



New York City
Fire Department Pension Fund, Subchapter Two
Performance Overview as of March 31, 2021

Total Fund Overview

New York City Fire Department Pension Fund, Subchapter Two

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Through March 31, 2021



Broad Market Commentary

Despite the upward movement in inflation expectations, the Federal Reserve held interest rates steady during its March meeting and announced it would maintain its pace of asset purchases until there is further progress on employment and inflation goals. The updated median dot plot reflects no change in the Fed Funds rate through 2023 – signaling the central bank’s belief that inflation will not sustainably breach the target – while market futures are now pricing in almost three hikes over that same period.

The broadly improving macroeconomic backdrop has resulted in higher growth and inflation expectations in the near term. While the corresponding increase in interest rates is notable, we continue to advocate for investors to maintain a dedicated allocation to Treasuries to support liquidity levels and cash flow needs in the event of a market dislocation. Further, the ongoing support from monetary and fiscal interventions continues to provide a supportive environment for equities. As such, we encourage investors to maintain strategic equity targets even in the face of modestly higher interest rates.

Equity Markets

Global equities continued their march upward in the first quarter bolstered by widespread vaccination efforts, a fresh round of fiscal stimulus, and renewed confidence in an economic recovery. U.S. stocks led the charge with gains of 6.2%, followed by international developed equities which returned 3.5%; emerging market equities were up 2.3%. Small-cap stocks outperformed large-cap equities. Catalyzed by rising interest rates, value bested growth for the second straight quarter, with the Russell 1000 Value Index up 11.3% compared to the paltry 0.9% gain by the Russell 1000 Growth Index. In a reversal from last year, energy led all sectors, followed by financials, while technology and consumer discretionary stocks lagged.

In hedge funds, equity-linked strategies posted a strong first quarter, returning 7.4%, according to the HFRI Equity Hedge Index; their strong performance follows long/short equity’s best year since 2009. However, it wasn’t smooth sailing for all: retail trading frenzy around stocks such as GameStop and AMC caused massive losses in a handful of hedge funds in January, while fueling market volatility. This tumult was followed by unprecedented selling volume in a handful of concentrated names with the unwinding of Archegos Capital in March.

Meanwhile, global private equity fundraising totaled \$197.8 billion for the three months ended March 31, up from \$162.8 billion a year earlier, according to Preqin. U.S. buyout deal activity—confirmed and estimated—came in at a robust \$203 billion, but below the prior quarter’s decade-high of \$293.7 billion, according to PitchBook data. U.S. buyout exit activity totaled \$162 billion, the second highest total on record, according to PitchBook. In venture capital, deal activity hit a single-quarter high of \$69 billion in the first quarter, fueled mostly by large late-stage deals of \$50 million or more; during the same period, exit activity was strong, totaling \$118.1 billion, according to PitchBook.

Through March 31, 2021



Fixed Income

U.S. interest rates rose significantly during the quarter, reaching pre-pandemic levels. Losses were felt across interest-rate sensitive indexes as a 0.8% increase in 10-year Treasury yields negatively impacted the fixed-income market. Investment-grade and high-yield spreads continued to compress in the first quarter with significant spread tightening occurring in lower-quality credit. However, returns for U.S. corporate credit were largely negative due to interest rates moving higher. The Bloomberg Barclays U.S. Aggregate Index was down 3.4%, while the Bloomberg Barclays U.S. Corporate High Yield Index was up a modest 0.8%.

Meanwhile, hedge fund indexes focused on structured credit and distressed debt started the year strong with the HFRI Relative Value Index returning 3% and the HFRI ED: Distressed/Restructuring Index increasing 8.8%. Emerging market debt was in the red as the JPM EMBI Global Diversified Index and the JPM GBI-EM Global Diversified Index lost 4.5% and 6.7%, respectively.

Performance (net of fees)

For the quarter, the Fund returned 2.47%, outperforming the policy index return by 9 basis points. Over the trailing 3-year period, the Fund returned 10.37% versus the index return of 10.57%, underperforming the policy index by 20 basis points.

Equity Composite (net of fees)

For the end of the quarter, the total equity composite (including alternatives and REITS) returned 5.35% for the quarter. For the 3-year period the portfolio returned 12.83%. For the quarter, total equity assets represented 66.03% of the total Fund assets.

For the quarter, domestic equity assets represented 30.59% of the total Fund assets. The Total Domestic Equity Portfolio returned 7.02%, outperforming the Russell 3000 Index return of 6.35% by 68 basis points. The domestic equity portfolio is lagging its index by 84 basis points for the 3-year period.

For the quarter, World ex-US equity assets represented 9.22% of the total Fund assets. The Total World ex-US Portfolio returned 2.58%, underperforming its index, which returned of 4.17%, by 159 basis points. World ex-US portfolio is outperforming its index by 367 basis points for the 3-year period.

Credit/Fixed Income Composites (net of fees)

For the quarter, total fixed income assets (including cash and alternative credit assets) represented 33.97% of the total Fund assets. The portfolio returned -2.81% for the quarter. The portfolio returned 5.63% for the 3-year period.

Through March 31, 2021



For the quarter, the structured fixed income portfolio represented 18.89% of the total Fund assets. The portfolio returned -5.73% for the quarter, underperforming its index for the quarter by 20 basis points. The portfolio returned 6.20% for the 3-year period.

For the quarter, high yield portfolio assets represented 6.06% of the total Fund assets. The portfolio returned 1.23% for the quarter, outperforming its index for the quarter by 37 basis points. The portfolio returned 6.82% for the 3-year period.

For the quarter, the opportunistic fixed income assets represented 3.11% of the total Fund assets. The portfolio returned 5.64% for the quarter, outperforming its index for the quarter by 327 basis points. The portfolio returned 6.97% for the 3-year period.

Real Estate and Infrastructure Composites

For the quarter, private real estate assets represented 4.30% of the total Fund assets. The portfolio returned (time-weighted, net of fees) 3.58% for the quarter, outperforming its index for the quarter by 144 basis points. The portfolio returned 5.91% for the 3-year period.

For the quarter, infrastructure assets represented 1.05% of the total Fund assets. The portfolio returned (time-weighted, net of fees) 4.79% for the quarter, outperforming its index for the quarter by 256 basis points. The portfolio returned 11.31% for the 3-year period.

Private Equity Composites (time weighted)

For the quarter, private equity assets represented 6.52% of the total Fund assets. The portfolio returned (time-weighted, net of fees) 10.41% for the quarter, underperforming its index for the quarter by 509 basis points. The portfolio returned 16.87% for the 3-year period.

NYC's Direct Hedge Fund Allocations Only

The allocation to hedge funds as of March 31, 2021 was \$860.9 million, 4.8% of the total fund. The first quarter return for the hedge fund portfolio was +0.5%, underperforming the HFRI FOF Composite Index + 1% p.a. return of +2.1%, and underperforming the 1 Yr. T-bill yield + 4% p.a. return of 0.9%.

Fire still has a single digit basis point exposure to a fund of hedge funds investment, which will be received in the future in the form of a redemption.

Note: 1Yr. T-bill + 4% p.a. calculated using Barclays U.S. Treasury: 1-3 Year + 4% p.a.

Note: 1Yr. T-bill + 4% calculated using Barclays U.S. Treasury: 1-3 Year + 4%

Through March 31, 2021



NYC's Tactical Portfolio

The allocation to the tactical trade as of March 31, 2021 was \$80.2 million, 0.5% of the total fund. The first quarter return for the tactical trade was +2.9%, underperforming the Russell 3000 return of +6.4%.

Total Portfolio Returns: March 31, 2021

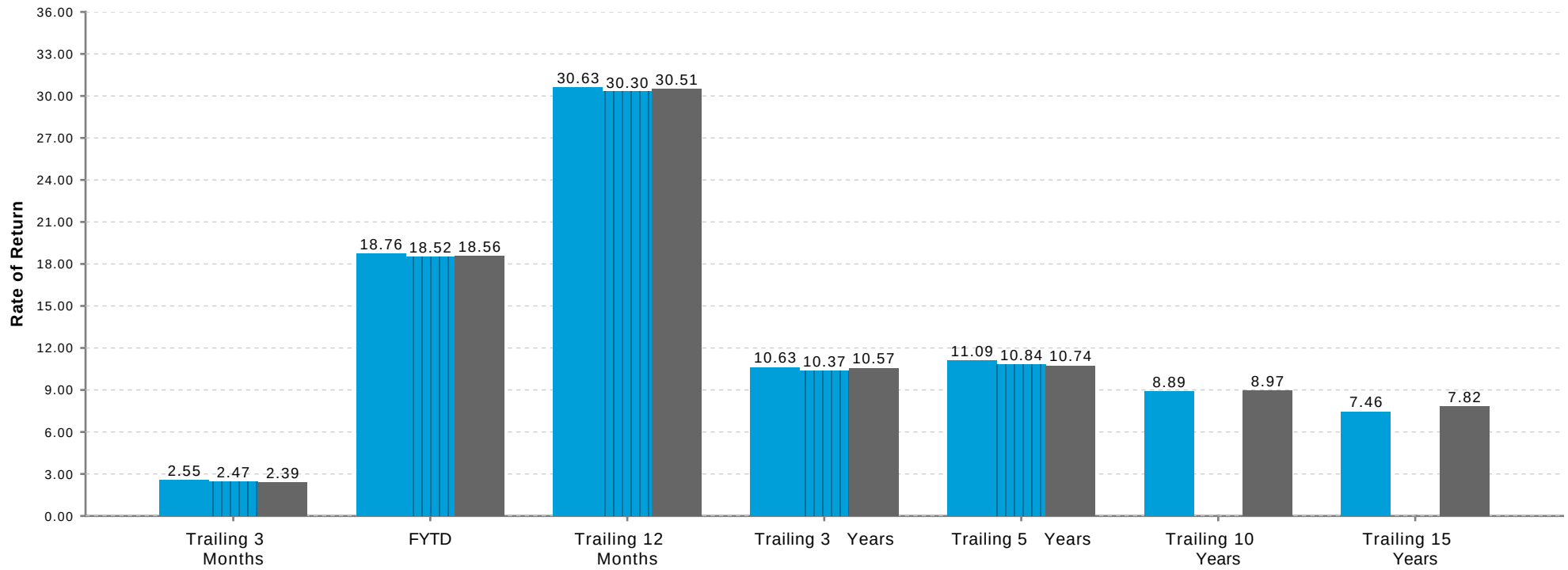


Market Value (Billions)

TOTAL FIRE

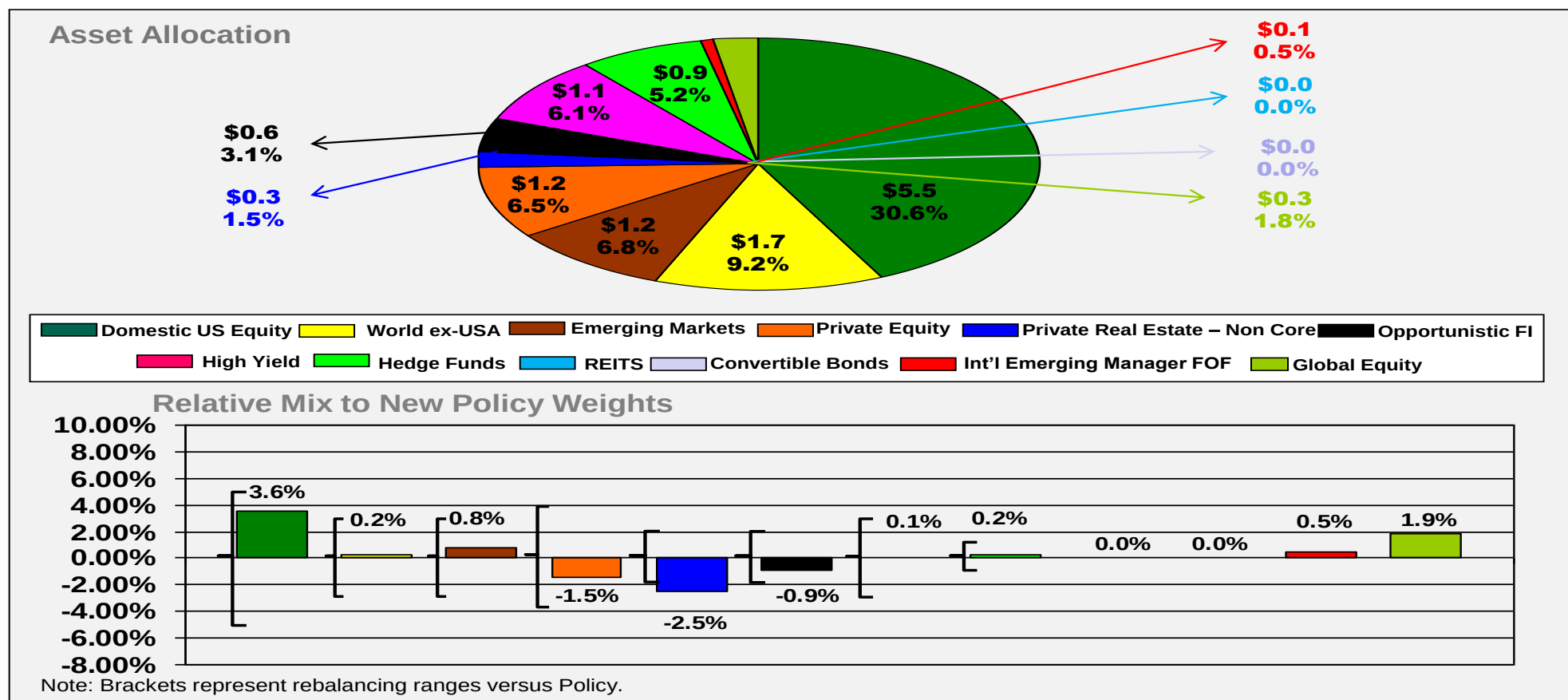
\$18.0

■ Total Fire - Gross ■ Total Fire - Net Mgr ■ Fire Policy Benchmark

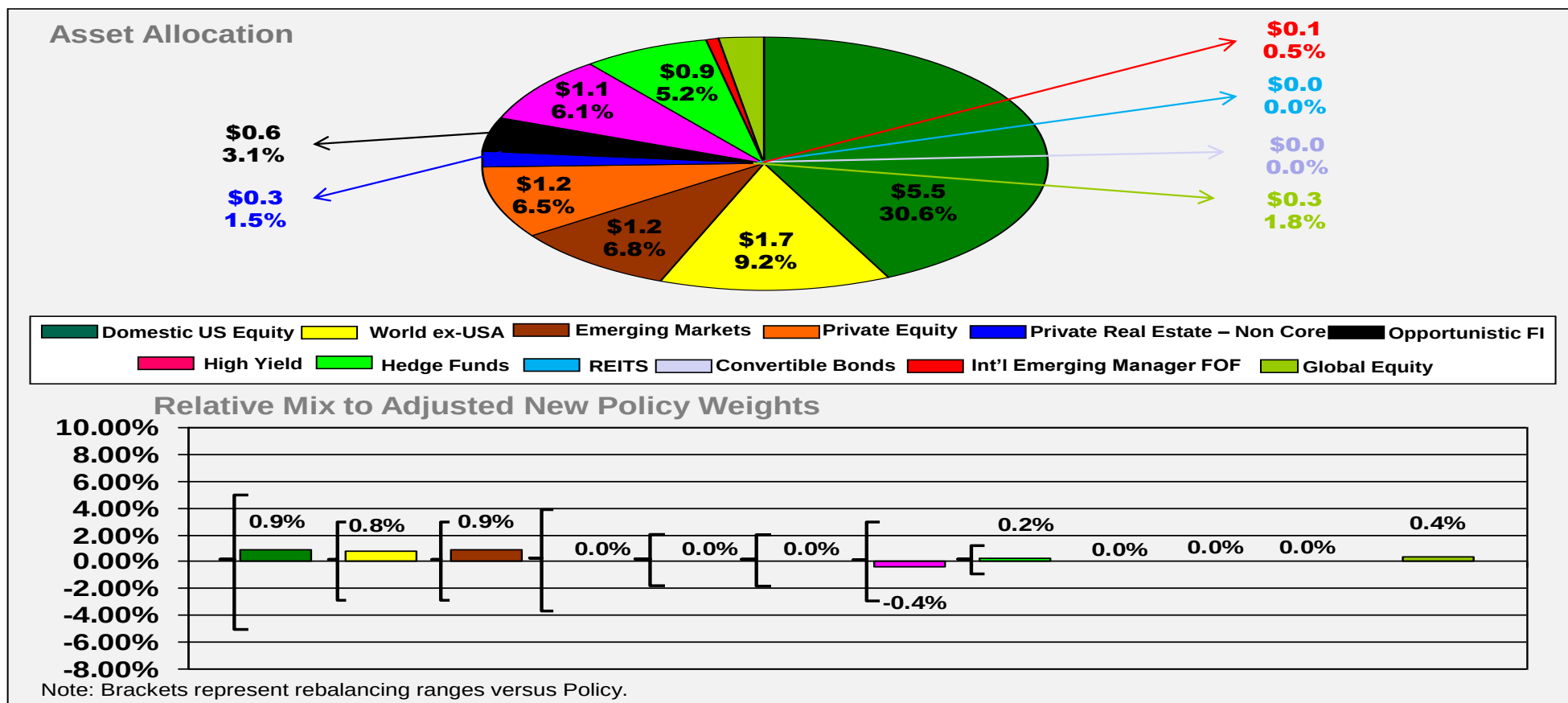


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL FIRE	9.3	10.0	11.1	8.1	7.7	7.8

