

ANNUAL REPORT

2012

Public Employee Retirement Administration Commission
Commonwealth of Massachusetts

Annual Report 2012

TABLE OF CONTENTS

• Commission Members	ii	• Framingham	44	• Northampton	84
• Mission Statement	iv	• Franklin Regional	45	• Northbridge	85
• Letter from the Chairman	1	• Gardner	46	• Norwood	86
• Letter from the Executive Director	2	• Gloucester	47	• Peabody	87
• Board Funding and Investments	6	• Greater Lawrence	48	• PRIM	118
• Introduction to the Board Profiles	11	• Greenfield	49	• Pittsfield	88
• Composite Investment Profile	12	• Hampden County Regional	50	• Plymouth	89
• Boston Teachers	12	• Hampshire County	51	• Plymouth County	90
		• Haverhill	52	• Quincy	91
Board Profiles		• Hingham	53	• Reading	92
• Adams	13	• Holyoke	54	• Revere	93
• Amesbury	14	• Hull	55	• Salem	94
• Andover	15	• Lawrence	56	• Saugus	95
• Arlington	16	• Leominster	57	• Shrewsbury	96
• Athol	17	• Lexington	58	• Somerville	97
• Attleboro	18	• Lowell	59	• Southbridge	98
• Barnstable County	19	• Lynn	60	• Springfield	99
• Belmont	20	• MHFA	61	• State	100
• Berkshire County	21	• MWRA	62	• State Teachers	101
• Beverly	22	• Malden	63	• Stoneham	102
• Blue Hills Regional	23	• Marblehead	64	• Swampscott	103
• Boston	24	• Marlborough	65	• Taunton	104
• Braintree	25	• Massport	66	• Wakefield	105
• Bristol County	26	• Maynard	67	• Waltham	106
• Brockton	27	• Medford	68	• Watertown	107
• Brookline	28	• Melrose	69	• Webster	108
• Cambridge	29	• Methuen	70	• Wellesley	109
• Chelsea	30	• Middlesex County	71	• West Springfield	110
• Chicopee	31	• Milford	72	• Westfield	111
• Clinton	32	• Milton	73	• Weymouth	112
• Concord	33	• Minuteman Regional	74	• Winchester	113
• Danvers	34	• Montague	75	• Winthrop	114
• Dedham	35	• Natick	76	• Woburn	115
• Dukes County	36	• Needham	77	• Worcester	116
• Easthampton	37	• New Bedford	78	• Worcester Regional	117
• Essex Regional	38	• Newburyport	79		
• Everett	39	• Newton	80	• Disability Retirement Statistics	119
• Fairhaven	40	• Norfolk County	81	• Investment Vendors	122
• Fall River	41	• North Adams	82	• PERAC Staff	140
• Falmouth	42	• North Attleboro	83		
• Fitchburg	43				



THE HONORABLE DOMENIC J. F. RUSSO
Chairman



THE HONORABLE SUZANNE M. BUMP
Auditor of the Commonwealth
Vice Chairman



GREGORY R. MENNIS
Assistant Secretary, Finance and Infrastructure
Executive Office of Administration & Finance



ROBERT B. MCCARTHY
President Emeritus of the Professional
Fire Fighters of Massachusetts

Commission Members



JAMES M. MACHADO
Sergeant, Fall River Police Department



ALAN G. MACDONALD
President Emeritus of the Massachusetts
Business Roundtable



DONALD R. MARQUIS
Former Town Manager, Arlington

MISSION STATEMENT

The Public Employee Retirement Administration Commission (PERAC) was created for and is dedicated to the oversight, guidance, monitoring, and regulation of the Massachusetts Public Pension Systems. The professional, prudent, and efficient administration of these systems is the public trust of PERAC and each of the 105 public pension systems for the mutual benefit of the public employees, public employers, and citizens of Massachusetts. The stewardship of the Trust Funds for the sole purpose of providing the benefits guaranteed to the public employees qualifying under the plans is the fulfillment of the obligation of the people of the Commonwealth to those who have dedicated their professional careers to the service of the people of the Commonwealth.

Letter from the CHAIRMAN

The Public Employee Retirement Administration Commission is pleased to release this 2012 Annual Report. This year we provide a progress report on the status of the Massachusetts public pension systems as they emerge from the immediate aftermath of the 2008 market collapse and ensuing economic malaise. In addition this review discusses the first year of implementation of Chapter 176 of the Acts of 2011. The Commission would like to commend the retirement boards and staff for the cooperation provided in the implementation process and thank the pension community for its patience as we proceeded with the enforcement of the complex and, at times, controversial aspects of that statute.

Recent Annual Reports have focused on the fiscal impact of the 2008 experience on the retirement systems. This year we finally have some good news to report as many systems have suffered through the absorption of those losses and are on the verge of moving forward. As our Actuary Jim Lamenzo has stressed, this recovery is taking place over a multi-year period. The Commonwealth and its cities and towns have stayed the course during this difficult time and we stand ready to resume moving to our ultimate goal of financial security.

Two key initiatives of Chapter 176 were the requirement that retirement board members file annual Statements of Financial Interest and also meet minimum education requirements. In 2012 we achieved virtually 100% compliance with these mandates and are well on our way to a similar record in 2013. This is a testament to the commitment of individual board members to serve the members and beneficiaries of the systems in a knowledgeable manner and with integrity. We have commented on the cynicism with which the media and public views our public pension plans. This record of compliance should convince every unbiased observer that, at least in Massachusetts, the trustees are dedicated, engaged and professional.

The foresight of Massachusetts has not necessarily been emulated by jurisdictions across the country. As a result, although we have adopted a series of reforms dating back three decades that have addressed investment, funding, benefit levels and governance, the Commission and pension funds continue to confront misinformation and often intentional disinformation about our system.

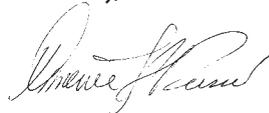
Massachusetts has modest benefit levels, substantial employee contributions and our employing government units have been responsible in making adequate appropriations to the pension system. We are often grouped with all pension plans when, in fact, because our members do not participate in Social Security our true peers only represent a small number of systems. This complicates the ability of Massachusetts to receive fair treatment from those who are unaware of this critical factor.

Today a number of study commissions are reviewing various retirement-related sections of our law including the “public employees’ pension classification system”, public employee participation in the deferred compensation plan, retiree healthcare and other non-pension benefits, and “all aspects of the ordinary and accidental disability provisions of the Massachusetts contributory retirement systems as well as the provisions of injured on-duty benefits and presumptions for public employees contained in the general laws.” Following their deliberations, the commissions will provide analysis and possibly recommendations for legislative action. This process further underscores that Massachusetts will continue to honestly appraise its pension law and seek improvements if necessary.

Our pension community has worked together in developing and implementing real solutions to real problems while adopting a balanced approach of shared sacrifice rather than an unfair shifting of burdens to public employees and their beneficiaries. These principles will continue to guide the Commission in its deliberations.

As always, the Commission and staff will use our best efforts to assist the retirement boards in safeguarding the interests of system members and beneficiaries.

Sincerely,



Domenic J.F. Russo
Chairman



Letter from the EXECUTIVE DIRECTOR

The Commission and its staff are pleased to release this Annual Report on the Massachusetts Public Employee Retirement Systems for 2012 which marked the first year of implementation of the most ambitious set of reforms to our public pension system in history. Chapter 176 revised the benefits available to present and future members of the retirement systems, regulated the interaction between collective bargaining agreements and the pension law and dramatically impacted the corporate governance law applicable to the retirement boards. In 2012 PERAC embarked on the initial stages of a multi-year effort to ensure that new practices were adopted by the public pension community without undue burden. These pages detail the fact that retirement board members have complied with not only the letter but also the spirit of the law. This willingness to greet major change with equanimity and cooperation should make a significant contribution to putting to rest concerns about procurement practices, educational standards, and transparency that have contributed to the clamor for fundamental changes in the very nature of Massachusetts' public pension funds and the benefits available to public employees in the Commonwealth.

Staff Changes

Staff changes took place during the year as PERAC Director of Communications and Education Sarah Kelly retired after thirty four years of state service. Sarah initiated a wide range of programs designed to inform, educate and, at times, entertain the Massachusetts public pension community. Her leadership enabled the recruitment of top notch professionals in the design and drafting of Commission publications, the

development and maintenance of the PERAC Website and the coordination of countless educational sessions. One of her lasting contributions has been the establishment of an unrivaled in-house publication capability that has significantly reduced dependence on contracting with outside sources. In addition Sarah was instrumental in the establishment of PERAC's successful Chapter 176 Education Program as she employed her experience in overseeing and planning PERAC's Annual Emerging Issues Forum and PERAC's Educational Institute at UMass Amherst. Sarah has set a high bar for her successor Natacha Dunker to meet. Natacha recently assumed the role of Director of Communications and Education and has already begun to build on the solid foundation left by Sarah.

As was noted in last years' Report, Barbara Phillips retired after serving as PERAC General Counsel for over twenty-five years. Over the course of the last several months she has been assisting new PERAC General Counsel John Parsons as he transitioned into the position as well as helping as the Commission implemented the reforms of Chapter 176. Recently Barbara decided that the time had come for her to reduce that role. It is impossible to review all of the issues with which she dealt, the wise counsel that she dispensed, and the professional example that she provided. No one has contributed more to the well-being of our retirement systems and the members and beneficiaries of those systems than Barbara.

A third stalwart of PERAC, Barbara Lagorio, also has decided to move on from her post retirement role of assisting the PERAC Disability Unit. Barbara virtually created the PERAC Disability Unit, including a

sophisticated computerized Disability Application Tracking System which ensures smooth functioning of the Medical Panel Process, the Comprehensive Medical Evaluation Process and PERAC's Return to Service Program.

Emerging Issues Forum

In September, 2012, PERAC held its eighth Emerging Issues Forum at the College of the Holy Cross. Three hundred and eleven people participated, the highest number of attendees in the program's history. Retirement board members received three education credits under the educational mandate of Chapter 176. As has become a custom, Lieutenant Governor Tim Murray delivered opening remarks and best wishes from Governor Deval Patrick. This year's focus was sustaining public pensions and post-retirement benefits. Linda Bournival, Consulting Actuary from KMS Actuaries, provided a country-wide and state by state assessment of pension reform and plan design. PERAC Actuary Jim Lamenzo, an annual star at these events, focused on the Massachusetts experience highlighting the major provisions of Chapter 21 of the Acts of 2009, Chapter 131 and Chapter 188 of the Acts of 2010 and Chapter 176 of the Acts of 2011. The former receiver of financially troubled Central Falls Rhode Island, Judge Robert Flanders detailed his experience in leading that city through the Chapter 9 bankruptcy process. As a result the city was able to eliminate a \$6 million structural deficit. Rosemary Booth Gallogly, Director of Revenue for the State of Rhode Island, made a presentation on the RI Study Commission on Locally Administered Plans. She noted that in the Central Falls collapse retiree pensions were cut by 55%.

Henry Dormitzer, Chair of the Special Commission on Retiree Healthcare and other Non-Pension Benefits brought the audience up to date on the OPEB's Commission's work. This session was particularly prescient as recently Governor Patrick has submitted legislation based on the Commission's efforts. Comptroller of the Commonwealth Marty Benison brought an accounting perspective to the issues of OPEB liabilities and GASB reporting requirements. In addition he outlined the details of the recently issued GASB pension reporting rules. Continuing on the health care theme, Bob Johnson, retired Deputy Director and Chief Operating Officer of the Group Insurance Commission, talked about the Commission's history and its expanding role in the administration of health care benefits for local employees and retirees. The concluding address was made by Treasurer and Receiver General Steven Grossman. Treasurer Grossman spoke about the challenges and achievements of the Pension Reserves Investment Management Board and reaffirmed his steadfast commitment to a defined benefit plan and fulfillment of the Commonwealth's pension obligations to its public employees.

Section 23B

Chapter 176 inserted Section 23B into Chapter 32 and throughout 2012 and into 2013 the Commission has been conducting analysis, disseminating memoranda and responding to questions in an effort to assist retirement boards and vendors. One of the major challenges raised by Section 23B has been the application of its provisions to investment allocations, products and complex legal structures that often are an integral part of alternative investment. PERAC issued Memorandum #51/2012 which contained specific recommendations as to how the contract term, indemnification, disclosure and fiduciary duty aspects of Section 23B could be met in the context of limited partnerships and similar entities.

The Commission also provided guidance through memoranda that outlined the impact of Chapter 176 on PERAC Investment Regulations. This action, in conjunction with the advisory mentioned above, has enabled a generally seamless transition to investing assets under the new law.

One element of Section 23B which we are presently dealing with is the requirement that vendors annually disclose payments made or received and conflicts of interest to the retirement boards and PERAC. We are reviewing and following up on submissions received to date. Already significant information has been gleaned from these filings including the use of sub-advisors, payments through the designation of a party as a "special limited partner" and the obtaining of services through "soft dollars".

Enforcement

In the spring of 2012 PERAC Auditors uncovered serious irregularities at the Maynard Retirement Board centering on the activities of Executive Director Timothy McDaid. The Commission immediately notified the Maynard Retirement Board which removed McDaid. An investigation was commenced by the Middlesex District Attorney who, with PERAC's assistance, ultimately developed sufficient evidence for an indictment. Recently McDaid pleaded guilty to charges of larceny over \$250, uttering a false check and forgery in connection with the theft uncovered by the PERAC Auditors.

In the interim the Commission acted to prohibit McDaid from serving a retirement board in any capacity based on a previous conviction for financial crime.

During this period the Commission also issued a Temporary Order assigning Deputy Chief Auditor James Tivnan and Compliance Counsel Derek Moitoso to monitor the Maynard Retirement System and ensure its smooth functioning.

Legal Issues

Two legal matters that drew considerable attention during 2012 were the application of the new Anti-Spiking provisions of Chapter 176 and the regular compensation status of payments made in lieu of taking vacation leave. Due to the nature of the anti-spiking statute, PERAC's Legal and Actuarial Unit worked tirelessly and ultimately produced an eight page memorandum that not only reviewed the legal framework but also set forth several examples as to how the statute works in practice. The Commission grappled for several meetings with the regular compensation status of vacation buy-back payments. Ultimately the Commission decided that such payments could be classified by the retirement board as regular compensation if that conclusion was reached after a careful analysis.

Waivers of Filing Requirement for 91A Filings Successful

Legislation proposed by PERAC and adopted as part of Chapter 176 authorized the Commission to waive the Annual Statement of Earned Income filing requirement for certain disabled retirees. After assessing the earnings history of all disabled retirees (a number that exceeded 15,000) PERAC issued over 2,200 waivers for the 2012 filing season to retirees who had been retired for twenty years and had reported no earnings in the last ten years. Over 2,100 of that number returned affidavits certifying that PERAC will be notified of any future change in

earnings status and these members are no longer required to file an Annual Statement of Earned Income. This represents a reduction of close to 14% in the number of disabled retirees required to file these statements.

Chapter 176 Impact on Members Taking a Refund

We would like to take this opportunity to once again remind retirement boards that the benefit changes in Chapter 176 can impact existing members in one particular scenario. Retirement boards must make sure that those who were members on or before April 2, 2012 are aware of the ramifications of taking a refund of retirement contributions in the event they leave service. Such an action will terminate membership in the system and if he or she later returns to service having taken such a refund, that individual will be considered a new employee and will be subject to the post-April 2, 2012 benefit structure. Benefit changes will include a new age factor table requiring a longer work period before achieving the same or similar benefit available to pre-April 2 members; an increase in the period for determining regular compensation from three to five years; and an increase in the minimum retirement age.

Statement of Financial Interests Filing

In accordance with Chapter 176 retirement board members are required to file Statements of Financial Interests by May 1st of each year. These submissions are not subject to release pursuant to the public records law. I would like to commend the retirement board members for their willingness to meet the requirements of the new law.

The Commission has in place Security Protocols to ensure that the information remains confidential. The staff at PERAC with access to the filings is strictly limited. Initially only the Compliance Officer and Compliance Counsel have access. In the event that an issue arises regarding compliance, the General Counsel and Executive Director as well as the Commission, in certain circumstances, will also be able to review a filing. If a Commissioner wishes to access a filing in the absence of those circumstances he or she must notify the Chair and may review the information in the presence of the Compliance Officer or Compliance Counsel. In the event that a Commissioner does so or if the Commission does so in the circumstances described above the retirement board member will be notified. Statements will not be copied or scanned electronically with the exception that a copy may be made in order to provide the retirement board member with a date stamped receipt.

The Compliance Review takes place in several stages and retirement board members are provided ample opportunity to establish that compliance with the statute has taken place or to bring the submission into compliance if necessary.

The 2011 filing season was completed with nearly 100% of retirement board members submitting Statements of Financial Interests. Only one board member was removed from office for failing to file. The 2012 filing season is in full swing and PERAC's Compliance Officer, Tom O'Donnell and Compliance Counsel Derek Moitoso are in the midst of reviewing submissions. The Statement of Financial Interests was modified for 2012 in an effort to simplify and streamline the process. Thus far we have experienced a high rate of compliance.

Again, I would like to express the thanks of the Commission to retirement board members whose cooperation and commitment have enabled the implementation of this mandate to proceed smoothly.

Education Update

2012 marked the first year of mandatory training for retirement board members. Chapter 176 required that during each member's term on the retirement board, the member must complete 18 hours of training. As of March 1, 2013 over 96% of retirement board members are in compliance with educational requirements. We are now proceeding with the 2013 schedule of educational events.

Educational sessions have been held from the Berkshires to Cape Cod. In the first year and a half of the program hardly a month has gone by in which no offering was available to retirement board members. Events have been held in the evening in an effort to accommodate busy schedules. A key element has been the cooperation between MACRS and PERAC in providing a stimulating and diverse program of presentations at the Spring and Fall MACRS Conferences. In 2012 topics at these Conferences included Securities Litigation, Section 15 Forfeiture, benefit calculations, actuarial valuations, Anti-Spiking, the Legislative Process, Pension Board Governance, and Legal Issues. At the Spring 2013 Conference credit will be given for participation in a pre-conference two day new trustees program as well as for sessions during the main conference.

PERAC has also conducted numerous training events throughout the state concerning Annual Statements, Disability, Audits/Earnings Reports, Pre/Post Chapter 176 Benefit Structure, Actuarial Basics and Funding Strategies, Financial Controls for Retirement Systems, and Review of Vendor Disclosures/Competitive Process. Credit has also been granted for attending PERAC's Annual Emerging Issues Forum.

In 2013 PERAC has expanded its efforts to enable retirement board members to obtain credit by completing on-line courses. We now grant credit for the State Ethics Commission On-Line Conflict of Interest Law Training, the Office of the Inspector General's Bidding Basics Course and the Office of the Attorney General's Open Meeting Law Course. These steps have facilitated the ability of retirement board members to comply with the education requirement

PERAC has also authorized credit for participation in programs sponsored by other organizations. Those attending the National Conference on Public Employee Retirement Systems (NCPERS) Trustee Educational Seminar, the NCPERS Program for Advanced Trustee Studies, the National Council on Teacher Retirement (NCTR), International Foundation of Employee Benefit Plans (IFB) New Trustees Institute/Advanced Trustees Institute and the PRIM Investors' Conference will receive credit.

Actuarial Reminders

PERAC has noted for several years that both nationally and locally our defined benefit plan has been under attack. Frequently those challenging the existing structure are ill-informed and, sometimes ill-intentioned. This Annual Report is a convenient forum to remind everyone dependent on or impacted by our pension plan of a few simple facts.

Employee/Employer Share of the Chapter 32 Retirement Benefit

The basic question is whether an employee's contributions accumulated with expected investment earnings over the working career are sufficient to pay the calculated retirement benefit for the remainder of the retiree's lifetime. In other words is the accumulated value of an employee's contributions at retirement age greater than the present value of the future retirement payments?

A measure of the general principle is as follows: If an employee is in Group 1, is hired after 7/1/96, and serves for over 20 years, the employee pays most, if not all of his or her superannuation retirement benefit provided that the plan's investment return assumption is met.

The employee share of the benefit varies depending on age, service, age at hire, age at retirement and pay. However, if all of the above criteria are met, many of these employees are paying more than 100% of the benefit. Due to the benefit reductions in Chapter 176 a Group 1 member hired after April 1, 2012 who meets the above criteria will likely contribute over 100% of his/her superannuation benefit.

Investment Return Assumption

The investment return assumption is the most commonly discussed pension plan actuarial assumption.

For over 15 years, the "standard" PERAC investment return assumption (assuming a reasonable investment allocation) has been 8.0%. For those of you who can recall the go-go investment returns of the 1990's, during that period the argument was made that this assumption should be increased because of the excellent returns achieved by the systems. PERAC resisted pressure to make such an increase. Over the course of the last several years the reverse has been true as pressure has been applied to reduce the investment assumption based on recent returns. We have been ahead of the curve as five to ten years ago we concluded that an 8.5% assumption was too high. More recently PERAC went further and indicated we believe that 8.25% is too high. We will be considering reducing the 8.0% assumption to 7.75% in 2013 actuarial valuations.

The record reflects the Commission's foresight. In 2003, about half of the systems used an investment return assumption above 8.0%. Today there are only 12 such systems and none use an assumption above 8.25%. In 2003 only 3 systems used an investment return assumption below 8.0%. Currently there are 25 such systems.

While the investment return assumption gets all the press, the salary increase assumption also makes a significant contribution to a plan's liabilities. PERAC's existing standard salary increase assumptions are somewhat conservative. Over the longer term, the investment return and salary increase assumptions should move in tandem as both have an inflation component. Fifteen-to-twenty years ago, PERAC required that the spread between these two assumptions be no more than 2.0%. It is important to note that the impact of a reduction in the investment return assumption may be partially (or fully) offset by a reduction in the salary increase assumption.

The current salary increase assumptions are based on job group and service. The rates of increase are the highest in the earliest years of employment and grade down to an ultimate rate (for example, 4.75% for Group 1 members in local systems). Again, since our salary assumption has not been adjusted to the experience of the past 3 to 5 years, recent actuarial valuations have produced conservative results. PERAC is wrapping up an Experience Study for the State Retirement System and the Teachers' Retirement System which will determine a revised salary assumption.

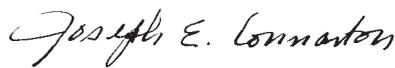
Actuarial assumptions are designed as a package. Focusing solely on the investment return assumption is counterproductive. Other assumptions (namely the salary increase assumption) also make a significant contribution in determining plan liabilities.

Conclusion

It is time now for all those involved in the Massachusetts public pension community to take a deep breath and assess recent history. After the devastating collapse of the capital markets, the ensuing slow down of the economy and the nearly annual statutory changes in our pension law we can safely say that none of us ever before experienced such challenges. Although, perhaps Chapter 176 had the most dramatic impact, other developments may, in the long run, have a greater role in the survival of the defined benefit system in Massachusetts. Foremost among these has been the steady progress made in overcoming the fiscal strain created by the failure of the capital markets in 2008 and the choppy economic recovery since then. Retirement boards have balanced the need to ensure that liabilities

are addressed over time with the recognition that state and local budgets must meet a variety of needs. All systems are meeting responsible funding schedules tailored to the specific circumstances of the governmental units involved. As the investment results detailed in this report underscore, the returns achieved by Massachusetts' funds remain competitive with those of other pension investors nationwide. Long-range returns support the conclusion that retirement boards have responsibly managed system assets. Finally, retirement board members have once again displayed their dedication and professionalism in complying cooperatively and enthusiastically with Chapter 176. For that response, as well as their day-to-day, year in and year out efforts on behalf of system members, beneficiaries and taxpayers, I offer the Commission's heartfelt thanks.

Sincerely,



Joseph E. Connarton
Executive Director

Board Funding and Investments

The funded ratios of pension funds in Massachusetts, based on information as of 4/1/13 begin on this page followed by investment return history for four periods: 2012; 2008-2012 inclusive; and 1985-2012 inclusive (MWRA: 1986-2012).

This section of the Report is the result of the efforts of the PERAC Investment Unit which includes Victoria Marcorelle, Veronica Colon, and Rose Cipriani as well as those of the PERAC Actuarial Unit consisting of James Lamenzo, John Boorack, Kaitlyn Doucette, Timothy Larkin and Sherry Brooks-Ross.

BOARD NAME	FUNDED RATIO	DATE
ADAMS	80.9%	1/1/2012
AMESBURY	49.8%	1/1/2012
ANDOVER	49.7%	1/1/2012
ARLINGTON	48.4%	1/1/2012
ATHOL	48.7%	1/1/2011
ATTLEBORO	65.1%	1/1/2012
BARNSTABLE COUNTY	55.5%	1/1/2012
BELMONT	51.3%	1/1/2010
BERKSHIRE COUNTY	83.5%	1/1/2011
BEVERLY	51.1%	1/1/2012
BLUE HILLS REGIONAL	68.6%	1/1/2012
BOSTON	61.4%	1/1/2012
BRAINTREE	62.4%	1/1/2012
BRISTOL COUNTY	59.3%	1/1/2012
BROCKTON	72.3%	1/1/2011
BROOKLINE	55.8%	1/1/2012
CAMBRIDGE	77.8%	1/1/2012
CHELSEA	53.3%	1/1/2011
CHICOPEE	60.1%	1/1/2011
CLINTON	65.6%	1/1/2011
CONCORD	76.7%	1/1/2012
DANVERS	58.6%	1/1/2012
DEDHAM	71.9%	1/1/2012
DUKES COUNTY	67.0%	1/1/2011
EASTHAMPTON	62.0%	1/1/2012
ESSEX REGIONAL	51.9%	1/1/2011
EVERETT	38.4%	1/1/2012
FAIRHAVEN	63.4%	1/1/2012
FALL RIVER	46.1%	1/1/2011

BOARD NAME	FUNDED RATIO	DATE
FALMOUTH	58.9%	1/1/2012
FITCHBURG	42.0%	1/1/2012
FRAMINGHAM	67.3%	1/1/2012
FRANKLIN REGIONAL	63.3%	1/1/2012
GARDNER	55.3%	1/1/2011
GLOUCESTER	44.3%	1/1/2012
GREATER LAWRENCE	89.5%	1/1/2011
GREENFIELD	61.1%	1/1/2011
HAMPDEN COUNTY REG.	48.9%	1/1/2012
HAMPSHIRE COUNTY	55.5%	1/1/2012
HAVERHILL	49.2%	1/1/2012
HINGHAM	69.4%	1/1/2012
HOLYOKE	50.9%	1/1/2012
HULL	43.7%	1/1/2012
LAWRENCE	39.4%	1/1/2012
LEOMINSTER	78.6%	1/1/2011
LEXINGTON	78.3%	1/1/2012
LOWELL	60.1%	1/1/2011
LYNN	46.0%	1/1/2011
MALDEN	70.1%	1/1/2012
MARBLEHEAD	73.7%	1/1/2012
MARLBOROUGH	68.4%	1/1/2011
MASS HOUSING FINANCE	77.4%	1/1/2011
MASSPORT	89.7%	1/1/2012
MASS WATER RESOURCES	87.6%	1/1/2011
MAYNARD	71.8%	1/1/2011
MEDFORD	64.4%	1/1/2010
MELROSE	55.7%	1/1/2012
METHUEN	46.8%	1/1/2012
MIDDLESEX COUNTY	43.7%	1/1/2012
MILFORD	62.1%	1/1/2011
MILTON	77.3%	1/1/2011
MINUTEMAN REGIONAL	104.0%	1/1/2011
MONTAGUE	75.6%	1/1/2012
NATICK	64.0%	1/1/2011
NEEDHAM	72.9%	1/1/2012
NEW BEDFORD	41.6%	1/1/2012
NEWBURYPORT	59.0%	1/1/2012
NEWTON	53.1%	1/1/2012

BOARD NAME	FUNDED RATIO	DATE
NORFOLK COUNTY	60.0%	1/1/2010
NORTH ADAMS	67.9%	1/1/2011
NORTH ATTLEBORO	73.4%	1/1/2011
NORTHAMPTON	60.5%	1/1/2012
NORTHBRIDGE	62.2%	1/1/2012
NORWOOD	84.0%	1/1/2010
PEABODY	48.5%	1/1/2012
PITTSFIELD	46.4%	1/1/2011
PLYMOUTH	54.2%	1/1/2010
PLYMOUTH COUNTY	56.1%	1/1/2011
QUINCY	47.6%	1/1/2010
READING	68.0%	7/1/2011
REVERE	57.6%	1/1/2011
SALEM	49.8%	1/1/2012
SAUGUS	67.8%	1/1/2011
SHREWSBURY	68.4%	1/1/2012
SOMERVILLE	60.4%	1/1/2011
SOUTHBRIDGE	49.1%	1/1/2012
SPRINGFIELD	29.0%	1/1/2012
STATE	73.8%	1/1/2012
STATE TEACHERS	60.7%	1/1/2012
STONEHAM	66.1%	1/1/2012
SWAMPSCOTT	46.2%	1/1/2011
TAUNTON	61.9%	1/1/2012
WAKEFIELD	66.5%	1/1/2012
WALTHAM	55.8%	1/1/2011
WATERTOWN	59.0%	1/1/2012
WEBSTER	49.7%	1/1/2012
WELLESLEY	75.8%	1/1/2012
WEST SPRINGFIELD	53.2%	1/1/2012
WESTFIELD	68.9%	1/1/2011
WEYMOUTH	55.6%	1/1/2012
WINCHESTER	84.5%	1/1/2011
WINTHROP	73.1%	1/1/2011
WOBURN	67.9%	1/1/2010
WORCESTER	67.7%	1/1/2012
WORCESTER REGIONAL	44.4%	1/1/2012

INVESTMENT RETURN HISTORY

BOARD NAME	28 YR 2012	27 YR 2011	26 YR 2010	10 YR 2012	10 YR 2011	10 YR 2010	5 YR 2012	5 YR 2011	5 YR 2010
ADAMS	8.05	8.01	8.28	5.39	4.13	4.44	2.26	2.01	3.41
AMESBURY	7.91	7.70	8.00	6.72	4.37	3.83	1.57	0.72	3.52
ANDOVER	8.31	8.11	8.42	5.35	2.91	2.16	1.52	-0.07	2.58
ARLINGTON	8.35	8.19	8.47	6.19	3.50	2.73	0.47	-1.02	1.44
ATHOL	7.20	6.98	7.25	5.48	3.61	3.39	1.69	1.05	3.24
ATTLEBORO	8.89	8.71	9.05	8.10	6.13	5.95	3.04	2.00	4.46
BARNSTABLE COUNTY	7.32	7.08	7.35	6.98	4.51	3.68	1.44	0.59	3.25
BELMONT	9.48	9.35	9.62	9.19	7.12	6.54	5.20	4.76	7.24
BERKSHIRE COUNTY	9.05	8.88	9.23	8.55	6.20	5.64	1.53	1.22	4.33
BEVERLY	8.55	8.34	8.66	6.48	4.65	4.48	1.60	0.68	2.10
BLUE HILLS REGIONAL	8.67	8.49	8.81	8.63	6.29	5.59	1.77	1.48	4.45
BOSTON	9.11	8.97	9.29	8.36	5.95	5.24	3.25	2.77	5.52
BRAINTREE	8.83	8.70	9.00	8.24	6.01	5.89	3.75	2.87	5.36
BRISTOL COUNTY	8.94	8.69	9.11	7.69	5.06	4.96	3.23	1.72	4.88
BROCKTON	8.94	8.82	9.17	7.54	5.09	4.84	2.20	1.22	3.62
BROOKLINE	8.79	8.68	9.09	6.95	5.26	5.31	2.11	1.25	4.25
CAMBRIDGE	9.28	9.08	9.46	7.27	5.05	4.85	2.46	1.90	4.56
CHELSEA	7.85	7.64	7.94	7.86	5.37	4.52	1.52	1.22	4.39
CHICOPEE	8.63	8.37	8.67	7.94	5.26	4.75	4.47	2.84	4.86
CLINTON	7.57	7.37	7.67	7.32	4.81	4.33	0.63	-0.68	2.69
COMPOSITE	9.27	9.11	9.46	8.38	5.98	5.42	1.83	1.38	4.39
CONCORD	8.58	8.44	8.64	7.31	5.42	5.04	3.02	2.34	4.34
DANVERS	8.03	7.93	8.40	6.22	4.27	4.10	2.57	1.59	4.64
DEDHAM	9.62	9.46	9.84	8.68	6.26	5.66	1.55	1.22	4.39
DUKES COUNTY	7.52	7.36	7.54	7.36	5.52	4.58	2.97	2.91	5.17
EASTHAMPTON	8.21	8.00	8.31	8.66	6.29	5.70	1.47	1.15	4.29
ESSEX REGIONAL	8.72	8.54	8.86	6.64	4.38	4.15	1.45	0.80	3.69
EVERETT	8.40	8.19	8.51	7.46	4.70	4.27	1.57	1.19	4.32
FAIRHAVEN	9.38	9.22	9.58	8.57	6.21	5.62	1.47	1.12	4.23
FALL RIVER	8.34	8.14	8.45	6.13	3.46	3.03	1.83	0.68	3.00
FALMOUTH	8.96	8.80	9.10	7.06	4.45	4.52	2.44	1.28	3.69
FITCHBURG	7.51	7.30	7.58	5.87	3.50	3.14	1.25	0.63	2.94
FRAMINGHAM	9.35	9.19	9.55	8.67	6.00	5.29	1.48	1.16	4.32
FRANKLIN REGIONAL	8.21	8.02	8.31	7.04	4.78	4.94	2.69	2.28	4.69
GARDNER	9.49	9.33	9.70	8.64	6.24	5.65	1.43	1.09	4.22
GLOUCESTER	8.88	8.70	9.03	7.13	4.75	4.66	1.53	0.70	3.39

(Continued)

INVESTMENT RETURN HISTORY

BOARD NAME	28 yr 2012	27 yr 2011	26 yr 2010	10 yr 2012	10 yr 2011	10 yr 2010	5 yr 2012	5 yr 2011	5 yr 2010
GREATER LAWRENCE	7.34	7.21	7.49	6.25	4.82	4.07	4.55	4.12	5.93
GREENFIELD	8.45	8.24	8.56	6.86	4.69	4.10	2.12	1.19	3.74
HAMPDEN COUNTY REG.	8.59	8.43	8.72	6.59	4.10	3.78	2.14	0.93	3.21
HAMPSHIRE COUNTY	8.44	8.22	8.52	7.95	4.98	4.37	3.73	2.08	4.86
HAVERHILL	10.15	10.06	10.46	8.30	6.30	5.94	2.71	2.56	5.37
HINGHAM	9.31	9.21	9.54	8.60	6.35	5.68	1.35	1.32	4.34
HOLYOKE	9.30	9.03	9.40	7.21	4.26	4.45	3.30	1.54	3.86
HULL	7.80	7.58	7.88	8.22	5.53	5.16	1.46	1.14	4.25
LAWRENCE	7.66	7.44	7.73	6.49	4.02	3.15	1.55	0.75	3.11
LEOMINSTER	8.39	8.15	8.55	7.16	5.27	5.69	1.75	0.99	4.49
LEXINGTON	8.87	8.67	9.26	7.12	5.07	5.35	0.82	0.60	4.60
LOWELL	9.16	9.00	9.35	7.69	5.01	3.91	1.24	0.93	4.07
LYNN	7.90	7.70	7.94	6.52	4.22	3.59	0.91	0.33	2.10
MALDEN	9.76	9.71	9.97	7.67	5.96	4.77	3.73	4.61	5.76
MARBLEHEAD	9.29	9.12	9.48	8.70	6.30	5.71	1.51	1.18	4.35
MARLBOROUGH	8.52	8.42	8.66	7.57	5.77	5.41	3.50	2.69	4.80
MASS HOUSING FINANCE	7.60	7.43	7.63	6.60	4.74	4.17	2.89	1.96	3.71
MASSPORT	9.13	8.99	9.30	7.93	5.71	5.22	3.11	2.12	4.83
MASS WATER RESOURCES	8.21	7.69	7.94	8.70	6.63	6.05	4.51	3.54	5.93
MAYNARD	7.70	7.59	7.83	6.41	5.15	4.88	1.75	1.46	2.67
MEDFORD	9.11	8.97	9.30	7.85	5.78	5.92	4.00	2.85	5.29
MELROSE	8.39	8.22	8.53	6.76	4.85	4.45	1.43	1.09	3.38
METHUEN	7.83	7.61	7.85	6.10	3.78	3.17	1.79	0.53	2.46
MIDDLESEX COUNTY	8.39	8.21	8.50	6.24	4.42	4.10	1.93	1.43	3.82
MILFORD	8.15	7.95	8.26	6.11	4.49	4.40	0.52	-0.31	1.54
MILTON	9.46	9.30	9.67	8.37	6.00	5.42	1.58	1.17	4.09
MINUTEMAN REGIONAL	9.59	9.46	9.83	8.68	6.32	5.71	1.39	1.17	4.32
MONTAGUE	9.18	9.01	9.36	8.66	6.26	5.66	1.46	1.13	4.27
NATICK	7.92	7.69	7.99	5.59	3.27	2.31	1.13	0.20	2.37
NEEDHAM	9.78	9.64	10.02	8.56	6.19	5.61	1.43	1.13	4.27
NEW BEDFORD	7.98	7.74	8.14	8.07	5.80	5.95	2.25	1.47	4.62
NEWBURYPORT	8.16	7.96	8.27	8.06	6.29	6.08	1.45	1.12	4.24
NEWTON	8.62	8.42	8.73	6.95	4.51	3.97	1.63	1.04	3.34
NORFOLK COUNTY	8.67	8.50	8.79	7.57	4.91	4.84	2.27	1.67	4.15
NORTH ADAMS	9.58	9.53	9.75	7.95	6.27	5.06	3.95	4.91	5.94
NORTH ATTLEBORO	8.47	8.36	8.57	6.88	5.13	5.09	3.46	2.28	4.04

(Continued)

INVESTMENT RETURN HISTORY

BOARD NAME	28 yr 2012	27 yr 2011	26 yr 2010	10 yr 2012	10 yr 2011	10 yr 2010	5 yr 2012	5 yr 2011	5 yr 2010
NORTHAMPTON	9.37	9.32	9.55	7.81	6.08	5.06	4.08	4.96	6.10
NORTHBRIDGE	9.43	9.26	9.62	8.71	6.32	5.70	1.53	1.20	4.31
NORWOOD	9.17	9.07	9.40	8.33	6.08	6.04	4.23	3.48	5.71
PEABODY	8.61	8.41	8.74	6.35	3.87	3.67	1.53	0.93	3.08
PITTSFIELD	8.13	7.93	8.20	6.28	3.64	3.16	1.57	0.50	2.59
PLYMOUTH	8.71	8.48	8.84	7.58	4.99	4.67	2.59	1.35	4.14
PLYMOUTH COUNTY	9.23	9.10	9.45	8.11	5.48	4.42	2.23	1.30	4.16
PRIM BOARD	9.65	9.50	9.87	8.61	6.21	5.61	1.43	1.07	4.21
QUINCY	8.35	8.19	8.50	7.05	5.12	4.97	2.58	1.45	3.92
READING	9.34	9.17	9.53	8.73	6.29	5.69	1.57	1.21	4.37
REVERE	8.34	8.14	8.46	8.31	6.00	5.44	1.41	1.00	4.06
SALEM	8.06	7.90	8.19	6.03	3.84	3.60	0.90	0.00	2.73
SAUGUS	9.28	9.11	9.46	8.65	6.26	5.66	1.54	1.20	4.33
SHREWSBURY	9.03	8.85	9.20	7.34	5.30	4.74	2.51	1.77	4.21
SOMERVILLE	8.93	8.70	8.95	8.17	6.21	5.65	4.04	3.44	5.27
SOUTHBRIDGE	7.95	7.77	8.08	5.26	3.40	3.18	0.01	-1.16	1.32
SPRINGFIELD	8.30	8.11	8.41	7.06	4.20	3.51	1.09	0.78	3.80
STATE	9.54	9.38	9.75	8.71	6.29	5.69	1.52	1.17	4.34
STATE TEACHERS	9.55	9.39	9.76	8.71	6.29	5.69	1.52	1.17	4.34
STONEHAM	8.81	8.63	8.97	8.68	6.28	5.69	1.55	1.21	4.35
SWAMPSCOTT	9.03	8.79	9.22	6.63	4.49	4.58	1.76	1.05	3.63
TAUNTON	9.63	9.54	9.91	7.47	5.73	5.70	3.41	2.72	5.14
WAKEFIELD	9.77	9.62	9.99	8.68	6.27	5.67	1.53	1.19	4.31
WALTHAM	8.62	8.42	8.69	6.95	4.43	3.80	1.57	0.67	3.00
WATERTOWN	8.25	8.08	8.42	7.08	4.72	4.57	2.04	1.07	4.12
WEBSTER	8.04	7.83	8.14	7.43	5.57	4.67	3.15	2.13	4.54
WELLESLEY	10.11	9.97	10.37	7.37	5.36	4.80	1.55	0.55	3.57
WEST SPRINGFIELD	8.02	7.92	8.08	6.44	4.70	4.41	2.77	2.54	3.42
WESTFIELD	8.59	8.36	8.68	7.21	4.31	3.96	3.41	1.94	4.14
WEYMOUTH	9.99	9.81	10.27	8.29	5.82	5.43	2.61	1.25	4.59
WINCHESTER	9.19	9.13	9.47	7.73	5.73	5.58	1.28	1.30	4.09
WINTHROP	8.65	8.50	8.84	7.78	5.14	4.98	1.39	1.23	4.21
WOBURN	9.41	9.25	9.59	8.16	5.63	5.56	3.24	2.64	5.17
WORCESTER	9.04	8.85	9.22	8.27	5.45	5.02	2.53	1.57	4.53
WORCESTER REGIONAL	8.10	7.91	8.23	5.73	3.42	2.94	1.08	0.21	2.74

Massachusetts Contributory Retirement Board Profiles

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, the Commission seeks to provide objective, comprehensive and accurate data for use by all interested parties.

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.

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.

Some 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 could mean the total appropriation increases 8.0% per year for 4 years and then the remaining unfunded liability is amortized on a 4.0% annual increasing basis until FY35. Twenty-two systems currently use a phase-in approach and both the percentage increase and the number of years before the amortization begins vary. Schedules described as "Total Increasing" mean the annual appropriation increases by the amount indicated for the entire schedule. Eleven systems have such a schedule.

In the actuarial area, PERAC approved 56 new funding schedules and completed 23 actuarial valuations in 2012. The valuations complemented the 53 valuations performed by private actuaries. The Actuarial Unit also completed the annual actuarial valuation of the Commonwealth's pension liability. Throughout the year, PERAC responded to legislative and gubernatorial requests for analysis of legislation and made presentations at several forums.

In addition to the information detailed in the Profiles, PERAC, as always, has been busy assisting the boards in other areas. In 2012, 714 medical panel requests were processed and 1,528 comprehensive medical evaluations were conducted. This led to the approval of 530 disability applications and 89 accidental death claims. Sixty-one medical re-examinations of disability retirees took place.

Such medical evaluations and examination resulted in 6 members returning to work saving \$200,564.16.

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 2012, PERAC analyzed 15,781 earnings reports, 4,027 retirees reported earnings and 179 earned in excess of the statutory limits. An additional 68 retirees failed to comply with the reporting requirement. This resulted in the recovery of \$1,334,175 in excess earnings and \$1,694,178 for non-compliance. In addition 34 retirees waived their allowance saving \$422,952.

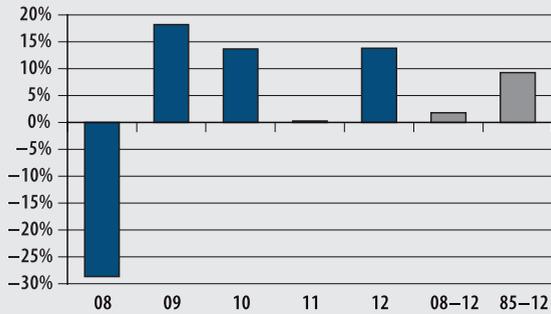
In 2012 PERAC conducted 35 audits of retirement systems. In addition, 18 follow-up audits were issued. The Commission awards Certificates of Achievement to those systems found by our auditors to be operating in an exemplary fashion. In 2012 we issued 13 Certificates of Achievement. As always, PERAC audit staff conducted annual seminars on the preparation of the Annual Statement, which included training regarding issues arising from the most recent pension reforms and the Attorney General's revised open meeting law regulations addressing remote participation

Composite Investment Profile

Commonwealth of Massachusetts

Public Employee Retirement Systems and Pension Reserves Investment Trust

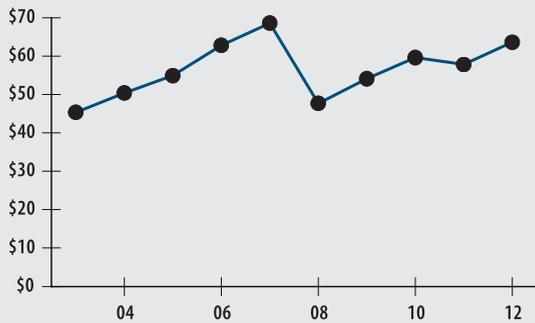
Investment Return (2008-2012, 5 Year and 28 Year Averages)



INVESTMENT

▶ 2012 Return	13.84%
▶ 2012 Target	N/A
▶ 2012 Market Value	63.6 B
▶ 2008-2012 (Annualized)	1.83%
▶ 1985-2012 (Annualized)	9.27%

Asset Growth (2003-2012) (Market Value in Billions)

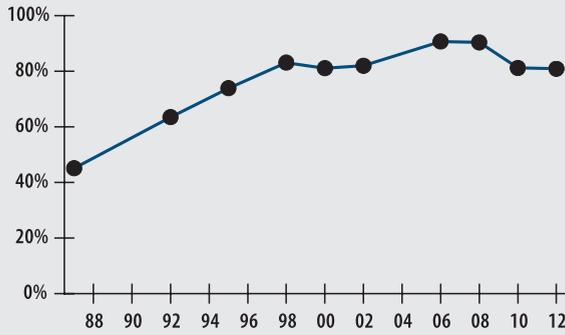


Boston Teachers

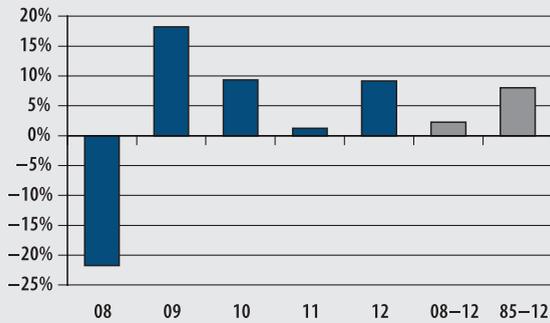
INVESTMENT

▶ 2012 Return	13.89%
▶ 2012 Target	8.00%
▶ 2012 Market Value	\$1.4 B

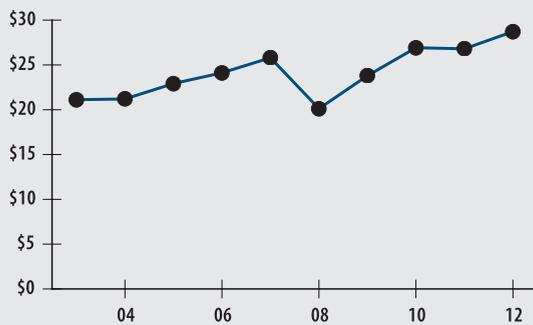
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

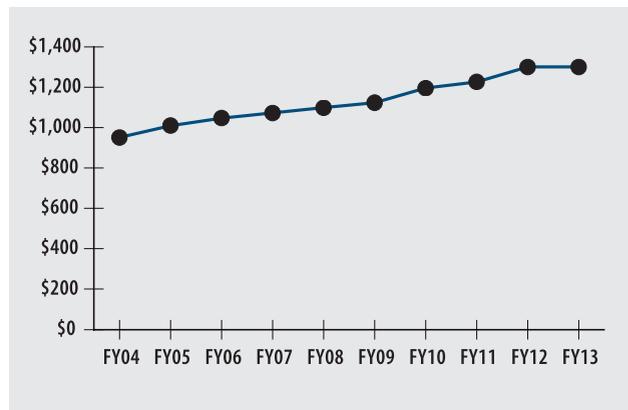
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.05%	8.01%	8.28%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.39%	4.13%	4.44%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.26%	2.01%	3.41%

ACTUARIAL

• Funded Ratio	80.9%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	7.50%
• Funding Schedule	1.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$6.8 M
• Total Pension Appropriation (Fiscal 2013)	\$1.3 M

	Active	Retired
• Number of Members	195	132
• Total Payroll/Benefit	\$6.1 M	\$1.6 M
• Average Salary/Benefit	\$31,100	\$12,300
• Average Age	49	73
• Average Service	13.0 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/23/12
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$2.25 M	\$4.13 M	\$5.56 M
Annual Disbursements	\$2.32 M	\$2.07 M	\$1.88 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	8
Number Who Reported Earnings	3
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	9.16%
▶ Assumed Rate of Return	7.50%
▶ 2012 Market Value	\$28.7 M
▶ 2008-2012 (Annualized)	2.26%
▶ 1985-2012 (Annualized)	8.05%

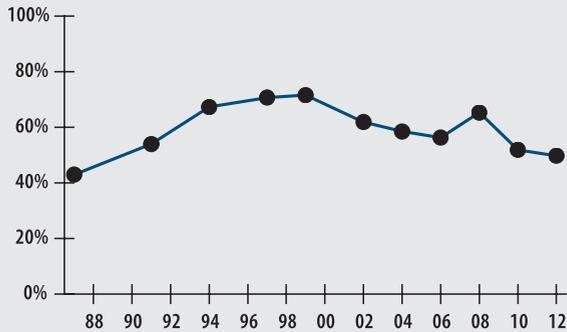
Amesbury

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

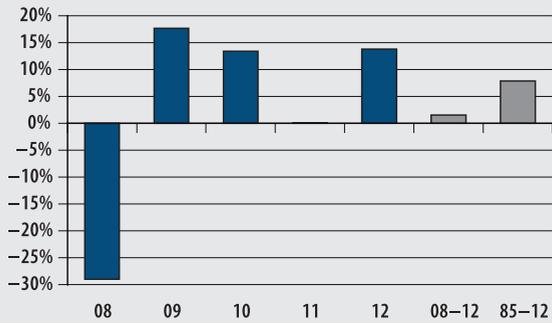
Board Members
Charles Benevento (Chairperson),
Michael Basque, Donna Cornoni,
Michael Cronin, Mary Marino

Board Administrator
Kevin Caira
Board Meeting
Last Thursday of each month at 1:30 pm

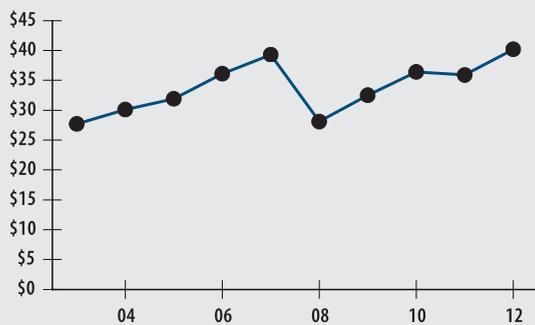
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

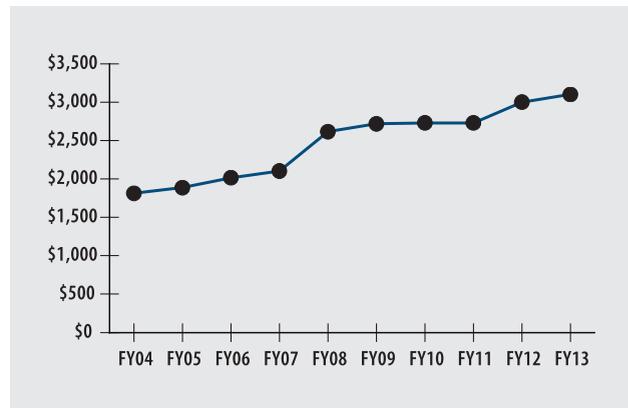
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.91%	7.70%	8.00%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.72%	4.37%	3.83%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.57%	0.72%	3.52%

ACTUARIAL

• Funded Ratio	49.8%
• Date of Last Valuation	01/12
• Actuary	Sherman Actuarial Services
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2036
• Unfunded Liability	\$39.1 M
• Total Pension Appropriation (Fiscal 2013)	\$3.1 M

	Active	Retired
• Number of Members	256	223
• Total Payroll/Benefit	\$13.5 M	\$4.1 M
• Average Salary/Benefit	\$52,600	\$18,500
• Average Age	NA	72
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

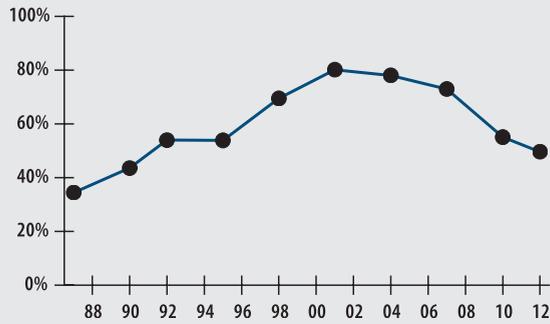
Date of Last Audit	06/01/12
Period Covered	01/01/09-12/31/11
	2011 2010 2009
Annual Receipts	\$4.48 M \$8.52 M \$8.76 M
Annual Disbursements	\$4.90 M \$4.69 M \$4.26 M

EARNED INCOME OF DISABILITY RETIREES (2011)

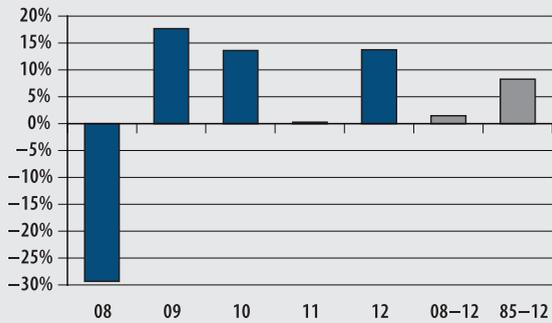
Number of Disability Retirees	16
Number Who Reported Earnings	6
Number of Excess Earners	1
Total Amount of Refund Due	\$6,241

▶ 2012 Return	13.86%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$40.2 M
▶ 2008-2012 (Annualized)	1.57%
▶ 1985-2012 (Annualized)	7.91%

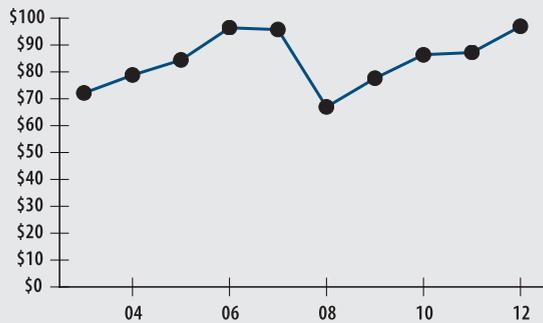
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

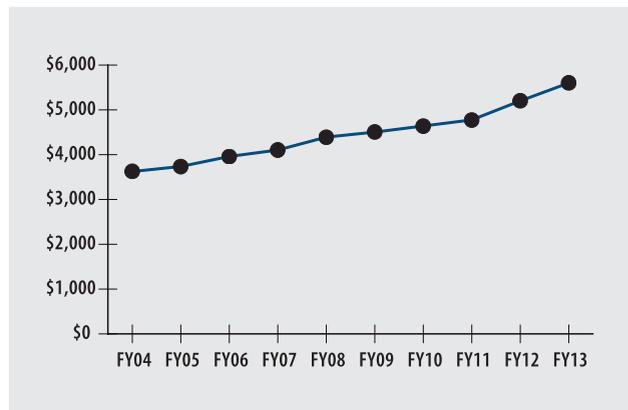
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.31%	8.11%	8.42%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.35%	2.91%	2.16%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.52%	-0.07%	2.58%

ACTUARIAL

• Funded Ratio	49.7%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	7.75%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2040
• Unfunded Liability	\$96.8 M
• Total Pension Appropriation (Fiscal 2013)	\$5.6 M

	Active	Retired
• Number of Members	701	396
• Total Payroll/Benefit	\$34.4 M	\$9.9 M
• Average Salary/Benefit	\$49,100	\$25,000
• Average Age	49	NA
• Average Service	12.1 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

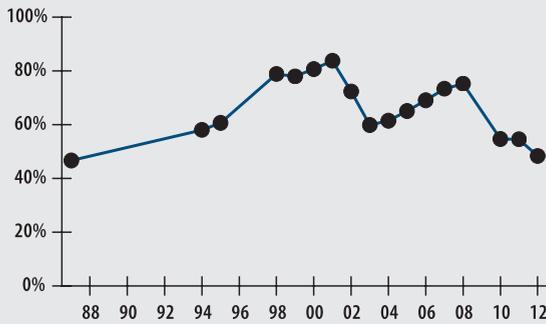
Date of Last Audit	12/18/12
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$8.84 M 2010 \$18.82 M 2009 \$19.89 M
Annual Disbursements	\$10.69 M \$10.06 M \$9.16 M

EARNED INCOME OF DISABILITY RETIREES (2011)

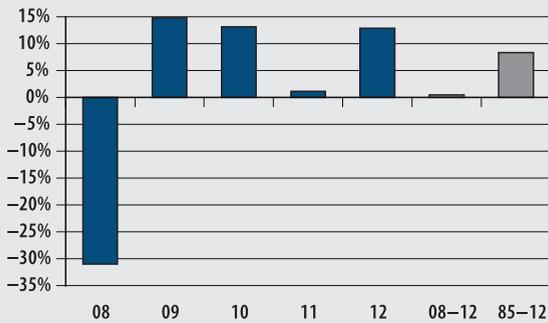
Number of Disability Retirees	39
Number Who Reported Earnings	10
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.76%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$96.9 M
▶ 2008-2012 (Annualized)	1.52%
▶ 1985-2012 (Annualized)	8.31%

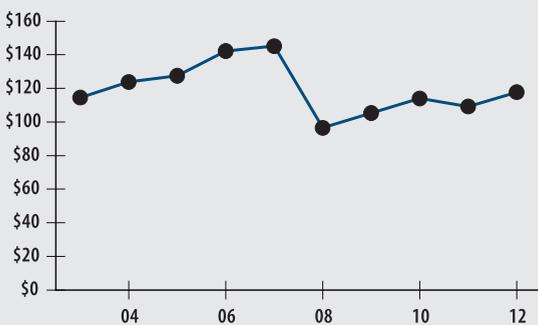
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

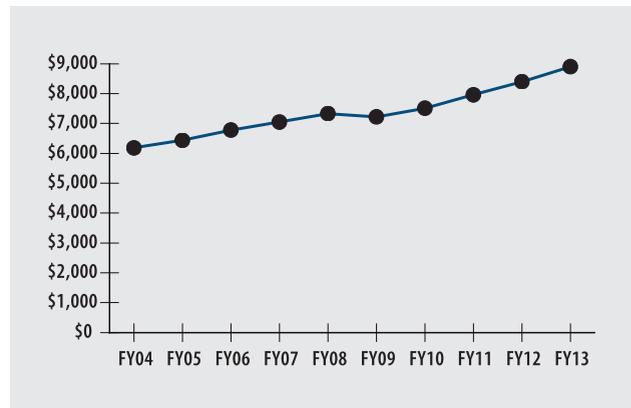
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.35%	8.19%	8.47%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.19%	3.50%	2.73%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.47%	-1.02%	1.44%

ACTUARIAL

• Funded Ratio	48.4%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.50%
• Funding Schedule	6.0% Total Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$118.5 M
• Total Pension Appropriation (Fiscal 2013)	\$8.9 M

	Active	Retired
• Number of Members	677	635
• Total Payroll/Benefit	\$28.6 M	\$15.5 M
• Average Salary/Benefit	\$42,300	\$24,500
• Average Age	48	74
• Average Service	11 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

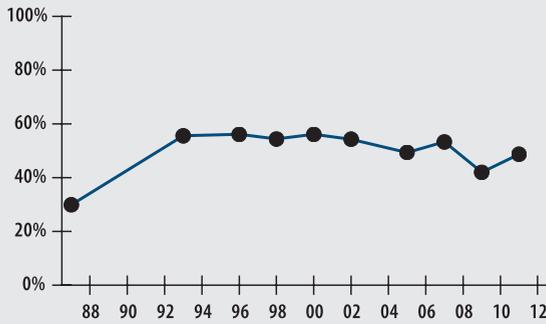
Date of Last Audit	05/24/12
Period Covered	01/01/09-12/31/10
Annual Receipts	2010 \$25.39 M
Annual Disbursements	2009 \$24.79 M
	2010 \$16.49 M
	2009 \$16.13 M

EARNED INCOME OF DISABILITY RETIREES (2011)

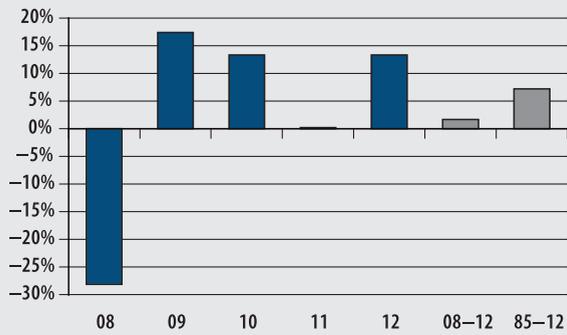
Number of Disability Retirees	90
Number Who Reported Earnings	20
Number of Excess Earners	1
Total Amount of Refund Due	\$639

▶ 2012 Return	12.89%
▶ Assumed Rate of Return	7.50%
▶ 2012 Market Value	\$117.7 M
▶ 2008-2012 (Annualized)	.47%
▶ 1985-2012 (Annualized)	8.35%

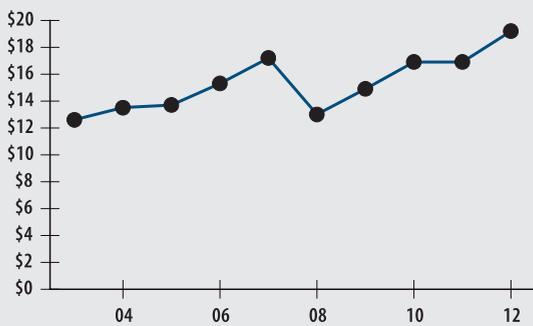
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

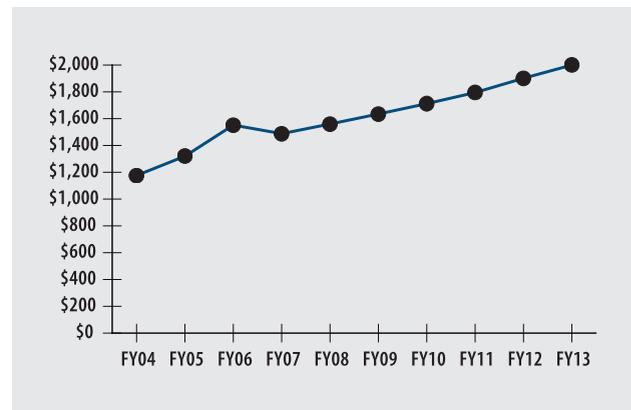
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.20%	6.98%	7.25%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.48%	3.61%	3.39%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.69%	1.05%	3.24%

ACTUARIAL

• Funded Ratio	48.7%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2040
• Unfunded Liability	\$20.0 M
• Total Pension Appropriation (Fiscal 2013)	\$2.0 M

	Active	Retired
• Number of Members	202	148
• Total Payroll/Benefit	\$7.0 M	\$2.1 M
• Average Salary/Benefit	\$34,400	\$14,300
• Average Age	48	73
• Average Service	11.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

