

# *Monthly Performance Review*

## *May 2018*

*Prepared for the New York City  
Board of Education Retirement System  
07.2018*



## TABLE OF CONTENTS

<i>Market Indicators for May &amp; June.....</i>	<i>1</i>
<i>Contribution to Returns.....</i>	<i>5</i>
<i>Asset Allocation: Growth, Deflation, Inflation; New Policy Weights &amp; Adjusted Policy Weight Mixes.....</i>	<i>6</i>
<i>Classification of Investments. ....</i>	<i>12</i>
<i>BERS' Market Values 2017-2018. ....</i>	<i>15</i>
<i>BERS' Market Values 2008-2018. ....</i>	<i>16</i>
<i>Manager / Benchmark Comparison Report.....</i>	<i>17</i>
<i>Private Equity Fund Supplemental Details .....</i>	<i>29</i>
<i>Private Equity Cash Flow Tracker .....</i>	<i>30</i>
<i>Real Estate Fund Supplemental Details.....</i>	<i>31</i>
<i>Real Estate Cash Flow Tracker.....</i>	<i>32</i>
<i>Infrastructure Fund Supplemental Details .....</i>	<i>33</i>
<i>Infrastructure Cash Flow Tracker.....</i>	<i>34</i>

**CITY OF NEW YORK**  
**NYC Board of Education Retirement System**  
**Market Indicator Report**  
**May 31, 2018**



**MARKET INDICATORS**

	<u>1 Month</u>	<u>3 Month</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
S&P 500	2.41	0.19	13.67	14.38	15.92	10.97	12.98	9.14
S&P 400 MIDCAP	4.13	4.82	13.03	14.86	16.00	10.25	12.17	9.93
RUSSELL 1000	2.55	0.57	13.80	14.60	16.03	10.70	12.91	9.18
RUSSELL 2000	6.07	8.37	16.73	20.76	20.56	10.98	12.18	9.64
RUSSELL 3000	2.82	1.14	14.03	15.06	16.37	10.72	12.85	9.21
RUSSELL 3000 GROWTH	4.53	2.32	21.32	21.32	20.78	13.69	15.51	10.86
RUSSELL 3000 VALUE	0.99	(0.14)	6.95	8.85	11.94	7.71	10.15	7.48
MSCI EAFE NET	(2.25)	(1.82)	8.16	7.97	12.12	4.33	5.93	2.10
MSCI EMF NET	(3.54)	(5.76)	12.89	14.03	20.53	6.17	4.52	1.62
MSCI WORLD NET	0.63	(0.44)	11.14	11.57	13.97	7.65	9.40	5.38
MSCI EUROPE SMID CAP NET	(1.59)	(0.65)	11.77	10.49	13.34	7.60	9.76	4.39
MSCI AC WORLD ex US NET	(2.31)	(2.50)	9.33	9.67	13.88	4.74	5.46	1.86
NYC - TREASURY AGENCY PLUS FIVE	1.47	1.81	(1.02)	(1.18)	(0.92)	1.15	2.19	4.75
Citigroup USBIG Treasury 1-3 Y Index	0.35	0.39	0.04	(0.05)	0.27	0.41	0.55	1.24
Citigroup USBIG Treasury/Agency 1-10 y	0.63	0.59	(0.70)	(0.96)	(0.27)	0.50	0.87	2.46
Citigroup Treasury 10+	2.15	3.21	(0.28)	0.14	(0.89)	2.03	3.94	6.26
CITIGROUP MORTGAGE	0.68	0.88	0.10	(0.30)	0.40	1.14	2.04	3.56
NYC - INVESTMENT GRADE CREDIT	0.55	(0.02)	(0.18)	(0.03)	1.95	2.41	2.85	5.00
CITIGROUP BROAD INVESTMENT GRADE	0.72	0.63	(0.28)	(0.40)	0.62	1.40	1.99	3.78

\*NCREIF NFI - ODCE NET index return calculated on a quarterly basis

**MARKET INDICATORS**

	<b><u>1 Month</u></b>	<b><u>3 Month</u></b>	<b><u>Fiscal YTD</u></b>	<b><u>1 Year</u></b>	<b><u>2 Year</u></b>	<b><u>3 Year</u></b>	<b><u>5 Year</u></b>	<b><u>10 Year</u></b>
NYC - CORE PLUS FIVE	0.79	0.69	(0.26)	(0.36)	0.80	1.69	2.43	4.41
BARCLAYS AGGREGATE	0.71	0.61	(0.27)	(0.37)	0.60	1.39	1.98	3.72
CITIGROUP BB & B	0.02	0.09	2.13	2.24	7.20	4.19	4.46	6.27
CITIGROUP BB & B CAPPED	0.03	0.04	2.12	2.22	7.05	4.07	4.39	6.48
BofA ML HIGH YIELD MASTER II	(0.02)	0.03	2.18	2.29	7.91	4.89	4.87	7.70
CSFB LEVERAGED LOAN	0.19	1.00	4.56	4.50	6.04	4.19	4.11	5.01
BARCLAYS GLOBAL US TIPS	0.43	1.42	1.70	0.74	1.57	1.46	0.86	3.15
BofA ML U.S. Convertible – Yield Alternative	0.59	1.71	4.94	6.12	9.49	2.92	3.29	5.26
BofA ML US Invt Grade Conv Bond Index	0.81	2.81	16.93	16.37	19.70	12.32	13.54	7.84
BofA ML ALL CONVERTIBLES EX MANDATORY	3.94	4.11	13.27	14.09	16.70	8.05	10.25	8.68
DJ US SELECT REAL ESTATE	3.98	9.61	(0.01)	2.44	1.92	4.60	6.99	5.85
NCREIF NFI - ODCE NET*	0.00	1.97	5.56	7.11	7.23	9.00	10.41	4.16
CPI + 4%	0.54	1.36	6.42	6.82	6.38	5.95	5.62	
91 DAY TREASURY BILL	0.15	0.42	1.19	1.28	0.86	0.62	0.39	0.36

\*NCREIF NFI - ODCE NET index return calculated on a quarterly basis

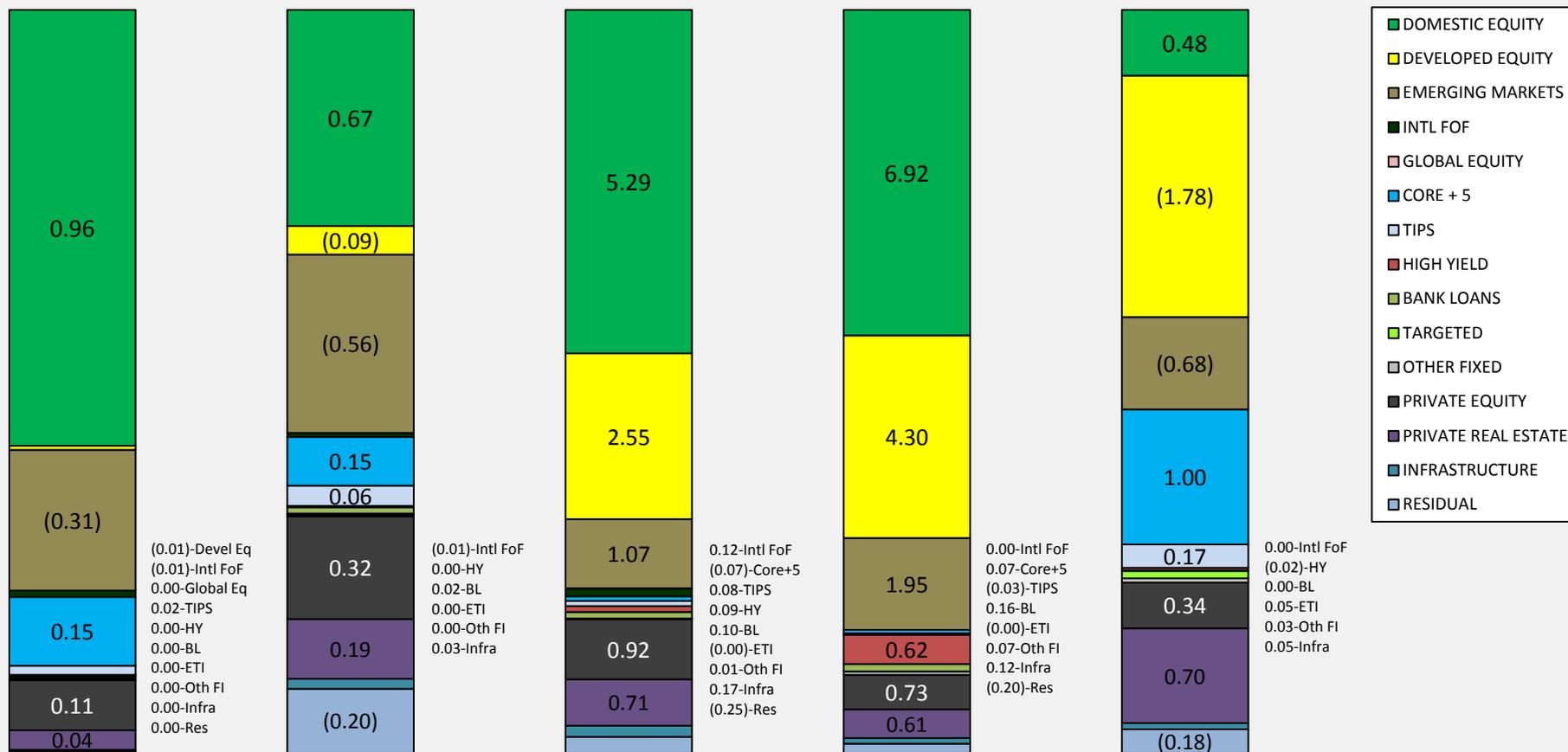
**MARKET INDICATORS**

	<u>1 Month</u>	<u>3 Month</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
S&P 500	0.62	3.43	14.37	14.37	16.12	11.93	13.42	10.17
S&P 400 MIDCAP	0.42	4.29	13.50	13.50	16.01	10.89	12.69	10.78
RUSSELL 1000	0.65	3.57	14.54	14.54	16.27	11.64	13.37	10.20
RUSSELL 2000	0.72	7.75	17.57	17.57	21.03	10.96	12.46	10.60
RUSSELL 3000	0.65	3.89	14.78	14.78	16.63	11.58	13.29	10.23
RUSSELL 3000 GROWTH	0.95	5.87	22.47	22.47	21.59	14.63	16.14	11.78
RUSSELL 3000 VALUE	0.28	1.71	7.25	7.25	11.64	8.48	10.40	8.60
MSCI EAFE NET	(1.22)	(1.24)	6.84	6.84	13.36	4.90	6.44	2.84
MSCI EMF NET	(4.15)	(7.96)	8.20	8.20	15.71	5.60	5.01	2.26
MSCI WORLD NET	(0.05)	1.73	11.09	11.09	14.59	8.48	9.94	6.26
MSCI EUROPE SMID CAP NET	(1.28)	(0.74)	10.34	10.34	17.31	7.88	10.38	5.28
MSCI AC WORLD ex US NET	(1.88)	(2.61)	7.28	7.28	13.67	5.07	5.99	2.54
NYC - TREASURY AGENCY PLUS FIVE	0.06	0.09	(0.96)	(0.96)	(2.80)	1.90	2.72	4.64
Citigroup USBIG Treasury 1-3 Y Index	0.02	0.22	0.06	0.06	(0.01)	0.41	0.56	1.21
Citigroup USBIG Treasury/Agency 1-10 y	(0.01)	0.06	(0.71)	(0.71)	(0.98)	0.62	1.02	2.42
Citigroup Treasury 10+	0.22	0.39	(0.06)	(0.06)	(3.80)	3.48	4.64	6.10
CITIGROUP MORTGAGE	0.01	0.26	0.11	0.11	0.01	1.42	2.23	3.56
NYC - INVESTMENT GRADE CREDIT	(0.54)	(0.88)	(0.72)	(0.72)	0.58	2.76	3.28	4.99
CITIGROUP BROAD INVESTMENT GRADE	(0.17)	(0.18)	(0.45)	(0.45)	(0.36)	1.71	2.26	3.75

**MARKET INDICATORS**

	<u>1 Month</u>	<u>3 Month</u>	<u>Fiscal YTD</u>	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>5 Year</u>	<u>10 Year</u>
NYC - CORE PLUS FIVE	(0.22)	(0.28)	(0.48)	(0.48)	(0.34)	2.10	2.77	4.38
BARCLAYS AGGREGATE	(0.12)	(0.16)	(0.40)	(0.40)	(0.36)	1.72	2.27	3.72
CITIGROUP BB & B	0.29	0.92	2.42	2.42	6.85	4.80	5.07	6.62
CITIGROUP BB & B CAPPED	0.29	0.88	2.42	2.42	6.72	4.67	5.00	6.74
BofA ML HIGH YIELD MASTER II	0.35	1.00	2.53	2.53	7.52	5.55	5.51	8.03
CSFB LEVERAGED LOAN	0.10	0.78	4.67	4.67	6.07	4.33	4.24	5.00
BARCLAYS GLOBAL US TIPS	0.40	0.77	2.11	2.11	0.73	1.93	1.68	3.03
BofA ML U.S. Convertible – Yield Alternative	1.56	2.59	6.58	6.58	9.53	4.20	4.13	5.76
BofA ML US Invt Grade Conv Bond Index	(1.78)	(0.38)	14.84	14.84	17.59	12.63	13.62	8.30
BofA ML ALL CONVERTIBLES EX MANDATORY	0.12	3.69	13.41	13.41	16.59	8.91	10.78	9.15
DJ US SELECT REAL ESTATE	4.24	9.99	4.23	4.23	0.85	7.67	8.27	7.54
91 DAY TREASURY BILL	0.17	0.45	1.36	1.36	0.92	0.68	0.42	0.35