Portfolio Asset Allocation – Growth

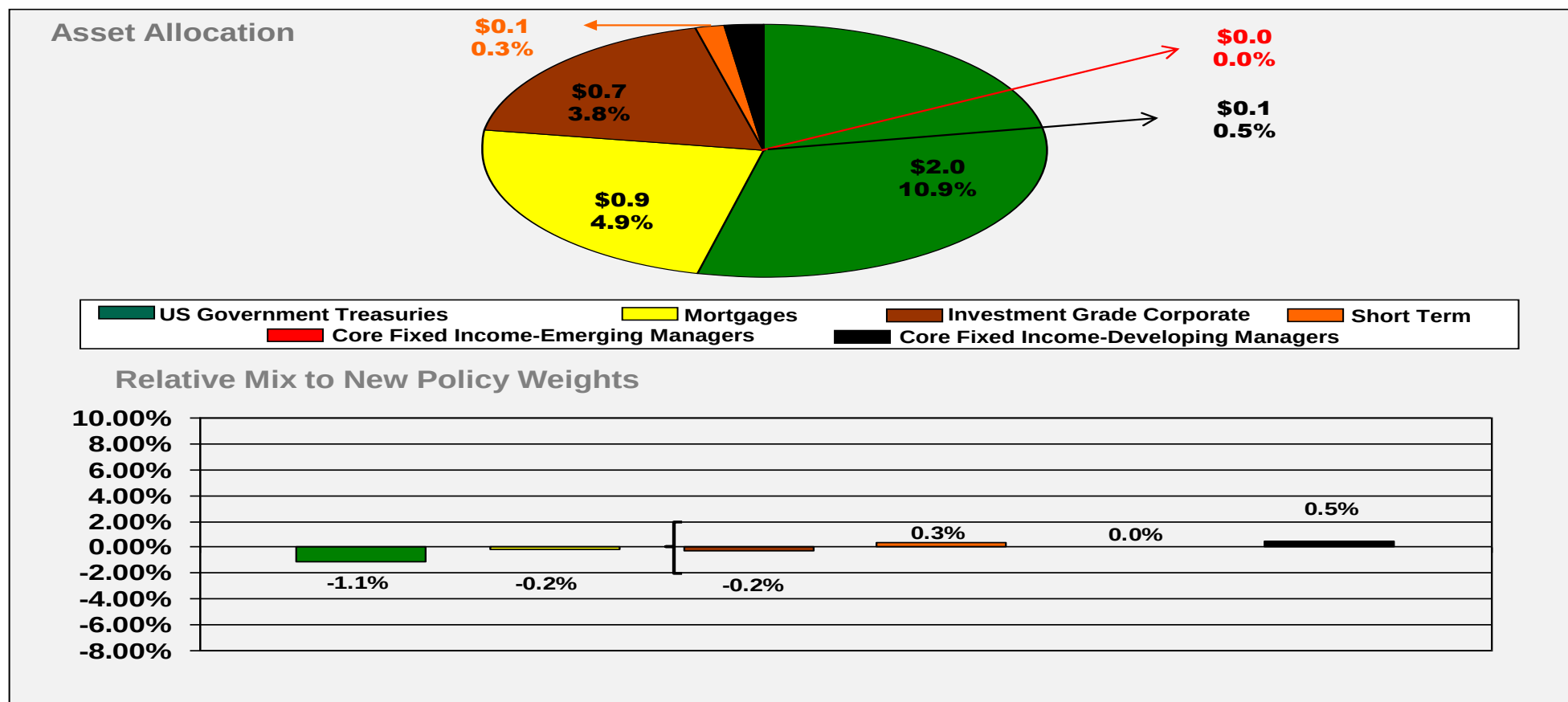


Portfolio Asset Allocation – Growth

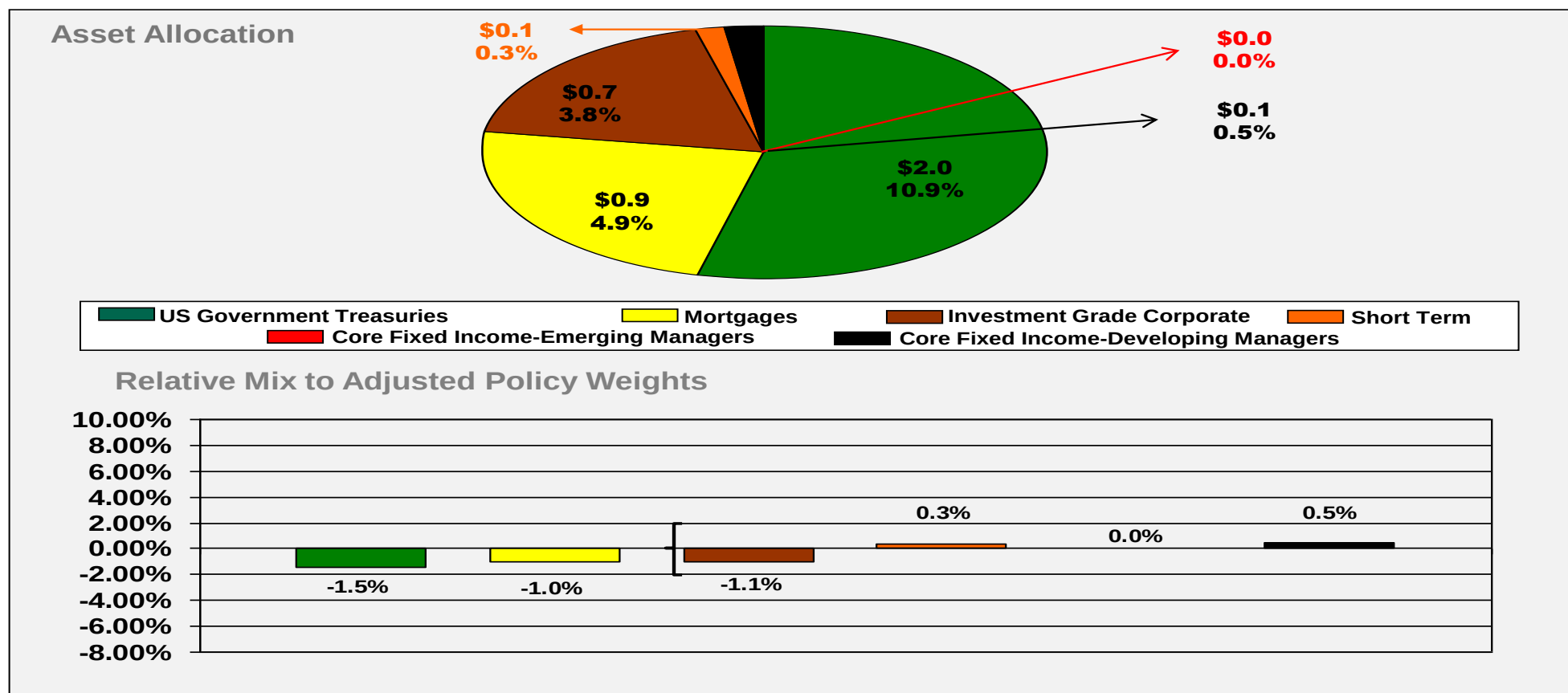


Note: On March 31, 2021 Fire's combined Fixed Income and Cash portfolios have a duration of 7.2 years. The duration of the Barclays US Aggregate Index was 6.4 years on that date.

Portfolio Asset Allocation – Deflation Protection

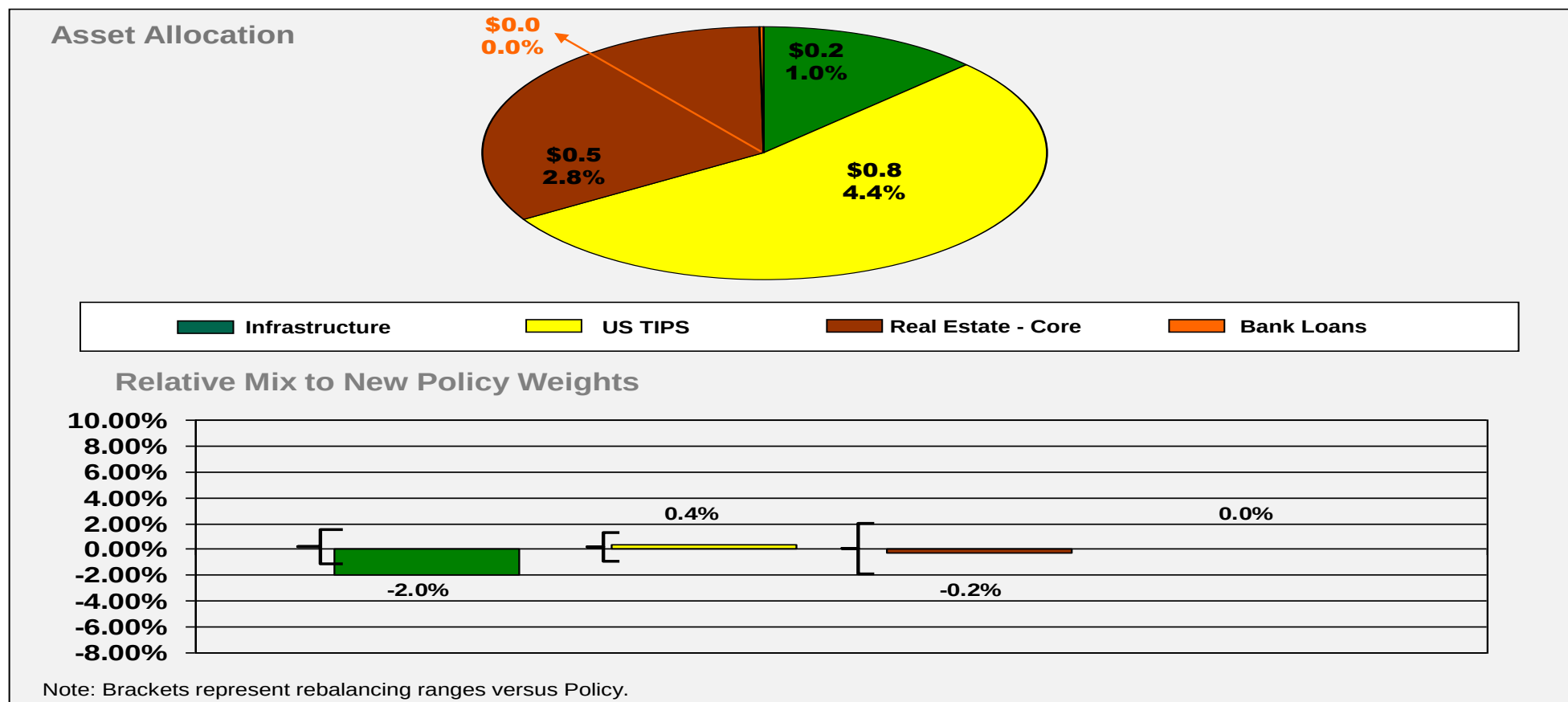


Portfolio Asset Allocation – Deflation Protection

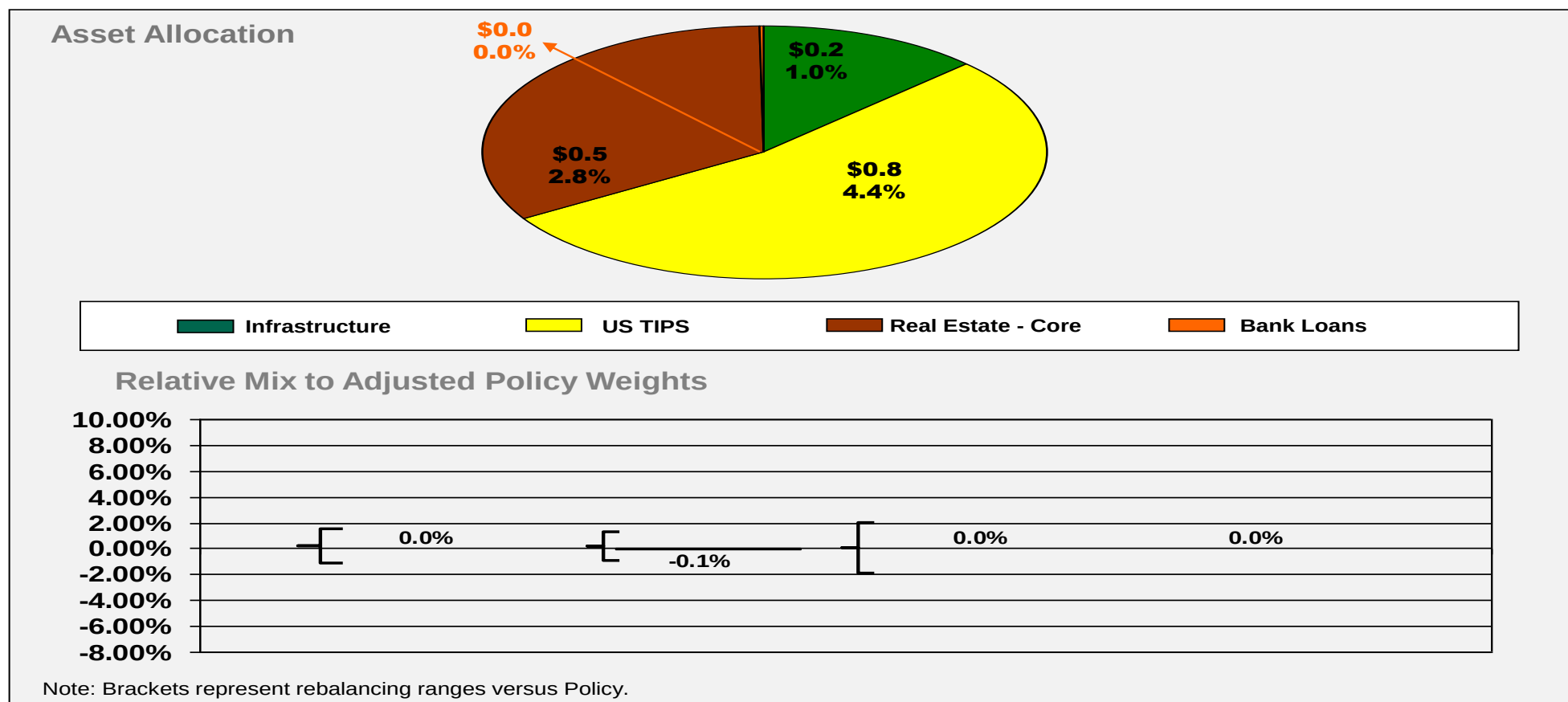


Note: On March 31, 2021 Fire's combined Fixed Income and Cash portfolios have a duration of 7.2 years. The duration of the Barclays US Aggregate Index was 6.4 years on that date.

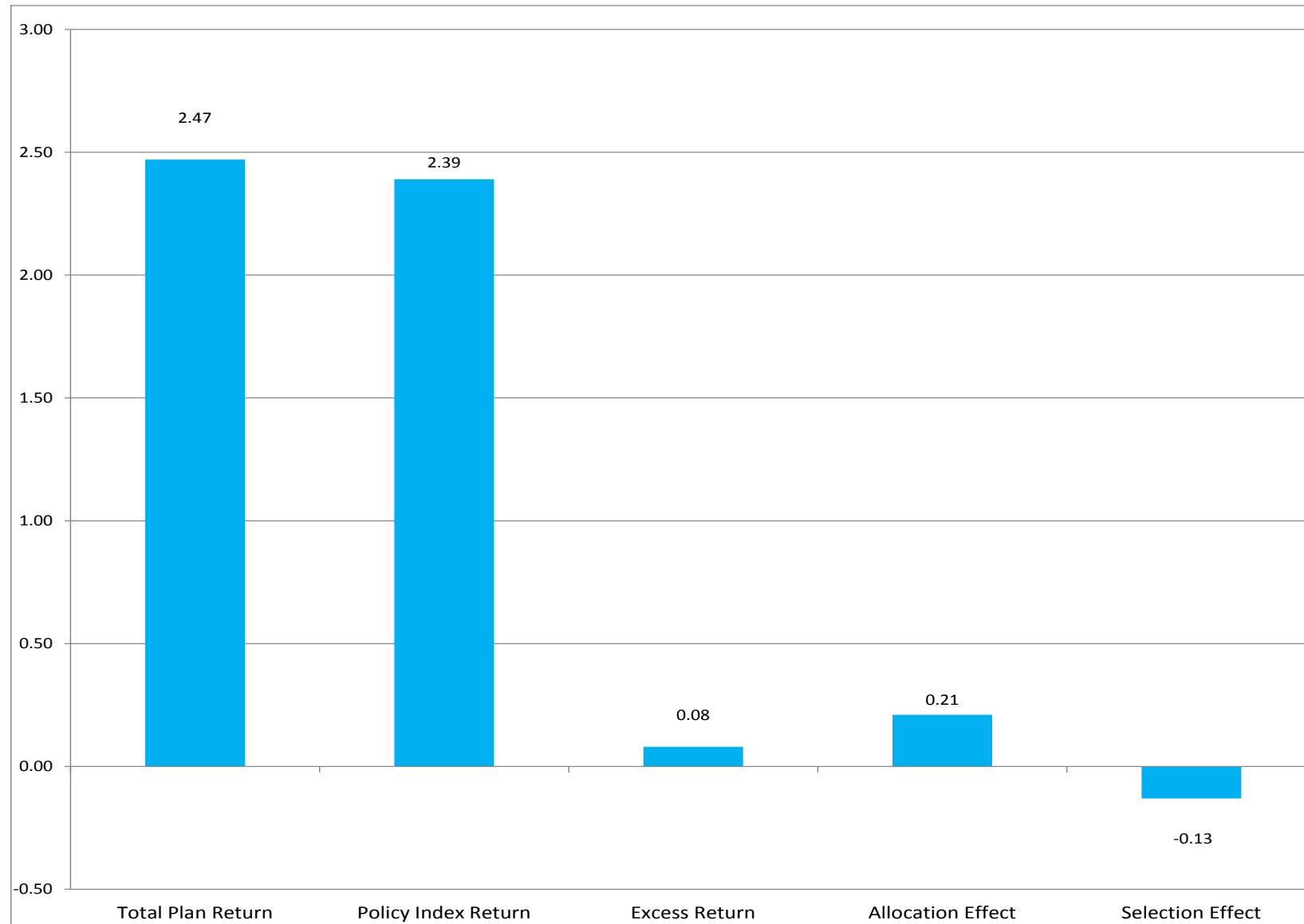
Portfolio Asset Allocation – Inflation Protection

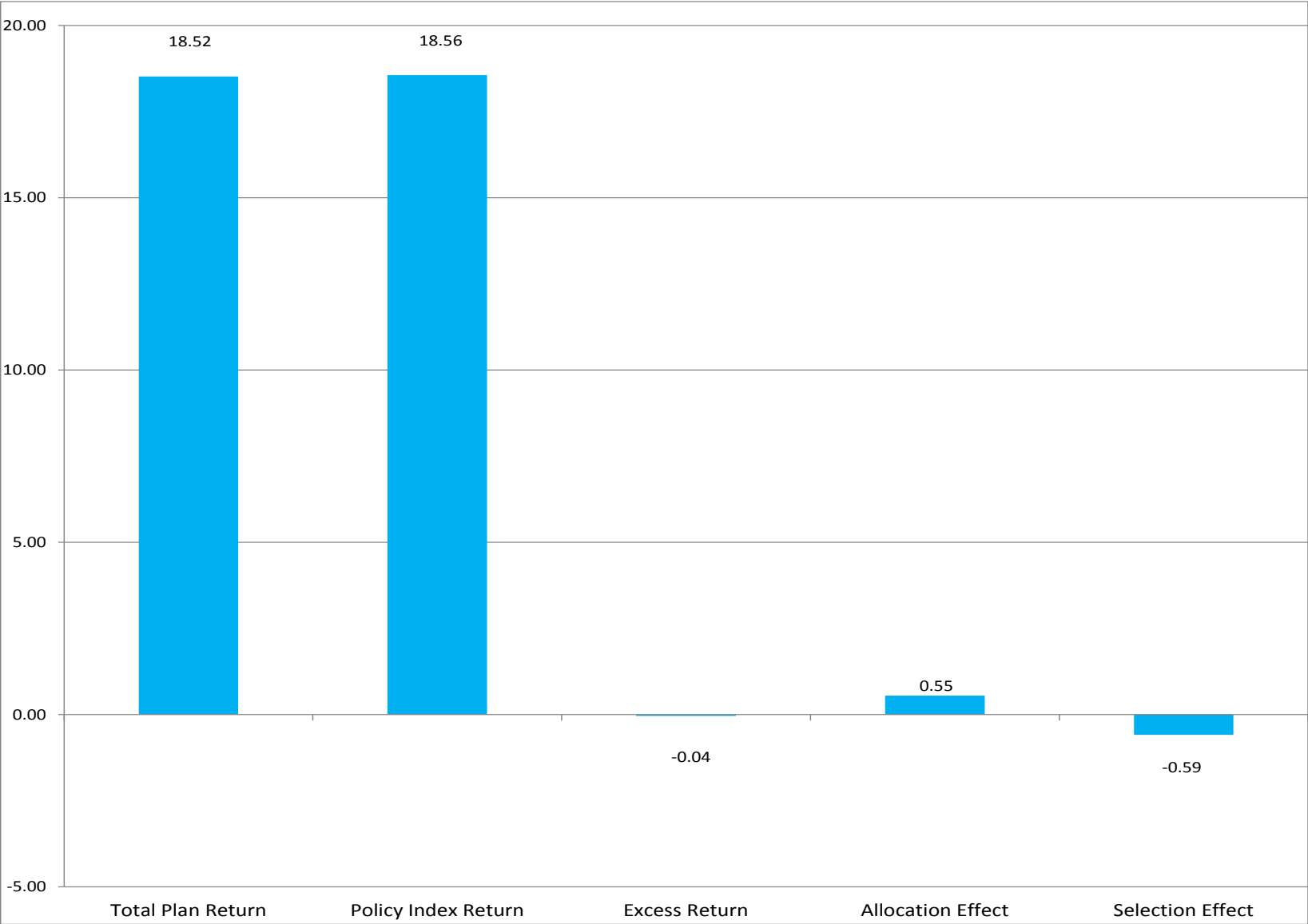


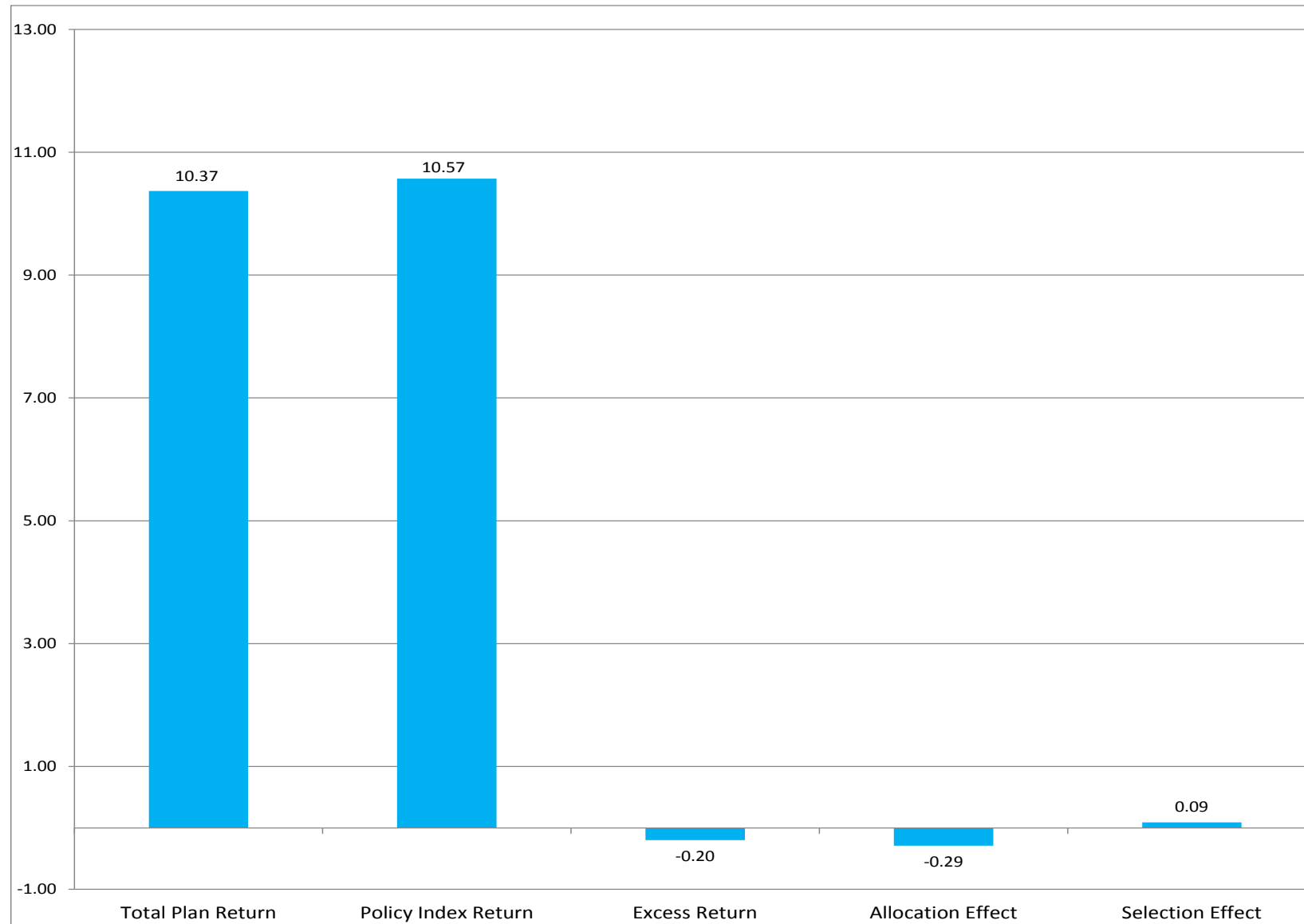
Portfolio Asset Allocation – Inflation Protection



Note: On March 31, 2021 Fire's combined Fixed Income and Cash portfolios have a duration of 7.2 years. The duration of the Barclays US Aggregate Index was 6.4 years on that date.







Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL FIRE	0.21	0.55	-0.29	Fire Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.01	-0.13	-0.17	RUSSELL 3000
TOTAL WORLD ex-USA	0.01	0.01	-0.03	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	0.00	0.12	-0.02	MSCI Emerging Markets
TOTAL GLOBAL EQUITY	0.01	0.05	0.00	MSCI AC WORLD
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	0.00	-0.05	-0.01	HFRI Fund of Funds Composite Index plus 1%
TOTAL REAL ESTATE SECURITIES	0.00	-0.09	-0.07	Dow Jones US Select Securities Index
TOTAL PRIVATE EQUITY	0.00	0.00	-0.07	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.00	-0.02	-0.01	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	0.00	0.00	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.01	0.68	0.20	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	-0.06	-0.36	0.28	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.18	0.90	-0.32	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CORPORATE	0.07	0.29	0.03	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.03	0.18	0.02	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.03	-0.17	-0.03	BBG BARC Agg
TOTAL HIGH YIELD	0.01	0.05	0.05	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	-0.09	0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	0.02	-0.01	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	0.00	0.00	0.07	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	-0.01	-0.83	-0.21	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL FIRE	-0.13	-0.59	0.09	Fire Policy Benchmark
TOTAL DOMESTIC EQUITY	0.20	0.20	-0.23	RUSSELL 3000
TOTAL WORLD ex-USA	-0.14	0.54	0.31	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	0.10	0.46	0.01	MSCI Emerging Markets
TOTAL GLOBAL EQUITY	-0.08	0.02	0.10	MSCI AC WORLD
TOTAL INTERNATIONAL FOF	-0.01	0.00	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	-0.10	-0.62	0.06	HFRI Fund of Funds Composite Index plus 1%
TOTAL REAL ESTATE SECURITIES	0.00	0.01	0.00	Dow Jones US Select Securities Index
TOTAL PRIVATE EQUITY	-0.30	-1.55	-0.15	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE-CORE	0.01	-0.04	0.04	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE-NON CORE	0.06	0.15	0.01	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.03	0.13	0.05	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	-0.01	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.00	0.00	0.03	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CORPORATE	-0.01	0.01	0.01	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.00	0.03	0.01	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.02	0.00	BBG BARC Agg
TOTAL HIGH YIELD	0.02	0.02	0.01	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	-0.03	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	-0.01	-0.02	0.00	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	0.00	0.00	-0.10	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.10	0.09	-0.06	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.01	0.01	

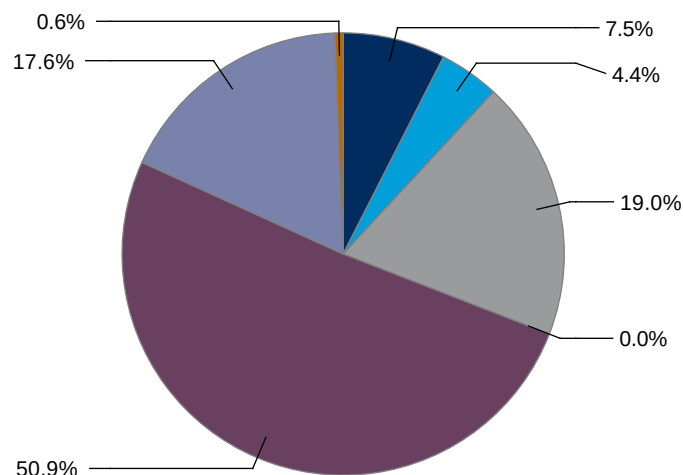
Total Domestic Equity Asset Allocations: March 31, 2021



TOTAL DOMESTIC EQUITY

Market Value (Billions)

\$5.5



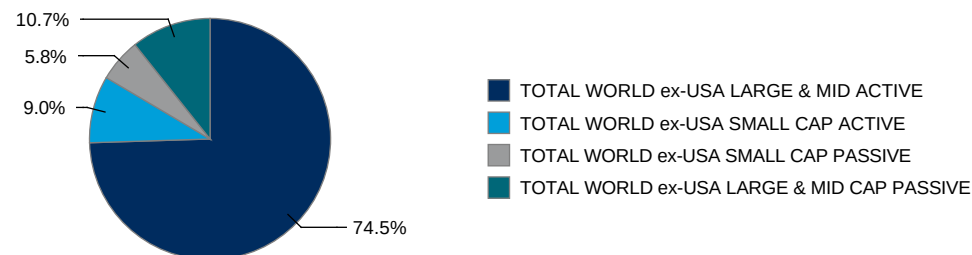
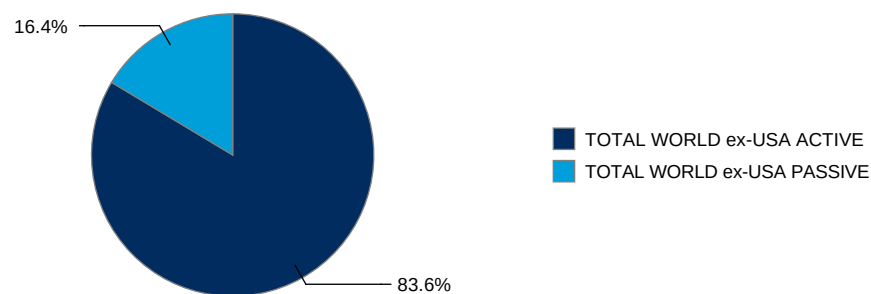
- TOTAL SMALL CAP ACTIVE
- TOTAL MID CAP ACTIVE
- TOTAL RUSSELL 1000 ACTIVE
- TOTAL SMALL CAP PASSIVE
- TOTAL RUSSELL 1000 PASSIVE
- TOTAL RUSSELL TOP 200 PASSIVE
- TOTAL EMERGING MANAGERS

	<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 SMALL CAP ACTIVE	6.2	7.5	1.3	8.1	12.7	(4.6)
TOTAL MID CAP ACTIVE	7.0	4.4	(2.6)	5.3	8.1	(2.8)
TOTAL RUSSELL 1000 ACTIVE	18.0	19.0	1.0	11.3	5.9	5.4
TOTAL SMALL CAP PASSIVE	0.0	0.0	0.0	10.5	12.7	(2.2)
TOTAL RUSSELL 1000 PASSIVE	50.0	50.9	1.0	6.1	5.9	0.2
TOTAL RUSSELL TOP 200 PASSIVE	18.2	17.6	(0.6)	5.1	5.1	0.0
TOTAL EMERGING MANAGERS	0.6	0.6	(0.1)	16.1	12.7	3.4

World ex-USA Equity Asset Allocation: March 31, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL WORLD ex-USA	\$1.7	9.2

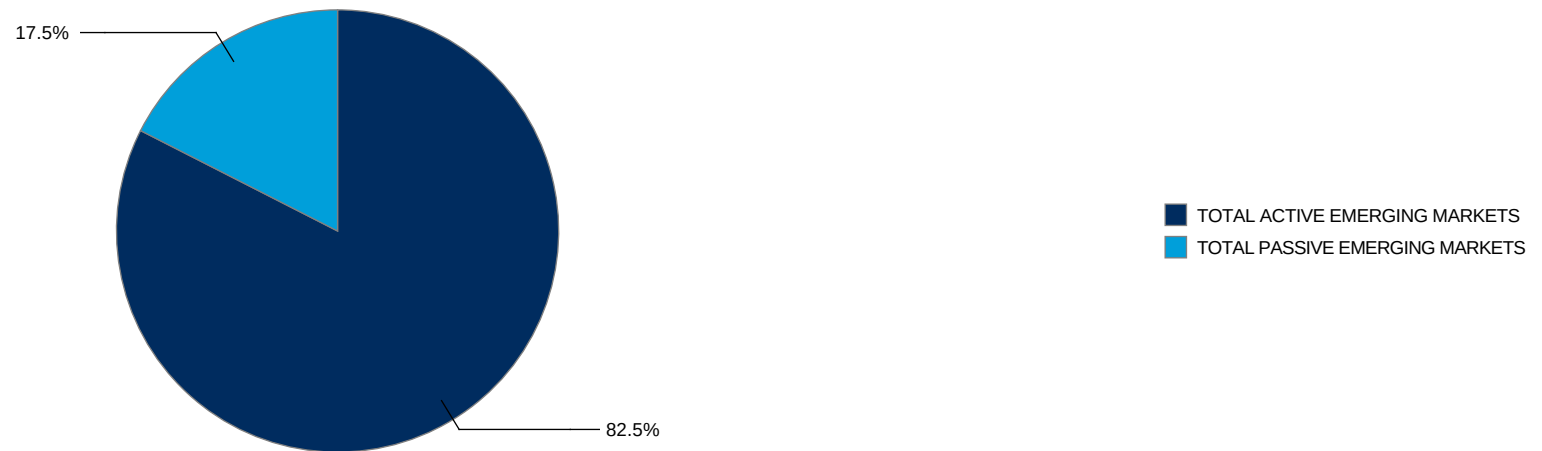


	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	74.50	1.49	4.04	(2.55)
TOTAL WORLD ex-USA SMALL CAP ACTIVE	9.05	8.60	3.66	4.94
TOTAL WORLD ex-USA SMALL CAP PASSIVE	5.78	4.90	4.88	0.02
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	10.66	4.06	4.04	0.02
TOTAL WORLD ex-USA	100.00	2.58	4.17	(1.59)

Emerging Markets Equity Asset Allocation: March 31, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL EMERGING MARKETS	\$1.2	6.8



	<u>Asset Class Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	82.48	4.04	2.29	1.75
TOTAL PASSIVE EMERGING MARKETS	17.52	2.72	2.29	0.44
TOTAL EMERGING MARKETS	100.00	3.77	2.29	1.49

Structured Fixed Income Asset Allocation: March 31, 2021



	<u>Market Value (Billions)</u>	<u>% of Plan</u>
TOTAL STRUCTURED+ETI	\$3.5	19.6



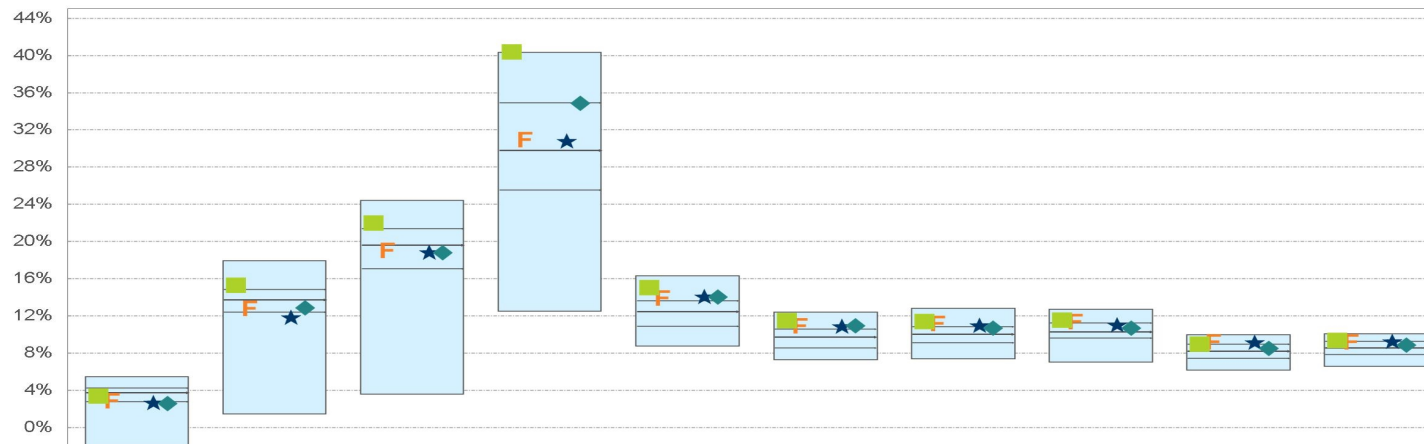
	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	57.14	55.91	(1.23)	(7.86)	(7.68)	(0.18)
TOTAL MORTGAGE	23.81	24.82	1.01	(1.35)	(1.10)	(0.25)
TOTAL INVESTMENT GRADE CORPORATE	19.05	19.27	0.22	(4.61)	(4.46)	(0.15)

Through March 31, 2021



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$1 Billion
Cumulative Periods Ending : March 31, 2021



Percentile Rankings	1 Otr	2 Otrs	3 Otrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	5.45	17.94	24.40	40.34	16.29	12.43	12.81	12.70	9.97	10.06
25th	4.25	14.84	21.39	34.92	13.61	10.59	10.84	11.25	8.94	9.25
50th	3.75	13.73	19.58	29.77	12.47	9.72	10.02	10.29	8.21	8.56
75th	2.80	12.41	17.05	25.53	10.91	8.55	9.13	9.63	7.46	7.82
95th	-2.09	1.45	3.61	12.49	8.74	7.30	7.38	7.02	6.16	6.59
No. Of Obs	63	63	63	63	52	52	52	52	52	52
F Total System - Fire	2.55 (78)	12.53 (71)	18.76 (61)	30.63 (42)	13.60 (25)	10.63 (23)	10.90 (23)	11.09 (26)	8.91 (26)	8.89 (36)
★ Fire Policy Benchmark	2.39 (81)	11.52 (78)	18.56 (63)	30.51 (43)	13.76 (23)	10.57 (25)	10.68 (32)	10.74 (34)	8.84 (26)	8.97 (30)
■ Public Mkt Equiv 25	3.08 (70)	14.98 (23)	21.70 (20)	40.10 (5)	14.73 (11)	11.17 (13)	11.10 (21)	11.23 (25)	8.66 (34)	9.06 (28)
◆ Public Mkt Equiv 35	2.27 (81)	12.55 (71)	18.47 (65)	34.58 (25)	13.73 (23)	10.65 (23)	10.37 (38)	10.37 (46)	8.20 (50)	8.56 (50)

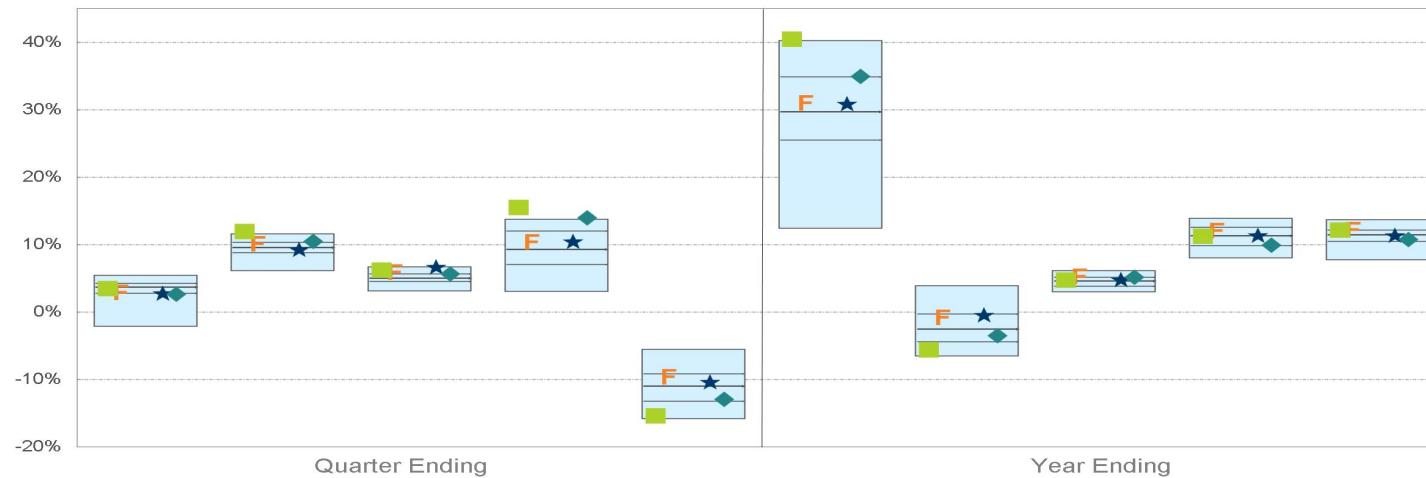
Wilshire Trust Universe Comparison Service® (TUCS®)

Through March 31, 2021



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$1 Billion
Consecutive Time Periods: March 31, 2021



Percentile Rankings	Mar 21	Dec 20	Sep 20	Jun 20	Mar 20	Mar 21	Mar 20	Mar 19	Mar 18	Mar 17
5th	5.45	11.65	6.70	13.78	-5.54	40.34	3.93	6.14	13.93	13.70
25th	4.25	10.39	5.67	12.06	-9.16	34.92	-0.29	5.21	12.58	12.16
50th	3.75	9.63	5.03	9.31	-11.00	29.77	-2.49	4.60	11.35	11.49
75th	2.80	8.84	4.59	7.05	-13.21	25.53	-4.39	3.86	9.89	10.48
95th	-2.09	6.16	3.15	3.10	-15.82	12.49	-6.48	3.05	8.03	7.75
No. Of Obs	63	63	63	63	63	63	52	54	54	54
F Total System - Fire	2.55 (78)	9.73 (45)	5.54 (29)	10.00 (35)	-9.96 (39)	30.63 (42)	-1.21 (36)	4.92 (32)	11.71 (44)	11.87 (38)
★ Fire Policy Benchmark	2.39 (81)	8.92 (73)	6.32 (9)	10.07 (35)	-10.73 (45)	30.51 (43)	-0.84 (32)	4.45 (55)	11.01 (55)	11.00 (57)
■ Public Mkt Equiv 25	3.08 (70)	11.55 (5)	5.85 (18)	15.12 (1)	-15.79 (94)	40.10 (5)	-6.04 (93)	4.36 (55)	10.89 (57)	11.78 (40)
◆ Public Mkt Equiv 35	2.27 (81)	10.06 (32)	5.26 (42)	13.60 (7)	-13.35 (75)	34.58 (25)	-3.90 (69)	4.74 (40)	9.55 (82)	10.36 (75)

Wilshire Trust Universe Comparison Service® (TUCS®)

Actual Fees Incurred



FIRE RETIREMENT SYSTEM 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	4,490.51	3,034.63	-	6.76	1,121.52	2.50	4,156.15	9.26
Small Cap Active:	344.62	1,574.94	-	45.70	-	-	1,574.94	45.70
Small Cap Growth	120.87	801.90	-	66.34	-	-	801.90	66.34
Small Cap Value	162.44	667.04	-	41.06	-	-	667.04	41.06
Small Cap Core	61.31	106.00	-	17.29	-	-	106.00	17.29
Small Cap Fundamental Index	-	-	-	-	-	-	-	-
Mid Cap Active:	171.48	514.50	-	30.00	1,121.52	65.40	1,636.02	-
Mid Cap Growth	-	-	-	-	-	-	-	-
Mid Cap Value	-	-	-	-	-	-	-	-
Mid Cap Core	171.48	514.50	-	30.00	1,121.52	65.40	1,636.02	95.41
Other Active:								
Russell 1000 Fundamental	791.82	756.37	-	9.55	-	-	756.37	9.55
Legato (Emerging Manager- Equity)	20.19	100.62	-	49.83	-	-	100.62	49.83
U.S. Environmental Managers	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
Total US Active Equities	1,328.11	2,946.43	-	22.19	1,121.52	8.44	4,067.95	30.63
Small Cap Passive:								
Small Cap Passive	35.87	1.52	-	0.42	-	-	1.52	0.42
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	-	-	-	-	-	-	-	-
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	2,418.14	48.03	-	0.20	-	-	48.03	0.20
Passive Russell 3000	-	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	708.39	38.64	-	0.55	-	-	38.64	0.55
Total US Passive Equities	3,162.40	88.19	-	0.28	-	-	88.19	0.28

