

# **FLASH REPORT (GROSS)**

## **Boston Retirement System**

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# CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Aug	YTD
<b>S&amp;P 500</b>	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	7.2%	9.7%
<b>Russell 1000</b>	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	7.3%	10.4%
<b>Russell 2000</b>	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	5.6%	-5.5%
<b>Russell 2500</b>	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	4.5%	-3.3%
<b>MSCI EAFE</b>	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	5.1%	-4.6%
<b>MSCI EM</b>	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	2.2%	0.4%
<b>MSCI ACWI</b>	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	6.1%	4.7%
<b>Private Equity</b>	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	-	-7.3%
<b>BC TIPS</b>	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	1.1%	9.6%
<b>BC Municipal</b>	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	-0.5%	3.3%
<b>BC Muni High Yield</b>	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	0.3%	0.3%
<b>BC US Corporate HY</b>	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	1.0%	1.7%
<b>BC US Agg Bond</b>	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	-0.8%	6.9%
<b>BC Global Agg</b>	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	-0.2%	6.1%
<b>BC Long Treasuries</b>	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	-4.3%	20.9%
<b>BC US Long Credit</b>	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	-3.4%	8.5%
<b>BC US STRIPS 20+ Yr</b>	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	-6.3%	28.4%
<b>JPM GBI-EM Global Div</b>	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	-0.3%	-4.4%
<b>JPM EMBI Glob Div</b>	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	0.5%	1.4%
<b>CS Hedge Fund</b>	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	-	-0.8%
<b>BBG Commodity</b>	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	6.8%	-9.0%
<b>Alerian MLP</b>	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	0.5%	-37.7%
<b>FTSE NAREIT Equity REITs</b>	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	0.8%	-14.8%