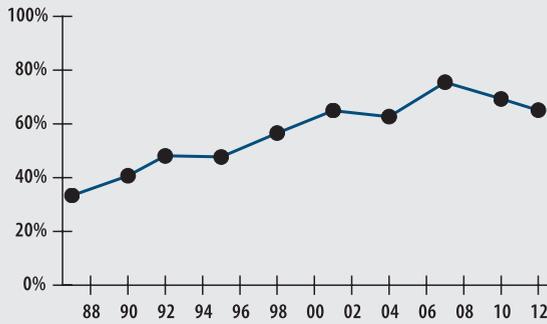
Date of Last Audit	05/03/12		
Period Covered	01/01/08-12/31/10		
	2010	2009	2008
Annual Receipts	\$4.62 M	\$5.03 M	\$(2.90 M)
Annual Disbursements	\$2.56 M	\$2.37 M	\$2.36 M

EARNED INCOME OF DISABILITY RETIREES (2011)

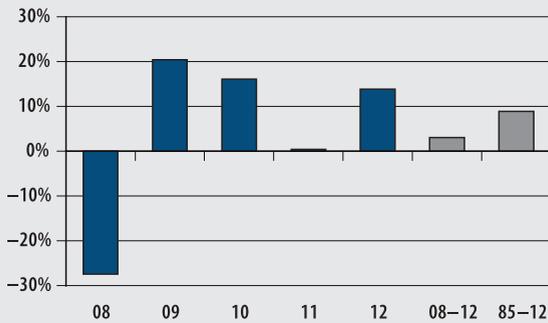
Number of Disability Retirees	19
Number Who Reported Earnings	9
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.39%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$19.2 M
▶ 2008-2012 (Annualized)	1.69%
▶ 1985-2012 (Annualized)	7.20%

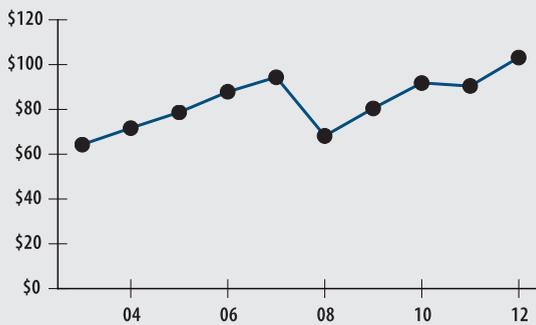
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

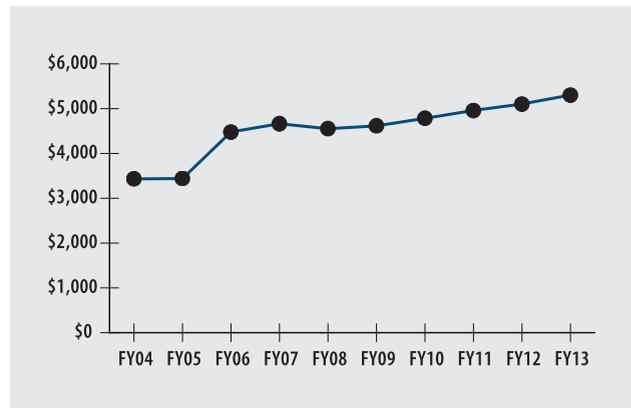
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.89%	8.71%	9.05%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.10%	6.13%	5.95%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.04%	2.00%	4.46%

ACTUARIAL

• Funded Ratio	65.1%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$53.0 M
• Total Pension Appropriation (Fiscal 2013)	\$5.3 M

	Active	Retired
• Number of Members	618	390
• Total Payroll/Benefit	\$27.6 M	\$8.5 M
• Average Salary/Benefit	\$44,600	\$21,800
• Average Age	48	74
• Average Service	12.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

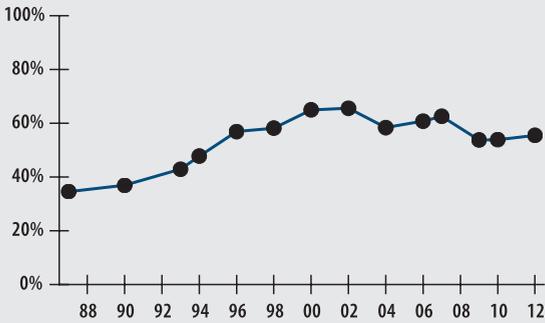
Date of Last Audit	02/01/12		
Period Covered	01/01/08-12/31/10		
Annual Receipts	2010 \$20.47 M	2009 \$21.46 M	2008 \$(18.07 M)
Annual Disbursements	\$8.93 M	\$8.75 M	\$8.41 M

EARNED INCOME OF DISABILITY RETIREES (2011)

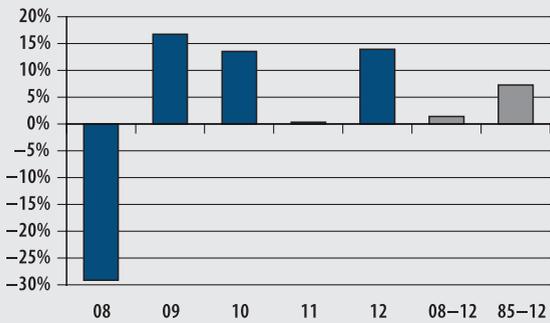
Number of Disability Retirees	39
Number Who Reported Earnings	9
Number of Excess Earners	1
Total Amount of Refund Due	\$6,804

▶ 2012 Return	13.90%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$103.1 M
▶ 2008-2012 (Annualized)	3.04%
▶ 1985-2012 (Annualized)	8.89%

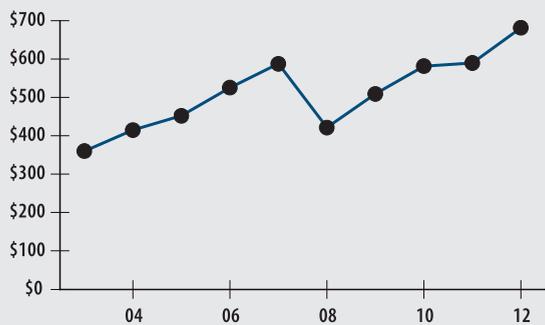
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

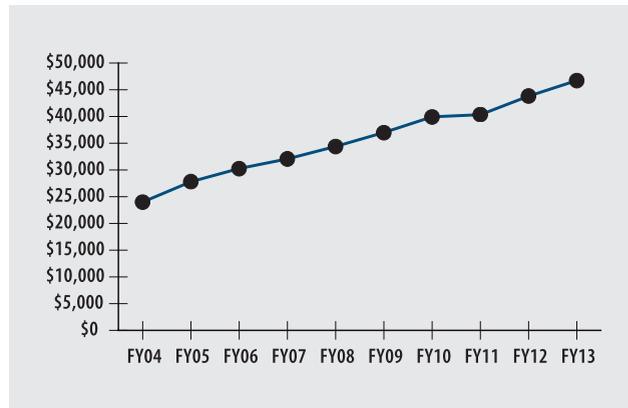
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.32%	7.08%	7.35%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.98%	4.51%	3.68%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.44%	0.59%	3.25%

ACTUARIAL

• Funded Ratio	55.5%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	7.88%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2038
• Unfunded Liability	\$522.4 M
• Total Pension Appropriation (Fiscal 2013)	\$46.7 M

	Active	Retired
• Number of Members	4,670	2,556
• Total Payroll/Benefit	\$239.4 M	\$54.3 M
• Average Salary/Benefit	\$51,300	\$21,200
• Average Age	49	NA
• Average Service	11.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	09/06/12
Period Covered	01/01/08-12/31/10

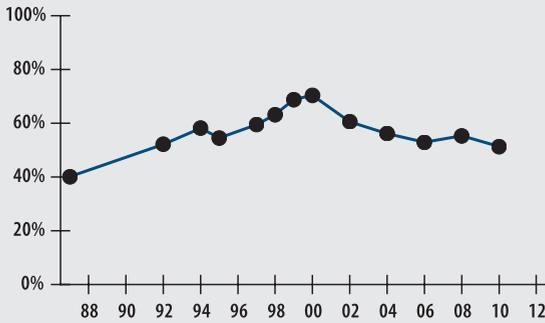
	2010	2009	2008
Annual Receipts	\$136.28 M	\$138.76 M	\$(106.00 M)
Annual Disbursements	\$68.73 M	\$53.28 M	\$50.11 M

EARNED INCOME OF DISABILITY RETIREES (2011)

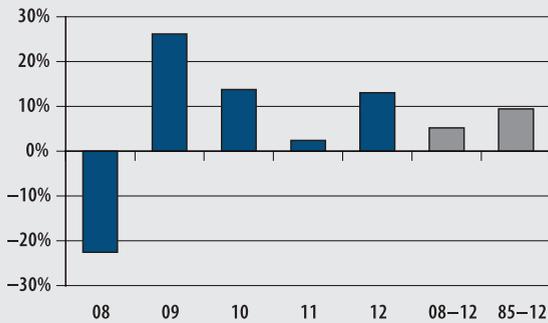
Number of Disability Retirees	335
Number Who Reported Earnings	109
Number of Excess Earners	4
Total Amount of Refund Due	\$21,853

▶ 2012 Return	13.94%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$681.3 M
▶ 2008-2012 (Annualized)	1.44%
▶ 1985-2012 (Annualized)	7.32%

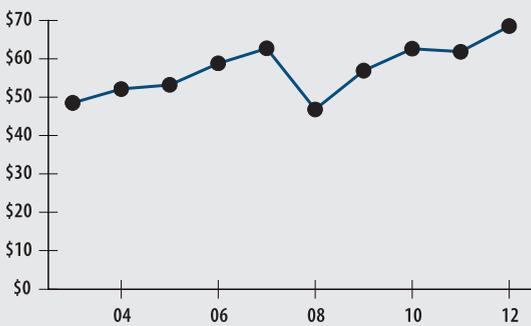
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

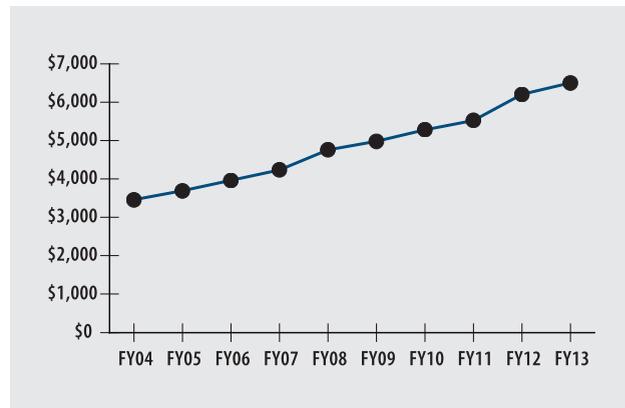
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.48%	9.35%	9.62%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
9.19%	7.12%	6.54%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
5.20%	4.76%	7.24%

ACTUARIAL

• Funded Ratio	51.3%
• Date of Last Valuation	01/10
• Actuary	Buck Consultants
• Assumed Rate of Return	7.75%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2027
• Unfunded Liability	\$60.2 M
• Total Pension Appropriation (Fiscal 2013)	\$6.5 M

	Active	Retired
• Number of Members	425	343
• Total Payroll/Benefit	\$19.4 M	\$8.4 M
• Average Salary/Benefit	\$45,500	\$24,400
• Average Age	47	NA
• Average Service	10.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

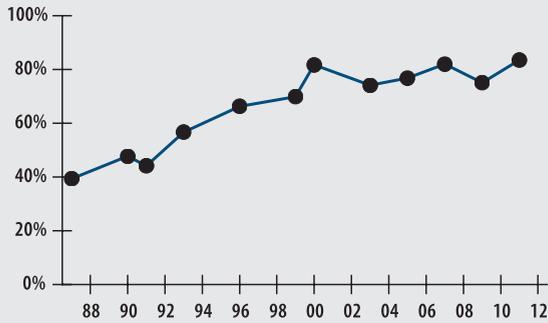
Date of Last Audit	08/11/10
Period Covered	01/01/07-12/31/09
	2009 2008 2007
Annual Receipts	\$19.61 M \$(6.60 M) \$13.02 M
Annual Disbursements	\$9.42 M \$9.20 M \$8.82 M

EARNED INCOME OF DISABILITY RETIREES (2011)

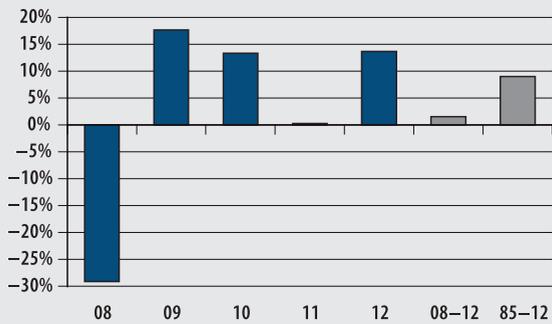
Number of Disability Retirees	43
Number Who Reported Earnings	17
Number of Excess Earners	2
Total Amount of Refund Due	\$10,598

▶ 2012 Return	13.06%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$68.5 M
▶ 2008-2012 (Annualized)	5.20%
▶ 1985-2012 (Annualized)	9.48%

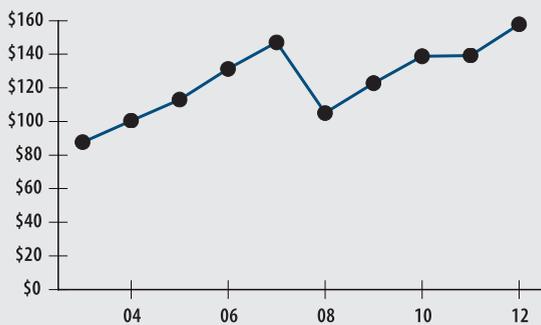
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

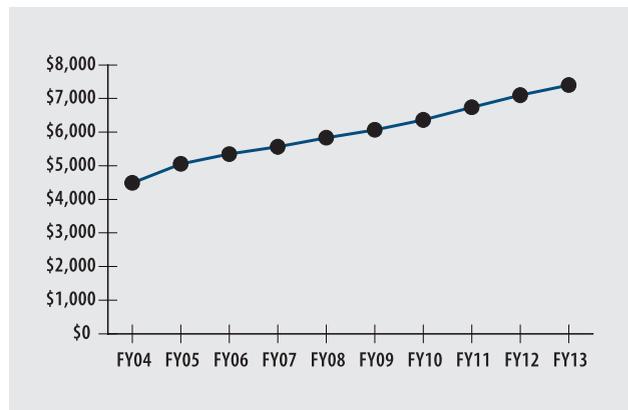
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.05%	8.88%	9.23%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.55%	6.20%	5.64%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.53%	1.22%	4.33%

ACTUARIAL

• Funded Ratio	83.5%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.7% Total Increasing
• Year Fully Funded	2022
• Unfunded Liability	\$29.7 M
• Total Pension Appropriation (Fiscal 2013)	\$7.4 M

	Active	Retired
• Number of Members	1,170	679
• Total Payroll/Benefit	\$38.5 M	\$8.6 M
• Average Salary/Benefit	\$32,900	\$12,600
• Average Age	50	74
• Average Service	11.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/18/10
Period Covered	01/01/07-12/31/09
Annual Receipts	2009 \$27.64 M 2008 \$(31.27 M) 2007 \$25.69 M
Annual Disbursements	\$10.56 M \$9.99 M \$9.94 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	24
Number Who Reported Earnings	5
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.67%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$157.8 M
▶ 2008-2012 (Annualized)	1.53%
▶ 1985-2012 (Annualized)	9.05%

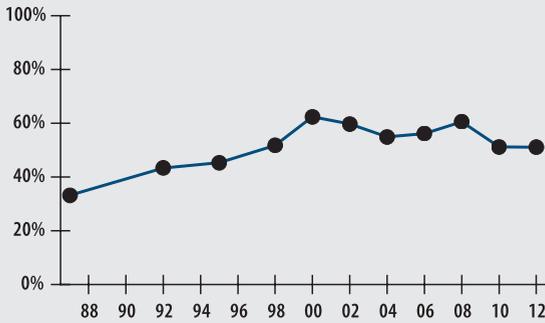
Beverly

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

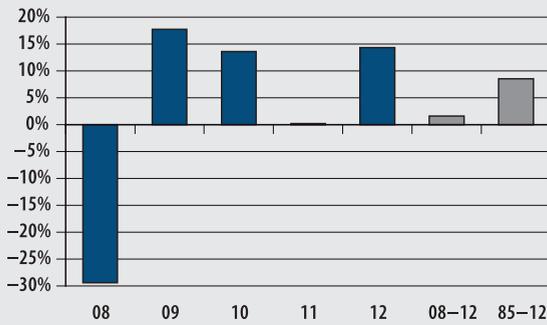
Board Members
John F. Lane, Jr. (Chairperson),
Carol Augulewicz, John Dunn, Clark Mitchell,
Richard Pierce

Board Administrator
Barbara Wells
Board Meeting
Last Thursday of each month

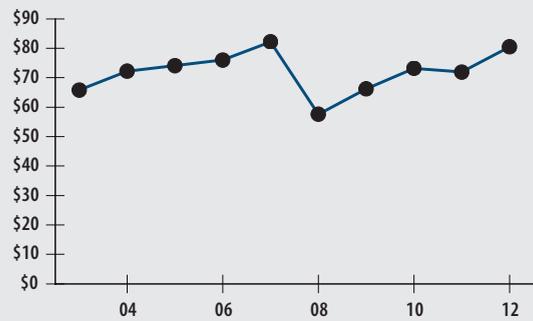
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

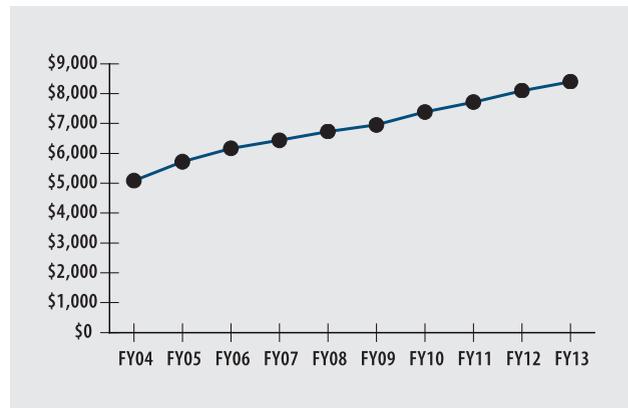
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.55%	8.34%	8.66%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.48%	4.65%	4.48%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.60%	0.68%	2.10%

ACTUARIAL

• Funded Ratio	51.1%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$78.9 M
• Total Pension Appropriation (Fiscal 2013)	\$8.4 M

	Active	Retired
• Number of Members	540	429
• Total Payroll/Benefit	\$24.0 M	\$10.3 M
• Average Salary/Benefit	\$44,500	\$24,100
• Average Age	49	73
• Average Service	11.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	11/29/11
Period Covered	01/01/08-12/31/10

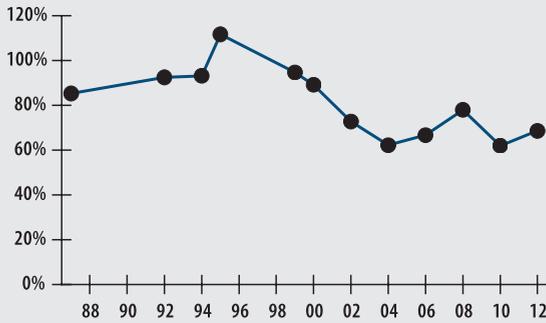
	2010	2009	2008
Annual Receipts	\$19.29 M	\$20.13 M	\$(14.26 M)
Annual Disbursements	\$11.98 M	\$11.11 M	\$10.71 M

EARNED INCOME OF DISABILITY RETIREES (2011)

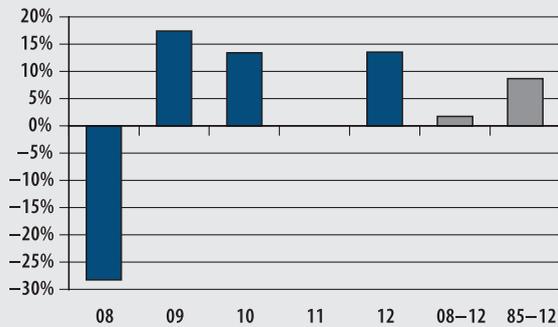
Number of Disability Retirees	62
Number Who Reported Earnings	10
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	14.37%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$80.5 M
▶ 2008-2012 (Annualized)	1.60%
▶ 1985-2012 (Annualized)	8.55%

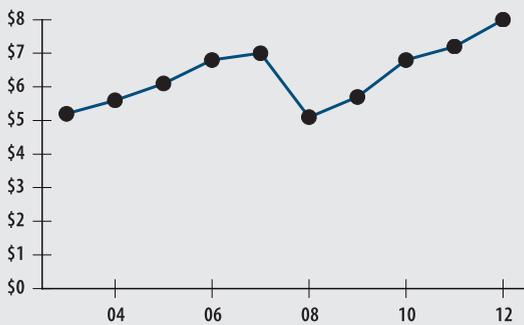
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

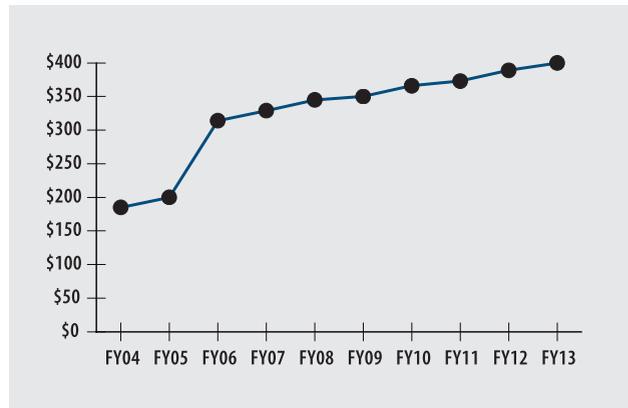
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.67%	8.49%	8.81%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.63%	6.29%	5.59%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.77%	1.48%	4.45%

ACTUARIAL

• Funded Ratio	68.6%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$3.6 M
• Total Pension Appropriation (Fiscal 2013)	\$405,000

	Active	Retired
• Number of Members	42	54
• Total Payroll/Benefit	\$1.8 M	\$0.8 M
• Average Salary/Benefit	\$43,600	\$15,100
• Average Age	51	78
• Average Service	12.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	02/16/11
Period Covered	01/01/07-12/31/09

	2009	2008	2007
Annual Receipts	\$1.44 M	\$(1.08 M)	\$1.02 M
Annual Disbursements	\$814,713	\$876,356	\$813,678

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	0
Number Who Reported Earnings	0
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.58%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$8.0 M
▶ 2008-2012 (Annualized)	1.77%
▶ 1985-2012 (Annualized)	8.67%

Boston

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

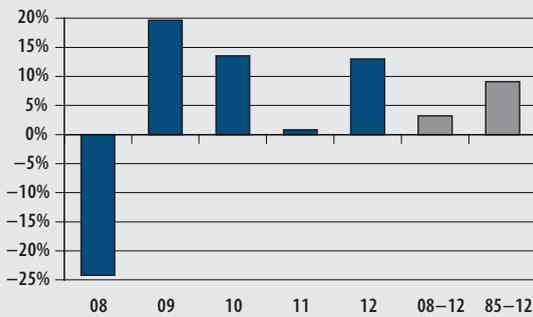
Board Members
Sean Kelly (Chairperson),
Diane Bissonette-Moes, Sally D. Glora,
Michael W. McLaughlin, Robert Smyth

Board Administrator
Daniel J. Greene, Esq.
Board Meeting
Monthly, date varies

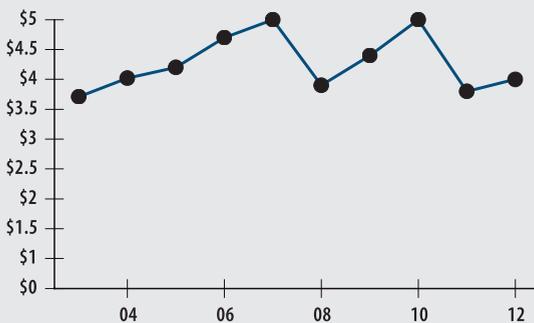
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Billions)



Investment Return History

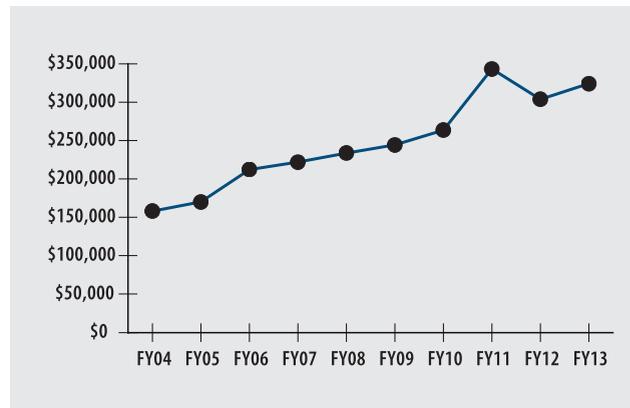
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.11%	8.97%	9.29%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.36%	5.95%	5.24%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.25%	2.77%	5.52%

ACTUARIAL

• Funded Ratio	61.4%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	7.75%
• Funding Schedule	9.25% Total Increasing
• Year Fully Funded	2025
• Unfunded Liability	\$3.0 B
• Total Pension Appropriation (Fiscal 2013)	\$324.0 M

	Active	Retired
• Number of Members	19,399	14,189
• Total Payroll/Benefit	\$1.3 B	\$461.6 M
• Average Salary/Benefit	\$67,100	\$32,500
• Average Age	46	73
• Average Service	13.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/24/12
Period Covered	01/01/08-12/31/10

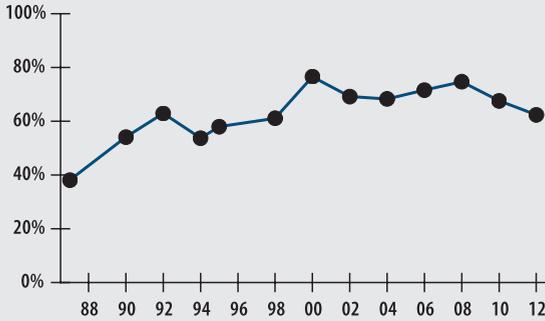
	2010	2009	2008
Annual Receipts	\$1.14 B	\$1.05 B	\$(778.02 M)
Annual Disbursements	\$518.18 M	\$455.54 M	\$441.44 M

EARNED INCOME OF DISABILITY RETIREES (2011)

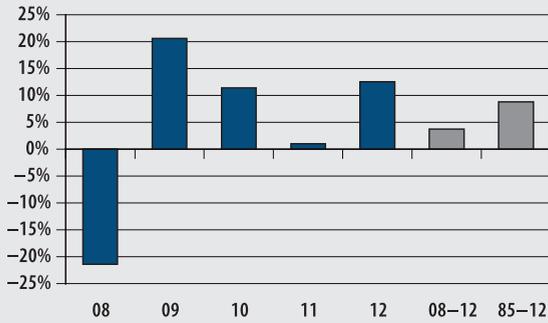
Number of Disability Retirees	1,837
Number Who Reported Earnings	301
Number of Excess Earners	28
Total Amount of Refund Due	\$169,539

▶ 2012 Return	13.00%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$3.5 B
▶ 2008-2012 (Annualized)	3.25%
▶ 1985-2012 (Annualized)	9.11%

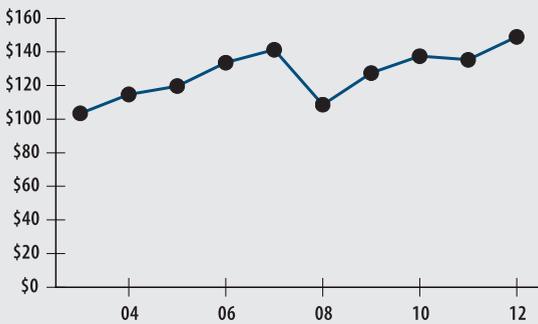
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

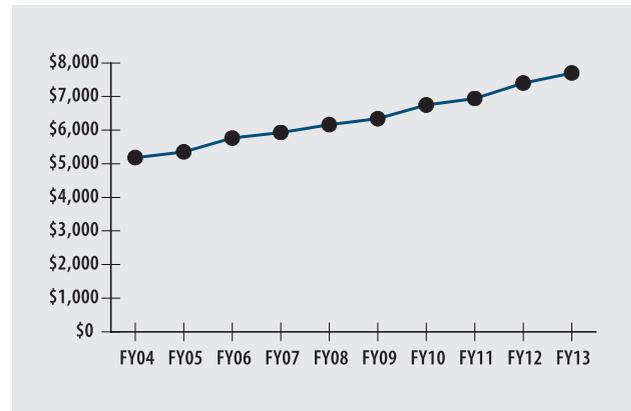
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.83%	8.70%	9.00%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.24%	6.01%	5.89%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.75%	2.87%	5.36%

ACTUARIAL

• Funded Ratio	62.4%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.88%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2033
• Unfunded Liability	\$83.0 M
• Total Pension Appropriation (Fiscal 2013)	\$7.7 M

	Active	Retired
• Number of Members	714	496
• Total Payroll/Benefit	\$36.5 M	\$12.9 M
• Average Salary/Benefit	\$51,100	\$26,100
• Average Age	50	74
• Average Service	12.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	05/24/12
Period Covered	01/01/09-12/31/11

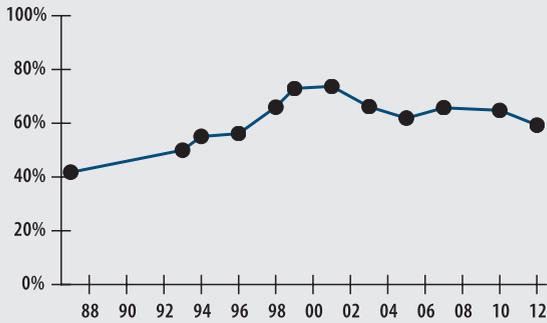
	2011	2010	2009
Annual Receipts	\$12.88 M	\$25.08 M	\$32.10 M
Annual Disbursements	\$15.14 M	\$14.92 M	\$13.35 M

EARNED INCOME OF DISABILITY RETIREES (2011)

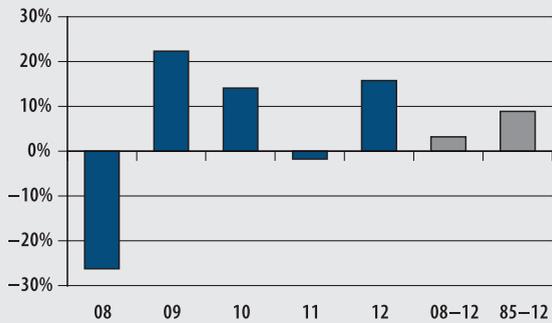
Number of Disability Retirees	63
Number Who Reported Earnings	17
Number of Excess Earners	1
Total Amount of Refund Due	\$1,920

▶ 2012 Return	12.56%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$149.0 M
▶ 2008-2012 (Annualized)	3.75%
▶ 1985-2012 (Annualized)	8.83%

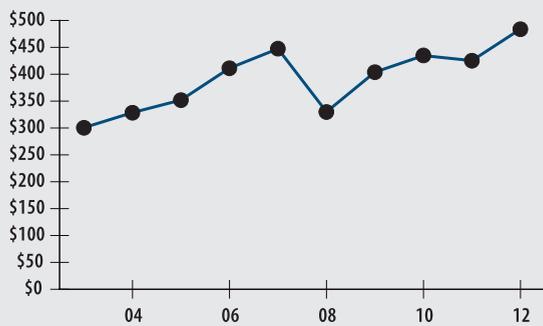
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

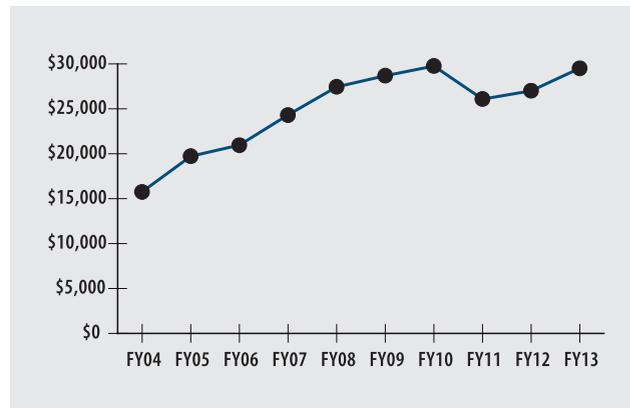
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.94%	8.69%	9.11%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.69%	5.06%	4.96%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.23%	1.72%	4.88%

ACTUARIAL

• Funded Ratio	59.3%
• Date of Last Valuation	01/12
• Actuary	Sherman Actuarial Services
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$316.2 M
• Total Pension Appropriation (Fiscal 2013)	\$29.5 M

	Active	Retired
• Number of Members	3,246	2,239
• Total Payroll/Benefit	\$137.2 M	\$43.1 M
• Average Salary/Benefit	\$42,300	\$19,300
• Average Age	NA	72
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	03/23/12
Period Covered	01/01/08-12/31/10

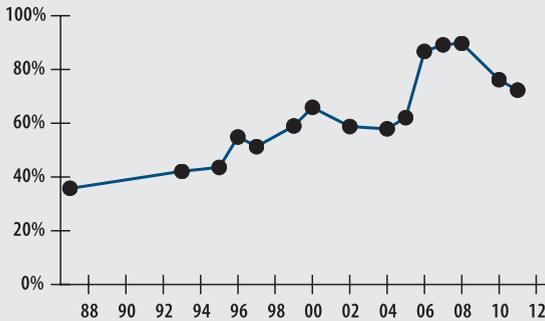
	2010	2009	2008
Annual Receipts	\$96.72 M	\$117.46 M	\$(74.62 M)
Annual Disbursements	\$65.31 M	\$43.89 M	\$41.89 M

EARNED INCOME OF DISABILITY RETIREES (2011)

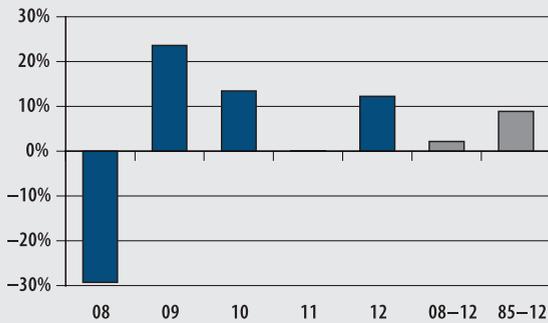
Number of Disability Retirees	253
Number Who Reported Earnings	72
Number of Excess Earners	5
Total Amount of Refund Due	\$54,157

▶ 2012 Return	15.79%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$483.5 M
▶ 2008-2012 (Annualized)	3.23%
▶ 1985-2012 (Annualized)	8.94%

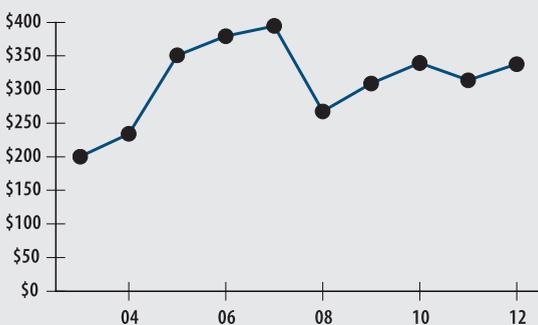
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

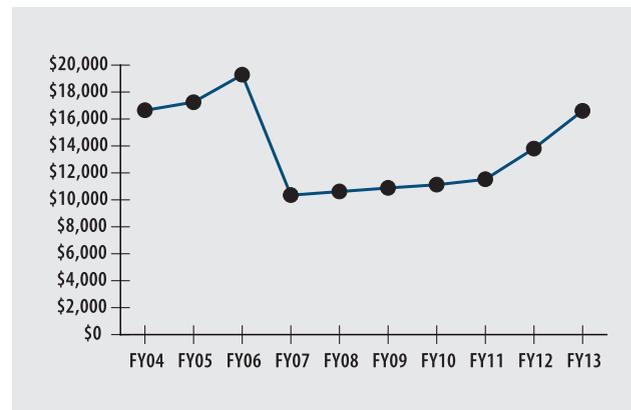
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.94%	8.82%	9.17%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.54%	5.09%	4.84%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.20%	1.22%	3.62%

ACTUARIAL

• Funded Ratio	72.3%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$136.6 M
• Total Pension Appropriation (Fiscal 2013)	\$16.6 M

	Active	Retired
• Number of Members	1,623	1,278
• Total Payroll/Benefit	\$74.4 M	\$33.6 M
• Average Salary/Benefit	\$45,900	\$26,300
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/04/13
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$22.47 M	\$60.47 M	\$76.31 M
Annual Disbursements	\$39.55 M	\$37.66 M	\$35.54 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	198
Number Who Reported Earnings	31
Number of Excess Earners	1
Total Amount of Refund Due	\$4,278

▶ 2012 Return	12.27%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$337.7 M
▶ 2008-2012 (Annualized)	2.20%
▶ 1985-2012 (Annualized)	8.94%

Brookline

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

Board Members

James J. Riley (Chairperson), Gary Altman,
 Stephan E. Cirillo, Michael F. DiPietro,
 Robert J. Ward

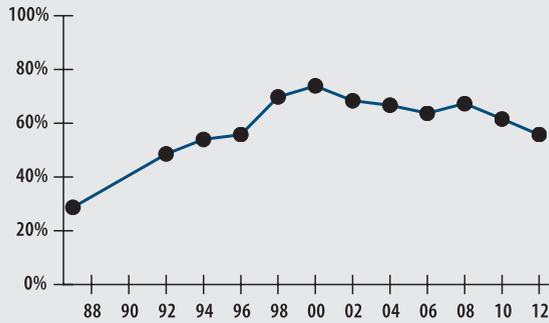
Board Administrator

Frank J. Zecha

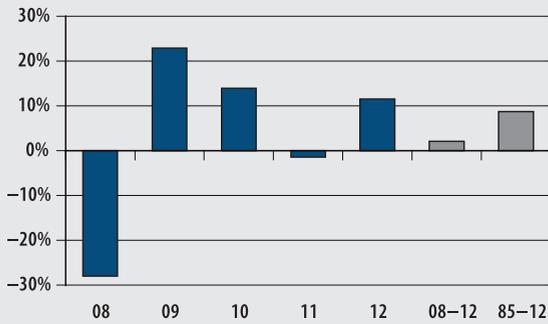
Board Meeting

Varies

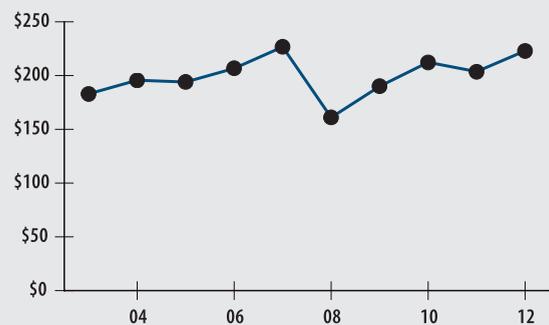
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

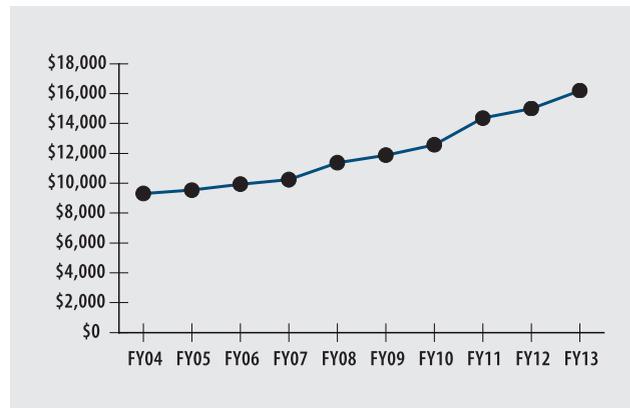
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.79%	8.68%	9.09%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.95%	5.26%	5.31%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.11%	1.25%	4.25%

ACTUARIAL

• Funded Ratio	55.8%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	7.75%
• Funding Schedule	5.9% Total Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$176.1 M
• Total Pension Appropriation (Fiscal 2013)	\$16.2 M

	Active	Retired
• Number of Members	1,188	875
• Total Payroll/Benefit	\$58.8 M	\$24.0 M
• Average Salary/Benefit	\$49,500	\$27,500
• Average Age	44	NA
• Average Service	11.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/12/12
Period Covered	01/01/09-12/31/11

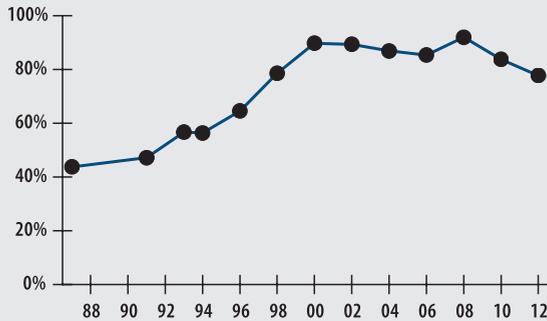
	2011	2010	2009
Annual Receipts	\$19.20 M	\$48.58 M	\$54.99 M
Annual Disbursements	\$26.77 M	\$25.86 M	\$24.96 M

EARNED INCOME OF DISABILITY RETIREES (2011)

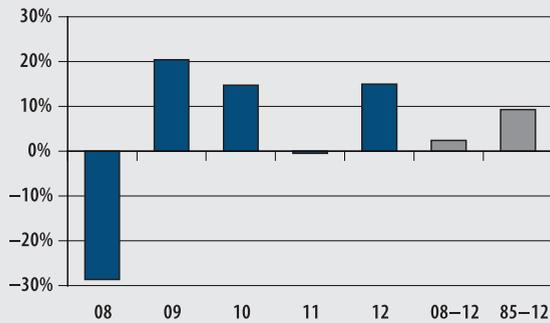
Number of Disability Retirees	179
Number Who Reported Earnings	41
Number of Excess Earners	1
Total Amount of Refund Due	\$5,787

▶ 2012 Return	11.59%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$222.8 M
▶ 2008-2012 (Annualized)	2.11%
▶ 1985-2012 (Annualized)	8.79%

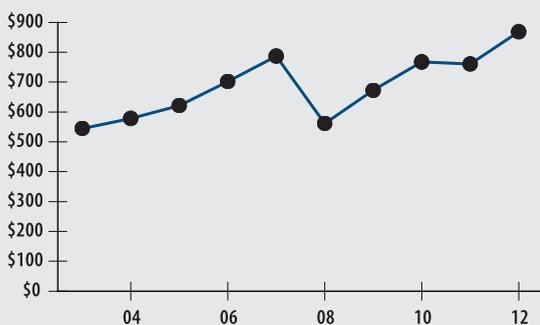
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

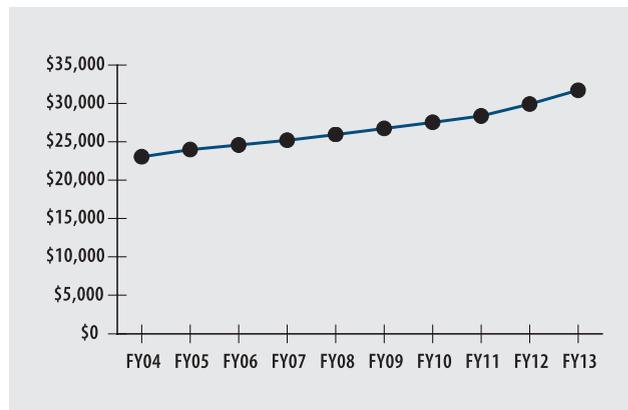
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.28%	9.08%	9.46%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.27%	5.05%	4.85%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.46%	1.90%	4.56%

ACTUARIAL

• Funded Ratio	77.8%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	5.85% Total Increasing
• Year Fully Funded	2029
• Unfunded Liability	\$237.8 M
• Total Pension Appropriation (Fiscal 2013)	\$31.7 M

	Active	Retired
• Number of Members	3,332	1,893
• Total Payroll/Benefit	\$217.1 M	\$52.2 M
• Average Salary/Benefit	\$65,200	\$27,600
• Average Age	47	NA
• Average Service	13.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

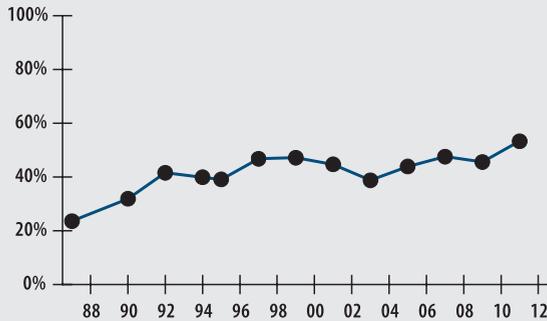
Date of Last Audit	05/10/11
Period Covered	01/01/08-12/31/09
	2009 2008
Annual Receipts	\$166.56 M \$(172.24 M)
Annual Disbursements	\$53.65 M \$51.66 M

EARNED INCOME OF DISABILITY RETIREES (2011)

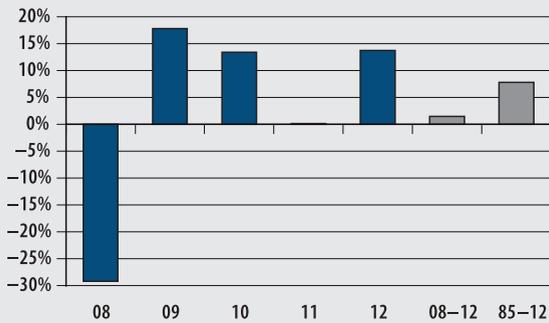
Number of Disability Retirees	256
Number Who Reported Earnings	47
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	14.99%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$868.4 M
▶ 2008-2012 (Annualized)	2.46%
▶ 1985-2012 (Annualized)	9.28%

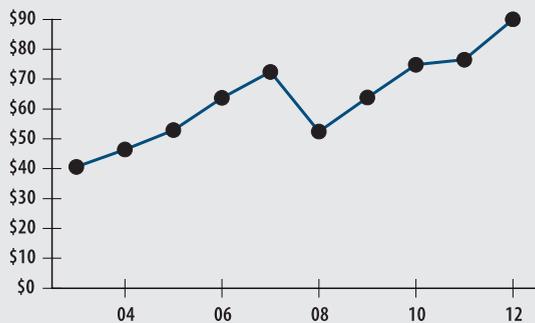
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

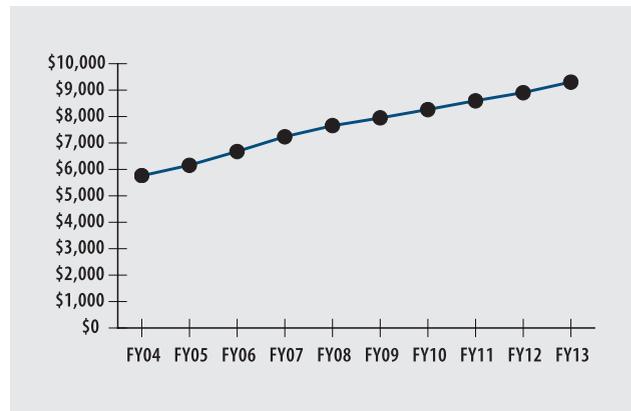
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.85%	7.64%	7.94%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.86%	5.37%	4.52%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.52%	1.22%	4.39%

ACTUARIAL

• Funded Ratio	53.3%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	2.95% Increasing
• Year Fully Funded	2028
• Unfunded Liability	\$73.5 M
• Total Pension Appropriation (Fiscal 2013)	\$9.3 M

	Active	Retired
• Number of Members	659	384
• Total Payroll/Benefit	\$29.8 M	\$8.3 M
• Average Salary/Benefit	\$45,100	\$21,600
• Average Age	46	76
• Average Service	11.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

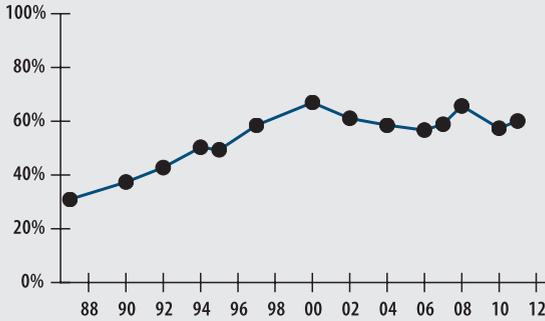
Date of Last Audit	07/26/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009 \$21.24 M
Annual Disbursements	2008 \$(10.47 M)
	\$9.87 M
	\$9.36 M

EARNED INCOME OF DISABILITY RETIREES (2011)

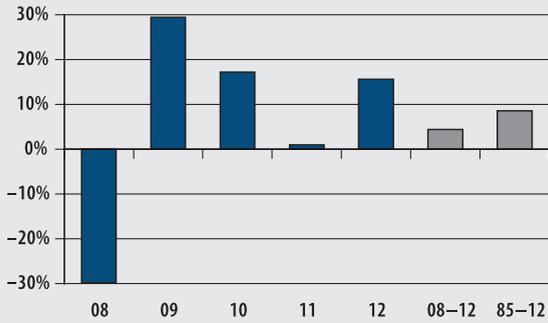
Number of Disability Retirees	76
Number Who Reported Earnings	16
Number of Excess Earners	1
Total Amount of Refund Due	\$16,227

▶ 2012 Return	13.77%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$90.0 M
▶ 2008-2012 (Annualized)	1.52%
▶ 1985-2012 (Annualized)	7.85%

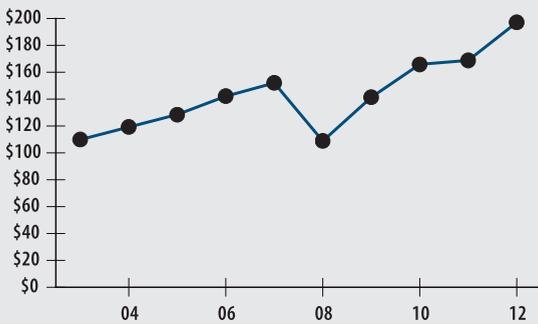
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

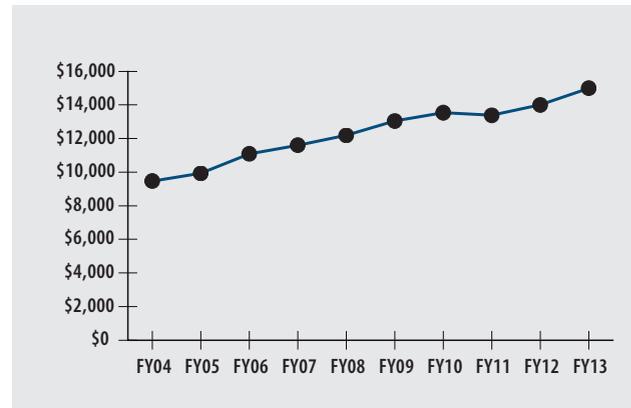
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.63%	8.37%	8.67%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.94%	5.26%	4.75%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.47%	2.84%	4.86%

ACTUARIAL

- Funded Ratio 60.1%
- Date of Last Valuation 01/11
- Actuary Buck Consultants
- Assumed Rate of Return 8.00%
- Funding Schedule 2.0% Increasing Phase-in
- Year Fully Funded 2026
- Unfunded Liability \$111.1 M
- Total Pension Appropriation (Fiscal 2013) \$15.0 M

	Active	Retired
• Number of Members	1,193	809
• Total Payroll/Benefit	\$50.2 M	\$16.4 M
• Average Salary/Benefit	\$42,100	\$20,300
• Average Age	NA	74
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

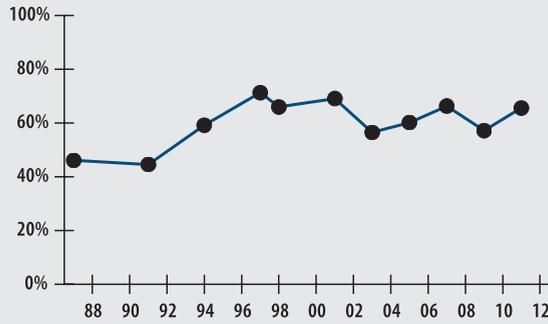
Date of Last Audit	09/08/11	
Period Covered	01/01/09-12/31/10	
	2010	2009
Annual Receipts	\$41.81 M	\$50.33 M
Annual Disbursements	\$17.86 M	\$17.02 M

EARNED INCOME OF DISABILITY RETIREES (2011)

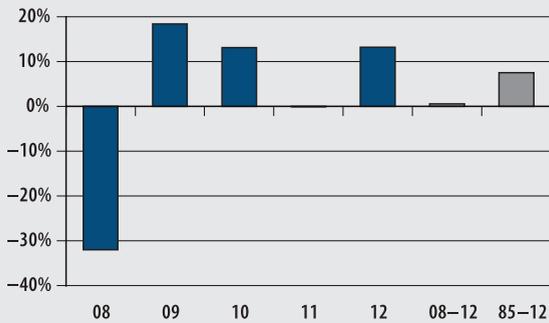
Number of Disability Retirees	94
Number Who Reported Earnings	31
Number of Excess Earners	1
Total Amount of Refund Due	\$3,269

▶ 2012 Return	15.67%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$197.0 M
▶ 2008-2012 (Annualized)	4.47%
▶ 1985-2012 (Annualized)	8.63%

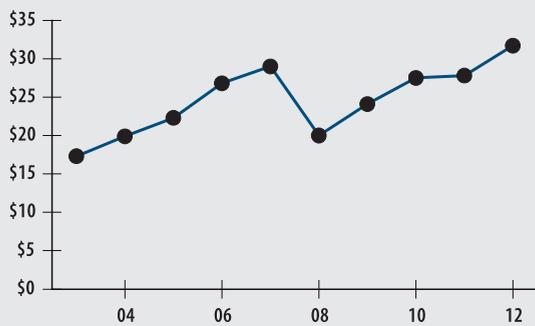
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

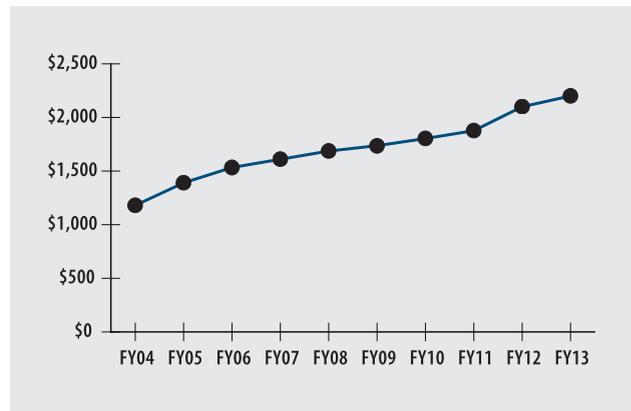
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.57%	7.37%	7.67%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.32%	4.81%	4.33%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.63%	-0.68%	2.69%

ACTUARIAL

• Funded Ratio	65.6%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2029
• Unfunded Liability	\$15.8 M
• Total Pension Appropriation (Fiscal 2013)	\$2.2 M

	Active	Retired
• Number of Members	239	103
• Total Payroll/Benefit	\$9.3 M	\$1.9 M
• Average Salary/Benefit	\$38,700	\$18,300
• Average Age	49	75
• Average Service	12.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/27/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$5.72 M	\$6.37 M	\$(6.70 M)
Annual Disbursements	\$2.34 M	\$2.32 M	\$2.25 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	12
Number Who Reported Earnings	3
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.21%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$31.7 M
▶ 2008-2012 (Annualized)	.63%
▶ 1985-2012 (Annualized)	7.57%

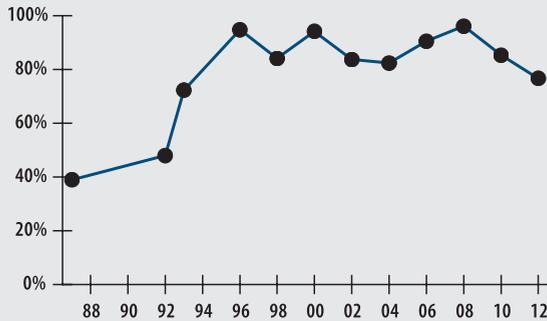
Concord

P. O. Box 535
22 Monument Square
Concord, MA 01742-0535
Phone 978-318-3068
Fax 978-318-3093

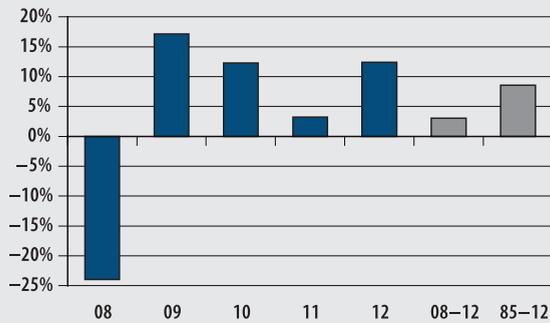
Board Members
Peter J. Fulton (Chairperson),
Gail Eagan-Henry, Anthony T. Logalbo,
Arnold Roth, Brian J. Whitney

Board Administrator
Linda Boucher
Board Meeting
Varies, usually the last Tuesday of
each month

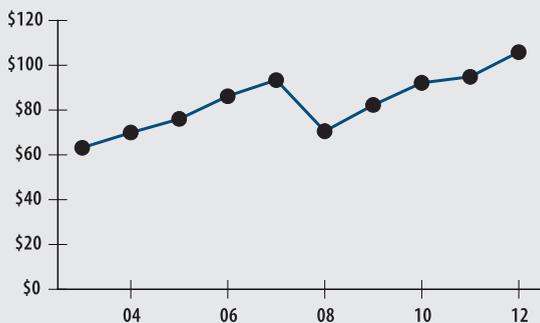
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

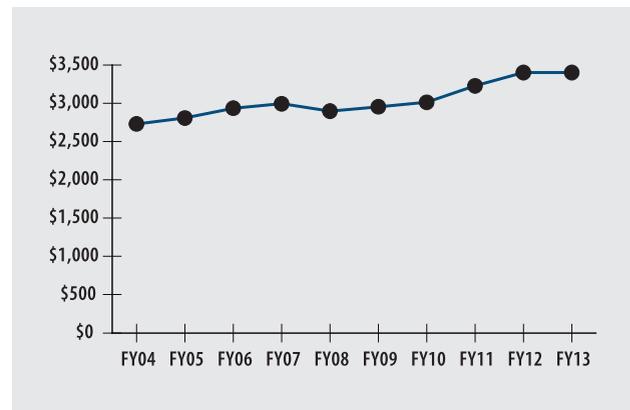
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.58%	8.44%	8.64%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.31%	5.42%	5.04%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.02%	2.34%	4.34%

ACTUARIAL

• Funded Ratio	76.7%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.50%
• Funding Schedule	2.0% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$28.8 M
• Total Pension Appropriation (Fiscal 2013)	\$3.4 M

	Active	Retired
• Number of Members	493	260
• Total Payroll/Benefit	\$25.2 M	\$5.4 M
• Average Salary/Benefit	\$51,200	\$20,700
• Average Age	49	74
• Average Service	12 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/20/12
Period Covered	01/01/09-12/31/11

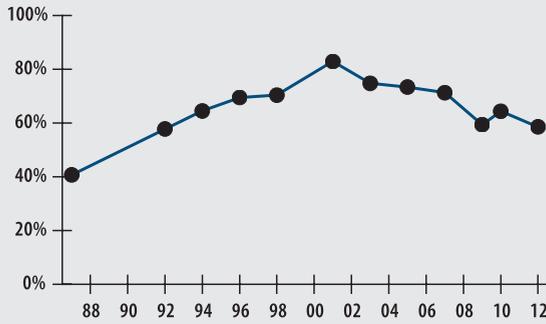
	2011	2010	2009
Annual Receipts	\$9.29 M	\$16.12 M	\$17.61 M
Annual Disbursements	\$6.66 M	\$6.27 M	\$5.09 M

EARNED INCOME OF DISABILITY RETIREES (2011)

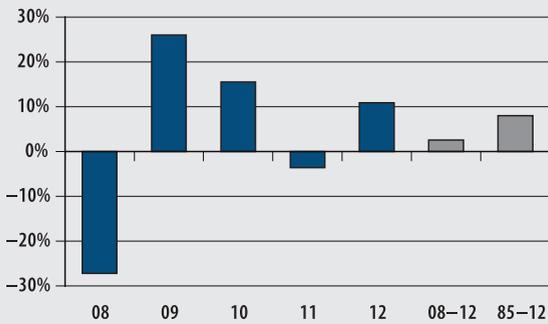
Number of Disability Retirees	25
Number Who Reported Earnings	8
Number of Excess Earners	1
Total Amount of Refund Due	\$24,787

▶ 2012 Return	12.39%
▶ Assumed Rate of Return	7.50%
▶ 2012 Market Value	\$105.8 M
▶ 2008-2012 (Annualized)	3.02%
▶ 1985-2012 (Annualized)	8.58%

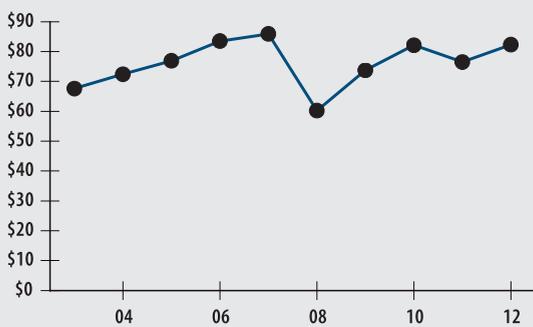
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

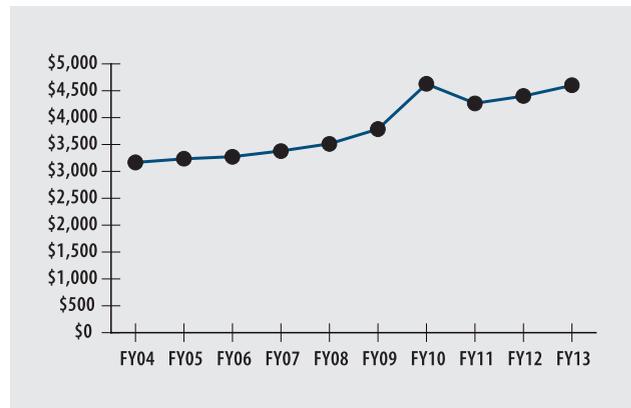
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.03%	7.93%	8.40%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.22%	4.27%	4.10%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.57%	1.59%	4.64%

ACTUARIAL

• Funded Ratio	58.6%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2036
• Unfunded Liability	\$59.3 M
• Total Pension Appropriation (Fiscal 2013)	\$4.6 M

	Active	Retired
• Number of Members	440	386
• Total Payroll/Benefit	\$22.9 M	\$8.4 M
• Average Salary/Benefit	\$52,100	\$21,800
• Average Age	48	75
• Average Service	13.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/17/13		
Period Covered	01/01/09-12/31/11		
Annual Receipts	2011 \$3.94 M	2010 \$18.09 M	2009 \$21.87 M
Annual Disbursements	\$9.74 M	\$9.24 M	\$8.78 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	24
Number Who Reported Earnings	8
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	10.93%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$82.3 M
▶ 2008-2012 (Annualized)	2.57%
▶ 1985-2012 (Annualized)	8.03%

