

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	Sep	YTD
S&P 500	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	1.9%	20.6%
Russell 1000	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	1.7%	20.5%
Russell 2000	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	2.1%	14.2%
Russell 2500	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	1.8%	17.7%
MSCI EAFE	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	2.9%	12.8%
MSCI EM	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	1.9%	5.9%
MSCI ACWI	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	2.1%	16.2%
Private Equity	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	-	4.9%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	-1.4%	7.6%
BC Municipal	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	-0.8%	6.7%
BC Muni High Yield	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	-0.2%	9.7%
BC US Corporate HY	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	0.4%	11.4%
BC US Agg Bond	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	-0.5%	8.5%
BC Global Agg	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	-1.0%	6.3%
BC Long Treasuries	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	-2.5%	19.8%
BC US Long Credit	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	-1.5%	21.9%
BC US STRIPS 20+ Yr	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	-3.6%	28.4%
JPM GBI-EM Global Div	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	1.0%	7.9%
JPM EMBI Glob Div	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	-0.5%	13.0%
CS Hedge Fund	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	-	7.1%
BBG Commodity	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	1.2%	3.1%
Alerian MLP	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	0.7%	11.1%
FTSE NAREIT Equity REITs	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	2.9%	27.0%

Source: FactSet, Barclays, Alerian, Credit Suisse, JP Morgan, 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	5,099,635,635	100.0	100.0	1.2	0.1	10.4	1.4	7.6	5.8	7.8	7.7	Aug-94
<i>Allocation Index</i>				1.4	0.6	11.0	2.8	7.5	5.9	7.3	--	Aug-94
<i>Policy Index</i>				1.6	0.7	11.0	4.1	8.2	6.5	7.8	--	Aug-94
PRIT Core Fund/Teachers*	1,652,661,144	32.4		1.5	1.4	11.6	4.8	8.8	7.5	--	9.5	Jul-10
Total Equity	2,464,744,903	48.3	48.0	2.0	-1.1	14.4	-2.0	9.3	6.5	--	--	Dec-04
Large Cap Comp	924,700,592	18.1	17.0	0.9	0.7	20.0	1.6	14.0	11.1	14.0	9.4	Dec-04
Rhumblin Advisors	220,832,303	4.3		1.9	1.7	20.5	4.2	13.3	10.8	13.2	9.9	Aug-94
DE Shaw Core Enhanced	91,227,226	1.8		1.8	2.4	20.8	4.4	14.1	11.3	14.0	14.0	Oct-09
JP Morgan 130/30	214,373,716	4.2		0.3	1.0	19.3	0.5	13.2	10.3	13.5	13.5	Oct-09
<i>S&P 500</i>				1.9	1.7	20.6	4.3	13.4	10.8	13.2	13.2	Oct-09
