



New York City  
Employees' Retirement System  
Performance Overview as of September 30, 2016

# Total Fund Overview

## **New York City Employees' Retirement System**

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Through September 30, 2016



### **City of New York Employees' Retirement System Third Quarter 2016 Summary**

**General Economic and Market Conditions:** Real gross domestic product (GDP) grew 2.9% in the third quarter, much stronger than expected, providing a pleasant surprise in a year filled with unpleasant ones. Third quarter growth was by far the strongest this year and the best quarterly rate in two years. Personal consumption has been driving growth in the U.S. for the past several years, but while consumption accounted for half of the growth in the third quarter, its influence weakened.

Other third quarter surprises included: a reversal in nonresidential fixed investment; continued growth in software and information processing; an uptick in federal government spending; strength in exports; and a return to inventory investment. Drags came from a decline in residential investment and weakness in state and local government spending, along with an increase in imports, which are a negative in the calculation of GDP.

Political and economic shocks - China's industrial recession, Brexit, the U.S. election - have increased uncertainty and hampered global growth, making many businesses increasingly risk averse. Add the uncertainty stemming from the global monetary policy experiment still underway - not the least of which involves the guessing game regarding the Fed's interest rate policy - and expectations for U.S. growth soured as the year unfolded.

Real GDP came in very weak in the first quarter and disappointed again in the second, coinciding with the Brexit vote in late June when the U.K. chose to leave the European Union. Consensus expectations for the third quarter had GDP growth falling below 2%, even dipping to 1.5% as recently as September. However, the job market remained sound, consumer sentiment stayed buoyant, and the anticipated turnarounds in inventory and nonresidential fixed investment actually materialized.

The days of consumer spending driving this expansion are likely behind us. Consumption slowed from a robust 4.3% gain in the second quarter to 2.1% in the third; this will likely be the norm going forward. Consumers enjoyed a real shot in the arm from strong job gains for several years and a "dividend" from low commodity prices. The U.S. economy created an average of 178,000 jobs per month through the first three quarters of 2016. While solid, this is a deceleration from the 211,000 rate in the first nine months of 2015. Although support from the job market and commodity prices is waning, households are still benefiting from increases in real wages, disposable incomes, and asset values.

Through September 30, 2016



Highly anticipated reversals in inventory and nonresidential fixed investing provided meaningful gains to the economy in the third quarter. The U.S. has suffered through an extended inventory correction, causing an outsized impact on overall growth: inventory contraction cut 1.2% from GDP growth in the second quarter, the fifth straight quarterly hit. Inventory investment turned the corner, adding 0.6% to third quarter GDP. After a six quarter collapse, investment in mining and petroleum structures began to revive in the third quarter, and the drilling rig count bounced up from an all-time low in the second quarter. This investment in the energy sector, along with gains in other types of structures, pushed nonresidential fixed investment up 3.1%.

Similar gains eluded residential construction, however, where demand appears robust, but supply and financing constraints are hampering the recovery. Real residential investment had been making progress for five years, but fell 7.7% in the second quarter and 6.2% in the third. Demand for housing appears to be solid, but sales of both existing and new homes fell during the third quarter. Potential homebuyers are still hampered by restricted access to mortgage financing, and homebuilders increasingly report challenges to hiring craft labor for projects.

The Fed refrained from raising interest rates over the summer, concerned about economic uncertainty and negative sentiment in the capital markets. The markets now expect the Fed to raise the short-term federal funds rate 25 basis points in December, and perhaps twice more in 2017, but these are fewer increases than previously predicted. In addition, the long-term equilibrium federal funds rate target has been cut from 3% to 2.6%.

Are central banks around the globe running out of ammunition? Rather than a dearth of ammunition, it seems the effectiveness of monetary policy is diminishing and with it the credibility of central banks. After the Great Recession, central bankers showed a remarkable willingness to try unorthodox policies, including quantitative easing (QE) and negative interest rates. But persistent banking problems (particularly in Europe and Japan) have made QE less effective, as central bank funds are used to rebuild bank balance sheets rather than for lending. In addition, tight fiscal policies have offset potential gains from monetary stimulus. And all regions have seen a drop in productivity growth, reducing the effectiveness of monetary or fiscal stimulation.

**Total Fund Performance:** For the quarter ended September 30, 2016, the Fund returned +3.83%, twenty five basis points above the Policy Target return of +3.58%. Over the trailing year, NYCERS has earned a return of +10.65% versus the Policy Target return of +10.70%. Over three years, the total Fund has returned +6.86% annualized. Over the trailing five years, the Fund has gained 9.96% annualized. The trailing 10-year return is +6.05% annualized.

**Total Fund Assets:** The Fund's assets totaled \$56.5 billion as of the end of the third quarter of 2016.

Through September 30, 2016



**U.S. Equity:** The total domestic equity portion of the NYCERS Fund returned +4.43% for the quarter, above the +4.40% return of the Russell 3000 Index. For the trailing year, NYCERS outperformed the index, returning +15.01% versus +14.96% for the index. The Fund is below the benchmark over three, five, seven, and ten years. The active portfolio bested the passive one over the quarter as well as the ten year return period. The passive portfolio performed better over the trailing one, three, five and seven year return periods.

In Large Cap, the Fund underperformed the Russell 1000 Index, returning +3.92% versus the Russell 1000's return of +4.03% during the third quarter. Over the past year, the Fund is below the benchmark by four basis points, returning +14.89% versus +14.93% for the index.

In Mid Cap, the Fund's performance closely mirrored that of the index for the quarter, consistent with its strictly passive exposure. The Fund returned +4.06%, underperforming the +4.14% return of the S&P Mid Cap Index. Over the past year, the Fund's +14.81% return is fifty two basis points below that of the index (+15.33%).

In Small Cap, the Fund returned +8.08%, below the Russell 2000 return of +9.05% for the quarter. The Fund's one year return of +17.38% outperformed the +15.47% return of the Index.

**Developed International:** For the quarter, the Fund's Non-U.S. Developed Equity composite returned +7.83% (excluding NYCERS' non-U.S. Environmental and Activist managers), outperforming the MSCI EAFE Index by 140 basis points. The Fund returned +11.03% for the trailing one year period, above the return of the benchmark (+6.52%). The Fund is above the benchmark over the trailing three, five, seven, and ten year periods.

**Emerging Markets Equity:** The Fund's emerging markets equity composite returned +7.97% in the quarter, outperforming the +7.59% return of the FTSE NYCERS custom benchmark. The active portfolio outperformed the passive one for the quarter. The one year return for the emerging markets composite is +16.19%, underperforming the +17.66% return for the benchmark. The Fund is ahead of the benchmark over the trailing five, seven, and ten year periods and below the benchmark over the trailing three year period.

**Fixed Income:** The composite of the Fund's structured investment grade bond managers returned +1.11% during the quarter, while the NYCERS Core Plus Five Index returned +0.69%. For the past year, the structured composite has gained 6.90%, while the

Through September 30, 2016



benchmark's return is +6.54%. Over longer time periods, the composite is ahead of the benchmark, having beaten it over the trailing three, five, seven, and ten year periods.

**TIPS:** The Fund's TIPS composite delivered a +0.98% return in the quarter, slightly above the +0.96% return for the Bloomberg Barclays Capital US TIPS Index. Over the past year, the Fund's TIPS managers have returned +6.66%, above the benchmark's return of +6.58%. Over longer time periods, the composite is ahead of the benchmark, having beaten it over the trailing three, five, seven, and ten year periods.

**Enhanced Yield:** In enhanced yield, the Fund's managers returned +5.20% for the quarter, while the Citigroup BB&B Index posted a lower return of +5.13%. The Fund underperformed the benchmark over the past year, returning +11.13% as compared to the benchmark's return of +11.77%. The Fund has beaten the benchmark over the trailing three, five, seven, and ten year periods.

**Bank Loans:** The NYCERS bank loan composite returned +2.78% in the third quarter, below the Credit Suisse Leveraged Loan Index's return of +3.10%. The Fund outperformed the benchmark for the year returning +5.38% versus +5.35% for the benchmark. The Fund has outperformed relative to the benchmark over the trailing three year period.

**Convertibles:** The convertible portfolio returned +4.05% in the quarter, below the +5.30% return of the NYCERS Custom Convertible Bond Index. Over the past year, the convertibles portfolio has returned +8.58%, outperforming the benchmark by 28 basis points. Over the trailing three, five, and seven year periods, the Fund has outperformed the custom benchmark.

**Opportunistic Fixed Income:** The opportunistic fixed income composite returned +3.30% over the third quarter. For the past year, the Fund is below the 10% annual return target with a return of +2.73%. Over five years, the Fund's +7.26% return is also below the 10% annual return target. Over seven years, the Fund's +12.12% return is above the 10% annual return target.

**Alternatives:** For the quarter, the Private Equity portfolio had approximately \$4.2 billion in invested capital, representing roughly 7.3% of the Total Fund. The Real Assets portfolio had approximately \$3.1 billion invested, accounting for roughly 5.5% of the Total Fund. Hedge Fund investments represented \$1.0 billion, or 1.9%. Performance is reported separately by NYCERS' Private Equity, Real Estate and Hedge Fund consultants.

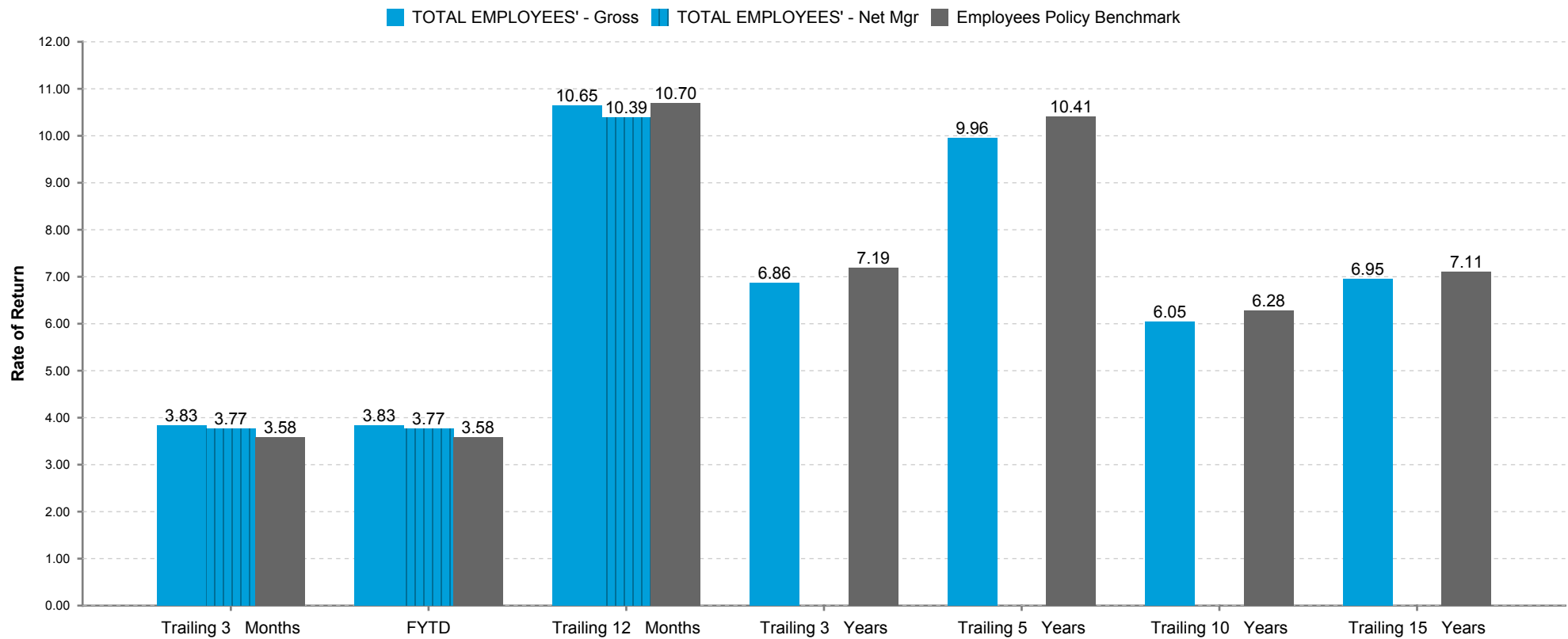
## Total Portfolio Returns: September 30, 2016



### Market Value (Billions)

TOTAL EMPLOYEES'

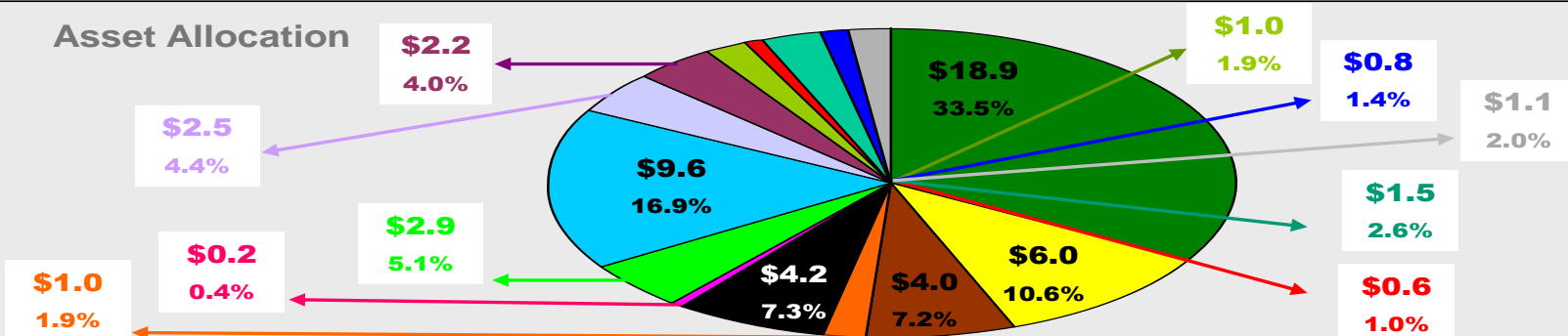
\$56.5



	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL EMPLOYEES'	6.2	6.0	10.0	6.8	10.0	10.9

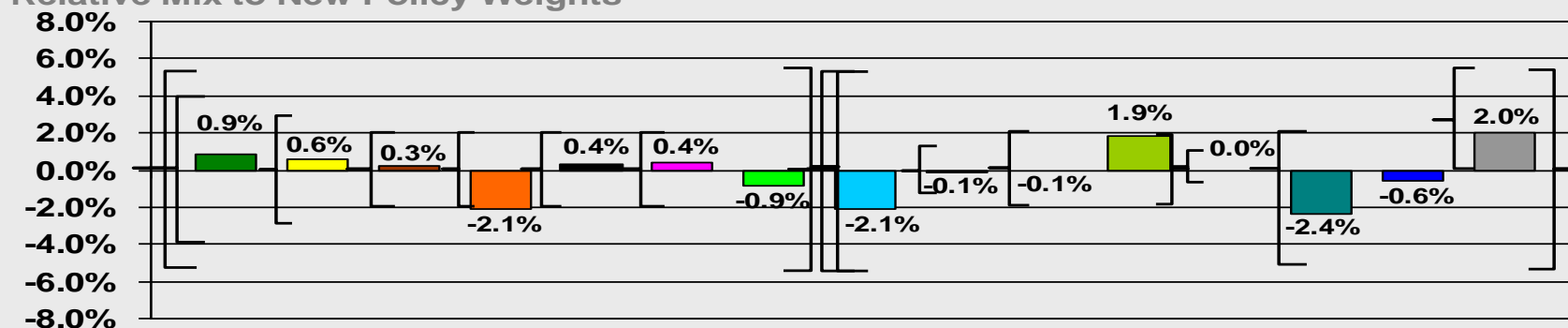
**\$56.5B Under Management**

**Asset Allocation**



■ Domestic Equity 
 ■ Developed Markets 
 ■ Emerging Markets 
 ■ Hedge Funds 
 ■ Private Equity 
 ■ Infrastructure 
 ■ Private RE 
 ■ Core + 5 
 ■ TIPS 
 ■ Enhanced Yield 
 ■ Bank Loans 
 ■ Conv. Bonds 
 ■ Opportunistic FI 
 ■ ETI 
 ■ Cash

**Relative Mix to New Policy Weights**

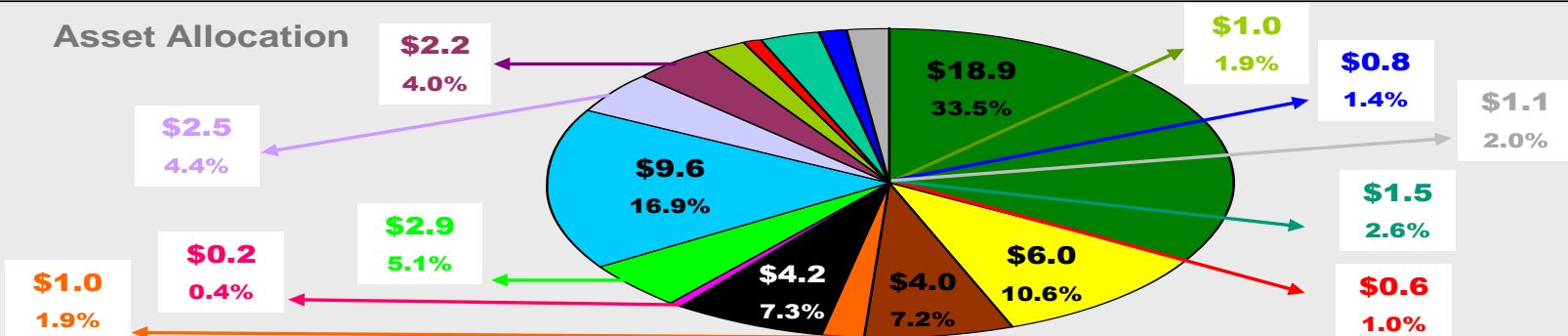


Note: Brackets represent rebalancing ranges versus policy.