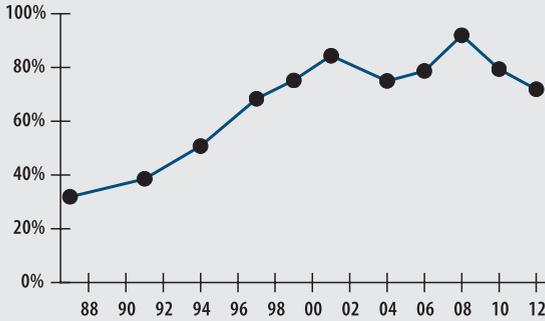
Board Members

John (Rosco) Maloney (Chairperson),
John W. Fontaine, Jr., Mariellen Murphy,
Thomas R. Rorrie, June Rosado

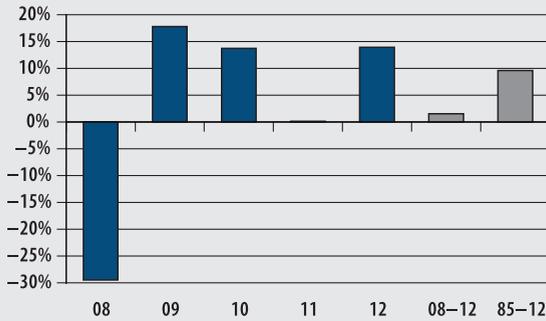
Board Administrator

Lynn M. Carley
Board Meeting
Third Wednesday of each month

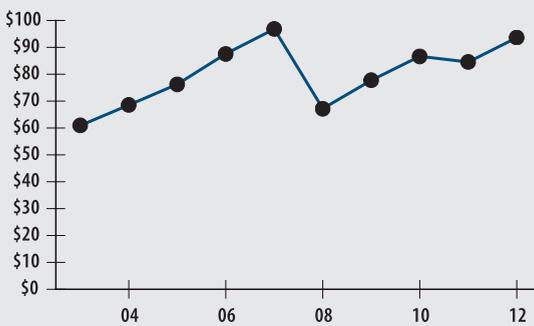
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

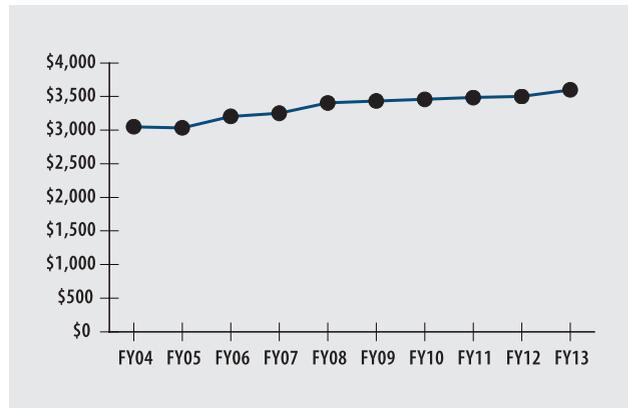
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.62%	9.46%	9.84%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.68%	6.26%	5.66%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.55%	1.22%	4.39%

ACTUARIAL

• Funded Ratio	71.9%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2034
• Unfunded Liability	\$33.8 M
• Total Pension Appropriation (Fiscal 2013)	\$3.6 M

	Active	Retired
• Number of Members	452	297
• Total Payroll/Benefit	\$20.7 M	\$7.0 M
• Average Salary/Benefit	\$45,900	\$23,500
• Average Age	47	74
• Average Service	11.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/06/13
Period Covered	01/01/09-12/31/11

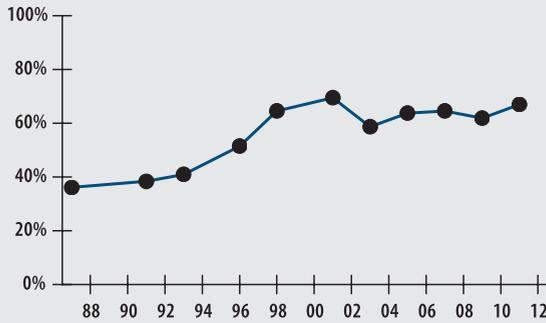
	2011	2010	2009
Annual Receipts	\$6.01 M	\$16.53 M	\$22.88 M
Annual Disbursements	\$8.01 M	\$7.62 M	\$7.00 M

EARNED INCOME OF DISABILITY RETIREES (2011)

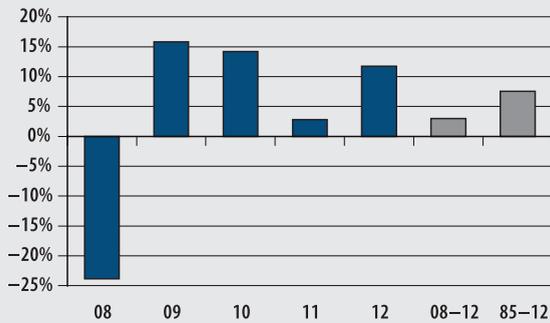
Number of Disability Retirees	50
Number Who Reported Earnings	7
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.95%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$93.6 M
▶ 2008-2012 (Annualized)	1.55%
▶ 1985-2012 (Annualized)	9.62%

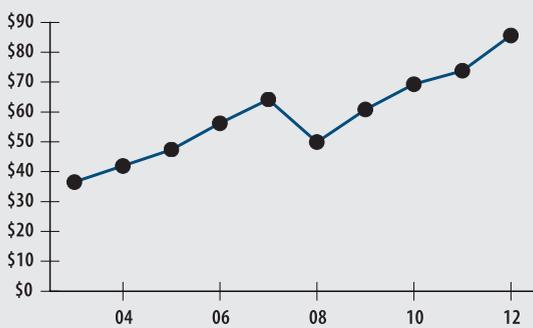
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

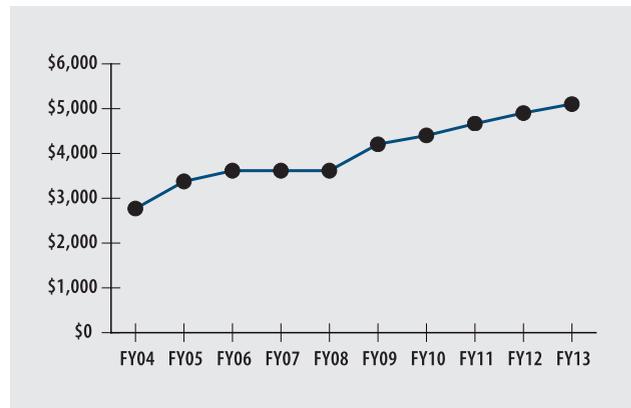
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.52%	7.36%	7.54%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.36%	5.52%	4.58%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.97%	2.91%	5.17%

ACTUARIAL

• Funded Ratio	67.0%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2026
• Unfunded Liability	\$36.4 M
• Total Pension Appropriation (Fiscal 2013)	\$5.1 M

	Active	Retired
• Number of Members	602	236
• Total Payroll/Benefit	\$29.1 M	\$4.6 M
• Average Salary/Benefit	\$48,400	\$19,400
• Average Age	49	NA
• Average Service	10.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	02/13/13
Period Covered	01/01/08-12/31/10

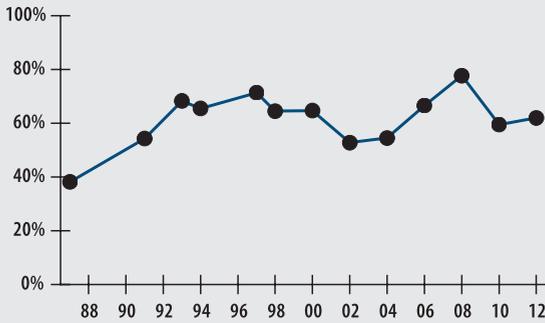
	2010	2009	2008
Annual Receipts	\$16.17 M	\$16.14 M	\$7.34 M
Annual Disbursements	\$7.15 M	\$5.11 M	\$5.23 M

EARNED INCOME OF DISABILITY RETIREES (2011)

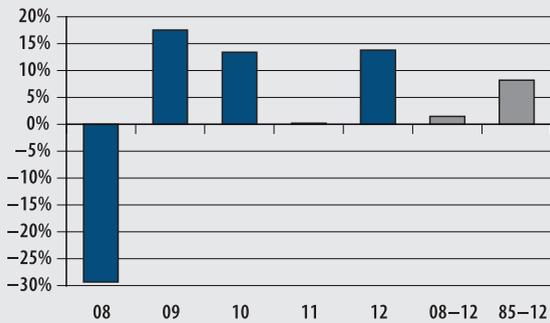
Number of Disability Retirees	22
Number Who Reported Earnings	10
Number of Excess Earners	2
Total Amount of Refund Due	\$16,737

▶ 2012 Return	11.75%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$85.6 M
▶ 2008-2012 (Annualized)	2.97%
▶ 1985-2012 (Annualized)	7.52%

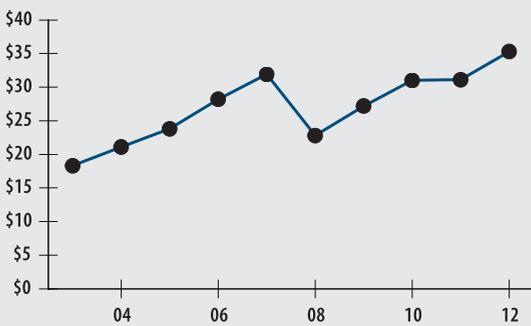
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

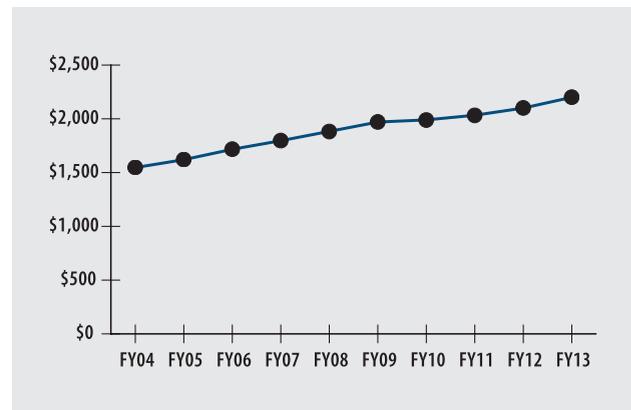
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.21%	8.00%	8.31%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.66%	6.29%	5.70%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.47%	1.15%	4.29%

ACTUARIAL

• Funded Ratio	62.0%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2033
• Unfunded Liability	\$19.0 M
• Total Pension Appropriation (Fiscal 2013)	\$2.2 M

	Active	Retired
• Number of Members	221	143
• Total Payroll/Benefit	\$8.9 M	\$2.6 M
• Average Salary/Benefit	\$40,500	\$17,900
• Average Age	48	71
• Average Service	12.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

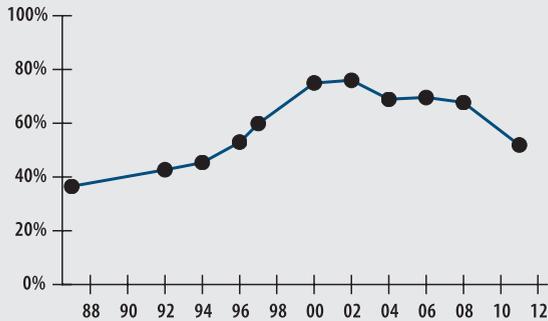
Date of Last Audit	11/30/12		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$3.12 M	\$6.72 M	\$6.97 M
Annual Disbursements	\$3.05 M	\$2.90 M	\$2.64 M

EARNED INCOME OF DISABILITY RETIREES (2011)

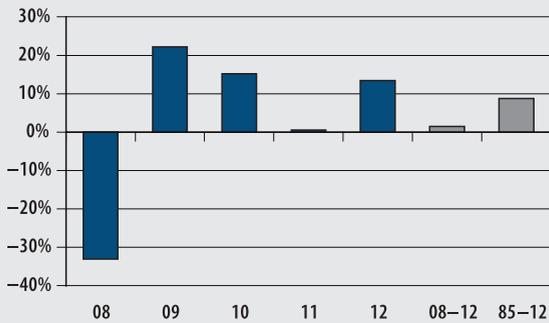
Number of Disability Retirees	16
Number Who Reported Earnings	4
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.85%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$35.3 M
▶ 2008-2012 (Annualized)	1.47%
▶ 1985-2012 (Annualized)	8.21%

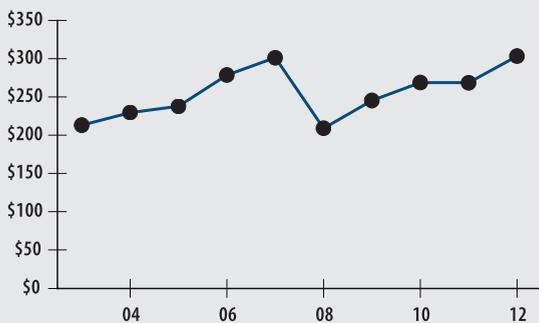
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

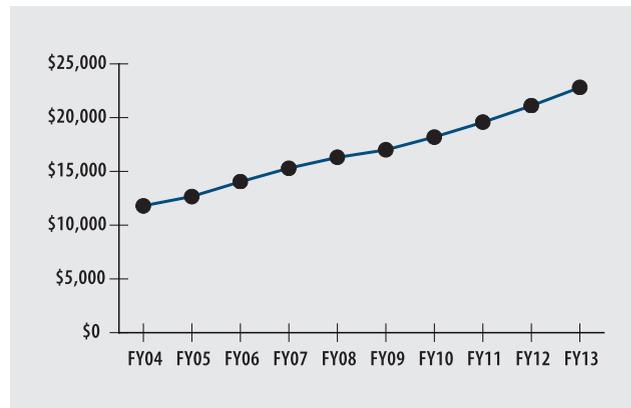
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.72%	8.54%	8.86%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.64%	4.38%	4.15%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.45%	0.80%	3.69%

ACTUARIAL

• Funded Ratio	51.9%
• Date of Last Valuation	01/11
• Actuary	Segal
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2035
• Unfunded Liability	\$257.8 M
• Total Pension Appropriation (Fiscal 2013)	\$22.8 M

	Active	Retired
• Number of Members	3,013	1,624
• Total Payroll/Benefit	\$119.7 M	\$29.7 M
• Average Salary/Benefit	\$39,700	\$18,300
• Average Age	48	NA
• Average Service	10.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

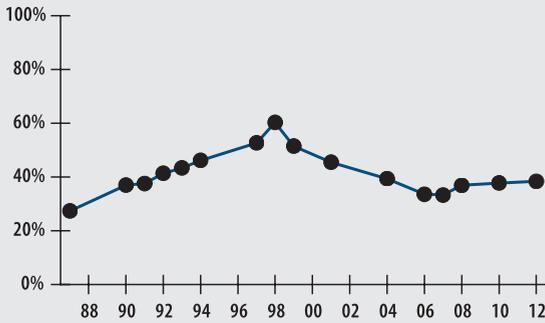
Date of Last Audit	06/13/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$38.89 M
Annual Disbursements	2010 \$62.98 M
	2009 \$70.61 M
	\$38.09 M
	\$36.10 M
	\$34.34 M

EARNED INCOME OF DISABILITY RETIREES (2011)

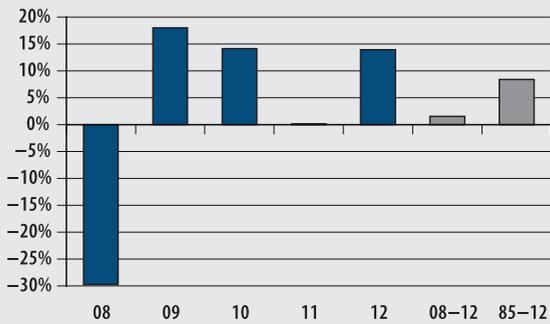
Number of Disability Retirees	121
Number Who Reported Earnings	38
Number of Excess Earners	4
Total Amount of Refund Due	\$24,582

▶ 2012 Return	13.46%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$303.2 M
▶ 2008-2012 (Annualized)	1.45%
▶ 1985-2012 (Annualized)	8.72%

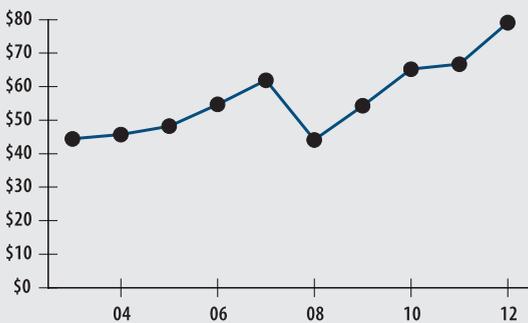
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

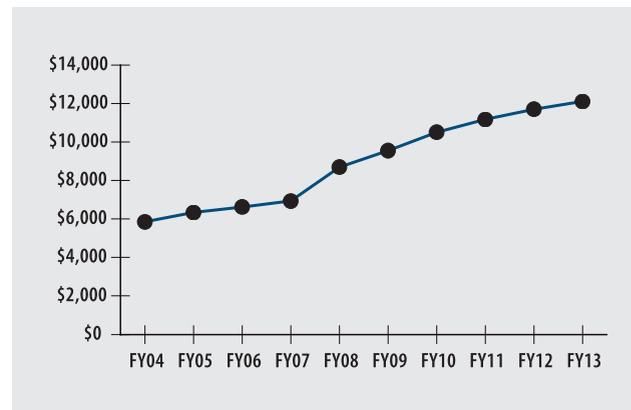
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.40%	8.19%	8.51%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.46%	4.70%	4.27%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.57%	1.19%	4.32%

ACTUARIAL

• Funded Ratio	38.4%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	3.7% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$115.7 M
• Total Pension Appropriation (Fiscal 2013)	\$12.1 M

	Active	Retired
• Number of Members	649	544
• Total Payroll/Benefit	\$31.6 M	\$11.4 M
• Average Salary/Benefit	\$48,600	\$21,000
• Average Age	47	76
• Average Service	11.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

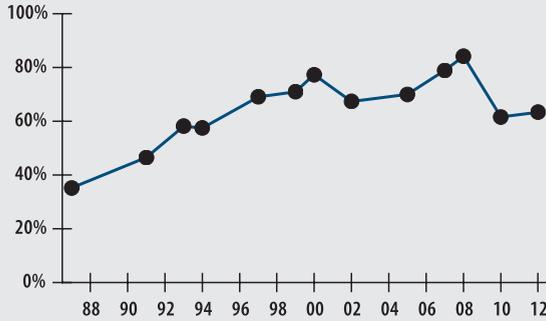
Date of Last Audit	02/08/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009 \$22.27 M 2008 \$(5.59 M)
Annual Disbursements	\$11.99 M \$12.27 M

EARNED INCOME OF DISABILITY RETIREES (2011)

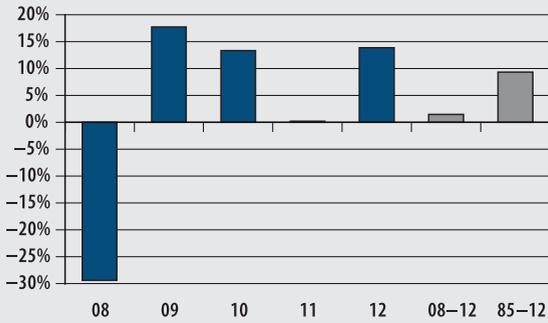
Number of Disability Retirees	82
Number Who Reported Earnings	22
Number of Excess Earners	1
Total Amount of Refund Due	\$26,310

▶ 2012 Return	13.99%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$79.1 M
▶ 2008-2012 (Annualized)	1.57%
▶ 1985-2012 (Annualized)	8.40%

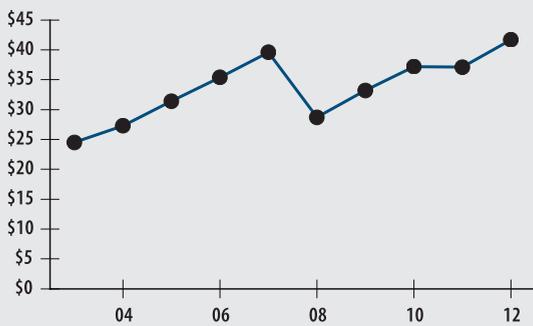
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

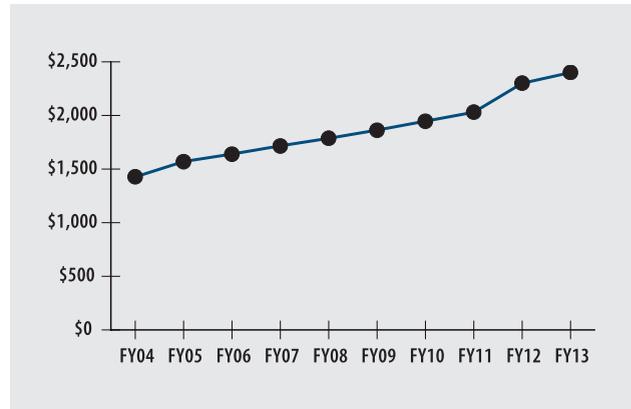
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.38%	9.22%	9.58%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.57%	6.21%	5.62%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.47%	1.12%	4.23%

ACTUARIAL

• Funded Ratio	63.4%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$21.5 M
• Total Pension Appropriation (Fiscal 2013)	\$2.4 M

	Active	Retired
• Number of Members	255	175
• Total Payroll/Benefit	\$10.4 M	\$3.1 M
• Average Salary/Benefit	\$40,900	\$17,600
• Average Age	48	72
• Average Service	13 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	11/09/10		
Period Covered	01/01/07-12/31/09		
	2009	2008	2007
Annual Receipts	\$7.95 M	\$(8.64 M)	\$7.31 M
Annual Disbursements	\$3.42 M	\$3.13 M	\$3.13 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	23
Number Who Reported Earnings	9
Number of Excess Earners	1
Total Amount of Refund Due	\$1,308

▶ 2012 Return	13.89%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$41.7 M
▶ 2008-2012 (Annualized)	1.47%
▶ 1985-2012 (Annualized)	9.38%

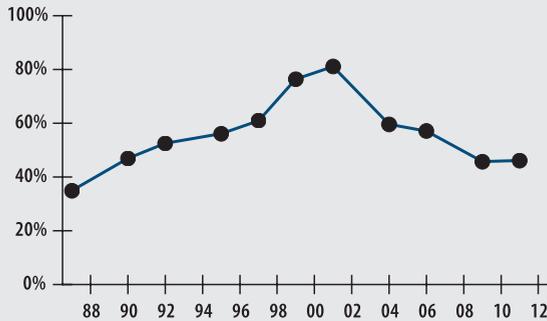
Fall River

30 Third Street
Suite 301
Fall River, MA 02720
Phone 508-646-9120
Fax 508-646-9123

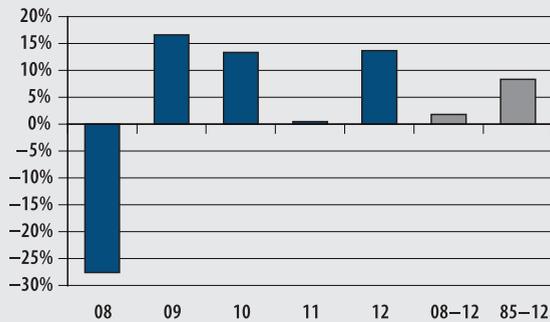
Board Members
Joseph Marshall (Chairperson),
Michael J. Coogan, Krishan Gupta,
David Machado, Arthur Viana

Board Administrator
Christine Tetreault
Board Meeting
Varies

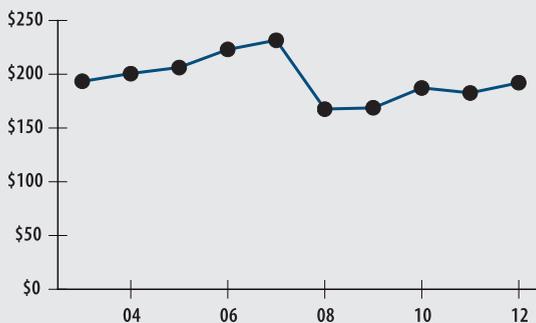
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

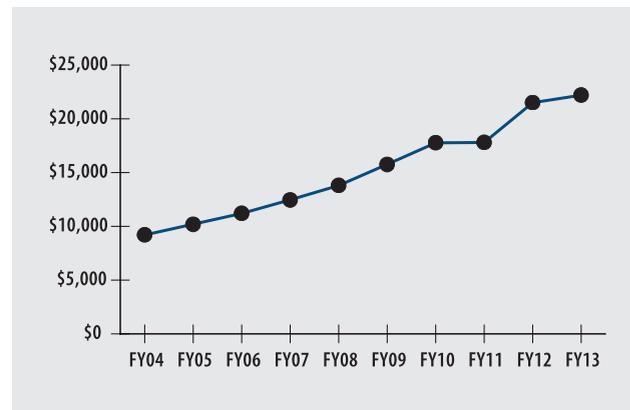
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.34%	8.14%	8.45%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.13%	3.46%	3.03%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.83%	0.68%	3.00%

ACTUARIAL

• Funded Ratio	46.1%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2040
• Unfunded Liability	\$259.0 M
• Total Pension Appropriation (Fiscal 2013)	\$22.2 M

	Active	Retired
• Number of Members	1,582	1,513
• Total Payroll/Benefit	\$69.2 M	\$29.9 M
• Average Salary/Benefit	\$43,800	\$19,700
• Average Age	47	72
• Average Service	14.1 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

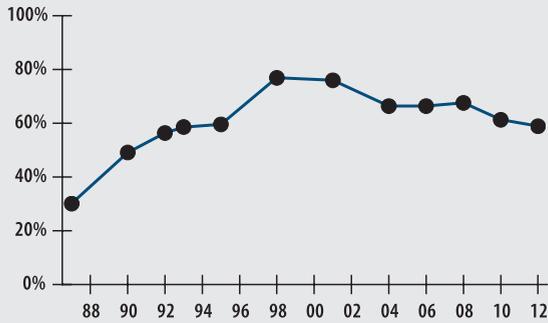
Date of Last Audit	08/24/11		
Period Covered	01/01/08-12/31/10		
	2010	2009	2008
Annual Receipts	\$50.06 M	\$50.25 M	\$(40.06 M)
Annual Disbursements	\$34.05 M	\$32.18 M	\$30.23 M

EARNED INCOME OF DISABILITY RETIREES (2011)

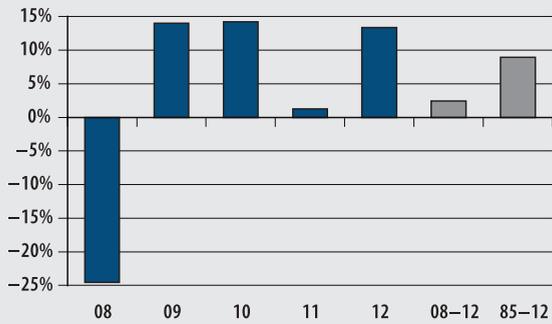
Number of Disability Retirees	257
Number Who Reported Earnings	50
Number of Excess Earners	2
Total Amount of Refund Due	\$31,689

▶ 2012 Return	13.71%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$192.0 M
▶ 2008-2012 (Annualized)	1.83%
▶ 1985-2012 (Annualized)	8.34%

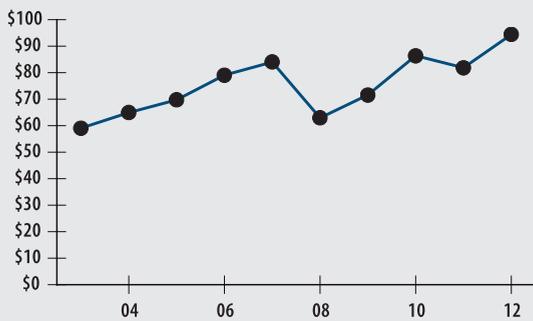
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

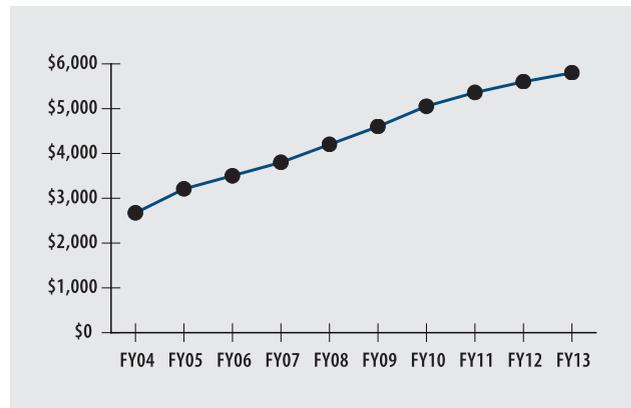
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.96%	8.80%	9.10%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.06%	4.45%	4.52%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.44%	1.28%	3.69%

ACTUARIAL

• Funded Ratio	58.9%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2037
• Unfunded Liability	\$62.9 M
• Total Pension Appropriation (Fiscal 2013)	\$5.8 M

	Active	Retired
• Number of Members	577	343
• Total Payroll/Benefit	\$26.7 M	\$7.9 M
• Average Salary/Benefit	\$46,200	\$23,000
• Average Age	50	72
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

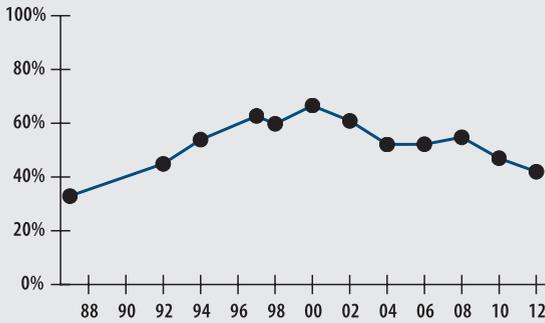
Date of Last Audit	06/06/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$9.48 M 2010 \$18.53 M 2009 \$17.22 M
Annual Disbursements	\$9.19 M \$8.40 M \$7.93 M

EARNED INCOME OF DISABILITY RETIREES (2011)

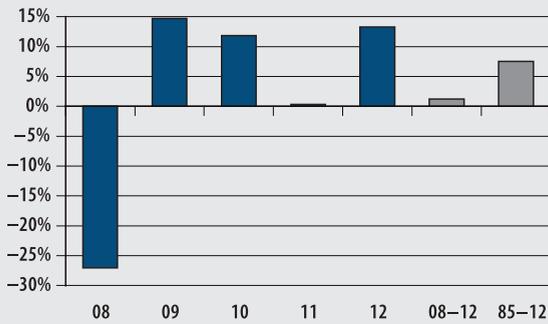
Number of Disability Retirees	43
Number Who Reported Earnings	16
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.36%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$94.4 M
▶ 2008-2012 (Annualized)	2.44%
▶ 1985-2012 (Annualized)	8.96%

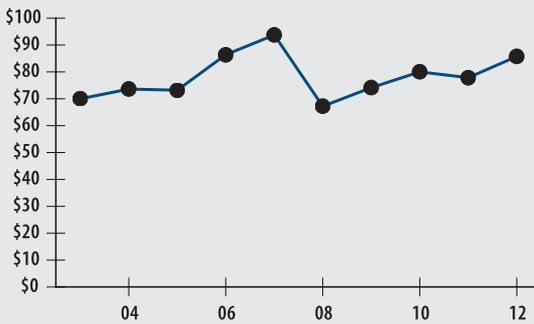
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

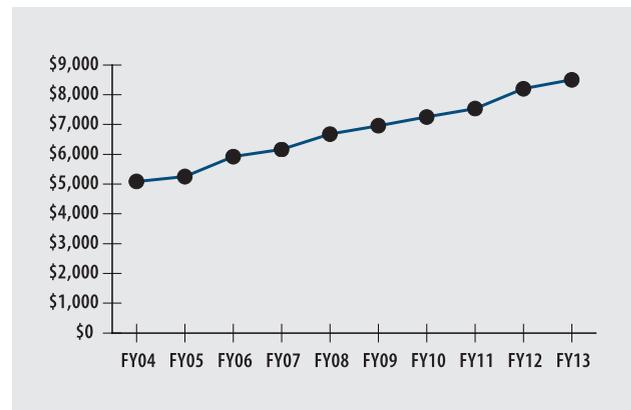
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.51%	7.30%	7.58%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.87%	3.50%	3.14%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.25%	0.63%	2.94%

ACTUARIAL

• Funded Ratio	42.0%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.95%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$112.4 M
• Total Pension Appropriation (Fiscal 2013)	\$8.5 M

	Active	Retired
• Number of Members	613	540
• Total Payroll/Benefit	\$27.0 M	\$12.1 M
• Average Salary/Benefit	\$44,100	\$22,500
• Average Age	48	NA
• Average Service	12.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/21/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$18.74 M	\$19.22 M	\$(14.77 M)
Annual Disbursements	\$12.82 M	\$12.29 M	\$11.66 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	59
Number Who Reported Earnings	10
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.30%
▶ Assumed Rate of Return	7.95%
▶ 2012 Market Value	\$85.7 M
▶ 2008-2012 (Annualized)	1.25%
▶ 1985-2012 (Annualized)	7.51%

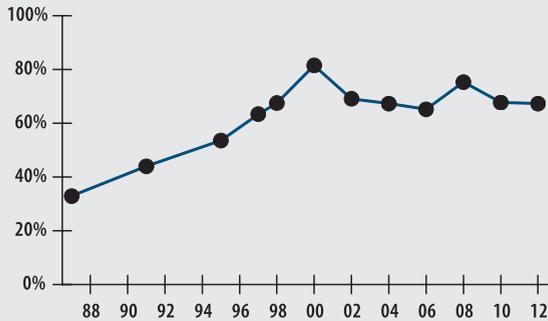
Framingham

Memorial Building
150 Concord Street, Room B-31
Framingham, MA 01702-8325
Phone 508-532-5465
Fax 508-532-5757

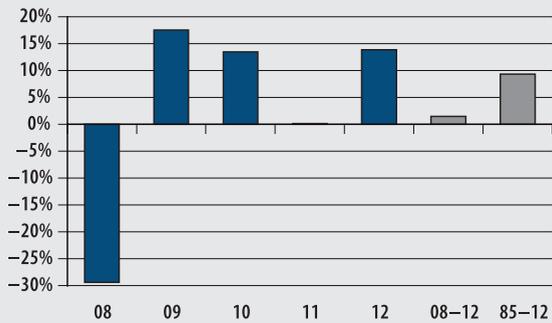
Board Members
Richard C. Howarth, Jr. (Chairperson),
Paul Barbieri, Mary Ellen Kelley,
Wayne MacDonald, Peter J. Rovinelli

Board Administrator
Roberta Griffin
Board Meeting
Varies

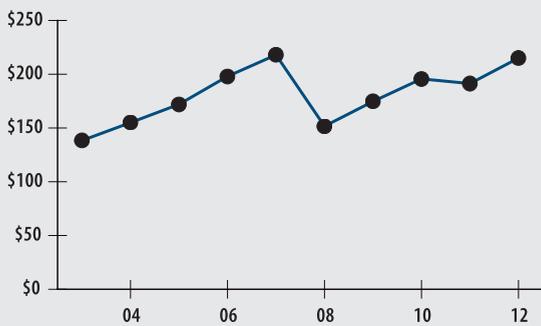
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

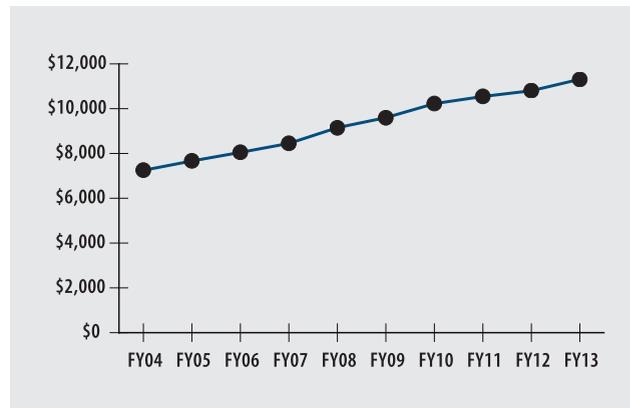
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.35%	9.19%	9.55%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.67%	6.00%	5.29%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.48%	1.16%	4.32%

ACTUARIAL

• Funded Ratio	67.3%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	5.0% Total Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$101.4 M
• Total Pension Appropriation (Fiscal 2013)	\$11.3 M

	Active	Retired
• Number of Members	1,072	809
• Total Payroll/Benefit	\$51.9 M	\$18.0 M
• Average Salary/Benefit	\$48,400	\$22,200
• Average Age	47	74
• Average Service	12.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

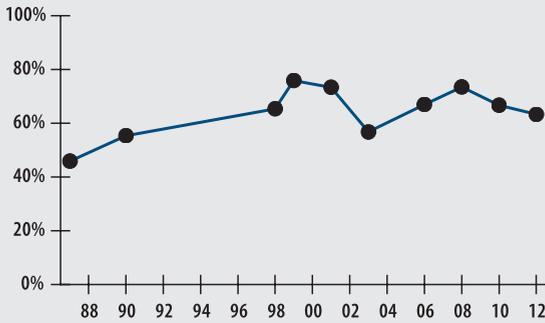
Date of Last Audit	03/31/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011: \$16.71 M, 2010: \$40.23 M, 2009: \$42.62 M
Annual Disbursements	2011: \$21.01 M, 2010: \$19.45 M, 2009: \$19.27 M

EARNED INCOME OF DISABILITY RETIREES (2011)

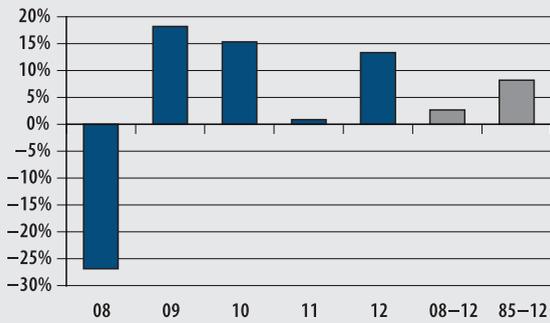
Number of Disability Retirees	79
Number Who Reported Earnings	21
Number of Excess Earners	1
Total Amount of Refund Due	\$408

▶ 2012 Return	13.90%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$214.9 M
▶ 2008-2012 (Annualized)	1.48%
▶ 1985-2012 (Annualized)	9.35%

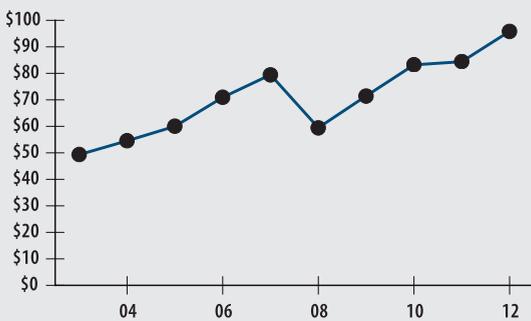
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

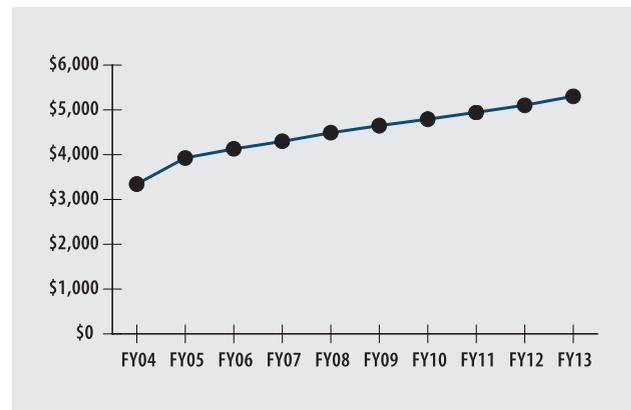
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.21%	8.02%	8.31%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.04%	4.78%	4.94%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.69%	2.28%	4.69%

ACTUARIAL

• Funded Ratio	63.3%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.88%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$49.7 M
• Total Pension Appropriation (Fiscal 2013)	\$5.3 M

	Active	Retired
• Number of Members	929	476
• Total Payroll/Benefit	\$30.0 M	\$6.2 M
• Average Salary/Benefit	\$32,300	\$12,900
• Average Age	49	72
• Average Service	10.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

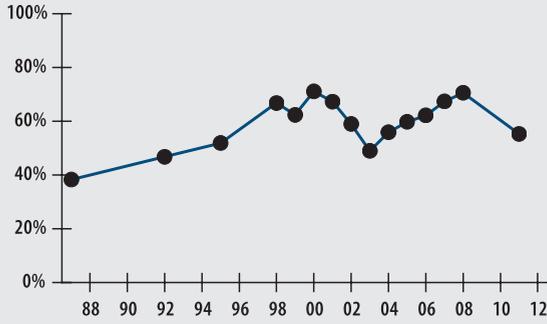
Date of Last Audit	01/13/11
Period Covered	01/01/07-12/31/09
Annual Receipts	2009 \$19.10 M 2008 \$(13.48 M) 2007 \$15.43 M
Annual Disbursements	\$7.19 M \$6.79 M \$7.30 M

EARNED INCOME OF DISABILITY RETIREES (2011)

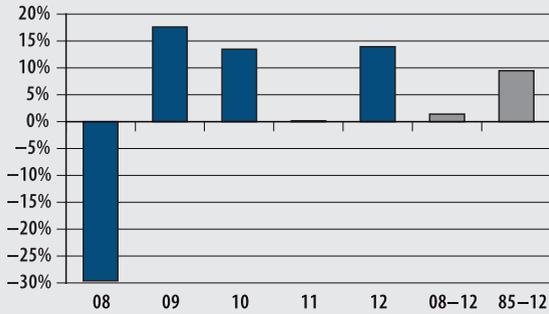
Number of Disability Retirees	18
Number Who Reported Earnings	5
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.39%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$95.8 M
▶ 2008-2012 (Annualized)	2.69%
▶ 1985-2012 (Annualized)	8.21%

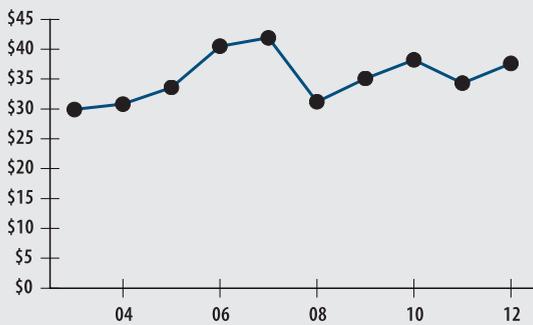
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

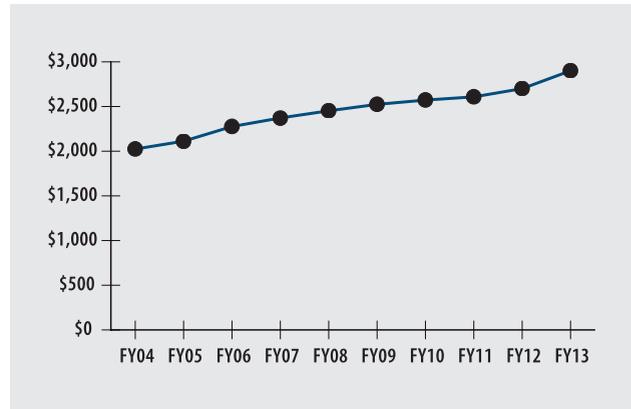
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.49%	9.33%	9.70%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.64%	6.24%	5.65%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.43%	1.09%	4.22%

ACTUARIAL

• Funded Ratio	55.3%
• Date of Last Valuation	01/11
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$30.9 M
• Total Pension Appropriation (Fiscal 2013)	\$2.9 M

	Active	Retired
• Number of Members	254	239
• Total Payroll/Benefit	\$10.2 M	\$4.5 M
• Average Salary/Benefit	\$40,200	\$18,900
• Average Age	48	72
• Average Service	13.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	09/21/11
Period Covered	01/01/08-12/31/10

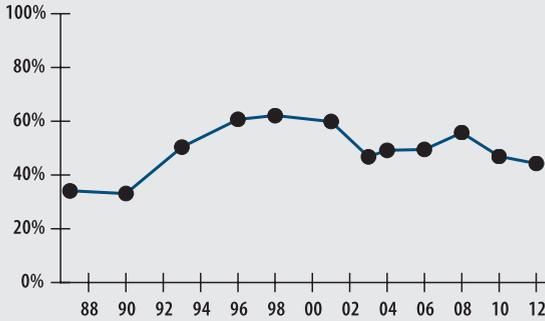
	2010	2009	2008
Annual Receipts	\$8.26M	\$8.91 M	\$(8.53 M)
Annual Disbursements	\$5.28 M	\$4.93 M	\$4.54 M

EARNED INCOME OF DISABILITY RETIREES (2011)

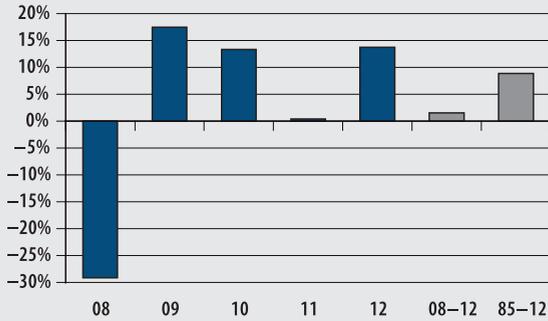
Number of Disability Retirees	27
Number Who Reported Earnings	8
Number of Excess Earners	1
Total Amount of Refund Due	\$58

▶ 2012 Return	13.94%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$37.6 M
▶ 2008-2012 (Annualized)	1.43%
▶ 1985-2012 (Annualized)	9.49%

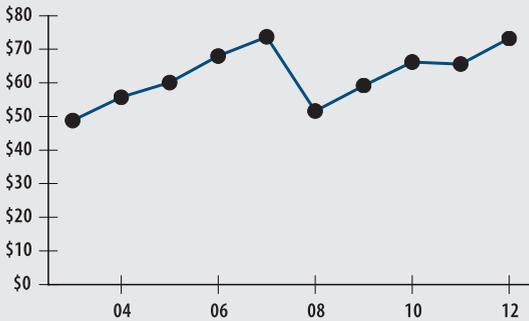
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

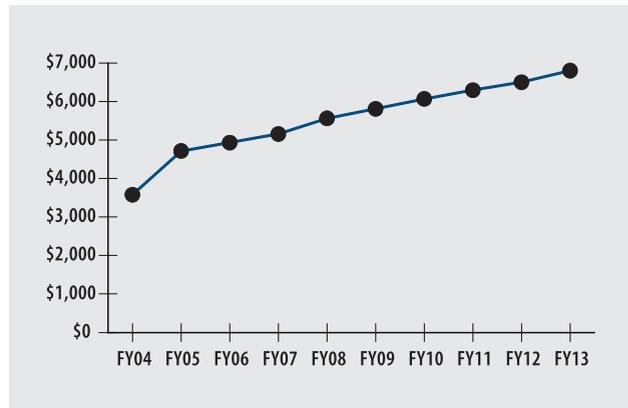
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.88%	8.70%	9.03%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.13%	4.75%	4.66%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.53%	0.70%	3.39%

ACTUARIAL

• Funded Ratio	44.3%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	7.88%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2037
• Unfunded Liability	\$84.7 M
• Total Pension Appropriation (Fiscal 2013)	\$6.8 M

	Active	Retired
• Number of Members	506	433
• Total Payroll/Benefit	\$23.1 M	\$9.4 M
• Average Salary/Benefit	\$45,700	\$21,800
• Average Age	50	NA
• Average Service	13.1 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

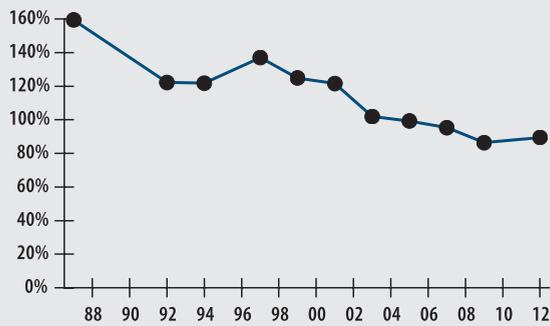
Date of Last Audit	05/23/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$9.57 M
Annual Disbursements	2010 \$16.84 M
	2009 \$15.55 M
	\$10.19 M
	\$9.82 M
	\$9.57 M

EARNED INCOME OF DISABILITY RETIREES (2011)

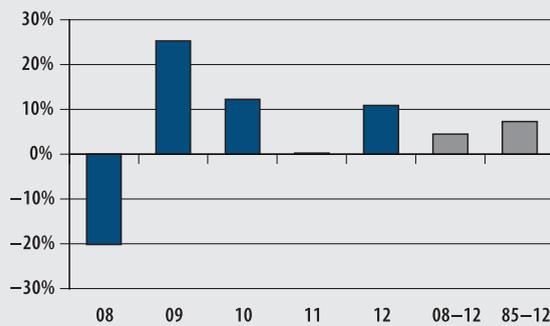
Number of Disability Retirees	60
Number Who Reported Earnings	14
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.79%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$73.2 M
▶ 2008-2012 (Annualized)	1.53%
▶ 1985-2012 (Annualized)	8.88%

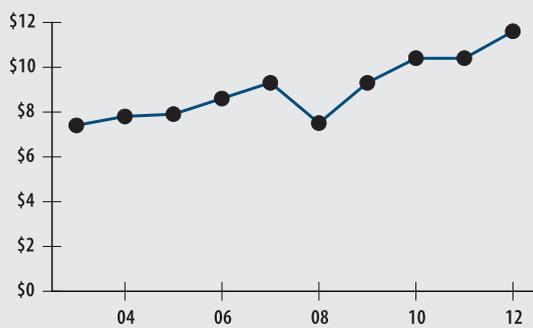
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

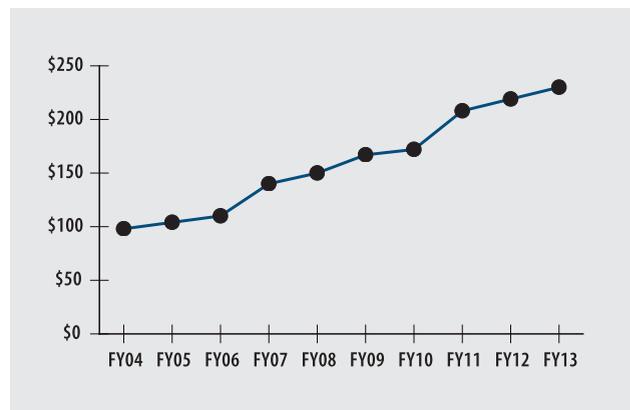
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.34%	7.21%	7.49%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.25%	4.82%	4.07%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.55%	4.12%	5.93%

ACTUARIAL

• Funded Ratio	89.5%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2026
• Unfunded Liability	\$1.2 M
• Total Pension Appropriation (Fiscal 2013)	\$230,000

	Active	Retired
• Number of Members	40	22
• Total Payroll/Benefit	\$2.4 M	\$0.4 M
• Average Salary/Benefit	\$59,400	\$19,400
• Average Age	52	74
• Average Service	17.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/07/10
Period Covered	01/01/07-12/31/09

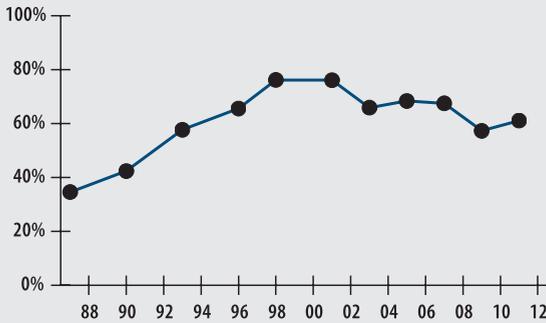
	2009	2008	2007
Annual Receipts	\$2.31 M	\$(1.34 M)	\$1.18 M
Annual Disbursements	\$514,784	\$461,496	\$450,550

EARNED INCOME OF DISABILITY RETIREES (2011)

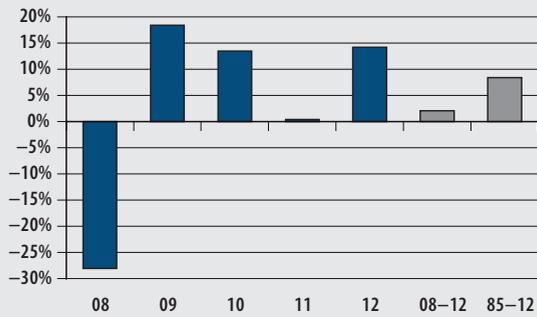
Number of Disability Retirees	2
Number Who Reported Earnings	0
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	10.91%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$11.6 M
▶ 2008-2012 (Annualized)	4.55%
▶ 1985-2012 (Annualized)	7.34%

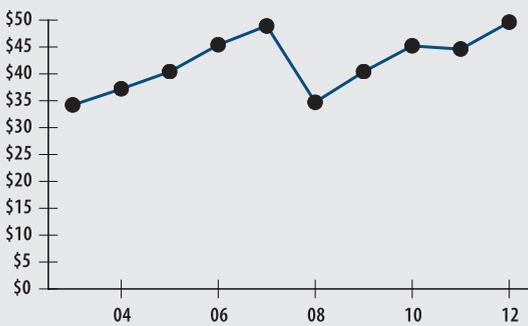
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

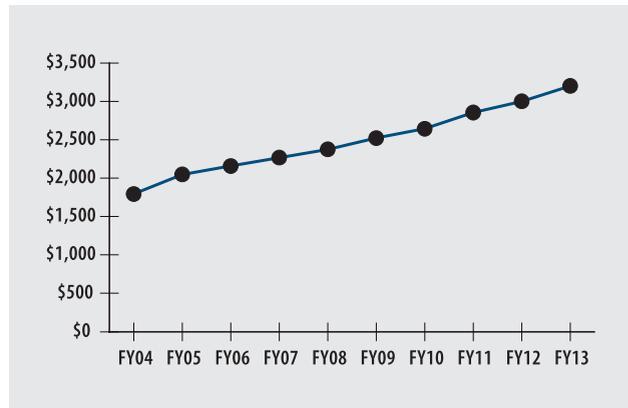
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.45%	8.24%	8.56%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.86%	4.69%	4.10%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.12%	1.19%	3.74%

ACTUARIAL

• Funded Ratio	61.1%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2038
• Unfunded Liability	\$31.2 M
• Total Pension Appropriation (Fiscal 2013)	\$3.2 M

	Active	Retired
• Number of Members	381	230
• Total Payroll/Benefit	\$13.9 M	\$4.3 M
• Average Salary/Benefit	\$36,400	\$18,600
• Average Age	48	71
• Average Service	11.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

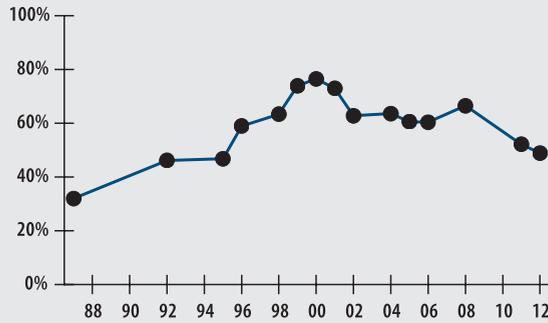
Date of Last Audit	04/12/12
Period Covered	01/01/08-12/31/10
Annual Receipts	2010 \$9.75 M 2009 \$10.62 M 2008 \$(9.49 M)
Annual Disbursements	2010 \$5.03 M 2009 \$4.77 M 2008 \$4.75 M

EARNED INCOME OF DISABILITY RETIREES (2011)

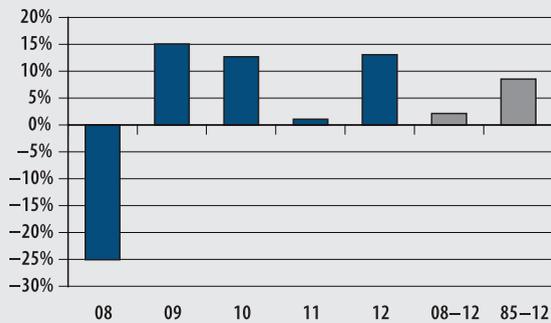
Number of Disability Retirees	15
Number Who Reported Earnings	3
Number of Excess Earners	1
Total Amount of Refund Due	\$4,701

▶ 2012 Return	14.25%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$49.6 M
▶ 2008-2012 (Annualized)	2.12%
▶ 1985-2012 (Annualized)	8.45%

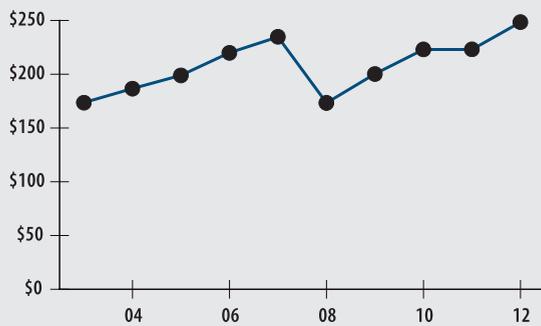
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

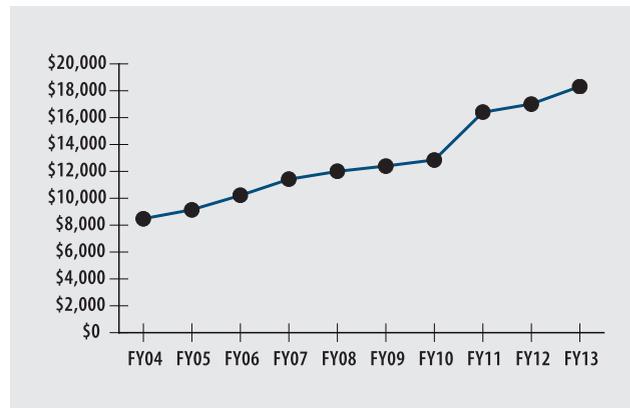
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.59%	8.43%	8.72%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.59%	4.10%	3.78%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.14%	0.93%	3.21%

ACTUARIAL

• Funded Ratio	48.9%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2036
• Unfunded Liability	\$255.0 M
• Total Pension Appropriation (Fiscal 2013)	\$18.3 M

	Active	Retired
• Number of Members	2,568	1,538
• Total Payroll/Benefit	\$90.0 M	\$26.0 M
• Average Salary/Benefit	\$35,000	\$16,900
• Average Age	49	NA
• Average Service	12.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	09/11/12
Period Covered	01/01/08-12/31/10

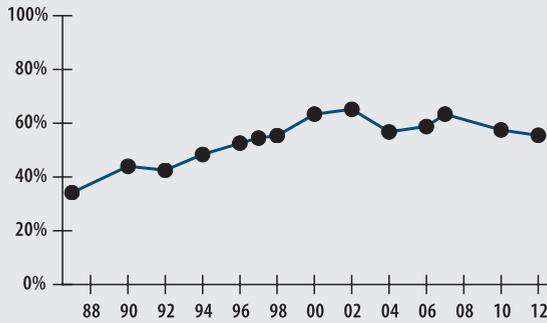
	2010	2009	2008
Annual Receipts	\$50.21 M	\$51.84 M	\$(33.90 M)
Annual Disbursements	\$27.20 M	\$26.34 M	\$26.30 M

EARNED INCOME OF DISABILITY RETIREES (2011)

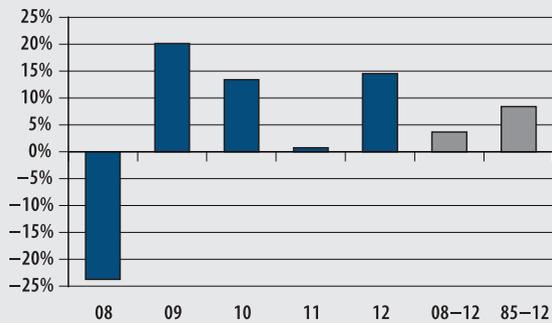
Number of Disability Retirees	117
Number Who Reported Earnings	29
Number of Excess Earners	4
Total Amount of Refund Due	\$33,318

▶ 2012 Return	13.13%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$248.3 M
▶ 2008-2012 (Annualized)	2.14%
▶ 1985-2012 (Annualized)	8.59%

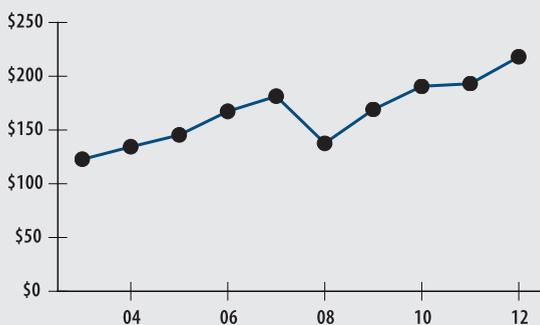
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

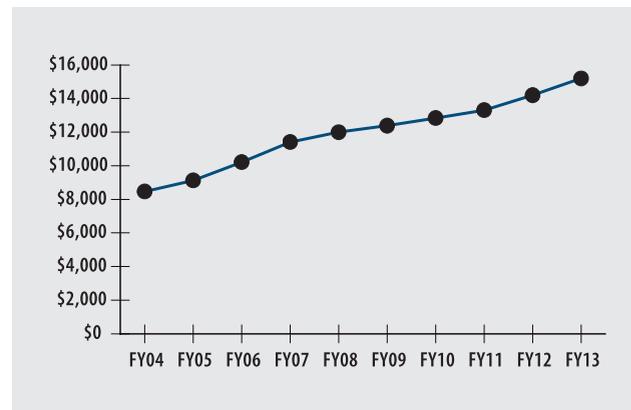
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.44%	8.22%	8.52%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.95%	4.98%	4.37%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.73%	2.08%	4.86%

ACTUARIAL

• Funded Ratio	55.5%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.88%
• Funding Schedule	4.0% Total Increasing
• Year Fully Funded	2034
• Unfunded Liability	\$163.4 M
• Total Pension Appropriation (Fiscal 2013)	\$15.2 M

	Active	Retired
• Number of Members	1,879	1,111
• Total Payroll/Benefit	\$68.6 M	\$18.8 M
• Average Salary/Benefit	\$36,500	\$17,000
• Average Age	48	NA
• Average Service	11.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/24/11
Period Covered	01/01/08-12/31/10

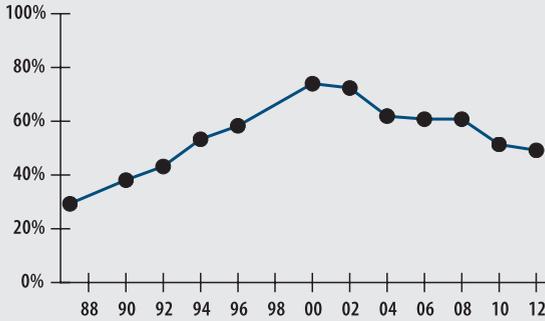
	2010	2009	2008
Annual Receipts	\$43.65 M	\$51.75 M	\$(26.66 M)
Annual Disbursements	\$21.64 M	\$19.66 M	\$18.06 M

EARNED INCOME OF DISABILITY RETIREES (2011)

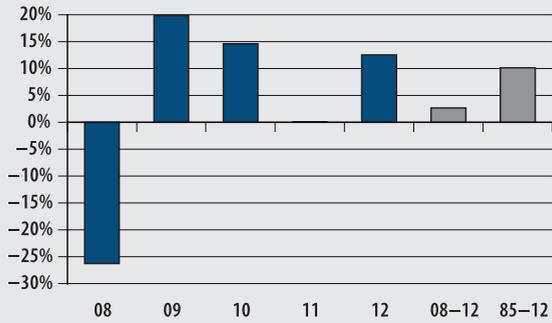
Number of Disability Retirees	74
Number Who Reported Earnings	21
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	14.58%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$218.0 M
▶ 2008-2012 (Annualized)	3.73%
▶ 1985-2012 (Annualized)	8.44%

