

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	2019	Oct	YTD
S&P 500	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	-2.7%	2.8%
Russell 1000	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	-2.4%	3.8%
Russell 2000	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	2.1%	-6.8%
Russell 2500	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	1.8%	-4.1%
MSCI EAFE	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	-4.0%	-10.8%
MSCI EM	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	2.1%	0.9%
MSCI ACWI	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	-2.4%	-1.1%
Private Equity	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	-	-7.3%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	-0.6%	8.5%
BC Municipal	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	-0.3%	3.0%
BC Muni High Yield	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	0.2%	0.5%
BC US Corporate HY	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	0.5%	1.1%
BC US Agg Bond	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	-0.4%	6.3%
BC Global Agg	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	0.1%	5.8%
BC Long Treasuries	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	-3.0%	17.7%
BC US Long Credit	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	-0.6%	7.3%
BC US STRIPS 20+ Yr	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	-4.0%	23.7%
JPM GBI-EM Global Div	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	0.4%	-5.9%
JPM EMBI Glob Div	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	0.0%	-0.5%
CS Hedge Fund	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	-	0.0%
BBG Commodity	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	1.4%	-10.8%
Alerian MLP	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	4.4%	-43.8%
FTSE NAREIT Equity REITs	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-2.6%	-19.7%

Source: FactSet, Barclays, Thomson One

*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag



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	5,368,315,997	100.0	100.0	-0.5	1.3	0.9	5.1	4.5	6.8	7.2	7.6	Aug-94
<i>Allocation Index</i>				-0.8	1.1	0.3	3.9	4.5	6.7	6.7	--	Aug-94
<i>Policy Index</i>				-0.8	1.5	0.8	4.4	5.4	7.3	7.3	--	Aug-94
PRIT Core Fund/Teachers*	1,692,229,582	31.5		-0.9	2.1	1.6	4.8	6.2	7.9	8.2	9.1	Jul-10
Total Equity	2,646,102,281	49.3	48.0	-1.2	1.0	-1.7	5.2	4.1	7.9	--	--	Dec-04
<i>MSCI ACWI</i>				-2.4	0.2	-1.1	4.9	5.5	8.1	7.9	6.6	Dec-04
Large Cap Comp	1,052,180,287	19.6	17.0	-2.0	1.5	8.9	17.2	12.6	13.5	14.4	10.0	Dec-04
Rhumblin Advisors	283,068,230	5.3		-2.7	0.4	2.8	9.7	10.4	11.7	13.0	9.9	Aug-94
DE Shaw Core Enhanced	364,066,959	6.8		-2.5	0.3	3.3	10.5	11.2	12.4	13.8	13.8	Oct-09
<i>Russell 1000</i>				-2.4	0.9	3.8	10.9	10.6	11.8	13.0	13.1	Oct-09
Aristotle Value	139,376,087	2.6		-0.2	2.8	-1.2	6.0	--	--	--	6.0	Nov-19
Columbia Threadneedle	125,782,700	2.3		-1.5	0.1	-9.4	-2.5	3.3	8.1	11.6	9.1	Jan-97
<i>Russell 1000 Value</i>				-1.3	0.2	-12.7	-7.6	1.9	5.8	9.5	7.6	Jan-97
Zevenbergen Capital	139,464,431	2.6		-1.5	5.8	79.6	101.3	39.3	28.6	21.3	14.5	Aug-94
<i>Russell 1000 Growth</i>				-3.4	1.6	20.1	29.2	18.8	17.3	16.3	10.6	Aug-94
Small Cap Comp	368,724,785	6.9	6.0	2.9	3.4	-1.5	7.4	6.8	10.3	12.0	9.5	Dec-04
Westfield Capital Management	107,321,781	2.0		0.5	4.5	10.9	23.9	14.3	13.9	14.1	11.6	Sep-03
<i>Russell 2000 Growth</i>				0.8	4.4	4.7	13.4	7.9	10.4	12.0	9.4	Sep-03
Bernzott	122,037,221	2.3		4.0	4.9	-3.2	5.5	6.4	10.7	--	10.7	Nov-15
<i>Russell 2000 Value</i>				3.6	4.1	-18.7	-13.9	-4.1	3.7	7.1	3.7	Nov-15
Aristotle Small Cap	139,212,357	2.6		4.1	1.1	-10.4	-4.7	0.2	6.8	--	6.8	Nov-15
<i>Russell 2000</i>				2.1	4.2	-6.8	-0.1	2.2	7.3	9.6	7.3	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.