### NYC Board of Education Retirement System Contribution to Return - May 2018



1 Month - Total Fund  
Return: 0.97%

3 Months - Total Fund  
Return: 0.60%

FYTD - Total Fund  
Return: 10.80%

FY Ending 6/30/17 Total  
Return: 15.33%

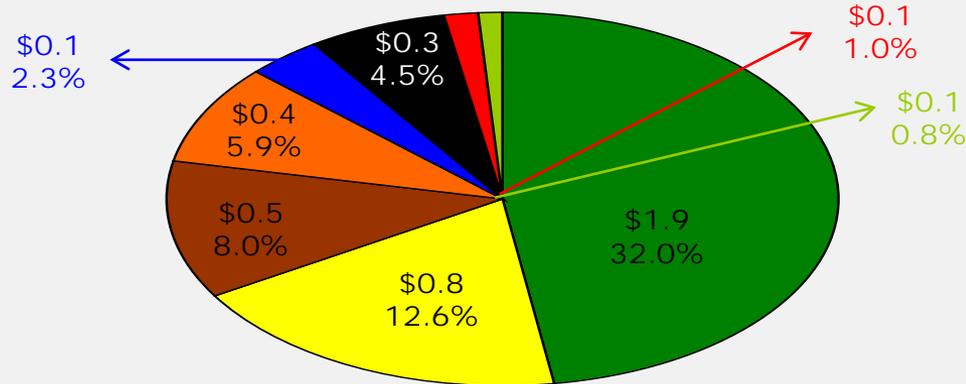
FY Ending 6/30/16 Total  
Return: 0.17%

Prepared by State Street

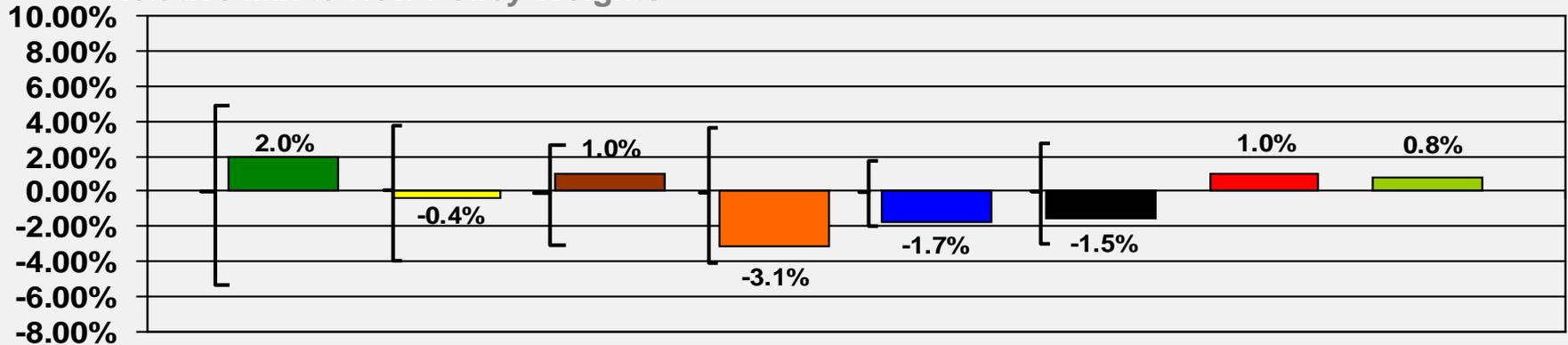
# Portfolio Asset Allocation – Growth : May 31, 2018

**\$6.0B** Under Management

## Asset Allocation



## Relative Mix to New Policy Weights

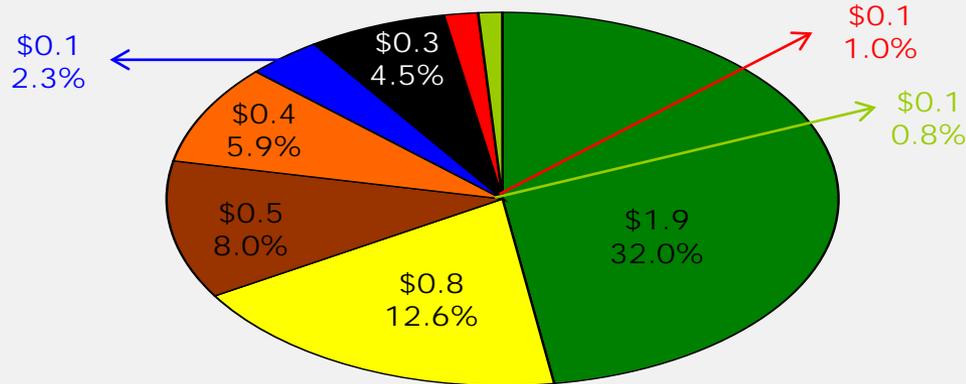


Note: Brackets represent rebalancing ranges versus Policy.

# Portfolio Asset Allocation – Growth : May 31, 2018

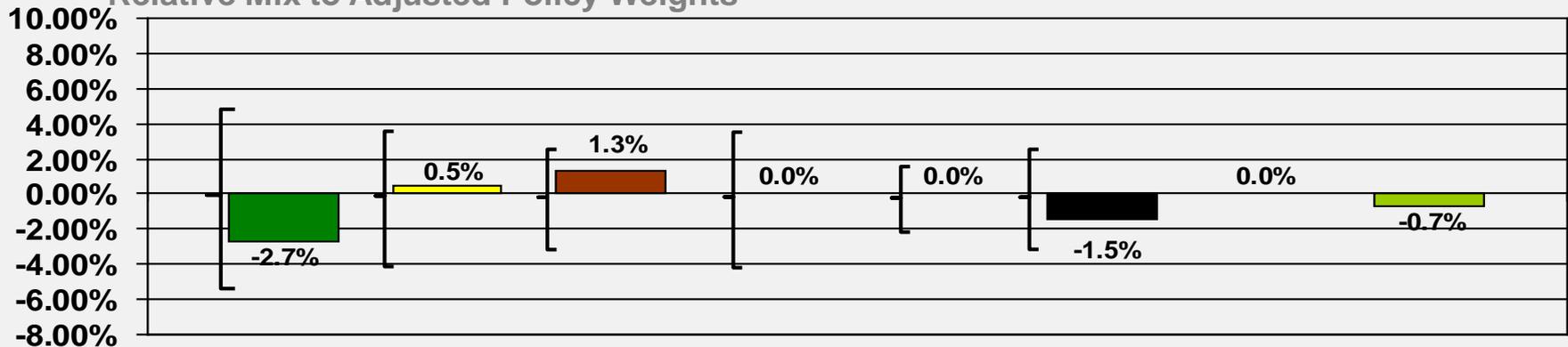
**\$6.0B** Under Management

## Asset Allocation



- Domestic US Equity
- Developed Markets EAFE
- Emerging Markets
- Private Equity
- Private Real Estate– Non Core
- High Yield
- Int'l Emerging Managers FoF
- Global Equity

## Relative Mix to Adjusted Policy Weights

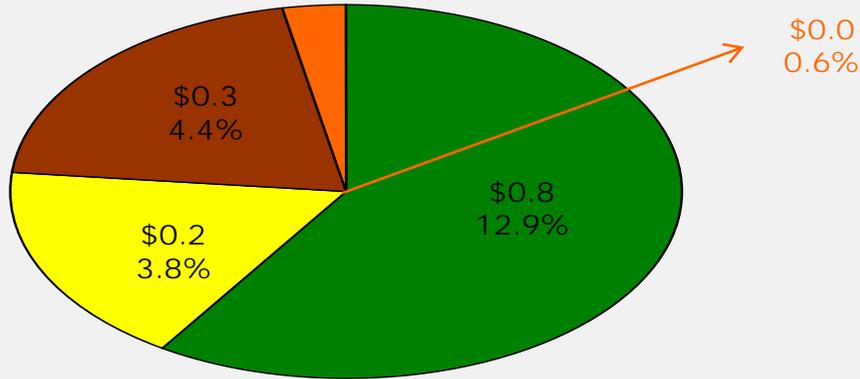


Note: Brackets represent rebalancing ranges versus Policy.

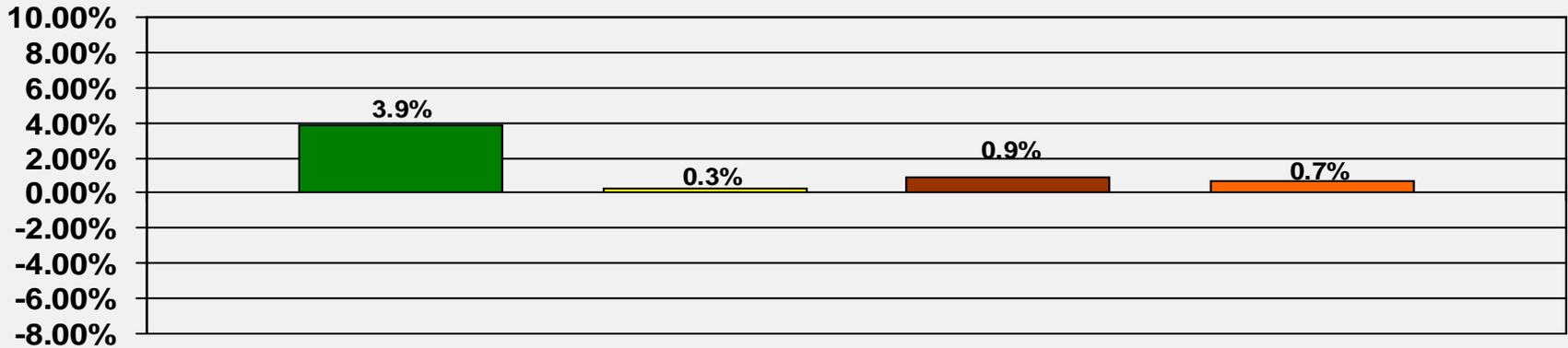
# Portfolio Asset Allocation – Deflation Protection : May 31, 2018

**\$6.0B** Under Management

## Asset Allocation



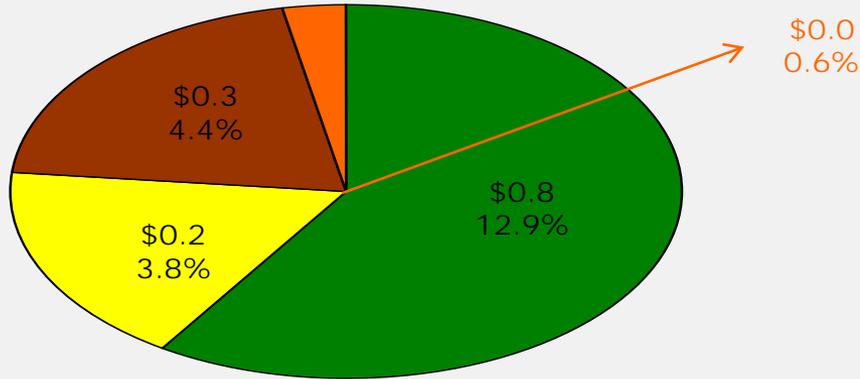
## Relative Mix to New Policy Weights



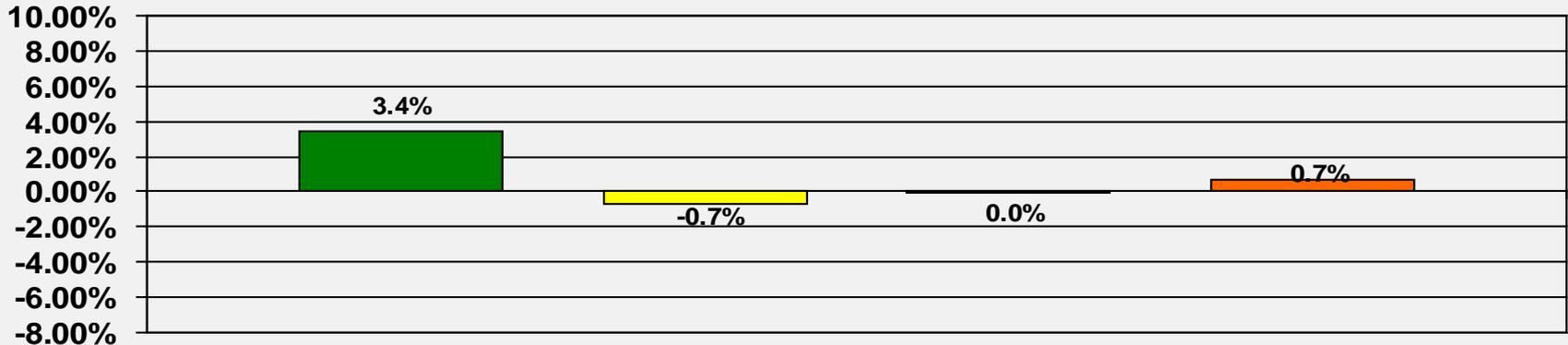
# Portfolio Asset Allocation – Deflation Protection : May 31, 2018

