









Common Investment Meeting (POLICE)

Schedule	Wednesday, June 19, 2019 9:00 AM — 3:00 PM EDT
Venue	Office of the New York City Comptroller, 1 Centre Street, 10th Floor (Room 1005) - Northside, New York, NY 10007
Organizer	Kim Boston

Agenda


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9:00 AM	Welcome and Opening	
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PUBLIC SESSION

Quarterly Fund Performance Overview:

**SUPPLEMENTAL MATERIAL -
PERFORMANCE REPORTING (Public):**

Total Fund Overview (Public):



New York City
Police Pension Fund, Subchapter Two
Performance Overview as of March 31, 2019

Total Fund Overview



New York City Police Pension Fund, Subchapter Two

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Through March 31, 2019



1Q19 Capital Markets Commentary

- US Equity** – US equities staged a V-shaped recovery in the first quarter as the central banks communicated a dovish monetary view while sharing positive economic news. The US economy is expected to grow at a slow and steady rate throughout 2019 as all economic signs are healthy. In the market, there was a resurgence in appreciation of the expensive growth stocks that declined so precipitously late last year. However, market participants are weary that recent policy and trade disruptions have impacted global growth which has caused recent market volatility. The on-going trade talks with China have been rocky and both sides have declared additional tariffs.
- International Equity** – Equity markets outside of the US enjoyed a strong start to 2019. While there are signs of an economic slowdown in Europe, by far the biggest unknown is the result of the U.K.’s Brexit. The latest draft proposal to exit the European Union (EU), agreed upon by Prime Minister Theresa May and EU officials, was again rejected by the U.K. Parliament. While the final exit date has been delayed, a failure to reach an agreement on a transition period would mean significant uncertainty for markets. Developed markets in Europe and Australia outperformed most emerging countries. China had a strong quarter as the market rebounded on positive economic data.
- The Federal Reserve held the fed funds rate unchanged over the quarter, and communicated a much more dovish stance on monetary policy amid slower growth expectations and stable inflation. Inflation has remained muted around 2%. Fed officials lowered their collective expectations for rate hikes in 2019 from two to zero, and announced that the balance sheet unwind would conclude in September.

Breakdown of GDP Growth



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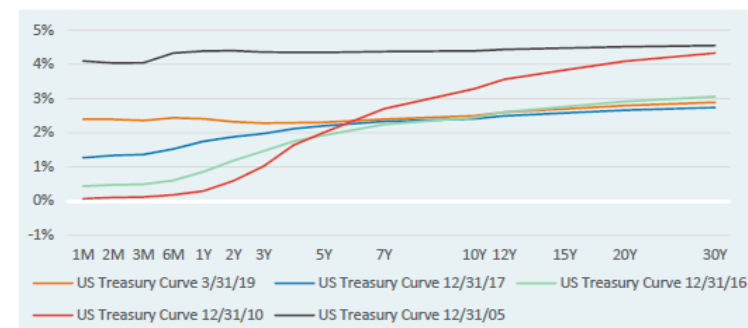
Through March 31, 2019



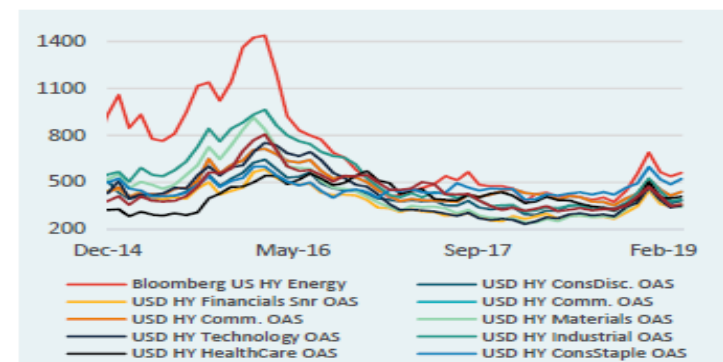
1Q19 Capital Markets Commentary

- Fixed Income** – More dovish expectations for monetary policy and some concerns over economic growth likely helped push long-term Treasury yields lower. The 10-year yield fell 28 bps to just above 2.4%. Falling long-term yields and stable short-term yields led to a brief inversion of the Treasury curve between the 10-year and 3-month yields. Investors have widely considered yield curve inversion as a sign that the economic cycle is coming to an end. At a high level, the shape of the yield curve tells investors something about what the market is expecting. All else equal, when the curve is steep, markets are expecting a positive growth environment and when the curve is flat or inverted, markets are expecting a negative growth environment.
- Opportunistic Fixed Income** – Anticipation of an easier monetary policy, which could potentially lengthen the credit cycle, has strengthened sentiment for risk assets. BB-rated bonds outperformed both CCC- and B-rated bonds in March. High yield bonds returned 7.3% for the quarter which is the strongest start to a calendar year on record for the asset class since 2003. Default activity has been low and stable in the US credit market, despite volatility in spreads. The par-weighted default rate declined to 0.9% and remains below its long-term average range of 3.0-3.5%.

U.S. YIELD CURVE



HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/19

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Through March 31, 2019



1Q19 Capital Markets Commentary

- **Real Estate** – Following a challenging fourth quarter in which real estate showed significant resilience, US REITs had a strong recovery in the first quarter which outperformed the broader equity market. Most property sectors posted double-digit gains, including cell tower REITs, which rallied on strong earnings and analyst upgrades. The fourth quarter equity market selloff left REITs at significant discounts to private market valuations. At the same time, capital continued to be raised for private real estate funds, boosting the potential of M&A.
- **Infrastructure** – Global listed infrastructure rose sharply in the first quarter, modestly outperforming the broad global stock market. Midstream energy led the advance, partially buoyed by a rebound in crude oil prices as key producer Saudi Arabia cut production to a four-year low. Within the communications (tower companies) segment there were reported healthy earnings stemming from strong leasing demand from the rollout of next-generation 5G wireless communications.
- **Private Equity** – Buyout activity continues to increase. Through the fourth quarter, buyouts were up 29% and 5% when measured by dollar value and number of transactions, respectively, compared to a year ago. The size of the average buyout, \$155 million, increased from \$133 million in 2017. Unlike deal flow, fund capital raising has slowed from the peaks of 2017. Buyout multiples decreased slightly from 2017. Average EV/EBITDA was 11.6x through year end (down from 11.9x in 2017) with debt multiples averaging 6.2x through the fourth quarter.
- **Hedge Funds** – Hedge funds consistently advanced alongside the broad markets and enjoyed the best first calendar quarter result since 2006 (Hedge Fund Weighted Composite 5.9% in the quarter; 0.9% trailing 12-months). While gains were broad based across strategy types, funds with greater equity market sensitivity earned the highest results. Within the equity hedge strategy set, funds with higher beta exposure rallied strongly. According to Hedge Fund Research, growth-oriented managers (9.3%) narrowly outperformed value-oriented (9.0%) peers.

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Through March 31, 2019



1Q19 Performance Commentary

- **Total Plan** – Over the first quarter of 2019 (1Q19), the Total Fund returned 7.2% on a net-of-fee basis which outperformed the policy benchmark return of 7.1%. In the trailing 12 months, the Total Fund returned 4.5%, outperforming the policy benchmark return of 4.4%. According to the Wilshire TUCS Universe of public plans over \$5 billion, the median return over the same period was 4.2%, placing the Total Fund above the median public plan.
 - Over the trailing three-, five- and ten-year periods, the Total Fund returned 9.3%, 7.0%, and 11.0%, respectively, closely matching the policy benchmark returns of 8.9%, 7.0%, and 11.5%, respectively.
- **Total Domestic Equity Composite** – The Total Fund has \$12.3 billion, or 30.9% invested in domestic equity. This allocation increased with the market's appreciation from 29.3% to 30.9%. The composite remains predominately passively invested with approximately 80% of the composite invested passively across market cap segments.
 - For 1Q19, the Domestic Equity Composite returned 13.9%, slightly underperforming the Russell 3000 index return of 14.0%. In the active segments: Mid-Cap Active outperformed its index, while Small-Cap Active and Large-Cap Active underperformed their indexes. The Emerging Manager segment slightly underperformed its benchmark.
 - Iridian was one of the best performing US equity managers for the quarter. The team uses a bottom-up, fundamental research process with an emphasis on identifying corporate change which can lead to value creation. The team evaluates companies in a private equity-like manner as if the entire business can be purchased and compares their valuation to the stock price. While their short term performance was good, their longer-term performance has been disappointing as the manager has underperformed versus their benchmark for all periods longer than a year.

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1Q19 Performance Commentary

- **Total World ex-USA Composite** – The Total Fund has \$3.5 billion, or 8.8% invested in developed international equities. The composite allocation is 70% Large & Mid active, 12% Small Cap Active, and 18% passive.
 - For 1Q19, the Total World ex-USA Composite outperformed its index. The Composite returned 12.0% versus the index return of 10.5%. Security selection was rewarded as the managers were invested in cyclical securities. All the segments were able to outperform their benchmark.
- **Total Emerging Markets Composite** – The Total Fund has \$2.4 billion or 6.0% invested in emerging markets. The composite allocation is 66% active and 34% passive. For the quarter, the Emerging Markets Composite underperformed its policy return. The composite returned 9.6% versus the policy return of 9.9%.
- **Total Fixed Income Composite** – The Total Fund has \$13.9 billion, or 35.1% invested in fixed income securities. The structure of the composite is: 45.5% in Structured Fixed Income (the allocation of the Structured Fixed Income & ETI is: 64.3% in Total Treasuries & Agencies, 19.5% in Total Mortgages, and 16.2% in Total Investment Grade Credit), 8.9% in Opportunistic Fixed Income (OFI), 12.7% in TIPS, 14.9% in Enhanced Yield, 4.7% in Bank Loans, 5.5% in Convertible Bonds, 0.6% in Fund of Funds, 0.5% in Core Plus Fixed Income, 2.9% in Targeted Investments, and 3.7% in Short-Term Cash.
 - For 1Q19, the Total Fixed Income Composite returned 3.8%. All the segments produced positive returns. Relative to their respective benchmarks, Investment grade and Convertible Bonds outperformed while Bank Loans and High Yield underperformed.

Wilshire Consulting



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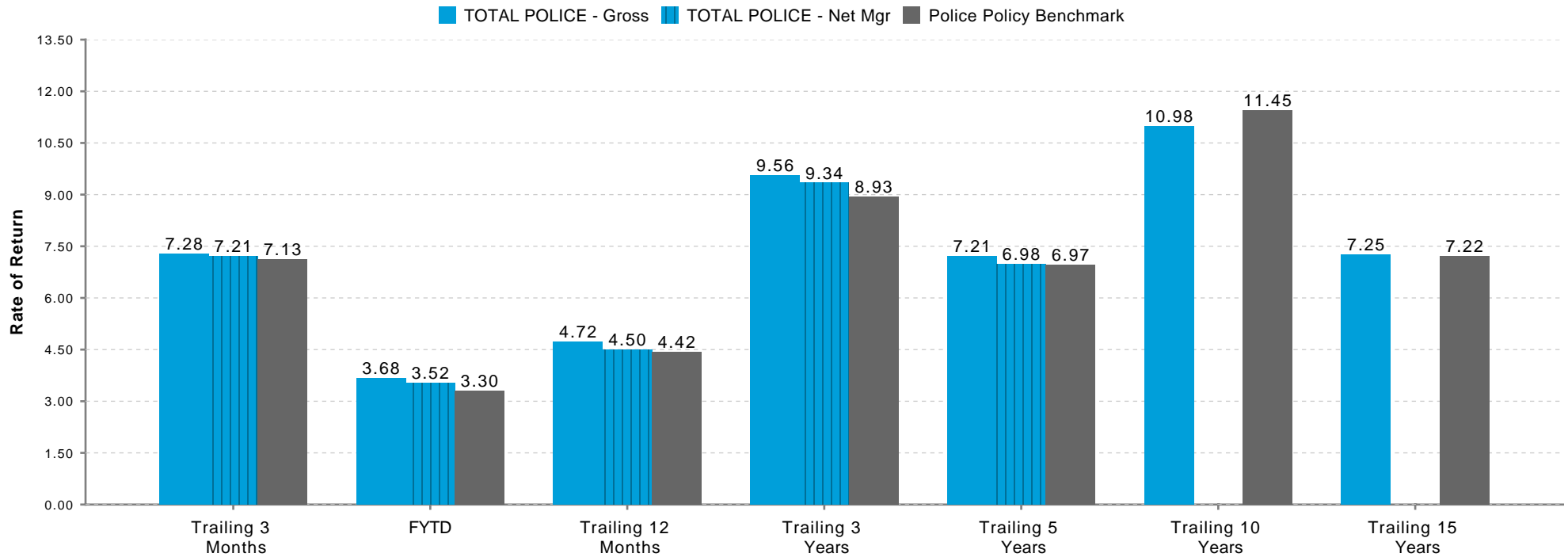
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Market Value (Billions)

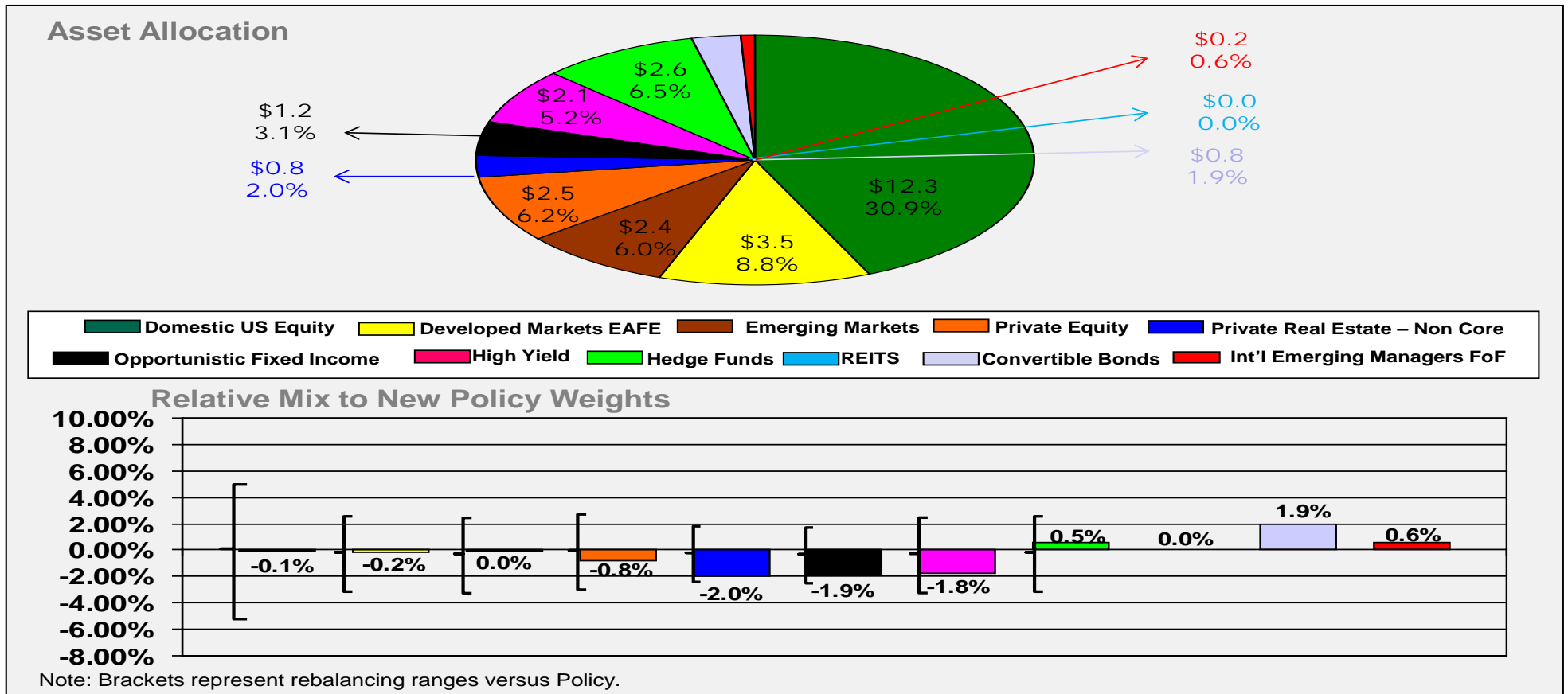
TOTAL POLICE

\$39.7

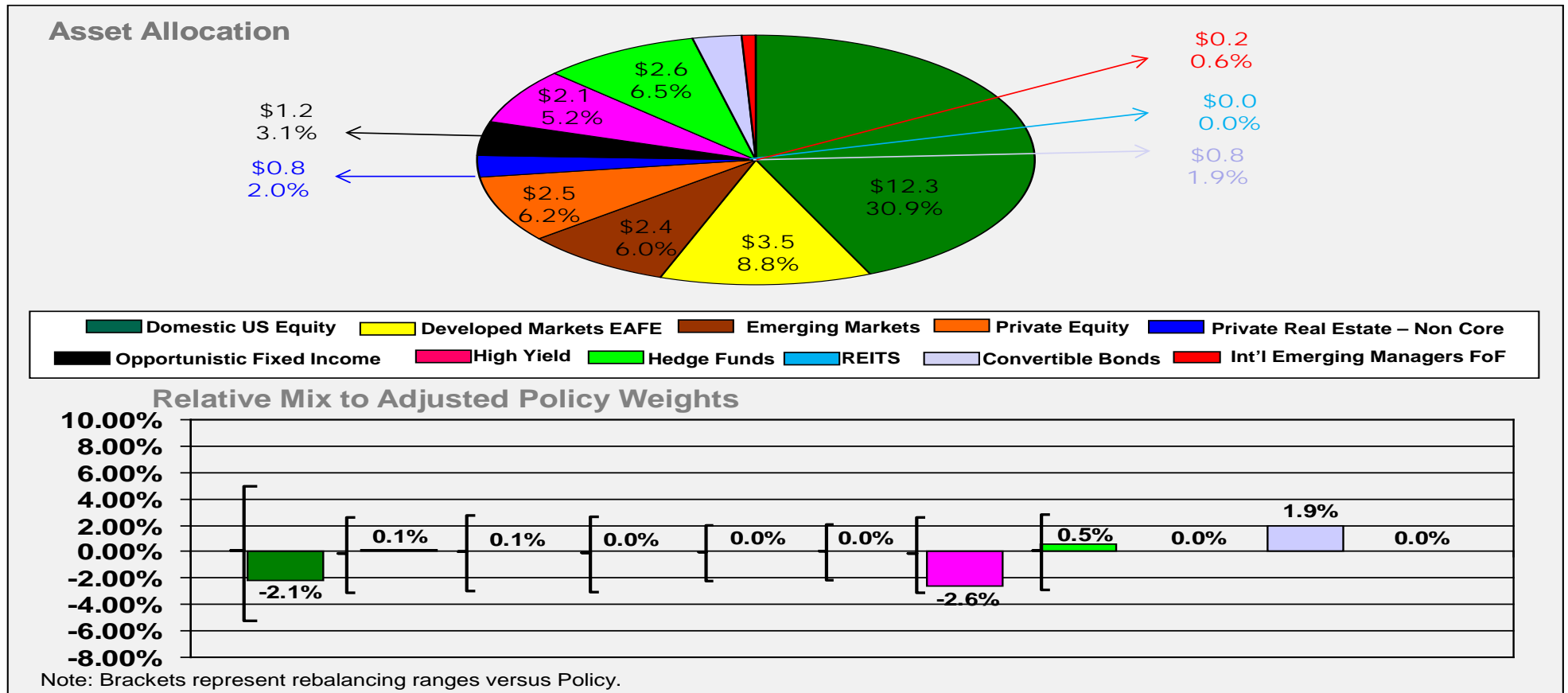


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL POLICE	5.3	5.4	7.2	6.0	7.8	8.4

