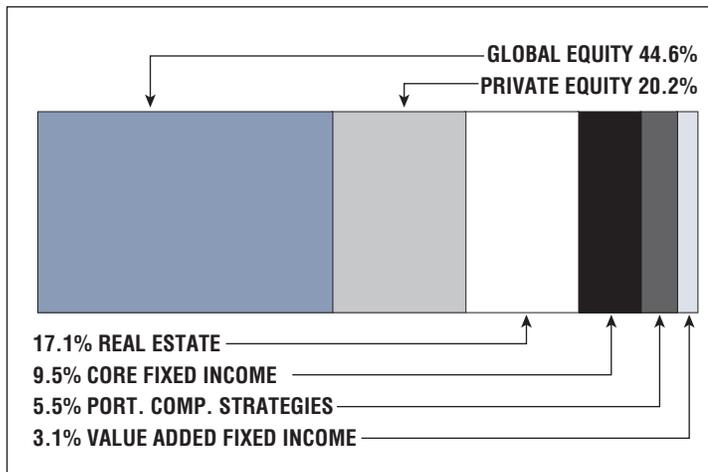
2033

Fully Funded

1.75% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$113.8 M

Unfunded Liability

\$18.4 M
(FY2023)

Total Pension Appropriation

Hull

CONTACT INFORMATION

253 Atlantic Avenue
2nd Floor
Hull, MA 02045
Phone 781-925-2282
Fax 781-925-8509

BOARD MEMBERS

J. Michael Buckley*
Eileen White
Bartley Kelly
Jason Harris
Gregory Galvin
*indicates Chairperson

BOARD ADMINISTRATOR

Darrell Bright

SYSTEM MEMBERS

Active Members 166
Total Payroll \$11.0 M
Average Salary \$66,100
Average Age 50
Average Service 11.8

Retired Members 152
Benefits Paid \$5.2 M
Average Benefit \$33,900
Average Age 72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 15
Reported Earnings 5
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$65.9 M
Market Value

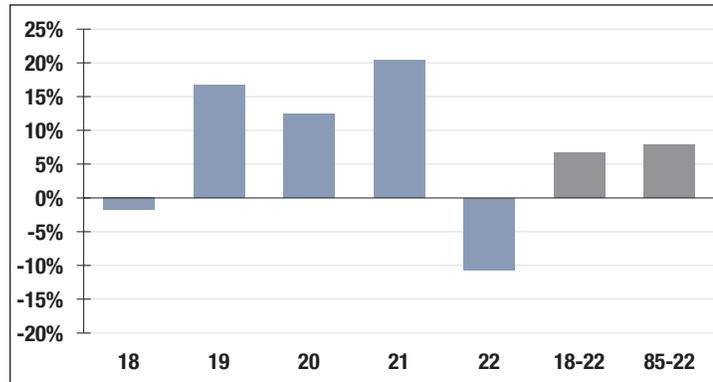
-10.70%
2022 Returns

8.33%
2013-2022
(Annualized)

7.94%
1985-2022
(Annualized)

Investment Returns

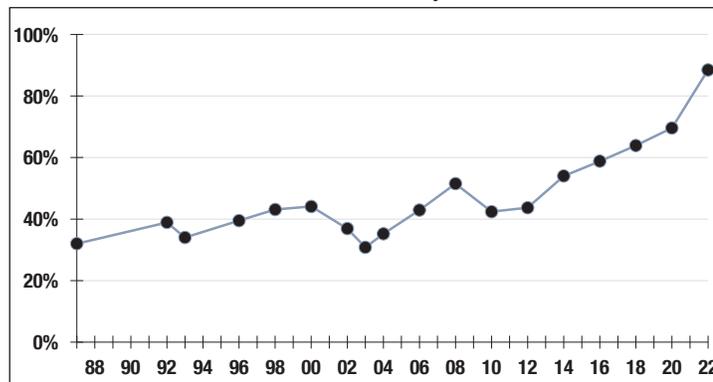
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.40%

Assumed Rate of Return

Funded Ratio History (1987-2022)



88.5%

Funded Ratio

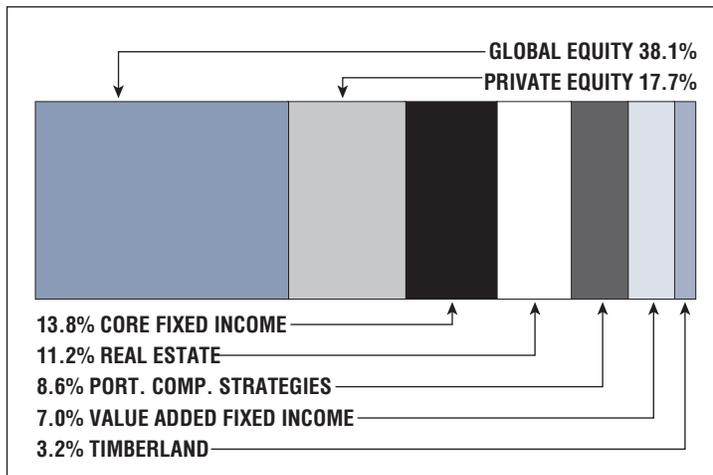
2030

Fully Funded

4.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$9.6 M

Unfunded Liability

\$4.2 M
(FY2023)

Total Pension Appropriation

Lawrence

CONTACT INFORMATION

354 Merrimack Street
Suite 302, Entry C
Lawrence, MA 01843
Phone 978-620-3570
Fax 978-722-9490

BOARD MEMBERS

Ramona Ceballos*
Pascual Ruiz
Diane Cockroft
Robert Wilson
Sheryl Wright
*indicates Chairperson

BOARD ADMINISTRATOR

Gina Rizzo

SYSTEM MEMBERS

Active Members 1,554
Total Payroll \$83.7 M
Average Salary \$53,800
Average Age 45
Average Service 10.4

Retired Members 912
Benefits Paid \$22.9 M
Average Benefit \$25,100
Average Age 73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 103
Reported Earnings 23
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: KMS



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\$303.5 M
Market Value

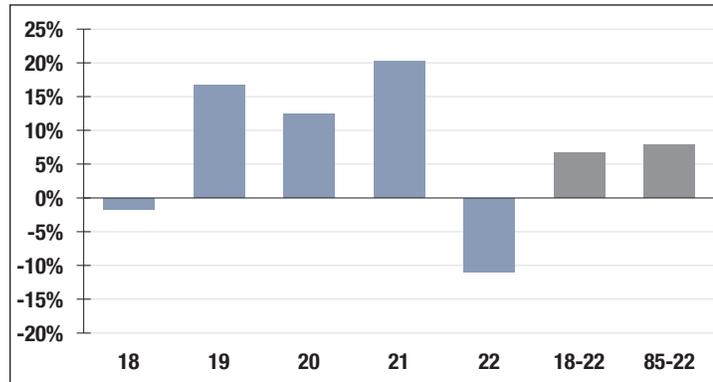
-11.02%
2022 Returns

8.26%
2013-2022
(Annualized)

7.82%
1985-2022
(Annualized)

Investment Returns

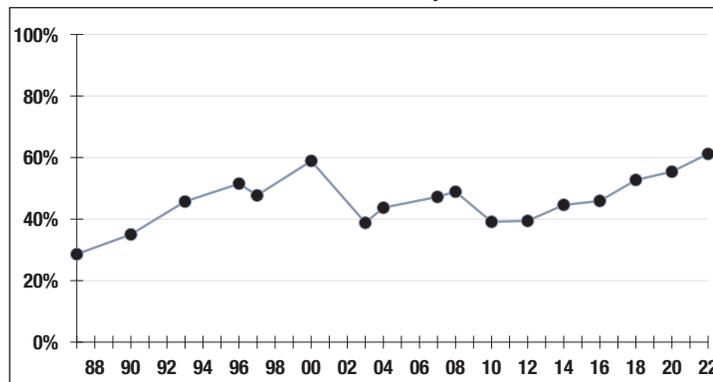
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



61.2%

Funded Ratio

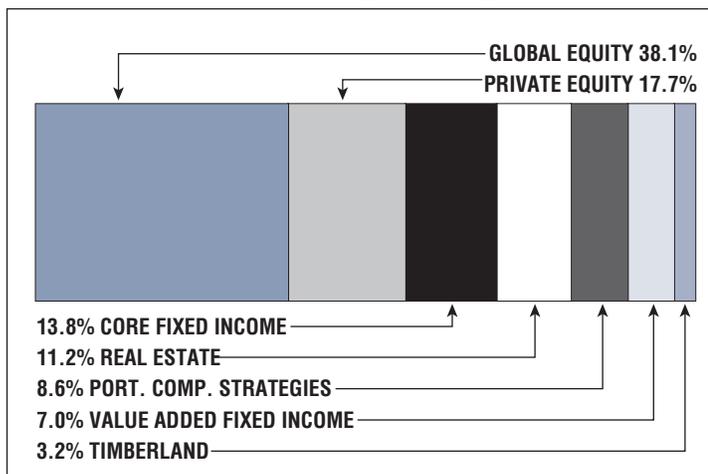
2036

Fully Funded

3.8% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$194.2 M

Unfunded Liability

\$23.6 M
(FY2023)

Total Pension Appropriation

Leominster

CONTACT INFORMATION

City Hall, Room 15
25 West Street
Leominster, MA 01453
Phone 978-962-3539
Fax 978-534-7508

BOARD MEMBERS

Jennifer Reddington
David Laplante*
Jonathan Campagna
Shayne Newton
Douglas Farwell
*indicates Chairperson

BOARD ADMINISTRATOR

Erin Hunt

SYSTEM MEMBERS

Active Members646
Total Payroll\$33.5 M
Average Salary\$51,900
Average Age44
Average Service9.7

Retired Members438
Benefits Paid\$12.2 M
Average Benefit\$27,800
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees36
Reported Earnings19
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



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\$258.3 M
Market Value

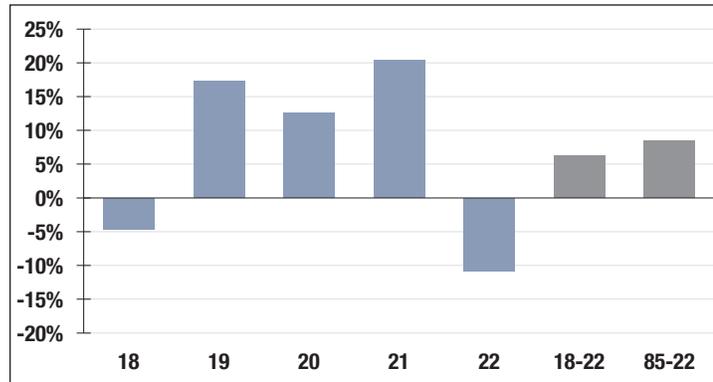
-10.85%
2022 Returns

8.74%
2013-2022
(Annualized)

8.48%
1985-2022
(Annualized)

Investment Returns

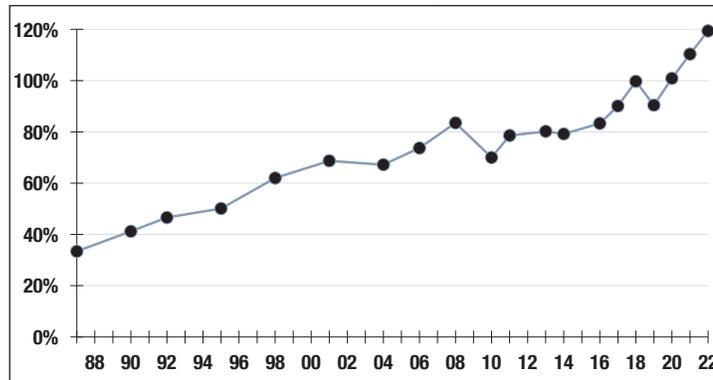
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



5.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



119.4%

Funded Ratio

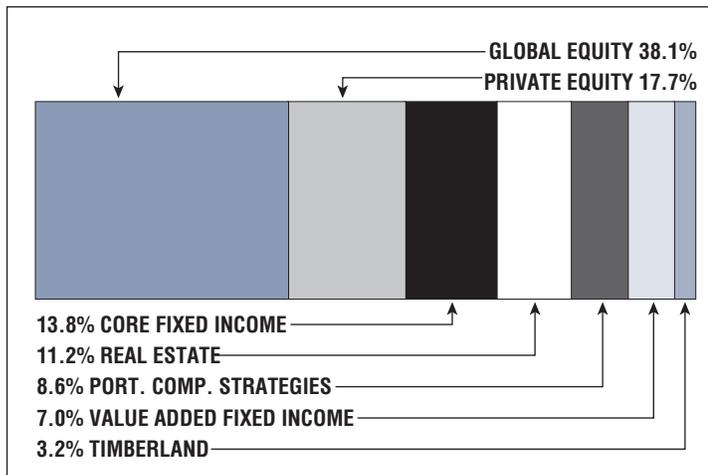
NA

Fully Funded

Fully Funded/
Normal Cost

Funding Schedule

Asset Allocation (12/31/22)



-\$48.7 M

Unfunded Liability

\$2.0 M
(FY2023)

Total Pension
Appropriation

Lexington

CONTACT INFORMATION

1625 Massachusetts Avenue
Lexington, MA 02420
Phone 781-861-2720
Fax 781-861-2794

BOARD MEMBERS

Carolyn Kosnoff
Frederick Weiss
Joseph Foley
Robert Cunha*
Alan Fields
*indicates Chairperson

BOARD ADMINISTRATOR

Michelle Malone

SYSTEM MEMBERS

Active Members757
Total Payroll\$45.7 M
Average Salary\$60,400
Average Age46
Average Service9.9

Retired Members457
Benefits Paid\$13.8 M
Average Benefit\$30,200
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees23
Reported Earnings10
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: Stone



\$191.0 M
Market Value

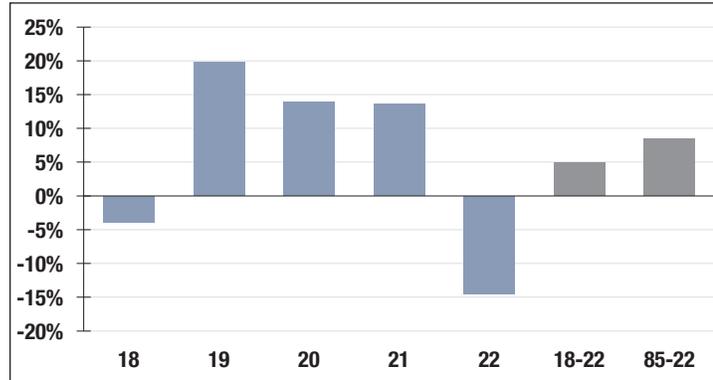
-14.47%
2022 Returns

7.16%
2013-2022
(Annualized)

8.42%
1985-2022
(Annualized)

Investment Returns

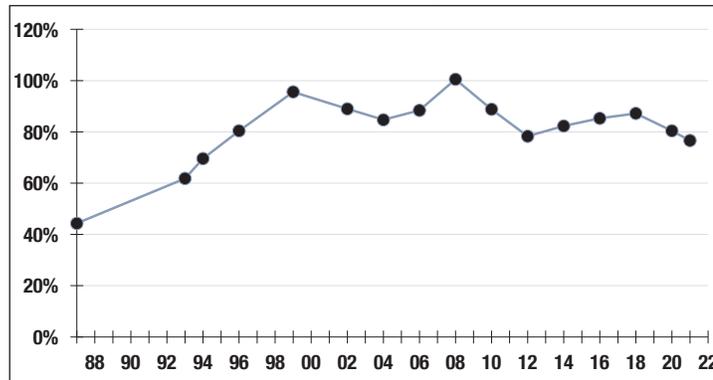
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



76.6%

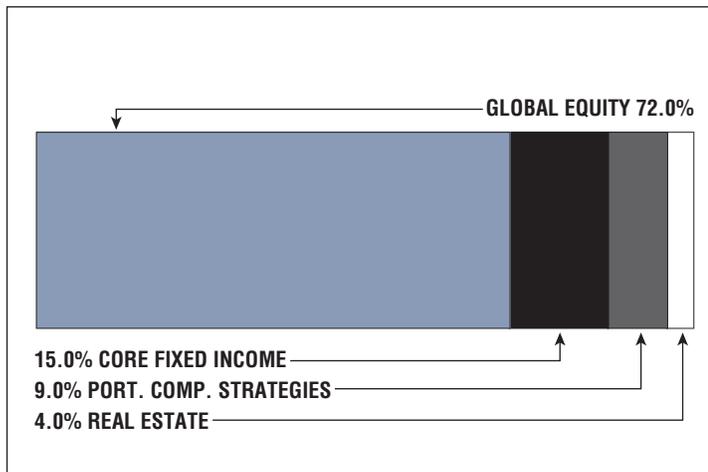
Funded Ratio

2030

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$59.3 M

Unfunded Liability

\$8.3 M
(FY2023)

Total Pension Appropriation

Lowell

CONTACT INFORMATION

City Hall, Room 3
375 Merrimack Street
Lowell, MA 01852-5998
Phone 978-674-4094
Fax 978-446-7019

BOARD MEMBERS

Kelly Oakes
David Keene
Robert Littlefield
William Desrosiers*
Michael Brennan
*indicates Chairperson

BOARD ADMINISTRATOR

Shannon Dowd

SYSTEM MEMBERS

Active Members 1,693
Total Payroll \$106.0 M
Average Salary \$62,600
Average Age 46
Average Service 12.3

Retired Members 1,288
Benefits Paid \$42.4 M
Average Benefit \$32,900
Average Age 72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 157
Reported Earnings 37
Excess Earners 1
Refund Due \$38,942

Last Valuation: 1/1/21
Actuary: KMS



Click/Scan for Website

\$482.6 M
Market Value

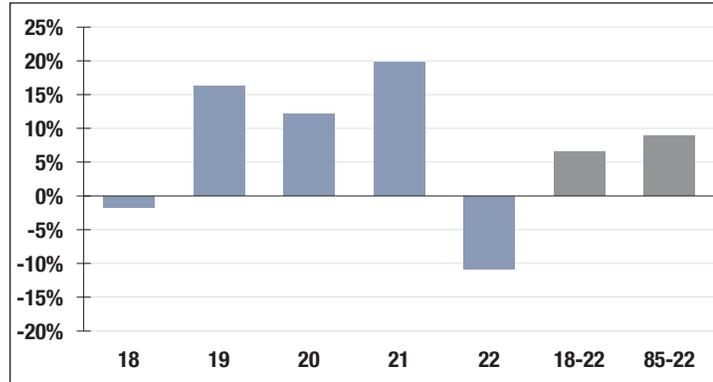
-10.80%
2022 Returns

8.06%
2013-2022
(Annualized)

8.87%
1985-2022
(Annualized)

Investment Returns

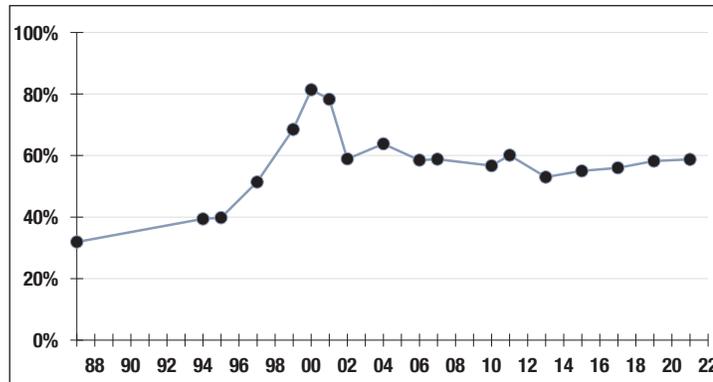
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.10%

Assumed Rate of Return

Funded Ratio History (1987-2022)



58.7%

Funded Ratio

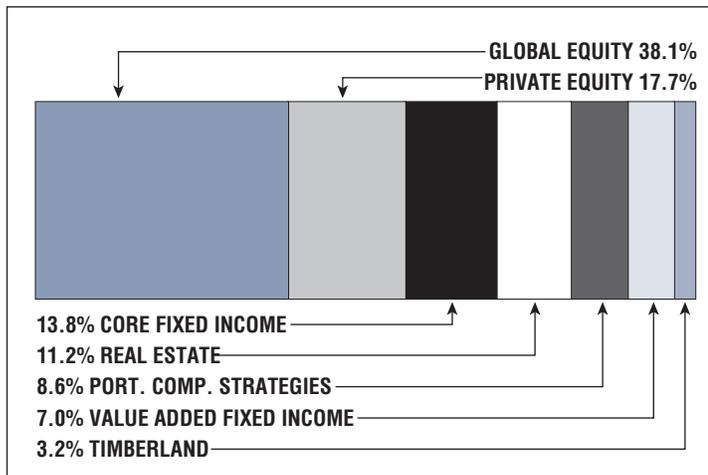
2037

Fully Funded

5.2% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$312.5 M

Unfunded Liability

\$33.4 M
(FY2023)

Total Pension Appropriation

Lynn

CONTACT INFORMATION

3 City Hall Square
Room 106
Lynn, MA 01901
Phone 781-586-6897
Fax 781-595-9101

BOARD MEMBERS

Stephen Spencer
Frank Valeri
Richard Biagiotti
Robert Mullins
Michael Marks*
*indicates Chairperson

BOARD ADMINISTRATOR

Gary Brenner

SYSTEM MEMBERS

Active Members 1,325
Total Payroll \$83.5 M
Average Salary \$63,100
Average Age 48
Average Service 14.1

Retired Members 1,201
Benefits Paid \$42.8 M
Average Benefit \$35,700
Average Age 74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 143
Reported Earnings 35
Excess Earners 1
Refund Due \$6,113

Last Valuation: 1/1/21
Actuary: PERAC



Click/Scan for Website

\$488.6 M
Market Value

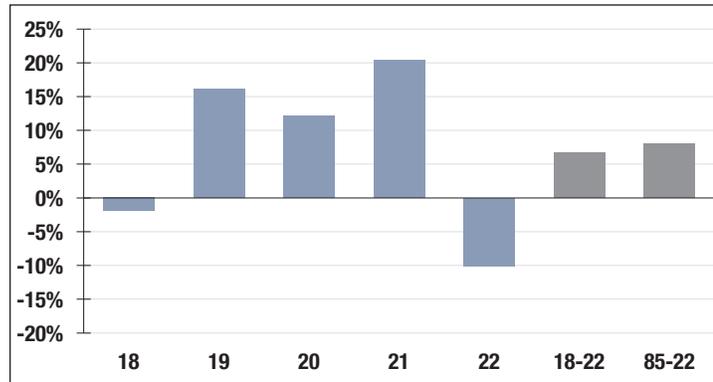
-10.04%
2022 Returns

8.32%
2013-2022
(Annualized)

8.01%
1985-2022
(Annualized)

Investment Returns

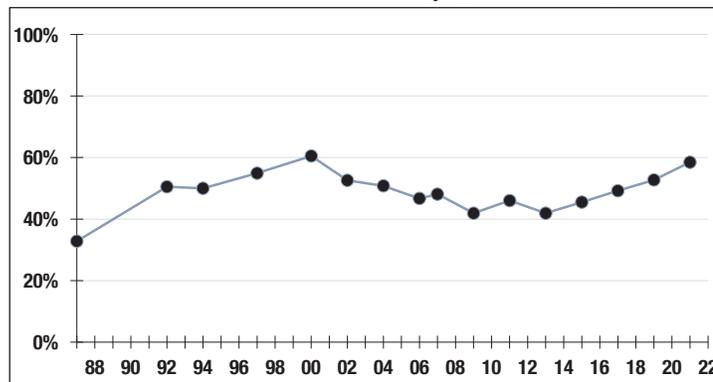
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



58.5%

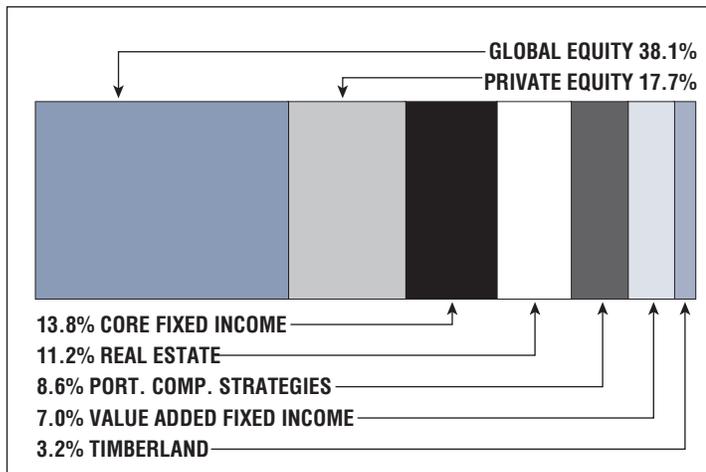
Funded Ratio

2033

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$303.8 M

Unfunded Liability

\$40.4 M
(FY2023)

Total Pension Appropriation

Malden

CONTACT INFORMATION

215 Pleasant Street
5th Floor
Malden, MA 02148
Phone 781-397-7086

BOARD MEMBERS

Charles Ranaghan
Domenic Fermano
Donald Boyce
Warren Atkinson*
Scott Lucey
*indicates Chairperson

BOARD ADMINISTRATOR

Robert Soohoo

SYSTEM MEMBERS

Active Members775
Total Payroll\$46.8 M
Average Salary\$60,400
Average Age48
Average Service13
Retired Members706
Benefits Paid\$22.5 M
Average Benefit\$31,800
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees75
Reported Earnings19
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



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\$291.6 M
Market Value

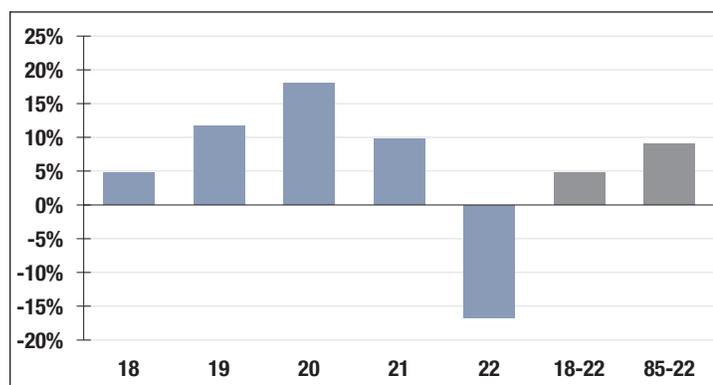
-16.68%
2022 Returns

6.98%
2013-2022
(Annualized)

9.02%
1985-2022
(Annualized)

Investment Returns

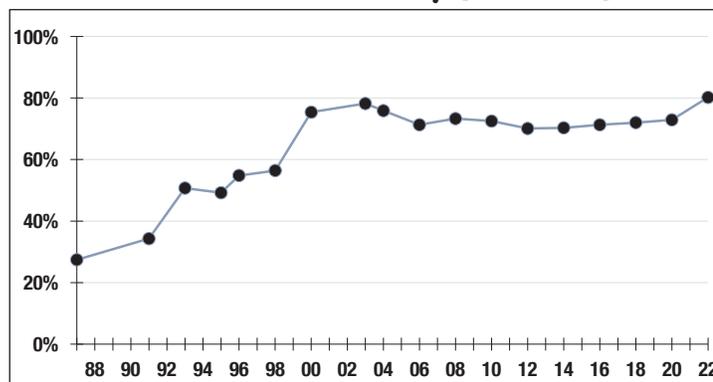
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



80.2%

Funded Ratio

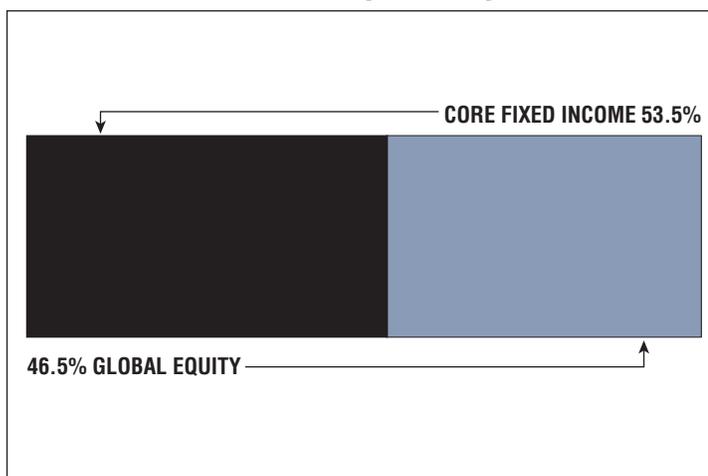
2030

Fully Funded

4.1% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$81.1 M

Unfunded Liability

\$16.5 M
(FY2023)

Total Pension Appropriation

Marblehead

CONTACT INFORMATION

Mary Alley Building
7 Widger Road
Marblehead, MA 01945
Phone 781-639-3418
Fax 781-631-2617

BOARD MEMBERS

Aleesha Nunley Benjamin
Charles Gessner
Jason Gilliland
Douglas Knowles
Robert Peck*
*indicates Chairperson

BOARD ADMINISTRATOR

Linda Gifford

SYSTEM MEMBERS

Active Members378
Total Payroll\$22.3 M
Average Salary\$58,900
Average Age50
Average Service 11.5

Retired Members.....346
Benefits Paid\$10.0 M
Average Benefit\$29,100
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees18
Reported Earnings8
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22

Actuary: PERAC



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\$115.5 M
Market Value

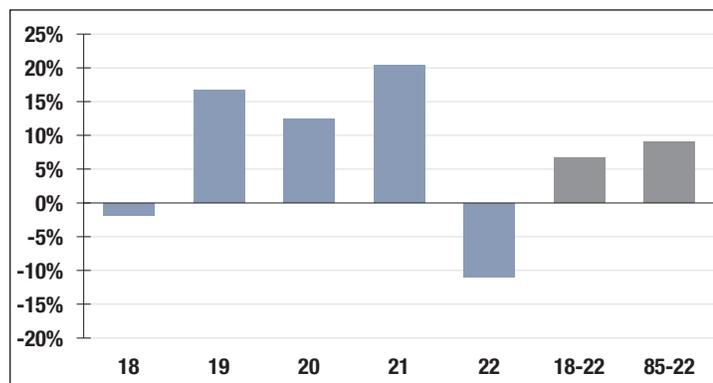
-10.98%
2022 Returns

8.30%
2013-2022
(Annualized)

9.03%
1985-2022
(Annualized)

Investment Returns

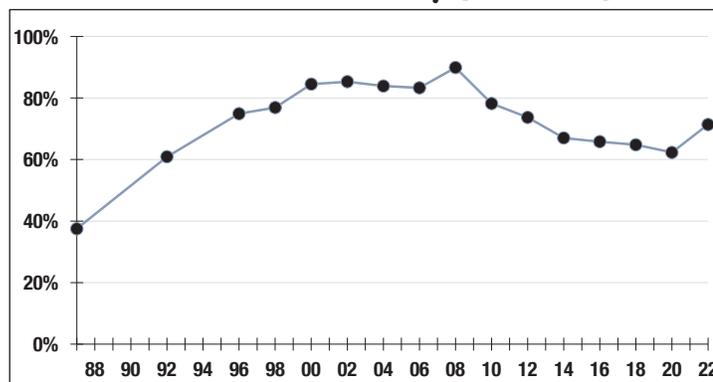
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



71.4%

Funded Ratio

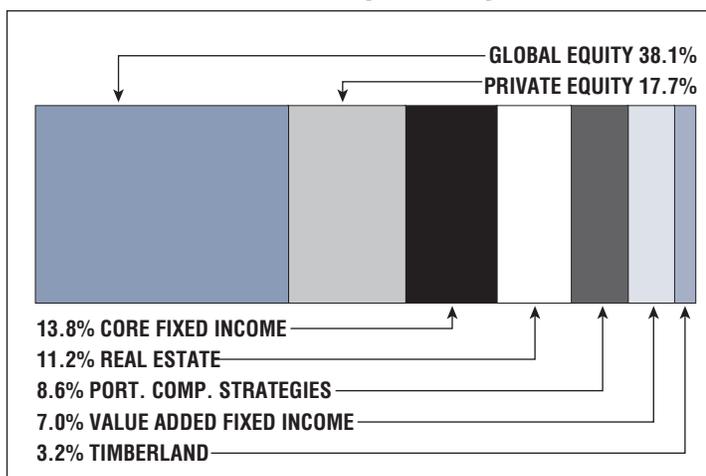
2036

Fully Funded

8.6% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$48.3 M

Unfunded Liability

\$5.2 M
(FY2023)

Total Pension Appropriation

Marlborough

CONTACT INFORMATION

289 Elm Street
Suite 111
Marlborough, MA 01752-3812
Phone 508-460-3760

BOARD MEMBERS

Diane Smith
Daniel Stanhope
Gregory Brewster*
William Taylor
Robert Gustafson
*indicates Chairperson

BOARD ADMINISTRATOR

Beth Matson

SYSTEM MEMBERS

Active Members640
Total Payroll\$38.1 M
Average Salary\$59,500
Average AgeNA
Average ServiceNA

Retired Members456
Benefits Paid\$14.7 M
Average Benefit\$32,100
Average Age71

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees33
Reported Earnings9
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: Sherman



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\$204.7 M
Market Value

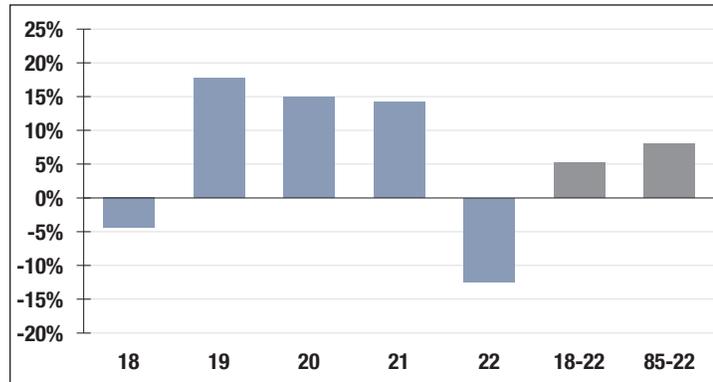
-12.42%
2022 Returns

6.73%
2013-2022
(Annualized)

8.04%
1985-2022
(Annualized)

Investment Returns

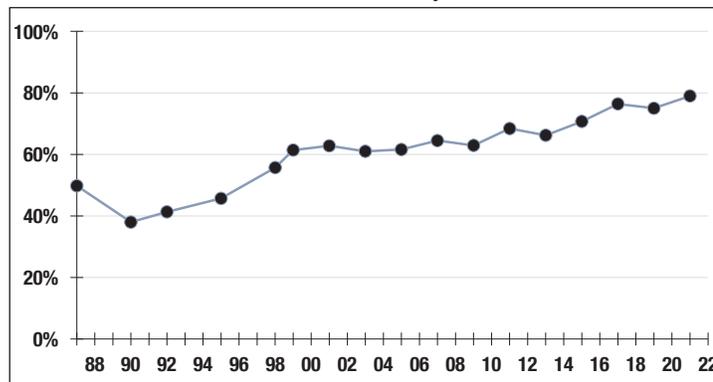
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



79.0%

Funded Ratio

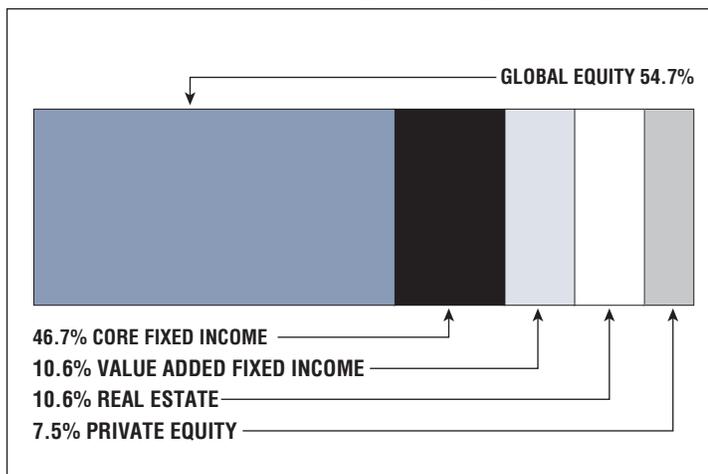
2028

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$52.9 M

Unfunded Liability

\$10.3 M
(FY2023)

Total Pension
Appropriation

MHFA (Mass. Housing Finance Agency)

CONTACT INFORMATION

One Beacon Street
 Boston, MA 02108
 Phone 617-854-1871
 Fax 617-854-1027

BOARD MEMBERS

Thomas Flynn
 Antonio Torres
 Michael Fitzmaurice*
 Paul Hynes
 *indicates Chairperson

BOARD ADMINISTRATOR

Joseph Petty

SYSTEM MEMBERS

Active Members312
 Total Payroll\$34.0 M
 Average Salary ...\$108,900
 Average Age50
 Average Service 15.2

Retired Members 194
 Benefits Paid\$9.4 M
 Average Benefit\$48,600
 Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 1
 Reported Earnings0
 Excess Earners0
 Refund Due\$0