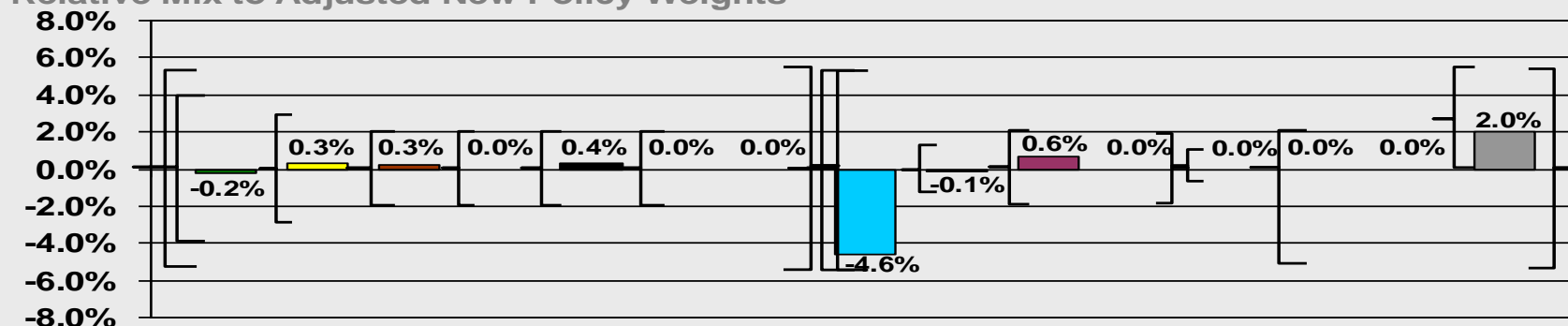
**\$56.5B Under Management**

**Asset Allocation**



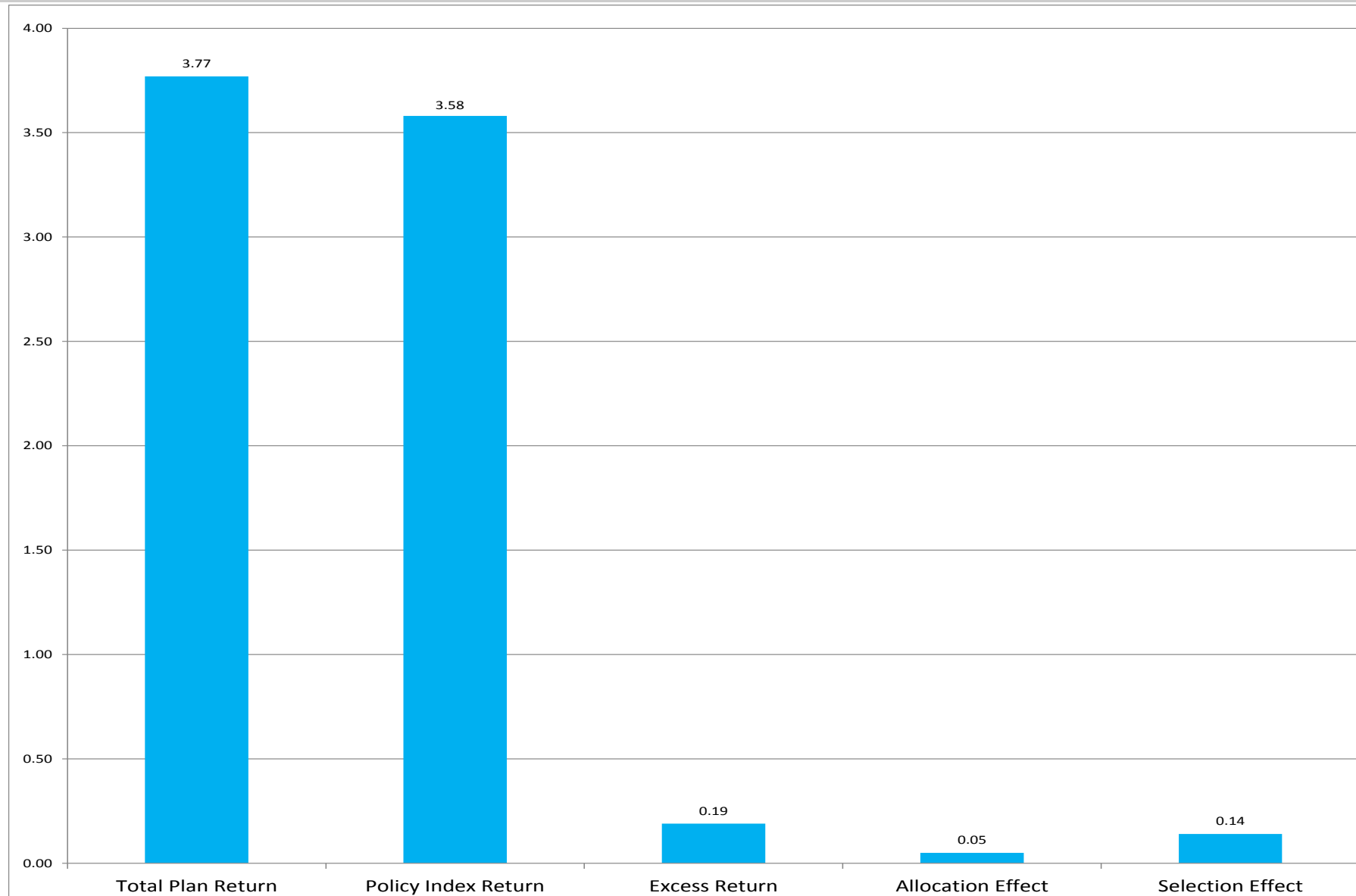
■ Domestic Equity 
 ■ Developed Markets 
 ■ Emerging Markets 
 ■ Hedge Funds 
 ■ Private Equity 
 ■ Infrastructure 
 ■ Private RE 
 ■ Core + 5 
 ■ TIPS 
 ■ Enhanced Yield 
 ■ Bank Loans 
 ■ Conv. Bonds 
 ■ Opportunistic FI 
 ■ ETI 
 ■ Cash

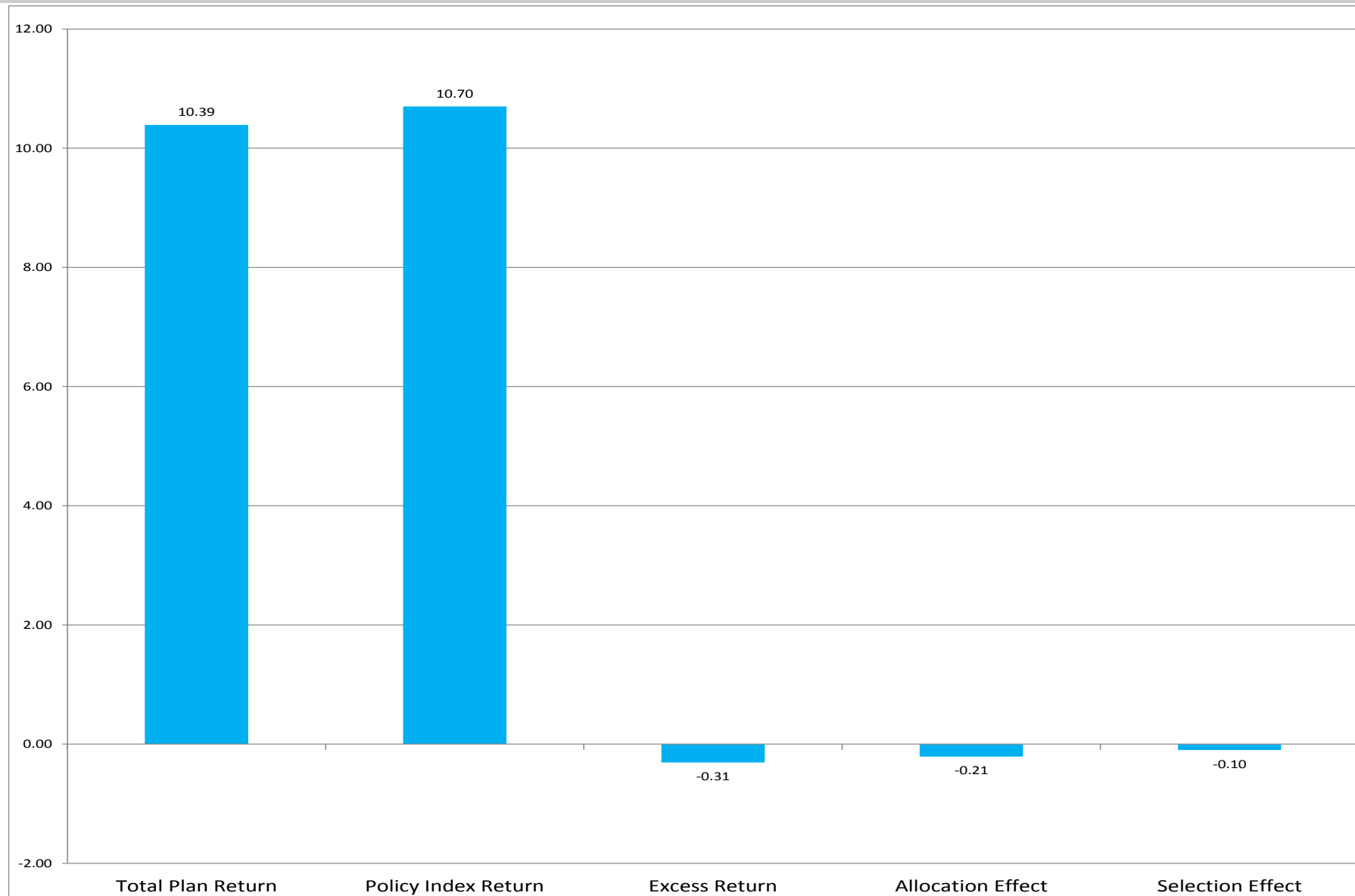
**Relative Mix to Adjusted New Policy Weights**

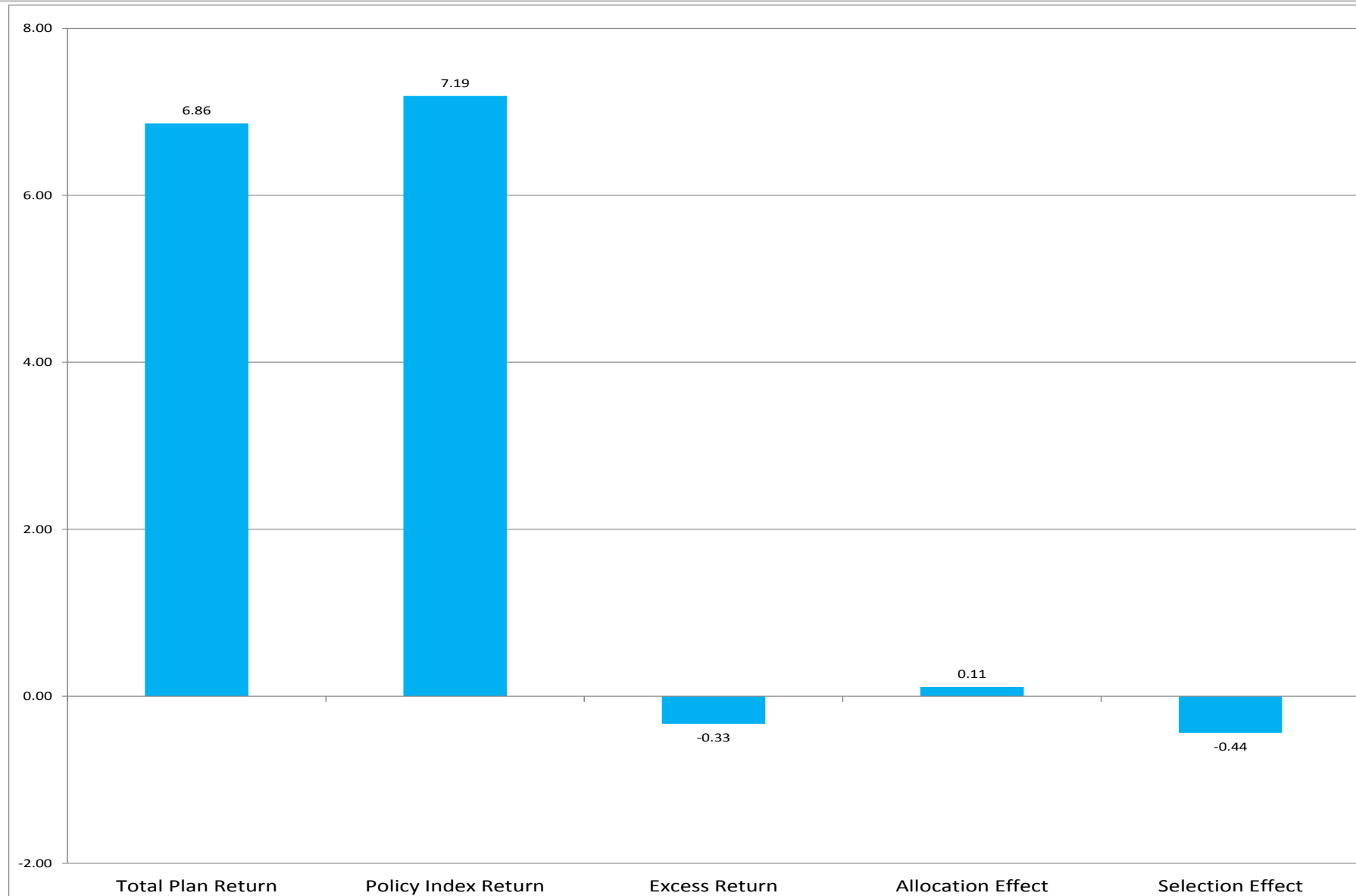


Note: Brackets represent rebalancing ranges versus policy.

Note: On September 30, 2016 NYCERS' combined Fixed Income and Cash portfolios have a duration of 5.6 years. The duration of the Barclays US Aggregate Index was 5.5 years on that date.







**Allocation Effect - Asset Class Breakdown**

	<u>Quarter</u>	<u>12 Months</u>	<u>3 Years*</u>	<u>Benchmark</u>
TOTAL EMPLOYEES'	0.05	-0.21	0.11	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	0.01	-0.02	0.08	RUSSELL 3000
TOTAL DEVELOPED EQUITY	-0.02	-0.02	-0.01	MSCI EAFE NET
TOTAL EMERGING MARKETS	0.01	-0.04	-0.04	FTSE NYCERS Custom EM Index
TOTAL PRIVATE EQUITY	-0.01	-0.06	0.04	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE	0.00	0.00	0.01	NCREIF NFI-ODCE NET + 1%
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL HEDGE FUNDS	0.01	0.00	0.00	1 Year Treasury Bill Yield + 4%
TOTAL STRUCTURED	0.12	0.11	0.08	NYC - CORE PLUS FIVE
TOTAL ENHANCED YIELD	0.01	0.00	-0.01	CITIGROUP BB & B
TOTAL BANK LOANS	0.00	0.00	0.00	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	0.00	0.05	BARCLAYS U.S TIPS INDEX
TOTAL CONVERTIBLE BONDS	0.00	0.00	0.00	BofAML ALL CONVERTIBLE - ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	10% Annual Return
TOTAL CASH	-0.06	-0.18	-0.08	

**Selection Effect - Asset Class Breakdown**

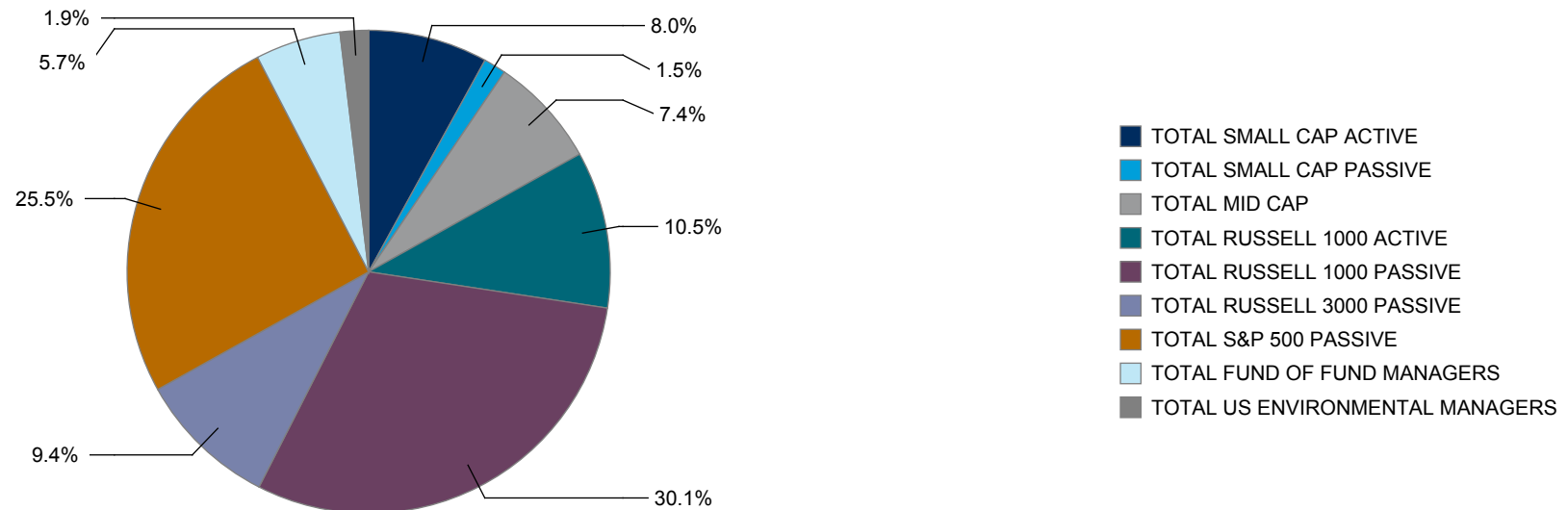
	<u>Quarter</u>	<u>12 Months</u>	<u>3 Years*</u>	<u>Benchmark</u>
TOTAL EMPLOYEES'	0.14	-0.10	-0.44	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	0.00	-0.02	-0.18	RUSSELL 3000
TOTAL DEVELOPED MARKETS	0.13	0.42	0.13	MSCI EAFE NET
TOTAL EMERGING MARKETS	0.02	-0.12	-0.01	FTSE NYCERS Custom EM Index
TOTAL PRIVATE EQUITY	-0.07	-0.04	-0.28	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE	0.01	0.05	0.04	NCREIF NFI-ODCE NET + 1%
TOTAL INFRASTRUCTURE	0.00	0.01	0.01	CPI + 4%
TOTAL HEDGE FUNDS	0.01	-0.16	-0.04	1 Year Treasury Bill Yield + 4%
TOTAL STRUCTURED	0.07	0.04	0.03	NYC - CORE PLUS FIVE
TOTAL ENHANCED YIELD	0.00	-0.04	0.01	CITIGROUP BB & B
TOTAL BANK LOANS	-0.01	-0.01	0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	0.00	0.00	BARCLAYS U.S TIPS INDEX
TOTAL CONVERTIBLE BONDS	-0.04	-0.02	-0.01	BofAML ALL CONVERTIBLE - ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.02	-0.21	-0.13	10% Annual Return
TOTAL CASH	0.00	0.00	0.01	

