

# **FLASH REPORT (GROSS)- PRELIMINARY**

## **Boston Retirement System**

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# CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Jan	Feb	Mar	Q1	YTD
<b>US Large Cap</b>	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	8.0%	3.2%	1.9%	13.6%	13.6%
<b>US Small/Mid Cap</b>	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	11.5%	4.7%	-0.8%	15.8%	15.8%
<b>Int'l Developed Equity</b>	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	6.6%	2.5%	0.6%	10.0%	10.0%
<b>Emerging Market Equity</b>	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	8.8%	0.2%	0.8%	9.9%	9.9%
<b>US Aggregate</b>	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	1.1%	-0.1%	1.9%	2.9%	2.9%
<b>US High Yield</b>	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	4.5%	1.7%	0.9%	7.3%	7.3%
<b>US Long Treasury</b>	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	0.7%	-1.2%	5.3%	4.7%	4.7%
<b>EM Local Credit</b>	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	5.5%	-1.1%	-1.3%	2.9%	2.9%
<b>Global Credit</b>	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	7.4%	-1.2%	1.5%	-0.6%	1.3%	2.2%	2.2%
<b>Commodities</b>	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	5.4%	1.0%	-0.2%	6.3%	6.3%
<b>BC TIPS</b>	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	1.3%	0.0%	1.8%	3.2%	3.2%

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse

S&P 500 = US Large Cap  
 Russell 2500 = US Small/Mid Cap  
 MSCI EAFE = International Developed Equity  
 MSCI EM = Emerging Market Equity  
 Bloomberg Barclays Aggregate = US Aggregate  
 Bloomberg Barclays High Yield = US HY  
 Bloomberg Barclays Long Treasury = US Long Treasury  
 GBI-EM Global Diversified = EM Local Credit  
 Barclays Global Aggregate = Global Credit  
 Bloomberg Commodity = Commodities  
 Barclays US TIPS = BC TIPS



## Boston Retirement System

# TOTAL FUND PERFORMANCE DETAIL (GROSS)-PRELIM

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Composite</b>	<b>4,913,170,038</b>	<b>100.0</b>	<b>100.0</b>	<b>0.6</b>	<b>7.3</b>	<b>1.3</b>	<b>8.6</b>	<b>5.7</b>	<b>9.7</b>	<b>7.8</b>	<b>Aug-94</b>
Allocation Index				0.8	7.3	2.1	8.4	5.6	9.2	--	Aug-94
Policy Index				0.6	6.9	3.2	9.1	6.1	9.9	--	Aug-94
PRIT Core Fund/Teachers*	1,694,964,404	34.5		0.6	6.3	3.7	9.2	7.2	--	9.4	Jul-10
<b>Total Equity</b>	<b>2,422,960,686</b>	<b>49.3</b>	<b>48.0</b>	<b>0.6</b>	<b>12.1</b>	<b>-1.0</b>	<b>11.2</b>	<b>6.5</b>	<b>--</b>	<b>--</b>	<b>Dec-04</b>
<b>Large Cap Comp</b>	<b>843,586,452</b>	<b>17.2</b>	<b>17.0</b>	<b>1.5</b>	<b>14.1</b>	<b>8.6</b>	<b>15.0</b>	<b>11.3</b>	<b>17.0</b>	<b>9.4</b>	<b>Dec-04</b>
Rhumblin Advisors	112,605,131	2.3		1.9	13.6	9.5	13.5	10.9	15.9	9.8	Aug-94
DE Shaw Core Enhanced	85,503,115	1.7		1.9	13.1	10.0	14.3	11.4	--	14.0	Oct-09
JP Morgan 130/30	204,508,223	4.2		2.2	13.3	7.6	13.8	10.6	--	13.6	Oct-09
S&P 500				1.9	13.6	9.5	13.5	10.9	15.9	13.3	Oct-09
DE Shaw 130/30	222,402,237	4.5		1.3	13.1	7.3	15.1	12.0	--	15.0	Oct-09
Russell 1000				1.7	14.0	9.3	13.5	10.6	16.0	13.3	Oct-09
Columbia Threadneedle	106,852,734	2.2		-0.3	10.7	2.2	13.3	8.6	16.6	9.5	Jan-97
Russell 1000 Value				0.6	11.9	5.7	10.5	7.7	14.5	8.2	Jan-97
Zevenbergen Capital	55,660,892	1.1		-0.5	26.9	18.4	23.7	13.7	20.0	12.2	Aug-94
Intech	56,054,120	1.1		2.9	18.1	11.7	17.2	13.8	17.9	10.0	Oct-06
Russell 1000 Growth				2.8	16.1	12.7	16.5	13.5	17.5	10.6	Oct-06
<b>Small Cap Comp</b>	<b>315,361,781</b>	<b>6.4</b>	<b>6.0</b>	<b>-0.7</b>	<b>14.7</b>	<b>3.7</b>	<b>15.5</b>	<b>8.0</b>	<b>16.6</b>	<b>9.8</b>	<b>Dec-04</b>
Westfield Capital Management	99,330,764	2.0		0.4	16.5	4.2	16.7	8.5	17.3	11.0	Sep-03
Russell 2000 Growth				-1.4	17.1	3.9	14.9	8.4	16.5	9.4	Sep-03
Bernzott	113,638,907	2.3		-0.1	14.1	7.1	17.1	--	--	13.3	Nov-15
Russell 2000 Value				-2.9	11.9	0.2	10.9	5.6	14.1	9.2	Nov-15
Aristotle	102,392,021	2.1		-2.6	13.7	1.2	12.9	--	--	10.6	Nov-15
Russell 2000				-2.1	14.6	2.0	12.9	7.1	15.4	10.1	Nov-15

- PRIT Core Fund valuation is based off the Policy Index as of 03/31/2019.