Portfolio Asset Allocation – Growth

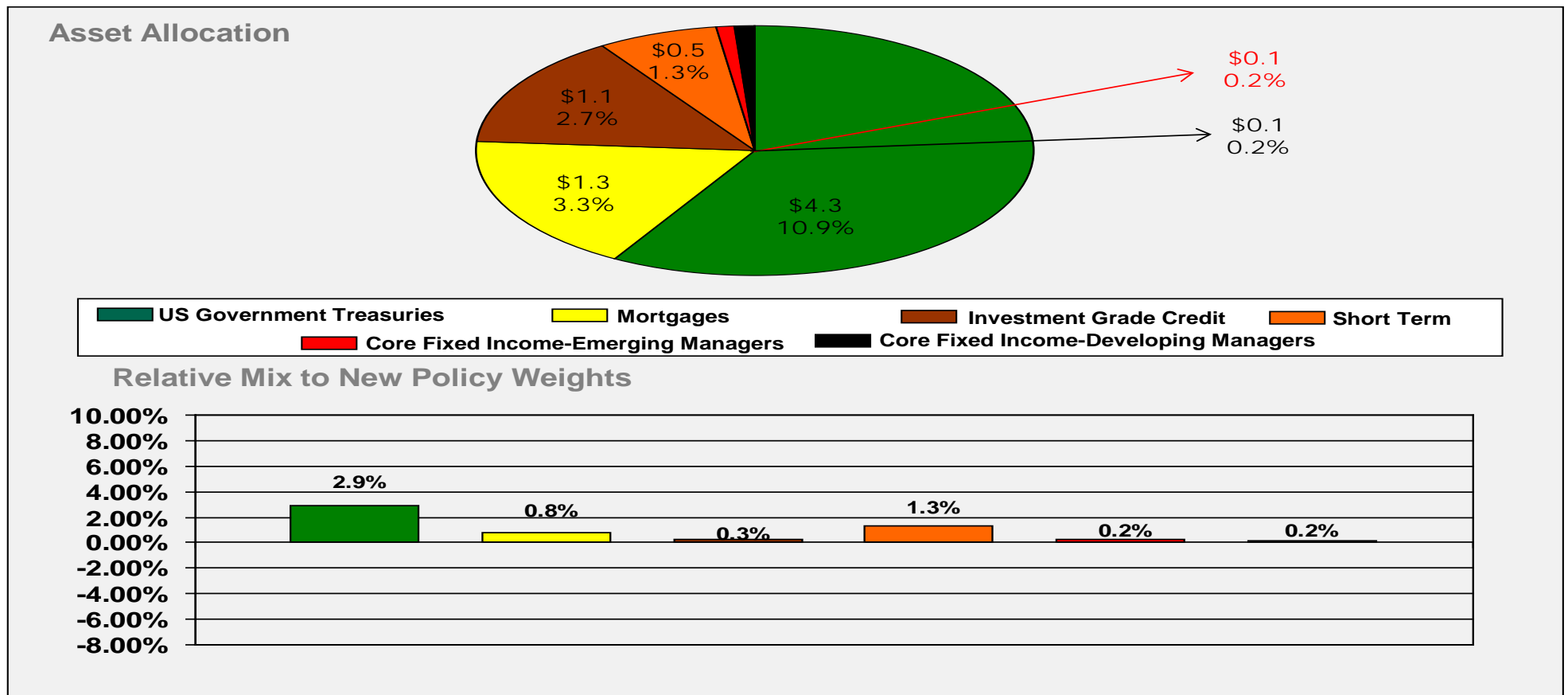


Portfolio Asset Allocation – Growth

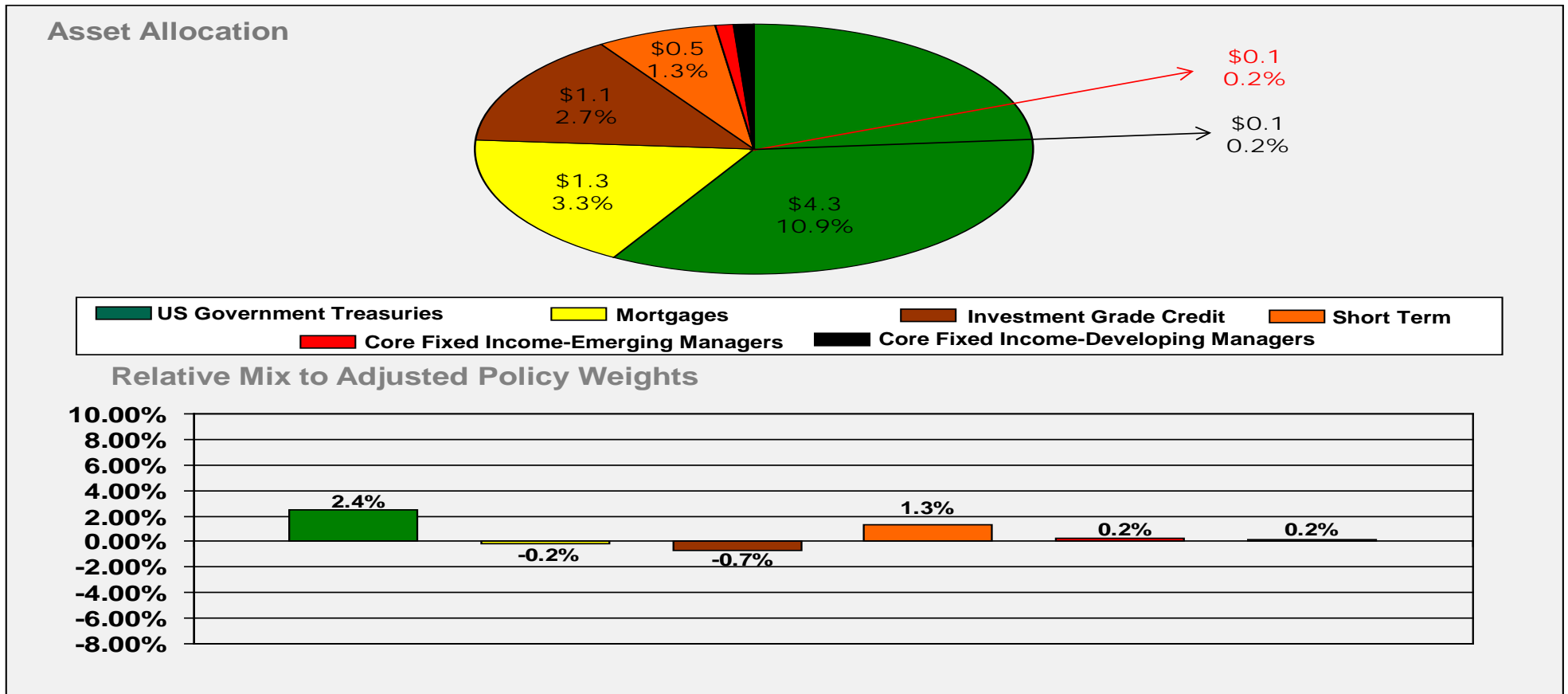


Note: On March 29, 2019 Police's combined Fixed Income and Cash portfolios have a duration of 7 years. The duration of the Barclays US Aggregate Index was 5.8 years on that date.

