MBTA RETIREMENT FUND

Building for the future since 1948.

2015 Comprehensive Annual Financial Report

MBTA Retirement Fund
For the years ended December 31, 2015 and 2014
Boston, Massachusetts

A Pension Trust Fund of the Massachusetts Bay Transportation Authority and Its Employees

Issued by John P. Barry, Interim-Executive Director

MBTA Retirement Fund

A Pension Trust Fund administering benefits earned by employees of the
Massachusetts Bay Transportation Authority

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Year Ended December 31, 2015

(With Basic Financial Statements for the Years Ended December 31, 2015 and 2014)

Prepared By
The MBTA Retirement Fund Staff

The Massachusetts Bay Transportation Authority Retirement Fund is a private trust created in 1948 by the Metropolitan Transit Authority, the predecessor agency to the Massachusetts Bay Transportation Authority (“MBTA”), and The Boston Carmen’s Union, Amalgamated Transit Union Local 589. Our mission then, as now, is to provide retirement benefits to the membership consisting of the transit workers and others employed by the MBTA. To ensure that the pensions earned by active and retired members, and their beneficiaries, remain secure, we are dedicated to managing a strong and diversified investment program.

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INTRODUCTION

October 26, 2016

Board of Trustees
Massachusetts Bay Transportation Authority Retirement Fund
One Washington Mall, 4th Floor
Boston, MA 02108

The Massachusetts Bay Transportation Authority Retirement Fund (the Fund) is pleased to present the Comprehensive Annual Financial Report (CAFR) for the calendar year ended December 31, 2015. Through the compilation of this report Fund management hopes to provide a clear understanding of the Fund's investments, financial statements and performance returns.

This report was prepared by the Fund's Finance Department. It contains the basic financial statements presented in accordance with generally accepted accounting principles (GAAP) and the standards applicable to financial audits as promulgated by Government Auditing Standards. For additional information regarding the Fund's performance and cash management, please refer to the MD&A section and supporting notes contained within this document. The responsibility for both the accuracy and completeness of the information and the contents of this report rests with the Fund's Board. For the year ended December 31, 2015, an audit was conducted by KPMG LLP, a firm of licensed certified public accountants.

The CAFR is divided into the following major sections:
Introductory Section: This section contains the letter of transmittal, an overview of Fund's performance, a summary of financial data and outlines the Fund's organizational structure.

Financial Section: This section contains the opinion of the independent certified public accountant, Management's Discussion and Analysis (MD&A), the financial statements of the Fund, and other required supplementary financial information and supporting tables. The MD&A provides an overview of the current year's financial activity with an analysis of the effects of any significant changes from the prior year.

Investment Section: This section contains a report on investment policies and activity, investment results, and various investment schedules.

Actuarial Section: This section contains the Fund's actuarial certification letter and various actuarial tables.

Statistical Section: This section contains various statistical tables consisting of pertinent information pertaining to the Fund.

(Continued)

Profile of the MBTA Retirement Fund

The Fund was established on January 1, 1948, under an agreement and declaration of trust (restated on October 28, 1980) by and among the Massachusetts Bay Transportation Authority (the Authority), Local 589, Amalgamated Transit Union, Boston Carmen's Union and AFL CIO (collectively, the Union). The Fund is a single employer plan. It was established as a contributory defined benefit retirement plan in accordance with the Pension Agreement; effective July 1, 1970, (restated thereafter) adopted by the Authority and the Union for the purpose of receiving contributions and providing pension benefits for its members and qualified beneficiaries.

The MBTA Retirement Fund Board seeks to utilize its assets under management to the benefit of the membership by strategically and methodically allocating financial resources to a differentiated portfolio of investments while utilizing the knowledge and experience of a broad range of investment managers. An overview of the Investment Policy Statement is included in the Investment Section.

The Board determines investment objectives, strategies, and policies of the Fund. The Executive Director of the Fund is accountable for the Fund's general management and operations and reports to and advises the six-member Board of Trustees. The staff of the Fund work diligently to uphold the original mission of serving members and their families.

As of December 31, 2015, the Fund had approximately $1,497.8 million in net position restricted for pension benefits compared to $1,587.9 million for the prior calendar year, representing a decrease of $90.1 million in net assets. The MBTA Retirement Fund Board utilizes the services of a third-party custodian institution to assist with the settlement and accounting for investment and cash transactions.

Interim-Executive Director Discussion

Despite a slow-but steady economic recovery, the market in 2015 had disappointing results. The financial markets struggled throughout the year achieving only modest returns. The Fund was able to generate a gross rate of return of 0.90% calculated on a time-weighted performance basis. Slow U.S. and global growth and market volatility were the primary factors for the Fund's low return. Today, the U.S. economy is trending positively, and evidence suggests that conditions will continue to improve. With the Fund's solid foundation and diversified portfolio we are well positioned to overcome challenges and risks to continue to achieve positive results.

Investment Overview

The Fund's portfolio is broadly diversified holding investments ranging from publicly traded stocks and bonds to privately held partnerships. The Retirement Board of the Fund oversees these investments and is in the process of reviewing the current asset allocation policy. This study is conducted every three to five years to ensure the balance of risk and performance return. The Board's primary goal is to maintain a financially sound pension fund in order to secure the financial security of its Members.

(Continued)

MBTA Retirement Fund Performance

As of December 31, 2015, the total fund return gross of fees with the exception of hedge funds which are net of fees was 0.90% and the annualized three-year return was 7.64%. For more detailed information regarding the Fund's investment policies, guidelines, and results please see the Investment Section of this report.

Year Ended December 31, 2015

- The Fund gained 0.90% underperforming the total policy benchmark of 2.01% by 111 basis points.
- The return equates to an investment gain of $4.4 million.
- Net total outflows to pay benefits for the calendar year were approximately $187.1 million.
- The return did not outperform the actuarial rate of return of 8%.

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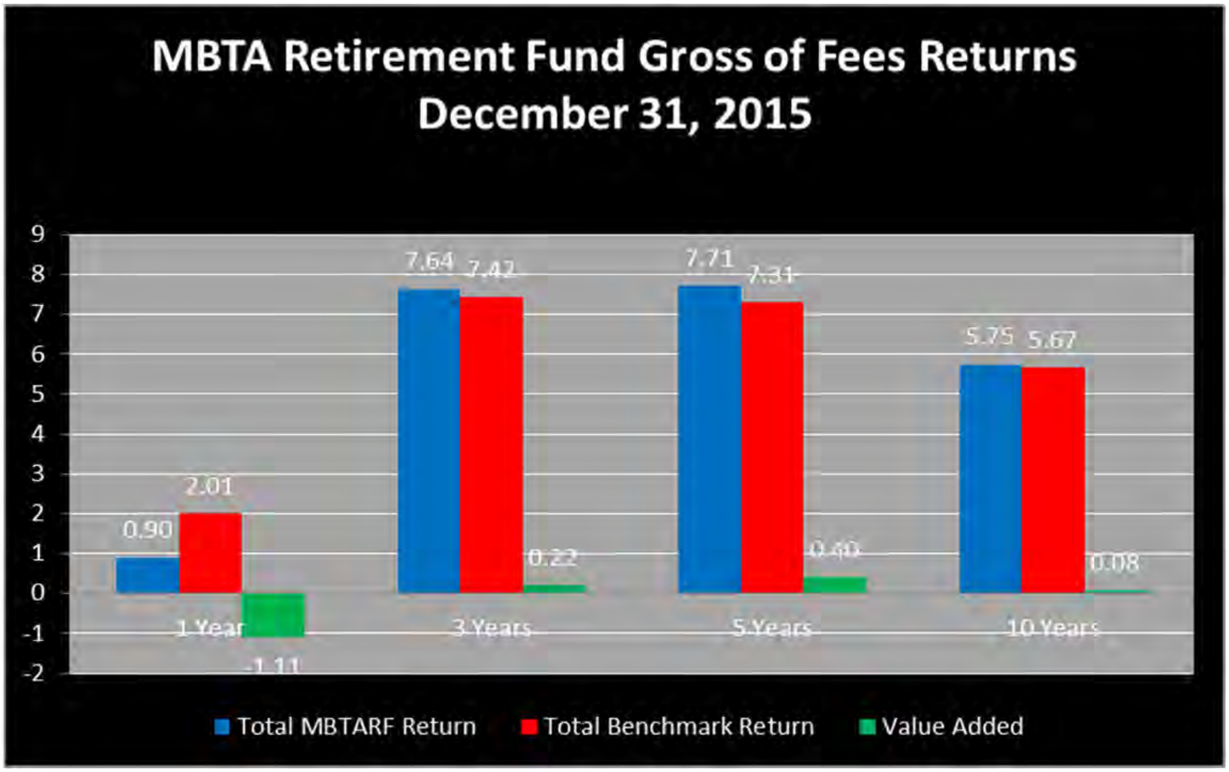
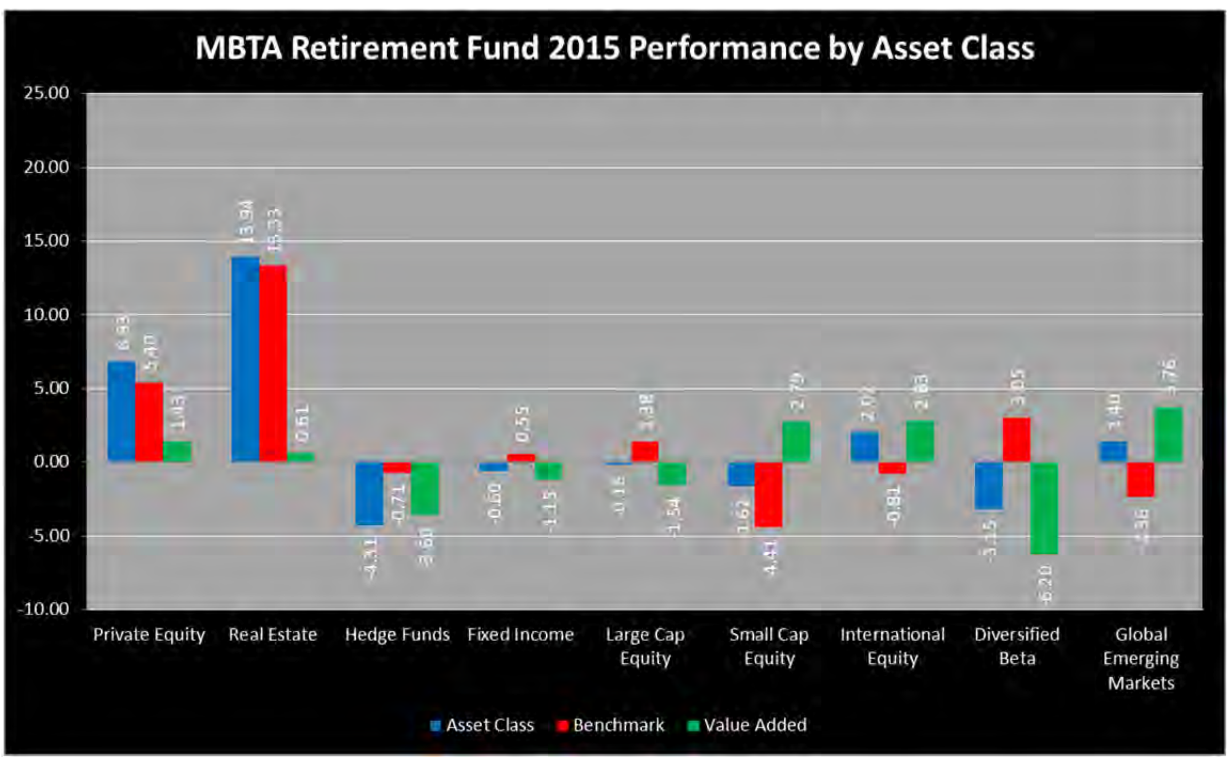
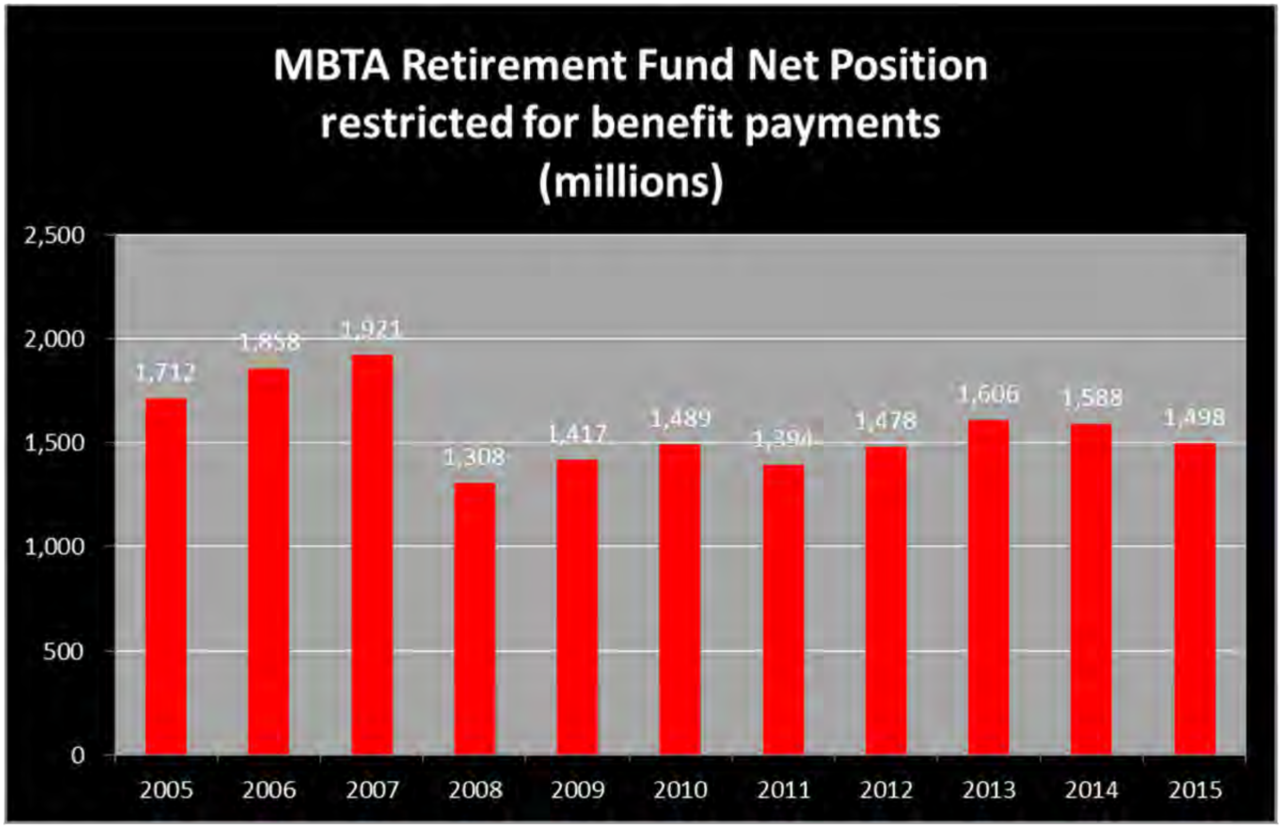

MBTA Retirement Fund Gross of Fees Returns
December 31, 2015
9
8
7
6
5
4
3
2
1
0
-1
-2
0.90
2.01
-1.11
7.64
7.42
0.22
7.71
7.31
0.40
5.75
5.67
0.08
1 Year
3 Years
5 Years
10 Years
Total MBTARF Return
Total Benchmark Return
Value Added


MBTA Retirement Fund 2015 Performance by Asset Class
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
Private Equity
Real Estate
Hedge Funds
Fixed Income
Large Cap Equity
Small Cap Equity
International Equity
Diversified Beta
Global Emerging Markets
Asset Class
Benchmark
Value Added

(Continued)


MBTA Retirement Fund Net Position
restricted for benefit payments
(millions)
2,500
2,000
1,500
1,000
500
0
1,712
1,858
1,921
1,308
1,417
1,489
1,394
1,478
1,606
1,588
1,498
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

(Continued)

Management's Discussion and Analysis

The Management's Discussion and Analysis (MD&A) beginning on page 25 provides an overview and analysis of the Fund's basic financial statements. The letter of transmittal is intended to complement the MD&A and should be read in conjunction with it.

Markets and Outlook

Despite the slow and steady economic recovery the U.S. and global markets struggled in 2015. Returns were modest at best. The U.S. economy's continued recovery indicates positive growth. Employment continues to trend upward and earnings have been beating analysts' expectations. However, events abroad still remain a cause of concern for the financial stability of the global economy. It is still unclear what the impact will be globally as of the result of the United Kingdom leaving the European Union. Downward pressure on oil prices have hurt earnings prospects for large energy producers and low interest rates prevailing in the economy have also caused financial institutions net interest margin to shrink. Despite these negative trends the Federal Reserve remains cautiously optimistic regarding the state of the domestic economy and is tailoring its monetary policy towards that end.

Asset Allocation

The asset allocation of the Fund is a critical factor for formulating investment strategies. An asset-liability study is conducted in three to five year intervals. This approach allows for sufficient flexibility to capture investment opportunities as they may occur, yet provide parameters to ensure prudence and care while managing the Fund's assets. The most recent asset allocation (below) is the result of an asset-liability study conducted by the Fund's actuary, Buck Consultants, and investment advisor, Marco Consulting Group. At year end the Fund's actual asset allocations were within approved target ranges.

Asset Class	Target (%)	Minimum Exposure (%)	Maximum Exposure (%)
Equities	43	38	48
Domestic Large Cap	18	13	23
Domestic Small Cap	7	4	10
Established International (Large Cap)	11	8	16
Global / Emerging Markets	7	4	10
Fixed Income	27	22	32
Core Fixed Income	8	4	12
TIPS	3	0	5
Mortgages	3	0	5
Global & Multi Sector	8	4	12
Bank Loans	2	0	4
Real Estate Debt	1	0	2
Cash	2	0	3
Alternative Investments	30	18	37
Private Equity	10	6	14
Real Estate	9	5	12
Hedge Funds	8	4	12
Risk Parity / Diversified Beta	3	0	5

Administration

The Board of Trustees of the Retirement Fund is the highest authority within the organizational structure. As of December 31, 2015, the date of the Fund’s most recent actuarial valuation, the Fund’s membership included 5,885 members in active status, 6,472, retirees and beneficiaries receiving benefits and 2 terminated vested members who are not yet receiving benefits. Fund management successfully completed the full implementation of its new pension management system to track demographics for both active and retired Members as well as administer benefit payments.

Membership

Membership in the Fund is available to most MBTA employees although MBTA Police Officers are excluded. Employees who are or may become members of the Union are included in the membership of the Fund. Employees who are not members of the Union but who are on the regular payroll of the Authority and Members of the Fund on the date of the execution of the Fund’s Pension Agreement are also included in the membership of the Fund. Members whose hire date is on or after December 6, 2012 will be required to complete at least twenty-five (25) years of creditable service and attain age 55 in order to be eligible for an early normal retirement allowance. For those members whose date of hire is prior to December 6, 2012, a completion of at least twenty-three (23) years of creditable service is required to receive compensation under an early normal allowance.

(Continued)

Benefits

The collectively bargained active wage agreement went into effect July 1, 2014. There are no pending imminent changes to this agreement at the time of this publication.

Contributions

Benefits paid to Members are financed by employer contributions, employee contributions, and earnings on investments made by the Fund. Effective July 1, 2015, Members are required to contribute at a rate of 5.7914% of their pensionable salary while the employer contribution rate is stated as 16.0286%. Effective July 1, 2016, member contribution and Authority contribution rates will be 6.4614% and 18.0386% respectively.

Awards

The Government Finance Officers Association (GFOA) awards a Certificate of Achievement for excellence in financial reporting. In order to be awarded such a certificate, the Fund must publish a comprehendible and efficiently organized CAFR. The financial reports contained within the financial reporting materials must satisfy both generally accepted accounting principles and legal requirements. The Fund intends to submit its CAFR to the GFOA to determine eligibility in future years.

Membership Communications

The MBTA Retirement Fund continues its focus on member communication through the publication of the bi-annual newsletter, Milestones, and posting pertinent information to our website at www.mbtarf.com. We place a special emphasis on providing quality customer service and we encourage feedback and welcome new ideas.

Funding

In setting contribution rates the Board's principal objectives are to set rates so the unfunded actuarial accrued liability (UAAL) will be amortized over a reasonable period of time from the most recent valuation date and the set rates so they remain relatively level over time. The most recent actuarial valuation report, dated December 31, 2015, calculated the Fund's unfunded actuarial pension liability at $941,672,817. An actuarial valuation of the Fund is performed annually. An assumption experience study is performed at least every five years. The actuarial firm, Buck Consultants completed the actuarial reviews and valuations. For more information on the actuarial assumptions of the Fund as part of the December 31, 2015 valuation please see the Summary of Actuarial Assumptions and Methods found in the Actuarial Section of the CAFR.

Acknowledgements

The compilation of the CAFR reflects the combined efforts of the Fund's staff, Actuary, and Investment Advisor. Our goal is to present a thorough and accurate report that is easy for our

(Continued)

members to read and understand. It is intended to provide complete and reliable information as a basis for making management decisions.

We would like to take this opportunity to express our gratitude to the Board of Trustees, Staff, Investment Advisor, Actuary, and to the many members who are working diligently to ensure the continued success of the Fund.

Yours respectfully,

John P. Barry
Interim - Executive Director

MBTA Retirement Fund Board Trustees

Advisory Committees to the MBTA Retirement Fund Board

Audit and Actuary Committee

James M. Evers
Board Member

Betsy Taylor
Board Member

Michael J. Heffernan
Board Member

James M. O'Brien
Board Member

Organizational Chart

MBTA Retirement Fund Board

(6 Appointed and Elected Trustees)

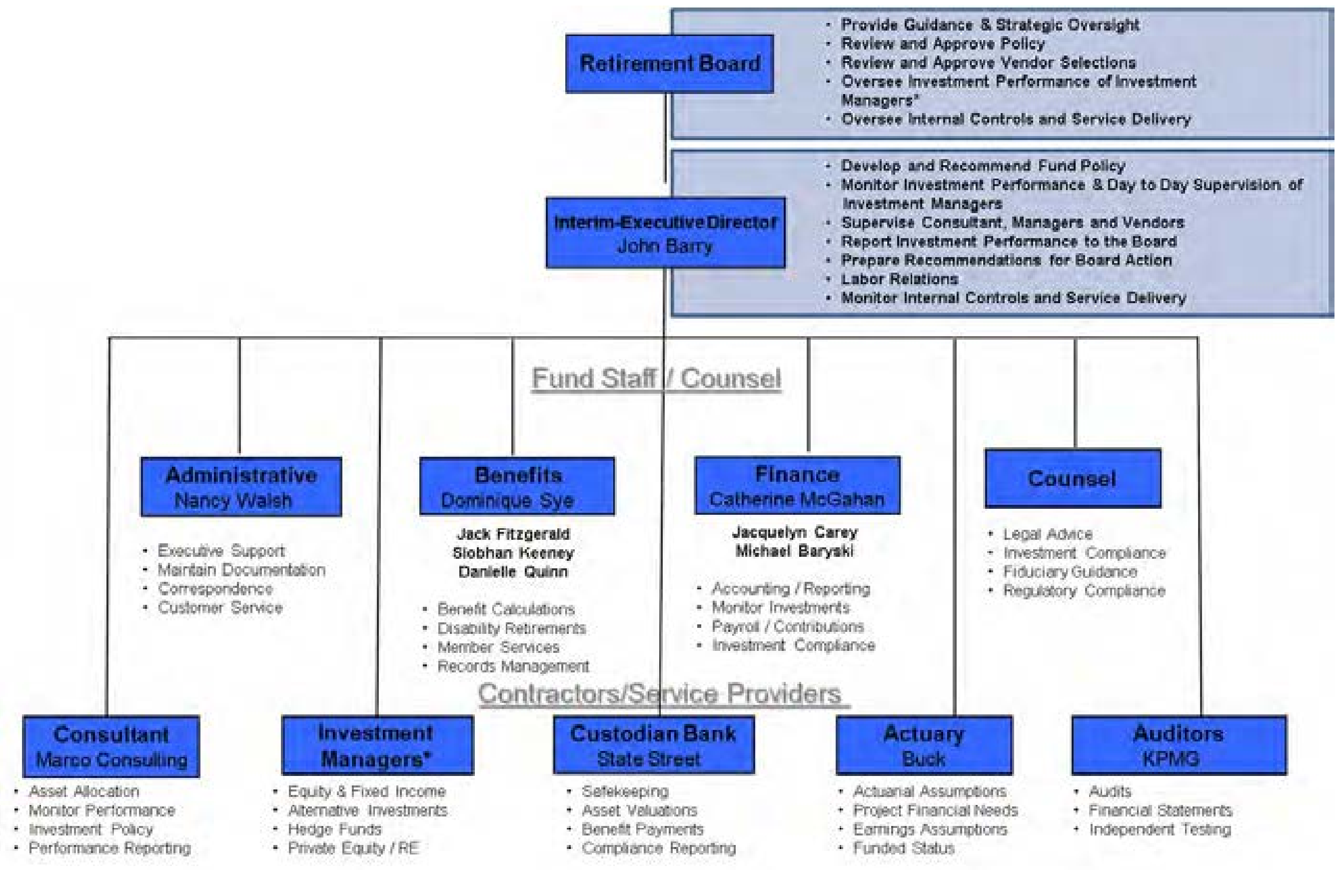
James M. Evers, Interim Chair

Steven Grossman Michael J. Heffernan

Craig S. Hughes James M. O'Brien

Betsy Taylor Katherine Hesse, Honorary Member

Pamela M. Holloman, Board Secretary



Please refer to the Investment Section, page 94 for the Schedule of Broker Commission and Fees.

