



Monthly Performance Review <u>March 2017</u>

Prepared for the New York City Board of Education Retirement System 05.2017



THE CITY OF NEW YORK OFFICE OF THE COMPTROLLER

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CITY OF NEW YORK NYC Board of Education Retirement System Market Indicator Report March 31, 2017



| MARKET INDICATORS | | | | | | | | |
|--|---------|----------------|------------|---------------|--------|---------------|---------------|----------------|
| | 1 Month | <u>3 Month</u> | Fiscal YTD | <u>1 Year</u> | 2 Year | <u>3 Year</u> | <u>5 Year</u> | <u>10 Year</u> |
| S&P 500 | 0.12 | 6.07 | 14.36 | 17.17 | 9.21 | 10.37 | 13.30 | 7.51 |
| S&P 400 MIDCAP | (0.39) | 3.94 | 16.28 | 20.92 | 7.97 | 9.36 | 13.32 | 8.96 |
| RUSSELL 1000 | 0.06 | 6.03 | 14.52 | 17.43 | 8.64 | 9.99 | 13.26 | 7.58 |
| RUSSELL 2000 | 0.13 | 2.47 | 21.60 | 26.22 | 6.72 | 7.22 | 12.35 | 7.12 |
| RUSSELL 3000 | 0.07 | 5.74 | 15.04 | 18.07 | 8.47 | 9.76 | 13.18 | 7.54 |
| RUSSELL 3000 GROWTH | 1.16 | 8.63 | 15.35 | 16.27 | 8.55 | 10.90 | 13.22 | 9.04 |
| RUSSELL 3000 VALUE | (1.01) | 2.99 | 14.73 | 19.97 | 8.40 | 8.58 | 13.08 | 5.94 |
| | | | 40.00 | | | . = . | | |
| MSCI EAFE NET | 2.75 | 7.25 | 13.33 | 11.67 | 1.21 | 0.50 | 5.83 | 1.05 |
| MSCI EMF NET | 2.52 | 11.44 | 16.44 | 17.21 | 1.55 | 1.18 | 0.81 | 2.72 |
| MSCI WORLD NET | 1.07 | 6.38 | 13.62 | 14.77 | 5.26 | 5.52 | 9.37 | 4.21 |
| MSCI EUROPE SMID CAP NET | 3.48 | 8.47 | 14.34 | 7.13 | 4.04 | 0.57 | 9.00 | 1.88 |
| MSCI AC WORLD ex US NET | 2.54 | 7.86 | 13.87 | 13.13 | 1.36 | 0.56 | 4.36 | 1.35 |
| NYC - TREASURY AGENCY PLUS FIVE | (0.18) | 1.09 | (6.75) | (3.06) | 0.11 | 3.83 | 2.73 | 5.55 |
| Citigroup USBIG Treasury 1-3 Y Index | 0.04 | 0.27 | (0.26) | 0.26 | 0.56 | 0.70 | 0.62 | 1.97 |
| Citigroup USBIG Treasury/Agency 1-10 y | 0.05 | 0.53 | (1.88) | (0.66) | 0.75 | 1.52 | 1.21 | 3.35 |
| Citigroup Treasury 10+ | (0.55) | 1.42 | (10.97) | (5.01) | (1.22) | 5.96 | 4.10 | 6.76 |
| CITIGROUP MORTGAGE | (0.03) | 0.43 | (1.00) | 0.06 | 1.21 | 2.67 | 2.00 | 4.19 |
| NYC - INVESTMENT GRADE CREDIT | (0.07) | 1.38 | (0.37) | 3.04 | 2.05 | 3.48 | 3.68 | 5.12 |
| CITIGROUP BROAD INVESTMENT GRADE | (0.05) | 0.85 | (1.74) | 0.48 | 1.20 | 2.68 | 2.34 | 4.36 |

CITY OF NEW YORK NYC Board of Education Retirement System Market Indicator Report March 31, 2017



| MARKET INDICATORS | | | | | | | | |
|--|----------------|---------|-------------------|---------------|--------|---------------|---------------|----------------|
| | <u>1 Month</u> | 3 Month | Fiscal YTD | <u>1 Year</u> | 2 Year | <u>3 Year</u> | <u>5 Year</u> | <u>10 Year</u> |
| NYC - CORE PLUS FIVE | (0.08) | 0.99 | (1.99) | 0.67 | 1.35 | 3.23 | 2.84 | 4.92 |
| BARCLAYS AGGREGATE | (0.05) | 0.82 | (1.73) | 0.44 | 1.20 | 2.68 | 2.34 | 4.27 |
| CITIGROUP BB & B | (0.13) | 2.28 | 9.20 | 14.62 | 5.07 | 4.14 | 6.21 | 6.02 |
| CITIGROUP BB & B CAPPED | (0.13) | 2.22 | 9.00 | 14.34 | 4.92 | 4.04 | 6.07 | 6.32 |
| BofA ML HIGH YIELD MASTER II | (0.21) | 2.71 | 10.38 | 16.88 | 5.93 | 4.62 | 6.85 | 7.34 |
| CSFB LEVERAGED LOAN | 0.08 | 1.20 | 6.69 | 9.74 | 4.18 | 3.72 | 4.88 | 4.24 |
| BARCLAYS GLOBAL US TIPS | (0.05) | 1.26 | (0.22) | 1.48 | 1.50 | 2.03 | 0.97 | 4.24 |
| BofA ML U.S. Convertible – Yield Alternative | 0.59 | 3.73 | 9.84 | 15.77 | 1.38 | 0.96 | 4.40 | 4.26 |
| BofA ML US Invt Grade Conv Bond Index | 1.20 | 5.52 | 15.75 | 18.96 | 10.40 | 10.85 | 12.09 | 6.04 |
| BofA ML ALL CONVERTIBLES EX MANDATORY | 0.86 | 5.62 | 16.40 | 21.08 | 5.56 | 6.32 | 10.31 | 7.31 |
| DJ US SELECT REAL ESTATE | (2.81) | (0.27) | (4.00) | 1.21 | 2.96 | 9.93 | 9.40 | 4.12 |
| NCREIF NFI - ODCE NET* | 1.54 | 1.54 | 5.35 | 7.36 | 9.96 | 10.77 | 10.94 | 4.62 |
| CPI + 4% | 0.04 | 1.37 | 4.66 | 6.48 | 5.70 | 5.13 | | |
| 91 DAY TREASURY BILL | 0.02 | 0.10 | 0.28 | 0.36 | 0.24 | 0.17 | 0.14 | 0.68 |

CITY OF NEW YORK NYC Board of Education Retirement System Market Indicator Report April 30, 2017

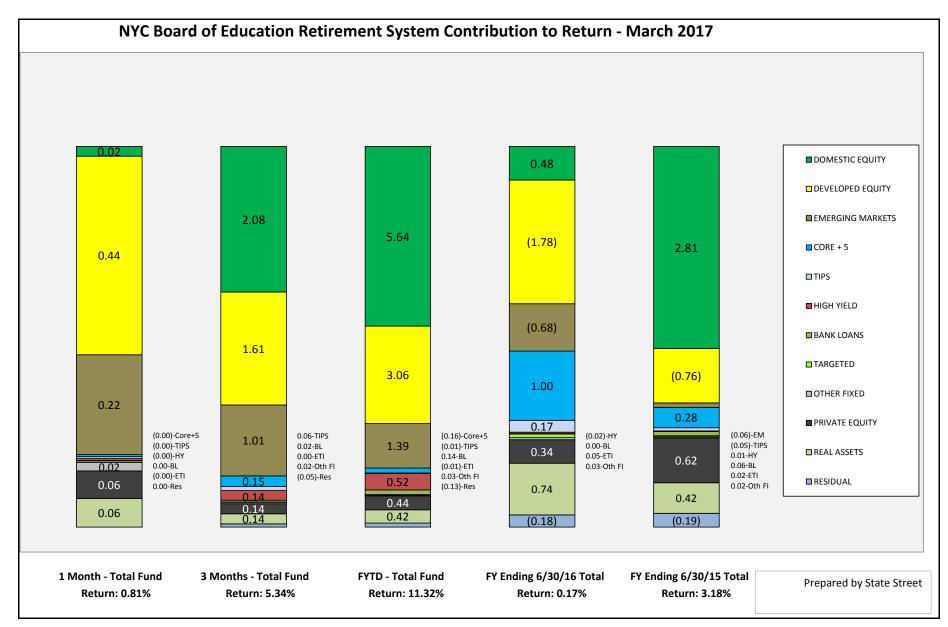


| MARKET INDICATORS | | | | | | | | |
|--|---------|----------------|------------|---------------|---------------|---------------|---------------|----------------|
| | 1 Month | <u>3 Month</u> | Fiscal YTD | <u>1 Year</u> | <u>2 Year</u> | <u>3 Year</u> | <u>5 Year</u> | <u>10 Year</u> |
| S&P 500 | 1.03 | 5.16 | 15.54 | 17.92 | 9.24 | 10.47 | 13.68 | 7.15 |
| S&P 400 MIDCAP | 0.84 | 3.08 | 17.25 | 20.46 | 9.24 | 10.24 | 13.56 | 8.73 |
| RUSSELL 1000 | 1.06 | 5.04 | 15.73 | 18.03 | 8.82 | 10.20 | 13.63 | 7.25 |
| RUSSELL 2000 | 1.10 | 3.18 | 22.94 | 25.63 | 8.70 | 9.03 | 12.95 | 7.05 |
| RUSSELL 3000 | 1.06 | 4.89 | 16.26 | 18.58 | 8.80 | 10.10 | 13.57 | 7.23 |
| RUSSELL 3000 GROWTH | 2.25 | 7.60 | 17.95 | 19.83 | 9.64 | 11.88 | 13.79 | 8.80 |
| RUSSELL 3000 VALUE | (0.14) | 2.24 | 14.57 | 17.33 | 7.95 | 8.29 | 13.28 | 5.57 |
| MSCI EAFE NET | 2.54 | 6.87 | 16.22 | 11.29 | 0.46 | 0.86 | 6.78 | 0.87 |
| MSCI EMF NET | 2.19 | 7.98 | 18.99 | 19.13 | (1.08) | 1.79 | 1.49 | 2.47 |
| MSCI WORLD NET | 1.48 | 5.41 | 15.30 | 14.65 | 4.82 | 5.68 | 9.94 | 3.92 |
| MSCI EUROPE SMID CAP NET | 5.75 | 10.88 | 20.91 | 11.56 | 4.32 | 2.28 | 10.59 | 1.91 |
| MSCI AC WORLD ex US NET | 2.14 | 6.40 | 16.31 | 12.59 | (0.05) | 0.83 | 5.13 | 1.12 |
| NYC - TREASURY AGENCY PLUS FIVE | 1.21 | 2.03 | (5.62) | (1.64) | 1.40 | 3.85 | 2.40 | 5.61 |
| Citigroup USBIG Treasury 1-3 Y Index | 0.13 | 0.27 | (0.13) | 0.35 | 0.61 | 0.70 | 0.61 | 1.95 |
| Citigroup USBIG Treasury/Agency 1-10 y | 0.52 | 0.86 | (1.37) | (0.11) | 1.06 | 1.58 | 1.13 | 3.35 |
| Citigroup Treasury 10+ | 1.53 | 2.56 | (9.61) | (3.04) | 1.14 | 5.78 | 3.53 | 6.83 |
| CITIGROUP MORTGAGE | 0.67 | 1.14 | (0.34) | 0.58 | 1.50 | 2.58 | 2.00 | 4.21 |
| NYC - INVESTMENT GRADE CREDIT | 1.00 | 1.99 | 0.63 | 2.69 | 2.81 | 3.45 | 3.64 | 5.15 |
| CITIGROUP BROAD INVESTMENT GRADE | 0.79 | 1.43 | (0.96) | 0.82 | 1.77 | 2.67 | 2.27 | 4.38 |