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
<b>Total Fund</b>	<b>5,442,809,858</b>	<b>100.0</b>	<b>100.0</b>	<b>2.9</b>	<b>8.1</b>	<b>2.5</b>	<b>9.6</b>	<b>6.1</b>	<b>7.6</b>	<b>8.2</b>	<b>7.8</b>	<b>Aug-94</b>
<i>Allocation Index</i>				3.0	7.7	2.2	8.9	6.2	7.6	7.8	--	Aug-94
<i>Policy Index</i>				2.8	7.0	2.1	9.1	6.8	8.1	8.4	--	Aug-94
PRIT Core Fund/Teachers*	1,729,091,334			2.4	5.9	1.9	8.1	7.2	8.6	9.1	9.3	Jul-10
<b>Total Equity</b>	<b>2,847,187,317</b>	<b>52.3</b>	<b>48.0</b>	<b>5.0</b>	<b>14.9</b>	<b>2.3</b>	<b>14.8</b>	<b>6.9</b>	<b>9.5</b>	<b>--</b>	<b>--</b>	<b>Dec-04</b>
<i>MSCI ACWI</i>				6.1	15.3	4.7	16.5	9.0	10.2	9.9	7.1	Dec-04
<b>Large Cap Comp</b>	<b>1,182,088,344</b>	<b>21.7</b>	<b>17.0</b>	<b>6.9</b>	<b>17.6</b>	<b>14.7</b>	<b>27.5</b>	<b>16.4</b>	<b>15.8</b>	<b>16.5</b>	<b>10.5</b>	<b>Dec-04</b>
Rhumblin Advisors	323,127,220	5.9		7.2	15.5	9.8	21.9	14.5	14.4	15.1	10.3	Aug-94
DE Shaw Core Enhanced	389,119,622	7.1		7.2	15.7	10.4	22.9	15.3	15.1	15.9	14.7	Oct-09
<i>Russell 1000</i>				7.3	16.1	10.4	22.5	14.6	14.3	15.2	14.0	Oct-09
Aristotle Value	142,319,464	2.6		5.0	12.3	0.9	--	--	--	--	8.3	Nov-19
Columbia Threadneedle	131,498,109	2.4		4.6	12.6	-5.3	7.5	7.2	9.8	13.4	9.3	Jan-97
<i>Russell 1000 Value</i>				4.1	7.5	-9.3	0.8	4.5	7.5	11.0	7.8	Jan-97
Zevenbergen Capital	195,550,808	3.6		8.7	34.9	84.5	98.7	41.9	29.7	23.8	14.7	Aug-94
<i>Russell 1000 Growth</i>				10.3	24.0	30.5	44.3	24.2	20.7	19.0	11.0	Aug-94
<b>Small Cap Comp</b>	<b>388,918,472</b>	<b>7.1</b>	<b>6.0</b>	<b>3.5</b>	<b>11.6</b>	<b>-1.5</b>	<b>11.9</b>	<b>9.0</b>	<b>10.2</b>	<b>13.7</b>	<b>9.6</b>	<b>Dec-04</b>
Westfield Capital Management	125,990,727	2.3		4.1	11.6	10.4	25.3	16.0	13.3	16.1	11.7	Sep-03
<i>Russell 2000 Growth</i>				5.9	13.7	6.2	17.3	10.9	10.5	14.1	9.6	Sep-03
Bernzott	121,751,325	2.2		4.7	16.3	-3.4	12.1	9.0	--	--	11.0	Nov-15
<i>Russell 2000 Value</i>				5.4	10.7	-17.7	-6.1	-1.4	4.4	8.7	4.1	Nov-15
Aristotle Small Cap	141,022,994	2.6		1.9	7.7	-9.7	0.2	2.6	--	--	7.2	Nov-15
<i>Russell 2000</i>				5.6	12.4	-5.5	6.0	5.0	7.7	11.5	7.8	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
<b>Total Non-US Equity</b>	<b>1,276,180,501</b>	<b>23.4</b>	<b>25.0</b>	<b>3.9</b>	<b>13.5</b>	<b>-6.4</b>	<b>5.5</b>	<b>-0.2</b>	<b>4.7</b>	<b>5.0</b>	<b>5.8</b>	<b>Aug-94</b>
<b>International Equity</b>	<b>866,731,419</b>	<b>15.9</b>	<b>17.0</b>	<b>5.0</b>	<b>11.9</b>	<b>-7.3</b>	<b>4.5</b>	<b>0.0</b>	<b>3.6</b>	<b>--</b>	<b>4.8</b>	<b>Dec-10</b>
Todd	242,825,312	4.5		3.7	14.0	-5.2	7.4	1.7	--	--	5.7	Apr-16
<i>MSCI ACWI ex USA</i>				4.3	13.9	-3.1	8.3	2.6	5.8	5.3	7.0	Apr-16
Panagora Asset Management	262,421,933	4.8		5.3	11.8	-6.2	4.5	-0.4	4.2	6.9	5.6	Aug-94
State Street Transition Account	252,767,385	4.6		5.1	10.9	-6.2	--	--	--	--	-2.1	Nov-19
<i>MSCI EAFE</i>				5.1	11.3	-4.6	6.1	2.3	4.7	5.9	-0.4	Nov-19
Segall Bryant Hamill	108,484,556	2.0		6.7	10.1	-15.4	-1.5	--	--	--	-7.6	Nov-17
<i>MSCI EAFE Small Cap</i>				7.5	12.6	-3.5	10.7	2.6	6.8	8.6	1.1	Nov-17
<b>Emerging Markets</b>	<b>409,449,082</b>	<b>7.5</b>	<b>8.0</b>	<b>1.6</b>	<b>16.9</b>	<b>-4.5</b>	<b>7.8</b>	<b>-0.6</b>	<b>7.0</b>	<b>--</b>	<b>2.6</b>	<b>Dec-10</b>
Vontobel	110,153,360	2.0		2.5	21.0	1.1	8.7	3.2	8.0	6.7	9.9	Oct-05
Polunin	112,623,733	2.1		2.1	17.6	-4.2	10.6	0.0	9.8	--	6.2	Oct-13
SSgA Emerging Markets	92,328,822	1.7		1.4	15.6	-6.5	5.6	-1.7	5.7	--	1.3	Oct-13
<i>MSCI Emerging Markets</i>				2.2	19.5	0.4	14.5	2.8	8.7	3.8	4.0	Oct-13
Lazard	94,343,167	1.7		0.2	12.9	-8.8	6.0	-4.5	4.2	--	1.4	Oct-13
<i>MSCI Emerging Markets Small Cap</i>				4.1	24.0	-0.8	10.8	-0.5	5.0	2.4	2.4	Oct-13
<b>Total Fixed Income</b>	<b>1,434,328,437</b>	<b>26.4</b>	<b>26.0</b>									
<b>Core Fixed Income</b>	<b>915,154,529</b>	<b>16.8</b>	<b>16.0</b>	<b>0.3</b>	<b>3.2</b>	<b>6.3</b>	<b>6.9</b>	<b>5.1</b>	<b>4.5</b>	<b>4.2</b>	<b>5.0</b>	<b>Dec-04</b>
Wells Asset Management	322,499,595	5.9		-0.5	2.0	8.1	7.8	5.6	4.8	4.5	5.5	May-05
BlackRock SIO	272,411,289	5.0		1.0	4.5	3.5	5.4	4.5	4.2	--	4.1	Aug-15
<i>BBgBarc US Aggregate TR</i>				-0.8	1.3	6.9	6.5	5.1	4.3	3.7	4.2	Aug-15
IR&M	320,243,645	5.9		0.7	3.4	7.6	7.6	5.1	4.5	--	4.5	Jul-15
<i>IR&amp;M Custom Benchmark</i>				0.5	2.9	7.0	6.9	4.8	3.9	3.4	3.9	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.