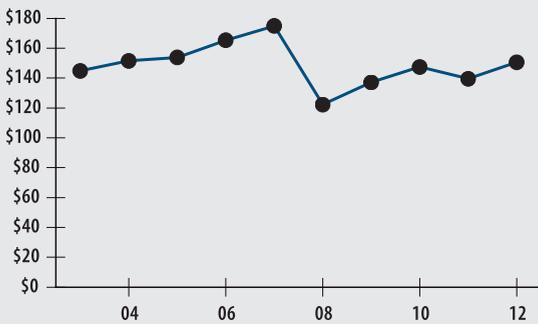
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

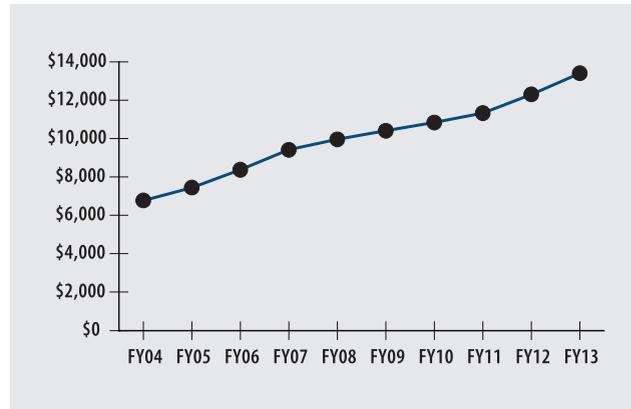
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
10.15%	10.06%	10.46%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.30%	6.30%	5.94%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.71%	2.56%	5.37%

ACTUARIAL

• Funded Ratio	49.2%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$155.6 M
• Total Pension Appropriation (Fiscal 2013)	\$13.4 M

	Active	Retired
• Number of Members	894	1,067
• Total Payroll/Benefit	\$36.5 M	\$21.5 M
• Average Salary/Benefit	\$40,800	\$20,200
• Average Age	49	72
• Average Service	13.1 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

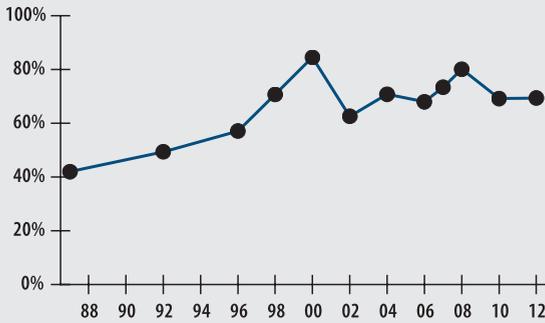
Date of Last Audit	10/27/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009 \$40.84 M 2008 \$(30.48 M)
Annual Disbursements	\$23.75 M \$23.54 M

EARNED INCOME OF DISABILITY RETIREES (2011)

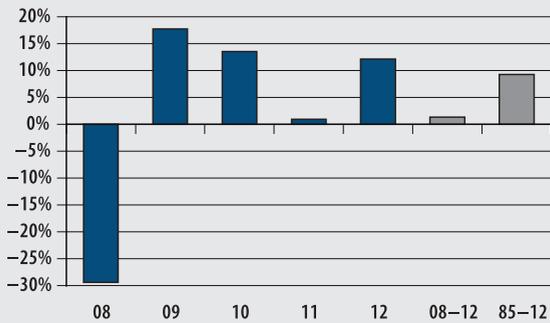
Number of Disability Retirees	105
Number Who Reported Earnings	20
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.59%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$150.6 M
▶ 2008-2012 (Annualized)	2.71%
▶ 1985-2012 (Annualized)	10.15%

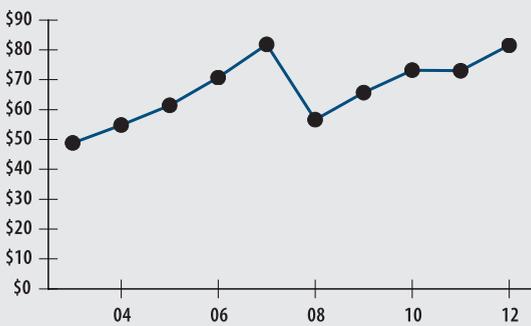
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

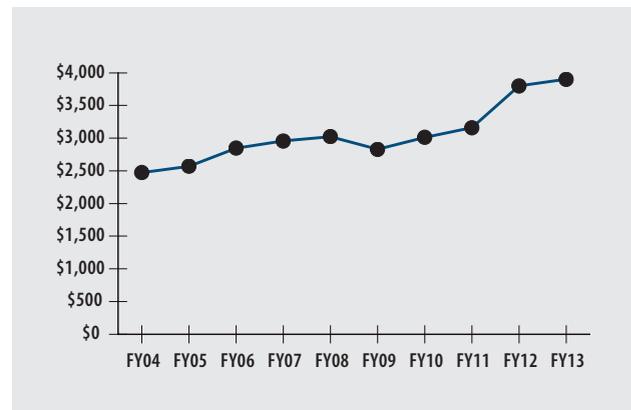
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.31%	9.21%	9.54%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.60%	6.35%	5.68%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.35%	1.32%	4.34%

ACTUARIAL

• Funded Ratio	69.4%
• Date of Last Valuation	01/12
• Actuary	KMS Actuaries
• Assumed Rate of Return	8.00%
• Funding Schedule	3.4% Total Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$35.1 M
• Total Pension Appropriation (Fiscal 2013)	\$3.9 M

	Active	Retired
• Number of Members	533	285
• Total Payroll/Benefit	\$23.3 M	\$6.4 M
• Average Salary/Benefit	\$43,700	\$22,500
• Average Age	49	73
• Average Service	10.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

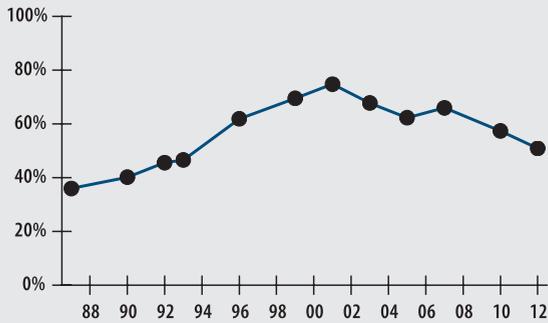
Date of Last Audit	02/06/13		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$7.26 M	\$14.40 M	\$15.55 M
Annual Disbursements	\$7.10 M	\$6.88 M	\$6.47 M

EARNED INCOME OF DISABILITY RETIREES (2011)

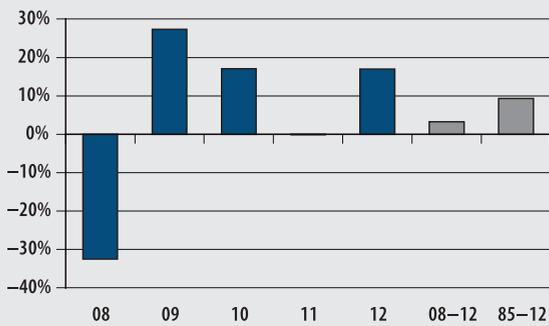
Number of Disability Retirees	14
Number Who Reported Earnings	3
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.19%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$81.5 M
▶ 2008-2012 (Annualized)	1.35%
▶ 1985-2012 (Annualized)	9.31%

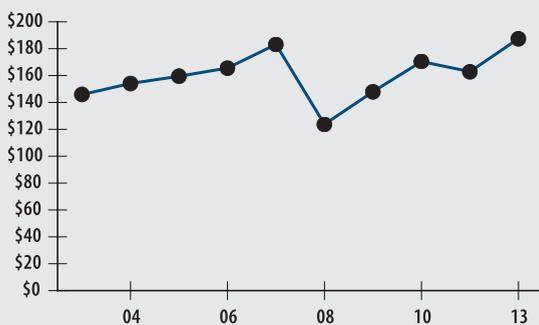
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

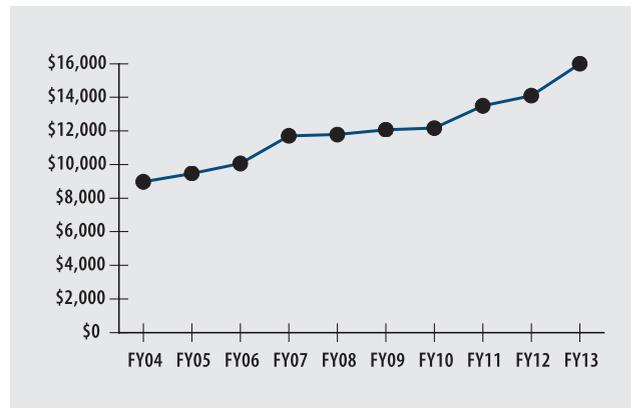
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.30%	9.03%	9.40%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.21%	4.26%	4.45%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.30%	1.54%	3.86%

ACTUARIAL

- Funded Ratio 50.9%
- Date of Last Valuation 01/12
- Actuary Segal
- Assumed Rate of Return 8.00%
- Funding Schedule 3.75% Increasing
- Year Fully Funded 2032
- Unfunded Liability \$165.1 M
- Total Pension Appropriation (Fiscal 2013) \$16.0 M

	Active	Retired
• Number of Members	1,228	922
• Total Payroll/Benefit	\$53.5 M	\$20.5 M
• Average Salary/Benefit	\$43,600	\$22,200
• Average Age	46	NA
• Average Service	12.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/03/12
Period Covered	01/01/09-12/31/11

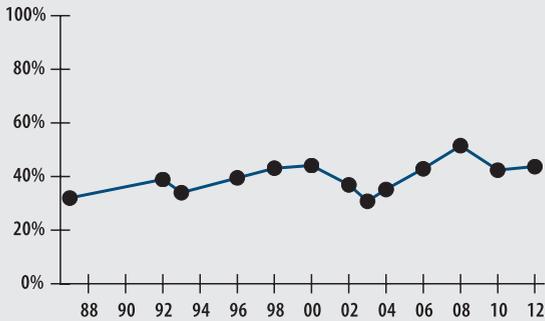
	2011	2010	2009
Annual Receipts	\$20.33 M	\$44.19 M	\$48.74
Annual Disbursements	\$23.47 M	\$22.52 M	\$21.33 M

EARNED INCOME OF DISABILITY RETIREES (2011)

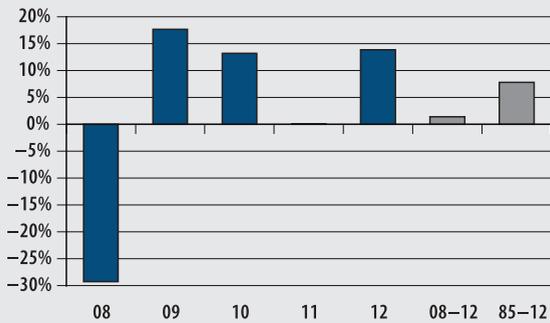
Number of Disability Retirees	88
Number Who Reported Earnings	14
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	16.93%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$187.3 M
▶ 2008-2012 (Annualized)	3.30%
▶ 1985-2012 (Annualized)	9.30%

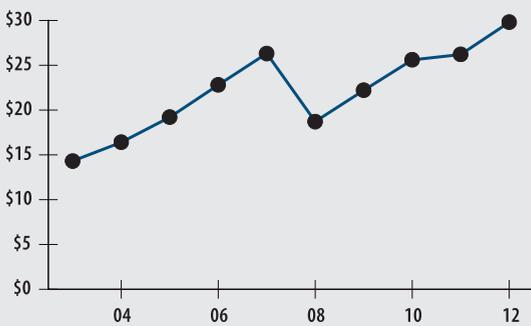
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

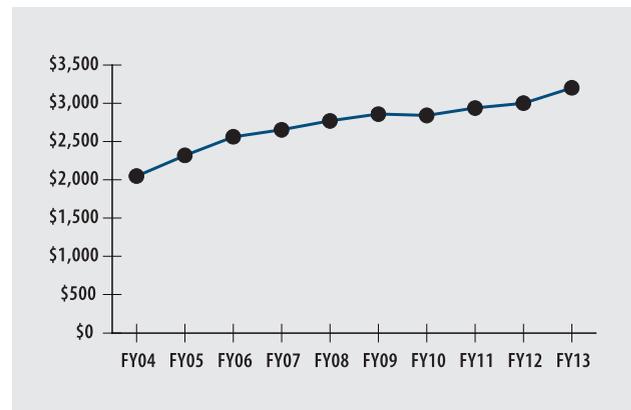
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.80%	7.58%	7.88%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.22%	5.53%	5.16%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.46%	1.14%	4.25%

ACTUARIAL

• Funded Ratio	43.7%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.75%
• Funding Schedule	3.8% Increasing
• Year Fully Funded	2033
• Unfunded Liability	\$33.8 M
• Total Pension Appropriation (Fiscal 2013)	\$3.2 M

	Active	Retired
• Number of Members	178	130
• Total Payroll/Benefit	\$9.2 M	\$3.2 M
• Average Salary/Benefit	\$51,600	\$24,200
• Average Age	50	71
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	09/08/10		
Period Covered	01/01/07-12/31/09		
	2009	2008	2007
Annual Receipts	\$7.07 M	\$(3.92 M)	\$6.77 M
Annual Disbursements	\$3.54 M	\$3.63 M	\$3.35 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	28
Number Who Reported Earnings	12
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.87%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$29.8 M
▶ 2008-2012 (Annualized)	1.46%
▶ 1985-2012 (Annualized)	7.80%

Lawrence

354 Merrimack Street
Suite 302
Lawrence, MA 01843
Phone 978-620-3570
Fax 978-683-5894

Board Members

David Camasso (Chairperson),
Elvin O. Alarcon, William Bateman,
John A. Neilon, Jr., Gina M. Rizzo

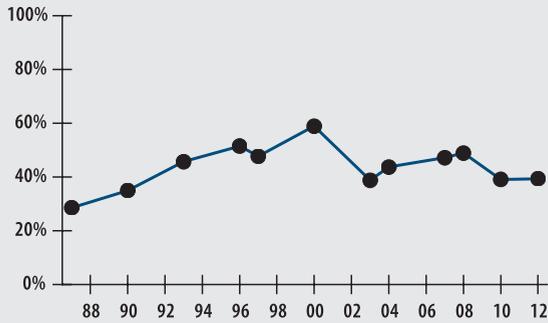
Board Administrator

Diane Cockroft

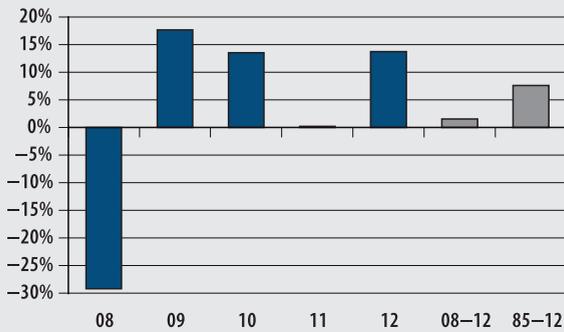
Board Meeting

Varies

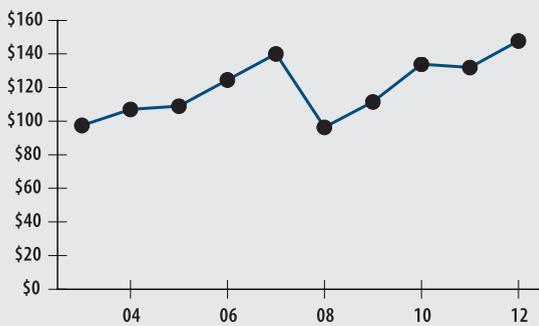
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

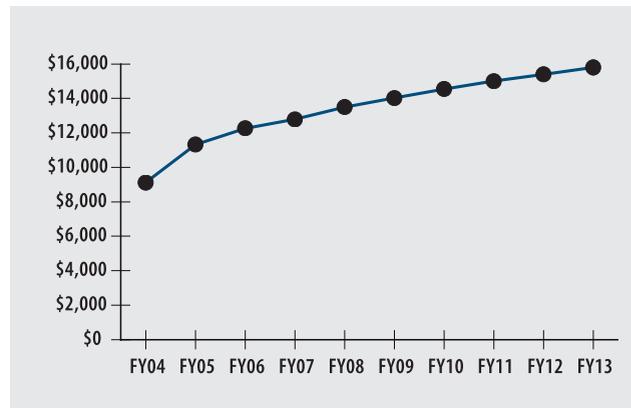
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.66%	7.44%	7.73%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.49%	4.02%	3.15%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.55%	0.75%	3.11%

ACTUARIAL

• Funded Ratio	39.4%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.75%
• Funding Schedule	3.42% Increasing
• Year Fully Funded	2038
• Unfunded Liability	\$203.5 M
• Total Pension Appropriation (Fiscal 2013)	\$15.8 M

	Active	Retired
• Number of Members	1,313	885
• Total Payroll/Benefit	\$55.8 M	\$20.5 M
• Average Salary/Benefit	\$42,500	\$23,100
• Average Age	46	74
• Average Service	11.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/27/10
Period Covered	01/01/08-12/31/09
Annual Receipts	2009: \$38.41 M 2008: \$(16.28 M)
Annual Disbursements	2009: \$21.12 M 2008: \$20.46 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	135
Number Who Reported Earnings	25
Number of Excess Earners	1
Total Amount of Refund Due	\$11,764

▶ 2012 Return	13.79%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$147.7 M
▶ 2008-2012 (Annualized)	1.55%
▶ 1985-2012 (Annualized)	7.66%

Leominster

City Hall, Room 15
25 West Street
Leominster, MA 01453
Phone 978-534-7507, ext. 246
Fax 978-534-7508

Board Members

John J. Richard (Chairperson), Paul R. Doig,
David R. LaPlante, Mark R. O'Donnell,
John F. Picone

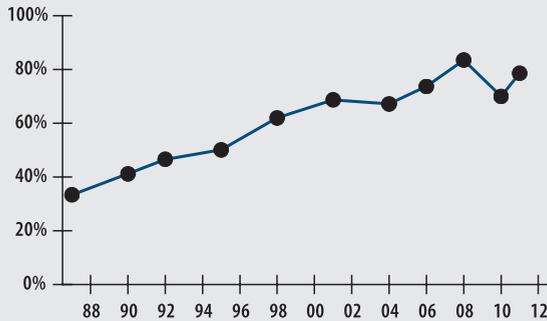
Board Administrator

Anna Hamblin

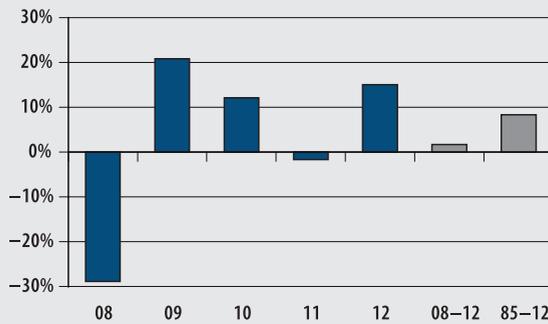
Board Meeting

Generally the last working day in each month

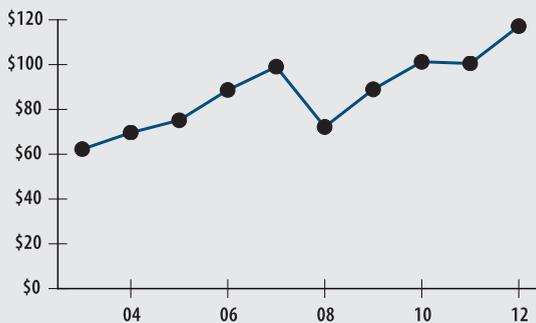
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

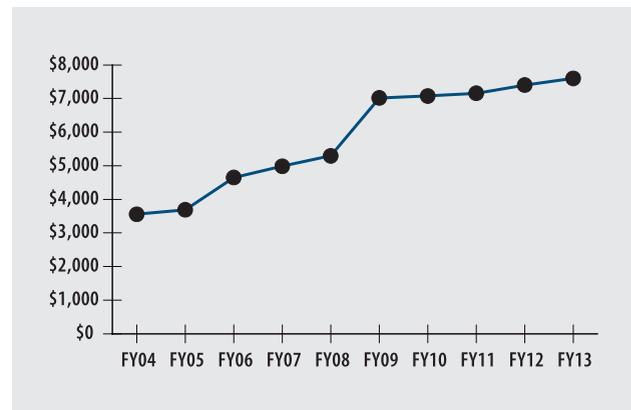
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.39%	8.15%	8.55%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.16%	5.27%	5.69%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.75%	0.99%	4.49%

ACTUARIAL

• Funded Ratio	78.6%
• Date of Last Valuation	01/11
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	2.77% Increasing
• Year Fully Funded	2016
• Unfunded Liability	\$27.5 M
• Total Pension Appropriation (Fiscal 2013)	\$7.6 M

	Active	Retired
• Number of Members	530	384
• Total Payroll/Benefit	\$22.4 M	\$7.3 M
• Average Salary/Benefit	\$42,300	\$19,000
• Average Age	47	73
• Average Service	11.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/13/11
Period Covered	01/01/08-12/31/10

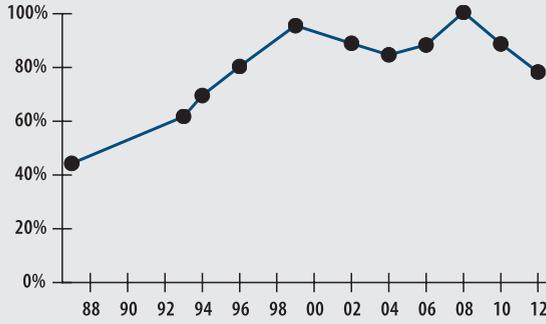
	2010	2009	2008
Annual Receipts	\$20.94 M	\$24.98 M	\$(19.01 M)
Annual Disbursements	\$8.66 M	\$8.16 M	\$7.88 M

EARNED INCOME OF DISABILITY RETIREES (2011)

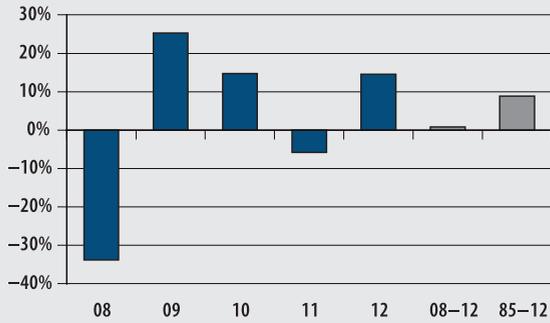
Number of Disability Retirees	43
Number Who Reported Earnings	13
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	15.05%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$117.1 M
▶ 2008-2012 (Annualized)	1.75%
▶ 1985-2012 (Annualized)	8.39%

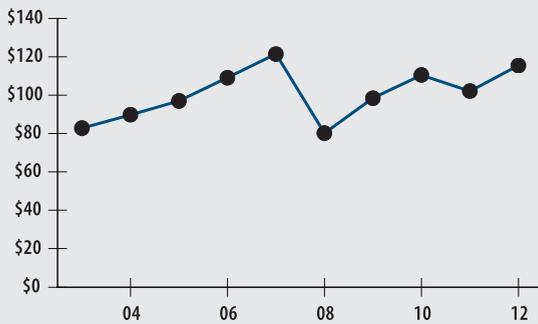
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

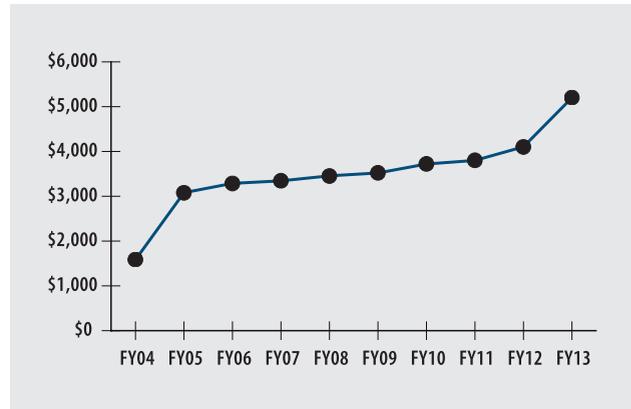
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.87%	8.67%	9.26%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.12%	5.07%	5.35%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.82%	0.60%	4.60%

ACTUARIAL

• Funded Ratio	78.3%
• Date of Last Valuation	01/12
• Actuary	Buck Consultants
• Assumed Rate of Return	7.75%
• Funding Schedule	4.5% Increasing Phase-in
• Year Fully Funded	2030
• Unfunded Liability	\$33.6 M
• Total Pension Appropriation (Fiscal 2013)	\$5.2 M

	Active	Retired
• Number of Members	632	382
• Total Payroll/Benefit	\$31.2 M	\$8.2 M
• Average Salary/Benefit	\$49,300	\$21,400
• Average Age	47	NA
• Average Service	10.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/13/11		
Period Covered	01/01/07-12/31/09		
Annual Receipts	2009 \$25.76 M	2008 \$(31.72 M)	2007 \$20.79 M
Annual Disbursements	\$8.37 M	\$8.67 M	\$8.40 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	26
Number Who Reported Earnings	8
Number of Excess Earners	1
Total Amount of Refund Due	\$41,333

▶ 2012 Return	14.57%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$115.4 M
▶ 2008-2012 (Annualized)	.82%
▶ 1985-2012 (Annualized)	8.87%

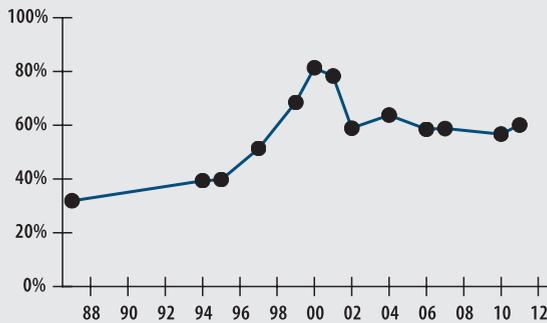
Lowell

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

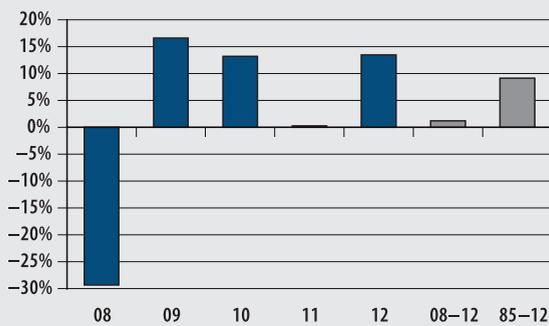
Board Members
Joseph Mahoney (Chairperson),
Michael M. Brennan, William Desrosiers,
Thomas Moses, Sheryl L. Wright

Board Administrator
Shannon Dowd
Board Meeting
Varies

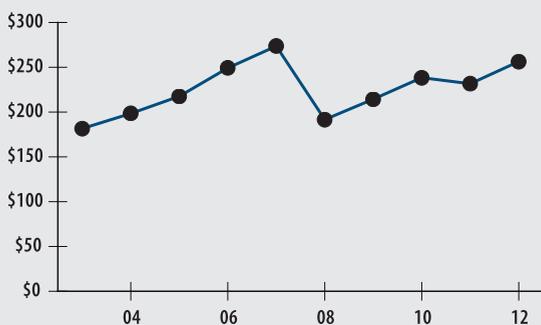
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

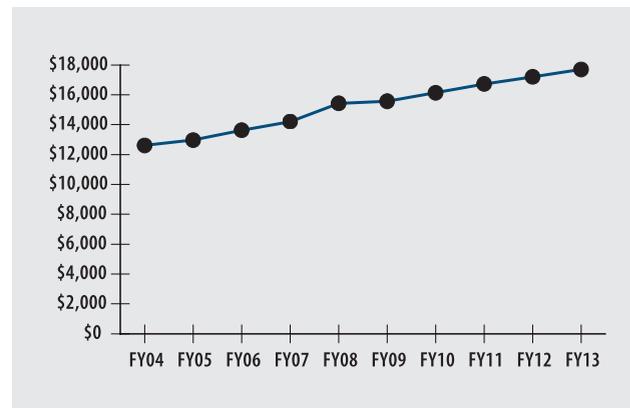
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.16%	9.00%	9.35%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.69%	5.01%	3.91%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.24%	0.93%	4.07%

ACTUARIAL

• Funded Ratio	60.1%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$179.2 M
• Total Pension Appropriation (Fiscal 2013)	\$17.7 M

	Active	Retired
• Number of Members	1,603	1,157
• Total Payroll/Benefit	\$76.2 M	\$27.6 M
• Average Salary/Benefit	\$47,500	\$23,900
• Average Age	NA	72
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/13/12
Period Covered	01/01/08-12/31/10

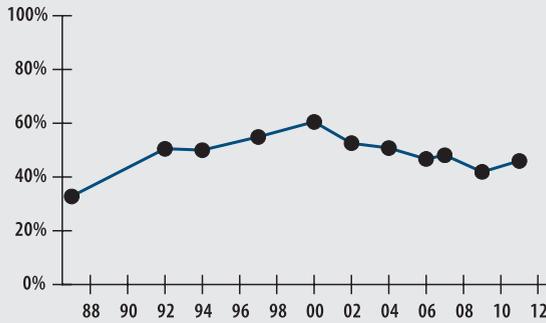
	2010	2009	2008
Annual Receipts	\$53.20 M	\$55.67 M	\$(53.76 M)
Annual Disbursements	\$32.94 M	\$30.20 M	\$28.25 M

EARNED INCOME OF DISABILITY RETIREES (2011)

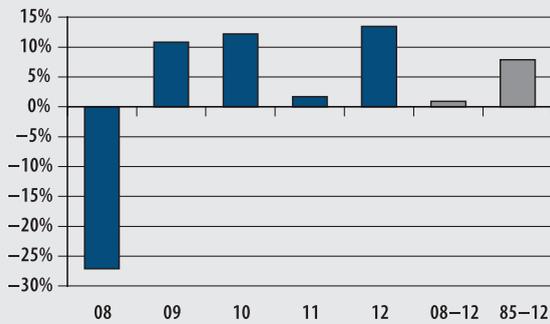
Number of Disability Retirees	184
Number Who Reported Earnings	36
Number of Excess Earners	2
Total Amount of Refund Due	\$1,930

▶ 2012 Return	13.52%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$256.1 M
▶ 2008-2012 (Annualized)	1.24%
▶ 1985-2012 (Annualized)	9.16%

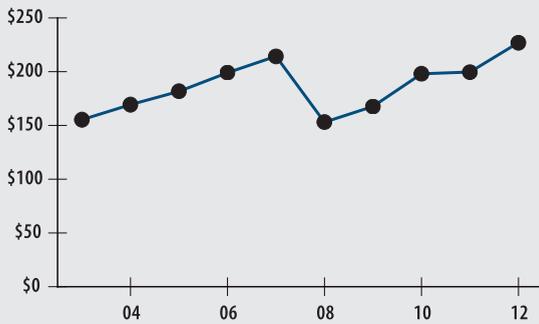
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

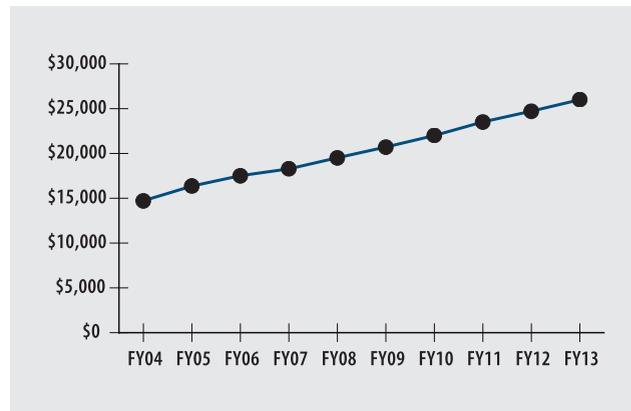
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.90%	7.70%	7.94%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.52%	4.22%	3.59%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.91%	0.33%	2.10%

ACTUARIAL

• Funded Ratio	46.0%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2031
• Unfunded Liability	\$257.6 M
• Total Pension Appropriation (Fiscal 2013)	\$26.0 M

	Active	Retired
• Number of Members	1,286	1,198
• Total Payroll/Benefit	\$65.3 M	\$29.5 M
• Average Salary/Benefit	\$50,800	\$24,600
• Average Age	50	74
• Average Service	15.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	11/23/11
Period Covered	01/01/08-12/31/10

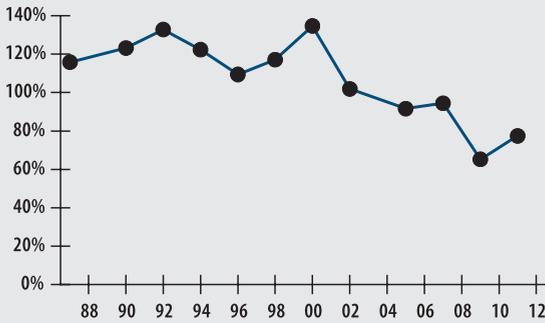
	2010	2009	2008
Annual Receipts	\$55.21 M	\$46.80 M	\$(30.91 M)
Annual Disbursements	\$32.63 M	\$31.61 M	\$31.10 M

EARNED INCOME OF DISABILITY RETIREES (2011)

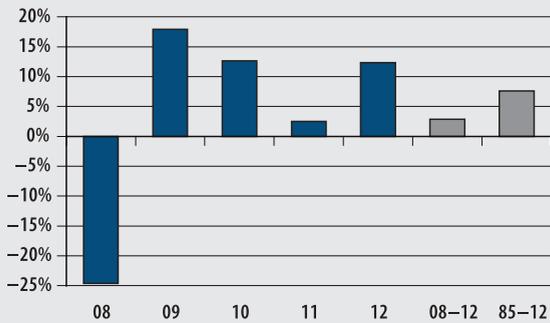
Number of Disability Retirees	173
Number Who Reported Earnings	27
Number of Excess Earners	1
Total Amount of Refund Due	\$4,555

▶ 2012 Return	13.48%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$226.8 M
▶ 2008-2012 (Annualized)	.91%
▶ 1985-2012 (Annualized)	7.90%

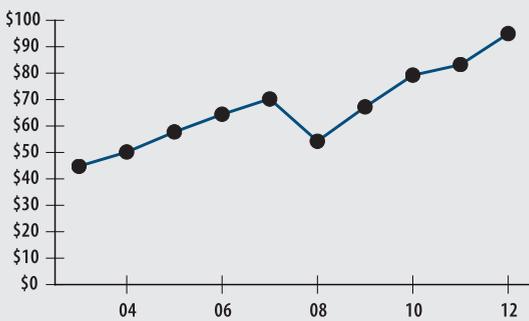
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

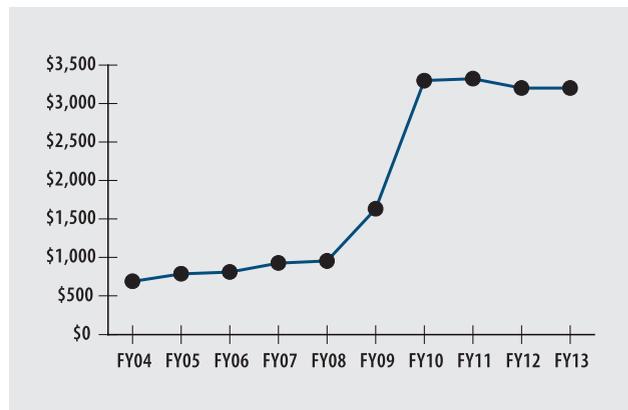
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.60%	7.43%	7.63%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.60%	4.74%	4.17%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.89%	1.96%	3.71%

ACTUARIAL

• Funded Ratio	77.4%
• Date of Last Valuation	01/11
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	Level
• Year Fully Funded	2022
• Unfunded Liability	\$23.2 M
• Total Pension Appropriation (Fiscal 2013)	\$3.2 M

	Active	Retired
• Number of Members	354	98
• Total Payroll/Benefit	\$29.7 M	\$3.0 M
• Average Salary/Benefit	\$84,000	\$30,400
• Average Age	48	69
• Average Service	13.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/17/11
Period Covered	01/01/08-12/31/10

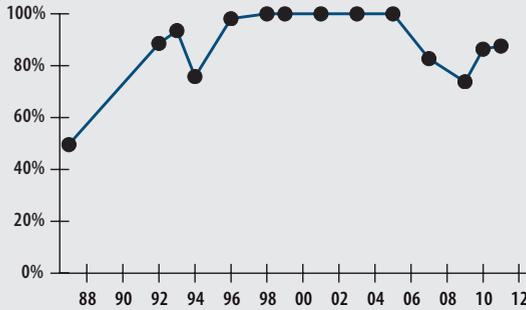
	2010	2009	2008
Annual Receipts	\$15.99 M	\$17.44 M	\$(12.66 M)
Annual Disbursements	\$3.97 M	\$3.86 M	\$3.71 M

EARNED INCOME OF DISABILITY RETIREES (2011)

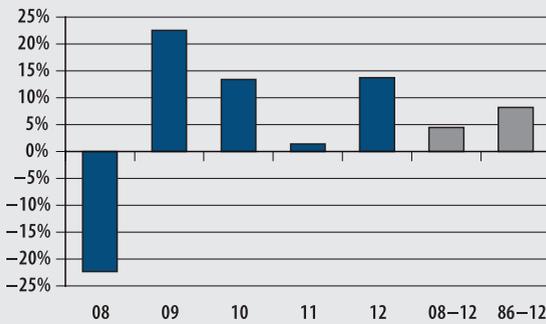
Number of Disability Retirees	2
Number Who Reported Earnings	0
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.34%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$94.9 M
▶ 2008-2012 (Annualized)	2.89%
▶ 1985-2012 (Annualized)	7.60%

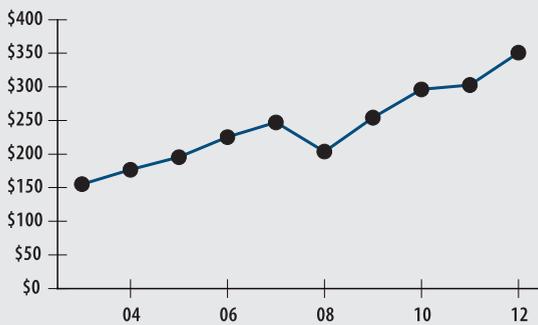
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 27 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

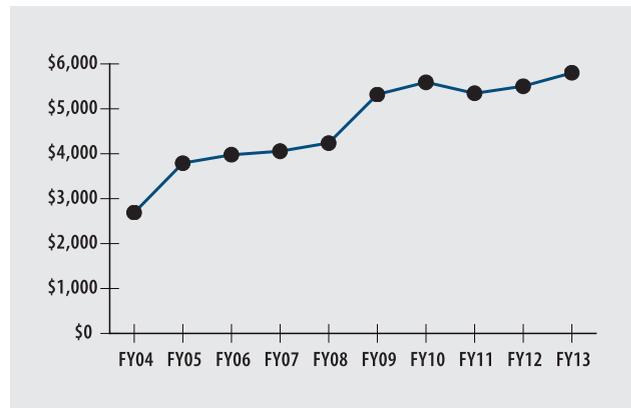
<u>27 years 2012</u>	<u>26 years 2011</u>	<u>25 years 2010</u>
8.21%	8.00%	8.28%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.70%	6.63%	6.05%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.51%	3.54%	5.93%

ACTUARIAL

- Funded Ratio 87.6%
- Date of Last Valuation 01/11
- Actuary Buck Consultants
- Assumed Rate of Return 8.00%
- Funding Schedule 4.5% Increasing
- Year Fully Funded 2024
- Unfunded Liability \$42.2 M
- Total Pension Appropriation (Fiscal 2013) \$5.8 M

	Active	Retired
• Number of Members	1,110	341
• Total Payroll/Benefit	\$82.9 M	\$8.5 M
• Average Salary/Benefit	\$74,700	\$24,400
• Average Age	NA	66
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/21/12
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$18.42 M	\$53.08 M	\$61.39 M
Annual Disbursements	\$12.24 M	\$10.93 M	\$9.81 M

EARNED INCOME OF DISABILITY RETIREES (2010)

Number of Disability Retirees	53
Number Who Reported Earnings	12
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.76%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$350.8 M
▶ 2008-2012 (Annualized)	4.51%
▶ 1986-2012 (Annualized)	8.21%

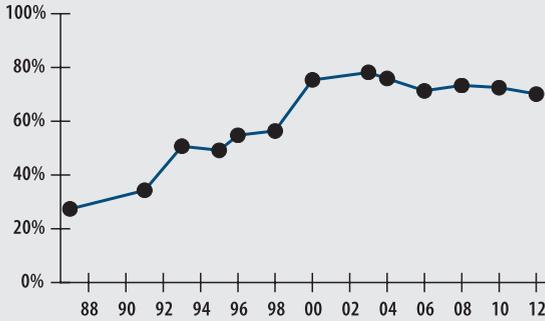
Malden

Government Center, Room 222
200 Pleasant Street
Malden, MA 02148
Phone 781-397-7086
Fax 781-397-7358

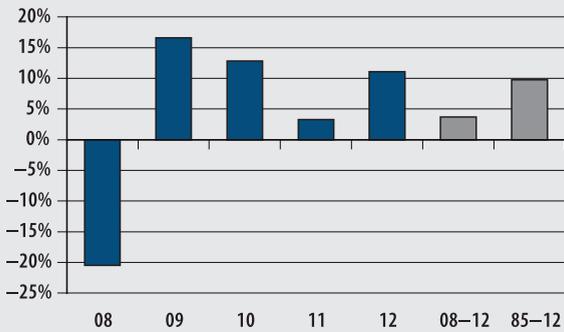
Board Members
Ronald B. Hogan (Chairperson),
Warren Atkinson, Jr., Joanne Croken,
Douglas Eisnor, Charles Ranaghan

Board Administrator
Kevin Morrison
Board Meeting
Third Wednesday of each month

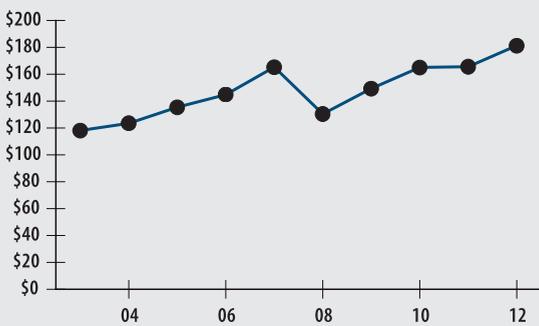
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

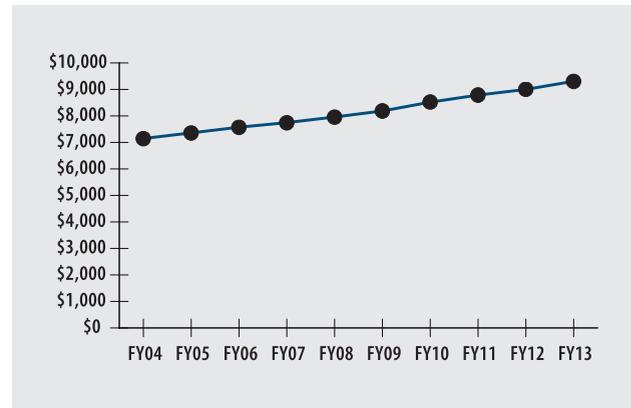
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.76%	9.71%	9.97%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.67%	5.96%	4.77%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.73%	4.61%	5.76%

ACTUARIAL

• Funded Ratio	70.1%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	2.3% Increasing Phase-in
• Year Fully Funded	2030
• Unfunded Liability	\$76.5 M
• Total Pension Appropriation (Fiscal 2013)	\$9.3 M

	Active	Retired
• Number of Members	797	669
• Total Payroll/Benefit	\$37.9 M	\$14.9 M
• Average Salary/Benefit	\$47,600	\$22,200
• Average Age	49	74
• Average Service	13.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/03/12
Period Covered	01/01/09-12/31/11

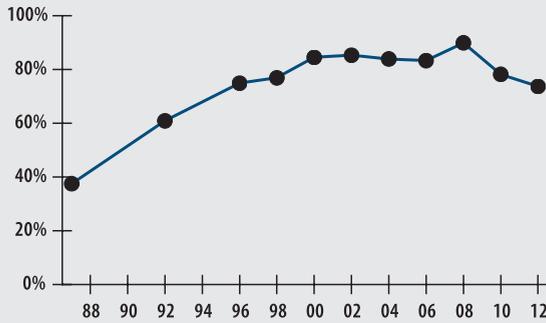
	2011	2010	2009
Annual Receipts	\$18.76 M	\$31.29 M	\$34.34 M
Annual Disbursements	\$16.91 M	\$16.20 M	\$15.27 M

EARNED INCOME OF DISABILITY RETIREES (2010)

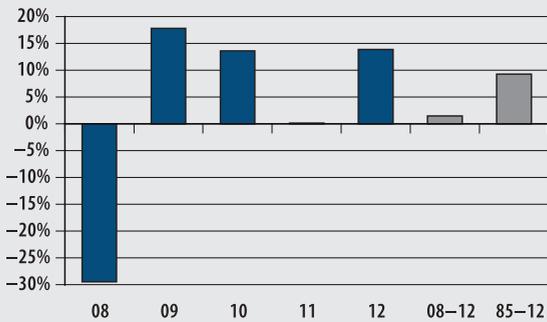
Number of Disability Retirees	96
Number Who Reported Earnings	30
Number of Excess Earners	2
Total Amount of Refund Due	\$14,087

▶ 2012 Return	11.09%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$181.1 M
▶ 2008-2012 (Annualized)	3.73%
▶ 1985-2012 (Annualized)	9.76%

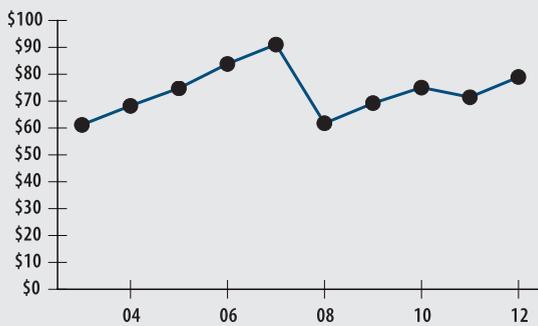
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

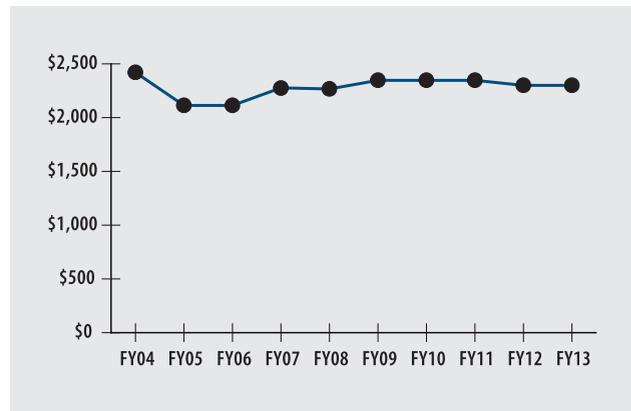
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.29%	9.12%	9.48%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.70%	6.30%	5.71%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.51%	1.18%	4.35%

ACTUARIAL

• Funded Ratio	73.7%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2037
• Unfunded Liability	\$28.4 M
• Total Pension Appropriation (Fiscal 2013)	\$2.3 M

	Active	Retired
• Number of Members	339	332
• Total Payroll/Benefit	\$16.6 M	\$7.0 M
• Average Salary/Benefit	\$48,900	\$21,000
• Average Age	49	73
• Average Service	12.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/19/10
Period Covered	01/01/07-12/31/09

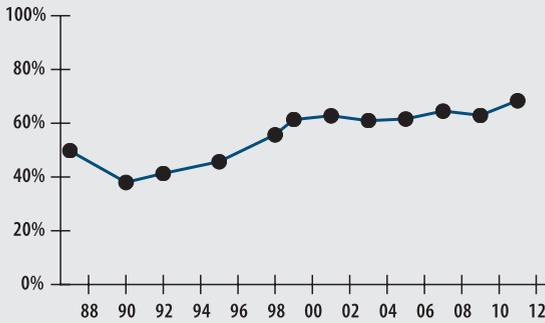
	2009	2008	2007
Annual Receipts	\$14.75 M	\$(22.24 M)	\$14.06 M
Annual Disbursements	\$7.28 M	\$7.01 M	\$6.94 M

EARNED INCOME OF DISABILITY RETIREES (2011)

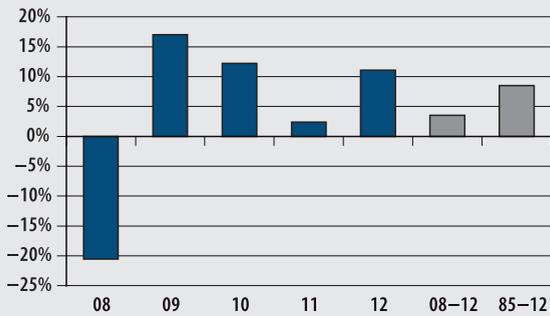
Number of Disability Retirees	21
Number Who Reported Earnings	9
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.89%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$78.9 M
▶ 2008-2012 (Annualized)	1.51%
▶ 1985-2012 (Annualized)	9.29%

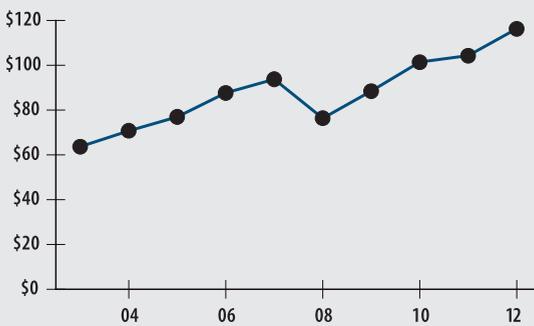
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

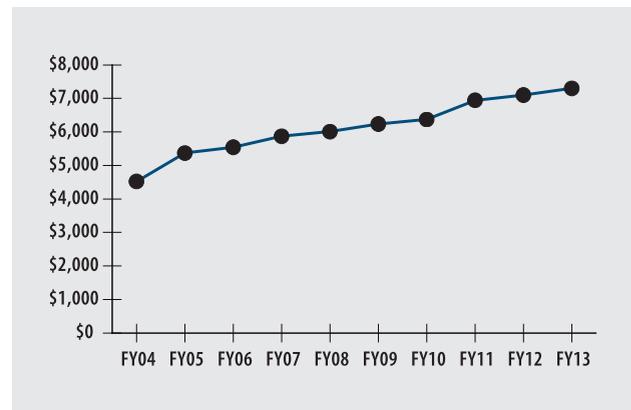
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.52%	8.42%	8.66%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.57%	5.77%	5.41%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.50%	2.69%	4.80%

ACTUARIAL

• Funded Ratio	68.4%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	2.0% Increasing
• Year Fully Funded	2025
• Unfunded Liability	\$50.6 M
• Total Pension Appropriation (Fiscal 2013)	\$7.3 M

	Active	Retired
• Number of Members	682	352
• Total Payroll/Benefit	\$30.5 M	\$8.4 M
• Average Salary/Benefit	\$44,700	\$23,800
• Average Age	NA	72
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

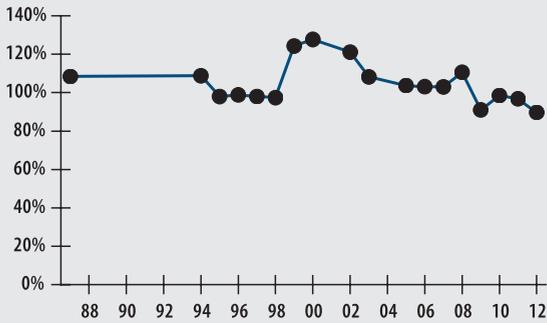
Date of Last Audit	05/02/13		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$13.03 M	\$21.06 M	\$22.66 M
Annual Disbursements	\$10.02 M	\$9.50 M	\$8.89 M

EARNED INCOME OF DISABILITY RETIREES (2011)

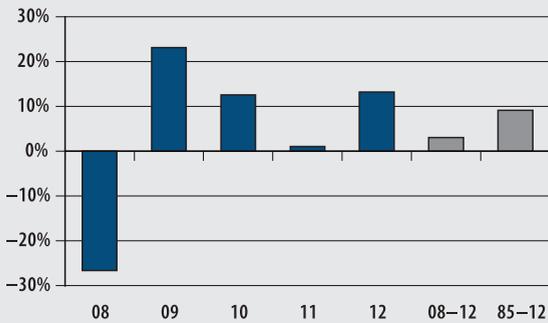
Number of Disability Retirees	36
Number Who Reported Earnings	8
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	11.07%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$116.2 M
▶ 2008-2012 (Annualized)	3.50%
▶ 1985-2012 (Annualized)	8.52%

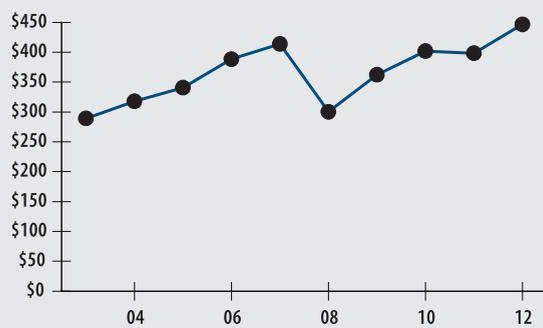
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

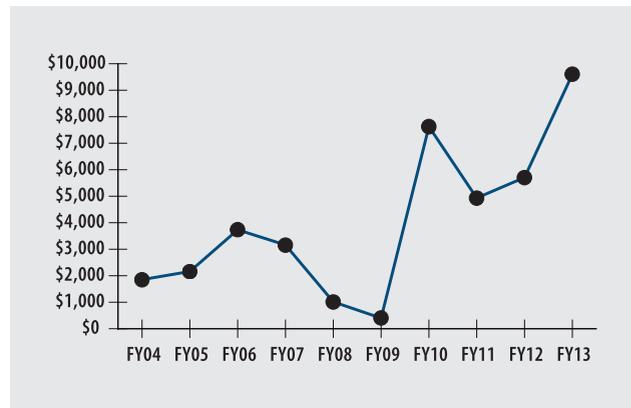
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.13%	8.99%	9.30%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.93%	5.71%	5.22%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.11%	2.12%	4.83%

ACTUARIAL

• Funded Ratio	89.7%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.63%
• Funding Schedule	Frozen Entry Age Basis
• Year Fully Funded	NA
• Unfunded Liability	\$48.5 M
• Total Pension Appropriation (Fiscal 2013)	\$9.6M

	Active	Retired
• Number of Members	1,119	630
• Total Payroll/Benefit	\$84.0 M	\$21.0 M
• Average Salary/Benefit	\$75,100	\$33,400
• Average Age	48	68
• Average Service	14.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	05/09/13
Period Covered	01/01/09-12/31/11

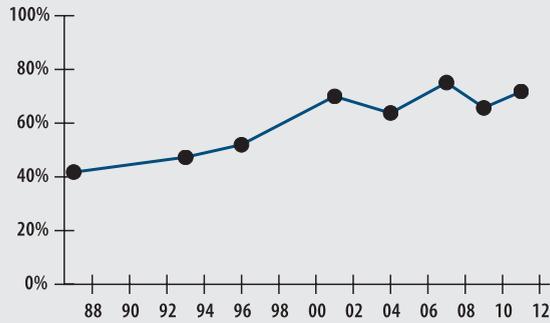
	2011	2010	2009
Annual Receipts	\$19.54 M	\$60.19 M	\$81.99 M
Annual Disbursements	\$22.69 M	\$20.76 M	\$17.86

EARNED INCOME OF DISABILITY RETIREES (2011)

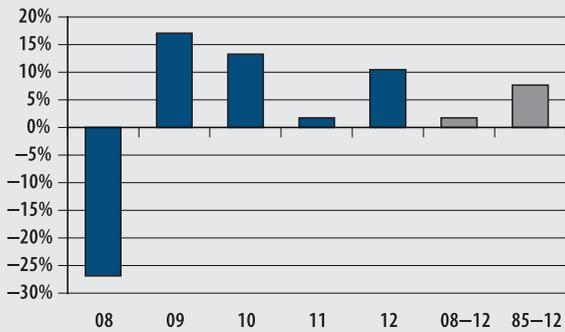
Number of Disability Retirees	51
Number Who Reported Earnings	13
Number of Excess Earners	1
Total Amount of Refund Due	\$11,506

▶ 2012 Return	13.23%
▶ Assumed Rate of Return	7.63%
▶ 2012 Market Value	\$446.7 M
▶ 2008-2012 (Annualized)	3.11%
▶ 1985-2012 (Annualized)	9.13%

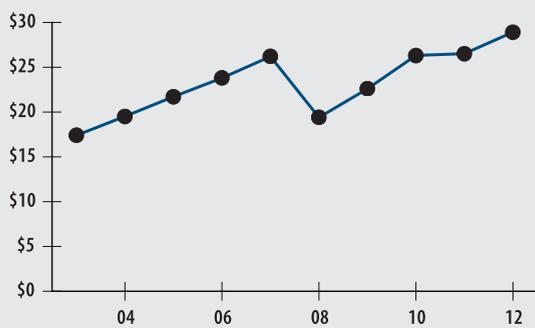
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

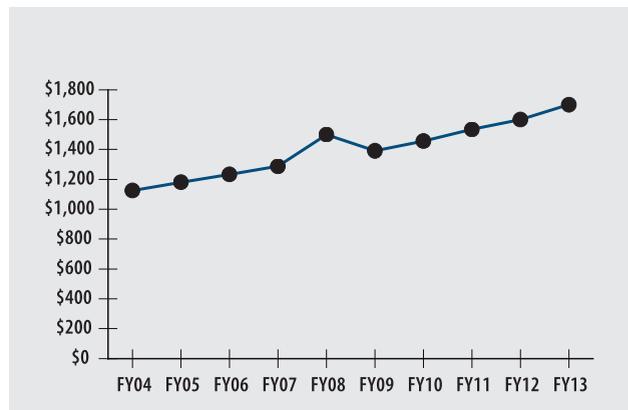
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.70%	7.59%	7.83%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.41%	5.15%	4.88%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.75%	1.46%	2.67%

ACTUARIAL

• Funded Ratio	71.8%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2029
• Unfunded Liability	\$10.8 M
• Total Pension Appropriation (Fiscal 2013)	\$1.7 M

	Active	Retired
• Number of Members	198	90
• Total Payroll/Benefit	\$7.7 M	\$1.9 M
• Average Salary/Benefit	\$39,000	\$21,500
• Average Age	48	72
• Average Service	10.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

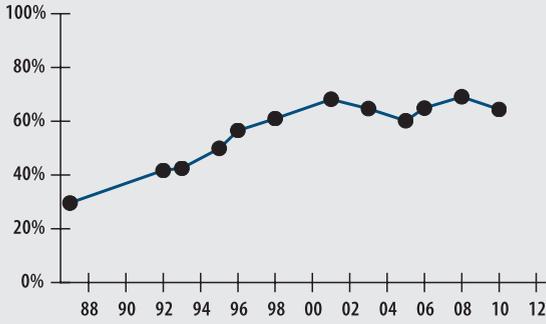
Date of Last Audit	10/27/11		
Period Covered	01/01/08-12/31/10		
	2010	2009	2008
Annual Receipts	\$5.33 M	\$6.20 M	\$(4.62 M)
Annual Disbursements	\$2.54 M	\$2.13 M	\$2.19 M

EARNED INCOME OF DISABILITY RETIREES (2011)

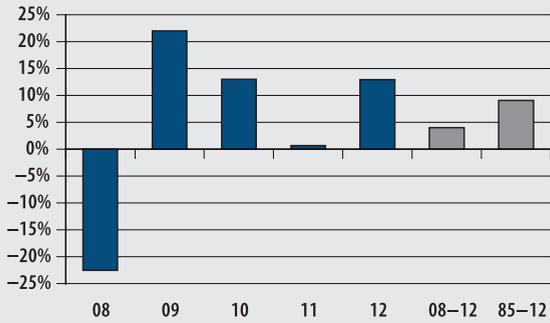
Number of Disability Retirees	10
Number Who Reported Earnings	5
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	10.51%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$28.9 M
▶ 2008-2012 (Annualized)	1.75%
▶ 1985-2012 (Annualized)	7.70%

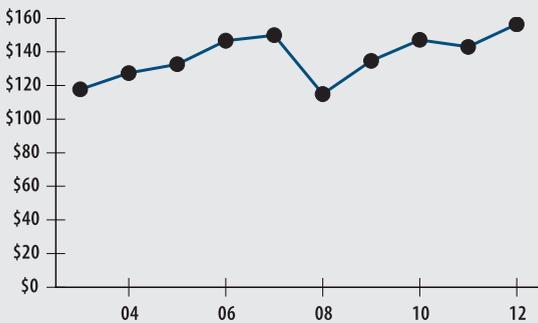
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

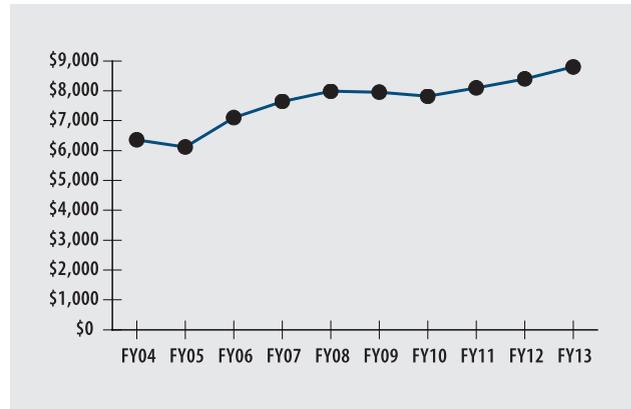
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.11%	8.97%	9.30%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.85%	5.78%	5.92%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.00%	2.85%	5.29%

ACTUARIAL

• Funded Ratio	64.4%
• Date of Last Valuation	01/10
• Actuary	Buck Consultants
• Assumed Rate of Return	7.50%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2040
• Unfunded Liability	\$83.3 M
• Total Pension Appropriation (Fiscal 2013)	\$8.8 M

	Active	Retired
• Number of Members	716	602
• Total Payroll/Benefit	\$35.5 M	\$14.0 M
• Average Salary/Benefit	\$49,500	\$23,200
• Average Age	NA	75
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/12/13		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$12.98 M	\$28.55 M	\$35.71 M
Annual Disbursements	\$17.34 M	\$16.13 M	\$15.47 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	106
Number Who Reported Earnings	21
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.99%
▶ Assumed Rate of Return	7.50%
▶ 2012 Market Value	\$156.4 M
▶ 2008-2012 (Annualized)	4.00%
▶ 1985-2012 (Annualized)	9.11%

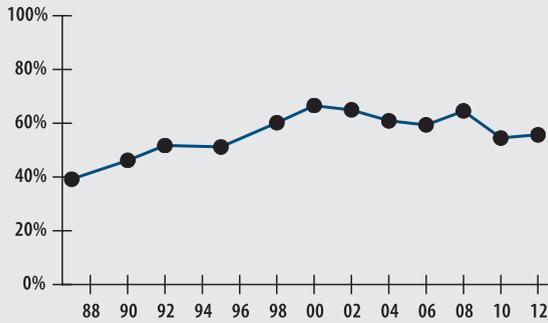
Melrose

City Hall
562 Main Street
Melrose, MA 02176
Phone 781-979-4150 or 4151
Fax 781-979-4206

