

FLASH REPORT (GROSS)

Boston Retirement System

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Q1	Apr	May	YTD
US Large Cap	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	13.6%	4.0%	-6.4%	10.7%
US Small/Mid Cap	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	15.8%	3.5%	-7.1%	11.3%
Int'l Developed Equity	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	10.0%	2.8%	-4.8%	7.6%
Emerging Market Equity	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	9.9%	2.1%	-7.3%	4.1%
US Aggregate	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	2.9%	0.0%	1.8%	4.8%
US High Yield	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	7.3%	1.4%	-1.2%	7.5%
US Long Treasury	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	4.7%	-1.8%	6.5%	9.5%
EM Local Credit	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	2.9%	-0.2%	0.3%	3.0%
Global Credit	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	7.4%	-1.2%	2.2%	-0.3%	1.4%	3.3%
Commodities	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	6.3%	-0.4%	-3.4%	2.3%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	3.2%	0.3%	1.7%	5.2%

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse

S&P 500 = US Large Cap
 Russell 2500 = US Small/Mid Cap
 MSCI EAFE = International Developed Equity
 MSCI EM = Emerging Market Equity
 Bloomberg Barclays Aggregate = US Aggregate
 Bloomberg Barclays High Yield = US HY
 Bloomberg Barclays Long Treasury = US Long Treasury
 GBI-EM Global Diversified = EM Local Credit
 Barclays Global Aggregate = Global Credit
 Bloomberg Commodity = Commodities
 Barclays US TIPS = BC TIPS



Boston Retirement System

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	4,857,912,586	100.0	100.0	-3.1	-0.6	6.0	-0.5	7.5	4.9	8.3	7.6	Aug-94
<i>Allocation Index</i>				-2.8	-0.4	6.1	0.3	7.6	5.0	7.9	--	Aug-94
<i>Policy Index</i>				-2.8	-0.5	5.7	1.6	8.2	5.5	8.5	--	Aug-94
PRIT Core Fund/Teachers*	1,627,399,147	33.5		-2.3	0.2	5.8	2.7	8.7	6.6	--	9.2	Jul-10
Total Equity	2,340,704,991	48.2	48.0	-6.5	-2.7	8.4	-5.3	9.2	5.3	--	--	Dec-04
Large Cap Comp	859,648,873	17.7	17.0	-6.6	-1.0	11.3	1.9	12.9	10.2	14.8	9.1	Dec-04
Rhumblin Advisors	147,171,905	3.0		-6.3	-0.7	10.7	3.7	11.7	9.6	13.9	9.6	Aug-94
DE Shaw Core Enhanced	83,262,794	1.7		-6.5	-0.8	10.2	3.8	12.2	10.1	--	13.4	Oct-09
JP Morgan 130/30	199,268,613	4.1		-6.6	-0.1	10.7	1.5	11.7	9.6	--	13.1	Oct-09
<i>S&P 500</i>				-6.4	-0.7	10.7	3.8	11.7	9.7	13.9	12.7	Oct-09
DE Shaw 130/30	215,031,544	4.4		-6.9	-1.9	9.5	0.3	12.3	10.6	--	14.4	Oct-09
<i>Russell 1000</i>				-6.4	-0.9	11.0	3.5	11.7	9.5	14.0	12.8	Oct-09
Columbia Threadneedle	102,462,083	2.1		-9.6	-4.3	6.3	-4.5	10.3	7.3	13.7	9.3	Jan-97
<i>Russell 1000 Value</i>				-6.4	-2.5	8.5	1.4	8.0	6.5	12.3	8.0	Jan-97
Zevenbergen Capital	56,198,702	1.2		-4.2	0.7	28.3	7.4	23.5	14.4	17.9	12.1	Aug-94
Intech	56,253,231	1.2		-3.5	3.4	18.6	8.4	16.9	13.5	16.6	9.9	Oct-06
<i>Russell 1000 Growth</i>				-6.3	0.7	13.7	5.4	15.3	12.3	15.6	10.2	Oct-06
Small Cap Comp	304,588,606	6.3	6.0	-7.1	-4.0	11.0	-4.7	12.4	8.0	14.4	9.4	Dec-04
Westfield Capital Management	96,791,398	2.0		-6.8	-1.9	13.8	-3.6	13.6	8.5	15.5	10.8	Sep-03
<i>Russell 2000 Growth</i>				-7.4	-5.9	11.8	-6.9	11.7	8.3	13.9	9.0	Sep-03
Bernzott	108,728,586	2.2		-7.0	-4.4	9.2	-1.9	13.3	--	--	11.3	Nov-15
<i>Russell 2000 Value</i>				-8.2	-7.4	6.7	-11.3	7.7	5.0	11.7	7.3	Nov-15
Aristotle	99,068,533	2.0		-7.6	-5.6	10.2	-7.3	10.4	--	--	9.2	Nov-15
<i>Russell 2000</i>				-7.8	-6.6	9.3	-9.0	9.8	6.7	12.8	8.2	Nov-15