Portfolio Asset Allocation – Deflation Protection

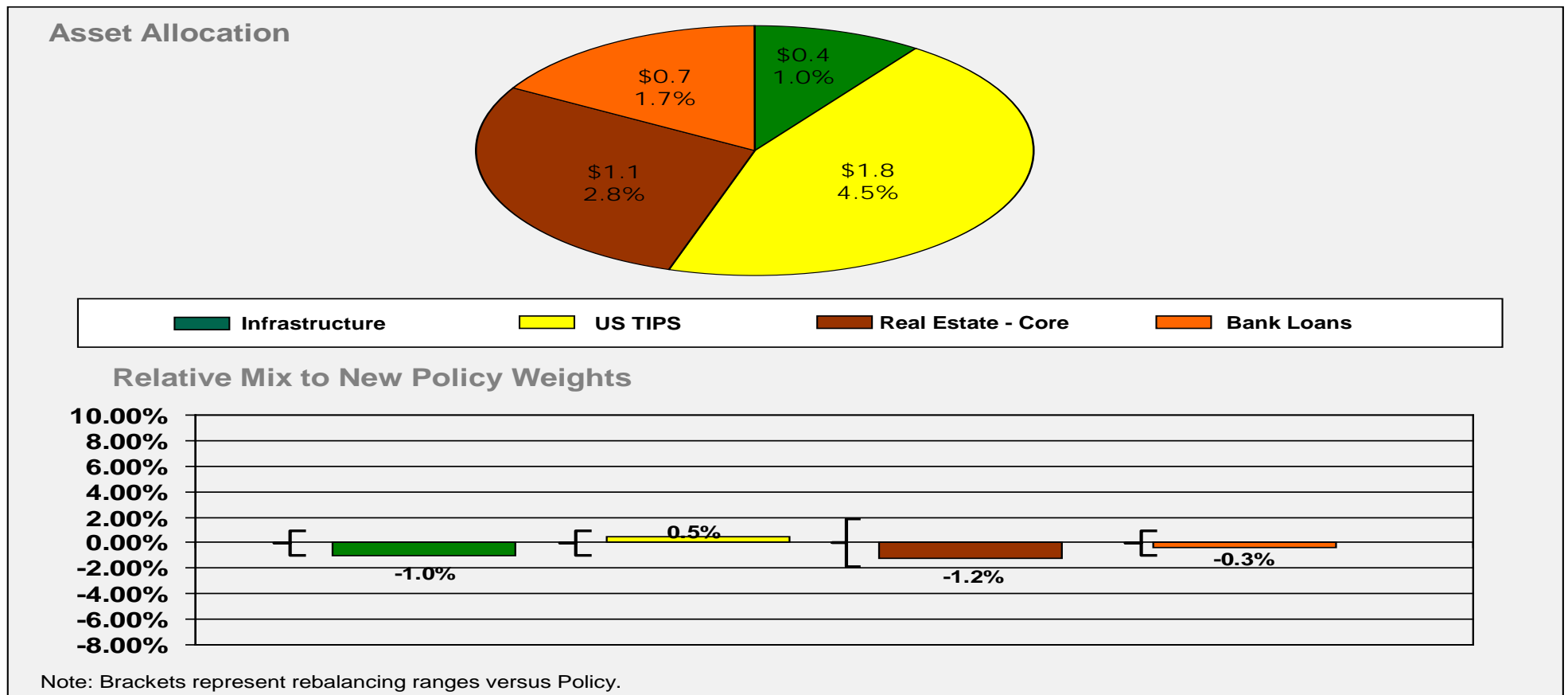


Portfolio Asset Allocation – Deflation Protection

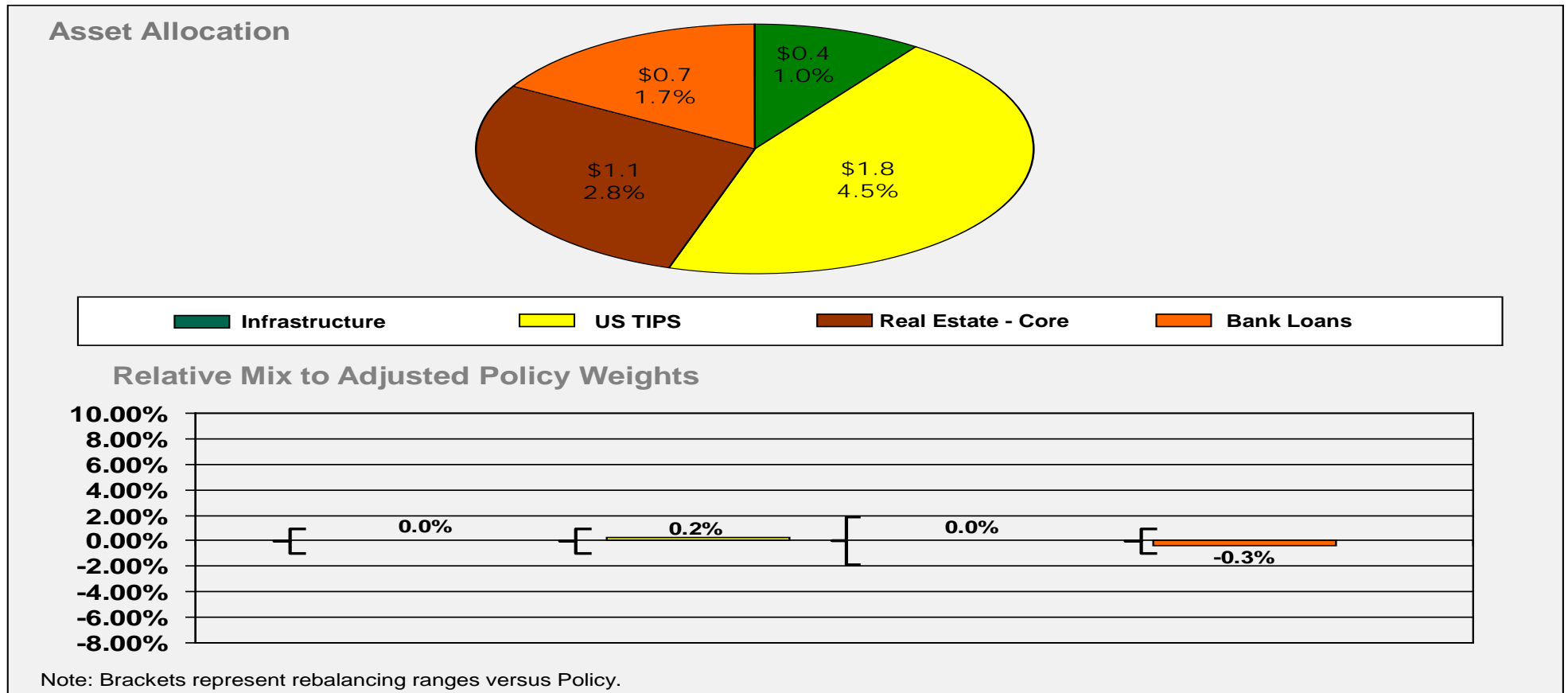


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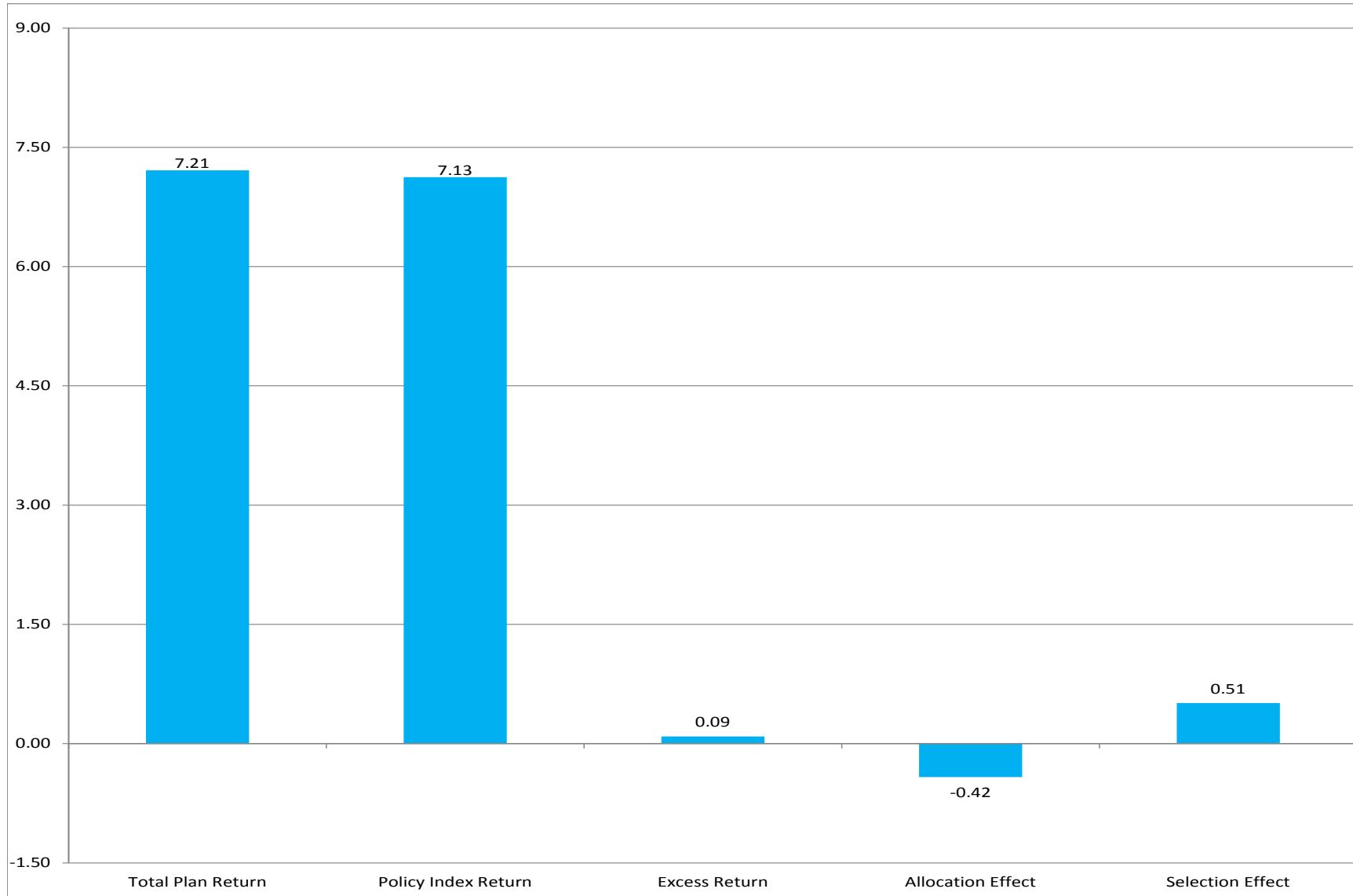
Portfolio Asset Allocation – Inflation Protection

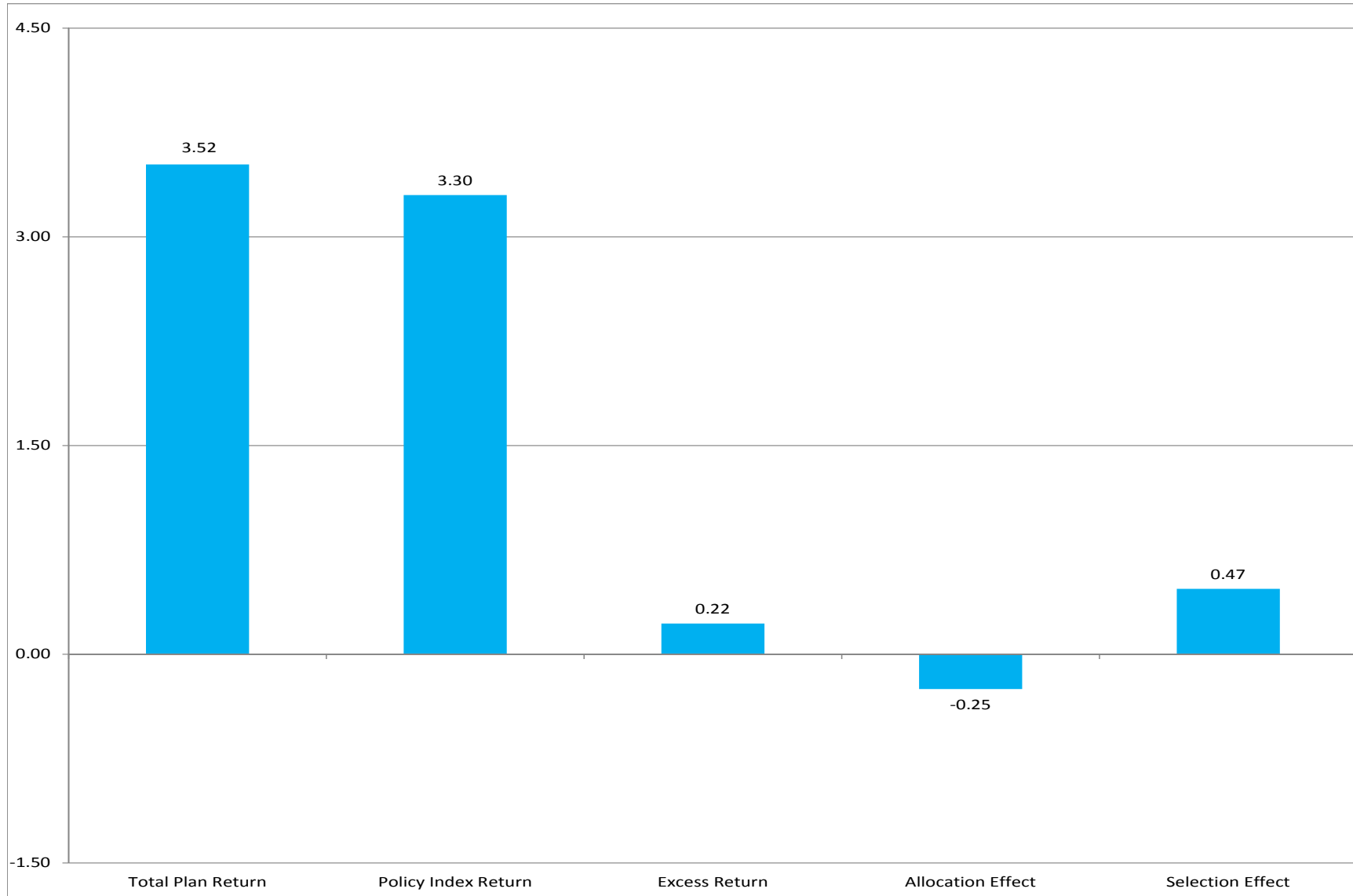


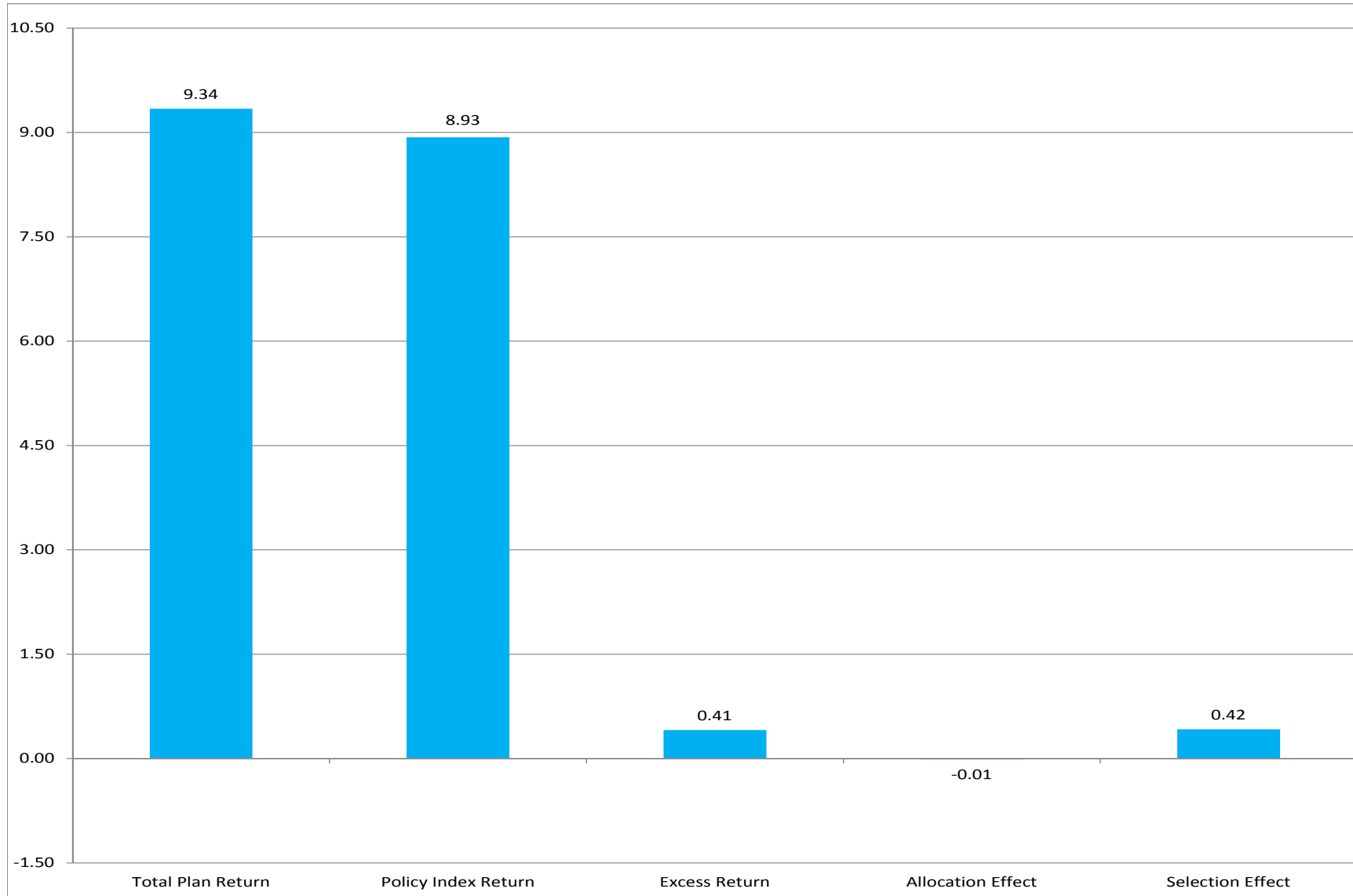
Portfolio Asset Allocation – Inflation Protection



Note: On March 29, 2019 Police's combined Fixed Income and Cash portfolios have a duration of 7 years. The duration of the Barclays US Aggregate Index was 5.8 years on that date.





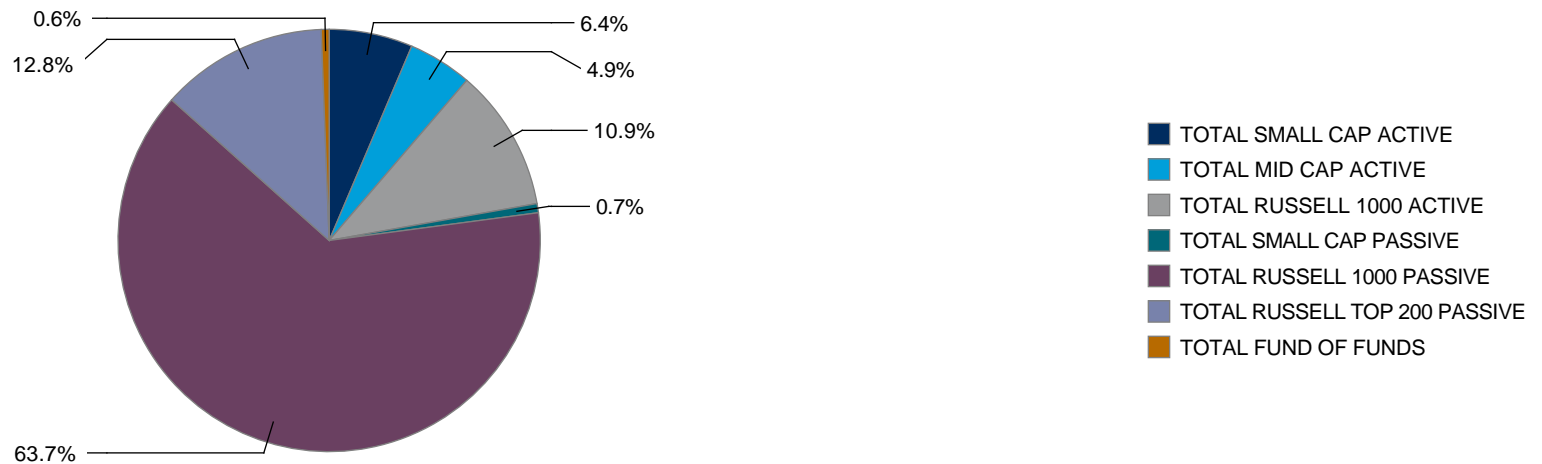


Allocation Effect - Asset Class Breakdown				
	<u>Quarter</u>	<u>FYTD</u>	<u>3 Years</u>	<u>Benchmark</u>
TOTAL POLICE	-0.42	-0.25	-0.01	Police Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.19	-0.11	-0.02	RUSSELL 3000
TOTAL DEVELOPED EQUITY	-0.02	-0.02	-0.01	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	-0.01	-0.02	-0.02	MSCI Emerging Markets
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	-0.01	-0.01	-0.01	HFRI Fund of Funds Composite Index plus 1%
TOTAL REAL ESTATE SECURITIES	0.00	0.00	-0.01	Dow Jones US Select Securities Index
TOTAL PRIVATE EQUITY	0.07	0.01	0.00	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.01	0.00	-0.01	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.01	0.00	0.00	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	-0.19	0.13	-0.04	FTSE USBIG Treasury 1-3 Y Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	-0.02	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	-0.12	0.08	-0.17	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.09	-0.17	0.21	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CREDIT	0.00	-0.02	-0.07	NYC - Investment Grade Credit
TOTAL MORTGAGES	0.00	-0.02	0.02	FTSE MORTGAGE INDEX
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.01	0.00	-0.01	BBG BARC Agg
TOTAL CORE FI- EMERGING MGRS	-0.01	0.00	-0.01	BBG BARC Agg
TOTAL HIGH YIELD	0.00	-0.05	0.10	High Yield Custom Benchmark
TOTAL BANK LOANS	0.01	0.00	0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	-0.01	-0.01	0.01	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	0.05	0.02	0.03	Merrill All US Converts
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.09	-0.04	-0.08	

Selection Effect - Asset Class Breakdown				
	<u>Quarter</u>	<u>FYTD</u>	<u>3 Years</u>	<u>Benchmark</u>
TOTAL POLICE	0.50	0.47	0.42	Police Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.05	-0.14	-0.10	RUSSELL 3000
TOTAL DEVELOPED EQUITY	0.12	0.00	0.22	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	-0.02	0.02	0.03	MSCI Emerging Markets
TOTAL INTERNATIONAL FOF	0.01	-0.01	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	-0.22	0.00	0.04	HFRI Fund of Funds Composite Index plus 1%
TOTAL REAL ESTATE SECURITIES	0.00	0.00	0.00	Dow Jones US Select Securities Index
TOTAL PRIVATE EQUITY	0.86	0.65	0.11	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.00	0.04	0.03	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	-0.01	-0.01	0.04	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.03	0.04	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	0.01	FTSE USBIG Treasury/Agency 1-10 y
TOTAL ACTIVE GOVERNMENT	0.00	0.00	0.00	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.00	0.00	FTSE Treasury 10+
TOTAL INVESTMENT GRADE CREDIT	0.01	0.00	0.01	NYC - Investment Grade Credit
TOTAL MORTGAGES	0.00	0.00	0.00	FTSE MORTGAGE INDEX
TOTAL ETI	0.00	0.01	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.00	0.00	BBG BARC Agg
TOTAL CORE FI- EMERGING MGRS	0.00	0.00	0.00	BBG BARC Agg
TOTAL HIGH YIELD	-0.01	-0.03	-0.03	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	0.00	0.00	BBG BARC Gbl Inf-Lk: US TIPS (Dly)
TOTAL CONVERTIBLE BONDS	-0.06	0.01	-0.05	Merrill All US Converts
TOTAL OPPORTUNISTIC FIXED	-0.16	-0.09	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

Total Domestic Equity Asset Allocations: March 31, 2019

	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL DOMESTIC EQUITY	\$12.3	30.9