Actual Fees Incurred



FIRE RETIREMENT SYSTEM
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	2,692.76	5,700.82	-	21.17	-	-	5,700.82	21.17
Global Equity	227.87	1,253.92	-	55.03	-	-	1,253.92	55.03
Active Total Global Equities	227.87	1,253.92	-	55.03	-	-	1,253.92	55.03
Active Total World Ex USA:	1,288.71	2,968.61	-	23.04	-	-	2,968.61	23.04
World Ex-USA Large & Mid Developed Growth Active	671.53	1,331.94	-	19.83	-	-	1,331.94	19.83
World Ex-USA Large & Mid Developed Value Active	511.13	1,249.78	-	24.45	-	-	1,249.78	24.45
World Ex-USA Developed Small Cap Active	106.05	386.89	-	36.48	-	-	386.89	36.48
Total World Ex USA	-	-	-	-	-	-	-	-
NON-U.S. Activist	-	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	881.00	2,381.18	-	27.03	-	-	2,381.18	27.03
International Fund of Funds	71.57	243.36	-	34.00	-	-	243.36	34.00
Total Active International Equities	2,241.28	5,593.16	-	24.96	-	-	5,593.16	24.96
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	64.14	20.70	-	3.23	-	-	20.70	3.23
World Ex-USA Large & Mid Cap Passive	128.59	15.20	-	1.18	-	-	15.20	1.18
Passive Global	-	-	-	-	-	-	-	-
Passive Emerging Markets	258.75	71.76	-	2.77	-	-	71.76	2.77
Total Int'l Passive Equities	451.48	107.66	-	2.38	-	-	107.66	2.38
REITS Active Equities	178.36	715	-	40.06	-	-	715	40.06
Total Equities	7,589.50	10,703.92	-	14.10	1,121.52	1.48	11,825.44	15.58

FIRE RETIREMENT SYSTEM
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2020

INVESTMENT STYLE (FIXED INCOME)	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 Fixed Income	4,774.12	6,071.04	-	12.72	-	-	6,071.04	12.72
Structured Program:	2,431.26	962.77	-	3.96	-	-	962.77	3.96
Government Treas/Agency Sector	976.53	339.06	-	3.47	-	-	339.06	3.47
Long Duration Treasury	589.42	58.01	-	0.98	-	-	58.01	0.98
Mortgage Sector	426.45	193.42	-	4.54	-	-	193.42	4.54
Investment Grade Credit Sector	438.85	372.28	-	8.48	-	-	372.28	8.48
Developing Managers	69.10	101.01	-	14.62	-	-	101.01	14.62
Emerging Managers	25.72	93.32	-	36.29	-	-	93.32	36.29
TIPS:	669.07	113.82	-	1.70	-	-	113.82	1.70
Active TIPS Managers	186.65	89.82	-	4.81	-	-	89.82	4.81
Passive TIPS Managers	482.42	24.00	-	0.50	-	-	24.00	0.50
High Yield	835.70	2,691.27	-	32.20	-	-	2,691.27	32.20
Bank Loans	210.69	769.20	-	36.51	-	-	769.20	36.51
Convertible Bonds	223.12	1,095.24	-	49.09	-	-	1,095.24	49.09
ETI - Access - RBC	28.29	50.23	-	17.75	-	-	50.23	17.75
ETI - AFL-CIO HIT	61.07	194.17	-	31.79	-	-	194.17	31.79
Other ETI Programs (Internally Managed)	27.74	-	-	-	-	-	-	-
Short Term (Internally Managed)	192.36	-	-	-	-	-	-	-
Total Public Markets	12,363.62	16,774.96	-	13.57	1,121.52	0.91	17,896.48	14.48

FIRE RETIREMENT SYSTEM
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	872.92	8,557.51	650.19	105.48	5,999.62	68.73	15,207.33	174.21
Private Equity	976.64	14,009.77	2,712.14	171.22	11,659.06	119.38	28,380.97	290.60
Private Real Estate	689.70	6,233.04	2,162.73	121.73	4,177.40	60.57	12,573.17	182.30
Infrastructure	149.18	2,903.59	291.07	111.31	251.19	8.75	3,445.85	120.06
Opportunistic Fixed Income	476.90	4,195.68	1,312.04	115.49	456.48	9.57	5,964.20	125.06
Total Private Markets	3,165.34	35,899.59	7,128.18	135.93	22,543.75	71.22	65,571.52	207.15
Total Overall	15,528.96	52,674.56	7,128.18	38.51	23,665.27	15.24	83,468.00	53.75

The overall carried interest and performance incentive fees paid by FIRE for the Fiscal Year: 15.24 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 Fire is : \$287m
- 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.

**NYC FIRE DEPARTMENT PENSION FUND
SECURITIES LENDING INCOME
March 31, 2021**

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	109,000	-	-	109,000
1990	104,000	-	-	104,000
1991	157,000	-	-	157,000
1992	429,000	47,000	48,000	524,000
1993	762,000	146,000	102,000	1,010,000
1994	693,000	267,000	102,000	1,062,000
1995	495,000	306,000	96,000	897,000
1996	455,000	228,000	179,000	862,000
1997	473,000	512,000	257,000	1,242,000
1998	789,000	552,000	356,000	1,697,000
1999	716,000	690,000	408,000	1,814,000
2000	734,000	897,000	408,000	2,039,000
2001	1,176,000	1,286,000	561,000	3,023,000
2002	671,000	1,162,000	506,000	2,339,000
2003	349,000	644,000	452,000	1,445,000
2004	505,000	670,000	462,000	1,637,000
2005	740,000	1,070,000	574,000	2,384,000
2006	599,000	1,753,000	713,000	3,065,000
2007	1,437,000	3,180,000	786,000	5,403,000
2008	4,172,000	6,798,000	1,236,000	12,206,000
2009	1,606,000	3,588,000	817,000	6,011,000
2010	760,000	2,047,000	563,000	3,370,000
2011	977,000	2,674,000	927,000	4,578,000
2012	1,229,000	3,324,000	832,000	5,385,000
2013	893,000	3,467,000	704,000	5,064,000
2014	756,000	2,028,000	1,739,000	4,523,000
2015	788,000	2,034,000	2,407,000	5,229,000
2016	807,000	3,245,000	2,094,000	6,146,000
2017	1,285,000	2,515,000	1,574,000	5,374,000
2018	1,100,230	2,442,001	1,489,477	5,031,708
2019	693,784	2,129,087	1,094,881	3,917,752
2020	780,299	1,002,944	638,140	2,421,383
2021 (3 months)	346,397	246,070	37,558	630,025
Since Inception	<u>27,586,711</u>	<u>50,950,101</u>	<u>22,163,056</u>	<u>100,699,868</u>

New York City
Fire Department Pension Fund, Subchapter Two

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 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 FIRE-TOTAL PORTFOLIO - GROSS	17,992	100.00	2.55	18.76	2.55	5.05	14.70	17.95	(2.27)	30.63	10.63	11.09	8.89	8.82	07/01/1987
FIRE - ESTIMATED INVESTMENT FEES			(0.08)	(0.23)	(0.08)	(0.24)	(0.26)	(0.29)	(0.20)	(0.33)	(0.26)	(0.25)			
EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.09)	(0.03)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)			
EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.05)	(0.14)	(0.05)	(0.12)	(0.14)	(0.17)	(0.08)	(0.21)	(0.14)	(0.13)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
FIRE-TOTAL PORTFOLIO - NET MGR			2.47	18.52	2.47	4.81	14.44	17.67	(2.47)	30.30	10.37	10.84			
FIRE POLICY BENCHMARK			2.39	18.56	2.39	4.73	13.78	19.05	(2.67)	30.51	10.57	10.74	8.97		
EXCESS RETURN			0.08	(0.04)	0.08	0.08	0.65	(1.38)	0.20	(0.21)	(0.20)	0.10	(0.08)		
EQUITY RETURN DETAIL															
26 FIRE-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - GROSS	11,880	66.03	5.47	29.53	5.47	2.98	17.50	22.15	(3.59)	47.68	13.17	14.22	11.01	9.10	04/01/2004
ESTIMATED INVESTMENT FEES			(0.11)	(0.34)	(0.11)	(0.29)	(0.34)	(0.36)	(0.24)	(0.49)	(0.33)	(0.32)			
EST MANAGEMENT FEES			(0.11)	(0.34)	(0.11)	(0.29)	(0.34)	(0.36)	(0.24)	(0.49)	(0.33)	(0.32)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
FIRE-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - NET MGR			5.35	29.20	5.35	2.69	17.17	21.79	(3.82)	47.19	12.83	13.90			
34 FIRE-TOTAL EQUITY - GROSS	8,805	48.94	5.49	34.33	5.49	2.85	20.21	27.62	(8.64)	62.85	13.99	15.33	11.16	9.20	04/01/2004
ESTIMATED INVESTMENT FEES			(0.05)	(0.18)	(0.05)	(0.17)	(0.22)	(0.21)	(0.15)	(0.30)	(0.20)	(0.19)			
EST MANAGEMENT FEES			(0.05)	(0.18)	(0.05)	(0.17)	(0.22)	(0.21)	(0.15)	(0.30)	(0.20)	(0.19)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
FIRE-TOTAL EQUITY - NET MGR			5.44	34.16	5.44	2.68	19.99	27.41	(8.79)	62.55	13.80	15.14			
42 FIRE-TOTAL DOMESTIC EQUITY - GROSS	5,504	30.59	7.04	33.78	7.04	4.66	19.14	30.08	(5.44)	62.78	16.39	16.24	13.38	12.59	08/01/1979
ESTIMATED INVESTMENT FEES			(0.02)	(0.07)	(0.02)	(0.09)	(0.12)	(0.12)	(0.09)	(0.16)	(0.11)	(0.11)			
FIRE-TOTAL DOMESTIC EQUITY - NET MGR			7.02	33.71	7.02	4.57	19.02	29.96	(5.53)	62.62	16.28	16.13			
RUSSELL 3000 (DAILY)			6.35	33.19	6.35	6.53	20.89	31.02	(5.24)	62.53	17.12	16.64	13.79	12.04	
EXCESS RETURN			0.68	0.52	0.68	(1.96)	(1.86)	(1.06)	(0.29)	0.10	(0.84)	(0.50)	(0.41)	0.55	
52 FIRE-TOTAL SMALL CAP - GROSS	415	2.30	8.24	43.34	8.24	(3.15)	22.75	24.28	(9.88)	88.02	14.36	15.63	12.00	8.83	04/01/2004
ESTIMATED INVESTMENT FEES			(0.16)	(0.63)	(0.16)	(0.52)	(0.72)	(0.61)	(0.47)	(1.09)	(0.61)	(0.65)			
FIRE-TOTAL SMALL CAP - NET MGR			8.08	42.71	8.08	(3.67)	22.03	23.67	(10.34)	86.94	13.75	14.98			
RUSSELL 2000 (DAILY)			12.70	55.36	12.70	(6.63)	19.96	25.52	(11.01)	94.85	14.76	16.35	11.68	9.56	
EXCESS RETURN			(4.62)	(12.65)	(4.62)	2.96	2.07	(1.86)	0.67	(7.91)	(1.01)	(1.37)	0.31	(0.73)	
62 FIRE-TOTAL MID CAP - GROSS	242	1.35	5.40	39.73	5.40	0.77	26.31	30.43	(14.21)	75.37	13.78	15.41	12.86	9.89	04/01/2004
ESTIMATED INVESTMENT FEES			(0.08)	(0.32)	(0.08)	(0.95)	(1.19)	(1.01)	(0.53)	(1.65)	(0.87)	(0.74)			
FIRE-TOTAL MID CAP - NET MGR			5.32	39.41	5.32	(0.18)	25.12	29.42	(14.74)	73.72	12.90	14.67			
RUSSELL MIDCAP (DAILY)			8.14	39.35	8.14	(2.24)	17.10	30.54	(9.06)	73.64	14.73	14.67	12.47	10.71	
EXCESS RETURN			(2.81)	0.06	(2.81)	2.06	8.02	(1.12)	(5.68)	0.08	(1.83)	0.00	0.40	(0.82)	

Consolidated Performance Report

Through March 31, 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																
74	FIRE-TOTAL RUSSELL 1000 - GROSS	3,846	21.37	7.45	33.54	7.45	4.32	17.71	30.08		61.39	16.50			16.50	04/01/2018
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.03)	(0.03)	(0.02)		(0.04)	(0.03)			(0.03)	
	FIRE-TOTAL RUSSELL 1000 - NET MGR			7.44	33.52	7.44	4.29	17.68	30.06		61.35	16.48			16.48	
	RUSSELL 1000 (DAILY)			5.91	31.82	5.91	7.48	20.96	31.43		60.59	17.31			17.31	
	EXCESS RETURN			1.53	1.70	1.53	(3.19)	(3.28)	(1.37)		0.76	(0.83)			(0.83)	
84	FIRE-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	970	5.39	5.12	29.21	5.12	11.25	22.40	31.77		56.21				18.68	05/01/2018
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)		(0.01)				(0.01)	
	FIRE-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			5.12	29.21	5.12	11.24	22.39	31.77		56.20				18.67	
	RUSSELL TOP 200 INDEX (DAILY)			5.12	29.27	5.12	11.20	22.37	31.75		56.30				18.65	
	EXCESS RETURN			0.00	(0.06)	0.00	0.04	0.02	0.02		(0.09)				0.02	
94	FIRE-TOTAL FUND OF FUNDS - GROSS	31	0.17	16.22	60.26	16.22	(7.81)	19.88	23.94	(7.75)	100.43	17.07			14.66	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.15)	(0.61)	(0.15)	(0.46)	(0.60)	(0.62)	(0.46)	(1.00)	(0.59)			(0.62)	
	FIRE-TOTAL FUND OF FUNDS - NET MGR			16.07	59.65	16.07	(8.27)	19.28	23.33	(8.21)	99.42	16.49			14.04	
	RUSSELL 2000 (DAILY)			12.70	55.36	12.70	(6.63)	19.96	25.52	(11.01)	94.85	14.76			14.01	
	EXCESS RETURN			3.37	4.29	3.37	(1.64)	(0.68)	(2.20)	2.80	4.58	1.73			0.03	

Consolidated Performance Report

Through March 31, 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																
106	FIRE-TOTAL WORLD ex-USA - GROSS	1,659	9.22	2.64	33.03	2.64	1.34	21.42	25.27	(14.17)	60.06	10.37	13.24	7.70	7.46	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.06)	(0.24)	(0.06)	(0.25)	(0.30)	(0.31)	(0.24)	(0.40)	(0.28)	(0.30)			
	FIRE-TOTAL WORLD ex-USA - NET MGR			2.58	32.79	2.58	1.09	21.12	24.96	(14.41)	59.66	10.08	12.94			
	WORLD EX-USA CUSTOM BM			4.17	27.77	4.17	(5.11)	8.32	22.91	(14.68)	48.47	6.41	9.22	5.92	6.17	
	EXCESS RETURN			(1.59)	5.03	(1.59)	6.20	12.79	2.05	0.28	11.19	3.67	3.72	1.78	1.29	
116	FIRE-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	1,236	6.87	1.56	32.64	1.56	3.08	24.47	25.96	(13.36)	60.45	11.50	14.15		8.30	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.07)	(0.28)	(0.07)	(0.29)	(0.36)	(0.35)	(0.24)	(0.46)	(0.31)	(0.31)		(0.30)	
	FIRE-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			1.49	32.36	1.49	2.79	24.11	25.62	(13.60)	59.99	11.18	13.84		8.00	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			4.04	26.46	4.04	(5.42)	7.59	22.49	(14.09)	45.86	6.34	8.95		5.01	
	EXCESS RETURN			(2.55)	5.90	(2.55)	8.21	16.52	3.13	0.49	14.13	4.84	4.88		2.99	
126	FIRE-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	150	0.83	8.69	43.13	8.69	(1.69)	19.00	22.69	(18.26)	72.26	8.57	12.58		10.60	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.09)	(0.35)	(0.09)	(0.34)	(0.37)	(0.50)	(0.39)	(0.56)	(0.42)	(0.48)			
	FIRE-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			8.60	42.78	8.60	(2.03)	18.63	22.18	(18.65)	71.70	8.15	12.10			
	S&P EPAC SMALL CAP USD NET			3.66	35.06	3.66	(4.00)	13.78	23.71	(18.58)	63.20	6.02	10.06		8.70	
	EXCESS RETURN			4.94	7.71	4.94	1.97	4.84	(1.52)	(0.07)	8.49	2.13	2.05		1.91	
136	FIRE-TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	96	0.53	4.90	35.85	4.90	(2.88)	13.20	25.50	(17.95)	65.23	7.20	11.01		8.45	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.03)	(0.04)	(0.03)	(0.02)	(0.05)	(0.03)	(0.04)		(0.03)	
	FIRE-TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			4.90	35.82	4.90	(2.91)	13.16	25.46	(17.97)	65.18	7.17	10.97		8.42	
	WORLD EX USA SC PASSIVE CUSTOM BM			4.88	35.76	4.88	(3.20)	12.78	25.41	(18.07)	65.17	6.89	10.74		8.14	
	EXCESS RETURN			0.02	0.06	0.02	0.29	0.38	0.05	0.10	0.01	0.27	0.23		0.28	
146	FIRE-TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - GROSS	177	0.98	4.06	26.70	4.06	(5.09)	8.10	22.76	(13.63)	46.20	6.82	9.15	5.82	5.83	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)			
	FIRE-TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - NET MGR			4.06	26.69	4.06	(5.11)	8.09	22.75	(13.64)	46.18	6.81	9.14			
	NYC CUSTOM WORLD EX US INDEX			4.04	26.46	4.04	(5.42)	7.59	22.49	(14.09)	45.86	6.34	8.77	5.48	5.49	
	EXCESS RETURN			0.02	0.23	0.02	0.31	0.50	0.26	0.45	0.32	0.47	0.37	0.33	0.33	

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EQUITY RETURN DETAIL																
158	FIRE-TOTAL EMERGING MARKETS - GROSS	1,217	6.76	3.89	40.01	3.89	(7.57)	17.40	17.93	(14.40)	66.16	6.62	12.83	4.41	7.50	09/01/1996
	ESTIMATED INVESTMENT FEES			(0.11)	(0.44)	(0.11)	(0.28)	(0.42)	(0.33)	(0.23)	(0.66)	(0.34)	(0.36)			
	FIRE-TOTAL EMERGING MARKETS - NET MGR			3.77	39.57	3.77	(7.85)	16.98	17.60	(14.63)	65.51	6.28	12.47			
	MSCI EMERGING MARKETS			2.29	34.13	2.29	(3.39)	18.31	18.42	(14.57)	58.39	6.48	12.07		3.65	
	EXCESS RETURN			1.49	5.44	1.49	(4.46)	(1.33)	(0.83)	(0.06)	7.12	(0.20)	0.41		0.76	
168	FIRE-TOTAL ACTIVE EMERGING MARKETS - GROSS	1,004	5.58	4.18	41.47	4.18	(9.26)	16.62	17.59	(14.39)	68.64	6.36	13.03	4.66	9.52	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.14)	(0.58)	(0.14)	(0.39)	(0.58)	(0.47)	(0.34)	(0.88)	(0.47)	(0.50)			
	FIRE-TOTAL ACTIVE EMERGING MARKETS - NET MGR			4.04	40.90	4.04	(9.65)	16.04	17.12	(14.73)	67.75	5.89	12.53			
	MSCI EMERGING MARKETS			2.29	34.13	2.29	(3.39)	18.31	18.42	(14.57)	58.39	6.48	12.07		3.65	8.64
	EXCESS RETURN			1.75	6.76	1.75	(6.26)	(2.26)	(1.30)	(0.16)	9.37	(0.58)	0.46		1.01	0.88
178	FIRE-TOTAL PASSIVE EMERGING MARKETS - GROSS	213	1.19	2.73	34.11	2.73	(3.74)	17.29	18.74	(14.44)	57.78	6.46	12.06	3.68	3.68	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.00)	(0.02)	(0.02)	(0.03)	0.01	(0.03)	(0.03)	(0.04)			
	FIRE-TOTAL PASSIVE EMERGING MARKETS - NET MGR			2.72	34.09	2.72	(3.76)	17.27	18.72	(14.43)	57.75	6.43	12.02			
	MSCI EMERGING MARKETS			2.29	34.13	2.29	(3.39)	18.31	18.42	(14.57)	58.39	6.48	12.07		3.65	3.65
	EXCESS RETURN			0.44	(0.05)	0.44	(0.37)	(1.04)	0.29	0.14	(0.64)	(0.05)	(0.05)		0.03	0.03
188	FIRE-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	93	0.52	1.55	29.72	1.55	(2.10)	17.02	22.57	(14.36)	53.39	7.71			9.71	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.06)	(0.30)	(0.06)	(0.33)	(0.41)	(0.42)	(0.30)	(0.49)	(0.36)			(0.37)	
	FIRE-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			1.50	29.42	1.50	(2.43)	16.62	22.15	(14.65)	52.91	7.35			9.34	
	MSCI ACWI EX USA IMI NET			3.77	29.91	3.77	(4.74)	11.12	21.63	(14.76)	51.94	6.51			8.65	
	EXCESS RETURN			(2.27)	(0.49)	(2.27)	2.31	5.50	0.52	0.10	0.97	0.84			0.70	
198	FIRE-TOTAL GLOBAL EQUITY - GROSS	332	1.85	0.51	31.39	0.51	16.60	39.76	36.71		64.07				19.81	06/01/2018
	ESTIMATED INVESTMENT FEES			(0.13)	(0.54)	(0.13)	(0.64)	(0.77)	(0.79)		(0.89)				(0.66)	
	FIRE-TOTAL GLOBAL EQUITY - NET MGR			0.37	30.85	0.37	15.96	39.00	35.92		63.17				19.15	
	MSCI AC WORLD (DAILY CONST)			4.57	29.68	4.57	2.11	16.25	26.60		54.60				12.41	
	EXCESS RETURN			(4.20)	1.18	(4.20)	13.85	22.74	9.32		8.57				6.74	

