



# MONTHLY GROSS PERFORMANCE REPORT

BOSTON RETIREMENT SYSTEM

OCTOBER 31, 2021

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# CALENDAR YEAR INDEX PERFORMANCE

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Oct	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%	7.0%	24.0%
<b>Russell 1000</b>	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	6.9%	23.2%
<b>Russell 2000</b>	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	4.3%	17.2%
<b>Russell 2500</b>	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	4.9%	19.4%
<b>MSCI EAFE</b>	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	2.5%	11.0%
<b>MSCI EM</b>	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	1.0%	-0.3%
<b>MSCI ACWI</b>	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	5.1%	16.8%
<b>Private Equity</b>	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	38.2%	-	9.7%
<b>BBG TIPS</b>	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	1.1%	4.7%
<b>BBG Municipal</b>	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	-0.3%	0.5%
<b>BBG Muni High Yield</b>	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	-0.4%	6.1%
<b>BBG US Corporate HY</b>	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	-0.2%	4.4%
<b>BBG US Agg Bond</b>	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	0.0%	-1.6%
<b>BBG Global Agg</b>	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-0.2%	-4.3%
<b>BBG Long Treasuries</b>	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	1.9%	-5.8%
<b>BBG US Long Credit</b>	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	1.5%	-1.2%
<b>BBG 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%	3.9%	-6.6%
<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%	-1.3%	-7.6%
<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%	0.0%	-1.3%
<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%	0.0%	11.3%
<b>BBG Commodity</b>	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	2.6%	32.5%
<b>Alerian Midstream</b>	-	-	-	16.4%	-37.3%	33.8%	-2.4%	-13.3%	24.0%	-23.4%	6.1%	47.4%
<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%	7.6%	32.5%