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 Non-US Equity	1,225,197,210	22.8	25.0	-1.6	-0.2	-10.1	-4.7	-2.6	3.3	3.2	5.7	Aug-94
International Equity	820,603,094	15.3	17.0	-3.0	-0.5	-12.1	-7.4	-3.1	2.0	--	4.2	Dec-10
Todd	234,275,469	4.4		-0.5	0.1	-8.6	-2.1	-0.8	--	--	4.7	Apr-16
<i>MSCI ACWI ex USA</i>				-2.1	-0.5	-7.5	-2.6	-0.2	4.3	3.4	5.7	Apr-16
Panagora Asset Management	246,404,782	4.6		-3.5	-1.1	-11.9	-8.4	-3.5	2.2	4.8	5.3	Aug-94
Walter Scott International Equity	236,833,258	4.4		-4.4	--	--	--	--	--	--	-4.4	Oct-20
<i>MSCI EAFE</i>				-4.0	-1.7	-10.8	-6.9	-1.2	2.8	3.8	-4.0	Oct-20
Segall Bryant Hamill	102,858,042	1.9		-3.8	1.3	-19.7	-13.9	-8.8	--	--	-8.8	Nov-17
<i>MSCI EAFE Small Cap</i>				-3.5	3.0	-7.5	-1.4	-0.4	5.4	6.5	-0.4	Nov-17
Emerging Markets	404,594,116	7.5	8.0	1.2	0.5	-5.5	1.3	-1.5	5.8	--	2.4	Dec-10
Vontobel	111,118,579	2.1		2.9	3.5	2.2	8.3	3.6	7.1	5.6	9.8	Oct-05
Polunin	110,537,493	2.1		1.8	0.4	-5.8	2.1	-1.0	8.6	--	5.8	Oct-13
SSgA Emerging Markets	92,957,587	1.7		1.3	2.1	-5.8	0.6	-2.4	5.3	--	1.4	Oct-13
<i>MSCI Emerging Markets</i>				2.1	2.6	0.9	8.3	1.9	7.9	2.4	4.0	Oct-13
Lazard	89,980,457	1.7		-1.7	-4.5	-13.0	-6.3	-6.5	2.0	--	0.7	Oct-13
<i>MSCI Emerging Markets Small Cap</i>				-0.6	1.8	-2.9	2.4	-2.4	3.3	0.6	2.0	Oct-13
Total Fixed Income	1,491,626,437	27.8	26.0	-0.2	0.1	6.0	6.6	4.9	4.4	4.1	4.9	Dec-04
Core Fixed Income	942,481,571	17.6	16.0	-0.3	-0.8	7.8	7.8	5.7	4.6	4.4	5.4	May-05
Wells Asset Management	321,726,392	6.0		0.0	1.0	3.5	4.7	4.2	4.2	--	3.9	Aug-15
BlackRock SIO	302,292,202	5.6		-0.4	-1.3	6.3	6.2	5.1	4.1	3.6	4.0	Aug-15
<i>BBgBarc US Aggregate TR</i>				-0.4	0.1	7.0	7.4	5.0	4.2	--	4.3	Jul-15
IR&M	318,462,978	5.9		-0.4	-0.1	6.3	6.7	4.6	3.6	3.3	3.6	Jul-15
<i>IR&M Custom Benchmark</i>				-0.4	-0.1	6.3	6.7	4.6	3.6	3.3	3.6	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.
- Total Fixed Income Composite value includes the liquidating Loomis Sayles account.