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ALTERNATIVE EQUITY RETURN DETAIL															
216 FIRE-TOTAL HEDGE FUNDS* - NET MGR	940	5.23	0.69	10.35	0.69	6.68	17.52	5.64	2.09	13.04	7.40	7.93		5.18	07/01/2011
HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.26	15.82	2.26	1.45	11.98	9.47	(3.06)	25.22	6.53	6.69		4.69	
EXCESS RETURN			(1.57)	(5.47)	(1.57)	5.23	5.54	(3.83)	5.14	(12.17)	0.88	1.24		0.50	
226 FIRE-TOTAL DIRECT HEDGE FUNDS* - NET MGR	940	5.23	0.69	10.35	0.69	6.68	17.53	5.64	2.17	13.04	7.41	8.05		6.06	01/01/2012
HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.26	15.82	2.26	1.45	11.98	9.47	(3.06)	25.22	6.53	6.69		5.53	
EXCESS RETURN			(1.57)	(5.47)	(1.57)	5.23	5.55	(3.83)	5.23	(12.17)	0.88	1.36		0.53	
236 FIRE-TOTAL PERMAL HEDGE FUNDS OF FUNDS* - NET MGR	-	0.00	(2.70)	6.89	(2.70)	(6.49)	(0.01)	6.26	(0.84)	9.27	0.14	2.08		1.79	07/01/2011
HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			2.26	15.82	2.26	1.45	11.98	9.47	(3.06)	25.22	6.53	6.69		4.69	
EXCESS RETURN			(4.96)	(8.93)	(4.96)	(7.94)	(11.99)	(3.20)	2.22	(15.94)	(6.38)	(4.61)		(2.89)	

* INFORMATION PROVIDED BY ALPHA FRONTIER

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ALTERNATIVE EQUITY RETURN DETAIL															
244 FIRE-TOTAL REAL ESTATE SECURITIES - GROSS	-	0.00				(14.46)		24.32	(6.09)						01/01/2003
ESTIMATED INVESTMENT FEES						(0.33)		(0.48)	(0.39)						
FIRE-TOTAL REAL ESTATE SECURITIES - NET MGR						(14.79)		23.83	(6.48)						
DJ US SELECT REAL ESTATE SECURITIES INDEX						(17.71)		23.10	(4.22)						
EXCESS RETURN						2.92		0.73	(2.26)						
254 FIRE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	1,172	6.52	11.05	36.76	11.05	2.29	16.75	12.96	18.87	25.01	18.12	18.46	14.96	14.39	04/01/2004
ESTIMATED INVESTMENT FEES			(0.65)	(1.61)	(0.65)	(0.94)	(1.12)	(1.20)	(0.89)	(1.67)	(1.25)	(1.14)			
FIRE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			10.41	35.16	10.41	1.35	15.63	11.76	17.98	23.34	16.87	17.31			
NYC R3000 +3% LAGGED			15.50	56.10	15.50	(6.37)	18.42	6.00	21.06	24.47	17.89	18.86	17.40	14.13	
EXCESS RETURN			(5.09)	(20.94)	(5.09)	7.72	(2.79)	5.76	(3.08)	(1.13)	(1.03)	(1.55)	(2.44)	0.26	
264 FIRE-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	774	4.30	3.76	5.84	3.76	3.14	1.16	7.58	10.88	2.58	6.52	8.61	11.30	8.04	04/01/2004
ESTIMATED INVESTMENT FEES			(0.18)	(0.55)	(0.18)	(0.60)	(0.55)	(0.70)	(0.45)	(0.65)	(0.60)	(0.57)			
FIRE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			3.58	5.29	3.58	2.54	0.61	6.88	10.43	1.93	5.91	8.04			
NCREIF NFI-ODCE NET + 100 BP			2.14	4.05	2.14	2.34	1.35	5.43	8.43	2.49	5.00	6.31	9.75		
EXCESS RETURN			1.44	1.24	1.44	0.20	(0.73)	1.45	2.00	(0.56)	0.91	1.74	1.55		
274 FIRE-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	188	1.05	5.11	15.55	5.11	7.48	9.64	13.79	10.05	13.70	12.88	14.92		15.35	12/01/2013
ESTIMATED INVESTMENT FEES			(0.33)	(1.02)	(0.33)	(1.79)	(1.47)	(1.61)	(1.46)	(1.46)	(1.56)	(2.02)		(2.93)	
FIRE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			4.79	14.54	4.79	5.69	8.17	12.18	8.59	12.24	11.31	12.90		12.42	
CPI + 4%			2.23	6.02	2.23	4.74	5.25	6.38	6.02	6.76	6.10	6.24		5.76	
EXCESS RETURN			2.55	8.52	2.55	0.95	2.91	5.80	2.57	5.48	5.22	6.65		6.66	

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FIXED INCOME RETURN DETAIL																
286	FIRE-TOTAL FIXED INCOME - GROSS	6,113	33.97	(2.78)	0.78	(2.78)	8.67	9.35	10.53	(0.38)	4.28	5.76	4.95	4.60	7.92	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.03)	(0.08)	(0.03)	(0.15)	(0.13)	(0.15)	(0.12)	(0.11)	(0.13)	(0.13)			
	EST MANAGEMENT FEES			(0.03)	(0.08)	(0.03)	(0.15)	(0.13)	(0.15)	(0.12)	(0.11)	(0.13)	(0.13)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	FIRE-TOTAL FIXED INCOME - NET MGR			(2.81)	0.70	(2.81)	8.52	9.23	10.38	(0.50)	4.17	5.63	4.82			
294	FIRE-TOTAL FIXED INCOME (ex ALTERNATIVE CREDIT & CASH) - GROSS	4,396	24.43	(4.87)	(3.67)	(4.87)	13.23	11.48	10.59	(0.84)	(0.53)	5.79	4.16		4.04	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.09)	(0.07)	(0.09)	(0.08)	(0.05)	(0.07)	(0.08)		(0.09)	
	EST MANAGEMENT FEES			(0.01)	(0.03)	(0.01)	(0.09)	(0.07)	(0.09)	(0.08)	(0.05)	(0.07)	(0.08)		(0.09)	
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	FIRE-TOTAL FIXED INCOME (ex ALTERNATIVE CREDIT & CASH) - NET MGR			(4.87)	(3.70)	(4.87)	13.14	11.42	10.51	(0.92)	(0.58)	5.72	4.08		3.95	
302	FIRE-TOTAL STRUCTURED FIXED INCOME - GROSS	3,399	18.89	(5.73)	(5.42)	(5.73)	15.74	12.81	11.18	(0.85)	(3.49)	6.25	4.44	4.60	7.51	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.00)	(0.03)	(0.00)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)			
	FIRE-TOTAL STRUCTURED FIXED INCOME - NET MGR			(5.73)	(5.45)	(5.73)	15.69	12.76	11.13	(0.89)	(3.52)	6.20	4.39			
	NYC CUSTOM STRUCTURED INDEX-FIRE			(5.53)	(5.45)	(5.53)	18.61	14.74	13.17	(1.29)	(3.69)	7.56	5.24	4.89		
	EXCESS RETURN			(0.21)	(0.00)	(0.21)	(2.92)	(1.98)	(2.04)	0.40	0.17	(1.35)	(0.85)	(0.30)		
312	FIRE-TOTAL GOVERNMENT - GROSS	1,967	10.93	(7.86)	(9.54)	(7.86)	19.06	13.77	11.15	(1.02)	(9.62)	5.83	2.91	4.59	6.95	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.03)	(0.02)	(0.03)	(0.02)	(0.01)	(0.02)	(0.03)			
	FIRE-TOTAL GOVERNMENT - NET MGR			(7.86)	(9.55)	(7.86)	19.03	13.75	11.12	(1.04)	(9.63)	5.81	2.88			
	CUSTOM GOVERNMENT BENCHMARK - FIRE			(7.68)	(9.03)	(7.68)	25.33	19.35	14.89	(1.89)	(8.65)	8.71	5.28	5.85		
	EXCESS RETURN			(0.18)	(0.53)	(0.18)	(6.30)	(5.60)	(3.78)	0.85	(0.98)	(2.90)	(2.41)	(1.26)		
322	FIRE-TOTAL MORTGAGE - GROSS	754	4.19	(1.12)	(0.35)	(1.12)	6.08	4.62	6.85	0.97	0.70	4.14	2.73	3.20	6.27	03/01/1987
	ESTIMATED INVESTMENT FEES			0.00	(0.03)	0.00	(0.05)	(0.06)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)			
	FIRE-TOTAL MORTGAGE - NET MGR			(1.12)	(0.38)	(1.12)	6.03	4.56	6.80	0.92	0.66	4.09	2.68			
	NYC CUSTOM MORTGAGE BENCHMARK			(1.10)	(0.81)	(1.10)	5.96	3.91	6.68	1.01	(0.49)	3.88	2.48	2.87	5.95	
	EXCESS RETURN			(0.02)	0.43	(0.02)	0.07	0.65	0.12	(0.09)	1.15	0.21	0.19	0.33	0.32	
332	FIRE-TOTAL INVESTMENT GRADE CORPORATE - GROSS	678	3.77	(4.60)	0.09	(4.60)	9.53	9.99	14.47	(2.22)	10.00	6.31	5.28	5.29	6.96	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.02)	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)	(0.09)	(0.09)			
	FIRE-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			(4.61)	0.02	(4.61)	9.44	9.90	14.37	(2.30)	9.91	6.22	5.19			
	NYC CUSTOM IGC BENCHMARK			(4.46)	(0.20)	(4.46)	9.26	9.70	13.40	(1.90)	8.06	5.98	4.67	4.78		
	EXCESS RETURN			(0.15)	0.22	(0.15)	0.18	0.20	0.98	(0.40)	1.84	0.24	0.52	0.51		
342	FIRE-TOTAL CORE FI- DEVELOPING MGRS - GROSS	85	0.47	(3.04)	(0.24)	(3.04)	8.23	8.37	10.07	(1.01)	4.61	5.16	3.72	4.08	4.86	05/01/2009
	ESTIMATED INVESTMENT FEES			(0.05)	(0.14)	(0.05)	(0.20)	(0.20)	(0.22)	(0.20)	(0.20)	(0.20)	(0.20)			
	FIRE-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			(3.09)	(0.38)	(3.09)	8.03	8.16	9.85	(1.21)	4.41	4.96	3.52			
	BBG BARC AGG (DLY)			(3.37)	(2.12)	(3.37)	8.74	7.51	8.72	0.01	0.71	4.65	3.10	3.44	3.91	
	EXCESS RETURN			0.28	1.74	0.28	(0.71)	0.66	1.14	(1.22)	3.70	0.31	0.42	0.64	0.94	

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FIXED INCOME RETURN DETAIL															
364 FIRE-TOTAL TIPS - GROSS	792	4.40	(1.66)	2.94	(1.66)	8.34	11.03	8.46	(1.25)	7.28	5.62	3.84	3.49	4.12	06/01/2005
ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)			
FIRE-TOTAL TIPS - NET MGR			(1.66)	2.92	(1.66)	8.32	11.01	8.44	(1.27)	7.26	5.60	3.82			
BBG BARC GBL INF-LK: US TIPS (DLY)			(1.47)	3.16	(1.47)	8.28	10.99	8.43	(1.26)	7.54	5.68	3.86	3.44	4.02	
EXCESS RETURN			(0.19)	(0.24)	(0.19)	0.04	0.02	0.01	(0.01)	(0.28)	(0.08)	(0.04)	0.05	0.10	
374 FIRE-TOTAL CONVERTIBLE BONDS - GROSS	-	0.00						13.33	(1.44)						07/01/2008
ESTIMATED INVESTMENT FEES								(0.54)	(0.48)						
FIRE-TOTAL CONVERTIBLE BONDS - NET MGR								12.79	(1.92)						
ICE BOFA ALL US CONV EX MANDATORY								22.89	0.65						
EXCESS RETURN								(10.10)	(2.57)						
384 FIRE-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	120	0.67	(2.73)	(1.23)	(2.73)	8.14	7.10	9.05	0.93	0.37	5.15	3.42	3.91	7.08	12/01/1984
ESTIMATED INVESTMENT FEES			(0.05)	(0.16)	(0.05)	(0.23)	(0.22)	(0.25)	(0.28)	(0.21)	(0.24)	(0.26)	(0.31)	(0.18)	
FIRE-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			(2.78)	(1.38)	(2.78)	7.91	6.87	8.81	0.65	0.16	4.90	3.16	3.60	6.90	
FIRE CUSTOM BENCHMARK (NO CASH)			(2.29)	(1.36)	(2.29)	7.65	6.18	7.78	0.68	0.46	4.46	3.00	3.31		
EXCESS RETURN			(0.49)	(0.03)	(0.49)	0.26	0.69	1.03	(0.04)	(0.30)	0.44	0.15	0.30		

Consolidated Performance Report

Through March 31, 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
ALTERNATIVE CREDIT INCOME RETURN DETAIL															
396 FIRE-TOTAL HIGH YIELD - GROSS	1,091	6.06	1.31	12.74	1.31	1.01	7.53	15.18	(2.94)	24.08	7.16	7.93	6.33	8.01	12/01/1994
ESTIMATED INVESTMENT FEES			(0.08)	(0.27)	(0.08)	(0.33)	(0.35)	(0.37)	(0.29)	(0.40)	(0.34)	(0.34)			
FIRE-TOTAL HIGH YIELD - NET MGR			1.23	12.47	1.23	0.68	7.18	14.81	(3.24)	23.69	6.82	7.60			
HIGH YIELD CUSTOM BENCHMARK			0.86	12.27	0.86	0.00	7.05	14.32	(2.34)	23.65	6.79	7.65	6.23	6.98	
EXCESS RETURN			0.37	0.20	0.37	0.68	0.13	0.49	(0.90)	0.04	0.04	(0.06)	0.10	1.04	
406 FIRE- TOTAL BANK LOANS - GROSS	5	0.03				(2.14)	0.55	7.73	1.18						12/01/2012
ESTIMATED INVESTMENT FEES						(0.36)	(0.36)	(0.39)	(0.36)						
FIRE-TOTAL BANK LOANS - NET MGR						(2.50)	0.19	7.34	0.81						
CSFB LEVERAGED LOAN INDEX						(2.27)	2.78	8.17	1.14						
EXCESS RETURN						(0.23)	(2.59)	(0.83)	(0.33)						
416 FIRE-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	560	3.11	5.73	16.39	5.73	(1.71)	5.52	5.84	6.54	11.08	7.16	9.01	7.00	8.34	11/01/2007
ESTIMATED INVESTMENT FEES			(0.09)	(0.19)	(0.09)	(0.17)	(0.16)	(0.18)	(0.16)	(0.22)	(0.19)	(0.18)			
FIRE-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			5.64	16.20	5.64	(1.88)	5.36	5.66	6.38	10.86	6.97	8.83			
OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			2.37	14.12	2.37	0.88	7.22	14.66	2.36	26.74	8.39	9.94	8.64	9.04	
EXCESS RETURN			3.27	2.08	3.27	(2.76)	(1.86)	(9.01)	4.02	(15.88)	(1.41)	(1.10)	(1.64)	(0.71)	
CASH SUMMARY															
428 Short Term FIRE - GROSS	61	0.34	0.02	0.09	0.02	1.38	0.45	2.27	1.97	0.13	1.43	1.27	0.82	3.38	12/01/1989
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 FIRE - NET MGR			0.02	0.09	0.02	1.38	0.45	2.27	1.97	0.13	1.43	1.27	0.82		
432 Cash Account	0	0.00													
434 Securities Lending	0	0.00													
436 KKR Cash Account	0	0.00													

New York City
Fire Department Pension Fund, Subchapter Two

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
EQUITY SUMMARY										
US EQUITY										
PanAgora-US SCC	95	0.53	12.77	50.23	12.77					
RUSSELL 2000 (DAILY)			12.70	55.36	12.70					
Excess			0.07	(5.12)	0.07					
BlackRock US SCG R2000	0	0.00	5.19	45.75	5.19	34.42	28.39	(9.14)	22.26	11.29
RUSSELL 2000 GROWTH DAILY			4.88	45.65	4.88	34.63	28.48	(9.31)	22.17	11.32
Excess			0.31	0.10	0.31	(0.21)	(0.09)	0.17	0.09	(0.02)
BlackRock US SCV R2000	0	0.00	21.14	65.91	21.14	4.88	22.60	(12.79)	7.34	31.71
RUSSELL 2000 VALUE DAILY			21.17	65.72	21.17	4.63	22.39	(12.86)	7.84	31.74
Excess			(0.03)	0.18	(0.03)	0.24	0.20	0.08	(0.49)	(0.03)
Brown Asset Mgmt US SCG	102	0.57	(6.48)	17.81	(6.48)	45.05	29.45	1.06	28.87	10.25
RUSSELL 2000 GROWTH DAILY			4.88	45.65	4.88	34.63	28.48	(9.31)	22.17	11.32
Excess			(11.36)	(27.85)	(11.36)	10.42	0.97	10.37	6.70	(1.07)
Wasatch-US SCG	71	0.40	5.37	42.10	5.37	39.15				
RUSSELL 2000 GROWTH DAILY			4.88	45.65	4.88	34.63				
Excess			0.49	(3.56)	0.49	4.52				
Cooke and Bieler-US SCV	67	0.37	16.46	52.03	16.46	9.23				
RUSSELL 2000 VALUE DAILY			21.17	65.72	21.17	4.63				
Excess			(4.71)	(13.69)	(4.71)	4.60				
Pzena-US SCV	79	0.44	21.74	70.58	21.74	0.68				
RUSSELL 2000 VALUE DAILY			21.17	65.72	21.17	4.63				
Excess			0.57	4.85	0.57	(3.95)				

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Wellington US MCC	242	1.35	5.32	39.40	5.32	25.11	32.69	(7.35)	25.09	12.29
S&P 400 MIDCAP INDEX (DAILY)			13.47	47.86	13.47	13.66	26.20	(11.08)	16.24	20.74
Excess			(8.15)	(8.46)	(8.15)	11.45	6.49	3.74	8.84	(8.45)
BlackRock US LMC R1000 Core	2,802	15.58	6.10	32.11	6.10	21.32	31.40			
RUSSELL 1000 (DAILY)			5.91	31.82	5.91	20.96	31.43			
Excess			0.19	0.29	0.19	0.36	(0.02)			
PIMCO RAFI US LMCE	530	2.94	14.16	41.73	14.16	4.47	25.39	(6.74)	16.88	
RUSSELL 1000 (DAILY)			5.91	31.82	5.91	20.96	31.43	(4.78)	21.69	
Excess			8.25	9.91	8.25	(16.49)	(6.03)	(1.96)	(4.81)	
Legal General US LMCE	514	2.85	8.54	33.33	8.54	9.61				
RUSSELL 1000 (DAILY)			5.91	31.82	5.91	20.96				
Excess			2.62	1.51	2.62	(11.36)				
SSGA US LMC Top 200 Core	970	5.39	5.12	29.21	5.12	22.39	31.77			
RUSSELL TOP 200 INDEX (DAILY)			5.12	29.27	5.12	22.37	31.75			
Excess			0.00	(0.06)	0.00	0.02	0.02			
FUND OF FUNDS										
FIRE-TOTAL FUND OF FUNDS	31	0.17	16.07	59.65	16.07	19.28	23.33	(8.21)		
RUSSELL 2000 (DAILY)			12.70	55.36	12.70	19.96	25.52	(11.01)		
Excess			3.37	4.29	3.37	(0.68)	(2.20)	2.80		
FIRE-TOTAL LEGATO	31	0.17	16.07	59.65	16.07	19.28	23.33	(8.19)		
RUSSELL 2000 (DAILY)			12.70	55.36	12.70	19.96	25.52	(11.01)		
Excess			3.37	4.29	3.37	(0.68)	(2.20)	2.82		
NON - US EQUITY										
Baillie Gifford WorldxUS LMCC	369	2.05	(3.13)	35.90	(3.13)	66.93	37.00	(15.37)	44.17	0.70
NYC Developed Growth Benchmark			4.04	26.46	4.04	7.59	22.49	(14.09)	27.77	(3.04)
Excess			(7.17)	9.44	(7.17)	59.34	14.50	(1.28)	16.40	3.74