CITY OF NEW YORK NYC Board of Education Retirement System Market Indicator Report April 30, 2017

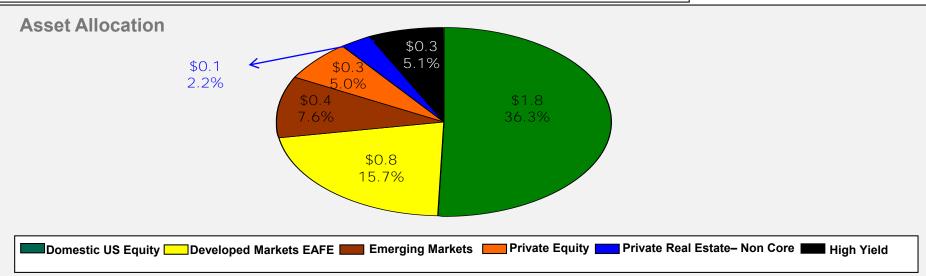


| MARKET INDICATORS | | | | | | | | |
|--|----------------|----------------|------------|---------------|---------------|---------------|---------------|----------------|
| | <u>1 Month</u> | <u>3 Month</u> | Fiscal YTD | <u>1 Year</u> | <u>2 Year</u> | <u>3 Year</u> | <u>5 Year</u> | <u>10 Year</u> |
| NYC - CORE PLUS FIVE | 0.93 | 1.71 | (1.07) | 1.02 | 2.05 | 3.19 | 2.75 | 4.96 |
| BARCLAYS AGGREGATE | 0.77 | 1.40 | (0.98) | 0.83 | 1.77 | 2.66 | 2.27 | 4.30 |
| CITIGROUP BB & B | 1.08 | 2.21 | 10.38 | 11.84 | 4.97 | 4.30 | 6.22 | 6.01 |
| CITIGROUP BB & B CAPPED | 1.09 | 2.20 | 10.19 | 11.60 | 4.82 | 4.20 | 6.10 | 6.30 |
| BofA ML HIGH YIELD MASTER II | 1.13 | 2.50 | 11.63 | 13.66 | 5.90 | 4.77 | 6.87 | 7.32 |
| CSFB LEVERAGED LOAN | 0.44 | 1.10 | 7.15 | 8.16 | 3.94 | 3.80 | 4.81 | 4.23 |
| BARCLAYS GLOBAL US TIPS | 0.59 | 1.01 | 0.37 | 1.73 | 1.42 | 1.77 | 0.69 | 4.22 |
| BofA ML U.S. Convertible – Yield Alternative | 1.20 | 3.23 | 11.16 | 13.34 | 1.33 | 1.21 | 4.86 | 4.30 |
| BofA ML US Invt Grade Conv Bond Index | 2.45 | 5.78 | 18.58 | 22.02 | 10.71 | 11.17 | 12.70 | 5.98 |
| BofA ML ALL CONVERTIBLES EX MANDATORY | 1.11 | 3.87 | 17.69 | 20.47 | 5.72 | 6.76 | 10.76 | 7.20 |
| DJ US SELECT REAL ESTATE | (0.24) | 0.35 | (4.23) | 4.01 | 5.96 | 8.54 | 8.70 | 4.10 |
| NCREIF NFI - ODCE NET* | 0.00 | 1.54 | 5.35 | 7.36 | 9.96 | 10.77 | 10.94 | 4.62 |
| CPI + 4% | 0.49 | 0.99 | 5.18 | 6.29 | 5.74 | 5.11 | 5.32 | |
| 91 DAY TREASURY BILL | 0.07 | 0.13 | 0.35 | 0.40 | 0.27 | 0.19 | 0.15 | 0.65 |

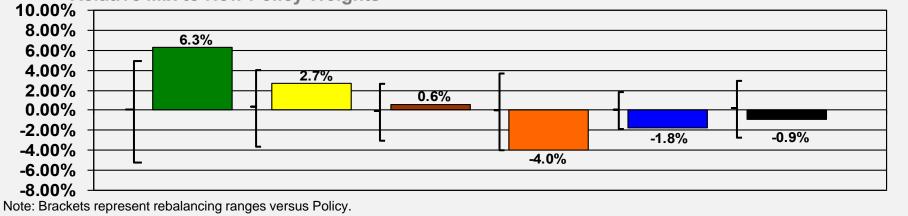


Portfolio Asset Allocation – Growth : March 31, 2017





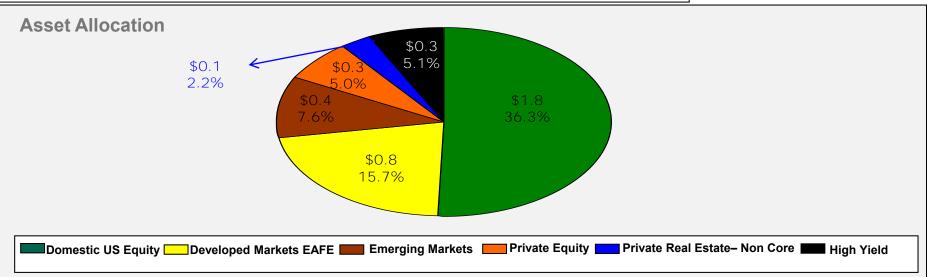
Relative Mix to New Policy Weights



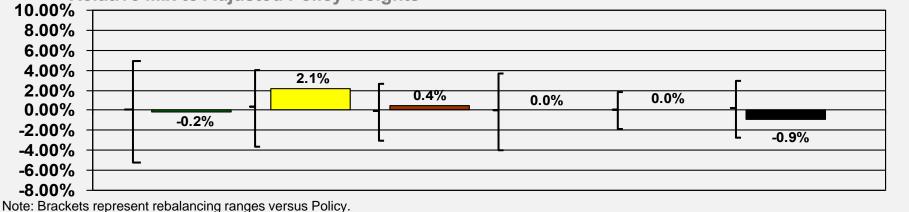
New York City Board of Education Retirement System Performance Overview as of March 31, 2017 Prepared by State Street

Portfolio Asset Allocation – Growth : March 31, 2017



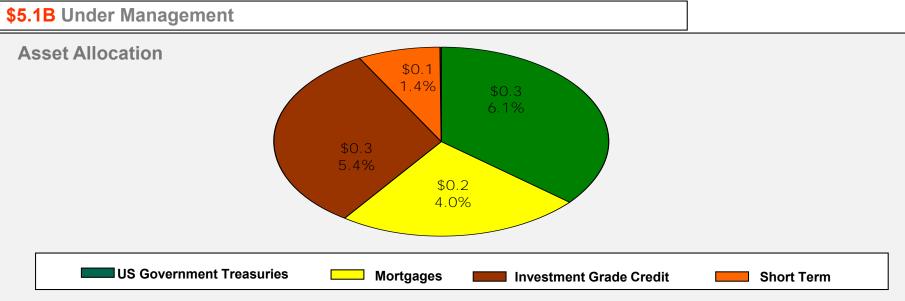


Relative Mix to Adjusted Policy Weights

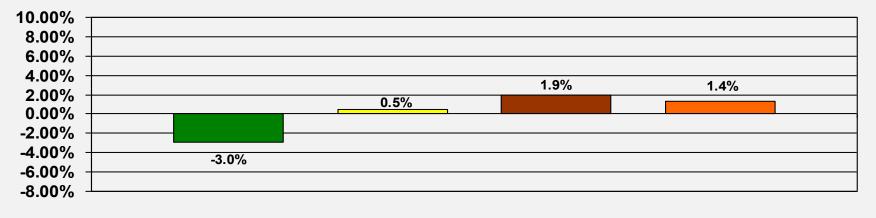


New York City Board of Education Retirement System Performance Overview as of March 31, 2017 Prepared by State Street Note: On March 31, 2017 BERS' combined Fixed Income and Cash portfolios have a duration of 5.6 years. The duration of the Barclays US Aggregate Index was 6 years on that date.