\*Returns are Gross of Investment Advisory Fees

## Total Domestic Equity Asset Allocations: Quarter Ending September 30, 2016



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$18.9	33.5

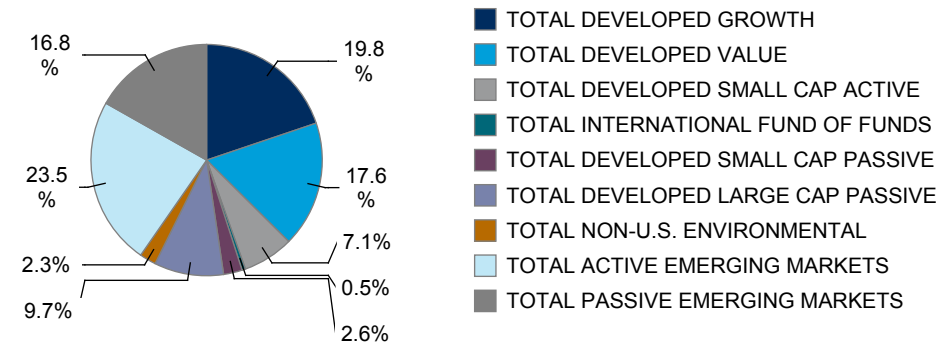
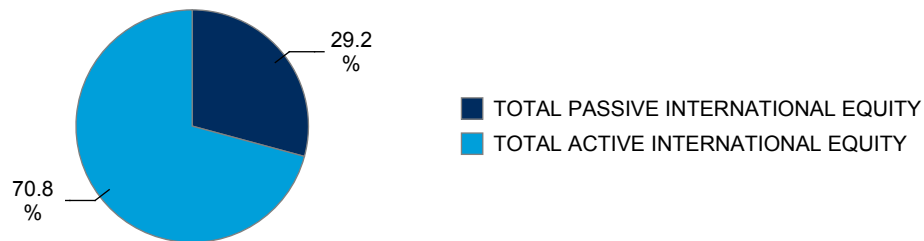


Sub Sector	Policy Weight	Actual Weight	Under/Over Weight	Index Return	Actual Return	Difference
TOTAL SMALL CAP ACTIVE	6.52	8.04	1.52	9.05	7.88	-1.17
TOTAL SMALL CAP PASSIVE	2.20	1.53	-0.67	9.05	9.18	0.14
TOTAL MID CAP	12.51	7.35	-5.16	4.14	4.06	-0.09
TOTAL RUSSELL 1000 ACTIVE	8.57	10.51	1.94	4.03	3.46	-0.57
TOTAL RUSSELL 1000 PASSIVE	25.27	30.08	4.81	4.03	4.08	0.05
TOTAL RUSSELL 3000 PASSIVE	17.59	9.39	-8.20	4.40	4.42	0.03
TOTAL S&P 500 PASSIVE	22.00	25.52	3.52	3.85	3.97	0.12
TOTAL EMERGING MANAGERS	3.50	5.69	2.19	4.40	4.50	0.11
TOTAL US ENVIRONMENTAL	1.84	1.89	0.05	9.05	4.93	-4.12

## International Equity Asset Allocation: September 30, 2016



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL INTERNATIONAL EQUITY	\$10.0	17.8

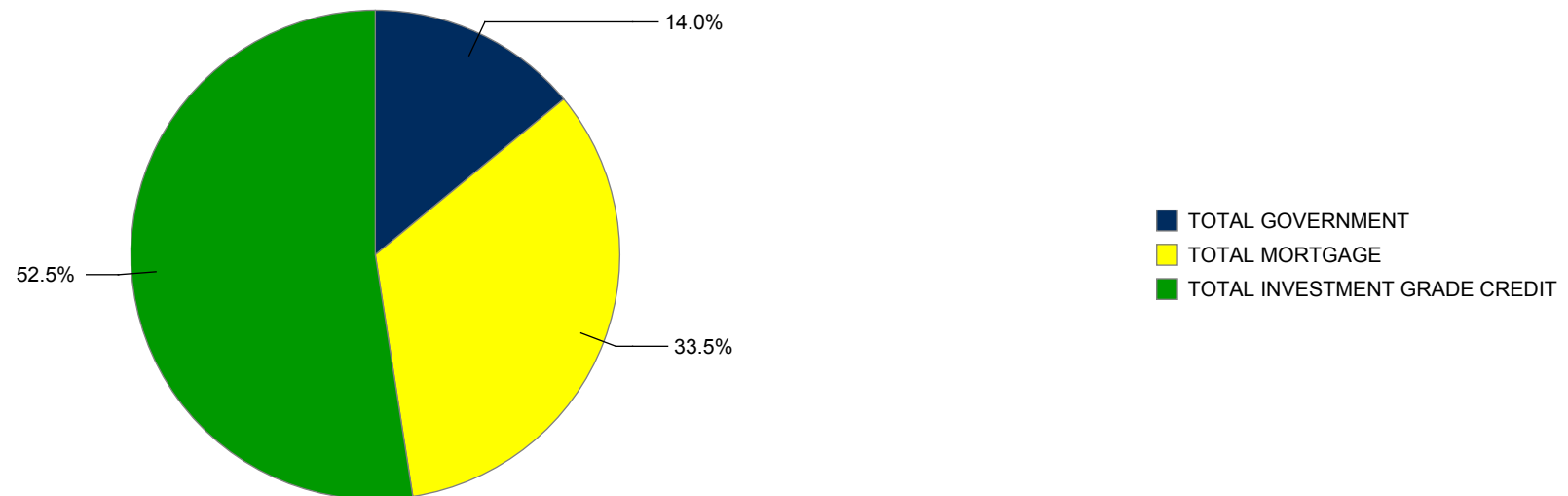


	<u>Asset Class Weight</u>	<u>Quarterly Returns - Fund and Benchmarks</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL DEVELOPED GROWTH	19.79	8.62	4.96	3.66
TOTAL DEVELOPED VALUE	17.63	7.71	7.99	(0.29)
TOTAL DEVELOPED SMALL CAP ACTIVE	7.06	7.81	8.42	(0.61)
TOTAL INTERNATIONAL FUND OF FUNDS	0.50	6.21	6.43	(0.23)
TOTAL DEVELOPED SMALL CAP PASSIVE	2.64	8.68	8.64	0.04
TOTAL DEVELOPED LARGE CAP PASSIVE	9.72	6.45	6.43	0.02
TOTAL NON-U.S. ENVIRONMENTAL	2.35	8.62	4.87	3.76
TOTAL ACTIVE EMERGING MARKET	23.50	8.42	7.59	0.82
TOTAL PASSIVE EMERGING MARKETS	16.81	7.34	7.27	0.08
TOTAL INTERNATIONAL EQUITY	100.00	7.92	6.91	1.00

## Structured Fixed Income Asset Allocation: September 30, 2016



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED	\$9.1	16.0



Sub Sector	Policy Weight	Actual Weight	Under/Over Weight	Index Return	Actual Return	Difference
TOTAL TREASURY/AGENCY	21.61	14.04	-7.57	-0.47	-0.27	0.20
TOTAL MORTGAGE	34.10	33.51	-0.59	0.57	0.66	0.09
TOTAL INV GRADE CREDIT	44.29	52.45	8.16	1.37	1.77	0.40

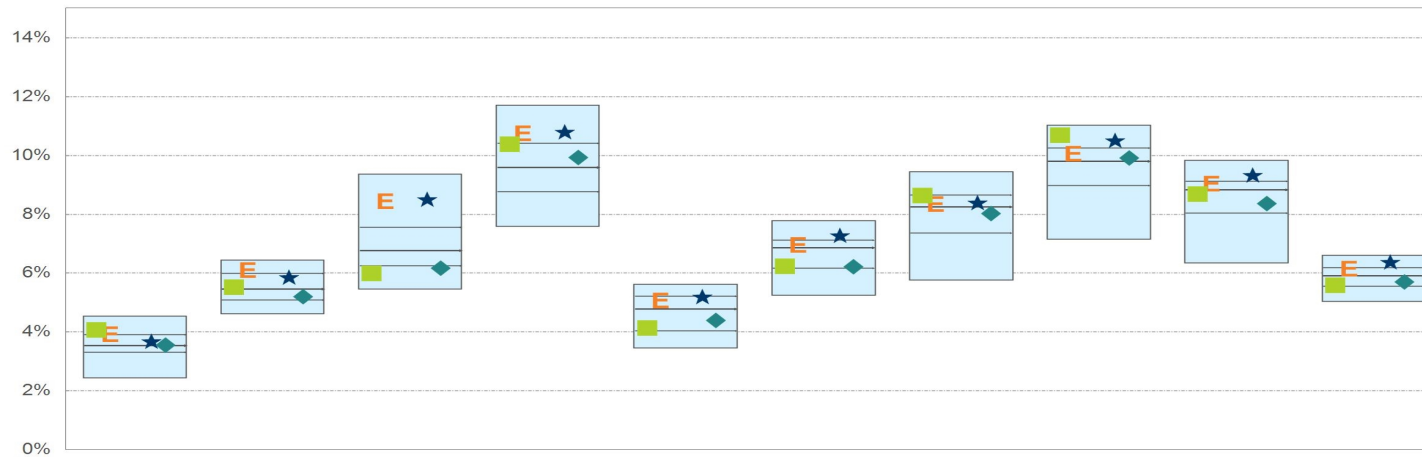


Through September 30, 2016



## City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion  
Cumulative Periods Ending : September 30, 2016



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	4.53	6.44	9.37	11.70	5.62	7.78	9.45	11.02	9.83	6.60
25th	3.91	5.99	7.55	10.41	5.21	7.12	8.65	10.25	9.13	6.19
50th	3.54	5.46	6.77	9.59	4.78	6.86	8.25	9.80	8.84	5.91
75th	3.31	5.08	6.25	8.76	4.03	6.16	7.36	8.97	8.04	5.56
95th	2.44	4.61	5.46	7.59	3.45	5.24	5.76	7.15	6.35	5.04
No. Of Obs	45	45	44	44	44	44	44	44	41	40
<b>E</b> Total System - Employee	3.83 (31)	6.01 (23)	8.34 (12)	10.65 (16)	4.98 (36)	6.86 (50)	8.25 (52)	9.96 (43)	8.94 (42)	6.05 (37)
<b>★</b> Employees Policy Bench	3.58 (45)	5.76 (27)	8.41 (8)	10.70 (12)	5.10 (25)	7.19 (18)	8.30 (45)	10.41 (18)	9.24 (22)	6.28 (13)
<b>■</b> Public Mkt Equiv 25	3.98 (19)	5.43 (52)	5.89 (89)	10.28 (27)	4.04 (72)	6.13 (75)	8.54 (34)	10.60 (12)	8.59 (65)	5.49 (83)
<b>◆</b> Public Mkt Equiv 35	3.46 (61)	5.11 (72)	6.07 (82)	9.84 (40)	4.29 (65)	6.12 (75)	7.92 (61)	9.82 (47)	8.26 (72)	5.61 (70)

Wilshire Trust Universe Comparison Service® (TUCS®)

Through September 30, 2016



## City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion  
Consecutive Time Periods: September 30, 2016



Percentile Rankings	Sep 16	Jun 16	Mar 16	Dec 15	Sep 15	Sep 16	Sep 15	Sep 14	Sep 13	Sep 12
5th	4.53	3.22	3.56	3.72	-2.24	11.70	1.89	12.87	15.07	18.96
25th	3.91	2.04	1.71	2.88	-3.66	10.41	0.80	11.58	13.59	17.19
50th	3.54	1.82	1.35	2.34	-4.31	9.59	-0.18	10.90	12.78	16.26
75th	3.31	1.62	1.05	2.02	-4.82	8.76	-0.78	10.09	11.87	14.32
95th	2.44	1.34	0.52	1.44	-5.66	7.59	-1.52	8.03	4.23	12.65
No. Of Obs	45	46	45	45	45	44	45	45	45	45
E Total System - Employee	3.83 (31)	2.09 (21)	2.20 (7)	2.13 (63)	-4.51 (61)	10.65 (16)	-0.40 (63)	10.71 (59)	12.52 (54)	17.09 (31)
★ Employees Policy Bench	3.58 (45)	2.11 (19)	2.50 (5)	2.12 (63)	-4.30 (45)	10.70 (12)	-0.21 (50)	11.50 (29)	11.68 (75)	19.27 (1)
■ Public Mkt Equiv 25	3.98 (19)	1.40 (94)	0.44 (96)	4.15 (1)	-6.00 (99)	10.28 (27)	-1.84 (96)	10.44 (65)	16.08 (1)	19.26 (1)
◆ Public Mkt Equiv 35	3.46 (61)	1.60 (77)	0.91 (84)	3.56 (5)	-4.98 (82)	9.84 (40)	-0.98 (79)	9.88 (77)	13.53 (27)	17.73 (17)

Wilshire Trust Universe Comparison Service® (TUCS®)

NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM				
ACTUAL FEES FOR FISCAL YEAR ENDING JUNE 30, 2015 AND				
ESTIMATED FEES FOR FY 2016 UPDATED THROUGH SEPTEMBER 2015				
	Actual 2015		Estimates 2016	
INVESTMENT STYLE (EQUITIES)	MV 06-30-15 (\$MM)	Mgmt Fees in Basis Points	MV 09-30-15 (\$MM)	Mgmt in Basis Points
<b>US Equities</b>	<b>18,198</b>	<b>9.10</b>	<b>16,814</b>	<b>8.44</b>
Small Cap Active	1,690	34.38	1,317	32.78
Small Cap Growth	-	0.00	-	-
Small Cap Value	293	50.54	270	53.15
Small Cap core	381	61.65	147	71.89
Small Cap Fundamental Index	1,017	19.52	900	20.31
Small/Mid Cap Active	-	-	-	-
Small/Mid Cap Growth	-	-	-	-
Small/Mid Cap Value	-	-	-	-
Mid Cap Active	-	-	-	-
Mid Cap Growth	-	-	-	-
Mid Cap Value	-	-	-	-
Mid Cap core	-	-	-	-
Russell 1000 Active	1,869	13.27	1,734	13.68
Russell 1000 Fundamental Index	1,869	13.27	1,734	13.68
Active Emerging Managers (U.S. Equities)	1,078	55.87	987	54.78
Total US Active Equities	4,638	30.87	4,037	29.96
Total US Passive Equities	13,217	0.57	12,464	0.54
Environmental US E. Strategies	343	43.70	312	45.44
<b>International Equities</b>	<b>9,172</b>	<b>30.07</b>	<b>8,494</b>	<b>29.80</b>
Active EAFE Equities	4,491	30.84	4,050	32.28
Growth	1,950	27.08	1,717	28.74
Value	1,867	27.48	1,699	29.25
Core	1	0.00	-	-
Small Cap	673	47.49	633	50.01
Non-US Environmental Strategies	205	43.99	189	54.63
Active Emerging Markets	2,336	50.94	2,042	49.81
Total Int'l Active Equities	7,032	37.90	6,280	38.65
Total Int'l Passive Equities	2,140	4.34	2,214	4.68
<b>REITS Passive Index</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Information provided by the New York City Comptroller

NEW YORK CITY EMPLOYEE RETIREMENT SYSTEM ACTUAL FEES FOR FISCAL YEAR ENDING JUNE 30, 2015 AND ESTIMATED FEES FOR FY 2016 UPDATED THROUGH SEPTEMBER 2015				
	Actual 2015		Estimates 2016	
INVESTMENT STYLE (FIXED INCOME)	MV 06-30-15 (\$MM)	Mgmt Fees in Basis Points	MV 09-30-15 (\$MM)	Mgmt in Basis Points
<b>Fixed Income</b>	<b>17,145</b>	<b>12.68</b>	<b>16,581</b>	<b>13.08</b>
Structured Program	9,044	7.23	9,120	7.22
Government Sector	1,094	4.77	1,129	4.40
Mortgage Sector	3,483	6.47	3,525	6.01
Investment Grade Credit Sector	4,467	8.43	4,467	8.88
Global Fixed Income	376	12.47	378	18.29
Progress Fixed Emerging Managers	111	34.44	112	34.50
TIPS	1,761	1.99	1,740	1.83
Active TIPS	429	6.63	424	5.97
Passive TIPS	1,332	0.50	1,316	0.50
Enhanced Yield	2,070	34.45	1,970	34.78
Bank Loans	1,006	32.65	998	33.01
Convertible Bonds	538	43.00	513	44.12
ETI - Access - RBC	124	21.11	120	22.65
ETI - AFL-CIO HIT	236	42.38	239	42.64
<b>Total Public Markets (Externally managed)</b>	<b>42,634</b>	<b>15.45</b>	<b>40,499</b>	<b>15.11</b>
Other ETI Programs	278	-	307	-
In-House Short Term	1,603	0.00	1,084	0.00
<b>Total Public Markets</b>	<b>44,515</b>	<b>14.80</b>	<b>41,890</b>	<b>14.61</b>
<b>INVESTMENT STYLE (PRIVATE)</b>				
<b>Hedge Funds</b>	<b>1,730</b>	<b>149.60</b>	<b>1,363</b>	<b>139.31</b>
<b>Private Equities</b>	<b>3,758</b>	<b>122.33</b>	<b>4,102</b>	<b>127.04</b> <sup>1</sup>
<b>Real Assets</b>	<b>2,555</b>	<b>115.63</b>	<b>2,575</b>	<b>102.99</b> <sup>1</sup>
Private Real Estate	2,442	116.14	2,456	98.65
Infrastructure	113	70.77	119	88.74
<b>Opportunistic Fixed Income</b>	<b>1,332</b>	<b>66.18</b>	<b>1,360</b>	<b>67.56</b>
<b>Total Private Markets</b>	<b>9,375</b>	<b>117.55</b>	<b>9,400</b>	<b>113.62</b> <sup>3</sup>
<b>Total Overall</b>	<b>53,889</b>	<b>32.68</b>	<b>51,289</b>	<b>32.75</b> <sup>4</sup>
<b>Footnotes</b>				
1 - Private Equity & Real Assets Investments exclude GP CARRY & Incentive Fees .				
2- Infrastructure Fees are based on committed Amounts for each investment which are higher than the actual Market Values.				
3- Private Equity and Private Real Estate fees are based on Invested values and committed amounts depending on the age of the investment.				
4- The Incentive Fees paid for the NYCERS Fund in 2015 are 15.45 BPS.				