Last Valuation: 1/1/21
 Actuary: Stone



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\$220.0 M
 Market Value

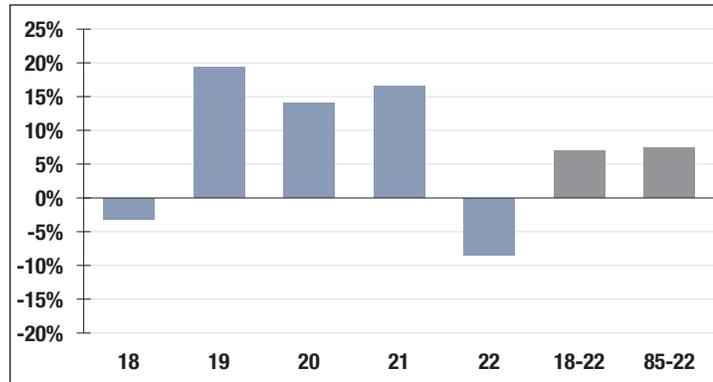
-8.46%
 2022 Returns

7.30%
 2013-2022
 (Annualized)

7.52%
 1985-2022
 (Annualized)

Investment Returns

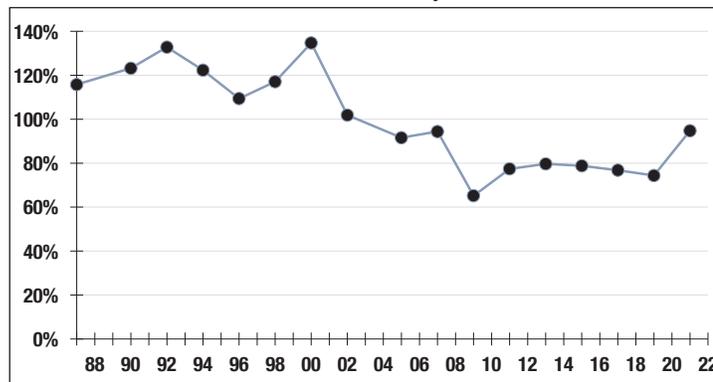
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



94.8%

Funded Ratio

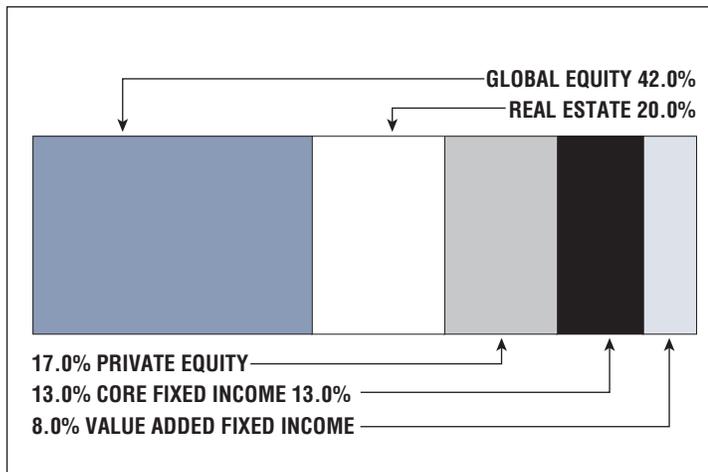
2021

Fully Funded

Fully Funded/
 Normal Cost

Funding Schedule

Asset Allocation (12/31/22)



\$11.5 M

Unfunded Liability

\$1.1 M
 (FY2023)

Total Pension
 Appropriation

MassPort

CONTACT INFORMATION

One Harborside Drive
Suite 200S
East Boston, MA 02128
Phone 617-568-3951
Fax 617-568-3957

BOARD MEMBERS

John Prankevicius
Michael Grieco
Betsy Taylor
Jon Turco
James Hoyte*
*indicates Chairperson

BOARD ADMINISTRATOR

Irene Moran

SYSTEM MEMBERS

Active Members 1,094
Total Payroll \$107.6 M
Average Salary \$98,400
Average Age 48
Average Service 13.8

Retired Members 976
Benefits Paid \$42.6 M
Average Benefit \$43,700
Average Age 70

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 43
Reported Earnings 8
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: Stone



\$764.3 M
Market Value

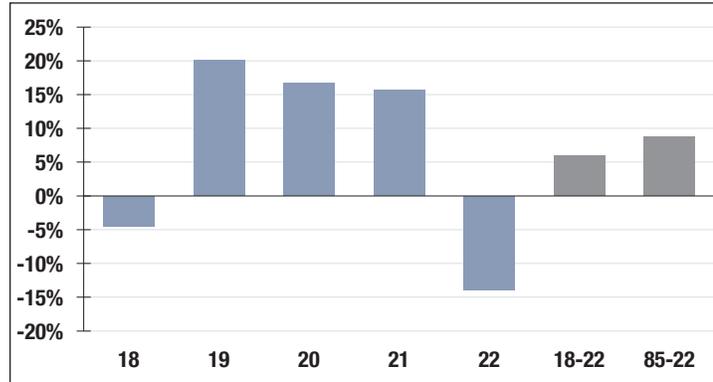
-13.96%
2022 Returns

7.57%
2013-2022
(Annualized)

8.72%
1985-2022
(Annualized)

Investment Returns

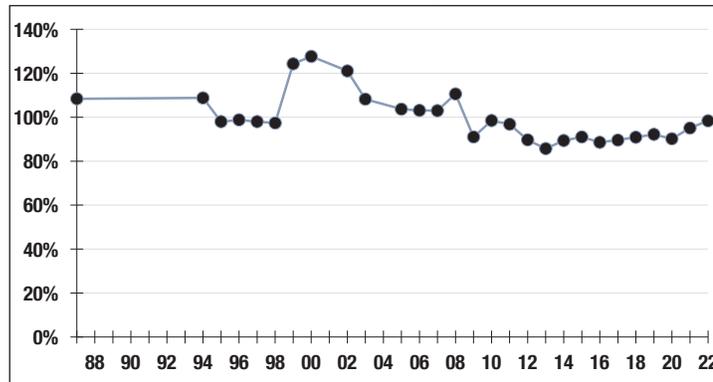
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



98.4%

Funded Ratio

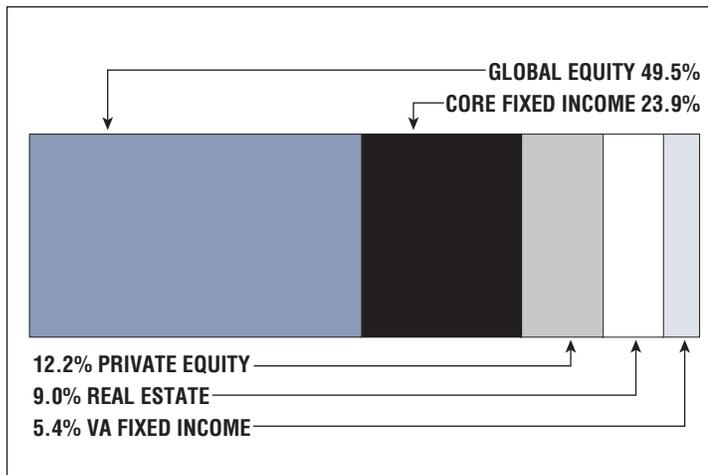
NA

Fully Funded

Frozen Entry Age

Funding Schedule

Asset Allocation (12/31/22)



\$13.2 M

Unfunded Liability

\$8.3 M
(FY2023)

Total Pension Appropriation

MTRS (Mass. Teachers)

CONTACT INFORMATION

500 Rutherford Avenue
Suite 210
Charlestown, MA 02129
Phone 617-679-6877
Fax 617-679-1661

BOARD MEMBERS

State Treasurer,
Deborah B. Goldberg
State Auditor,
Diana DiZoglio
Ventura Rodriguez*
Anne Wass
Dennis Naughton
Jacqueline Gorrie
Richard Liston
*indicates Chairperson

BOARD ADMINISTRATOR

Erika Glaster

SYSTEM MEMBERS

Active Members98,926
Total Payroll \$7.7 B
Average Salary\$77,900
Average Age44
Average Service 13.2

Retired Members....69,727
Benefits Paid \$3.3 B
Average Benefit....\$47,400
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees.....513
Reported Earnings 110
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$34.7 B
Market Value

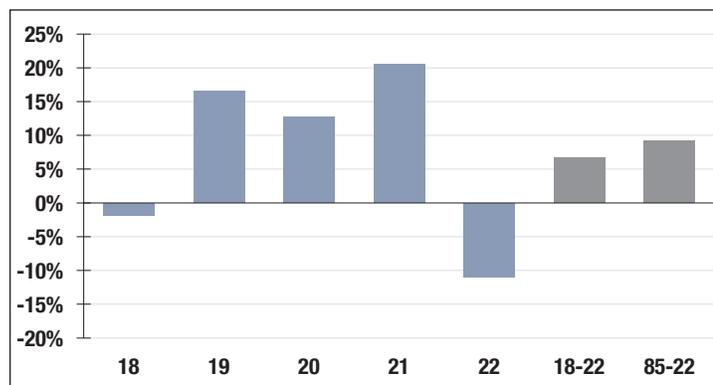
-10.98%
2022 Returns

8.36%
2013-2022
(Annualized)

9.24%
1985-2022
(Annualized)

Investment Returns

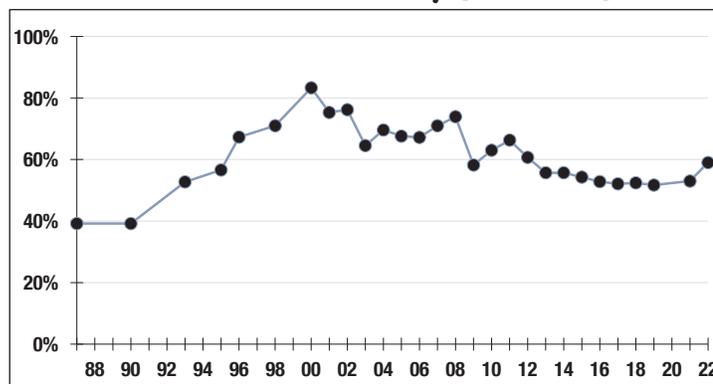
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate
of Return

Funded Ratio History (1987-2022)



59.0%

Funded Ratio

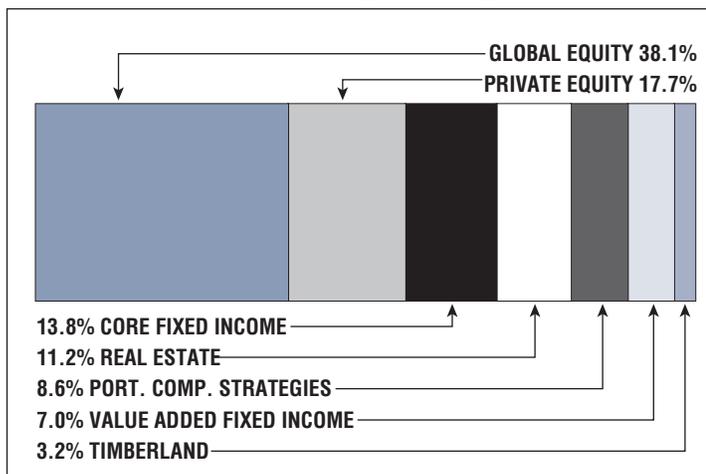
2036

Fully Funded

9.63% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$24.7 B

Unfunded Liability

\$2.1 B
(FY2023)

Total Pension
Appropriation

MWRA (Mass. Water Resources Authority)

CONTACT INFORMATION

Two Griffin Way
Chelsea, MA 02150
Phone 617-305-5595
Fax 617-371-1616

BOARD MEMBERS

Brian Pena
Matthew Horan
James Fleming*
Kevin McKenna
Frank Zecha
*indicates Chairperson

BOARD ADMINISTRATOR

Carolyn Russo

SYSTEM MEMBERS

Active Members 1,044
Total Payroll \$103.8 M
Average Salary \$99,400
Average Age 51
Average Service 17.2

Retired Members 763
Benefits Paid \$33.1 M
Average Benefit \$43,300
Average Age 71

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 74
Reported Earnings 16
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: Segal



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\$630.2 M
Market Value

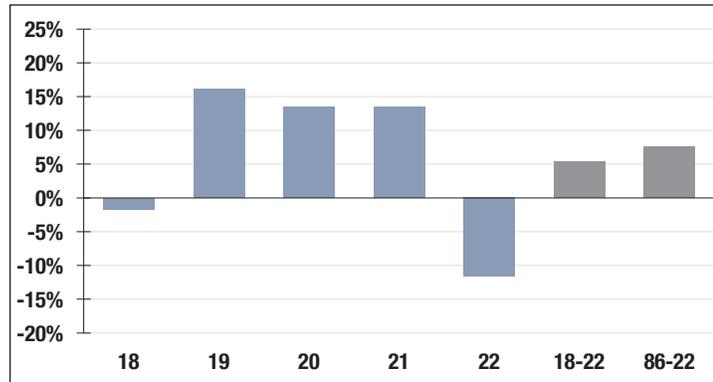
-11.64%
2022 Returns

6.97%
2013-2022
(Annualized)

7.87%
1986-2022
(Annualized)

Investment Returns

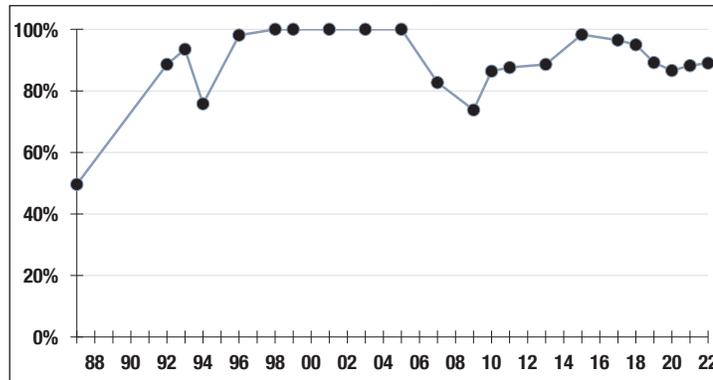
(2018-2022, 5-Year & 37-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



89.0%

Funded Ratio

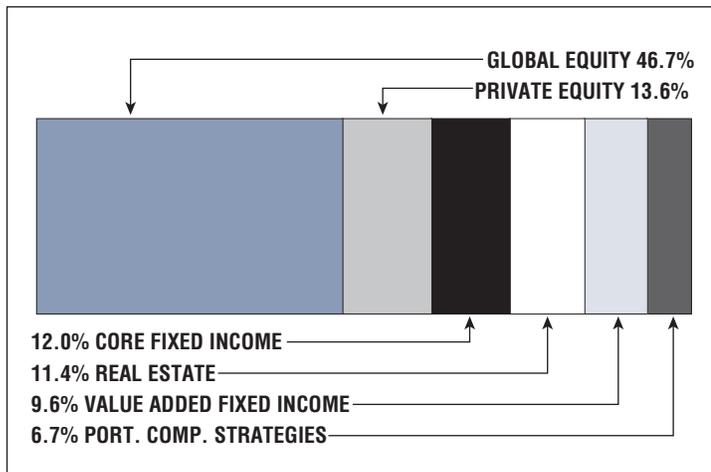
2030

Fully Funded

12.05% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$82.0 M

Unfunded Liability

\$12.6 M
(FY2023)

Total Pension Appropriation

Maynard

CONTACT INFORMATION

195 Main Street
 Maynard, MA 01754
 Phone 978-897-1820
 Fax 978-897-1013

BOARD MEMBERS

Kevin Petersen
 Clifford Wilson
 Patrick Hakey
 Christopher Connolly*
 *indicates Chairperson

BOARD ADMINISTRATOR

Kenneth DeMars

SYSTEM MEMBERS

Active Members 186
 Total Payroll \$9.8 M
 Average Salary \$52,900
 Average Age 46
 Average Service 10

Retired Members 136
 Benefits Paid \$3.9 M
 Average Benefit \$28,500
 Average Age 73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 5
 Reported Earnings 3
 Excess Earners 0
 Refund Due \$0

Last Valuation: 1/1/21
 Actuary: PERAC



\$56.3 M
 Market Value

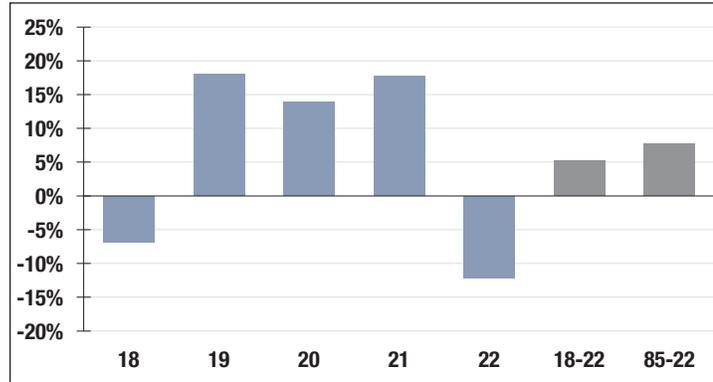
-12.16%
 2022 Returns

7.98%
 2013-2022
 (Annualized)

7.77%
 1985-2022
 (Annualized)

Investment Returns

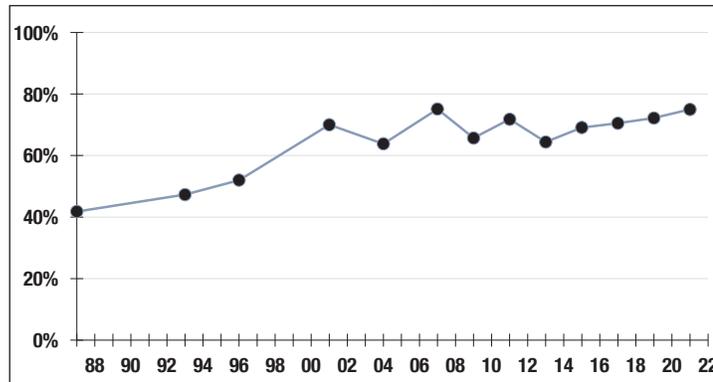
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



75.0%

Funded Ratio

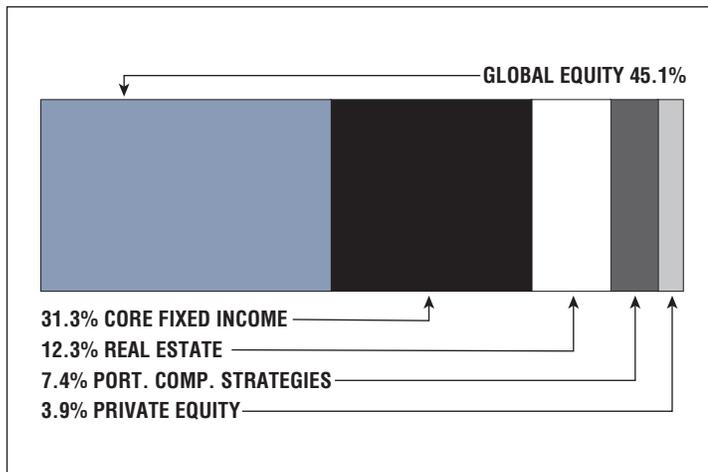
2035

Fully Funded

6.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$17.4 M

Unfunded Liability

\$2.9 M
 (FY2023)

Total Pension Appropriation

Medford

CONTACT INFORMATION

City Hall, Room 215
85 George P. Hassett Drive
Medford, MA 02155
Phone 781-393-2517
Fax 781-393-2522

BOARD MEMBERS

Robert Dickinson
Robert Maiocco
Patrick Ripley
Rick Jordan*
James Vieira
*indicates Chairperson

BOARD ADMINISTRATOR

Mark Minervini

SYSTEM MEMBERS

Active Members742
Total Payroll\$47.6 M
Average Salary\$64,100
Average AgeNA
Average ServiceNA

Retired Members620
Benefits Paid\$22.6 M
Average Benefit\$36,500
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees91
Reported Earnings12
Excess Earners1
Refund Due\$55,023

Last Valuation: 1/1/22

Actuary: Sherman



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\$227.4 M
Market Value

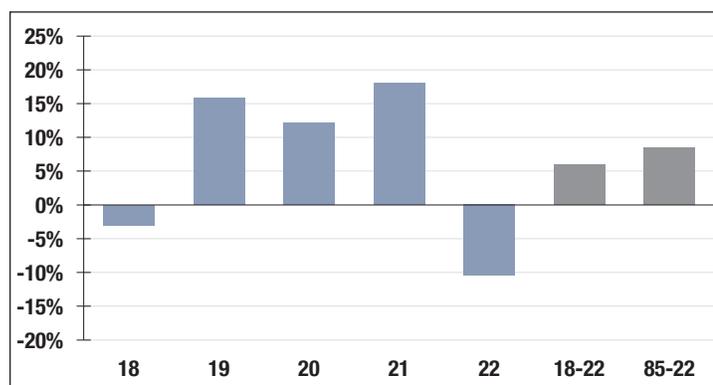
-10.45%
2022 Returns

6.62%
2013-2022
(Annualized)

8.45%
1985-2022
(Annualized)

Investment Returns

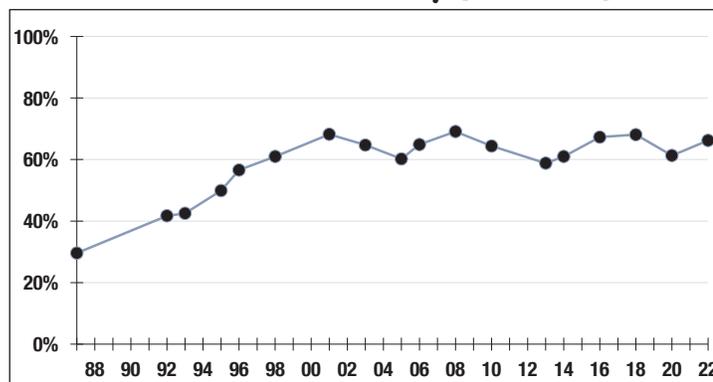
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



66.2%

Funded Ratio

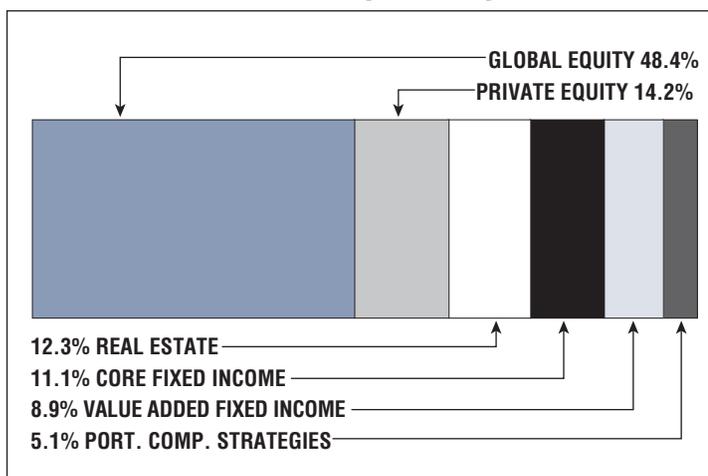
2032

Fully Funded

6.9% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$117.6 M

Unfunded Liability

\$15.2 M
(FY2023)

Total Pension Appropriation

Melrose

CONTACT INFORMATION

City Hall
562 Main Street
Melrose, MA 02176
Phone 781-979-4151
Fax 781-979-4206

BOARD MEMBERS

Patrick Dello Russo*
Kerriann Golden
Michael Lyle
Scott Colborne
John McLaughlin
*indicates Chairperson

BOARD ADMINISTRATOR

Adam Travinski

SYSTEM MEMBERS

Active Members406
Total Payroll\$22.7 M
Average Salary\$56,000
Average Age47
Average Service 10.2

Retired Members397
Benefits Paid\$9.9 M
Average Benefit\$24,900
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees26
Reported Earnings4
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: Stone



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\$107.0 M
Market Value

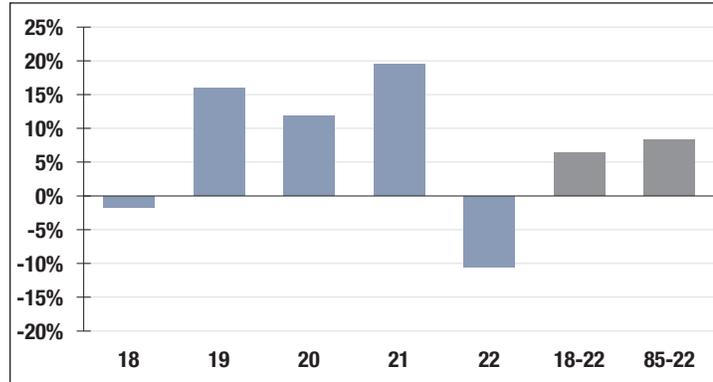
-10.53%
2022 Returns

7.88%
2013-2022
(Annualized)

8.25%
1985-2022
(Annualized)

Investment Returns

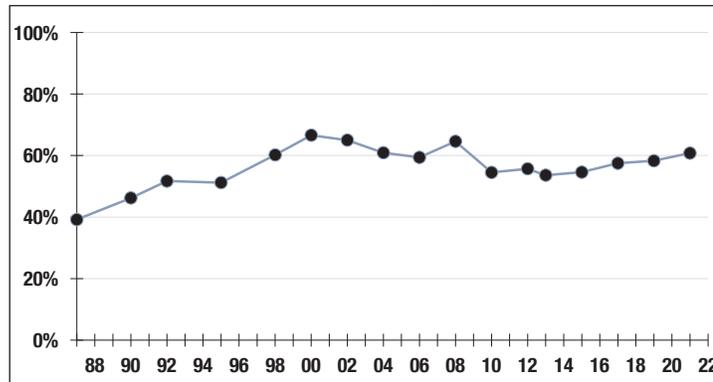
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate
of Return

Funded Ratio History (1987-2022)



60.8%

Funded Ratio

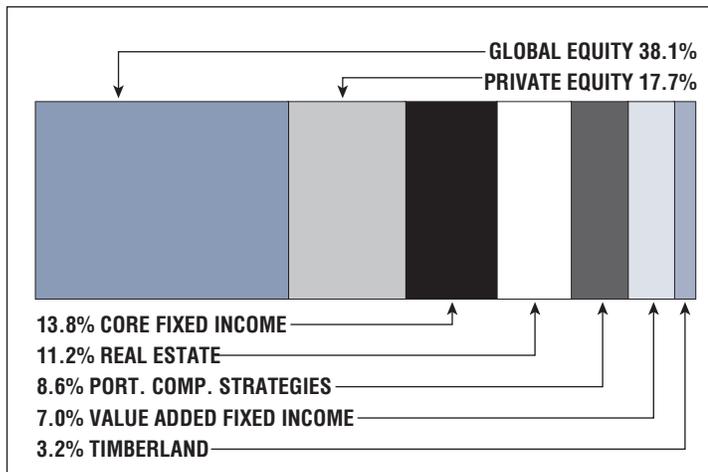
2037

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$64.1 M

Unfunded Liability

\$7.2 M
(FY2023)

Total Pension
Appropriation

Methuen

CONTACT INFORMATION

41 Pleasant Street
Suite 313
Methuen, MA 01844
Phone 978-983-8620
Fax 978-983-8972

BOARD MEMBERS

Kathleen Beam
John Sheehy
Albert Trott
Michael Hennessy*
Robert Sheehan
*indicates Chairperson

BOARD ADMINISTRATOR

Kaitlyn Doucette

SYSTEM MEMBERS

Active Members664
Total Payroll\$39.2 M
Average Salary\$59,000
Average Age48
Average Service 12.2

Retired Members478
Benefits Paid\$17.2 M
Average Benefit\$36,000
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees48
Reported Earnings 15
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



\$214.7 M
Market Value

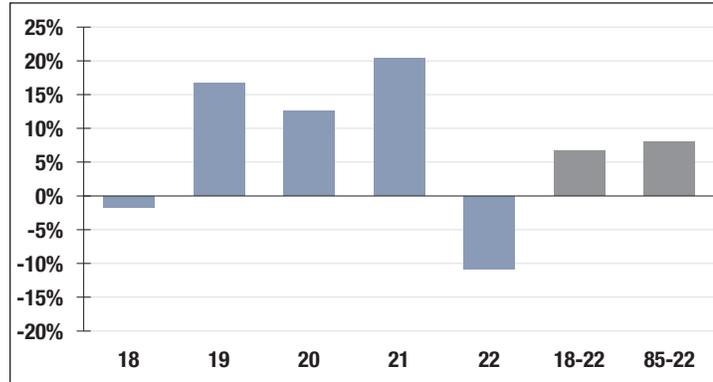
-10.81%
2022 Returns

8.58%
2013-2022
(Annualized)

8.02%
1985-2022
(Annualized)

Investment Returns

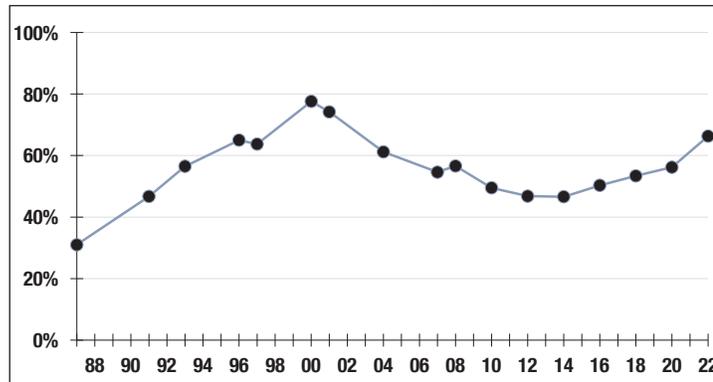
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



66.3%

Funded Ratio

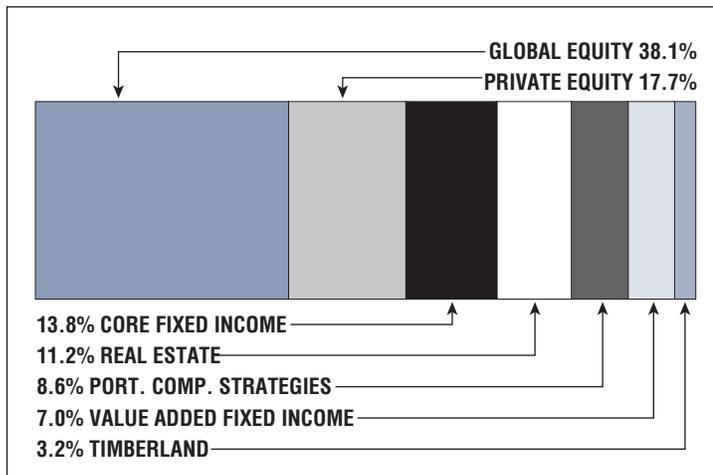
2034

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$109.5 M

Unfunded Liability

\$15.5 M
(FY2023)

Total Pension Appropriation

Middlesex County

CONTACT INFORMATION

25 Linnell Circle
 P.O. Box 160
 Billerica, MA 01865
 Phone 978-439-3000
 Fax 978-439-3050

BOARD MEMBERS

Thomas Gibson*
 Brian Curtin
 John Brown
 Joseph Kearns
 Robert Healy
 *indicates Chairperson

BOARD ADMINISTRATOR

Lisa Maloney

SYSTEM MEMBERS

Active Members9,432
 Total Payroll\$519.2 M
 Average Salary\$55,100
 Average Age47
 Average Service 10.6

Retired Members6,284
 Benefits Paid\$184.4 M
 Average Benefit\$29,300
 Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees360
 Reported Earnings 122
 Excess Earners4
 Refund Due\$37,570

Last Valuation: 1/1/22

Actuary: Segal



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\$1.9 B
 Market Value

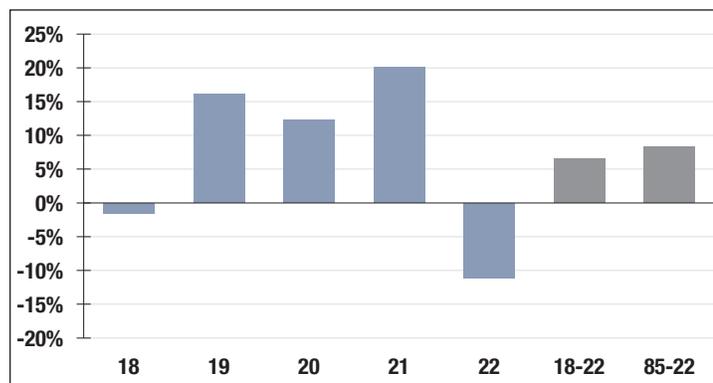
-11.11%
 2022 Returns

7.95%
 2013-2022
 (Annualized)

8.28%
 1985-2022
 (Annualized)

Investment Returns

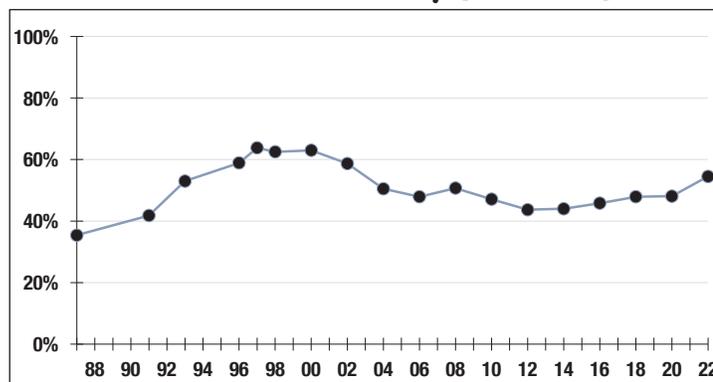
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.15%

Assumed Rate of Return

Funded Ratio History (1987-2022)



54.5%

Funded Ratio

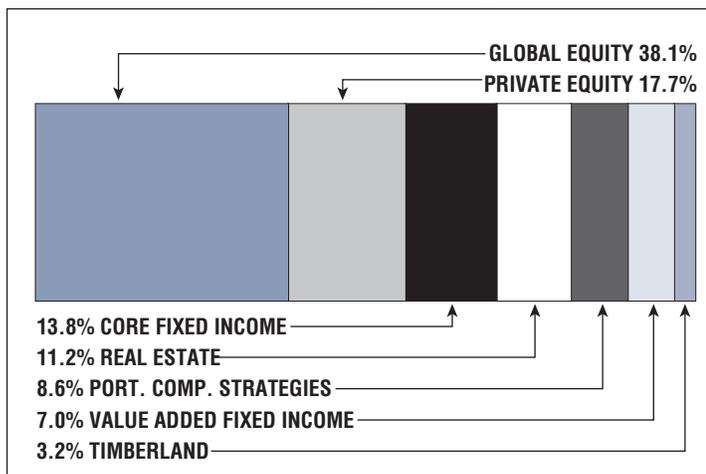
2036

Fully Funded

4.0% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$1.6 B

Unfunded Liability

\$156.4 M
 (FY2023)

Total Pension Appropriation

Milford

CONTACT INFORMATION

60 N. Bow Street
Senior Center
Milford, MA 01757
Phone 508-634-2321
Fax 508-634-0902

BOARD MEMBERS

Zachary Taylor*
Christopher Pilla
James Curley
Richard Villani
Martha White
*indicates Chairperson

BOARD ADMINISTRATOR

Kelly Capece

SYSTEM MEMBERS

Active Members512
Total Payroll\$24.2 M
Average Salary\$47,300
Average Age48
Average Service 10.8

Retired Members329
Benefits Paid\$9.6 M
Average Benefit\$29,200
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees31
Reported Earnings 12
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



\$122.5 M
Market Value

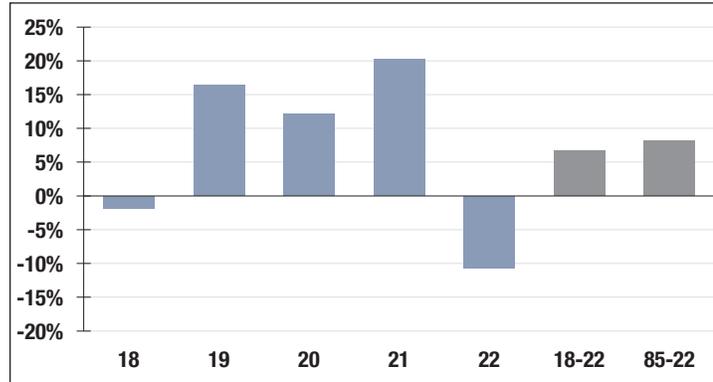
-10.68%
2022 Returns

8.23%
2013-2022
(Annualized)

8.17%
1985-2022
(Annualized)

Investment Returns

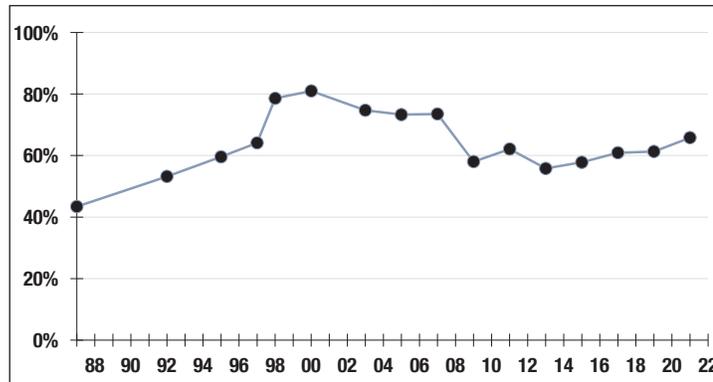
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