Public Markets Manager Performance Detail



Net Returns Through March 31, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Walter Scott WorldxUS LMCC	333	1.85	(0.95)	19.87	(0.95)	17.99	28.51	(7.65)	28.12	5.03
NYC Developed Growth Benchmark			4.04	26.46	4.04	7.59	22.49	(14.09)	27.77	(3.04)
Excess			(4.99)	(6.60)	(4.99)	10.41	6.02	6.44	0.35	8.07
Causeway WorldxUS LMCV	246	1.37	7.20	38.78	7.20	6.48	21.35	(18.34)	28.22	0.52
NYC Developed Value Benchmark			4.04	26.46	4.04	7.59	22.49	(14.09)	22.77	5.02
Excess			3.16	12.32	3.16	(1.10)	(1.14)	(4.25)	5.45	(4.51)
Sprucegrove WorldxUS LMCC	284	1.58	6.26	39.40	6.26	4.85	17.62	(13.67)	27.20	11.10
NYC Developed Value Benchmark			4.04	26.46	4.04	7.59	22.49	(14.09)	22.77	5.02
Excess			2.22	12.94	2.22	(2.74)	(4.87)	0.42	4.44	6.08
Acadian WorldxUS SCC	125	0.70	8.98	40.24	8.98	15.89	21.82	(19.22)	38.38	6.41
S&P EPAC Small Cap USD NET			3.66	35.06	3.66	13.78	23.71	(18.58)	33.47	1.34
Excess			5.32	5.17	5.32	2.11	(1.89)	(0.65)	4.91	5.07
Fidelity WorldxUS SCC	0	0.00						(18.22)	31.28	(0.80)
S&P EPAC Small Cap USD NET								(18.58)	33.47	1.34
Excess								0.36	(2.19)	(2.14)
Algert EAFE SCC	25	0.14	6.96	34.88	6.96	9.70				
MSCI EAFE SMALL CAP NET (DAILY)			4.50	35.12	4.50	12.34				
Excess			2.46	(0.23)	2.46	(2.64)				
SSGA WorldxUS LMC NYC Custom IDX	177	0.98	4.06	26.69	4.06	8.09	22.75	(13.64)	24.43	1.28
NYC Custom World ex US Index			4.04	26.46	4.04	7.59	22.49	(14.09)	24.12	1.00
Excess			0.02	0.23	0.02	0.50	0.26	0.45	0.32	0.28
SSGA WorldxUS SC Custom IDX ¹	96	0.53	4.90	35.82	4.90	13.16	25.67	(17.97)	33.43	2.77
World ex USA SC PASSIVE CUSTOM BM			4.88	35.76	4.88	12.78	25.41	(18.07)	33.31	2.18
Excess			0.02	0.06	0.02	0.38	0.26	0.10	0.12	0.59

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
EMERGING MARKETS										
Baillie Gifford EM	233	1.30	0.50	42.85	0.50	29.60	28.50	(15.37)	54.13	2.78
MSCI EMERGING MARKETS			2.29	34.13	2.29	18.31	18.42	(14.57)	37.28	11.19
Excess			(1.78)	8.72	(1.78)	11.29	10.08	(0.80)	16.85	(8.41)
Acadian EM	173	0.96	6.84	35.10	6.84	10.72	15.71	(17.27)	40.45	12.65
MSCI EMERGING MARKETS			2.29	34.13	2.29	18.31	18.42	(14.57)	37.28	11.19
Excess			4.55	0.96	4.55	(7.59)	(2.71)	(2.70)	3.16	1.46
Parametric EM	0	0.00					14.20	(14.33)	29.65	13.85
MSCI EMERGING MARKETS							18.42	(14.57)	37.28	11.19
Excess							(4.22)	0.24	(7.63)	2.67
Pzena-EM ACV	278	1.55	11.13	50.08	11.13					
MSCI EMERGING MARKETS			2.29	34.13	2.29					
Excess			8.84	15.95	8.84					
Sands-EM LCG	149	0.83	(2.15)		(2.15)					
MSCI EMERGING MARKETS			2.29		2.29					
Excess			(4.44)		(4.44)					
UBS-EM ACC	169	0.94	0.98	35.19	0.98					
MSCI EMERGING MARKETS			2.29	34.13	2.29					
Excess			(1.30)	1.06	(1.30)					
DFA EM	0	0.00				2.35	9.73	(12.06)	33.64	17.36
MSCI EMERGING MARKETS						18.31	18.42	(14.57)	37.28	11.19
Excess						(15.96)	(8.69)	2.51	(3.64)	6.17
BlackRock MSCI EM Core	213	1.19	2.72	34.09	2.72	17.27	18.76	(14.43)	37.25	11.17
MSCI EMERGING MARKETS			2.29	34.13	2.29	18.31	18.42	(14.57)	37.28	11.19
Excess			0.44	(0.05)	0.44	(1.04)	0.34	0.14	(0.03)	(0.02)

[illegible]

1 Name changed from SSGA MSCI EAFE Small Cap Index 12.2017
2 Assets were in transition from 9/29/17 to 2/11/19
3 Assets were in transition from 9/29/17 to 11/30/17

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
Taplin Corporate	2	0.01				10.78	15.61	(3.48)	8.08	9.52
NYC - Investment Grade Credit						9.70	13.40	(1.90)	6.04	5.56
Excess						1.08	2.22	(1.58)	2.05	3.97
T Rowe Price-Corporate	279	1.55	(4.46)	0.20	(4.46)	9.60	14.52	(2.41)	6.89	6.00
NYC Custom IGC Benchmark			(4.46)	(0.20)	(4.46)	9.70	13.40	(1.90)	6.04	5.56
Excess			(0.00)	0.40	(0.00)	(0.10)	1.12	(0.51)	0.86	0.44
BlackRock Corporate	166	0.92	(4.76)	(0.30)	(4.76)	10.28	14.05	(2.01)	6.12	5.43
NYC Custom IGC Benchmark			(4.46)	(0.20)	(4.46)	9.70	13.40	(1.90)	6.04	5.56
Excess			(0.30)	(0.10)	(0.30)	0.58	0.66	(0.11)	0.09	(0.13)
Neuberger Berman-Corporate	148	0.82								
BBG BARC US Cdt Corp Inv Grd Idx										
Excess										
Prudential Corporate	83	0.46	(4.41)	0.26	(4.41)	9.88	13.71	(1.81)	6.32	5.97
NYC - Investment Grade Credit			(4.37)	(0.10)	(4.37)	9.70	13.40	(1.90)	6.04	5.56
Excess			(0.04)	0.37	(0.04)	0.18	0.31	0.09	0.28	0.41
BlackRock Mortgages	525	2.92	(1.20)	(0.36)	(1.20)	4.81	7.04	0.97	2.66	2.19
NYC Custom Mortgage Benchmark			(1.10)	(0.81)	(1.10)	3.91	6.68	1.01	2.47	1.59
Excess			(0.10)	0.45	(0.10)	0.90	0.36	(0.04)	0.19	0.60
Neuberger Berman Mortgages	0	0.00					6.32	0.81	2.42	1.52
FTSE MORTGAGE INDEX							6.68	1.01	2.47	1.59
Excess							(0.35)	(0.20)	(0.05)	(0.06)
Wellington Mortgages	228	1.27	(0.93)		(0.93)					
BBG BARC Mtg Idx			(1.10)		(1.10)					
Excess			0.17		0.17					

Public Markets Manager Performance Detail



Net Returns Through March 31, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
SSGA LI Treasury	81	0.45	(8.57)	(9.90)	(8.57)	14.04	10.67	(0.20)	4.81	1.47
NYC - Treasury Agency Plus Five			(8.84)	(10.26)	(8.84)	12.85	10.40	(0.05)	4.66	1.21
Excess			0.27	0.36	0.27	1.18	0.27	(0.15)	0.16	0.26
SSGA IT Treasury 1-10Y ²	7	0.04	(1.76)	(1.77)	(1.76)	5.74	5.08	2.03		
FTSE USBIG Treasury/Agency 1-10 y			(1.73)	(1.75)	(1.73)	5.72	5.18	1.42		
Excess			(0.03)	(0.02)	(0.03)	0.03	(0.09)	0.61		
SSGA ST Treasury 1-3Y ³	874	4.86	(0.05)	0.12	(0.05)	2.31	3.56	1.53	1.78	
FTSE USBIG Treasury 1-3 Y Index			(0.04)	0.10	(0.04)	3.09	3.56	1.56	0.42	
Excess			(0.01)	0.02	(0.01)	(0.78)	0.00	(0.03)	1.36	
SSGA LT Treasury 10Y Plus	1,005	5.59	(13.79)	(16.39)	(13.79)	17.57	14.88	(1.83)	8.54	
FTSE Treasury 10+			(13.84)	(16.34)	(13.84)	17.72	14.89	(1.89)	8.60	
Excess			0.05	(0.05)	0.05	(0.16)	(0.01)	0.05	(0.07)	
HIGH YIELD										
Brigade High Yield	144	0.80	3.19	17.75	3.19	8.08	15.07			
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32			
Excess			2.34	5.49	2.34	1.04	0.75			
Eaton Vance High Yield	163	0.91	0.59	11.09	0.59	5.62	14.66			
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32			
Excess			(0.27)	(1.18)	(0.27)	(1.43)	0.35			
Mackay Shields High Yield	162	0.90	1.05	10.95	1.05	8.00	13.87			
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32			
Excess			0.20	(1.31)	0.20	0.95	(0.45)			
Nomura High Yield	140	0.78	1.72	15.25	1.72	7.99	12.74			
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32			
Excess			0.86	2.98	0.86	0.94	(1.58)			

Public Markets Manager Performance Detail



Net Returns Through March 31, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Shenkman High Yield	175	0.97	0.50	10.48	0.50	6.68	14.10			
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32			
Excess			(0.36)	(1.78)	(0.36)	(0.37)	(0.22)			
T Rowe Price High Yield	307	1.71	1.35	12.81	1.35	7.22	15.65	(2.34)	7.29	12.24
BBG BARC US HY - 2% Issr Cap			0.86	12.27	0.86	7.05	14.32	(2.08)	7.50	17.13
Excess			0.49	0.54	0.49	0.17	1.33	(0.26)	(0.22)	(4.89)
BANK LOANS										
Barings Bank Loans	1	0.01				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	(1.41)
Bain Bank Loans	4	0.02								
CSFB LEVERAGED LOAN INDEX										
Excess										
TIPS										
BlackRock TIPS	176	0.98	(1.69)	2.84	(1.69)	11.01	8.42	(1.18)	2.98	4.75
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			(1.47)	3.16	(1.47)	10.99	8.43	(1.26)	3.01	4.68
Excess			(0.22)	(0.32)	(0.22)	0.02	(0.01)	0.08	(0.02)	0.07
SSGA TIPS	616	3.42	(1.65)	2.95	(1.65)	10.96	8.44	(1.30)	3.06	4.59
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			(1.47)	3.16	(1.47)	10.99	8.43	(1.26)	3.01	4.68
Excess			(0.18)	(0.21)	(0.18)	(0.03)	0.02	(0.04)	0.05	(0.09)
CONVERTIBLE BONDS										
Advent Convertible Bonds	0	0.00					12.79	(1.92)	7.92	7.20
ICE BofA US Convertibles - Yield Alter							15.40	(0.42)	9.45	9.96
Excess							(2.61)	(1.51)	(1.53)	(2.76)

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
CORE FI-DEVELOPING MANAGERS										
LM Capital-Core Plus	33	0.18	(2.98)	0.02	(2.98)	9.09	9.55	(1.30)	3.92	3.43
BBG BARC Agg (Dly)			(3.37)	(2.12)	(3.37)	7.51	8.72	0.01	3.54	2.65
Excess			0.39	2.15	0.39	1.58	0.84	(1.32)	0.38	0.78
Pugh-CorePlus	16	0.09	(3.34)	(1.80)	(3.34)					
BBG BARC Agg (Dly)			(3.37)	(2.12)	(3.37)					
Excess			0.04	0.32	0.04					
GIA-Core Plus	37	0.20	(3.08)	(0.12)	(3.08)	7.87	10.17	(1.11)	3.99	3.96
BBG BARC Agg (Dly)			(3.37)	(2.12)	(3.37)	7.51	8.72	0.01	3.54	2.65
Excess			0.30	2.01	0.30	0.37	1.46	(1.12)	0.45	1.31
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	62	0.35	(2.24)	(1.40)	(2.24)	6.20	7.78	0.16	3.17	1.94
BBG BARC Agg (Dly)			(3.37)	(2.12)	(3.37)	7.51	8.72	0.01	3.54	2.65
Excess			1.13	0.73	1.13	(1.31)	(0.94)	0.15	(0.38)	(0.71)
RBC Access MBS	29	0.16	(2.24)	(1.36)	(2.24)	6.14	7.21	0.49	2.64	1.61
Access RBC Benchmark			(1.42)	(1.19)	(1.42)	4.69	6.05	1.17	1.96	1.52
Excess			(0.82)	(0.16)	(0.82)	1.45	1.16	(0.69)	0.69	0.09
CPC Construction Facility	3	0.02	1.48	1.86	1.48	0.67	6.42	4.14	6.06	(3.95)
CPC CONST BENCHMARK			0.60	1.83	0.60	2.73	4.09	3.99	3.34	3.03
Excess			0.88	0.03	0.88	(2.06)	2.33	0.15	2.73	(6.99)
BOA PPAR FNMA	3	0.02	(5.48)	(4.41)	(5.48)	6.12	13.54	2.33	5.21	4.07
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			(4.43)	(4.30)	(4.43)	0.98	5.74	0.47	1.60	1.69
Citibank PPAR FNMA	4	0.02	(5.56)	(4.38)	(5.56)	7.06	19.71	2.63	5.26	3.71
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			(4.52)	(4.27)	(4.52)	1.92	11.91	0.77	1.65	1.33

Public Markets Manager Performance Detail

Net Returns Through March 31, 2021



	Market Value (SMM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
Citibank PPAR GNMA	1	0.00	(1.74)	0.51	(1.74)	8.31	5.33	1.90	3.10	2.78
GNMA Plus 65bps			(0.77)	(0.26)	(0.77)	4.31	6.73	1.63	2.53	2.28
Excess			(0.97)	0.77	(0.97)	4.00	(1.41)	0.27	0.57	0.50
CFSB PPAR FNMA	0	0.00	(6.50)		(6.50)					
FNMA Plus 85bps			(1.05)		(1.05)					
Excess			(5.46)		(5.46)					
CFSB PPAR GNMA	0	0.00	(1.51)	0.71	(1.51)	8.01	5.91	0.99	3.83	3.21
GNMA Plus 65bps			(0.77)	(0.26)	(0.77)	4.31	6.73	1.63	2.53	2.28
Excess			(0.74)	0.97	(0.74)	3.69	(0.82)	(0.65)	1.30	0.93
CPC PPAR FNMA	2	0.01	(4.33)	(2.25)	(4.33)	7.00	13.18	2.31	5.06	6.15
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			(3.29)	(2.14)	(3.29)	1.87	5.38	0.45	1.45	3.77
ECLF PPAR FNMA	2	0.01	(6.29)	(3.94)	(6.29)					
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)					
Excess			(5.25)	(3.83)	(5.25)					
JPMC PPAR FNMA	6	0.04	(5.56)	(3.77)	(5.56)	8.33	14.68	1.68	9.96	7.94
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			(4.52)	(3.66)	(4.52)	3.19	6.88	(0.18)	6.35	5.56
LIIF PPAR FNMA	3	0.02	(5.50)	(4.25)	(5.50)	6.44	16.35	2.27	9.55	5.03
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			(4.46)	(4.14)	(4.46)	1.30	8.55	0.41	5.94	2.65
LIIF PPAR GNMA	0	0.00	(0.53)	1.07	(0.53)	6.19	5.54	2.53	2.52	3.88
GNMA Plus 65bps			(0.77)	(0.26)	(0.77)	4.31	6.73	1.63	2.53	2.28
Excess			0.24	1.33	0.24	1.87	(1.19)	0.89	(0.01)	1.61

Public Markets Manager Performance Detail



Net Returns Through March 31, 2021

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2020	2019	2018	2017	2016
LISC PPAR FNMA	2	0.01	(6.28)	13.30	(6.28)	31.93	14.95			
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80			
Excess			(5.23)	13.41	(5.23)	26.80	7.15			
NCBCI PPAR FNMA	0	0.00	(0.83)	1.63	(0.83)	8.49	4.08	2.00	1.75	3.46
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80	1.86	3.61	2.38
Excess			0.22	1.74	0.22	3.36	(3.72)	0.15	(1.86)	1.07
NCBCI PPAR GNMA	0	0.00	(0.47)	1.94	(0.47)	8.16	3.69	1.23	3.01	3.51
GNMA Plus 65bps			(0.77)	(0.26)	(0.77)	4.31	6.73	1.63	2.53	2.28
Excess			0.30	2.20	0.30	3.85	(3.04)	(0.41)	0.48	1.23
Wells Fargo PPAR FNMA	1	0.01	(6.29)	15.24	(6.29)	28.61	21.71			
FNMA Plus 85bps			(1.05)	(0.11)	(1.05)	5.14	7.80			
Excess			(5.24)	15.35	(5.24)	23.48	13.91			
CASH										
Short Term FIRE	61	0.34	0.02	0.09	0.02	0.45	2.27	1.97	1.13	0.88
ICE BofA US 3-Month Treasury Bill			0.03	0.09	0.03	0.67	2.28	1.87	0.86	0.33
Excess			(0.01)	(0.00)	(0.01)	(0.21)	(0.01)	0.09	0.27	0.56
Cash Account	0	0.00								
Securities Lending	0	0.00								

New York City
Fire Department Pension Fund, Subchapter Two

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		2,627,771,626	2,066,117,146	2,060,507,909	1,184,474,900	1.57	12.0%
TOTAL LIQUIDATED		219,047,161	242,421,289	312,576,396	20,007	1.29	7.0%
TOTAL ACTIVE		2,408,724,464	1,823,695,858	1,747,931,513	1,184,454,893	1.61	13.2%
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	22,586,486	26,972,134	25,292,077	11,669	0.94	-1.2%
Lincolnshire Equity Fund II, L.P.	1999	6,899,005	7,223,050	14,158,254	126,431	1.98	24.6%
SCP Private Equity Partners II, L.P.	2000	15,000,000	16,834,296	6,514,303	973,498	0.44	-9.4%
Apollo Investment Fund V, L.P.	2001	15,000,000	23,379,009	46,122,367	128,599	1.98	38.8%
CVC European Equity Partners III, L.P.	2001	10,000,000	11,880,366	29,775,858	501,468	2.55	41.0%
Ares Corporate Opportunities Fund, L.P.	2003	5,000,000	5,998,308	8,941,880	10,035	1.49	13.1%
Blackstone Capital Partners IV, L.P.	2003	13,875,989	17,172,972	41,853,940	320,743	2.46	36.3%
FS Equity Partners V, L.P.	2003	10,000,000	8,567,981	16,744,589	994,172	2.07	15.4%
FdG Capital Partners II LP	2004	5,000,000	5,387,768	6,421,816	98,649	1.21	3.6%
Lincolnshire Equity Fund III, L.P.	2004	5,000,000	5,000,631	7,113,293	1,647,245	1.75	27.7%
Markstone Capital Partners, LP	2004	5,000,000	5,862,384	2,477,825	34,027	0.43	-35.4%
Medica III Investments (International) L.P.	2004	3,000,000	2,992,836	1,267,948	462	0.42	-66.8%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 1	2004	2,000,000	2,053,879	2,074,558	186,248	1.10	1.6%
Yucaipa American Alliance Fund I, LP	2004	5,000,000	7,491,869	8,800,690	300,390	1.21	4.5%
Arlington Capital Partners II, L.P.	2005	4,000,000	4,069,527	7,137,350	7,437	1.76	11.2%
FirstMark Capital I, L.P. (fka FirstMark IV)	2005	1,500,000	1,639,064	9,476,836	4,495,451	8.52	33.6%
JP Morgan Fleming (Tranche A)	2005	3,000,000	3,022,713	3,313,231	805,542	1.36	5.4%
New Mountain Partners II, L.P.	2005	2,580,650	2,337,304	4,502,540	30,360	1.94	13.6%
Palladium Equity Partners III, L.P.	2005	10,000,000	10,572,813	20,070,680	74,362	1.91	15.4%
Snow Phipps Group, L.P.	2005	5,000,000	6,124,792	5,228,654	2,110,025	1.20	3.9%
USPF II Institutional Fund, L.P.	2005	5,000,000	6,594,940	7,688,280	594,588	1.26	3.8%
Aisling Capital II, LP	2006	1,000,000	1,178,021	1,141,279	32,577	1.00	-0.1%
Apollo Investment Fund VI, L.P.	2006	20,000,000	25,741,832	38,519,613	381,409	1.51	8.7%
Ares Corporate Opportunities Fund II, L.P.	2006	5,000,000	5,476,087	9,135,462	9,887	1.67	13.1%
Arsenal Capital Partners II, LP	2006	4,000,000	4,986,154	9,557,955	40,704	1.93	12.1%
Atlantic Equity Partners IV, L.P.	2006	3,768,757	3,663,425	719,154	3,602,017	1.18	1.7%
Blackstone Capital Partners V, L.P.	2006	9,448,250	10,060,754	16,043,458	311,195	1.63	7.9%
Catterton Partners VI, L.P.	2006	5,000,000	5,693,763	8,940,481	1,744,568	1.88	11.4%