Information provided by the New York City Comptroller

**NYC EMPLOYEES' RETIREMENT SYSTEM SECURITIES LENDING INCOME**  
**September 30, 2016**

	<u>U.S. FIXED INCOME</u>	<u>U.S. EQUITY</u>	<u>INTERNATIONAL EQUITY</u>	
1990*	\$256,000	--	--	
1991	754,000	\$48,000	--	
1992	1,467,000	654,000	\$367,000	
1993	3,445,000	1,308,000	732,000	
1994	4,261,000	2,744,000	1,082,000	
1995	3,727,000	3,191,000	745,000	
1996	3,608,000	3,592,000	1,258,000	
1997	3,924,000	5,921,000	1,533,000	
1998	6,374,000	7,337,000	1,952,000	
1999	6,643,000	6,718,000	2,175,000	
2000	6,552,000	7,669,000	3,049,000	
2001	10,335,000	10,394,000	4,435,000	
2002	5,906,000	7,780,000	3,510,000	
2003	2,442,000	4,766,000	3,603,000	
2004	3,502,000	5,844,000	3,825,000	
2005	5,229,000	8,264,000	4,471,000	
2006	4,626,000	10,012,000	4,163,000	
2007	9,445,000	15,100,000	4,510,000	
2008	25,936,000	26,696,000	6,878,000	
2009	8,149,000	16,388,000	4,305,000	
2010	3,714,000	10,256,000	3,125,000	
2011	4,834,000	12,861,000	5,163,000	
2012	6,691,000	16,287,000	4,116,000	
2013	5,051,000	17,973,000	3,014,000	
2014	5,194,000	14,847,000	5,272,000	
2015	5,010,000	16,300,000	6,124,000	
2016 (9 Months)	4,477,000	11,964,000	6,982,000	
Since Inception	<u>\$151,552,000</u>	<u>\$244,914,000</u>	<u>\$86,389,000</u>	*Inception 7/90

New York City  
Employees' Retirement System

# Appendix A

## Consolidated Performance Report

# Consolidated Performance Report

Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>SYSTEM RETURN SUMMARY</b>														
5 NYCERS-TOTAL PORTFOLIO - GROSS	56,545	100.00	3.83	3.83	8.34	(0.17)	7.34	15.73	13.41	1.13	9.96	6.05	8.67	07/01/1987
ESTIMATED INVESTMENT FEES			(0.06)	(0.06)	(0.18)	(0.27)	(0.27)							
EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.03)	(0.09)	(0.12)	(0.13)							
EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.03)	(0.03)	(0.09)	(0.15)	(0.14)							
EST INCENTIVE FEES														
EST OTHER FEES														
EST FEE OFFSETS														
NYCERS-TOTAL PORTFOLIO - NET MGR			3.77	3.77	8.16	(0.44)	7.07							
NYCERS POLICY BENCHMARK			3.58	3.58	8.41	0.17	8.15	15.33	13.39	2.14	10.41	6.28		
EXCESS RETURN			0.20	0.20	(0.25)	(0.61)	(1.08)	0.40	0.02	(1.01)	(0.45)	(0.22)		
<b>EQUITY RETURN DETAIL</b>														
18 NYCERS-TOTAL EQUITY (INCL PE & RA) - GROSS	37,259	65.89	4.86	4.86	8.71	(0.17)	7.85	22.95	16.08	(1.39)	12.45	5.89	7.06	04/01/2004
ESTIMATED INVESTMENT FEES			(0.07)	(0.07)	(0.21)	(0.35)	(0.33)							
EST MANAGEMENT FEES			(0.07)	(0.07)	(0.21)	(0.35)	(0.33)							
EST INCENTIVE FEES														
EST OTHER FEES														
EST FEE OFFSETS														
NYCERS-TOTAL EQUITY (INCL PE & RA) - NET MGR			4.79	4.79	8.50	(0.52)	7.52							
26 NYCERS-TOTAL DOMESTIC EQUITY - GROSS	18,919	33.46	4.43	4.43	8.96	(0.67)	11.35	34.39	16.62	0.17	16.23	7.30	11.13	08/01/1979
ESTIMATED INVESTMENT FEES			(0.02)	(0.02)	(0.07)	(0.09)	(0.11)							
NYCERS-TOTAL DOMESTIC EQUITY - NET MGR			4.41	4.41	8.89	(0.76)	11.24							
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56	33.55	16.42	1.03	16.36	7.37	11.47	
EXCESS RETURN			0.01	0.01	0.71	(1.24)	(1.31)	0.84	0.21	(0.85)	(0.12)	(0.07)	(0.34)	
36 NYCERS-TOTAL SMALL CAP - GROSS	1,811	3.20	8.08	8.08	14.38	(5.96)	4.40	41.99	17.81	(4.50)	16.58	7.86	8.12	04/01/2004
ESTIMATED INVESTMENT FEES			(0.06)	(0.06)	(0.23)	(0.27)	(0.31)							
NYCERS-TOTAL SMALL CAP - NET MGR			8.02	8.02	14.15	(6.24)	4.09							
RUSSELL 2000 (DAILY)			9.05	9.05	11.46	(4.41)	4.89	38.82	16.35	(4.18)	15.82	7.07	7.63	
EXCESS RETURN			(1.02)	(1.02)	2.69	(1.82)	(0.80)	3.17	1.46	(0.33)	0.75	0.78	0.49	
46 NYCERS-TOTAL MID CAP - GROSS	1,391	2.46	4.06	4.06	11.96	(2.19)	9.98	33.13	17.81		16.36		11.16	02/01/2011
ESTIMATED INVESTMENT FEES			(0.03)	(0.03)	(0.03)	(0.01)	(0.01)							
NYCERS-TOTAL MID CAP - NET MGR			4.03	4.03	11.93	(2.20)	9.97							
S&P 400 MIDCAP INDEX (DAILY)			4.14	4.14	12.40	(2.18)	9.77	33.50	17.88		16.50		11.26	
EXCESS RETURN			(0.11)	(0.11)	(0.47)	(0.02)	0.20	(0.37)	(0.07)		(0.14)		(0.10)	
56 NYCERS-TOTAL RUSSELL 1000 - GROSS	7,680	13.58	3.92	3.92	8.26	(0.27)	13.02	35.73	16.76	0.66	16.73		9.82	07/01/2008
ESTIMATED INVESTMENT FEES			(0.01)	(0.01)	(0.03)	(0.04)	(0.07)							
NYCERS-TOTAL RUSSELL 1000 - NET MGR			3.91	3.91	8.23	(0.31)	12.95							
RUSSELL 1000 (DAILY)			4.03	4.03	7.92	0.92	13.24	33.11	16.42	1.50	16.41		8.98	
EXCESS RETURN			(0.12)	(0.12)	0.31	(1.23)	(0.29)	2.62	0.33	(0.84)	0.32		0.85	

# Consolidated Performance Report

Through September 30, 2016



		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL															
68	NYCERS-TOTAL RUSSELL 3000 PASSIVE - GROSS	1,776	3.14	4.42	4.42	8.17	0.49	12.89	33.63	16.34	1.05	16.42	7.43	9.85	02/01/1990
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.01)	(0.01)	(0.01)							
	NYCERS-TOTAL RUSSELL 3000 PASSIVE - NET MGR			4.42	4.42	8.16	0.48	12.88							
	RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56	33.55	16.42	1.03	16.36	7.37	9.80	
	EXCESS RETURN			0.02	0.02	(0.02)	(0.00)	0.32	0.08	(0.08)	0.02	0.06	0.06	0.04	
78	NYCERS-TOTAL S&P 500 PASSIVE - GROSS	4,828	8.54	3.97	3.97	7.85	1.11	13.62	32.49	15.99	1.74	16.29	7.15	4.40	07/01/2000
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)							
	NYCERS-TOTAL S&P 500 PASSIVE - NET MGR			3.97	3.97	7.85	1.11	13.62							
	S&P 500 INDEX (DAILY)			3.85	3.85	7.84	1.38	13.69	32.39	16.00	2.11	16.37	7.24	4.51	
	EXCESS RETURN			0.11	0.11	0.01	(0.27)	(0.07)	0.10	(0.02)	(0.37)	(0.08)	(0.09)	(0.11)	
88	NYCERS-TOTAL FUND OF FUNDS - GROSS	1,076	1.90	4.50	4.50	4.58	(2.85)	8.19	37.19	16.17	(0.20)	14.28	6.91	8.53	07/01/1993
	ESTIMATED INVESTMENT FEES			(0.15)	(0.15)	(0.46)	(0.57)	(0.64)							
	NYCERS-TOTAL FUND OF FUNDS - NET MGR			4.36	4.36	4.13	(3.41)	7.55							
	RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56	33.55	16.42	1.03	16.36	7.37	9.16	
	EXCESS RETURN			(0.04)	(0.04)	(4.05)	(3.89)	(5.01)	3.63	(0.25)	(1.23)	(2.08)	(0.46)	(0.64)	



# Consolidated Performance Report

Through September 30, 2016



		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL															
100	NYCERS-TOTAL INTERNATIONAL EQUITY - GROSS	10,037	17.75	7.92	7.92	10.64	(7.90)	(2.50)	12.45	18.06	(14.05)	6.52	2.52	6.11	09/01/1990
	ESTIMATED INVESTMENT FEES			(0.07)	(0.07)	(0.23)	(0.28)	(0.30)							
	NYCERS-TOTAL INTERNATIONAL EQUITY - NET MGR			7.84	7.84	10.40	(8.17)	(2.80)							
	MSCI AC WORLD EX US (NET)			6.91	6.91	5.82	(5.66)	(3.87)	15.29	16.83	(13.71)	6.04	2.16		
	EXCESS RETURN			0.93	0.93	4.58	(2.51)	1.06	(2.84)	1.23	(0.34)	0.48	0.36		
110	NYCERS-TOTAL DEVELOPED GROWTH ACTIVE - GROSS	1,986	3.51	8.62	8.62	9.42	(1.94)	(5.15)	20.21	20.02	(12.92)	9.00	3.88	6.82	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.08)	(0.08)	(0.23)	(0.28)	(0.27)							
	NYCERS-TOTAL DEVELOPED GROWTH ACTIVE - NET MGR			8.54	8.54	9.19	(2.22)	(5.42)							
	MSCI EAFE GROWTH			4.96	4.96	2.63	4.09	(4.43)	22.55	16.86	(12.11)	8.73	3.14	5.39	
	EXCESS RETURN			3.59	3.59	6.56	(6.31)	(0.99)	(2.34)	3.16	(0.80)	0.27	0.74	1.44	
120	NYCERS-TOTAL DEVELOPED VALUE ACTIVE - GROSS	1,769	3.13	7.71	7.71	4.13	(6.04)	(3.85)	22.15	14.03	(11.01)	6.37	1.23	5.01	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.08)	(0.08)	(0.22)	(0.27)	(0.26)							
	NYCERS-TOTAL DEVELOPED VALUE ACTIVE - NET MGR			7.63	7.63	3.91	(6.30)	(4.11)							
	MSCI EAFE VALUE NET (DAILY)			7.99	7.99	0.82	(5.68)	(5.39)	22.95	17.69	(12.17)	5.99	0.44	4.11	
	EXCESS RETURN			(0.36)	(0.36)	3.09	(0.62)	1.28	(0.80)	(3.66)	1.16	0.38	0.79	0.90	
130	NYCERS-TOTAL DEVELOPED SMALL CAP ACTIVE- GROSS	709	1.25	7.81	7.81	5.38	10.72	(3.78)						7.96	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.13)	(0.13)	(0.39)	(0.55)	(0.48)							
	NYCERS-TOTAL DEVELOPED SMALL CAP ACTIVE - NET MGR			7.68	7.68	4.99	10.18	(4.26)							
	S&P EPAC SMALL CAP USD NET			8.42	8.42	4.88	8.58	(3.43)						7.07	
	EXCESS RETURN			(0.74)	(0.74)	0.11	1.59	(0.83)						0.89	
140	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS ACTIVE - GROS	50	0.09	6.21	6.21	0.43	1.16	(4.89)	21.26	18.84	(13.33)	7.51		0.16	12/01/2007
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.37)	(0.64)	(0.65)							
	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS ACTIVE - NET MGR			6.21	6.21	0.06	0.52	(5.54)							
	MSCI EAFE			6.43	6.43	1.73	(0.81)	(4.90)	22.78	17.32	(12.14)	7.39		(0.53)	
	EXCESS RETURN			(0.23)	(0.23)	(1.67)	1.33	(0.64)	(1.52)	1.52	(1.19)	0.12		0.69	
150	NYCERS-TOTAL DEVELOPED SMALLCAP PASSIVE - GROSS	265	0.47	8.68	8.68	5.58	9.99							4.63	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.01)	(0.02)							(0.02)	
	NYCERS-TOTAL DEVELOPED SMALLCAP PASSIVE - NET MGR			8.67	8.67	5.57	9.97							4.61	
	MSCI EAFE SMALL CAP NET (DAILY)			8.64	8.64	5.19	9.59							4.09	
	EXCESS RETURN			0.03	0.03	0.38	0.39							0.51	
160	NYCERS-TOTAL DEVELOPED LARGE CAP PASSIVE - GROSS	975	1.72	6.45	6.45	2.07	(0.41)	(4.98)	23.02	17.60		7.64		3.34	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.01)	(0.02)	(0.02)							
	NYCERS-TOTAL DEVELOPED LARGE CAP PASSIVE - NET MGR			6.45	6.45	2.06	(0.42)	(5.00)							
	MSCI EAFE			6.43	6.43	1.73	(0.81)	(4.90)	22.78	17.32		7.39		3.06	
	EXCESS RETURN			0.01	0.01	0.33	0.39	(0.10)	0.24	0.28		0.25		0.28	

# Consolidated Performance Report

Through September 30, 2016



		Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>EQUITY RETURN DETAIL</b>															
172	NYCERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	2,359	4.17	8.42	8.42	17.04	(17.85)	1.02	(0.20)	20.86	(18.86)	3.94	5.60	7.37	11/01/2005
	ESTIMATED INVESTMENT FEES			(0.13)	(0.13)	(0.41)	(0.41)	(0.50)							
	NYCERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			8.29	8.29	16.63	(18.25)	0.52							
	FTSE CUSTOM NYCERS ALL EMERGING INDEX			7.59	7.59	18.50	(16.80)	(0.07)	(4.22)	17.84	(18.20)	2.86	4.69	6.71	
	EXCESS RETURN			0.70	0.70	(1.87)	(1.45)	0.60	4.03	3.02	(0.67)	1.08	0.91	0.66	
182	NYCERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	1,688	2.98	7.34	7.34	17.96	(17.87)	(1.29)	(4.24)	16.11		1.85		(2.72)	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.01)	(0.05)	(0.05)	(0.06)							
	NYCERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			7.33	7.33	17.92	(17.92)	(1.35)							
	MSCI CUSTOM NYCERS EMERGING MARKETS (NET)			7.27	7.27	17.74	(17.71)								
	EXCESS RETURN			0.06	0.06	0.18	(0.21)								

# Consolidated Performance Report

Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>EQUITY RETURN DETAIL</b>														
200	NYCERS-TOTAL HEDGE FUND - NET MGR	1,050	1.86	1.40	1.40	1.23	(1.57)	5.43						07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.68	2.68	0.53	0.73	4.40						
	EXCESS RETURN			(1.28)	(1.28)	0.70	(2.30)	1.03						
210	NYCERS-TOTAL DIRECT HEDGE FUNDS - NET MGR	802	1.42	1.59	1.59	1.54	(1.45)	5.97						01/01/2012
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.68	2.68	0.53	0.73	4.40						
	EXCESS RETURN			(1.09)	(1.09)	1.01	(2.18)	1.57						
220	NYCERS-TOTAL PERMAL HEDGE FUNDS - NET MGR	248	0.44	0.69	0.69	(0.12)	(2.15)	2.58						07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.68	2.68	0.53	0.73	4.40						
	EXCESS RETURN			(1.99)	(1.99)	(0.65)	(2.88)	(1.82)						

# Consolidated Performance Report

Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>EQUITY RETURN DETAIL</b>														
226 NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED)	4,155	7.35	2.76	2.76	6.08	10.61	13.99	8.08	12.74	13.78	9.88	8.51	11.62	04/01/2004
NYC R3000 +3% LAGGED			3.39	3.39	12.57	2.49	21.24	24.53	35.20	5.55	15.33	11.85	12.15	
EXCESS RETURN			(0.63)	(0.63)	(6.48)	8.11	(7.26)	(16.45)	(22.47)	8.23	(5.45)	(3.34)	(0.53)	
236 NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED)	2,890	5.11	2.41	2.41	8.31	16.06	15.44	12.61	14.43	22.28	14.01	6.69	9.23	04/01/2004
NCREIF NFI-ODCE NET + 100 BP			2.08	2.08	6.59	15.08	12.56	14.02	10.88	16.09	12.44			
EXCESS RETURN			0.33	0.33	1.73	0.98	2.88	(1.41)	3.55	6.19	1.57			
246 NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED)	208	0.37	2.85	2.85	7.49	15.14	20.16						15.04	12/01/2013
CPI + 4%			1.45	1.45	4.27	4.72	4.70						5.07	
EXCESS RETURN			1.41	1.41	3.22	10.42	15.45						9.98	

