FLASH REPORT (GROSS)

Boston Retirement System

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Mike Manning, CFA, CAIA, Managing Partner

Will Forde, CFA, CAIA, Sr. Consultant

Kiley Fischer, Analyst

Jake Mallinson, Sr. Analyst

CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	Jan	Feb	YTD
US Large Cap	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	8.0%	3.2%	11.5%
US Small/Mid Cap	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	11.5%	4.7%	16.8%
Int'l Developed Equity	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	6.6%	2.5%	9.3%
EM Equity	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	8.8%	0.2%	9.0%
US Aggregate	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	1.1%	-0.1%	1.0%
US High Yield	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	4.5%	1.7%	6.3%
US Long Treasuries	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	0.7%	-1.2%	-0.6%
EM Local Credit	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	5.5%	-1.1%	4.3%
Global Credit	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	7.4%	-1.2%	1.5%	-0.6%	0.9%
Commodities	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	5.4%	1.0%	6.5%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	1.3%	0.0%	1.3%

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 Treasuries
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)

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Composite	**4,879,324,929**	**100.0**	**100.0**	**1.5**	**6.6**	**3.1**	**0.0**	**10.1**	**5.7**	**9.9**	**7.8**	**Aug-94**
Allocation Index				*1.6*	*6.5*	*3.0*	*0.8*	*9.8*	*5.6*	*9.5*	*--*	*Aug-94*
Policy Index				*1.5*	*6.2*	*3.4*	*2.6*	*10.7*	*6.2*	*10.3*	*--*	*Aug-94*
PRIT Core Fund/Teachers*	1,684,286,031	34.5		1.3	5.6	2.9	3.4	10.6	7.4	--	9.5	Jul-10
Total Equity	**2,607,592,300**	**53.4**	**52.0**	**2.6**	**11.4**	**3.7**	**-3.3**	**13.7**	**6.4**	**--**	**--**	**Dec-04**
Large Cap Comp	**831,611,888**	**17.0**	**17.0**	**3.4**	**12.4**	**2.4**	**4.5**	**17.0**	**11.0**	**17.8**	**9.3**	**Dec-04**
Rhumbline Advisors	110,468,638	2.3		3.2	11.4	1.4	4.6	15.2	10.6	16.6	9.8	Aug-94
DE Shaw Core Enhanced	83,917,082	1.7		3.4	11.1	1.7	5.5	16.0	11.1	--	13.9	Oct-09
JP Morgan 130/30	200,021,674	4.1		2.5	10.8	0.8	1.9	15.7	10.3	--	13.5	Oct-09
S&P 500				*3.2*	*11.5*	*1.4*	*4.7*	*15.3*	*10.7*	*16.7*	*13.2*	*Oct-09*
DE Shaw 130/30	219,591,466	4.5		3.7	11.6	2.9	4.0	17.1	11.7	--	15.0	Oct-09
Russell 1000				*3.4*	*12.0*	*1.8*	*5.0*	*15.4*	*10.4*	*16.8*	*13.2*	*Oct-09*
Columbia Threadneedle	107,193,085	2.2		1.7	11.1	0.4	0.4	15.9	9.0	17.9	9.6	Jan-97
Russell 1000 Value				*3.2*	*11.2*	*0.5*	*3.2*	*12.8*	*8.1*	*15.4*	*8.2*	*Jan-97*
Zevenbergen Capital	55,935,597	1.1		8.3	27.5	11.8	16.0	26.8	12.1	21.3	12.2	Aug-94
Intech	54,484,346	1.1		5.0	14.8	5.0	6.9	18.5	13.0	18.5	9.8	Oct-06
