

# MONTHLY GROSS PERFORMANCE REPORT

BOSTON RETIREMENT SYSTEM

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# CALENDAR YEAR INDEX PERFORMANCE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Jun	QTD	YTD
<b>S&amp;P 500</b>	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	2.3%	8.5%	15.3%
<b>Russell 1000</b>	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	2.5%	8.5%	15.0%
<b>Russell 2000</b>	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	1.9%	4.3%	17.5%
<b>Russell 2500</b>	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	1.2%	5.4%	17.0%
<b>MSCI EAFE</b>	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	-1.1%	5.2%	8.8%
<b>MSCI EM</b>	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	0.2%	5.0%	7.4%
<b>MSCI ACWI</b>	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	1.3%	7.4%	12.3%
<b>Private Equity</b>	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	38.2%	-	-	-
<b>BC TIPS</b>	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	0.6%	3.2%	1.7%
<b>BC Municipal</b>	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	0.3%	1.4%	1.1%
<b>BC Muni High Yield</b>	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	1.3%	3.9%	6.1%
<b>BC US Corporate HY</b>	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	1.3%	2.7%	3.6%
<b>BC US Agg Bond</b>	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	0.7%	1.8%	-1.6%
<b>BC Global Agg</b>	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-0.9%	1.3%	-3.2%
<b>BC Long Treasuries</b>	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	3.6%	6.5%	-7.9%
<b>BC US Long Credit</b>	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	3.6%	6.4%	-2.5%
<b>BC US STRIPS 20+ Yr</b>	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	24.0%	5.5%	9.6%	-10.7%
<b>JPM GBI-EM Global Div</b>	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	2.7%	-1.2%	3.5%	-3.4%
<b>JPM EMBI Glob Div</b>	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	5.3%	0.7%	4.1%	-0.7%
<b>CS Hedge Fund</b>	0.5%	5.9%	10.0%	5.4%	0.2%	-0.6%	7.2%	-1.1%	6.3%	4.1%	1.1%	4.5%	10.7%
<b>BBG Commodity</b>	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	1.9%	13.3%	21.1%
<b>Alerian Midstream</b>	-	-	-	16.4%	-37.3%	33.8%	-2.4%	-13.3%	24.0%	-23.4%	3.4%	16.4%	40.7%
<b>FTSE NAREIT Equity REITs</b>	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-8.0%	2.6%	12.0%	22.0%

\*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag  
Source: FactSet, Barclays, Thomson One