**\$6.0B** Under Management

## Asset Allocation



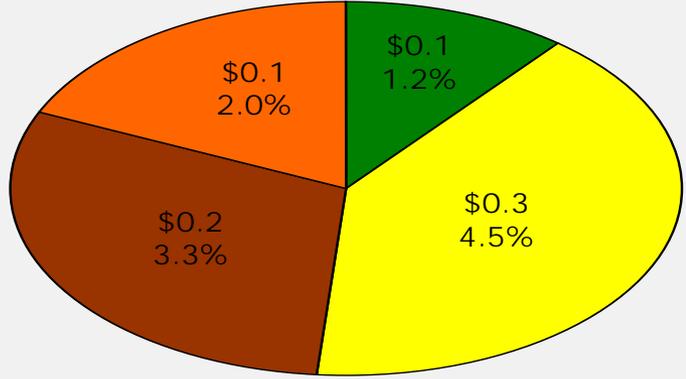
## Relative Mix to Adjusted Policy Weights



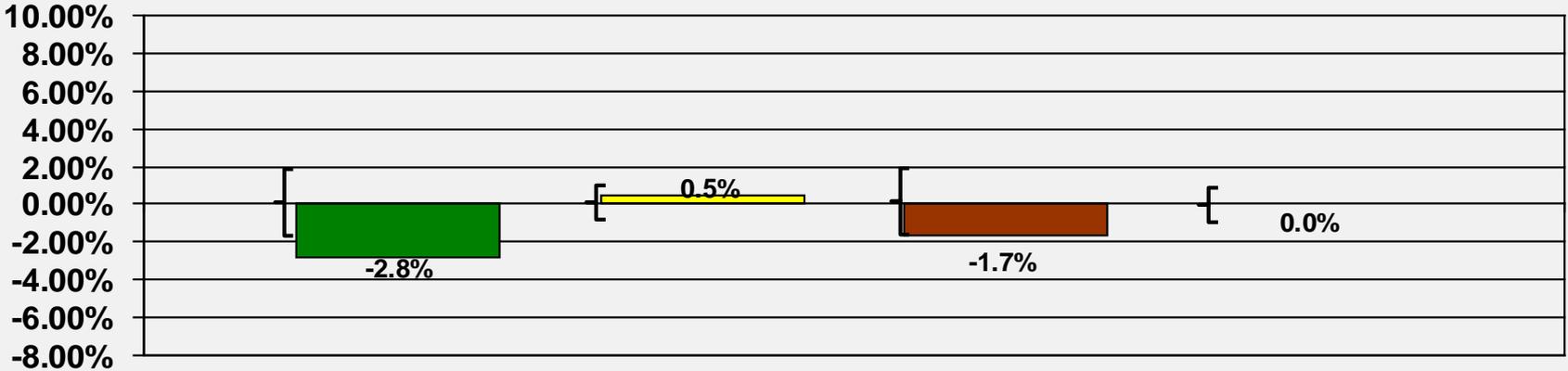
# Portfolio Asset Allocation – Inflation Protection : May 31, 2018

**\$6.0B** Under Management

## Asset Allocation



## Relative Mix to New Policy Weights

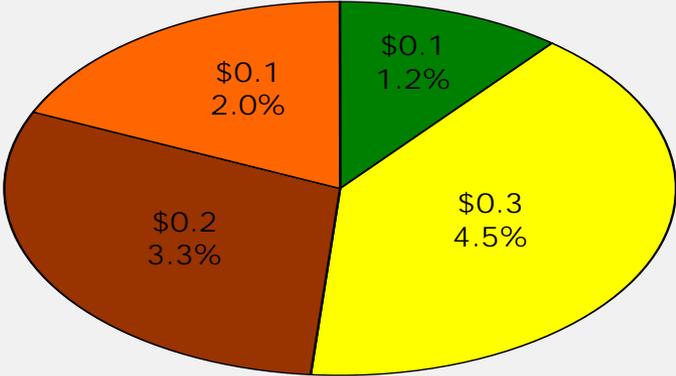


Note: Brackets represent rebalancing ranges versus Policy.

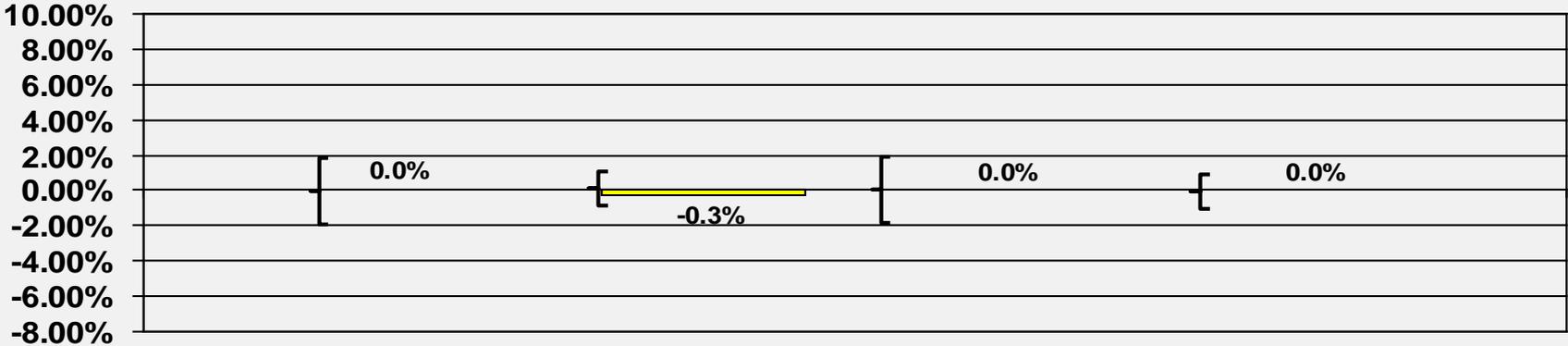
# Portfolio Asset Allocation – Inflation Protection : May 31, 2018

**\$6.0B** Under Management

## Asset Allocation



## Relative Mix to Adjusted Policy Weights



Note: Brackets represent rebalancing ranges versus Policy.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM**  
**CLASSIFICATION OF INVESTMENTS**  
**(as of May 31st, 2018)**

**ASSET CLASS ALLOCATIONS**

	In \$MM	Actual	Policy Target	Adjustment	Adjusted Policy	Adjusted Target Range ***
<b>TOTAL EQUITIES</b>	\$4,020.7	67.3%	72.0%	NA	68.9%	63.9% - 73.9%
<b>TOTAL FIXED INCOME</b>	\$1,955.9	32.7%	28.0%	NA	31.1%	26.1% - 36.1%
<b>TOTAL ASSETS</b>	\$5,976.5	100.0%	100.0%	NA	100.0%	

	In \$MM	Actual	Policy Target	Adjustment	Adjusted Policy	Adjusted Target Range ***
<b>US Equities</b>	\$1,913.5	32.0%	30.0%	5.5%	35.5%	30.5% - 40.5%
<b>Non-US Equities/EAFE</b>	\$754.8	12.6%	13.0%	0.1%	13.1%	9.1% - 17.1%
<b>Emerging Markets</b>	\$478.1	8.0%	7.0%	0.5%	7.5%	4.5% - 10.5%
<b>Non-US Emerging Mgrs. FoF</b>	\$62.6	1.0%	0.0%	NA	0.0%	-
<b>Global Equity</b>	\$50.3	0.8%	0.0%	NA	0.0%	-
<b>TOTAL PUBLIC EQUITY</b>	\$3,259.3	54.5%	50.0%	6.2%	56.2%	
<b>* REAL ESTATE - CORE</b>	\$199.5	3.3%	5.0%	NA	3.3%	1.3% - 5.3%
<b>* REAL ESTATE - OPPORTUNISTIC</b>	\$137.5	2.3%	4.0%	NA	2.3%	0.3% - 4.3%
<b>* PRIVATE EQUITY</b>	\$353.2	5.9%	9.0%	NA	5.9%	1.9% - 9.9%
<b>PRIVATE INFRASTRUCTURE</b>	\$71.1	1.2%	4.0%	NA	1.2%	-0.8% - 3.2%
<b>TOTAL EQUITIES</b>	\$4,020.7	67.3%	72.0%	NA	68.9%	63.9% - 73.9%

	In \$MM	Actual	Policy Target	Adjustment	Adjusted Policy	Adjusted Target Range ***
<b>U.S. Treasuries – All Maturities</b>	\$769.8	12.9%	0.0%	NA	0.0%	-5.0% - 5.0%
<b>U.S. Treasuries - Longer Than Five Years</b>	\$0.0	0.0%	9.0%	0.5%	9.5%	4.5% - 14.5%
<b>Core Mortgage-Backed Securities</b>	\$190.9	3.2%	1.5%	1.0%	2.5%	1.5% - 3.5%
<b>Credit - Investment Grade Corporates</b>	\$264.6	4.4%	3.5%	1.0%	4.5%	3.5% - 5.5%
<b>High Yield</b>	\$271.5	4.5%	6.0%	NA	6.0%	3.0% - 9.0%
<b>Bank Loans</b>	\$119.4	2.0%	2.0%	NA	2.0%	1.0% - 3.0%
<b>Total High Yield &amp; Bank Loans</b>	\$390.9	6.5%	8.0%	0.0%	8.0%	3.0% - 9.0%
<b>TIPS</b>	\$266.2	4.5%	4.0%	0.7%	4.7%	3.7% - 5.7%
<b>** ETI</b>	\$34.8	0.6%	2.0%	NA	2.0%	1.0% - 3.0%
<b>Cash</b>	\$38.7	0.6%	0.0%	NA	0.0%	0.0% - 0.0%
<b>TOTAL PUBLIC FIXED INCOME</b>	\$1,955.9	32.7%	28.0%	NA	31.1%	
<b>TOTAL FIXED INCOME</b>	\$1,955.9	32.7%	28.0%	NA	31.1%	26.1% - 36.1%

\* Ranges for illiquid asset classes represent minimums and maximums which will be monitored and will influence pacing analysis but will not necessarily result in purchases or sales.

\*\* ETIs have a policy of 2% of the total Fund. The ETI adjusted policy % is shown for illustrative purposes only and is not included in the sub-totals. The ETI policy % is included within the policy % of the other asset classes.

\*\*\* Adjusted Target Ranges are calculated as follows: Total Equities: +/-5%; Total Fixed Income: +/-5%; US Equities: +/-5%; Non-US Equities/EAFE: +/-4%; Emerging Markets: +/-3%; Real Estate Core: +/-2%; Real Estate Opportunistic: +/-2%; Private Equity: +/-4%; US Treasuries All Maturities: +/-5%; US Treasuries Longer than 5 Years: +/-5%; Mortgage Backed Securities: +/-1%; Investment Grade Corporates: +/-1%; TIPS: +/-1%; High Yield: +/-3%; Bank Loans: +/-1%.

# NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

## CLASSIFICATION OF INVESTMENTS

### (as of May 31st, 2018)

#### Adjustments to Long-Term Asset Allocation

##### 1) Private Equity

100% of uninvested commitments will be invested in Domestic Equity.

##### 2) Real Estate Core

40% of uninvested commitments will be invested in US Equity, 12% of uninvested commitments will be invested in US Treasuries, 24% of uninvested commitments will be invested in Investment Grade Corporates, and 24% of uninvested commitments will be invested in Mortgage Backed Securities.

##### 3) Real Estate Opportunistic

60% of uninvested commitments will be invested in US Equity, 8% of uninvested commitments will be invested in US Treasuries, 16% of uninvested commitments will be invested in Investment Grade Corporates, and 16% of uninvested commitments will be invested in Mortgage Backed Securities.

##### 4) Infrastructure

27% of uninvested commitments will be invested in US Equity, 18% of uninvested commitments will be invested in Developed Ex-US Equity, 5% of uninvested commitments will be invested in Emerging Markets Equity, 5% of uninvested commitments will be invested in US Treasuries, 10% of uninvested commitments will be invested in Investment Grade Corporates, 10% of uninvested commitments will be invested in Mortgage Backed Securities, and 25% of uninvested commitments will be invested in TIPS.