DE Shaw 130/30	232,596,103	4.6		1.7	1.8	18.8	1.9	13.6	12.0	14.8	14.8	Oct-09
<i>Russell 1000</i>				1.7	1.4	20.5	3.9	13.2	10.6	13.2	13.2	Oct-09
Columbia Threadneedle	111,078,914	2.2		2.8	0.2	15.3	-1.6	11.2	8.4	13.0	9.5	Jan-97
<i>Russell 1000 Value</i>				3.6	1.4	17.8	4.0	9.4	7.8	11.5	8.3	Jan-97
Zevenbergen Capital	54,260,089	1.1		-7.7	-11.3	23.9	-6.4	18.4	11.9	15.1	11.8	Aug-94
<i>Russell 1000 Growth</i>				0.0	1.5	23.3	3.7	16.9	13.4	14.9	9.8	Aug-94
Small Cap Comp	319,313,945	6.3	6.0	2.4	-1.7	16.6	-6.7	12.5	9.0	13.0	9.5	Dec-04
Westfield Capital Management	100,886,343	2.0		-0.7	-2.4	18.8	-3.8	13.8	8.8	14.0	10.8	Sep-03
<i>Russell 2000 Growth</i>				-0.8	-4.2	15.3	-9.6	9.8	9.1	12.2	9.0	Sep-03
Bernzott	113,797,399	2.2		4.2	-1.1	14.6	-8.3	13.5	--	--	11.7	Nov-15
<i>Russell 2000 Value</i>				5.1	-0.6	12.8	-8.2	6.5	7.2	10.1	8.2	Nov-15
Aristotle Small Cap	104,629,504	2.1		3.6	-1.8	16.7	-7.4	10.5	--	--	9.9	Nov-15
<i>Russell 2000</i>				2.1	-2.4	14.2	-8.9	8.2	8.2	11.2	8.7	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	1,220,730,365	23.9	25.0	2.7	-2.2	10.4	-3.4	5.4	2.7	4.5	6.0	Aug-94
International Equity	831,457,081	16.3	17.0	3.0	-1.4	12.2	-4.2	5.6	2.8	--	5.2	Dec-10
Todd	232,405,307	4.6		2.2	-1.3	15.2	-3.2	6.2	--	--	5.8	Apr-16
<i>MSCI ACWI ex USA</i>				2.6	-1.8	11.6	-1.2	6.3	2.9	4.5	7.2	Apr-16
Panagora Asset Management	234,007,360	4.6		3.3	-1.8	8.9	-4.9	5.0	3.7	6.3	5.7	Aug-94
Fisher	249,564,255	4.9		3.2	-1.4	15.8	-0.6	7.7	4.8	6.4	4.6	Feb-06
<i>MSCI EAFE</i>				2.9	-1.1	12.8	-1.3	6.5	3.3	4.9	3.3	Feb-06
Segall Bryant Hamill	115,098,177	2.3		3.7	-1.0	5.8	-12.6	--	--	--	-8.6	Nov-17
<i>MSCI EAFE Small Cap</i>				2.8	-0.4	12.1	-5.9	5.9	6.0	7.5	-2.1	Nov-17
Emerging Markets	389,273,284	7.6	8.0	2.1	-3.7	6.7	-1.4	4.7	2.5	--	2.3	Dec-10
Vontobel	102,345,855	2.0		0.2	-3.1	11.6	6.9	5.6	3.8	8.1	9.9	Oct-05
Polunin	105,090,461	2.1		2.3	-4.6	5.0	-3.3	7.2	4.8	--	5.8	Oct-13
SSgA Emerging Markets	89,788,861	1.8		2.7	-4.4	2.6	-6.9	5.1	0.9	--	1.0	Oct-13
<i>MSCI Emerging Markets</i>				1.9	-4.2	5.9	-2.0	6.0	2.3	3.4	2.7	Oct-13
Lazard	92,048,106	1.8		3.4	-2.7	8.4	-0.2	0.6	0.8	--	1.5	Oct-13
<i>MSCI Emerging Markets Small Cap</i>				2.0	-4.6	1.8	-5.5	1.3	-0.1	3.2	1.3	Oct-13
Total Fixed Income	1,482,993,586	29.1	26.0	-0.4	1.5	7.4	8.0	3.4	3.6	4.4	4.8	Dec-04
Core Fixed Income	951,811,723	18.7	16.0	-0.4	1.5	7.4	8.0	3.4	3.6	4.4	4.8	Dec-04
Wells Asset Management	317,721,390	6.2		-0.5	2.3	8.6	10.5	3.1	3.7	4.7	5.3	May-05
BlackRock SIO	318,513,556	6.2		0.1	1.0	6.6	6.2	4.5	--	--	3.7	Aug-15
<i>BBgBarc US Aggregate TR</i>				-0.5	2.3	8.5	10.3	2.9	3.4	3.7	3.5	Aug-15
IR&M	315,576,777	6.2		-0.7	1.3	7.1	7.6	2.5	--	--	3.6	Jul-15
<i>IR&M Custom Benchmark</i>				-1.0	1.7	8.0	8.4	2.3	3.0	3.6	3.2	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.