# Consolidated Performance Report

Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>FIXED INCOME RETURN DETAIL</b>														
258	NYCERS-TOTAL FIXED INCOME (DOM & GLOBAL) - GROSS ESTIMATED INVESTMENT FEES	19,269	34.08	1.84 (0.03)	1.84 (0.03)	7.51 (0.11)	(0.37) (0.13)	6.18 (0.15)	1.19	8.31	6.77	4.81	6.01	8.52 02/01/1980
	EST MANAGEMENT FEES			(0.03)	(0.03)	(0.11)	(0.13)	(0.15)						
	EST INCENTIVE FEES													
	EST OTHER FEES													
	EST FEE OFFSETS													
	NYCERS-TOTAL FIXED INCOME (DOM & GLOBAL) - NET MGR			1.80	1.80	7.39	(0.50)	6.03						
266	NYCERS-TOTAL STRUCTURED FIXED INCOME - GROSS ESTIMATED INVESTMENT FEES	9,061	16.03	1.11 (0.02)	1.11 (0.02)	7.38 (0.06)	0.28 (0.07)	7.69 (0.09)	(1.73)	6.92	8.85	4.32	5.91	8.06 01/01/1985
	NYCERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			1.09	1.09	7.32	0.21	7.60						
	NYC - CORE PLUS FIVE			0.69	0.69	7.06	0.41	7.66	(2.79)	5.41	9.40	3.74	5.50	
	EXCESS RETURN			0.40	0.40	0.26	(0.20)	(0.06)	1.06	1.51	(0.55)	0.58	0.41	
276	NYCERS-TOTAL CORE FIXED INCOME - GROSS ESTIMATED INVESTMENT FEES	401	0.71	1.04 (0.05)	1.04 (0.05)	6.46 (0.15)	1.04 (0.18)	5.84 (0.17)	(1.54)	6.23	8.11	3.93		5.64 05/01/2009
	NYCERS-TOTAL CORE FIXED INCOME - NET MGR			0.99	0.99	6.32	0.86	5.67						
	BBG BARC AGG (DLY)			0.46	0.46	5.80	0.55	5.97	(2.02)	4.21	7.84	3.08		4.56
	EXCESS RETURN			0.53	0.53	0.52	0.31	(0.30)	0.49	2.02	0.27	0.85		1.07
286	NYCERS-TOTAL FIXED INCOME FUND OF FUNDS - GROSS ESTIMATED INVESTMENT FEES	118	0.21	0.93 (0.08)	0.93 (0.08)	5.76 (0.25)	0.90 (0.35)	6.18 (0.36)	(1.76)	5.51	8.39	3.48	5.31	6.11 01/01/1992
	NYCERS-TOTAL FIXED INCOME FUND OF FUNDS - NET MGR			0.86	0.86	5.51	0.56	5.82						
	BBG BARC AGG (DLY)			0.46	0.46	5.80	0.55	5.97	(2.02)	4.21	7.84	3.08	4.79	5.82
	EXCESS RETURN			0.40	0.40	(0.29)	0.01	(0.15)	0.26	1.29	0.55	0.40	0.52	0.29
296	NYCERS-TOTAL TIPS - GROSS ESTIMATED INVESTMENT FEES	2,472	4.37	0.98 (0.00)	0.98 (0.00)	7.38 (0.01)	(1.18) (0.03)	3.50 (0.07)	(8.42)	7.25	13.50	2.09	4.64	4.32 06/01/2005
	NYCERS-TOTAL TIPS - NET MGR			0.98	0.98	7.36	(1.21)	3.42						
	BBG BARC GBL INF-LK: US TIPS (DLY)			0.96	0.96	7.27	(1.44)	3.64	(8.61)	6.98	13.56	1.93	4.48	4.15
	EXCESS RETURN			0.01	0.01	0.10	0.23	(0.21)	0.19	0.27	(0.06)	0.16	0.15	0.17
306	NYCERS-TOTAL ENHANCED YIELD - GROSS ESTIMATED INVESTMENT FEES	2,236	3.95	5.20 (0.09)	5.20 (0.09)	13.40 (0.29)	(3.82) (0.33)	2.94 (0.36)	8.31	14.56	5.73	8.01	7.55	7.93 10/01/1994
	NYCERS-TOTAL ENHANCED YIELD - NET MGR			5.11	5.11	13.11	(4.15)	2.58						
	CITIGROUP BB & B			5.13	5.13	13.71	(4.21)	2.78	6.17	14.45	6.58	7.61	6.27	7.05
	EXCESS RETURN			(0.02)	(0.02)	(0.60)	0.06	(0.20)	2.14	0.11	(0.85)	0.40	1.28	0.88
316	NYCERS- TOTAL BANK LOANS - GROSS ESTIMATED INVESTMENT FEES	1,050	1.86	2.78 (0.09)	2.78 (0.09)	6.84 (0.26)	1.18 (0.33)	2.58 (0.34)	6.41					4.53 12/01/2012
	NYCERS-TOTAL BANK LOANS - NET MGR			2.70	2.70	6.58	0.85	2.24						
	CSFB LEVERAGED LOAN INDEX			3.10	3.10	7.46	(0.38)	2.06	6.15					4.14
	EXCESS RETURN			(0.40)	(0.40)	(0.88)	1.23	0.18	0.26					0.39

# Consolidated Performance Report

Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014	2013	2012	2011	5 Year	10 Year	ITD	Inception Date
<b>FIXED INCOME RETURN DETAIL</b>														
328 NYCERS- TOTAL CONVERTIBLE BONDS - GROSS	554	0.98	4.05	4.05	6.93	(0.85)	8.42	16.33	11.66	(3.02)	9.12		6.11	06/01/2008
ESTIMATED INVESTMENT FEES			(0.11)	(0.11)	(0.34)	(0.43)	(0.47)							
NYCERS-TOTAL CONVERTIBLE BONDS - NET MGR			3.94	3.94	6.59	(1.28)	7.95							
BOFAML ALL CONVERTIBLE EX M AI (DAILY)			7.41	7.41	8.87	(2.89)	9.33	25.00	14.41	(3.42)	11.49		7.42	
EXCESS RETURN			(3.47)	(3.47)	(2.28)	1.61	(1.38)	(8.68)	(2.76)	0.39	(2.37)		(1.31)	
338 NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME	1,497	2.65	3.30	3.30	4.65	(2.18)	8.15	17.55	20.49	(4.40)	7.26		7.53	10/01/2007
10% ANNUAL RETURN			2.41	2.41	7.41	10.00	10.00	10.00	10.00	10.00	10.00		10.00	
EXCESS RETURN			0.89	0.89	(2.76)	(12.18)	(1.85)	7.55	10.49	(14.40)	(2.74)		(2.47)	
348 NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH)	780	1.38	0.90	0.90	7.50	4.33	8.26	2.35	6.18	6.66	5.98	6.55	8.35	12/01/1984
EMPLOYEES CUSTOM BENCHMARK (NO CASH)			0.56	0.56	4.66	1.42	6.03	(1.64)	3.41	7.66	2.98	4.87		
EXCESS RETURN			0.34	0.34	2.84	2.91	2.22	3.98	2.77	(1.00)	3.00	1.68		
<b>CASH SUMMARY</b>														
360 EMPLOYEES' SHORT TERM - GROSS	1,100	1.95	0.11	0.11	0.62	0.31	0.36	0.19	0.56	0.92	0.42	1.48		04/01/1982
ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	(0.00)	0.00	0.00	0.00	0.00	0.00	0.00		
EMPLOYEES' SHORT TERM - NET MGR			0.11	0.11	0.62	0.31	0.36	0.19	0.56	0.92	0.42	1.48		
364 C/D - FAIL FLOAT EARNINGS	3	0.01												
366 SECURITY LENDING	13	0.02												

New York City  
Employees' Retirement System

# Appendix B

## Public Markets Manager Performance Detail

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
EQUITY SUMMARY							
US EQUITY							
State Street Global Advisors R3000	1,776	3.14	4.42	4.42	8.14	0.39	12.87
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			0.02	0.02	(0.04)	(0.09)	0.31
Amalgamated Bank	4,828	8.54	3.97	3.97	7.85	1.11	13.62
S&P 500 INDEX (DAILY)			3.85	3.85	7.84	1.38	13.69
Excess			0.11	0.11	0.01	(0.27)	(0.07)
Blackrock Inst R 2000 Growth	226	0.40	9.26	9.26	7.45	(1.54)	5.70
RUSSELL 2000 GROWTH DAILY			9.22	9.22	7.48	(1.38)	5.60
Excess			0.04	0.04	(0.03)	(0.16)	0.10
Blackrock Inst R 2000 Value	62	0.11	8.91	8.91	15.45	(7.49)	4.90
RUSSELL 2000 VALUE DAILY			8.87	8.87	15.49	(7.47)	4.22
Excess			0.04	0.04	(0.03)	(0.02)	0.68
RAFI - SC Fundamental	1,055	1.87	8.41	8.41	14.03	(7.09)	4.56
RUSSELL 2000 (DAILY)			9.05	9.05	11.46	(4.41)	4.89
Excess			(0.63)	(0.63)	2.57	(2.68)	(0.34)
Ceredex SCV	299	0.53	6.04	6.04	21.61	(4.74)	2.58
RUSSELL 2000 VALUE DAILY			8.87	8.87	15.49	(7.47)	4.22
Excess			(2.83)	(2.83)	6.12	2.73	(1.64)
Wellington Small Core	169	0.30	7.20	7.20	10.50	(2.79)	9.89
RUSSELL 2000 (DAILY)			9.05	9.05	11.46	(4.41)	4.89
Excess			(1.85)	(1.85)	(0.97)	1.63	4.99



# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
State Street GA S&P 400	1,391	2.46	4.04	4.04	11.94	(2.31)	9.97
S&P 400 MIDCAP INDEX (DAILY)			4.14	4.14	12.40	(2.18)	9.77
Excess			(0.10)	(0.10)	(0.46)	(0.13)	0.20
Blackrock Inst R 1000 Growth	2,919	5.16	4.61	4.61	6.00	5.58	12.90
RUSSELL 1000 GROWTH - DAILY			4.58	4.58	6.00	5.67	13.05
Excess			0.03	0.03	(0.00)	(0.09)	(0.15)
Blackrock Inst R 1000 Value	2,772	4.90	3.52	3.52	9.97	(3.94)	13.51
RUSSELL 1000 VALUE (DAILY)			3.48	3.48	10.00	(3.83)	13.45
Excess			0.04	0.04	(0.02)	(0.11)	0.06
VTL S&P 500 Fundamental	500	0.88	3.00	3.00	7.06	(1.25)	13.81
S&P 500 INDEX (DAILY)			3.85	3.85	7.84	1.38	13.69
Excess			(0.85)	(0.85)	(0.78)	(2.63)	0.12
RAFI - LC Fundamental	1,489	2.63	3.58	3.58	9.90	(3.17)	12.15
RUSSELL 1000 (DAILY)			4.03	4.03	7.92	0.92	13.24
Excess			(0.45)	(0.45)	1.98	(4.09)	(1.09)
FUND OF FUNDS							
NYCERS-TOTAL FUND OF FUNDS	1,076	1.90	4.36	4.36	4.13	(3.41)	7.55
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			(0.04)	(0.04)	(4.05)	(3.89)	(5.01)
NYCERS-TOTAL ATTUCKS	333	0.59	4.88	4.88	5.73	(3.63)	9.46
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			0.48	0.48	(2.45)	(4.10)	(3.10)
NYCERS-TOTAL CAPITAL PROSPECTS	80	0.14	6.14	6.14	7.21	(2.40)	9.13
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			1.74	1.74	(0.97)	(2.88)	(3.42)

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
NYCERS-TOTAL PROGRESS EQUITY	416	0.74	3.68	3.68	2.52	(4.66)	6.99
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			(0.71)	(0.71)	(5.67)	(5.14)	(5.57)
NYCERS-TOTAL F I S	247	0.44	4.22	4.22	3.90	(1.25)	5.52
RUSSELL 3000 (DAILY)			4.40	4.40	8.18	0.48	12.56
Excess			(0.18)	(0.18)	(4.28)	(1.73)	(7.03)
U.S. ENVIRONMENTAL							
Walden Asset Management (ENVRN)	358	0.63	4.81	4.81	13.78	(3.33)	(0.34)
RUSSELL 2000 (DAILY)			9.05	9.05	11.46	(4.41)	4.89
Excess			(4.24)	(4.24)	2.32	1.08	(5.24)
NON - US EQUITY							
Causeway	830	1.47	6.57	6.57	(0.48)	(2.41)	(4.94)
MSCI EAFE VALUE NET (DAILY)			7.99	7.99	0.82	(5.68)	(5.39)
Excess			(1.42)	(1.42)	(1.30)	3.28	0.45
Sprucegrove	939	1.66	8.58	8.58	8.13	(9.77)	(3.69)
MSCI EAFE VALUE NET (DAILY)			7.99	7.99	0.82	(5.68)	(5.39)
Excess			0.59	0.59	7.31	(4.08)	1.70
Baillie Gifford MTA	921	1.63	11.32	11.32	7.98	(4.67)	(6.81)
MSCI EAFE GROWTH			4.96	4.96	2.63	4.09	(4.43)
Excess			6.36	6.36	5.36	(8.76)	(2.38)
Walter Scott	1,065	1.88	6.25	6.25	10.25	0.04	(3.43)
MSCI EAFE GROWTH			4.96	4.96	2.63	4.09	(4.43)
Excess			1.29	1.29	7.63	(4.05)	1.00
Acadian	359	0.64	7.64	7.64	6.52	8.71	(3.02)
S&P EPAC Small Cap USD NET			8.42	8.42	4.88	8.58	(3.43)
Excess			(0.79)	(0.79)	1.63	0.13	0.41

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
Pyramis	350	0.62	7.72	7.72	3.47	11.68	(5.51)
S&P EPAC Small Cap USD NET			8.42	8.42	4.88	8.58	(3.43)
Excess			(0.70)	(0.70)	(1.42)	3.09	(2.08)
SSGA MTA 121	975	1.72	6.45	6.45	2.06	(0.42)	(5.00)
MSCI EAFE			6.43	6.43	1.73	(0.81)	(4.90)
Excess			0.01	0.01	0.33	0.39	(0.10)
SSGA MSCI EAFE Small Cap Index	265	0.47	8.67	8.67	5.57	9.97	
MSCI EAFE SMALL CAP NET (DAILY)			8.64	8.64	5.19	9.59	
Excess			0.03	0.03	0.38	0.39	
Generation GE MTA	236	0.42	8.47	8.47	12.83	7.04	11.39
MSCI World Index			4.87	4.87	5.55	(0.87)	4.94
Excess			3.61	3.61	7.28	7.91	6.45
INTERNATIONAL FUND OF FUNDS							
NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS	50	0.09	6.21	6.21	0.06	0.52	(5.54)
MSCI EAFE			6.43	6.43	1.73	(0.81)	(4.90)
Excess			(0.23)	(0.23)	(1.67)	1.33	(0.64)
EMERGING MARKETS							
BALLIE MTA	614	1.09	9.98	9.98	12.85	(13.67)	4.53
FTSE Custom NYCERS All Emerging Index			7.59	7.59	18.50	(16.80)	(0.07)
Excess			2.39	2.39	(5.65)	3.14	4.60
Acadian / MTA	564	1.00	9.37	9.37	15.78	(18.25)	3.09
FTSE Custom NYCERS All Emerging Index			7.59	7.59	18.50	(16.80)	(0.07)
Excess			1.78	1.78	(2.72)	(1.45)	3.16
PARAMETRIC EM	556	0.98	4.87	4.87	16.18	(19.39)	(1.55)
FTSE Custom NYCERS All Emerging Index			7.59	7.59	18.50	(16.80)	(0.07)
Excess			(2.72)	(2.72)	(2.33)	(2.59)	(1.48)

## Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
DFA MTA	625	1.11	8.83	8.83	21.86	(22.06)	(4.16)
FTSE Custom NYCERS All Emerging Index			7.59	7.59	18.50	(16.80)	(0.07)
Excess			1.23	1.23	3.36	(5.26)	(4.09)
Blackrock EM	1,688	2.98	7.33	7.33	17.92	(17.92)	(1.52)
MSCI CUSTOM NYCERS EMERGING MARKETS (NET)			7.27	7.27	17.74	(17.71)	
Excess			0.06	0.06	0.18	(0.21)	

### FIXED INCOME SUMMARY

#### STRUCTURED FIXED INCOME

Neuberger Berman - Mortgage	908	1.61	0.56	0.56	3.58	1.42	6.99
CITIGROUP MORTGAGE INDEX			0.57	0.57	3.64	1.56	6.12
Excess			(0.01)	(0.01)	(0.06)	(0.14)	0.86
Blackrock - Mortgage	1,041	1.84	0.74	0.74	4.00	1.67	6.75
CITIGROUP MORTGAGE INDEX			0.57	0.57	3.64	1.56	6.12
Excess			0.17	0.17	0.36	0.11	0.62
Wellington - Mortgage	455	0.81	0.68	0.68	3.94	1.35	6.77
CITIGROUP MORTGAGE INDEX			0.57	0.57	3.64	1.56	6.12
Excess			0.11	0.11	0.30	(0.21)	0.65
Goldman Sachs - Mortgage	455	0.80	0.52	0.52	3.42	1.60	6.24
CITIGROUP MORTGAGE INDEX			0.57	0.57	3.64	1.56	6.12
Excess			(0.04)	(0.04)	(0.21)	0.04	0.12
Amundi Smith Breeden - Mortgage	180	0.32	0.74	0.74	3.84	1.73	6.36
CITIGROUP MORTGAGE INDEX			0.57	0.57	3.64	1.56	6.12
Excess			0.17	0.17	0.20	0.16	0.23