Russell 1000 Growth				*3.6*	*12.9*	*3.2*	*6.6*	*18.0*	*12.6*	*18.2*	*10.4*	*Oct-06*
Small Cap Comp	**317,743,426**	**6.5**	**6.0**	**4.1**	**15.6**	**2.7**	**4.9**	**19.0**	**8.1**	**17.7**	**9.9**	**Dec-04**
Westfield Capital Management	98,903,345	2.0		4.5	16.0	4.8	4.7	20.2	8.1	18.1	11.1	Sep-03
Russell 2000 Growth				*6.5*	*18.8*	*4.9*	*6.7*	*18.3*	*8.2*	*17.7*	*9.6*	*Sep-03*
Bernzott	113,733,438	2.3		3.3	14.2	2.1	6.6	20.0	--	--	13.7	Nov-15
Russell 2000 Value				*3.9*	*15.2*	*1.3*	*4.4*	*15.0*	*6.5*	*15.4*	*10.4*	*Nov-15*
Aristotle	105,106,555	2.2		4.7	16.7	1.3	4.7	16.8	--	--	11.8	Nov-15
Russell 2000				*5.2*	*17.0*	*3.1*	*5.6*	*16.7*	*7.4*	*16.6*	*11.1*	*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 (%)	Fiscal YTD (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Non-US Equity	**1,458,236,986**	**29.9**	**29.0**	**1.8**	**10.0**	**4.7**	**-10.2**	**10.3**	**2.6**	**9.9**	**6.1**	**Aug-94**
International Equity	**1,019,962,577**	**20.9**	**21.0**	**2.0**	**10.4**	**3.9**	**-9.7**	**8.9**	**1.7**	**--**	**5.3**	**Dec-10**
Todd	287,151,837	5.9		1.9	12.5	4.0	-8.7	--	--	--	6.2	Apr-16
MSCI ACWI ex USA				*2.0*	*9.7*	*4.7*	*-6.5*	*10.7*	*2.5*	*9.6*	*8.1*	*Apr-16*
Panagora Asset Management	314,869,478	6.5		1.1	9.0	4.0	-8.5	9.2	3.0	11.4	5.9	Aug-94
Fisher	297,901,565	6.1		3.5	10.3	4.6	-8.1	10.6	2.9	11.7	4.4	Feb-06
MSCI EAFE				*2.5*	*9.3*	*4.0*	*-6.0*	*9.3*	*2.1*	*9.6*	*3.2*	*Feb-06*
Segall Bryant Hamill	119,638,858	2.5		1.3	9.3	1.7	-18.1	--	--	--	-9.7	Nov-17
MSCI EAFE Small Cap				*2.2*	*10.5*	*3.4*	*-10.5*	*10.2*	*4.3*	*13.5*	*-4.1*	*Nov-17*
Emerging Markets	**438,274,409**	**9.0**	**8.0**	**1.3**	**9.0**	**6.3**	**-11.2**	**13.0**	**4.5**	**--**	**2.7**	**Dec-10**
Vontobel	99,561,208	2.0		0.9	8.0	6.6	-7.2	11.0	5.4	12.9	10.1	Oct-05
Polunin	110,080,412	2.3		2.4	9.6	6.9	-9.5	17.6	7.5	--	7.3	Oct-13
SSgA Emerging Markets	134,034,005	2.7		-0.2	7.9	4.9	-10.8	14.6	3.1	--	2.1	Oct-13
MSCI Emerging Markets				*0.2*	*9.0*	*6.1*	*-9.9*	*15.0*	*4.1*	*10.3*	*3.5*	*Oct-13*
Lazard	94,598,784	1.9		2.5	10.8	7.4	-17.2	8.6	2.5	--	2.1	Oct-13
MSCI Emerging Markets Small Cap				*1.3*	*6.8*	*5.0*	*-14.3*	*9.0*	*2.0*	*11.7*	*2.3*	*Oct-13*
Total Fixed Income	**1,218,102,273**	**25.0**	**22.0**									
Core Fixed Income	**707,105,491**	**14.5**	**12.0**	**0.2**	**1.4**	**2.3**	**2.3**	**2.9**	**2.9**	**4.8**	**4.6**	**Dec-04**
Wells Asset Management	212,380,044	4.4		0.1	1.1	2.9	3.3	2.1	2.7	5.0	5.0	May-05
BlackRock SIO	225,591,472	4.6		0.3	1.7	1.8	0.9	4.2	--	--	2.9	Aug-15
BBgBarc US Aggregate TR				*-0.1*	*1.0*	*2.9*	*3.2*	*1.7*	*2.3*	*3.7*	*2.0*	*Aug-15*
IR&M	269,133,975	5.5		0.1	1.3	2.2	2.6	2.1	--	--	2.6	Jul-15
IR&M Custom Benchmark				*0.0*	*1.2*	*2.3*	*2.4*	*1.3*	*2.1*	*3.6*	*1.8*	*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.