\*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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund</b>	<b>6,713,207,204</b>	<b>100.0</b>	<b>100.0</b>	<b>2.0</b>	<b>11.8</b>	<b>24.3</b>	<b>12.5</b>	<b>10.8</b>	<b>8.9</b>	<b>8.2</b>	<b>Aug-94</b>
Allocation Index				2.0	11.8	24.9	12.6	10.6	8.7	--	Aug-94
Policy Index				2.0	11.9	25.1	13.0	11.2	9.1	--	Aug-94
PRIT Core Fund/Teachers*	2,161,209,190	32.2		2.6	16.3	28.8	14.4	12.3	10.4	10.7	Jul-10
<b>Total Equity</b>	<b>3,398,126,653</b>	<b>50.6</b>	<b>48.0</b>	<b>3.9</b>	<b>15.0</b>	<b>36.7</b>	<b>16.8</b>	<b>14.5</b>	<b>11.8</b>	<b>--</b>	<b>Dec-04</b>
MSCI ACWI				5.1	16.8	37.3	17.5	14.7	11.3	8.2	Dec-04
<b>Large Cap Comp</b>	<b>1,229,332,416</b>	<b>18.3</b>	<b>17.0</b>	<b>6.7</b>	<b>20.3</b>	<b>41.3</b>	<b>23.5</b>	<b>20.6</b>	<b>17.5</b>	<b>11.6</b>	<b>Dec-04</b>
Rhumblin Advisors	302,921,453	4.5		7.0	24.0	42.9	21.4	18.9	16.2	11.0	Aug-94
DE Shaw Core Enhanced	387,412,959	5.8		7.0	22.5	42.1	21.8	19.4	16.9	15.9	Oct-09
S&P 500				7.0	24.0	42.9	21.5	18.9	16.2	15.2	Oct-09
Aristotle Value	171,694,782	2.6		4.4	22.1	41.7	--	--	--	22.6	Nov-19
Columbia Threadneedle	186,805,613	2.8		6.6	24.8	49.3	16.8	15.7	15.0	10.4	Jan-97
Russell 1000 Value				5.1	22.0	43.8	13.9	12.4	12.8	8.8	Jan-97
Zevenbergen Capital	179,986,746	2.7		8.2	4.3	30.2	43.9	36.3	24.3	15.0	Aug-94
Russell 1000 Growth				8.7	24.2	43.2	29.4	25.5	19.4	11.7	Aug-94
<b>Small Cap Comp</b>	<b>495,598,109</b>	<b>7.4</b>	<b>6.0</b>	<b>3.8</b>	<b>16.4</b>	<b>42.2</b>	<b>17.3</b>	<b>18.3</b>	<b>14.9</b>	<b>11.2</b>	<b>Dec-04</b>
Westfield Capital Management	153,412,645	2.3		4.7	18.7	44.1	25.5	23.0	17.0	13.2	Sep-03
Russell 2000 Growth				4.7	7.6	38.5	18.6	17.9	14.6	10.8	Sep-03
Bernzott	138,522,969	2.1		3.6	12.4	34.8	13.8	17.1	--	14.4	Nov-15
Russell 2000 Value				3.8	27.6	64.3	13.4	12.6	12.1	12.0	Nov-15
Aristotle Small Cap	203,393,420	3.0		3.3	17.9	46.9	13.2	14.8	--	12.7	Nov-15
Russell 2000				4.3	17.2	50.8	16.5	15.5	13.5	13.5	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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Non-US Equity</b>	<b>1,673,196,129</b>	<b>24.9</b>	<b>25.0</b>	<b>2.0</b>	<b>10.9</b>	<b>32.1</b>	<b>11.4</b>	<b>9.0</b>	<b>6.6</b>	<b>6.5</b>	<b>Aug-94</b>
<b>International Equity</b>	<b>1,144,615,133</b>	<b>17.1</b>	<b>17.0</b>	<b>2.7</b>	<b>12.9</b>	<b>34.9</b>	<b>10.9</b>	<b>9.2</b>	<b>7.3</b>	<b>6.7</b>	<b>Dec-10</b>
Todd	340,630,917	5.1		3.7	13.5	37.2	14.0	11.0	--	9.9	Apr-16
MSCI ACWI ex USA				2.4	8.4	29.7	12.0	9.8	6.7	9.6	Apr-16
Panagora Asset Management	337,621,738	5.0		2.4	13.6	37.4	10.5	8.9	8.4	6.3	Aug-94
Walter Scott International Equity	325,765,746	4.9		2.7	10.6	28.6	--	--	--	20.9	Oct-20
MSCI EAFE				2.5	11.0	34.2	11.5	9.8	7.4	26.3	Oct-20
Segall Bryant Hamill	140,366,727	2.1		1.0	14.6	37.6	6.1	--	--	1.1	Nov-17
MSCI EAFE Small Cap				1.6	11.7	35.8	13.4	11.4	10.1	7.7	Nov-17
<b>Emerging Markets</b>	<b>528,580,996</b>	<b>7.9</b>	<b>8.0</b>	<b>0.5</b>	<b>6.7</b>	<b>26.4</b>	<b>12.6</b>	<b>8.7</b>	<b>5.1</b>	<b>4.4</b>	<b>Dec-10</b>
ABS Emerging Markets Strategic Portfolio	115,161,555	1.7		--	--	--	--	--	--	--	Nov-21
Columbia Emerging Markets Equity	117,622,446	1.8		0.3	--	--	--	--	--	--	Aug-21
Polunin	151,710,469	2.3		-0.1	9.0	38.5	16.3	12.6	--	9.4	Oct-13
MSCI Emerging Markets				1.0	-0.3	17.0	12.3	9.4	4.9	5.5	Oct-13
Lazard	144,086,525	2.1		1.1	15.8	36.0	13.1	5.9	--	4.5	Oct-13
MSCI Emerging Markets Small Cap				0.2	17.4	44.3	17.5	10.1	6.2	6.5	Oct-13
SSgA Emerging Markets	0	0.0		1.0	9.0	24.2	9.6	8.1	--	3.9	Oct-13
MSCI Emerging Markets				1.0	-0.3	17.0	12.3	9.4	4.9	5.5	Oct-13
<b>Total Fixed Income</b>	<b>1,676,483,729</b>	<b>25.0</b>	<b>26.0</b>	<b>0.0</b>	<b>1.9</b>	<b>6.1</b>	<b>6.6</b>	<b>5.1</b>	<b>4.2</b>	<b>4.5</b>	<b>Dec-10</b>
<b>Core Fixed Income</b>	<b>1,046,213,117</b>	<b>15.6</b>	<b>16.0</b>	<b>0.0</b>	<b>0.9</b>	<b>3.4</b>	<b>6.3</b>	<b>4.2</b>	<b>3.8</b>	<b>4.8</b>	<b>Dec-04</b>
BlackRock SIO	368,207,403	5.5		-0.1	1.6	5.9	5.9	4.9	--	4.2	Aug-15
Wells Asset Management	346,102,997	5.2		-0.1	-1.3	0.1	6.4	3.6	3.8	5.1	May-05
Bloomberg US Aggregate TR				0.0	-1.6	-0.5	5.6	3.1	3.0	4.1	May-05
IR&M	331,902,717	4.9		0.3	2.5	4.4	6.8	4.0	--	4.3	Jul-15
IR&M Custom Benchmark				0.3	2.1	3.8	6.4	3.5	3.2	3.7	Jul-15