## 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
<b>Value Added Fixed Income</b>	<b>519,173,908</b>	<b>9.5</b>	<b>10.0</b>	<b>1.5</b>	<b>8.2</b>	<b>0.4</b>	<b>3.0</b>	<b>3.4</b>	<b>5.4</b>	<b>--</b>	<b>--</b>	
<b>High Yield Income</b>	<b>327,835,412</b>	<b>6.0</b>	<b>6.0</b>	<b>1.6</b>	<b>8.0</b>	<b>0.3</b>	<b>3.2</b>	<b>3.9</b>	<b>5.6</b>	<b>6.6</b>	<b>6.7</b>	<b>Jan-06</b>
Crescent Capital	109,675,944	2.0		1.2	6.6	0.2	3.1	3.9	5.3	--	5.0	May-15
50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield				1.2	5.7	0.2	2.8	4.0	5.1	5.6	4.3	May-15
DDJ	104,288,910	1.9		2.0	9.9	0.2	3.1	3.7	6.7	--	5.5	May-15
75% BC HY 25% S&P Leverage Loan				1.1	6.2	0.9	3.7	4.4	5.8	--	4.8	May-15
GoldenTree Multi Sector Opp Credit	112,901,094	2.1		1.8	7.7	0.7	3.4	4.2	--	--	5.0	Dec-16
Blended Index				1.1	5.3	0.5	2.6	3.7	--	--	4.4	Dec-16
S&P/LSTA Leveraged Loan TR				1.5	4.7	-1.3	0.9	3.0	3.7	4.3	3.4	Dec-16
<b>Emerging Market Debt</b>	<b>191,338,496</b>	<b>3.5</b>	<b>4.0</b>	<b>1.2</b>	<b>8.5</b>	<b>-0.5</b>	<b>1.8</b>	<b>2.2</b>	<b>5.0</b>	<b>--</b>	<b>0.8</b>	<b>Nov-11</b>
Aberdeen EMD Plus	191,338,183	3.5		1.2	8.5	-0.5	1.8	--	--	--	9.0	Dec-18
JP Morgan EMBI Global Diversified				0.5	7.9	1.4	2.7	4.1	6.3	5.8	10.0	Dec-18
<b>Total Alternative Assets</b>	<b>1,134,131,081</b>	<b>20.8</b>	<b>26.0</b>									
<b>Hedge Fund Composite</b>	<b>251,307,016</b>	<b>4.6</b>	<b>5.0</b>	<b>2.3</b>	<b>6.2</b>	<b>4.4</b>	<b>6.8</b>	<b>3.2</b>	<b>1.7</b>	<b>3.3</b>	<b>3.3</b>	<b>Nov-04</b>
EnTrust Peruvian Bonds	4,618,667	0.1		-0.2	-0.6	-2.0	-5.3	--	--	--	-4.7	Jan-18
Blackstone	118,330,320	2.2		1.5	4.3	2.0	4.0	--	--	--	4.6	Feb-18
Grosvenor	126,976,404	2.3		3.1	8.4	7.2	10.3	5.0	3.8	--	4.4	Jul-13
HFRI Fund of Funds Composite Index				2.2	6.5	2.8	5.5	3.1	2.7	3.1	3.3	Jul-13
Hedge Fund Transition Account	1,381,625	0.0										
<b>Real Estate Composite</b>	<b>513,519,191</b>	<b>9.4</b>	<b>10.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.6</b>	<b>6.1</b>	<b>8.2</b>	<b>9.0</b>	<b>11.4</b>	<b>--</b>	
<b>Private Equity &amp; Debt</b>	<b>369,304,874</b>	<b>6.8</b>	<b>11.0</b>	<b>0.0</b>	<b>-10.5</b>	<b>-8.2</b>	<b>-5.3</b>	<b>5.4</b>	<b>5.4</b>	<b>7.1</b>	<b>--</b>	
<b>Cash</b>	<b>27,163,023</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.4</b>	<b>1.1</b>	<b>0.9</b>	<b>0.5</b>	<b>0.3</b>	<b>1.2</b>	<b>Oct-04</b>

- Real Estate and Private Equity & Debt report on a quarterly basis, valuations are as of 3/31/2020.
- 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

PE/RE Summary						
Quarter Ending March 31, 2020						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
<b>Private Equity &amp; Debt IRR</b>	<b>\$986,857,223</b>	<b>\$608,982,836</b>	<b>\$765,724,002</b>	<b>-10.5%</b>	<b>-5.3%</b>	<b>\$369,304,874</b>
Private Equity	\$604,878,722	\$466,596,637	\$509,284,075			\$198,023,427
Private Debt	\$381,978,501	\$142,386,199	\$256,439,927			\$171,281,447
<b>Real Estate IRR</b>	<b>\$1,018,213,894</b>	<b>\$777,602,068</b>	<b>\$846,592,875</b>	<b>0.0%</b>	<b>6.1%</b>	<b>\$513,519,191</b>



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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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