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
Prudential - Corp - Credit	1,251	2.21	1.31	1.31	8.95	(0.32)	7.54
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			(0.06)	(0.06)	0.07	0.33	0.50
T. Rowe Price - Credit	914	1.62	1.66	1.66	9.28	0.13	7.91
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			0.29	0.29	0.40	0.78	0.87
Blackrock - Credit	899	1.59	1.45	1.45	8.76	(0.83)	7.48
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			0.08	0.08	(0.12)	(0.18)	0.44
Taplin Canida Habacht - Credit	792	1.40	3.16	3.16	11.89	(4.37)	7.83
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			1.79	1.79	3.01	(3.73)	0.79
Barrow Hanley - Credit	687	1.22	1.47	1.47	8.91	(0.09)	7.47
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			0.10	0.10	0.03	0.56	0.42
Prudential-Privest - Credit	205	0.36	1.68	1.68	6.82	1.63	7.20
NYC - Investment Grade Credit			1.37	1.37	8.88	(0.65)	7.04
Excess			0.31	0.31	(2.06)	2.28	0.16
Blackrock - Gov't	635	1.12	(0.33)	(0.33)	9.24	0.69	11.98
NYC - Treasury Agency Plus Five			(0.47)	(0.47)	9.21	0.72	12.38
Excess			0.14	0.14	0.04	(0.03)	(0.40)
State Street - Gov't	637	1.13	(0.22)	(0.22)	9.52	0.46	12.10
NYC - Treasury Agency Plus Five			(0.47)	(0.47)	9.21	0.72	12.38
Excess			0.25	0.25	0.31	(0.26)	(0.28)

# Public Markets Manager Performance Detail

Net Returns Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
<b>ENHANCED YIELD</b>							
Loomis, Sayles - High Yield	448	0.79	6.72	6.72	18.49	(7.67)	4.89
NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR)			5.49	5.49	15.32	(4.64)	2.50
Excess			1.23	1.23	3.17	(3.02)	2.38
Oaktree - High Yield	356	0.63	4.91	4.91	13.16	(4.77)	1.52
BofAML HYM CONSTRAINED (DAILY)			5.49	5.49	15.32	(4.61)	2.51
Excess			(0.58)	(0.58)	(2.16)	(0.16)	(0.98)
NEUBERGER BERMAN - HIGH YIELD	380	0.67	5.15	5.15	13.49	(4.00)	2.14
BofAML HIGH YIELD MASTER II (DAILY)			5.49	5.49	15.32	(4.64)	2.50
Excess			(0.34)	(0.34)	(1.83)	0.64	(0.36)
Stone Harbor - High Yield	218	0.38	4.60	4.60	11.30	(4.54)	0.97
BofAML HIGH YIELD MASTER II (DAILY)			5.49	5.49	15.32	(4.64)	2.50
Excess			(0.89)	(0.89)	(4.02)	0.11	(1.54)
T. Rowe Price - Enhanced Yield	383	0.68	4.54	4.54	11.03	(1.28)	2.96
CITIGROUP BB & B			5.13	5.13	13.71	(4.21)	2.78
Excess			(0.60)	(0.60)	(2.67)	2.93	0.18
Shenkman - High Yield	188	0.33	4.16	4.16	10.13	(2.24)	2.93
CITIGROUP BB & B			5.13	5.13	13.71	(4.21)	2.78
Excess			(0.97)	(0.97)	(3.58)	1.97	0.14
Penn Capital Mgt	138	0.24	4.76	4.76	9.72	(1.26)	0.84
CITIGROUP BB & B			5.13	5.13	13.71	(4.21)	2.78
Excess			(0.38)	(0.38)	(3.99)	2.95	(1.95)
Fort Washington	126	0.22	4.46	4.46	11.49	(4.43)	2.18
CITIGROUP BB & B			5.13	5.13	13.71	(4.21)	2.78
Excess			(0.68)	(0.68)	(2.21)	(0.22)	(0.60)

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
<b>BANK LOANS</b>							
Babson BL	285	0.50	2.82	2.82	6.21	0.12	1.99
CSFB LEVERAGED LOAN INDEX			3.10	3.10	7.46	(0.38)	2.06
Excess			(0.27)	(0.27)	(1.24)	0.50	(0.07)
Credit Suisse BL	293	0.52	2.50	2.50	6.68	2.57	2.67
CSFB LEVERAGED LOAN INDEX			3.10	3.10	7.46	(0.38)	2.06
Excess			(0.59)	(0.59)	(0.78)	2.96	0.61
Guggenheim BL	187	0.33	2.60	2.60	6.16	2.07	2.88
CSFB LEVERAGED LOAN INDEX			3.10	3.10	7.46	(0.38)	2.06
Excess			(0.49)	(0.49)	(1.30)	2.45	0.83
Invesco BL	284	0.50	2.82	2.82	7.14	(0.91)	1.65
CSFB LEVERAGED LOAN INDEX			3.10	3.10	7.46	(0.38)	2.06
Excess			(0.28)	(0.28)	(0.32)	(0.53)	(0.41)
<b>TIPS</b>							
State Street TIPS MTA	1,866	3.30	0.98	0.98	7.38	(1.35)	3.57
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			0.96	0.96	7.27	(1.44)	3.64
Excess			0.02	0.02	0.11	0.09	(0.07)
Blackrock TIPS MTA	606	1.07	0.97	0.97	7.32	(1.24)	3.74
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			0.96	0.96	7.27	(1.44)	3.64
Excess			0.01	0.01	0.05	0.20	0.10
<b>CONVERTIBLE BONDS</b>							
Advent Conv Bonds	345	0.61	4.77	4.77	7.81	(1.92)	4.68
BofA ML U.S. Convertible Yield Alternative			5.40	5.40	9.44	(8.77)	2.75
Excess			(0.63)	(0.63)	(1.63)	6.85	1.93

# Public Markets Manager Performance Detail

Net Returns Through September 30, 2016



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
Victory - Conv Bonds	209	0.37	2.59	2.59	4.62	(0.24)	13.76
BofA Merrill Lynch US Investment Grade Convertible Bond Index			5.11	5.11	9.46	1.68	15.69
Excess			(2.52)	(2.52)	(4.84)	(1.92)	(1.93)
FIXED INCOME FUND OF FUNDS							
New Century Adv LLC (Core)	27	0.05	1.11	1.11	5.01	(0.04)	6.09
BBG BARC Agg (Dly)			0.46	0.46	5.80	0.55	5.97
Excess			0.65	0.65	(0.78)	(0.59)	0.12
Hillswick	10	0.02	(0.35)	(0.35)			
BBG BARC Agg (Dly)			0.46	0.46			
Excess			(0.81)	(0.81)			
Integrity	12	0.02	0.64	0.64			
BBG BARC Agg (Dly)			0.46	0.46			
Excess			0.19	0.19			
Pugh Capital Mgmt Inc (Core)	30	0.05	0.88	0.88	6.30	0.69	6.05
BBG BARC Agg (Dly)			0.46	0.46	5.80	0.55	5.97
Excess			0.42	0.42	0.50	0.14	0.08
Ramirez Asset	38	0.07	1.05	1.05	6.08	0.94	
BBG BARC Agg (Dly)			0.46	0.46	5.80	0.55	
Excess			0.59	0.59	0.28	0.39	
CORE FIXED INCOME							
LM Capital	295	0.52	0.97	0.97	6.22	0.83	5.67
BBG BARC Agg (Dly)			0.46	0.46	5.80	0.55	5.97
Excess			0.51	0.51	0.43	0.28	(0.30)
GIA	106	0.19	1.06	1.06	6.58		
BBG BARC Agg (Dly)			0.46	0.46	5.80		
Excess			0.61	0.61	0.79		



# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
ECONOMICALLY TARGETED INVESTMENTS							
AFL-CIO HOUSING INV TRUST	308	0.55	0.55	0.55	5.09	1.13	6.10
BBG BARC Agg (Dly)			0.46	0.46	5.80	0.55	5.97
Excess			0.09	0.09	(0.71)	0.58	0.14
ACCESS RBC	106	0.19	0.43	0.43	3.83	1.83	6.66
Access RBC Benchmark			0.29	0.29	3.64	1.40	5.08
Excess			0.13	0.13	0.19	0.43	1.58
CPC CONST FACILITY	18	0.03	2.22	2.22	(1.17)	12.90	
CPC CONST BENCHMARK			0.77	0.77	2.31	2.90	
Excess			1.45	1.45	(3.47)	10.00	
BOA-PPAR (FNMA)	27	0.05	1.60	1.60	13.40	42.03	13.31
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			0.84	0.84	8.99	39.53	6.19
BOA-PPAR (GNMA)	17	0.03	0.89	0.89	11.07	8.04	15.61
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			0.20	0.20	7.34	6.03	8.96
CCD-PPAR (FNMA)	10	0.02	1.52	1.52	11.70	6.69	25.71
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			0.75	0.75	7.29	4.20	18.58
CCD-PPAR (GNMA)	7	0.01	0.83	0.83	9.89	5.08	15.37
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			0.14	0.14	6.16	3.06	8.72
CFSB-PPAR (GNMA)	3	0.01	0.83	0.83	10.30	5.90	15.34
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			0.13	0.13	6.57	3.88	8.69

# Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
CPC-PPAR (FNMA)	76	0.13	1.13	1.13	13.04	8.96	13.91
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			0.37	0.37	8.63	6.46	6.78
CPC - PPAR (GNMA)	107	0.19	0.29	0.29	8.45	5.08	8.41
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			(0.41)	(0.41)	4.73	3.07	1.76
JPMC-PPAR (FNMA)	49	0.09	5.34	5.34	17.04	6.18	12.06
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			4.58	4.58	12.62	3.68	4.93
JPMC - PPAR (GNMA)	39	0.07	0.35	0.35	7.87	6.04	13.75
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			(0.34)	(0.34)	4.14	4.03	7.10
LIIF-PPAR (FNMA)	5	0.01	(5.33)	(5.33)	13.17	6.29	38.12
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			(6.10)	(6.10)	8.75	3.79	30.99
LIIF-PPAR (GNMA)	3	0.01	(0.08)	(0.08)	6.77	3.92	9.74
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			(0.77)	(0.77)	3.04	1.91	3.09
NCBCI PPAR (FNMA)	0	0.00	0.24	0.24	9.29	4.97	14.93
FNMA Plus 85bps			0.76	0.76	4.42	2.50	7.13
Excess			(0.53)	(0.53)	4.88	2.47	7.81
NCBCI-PPAR (GNMA)	2	0.00	0.71	0.71	10.10	5.53	16.66
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			0.01	0.01	6.37	3.52	10.01

## Public Markets Manager Performance Detail



Net Returns Through September 30, 2016

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2015	2014
NHS-PPAR (GNMA)	1	0.00	0.25	0.25	8.50	4.90	13.73
GNMA Plus 65bps			0.70	0.70	3.73	2.02	6.65
Excess			(0.45)	(0.45)	4.78	2.89	7.08
CASH							
EMPLOYEES' SHORT TERM	1,100	1.95	0.11	0.11	0.62	0.31	0.36
91 DAY T-BILL			0.10	0.10	0.24	0.05	0.02
Excess			0.02	0.02	0.37	0.27	0.34
C/D - FAIL FLOAT EARNINGS	3	0.01					
SECURITY LENDING	13	0.02					

New York City  
Employees' Retirement System

# Appendix C

## Alternative Assets Manager Performance Detail

# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
<b>TOTAL PRIVATE EQUITY</b>		9,082,671,463	7,310,955,721	5,693,524,432	4,170,822,997	1.35	8.9%
<b>TOTAL ACTIVE</b>		8,581,422,761	6,739,627,594	5,022,706,071	4,170,822,997	1.36	9.3%
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,961,600	50,423,097	169,951	0.94	-1.2%
FdG Capital Partners LLC	1999	25,000,000	28,756,835	42,947,883	6,365,393	1.71	14.8%
Lincolnshire Equity Fund II, L.P.	1999	18,397,347	19,261,466	36,463,088	1,037,952	1.95	24.6%
Solera Partners, L.P.	2000	19,999,779	26,476,415	41,635,156	3,673,815	1.71	8.5%
SCP Private Equity Partners II, L.P.	2000	27,442,463	30,827,225	10,339,594	3,991,950	0.46	-9.9%
New Mountain Partners, L.P.	2001	18,141,933	17,116,468	24,431,489	471,306	1.45	12.4%
Apollo Investment Fund V, L.P.	2001	40,000,000	62,509,880	122,932,865	1,294,174	1.99	38.6%
RRE Ventures III, L.P.	2001	19,999,999	26,274,675	33,150,017	2,832,135	1.37	5.8%
Thomas, McNerney & Partners, L.P.	2002	20,000,000	20,000,000	7,003,139	4,654,676	0.58	-10.4%
BDCM Opportunity Fund, L.P.	2002	25,000,000	52,554,619	90,110,270	98,591	1.72	22.8%
Landmark Equity Partners XI, L.P.	2002	55,000,000	52,284,778	76,665,450	4,099,452	1.54	23.5%
FS Equity Partners V, L.P.	2003	25,000,000	21,393,182	41,752,123	2,316,955	2.06	15.7%
Blackstone Capital Partners IV, L.P.	2003	34,418,762	38,818,072	98,629,819	537,173	2.55	39.7%
Ares Corporate Opportunities Fund, L.P.	2003	45,000,000	53,984,770	78,961,930	4,515,870	1.55	13.6%
Markstone Capital Partners, LP	2004	40,000,000	46,899,103	19,822,611	1,955,927	0.46	-35.3%
FdG Capital Partners II LP	2004	35,000,000	37,624,231	42,499,038	2,389,728	1.19	3.5%
Paladin Homeland Security Fund (NY City), L.P.	2004	15,000,000	16,348,036	5,249,426	2,291,343	0.46	-10.7%
Lincolnshire Equity Fund III, L.P.	2004	55,000,000	54,070,119	69,467,169	27,226,284	1.79	30.0%
Yucaipa American Alliance Fund I, LP	2004	90,000,000	114,094,892	94,282,024	33,155,391	1.12	2.9%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	2004	32,000,000	32,725,517	26,635,754	13,584,594	1.23	3.8%
Aurora Equity Partners III L.P.	2004	50,000,000	54,123,136	86,395,365	5,647,661	1.70	14.4%
Trilantic Capital Partners III L.P.	2004	45,088,848	40,126,836	59,174,224	1,105,754	1.50	12.4%
Celtic Pharmaceutical Holdings L.P.	2004	25,000,000	25,402,094	402,094	3,976,018	0.17	-18.7%
Palladium Equity Partners III, L.P.	2005	35,000,000	36,029,428	51,266,878	19,522,528	1.96	17.6%
New Mountain Partners II, L.P.	2005	46,451,615	41,780,816	80,867,650	727,906	1.95	13.7%
VSS Communications Partners IV, L.P.	2005	24,690,337	28,424,765	18,918,709	2,223,831	0.74	-5.2%
Prism Venture Partners V-A, L.P.	2005	30,000,000	30,762,722	16,713,788	4,890,481	0.70	-6.9%
NB New York City Growth Fund	2005	34,819,694	34,819,694	34,883,967	(795,887)	0.98	-0.7%
Quadrangle Capital Partners II LP	2005	59,042,060	62,295,458	68,716,685	13,954,205	1.33	5.8%
Snow Phipps Group, L.P.	2005	20,000,000	23,074,361	18,071,332	11,896,635	1.30	6.9%
GI Partners Fund II L.P.	2005	35,000,000	35,442,509	41,848,151	12,481,838	1.53	7.1%
Blackstone Mezzanine Partners II, L.P.	2005	25,000,000	23,477,332	31,496,847	609,463	1.37	8.1%
Psilos Group Partners III, L.P.	2005	35,000,000	37,205,819	17,948,760	27,006,744	1.21	3.7%

Information provided by the New York City Employees' Retirement System Consultants

# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
USPF II Institutional Fund, L.P.	2005	65,000,000	85,734,194	59,448,647	59,022,562	1.38	6.2%
JP Morgan Fleming (Tranche A)	2005	43,000,000	41,656,800	29,919,599	25,074,165	1.32	6.0%
Aisling Capital II, LP	2006	6,680,102	7,850,198	5,311,310	1,844,584	0.91	-2.0%
InterMedia Partners VII, L.P.	2006	25,000,000	28,970,204	17,874,149	24,095,136	1.45	5.5%
Terra Firma Capital Partners III, L.P.	2006	52,769,602	53,570,980	5,408,603	20,771,127	0.49	-11.0%
BDCM Opportunity Fund II, L.P.	2006	25,000,000	36,330,630	35,058,707	35,345,806	1.94	16.2%
Blackstone Capital Partners V, L.P.	2006	121,624,827	129,163,485	166,250,603	43,113,428	1.62	8.2%
Avista Capital Partners, L.P.	2006	45,000,000	58,797,207	51,908,702	22,106,167	1.26	5.1%
GSC Recovery III, L.P.	2006	25,000,000	28,176,914	29,697,283	2,863,665	1.16	3.8%
Apollo Investment Fund VI, L.P.	2006	90,000,000	115,838,240	145,311,271	27,084,234	1.49	8.9%
Landmark Equity Partners XIII, L.P.	2006	50,000,000	47,830,446	44,729,095	16,897,576	1.29	5.6%
Ares Corporate Opportunities Fund II, L.P.	2006	50,000,000	54,760,870	82,811,581	9,753,228	1.69	13.5%
Fairview Ventures Fund III, L.P.	2006	25,000,000	25,795,948	19,698,739	26,999,441	1.81	14.6%
Ampersand 2006	2006	25,000,000	25,000,000	31,919,037	22,339,895	2.17	14.9%
CCMP Capital Investors II, L.P.	2006	30,000,000	32,984,888	39,942,725	15,309,581	1.68	13.6%
CLP 2014 (fka Perseus Partners VII)	2006	30,000,000	35,015,446	12,105,965	724,448	0.37	-23.9%
Thomas, McNerney & Partners II, L.P.	2006	25,000,000	24,849,167	42,196,658	13,874,284	2.26	17.4%
Catterton Partners VI, L.P.	2006	45,000,000	49,887,442	61,097,483	32,787,741	1.88	13.1%
First Reserve Fund XI, L.P.	2006	45,000,000	47,820,682	26,739,005	4,694,772	0.66	-10.3%
Arsenal Capital Partners II, LP	2006	22,500,000	26,912,683	25,589,597	19,455,981	1.67	10.9%
RRE Ventures IV, L.P.	2006	35,000,000	43,543,836	21,044,903	44,602,399	1.51	7.8%
MidOcean Partners III, L.P.	2006	60,000,000	68,346,093	51,523,108	54,984,654	1.56	9.6%
GF Capital Private Equity Fund, L.P.	2006	20,000,000	20,626,154	22,565,552	13,689,785	1.76	14.3%
The Fourth Cinven Fund	2006	71,438,497	72,910,838	94,146,833	5,399,497	1.37	6.5%
Pegasus Partners IV, L.P.	2007	30,000,000	35,450,068	17,897,776	17,409,493	1.00	-0.1%
FTVentures III, LP	2007	24,201,990	24,651,990	31,595,290	20,158,279	2.10	16.3%
Co-Investment Partners Europe, L.P.	2007	39,935,336	42,011,550	28,965,906	24,300,302	1.27	4.9%
Montreux Equity Partners IV, L.P.	2007	20,000,000	20,000,000	6,843,774	19,725,739	1.33	5.9%
Quaker BioVentures II, L.P.	2007	20,000,000	17,658,740	11,438,605	10,493,717	1.24	5.5%
SCP Vitalife Partners II Fund	2007	20,000,000	20,099,698	1,579	12,535,888	0.62	-8.8%
Craton Equity Investors I, L.P.	2007	20,000,000	20,089,805	1,539,560	3,570,679	0.25	-21.2%
Nautic Partners VI, L.P.	2007	30,000,000	33,402,321	61,398,958	14,298,491	2.27	19.1%
Constellation Venture Capital III, L.P.	2007	25,000,000	27,160,015	5,676,045	16,038,700	0.80	-4.4%
United States Power Fund III, L.P.	2007	65,000,000	71,706,783	33,791,795	61,082,720	1.32	5.7%
Halyard Capital Fund II, L.P.	2007	25,000,000	21,206,440	21,180,466	9,472,203	1.45	7.3%
Carlyle Partners V, L.P.	2007	70,000,000	71,289,098	84,533,483	33,255,063	1.65	13.3%

Information provided by the New York City Employees' Retirement System Consultants

# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
PCG Clean Energy & Technology Fund (East), LLC	2007	90,000,000	79,605,090	9,980,582	37,928,721	0.60	-9.3%
GSO Capital Opportunities Fund LP	2007	45,000,000	67,205,518	91,456,126	6,010,908	1.45	17.9%
StarVest Partners II, L.P.	2007	25,000,000	24,943,994	1,166,983	21,950,883	0.93	-1.7%
New Mountain Partners III, L.P.	2007	100,000,000	98,627,032	79,134,931	84,710,982	1.66	12.0%
Vista Equity Partners Fund III, L.P.	2007	30,000,000	31,871,536	67,850,734	13,949,742	2.57	28.3%
Trilantic Capital Partners IV L.P.	2007	69,028,637	71,533,562	97,265,247	13,392,119	1.55	13.9%
RLJ Equity Partners Fund I, L.P.	2007	20,000,000	21,179,584	8,301,877	26,033,233	1.62	13.5%
Pine Brook Capital Partners, L.P.	2007	30,000,000	31,422,057	18,464,292	17,483,919	1.14	4.5%
Paladin III (NY City), L.P.	2008	30,000,000	37,486,156	17,846,948	31,087,631	1.31	7.7%
Relativity Fund, L.P.	2008	10,877,829	10,773,614	2,302,071	3,465,235	0.54	-10.9%
Apollo Investment Fund VII, L.P.	2008	100,000,000	118,027,691	176,618,663	29,670,417	1.75	24.3%
NGN BioMed Opportunity II, L.P.	2008	20,000,000	19,151,821	3,946,209	9,662,808	0.71	-7.6%
Carpenter Community BancFund-A, L.P.	2008	20,000,000	19,519,654	11,658,453	18,783,592	1.56	8.1%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	45,000,000	49,659,172	33,807,446	22,487,601	1.13	4.3%
Yucaipa American Alliance Fund II, LP	2008	120,000,000	163,744,290	97,293,704	125,473,809	1.36	8.4%
Levine Leichtman Capital Partners IV, L.P.	2008	35,000,000	35,143,420	44,357,153	17,675,790	1.77	20.6%
Lee Equity Partners Fund, L.P.	2008	37,261,581	50,020,033	56,971,528	4,010,739	1.22	6.3%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	2008	45,000,000	42,054,618	25,269,212	38,989,655	1.53	14.1%
Yucaipa Corporate Initiatives Fund II, LP	2008	42,092,788	40,937,928	12,669,673	24,966,329	0.92	-1.8%
Leeds Equity Partners V, L.P.	2008	60,000,000	54,360,440	51,223,650	39,330,962	1.67	16.2%
GI Partners Fund III L.P.	2008	45,000,000	48,199,335	48,988,093	20,169,057	1.43	12.1%
Ares Corporate Opportunities Fund III, L.P.	2008	75,000,000	88,461,614	91,139,003	68,258,613	1.80	20.8%
GCM Grosvenor NYCERS Emerging Manager Co-Investment Fund, L.P.	2008	12,875,950	14,649,770	26,323,595	46,135	1.80	14.2%
GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	2008	116,737,374	124,972,002	74,401,636	87,676,520	1.30	10.3%
First Reserve Fund XII, L.P.	2008	45,000,000	47,936,739	21,141,435	14,301,100	0.74	-8.2%
Landmark Equity Partners XIV, L.P.	2008	109,120,000	101,956,466	84,166,725	49,260,960	1.31	11.8%
Crestview Partners II, L.P.	2008	50,000,000	54,503,075	44,268,275	34,730,624	1.45	12.0%
Avista Capital Partners II, L.P.	2008	75,000,000	91,251,493	102,047,062	62,688,623	1.81	17.4%
Blue Wolf Capital Fund II, L.P.	2008	25,000,000	27,167,904	12,501,194	19,964,449	1.19	5.7%
Bridgepoint Europe IV	2008	26,742,777	24,600,965	21,294,827	14,476,370	1.45	10.4%
Aisling Capital III, LP	2008	14,000,000	14,855,342	13,448,443	9,222,911	1.53	18.9%
Onex Partners III LP	2008	75,000,000	81,027,018	58,915,211	62,712,853	1.50	12.7%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	40,000,000	38,739,959	32,185,534	25,926,696	1.50	12.8%
FS Equity Partners VI, L.P.	2009	32,500,000	31,286,350	24,359,661	32,328,121	1.81	17.9%
Lincolnshire Equity Fund IV, L.P.	2009	27,500,000	28,182,913	9,638,864	24,723,911	1.22	7.3%
Lexington Capital Partners VII, L.P.	2009	50,000,000	42,668,825	38,432,363	24,833,474	1.48	15.3%

Information provided by the New York City Employees' Retirement System Consultants

# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Snow Phipps II, L.P.	2010	30,000,000	29,841,760	14,320,384	30,302,510	1.50	17.5%
JP Morgan Fleming (Tranche B)	2010	35,000,000	32,476,125	12,022,033	34,027,440	1.42	11.6%
Trident V, L.P.	2010	110,000,000	116,164,874	32,710,893	113,921,753	1.26	8.0%
Blackstone Capital Partners VI, L.P.	2011	120,000,000	111,564,677	19,603,884	115,466,511	1.21	9.8%
Ampersand 2011	2011	25,000,000	24,125,000	8,694,145	37,403,652	1.91	19.2%
BDCM Opportunity Fund III, L.P.	2011	45,000,000	57,406,306	20,728,277	47,170,332	1.18	8.4%
AXA Secondary Fund V B L.P.	2011	120,000,000	94,892,906	65,016,958	78,017,901	1.51	17.0%
Wellspring Capital Partners V, L.P.	2011	40,000,000	35,876,787	4,866,522	43,879,019	1.36	14.6%
EQT VI, L.P.	2011	105,942,792	90,471,874	2,593,006	110,626,659	1.25	8.6%
Pegasus Partners V, L.P.	2011	20,789,916	16,453,434	3,700,886	22,783,755	1.61	16.7%
BC European Capital IX	2011	132,058,438	111,580,379	38,669,729	96,660,201	1.21	8.3%
American Securities Partners VI, L.P.	2011	80,000,000	84,853,612	26,188,180	92,955,407	1.40	18.8%
Vista Equity Partners Fund IV, L.P.	2011	100,000,000	100,893,426	51,024,971	126,898,560	1.76	22.4%
Warburg Pincus Private Equity XI, L.P.	2012	110,000,000	102,733,488	18,508,710	109,316,903	1.24	12.4%
Trilantic Capital Partners V L.P.	2012	70,000,000	39,478,439	2,558,009	36,854,622	1.00	-0.1%
Palladium Equity Partners IV, L.P.	2012	55,000,000	24,961,217	2,705,377	24,341,431	1.08	4.0%
Ares Corporate Opportunities Fund IV, L.P.	2012	125,000,000	97,970,953	8,707,794	105,954,878	1.17	9.2%
Green Equity Investors VI, L.P.	2012	120,000,000	96,765,064	15,668,701	101,508,919	1.21	11.7%
Platinum Equity Capital Partners III, L.P.	2012	100,000,000	60,177,028	36,144,131	63,544,057	1.66	46.6%
<u>NYCERS - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>150,000,000</u>	<u>80,789,449</u>	<u>4,404,622</u>	<u>87,522,653</u>	<u>1.14</u>	<u>9.9%</u>
Carlyle Partners VI, L.P.	2013	75,000,000	37,862,352	1,248,343	41,125,926	1.12	8.0%
Landmark Equity Partners XV, L.P.	2013	75,000,000	25,974,786	10,280,699	19,962,423	1.16	11.1%
Apollo Investment Fund VIII, L.P.	2013	140,000,000	60,625,517	1,359,510	64,627,477	1.09	9.2%
Landmark - NYC Fund I, L.P.	2013	25,000,000	11,039,827	2,967,680	10,903,262	1.26	16.1%
CVC Capital Partners VI, L.P.	2013	121,415,907	45,435,563	829,561	44,449,971	1.00	-0.4%
Crestview Partners III, L.P.	2013	66,000,000	15,112,145	249,535	13,057,412	0.88	NM
Crestview Partners III (Co-Investment B), L.P.	2013	22,000,000	7,374,875	309,025	7,312,126	1.03	NM
Olympus Growth Fund VI, L.P.	2014	75,000,000	38,079,499	5,784,184	39,308,526	1.18	28.0%
ASF VI B L.P.	2014	83,000,000	40,186,988	2,159,002	46,159,443	1.20	15.2%
ASF VI B NYC Co-Invest L.P.	2014	27,000,000	17,031,244	3,815,187	17,768,824	1.27	18.3%
Vista Equity Partners Fund V, L.P.	2014	125,000,000	109,685,394	21,665,755	98,141,813	1.09	NM
Carlyle Partners VI, L.P. (Side Car)	2014	4,567,000	4,473,871	-	4,174,875	0.93	NM
Lexington Capital Partners VIII, L.P.	2014	110,000,000	24,342,374	4,795,520	25,878,454	1.26	NM
Centerbridge Capital Partners III, L.P.	2014	23,700,000	6,310,789	249,841	6,648,464	1.09	NM
Siris Partners III, L.P.	2015	31,000,000	4,793,167	23,901	4,197,490	0.88	NM
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	78,500,000	20,609,630	-	21,524,790	1.04	NM

Information provided by the New York City Employees' Retirement System Consultants



# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Warburg Pincus Private Equity XII, L.P.	2015	205,500,000	14,264,797	-	12,247,791	0.86	NM
ASF VII B L.P.	2015	94,500,000	6,615,983	24,926	7,747,287	1.17	NM
ASF VII B NYC Co-Invest L.P.	2015	46,000,000	4,600	-	4,600	1.00	NM
EQT VII, L.P.	2015	158,844,548	29,926,094	-	26,482,214	0.88	NM
American Securities Partners VII, L.P.	2015	80,000,000	-	-	(494,356)	-	N/A
Bridgepoint Europe V L.P.	2015	60,286,589	12,543,776	-	12,885,384	1.03	NM
Bridgepoint Europe V Co-Invest	2015	17,491,320	-	-	-	-	N/A
<u>NYCERS - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>180,000,000</u>	<u>5,127,213</u>	<u>-</u>	<u>4,940,180</u>	<u>0.96</u>	<u>NM</u>
Vista Equity Partners Fund VI, L.P.	2016	158,000,000	18,956,629	-	19,140,700	1.01	NM
Ares Corporate Opportunities Fund V, L.P.	2016	95,000,000	-	-	-	-	N/A
Apax IX USD, L.P.	2016	127,000,000	-	-	-	-	N/A
BC European Capital X	2016	86,623,680	-	-	-	-	N/A
BCEC X Co-Investment	2016	34,649,472	-	-	-	-	N/A
Green Equity Investors VII, L.P.	2016	95,000,000	-	-	-	-	N/A
<b>TOTAL LIQUIDATED</b>		<b>501,248,703</b>	<b>571,328,127</b>	<b>670,818,361</b>	<b>-</b>	<b>1.17</b>	<b>5.1%</b>
AEA Investors 2006 Fund L.P.	2006	22,893,771	26,016,229	30,842,902	-	1.19	7.8%
Allegra Capital Partners IV, L.P.	2000	24,000,000	24,000,000	12,606,027	-	0.53	-7.4%
Carlyle Partners III, L.P.	2000	45,423,105	55,645,609	108,817,410	-	1.96	20.5%
Clayton, Dubilier & Rice Fund VII, L.P.	2005	41,067,427	46,598,100	52,419,668	-	1.12	2.5%
Clayton, Dubilier & Rice Fund VIII, L.P.	2009	29,243,725	35,195,073	40,239,167	-	1.14	6.2%
Emerald Infrastructure Development Fund	2008	996,804	996,804	5,607	-	0.01	-99.4%
Ethos US Dollar Fund V-B	2005	30,290,568	46,370,610	49,740,469	-	1.07	3.0%
HM 2006 Sector Performance Fund	2007	23,185,013	26,474,417	18,633,959	-	0.70	-12.0%
NewSpring Growth Capital II, L.P.	2006	14,400,000	14,561,753	21,528,849	-	1.48	11.7%
Ripplewood Partners II, L.P.	2001	20,000,000	22,522,260	17,590,589	-	0.78	-10.2%
Silver Lake Partners II, L.P.	2004	46,469,062	53,190,565	75,839,352	-	1.43	9.1%
Silver Lake Partners III, L.P.	2007	37,822,673	45,707,472	63,369,258	-	1.39	17.0%
Tailwind Capital Partners, L.P.	2007	26,057,294	29,653,998	30,122,727	-	1.02	0.7%
Thomas H. Lee Equity Fund VI, L.P.	2006	34,418,261	39,074,789	35,813,300	-	0.92	-2.0%
VS&A Communications Partners III, L.P.	1998	50,000,000	50,248,403	69,062,415	-	1.37	6.3%
Vitruvian Investment Partnership I	2007	54,981,001	55,072,045	44,186,661	-	0.80	-7.7%

Information provided by the New York City Employees' Retirement System Consultants

# Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
<b>TOTAL REAL ASSETS</b>		4,447,806,713	3,600,165,966	1,845,818,232	3,055,697,820	1.36	7.7%
<b>TOTAL PRIVATE REAL ESTATE</b>		3,978,806,713	3,445,200,015	1,839,027,715	2,889,981,792	1.37	7.6%
<b>TOTAL LIQUIDATED PRIVATE REAL ESTATE</b>		171,360,625	132,620,501	332,970,852	-	2.51	9.8%
<b>TOTAL INFRASTRUCTURE</b>		469,000,000	154,965,951	6,790,517	165,716,028	1.11	10.5%
<b>TOTAL PRIVATE REAL ESTATE</b>							
Blackstone Fund IV	2004	30,000,000	38,440,704	45,407,325	8,566,637	1.40	10.7%
The City Investment Fund I	2004	225,000,000	221,883,300	224,092,986	787,664	1.01	0.3%
Canyon Johnson Urban Fund II	2005	40,000,000	35,954,818	13,194,594	2,807,510	0.45	-10.6%
AREA Real Estate Investment Fund V, LP	2006	25,000,000	25,000,001	11,232,946	13,104,782	0.97	-0.4%
PRISA SA	2006	86,000,000	92,514,113	22,362,685	112,231,442	1.45	4.3%
Prologis Targeted U.S. Logistics Fund	2006	25,000,000	32,398,805	7,697,211	31,311,287	1.20	2.5%
RREEF America REIT II	2006	86,000,000	113,537,802	49,015,175	111,848,491	1.42	4.8%
UBS Trumbull Property Fund	2006	156,000,000	216,277,653	48,212,384	266,674,949	1.46	6.5%
Blackstone Real Estate Partners VI	2007	110,000,000	122,123,928	165,965,603	64,272,052	1.89	13.1%
Carlyle Realty Partners V	2007	20,000,000	25,025,630	27,669,012	7,221,479	1.39	8.8%
Colony Realty Partners II	2007	20,000,000	21,420,211	666,108	5,236,800	0.28	-14.3%
Heitman HART	2007	115,000,000	159,874,638	44,874,638	212,658,204	1.61	8.2%
JP Morgan Special Situation Property Fund	2007	90,000,000	102,852,130	26,237,900	113,110,204	1.35	3.9%
JP Morgan Strategic Property Fund	2007	136,000,000	149,368,223	-	255,108,295	1.71	7.1%
Metropolitan Workforce Housing Fund	2007	14,000,000	14,013,027	6,332,270	10,757,484	1.22	4.2%
PRISA II	2007	141,518,761	149,597,017	29,324,949	189,893,370	1.47	5.3%
RREEF America REIT III - 1410	2007	90,000,000	90,000,000	47,615,829	4,107,470	0.57	-7.5%
UrbanAmerica II	2007	25,000,000	23,222,735	2,489,211	156,354	0.11	-25.0%
American Value Partners Fund I	2008	55,000,000	39,320,163	31,839,298	15,216,537	1.20	4.2%
AREA European Real Estate Fund III, LP	2008	30,000,000	30,487,500	30,737,500	5,464,734	1.19	4.5%
Capri Urban Investors	2008	60,000,000	59,980,707	15,777,250	38,321,182	0.90	-1.7%
PRISA III	2008	50,000,000	57,633,823	-	124,572,677	2.16	13.2%
Silverpeak Legacy Partners III	2008	50,000,000	22,168,479	2,082,876	6,708,908	0.40	-12.3%
Stockbridge Real Estate Fund III	2008	27,000,000	26,998,145	-	35,805,385	1.33	5.2%
Westbrook Real Estate Fund VII	2008	40,000,000	43,484,433	38,472,731	13,734,635	1.20	3.5%
Thor Urban Property Fund II	2009	40,000,000	51,756,666	44,679,492	34,104,480	1.52	12.9%
Walton Street Real Estate Fund VI	2009	50,000,000	44,323,933	40,135,701	27,099,389	1.52	10.1%
Blackstone Real Estate Partners Europe III (USD Vehicle)	2010	50,000,000	51,176,456	36,562,983	34,432,314	1.39	11.6%
Canyon Johnson Urban Fund III	2010	30,000,000	29,586,980	39,586,665	770,024	1.36	12.3%
LaSalle Property Fund	2010	50,000,000	50,000,000	10,312,729	67,624,775	1.56	12.4%