# Boston Retirement System

## TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund</b>	<b>6,504,402,898</b>	<b>100.0</b>	<b>100.0</b>	<b>1.6</b>	<b>5.0</b>	<b>9.0</b>	<b>27.1</b>	<b>10.4</b>	<b>11.0</b>	<b>8.3</b>	<b>8.2</b>	<b>Aug-94</b>
Allocation Index				1.5	5.0	8.9	26.9	10.5	10.7	8.0	--	Aug-94
Policy Index				1.7	5.0	8.5	26.8	11.1	11.2	8.4	--	Aug-94
PRIT Core Fund/Teachers*	2,116,553,057			3.0	6.8	11.5	30.0	12.2	12.0	9.5	10.6	Jul-10
<b>Total Equity</b>	<b>3,504,444,919</b>	<b>53.9</b>	<b>48.0</b>	<b>0.5</b>	<b>6.1</b>	<b>12.5</b>	<b>42.4</b>	<b>13.6</b>	<b>15.0</b>	<b>10.5</b>	<b>--</b>	<b>Dec-04</b>
MSCI ACWI				1.3	7.4	12.3	39.3	14.6	14.6	9.9	8.2	Dec-04
<b>Large Cap Comp</b>	<b>1,311,694,521</b>	<b>20.2</b>	<b>17.0</b>	<b>2.5</b>	<b>7.7</b>	<b>13.7</b>	<b>44.1</b>	<b>20.6</b>	<b>20.1</b>	<b>16.2</b>	<b>11.5</b>	<b>Dec-04</b>
Rhumblin Advisors	329,198,987	5.1		2.3	8.5	15.2	40.7	18.6	17.6	14.8	10.8	Aug-94
DE Shaw Core Enhanced	438,277,198	6.7		2.1	8.1	14.8	41.1	19.4	18.4	15.6	15.8	Oct-09
Russell 1000				2.5	8.5	15.0	43.1	19.2	18.0	14.9	15.2	Oct-09
Aristotle Value	188,600,636	2.9		1.1	6.4	16.9	46.2	--	--	--	24.4	Nov-19
Columbia Threadneedle	181,413,443	2.8		-2.9	5.1	20.7	51.7	14.5	16.1	13.9	10.4	Jan-97
Russell 1000 Value				-1.1	5.2	17.0	43.7	12.4	11.9	11.6	8.8	Jan-97
Zevenbergen Capital	173,764,124	2.7		12.4	9.1	0.3	47.9	38.4	37.4	22.2	15.0	Aug-94
Russell 1000 Growth				6.3	11.9	13.0	42.5	25.1	23.7	17.9	11.4	Aug-94
<b>Small Cap Comp</b>	<b>508,573,695</b>	<b>7.8</b>	<b>6.0</b>	<b>0.3</b>	<b>3.8</b>	<b>13.4</b>	<b>51.6</b>	<b>14.6</b>	<b>18.1</b>	<b>13.4</b>	<b>11.2</b>	<b>Dec-04</b>
Westfield Capital Management	143,363,791	2.2		2.5	6.3	10.7	48.1	19.7	21.9	14.7	13.0	Sep-03
Russell 2000 Growth				4.7	3.9	9.0	51.4	15.9	18.8	13.5	11.1	Sep-03
Bernzott	163,476,566	2.5		-1.4	1.5	12.1	52.3	14.0	17.3	--	15.3	Nov-15
Russell 2000 Value				-0.6	4.6	26.7	73.3	10.3	13.6	10.8	12.6	Nov-15
Aristotle Small Cap	201,547,411	3.1		0.1	3.9	16.6	53.4	10.6	14.9	--	13.2	Nov-15
Russell 2000				1.9	4.3	17.5	62.0	13.5	16.5	12.3	14.4	Nov-15