	<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 ACTIVE SMALL CAP	5.7	6.4	0.7	13.8	14.6	(0.8)
TOTAL ACTIVE MID CAP	5.0	4.9	(0.1)	19.9	16.5	3.4
TOTAL RUSSELL 1000 ACTIVE	18.0	10.9	(7.1)	11.7	14.0	(2.3)
TOTAL SMALL CAP PASSIVE	1.4	0.7	(0.7)	17.1	14.6	2.5
TOTAL RUSSELL 1000 PASSIVE	56.6	63.7	7.1	14.0	14.0	(0.0)
TOTAL RUSSELL TOP 200 PASSIVE	12.7	12.8	0.1	13.0	13.1	(0.0)
TOTAL EMERGING MANAGERS	0.6	0.6	(0.0)	14.3	14.6	(0.3)

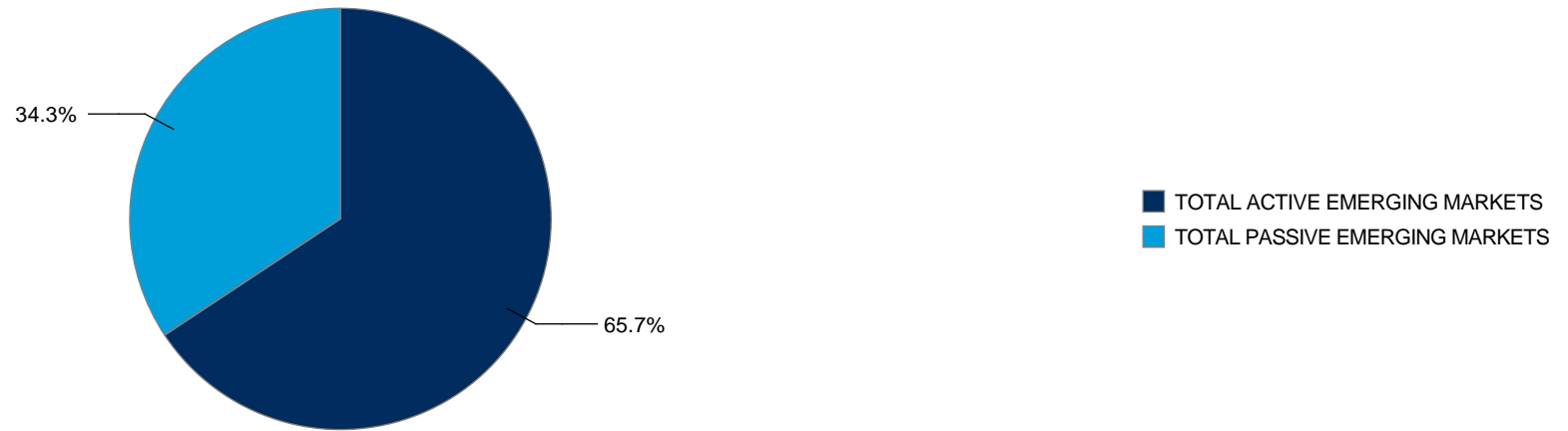
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL WORLD ex-USA	\$3.5	8.8



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	69.03	12.80	10.45	2.35
TOTAL WORLD ex-USA SMALL CAP ACTIVE	11.14	9.80	9.92	(0.12)
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	16.60	10.46	10.45	0.01
TOTAL WORLD ex-USA SMALL CAP PASSIVE	3.23	10.79	10.93	(0.14)
TOTAL WORLD ex-USA	100.00	12.00	10.52	1.49



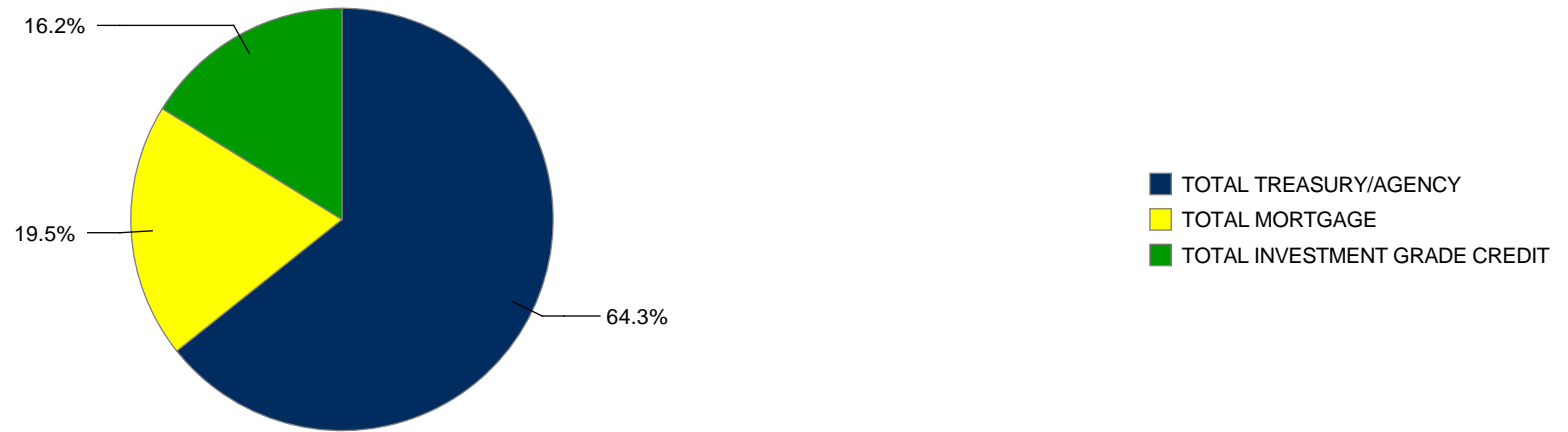
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL EMERGING MARKETS	\$2.4	6.0



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	65.70	9.44	9.92	(0.48)
TOTAL PASSIVE EMERGING MARKETS	34.30	10.04	9.92	0.13
TOTAL EMERGING MARKETS	100.00	9.64	9.92	(0.27)



	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL STRUCTURED + ETI	\$6.7	17.0



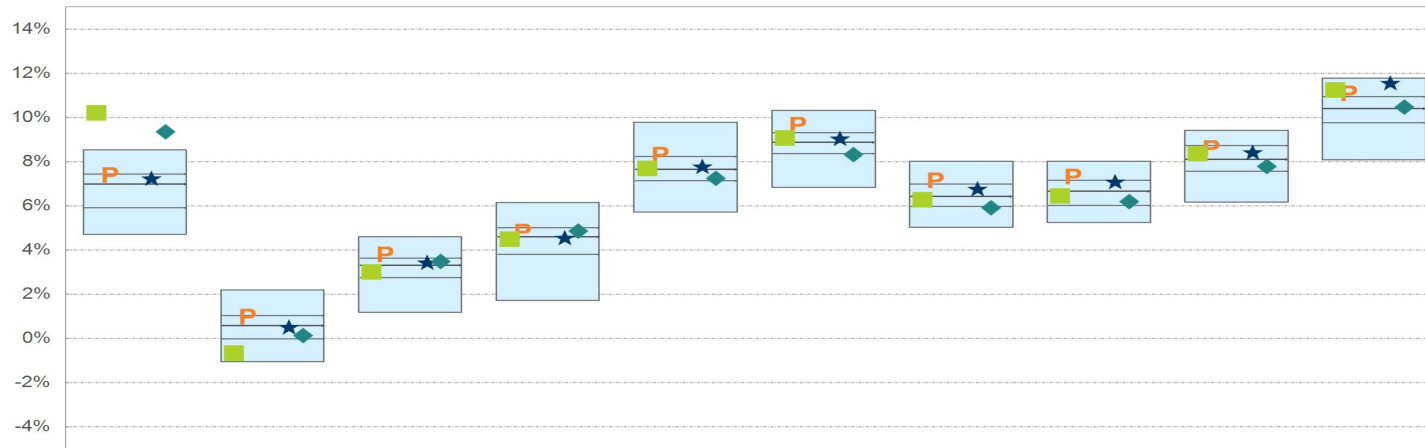
	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL TREASURY/AGENCY	61.54	64.32	2.78	3.33	4.70	(1.37)
TOTAL MORTGAGE	19.23	19.48	0.25	2.46	2.16	0.30
TOTAL INVESTMENT GRADE CREDIT	19.23	16.20	(3.03)	5.02	4.72	0.30

Through March 31, 2019



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
 Cumulative Periods Ending : March 31, 2019



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	8.55	2.20	4.60	6.16	9.78	10.33	8.02	8.02	9.42	11.79
25th	7.44	1.02	3.64	5.00	8.24	9.32	7.00	7.16	8.74	10.96
50th	7.00	0.58	3.31	4.60	7.66	8.89	6.43	6.66	8.11	10.41
75th	5.91	-0.03	2.75	3.81	7.14	8.37	5.97	6.03	7.57	9.77
95th	4.70	-1.06	1.18	1.71	5.72	6.85	5.04	5.25	6.17	8.09
No. Of Obs	45	45	45	45	45	45	45	45	45	41
P Total System - Police	7.28 (38)	0.86 (31)	3.68 (21)	4.72 (40)	8.20 (25)	9.56 (17)	7.03 (23)	7.21 (21)	8.49 (31)	10.98 (20)
★ Police Policy Benchmark	7.13 (38)	0.39 (56)	3.30 (50)	4.42 (54)	7.65 (50)	8.93 (45)	6.64 (40)	6.97 (43)	8.30 (43)	11.45 (10)
■ Public Mkt Equiv 25	10.10 (1)	-0.81 (94)	2.87 (68)	4.36 (54)	7.58 (50)	8.96 (45)	6.16 (70)	6.32 (70)	8.24 (43)	11.13 (14)
◆ Public Mkt Equiv 35	9.22 (1)	0.00 (70)	3.35 (43)	4.74 (40)	7.12 (77)	8.19 (82)	5.79 (82)	6.06 (72)	7.66 (68)	10.34 (52)

Wilshire Trust Universe Comparison Service® (TUCS®)

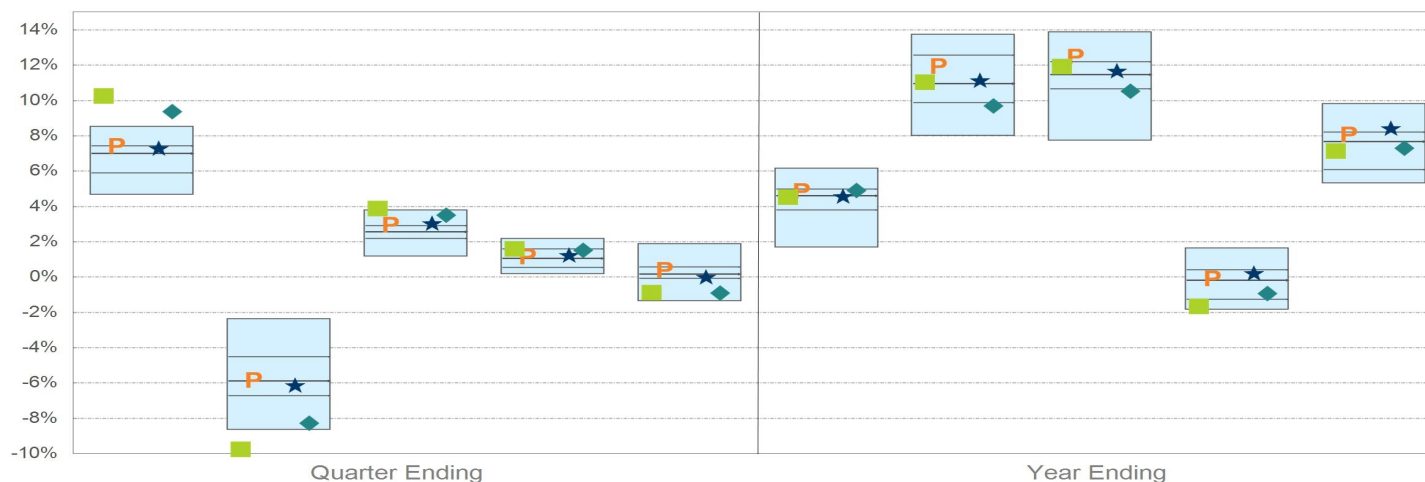


Through March 31, 2019



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: March 31, 2019



Percentile Rankings	Mar 19	Dec 18	Sep 18	Jun 18	Mar 18	Mar 19	Mar 18	Mar 17	Mar 16	Mar 15
5th	8.55	-2.37	3.81	2.18	1.90	6.16	13.77	13.90	1.65	9.84
25th	7.44	-4.52	2.93	1.60	0.58	5.00	12.58	12.21	0.41	8.22
50th	7.00	-5.89	2.57	1.07	0.17	4.60	10.97	11.48	-0.18	7.69
75th	5.91	-6.71	2.20	0.56	-0.07	3.81	9.89	10.68	-1.26	6.09
95th	4.70	-8.63	1.20	0.20	-1.33	1.71	8.03	7.75	-1.83	5.33
No. Of Obs	45	45	45	45	45	45	45	45	45	45
P Total System - Police	7.28 (38)	-5.99 (52)	2.80 (34)	1.00 (52)	0.25 (43)	4.72 (40)	11.81 (36)	12.33 (21)	-0.22 (54)	7.91 (38)
★ Police Policy Benchmark	7.13 (38)	-6.29 (61)	2.90 (27)	1.08 (47)	-0.16 (79)	4.42 (54)	10.98 (47)	11.53 (47)	0.07 (43)	8.26 (23)
■ Public Mkt Equiv 25	10.10 (1)	-9.91 (100)	3.72 (5)	1.45 (34)	-1.05 (94)	4.36 (54)	10.89 (52)	11.78 (40)	-1.83 (96)	6.98 (61)
◆ Public Mkt Equiv 35	9.22 (1)	-8.45 (94)	3.35 (17)	1.35 (36)	-1.06 (94)	4.74 (40)	9.55 (82)	10.36 (77)	-1.08 (72)	7.14 (61)

Wilshire Trust Universe Comparison Service® (TUCS®)

POLICE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

INVESTMENT STYLE (EQUITIES)	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Actual 2018			Total Fees & Expenses in (\$M)		Avg. MV FYTD 09-30-18 (\$MM)	Estimates 2019	
				Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS		Mgmt. Fees (\$M)	Mgmt. Fees in BPS
Total US Equities	19,929.98	9,105.70		4.57	947.43	0.48	10,053.13	5.04	12,515.78	9,759.45	7.80
Small Cap Active											
Small Cap Growth	773.77	4,232.73		54.70	-	-	4,232.73	54.70	878.11	4,923.91	56.07
Small Cap Value	180.16	1,791.83		99.46	-	-	1,791.83	99.46	222.98	2,228.43	99.94
Small Cap Core	289.55	1,586.48		54.79	-	-	1,586.48	54.79	316.46	1,735.92	54.85
Small Cap Fundamental Index	154.86	539.79		34.86	-	-	539.79	34.86	171.86	604.92	35.20
Mid Cap Active											
Mid Cap Growth	149.19	314.62		21.09	-	-	314.62	21.09	166.81	354.64	21.26
Mid Cap Value	587.63	2,494.28		42.45	947.43	-	3,441.71	58.57	621.46	2,621.20	42.18
Mid Cap Core	-	-		-	-	-	-	-	-	-	-
Russell 1000 Fundamental	290.86	1,608.55		55.30	-	-	1,608.55	55.30	288.40	1,616.39	56.05
Active Emerging Managers (U.S. Equities)	296.77	885.73		29.85	947.43	31.93	1,833.16	61.77	333.07	1,004.81	30.17
Total US Active Equities	2,792.13	8,665.16		31.03	947.43	3.39	9,612.59	34.43	2,958.08	9,509.01	32.15
Small Cap Passive											
Small Cap Passive	180.69	7.74		0.43	-	-	7.74	0.43	123.57	5.23	0.42
Russell / S&P Passive											
Russell 1000 Growth Passive	2,193.09	99.21		0.45	-	-	99.21	0.45	2.70	-	-
Russell 1000 Value Passive	2,108.90	77.16		0.37	-	-	77.16	0.37	2.93	-	-
Russell 1000 Core Passive	8,051.98	37.64		0.05	-	-	37.64	0.05	7,745.32	153.96	0.20
Passive Russell 3000	3,043.77	197.91		0.65	-	-	197.91	0.65	-	-	-
Passive S&P 500	-	-		-	-	-	-	-	-	-	-
Passive Russell Top 200	1,559.42	20.89		0.13	-	-	20.89	0.13	1,683.18	91.25	0.54
Total US Passive Equities	17,137.85	440.54		0.26	-	-	440.54	0.26	9,557.70	250.44	0.26