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	531,181,862	10.4	10.0	0.0	0.5	8.9	6.0	5.5	3.7	--	--	
High Yield Income	319,528,752	6.3	6.0	0.2	0.2	7.0	3.4	5.9	5.1	7.5	6.9	Jan-06
Crescent Capital	107,499,014	2.1		0.5	1.7	9.0	5.3	5.4	--	--	5.5	May-15
50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield				0.5	1.3	9.2	4.9	5.3	4.7	6.6	4.7	May-15
DDJ	101,638,925	2.0		0.0	-1.4	4.5	1.2	7.0	--	--	5.9	May-15
75% BC HY 25% S&P Leverage Loan				0.4	1.3	10.3	5.6	5.7	--	--	5.1	May-15
GoldenTree Multi Sector Opp Credit	109,252,866	2.1		0.1	0.2	7.5	3.3	--	--	--	5.5	Dec-16
Blended Index				0.4	0.9	8.0	4.6	4.9	--	--	5.0	Dec-16
S&P/LSTA Leveraged Loan TR				0.7	1.2	7.0	3.3	4.6	4.0	5.2	4.5	Dec-16
Emerging Market Debt	187,400,896	3.7	4.0	-0.3	1.0	12.7	10.8	5.2	0.8	--	0.6	Nov-11
Aberdeen EMD Plus	187,400,583	3.7		-0.3	1.0	12.7	--	--	--	--	13.8	Dec-18
JP Morgan EMBI Global Diversified				-0.5	1.5	13.0	11.6	4.6	5.7	6.9	14.5	Dec-18
Global Fixed Income	24,252,214	0.5	0.0	-0.9	0.4	6.6	7.1	2.0	2.4	3.1	5.1	Jul-95
Loomis Sayles	24,252,214	0.5		-0.9	0.4	6.6	7.1	2.0	2.4	3.1	5.7	Nov-99
FTSE WGBI TR				-1.3	0.8	6.3	8.1	1.2	1.8	1.7	4.2	Nov-99
Total Alternative Assets	1,100,191,451	21.6	26.0									
Hedge Fund Composite	237,253,742	4.7	5.0	0.0	0.1	3.9	-0.1	2.1	0.3	2.9	3.1	Nov-04
EnTrust Peruvian Bonds	4,891,864	0.1		-0.2	-2.1	-3.0	-5.6	--	--	--	-4.3	Jan-18
Blackstone	115,165,169	2.3		0.2	0.8	6.2	5.0	--	--	--	4.8	Feb-18
Grosvenor	114,984,364	2.3		-0.1	-0.5	3.1	-2.0	3.3	2.1	--	3.4	Jul-13
HFRI Fund of Funds Composite Index				-0.4	-0.8	5.3	0.1	3.2	2.0	2.7	2.8	Jul-13
Hedge Fund Transition Account	2,212,345	0.0										
Real Estate Composite	500,073,176	9.8	10.0	1.6	1.6	5.1	7.6	8.6	9.9	10.0	--	
Private Equity & Debt	362,864,533	7.1	11.0	1.9	1.9	2.7	5.1	9.8	7.5	8.4	--	
Cash	51,705,695	1.0	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 6/30/2019.
- 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 is preliminary as of 9/30/2019.

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 June 30, 2019						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
Private Equity & Debt IRR	\$971,380,397	\$577,771,427	\$698,841,830	1.9%	5.1%	\$362,864,533
Private Equity	\$604,401,896	\$450,777,850	\$487,381,867			\$200,483,462
Private Debt	\$366,978,501	\$126,993,577	\$211,459,963			\$162,381,071
Real Estate IRR	\$928,863,774	\$747,665,633	\$825,201,741	1.6%	7.6%	\$500,073,176



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- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- 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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