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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Non-US Equity</b>	<b>1,684,176,704</b>	<b>25.9</b>	<b>25.0</b>	<b>-0.9</b>	<b>5.6</b>	<b>11.3</b>	<b>38.2</b>	<b>8.0</b>	<b>10.5</b>	<b>5.2</b>	<b>6.6</b>	<b>Aug-94</b>
<b>International Equity</b>	<b>1,125,225,733</b>	<b>17.3</b>	<b>17.0</b>	<b>-1.2</b>	<b>5.3</b>	<b>10.7</b>	<b>35.3</b>	<b>7.0</b>	<b>10.0</b>	<b>5.6</b>	<b>6.7</b>	<b>Dec-10</b>
Todd	336,596,664	5.2		-2.4	2.4	11.6	40.6	9.9	11.6	--	10.2	Apr-16
MSCI ACWI ex USA				-0.6	5.5	9.2	35.7	9.4	11.1	5.4	10.4	Apr-16
Panagora Asset Management	331,284,440	5.1		-1.3	5.7	11.3	36.7	7.1	9.8	6.8	6.3	Aug-94
Walter Scott International Equity	316,448,888	4.9		0.5	7.7	7.2	--	--	--	--	19.1	Oct-20
MSCI EAFE				-1.1	5.2	8.8	32.3	8.3	10.3	5.9	26.3	Oct-20
Segall Bryant Hamill	140,664,270	2.2		-2.2	6.0	14.5	42.9	2.1	--	--	1.2	Nov-17
MSCI EAFE Small Cap				-1.7	4.3	9.0	41.0	8.4	12.0	8.4	7.7	Nov-17
<b>Emerging Markets</b>	<b>558,950,971</b>	<b>8.6</b>	<b>8.0</b>	<b>-0.1</b>	<b>6.1</b>	<b>12.5</b>	<b>44.5</b>	<b>10.2</b>	<b>11.5</b>	<b>4.5</b>	<b>5.1</b>	<b>Dec-10</b>
Vontobel	131,828,617	2.0		-1.7	2.0	4.3	34.9	10.6	10.2	6.4	10.6	Oct-05
Polunin	154,704,178	2.4		-1.5	6.4	10.8	52.9	13.2	15.3	--	10.0	Oct-13
SSgA Emerging Markets	119,850,430	1.8		0.1	4.3	13.2	43.4	7.6	10.8	--	4.6	Oct-13
MSCI Emerging Markets				0.2	5.0	7.4	40.9	11.3	13.0	4.3	6.8	Oct-13
Lazard	152,567,746	2.3		2.5	11.2	22.6	44.7	8.4	9.2	--	5.5	Oct-13
MSCI Emerging Markets Small Cap				2.3	11.3	19.8	63.7	12.3	11.9	4.5	7.0	Oct-13
<b>Total Fixed Income</b>	<b>1,572,863,855</b>	<b>24.2</b>	<b>26.0</b>	<b>0.5</b>	<b>1.8</b>	<b>0.4</b>	<b>4.7</b>	<b>6.0</b>	<b>4.2</b>	<b>4.2</b>	<b>4.9</b>	<b>Dec-04</b>
<b>Core Fixed Income</b>	<b>967,430,224</b>	<b>14.9</b>	<b>16.0</b>	<b>0.5</b>	<b>1.8</b>	<b>0.4</b>	<b>4.7</b>	<b>6.0</b>	<b>4.2</b>	<b>4.2</b>	<b>4.9</b>	<b>Dec-04</b>
Wells Asset Management	321,152,124	4.9		0.8	1.9	-1.4	0.9	6.1	3.6	4.2	5.2	May-05
BlackRock SIO	318,975,980	4.9		0.3	1.2	1.6	9.0	6.0	5.3	--	4.5	Aug-15
Bloomberg US Aggregate TR				0.7	1.8	-1.6	-0.3	5.3	3.0	3.4	3.4	Aug-15
IR&M	327,302,120	5.0		0.4	2.2	1.1	4.6	6.0	3.8	--	4.3	Jul-15
IR&M Custom Benchmark				0.3	2.1	0.8	3.8	5.5	3.2	3.5	3.7	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.