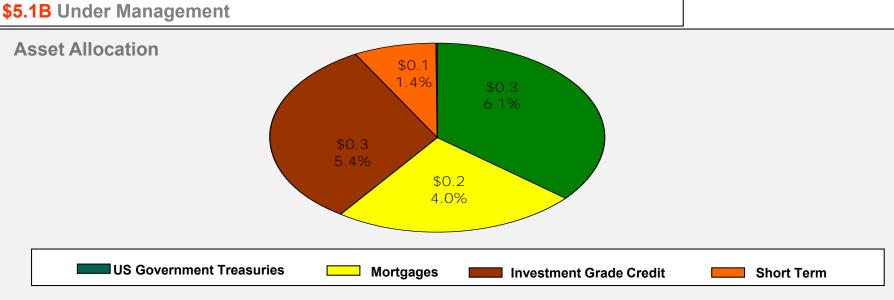
Portfolio Asset Allocation – Deflation Protection : March 31, 2017



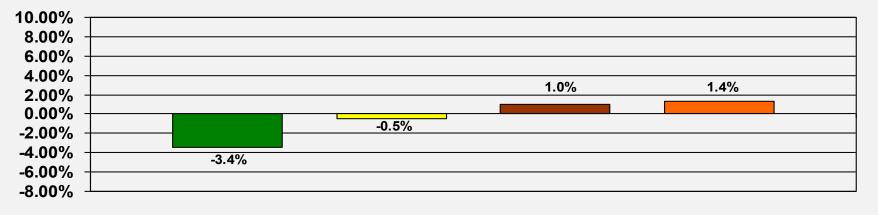
Relative Mix to New Policy Weights



Portfolio Asset Allocation – Deflation Protection : March 31, 2017

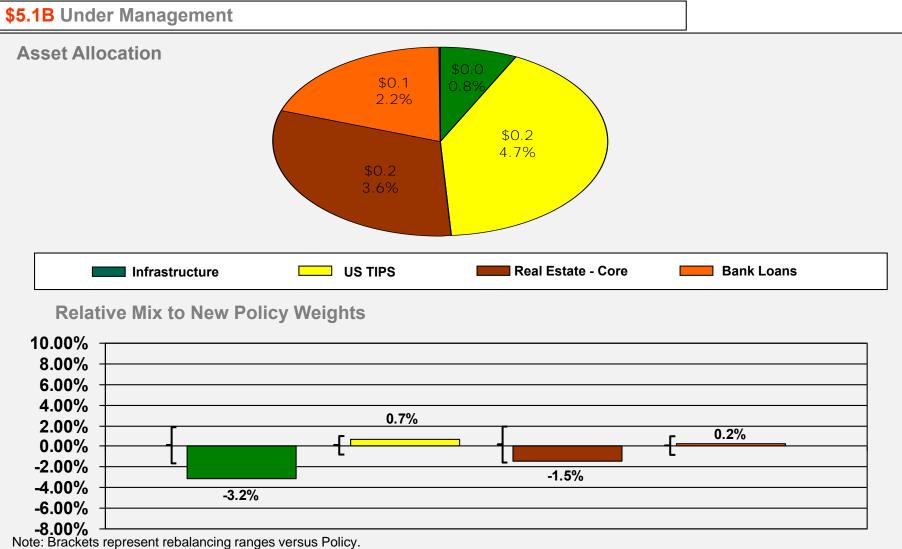


Relative Mix to Adjusted Policy Weights

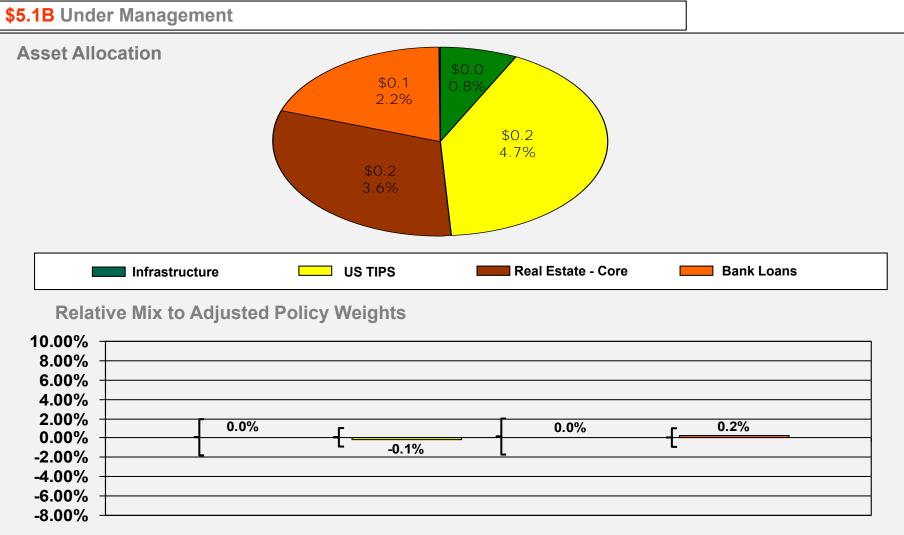


Note: On March 31, 2017 BERS' combined Fixed Income and Cash portfolios have a duration of 5.6 years. The duration of the Barclays US Aggregate Index was 6 years on that date.

Portfolio Asset Allocation – Inflation Protection : March 31, 2017



Portfolio Asset Allocation – Inflation Protection : March 31, 2017



Note: Brackets represent rebalancing ranges versus Policy.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM CLASSIFICATION OF INVESTMENTS (as of March 31st, 2017)

| CLASS ALLOCATIONS | In \$MM | Actual | Policy Target | Adjustment | Adjusted Policy | Adjusted Target Range *** |
|---|--|---|--|--|--|--|
| TOTAL EQUITIES | \$3,627.9 | 71.2% | 72.0% | NA | 68.8% | 63.8% - 73.8% |
| TOTAL FIXED INCOME | \$1,468.6 | 28.8% | 28.0% | NA | 31.2% | 26.2% - 36.2% |
| TOTAL ASSETS | \$5,096.5 | 100.0% | 100.0% | NA | 100.0% | |
|] | In \$MM | Actual | Policy Target | Adjustment | Adjusted Policy | Adjusted Targe Range *** |
| US Equities | \$1,849.7 | 36.3% | 30.0% | 6.5% | 36.5% | 31.5% - 41.5% |
| Non-US Equities/EAFE | \$800.8 | 15.7% | 13.0% | 0.2% | 13.2% | 9.2% - 17.2% |
| Emerging Markets | \$386.2 | 7.6% | 7.0% | 0.6% | 7.6% | 4.6% - 10.6% |
| TOTAL PUBLIC EQUITY | \$3,036.7 | 59.6% | 50.0% | 7.2% | 57.2% | |
| * REAL ESTATE - CORE | \$181.1 | 3.6% | 5.0% | NA | 3.6% | 1.6% - 5.6% |
| * REAL ESTATE - OPPORTUNISTIC | \$111.9 | 2.2% | 4.0% | NA | 2.2% | 0.2% - 4.2% |
| * PRIVATE EQUITY | \$255.4 | 5.0% | 9.0% | NA | 5.0% | 1.0% - 9.0% |
| | | | | | | |
| PRIVATE INFRASTRUCTURE | \$42.8 | 0.8% | 4.0% | NA | 0.8% | -1.2% - 2.8% |
| PRIVATE INFRASTRUCTURE TOTAL EQUITIES | \$42.8 \$3,627.9 | 0.8% 71.2% | 4.0% | NA NA | 0.8% 68.8% | -1.2% - 2.8% 63.8% - 73.8% |
| | | | | | | 63.8% - 73.8% |
| | | | | | | 63.8% - 73.89 Adjusted Targe |
| | \$3,627.9 | 71.2% | 72.0% | NA | 68.8% | 63.8% - 73.8 Adjusted Targe Range ^{***} |
| TOTAL EQUITIES | \$3,627.9 In \$MM | 71.2% Actual | 72.0% Policy Target | NA Adjustment | 68.8% | 63.8% - 73.8 Adjusted Targe Range *** -5.0% - 5.0% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities | \$3,627.9 In \$MM \$308.3 | 71.2% Actual 6.1% | 72.0% Policy Target 0.0% | NA Adjustment NA | 68.8% Adjusted Policy 0.0% | 63.8% - 73.8 Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5 |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years | \$3,627.9 In \$MM \$308.3 \$0.0 | 71.2% Actual 6.1% 0.0% | 72.0% Policy Target 0.0% 9.0% | NA Adjustment NA 0.5% | 68.8% Adjusted Policy 0.0% 9.5% | 63.8% - 73.8 Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5 1.5% - 3.5% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 | 71.2% Actual 6.1% 0.0% 3.4% | 72.0% Policy Target 0.0% 9.0% 1.5% | NA Adjustment NA 0.5% 1.0% | 68.8% Adjusted Policy 0.0% 9.5% 2.5% | 63.8% - 73.89 Adjusted Targe |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% | NA Adjustment NA 0.5% 1.0% 1.0% | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% | 63.8% - 73.8% Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5% 1.5% - 3.5% 3.5% - 5.5% 3.0% - 9.0% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates High Yield | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 \$261.3 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% 5.1% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% 6.0% | NA Adjustment NA 0.5% 1.0% 1.0% NA | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% 6.0% | 63.8% - 73.8% Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5% 1.5% - 3.5% 3.5% - 5.5% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates High Yield Bank Loans | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 \$261.3 \$113.2 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% 5.1% 2.2% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% 6.0% 2.0% | NA Adjustment NA 0.5% 1.0% 1.0% NA NA NA | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% 6.0% 2.0% | 63.8% - 73.8% Adjusted Targe Range ^{***} -5.0% - 5.0% 4.5% - 14.5% 1.5% - 3.5% 3.5% - 5.5% 3.0% - 9.0% 1.0% - 3.0% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates High Yield Bank Loans Total High Yield & Bank Loans | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 \$261.3 \$113.2 \$374.5 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% 5.1% 2.2% 7.3% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% 6.0% 2.0% 8.0% | NA Adjustment NA 0.5% 1.0% 1.0% NA 0.4 0.5% 0.0% | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% 6.0% 2.0% 8.0% | 63.8% - 73.8 Adjusted Targe Range ^{***} -5.0% - 5.0% 4.5% - 14.5% 1.5% - 3.5% 3.5% - 5.5% 3.0% - 9.0% 1.0% - 3.0% 3.0% - 9.0% 3.8% - 5.8% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates High Yield Bank Loans Total High Yield & Bank Loans TIPS | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 \$261.3 \$113.2 \$374.5 \$238.0 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% 5.1% 2.2% 7.3% 4.7% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% 6.0% 2.0% 8.0% 4.0% | NA Adjustment NA 0.5% 1.0% 1.0% NA 0.0% 0.8% | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% 6.0% 2.0% 8.0% 4.8% | 63.8% - 73.8 Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5 1.5% - 3.5% 3.5% - 5.5% 3.0% - 9.0% 1.0% - 3.0% 3.8% - 5.8% 1.0% - 3.0% |
| TOTAL EQUITIES U.S. Treasuries – All Maturities U.S. Treasuries - Longer Than Five Years Core Mortgage-Backed Securities Credit - Investment Grade Corporates High Yield Bank Loans Total High Yield & Bank Loans TIPS "ETI | \$3,627.9 In \$MM \$308.3 \$0.0 \$173.4 \$275.7 \$261.3 \$113.2 \$374.5 \$238.0 \$29.7 | 71.2% Actual 6.1% 0.0% 3.4% 5.4% 5.1% 2.2% 7.3% 4.7% 0.6% | 72.0% Policy Target 0.0% 9.0% 1.5% 3.5% 6.0% 2.0% 8.0% 4.0% 2.0% | NA Adjustment NA 0.5% 1.0% 1.0% NA 0.0% 0.8% NA | 68.8% Adjusted Policy 0.0% 9.5% 2.5% 4.5% 6.0% 2.0% 8.0% 4.8% 2.0% | 63.8% - 73.8 Adjusted Targe Range *** -5.0% - 5.0% 4.5% - 14.5% 1.5% - 3.5% 3.5% - 5.5% 3.0% - 9.0% 1.0% - 3.0% 3.0% - 9.0% |

