



New York City
Employees' Retirement System
Performance Overview as of June 30, 2021

Total Fund Overview

New York City Employees' Retirement System

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City of New York Employees' Retirement System Second Quarter 2021 Summary

General Economic and Market Conditions: U.S. GDP grew at a 6.5% annual rate in 2Q21 and regained the level last seen in February 2020, before the COVID pandemic spurred a global shutdown in economic activity. Our focus during the pandemic has been on the level of economic indicators— GDP, employment, unemployment, consumer spending, imports and exports, and personal income. Traditional measures such as annualized GDP growth lost meaning around the plunge and sharp recovery that defined the shutdown and reopening experience. Reaching the previous level of real GDP is a major milestone; now, GDP growth will regain some meaning as a way to track economic progress. Other key indicators like employment have yet to regain their pre-pandemic levels. In fact, employment has been the measure that took the greatest hit and has the furthest to go before claiming full recovery. We lost over 22 million jobs in the U.S. in March and April of 2020; while we have gained 15.5 million back, that's still almost 7 million short. The lost jobs were spread across many industries, but the deepest losses and the greatest deficits left to recover are in lower-paid sectors with concentrations of hourly jobs, including hospitality and travel-related industries.

The gains in GDP in 1Q and 2Q were startling and robust, yet still a bit less than economists expected. The Federal Reserve issued a forecast of 7% growth for the year in June 2021, but the 1Q figure was revised down to 6.3%. Growth in 3Q is expected to be stronger than 2Q, but consensus expectations for the year are coming down from 7%. Restocking depleted inventories was expected to be the main driver of growth this year, along with incredibly robust spending by consumers, but supply bottlenecks led to an actual decline in private inventory investment in 2Q, particularly in retail goods. Economists now estimate that in the second half of the year, inventory building is expected to account for as much as two-thirds of GDP growth.

Supply bottlenecks are really the story of the year for many markets in the global economy, both in goods such as building materials, commodities, and auto parts (such as vital computer chips), and in labor for a number of industries, in particular those originally hit hardest like hotels, restaurants, retail, and travel. The stories told by businesses unable to fill multiple open positions contrast sharply with the 7 million job deficit. So what gives? Fueling personal consumption demand has been a singular economic period where the steepest recession in terms of job losses and GDP decline in 70 years was accompanied by NO decline in total personal income. In a normal downturn, as individuals lose jobs and companies close their doors, spending sags as consumers and companies cut back. Unprecedented policy actions to support both individuals and businesses kept incomes in aggregate from falling at all, yet shutdowns held back supply in the face of almost no decrease in demand, at least for goods like building supplies, technology, communications, and computer services.

Through June 30, 2021



These kinks in supply have led to a spike in headline inflation: the year-over-year Consumer Price Index came in at 5.4% in June, while the much-more-volatile Producer Price Index shot up 19.5% compared to June 2020. After complete or partial shutdowns around the globe, many industries cannot simply restart production and build supply to meet surging demand instantaneously. Producer prices had been tumbling for more than a year prior to the pandemic, and then suffered another shock with the almost-forgotten plunge in energy prices in 1Q20 as Saudi oil producers entered into a price war to establish global energy supply discipline. The price of building materials, specifically timber, became the metaphor for inflation fears, reaching the point of commentary by none other than the chairman of the Federal Reserve. As incomes were maintained and interest in home renovation soared during the pandemic, demand for lumber surged while product from lumber mills was constrained first by total shutdowns and then production processes limited by social distancing protocols. Timber prices shot up over 300% by the start of June 2021, reaching an all-time high of \$1,515 per thousand board feet. As production caught up and demand finally eased, prices have since fallen by over \$1,000 and are back at 2018 levels (but still up 200% from spring 2020). Such volatility may be extreme, but timber really may be the appropriate metaphor for transitory price increases that will work through many industries and labor markets in the U.S. and global economies throughout 2021 and into 2022.

Please note that all return figures mentioned below are gross of fee.

Total Fund Performance: For the quarter ended June 30, 2021, the Fund returned +5.38%, twenty eight basis points above the Policy Target return of +5.10%. Over the trailing year, NYCERS has earned a return of +27.01% versus the Policy Target return of +26.34%. Over three years, the total Fund has returned +12.28% annualized. Over the trailing five years, the Fund has gained 11.76% annualized. The trailing 10-year return is +9.34% annualized.

Total Fund Assets: The Fund's assets totaled \$86.0 billion as of the end of the second quarter of 2021.

U.S. Equity: The total domestic equity portion of the NYCERS Fund returned +7.68% for the quarter, below the +8.24% return of the Russell 3000 Index. For the trailing year, NYCERS outperformed the index, returning +45.23% versus +44.16% for the index. The Fund is below the benchmark over the trailing three, five and ten year periods.

In Large Cap, the Fund underperformed the Russell 1000 Index, returning +7.94% versus the Russell 1000's return of +8.54% during the second quarter. The Fund's one year return of +43.88% outperformed the +43.07% return of the Index. The Fund is below the benchmark over the trailing three year period.

Through June 30, 2021



In Small Cap, the Fund returned +4.39%, above the Russell 2000 return of +4.29% for the quarter. The Fund's one year return of +61.70% underperformed the +62.03% return of the Index. The Fund is ahead of the benchmark over the trailing three year period.

Developed International: For the quarter, the Fund's Non-U.S. Developed Equity composite returned +5.82% (excluding NYCERS' historical non-U.S. Environmental manager), outperforming the Custom MSCI World ex-US Benchmark by 30 basis points. The Fund returned +40.27% for the trailing one year period, above the return of the benchmark (+34.82%). The Fund is above the benchmark over the trailing three, five, and ten year periods.

Emerging Markets Equity: The Fund's active emerging markets equity composite returned +5.31% in the quarter, outperforming the +5.05% return of NYCERS custom MSCI benchmark. The active portfolio outperformed the passive one for the quarter. The one year return for the active emerging markets composite is +54.18%, outperforming the +49.44% return for the benchmark. The active emerging markets equity composite is above the benchmark over the trailing three, five, and ten year periods.

Core Fixed Income: The composite of the Fund's core program returned +2.09% during the quarter, while the NYCERS Custom Structured Index returned +1.93%. For the past year, the core composite has returned -0.04%, while the benchmark's return is -0.39%. The Fund is below the benchmark over the trailing three and five year periods and ahead of the benchmark over the trailing ten year period.

TIPS: The Fund's TIPS composite delivered a +3.42% return in the quarter, above the +3.25% return for the Bloomberg Barclays Capital US TIPS Index. Over the past year, the Fund's TIPS managers have returned +6.46%, underperforming the benchmark's return of +6.51%. The Fund is below the benchmark over the trailing three year period, even with the benchmark over the trailing five year period, and ahead of the benchmark over the trailing ten year period.

High Yield: In high yield, the Fund's managers returned +2.80% for the quarter, while NYCERS High Yield Custom Benchmark posted a lower return of +2.74%. The Fund outperformed the custom benchmark over the past year, returning +15.45% as compared to the benchmark's return of +15.34%. The Fund is ahead of the benchmark over the trailing three, five, and ten year periods.

Convertibles: The convertible portfolio returned +2.10% in the quarter, below the +3.77% return of the ICE BofA All US Conv Ex Mandatory Index. Over the past year, the convertibles portfolio has returned +22.93%, underperforming the +48.00% return for the benchmark. The Fund underperformed the benchmark over the trailing three, five, and ten year periods.

Through June 30, 2021



Opportunistic Fixed Income: The opportunistic fixed income composite returned +4.86% over the second quarter, outperforming the blended benchmark of 50% JP Morgan Global High Yield / 50% Credit Suisse Leveraged Loan Index - Plus 300 bps (+2.83%). The Fund returned +21.77% for the trailing one year period, above the return of the blended benchmark (+17.35%). The Fund is below the blended benchmark over the trailing three, five, and ten year periods.

Alternatives: For the quarter, the Private Equity portfolio had approximately \$6.5 billion in invested capital, representing roughly 7.6% of the Total Fund. The Private Real Estate portfolio had approximately \$4.3 billion invested, accounting for roughly 5.1% of the Total Fund. The Infrastructure portfolio had approximately \$997 million invested, or 1.2%. Performance is reported separately by NYCERS' Private Equity and Real Estate consultants.

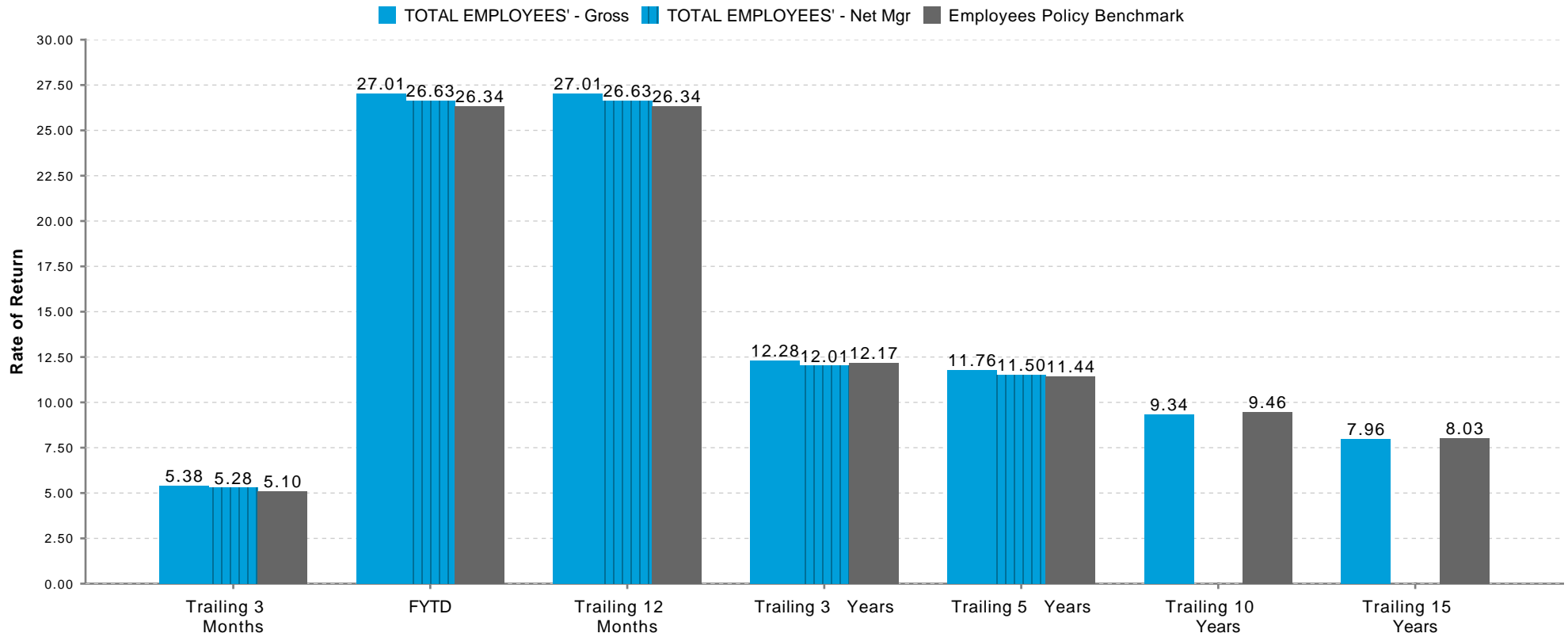
Total Portfolio Returns: June 30, 2021



Market Value (Billions)

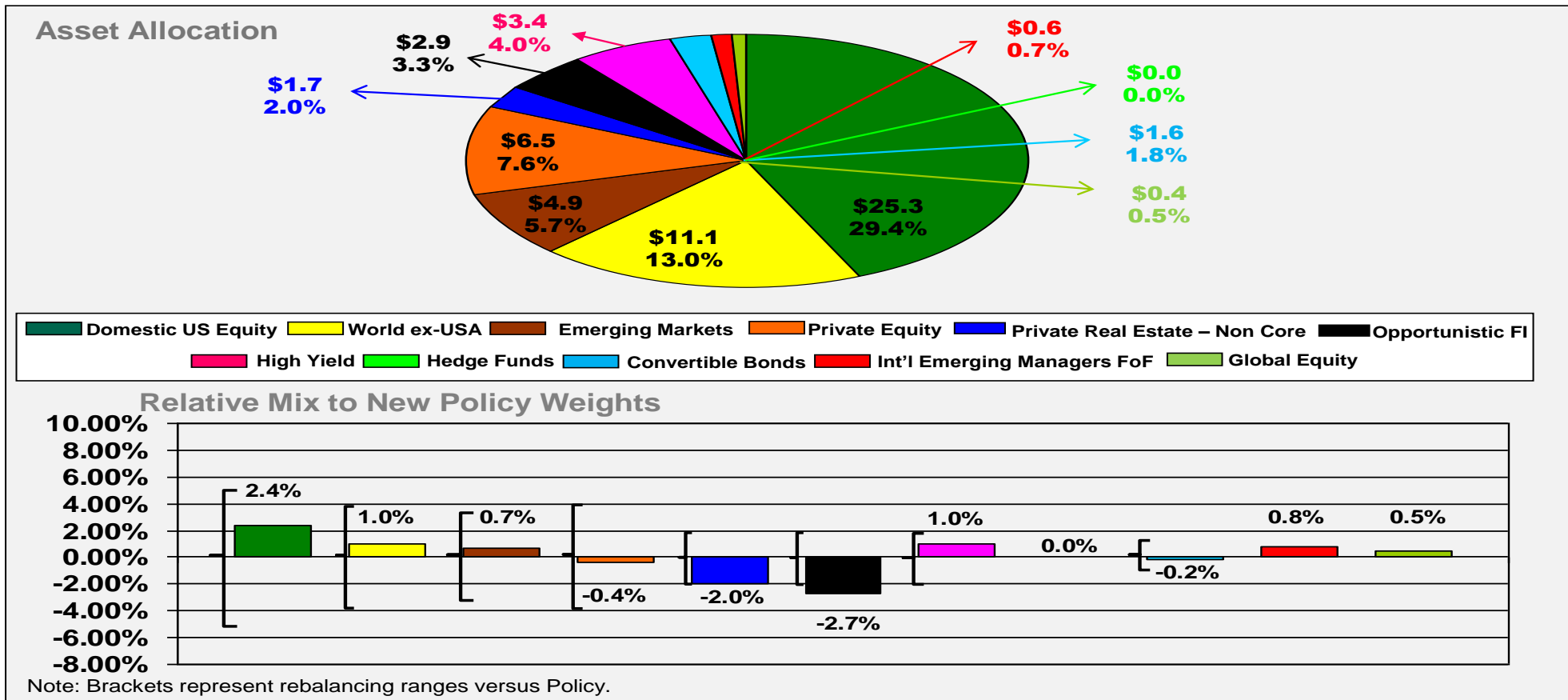
TOTAL EMPLOYEES'

\$86.0

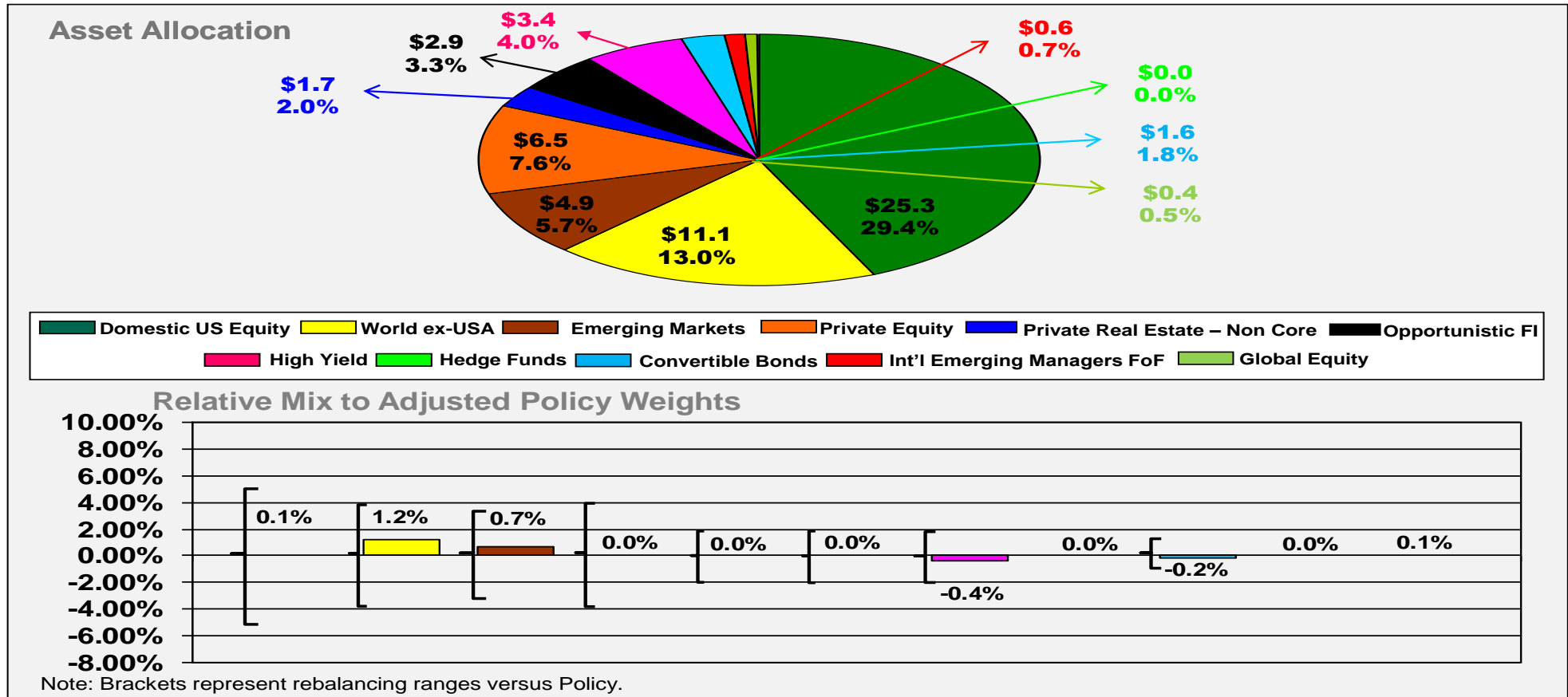


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL EMPLOYEES'	9.7	10.3	11.8	8.3	7.7	7.9