65.8%

Funded Ratio

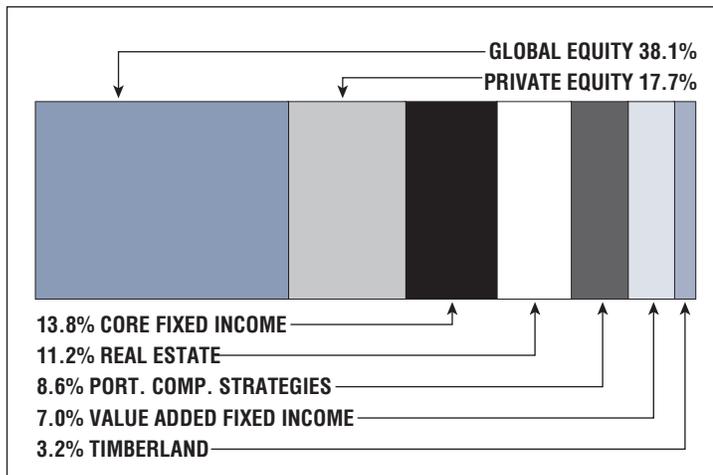
2035

Fully Funded

7.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$57.2 M

Unfunded Liability

\$6.9 M
(FY2023)

Total Pension Appropriation

Milton

CONTACT INFORMATION

40 Willard Street
Suite G102
Quincy, MA 02169
Phone 617-770-5970
Fax 617-770-5971

BOARD MEMBERS

Amy Dexter
Paige Eppolito*
Thomas Cicerone
William Murphy
Robert O'Melia
*indicates Chairperson

BOARD ADMINISTRATOR

Jeanne Darcy

SYSTEM MEMBERS

Active Members402
Total Payroll\$26.8 M
Average Salary\$66,800
Average Age47
Average Service 11.7

Retired Members280
Benefits Paid\$9.4 M
Average Benefit\$33,600
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees22
Reported Earnings5
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



\$179.8 M
Market Value

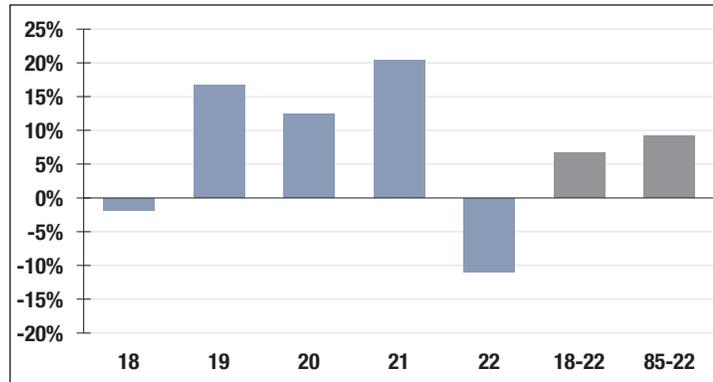
-10.97%
2022 Returns

8.29%
2013-2022
(Annualized)

9.15%
1985-2022
(Annualized)

Investment Returns

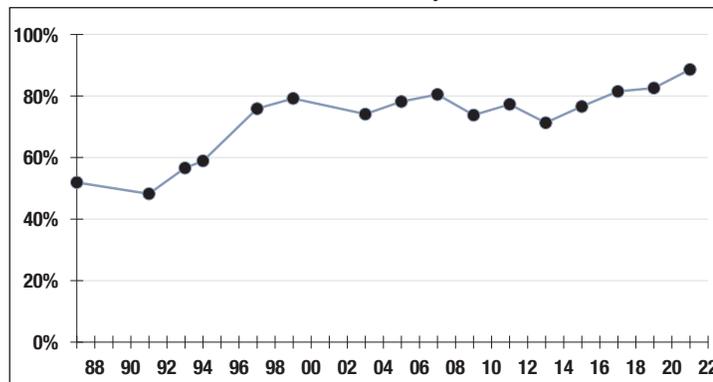
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



88.6%

Funded Ratio

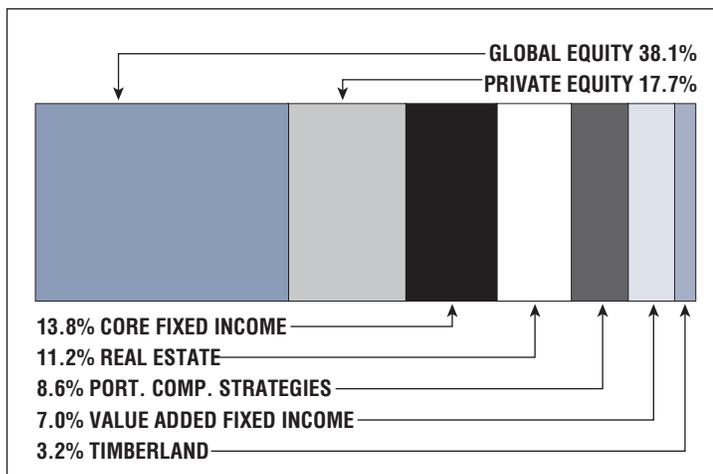
2026

Fully Funded

6.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$20.4 M

Unfunded Liability

\$7.9 M
(FY2023)

Total Pension Appropriation

Minuteman Regional School District

CONTACT INFORMATION

758 Marrett Road
Lexington, MA 02421
Phone 781-861-6500
Fax 781-863-1747

BOARD MEMBERS

Laurie Elliott*
Nikki Andrade
Cheryl Mixon
Maria Oliveira
Norman Cohen
*indicates Chairperson

BOARD ADMINISTRATOR

Sandor Zapolin

SYSTEM MEMBERS

Active Members35
Total Payroll\$2.0 M
Average Salary\$58,000
Average Age48
Average Service7.6

Retired Members39
Benefits Paid\$1.0 M
Average Benefit\$26,800
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 1
Reported Earnings0
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



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\$15.4 M
Market Value

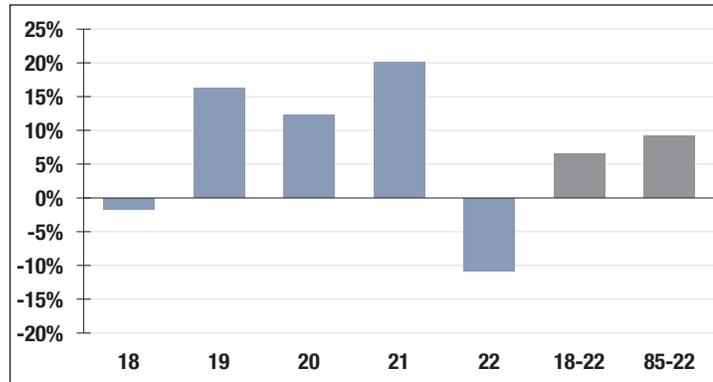
-10.84%
2022 Returns

8.07%
2013-2022
(Annualized)

9.19%
1985-2022
(Annualized)

Investment Returns

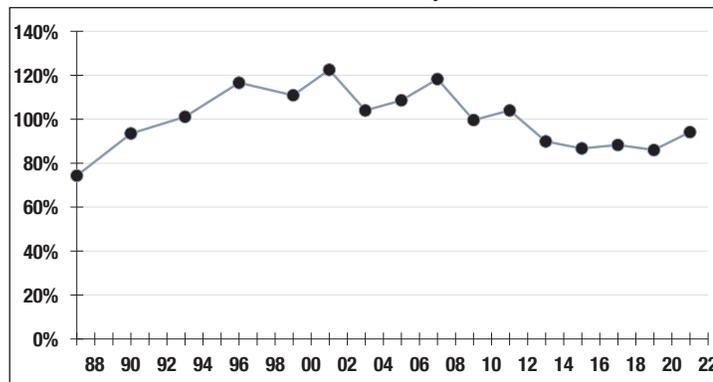
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



94.2%

Funded Ratio

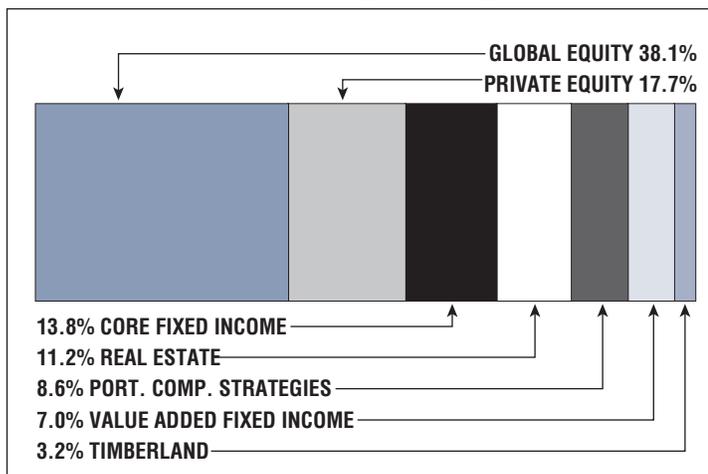
2027

Fully Funded

10.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$911 K

Unfunded Liability

\$359 K
(FY2023)

Total Pension Appropriation

Montague

CONTACT INFORMATION

One Avenue A
Turners Falls, MA 01376
Phone 413-863-3200
Fax 833-719-1294

BOARD MEMBERS

Carolyn Olsen*
Steven Ellis
Cheryl Clark
David Dion
Marianne Fiske
*indicates Chairperson

BOARD ADMINISTRATOR

Debra Underhill

SYSTEM MEMBERS

Active Members 194
Total Payroll \$8.1 M
Average Salary \$41,900
Average Age 46
Average Service 9.4

Retired Members 164
Benefits Paid \$3.8 M
Average Benefit \$22,900
Average Age 72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 14
Reported Earnings 2
Excess Earners 1
Refund Due \$6,784

Last Valuation: 1/1/22
Actuary: PERAC



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\$54.0 M
Market Value

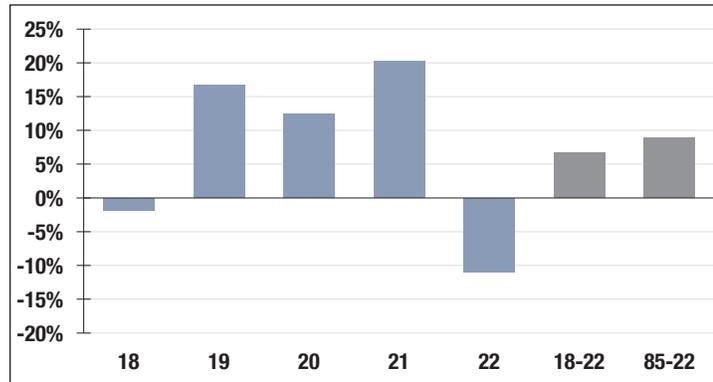
-10.97%
2022 Returns

8.26%
2013-2022
(Annualized)

8.94%
1985-2022
(Annualized)

Investment Returns

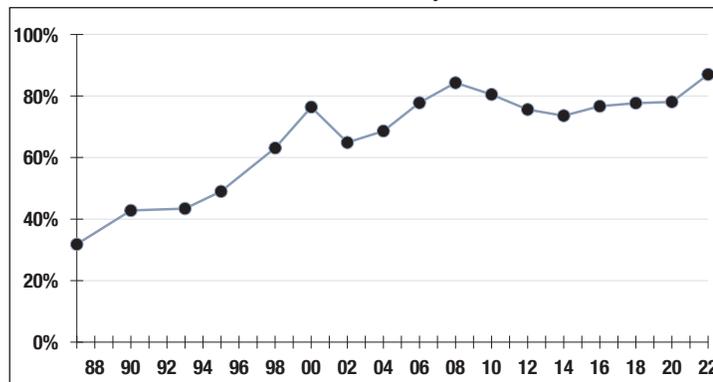
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.85%

Assumed Rate of Return

Funded Ratio History (1987-2022)



87.0%

Funded Ratio

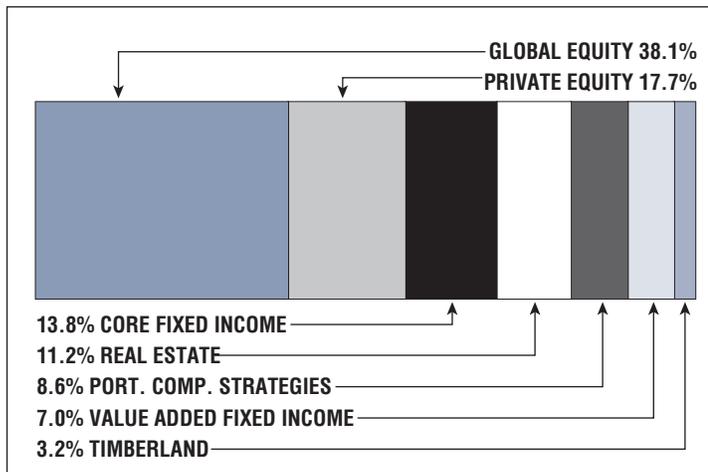
2030

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$8.4 M

Unfunded Liability

\$2.3 M
(FY2023)

Total Pension Appropriation

Natick

CONTACT INFORMATION

13 East Central Street
Natick, MA 01760
Phone 508-647-6440
Fax 508-647-6443

BOARD MEMBERS

Michelle Laramee
Eliot Lurier
Michael Melchiorri*
Nicholas Mabardy
B. Michael Reardon
*indicates Chairperson

BOARD ADMINISTRATOR

Kathleen Bacon

SYSTEM MEMBERS

Active Members635
Total Payroll\$38.0 M
Average Salary\$59,900
Average Age47
Average Service11.3

Retired Members414
Benefits Paid\$13.6 M
Average Benefit\$32,800
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees13
Reported Earnings4
Excess Earners0
Refund Due\$0

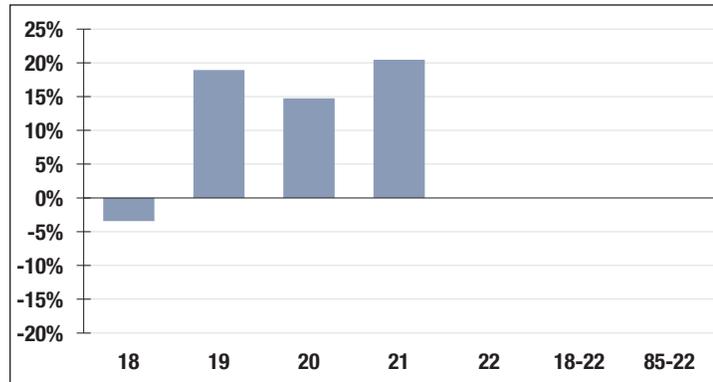
Last Valuation: 1/1/21
Actuary: Segal



2022 investment return data not available at time of publication.

Investment Returns

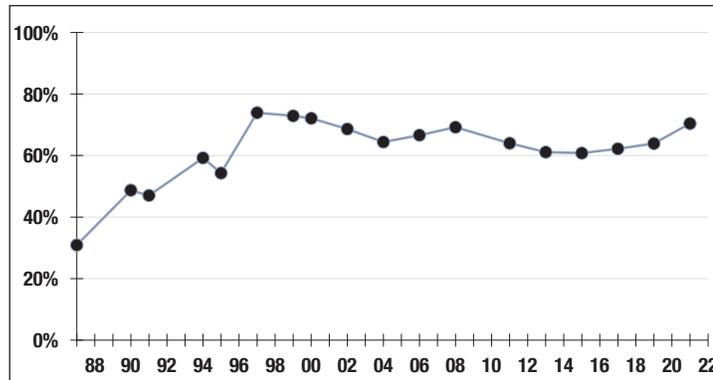
(2018-2021 Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



70.4%

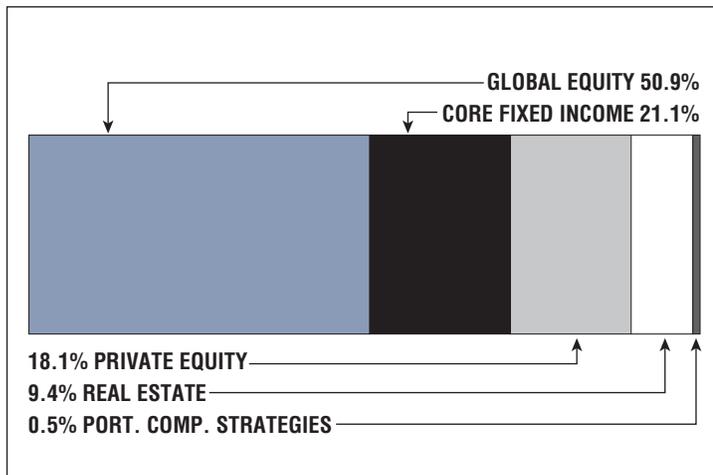
Funded Ratio

2030

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$75.4 M

Unfunded Liability

\$13.0 M
(FY2023)

Total Pension Appropriation

Needham

CONTACT INFORMATION

Town Hall
1471 Highland Avenue
Needham, MA 02492
Phone 781-455-7500
Fax 781-449-4569

BOARD MEMBERS

Michelle Vaillancourt
Sandra Cincotta*
John Krawiecki
Robert Papetti
Robert Mearls
*indicates Chairperson

BOARD ADMINISTRATOR

Jacob Cole

SYSTEM MEMBERS

Active Members727
Total Payroll\$44.5 M
Average Salary\$61,200
Average Age47
Average Service 10.6

Retired Members.....472
Benefits Paid\$14.6 M
Average Benefit\$30,900
Average Age76

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees26
Reported Earnings4
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: KMS



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\$213.9 M
Market Value

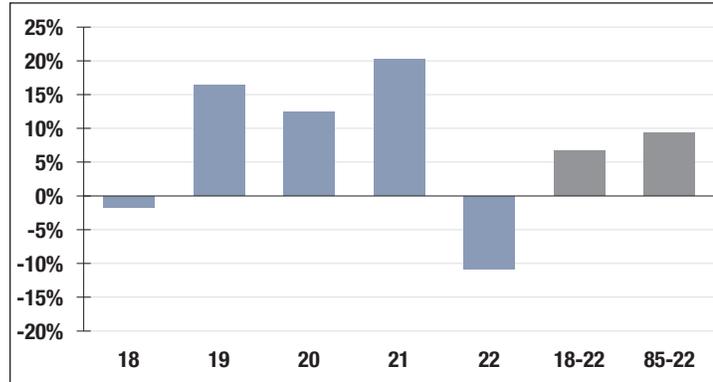
-10.82%
2022 Returns

8.22%
2013-2022
(Annualized)

9.37%
1985-2022
(Annualized)

Investment Returns

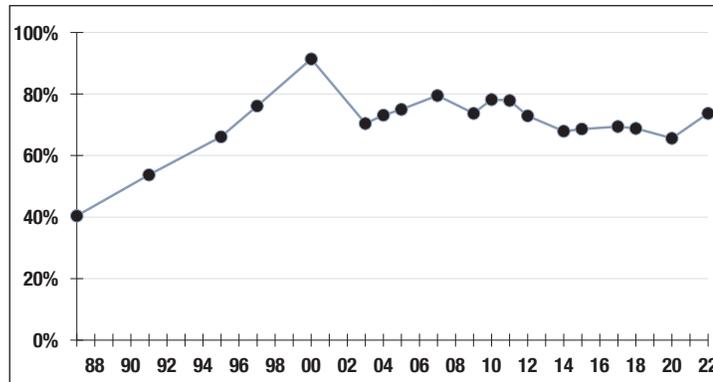
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



73.7%

Funded Ratio

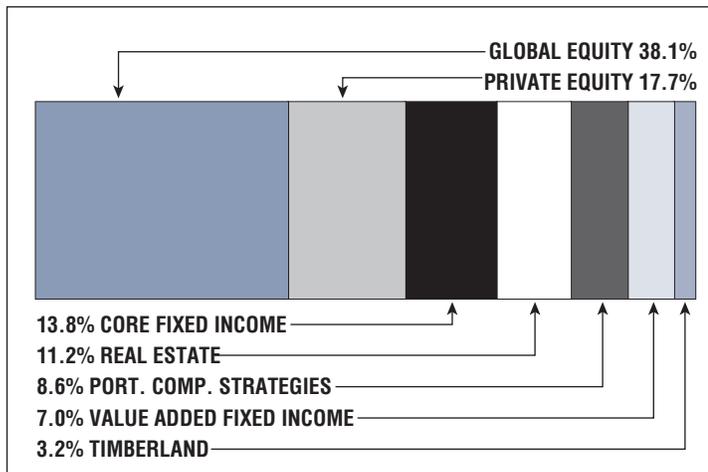
2033

Fully Funded

4.0% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$75.9 M

Unfunded Liability

\$11.4 M
(FY2023)

Total Pension Appropriation

New Bedford

CONTACT INFORMATION

651 Orchard Street
#203A
New Bedford, MA 02744-1008
Phone 508-979-1538
Fax 508-979-1799

BOARD MEMBERS

Emily Arpke
Angela Natho
James Kummer
Leonard Baillargeon*
Susan Thompson
*indicates Chairperson

BOARD ADMINISTRATOR

Eric Cohen

SYSTEM MEMBERS

Active Members2,217
Total Payroll\$115.3 M
Average Salary\$52,000
Average Age44
Average Service 10.7

Retired Members1,813
Benefits Paid\$50.3 M
Average Benefit\$27,700
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees260
Reported Earnings55
Excess Earners3
Refund Due\$17,241

Last Valuation: 1/1/22

Actuary: KMS



Click/Scan for Website

\$416.2 M
Market Value

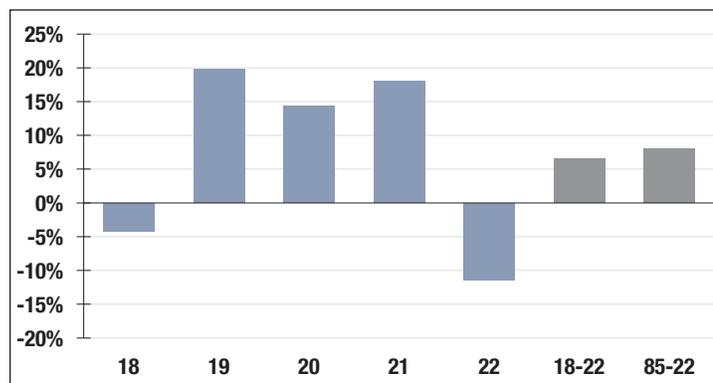
-11.43%
2022 Returns

8.32%
2013-2022
(Annualized)

8.07%
1985-2022
(Annualized)

Investment Returns

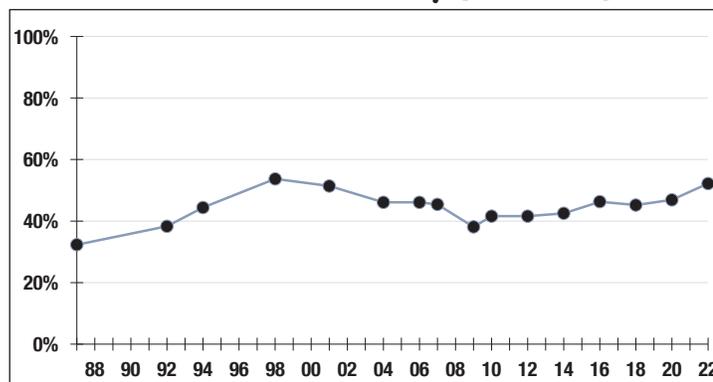
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



52.2%

Funded Ratio

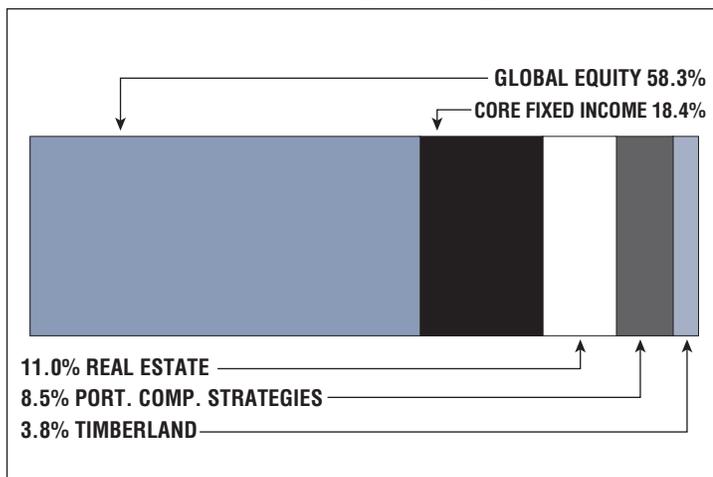
2035

Fully Funded

6.18% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$389.5 M

Unfunded Liability

\$40.8 M
(FY2023)

Total Pension Appropriation

Newburyport

CONTACT INFORMATION

16 Unicorn Street
Newburyport, MA 01950
Phone 978-465-6619
Fax 978-462-4042

BOARD MEMBERS

Ethan Manning
John Moak
Jeffrey Cutter
Joseph Spaulding*
Larry Giunta
*indicates Chairperson

BOARD ADMINISTRATOR

Laurie Burton

SYSTEM MEMBERS

Active Members370
Total Payroll\$21.1 M
Average Salary\$57,000
Average Age49
Average Service11.7

Retired Members267
Benefits Paid\$8.3 M
Average Benefit\$31,100
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees22
Reported Earnings7
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



\$109.6 M
Market Value

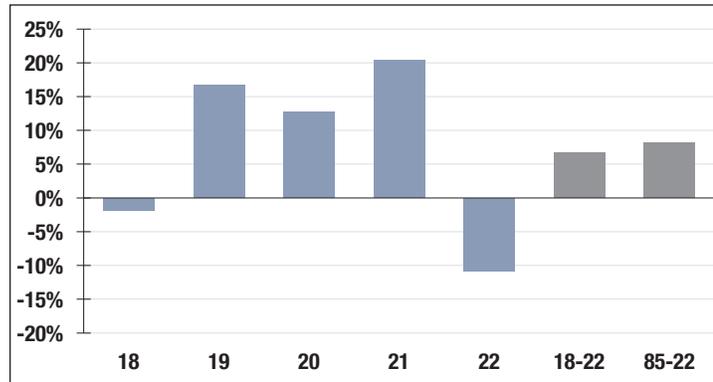
-10.85%
2022 Returns

8.21%
2013-2022
(Annualized)

8.17%
1985-2022
(Annualized)

Investment Returns

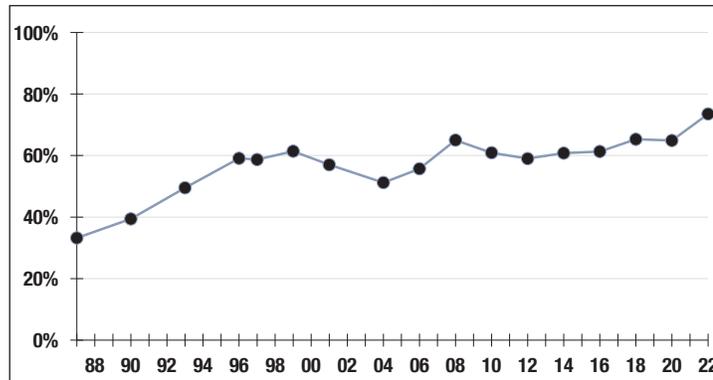
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



73.5%

Funded Ratio

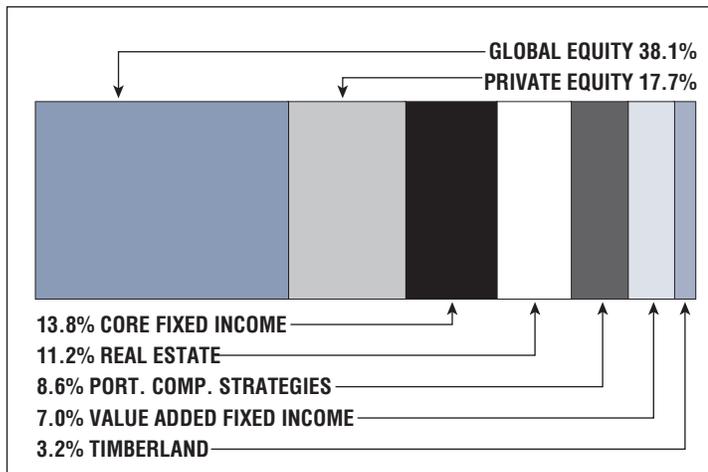
2036

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$40.4 M

Unfunded Liability

\$5.9 M
(FY2023)

Total Pension Appropriation

Newton

CONTACT INFORMATION

City Hall
1000 Commonwealth Avenue
Newton Centre, MA 02459-1449
Phone 617-796-1095
Fax 617-796-1098

BOARD MEMBERS

Stephen Curley
Anthony Logalbo
Kelly Byrne
Thomas Lopez*
Lisa Maloney
*indicates Chairperson

BOARD ADMINISTRATOR

Barbara O'Brien

SYSTEM MEMBERS

Active Members 1,555
Total Payroll \$112.0 M
Average Salary \$72,000
Average Age 46
Average Service 12.1

Retired Members 1,334
Benefits Paid \$44.8 M
Average Benefit \$33,600
Average Age 75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 122
Reported Earnings 27
Excess Earners 0
Refund Due \$0

Last Valuation: 1/1/22
Actuary: Segal



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\$473.8 M
Market Value

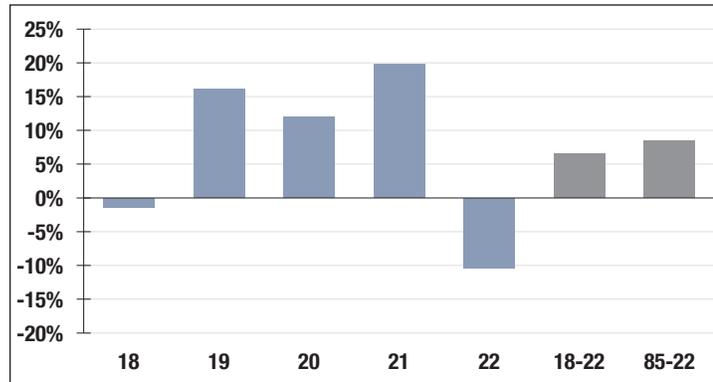
-10.44%
2022 Returns

8.15%
2013-2022
(Annualized)

8.50%
1985-2022
(Annualized)

Investment Returns

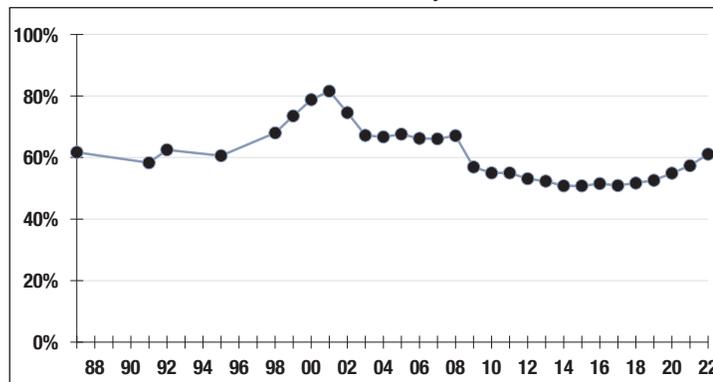
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



61.1%

Funded Ratio

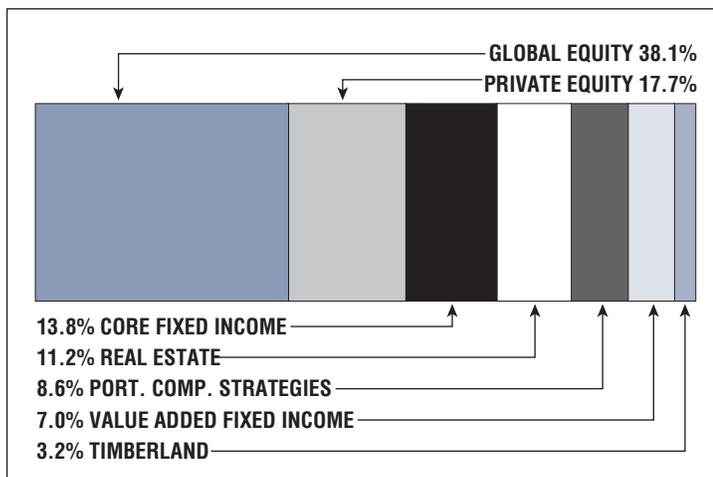
2030

Fully Funded

9.6% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$301.2 M

Unfunded Liability

\$40.8 M
(FY2023)

Total Pension Appropriation

Norfolk County

CONTACT INFORMATION

480 Neponset Street
Bldg. 15
Canton, MA 02021
Phone 781-821-0664
Fax 781-821-0981

BOARD MEMBERS

Michael Bellotti*
Paul Connors
Edwin Little
Josephine Shea
Lisa Sinkus
*indicates Chairperson

BOARD ADMINISTRATOR

Kathleen Kiely-Becchetti

SYSTEM MEMBERS

Active Members5,801
Total Payroll\$339.6 M
Average Salary\$58,500
Average AgeNA
Average ServiceNA

Retired Members.....3,717
Benefits Paid\$111.1 M
Average Benefit\$29,900
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees313
Reported Earnings90
Excess Earners.....5
Refund Due\$39,895

Last Valuation: 1/1/22

Actuary: Sherman



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\$1.3 B
Market Value

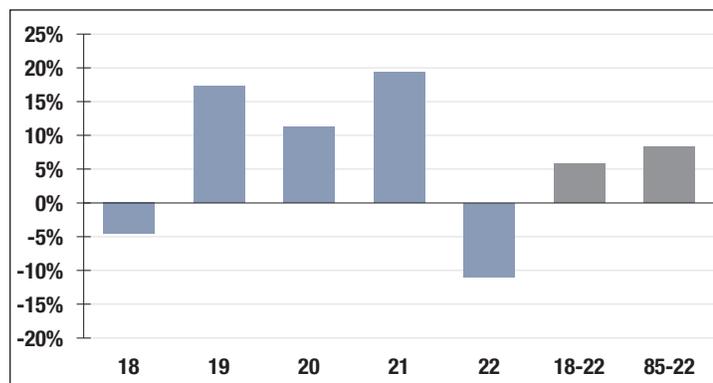
-10.98%
2022 Returns

7.53%
2013-2022
(Annualized)

8.36%
1985-2022
(Annualized)

Investment Returns

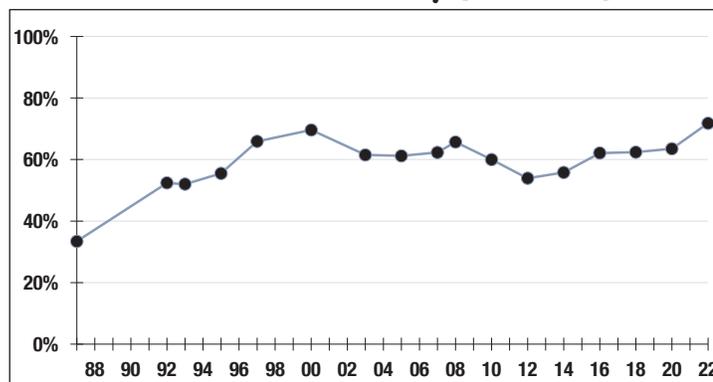
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.75%

Assumed Rate
of Return

Funded Ratio History (1987-2022)



71.8%

Funded Ratio

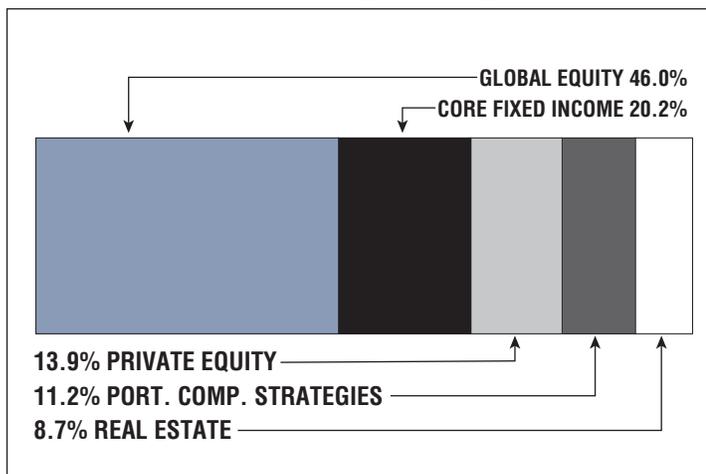
2029

Fully Funded

4.5% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$505.4 M

Unfunded Liability

\$93.5 M
(FY2023)

Total Pension
Appropriation

North Adams

CONTACT INFORMATION

61 Main Street
Suite 247
North Adams, MA 01247
Phone 413-663-5185
Fax 413-664-9412

BOARD MEMBERS

Beverly Cooper
Kathleen Wall
Lawrence O'Brien*
Matthew LaBonte
Fred Thompson
*indicates Chairperson

BOARD ADMINISTRATOR

Shawn Flynn

SYSTEM MEMBERS

Active Members312
Total Payroll\$11.8 M
Average Salary\$37,800
Average Age46
Average Service 10.7

Retired Members.....241
Benefits Paid\$5.3 M
Average Benefit\$22,200
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees33
Reported Earnings 15
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/21