- J&W Seligman is now named Columbia Threadneedle.



## Boston Retirement System

# TOTAL FUND PERFORMANCE DETAIL (GROSS)-PRELIM

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Non-US Equity</b>	<b>1,264,012,454</b>	<b>25.7</b>	<b>25.0</b>	<b>0.4</b>	<b>10.4</b>	<b>-8.1</b>	<b>7.6</b>	<b>2.6</b>	<b>9.1</b>	<b>6.1</b>	<b>Aug-94</b>
<b>International Equity</b>	<b>824,782,329</b>	<b>16.8</b>	<b>17.0</b>	<b>0.4</b>	<b>10.9</b>	<b>-7.4</b>	<b>6.7</b>	<b>1.9</b>	<b>--</b>	<b>5.3</b>	<b>Dec-10</b>
Todd	227,578,597	4.6		-0.2	12.3	-7.2	6.0	--	--	6.0	Apr-16
<i>MSCI ACWI ex USA</i>				0.6	10.3	-4.2	8.1	2.6	8.8	8.1	Apr-16
Panagora Asset Management	235,960,634	4.8		0.5	9.5	-5.6	7.1	3.3	10.8	5.9	Aug-94
Fisher	242,492,604	4.9		1.6	12.0	-5.1	8.5	3.5	11.0	4.5	Feb-06
<i>MSCI EAFE</i>				0.6	10.0	-3.7	7.3	2.3	9.0	3.2	Feb-06
Segall Bryant Hamill	118,354,223	2.4		-1.1	8.1	-17.0	--	--	--	-9.8	Nov-17
<i>MSCI EAFE Small Cap</i>				0.2	10.7	-9.4	7.5	4.5	12.8	-3.7	Nov-17
<b>Emerging Markets</b>	<b>439,230,125</b>	<b>8.9</b>	<b>8.0</b>	<b>0.3</b>	<b>9.3</b>	<b>-9.6</b>	<b>9.2</b>	<b>4.0</b>	<b>--</b>	<b>2.7</b>	<b>Dec-10</b>
Vontobel	102,760,883	2.1		3.3	11.6	-3.5	9.3	5.2	12.6	10.3	Oct-05
Polunin	108,414,118	2.2		-1.4	8.1	-8.4	12.0	6.9	--	6.9	Oct-13
SSgA Emerging Markets	132,805,633	2.7		-0.9	7.0	-10.3	9.7	2.2	--	1.9	Oct-13
<i>MSCI Emerging Markets</i>				0.8	9.9	-7.4	10.7	3.7	8.9	3.6	Oct-13
Lazard	95,249,491	1.9		0.7	11.6	-15.8	5.6	2.3	--	2.2	Oct-13
<i>MSCI Emerging Markets Small Cap</i>				0.9	7.8	-12.4	5.9	1.8	10.4	2.5	Oct-13
<b>Total Fixed Income</b>	<b>1,428,828,868</b>	<b>29.1</b>	<b>26.0</b>								
<b>Core Fixed Income</b>	<b>913,230,432</b>	<b>18.6</b>	<b>16.0</b>	<b>1.4</b>	<b>2.8</b>	<b>3.4</b>	<b>3.0</b>	<b>3.2</b>	<b>4.8</b>	<b>4.7</b>	<b>Dec-04</b>
Wells Asset Management	301,532,405	6.1		1.9	3.1	4.7	2.4	3.1	5.0	5.1	May-05
BlackRock SIO	308,372,354	6.3		1.0	2.6	2.2	4.3	--	--	3.1	Aug-15
<i>BBgBarc US Aggregate TR</i>				1.9	2.9	4.5	2.0	2.7	3.8	2.5	Aug-15
IR&M	303,325,672	6.2		1.6	2.8	3.5	2.2	--	--	2.9	Jul-15
<i>IR&amp;M Custom Benchmark</i>				1.9	3.1	3.4	1.7	2.5	3.7	2.3	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.