Historical MBTA Retirement Fund Board Members

	Period of Service From	To
(A) Harold Ulrich **	08/48	01/49
(E) Irving F. Murray	08/48	08/49
(E) William A. Roche	08/49	07/56
(A) Thomas A. Dunbar **	08/48	01/59
(A) Charles A. McCarron **	08/48	05/60
(E) Thomas P. Dillon	08/48	03/61
(A) Ernest M. Flint	01/49	01/50
(E) Bartholomew P. Saunders	08/49	08/52
(A) Arthur V. Grimes	07/50	06/52
(A) Augustine Airola	06/52	04/53
(E) James J. Casey	08/52	08/64
(A) Harold Ulrich	04/53	04/57
(E) Michael J. Gormley	07/56	12/63
(A) William V. Ward **	08/57	08/64
(A) John J. Sullivan	01/59	07/59
(A) Willis B. Downey **	06/59	08/62
(A) William E. Ryan	06/60	02/72
(E) Edward S. Russell	03/61	01/62
(E) Matthew F. Ryan	01/62	12/69
(A) Edward F. McLaughlin, Jr.	08/62	03/70
(E) Walter H. Doyle	12/63	12/69
(E) Thomas F. Holland, Jr.	08/64	08/70
(A) Philip Kramer **	08/64	04/68
(A) Richard D. Buck **	04/68	07/79
(E) John J. Sugrue	12/69	12/71
(E) Albert F. Kelley	12/69	12/75
(A) Joseph C. Kelly	03/70	07/70
(A) John R. Launie	07/70	05/83
(E) Albert J. Fitzpatrick	08/70	07/80
(E) Patrick C. Quill	12/71	12/75
(A) Joseph H. Elcock	02/72	07/79
(E) John J. Sugrue	01/76	07/76
(E) Redmond R. Condon	01/76	02/78
(E) Joseph D. Fleming, Jr.	07/76	12/77
(E) Donald R. Abbott	12/77	08/79
(E) James J. Slattery	02/78	08/79
(A) Walter J. Ryan **	07/79	05/83
(A) Richard L. Taylor	07/79	05/83
(E) George P. Adams	08/79	11/79
(E) Richard J. Guiney	08/79	11/79

	Period of Service From	To
(E) John J. Gallahue, Jr.	11/79	01/83
(E) John J. O'Leary	03/80	01/93
(E) James T. Norton	07/80	10/90
(E) Paul M. Connolly	01/83	12/86
(A) Paul E. Means	05/83	01/84
(A) William F. Irvin **	05/83	04/91
(A) James E. Smith, Esq.	05/83	04/91
(A) Melissa A. Tillman	01/84	04/91
(E) Anthony B. Romano **	12/86	02/92
(E) John J. Connolly **	10/90	08/94
(A) Domenic M. Bozzotto	04/91	02/97
(A) Toye L. Brown, Ph.D.	04/91	10/93
(A) James A. Radley	04/91	11/92
(E) James W. Duchaney	02/92	01/93
(A) Michael P. Hogan	11/92	12/93
(E) Richard M. Murphy	01/93	08/96
(E) Edward F. Sheckleton **	01/93	12/01
(A) Oliver C. Mitchell, Jr.	10/93	05/98
(A) Albert Shaw	12/93	10/95
(E) Paul V. Buckley	08/94	04/98
(A) Boyce W. Slayman	10/95	03/00
(E) James E. Lydon	10/96	12/01
(A) Janice Loux**	10/97	03/15
(E) William A. Irvin	04/98	12/05
(A) William A. Mitchell, Jr.	12/98	10/00
(A) Joseph M. Trolla	08/00	10/08
(A) Hon. Baron H. Martin	11/00	10/04
(E) Stephan G. MacDougall	01/02	12/10
(E) John P. Barry	01/02	04/06
(A) Jonathan R. Davis	10/04	05/15
(E) James M. O'Connell	09/07	06/15
(E) Michael F. Mastrocola	07/06	01/12
(A) Darnell L. Williams	01/09	05/15
(E) John J. Lee	01/11	12/13
(E) James M. Evers	04/12	Present
(E) James M. O'Brien	01/14	Present
(A) Steven Grossman	06/15	Present
(A) Betsy Taylor	06/15	Present
(A) Michael J. Heffernan	06/15	Present
(E) Craig S. Hughes	07/15	Present

(E) Employee Representative (A) Authority Representative ** Chairperson

Historical Executive Directors of the MBTA Retirement Fund

Name	Period of Service From	To	Name	Period of Service From	To
John H. Moran	01/48	11/51	Karl E. White	04/02	06/06
Michael J. Powell	11/51	12/82	Michael H. Mulhern	07/06	08/16
John J. "Jack" Gallahue, Jr.	01/83	03/02	John P. Barry - Interim	08/16	

1 Prior to 1968 the Executive Director position was referred to as Treasurer

Historical MBTA Retirement Fund Alternate Board Members

Name	Period of Service From	To	Name	Period of Service From	To
(A) Joseph Gannon	08/48	01/49	(A) Guido R. Perera, Jr.	10/78	7/79
(A) Richard A. Sullivan	08/48	01/49	(A) Paul E. Means	7/79	5/83
(A) Ernie B. Myott	08/48	08/64	(A) John J. McCarthy	7/79	5/83
(E) Philip E. Doyle	08/48	12/49	(A) Guy F. DeBenedetto	7/79	8/81
(E) John C. Carey	08/48	08/54	(E) Frederick W. Burt III	12/79	3/83
(E) Joseph P. Fahey	08/48	04/54	(E) Charles E. Smyth	7/80	10/90
(A) Edward Dana	01/49	02/51	(E) Donald J. Quinlan	3/83	7/85
(A) Edward R. Kelly	01/49	07/50	(E) Anthony B. Romano	1/84	12/86
(E) Thomas Freeman	12/49	08/52	(A) Melba F. Hamilton	5/84	4/91
(A) Ernest M. Flint	07/50	10/52	(A) Judith H. Robbins	6/84	4/91
(E) Thomas F. Holland, Jr.	08/52	08/64	(E) Stanley V. Stearns	7/85	1/87
(A) John J. Sullivan	10/52	01/59	(E) Albert Mastrocola	1/87	10/97
(A) Horace Schmerhorn	04/53	04/56	(E) Edward F. Sheckleton	1/87	1/93
(E) Edward S. Russell	04/54	03/61	(E) Paul V. Buckley	10/90	8/94
(E) Michael J. Gormley	04/54	07/56	(A) Michael P. Hogan	6/91	11/92
(A) Robert H. Ryan	05/56	08/57	(A) Gregory C. Flynn, Esq.	10/91	3/92
(E) Joseph P. Fahey	07/56	01/58	(A) Arthur D. Shea	11/91	2/92
(A) John J. Graham	08/57	08/64	(A) Wesley G. Wallace, Jr.	2/92	3/94
(E) Thomas J. Rush	01/58	12/69	(A) Esther R. Maletz, Esq.	3/92	3/94
(A) William J. Fitzsimons	01/59	07/70	(E) Robert F. Gosnell	1/93	3/96
(E) Richard R. Rodwell	03/61	01/62	(A) Carol A. Buckley	3/94	1/96
(E) Walter H. Doyle	01/62	12/63	(A) Francis X. McDonough	3/94	8/96
(E) Paul F. Halloran	12/63	12/69	(A) Clifford H. Straw	3/94	1/96
(E) Albert J. Fitzpatrick	08/64	08/70	(E) Robert H. Stearns	8/94	4/98
(A) Frederick J. Sheehan	08/64	03/67	(A) William A. Mitchell, Jr.	1/96	12/98
(A) George L. Anderson	08/64	04/68	(E) Daniel K. Burton	4/96	9/96
(A) Vincent M. Banks	03/67	01/74	(A) Sharna A. Small-Borsellino	4/96	5/00
(A) Forrest I. Neal, Jr.	04/68	01/78	(E) Francis X. Madden	10/96	1/99
(E) Patrick C. Quill	12/69	12/71	(E) James M. O'Connell	4/98	12/05
(E) Dennis F. Guiney	12/69	12/73	(A) Philip Puccia	2/97	3/99
(A) Joseph A. Emerson	07/70	01/74	(E) James D. Wyllie	11/97	12/98
(E) Charles H. Ward	08/70	02/77	(E) Daniel K. Burton	1/99	1/00
(E) Paul F. Sullivan	12/71	12/73	(A) Willie J. Davis	12/98	7/00
(E) Charles F. Cole, Jr.	12/73	12/75	(A) Michael Mulhern	4/99	4/02
(E) Edward J. Doherty	12/73	12/75	(E) Torrie Austin	5/99	4/00
(A) Daniel F. Dullea	01/74	02/76	(E) James D. Wyllie	1/99	11/00
(A) Francis A. Sullivan	01/74	07/79	(E) James M. Evers	5/00	9/00
(E) Joseph A. Dineen	01/76	12/77	(A) Alice A. Fernandes	5/00	12/06
(E) Joseph D. Fleming, Jr.	01/76	07/76	(A) Jonathan R. Davis	8/00	10/04
(E) James T. Norton	03/77	07/80	(E) Stephan G. MacDougall	10/00	11/00
(E) Redmond R. Condon	02/78	01/84	(E) James M. Evers	11/00	12/01
(E) George P. Adams	02/78	08/79	(E) James Knox	8/01	12/01
(A) Troy Y. Murray	10/78	07/79			

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(E) James Crowley	01/02	03/03
(E) Roy L. Chance	02/02	12/02
(A) Wesley G. Wallace, Jr.	05/02	10/06
(E) Robert L. Callahan	03/03	02/06
(E) M. John Burr	03/03	12/03
(E) John S. Murray	01/04	02/05
(A) Brian J. Donohue	10/04	05/09
(E) James M. O'Brien	03/05	12/10
(E) Michael F. Mastrocola	02/06	06/06
(E) Daniel K. Burton	07/06	09/07
(E) Brian P. Cummins	08/07	06/15
(E) John M. Burr	09/07	02/08
(A) William A. Mitchell, Jr.	03/07	01/12
(A) Jeanne M. Morrison	10/06	03/15
(E) Walter J. Novicki	02/08	01/10
(E) Lawrence C. Kelly	02/10	04/11
(E) Walter J. Novicki	01/11	12/11
(E) James M. O'Brien	05/11	12/13
(E) John A. Clancy	01/12	12/13
(A) Gerald K. Kelley	06/12	Present
(E) Margaret C. LaPaglia	01/14	Present
(E) Lawrence C. Kelly	01/14	Present
(E) Timothy P. Long	07/15	Present

(E) Employee Representative (A) Authority Representative

MBTA Retirement Fund Professional Services

KPMG, LLP
Audit services

Marco Consulting Group
Investment consulting services

Buck Consultants
Actuarial services

Holland & Knight
Legal Counsel

State Street Bank & Trust Company
Custodian

FINANCIAL SECTION

Two Financial Center
60 South Street
Boston, MA 02111

Independent Auditors' Report

The Retirement Board and Participants
Massachusetts Bay Transportation Authority Retirement Fund:

We have audited the accompanying financial statements of the Massachusetts Bay Transportation Authority Retirement Fund (the Fund), which comprise the statements of fiduciary net position as of December 31, 2015 and 2014 and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Massachusetts Bay Transportation Authority Retirement Fund as of December 31, 2015 and 2014 and the changes in fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.

KPMG

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis and the required supplementary information as listed in the accompanying table of contents (collectively referred to as RSI), be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the RSI in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information and Other Information

Our audits were conducted for the purpose of forming an opinion on the Fund's basic financial statements. The Introduction, Other Supplementary Information, Investment, Actuarial, Statistical and Frequently Asked Questions sections as listed in the accompanying table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Other Supplementary Information is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Other Supplementary Information is fairly stated in all material respects in relation to the basic financial statements as a whole.

The Introduction, Investment, Actuarial, Statistical, and Frequently Asked Questions sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

KPMG LLP

October 26, 2016

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

This section presents Management's Discussion and Analysis (MD&A) of the Massachusetts Bay Transportation Authority Retirement Fund's (the Fund or MBTARF) financial activity and performance as of and for the years ended December 31, 2015 and 2014. The MD&A is unaudited and is intended to serve as an introduction to the Fund's basic financial statements, as well as to offer readers of the Fund's financial statements a narrative view and analysis of MBTARF's financial activities.

Financial Reporting Structure

The financial statements include the statements of fiduciary net position and changes in fiduciary net position. They present the financial position of the Fund as of December 31, 2015 and 2014 and its financial activities for the years then ended. The notes to the financial statements provide further information that is essential to a full understanding of the financial statements. The notes describe the significant accounting policies of the Fund and provide detailed disclosures on certain account balances. The required supplementary schedules include the schedules of changes in net pension liability and related ratios, investment returns, contributions and related notes as prescribed by the Governmental Accounting Standards Board (GASB).

The Fund's financial statements are prepared on an accrual basis of accounting. This method of accounting requires recognizing and recording financial transactions when they occur and not just in conjunction with the inflows and outflows of cash.

The total assets managed by the Fund are held in the trust for the payment of pension and related benefits to its members. The Fund's Board of Trustees, in its fiduciary capacity, with assistance from its consultants established the Fund's investment policies and oversees their implementation.

Financial Highlights

Year Ended December 31, 2015

The net position of the Fund decreased $90.1 million, or 5.67%, from $1,587.9 million as of December 31, 2014 to $1,497.8 million as of December 31, 2015.

Net investment income decreased $68.8 million, or 93.6%, from $73.5 million for the year ended December 31, 2014 to $4.7 million for the year ended December 31, 2015. The Fund had a 0.90% rate of return for the year ended December 2015 compared to a 5.51% rate of return for the year ended December 31, 2014. The returns identified in the MD&A are gross of fees with the exception of hedge funds, which are net of fees.

The total contributions received during the year ended December 31, 2015 were $99.9 million compared to total contributions received during the year ended December 31, 2014 of $95.9 million. (Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
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Management's Discussion and Analysis

December 31, 2015

(Unaudited)

Employer contributions during the year ended December 31, 2015 increased $2.8 million or 4.0% to $73.4 million from $70.6 million during the year ended December 31, 2014. This increase is primarily due to the continued execution of the new wage agreement that was applied retroactively going back to July 2010.

Member contributions were $26.5 million during the year ended December 2015, an increase of $1.2 million or 4.7% over year ended December 31, 2014 member contributions of $25.3 million. The change in member contributions is also due to the continued implementation of the new wage agreement.

Benefits paid during the year ended December 31, 2015 were $187.1 million an increase of $4.6 million, or 2.5%, over the benefits paid during the year ended December 31, 2014 of $182.5 million. This increase is primarily due to the increased number of retirees and lengthening life span as well as the continued application of the wage agreement for members who retired after July 1, 2010.

Year Ended December 31, 2014

The net position of the Fund decreased $18.8 million, or 1.16%, from $1,606.7 million as of December 31, 2013 to $1,587.9 million as of December 31, 2014.

Net investment income decreased $158.1 million, or 68.3%, from $231.6 million for the year ended December 31, 2013 to $73.5 million for the year ended December 31, 2014. The Fund had a 5.51% rate of return for the year ended December 2014 compared to a 17.08% rate of return for the year ended December 31, 2013. The returns identified in the MD&A are gross of fees with the exception of hedge funds, which are net of fees.

The total contributions received during the year ended December 31, 2014 were $95.9 million compared to total contributions received during the year ended December 31, 2013 of $79.0 million.

Employer contributions during the year ended December 31, 2014 increased $12.6 million or 21.7% to $70.6 million from $58.0 million during the year ended December 31, 2013. This increase is primarily due to the execution of the new wage agreement that was applied retro actively going back to July 2010.

Member contributions were $25.3 million during the year ended December 2014, an increase of $4.3 million or 20.4% over year ended December 31, 2013 member contributions of $21.0 million. The change in member contributions is also due to the implementation of the new wage agreement.

Benefits paid during the year ended December 31, 2014 were $182.5 million an increase of $5.2 million, or 2.9%, over the benefits paid during the year ended December 31, 2014 of $177.3 million. This increase is primarily due to the 2014 retirees having an increased average benefit and life span as well as the application of the wage agreement for members who retired after July 1, 2010.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

Financial Analysis

The following schedules report the condensed comparative fiduciary net position and activities for the Fund as of and for the years ended December 31.

Condensed Comparative Fiduciary Net Position

(Dollar values expressed in millions)

		December 31		
		2015	**2014**	**2013**
Cash	$	3.2	3.0	2.9
Receivables		5.1	5.8	6.5
Investments		1,495.9	1,585.9	1,604.2
Cash collateral on securities lending		66.2	105.9	123.7
Total assets		1,570.4	1,700.6	1,737.3
Cash collateral on securities lending		66.2	105.9	123.7
Accounts payable and accrued expenses		5.1	4.3	4.3
Payable for investments purchased		1.3	2.5	2.6
Total liabilities		72.6	112.7	130.6
Net position – restricted for pension benefits	$	1,497.8	1,587.9	1,606.7

Total assets were $1,570.4 million as of December 31, 2015, a decrease of $130.2 million, or 7.7%, over the year ended December 31, 2014. Investments were valued at $1,495.9 million, a decrease of $90.0 million, or 5.7%, over the year ended December 31, 2015. This loss in investment value is due to corporate revenues and earnings decreasing throughout the year and more expectations for future corporate growth were adjusted downward. The international markets underperformed U.S. markets and emerging markets were also down for the year. Fixed income also had a relatively weak 2015 largely driven by investors' concerns over rising interest rates. Cash collateral on securities lending decreased by $39.7 million, or 37.5%. Receivables decreased by $0.7 million, or 12.1%, over the prior calendar year due to decreased pending investment sales at the end of the calendar year.

Total liabilities as of December 31, 2015 decreased by $40.1 million, or 35.6%, over the prior year. This resulted primarily from decreased cash collateral on securities lending activity. The cash collateral on securities lending decreased by $39.7 million, or 37.5%, in calendar year 2015. Payable for investment purchased decreased by $1.2 million, or 48%.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

Condensed Comparative Fiduciary Net Position

(Dollar values expressed in millions)

		December 31		
		2015	**2014**	**2013**
Additions:				
Employer contributions	$	73.4	70.6	58.0
Member contributions		26.5	25.3	21.0
Income from investments		4.7	73.5	231.6
Total additions		104.6	169.4	310.6
Deductions:				
Retirement benefits		187.1	182.5	177.3
Refunds of contributions		1.8	1.6	1.1
Administrative expense		5.8	4.0	3.9
Total deductions		194.7	188.1	182.3
Total changes in fiduciary net position	$	(90.1)	(18.7)	128.3

Additions to Plan Fiduciary Position

For the calendar year ended December 31, 2015, employer contributions increased by $2.8 million and member contributions increased by $1.2 million. Effective July 1, 2015, the employer's contribution rate changed from 16.0511% to 16.0286% and the member contribution rate changed from 5.7989% to 5.7914%, resulting in a 0.14% and 1.29% decrease, respectively.

Contributions are required to provide benefits and meet administrative expenses and are made jointly by the Massachusetts Bay Transportation Authority (the Authority) and members. The contribution percentage is negotiated periodically as part of the collective bargaining agreement. The Fund's investment portfolio has been a major source of additions to the Fund's net position. There was a net investment gain in 2015 of $4.7 million compared to a $73.5 million net investment gain in 2014. This is primarily the result of a change in the fair value of the investment portfolio.

(Continued)

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND**

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

Deductions from Fiduciary Net Position

Benefits paid increased by $4.6 million, or 2.5%, over the year ended 2015. This increase is primarily due to the increased number of retirees and lengthening life span as well as the continued application of the wage agreement for members who retired after July 1, 2010. Administrative expenses increased from $4.0 million to $5.8 million, an increase of $1.8 million, or 45%. This increase is directly attributable to extraordinary legal and consultant fees incurred in responding to allegations published on June 28, 2015 in The Boston Globe citing a report authored by, among others, Harry Markopolos, containing allegations questioning the accuracy of the Fund's financial reporting for the years 2011-2013. As detailed more fully in the Fund's 2014 Comprehensive Annual Financial Report these allegations were deemed to lack merit by an independent consultant but, nonetheless, resulted in added legal fees and related expense to the Fund.

Net Pension Liability (NPL)

The Fund retains an independent actuarial firm, Buck Consultants, to conduct annual actuarial valuations to monitor net pension liability.

As of December 31, 2015 and 2014, the fiduciary net position as a percentage of the total pension liability was 59.63% and 64.88%, respectively.

Investment Performance 2015

The Fund began the calendar year 2015 with a net position of $1,587.9 million and ended the calendar year with a net position of $1,497.8 million, representing a 5.7% decrease. The Fund invests strategically to achieve the actuarial rate of return while controlling risk through diversification of asset class exposure. The primary determinant of long-term investment performance is the strategic asset allocation policy.

Domestic equity (31.3%), international equity (13.9%), fixed income investments (23.1%), and cash equivalents (4.1%) comprise approximately (72.4%) of invested assets as of December 31, 2015. The remaining (27.6%) of assets are invested in real estate (8.7%), and alternative investments (18.9%), which include private equity, absolute return, and diversified beta. These assets are expected to earn enhanced returns and manage risk through further diversification.

Investment performance results are measured by the relationship of the Fund's portfolio returns for equity and fixed income investment against widely accepted market indices. For the calendar year ended December 31, 2015, the MBTA Retirement Fund's total fund return was 0.90% compared to 5.51% for the calendar year ended December 31, 2014. The 2015 decrease in return was primarily due to the poor domestic and global market conditions.

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

The domestic large cap equity returned (0.16) % compared to the S&P 500 Index of 1.38%. The domestic small cap equity returned (1.62) % compared to the Russell 2000 Growth Index of (1.38) % and the Russell 2000 Value Index of (7.47) %. The global equity and emerging markets returned 1.40% compared to MSCI All Country World Index of (2.36) %. The international equity returned 2.02% compared to the MSCI EAFE Index of (0.81) %. Fixed Income returned (0.60) % compared to the BC Aggregate of 0.55%.

The total fund performance of 0.90% for calendar year 2015 underperformed by 1.11% the total fund custom index (a blended composition of major market indices in proportion to the Fund's asset allocation), which returned 2.01%.

Additionally, for the year ended December 31, 2015, the real estate portfolio returned 13.94% compared to the NCREIF Property Index of 13.33%. The hedge fund portfolio returned (4.31)% compared to the CSFB/Tremont Hedge Fund Index of (0.71)%. The private equity active portfolio returned 6.83% and the legacy private equity portfolio returned (6.52)% compared to State Street's Customized Benchmark return of 5.40%. State Street Customized Benchmark consists of 36% buyout, 9% venture, 37% debt and 18% fund of funds. Diversified Beta returned (3.15) % compared to the 91 Treasury Bill Plus 300 Basis Points return of 3.1%.

Investment Performance 2014

The Fund began the calendar year 2014 with net position of $1,606.7 million and ended the calendar year with net position of $1,587.9 million, representing a 1.16% decrease. The Fund invests strategically to achieve the actuarial rate of return while controlling risk through diversification of asset class exposure. The primary determinant of long-term investment performance is the strategic asset allocation policy.

Domestic equity (32.5%), international equity (13.6%), fixed income investments (21.9%), and cash equivalents (3.6%) comprise approximately (71.6%) of invested assets as of December 31, 2014. The remaining (28.4%) of assets are invested in real estate (8.9%), and alternative investments (19.5%), which include private equity, absolute return, and diversified beta. These assets are expected to earn enhanced returns and manage risk through further diversification.

Investment performance results are measured by the relationship of the Fund's portfolio returns for equity and fixed income investment against widely accepted market indices. For the calendar year ended December 31, 2014, the MBTA Retirement Fund's total fund return was 5.51% compared to 17.08% for the calendar year ended December 31, 2013. The 2014 return was primarily due to the market conditions.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

The total fund performance of 5.51% for calendar year 2014 underperformed by 0.71% the total fund custom index (a blended composition of major market indices in proportion to the Fund's asset allocation), which returned 6.22%.

The domestic large cap equity returned 10.39% compared to the S&P 500 Index of 13.69%. The domestic small cap equity returned 2.37% compared to the Russell 2000 Growth Index of 5.60% and the Russell 2000 Value Index of 4.22%. The global equity and emerging markets returned 6.35% compared to MSCI All Country World Index of 5.50%. The international equity returned (5.87)% compared to the MSCI EAFE Index of (4.90)%. Fixed Income returned 4.90% compared to the BC Aggregate of 5.97%.

Additionally, for the year ended December 31, 2014, the real estate portfolio return 20.25% compared to the NCREIF Property Index of 11.82%. The hedge fund portfolio returned 4.14% compared to the CSFB/Tremont Hedge Fund Index of 4.13%. The private equity active portfolio returned 7.60% and the legacy private equity portfolio returned (4.96)% compared to State Street's Customized Benchmark return of 6.93%. State Street Customized Benchmark consists of 36% buyout, 9% venture, 37% debt and 18% fund of funds. Diversified Beta returned 6.72% compared to the 91 Treasury Bill Plus 300 Basis Points return of 3.04%.

Other Information

In September of 2013, the Fund received an in-kind distribution from Weston Capital Partners Fund II Ltd (PII) of interests in four funds ("White Oak") managed by White Oak Global Advisors LLC which made up the majority of PII's remaining assets at that time.

In December of 2015, Crestline-Kirchner, L.P. (CK), a specialist in management of illiquid assets, was engaged to manage White Oak and suspended auditing of its financial statements to save expenses. CK reports to investor's quarterly, providing information on each of the remaining White Oak portfolio companies including an unaudited high and low estimated value for each and a projected timeline for liquidation.

Due to the absence of audited financial statements and its liquidation status, as of December 31, 2015 the Fund wrote down to zero the value of its investment in White Oak.

During 2015, the Fund engaged FTI Consulting ("FTI") and counsel to investigate allegations concerning the Fund's financial reporting for fiscal years 2011-2013. Although the years in question are not directly related to the periods covered in this report, the FTI report nonetheless provides meaningful information about the Fund and its operations. For a more complete description of FTI's work, please see the Fund's website (*www.mbtarf.com*) for a link to FTI's report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Required Supplementary Information

Management's Discussion and Analysis

December 31, 2015

(Unaudited)

Contacting the MBTA Retirement Fund

This financial report is designed to provide a general overview of the Fund's investment results and financial condition of the Fund for the years ended December 31, 2015 and 2014. Please contact the MBTA Retirement Fund Office by emailing invest@mbtarf.com or by phone to 617-316-3800 for additional financial information or questions related to this report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Statements of Fiduciary Net Position

Years ended December 31, 2015 and 2014

	2015	2014
Assets:		
Investments, at fair value:		
Domestic:		
Cash and cash equivalents	$ 61,253,644	57,554,556
Fixed income	339,671,431	340,063,702
Common stock and equity funds	468,588,759	515,963,329
Real estate	130,266,856	141,194,900
Alternative investments and hedge funds	283,054,021	309,485,039
	1,282,834,711	1,364,261,526
International:		
Cash and cash equivalents	58,048	14,281
Fixed income	5,320,012	6,515,165
Common stock and equity funds	207,659,261	215,111,044
	213,037,321	221,640,490
Total investments	1,495,872,032	1,585,902,016
Cash and cash equivalents	3,233,915	2,952,778
Contribution receivable from Massachusetts Bay Transportation Authority	1,974,341	1,658,892
Cash collateral on securities lending, invested	66,204,476	105,907,691
Receivable for investments sold and other	3,125,680	4,176,805
Total assets	1,570,410,444	1,700,598,182
Liabilities:		
Cash collateral on securities lending, due to borrowers	66,204,476	105,907,691
Accounts payable and accrued expenses	5,056,524	4,273,470
Payable for investments purchased	1,301,409	2,450,532
Total liabilities	72,562,409	112,631,693
Net position – restricted for pension benefits	$ 1,497,848,035	1,587,966,489

See accompanying notes to financial statements.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Statements of Changes in Fiduciary Net Position
Years ended December 31, 2015 and 2014

	2015	2014
Additions:		
Contributions by Massachusetts Bay Transportation Authority	$ 73,373,672	70,603,285
Contributions by members	26,510,946	25,318,224
Total contributions	99,884,618	95,921,509
Investment income:		
Income from investments and other income	56,657,660	53,319,148
Less investment expenses, other than from securities lending	(6,611,956)	(7,566,154)
Net (depreciation) appreciation in fair value of investments	(45,625,486)	27,464,514
Net investment gain	4,420,218	73,217,508
Securities lending activity:		
Securities lending income	605,634	657,244
Less borrower rebates and fees	314,606	331,275
Net income from securities lending activities	291,028	325,969
Total net investment income	4,711,246	73,543,477
Total additions	104,595,864	169,464,986
Deductions:		
Retirement benefits	187,148,675	182,499,776
Refunds of members' contributions	1,757,557	1,630,411
Administrative expenses	5,808,086	4,052,664
Total deductions	194,714,318	188,182,851
Net change in net position	(90,118,454)	(18,717,865)
Net position – restricted for pension benefits:		
Beginning of year	1,587,966,489	1,606,684,354
End of year	$ 1,497,848,035	1,587,966,489

See accompanying notes to financial statements.

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND**

Notes to Financial Statements
December 31, 2015 and 2014

(1) Description of the Fund

(a) General

The following description of the Massachusetts Bay Transportation Authority Retirement Fund (the Fund), a single employer plan, provides only general information. Employees (members) should refer to the Pension Agreement for a more complete description of the Fund's provisions.