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
Value Added Fixed Income	549,144,866	10.2	10.0	0.6	1.4	0.4	2.8	3.3	5.4	--	--	
High Yield Income	331,295,320	6.2	6.0	0.8	2.7	1.4	4.3	3.8	5.8	6.1	6.7	Jan-06
Crescent Capital	110,202,900	2.1		0.9	1.6	0.6	2.9	3.6	5.4	--	5.0	May-15
<i>50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield</i>				0.4	1.4	0.3	2.6	3.6	5.2	5.2	4.2	May-15
DDJ	107,598,398	2.0		1.6	5.2	3.4	7.4	4.0	7.5	--	5.9	May-15
<i>75% BC HY 25% S&P Leverage Loan</i>				0.4	0.9	0.7	3.1	3.9	5.8	--	4.7	May-15
GoldenTree Multi Sector Opp Credit	112,513,343	2.1		-0.1	1.4	0.3	2.9	3.8	--	--	4.7	Dec-16
<i>Blended Index</i>				0.3	1.4	0.8	2.6	3.4	--	--	4.3	Dec-16
<i>S&P/LSTA Leveraged Loan TR</i>				0.2	2.3	-0.5	1.7	3.0	4.1	4.1	3.5	Dec-16
Emerging Market Debt	217,849,546	4.1	4.0	0.2	-0.7	-2.4	-0.5	2.1	4.4	--	0.5	Nov-11
Aberdeen EMD Plus	217,849,232	4.1		0.2	-0.7	-2.4	-0.5	--	--	--	7.1	Dec-18
<i>JP Morgan EMBI Global Diversified</i>				0.0	-1.4	-0.5	1.0	3.4	5.6	5.2	8.0	Dec-18
Total Alternative Assets	1,197,353,945	22.3	26.0									
Hedge Fund Composite	263,493,756	4.9	5.0	0.5	3.2	5.4	7.3	3.1	2.3	3.0	3.4	Nov-04
EnTrust Peruvian Bonds	4,541,708	0.1		-1.4	-1.8	-3.6	-6.5	--	--	--	-5.0	Jan-18
Blackstone	128,123,744	2.4		0.2	1.5	2.0	3.4	--	--	--	4.3	Feb-18
Grosvenor	129,465,847	2.4		0.9	5.2	9.3	11.9	5.1	4.4	--	4.6	Jul-13
<i>HFRI Fund of Funds Composite Index</i>				0.3	2.3	2.9	5.5	2.6	3.0	2.8	3.2	Jul-13
Hedge Fund Transition Account	1,362,457	0.0										
Real Estate Composite	507,748,596	9.5	10.0	0.0	-1.0	1.5	3.4	6.9	7.9	10.8	--	
Private Equity & Debt	426,111,593	7.9	11.0	0.0	7.1	-1.7	-0.5	6.6	5.6	7.9	--	
Cash	33,233,334	0.6	0.0	0.0	0.0	0.4	0.6	0.9	0.5	0.3	1.2	Oct-04

- Real Estate and Private Equity & Debt report on a quarterly basis, valuations are as of 6/30/2020.
- 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.

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

Private Markets & Real Estate Summary						
Quarter Ending June 30, 2020						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
Private Equity & Debt IRR	\$1,061,871,623	\$614,141,318	\$799,319,547	7.1%	-0.5%	\$426,111,593
Private Equity	\$604,893,122	\$469,822,949	\$516,285,075			\$217,786,033
Private Debt	\$456,978,501	\$144,318,369	\$283,034,472			\$208,325,560
Real Estate IRR	\$1,037,176,734	\$782,609,965	\$851,209,177	-1.0%	3.4%	\$507,748,596



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- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
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