- J&W Seligman is now named Columbia Threadneedle.

Note: Returns are gross of manager fees except for hedge funds and private equity which are net of fees.



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TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Non-US Equity	1,176,467,511	24.2	25.0	-6.2	-3.5	6.1	-10.3	6.0	1.2	6.0	5.9	Aug-94
International Equity	792,396,890	16.3	17.0	-6.7	-3.4	6.6	-10.5	4.9	0.6	--	4.7	Dec-10
Todd	218,265,016	4.5		-7.7	-4.3	7.7	-11.2	4.2	--	--	4.2	Apr-16
<i>MSCI ACWI ex USA</i>				-5.4	-2.3	7.2	-6.3	6.7	1.3	5.8	6.7	Apr-16
Panagora Asset Management	226,206,901	4.7		-5.5	-3.5	5.2	-9.5	4.9	2.0	7.8	5.7	Aug-94
Fisher	235,301,687	4.8		-6.9	-1.2	9.0	-6.2	7.2	2.4	7.7	4.3	Feb-06
<i>MSCI EAFE</i>				-4.8	-1.5	7.6	-5.7	5.8	1.3	6.2	3.0	Feb-06
Segall Bryant Hamill	112,235,558	2.3		-6.9	-6.2	2.5	-20.4	--	--	--	-11.8	Nov-17
<i>MSCI EAFE Small Cap</i>				-5.3	-2.3	8.0	-11.9	5.6	3.8	9.4	-4.8	Nov-17
Emerging Markets	384,070,621	7.9	8.0	-5.0	-3.6	5.1	-9.7	8.2	2.2	--	2.2	Dec-10
Vontobel	100,452,239	2.1		-5.3	1.1	9.2	-0.9	7.8	3.8	9.8	10.0	Oct-05
Polunin	103,950,715	2.1		-3.7	-5.1	3.9	-9.4	11.9	4.7	--	6.0	Oct-13
SSgA Emerging Markets	89,016,912	1.8		-6.3	-5.7	1.8	-11.6	9.0	0.4	--	0.9	Oct-13
<i>MSCI Emerging Markets</i>				-7.3	-4.5	4.1	-8.7	9.9	1.8	5.0	2.5	Oct-13
Lazard	90,650,756	1.9		-5.0	-4.2	6.2	-16.1	3.6	0.5	--	1.2	Oct-13
<i>MSCI Emerging Markets Small Cap</i>				-4.9	-3.8	2.7	-14.7	5.0	0.1	5.4	1.5	Oct-13
Total Fixed Income	1,443,879,945	29.7	26.0									
Core Fixed Income	925,537,888	19.1	16.0	1.1	3.0	4.4	5.1	3.3	3.1	4.7	4.7	Dec-04
Wells Asset Management	306,634,305	6.3		1.7	3.6	4.8	6.4	2.8	3.0	4.9	5.1	May-05
BlackRock SIO	310,579,211	6.4		0.3	2.0	3.7	3.8	4.4	--	--	3.3	Aug-15
<i>BBgBarc US Aggregate TR</i>				1.8	3.8	4.8	6.4	2.5	2.7	3.8	2.8	Aug-15
IR&M	308,324,372	6.3		1.3	3.3	4.6	5.1	2.5	--	--	3.2	Jul-15
<i>IR&M Custom Benchmark</i>				1.7	3.8	5.1	5.2	2.2	2.5	3.7	2.7	Jul-15

- IR&M Custom Benchmark reflects BC Agg since inception through 04/30/2017, as of 05/01/2017 forward it reflects 40% BC Agg/60% BC US TIPS.