The Fund was established on January 1, 1948, under an agreement and declaration of trust (restated in October 28, 1980) by and among the Massachusetts Bay Transportation Authority (the Authority), Local 589, Amalgamated Transit Union, Boston Carmen's Union, and AFL CIO (collectively, the Union). The Fund was established as a contributory defined benefit retirement plan in accordance with the Pension Agreement, effective July 1, 1970, adopted by the Authority and the Union for the purpose of receiving contributions and providing pension benefits for its members and qualified beneficiaries.

The general administration and responsibility for the operation of the Fund are vested in a seven-member Retirement Board. The Board consists of three members appointed by the Authority (at least one of whom must be a member of the Authority's Board of Directors), two members appointed by the Boston Carmen's Union, Local Union 589 of the Amalgamated Transit Union, AFL-CIO, one member elected by vote conducted by the Authority for a term of three years by members of the Fund who are not members of the Boston Carmen's Union, Local Union 589 of the Amalgamated Transit Union, AFL-CIO, and one member, who has no vote and is known as the honorary member, who is elected, for such period as the Retirement Board may determine, by the other six members of the Retirement Board.

(b) Membership

The Fund covers all employees of the Authority except the MBTA Police, who are covered separately, and certain executives who elect coverage under an alternate plan. At December 31, 2015 and 2014, Fund membership consisted of:

	2015		2014	
Retired members or beneficiaries currently receiving benefits	6,472	(1)	6,407	(2)
Active members	5,885		5,798	
Active members not presently earning service credit	88		134	
Total membership	12,445		12,339	

(1)Year 2015 includes 6,371 retirees and beneficiaries and 101 individuals receiving payments under QDROs
(2)Year 2014 includes 6,309 retirees and beneficiaries and 98 individuals receiving payments under QDROs

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

(c) Funding Policy

Contributions required to provide benefits and meet administrative expenses are made jointly by the Authority and members. The member contribution rate was decreased from 5.7989% to 5.7914% effective July 1, 2015 of pretax compensation. The Authority contribution rate was decreased from 16.0511% to 16.0286% effective July 1, 2015. As of July 1, 2016 member contribution and Authority contribution rates will be 6.4614% and 18.0386% respectively. These contribution rates were calculated based on the most recent actuarial valuation of plan benefits and the Memorandum of Understanding with the Authority. The terms of the Fund's obligations are part of the Pension Agreement contained in the annual report of the Fund. Only parties to the Pension Agreement can amend the terms. The contributions by members and the Authority have been developed to provide normal contributions, interest on the unfunded accrued liability, and administrative expenses.

(d) Benefits

The Fund provides for retirement, disability and death benefits in accordance with the Pension Agreement, as amended.

A summary of benefits is as follows:

Normal Retirement Allowance

Condition for Allowance

Any member may retire at age 65. A member may remain in service after the stated retirement date.

Amount of Allowance

The normal retirement allowance equals 2.46% of 3-year average annual compensation multiplied by the years of service, such allowance not to exceed 75% of such average annual compensation.

Early Normal Retirement Allowance

Condition for Allowance

Any member hired prior December 6, 2012 and has completed at least 23 years of service may retire on an early normal retirement allowance.

Any member hired on or after December 6, 2012, has attained age 55 and completed at least 25 years of service may retire on an early normal retirement allowance.

Amount of Allowance

The early normal retirement allowance is computed in the same manner as a normal retirement allowance on the basis of the compensation and service to the time of retirement.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

Early Reduced Retirement Allowance

Condition for Allowance

A member who has attained age 55 and has completed at least 20 years of service may be retired on an early reduced retirement allowance.

Amount of Allowance

The early reduced retirement allowance is an immediate allowance, commencing at the date of retirement, and is computed in the same manner as a normal retirement allowance on the basis of compensation and service to the time of early retirement, but reduced by 1/2 of 1% for each month of retirement prior to normal retirement date.

Disability Retirement Allowance

Condition for Allowance

Any member who has completed 4 years of service in case of disablement due to an occupational accident or sickness, or who has completed 6 years of service in case of disablement due to any other cause, and who has become totally and permanently incapacitated, mentally or physically, for the further performance of duty may be retired.

Amount of Allowance

Upon disability retirement, a member receives an allowance commencing immediately, which is computed as a normal retirement allowance on the basis of the compensation and service to the time of disability retirement and is not less than 15% of the member's 3-year average annual compensation.

Vested Retirement Allowance

Condition for Allowance

Any member who has completed 10 years of service and who is not eligible for a retirement allowance is eligible for a vested retirement allowance, in lieu of a refund of his/her contributions with interest, in the event his/her employment terminates for reasons other than voluntary quit or discharge for cause.

Amount of Allowance

The vested retirement allowance is a deferred allowance commencing on the member's normal retirement date and equal to a percentage, not exceeding 100%, of the amount computed as a normal retirement allowance on the basis of the compensation and service to the time of termination; the applicable percentage is 5% multiplied by the number of years of creditable service, not in excess of 20, at the time of termination.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

Survivor Benefit

Condition for Benefit

Upon the death of a member who has completed 10 years of service and who is survived by a spouse and/or dependent children designated to receive the deceased member’s contributions with interest, a benefit may be elected by such survivor in lieu of the payment of the contributions with interest.

Amount of Benefit

If the deceased member had completed at least 10 but fewer than 23 years of service, the survivor’s benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his/her death and elected a 50% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

If the deceased member had completed at least 23 years of service, the survivor’s benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his/her death and elected a 100% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

Accidental Death Benefit

Condition for Benefit

Upon the death of a member in service whose death results solely from an injury or injuries sustained in the performance of duty, and who is survived by a spouse designated to receive the deceased member’s contribution with interest, an allowance shall be payable to said spouse.

Amount of Benefit

The accidental death benefit, payable for life, is equal to the amount which would have become payable to the member if the member had retired as of the date of his/her death on a disability retirement allowance. If there should be insufficient creditable service, the surviving spouse receives the minimum allowance available under the disability retirement provision.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

(e) Fund Termination

In the event of termination of the Fund, all of the assets of the Fund shall be used for the benefit of members and retired members or their beneficiaries, and for no other purpose. Each member, and each retired member or their designated beneficiary in receipt of a retirement allowance, shall be entitled to such proportionate part of the assets of the Fund as the reserve, required for their benefits, bears to the total reserves required under the Fund as determined by the Massachusetts Bay Transportation Authority Retirement Board (the Retirement Board) on the basis of actuarial valuation. The Retirement Board may require all such members, and retired members or designated beneficiaries, to withdraw such amounts in cash or in the form of immediate or deferred annuities as it may determine.

(2) Significant Accounting Policies

(a) Basis of Accounting

The financial statements have been prepared on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles (GAAP), as promulgated by the Governmental Accounting Standards Board (GASB).

(b) Use of Estimates

The preparation of financial statements in conformity with GAAP requires the Fund's management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Significant items subject to such estimates and assumptions include, but are not limited to, the assessment of fair values for real estate and alternative investment holdings in the absence of readily available market values, and these estimates may be materially different than values that would have been used had a ready market existed for these investments.

(c) Cash and Cash Equivalents

Cash and cash equivalents generally consist of cash on deposit with banks and financial institutions and highly liquid short-term investments, which have original maturities of three months or less. The Fund maintains its cash deposits with financial institutions, which management considers being of high credit quality and, by policy, limits the allocation of funds to any single major financial institution to minimize the Fund's amount of credit exposure.

(d) Revenue Recognition

Contributions are recognized pursuant to the contractual requirements of the Pension Agreement. Investment income is recognized as it is earned. Net appreciation (depreciation) in the fair value of investments is recorded as an increase (decrease) to investment income based on the valuation of investments as of the date of the financial statements.

(Continued)

**MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND**

Notes to Financial Statements
December 31, 2015 and 2014

(e) Retirement Benefits and Refunds

Retirement benefits and refunds are recognized when they become due and payable.

(f) Investments

Investments are stated at fair value. Securities traded on national security exchanges are valued on the basis of the closing price as of the last business day of the reporting period. Securities traded in the over-the-counter market are normally valued at the mean of the closing bid and asked prices. Securities listed or traded on certain foreign exchanges whose operations are similar to the U.S. over-the-counter market are valued at the price within the limits of the latest available current bid and asked prices deemed best to reflect current value. Gains and losses on sales of investments are determined on the basis of average cost.

Investments in real estate represent the Fund’s percent ownership in private real estate funds and limited partnerships. The Fund’s investments are valued based on estimates by the Fund’s management as a result of their review of financial information of the underlying real estate investment assets and standards established by the real estate industry, generally using the net asset value of the underlying investment as a practical expedient.

Investments in alternative investments and hedge funds include the Fund’s percent ownership in venture capital, leveraged buyouts, private placements, hedge fund-of-funds, and other investments where the structure, risk profile, and return potential differ from traditional equity and fixed income investments. These investments are included in the statement of fiduciary net position at estimated values determined in good faith by the Fund’s management, generally using the net asset value of the underlying investment as a practical expedient.

Purchase and sales of investments are selected on a trade-date basis.

(g) Derivatives

A derivative is an investment agreement or security with a value that depends on, or is derived from, the value of an underlying asset, reference rate, or financial index. The Fund has classified its investment in forward exchange contracts as investment derivative instruments. A forward exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. The Fund utilizes forward foreign exchange contracts to minimize the effect of fluctuating foreign currencies. Risk associated with such contracts includes movement in the value of a foreign currency relative to the U.S. dollar. Realized gain or loss on forward exchange contracts is the difference between the original contract and the closing value of such contract and is included in the statement of changes in fiduciary net position. At December 31, 2015 and 2014, the Fund held open forward exchange contracts of varying amounts and currencies. Unrealized gains and losses are not significant to the financial statements.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

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December 31, 2015 and 2014

(h) Currency Translation

As a result of having assets and liabilities denominated in foreign currencies, the Fund is exposed to the effect of foreign exchange rate fluctuations. Assets and liabilities denominated in foreign currencies and commitments under forward foreign exchange contracts and currency options are translated into U.S. dollars at the mean of the quoted bid and asked prices of such currencies against the U.S. dollar. Changes in foreign exchanges are reflected directly in income. Purchases and sales of portfolio securities are translated at the rates of exchange prevailing when such securities were acquired or sold. Income and expenses are translated at rates of exchange prevailing when accrued. It is not practical to isolate that portion of the results of operations arising as a result of changes in the foreign exchange rates from the fluctuations arising from changes in the market price of securities during the period. Net realized gains on foreign currency transactions represent net foreign exchange gains from holding foreign currencies, currency gains or losses realized between the trade and settlement dates on security transactions, and the difference between the amounts of dividends, interest, and foreign taxes recorded on the Fund’s books and the U.S. dollar equivalent amounts actually received or paid.

(i) Income Taxes

The Fund is considered a qualified governmental plan under Internal Revenue Code Section 414(d) and, is generally exempt from federal and state income tax under the Internal Revenue Code Section 115.

(3) Cash Deposits, Investments, and Securities Lending

The Fund, in accordance with the declaration of trust agreement, is authorized to make deposits into checking and savings accounts and to invest in any form or type of investment, financial instrument, or financial transaction deemed prudent in the informed opinion of the Retirement Board. State Street Bank & Trust Company serves as the master custodian for the Fund’s assets.

For the years ended December 31, 2015 and 2014, the Fund’s essential risk information about deposits and investments is presented on the following tables.

(a) Custodial Credit Risk

Custodial credit risk is the risk that, in the event of failure of a depository financial institution, the Fund’s deposits may not be returned. The Fund maintains its cash and cash equivalent deposits with various financial institutions, which management considers being of high quality. The Fund limits the allocation of its cash and cash equivalent deposits to any single financial institution to minimize the Fund’s exposure. The Fund’s cash and cash equivalent deposits that are not collateralized are subject to the Federal Deposit Insurance Corporation (FDIC) insurance limits. At December 31, 2015 and 2014, $2,825,925 and $2,559,211 of the Fund’s cash and cash equivalents deposits were in excess of the FDIC insurance limit.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
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Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Fund and are held by either the depository financial institution or the depository financial institution's trust department or agent but not in the Fund's name.

All of the Fund's investments are held by the Fund's custodian in the Fund's name, except for investments in hedge funds, real estate and alternative investments, which by their nature are not required to be categorized.

(b) Investment Policy

The Fund's investment objective is to achieve consistent positive real returns and to maximize long-term total return within prudent levels of risk through a combination of income and capital appreciation. The Fund's goal is to meet or exceed the Fund's actuarial target rate of return in order to maintain and improve upon its funded status.

The Fund is currently invested in stocks (domestic and foreign), fixed income securities (domestic), real estate, private equity, and hedge funds.

The following was the Board's adopted asset allocation policy as of December 31, 2015 and 2014:

Asset class	Target
Domestic equity	25%
International equity	11
Global/Emerging markets	7
Fixed income	25
Real estate	9
Private equity	10
Hedge funds	8
Risk Parity/Diversified Beta	3
Cash	2
Total	100%

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
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(c) Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The following is a listing of the Fund's fixed income investments and related maturity schedule (in years) as of December 31, 2015 and 2014:

	2015				
Investment type	**Fair value**	**Less than 1**	**1–5**	**6–10**	**More than 10**
U.S. agencies	$ 70,163,455	—	66,159,721	1,133,565	2,870,169
U.S. Treasury notes and bonds	25,945,506	2,381,219	15,098,668	4,910,838	3,554,780
Domestic corporate	190,664,204	124,801	53,236,982	93,908,202	43,394,221
International corporate	5,320,012	1,446,327	2,818,135	765,144	290,405
Asset backed:					
CMOs	2,893,250	—	—	115,910	2,777,340
Mortgage backed	34,306,842	35,096	495,466	—	33,776,280
Other	15,698,174	—	6,756,726	1,155,074	7,786,374
	$ 344,991,443	3,987,443	144,565,698	101,988,733	94,449,569

	2014				
Investment type	**Fair value**	**Less than 1**	**1–5**	**6–10**	**More than 10**
U.S. agencies	$ 72,210,477	—	67,981,724	290,315	3,938,438
U.S. Treasury notes and bonds	24,813,278	755,234	16,068,873	4,899,886	3,089,285
Domestic corporate	186,152,205	1,461,169	51,199,604	87,413,051	46,078,381
International corporate	6,515,165	1,085,657	2,962,802	1,721,958	744,748
Asset backed:					
CMOs	4,176,319	—	—	165,101	4,011,218
Mortgage backed	35,335,722	751,028	2,552,375	—	32,032,319
Other	17,375,701	—	9,523,048	1,713,373	6,139,280
	$ 346,578,867	4,053,088	150,288,426	96,203,684	96,033,669

The Fund's guidelines limit its effective exposure to interest rate risk by benchmarking the separately managed fixed income investment accounts to an intermediate duration benchmark with a weighted average duration of four to five years. The Fund further constrains its actively managed fixed income portfolios to maintain a duration that shall not exceed 1.5 times the benchmark duration. The manager of each fixed income portfolio is responsible for determining the maturity and commensurate returns of his/her portfolio. Fixed income managers are also expected to report risk statistics and give a description of portfolio characteristics, including quality, duration, allocation by security type, and yield to maturity.

The collateralized mortgage obligations (CMOs) held by the Fund at December 31, 2015 and 2014 are highly sensitive to changes in interest rates. (Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

(d) Credit Risk

Credit risk exists when there is a possibility the issuer or other counterparty to an investment may be unable to fulfill its obligations. The Fund expects all investment managers to perform their fiduciary duties as prudent people would and conform to all state and federal statutes governing the investment of the funds. Managers are to adhere to the philosophy and style that was articulated to the Retirement Board at the time of hire. The fixed income investment managers have full discretion to invest in fixed income securities in order to exceed their strategy specific benchmarks.

The Fund's fixed income investments as of December 31, 2015 and 2014 were rated by Standard and Poor's and/or an equivalent national rating organization, and the ratings are presented below using the Standard & Poor's rating scale:

	2015								
Investment type	**Fair value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**	**Not rated**
U.S. agencies	$ 70,163,455	—	3,794,824	1,133,565	65,235,066	—	—	—	—
Domestic corporate	190,664,204	407,104	1,719,139	64,168,721	53,007,833	46,933,691	5,452,365	545,671	18,429,679
International	5,320,012	1,003,382	—	1,814,454	737,123	532,894	—	—	1,232,160
Asset backed:									
CMOs	2,893,250	—	4,723	—	585,238	—	—	—	2,888,527
Mortgage backed	34,306,842	3,523,654	3,038,384	3,862,165	1,427,684	—	—	—	23,297,401
Other	15,698,174	4,987,673	—	1,388,622			14,834	263,570	7,615,791
Total credit securities risk	319,045,937	9,921,813	8,557,070	72,367,527	120,992,944	47,466,585	5,467,199	809,241	53,463,558
U.S. government fixed income securities*	25,945,506								
Total fixed income securities	$ 344,991,443								

	2014								
Investment type	**Fair value**	**AAA**	**AA**	**A**	**BBB**	**BB**	**B**	**CCC**	**Not rated**
U.S. agencies	$ 72,210,477	—	2,595,791	69,324,371	290,315	—	—	—	—
Domestic corporate	186,152,205	798,907	1,622,292	66,377,087	37,804,850	12,879,937	49,303,163	786,750	16,579,219
International	6,515,165	597,766	—	3,920,151	779,408	517,286	—	—	700,554
Asset backed:									
CMOs	4,176,319	—	—	23,671	—	—	—	—	4,152,648
Mortgage backed	35,335,722	5,313,919	3,502,466	524,287	1,641,097	—	—	—	24,353,953
Other	17,375,701	7,449,146	7,899	678,751	687,929	—	17,343	308,145	8,226,488
Total credit securities risk	321,765,589	14,159,738	7,728,448	140,848,318	41,203,599	13,397,223	49,320,506	1,094,895	54,012,862
U.S. government fixed income securities*	24,813,278								
Total fixed income securities	$ 346,578,867								

* Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Financial Statements
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(e) Concentration Risk

Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. The Fund places a 5% limit on the individual exposure to any single issuer at the time of purchase. The Fund has no investments, at fair value, that exceed 5% of the Fund's total investments as of December 31, 2015 and 2014. The Fund does have investments in individual commingled funds and trusts that represent more than 5% of the Fund's assets, but in each case, these investments are in institutional commingled funds that are invested in diversified portfolios.

(f) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Fund's exposure to foreign currency risk is attributable to its investments in separately managed and commingled international equity mutual funds and trusts that are invested in diversified portfolios of international stocks that are denominated in foreign currencies. The Fund's combined policy target allocation to all non-U.S. securities is currently 16% of the Fund's total assets. Currency hedging is permitted for defensive purposes. Currency hedging shall be effected through the use of forward currency contracts, which are described more fully in note 2.

Risk of loss arises from changes in currency exchange rates. The Fund's exposure to foreign currency risk as of December 31, 2015 and 2014 are presented on the following tables:

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements

December 31, 2015 and 2014

		2015			
Currency		**Short term**	**Fixed income**	**Equity**	**Total**
Australian dollar	$	13,919	550,929	598,296	1,163,144
Brazilian real		—	596,059	937,846	1,533,905
Canadian dollar		7,029	—	1,498,891	1,505,920
Chilean peso		—	278,027	—	278,027
Colombian peso		—	728,101	—	728,101
Danish krone		—	—	922,012	922,012
Euro currency		11,927	—	45,020,789	45,032,716
Hong Kong dollar		—	—	3,020,969	3,020,969
Indian rupee		—	1,003,382	—	1,003,382
Japanese yen		—	—	34,449,442	34,449,442
Mexican peso		—	2,163,514	—	2,163,514
New Zealand dollar		7	—	—	7
Norwegian krone		—	—	831,127	831,127
Pound sterling		25,151	—	23,662,844	23,687,995
Singapore dollar		—	—	2,467,125	2,467,125
South African rand		—	—	2,873,092	2,873,092
South Korean wom		—	—	742,058	742,058
Swedish krona		15	—	3,122,044	3,122,059
Swiss franc		—	—	8,437,587	8,437,587
Thailand baht		—	—	4,101,191	4,101,191
International equity pooled funds (various currencies)		—	—	74,973,948	74,973,948
Total securities subject to foreign currency risk		58,048	5,320,012	207,659,261	213,037,321
United States dollars (securities held by international investment managers)		—	—	20,574,921	20,574,921
Total international investment securities	$	58,048	5,320,012	228,234,182	233,612,242

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

	2014			
Currency	**Short term**	**Fixed income**	**Equity**	**Total**
Australian dollar	$ —	645,144	1,352,211	1,997,355
Brazilian real	—	1,115,503	1,674,199	2,789,702
Canadian dollar	11,302	—	1,930,686	1,941,988
Chilean peso	—	294,397	—	294,397
Colombian peso	—	181,191	—	181,191
Danish krone	—	—	844,320	844,320
Euro currency	2,971	—	45,074,646	45,077,617
Hong Kong dollar	—	—	5,195,497	5,195,497
Indian rupee	—	597,766	—	597,766
Japanese yen	—	—	30,301,657	30,301,657
Mexican peso	—	2,595,507	—	2,595,507
New Zealand dollar	8	—	—	8
Norwegian krone	—	—	553,681	553,681
Philippine peso	—	1,085,657	—	1,085,657
Pound sterling	—	—	25,109,705	25,109,705
Singapore dollar	—	—	1,754,104	1,754,104
South African rand	—	—	4,361,188	4,361,188
Swedish krona	—	—	3,854,148	3,854,148
Swiss franc	—	—	13,336,648	13,336,648
Thailand baht	—	—	5,109,760	5,109,760
International equity pooled funds (various currencies)	—	—	74,658,594	74,658,594
Total securities subject to foreign currency risk	14,281	6,515,165	215,111,044	221,640,490
United States dollars (securities held by international investment managers)	—	—	21,635,342	21,635,342
Total international investment securities	$ 14,281	6,515,165	236,746,386	243,275,832

(g) Securities Lending Transactions

The Fund participates in the State Street Bank and Trust Company securities lending program by lending securities to borrowers (subject to borrower limits and program guidelines) and earning additional income, which is included in net investment income in the statement of changes in fiduciary net position.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
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Notes to Financial Statements

December 31, 2015 and 2014

The Fund did not incur any losses on loaned securities during the year ended December 31, 2015 and 2014. The securities are monitored on a daily basis by the custodian to ensure that the loans are properly collateralized. The collateral value is required to be at least 102% of the fair value of loaned domestic investments and a collateral value of at least 105% of the fair value on loaned international investments. Collateral can consist of both cash and securities. Should the collateral percentage levels fall below the stated figures, the borrowers are required to provide additional collateral to proper levels. The indemnification that State Street Bank provides the Fund in regard to loan risk is that should a borrower default on returning a security from loan, the collateral held is used to buy the security to be returned to the Fund. Any shortfall of proceeds to purchase the securities is taken on by State Street Bank.

Loaned securities are included in the statement of fiduciary net position since the Fund maintains ownership. For loans collateralized by cash, the value of the collateral is recorded as a liability offsetting the cash collateral recorded as an asset. The cash collateral as of December 31, 2015 and 2014 was $66,204,476 and $105,907,691. For loans having collateral other than cash, the related collateral securities are not recorded as assets in the statement of fiduciary net position, and a corresponding liability is not recorded, since the Fund cannot pledge or sell the collateral securities, except in the event of a borrower's default.

At December 31, 2015 and 2014, the fair value of loaned securities outstanding, included in investments, was approximately $64,045,712 and $102,799,993.

(h) Commitments

At December 31, 2015 and 2014, the Fund had contractual commitments to provide approximately $89.6 million and $68.8 million respectively of additional funding for alternative investments and real estate.

(i) Money Rate of Return

The Annual money-weighted rate of return on the Fund's investments calculated as the internal rate of return on the pension fund net of investment expenses for the years ended December 31, 2015 and 2014 is 0.65% and 4.80%. A money weighted return expresses investment performance net of pension plan investment expense, adjusted for the changing amounts actually invested.

(4) Related-Party Transactions

The Fund invests certain cash in a money market fund, the State Street Bank and Trust Company Short Term Investment Fund, which is sponsored by the Fund's custodial bank. The total value of the funds held at December 31, 2015 and 2014 was $59,255,608 and $52,597,983.

The Fund invests in the AFL-CIO Housing Investment Trust and the AFL-CIO Building Investment Trust, two for-profit investment programs of the AFL-CIO. The total value of AFL-CIO Housing Investment Trust at December 31, 2015 and 2014 was $49,286,560 and $48,734,330. The total value of AFL-CIO Building Investment Trust at December 31, 2015 and 2014 was $13,625,681 and $11,919,363.

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

(5) Net Pension Liability

The components of the net pension liabilities of the MBTA Retirement Fund as of December 31, 2015 and 2014 are shown as follows (amounts in thousands):

		2015	2014
Total pension liability	$	2,512,085	2,447,731
Plan Fiduciary net position		(1,497,848)	(1,587,966)
Fund's net pension liability	$	1,014,237	859,765
Plan fiduciary net position as a percentage of total pension liability		59.63%	64.88%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2015 and 2014, using the following actuarial assumptions:

- Projected salary increases of 4% per year including inflation
- Investment rate of return 8% per annum, compounded annually
- Inflation rate of 3 percent

For the actuarial valuation as of December 31, 2015, the RP-2000 Blue Collar Mortality Tables with generational projection using Scale BB are used for all active participants. 97.2% of the RP-2000 Blue-Collar Tables for Healthy Males projected by Scale BB generationally are used for all retirees and deferred vested participants. 116.5% of the RP-2000 Blue-Collar Tables for Healthy Females projected by Scale BB generationally are used for all beneficiary participants. The RP-2000 Tables for Disabled Lives projected by Scale BB generationally are used for the period after disability retirement. Among pre-retirement deaths, 7.50% are assumed for accidental death benefits.

For the actuarial valuation as of December 31, 2014, the mortality rates were based on the UP 1994 Mortality Table for males projected to year 2020 with Scale AA is used for all active and retired participants. The UP 1994 Mortality Table for Females projected to year 2020 with Scale AA for all beneficiaries. A special mortality table is used for the period after disability retirement. Among pre-retirement deaths, 7.50% are assumed to qualify for accidental death benefits.

The actuarial assumptions used in the December 31, 2015 valuation were based on the results of an actuarial experience study for the period from January 1, 2010, through December 31, 2014. Actuarial valuations attempt to estimate costs associated with the pension fund based on a number of demographic, economic and retirement experience assumptions. Experience studies are required by statute to be conducted every five years to review experience in comparison to these assumptions and to provide recommended changes to assumptions.