- IR&M Custom Benchmark reflects Bloomberg Agg since inception through 04/30/2017, from 05/01/2017 to 9/30/2021 reflects 40% Bloomberg Agg/60% Bloomberg Intermediate TIPS and as of 10/1/2021 reflects 60% Bloomberg Agg/40% Bloomberg Intermediate 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 (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Value Added Fixed Income</b>	<b>630,270,612</b>	<b>9.4</b>	<b>10.0</b>	<b>-0.2</b>	<b>3.5</b>	<b>10.6</b>	<b>6.9</b>	<b>5.9</b>	<b>4.5</b>	<b>--</b>	
<b>High Yield Income</b>	<b>377,783,367</b>	<b>5.6</b>	<b>6.0</b>	<b>0.3</b>	<b>8.0</b>	<b>14.6</b>	<b>7.5</b>	<b>7.1</b>	<b>6.9</b>	<b>7.2</b>	<b>Jan-06</b>
Crescent Capital	120,692,890	1.8		-0.1	5.1	10.5	6.6	5.8	--	5.8	May-15
50/50 S&P/LSTA Leveraged Loan/Bloomberg High Yield				0.0	4.5	9.5	5.8	5.4	5.7	5.0	May-15
DDJ	123,310,626	1.8		0.4	9.0	15.2	7.7	8.3	--	7.3	May-15
75% BC HY 25% S&P Leverage Loan				-0.1	4.4	10.0	6.6	5.9	--	5.5	May-15
GoldenTree Multi Sector Opp Credit	132,750,978	2.0		0.6	9.8	18.0	8.1	--	--	7.3	Dec-16
Blended Index				0.1	4.7	9.5	5.8	5.2	--	5.3	Dec-16
S&P/LSTA Leveraged Loan TR				0.3	4.7	8.5	4.2	4.5	4.6	4.5	Dec-16
<b>Emerging Market Debt</b>	<b>252,487,245</b>	<b>3.8</b>	<b>4.0</b>	<b>-0.9</b>	<b>-3.0</b>	<b>4.8</b>	<b>5.8</b>	<b>4.1</b>	<b>1.0</b>	<b>1.0</b>	<b>Nov-11</b>
Aberdeen EMD Plus	252,486,932	3.8		-0.9	-3.0	4.8	--	--	--	6.3	Dec-18
JP Morgan EMBI Global Diversified				0.0	-1.3	4.4	6.4	4.2	5.4	6.8	Dec-18
<b>Total Alternative Assets</b>	<b>1,498,034,131</b>	<b>22.3</b>	<b>26.0</b>								
<b>Hedge Fund Composite</b>	<b>310,469,956</b>	<b>4.6</b>	<b>5.0</b>	<b>0.6</b>	<b>7.7</b>	<b>14.1</b>	<b>7.5</b>	<b>5.7</b>	<b>4.5</b>	<b>4.0</b>	<b>Nov-04</b>
EnTrust Peruvian Bonds	4,609,549	0.1		-0.2	-1.8	2.0	-3.3	--	--	-3.2	Jan-18
Blackstone	142,136,460	2.1		0.3	7.3	12.2	7.1	--	--	6.4	Feb-18
Grosvenor	162,491,679	2.4		0.9	8.4	16.5	9.4	7.7	--	5.9	Jul-13
HFRI Fund of Funds Composite Index				1.6	7.4	15.8	8.1	6.2	4.5	4.6	Jul-13
Hedge Fund Transition Account	1,232,268	0.0									
<b>Real Estate Composite</b>	<b>555,626,490</b>	<b>8.3</b>	<b>10.0</b>	<b>0.0</b>	<b>8.7</b>	<b>9.8</b>	<b>6.9</b>	<b>7.8</b>	<b>9.7</b>	<b>--</b>	
<b>Private Equity &amp; Debt</b>	<b>631,937,685</b>	<b>9.4</b>	<b>11.0</b>	<b>0.0</b>	<b>31.0</b>	<b>37.7</b>	<b>12.9</b>	<b>12.7</b>	<b>9.6</b>	<b>--</b>	
<b>Cash</b>	<b>140,562,690</b>	<b>2.1</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, and are lagged one quarter.
- 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 June 30, 2021						
	Committed Capital	Cummulative Distribution	Contributed Capital	QTR	Last Year	Valuation
Private Equity & Debt IRR	\$1,317,360,846	\$676,267,404	\$894,693,991	9.0%	37.7%	\$631,937,685
Private Equity	\$799,382,345	\$510,419,415	\$574,703,352			\$327,531,332
Private Debt	\$517,978,501	\$165,847,989	\$319,990,639			\$304,406,353
Real Estate IRR	\$1,089,867,880	\$844,893,654	\$913,138,908	4.9%	9.8%	\$555,626,490



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Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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





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