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TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Value Added Fixed Income	518,342,057	10.7	10.0	-0.4	1.5	6.3	4.2	6.1	2.9	--	--	
High Yield Income	315,826,871	6.5	6.0	-0.8	1.5	5.7	4.4	7.0	4.9	8.7	7.0	Jan-06
Crescent Capital	104,120,087	2.1		-0.5	1.3	5.6	4.8	5.8	--	--	5.2	May-15
50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield				-0.7	1.2	6.5	4.7	6.1	4.1	8.0	4.5	May-15
DDJ	102,803,315	2.1		-1.5	1.6	5.2	4.6	9.7	--	--	6.5	May-15
75% BC HY 25% S&P Leverage Loan				-0.9	1.2	7.0	5.1	6.6	--	--	4.7	May-15
GoldenTree Multi Spec Opp Credit	107,967,419	2.2		-0.4	1.7	6.3	3.8	--	--	--	5.7	Dec-16
Blended Index				-0.4	1.5	5.8	4.3	--	--	--	4.8	Dec-16
S&P/LSTA Leveraged Loan TR				-0.2	1.3	5.5	3.8	5.2	3.7	6.6	4.5	Dec-16
Emerging Market Debt	178,902,405	3.7	4.0	0.0	1.4	7.6	3.8	4.9	-1.0	--	0.0	Nov-11
Aberdeen EMD Plus	178,902,359	3.7		0.0	1.4	7.6	--	--	--	--	8.7	Dec-18
JP Morgan EMBI Global Diversified				0.4	2.1	7.7	7.5	5.5	4.7	7.6	9.1	Dec-18
Global Fixed Income	23,612,781	0.5	0.0	1.0	2.1	3.9	3.1	2.7	1.4	4.1	5.1	Jul-95
Loomis Sayles	23,612,781	0.5		1.0	2.1	3.9	3.1	2.7	1.4	4.1	5.7	Nov-99
FTSE WGBI TR				1.7	2.5	3.0	2.8	1.5	0.5	2.0	4.1	Nov-99
Total Alternative Assets	1,019,506,204	21.0	26.0									
Hedge Fund Composite	235,057,832	4.8	5.0	-0.5	0.3	2.5	-0.6	1.9	-0.2	3.2	2.9	Nov-04
EnTrust Peruvian Bonds	5,007,462	0.1		-0.1	-0.6	-0.8	-4.5	--	--	--	-3.8	Jan-18
Blackstone	113,043,382	2.3		0.0	1.3	3.8	4.3	--	--	--	4.3	Feb-18
Grosvenor	114,294,215	2.4		-1.0	0.1	2.5	-2.2	3.9	2.2	--	3.5	Jul-13
HFRI Fund of Funds Composite Index				-1.0	0.9	4.5	-0.8	3.6	2.1	3.1	2.9	Jul-13
Hedge Fund Transition Account	2,712,773	0.1										
Real Estate Composite	469,478,597	9.7	10.0	0.0	1.6	1.6	8.9	8.7	10.5	6.6	--	
Private Equity & Debt	314,969,775	6.5	11.0	0.0	-1.4	-1.4	9.3	8.4	8.7	8.5	--	
Cash	53,821,446	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	Oct-04

- Real Estate and Private Equity & Debt report on a quarterly basis, valuations are as of 12/31/2018.
- The Hedge Fund Transition Account is an estimation of the total values redeemed from the hedge fund portfolio and is subject to change.
- The Blended Index Benchmark consists of 30% ML HY II/ 30% S&P LSTA / 25% HFRI RV FI/ 15% BAML ABS.
- Entrust Peruvian Bonds and Grosvenor are preliminary as of 5/31/2019.

Note: Returns are gross of manager fees except for hedge funds and private equity which are net of fees.



Boston Retirement System

TOTAL FUND PERFORMANCE DETAIL

PE/RE Summary						
Quarter Ending December 31, 2018						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
Private Equity & Debt IRR	\$948,876,703	\$563,358,645	\$650,857,524	-1.4%	9.3%	\$314,969,775
Private Equity	\$610,376,703	\$440,951,360	\$460,027,029			\$175,189,071
Private Debt	\$338,500,000	\$122,407,285	\$190,830,495			\$139,780,704
Real Estate IRR	\$899,735,502	\$729,353,035	\$792,965,732	1.6%	8.9%	\$469,478,597



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