Portfolio Asset Allocation – Growth

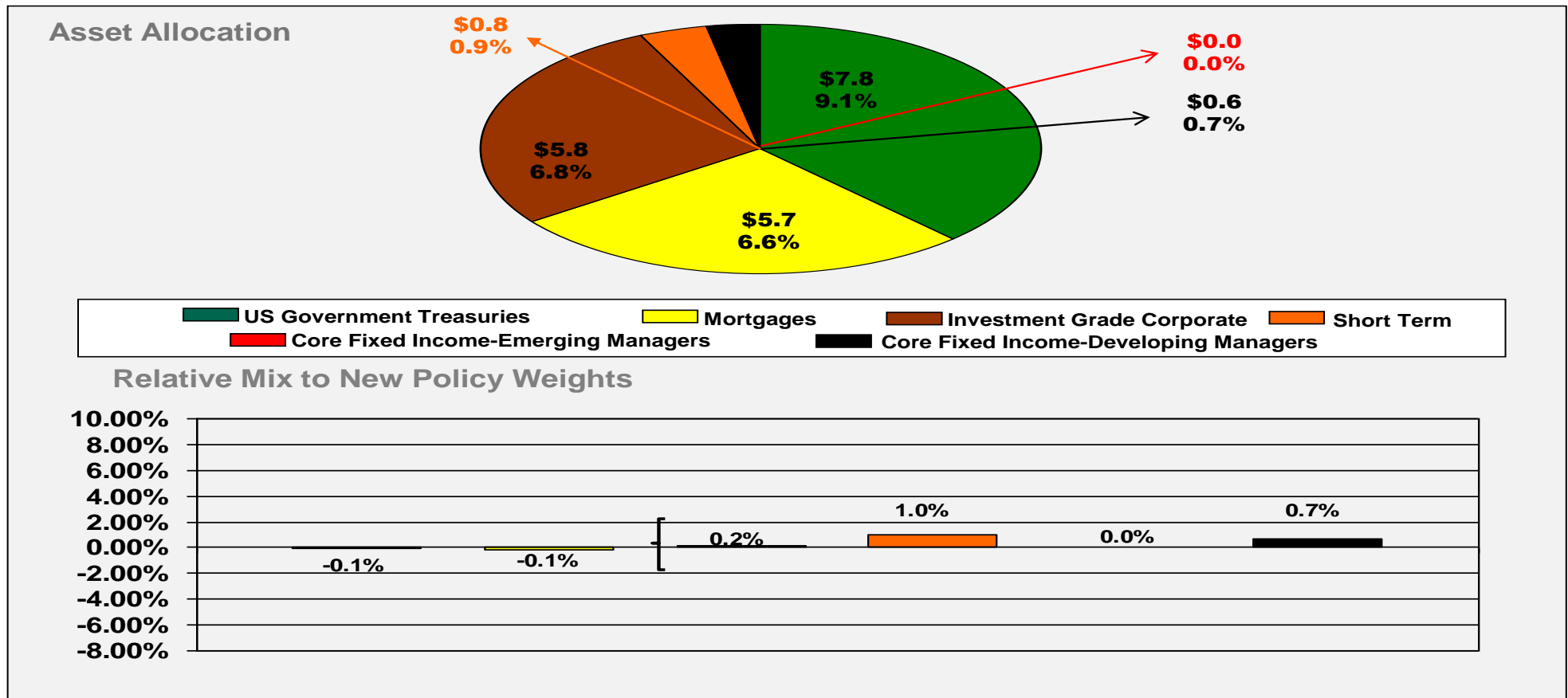


Portfolio Asset Allocation – Growth

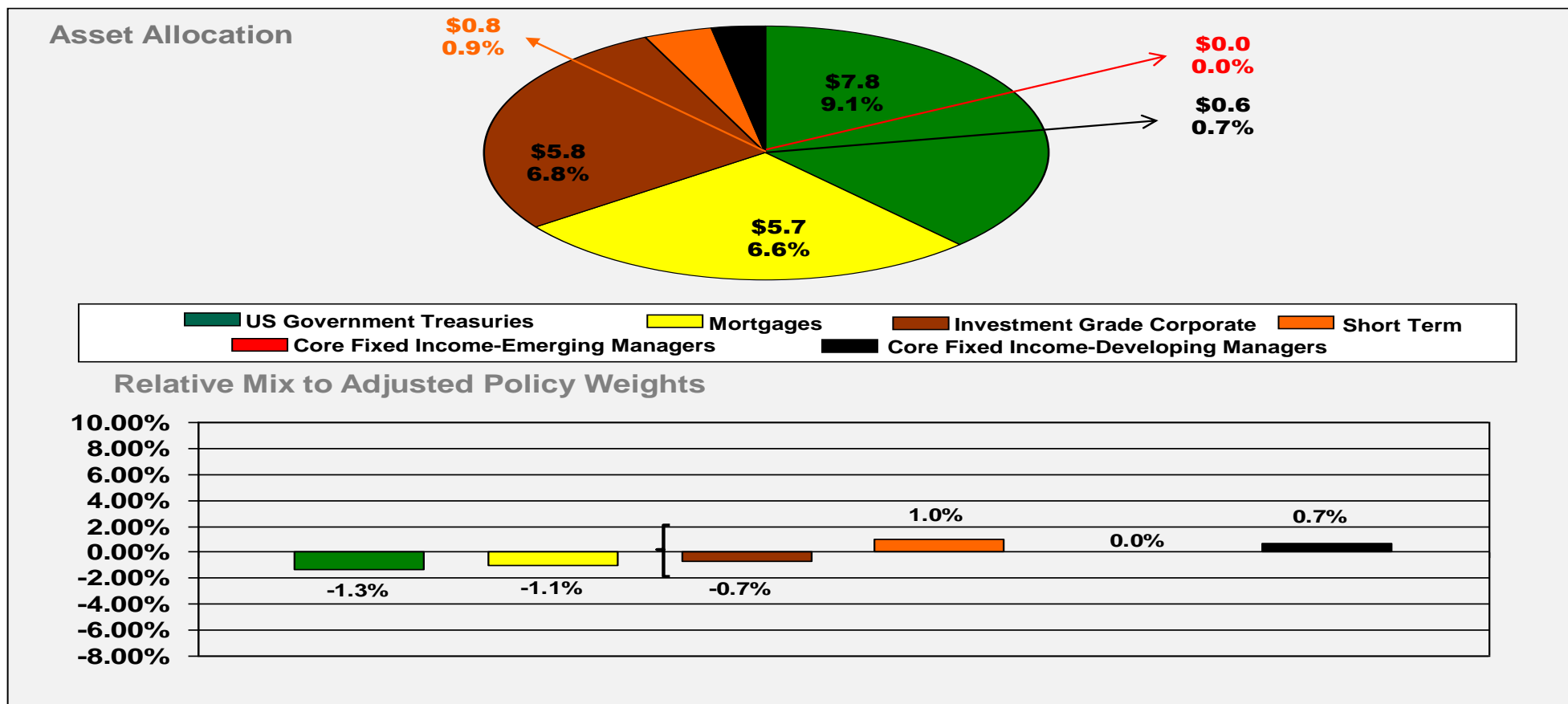


Note: On June 30, 2021 NYCERS' combined Fixed Income and Cash portfolios have a duration of 5.9 years. The duration of the Bloomberg US Aggregate Index was 6.6 years on that date.

Portfolio Asset Allocation – Deflation Protection

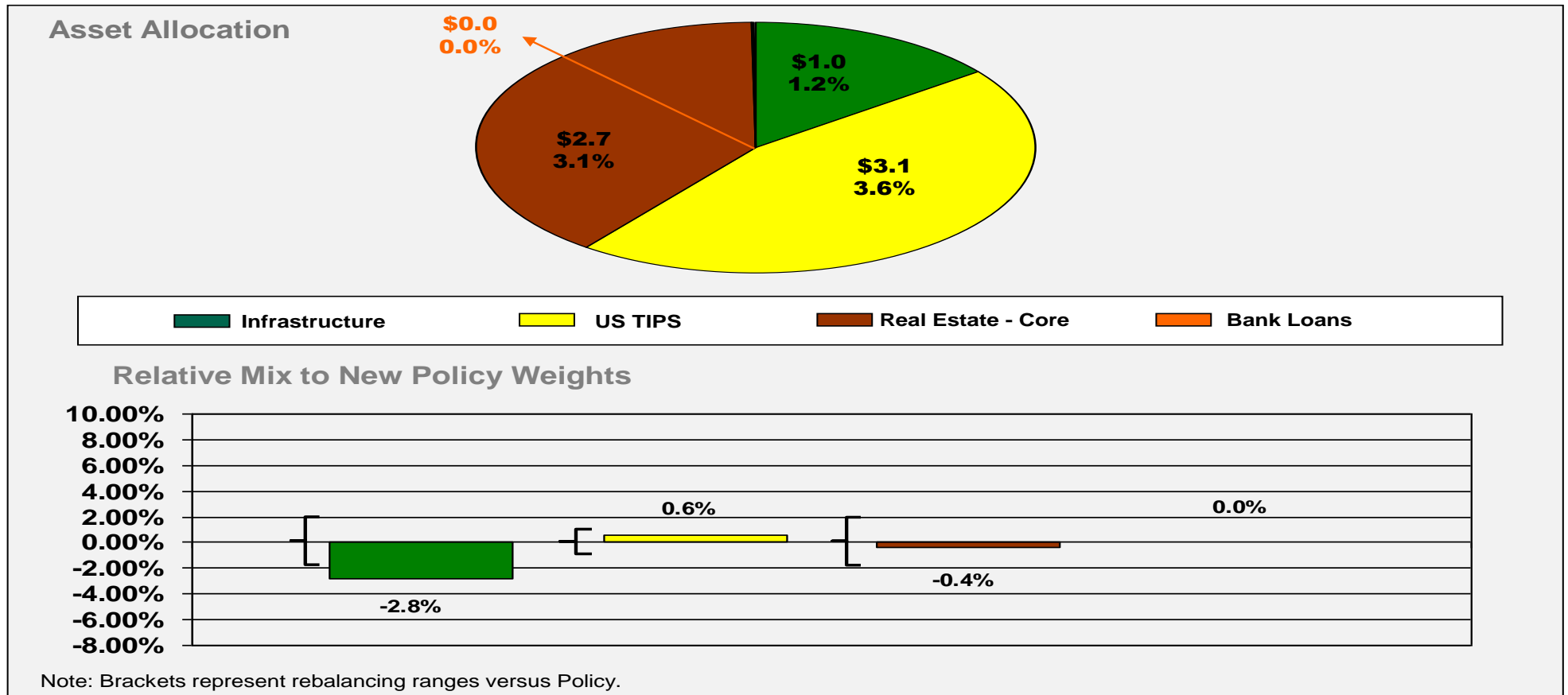


Portfolio Asset Allocation – Deflation Protection

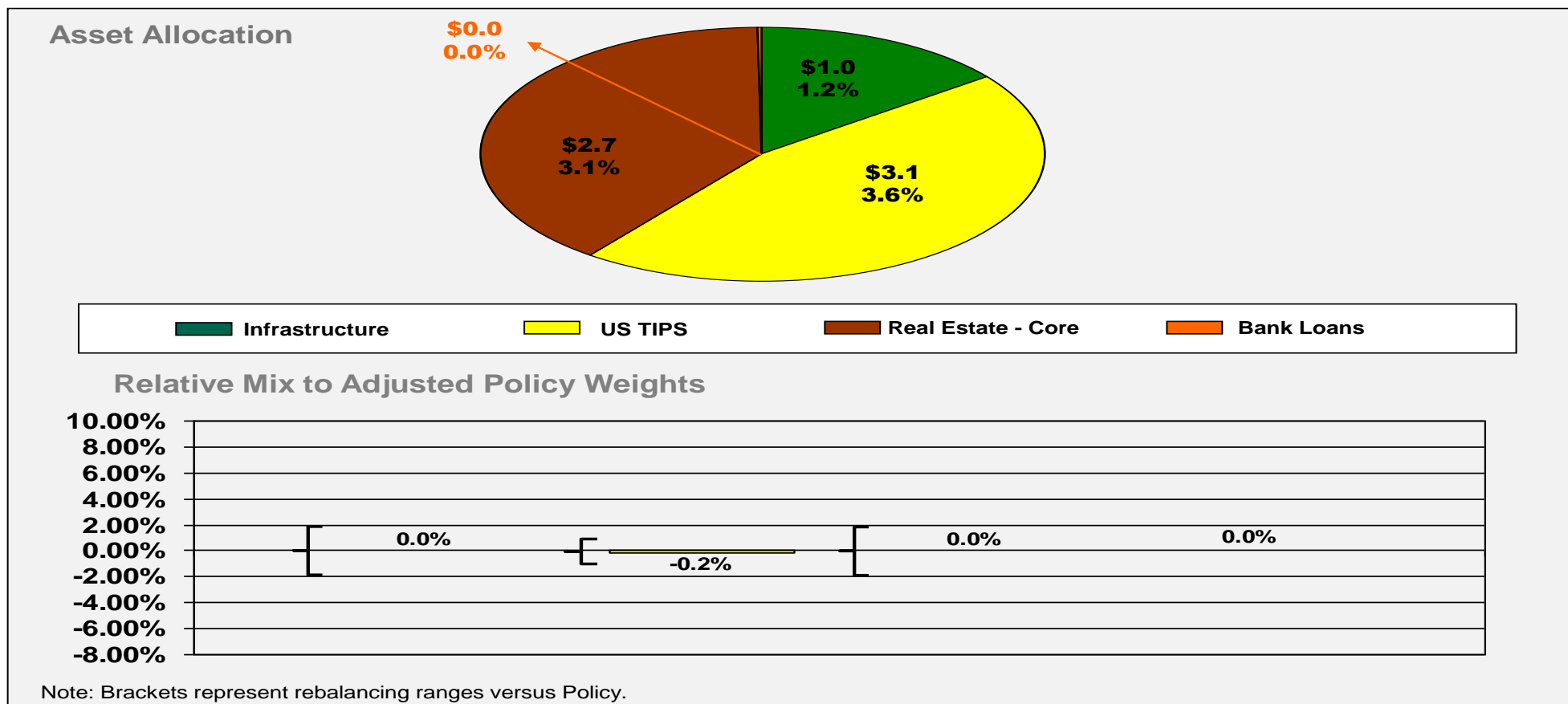


Note: On June 30, 2021 NYCERS' combined Fixed Income and Cash portfolios have a duration of 5.9 years. The duration of the Bloomberg US Aggregate Index was 6.6 years on that date.

Portfolio Asset Allocation – Inflation Protection

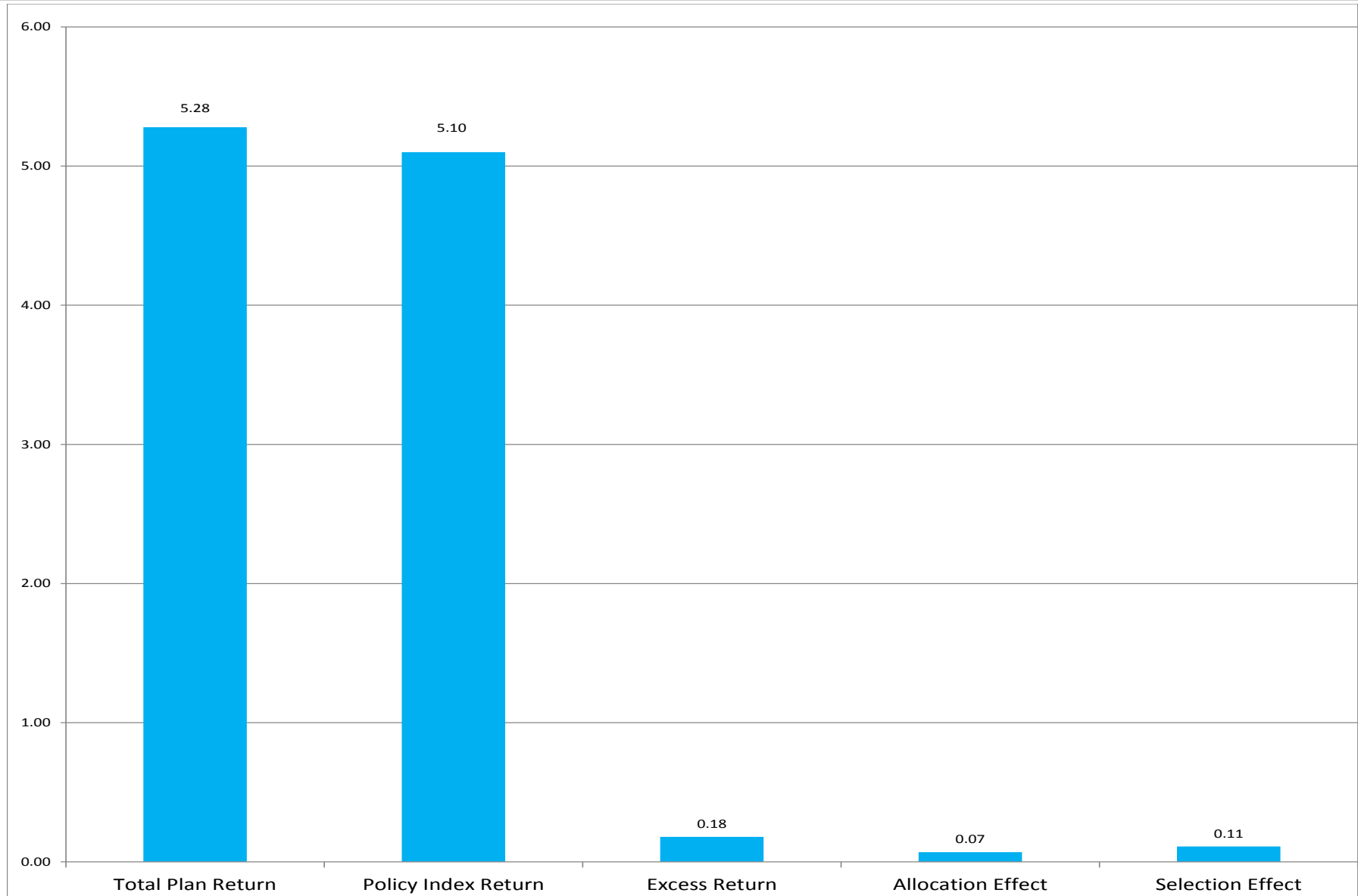


Portfolio Asset Allocation – Inflation Protection

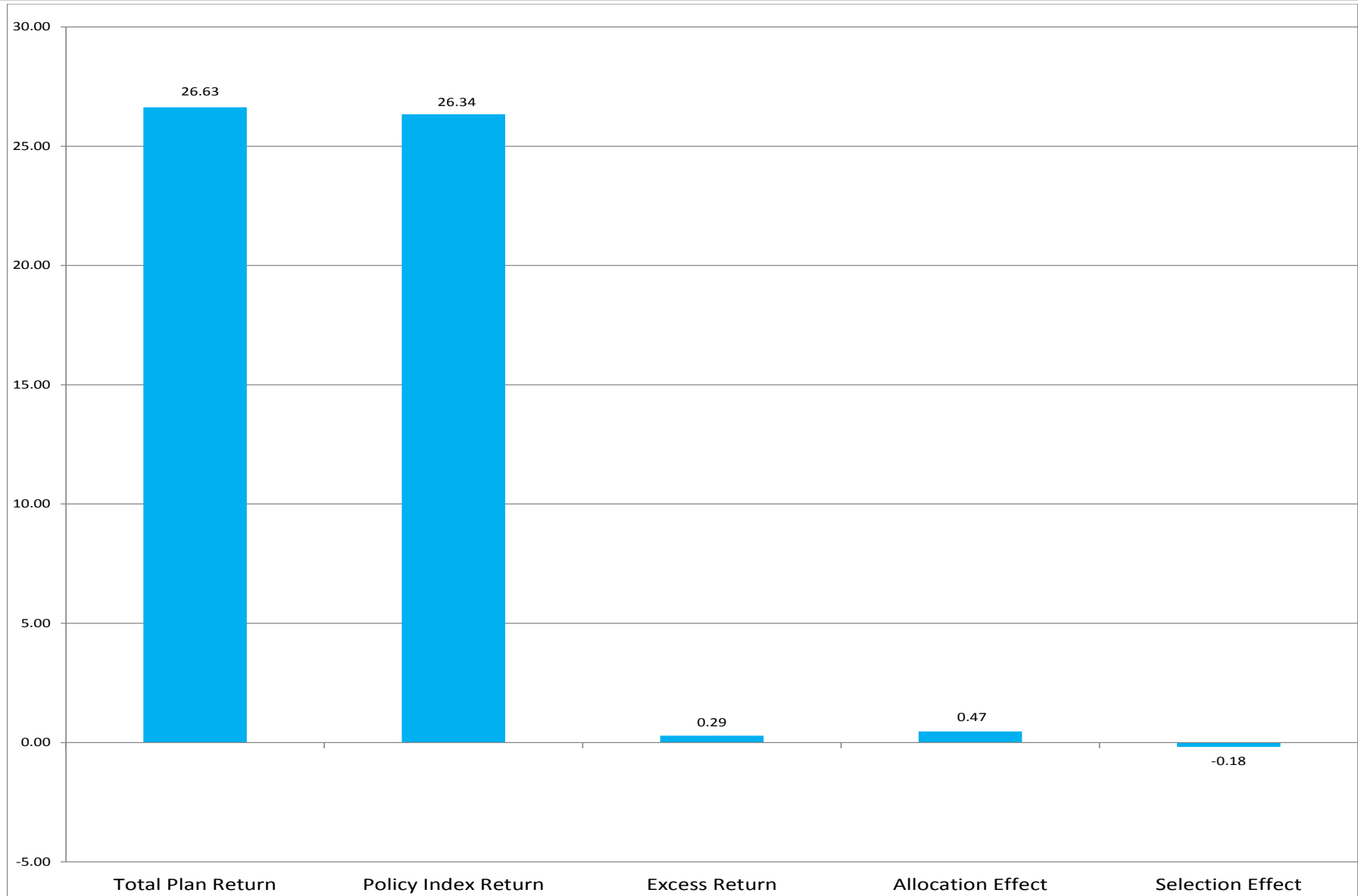


Note: On June 30, 2021 NYCERS' combined Fixed Income and Cash portfolios have a duration of 5.9 years. The duration of the Bloomberg US Aggregate Index was 6.6 years on that date.

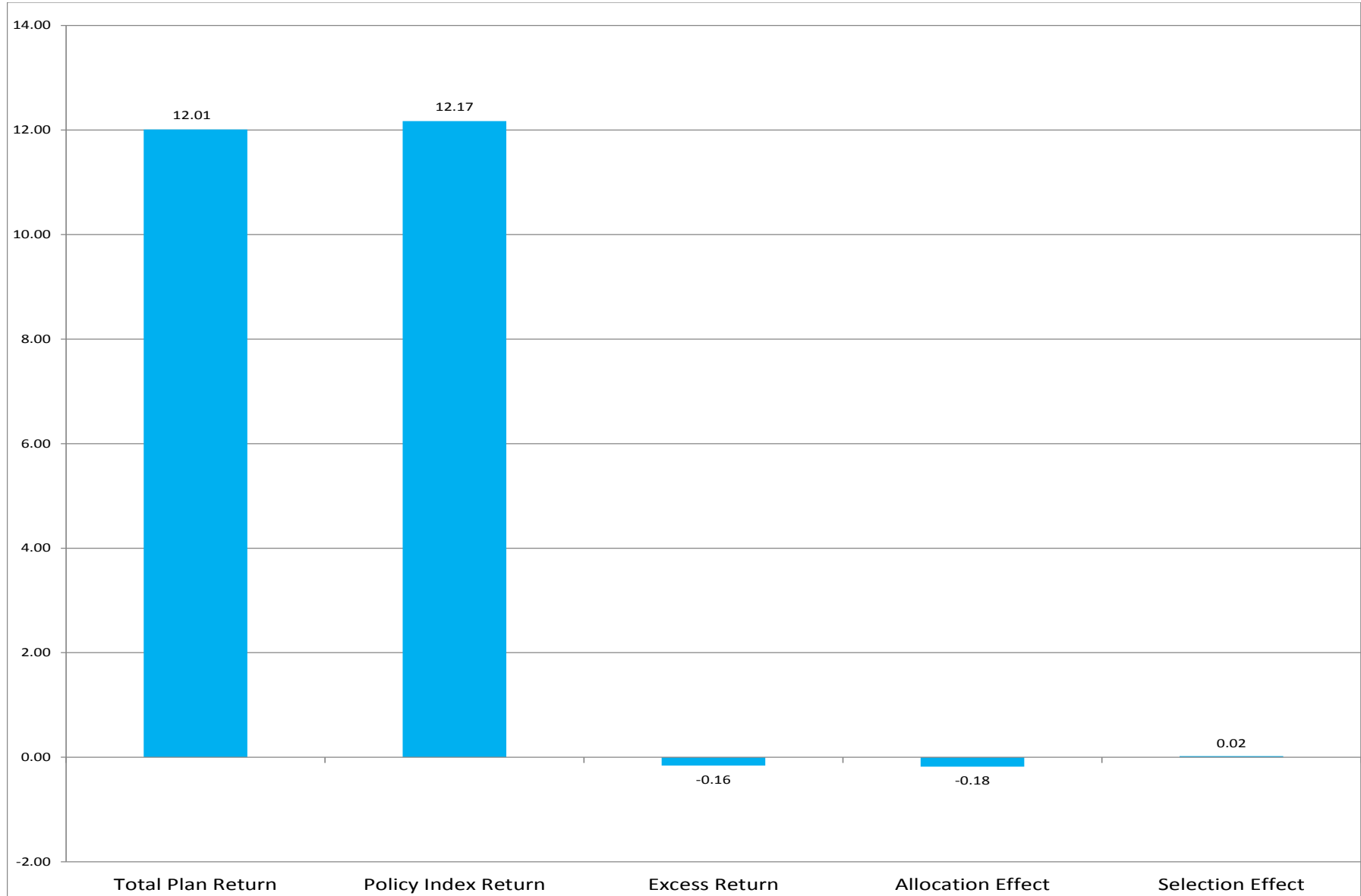
Performance Attribution: Total Plan - Quarter Ending: June 30, 2021