#### Impact of Adjustments

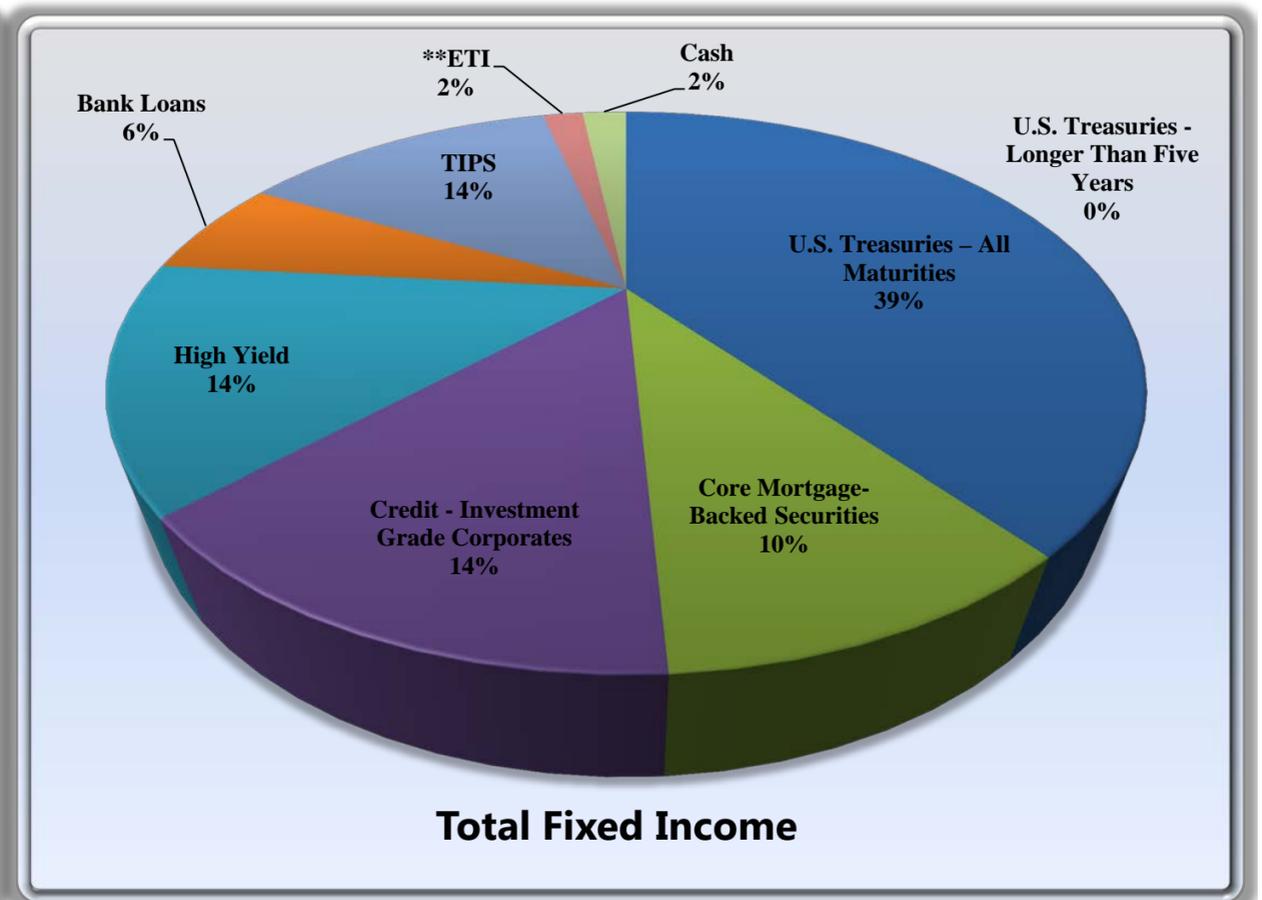
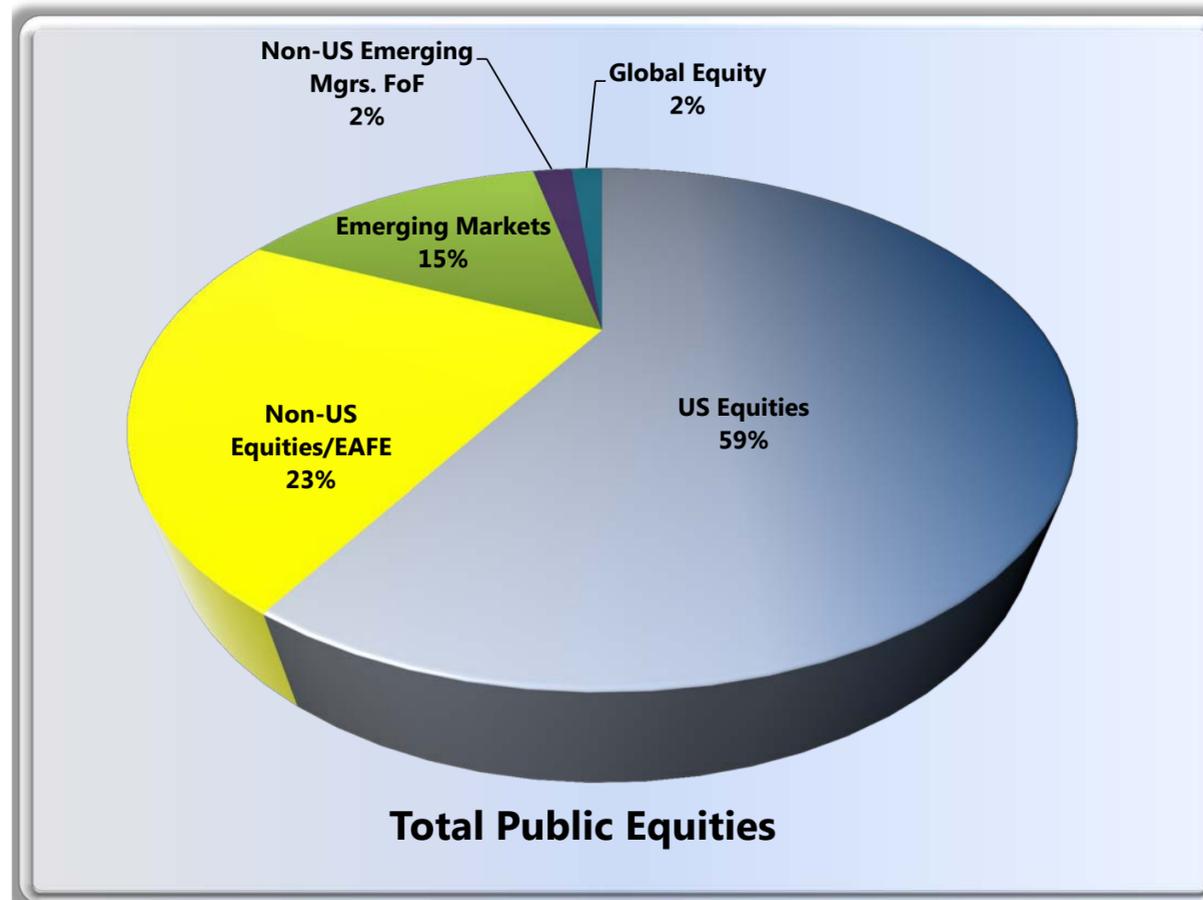
<b>1) U.S. Treasuries - Longer Than Five Years</b>	<b>9.0%</b>
12% of uninvested Real Estate Core	0.2%
8% of uninvested Real Estate Opportunistic	0.1%
5% of uninvested Private Infrastructure	0.1%
<b>Total U.S. Treasuries - Longer Than Five Years</b>	<b>9.5%</b>
<b>2) Credit - Investment Grade Corporates</b>	<b>3.5%</b>
24% of uninvested Real Estate Core	0.4%
16% of uninvested Real Estate Opportunistic	0.3%
10% of uninvested Private Infrastructure	0.3%
<b>Total Credit - Investment Grade Corporates</b>	<b>4.5%</b>
<b>3) Core Mortgage-Backed Securities</b>	<b>1.5%</b>
24% of uninvested Real Estate Core	0.4%
16% of uninvested Real Estate Opportunistic	0.3%
10% of uninvested Private Infrastructure	0.3%
<b>Total Core Mortgage-Backed Securities</b>	<b>2.5%</b>
<b>4) Domestic Equity</b>	<b>30.0%</b>
100% of uninvested Private Equity	3.1%
40% of uninvested of uninvested Real Estate Core	0.7%
60% of uninvested Real Estate Opportunistic	1.0%
27% of uninvested Private Infrastructure	0.8%
<b>Total Domestic Equity</b>	<b>35.5%</b>

# NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

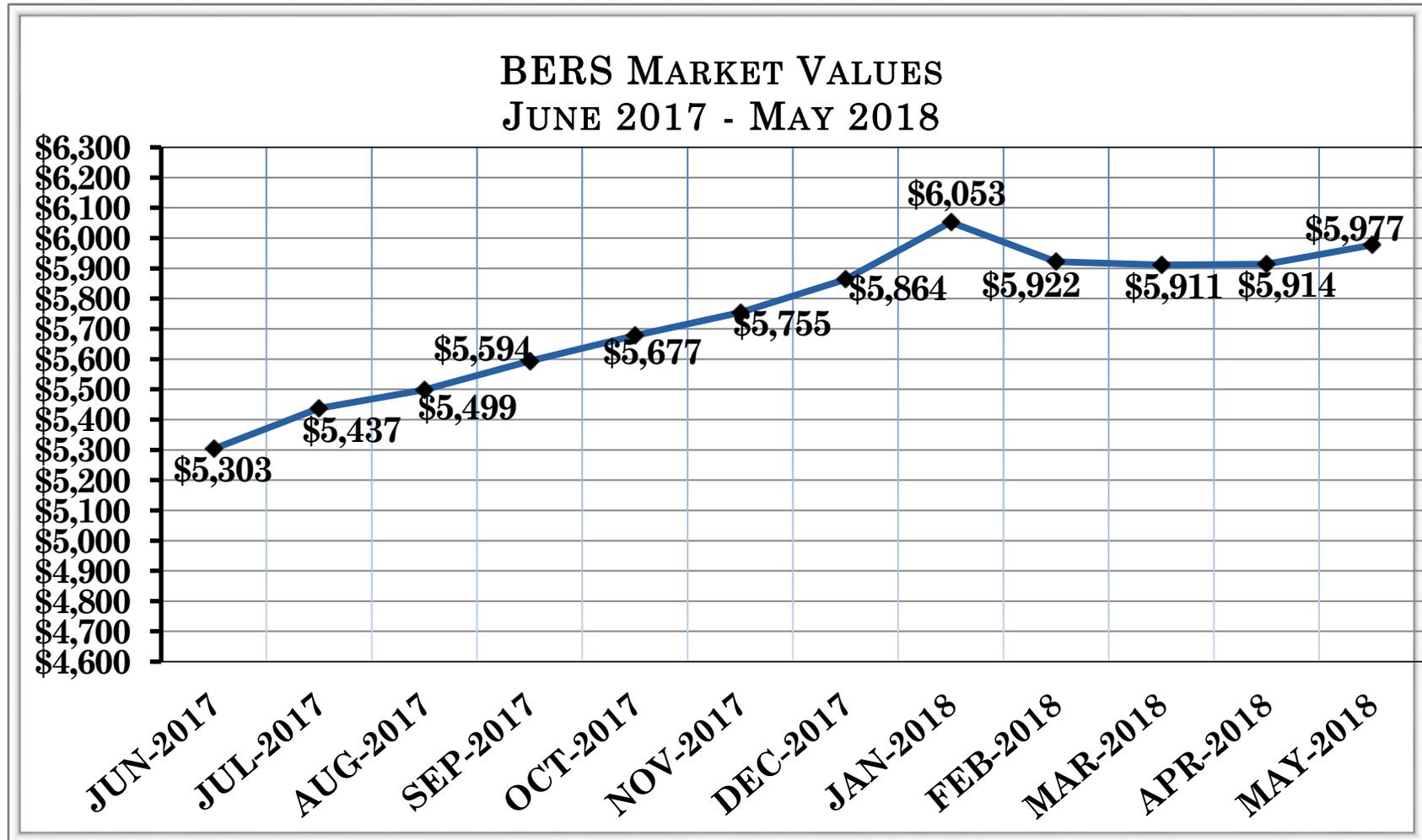
## CLASSIFICATION OF INVESTMENTS

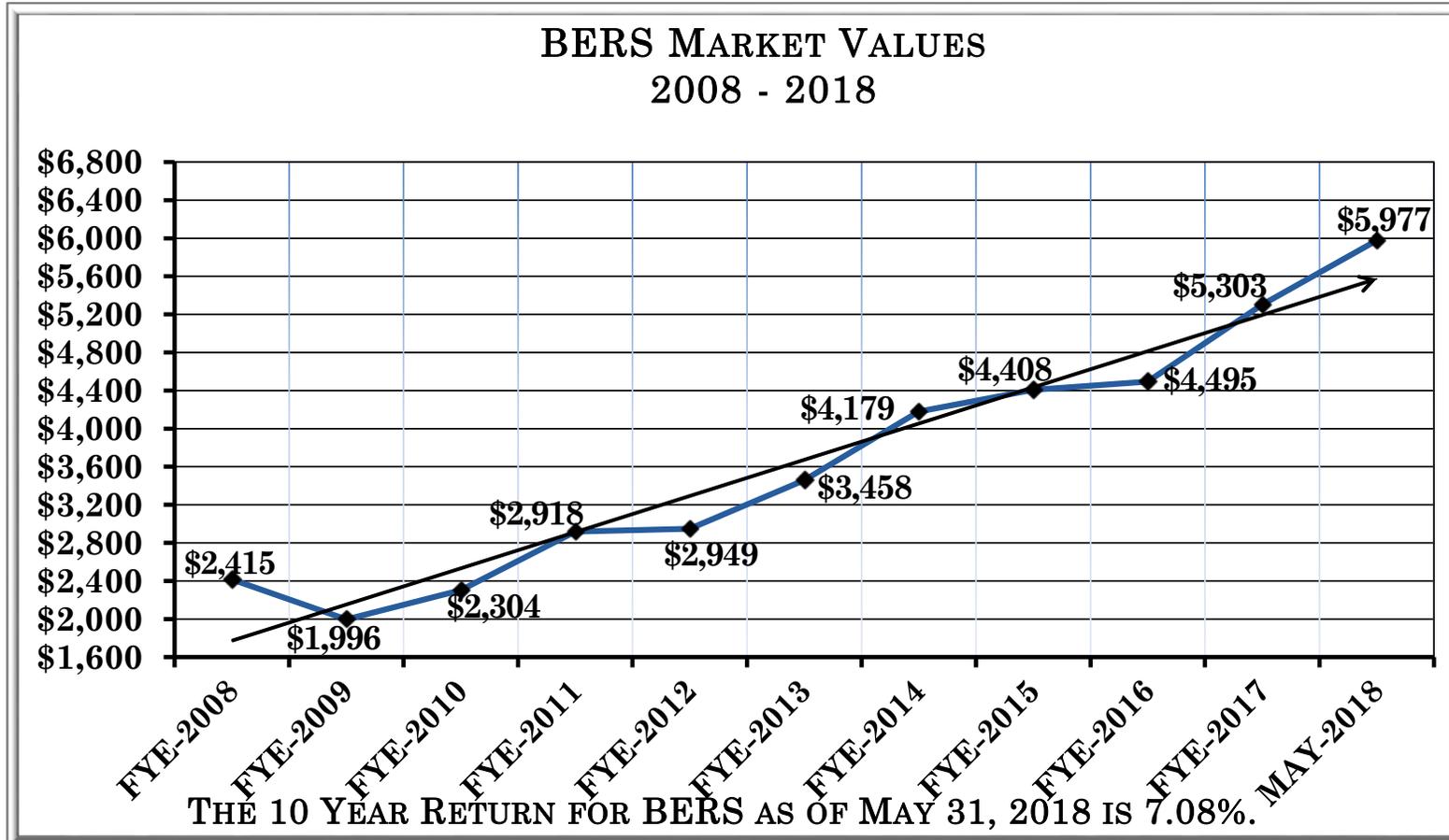
(as of May 31st, 2018)

<b>5) Treasury Inflation Protected Securities</b>	<b>4.0%</b>
25% of uninvested Private Infrastructure	0.7%
Total Treasury Inflation Protected Securities	4.7%
<b>6) Non-U.S. Equity - Emerging Markets</b>	<b>7.0%</b>
5% of uninvested Private Infrastructure	0.1%
<b>Total Non-U.S. Equity - Emerging Markets</b>	<b>7.1%</b>
<b>7) Non-U.S. Equity - Developed Mkts.</b>	<b>13.0%</b>
18% of uninvested Private Infrastructure	0.5%
<b>Total Non-U.S. Equity</b>	<b>13.5%</b>



Note: Totals may not equal 100% due to rounding





# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Assets (\$MM)	% of Total	Trailing 1 Month	Trailing 3 Month	FYTD	CYTD	FYE 6/30/17	CYE 12/31/17	CYE 12/31/16	CYE 12/31/15	CYE 12/31/14	Trailing 1 Year	Inception Date
<b>ASSET CLASS SUMMARY</b>													
BERS-TOTAL DOM EQUITY	1,913.48	32.02	3.02	2.06	15.01	3.41	19.03	21.43	12.57	0.39	11.14	16.16	Sep-01-91
BERS-TOTAL WORLD ex-USA EQUITY	754.79	12.63	(0.07)	(0.65)	18.50	2.72	26.55	35.18	5.93	(4.98)	(5.04)	17.95	Nov-01-92
BERS-TOTAL EMERGING (INTL)	478.13	8.00	(3.61)	(6.40)	13.04	(2.26)	30.10	39.55	12.53	(15.14)	3.77	14.16	Nov-01-97
BERS-TOTAL INTL FOF	62.64	1.05	(1.31)	(1.21)	11.51	(0.17)						11.15	May-01-17
BERS-TOTAL GLOBAL EQUITY	50.28	0.84											May-01-18
BERS-TOTAL STRUCTURED	1,225.26	20.50	0.78	0.80	(0.42)	(1.83)	0.48	4.14	3.89	0.20	7.58	(0.40)	Jan-01-85
BERS-TOTAL TIPS MANAGERS	266.16	4.45	0.45	1.42	1.75	(0.42)	(0.68)	3.04	4.78	(0.85)	3.27	0.75	Jun-01-05
BERS-TOTAL HIGH YIELD	271.48	4.54	0.06	0.10	1.96	(0.16)	11.98	6.81	15.60	(4.66)	2.75	2.02	Aug-01-97
BERS-TOTAL BANK LOANS	119.44	2.00	0.07	0.98	4.81	2.07	6.82	4.47	8.48	0.12	1.99	4.66	Dec-01-12
TOTAL BOE ETI (w/o cash)	34.82	0.58	0.69	0.61	(0.60)	(1.63)	(0.05)	4.11	2.31	3.30	6.96	(0.46)	Dec-01-84
BERS-TOTAL PRIVATE EQUITY	353.19	5.91	1.89	5.58	16.95	7.61	14.62	17.86	9.19	12.71	20.52	18.65	Jul-01-06
BERS-TOTAL PRIVATE REAL ESTATE	337.02	5.64	0.76	3.31	12.55	6.09	10.79	12.74	10.16	14.98	12.58	13.14	Dec-01-10
BERS-TOTAL INFRASTRUCTURE	71.13	1.19	0.20	2.71	17.44	6.32	14.78	22.08	8.08	9.15	9.58	17.53	Dec-01-13
BERS-TOTAL CASH	38.00	0.64	0.17	0.50	1.35	0.72	0.73	1.13	0.56	0.40	0.27	1.43	Apr-01-04
SECURITY LENDING	0.72	0.01											Apr-01-04
<b>BERS-TOTAL BOARD OF ED.</b>	<b>5,976.54</b>	<b>100.00</b>	<b>0.97</b>	<b>0.60</b>	<b>10.80</b>	<b>1.77</b>	<b>15.33</b>	<b>18.82</b>	<b>9.19</b>	<b>(0.44)</b>	<b>6.39</b>	<b>11.22</b>	<b>Jul-01-87</b>
BERS-TOTAL EQUITY	3,209.04	53.69	1.14	(0.26)	15.05	1.97	22.49	27.26	10.66	(2.33)	5.91	15.73	Apr-01-04
BERS-TOTAL GLOBAL EQUITY	50.28	0.84											May-01-18
BERS-TOTAL FIXED INCOME (MINUS SS)	1,917.16	32.08	0.58	0.79	0.70	(1.04)	2.82	4.34	6.51	(0.81)	5.53	0.44	Apr-01-04
BERS-TOTAL PRIVATE EQUITY	353.19	5.91	1.89	5.58	16.95	7.61	14.62	17.86	9.19	12.71	20.52	18.65	Jul-01-06
BERS-TOTAL PRIVATE REAL ESTATE	337.02	5.64	0.76	3.31	12.55	6.09	10.79	12.74	10.16	14.98	12.58	13.14	Dec-01-10
BERS-TOTAL INFRASTRUCTURE	71.13	1.19	0.20	2.71	17.44	6.32	14.78	22.08	8.08	9.15	9.58	17.53	Dec-01-13
BERS-TOTAL CASH	38.00	0.64	0.17	0.50	1.35	0.72	0.73	1.13	0.56	0.40	0.27	1.43	Apr-01-04
SECURITY LENDING	0.72	0.01											Apr-01-04
<b>BERS-TOTAL BOARD OF ED.</b>	<b>5,976.54</b>	<b>100.00</b>	<b>0.97</b>	<b>0.60</b>	<b>10.80</b>	<b>1.77</b>	<b>15.33</b>	<b>18.82</b>	<b>9.19</b>	<b>(0.44)</b>	<b>6.39</b>	<b>11.22</b>	<b>Jul-01-87</b>
Board of Education Policy Benchmark			0.54	0.46	8.84	0.90	13.39	16.63	8.66	(0.08)	6.93	9.31	Jun-01-94

2 of 2

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# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
<b>ASSET CLASS SUMMARY</b>									
<b>BERS-TOTAL BOARD OF ED.</b>	<b>5,977</b>	<b>100.00</b>	<b>0.97</b>	<b>0.60</b>	<b>10.80</b>	<b>1.77</b>	<b>18.82</b>	<b>9.19</b>	<b>(0.44)</b>
Board of Education Policy Benchmark			0.54	0.46	8.84	0.90	16.63	8.66	(0.08)
Excess			0.43	0.14	1.96	0.87	2.18	0.53	(0.36)
<b>BERS-TOTAL EQUITY (INCL PE &amp; RA)</b>	<b>4,021</b>	<b>67.27</b>	<b>1.16</b>	<b>0.75</b>	<b>15.32</b>	<b>3.04</b>	<b>25.24</b>	<b>10.42</b>	<b>(0.43)</b>
<b>BERS-TOTAL FIXED INCOME (MINUS SS)</b>	<b>1,917</b>	<b>32.08</b>	<b>0.58</b>	<b>0.79</b>	<b>0.70</b>	<b>(1.04)</b>	<b>4.34</b>	<b>6.51</b>	<b>(0.81)</b>
<b>EQUITY SUMMARY</b>									
<b>US EQUITY</b>									
NYC BERS BLACKROCK R2000 GROWTH	75	1.26	6.25	7.79	21.05	8.90	22.26	11.29	(1.30)
RUSSELL 2000 GROWTH DAILY			6.30	7.83	20.92	8.85	22.17	11.32	(1.38)
Excess			(0.04)	(0.04)	0.13	0.06	0.09	(0.02)	0.08
NYC BERS BLACKROCK R2000 VALUE	74	1.24	5.82	8.98	12.69	4.97	7.34	31.71	(7.38)
RUSSELL 2000 VALUE DAILY			5.82	8.98	12.42	4.81	7.84	31.74	(7.47)
Excess			0.00	0.00	0.27	0.16	(0.49)	(0.03)	0.09
Wellington Mgmt MCC	159	2.66	4.11	4.86	19.24	7.33	25.06	12.28	1.76
S&P MID CAP 400			4.13	4.82	13.03	3.05	16.24	20.74	(2.18)
Excess			(0.02)	0.04	6.21	4.28	8.82	(8.45)	3.94

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
NYC BERS BLACKROCK R1000 GROWTH	1	0.01					30.25	7.06	5.78
RUSSELL 1000 GROWTH - DAILY			4.38				30.21	7.08	5.67
Excess							0.03	(0.02)	0.12
NYC BERS BLACKROCK R1000 VALUE	1	0.02					13.66	17.31	(3.81)
RUSSELL 1000 VALUE (DAILY)			0.59				13.66	17.34	(3.83)
Excess							(0.01)	(0.03)	0.01
NYC BERS BLACKROCK R1000 CORE	1,202	20.10	2.62						
RUSSELL 1000 (DAILY)			2.55						
Excess			0.06						
SSGA Russell Top 200	390	6.52	2.65						
RUSSELL TOP 200 INDEX (DAILY)			2.66						
Excess			(0.01)						
<b>FUND OF FUNDS</b>									
BERS-TOTAL FUND OF FUNDS	12	0.20	6.62	8.72	13.63	6.12			
RUSSELL 2000 (DAILY)			6.07	8.37	16.73	6.90			
Excess			0.55	0.35	(3.10)	(0.78)			
BERS-TOTAL LEGATO	12	0.20	6.62	8.72	13.69	6.12			
RUSSELL 2000 (DAILY)			6.07	8.37	16.73	6.90			
Excess			0.55	0.35	(3.04)	(0.78)			

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
LEG-ALTRAVUE SCV	2	0.03	4.49	5.99	7.78	2.41			
RUSSELL 2000 VALUE DAILY			5.82	8.98	12.42	4.81			
Excess			(1.33)	(3.00)	(4.64)	(2.40)			
LEG-BOWLING SCV	2	0.03	5.93	8.26	12.34	3.58			
RUSSELL 2000 VALUE DAILY			5.82	8.98	12.42	4.81			
Excess			0.12	(0.73)	(0.08)	(1.23)			
LEG-BRIDGE CITY SCG	3	0.04	8.42	10.70	18.65	9.37			
RUSSELL 2000 GROWTH DAILY			6.30	7.83	20.92	8.85			
Excess			2.12	2.87	(2.26)	0.53			
LEG-DEAN SCV	2	0.04	3.22	3.69	5.36	1.03			
RUSSELL 2000 VALUE DAILY			5.82	8.98	12.42	4.81			
Excess			(2.59)	(5.29)	(7.06)	(3.78)			
LEG-ESSEX SCG	2	0.04	8.45	12.48	23.33	11.05			
RUSSELL 2000 GROWTH DAILY			6.30	7.83	20.92	8.85			
Excess			2.15	4.65	2.41	2.20			
LEG-PACIFIC SCG	0	0.00							
RUSSELL 2000 GROWTH DAILY			6.30						
Excess									