* 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 Copportunistic: +/-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 March 31st, 2017)

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

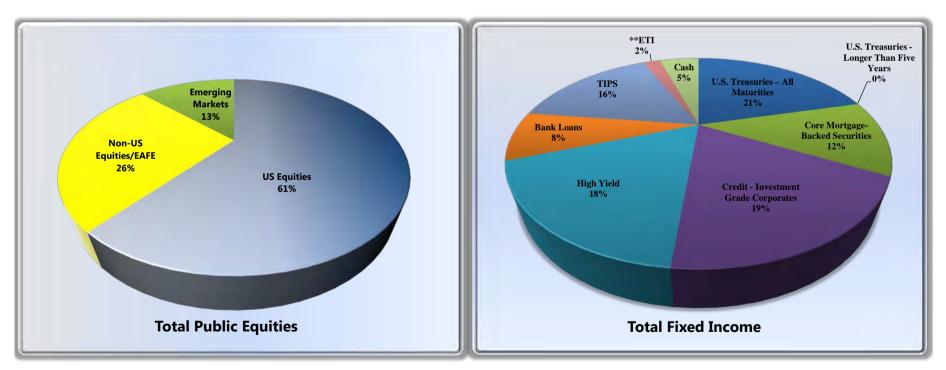
27% of uninvested commitments will be invested in US Equity, 18% of uninvested commitments will be invested in Developed Ex-US Equity, 5% of uninvested commitments will be invested in US Treasuries, 10% of uninvested commitments will be invested in Investment Grade Corporates, 10% of uninvested commitments will be invested in TIPS.

Impact of Adjustments

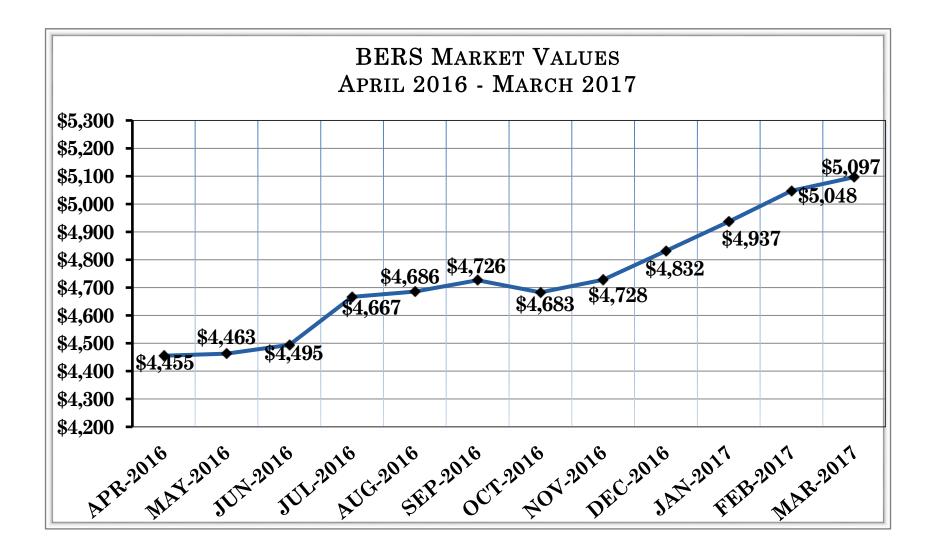
| 1) U.S. Treasuries - Longer Than Five Years | 9.0% |
|--|-------|
| 12% of uninvested Real Estate Core | 0.2% |
| 8% of uninvested Real Estate Opportunistic | 0.1% |
| 5% of uninvested Private Infrastructure | 0.2% |
| Total U.S. Treasuries - Longer Than Five Years | 9.5% |
| 2) Credit - Investment Grade Corporates | 3.5% |
| 24% of uninvested Real Estate Core | 0.3% |
| 16% of uninvested Real Estate Opportunistic | 0.3% |
| 10% of uninvested Private Infrastructure | 0.3% |
| Total Credit - Investment Grade Corporates | 4.5% |
| 3) Core Mortgage-Backed Securities | 1.5% |
| 24% of uninvested Real Estate Core | 0.3% |
| 16% of uninvested Real Estate Opportunistic | 0.3% |
| 10% of uninvested Private Infrastructure | 0.3% |
| Total Core Mortgage-Backed Securities | 2.5% |
| 4) Domestic Equity | 30.0% |
| 100% of uninvested Private Equity | 4.0% |
| 40% of uninvested of uninvested Real Estate Core | 0.6% |
| 60% of uninvested Real Estate Opportunistic | 1.1% |
| 27% of uninvested Private Infrastructure | 0.9% |
| Total Domestic Equity | 36.5% |

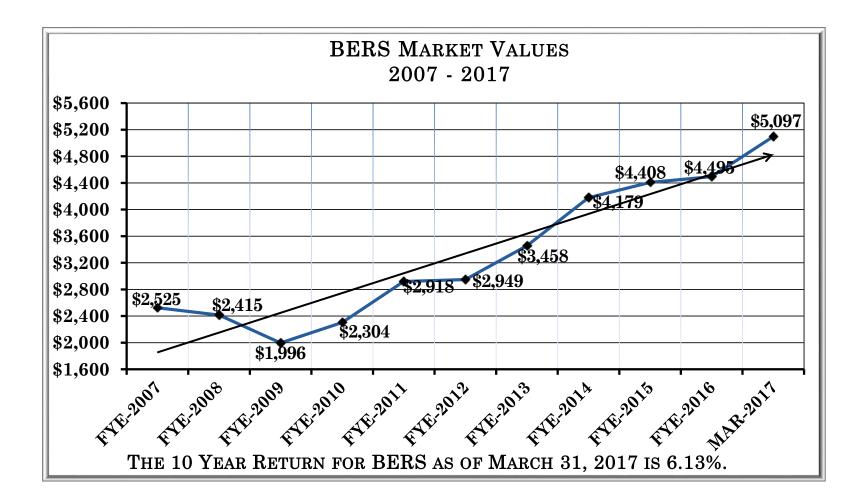
NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM CLASSIFICATION OF INVESTMENTS (as of March 31st, 2017)

| 5) Treasury Inflation Protected Securities | 4.0% |
|---|-------|
| 25% of uninvested Private Infrastructure | 0.8% |
| Total Treasury Inflation Protected Securities | 4.8% |
| 6) Non-U.S. Equity - Emerging Markets | 7.0% |
| 5% of uninvested Private Infrastructure | 0.2% |
| Total Non-U.S. Equity - Emerging Markets | 7.2% |
| 7) Non-U.S. Equity - Developed Mkts. | 13.0% |
| 18% of uninvested Private Infrastructure | 0.6% |
| Total Non-U.S. Equity | 13.6% |



Note: Totals may not equal 100% due to rounding





Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending March 31, 2017

| | Assets (\$MM) | % of Total | Trailing 1 Month | Trailing 3 Month | FYTD | CYTD | FYE 06/30/16 | CYE 12/31/16 | CYE 12/31/15 | CYE 12/31/14 | Trailing 1 Year | Inception Date |
|-------------------------------------|------------------|---------------|---------------------|---------------------|--------|-------|-----------------|-----------------|-----------------|-----------------|--------------------|-------------------|
| ASSET CLASS SUMMARY | | | | | | | | | | | | |
| BERS-TOTAL DOM EQUITY | 1,849.68 | 36.29 | 0.06 | 5.73 | 15.27 | 5.73 | 1.26 | 12.57 | 0.39 | 11.14 | 18.16 | Sep-01-91 |
| BERS-TOTAL DEVELOPED EQUITY | 800.79 | 15.71 | 2.83 | 10.08 | 18.89 | 10.08 | (10.83) | 5.93 | (4.98) | (5.04) | 18.44 | Nov-01-92 |
| BERS-TOTAL EMERGING (INTL) | 386.20 | 7.58 | 2.95 | 14.04 | 22.96 | 14.04 | (14.24) | 12.53 | (15.14) | 3.77 | 23.37 | Nov-01-97 |
| BERS-TOTAL STRUCTURED | 757.51 | 14.86 | (0.03) | 1.06 | (1.08) | 1.06 | 6.61 | 3.89 | 0.20 | 7.58 | 1.61 | Jan-01-85 |
| BERS-TOTAL TIPS MANAGERS | 237.98 | 4.67 | (0.08) | 1.25 | (0.28) | 1.25 | 4.43 | 4.78 | (0.85) | 3.27 | 1.54 | Jun-01-05 |
| BERS-TOTAL HIGH YIELD | 261.33 | 5.13 | (0.09) | 2.66 | 9.90 | 2.66 | (0.38) | 15.60 | (4.66) | 2.75 | 15.67 | Aug-01-97 |
| BERS-TOTAL BANK LOANS | 113.21 | 2.22 | 0.15 | 1.06 | 6.12 | 1.06 | 0.20 | 8.48 | 0.12 | 1.99 | 9.11 | Dec-01-12 |
| TOTAL BOE ETI (w/o cash) | 29.67 | 0.58 | (0.07) | 0.67 | (2.34) | 0.67 | 8.61 | 2.31 | 3.30 | 6.96 | (0.40) | Dec-01-84 |
| BERS-TOTAL PRIVATE EQUITY | 255.39 | 5.01 | 1.21 | 2.83 | 8.69 | 2.83 | 7.19 | 9.19 | 12.71 | 20.52 | 11.12 | Jul-01-06 |
| BERS-TOTAL REAL ASSETS | 335.87 | 6.59 | 0.97 | 2.20 | 6.50 | 2.20 | 13.62 | 9.91 | 14.31 | 12.55 | 9.86 | Dec-01-10 |
| BERS-TOTAL CASH | 65.59 | 1.29 | 0.07 | 0.23 | 0.45 | 0.23 | 0.47 | 0.56 | 0.40 | 0.27 | 0.58 | Apr-01-04 |
| SECURITY LENDING | 3.28 | 0.06 | | | | | | | | | | Apr-01-04 |
| BERS-TOTAL BOARD OF ED. | 5,096.50 | 100.00 | 0.81 | 5.34 | 11.32 | 5.34 | 0.17 | 9.19 | (0.44) | 6.39 | 13.62 | Jul-01-87 |
| BERS-TOTAL EQUITY | 3,036.67 | 59.58 | 1.14 | 7.84 | 17.13 | 7.84 | (3.38) | 10.66 | (2.33) | 5.91 | 18.90 | Apr-01-04 |
| BERS-TOTAL FIXED INCOME (MINUS SS) | 1,399.70 | 27.46 | (0.04) | 1.40 | 1.67 | 1.40 | 4.47 | 6.51 | (0.81) | 5.53 | 4.74 | Apr-01-04 |
| BERS-TOTAL PRIVATE EQUITY | 255.39 | 5.01 | 1.21 | 2.83 | 8.69 | 2.83 | 7.19 | 9.19 | 12.71 | 20.52 | 11.12 | Jul-01-06 |
| BERS-TOTAL REAL ASSETS | 335.87 | 6.59 | 0.97 | 2.20 | 6.50 | 2.20 | 13.62 | 9.91 | 14.31 | 12.55 | 9.86 | Dec-01-10 |
| BERS-TOTAL CASH | 65.59 | 1.29 | 0.07 | 0.23 | 0.45 | 0.23 | 0.47 | 0.56 | 0.40 | 0.27 | 0.58 | Apr-01-04 |
| SECURITY LENDING | 3.28 | 0.06 | | | | | | | | | | Apr-01-04 |
| BERS-TOTAL BOARD OF ED. | 5,096.50 | 100.00 | 0.81 | 5.34 | 11.32 | 5.34 | 0.17 | 9.19 | (0.44) | 6.39 | 13.62 | Jul-01-87 |
| Board of Education Policy Benchmark | | | 0.75 | 4.62 | 9.73 | 4.62 | 0.75 | 8.67 | (0.09) | 6.93 | 11.81 | Jun-01-94 |