Performance Attribution: Total Plan - Fiscal Year to Date: June 30, 2021



Performance Attribution: Total Plan - 3 Years Ending: June 30, 2021





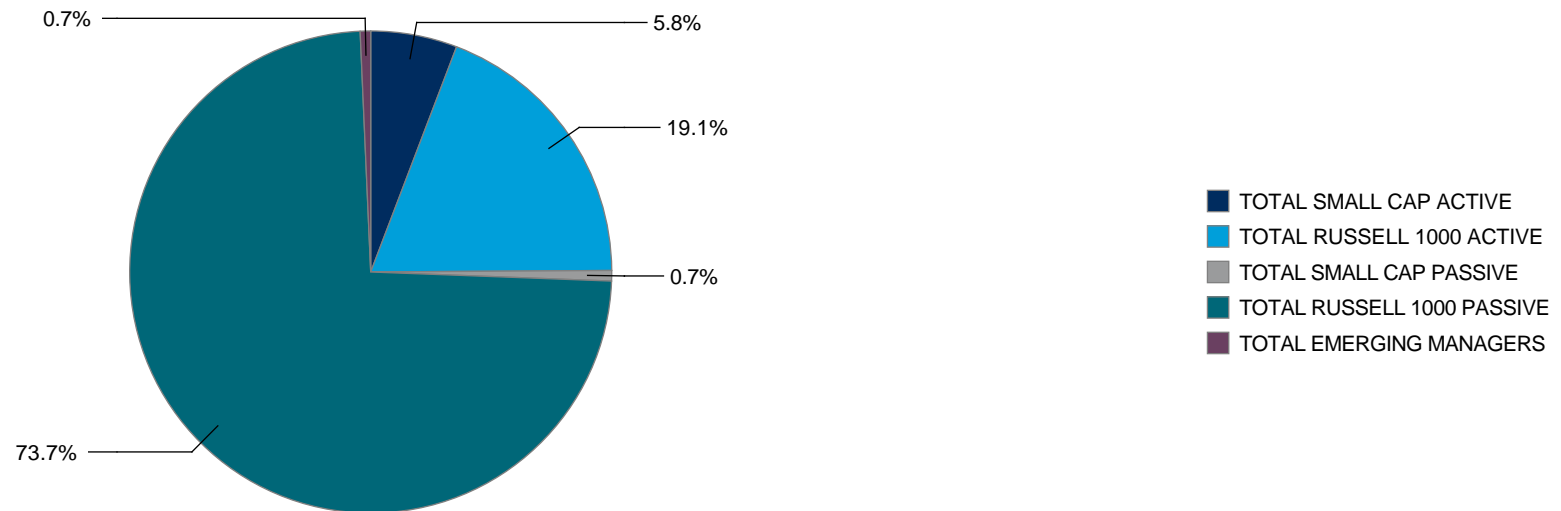
Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	0.07	0.47	-0.18	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	0.01	-0.01	-0.10	RUSSELL 3000
TOTAL WORLD ex-USA	0.01	0.06	0.02	MSCI World ex USA IMI Net
TOTAL GLOBAL EQUITY	0.00	0.01	0.00	MSCI World Index
TOTAL EMERGING MARKETS	0.00	0.01	-0.01	Employees Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	NYC Blended Custom Benchmark for FoF
TOTAL HEDGE FUNDS	0.00	0.00	0.00	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	0.00	0.00	-0.04	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.00	-0.01	0.00	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	0.00	-0.01	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.05	-0.10	-0.06	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.01	0.55	0.24	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.00	0.02	-0.10	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	-0.01	0.08	0.03	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CORPORATE	0.02	0.24	0.04	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.05	0.21	0.03	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.02	-0.19	-0.05	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	0.01	0.01	0.03	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	-0.08	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	-0.02	-0.01	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	0.00	-0.03	-0.01	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.07	-0.35	-0.15	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL EMPLOYEES'	0.11	-0.18	0.02	Employees Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.16	0.20	-0.19	RUSSELL 3000
TOTAL WORLD ex-USA	0.02	0.48	0.41	MSCI World ex USA IMI Net
TOTAL GLOBAL EQUITY	0.01	0.01	0.02	MSCI World Index
TOTAL EMERGING MARKETS	0.01	0.06	0.01	Employees Custom EM Index
TOTAL INTERNATIONAL FOF	0.01	0.01	0.01	NYC Blended Custom Benchmark for FoF
TOTAL HEDGE FUNDS	0.00	0.00	0.00	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	0.21	-0.83	-0.12	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	-0.03	-0.07	0.01	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	-0.01	0.06	0.01	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.09	0.05	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.00	-0.01	0.00	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.00	0.01	-0.01	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CORPORATE	0.00	0.02	0.02	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.00	0.03	0.02	NYC Custom Mortgage Benchmark
TOTAL ETI	0.01	0.01	0.01	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.02	0.01	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	0.00	-0.01	0.00	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	-0.02	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.01	0.00	0.00	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	-0.03	-0.36	-0.17	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.06	0.11	-0.04	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.01	

Total Domestic Equity Asset Allocations: Quarter Ending June 30, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL DOMESTIC EQUITY	\$25.3	29.4

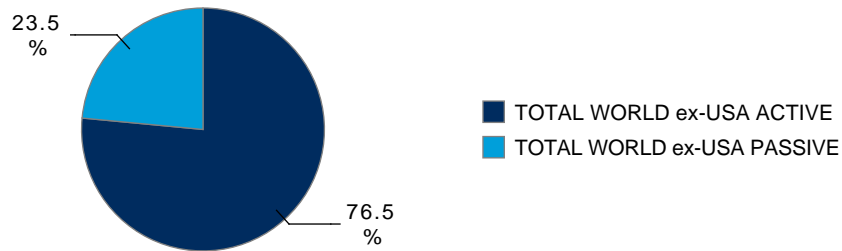


	Policy Weight	Actual Weight	Under/Over Weight	Quarterly Returns		
				Fund	Benchmark	Excess
TOTAL SMALL CAP ACTIVE	5.3	5.8	0.5	4.1	4.3	(0.2)
TOTAL RUSSELL 1000 ACTIVE	18.0	19.1	1.1	5.6	8.5	(2.9)
TOTAL SMALL CAP PASSIVE	1.2	0.7	(0.4)	4.4	4.3	0.1
TOTAL RUSSELL 1000 PASSIVE	75.0	73.7	(1.3)	8.5	8.5	0.0
TOTAL EMERGING MANAGERS	0.6	0.7	0.1	4.4	4.3	0.1

World ex-USA Equity Asset Allocation: June 30, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$11.1	13.0

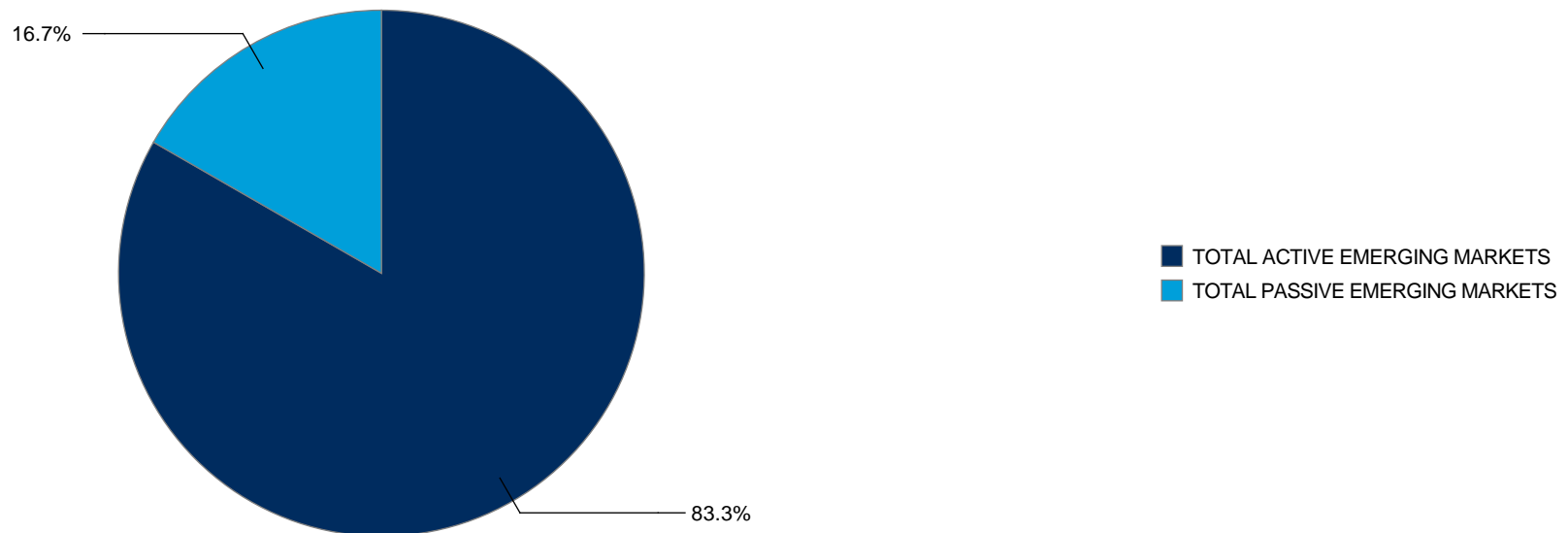


	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	69.31	5.57	5.65	(0.07)
TOTAL WORLD ex-USA SMALL CAP ACTIVE	7.20	8.30	5.31	3.00
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	15.54	5.84	5.65	0.19
TOTAL WORLD ex-USA SMALL CAP PASSIVE	7.95	4.90	4.81	0.09
TOTAL WORLD ex-USA	100.00	5.76	5.52	0.24

Emerging Markets Equity Asset Allocation: June 30, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$4.9	5.7

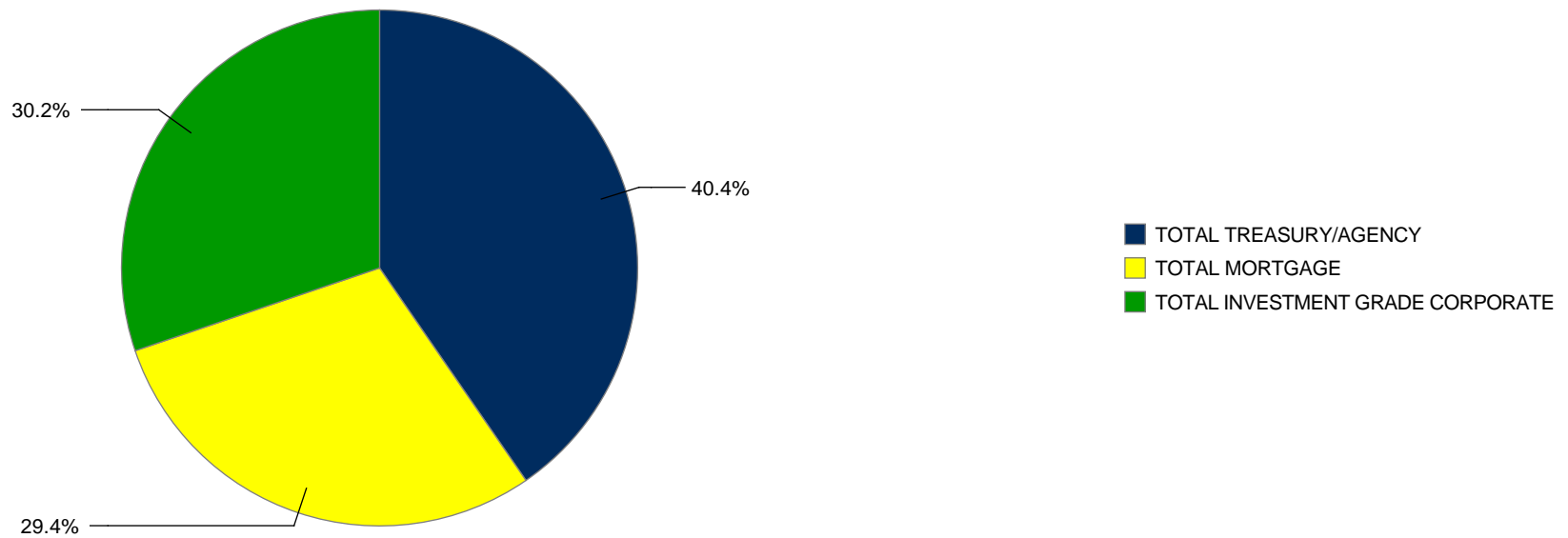


	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	83.34	5.46	5.05	0.41
TOTAL PASSIVE EMERGING MARKETS	16.66	4.30	5.05	(0.75)
TOTAL EMERGING MARKETS	100.00	5.21	5.05	0.16

Structured Fixed Income Asset Allocation: June 30, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED + ETI	\$19.3	22.5

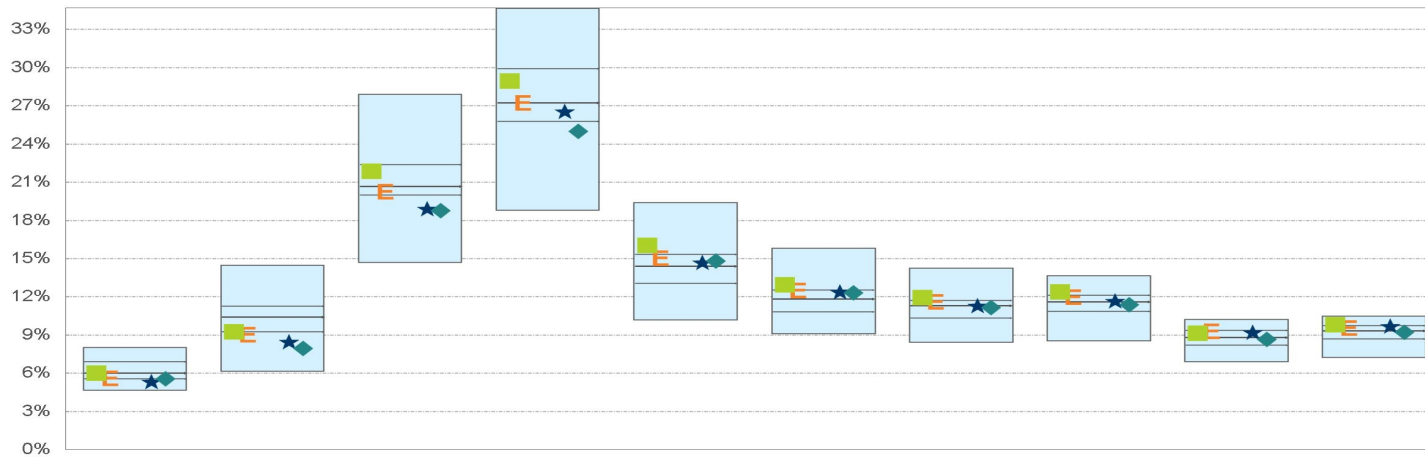


	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	40.80	40.44	(0.36)	2.00	1.96	0.05
TOTAL MORTGAGE	29.91	29.38	(0.53)	0.65	0.33	0.31
TOTAL INVESTMENT GRADE CORPORATE	29.29	30.17	0.88	3.61	3.55	0.06



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Cumulative Periods Ending : June 30, 2021

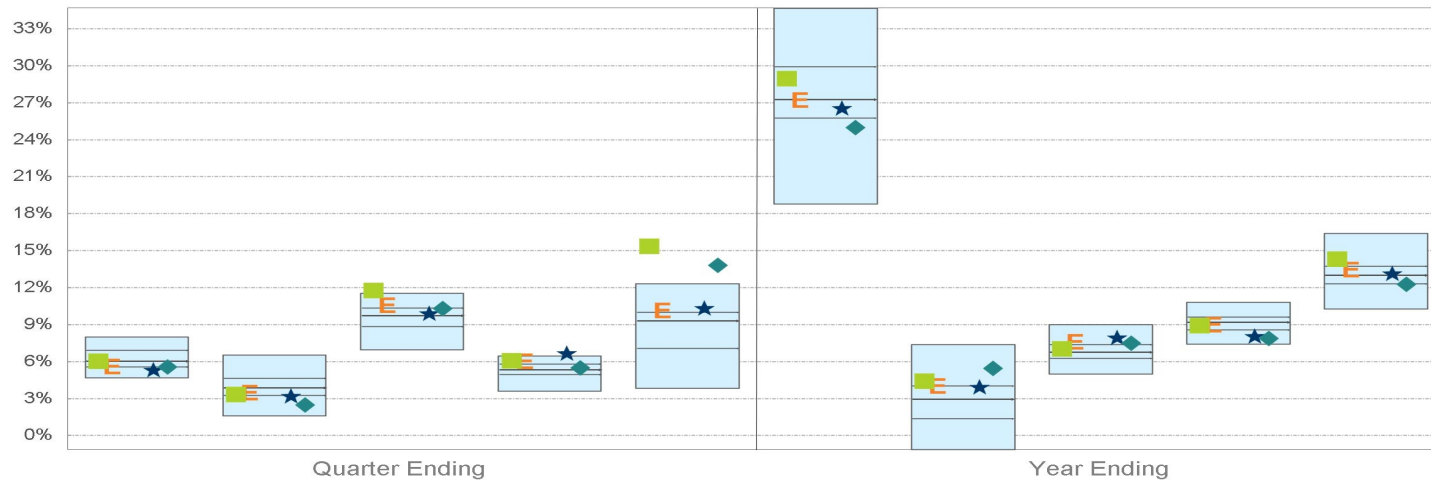


Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	8.01	14.46	27.91	34.66	19.40	15.82	14.25	13.66	10.24	10.48
25th	6.91	11.27	22.37	29.92	15.35	12.54	11.73	12.13	9.38	9.75
50th	6.01	10.41	20.68	27.25	14.41	11.83	11.31	11.62	8.82	9.32
75th	5.55	9.27	19.99	25.77	13.05	10.81	10.35	10.85	8.21	8.69
95th	4.67	6.15	14.71	18.80	10.18	9.11	8.44	8.56	6.92	7.23
No. Of Obs	51	51	51	51	49	48	48	48	48	48
E Total System - Employee	5.38 (81)	8.81 (83)	20.04 (68)	27.01 (54)	14.82 (41)	12.28 (37)	11.39 (45)	11.76 (41)	9.05 (41)	9.33 (47)
★ Employees Policy Bench	5.10 (83)	8.23 (83)	18.70 (81)	26.34 (64)	14.46 (47)	12.17 (43)	11.07 (50)	11.44 (54)	9.00 (41)	9.46 (39)
■ Public Mkt Equiv 25	5.78 (66)	9.03 (77)	21.63 (36)	28.74 (30)	15.81 (14)	12.73 (21)	11.71 (25)	12.18 (21)	8.93 (43)	9.57 (31)
◆ Public Mkt Equiv 35	5.32 (81)	7.71 (87)	18.54 (83)	24.77 (83)	14.57 (47)	12.08 (45)	10.95 (54)	11.17 (60)	8.43 (66)	8.99 (60)



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: June 30, 2021



Percentile Rankings	Jun 21	Mar 21	Dec 20	Sep 20	Jun 20	Jun 21	Jun 20	Jun 19	Jun 18	Jun 17
5th	8.01	6.54	11.52	6.47	12.29	34.66	7.39	9.00	10.80	16.38
25th	6.91	4.63	10.33	5.80	10.00	29.92	4.01	7.36	9.62	13.72
50th	6.01	3.88	9.73	5.35	9.31	27.25	2.95	6.77	9.17	13.00
75th	5.55	3.25	8.85	4.93	7.05	25.77	1.36	6.25	8.56	12.31
95th	4.67	1.61	6.94	3.60	3.84	18.80	-1.14	4.98	7.43	10.27
No. Of Obs	51	51	51	51	51	51	49	49	50	50
E Total System - Employee	5.38 (81)	3.25 (75)	10.33 (26)	5.80 (25)	9.92 (28)	27.01 (54)	3.79 (33)	7.36 (25)	8.78 (60)	13.24 (37)
★ Employees Policy Bench	5.10 (83)	2.98 (77)	9.67 (52)	6.44 (5)	10.13 (23)	26.34 (64)	3.70 (39)	7.73 (16)	7.84 (89)	12.93 (52)
■ Public Mkt Equiv 25	5.78 (66)	3.08 (77)	11.55 (3)	5.85 (23)	15.12 (1)	28.74 (30)	4.17 (23)	6.81 (45)	8.70 (64)	14.09 (13)
◆ Public Mkt Equiv 35	5.32 (81)	2.27 (89)	10.06 (34)	5.26 (58)	13.60 (1)	24.77 (83)	5.21 (12)	7.25 (29)	7.64 (91)	12.03 (79)

Wilshire Trust Universe Comparison Service® (TUCS®)

**NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM (NYCERS)
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2020**

INVESTMENT STYLE (EQUITIES)	Avg. Net Asset Value FY 2020 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total US Equities	20,568.16	8,799.05	-	4.28	-	-	8,799.05	4.28
Small Cap Active:	1,306.52	4,483.32	-	34.31	-	-	4,483.32	34.31
Small Cap Growth	324.75	717.72	-	22.10	-	-	717.72	22.10
Small Cap Value	288.42	941.00	-	32.63	-	-	941.00	32.63
Small Cap Core	385.45	2,107.58	-	54.68	-	-	2,107.58	54.68
Small Cap Fundamental Index	307.90	717.02	-	23.29	-	-	717.02	23.29
Mid Cap Active:	-	-	-	-	-	-	-	-
Mid Cap Growth	-	-	-	-	-	-	-	-
Mid Cap Value	-	-	-	-	-	-	-	-
Mid Cap Core	-	-	-	-	-	-	-	-
Other Active:								
Russell 1000 Fundamental	3,536.22	3,440.12	-	9.73	-	-	3,440.12	9.73
Legato (Emerging Manager- Equity)	112.20	559.11	-	49.83	-	-	559.11	49.83
U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total US Active Equities	4,954.95	8,482.55	-	17.12	-	-	8,482.55	17.12
Small Cap Passive:								
Small Cap Passive	277.59	11.97	-	0.43	-	-	11.97	0.43
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	-	-	-	-	-	-	-	-
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	15,335.63	304.53	-	0.20	-	-	304.53	0.20
Passive Russell 3000	-	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	-	-	-	-	-	-	-	-
Total US Passive Equities	15,613.21	316.50	-	0.20	-	-	316.50	0.20

**NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM (NYCERS)
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2020**

	Avg. Net Asset Value FY 2020 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total International Equities	13,281.65	30,673.25	-	23.09	116.36	0.09	30,789.61	23.18
Global Equity	287.75	1,657.00	-	57.58	-	-	1,657.00	57.58
Active Total Global Equities	287.75	1,657.00	-	57.58	-	-	1,657.00	57.58
Active Total World Ex USA:	5,800.31	16,562.01	-	28.55	-	-	16,562.01	28.55
World Ex-USA Large & Mid Developed Growth Active	2,863.58	7,833.85	-	27.36	-	-	7,833.85	27.36
World Ex-USA Large & Mid Developed Value Active	2,381.38	6,746.78	-	28.33	-	-	6,746.78	28.33
World Ex-USA Developed Small Cap Active	555.35	1,981.38	-	35.68	-	-	1,981.38	35.68
Total World Ex USA	-	-	-	-	-	-	-	-
NON-U.S. Activist	-	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	2,568.78	10,793.39	-	42.02	-	-	10,793.39	42.02
International Fund of Funds	462.34	2,369.04	-	51.24	116.36	2.52	2,485.40	53.76
Total Active International Equities	8,831.43	29,724.44	-	33.66	116.36	-	29,840.80	33.79
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	618.27	204.12	-	3.30	-	-	204.12	3.30
World Ex-USA Large & Mid Cap Passive	2,038.69	243.40	-	1.19	-	-	243.40	1.19
Passive Global	-	-	-	-	-	-	-	-
Passive Emerging Markets	1,793.26	501.29	-	2.80	-	-	501.29	2.80
Total Int'l Passive Equities	4,450.22	948.81	-	2.13	-	-	948.81	2.13
REITS Active Equities	-	-	-	-	-	-	-	-
Total Equities	34,137.57	41,129.30	-	12.05	116.36	0.03	41,245.66	12.08

**NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM (NYCERS)
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2020**

	Avg. Net Asset Value FY 2020 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
INVESTMENT STYLE (FIXED INCOME)								
Total Fixed Income	23,239.58	25,834.89	-	11.12	-	-	25,834.89	11.12
Structured Program:	12,970.73	6,373.92	-	4.91	-	-	6,373.92	4.91
Government Treas/Agency Sector	7,768.72	2,670.75	-	3.44	-	-	2,670.75	3.44
Long Duration Treasury	-	-	-	-	-	-	-	-
Mortgage Sector	2,383.63	1,064.13	-	4.46	-	-	1,064.13	4.46
Investment Grade Credit Sector	2,818.39	2,639.05	-	9.36	-	-	2,639.05	9.36
Developing Managers	519.95	812.86	-	15.63	-	-	812.86	15.63
Emerging Managers	102.77	382.25	-	37.19	-	-	382.25	37.19
TIPS:	2,983.62	529.02	-	1.77	-	-	529.02	1.77
Active TIPS Managers	765.21	418.24	-	5.47	-	-	418.24	5.47
Passive TIPS Managers	2,218.41	110.79	-	0.50	-	-	110.79	0.50
High Yield	3,180.33	9,331.57	-	29.34	-	-	9,331.57	29.34
Bank Loans	1,164.84	3,753.67	-	32.22	-	-	3,753.67	32.22
Convertible Bonds	843.75	3,275.82	-	38.82	-	-	3,275.82	38.82
ETI - Access - RBC	166.36	295.17	-	17.74	-	-	295.17	17.74
ETI - AFL-CIO HIT	339.87	1,080.61	-	31.79	-	-	1,080.61	31.79
Other ETI Programs (Internally Managed)	419.96	-	-	-	-	-	-	-
Short Term (Internally Managed)	547.39	-	-	-	-	-	-	-
Total Public Markets	57,377.15	66,964.19	-	11.67	116.36	0.02	67,080.55	11.69

NEW YORK CITY EMPLOYEES RETIREMENT SYSTEM (NYCERS)
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2020

INVESTMENT STYLE (PRIVATE MARKETS)	Avg. Net Asset Value FY 2020 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Hedge Funds	-	-	-	-	-	-	-	-
Private Equity	4,909.05	66,417.99	14,095.03	164.01	35,820.42	72.97	116,333.44	236.98
Private Real Estate	3,828.87	37,228.12	13,509.62	132.51	23,444.66	61.23	74,182.40	193.75
Infrastructure	773.72	14,593.63	1,449.18	112.99	1,883.90	13.27	17,926.72	126.26
Opportunistic Fixed Income	2,265.62	19,289.95	6,062.93	111.90	2,129.37	9.40	27,482.25	121.30
Total Private Markets	11,777.25	137,529.68	35,116.76	146.59	63,278.36	53.73	235,924.80	200.32
Total Overall	69,154.40	204,493.88	35,116.76	34.65	63,394.72	9.17	303,005.36	43.82

The overall carried interest and performance incentive fees paid by NYCERS for the Fiscal Year: 9.17 BPS

General Footnotes:

- 1) Infrastructure's fees in bps are based off total committed amounts rather than Avg. NAV due to its early fund life juncture. The total committed amount as of 6/30/20 for NYCERS is : \$1,419.8m
- 2) Private Market expense data is limited to the partnerships that have provided ILPA files. In the event where there is no ILPA, GP financial statements are prorated for each of the participants of the partnership and/or adjusted for cash flow expenses reported by our custodian bank.

Securities Lending Income

Through June 30, 2021



**NYC EMPLOYEES' RETIREMENT SYSTEM
SECURITIES LENDING INCOME
June 30, 2021**

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	-	-	-	-
1990	256,000	-	-	256,000
1991	754,000	48,000	-	802,000
1992	1,467,000	654,000	367,000	2,488,000
1993	3,445,000	1,308,000	732,000	5,485,000
1994	4,261,000	2,744,000	1,082,000	8,087,000
1995	3,727,000	3,191,000	745,000	7,663,000
1996	3,608,000	3,592,000	1,258,000	8,458,000
1997	3,924,000	5,921,000	1,533,000	11,378,000
1998	6,374,000	7,337,000	1,952,000	15,663,000
1999	6,643,000	6,718,000	2,175,000	15,536,000
2000	6,552,000	7,669,000	3,049,000	17,270,000
2001	10,335,000	10,394,000	4,435,000	25,164,000
2002	5,906,000	7,780,000	3,510,000	17,196,000
2003	2,442,000	4,766,000	3,603,000	10,811,000
2004	3,502,000	5,844,000	3,825,000	13,171,000
2005	5,229,000	8,264,000	4,471,000	17,964,000
2006	4,626,000	10,012,000	4,163,000	18,801,000
2007	9,445,000	15,100,000	4,510,000	29,055,000
2008	25,936,000	26,696,000	6,878,000	59,510,000
2009	8,149,000	16,388,000	4,305,000	28,842,000
2010	3,714,000	10,256,000	3,125,000	17,095,000
2011	4,834,000	12,861,000	5,163,000	22,858,000
2012	6,691,000	16,287,000	4,116,000	27,094,000
2013	5,051,000	17,973,000	3,014,000	26,038,000
2014	5,194,000	14,847,000	5,272,000	25,313,000
2015	5,010,000	16,300,000	6,124,000	27,434,000
2016	6,545,000	19,856,000	5,097,000	31,498,000
2017	9,452,000	16,246,000	4,295,000	29,993,000
2018	14,213,961	13,284,175	6,691,938	34,190,073
2019	9,221,733	12,445,312	4,805,756	26,472,801
2020	9,421,895	6,875,019	3,876,698	20,173,612
2021 (6 months)	6,224,721	3,781,859	1,462,862	11,469,442
Since Inception	<u>202,154,309</u>	<u>305,438,365</u>	<u>105,636,254</u>	<u>613,228,928</u>

**New York City
Employees' Retirement System**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through June 30, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2020	CYE 2020	CYE 2019	CYE 2018	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	NYCERS-TOTAL PORTFOLIO - GROSS	85,974	100.00	5.38	27.01	8.81	3.79	13.96	17.87	(2.51)	27.01	12.28	11.76	9.34	9.07	07/01/1987
	ESTIMATED INVESTMENT FEES			(0.10)	(0.38)	(0.19)	(0.21)	(0.24)	(0.27)	(0.19)	(0.38)	(0.27)	(0.25)			
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.11)	(0.06)	(0.10)	(0.10)	(0.10)	(0.10)	(0.11)	(0.10)	(0.11)			
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.07)	(0.27)	(0.13)	(0.11)	(0.14)	(0.17)	(0.09)	(0.27)	(0.17)	(0.14)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL PORTFOLIO - NET MGR			5.28	26.63	8.62	3.58	13.72	17.60	(2.70)	26.63	12.01	11.50			
	NYCERS POLICY BENCHMARK			5.10	26.34	8.23	3.70	13.74	18.42	(2.75)	26.34	12.17	11.44	9.46		
	EXCESS RETURN			0.18	0.29	0.39	(0.12)	(0.01)	(0.81)	0.04	0.29	(0.17)	0.06	(0.13)		
EQUITY RETURN DETAIL																
18	NYCERS-TOTAL EQUITY (INCLUDING ALTERNATIVES) - GROSS	54,301	63.16	7.05	41.46	13.64	1.41	16.63	22.90	(4.50)	41.46	15.42	15.46	11.68	9.24	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.14)	(0.57)	(0.27)	(0.25)	(0.29)	(0.36)	(0.23)	(0.57)	(0.35)	(0.33)			
	EST MANAGEMENT FEES			(0.14)	(0.57)	(0.27)	(0.25)	(0.29)	(0.36)	(0.23)	(0.57)	(0.35)	(0.33)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL EQUITY (INCLUDING ALTERNATIVES) - NET MGR			6.91	40.90	13.36	1.16	16.35	22.54	(4.74)	40.90	15.07	15.13			
34	NYCERS-TOTAL DOMESTIC EQUITY - GROSS	25,264	29.39	7.68	45.23	15.77	4.29	18.84	29.99	(5.37)	45.23	17.98	17.37	14.23	11.81	08/01/1979
	ESTIMATED INVESTMENT FEES			(0.03)	(0.09)	(0.04)	(0.04)	(0.06)	(0.05)	(0.04)	(0.09)	(0.06)	(0.06)			
	NYCERS-TOTAL DOMESTIC EQUITY - NET MGR			7.65	45.14	15.73	4.25	18.78	29.95	(5.41)	45.14	17.92	17.31			
	RUSSELL 3000 (DAILY)			8.24	44.16	15.11	6.53	20.89	31.02	(5.24)	44.16	18.73	17.89	14.70	12.18	
	EXCESS RETURN			(0.59)	0.98	0.62	(2.28)	(2.11)	(1.07)	(0.17)	0.98	(0.81)	(0.58)	(0.47)	(0.36)	
44	NYCERS-TOTAL SMALL CAP - GROSS	1,644	1.91	4.39	61.70	16.51	(5.37)	21.99	24.73	(10.67)	61.70	14.09	16.18	12.53	10.02	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.27)	(0.97)	(0.44)	(0.33)	(0.53)	(0.36)	(0.26)	(0.97)	(0.47)	(0.42)			
	NYCERS-TOTAL SMALL CAP - NET MGR			4.12	60.73	16.08	(5.70)	21.45	24.37	(10.93)	60.73	13.62	15.77			
	RUSSELL 2000 (DAILY)			4.29	62.03	17.54	(6.63)	19.96	25.52	(11.01)	62.03	13.52	16.47	12.34	9.68	
	EXCESS RETURN			(0.17)	(1.30)	(1.46)	0.93	1.49	(1.15)	0.09	(1.30)	0.10	(0.70)	0.19	0.34	
54	NYCERS-TOTAL RUSSELL 1000 - GROSS	23,441	27.26	7.94	43.88	15.59	5.05	18.55	30.46		43.88	18.32		18.12	04/01/2018	
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.02)	(0.03)	(0.02)		(0.03)	(0.02)		(0.02)		
	NYCERS-TOTAL RUSSELL 1000 - NET MGR			7.94	43.85	15.58	5.03	18.52	30.44		43.85	18.30		18.10		
	RUSSELL 1000 (DAILY)			8.54	43.07	14.95	7.48	20.96	31.43		43.07	19.16		18.84		
	EXCESS RETURN			(0.60)	0.78	0.63	(2.45)	(2.44)	(0.99)		0.78	(0.86)		(0.74)		
64	NYCERS-TOTAL FUND OF FUNDS - GROSS	179	0.21	4.60	67.61	21.45	(7.73)	20.06	24.02	(7.77)	67.61	15.83		15.19	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.19)	(0.94)	(0.38)	(0.46)	(0.60)	(0.62)	(0.46)	(0.94)	(0.60)		(0.57)		
	NYCERS-TOTAL FUND OF FUNDS - NET MGR			4.41	66.66	21.07	(8.19)	19.46	23.40	(8.23)	66.66	15.23		14.62		
	RUSSELL 2000 (DAILY)			4.29	62.03	17.54	(6.63)	19.96	25.52	(11.01)	62.03	13.52		14.26		
	EXCESS RETURN			0.12	4.64	3.53	(1.56)	(0.50)	(2.12)	2.78	4.64	1.71		0.36		

Consolidated Performance Report

Through June 30, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2020	CYE 2020	CYE 2019	CYE 2018	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
76	NYCERS-TOTAL WORLD ex-USA - GROSS	11,148	12.97	5.82	40.27	8.95	0.69	19.79	25.54	(13.92)	40.27	12.49	14.20	8.13	7.53	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.06)	(0.30)	(0.12)	(0.20)	(0.25)	(0.26)	(0.19)	(0.30)	(0.24)	(0.25)			
	NYCERS-TOTAL WORLD ex-USA - NET MGR			5.76	39.97	8.83	0.49	19.55	25.28	(14.11)	39.97	12.25	13.95			
	WORLD EX-USA CUSTOM BM			5.52	34.82	9.92	(5.11)	8.32	22.91	(14.68)	34.82	8.62	10.77	6.33	6.41	
	EXCESS RETURN			0.24	5.15	(1.09)	5.60	11.22	2.38	0.57	5.15	3.64	3.18	1.80	1.12	
86	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	7,726	8.99	5.64	40.81	7.65	3.59	25.16	26.92	(12.94)	40.81	14.26	15.74		8.94	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.07)	(0.39)	(0.15)	(0.29)	(0.35)	(0.35)	(0.24)	(0.39)	(0.32)	(0.32)		(0.30)	
	NYCERS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			5.57	40.42	7.50	3.30	24.81	26.56	(13.18)	40.42	13.94	15.42		8.63	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			5.65	33.60	9.92	(5.42)	7.59	22.49	(14.09)	33.60	8.57	10.48		5.60	
	EXCESS RETURN			(0.07)	6.82	(2.41)	8.72	17.22	4.07	0.91	6.82	5.37	4.94		3.04	
96	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	803	0.93	8.39	53.35	18.81	(2.03)	14.91	24.40	(18.45)	53.35	12.06	14.43		11.11	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.09)	(0.51)	(0.19)	(0.34)	(0.38)	(0.48)	(0.37)	(0.51)	(0.41)	(0.47)			
	NYCERS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			8.30	52.84	18.62	(2.37)	14.53	23.92	(18.82)	52.84	11.65	13.96			
	S&P EPAC SMALL CAP USD NET			5.31	42.23	9.16	(4.00)	13.78	23.71	(18.58)	42.23	8.53	11.83		9.11	
	EXCESS RETURN			3.00	10.61	9.46	1.63	0.75	0.21	(0.24)	10.61	3.12	2.13		2.00	
106	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - GROSS	1,732	2.01	5.84	33.86	10.10	(5.00)	8.09	22.57	(13.64)	33.86	8.88	10.63	6.20	6.23	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)			
	NYCERS-TOTAL WORLD ex-USA LARGE CAP PASSIVE - NET MGR			5.84	33.85	10.09	(5.01)	8.08	22.55	(13.65)	33.85	8.87	10.62			
	NYC CUSTOM WORLD EX US INDEX			5.65	33.60	9.92	(5.42)	7.59	22.49	(14.09)	33.60	8.57	10.29	5.90	5.92	
	EXCESS RETURN			0.19	0.25	0.18	0.41	0.49	0.06	0.44	0.25	0.30	0.33	0.30	0.31	
116	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	886	1.03	4.90	42.47	10.04	(2.68)	13.30	25.53	(17.68)	42.47	9.25	12.71		8.95	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.04)	(0.02)	(0.03)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.05)		(0.04)	
	NYCERS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			4.90	42.43	10.02	(2.71)	13.26	25.48	(17.72)	42.43	9.21	12.66		8.91	
	WORLD EX USA SC PASSIVE CUSTOM BM			4.81	42.28	9.92	(3.20)	12.78	25.41	(18.07)	42.28	8.92	12.37		8.54	
	EXCESS RETURN			0.09	0.15	0.11	0.49	0.48	0.07	0.35	0.15	0.29	0.28		0.37	

Consolidated Performance Report

Through June 30, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2020	CYE 2020	CYE 2019	CYE 2018	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
128	NYCERS-TOTAL EMERGING MARKETS - GROSS	4,919	5.72	5.31	51.74	10.12	(11.29)	16.31	15.07	(14.01)	51.74	11.98	12.08	4.31	8.16	09/01/2005
	ESTIMATED INVESTMENT FEES			(0.10)	(0.50)	(0.19)	(0.22)	(0.33)	(0.29)	(0.22)	(0.50)	(0.31)	(0.31)			
	NYCERS-TOTAL EMERGING MARKETS - NET MGR			5.21	51.24	9.92	(11.51)	15.98	14.78	(14.23)	51.24	11.67	11.77			
	NYCERS CUSTOM EM INDEX			5.05	49.44	8.66	(11.27)	14.99	15.10	(13.38)	49.44	11.33	11.52	3.84	7.92	
	EXCESS RETURN			0.16	1.79	1.27	(0.24)	1.00	(0.33)	(0.85)	1.79	0.34	0.25	0.46	0.24	
138	NYCERS-TOTAL ACTIVE EMERGING MARKETS - GROSS	4,099	4.77	5.58	54.18	11.15	(11.15)	17.93	15.02	(14.78)	54.18	12.69	12.77	4.87	8.63	11/01/2005
	ESTIMATED INVESTMENT FEES			(0.12)	(0.70)	(0.25)	(0.37)	(0.52)	(0.46)	(0.34)	(0.70)	(0.48)	(0.48)			
	NYCERS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			5.46	53.48	10.90	(11.52)	17.41	14.56	(15.12)	53.48	12.22	12.29			
	NYCERS CUSTOM EM INDEX			5.05	49.44	8.66	(11.27)	14.99	15.10	(13.38)	49.44	11.33	11.52	3.84	7.83	
	EXCESS RETURN			0.41	4.04	2.24	(0.25)	2.43	(0.55)	(1.74)	4.04	0.89	0.77	1.03	0.79	
148	NYCERS-TOTAL PASSIVE EMERGING MARKETS - GROSS	820	0.95	4.31	47.24	7.50	(11.14)	14.82	15.14	(12.83)	47.24	10.84	11.03	3.20	2.98	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.04)	(0.01)	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)			
	NYCERS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			4.30	47.20	7.48	(11.16)	14.79	15.10	(12.86)	47.20	10.81	10.99			
	NYCERS CUSTOM PASSIVE EM INDEX			5.05	49.44	8.66	(11.27)	14.99	15.10	(12.97)	49.44	11.33	11.32			
	EXCESS RETURN			(0.75)	(2.24)	(1.18)	0.11	(0.20)	(0.00)	0.11	(2.24)	(0.51)	(0.33)			
158	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	641	0.75	7.10	39.89	10.59	(1.72)	14.52	25.68	(15.83)	39.89	11.08		10.87	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.21)	(0.80)	(0.35)	(0.53)	(0.62)	(0.64)	(0.44)	(0.80)	(0.60)		(0.59)		
	NYCERS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			6.89	39.08	10.25	(2.25)	13.90	25.04	(16.27)	39.08	10.48		10.27		
	NYC BLENDED CUSTOM BENCHMARK FOR FOF (ERS)			5.71	37.37	10.00	(5.98)	9.45	21.73	(14.39)	37.37	9.18		9.14		
	EXCESS RETURN			1.18	1.71	0.25	3.73	4.45	3.30	(1.88)	1.71	1.30		1.14		
168	NYCERS-TOTAL GLOBAL EQUITY - GROSS	420	0.49	10.71	42.63	13.55	5.84	21.23	34.95		42.63			20.39	08/01/2018	
	ESTIMATED INVESTMENT FEES			(0.16)	(0.82)	(0.32)	(0.60)	(0.70)	(0.85)		(0.82)			(0.70)		
	NYCERS-TOTAL GLOBAL EQUITY - NET MGR			10.55	41.81	13.22	5.24	20.53	34.10		41.81			19.69		
	MSCI WORLD INDEX			7.74	39.04	13.05	2.84	15.90	27.67		39.04			14.25		
	EXCESS RETURN			2.80	2.77	0.18	2.40	4.63	6.43		2.77			5.43		