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Collier International Partners V, L.P.	2006	5,000,000	4,372,182	5,832,594	192,367	1.38	7.6%
Euro Choice III L.P.	2006	5,312,071	5,347,612	6,014,685	197,864	1.16	2.9%
Falconhead Capital Partners II, L.P.	2006	4,000,000	4,481,396	4,478,251	911,400	1.20	3.4%
First Reserve Fund XI, L.P.	2006	5,000,000	5,313,265	3,462,114	57,911	0.66	-9.5%
GF Capital Private Equity Fund, L.P.	2006	3,000,000	3,076,007	4,058,641	1,363,624	1.76	11.3%
MidOcean Partners III, L.P.	2006	9,705,796	11,611,760	23,289,736	1,534,142	2.14	13.2%
Permira IV, L.P.	2006	5,472,501	6,016,234	8,822,843	877,876	1.61	8.9%
RRE Ventures IV, L.P.	2006	2,500,000	3,180,708	2,544,869	2,238,885	1.50	5.3%
Terra Firma Capital Partners III, L.P.	2006	5,224,288	5,298,700	2,388,640	26,996	0.46	-9.2%
The Fourth Cinven Fund	2006	2,719,015	2,870,280	4,124,333	2,004	1.44	7.3%
Thomas, McNerney & Partners II, L.P.	2006	3,000,000	3,035,394	6,611,246	264,066	2.27	16.6%
Carlyle Partners V, L.P.	2007	10,000,000	10,340,844	17,357,076	989,201	1.77	13.5%
Constellation Venture Capital III, L.P.	2007	5,000,000	5,765,313	2,904,086	1,636,980	0.79	-3.5%
FTVentures III, LP	2007	2,500,000	2,743,841	5,452,899	745,358	2.26	15.7%
Gleacher Mezzanine Fund II, L.P.	2007	3,000,000	2,752,429	3,651,296	35,157	1.34	10.6%
GSO Capital Opportunities Fund LP	2007	7,500,000	11,229,550	15,937,873	101,406	1.43	17.3%
Highland Consumer Fund I LP	2007	2,000,000	2,003,212	1,224,131	324,179	0.77	-3.4%
Montreux Equity Partners IV, L.P.	2007	5,000,000	5,000,000	2,761,158	4,054,136	1.36	4.2%
New Mountain Partners III, L.P.	2007	10,000,000	10,228,555	17,524,219	5,417,102	2.24	13.9%
Olympus Capital Asia III, L.P.	2007	5,000,000	5,851,116	2,988,294	1,010,254	0.68	-8.2%
PCG Clean Energy & Technology Fund (East), LLC	2007	10,000,000	9,047,736	2,660,473	766,667	0.38	-12.4%
Pegasus Partners IV, L.P.	2007	7,500,000	9,112,510	6,900,231	1,454,058	0.92	-1.6%
Pine Brook Capital Partners, L.P.	2007	7,500,000	8,517,075	10,609,787	379,666	1.29	6.9%
Post Capital Equity Partners II LP	2007	3,000,000	2,163,355	4,081,000	484,107	2.11	15.3%
Princeton Capital Corp. (fka Capital Point)	2007	3,000,000	3,497,432	2,267,271	644,492	0.83	-4.0%
SCP Vitalife Partners II Fund	2007	5,000,000	5,024,924	395	1,298,680	0.26	-13.3%
Trilantic Capital Partners IV L.P.	2007	7,236,332	7,554,273	11,334,907	394,482	1.55	13.1%
United States Power Fund III, L.P.	2007	5,000,000	5,915,665	6,111,963	1,175,600	1.23	3.6%
Vista Equity Partners Fund III, L.P.	2007	7,500,000	8,059,705	19,154,991	617,238	2.45	26.9%
Aisling Capital III, LP	2008	3,500,000	3,948,200	9,286,268	52,732	2.37	26.0%
Apollo Investment Fund VII, L.P.	2008	25,000,000	30,651,985	49,593,520	2,268,769	1.69	22.4%
Ares Corporate Opportunities Fund III, L.P.	2008	10,000,000	12,233,181	25,840,135	586,390	2.16	20.4%
Avista Capital Partners II, L.P.	2008	10,000,000	13,150,800	20,608,240	796,165	1.63	14.4%

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Blue Wolf Capital Fund II, L.P.	2008	3,000,000	3,317,104	5,475,256	70,473	1.67	10.6%
Bridgepoint Europe IV	2008	6,654,563	6,871,685	9,131,924	1,220,047	1.51	9.6%
Crestview Partners II, L.P.	2008	7,500,000	8,842,000	11,905,600	4,139,803	1.81	13.7%
CVC European Equity Partners V, L.P.	2008	13,609,737	14,796,154	28,531,266	616,941	1.97	16.4%
Euro Choice IV L.P.	2008	6,493,854	6,023,874	6,580,059	2,030,383	1.43	6.9%
First Reserve Fund XII, L.P.	2008	5,000,000	5,554,103	2,817,426	269,951	0.56	-14.5%
GCM Grosvenor NYCFDPF Emerging Manager Fund, L.P.	2008	8,979,798	11,822,753	10,538,769	5,943,212	1.39	8.8%
GI Partners Fund III L.P.	2008	7,500,000	8,103,000	12,636,713	85,840	1.57	13.0%
Landmark Equity Partners XIV, L.P.	2008	13,630,000	13,283,664	15,422,825	2,068,110	1.32	9.3%
Levine Leichtman Capital Partners IV, L.P.	2008	5,000,000	5,353,601	8,479,347	670,224	1.71	18.3%
Milestone Partners III, L.P.	2008	3,000,000	3,237,896	2,743,770	310,445	0.94	-1.1%
New York/Fairview Emerging Managers Fund, L.P.-Tranche 2	2008	5,000,000	5,065,974	8,213,096	6,533,798	2.91	19.9%
NGN BioMed Opportunity II, L.P.	2008	5,000,000	4,787,955	3,336,553	2,602,389	1.24	3.0%
Onex Partners III LP	2008	5,000,000	5,484,081	7,307,149	1,490,196	1.60	11.3%
Paladin III (NY City), L.P.	2008	7,500,000	10,444,540	18,210,368	8,376,367	2.55	15.1%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	7,500,000	8,631,611	8,628,483	573,956	1.07	1.7%
Yucaipa American Alliance Fund II, LP	2008	15,000,000	20,587,385	21,574,156	12,481,627	1.65	8.6%
Yucaipa Corporate Initiatives Fund II, LP	2008	4,676,976	4,592,705	2,742,407	1,115,014	0.84	-2.5%
FS Equity Partners VI, L.P.	2009	12,500,000	12,593,134	34,682,785	4,257,450	3.09	23.7%
Lexington Capital Partners VII, L.P.	2009	10,000,000	8,923,109	12,193,167	2,004,338	1.59	13.7%
Lincolnshire Equity Fund IV, L.P.	2009	2,500,000	2,690,018	3,103,753	792,002	1.45	8.7%
NorthBound Emerging Manager Custom Fund LP	2009	5,000,000	4,366,772	6,146,330	708,044	1.57	11.7%
Scale Venture Partners III, LP	2009	5,000,000	4,981,767	12,750,882	1,106,150	2.78	22.6%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	7,500,000	7,500,000	9,766,913	2,553,056	1.64	11.7%
Comvest Investment Partners IV, L.P.	2010	20,000,000	20,519,080	33,015,368	4,611,655	1.83	28.7%
Snow Phipps II, L.P.	2010	7,500,000	9,009,341	8,154,530	4,172,854	1.37	8.6%
Trident V, L.P.	2010	15,000,000	17,566,853	20,784,656	9,418,058	1.72	11.4%
American Securities Partners VI, L.P.	2011	20,000,000	21,776,638	32,770,035	12,661,037	2.09	21.8%
Ampersand 2011	2011	5,000,000	5,000,000	16,193,623	137,121	3.27	21.9%
AXA Secondary Fund V B L.P.	2011	40,000,000	32,956,743	52,565,618	258,827	1.60	15.4%
BC European Capital IX	2011	21,693,990	24,645,718	24,449,952	27,403,357	2.10	17.4%
BDCM Opportunity Fund III, L.P.	2011	10,000,000	14,671,479	9,566,507	11,858,753	1.46	8.4%
Blackstone Capital Partners VI, L.P.	2011	10,000,000	10,690,708	11,438,106	6,377,604	1.67	12.3%

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
EQT VI, L.P.	2011	17,625,995	18,769,545	26,494,406	5,610,379	1.71	13.5%
Pegasus Partners V, L.P.	2011	6,236,975	7,823,945	6,767,956	5,067,363	1.51	9.8%
Platinum Equity Capital Partners III, L.P.	2011	25,000,000	21,418,242	38,805,545	7,792,534	2.18	36.9%
Vista Equity Partners Fund IV, L.P.	2011	30,000,000	30,976,401	39,499,194	19,576,406	1.91	15.8%
Wellspring Capital Partners V, L.P.	2011	7,500,000	7,904,533	10,712,066	2,431,053	1.66	15.8%
Ares Corporate Opportunities Fund IV, L.P.	2012	20,000,000	21,291,715	24,934,291	12,652,986	1.77	14.8%
Green Equity Investors VI, L.P.	2012	25,000,000	27,419,893	20,617,797	29,949,703	1.84	15.3%
<i>NYCFPF - 2012 Emerging Manager Program</i>	<i>2012</i>	<i>22,700,000</i>	<i>23,658,856</i>	<i>17,087,090</i>	<i>29,711,090</i>	<i>1.98</i>	<i>18.9%</i>
Palladium Equity Partners IV, L.P.	2012	10,000,000	9,804,065	4,888,221	8,242,912	1.34	8.5%
Summit Partners Growth Equity Fund VIII-A, L.P.	2012	30,000,000	34,309,073	61,105,464	17,743,452	2.30	26.8%
Trilantic Capital Partners V L.P.	2012	10,000,000	11,039,035	11,166,783	5,742,974	1.53	15.7%
Warburg Pincus Private Equity XI, L.P.	2012	35,000,000	36,922,958	40,185,071	22,212,732	1.69	13.2%
Apollo Investment Fund VIII, L.P.	2013	40,000,000	37,817,963	21,842,415	31,551,867	1.41	10.5%
ASF VI B L.P.	2013	30,000,000	24,228,369	29,700,147	4,804,632	1.42	12.0%
Carlyle Partners VI, L.P.	2013	20,000,000	21,451,025	12,214,643	23,572,921	1.67	14.8%
Crestview Partners III, L.P.	2013	24,000,000	19,458,088	10,718,817	15,631,638	1.35	11.9%
Landmark - NYC Fund I, L.P.	2013	9,000,000	8,186,094	6,294,821	5,933,931	1.49	14.3%
Landmark Equity Partners XV, L.P.	2013	26,000,000	20,871,107	15,624,339	11,256,053	1.29	11.1%
ASF VI B NYC Co-Invest L.P.	2014	10,000,000	8,275,077	9,230,833	3,653,306	1.56	14.4%
Bridgepoint Europe V L.P.	2014	11,439,538	11,295,932	5,420,043	11,776,410	1.52	15.9%
Carlyle Partners VI, L.P. (Side Car)	2014	2,200,000	1,601,682	335,577	2,801,945	1.96	14.8%
Crestview Partners III (Co-Investment B), L.P.	2014	8,000,000	8,284,349	394,887	8,294,574	1.05	1.4%
CVC Capital Partners VI, L.P.	2014	35,165,413	36,413,398	17,709,127	43,759,884	1.69	17.0%
Lexington Capital Partners VIII, L.P.	2014	40,000,000	35,876,814	23,347,758	27,720,225	1.42	16.5%
Olympus Growth Fund VI, L.P.	2014	15,000,000	14,302,574	9,154,163	11,061,004	1.41	12.6%
Vista Equity Partners Fund V, L.P.	2014	40,000,000	48,966,732	47,994,410	48,580,109	1.97	21.1%
ASF VII B L.P.	2015	17,000,000	9,511,514	2,333,659	10,914,293	1.39	15.7%
ASF VII B NYC Co-Invest L.P.	2015	9,000,000	5,516,020	2,605,262	6,434,713	1.64	21.9%
Bridgepoint Europe V Co-Invest	2015	3,513,543	3,241,557	2,499,695	4,149,030	2.05	27.1%
Centerbridge Capital Partners III, L.P.	2015	4,200,000	4,731,350	2,214,510	4,613,916	1.44	18.1%
EQT VII, L.P.	2015	28,388,798	28,933,298	20,784,648	35,256,952	1.94	26.5%
<i>NYCFPF - 2015 Emerging Manager Program</i>	<i>2015</i>	<i>29,750,000</i>	<i>21,054,544</i>	<i>3,229,547</i>	<i>28,826,573</i>	<i>1.52</i>	<i>26.9%</i>
Siris Partners III, L.P.	2015	5,500,000	5,731,308	2,817,275	5,586,148	1.47	16.0%

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Warburg Pincus Private Equity XII, L.P.	2015	36,000,000	35,989,645	7,938,188	45,741,637	1.49	16.0%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	14,000,000	13,031,568	11,221,496	15,319,296	2.04	29.3%
American Securities Partners VII, L.P.	2016	14,000,000	12,996,278	2,083,510	13,393,954	1.19	7.0%
Apax IX USD, L.P.	2016	22,000,000	21,661,333	1,500,132	38,330,228	1.84	31.8%
BCEC X Co-Investment	2016	6,411,316	6,440,670	40,396	11,173,876	1.74	28.1%
Platinum Equity Capital Partners IV, L.P.	2016	19,000,000	16,855,909	5,630,043	20,978,659	1.58	24.1%
Vista Equity Partners Fund VI, L.P.	2016	28,000,000	31,398,929	17,344,192	38,691,153	1.78	21.8%
Ares Corporate Opportunities Fund V, L.P.	2017	17,000,000	16,578,550	2,595,014	13,736,225	0.99	-0.8%
BC European Capital X	2017	16,055,844	14,174,185	264,680	20,029,664	1.43	20.5%
CVC Capital Partners VII, L.P.	2017	31,478,242	19,570,525	341,627	25,114,305	1.30	25.4%
Green Equity Investors VII, L.P.	2017	17,000,000	15,029,348	1,632,228	23,055,671	1.64	24.6%
KKR Americas Fund XII, L.P.	2017	28,000,000	18,110,786	787,265	26,911,286	1.53	26.3%
Palladium Equity Partners V, L.P.	2017	6,666,667	3,424,719	34,814	3,461,976	1.02	NM
Warburg Pincus Financial Sector, L.P.	2017	21,000,000	16,767,522	1,071,000	19,491,023	1.23	15.5%
Apollo Investment Fund IX, L.P.	2018	52,000,000	14,228,735	1,525,230	14,434,885	1.12	NM
ASF VIII B L.P.	2018	36,000,000	7,423,867	109,001	10,608,943	1.44	NM
Bridgepoint Europe VI	2018	24,827,694	9,656,647	1,866,919	9,386,871	1.17	NM
EQT VIII Co-Investment	2018	8,257,420	4,348,796	-	6,197,549	1.43	24.7%
EQT VIII, L.P.	2018	22,475,377	16,233,026	475,531	22,312,613	1.40	34.8%
Platinum Equity Capital Partners IV Co-Investment, L.P.	2018	3,000,000	2,104,085	418,633	2,395,503	1.34	14.2%
Platinum Equity Small Cap Fund, L.P.	2018	8,000,000	3,702,461	-	3,044,865	0.82	-21.7%
Siris Partners IV, L.P.	2018	18,000,000	9,920,057	102,311	11,141,276	1.13	NM
Vista Equity Partners Fund VII, L.P.	2018	35,500,000	17,326,616	82,748	18,180,713	1.05	NM
Apax X USD L.P.	2019	21,500,000	258,000	-	895,987	3.47	NM
ASF VIII B NYC Co-Invest L.P.	2019	18,000,000	1,221,134	-	2,378,112	1.95	NM
Blackstone Capital Partners VIII L.P.	2019	22,500,000	-	-	(274,728)	-	N/A
Bridgepoint Europe VI Co-Invest	2019	6,212,454	3,573,608	-	3,948,824	1.10	NM
Crestview Partners IV (Co-Investment), L.P.	2019	4,666,667	252,635	-	755,436	2.99	NM
Crestview Partners IV, L.P.	2019	14,000,000	757,902	-	2,001,076	2.64	NM
KKR European Fund V (USD)	2019	17,650,000	7,460,720	-	8,259,667	1.11	NM
Lexington Capital Partners IX	2019	21,375,000	5,365,361	1,122,511	6,478,394	1.42	NM
Lexington IX Co-Invest	2019	7,125,000	493,762	-	803,004	1.63	NM
Lindsay Goldberg V	2019	18,000,000	1,859,253	742	2,187,956	1.18	NM

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
<i>NYCFPF - 2019 Emerging Manager Program</i>	<i>2019</i>	<i>37,550,000</i>	<i>2,617,089</i>	<i>101,069</i>	<i>3,275,452</i>	<i>1.29</i>	<i>NM</i>
Platinum Equity Capital Partners V, L.P.	2019	32,000,000	4,024,302	7,217	4,527,750	1.13	NM
Trilantic Capital Partners VI (North America) L.P.	2019	20,000,000	5,100,755	42,906	4,931,179	0.98	NM
Warburg Pincus Global Growth, L.P.	2019	25,500,000	11,477,253	-	12,010,349	1.05	NM
Welsh, Carson, Anderson & Stowe XIII, L.P.	2019	18,000,000	4,183,917	-	4,443,770	1.06	NM
BC Partners Fund XI	2020	24,200,000	-	-	(66,100)	-	N/A
BC Partners XI Metro Co-Investment L.P.	2020	11,000,000	-	-	-	-	N/A
Clearlake Capital Partners VI, L.P.	2020	11,000,000	2,816,266	91,725	3,041,053	1.11	NM
EQT IX (No. 2) USD SCSP	2020	21,018,000	-	-	929,072	-	NM
EQT IX Co-Investment	2020	5,732,000	-	-	(23,923)	-	N/A
FTV VI	2020	3,500,000	1,330,000	-	1,706,856	1.28	NM
Green Equity Investors VIII Coinvest N, L.P.	2020	7,500,000	1,815,788	-	1,801,165	0.99	NM
Green Equity Investors VIII, L.P.	2020	22,500,000	2,961,445	-	2,861,066	0.97	NM
Hg Genesis 9, L.P.	2020	12,480,209	-	-	(51,683)	-	N/A
KKR Asian Fund IV SCSP	2020	25,000,000	-	-	(33,108)	-	N/A
NYC-NorthBound Emerging Managers Program LP	2020	25,000,000	-	-	(27,322)	-	N/A
One Rock Capital Partners III, L.P.	2020	9,500,000	-	-	-	-	N/A
Platinum Equity Capital Partners V Co-Investment, L.P.	2020	8,000,000	-	-	-	-	N/A
Stellex Capital Partners II	2020	12,000,000	-	-	-	-	N/A
CVC Capital Partners VIII, L.P.	2021	42,754,253	-	-	-	-	N/A
The Resolute Fund V, L.P.	2021	16,500,000	-	-	(15,908)	-	N/A
Valor Equity Partners V, L.P.	2021	5,500,000	-	-	272,823	-	N/A

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			1,246,949,267	1,070,221,227	689,950,689	766,195,086	1.34	7.5%
TOTAL PRIVATE REAL ESTATE								
PRISA SA	2006	Core Portfolio	7,000,000	7,530,220	3,433,483	9,926,412	1.77	4.7%
Prologis Targeted U.S. Logistics Fund	2006	Core Portfolio	35,000,000	6,745,383	2,861,358	10,939,335	2.05	6.5%
RREEF America REIT II	2006	Core Portfolio	7,000,000	9,178,399	5,341,199	10,103,915	1.68	5.1%
UBS Trumbull Property Fund	2006	Core Portfolio	27,000,000	41,181,464	43,169,210	18,662,349	1.50	6.1%
Heitman HART	2007	Core Portfolio	9,000,000	15,491,642	6,491,642	19,961,352	1.71	6.7%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	5,000,000	5,870,702	2,354,125	7,373,315	1.66	4.5%
JP Morgan Strategic Property Fund	2007	Core Portfolio	22,000,000	24,459,391	18,221,222	34,107,640	2.14	7.4%
PRISA II	2007	Core Portfolio	20,228,233	21,417,377	8,583,843	30,311,519	1.82	5.5%
LaSalle Property Fund	2010	Core Portfolio	48,000,000	47,540,097	14,561,953	60,239,698	1.57	8.8%
NYC Asset Investor #2 LLC	2013	Core Portfolio	9,000,000	9,038,861	3,770,524	6,279,460	1.11	2.4%
MetLife Core Property Fund	2014	Core Portfolio	41,000,000	41,000,000	5,855,402	44,135,419	1.22	7.1%
Exeter Industrial Core Club Fund II	2016	Core Portfolio	6,000,000	5,782,201	1,191,126	6,987,654	1.41	14.1%
Jamestown Premier Property Fund	2016	Core Portfolio	8,000,000	11,673,473	4,336,643	8,596,474	1.11	3.9%
NYCRS Artemis Co-Investment (SEM)	2016	Core Portfolio	11,000,000	12,775,721	4,967,662	11,256,573	1.27	12.5%
USAA Eagle Real Estate Fund	2016	Core Portfolio	30,000,000	30,000,000	-	32,471,589	1.08	2.8%
Brookfield Premier Real Estate Partners	2017	Core Portfolio	19,000,000	22,394,512	3,679,790	26,089,816	1.33	8.8%
Carlyle Property Investors	2017	Core Portfolio	19,000,000	21,761,943	3,023,722	24,246,706	1.25	8.2%
Lion Industrial Trust - 2007	2017	Core Portfolio	50,000,000	54,804,381	4,282,866	66,924,363	1.30	14.0%
Almanac Realty Securities VIII	2019	Core Portfolio	10,500,000	2,256,981	81,559	2,257,421	1.04	4.1%
Almanac Realty Securities VIII (Sidecar II)	2019	Core Portfolio	7,000,000	1,527,589	54,657	1,748,831	1.18	20.3%
Artemis Real Estate Partners Income and Growth Fund	2019	Core Portfolio	10,000,000	2,797,378	108,137	2,549,282	0.95	-5.1%
Harrison Street Core Property Fund, L.P.	2019	Core Portfolio	6,700,000	7,038,416	394,521	7,152,748	1.07	6.1%
Heitman Core Real Estate Debt Income Trust	2019	Core Portfolio	8,000,000	8,988,423	988,424	8,924,948	1.10	5.6%
HSRE-Centre Street Core Co-Investment, L.P.	2019	Core Portfolio	3,300,000	2,082,525	115,398	2,200,588	1.11	7.8%
Cortland Partners Growth and Income Fund	2020	Core Portfolio	25,000,000	25,186,033	439,553	25,533,827	1.03	3.6%
Exeter Industrial Core Fund III, LP	2020	Core Portfolio	21,300,000	4,830,840	135,637	4,813,288	1.02	4.3%
Kayne Anderson Core Real Estate Fund	2020	Core Portfolio	10,000,000	10,215,240	325,659	10,079,195	1.02	2.2%
Blackstone Fund IV	2004	Non-Core Portfolio	5,000,000	6,406,782	8,939,968	203,734	1.43	10.4%
The City Investment Fund I	2004	Non-Core Portfolio	35,000,000	34,515,181	34,904,154	54,813	1.01	0.3%
Blackstone Real Estate Partners VI	2007	Non-Core Portfolio	10,000,000	11,170,327	21,869,254	421,999	2.00	13.2%
Carlyle Realty Partners V	2007	Non-Core Portfolio	5,000,000	6,347,279	8,335,991	965,694	1.47	8.6%
Colony Investors VIII	2007	Non-Core Portfolio	20,000,000	21,249,679	9,077,467	378,329	0.44	-11.4%
Metropolitan Workforce Housing Fund (SEM)	2007	Non-Core Portfolio	3,500,000	3,503,257	4,186,143	64,833	1.21	3.8%
AG Realty Fund VII	2008	Non-Core Portfolio	15,000,000	14,100,000	21,096,846	173,651	1.51	12.6%