The actuarial assumptions used in the December 31, 2014 valuation were based on the results of an actuarial experience study for the period January 1, 2006 through December 31, 2010. (Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
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Notes to Financial Statements

December 31, 2015 and 2014

The Long-term expected rate of return on Fund investments was determined using best-estimate ranges of expected future nominal rates of return (expected returns, net of investment expense and inflation) developed for each major asset class using an econometric model that forecasts a variety of economic environments and then calculates asset class returns based on functional relationships between economic variables and the asset class. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of December 31, are summarized in the following table:

Asset class	Target asset allocation 2015	Target asset allocation 2014	Long-term expected real rate of return 2015	Long-term expected real rate of return 2014
Equity	43%	43%	8.46%	8.46%
Fixed income	27	27	1.83	1.83
Alternatives	30	30	7.92	7.92

Nominal long-term expected rates of return for these asset classes are equal to the sum of the above expected long-term real rates and the expected long-term inflation rate of 3.0%

(a) Discount Rate

The discount rate used to measure the total pension liability at December 31, 2015 and 2014, was 8.00%. The projections of cash flows used to determine the discount rate assumed that contributions will continue to be made in accordance with the current funding policy. Based on those assumptions, the Fund's fiduciary net position was projected to be available to make all projected further benefit payments of current plan members. Therefore, the long-term expected rate of return on the plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

(b) Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability as of December 31, 2015 and 2014, calculated using the discount rate of 8.00%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (7.00%) or one percentage point higher (9.00%) than the current rate (amounts in thousands):

	2015		
	1% Decrease (7.00%)	Current discount rate (8.00%)	1% Increase (9.00%)
Net pension liability	1,269,791	1,014,237	796,832

(Continued)

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Financial Statements
December 31, 2015 and 2014

	2014		
	1% Decrease (7.00%)	**Current discount rate (8.00%)**	**1% Increase (9.00%)**
Net pension liability	1,097,133	859,765	656,157

REQUIRED SUPPLEMENTARY INFORMATION

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Schedule of Changes in Net Pension Liability and Related Ratios
(Unaudited)

		2015	2014
Total pension liability:			
Service cost	$	37,305,333	34,500,540
Interest		191,392,028	184,667,178
Differences between expected and actual experience		31,325,149	48,560,391
Changes of assumptions		(6,762,751)	-
Benefits payments		(188,906,232)	(184,130,187)
Net change in total pension liability		64,353,527	83,597,922
Total pension liability – beginning of year		2,447,731,057	2,364,133,135
Total pension liability – end of year (a)		2,512,084,584	2,447,731,057
Change in fiduciary net position:			
Contributions – employer		73,373,672	70,603,285
Contributions – employee		26,510,946	25,318,224
Net investment income		4,711,246	73,543,477
Benefits payments		(188,906,232)	(184,130,187)
Administrative expenses		(5,808,086)	(4,052,664)
Net change in fiduciary net position		(90,118,454)	(18,717,865)
Fiduciary net position – beginning of year		1,587,966,489	1,606,684,354
Fiduciary net position – end of year (b)		1,497,848,035	1,587,966,489
Net pension liability – end of year (a)-(b)	$	1,014,236,549	859,764,568
Fiduciary net position as a percentage of the total pension liability		59.63%	64.88%
Covered payroll as of December 31, 2015 and 2014 actuarial valuation	$	443,237,899	417,957,007
Net pension liability as a percentage of covered-employee payroll		228.82%	205.71%

See accompanying independent auditors' report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Schedule of Investment Returns
(Unaudited)

	2015	2014
Annual money-weighted rate of return, net of investment expense	0.65%	4.80%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See accompanying independent auditors' report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RETIREMENT FUND

Schedule of Contributions

(Unaudited)

Year		Actuarially determined contribution	Actual contribution in relation to actuarially determined contribution	Percentage of actuarially required contributions	Covered-employee payroll	Contribution as a percentage of covered-employees
2015	$	73,359,000	73,373,372	100.02%	443,238,000	16.55%
2014		77,594,000	70,603,285	90.99	417,957,000	16.89
2013		67,602,000	58,039,160	85.85	379,071,000	15.31
2012		66,035,000	54,968,325	83.24	370,873,000	14.82
2011		60,691,000	52,278,311	86.14	366,535,000	14.26
2010		60,252,000	49,006,722	81.34	356,608,000	13.74
2009		49,340,000	38,566,024	78.16	350,619,000	11.00
2008		39,761,000	35,420,770	89.08	377,795,000	9.38
2007		33,815,000	30,014,017	88.76	357,069,000	8.41
2006		33,327,000	34,485,593	103.48	320,648,000	10.76

See accompanying independent auditors' report.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RETIREMENT FUND

Notes to Required Supplementary Information
(Unaudited)

Actuarial Assumption and Methods

Actuarially determined contributions are calculated as of the December 31 proceeding by six months of the start of the fiscal year in which contributions are made. For example, the contribution calculated in the December 31, 2013 actuarial valuation was to be made during the period from July 1, 2014 through June 30, 2015.

Methods and assumptions used to determine the contributions for calendar 2015 and 2014 (based on 2013 and 2014 actuarial valuations).

- Actuarial cost method – Entry Age Normal
- Amortization method – Level Percentage of Pay
- Remaining amortization period – 25 years (2014 valuation), 26 years (2013 valuation)
- Asset Valuation method – Five year phase-in smoothing method
- Investment rate of return – 8% net of pension plan investment expense
- Retirement Age – Probabilities of retirement are based on table that reflects both age and service
- Mortality – For all active and retired participants, the UP 1994 Mortality Table for Males projected to 2020 with Scale AA. For all beneficiaries, the UP 1994 Mortality Table for Females projected to 2020 with Scale AA. A special mortality table is used for the period after disability retirement.

Effective with the December 31, 2013 actuarial valuation, the actuarial asset valuation method utilized to compute the actuarial value of assets changed from the five-year moving average of market values method to the five-year phase-in smoothing method. This was done in an effort to further align the Fund's funding policies with those prevalent among the Commonwealth of Massachusetts' public retirement systems and to enhance the transparency of its actuarial calculations. With the implementation as of December 31, 2013, the Fund restarted its actuarial value of plan assets at market value and will gradually implement the phase-in smoothing method over the next four years.

Schedule of Administrative Expenses

As of December 31,	2015	2014
Wages and Benefits		
Staff Salaries *	1,276,088	1,279,634
Retiree Payroll	330,826	321,891
Benefits	334,369	285,876
Total Personnel Services	**1,941,282**	**1,887,401**

*Executive Director Salary = $282,000

*Deputy Director Salary = $196,000

Professional Services		
Actuarial	140,224	119,820
Audit	97,154	91,760
Extraordinary Consultant fees*	1,189,039	-
Legal Counsel	1,509,106	942,723
Disability Medical Exams	37,375	52,850
Total Professional Services	**2,972,898**	**1,207,153**
Communication		
Newsletter / Annual Report	80,614	70,274
Postage	8,114	7,524
Telephone	37,972	26,663
Education and Training	54,856	87,434
Manager Meetings	18,393	53,468
Member Services	5,748	5,714
Total Communication	**205,696**	**251,077**
Miscellaneous		
General and Administrative	49,179	62,278
Business Insurance	162,576	178,710
Rent	366,387	355,513
Technological Support	110,068	110,532
Total Miscellaneous	**688,210**	**707,033**
Total Administrative Expenses	**5,808,086**	**4,052,664**

*Fees incurred in response to Markopolous allegations and in support of FTI Consulting investigation, and related matters.

See accompanying Independent Auditors' Report

Schedule of Investment Expenses and Payments to Consultants

As of December 31, 2015

Schedule of Investment Expenses	
Investment Management Fees	5,331,061
Investment Consultant Fees	366,698
Communications / Governmental Services	134,400
Custodial Fees	779,797
Total Investment Expenses	**6,611,956**

Schedule of Payments to Consultants*	
Independent Auditors	97,154
Extraordinary Consultant fees**	1,189,039
Actuary	140,224
Legal	1,509,106
Total Payments to Consultants	**2,935,523**

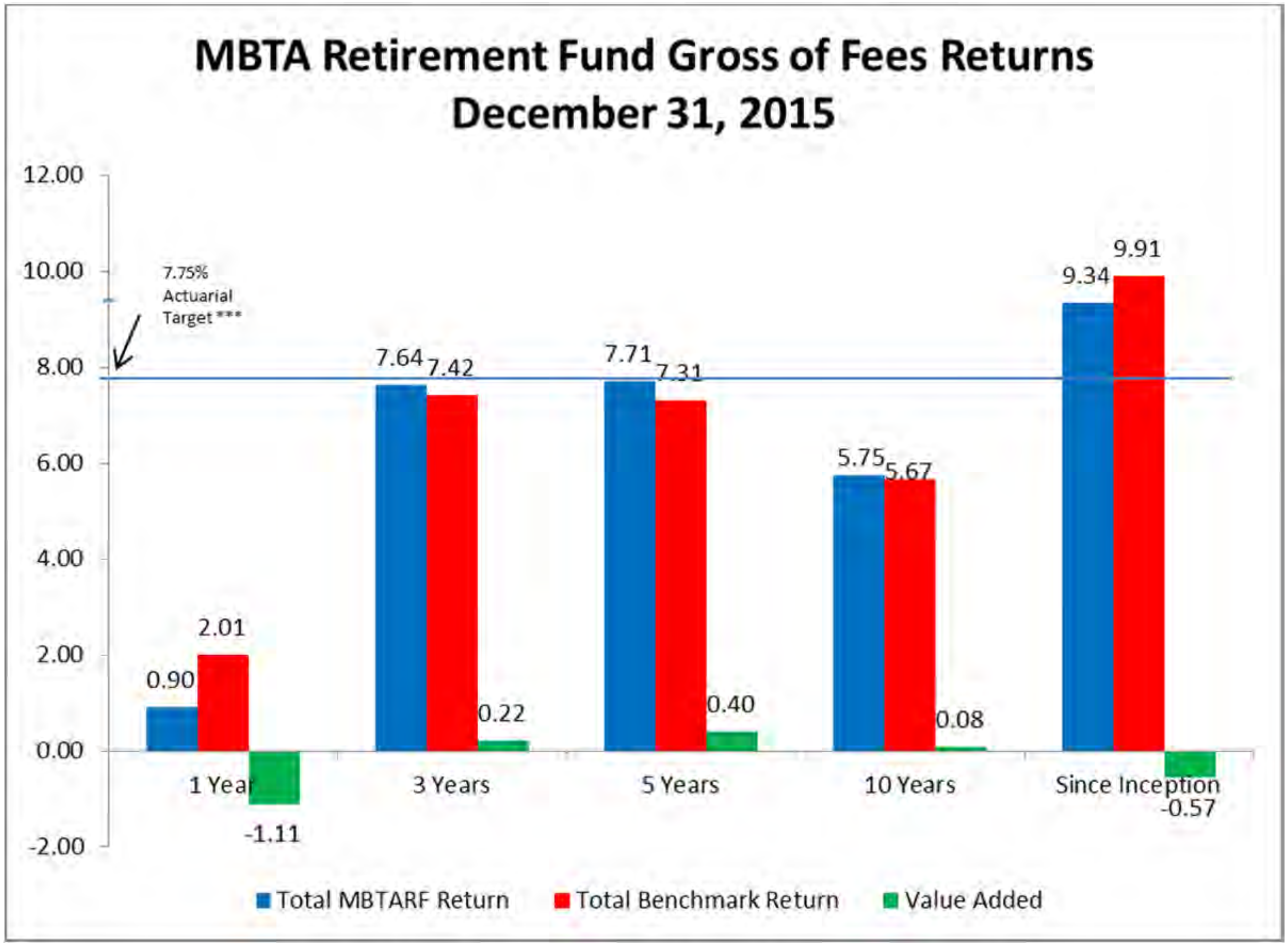
*These payments are presented for analytical purposes; each amount is already included in schedules of administrative or investment expenses

**Fees incurred in response to Markopolous allegations and in support of FTI Consulting investigation, and related matters.

See accompanying Independent Auditors' Report

INVESTMENT SECTION

2015 Investment Results



***** Gross of Fees with the exception of hedge funds which are net of fees

** Performance inception date of January 1, 1987

*** In February 2016, the MBTA Retirement Fund Board adopted new actuarial assumptions for use in the preparation of the annual actuarial valuations of the Fund. These assumptions were based on an experience study covering the four-year period ending December 31, 2014. The expected return on assets for funding purposes was reduced by a 25-basis-point margin, resulting in a 7.75% expected return on assets. The discount rate used to measure the total pension liability at December 31, 2015, was 8.00%. The projection of cash flows used to determine the discount rate assumed that contributions will continue to be made in accordance with the Fund's current funding policy.

Report on Investment Activity

The Massachusetts Bay Transportation Authority Retirement Fund (the "Fund") was created to provide retirement benefits for certain employees of the Massachusetts Bay Transportation Authority (the "Authority"). The Fund was established in 1948 pursuant to a Trust Agreement between local 589 ATU AFL-CIO (the "Union") and the Authority that is governed by the terms of a separately negotiated Pension Agreement between the Authority and the Union. The MBTA Retirement Board is responsible for the general oversight of the MBTA Retirement Fund. The primary goal of the Fund's investment program is to meet or exceed the Fund's actuarial target rate of return in order to maintain and improve upon its funded status. The Board of the Fund seeks to maximize return on investments through a diverse group of investment managers with an acceptable level of risk.

The Investment Section was prepared by the MBTA Retirement Fund Finance Staff with assistance of the consultant, Marco Consulting Group. The Fund's investment portfolios are presented at fair value which is appropriate industry standard.

As of December 31, 2015 the Board employed 19 public markets investment managers, 38 private equity market managers, 10 real estate managers, 3 hedge fund-of-funds managers and 1 risk parity/diversified beta manager. The Fund had approximately $1,496 million in assets under management at December 31, 2015. Each investment manager operates within guidelines that are established by the Board and consultant and are outlined in a detailed investment management or partnership agreement.

The Investment Policy statement adopted by the Fund Board requires that the Board and the Executive Director review the asset allocation at least quarterly to determine if the asset allocation is consistent with the exposure ranges described. A change in the Fund's liability structure, funded status, or long-term investment prospects may also trigger a revision of the asset allocation. The Executive Director will direct investment managers to transfer funds to rebalance the asset allocation as necessary. The Executive Director shall use appropriate judgment and care when rebalancing portfolios.

Current Allocation as of 12/31/2015

Asset Class	12/31/2015 Allocation %	Target (%)
Equities	45.9	43
Domestic Large Cap	17.3	18
Domestic Small Cap	7.9	7
Established International (Large Cap)	12.6	11
Global / Emerging Markets	8.1	7
Fixed Income	26.5	27
Core Fixed Income	6.9	8
TIPS	0.7	3
Real Estate Debt/Mortgages	4.4	4
Global & Multi Sector	9.3	8
Bank Loans	2.4	2
Cash	2.8	2
Alternative Investments	27.6	30
Private Equity	10.1	10
Real Estate	8.7	9
Hedge Funds	5.6	8
Risk Parity / Diversified Beta	3.2	3

The Year in Review – The World Markets

Fiscal Year 2015 Global Markets Overview

First Quarter 2015:

The first quarter of 2015 was marked by low oil prices, a stronger dollar, low U.S. interest rates and initiatives by global central banks to decrease foreign interest rates. The strength of the dollar, which gained over 7% during the first quarter, was primarily driven by zero or negative interest rates globally and a growing US economy relative to that of Europe. The strong dollar also was a headwind for US exporters who rely on generating revenue from overseas sales. As the dollar becomes stronger, US foreign currency becomes less valuable in terms of the greenback and makes currency collected from overseas sales less valuable. The stronger dollar also made oil more expensive while an increase in supply and a decrease in demand for the commodity further drove prices lower. Furthermore, the Gulf States have shown no signs of cutting oil production as the perceived benefits of this action to countries such as Iran and Russia would be exceptional. Depressed global economic activity has also been a headwind to the price of oil as oil producing firms have seen a decrease in stock prices. However, the lower cost of oil was a boon to the consumer.

Small cap equities were the best performers among domestic equities as the Russell 2000 posted a 4.3% return. Healthcare stocks also performed well while utility firms showed disappointing results. Globally, the decreasing odds of an imminent Brexit, the term given to the potential departure of Greece from the Eurozone, also led to positive equity performance. In the fixed income sector, U.S. Treasury Securities were driven higher as the Federal Reserve demonstrated that they would most likely not increase domestic interest rates. As interest rates rise, the price of fixed income securities will fall. High yield debt also rebounded from 2014 and was mainly driven lower in the previous year due to rising oil prices. However, the stronger dollar did have a negative effect on global fixed income securities.

Second Quarter 2015:

At the beginning of the Second Quarter of 2015, equities continued to perform, but, at the end of June, Greece's failure to repay 1.5 billion euros to the International Monetary Fund shook investor confidence. A deal was later reached in which Greece accepted additional austerity measures. However, Puerto Rico also declared it would not be able to repay its debt and the Chinese Stock Market declines further led to market turmoil.

Conflicting indicators emerged throughout the quarter in regards to the continuation of the bull market, the third such longest in US History at the time. (Continued)

Price to earnings ratios hovered around their tech boom levels of the 1990s indicating stocks were overpriced. At the same time, US economic indicators gave an upbeat outlook on growth as Americans spent more and unemployment continued its descent. However, financial engineering such as stock buybacks, increasing dividends, and merger and acquisition activity showed signs of a slowdown as entities looked to achieve financial results in other ways than reinvesting in their businesses and growing productivity. The NASDAQ composite reached a record high during the quarter due to increased merger and acquisition activity.

In the domestic equity market, small and large cap equities posted very modest gains while mid cap stocks showed losses. Healthcare was once again a positive performer while utility shares declined once more. Furthermore, the markets learned that the Federal Reserve was unlikely to raise interest rates until September at the earliest. The delayed rate hike did not save US Treasuries though as they decreased during the quarter. High yield bonds continued to perform well but the additional debt issued as a result of merger and acquisition activity hurt investment grade prices. Mortgage-backed securities performed well during the quarter as interest rate remained steady.

Third Quarter 2015:

Equity markets showed disappointing results for the quarter as concerns over the stumbling Chinese economy overtook markets. In August, Chinese officials devalued the yuan in order to encourage exports and this scared investors. The news from China was particularly worrisome for emerging market economies that rely on exporting commodities to generate economic growth. China is a major consumer of such resources and slower economic activity in that region means less demand for commodities being exported by emerging markets. Earnings from oil and commodity producing firms were also weak as oil dropped below $40 a barrel for the first time since 2009. Brazil was the worst performing emerging market in the quarter.

The US Economy continued to show signs of improvement with GDP growth of 3.9% at the end of the second quarter and a decreasing unemployment rate. However, the Federal Reserve did not increase interest rates in September due to concerns over the global economy and low inflation. Furthermore, the US dollar continued to strengthen against emerging market currencies rendering foreign sales by US companies less valuable. Japan and Germany, although two of the strongest countries in the quarter, also experienced equity declines over China fears.

In fixed income markets, spreads between investment grade yields on corporate bonds and risk –free government bonds grew larger. However, high-yield debt did not perform well as fear over the lower price of oil concerned investors regarding potential defaults from industry related firms.

(Continued)

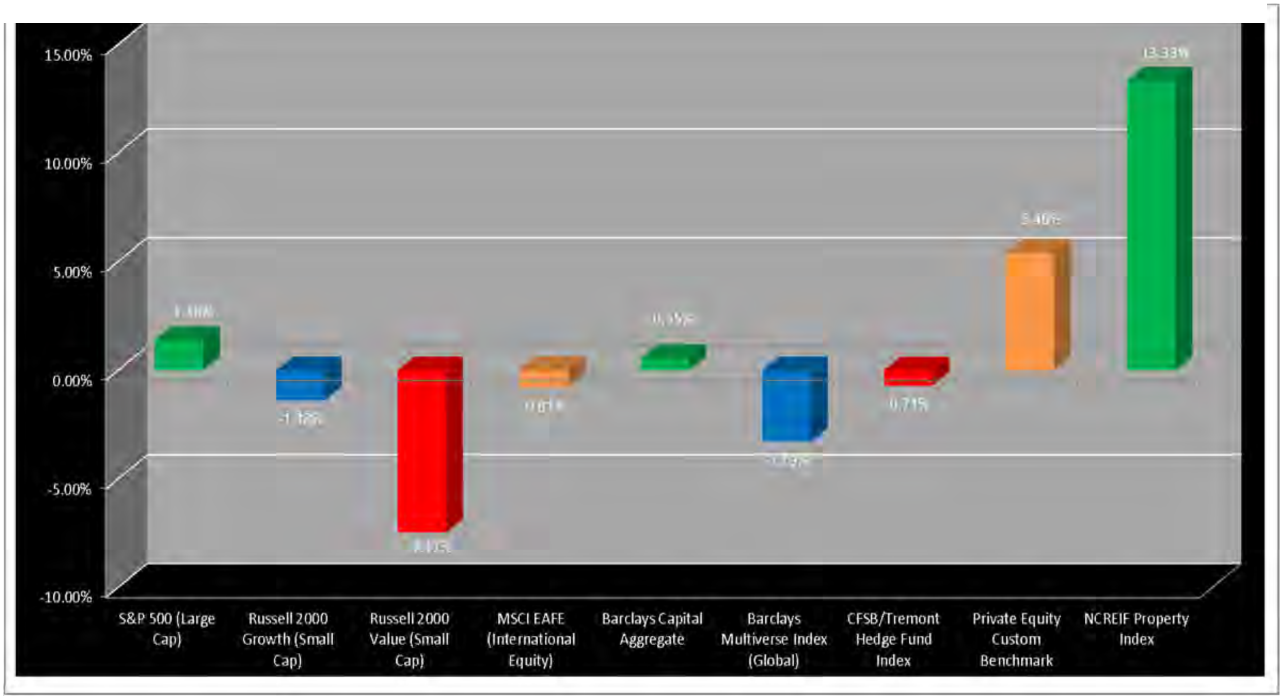
Fourth Quarter 2015:

Equities made a comeback in October of 2015 but gains from the month were offset by a weak December. Oil also continued its decline despite a small comeback in October whilst fears of slowing growth in China plagued investors. The Chinese Government announced GDP growth of 6.9% for the fourth quarter, a figure that represents stalled growth for the emerging market economy. Investors were also concerned that this growth rate was overstated and China was doing much worse than many people realized. While a troubled Chinese economy led to a lackluster demand for oil, the return of Iran into the oil market increased supply, further weighing on prices.

The strength of the US Economy justified the first interest rate hike by the Federal Reserve since 2009. Unemployment fell to 5% while consumer confidence and spending remained at least at respectable levels. However, factory sales and orders did decline.

Treasuries performed fairly well due to the delayed interest rate hike by the Federal Reserve. A flock of international investors who sought to escape investing in sovereign debt of countries with more aggressive monetary policy also aided treasuries. High yield bonds issued by energy companies did not perform well as the fall in the price of oil cut into revenues. Investment grade credit was also down on the quarter.

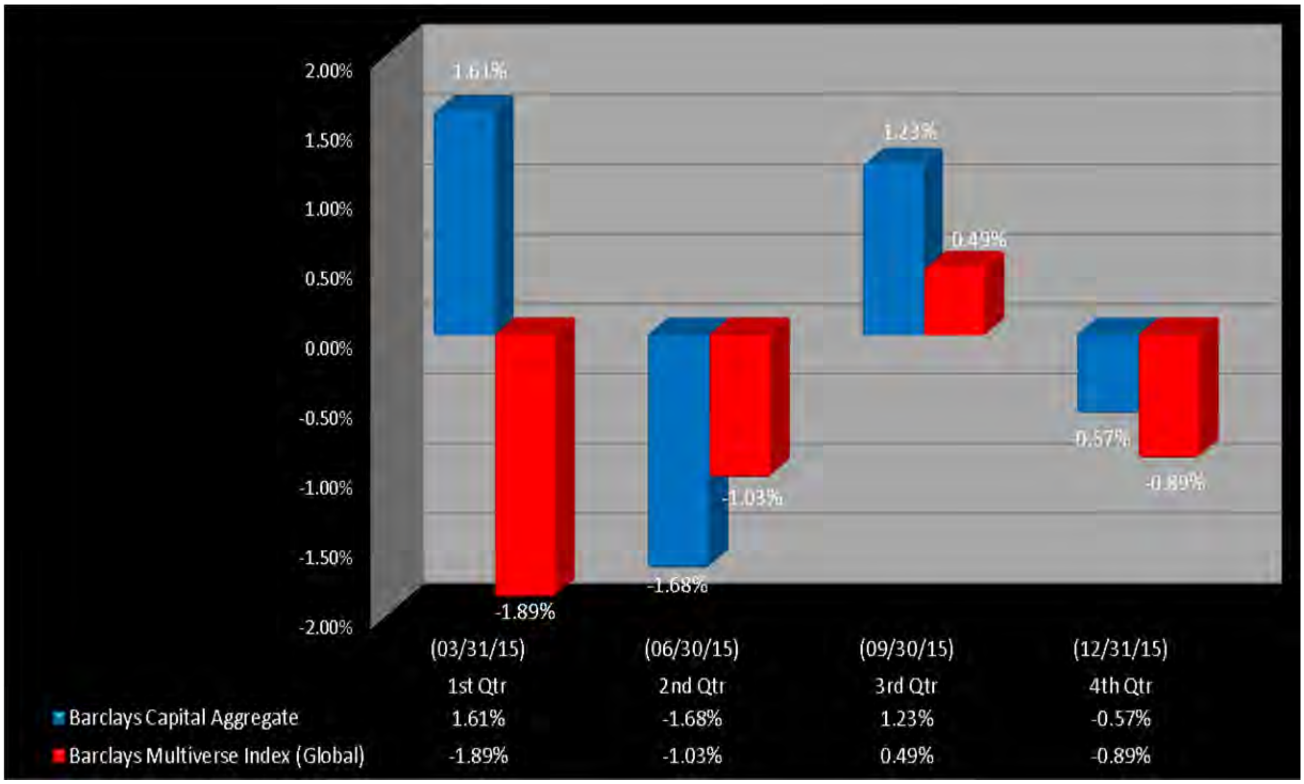
Fiscal Year 2015 Market Indices Returns



Fiscal Year 2015 Equity Indices by Quarter

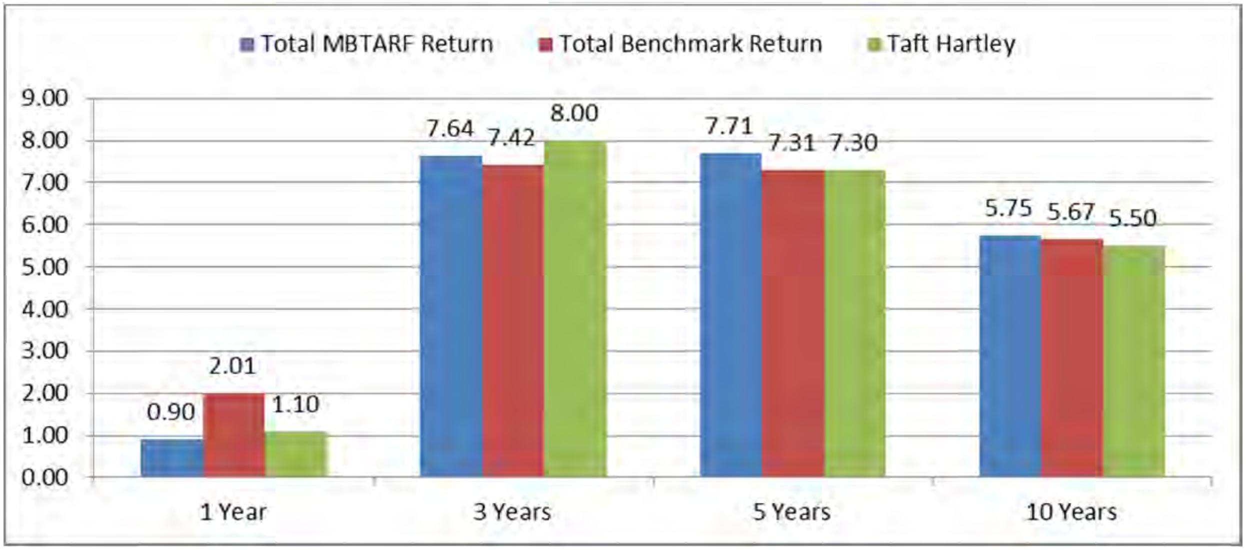
	(03/31/15) 1st Qtr	(06/30/15) 2nd Qtr	(09/30/15) 3rd Qtr	(12/31/15) 4th Qtr
S&P 500 (Large Cap)	0.95%	0.28%	-6.44%	7.04%
Russell 2000 Growth (Small Cap)	6.63%	1.98%	-13.06%	4.32%
Russell 2000 Value (Small Cap)	1.98%	-1.20%	-10.73%	2.88%
MSCI EAFE (International Equity)	4.88%	0.62%	-10.23%	4.71%

Fiscal Year 2015 Fixed Income Indices by Quarter



MBTARF Core Performance: Fiscal Year 2015

Returns are calculated based on a time-weighted rate of return methodology. The Fund's returns (gross of fees) and benchmarks for the periods ended December 31, 2015:



During fiscal year 2015, the Fund returned 0.90%, underperforming the Policy Benchmark of 2.01% by 111 basis points. The MBTARF began fiscal year 2015 with a net position of $1,588 million and ended with a $1,498 million net position. On a gross basis the Fund decreased $90 million. $187 million in net retirement benefits were dispersed to members of the Fund.