POLICE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Actual 2018							Estimates 2019			
	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09-30- 18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
Total International Equities	6,540.21	17,632.03		26.96	2,945.93	4.50	20,577.96	31.46	6,331.10	16,454.13	25.99
Active EAFE Equities	2,913.29	8,884.62		30.50	-	-	8,884.62	30.50	2,934.02	9,082.25	30.95
World Ex-USA Large & Mid Active	2,473.43	6,745.04		27.27	-	-	6,745.04	27.27	2,507.07	6,975.91	27.82
World Ex-USA Small Cap Active	439.51	2,139.58		48.68	-	-	2,139.58	48.68	426.62	2,106.34	49.37
Total World Ex USA	0.35	-		-	-	-	-	-	0.34	-	-
NON-U.S. Environmental Managers	59.07	545.99		92.43	2,945.93	498.68	3,491.92	591.11	4.15	-	-
Active Emerging Markets	1,644.50	6,843.86		41.62	-	-	6,843.86	41.62	1,564.36	6,188.66	39.56
Total Active Int'l Fund of Funds	169.01	804.18		47.58	-	-	804.18	47.58	162.11	803.31	49.55
Total Active International Equities	4,785.88	17,078.66		35.69	2,945.93	498.68	20,024.59	41.84	4,664.64	16,074.23	34.46
Int'l Passive Equities											
World Ex-USA Small Cap Passive	119.88	58.53		4.88	-	-	58.53	4.88	120.71	60.44	5.01
World Ex-USA Large & Mid Cap Passive	657.07	74.32		1.13	-	-	74.32	1.13	661.68	76.92	1.16
Passive Emerging Markets	977.38	420.53		4.30	-	-	420.53	4.30	884.08	242.56	2.74
Total Int'l Passive Equities	1,754.33	553.38		3.15	-	-	553.38	3.15	1,666.46	379.91	2.28
REITS Active Equities	46.68	54.37		11.65	-	-	54.37	11.65	0.16	-	-

POLICE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Actual 2018			Total Fees & Expenses in (\$M)		Estimates 2019		
				Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS	Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09-30-18 (\$MM)	Mgmt. Fees (\$M)	Mgmt. Fees in BPS
INVESTMENT STYLE (FIXED INCOME)											
Total Fixed Income	12,135.69	14,868.46		12.25	37.73	0.03	14,906.19	12.28	13,322.53	14,489.17	10.88
Structured Program	6,424.64	3,333.01		5.19	37.73	0.06	3,370.73	5.25	7,392.76	2,761.07	3.73
Government Treas/Agency Sector	2,363.28	1,017.90		4.31	37.73	0.16	1,055.62	4.47	3,922.12	941.44	2.40
Long Duration Treasury	1,307.08	127.56		0.98	-	-	127.56	0.98	1,349.77	136.82	1.01
Mortgage Sector	902.89	413.02		4.57	-	-	413.02	4.57	871.15	399.36	4.58
Investment Grade Credit Sector	1,851.39	1,774.53		9.58	-	-	1,774.53	9.58	1,249.71	1,283.45	10.27
Developing Managers	73.48	147.11		20.02	-	-	147.11	20.02	73.12	147.72	20.20
Emerging Managers	78.71	269.58		34.25	-	-	269.58	34.25	78.50	271.45	34.58
TIPS	1,681.90	307.00		1.83	-	-	307.00	1.83	1,738.33	308.75	1.78
Active TIPS Managers	420.61	232.82		5.54	-	-	232.82	5.54	434.83	242.94	5.59
Passive TIPS Managers	1,261.29	74.18		0.59	-	-	74.18	0.59	1,303.49	65.81	0.50
High Yield	1,827.19	5,717.09		31.29	-	-	5,717.09	31.29	1,839.00	5,447.76	29.62
Bank Loans	634.73	1,901.56		29.96	-	-	1,901.56	29.96	654.68	1,952.30	29.82
Convertible Bonds	680.68	2,410.74		35.42	-	-	2,410.74	35.42	748.47	2,808.57	37.52
ETI - Access - RBC	79.83	148.11		18.55	-	-	148.11	18.55	85.28	157.28	18.44
ETI - AFL-CIO HIT	157.04	634.26		40.39	-	-	634.26	40.39	155.85	634.26	40.70
Total Public Markets (Externally managed)	38,155.07	41,660.57		10.92	3,931.09	1.03	45,591.65	11.95	31,613.03	40,702.76	12.88
Other ETI Programs	157.68	-		-	-	-	-	-	152.84	-	-
In-House Short Term	339.80	-		-	-	-	-	-	403.70	-	-
Total Public Markets	38,652.55	41,660.57		10.78	3,931.09	1.02	45,591.65	11.80	32,169.57	40,702.76	12.65

POLICE RETIREMENT SYSTEM
ACTUAL FEES FOR FISCAL YEAR ENDED JUNE 30, 2018 AND ESTIMATED FEES FOR FY 2019 UPDATED THROUGH SEPTEMBER 2018

	Avg. MV FY 2018 (\$MM)	Mgmt. Fees (\$M)	Partnership Expenses (\$M)	Actual 2018			Total Fees & Expenses in (\$M)	Total Fees & Expenses in BPS	Avg. MV FYTD 09-30-18 (\$MM)	Estimates 2019	
				Mgmt. Fees / Partnership Expenses in BPS	Incentive Fees in (\$M)	Incentive Fees in BPS				Mgmt. Fees (\$M)	Mgmt. Fees in BPS
INVESTMENT STYLE (PRIVATE MARKETS)											
Hedge Funds	2,047.40	22,634.55	-	110.55	29,035.95	141.82	51,670.50	252.37	2,365.19	25,350.69	107.18
Private Equity	2,437.40	26,410.92	9,797.65	148.55	60,278.07	247.31	96,486.65	395.86	2,476.99	50,255.71	202.89
Private Real Estate	1,804.04	18,899.87	6,302.52	139.70	21,740.83	120.51	46,943.21	260.21	1,840.06	20,208.50	109.83
Infrastructure	205.36	5,560.18	2,307.06	140.31	690.49	33.62	8,557.73	152.63	280.49	7,265.44	117.56
Opportunistic Fixed Income	1,122.20	9,908.56	7,578.71	155.83	3,069.97	27.36	20,557.24	183.19	1,175.70	10,000.00	85.06
Total Private Markets	7,616.40	83,414.08	25,985.95	143.64	114,815.31	150.75	224,215.33	294.38	8,138.43	113,080.35	138.95
Total Overall	38,431.13	125,074.64	25,985.95	39.31	118,746.39	30.90	269,806.98	70.21	40,308.00	153,783.10	38.15

The overall carried interest and incentive fees paid by POLICE in Fiscal Year 2018: 30.9 BPS

General Footnotes:

- 1) Private Markets data reflect: carried interest realized and/or Incentive fees as stated by its corresponding partnership. Management fees reported are inclusive of partnership expenses associated with the partnership for the stated fiscal year.
- 2) Infrastructure's expense data is based off the total committed amounts rather than current market value due to its early fund life juncture.
- 3) Estimated Fees for the Public Markets data does not take into account major rebalancing shifts and is calculated at a fixed NAV. Estimates fees for the Private Markets data is based solely off gross management fee data and is not inclusive of any offsets. Both estimates are considered to be equitably conservative and should be construed as such. Estimates for FY 2018 for Private Equity is provided by the Consultant.

**NYC POLICE DEPARTMENT PENSION FUND
 SECURITIES LENDING INCOME
 March 31, 2019**

	U. S. FIXED INCOME	U. S. EQUITY	INTERNATIONAL EQUITY	TOTAL
1989	254,000	-	-	254,000
1990	288,000	-	-	288,000
1991	464,000	-	-	464,000
1992	996,000	138,000	126,000	1,260,000
1993	1,852,000	434,000	203,000	2,489,000
1994	1,846,000	815,000	317,000	2,978,000
1995	1,465,000	888,000	224,000	2,577,000
1996	1,465,000	1,051,000	379,000	2,895,000
1997	1,632,000	1,793,000	599,000	4,024,000
1998	2,770,000	2,517,000	1,006,000	6,293,000
1999	2,681,000	2,713,000	1,184,000	6,578,000
2000	2,697,000	2,899,000	1,520,000	7,116,000
2001	3,947,000	3,595,000	1,980,000	9,522,000
2002	2,646,000	3,401,000	1,725,000	7,772,000
2003	1,238,000	2,257,000	1,859,000	5,354,000
2004	1,515,000	2,306,000	2,097,000	5,918,000
2005	2,333,000	3,172,000	2,503,000	8,008,000
2006	2,104,000	5,043,000	2,243,000	9,390,000
2007	4,582,000	8,425,000	2,727,000	15,734,000
2008	13,856,000	16,383,000	3,872,000	34,111,000
2009	5,163,000	9,110,000	2,695,000	16,968,000
2010	2,405,000	5,813,000	1,979,000	10,197,000
2011	3,060,000	8,287,000	3,253,000	14,600,000
2012	4,213,000	10,047,000	2,545,000	16,805,000
2013	2,980,000	11,363,000	2,255,000	16,598,000
2014	3,478,000	6,803,000	5,786,000	16,067,000
2015	3,692,000	7,281,000	7,489,000	18,462,000
2016	4,070,000	11,406,000	6,506,000	21,982,000
2017	5,912,000	8,631,000	4,480,000	19,023,000
2018	7,031,949	6,808,922	3,412,832	17,253,704
2019 (3 months)	1,161,345	1,812,380	797,469	3,771,194
Since Inception	<u>93,797,294</u>	<u>145,192,302</u>	<u>65,762,302</u>	<u>304,751,898</u>



**New York City
Police Pension Fund, Subchapter Two**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	POLICE-TOTAL PORTFOLIO - GROSS	39,729	100.00	7.28	3.68	7.28	(2.15)	16.80	9.09	0.47	7.60	9.56	7.21	10.98	8.57	07/01/1987
	POLICE - ESTIMATED INVESTMENT FEES			(0.07)	(0.17)	(0.07)	(0.18)	(0.24)	(0.23)	(0.23)	(0.26)	(0.22)	(0.23)			
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.07)	(0.03)	(0.10)	(0.10)	(0.11)	(0.13)	(0.14)	(0.10)	(0.11)			
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.04)	(0.10)	(0.04)	(0.08)	(0.14)	(0.12)	(0.10)	(0.12)	(0.12)	(0.12)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL PORTFOLIO - NET MGR			7.21	3.52	7.21	(2.33)	16.56	8.86	0.23	7.34	9.34	6.98			
	POLICE POLICY BENCHMARK			7.13	3.30	7.13	(2.67)	16.04	9.23	0.41	8.16	8.93	6.97	11.45		
	EXCESS RETURN			0.09	0.21	0.09	0.35	0.52	(0.37)	(0.18)	(0.81)	0.41	0.01	(0.47)		
EQUITY RETURN DETAIL																
18	POLICE-TOTAL EQUITY (INCLUDES PE & RA) - GROSS	25,780	64.89	9.25	3.20	9.25	(3.54)	22.30	10.57	0.67	8.27	12.06	8.79	13.52	8.06	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.09)	(0.21)	(0.09)	(0.21)	(0.30)	(0.27)	(0.29)	(0.30)	(0.27)	(0.28)			
	EST MANAGEMENT FEES			(0.09)	(0.21)	(0.09)	(0.21)	(0.30)	(0.27)	(0.29)	(0.30)	(0.27)	(0.28)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL EQUITY (INCL PE & RA) - NET MGR			9.17	2.99	9.17	(3.75)	22.00	10.30	0.38	7.96	11.79	8.51			
26	POLICE-TOTAL DOMESTIC EQUITY - GROSS	12,294	30.94	13.90	4.28	13.90	(5.47)	20.57	13.13	0.03	11.42	13.27	9.92	15.83	11.07	12/01/1984
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.02)	(0.07)	(0.08)	(0.10)	(0.12)	(0.13)	(0.08)	(0.10)			
	POLICE-TOTAL DOMESTIC EQUITY - NET MGR			13.88	4.22	13.88	(5.54)	20.49	13.03	(0.10)	11.29	13.19	9.82			
	RUSSELL 3000 (DAILY)			14.04	4.70	14.04	(5.24)	21.13	12.74	0.48	12.56	13.48	10.36	16.00	11.15	
	EXCESS RETURN			(0.16)	(0.47)	(0.16)	(0.30)	(0.64)	0.29	(0.57)	(1.26)	(0.29)	(0.54)	(0.16)	(0.08)	
36	POLICE-TOTAL SMALL CAP ACTIVE - GROSS	787	1.98	13.95	(4.02)	13.95	(9.61)	14.39	23.82	(2.65)	3.34	12.75	7.82	16.22	8.67	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.16)	(0.40)	(0.16)	(0.50)	(0.62)	(0.70)	(0.60)	(0.63)	(0.62)	(0.62)			
	POLICE-TOTAL SMALL CAP ACTIVE - NET MGR			13.79	(4.42)	13.79	(10.11)	13.76	23.12	(3.25)	2.71	12.13	7.20			
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89	12.92	7.05	15.36	8.04	
	EXCESS RETURN			(0.80)	0.87	(0.80)	0.90	(0.88)	1.81	1.17	(2.18)	(0.79)	0.14	0.86	0.63	
46	POLICE-TOTAL SMALL CAP PASSIVE - GROSS	86	0.22	17.08	(3.28)	17.08	(9.65)	16.88	18.57	(3.56)	5.01	14.52	7.98	9.15	10/01/2013	
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)			
	POLICE-TOTAL SMALL CAP PASSIVE - NET MGR			17.08	(3.28)	17.08	(9.66)	16.87	18.57	(3.57)	5.01	14.51	7.98			
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89	12.92	7.05	8.24		
	EXCESS RETURN			2.50	2.01	2.50	1.36	2.22	(2.74)	0.85	0.11	1.59	0.92	0.91		

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
58	POLICE-TOTAL MIDCAP - GROSS	602	1.51	20.03	(0.82)	20.03	(14.95)	23.25	13.04	(0.58)	10.27	12.08	8.57	16.34	8.51	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.12)	(0.31)	(0.12)	(0.36)	(0.45)	(0.45)	(0.36)	(0.34)	(0.44)	(0.41)			
	POLICE-TOTAL MIDCAP - NET MGR			19.90	(1.13)	19.90	(15.30)	22.80	12.59	(0.95)	9.93	11.63	8.16			
	RUSSELL MIDCAP (DAILY)			16.54	3.55	16.54	(9.06)	18.52	13.80	(2.44)	13.22	11.82	8.81	16.88	9.64	
	EXCESS RETURN			3.37	(4.68)	3.37	(6.25)	4.28	(1.20)	1.49	(3.29)	(0.18)	(0.64)	(0.54)	(1.12)	
78	POLICE-TOTAL RUSSELL 1000 ACTIVE - GROSS	1,343	3.38	11.70	2.86	11.70	(6.85)	17.41	14.77	(1.87)	10.98	10.82	8.59	15.10	8.40	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.03)	(0.09)	(0.03)	(0.11)	(0.18)	(0.10)	(0.15)	(0.25)	(0.13)	(0.15)			
	POLICE-TOTAL RUSSELL 1000 ACTIVE - NET MGR			11.67	2.77	11.67	(6.96)	17.23	14.66	(2.01)	10.73	10.69	8.43			
	RUSSELL 1000 (DAILY)			14.00	5.54	14.00	(4.78)	21.69	12.05	0.92	13.24	13.52	10.63	16.05	8.74	
	EXCESS RETURN			(2.33)	(2.77)	(2.33)	(2.17)	(4.46)	2.61	(2.93)	(2.51)	(2.83)	(2.20)	(0.95)	(0.33)	
88	POLICE-TOTAL RUSSELL 1000 PASSIVE - GROSS	7,834	19.72	13.97	5.66	13.97								9.63	04/01/2018	
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)								(0.00)		
	POLICE-TOTAL RUSSELL 1000 PASSIVE - NET MGR			13.97	5.66	13.97								9.63		
	RUSSELL 1000 (DAILY)			14.00	5.54	14.00								9.30		
	EXCESS RETURN			(0.03)	0.12	(0.03)								0.33		
98	POLICE-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	1,573	3.96	13.02	6.36	13.02								9.87	05/01/2018	
	ESTIMATED INVESTMENT FEES			0.00	(0.00)	0.00								(0.01)		
	POLICE-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			13.02	6.35	13.02								9.85		
	RUSSELL TOP 200 INDEX (DAILY)			13.05	6.32	13.05								9.85		
	EXCESS RETURN			(0.03)	0.03	(0.03)								0.01		
108	POLICE-TOTAL FUND OF FUNDS - GROSS	70	0.18	14.47	(1.63)	14.47	(7.81)							7.09	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.14)	(0.37)	(0.14)	(0.46)							(0.55)		
	POLICE-TOTAL FUND OF FUNDS - NET MGR			14.32	(2.00)	14.32	(8.27)							6.53		
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)							6.51		
	EXCESS RETURN			(0.26)	3.30	(0.26)	2.74							0.03		