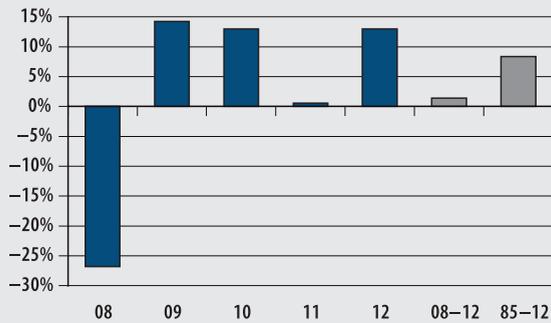
Board Members
Patrick DelloRusso (Chairperson),
Scott Colborne, Michael Lindstrom,
Michael L. Lyle, Richard E. Pitts

Board Director
Michael Pasquariello
Board Meeting
Usually the last Wednesday of each month

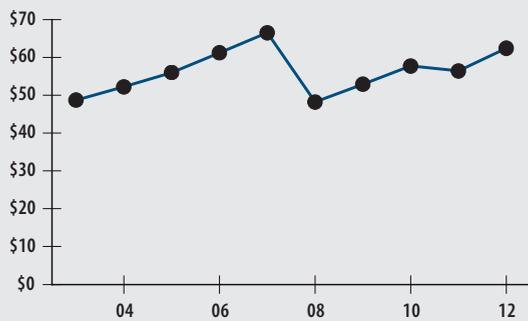
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

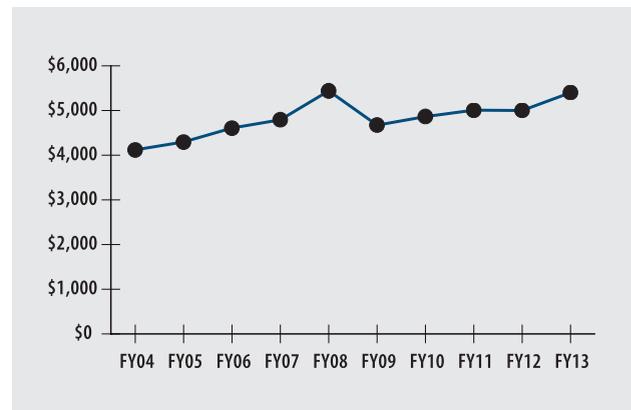
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.39%	8.22%	8.53%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.76%	4.85%	4.45%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.43%	1.09%	3.38%

ACTUARIAL

• Funded Ratio	55.7%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	3.31% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$49.4 M
• Total Pension Appropriation (Fiscal 2013)	\$5.4 M

	Active	Retired
• Number of Members	423	368
• Total Payroll/Benefit	\$17.3 M	\$7.6 M
• Average Salary/Benefit	\$41,000	\$20,800
• Average Age	48	74
• Average Service	10.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/04/11
Period Covered	01/01/08-12/31/10

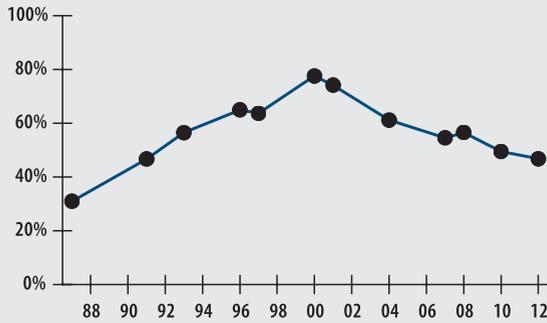
	2010	2009	2008
Annual Receipts	\$13.17 M	\$12.55 M	\$(9.70 M)
Annual Disbursements	\$8.32 M	\$8.19 M	\$8.18 M

EARNED INCOME OF DISABILITY RETIREES (2011)

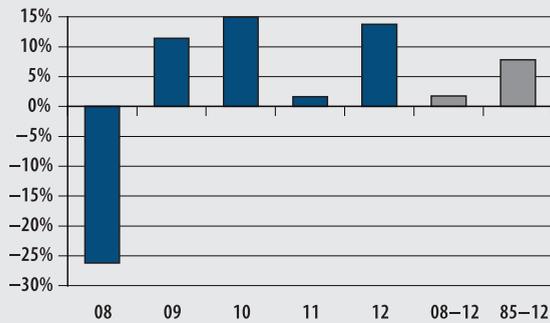
Number of Disability Retirees	44
Number Who Reported Earnings	12
Number of Excess Earners	1
Total Amount of Refund Due	\$2,122

▶ 2012 Return	12.98%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$62.4 M
▶ 2008-2012 (Annualized)	1.43%
▶ 1985-2012 (Annualized)	8.39%

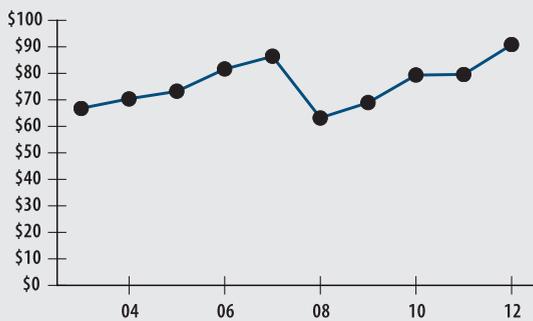
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

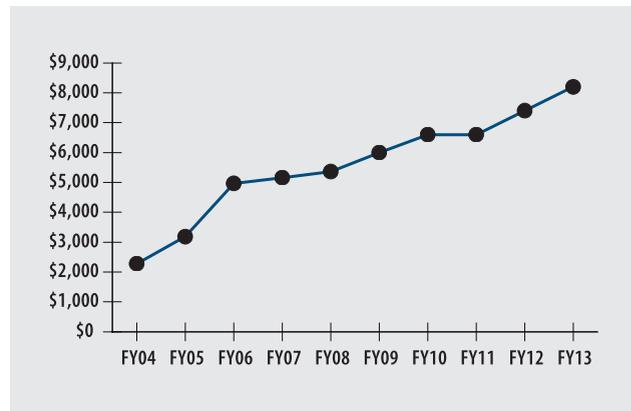
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.83%	7.61%	7.85%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.10%	3.78%	3.17%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.79%	0.53%	2.46%

ACTUARIAL

• Funded Ratio	46.8%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2032
• Unfunded Liability	\$98.4 M
• Total Pension Appropriation (Fiscal 2013)	\$8.2 M

	Active	Retired
• Number of Members	603	421
• Total Payroll/Benefit	\$29.4 M	\$10.1 M
• Average Salary/Benefit	\$48,800	\$23,900
• Average Age	47	72
• Average Service	13.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

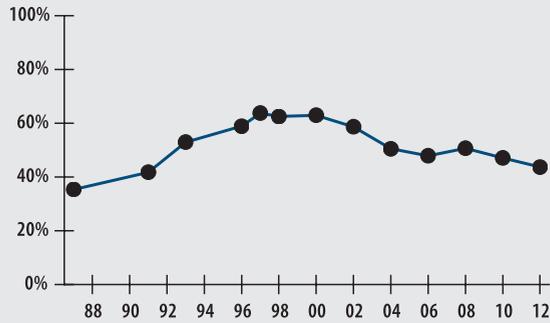
Date of Last Audit	04/12/12
Period Covered	01/01/09-12/31/10
Annual Receipts	2010 \$20.38 M / 2009 \$16.61 M
Annual Disbursements	\$10.36 M / \$9.81 M

EARNED INCOME OF DISABILITY RETIREES (2011)

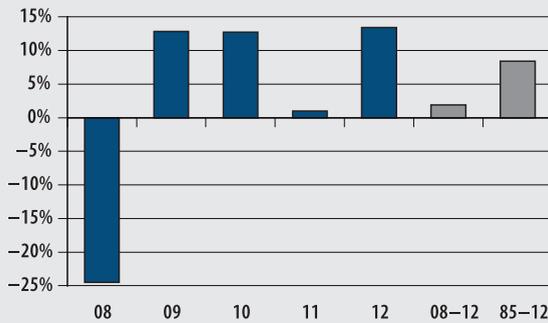
Number of Disability Retirees	54
Number Who Reported Earnings	15
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.74%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$90.8 M
▶ 2008-2012 (Annualized)	1.79%
▶ 1985-2012 (Annualized)	7.83%

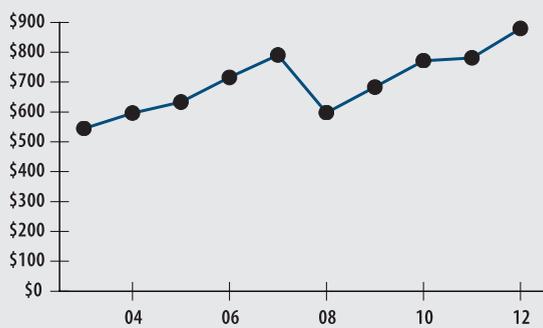
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

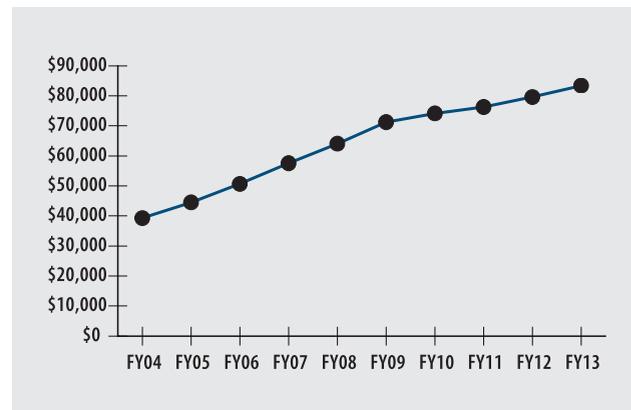
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.39%	8.21%	8.50%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.24%	4.42%	4.10%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.93%	1.43%	3.82%

ACTUARIAL

• Funded Ratio	43.7%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2035
• Unfunded Liability	\$1.1 B
• Total Pension Appropriation (Fiscal 2013)	\$83.4 M

	Active	Retired
• Number of Members	8,979	4,886
• Total Payroll/Benefit	\$393.1 M	\$102.7 M
• Average Salary/Benefit	\$43,800	\$21,000
• Average Age	48	NA
• Average Service	11.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/31/12
Period Covered	01/01/08-12/31/10

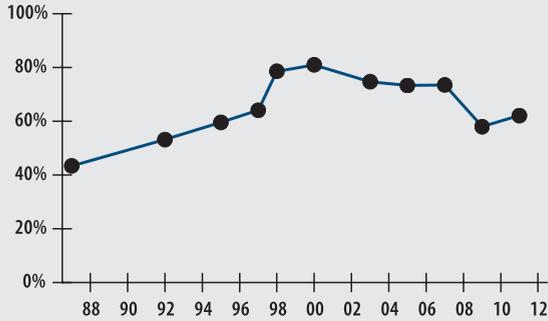
	2010	2009	2008
Annual Receipts	\$203.90 M	\$200.56 M	\$(96.45 M)
Annual Disbursements	\$111.74 M	\$107.05 M	\$104.03 M

EARNED INCOME OF DISABILITY RETIREES (2011)

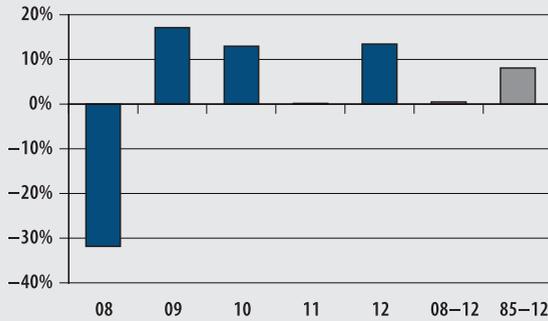
Number of Disability Retirees	456
Number Who Reported Earnings	122
Number of Excess Earners	5
Total Amount of Refund Due	\$19,619

▶ 2012 Return	13.44%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$879.4 M
▶ 2008-2012 (Annualized)	1.93%
▶ 1985-2012 (Annualized)	8.39%

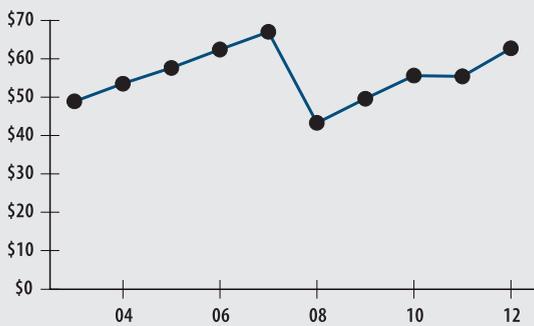
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

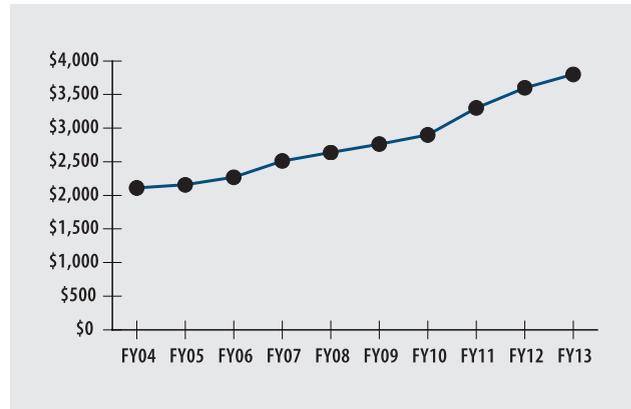
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.15%	7.95%	8.26%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.11%	4.49%	4.40%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.52%	-0.31%	1.54%

ACTUARIAL

• Funded Ratio	62.1%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2037
• Unfunded Liability	\$37.3 M
• Total Pension Appropriation (Fiscal 2013)	\$3.8 M

	Active	Retired
• Number of Members	441	274
• Total Payroll/Benefit	\$17.7 M	\$5.0 M
• Average Salary/Benefit	\$40,100	\$18,300
• Average Age	49	75
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/13/10
Period Covered	01/01/07-12/31/09

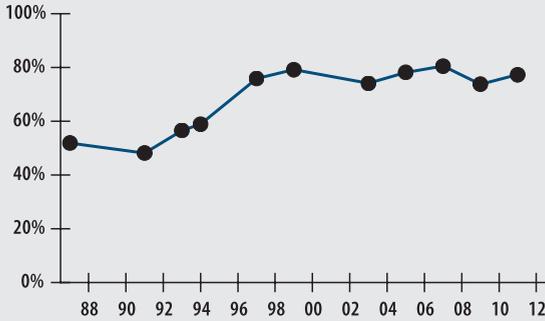
	2009	2008	2007
Annual Receipts	\$12.11 M	\$(17.26 M)	\$9.63 M
Annual Disbursements	\$5.69 M	\$5.55 M	\$5.40 M

EARNED INCOME OF DISABILITY RETIREES (2011)

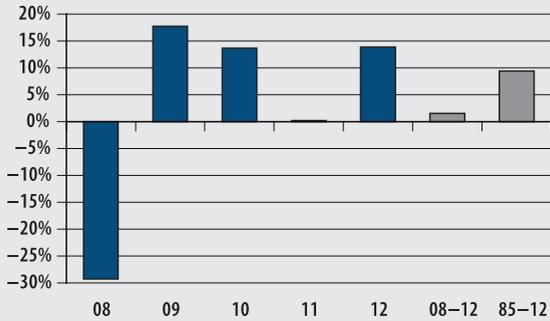
Number of Disability Retirees	30
Number Who Reported Earnings	12
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.46%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$62.7 M
▶ 2008-2012 (Annualized)	.52%
▶ 1985-2012 (Annualized)	8.15%

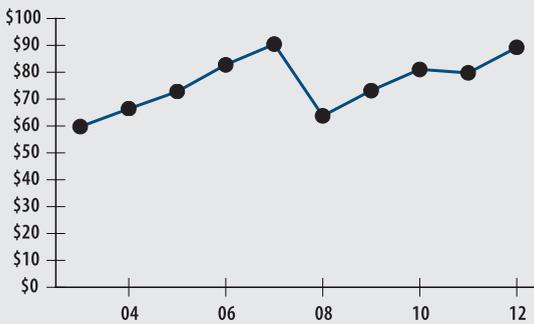
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

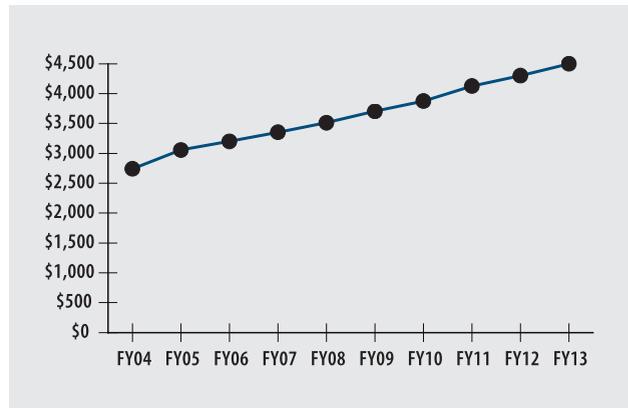
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.46%	9.30%	9.67%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.37%	6.00%	5.42%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.58%	1.17%	4.09%

ACTUARIAL

• Funded Ratio	77.3%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	3.75% Increasing
• Year Fully Funded	2022
• Unfunded Liability	\$25.7 M
• Total Pension Appropriation (Fiscal 2013)	\$4.5 M

	Active	Retired
• Number of Members	334	277
• Total Payroll/Benefit	\$17.2 M	\$6.8 M
• Average Salary/Benefit	\$51,600	\$24,600
• Average Age	47	73
• Average Service	12.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/20/12
Period Covered	01/01/09-12/31/11

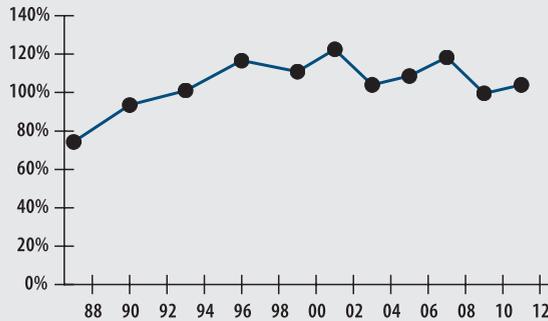
	2011	2010	2009
Annual Receipts	\$6.73 M	\$15.68 M	\$16.59 M
Annual Disbursements	\$7.99 M	\$7.79 M	\$7.20 M

EARNED INCOME OF DISABILITY RETIREES (2011)

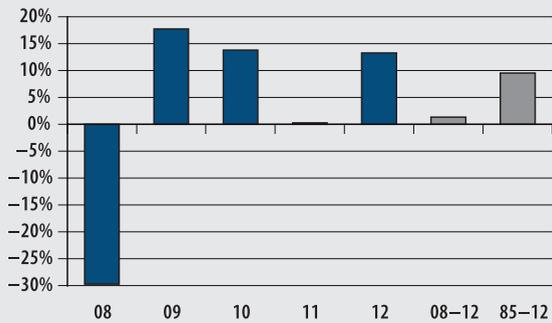
Number of Disability Retirees	39
Number Who Reported Earnings	8
Number of Excess Earners	1
Total Amount of Refund Due	\$2,089

▶ 2012 Return	13.90%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$89.2 M
▶ 2008-2012 (Annualized)	1.58%
▶ 1985-2012 (Annualized)	9.46%

Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

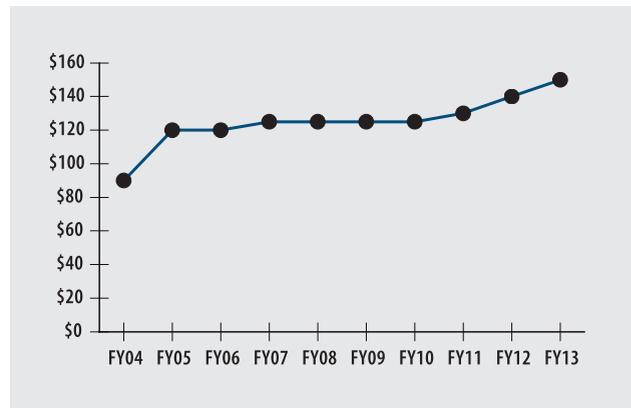
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.59%	9.46%	9.83%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.68%	6.32%	5.71%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.39%	1.17%	4.32%

ACTUARIAL

• Funded Ratio	104.0%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	Fully Funded
• Year Fully Funded	NA
• Unfunded Liability	-\$0.5 M
• Total Pension Appropriation (Fiscal 2013)	\$150,000

	Active	Retired
• Number of Members	48	37
• Total Payroll/Benefit	\$2.2 M	\$0.8 M
• Average Salary/Benefit	\$46,600	\$20,400
• Average Age	47	73
• Average Service	9.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/24/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$1.82 M	\$1.92 M	\$(3.29 M)
Annual Disbursements	\$780,297	\$698,729	\$641,616

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	1
Number Who Reported Earnings	0
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.32%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$11.6 M
▶ 2008-2012 (Annualized)	1.39%
▶ 1985-2012 (Annualized)	9.59%

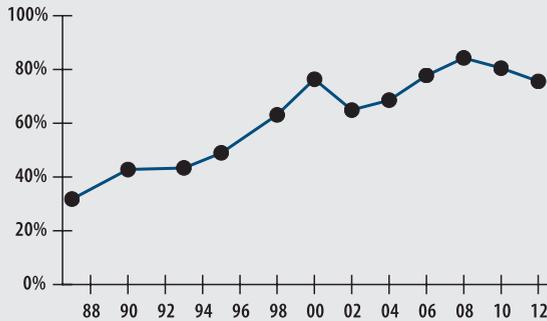
Montague

One Avenue A
Turners Falls, MA 01376
Phone 413-863-3200, ext. 111
Fax 413-863-3224

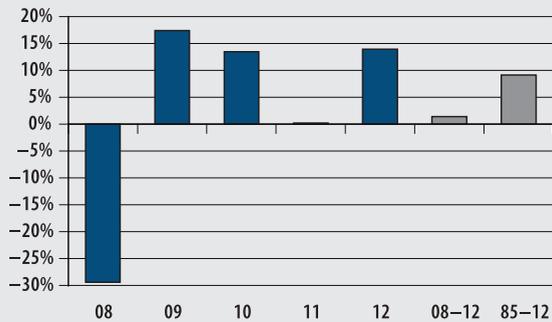
Board Members
Carolyn S. Olsen (Chairperson),
Frank Abbondanzio, Cheryl Clark,
David R. Dion, Marianne Fiske

Board Administrator
Shari Hildreth
Board Meeting
Usually the fourth Tuesday of each month
at 1:00 pm

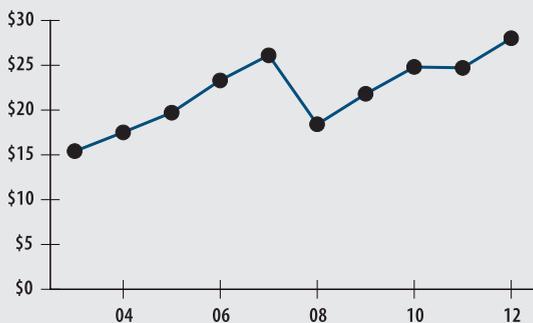
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

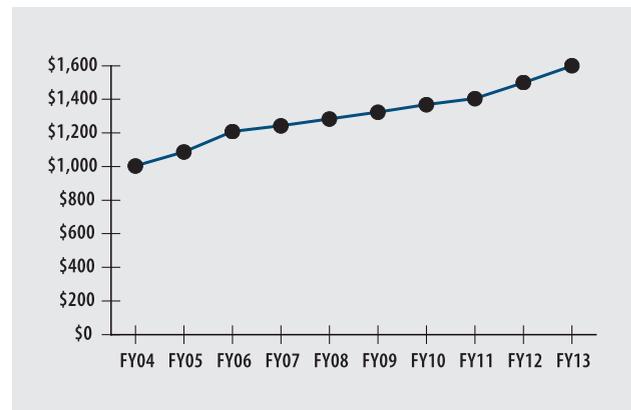
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.18%	9.01%	9.36%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.66%	6.26%	5.66%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.46%	1.13%	4.27%

ACTUARIAL

• Funded Ratio	75.6%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	1.0% Increasing
• Year Fully Funded	2025
• Unfunded Liability	\$8.7 M
• Total Pension Appropriation (Fiscal 2013)	\$1.6 M

	Active	Retired
• Number of Members	193	114
• Total Payroll/Benefit	\$5.9 M	\$1.9 M
• Average Salary/Benefit	\$30,700	\$16,300
• Average Age	48	72
• Average Service	11.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

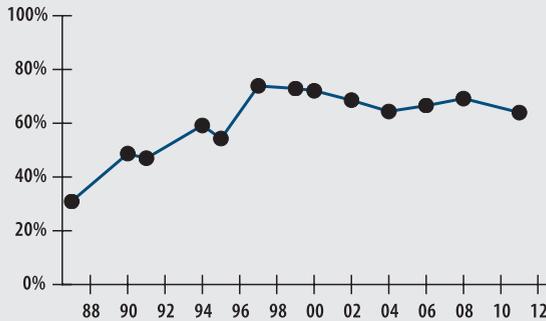
Date of Last Audit	05/16/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011: \$2.17 M, 2010: \$5.05 M, 2009: \$5.35 M
Annual Disbursements	2011: \$2.23 M, 2010: \$2.07 M, 2009: \$1.93 M

EARNED INCOME OF DISABILITY RETIREES (2011)

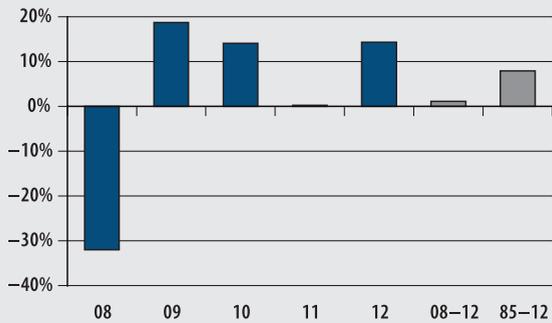
Number of Disability Retirees	14
Number Who Reported Earnings	3
Number of Excess Earners	1
Total Amount of Refund Due	\$2,546

▶ 2012 Return	13.94%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$28.0 M
▶ 2008-2012 (Annualized)	1.46%
▶ 1985-2012 (Annualized)	9.18%

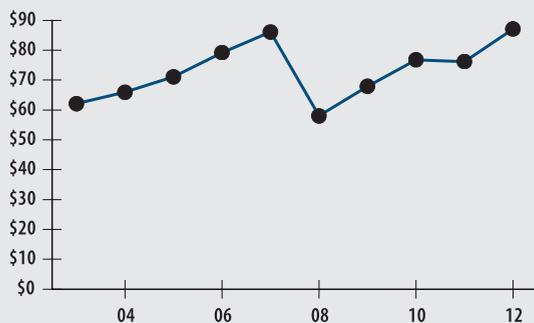
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

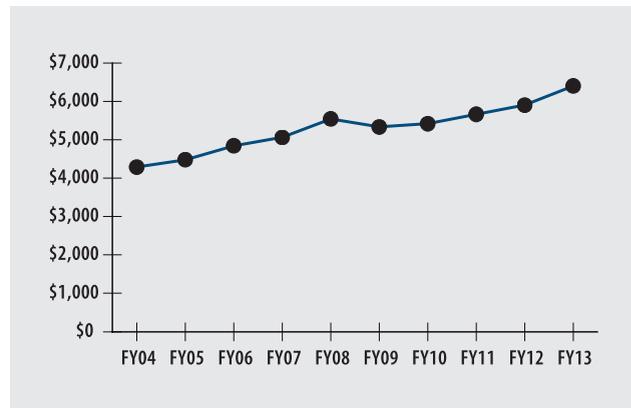
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.92%	7.69%	7.99%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.59%	3.27%	2.31%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.13%	0.20%	2.37%

ACTUARIAL

• Funded Ratio	64.0%
• Date of Last Valuation	01/11
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2030
• Unfunded Liability	\$53.2 M
• Total Pension Appropriation (Fiscal 2013)	\$6.4 M

	Active	Retired
• Number of Members	559	360
• Total Payroll/Benefit	\$27.6 M	\$8.1 M
• Average Salary/Benefit	\$49,400	\$22,500
• Average Age	48	NA
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/15/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$9.90 M 2010 \$17.72 M 2009 \$18.47 M
Annual Disbursements	\$9.80 M \$9.45 M \$9.47 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	31
Number Who Reported Earnings	7
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	14.32%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$87.1 M
▶ 2008-2012 (Annualized)	1.13%
▶ 1985-2012 (Annualized)	7.92%

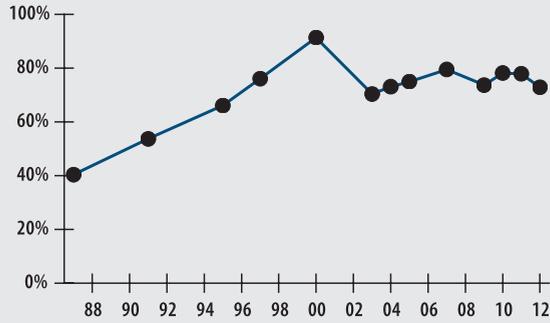
Needham

Town Hall
1471 Highland Avenue
Needham, MA 02492-2605
Phone 781-455-7500, Ext. 231, 232
Fax 781-449-4569

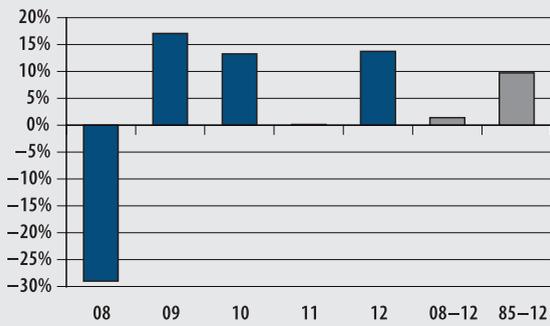
Board Members
Evelyn M. Poness (Chairperson),
Kathleen P. Fitzpatrick, John P. Krawiecki,
Robert P. Mearls, Thomas A. Welch II

Board Administrator
Mary Clare Siegel
Board Meeting
Usually second Wednesday of each month
at 9:00 am

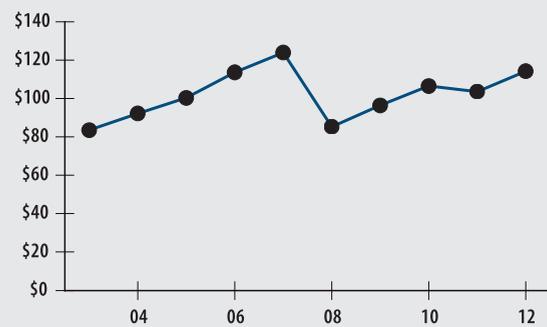
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

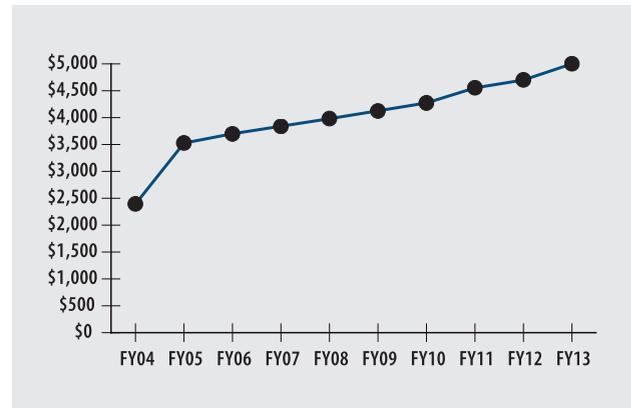
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.78%	9.64%	10.02%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.56%	6.19%	5.61%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.43%	1.13%	4.27%

ACTUARIAL

• Funded Ratio	72.9%
• Date of Last Valuation	01/12
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$42.5 M
• Total Pension Appropriation (Fiscal 2013)	\$5.0 M

	Active	Retired
• Number of Members	644	473
• Total Payroll/Benefit	\$29.0 M	\$9.6 M
• Average Salary/Benefit	\$45,000	\$20,200
• Average Age	NA	77
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/06/13
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$8.20 M	\$20.45 M	\$21.64 M
Annual Disbursements	\$11.04 M	\$10.55 M	\$10.42 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	33
Number Who Reported Earnings	7
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.74%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$114.2 M
▶ 2008-2012 (Annualized)	1.43%
▶ 1985-2012 (Annualized)	9.78%

New Bedford

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

Board Members

Arthur J. Caron, Jr., Esq. (Chairperson),
 Dennis C. Brightman, Paul M. Lestage,
 Peter C. Schmidt, Edward J. Wiley

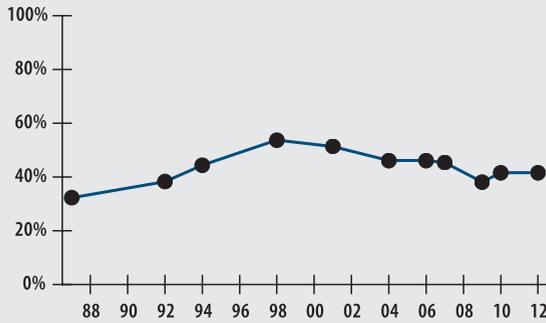
Board Administrator

Gerard Arnaudet

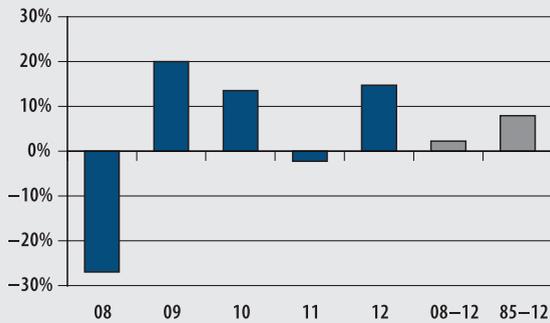
Board Meeting

Usually last Thursday of each month at
 10:00 am

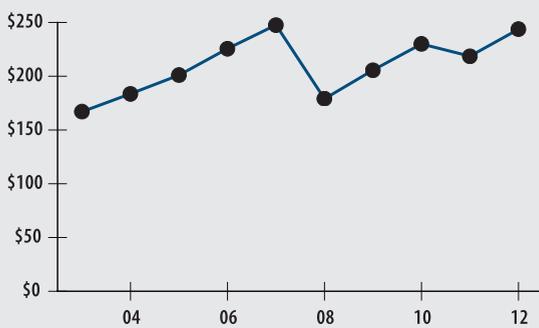
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

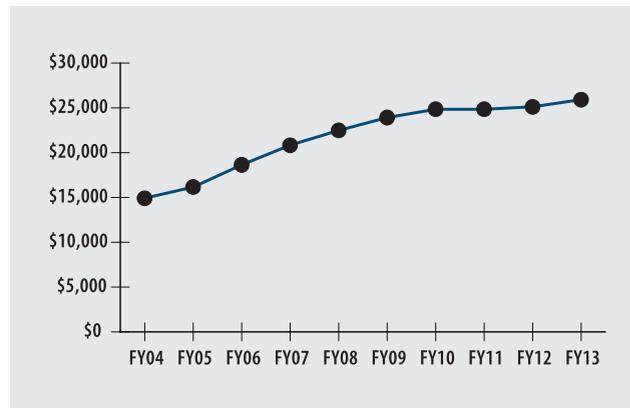
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.98%	7.74%	8.14%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.07%	5.80%	5.95%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.25%	1.47%	4.62%

ACTUARIAL

• Funded Ratio	41.6%
• Date of Last Valuation	01/12
• Actuary	Sherman Actuarial Services
• Assumed Rate of Return	7.75%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2036
• Unfunded Liability	\$337.5 M
• Total Pension Appropriation (Fiscal 2013)	\$25.9 M

	Active	Retired
• Number of Members	1,917	1,774
• Total Payroll/Benefit	\$82.5 M	\$37.5M
• Average Salary/Benefit	\$43,000	\$21,100
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	12/13/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$63.06 M	\$65.97 M	\$(32.84 M)
Annual Disbursements	\$40.23 M	\$38.23 M	\$35.57 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	338
Number Who Reported Earnings	83
Number of Excess Earners	5
Total Amount of Refund Due	\$33,518

▶ 2012 Return	14.76%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$243.7 M
▶ 2008-2012 (Annualized)	2.25%
▶ 1985-2012 (Annualized)	7.98%

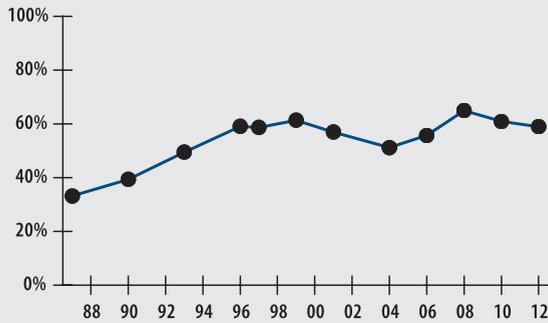
Newburyport

City Hall
60 Pleasant Street
Newburyport, MA 01950
Phone 978-465-6619
Fax 978-462-4042

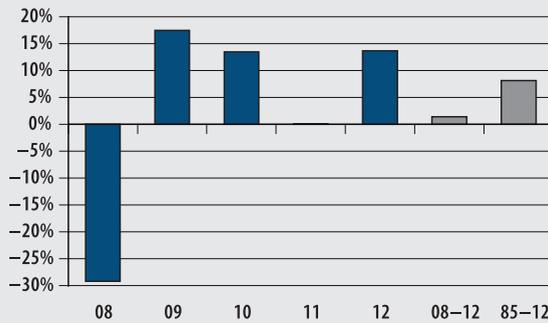
Board Members
Vincent Malgeri, Esq. (Chairperson),
Paula Fowler, Alexander Kravchuk,
Joseph Spaulding, William B. Squillace

Board Administrator
Laurie Burton
Board Meeting
Last Wednesday of the month

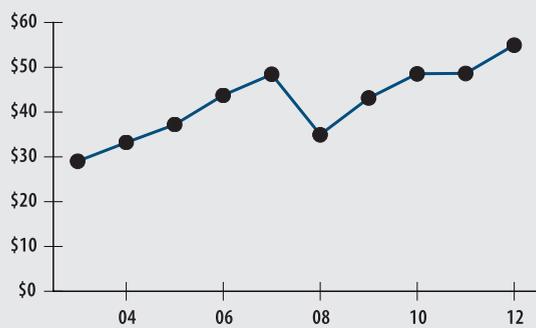
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

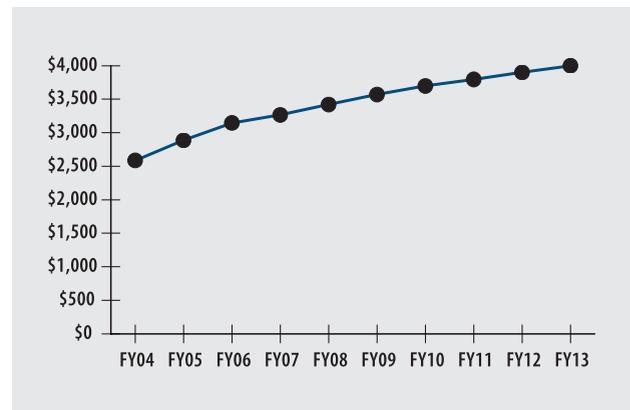
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.16%	7.96%	8.27%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.06%	6.29%	6.08%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.45%	1.12%	4.24%

ACTUARIAL

• Funded Ratio	59.0%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	2.7% Increasing
• Year Fully Funded	2038
• Unfunded Liability	\$36.1 M
• Total Pension Appropriation (Fiscal 2013)	\$4.0 M

	Active	Retired
• Number of Members	364	217
• Total Payroll/Benefit	\$15.1 M	\$4.9 M
• Average Salary/Benefit	\$41,400	\$22,700
• Average Age	47	73
• Average Service	10.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/17/13
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$5.66 M	\$11.29 M	\$11.82 M
Annual Disbursements	\$5.80 M	\$5.51 M	\$5.24 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	28
Number Who Reported Earnings	7
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.71%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$54.9 M
▶ 2008-2012 (Annualized)	1.45%
▶ 1985-2012 (Annualized)	8.16%

Board Members

Nunzio J. Piselli (Chairperson), Paul Bianchi,
 Francis P. Capello, Jr., Kimberly A. Fletcher, Esq.,
 David C. Wilkinson

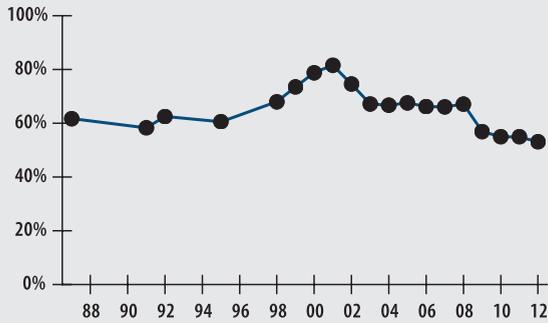
Board Administrator

Kelly Byrne

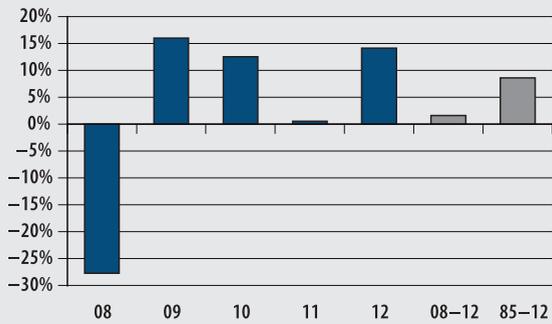
Board Meeting

Third Wednesday of the month at 3:00 pm

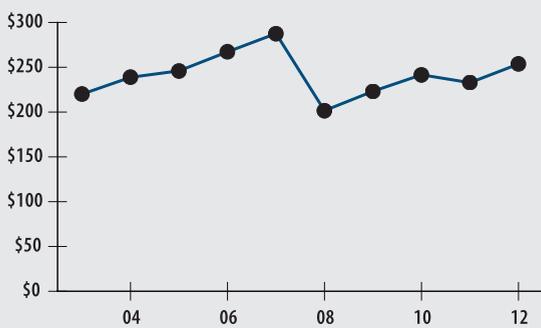
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

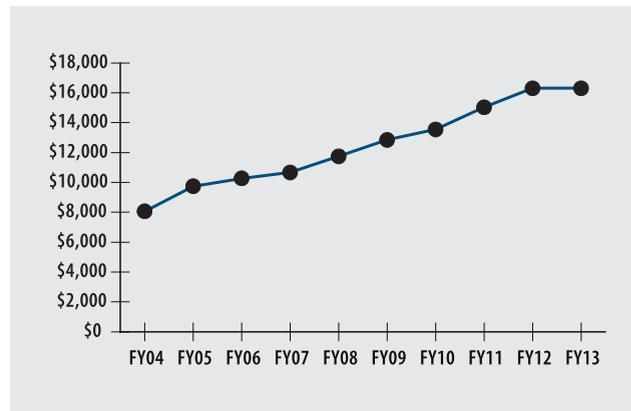
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.62%	8.42%	8.73%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.95%	4.51%	3.97%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.63%	1.04%	3.34%

ACTUARIAL

• Funded Ratio	53.1%
• Date of Last Valuation	01/12
• Actuary	Buck Consultants
• Assumed Rate of Return	7.75%
• Funding Schedule	3.75% Increasing
• Year Fully Funded	2038
• Unfunded Liability	\$231.1 M
• Total Pension Appropriation (Fiscal 2013)	\$16.3 M

	Active	Retired
• Number of Members	1,610	1,319
• Total Payroll/Benefit	\$80.3 M	\$32.4 M
• Average Salary/Benefit	\$49,900	\$24,600
• Average Age	NA	74
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/22/11
Period Covered	01/01/08-12/31/10

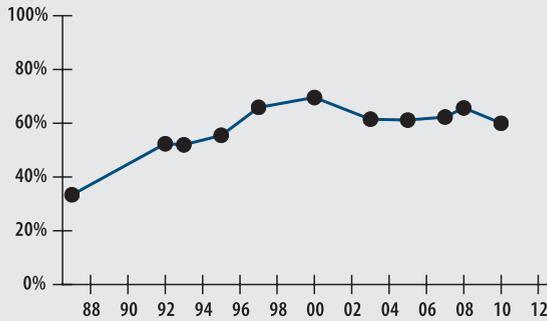
	2010	2009	2008
Annual Receipts	\$52.21 M	\$53.85 M	\$(54.91 M)
Annual Disbursements	\$33.85 M	\$32.28 M	\$31.01 M

EARNED INCOME OF DISABILITY RETIREES (2011)

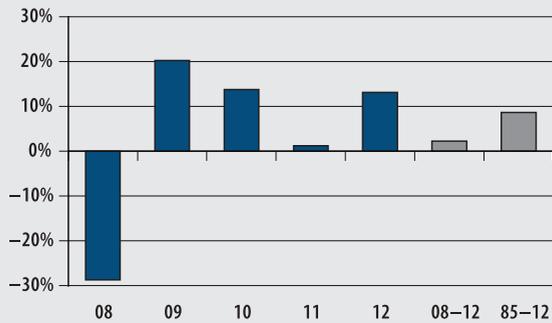
Number of Disability Retirees	146
Number Who Reported Earnings	38
Number of Excess Earners	1
Total Amount of Refund Due	\$1,208

▶ 2012 Return	14.15%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$253.6 M
▶ 2008-2012 (Annualized)	1.63%
▶ 1985-2012 (Annualized)	8.62%

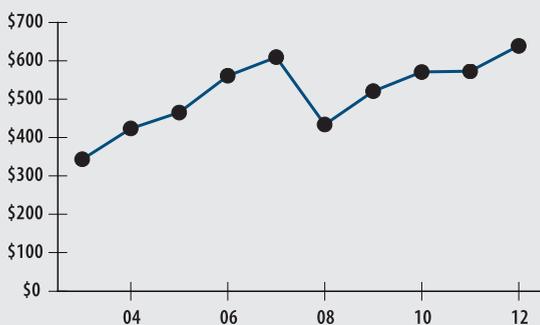
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

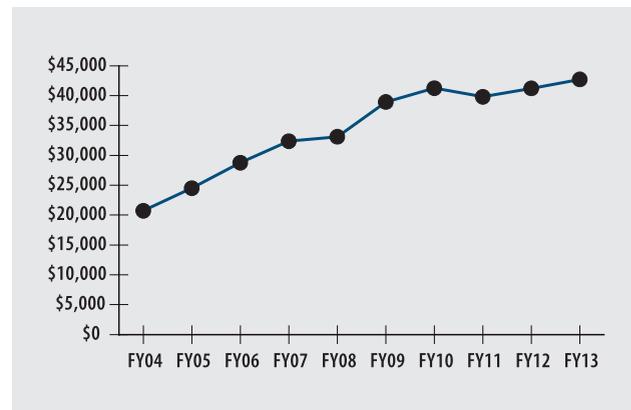
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.67%	8.50%	8.79%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.57%	4.91%	4.84%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.27%	1.67%	4.15%

ACTUARIAL

• Funded Ratio	60.0%
• Date of Last Valuation	01/10
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2031
• Unfunded Liability	\$401.1 M
• Total Pension Appropriation (Fiscal 2013)	\$42.7 M

	Active	Retired
• Number of Members	5,526	2,870
• Total Payroll/Benefit	\$223.3 M	\$56.6 M
• Average Salary/Benefit	\$40,400	\$19,700
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	05/17/13
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$71.51 M	\$140.13 M	\$159.23 M
Annual Disbursements	\$73.10 M	\$87.18 M	\$66.17 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	312
Number Who Reported Earnings	94
Number of Excess Earners	4
Total Amount of Refund Due	\$29,393

▶ 2012 Return	13.19%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$638.7 M
▶ 2008-2012 (Annualized)	2.27%
▶ 1985-2012 (Annualized)	8.67%

North Adams

85 Main Street, Room 322
North Adams, MA 01247
Phone 413-663-5185
Fax 413-664-9412

Board Members

Lawrence R. O'Brien (Chairperson),
Alan Marden, Fred T. Thompson, Esq.,
Kathleen A. Wall

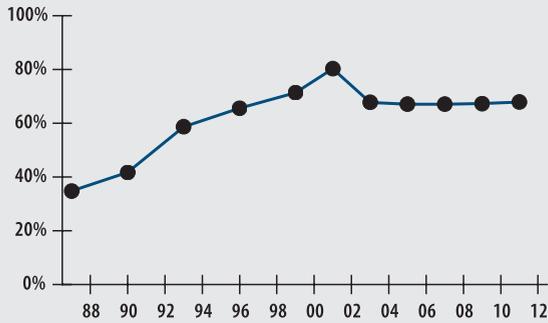
Board Administrator

Beth Matson

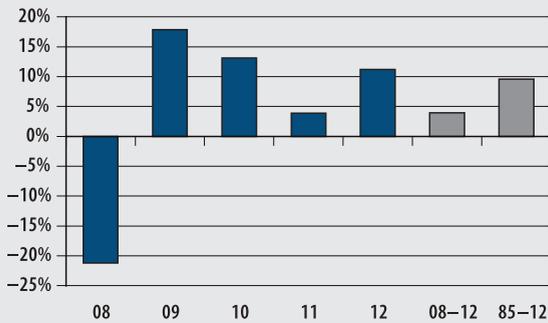
Board Meeting

Varies

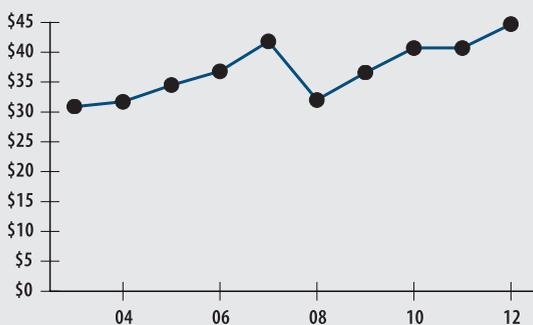
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

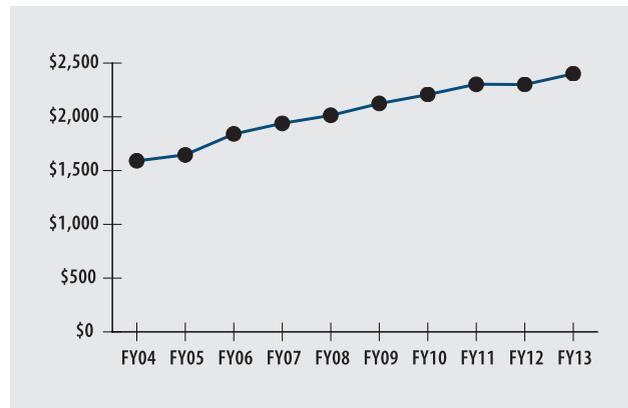
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.58%	9.53%	9.75%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.95%	6.27%	5.06%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.95%	4.91%	5.94%

ACTUARIAL

• Funded Ratio	67.9%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2028
• Unfunded Liability	\$19.4 M
• Total Pension Appropriation (Fiscal 2013)	\$2.4 M

	Active	Retired
• Number of Members	369	211
• Total Payroll/Benefit	\$10.4 M	\$3.7 M
• Average Salary/Benefit	\$28,200	\$17,400
• Average Age	47	73
• Average Service	10.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/26/11
Period Covered	01/01/08-12/31/10

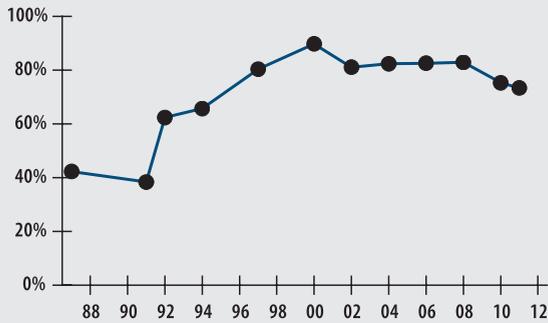
	2010	2009	2008
Annual Receipts	\$8.13 M	\$8.92 M	\$(5.95 M)
Annual Disbursements	\$4.43 M	\$4.17 M	\$4.10 M

EARNED INCOME OF DISABILITY RETIREES (2011)

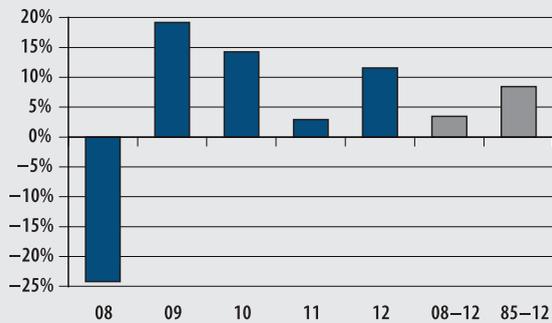
Number of Disability Retirees	34
Number Who Reported Earnings	10
Number of Excess Earners	1
Total Amount of Refund Due	\$1,664

▶ 2012 Return	11.18%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$44.7 M
▶ 2008-2012 (Annualized)	3.95%
▶ 1985-2012 (Annualized)	9.58%

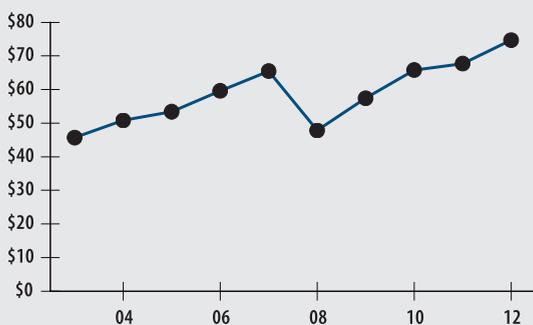
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

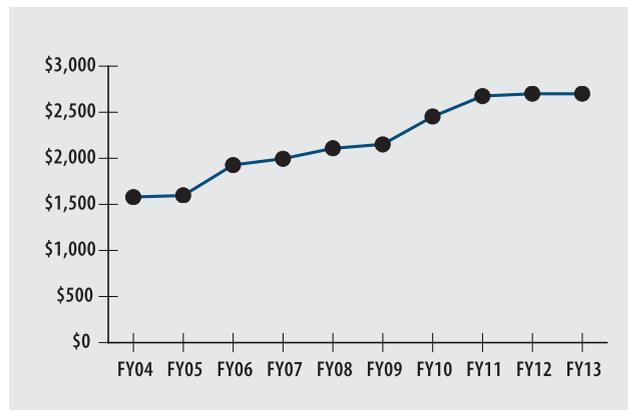
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.47%	8.36%	8.57%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.88%	5.13%	5.09%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.46%	2.28%	4.04%

ACTUARIAL

• Funded Ratio	73.4%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2033
• Unfunded Liability	\$24.7 M
• Total Pension Appropriation (Fiscal 2013)	\$2.7 M

	Active	Retired
• Number of Members	504	215
• Total Payroll/Benefit	\$20.7 M	\$4.1 M
• Average Salary/Benefit	\$41,000	\$19,100
• Average Age	NA	71
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/17/11
Period Covered	01/01/08-12/31/10
Annual Receipts	2010 \$12.99 M 2009 \$14.56 M 2008 \$(11.20 M)
Annual Disbursements	2010 \$4.81 M 2009 \$4.26 M 2008 \$4.32 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	24
Number Who Reported Earnings	8
Number of Excess Earners	1
Total Amount of Refund Due	\$2,114

▶ 2012 Return	11.59%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$74.7 M
▶ 2008-2012 (Annualized)	3.46%
▶ 1985-2012 (Annualized)	8.47%

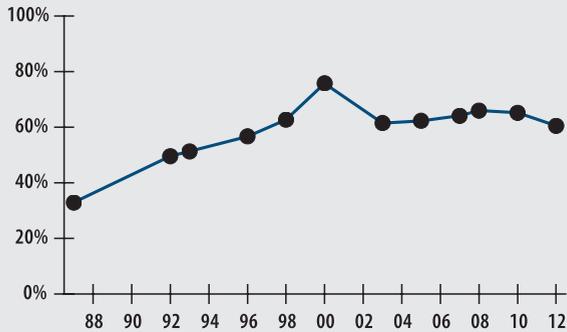
Northampton

City Hall, Room 3
210 Main Street
Northampton, MA 01060
Phone 413-587-1211
Fax 413-587-1278

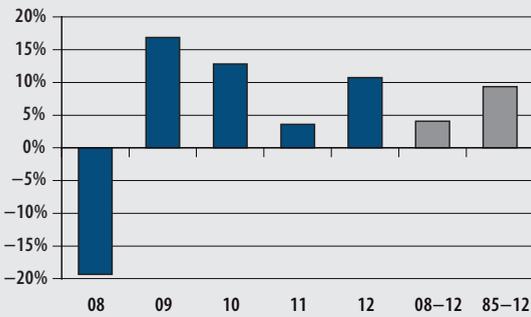
Board Members
Joyce Karpinski (Chairperson),
Shirley A. LaRose, Michael J. Lyons,
Thomas Sullivan, Susan L. Wright

Board Administrator
David Shipka
Board Meeting
Last Tuesday or Thursday of each month

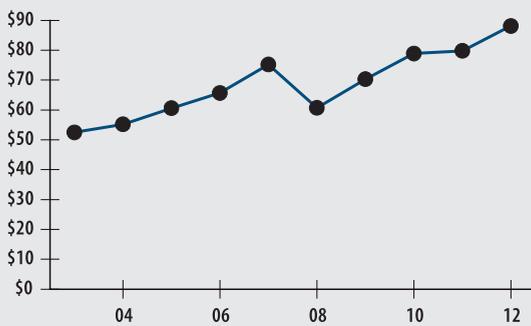
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

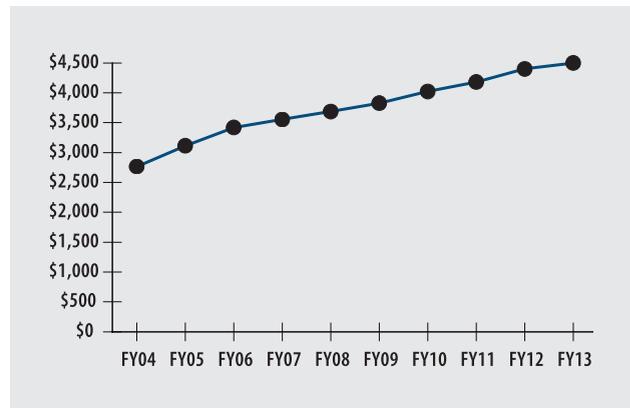
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.37%	9.32%	9.55%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.81%	6.08%	5.06%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.08%	4.96%	6.10%

ACTUARIAL

• Funded Ratio	60.5%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.75%
• Funding Schedule	3.77% Increasing
• Year Fully Funded	2036
• Unfunded Liability	\$51.9 M
• Total Pension Appropriation (Fiscal 2013)	\$4.5 M

	Active	Retired
• Number of Members	624	363
• Total Payroll/Benefit	\$23.9 M	\$7.1 M
• Average Salary/Benefit	\$38,300	\$19,600
• Average Age	47	70
• Average Service	11.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

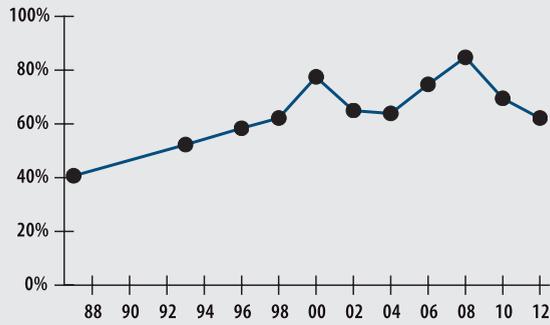
Date of Last Audit	07/26/12
Period Covered	01/01/10-12/31/11
Annual Receipts	2011: \$9.71 M, 2010: \$15.63 M
Annual Disbursements	2011: \$8.11 M, 2010: \$7.70 M

EARNED INCOME OF DISABILITY RETIREES (2011)

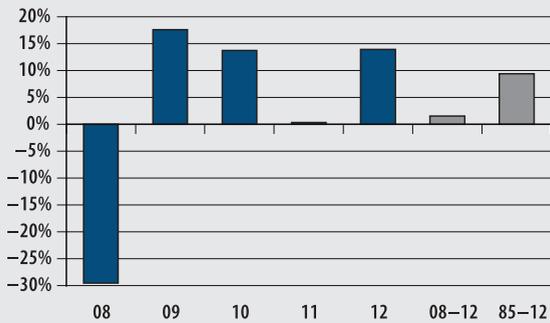
Number of Disability Retirees	40
Number Who Reported Earnings	13
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	10.75%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$88.1 M
▶ 2008-2012 (Annualized)	4.08%
▶ 1985-2012 (Annualized)	9.37%

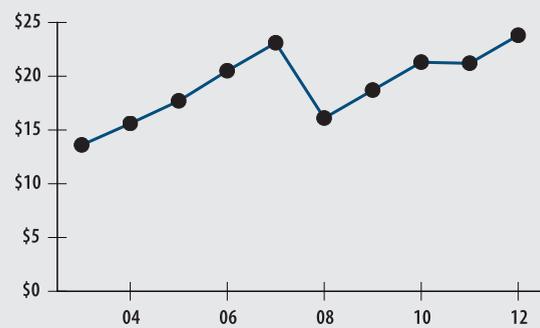
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

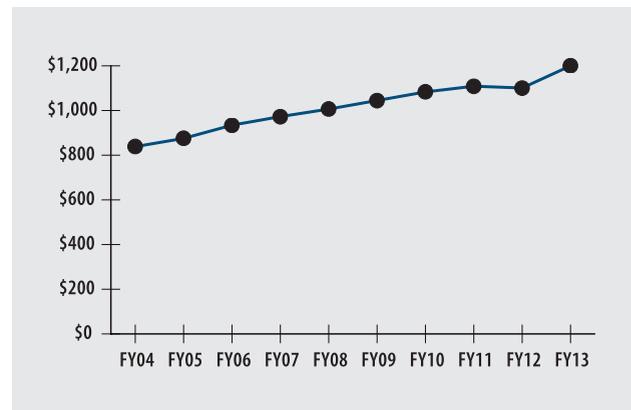
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.43%	9.26%	9.62%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.71%	6.32%	5.70%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.53%	1.20%	4.31%

ACTUARIAL

• Funded Ratio	62.2%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	3.91% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$13.2 M
• Total Pension Appropriation (Fiscal 2013)	\$1.2 M

	Active	Retired
• Number of Members	184	108
• Total Payroll/Benefit	\$7.3 M	\$1.9 M
• Average Salary/Benefit	\$39,700	\$17,100
• Average Age	47	74
• Average Service	10.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/20/12		
Period Covered	01/01/08-12/31/10		
	2010	2009	2008
Annual Receipts	\$4.67 M	\$4.70 M	\$(4.97 M)
Annual Disbursements	\$2.07 M	\$2.08 M	\$2.02 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	10
Number Who Reported Earnings	3
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.94%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$23.8 M
▶ 2008-2012 (Annualized)	1.53%
▶ 1985-2012 (Annualized)	9.43%

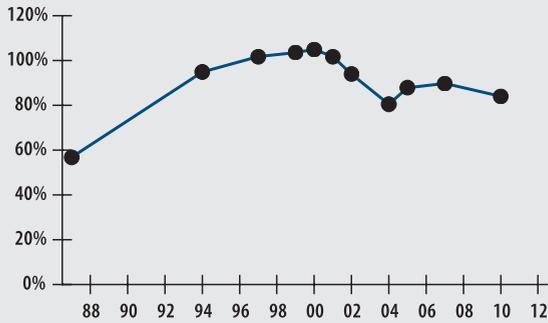
Norwood

Municipal Building
566 Washington Street
Norwood, MA 02062
Phone 781-762-1240, Ext. 157
Fax 781-278-3024

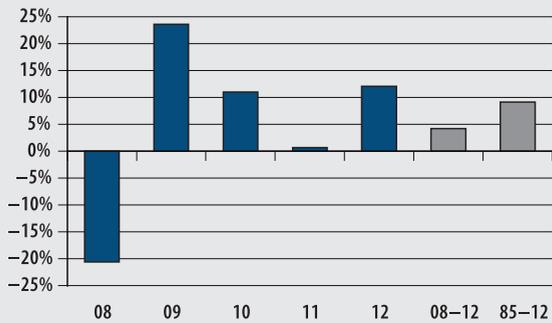
Board Members
Eileen P. Hickey (Chairperson),
Joseph F. Curran, Ted Mulvehill, Tom O'Toole,
Robert M. Thornton

Board Administrator
Debra A. Wilkes
Board Meeting
Third Thursday of each month

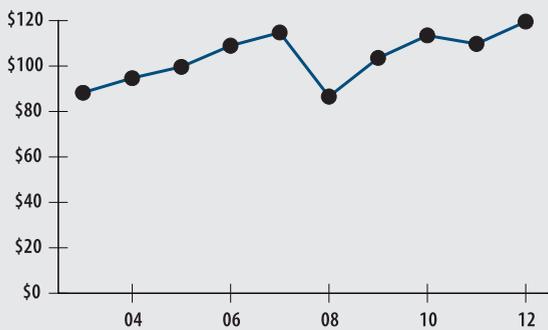
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

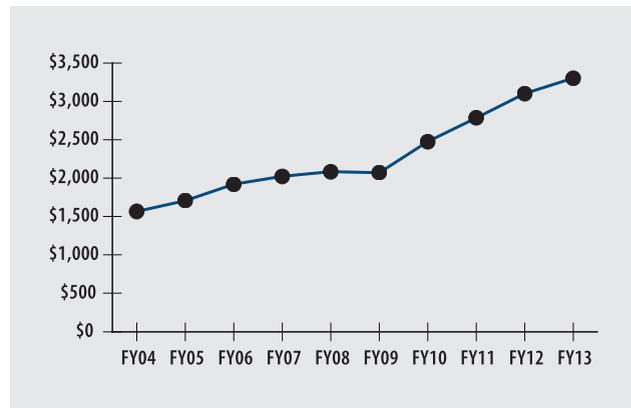
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.17%	9.07%	9.40%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.33%	6.08%	6.04%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.23%	3.48%	5.71%

ACTUARIAL

• Funded Ratio	84.0%
• Date of Last Valuation	01/10
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$21.8 M
• Total Pension Appropriation (Fiscal 2013)	\$3.3 M

	Active	Retired
• Number of Members	588	343
• Total Payroll/Benefit	\$28.4 M	\$7.4 M
• Average Salary/Benefit	\$48,400	\$21,600
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	05/17/13
Period Covered	01/01/09-12/31/11

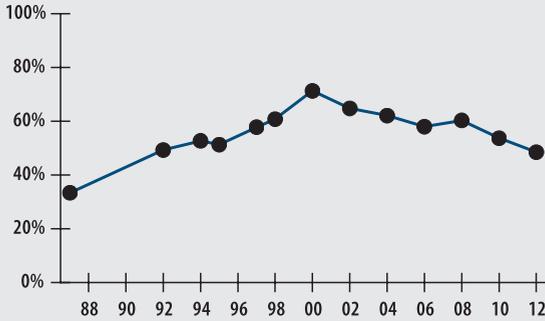
	2011	2010	2009
Annual Receipts	\$7.35 M	\$17.12 M	\$24.68 M
Annual Disbursements	\$9.35 M	\$8.75 M	\$8.26 M

EARNED INCOME OF DISABILITY RETIREES (2011)

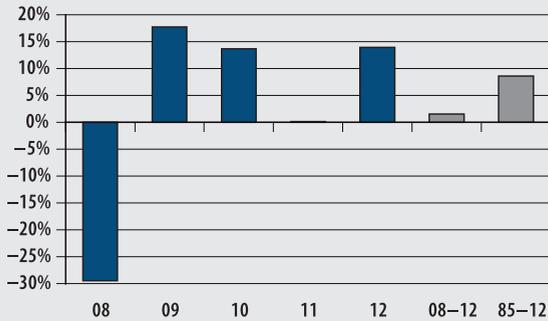
Number of Disability Retirees	42
Number Who Reported Earnings	10
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.11%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$119.5 M
▶ 2008-2012 (Annualized)	4.23%
▶ 1985-2012 (Annualized)	9.17%

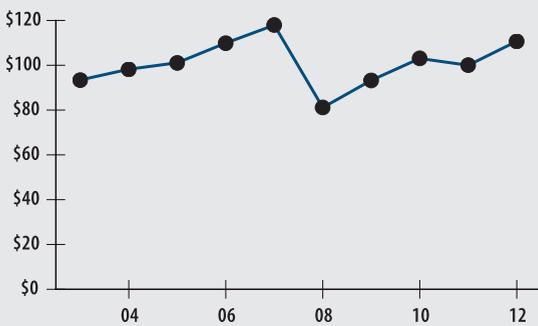
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

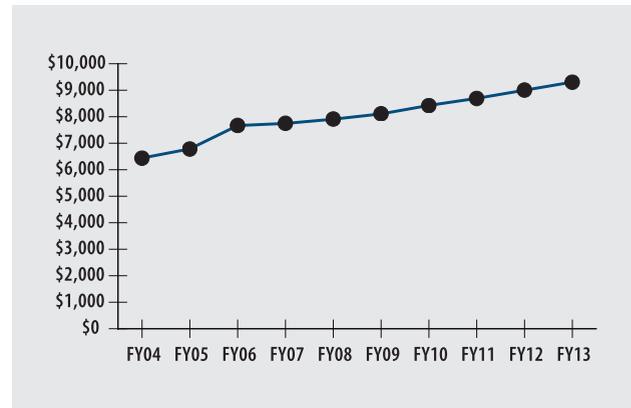
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.61%	8.41%	8.74%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.35%	3.87%	3.67%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.53%	0.93%	3.08%

ACTUARIAL

• Funded Ratio	48.5%
• Date of Last Valuation	01/12
• Actuary	Sherman Actuarial Services
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2036
• Unfunded Liability	\$120.6 M
• Total Pension Appropriation (Fiscal 2013)	\$9.3 M

	Active	Retired
• Number of Members	792	766
• Total Payroll/Benefit	\$41.9 M	\$15.2 M
• Average Salary/Benefit	\$53,000	\$19,800
• Average Age	NA	76
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	07/14/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$25.61 M	\$26.82 M	\$(21.60 M)
Annual Disbursements	\$15.59 M	\$15.35M	\$14.92 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	66
Number Who Reported Earnings	11
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.97%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$110.6 M
▶ 2008-2012 (Annualized)	1.53%
▶ 1985-2012 (Annualized)	8.61%

Board Members

Gerald E. Miller (Chairperson),
Susan M. Carmel, Timothy A. Hannigan,
James J. Mooney, Edward M. Reilly, Esq.