Actuary: PERAC



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\$73.6 M
Market Value

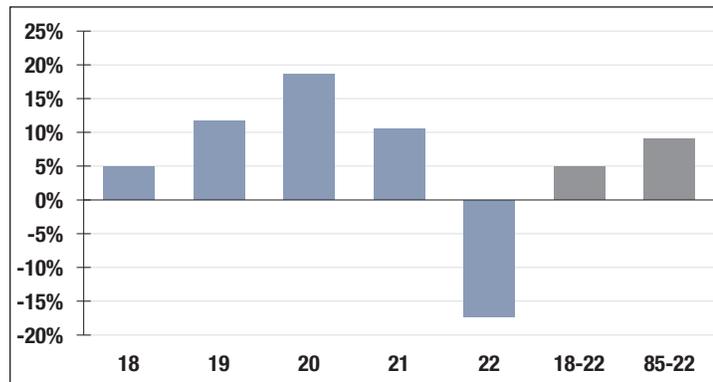
-17.35%
2022 Returns

7.40%
2013-2022
(Annualized)

9.01%
1985-2022
(Annualized)

Investment Returns

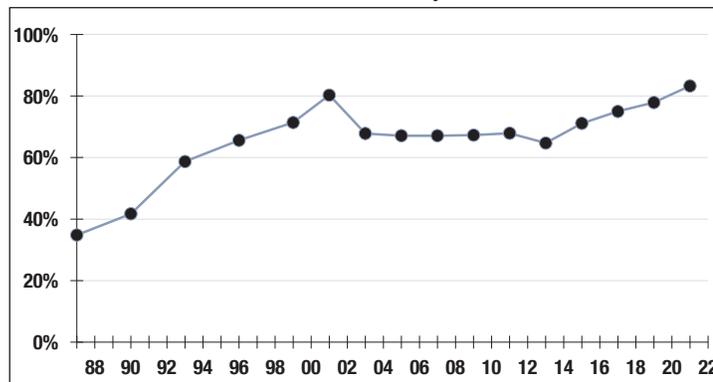
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



83.3%

Funded Ratio

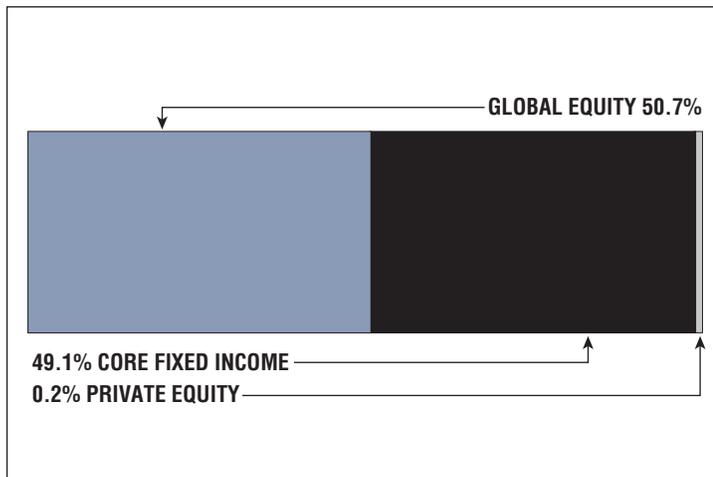
2029

Fully Funded

4.9% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$15.1 M

Unfunded Liability

\$3.9 M
(FY2023)

Total Pension Appropriation

North Attleboro

CONTACT INFORMATION

500 East Washington Street,
2nd Floor
North Attleboro, MA 02760
Phone 508-699-0119
Fax 508-699-0127

BOARD MEMBERS

Linda Catanzariti
Pedro Alves
Brian Brousseau
Craig Chapman*
Lauren Durham
*indicates Chairperson

BOARD ADMINISTRATOR

Juanita Escobar

SYSTEM MEMBERS

Active Members509
Total Payroll\$27.3 M
Average Salary\$53,700
Average Age48
Average Service 11.3

Retired Members325
Benefits Paid\$9.7 M
Average Benefit\$30,000
Average Age71

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees27
Reported Earnings 11
Excess Earners2
Refund Due\$5,344

Last Valuation: 1/1/22

Actuary: Segal



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\$140.3 M
Market Value

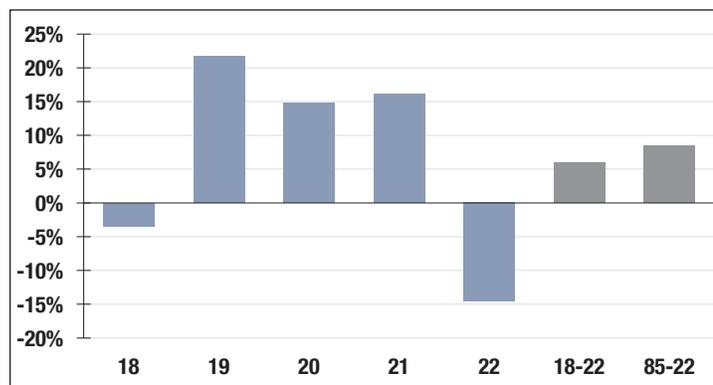
-14.59%
2022 Returns

8.25%
2013-2022
(Annualized)

8.42%
1985-2022
(Annualized)

Investment Returns

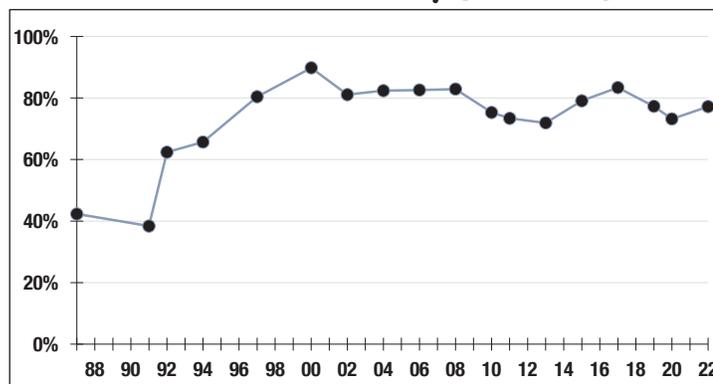
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



77.2%

Funded Ratio

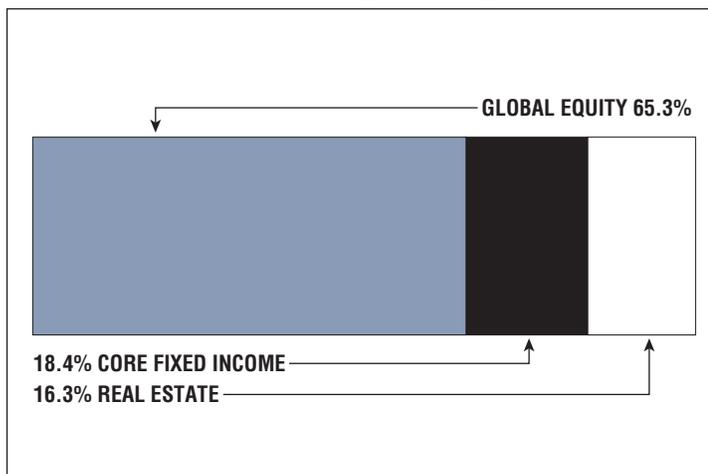
2034

Fully Funded

6.13% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$44.4 M

Unfunded Liability

\$4.7 M
(FY2023)

Total Pension Appropriation

Northampton

CONTACT INFORMATION

240 Main Street
 First Floor
 Northampton, MA 01060
 Phone 413-587-1211
 Fax 413-587-1278

BOARD MEMBERS

Joyce Karpinski
 Charlene Nardi*
 Karen Lafleche
 Tammy Suprenant
 Thomas Sullivan
 *indicates Chairperson

BOARD ADMINISTRATOR

David Shipka

SYSTEM MEMBERS

Active Members682
 Total Payroll\$33.9 M
 Average Salary\$49,600
 Average Age46
 Average Service9.7
 Retired Members.....471
 Benefits Paid\$12.3 M
 Average Benefit\$26,100
 Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees30
 Reported Earnings11
 Excess Earners.....0
 Refund Due\$0

Last Valuation: 1/1/22

Actuary: Stone



\$145.4 M
 Market Value

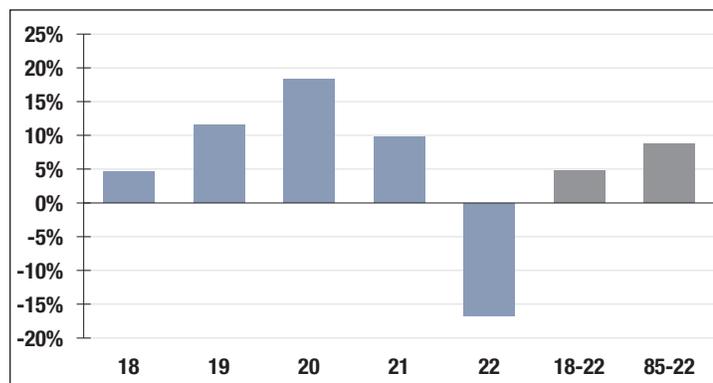
-16.76%
 2022 Returns

7.37%
 2013-2022
 (Annualized)

8.84%
 1985-2022
 (Annualized)

Investment Returns

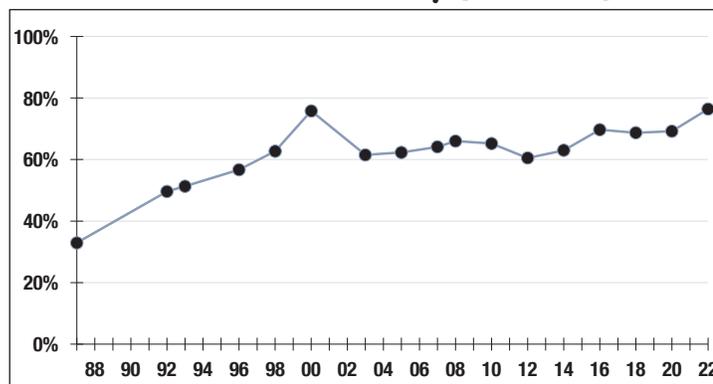
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



76.4%

Funded Ratio

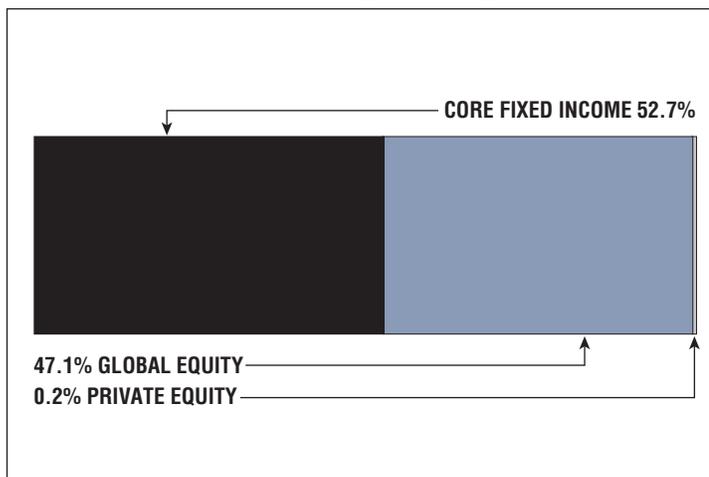
2035

Fully Funded

3.45% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$51.4 M

Unfunded Liability

\$7.5 M
 (FY2023)

Total Pension Appropriation

Northbridge

CONTACT INFORMATION

7 Main Street
Town Hall
Whitinsville, MA 01588
Phone 508-234-0820
Fax 508-234-5834

BOARD MEMBERS

Sharon Emerick
Sharon Susienka
George Murray
John Meagher*
Thomas Frieswyk
*indicates Chairperson

BOARD ADMINISTRATOR

Caitlin Leahey

SYSTEM MEMBERS

Active Members218
Total Payroll\$9.9 M
Average Salary\$45,500
Average Age45
Average Service9.5

Retired Members115
Benefits Paid\$2.9 M
Average Benefit\$24,800
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees10
Reported Earnings4
Excess Earners1
Refund Due\$1,537

Last Valuation: 1/1/22
Actuary: Stone



\$47.6 M
Market Value

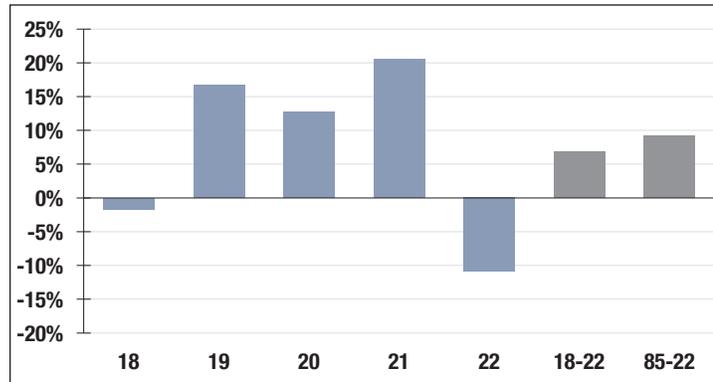
-10.90%
2022 Returns

8.37%
2013-2022
(Annualized)

9.15%
1985-2022
(Annualized)

Investment Returns

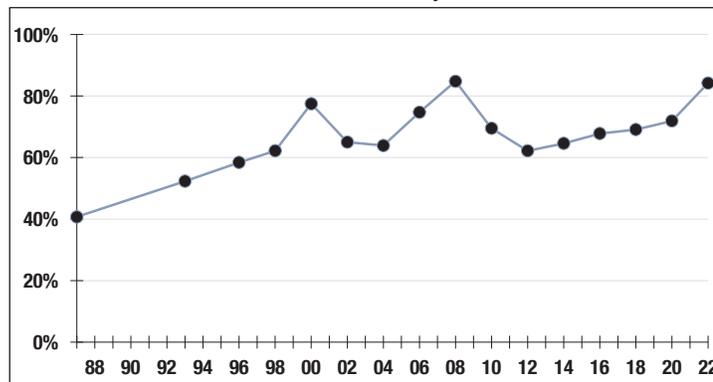
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



84.2%

Funded Ratio

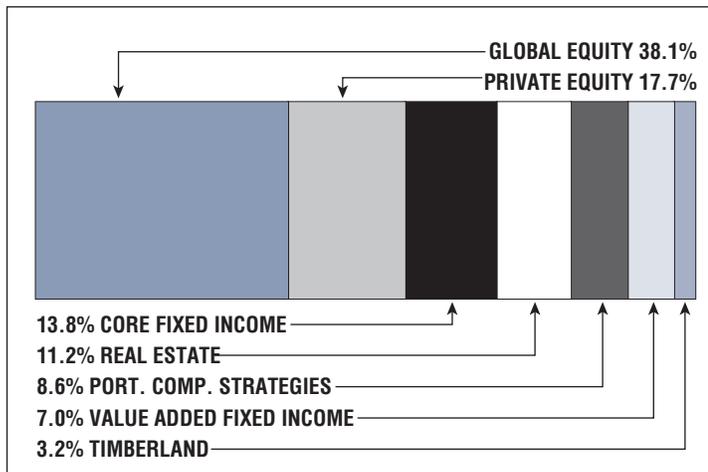
2031

Fully Funded

2.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$9.2 M

Unfunded Liability

\$2.1 M
(FY2023)

Total Pension Appropriation

Norwood

CONTACT INFORMATION

566 Washington Street
Norwood, MA 02062
Phone 781-762-1240
Fax 781-278-3024

BOARD MEMBERS

Edmund Mulvehill*
Eileen Hickey
Thomas O'Toole
Thomas Rorrie
*indicates Chairperson

BOARD ADMINISTRATOR

Debra Wilkes

SYSTEM MEMBERS

Active Members650
Total Payroll\$40.6 M
Average Salary\$62,400
Average Age48
Average Service 10.6

Retired Members439
Benefits Paid\$13.5 M
Average Benefit\$30,800
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees30
Reported Earnings 10
Excess Earners 1
Refund Due\$48,409

Last Valuation: 1/1/22
Actuary: Segal



\$209.5 M
Market Value

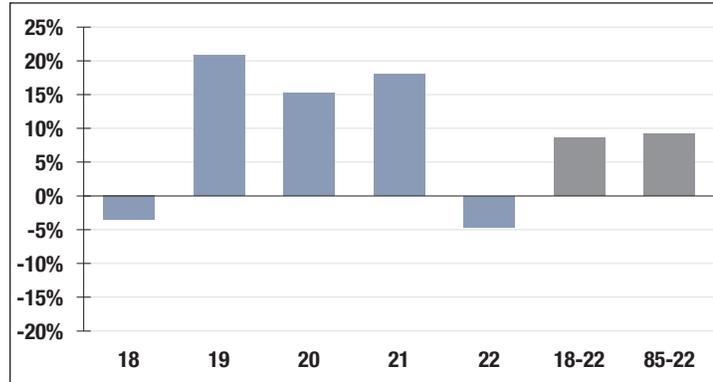
-4.61%
2022 Returns

9.24%
2013-2022
(Annualized)

9.19%
1985-2022
(Annualized)

Investment Returns

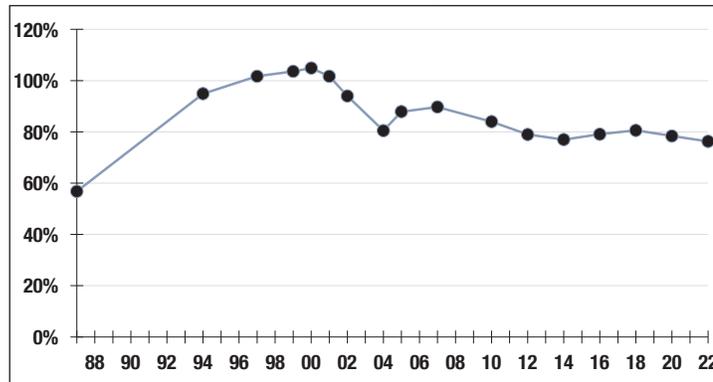
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



76.3%

Funded Ratio

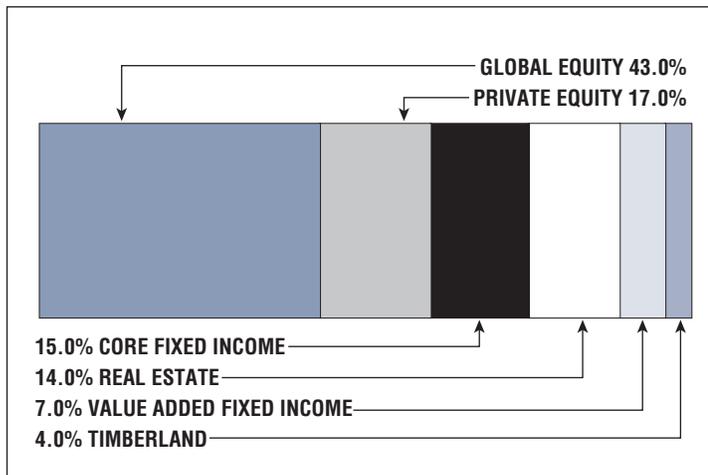
2038

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$63.0 M

Unfunded Liability

\$6.2 M
(FY2023)

Total Pension Appropriation

Peabody

CONTACT INFORMATION

City Hall
24 Lowell Street
Peabody, MA 01960
Phone 978-538-5911
Fax 978-560-0955

BOARD MEMBERS

Michael Gingras
Edward Lomasney
Andrea Trefry
Henry Hogan
Richard Yagjian*
*indicates Chairperson

BOARD ADMINISTRATOR

James Freeman

SYSTEM MEMBERS

Active Members835
Total Payroll\$50.4 M
Average Salary\$60,300
Average AgeNA
Average ServiceNA

Retired Members769
Benefits Paid\$21.8 M
Average Benefit\$28,400
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees41
Reported Earnings8
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Sherman



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\$183.6 M
Market Value

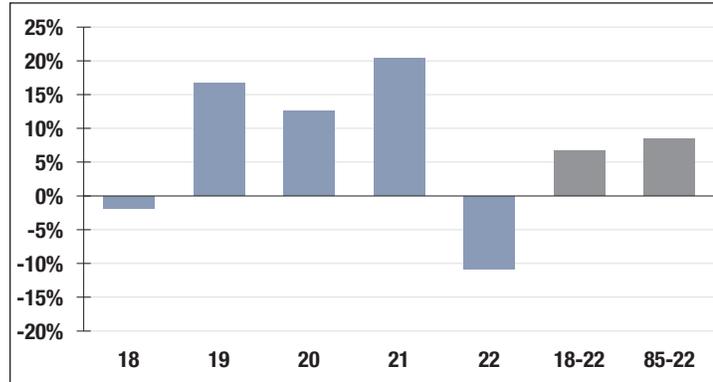
-10.88%
2022 Returns

8.32%
2013-2022
(Annualized)

8.53%
1985-2022
(Annualized)

Investment Returns

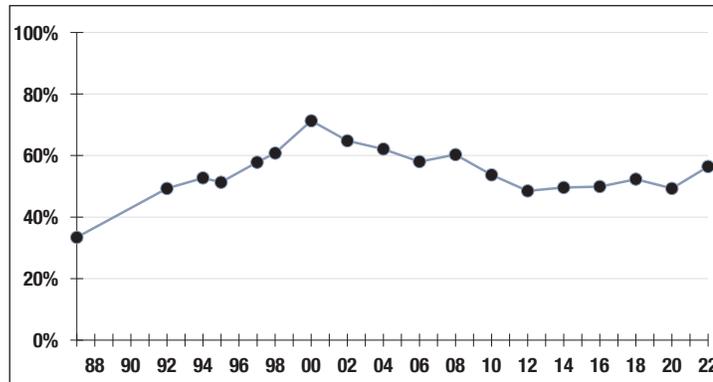
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



56.4%

Funded Ratio

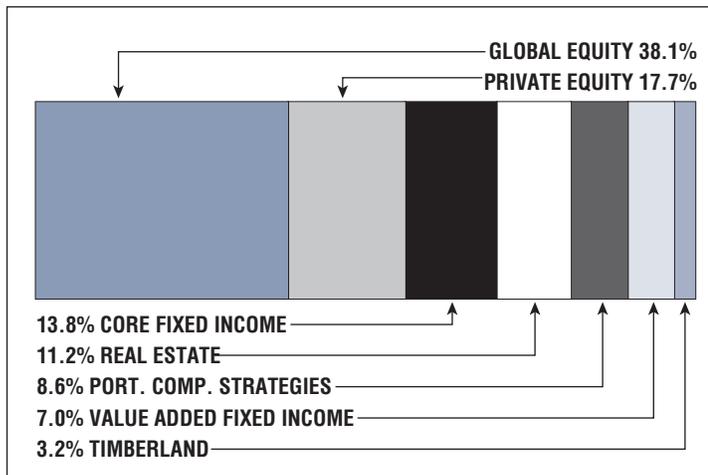
2036

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$150.4 M

Unfunded Liability

\$15.4 M
(FY2023)

Total Pension Appropriation

Pittsfield

CONTACT INFORMATION

114 Fenn Street
Pittsfield, MA 01201
Phone 413-499-9468
Fax 413-499-9328

BOARD MEMBERS

Matthew Kerwood*
Bonnie Galant
Timothy Bartini
Timothy Hannigan
William Flynn
*indicates Chairperson

BOARD ADMINISTRATOR

Karen Lancto

SYSTEM MEMBERS

Active Members861
Total Payroll\$37.2 M
Average Salary\$43,200
Average Age48
Average Service11.1

Retired Members792
Benefits Paid\$19.4 M
Average Benefit\$24,500
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees65
Reported Earnings14
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



\$175.0 M
Market Value

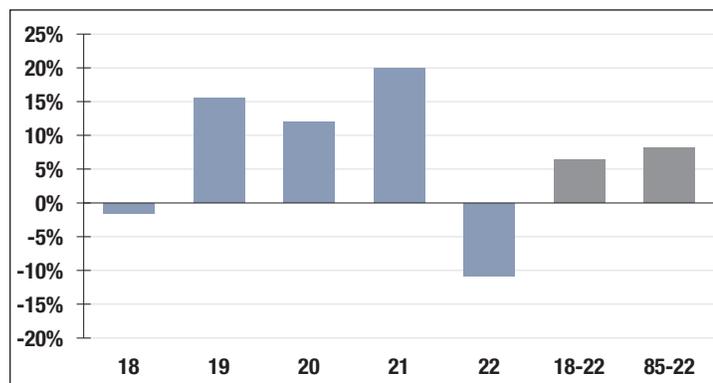
-10.80%
2022 Returns

8.07%
2013-2022
(Annualized)

8.11%
1985-2022
(Annualized)

Investment Returns

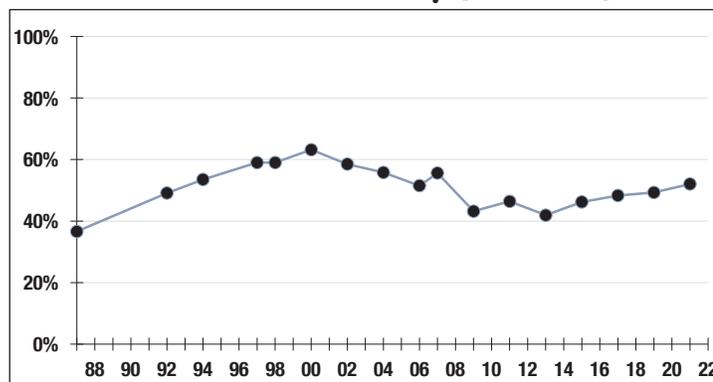
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



52.0%

Funded Ratio

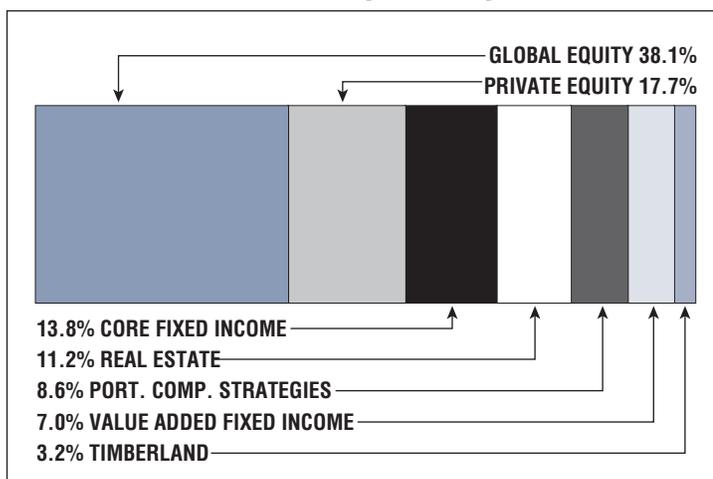
2037

Fully Funded

5.2% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$146.8 M

Unfunded Liability

\$16.3 M
(FY2023)

Total Pension Appropriation

Plymouth

CONTACT INFORMATION

212 South Meadow Road
Unit #3
Plymouth, MA 02360
Phone 508-830-4170
Fax 508-830-4019

BOARD MEMBERS

Lynne Barrett
Sharon LaRosa
Dale Webber
Thomas Kelley*
Robert Ness
*indicates Chairperson

BOARD ADMINISTRATOR

Wendy Cherry

SYSTEM MEMBERS

Active Members901
Total Payroll\$53.6 M
Average Salary\$59,500
Average Age48
Average Service 11.3

Retired Members817
Benefits Paid\$22.4 M
Average Benefit\$27,500
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees81
Reported Earnings31
Excess Earners 1
Refund Due\$43,302

Last Valuation: 1/1/22
Actuary: KMS



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\$228.7 M
Market Value

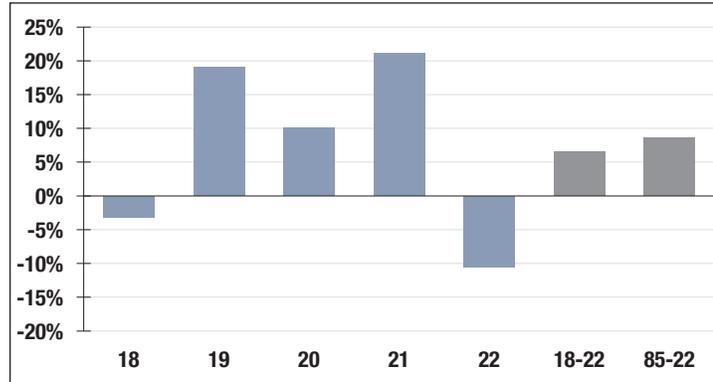
-10.55%
2022 Returns

8.59%
2013-2022
(Annualized)

8.68%
1985-2022
(Annualized)

Investment Returns

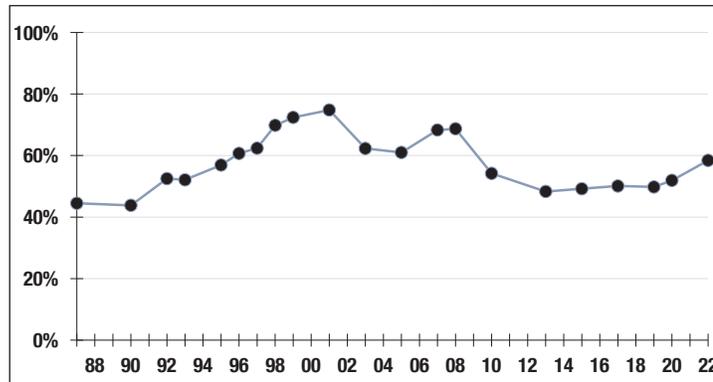
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



58.4%

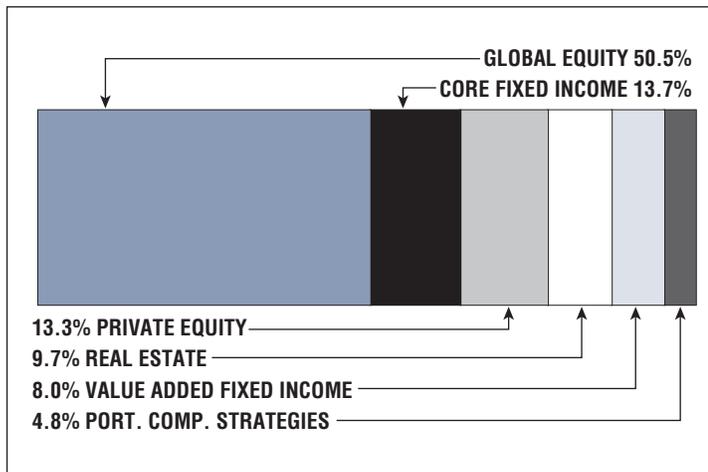
Funded Ratio

2035

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$165.2 M

Unfunded Liability

\$17.4 M
(FY2023)

Total Pension Appropriation

Plymouth County

CONTACT INFORMATION

60 Industrial Park Road
Plymouth, MA 02360
Phone 508-830-1803
Fax 508-830-1875

BOARD MEMBERS

Thomas O'Brien*
James Harrington
John Sciara
Joseph McDonough
Pamela Avitabile
*indicates Chairperson

BOARD ADMINISTRATOR

Padraic Lydon

SYSTEM MEMBERS

Active Members5,824
Total Payroll\$316.7 M
Average Salary\$54,400
Average AgeNA
Average ServiceNA

Retired Members4,546
Benefits Paid\$124.4 M
Average Benefit\$27,400
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees308
Reported Earnings107
Excess Earners3
Refund Due\$22,826

Last Valuation: 1/1/22
Actuary: Sherman



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\$1.3 B
Market Value

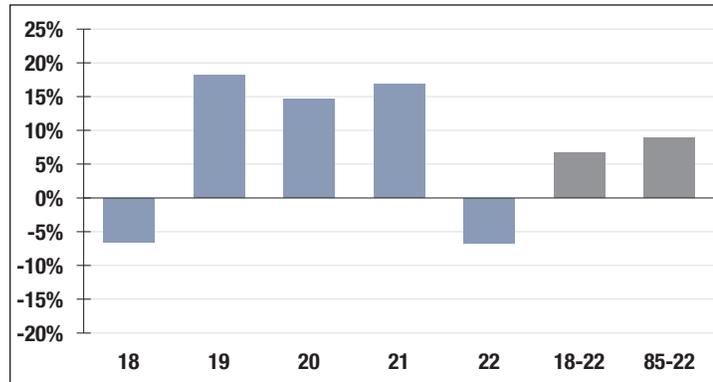
-6.68%
2022 Returns

8.02%
2013-2022
(Annualized)

8.91%
1985-2022
(Annualized)

Investment Returns

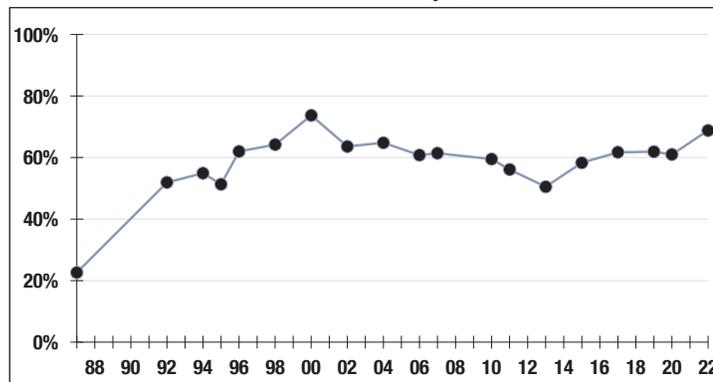
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.88%

Assumed Rate of Return

Funded Ratio History (1987-2022)



68.8%

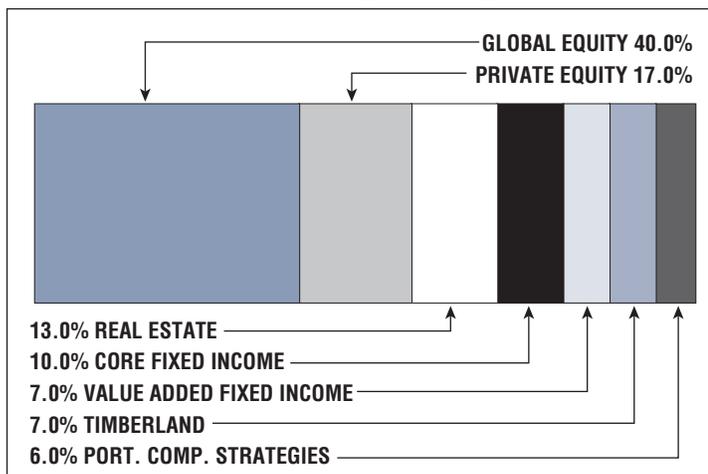
Funded Ratio

2029

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$594.4 M

Unfunded Liability

\$94.7 M
(FY2023)

Total Pension Appropriation

Quincy

CONTACT INFORMATION

1212 Hancock Street
Suite 210A
Quincy, MA 02169
Phone 617-376-1075
Fax 617-376-1149

BOARD MEMBERS

Susan O'Connor*
Michael McFarland
Ernest Arienti
Paul Brown
Richard Fitzpatrick
*indicates Chairperson

BOARD ADMINISTRATOR

Brad Croall

SYSTEM MEMBERS

Active Members 1,575
Total Payroll \$107.7 M
Average Salary \$68,400
Average Age 49
Average Service 12

Retired Members 1,496
Benefits Paid \$51.1 M
Average Benefit \$34,200
Average Age 75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 135
Reported Earnings 27
Excess Earners 1
Refund Due \$1,167

Last Valuation: 1/1/22
Actuary: Stone



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\$793.9 M
Market Value

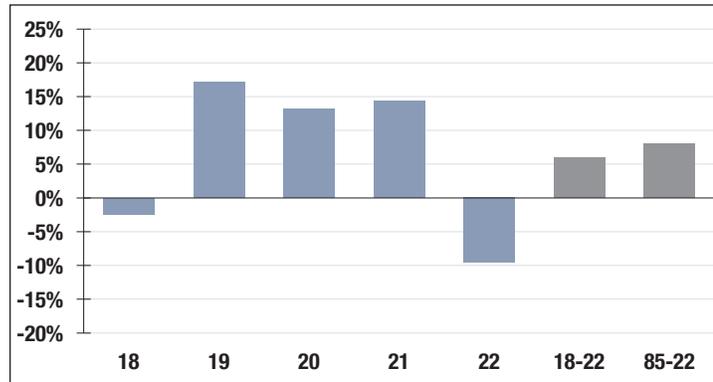
-9.60%
2022 Returns

7.02%
2013-2022
[Annualized]

8.00%
1985-2022
[Annualized]

Investment Returns

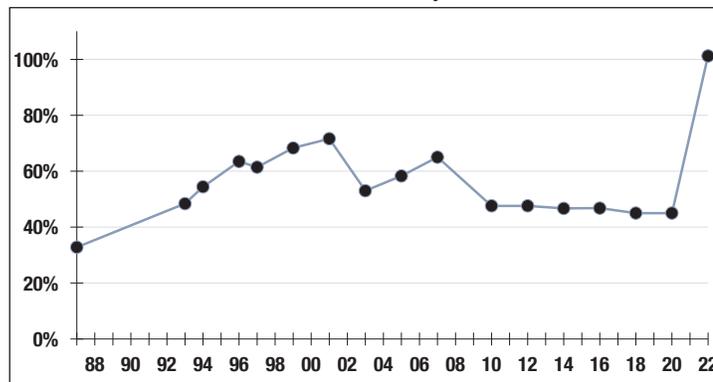
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