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EQUITY RETURN DETAIL																
120	POLICE-TOTAL WORLD ex-USA - GROSS	3,508	8.83	12.07	(3.08)	12.07	(14.42)	31.18	4.17	(0.56)	(4.25)	9.92	4.43	10.21	6.02	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.07)	(0.18)	(0.07)	(0.21)	(0.36)	(0.28)	(0.28)	(0.28)	(0.29)	(0.28)			
	EST MANAGEMENT FEES			(0.07)	(0.18)	(0.07)	(0.21)	(0.36)	(0.28)	(0.28)	(0.28)	(0.29)	(0.28)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL WORLD ex-USA - NET MGR			12.00	(3.26)	12.00	(14.63)	30.82	3.88	(0.84)	(4.52)	9.63	4.15			
	WORLD EX USA CUSTOM BM			10.52	(3.22)	10.52	(14.68)	26.40	1.15	0.49	(4.90)	7.40	2.67	9.44	5.41	
	EXCESS RETURN			1.49	(0.04)	1.49	0.05	4.42	2.73	(1.34)	0.38	2.23	1.48	0.77	0.61	
130	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	2,421	6.09	12.88	(2.09)	12.88	(13.50)	31.96	4.83	(3.67)	(4.50)	11.13	4.45		4.59	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.08)	(0.20)	(0.08)	(0.24)	(0.35)	(0.30)	(0.27)	(0.27)	(0.30)	(0.29)		(0.29)	
	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			12.80	(2.30)	12.80	(13.74)	31.61	4.54	(3.94)	(4.77)	10.83	4.16		4.30	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			10.45	(2.41)	10.45	(14.09)	25.18	1.00	(0.81)	(4.90)	7.34	2.37		2.74	
	EXCESS RETURN			2.35	0.12	2.35	0.35	6.42	3.54	(3.13)	0.14	3.49	1.79		1.57	
140	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	391	0.98	9.92	(8.79)	9.92	(18.37)	35.53	3.16	10.89	(4.79)	7.68	5.09		7.50	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.13)	(0.33)	(0.13)	(0.40)	(0.62)	(0.51)	(0.55)	(0.48)	(0.51)	(0.51)			
	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			9.80	(9.12)	9.80	(18.76)	34.90	2.65	10.34	(5.26)	7.17	4.58			
	S&P EPAC SMALL CAP USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)	6.75	4.12		6.58	
	EXCESS RETURN			(0.12)	(0.57)	(0.12)	(0.18)	1.44	1.32	1.76	(1.83)	0.42	0.46		0.92	
150	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	113	0.28	10.80	(7.74)	10.80	(17.95)	33.51	2.79	9.88		7.82	4.83		5.67	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.02)	(0.08)	(0.02)	(0.02)		(0.04)	(0.03)		(0.03)	
	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			10.79	(7.76)	10.79	(17.97)	33.44	2.77	9.86		7.78	4.80		5.64	
	WORLD EX USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)	33.31	2.18	9.59		7.59	4.53		5.37	
	EXCESS RETURN			(0.14)	0.03	(0.14)	0.10	0.12	0.59	0.27		0.19	0.27		0.28	
160	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - GROSS	582	1.47	10.46	(2.44)	10.46	(14.04)	24.59	1.31	(0.53)	(4.73)	7.28	2.41		4.36	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)			
	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - NET MGR			10.46	(2.44)	10.46	(14.05)	24.58	1.30	(0.54)	(4.75)	7.27	2.40			
	NYC CUSTOM WORLD EX US INDEX			10.45	(2.41)	10.45	(14.09)	24.12	1.00	(0.81)	(4.90)	7.04	2.19		4.09	
	EXCESS RETURN			0.01	(0.03)	0.01	0.04	0.47	0.30	0.27	0.15	0.23	0.21		0.27	

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EQUITY RETURN DETAIL																
172	POLICE-EMERGING MARKETS ACTIVE - GROSS	1,565	3.94	9.54	1.32	9.54	(14.52)	39.79	12.03	(14.20)	(0.62)	11.93	4.56	9.93	8.63	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.11)	(0.30)	(0.11)	(0.34)	(0.61)	(0.52)	(0.42)	(0.49)	(0.48)	(0.47)			
	POLICE-EMERGING MARKETS ACTIVE - NET MGR			9.44	1.02	9.44	(14.86)	39.18	11.51	(14.62)	(1.11)	11.46	4.09			
	MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)	10.68	3.68	8.94	7.92	
	EXCESS RETURN			(0.48)	0.42	(0.48)	(0.29)	1.89	0.32	0.30	1.08	0.77	0.41	0.99	0.71	
182	POLICE-EMERGING MARKETS PASSIVE - GROSS	817	2.06	10.05	0.73	10.05	(14.46)	37.41	11.23	(14.86)	(2.23)	10.77	3.80	1.24	04/01/2011	
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	0.00	(0.15)	(0.06)	(0.05)	(0.06)	(0.05)	(0.06)			
	POLICE-EMERGING MARKETS PASSIVE - NET MGR			10.04	0.71	10.04	(14.45)	37.26	11.17	(14.91)	(2.29)	10.71	3.74			
	MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)	10.68	3.68	1.18		
	EXCESS RETURN			0.13	0.12	0.13	0.11	(0.02)	(0.02)	0.00	(0.10)	0.03	0.06	0.06	0.06	
192	POLICE-TOTAL INTERNATIONAL FUND OF FUND - GROSS	237	0.60	11.44	(3.78)	11.44	(14.63)							5.50	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.14)	(0.35)	(0.14)	(0.42)							(0.52)		
	POLICE-TOTAL INTERNATIONAL FUND OF FUND - NET MGR			11.30	(4.12)	11.30	(15.05)							4.98		
	MSCI ACWI EX USA IMI NET			10.30	(2.42)	10.30	(14.76)							4.51		
	EXCESS RETURN			0.99	(1.71)	0.99	(0.29)							0.47		

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EQUITY RETURN DETAIL															
210	POLICE-TOTAL HEDGE FUNDS* - NET MGR	2,596	6.53	1.81	0.46	1.81	2.12	9.66	3.00	(1.65)	5.31	5.95	3.78	3.74	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			4.89	0.45	4.89	(3.06)	8.84	1.52	0.73	4.40	4.98	3.23	3.52	
	EXCESS RETURN			(3.08)	0.01	(3.08)	5.17	0.82	1.48	(2.39)	0.91	0.97	0.56	0.22	
220	POLICE-TOTAL DIRECT HEDGE FUNDS* - NET MGR	2,460	6.19	1.81	0.57	1.81	2.31	10.38	2.79	(1.34)	5.71	6.17	4.08	4.74	01/01/2012
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			4.89	0.45	4.89	(3.06)	8.84	1.52	0.73	4.40	4.98	3.23	4.50	
	EXCESS RETURN			(3.08)	0.13	(3.08)	5.36	1.54	1.28	(2.07)	1.31	1.19	0.85	0.24	
230	POLICE-TOTAL PERMAL HEDGE FUNDS* - NET MGR	136	0.34	1.69	(1.58)	1.69	(0.71)	2.18	4.58	(3.52)	3.12	3.01	1.16	2.09	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			4.89	0.45	4.89	(3.06)	8.84	1.52	0.73	4.40	4.98	3.23	3.52	
	EXCESS RETURN			(3.20)	(2.02)	(3.20)	2.35	(6.66)	3.07	(4.25)	(1.28)	(1.97)	(2.07)	(1.43)	

*Information provided by Alpha Frontier.

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
248	POLICE-TOTAL PRIVATE EQUITY (TIME WEIGHTED)	2,479	6.24	(0.37)	9.38	(0.37)	18.79	21.49	10.07	11.70	14.94	15.71	14.20	13.35	13.43	04/01/2004
	NYC R3000 +3% LAGGED			(13.63)	(2.48)	(13.63)	21.06	22.22	18.37	2.49	21.24	12.22	11.13	17.02	12.22	
	EXCESS RETURN			13.26	11.86	13.26	(2.27)	(0.73)	(8.30)	9.21	(6.31)	3.50	3.07	(3.67)	1.22	
258	POLICE-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED)	1,902	4.79	1.34	6.21	1.34	11.19	12.77	11.80	16.65	18.00	11.24	13.18	8.44	8.54	04/01/2004
	NCREIF NFI-ODCE NET + 100 BP			1.45	5.43	1.45	8.43	7.72	8.86	15.08	12.56	8.07	10.26			
	EXCESS RETURN			(0.11)	0.77	(0.11)	2.76	5.05	2.94	1.57	5.44	3.17	2.92			
268	POLICE-TOTAL INFRASTRUCTURE (TIME WEIGHTED)	381	0.96	2.08	9.32	2.08	16.11	20.56	10.51	15.14	20.26	15.79	19.39		15.81	12/01/2013
	CPI + 4%			1.55	4.35	1.55	6.03	6.20	6.17	4.69	4.69	6.30	5.56		5.62	
	EXCESS RETURN			0.53	4.97	0.53	10.07	14.37	4.35	10.46	15.57	9.49	13.83		10.19	

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FIXED INCOME RETURN DETAIL																
280	POLICE-TOTAL FIXED INCOME - GROSS	13,949	35.11	3.86	4.28	3.86	(0.23)	5.56	5.66	(0.17)	6.20	4.08	3.63	5.73	8.05	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.03)	(0.09)	(0.03)	(0.12)	(0.13)	(0.14)	(0.12)	(0.14)	(0.13)	(0.13)			
	EST MANAGEMENT FEES			(0.03)	(0.09)	(0.03)	(0.12)	(0.13)	(0.14)	(0.12)	(0.14)	(0.13)	(0.13)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL FIXED INCOME - NET MGR			3.83	4.18	3.83	(0.35)	5.43	5.52	(0.29)	6.06	3.95	3.50			
288	POLICE-TOTAL STRUCTURED FIXED INCOME - GROSS	6,333	15.94	3.51	5.14	3.51	(0.85)	5.16	3.50	0.56	7.69	2.64	3.35	4.95	7.44	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.04)	(0.06)	(0.07)	(0.07)	(0.09)	(0.06)	(0.06)			
	POLICE-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.50	5.11	3.50	(0.89)	5.10	3.42	0.48	7.60	2.59	3.29			
	NYC CUSTOM STRUCTURED INDEX-POLICE			4.24	5.58	4.24	(1.29)	6.95								
	EXCESS RETURN			(0.74)	(0.47)	(0.74)	0.39	(1.84)								
298	POLICE-TOTAL CORE FI- DEVELOPING MGRS - GROSS	76	0.19	3.73	4.64	3.73	(0.99)	4.18	3.88	1.28	5.74	2.53	3.17	4.71	05/01/2009	
	ESTIMATED INVESTMENT FEES			(0.05)	(0.16)	(0.05)	(0.20)	(0.20)	(0.22)	(0.20)	(0.17)	(0.20)	(0.20)			
	POLICE-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			3.68	4.48	3.68	(1.19)	3.98	3.66	1.08	5.57	2.32	2.97			
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97	2.03	2.74	3.75		
	EXCESS RETURN			0.74	(0.16)	0.74	(1.20)	0.43	1.02	0.53	(0.39)	0.30	0.23	0.96		
308	POLICE-TOTAL CORE FI- EMERGING MGRS - GROSS	82	0.21	3.10	4.79	3.10	0.29	4.51	3.19	1.00	6.21	2.78	3.17	2.77	06/01/2012	
	ESTIMATED INVESTMENT FEES			(0.09)	(0.27)	(0.09)	(0.34)	(0.48)	(0.22)	(0.35)	(0.36)	(0.35)	(0.35)			
	POLICE-TOTAL CORE FI- EMERGING MGRS - NET MGR			3.01	4.52	3.01	(0.05)	4.02	2.97	0.65	5.85	2.43	2.82			
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97	2.03	2.74	2.24		
	EXCESS RETURN			0.07	(0.12)	0.07	(0.06)	0.48	0.32	0.10	(0.12)	0.41	0.08	0.53		
318	POLICE-TOTAL TIPS - GROSS	1,778	4.48	3.24	1.93	3.24	(1.25)	3.10	4.70	(1.29)	3.52	1.75	1.96	3.48	3.70	06/01/2005
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.02)	(0.02)	(0.02)	(0.03)	(0.07)	(0.02)	(0.03)			
	POLICE-TOTAL TIPS - NET MGR			3.24	1.92	3.24	(1.27)	3.09	4.68	(1.32)	3.45	1.73	1.94			
	BBG BARC GBL INF-LK: US TIPS (DLY)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64	1.70	1.94	3.41	3.57	
	EXCESS RETURN			0.04	(0.00)	0.04	(0.00)	0.08	(0.01)	0.12	(0.19)	0.03	(0.00)	0.06	0.13	
328	POLICE-TOTAL HIGH YIELD - GROSS	2,084	5.24	7.16	4.47	7.16	(2.82)	6.93	15.25	(3.94)	2.80	7.60	4.20	9.69	7.63	10/01/1994
	ESTIMATED INVESTMENT FEES			(0.08)	(0.24)	(0.08)	(0.30)	(0.34)	(0.39)	(0.33)	(0.35)	(0.35)	(0.34)			
	POLICE-TOTAL HIGH YIELD - NET MGR			7.07	4.23	7.07	(3.12)	6.59	14.86	(4.26)	2.45	7.25	3.85			
	HIGH YIELD CUSTOM BENCHMARK			7.26	4.85	7.26	(2.34)	7.03	15.48	(4.21)	2.78	7.91	4.36	9.53	6.87	
	EXCESS RETURN			(0.18)	(0.62)	(0.18)	(0.78)	(0.44)	(0.61)	(0.05)	(0.34)	(0.65)	(0.51)	0.16	0.75	

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FIXED INCOME RETURN DETAIL															
340	POLICE- TOTAL BANK LOANS - GROSS	660	1.66	3.61	2.50	3.61	1.13	4.72	8.86	1.80	2.76	5.69	4.29	4.72	12/01/2012
	ESTIMATED INVESTMENT FEES			(0.08)	(0.23)	(0.08)	(0.30)	(0.31)	(0.34)	(0.32)	(0.32)	(0.32)	(0.32)		
	POLICE-TOTAL BANK LOANS - NET MGR			3.54	2.27	3.54	0.82	4.41	8.52	1.49	2.44	5.38	3.98		
	CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06	5.87	3.83	4.32	
	EXCESS RETURN			(0.24)	(0.25)	(0.24)	(0.32)	0.17	(1.35)	1.87	0.38	(0.49)	0.15	0.40	
350	POLICE-TOTAL CONVERTIBLE BONDS - GROSS	764	1.92	7.15	4.74	7.15	(0.17)	14.74	7.23	(0.41)	9.44	9.59	6.67	10.45	7.21
	ESTIMATED INVESTMENT FEES			(0.10)	(0.29)	(0.10)	(0.38)	(0.43)	(0.43)	(0.41)	(0.45)	(0.42)	(0.42)		
	POLICE-TOTAL CONVERTIBLE BONDS - NET MGR			7.06	4.45	7.06	(0.55)	14.31	6.80	(0.81)	8.99	9.17	6.25		
	BOFAML ALL CONVERTIBLE EX M AI (DAILY)			10.08	3.93	10.08	0.65	15.70	11.71	(2.75)	9.33	13.69	7.84	13.40	8.88
	EXCESS RETURN			(3.02)	0.52	(3.02)	(1.19)	(1.39)	(4.90)	1.94	(0.34)	(4.52)	(1.59)	(2.94)	(1.67)
360	POLICE-TOTAL OPPORTUNISTIC FIXED INCOME	1,246	3.14	1.20	3.50	1.20	6.41	7.93	8.62	(1.34)	8.86	9.15	5.56	12.52	7.98
	OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			6.18	6.12	6.18	2.36	9.42	17.40	0.63	4.93	10.65	7.46	12.99	9.10
	EXCESS RETURN			(4.98)	(2.62)	(4.98)	4.05	(1.49)	(8.78)	(1.97)	3.93	(1.50)	(1.90)	(0.47)	(1.12)
370	POLICE-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	405	1.02	2.84	5.72	2.84	1.03	3.83	2.73	4.04	8.06	2.20	3.90	4.98	7.95
	ESTIMATED INVESTMENT FEES			(0.05)	(0.16)	(0.05)	(0.21)	(0.21)	(0.22)	(0.22)	(0.23)	(0.21)	(0.22)	(0.22)	(0.10)
	POLICE-TOTAL TARGETED INVESTMENTS - NET MGR			2.79	5.56	2.79	0.82	3.62	2.51	3.82	7.83	1.99	3.69	4.75	7.85
	POLICE CUSTOM BENCHMARK (NO CASH)			2.49	4.53	2.49	0.96	3.08	2.38	1.40	6.11	2.15	2.91	3.61	
	EXCESS RETURN			0.30	1.02	0.30	(0.15)	0.54	0.13	2.43	1.72	(0.16)	0.78	1.14	
CASH SUMMARY															
382	Short Term - POLICE - GROSS	520	1.31	0.61	1.70	0.61	1.96	1.13	0.89	0.47	0.23	1.40	1.05	0.79	04/01/1982
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Short Term - POLICE - NET MGR			0.61	1.70	0.61	1.96	1.13	0.89	0.47	0.23	1.40	1.05	0.79	
386	KKR Cash Account	-	0.00												
388	Cash Account	-	0.00												
390	Securities Lending	-	0.00												