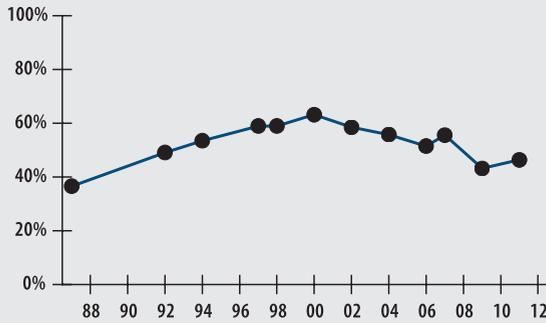
Board Administrator

Karen L. Lancto

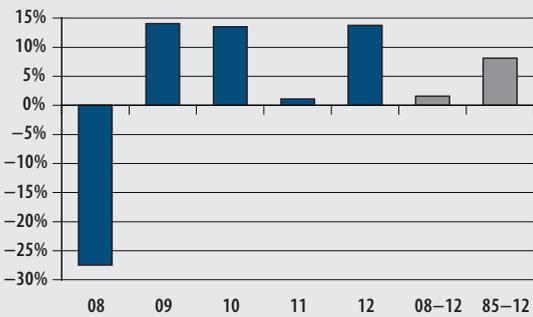
Board Meeting

Varies

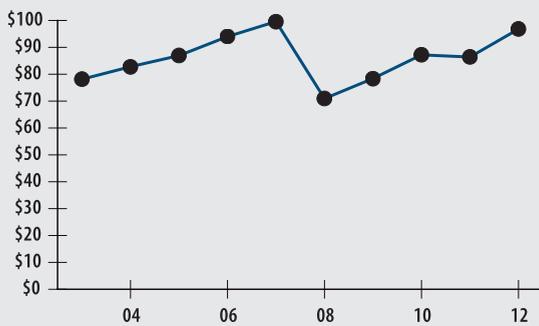
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

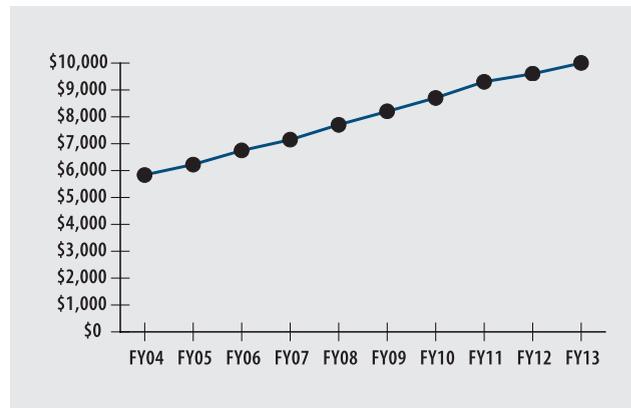
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.13%	7.93%	8.20%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.28%	3.64%	3.16%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.57%	0.50%	2.59%

ACTUARIAL

• Funded Ratio	46.4%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2036
• Unfunded Liability	\$110.9 M
• Total Pension Appropriation (Fiscal 2013)	\$10.0 M

	Active	Retired
• Number of Members	929	749
• Total Payroll/Benefit	\$31.2 M	\$13.0 M
• Average Salary/Benefit	\$33,500	\$17,300
• Average Age	49	74
• Average Service	11.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	02/24/12
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$23.32 M	\$21.96 M	\$(15.53 M)
Annual Disbursements	\$14.32 M	\$13.81 M	\$13.71 M

EARNED INCOME OF DISABILITY RETIREES (2011)

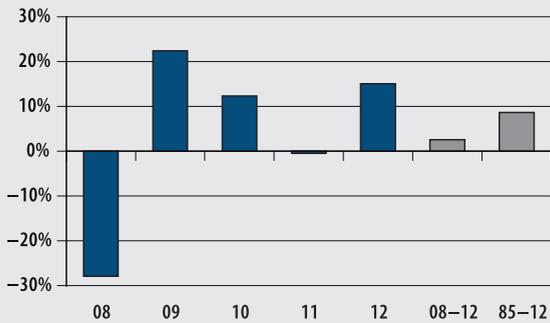
Number of Disability Retirees	107
Number Who Reported Earnings	28
Number of Excess Earners	1
Total Amount of Refund Due	\$68

▶ 2012 Return	13.79%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$96.8 M
▶ 2008-2012 (Annualized)	1.57%
▶ 1985-2012 (Annualized)	8.13%

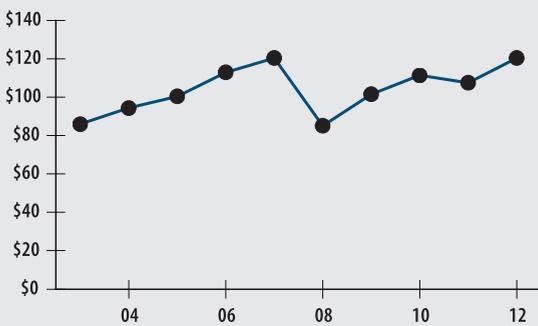
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

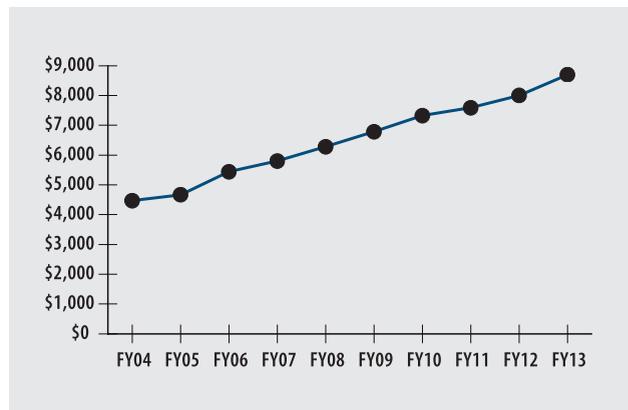
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.71%	8.48%	8.84%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.58%	4.99%	4.67%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.59%	1.35%	4.14%

ACTUARIAL

• Funded Ratio	54.2%
• Date of Last Valuation	01/10
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	6.0% Total Increasing
• Year Fully Funded	2027
• Unfunded Liability	\$94.3 M
• Total Pension Appropriation (Fiscal 2013)	\$8.7 M

	Active	Retired
• Number of Members	957	562
• Total Payroll/Benefit	\$35.7 M	\$11.8 M
• Average Salary/Benefit	\$37,300	\$21,000
• Average Age	48	69
• Average Service	11.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

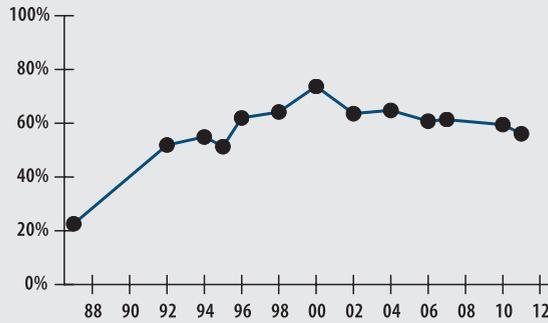
Date of Last Audit	11/10/11		
Period Covered	01/01/08-12/31/10		
Annual Receipts	2010 \$24.37 M	2009 \$30.12 M	2008 \$(23.17 M)
Annual Disbursements	\$14.53 M	\$13.25 M	\$12.59 M

EARNED INCOME OF DISABILITY RETIREES (2011)

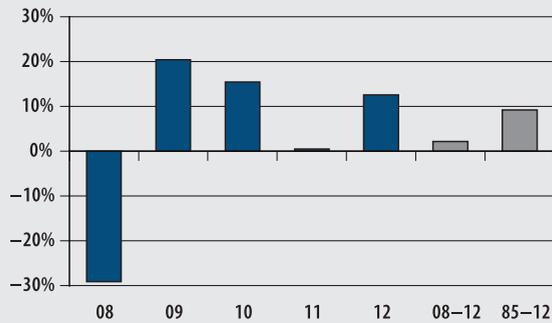
Number of Disability Retirees	81
Number Who Reported Earnings	27
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	15.04%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$120.4 M
▶ 2008-2012 (Annualized)	2.59%
▶ 1985-2012 (Annualized)	8.71%

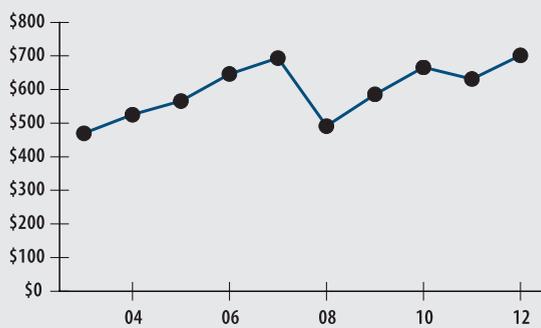
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

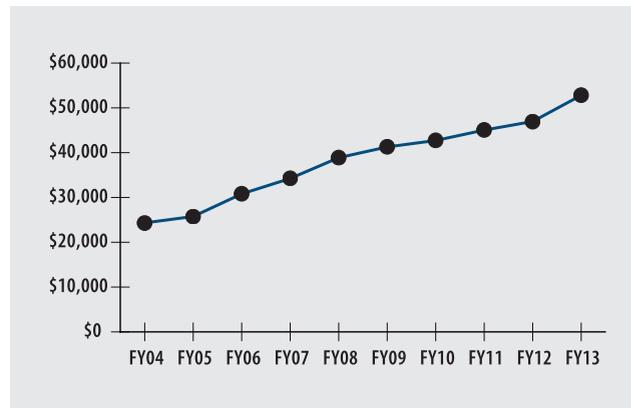
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.23%	9.10%	9.45%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.11%	5.48%	4.42%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.23%	1.30%	4.16%

ACTUARIAL

• Funded Ratio	56.1%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$520.7 M
• Total Pension Appropriation (Fiscal 2013)	\$52.8 M

	Active	Retired
• Number of Members	5,775	3,442
• Total Payroll/Benefit	\$228.3 M	\$67.4 M
• Average Salary/Benefit	\$39,500	\$19,600
• Average Age	NA	72
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

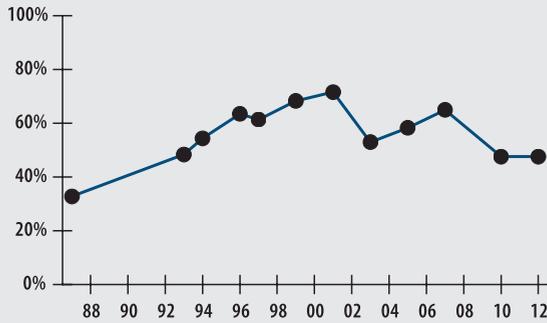
Date of Last Audit	01/26/11		
Period Covered	01/01/07-12/31/09		
Annual Receipts	2009 \$178.10 M	2008 \$(143.59 M)	2007 \$116.04 M
Annual Disbursements	\$74.27 M	\$68.76 M	\$67.38 M

EARNED INCOME OF DISABILITY RETIREES (2011)

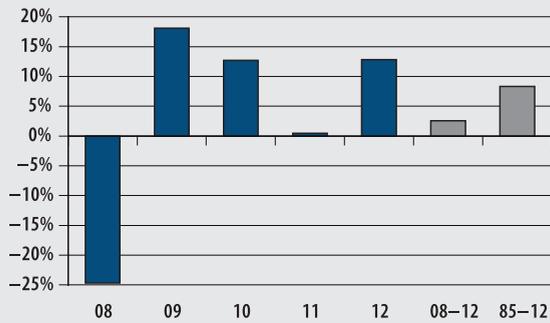
Number of Disability Retirees	350
Number Who Reported Earnings	104
Number of Excess Earners	7
Total Amount of Refund Due	\$87,221

▶ 2012 Return	12.62%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$701.5 M
▶ 2008-2012 (Annualized)	2.23%
▶ 1985-2012 (Annualized)	9.23%

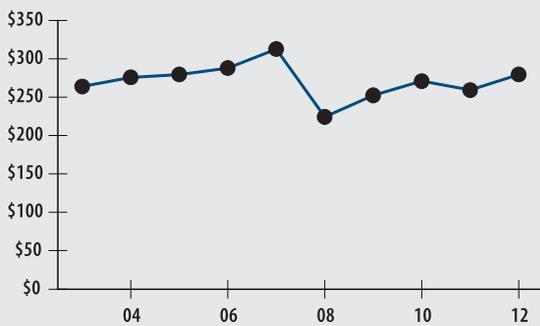
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

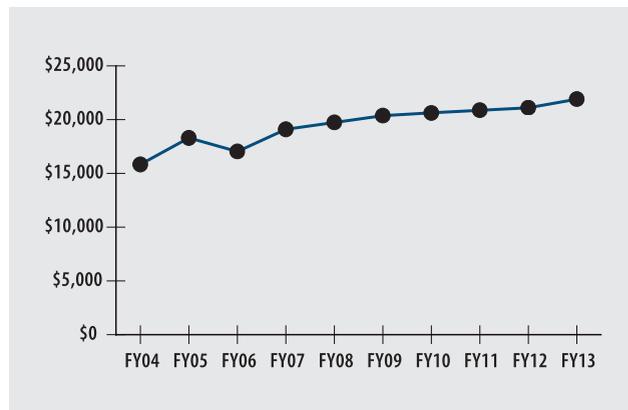
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.35%	8.19%	8.50%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.05%	5.12%	4.97%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.58%	1.45%	3.92%

ACTUARIAL

• Funded Ratio	47.6%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	3.91% Increasing
• Year Fully Funded	2040
• Unfunded Liability	\$302.4 M
• Total Pension Appropriation (Fiscal 2013)	\$21.9 M

	Active	Retired
• Number of Members	1,324	1,561
• Total Payroll/Benefit	\$75.6 M	\$39.5 M
• Average Salary/Benefit	\$57,100	\$25,300
• Average Age	49	73
• Average Service	13.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	03/02/12
Period Covered	01/01/08-12/31/10
Annual Receipts	2010 \$59.40 M 2009 \$69.27 M 2008 \$(46.05 M)
Annual Disbursements	2010 \$41.77 M 2009 \$40.54 M 2008 \$40.64 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	161
Number Who Reported Earnings	33
Number of Excess Earners	1
Total Amount of Refund Due	\$13,015

▶ 2012 Return	12.83%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$279.5 M
▶ 2008-2012 (Annualized)	2.58%
▶ 1985-2012 (Annualized)	8.35%

Reading

16 Lowell Street
Reading, MA 01867
Phone 781-942-9007
Fax 781-942-9037

Board Members

Joseph R. Veno (Chairperson),
Sharon M. Angstrom, Thomas A. Clough,
Francis P. Driscoll, Richard P. Foley

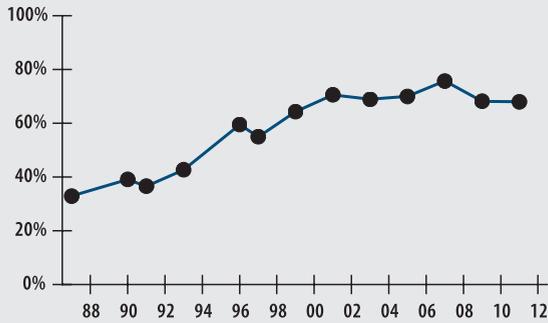
Board Administrator

Colleen Loughlin

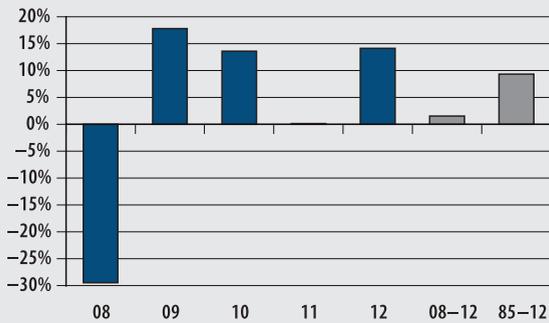
Board Meeting

Fourth Tuesday of each month at 6:00 pm

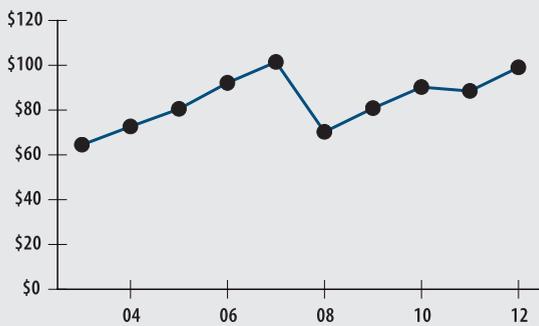
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

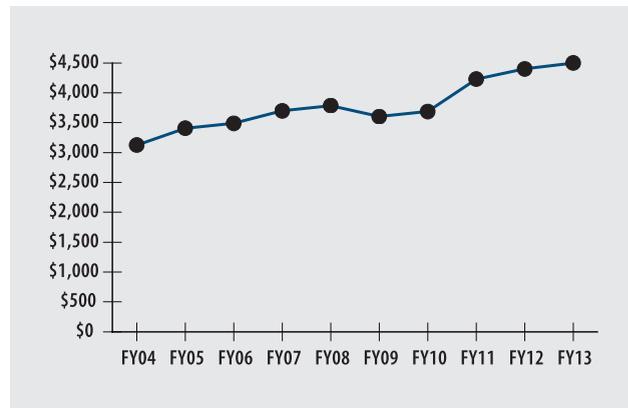
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.34%	9.17%	9.53%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.73%	6.29%	5.69%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.57%	1.21%	4.37%

ACTUARIAL

• Funded Ratio	68.0%
• Date of Last Valuation	07/11
• Actuary	Segal
• Assumed Rate of Return	7.75%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$43.1 M
• Total Pension Appropriation (Fiscal 2013)	\$4.5 M

	Active	Retired
• Number of Members	333	329
• Total Payroll/Benefit	\$20.9 M	\$7.5 M
• Average Salary/Benefit	\$62,900	\$22,800
• Average Age	49	NA
• Average Service	15 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/13/13
Period Covered	01/01/10-12/31/12

	2012	2011	2010
Annual Receipts	\$19.13 M	\$7.12 M	\$17.3 M
Annual Disbursements	\$8.73 M	\$8.61 M	\$7.95 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	42
Number Who Reported Earnings	10
Number of Excess Earners	1
Total Amount of Refund Due	\$3,035

▶ 2012 Return	14.15%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$99.0 M
▶ 2008-2012 (Annualized)	1.57%
▶ 1985-2012 (Annualized)	9.34%

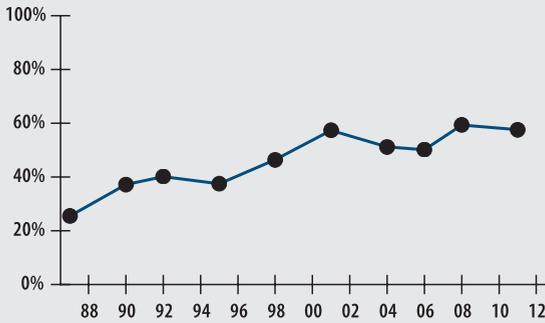
Revere

City Hall
281 Broadway
Revere, MA 02151
Phone 781-286-8173
Fax 781-286-3316

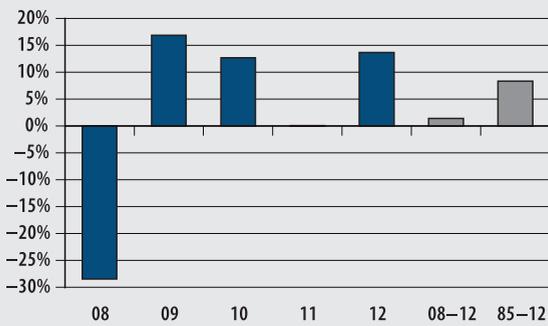
Board Members
Laurie Giardella (Chairperson),
Michael Conley, John Henry, Steven Parsons,
David Petrilli

Board Administrator
Carolyn M. Russo
Board Meeting
Varies

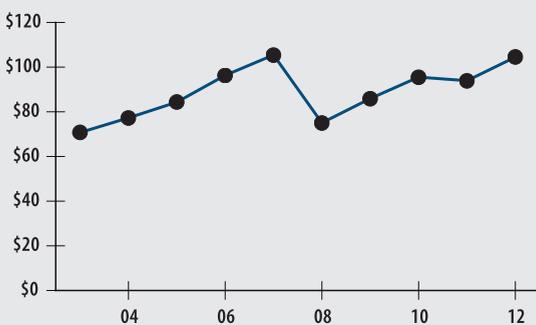
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

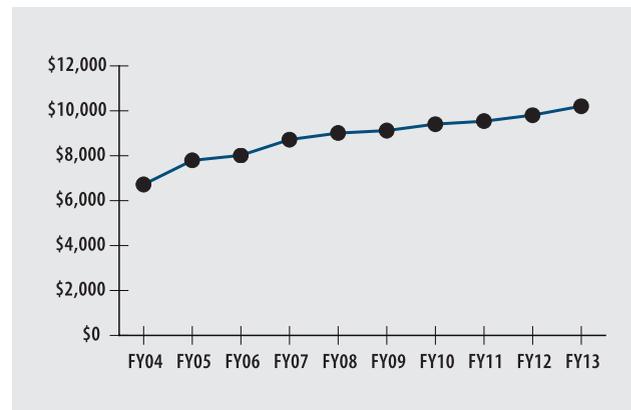
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.34%	8.14%	8.46%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.31%	6.00%	5.44%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.41%	1.00%	4.06%

ACTUARIAL

• Funded Ratio	57.6%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	2.45% Increasing
• Year Fully Funded	2027
• Unfunded Liability	\$75.6 M
• Total Pension Appropriation (Fiscal 2013)	\$10.2 M

	Active	Retired
• Number of Members	492	544
• Total Payroll/Benefit	\$25.3 M	\$12.5 M
• Average Salary/Benefit	\$51,300	\$22,900
• Average Age	50	76
• Average Service	12.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

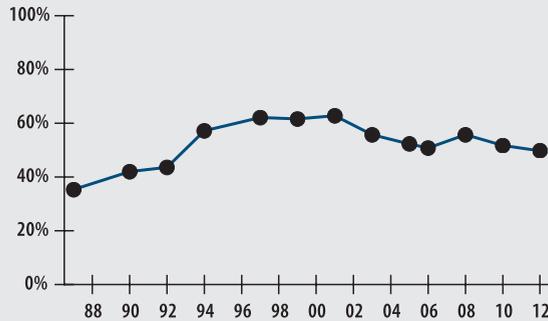
Date of Last Audit	03/28/12
Period Covered	01/01/09-12/31/10
Annual Receipts	2010 \$23.40 M
Annual Disbursements	2009 \$24.39 M
	\$13.81 M
	\$13.52 M

EARNED INCOME OF DISABILITY RETIREES (2011)

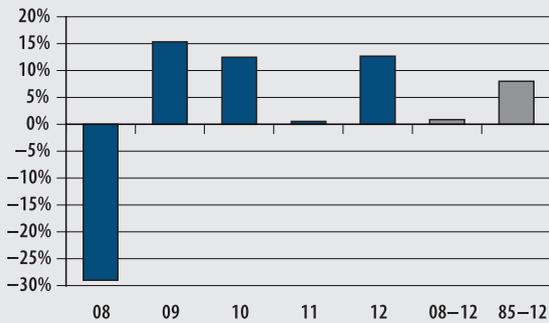
Number of Disability Retirees	122
Number Who Reported Earnings	31
Number of Excess Earners	1
Total Amount of Refund Due	\$3,535

▶ 2012 Return	13.67%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$104.5 M
▶ 2008-2012 (Annualized)	1.41%
▶ 1985-2012 (Annualized)	8.34%

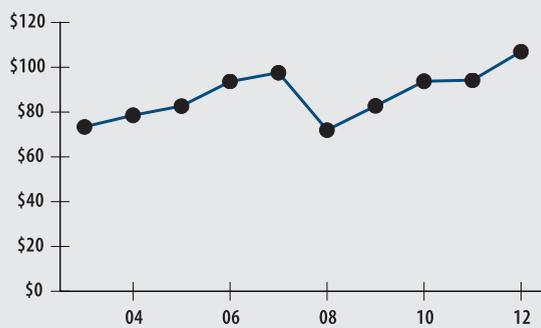
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

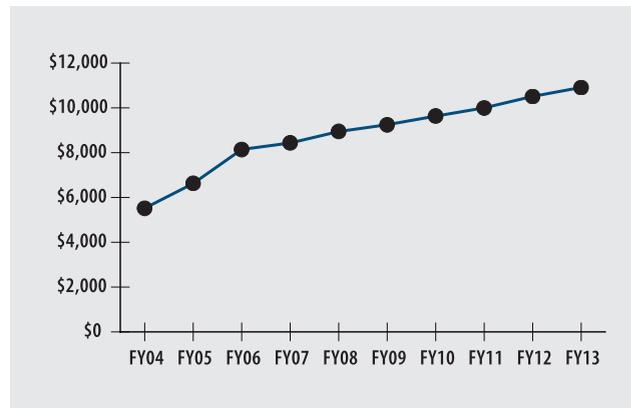
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.06%	7.90%	8.19%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.03%	3.84%	3.60%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.90%	0.00%	2.73%

ACTUARIAL

• Funded Ratio	49.8%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Total Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$107.5 M
• Total Pension Appropriation (Fiscal 2013)	\$10.9 M

	Active	Retired
• Number of Members	804	581
• Total Payroll/Benefit	\$37.1 M	\$12.4 M
• Average Salary/Benefit	\$46,100	\$21,400
• Average Age	49	NA
• Average Service	12.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/13/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009 \$24.45 M 2008 \$(15.58 M)
Annual Disbursements	\$13.39 M \$12.89 M

EARNED INCOME OF DISABILITY RETIREES (2011)

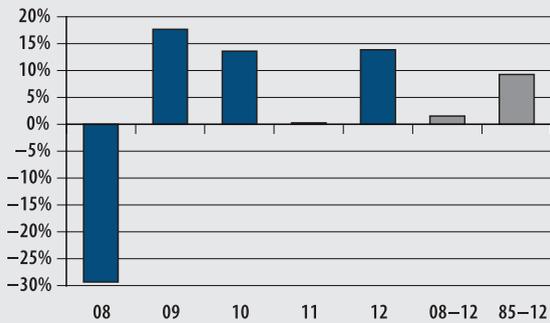
Number of Disability Retirees	65
Number Who Reported Earnings	11
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.73%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$106.9 M
▶ 2008-2012 (Annualized)	.90%
▶ 1985-2012 (Annualized)	8.06%

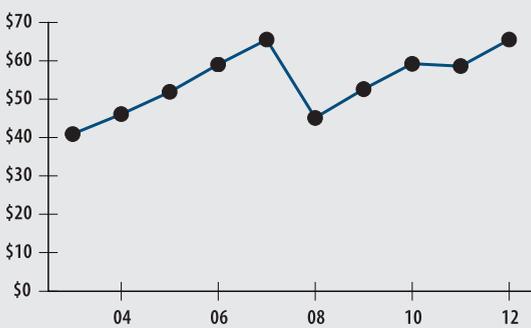
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

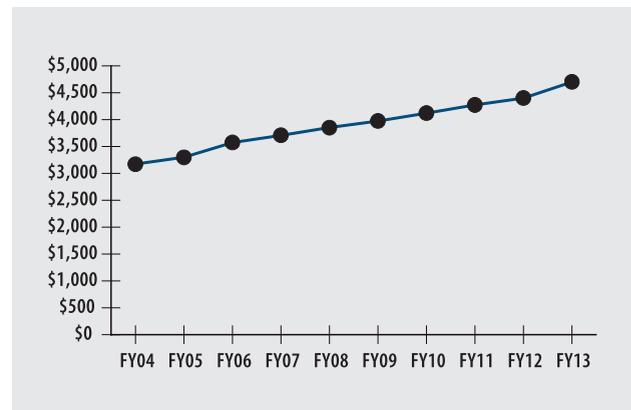
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.28%	9.11%	9.46%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.65%	6.26%	5.66%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.54%	1.20%	4.33%

ACTUARIAL

• Funded Ratio	67.8%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2024
• Unfunded Liability	\$31.9 M
• Total Pension Appropriation (Fiscal 2013)	\$4.7 M

	Active	Retired
• Number of Members	342	282
• Total Payroll/Benefit	\$15.1 M	\$6.1 M
• Average Salary/Benefit	\$44,100	\$21,600
• Average Age	48	74
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

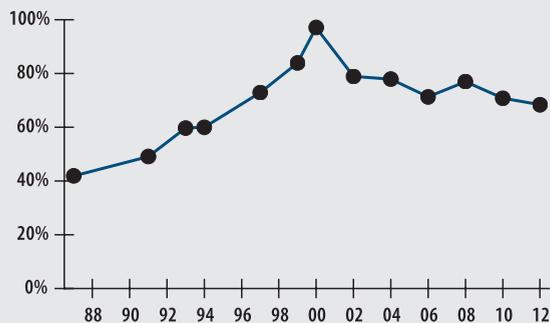
Date of Last Audit	11/13/12		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$6.30 M	\$13.38 M	\$13.99 M
Annual Disbursements	\$6.83 M	\$6.68 M	\$6.64 M

EARNED INCOME OF DISABILITY RETIREES (2011)

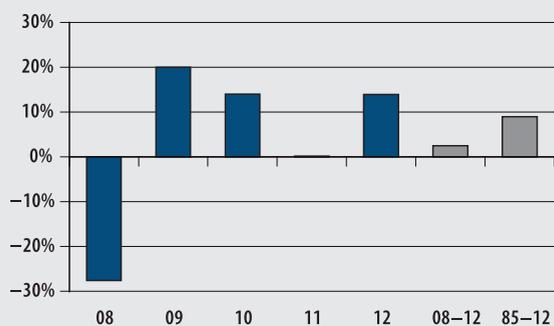
Number of Disability Retirees	37
Number Who Reported Earnings	9
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.87%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$65.5 M
▶ 2008-2012 (Annualized)	1.54%
▶ 1985-2012 (Annualized)	9.28%

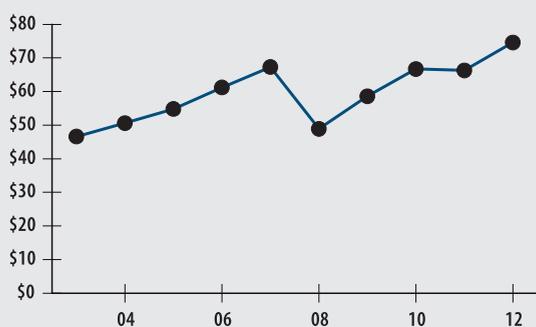
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

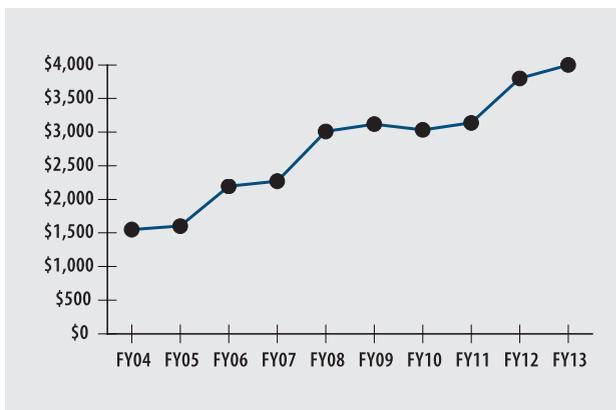
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.03%	8.85%	9.20%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.34%	5.30%	4.74%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.51%	1.77%	4.21%

ACTUARIAL

- Funded Ratio 68.4%
- Date of Last Valuation 01/12
- Actuary Sherman Actuarial Services
- Assumed Rate of Return 8.00%
- Funding Schedule 4.5% Increasing
- Year Fully Funded 2022
- Unfunded Liability \$33.2 M
- Total Pension Appropriation (Fiscal 2013) \$4.0 M

	Active	Retired
• Number of Members	582	237
• Total Payroll/Benefit	\$22.7 M	\$5.7 M
• Average Salary/Benefit	\$39,000	\$24,000
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	11/10/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$13.80 M	\$15.32 M	\$(13.07 M)
Annual Disbursements	\$6.27 M	\$5.60 M	\$5.31 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	27
Number Who Reported Earnings	10
Number of Excess Earners	1
Total Amount of Refund Due	\$1,507

▶ 2012 Return	13.92%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$74.6 M
▶ 2008-2012 (Annualized)	2.51%
▶ 1985-2012 (Annualized)	9.03%

Somerville

City Hall Annex
50 Evergreen Avenue
Somerville, MA 02145
Phone 617-625-6600
Fax 617-666-4325

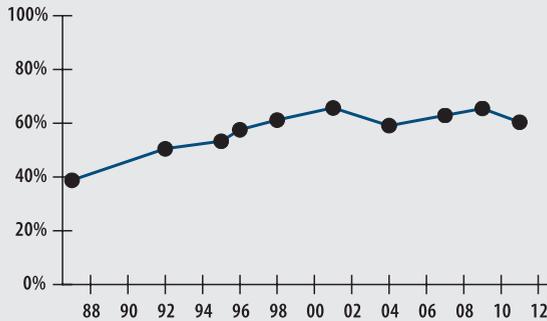
Board Members

John E. Rourke (Chairperson),
Edward F. Bean, Jr., Matthew Dias,
John M. Memory, Mary A. Phinney

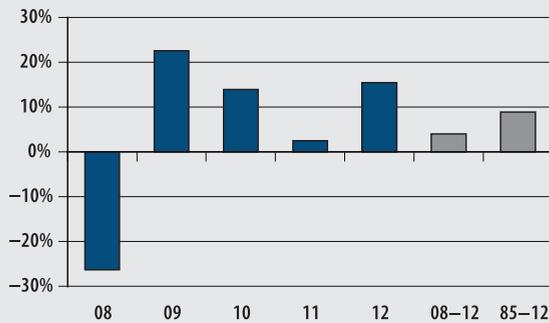
Board Meeting

Varies

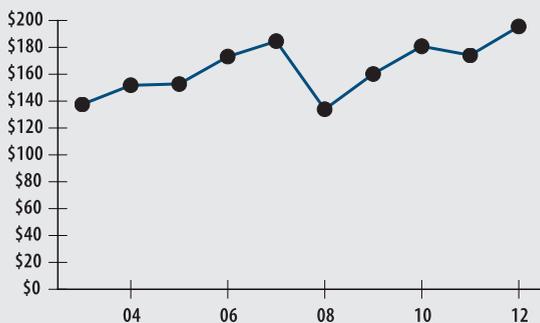
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

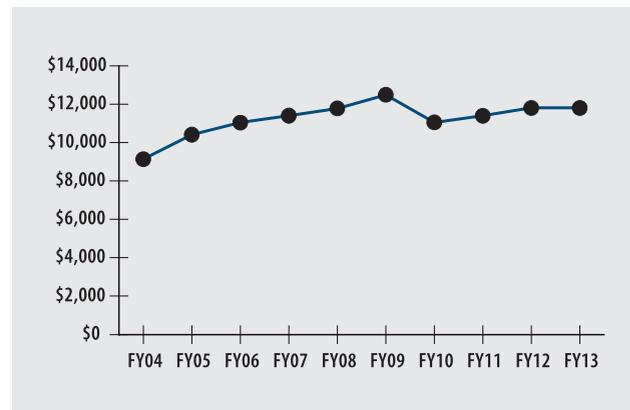
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.93%	8.70%	8.95%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.17%	6.21%	5.65%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
4.04%	3.44%	5.27%

ACTUARIAL

• Funded Ratio	60.4%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$123.3 M
• Total Pension Appropriation (Fiscal 2013)	\$11.8 M

	Active	Retired
• Number of Members	1,120	897
• Total Payroll/Benefit	\$56.7 M	\$20.7 M
• Average Salary/Benefit	\$50,600	\$23,100
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

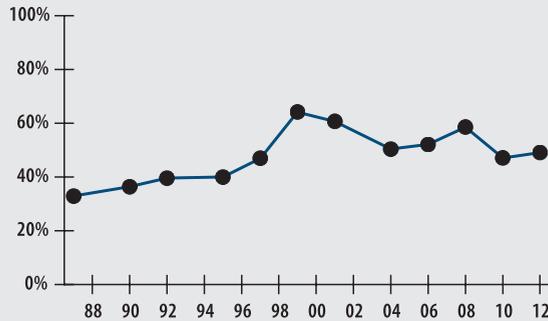
Date of Last Audit	05/04/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009: \$48.25 M 2008: \$(30.71 M)
Annual Disbursements	2009: \$22.35 M 2008: \$21.47 M

EARNED INCOME OF DISABILITY RETIREES (2011)

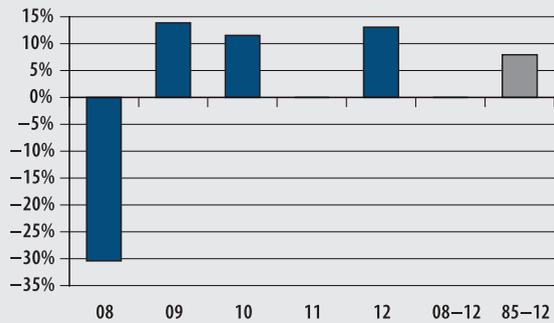
Number of Disability Retirees	131
Number Who Reported Earnings	22
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	15.46%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$195.4 M
▶ 2008-2012 (Annualized)	4.04%
▶ 1985-2012 (Annualized)	8.93%

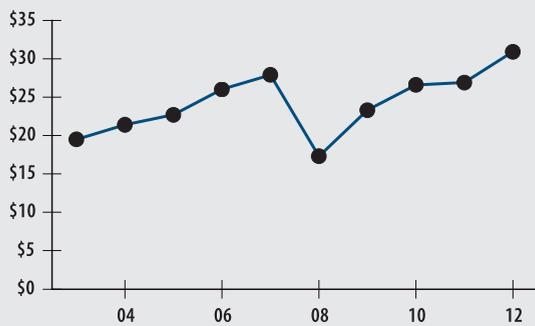
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

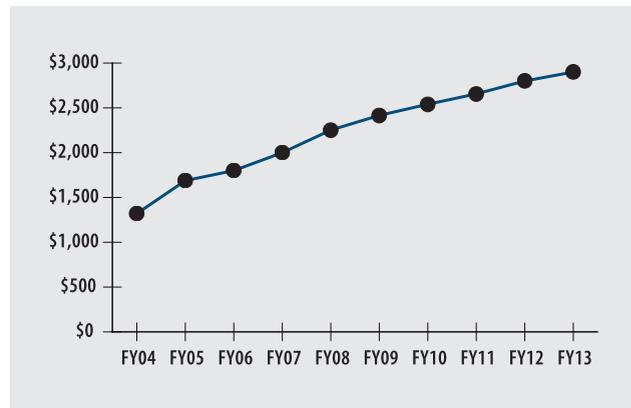
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
7.95%	7.77%	8.08%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.26%	3.40%	3.18%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
0.01%	-1.16%	1.32%

ACTUARIAL

• Funded Ratio	49.1%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2038
• Unfunded Liability	\$30.7 M
• Total Pension Appropriation (Fiscal 2013)	\$2.9 M

	Active	Retired
• Number of Members	339	166
• Total Payroll/Benefit	\$13.1 M	\$3.0 M
• Average Salary/Benefit	\$38,800	\$18,000
• Average Age	46	73
• Average Service	10.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

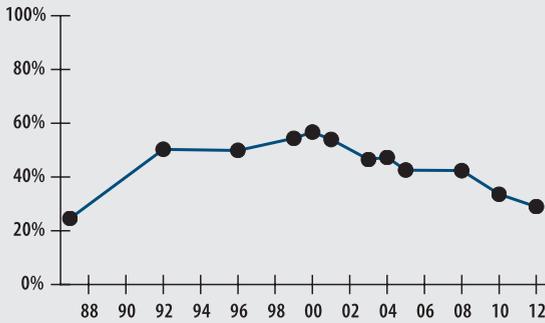
Date of Last Audit	01/07/13
Period Covered	01/01/10-12/31/11
Annual Receipts	2011 \$4.20 M
Annual Disbursements	2010 \$6.79 M
	2011 \$3.91 M
	2010 \$3.55 M

EARNED INCOME OF DISABILITY RETIREES (2011)

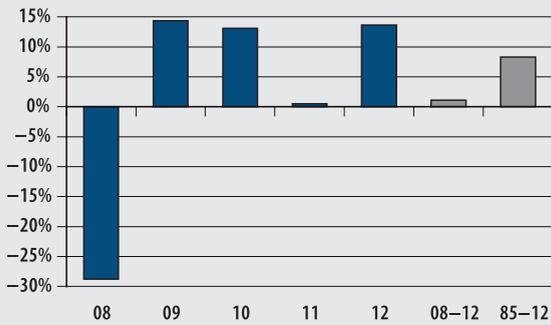
Number of Disability Retirees	16
Number Who Reported Earnings	5
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.08%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$30.9 M
▶ 2008-2012 (Annualized)	.01%
▶ 1985-2012 (Annualized)	7.95%

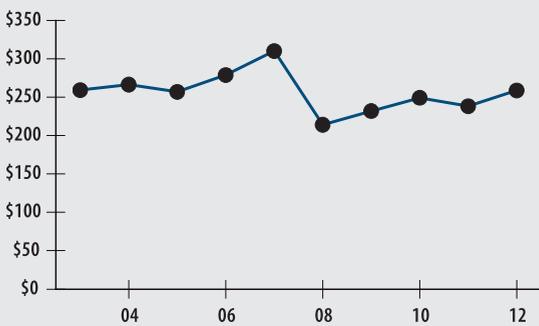
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

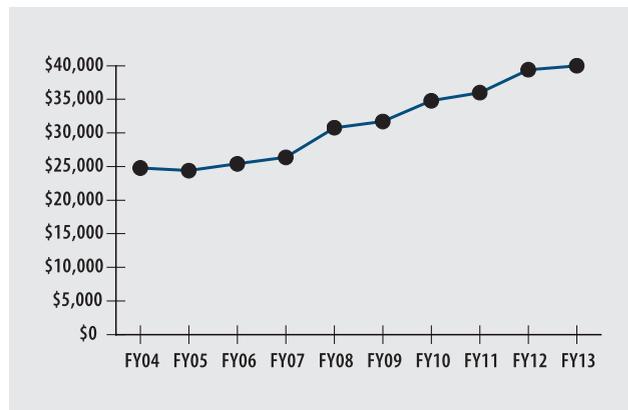
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.30%	8.11%	8.41%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.06%	4.20%	3.51%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.09%	0.78%	3.80%

ACTUARIAL

• Funded Ratio	29.0%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.13%
• Funding Schedule	6.0% Total Increasing
• Year Fully Funded	2037
• Unfunded Liability	\$657.2 M
• Total Pension Appropriation (Fiscal 2013)	\$40.8 M

	Active	Retired
• Number of Members	3,208	2,688
• Total Payroll/Benefit	\$134.8 M	\$57.2 M
• Average Salary/Benefit	\$42,000	\$21,300
• Average Age	46	72
• Average Service	13 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	03/23/11		
Period Covered	01/01/07-12/31/09		
Annual Receipts	2009 \$82.47 M	2008 \$(43.55 M)	2007 \$77.63 M
Annual Disbursements	\$59.89 M	\$59.10 M	\$57.57 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	451
Number Who Reported Earnings	126
Number of Excess Earners	11
Total Amount of Refund Due	\$63,019

▶ 2012 Return	13.67%
▶ Assumed Rate of Return	8.13%
▶ 2012 Market Value	\$258.7 M
▶ 2008-2012 (Annualized)	1.09%
▶ 1985-2012 (Annualized)	8.30%

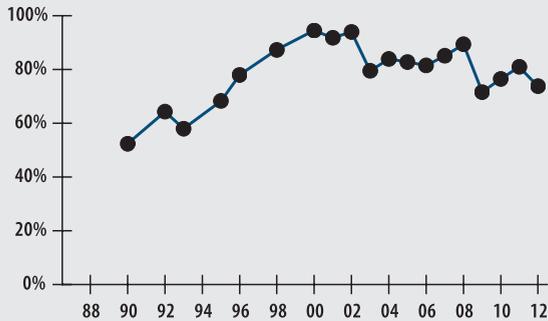
State

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

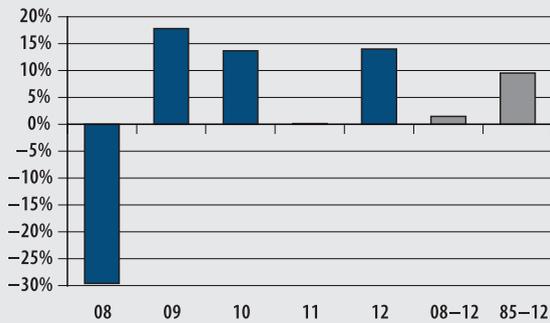
Board Members
Treasurer Steven Grossman (Chairperson),
Christopher S. Condon, Patricia Deal,
Theresa McGoldrick, Esq., Ralph White

Board Administrator
Nicola Favorito, Esq.
Board Meeting
Last Thursday of each month

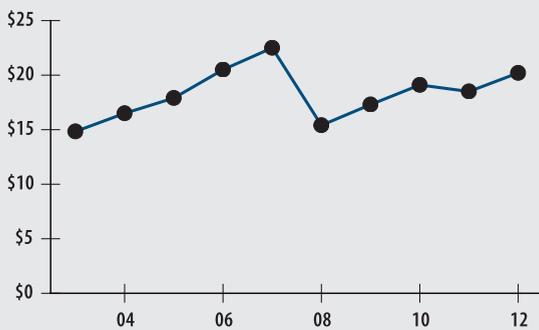
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Billions)



Investment Return History

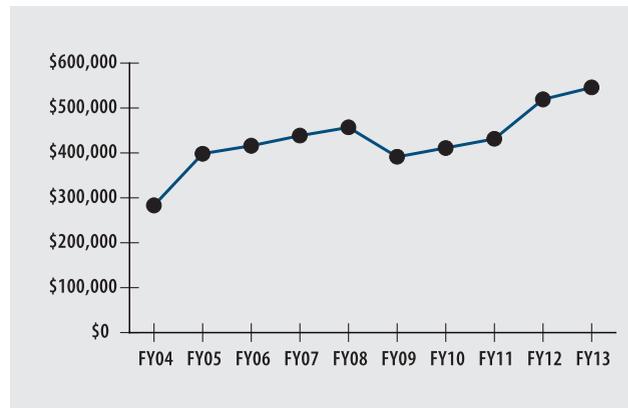
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.54%	9.38%	9.75%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.71%	6.29%	5.69%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.52%	1.17%	4.34%

ACTUARIAL

• Funded Ratio	73.8%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2040
• Unfunded Liability	\$7.3 B
• Total Pension Appropriation (Fiscal 2013)	\$545.5 M

	Active	Retired
• Number of Members	85,935	54,544
• Total Payroll/Benefit	\$4.9 B	\$1.5 B
• Average Salary/Benefit	\$57,300	\$27,400
• Average Age	48	72
• Average Service	13.6 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	02/28/11
Period Covered	01/01/07-12/31/09

	2009	2008	2007
Annual Receipts	\$3.37 B	\$(5.69 B)	\$3.48 B
Annual Disbursements	\$1.49 B	\$1.43 B	\$1.40 B

EARNED INCOME OF DISABILITY RETIREES (2010)

Number of Disability Retirees	3,730
Number Who Reported Earnings	836
Number of Excess Earners	54
Total Amount of Refund Due	\$459,018

▶ 2012 Return	14.00%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$20.2 B
▶ 2008-2012 (Annualized)	1.52%
▶ 1985-2012 (Annualized)	9.54%

State Teachers

New Board Name
(Effective May 15, 2006):
Massachusetts Teachers

One Charles Park
Cambridge, MA 02142-1206
Phone 617-679-MTRS (6877)
Fax 617-679-1661

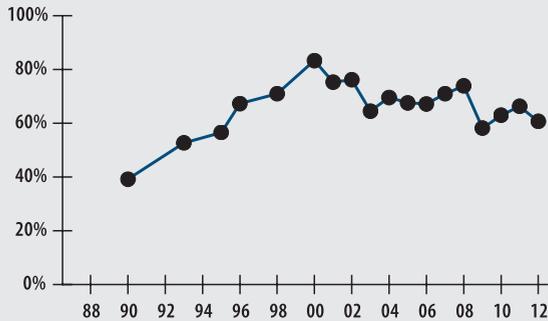
Board Members

Jeff Wulfson (Chairperson),
Auditor Suzanne M. Bump, Nicola Favorito,
Treasurer Steven Grossman, Richard L. Liston,
Karen A. Mitchell, Dennis J. Naughton,
Joannah M. Quinn, Anne Wass

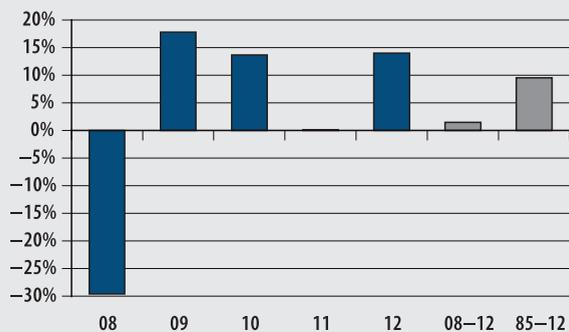
Board Administrator

Joan Schloss
Board Meeting
Last Friday of the month

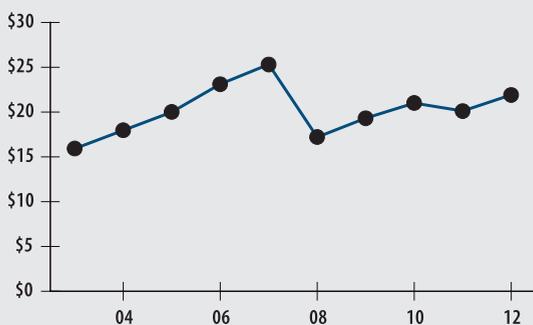
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Billions)



Investment Return History

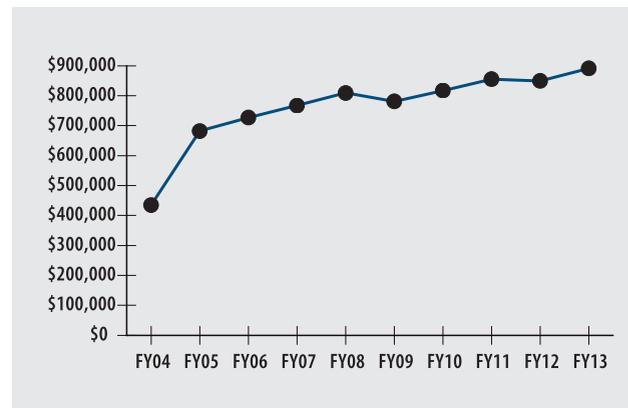
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.55%	9.39%	9.76%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.71%	6.29%	5.69%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.52%	1.17%	4.34%

ACTUARIAL

• Funded Ratio	60.7%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2040
• Unfunded Liability	\$14.3 B
• Total Pension Appropriation (Fiscal 2013)	\$891.6 M

	Active	Retired
• Number of Members	86,860	57,406
• Total Payroll/Benefit	\$5.7 B	\$2.3 B
• Average Salary/Benefit	\$65,100	\$39,400
• Average Age	44	70
• Average Service	12.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/20/11
Period Covered	01/01/07-12/31/09

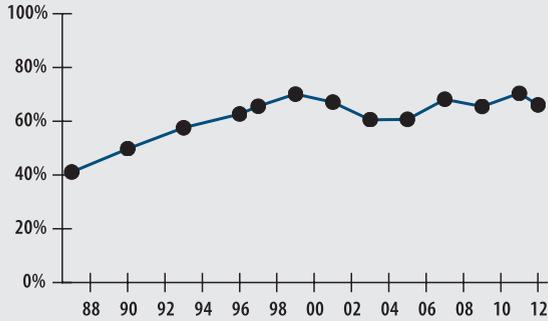
	2009	2008	2007
Annual Receipts	\$4.38 B	\$(5.90 B)	\$4.14 B
Annual Disbursements	\$2.23 B	\$2.10 B	\$2.01 B

EARNED INCOME OF DISABILITY RETIREES (2011)

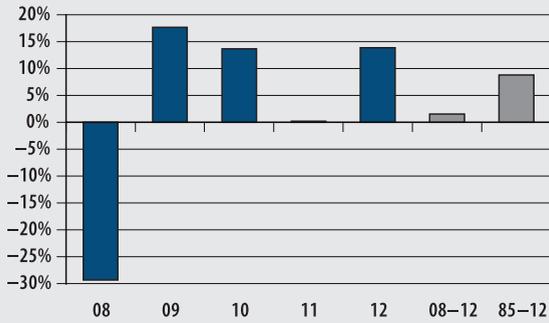
Number of Disability Retirees	744
Number Who Reported Earnings	123
Number of Excess Earners	2
Total Amount of Refund Due	\$11,519

▶ 2012 Return	14.00%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$21.9 B
▶ 2008-2012 (Annualized)	1.52%
▶ 1985-2012 (Annualized)	9.55%

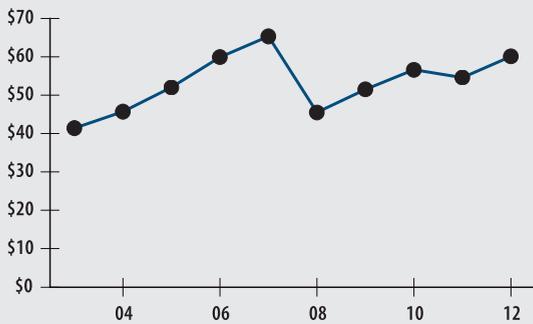
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

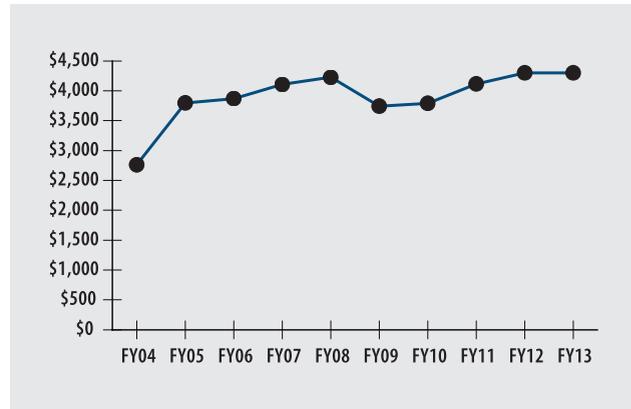
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.81%	8.63%	8.97%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.68%	6.28%	5.69%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.55%	1.21%	4.35%

ACTUARIAL

• Funded Ratio	66.1%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	7.5% Total Increasing
• Year Fully Funded	2023
• Unfunded Liability	\$32.1 M
• Total Pension Appropriation (Fiscal 2013)	\$4.3 M

	Active	Retired
• Number of Members	256	287
• Total Payroll/Benefit	\$11.6 M	\$6.6 M
• Average Salary/Benefit	\$45,400	\$23,000
• Average Age	49	74
• Average Service	13 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/13/12
Period Covered	01/01/08-12/31/10

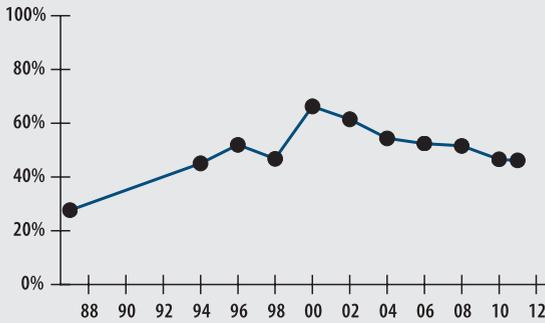
	2010	2009	2008
Annual Receipts	\$12.56 M	\$14.84 M	\$(15.60 M)
Annual Disbursements	\$7.35 M	\$6.90 M	\$6.55 M

EARNED INCOME OF DISABILITY RETIREES (2011)

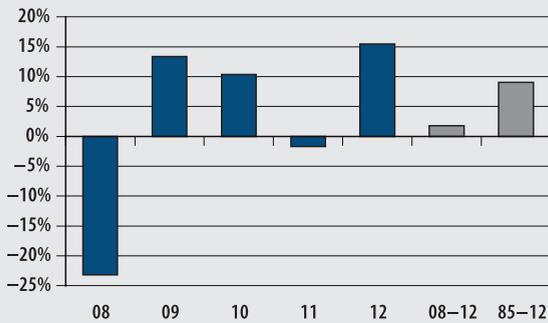
Number of Disability Retirees	26
Number Who Reported Earnings	6
Number of Excess Earners	1
Total Amount of Refund Due	\$581

▶ 2012 Return	13.88%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$60.1 M
▶ 2008-2012 (Annualized)	1.55%
▶ 1985-2012 (Annualized)	8.81%