Information provided by the New York City Employees' Retirement System Consultants

## Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Westbrook Real Estate Fund VIII	2010	50,000,000	59,287,424	67,801,514	9,847,931	1.31	12.5%
Carlyle Realty Partners VI	2011	70,000,000	65,153,792	68,644,513	40,828,266	1.68	28.9%
H/2 Special Opportunities Fund II	2011	40,000,000	39,999,999	24,235,222	31,616,996	1.40	15.0%
Blackstone Real Estate Partners VII	2012	170,000,000	199,624,351	123,164,910	175,197,099	1.49	21.4%
Brookfield Strategic Real Estate Partners	2012	100,000,000	103,710,668	33,954,690	110,173,480	1.39	17.8%
Taconic New York City Investment Fund LP	2012	70,000,000	28,954,546	17,022,727	33,012,628	1.73	18.1%
KTR Industrial Fund III	2013	40,000,000	17,479,475	27,587,374	75,374	1.58	40.5%
NYC Asset Investor #1 LLC	2013	50,000,000	53,462,027	5,852,876	60,462,193	1.24	15.7%
NYC Asset Investor #2 LLC	2013	75,000,000	62,046,071	9,379,447	65,397,568	1.21	12.9%
NYC Asset Investor #3 LLC	2013	50,000,000	17,116,185	195,673	17,283,691	1.02	1.6%
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2014	169,000,000	139,018,206	20,625,813	130,269,506	N/A	N/A
Carlyle Realty Partners VII	2014	80,000,000	33,415,459	186,273	37,092,877	N/A	N/A
Divco West Fund IV	2014	23,000,000	22,334,462	7,422,388	25,970,126	N/A	N/A
Lone Star Real Estate Fund III	2014	100,000,000	92,730,560	31,885,086	80,467,184	N/A	N/A
MetLife Core Property Fund	2014	50,000,000	50,000,000	3,506,500	56,500,406	N/A	N/A
Almanac Realty Securities VII	2015	65,000,000	15,667,666	389,749	16,517,378	N/A	N/A
Avanath Affordable Housing Fund II	2015	8,000,000	7,408,771	-	9,462,508	N/A	N/A
Blackstone Real Estate Partners VIII	2015	151,000,000	57,111,180	528,877	62,545,889	N/A	N/A
H/2 Special Opportunities Fund III	2015	65,000,000	37,381,152	-	40,011,951	N/A	N/A
Almanac Realty Securities VII (Sidecar IV)	2016	20,000,000	2,991,102	-	3,221,115	N/A	N/A
Divco West Fund V	2016	60,000,000	-	-	-	N/A	N/A
European Property Investors Special Opportunities Fund IV (EPISO IV)	2016	49,178,496	7,202,075	709,063	6,357,793	N/A	N/A
Exeter Industrial Core Club Fund II	2016	28,000,000	5,740,000	-	5,717,725	N/A	N/A
Jamestown Premier Property Fund	2016	39,000,000	10,847,010	386,117	10,740,282	N/A	N/A
NYCRS Artemis Co-Investment	2016	53,000,000	5,857,864	-	8,006,385	N/A	N/A
PW Real Estate Fund III LP	2016	46,748,831	-	-	(411,427)	N/A	N/A
USAA Eagle Real Estate Fund	2016	60,000,000	37,617,449	-	39,904,932	N/A	N/A
Westbrook Partners X - Co-Investment	2016	23,000,000	-	-	-	N/A	N/A
Westbrook Real Estate Fund X	2016	36,000,000	-	-	2,422	N/A	N/A
<b>TOTAL LIQUIDATED PRIVATE REAL ESTATE</b>							
Canyon Johnson Urban Fund	2003	15,000,000	13,590,364	15,874,432	-	1.17	10.2%
Tishman Speyer Separate Account (ERS)	2004	100,000,000	71,066,452	259,755,306	-	3.66	63.2%
Carbon Capital III	2009	40,000,000	43,757,162	53,134,591	-	1.21	8.5%
JP Morgan Urban Renaissance Property Fund	2009	16,360,625	4,206,523	4,206,523	-	1.00	0.0%

Information provided by the New York City Employees' Retirement System Consultants

## Alternative Assets Manager Performance Detail

Through June 30, 2016



	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
<b>TOTAL INFRASTRUCTURE INVESTMENTS</b>							
Brookfield Infrastructure Fund II	2013	75,000,000	45,333,637	5,176,453	51,287,888	1.25	16.2%
IFM Global Infrastructure Fund	2014	75,000,000	76,159,163	1,159,163	81,555,046	N/A	N/A
First Reserve Energy Infrastructure Fund II,	2014	45,000,000	8,161,137	232,899	7,474,805	N/A	N/A
KKR Global Infrastructure Investors II L.P.	2014	77,000,000	17,324,040	222,002	17,176,532	N/A	N/A
Brookfield Infrastructure Fund III, L.P.	2016	91,000,000	7,191,637	-	8,290,107	N/A	N/A
Global Infrastructure Partners III-A/B, L.P.	2016	106,000,000	796,337	-	(68,350)	N/A	N/A

Information provided by the New York City Employees' Retirement System Consultants

## Alternative Assets Manager Performance Detail

Through September 30, 2016



	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
<b>TOTAL OPPORTUNISTIC FIXED INCOME</b>		2,049,884,078	1,906,784,820	784,456,094	1,506,908,214	3.30%	7.43%
Avenue Special Situations Fund V, L.P.	2007	75,784,973	76,951,175	99,724,647	829,340	0.00%	NM
Avenue Europe Special Sit. Fund, L.P	2008	30,901,612	27,839,090	53,462,641	254,359	1.16%	NM
PIMCO DiSCO Fund, L.P.	2008	150,000,000	150,427,750	204,457,599	-		11.23%
Alliance Bernstein PPIP Fund, L.P	2009	41,697,493	41,697,493	57,295,571	-		15.51%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862	-		20.19%
Avenue Special Situations Fund VI L.P.	2011	70,000,000	71,766,544	45,401,394	30,770,713	0.00%	1.54%
Golden Tree	2011	140,000,000	131,253,192	-	182,252,141	3.12%	8.21%
Marathon Centre Street Partnership, L.P.	2011	218,750,000	229,250,000	26,250,000	256,937,981	3.15%	6.49%
AG Centre Street Partnership, L.P.	2012	180,000,000	142,200,000	24,226,130	148,959,339	3.89%	6.15%
Apollo Centre Street Partnership, L.P	2012	268,750,000	235,888,211	77,129,065	168,333,554	4.48%	1.77%
FCO MA Centre Street L.P.	2012	140,000,000	174,500,303	63,515,770	135,768,991	0.00%	7.94%
OHA Centre Street Partnership, L.P.	2012	175,000,000	170,722,628	25,600,677	175,771,453	6.31%	6.13%
Contrarian Partnership, L.P	2013	90,000,000	72,000,000	-	77,117,912	7.78%	3.52%
Lone Star Fund VIII(U.S.), L.P.	2013	100,000,000	87,065,530	61,997,396	51,392,957	0.00%	21.80%
Oaktree Opportunities Fund IX, L.P.	2013	100,000,000	100,000,000	-	99,022,812	3.43%	-0.41%
Ares Centre Street LP	2014	140,000,000	128,117,072	-	141,157,678	1.37%	9.40%
Brightwood Capital Fund III, L.P.	2015	35,000,000	26,653,806	3,670,342	24,096,727	0.00%	3.27%
Torchlight Debt Opportunity Fund V, LP	2015	67,000,000	13,399,897	-	14,242,259	9.03%	8.92%

Information provided by Alpha Frontier  
Above data is not final and subject to change

# Alternative Assets Manager Performance Detail

Through September 30, 2016



	Market Value	MTD Return%	3 Month Return%	FYTD Return%	YTD Return%	1 Year Return%	3 Year Return%	ITD Return%	ITD Cumulative Return%
<b>TOTAL HEDGE FUNDS</b>	1,047,508,841	-0.28%	1.14%	1.14%	1.18%	-0.23%	2.63%	2.69%	14.94%
<b>TOTAL DIRECT HEDGE FUNDS</b>	799,267,237	-0.38%	1.33%	1.33%	1.27%	-0.14%	2.92%	4.02%	20.58%
<b>TOTAL FUND OF FUNDS HEDGE FUNDS</b>	248,241,604	0.05%	0.53%	0.53%	1.08%	-0.32%	1.19%	1.83%	10.00%
<b>TOTAL DIRECT HEDGE FUNDS</b>									
Double Black Diamond, L.P.	-	0.00%		0.00%	0.00%		4.01%	6.53%	13.49%
SRS Partners US, LP	35,125,614	1.02%	4.40%	4.40%	-5.80%	1.33%		4.54%	8.08%
Turiya Fund LP	-	0.00%		0.00%	-9.81%	-9.05%		-7.32%	-7.32%
Total Long/Short Equity	35,125,614	1.02%	4.40%	4.40%	-5.82%	-1.84%	3.96%	3.92%	13.33%
Fir Tree Value Fund, L.P.	91,143,437	-0.75%	2.18%	2.18%	-1.70%	-4.42%	-2.44%	0.36%	1.32%
Luxor Capital Partners Liquidating SPV, LLC.	8,944,681	0.35%	-3.76%	-3.76%	-3.76%			-3.76%	-3.76%
Luxor Capital Partners, LP	-	0.00%		0.00%	-7.78%	-18.04%		-17.68%	-33.32%
Perry Partners L.P.	47,260,139	-1.53%	-0.07%	-0.07%	-2.89%	-8.04%	-5.01%	-4.45%	-14.08%
Standard General Fund L.P.	28,630,888	-0.11%	6.36%	6.36%	6.36%			6.36%	6.36%
Standard General Fund L.P. - DO NOT USE	-	0.00%		0.00%	6.76%	5.10%		3.61%	7.68%
Total Event Driven	175,979,145	-0.80%	1.89%	1.89%	-1.72%	-7.02%	-4.49%	-1.77%	-6.33%
Brevan Howard L.P.	137,120,495	-0.81%	-1.99%	-1.99%	-2.64%	-4.53%	-0.71%	0.38%	1.77%
CCP Quantitative Fund LP	87,512,797	-2.34%	-3.80%	-3.80%	2.75%	3.64%	10.53%	-0.42%	-1.53%
Pharo Gaia Fund, LTD.	57,356,888	1.18%	5.81%	5.81%	14.39%			15.87%	15.87%
Pharo Macro Fund, Ltd.	-	0.00%		0.00%	4.57%	2.75%	7.80%	8.80%	28.80%
Systematica BlueTrend Fund L.P.	-	0.00%		0.00%	-2.34%	-4.22%	4.87%	1.23%	4.89%
Total Tactical Trading	281,990,180	-0.90%	-1.17%	-1.17%	2.12%	1.22%	4.98%	1.54%	7.40%
Brigade Leveraged Capital Structures Fund LP	-	0.00%		0.00%	0.00%		2.36%	4.64%	16.31%
Caspian Select Credit Fund, L.P.	112,906,744	0.95%	4.27%	4.27%	4.43%	-1.48%	-0.18%	2.83%	13.10%
D.E. Shaw Composite Fund, L.L.C.	193,265,555	-0.26%	2.39%	2.39%	5.65%	10.02%	13.18%	14.26%	88.35%
Total Relative Value	306,172,299	0.19%	3.07%	3.07%	5.20%	5.48%	7.10%	8.94%	50.20%
<b>TOTAL FUND OF FUNDS HEDGE FUNDS</b>									
Fund of Funds Hedge Funds	248,241,604	0.05%	0.53%	0.53%	1.08%	-0.32%	1.19%	1.83%	10.00%

Information provided by Alpha Frontier

New York City  
Employees' Retirement System

# Appendix D

## Footnotes

Through September 30, 2016



- The Barclays Capital Aggregate (then known as the Lehman Brothers Aggregate) was used prior to 1/1/89. Effective 1/1/89, in the Government Sector, maturities of less than 5 years were dropped from the Salomon and Lehman indices. From that date until 7/1/99 the benchmark was the NYC Core + 5, from Lehman.
- Effective 7/1/94, the NYC Core + 5 Index includes BBB rated securities.
- Effective 7/1/99, the basis of the NYC Index was changed from Lehman Brothers to Salomon. Also effective 7/1/99, only Salomon indices have been used to compare all fixed income managers.
- Effective 4/1/03, the name of the benchmark provider was changed from Salomon to Citigroup.
- Effective 7/1/03 the “NYC-Loomis” benchmark index for the Loomis Sayles Enhanced Yield portfolio reflects a change from the Citigroup BB&B Index to the more appropriate Merrill Lynch High Yield Master II Index.
- Effective 7/1/09, the Core+5 program was restructured.
  - The U.S. Gov’t sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov’t Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
  - The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
  - There were no changes to the Mortgage sector Index.
  - The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.
- Effective 11/1/10 The NCREIF NPI policy index was replaced with the NCREIF NFI ODEC net Index retroactively.
- Effective 6/1/11 The Opportunistic Fixed NYC-CORE PLUS 5 + 200BPS policy index was replaced with the NYC-10% ANNUAL RETURN primary and JP MORGAN GLOBAL HIGH YIELD PLUS 3% secondary indices retroactively.
- Effective 8/1/11 The Hedge Funds Primary benchmark is the 1 YEAR TREASURY BILL YIELD + 4% and the secondary benchmark is the HFRI FUND OF FUNDS COMPOSITE INDEX + 1%.



### General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment fees are recorded on a cash basis. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

### Page Specific

#### Pages 8 & 9 - Portfolio Asset Allocation

- Rebalancing Ranges: the minimum and maximum weights that actual Asset Allocation may reach before rebalancing between Asset Classes is necessary.

#### Pages 10 -12 - Performance Attribution: Total Plan

- Plan Return at Policy Weights: the return of the Total Plan assuming actual Asset Class results were maintained at target (Adjusted Policy) weights. *Figure = (Return of Asset Class 1 \* Target Weight) plus (Return Of Asset Class 2 \* Target Weight) plus (.....)*
- **Allocation Effect** = Total Plan Return minus Plan Return At Adjusted Policy Weights. Allocation is the Contribution to Performance resulting from an overweight or underweight to an asset class. E.g. an underweight to an Asset Class that under-performs results in a positive Allocation Effect and vice versa.
- **Selection Effect** = Equal to the Custom Benchmark (Adjusted Policy Index) Return minus Plan Return at Adjusted Policy Weights. This illustrates how the Managers have added or removed value based on their Security Selection decisions, e.g., *If the manager's Actual Returns are higher than the Implied Return there will be a positive Selection Effect.*
- **Policy Index = Custom Benchmark**  
*The "policy index" is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program. Weights may reflect an adjustment of actual policy for outstanding commitments for new or revised programs, such as for private market programs, which are invested gradually, or for any new or updated program requiring the completion of RFPs and contracts. The policy index/custom benchmark is calculated monthly based on adjusted policy weights at the beginning of each month.*

Through September 30, 2016



*The indexes and most recent policy weights are as follows:*

*U.S. Equity: Russell 3000 \* 33.63%*

*International Developed (EAFE) Markets: MSCI EAFE \* 10.27%*

*Emerging Markets: FTSE NYCERS Custom Benchmark \* 6.90%*

*Private Equity: Russell 3000 + 300 b.p. per annum \* 7.00%*

*Private Real Estate: NFI - ODCE Net+100BPS \* 5.21%*

*Infrastructure: CPI + 4% \* 0.32%*

*Hedge Funds: 1yr T- Bill yield + 4% \* 1.87%*

*Domestic Fixed Income: NYC Core +5 \* 21.49%*

*TIPS: Lehman U.S. TIPS \* 4.50%*

*Enhanced Yield: Citigroup BB&B \* 3.34%*

*Bank Loans: Credit Suisse Leveraged Loan \* 1.85%*

*Convertible Bonds: BofAML All Convertibles Ex Mandatory \* 1.00%*

*Opportunistic Fixed: 10% Annualized Return \* 2.61%*

### **Page 13 – Allocation and Selection Effects - Asset Class Breakdown**

- This chart aims to break down the Allocation and Selection Effects shown on the Performance Attribution pages. The aim of the Page is to show the asset classes where Managers are either out performing or under performing their benchmark and to show the basis point effect that this is having on Plan performance.