## Boston Retirement System

# TOTAL FUND PERFORMANCE DETAIL (GROSS)-PRELIM

	Market Value (\$)	% of Portfolio	Policy %	1 Mo (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Value Added Fixed Income</b>	<b>515,598,436</b>	<b>10.5</b>	<b>10.0</b>	<b>0.8</b>	<b>5.6</b>	<b>1.5</b>	<b>6.6</b>	<b>3.1</b>	<b>--</b>	<b>--</b>	
<b>High Yield Income</b>	<b>313,725,064</b>	<b>6.4</b>	<b>6.0</b>	<b>0.6</b>	<b>4.8</b>	<b>3.7</b>	<b>7.7</b>	<b>4.9</b>	<b>9.9</b>	<b>7.0</b>	<b>Jan-06</b>
Crescent Capital	103,666,202	2.1		0.3	4.5	4.3	6.2	--	--	5.1	May-15
<i>50/50 S&amp;P/LSTA Leveraged Loan/BBgBarc High Yield</i>				0.4	5.6	4.4	7.1	4.2	9.6	4.5	May-15
DDJ	102,342,094	2.1		1.1	4.8	3.2	11.0	--	--	6.7	May-15
<i>75% BC HY 25% S&amp;P Leverage Loan</i>				0.7	6.4	5.2	7.8	--	--	4.8	May-15
GoldenTree Multi Spec Opp Credit	106,783,015	2.2		0.6	5.1	3.4	--	--	--	5.6	Dec-16
<i>Blended Index</i>				0.5	4.8	3.9	--	--	--	4.7	Dec-16
<i>S&amp;P/LSTA Leveraged Loan TR</i>				-0.2	4.0	3.0	5.7	3.6	8.0	4.2	Dec-16
<b>Emerging Market Debt</b>	<b>178,437,453</b>	<b>3.6</b>	<b>4.0</b>	<b>1.2</b>	<b>7.4</b>	<b>-2.4</b>	<b>4.9</b>	<b>-0.5</b>	<b>--</b>	<b>0.0</b>	<b>Nov-11</b>
Aberdeen EMD Plus	178,437,407	3.6		1.2	7.4	--	--	--	--	8.4	Nov-18
<i>JP Morgan EMBI Global Diversified</i>				1.4	7.0	4.2	5.8	5.4	8.5	8.4	Nov-18
<b>Global Fixed Income</b>	<b>23,435,919</b>	<b>0.5</b>	<b>0.0</b>	<b>1.2</b>	<b>3.1</b>	<b>-0.5</b>	<b>2.7</b>	<b>1.6</b>	<b>4.9</b>	<b>5.1</b>	<b>Jul-95</b>
Loomis Sayles	23,435,919	0.5		1.2	3.1	-0.5	2.7	1.6	4.9	5.7	Nov-99
<i>FTSE WGBI TR</i>				1.3	1.7	-1.6	1.0	0.6	2.2	4.1	Nov-99
<b>Total Alternative Assets</b>	<b>1,006,810,513</b>	<b>20.5</b>	<b>26.0</b>								
<b>Hedge Fund Composite</b>	<b>236,183,320</b>	<b>4.8</b>	<b>5.0</b>	<b>0.3</b>	<b>2.4</b>	<b>0.1</b>	<b>2.8</b>	<b>0.4</b>	<b>3.9</b>	<b>3.1</b>	<b>Nov-04</b>
Permal	70,908,333	1.4		0.0	1.7	-4.2	1.3	-0.5	5.5	3.1	Nov-07
EnTrust Peruvian Bonds	5,022,866	0.1		-0.3	-0.6	-4.7	--	--	--	-4.2	Jan-18
Blackstone	77,708,650	1.6		0.6	3.1	5.0	--	--	--	4.3	Feb-18
Grosvenor	79,700,634	1.6		0.1	2.6	-0.5	4.7	2.3	--	3.6	Jul-13
<i>HFRI Fund of Funds Composite Index</i>				0.9	4.6	0.1	3.9	2.2	3.5	2.9	Jul-13
Hedge Fund Transition Account	2,842,836	0.1									
<b>Real Estate Composite</b>	<b>463,464,505</b>	<b>9.4</b>	<b>10.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.2</b>	<b>8.1</b>	<b>10.2</b>	<b>6.4</b>	<b>--</b>	
<b>Private Equity &amp; Debt</b>	<b>307,162,688</b>	<b>6.3</b>	<b>11.0</b>	<b>0.0</b>	<b>0.0</b>	<b>12.6</b>	<b>9.5</b>	<b>9.3</b>	<b>8.8</b>	<b>--</b>	
<b>Cash</b>	<b>54,569,971</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.1</b>	<b>Oct-04</b>

- Real Estate and Private Equity & Debt report on a quarterly basis, valuations are as of 9/30/2018.
- 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.
- March performance is preliminary.

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 September 30, 2018						
	Committed Capital	Cumulative Distribution	Contributed Capital	QTR	Last Year	Valuation
<b>Private Equity &amp; Debt IRR</b>	<b>\$888,885,650</b>	<b>\$564,456,348</b>	<b>\$635,550,853</b>	<b>3.9%</b>	<b>16.2%</b>	<b>\$307,162,688</b>
Private Equity	\$570,385,650	\$431,557,650	\$448,204,108			\$174,398,504
Private Debt	\$318,500,000	\$132,898,698	\$187,346,745			\$132,764,184
<b>Real Estate IRR</b>	<b>\$900,081,937</b>	<b>\$713,322,048</b>	<b>\$778,245,832</b>	<b>2.4%</b>	<b>9.5%</b>	<b>\$463,464,505</b>



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- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
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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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