Boston Retirement System

TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value ($)	% of Portfolio	Policy %	1 Mo (%)	Fiscal YTD (%)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Value Added Fixed Income	**510,996,783**	**10.5**	**10.0**	**1.3**	**4.7**	**3.8**	**0.9**	**7.6**	**3.2**	**--**	**--**	
High Yield Income	**311,383,809**	**6.4**	**6.0**	**1.4**	**4.1**	**2.1**	**3.1**	**8.3**	**4.9**	**10.0**	**7.0**	**Jan-06**
Crescent Capital	103,064,482	2.1		1.4	4.3	2.3	3.5	6.7	--	--	5.2	May-15
50/50 S&P/LSTA Leveraged Loan/BBgBarc High Yield				*1.6*	*5.2*	*2.8*	*3.9*	*8.2*	*4.1*	*9.8*	*4.5*	*May-15*
DDJ	101,186,747	2.1		0.9	3.6	1.5	2.4	11.7	--	--	6.5	May-15
75% BC HY 25% S&P Leverage Loan				*1.6*	*5.7*	*3.4*	*4.1*	*9.0*	--	--	*4.7*	*May-15*
GoldenTree Multi Spec Opp Credit	106,198,921	2.2		1.9	4.5	2.4	3.3	--	--	--	5.6	Dec-16
Blended Index				*1.4*	*4.3*	*2.6*	*3.3*	--	--	--	*4.7*	*Dec-16*
S&P/LSTA Leveraged Loan TR				*1.6*	*4.2*	*1.5*	*3.4*	*6.7*	*3.7*	*8.2*	*4.4*	*Dec-16*
Emerging Market Debt	**176,397,859**	**3.6**	**4.0**	**1.3**	**6.1**	**7.1**	**-2.9**	**6.7**	**-0.2**	**--**	**-0.2**	**Nov-11**
Aberdeen EMD Plus	176,397,812	3.6		1.3	6.1	7.1	--	--	--	--	7.1	Nov-18
JP Morgan EMBI Global Diversified				*1.0*	*5.5*	*6.9*	*3.1*	*6.4*	*5.4*	*8.8*	*6.9*	*Nov-18*
Global Fixed Income	**23,215,116**	**0.5**	**0.0**	**-0.4**	**1.8**	**3.4**	**-0.8**	**3.6**	**1.4**	**5.0**	**5.1**	**Jul-95**
Loomis Sayles	23,215,116	0.5		-0.4	1.8	3.4	-0.8	3.6	1.4	5.0	5.6	Nov-99
FTSE WGBI TR				*-0.9*	*0.5*	*2.9*	*-1.3*	*1.4*	*0.3*	*2.3*	*4.0*	*Nov-99*
Total Alternative Assets	**1,006,288,423**	**20.6**	**26.0**									
Hedge Fund Composite	**235,661,230**	**4.8**	**5.0**	**0.5**	**2.2**	**0.3**	**-0.7**	**2.9**	**0.3**	**3.8**	**3.1**	**Nov-04**
Permal	70,900,547	1.5		0.7	1.6	-1.7	-5.7	1.8	-0.5	5.5	3.1	Nov-07
EnTrust Peruvian Bonds	5,039,496	0.1		-0.2	-0.3	-2.4	-4.5	--	--	--	-4.2	Jan-18
Blackstone	77,293,219	1.6		0.4	2.4	2.1	4.5	--	--	--	4.1	Feb-18
Grosvenor	79,585,132	1.6		0.4	2.4	0.4	-0.8	4.8	2.2	--	3.6	Jul-13
HFRI Fund of Funds Composite Index				*1.1*	*3.7*	*2.0*	*-1.3*	*3.9*	*1.9*	*3.5*	*2.8*	*Jul-13*
Hedge Fund Transition Account	2,842,836	0.1										
Real Estate Composite	**463,464,505**	**9.5**	**10.0**	**0.0**	**0.0**	**2.4**	**9.5**	**9.3**	**10.9**	**5.3**	**--**	
Private Equity & Debt	**307,162,688**	**6.3**	**11.0**	**0.0**	**0.0**	**3.9**	**16.2**	**9.4**	**9.9**	**8.7**	**--**	
Cash	**47,341,932**	**1.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**1.1**	**Oct-04**

- 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.
- Entrust Peruvian Bonds 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
Private Equity & Debt IRR	**$888,885,650**	**$564,456,348**	**$635,550,853**	**3.9%**	**16.2%**	**$307,162,688**
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
Real Estate IRR	**$900,081,937**	**$713,322,048**	**$778,245,832**	**2.4%**	**9.5%**	**$463,464,505**

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- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- 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.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.