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ALTERNATIVE EQUITY RETURN DETAIL																
186	NYCERS-TOTAL HEDGE FUND* - NET MGR	1	-	9.29	18.07	21.04	(23.15)	(20.42)	5.19	4.80	18.07	0.51	2.45	2.52	2.52	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			3.12	19.46	5.47	1.45	11.98	9.47	(3.06)	19.46	7.38	7.18	4.89	4.89	
	EXCESS RETURN			6.17	(1.39)	15.58	(24.60)	(32.40)	(4.27)	7.85	(1.39)	(6.86)	(4.73)	(2.37)	(2.37)	
196	NYCERS-TOTAL DIRECT HEDGE FUNDS* - NET MGR	1	-	9.29	18.07	21.04	(23.15)	(20.42)	5.19	4.80	18.07	0.51	2.64	3.26	01/01/2012	
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			3.12	19.46	5.47	1.45	11.98	9.47	(3.06)	19.46	7.38	7.18	5.72		
	EXCESS RETURN			6.17	(1.39)	15.58	(24.60)	(32.40)	(4.27)	7.85	(1.39)	(6.86)	(4.54)	(2.47)		

* INFORMATION PROVIDED BY ALPHA FRONTIER

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ALTERNATIVE EQUITY RETURN DETAIL																
205	NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	6,538	7.60	11.07	52.10	22.68	2.77	18.64	12.46	16.96	52.10	21.47	19.72	14.70	13.91	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.55)	(2.49)	(1.28)	(0.94)	(1.14)	(1.16)	(0.91)	(2.49)	(1.43)	(1.24)			
	NYCERS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			10.52	49.61	21.40	1.83	17.50	11.30	16.05	49.61	20.04	18.48			
	NYC R3000 +3% LAGGED			7.12	67.21	23.72	(6.37)	18.42	6.00	21.06	67.21	20.59	20.09	17.30	14.37	
	EXCESS RETURN			3.40	(17.60)	(2.32)	8.20	(0.92)	5.30	(5.01)	(17.60)	(0.55)	(1.61)	(2.60)	(0.46)	
215	NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	4,373	5.09	3.54	8.72	6.94	2.55	0.82	7.03	10.84	8.72	6.54	8.38	11.40	8.98	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.33)	(0.97)	(0.55)	(0.74)	(0.69)	(0.78)	(0.61)	(0.97)	(0.77)	(0.73)			
	NYCERS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			3.20	7.75	6.40	1.81	0.12	6.25	10.22	7.75	5.77	7.66			
	NCREIF NFI-ODCE NET + 100 BP			3.94	8.15	6.16	2.34	1.35	5.43	8.43	8.15	5.64	6.68	9.68		
	EXCESS RETURN			(0.74)	(0.40)	0.24	(0.53)	(1.23)	0.82	1.79	(0.40)	0.13	0.98	1.72		
225	NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	997	1.16	4.22	20.46	9.65	7.86	10.04	13.50	15.81	20.46	13.71	14.70		14.93	12/01/2013
	ESTIMATED INVESTMENT FEES			(0.81)	(1.95)	(1.17)	(1.71)	(1.41)	(1.52)	(1.33)	(1.95)	(1.66)	(1.88)		(2.75)	
	NYCERS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			3.41	18.51	8.48	6.15	8.63	11.98	14.49	18.51	12.05	12.83		12.17	
	CPI + 4%			3.35	9.57	5.65	4.74	5.25	6.38	6.02	9.57	6.66	6.54		6.03	
	EXCESS RETURN			0.06	8.94	2.83	1.41	3.38	5.60	8.47	8.94	5.38	6.28		6.14	

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FIXED INCOME RETURN DETAIL																
237	NYCERS-TOTAL FIXED INCOME - GROSS	31,672	36.84	2.46	5.39	0.79	7.74	9.58	9.56	0.09	5.39	6.81	5.00	4.85	8.10	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.03)	(0.12)	(0.06)	(0.13)	(0.13)	(0.13)	(0.11)	(0.12)	(0.12)	(0.12)			
	EST MANAGEMENT FEES			(0.03)	(0.12)	(0.06)	(0.13)	(0.13)	(0.13)	(0.11)	(0.12)	(0.12)	(0.12)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL FIXED INCOME - NET MGR			2.43	5.26	0.74	7.61	9.46	9.43	(0.02)	5.26	6.69	4.88			
245	NYCERS-TOTAL FIXED INCOME (ex ALTERNATIVES & CASH) - GROSS	24,576	28.59	2.26	2.40	(0.69)	11.16	11.74	9.46	(0.36)	2.40	7.08	4.36	4.46	11/01/2013	
	ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.04)	(0.08)	(0.09)	(0.07)	(0.07)	(0.08)	(0.08)	(0.08)	(0.09)		
	EST MANAGEMENT FEES			(0.02)	(0.08)	(0.04)	(0.08)	(0.09)	(0.07)	(0.07)	(0.08)	(0.08)	(0.08)	(0.09)		
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	NYCERS-TOTAL FIXED INCOME (ex ALTERNATIVES & CASH) - NET MGR			2.24	2.32	(0.72)	11.08	11.65	9.39	(0.43)	2.32	7.01	4.29	4.37		
253	NYCERS-TOTAL STRUCTURED FIXED INCOME - GROSS	18,396	21.40	2.09	(0.04)	(1.60)	12.39	11.47	9.33	(0.33)	(0.04)	6.82	4.06	4.48	7.53	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.01)	(0.06)	(0.03)	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)			
	NYCERS-TOTAL STRUCTURED FIXED INCOME - NET MGR			2.08	(0.09)	(1.63)	12.34	11.41	9.28	(0.37)	(0.09)	6.77	4.01			
	NYC CUSTOM STRUCTURED INDEX-ERS			1.93	(0.39)	(1.55)	14.00	12.44	10.25	(0.19)	(0.39)	7.54	4.31	4.44		
	EXCESS RETURN			0.14	0.29	(0.08)	(1.66)	(1.04)	(0.96)	(0.19)	0.29	(0.76)	(0.31)	0.04		
263	NYCERS-TOTAL GOVERNMENT - GROSS	7,821	9.10	2.01	(3.24)	(2.65)	13.89	11.17	8.37	(0.13)	(3.24)	6.08	2.33	4.37	6.98	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.03)	(0.03)	(0.04)	(0.03)	(0.02)	(0.03)	(0.03)			
	NYCERS-TOTAL GOVERNMENT - NET MGR			2.00	(3.26)	(2.66)	13.86	11.14	8.33	(0.16)	(3.26)	6.05	2.30			
	CUSTOM GOVERNMENT BENCHMARK - ERS			1.96	(2.99)	(2.42)	16.96	13.85	10.40	(0.05)	(2.99)	7.79	3.43	4.97		
	EXCESS RETURN			0.05	(0.27)	(0.24)	(3.10)	(2.72)	(2.07)	(0.10)	(0.27)	(1.74)	(1.12)	(0.60)		
273	NYCERS-TOTAL MORTGAGE - GROSS	4,740	5.51	0.37	0.22	(0.68)	6.09	4.73	6.85	0.96	0.22	4.25	2.55	3.02	6.27	03/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.02)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)	(0.05)	(0.06)			
	NYCERS-TOTAL MORTGAGE - NET MGR			0.35	0.16	(0.70)	6.04	4.67	6.80	0.90	0.16	4.20	2.49			
	NYC CUSTOM MORTGAGE BENCHMARK			0.33	(0.48)	(0.77)	5.96	3.91	6.68	1.01	(0.48)	3.91	2.33	2.67	5.91	
	EXCESS RETURN			0.02	0.64	0.07	0.08	0.77	0.13	(0.11)	0.64	0.29	0.16	0.36	0.35	
283	NYCERS-TOTAL INVESTMENT GRADE CORPORATE - GROSS	5,835	6.79	3.63	3.73	(1.10)	9.62	10.14	14.40	(2.18)	3.73	7.91	5.16	5.37	7.00	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.10)	(0.05)	(0.10)	(0.10)	(0.11)	(0.09)	(0.10)	(0.10)	(0.10)			
	NYCERS-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			3.61	3.64	(1.15)	9.52	10.04	14.29	(2.27)	3.64	7.81	5.06			
	NYC CUSTOM IGC BENCHMARK			3.55	3.34	(1.07)	9.26	9.70	13.40	(1.90)	3.34	7.53	4.70	4.90		
	EXCESS RETURN			0.06	0.30	(0.08)	0.26	0.34	0.89	(0.37)	0.30	0.28	0.36	0.47		
293	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	616	0.72	2.01	2.41	(0.94)	8.34	9.11	9.89	(0.87)	2.41	6.25	3.85	4.04	4.93	05/01/2009
	ESTIMATED INVESTMENT FEES			(0.04)	(0.18)	(0.09)	(0.19)	(0.19)	(0.19)	(0.18)	(0.18)	(0.19)	(0.18)			
	NYCERS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			1.97	2.23	(1.02)	8.15	8.91	9.70	(1.05)	2.23	6.07	3.67			
	BLOOMBERG U.S. AGGREGATE			1.83	(0.33)	(1.60)	8.74	7.51	8.72	0.01	(0.33)	5.34	3.03	3.39	3.99	
	EXCESS RETURN			0.14	2.56	0.58	(0.59)	1.41	0.98	(1.06)	2.56	0.72	0.64	0.65	0.94	

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FIXED INCOME RETURN DETAIL																
315	NYCERS-TOTAL TIPS - GROSS	3,058	3.56	3.42	6.46	1.71	8.26	10.94	8.46	(1.26)	6.46	6.51	4.17	3.51	4.28	06/01/2005
	ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)			
	NYCERS-TOTAL TIPS - NET MGR			3.41	6.44	1.70	8.24	10.92	8.44	(1.27)	6.44	6.49	4.15			
	BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			3.25	6.51	1.73	8.28	10.99	8.43	(1.26)	6.51	6.53	4.17	3.40	4.16	
	EXCESS RETURN			0.16	(0.07)	(0.03)	(0.04)	(0.07)	0.01	(0.01)	(0.07)	(0.04)	(0.02)	0.11	0.12	
325	NYCERS- TOTAL CONVERTIBLE BONDS - GROSS	1,565	1.82	2.10	22.93	4.94	5.87	16.57	16.42	(0.29)	22.93	11.68	10.93	8.39	7.72	06/01/2008
	ESTIMATED INVESTMENT FEES			(0.09)	(0.46)	(0.18)	(0.41)	(0.47)	(0.46)	(0.40)	(0.46)	(0.44)	(0.44)			
	NYCERS-TOTAL CONVERTIBLE BONDS - NET MGR			2.01	22.46	4.76	5.46	16.10	15.95	(0.69)	22.46	11.24	10.49			
	ICE BOFA ALL US CONV EX MANDATORY			3.77	48.00	6.72	17.79	52.05	22.89	0.65	48.00	23.48	20.68	13.75	11.86	
	EXCESS RETURN			(1.76)	(25.53)	(1.96)	(12.33)	(35.95)	(6.94)	(1.34)	(25.53)	(12.24)	(10.19)	(5.36)	(4.14)	
335	NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	942	1.10	2.15	0.94	(0.88)	7.88	7.35	9.28	1.17	0.94	6.17	3.43	4.85	7.69	12/01/1984
	ESTIMATED INVESTMENT FEES			(0.04)	(0.15)	(0.07)	(0.16)	(0.16)	(0.17)	(0.20)	(0.15)	(0.17)	(0.18)	(0.20)	(0.10)	
	NYCERS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			2.12	0.79	(0.95)	7.72	7.19	9.11	0.98	0.79	6.00	3.25	4.65	7.59	
	EMPLOYEES CUSTOM BENCHMARK (NO CASH)			0.96	(0.10)	(0.98)	7.39	5.79	7.62	1.01	(0.10)	4.78	2.92	3.23		
	EXCESS RETURN			1.15	0.89	0.03	0.33	1.40	1.49	(0.03)	0.89	1.23	0.33	1.42		

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ALTERNATIVE CREDIT INCOME RETURN DETAIL																
347	NYCERS-TOTAL HIGH YIELD - GROSS	3,405	3.96	2.80	15.45	3.85	0.58	7.18	14.74	(2.38)	15.45	7.71	7.37	6.57	7.70	10/01/1994
	ESTIMATED INVESTMENT FEES			(0.08)	(0.37)	(0.16)	(0.31)	(0.34)	(0.36)	(0.31)	(0.37)	(0.34)	(0.34)			
	NYCERS-TOTAL HIGH YIELD - NET MGR			2.72	15.08	3.69	0.27	6.84	14.38	(2.69)	15.08	7.37	7.03			
	HIGH YIELD CUSTOM BENCHMARK			2.74	15.34	3.61	0.00	7.05	14.32	(2.34)	15.34	7.42	7.19	6.41	6.94	
	EXCESS RETURN			(0.01)	(0.26)	0.08	0.27	(0.21)	0.06	(0.35)	(0.26)	(0.05)	(0.16)	0.16	0.76	
357	NYCERS- TOTAL BANK LOANS - GROSS	15	0.02	(3.47)	3.00	(2.74)	(1.45)	1.24	8.35	0.99	3.00	1.78	3.41		3.68	12/01/2012
	ESTIMATED INVESTMENT FEES			0.31	0.09	0.24	(0.32)	(0.32)	(0.35)	(0.33)	0.09	(0.19)	(0.25)			
	NYCERS-TOTAL BANK LOANS - NET MGR			(3.17)	3.09	(2.50)	(1.77)	0.92	8.00	0.66	3.09	1.59	3.16			
	CSFB LEVERAGED LOAN INDEX			1.44	11.67	3.48	(2.27)	2.78	8.17	1.14	11.67	4.36	5.04		4.42	
	EXCESS RETURN			(4.61)	(8.57)	(5.98)	0.50	(1.86)	(0.17)	(0.48)	(8.57)	(2.77)	(1.88)		(0.74)	
367	NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	2,861	3.33	4.86	21.77	10.59	(1.85)	5.30	5.49	6.46	21.77	7.94	8.62	6.77	7.82	10/01/2007
	ESTIMATED INVESTMENT FEES			(0.03)	(0.22)	(0.12)	(0.16)	(0.15)	(0.18)	(0.15)	(0.22)	(0.17)	(0.16)			
	NYCERS-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			4.84	21.55	10.46	(2.01)	5.15	5.32	6.32	21.55	7.77	8.46			
	OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			2.83	17.35	5.27	0.88	7.22	14.66	2.36	17.35	8.96	9.44	8.78	9.12	
	EXCESS RETURN			2.01	4.20	5.20	(2.89)	(2.07)	(9.35)	3.95	4.20	(1.19)	(0.98)	(2.01)	(1.30)	
CASH SUMMARY																
379	Short Term NYCERS - GROSS	814	0.95	0.03	0.15	0.06	1.44	0.50	2.30	1.95	0.15	1.31	1.23	0.84		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	0.00		
	Short Term NYCERS - NET MGR			0.03	0.15	0.06	1.44	0.50	2.30	1.95	0.15	1.31	1.23	0.84		
383	Cash Account	1	0.00													
385	Securities Lending	0	0.00													
387	KKR Cash Account	0	0.00													

**New York City
Employees' Retirement System**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through June 30, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	9	0.01	3.95	52.75	9.99	34.46	28.51	(9.18)	22.32	11.29
RUSSELL 2000 GROWTH DAILY			3.92	51.36	8.98	34.63	28.48	(9.31)	22.17	11.32
Excess			0.03	1.39	1.01	(0.18)	0.03	0.12	0.15	(0.03)
BlackRock US SCV R2000	179	0.21	4.40	73.20	26.48	4.51	23.52	(12.77)	7.95	31.61
RUSSELL 2000 VALUE DAILY			4.56	73.28	26.69	4.63	22.39	(12.86)	7.84	31.74
Excess			(0.16)	(0.08)	(0.22)	(0.13)	1.13	0.09	0.11	(0.13)
RAFI US SCE	0	0.00					20.92	(11.31)	9.63	27.57
RUSSELL 2000 (DAILY)							25.52	(11.01)	14.65	21.31
Excess							(4.60)	(0.29)	(5.01)	6.26
Cooke and Bieler-US SCV	117	0.14	0.78	53.28	17.44	9.20				
RUSSELL 2000 VALUE DAILY			4.56	73.28	26.69	4.63				
Excess			(3.78)	(20.00)	(9.25)	4.57				
Pzena-US SCV	130	0.15	0.90	68.59	21.73	(1.19)				
RUSSELL 2000 VALUE DAILY			4.56	73.28	26.69	4.63				
Excess			(3.66)	(4.69)	(4.96)	(5.83)				
T Rowe Price-US SCV	90	0.10	3.04	54.71	16.24					
RUSSELL 2000 VALUE DAILY			4.56	73.28	26.69					
Excess			(1.52)	(18.57)	(10.45)					
PanAgora-US SCC	199	0.23	4.36	56.76	17.68					
RUSSELL 2000 (DAILY)			4.29	62.03	17.54					
Excess			0.07	(5.27)	0.15					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Wellington US SCC	387	0.45	3.33	62.44	11.81	28.10	32.98	(10.09)	19.90	19.25
RUSSELL 2000 (DAILY)			4.29	62.03	17.54	19.96	25.52	(11.01)	14.65	21.31
Excess			(0.96)	0.41	(5.73)	8.14	7.46	0.93	5.25	(2.05)
Wasatch-US SCG	271	0.32	7.62	52.89	13.32	38.38				
RUSSELL 2000 GROWTH DAILY			3.92	51.36	8.98	34.63				
Excess			3.71	1.53	4.33	3.75				
William Blair-US SCG	262	0.30	4.80	62.22	13.34					
RUSSELL 2000 GROWTH DAILY			3.92	51.36	8.98					
Excess			0.88	10.86	4.36					
BlackRock US LMC R1000 Core	18,615	21.65	8.54	43.44	15.09	21.30	31.44			
RUSSELL 1000 (DAILY)			8.54	43.07	14.95	20.96	31.43			
Excess			0.00	0.37	0.13	0.33	0.02			
PIMCO RAFI US LMCE	2,587	3.01	5.43	49.36	20.34	4.50	25.33	(6.90)	16.94	15.71
RUSSELL 1000 (DAILY)			8.54	43.07	14.95	20.96	31.43	(4.78)	21.69	12.05
Excess			(3.10)	6.29	5.38	(16.47)	(6.09)	(2.11)	(4.74)	3.66
Legal General US LMCE	2,239	2.60	5.88	41.24	14.98	9.60				
RUSSELL 1000 (DAILY)			8.54	43.07	14.95	20.96				
Excess			(2.66)	(1.83)	0.03	(11.37)				
FUND OF FUNDS										
NYCERS-TOTAL FUND OF FUNDS	179	0.21	4.41	66.66	21.07	19.46	23.40	(8.23)		
RUSSELL 2000 (DAILY)			4.29	62.03	17.54	19.96	25.52	(11.01)		
Excess			0.12	4.64	3.53	(0.50)	(2.12)	2.78		
NYCERS-TOTAL LEGATO	179	0.21	4.41	66.66	21.07	19.46	23.40	(8.17)		
RUSSELL 2000 (DAILY)			4.29	62.03	17.54	19.96	25.52	(11.01)		
Excess			0.12	4.64	3.53	(0.50)	(2.12)	2.84		

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
NON - US EQUITY										
Causeway WorldxUS LMCC	1,536	1.79	2.28	41.24	9.71	4.77	23.48	(18.52)	27.94	0.69
NYC Developed Value Benchmark ^[1]			5.65	33.60	9.92	7.59	22.49	(14.09)	22.77	5.02
Excess			(3.36)	7.63	(0.21)	(2.82)	0.99	(4.43)	5.18	(4.33)
Sprucegrove WorldxUS LMCC	1,883	2.19	4.01	45.57	10.68	4.92	17.97	(13.93)	27.61	11.10
NYC Developed Value Benchmark ^[1]			5.65	33.60	9.92	7.59	22.49	(14.09)	22.77	5.02
Excess			(1.64)	11.97	0.77	(2.66)	(4.52)	0.16	4.85	6.08
Baillie Gifford WorldxUS LMCC	2,352	2.74	7.19	45.40	4.54	65.71	36.40	(12.79)	39.40	2.12
NYC Developed Growth Benchmark ^[2]			5.65	33.60	9.92	7.59	22.49	(14.09)	27.77	(3.04)
Excess			1.55	11.79	(5.38)	58.13	13.91	1.30	11.63	5.16
Walter Scott WorldxUS LMCC	1,955	2.27	7.97	29.84	7.15	21.21	28.56	(7.16)	27.94	5.26
NYC Developed Growth Benchmark ^[2]			5.65	33.60	9.92	7.59	22.49	(14.09)	27.77	(3.04)
Excess			2.32	(3.77)	(2.77)	13.63	6.07	6.93	0.17	8.31
Acadian WorldxUS SCC	647	0.75	9.50	56.51	20.71	15.95	24.57	(19.03)	37.50	5.15
S&P EPAC Small Cap USD NET			5.31	42.23	9.16	13.78	23.71	(18.58)	33.47	1.34
Excess			4.19	14.28	11.55	2.16	0.86	(0.45)	4.03	3.82
Fidelity WorldxUS SCC	0	0.00						(18.48)	31.22	(0.81)
S&P EPAC Small Cap USD NET								(18.58)	33.47	1.34
Excess								0.10	(2.25)	(2.15)
Alger EAFE SCC	156	0.18	3.95	40.07	11.05	9.65				
MSCI EAFE SMALL CAP NET (DAILY)			4.34	40.98	9.04	12.34				
Excess			(0.39)	(0.91)	2.01	(2.69)				
SSGA WorldxUS LMC NYC Custom IDX	1,732	2.01	5.84	33.85	10.09	8.08	22.55	(13.65)	24.53	1.28
NYC Custom World ex US Index ^[3]			5.65	33.60	9.92	7.59	22.49	(14.09)	24.12	1.00
Excess			0.19	0.25	0.18	0.49	0.06	0.44	0.41	0.28