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
LEG-LISANTI-SCG	1	0.02	9.90	12.07					
RUSSELL 2000 GROWTH DAILY			6.30	7.83					
Excess			3.60	4.23					
LEG-TRANSITION	0	0.00							
<b>NON - US EQUITY</b>									
Sprucegrove MTA (BOE)	327	5.48	(1.93)	(1.61)	12.75	(1.36)	27.15	11.14	(9.56)
NYC Developed Value Benchmark			(1.90)	(1.38)	8.62	(1.69)	22.77	5.02	(5.68)
Excess			(0.03)	(0.23)	4.13	0.33	4.38	6.12	(3.87)
Baillie Gifford MTA	315	5.27	1.62	0.61	24.87	7.41	44.17	0.70	(3.81)
NYC Developed Growth Benchmark			(1.90)	(1.38)	7.65	(1.69)	27.77	(3.04)	4.09
Excess			3.52	1.99	17.22	9.10	16.40	3.74	(7.90)
Acadian	112	1.88	0.18	(1.67)	16.97	0.93	38.38	6.41	8.68
S&P EPAC Small Cap USD NET			(0.77)	(1.01)	13.80	0.08	33.47	1.34	8.58
Excess			0.95	(0.66)	3.17	0.85	4.91	5.07	0.09
BERS-TOTAL INTL FOF	63	1.05	(1.31)	(1.21)	11.51	(0.17)			
MSCI ACWI ex USA IMI Net			(2.12)	(2.28)	9.95	(1.68)			
Excess			0.81	1.07	1.57	1.50			
BERS-TOTAL INTL FIS	63	1.05	(1.31)	(1.21)	11.51	(0.17)			
MSCI ACWI ex USA IMI Net			(2.12)	(2.28)	9.95	(1.68)			
Excess			0.81	1.07	1.57	1.50			

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
FIS-BOE-OSMOSIS EAFE	9	0.14	(1.24)	(0.77)	10.07	1.09			
MSCI EAFE			(2.25)	(1.82)	8.16	(1.55)			
Excess			1.00	1.04	1.91	2.64			
FIS-BOE-METIS EAFE	6	0.10	(2.87)	(3.43)	7.71	(2.20)			
MSCI EAFE			(2.25)	(1.82)	8.16	(1.55)			
Excess			(0.62)	(1.61)	(0.45)	(0.66)			
FIS-BOE-DUNDAS EAFE	11	0.18	0.62	1.35	11.87	1.44			
MSCI EAFE + Canada Net Index			(1.90)	(1.38)	8.23	(1.69)			
Excess			2.52	2.73	3.64	3.13			
FIS-BOE-DENALI EAFE	11	0.18	(1.66)	(0.45)	10.79	(0.38)			
MSCI EAFE + Canada Net Index			(1.90)	(1.38)	8.23	(1.69)			
Excess			0.24	0.93	2.56	1.31			
FIS-BOE-CHANGE GLOBAL EM	8	0.14	(4.47)	(7.06)	7.25	(3.99)			
MSCI EMERGING MARKETS			(3.54)	(5.76)	12.89	(2.61)			
Excess			(0.93)	(1.31)	(5.64)	(1.38)			
FIS-BOE-AUBREY EM	6	0.10	0.60	0.30	25.26	2.93			
MSCI EMERGING MARKETS			(3.54)	(5.76)	12.89	(2.61)			
Excess			4.15	6.06	12.37	5.54			

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
FIS-BOE-ATIVO EAFE	9	0.15	(0.22)	1.66	12.19	0.96			
MSCI EAFE + Canada Net Index			(1.90)	(1.38)	8.23	(1.69)			
Excess			1.67	3.04	3.96	2.65			
FIS-BOE-ALGERT EAFE SC	3	0.05	(1.64)	(3.31)	11.37	(2.50)			
MSCI EAFE SMALL CAP NET (DAILY)			(0.96)	(0.75)	14.68	0.63			
Excess			(0.69)	(2.57)	(3.30)	(3.13)			
<b>EMERGING MARKETS</b>									
ACADIAN	335	5.61	(3.63)	(6.72)	13.07	(2.28)	40.45	12.74	(15.14)
MSCI EMERGING MARKETS			(3.54)	(5.76)	12.89	(2.61)	37.28	11.19	(14.92)
Excess			(0.09)	(0.97)	0.18	0.33	3.16	1.55	(0.22)
CONY GT EM BLACKROCK	143	2.39	(3.57)	(5.71)	12.69	(2.51)	37.25		
MSCI EMERGING MARKETS			(3.54)	(5.76)	12.89	(2.61)	37.28		
Excess			(0.02)	0.05	(0.21)	0.10	(0.03)		
<b>GLOBAL EQUITY</b>									
Morgan Stanley-ACWI	50	0.84							
MSCI AC WORLD (Daily Const)			0.12						
Excess									

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
<b>FIXED INCOME SUMMARY</b>									
<b>STRUCTURED FIXED INCOME</b>									
Blackrock Mortgages	191	3.19	0.70	0.78	0.12	(0.94)	3.06	2.32	1.73
CITIGROUP MORTGAGE INDEX			0.68	0.88	0.10	(0.99)	2.47	1.59	1.56
Excess			0.02	(0.10)	0.03	0.04	0.59	0.73	0.17
Prudential - Credit	142	2.38	0.55	(0.03)	0.06	(2.38)	6.21	5.86	(0.22)
NYC - Investment Grade Credit			0.55	(0.02)	(0.18)	(2.39)	6.04	5.56	(0.65)
Excess			0.00	(0.01)	0.23	0.00	0.17	0.30	0.43
Taplin Canida Habacht - Credit	122	2.05	0.39	(0.42)	(0.01)	(2.63)	7.18	8.02	(3.01)
NYC - Investment Grade Credit			0.55	(0.02)	(0.18)	(2.39)	6.04	5.56	(0.65)
Excess			(0.15)	(0.39)	0.16	(0.25)	1.14	2.46	(2.36)
State Street Govt	368	6.15	1.43	1.80	(1.01)	(2.22)	4.92	1.23	0.45
NYC - Treasury Agency Plus Five			1.47	1.81	(1.02)	(2.19)	4.66	1.21	0.72
Excess			(0.03)	(0.01)	0.00	(0.03)	0.27	0.01	(0.27)
SSGA 1-3 Treasury Index	402	6.73	0.36	0.39	0.00	0.02	0.45		
Citigroup USBIG Treasury 1-3 Y Index			0.35	0.39	0.04	0.06	0.42		
Excess			0.01	0.00	(0.04)	(0.04)	0.03		
<b>HIGH YIELD</b>									
Loomis Sayles - High Yield	135	2.26	0.19	0.28	1.72	0.01	7.02	19.92	(7.07)
NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR)			(0.02)	0.03	2.18	(0.27)	7.48	17.49	(4.64)
Excess			0.20	0.25	(0.46)	0.28	(0.46)	2.44	(2.43)

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
Shenkman - High Yield	136	2.28	(0.07)	(0.08)	2.20	(0.32)	6.60	11.62	(1.97)
CITIGROUP BB & B			0.02	0.09	2.13	(0.38)	7.03	15.48	(4.21)
Excess			(0.09)	(0.17)	0.07	0.07	(0.43)	(3.85)	2.24
<b>BANK LOANS</b>									
Babson BL	119	2.00	0.07	0.98	4.81	2.07	4.47	8.48	0.12
CSFB LEVERAGED LOAN INDEX			0.19	1.00	4.56	2.27	4.25	9.88	(0.38)
Excess			(0.12)	(0.02)	0.24	(0.20)	0.22	(1.39)	0.51
<b>TIPS</b>									
SSGA TIPS	266	4.45	0.45	1.42	1.75	(0.42)	3.04	4.78	
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			0.43	1.42	1.70	(0.42)	3.01	4.68	
Excess			0.02	0.00	0.04	0.01	0.04	0.09	
<b>OTHER FIXED</b>									
AFL-CIO HOUSING INV TRUST	16	0.27	0.55	0.34	(0.43)	(1.42)	3.17	1.94	1.13
BBG BARC Agg (Dly)			0.71	0.61	(0.27)	(1.50)	3.54	2.65	0.55
Excess			(0.16)	(0.27)	(0.15)	0.08	(0.38)	(0.71)	0.58
ACCESS RBC	10	0.16	0.65	0.69	(0.34)	(1.33)	2.64	1.61	1.83
Access RBC Benchmark			0.71	0.81	(0.16)	(0.83)	1.96	1.52	1.40
Excess			(0.06)	(0.11)	(0.18)	(0.50)	0.69	0.09	0.43

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
CPC CONST FACILITY	1	0.01	0.53	1.20	5.17	1.79	6.05	(3.95)	12.90
CPC CONST BENCHMARK			0.33	0.96	3.32	1.57	3.34	3.03	2.90
Excess			0.20	0.24	1.85	0.22	2.72	(6.99)	10.01
CFSB-PPAR (GNMA)	0	0.00	1.50	0.01	(2.78)	(3.04)	3.83	3.21	5.90
GNMA Plus 65bps			0.78	1.09	0.56	(0.75)	2.53	2.28	2.02
Excess			0.72	(1.08)	(3.35)	(2.30)	1.30	0.93	3.88
CCD-PPAR (GNMA)	0	0.01	1.43	0.02	(2.40)	(2.74)	3.10	2.78	5.08
GNMA Plus 65bps			0.78	1.09	0.56	(0.75)	2.53	2.28	2.02
Excess			0.65	(1.07)	(2.97)	(1.99)	0.57	0.50	3.06
CCD-PPAR (FNMA)	1	0.02	1.36	1.23	(1.07)	(2.43)	5.26	3.71	6.69
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			0.61	0.14	(2.02)	(1.81)	1.65	1.33	4.20
CPC-PPAR (FNMA)	1	0.02	0.58	0.49	(1.42)	(3.06)	5.06	6.15	8.96
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			(0.16)	(0.60)	(2.37)	(2.44)	1.45	3.77	6.46
JPMC-PPAR (FNMA)	3	0.05	0.96	0.96	(1.62)	(2.74)	9.96	7.94	6.18
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			0.22	(0.13)	(2.57)	(2.11)	6.35	5.56	3.68

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



Periods Ending May 31, 2018

	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
BOA-PPAR (FNMA)	1	0.02	1.10	1.60	(1.81)	(2.23)	5.21	4.07	42.03
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			0.36	0.51	(2.76)	(1.60)	1.60	1.69	39.53
LIIF-PPAR (GNMA)	0	0.00	0.79	0.51	(0.77)	(1.07)	2.52	3.88	3.92
GNMA Plus 65bps			0.78	1.09	0.56	(0.75)	2.53	2.28	2.02
Excess			0.01	(0.59)	(1.33)	(0.33)	(0.01)	1.61	1.91
NCBCI-PPAR (GNMA)	0	0.00	1.45	(0.10)	(2.47)	(2.89)	3.01	3.51	5.53
GNMA Plus 65bps			0.78	1.09	0.56	(0.75)	2.53	2.28	2.02
Excess			0.67	(1.19)	(3.03)	(2.14)	0.48	1.23	3.52
LIIF-PPAR (FNMA)	2	0.03	1.06	1.06	(1.66)	(2.63)	9.55	5.03	6.29
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			0.31	(0.02)	(2.61)	(2.01)	5.94	2.65	3.79
NCBCI-PPAR (FNMA)	0	0.00	1.38	(0.58)	(1.62)	(3.06)	1.75	3.46	4.97
FNMA Plus 85bps			0.74	1.09	0.95	(0.62)	3.61	2.38	2.50
Excess			0.64	(1.67)	(2.57)	(2.43)	(1.86)	1.07	2.47
BOARD OF ED. SHORT TERM	38	0.64	0.17	0.46	1.26	0.67	1.10	0.55	0.39
91 DAY T-BILL			0.15	0.42	1.19	0.64	0.86	0.33	0.05
Excess			0.02	0.03	0.07	0.03	0.24	0.23	0.35
Cash Accounts	0	0.00							

# New York City Board of Education Retirement System

## Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending May 31, 2018



	Ending Market Value (\$MM)	% of Total	1 Month	3 Month	FYTD	CYTD	CYE 12/31/2017	CYE 12/31/2016	CYE 12/31/2015
SECURITY LENDING	1	0.01							
KKR SP CASH ACCOUNT	0	0.00	43.61	44.02					
<b>PRIVATE EQUITY</b>									
BERS-TOTAL PRIVATE EQUITY	353	5.91	1.89	5.58	16.95	7.61	17.86	9.19	12.71
BERS-TOTAL PRIVATE REAL ESTATE	337	5.64	0.76	3.31	12.55	6.09	12.74	10.16	14.98
BERS-TOTAL INFRASTRUCTURE	71	1.19	0.20	2.71	17.44	6.32	22.08	8.08	9.15