101.2%

Funded Ratio

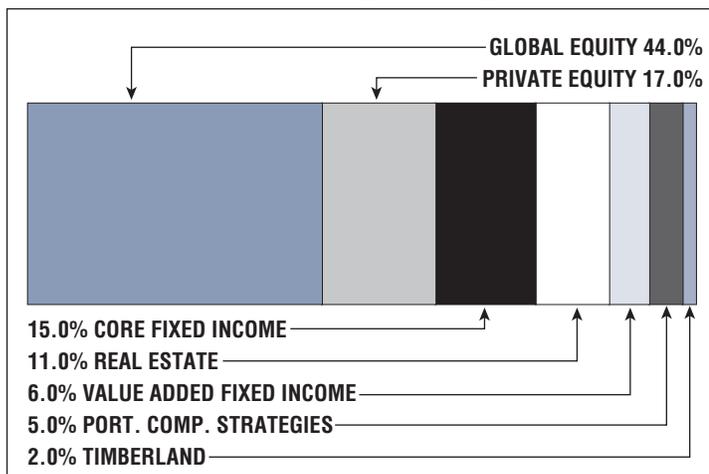
NA

Fully Funded

Fully Funded,
Housing FY35

Funding Schedule

Asset Allocation (12/31/22)



-\$10.1 M

Unfunded Liability

\$9.2 M
[FY2023]

Total Pension
Appropriation

Reading

CONTACT INFORMATION

2 Haven Street
Unit 307
Reading, MA 01867
Phone 781-942-9007
Fax 781-623-3053

BOARD MEMBERS

Sharon Angstrom
Carol Roberts
David Gentile*
Robert Beck
John Halsey
*indicates Chairperson

BOARD ADMINISTRATOR

Colleen Loughlin

SYSTEM MEMBERS

Active Members355
Total Payroll\$29.6 M
Average Salary\$83,400
Average Age47
Average Service 12.7

Retired Members366
Benefits Paid\$12.3 M
Average Benefit\$33,600
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees29
Reported Earnings8
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: KMS



\$175.2 M
Market Value

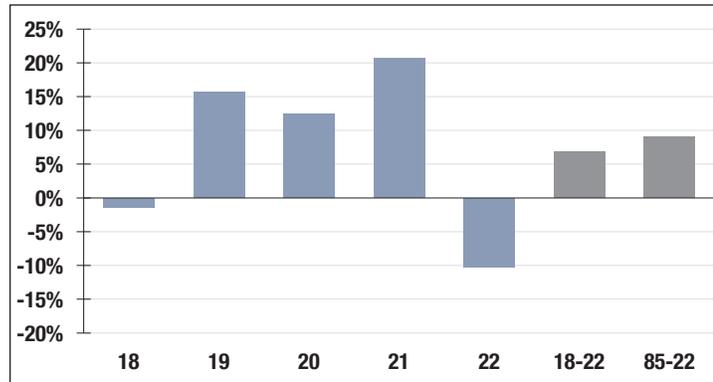
-10.26%
2022 Returns

8.35%
2013-2022
(Annualized)

9.08%
1985-2022
(Annualized)

Investment Returns

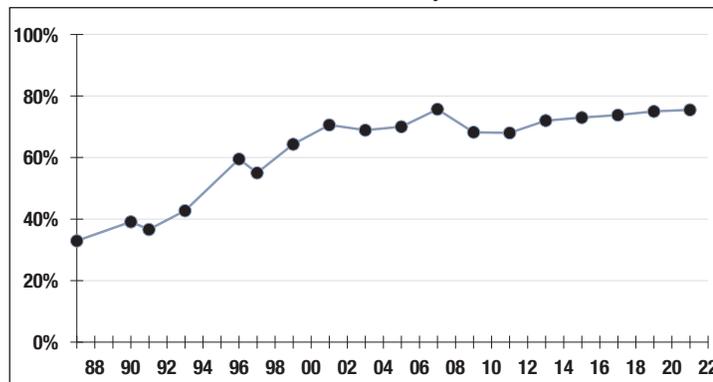
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



75.5%

Funded Ratio

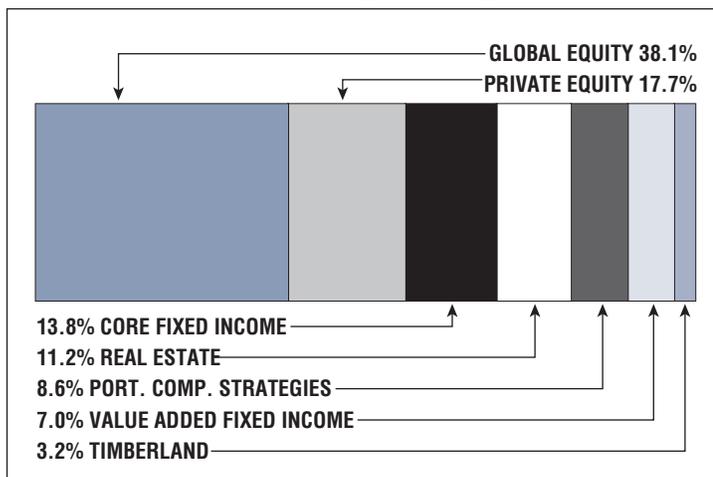
2031

Fully Funded

6.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$52.2 M

Unfunded Liability

\$8.5 M
(FY2023)

Total Pension Appropriation

Revere

CONTACT INFORMATION

14 Yeamans Street
 Unit C2
 Revere, MA 02151
 Phone 781-286-8173
 Fax 781-286-3316

BOARD MEMBERS

Richard Viscay*
 Ida Cody
 James Cullen
 Sean Manion
 Gennaro Cataldo
 *indicates Chairperson

BOARD ADMINISTRATOR

Scott Provensal

SYSTEM MEMBERS

Active Members622
 Total Payroll\$43.3 M
 Average Salary\$69,600
 Average Age47
 Average Service 11.9

 Retired Members.....490
 Benefits Paid\$17.2 M
 Average Benefit\$35,000
 Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees91
 Reported Earnings23
 Excess Earners.....0
 Refund Due\$0

Last Valuation: 1/1/21
 Actuary: PERAC



Click/Scan for Website

\$221.8 M
 Market Value

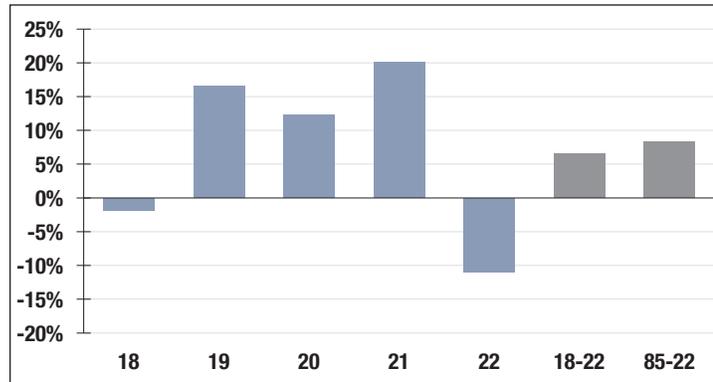
-10.93%
 2022 Returns

8.19%
 2013-2022
 (Annualized)

8.30%
 1985-2022
 (Annualized)

Investment Returns

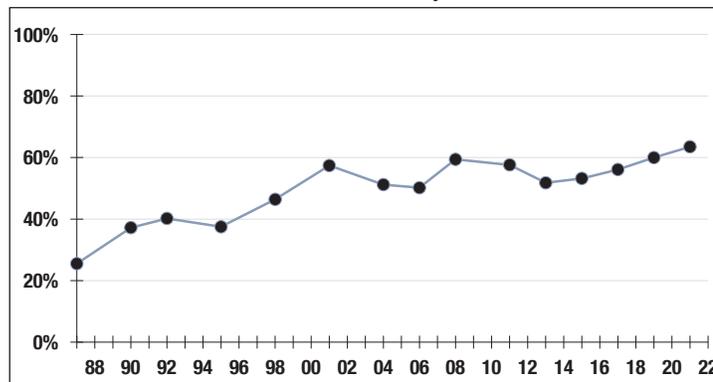
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



63.5%

Funded Ratio

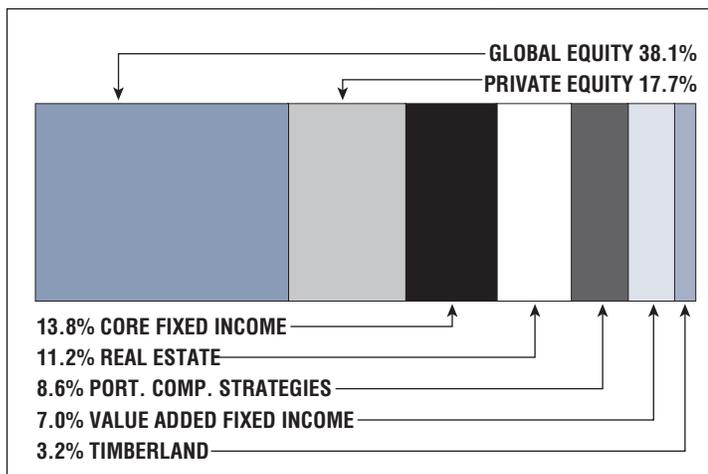
2033

Fully Funded

6.32% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$111.2 M

Unfunded Liability

\$16.0 M
 (FY2023)

Total Pension Appropriation

Salem

CONTACT INFORMATION

20 Central Street
Suite 110
Salem, MA 01970
Phone 978-745-8983
Fax 978-745-4216

BOARD MEMBERS

Anna Freedman*
Lisa Peterson
Robert Callahan
Sarah Hayes
Matthew Veno
*indicates Chairperson

BOARD ADMINISTRATOR

Paul Findlen

SYSTEM MEMBERS

Active Members919
Total Payroll\$55.7 M
Average Salary\$60,600
Average Age47
Average Service 10.4

Retired Members636
Benefits Paid\$20.1 M
Average Benefit\$31,600
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees48
Reported Earnings 15
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Segal



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\$247.0 M
Market Value

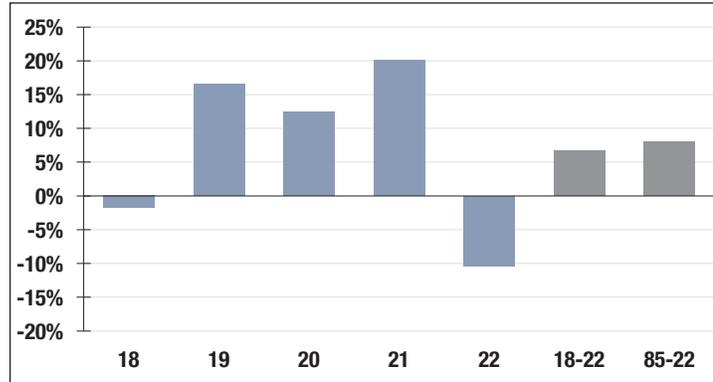
-10.41%
2022 Returns

8.17%
2013-2022
(Annualized)

8.09%
1985-2022
(Annualized)

Investment Returns

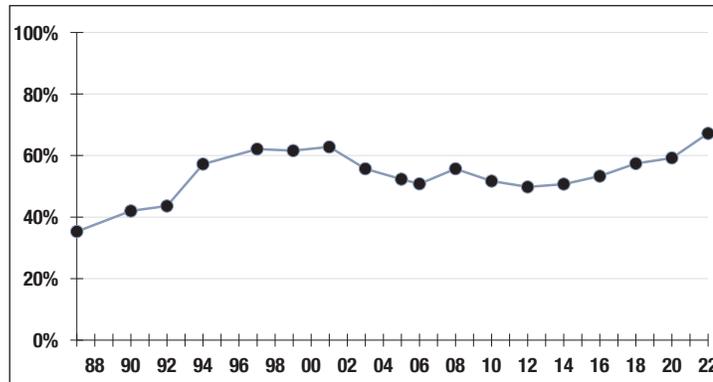
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.90%

Assumed Rate of Return

Funded Ratio History (1987-2022)



67.2%

Funded Ratio

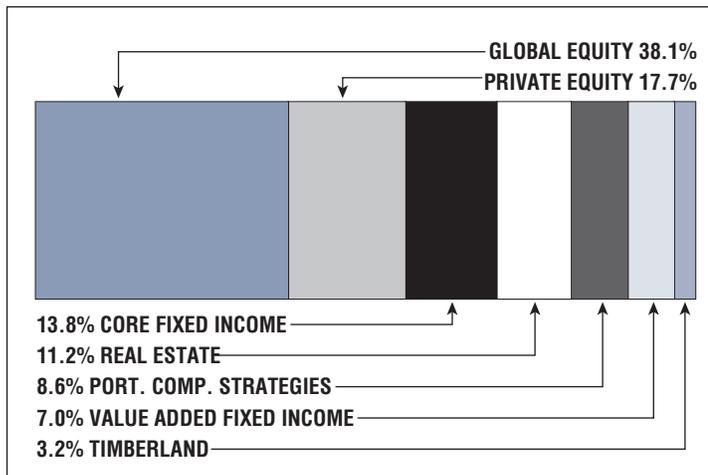
2032

Fully Funded

5.55% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$120.0 M

Unfunded Liability

\$17.2 M
(FY2023)

Total Pension Appropriation

Saugus

CONTACT INFORMATION

25R Main Street
Town Hall Annex
Saugus, MA 01906
Phone 781-558-2903
Fax 781-666-3218

BOARD MEMBERS

Donna Matarazzo
Eugene Decareau
Mark Gannon
William Cross*
Doreen DiBari
*indicates Chairperson

BOARD ADMINISTRATOR

Ann Quinlan

SYSTEM MEMBERS

Active Members340
Total Payroll\$20.4 M
Average Salary\$60,000
Average Age46
Average Service 11.8

Retired Members.....302
Benefits Paid\$8.7 M
Average Benefit\$28,900
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees26
Reported Earnings5
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: PERAC



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\$139.1 M
Market Value

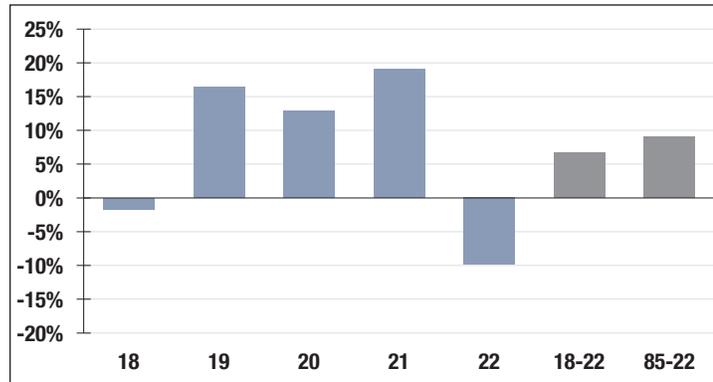
-9.86%
2022 Returns

8.34%
2013-2022
[Annualized]

9.03%
1985-2022
[Annualized]

Investment Returns

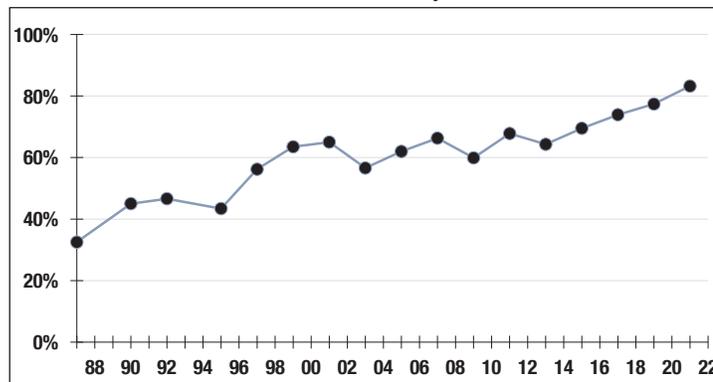
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



83.2%

Funded Ratio

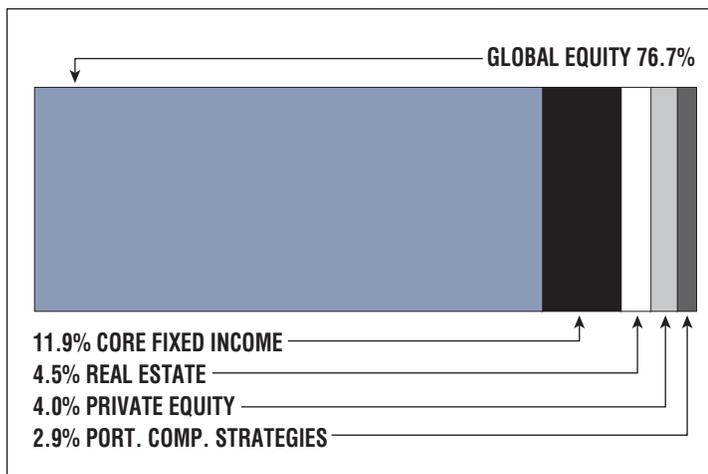
2027

Fully Funded

5.2% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$25.3 M

Unfunded Liability

\$8.3 M
[FY2023]

Total Pension Appropriation

Shrewsbury

CONTACT INFORMATION

100 Maple Avenue
Shrewsbury, MA 01545
Phone 508-841-8510
Fax 508-842-0587

BOARD MEMBERS

Amy Li
Michael Hale
Mary Thompson
Ralph Iaccarino
Alice Ferro

BOARD ADMINISTRATOR

Gregory Gatsogiannis

SYSTEM MEMBERS

Active Members433
Total Payroll\$27.2 M
Average Salary\$62,900
Average AgeNA
Average ServiceNA

Retired Members305
Benefits Paid\$9.5 M
Average Benefit\$31,100
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees20
Reported Earnings7
Excess Earners1
Refund Due\$1,545

Last Valuation: 1/1/22
Actuary: Sherman



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\$155.4 M
Market Value

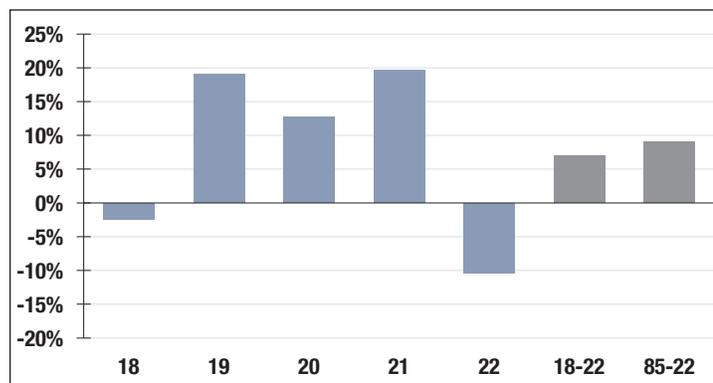
-10.40%
2022 Returns

8.91%
2013-2022
(Annualized)

9.00%
1985-2022
(Annualized)

Investment Returns

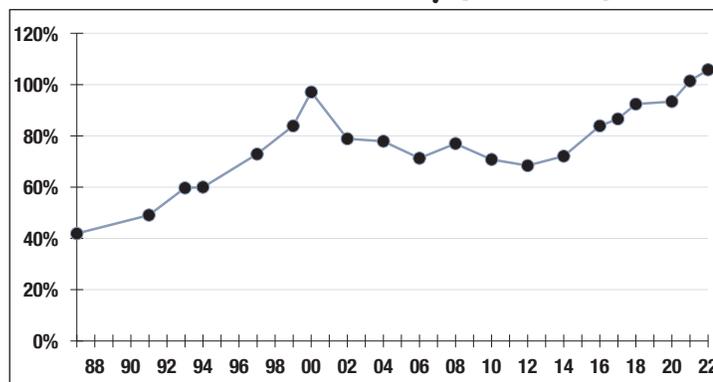
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



105.8%

Funded Ratio

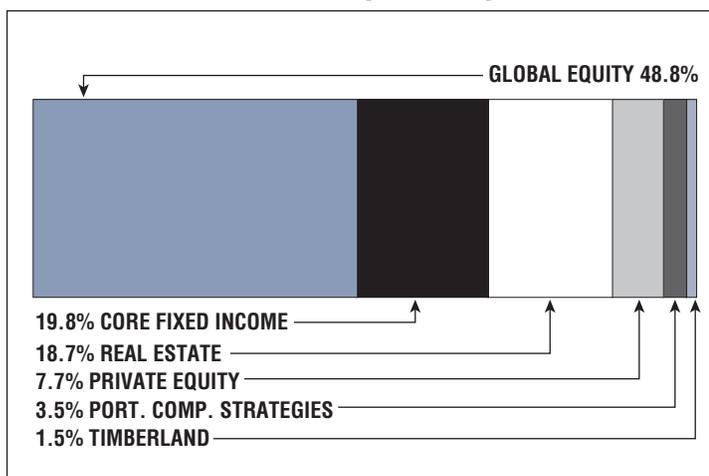
NA

Fully Funded

Fully Funded

Funding Schedule

Asset Allocation (12/31/22)



-\$9.0 M

Unfunded Liability

\$1.1 M
(FY2023)

Total Pension Appropriation

Somerville

CONTACT INFORMATION

323 Broadway
Somerville, MA 02145
Phone 617-764-3811
Fax 617-591-3211

BOARD MEMBERS

Edward Bean*
Michael Mastrobuoni
John Memory
Thomas Ross
David Castellarin
*indicates Chairperson

BOARD ADMINISTRATOR

Michael Pasquariello

SYSTEM MEMBERS

Active Members 1,266
Total Payroll\$93.8 M
Average Salary\$74,100
Average AgeNA
Average ServiceNA

Retired Members958
Benefits Paid\$32.3 M
Average Benefit\$33,700
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 103
Reported Earnings27
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Sherman



\$343.5 M
Market Value

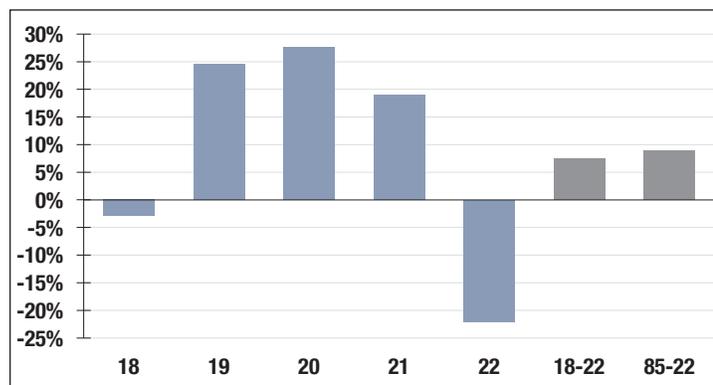
-22.06%
2022 Returns

8.62%
2013-2022
(Annualized)

8.85%
1985-2022
(Annualized)

Investment Returns

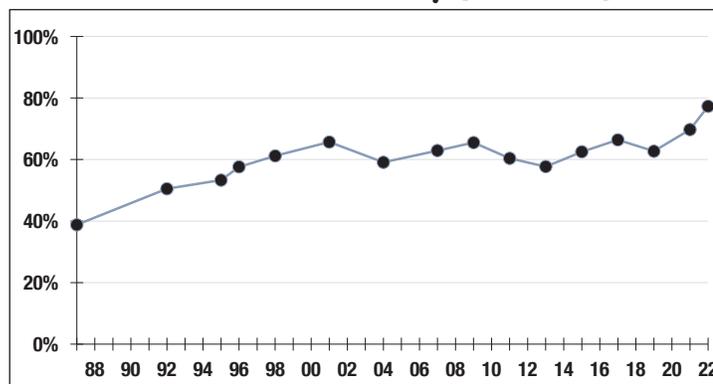
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



77.3%

Funded Ratio

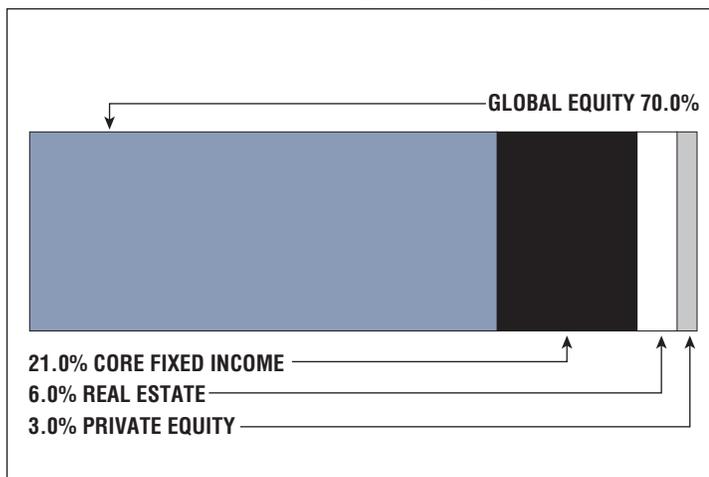
2033

Fully Funded

2.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$119.5 M

Unfunded Liability

\$17.2 M
(FY2023)

Total Pension Appropriation

Southbridge

CONTACT INFORMATION

Town Hall
41 Elm Street
Southbridge, MA 01550
Phone 508-765-4903
Fax 508-765-0902

BOARD MEMBERS

Kristine Russell
Julie Pena
Wilfrid Cournoyer
Pamela Leduc*
*indicates Chairperson

BOARD ADMINISTRATOR

Yolanda Alvarado

SYSTEM MEMBERS

Active Members398
Total Payroll\$19.7 M
Average Salary\$49,400
Average Age44
Average Service8.7

Retired Members187
Benefits Paid\$5.0 M
Average Benefit\$26,900
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees17
Reported Earnings8
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$74.9 M
Market Value

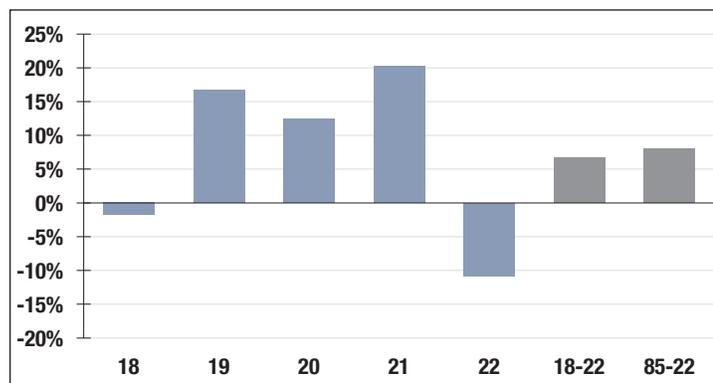
-10.88%
2022 Returns

8.24%
2013-2022
(Annualized)

8.03%
1985-2022
(Annualized)

Investment Returns

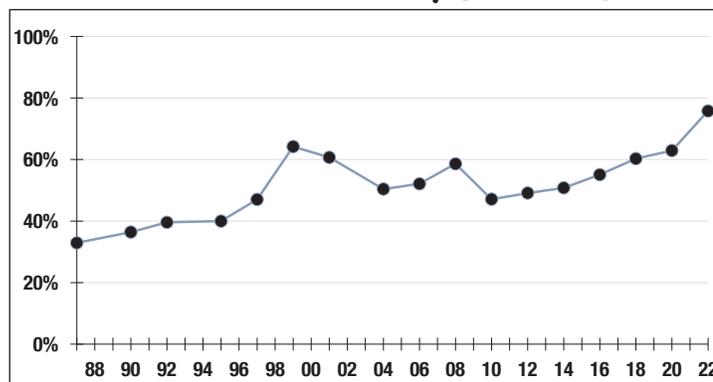
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



75.8%

Funded Ratio

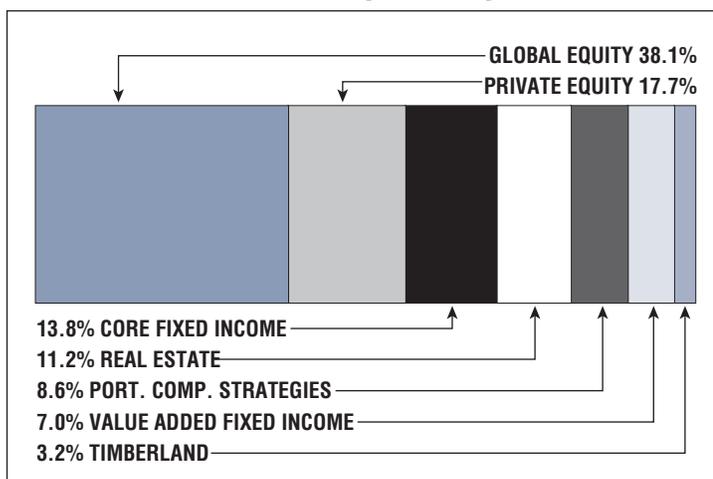
2032

Fully Funded

5.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$24.1 M

Unfunded Liability

\$5.0 M
(FY2023)

Total Pension Appropriation

Springfield

CONTACT INFORMATION

70 Tapley Street
Springfield, MA 01104
Phone 413-787-6090
Fax 413-787-6046

BOARD MEMBERS

Patrick Burns
Haskell Kennedy
Robert Moynihan
Thomas Scanlon*
Karl Schmaelzle
*indicates Chairperson

BOARD ADMINISTRATOR

Susana Baltazar

SYSTEM MEMBERS

Active Members3,327
Total Payroll\$176.8 M
Average Salary\$53,100
Average Age44
Average Service10.9

Retired Members2,812
Benefits Paid\$85.9 M
Average Benefit\$30,500
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees388
Reported Earnings133
Excess Earners6
Refund Due\$45,868

Last Valuation: 1/1/22
Actuary: PERAC



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\$509.2 M
Market Value

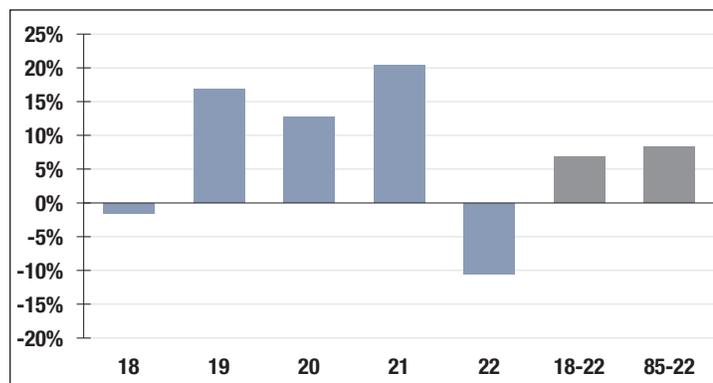
-10.55%
2022 Returns

8.52%
2013-2022
(Annualized)

8.36%
1985-2022
(Annualized)

Investment Returns

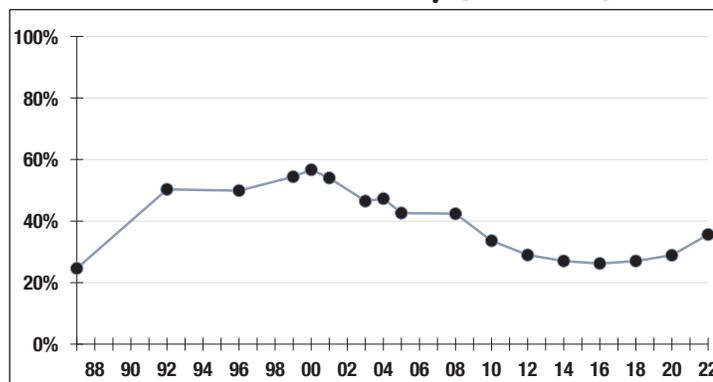
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



35.6%

Funded Ratio

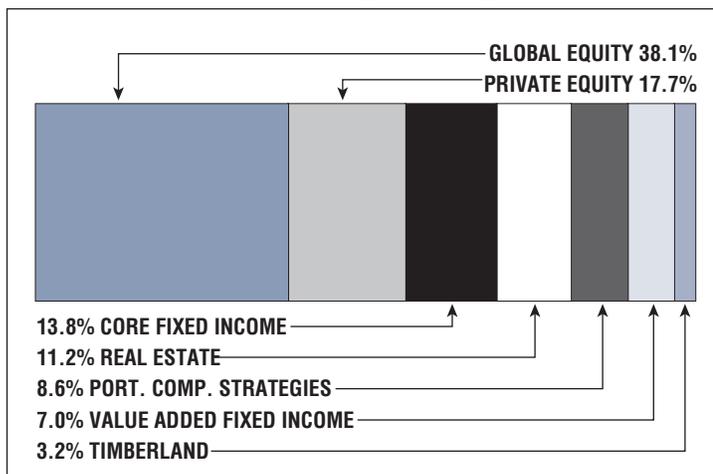
2033

Fully Funded

9.2% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$898.4 M

Unfunded Liability

\$93.1 M
(FY2023)

Total Pension Appropriation

State

CONTACT INFORMATION

One Winter Street, 8th floor
 Boston, MA 02108
 Phone 617-367-7770
 Fax 617-723-1438

BOARD MEMBERS

State Treasurer
 Deborah Goldberg*
 Maureen Valente
 Frank Valeri
 Theresa McGoldrick
 Archie Gormley
 *indicates Chairperson

BOARD ADMINISTRATOR

Kathryn Kougias

SYSTEM MEMBERS

Active Members85,999
 Total Payroll \$6.7 B
 Average Salary\$77,300
 Average Age47
 Average Service 12.2

 Retired Members....68,280
 Benefits Paid \$2.7 B
 Average Benefit\$39,600
 Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees.....3,504
 Reported Earnings949
 Excess Earners.....36
 Refund Due\$532,002

Last Valuation: 1/1/22
 Actuary: PERAC



\$33.2 B
 Market Value

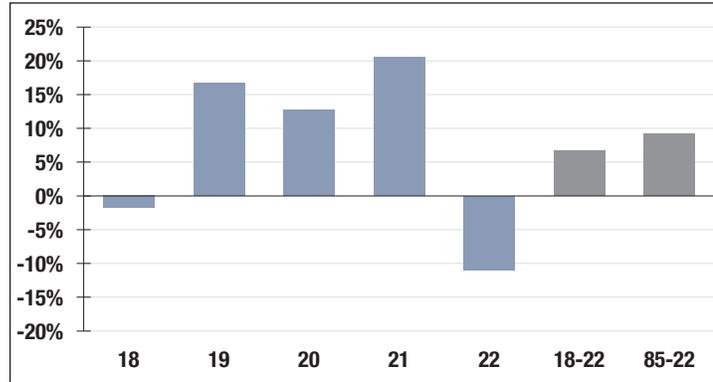
-10.97%
 2022 Returns

8.37%
 2013-2022
 (Annualized)

9.23%
 1985-2022
 (Annualized)

Investment Returns

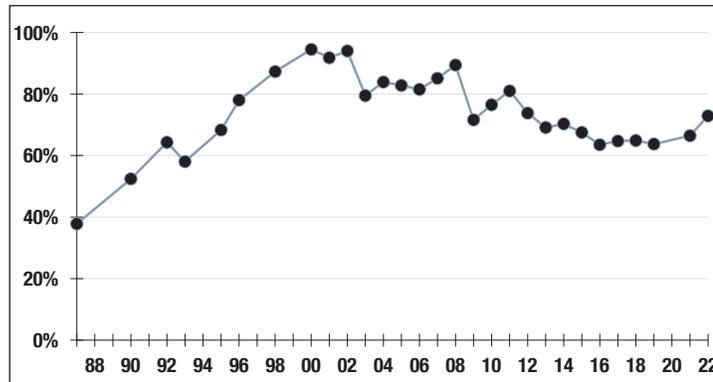
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



72.9%

Funded Ratio

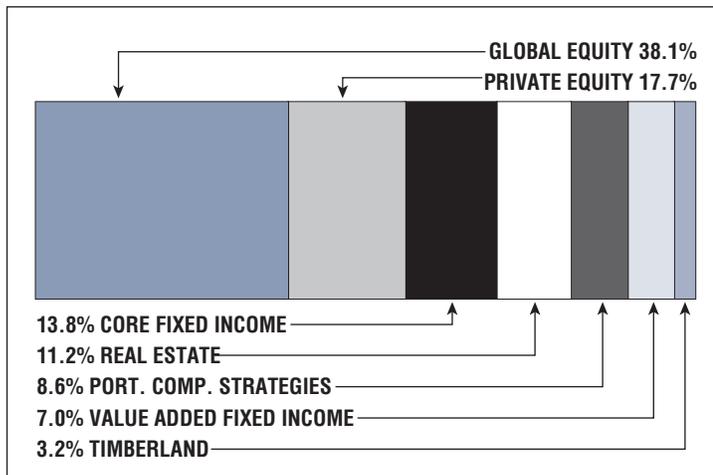
2036

Fully Funded

9.63% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$12.8 B

Unfunded Liability

\$1.4 B
 (FY2023)

Total Pension Appropriation

Stoneham

CONTACT INFORMATION

Town Hall
35 Central Street
Stoneham, MA 02180
Phone 781-279-2635
Fax 781-438-6906

BOARD MEMBERS

Lauri Plourde
Kathleen Sullivan
Francis Gould
John Scullin
Janice Houghton*
*indicates Chairperson

BOARD ADMINISTRATOR

Christopher Delisi

SYSTEM MEMBERS

Active Members309
Total Payroll\$17.2 M
Average Salary\$55,700
Average Age47
Average Service11

Retired Members291
Benefits Paid\$8.4 M
Average Benefit\$28,900
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees17
Reported Earnings3
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Stone