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
SSGA WorldxUS SC Custom IDX ^[4]	886	1.03	4.90	42.43	10.02	13.26	25.44	(17.72)	33.66	2.52
World ex USA SC PASSIVE CUSTOM BM ^[5]			4.81	42.28	9.92	12.78	25.41	(18.07)	33.31	2.18
Excess			0.09	0.15	0.11	0.48	0.03	0.35	0.35	0.33
EMERGING MARKETS										
Baillie Gifford EM	1,118	1.30	2.92	48.69	4.56	35.23	24.53	(14.40)	41.25	4.20
ERS Baillie Gifford EM Custom Benchmark			5.05	39.14	7.45	8.26	15.10	(13.38)	34.18	13.66
Excess			(2.13)	9.54	(2.89)	26.96	9.43	(1.02)	7.07	(9.46)
Acadian EM	880	1.02	6.78	53.17	14.58	7.84	12.83	(17.60)	36.05	12.66
ERS Acadian EM Custom Benchmark			5.05	42.87	7.45	11.17	15.10	(13.38)	34.18	13.66
Excess			1.74	10.30	7.13	(3.33)	(2.28)	(4.22)	1.86	(1.00)
AQR-EM SCC	224	0.26	15.95		26.46					
MSCI EMERGING MARKETS			5.05		7.45					
Excess			10.90		19.02					
Parametric EM	0	0.00					10.92	(14.77)	30.24	11.58
NYCERS Custom EM Index ^[6]							15.10	(13.38)	34.18	13.66
Excess							(4.18)	(1.38)	(3.95)	(2.09)
Pzena-EM ACV	362	0.42	2.21							
MSCI EMERGING MARKETS			5.05							
Excess			(2.84)							
RBC-EM ACG	279	0.32	1.00							
MSCI EMERGING MARKETS			5.05							
Excess			(4.04)							
Sands-EM LCG	300	0.35	9.20							
MSCI EMERGING MARKETS			5.05							
Excess			4.15							

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
UBS-EM ACC	302	0.35								
MSCI EMERGING MARKETS										
Excess										
DFA EM	633	0.74	6.98	59.55	14.45	10.08	9.04	(13.70)	34.27	20.31
NYCERS Custom EM Index ^[6]			5.05	49.44	8.66	14.99	15.10	(13.38)	34.18	13.66
Excess			1.94	10.11	5.79	(4.90)	(6.06)	(0.31)	0.09	6.65
BlackRock MSCI EM Core	820	0.95	4.30	47.20	7.48	14.79	15.10	(12.86)	32.90	12.49
NYCERS Custom Passive EM Index ^[7]			5.05	49.44	8.66	14.99	15.10	(12.97)	33.03	12.68
Excess			(0.75)	(2.24)	(1.18)	(0.20)	(0.00)	0.11	(0.13)	(0.19)
INTERNATIONAL FOF										
NYCERS-TOTAL INTERNATIONAL FOF	641	0.75	6.89	39.08	10.25	13.90	25.04	(16.27)		
NYC Blended Custom Benchmark for FoF (ERS) ^[8]			5.71	37.37	10.00	9.45	21.73	(14.39)		
Excess			1.18	1.71	0.25	4.45	3.30	(1.88)		
NYCERS-TOTAL INTERNATIONAL BIVIUM	214	0.25	5.76	45.66	12.73	13.13	25.89	(18.08)		
NYC Blended Custom Benchmark for FoF (ERS) ^[8]			5.71	37.37	10.00	9.45	21.73	(14.39)		
Excess			0.05	8.29	2.73	3.68	4.15	(3.69)		
NYCERS-TOTAL INTERNATIONAL XPONANCE	207	0.24	7.84	37.58	9.50	12.37	21.96	(14.84)		
NYC Blended Xponance Benchmark for ERS ^[9]			5.60	37.22	9.88	9.45	21.73	(14.39)		
Excess			2.24	0.36	(0.38)	2.91	0.23	(0.45)		
NYCERS-TOTAL INTERNATIONAL LEADING EDGE	220	0.26	7.12	34.43	8.61	16.02	27.30	(15.78)		
NYC Blended Custom Benchmark for FoF (ERS) ^[8]			5.71	37.37	10.00	9.45	21.73	(14.39)		
Excess			1.41	(2.94)	(1.40)	6.57	5.56	(1.39)		
GLOBAL EQUITY										
Fiera-Global	420	0.49	10.55	41.81	13.22	20.53	34.10			
MSCI World Index			7.74	39.04	13.05	15.90	27.67			
Excess			2.80	2.77	0.18	4.63	6.43			

Public Markets Manager Performance Detail

Net Returns Through June 30, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
Neuberger Berman Mortgages	0	0.00					6.34	0.82	2.43	1.50
FTSE MORTGAGE INDEX							6.68	1.01	2.47	1.59
Excess							(0.34)	(0.19)	(0.04)	(0.09)
PIMCO MORT	1,448	1.68	0.10		(0.62)					
Bloomberg US Mortgage Backed Securities			0.33		(0.77)					
Excess			(0.23)		0.15					
Wellington Mortgages	571	0.66	0.40		(0.45)					
Bloomberg US Mortgage Backed Securities			0.33		(0.77)					
Excess			0.07		0.32					
BlackRock Mortgages	2,720	3.16	0.48	0.15	(0.74)	4.86	7.00	0.96	2.69	2.17
NYC Custom Mortgage Benchmark ^[10]			0.33	(0.48)	(0.77)	3.91	6.68	1.01	2.47	1.59
Excess			0.15	0.63	0.03	0.95	0.33	(0.05)	0.22	0.58
Prudential Corporate	886	1.03	3.51	3.64	(1.05)	9.71	13.56	(1.91)	6.17	5.89
NYC - Investment Grade Credit			3.39	3.28	(1.13)	9.70	13.40	(1.90)	6.04	5.56
Excess			0.12	0.36	0.08	0.01	0.17	(0.01)	0.13	0.33
T Rowe Price-Corporate	2,632	3.06	3.63	3.71	(1.03)	9.39	14.52	(2.41)	6.85	6.00
NYC Custom IGC Benchmark ^[11]			3.55	3.34	(1.07)	9.70	13.40	(1.90)	6.04	5.56
Excess			0.09	0.37	0.04	(0.31)	1.13	(0.51)	0.81	0.44
BlackRock Corporate	743	0.86	3.73	3.35	(1.22)	10.03	13.98	(2.00)	6.38	5.50
NYC Custom IGC Benchmark ^[11]			3.55	3.34	(1.07)	9.70	13.40	(1.90)	6.04	5.56
Excess			0.19	0.01	(0.15)	0.33	0.59	(0.10)	0.35	(0.06)

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Neuberger Berman-Corporate	1,574	1.83	3.56							
Bloomberg U.S. Corporate Inv Grade			3.55							
Excess			0.01							
Taplin Corporate	0	0.00				11.41	15.75	(3.47)	6.91	9.51
NYC - Investment Grade Credit						9.70	13.40	(1.90)	6.04	5.56
Excess						1.71	2.35	(1.56)	0.87	3.95
Barrow Hanley Corporate	0	0.00				11.27	14.78	(2.37)	6.06	5.88
NYC - Investment Grade Credit						9.70	13.40	(1.90)	6.04	5.56
Excess						1.57	1.38	(0.46)	0.02	0.32
BlackRock LI Treasury	1,126	1.31	4.06	(6.19)	(4.97)	12.48	10.41	(0.19)	4.76	1.24
NYC - Treasury Agency Plus Five			4.17	(6.52)	(5.04)	12.85	10.40	(0.05)	4.66	1.21
Excess			(0.11)	0.32	0.07	(0.38)	0.01	(0.14)	0.10	0.02
SSGA LI Treasury	1,249	1.45	4.02	(5.99)	(4.81)	13.02	10.53	(0.18)	4.93	1.57
NYC - Treasury Agency Plus Five			4.17	(6.52)	(5.04)	12.85	10.40	(0.05)	4.66	1.21
Excess			(0.15)	0.53	0.23	0.16	0.13	(0.13)	0.28	0.36
SSGA ST Treasury 1-3Y	2,068	2.40	(0.04)	0.02	(0.14)	3.10	3.54	1.52	0.40	
FTSE USBIG Treasury 1-3 Y Index			(0.03)	0.07	(0.08)	3.09	3.56	1.56	0.42	
Excess			(0.01)	(0.05)	(0.06)	0.01	(0.02)	(0.04)	(0.02)	
SSGA LT Treasury 10Y Plus	654	0.76	6.95							
FTSE Treasury 10+			6.98							
Excess			(0.02)							
SSGA IT Treasury 1-10Y ⁽¹²⁾	2,724	3.17	0.65	(2.25)	(1.12)	4.55	5.09	2.05		
FTSE USBIG Treasury/Agency 1-10 y			0.68	(1.09)	(1.06)	5.72	5.18	1.42		
Excess			(0.03)	(1.17)	(0.06)	(1.17)	(0.09)	0.63		

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
HIGH YIELD										
Oaktree High Yield	465	0.54	2.60	14.32	3.17	7.15	13.98	(3.46)	5.78	14.91
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32	(2.08)	7.50	17.13
Excess			(0.14)	(1.02)	(0.44)	0.10	(0.34)	(1.38)	(1.72)	(2.22)
Pinebridge High Yield	397	0.46	2.55	14.95	3.35					
ICE BofA US High Yield Index			2.77	15.62	3.70					
Excess			(0.23)	(0.67)	(0.35)					
Neuberger Berman High Yield	498	0.58	2.65	14.53	3.27	6.04	14.15	(2.00)	5.78	14.70
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32	(2.08)	7.50	17.13
Excess			(0.08)	(0.81)	(0.35)	(1.01)	(0.17)	0.08	(1.73)	(2.43)
Stone Harbor High Yield	5	0.01					14.12	(2.62)	5.85	12.98
Bloomberg U.S. HY - 2% Issuer Cap							14.32	(2.08)	7.50	17.13
Excess							(0.20)	(0.53)	(1.65)	(4.15)
T Rowe Price High Yield	532	0.62	2.74	15.67	4.13	7.03	15.63	(2.36)	7.03	12.32
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32	(2.08)	7.50	17.13
Excess			0.01	0.33	0.52	(0.02)	1.32	(0.28)	(0.47)	(4.81)
Shenkman High Yield	428	0.50	2.57	13.35	3.06	6.37	14.32	(3.21)	6.79	11.86
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32	(2.08)	7.50	17.13
Excess			(0.17)	(1.99)	(0.55)	(0.68)	0.01	(1.12)	(0.71)	(5.27)
Eaton Vance High Yield	341	0.40	2.88	14.82	3.63	5.98	14.56			
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32			
Excess			0.14	(0.52)	0.01	(1.07)	0.24			
Mackay Shields High Yield	376	0.44	2.61	14.08	3.69	8.04	14.19			
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32			
Excess			(0.13)	(1.26)	0.07	0.99	(0.13)			

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Nomura High Yield	364	0.42	3.30	19.93	5.50	8.17	13.37			
Bloomberg U.S. HY - 2% Issuer Cap			2.74	15.34	3.61	7.05	14.32			
Excess			0.57	4.59	1.88	1.12	(0.95)			
BANK LOANS										
Barings Bank Loans	1	0.00				1.12	7.82	0.38	4.47	8.46
CSFB LEVERAGED LOAN INDEX						2.78	8.17	1.14	4.25	9.88
Excess						(1.66)	(0.36)	(0.76)	0.22	(1.42)
Credit Suisse Bank Loans	1	0.00				1.81	8.31	1.04	4.66	8.95
CSFB LEVERAGED LOAN INDEX						2.78	8.17	1.14	4.25	9.88
Excess						(0.96)	0.13	(0.10)	0.41	(0.92)
Invesco Bank Loans	7	0.01	(3.92)	1.06	(2.53)	(0.42)	8.60	0.17	3.64	9.68
CSFB LEVERAGED LOAN INDEX			1.44	11.67	3.48	2.78	8.17	1.14	4.25	9.88
Excess			(5.36)	(10.60)	(6.01)	(3.19)	0.42	(0.97)	(0.61)	(0.20)
Bain Bank Loans	6	0.01								
CSFB LEVERAGED LOAN INDEX										
Excess										
TIPS										
SSGA TIPS	2,209	2.57	3.42	6.49	1.73	10.88	8.44	(1.30)	3.06	4.73
Bloomberg Global Inflation-Linked: U.S. TIPS			3.25	6.51	1.73	10.99	8.43	(1.26)	3.01	4.68
Excess			0.17	(0.03)	(0.00)	(0.11)	0.02	(0.04)	0.05	0.04
BlackRock TIPS	849	0.99	3.38	6.32	1.63	11.01	8.42	(1.18)	2.98	4.71
Bloomberg Global Inflation-Linked: U.S. TIPS			3.25	6.51	1.73	10.99	8.43	(1.26)	3.01	4.68
Excess			0.13	(0.20)	(0.10)	0.02	(0.01)	0.08	(0.02)	0.02

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
CONVERTIBLE BONDS										
Advent Convertible Bonds	987	1.15	2.03	20.28	2.95	17.21	12.71	(1.64)	7.75	7.35
ICE BofA US Convertibles - Yield Alter			2.46	22.15	4.48	13.34	15.40	(0.42)	9.45	9.96
Excess			(0.43)	(1.87)	(1.53)	3.87	(2.69)	(1.22)	(1.69)	(2.61)
Victory Convertible Bonds										
Victory Convertible Bonds	578	0.67	1.98	26.38	8.01	14.91	20.49	0.66	20.54	6.47
ICE BofA All IG US Convertibles			1.16	20.73	4.62	7.57	20.88	3.35	20.99	14.23
Excess			0.82	5.64	3.38	7.35	(0.39)	(2.69)	(0.45)	(7.77)
CORE FI - DEVELOPING MANAGERS										
LM Capital-Core Plus										
LM Capital-Core Plus	359	0.42	1.86	2.61	(1.02)	9.60	9.70	(1.14)	3.85	3.47
Bloomberg U.S. Aggregate			1.83	(0.33)	(1.60)	7.51	8.72	0.01	3.54	2.65
Excess			0.03	2.94	0.59	2.10	0.99	(1.15)	0.31	0.82
GIA-Core Plus										
GIA-Core Plus	204	0.24	2.12	1.92	(0.98)	7.85	9.69	(0.81)	4.35	4.00
Bloomberg U.S. Aggregate			1.83	(0.33)	(1.60)	7.51	8.72	0.01	3.54	2.65
Excess			0.29	2.26	0.63	0.34	0.97	(0.82)	0.80	1.35
Pugh-CorePlus										
Pugh-CorePlus	53	0.06	2.10	0.84	(1.25)					
Bloomberg U.S. Aggregate			1.83	(0.33)	(1.60)					
Excess			0.27	1.17	0.35					
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust										
AFL-CIO Housing Investment Trust	351	0.41	1.54	0.12	(0.74)	6.20	7.78	0.16	3.17	1.94
Bloomberg U.S. Aggregate			1.83	(0.33)	(1.60)	7.51	8.72	0.01	3.54	2.65
Excess			(0.29)	0.45	0.87	(1.31)	(0.94)	0.15	(0.38)	(0.71)
RBC Access MBS										
RBC Access MBS	169	0.20	1.46	0.08	(0.82)	6.14	7.21	0.49	2.64	1.61
Access RBC Benchmark			0.44	(0.76)	(0.99)	4.69	6.05	1.17	1.96	1.52
Excess			1.02	0.84	0.17	1.45	1.16	(0.69)	0.69	0.09

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
CPC Construction Facility	8	0.01	0.77	2.64	2.26	0.67	5.04	4.14	6.07	(3.95)
CPC CONST BENCHMARK			0.60	2.45	1.21	2.73	4.09	3.99	3.34	3.03
Excess			0.17	0.20	1.06	(2.05)	0.95	0.15	2.73	(6.99)
BOA PPAR FNMA	23	0.03	3.35	(1.21)	(2.31)	6.12	13.54	2.33	5.21	4.07
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			2.72	(1.72)	(1.89)	0.98	5.74	0.47	1.60	1.69
BOA PPAR GNMA	15	0.02	1.35	0.81	(0.98)	7.45	8.44	2.42	4.08	3.13
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.23	0.95	(0.32)	3.14	1.70	0.79	1.56	0.85
Citibank PPAR FNMA	25	0.03	3.57	(0.97)	(2.20)	7.06	19.71	2.63	5.26	3.71
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			2.94	(1.48)	(1.77)	1.92	11.91	0.77	1.65	1.33
Citibank PPAR GNMA	6	0.01	1.53	2.05	(0.24)	8.31	5.33	1.90	3.10	2.78
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.42	2.19	0.42	4.00	(1.41)	0.27	0.57	0.50
CFSB PPAR FNMA	1	0.00	4.06		(2.71)					
FNMA Plus 85bps			0.62		(0.43)					
Excess			3.43		(2.28)					
CFSB PPAR GNMA	2	0.00	1.35	2.07	(0.17)	8.01	5.91	0.99	3.83	3.21
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.24	2.22	0.48	3.69	(0.82)	(0.65)	1.30	0.93
CPC PPAR FNMA	101	0.12	3.87	1.54	(0.63)	7.00	13.18	2.31	5.06	6.15
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			3.25	1.03	(0.20)	1.87	5.38	0.45	1.45	3.77

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
CPC PPAR GNMA	70	0.08	1.38	1.98	(0.22)	7.95	4.76	0.86	2.58	2.86
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.27	2.12	0.44	3.63	(1.97)	(0.77)	0.05	0.58
ECLF PPAR FNMA	3	0.00	4.07	(0.03)	(2.48)					
FNMA Plus 85bps			0.62	0.51	(0.43)					
Excess			3.45	(0.55)	(2.05)					
JPMC PPAR FNMA	94	0.11	3.40	(0.50)	(2.35)	8.33	14.68	1.68	9.96	7.94
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			2.77	(1.02)	(1.93)	3.19	6.88	(0.18)	6.35	5.56
JPMC PPAR GNMA	30	0.03	1.28	2.54	0.22	8.29	5.77	1.99	2.63	2.99
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.17	2.68	0.88	3.97	(0.97)	0.36	0.11	0.72
LIIF PPAR FNMA	12	0.01	3.38	(1.01)	(2.31)	6.44	16.35	2.27	9.55	5.03
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			2.76	(1.52)	(1.88)	1.30	8.55	0.41	5.94	2.65
LIIF PPAR GNMA	2	0.00	0.96	2.04	0.42	6.19	5.54	2.53	2.52	3.88
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			0.85	2.18	1.08	1.87	(1.19)	0.89	(0.01)	1.61
LISC PPAR FNMA	3	0.00	4.09	17.94	(2.45)	31.93	14.95			
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80			
Excess			3.46	17.42	(2.02)	26.80	7.15			
NCBCI PPAR FNMA	0	0.00	1.21	2.86	0.37	8.49	4.08	2.00	1.75	3.46
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80	1.86	3.61	2.38
Excess			0.59	2.35	0.80	3.36	(3.72)	0.15	(1.86)	1.07

Public Markets Manager Performance Detail



Net Returns Through June 30, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
NCBCI PPAR GNMA	2	0.00	1.11	3.07	0.64	8.16	3.69	1.23	3.01	3.51
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			0.99	3.21	1.29	3.85	(3.04)	(0.41)	0.48	1.23
NHS PPAR GNMA	0	0.00	1.18	3.39	0.83	7.11	2.90	0.54	(2.93)	3.58
GNMA Plus 65bps			0.12	(0.14)	(0.66)	4.31	6.73	1.63	2.53	2.28
Excess			1.06	3.53	1.48	2.80	(3.84)	(1.09)	(5.46)	1.30
Wells Fargo PPAR FNMA	24	0.03	3.93	19.77	(2.60)	28.61	21.71			
FNMA Plus 85bps			0.62	0.51	(0.43)	5.14	7.80			
Excess			3.31	19.25	(2.18)	23.48	13.91			
CASH										
Short Term NYCERS	814	0.95	0.03	0.15	0.06	0.50	2.30	1.95	1.09	0.76
ICE BofA US 3-Month Treasury Bill			(0.00)	0.09	0.02	0.67	2.28	1.87	0.86	0.33
Excess			0.03	0.05	0.04	(0.17)	0.01	0.07	0.23	0.44
Cash Account	1	0.00								
Securities Lending	0	0.00								

**New York City
Employees' Retirement System**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		13,377,368,818	10,880,232,533	10,780,594,301	6,392,761,021	1.58	11.0%
TOTAL LIQUIDATED		1,284,777,320	1,450,291,842	1,772,985,787	219,921	1.22	5.3%
TOTAL ACTIVE		12,092,591,498	9,429,940,691	9,007,608,514	6,392,541,100	1.63	12.2%
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,944,269	50,584,154	22,366	0.94	-1.2%
Lincolnshire Equity Fund II, L.P.	1999	18,397,347	19,261,466	37,755,344	336,294	1.98	24.6%
SCP Private Equity Partners II, L.P.	2000	27,442,463	30,827,225	10,819,873	198,802	0.36	-15.8%
Apollo Investment Fund V, L.P.	2001	40,000,000	62,528,643	123,295,865	344,499	1.98	38.6%
RRE Ventures III, L.P.	2001	19,999,999	26,323,260	34,078,940	1,276,414	1.34	5.4%
Thomas, McNERNEY & Partners, L.P.	2002	20,000,000	20,000,000	10,058,105	2,122,790	0.61	-7.3%
Ares Corporate Opportunities Fund, L.P.	2003	45,000,000	53,984,770	80,476,920	467,960	1.50	13.1%
Blackstone Capital Partners IV, L.P.	2003	34,418,762	38,818,072	100,181,154	(39,428)	2.58	39.7%
FS Equity Partners V, L.P.	2003	25,000,000	21,419,958	41,861,469	2,266,061	2.06	15.4%
FdG Capital Partners II LP	2004	35,000,000	37,714,408	44,952,749	690,540	1.21	3.6%
Lincolnshire Equity Fund III, L.P.	2004	55,000,000	55,006,941	78,246,227	18,114,429	1.75	27.6%
Markstone Capital Partners, LP	2004	40,000,000	46,899,103	19,822,611	272,215	0.43	-34.5%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	2004	32,000,000	32,862,069	33,917,301	2,345,487	1.10	1.6%
Yucaipa American Alliance Fund I, LP	2004	90,000,000	114,094,892	137,148,067	823,330	1.21	3.9%
JP Morgan Fleming (Tranche A)	2005	43,000,000	43,134,053	47,324,854	11,158,479	1.36	5.3%
New Mountain Partners II, L.P.	2005	46,451,615	42,071,397	81,045,604	491,507	1.94	13.6%
Palladium Equity Partners III, L.P.	2005	35,000,000	36,441,905	70,498,122	275,361	1.94	16.1%
Snow Phipps Group, L.P.	2005	20,000,000	24,499,168	20,914,615	9,300,063	1.23	4.4%
USPF II Institutional Fund, L.P.	2005	65,000,000	85,734,194	99,947,469	7,704,916	1.26	3.8%
Aisling Capital II, LP	2006	6,680,102	7,854,064	7,775,060	236,924	1.02	0.4%
Ampersand 2006	2006	25,000,000	25,000,000	78,074,782	590,477	3.15	16.9%
Apollo Investment Fund VI, L.P.	2006	90,000,000	115,838,240	173,338,314	1,705,952	1.51	8.7%
Ares Corporate Opportunities Fund II, L.P.	2006	50,000,000	54,760,870	91,388,541	64,260	1.67	13.1%
Arsenal Capital Partners II, LP	2006	22,500,000	27,438,944	53,113,671	225,589	1.94	12.1%
BDCM Opportunity Fund II, L.P.	2006	25,000,000	37,203,442	101,469,671	2,794,833	2.80	18.4%
Blackstone Capital Partners V, L.P.	2006	121,624,827	129,501,303	209,063,240	3,303,587	1.64	8.0%
Catterton Partners VI, L.P.	2006	45,000,000	51,243,868	82,970,154	14,473,021	1.90	11.5%