**New York City
Police Pension Fund, Subchapter Two**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	85	0.21	17.14	(3.01)	17.14	(9.14)	22.26	11.29	(1.30)	5.50
RUSSELL 2000 GROWTH DAILY			17.14	(3.15)	17.14	(9.31)	22.17	11.32	(1.38)	5.60
Excess			(0.01)	0.14	(0.01)	0.17	0.09	(0.02)	0.08	(0.11)
BlackRock US SCV R2000	1	0.00						31.71	(7.38)	4.11
RUSSELL 2000 VALUE DAILY								31.74	(7.47)	4.22
Excess								(0.03)	0.09	(0.11)
Brown Asset Mgmt US SCG	210	0.53	19.09	2.55	19.09	0.98	28.92	10.23	8.62	2.93
RUSSELL 2000 GROWTH DAILY			17.14	(3.15)	17.14	(9.31)	22.17	11.32	(1.38)	5.60
Excess			1.95	5.71	1.95	10.29	6.75	(1.09)	10.00	(2.68)
Ceredex US SCV	142	0.36	11.25	(5.94)	11.25	(11.72)	10.61	29.38	(4.74)	2.55
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	4.22
Excess			(0.67)	1.57	(0.67)	1.15	2.77	(2.36)	2.73	(1.66)
Dalton US SCV	144	0.36	13.00	(6.46)	13.00	(17.30)	8.38	25.01	(3.32)	4.47
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	4.22
Excess			1.08	1.04	1.08	(4.43)	0.55	(6.73)	4.15	0.25
DFA US SCC	154	0.39	12.10	(7.17)	12.10	(12.54)	11.53	25.08	(3.86)	4.48
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89
Excess			(2.48)	(1.87)	(2.48)	(1.52)	(3.12)	3.77	0.56	(0.42)
RAFI US SCE	137	0.34	11.51	(7.28)	11.51	(11.57)	9.74	27.83	(6.65)	4.72
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89
Excess			(3.07)	(1.99)	(3.07)	(0.56)	(4.91)	6.52	(2.23)	(0.17)

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Iridian US MCC	271	0.68	19.42	(6.36)	19.42	(23.30)	23.36	4.19	(3.71)	14.04
RUSSELL MIDCAP (DAILY)			16.54	3.55	16.54	(9.06)	18.52	13.80	(2.44)	13.22
Excess			2.89	(9.91)	2.89	(14.24)	4.84	(9.60)	(1.27)	0.82
Wellington US MCC	331	0.83	20.30	3.61	20.30	(7.35)	25.05	12.30	1.76	10.93
S&P 400 MIDCAP INDEX (DAILY)			14.49	(1.63)	14.49	(11.08)	16.24	20.74	(2.18)	9.77
Excess			5.81	5.24	5.81	3.73	8.80	(8.44)	3.93	1.16
BlackRock US LC R1000 Growth	0	0.00					30.25	7.15	5.60	12.91
RUSSELL 1000 GROWTH - DAILY							30.21	7.08	5.67	13.05
Excess							0.04	0.08	(0.07)	(0.14)
BlackRock US LMC R1000 Core	7,834	19.72	13.98	5.66	13.98					
RUSSELL 1000 (DAILY)			14.00	5.54	14.00					
Excess			(0.02)	0.12	(0.02)					
SSGA US LMC Top 200 Core	1,573	3.96	13.02	6.35	13.02					
RUSSELL TOP 200 INDEX (DAILY)			13.05	6.32	13.05					
Excess			(0.03)	0.03	(0.03)					
RAFI US LMCE	1,343	3.38	11.67	2.77	11.67	(6.92)	16.84	15.73	(3.09)	12.04
RUSSELL 1000 (DAILY)			14.00	5.54	14.00	(4.78)	21.69	12.05	0.92	13.24
Excess			(2.33)	(2.77)	(2.33)	(2.13)	(4.84)	3.68	(4.01)	(1.20)
VTL US LCE	0	0.00					20.17	12.77	(1.26)	13.81
S&P 500 INDEX (DAILY)							21.83	11.96	1.38	13.69
Excess							(1.66)	0.81	(2.64)	0.12
FUND OF FUNDS										
POLICE-FUND OF FUNDS	70	0.18	14.32	(2.00)	14.32	(8.27)				
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)				
Excess			(0.26)	3.30	(0.26)	2.74				

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
POLICE-TOTAL LEGATO	70	0.18	14.32	(2.00)	14.32	(8.20)				
RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)				
Excess			(0.26)	3.30	(0.26)	2.82				
NON - US EQUITY										
Baillie Gifford WorldxUS LMCC	637	1.60	19.35	(5.85)	19.35	(15.37)	44.17	0.70	(3.81)	(6.77)
NYC Developed Growth Benchmark			10.45	(2.41)	10.45	(14.09)	27.77	(3.04)	4.09	(4.43)
Excess			8.90	(3.44)	8.90	(1.28)	16.40	3.74	(7.90)	(2.34)
Walter Scott WorldxUS LMCC	643	1.62	11.77	3.18	11.77	(7.68)	28.04	5.03	0.28	(3.56)
NYC Developed Growth Benchmark			10.45	(2.41)	10.45	(14.09)	27.77	(3.04)	4.09	(4.43)
Excess			1.32	5.59	1.32	6.41	0.27	8.07	(3.81)	0.87
Causeway WorldxUS LMCC	539	1.36	10.62	(4.46)	10.62	(18.34)	28.22	0.52	(2.39)	(5.18)
NYC Developed Value Benchmark			10.45	(2.41)	10.45	(14.09)	22.77	5.02	(5.68)	(5.39)
Excess			0.17	(2.05)	0.17	(4.25)	5.45	(4.51)	3.29	0.21
Sprucegrove WorldxUS LMCC	603	1.52	9.46	(1.89)	9.46	(13.67)	27.15	11.10	(9.44)	(3.32)
NYC Developed Value Benchmark			10.45	(2.41)	10.45	(14.09)	22.77	5.02	(5.68)	(5.39)
Excess			(0.99)	0.52	(0.99)	0.42	4.38	6.08	(3.75)	2.07
Acadian WorldxUS SCC	200	0.50	10.29	(8.12)	10.29	(19.22)	38.38	6.41	8.68	(4.92)
S&P EPAC Small Cap USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)
Excess			0.36	0.43	0.36	(0.65)	4.91	5.07	0.09	(1.49)
Fidelity WorldxUS SCC	140	0.35	9.64	(9.79)	9.64	(18.22)	31.34	(0.91)	11.97	(5.60)
S&P EPAC Small Cap USD NET			9.92	(8.54)	9.92	(18.58)	33.47	1.34	8.58	(3.43)
Excess			(0.28)	(1.24)	(0.28)	0.36	(2.13)	(2.24)	3.38	(2.17)
Algert EAFE SCC	51	0.13								
MSCI EAFE SMALL CAP NET (DAILY)										
Excess										

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
SSGA WorldxUS LMC NYC Custom IDX	582	1.47	10.46	(2.44)	10.46	(14.05)	24.58	1.30	(0.54)	(4.75)
NYC Custom World ex US Index			10.45	(2.41)	10.45	(14.09)	24.12	1.00	(0.81)	(4.90)
Excess			0.01	(0.03)	0.01	0.04	0.47	0.30	0.27	0.15
SSGA WorldxUS SC Custom IDX ¹	113	0.28	10.79	(7.76)	10.79	(17.97)	33.43	2.77	9.86	
World ex USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)	33.31	2.18	9.59	
Excess			(0.14)	0.03	(0.14)	0.10	0.12	0.59	0.27	
Generation WorldxUS	0	0.00						9.79	7.04	11.39
MSCI World Index								7.51	(0.87)	4.94
Excess								2.28	7.91	6.45
EMERGING MARKETS										
DFA EM	371	0.93	6.89	1.21	6.89	(12.06)	33.64	17.39	(19.39)	(4.50)
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)
Excess			(3.03)	0.62	(3.03)	2.50	(3.64)	6.20	(4.48)	(2.31)
Baillie Gifford EM	430	1.08	14.74	5.35	14.74	(15.37)	54.14	2.78	(8.00)	0.10
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)
Excess			4.82	4.75	4.82	(0.80)	16.86	(8.41)	6.92	2.29
Eaton Vance EM	377	0.95	7.66	(0.24)	7.66	(14.33)	29.65	13.87	(15.72)	(3.92)
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)
Excess			(2.25)	(0.84)	(2.25)	0.24	(7.63)	2.68	(0.80)	(1.73)
Acadian EM	387	0.98	8.10	(2.40)	8.10	(17.27)	40.45	12.65	(15.05)	3.79
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)
Excess			(1.81)	(3.00)	(1.81)	(2.70)	3.16	1.46	(0.13)	5.98
BlackRock MSCI EM Core	817	2.06	10.04	0.71	10.04	(14.44)	37.26	11.17	(14.91)	(2.29)
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)	37.28	11.19	(14.92)	(2.19)
Excess			0.13	0.12	0.13	0.13	(0.02)	(0.02)	0.01	(0.10)

¹ Name changed from SSGA MSCI EAFE Small Cap Index 12.2017

² Assets were in transition from 9/29/17 to 11/30/17

³ Assets were in transition from 9/29/17 to 2/11/19

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
INTERNATIONAL FOF										
POLICE-TOTAL INTERNATIONAL FOF	237	0.60	11.30	(4.12)	11.30	(15.05)				
MSCI ACWI ex USA IMI Net			10.30	(2.42)	10.30	(14.76)				
Excess			0.99	(1.71)	0.99	(0.29)				
POLICE-TOTAL INTERNATIONAL FIS										
POLICE-TOTAL INTERNATIONAL FIS	116	0.29	10.34	(2.81)	10.34	(14.14)				
MSCI ACWI ex USA IMI Net			10.30	(2.42)	10.30	(14.76)				
Excess			0.04	(0.39)	0.04	0.62				
POLICE-TOTAL INTERNATIONAL LEADING EDGE										
POLICE-TOTAL INTERNATIONAL LEADING EDGE	120	0.30	12.24	(6.01)	12.24	(16.50)				
MSCI ACWI ex USA IMI Net			10.30	(2.42)	10.30	(14.76)				
Excess			1.93	(3.59)	1.93	(1.74)				
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
BlackRock Mortgages	814	2.05	2.34	4.30	2.34	0.97	2.56	2.29	1.81	6.48
FTSE MORTGAGE INDEX			2.16	4.21	2.16	1.01	2.47	1.59	1.56	6.12
Excess			0.18	0.09	0.18	(0.04)	0.10	0.71	0.25	0.35
Neuberger Berman Mortgages	94	0.24	2.17	4.10	2.17	0.78	2.39	1.52	1.42	6.68
FTSE MORTGAGE INDEX			2.16	4.21	2.16	1.01	2.47	1.59	1.56	6.12
Excess			0.01	(0.11)	0.01	(0.23)	(0.07)	(0.07)	(0.15)	0.55
T Rowe Price Credit	431	1.09	4.90	5.90	4.90	(2.39)	6.89	6.04	0.02	7.91
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.18	0.08	0.18	(0.48)	0.85	0.48	0.67	0.86
BlackRock Credit	204	0.51	5.03	5.83	5.03	(1.96)	6.44	5.48	(0.57)	7.55
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.31	0.02	0.31	(0.05)	0.40	(0.07)	0.07	0.51

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
Taplin Credit	96	0.24	5.55	5.22	5.55	(3.47)	7.61	9.54	(3.98)	7.92
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.82	(0.59)	0.82	(1.56)	1.58	3.98	(3.34)	0.88
Prudential Credit	246	0.62	4.82	5.79	4.82	(1.93)	6.35	6.05	(0.32)	7.19
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.10	(0.02)	0.10	(0.02)	0.32	0.50	0.33	0.14
Fidelity Credit	114	0.29	5.45	6.10	5.45	(2.26)	6.28	5.80	(0.09)	7.38
NYC - Investment Grade Credit			4.72	5.82	4.72	(1.90)	6.04	5.56	(0.65)	7.04
Excess			0.73	0.28	0.73	(0.35)	0.25	0.24	0.56	0.34
SSGA LI Treasury	1,160	2.92	3.46	5.42	3.46	(0.21)	5.01	1.62	0.49	12.13
NYC - Treasury Agency Plus Five			3.37	5.57	3.37	(0.05)	4.66	1.21	0.72	12.38
Excess			0.09	(0.15)	0.09	(0.16)	0.36	0.41	(0.24)	(0.25)
BlackRock LI Treasury	808	2.03	3.41	5.50	3.41	(0.18)	4.79	1.21	0.66	11.93
NYC - Treasury Agency Plus Five			3.37	5.57	3.37	(0.05)	4.66	1.21	0.72	12.38
Excess			0.04	(0.07)	0.04	(0.13)	0.14	(0.00)	(0.06)	(0.44)
Fischer Francis LI Treasury	0	0.00					4.67	1.34	0.51	11.36
NYC - Treasury Agency Plus Five							4.66	1.21	0.72	12.38
Excess							0.01	0.12	(0.21)	(1.02)
SSGA ST Treasury 1-3Y ²	909	2.29	0.98	2.48	0.98	1.50	3.08			
FTSE USBIG Treasury 1-3 Y Index			0.99	2.48	0.99	1.56	0.42			
Excess			(0.01)	0.00	(0.01)	(0.06)	2.66			
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87	0.86			
Excess			0.38	0.82	0.38	(0.38)	2.22			

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
SSGA IT Treasury 1-10Y ³	6	0.02	1.47	2.63	1.47	2.04				
FTSE USBIG Treasury/Agency 1-10 y			1.58	3.69	1.58	1.42				
Excess			(0.10)	(1.06)	(0.10)	0.62				
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87				
Excess			0.87	0.97	0.87	0.16				
SSGA LT Treasury 10Y Plus	1,450	3.65	4.67	5.86	4.67	(1.84)	8.54			
FTSE Treasury 10+			4.70	5.84	4.70	(1.89)	8.60			
Excess			(0.04)	0.02	(0.04)	0.05	(0.07)			
CORE FI-EMERGING MANAGERS										
Hillswick Core-Core Plus	8	0.02	2.61	4.73	2.61	0.33	2.64	2.61	0.61	7.09
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			(0.33)	0.08	(0.33)	0.32	(0.90)	(0.03)	0.06	1.13
Integrity Core-Core Plus	7	0.02	2.78	4.35	2.78	(0.03)	3.93			
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54			
Excess			(0.17)	(0.30)	(0.17)	(0.04)	0.39			
Ramirez Core-Core Plus	21	0.05	3.36	4.68	3.36	0.07	4.47	3.64	1.12	
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	
Excess			0.41	0.04	0.41	0.06	0.93	0.99	0.57	
New Century Core-Core Plus	21	0.05	2.94	4.49	2.94	0.12	4.04	2.37	(0.30)	6.53
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			(0.00)	(0.16)	(0.00)	0.11	0.50	(0.28)	(0.85)	0.56
Pugh Core-Core Plus	25	0.06	2.98	4.41	2.98	(0.42)	4.12	3.48	0.79	5.88
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			0.04	(0.24)	0.04	(0.43)	0.58	0.83	0.24	(0.09)

¹ Name changed from SSGA MSCI EAFE Small Cap Index 12.2017

² Assets were in transition from 9/29/17 to 11/30/17

³ Assets were in transition from 9/29/17 to 2/11/19

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
HIGH YIELD										
Brigade High Yield	102	0.26	7.29		7.29					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			0.04		0.04					
Eaton Vance High Yield	104	0.26	7.01		7.01					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			(0.25)		(0.25)					
Loomis Sayles High Yield	0	0.00					7.23	22.23	(8.58)	4.73
NYC-Loomis (BoA MLMSTII 7-03/BB&B PRIOR)							7.48	17.49	(4.64)	2.50
Excess							(0.25)	4.74	(3.94)	2.22
Mackay Shields High Yield	121	0.30	6.98		6.98					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			(0.28)		(0.28)					
Neuberger Berman High Yield	305	0.77	6.91	4.85	6.91	(1.99)	5.77	14.72	(4.00)	2.05
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.35)	(0.01)	(0.35)	0.09	(1.74)	(2.41)	0.44	(0.41)
Nomura High Yield	105	0.26	7.31		7.31					
BBG BARC US HY - 2% Issr Cap			7.26		7.26					
Excess			0.05		0.05					
Oaktree High Yield	220	0.55	7.09	4.25	7.09	(3.42)	5.87	14.91	(4.75)	1.41
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.17)	(0.60)	(0.17)	(1.34)	(1.63)	(2.22)	(0.31)	(1.05)
Stone Harbor High Yield	201	0.51	7.62	5.25	7.62	(2.63)	5.86	13.01	(4.47)	0.31
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			0.36	0.40	0.36	(0.54)	(1.64)	(4.11)	(0.04)	(2.14)

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
T Rowe Price High Yield	617	1.55	7.10	5.55	7.10	(2.36)	6.79	12.36	(1.13)	2.92
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.15)	0.70	(0.15)	(0.28)	(0.71)	(4.76)	3.31	0.46
Shenkman High Yield	305	0.77	6.86	0.62	6.86	(5.95)	6.86	11.72	(2.65)	2.64
BBG BARC US HY - 2% Issr Cap			7.26	4.85	7.26	(2.08)	7.50	17.13	(4.43)	2.46
Excess			(0.40)	(4.23)	(0.40)	(3.86)	(0.64)	(5.40)	1.79	0.18
Fort Washington High Yield	0	0.00					7.53	12.86	(4.13)	2.41
FTSE BB & B							7.03	15.48	(4.21)	2.78
Excess							0.50	(2.62)	0.08	(0.37)
Transition High Yield	4	0.01								
BANK LOANS										
Barings Bank Loans	258	0.65	3.77	2.01	3.77	0.38	4.47	8.44	0.12	1.99
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.01)	(0.52)	(0.01)	(0.76)	0.22	(1.43)	0.50	(0.07)
Credit Suisse Bank Loans	270	0.68	3.65	2.62	3.65	1.04	4.66	8.94	2.57	2.67
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.12)	0.09	(0.12)	(0.10)	0.41	(0.93)	2.96	0.61
Guggenheim Bank Loans	132	0.33	2.85	2.09	2.85	1.24	3.82	7.84	2.07	2.88
CSFB LEVERAGED LOAN INDEX			3.78	2.53	3.78	1.14	4.25	9.88	(0.38)	2.06
Excess			(0.93)	(0.43)	(0.93)	0.10	(0.43)	(2.03)	2.45	0.83
TIPS										
SSGA TIPS	1,333	3.36	3.24	1.92	3.24	(1.30)	3.06	4.68	(1.35)	3.57
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64
Excess			0.04	(0.00)	0.04	(0.03)	0.05	(0.00)	0.09	(0.07)