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\$116.5 M
Market Value

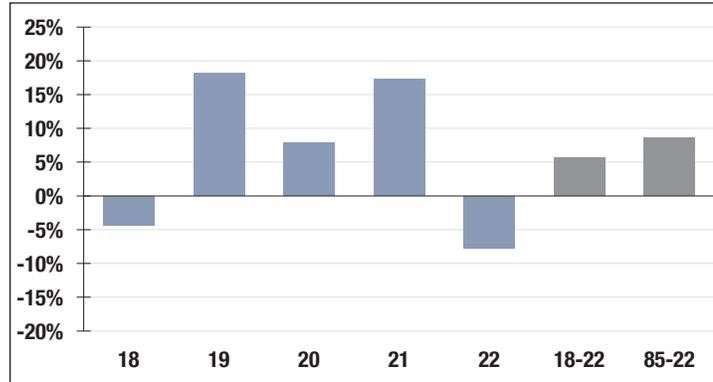
-7.71%
2022 Returns

7.88%
2013-2022
[Annualized]

8.57%
1985-2022
[Annualized]

Investment Returns

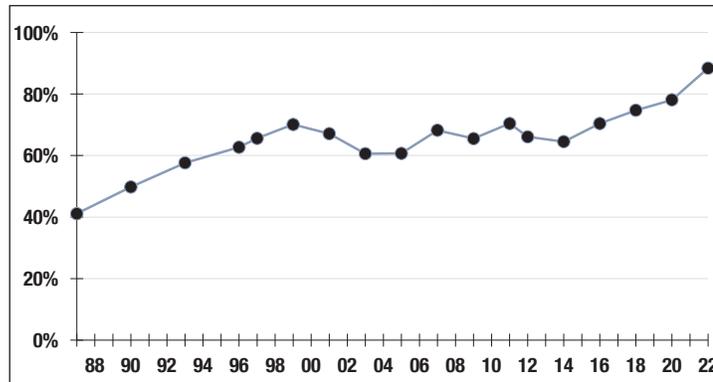
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



88.4%

Funded Ratio

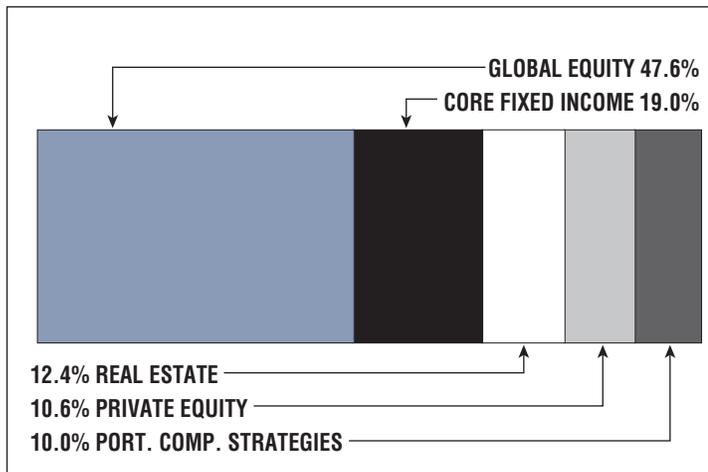
2026

Fully Funded

Level Payment

Funding Schedule

Asset Allocation (12/31/22)



\$15.4 M

Unfunded Liability

\$7.3 M
[FY2023]

Total Pension Appropriation

Swampscott

CONTACT INFORMATION

22 Monument Ave.
Town Hall
Swampscott, MA 01907
Phone 781-596-8827
Fax 781-394-2668

BOARD MEMBERS

Amy Sarro
Thomas Driscoll*
John Behen
Kevin Breen
Robert Powell
*indicates Chairperson

BOARD ADMINISTRATOR

Nancy Lord

SYSTEM MEMBERS

Active Members249
Total Payroll\$13.2 M
Average Salary\$53,100
Average Age46
Average Service11.6

Retired Members235
Benefits Paid\$6.8 M
Average Benefit\$29,100
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees18
Reported Earnings4
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21
Actuary: Segal



\$78.9 M
Market Value

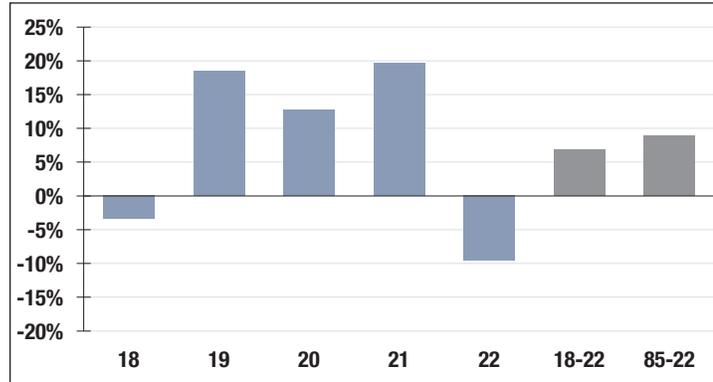
-9.58%
2022 Returns

8.60%
2013-2022
(Annualized)

8.91%
1985-2022
(Annualized)

Investment Returns

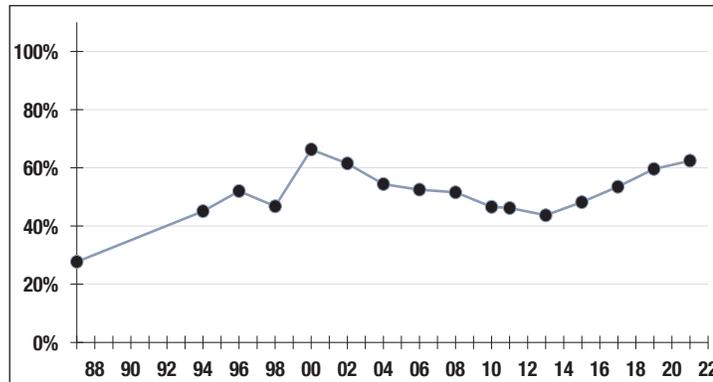
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.13%

Assumed Rate of Return

Funded Ratio History (1987-2022)



62.4%

Funded Ratio

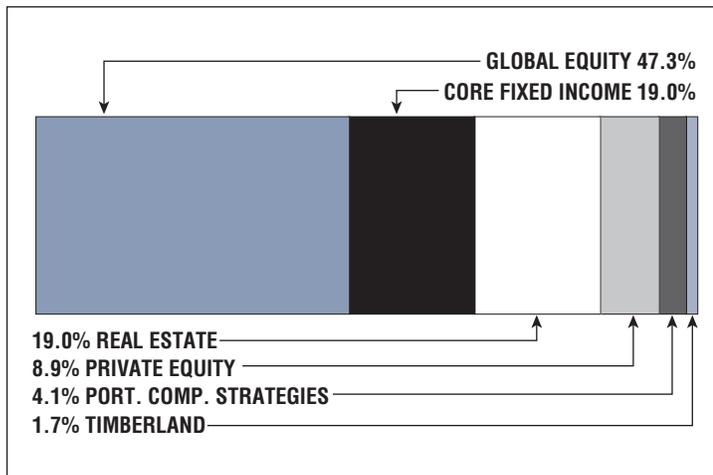
2031

Fully Funded

5.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$42.4 M

Unfunded Liability

\$6.0 M
(FY2023)

Total Pension Appropriation

Taunton

CONTACT INFORMATION

104 Dean Street
Suite 203
Taunton, MA 02780
Phone 508-821-1052
Fax 508-821-1063

BOARD MEMBERS

Ian Fortes
Gill Enos
Dennis Smith*
Thomas Bernier
Barry Amaral
*indicates Chairperson

BOARD ADMINISTRATOR

Paul Slivinski

SYSTEM MEMBERS

Active Members 1,054
Total Payroll \$68.0 M
Average Salary \$64,500
Average Age 48
Average Service 12.4

Retired Members 975
Benefits Paid \$31.9 M
Average Benefit \$32,800
Average Age 73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees 76
Reported Earnings 16
Excess Earners 1
Refund Due \$6,422

Last Valuation: 1/1/22
Actuary: Buck



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\$376.9 M
Market Value

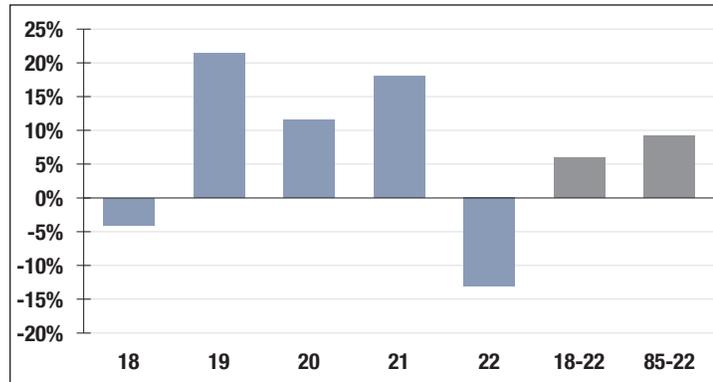
-13.11%
2022 Returns

8.00%
2013-2022
(Annualized)

9.20%
1985-2022
(Annualized)

Investment Returns

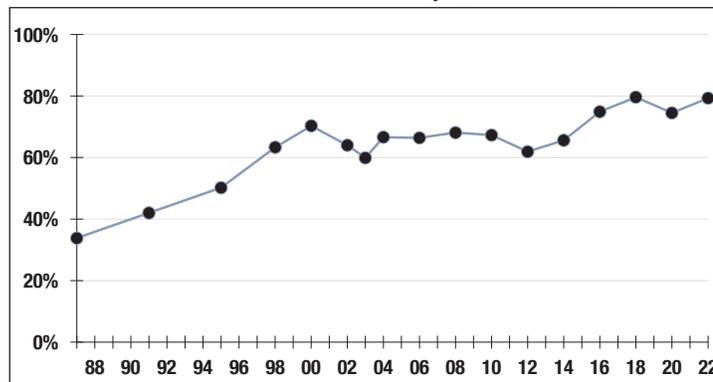
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.60%

Assumed Rate of Return

Funded Ratio History (1987-2022)



79.3%

Funded Ratio

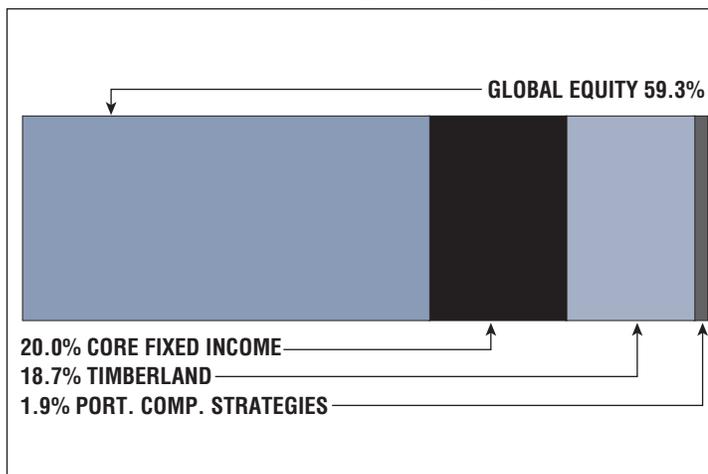
2030

Fully Funded

4.5% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$107.4 M

Unfunded Liability

\$19.6 M
(FY2023)

Total Pension Appropriation

Wakefield

CONTACT INFORMATION

1 Lafayette Street
Wakefield, MA 01880
Phone 781-246-6352

BOARD MEMBERS

Kevin Gill*
Sherri Dalton
Dennis Fazio
Erin Findlen Kokinda
Daniel Sherman
*indicates Chairperson

BOARD ADMINISTRATOR

Cathy Cheek

SYSTEM MEMBERS

Active Members462
Total Payroll\$31.4 M
Average Salary\$68,100
Average Age48
Average Service12

Retired Members372
Benefits Paid\$12.4 M
Average Benefit\$33,400
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees26
Reported Earnings4
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



Click/Scan for Website

\$153.4 M
Market Value

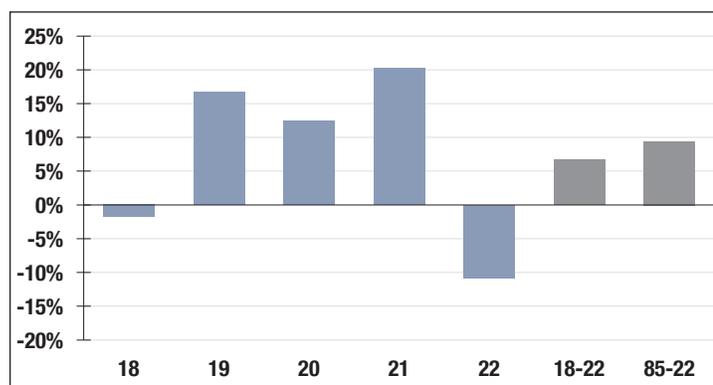
-10.83%
2022 Returns

8.34%
2013-2022
(Annualized)

9.39%
1985-2022
(Annualized)

Investment Returns

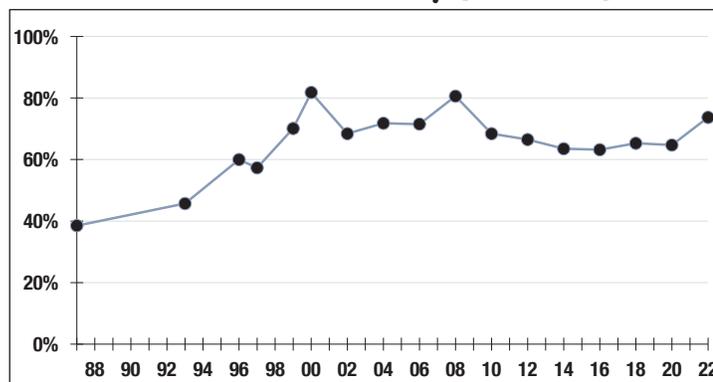
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.40%

Assumed Rate of Return

Funded Ratio History (1987-2022)



73.7%

Funded Ratio

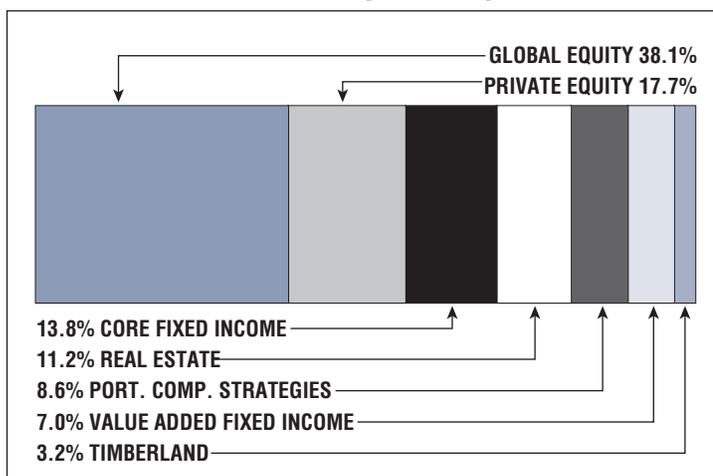
2036

Fully Funded

5.65% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$56.1 M

Unfunded Liability

\$7.6 M
(FY2023)

Total Pension Appropriation

Waltham

CONTACT INFORMATION

25 Lexington Street
2nd Floor
Waltham, MA 02452
Phone 781-314-3230
Fax 781-314-3236

BOARD MEMBERS

Paul Centofanti
Elizabeth Arnold
Scott Hovsepian
William MacDonald*
Mary Rosen
*indicates Chairperson

BOARD ADMINISTRATOR

Andrew Malis

SYSTEM MEMBERS

Active Members915
Total Payroll\$66.6 M
Average Salary\$72,800
Average AgeNA
Average ServiceNA

Retired Members796
Benefits Paid\$28.3 M
Average Benefit\$35,600
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees68
Reported Earnings19
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/21

Actuary: Sherman



Click/Scan for Website

\$301.2 M
Market Value

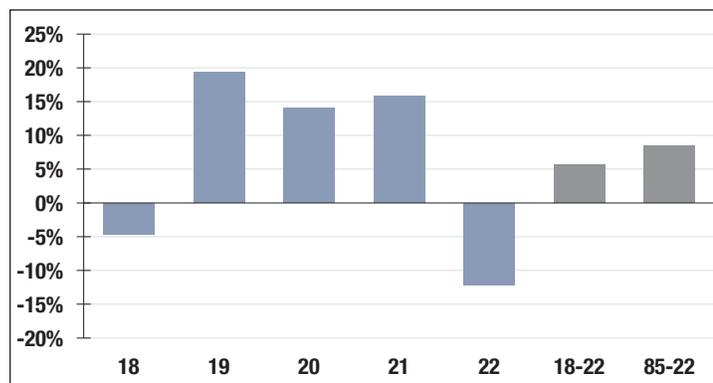
-12.16%
2022 Returns

7.83%
2013-2022
(Annualized)

8.41%
1985-2022
(Annualized)

Investment Returns

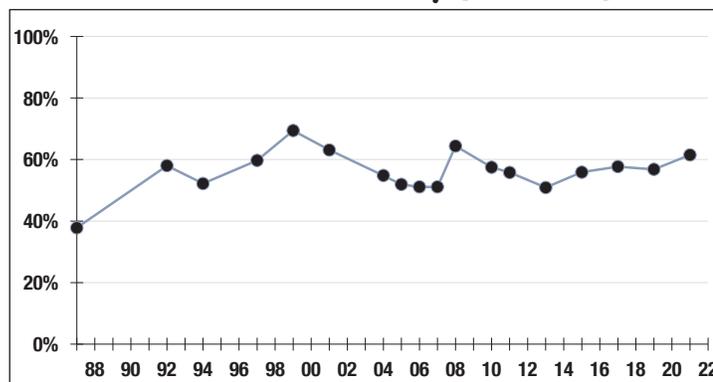
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



61.5%

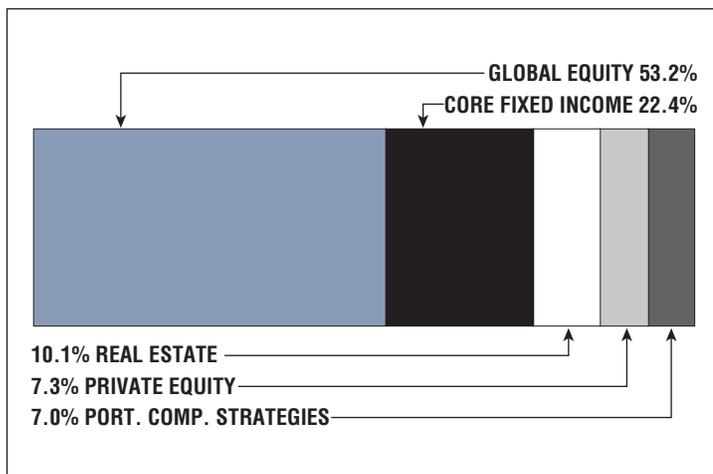
Funded Ratio

2032

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$181.0 M

Unfunded Liability

\$21.0 M
(FY2023)

Total Pension Appropriation

Watertown

CONTACT INFORMATION

149 Main Street
 Watertown, MA 02472
 Phone 617-972-6456
 Fax 617-923-3531

BOARD MEMBERS

Megan Langan
 John Loughran
 Domenic Arone
 Thomas Thibaut*
 Kathleen Kiely-Becchetti
 *indicates Chairperson

BOARD ADMINISTRATOR

Kayla Sheehan

SYSTEM MEMBERS

Active Members525
 Total Payroll\$38.2 M
 Average Salary\$72,700
 Average AgeNA
 Average ServiceNA
 Retired Members418
 Benefits Paid\$15.0 M
 Average Benefit\$35,900
 Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees43
 Reported Earnings7
 Excess Earners0
 Refund Due\$0

Last Valuation: 1/1/22
 Actuary: Sherman



Click/Scan for Website

\$240.6 M
 Market Value

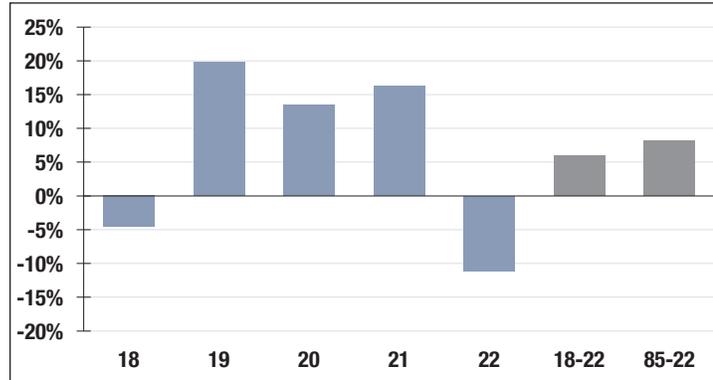
-11.19%
 2022 Returns

7.82%
 2013-2022
 (Annualized)

8.14%
 1985-2022
 (Annualized)

Investment Returns

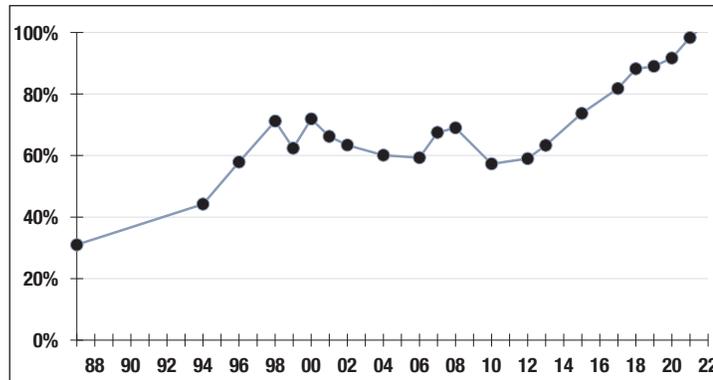
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.70%

Assumed Rate of Return

Funded Ratio History (1987-2022)



103.6%

Funded Ratio

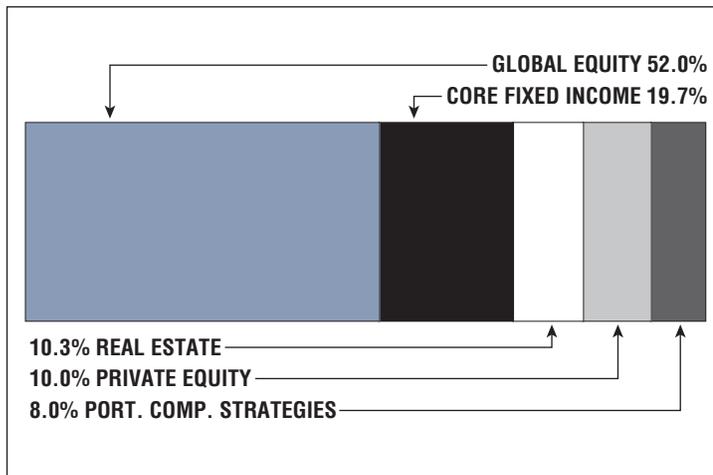
NA

Fully Funded

Fully Funded

Funding Schedule

Asset Allocation (12/31/22)



-\$9.1 M

Unfunded Liability

\$1.3 M
 (FY2023)

Total Pension Appropriation

Webster

CONTACT INFORMATION

350 Main Street
Suite 5
Webster, MA 01570
Phone 508-949-3800
Fax 508-949-3826

BOARD MEMBERS

Timothy Bell
Eleanor Doros
James Hoover
Robert Craver*
Brian Perry
*indicates Chairperson

BOARD ADMINISTRATOR

Kristin LaPlante

SYSTEM MEMBERS

Active Members275
Total Payroll\$13.4 M
Average Salary\$48,900
Average Age46
Average Service 10.4

Retired Members 150
Benefits Paid\$4.2 M
Average Benefit\$28,000
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees7
Reported Earnings 1
Excess Earners0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: PERAC



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\$53.7 M
Market Value

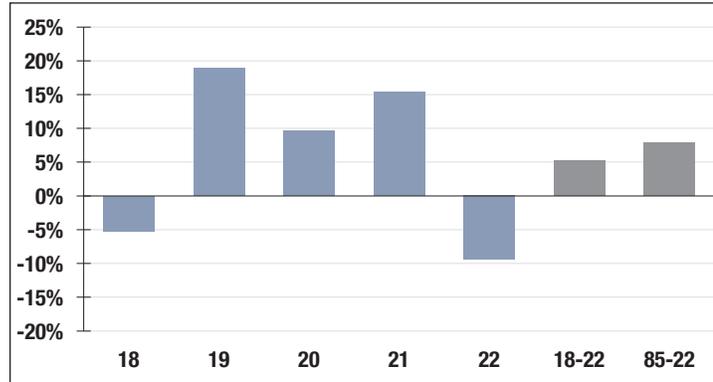
-9.46%
2022 Returns

7.53%
2013-2022
[Annualized]

7.91%
1985-2022
[Annualized]

Investment Returns

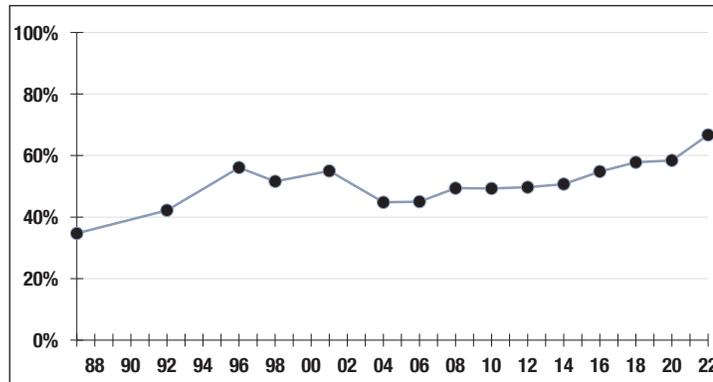
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.10%

Assumed Rate of Return

Funded Ratio History (1987-2022)



66.7%

Funded Ratio

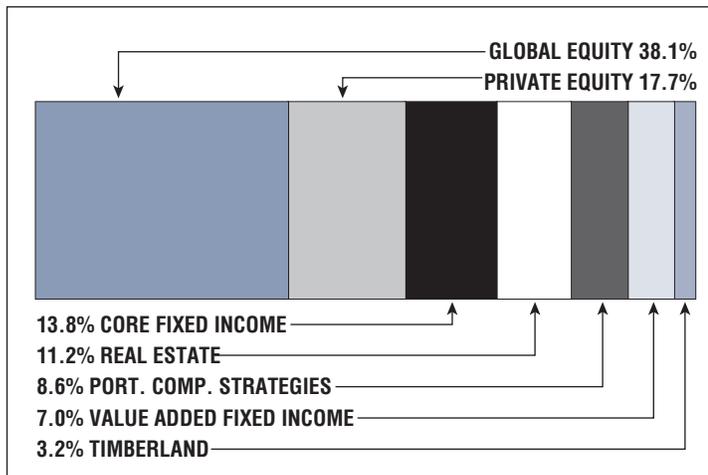
2032

Fully Funded

6.5% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$26.6 M

Unfunded Liability

\$4.4 M
[FY2023]

Total Pension Appropriation

Wellesley

CONTACT INFORMATION

Town Hall
888 Worcester Street
Wellesley, MA 02482
Phone 781-489-4238
Fax 781-431-8643

BOARD MEMBERS

Sheryl Strother
David Kornwitz*
Michael Leach
Timothy Barros
Charles Cahill
*indicates Chairperson

BOARD ADMINISTRATOR

Lynn Whynot

SYSTEM MEMBERS

Active Members691
Total Payroll\$40.9 M
Average Salary\$59,200
Average Age46
Average Service 10.5

Retired Members.....426
Benefits Paid\$13.3 M
Average Benefit\$31,100
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees29
Reported Earnings7
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/21

Actuary: Segal



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\$256.6 M
Market Value

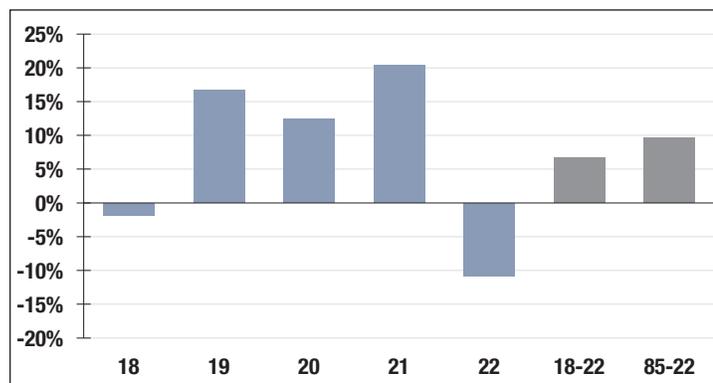
-10.87%
2022 Returns

8.34%
2013-2022
(Annualized)

9.64%
1985-2022
(Annualized)

Investment Returns

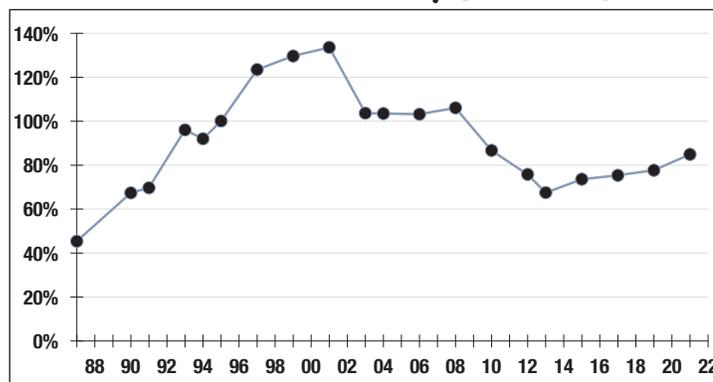
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



84.9%

Funded Ratio

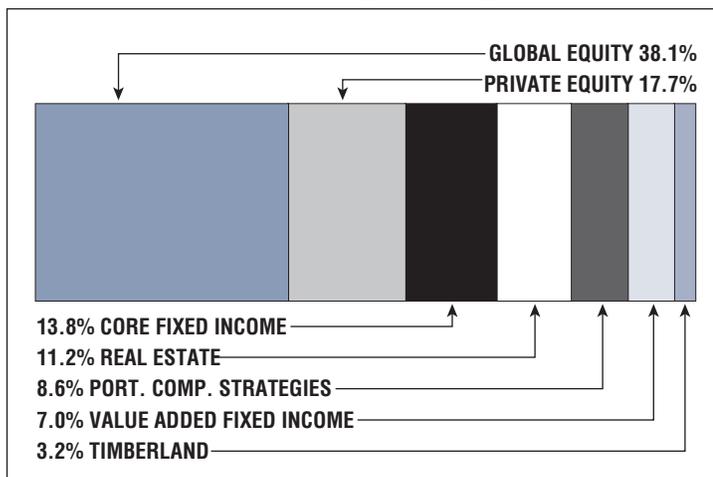
2030

Fully Funded

3.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$43.1 M

Unfunded Liability

\$10.0 M
(FY2023)

Total Pension Appropriation

West Springfield

CONTACT INFORMATION

26 Central Street
Suite 26
West Springfield, MA 01089
Phone 413-495-1891

BOARD MEMBERS

Sharon Wilcox*
Thomas Cummings
Gwen Keough
William Flaherty
Daniel Marini
*indicates Chairperson

BOARD ADMINISTRATOR

James Lovotti

SYSTEM MEMBERS

Active Members625
Total Payroll\$30.5 M
Average Salary\$48,800
Average Age45
Average Service10.1

Retired Members452
Benefits Paid\$12.0 M
Average Benefit\$26,600
Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees32
Reported Earnings15
Excess Earners1
Refund Due\$27,137

Last Valuation: 1/1/22
Actuary: Stone



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\$135.0 M
Market Value

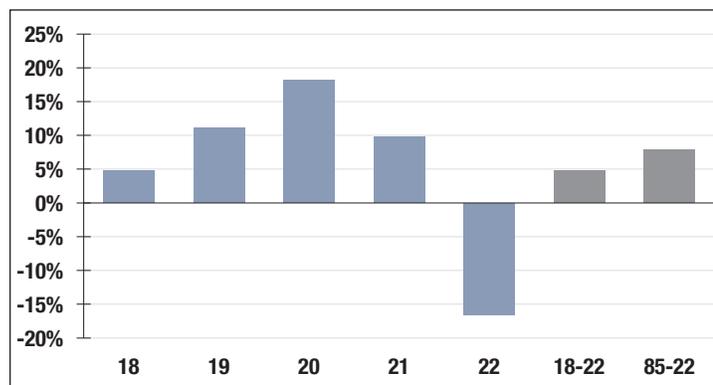
-16.61%
2022 Returns

7.25%
2013-2022
(Annualized)

7.81%
1985-2022
(Annualized)

Investment Returns

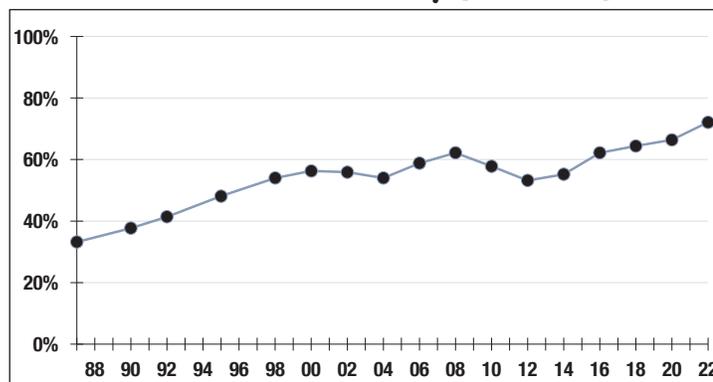
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



72.1%

Funded Ratio

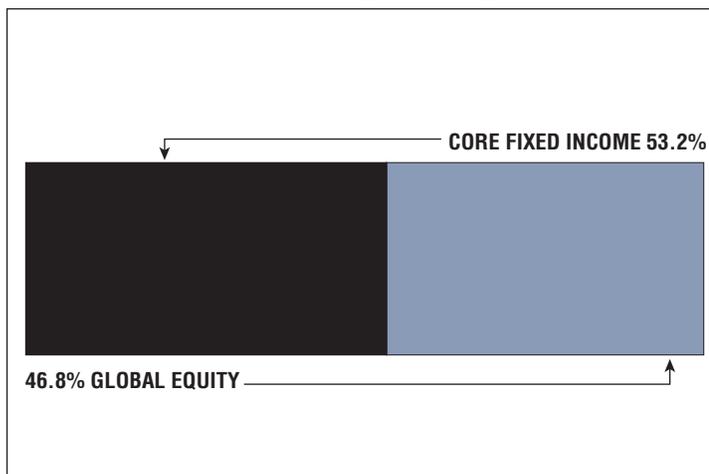
2033

Fully Funded

4.0% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$60.7 M

Unfunded Liability

\$8.2 M
(FY2023)

Total Pension Appropriation

Westfield

CONTACT INFORMATION

59 Court Street
 P.O. Box 106
 Westfield, MA 01086
 Phone 413-572-6239
 Fax 413-642-9410

BOARD MEMBERS

Vicki Moro
 Edward Murphy
 Christopher Kane
 Mark Devine*
 Dennis Powers
 *indicates Chairperson

BOARD ADMINISTRATOR

Liam Browne

SYSTEM MEMBERS

Active Members831
 Total Payroll\$43.8 M
 Average Salary\$52,700
 Average Age47
 Average Service12

 Retired Members.....719
 Benefits Paid\$21.0 M
 Average Benefit\$29,200
 Average Age72

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees50
 Reported Earnings10
 Excess Earners.....0
 Refund Due\$0

Last Valuation: 1/1/21

Actuary: PERAC



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\$289.2 M
 Market Value

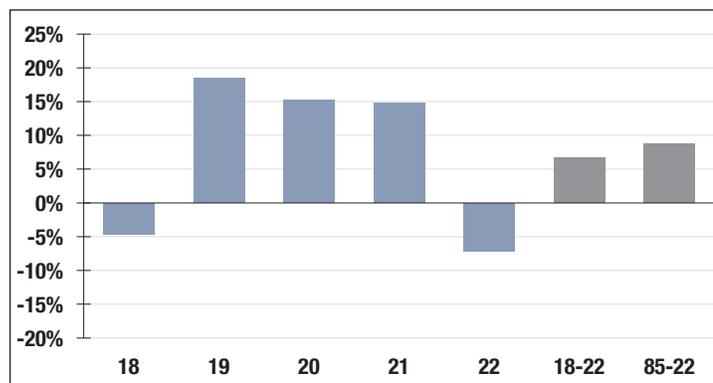
-7.21%
 2022 Returns

9.09%
 2013-2022
 (Annualized)

8.72%
 1985-2022
 (Annualized)

Investment Returns

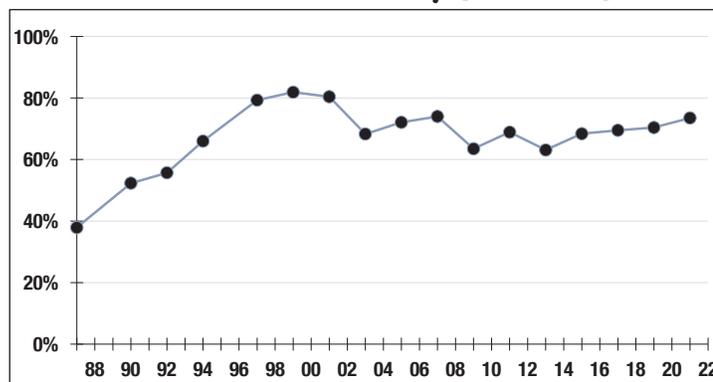
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