The quarterly returns of the Fund in fiscal year 2015 were as follows:

	MBTARF Return	Policy Benchmark Return
QTR 1	2.18	1.85
QTR 2	0.94	0.56
QTR 3	-4.75	-2.94
QTR 4	2.71	2.62

Due to concerns over an economic slowdown in China, slumping oil prices, Federal Reserve plans to raise interest rates and the global impacts of a strengthening US dollar, most asset classes generated negative to flat returns in 2015. Moreover, active public markets equity managers, as a group, continued to underperform their benchmark indexes. Against this setting, institutional investors were challenged. Public, Taft-Hartley and Corporate pension funds, for example, generated median gross returns of 0.1%, 1.1% and -1.1% respectively for the year.

(Continued)

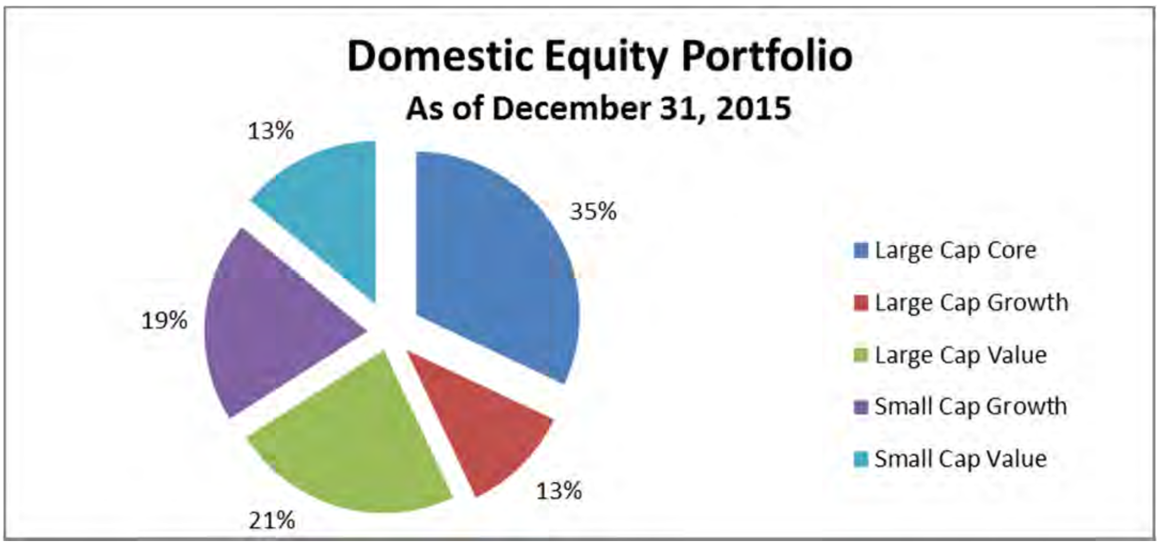
Through December 31, 2015 the Fund returned 9.34% since inception outperforming the actuarial rate of return of 7.75% by 159 basis points. The Funds annualized returns for the 10, 5, and 3 years ending December 31, 2015 exceeded Taft – Hartley and Public Fund median returns for most periods, ranking in the 24th, 47th and 64th percentiles within the Taft-Hartley universe and the 25th, 33rd and 47th percentiles within the public fund universe over these periods.

Following a year like 2015, it is imperative that institutional investors such as the Fund review their asset allocation, since it may determine up to 90% of a portfolio’s long-term performance. In 2015, the Board of Trustees and Fund Management initiated an experience study covering the five year period ending December 31, 2014. Following the study’s approval in 2016, the Board authorized an asset liability management study (ALM) to position the Fund to build on its record of long-term results. Since 1982, a period that includes multiple market cycles, the MBTA Retirement Fund generated an annualized gain of over 9%. The Fund achieved these results by implementing and periodically modifying a long-term asset allocation strategy that balances risk and return. The MBTA Retirement Board and Fund management will continue to monitor the asset classes, investment strategies and investment managers within the Fund’s portfolio and will make adjustments as the markets evolve.

Investment Summary by Type

Domestic Equity Portfolio

As of December 31, 2015, the domestic equity portfolio had approximately $372.2 million in net assets, which represented 24.88% of the Fund portfolio. Approximately 68.6% of the domestic equity portfolio is invested in a large capitalization equity strategy (large cap) with the remaining 31.4% in a small capitalization equity strategy (small cap). The Fund's domestic equity portfolio is actively managed in an attempt to outperform a diverse set of indices. Each investment manager's performance is measured against an assigned index based on the stated investment strategy.



On a three, five and ten-year basis through December 31, 2015, the domestic equity portfolio has returned 13.48%, 12.09% and 8.00% compared to the S&P 500 benchmark, which returned 15.13%, 12.57% and 7.31% respectively.

Style - The Board intends to manage risk and diversify the Fund's portfolio through the selection of money managers with different investment styles and complementary characteristics within each asset class.

Portfolio Risks – Although the performance of equity securities has historically exceeded that of other market assets over an extended period of time, these assets, as all investments carry the risk of loss of principal and are subject to changing market conditions. The value of equities is not only determined by external market factors but by the performance of the firms for which these assets legally represent. (Continued)

Portfolio Returns - During the calendar year the portfolio produced a return of (0.68)% compared to 1.38% for the portfolio benchmark. Large cap equity managers returned (0.16)% underperforming the benchmark by 1.54% and small cap equity returned (1.62)% outperforming the Russell 2000 Index by 2.79%. The Fund had one large cap core manager, which outperformed the S&P 500 benchmark by 1.48%. The large cap growth manager outperformed by 1.41% and the large cap value manager underperformed their benchmark by 5.68%. All four small cap managers outperformed their respective benchmarks.

The top ten holdings in the domestic equity portfolio at December 31, 2015 are illustrated below. A complete listing of holdings is available upon request.

	Shares	Stock	Market Value ($000's)	% of fair value
1	118,272	VISA INC CLASS A SHARES	$9,172	2.46%
2	77,012	FACEBOOK INC A	8,060	2.17
3	9,950	REGENERON PHARMACEUTICALS	5,402	1.45
4	7,977	AMAZON.COM INC	5,392	1.45
5	49,914	APPLE INC	5,254	1.41
6	72,336	NIKE INC CL B	4,521	1.21
7	55,300	ALIBABA GROUP HOLDING SP ADR	4,494	1.21
8	134,600	SCHWAB (CHARLES) CORP	4,432	1.19
9	231,300	JP MORGAN STRUCTURED PRODUCTS	4,397	1.18
10	5,792	ALPHABET INC CL C	4,395	1.18
		Total Top Ten	**$55,519**	**14.92%**

(Continued)

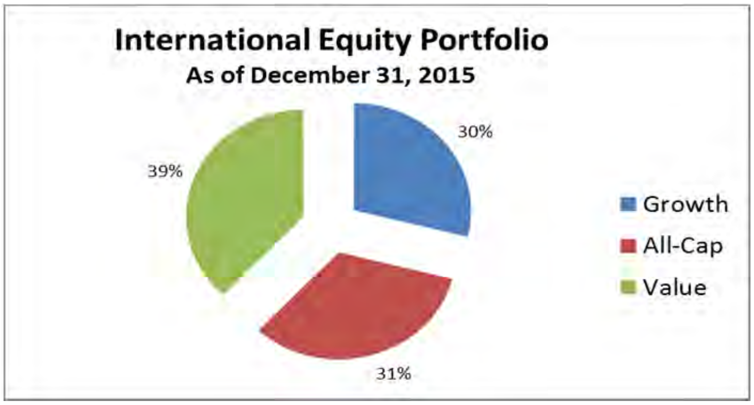
The MBTA Retirement Fund's domestic equity managers at December 31, 2015 are presented in the following table:

	Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
	Alliance Bernstein	Small Cap Growth	38,147,230
	DePrince, Race & Zollo	Large Cap Value	77,389,467
	Holland Capital Management	Large Cap Growth	48,978,195
	Intech	Large Cap Core	128,797,527
	RBC Global Asset Management	Small Cap Growth	30,847,690
	Robeco Investment Management	Small Cap Value	25,703,481
	State Street Global Advisors	Small Cap Value	22,355,840
	Total Portfolio Fair Value:		**372,219,430**

*On occasion the Fund receives stock distributions from Private Equity managers. At year end 2015 the fair value of these equities is $73,573.

International Equity Portfolio

As of December 31, 2015, the international equity portfolio had approximately $190.6 million in net assets, representing 12.74% of the Fund portfolio. The international equity managers are benchmarked against the MSCI EAFE index, which includes the developed markets of Europe, Australia and the Far East. The international equity portfolio is comprised of three actively managed accounts.



The primary strategy is to invest in international equity funds to achieve consistent, positive real returns and to maximize long-term total return within prudent levels of risk through a combination of income and capital appreciation.

Style – The Board intends for a group of managers employing various strategies to invest assets in a well-diversified portfolio of Non-U.S. developed market equity securities. This group consists of a broad range of styles and approaches including: core international products, top-down country selectors, bottom-up security selectors, capitalization ranges, growth and value-oriented products and products using various mixtures of these strategies. Certain investment managers may have a guideline up to 20% exposure in emerging markets.

Portfolio Risks – International assets are subject to additional risks such as changes in foreign currency exchange markets and the environment in which the trading of these securities and associated financial reporting are governed. Differences between reporting standards across jurisdictions also adds to the complexity of these markets.

Portfolio Returns - During the fiscal year, international equity returned 2.02% outperforming the benchmark by 2.83%. All three international equity asset managers outperformed their respective benchmark, MSCI EAFE index.

(Continued)

On a three, five and ten-year basis through December 31, 2015, the international equity portfolio has returned 5.80%, 4.76% and 4.95% compared to the MSCI EAFE benchmark, which returned 5.01%, 3.60% and 3.03% respectively.

The top ten holdings in the international equity portfolio at December 31, 2015 are illustrated below. A complete listing of holdings is available upon request.

	Shares	Stock	Market Value ($000's)	% of fair value
1	60,549	FRESENIUS SE + CO KGAA	$4,339	2.28%
2	43,396	NOVARTIS AG REG	3,763	1.97
3	19,500	ONO PHARMACEUTICAL CO LTD	3,516	1.84
4	34,609	UCB SA	3,129	1.64
5	21,000	NASPERS LTD N SHS	2,873	1.51
6	180,500	ARM HOLDINGS PLC	2,764	1.45
7	59,517	TOTAL SA	2,668	1.4
8	51,400	ASOS PLC	2,614	1.37
9	2,344,300	CP ALL PCL FOREIGN	2,557	1.34
10	421,000	AIA GROUP LTD	2,531	1.33
		Total Top Ten	**$30,754**	**16.13%**

The MBTA Retirement Fund's international equity managers at December 31, 2015 are presented in the following table:

Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
Gryphon International	Growth	57,392,734
Henderson Investors	All-Cap	58,249,556
Morgan Stanley Asset Management	International Large Value	74,973,948
Total Portfolio Fair Value:		**190,616,238**

Global Equity and Emerging Market Portfolio

As of December 31, 2015, the global equity and emerging markets portfolio had approximately $112.2 million or 7.5% of MBTA Retirement Fund's assets. The MBTA Retirement Fund measures the investment manager's performance against the MSCI ALL Country World Index a benchmark comprised of stocks from 46 different countries including 23 countries classified as developed markets (including the United States) and 23 countries that are considered emerging markets. The manager is also measured against a secondary blended benchmark that consists of 71.4% of the MSCI ALL Country World Index and 28.6% the MSCI Emerging markets index.

Portfolio Composition - The portfolio invests a significant percentage of its assets in foreign securities traded on foreign exchanges including the use of derivatives (e.g. LEPOS and p-notes) to gain access to certain foreign markets. The manager is granted full discretion to buy, sell, invest and reinvest its portion of the Fund's assets in stocks contained within the MSCI ALL Country World Index. The maximum allocation to emerging markets is three times the benchmark sector weighting or approximately 30% of the portfolio. The investment objective of the global equity and emerging markets portfolio is to achieve consistent, positive real returns and to maximize long term total return within prudent levels of risk through a combination of income and capital appreciation.

As of December 31, 2015, the global and emerging markets portfolio's country and regional exposures included a 71% allocation to developed market stocks, which included a 56% allocation to U.S. stocks, and an approximately 26% allocation to emerging, markets stocks, which included a 7% allocation to Chinese stocks.

Portfolio Risks – In addition to providing the potential for higher expected returns, emerging markets generally expose investors to higher expected risks due their susceptibility to more volatile economic conditions, potential political instability and, in some cases, an absence of a

(Continued)

mature system of corporate governance. These investments also carry all the risks associated with domestic and developed market investments.

Portfolio Returns - During the fiscal year, global equity and emerging market portfolio returned 1.40%, exceeding the benchmark by 3.76%. On a three, year basis through December 31, 2015, the global equity and emerging market portfolio has returned 11.68%, compared to the MSCI All Country World Index, which returned 7.69%. Due to the fact the MBTA Retirement Fund began investing in this asset class in October 2012, the investment manager's results do not yet include five and ten year periods.

The top ten holdings in the global equity and emerging market portfolio at December 31, 2015 are illustrated below. A complete listing of holdings is available upon request.

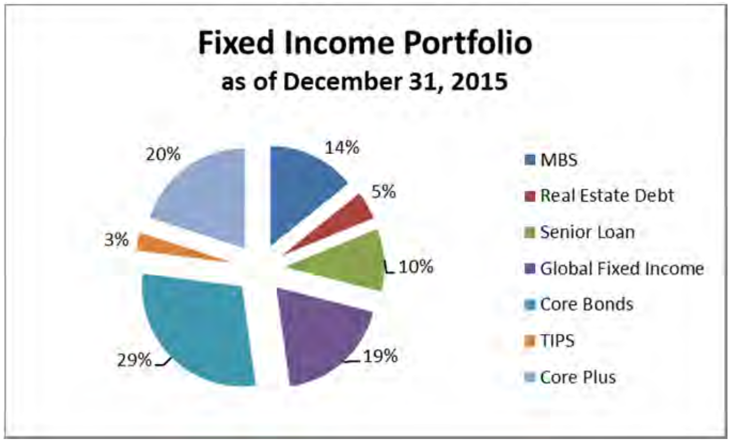
	Shares	Stock	Market Value ($000's)	% of fair value
1	2,311,935,975	FACEBOOK INC A	$ 6,091	5.43%
2	1,904,791,047	VISA INC CLASS A SHARES	5,871	5.23
3	103,165,457	REGENERON PHARMACEUTICALS	4,750	4.23
4	2,495,276,682	ALIBABA GROUP HOLDING SP ADR	4,494	4.00
5	231,300	JP MORGAN STRUCTURED PRODUCTS	4,397	3.92
6	1,321,691,068	SCHWAB (CHARLES) CORP	4,008	3.57
7	271,321,040	BAIDU INC SPON ADR	3,989	3.55
8	119,000,000	WORKDAY INC CLASS A	3,888	3.46
9	589,237,500	ONO PHARMACEUTICAL CO LTD	3,516	3.13
10	1,331,470,017	NIKE INC CL B	3,213	2.86
		Total Top Ten	**$44,217**	**39.39%**

The MBTA Retirement Fund's global equity and emerging market manager at December 31, 2015 is presented in the following table:

	Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
SANDS	Sands Capital Management	Growth	112,247,406

Fixed Income Portfolio

As of December 31, 2015, the fixed income portfolio had approximately $346.2 million in net assets, which represented 23.14% of the MBTARF portfolio. The Fund's fixed income portfolio is benchmarked against the Barclays Aggregate Bond Index, BC GOV/Credit, BC MBS, S&P/LSTA Leveraged Loan, BC U.S. TIPS and Barclays Multiverse.



Styles - Fixed income managers serve in a specialist role managing debt securities. Domestic core fixed income managers' investments may include (i) U.S. dollar denominated obligations of the United States Government and its Agencies and instrumentalities, and U.S. corporations, (ii) mortgage-backed securities including CMOs and commercial mortgage backed securities ("CMBS"), (iii) Asset Backed Securities("ABSs"), (iv) registered 144A securities if applicable, (v) municipal bonds, (vi) short term securities, (vii) securities of foreign companies or foreign countries (sovereigns or supranational) denominated in U.S. dollars, trading in the U.S. markets and capable of settlement in U.S. markets (Yankee bonds), and (viii) dollar denominated obligations of U.S. companies trading outside the U.S. ("Eurobonds").

Portfolio Risk - Risk in bond investments is primarily driven by changing interest rates which cause the value of these investments to fluctuate. The action of the Federal Reserve Bank of the United States through its monetary policy and through the monetary policy of other such institutions significantly affects interest rates. The risk of default is also associated with these investments and is measured by established credit rating firms. Default risks are subject to change.

Portfolio Returns - During the fiscal year, fixed income portfolio returned (0.60)% underperforming the Barclays Aggregate Bond Index benchmark by 1.15%.

On a three, five and ten-year basis through December 31, 2015, the fixed income portfolio has returned 1.69%, 4.12% and 4.47% compared to the Barclays Aggregate Bond Index, which returned 1.44%, 3.25% and 4.52% respectively.

(Continued)

The top ten holdings in the fixed income portfolio at December 31, 2015 are illustrated below. A complete listing of holdings is available upon request.

	Shares	Stock	Market Value ($000's)	% of fair value
1	4,823,000	US TREASURY N/B Due 06/30/2020 Rating NR	4,803	1.39%
2	2,916,000	US TREASURY N/B Due 03/31/2020 Rating NR	2,880	0.83
3	1,945,000	CITIBANK CREDIT CARD ISSUANCE Due 04/09/2020 Rating AAA	1,950	0.56
4	1,434,000	US TREASURY N/B Due 08/15/2043 Rating NR	1,615	0.47
5	1,497,319	LB UBS COMMERCIAL MORTGAGE TRU Due 02/15/2040 Rating A+	1,532	0.44
6	1,520,000	US TREASURY N/B Due 10/31/2016 Rating NR	1,523	0.44
7	1,485,000	US TREASURY N/B Due 06/15/2017 Rating NR	1,483	0.43
8	1,393,984	FNMA POOL AX6095 Due 10/01/2044 Rating NR	1,448	0.42
9	1,391,265	COMM MORTGAGE TRUST Due 12/10/2049 Rating AA	1,443	0.42
10	1,283,000	JP MORGAN CHASE COMMERCIAL MOR Due 06/15/2049 Rating A	1,308	0.38
		Total Top Ten	**$19,985**	**5.77%**

(Continued)

The MBTA Retirement Fund's fixed income managers at December 31, 2015 are presented in the following table:

	Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
	AFL-CIO Housing	MBS	49,286,560
	Amalgamated Bank of New York	Real Estate Debt	15,821,507
	Eaton Vance	Senior Loan	35,161,950
	Franklin Templeton	Global FI	65,235,066
	Income Research & Management	Core Bonds	100,590,434
	IRM TIPS	TIPS	9,976,570
	IRM Transition Fund	Core Bonds	665,232
	Loomis, Sayles & Company	Core Plus	69,448,485
	Total Portfolio Fair Value:		**346,185,803**

Real Estate Portfolio

As of December 31, 2015 the MBTA Retirement Fund had $130.3 million invested in real estate. The equity real estate program is comprised primarily of two separate but complementary investment strategies – core and specialty. Core investments include property types in multi-family housing, retail, industrial and office buildings. These assets are characterized by stable and increasing income levels and are located in major metropolitan areas which exhibit reasonable economic diversification. Specialty investments include property types in hotels, assisted-living and congregate care facilities. Specialty strategies enhance returns of assets capable of, but not currently, exhibiting core type characteristics.

Objective - The MBTA Retirement Fund's allocation to real estate equity is intended to enhance the return, risk and portfolio diversification characteristics of the Fund's total portfolio. It is anticipated that investments in equity real estate will, over a full market cycle, produce an income return that is in excess of the yield of an investment grade, core fixed income investment combined with some level of equity appreciation. In addition, it is expected that equity real estate will exhibit a lower correlation with traditional equity and fixed income securities.

Portfolio Risk - Real estate investments expose investors to risks. These include:

- Market risks that may be exacerbated by real estate's sensitivity to economic conditions and/or by the investment manager's utilization of leverage.
- Lower liquidity, especially for closed end, limited partnership and direct investments.
- Operational and credit risks that are higher than those of traditional investments.
- Valuation and appraisal lag which can be exacerbated in times of rapid price changes in the commercial real estate market.

Leverage – Leverage may be utilized at the discretion of the underlying real estate managers in a constrained manner, consistent with the commingled fund documents, in order to enhance

(Continued)

yields of the various investments and/or facilitate the diversification of the portfolio. The total level of debt for any single commingled fund investment is not expected to exceed seventy percent of the value of that fund. However, as a general guideline, the Fund's composite real estate portfolio shall never be more than fifty percent levered on an aggregate basis at any time.

Real Estate Investment Strategies - Private real estate equity strategies include core, core plus, value-added and opportunistic approaches. Core diversified funds have lower risk due to their limited use of leverage and broad diversification across multiple property types, geographic regions, and income generating assets (most properties in core portfolios are fully leased and generating income). Further out on the risk and return continuum, core plus, value-added and opportunistic funds have lower occupancy rates, utilize more leverage and include properties in the development and/or pre-development stage. Due to their higher risk, these strategies are expected to generate returns that exceed that of core real estate.

Open ended and closed end real estate investments are diversified by vintage year, investment manager, geographic region, property type and investment strategy. With respect to vintage year diversification, closed end funds are diversified due to the fact that they are designed to invest over specific, finite time periods, while open-end funds are diversified by definition (i.e. by virtue of always being open and investing in all time periods).

Investment Strategy Allocations - Of the MBTA Retirement Fund's 13 active closed end real estate funds, 2 funds with a total market value of $5.0 million are in the investing stage of their lifecycle; 6 funds accounting for $27.4 million in market value are in the harvesting stage, while 5 funds accounting for $12.9 million in market value are liquidating their underlying investments.

The MBTA Retirement Fund's investment strategy is diversified by strategy across the closed and open end funds as follows:

- 41.9% of the portfolio was invested in core and core plus strategies
- 45.2% of the portfolio was invested in value-added strategies

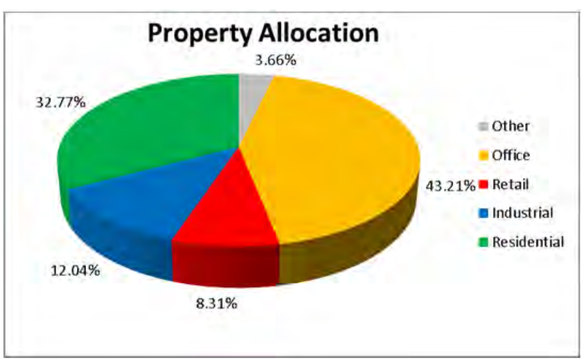
- 8.6% of the portfolio was invested in opportunistic strategies
- In total, 4.2% was invested in sector focused, mezzanine and other investment strategies.

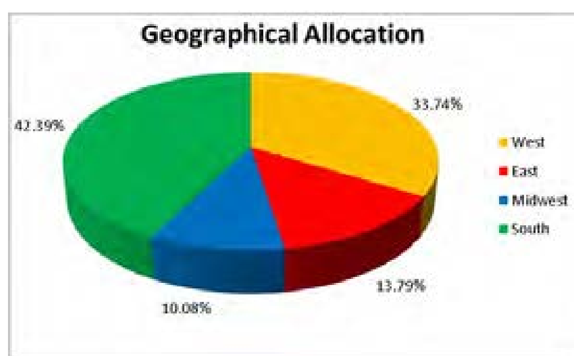
Portfolio Returns – The MBTARF real estate portfolio returned 13.94% during the fiscal year. The 3, 5 and 10 year returns for the real estate portfolio are 16.22%, 14.83%, and 4.48%, respectively. The NCREIF Benchmark returned 13.33% during the fiscal year. The benchmark's 3, 5, and 10 year returns are 12.04%, 12.18%, and 7.76%, respectively.

The MBTARF real estate portfolio received $30.8 million in distributions during the fiscal year ended December 31, 2015, compared to the $31.8 million in distributions received during the 2014 fiscal year. The MBTARF's real estate managers called $2.9 million of capital during the 2015 fiscal year, compared to $3.2 million of capital called during the 2014 fiscal year. The net cash flow from the MBTARF's real estate portfolio for the year ended December 31, 2015 was a net cash inflow of $27.9 million, compared to a net inflow of $28.6 million for the fiscal year ended December 31, 2014.

Geographic Diversification

The following charts illustrate the property type and geographic diversification of closed end real estate portfolio:





(Continued)

The MBTA Retirement Real Estate managers at December 31, 2015 are presented in the following table:

Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
AFL CIO BLDG INVST TR	Open Ended	13,625,681
PEARLMARK REAL ESTATE PARTNERS	Value Add, Mezzanine & Sector Focused	5,018,359
COLONY INVESTORS VII LP	Opportunistic	2,505,100
INTERCONTINENAL REAL ESTATE CORP	Core Plus and Open Ended	24,228,406
JP MORGAN ASSET MANAGEMENT	Open Ended	38,044,076
ARES Commercial Real Estate Corp	Opportunistic	178,361
MULTI EMPLOYER PROPERTY TRUST	Open Ended	16,773,418
TA ASSOCIATES REALTY	Value Add	20,309,253
PRUDENTIAL REAL ESTATE INVESTORS	Sector Focused	1,029,661
SIGULER GUFF & COMPANY	Opportunistic	8,554,541
Total Portfolio Fair Value:		**130,266,856**

Risk Parity / Diversified Beta Portfolio:

As of December 31, 2015, the MBTA Retirement Fund had $48.5 million invested in the risk parity portfolio, representing 3.24% of the total Fund. The Risk Parity manager utilizes a risk premium capture strategy that seeks to generate returns by investing in equity, bond and commodity markets using a risk-balanced investment process. Specifically, the manager selects the appropriate assets for the strategy, allocates them based on their proprietary risk management and portfolio construction techniques, and then applies an active position process to improve expected returns.

The MBTA Retirement Fund invests in Risk Parity / Diversified Beta products because it provides the Fund with diversification and attractive returns. Additionally, the strategy provides daily liquidity, no lock-up, high capacity, and high transparency-all of which are attractive qualities for the Fund.