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NYC Board of Education Retirement System  
Private Equity Portfolio  
As of December 31, 2017 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR <sup>1</sup>	PME Benchmark <sup>2</sup>	PME Spread <sup>3</sup>
<b>Active Investments</b>										
2005	Mesirow Financial Private Equity Partnership Fund III, L.P.	7/20/2006	\$ 57,000,000	\$ 55,093,273	\$ 74,416,991	\$ 18,293,369	1.68x	8.56%	8.68%	(0.12)%
2006	Mesirow Financial Private Equity Partnership Fund IV, L.P.	3/31/2008	25,000,000	22,842,233	23,872,289	14,719,005	1.69x	10.47%	12.57%	(2.11)%
2006	New York Fairview Private Equity Fund, L.P.	7/14/2006	19,000,000	17,320,307	16,347,591	7,416,878	1.37x	6.06%	9.58%	(3.52)%
2009	Mesirow Financial Private Equity Partnership Fund V, L.P.	3/7/2011	45,000,000	37,592,932	26,332,954	39,430,964	1.75x	16.27%	14.08%	2.19%
2012	Platinum Equity Capital Partners III, L.P.	1/14/2013	15,000,000	14,124,212	14,599,412	11,966,811	1.88x	47.25%	14.77%	32.48%
2012	Warburg Pincus Private Equity XI, L.P.	7/17/2012	25,000,000	24,687,640	12,958,804	22,957,806	1.45x	13.65%	13.59%	0.06%
2013	Apollo Investment Fund VIII, L.P.	12/11/2013	20,000,000	15,396,507	3,567,619	17,760,764	1.39x	20.71%	14.74%	5.97%
2013	Carlyle Partners VI, L.P.	7/3/2013	20,000,000	19,290,668	4,271,244	19,800,198	1.25x	13.64%	13.22%	0.42%
2013	Landmark Equity Partners XV, L.P.	10/30/2013	19,000,000	10,558,374	5,887,383	7,247,659	1.24x	13.47%	12.89%	0.58%
2013	Landmark Equity Partners XV, L.P. - Side Car	12/24/2013	6,000,000	4,746,722	1,854,645	4,396,696	1.32x	17.54%	11.32%	6.23%
2014	CVC Capital Partners VI, L.P.	2/18/2014	17,746,623	15,482,987	1,736,755	16,624,512	1.19x	13.93%	14.94%	(1.01)%
2013	Crestview Partners III, L.P.	3/3/2015	15,000,000	5,741,871	96,110	6,506,204	1.15x	8.27%	14.11%	(5.85)%
2013	Crestview Partners III (Co-Investment B), L.P.	12/17/2015	5,000,000	3,065,378	72,440	3,628,904	1.21x	12.75%	18.30%	(5.55)%
2014	ASF VI, L.P.	5/9/2014	15,000,000	9,523,773	2,977,998	10,058,136	1.37x	15.12%	13.08%	2.04%
2014	ASF VI NYC Co-Invest, L.P.	5/9/2014	5,000,000	3,606,391	2,020,600	3,125,350	1.43x	16.66%	9.94%	6.72%
2014	Carlyle Partners VI, L.P. - Side Car	9/23/2014	2,200,000	1,383,054	-	1,466,330	1.06x	2.63%	13.80%	(11.17)%
2014	Lexington Capital Partners VIII, L.P.	1/8/2015	20,000,000	10,328,549	3,661,707	9,895,262	1.31x	27.95%	16.15%	11.80%
2014	Vista Equity Partners Fund V, L.P.	9/8/2014	25,000,000	25,190,159	5,614,104	28,335,849	1.35x	14.76%	12.99%	1.77%
2015	Centerbridge Capital Partners III, L.P.	5/21/2015	2,500,000	1,210,257	158,944	1,301,083	1.21x	14.08%	14.72%	(0.64)%
2015	Siris Partners III, L.P.	5/4/2015	3,500,000	2,243,914	152,329	2,383,992	1.13x	10.67%	17.18%	(6.50)%
2012	NYCBERS - 2012 Emerging Manager Program*	10/31/2014	14,650,000	11,719,293	1,194,877	13,048,099	1.22x	11.81%	12.52%	(0.71)%
2015	American Securities Partners VII, L.P.	7/8/2016	8,000,000	4,025,022	157,201	4,445,015	1.14x	N/M	N/M	N/M
2015	ASF VII, L.P.	12/29/2015	10,000,000	2,186,701	126,709	2,630,606	1.26x	29.06%	17.66%	11.40%
2015	ASF VII B NYC Co-Invest, L.P.	12/29/2015	6,000,000	2,690,003	-	3,906,795	1.45x	851.24%	21.99%	829.24%
2015	NYCBERS - 2015 Emerging Manager Program**	2/22/2016	40,350,000	2,401,450	270,234	2,650,521	1.22x	N/M	N/M	N/M
2015	Warburg Pincus Private Equity XII, L.P.	12/21/2015	21,500,000	10,418,701	212,327	10,767,509	1.05x	6.65%	20.25%	(13.60)%
2015	Welsh, Carson, Anderson & Stowe XII, L.P.	8/26/2015	10,000,000	4,162,019	236,094	5,308,702	1.33x	19.13%	17.99%	1.14%
2015	Bridgepoint Europe V, L.P.	2/8/2016	8,636,198	4,852,961	769,344	5,323,439	1.26x	N/M	N/M	N/M
2015	Bridgepoint Europe V Co-Invest	8/16/2016	2,909,748	1,428,666	-	1,783,222	1.25x	N/M	N/M	N/M
2015	EQT VII, L.P.	1/8/2016	17,344,974	10,618,275	292,509	12,604,381	1.21x	N/M	N/M	N/M
2016	Vista Equity Partners Fund VI, L.P.	6/28/2016	16,000,000	11,675,641	159,194	12,059,532	1.05x	N/M	N/M	N/M
2016	Apax IX USD, L.P.	5/12/2017	13,000,000	6,006,000	-	6,338,968	1.06x	N/M	N/M	N/M
2017	Ares Corporate Opportunities Fund V, L.P.	6/22/2017	10,000,000	1,393,363	-	1,330,715	0.96x	N/M	N/M	N/M
2017	Green Equity Investors VII, L.P.	5/12/2017	10,000,000	2,672,711	-	2,511,645	0.94x	N/M	N/M	N/M
2017	BC European Capital X, L.P.	12/14/2017	11,934,343	2,838,647	-	2,644,693	0.93x	N/M	N/M	N/M
2017	BC European Capital X Metro Co-Investment L.P.	3/24/2017	4,730,302	874,165	-	869,277	0.99x	N/M	N/M	N/M
2017	Platinum Equity Capital Partners IV, L.P.	3/21/2017	11,500,000	2,871,883	499,059	2,627,508	1.09x	N/M	N/M	N/M
2018	CVC Capital Partners VII, L.P.	N/A	20,365,135	-	-	-	N/A	N/M	N/M	N/M
2018	Apollo Investment Fund IX, L.P.	N/A	32,000,000	-	-	-	N/A	N/M	N/M	N/M
2017	KKR Americas Fund XII, L.P.	N/A	16,000,000	-	-	137,775	N/A	N/M	N/M	N/M
2017	Warburg Pincus Financial Sector, L.P.	N/A	13,000,000	-	-	-	N/A	N/M	N/M	N/M
<b>Total Portfolio</b>			<b>\$ 659,867,323</b>	<b>\$ 382,264,700</b>	<b>\$ 204,517,466</b>	<b>\$ 338,304,174</b>	<b>1.42x</b>	<b>11.58%</b>	<b>11.31%</b>	<b>0.27%</b>

Vintage Year	Investment	First Drawdown	Committed Capital	Net Contributed Capital	Net Distributed Capital	Market Value	Multiple	IRR <sup>1</sup>	PME Benchmark <sup>2</sup>	PME Spread <sup>3</sup>
<b>Commitments Closed Subsequent to as of Date</b>										
2018	EQT VIII SCSP	N/A	\$ 13,776,415	-	-	-	N/A	N/A	N/A	N/A
2018	Siris Partners IV, L.P.	N/A	\$ 10,000,000	-	-	-	N/A	N/A	N/A	N/A
2018	Bridgepoint Europe VI, L.P.	N/A	\$ 14,974,364	-	-	-	N/A	N/A	N/A	N/A
2018	Bridgepoint Europe VI Co-Invest	N/A	\$ 3,743,591	-	-	-	N/A	N/A	N/A	N/A
<b>Total Commitments Closed Subsequent to as of Date</b>			<b>\$ 42,494,370</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\*Please note that the NYCBERS - 2012 Emerging Manager Program total commitment amount includes the full amount allocated to the Program, of which \$14.7 million has been committed as of December 31, 2017. As of 4Q17, the remaining commitments in the EM 2012 Program were reallocated to the EM 2015 Program.

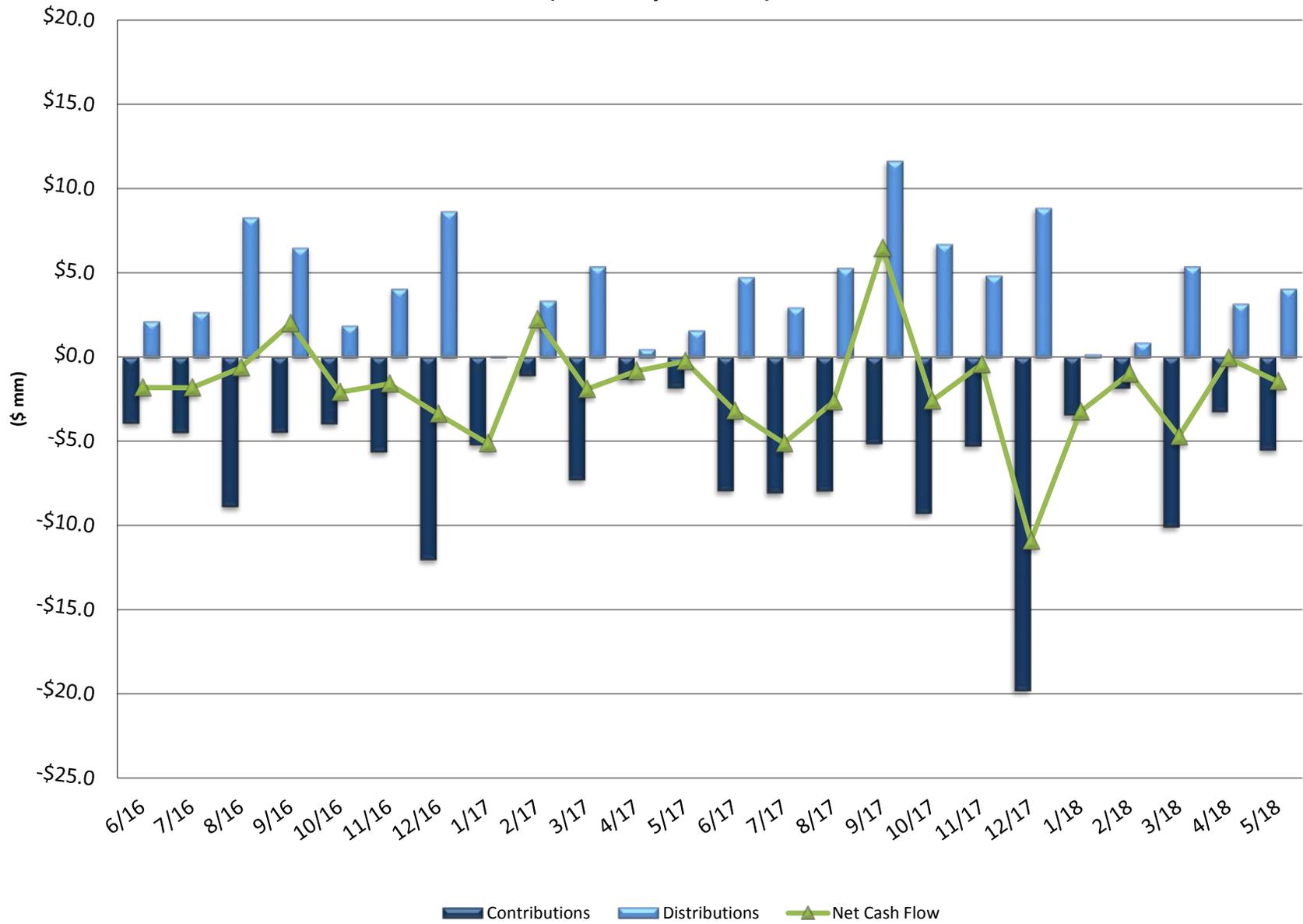
\*\*Please note that the NYCBERS - 2015 Emerging Manager Program total commitment amount includes the full amount allocated to the Program, of which \$22.3 million has been committed as of December 31, 2017. As of 4Q17, the remaining commitments in the EM 2012 Program were reallocated to the EM 2015 Program.

<sup>2</sup> The total PME is the Russell 3000 Total Return Index and incorporates the PME + methodology for all partnerships where distributions have occurred, and incorporates the and incorporates the Long Nickel methodologies for those partnerships that have not yet had any distributions to date. The fund PME is the Russell 3000 Total Return Index and incorporates the PME + methodology for all partnerships where distributions have occurred.

<sup>3</sup> PME Spread is the percentage difference between the IRR and PME Benchmark for each respective partnership.

Note: Where available, December 31, 2017 reported valuations were used. In the absence of December 31, 2017 reported values, market values have been adjusted forward using interim cashflows through December 31, 2017. The IRR calculated in the early years of a fund is not meaningful given the j-curve effect. The aggregate portfolio performance figures for IRR and multiple are as of December 31, 2017.