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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Value Added Fixed Income</b>	<b>605,433,630</b>	<b>9.3</b>	<b>10.0</b>	<b>0.9</b>	<b>3.4</b>	<b>3.4</b>	<b>16.2</b>	<b>6.9</b>	<b>6.7</b>	<b>4.6</b>	--	
<b>High Yield Income</b>	<b>371,224,255</b>	<b>5.7</b>	<b>6.0</b>	<b>1.2</b>	<b>3.0</b>	<b>6.0</b>	<b>19.9</b>	<b>7.3</b>	<b>7.7</b>	<b>6.8</b>	<b>7.2</b>	<b>Jan-06</b>
Crescent Capital	119,440,381	1.8		1.1	2.5	3.8	15.7	6.7	6.4	--	5.9	May-15
<i>50/50 S&amp;P/LSTA Leveraged Loan/Bloomberg High Yield</i>				0.9	2.1	3.5	13.5	5.9	6.2	5.5	5.1	May-15
DDJ	120,736,163	1.9		1.9	3.3	6.6	23.3	7.6	9.4	--	7.3	May-15
<i>75% BC HY 25% S&amp;P Leverage Loan</i>				1.1	2.4	3.5	14.4	6.7	6.9	--	5.6	May-15
GoldenTree Multi Sector Opp Credit	130,030,787	2.0		0.8	3.0	7.6	20.9	7.6	--	--	7.3	Dec-16
<i>Blended Index</i>				0.7	2.0	3.9	13.0	5.8	5.9	--	5.5	Dec-16
<i>S&amp;P/LSTA Leveraged Loan TR</i>				0.4	1.5	3.3	11.7	4.4	5.0	4.4	4.5	Dec-16
<b>Emerging Market Debt</b>	<b>234,209,375</b>	<b>3.6</b>	<b>4.0</b>	<b>0.3</b>	<b>4.2</b>	<b>-0.5</b>	<b>10.5</b>	<b>6.2</b>	<b>5.1</b>	<b>--</b>	<b>1.3</b>	<b>Nov-11</b>
Aberdeen EMD Plus	234,209,062	3.6		0.3	4.2	-0.5	10.5	--	--	--	8.2	Dec-18
<i>JP Morgan EMBI Global Diversified</i>				0.7	4.1	-0.7	7.5	6.7	4.9	5.7	8.0	Dec-18
<b>Total Alternative Assets</b>	<b>1,392,216,013</b>	<b>21.4</b>	<b>26.0</b>									
<b>Hedge Fund Composite</b>	<b>300,370,583</b>	<b>4.6</b>	<b>5.0</b>	<b>1.2</b>	<b>3.3</b>	<b>4.0</b>	<b>15.8</b>	<b>6.1</b>	<b>5.3</b>	<b>3.7</b>	<b>3.8</b>	<b>Nov-04</b>
EnTrust Peruvian Bonds	4,648,650	0.1		-0.2	-0.6	-1.2	0.7	-3.5	--	--	-3.3	Jan-18
Blackstone	140,208,187	2.2		1.1	3.3	5.4	13.1	6.9	--	--	6.5	Feb-18
Grosvenor	154,246,224	2.4		1.3	3.4	2.9	19.1	7.0	7.2	--	5.5	Jul-13
<i>HFRI Fund of Funds Composite Index</i>				0.5	2.9	4.9	18.3	6.3	6.1	3.9	4.5	Jul-13
Hedge Fund Transition Account	1,267,523	0.0										
<b>Real Estate Composite</b>	<b>506,849,981</b>	<b>7.8</b>	<b>10.0</b>	<b>1.8</b>	<b>1.8</b>	<b>3.6</b>	<b>3.6</b>	<b>5.8</b>	<b>7.1</b>	<b>9.8</b>	--	
<b>Private Equity &amp; Debt</b>	<b>584,995,449</b>	<b>9.0</b>	<b>11.0</b>	<b>11.1</b>	<b>11.1</b>	<b>20.2</b>	<b>35.4</b>	<b>11.4</b>	<b>11.1</b>	<b>9.0</b>	--	
<b>Cash</b>	<b>34,878,110</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.9</b>	<b>0.5</b>	<b>0.3</b>	<b>1.1</b>	<b>Oct-04</b>

- Real Estate and Private Equity & Debt report on a quarterly basis, valuations are as of 3/31/2021.
- 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 March 31, 2021						
	Committed Capital	Cummulative Distribution	Contributed Capital	QTR	Last Year	Valuation
<b>Private Equity &amp; Debt IRR</b>	<b>\$1,319,637,085</b>	<b>\$650,123,092</b>	<b>\$871,929,908</b>	<b>11.1%</b>	<b>35.5%</b>	<b>\$584,995,449</b>
Private Equity	\$801,658,584	\$494,360,197	\$548,450,239			\$288,135,825
Private Debt	\$517,978,501	\$155,762,895	\$323,479,669			\$296,859,624
<b>Real Estate IRR</b>	<b>\$1,089,579,039</b>	<b>\$829,331,819</b>	<b>\$873,650,979</b>	<b>1.8%</b>	<b>3.5%</b>	<b>\$506,849,981</b>



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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv





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