Portfolio Risks - Investments in Risk Parity / Diversified Beta are subject to various risks, including derivatives and leverage risk. The Risk Parity manager may invest a substantial portion of its assets in "derivatives" –so-called because their value "derives" from the value of an underlying asset, reference rate or index-the value of which may rise or fall more rapidly than other investments. The strategy invests principally in exchange-traded futures across a diverse mix of assets including equities, bonds and commodities. For some derivatives, it is possible to lose more than the amount invested in the derivative. If the portfolio uses derivatives to "hedge" a portfolio risk, it is possible that the hedge may not succeed. This may happen for various reasons, including unexpected changes in the value of the rest of the portfolio. Over the counter derivatives are also subject to counterparty risk, which is the risk that the other party to the contract will not fulfill its contractual obligation to complete the transaction with the Fund. The implementation of a risk parity strategy requires the use of leverage in order to increase the risk of the government bond allocation in the strategy so that it can be balanced against the portfolio's exposure to stocks and commodities. The use of derivatives facilitates the ability to create the desired level of leverage in the portfolio. Leverage may cause the portfolio to be more volatile than if the portfolio had not been leveraged because leverage can exaggerate the effect of any increase or decrease in the value of securities held by the portfolio.

(Continued)

Portfolio Returns - For the calendar year 2015, the Risk Parity / Diversified Beta portfolio returned (3.15)%, underperforming the asset class benchmark, (Treasury Bill Plus 300 Basis Points) by 6.20%.

On a three-year basis through December 31, 2015, the Risk Parity / Diversified Beta portfolio has returned 2.02% compared to its benchmark, which returned 3.06%. The MBTA Retirement Fund began investing in this asset class in 2012. Due to this, 5 and 10 year returns are not yet available.

The MBTA Retirement Fund's Risk Parity / Diversified Beta manager at December 31, 2015 is presented in the following table:

	Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
Invesco	Invesco National Trust	Diversified Beta	48,494,054

Hedge Fund Portfolio

As of December 31, 2015, the MBTARF's hedge fund portfolio held $83.6 million in net assets, which represented 5.59% of the total MBTARF portfolio. The objective of the MBTARF's hedge fund program is to reduce the volatility of the total fund while attempting to maximize returns in a variety of market conditions. As a group of strategies, hedge funds represent a broad set of investment styles, mandates, and products that focus primarily on the liquid equity, fixed income, and derivatives markets, but that may also include allocations to non-traditional investments, including illiquid securities and investments. There are two primary methods for investing in hedge funds: funds of hedge funds; and single manager funds. The MBTARF primarily utilizes funds of hedge funds in an effort to significantly reduce risk through diversification.

Portfolio Risks - Hedge Funds are subject to various risks inherent in this strategy. Fluctuations in the markets can create market risk. Credit risk due to the fixed income nature of hedge fund strategies. As the MBTARF is invested in fund of fund strategies, liquidity risk is present as managers unwind from underlying positions. Investing in hedge fund exposes operational risks in executing strategies and valuations of positions. The Fund monitors risk by enforcing the investment managers to provide exceptional levels of transparency.

Portfolio Returns - The MBTARF's hedge fund portfolio returned (4.31) % for the calendar year. The MBTARF uses the CSFB/Tremont Hedge Fund Index as a benchmark for hedge fund performance. The benchmark returned (0.71) % in the 2015 fiscal year. On a 3, 5, and 10-year basis, the MBTARF hedge fund portfolio returned 3.66%, 3.57%, and 2.49%, respectively. The benchmark returned 4.30%, 3.56%, and 4.98%, respectively, over the same 3, 5, and 10 year periods.

(Continued)

The MBTARF hedge fund portfolio has 3 active investments as of December 31, 2015. Each of these investments is in a fund of hedge funds.

Manager	Investment Mandate	Portfolio Fair Value @ 12-31-2015
EnTrust Capital Diversified Fund LT	fund of funds	39,524,228
Rock Creek	fund of funds	29,159,852
Silver Creek	fund of funds	14,960,343
Total Portfolio Fair Value:		**83,644,423**

Private Equity Portfolio

As of December 31, 2015, the private equity portfolio had approximately $150.9 million in net assets, which represented 10.09% of the MBTARF portfolio. The private equity portfolio is used to increase the expected long-term return of the MBTARF portfolio, while generating cash flow and providing diversification. The private equity portfolio is diversified among sub-classes which include: venture capital, growth equity, buyouts, mezzanine, secondary strategies, distressed, energy, and special situations. The MBTARF private equity portfolio is benchmarked to a State Street Customized Benchmark, which takes into account the portfolio's allocations to the various private equity sub-classes.

Portfolio Risks - Private equity does not lend itself to traditional quantitative measures of risk. Rather, risk is measured through a combination of quantitative and qualitative constraints. These risks include, but are not limited to, the following:

- ***Liquidity risk***: Private equity investments are illiquid and typically have expected holding periods of 10-12 years. Investments are typically held until maturity and selling prior to maturity results in a discount to fair value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation exposure limits.
- ***Vintage risk***: Vintage reflects the year of the first capital draw from a fund. Vintage risk refers to the variability of private equity commitments over time. Vintage risk is minimized by pacing investments to provide vintage year diversification.
- ***Manager risk***: Manager risk consists of two elements: the exposure within an investment vehicle; and the number of managers in the private equity program. The exposure to a specific manager within an investment vehicle is controlled by limiting the commitment size to a specific investment vehicle. The optimum number of managers in the portfolio varies with time.

(Continued)

- ***Firm risk***: Firm risk is the exposure to a private equity firm and is controlled by limiting the maximum commitment to funds actively managed by a firm and its affiliates.
- ***Currency risk***: Currency risk is the risk that investments held in a foreign currency will change in value as a result of changes in the currency exchange rates. The private equity program accepts the currency risks consistent with the geographic constraints of the investment opportunity. Private equity investments generally do not hedge currency risk and the private equity program does not implement currency hedges.
- ***Industry risk***: Typically, private equity funds are permitted to invest in a wide variety of industries with limited controls. Industry risk is controlled primarily through appropriate diversification across strategies and sub-strategies.
- ***Geographic risk***: Geographic risk is controlled through a long-term, international target exposure. Global opportunities generally indicate geographic limits and exposure will be attributed and monitored accordingly.
- ***Leverage risk***: Private equity managers invest capital throughout the capital structure of portfolio companies. The capital markets control the maximum leverage available to the private equity managers. Investors control leverage exposure through portfolio construction and private equity fund selection.

Portfolio Returns - The MBTARF's active private equity portfolio returned 6.83% during the fiscal year. The 3, 5 and 10 year returns for the private equity active portfolio are 12.02%, 9.73%, and 8.86%, respectively. The MBTARF's State Street Customized Benchmark returned 5.40% during the fiscal year. The benchmark's 3, 5, and 10 year returns are 12.11%, 11.58%, and 9.78%, respectively. The legacy portfolio, vintage years prior to 2005, returned (6.52)% during the calendar year. The 3, 5 and 10 year returns for the private equity legacy portfolio are (14.79)%, (0.45)% and 6.50% respectively.

The MBTARF private equity portfolio received $42.5 million in distributions during the fiscal year 2015, compared to $42.5 million in the 2014 fiscal year. The private equity portfolio's

(Continued)

managers called $24.0 million of capital during the fiscal year 2015, compared to $18.3 million called in the 2014 fiscal year. The net cash flow from the private equity portfolio was an inflow of $18.5 million in fiscal year 2015, compared to an inflow of $24.2 million in fiscal year 2014.

(Continued)

The MBTA Retirement Fund's active private equity investment manager's investments are reported in the summary below:

Manager	Investment Mandate	Portfolio Fair Value 12-31-2015	Manager	Investment Mandate	Portfolio Fair Value 12-31-2015
ABS CAPITAL PARTNERS IV	Growth	764,030	PHAROS CAPITAL	Growth Equity	141,572
ADD ONE PARTNERS	Venture	306,777	PHAROS CAPITAL II	Growth Equity	5,306,404
AG EQUITY PARTNERS	Growth Equity	7,675	PHAROS CAPITAL PARTNERS III	Growth Equity	1,767,461
AIG CAPITAL MGMT	Buyout	100,816	QUADRANGLE CAPITAL PARTNERS II	Buyout	1,074,794
ASCENT VENTURES II	Venture	305,651	SCP PARTNERS I	Venture	10,860
ASCENT VENTURES III	Venture	305,274	SCP PARTNERS II	Venture	2,063,202
BOSTON CAPITAL III	Venture	41,276	SIGULER GUFF BRIC OPPN FDII	Buyout	5,113,729
BOSTON MILLENNIA	Venture	33,090	SIGULER GUFF DISTRESSED	Distressed	1,066,482
BOSTON MILLENNIA II	Venture	1,682,144	SIGULER GUFF DISTRESSED OPP	Distressed	4,410,601
CHARTWELL CAPITAL II	Growth Equity	342,302	SL CAPITAL ESF I	Buyout	3,016,111
CRESCENDO IV	Venture	1,767,045	SL CAPITAL SOF II	Secondary Fund of Funds	2,465,352
CROSS ATLANTIC TECHNOLOGY	Venture	559,350	STERLING CAPITAL PARTNERS	Growth Equity	881,710
EUROPEAN STRATEGIC II	Buyout	2,722,591	STERLING CAPITAL PARTNERS II	Growth Equity	1,799,321
EUROPEAN STRATEGIC PARTNERS 2008	Buyout	5,530,477	STERLING CAPITAL PARTNERS III	Growth Equity	3,144,851
EUROPEAN STRATEGIC PARTNERS I	Buyout	339,481	STERLING CAPITAL PARTNERS IV	Growth Equity	3,089,113
EUROPEAN STRATEGIC PARTNERS 2006	Buyout	4,298,048	STERLING VENTURES	Venture	72,306
GROSVENOR OPPOR CREDIT III	Special Situations	4,935,600	SVB CAPITAL PARTNERS II	Venture	1,206,052
HALIFAX CAPITAL PARTNERS II	Buyout	3,495,365	SVB CAPITAL PARTNERS III	Venture	2,961,279
LAZARD TECHNOLOGY II	Venture	996,587	SVB STRATEGIC INVESTORS III	Venture	5,671,656
LEXINGTON CAPITAL PARTNERS VIB	Secondary Fund of Funds	3,317,639	SYNDICATED COMM IV	Growth Equity	64,954
LEXINGTON CAPITAL PTNRS VII	Secondary Fund of Funds	5,560,726	TCW CRESCENT MEZZANINE V	Mezzanine	1,354,994
LEXINGTON CAPITAL PTNRS VIII	Secondary Fund of Funds	1,672,952	THOMAS H LEE EQUITY FUND VI	Buyout	3,521,943
LEXINGTON MID MARKET II LP	Secondary Fund of Funds	4,669,884	THOMAS WEISEL PARTNERS II	Secondary Fund of Funds	1,488,017
LEXINGTON MID MARKET III	Secondary Fund of Funds	3,298,245	TOP TIER VENTURE VELOCITY FUND	Secondary Fund of Funds	5,215,288
LEXINGTON MIDDLE MARKET	Secondary Fund of Funds	2,655,571	VANGUARD VII	Venture	1,915,384
MORGAN STANLEY LP	Growth Equity	135,570	VENTURE LENDING + LEASING III	Mezzanine	254,475
NEW MOUNTAIN PARTNERS	Buyout	110,644	VENTURE LENDING + LEASING IV	Mezzanine	458,600
NEW MOUNTAIN PARTNERS II	Buyout	93,253	VENTURE LENDING + LEASING V	Mezzanine	1,364,100
NEW MOUNTAIN PARTNERS III	Buyout	4,078,952	VENTURE LENDING + LEASING VI	Mezzanine	5,433,383
NEW MOUNTAIN PARTNERS IV	Buyout	2,111,472	VENTURE LENDING + LEASING VII	Mezzanine	6,128,235
OAKTREE MEZZANINE FUND LP CLASS A	Mezzanine	10,590	VENTURE LENDING + LEASING VIII	Mezzanine	669,825
OAKTREE MEZZANINE FUND LP CLASS B	Mezzanine	2,787,299	WELLINGTON PARTNERS II	Venture	1,801,718
OCH ZIFF ENERGY FUND	Energy	3,484,299	WLR RECOVERY FUND V	Special Situations	4,097,401
OPUS CAPITAL VENTURE PRTNS V	Venture	5,437,906	WP+G VA VI (LIGHTSPEED)	Venture	837,701
PACIFIC VENTURE II	Venture	54,956	Z CAPITAL SPECIAL SIT. FD II	Special Situations	1,838,601
PAUL CAPITAL HEALTHCARE III	Mezzanine	1,194,532	**Total Portfolio Fair Value**		**150,915,544**

SCHEDULE OF TIME-WEIGHTED RETURNS BY ASSET CLASS

For the Period Ended December 31, 2015

Portfolio	Returns for periods ending December 31,						
	Annualized Returns		Annual Returns				
	3 - Year	5 - Year	2015	2014	2013	2012	2011
Total Fund	7.64	7.71	0.90	5.51	17.08	14.93	1.06
Policy Benchmark	7.42	7.31	2.01	6.22	14.40	10.99	3.44
Taft Hartley - Median	8.00	7.30	1.10	6.70	16.90	11.70	1.40
Domestic Equity Large Cap Composite	13.31	12.19	(0.16)	10.39	32.01	20.10	1.70
S&P 500 Index	15.13	12.57	1.38	13.69	32.39	16.00	2.11
Domestic Equity Small Cap Composite	12.73	10.85	(1.62)	2.37	42.25	18.83	(1.71)
Russell 2000 Growth Index	14.28	10.67	(1.38)	5.60	43.30	14.59	(2.91)
Russell 2000 Value Index	9.06	7.67	(7.47)	4.22	34.52	18.05	(5.50)
Global Emerging Markets Composite	11.68	-	1.40	6.35	29.17	-	-
MSIC ALL Country World	7.69	-	(2.36)	5.50	22.80	-	-
International Equity Composite	5.80	4.76	2.02	(5.87)	23.34	20.98	(11.94)
MSCI EAFE	5.01	3.60	(0.81)	(4.90)	22.78	17.32	(12.14)
Fixed Income Composite	1.69	4.12	(0.60)	4.90	0.84	11.80	4.11
Barclays Aggregate	1.44	3.25	0.55	5.97	(2.02)	4.21	7.84
Diversified Beta	2.02	-	(3.15)	6.72	2.73	3.66	-
91 Treasury Bill Plus 300 Basis Points	3.06	-	3.05	3.04	3.08	3.11	-
Hedge Funds	3.66	3.57	(4.31)	4.14	(4.75)	(1.94)	0.02
CSFB/Tremont Hedge Fund Index	4.30	3.56	(0.71)	4.13	9.73	7.67	(2.52)
Private Equity:							
Active Portfolio	12.02	9.73	6.83	7.60	15.93	18.19	6.89
Legacy Portfolio (vintage years prior to 2005)	(14.79)	(0.45)	(6.52)	(4.96)	(6.23)	9.52	(4.12)
State Street Cusomized Benchmark	12.11	11.58	5.40	6.93	17.08	13.51	6.73
Real Estate Composite	16.22	14.83	13.94	20.25	14.33	11.56	13.52
NCREIF Property Index	12.04	12.18	13.33	11.82	10.98	10.54	14.26

Policy Benchmark:

10% State Street PE 1 quarter lag	7% MSCI All County World Index (net)
11% S&P EPAC Large/Mid Cap	9% Barclays Aggregate Bond
17% S&P 500	3% Barclays U.S. TIPS 1-10 yr
1% Russell 3000	3% Barclays MBS
7% Russell 2000	8% Barclays Multiuniverse
11% 91 T-Bill One month lag plus 300 BP	2% S&P LSTA
9% NCREIF Property Index quarter lag	

* All returns information is gross of fees, except hedge fund fees, which are net of fees. Returns are calculated on a time-weighted rate of return methodology.

Investment Summary at Fair Value

As of December 31, 2015

	Fair Value ($000s)	% of Fair Value
Short-Term:		
Cash and cash equivalents*	$61,311,692	4.10%
Fixed Income:		
U.S. Agencies	70,163,455	4.69%
US Treasury	25,945,506	1.73%
Domestic fixed income	190,664,204	12.75%
International fixed income	5,320,012	0.36%
Asset Backed	52,898,266	3.54%
Equity:		
Domestic equity securities	468,588,759	31.32%
International equity securities	207,659,261	13.88%
Real Estate	130,266,856	8.71%
Private Equity	150,915,544	10.09%
Risk Parity	48,494,054	3.24%
Hedge Funds	83,644,423	5.59%
Total Investments	$1,495,872,032	100.00%

*Investment manager's cash holdings are reported in cash and cash equivalents

SUMMARY SCHEDULE OF BROKER COMMISSION

(Top 25 Brokers and Cumulative Fees Paid to Others)

Year Ended December 31, 2015

Brokerage Firm	Shares/Par Value	Fees Paid	% Total	Average $ per share
STATE STREET GLOBAL MKTS/BOS Total	3,422	45,835	11.29%	13.3943
MORGAN STANLEY CO INCORPORATED Total	1,286,482	40,112	9.88%	0.0312
STATE STREET GLOBAL MARKETS Total	2,382,201	34,539	8.51%	0.0145
CAPITAL INSTITUTIONAL SVCS INC EQUITIES Total	1,263,189	21,353	5.26%	0.0169
JP MORGAN SECURITIES PLC Total	377,707	19,158	4.72%	0.0507
WEEDEN + CO. Total	605,305	17,859	4.40%	0.0295
DEUTSCHE BANK SECURITIES INC Total	545,656	15,869	3.91%	0.0291
JEFFERIES + COMPANY INC Total	603,583	13,200	3.25%	0.0219
CREDIT SUISSE SECURITIES (USA) LLC Total	842,356	12,586	3.10%	0.0149
J.P. MORGAN SECURITIES INC. Total	462,857	11,013	2.71%	0.0238
ROSENBLATT SECURITIES LLC Total	355,700	10,303	2.54%	0.0290
SANFORD CBERNSTEIN CO LLC Total	530,427	9,915	2.44%	0.0187
INSTINET Total	417,386	9,639	2.37%	0.0231
CONVERGEX EXECUTION SOLUTIONS LLC Total	269,435	8,079	1.99%	0.0300
GOLDMAN SACHS + CO Total	280,806	7,893	1.94%	0.0281
CITATION GROUP Total	262,900	7,582	1.87%	0.0288
UBS SECURITIES LLC Total	251,710	6,388	1.57%	0.0254
GOLDMAN SACHS INTERNATIONAL Total	1,364,296	4,985	1.23%	0.0037
RAYMOND JAMES AND ASSOCIATES INC Total	119,579	4,724	1.16%	0.0395
CITIGROUP GLOBAL MARKETS LIMITED Total	125,412	4,053	1.00%	0.0323
SG AMERICAS SECURITIES LLC Total	139,640	3,851	0.95%	0.0276
RBC CAPITAL MARKETS Total	138,244	3,698	0.91%	0.0267
FIDELITY CAPITAL MARKETS Total	161,799	3,638	0.90%	0.0225
BARCLAYS CAPITAL Total	986,257	3,274	0.81%	0.0033
LIQUIDNET INC Total	146,058	3,258	0.80%	0.0223
OTHER	5,910,800	83,232	20.50%	0.0141
TOTALS	**19,833,207**	**$ 406,038**	**100%**	**0.0247**

The Fund Board has a commission recapture agreement with Capital Institutional Services, Inc. For the year ended December 31, 2015 the Fund earned approximately $5 thousand from the commission recapture program.

SCHEDULE OF DIRECT MANAGEMENT FEES

Year Ended December 31, 2015

Investment Management Fees by Asset Class:	**AUM ($000s)**	**Fees ($000s)**
Domestic Equity	$ 372,219	$ 1,981
International Equity	190,616	1,367
Global Equity	112,247	855
Fixed Income	231,664	911
Risk Parity / Diversified Beta	48,494	217
Total Investment Management Fees		5,331
Investment Advisory (Consulting) Fees		$ 367
Communications / Governmental Services		$ 134
Custodian Fees		780
Total Direct Management Fees charged to MBTARF		$ 6,612

INVESTMENT POLICY STATEMENT

The following are significant fundamentals of the Fund's Investment Policy Statement. The policy delineates the objectives and policies that have been established by the Board to provide a framework for the on-going management of the Fund. It is designed to clearly communicate the directives of the Board to all interested parties. The Policy shall be revised from time to time, as deemed necessary, and will be reviewed annually to ensure its relevance to the Fund's current needs. Any resulting material changes will be communicated to all affected parties. The Policy will apply to the Fund on an aggregate basis.

The primary goal of the Massachusetts Bay Transportation Authority Retirement Fund's investment program is to meet or exceed the Fund's actuarial target rate of return in order to maintain and improve upon its funded status. The Fund's investment program is based on the precepts of the generally accepted capital markets theory followed by institutional investors who, by definition, are long-term-oriented investors with goals and objectives that are similar to the Fund. This philosophy holds that:

- Increasing risk is rewarded with compensating returns over time and therefore, prudent risk- taking is justifiable for long-term investors.
- Risk can be controlled through diversification of asset class exposure, implementation strategies and individual security holdings.
- Diversification benefits shall be measured by examining the correlation between asset classes, implementation strategies and manager styles, with a goal of maximizing diversification and limiting concentration and overlap in asset classes and strategies that are more highly correlated.
- Risk is reduced by time and, over time; the relative performance of different asset classes is reasonably consistent.

The Fund shall be managed to accomplish the following:

- Ensure the availability of sufficient assets to pay benefits;
- Minimize and stabilize employer and employee contributions;
- Achieve the appropriate rate of total return with prudent levels of risk and liquidity consistent with the Fund's liabilities and cash flows;
- Maintain sufficient diversification to avoid large losses and preserve capital; and
- Maintain and improve the funded ratio (market value of assets/actuarial value of benefits earned to date as measured by the Fund's actuary) of the Fund over time.

(Continued)

Rate of Return Assumption

The actuarially required return for the Fund is 8.00%* annually, net of all fees and operating expenses.

Relative Return Objectives

The Fund shall seek to achieve a rate of return that ranks in the top half of the appropriate peer fund universes given a comparable level of risk and to achieve a long term rate of return on investments that is equal to or exceeds both the Policy and Allocation Indices. Returns for investment managers are expected to exceed their respective benchmarks, as well as rank in the top half of the appropriate universe of managers adhering to the same investment strategy. The Board further recognizes that the return targets described herein may not be achieved in any single year. Instead, a longer-term horizon of five years shall be used in measuring the long-term success of the Fund. While the Board expects that returns will vary over time, the Fund shall have a risk tolerance consistent with that of other funds created for similar purposes, and the assets of the Fund shall be invested accordingly.

Current Asset Allocation Targets & Ranges

Asset allocation herein refers to the establishment of relative percentage allocation guidelines for the investment of assets in equities, fixed income, alternative investments, cash equivalents, and other general forms of investment, and not to individual security selection. This single decision is the most important consideration for the Board. In terms of direct impact on the Fund's performance, the Fund's policy asset mix choice outweighs all other decisions. As a practical matter, the Board understands that while important, portfolio structure decisions and active management strategies involving stock and bond selection, sector weighting, or market timing have been shown to contribute less than long-term asset allocation decisions.

Factors to be considered include:

(1) the Fund's assumed rate of return,
(2) the risk tolerance of the Board,
(3) the Fund's liquidity requirements,
(4) Funded status,
(5) the Fund's liability structure and other characteristics unique to the fund. Following an asset allocation review which considered the impact of a range of asset allocation policies on the Fund.

The Board will review the asset allocation targets at least annually, and may adopt changes over a three- to five-year time horizon or, more frequently, if significant changes occur within the economic or capital market environments. A change in the Fund's liability structure, funded status, or long-term investment prospects may also trigger a revision of the asset allocation.

***** *In February 2016, the MBTA Retirement Fund Board adopted new actuarial assumptions for use in the preparation of the annual actuarial valuations of the Fund. These assumptions were based on an experience study covering the four-year period ending December 31, 2014. The expected return on assets for funding purposes was reduced by a 25-basis-point margin, resulting in a 7.75% expected return on assets. The discount rate used to measure the total pension liability at December 31, 2015, was 8.00%. The projection of cash flows used to determine the discount rate assumed that contributions will continue to be made in accordance with the Fund's current funding policy.*

(Continued)

Performance Benchmarks

Total Fund Return: The Total Fund Return shall be compared against other corporate, jointly trusteed and public pension plans. The Board shall seek to compare its returns against other funds of similar size and circumstances, as represented by various peer group medians provided by the Fund's investment consultant. The Total Fund Return objective is to meet or exceed the Allocation Index Return and the Policy Index Return, which are each described below.

Allocation Index: The Allocation Index Return shall measure the success of the Fund's current allocation. It shall be calculated by using index rates of return for each asset class invested in by the Fund multiplied by the actual percent allocated to each asset class. The difference between the Allocation Index Return and the Total Fund Return measures the effect of active management. If the Total Fund Return is greater than the Allocation Index Return, then active management has in aggregate added value. If the Total Fund Return is less than the Allocation Index Return, then active management has not added value.

Policy Index: The Policy Index Return shall measure the success of the Fund's target allocation. It shall be calculated by using index rates of return for each asset class invested in by the Fund multiplied by the percent targeted to each asset class. The difference between the Allocation Index Return and the Policy Index Return measures the effects of deviating from the target allocation. If the Allocation Index Return is greater than the Policy Index Return, then deviating from the target allocation has added value. If the Allocation Index Return is less than the Policy Index Return, then deviating from the target allocation has not added value.

Manager Benchmarks: The Investment Managers shall be compared to a combination of passively managed index returns matching the managers' specific investment styles, as well as the median manager in their appropriate peer group universe.

Rebalancing

The Board and Executive Director will review asset allocation at least quarterly to determine if the asset allocation is consistent with the exposure ranges described herein. The Executive Director will direct investment managers to transfer funds to rebalance the asset allocation as necessary. The Executive Director shall use appropriate judgment and care when rebalancing portfolios. A cash equitization investment strategy may use financial futures contracts to overlay the Fund's cash manager account in accordance with the provisions of this policy. The strategy will be used in order to gain equity and fixed income market exposure consistent with the Fund's asset allocation targets as detailed above.

ACTUARIAL SECTION

Buck Consultants has performed a December 31, 2015 actuarial valuation of the MBTA Retirement Fund. This valuation and report was prepared using generally accepted actuarial principles and practices and meets the parameters set by the Governmental Accounting Standards Board (GASB) - Statement No. 67. To the best of our knowledge, this report is complete and accurate, and the assumptions used represent our best estimate of anticipated experience of the Fund.

Buck Consultants has prepared and included as part of this report all of the supporting schedules in the Actuarial Section of the Comprehensive Annual Financial Report (CAFR).

David L. Driscoll
Principal, Consulting Actuary

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Section I - Overview

July 15, 2016

Retirement Board

Massachusetts Bay Transportation Authority Retirement Fund

One Washington Mall, Fourth Floor

Boston, MA 02108

Dear Board Members:

The Pension Agreement covering the Massachusetts Bay Transportation Authority Retirement Fund provides that the actuary make annual actuarial valuations of the Fund and certify rates of contribution to the Retirement Board.

This report presents the results of an actuarial valuation of the Fund, prepared as of December 31, 2015, together with our recommendations regarding the rates of contribution payable beginning July 1, 2016.

This valuation reflects the funding policy adopted by the Board effective December 31, 2009. The actuarial cost method used is the entry age normal cost method. The amortization of the unfunded liability is made in installments increasing at the rate of four percent per year over a closed 30-year period beginning December 31, 2009.

This valuation is based on the assumptions adopted by the Retirement Board, in February 2016, on the basis of an experience study covering the period January 1, 2010, through December 31, 2014. The actuarial assumptions covering termination, disability, retirement, and pre- and post-retirement mortality were changed, and the assumed interest rate used in funding calculations was lowered from 8.00% to 7.75%. All of these changes were effective December 31, 2015. I believe that these assumptions are reasonable.