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Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

| Periods Ending March 31, 2017 | Ending Market Value (\$MM) | % of Total | 1 Month | 3 Month | FYTD | СҮТД | 2016 | 2015 |
|-------------------------------------|----------------------------------|---------------|---------|---------|--------|--------|--------|--------|
| ASSET CLASS SUMMARY | | | | | | | | |
| BERS-TOTAL BOARD OF ED. | 5,097 | 100.00 | 0.81 | 5.34 | 11.32 | 5.34 | 9.19 | (0.44) |
| Board of Education Policy Benchmark | | | 0.75 | 4.62 | 9.73 | 4.62 | 8.67 | (0.09) |
| Excess | | | 0.06 | 0.73 | 1.60 | 0.73 | 0.52 | (0.36) |
| BERS-TOTAL EQUITY (INCL PE & RA) | 3,628 | 71.18 | 1.13 | 6.95 | 15.51 | 6.95 | 10.42 | (0.43) |
| BERS-TOTAL FIXED INCOME (MINUS SS) | 1,400 | 27.46 | (0.04) | 1.40 | 1.67 | 1.40 | 6.51 | (0.81) |
| EQUITY SUMMARY | | | | | | | | |
| US EQUITY | | | | | | | | |
| NYC BERS BLACKROCK R2000 GROWTH | 38 | 0.75 | 1.19 | 5.40 | 19.18 | 5.40 | 11.29 | (1.30) |
| RUSSELL 2000 GROWTH DAILY | | | 1.18 | 5.35 | 19.17 | 5.35 | 11.32 | (1.38) |
| Excess | | | 0.01 | 0.05 | 0.01 | 0.05 | (0.02) | 0.08 |
| NYC BERS BLACKROCK R2000 VALUE | 41 | 0.80 | (0.83) | (0.06) | 24.03 | (0.06) | 31.71 | (7.38) |
| RUSSELL 2000 VALUE DAILY | | | (0.85) | (0.13) | 24.03 | (0.13) | 31.74 | (7.47) |
| Excess | | | 0.01 | 0.07 | 0.01 | 0.07 | (0.03) | 0.09 |
| Wellington Mgmt MCC | 126 | 2.47 | (0.06) | 6.18 | 15.96 | 6.18 | 12.28 | 1.76 |
| S&P MID CAP 400 | | | (0.39) | 3.94 | 16.28 | 3.94 | 20.74 | (2.18) |
| Excess | | | 0.32 | 2.24 | (0.32) | 2.24 | (8.45) | 3.94 |
| NYC BERS BLACKROCK R1000 GROWTH | 753 | 14.78 | 1.15 | 8.90 | 15.02 | 8.90 | 7.06 | 5.78 |
| RUSSELL 1000 GROWTH - DAILY | | | 1.16 | 8.91 | 15.05 | 8.91 | 7.08 | 5.67 |
| Excess | | | 0.00 | (0.01) | (0.03) | (0.01) | (0.02) | 0.12 |
| NYC BERS BLACKROCK R1000 VALUE | 757 | 14.85 | (1.02) | 3.26 | 13.98 | 3.26 | 17.31 | (3.81) |
| RUSSELL 1000 VALUE (DAILY) | | | (1.02) | 3.27 | 14.00 | 3.27 | 17.34 | (3.83) |
| Excess | | | 0.00 | (0.01) | (0.02) | (0.01) | (0.03) | 0.01 |
| | | | | | | | | |



Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

| Periods Ending March 31, 2017 | Ending Market Value | % | | | | | | |
|-------------------------------|------------------------|----------|---------|---------|--------|--------|--------|---------|
| | (\$MM) | of Total | 1 Month | 3 Month | FYTD | CYTD | 2016 | 2015 |
| FUND OF FUNDS | | | | | | | | |
| BERS-TOTAL FUND OF FUNDS | 135 | 2.65 | 0.20 | 4.29 | 17.89 | 4.29 | 12.27 | (3.72) |
| Blended Russell 2000 & 3000 | | | 0.10 | 4.10 | 18.36 | 4.10 | 17.04 | (1.93) |
| Excess | | | 0.10 | 0.19 | (0.47) | 0.19 | (4.77) | (1.79) |
| BERS-TOTAL FIS | 67 | 1.32 | 0.51 | 3.39 | 21.50 | 3.39 | 17.54 | (4.25) |
| RUSSELL 2000 (DAILY) | | | 0.13 | 2.47 | 21.60 | 2.47 | 21.31 | (4.41) |
| Excess | | | 0.38 | 0.92 | (0.10) | 0.92 | (3.77) | 0.17 |
| BERS-TOTAL PROGRESS | 68 | 1.33 | (0.11) | 5.22 | 14.25 | 5.22 | 7.21 | (3.19) |
| RUSSELL 3000 (DAILY) | | | 0.07 | 5.74 | 15.04 | 5.74 | 12.74 | 0.48 |
| Excess | | | (0.18) | (0.52) | (0.79) | (0.52) | (5.53) | (3.67) |
| NON - US EQUITY | | | | | | | | |
| Sprucegrove MTA (BOE) | 351 | 6.88 | 2.31 | 8.09 | 20.17 | 8.09 | 11.14 | (9.56) |
| MSCI EAFE VALUE NET (DAILY) | | | 2.80 | 6.05 | 19.31 | 6.05 | 5.02 | (5.68) |
| Excess | | | (0.48) | 2.05 | 0.87 | 2.05 | 6.12 | (3.87) |
| Baillie Gifford MTA | 354 | 6.94 | 3.54 | 12.22 | 18.07 | 12.22 | 0.70 | (3.81) |
| MSCI EAFE GROWTH | | | 2.71 | 8.52 | 7.60 | 8.52 | (3.04) | 4.09 |
| Excess | | | 0.83 | 3.70 | 10.46 | 3.70 | 3.74 | (7.90) |
| Acadian | 97 | 1.90 | 2.15 | 10.03 | 16.98 | 10.03 | 6.41 | 8.68 |
| S&P EPAC Small Cap USD NET | | | 2.18 | 8.04 | 13.18 | 8.04 | 1.34 | 8.58 |
| Excess | | | (0.03) | 1.99 | 3.80 | 1.99 | 5.07 | 0.09 |
| EMERGING MARKETS | | | | | | | | |
| ACADIAN | 281 | 5.51 | 3.10 | 14.93 | 24.15 | 14.93 | 12.74 | (15.14) |
| MSCI EMERGING MARKETS | | | 2.52 | 11.44 | 16.44 | 11.44 | 11.19 | (14.92) |
| Excess | | | 0.58 | 3.49 | 7.70 | 3.49 | 1.55 | (0.22) |
| CONY GT EM BLACKROCK | 106 | 2.07 | 2.55 | 11.66 | | 11.66 | | |
| MSCI EMERGING MARKETS | | | 2.52 | 11.44 | | 11.44 | | |
| Excess | | | 0.03 | 0.21 | | 0.21 | | |



Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

| Periods Ending March 31, 2017 | Ending Market Value | % | | | | | | |
|--|------------------------|----------|---------|---------|--------|--------|--------|--------|
| FIXED INCOME SUMMARY | (\$MM) | of Total | 1 Month | 3 Month | FYTD | CYTD | 2016 | 2015 |
| | | | | | | | | |
| STRUCTRED FIXED INCOME | | | | | | | | |
| Blackrock Mortgages | 173 | 3.40 | 0.00 | 0.68 | (0.32) | 0.68 | 2.32 | 1.73 |
| CITIGROUP MORTGAGE INDEX | | | (0.03) | 0.43 | (1.00) | 0.43 | 1.59 | 1.56 |
| Excess | | | 0.02 | 0.25 | 0.68 | 0.25 | 0.73 | 0.17 |
| Prudential - Credit | 139 | 2.72 | (0.13) | 1.29 | (0.27) | 1.29 | 5.86 | (0.22) |
| NYC - Investment Grade Credit | | | (0.07) | 1.38 | (0.37) | 1.38 | 5.56 | (0.65) |
| Excess | | | (0.07) | (0.08) | 0.10 | (0.08) | 0.30 | 0.43 |
| Taplin Canida Habacht - Credit | 119 | 2.34 | (0.03) | 1.84 | 2.16 | 1.84 | 8.02 | (3.01) |
| NYC - Investment Grade Credit | | | (0.07) | 1.38 | (0.37) | 1.38 | 5.56 | (0.65) |
| Excess | | | 0.04 | 0.46 | 2.52 | 0.46 | 2.46 | (2.36) |
| Prudential-Privest - Credit | 17 | 0.34 | 0.10 | 1.68 | 1.01 | 1.68 | 4.30 | 1.63 |
| NYC - Investment Grade Credit | | 0.01 | (0.07) | 1.38 | (0.37) | 1.38 | 5.56 | (0.65) |
| Excess | | | 0.17 | 0.30 | 1.37 | 0.30 | (1.26) | 2.28 |
| State Street Govt | 128 | 2.51 | (0.13) | 1.23 | (6.56) | 1.23 | 1.23 | 0.45 |
| NYC - Treasury Agency Plus Five | 120 | 2.01 | (0.18) | 1.09 | (6.75) | 1.09 | 1.21 | 0.72 |
| Excess | | | 0.05 | 0.13 | 0.18 | 0.13 | 0.01 | (0.27) |
| SSGA 1-3 Treasury Index | 181 | 3.54 | 0.08 | 0.30 | | 0.30 | | |
| Citigroup USBIG Treasury 1-3 Y Index | | 0.01 | 0.04 | 0.27 | | 0.27 | | |
| Excess | | | 0.04 | 0.03 | | 0.03 | | |
| HIGH YIELD | | | | | | | | |
| Loomis Sayles - High Yield | 131 | 2.56 | (0.01) | 3.25 | 11.81 | 3.25 | 19.92 | (7.07) |
| NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR) | | | (0.21) | 2.71 | 10.38 | 2.71 | 17.49 | (4.64) |
| Excess | | | 0.20 | 0.54 | 1.43 | 0.54 | 2.44 | (2.43) |
| Shenkman - High Yield | 131 | 2.57 | (0.16) | 2.08 | 8.06 | 2.08 | 11.62 | (1.97) |
| CITIGROUP BB & B | | | (0.13) | 2.28 | 9.20 | 2.28 | 15.48 | (4.21) |
| Excess | | | (0.03) | (0.20) | (1.14) | (0.20) | (3.85) | 2.24 |



Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

| | Ending Market | | | | | | | |
|------------------------------------|---------------|----------|---------|------------|--------|--------|--------|--------|
| | Value | % | | // | | | 00/0 | |
| | (\$MM) | of Total | 1 Month | 3 Month | FYTD | CYTD | 2016 | 2015 |
| BANK LOANS | | | | | | | | |
| Babson BL | 113 | 2.22 | 0.15 | 1.06 | 6.12 | 1.06 | 8.48 | 0.12 |
| CSFB LEVERAGED LOAN INDEX | | | 0.08 | 1.20 | 6.69 | 1.20 | 9.88 | (0.38) |
| Excess | | | 0.08 | (0.14) | (0.57) | (0.14) | (1.39) | 0.51 |
| TIPS | | | | | | | | |
| SSGA TIPS | 238 | 4.67 | (0.08) | 1.25 | (0.28) | 1.25 | 4.78 | |
| BBG BARC Gbl Inf-Lk: US TIPS (Dly) | | | (0.05) | 1.26 | (0.22) | 1.26 | 4.68 | |
| Excess | | | (0.03) | (0.01) | (0.06) | (0.01) | 0.09 | |
| OTHER FIXED | | | | | | | | |
| AFL-CIO HOUSING INV TRUST | 16 | 0.31 | 0.05 | 0.81 | (1.68) | 0.81 | 1.94 | 1.13 |
| BBG BARC Agg (Dly) | | | (0.05) | 0.82 | (1.73) | 0.82 | 2.65 | 0.55 |
| Excess | | | 0.10 | (0.01) | 0.05 | (0.01) | (0.71) | 0.58 |
| | | | | (0.0.1) | | () | (0) | |
| ACCESS RBC | 6 | 0.12 | (0.01) | 0.48 | (1.25) | 0.48 | 1.61 | 1.83 |
| Access RBC Benchmark | | | 0.03 | 0.46 | (1.30) | 0.46 | 1.52 | 1.40 |
| Excess | | | (0.04) | 0.02 | 0.05 | 0.02 | 0.09 | 0.43 |
| CPC CONST FACILITY | 1 | 0.01 | 0.42 | 2.04 | 1.37 | 2.04 | (3.95) | 12.90 |
| CPC CONST BENCHMARK | | | 0.28 | 0.83 | 2.41 | 0.83 | 3.12 | 2.90 |
| Excess | | | 0.13 | 1.21 | (1.04) | 1.21 | (7.07) | 10.01 |
| CFSB-PPAR (GNMA) | 0 | 0.00 | (0.45) | 0.23 | (5.44) | 0.23 | 3.21 | 5.90 |
| GNMA Plus 65bps | | 0.00 | (0.03) | 0.42 | (0.30) | 0.42 | 2.28 | 2.02 |
| Excess | | | (0.42) | (0.19) | (5.14) | (0.19) | 0.93 | 3.88 |
| | | | | | | | | |
| CCD-PPAR (GNMA) | 0 | 0.01 | (0.24) | 0.06 | (5.63) | 0.06 | 2.78 | 5.08 |
| GNMA Plus 65bps | | | (0.03) | 0.42 | (0.30) | 0.42 | 2.28 | 2.02 |
| Excess | | | (0.21) | (0.36) | (5.34) | (0.36) | 0.50 | 3.06 |
| CCD-PPAR (FNMA) | 1 | 0.02 | (0.47) | 0.35 | (5.41) | 0.35 | 3.71 | 6.69 |
| FNMA Plus 85bps | | | 0.07 | 0.71 | (0.50) | 0.71 | 2.38 | 2.50 |
| Excess | | | (0.54) | (0.36) | (4.91) | (0.36) | 1.33 | 4.20 |
| | | | | | | | | |



Manager / Benchmark Comparison Report

Rates of Return - Net Mgr



| Value (\$MM) 1 2 | % of Total 0.02 | 1 Month (0.29) 0.07 (0.36) | 3 Month (0.80) 0.71 | FYTD (5.79) (0.50) | CYTD (0.80) | 2016 6.15 | 2015 8.96 |
|---------------------------|----------------------------|--|--|--|---|--|--|
| | | 0.07 | 0.71 | | | 6.15 | 8.96 |
| 2 | | | | (0.50) | | | 0.00 |
| 2 | | (0.36) | | | 0.71 | 2.38 | 2.50 |
| 2 | | | (1.50) | (5.29) | (1.50) | 3.77 | 6.46 |
| | 0.04 | (0.42) | 1.24 | (1.64) | 1.24 | 7.94 | 6.18 |
| | | 0.07 | 0.71 | (0.50) | 0.71 | 2.38 | 2.50 |
| | | (0.49) | 0.53 | (1.14) | 0.53 | 5.56 | 3.68 |
| 1 | 0.03 | (0.49) | 0.24 | (6.54) | 0.24 | 4.07 | 42.03 |
| | | 0.07 | 0.71 | (0.50) | 0.71 | 2.38 | 2.50 |
| | | (0.56) | (0.47) | (6.04) | (0.47) | 1.69 | 39.53 |
| 0 | 0.00 | (0.03) | 0.36 | (2.43) | 0.36 | 3.88 | 3.92 |
| | | (0.03) | 0.42 | (0.30) | 0.42 | 2.28 | 2.02 |
| | | 0.00 | (0.06) | (2.13) | (0.06) | 1.61 | 1.91 |
| 0 | 0.00 | (0.35) | (0.04) | (5.36) | (0.04) | 3.51 | 5.53 |
| | | (0.03) | 0.42 | (0.30) | 0.42 | 2.28 | 2.02 |
| | | (0.32) | (0.46) | (5.07) | (0.46) | 1.23 | 3.52 |
| 1 | 0.02 | (0.52) | 0.39 | (11.80) | 0.39 | 5.03 | 6.29 |
| | | 0.07 | 0.71 | (0.50) | 0.71 | 2.38 | 2.50 |
| | | (0.59) | (0.32) | (11.30) | (0.32) | 2.65 | 3.79 |
| 0 | 0.00 | (0.20) | (0.60) | (5.69) | (0.60) | 3.46 | 4.97 |
| | | 0.07 | 0.71 | (0.50) | 0.71 | 2.38 | 2.50 |
| | | (0.27) | (1.31) | (5.19) | (1.31) | 1.07 | 2.47 |
| 66 | 1.29 | 0.07 | 0.23 | 0.45 | 0.23 | 0.55 | 0.39 |
| | | 0.02 | 0.10 | 0.28 | 0.10 | 0.33 | 0.05 |
| | | 0.05 | 0.12 | 0.16 | 0.12 | 0.23 | 0.35 |
| | 1 0 0 1 1 0 | 1 0.03 0 0.00 0 0.00 1 0.02 0 0.00 | 0.07 (0.49) 1 0.03 0 0.07 (0.56) 0 0.00 0 0.03) 0 0.03) 0 0.00 0 0.00 0 0.035) 0 0.02 0 0.02 | 0.07 0.71 (0.49) 0.53 1 0.03 (0.49) 0.24 0.07 0.71 (0.56) (0.47) 0 0.00 (0.03) 0.36 0 0.00 (0.03) 0.42 0.00 (0.03) 0.42 0.00 (0.35) (0.04) 0 0.00 (0.35) (0.04) 0 0.00 (0.32) (0.46) 1 0.02 (0.52) 0.39 1 0.02 (0.52) 0.39 0 0.00 (0.20) (0.60) 0 0.00 (0.20) (0.60) 0.07 0.71 (0.27) (1.31) 66 1.29 0.07 0.23 0.02 0.10 0.10 0.10 | 0.07 0.71 (0.50) (0.49) 0.53 (1.14) 1 0.03 (0.49) 0.24 (6.54) 0.07 0.71 (0.50) (0.47) (6.04) 0 0.00 (0.03) 0.36 (2.43) 0 0.00 (0.03) 0.36 (2.43) 0 0.00 (0.03) 0.42 (0.30) 0 0.00 (0.35) (0.04) (5.36) 0 0.00 (0.35) (0.04) (5.36) 0 0.00 (0.35) (0.04) (5.36) 0 0.00 (0.55) (0.04) (5.36) 0 0.00 (0.52) 0.39 (11.80) 0 0.02 0.39 (11.80) (0.50) 0.02 0.39 (11.30) (0.50) (0.50) 0.02 0.07 0.71 (0.50) (0.51) | 0.07 0.71 (0.50) 0.71 (0.49) 0.53 (1.14) 0.53 1 0.03 (0.49) 0.24 (6.54) 0.24 0.07 0.71 (0.50) 0.71 0.056 (0.47) (6.04) (0.47) 0 0.00 (0.03) 0.36 (2.43) 0.36 0 0.00 (0.03) 0.42 (0.30) 0.42 0 0.00 (0.03) 0.42 (0.30) 0.42 0 0.00 (0.03) 0.42 (0.30) 0.42 0 0.00 (0.35) (0.04) (5.36) (0.04) 0 0.00 (0.32) (0.46) (5.07) (0.46) 1 0.02 (0.52) 0.39 (11.80) 0.39 1 0.02 0.32 (11.30) (0.32) 0 0.00 (0.20) (0.60) (5.69) (0.60) 0.02 0.39 (11.30) <td< td=""><td>0.07 0.71 (0.50) 0.71 2.38 (0.49) 0.53 (1.14) 0.53 5.56 1 0.03 (0.49) 0.24 (6.54) 0.24 4.07 1 0.03 (0.49) 0.24 (6.54) 0.24 4.07 1 0.03 (0.47) (0.50) 0.71 2.38 0 0.00 (0.03) 0.36 (2.43) 0.36 3.88 0 0.00 (0.03) 0.42 (0.30) 0.42 2.28 0 0.00 (0.03) 0.42 (0.30) 0.42 2.28 0 0.00 (0.35) (0.04) (5.36) (0.04) 1.81 0 0.00 (0.35) (0.04) (5.36) (0.04) 3.51 0 0.00 (0.32) (0.46) (5.07) (0.46) 1.23 1 0.02 (0.52) 0.39 (11.30) 0.32 2.85 0 0.07</td></td<> | 0.07 0.71 (0.50) 0.71 2.38 (0.49) 0.53 (1.14) 0.53 5.56 1 0.03 (0.49) 0.24 (6.54) 0.24 4.07 1 0.03 (0.49) 0.24 (6.54) 0.24 4.07 1 0.03 (0.47) (0.50) 0.71 2.38 0 0.00 (0.03) 0.36 (2.43) 0.36 3.88 0 0.00 (0.03) 0.42 (0.30) 0.42 2.28 0 0.00 (0.03) 0.42 (0.30) 0.42 2.28 0 0.00 (0.35) (0.04) (5.36) (0.04) 1.81 0 0.00 (0.35) (0.04) (5.36) (0.04) 3.51 0 0.00 (0.32) (0.46) (5.07) (0.46) 1.23 1 0.02 (0.52) 0.39 (11.30) 0.32 2.85 0 0.07 |

