

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	Jan	YTD
S&P 500	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	-1.0%	-1.0%
Russell 1000	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	-0.8%	-0.8%
Russell 2000	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	5.0%	5.0%
Russell 2500	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	2.5%	2.5%
MSCI EAFE	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	-1.1%	-1.1%
MSCI EM	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	3.1%	3.1%
MSCI ACWI	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	-0.5%	-0.5%
Private Equity	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	1.8%*	-	-
BC TIPS	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	0.3%	0.3%
BC Municipal	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	0.6%	0.6%
BC Muni High Yield	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	2.1%	2.1%
BC US Corporate HY	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	0.3%	0.3%
BC US Agg Bond	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	-0.7%	-0.7%
BC Global Agg	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-0.9%	-0.9%
BC Long Treasuries	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	-3.6%	-3.6%
BC US Long Credit	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	-2.6%	-2.6%
BC US STRIPS 20+ Yr	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	24.0%	-5.3%	-5.3%
JPM GBI-EM Global Div	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	2.7%	-1.1%	-1.1%
JPM EMBI Glob Div	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	5.3%	-1.1%	-1.1%
CS Hedge Fund	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	6.4%	-	-
BBG Commodity	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	2.6%	2.6%
Alerian MLP	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	-28.7%	5.8%	5.8%
FTSE NAREIT Equity REITs	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-8.0%	0.1%	0.1%

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 (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	6,004,341,885	100.0	100.0	-0.1	11.2	12.8	6.1	10.2	7.8	8.0	Aug-94
Allocation Index				0.2	12.0	13.0	6.5	10.2	7.5	--	Aug-94
Policy Index				0.1	12.0	13.5	7.5	10.9	8.0	--	Aug-94
PRIT Core Fund/Teachers*	1,987,936,009	33.1		0.0	10.7	12.7	7.8	11.0	8.8	9.9	Jul-10
Total Equity	3,125,623,935	52.1	48.0	0.2	19.1	19.3	7.1	14.0	--	--	Dec-04
MSCI ACWI				-0.5	17.0	17.0	7.9	13.6	8.9	7.6	Dec-04
Large Cap Comp	1,193,448,581	19.9	17.0	0.0	17.4	27.3	14.9	19.2	15.2	10.9	Dec-04
Rhumblin Advisors	282,815,608	4.7		-1.0	14.0	17.2	11.7	16.1	13.5	10.4	Aug-94
DE Shaw Core Enhanced	417,320,125	7.0		-1.0	14.9	18.7	12.8	17.1	14.4	14.9	Oct-09
Russell 1000				-0.8	15.5	19.8	12.5	16.7	13.6	14.3	Oct-09
Aristotle Value	161,520,945	2.7		0.0	16.0	16.4	--	--	--	18.0	Nov-19
Columbia Threadneedle	152,211,895	2.5		1.2	21.1	14.7	6.2	14.4	12.5	9.8	Jan-97
Russell 1000 Value				-0.9	16.7	4.1	4.4	10.7	10.2	8.2	Jan-97
Zevenbergen Capital	179,166,644	3.0		3.0	28.7	108.1	44.8	39.4	23.3	15.4	Aug-94
Russell 1000 Growth				-0.7	14.5	34.5	19.9	22.2	16.8	11.1	Aug-94
Small Cap Comp	450,396,241	7.5	6.0	0.2	22.5	22.6	10.9	17.7	12.9	10.7	Dec-04
Westfield Capital Management	128,107,127	2.1		-1.2	20.0	32.7	16.3	21.4	14.7	12.6	Sep-03
Russell 2000 Growth				4.8	34.8	42.7	16.5	20.2	14.1	11.1	Sep-03
Bernzott	146,120,407	2.4		-0.1	19.9	16.9	10.4	17.8	--	14.0	Nov-15
Russell 2000 Value				5.3	35.5	16.4	5.1	12.3	9.2	9.7	Nov-15
Aristotle Small Cap	175,995,410	2.9		1.6	26.7	19.2	6.7	14.0	--	11.4	Nov-15
Russell 2000				5.0	35.2	30.2	11.1	16.5	11.8	13.2	Nov-15