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Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
American Value Partners Fund I (SEM)	2008	Non-Core Portfolio	5,000,000	3,785,294	3,471,997	205,114	0.97	-0.5%
Ares European Real Estate Fund III, LP	2008	Non-Core Portfolio	15,000,000	15,243,750	16,746,250	132,528	1.11	2.6%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	5,000,000	2,216,844	467,199	260,146	0.33	-11.0%
Stockbridge Real Estate Fund III	2008	Non-Core Portfolio	13,500,000	13,499,074	8,414,877	8,063,329	1.22	2.6%
Thor Urban Property Fund II	2009	Non-Core Portfolio	5,000,000	6,849,514	6,847,656	654,892	1.10	2.9%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	5,000,000	4,432,393	5,072,700	1,565,134	1.50	7.8%
Blackstone Real Estate Partners Europe III (USD Vehicle)	2010	Non-Core Portfolio	5,000,000	5,228,826	7,115,819	601,775	1.48	10.6%
Westbrook Real Estate Fund VIII	2010	Non-Core Portfolio	5,000,000	5,974,840	6,889,968	710,844	1.27	9.9%
Carlyle Realty Partners VI	2011	Non-Core Portfolio	20,000,000	19,315,043	31,330,259	1,568,801	1.70	24.5%
H/2 Special Opportunities Fund II	2011	Non-Core Portfolio	10,000,000	10,000,001	14,562,251	195,616	1.48	13.2%
Blackstone Real Estate Partners VII	2012	Non-Core Portfolio	30,000,000	38,064,645	48,728,976	11,771,416	1.59	15.2%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	15,000,000	17,262,297	26,254,131	7,849,109	1.98	19.4%
Divco West Fund III	2012	Non-Core Portfolio	30,000,000	29,429,127	50,867,781	39,944	1.73	23.9%
Taconic New York City Investment Fund LP	2012	Non-Core Portfolio	20,000,000	8,363,637	13,546,356	1,114,115	1.75	15.4%
NYC Asset Investor #1 LLC	2013	Non-Core Portfolio	5,000,000	5,535,633	2,546,425	3,407,911	1.08	1.6%
NYC Asset Investor #3 LLC	2013	Non-Core Portfolio	6,000,000	4,191,769	694,670	4,571,987	1.26	5.9%
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2014	Non-Core Portfolio	26,000,000	25,327,981	29,467,149	8,652,221	1.51	13.5%
Carlyle Realty Partners VII	2014	Non-Core Portfolio	15,000,000	13,626,624	14,126,174	5,656,051	1.45	14.4%
Divco West Fund IV	2014	Non-Core Portfolio	30,000,000	29,700,495	45,321,908	4,294,462	1.67	25.0%
Lone Star Real Estate Fund III	2014	Non-Core Portfolio	25,000,000	23,435,387	30,350,667	1,232,493	1.35	14.0%
Avanath Affordable Housing Fund II (SEM)	2015	Non-Core Portfolio	2,220,000	2,158,370	680,675	3,036,888	1.72	11.5%
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	31,500,000	34,200,913	23,440,703	24,498,719	1.40	14.2%
H/2 Special Opportunities Fund III	2015	Non-Core Portfolio	15,000,000	15,577,770	13,231,169	4,937,547	1.17	5.9%
European Property Investors Special Opportunities IV (EPISO IV)	2016	Non-Core Portfolio	10,059,238	9,050,919	2,153,256	9,874,101	1.33	11.3%
PW Real Estate Fund III LP	2016	Non-Core Portfolio	9,562,261	7,531,899	3,201,177	11,893,144	2.00	30.8%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	8,000,000	7,677,307	4,159,997	4,851,959	1.17	10.5%
Divco West Fund V	2017	Non-Core Portfolio	12,000,000	7,345,487	1,419,488	6,620,970	1.09	3.5%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	8,000,000	7,931,368	2,675,451	7,189,824	1.24	12.1%
Exeter Industrial Value Fund IV	2017	Non-Core Portfolio	10,000,000	9,443,137	1,019,608	12,488,066	1.43	19.0%
H/2 Special Opportunities Fund IV	2017	Non-Core Portfolio	19,000,000	19,000,000	-	18,285,217	0.96	-3.0%
KKR CMBS B-Piece SMA	2017	Non-Core Portfolio	25,000,000	22,313,016	5,137,591	20,709,757	1.16	6.7%
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	23,100,000	6,218,670	3,327,441	2,107,156	0.87	-9.6%
Primerica Real Estate Capital VI (PRECap VI)	2017	Non-Core Portfolio	10,040,161	9,587,504	5,026,276	6,095,596	1.16	11.7%
Basis Investment Group Fund I (SEM)	2018	Non-Core Portfolio	4,100,000	2,955,981	932,144	2,623,911	1.20	12.5%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	20,070,000	18,567,012	6,588,813	15,072,667	1.23	20.6%
AERMONT Real Estate Fund IV	2019	Non-Core Portfolio	10,271,627	2,425,925	-	1,879,378	0.77	-23.4%
Blackstone Real Estate Partners IX	2019	Non-Core Portfolio	34,000,000	11,735,584	1,615,441	12,164,282	1.17	22.1%

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Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Brookfield Strategic Real Estate Partners III	2019	Non-Core Portfolio	30,000,000	15,193,757	246,912	16,393,813	1.10	8.6%
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	2020	Non-Core Portfolio	19,997,747	5,326,327	12,224	6,324,724	1.19	33.7%
Divco West Fund VI	2020	Non-Core Portfolio	17,000,000	762,144	-	654,712	0.86	-14.3%
DRA Growth & Income Fund X	2020	Non-Core Portfolio	13,000,000	2,432,369	496,603	2,194,932	1.11	13.7%
ElmTree Net Lease Fund IV	2020	Non-Core Portfolio	11,000,000	1,693,895	-	1,583,323	0.93	-10.7%
GreenOak Asia III (USD Vehicle)	2020	Non-Core Portfolio	14,000,000	6,728,420	4,583,369	2,400,798	1.04	9.7%
Exeter Industrial Value Fund V	2021	Non-Core Portfolio	10,000,000	2,500,000	-	2,471,228	0.99	-1.7%
KKR Real Estate Securities Dislocation Opportunity Co-Investmen	2021	Non-Core Portfolio	21,000,000	9,518,582	-	11,157,716	1.17	23.0%

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Alternative Assets Manager Performance Detail

Through December 31, 2020



	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		344,585,641	181,906,667	50,001,842	184,039,126	1.29	12.0%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	15,000,000	12,655,609	5,635,205	16,755,204	1.77	13.0%
Global Energy & Power Infrastructure Fund II	2014	10,000,000	10,515,115	8,474,503	5,974,129	1.37	21.7%
IFM Global Infrastructure Fund	2014	10,000,000	13,351,525	5,126,121	16,181,080	1.60	11.4%
KKR Global Infrastructure Investors II L.P.	2014	12,000,000	12,733,797	10,890,490	9,401,900	1.59	16.8%
Actis Energy 4	2016	12,900,000	9,915,027	2,937,710	10,136,000	1.32	14.6%
ASF VII Infrastructure L.P.	2016	15,000,000	8,153,327	650,721	9,131,379	1.20	14.2%
Brookfield Infrastructure Fund III, L.P.	2016	19,000,000	11,727,760	3,163,463	11,737,434	1.27	10.4%
Global Infrastructure Partners III-A/B, L.P.	2016	22,000,000	19,404,252	3,848,831	18,916,552	1.17	6.4%
Axiom Infrastructure North America	2017	15,220,450	15,586,794	2,573,561	16,106,029	1.20	9.5%
EQT Infrastructure III (No.2) SCSp	2017	11,214,184	11,738,277	1,750,269	15,685,905	1.49	20.4%
NYCRS EIG Energy Partners, L.P.	2017	15,300,000	5,852,367	1,131,723	5,332,501	1.10	7.3%
Cardinal NR Sidecar Holdings L.P.	2018	2,060,000	2,072,901	494,859	2,498,039	1.44	18.9%
Global Infrastructure Partners IV-A/B, L.P.	2018	24,700,000	679,516	-	(5,317)	NM	NM
KKR Global Infrastructure Investors III L.P.	2018	17,200,000	8,434,030	559,096	6,888,957	0.88	-11.5%
Ardian Infrastructure Fund V B	2019	16,822,407	1,910,002	96,213	2,042,424	NM	NM
Brookfield Infrastructure Fund IV Co-Investment (Snow)	2019	2,000,000	2,008,446	115,265	2,158,840	NM	NM
Brookfield Infrastructure Fund IV, L.P.	2019	21,000,000	10,526,407	1,173,909	10,162,016	NM	NM
EQT Infrastructure IV (No.2) USD SCSp	2019	20,000,000	12,136,379	473,250	12,910,045	1.10	11.0%
Global Energy & Power Infrastructure Fund III, L.P.	2019	17,200,000	5,304,367	906,652	4,892,630	1.09	11.8%
BIS NYC Infrastructure Emerging Manager Opportunities Fund	2020	14,980,000	-	-	-	NM	NM
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	2020	1,800,000	1,813,846	-	2,112,886	NM	NM
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	2020	2,300,000	2,308,214	-	2,300,839	NM	NM
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	2020	3,068,600	3,078,707	-	3,162,447	NM	NM
EQT Infrastructure V (No.2) USD SCSp	2020	40,000,000	-	-	(442,793)	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2021	3,820,000	-	-	-	-	0.0%

Information provided by the New York City Fire Retirement System Consultants

Alternative Assets Manager Performance Detail

Through March 31, 2021



	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		676,916,708	715,197,048	363,987,924	580,673,097	5.28%	7.74%
Avenue Special Situations Fund V, L.P.	2007	5,052,332	5,130,079	6,706,716	-		10.89%
Avenue Europe Special Sit. Fund, L.P.	2008	5,239,376	4,495,867	8,970,029	-		15.01%
PIMCO DiSCO Fund, L.P.	2008	25,000,000	25,071,292	34,076,267	-		11.23%
Torchlight Debt Opportunity Fund III, LLC	2009	15,000,000	15,991,888	23,792,157	-		13.36%
Avenue Special Situations Fund VI (A), L.P.	2011	15,000,000	15,378,545	15,272,631	1,879,746	8.80%	2.37%
GoldenTree Managed Account	2011	32,000,000	32,200,730	-	57,464,198	2.16%	7.28%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	46,875,000	76,125,000	40,031,250	70,217,659	8.42%	7.41%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	35,000,000	39,725,000	9,260,636	44,464,171	6.87%	5.87%
Apollo Centre Street Partnership, L.P.	2012	63,333,333	99,329,079	77,280,649	43,067,464	5.29%	6.54%
FCO MA Centre Street L.P.	2012	30,000,000	58,845,668	43,517,119	32,793,944	5.31%	8.56%
OHA Centre Street Partnership, L.P.	2012	56,250,000	63,307,739	15,665,796	76,404,680	4.81%	8.57%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	15,000,000	15,000,000	-	17,052,356	7.68%	2.14%
Oaktree Opportunities Fund IX, L.P.	2013	30,000,000	30,000,000	15,205,251	23,255,336	13.97%	4.48%
Ares Centre Street Partnership, L.P.	2014	30,000,000	30,000,000	-	47,873,886	3.18%	9.29%
Brightwood Capital Fund III, L.P.	2015	8,000,000	6,492,299	5,312,375	3,209,396	0.73%	6.42%
Torchlight Debt Opportunity Fund V, LP	2015	20,000,000	16,000,000	15,103,465	5,462,506	3.00%	10.61%
Brightwood Capital Fund IV, LP	2016	20,000,000	20,000,000	5,211,119	18,118,072	3.87%	7.44%
ICG Centre Street Partnership, L.P.	2017	30,000,000	40,320,115	21,657,142	23,920,097	2.26%	9.46%
KKR OFI SMA	2017	55,000,000	42,268,462	10,702,964	42,170,574	9.52%	13.17%
Maranon Centre Street Partnership, L.P.	2018	21,000,000	19,381,023	527,182	21,128,083	2.44%	6.71%
FCO MA Centre Street II (PF) LP	2019	30,000,000	28,507,254	15,130,669	18,426,543	5.62%	33.04%
Torchlight Debt Fund VI, LP	2019	20,000,000	20,564,508	564,508	21,062,197	2.31%	4.31%
KKR-NYC Credit C L.P.	2020	10,416,667	781,250	-	971,186	8.75%	57.22%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitment	2020	18,750,000	7,031,250	-	8,383,459	-10.73%	77.70%
Torchlight Debt Fund VII, LP	2020	25,000,000	2,500,000	-	2,598,400	2.98%	9.45%
400 Capital Centre Street LP	2021	15,000,000	750,000	-	749,143		-18.83%

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

Alternative Assets Manager Performance Detail

Through March 31, 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	940,431,802	0.48%	0.69%	10.35%	0.69%	13.04%	7.40%	5.22%	64.17%
TOTAL DIRECT HEDGE FUNDS	940,412,852	0.48%	0.69%	10.35%	0.69%	13.04%	7.41%	6.00%	72.27%
FUND OF FUNDS HEDGE FUNDS	18,949	-1.24%	-2.70%	6.89%	-2.70%	9.27%	0.14%	1.79%	18.92%
TOTAL DIRECT HEDGE FUNDS									
D.E. Shaw Composite Fund, L.L.C.	103,822,610	1.52%	5.40%	14.76%	5.40%	23.91%	14.26%	13.75%	229.27%
Voloridge Fund, LP	36,078,898	1.26%	-6.70%	-0.15%	-6.70%	5.64%		19.25%	44.32%
Voloridge Trading Aggressive Fund, LP	9,671,459	6.30%	-3.90%	4.60%	-3.90%	16.42%		21.88%	51.02%
Relative Value	149,572,967	1.75%	1.59%	10.13%	1.59%	18.38%	13.44%	12.12%	188.03%
AlphaQuest Original LLC	61,810,582	2.91%	10.75%	2.16%	10.75%	-3.04%	2.87%	5.95%	24.79%
Brevan Howard AH Fund, L.P.	44,764,756	-2.76%	-2.76%	-11.80%	-2.76%	-23.04%	22.45%	15.48%	75.75%
Florin Court Capital Fund	40,120,641	4.66%	0.48%	4.62%	0.48%	1.13%		7.60%	21.58%
GreshamQuant - ACAR Fund, LLC	23,751,868	2.56%	5.59%	15.96%	5.59%	8.32%		10.32%	18.76%
GSA Trend Fund LP	60,005,077	0.57%	4.77%	4.60%	4.77%	-0.76%	-0.22%	-0.70%	-2.70%
Key Square Partners LP	54,635,177	-0.29%	-3.15%	0.24%	-3.15%	6.97%	-4.76%	-3.83%	-13.90%
Pharo Gaia Fund, LTD.	63,433,032	-4.03%	-8.75%	2.82%	-8.75%	16.02%	2.28%	9.78%	64.51%
Pharo Macro Fund, Ltd.	44,356,889	-2.77%	-7.26%	3.44%	-7.26%	11.65%	1.48%	7.27%	72.31%
Tactical Trading	392,878,022	-0.23%	-0.61%	1.12%	-0.61%	-1.27%	4.56%	3.64%	39.62%
Caspian Select Credit Fund, L.P.	77,411,333	1.06%	3.42%	17.75%	3.42%	27.86%	5.84%	4.67%	50.17%
DL Partners Opportunities Fund LP	46,429,186	-0.60%	4.48%	17.76%	4.48%	29.77%		6.92%	17.54%
Fir Tree Value Fund, L.P.	-	0.00%		5.64%	0.00%	1.89%	-29.21%	-11.67%	-62.55%
Luxor Capital Partners Liquidating SPV, LLC.	683,424	-2.47%	-2.56%	-1.40%	-2.56%	3.51%		-8.44%	-19.79%
Luxor Capital Partners, LP	73,819,504	-1.68%	-9.88%	16.52%	-9.88%	39.74%	15.43%	7.64%	65.35%
Perry Partners L.P.	257,317	27.82%	27.82%	35.83%	27.82%	39.54%	5.07%	0.09%	0.69%
Standard General Fund II L.P.	21,281,563	3.58%	19.00%	70.45%	19.00%	80.49%	15.69%	11.32%	56.35%
Event Driven	219,882,327	0.02%	-0.05%	20.84%	-0.05%	37.15%	9.29%	5.77%	64.88%
Altimeter Partners Fund LP	34,338,745	1.71%	0.57%	35.58%	0.57%	48.99%	17.04%	14.19%	96.33%
Gotham Targeted Neutral, LP	-	0.00%	-0.52%	-7.94%	-0.52%	-9.60%	-6.35%	-3.03%	-17.09%
Lansdowne European Absolute Opportunities Fund, L.P.	27,513,418	2.73%	0.04%	2.60%	0.04%	8.52%		-6.30%	-11.25%
SRS Partners US, LP	55,106,953	3.39%	7.18%	24.51%	7.18%	12.72%	8.11%	8.50%	66.51%
Turiya Fund LP	61,120,420	-0.60%	4.76%	35.25%	4.76%	45.61%	9.73%	5.88%	38.88%
Long/Short Equity	178,079,536	1.57%	3.73%	23.44%	3.73%	25.18%	6.83%	5.89%	55.83%
FUND OF FUNDS HEDGE FUNDS									
Fund of Funds Hedge Funds	18,949	-1.24%	-2.70%	6.89%	-2.70%	9.27%	0.14%	1.79%	18.92%

Information provided by Alpha Frontier

New York City
Fire Department Pension Fund, Subchapter Two

Appendix D

Footnotes

Through March 31, 2021



- The Barclays Capital Aggregate (then known as the Lehman Brothers Aggregate) was used prior to 1/1/89. Effective 1/1/89, in the Government Sector, maturities of less than 5 years were dropped from the Salomon and Lehman indices. From that date until 7/1/99 the benchmark was the NYC Core + 5, from Lehman.
- Effective 7/1/94, the NYC Core + 5 Index includes BBB rated securities.
- Effective 7/1/99, the basis of the NYC Index was changed from Lehman Brothers to Salomon. Also effective 7/1/99, only Salomon indices have been used to compare all fixed income managers.
- Effective 4/1/03, the name of the benchmark provider was changed from Salomon to Citigroup.
- Effective 7/1/09, the Core+5 program was restructured.
 - The U.S. Gov't sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov't Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
 - The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
 - There were no changes to the Mortgage sector Index.
 - The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.

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 * 29.99%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 8.45%*

*International Active – Global: MSCI ACWI * 1.48%*

*Emerging Markets: MSCI Emerging Markets * 5.87%*

*International Emerging Managers FOF: MSCI ACWI Ex US IMI Net * 0.52%*

*REITs: Dow Jones Real Estate Securities * 0.00%*

*Private Equity: Russell 3000 + 300 b.p. per annum * 6.27%*

*Private Real Estate – Core: NFI - ODCE Net * 2.77%*

*Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 1.51%*

*Infrastructure: CPI + 4% * 1.02%*

*Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 5.00%*

*US Treasury Short Term: FTSE USBIG Treasury 1-3Y * 5.50%*

*US Treasury Intermediate: FTSE USBIG Treasury/Agency 1-10Y * 0.00%*

*Active Government: NYC Treasury Agency + 5 * 0.00%*

*US Treasury Long Duration: FTSE Treasury 10+ * 6.92%*

*Core FI-Developing Mgrs: BBG Barc Agg * 0.00%*

*Core FI-Emerging Mgrs: BBG Barc Agg * 0.00%*

Through March 31, 2021



*Mortgage: Bloomberg Barclays US MBS * 5.15%*

*ETI: ETI Custom Benchmark * 0.68%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 4.83%*

*High Yield: Bloomberg Barclays US High Yield 2% Issuer Capped * 6.45%*

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

*TIPS: Bloomberg Barclays Global Inflation Linked US TIPS * 4.50%*

*Convertible Bonds: ICE BofA All US Conv Ex Mandatory * 0.00%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.11%*

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.