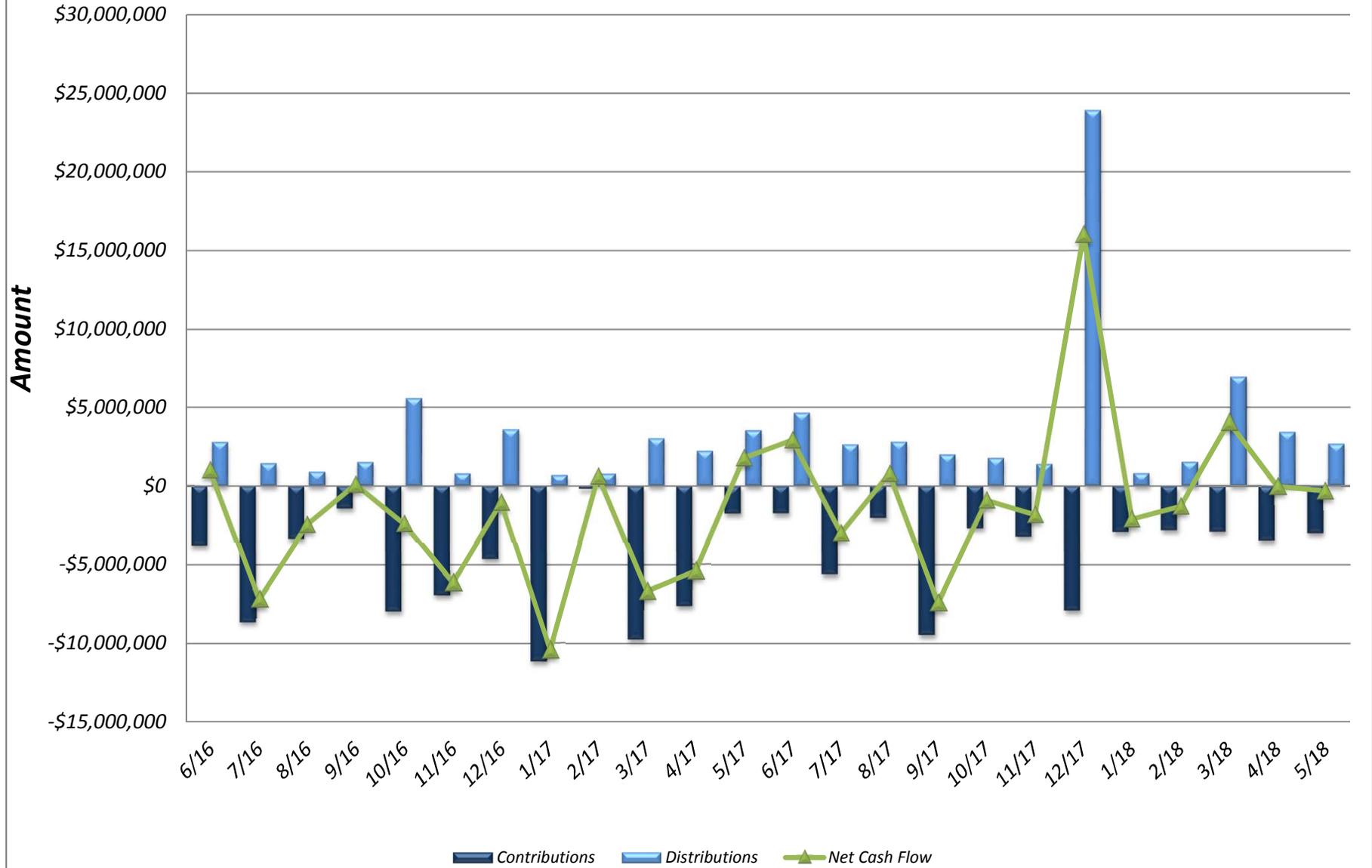
### NYC BERS Monthly PE Cash Flow Summary (as of May 31, 2018)



Vintage Year	Investments by Strategy	First Draw-down	Committed Capital	Contributions	Distributions	Market Value	Unfunded Commitment	Equity Multiple	IRR
2016	Brookfield Premier Real Estate Partners	11/2016	\$10,000,000	\$10,219,958	(\$219,958)	\$11,067,775	\$0	1.10x	11.8%
2016	Exeter Industrial Core Club Fund II	5/2016	\$10,000,000	\$4,030,000	(\$334,381)	\$4,314,162	\$5,970,000	1.15x	14.4%
2018	Heitman Core Real Estate Debt Income Trust <sup>2</sup>	N/A	\$10,000,000	\$0	\$0	\$0	\$10,000,000	N/A	N/A
2016	Jamestown Premier Property Fund	2/2016	\$5,000,000	\$5,389,528	(\$794,377)	\$5,438,717	\$0	1.16x	10.8%
2010	LaSalle Property Fund	12/2010	\$27,600,000	\$27,600,000	(\$7,641,703)	\$37,619,782	\$0	1.64x	10.9%
2017	Lion Industrial Trust - 2007	1/2017	\$10,000,000	\$10,319,763	(\$319,762)	\$11,148,969	\$0	1.11x	12.4%
2014	MetLife Core Property Fund	7/2014	\$15,000,000	\$15,000,000	(\$1,937,055)	\$18,118,616	\$0	1.34x	10.5%
2013	NYC Asset Investor #2 LLC (Related)	7/2013	\$11,000,000	\$10,557,373	(\$1,487,426)	\$14,641,840	\$708,006	1.53x	17.1%
2016	NYCRS Artemis Co-Investment <sup>1</sup>	2/2016	\$11,000,000	\$6,078,082	(\$3,365,271)	\$4,256,646	\$6,912,089	1.25x	33.7%
2011	UBS Trumbull Property Fund	4/2011	\$41,400,000	\$60,102,702	(\$15,560,868)	\$79,232,767	\$0	1.58x	9.2%
2015	USAA Eagle Real Estate Fund	12/2015	\$10,000,000	\$8,401,005	\$0	\$9,750,969	\$1,598,995	1.16x	8.8%
<b>Core Portfolio</b>			<b>\$161,000,000</b>	<b>\$157,698,411</b>	<b>(\$31,660,802)</b>	<b>\$195,590,244</b>	<b>\$25,189,090</b>	<b>1.44x</b>	<b>10.3%</b>
2013	Blackstone Real Estate Partners Europe IV	12/2013	\$32,500,000	\$31,157,946	(\$23,033,152)	\$22,150,936	\$6,662,292	1.45x	17.0%
2015	Blackstone Real Estate Partners VIII	8/2015	\$16,500,000	\$9,792,866	(\$3,165,964)	\$8,963,909	\$9,442,595	1.24x	18.0%
2012	Brookfield Strategic Real Estate Partners	9/2012	\$10,000,000	\$11,681,111	(\$10,504,471)	\$10,198,464	\$1,283,000	1.77x	21.9%
2014	Carlyle Realty Partners VII	7/2014	\$25,000,000	\$19,484,388	(\$3,910,589)	\$19,860,622	\$8,810,261	1.22x	13.9%
2016	Divco West Fund V	12/2016	\$10,000,000	\$2,936,636	\$0	\$2,962,090	\$7,063,364	1.01x	1.6%
2017	DRA Growth and Income Fund IX	3/2017	\$10,000,000	\$3,662,242	(\$486,531)	\$3,539,983	\$6,616,288	1.10x	22.9%
2017	DRA Growth and Income Fund IX Co-investment	N/A	\$2,000,000	\$0	\$0	\$0	\$2,000,000	N/A	N/A
2015	European Property Investors Special Opp IV	12/2015	\$11,176,931	\$5,085,193	(\$314,687)	\$5,346,824	\$6,877,935	1.11x	13.2%
2016	Exeter Industrial Value Fund IV	9/2017	\$10,000,000	\$1,000,000	\$0	\$1,003,885	\$9,000,000	N/M	1.4%
2011	Franklin Templeton Private Real Estate Fund	4/2011	\$30,000,000	\$34,964,566	(\$39,626,088)	\$7,734,164	\$4,126,681	1.35x	20.4%
2014	H/2 Special Opportunities Fund III <sup>2</sup>	12/2014	\$15,000,000	\$15,000,000	(\$4,247,943)	\$14,168,998	\$0	1.23x	14.3%
2016	H/2 Special Opportunities Fund IV <sup>2</sup>	11/2016	\$10,000,000	\$1,168,355	(\$81,350)	\$1,022,398	\$8,908,553	0.94x	-6.4%
2018	KKR Real Estate Partners Americas II <sup>2</sup>	N/A	\$10,000,000	\$0	\$0	\$0	\$10,000,000	N/A	N/A
2017	Lone Star Real Estate Fund V <sup>2</sup>	9/2017	\$23,164,910	\$2,046,281	(\$55,586)	\$1,513,781	\$21,118,629	N/M	N/M
2013	NYC Asset Investor #1 LLC (Vanbarton)	6/2013	\$10,000,000	\$11,052,698	(\$1,846,619)	\$12,329,512	\$836,387	1.28x	9.6%
2013	NYC Asset Investor #3 LLC (Hudson)	9/2013	\$8,000,000	\$4,481,552	(\$837,198)	\$4,784,087	\$3,518,448	1.25x	11.7%
2017	NYCRS-KKR CMBS Retention Partners <sup>2</sup>	9/2017	\$13,000,000	\$4,568,487	(\$62,037)	\$4,588,805	\$8,450,000	N/M	N/M
2016	Pramerica Real Estate Capital VI <sup>2</sup>	4/2017	\$10,821,998	\$3,458,364	(\$693,397)	\$3,332,914	\$7,348,195	N/M	N/M
2016	PW Real Estate Fund III LP	10/2016	\$10,624,734	\$3,820,804	(\$650,883)	\$5,407,458	\$7,882,345	1.59x	58.9%
2016	Westbrook Real Estate Fund X Co-Investment	7/2016	\$10,000,000	\$2,726,989	(\$368,421)	\$2,573,504	\$7,719,965	1.08x	10.4%
<b>Non-Core Portfolio</b>			<b>\$277,788,573</b>	<b>\$168,088,479</b>	<b>(\$89,884,917)</b>	<b>\$131,482,334</b>	<b>\$137,664,938</b>	<b>1.32x</b>	<b>17.3%</b>
Emerging Manager			\$11,000,000	\$6,078,082	(\$3,365,271)	\$4,256,646	\$6,912,089	1.25x	33.7%
Debt			\$91,986,908	\$26,241,488	(\$5,140,313)	\$24,626,896	\$65,825,377	1.13x	12.6%
<b>Total Portfolio</b>			<b>\$438,788,573</b>	<b>\$325,786,890</b>	<b>(\$121,545,719)</b>	<b>\$327,072,577</b>	<b>\$162,854,028</b>	<b>1.38x</b>	<b>12.3%</b>
<b>Additional Funds Closed</b>									
2017	Heitman Core Real Estate Debt Income Trust		10,000,000						
2018	Brookfield Strategic Real Estate Partners III		12,000,000						
<b>Total:</b>			<b>22,000,000</b>						

<sup>1</sup> Emerging managers<sup>2</sup> Debt investments

**BERS Monthly Real Estate Cash Flow Summary**  
 (as of May 31, 2018)



**New York City Board of Education Retirement System  
Infrastructure Portfolio  
As of December 31, 2017**

Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Market Value	TVPI	IRR
<b>Active Investments:</b>								
2013	Brookfield Infrastructure Fund II, L.P.	7/8/2013	\$10,000,000	\$7,809,765	\$1,519,136	\$9,086,592	1.4x	13.3%
2014	KKR Global Infrastructure Investors II L.P.	6/12/2015	19,000,000	16,066,552	1,343,533	16,510,289	1.1x	12.7%
2014	IFM Global Infrastructure Fund	1/2/2014	15,000,000	16,309,148	1,309,148	19,712,755	1.3x	10.9%
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	15,000,000	9,247,016	6,358,266	7,355,628	1.5x	55.1%
2016	Global Infrastructure Partners III-A/B, L.P.	1/29/2016	12,000,000	3,134,472	171,075	2,699,037	NM	NM
2016	Brookfield Infrastructure Fund III, L.P.	4/15/2016	10,000,000	1,881,529	149,017	1,995,010	NM	NM
2016	Actis Energy 4	12/16/2016	10,600,000	3,141,372	552	2,907,000	NM	NM
2017	NYCRS EIG Energy Partners, L.P.	8/14/2017	11,760,000	564,713	-	558,610	NM	NM
2017	EQT Infrastructure III (No.2) SCSp	2/18/2017	9,510,318	2,698,078	385,390	2,383,094	NM	NM
2017	Axiom Infrastructure North America	8/14/2017	12,694,260	40,968	-	1,548	NM	NM
2017	ASF VII Infrastructure L.P.	4/24/2017	12,000,000	826,324	17	1,060,561	NM	NM
<b>Total</b>			<b>\$137,564,578</b>	<b>\$61,719,937</b>	<b>\$11,236,134</b>	<b>\$64,270,123</b>	<b>1.2x</b>	<b>14.8%</b>

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in the early years of a fund is usually not meaningful given the J-Curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP, a consultant to the New York City Retirement Systems, based on information provided by the general partners of each investment (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

### BERS Monthly Infrastructure Cash Flow Summary (as of May 31, 2018)