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Fairview Ventures Fund III, L.P.	2006	25,000,000	26,860,461	47,433,476	22,143,528	2.59	15.8%
First Reserve Fund XI, L.P.	2006	45,000,000	47,820,682	30,367,907	418,698	0.64	-10.0%
GF Capital Private Equity Fund, L.P.	2006	20,000,000	20,729,120	27,032,655	9,080,281	1.74	11.4%
Landmark Equity Partners XIII, L.P.	2006	50,000,000	48,059,342	63,519,033	169,585	1.33	5.4%
MidOcean Partners III, L.P.	2006	58,234,777	69,703,644	141,147,945	9,533,606	2.16	13.3%
RRE Ventures IV, L.P.	2006	35,000,000	44,529,980	35,628,217	63,052,474	2.22	9.5%
Terra Firma Capital Partners III, L.P.	2006	52,779,490	53,538,812	24,137,839	209,302	0.45	-9.3%
The Fourth Cinven Fund	2006	69,233,255	72,910,892	105,361,467	48,806	1.45	7.4%
Thomas, McNerney & Partners II, L.P.	2006	25,000,000	25,349,167	55,110,685	2,162,773	2.26	16.6%
Carlyle Partners V, L.P.	2007	70,000,000	72,385,953	121,589,297	8,378,411	1.80	13.6%
Co-Investment Partners Europe, L.P.	2007	39,871,461	42,601,283	52,846,040	1,130,868	1.27	4.6%
Constellation Venture Capital III, L.P.	2007	25,000,000	28,826,564	14,520,432	10,503,546	0.87	-2.0%
FTVentures III, LP	2007	24,201,990	26,802,873	52,454,701	6,113,416	2.19	15.7%
GSO Capital Opportunities Fund LP	2007	45,000,000	67,377,298	95,627,284	666,346	1.43	17.3%
Halyard Capital Fund II, L.P.	2007	25,000,000	21,720,416	26,459,102	5,949,951	1.49	6.8%
Montreux Equity Partners IV, L.P.	2007	20,000,000	20,000,000	11,044,696	16,323,734	1.37	4.2%
Nautic Partners VI, L.P.	2007	30,000,000	33,551,243	73,367,456	6,924,224	2.39	18.6%
New Mountain Partners III, L.P.	2007	100,000,000	102,285,544	175,242,157	74,506,946	2.44	14.7%
PCG Clean Energy & Technology Fund (East), LLC	2007	90,000,000	81,429,594	23,944,273	9,683,527	0.41	-10.9%
Pegasus Partners IV, L.P.	2007	30,000,000	36,450,033	27,600,933	5,814,371	0.92	-1.6%
Pine Brook Capital Partners, L.P.	2007	30,000,000	34,068,301	42,439,115	1,830,436	1.30	7.0%
Quaker BioVentures II, L.P.	2007	20,000,000	19,358,740	19,972,887	3,325,298	1.20	3.7%
RLJ Equity Partners Fund I, L.P.	2007	20,000,000	22,197,034	25,661,463	7,882,544	1.51	8.5%
SCP Vitalife Partners II Fund	2007	20,000,000	20,099,698	1,579	5,187,953	0.26	-12.9%
StarVest Partners II, L.P.	2007	25,000,000	25,159,680	11,649,083	11,338,751	0.91	-1.2%
Trilantic Capital Partners IV L.P.	2007	69,028,637	71,966,276	107,362,564	3,977,691	1.55	13.2%
United States Power Fund III, L.P.	2007	65,000,000	76,903,642	79,455,499	17,223,066	1.26	3.9%
Vista Equity Partners Fund III, L.P.	2007	30,000,000	32,259,920	76,619,901	2,488,374	2.45	26.8%
Aisling Capital III, LP	2008	14,000,000	15,793,389	37,214,504	149,467	2.37	26.0%
Apollo Investment Fund VII, L.P.	2008	100,000,000	122,675,907	202,181,092	7,695,991	1.71	22.5%
Ares Corporate Opportunities Fund III, L.P.	2008	75,000,000	91,895,841	194,360,073	5,316,643	2.17	20.5%

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Avista Capital Partners II, L.P.	2008	75,000,000	98,630,998	154,561,847	5,833,838	1.63	14.4%
Blue Wolf Capital Fund II, L.P.	2008	25,000,000	27,705,694	45,652,083	542,333	1.67	10.6%
Bridgepoint Europe IV	2008	26,630,894	27,486,738	36,527,697	4,760,006	1.50	9.5%
Crestview Partners II, L.P.	2008	50,000,000	59,590,508	82,253,924	28,995,496	1.87	14.1%
First Reserve Fund XII, L.P.	2008	45,000,000	49,986,866	25,356,785	2,523,032	0.56	-14.2%
GCM Grosvenor NYCERS Emerging Manager Fund, L.P.	2008	116,737,374	147,071,360	145,847,383	70,114,890	1.47	9.8%
GI Partners Fund III L.P.	2008	45,000,000	48,627,007	76,237,582	14,644	1.57	13.0%
Landmark Equity Partners XIV, L.P.	2008	109,120,000	106,420,161	124,337,406	17,484,012	1.33	9.5%
Leeds Equity Partners V, L.P.	2008	60,000,000	56,865,090	101,086,020	48,081,450	2.62	19.1%
Levine Leichtman Capital Partners IV, L.P.	2008	35,000,000	37,477,097	59,355,428	4,934,460	1.72	18.3%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	2008	45,000,000	45,593,762	88,606,006	44,893,712	2.93	19.7%
NGN BioMed Opportunity II, L.P.	2008	20,000,000	19,151,821	13,346,209	9,414,455	1.19	2.4%
Onex Partners III LP	2008	75,000,000	82,261,325	112,631,194	20,399,430	1.62	11.4%
Paladin III (NY City), L.P.	2008	30,000,000	41,778,140	72,841,457	38,642,503	2.67	15.5%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	45,000,000	51,817,249	53,231,094	2,457,965	1.07	1.9%
Yucaipa American Alliance Fund II, LP	2008	120,000,000	164,699,094	173,546,457	102,358,299	1.68	8.6%
Yucaipa Corporate Initiatives Fund II, LP	2008	42,092,788	41,334,383	24,681,671	11,317,812	0.87	-1.9%
FS Equity Partners VI, L.P.	2009	32,500,000	32,754,101	90,175,129	12,812,652	3.14	23.8%
Lexington Capital Partners VII, L.P.	2009	50,000,000	44,615,537	61,580,688	10,936,778	1.63	14.0%
Lincolnshire Equity Fund IV, L.P.	2009	27,500,000	29,620,491	34,141,280	9,041,610	1.46	8.8%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	40,000,000	40,000,000	54,950,693	11,035,186	1.65	11.7%
JP Morgan Fleming (Tranche B)	2010	35,000,000	36,366,477	36,355,435	31,172,795	1.86	11.6%
Snow Phipps II, L.P.	2010	30,000,000	36,163,652	32,618,121	16,677,619	1.36	8.3%
Trident V, L.P.	2010	110,000,000	128,952,428	153,841,993	72,085,642	1.75	11.6%
American Securities Partners VI, L.P.	2011	80,000,000	88,778,212	133,279,587	60,116,988	2.18	22.6%
Ampersand 2011	2011	25,000,000	25,000,000	80,968,121	681,869	3.27	21.9%
AXA Secondary Fund V B L.P.	2011	120,000,000	98,870,221	157,696,849	776,482	1.60	15.4%
BC European Capital IX	2011	131,008,553	148,390,663	146,837,071	158,310,065	2.06	16.6%
BDCM Opportunity Fund III, L.P.	2011	45,000,000	66,159,227	43,375,271	54,107,873	1.47	8.3%
Blackstone Capital Partners VI, L.P.	2011	120,000,000	128,396,324	139,537,465	80,288,990	1.71	12.7%
EQT VI, L.P.	2011	106,016,297	113,314,512	160,881,799	32,403,751	1.71	13.4%
Pegasus Partners V, L.P.	2011	20,789,916	26,195,242	22,559,841	16,965,040	1.51	9.6%

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Platinum Equity Capital Partners III, L.P.	2011	100,000,000	85,672,971	160,310,138	28,153,092	2.20	36.9%
Vista Equity Partners Fund IV, L.P.	2011	100,000,000	105,031,159	133,516,139	65,881,667	1.90	15.6%
Wellspring Capital Partners V, L.P.	2011	40,000,000	42,157,531	57,131,012	13,099,619	1.67	15.7%
Ares Corporate Opportunities Fund IV, L.P.	2012	125,000,000	133,183,880	166,299,208	80,562,935	1.85	15.7%
Green Equity Investors VI, L.P.	2012	120,000,000	131,929,530	99,460,198	147,982,518	1.88	15.2%
<i>NYCERS - 2012 Emerging Manager Program</i>	<u>2012</u>	<u>128,600,000</u>	<u>132,394,712</u>	<u>120,058,251</u>	<u>179,925,806</u>	<u>2.27</u>	<u>22.4%</u>
Palladium Equity Partners IV, L.P.	2012	55,000,000	54,101,306	26,885,213	48,216,800	1.39	9.1%
Trilantic Capital Partners V L.P.	2012	70,000,000	77,508,795	79,020,336	42,331,797	1.57	16.0%
Warburg Pincus Private Equity XI, L.P.	2012	110,000,000	116,043,581	132,530,186	65,493,500	1.71	13.2%
Apollo Investment Fund VIII, L.P.	2013	140,000,000	132,462,986	81,922,219	121,862,660	1.54	12.5%
ASF VI B L.P.	2013	83,000,000	67,031,813	83,914,075	12,685,018	1.44	12.3%
Carlyle Partners VI, L.P.	2013	75,000,000	80,444,662	49,532,725	97,986,863	1.83	16.6%
Crestview Partners III, L.P.	2013	66,000,000	53,509,772	29,476,748	48,124,213	1.45	13.7%
Landmark - NYC Fund I, L.P.	2013	25,000,000	22,783,785	19,274,740	17,597,706	1.62	16.1%
Landmark Equity Partners XV, L.P.	2013	75,000,000	60,205,101	46,384,396	37,400,569	1.39	13.4%
ASF VI B NYC Co-Invest L.P.	2014	27,000,000	22,619,184	25,944,507	9,186,616	1.55	14.2%
Bridgepoint Europe V L.P.	2014	62,016,585	57,686,698	37,545,617	60,974,126	1.71	18.2%
Carlyle Partners VI, L.P. (Side Car)	2014	8,250,000	6,006,768	2,825,194	9,551,795	2.06	15.3%
Crestview Partners III (Co-Investment B), L.P.	2014	22,000,000	22,781,960	1,085,940	24,704,392	1.13	3.4%
CVC Capital Partners VI, L.P.	2014	123,334,277	127,532,806	62,875,210	156,948,148	1.72	16.8%
Lexington Capital Partners VIII, L.P.	2014	110,000,000	99,886,176	70,033,488	83,652,640	1.54	19.0%
Olympus Growth Fund VI, L.P.	2014	75,000,000	71,512,866	45,770,817	61,284,527	1.50	13.9%
Vista Equity Partners Fund V, L.P.	2014	125,000,000	153,672,579	149,982,525	160,738,880	2.02	21.2%
ASF VII B L.P.	2015	94,500,000	52,872,815	28,137,821	50,448,781	1.49	17.5%
ASF VII B NYC Co-Invest L.P.	2015	46,000,000	28,376,867	18,403,064	28,345,152	1.65	20.9%
Bridgepoint Europe V Co-Invest	2015	18,389,792	17,018,173	14,039,676	20,911,372	2.05	25.8%
Centerbridge Capital Partners III, L.P.	2015	23,700,000	26,771,027	14,427,403	27,135,932	1.55	20.0%
EQT VII, L.P.	2015	162,075,714	168,547,143	124,496,382	208,848,725	1.98	26.4%
<i>NYCERS - 2015 Emerging Manager Program</i>	<u>2015</u>	<u>179,750,000</u>	<u>131,234,195</u>	<u>28,408,836</u>	<u>184,763,044</u>	<u>1.62</u>	<u>28.3%</u>
Siris Partners III, L.P.	2015	31,000,000	32,391,994	17,303,434	29,534,500	1.45	14.7%
Warburg Pincus Private Equity XII, L.P.	2015	205,500,000	205,440,895	66,948,869	271,694,069	1.65	18.6%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	78,500,000	73,752,848	64,855,902	104,283,474	2.29	32.3%

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
American Securities Partners VII, L.P.	2016	80,000,000	75,881,365	12,612,736	85,713,334	1.30	9.8%
Apax IX USD, L.P.	2016	127,000,000	126,387,697	40,711,792	212,236,922	2.00	33.3%
BCEC X Co-Investment	2016	35,726,639	35,883,734	225,066	66,632,751	1.86	28.4%
Platinum Equity Capital Partners IV, L.P.	2016	111,000,000	98,235,760	34,635,602	126,855,694	1.64	24.0%
Vista Equity Partners Fund VI, L.P.	2016	158,000,000	177,179,672	98,091,563	229,663,969	1.85	21.9%
Ares Corporate Opportunities Fund V, L.P.	2017	95,000,000	94,943,421	18,068,711	86,502,107	1.10	5.0%
BC European Capital X	2017	89,038,067	78,970,458	1,474,643	114,569,540	1.47	19.5%
CVC Capital Partners VII, L.P.	2017	157,340,257	99,302,291	1,956,458	131,603,184	1.34	23.5%
Green Equity Investors VII, L.P.	2017	95,000,000	84,144,007	14,883,134	131,882,324	1.74	25.1%
KKR Americas Fund XII, L.P.	2017	158,000,000	102,356,733	11,134,255	198,432,000	2.05	40.7%
Palladium Equity Partners V, L.P.	2017	33,333,333	17,491,594	192,179	18,451,395	1.07	5.0%
Warburg Pincus Financial Sector, L.P.	2017	104,000,000	83,013,156	5,304,000	102,172,835	1.29	16.9%
Apollo Investment Fund IX, L.P.	2018	256,000,000	73,545,763	15,554,943	83,739,586	1.35	26.8%
ASF VIII B L.P.	2018	174,000,000	35,882,024	526,841	58,076,217	1.63	56.3%
Bridgepoint Europe VI	2018	122,877,806	48,972,996	9,467,944	49,263,345	1.20	NM
EQT VIII Co-Investment	2018	40,516,420	21,743,982	-	31,181,165	1.43	21.5%
EQT VIII, L.P.	2018	111,250,426	83,775,082	2,377,654	119,770,850	1.46	32.4%
Platinum Equity Capital Partners IV Co-Investment, L.P.	2018	16,000,000	11,221,788	2,232,710	13,958,105	1.44	16.5%
Platinum Equity Small Cap Fund, L.P.	2018	41,000,000	19,017,057	109,368	15,375,481	0.81	-17.7%
Siris Partners IV, L.P.	2018	89,000,000	49,317,366	7,361,310	51,237,854	1.19	12.2%
Vista Equity Partners Fund VII, L.P.	2018	177,500,000	107,690,069	413,777	114,188,509	1.06	6.6%
Apax X USD L.P.	2019	104,500,000	10,794,850	-	19,021,566	1.76	NM
ASF VIII B NYC Co-Invest L.P.	2019	87,000,000	5,902,144	-	13,115,961	2.22	102.1%
Blackstone Capital Partners VIII L.P.	2019	109,000,000	11,683,470	-	12,745,467	1.09	NM
Bridgepoint Europe VI Co-Invest	2019	30,978,270	18,123,297	-	20,396,575	1.13	NM
Crestview Partners IV (Co-Investment), L.P.	2019	23,666,667	1,281,215	-	4,257,095	3.32	NM
Crestview Partners IV, L.P.	2019	71,000,000	3,843,643	-	10,953,034	2.85	NM
KKR European Fund V (USD)	2019	83,250,000	35,177,729	1,373,099	33,972,544	1.00	NM
Lexington Capital Partners IX	2019	106,500,000	37,145,484	7,426,009	48,667,253	1.51	NM
Lexington IX Co-Invest	2019	35,500,000	11,070,675	-	14,733,187	1.33	NM
Lindsay Goldberg V	2019	87,000,000	16,087,366	3,589	17,584,272	1.09	NM
<u>NYCERS - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>226,650,000</u>	<u>21,871,531</u>	<u>606,411</u>	<u>26,684,815</u>	<u>1.25</u>	<u>NM</u>

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Platinum Equity Capital Partners V, L.P.	2019	157,000,000	34,952,940	133,782	37,594,297	1.08	NM
Trilantic Capital Partners VI (North America) L.P.	2019	51,000,000	11,350,896	209,799	11,377,542	1.02	NM
Warburg Pincus Global Growth, L.P.	2019	125,500,000	61,663,659	909,875	69,315,023	1.14	16.8%
Welsh, Carson, Anderson & Stowe XIII, L.P.	2019	89,000,000	20,687,142	-	23,258,020	1.12	17.6%
BC Partners Fund XI	2020	110,000,000	-	-	(751,291)	-	NM
BC Partners XI Metro Co-Investment L.P.	2020	50,000,000	-	-	-	-	N/A
Clearlake Capital Partners VI, L.P.	2020	47,000,000	22,804,548	391,916	25,418,063	1.13	NM
EQT IX (No. 2) USD SCSP	2020	92,125,000	20,320,481	43,266	25,349,991	1.25	NM
EQT IX Co-Investment	2020	25,125,000	-	-	(107,377)	-	NM
FTV VI	2020	21,500,000	8,815,000	-	13,214,450	1.50	NM
Green Equity Investors VIII Coinvest N, L.P.	2020	36,300,000	15,275,351	-	15,196,442	0.99	NM
Green Equity Investors VIII, L.P.	2020	109,000,000	14,704,812	-	13,353,392	0.91	NM
Hg Genesis 9, L.P.	2020	53,012,418	390,797	-	1,881,771	4.82	NM
KKR Asian Fund IV SCSP	2020	103,000,000	-	-	535,084	-	NM
NYC-NorthBound Emerging Managers Program LP	2020	262,000,000	-	-	991,513	-	NM
One Rock Capital Partners III, L.P.	2020	43,000,000	-	-	(311,215)	-	NM
Platinum Equity Capital Partners V Co-Investment, L.P.	2020	39,250,000	-	-	-	-	N/A
Stellex Capital Partners II	2020	51,500,000	-	-	-	-	N/A
CVC Capital Partners VIII, L.P.	2021	180,601,309	-	-	-	-	N/A
The Resolute Fund V, L.P.	2021	72,000,000	-	-	(330,825)	-	NM
Valor Equity Partners V, L.P.	2021	26,000,000	8,678,838	-	11,627,337	1.34	NM