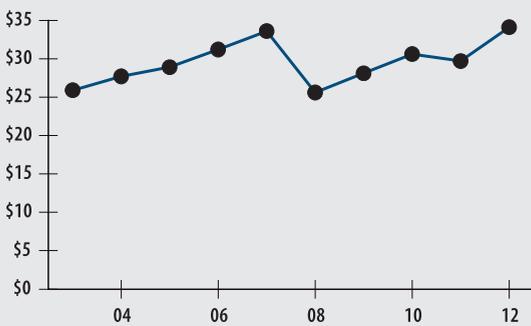
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

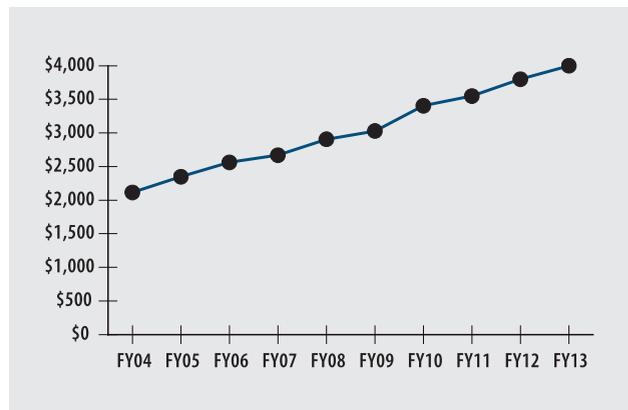
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.03%	8.79%	9.22%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.63%	4.49%	4.58%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.76%	1.05%	3.63%

ACTUARIAL

• Funded Ratio	46.2%
• Date of Last Valuation	01/11
• Actuary	Stone
• Assumed Rate of Return	8.00%
• Funding Schedule	3.93% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$38.6 M
• Total Pension Appropriation (Fiscal 2013)	\$4.0 M

	Active	Retired
• Number of Members	226	213
• Total Payroll/Benefit	\$11.0 M	\$4.5 M
• Average Salary/Benefit	\$48,500	\$21,100
• Average Age	49	74
• Average Service	13 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

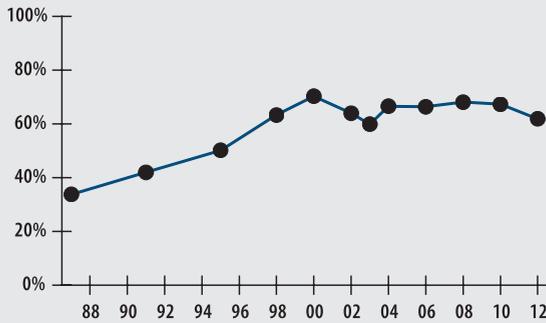
Date of Last Audit	12/05/12
Period Covered	01/01/09-12/31/11
Annual Receipts	2011 \$4.67 M
Annual Disbursements	2010 \$8.06 M
	2009 \$7.76 M
	\$5.62 M
	\$5.06 M
	\$5.26 M

EARNED INCOME OF DISABILITY RETIREES (2011)

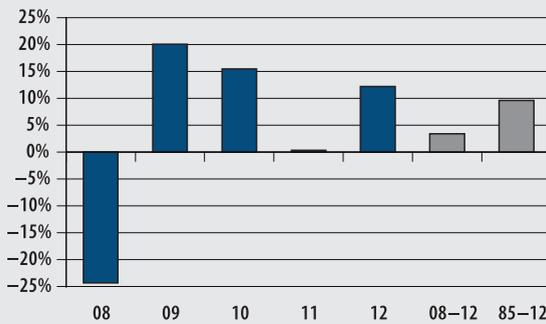
Number of Disability Retirees	26
Number Who Reported Earnings	7
Number of Excess Earners	1
Total Amount of Refund Due	\$28,448

▶ 2012 Return	15.45%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$34.1 M
▶ 2008-2012 (Annualized)	1.76%
▶ 1985-2012 (Annualized)	9.03%

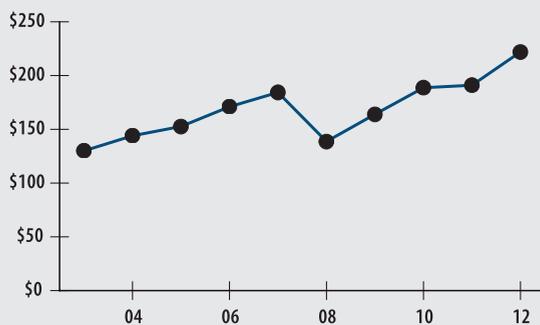
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

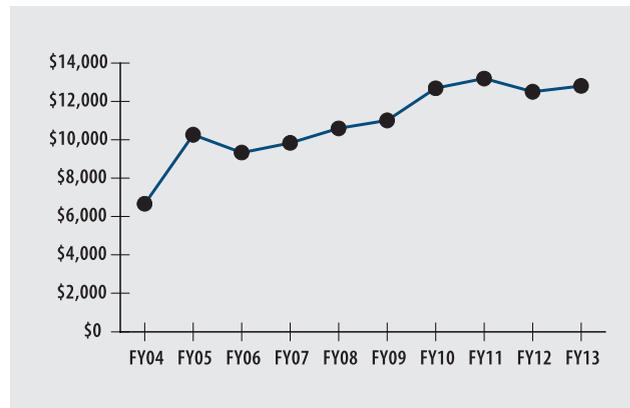
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.63%	9.54%	9.91%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.47%	5.73%	5.70%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.41%	2.72%	5.14%

ACTUARIAL

• Funded Ratio	61.9%
• Date of Last Valuation	01/12
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2030
• Unfunded Liability	\$129.2 M
• Total Pension Appropriation (Fiscal 2013)	\$12.8 M

	Active	Retired
• Number of Members	1,098	742
• Total Payroll/Benefit	\$55.6 M	\$18.1 M
• Average Salary/Benefit	\$50,700	\$24,400
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/15/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009 \$46.27 M
Annual Disbursements	2008 \$(28.90 M)
	2009 \$18.91 M
	2010 \$17.66 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	92
Number Who Reported Earnings	18
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.23%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$221.8 M
▶ 2008-2012 (Annualized)	3.41%
▶ 1985-2012 (Annualized)	9.63%

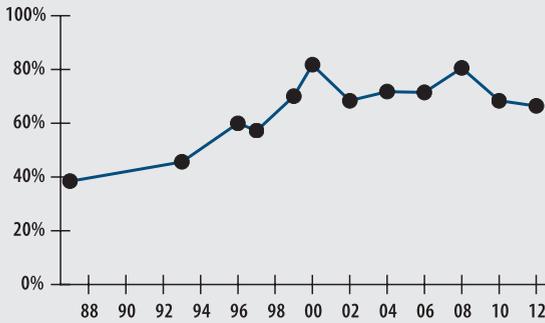
Wakefield

1 Lafayette Street
Wakefield, MA 01880
Phone 781-246-6396
Fax 781-246-2400

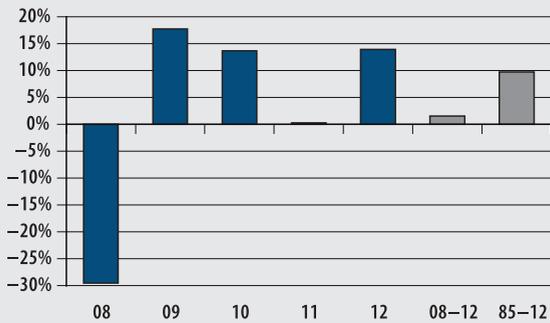
Board Members
Kevin Gill (Chairperson), Daniel Calore,
Richard J. DeFelice, Philip Rogers, Sr.,
Daniel Sherman

Board Administrator
Cathy Cheek
Board Meeting
Third Thursday of each month

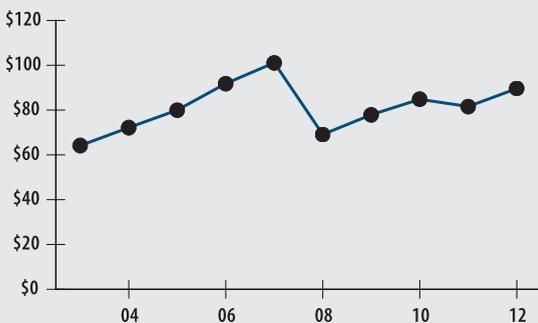
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

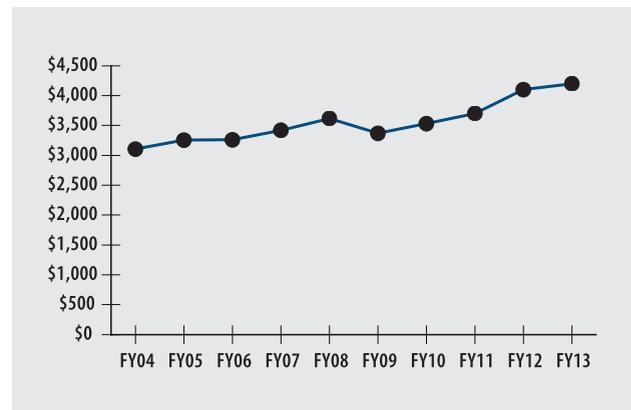
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.77%	9.62%	9.99%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.68%	6.27%	5.67%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.53%	1.19%	4.31%

ACTUARIAL

• Funded Ratio	66.5%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2038
• Unfunded Liability	\$45.0 M
• Total Pension Appropriation (Fiscal 2013)	\$4.2 M

	Active	Retired
• Number of Members	427	365
• Total Payroll/Benefit	\$19.3 M	\$8.6 M
• Average Salary/Benefit	\$45,100	\$23,600
• Average Age	48	74
• Average Service	12.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

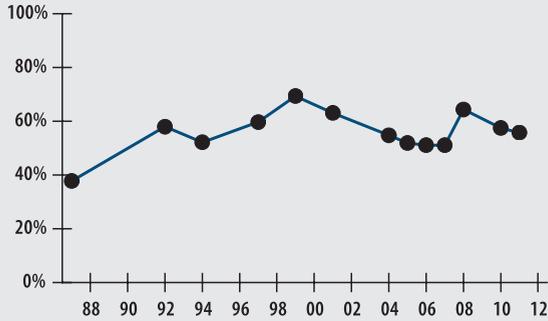
Date of Last Audit	04/12/12
Period Covered	01/01/09-12/31/10
Annual Receipts	2010 \$16.20 M
Annual Disbursements	2009 \$17.38 M
	\$9.16 M
	\$8.62 M

EARNED INCOME OF DISABILITY RETIREES (2011)

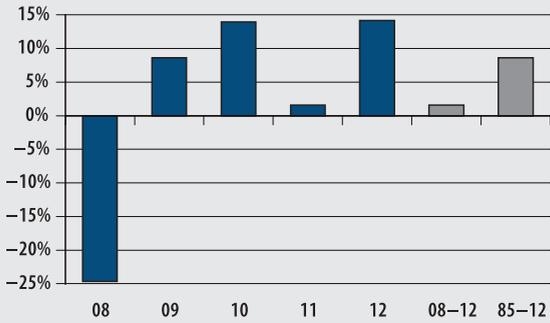
Number of Disability Retirees	39
Number Who Reported Earnings	9
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.97%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$89.6 M
▶ 2008-2012 (Annualized)	1.53%
▶ 1985-2012 (Annualized)	9.77%

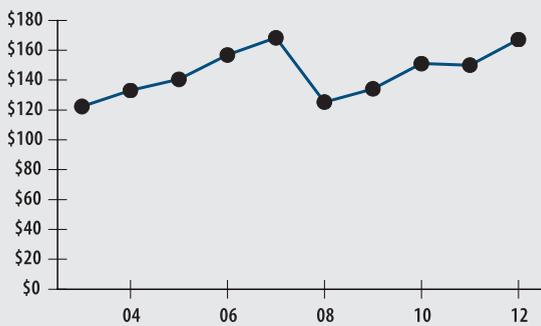
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

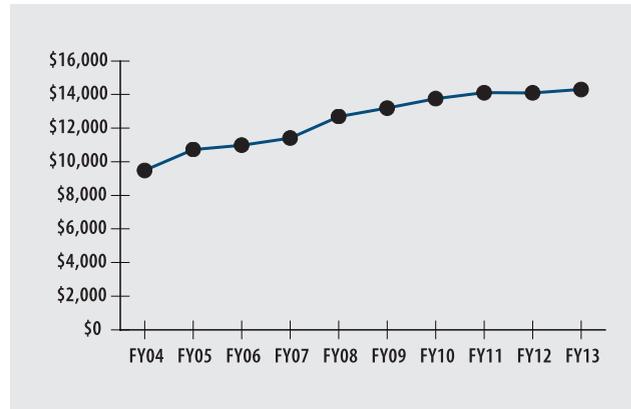
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.62%	8.42%	8.69%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.95%	4.43%	3.80%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.57%	0.67%	3.00%

ACTUARIAL

• Funded Ratio	55.8%
• Date of Last Valuation	01/11
• Actuary	Buck Consultants
• Assumed Rate of Return	8.25%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2031
• Unfunded Liability	\$133.3 M
• Total Pension Appropriation (Fiscal 2013)	\$14.3 M

	Active	Retired
• Number of Members	854	785
• Total Payroll/Benefit	\$48.5 M	\$20.0 M
• Average Salary/Benefit	\$56,800	\$25,400
• Average Age	NA	73
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	10/03/10		
Period Covered	01/01/07-12/31/09		
	2009	2008	2007
Annual Receipts	\$31.55M	\$(24.05 M)	\$33.15 M
Annual Disbursements	\$21.02 M	\$20.72 M	\$20.66 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	104
Number Who Reported Earnings	22
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	14.17%
▶ Assumed Rate of Return	8.25%
▶ 2012 Market Value	\$167.1 M
▶ 2008-2012 (Annualized)	1.57%
▶ 1985-2012 (Annualized)	8.62%

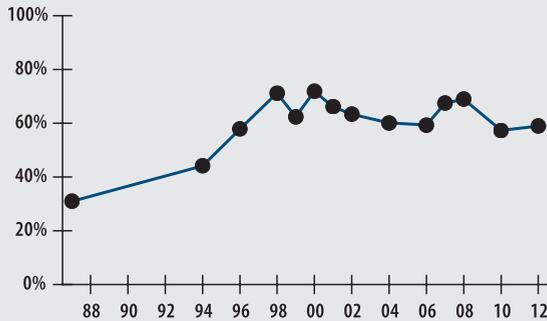
Watertown

P. O. Box 199
 149 Main Street
 Watertown, MA 02471-0199
 Phone 617-972-6456, 888-972-6456 (toll free)
 Fax 617-923-3531

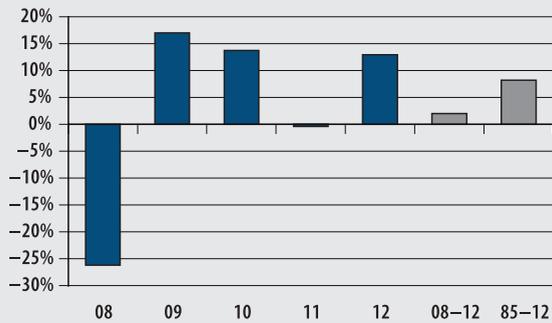
Board Members
 Thomas V. Thibaut, Jr. (Chairperson),
 Domenic Arone, Kathleen Kiely-Becchetti,
 John T. Loughran, Thomas J. Tracy

Board Administrator
 Barbara A. Sheehan
Board Meeting
 Varies

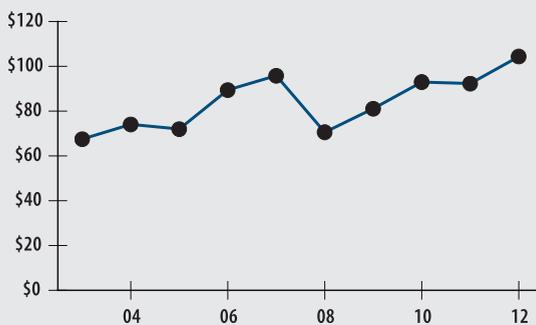
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

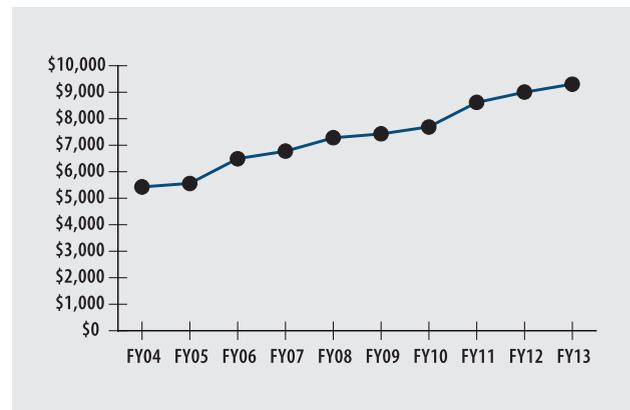
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.25%	8.08%	8.42%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.08%	4.72%	4.57%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.04%	1.07%	4.12%

ACTUARIAL

• Funded Ratio	59.0%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2022
• Unfunded Liability	\$70.6 M
• Total Pension Appropriation (Fiscal 2013)	\$9.3

	Active	Retired
• Number of Members	500	416
• Total Payroll/Benefit	\$25.8 M	\$10.4 M
• Average Salary/Benefit	\$51,600	\$25,100
• Average Age	47	76
• Average Service	13.0 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

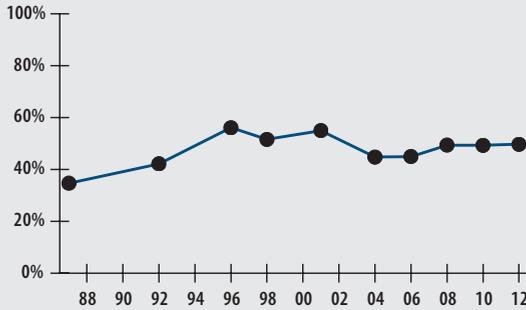
Date of Last Audit	02/23/11
Period Covered	01/01/08-12/31/09
Annual Receipts	2009: \$20.87 M, 2008: \$(13.66 M)
Annual Disbursements	2009: \$10.97 M, 2008: \$10.81 M

EARNED INCOME OF DISABILITY RETIREES (2011)

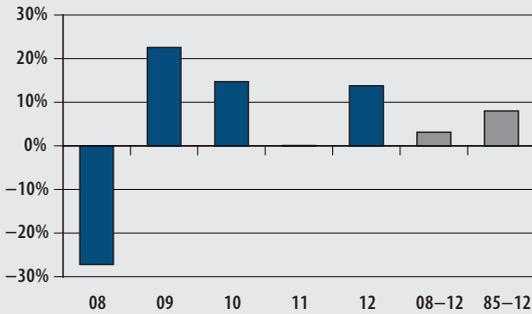
Number of Disability Retirees	59
Number Who Reported Earnings	11
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	12.99%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$104.3 M
▶ 2008-2012 (Annualized)	2.04%
▶ 1985-2012 (Annualized)	8.25%

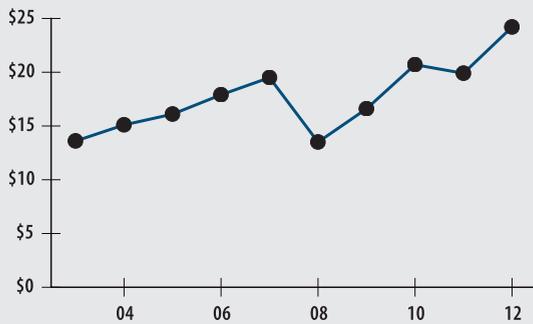
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

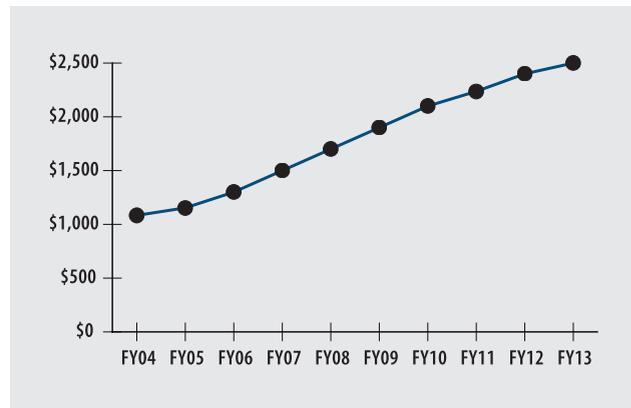
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.04%	7.83%	8.14%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.43%	5.57%	4.67%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.15%	2.13%	4.54%

ACTUARIAL

• Funded Ratio	49.7%
• Date of Last Valuation	01/12
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.5% Increasing
• Year Fully Funded	2029
• Unfunded Liability	\$23.0 M
• Total Pension Appropriation (Fiscal 2013)	\$2.5 M

	Active	Retired
• Number of Members	243	132
• Total Payroll/Benefit	\$8.9 M	\$2.5 M
• Average Salary/Benefit	\$36,500	\$18,700
• Average Age	47	72
• Average Service	11.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/04/12
Period Covered	01/01/08-12/31/10

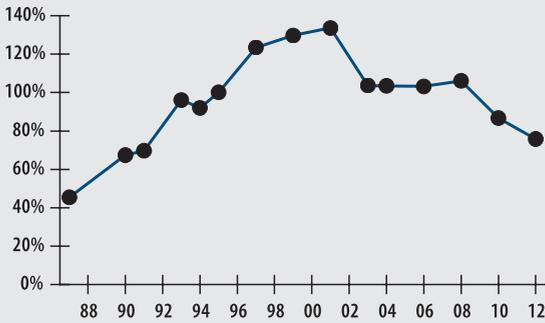
	2010	2009	2008
Annual Receipts	\$5.67 M	\$6.10 M	\$(2.41 M)
Annual Disbursements	\$2.88 M	\$2.63 M	\$2.65 M

EARNED INCOME OF DISABILITY RETIREES (2011)

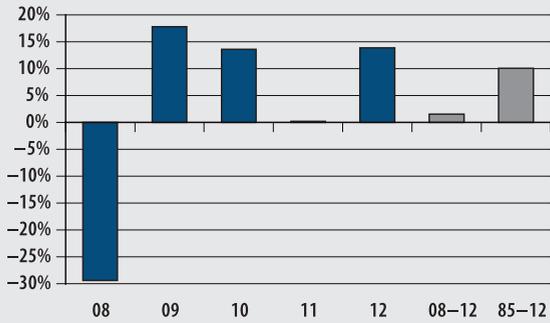
Number of Disability Retirees	11
Number Who Reported Earnings	2
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.83%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$24.2 M
▶ 2008-2012 (Annualized)	3.15%
▶ 1985-2012 (Annualized)	8.04%

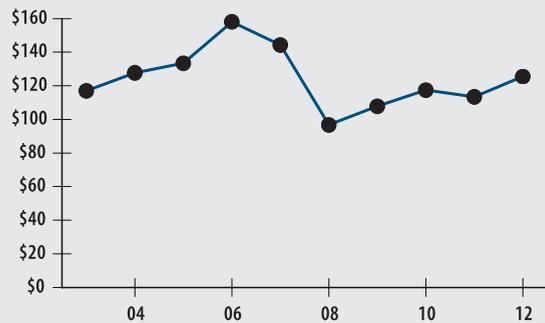
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

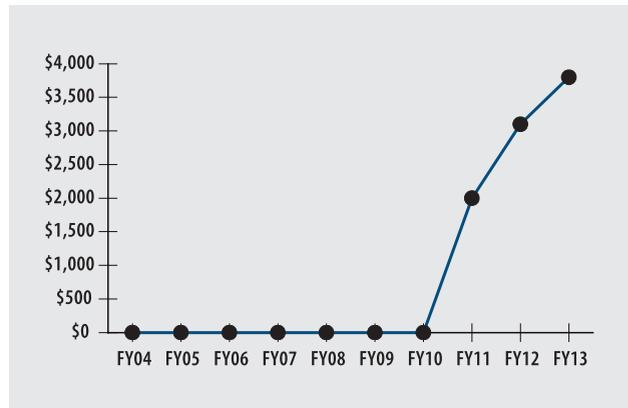
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
10.11%	9.97%	10.37%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.37%	5.36%	4.80%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.55%	0.55%	3.57%

ACTUARIAL

- Funded Ratio 75.8%
- Date of Last Valuation 01/12
- Actuary Segal
- Assumed Rate of Return 7.75%
- Funding Schedule 4.5% Increasing Phase-in
- Year Fully Funded 2030
- Unfunded Liability \$40.0 M
- Total Pension Appropriation (Fiscal 2013) \$3.8 M

	Active	Retired
• Number of Members	669	406
• Total Payroll/Benefit	\$33.9 M	\$9.2 M
• Average Salary/Benefit	\$50,700	\$22,600
• Average Age	45	NA
• Average Service	10.8 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	12/05/12
Period Covered	01/01/09-12/31/11

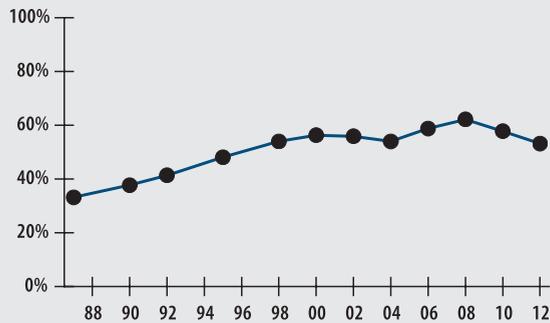
	2011	2010	2009
Annual Receipts	\$7.17 M	\$19.67 M	\$21.11 M
Annual Disbursements	\$10.81 M	\$10.22 M	\$9.68 M

EARNED INCOME OF DISABILITY RETIREES (2011)

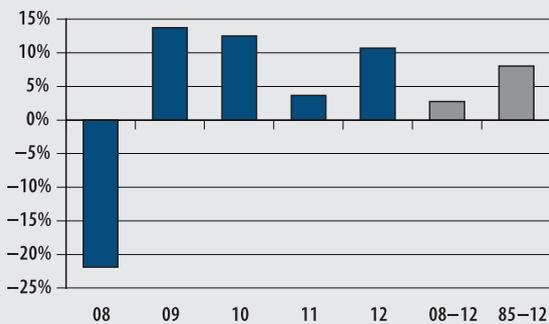
Number of Disability Retirees	33
Number Who Reported Earnings	6
Number of Excess Earners	1
Total Amount of Refund Due	\$3,176

▶ 2012 Return	13.93%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$125.5 M
▶ 2008-2012 (Annualized)	1.55%
▶ 1985-2012 (Annualized)	10.11%

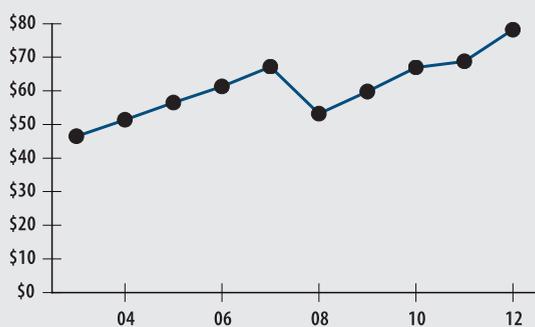
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

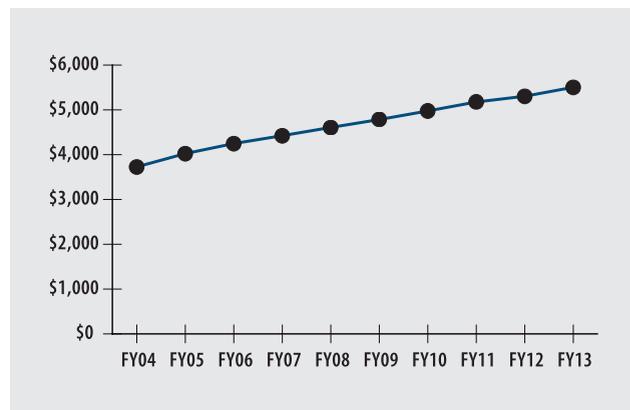
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.02%	7.92%	8.08%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
6.44%	4.70%	4.41%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.77%	2.54%	3.42%

ACTUARIAL

• Funded Ratio	53.2%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.75%
• Funding Schedule	3.75% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$63.5 M
• Total Pension Appropriation (Fiscal 2013)	\$5.5 M

	Active	Retired
• Number of Members	570	375
• Total Payroll/Benefit	\$23.4 M	\$7.2 M
• Average Salary/Benefit	\$41,000	\$19,300
• Average Age	47	73
• Average Service	12.3 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	01/20/12
Period Covered	01/01/08-12/31/10

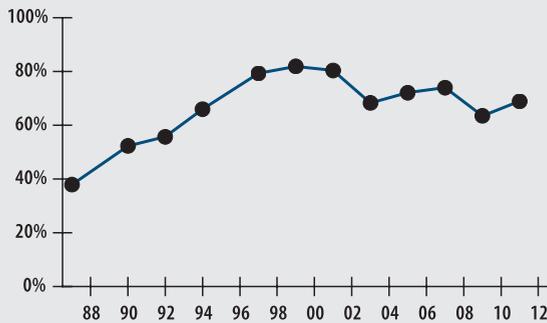
	2010	2009	2008
Annual Receipts	\$14.72 M	\$14.20 M	\$(6.60 M)
Annual Disbursements	\$7.45 M	\$7.25 M	\$6.89 M

EARNED INCOME OF DISABILITY RETIREES (2011)

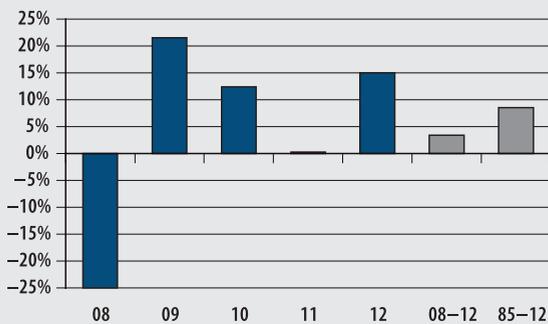
Number of Disability Retirees	39
Number Who Reported Earnings	11
Number of Excess Earners	1
Total Amount of Refund Due	\$7,110

▶ 2012 Return	10.71%
▶ Assumed Rate of Return	7.75%
▶ 2012 Market Value	\$78.2 M
▶ 2008-2012 (Annualized)	2.77%
▶ 1985-2012 (Annualized)	8.02%

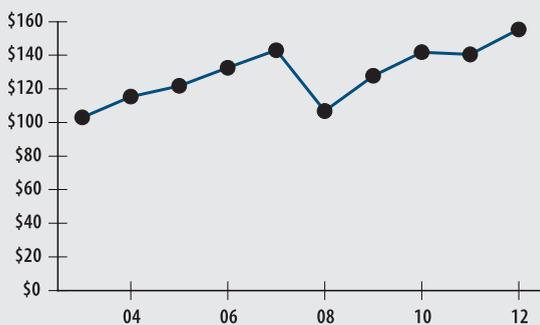
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

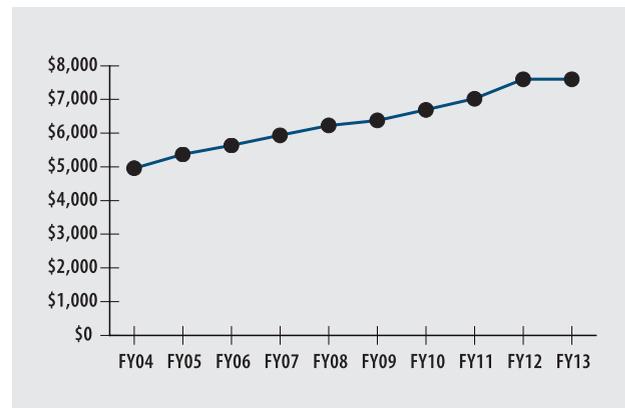
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.59%	8.36%	8.68%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.21%	4.31%	3.96%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.41%	1.94%	4.14%

ACTUARIAL

• Funded Ratio	68.9%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2032
• Unfunded Liability	\$66.7 M
• Total Pension Appropriation (Fiscal 2013)	\$7.6 M

	Active	Retired
• Number of Members	894	553
• Total Payroll/Benefit	\$35.6 M	\$11.2 M
• Average Salary/Benefit	\$39,900	\$20,300
• Average Age	49	72
• Average Service	12.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

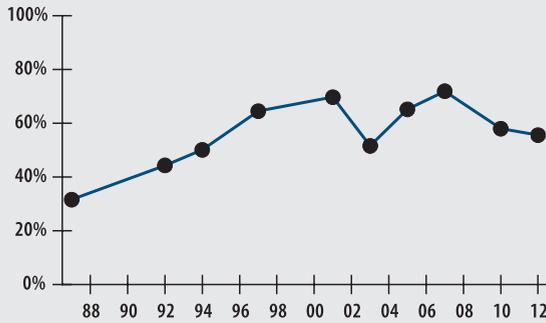
Date of Last Audit	05/16/13
Period Covered	01/01/10-12/31/11
Annual Receipts	2011 \$12.06 M
Annual Disbursements	2010 \$26.73 M
	2011 \$13.37 M
	2010 \$12.72 M

EARNED INCOME OF DISABILITY RETIREES (2011)

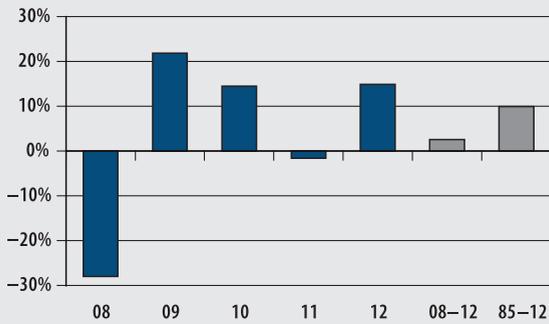
Number of Disability Retirees	61
Number Who Reported Earnings	16
Number of Excess Earners	1
Total Amount of Refund Due	\$3,525

▶ 2012 Return	15.04%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$155.4 M
▶ 2008-2012 (Annualized)	3.41%
▶ 1985-2012 (Annualized)	8.59%

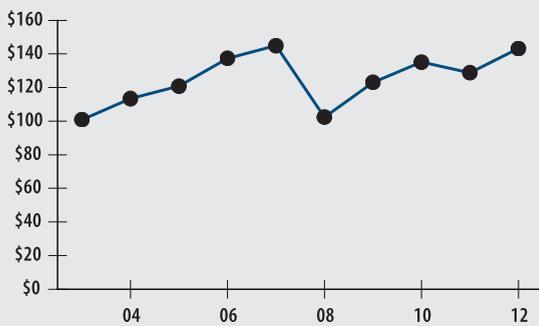
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

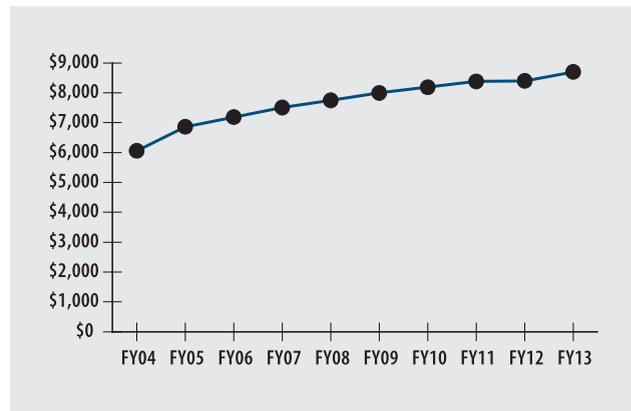
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.99%	9.81%	10.27%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.29%	5.82%	5.43%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.61%	1.25%	4.59%

ACTUARIAL

• Funded Ratio	55.6%
• Date of Last Valuation	01/12
• Actuary	Stone
• Assumed Rate of Return	7.88%
• Funding Schedule	3.61% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$103.1 M
• Total Pension Appropriation (Fiscal 2013)	\$8.7 M

	Active	Retired
• Number of Members	810	628
• Total Payroll/Benefit	\$34.8 M	\$14.8 M
• Average Salary/Benefit	\$43,000	\$23,600
• Average Age	49	74
• Average Service	11.5 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

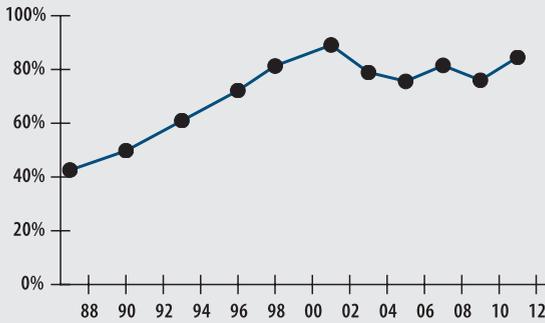
Date of Last Audit	02/06/13		
Period Covered	01/01/09-12/31/11		
	2011	2010	2009
Annual Receipts	\$11.31 M	\$30.34 M	\$33.66 M
Annual Disbursements	\$16.96 M	\$16.35 M	\$15.42 M

EARNED INCOME OF DISABILITY RETIREES (2011)

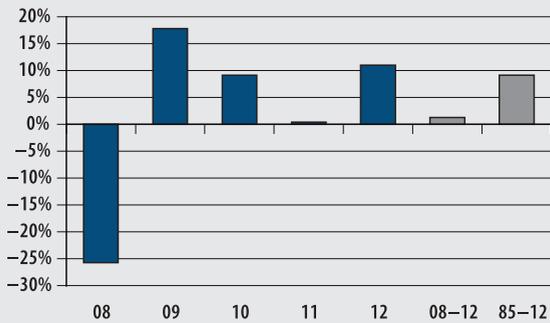
Number of Disability Retirees	99
Number Who Reported Earnings	28
Number of Excess Earners	1
Total Amount of Refund Due	\$611

▶ 2012 Return	14.93%
▶ Assumed Rate of Return	7.88%
▶ 2012 Market Value	\$143.2 M
▶ 2008-2012 (Annualized)	2.61%
▶ 1985-2012 (Annualized)	9.99%

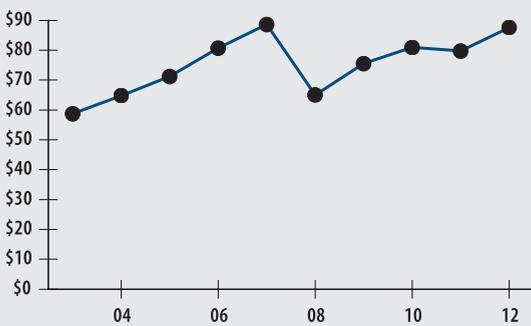
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

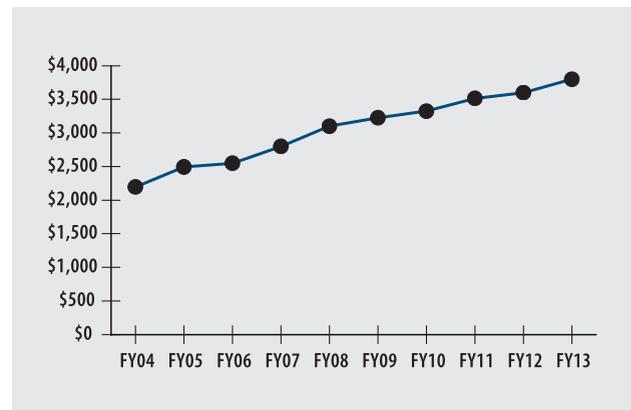
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.19%	9.13%	9.47%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.73%	5.73%	5.58%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.28%	1.30%	4.09%

ACTUARIAL

• Funded Ratio	84.5%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	Level
• Year Fully Funded	2021
• Unfunded Liability	\$16.1 M
• Total Pension Appropriation (Fiscal 2013)	\$3.8 M

	Active	Retired
• Number of Members	363	286
• Total Payroll/Benefit	\$17.2 M	\$5.9 M
• Average Salary/Benefit	\$47,400	\$20,500
• Average Age	48	75
• Average Service	12.7 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	08/11/10		
Period Covered	01/01/07-12/31/09		
	2009	2008	2007
Annual Receipts	\$17.24 M	\$(17.73 M)	\$13.76 M
Annual Disbursements	\$6.21 M	\$6.46 M	\$6.08 M

EARNED INCOME OF DISABILITY RETIREES (2011)

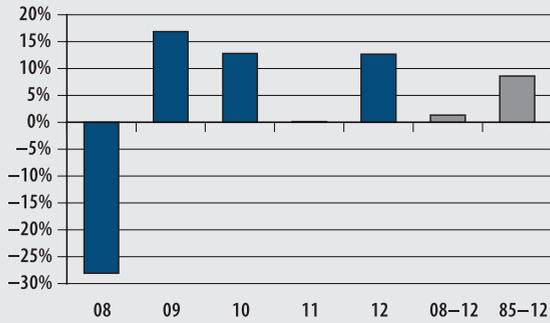
Number of Disability Retirees	29
Number Who Reported Earnings	6
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	11.02%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$87.6 M
▶ 2008-2012 (Annualized)	1.28%
▶ 1985-2012 (Annualized)	9.19%

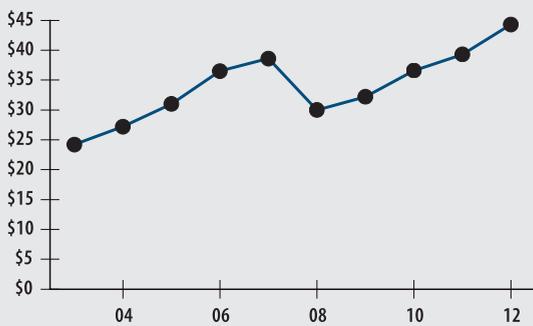
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

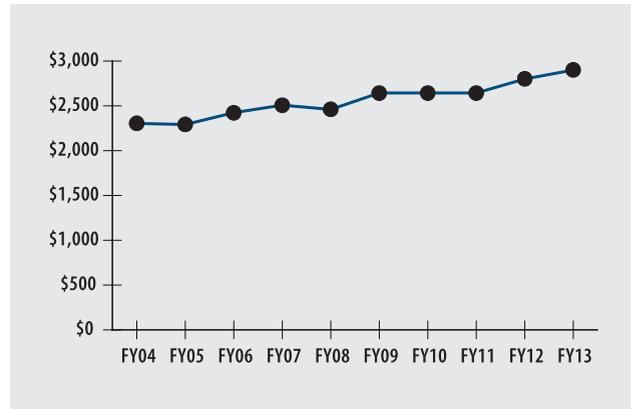
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.65%	8.50%	8.84%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
7.78%	5.14%	4.98%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.39%	1.23%	4.21%

ACTUARIAL

• Funded Ratio	73.1%
• Date of Last Valuation	01/11
• Actuary	PERAC
• Assumed Rate of Return	8.00%
• Funding Schedule	2.0% Increasing
• Year Fully Funded	2023
• Unfunded Liability	\$15.4 M
• Total Pension Appropriation (Fiscal 2013)	\$2.9 M

	Active	Retired
• Number of Members	247	169
• Total Payroll/Benefit	\$10.0 M	\$3.1 M
• Average Salary/Benefit	\$40,600	\$18,300
• Average Age	50	75
• Average Service	12.9 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	06/10/13
Period Covered	01/01/09-12/31/11
Annual Receipts	2011: \$4.19 M, 2010: \$8.03 M, 2009: \$8.48 M
Annual Disbursements	2011: \$3.98 M, 2010: \$3.74 M, 2009: \$3.75 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	19
Number Who Reported Earnings	3
Number of Excess Earners	1
Total Amount of Refund Due	\$3,806

▶ 2012 Return	12.71%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$44.3 M
▶ 2008-2012 (Annualized)	1.39%
▶ 1985-2012 (Annualized)	8.65%

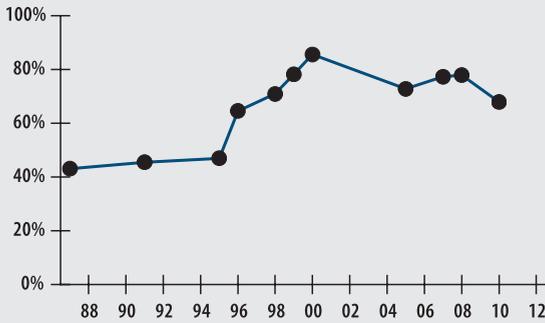
Woburn

City Hall, Second Floor
10 Common Street
Woburn, MA 01801-4139
Phone 781-897-5820
Fax 781-897-5824

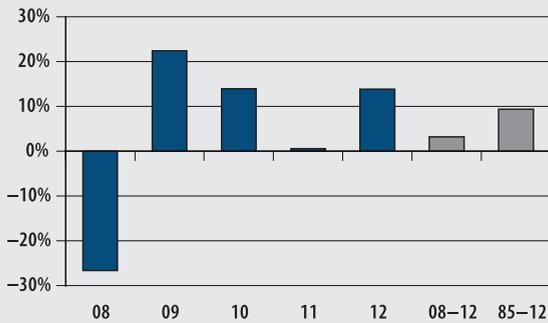
Board Members
Gerald W. Surette (Chairperson),
Denis P. Devine, A. John Flaherty,
Michael J. Gorman, Marilou E. Lundin

Board Administrator
Maureen T. Marcucci
Board Meeting
Varies

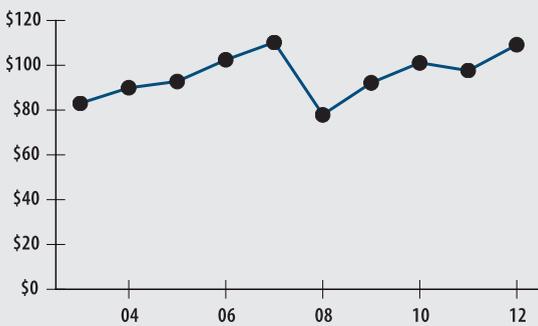
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

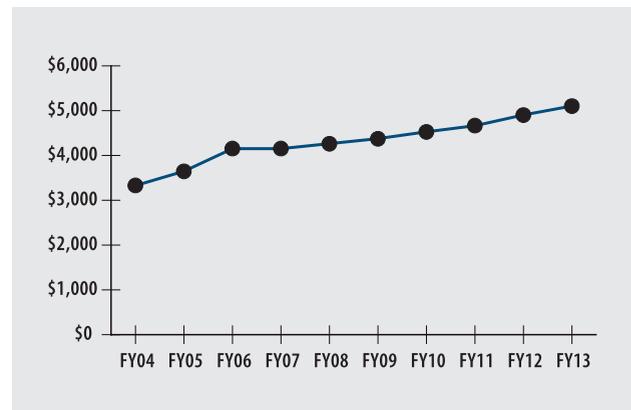
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.41%	9.25%	9.59%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.16%	5.63%	5.56%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
3.24%	2.64%	5.17%

ACTUARIAL

• Funded Ratio	67.9%
• Date of Last Valuation	01/10
• Actuary	Buck Consultants
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing
• Year Fully Funded	2035
• Unfunded Liability	\$49.6 M
• Total Pension Appropriation (Fiscal 2013)	\$5.1 M

	Active	Retired
• Number of Members	570	402
• Total Payroll/Benefit	\$27.4 M	\$7.9 M
• Average Salary/Benefit	\$48,100	\$19,600
• Average Age	NA	74
• Average Service	NA	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	09/22/11
Period Covered	01/01/08-12/31/10

	2010	2009	2008
Annual Receipts	\$20.62 M	\$24.44 M	\$(23.01 M)
Annual Disbursements	\$11.09 M	\$10.05 M	\$10.21 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	34
Number Who Reported Earnings	6
Number of Excess Earners	0
Total Amount of Refund Due	\$0

▶ 2012 Return	13.88%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$109.1 M
▶ 2008-2012 (Annualized)	3.24%
▶ 1985-2012 (Annualized)	9.41%

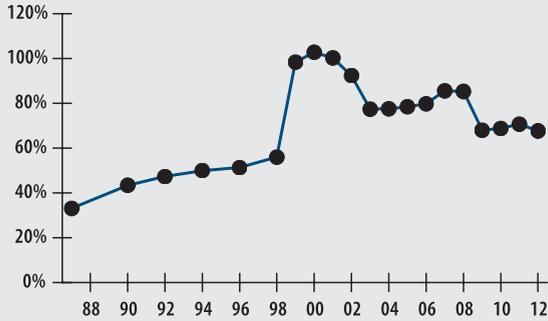
Worcester

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

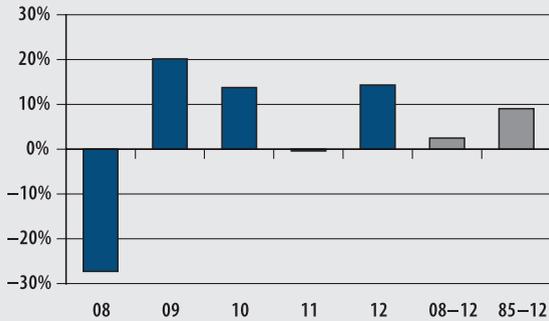
Board Members
James DelSignore (Chairperson),
Elizabeth A. Early, John F. Mahan,
Thomas M. Wade, Stephen F. Wentzell

Board Administrator
Elizabeth A. Early
Board Meeting
Second and Third Thursday of each month

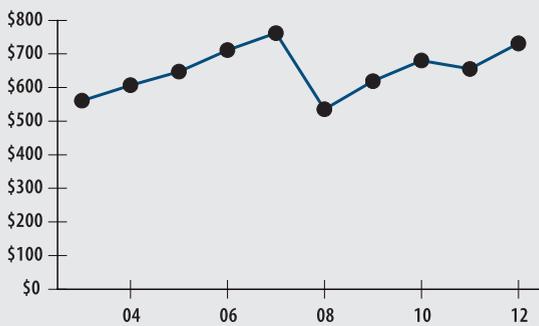
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

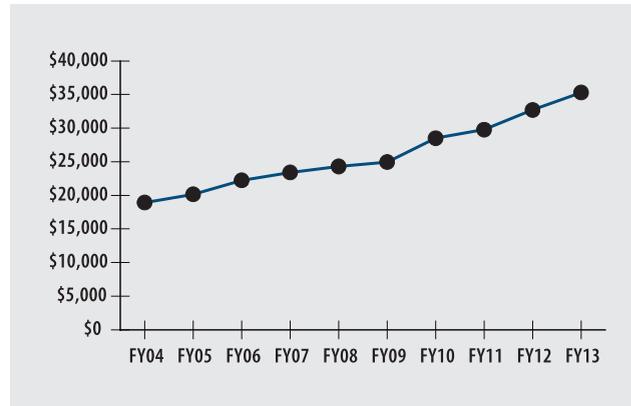
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
9.04%	8.85%	9.22%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
8.27%	5.45%	5.02%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
2.53%	1.57%	4.53%

ACTUARIAL

• Funded Ratio	67.7%
• Date of Last Valuation	01/12
• Actuary	Segal
• Assumed Rate of Return	8.00%
• Funding Schedule	4.0% Increasing Phase-in
• Year Fully Funded	2035
• Unfunded Liability	\$339.1 M
• Total Pension Appropriation (Fiscal 2013)	\$35.3 M

	Active	Retired
• Number of Members	3,178	2,777
• Total Payroll/Benefit	\$159.7 M	\$63.2 M
• Average Salary/Benefit	\$50,200	\$22,800
• Average Age	47	NA
• Average Service	14.2 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

Date of Last Audit	04/17/13
Period Covered	01/01/09-12/31/11

	2011	2010	2009
Annual Receipts	\$47.12 M	\$133.74 M	\$156.28 M
Annual Disbursements	\$73.02 M	\$69.58 M	\$66.91 M

EARNED INCOME OF DISABILITY RETIREES (2011)

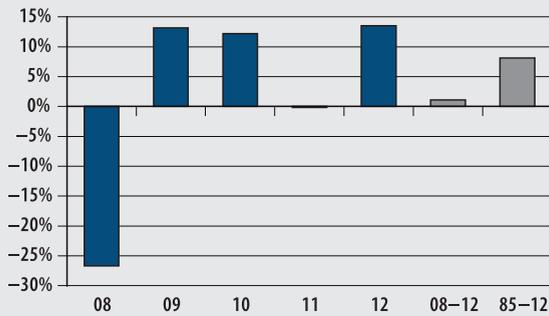
Number of Disability Retirees	436
Number Who Reported Earnings	84
Number of Excess Earners	5
Total Amount of Refund Due	\$40,653

▶ 2012 Return	14.35%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$731.3 M
▶ 2008-2012 (Annualized)	2.53%
▶ 1985-2012 (Annualized)	9.04%

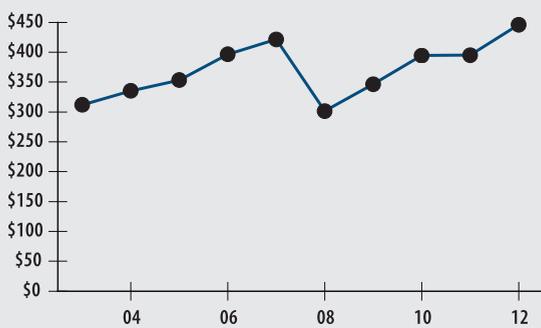
Funded Ratio (1987-2012)



Investment Return (2008-2012, 5 Year and 28 Year Averages)



Asset Growth (2003-2012) (Market Value in Millions)



Investment Return History

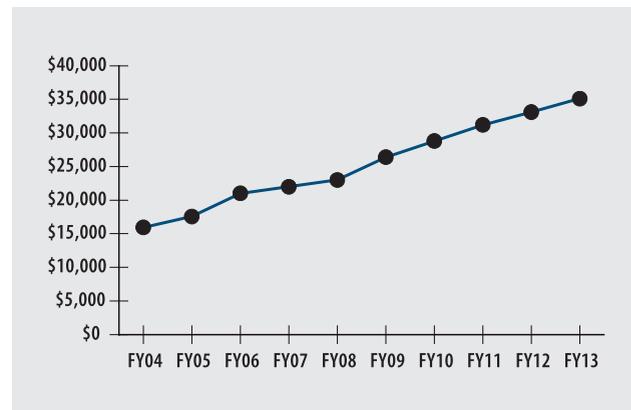
<u>28 years 2012</u>	<u>27 years 2011</u>	<u>26 years 2010</u>
8.10%	7.91%	8.23%
<u>10 years 2012</u>	<u>10 years 2011</u>	<u>10 years 2010</u>
5.73%	3.42%	2.94%
<u>5 years 2012</u>	<u>5 years 2011</u>	<u>5 years 2010</u>
1.08%	0.21%	2.74%

ACTUARIAL

- Funded Ratio 44.4%
- Date of Last Valuation 01/12
- Actuary KMS Actuaries
- Assumed Rate of Return 8.00%
- Funding Schedule 4.0% Increasing Phase-in
- Year Fully Funded 2040
- Unfunded Liability \$546.1 M
- Total Pension Appropriation (Fiscal 2013) \$35.1 M

	Active	Retired
• Number of Members	6,377	2,975
• Total Payroll/Benefit	\$239.0 M	\$49.4 M
• Average Salary/Benefit	\$37,500	\$16,600
• Average Age	48	73
• Average Service	10.4 years	NA

10-YEAR HISTORY OF APPROPRIATIONS (IN THOUSANDS)



AUDIT

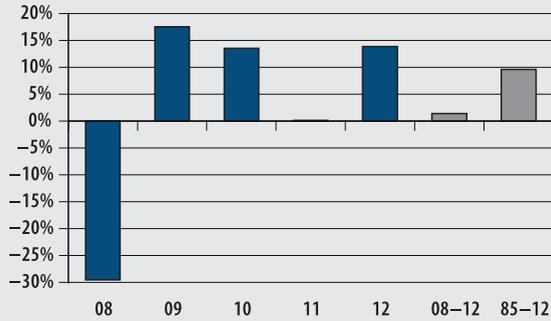
Date of Last Audit	06/10/13	
Period Covered	01/01/10-12/31/11	
	2011	2010
Annual Receipts	\$60.73 M	\$103.17 M
Annual Disbursements	\$57.25 M	\$54.88 M

EARNED INCOME OF DISABILITY RETIREES (2011)

Number of Disability Retirees	231
Number Who Reported Earnings	65
Number of Excess Earners	3
Total Amount of Refund Due	\$11,061

▶ 2012 Return	13.54%
▶ Assumed Rate of Return	8.00%
▶ 2012 Market Value	\$446.0 M
▶ 2008-2012 (Annualized)	1.08%
▶ 1985-2012 (Annualized)	8.10%

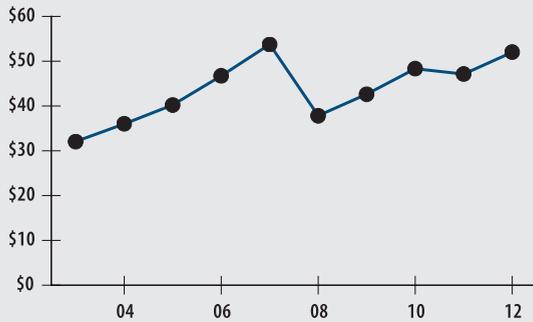
Investment Return (2008-2012, 5 Year and 28 Year Averages)



Investment Return History

28 years 2012	27 years 2011	26 years 2010
9.65%	9.50%	9.87%
10 years 2012	10 years 2011	10 years 2010
8.61%	6.21%	5.61%
5 years 2012	5 years 2011	5 years 2010
1.43%	1.07%	4.21%

Asset Growth (2003-2012) (Market Value in Billions)



▶ 2012 Return	13.87%
▶ 2012 Target	8.00%
▶ 2012 Market Value	\$52.0 B
▶ 2008-2012 (Annualized)	1.43%
▶ 1985-2012 (Annualized)	9.65%

Disability Retirement Statistics as of 12/31/12

	Disability Retirement Panel Requests	Accidental Retirement Approvals	Disability Nurse CME Reviews	Physician CME/RTS Reviews	Accidental Death Approvals
Retirement Boards with 40–399 Active Members					
Adams Retirement Board	0	0	0	0	0
Amesbury Retirement Board	1	1	0	2	0
Athol Retirement Board	2	1	1	4	0
Blue Hills Regional School Retirement Board	0	0	0	0	0
Clinton Retirement Board	1	1	0	1	0
Easthampton Retirement Board	3	2	0	1	0
Fairhaven Retirement Board	0	1	0	0	0
Gardner Retirement Board	2	2	0	1	0
Gr. Lawrence Sanitary District Retirement Board	0	0	0	1	0
Greenfield Retirement Board	2	2	0	1	0
Hull Retirement Board	0	0	0	0	0
Marblehead Retirement Board	1	0	0	2	0
Mass Housing Finance Agency Retirement Board	0	0	0	0	0
Maynard Retirement Board	1	0	0	0	0
Milton Retirement Board	1	0	0	5	0
Minuteman Regional School District Ret. Board	1	1	0	0	0
Montague Retirement Board	0	0	0	2	0
Newburyport Retirement Board	0	1	1	1	0
North Adams Retirement Board	0	1	0	2	0
Northbridge Retirement Board	1	0	0	2	0
Reading Retirement Board	1	0	1	3	0
Saugus Retirement Board	1	0	0	2	0
Southbridge Retirement Board	1	0	0	1	0
Stoneham Retirement Board	0	0	0	2	0
Swampscott Retirement Board	4	2	0	1	0
Webster Retirement Board	0	1	0	0	0
Winchester Retirement Board	2	0	0	0	0
Winthrop Retirement Board	2	0	0	0	0
Retirement Boards with 400–599 Active Members					
Belmont Retirement Board	0	0	0	5	0
Beverly Retirement Board	1	1	0	1	0
Concord Retirement Board	0	0	0	2	0
Danvers Retirement Board	3	3	1	1	0
Dedham Retirement Board	1	3	1	4	0
Fitchburg Retirement Board	1	1	1	5	0
Gloucester Retirement Board	0	0	0	6	0
Hingham Retirement Board	0	0	0	0	0
Leominster Retirement Board	1	0	0	4	0
Lexington Retirement Board	0	1	0	4	0

Disability Retirement Statistics as of 12/31/12

	Disability Retirement Requests	Accidental Death Approvals	Disability Nurse CME Reviews	Physician CME/RTS Reviews	
Melrose Retirement Board	2	1	0	3	0
Milford Retirement Board	1	1	1	1	0
Natick Retirement Board	1	0	0	1	0
North Attleboro Retirement Board	3	1	0	4	0
Norwood Retirement Board	2	0	0	4	0
Revere Retirement Board	6	1	1	3	0
Wakefield Retirement Board	1	2	0	1	0
Watertown Retirement Board	1	1	1	5	1
West Springfield Retirement Board	1	1	0	1	1
Woburn Retirement Board	0	0	0	2	0
Retirement Boards with 600-899 Active Members					
Andover Retirement Board	1	1	0	4	0
Arlington Retirement Board	4	1	0	7	0
Attleboro Retirement Board	11	4	2	1	0
Braintree Retirement Board	5	3	0	2	0
Chelsea Retirement Board	5	3	0	6	0
Dukes County Contributory Retirement System	1	1	0	1	0
Everett Retirement Board	6	5	2	6	0
Falmouth Retirement Board	0	0	0	6	0
Malden Retirement Board	2	5	1	10	1
Marlborough Retirement Board	2	2	0	3	0
Medford Retirement Board	7	2	3	11	1
Methuen Retirement Board	1	3	2	3	0
Needham Retirement Board	1	0	1	1	0
Northampton Retirement Board	1	2	0	3	0
Peabody Retirement Board	3	1	1	8	0
Salem Retirement Board	1	0	0	5	0
Shrewsbury Retirement Board	1	2	1	4	0
Waltham Retirement Board	5	4	1	6	0
Wellesley Retirement Board	3	2	0	2	1
Westfield Retirement Board	1	1	1	9	0
Weymouth Retirement Board	0	0	0	11	0
Retirement Boards with 900-2,399 Active Members					
Berkshire County Retirement Board	3	1	0	4	0
Brockton Retirement Board	3	3	0	16	0
Brookline Retirement Board	12	4	3	15	2
Chicopee Retirement Board	7	4	2	9	0
Fall River Retirement Board	13	4	1	32	1
Framingham Retirement Board	3	2	0	9	3

Disability Retirement Statistics as of 12/31/12

	Disability Retirement Panel Requests	Accidental Death Approvals	Disability Nurse CME Reviews	Physician CME/RTS Reviews	
Franklin County Retirement Board	3	3	0	3	0
Haverhill Retirement Board	4	4	1	5	0
Holyoke Retirement Board	6	5	1	11	2
Lawrence Retirement Board	7	2	0	9	0
Lowell Retirement Board	17	12	0	19	1
Lynn Retirement Board	15	10	0	27	1
Mass Port Authority Retirement Board	2	1	0	3	0
Mass Water Resource Authority Retirement Board	0	3	0	8	0
New Bedford Retirement Board	14	11	0	34	0
Newton Retirement Board	5	3	3	14	0
Pittsfield Retirement Board	0	2	0	9	1
Plymouth Retirement Board	1	1	0	7	0
Quincy Retirement Board	5	4	1	12	2
Somerville Retirement Board	6	1	0	9	0
Taunton Retirement Board	8	2	1	4	0
Retirement Boards with 2,400-10,000 Active Members					
Barnstable County Board of Retirement	17	14	0	46	1
Bristol County Board of Retirement	10	8	2	38	1
Cambridge Retirement Board	15	13	4	24	1
Essex Regional Retirement Board	4	1	0	10	0
Hampden County Regional Retirement Board	6	2	0	17	1
Hampshire County Regional Retirement Board	5	5	0	13	2
Middlesex County Retirement Board	23	15	3	46	3
Norfolk County Retirement Board	12	13	2	29	1
Plymouth County Retirement Board	11	14	2	32	1
Springfield Retirement Board	16	14	4	43	1
Worcester Regional Retirement Board	14	11	1	34	0
Worcester Retirement Board	7	12	10	32	0
Retirement Boards with 20,500-90,000 Active Members					
Boston Retirement Board	129	91	12	239	8
State Retirement Board	159	138	12	429	20
Teachers Retirement Board	39	22	0	37	3
Total All Retirement Boards:	714	530	89	1,528	61

Restoration to Service Statistics *(Provided for those boards where a disability retiree has returned to work.)*

- Boston Retirement Board 1
- Bristol County Retirement Board 1
- Franklin County Retirement Board 1
- Middlesex County Retirement Board 1
- Westfield Retirement Board 1
- State Retirement Board 1

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.