We performed the valuation using participant data and plan asset data supplied by the Authority and Retirement Fund. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The accuracy of the results of the valuation are dependent on the accuracy of the data.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this report.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the Academy to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

BUCK CONSULTANTS, LLC

David L. Driscoll

David L. Driscoll, FSA, FCA, MAAA, EA
Principal, Consulting Actuary

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Section II - Summary of Principal Results

1. The principal results of the current and preceding years' valuations are summarized below:

Valuation Date	December 31, 2014	December 31, 2015
Number of active members	5,798	5,885
Annual compensation of all members	$ 417,957,007	$ 443,237,899
Annual compensation of active members below normal retirement age	$ 415,146,025	$ 440,501,980
Average age	47.55	47.45
Average service	11.44	11.03
Average compensation	$ 72,086	$ 75,317
Number of active members not accumulating creditable service	134	88
Number of retired members, beneficiaries and disabled members	6,407[1]	6,472[2]
Annual retirement allowances	$ 185,827,100	$ 192,715,872
Assets for funding purposes	$ 1,632,174,762	$ 1,630,411,191
Unfunded accrued liability	$ 815,556,295	$ 941,672,817
Contribution rates required:		
Normal	9.1000%	10.0100%
Accrued liability	12.3000%	13.4900%
Expenses	0.4500%	1.0000%
Total required rate	21.8500%	24.5000%
Member excess rate	0.0000%	0.0000%
Actual contribution rate during following fiscal year	21.8500%	24.5000%

2. Valuation results as of December 31, 2015, are given in Section VI, and contribution levels are set forth in Section VII.

3. Schedule B of this report outlines the actuarial assumptions and methods used in the valuation. The actuarial assumptions were selected on the basis of an experience study covering the five-year period ending December 31, 2014. The Board voted to adopt these assumptions in February 2016.

4. Schedule C of this report presents a summary of the main provisions of the Fund, as interpreted in preparing the actuarial valuation.

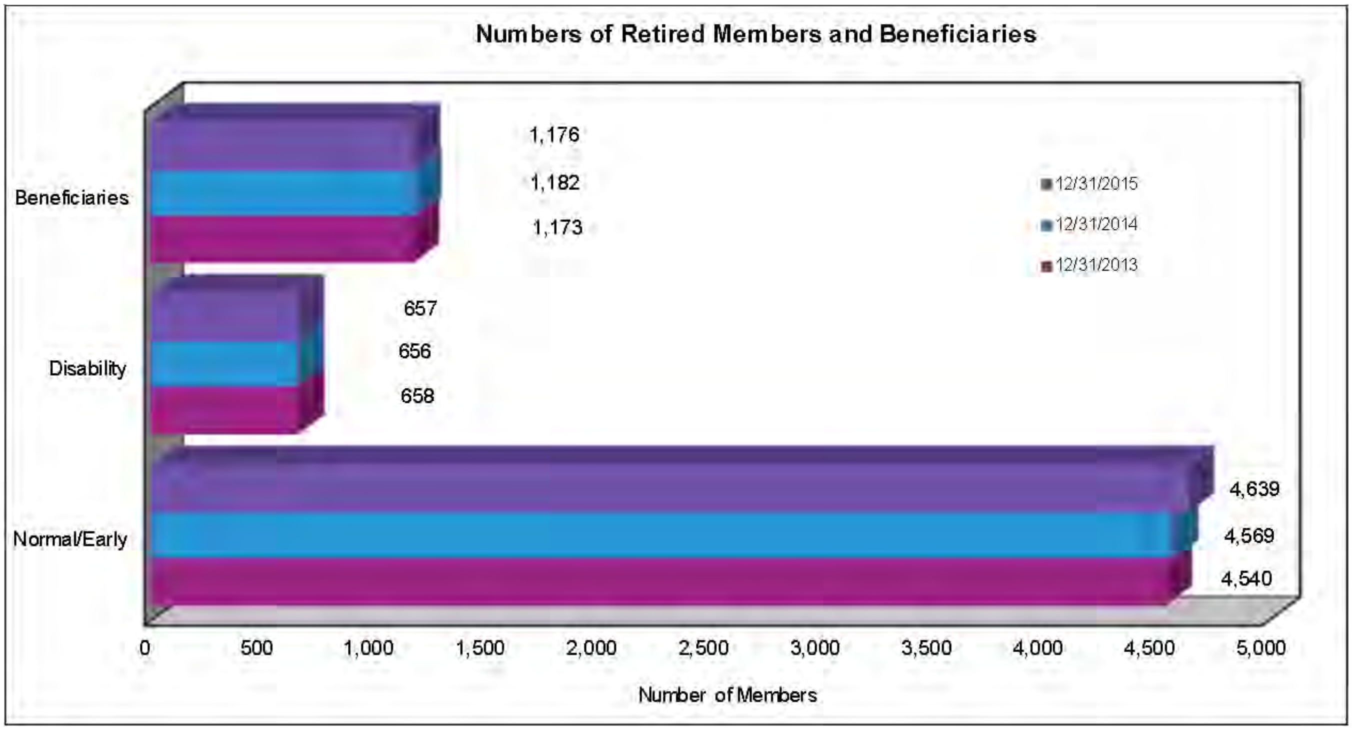
[1] Includes 6,309 retirees and beneficiaries and 98 individuals receiving payments under QDROs.
[2] Includes 6,371 retirees and beneficiaries and 101 individuals receiving payments under QDROs.

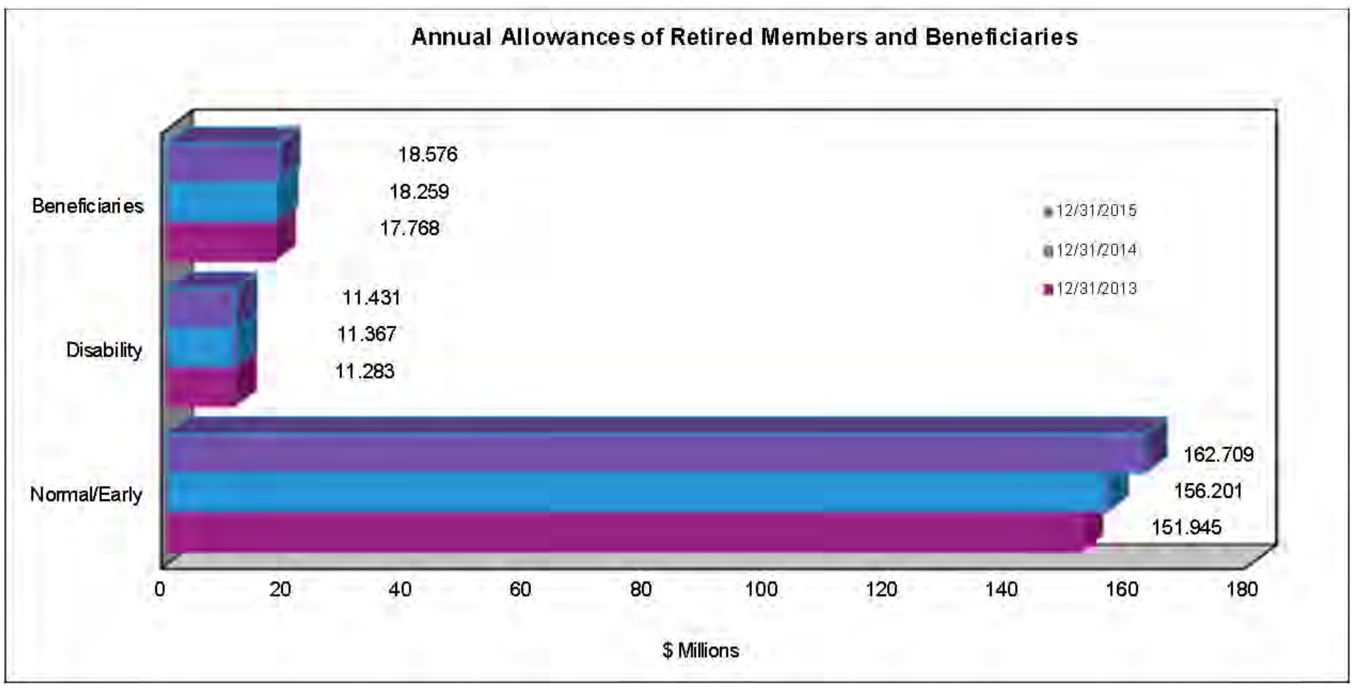
Section III - Membership Data

1. Employee data were furnished by the Authority and Retirement Fund.
2. Table 1 of Schedule D shows the number and annual compensation of active members, while Table 2 of Schedule D shows the number and annual retirement allowances of retired members, disabled members and beneficiaries.
3. The following table summarizes the number and annual retirement allowances of retired members, disabled members and beneficiaries as of December 31, 2015:

Category	Number	Annual Retirement Allowances
Benefits to Members Retired on Normal, Early Normal and Reduced Early Retirement Allowances	4,639	$ 162,709,154
Benefits to Members Retired on Disability Retirement Allowances	657	11,430,918
Benefits to Beneficiaries of Deceased Members	1,176	18,575,800
Total	6,472	$ 192,715,872

Section III - Membership Data (continued)





Section IV - Assets

1. Asset information was obtained from the Retirement Fund office.
2. The market value of the Fund's net assets available for benefits as of December 31, 2015, amounted to $1,497,848,035.
3. The asset method is a five-year phase-in smoothing method under which the value of assets for actuarial purposes equals market value less a five-year phase-in of the differences between actual and assumed investment return. The value of assets for actuarial purposes may not differ from the market value of assets by more than 20%. The smoothing method used to calculate the value of assets for actuarial purposes was restarted as of December 31, 2013, coincident with the change to the present method.
4. The calculation of the actuarial value of assets as of December 31, 2015 is presented below:

Market value as of December 31, 2015					1,497,848,035	(A)
Adjustment to recognize asset gains (losses) over 5 years:						
Year Ending	Asset gain (loss)	X	Adjustment factor	=	Adjustment	
12/31/2015	(124,258,689)		0.80		(99,406,951)	
12/31/2014	(55,260,341)		0.60		(33,156,205)	
Total					(132,563,156)	(B)
Actuarial value of assets as of, December 31, 2015					1,630,411,191	
Asset gain during fiscal year ending December 31, 2015						
Actual return on market value and cash flow						
Income from investments and securities lending					57,393,688	
Net appreciation					(45,625,486)	
Investment expenses					(6,611,956)	
Total					5,156,246	(C)
Expected 8.00% return on market value and cash flow					129,414,935	(D)
Asset gain (loss) (C) – (D)					(124,258,689)	

The assets for valuation purposes are 108.85% of market value.

5. As of December 31, 2007, members' excess contributions (as discussed in Section V) had been fully depleted to cover the cost of the one-time cost-of-living increases negotiated during the collective bargaining related to the benefits provided under the Fund. The actuarial asset value derived above thus requires no additional adjustment for members' excess contributions.

Section V – Member Excess Contributions

1. Effective July 1, 1998, in lieu of a reduction in the 4% contribution rate, members continued to make contributions equal to 4% of covered payroll.
2. To the extent that 4.00% exceeds the actuarially determined member required contribution rate, the excess is characterized as member excess contributions. These amounts are to be accumulated within the Retirement Fund and used to provide additional benefits.
3. The member excess rates developed in prior years are as follows:

Period	Excess Rate	Period	Excess Rate
July 1, 2001 – June 30, 2002	3.53610%	July 1, 2008 – June 30, 2009	0.00000%
July 1, 2002 – June 30, 2003	0.64610%	July 1, 2009 – June 30, 2010	0.00000%
July 1, 2003 – June 30, 2004	0.00000%	July 1, 2010 – June 30, 2011	0.00000%
July 1, 2004 – June 30, 2005	0.27610%	July 1, 2011 – June 30, 2012	0.00000%
July 1, 2005 – June 30, 2006	0.08610%	July 1, 2012 – June 30, 2013	0.00000%
July 1, 2006 – June 30, 2007	0.39610%	July 1, 2013 – June 30, 2014	0.00000%
July 1, 2007 – June 30, 2008	0.39610%	July 1, 2014 – June 30, 2015	0.00000%

4. As of December 31, 2007, members' excess contributions accumulated in prior years had been fully depleted.
5. The member excess rate for the period July 1, 2015 - June 30, 2016 is derived as follows:
   a. Effective prior member excess rate (December 31, 2014) -1.4464%
   b. Decrease in total required contribution rate from
      prior valuation (see Section VII) -2.6800%
   c. Current member excess rate (July 1, 2015) ((a.) + 25% of (b.)) -2.1164%
6. The accumulated value of the excess contributions as of December 31, 2015 is $0.

Section VI – Comments on Valuation

1. Schedule A of this report presents the results of the valuation as of December 31, 2015.
2. The total entry age normal accrued liability on account of benefits expected to be paid to present retired members, former members, beneficiaries, active and inactive members is $2,572,084,008. Of this amount, $1,774,425,407 is on account of retired members and beneficiaries, $795,769,720 is on account of present active members and $1,888,881 is on account of contributions expected to be returned to active members not accumulating creditable service.
3. The value of Fund assets to be used in developing required contributions to the Fund is $1,630,411,191, including required contributions made by active members. When $1,630,411,191 is subtracted from $2,572,084,008, there remains $941,672,817, which represents the unfunded actuarial accrued liability of the Fund.
4. Amortization of the unfunded liability over the remaining 24 years in the amortization period as of December 31, 2015, in annual installments rising at the rate of 4% per year produces an amortization installment of $59,406,600 as of December 31, 2015. This amounts to 13.49% of the value of annual compensation of active members below normal retirement age on that date.
5. The total entry age normal cost at December 31, 2015, is $44,076,861, or 10.01% of the annual compensation of active members below normal retirement age on that date.
6. In addition to the amounts needed to cover amortization of the unfunded liability and normal cost, an allowance of 1.00% of annual compensation of active members below normal retirement age is included in the total required contribution to cover expenses.
7. During 2015, the unfunded actuarial accrued liability increased $126.1 million, from $815.6 million to $941.7 million. The expected unfunded actuarial accrued liability at December 31, 2015, was $817.2 million. The $124.5 million difference consists of a $39.8 million shortfall in 2015 of returns on the actuarial value of assets, $63.3 million in increased accrued liability owing to the changes made to actuarial assumptions effective December 31, 2015, and $21.4 million in increases in accrued liability due to unfavorable demographic experience in 2015. Additional detail is provided in Section IX.

Section VII – Contributions to the Fund

1. Effective December 31, 2009, the contributions by members and the Authority are to provide normal contributions, amortization of the unfunded accrued liability and administrative expenses. It is assumed that investment earnings will be sufficient to cover fiduciary and investment expenses and, in addition, provide the yield assumed for actuarial purposes.
2. The valuation indicates that 10.01% of compensation is required to cover normal cost and 13.49% of compensation is required to cover amortization of the unfunded accrued liability. Adding 1.00% of compensation for anticipated administrative expenses, excluding fiduciary and other investment expenses, results in a total contribution rate of 24.50% of compensation to be paid by the Authority and the members of the Retirement Fund from July 1, 2016, through June 30, 2017.
3. This rate is 2.68% more than the 21.82% rate developed in the December 31, 2014, valuation. Under the adjustment formula contained in the July 1, 2002, Pension Agreement, 75% of the change will be allocated to the Authority as a change in the in contribution rate and 25% will be allocated to the member's required contribution rate. This results in the following rates payable during the year beginning July 1, 2016:

Authority	18.0386%
Members' required	6.4614%
Subtotal (Section II)	24.5000%
Members' excess (Section V)	0.0000%
Total	24.5000%

Section VIII – Statement No. 25 of the Governmental Accounting Standards Board

1. Statement No. 25 of the Governmental Accounting Standards Board has been superseded by Statement No. 67. Required reporting for the Retirement Fund under Statement No. 67 will be covered in a separate report. The information below is shown nonetheless for informational purposes.

2. The following schedule shows funding progress information that would have been required by Statement No. 25 as of December 31, 2015:

Schedule of Funding Progress (,000)

Year Ending December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage Covered Payroll ((b-a)/c)
2015	1,630,411	2,572,084	941,673	63.39%	440,502	213.77%
2014	1,632,175	2,447,731	815,556	66.68%	415,146	196.45%
2013	1,606,684	2,364,133	757,449	67.96%	379,071	199.82%
2012	1,456,957	2,312,170	855,213	63.01%	370,873	230.59%
2011	1,550,446	2,276,750	726,304	68.10%	366,535	198.15%
2010	1,649,129	2,341,344	692,215	70.44%	356,608	194.11%

Section IX – Experience

Records are maintained whereby the actual experience of active and retired members is compared to that expected on the basis of the tables adopted by the Retirement Board. In this way, deviations in the experience from that anticipated will be noted and any adjustments believed necessary will be brought to the attention of the Retirement Board in future experience studies.

During the last year, the total unfunded actuarial accrued liability (UAL) was expected to increase from $815,556,295 to $817,210,556. The actual UAL at the end of the year was $941,672,817. The chart below reconciles the expected to actual UAL. The primary sources of changes were a $63,334,197 increase in the accrued liability resulting from changes made to actuarial assumptions and returns on investments that were $39,755,074 below expected levels in 2015.

The sources of the (Gains)/Losses are as follows:

Actual UAL as of December 31, 2014		$ 815,556,295
Expected UAL (Prior to Changes) as of December 31, 2015		$ 817,210,556
Salary Increases	$ 12,235,361	
New Participants	319,681	
Active – Retirements	7,403,533	
Active – Terminations	7,282,258	
Active – Mortality	553,146	
Active – Disablities	735,548	
Retiree Mortality	(17,485,115)	
Other (Data Corrections, etc.)	10,328,580	
Liability (Gain)/Loss – Demographic Experience		$ 21,372,992
Change in Accrued Liability Due to Assumption Changes		$ 63,334,197
Total of Liability (Gain)/Loss and effects of changes in assumptions and Contribution rates		$ 84,707,189
Investment (Gain)/Loss		$ 39,755,074
Total Change in UAL		$ 124,462,262
Actual UAL as of December 31, 2015		$ 941,672,817

Schedule A – Results of the Valuation as of December 31, 2015

1.	Present Value of Future Benefits	
(a)	Present value of prospective benefits to retired members, former members and beneficiaries	$ 1,774,425,408
(b)	Present value of prospective retirement allowances on account of present active members	1,180,773,204
(c)	Present value of members' contributions to be returned to the members not accumulating creditable service	1,888,881
(d)	Total actuarial liabilities	$ 2,957,087,493
2.	Assets of the Fund for purposes of development of contributions	$ 1,630,411,191
3.	Present value of future contributions to the fund (1(d)-2)	$ 1,326,676,302
4.	Present value of future normal contributions to the Fund[1]	$ 385,003,485
5.	Unfunded accrued liability (3) - (4)	$ 941,672,817

[1] Includes future contributions of members at the rate developed in Section VII.

Schedule B – Outline of Actuarial Assumptions and Methods

Data

For new entrants, the rate of pay was used for the 2015 salary.

Interest rate for funding purposes

7.75% per annum, compounded annually, in addition to fiduciary and investment management expenses.

Separations from active service

Representative values of the assumed rates of withdrawal and reduced early retirement and disability are as follows:

Age	Withdrawal and Reduced Early Retirement	Disability Male[1]	Disability – Female[1]
20	.0878	.0007	.0011
25	.0665	.0008	.0012
30	.0498	.0010	.0015
35	.0373	.0013	.0020
40	.0362	.0017	.0026
45	.0337	.0015	.0038
50	.0338	.0025	.0044
55	.0403	.0046	.0080
60	.0557	.0090	.0158
64	.0691	.0168	.0294

Representative rates of unreduced early normal retirement allowances are as follows:

Hired Before December 6, 2012:

	Males		Females	
Age	In the year attaining 23 years	In years after attainment of 23 years	In the year attaining 23 years	In years after attainment of 23 years
50	15%	4%	15%	4%
55	20%	5%	20%	5%
60	30%	10%	30%	10%
62	35%	10%	35%	10%
63	35%	10%	35%	10%
64	35%	20%	35%	20%
65	35%	30%	35%	30%
66	25%	25%	25%	25%
67	25%	25%	25%	25%
68	25%	25%	25%	25%
69	25%	25%	25%	25%
70	100%	100%	100%	100%

[1] 50% of disabilities are assumed to qualify for occupational disability benefits.

Schedule B – Outline of Actuarial Assumptions and Methods (continued)

Hired After December 6, 2012:

	Males		Females	
Age	In the year attaining 25 years	In years after attainment of 25 years	In the year attaining 25 years	In years after attainment of 25 years
50	0%	0%	0%	0%
55	20%	20%	20%	20%
60	30%	10%	30%	10%
62	35%	10%	35%	10%
63	35%	10%	35%	10%
64	35%	20%	35%	20%
65	35%	30%	35%	30%
66	25%	25%	25%	25%
67	25%	25%	25%	25%
68	25%	25%	25%	25%
69	25%	25%	25%	25%
70	100%	100%	100%	100%

Salary increases

4% per year.

Deaths before and after retirement

The RP-2000 Blue Collar Mortality Tables with generational projection using Scale BB are used for all active participants. 97.2% of the RP-2000 Blue-Collar Tables for Healthy Males projected by Scale BB generationally are used for all retirees and deferred vested participants. 116.5% of the RP-2000 Blue-Collar Tables for Healthy Females projected by Scale BB generationally are used for all beneficiary participants. The RP-2000 Tables for Disabled Lives projected by Scale BB generationally are used for the period after disability retirement. Among pre-retirement deaths, 7.50% are assumed to qualify for accidental death benefits.

Normal retirement

Age 65.

Percent married

90% of male members and 50% of female members under age 55 or who have less than 23 years of service are assumed to be married. 100% of employees age 55 and older or who have 23 or more years of service are assumed to be married. In each case, the female is assumed to be three years younger than the male.

Pension options

50% of male members elect a 75% joint and survivor benefit and 10% of female members elect a 50% joint and survivor benefit. All others elect a life annuity.

Fiduciary and investment management expenses

Paid from investment earnings of the Fund.

Loading or contingency reserves

None.

Schedule B – Outline of Actuarial Assumptions and Methods (continued)

Valuation method

Prior to December 31, 2009, projected benefit method with entry age normal cost and open-end accrued liability. On and after December 31, 2009, individual entry age normal method.

Asset valuation method

A five-year phase-in smoothing method is used, under which the value of assets for actuarial purposes equals market value less a five-year phase-in of the differences between actual and assumed investment return. The value of assets for actuarial purposes may not differ from the market value of assets by more than 20%.

Effective December 31, 2013, the actuarial asset method was changed from a five-year moving average of market values to a five-year phase-in smoothing method, with the smoothing restarted as of December 31, 2013.

Prior to December 31, 2013, a five-year moving average of market values method was used to compute the actuarial value of assets.

Summary of Changes from December 31, 2014 Valuation

An experience study covering the five-year period ending December 31, 2014 was presented to the board on February 5, 2016. Pursuant to the recommendations of this experience study, the following valuation assumptions were updated from the December 31, 2014 valuation:

(a) Active Service Demographic Assumptions

1. Termination and Reduced Early Retirement Rates – changed to 80% of the rates utilized in the December 31, 2014 valuation.
2. Disability Rates – decreased assumed rates of disability at higher ages for both male and female active participants.
3. Mortality Rates – changed mortality table from UP-1994 Male projected to 2020 with Scale AA to the RP-2000 Blue Collar Mortality Tables with generational projection using Scale BB.
4. Service Retirement Rates – adjusted assumed rates of service retirements for males and females in the year in which participants complete sufficient years of service for unreduced benefits as well as for subsequent years of service.

(b) Post-Retirement Mortality Rates

1. Service Retirements – changed mortality table from UP-1994 Male Table projected to 2020 with Scale AA to 97.2% of the RP-2000 Blue-Collar Tables for Healthy Males projected by Scale BB generationally.
2. Dependents of Deceased Members – changed mortality table from UP-1994 Female Table projected to 2020 with Scale AA to 116.5% of the RP-2000 Blue-Collar Tables for Healthy Females projected by Scale BB generationally.
3. Disabled Retirees – changed mortality table to the RP-2000 Tables for Disabled Lives projected by Scale BB generationally.

(c) Economic Assumptions

1. Interest Rate – changed from 8.00% to 7.75%.
2. Expenses – changed from 0.45% of payroll to 1.00% of payroll.

The changes in assumptions discussed above increased the plan's accrued liability by $63.3 million.

Schedule C – Summary of Main Provisions of the Fund as Interpreted for Valuation Purposes

The Massachusetts Bay Transportation Authority Retirement Fund became effective as of January 1, 1948. The following summary describes the current main membership, benefit, and contribution provisions of the Fund as interpreted for the valuation.

1 - Definitions

"Compensation" means the full regular remuneration paid to an employee, excluding any overtime pay. "Service" creditable under the Fund means all service rendered by a member prior to his normal retirement date since he last became a member for which contributions are made by the member and by the Authority. "Union" means Boston Carmen's Union, Local Division 589 of the Amalgamated Transit Union, AFL-CIO.

2 - Membership

Each employee, including employees on a part-time basis, who is or who may become a member of the Union or any union recognized by the Authority for collective bargaining purposes is included in the membership of the Fund. Any employee who is not a member of the Union but who is in a group which was authorized to participate in the Fund is included in the membership.

3 - Benefits

Normal Retirement Allowance

Condition for Allowance

Any member may retire at age 65. A member may remain in service after the stated retirement date.

Amount of Allowance

The normal retirement allowance equals 2.46% of 3-year average annual compensation multiplied by the years of service, such allowance not to exceed 75% of such average annual compensation.

Early Normal Retirement Allowance

Condition for Allowance

Any member hired prior December 6, 2012 and has completed at least 23 years of service may retire on an early normal retirement allowance.

Any member hired on or after December 6, 2012, has attained age 55 and completed at least 25 years of service may retire on an early normal retirement allowance.

Amount of Allowance

The early normal retirement allowance is computed in the same manner as a normal retirement allowance on the basis of the compensation and service to the time of retirement.

Early Reduced Retirement Allowance

Condition for Allowance

A member who has attained age 55 and has completed at least 20 years of service may be retired on an early reduced retirement allowance.

Amount of Allowance

The early reduced retirement allowance is an immediate allowance, commencing at the date of retirement, and is computed in the same manner as a normal retirement allowance on the basis of compensation and service to the time of early retirement, but reduced by ½ of 1% for each month of retirement prior to normal retirement date.

Schedule C – Summary of Main Provisions of the Fund as Interpreted for Valuation Purposes (continued)

Disability Retirement Allowance

Condition for Allowance

Any member who has completed 4 years of service in case of disablement due to an occupational accident or sickness, or who has completed 6 years of service in case of disablement due to any other cause, and who has become totally and permanently incapacitated, mentally or physically, for the further performance of duty may be retired.

Amount of Allowance

Upon disability retirement, a member receives an allowance commencing immediately, which is computed as a normal retirement allowance on the basis of the compensation and service to the time of disability retirement and is not less than 15% of the member's 3-year average annual compensation.

Vested Retirement Allowance

Condition for Allowance

Any member who has completed 10 years of service and who is not eligible for a retirement allowance is eligible for a vested retirement allowance, in lieu of a refund of his contributions with interest, in the event his employment terminates for reasons other than voluntary quit or discharge for cause.

Amount of Allowance

The vested retirement allowance is a deferred allowance commencing on the member's normal retirement date and equal to a percentage, not exceeding 100 percent, of the amount computed as a normal retirement allowance on the basis of the compensation and service to the time of termination; the applicable percentage is 5 percent multiplied by the number of years of creditable service, not in excess of 20, at the time of termination.