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

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			7,049,089,391	5,613,789,391	3,606,036,180	4,285,222,393	1.41	7.1%
TOTAL PRIVATE REAL ESTATE								
JP Morgan Strategic Property Fund	2006	Core Portfolio	136,000,000	192,421,766	132,039,471	231,008,171	1.89	6.4%
PRISA	2006	Core Portfolio	86,000,000	92,673,389	43,116,435	123,346,159	1.80	4.7%
Prologis Targeted US Logistics Fund	2006	Core Portfolio	40,000,000	34,855,186	15,438,566	57,192,203	2.08	6.7%
RREEF America REIT II	2006	Core Portfolio	162,000,000	113,537,802	66,395,054	126,547,968	1.70	5.1%
UBS Trumbull Property Fund	2006	Core Portfolio	156,000,000	251,614,884	269,969,716	110,731,568	1.51	5.5%
Heitman America Real Estate Trust, L.P.	2007	Core Portfolio	115,000,000	205,279,927	90,279,927	259,403,604	1.70	6.7%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	90,000,000	119,858,836	58,917,356	133,814,453	1.61	4.7%
PRISA II	2007	Core Portfolio	141,518,761	150,922,667	61,394,823	214,623,318	1.83	5.5%
LaSalle Property Fund	2010	Core Portfolio	132,000,000	131,620,297	27,961,468	153,831,555	1.38	8.2%
NYC Asset Investor #2	2013	Core Portfolio	75,000,000	76,276,228	32,373,418	52,730,943	1.12	2.4%
MetLife Core Property Fund	2014	Core Portfolio	50,000,000	50,000,000	14,631,281	63,224,662	1.56	8.1%
Almanac Realty Securities VII	2015	Core Portfolio	65,000,000	57,745,804	45,818,300	32,972,616	1.36	13.0%
Almanac Realty Securities VII (Sidecar IV)	2015	Core Portfolio	20,000,000	14,560,366	10,871,779	9,552,387	1.40	14.8%
USAA Eagle Real Estate Fund	2015	Core Portfolio	90,000,000	99,317,673	9,747,342	107,061,154	1.18	4.8%
Artemis Co-Investment	2016	Core Portfolio	53,000,000	61,555,744	23,935,107	54,678,496	1.28	11.9%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	169,000,000	126,465,603	17,624,257	146,091,259	1.29	8.5%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	28,000,000	27,270,526	6,310,057	34,791,435	1.51	15.6%
Jamestown Premier Property Fund	2016	Core Portfolio	48,721,196	56,971,045	21,278,343	40,580,621	1.09	3.0%
Carlyle Property Investors	2017	Core Portfolio	91,000,000	105,482,035	14,482,035	120,841,022	1.28	8.5%
Lion Industrial Trust	2017	Core Portfolio	90,000,000	106,091,128	16,091,128	145,790,947	1.53	14.3%
Almanac Realty Securities VIII	2018	Core Portfolio	51,000,000	12,757,206	871,710	12,621,495	1.06	5.9%
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	34,000,000	8,581,317	511,573	9,754,635	1.20	19.5%
Heitman Core Real Estate Debt Income Trust	2018	Core Portfolio	127,000,000	51,946,671	6,946,671	50,985,927	1.12	5.7%
Artemis Income and Growth Fund	2019	Core Portfolio	61,000,000	18,774,858	919,795	17,018,213	0.96	-4.0%
Harrison Street Core Property Fund	2019	Core Portfolio	90,000,000	95,575,167	5,575,167	97,736,751	1.08	5.7%
Harrison Street Core Property Fund Co-Investment	2019	Core Portfolio	45,000,000	29,971,668	1,576,762	30,637,248	1.07	4.5%
Cortland Growth and Income, L.P.	2020	Core Portfolio	107,000,000	109,967,971	2,967,971	113,909,820	1.06	NM
Exeter Core Industrial Fund III	2020	Core Portfolio	72,100,000	19,589,570	765,212	20,388,188	1.08	NM
Blackstone Real Estate Partners IV L.P.	2004	Non-Core Portfolio	30,000,000	38,393,533	54,112,660	725,370	1.43	10.3%
The City Investment Fund I	2004	Non-Core Portfolio	225,000,000	221,883,300	224,384,800	348,854	1.01	0.3%
Apollo Real Estate Investment Fund V	2006	Non-Core Portfolio	25,000,000	25,000,000	29,086,034	28,254	1.16	1.9%
American Value Partners Fund I	2007	Non-Core Portfolio	55,000,000	39,320,163	41,373,738	1,513,823	1.09	1.9%
Blackstone Real Estate Partners VI L.P.	2007	Non-Core Portfolio	110,000,000	123,465,884	242,696,929	3,983,987	2.00	13.3%
Carlyle Realty Partners V, L.P.	2007	Non-Core Portfolio	17,000,000	25,868,516	33,579,254	3,782,964	1.44	8.4%
Metropolitan Workforce Housing Fund	2007	Non-Core Portfolio	14,000,000	14,013,027	16,744,531	257,490	1.21	3.9%
Westbrook Real Estate Fund VII, L.P.	2007	Non-Core Portfolio	40,000,000	44,041,684	42,237,578	8,569,261	1.15	2.4%
Ares European Real Estate Fund III	2008	Non-Core Portfolio	30,000,000	30,487,501	33,492,499	260,250	1.11	2.6%
Blackstone Real Estate Partners Europe III - USD	2008	Non-Core Portfolio	50,000,000	52,288,584	71,158,532	5,751,443	1.47	10.5%

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Capri Urban Investors	2008	Non-Core Portfolio	60,000,000	60,000,000	27,538,270	11,593,512	0.65	-5.6%
PRISA III	2008	Non-Core Portfolio	50,000,000	99,355,823	38,957,324	194,762,060	2.35	11.5%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	50,000,000	23,592,397	4,726,170	2,582,000	0.31	-12.0%
Stockbridge Real Estate III	2008	Non-Core Portfolio	27,000,000	26,998,145	16,829,753	16,590,945	1.24	2.7%
Thor Urban Property Fund II	2008	Non-Core Portfolio	40,000,000	54,796,108	56,147,962	1,720,116	1.06	1.8%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	50,000,000	44,323,933	50,723,633	16,397,048	1.51	7.9%
Westbrook Real Estate Fund VIII, L.P.	2009	Non-Core Portfolio	50,000,000	59,760,616	68,952,803	7,086,510	1.27	9.9%
Carlyle Realty Partners VI, L.P.	2011	Non-Core Portfolio	70,000,000	75,993,040	108,600,411	5,250,850	1.50	20.1%
H2 Special Opportunities Fund II	2011	Non-Core Portfolio	40,000,000	40,045,335	58,344,882	730,842	1.48	13.3%
Blackstone Real Estate Partners VII L.P.	2012	Non-Core Portfolio	170,000,000	217,082,251	277,487,943	67,295,918	1.59	15.0%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	100,000,000	120,814,437	182,637,357	49,694,068	1.92	19.1%
Taconic New York City Investment Fund	2012	Non-Core Portfolio	70,000,000	29,272,728	47,996,467	3,404,692	1.76	15.4%
Blackstone Real Estate Partners Europe IV L.P. - USD	2013	Non-Core Portfolio	169,000,000	168,605,559	195,887,918	53,475,079	1.48	13.0%
Lone Star Real Estate Fund III, L.P.	2013	Non-Core Portfolio	100,000,000	95,639,471	123,587,339	4,782,353	1.34	14.0%
NYC Asset Investor #1	2013	Non-Core Portfolio	50,000,000	58,191,194	28,299,156	34,329,057	1.08	1.7%
NYC Asset Investor #3	2013	Non-Core Portfolio	50,000,000	35,071,880	6,329,778	37,446,412	1.25	5.4%
Carlyle Realty Partners VII, L.P.	2014	Non-Core Portfolio	80,000,000	73,444,518	73,036,479	30,279,818	1.41	12.9%
DivcoWest Fund IV	2014	Non-Core Portfolio	23,000,000	22,770,380	35,014,449	3,269,285	1.68	25.3%
H2 Special Opportunities III	2014	Non-Core Portfolio	65,000,000	67,503,668	57,415,260	23,597,109	1.20	6.8%
Avanath Affordable Housing II	2015	Non-Core Portfolio	8,000,000	8,291,867	3,486,609	10,553,955	1.69	11.1%
Blackstone Real Estate Partners VIII L.P.	2015	Non-Core Portfolio	151,000,000	166,692,932	116,263,955	119,440,410	1.41	14.0%
Tristan European Property Investors Special Opp IV	2015	Non-Core Portfolio	49,796,999	44,997,602	12,231,059	47,586,257	1.33	10.7%
DivcoWest Fund V	2016	Non-Core Portfolio	60,000,000	43,722,064	9,374,645	40,454,336	1.14	5.3%
H2 Special Opportunities IV	2016	Non-Core Portfolio	91,000,000	91,699,867	740,287	103,467,316	1.14	8.6%
PW Real Estate Fund III	2016	Non-Core Portfolio	50,493,331	36,780,138	15,736,388	57,374,362	1.99	28.4%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	36,000,000	34,610,719	21,506,629	19,675,970	1.19	10.6%
Basis Investment Group Real Estate Fund I	2017	Non-Core Portfolio	17,000,000	13,585,882	5,099,941	11,490,835	1.22	12.7%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	49,000,000	50,998,571	19,641,861	46,179,979	1.29	13.8%
Exeter Industrial Value Fund IV, L.P.	2017	Non-Core Portfolio	30,000,000	28,329,412	3,058,824	41,190,506	1.56	21.6%
NYCRS-KKR CMBS Retention Partners	2017	Non-Core Portfolio	122,000,000	110,348,681	27,515,945	100,840,295	1.16	6.1%
Pramerica Real Estate Capital VI	2017	Non-Core Portfolio	60,741,073	57,794,436	33,670,304	33,487,281	1.16	10.9%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	118,700,000	110,247,748	35,082,487	97,109,279	1.20	15.1%
Aermont Capital Real Estate Fund IV	2019	Non-Core Portfolio	76,768,032	17,747,536	-	13,576,344	0.76	-19.7%
Blackstone Real Estate Partners Europe VI L.P.	2019	Non-Core Portfolio	99,000,000	29,663,876	80,843	32,160,829	1.09	13.0%
Blackstone Real Estate Partners IX L.P.	2019	Non-Core Portfolio	166,000,000	63,027,219	9,022,023	67,304,976	1.21	22.5%
Brookfield Strategic Real Estate Partners III, L.P.	2019	Non-Core Portfolio	170,000,000	97,243,907	5,326,977	104,157,325	1.13	10.5%
Grosvenor Real Estate Emerging Manager SMA	2019	Non-Core Portfolio	236,000,000	39,923,606	-	39,040,050	0.98	NM
Westbrook Real Estate Fund XI	2019	Non-Core Portfolio	83,000,000	7,582,768	-	8,216,901	1.08	NM
DivcoWest Fund VI	2020	Non-Core Portfolio	82,000,000	4,929,620	-	4,387,277	0.89	NM
DRA Growth and Income Fund X	2020	Non-Core Portfolio	59,000,000	14,459,807	2,829,482	13,376,067	1.12	NM
ElmTree U.S. Net Lease Fund IV, L.P.	2020	Non-Core Portfolio	51,000,000	10,664,515	47,895	10,293,824	0.97	NM

Information provided by the New York City Retirement Systems Consultants. Interim returns are subject to change and may differ due to differences in accounting and performance methodologies.

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Exeter Industrial Value Fund V, L.P.	2020	Non-Core Portfolio	49,000,000	12,250,000	-	13,847,265	1.13	NM
GreenOak Asia III	2020	Non-Core Portfolio	87,000,000	41,812,956	28,659,166	14,489,260	1.03	NM
KKR RE Europe II	2020	Non-Core Portfolio	83,250,000	-	-	2,633,920		NM
KKR Real Estate Securities Dislocation Opportunity Co-Investment Strai	2020	Non-Core Portfolio	98,000,000	44,420,049	8,833,696	48,102,219	1.28	NM
Pramerica Real Estate Capital VII (USD)	2020	Non-Core Portfolio	88,000,000	6,661,446	-	6,580,423	0.99	NM
Cerberus Institutional Real Estate Partners V SMA	2021	Non-Core Portfolio	89,000,000	-	-	(105,874)		NM
KKR Real Estate Partners Americas III SCSp	2021	Non-Core Portfolio	135,000,000	-	-	-		NM
NYC Hudson Multifamily Green Fund	2021	Non-Core Portfolio	116,000,000	-	-	-		NM
Rialto Real Estate Fund IV - Debt, LP	2021	Non-Core Portfolio	102,000,000	15,593,158	1,636,531	16,934,618	1.19	NM

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Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		2,033,323,427	953,405,687	281,714,827	983,210,357	1.33	12.1%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	75,000,000	63,665,769	28,646,651	85,805,616	1.80	13.0%
Global Energy & Power Infrastructure Fund II	2014	45,000,000	47,520,001	38,993,532	26,275,912	1.37	20.7%
IFM Global Infrastructure Fund	2014	75,000,000	100,136,579	39,499,289	121,799,497	1.61	11.2%
KKR Global Infrastructure Investors II L.P.	2014	77,000,000	82,576,585	72,162,722	66,542,708	1.68	18.2%
Actis Energy 4	2016	64,300,000	49,421,420	14,643,004	49,192,000	1.29	12.3%
ASF VII Infrastructure L.P.	2016	66,000,000	38,923,522	2,863,175	46,352,599	1.26	16.9%
Brookfield Infrastructure Fund III, L.P.	2016	91,000,000	56,420,342	15,473,251	56,600,332	1.28	9.9%
Global Infrastructure Partners III-A/B, L.P.	2016	106,000,000	95,469,213	20,688,030	94,667,834	1.21	7.1%
Axiom Infrastructure North America (2017)	2017	67,104,915	68,888,201	13,050,993	71,704,331	1.23	9.9%
EQT Infrastructure III (No.2) SCSp	2017	56,037,005	58,900,813	8,724,210	80,160,096	1.51	19.2%
NYCRS EIG Energy Partners, L.P.	2017	65,880,000	25,264,838	6,072,740	22,446,301	1.13	7.9%
Cardinal NR Sidecar Holdings L.P.	2018	10,500,000	10,567,297	2,609,053	13,169,417	1.49	18.8%
EQT Infrastructure IV (No.2) USD SCSp	2018	101,500,000	61,592,124	2,401,746	67,239,355	1.13	11.0%
Global Infrastructure Partners IV-A/B, L.P.	2018	117,400,000	11,476,173	1	7,910,816	0.69	-64.6%
KKR Global Infrastructure Investors III L.P.	2018	87,500,000	43,262,349	3,083,571	34,618,130	0.87	-10.5%
Ardian Infrastructure Fund V B	2019	77,658,736	9,222,727	460,450	9,526,861	1.08	6.5%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	2019	10,000,000	10,042,230	665,269	11,052,032	1.17	12.5%
Brookfield Infrastructure Fund IV, L.P.	2019	101,000,000	51,555,185	6,171,362	52,113,309	1.13	12.0%
Global Energy & Power Infrastructure Fund III, L.P.	2019	87,500,000	33,624,754	4,995,941	31,683,766	1.09	11.0%
Actis Energy 5	2020	113,000,000	-	-	-	NM	NM
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	2020	71,660,000	3,902,277	-	3,855,498	NM	NM
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	2020	8,400,000	8,484,000	509,835	9,516,206	1.18	16.9%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	2020	9,700,000	9,734,643	-	11,004,712	NM	NM
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	2020	12,712,770	12,754,645	-	12,934,792	NM	NM
EQT Infrastructure V (No.2) USD SCSp	2020	135,000,000	-	-	(1,876,473)	NM	NM
Basalt Infrastructure Partners III	2021	114,000,000	-	-	-	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2021	16,470,000	-	-	-	-	0.0%
Stonepeak Infrastructure Fund IV, L.P.	2021	171,000,000	-	-	(1,085,290)	NM	NM

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

Alternative Assets Manager Performance Detail

Through June 30, 2021



	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		3,500,273,487	3,683,372,238	1,967,030,572.65	2,948,885,012	4.55%	8.19%
Avenue Special Situations Fund V, L.P.	2007	75,784,973	76,951,175	100,600,875.00	-	-	10.89%
Avenue Europe Special Sit. Fund, L.P.	2008	32,609,202	27,839,090	53,703,162.08	-	-	13.21%
PIMCO DiSCO Fund, L.P.	2008	150,000,000	150,427,750	204,457,598.81	-	-	11.23%
Alliance Bernstein PPIP Fund, L.P.	2009	41,697,493	41,697,493	57,295,571.07	-	-	15.51%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862.00	-	-	20.19%
Avenue Special Situations Fund VI (A), L.P.	2011	70,000,000	71,766,544	71,272,284.00	8,737,638.00	-0.39%	2.35%
GoldenTree Managed Account	2011	140,000,000	140,878,192	-	257,252,537.35	2.33%	7.34%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	218,750,000	355,250,000	186,812,500.00	357,183,159.89	9.49%	8.20%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	180,000,000	204,300,000	47,626,130.00	234,763,499.00	2.66%	6.05%
Apollo Centre Street Partnership, L.P.	2012	340,416,667	557,729,702	415,383,478.00	262,604,224.30	3.01%	6.70%
FCO MA Centre Street L.P.	2012	140,000,000	275,069,930	206,859,097.49	155,235,027.00	3.69%	8.74%
OHA Centre Street Partnership, L.P.	2012	262,500,000	308,897,654	73,107,048.71	382,106,787.39	3.29%	8.78%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	90,000,000	90,000,000	-	109,744,014.32	7.26%	3.19%
Lone Star Fund VIII (U.S.), L.P.	2013	100,000,000	98,438,980	96,694,196.58	22,180,547.43	1.47%	9.43%
Oaktree Opportunities Fund IX, L.P.	2013	100,000,000	100,000,000	62,176,125.33	71,451,207.00	8.22%	5.08%
Ares Centre Street Partnership, L.P.	2014	140,000,000	140,000,000	-	230,657,786.82	3.29%	9.49%
Brightwood Capital Fund III, L.P.	2015	35,000,000	28,403,806	25,814,656.60	11,780,147.00	2.72%	6.49%
Torchlight Debt Opportunity Fund V, LP	2015	67,000,000	53,600,000	53,348,266.00	16,039,295.00	3.05%	10.65%
Brightwood Capital Fund IV, LP	2016	87,500,000	87,500,000	27,082,625.00	77,615,133.00	3.51%	7.99%
ICG Centre Street Partnership, L.P.	2017	120,000,000	161,280,463	88,602,089.18	95,504,639.23	1.92%	9.32%
KKR OFI SMA	2017	272,000,000	208,855,205	52,931,023.00	222,063,897.93	11.89%	14.60%
Maranon Centre Street Partnership, L.P.	2018	103,000,000	95,059,305	2,585,703.72	107,732,425.20	3.96%	7.91%
FCO MA Centre Street II (ER) LP	2019	140,000,000	142,545,691	90,762,962.86	78,506,220.00	4.07%	29.90%
Torchlight Debt Fund VI, LP	2019	84,000,000	86,370,932	8,115,654.00	84,217,795.00	1.81%	4.77%
FCO MA Centre Street II EXP (ER) LP	2020	70,000,000	10,500,000	-	11,029,152.00	5.72%	14.99%
GCM Grosvenor NYC Emerging OFI Managers, L.P. - Class A	2020	116,000,000	46,829,788	74,663.22	47,864,681.25	0.00%	4.82%
KKR-NYC Credit C L.P.	2020	51,515,152	11,590,910	-	13,236,431.59	7.76%	52.80%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitr	2020	87,500,000	45,937,500	-	52,264,314.47	1.95%	35.24%
Torchlight Debt Fund VII, LP	2020	88,000,000	17,600,000	-	17,995,909.00	0.28%	4.94%
400 Capital Centre Street LP	2021	70,000,000	21,000,000	-	21,118,543.00	0.58%	3.31%

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

Alternative Assets Manager Performance Detail

Through June 30, 2021



	Market Value	MTD Return%	3 Month Return%	FYTD Return%	YTD Return%	1 Year Return%	3 Year Return%	ITD Return%	ITD Cumulative Return%
TOTAL HEDGE FUNDS	1,290,162	3.87%	9.29%	17.98%	20.95%	17.98%	0.49%	2.51%	28.14%
TOTAL DIRECT HEDGE FUNDS	1,290,162	3.87%	9.29%	17.98%	20.95%	17.98%	0.49%	3.25%	35.46%
FUND OF FUNDS HEDGE FUNDS	-	0.00%		0.00%	0.00%			1.83%	12.03%
TOTAL DIRECT HEDGE FUNDS									
Luxor Capital Partners Liquidating SPV, LLC.	1,096,316	-0.22%	5.71%	-15.51%	0.29%	-15.51%	-19.48%	-7.51%	-32.31%
Perry Partners L.P.	193,846	35.27%	35.27%	83.75%	72.91%	83.75%	16.21%	3.90%	36.21%
Event Driven	1,290,162	3.87%	9.29%	17.98%	20.95%	17.98%	-2.93%	0.48%	4.46%
FUND OF FUNDS HEDGE FUNDS									
Fund of Funds Hedge Funds	-	0.00%		0.00%	0.00%			1.83%	12.03%

Information provided by Alpha Frontier

**New York City
Employees' Retirement System**

Appendix D

Footnotes

General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment (Private Market) fees are recorded on a cash basis and are not inclusive of carried interest paid. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Returns greater than 1 year are annualized.
- 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 - 13 - Portfolio Asset Allocation

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

Pages 14 -16 - 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.

The indexes and most recent policy weights are as follows:

U.S. Equity: Russell 3000 * 29.34%

International Developed (EAFE) Markets: MSCI World ex USA IMI * 11.73%

International Active- Global: MSCI World Net Dividends Index * 0.39%

Emerging Markets: MSCI Custom ERS Emerging Markets (Net) * 5.03%

International Emerging Managers FOF: NYC Blended Custom Benchmark for FoF * 0.75%

REITs: Dow Jones Real Estate Securities * 0.00%

Private Equity: Russell 3000 + 300 b.p. per annum * 7.56%

Private Real Estate – Core: NFI - ODCE Net * 3.08%

Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 2.00%

Infrastructure: CPI + 4% * 1.15%

Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 0.00%

US Treasury Short Term: FTSE USBIG Treasury 1-3Y * 3.12%

US Treasury Intermediate: FTSE USBIG Treasury/Agency 1-10Y * 3.65%

Active Government: NYC Treasury Agency + 5 * 2.61%

US Treasury Long Duration: FTSE Treasury 10+ * 1.04%

Core FI-Developing Managers: Bloomberg U.S. Aggregate * 0.00%

Core FI-Emerging Managers: Bloomberg U.S. Aggregate * 0.00%

*Mortgage: Bloomberg US Mortgage Backed Securities * 6.56%*

*ETI: ETI Custom Benchmark * 1.10%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 7.52%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 4.35%*

*Bank Loans: Credit Suisse Leveraged Loan * 0.00%*

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.71%*

*Convertible Bonds: ICE BofA All US Conv Ex Mandatory * 2.00%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.30%*

Page 17 – 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.

Through June 30, 2021



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- [1] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.
 - [2] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.
 - [3] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.
 - [4] Name changed from SSGA MSCI EAFE Small Cap Index 12.2017
 - [5] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).
 - [6] NYCERS Custom EM Index: Beginning 7.2018 benchmark changed from FTSE Custom NYCERS All Emerging Index to MSCI Custom NYCERS Emerging Markets Net. Beginning 4.2021 benchmark changed to MSCI Emerging Markets.
 - [7] NYCERS Custom Passive EM Index: Beginning 4.2021 benchmark changed from MSCI Custom NYCERS Emerging Markets Net to MSCI Emerging Markets.
 - [8] NYC Blended Custom Benchmark for FoF: Beginning 5.2021 benchmark composition changed from 85% MSCI World ex USA IMI NR / 15% MSCI Custom NYCERS Emerging Markets Net to MSCI ACWI ex USA IMI Net.
 - [9] NYC Blended Xponance Benchmark for ERS: Beginning 4.2021 benchmark changed from NYC Blended Custom Benchmark for FoF to MSCI ACWI ex USA IMI Net.
 - [10] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.
 - [11] NYC Custom IGC Benchmark: Beginning 3.2021 benchmark changed from NYC - Investment Grade Credit to Bloomberg U.S. Corporate Inv Grade.
 - [12] Assets were in transition from 9/29/17 to 2/11/19