73.5%

Funded Ratio

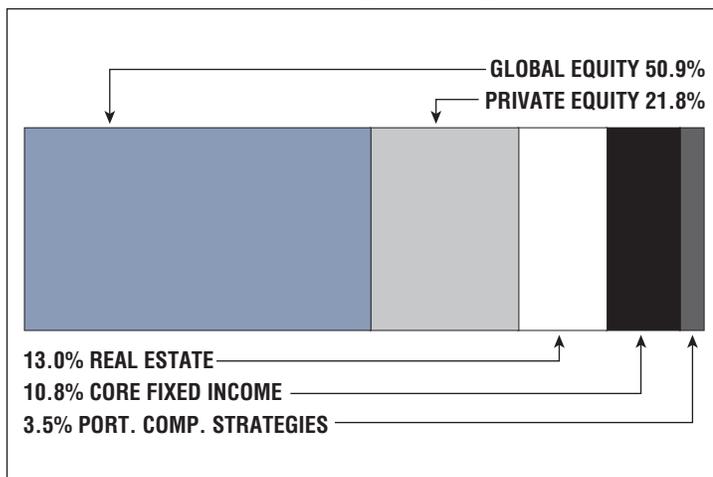
2036

Fully Funded

4.96% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$94.7 M

Unfunded Liability

\$13.0 M
 (FY2023)

Total Pension Appropriation

Weymouth

CONTACT INFORMATION

807 Broad Street
Weymouth, MA 02189
Phone 781-331-8721
Fax 781-331-3005

BOARD MEMBERS

Brent Lydon
Greg Hargadon
Joseph Davis*
Richard Hayes
Barbara Costa
*indicates Chairperson

BOARD ADMINISTRATOR

Edward Masterson

SYSTEM MEMBERS

Active Members878
Total Payroll\$48.6 M
Average Salary\$55,300
Average Age46
Average Service11

Retired Members659
Benefits Paid\$20.3 M
Average Benefit\$30,800
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees78
Reported Earnings23
Excess Earners1
Refund Due\$8,078

Last Valuation: 1/1/22
Actuary: Stone



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\$239.8 M
Market Value

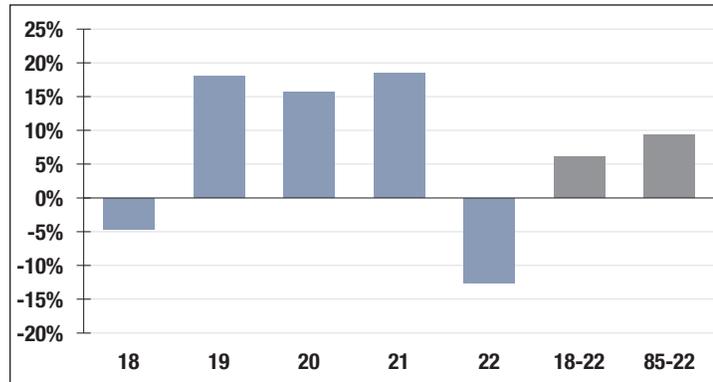
-12.58%
2022 Returns

7.93%
2013-2022
(Annualized)

9.44%
1985-2022
(Annualized)

Investment Returns

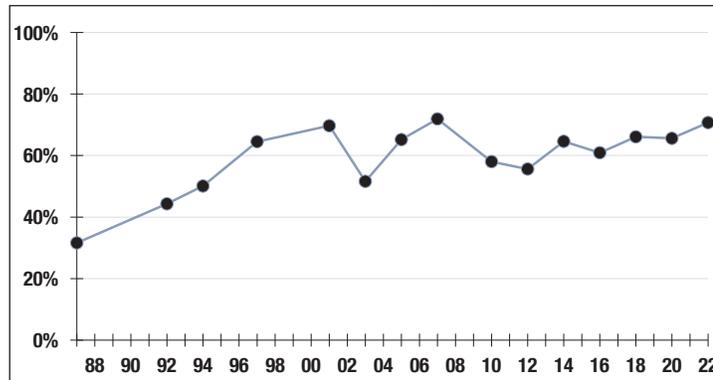
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



70.7%

Funded Ratio

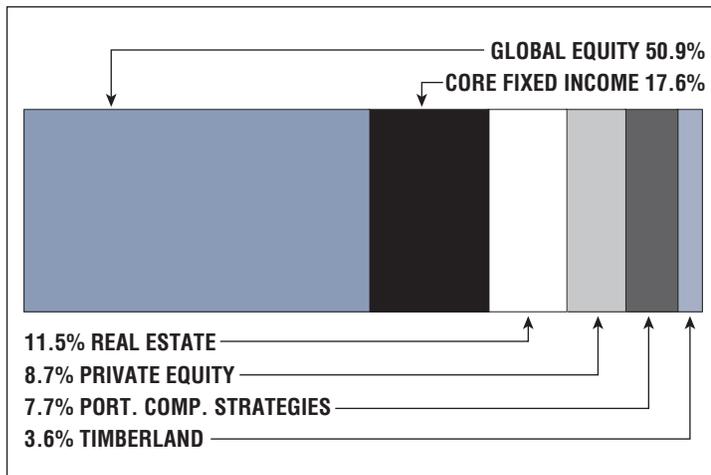
2035

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$104.3 M

Unfunded Liability

\$13.8 M
(FY2023)

Total Pension Appropriation

Winchester

CONTACT INFORMATION

71 Mount Vernon Street
Winchester, MA 01890
Phone 781-721-7127
Fax 781-721-7156

BOARD MEMBERS

Stacie Ward
Michael Lucas
Philip Ciampa
Robert Frary*
Thomas Tracy
*indicates Chairperson

BOARD ADMINISTRATOR

Karen Manchuso

SYSTEM MEMBERS

Active Members393
Total Payroll\$23.5 M
Average Salary\$59,700
Average Age48
Average Service11.9

Retired Members281
Benefits Paid\$8.8 M
Average Benefit\$31,200
Average Age76

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees15
Reported Earnings4
Excess Earners1
Refund Due\$9,608

Last Valuation: 1/1/21
Actuary: PERAC



\$156.1 M
Market Value

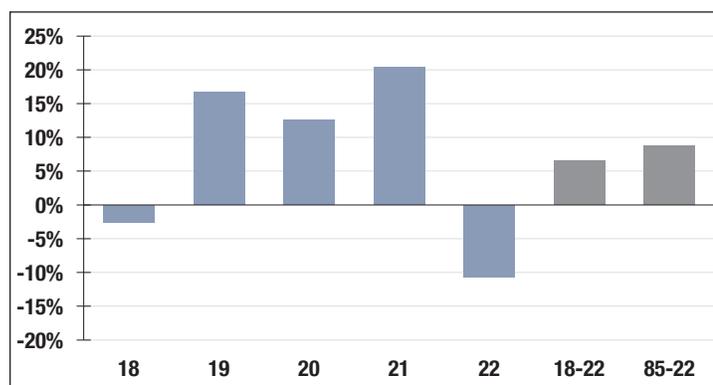
-10.73%
2022 Returns

7.59%
2013-2022
(Annualized)

8.77%
1985-2022
(Annualized)

Investment Returns

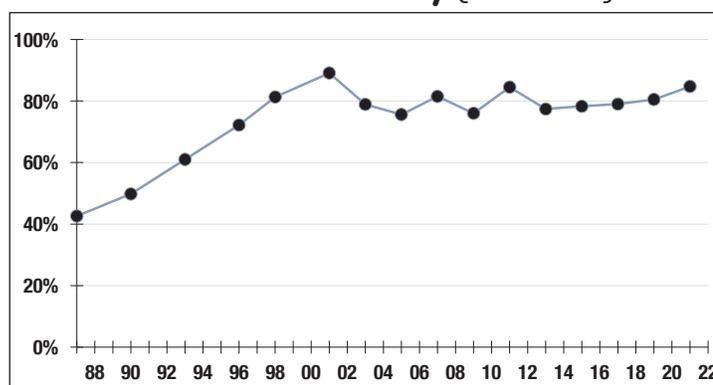
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.00%

Assumed Rate of Return

Funded Ratio History (1987-2022)



84.7%

Funded Ratio

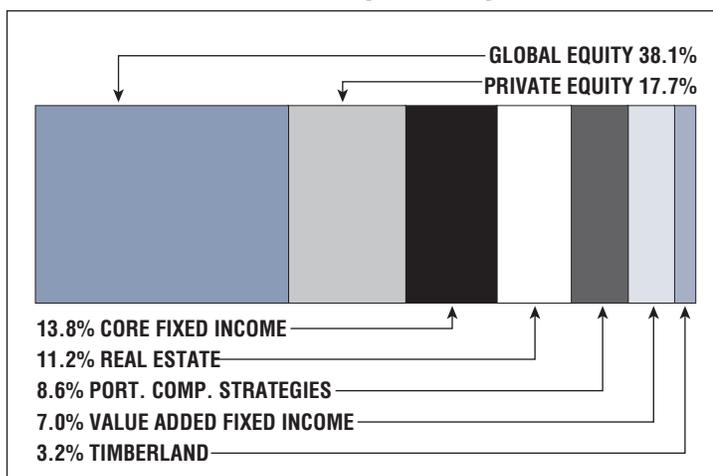
2029

Fully Funded

7.7% Total Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$25.1 M

Unfunded Liability

\$6.5 M
(FY2023)

Total Pension Appropriation

Winthrop

CONTACT INFORMATION

Town Hall
1 Metcalf Square
Winthrop, MA 02152
Phone 617-539-5750

BOARD MEMBERS

Dylan Cook
Terence Delehanty
Dennis Boudrow
James Feeley
Karin Chavis*
*indicates Chairperson

BOARD ADMINISTRATOR

Michelle Church

SYSTEM MEMBERS

Active Members251
Total Payroll\$13.0 M
Average Salary\$51,800
Average Age49
Average Service11.4

Retired Members193
Benefits Paid\$4.8 M
Average Benefit\$24,900
Average Age75

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees10
Reported Earnings1
Excess Earners1
Refund Due\$34,195

Last Valuation: 1/1/21
Actuary: PERAC



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\$93.9 M
Market Value

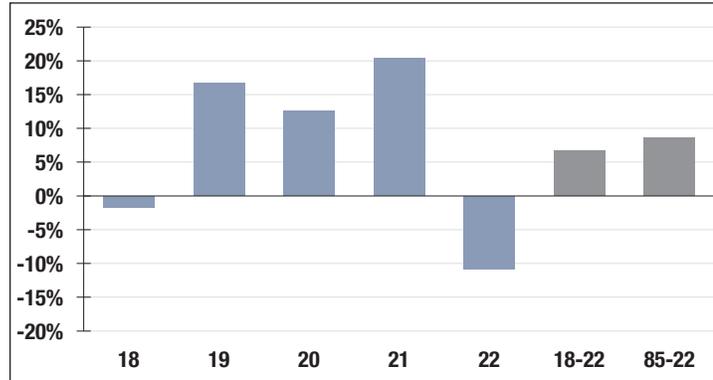
-10.78%
2022 Returns

8.28%
2013-2022
(Annualized)

8.55%
1985-2022
(Annualized)

Investment Returns

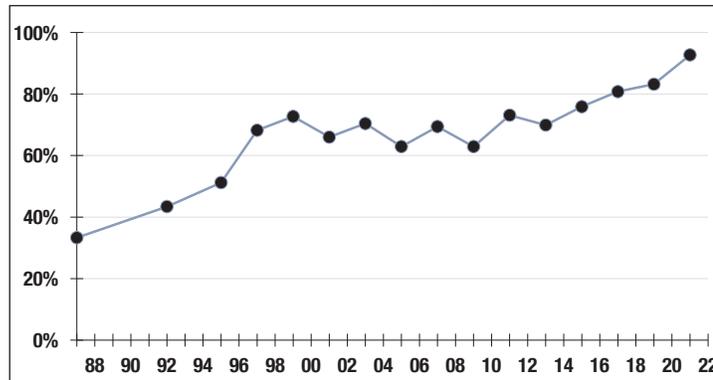
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.75%

Assumed Rate of Return

Funded Ratio History (1987-2022)



92.7%

Funded Ratio

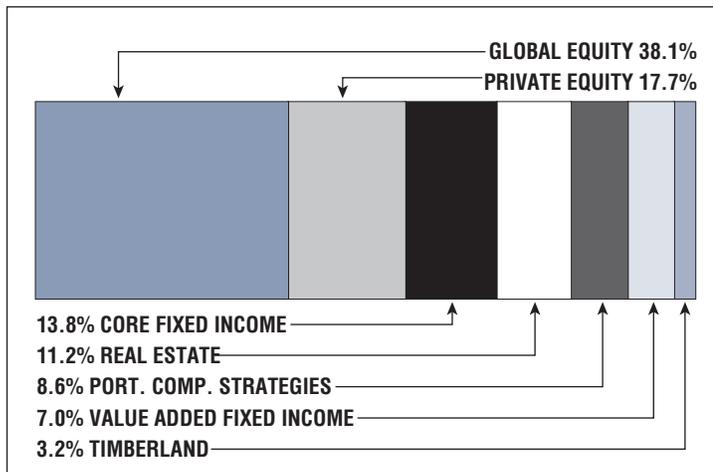
2026

Fully Funded

Level
Appropriation

Funding Schedule

Asset Allocation (12/31/22)



\$6.5 M

Unfunded Liability

\$3.9 M
(FY2023)

Total Pension
Appropriation

Woburn

CONTACT INFORMATION

City Hall, 2nd Floor
10 Common Street
Woburn, MA 01801
Phone 781-897-5820
Fax 339-227-4257

BOARD MEMBERS

Charles Doherty
Gerald Surette
Denis Devine*
Marilou Lundin
Michael Gorman
*indicates Chairperson

BOARD ADMINISTRATOR

Anne Speicher

SYSTEM MEMBERS

Active Members529
Total Payroll\$31.7 M
Average Salary\$60,000
Average Age49
Average Service 12.4

Retired Members.....492
Benefits Paid\$16.8 M
Average Benefit\$34,100
Average AgeNA

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees28
Reported Earnings9
Excess Earners.....0
Refund Due\$0

Last Valuation: 1/1/22
Actuary: Buck



\$173.4 M
Market Value

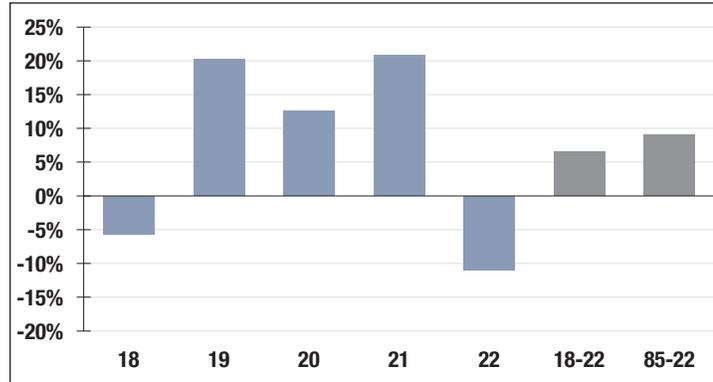
-10.98%
2022 Returns

8.39%
2013-2022
(Annualized)

9.14%
1985-2022
(Annualized)

Investment Returns

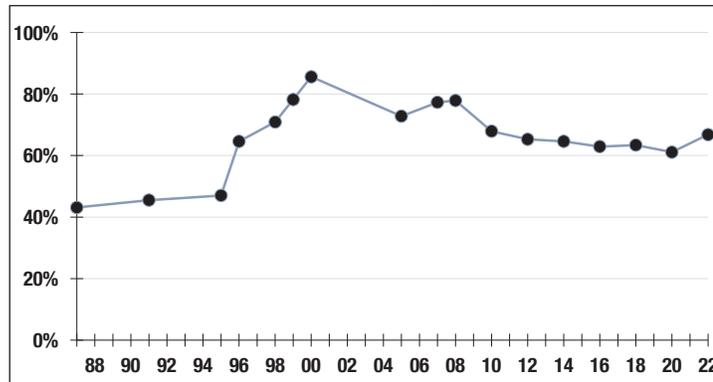
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.50%

Assumed Rate of Return

Funded Ratio History (1987-2022)



66.8%

Funded Ratio

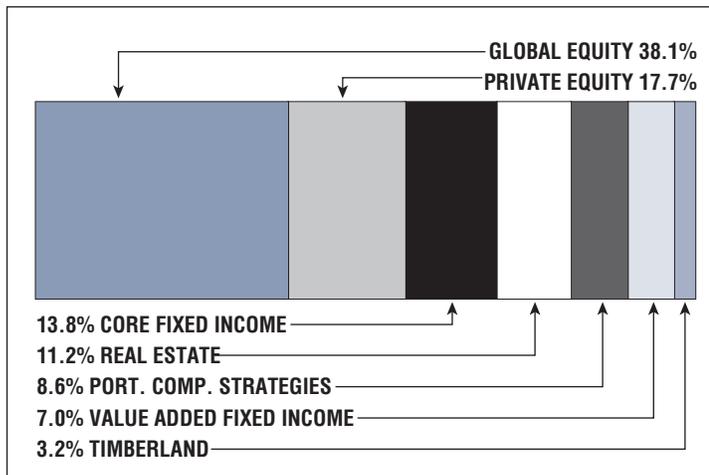
2035

Fully Funded

4.0% Increasing

Funding Schedule

Asset Allocation (12/31/22)



\$90.3 M

Unfunded Liability

\$11.5 M
(FY2023)

Total Pension Appropriation

Worcester

CONTACT INFORMATION

City Hall, Room 103
455 Main Street
Worcester, MA 01608
Phone 508-799-1062
Fax 508-799-1047

BOARD MEMBERS

Robert Stearns
Matthew Wally
Elizabeth Early*
John Mahan
Tamara Cullen
*indicates Chairperson

BOARD ADMINISTRATOR

Lisa Poske

SYSTEM MEMBERS

Active Members3,377
Total Payroll\$200.0 M
Average Salary\$59,200
Average Age46
Average Service12

Retired Members.....2,753
Benefits Paid\$93.2 M
Average Benefit\$33,800
Average Age74

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees331
Reported Earnings52
Excess Earners.....2
Refund Due\$26,249

Last Valuation: 1/1/22
Actuary: Segal



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\$1.2 B
Market Value

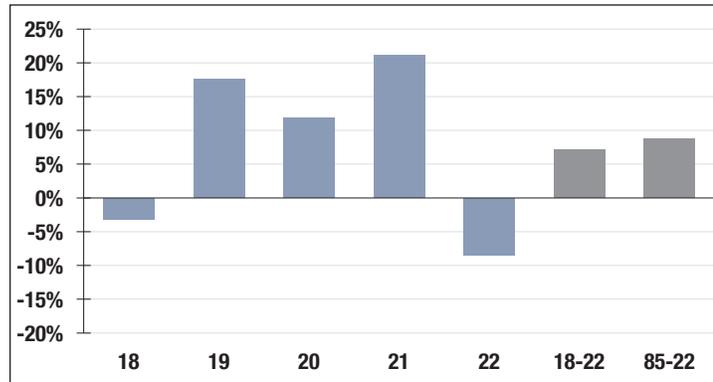
-8.47%
2022 Returns

7.74%
2013-2022
(Annualized)

8.70%
1985-2022
(Annualized)

Investment Returns

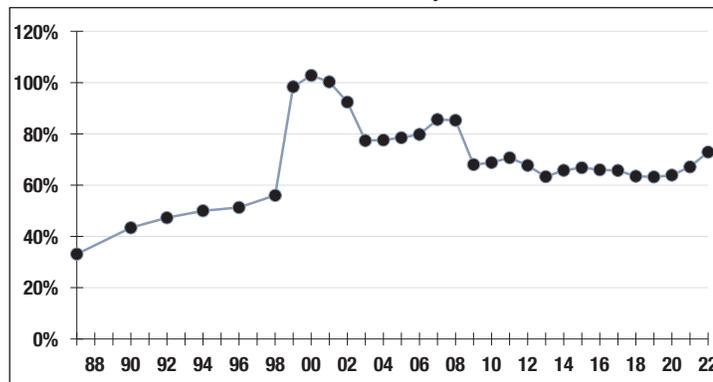
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



6.80%

Assumed Rate of Return

Funded Ratio History (1987-2022)



72.9%

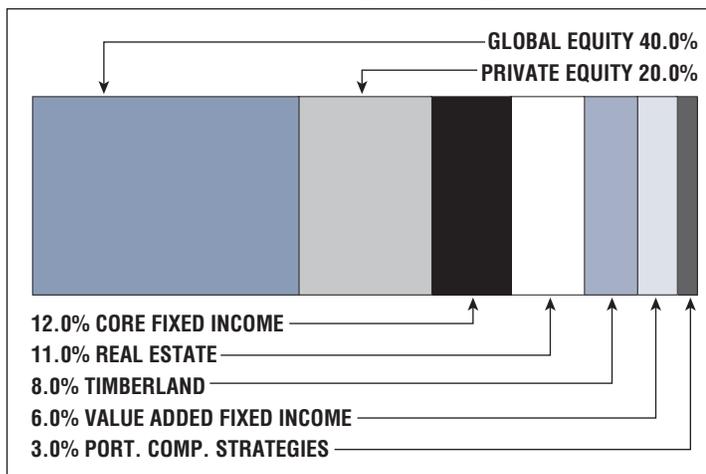
Funded Ratio

2034

Fully Funded

Varies Total Increasing Funding Schedule

Asset Allocation (12/31/22)



\$447.5 M

Unfunded Liability

\$62.8 M
(FY2023)

Total Pension Appropriation

Worcester Regional

CONTACT INFORMATION

Midstate Office Park
23 Midstate Drive, Suite 106
Auburn, MA 01501
Phone 508-832-6314
Fax 508-832-6318

BOARD MEMBERS

Kevin Blanchette*
Rebecca Tuttle
Michael Donoghue
Pauline Lajoie
Eugene Durgin
*indicates Chairperson

BOARD ADMINISTRATOR

Colleen Canty

SYSTEM MEMBERS

Active Members7,121
Total Payroll\$352.8 M
Average Salary\$49,500
Average Age47
Average Service9.6

Retired Members.....4,112
Benefits Paid\$101.2 M
Average Benefit\$24,600
Average Age73

2021 EARNED INCOME OF DISABILITY RETIREES:

Disability Retirees246
Reported Earnings82
Excess Earners.....2
Refund Due\$35,516

Last Valuation: 1/1/22

Actuary: KMS



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\$965.8 M
Market Value

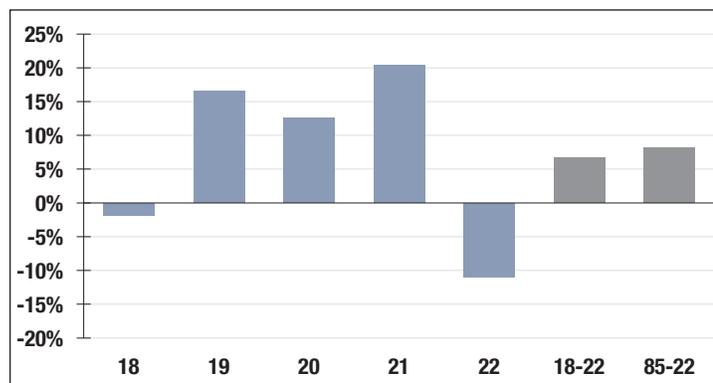
-11.00%
2022 Returns

8.21%
2013-2022
(Annualized)

8.13%
1985-2022
(Annualized)

Investment Returns

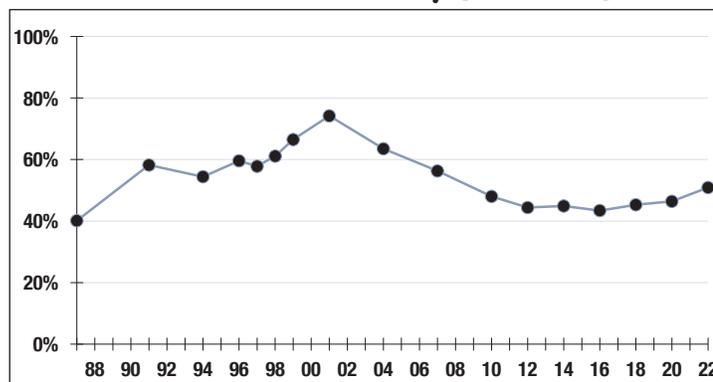
(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



7.25%

Assumed Rate of Return

Funded Ratio History (1987-2022)



50.9%

Funded Ratio

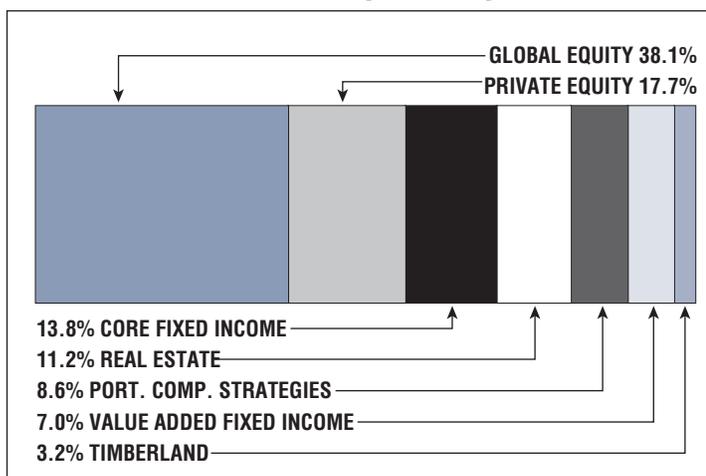
2036

Fully Funded

4.0% Increasing Phase-In

Funding Schedule

Asset Allocation (12/31/22)



\$933.9 M

Unfunded Liability

\$82.7 M
(FY2023)

Total Pension Appropriation

CONTACT INFORMATION

53 State Street
 Suite 600
 Boston, MA 02109
 Phone 617-946-8401
 Fax 617-946-8442

BOARD MEMBERS

State Treasurer
 Deborah Goldberg*
 Robert Brousseau
 Ruth Ellen Fitch, Esq.
 Catherine D'Amato
 Theresa McGoldrick, Esq.
 Peter Monaco
 Dennis Naughton
 Carly Rose
 Paul Shanley, Esq.
 *indicates Chairperson

EXECUTIVE DIRECTOR/CIO

Michael G. Trotsky, CFA

\$91.9 B
 Market Value

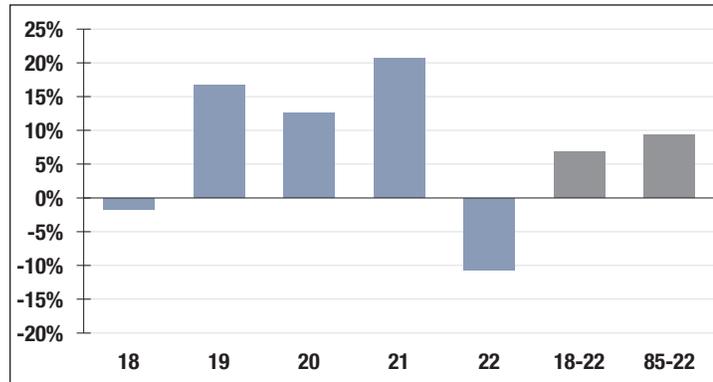
-10.74%
 2022 Returns

8.35%
 2013-2022
 (Annualized)

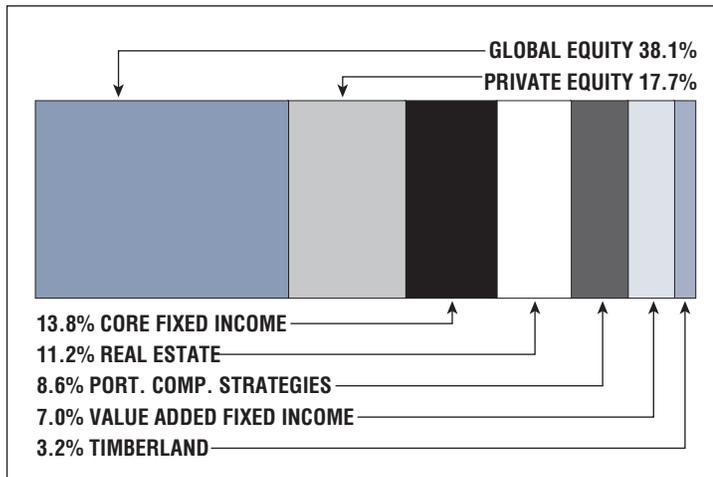
9.31%
 1985-2022
 (Annualized)

Investment Returns

(2018-2022, 5-Year & 38-Year Averages, as of 12/31/22)



Asset Allocation (12/31/22)



Click/Scan for Website

Disability Retirement Statistics

[As of 12/31/22]

RETIREMENT BOARDS WITH 1-399 ACTIVE MEMBERS	MEDICAL PANEL REQUESTS	DISABILITY RETIREMENT APPROVALS	ACCIDENTAL DEATH APPROVALS	CME REVIEWS
Adams Retirement Board	0	1	0	0
Amesbury Retirement Board	4	0	0	1
Blue Hills Regional Vocational School Retirement Board	0	0	0	0
Clinton Retirement Board	1	1	0	0
Easthampton Retirement Board	0	0	0	0
Fairhaven Retirement Board	1	1	0	0
Gardner Retirement Board	0	0	0	2
Greater Lawrence Sanitary District Retirement Board	0	0	0	0
Hull Retirement Board	1	0	0	0
Marblehead Retirement Board	1	1	0	0
Mass Housing Finance Agency Retirement Board (MHFA)	0	0	0	0
Maynard Retirement Board	3	1	0	0
Minuteman Regional School District Retirement Board	0	0	0	0
Montague Retirement Board	0	0	0	2
Newburyport Retirement Board	0	0	0	0
North Adams Retirement Board	4	2	0	2
Northbridge Retirement Board	0	0	0	0
Reading Retirement Board	4	3	0	2
Saugus Retirement Board	3	3	0	0
Southbridge Retirement Board	0	0	0	2
Stoneham Retirement Board	2	1	0	1
Swampscott Contributory Retirement Board	1	2	0	1
Webster Retirement Board	0	0	0	1
Winchester Retirement Board	0	1	0	0
Winthrop Retirement Board	0	0	0	0
RETIREMENT BOARDS WITH 400-599 ACTIVE MEMBERS				
Belmont Retirement Board	4	3	0	2
Beverly Retirement Board	0	0	0	1
Concord Retirement Board	0	1	0	0
Danvers Retirement Board	2	3	0	1
Dedham Contributory Retirement Board	5	2	0	0
Gloucester Retirement Board	0	0	0	0
Greenfield Retirement Board	0	0	0	1
Melrose Retirement Board	0	0	0	1
Milford Retirement Board	2	2	1	0
Milton Retirement Boardw	0	0	0	1
North Attleboro Retirement Board	0	0	0	2
Shrewsbury Contributory Retirement Board	2	0	0	1
Wakefield Retirement Board	3	1	2	0
Watertown Retirement Board	1	2	0	1
Woburn Retirement Board	7	4	0	1

Disability Retirement Statistics

[As of 12/31/22]

RETIREMENT BOARDS WITH 600-899 ACTIVE MEMBERS	MEDICAL PANEL REQUESTS	DISABILITY RETIREMENT APPROVALS	ACCIDENTAL DEATH APPROVALS	CME REVIEWS
Andover Retirement Board	6	3	0	0
Arlington Retirement Board	2	2	0	3
Attleboro Retirement Board	1	2	0	2
Braintree Contributory Retirement Board	4	1	0	2
Chelsea Retirement Board	2	2	0	1
Dukes County Contributory Retirement Board	1	2	0	0
Everett Retirement Board	3	5	1	3
Falmouth Retirement Board	3	2	0	0
Fitchburg Retirement Board	1	2	0	1
Hingham Retirement Board	1	3	0	1
Leominster Retirement Board	9	3	0	2
Lexington Retirement Board	0	0	0	1
Malden Contributory Retirement Board	1	0	0	2
Marlborough Retirement Board	4	1	0	0
Medford Retirement Board	2	4	0	3
Methuen Contributory Retirement Board	2	3	0	6
Natick Retirement Board	1	1	0	1
Needham Contributory Retirement Board	0	0	0	0
Northampton Retirement Board	0	0	0	4
Norwood Contributory Retirement Board	3	1	0	0
Peabody Retirement Board	4	4	0	0
Pittsfield Retirement Board	2	6	0	4
Revere Retirement Board	9	5	1	4
Wellesley Retirement Board	1	0	0	0
West Springfield Retirement Board	2	1	1	1
Westfield Retirement Board	3	1	1	4
Weymouth Retirement Board	8	1	0	0
RETIREMENT BOARDS WITH 900-2,399 ACTIVE MEMBERS				
Berkshire County Retirement Board	3	4	0	2
Brockton Retirement Board	14	12	0	7
Brookline Retirement Board	9	13	0	4
Chicopee Retirement Board	6	2	0	9
Fall River Retirement Board	12	2	0	6
Framingham Retirement Board	2	2	0	2
Franklin Regional Retirement Board	0	0	0	0
Hampshire County Regional Retirement Board	2	2	0	3
Haverhill Retirement Board	6	6	1	0
Holyoke Retirement Board	1	2	0	2
Lawrence Retirement Board	4	4	0	5
Lowell Retirement Board	10	5	1	6
Lynn Retirement Board	5	4	0	10

Disability Retirement Statistics

[As of 12/31/22]

RETIREMENT BOARDS WITH 900-2,399 ACTIVE MEMBERS (Cont'd)	MEDICAL PANEL REQUESTS	DISABILITY RETIREMENT APPROVALS	ACCIDENTAL DEATH APPROVALS	CME REVIEWS
Mass Port Authority Employees' Retirement Board	4	4	0	0
Mass Water Resources Authority Retirement Board	9	2	0	5
New Bedford Retirement Board	9	12	0	12
Newton Retirement Board	6	7	0	3
Plymouth Contributory Retirement Association	10	9	0	4
Quincy Retirement Board	8	15	0	3
Salem Contributory Retirement Board	9	3	0	3
Somerville Retirement Board	5	4	1	7
Taunton Retirement Board	1	3	0	1
Waltham Retirement Board	1	0	0	3
RETIREMENT BOARDS WITH 2,400-10,000 ACTIVE MEMBERS				
Barnstable County Retirement Board	19	15	0	11
Bristol County Retirement Board	11	10	0	10
Cambridge Retirement Board	14	16	0	15
Essex Regional Retirement Board	6	2	0	5
Hampden County Regional Retirement Board	2	2	0	5
Middlesex County Retirement Board	33	26	0	22
Norfolk County Retirement Board	34	25	2	24
Plymouth County Retirement Board	15	13	1	13
Springfield Retirement Board	13	22	0	20
Worcester Regional Retirement Board	21	9	0	11
Worcester Retirement Board	19	11	0	20
RETIREMENT BOARDS WITH 10,001-100,000 ACTIVE MEMBERS				
Boston (City) Retirement Board	105	85	0	58
Massachusetts Teachers' (MTRS)	33	26	0	12
State Retirement Board	116	116	1	184
Total All Retirement Boards	703	585	14	578

RESTORATION TO SERVICE STATISTICS (Provided for those boards where a disability retiree has returned to work.)

Fall River 1	Holyoke 1	Lowell 1
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Investment Vendors

The following is a listing of the investment managers, custodians, and consultants that serve the Massachusetts public pension systems. The listing is based on information supplied by the retirement boards.