Adams	Domestic Equity <ul style="list-style-type: none"> Granite Investment Advisors International Equity <ul style="list-style-type: none"> EuroPacific Growth Fund 	Domestic Fixed Income <ul style="list-style-type: none"> Granite Investment Advisors Custodian <ul style="list-style-type: none"> State Street 	
Amesbury	<ul style="list-style-type: none"> PRIT 		
Andover	<ul style="list-style-type: none"> PRIT 		
Arlington	Alternative Investments <ul style="list-style-type: none"> Wilshire Private Markets Fund IV & VII General Allocation <ul style="list-style-type: none"> PRIT 	Custodian <ul style="list-style-type: none"> State Street 	
Athol	<ul style="list-style-type: none"> PRIT 		
Attleboro	Domestic Equity <ul style="list-style-type: none"> Boston Advisors, Inc. Daruma Asset Management, Inc. Frontier Capital Management Company, LLC RhumbLine S&P 500 Pooled Index Fund International Equity <ul style="list-style-type: none"> SSgA MSCI ACWI ex-US Index NL Fund 	Domestic Fixed Income <ul style="list-style-type: none"> Pyramis Core Plus Commingled Pool Real Estate <ul style="list-style-type: none"> Hancock Timberland XI Fund INVESCO Core Real Estate Fund INVESCO IRT Equity Real Estate Securities Fund 	Alternative Investments <ul style="list-style-type: none"> RMK Global Timberland Resources Fund Hedge Funds <ul style="list-style-type: none"> PRIT Consultant <ul style="list-style-type: none"> Dahab Associates Custodian <ul style="list-style-type: none"> State Street
Barnstable County	Real Estate <ul style="list-style-type: none"> Allegis Value Trust (AVT) Fund Intercontinental Real Estate Investment Fund IV, LLC 	General Allocation <ul style="list-style-type: none"> PRIT 	
Belmont	Domestic Equity <ul style="list-style-type: none"> Atlanta Capital Management Company, LLC Rothschild Large Cap Value Fund International Equity <ul style="list-style-type: none"> PRIT Domestic Fixed Income <ul style="list-style-type: none"> Scout Core Plus Bond Fund Global Fixed Income <ul style="list-style-type: none"> Mondrian Global Fixed Income Fund 	Real Estate <ul style="list-style-type: none"> AEW Core Property Trust, L.P. AEW Partners VI, L.P. PRIT General Allocation <ul style="list-style-type: none"> PRIT Alternative Investments <ul style="list-style-type: none"> Dover Street VII, L.P. PRIT 	Global Balanced <ul style="list-style-type: none"> PIMCO All Asset Fund Hedge Funds <ul style="list-style-type: none"> PRIT Consultant <ul style="list-style-type: none"> New England Pension Consultants Custodian <ul style="list-style-type: none"> State Street
Berkshire County	<ul style="list-style-type: none"> PRIT 		

Beverly

• PRIT

Blue Hills Regional

• PRIT

Boston

Domestic Equity

- Boston Company
- Columbia Asset Management
- D.E. Shaw 130/30 Enhanced Large Cap Equity Fund
- D.E. Shaw Enhanced Long-Only Equity Fund
- Enhanced Investment Technologies (INTECH)
- J.P. Morgan Large Cap Core 130/30 Fund
- RhumbLine S&P 500 Pooled Index Fund
- Westfield Capital Management Company, LLC
- Zevenbergen Capital

International Equity

- Alliance Bernstein Emerging Markets Value Account
- Boston Company
- Fisher Investments Foreign Equity Fund
- PanAgora Asset Management
- Vontobel Asset Management

Domestic Fixed Income

- Fountain Capital Management, LLC
- Loomis Sayles Senior Loan Fund, LLC
- Richmond Capital Management
- SSgA U.S. Aggregate Bond Index SL Fund
- Wells Capital Management, Inc.

International Fixed Income

- Loomis, Sayles & Company, L.P.
- Loomis Sayles Emerging Markets Debt Investment Trust

Real Estate

- AEW Partners V, L.P.
- Angelo Gordon Realty Fund VIII, L.P.
- Arsenal Real Estate Fund IA, L.P.
- Dune Real Estate Fund II, L.P.
- Hearthstone-MSII Homebuilding Investors
- Hearthstone Multi-State Residential Value Added Fund III

- Hunt Commercial Realty Partners II, L.P.
- INVESCO Core Real Estate Fund
- J.P. Morgan Special Situation Property Fund
- LaSalle Income & Growth Fund III & V
- Mesirow Financial Institutional Real Estate International Fund II
- Mesirow Financial Real Estate Value Fund
- Pearlmark Mezzanine Realty Partners III
- Prudential Real Estate Investors (PRISA) Fund
- Prudential Real Estate Senior Housing Partners III
- Siguler Guff Distressed Real Estate Opportunities Fund, LP
- TA Realty Associates Fund IX
- Urdang Value Added Fund II
- WCP Real Estate Fund II & III, L.P.

Alternative Investments

- Aladdin Credit Offshore Fund I, L.P.
- Ascent Venture Partners III, L.P.
- Audax Mezzanine Fund, L.P.
- Audax Mezzanine Fund II & III
- Blue Point Capital Partners, L.P.
- Blue Point Capital Partners II, L.P.
- Boston Millennia Partners II, L.P.
- Commonwealth Capital Ventures III
- Crescent Mezzanine VI
- Energy Spectrum Partners VI L.P.
- European Strategic Partners I, L.P.
- Evercore Capital Partners II, L.P.
- GoldenTree Distressed Debt Fund LP
- JFL Equity Investors III, L.P.
- J.W. Childs Equity Partners III, L.P.
- Lexington Capital Partners V, VI & VII, L.P.
- Lexington Middle Market Investors, L.P.
- Lexington Middle Market Investors II, L.P.
- MPM BioVentures III & IV, L.P.
- Oaktree Power Opportunities Fund III, L.P.
- Perella Weinberg Partners ABV Opportunity Fund II

- Prudential Capital Partners, L.P.
- Prudential Capital Partners II & IV
- Sanderling Venture Partners V & VI
- SCP Private Equity Partners II, L.P.
- Siguler Guff Distressed Opportunities Fund
- Siguler Guff Distressed Opportunities Fund II, III & IV
- Standard Life European Strategic Partners Fund 2006
- Sterling Capital Partners, L.P.
- Sterling Capital Partners II, III & IV
- Sterling Venture Partners, LLC
- TH Lee Putnam Parallel Ventures, L.P.
- Thomas H. Lee Equity Fund V & VI, L.P.
- Thomas Weisel Global Growth Partners II
- Vanguard VI Annex Fund, L.P.
- Vanguard VII, L.P.
- Venture Lending & Leasing III, IV, V, VI & VII
- W Capital Partners II, L.P.

Hedge Fund

- EnTrust Capital Diversified Fund
- GAM U.S. Institutional Diversity Fund
- Mesirow Absolute Return Fund (Institutional) Ltd. Class J
- Permal Fixed Income Holdings N.V.

Consultant

- New England Pension Consultants

Custodian

- State Street

Braintree

Domestic Equity

- SSgA S&P 500 Flagship SL Fund

Domestic Fixed Income

- Loomis Sayles Investment Grade Fixed Income Fund
- SSgA U.S. Aggregate Bond Index SL Fund

International Equity

- Acadian Emerging Markets Equity Fund
- Boston Company Non-US Value Equity Fund

International Fixed Income

- Pictet Local Currency Debt Fund

Alternative Investments

- Lexington Capital Partners VII, L.P.

Real Estate

- PRIT

General Allocation

- PRIT

Hedge Funds

- PRIT

Consultant

- New England Pension Consultants

Custodian

- State Street

Bristol County

Domestic Equity

- Earnest Partners, LLC
- INTECH Large Cap Growth Equity Fund
- LSV Asset Management
- Rice Hall James & Associates
- Trust & Fiduciary Management Services / TFMS Matrix Income Fund
- UBS US Large Cap Equity Fund

International Equity

- Arrowstreet Capital, L.P.
- Lazard Emerging Markets Equity Portfolio
- MFS Institutional International Equity Fund
- RBC GAM International Fund

Domestic Fixed Income

- Alliance Bernstein Legacy Securities Portfolio
- Income Research & Management
- INVESCO Mortgage Recovery Fund
- PIMCO Diversified Real Return Fund

- SSgA U.S. Aggregate Bond Index SL Fund
- Trust & Fiduciary Management Services / TFMS Matrix Income Fund

International Fixed Income

- Colchester Global Bond Fund

Real Estate

- Brookfield Timberlands Fund V
- Eastern Timberland Opportunities II
- Hancock ForesTree V, L.P.
- Hunt Investment Management / Residential Income and Value Added (RIVA) Fund
- New Boston Institutional Fund, L.P. VI
- RREEF America REIT II
- TA Realty Associates Fund VII

Global REIT

- CB Richard Ellis Clarion Global Real Estate Securities Strategy

Alternative Investments

- BlackRock Diversified Private Equity Program III & IV
- Charles River Partnership X & XI
- DuPont Capital Management / DCM Private Equity Fund II
- DN Partners, L.P.
- DN Partners II, L.P.
- Mesirov Financial Private Equity Partnership Fund V
- Senior Tour Players Fund I

Hedge Funds

- PRIT

Consultant

- Segal Rogerscasey

Custodian

- State Street

Brockton

Domestic Equity

- Boston Company Asset Management
- D.E. Shaw U.S. Large Cap Core Enhanced Special Fund
- ICC Capital Management, Inc.
- Valley Forge Asset Management Corporation
- Wellington Trust Co.-CIF Mid Cap Growth Portfolio

International Equity

- Acadian International Small Cap Fund
- Boston Company Emerging Markets Pooled Fund
- RBC GAM International Fund

Domestic Fixed Income

- Loomis, Sayles & Company, L.P.
- RBC Global Asset Management (U.S.) Inc.

International/Global Fixed Income

- Brandywine International Fixed Income Fund

- Lazard Emerging Income Fund
- McDonnell International Fixed Income Fund

Real Estate

- Arsenal Real Estate Fund IA, L.P.
- Duff & Phelps Real Estate Securities Trust
- Hunt Investment Management / Residential Income and Value-Added (RIVA) Fund
- Intercontinental Real Estate Investment Fund IV, LLC
- Landmark Real Estate Partners VI
- Mesirov Financial Real Estate Value Fund, L.P.
- New Boston Institutional Fund, L.P. VI
- Siguler Guff Distressed Real Estate Opportunities Fund, LP
- TA Realty Associates Fund VI

Alternative Investments

- Ascent Venture Partners II, III, IV, & V L.P.
- Boston Capital Ventures III

- Charlesbank Equity Fund V
- FLAG Energy & Resources II, L.P.
- HealthPoint Partners, L.P.
- INVESCO Non-U.S. Partnership Fund III, L.P.
- Landmark Equity Partners XIV
- Levine Leichtman Capital Partners Deep Value Fund, L.P.
- Oppenheimer Global Resource Private Equity Fund I, L.P.
- Wellington Trust Co.-CIF Diversified Inflation Hedges Fund

Global Balanced

- PIMCO All Asset Fund

Consultant

- New England Pension Consultants

Custodian

- State Street

Brookline

Domestic Equity

- Champlain Small Cap Fund, LLC
- Earnest Partners, LLC
- Enhanced Investment Technologies (INTECH)
- Rothschild Small Cap Fund
- SSgA S&P 500 Flagship NL Fund

International Equity

- Driehaus International Small Cap Growth Fund
- Legg Mason Emerging Markets Trust CI
- Thornburg International Equity (Q.P.), LLC
- Wentworth, Hauser, and Violic

Domestic Fixed Income

- Loomis Sayles Institutional High Income Fund
- SSgA Treasury Inflation Protected Securities (TIPS) SL Fund
- SSgA U.S. Aggregate Bond Index NL Fund
- SSgA U.S. Aggregate Bond Index SL Fund

International Fixed Income

- BNY Mellon EB Emerging Markets Debt Local Currency Fund

Real Estate

- AEW Value Investors II, L.P.
- Hancock Timberland IX Fund
- PRIT
- Sustainable Woodlands Fund II, L.P.

Alternative Investments

- HarbourVest Partners VII – Buyout Partnership Fund L.P.
- HarbourVest Partners VII – Mezzanine & Distressed Debt Fund L.P.
- HarbourVest Partners VII – Venture Partnership Fund L.P.
- HarbourVest Partners VIII – Buyout Fund L.P.
- HarbourVest Partners VIII – Mezzanine & Distressed Debt Fund L.P.
- HarbourVest Partners VIII – Venture Fund L.P.
- INVESCO International Partnership Fund V, L.P.
- INVESCO Non-U.S. Partnership Fund III, L.P.

- INVESCO U.S. Buyout & Expansion Capital Partnership Fund III, L.P.
- INVESCO U.S. Buyout Partnership Fund V, L.P.
- INVESCO Venture Partnership Fund III & V, L.P.
- Lexington Capital Partners VII, L.P.
- Wellington Trust Co.-CIF Commodities Fund

Global Balanced

- BlackRock Global Allocation Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

Hedge Funds

- PRIT

General Allocation

- PRIT

Consultant

- New England Pension Consultants

Custodian

- State Street

Cambridge

Domestic Equity

- Columbia Management Group, Inc.
- Fred Alger Management, Inc.
- MFS Institutional Advisors, Inc.
- Pyramis Large Cap Core 130/30 Fund
- SSgA Russell 2500 Growth Index Strategy
- SSgA S&P 500 Flagship NL Fund
- WEDGE Capital Management, LLP

International Equity

- Lazard Emerging Markets Equity Portfolio
- RBC GAM International Fund
- SSgA MSCI-EAFE Index NL Fund
- SSgA MSCI-EAFE Index SL Fund

Domestic Fixed Income

- Income Research & Management

- MacKay-Shields Financial Corporation
- Pyramis Broad Market Duration Portfolio

International Fixed Income

- Brandywine Global Fixed Income Fund

Real Estate

- AEW Partners V, L.P.
- Carey Corporate Properties Associates Fund 15
- Hancock ForesTree V Fund
- Hancock Timberland X Fund
- INVESCO Core Real Estate Fund
- Landmark Real Estate Partners VI, LP
- Penn Square Global Real Estate Fund II
- UBS (US) Trumbull Property Fund LP

Alternative Investments

- Ascent Venture Partners II, III, IV, & V L.P.
- BlackRock Diversified Private Equity Program II
- Hamilton Lane Private Equity Fund VI, LP

Hedge Funds

- PRIT

Consultant

- Segal Rogercasey

Custodian

- State Street

Chelsea

- PRIT

Chicopee

Domestic Equity

- SEI Institutional Investments Trust Large Cap Disciplined Equity Fund
- SEI Institutional Investments Trust Small/Mid Cap Equity Fund

International Equity

- SEI Institutional Investments Trust World Equity Ex-US Fund

Domestic Fixed Income

- SEI Institutional Investments Trust Core Fixed Income Fund

- SEI Institutional Investments Trust High Yield Bond Fund

International Fixed Income

- SEI Institutional Investments Trust Emerging Market Bond Fund

Real Estate

- PRIT
- SEI Core Property Fund, L.P.

Alternative Investments

- SEI Global Private Equity Fund II (2007), L.P.
- SEI Structured Credit Fund, L.P.

Hedge Funds

- PRIT
- SEI Special Situations Fund

Custodian

- SEI Private Trust Company

Clinton

Total Portfolio

- PRIT

Consultant

- Trust Advisory Group, Ltd.

Concord

Domestic Equity

- Columbia Disciplined Value Fund
- Frank Russell Equity I Fund

International Equity

- Frank Russell International Fund

Domestic Fixed Income

- Columbia Management Group, Inc.

Real Estate

- PRIT

Alternative Investments

- PRIT

General Allocation

- PRIT

Custodian

- Bank of America

Danvers

Domestic Equity

- Dalton, Greiner, Hartman, Maher & Co., LLC
- Fidelity Spartan 500 Index Fund
- Mount Lucas US Focused Equity Strategy
- RhumbLine Russell 1000 Growth Pooled Index Fund
- Schafer Cullen Capital Management

Domestic Fixed Income

- Longfellow Investment Management
- Primus High Yield Bond Fund

International Equity

- PRIT

Real Estate

- BPG Investment Partnership VIII & IX, L.P.
- TA Realty Associates Fund X

Emerging Markets

- PRIT

Alternative Investments

- Palladian Partners VII, LP

- PRIT

Hedge Funds

- PRIT

Consultant

- Graystone Consulting

Custodian

- State Street

Dedham

• PRIT

Dukes County

Domestic Equity

- Eaton Vance – Atlanta Capital SMID Cap Fund
- Polen Capital Management
- Vanguard Value Index Fund

International Equity

- PRIT

Domestic Fixed Income

- Bradford & Marzec LLC
- PRIT

Real Estate

- PRIT

General Allocation

- PRIT

Consultant

- Dahab Associates

Custodian

- State Street

Easthampton

• PRIT

Essex Regional

Real Estate

- Intercontinental Real Estate Investment Fund III, LLC
- Principal Green Property Fund I, L.P.
- Sentinel Realty Partners IV
- TA Realty Associates Fund IX

Alternative Investments

- Ascent Venture Partners III, IV, & V L.P.
- Boston Millennia Partners, L.P.

- Boston Millennia Partners II, L.P.

- Levine Leichtman Capital Partners III & IV, L.P.

- MTDC Commonwealth Fund Investment Program II

- BlackRock Investment Management / Vesey Street Fund IV (ERISA), L.P.

General Allocation

- PRIT

Consultant

- Dahab Associates

Custodian

- State Street

Everett

• PRIT

Fairhaven

• PRIT

Fall River

Alternative Investments

- North American Strategic Partners 2006, L.P.

General Allocation

- PRIT

Falmouth

Domestic Equity

- Earnest Partners, LLC
- Eaton Vance Large Cap Growth Fund
- Lee Munder Mid Cap Core Collective Fund
- RhumbLine Russell 1000 Value Pooled Index Fund
- Seizert Capital Partners

International Equity

- Denver International Small Cap Equity Fund
- INVESCO IRT International Equity Fund

Domestic Fixed Income

- SSgA U.S. Aggregate Bond Index SL Fund
- SSgA U.S. High Yield Bond Index NL Strategy Fund

International Fixed Income

- Baring International Group Trust Fund F

Real Estate

- Duff & Phelps Real Estate Securities Trust
- Intercontinental Real Estate Investment Fund III, LLC
- Metropolitan Real Estate Equity Management / MREP 2008 Distressed Co-Investment Fund, L.P.
- Principal U.S. Property Account

Alternative Investments

- INVESCO Non-U.S. Partnership Fund III, L.P.
- INVESCO U.S. Buyout & Expansion Capital Partnership Fund III, L.P.
- INVESCO Venture Partnership Fund III, L.P.
- Lexington Capital Partners V & VII, L.P.
- Mesriow Financial Private Equity Partnership Fund IV

- Siguler Guff Distressed Opportunities Fund III

Hedge Funds

- PRIT

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

Fitchburg	Real Estate <ul style="list-style-type: none"> • TA Realty Associates Fund VII 	General Allocation <ul style="list-style-type: none"> • PRIT 	
Framingham	<ul style="list-style-type: none"> • PRIT 		
Franklin Regional	Domestic Equity <ul style="list-style-type: none"> • Daruma Asset Management, Inc. • O'Shaughnessy Asset Management • Polen Capital Management • Seizert Capital Partners Domestic Fixed Income <ul style="list-style-type: none"> • IR&M Core Bond Fund 	Real Estate <ul style="list-style-type: none"> • PRIT General Allocation <ul style="list-style-type: none"> • PRIT Consultant <ul style="list-style-type: none"> • Dahab Associates 	Custodian <ul style="list-style-type: none"> • Comerica Bank
Gardner	<ul style="list-style-type: none"> • PRIT 		
Gloucester	<ul style="list-style-type: none"> • PRIT 		
Greater Lawrence	Total Portfolio <ul style="list-style-type: none"> • Seaward Management 	Custodian <ul style="list-style-type: none"> • Bank of New York Mellon 	
Greenfield	<ul style="list-style-type: none"> • PRIT 		
Hampden County Regional	Real Estate <ul style="list-style-type: none"> • Fidelity Real Estate Growth Fund III, L.P. • New Boston Institutional Fund, L.P. VI Alternative Investments <ul style="list-style-type: none"> • DLJ Diversified Partners IV, L.P. • INVESCO Non-U.S. Partnership Fund III, L.P. • INVESCO U.S. Buyout & Expansion Capital 	<ul style="list-style-type: none"> • Partnership Fund III, L.P. • INVESCO Venture Partnership Fund III, L.P. General Allocation <ul style="list-style-type: none"> • PRIT Consultant <ul style="list-style-type: none"> • Segal Rogercasey 	
Hampshire County	Domestic Equity <ul style="list-style-type: none"> • RhumbLine S&P 500 Pooled Index Fund • RhumbLine S&P Mid-Cap 400 Pooled Index Fund • RhumbLine S&P Small Cap Pooled Index Fund International Equity <ul style="list-style-type: none"> • MFS Institutional International Equity Fund • RBC GAM International Fund Domestic Fixed Income <ul style="list-style-type: none"> • Credos Floating Rate Fund, L.P. • Mellon EB Aggregate Bond Index Fund • Primus High Yield Bond Fund, L.P. 	International Fixed Income <ul style="list-style-type: none"> • Colchester Global Bond Fund • PIMCO Emerging Local Bond Fund Real Estate <ul style="list-style-type: none"> • Intercontinental Real Estate Investment Fund III, LLC • PRIT Emerging Markets <ul style="list-style-type: none"> • PRIT Alternative Investments <ul style="list-style-type: none"> • Ascent Venture Partners III, IV & V, L.P. • Lexington Capital Partners VII, L.P. • PENN Distressed Fund, L.P. 	<ul style="list-style-type: none"> • Perella Weinberg Partners ABV Opportunity Fund III • Permal Private Equity Opportunities IV, L.P. • PRIT Global Balanced <ul style="list-style-type: none"> • Mellon EB Daily Value Expanded Alpha I Fund • PIMCO All Asset Fund • GMO Global Balanced Asset Allocation Fund Hedge Funds <ul style="list-style-type: none"> • PRIT Consultant <ul style="list-style-type: none"> • New England Pension Consultants

Haverhill

Domestic Equity

- Fisher Investments, Inc.
- Munder Capital Management
- Putnam Advisory Company, LLC
- RhumbLine Russell 1000 Growth Pooled Index Fund
- RhumbLine Russell 1000 Value Pooled Index Fund
- Systematic Financial Management, L.P.

International Equity

- INVESCO IRT International Equity Fund
- MFS Institutional International Equity Fund

Domestic Fixed Income

- PRIT

International Fixed Income

- Columbia Asset Management

Real Estate

- GFP Global Timber Investors 8
- GFP Institutional Global Timber Investors VI Ltd.
- GFP World Timberfund L.L.C.
- Intercontinental Real Estate Investment Fund III, LLC
- Mesirow Financial Institutional Real Estate International Fund
- PRIT

Alternative Investments

- First America Asia Fund I
- Globespan Capital Partners V, L.P.
- GrandBanks Capital Venture Fund II LP
- Macquarie Clean Technology Offshore Fund
- Novus Ventures II, L.P.
- PRIT
- Thomas H. Lee Equity Fund V, L.P.

Emerging Markets

- PRIT

Hedge Funds

- PRIT

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

Hingham

Total Portfolio

- PRIT

Consultant

- Fiduciary Investment Advisors, LLC

Holyoke

Domestic Equity

- Boston Company Mid Cap Opportunistic Value Equity Fund
- Brandywine Classic Large Cap Value Fund
- Ceredex Large Cap Value Fund
- Pyram Select Equity Small Cap Collective Trust
- Seizert Large Cap Value Fund
- SSgA Russell 1000 Index NL Fund
- SSgA Russell 2000 Index NL Fund
- SSgA S&P Midcap NL Fund
- UBS Large Cap Select Growth Fund

International Equity

- Fisher Investments Foreign Equity Fund
- Lazard Emerging Markets Equity Portfolio

- OFI Institutional Asset Management, Inc. / OFITC Emerging Markets Equity Fund
- RBC GAM International Fund
- SSgA MSCI-EAFE Index Fund
- SSgA MSCI Emerging Markets Fund

Domestic Fixed Income

- Putnam Core Fixed Income Fund
- Putnam High Yield Managed Trust
- SSgA Treasury Inflation Protected Securities (TIPS) Fund

Real Estate

- American Core Realty Fund, LLC
- Fidelity Real Estate Growth Fund III, L.P.
- Intercontinental Real Estate Investment

- Fund III, LLC

- INVESCO Core Real Estate Fund
- TA Realty Associates Fund VII

Alternative Investments

- Constitution Capital Partners Ironsides II
- Constitution Capital Partners Ironsides Co-Investment Fund II
- INVESCO Balanced-Risk Commodity Fund
- Mesirow Financial Private Equity Partnership Fund V
- Opus Commodities Core Plus A Fund

Hedge Funds

- PRIT

Hull

- PRIT

Lawrence

- PRIT

Leominster

Domestic Equity

- MFS Institutional Large Cap Value Fund
- Union Labor Life Small Cap Equity Account

International Equity

- Templeton Foreign Equity Series Fund

General Allocation

- PRIT

Hedge Funds

- PRIT

Custodian

- State Street

Lexington

Domestic Equity

- Fidelity Contra Fund
- Fiduciary Large Cap Fund
- Hartford Capital Appreciation HLS Fund

International Equity

- Acadian International Equity Fund
- Matthews Pacific Tiger Fund

Domestic Fixed Income

- Loomis Sayles Credit Asset Fund
- SSgA U.S. Aggregate Bond Index NL Fund

Real Estate

- Beacon Capital Strategic Partners V, L.P.

Alternative Investments

- Wellington Trust Co.-CIF Enduring Assets Fund

Global Balanced Fund

- PIMCO All Asset Fund
- PIMCO Global Multi-Asset Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

Consultant

- Meketa Investment Group

Custodian

- State Street

Lowell

Real Estate

- Intercontinental Real Estate Investment Fund III, LLC
- Sentinel Realty Partners IV & V

Alternative Investments

- Ascent Venture Partners II, III, & IV, L.P.
- Boston Millennia Partners, L.P.
- Boston Millennia Partners II, L.P.

- Charles River Partnership X & XI
- DN Partners, L.P.
- North Atlantic Venture Fund II & III
- Novus Ventures II, L.P.

General Allocation

- PRIT

Distribution Manager

- QCI Asset Management

Custodian

- State Street

Lynn

Real Estate

- BlackRock Granite Property Fund
- Fidelity Real Estate Growth Fund III, L.P.
- Hunt Investment Management / Property Redevelopment & Renovation Fund

Alternative Investments

- Ascent Venture Partners III & IV, L.P.
- BlackRock Diversified Private Equity Program III

General Allocation

- PRIT

MHFA

Domestic Equity

- SSgA Russell 1000 Growth Index NL Fund
- SSgA Russell 1000 Value Index NL Fund
- SSgA Russell 2000 Index NL Fund

International Equity

- Dimensional Emerging Markets Value Portfolio
- SSgA MSCI-EAFE Index NL Fund
- SSgA MSCI-EAFE Small Cap Index NL Fund

Domestic Fixed Income

- Columbia Trust U.S. High Yield Bond Fund

- McDonnell Investment Management, LLC
- SSgA Treasury Inflation Protected Securities (TIPS) NL Fund

Real Estate

- Angelo Gordon Realty Fund IV, L.P.
- Clarion Lion Properties Fund
- TA Realty Associates Fund IX

Alternative Investments

- Ascent Venture Partners II, III, IV, & V L.P.
- Goldman Sachs Private Equity Partners Fund 2005 – Direct Investment Fund

- Goldman Sachs Private Equity Partners Fund 2005 – Manager Fund, L.P.
- HarbourVest Partners VIII – Buyout Partnership Fund
- RS Global Natural Resources Fund

Consultant

- Meketa Investment Group

Custodian

- State Street

MWRA

Domestic Equity

- INTECH Risk-Managed Broad Large Cap Growth Fund
- Loomis Sayles Small Company Growth Fund
- MFS Institutional Advisors, Inc.
- RhumbLine S&P 500 Pooled Index Fund
- Robeco Investment Management

International Equity

- Boston Company Non-US Value Equity Fund
- Schroder International Alpha Portfolio

Domestic Fixed Income

- INVESCO Core Bond Fund
- INVESCO Mortgage Recovery Feeder Fund, L.P.
- INVESCO Mortgage Recovery Loans AIV Fund, L.P.
- Loomis Sayles Fixed Income Fund

Real Estate

- Intercontinental Real Estate Investment Fund IV, LLC
- Landmark Real Estate Partners VI
- Mesirow Financial Institutional Real Estate Global Partnership Fund II
- Morgan Stanley Prime Property Fund
- PRIT

Alternative Investments

- Ascent Venture Partners II, IV, & V L.P.
- Boston Capital Ventures III
- Castile Ventures III, L.P.
- Concord Partners III, L.P.
- Foundry Venture Capital 2007 & 2010, LP
- INVESCO Venture Partnership Fund IV, L.P.
- PineBridge Private Equity Portfolio V
- PRIT

Global Balanced

- PIMCO All Asset Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

General Allocation

- PRIT

Hedge Funds

- EnTrust Capital Diversified Fund
- Permal Fixed Income Holdings N.V.
- PRIT

Consultant

- New England Pension Consultants

Custodian

- State Street

Malden

Total Portfolio

- de Burlo Group

Custodian

- State Street

Marblehead

- PRIT

Marlborough

Domestic Equity

- Fiduciary Large Cap Fund
- Legg Mason Batterymarch U.S. Small Cap Equity Portfolio

- PENN Midcap Equity Fund, LP
- RhumbLine S&P 500 Pooled Index Fund

International Equity

- Boston Company Non-US Value Equity Fund
- Neuberger Berman International Large Cap Fund – Institutional Class

Marlborough

(continued)

Domestic Fixed Income

- Shenkman Capital Management / Primus High Yield Bond Fund
- SSgA U.S. Aggregate Bond Index NL Fund
- SSgA Treasury Inflation Protected Securities (TIPS) NL Fund

Alternative Investments

- North American Strategic Partners 2006, L.P.

Real Estate

- Clarion Lion Properties Fund
- Colony Partners IV, L.P.

Consultant

- Meketa Investment Group

Custodian

- Comerica Bank

Massport

Domestic Equity

- Pzena Investment Management
- SSgA Russell 1000 Index SL Fund
- SSgA Russell 2000 Growth Index SL Fund

International Equity

- Aberdeen EAFE Plus Fund
- SSgA MSCI ACWI ex-US Index NL Fund

Domestic Fixed Income

- SSgA U.S. Aggregate Bond Index NL Fund
- Wellington Trust Co.-CIF II Core Bond Plus Portfolio

Real Estate

- PRIT

Alternative Investments

- PRIT

Consultant

- Wilshire Associates

Custodian

- State Street

Maynard

Domestic Equity

- Boston Advisors, Inc.

Domestic Fixed Income

- PRIT

Real Estate

- PRIT

Alternative Investments

- Seguin Partners Fund, L.P.

Emerging Markets

- PRIT

Custodian

- State Street

Medford

Domestic Equity

- Loomis Sayles Small Cap Value Fund
- RhumbLine S&P 500 Pooled Index Fund
- RhumbLine S&P Mid-Cap 400 Pooled Index Fund
- SSgA Index Plus Edge Strategy Fund

International Equity

- INVESCO IRT International Equity Fund
- Western Emerging Markets Debt Local Currency Sovereign Fund

Domestic Fixed Income

- Columbia Management Group, Inc.
- Wellington Trust Co.-CIF II Core Bond Plus Portfolio

Real Estate

- PRIT

Alternative Investments

- PRIT

Global Balanced

- Mellon EB Daily Value Expanded Alpha I

Fund

- PIMCO All Asset Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

Hedge Funds

- PRIT

Consultant

- New England Pension Consultants

Custodian

- State Street

Melrose

Real Estate

- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Intercontinental Real Estate Investment Fund II, LLC
- TA Realty Associates Fund V & VII

Alternative Investments

- Ascent Venture Partners IV, L.P.

Alternative Investments

- INVESCO Non-U.S. Partnership Fund III, L.P.
- INVESCO U.S. Buyout & Expansion Capital Partnership Fund III, L.P.
- INVESCO Venture Partnership Fund III & IV, L.P.

General Allocation

- PRIT

Consultant

- Segal Rogersoncasey

Methuen

Real Estate

- Sentinel Realty Partners IV

Alternative Investments

- BlackRock Diversified Private Equity Program III

General Allocation

- PRIT

Middlesex County

Real Estate

- GFP World Timberfund L.L.C.
- Hunt Investment Management / Multi-Family Development Program III
- Hunt Investment Management / Residential Income and Value Added (RIVA) Fund

- Intercontinental Real Estate Investment Fund III & IV, LLC
- TA Realty Associates Fund VI
- Value Enhancement Fund IV, V & VI

Alternative Investments

- Alliance Technology Ventures III, L.P.
- Ascend Ventures, L.P.

- Ascent Venture Partners II & III, L.P.
- Auda Partners, L.P.
- Boston Millennia Partners, L.P.
- Boston Millennia Partners II, L.P.
- Duke Street Capital Fund V & VI
- First America Asia Fund I, LLC
- Globespan Capital Partners IV & V, L.P.

Middlesex County

(continued)

- INVESCO Non-U.S. Partnership Fund III, L.P.
- North Atlantic Venture Fund II & III
- Novo Vita, L.P.
- Novus Ventures II, L.P.
- Thomas H. Lee Equity Fund V, L.P.

General Allocation

- PRIT

Custodian

- State Street

Milford

- PRIT

Milton

- PRIT

Minuteman Regional

- PRIT

Montague

- PRIT

Natick

Domestic Equity

- SEI Institutional Investments Trust Disciplined Equity Fund
- SEI Institutional Investments Trust Large Cap Equity Fund
- SEI Institutional Investments Trust Small Cap Equity Fund
- SEI Institutional Investments Trust Small/Mid Cap Equity Fund

International Equity

- SEI Institutional Investments Trust World Equity Ex-US Fund

Domestic Fixed Income

- SEI Institutional Investments Trust Core

Fixed Income Fund

- SEI Institutional Investments Trust High Yield Bond Fund

International Fixed Income

- SEI Institutional Investments Trust Emerging Market Bond Fund

Real Estate

- Intercontinental Real Estate Investment Fund III, LLC
- PRIT
- Sentinel Realty Partners VI

Alternative Investments

- First America Asia Fund I

- North American Strategic Partners 2006, L.P.

- PRIT

Hedge Funds

- PRIT

Consultant

- Fiduciary Investment Advisors, LLC

Custodian

- State Street

Needham

- PRIT

New Bedford

Domestic Equity

- Boston Company
- Wellington Trust Co.-CIF Diversified Growth Portfolio
- Westfield Capital Management Company, LLC

International Equity

- Acadian Emerging Markets Equity Fund
- Boston Company Non-US Value Equity Fund
- Echo Point International Growth Equity Fund

Domestic Fixed Income

- Aberdeen Asset Management, Inc.
- Loomis Sayles Fixed Income Fund

Real Estate

- BlackRock Granite Property Fund
- Hunt Investment Management / Property Redevelopment & Renovation Fund
- TA Realty Associates Fund VIII
- UBS (US) Trumbull Property Fund LP

Alternative Investments

- INVESCO International Partnership Fund IV, L.P.
- INVESCO U.S. LBO & Corporate Finance Partnership Fund IV, L.P.
- INVESCO Venture Partnership Fund IV, L.P.
- Mesriow Financial Private Equity Partnership Fund V
- Wilton Private Market Specialized Fund, LLC

Global Balanced

- PIMCO All Asset Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

Consultant

- Segal Rogerscasey

Custodian

- State Street

Newburyport

- PRIT

Newton

Real Estate

- Fidelity Real Estate Growth Fund II, L.P.

General Allocation

- PRIT

Norfolk County

Domestic Equity

- Copper Rock Capital Partners, LLC
- D.E. Shaw U.S. Broad Market Core Alpha Extension Special Fund II
- Fisher Investments, Inc.
- GAMCO Asset Management Inc.
- Munder Capital Management
- Putnam Advisory Company, LLC
- RhumbLine Russell 1000 Value Pooled Index Fund
- Seizert Capital Partners
- SSgA Russell 1000 Growth Index NL Fund

International Equity

- AGF Global Resources Strategy
- Denver International Small Cap Equity Fund
- Kleinwort Benson Global Environmental Solutions Strategy
- Lazard Emerging Markets Equity Portfolio
- MFS Institutional Advisors, Inc.

Domestic Fixed Income

- Income Research & Management
- IR&M Core Bond Fund
- Loomis, Sayles & Company, L.P.

International Fixed Income

- Lazard Emerging Income Fund
- Wells Capital Management / First International Advisors International Bond Strategy

Real Estate

- 1921 Realty Inc.
- Clarion Lion Properties Fund
- DSF Capital Partners IV LP

- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Intercontinental Real Estate Investment Fund III, LLC
- Intercontinental U.S. Real Estate Investment Fund, LLC
- Mesirow Financial Institutional Real Estate International Fund
- PRIT
- Sentinel Realty Partners IV
- Siguler Guff Distressed Real Estate Opportunities Fund, LP
- TA Realty Associates Fund VII
- Urdang Value Added Fund II, L.P.

Alternative Investments

- ArcLight Energy Partners Fund V, L.P.
- Ascend Ventures, L.P.
- Ascend Ventures II, L.P.
- Boston Millennia Partners, L.P.
- Boston Millennia Partners II, L.P.
- Collinson, Howe & Lennox / CHL Medical Partners II, L.P.
- Collier International Partners IV
- Constitution Capital Partners Ironsides II
- Constitution Capital Partners Ironsides Co-Investment Fund II
- Corsair III Financial Services Capital Partners, L.P.
- Globespan Capital Partners V, L.P.
- Halpern Denny Fund III, L.P.
- Hamilton Lane Co-Investment Fund II
- Inflection Point Ventures, L.P.
- INVESCO Venture Partnership Fund IV, L.P.

- Levine Leichtman Capital Partners Deep Value Fund, L.P.
- LLM Structured Equity Fund L.P.
- Mesirow Financial Capital Partners IX
- Monitor Venture Partners I, L.P.
- North American Strategic Partners
- Perseus Partners VII, L.P.
- PRISM Venture Partners IV & V, L.P.
- Siguler Guff Distressed Opportunities Fund III
- Wilshire Private Markets Fund II & IV

Hedge Funds

- Mesirow Absolute Return Fund (Institutional) Ltd. Class W
- PRIT

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

North Adams

Domestic Equity

- de Burlo Group

Domestic Fixed Income

- de Burlo Group

Alternative Investments

- PRIT

Hedge Funds

- PRIT

Custodian

- State Street

North Attleboro

Domestic Equity

- Atlanta Capital Management Company
- Herndon Capital Management, LLC
- Navellier & Associates, Inc.
- RhumbLine S&P 500 Pooled Index Fund
- Stewart Capital Advisors, LLC

International Equity

- Lazard Freres International Equity Fund
- Vontobel International Fund

Domestic Fixed Income

- Brandes Core Plus Fixed Income Fund
- RhumbLine Core Bond Index Fund

Real Estate

- AmSouth Timber Fund

Consultant

- Dahab Associates

Custodian

- State Street

Northampton

Domestic Equity

- de Burlo Group

Domestic Fixed Income

- de Burlo Group

Alternative Investments

- PRIT

Hedge Funds

- PRIT

Custodian

- State Street

Northbridge

- PRIT

Norwood

Domestic Equity

- Atlanta Capital Management Company, LLC
- Boston Company
- Winslow Capital Management, Inc. / Mainstay Large Cap Equity Fund

International Equity

- EuroPacific Growth Fund

Domestic Fixed Income

- Oaktree Capital Management / OCM High Yield Trust
- RhumbLine Core Bond Pooled Index Fund

Real Estate

- PRIT

Hedge Funds

- PRIT

Consultant

- Meketa Investment Group

Custodian

- State Street

Peabody

- PRIT

PRIM

Domestic Equity Managers

- INTECH Investment Management, LLC
- Pacific Investment Management Company (PIMCO)
- State Street Global Advisors

International Equity Managers

- Baillie Gifford
- Marathon Asset Management, Ltd.
- Mondrian Investment Partners Ltd.
- State Street Global Advisors

Core Fixed Income Managers

- Access Capital
- AFL-CIO Housing Investment Trust
- Blackrock, Inc.
- Community Capital Management
- Loomis, Sayles & Company, L.P.
- Pacific Investment Management Company (PIMCO)

Value-Added Fixed Income Managers

- Ashmore Investment Management, Ltd.
- Eaton Vance Institutional Funds
- Fidelity Management Trust Company
- ING Investment Management
- Investec Asset Management
- Loomis, Sayles & Company, L.P.
- Pacific Investment Management Company (PIMCO)
- Pictet Asset Management, Inc.
- Shenkman Capital Management
- Stone Harbor Investment Partners LP

Distressed Debt Managers

- Angelo, Gordon & Co.
- Avenue Capital Group
- Crescent Capital Group
- GSO Capital Partners
- H.I.G. Bayside Loan Opportunity Fund
- Oaktree Capital Management
- Trust Company of the West
- Wayzata Investment Partners

Emerging Markets Equity Managers

- Acadian Asset Management LLC
- Ashmore EMM, L.L.C.
- GMO LLC
- State Street Global Advisors
- T. Rowe Price
- Wasatch Advisors Inc.

Natural Resources

- Denham Capital Management
- Jennison Associates
- Quantum Energy Partners
- Tenaska Capital Management, LLC
- T. Rowe Price

Real Estate Managers

- AEW Partners
- Canyon Johnson
- Carlyle Group (The)
- DivcoWest
- European Investors, Inc.
- Intercontinental
- INVESCO Realty Advisors
- J.P. Morgan Investment Management
- LaSalle Investment Management
- New Boston
- TA Associates Realty
- Urdang Advisors

Timber Managers

- Campbell Group, LLC
- Forest Investment Associates

Private Equity Managers

- Advent International
- Alchemy Partners
- Alta Communications
- American Securities
- APAX Partners & Co.
- Apollo Management Co.
- Ascent Ventures
- Austin Ventures
- Bain Capital
- Battery Ventures
- Berkshire Partners, LLC
- Blackstone Capital Partners
- Boston Ventures
- Bridgepoint Capital Limited
- Candover
- Capital Resource Partners
- Carlyle Partners
- Castile Ventures
- Catalyst Investors
- Centerbridge Capital Partners
- Charles River Ventures
- Charlesbank Capital Partners
- Charterhouse Group
- Chequers Capital
- Code Hennessy & Simmons
- Commonwealth Capital Ventures

- CVC European Equity Partners
- Cypress Group (The)
- Cypress Merchant Banking
- DLJ Merchant Banking
- El Dorado Ventures
- Equitable Capital Management
- Essex Woodlands
- Ethos Private Equity
- Exponent Partners
- First Reserve Corporation
- Flagship Ventures
- Forstmann, Little & Co.
- Freeman Spogli Equity Partners
- Genstar Capital Partners
- Gilde Buy Out Partners
- Gores Partners
- GTCR Golder, Rauner
- Harbourvest Partners, LP
- Hellman & Friedman Capital Partners
- H.I.G. Capital
- Highland Capital Partners
- Hony Capital
- Index Ventures
- Insight Venture Partners
- Institutional Venture Partners
- InterWest Partners
- Kelso & Company
- Kepha Partners
- Keytone Ventures
- Kohlberg Kravis Roberts and Co.
- KPS Capital Partners, L.P.
- M/C Venture Partners
- Madison Dearborn Capital Partners
- Menlo Ventures
- MFA Partnerships
- Montagu Private Equity
- Montreux Equity Partners
- Nautic Partners
- New Enterprise Associates
- Nordic Capital
- Odyssey Investment Partners
- Olympus Growth Fund
- One Liberty
- Onex Partners
- PAI Partners
- Permira
- Polaris Venture Partners
- Providence Equity Partners
- Quad-C Management, Inc.
- Rembrandt Venture Partners

PRIM

(continued)

- Richland Ventures
- SAIF Partners
- SCP Vitalife
- Sherbrooke Capital
- Sofinnova Ventures, Inc.
- Spark Capital
- Spectrum Equity Partners
- Summit Ventures
- SV Life Sciences Advisors, LLC
- TA Associates
- Technology Crossover Ventures
- Texas Pacific Group
- Thoma Bravo
- Thoma Cresse
- Thomas H. Lee Equity Partners
- Torquest Partners
- Towerbrook Capital Partners
- Trident Capital
- Union Square Ventures
- VantagePoint Partners
- Vestar Capital Partners
- Vista Equity Partners
- Welsh Carson Anderson & Stowe
- Weston Presidio Capital
- WestView Capital Partners
- Whitney & Company
- William Blair Mezzanine Capital Fund
- Willis Stein & Partners
- Xenon Private Equity
- Hedge Fund Managers**
- Anchorage Capital Group
- Arrowgrass Capital Partners
- Ascend Capital
- BlueCrest Capital LP
- Brevan Howard Capital Management
- Brigade Capital Management
- Capula Investment Management
- Claren Road Asset Management
- Davidson Kempner Capital Management
- Elliot Management Corporation
- Glenview Capital Management
- Highfields Capital
- Indus Capital Partners
- King Street Advisors LLC
- Och-Ziff Capital Management Group
- Pacific Alternative Asset Management Company
- Pershing Square Capital Management
- Samlyn Capital
- Steadfast Capital Management LP
- Taconic Capital Advisors
- Winton Capital Management
- York Capital Management
- Consultants**
- Callan Associates
- Cliffwater LLC
- Hamilton Lane
- NEPC
- Townsend Group (The)
- Custodian**
- BNY Mellon

Pittsfield

- Real Estate**
- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Sentinel Realty Partners VI
- Alternative Investments**
- North American Strategic Partners 2006, L.P.
- General Allocation**
- PRIT
- Consultant**
- Fiduciary Investment Advisors, LLC

Plymouth

- Domestic Equity**
- Boston Advisors, Inc.
- Boston Trust & Investment Management Company
- Robeco Large Cap Value Equity Fund
- SSgA S&P 500 Flagship NL Fund
- Wellington Trust Co.-CIF Research Equity Portfolio
- Westfield Capital Management
- International Equity**
- Templeton Foreign Equity Series Fund
- Domestic Fixed Income**
- Babson Floating Rate/Bank Loan Fund
- INVESCO High Yield Fund
- Wellington Legacy Securities PPIF
- Wellington Trust Co.-CIF II Core Bond Fund
- Real Estate**
- Intercontinental Real Estate Investment Fund IV, LLC
- PRIT
- Alternative Investments**
- PRIT
- Global Balanced**
- BlackRock Global Allocation Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio
- Hedge Funds**
- PRIT
- Consultant**
- Fiduciary Investment Advisors, LLC
- Custodian**
- State Street

Plymouth County

- Domestic Equity**
- Boston Company Small Cap Growth Fund
- Fisher Investments, Inc.
- Lee Munder Capital Group
- RBC Global Asset Management (U.S.) Inc.
- RhumbLine Russell 1000 Growth Pooled Index Fund
- RhumbLine Russell 2000 Value Index Fund
- Wellington Management Company, LLP
- International Equity**
- Allianz NACM International Growth Opportunities Fund
- Boston Company Emerging Markets Pooled Fund
- HGK International Equity Fund
- Kleinwort Benson Investors Dividend Plus International Equity Fund
- Domestic Fixed Income**
- Eaton Vance Management
- Income Research & Management
- International Fixed Income**
- Franklin Templeton Emerging Markets Debt Opportunities Fund
- McDonnell Investment Management, LLC
- Real Estate**
- 1921 Realty Inc.
- Berkshire Multifamily Value Fund II, L.P.
- DSF Capital Partners IV LP
- Hunt Investment Management / Multi-Family Development Program III
- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Intercontinental Real Estate Investment Fund III & IV, LLC
- INVESCO IRT Equity Real Estate Securities Fund
- Mesirow Financial Institutional Real Estate International Fund
- Multi-Employer Property Trust
- New Boston Institutional Fund, L.P. VII
- Prudential Real Estate Investors (PRISA Fund)
- Alternative Investments**
- Akina Euro Choice V, LP
- Ascend Ventures II, L.P.
- Ascent Venture Partners IV & V, L.P.
- Charles River Partnership X & XI
- Citigroup Venture Capital International Growth Partnership II, LP
- DN Partners, L.P.
- DN Partners II, L.P.

Plymouth County

(continued)

- Euro Choice II (Delaware) LP
- Globespan Capital Partners V, L.P.
- J.P. Morgan Global Maritime Investment Fund
- Landmark Equity Partners XIV
- Leeds Weld Equity Partners IV, L.P.
- Lexington Capital Partners VII, L.P.
- Levine Leichtman Capital Partners Deep Value Fund, L.P.
- Mesirow Financial Capital Partners IX

- RMK Global Timberland Resources Fund
- Senior Tour Players Fund I
- Siguler Guff Distressed Opportunities Fund III
- THL Credit Bank Loan Select Fund
- Timbervest Partners III, LP

Hedge Fund

- ABS Offshore SPC – Global Segregated Portfolio
- Aetos Capital Prime Portfolio

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

Quincy

Domestic Equity

- Harbor Funds Small Cap Value Fund
- PENN Small Cap Fund
- RhumbLine Russell 1000 Growth Pooled Index Fund
- RhumbLine Russell 1000 Value Pooled Index Fund
- RhumbLine S&P Mid-Cap 400 Pooled Index Fund

International Equity

- Aberdeen DBT Emerging Markets Equity Fund
- INVESCO IRT International Equity Fund
- SSgA MSCI-EAFE Index NL Fund
- Victory Capital Series, LLC Series C

Domestic Fixed Income

- Loomis Sayles High Yield Conservative Trust
- SSgA Treasury Inflation Protected Securities (TIPS) NL Fund
- SSgA U.S. Aggregate Bond Index NL Fund

International Fixed Income

- Artio Global High Income Fund

Real Estate

- AEW Partners V, L.P.
- Colony Realty Partners IV, L.P.
- Hancock Timberland IX Fund
- TA Realty Associates Fund VIII & IX
- UBS (US) Trumbull Property Fund LP
- UBS (US) Trumbull Property Income Fund LP

Alternative Investments

- Adams Street Partnership Fund Program 2010
- Goldman Sachs Private Equity Partners Fund 2005 – Direct Investment Fund
- Goldman Sachs Private Equity Partners Fund 2005 – Manager Fund, L.P.
- North American Strategic Partners 2006, L.P.
- Oppenheimer Global Resource Private Equity Fund I, L.P.
- PRIT

General Allocation

- PRIT

Hedge Funds

- PRIT

Consultant

- Meketa Investment Group

Custodian

- State Street

Reading

- PRIT

Revere

- PRIT

Salem

Real Estate

- Fidelity Real Estate Growth Fund II, L.P.

Alternative Investments

- Ascent Venture Partners III, L.P.

- First America Asia Fund I L.P.

General Allocation

- PRIT

Custodian

- State Street

Saugus

- PRIT

Shrewsbury

Total Portfolio

- PRIT

Consultant

- Dahab Associates

Somerville

Domestic Equity

- Congress Asset Management
- RhumbLine S&P 500 Pooled Index Fund

International Equity

- Lazard Emerging Markets Equity Portfolio
- Lazard Freres International Equity Fund

Domestic Fixed Income

- Loomis Sayles Fixed Income Fund

Somerville

(continued)

Real Estate

- UBS (US) Trumbull Property Fund LP

Custodian

- Comerica Bank

Southbridge

- PRIT

Springfield

Alternative Investments

- Ascend Ventures, L.P.
- Boston Millennia Partners, L.P.
- Boston Millennia Partners II, L.P.

- Crescendo IV, L.P.
- Crescendo World Fund
- DN Partners, L.P.
- Ticonderoga e-Services I, L.P.

General Allocation

- PRIT

State

- PRIT

State Teachers

- PRIT

Stoneham

- PRIT

Swampscott

Domestic Equity

- Alger Capital Appreciation Fund
- Trust & Fiduciary Management Services Inc.

Real Estate

- Intercontinental Real Estate Investment Fund III, LLC

Alternative Investments

- North Sky LBO Fund II, L.P.
- North Sky Venture Fund II, LP

General Allocation

- PRIT

Consultant

- Fiduciary Investment Advisors, LLC

Custodian

- State Street

Taunton

Domestic Equity

- Boston Trust & Investment Management Company
- Daruma Asset Management
- Munder Capital Management
- SSgA S&P 500 Flagship NL Fund
- Systematic Financial Management, L.P.

International Equity

- Denver International Small Cap Equity Fund
- Earnest International Pooled Group Trust
- Glovista Investments LLC
- Vontobel International Equity Fund

Domestic Fixed Income

- C.S. McKee, L.P.
- Emerald Fixed Income Advisers, LLC

Real Estate

- Fidelity Real Estate Growth Fund III, L.P.
- Intercontinental Real Estate Investment Fund III, LLC
- INVESCO Core Real Estate Fund
- INVESCO IRT Equity Real Estate Securities Fund
- Molpus Woodlands Fund III, L.P.

Alternative Investments

- BlackRock Investment Management / Vesey Street Fund IV (ERISA), L.P.
- Boston Millennia Partners, L.P.
- Boston Millennia Partners II, L.P.
- INVESCO International Partnership Fund IV, L.P.
- INVESCO U.S. LBO & Corporate Finance

Partnership Fund IV, L.P.

- INVESCO Venture Partnership Fund IV, L.P.
- Timbervest Partners III, L.P.

Consultant

- Dahab Associates

Custodian

- State Street

Wakefield

- PRIT

Waltham

Real Estate

- Hunt Investment Management / Property Redevelopment & Renovation Fund

- Hunt Investment Management / Residential Income and Value Added (RIVA) Fund

- Intercontinental Real Estate Investment Fund III, LLC

Waltham

(continued)

Alternative Investments

- Ascent Venture Partners III, L.P.
- INVESCO Non-U.S. Partnership Fund II, L.P.
- INVESCO U.S. Buyout Partnership Fund II, L.P.

- INVESCO Venture Partnership Fund III, L.P.
- Precision Capital Special Opportunities Fund III, LLC
- RCP Fund IV, L.P.
- VSS Mezzanine Partners, L.P.

General Allocation

- PRIT

Custodian

- State Street

Watertown

Domestic Equity

- Fisher Investments, Inc.
- Lee Munder Midcap Core Collective Fund
- PRIT
- Wellington Trust Co.-CIF Small Cap 2000 Fund

International Equity

- Acadian International Small Cap Fund
- Earnest International Pooled Group Trust
- MFS Institutional International Equity Fund

Domestic Fixed Income

- Guggenheim High Yield Plus Fund
- IR&M Core Bond Fund

International Fixed Income

- Brandywine Global Opportunistic Fixed Income Fund

Real Estate

- Arsenal Real Estate Fund IA, L.P.
- Intercontinental Real Estate Investment Fund III & IV, LLC
- New Boston Institutional Fund, L.P. VI
- PRIT

Alternative Investments

- Auda Ventures, L.P.
- PRIT
- RCP Fund IV, LP

Global Balanced

- BlackRock Global Allocation Fund
- Wellington Trust Co.-CIF Opportunistic Investment Portfolio

Hedge Funds

- PRIT

Consultant

- Fiduciary Investment Advisors

Custodian

- State Street

Webster

Domestic Equity

- Eaton Vance Small Cap Core Fund
- Lee Munder Mid Cap Fund
- RhumbLine Russell 1000 Pooled Index Fund

International Equity

- INVESCO IRT International Equity Fund

Domestic Fixed Income

- Loomis Sayles Investment Grade Fixed Income Fund

Real Estate

- PRIT

Alternative Investments

- PRIT

Hedge Funds

- PRIT

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

Wellesley

- PRIT

West Springfield

Domestic Equity

- de Burlo Group

Domestic Fixed Income

- de Burlo Group

Real Estate

- AmSouth Timber Fund

Custodian

- State Street

Westfield

Domestic Equity

- Boston Company US Large Cap Core Equity Fund
- Columbia US Contrarian Core Equity Private Fund
- INVESCO Charter Fund
- Laudus Growth Investors US Large Cap Growth Fund
- Loomis Sayles Small Cap Growth Fund
- Loomis Sayles Small Cap Value Fund

Real Estate

- SSgA S&P 500 Flagship NL Fund

- SSgA S&P Midcap Index Fund

International Equity

- SSgA MSCI-EAFE Index Fund
- SSgA MSCI Emerging Markets Fund
- Wasatch International Small Cap Growth Fund

Domestic Fixed Income

- IR&M Core Bond Fund
- SSgA U.S. High Yield Bond Index Strategy Fund

Real Estate

- PRIT

Alternative Investments

- Constitution Capital Partners Ironsides II
- Constitution Capital Partners Ironsides Co-Investment Fund II

Hedge Funds

- PRIT

Weymouth

Domestic Equity

- Boston Company Dynamic Equity Fund
- Loomis Sayles Small Midcap Core Trust
- PENN Small to Mid Cap Equity Fund, L.P.
- RhumbLine S&P 500 Pooled Index Fund
- Westfield Capital Management

International Equity

- Aberdeen EAFE Plus Fund
- Acadian International Small Cap Fund

- Earnest International Pooled Group Trust
- William Blair International Small Cap Growth Fund

Domestic Fixed Income

- Advent Legacy Securities PPIF
- Bradford & Marzec, LLC

International Fixed Income

- Brandywine Global Opportunistic Fixed Income Fund

Real Estate

- Intercontinental Real Estate Investment Fund III, LLC
- PRIT

Alternative Investments

- Constitution Capital Partners Ironsides II
- Constitution Capital Partners Ironsides Co-Investment Fund II
- HarbourVest Partners IX – Buyout Fund LP

Weymouth (continued)

- HarbourVest Partners IX – Credit Opportunities Fund LP
- HarbourVest Partners IX – Venture Fund LP
- INVESCO International Partnership Fund IV, L.P.
- INVESCO U.S. LBO & Corporate Finance Partnership Fund IV, L.P.
- INVESCO Venture Partnership Fund IV, L.P.

Hedge Funds

- PRIT

Inflation Hedge Product

- SSgA Real Asset Non-Lending Fund

Consultant

- Fiduciary Investment Advisors, LLC

Custodian

- State Street

Winchester

Domestic Equity

- SSgA S&P 500 Flagship SL Fund

International Equity

- SSgA Active Emerging Markets NL Fund
- SSgA Active Emerging Markets SL Fund
- SSgA International Alpha NL Fund
- SSgA International Alpha SL Fund
- SSgA International Alpha Select NL Fund
- SSgA International Alpha Select SL Fund
- SSgA MSCI-EAFE Index Fund

- SSgA MSCI Emerging Markets Fund
- SSgA Small Cap International Alpha SL Common Trust Fund

Domestic Fixed Income

- PRIT
- Wellington Trust Co.-CIF II Core Bond Fund

Real Estate

- Guggenheim Real Estate Plus Fund
- Hunt Investment Management / Multi-Family Development Program III

- TA Realty Associates Fund VI

Hedge Funds

- PRIT

Inflation Hedge Product

- SSgA Real Asset Strategy

Custodian

- State Street

Winthrop

- PRIT

Woburn

Domestic Equity

- BlackRock Small Cap Growth Equity Fund
- Earnest Partners, LLC
- RhumbLine Advisers
- RhumbLine Russell 1000 Pooled Index Fund
- Turner Investment Partners, Inc.

International Equity

- PRIT

Domestic Fixed Income

- Earnest Partners, LLC
- Loomis Sayles Institutional High Income Fund
- SSgA Treasury Inflation Protected Securities (TIPS) NL Fund

Real Estate

- Hunt Investment Management / Multi-Family Development Program III
- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Intercontinental Real Estate Investment Fund II & III, LLC
- PRIT
- TA Realty Associates Fund V

Alternative Investments

- Charlesbank Equity Fund V, VI & VII
- INVESCO Non-U.S. Partnership Fund III, L.P.
- INVESCO U.S. Buyout & Expansion Capital Partnership Fund III, L.P.
- INVESCO Venture Partnership Fund III, L.P.

- Macquarie Clean Technology Fund II
- RS Global Natural Resources Fund
- Wilshire Private Markets Fund VII

Emerging Markets

- PRIT

Hedge Funds

- PRIT

Consultant

- Wainwright Investment Counsel, LLC

Custodian

- State Street

Worcester

Domestic Equity

- Lee Munder Capital Group
- Loomis, Sayles & Company, L.P.
- Penn Capital Management Company, Inc.
- SSgA Russell 1000 Growth Index NL Fund
- SSgA Russell 1000 Value Index NL Fund
- SSgA S&P 500 Flagship NL Fund
- SSgA S&P Mid Cap Index NL Fund

International Equity

- Acadian International Small Cap Fund
- Lazard Emerging Markets Equity Portfolio
- SSgA Daily MSCI-EAFE Index NL Fund
- SSgA MSCI-EAFE Index NL Fund

Domestic Fixed Income

- Loomis, Sayles & Company, L.P.
- Opus Investment Management, Inc.

Real Estate

- AEW Partners VI, L.P.
- Bailard Real Estate Investment Trust I
- Hancock Timberland VII Fund
- Heitman Value Partners, L.P.
- Intercontinental Real Estate Investment Fund IV, LLC
- INVESCO Core Real Estate Fund
- PRIT
- RMK Balanced Timberland Fund B
- RMK Select Timberland Investment Fund I & II, LLC
- Value Enhancement Fund II & IV

Hedge Funds

- Aetos Capital Balanced Portfolio
- Benchmark Plus Institutional Partners Fund
- Blackstone Alternative Asset Management,

- L.P. / BPIF Non-Taxable L.P. ("Partners NT")

Alternative Investments

- American Securities Partners VI, L.P.
- Ascent Venture Partners II, III, IV, & V L.P.
- Boston Capital Ventures III
- Boston Millennia Partners II & III, L.P.
- Capital International Private Equity Fund VI, L.P.
- Charlesbank Equity Fund V & VI
- Concord Partners III, L.P.
- European Strategic Partners I, L.P.
- Global Infrastructure Partners Fund I
- Harvest Partners V, L.P.
- INVESCO Non-U.S. Partnership Fund II, L.P.
- INVESCO U.S. Buyout Partnership Fund II, L.P.
- INVESCO Venture Partnership Fund II, L.P.

Worcester

(continued)

- Newstone Capital Partners, L.P.
- Newstone Capital Partners II
- Northstar Mezzanine Partners III, IV, & V
- Riverside Capital Appreciation Fund 2000 & 2003
- Riverside Capital Appreciation Fund V
- Riverside Capital Europe Fund III
- SSgA Global Natural Resources Non-Lending Index Fund
- Vitruvian Investment Partnership I
- White Deer Energy, L.P.

Global Balanced

- PIMCO All Asset Fund

Consultant

- Meketa Investment Group

Custodian

- State Street

Worcester Regional

Real Estate

- AEW Partners V, L.P.
- Hunt Investment Management / Property Redevelopment & Renovation Fund
- Intercontinental Real Estate Investment

- Fund III, LLC
- TA Realty Associates Fund VII

Alternative Investments

- Ascent Venture Partners II & IV, L.P.

- North American Strategic Partners 2006, L.P.

General Allocation

- PRIT

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Executive Assistant

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