Survivor Benefit

Condition for Benefit

Upon the death of a member who has completed 10 years of service and who is survived by a spouse and/or dependent children designated to receive the deceased member's contributions with interest, a benefit may be elected by such survivor in lieu of the payment of the contributions with interest.

Amount of Benefit

If the deceased member had completed at least 10 but fewer than 23 years of service, the survivor's benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his death and elected a 50% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

If the deceased member had completed at least 23 years of service, the survivor's benefit, payable for life, is equal to the amount which would have become payable if the member had retired as of the date of his death and elected a 100% joint and survivor option in effect as of the date of death with the survivor as the designated person under the option. There is no reduction for early commencement.

Accidental Death Benefit

Condition for Benefit

Upon the death of a member in service whose death results solely from an injury or injuries sustained in the performance of duty, and who is survived by a spouse designated to receive the deceased member's contribution with interest, an allowance shall be payable to said spouse.

Schedule C – Summary of Main Provisions of the Fund as Interpreted for Valuation Purposes (continued)

Amount of Benefit

The accidental death benefit, payable for life, is equal to the amount which would have become payable to the member if the member had retired as of the date of his death on a disability retirement allowance. If there should be insufficient creditable service, the surviving spouse receives the minimum allowance available under the disability retirement provision.

Return of Contributions

On Account of Termination of Service

In the event of a member's termination of employment for any reason other than death or retirement, he is paid the amount of his contributions, with interest.

On Account of Death Prior to Retirement

Upon the death of a member or retired member before his retirement allowance has become effective, the amount of his contributions, with interest, is paid to his beneficiary or estate, unless a survivor benefit is payable.

On Account of Death after Retirement

Upon the death of a retired member, or the survivor of a retired member and his designated beneficiary under an optional benefit, any excess of his contributions at retirement, with interest, over the sum of all retirement allowance payments made is paid to the member's beneficiary or to the survivor's estate.

Our valuation does not include return of contributions on account of death after retirement for current retirees due to negligible impact on the Fund's liabilities.

Optional Benefits in Lieu of Regular Benefits

At retirement, or on his normal retirement date if prior thereto, any member may elect to convert his allowance into an optional benefit of equivalent actuarial value permitted by the Rules and Regulations.

Reinstatement of Creditable Service

If a member's service is interrupted by reason of resignation or dismissal, he has the opportunity upon the completion of 3 years of service after he has been rehired to repay to the Fund all amounts he has withdrawn together with an amount equal to their reasonable earnings. Upon such repayment, the member is to be credited with service for the periods before and after the interruption as though they had been a single period of service.

4 - Contributions

Contributions required to provide benefits and meet administrative expenses are made jointly by the Authority and members. The member contribution rate was increased from 5.1489% to 5.4989% effective August 11, 2012, to 5.5589% effective July 1, 2013, to 5.7989% effective July 1, 2014, to 5.7914% effective July 1, 2015, and to 6.4714% effective July 1, 2016. Member contributions are "picked up" by the Authority pursuant to Section 414(h)(2) of the Internal Revenue Code.

Summary of Changes from December 31, 2014 Valuation

None.

Schedule D – Tables of Employee Data (continued)

Table 1 – The Number and Annual Compensation of Active Members Distributed by

Fifth Age and Service as of December 31, 2015

Attained Age	Completed Years of Service																			
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		Total	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Under 25	24	1,440,259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	1,440,259
25 to 29	267	16,033,790	86	6,411,555	1	94,727	0	0	0	0	0	0	0	0	0	0	0	0	354	22,540,072
30 to 34	264	16,083,962	203	15,415,208	58	4,522,361	2	170,872	0	0	0	0	0	0	0	0	0	0	527	36,192,403
35 to 39	235	14,879,469	199	15,137,827	127	10,115,752	48	3,848,693	0	0	0	0	0	0	0	0	0	0	609	43,981,741
40 to 44	217	13,817,231	214	16,471,645	145	11,353,629	115	9,127,608	33	2,628,108	2	189,455	0	0	0	0	0	0	726	53,587,674
45 to 49	252	17,424,109	251	19,894,550	186	14,497,405	154	11,920,869	104	8,293,896	41	3,328,037	0	0	0	0	0	0	988	75,358,867
50 to 54	221	16,096,658	247	19,724,338	224	18,044,801	171	13,451,015	139	11,230,364	123	9,986,559	21	1,752,739	0	0	0	0	1146	90,286,473
55 to 59	134	9,693,766	162	13,069,447	181	14,530,793	124	9,584,663	114	9,151,599	109	8,756,196	43	3,514,681	1	79,290	0	0	868	68,380,434
60 to 64	55	4,158,162	87	6,892,243	103	7,989,580	83	6,556,564	76	6,452,942	60	4,781,691	15	1,196,714	9	731,578	1	73,507	489	38,832,981
65 to 69	20	1,648,552	20	1,581,160	24	1,858,790	20	1,530,073	20	1,785,138	10	836,930	5	424,461	2	164,861	4	314,036	125	10,144,000
70 & up	3	234,423	4	395,162	6	537,872	4	299,104	4	375,045	4	316,450	1	67,767	0	0	3	267,174	29	2,492,996
Total	1,692	111,510,380	1,473	114,993,133	1,055	83,545,710	721	56,489,461	490	39,917,091	349	28,195,317	85	6,956,363	12	975,728	8	654,717	5,885	443,237,899

Schedule D – Tables of Employee Data (continued)

Table 2 – The Number and Annual Retirement Allowances Distributed by Age as of December 31, 2015

	Service Retirements		Disabled Members		Beneficiaries	
Age	Number	Amount	Number	Amount	Number	Amount
<50	96	4,299,843	47	806,466	35	425,937
50	48	2,139,330	7	113,180	4	70,073
51	45	2,028,662	9	135,513	8	67,180
52	60	2,676,863	11	214,928	8	131,496
53	58	2,605,531	10	204,495	9	147,646
54	46	1,919,984	11	186,501	7	103,700
55	83	3,599,679	18	352,133	9	206,112
56	80	3,311,820	25	353,762	8	115,335
57	106	4,556,426	25	486,690	11	116,576
58	80	3,375,578	27	557,798	7	157,842
59	108	4,522,445	9	130,815	14	160,924
60	113	4,758,264	27	483,880	24	340,105
61	120	5,118,896	33	608,788	11	176,543
62	135	5,568,034	28	542,713	13	180,284
63	162	6,824,098	25	411,560	22	466,068
64	141	5,620,113	17	338,205	20	316,690
65	174	6,626,916	35	624,851	21	430,452
66	191	7,420,283	35	661,357	19	330,607
67	222	8,229,447	24	468,684	26	501,992
68	231	8,074,350	31	617,109	30	596,007
69	196	6,759,798	20	349,907	35	643,083
70	189	6,284,775	20	434,659	32	577,193
71	214	7,118,750	23	400,874	32	585,335
72	200	6,453,002	29	352,541	42	813,633
73	183	5,871,168	18	302,544	43	735,015
74	153	4,637,635	15	222,661	26	319,030
75	128	3,758,809	16	282,541	39	609,207
76	141	4,321,966	9	107,325	32	545,735
77	110	3,203,724	12	199,880	34	539,667
78	110	3,028,450	6	92,518	35	599,357
79	92	2,639,895	7	66,103	49	842,477
80	85	2,331,369	6	85,711	31	505,279
81	69	1,823,601	3	25,902	30	465,741
82	70	1,815,326	6	88,074	28	413,828
83	72	1,750,818	4	33,127	31	483,077
84	44	1,117,197	0	0	36	526,414
85	43	1,002,497	2	23,843	32	417,547
>85	241	5,513,812	7	63,279	283	3,912,611
Total	4,639	162,709,154	657	11,430,918	1,176	18,575,800
No Option	2,962	104,428,893	531	9,463,290	1,176	18,575,800
Survivor Option	38	1,613,858	9	139,056	0	0
Pop-Up Option	1,639	56,666,403	117	1,828,571	0	0
Total	4,639	162,709,154	657	11,430,918	1,176	18,575,800

STATISTICAL SECTION

Objectives

The objectives of the Statistical Section are to provide additional historical perspective, context and detail to assist readers in using the information in the Financial Statements, Notes to the Financial Statements, and Required Supplementary Information in order to understand and assess the Plan's economic condition.

Financial Trends

The Schedule of Changes in Net Position presented on page 124 contains historical information related to the Fund's revenues, expenses, changes in net position and net position available for benefits. The Schedule of Additions by Source on page 124 provides employer and employee contribution rates and investment income historical information. The schedules of deductions and benefits by type on page 125 provide a history of annual benefit, withdrawal, and operating expense trends.

Demographic and Economic Information

The schedule of Distribution of Plan Members shown on page 126 provides relevant details about the composition of the Fund's active membership including concentration of members within various age groups.

Operating Information

The Schedule of Average Benefit Payments on page 127 presents average monthly benefits and average final salary information by years of credited service for new benefit recipients within specified plan years. The Schedule of Valuation Data on page 128 illustrates the number of active members, annual payroll and average salary. Statistical data is provided from both the Fund's internal resources and from Buck Consultants.

Financial Trends (2006 - 2015 for all reports)

Schedule of Changes in Net Position

Year Ended Dec 31	Net Position Beginning of Year	Additions	Deductions	Increase (Decrease) in net Position	Net Position End of Year
2015	1,587,966,489	104,595,864	194,714,318	(90,118,454)	1,497,848,035
2014	1,606,684,354	169,464,986	188,182,851	(18,717,865)	1,587,966,489
2013	1,478,348,978	310,688,826	182,353,450	128,335,376	1,606,684,354
2012	1,394,395,336	262,766,724	178,813,082	83,953,642	1,478,348,978
2011	1,488,656,182	80,652,299	174,913,145	(94,260,846)	1,394,395,336
2010	1,417,576,340	240,947,436	169,867,594	71,079,842	1,488,656,182
2009	1,308,203,132	271,639,119	162,265,911	109,373,208	1,417,576,340
2008	1,920,580,509	(457,172,436)	155,204,941	(612,377,377)	1,308,203,132
2007	1,858,191,522	210,674,872	148,285,885	62,388,987	1,920,580,509
2006	1,712,350,978	281,830,524	135,989,980	145,840,544	1,858,191,522

Schedule of Additions by Source

Year Ended Dec 31	Employee Contributions	Employer Contributions	Employer Contributions as % of Covered Payroll	Investment Income (a)	Total
2015	26,510,946	73,373,672	16.66	4,711,246	104,595,864
2014	25,318,224	70,603,285	17.00	73,543,477	169,464,986
2013	21,027,548	58,039,160	15.31	231,622,118	310,688,826
2012	20,023,337	54,968,325	14.82	187,775,062	262,766,724
2011	19,089,304	52,278,311	14.26	9,284,684	80,652,299
2010	17,999,009	49,006,722	13.74	173,941,705	240,947,436
2009	15,254,120	38,566,024	11.00	217,818,975	271,639,119
2008	14,963,808	35,420,770	9.38	(507,557,014)	(457,172,436)
2007	13,373,194	30,014,017	8.41	167,287,661	210,674,872
2006	13,258,418	34,485,593	10.75	234,086,513	281,830,524

Contributions were made in accordance with actuarially determined contribution requirements
(a) Net of investment expenses

Schedule of Deductions by Type

Year Ended Dec 31	Benefits	Operating Expenses	Withdrawals	Total
2015	187,148,675	5,808,086	1,757,557	194,714,318
2014	182,499,776	4,052,664	1,630,411	188,182,851
2013	177,311,634	3,948,978	1,092,838	182,353,450
2012	174,627,907	3,384,113	801,062	178,813,082
2011	170,034,251	3,793,418	1,085,476	174,913,145
2010	164,510,892	4,441,078	915,624	169,867,594
2009	156,774,660	4,584,068	907,183	162,265,911
2008	148,957,895	5,207,616	1,039,430	155,204,941
2007	142,028,261	5,284,586	973,038	148,285,885
2006	131,811,614	3,547,170	631,196	135,989,980

Schedule of Benefit Deduction by Type

Year Ended Dec 31	Service	Disability	Beneficiary	Total
2015	158,790,759	12,294,604	16,063,312	187,148,675
2014	153,390,245	10,892,495	18,217,036	182,499,776
2013	149,450,754	10,689,534	17,171,346	177,311,634
2012	146,842,625	10,685,263	17,100,019	174,627,907
2011	142,715,543	10,508,424	16,810,284	170,034,251
2010	137,212,102	10,534,419	16,764,370	164,510,892
2009	129,815,106	10,165,316	16,794,238	156,774,660
2008	122,976,439	9,538,216	16,443,240	148,957,895
2007	116,557,172	8,993,080	16,478,010	142,028,261
2006	107,747,492	8,817,925	15,246,197	131,811,614

Demographic and Economic Information (As of 12/31/15)

Distribution of Fund Members as of December 31, 2015 - Active Members

	Years of Service										Total	Average
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total	Compensation	Compensation
0-24	24	0	-	-	-	-	-	-	-	24	1,440,259	60,011
25-29	267	86	1	-	-	-	-	-	-	354	22,540,072	63,673
30-34	264	203	58	2	-	-	-	-	-	527	36,192,403	68,676
35-39	235	199	127	48	-	-	-	-	-	609	43,981,741	72,220
40-44	217	214	145	115	33	2	-	-	-	726	53,587,674	73,812
45-49	252	251	186	154	104	41	-	-	-	988	75,358,867	76,274
50-54	221	247	224	171	139	123	21	-	-	1,146	90,286,473	78,784
55-59	134	162	181	124	114	109	43	1	-	868	68,380,434	78,779
60-64	55	87	103	83	76	60	15	9	1	489	38,832,981	79,413
65-69	20	20	24	20	20	10	5	2	4	125	10,144,000	81,152
70+	3	4	6	4	4	4	1	-	3	29	2,492,996	85,965
Total	**1,692**	**1,473**	**1,055**	**721**	**490**	**349**	**85**	**12**	**8**	**5,885**	**443,237,899**	75,317

Operating Information

Schedule of Average Benefit Payments - New Benefit Recipients (2006 – 2015)

Schedule of Average Benefit Payments - New Benefit Recipients (2006 - 2015)

Years of Service	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
From 1/1/2006 - 12/31/2006								
Average Monthly Benefit	$ 311	$ 738	$ 1,293	$ 2,047	$ 2,811	$ 3,602	$ 3,913	$ 2,883
Average Final Average Salary	65,593	49,220	57,833	59,903	65,695	69,426	73,819	66,012
Number of Retired Members	2	2	17	27	100	65	19	232
From 1/1/2007 - 12/31/2007								
Average Monthly Benefit	$ 440	$ 750	$ 1,413	$ 2,173	$ 2,981	$ 3,937	$ 3,909	$ 3,028
Average Final Average Salary	47,660	46,528	60,895	65,416	67,094	74,345	73,696	67,834
Number of Retired Members	3	8	10	20	165	57	17	280
From 1/1/2008 - 12/31/2008								
Average Monthly Benefit	$ 376	$ 805	$ 1,366	$ 1,890	$ 3,114	$ 3,785	$ 3,791	$ 3,050
Average Final Average Salary	54,435	54,936	59,125	62,404	69,994	72,082	72,697	69,177
Number of Retired Members	3	3	8	31	198	50	20	313
From 1/1/2009 - 12/31/2009								
Average Monthly Benefit	$ 510	$ 764	$ 1,413	$ 2,074	$ 3,206	$ 3,968	$ 4,162	$ 3,147
Average Final Average Salary	60,930	53,579	60,646	62,910	71,326	76,376	76,467	70,839
Number of Retired Members	1	4	12	25	147	45	14	248
From 1/1/2010 - 12/31/2010								
Average Monthly Benefit	$ -	$ 795	$ 1,525	$ 2,035	$ 3,338	$ 3,989	$ 4,169	$ 3,231
Average Final Average Salary	-	66,069	68,550	66,235	74,107	76,433	75,093	73,415
Number of Retired Members	0	7	11	24	188	41	14	285
From 1/1/2011 - 12/31/2011								
Average Monthly Benefit	$ -	$ 876	$ 1,390	$ 2,721	$ 3,266	$ 3,919	$ 4,351	$ 3,161
Average Final Average Salary	-	61,939	66,442	75,563	74,337	78,379	80,226	74,320
Number of Retired Members	0	7	12	16	133	29	7	204
From 1/1/2012 - 12/31/2012								
Average Monthly Benefit	$ 311	$ 840	$ 1,534	$ 2,305	$ 3,165	$ 4,239	$ 4,669	$ 3,137
Average Final Average Salary	43,363	59,592	75,925	73,205	74,644	80,771	85,574	75,643
Number of Retired Members	1	5	13	22	101	32	10	184
From 1/1/2013 - 12/31/2013								
Average Monthly Benefit	$ 844	$ 976	$ 1,460	$ 2,195	$ 3,298	$ 3,969	$ 4,868	$ 3,203
Average Final Average Salary	104,387	56,659	69,224	72,730	77,261	77,890	83,824	76,361
Number of Retired Members	2	4	19	12	78	52	7	174
From 1/1/2014 - 12/31/2014								
Average Monthly Benefit	$ -	$ 944	$ 1,565	$ 2,371	$ 3,455	$ 4,103	$ 4,429	$ 3,517
Average Final Average Salary	-	60,088	69,079	71,012	80,485	81,816	80,201	79,223
Number of Retired Members	0	1	10	7	55	37	13	123
From 1/1/2015 - 12/31/2015								
Average Monthly Benefit	$ 813	$ 951	$ 1,760	$ 2,346	$ 3,720	$ 4,582	$ 4,988	$ 3,565
Average Final Average Salary	143,040	77,667	74,294	76,590	86,810	87,865	88,188	85,090
Number of Retired Members	2	18	27	24	98	70	31	270

Schedule of Active Member Valuation Data

Valuation Date	Number	Annual Payroll	Average Annual Pay	% Increase In Average Pay
2015	5,885	443,237,899	75,317	4.5%
2014	5,798	417,957,007	72,086	8.2%
2013	5,726	381,380,271	66,605	1.2%
2012	5,668	373,000,972	65,808	2.3%
2011	5,726	368,473,591	64,351	1.4%
2010	5,643	358,028,815	63,447	0.9%
2009	5,719	359,486,528	62,858	0.1%
2008	6,152	386,372,713	62,804	4.9%
2007	6,081	364,204,073	59,892	4.4%

Frequently Asked Questions

Questions & Answers

Q *Who is eligible to become a member of the Retirement Fund?*

A Any person regularly employed by the MBTA is eligible to become a member of the Retirement Fund.

Q *How does an employee contribute to the Retirement Fund?*

A Retirement contributions are deducted from the regular earnings (excluding overtime).

Q *Are the matching contributions made by the Authority applied to the member's balance in the Fund?*

A NO. The Authority's contributions are not applied to the member's balance in the Fund. These contributions become an irrevocable asset of the Fund used for the benefit of its members.

Q *What is the rate of interest earned by the member on his/her contributions? Does the member continue to earn interest after his/her employment with the Authority is terminated by reason of retirement, resignation or discharge?*

A Interest earned on contributions made on or after July 1, 1967, are compounded annually at a rate of three percent (3%). Note: This rate is set by the Pension Agreement and does not reflect the earnings of the Fund. NO. A member stops earning interest on his/her contributions as of the last day of the month prior to his/her separation from the Authority's service.

Q *How do part-time employees accrue creditable service?*

A For the purpose of determining the amount of retirement benefit, creditable service shall accrue at the rate of one month of creditable service, or fraction thereof, for each 173 pay hours received.

Questions & Answers *(continued)*

Q ***Under what circumstances is the spouse of a member required to sign a spousal consent form?***

A When a member is about to retire, a spousal consent is required when the member elects to receive his/her benefit in the following manner:

No optional benefit for spouse
33⅓% with no pop-up
25% with no pop-up
50% with pop-up
33⅓% with pop-up
25% with pop-up
5, 10 or 15 years term certain benefits

Q ***Are retirement contributions deducted from Workers' Compensation payments? Does the time out on Workers' Compensation count as creditable membership service?***

A No. There are no retirement contributions deducted from Workers' Compensation payments. As a result, it may exclude that year as a high year in calculating the high 3 year average.

Yes. When a member is out of work and receiving Workers' Compensation payments, it does count as creditable membership service.

Q ***Workers' Compensation Offset: Does my receipt of Workers' Compensation payments affect my disability retirement benefit?***

A Possibly: If the payments that you receive under Workers' Compensation are based on the same injury that qualified you for disability retirement, your pension benefit will be offset against your Workers' Compensation for that same injury.

This means that your pension benefit will be directly reduced by the amount of the Workers' Compensation benefit that you receive.

Workers' Compensation payments that are based on an injury different from the injury that qualified you for a disability pension will not affect your disability retirement benefit.

Q ***Is the employment date with the Authority the same as the membership date in the Fund?***

A NO. Membership in the Fund begins when contributions are made to the Fund and is usually a short time after the employment date, typically 90 days after being employed.

Q ***When can a member retire?***

A A member can retire at age 65 or older on a Normal Retirement; for a member hired before December 6th, 2012, an Early Normal Retirement is available with 23 years of creditable service; a member hired on or after December 6th, 2012, an Early Normal Retirement is available if the member is age 55 or older and has at least 25 years of creditable service; an Early Reduced Retirement is available if a member is age 55 or older and has at least 20 years of creditable service; however, the retirement allowance will be reduced by 1/2 of 1% for each month between the age at retirement and age 65. The Plan provides for a Disability Retirement after 4 years of creditable service for an occupational disability or after 6 years for a non-occupational disability.

Q ***How is a member's retirement allowance determined?***

A The maximum retirement allowance is determined by using the following formula: The average of the best 3 years of earnings, multiplied by 2.46%, and multiplied by years and months of creditable membership service.

Q ***What is the date shown on the monthly retirement checks and when are they mailed to the retirees?***

A The monthly retirement checks are dated for the last business day of the month. The checks are mailed 4 or 5 days before the end of the month in order for them to arrive at the retiree's home by the last day of the month.

Questions & Answers *(continued)*

Q ***Does a member have a decision to make on how the pension will be paid?***

A YES. A member can take the maximum retirement allowance payable and will get a check every month for life in that amount, subject to adjustments from time to time. If a member takes the maximum retirement allowance payable, the member will recover the money contributed to the Fund in three years or less, and after the member dies, no further payments will be made from this Fund. A member can elect to take retirement payments under an option. Options give the retiree a lesser amount for life with the provision that upon their death the person designated as beneficiary will receive a retirement allowance. An example would be the 100% option. Instead of taking the maximum retirement allowance payable, the member elects to take a reduced amount for life and upon the member's death, the designated beneficiary will receive 100% of the allowance the member was receiving for life. The amount of reduction from the maximum is determined by option factors which are based on the member's and designated beneficiary's age and life expectancy. There are several types of options available.

Q ***If a member leaves the employ of the MBTA, what happens to the contributions made on the employee's behalf (Authority's Contributions) to the Fund?***

A Those contributions, once made, become an irrevocable asset of the Pension Fund and can only be used for the exclusive benefit of the members of the Fund.

Q ***If a retirement benefit is sent direct deposit (ACH – wire transfer) to a bank or credit union, when is the benefit deposited into the retiree's account and when are the funds available?***

A The benefit is wired to the retiree's bank or credit union on the last business day of the month. The availability date of these funds is determined by the member's banking institution.

Q ***Once a member has retired and elected either the maximum benefit or elected an option, can this election be changed?***

A NO. An option elected by a member can only be changed prior to the effective date of retirement.

Q ***How does unused sickleave affect the retirement allowance?***

A At retirement, a member's unused sickleave is converted to creditable membership service, which when multiplied by 2.46% of the average of the three (3) best years, increases the retirement allowance. For example, sickleave of 150 days converts to 7 months of creditable membership service. However, unused sickleave cannot be used to determine service eligibility for retirement.

Q ***In the event a retiree is divorced/widowed, can he/she drop the option elected or change it in favor of a new spouse?***

A NO. In the event a retiree is divorced/widowed from his/her spouse, the option elected cannot be dropped or transferred in favor of a new spouse after the effective date of retirement.

Q ***Can a member buy any service for which credit is not being received?***

A NO. A member can only get credit for the time in which both the member and the Authority make contributions.

Q ***Who can an active or retired member contact with specific questions concerning health and life insurance benefits?***

A Active and retired members of the MBTA may contact the Benefits Department with specific questions about health and life insurance benefits. The telephone number is (617) 222-3244. Written inquiries should be sent to the MBTA Benefits Department, 10 Park Plaza, 4th Floor, Boston, MA 02116.

Questions & Answers *(continued)*

Q ***Can a member withdraw any money from the Fund and pay it back at a later date with interest?***

A NO. A member cannot withdraw any contributions from the Fund. The only way a member can obtain money from the Fund is either by resigning or retiring.

Q ***Can I receive creditable service in the MBTA Retirement Fund for service with any other Federal, State, or local government agency?***

A NO. Since the MBTA Retirement Fund is a private system, no credit can be given for service other than with the MBTA.

Q ***If the surviving spouse is eligible to receive a monthly benefit, how soon does he/she begin receiving the benefit? Does he/she have to wait until the member would have reached age 65?***

A The surviving spouse is eligible to receive the benefit the first month following the member's death. He/she does not have to wait until the member would have reached age 65.

Example: Member passes away June 15. The surviving spouse is eligible for benefit starting July 1.

Q ***How are changes made in the Pension Plan?***

A All changes and improvements to the Pension Plan are negotiated between Local #589 and the Authority.

Q ***If I leave the employ of the Authority and return at a later date, am I eligible to "Buy Back" my prior service?***

A YES. A former member of the Fund who is re-employed by the Authority is eligible, after a 3-year waiting period, to request the Retirement Board to restore his/her previous service by the repayment of the withdrawn funds, plus interest. "Bridging the Gap" restores to the member the creditable service he/she built up during the previous period of employment. There is no credit given for the period between the date the member left the employ of the Authority and the date he/she was re-employed. That gap will always remain. Therefore, any member of the Fund who terminated his/her employment with the Authority and was re-employed should contact the Retirement Board to determine the amount necessary to "Buy Back" the previous service.

Q ***How does a member qualify for a benefit under the Vesting Provision of the Fund?***

A Under the Vesting Provision of the Fund, a member who has at least 10 years of creditable membership service may qualify for a benefit provided that his/her employment with the MBTA ended through no fault of their own. If a member resigns or is discharged for cause, he/she is not eligible for a retirement benefit under this provision.

Q ***When is a member eligible to receive a benefit under the Vesting Provision of the Fund?***

A Under the Vesting Provision of the Fund, a member is eligible to receive a retirement benefit the first of the month following the member's 65th birthday provided that the member has the 10 years of creditable membership service in the Fund and his/her employment did not end voluntarily or by termination.

Q ***Can taxes be withheld from my pension benefit?***

A Federal taxes can be withheld and deducted from your pension check each month. The amount of federal tax withheld from your monthly benefit can be changed at anytime by filing a new W-4P form with the Retirement Fund.

The MBTARF Pension is not taxable in the state of Massachusetts. Retirees residing in Massachusetts should not include their pensionable earnings from the MBTA Retirement Fund as income on their Massachusetts return.

Q ***If a member has a question concerning the Fund or would like to obtain an estimate of his/her retirement benefit, whom should he/she contact for the correct answer?***

A All questions should be directed to the MBTA Retirement Fund at One Washington Mall, Boston, MA 02108 (617) 316-3800 or 800-810-6228.