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



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	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Non-US Equity	1,481,779,113	24.7	25.0	0.3	19.5	11.6	0.5	9.3	4.5	6.3	Aug-94
International Equity	992,175,153	16.5	17.0	-0.6	18.7	7.7	0.0	7.9	4.8	5.8	Dec-10
Todd	301,781,676	5.0		-0.1	20.8	14.8	3.0	--	--	8.6	Apr-16
MSCI ACWI ex USA				0.2	19.8	14.0	3.1	10.5	4.8	9.4	Apr-16
Panagora Asset Management	295,579,003	4.9		-0.8	20.0	8.1	0.1	7.8	6.1	6.0	Aug-94
Walter Scott International Equity	271,187,780	4.5		-1.4	14.7	--	--	--	--	9.6	Oct-20
MSCI EAFE				-1.1	19.6	8.9	2.2	8.8	5.2	14.8	Oct-20
Segall Bryant Hamill	123,389,884	2.1		0.1	20.2	0.8	-5.8	--	--	-2.8	Nov-17
MSCI EAFE Small Cap				-0.4	21.0	15.3	3.0	11.1	7.7	5.7	Nov-17
Emerging Markets	489,603,960	8.2	8.0	2.3	21.2	20.1	1.4	12.3	4.2	4.3	Dec-10
Vontobel	132,209,298	2.2		4.2	19.2	25.4	5.8	12.5	8.0	10.9	Oct-05
Polunin	138,985,709	2.3		-0.8	26.0	28.5	3.0	16.3	--	9.0	Oct-13
SSgA Emerging Markets	111,527,605	1.9		5.3	20.0	20.1	0.1	12.2	--	3.9	Oct-13
MSCI Emerging Markets				3.1	20.9	27.9	4.4	15.0	4.2	6.6	Oct-13
Lazard	106,881,349	1.8		1.1	18.8	5.5	-3.7	7.5	--	3.0	Oct-13
MSCI Emerging Markets Small Cap				0.1	23.0	24.3	0.8	10.0	2.6	4.8	Oct-13
Total Fixed Income	1,550,944,519	25.8	26.0	-0.2	2.3	6.9	5.6	4.8	4.5	5.0	Dec-04
Core Fixed Income	962,904,138	16.0	16.0	-0.2	2.3	6.9	5.6	4.8	4.5	5.0	Dec-04
Wells Asset Management	323,414,018	5.4		-0.8	0.6	6.4	6.2	4.6	4.6	5.4	May-05
BlackRock SIO	314,932,628	5.2		0.1	4.3	7.2	5.0	5.3	--	4.6	Aug-15
BBgBarc US Aggregate TR				-0.7	0.4	4.7	5.5	4.0	3.8	3.9	Aug-15
IR&M	324,557,492	5.4		0.2	2.0	7.4	5.8	4.5	--	4.4	Jul-15
IR&M Custom Benchmark				0.1	1.7	6.5	5.5	3.8	3.7	3.8	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 (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Value Added Fixed Income	588,040,381	9.8	10.0	0.3	7.2	6.4	4.9	7.5	4.7	--	
High Yield Income	354,639,569	5.9	6.0	1.0	7.2	7.7	5.8	7.9	6.5	7.1	Jan-06
Crescent Capital	116,017,704	1.9		0.2	5.4	5.9	5.3	6.7	--	5.7	May-15
<i>50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield</i>				0.8	5.6	5.6	5.1	7.3	5.4	5.0	May-15
DDJ	115,009,623	1.9		1.4	7.2	9.3	5.8	10.1	--	6.9	May-15
<i>75% BC HY 25% S&P Leverage Loan</i>				0.5	5.9	6.5	5.6	8.2	--	5.5	May-15
GoldenTree Multi Sector Opp Credit	122,589,069	2.0		1.4	9.0	8.2	6.1	--	--	6.6	Dec-16
<i>Blended Index</i>				0.9	5.5	5.8	4.9	--	--	5.3	Dec-16
<i>S&P/LSTA Leveraged Loan TR</i>				1.2	4.8	3.8	4.1	5.6	4.2	4.5	Dec-16
Emerging Market Debt	233,400,812	3.9	4.0	-0.9	7.1	3.1	2.9	6.9	--	1.3	Nov-11
Aberdeen EMD Plus	233,400,499	3.9		-0.9	7.1	3.1	--	--	--	9.7	Dec-18
<i>JP Morgan EMBI Global Diversified</i>				-1.1	4.7	2.6	4.7	6.9	6.2	9.4	Dec-18
Total Alternative Assets	1,275,303,992	21.2	26.0								
Hedge Fund Composite	280,235,080	4.7	5.0	-3.2	2.6	7.7	3.5	3.8	3.1	3.5	Nov-04
EnTrust Peruvian Bonds	4,703,886	0.1		-0.2	3.7	0.2	-3.5	--	--	-3.5	Jan-18
Blackstone	132,862,637	2.2		-0.5	4.0	5.7	5.3	--	--	5.3	Feb-18
Grosvenor	141,264,517	2.4		-5.7	1.3	10.3	4.3	5.4	--	4.6	Jul-13
<i>HFRI Fund of Funds Composite Index</i>				-0.8	6.9	9.7	3.8	5.0	3.2	4.0	Jul-13
Hedge Fund Transition Account	1,404,040	0.0									
Real Estate Composite	515,299,143	8.6	10.0	0.0	1.0	2.5	6.3	7.5	10.5	--	
Private Equity & Debt	479,769,769	8.0	11.0	0.0	5.1	3.3	7.1	6.8	8.1	--	
Cash	52,469,438	0.9	0.0	0.0	0.0	0.3	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 9/30/2020.
- 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 Summary						
Quarter Ending September 30, 2020						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
Private Equity & Debt IRR	\$1,181,018,410	\$619,748,160	\$835,245,737	5.1%	3.3%	\$479,769,769
Private Equity	\$724,039,909	\$472,854,874	\$521,976,607			\$232,545,995
Private Debt	\$456,978,501	\$146,893,286	\$313,269,130			\$247,223,774
Real Estate IRR	\$1,037,176,734	\$782,609,965	\$851,209,177	1.0%	2.5%	\$515,299,143



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