Manager / Benchmark Comparison Report

Rates of Return - Net Mgr

Periods Ending March 31, 2017

| r onodo Ending Maron or, 2017 | | | | | | | | |
|--------------------------------|----------------------------------|---------------|---------|---------|------|------|-------|-------|
| | Ending Market Value (\$MM) | % of Total | 1 Month | 3 Month | FYTD | СҮТД | 2016 | 2015 |
| C/D - FAIL FLOAT EARNINGS | 0 | 0.00 | | | | | | |
| SECURITY LENDING | 3 | 0.06 | | | | | | |
| PRIVATE EQUITY | | | | | | | | |
| BERS-TOTAL PRIVATE EQUITY | 255 | 5.01 | 1.21 | 2.83 | 8.69 | 2.83 | 9.19 | 12.71 |
| REAL ASSETS | | | | | | | | |
| BERS-TOTAL PRIVATE REAL ESTATE | 293 | 5.75 | 0.79 | 2.20 | 6.55 | 2.20 | 10.16 | 14.98 |
| BERS-TOTAL INFRASTRUCTURE | 43 | 0.84 | 2.21 | 2.21 | 6.15 | 2.21 | 8.08 | 9.15 |
| Limited Access | | | | | | | | 2 |
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NYC Board of Education Retirement System Private Equity Portfolio As of December 31, 2016 (in USD)

| Vintage | Investment | First | | Committed | | 1, 2016 (in US d-In Capital | | stributed Capital | | Market Value | Multiple | IRR ¹ | PME | DME Corood ³ |
|----------|---|------------|----|-------------|-----|--------------------------------|----|-------------------|----|--------------|----------|------------------|------------------------|-------------------------|
| Year | | Drawdown | | Capital | Pai | a-in Capital | וע | stributed Capital | | Warket value | withtpie | IKK | Benchmark ² | PME Spread [®] |
| | vestments | | | | | | | | | | | | | |
| 2005 | Mesirow Financial Private Equity Partnership Fund III, L.P. | 7/20/2006 | \$ | 57,000,000 | Ş | 55,093,273 | \$ | 68,436,309 | \$ | 22,875,764 | 1.66x | 8.62% | 8.36% | 0.25% |
| 2006 | Mesirow Financial Private Equity Partnership Fund IV, L.P. | 3/31/2008 | | 25,000,000 | | 22,342,233 | | 18,750,104 | | 17,314,204 | 1.61x | 10.27% | 12.00% | (1.73%) |
| 2006 | New York Fairview Private Equity Fund, L.P. | 7/14/2006 | | 19,000,000 | | 17,320,307 | | 14,983,489 | | 8,375,306 | 1.35x | 6.13% | 9.09% | (2.96%) |
| 2009 | Mesirow Financial Private Equity Partnership Fund V, L.P. | 3/7/2011 | | 45,000,000 | | 34,439,326 | | 15,307,954 | | 40,332,487 | 1.62x | 15.82% | 12.72% | 3.10% |
| 2012 | Platinum Equity Capital Partners III, L.P. | 1/14/2013 | | 15,000,000 | | 14,218,681 | | 11,587,852 | | 11,291,776 | 1.61x | 49.79% | 12.51% | 37.29% |
| 2012 | Warburg Pincus Private Equity XI, L.P. | 7/17/2012 | | 25,000,000 | | 22,190,787 | | 4,438,890 | | 24,853,969 | 1.32x | 12.39% | 11.33% | 1.05% |
| 2013 | Apollo Investment Fund VIII, L.P. | 12/11/2013 | | 20,000,000 | | 11,868,129 | | 1,027,866 | | 12,479,556 | 1.14x | 11.93% | 9.36% | 2.57% |
| 2013 | Carlyle Partners VI, L.P. | 7/3/2013 | | 20,000,000 | | 12,130,979 | | 3,208,758 | | 10,514,009 | 1.13x | 8.03% | 8.58% | (0.55%) |
| 2013 | Landmark Equity Partners XV, L.P. | 10/30/2013 | | 19,000,000 | | 7,795,118 | | 3,438,372 | | 5,755,129 | 1.18x | 11.27% | 9.60% | 1.67% |
| 2013 | Landmark Equity Partners XV, L.P Side Car | 12/24/2013 | | 6,000,000 | | 3,043,236 | | 1,177,388 | | 2,698,437 | 1.27x | 15.38% | 6.68% | 8.69% |
| 2013 | CVC Capital Partners VI, L.P. | 2/18/2014 | | 16,810,261 | | 9,670,315 | | 118,425 | | 10,024,003 | 1.05x | 4.95% | 9.50% | (4.55%) |
| 2013 | Crestview Partners III, L.P. | 3/3/2015 | | 15,000,000 | | 4,598,843 | | 75,827 | | 4,399,792 | 0.97x | N/M | N/M | N/M |
| 2013 | Crestview Partners III (Co-Investment B), L.P. | 12/17/2015 | | 5,000,000 | | 3,027,407 | | 72,440 | | 3,398,923 | 1.15x | N/M | N/M | N/M |
| 2014 | ASF VI, L.P. | 5/9/2014 | | 15,000,000 | | 8,325,263 | | 805,679 | | 9,542,170 | 1.24x | 14.53% | 8.93% | 5.60% |
| 2014 | ASF VI NYC Co-Invest, L.P. | 5/9/2014 | | 5,000,000 | | 3,313,934 | | 966,516 | | 3,325,766 | 1.30x | 15.99% | 5.88% | 10.11% |
| 2014 | Carlyle Partners VI, L.P Side Car | 9/23/2014 | | 2,200,000 | | 1,193,842 | | - | | 1,101,066 | 0.92x | (5.17%) | 6.95% | (12.12%) |
| 2014 | Lexington Capital Partners VIII, L.P. | 1/8/2015 | | 20,000,000 | | 5,134,814 | | 1,631,596 | | 5,083,318 | 1.31x | N/M | N/M | N/M |
| 2014 | Vista Equity Partners Fund V, L.P. | 9/8/2014 | | 25,000,000 | | 24,315,235 | | 4,650,465 | | 22,951,277 | 1.14x | 9.75% | 8.20% | 1.55% |
| 2015 | Centerbridge Capital Partners III, L.P. | 5/21/2015 | | 2,500,000 | | 681,731 | | 30,128 | | 762,721 | 1.16x | N/M | N/M | N/M |
| 2015 | Siris Partners III, L.P. | 5/4/2015 | | 3,500,000 | | 1,430,221 | | 23,058 | | 1,399,895 | 0.99x | N/M | N/M | N/M |
| 2012 | NYCBERS - 2012 Emerging Manager Program* | 10/31/2014 | | 25,000,000 | | 8,812,276 | | 682,074 | | 9,340,240 | 1.14x | 11.02% | 7.84% | 3.18% |
| 2015 | American Securities Partners VII, L.P. | 7/8/2016 | | 8,000,000 | | 1,623,122 | | 73,119 | | 1,579,784 | 1.02x | N/M | N/M | N/M |
| 2015 | ASF VII, L.P. | 12/29/2015 | | 10,000,000 | | 935,000 | | 80,842 | | 1,000,558 | 1.16x | N/M | N/M | N/M |
| 2015 | ASF VII B NYC Co-Invest, L.P. | 12/29/2015 | | 6,000,000 | | 600 | | - | | 600 | 1.00x | N/M | N/M | N/M |
| 2015 | NYCBERS - 2015 Emerging Manager Program** | 2/22/2016 | | 30,000,000 | | 870,700 | | 13,817 | | 902,169 | 1.05x | N/M | N/M | N/M |
| 2015 | Warburg Pincus Private Equity XII, L.P. | 12/21/2015 | | 21,500,000 | | 3,859,250 | | 23,326 | | 3,514,231 | 0.92x | N/M | N/M | N/M |
| 2015 | Welsh, Carson, Anderson & Stowe XII, L.P. | 8/26/2015 | | 10,000,000 | | 2,815,523 | | - | | 3,208,158 | 1.14x | N/M | N/M | N/M |
| 2015 | Bridgepoint Europe V, L.P. | 2/8/2016 | | 8,031,222 | | 2,351,975 | | - | | 2,715,964 | 1.15x | N/M | N/M | N/M |
| 2015 | Bridgepoint Europe V Co-Invest | 8/16/2016 | | 2,665,605 | | 553,673 | | - | | 542,363 | 0.98x | N/M | N/M | N/M |
| 2015 | EQT VII, L.P. | 1/8/2016 | | 16,114,782 | | 5,496,731 | | 30,712 | | 4,953,695 | 0.91x | N/M | N/M | N/M |
| 2016 | Vista Equity Partners Fund VI, L.P. | 6/28/2016 | | 16,000,000 | | 5,701,461 | | 48,231 | | 5,637,912 | 1.00x | N/M | N/M | N/M |
| 2016 | Apax IX USD, L.P. | N/A | | 13,000,000 | | - | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | Ares Corporate Opportunities Fund V, L.P. | N/A | | 10,000,000 | | - | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | Green Equity Investors VII, L.P. | N/A | | 10,000,000 | | - | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | BC European Capital X, L.P. | N/A | | 10,536,298 | | | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | BC European Capital X Metro Co-Investment L.P. | N/A | | 4,214,519 | | - | | - | | - | N/A | N/A | N/A | N/A |
| Total Po | | ,,, | \$ | 529,222,686 | \$ | 295,153,984 | \$ | 151,683,236 | \$ | 251,875,241 | 1.37x | 10.29% | 9.75% | 0.54% |
| Vintage | | First | | Committed | Net | Contributed | | Net Distributed | | | | | PME | |
| Year | Investment | Drawdown | | Capital | Met | Capital | | Capital | | Market Value | Multiple | IRR ¹ | Benchmark ² | PME Spread ³ |
| Commitr | ments Closed Subsequent to as of Date | | | | | | | | | | | | | |
| 2017 | Platinum Equity Capital Partners IV, L.P. | N/A | \$ | 11,500,000 | | - | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | CVC Capital Partners VII, L.P. | N/A | \$ | 17,911,706 | | - | | - | | - | N/A | N/A | N/A | N/A |
| 2017 | Apollo Investment Fund IX, L.P. | N/A | \$ | 32,000,000 | | - | | - | | - | N/A | N/A | N/A | N/A |
| | mmitments Closed Subsequent to as of Date | | Ś | 61.411.706 | | | Ś | | Ś | | N/A | N/A | N/A | N/A |