Retirement Board	Investment Vendors		
Adams	▪ PRIT Fund		
Amesbury	▪ PRIT Fund		
Andover ▶ Consultant: Dahab Associates	▪ PRIT Fund	• Federated Hermes	• RhumbLine Advisers
Arlington ▶ Custodian: M&T Bank Wilmington Trust	▪ PRIT Fund		
Attleboro ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Dahab Associates Inc.	• Amalgated Bank • BTG Pactical Timberland Investment Group • Copeland Capital Management • Fidelity Institutional Asset Management • Frontier Capital Management Co., LLC	• Hancock Timber Resource Group, Inc. • Intercontinental Real Estate Corp. • Invesco Private Capital, Inc. • Peregrine Capital	• PRIT Fund • RhumbLine Advisers • State Street Global Advisors • Van Eck
Barnstable County	▪ PRIT Fund		
Belmont ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: NEPC, LLC	▪ PRIT Fund	• AEW Capital Management, LP • Atlanta Capital • Carillon Reams • Goldentree Asset Management, LP • HarbourVest Partners, LLC	• Loomis, Sayles & Company • Pacific Investment Management Company, LLC • RhumbLine Advisers • Rothschild Asset Management Inc.
Berkshire County	▪ PRIT Fund		
Beverly	▪ PRIT Fund		
Blue Hills Regional	▪ PRIT Fund		
Boston (City) ▶ Custodian: State Street Bank & Trust ▶ Consultant: NEPC, LLC	• 57 Stars, LLC • ABS Investment Management, LLC • AEW Capital Management, LP • Aberdeen Asset Management • Alcentra NY, LLC • Allspring Global Investments, Inc. • American Securities • Angelo, Gordon & Co., LP • Apollo Global Management, Inc. • Arclight Capital Partners, LLC • Aristotle Capital Management, LLC • Arsenal Real Estate Funds, LLC • Ascent Venture Partners • Audax Group • Aurora Management Partners • Bain Capital • Bernzott Capital Advisors • BlackRock Advisors, LLC • Blackstone Alternative Asset Management Assoc. • Boston Millennia Partners • Brookfield Asset Management • CCMP Capital Advisors, LLC • Carlyle Realty Partners • Columbia Management Investment Advisors, LLC • Crescent Capital Group, LP • CVC Capital Partners • D.E. Shaw Investment Management, LLC • DRC Capital, LLP • Dune Capital Management, LP	• Energy Spectrum Partners • EnTrust Global Partners • FSN Capital • Goldentree Asset Management, LP • Grosvenor Capital Management, LP • Hamilton Lane • HarbourVest Partners, LLC • H.I.G. Capital • ICONIQ Capital, LLC • Incline Elevate • Income Research & Management • Insight Venture Management • Intercontinental Real Estate Corp. • Invesco Core Real Estate USA, LP • J.F. Lehman & Company, Inc. • J.P. Morgan • Kayne Anderson Capital Advisors, LP • KPS Capital Partners, LP • Lazard Asset Management, LLC • Lexington Partners, LP • Lighthouse Investment Partners • Main Capital Partners B.V. • Mesirov Advanced Strategies, Inc. • MPM Capital, LP • NGP Energy Capital Management, LLC • Oaktree Capital Management, LP • PanAgora Asset Management, Inc. • Perella Weinberg Partners Capital Management, LP • Platinum Equity Advisors, LLC	• Polen Capital Management, LLC • Polunin Capital Partners • Prudential Capital Partners • Prudential Real Estate Investors • RhumbLine Advisers • Roark Capital Partners • Sanderling Ventures • SCP Private Equity Partners • Segall Bryant & Hamill • Siguler Guff Advisers, LLC • SL Capital Partners • State Street Global Advisors • STG Partners, LLC • Sterling Fund Management • Summit Partners, LP • TA Realty • Technology Crossover Ventures • THL Credit Senior Loan Strategies, LLC • Thomas H. Lee Partners, LP • Thoma Bravo, LLC • Todd Asset Management • Tristan Capital Partners • Vontobel Asset Management, Inc. • Western Technology • Westfield Capital Management Company, LP • Westport Capital Partners, LLC • Z Capital Partners, LLC • Zevenbergen Capital Investments, LLC • ZMC Advisors LP

Investment Vendors

Retirement Board	Investment Vendors		
Boston Teachers	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Braintree ▶ Custodian: SEI Private Trust Company	<ul style="list-style-type: none"> ▪ SEI Investments 	<ul style="list-style-type: none"> • Lexington Partners, LP 	<ul style="list-style-type: none"> • PRIT Fund
Bristol County ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Segal Marco Advisors	<ul style="list-style-type: none"> • Aberdeen Asset Management • Arrowstreet Capital, LP • Ashmore Investment Advisors, Ltd. • Bardin Hill Investment Partners • BlackRock Investment Management, LLC • Brookfield Timberlands Management, LP • BTG Pactual Timberland Investment Group • Ceres Partners, LLC • Clearbridge Investments • Columbia Management Investment Advisers, LLC • DN Partners • Dupont Capital Management 	<ul style="list-style-type: none"> • Earnest Partners, LLC • Entrust Global • Fiera Capital Inc. • Fiduciary Trust International • Frontier Capital Management Co., LLC • GCM Customized Fund Investment Group • Goldentree Asset Management, LP • Grosvenor Capital Management, LP • Hancock Timber Resource Group, Inc. • IFM Investors (US) Advisor • Intercontinental Real Estate Corp. • Lazard Asset Management, LLC • LSV Asset Management 	<ul style="list-style-type: none"> • Lyrical Asset Management, LP • Mesirow Financial Private Equity Advisors, Inc. • Oaktree Capital Management, LP • Northern Trust Investments, Inc. • Pacific Investment Management Company (PIMCO) • Polaris Capital Management, LLC • PRIT Fund • RBC Global Asset Management (U.S.), Inc. • RREEF Management, LLC • Stone Harbor Investment Partners • TerraCap Management, LLC • Timberland Investment Resources, LLC • William Blair Investment Management, LLC
Brockton ▶ Custodian: SEI Private Trust Company ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> ▪ SEI Investments 	<ul style="list-style-type: none"> • Aberdeen Asset Management • Ascent Venture Partners 	<ul style="list-style-type: none"> • Landmark Partners, LLC • Siguler Guff Advisers, LLC
Brookline	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • Hancock Timber Resource Group, Inc. • HarbourVest Partners, LLC • Invesco Private Capital, Inc. 	<ul style="list-style-type: none"> • Lexington Partners, LP • Sustainable Woodlands Partners, LLC
Cambridge ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Segal Marco Advisors	<ul style="list-style-type: none"> • Aberdeen Asset Management • Acadian Asset Management • BlackRock Investment Management, LLC • Campbell Global LLC • Fidelity Institutional Asset Management • Garcia Hamilton & Associates, LP • Hamilton Lane • Hancock Natural Resource Group, Inc. • IFM Investors (US) Advisor, LLC 	<ul style="list-style-type: none"> • Income Research & Management • Intercontinental Real Estate Corp. • J.P. Morgan Investment Management • Landmark Partners, LLC • Lazard Asset Management, LLC • Lexington Partners, LP • Loomis Sayles & Co. • Mellon Investments Corporation • Penn Square Global Real Estate Group, LLC 	<ul style="list-style-type: none"> • PineBridge Investments, LLC • Polaris Capital Management, LLC • PRIT Fund • RBC Global Asset Management (U.S.), Inc. • RhumbLine Advisers • Rockwood Capital, LLC • UBS Realty Advisors, LLC • Wellington Management Company
Chelsea	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Chicopee ▶ Custodian: SEI Private Trust Company	<ul style="list-style-type: none"> ▪ SEI Investments 	<ul style="list-style-type: none"> • PRIT Fund 	
Clinton ▶ Consultant: Trust Advisory Group, Ltd.	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Concord ▶ Custodian: Comerica Bank ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> • Acadian Asset Management, LLC • BlackRock Advisors, LLC • PRIT Fund 	<ul style="list-style-type: none"> • Rhumbline Advisers • Russell Investment Group 	<ul style="list-style-type: none"> • Wellington Management
Danvers ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Segal Marco Advisors	<ul style="list-style-type: none"> • Barings, LLC • BMO Asset Management Corporation • Eagle Capital Management, LLC 	<ul style="list-style-type: none"> • Gerber-Taylor Management Company • Intercontinental Real Estate Corp. • PRIT Fund 	<ul style="list-style-type: none"> • RhumbLine Advisers • TA Realty • Western Asset Management Co.

Investment Vendors

Retirement Board	Investment Vendors		
Dedham	▪ PRIT Fund		
Dukes County ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Dahab Associates, Inc.	<ul style="list-style-type: none"> Aristotle Capital Management, LLC Atlanta Capital 	<ul style="list-style-type: none"> Garcia Hamilton & Associates LP Polen Capital Management, LLC 	<ul style="list-style-type: none"> PRIT Fund
Easthampton	▪ PRIT Fund		
Essex County	▪ PRIT Fund	<ul style="list-style-type: none"> BlackRock Investment Management, LLC 	<ul style="list-style-type: none"> Levine Leichtman Capital Partners, Inc..
Everett	▪ PRIT Fund		
Fairhaven	▪ PRIT Fund		
Fall River	▪ PRIT Fund		
Falmouth ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Wainwright Investment Counsel, LLC	<ul style="list-style-type: none"> Dimensional Fund Advisors, LP Hamilton Lane HGK Asset Management, Inc. Lexington Partners, LP 	<ul style="list-style-type: none"> LMCG Investments, LLC Lord Abbett & Co., LLC Mesirow Financial Private Equity Advisors, Inc. PRIT Fund 	<ul style="list-style-type: none"> Rhumblin Advisers Siguler Guff Advisers, LLC State Street Global Advisors TerraCap Partners
Fitchburg	▪ PRIT Fund		
Framingham	▪ PRIT Fund		
Franklin County ▶ Custodian: Comerica Bank ▶ Consultant: Dahab Associates, Inc.	<ul style="list-style-type: none"> Aberdeen Asset Management Chartwell Investment Partners Copeland Capital Management 	<ul style="list-style-type: none"> Fiera Capital Inc. Loomis, Sayles & Company O'Shaughnessy Asset Management, LLC 	<ul style="list-style-type: none"> Polen Capital Management, LLC PRIT Fund
Gardner	▪ PRIT Fund		
Gloucester	▪ PRIT Fund		
Greater Lawrence	<ul style="list-style-type: none"> PRIO Wealth, LLC 		
Greenfield	▪ PRIT Fund		
Hampden County	▪ PRIT Fund		
Hampshire County ▶ Consultant: Dahab Associates, Inc.	▪ PRIT Fund	<ul style="list-style-type: none"> Glouston Capital Partners, LLC Lexington Partners, LP 	<ul style="list-style-type: none"> Portfolio Advisers, LLC
Haverhill ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Wainwright Investment Counsel, LLC	▪ PRIT Fund	<ul style="list-style-type: none"> Fisher Investments Global Forest Partners, LP Globespan Capital Management, Inc. GrandBanks Capital Income Research & Management Mesirow Financial Institutional Real Estate 	<ul style="list-style-type: none"> Molpus Woodlands Group, LLC Putnam Advisory Company, LLC Stafford Private Equity, Inc. TerraCap Management The DSF Group
Hingham ▶ Consultant: Meketa Investment Group	▪ PRIT Fund		

Investment Vendors

Retirement Board	Investment Vendors		
Holyoke ▶ Consultant: Segal Marco Advisors	<ul style="list-style-type: none"> • Aberdeen Asset Management • Acadian Asset Management, LLC • Allspring Global Investments, Inc. • Aristotle Capital Management • Constitution Capital Partners, LLC • Entrust Global • Fidelity Institutional Asset Management • LMCG Investments, LLC 	<ul style="list-style-type: none"> • Long Wharf Real Estate Partners, LLC • Loomis, Sayles & Company • Mesirov Financial Private Equity Advisors, Inc. • Monroe Capital • Newton Investment Management, LLC • Oaktree Capital Management, LP • Oberweis Asset Management, Inc. • Polaris Capital Management, LLC 	<ul style="list-style-type: none"> • PRIT Fund • Putnam Investment Management, LLC • RBC Global Asset Management (U.S.) Inc. • Seizert Capital Partners, LLC • State Street Global Advisors • TerraCap Management, LLC • Wasatch Advisors, Inc. • Western Asset Management Co.
Hull	▪ PRIT Fund		
Lawrence	▪ PRIT Fund		
Leominster	▪ PRIT Fund		
Lexington ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Meketa Investment Group, Inc.	<ul style="list-style-type: none"> • Acadian Asset Management, LLC • Angelo, Gordan & Co., LP • Driehaus Capital Management, LLC • Fidelity Investments 	<ul style="list-style-type: none"> • Golub Capital Partners • Kayne Anderson Rudnick Investment Management • Matthews International Capital Management, LLC • Monroe Capital 	<ul style="list-style-type: none"> • PRIT Fund • RhumbLine Advisers • Wellington Management Company, LLP • White Oak Global Advisors, LLC
Lowell ▶ Custodian: M&T Bank Wilmington Trust	▪ PRIT Fund		
Lynn	▪ PRIT Fund		
Malden ▶ Custodian: M&T Bank Wilmington Trust	<ul style="list-style-type: none"> • De Burlo Group, Inc. 		
Marblehead	▪ PRIT Fund		
Marlborough ▶ Custodian: Comerica Bank ▶ Consultant: Meketa Investment Group, Inc.	<ul style="list-style-type: none"> • Clarion Partners • Constitution Capital Partners, LLC • Dimensional Fund Advisors LP • Driehaus Capital Management, LLC 	<ul style="list-style-type: none"> • Fiduciary Management, Inc. • Frontier Capital Management Co., LLC • HarbourVest Partners, LLC • Payden & Rygel 	<ul style="list-style-type: none"> • RhumbLine Advisers • Rockwood Capital • Shenkman Capital Management, Inc. • State Street Global Advisors
MHFA ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Meketa Investment Group, Inc.	<ul style="list-style-type: none"> • Aberdeen Asset Management • AEW Capital Management, LP • Ascent Venture Partners • Constitution Capital Partners, LLC • GQC Partners, LLC 	<ul style="list-style-type: none"> • Goldman Sachs Asset Management, LP • HarbourVest Partners, LLC • IFM Investors Advisor • Intercontinental Real Estate Corporation • Longfellow Investment Management 	<ul style="list-style-type: none"> • Lord Abbett & Co., LLC • MetLife Investment Management • State Street Global Advisors • TA Realty
Massport ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Wilshire Associates	<ul style="list-style-type: none"> • Baillie Gifford Overseas Limited • PRIT Fund 	<ul style="list-style-type: none"> • Pzena Investment Management, LLC • State Street Global Advisors 	<ul style="list-style-type: none"> • Wellington Management Company, LLP
MTRS (Mass Teachers' Retirement System)	▪ PRIT Fund		

Investment Vendors

Retirement Board	Investment Vendors		
MWRA ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: NEPC, LLC	<ul style="list-style-type: none"> • ABS Investment Management, LLC • Alcentra NY, LLC • Ascent Venture Partners • Axiom International Investors, LLC • Baillie Gifford • Baxter Street • Boston Partners • CarVal Investors • Cerberus Capital Management, LP • Coho Partners, Ltd. • Constitution Capital Partners LLC • Corbin Capital Partners LP • EnTrust Global Partners 	<ul style="list-style-type: none"> • Foundry Group, LLP • Garcia Hamilton & Associates LP • Hamilton Lane • HarbourVest Partners, LLC • J.F. Lehman & Company • Kayne Anderson Capital Advisors, LP • Landmark Partners, LLC • Loomis, Sayles & Company • Lord, Abbett & Co. LLC • Mesirow • Morgan Stanley • Octagon Credit Investors, LLC 	<ul style="list-style-type: none"> • Park Square Capital • Pinebridge Investments, LLC • Polen Capital Management, LLC • PRIT Fund • Private Advisors, LLC • RhumbLine Advisers • Schroders Investment Management North America, Inc. • SEI Investments • TA Realty • TerraCap Management, LLC • UBS Hedge Fund Solutions, LLC
Maynard ▶ Custodian: M&T Bank Wilmington Trust	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • Boston Advisors, LLC 	
Medford ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: NEPC, LLC	<ul style="list-style-type: none"> • Ashmore Investment Advisor Limited • City of London Investment Management • Garcia Hamilton & Associates LP 	<ul style="list-style-type: none"> • Lazard Asset Management, LLC • Loomis, Sayles & Company • PRIT Fund 	<ul style="list-style-type: none"> • RhumbLine Advisers • William Blair & Company, LLC
Melrose	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Methuen	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • BlackRock Investment Management, LLC 	
Middlesex County	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • Global Forest Partners, LP 	<ul style="list-style-type: none"> • Globespan Capital Management, Inc.
Milford	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Milton	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Minuteman Regional	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Montague	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Natick ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> ▪ SEI Investments 	<ul style="list-style-type: none"> • PRIT Fund 	
Needham	<ul style="list-style-type: none"> ▪ PRIT Fund 		
New Bedford ▶ Consultant: Segal Marco Advisors	<ul style="list-style-type: none"> • Aberdeen Asset Management, Inc. • Acadian Asset Management, LLC • Constitution Capital Partners LLC • Hamilton Lane • Hancock Natural Resource Group, Inc. 	<ul style="list-style-type: none"> • Intercontinental Real Estate Corp. • Lexington Advisors, Inc. • Loomis, Sayles & Company • Mesirow Private Equity Advisors, Inc. • Newton Investment Management, LLC 	<ul style="list-style-type: none"> • Pacific Investment Management Company, LLC • Neuberger Berman Management • State Street Global Advisors Limited • UBS Realty Investors, LLC • Westfield Capital Management Company, LP
Newburyport	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Newton	<ul style="list-style-type: none"> ▪ PRIT Fund 		

Investment Vendors

Retirement Board	Investment Vendors		
<p>Norfolk County</p> <p>► Custodian: M&T Bank Wilmington Trust</p> <p>► Consultant: Wainwright Investment Counsel, LLP</p>	<ul style="list-style-type: none"> • Amundi Pioneer Institutional Asset Mgmt., Inc. • Aristotle Capital Management, LLC • Ascend Ventures Group, LLC • BNY Mellon Asset Management N.A. • Constitution Capital Partners, LLC • Corsair Capital LLC • D.E. Shaw Investment Management, LLC • DSF Group • EnTrust Partners, LLC • Gamco Asset Management, Inc. 	<ul style="list-style-type: none"> • Gerding Edlen Investment Management, LLC • Globespan Capital Management, Inc. • Goldentree Asset Management, LP • Hamilton Lane • HarbourVest Partners, LLC • Income Research & Management • Intercontinental Real Estate Corporation • Invesco Private Capital, Inc. • LLM Capital Partners • LMCg Investments, LLC 	<ul style="list-style-type: none"> • Mesirov Capital Partners IX, LP • Mesirov Financial Institutional Real Estate • MFS International Advisors, Inc. • PRIT Fund • RhumbLine Advisers • Seizert Capital Partners, LLC • Siguler Guff Advisors, LLC • TA Realty • TerraCap Management • Wellington Management Company, LLP
<p>North Adams</p> <p>► Custodian: M&T Bank Wilmington Trust</p>	<ul style="list-style-type: none"> • De Burlo Group, Inc. 	<ul style="list-style-type: none"> • PRIT Fund 	
<p>North Attleboro</p> <p>► Custodian: M&T Bank Wilmington Trust</p> <p>► Consultant: Dahab Associates, Inc.</p>	<ul style="list-style-type: none"> • Aristotle Capital Management, LLC • Atlanta Capital • Axium International Investors, LLC • Blackrock Realty Advisors, Inc. 	<ul style="list-style-type: none"> • Brandes Investment Partners, LP • Davenport & Company, LLC • Intercontinental Real Estate Corporation • Lazard Asset Management, LLC 	<ul style="list-style-type: none"> • Loomis, Sayles & Company • RhumbLine Advisers • Vontobel Asset Management, Inc.
<p>Northampton</p> <p>► Custodian: M&T Bank Wilmington Trust</p>	<ul style="list-style-type: none"> • De Burlo Group, Inc. 	<ul style="list-style-type: none"> • PRIT Fund 	
<p>Northbridge</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Norwood</p> <p>► Custodian: M&T Bank Wilmington Trust</p> <p>► Consultant: Meketa Investment Group, Inc.</p>	<ul style="list-style-type: none"> • Aberdeen Asset Management, Inc. • American Funds • Aristotle Capital Management, LLC • Atlanta Capital • Brigade Capital Management • Columbia Management Investment Advisors, LLC 	<ul style="list-style-type: none"> • Constitution Capital Partners • Dimensional Fund Advisors, LP • Driehaus Capital Management, LLC • HarbourVest Partners, LLC • IFM Investors Advisor 	<ul style="list-style-type: none"> • Landmark Partners, LLC • Newton Investment Management, LLC • PRIT Fund • RhumbLine Advisers • State Street Global Advisors
<p>Peabody</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Pittsfield</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Plymouth</p> <p>► Custodian: M&T Bank Wilmington Trust</p> <p>► Consultant: Fiducient Advisors, LLC</p>	<ul style="list-style-type: none"> • Acadian Asset Management • Aristotle Capital Management, LLC • BlackRock Advisors, LLC 	<ul style="list-style-type: none"> • Boston Trust Walden • Columbia Management Investment Advisers • PRIT Fund 	<ul style="list-style-type: none"> • Rhumbline Advisers • Wellington Management Company, LLP • Westfield Capital Management Company, LP

Investment Vendors

Retirement Board	Investment Vendors		
<p>Plymouth County</p> <ul style="list-style-type: none"> ▶ Custodian: State Street Bank & Trust ▶ Consultant: Meketa Investment Group 	<ul style="list-style-type: none"> • ABS Investment Management, LLC • AEW Capital Management, LP • Aristotle Capital Management, LLC • Ascent Venture Partners • Audax Management Company (NY), LLC • Basalt Infrastructure Partners • BlackRock Advisors, LLC • BTG Pactual Timberland Investment Group • Carlyle Investment Management • CAI Manager LP • Charlesbank Capital Partners, LLC • Constitution Capital Partners, LLC • DN Partners • Driehaus Capital Management, LLC • Entrust Global Partners • Fisher Investments • First Eagle Investment Management • Freeman Spogoli Management 	<ul style="list-style-type: none"> • Global Infrastructure Management, LLC • Globespan Capital Management, Inc. • HarborVest Partner • IFM Investors Advisor • Income Research & Management • Invesco Trust Company • I Squared Capital • John Hancock Trust Company • J.P. Morgan Investment Management, Inc. • Kohlberg & Co., LLC • Kopernik Global Investors • Landmark Partners, LLC • Lexington Partners, LP • LLR Management • Lord Abbett & Company • Mesirow Financial Capital Partners X, LP • Mesirow Financial Institutional Real Estate 	<ul style="list-style-type: none"> • Newton Investment Management, LLC • Old Farm Partners • PCCP, LLC • RhumbLine Advisers • Ridgemont Equity Partners • Rockpoint Capital • Searchlight Capital Partners • Siguler Guff Advisers, LLC • Summit Partners, LP • Systematic Financial Management • TA Realty • Trilantic Capital Management L.P. • Vulcan Value Partners, LLC • Walter Scott & Partners, Ltd. • Waud Capital Partners • Wellington Management • Wellspring Capital Management, LLC
<p>Quincy</p> <ul style="list-style-type: none"> ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Meketa Investment Group, Inc. 	<ul style="list-style-type: none"> • Acadian Asset Management, LLC • Adams Street Partners, LLC • AEW Capital Management, LP • Axiom • Beach Point Capital Management, LP • Brookfield Asset Management • Brown Advisory, LLC • Charlesbank Capital Partners, LLC • Columbia Management Investment Advisors, LLC • Driehaus Capital Management, LLC • Entrust Permal 	<ul style="list-style-type: none"> • Freeman Spogli Management • Global Infrastructure Management • Goldman Sachs Asset Management, LP • Hancock Timber Resource Group, Inc. • HarborVest Partners • IFM Investors Advisor • J.P. Morgan Investment Management • LLR Management • Loomis, Sayles & Company • Oppenheimer Alternative Investment Management • PRIT Fund 	<ul style="list-style-type: none"> • RhumbLine Advisers • Ridgemont Equity Partners • Rockwood Capital • Searchlight Capital Partners • SL Capital Partners, LLP • State Street Global Advisors • TerraCap Management, LLC • Torchlight Investors, LLC • Trilantic Capital Management L.P. • UBS Realty Investors, LLC • Wellspring Capital Management
<p>Reading</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Revere</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Salem</p>	<ul style="list-style-type: none"> ▪ PRIT Fund 		
<p>Saugus</p> <ul style="list-style-type: none"> ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Wainwright Investment Counsel, LLP 	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • Aristotle Capital Management, LLC • Lord Abbett & Co., LLC • LMCG Investments, LLC 	<ul style="list-style-type: none"> • Massachusetts Financial Services Co. • RhumbLine Advisers
<p>Shrewsbury</p> <ul style="list-style-type: none"> ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Dahab Associates, Inc. 	<ul style="list-style-type: none"> ▪ PRIT Fund 		

Investment Vendors

Retirement Board	Investment Vendors		
Somerville ▶ Custodian: Comerica Bank	<ul style="list-style-type: none"> • Congress Asset Management Company, LLP • Lazard Asset Management, LLC 	<ul style="list-style-type: none"> • Loomis, Sayles & Company • PRIT Fund 	<ul style="list-style-type: none"> • RhumbLine Advisers • UBS Realty Investors, LLC
Southbridge	▪ PRIT Fund		
Springfield	▪ PRIT Fund		
State	▪ PRIT Fund		
Stoneham ▶ Consultant: Fiducient Advisors, LLC	▪ PRIT Fund	<ul style="list-style-type: none"> • Russell Investment Group 	
Swampscott ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Dahab Associates	▪ PRIT Fund	<ul style="list-style-type: none"> • Aristotle Capital Management, LLC • Intercontinental Real Estate Corporation 	<ul style="list-style-type: none"> • LMCG Investments, LLC • TA Realty
Taunton ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Dahab Associates, Inc.	<ul style="list-style-type: none"> • Aberdeen Asset Management • Allspring Global Investments, Inc. • BlackRock Investment Management, LLC • Boston Partners • Ceres Partners, LLC • C.S. Mckee, LP • Frontier Capital Management Co., LLC • GAM International Management Limited 	<ul style="list-style-type: none"> • Intercontinental Real Estate Corporation • John Hancock Trust Company • LMCG Investments, LLC • Mesirov Financial Investment Management, Inc. • Molpus Woodlands Group, LLC • Pacific Investment Management Company, LLC • Polen Capital Management, LLC • PRIT Fund 	<ul style="list-style-type: none"> • Quantitative Management Association • Rhumbline • State Street Global Advisors • TA Realty • TimberVest, LLC • Vontobel Asset Management, Inc. • Weaver C. Barksdale & Associates
Wakefield	▪ PRIT Fund		
Waltham ▶ Custodian: SEI Private Trust Company ▶ Consultant: Fiducient Advisors, LLC	▪ SEI Investments	<ul style="list-style-type: none"> • PRIT Fund 	
Watertown ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> • Acadian Asset Management, LLC • American Realty Advisors • Brandywine Global Investment Management, LLC • Columbia Management Investment Advisors, LLC • Eaton Vance Management 	<ul style="list-style-type: none"> • Entrust Global Partners, LLC • Income Research & Management • Massachusetts Financial Services Company • Pinebridge Investment, LLC • PRIT Fund 	<ul style="list-style-type: none"> • RCP Advisors, LLC • TA Realty • TerraCap Management, LLC • Wellington Management Company, LLP
Webster ▶ Custodian:	▪ PRIT Fund	<ul style="list-style-type: none"> • HGK Asset Management Inc. 	
Wellesley	▪ PRIT Fund		

Investment Vendors

Retirement Board	Investment Vendors		
West Springfield ▶ Custodian: Comerica Bank	<ul style="list-style-type: none"> • De Burlo Group, Inc. 		
Westfield ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> • AEW Capital Management LP • Columbia Management Investment Advisers, LLC • Constitution Capital Partners, LLC • Hamilton Lane • Income Research & Management • Intercontinental Real Estate Corporation 	<ul style="list-style-type: none"> • Lazard Asset Management LMG Investments, LLC • Long Wharf Real Estate Partners, LLC • Loomis, Sayles & Company • Pacific Investment Co., LLC • Polaris Capital Management, LLC 	<ul style="list-style-type: none"> • PRIT Fund • RBC Global Asset Management (U.S.), Inc. • State Street Global Advisors • TerraCap Management • Wasatch Advisors, Inc.
Weymouth ▶ Custodian: Comerica ▶ Consultant: Fiducient Advisors, LLC	<ul style="list-style-type: none"> • 747 Capital • Acadian Asset Management, LLC • Adams Street Partners • Aristotle Capital Management, LLC • Ashmore Investment Advisers • BlackRock Advisors, LLC • Boston Trust Walden Company • Brooke Private Equity Associates Management, LLC • Brandywine Global Investment Management, LLC • Constitution Capital Partners, LLC 	<ul style="list-style-type: none"> • EnTrust Global Partners, LLC • Hamilton Lane • Harbor Capital Advisors Inc. • HarbourVest Partners, LLC • Invesco Private Capital, Inc. • Landmark Partners, LLC • Lazard Asset Management, LLC • MIRA, Americas Inc. • Newton Investment Management, LLC • Oaktree Capital Management, LP 	<ul style="list-style-type: none"> • Principal Global Investors LLC • PRIT Fund • RhumbLine Advisers • Riverbridge Partners, LLC • Seizert Capital Partners, LLC • Sigular Guff Advisers, LLC • Stockbridge Core and Value Advisors • TerraCap Management, LLC • Wasatch Advisors • Western Asset Management Co.
Winchester	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Winthrop	<ul style="list-style-type: none"> ▪ PRIT Fund 		
Woburn ▶ Custodian: M&T Bank Wilmington Trust	<ul style="list-style-type: none"> ▪ PRIT Fund 	<ul style="list-style-type: none"> • Charlesbank Capital Partners, LLC 	<ul style="list-style-type: none"> • Stafford Private Equity Inc.
Worcester ▶ Custodian: M&T Bank Wilmington Trust ▶ Consultant: Meketa Investment Group	<ul style="list-style-type: none"> • Acadian Asset Management, LLC • AEW Capital Management, LP • American Securities, LLC • Ascent Venture Partners • Boston Millenia Partners • BTG Pactual Timberland Investment Group, LLC • Capital International, Inc. • Charlesbank Capital Partners, LLC • Eaton Vance Management 	<ul style="list-style-type: none"> • EnTrust Global Partners, LLC • Global Infrastructure Management, LLC • Hancock Natural Resource Group, Inc. • Harvest Partners, LP • IFM Investors (US) Advisor, LLC • Income Research & Management • Lazard Asset Management, LLC • Loomis, Sayles & Company • Newstone Capital Partners, LLC 	<ul style="list-style-type: none"> • Northstar Company, LLC • Old Farm Partners LP • PRIT Fund • Ridgemont Equity Partners • Riverside Company • SL Capital Partners, LLP • State Street Global Advisors • TA Associates Management • Vitruvian Partners, LLP
Worcester Regional	<ul style="list-style-type: none"> ▪ PRIT Fund 		

PRIM Investment Vendors

(Organized by Service Provider Type)

Custodian:

- ▶ BYN Mellon

External Auditor:

- ▶ KPMG, LLP

Consultants:

- ▶ Aberdeen Asset Management Inc. - Portfolio Completion Strategies Advisory Services
- ▶ Albourne – Operational Due Diligence Service Provider
- ▶ Callan Associates - Public Market Advisory Services
- ▶ Hamilton Lane - Private Equity Advisory Services
- ▶ International Woodland Company – Timberland Advisory Services
- ▶ NEPC, LLC - Asset Allocation Advisory Services
- ▶ NewAlpha Asset Management – Portfolio Completion Strategies Advisory Services

Domestic Equity Managers

- Acadian Asset Management, LLC
- Brandywine Global Investment Management
- Driehaus Capital Management, LLC
- Frontier Capital Management

- Goldman Sachs Investment Management
- Lord, Abnett & Co., LLC
- Rhumblin Advisers

- Riverbridge Partners
- State Street Global Advisors
- Summit Creek Advisors

International Equity Managers

- Acadian Asset Management, LLC
- ARGA Investment Management
- Artisan Partners
- AQR Capital

- Baillie Gifford
- Driehaus Capital Management, LLC
- Marathon Asset Management, LLP
- Mondrian Investment Partners

- Russell Implementation Services
- State Street Global Advisors
- Xponance

Emerging Market Managers

- Acadian Asset Management, LLC
- AQR Capital
- Baillie Gifford

- Driehaus Capital Management, LLC
- Pzena Investment Management

- T. Rowe Price
- Wasatch Advisors, Inc.

Core Fixed Income Managers

- AFL-CIO Housing Investment Trust
- Blackrock Financial Management, Inc.
- Loomis, Sayles & Company

- Longfellow Investment Management
- New Century Advisors, LLC

- Pacific Investment Management Company, LLC
- Pugh Capital Management

Value-Added Fixed Income Managers

- 400 Capital Management, LLC
- Anchorage Capital Group, LLC
- Ashmore Investment Management, Ltd.
- Berkshire Group, LLC
- Eaton Vance Institutional Funds

- Fidelity Management Trust Company
- LibreMax Capital
- Loomis, Sayles & Company, LP
- Mudrick Capital Management, LP

- Newmarket Capital
- Pacific Investment Management Company, LLC
- Shenkman Capital Management
- Voya Financial

Alternative Investments—Real Estate Managers

- AEW Capital Management
- Berkshire Group, LLC
- Blackstone
- Brookfield Investment Management

- Cambridge Associates
- CBRE Global Investors
- CenterSquare Investment Management
- DivcoWest

- INVESCO Realty Advisors
- LaSalle Investment Management
- Stockbridge

Alternative Investments—Timberland

- Campbell Group, LLC

- Forest Investment Associates

Alternative Investments—Portfolio Completion Strategy Managers

- 400 Capital Management
- Aeolus Capital Management Ltd.
- Basswood Capital Management, LLC
- Blackrock Aviation
- Breakout Funds, LLC
- Brigade Capital G.P., LLC
- Cantab Capital Partners, LP
- Canvas Capital
- Capula Management Limited
- Cirera Capital Limited
- CKC Capital, LLC
- Complus Asset Management Limited

- Contrarian Capital Management
- Davidson Kempner Advisors, Inc.
- DLD Asset Management, LP
- East Lodge Capital
- Elliot Capital Advisors, LP
- FIR Tree Capital Management
- GaoFeng Global Asset Management, Ltd.
- Investcorp Investment Advisors, LLC
- JEN Partners, LLC
- Land and Buildings Investment Management
- LMCG Investments, LLC

- Markel CATCo Investment Management
- Mudrick Capital Management, LP
- Mygale, LLP
- North Peak Capital Management
- Pacific Alternative Asset Management Co. (PAAMCO)
- PGIM, Inc.
- Power Pacific Investment Management, Inc.
- RV Capital Management Pvt., Ltd.
- Sightway Capital
- Silver Creek Advisory Partners, LLC
- Summit Partners Public Asset Management, LLC
- Tabor Asset Management

PRIM Investment Vendors

(Organized by Service Provider Type, Continued)

Alternative Investments—Private Equity and Distressed Debt Managers

PRIVATE EQUITY:

- Acon Investments
- Advent International
- Alta Communications
- American Industrial Partners
- American Securities
- Apollo Management Co.
- Ascent Venture Partners
- Austin Ventures
- Bain Capital
- Battery Ventures
- Berkshire Partners
- Blackstone Capital Partners
- Bridgepoint Capital
- Carlyle Partners
- Castille Ventures
- Catalyst Investors
- Centerbridge Capital
- Charlesbank Capital Partners
- Charterhouse Capital
- Chequers Capital
- CVC Capital
- Cypress Group
- Denham Capital Management
- El Dorado Ventures
- Elysian Capital
- Essex Woodlands Health Ventures
- Ethos Private Equity
- Exponent Private Equity
- First Reserve Corporation
- Flagship Pioneering
- Freeman Spogli Equity Partners
- GENSTAR Capital
- Georgian Partners
- Gilde Buy Out Partner AG
- GTCR Golder Rauner

- Hellman & Friedman Capital Partners
- H.I.G. Capital Partners
- Highland Capital
- Hony Capital
- Index Ventures
- Insight Partners
- Institutional Venture Partners
- InterWest Partners
- JMI Equity
- Kelso & Company
- Kepha Partners
- Keytone Ventures
- Kohlberg Kravis Roberts and Co.
- KPS Capital Partners
- Lovell Minnick Partners
- Madison Dearborn Capital Partners
- M/C Venture Partners
- Medicxi Ventures
- Menlo Ventures
- Montagu
- Montreux Equity Partners
- Nautic Partners (Chisholm Management Co.)
- New Enterprise Associates
- Nordic Capital
- Odyssey Investment Partners
- Olympus Partners
- Onex Capital
- Permira Ventures
- Polaris Venture Partners
- Providence Equity Partners
- Providence Strategic Growth
- Quad-C Management
- Quantum Energy Partners
- Rembrandt Venture Partners
- Rhone Group, LLC
- SAIF Partners

- SCP Vitalife
- Sherbrooke Capital
- Sofinnova Ventures, Inc.
- Spark Capital
- Stone Point Capital (Trident Capital)
- Summit Ventures
- SV Life Sciences Advisors
- TA Associates
- Technology Crossover Ventures
- Tenaska Capital
- Texas Pacific Group
- The Gores Group
- Thoma Bravo
- Thoma Cressey Partners
- Thomas H. Lee Equity Partners, LP
- Thompson Street Capital
- Tidemark
- Torquest Partners
- Towerbrook Capital Partners
- TPG Capital
- Union Square Ventures
- VantagePoint Partners
- Vestar Capital Partners
- Vista Equity Partners
- Waterland Private Equity
- WestView Capital Partners
- Xenon Private Equity, LTD

DISTRESSED DEBT:

- Anchorage Capital
- Avenue Capital Group
- CarVal Investors
- Centerbridge Special Credit
- Crescent Capital Group
- GSO Capital Partners
- Oaktree Capital Management
- Trust Company of the West (TCW)
- Wayzata Investment Partners

Overlay Managers (Cash)

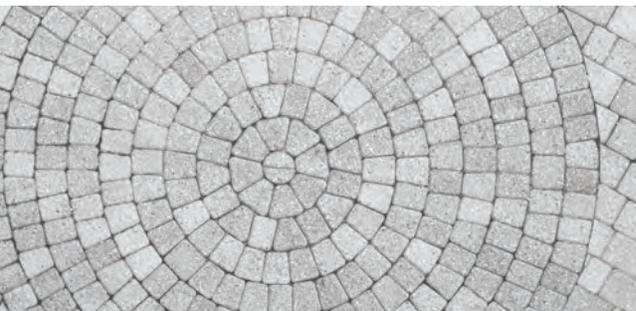
- Parametric Portfolio Associates, LLC

PERAC Directory

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