Total Commitments Closed Subsequent to as of Date *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, 2016.

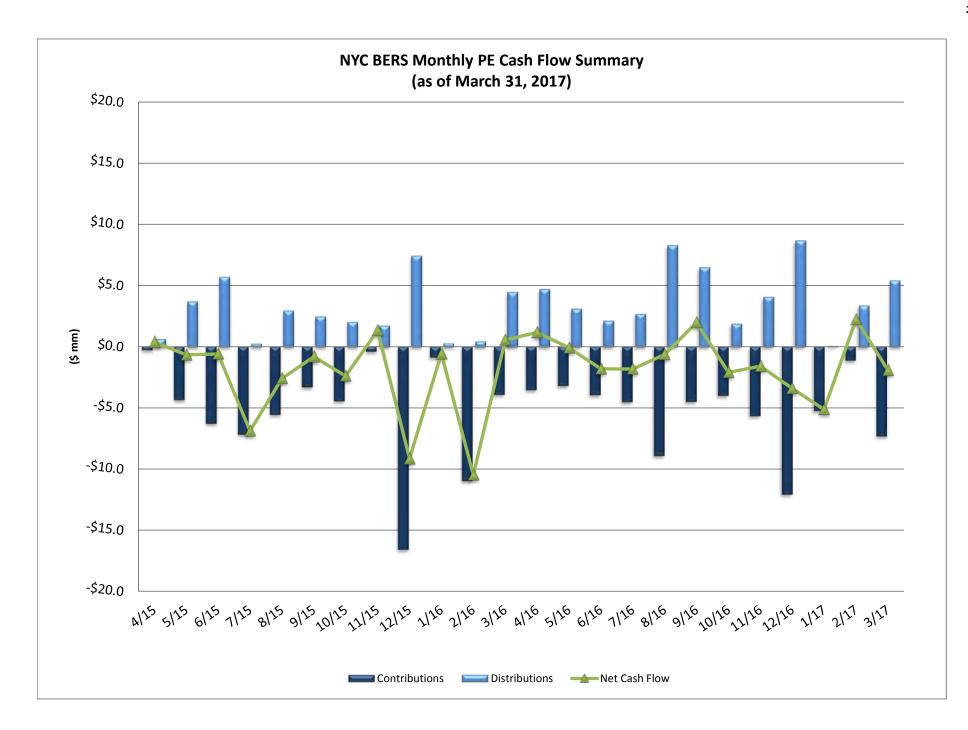
**Please note that the NYCBERS - 2015 Emerging Manager Program total commitment amount includes the full amount allocated to the Program, of which \$7.5 million has been committed as of December 31, 2016.

¹Performance for funds with less than 8 quarters of activity is not yet meaningful.

² 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.

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

Note: Where available, December 31, 2016 reported valuations were used. In the absense of December 31, 2016 reported values, market values have been adjusted forward using interim cashflows through December 31, 2016. 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, 2016.





| vintage Year | Fund Name | First Draw Down | Capital Committed | Contributions | Distributions | Market Value | Equity Multiple | Net IR |
|-----------------|---|-----------------|-------------------|---------------|---------------|--------------|-----------------|--------|
| 2017 | Brookfield Premier Real Estate Partners | 11/22/2016 | 10,000,000 | 4,715,030 | 0 | 5,114,482 | n/a | n/a |
| 2016 | Exeter Industrial Core Club Fund II | 5/20/2016 | 10,000,000 | 2,450,000 | -52,105 | 2,522,006 | 1.1x | 11.5 |
| 2016 | Jamestown Premier Property Fund | 2/4/2016 | 5,000,000 | 5,137,182 | -455,236 | 4,846,808 | 1.0x | 5.6 |
| 2011 | LaSalle Property Fund | 12/13/2010 | 27,600,000 | 27,600,000 | -5,974,476 | 37,370,826 | 1.6x | 12.1 |
| 2017 | Lion Industrial Trust - 2007 | ,, | 10,000,000 | 0 | 0 | 0 | n/a | n/ |
| 2014 | MetLife Core Property Fund | 7/1/2014 | 15,000,000 | 15,000,000 | -1,401,833 | 17,514,179 | 1.3x | 13. |
| 2013 | NYC Asset Investor #2 LLC | 7/9/2013 | 11,000,000 | 10,557,373 | -1,450,644 | 12,307,842 | 1.3x | 16. |
| 2016 | NYCRS Artemis Co-Investment | 2/24/2016 | 11,000,000 | 3,253,838 | 0 | 4,022,526 | 1.2x | 64. |
| 2011 | UBS Trumbull Property Fund | 4/1/2011 | 41,400,000 | 56,822,909 | -12,426,383 | 74,535,993 | 1.5x | 9.7 |
| 2016 | USAA Eagle Real Estate Fund | 12/1/2015 | 10,000,000 | 7,735,162 | 0 | 8,527,372 | 1.1x | 12. |
| | Core/Core Plus Portfolio | | 151,000,000 | 133,271,494 | -21,760,676 | 166,762,035 | 1.4x | 10. |
| 2014 | Blackstone Real Estate Partners Europe IV (USD Vehicle) | 12/23/2013 | 32,500,000 | 28,920,153 | -4,955,728 | 26,852,493 | 1.1x | 6. |
| 2015 | Blackstone Real Estate Partners VIII | 8/18/2015 | 16,500,000 | 7,132,514 | -1,788,214 | 6,516,204 | 1.2x | 19 |
| 2012 | Brookfield Strategic Real Estate Partners | 9/20/2012 | 10,000,000 | 10,634,866 | -3,797,149 | 11,721,425 | 1.5x | 17 |
| 2014 | Carlyle Realty Partners VII | 6/30/2014 | 25,000,000 | 14,176,644 | -191,787 | 15,926,242 | 1.1x | 13 |
| 2016 | Divco West Fund V | 12/21/2016 | 10,000,000 | 522,271 | 0 | 467,330 | n/a | n, |
| 2016 | European Property Investors Special Opportunities IV (EPISO IV) | 12/18/2015 | 11,176,931 | 2,004,474 | -272,080 | 1,656,507 | 1.0x | -6. |
| 2011 | Franklin Templeton Private Real Estate Fund | 3/31/2011 | 30,000,000 | 30,330,456 | -30,847,557 | 14,233,652 | 1.5x | 24. |
| 2015 | H/2 Special Opportunities Fund III | 12/29/2014 | 15,000,000 | 12,993,856 | -844,314 | 14,262,659 | 1.2x | 19 |
| 2017 | H/2 Special Opportunities Fund IV | 11/15/2016 | 10,000,000 | 860,955 | 0 | 870,571 | 1.0x | 11 |
| 2017 | Lone Star Real Estate Fund V | | 23,100,000 | 0 | 0 | -259,485 | n/a | n, |
| 2013 | NYC Asset Investor #1 LLC | 6/25/2013 | 10,000,000 | 10,746,128 | -1,395,024 | 12,112,842 | 1.3x | 12 |
| 2013 | NYC Asset Investor #3 LLC | 9/20/2013 | 8,000,000 | 3,335,361 | -31,308 | 3,792,367 | 1.1x | 9. |
| 2016 | PW Real Estate Fund III LP | 10/7/2016 | 10,624,734 | 2,322,022 | 0 | 2,047,672 | 0.9x | -41 |
| 2016 | Westbrook Real Estate Fund X | 7/18/2016 | 10,000,000 | 1,159,007 | 0 | 1,173,623 | 1.0x | 5. |
| | Non-Core Portfolio | | 221,901,665 | 125,138,706 | -44,123,160 | 111,374,103 | 1.2x | 16 |
| | Small Emerging Manager | | 11,000,000 | 3,253,838 | 0 | 4,022,526 | 1.2x | 64 |
| | New York City Board of Education Retirement System | | 372,901,665 | 258,410,200 | -65,883,835 | 278,136,137 | 1.3x | 12. |
| onal Funds Clos | ed | | | | | | | |
| vintage Year | Fund Name | First Draw Down | Capital Committed | Contributions | | | | |
| 2017 | DRA Growth & Income Fund IX | | 10,000,000 | | | | | |
| 2017 | Exeter Industrial Value IV | | 10,000,000 | | | | | |
| 2017 | Pramerica Real Estate Capital VI | | 10,000,000 | | | | | |

Note: The equity multiples and IRRs contained in this report are interim calculations based upon information provided by the investment managers of the New York City Retirement Systems, including cash flows and quarterly unaudited, or audited, valuations. The IRR calculated in early years of a fund life is not meaningful given the J-curve effect and can be significantly impacted by the timing of cash flows, investment strategy, investment pacing, and fund life. The calculations are not necessarily indicative of total fund performance, which can only be determined after the fund is liquidated and all capital contributed and earnings have been distributed to the investor. All data supplied is as of December 31, 2016.