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
BlackRock TIPS	445	1.12	3.24	1.92	3.24	(1.18)	2.98	4.66	(1.24)	3.74
BBG BARC Gbl Inf-Lk: US TIPS (Dly)			3.19	1.92	3.19	(1.26)	3.01	4.68	(1.44)	3.64
Excess			0.05	0.00	0.05	0.09	(0.02)	(0.02)	0.20	0.10
CONVERTIBLE BONDS										
Advent Convertible Bonds	349	0.88	6.33	3.15	6.33	(1.92)	7.93	7.15	(1.38)	4.65
BofA ML U.S. Convertible Yield Alternative			6.29	2.27	6.29	(0.42)	9.45	9.96	(8.77)	2.75
Excess			0.04	0.88	0.04	(1.50)	(1.52)	(2.81)	7.40	1.91
Victory Convertible Bonds	414	1.04	7.67	5.57	7.67	0.66	20.63	6.46	(0.24)	13.76
BofA Merrill Lynch US Investment Grade Convertible Bond Index			6.91	6.06	6.91	3.35	20.99	14.23	1.68	15.69
Excess			0.76	(0.49)	0.76	(2.69)	(0.36)	(7.77)	(1.92)	(1.94)
CORE FI-DEVELOPING MANAGERS										
LM Capital Core-Core Plus	37	0.09	3.68	4.56	3.68	(1.40)	3.92	3.38	1.02	5.57
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			0.74	(0.09)	0.74	(1.41)	0.38	0.74	0.47	(0.39)
GIA Core-Core Plus	39	0.10	3.68	4.41	3.68	(0.98)	4.03	3.93		
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65		
Excess			0.74	(0.24)	0.74	(1.00)	0.49	1.29		
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	163	0.41	2.65	4.47	2.65	0.16	3.17	1.94	1.13	6.10
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97
Excess			(0.29)	(0.18)	(0.29)	0.15	(0.38)	(0.71)	0.58	0.14
RBC Access MBS	84	0.21	2.50	4.43	2.50	0.49	2.64	1.61	1.83	6.66
Access RBC Benchmark			2.01	4.03	2.01	1.17	1.96	1.52	1.40	5.08
Excess			0.49	0.40	0.49	(0.69)	0.69	0.09	0.43	1.58

1 Name changed from SSGA MSCI EAFE Small Cap Index 12.2017

2 Assets were in transition from 9/29/17 to 11/30/17

3 Assets were in transition from 9/29/17 to 2/11/19

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
CPC Construction Facility	5	0.01	1.31	3.39	1.31	4.14	6.07	(3.95)	12.90	
CPC CONST BENCHMARK			1.06	3.14	1.06	3.99	3.34	3.03	2.90	
Excess			0.25	0.26	0.25	0.15	2.73	(6.99)	10.01	
BOA PPAR FNMA	7	0.02	3.40	7.43	3.40	2.33	5.21	4.07	42.03	13.31
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.07	2.63	1.07	0.47	1.60	1.69	39.53	6.19
BOA PPAR GNMA	6	0.02	2.77	6.69	2.77	2.42	4.08	3.13	8.04	15.61
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.44	2.01	0.44	0.79	1.56	0.85	6.03	8.96
Citibank PPAR FNMA	4	0.01	3.24	8.33	3.24	2.63	5.26	3.71	6.69	25.71
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.91	3.53	0.91	0.77	1.65	1.33	4.20	18.58
Citibank PPAR GNMA	3	0.01	2.73	7.40	2.73	1.90	3.10	2.78	5.08	15.37
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.40	2.73	0.40	0.27	0.57	0.50	3.06	8.72
CFSB PPAR GNMA	1	0.00	2.64	6.73	2.64	0.99	3.83	3.21	5.90	15.34
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.32	2.05	0.32	(0.65)	1.30	0.93	3.88	8.69
CPC PPAR FNMA	51	0.13	3.78	8.40	3.78	2.31	5.06	6.15	8.96	13.91
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.46	3.61	1.46	0.45	1.45	3.77	6.46	6.78
CPC PPAR GNMA	53	0.13	2.52	6.49	2.52	0.63	2.29	2.21	5.24	9.23
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.19	1.81	0.19	(1.00)	(0.24)	(0.07)	3.23	2.58

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
JPMC PPAR FNMA	19	0.05	3.24	7.45	3.24	1.68	9.96	7.94	6.18	12.08
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.91	2.66	0.91	(0.18)	6.35	5.56	3.68	4.96
LIIF PPAR FNMA	6	0.02	3.35	8.21	3.35	2.27	9.55	5.03	6.29	38.12
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			1.02	3.41	1.02	0.41	5.94	2.65	3.79	30.99
LIIF PPAR GNMA	1	0.00	1.92	5.48	1.92	2.53	2.52	3.88	3.92	9.74
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			(0.40)	0.81	(0.40)	0.89	(0.01)	1.61	1.91	3.09
LISC PPAR FNMA	1	0.00	3.72		3.72					
FNMA Plus 85bps			2.33		2.33					
Excess			1.39		1.39					
NCBCI PPAR FNMA	0	0.00	2.52	7.66	2.52	2.00	1.75	3.46	4.97	14.93
FNMA Plus 85bps			2.33	4.80	2.33	1.86	3.61	2.38	2.50	7.13
Excess			0.19	2.87	0.19	0.15	(1.86)	1.07	2.47	7.81
NCBCI PPAR GNMA	1	0.00	2.47	6.60	2.47	1.23	3.01	3.51	5.53	16.66
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.15	1.92	0.15	(0.41)	0.48	1.23	3.52	10.01
NHS PPAR GNMA	0	0.00	2.48	5.99	2.48	0.54	(2.93)	3.58	4.90	13.73
GNMA Plus 65bps			2.32	4.68	2.32	1.63	2.53	2.28	2.02	6.65
Excess			0.16	1.32	0.16	(1.09)	(5.46)	1.30	2.89	7.08
Wells Fargo PPAR FNMA	1	0.00	9.99	16.43	9.99					
FNMA Plus 85bps			2.33	4.80	2.33					
Excess			7.67	11.64	7.67					

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
CASH										
Short Term POLICE	520	1.31	0.61	1.70	0.61	1.96	1.13	0.89	0.47	0.23
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87	0.86	0.33	0.05	0.03
Excess			0.01	0.03	0.01	0.08	0.27	0.56	0.41	0.19
KKR SP CASH ACCOUNT										
Cash Account	0	0.00								
Securities Lending	0	0.00								



**New York City
Police Pension Fund, Subchapter Two**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		6,200,103,510	5,073,003,344	4,954,504,937	2,476,225,529	1.46	10.7%
TOTAL LIQUIDATED		459,698,166	500,189,905	652,804,574	-	1.31	7.6%
TOTAL ACTIVE		5,740,405,343	4,572,813,439	4,301,700,362	2,476,225,529	1.48	11.2%

TOTAL ACTIVE							
Cypress Merchant Banking Partners II, L.P.	1999	45,172,972	53,944,269	50,584,154	26,160	0.94	-1.2%
Lincolnshire Equity Fund II, L.P.	1999	11,038,409	11,556,880	22,425,179	448,302	1.98	24.6%
SCP Private Equity Partners II, L.P.	2000	25,000,000	28,057,160	10,857,159	2,964,978	0.49	-8.1%
Solera Partners, L.P.	2000	9,999,888	13,296,140	20,817,577	154,489	1.58	7.5%
Apollo Investment Fund V, L.P.	2001	35,000,000	54,551,027	107,618,495	347,692	1.98	38.8%
CVC European Equity Partners III, L.P.	2001	25,000,000	29,700,915	74,439,614	1,710,970	2.56	41.0%
Landmark Equity Partners XI, L.P.	2002	30,000,000	28,518,970	43,831,911	73,539	1.54	23.3%
Ares Corporate Opportunities Fund, L.P.	2003	35,000,000	41,988,154	62,593,160	2,104,502	1.54	13.4%
Blackstone Capital Partners IV, L.P.	2003	46,253,267	57,200,737	135,968,508	3,970,714	2.45	36.3%
FS Equity Partners V, L.P.	2003	15,000,000	12,851,976	25,116,883	1,305,176	2.06	15.5%
Aurora Equity Partners III L.P.	2004	15,000,000	16,238,039	26,230,763	112,658	1.62	13.5%
FdG Capital Partners II LP	2004	25,000,000	26,938,873	31,142,933	1,655,811	1.22	3.8%
Lincolnshire Equity Fund III, L.P.	2004	15,000,000	14,983,501	21,199,805	5,812,466	1.80	28.6%
Markstone Capital Partners, LP	2004	10,000,000	11,724,772	4,955,651	68,054	0.43	-45.0%
Medica III Investments (International) L.P.	2004	10,000,000	10,000,000	4,237,089	2,406,000	0.66	-8.2%
Paladin Homeland Security Fund (NY City), L.P.	2004	30,000,000	33,026,562	12,572,023	44,325	0.38	-14.2%
Yucaipa American Alliance Fund I, LP	2004	20,000,000	29,967,488	29,100,205	7,594,570	1.22	4.8%
Arlington Capital Partners II, L.P.	2005	20,000,000	20,236,733	34,127,505	1,590,938	1.77	11.3%
Blackstone Mezzanine Partners II, L.P.	2005	11,954,147	13,356,475	17,778,894	143,141	1.34	7.8%
Carlyle Partners IV, L.P.	2005	50,000,000	51,531,593	100,780,768	1,052,504	1.98	13.0%
FirstMark Capital I, L.P. (fka FirstMark IV)	2005	10,000,000	10,927,097	30,744,500	40,382,544	6.51	33.9%
JP Morgan Fleming (Tranche A)	2005	40,000,000	39,723,512	37,295,182	15,390,559	1.33	5.3%
New Mountain Partners II, L.P.	2005	7,741,935	7,011,896	13,507,602	121,535	1.94	13.6%
Palladium Equity Partners III, L.P.	2005	25,000,000	27,024,033	48,384,262	2,377,917	1.88	14.7%
Prism Venture Partners V-A, L.P.	2005	20,000,000	20,508,481	12,708,069	335,055	0.64	-8.7%
Psilos Group Partners III, L.P.	2005	12,500,000	13,287,792	6,410,270	8,786,749	1.14	2.1%
Snow Phipps Group, L.P.	2005	10,000,000	11,913,742	10,457,308	5,107,446	1.31	6.0%
USPF II Institutional Fund, L.P.	2005	20,000,000	26,379,750	26,432,183	8,037,684	1.31	4.5%

Information provided by the New York City Police Retirement Systems Consultants

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Aisling Capital II, LP	2006	2,500,000	2,945,044	2,852,895	111,030	1.01	0.1%
Apollo Investment Fund VI, L.P.	2006	45,000,000	57,919,123	81,693,522	5,353,077	1.50	8.6%
Ares Corporate Opportunities Fund II, L.P.	2006	15,000,000	16,428,261	26,505,651	1,040,867	1.68	13.1%
Arsenal Capital Partners II, LP	2006	10,000,000	12,185,086	19,374,928	3,101,350	1.84	11.6%
Atlantic Equity Partners IV, L.P.	2006	25,124,928	23,058,118	3,339,239	12,061,868	0.67	-4.7%
Avista Capital Partners, L.P.	2006	20,000,000	26,295,958	32,016,285	569,552	1.24	4.5%
Blackstone Capital Partners V, L.P.	2006	42,087,697	44,764,753	69,427,104	3,412,854	0.39	-20.8%
Capital Partners Private Equity Income Fund, L.P.	2006	15,000,000	14,476,277	33,181,704	359,108	2.32	21.1%
Catterton Partners VI, L.P.	2006	20,000,000	22,775,054	33,300,876	9,357,680	1.87	11.8%
CCMP Capital Investors II, L.P.	2006	20,000,000	21,947,972	37,758,518	17,732	1.72	13.5%
CLP 2014 (fka Perseus Partners VII)	2006	15,000,000	17,549,750	6,900,265	(16,665)	0.39	-20.8%
Coller International Partners V, L.P.	2006	10,000,000	8,744,365	11,318,085	878,704	1.39	7.9%
Euro Choice III L.P.	2006	26,707,385	26,875,176	27,706,882	3,484,206	1.16	3.0%
Falconhead Capital Partners II, L.P.	2006	15,000,000	16,846,651	16,818,185	4,812,535	1.28	4.7%
Fenway Partners Capital Fund III, L.P.	2006	15,000,000	17,230,534	14,757,733	12,628,782	1.59	7.4%
First Reserve Fund XI, L.P.	2006	20,000,000	21,253,053	13,273,524	1,119,317	0.68	-8.9%
GF Capital Private Equity Fund, L.P.	2006	10,000,000	10,482,415	13,284,185	5,309,758	1.77	12.4%
GSC Recovery III, L.P.	2006	5,000,000	5,645,685	6,641,597	49,738	1.19	4.2%
InterMedia Partners VII, L.P.	2006	12,500,000	14,599,097	14,795,867	124,605	1.02	0.3%
Landmark Equity Partners XIII, L.P.	2006	10,000,000	9,599,442	10,218,983	2,287,914	1.30	5.3%
MidOcean Partners III, L.P.	2006	38,823,185	46,259,596	80,685,912	13,685,280	2.04	12.9%
NB Co-Investment Partners LP	2006	60,000,000	60,616,170	85,745,060	2,450,402	1.45	8.7%
Permira IV, L.P.	2006	16,105,913	17,459,693	25,230,306	1,954,100	1.56	8.6%
RRE Ventures IV, L.P.	2006	15,000,000	18,975,463	10,524,928	16,722,694	1.44	5.5%
Terra Firma Capital Partners III, L.P.	2006	15,529,945	15,733,966	4,468,583	2,609,738	0.45	-9.8%
The Fourth Cinven Fund	2006	13,517,898	14,218,057	20,507,894	10,341	1.44	7.3%
Thomas, McNerney & Partners II, L.P.	2006	10,000,000	10,139,667	20,404,274	1,769,822	2.19	16.4%
Carlyle Partners V, L.P.	2007	50,000,000	51,532,052	83,022,733	8,391,545	1.77	13.7%
Comvest Investment Partners III, L.P.	2007	15,000,000	19,455,548	23,287,343	1,929,041	1.30	6.4%
Constellation Venture Capital III, L.P.	2007	15,000,000	17,145,021	8,397,431	4,452,163	0.75	-4.8%
FTVentures III, LP	2007	7,500,000	8,231,525	14,334,565	3,685,366	2.19	15.8%
Gleacher Mezzanine Fund II, L.P.	2007	10,000,000	9,197,768	12,187,028	83,690	1.33	10.6%
GSO Capital Opportunities Fund LP	2007	17,500,000	26,202,290	37,188,395	285,616	1.43	17.4%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Highland Consumer Fund I LP	2007	10,000,000	10,016,060	5,683,154	2,469,459	0.81	-2.9%
Montreux Equity Partners IV, L.P.	2007	10,000,000	10,000,000	5,522,350	8,106,226	1.36	4.9%
New Mountain Partners III, L.P.	2007	35,000,000	35,653,120	47,462,355	23,075,761	1.98	13.3%
Olympus Capital Asia III, L.P.	2007	20,000,000	23,404,664	11,953,414	8,174,645	0.86	-3.4%
PCG Clean Energy & Technology Fund (East), LLC	2007	40,000,000	36,190,929	7,196,357	9,538,693	0.46	-10.8%
Pegasus Partners IV, L.P.	2007	15,000,000	18,131,266	11,927,259	4,863,275	0.93	-1.5%
Pine Brook Capital Partners, L.P.	2007	15,000,000	17,022,533	19,441,456	2,736,746	1.30	7.3%
Quaker BioVentures II, L.P.	2007	15,000,000	14,294,055	12,327,681	2,803,216	1.06	1.3%
SCP Vitalife Partners II Fund	2007	15,000,000	15,074,774	1,184	6,919,645	0.46	-9.7%
Trilantic Capital Partners IV L.P.	2007	45,856,523	47,858,644	70,619,489	5,679,769	1.59	13.9%
United States Power Fund III, L.P.	2007	15,000,000	17,746,993	17,852,552	4,442,700	1.26	4.2%
Vista Equity Partners Fund III, L.P.	2007	20,000,000	21,432,202	49,282,348	4,984,240	2.53	27.2%
Aisling Capital III, LP	2008	7,000,000	7,899,724	13,282,464	3,635,153	2.14	24.5%
Apollo Investment Fund VII, L.P.	2008	50,000,000	60,600,500	95,018,090	8,916,012	1.72	22.9%
Ares Corporate Opportunities Fund III, L.P.	2008	25,000,000	30,158,441	44,090,210	17,960,380	2.06	20.4%
Avista Capital Partners II, L.P.	2008	35,000,000	45,362,795	70,074,340	6,474,592	1.69	15.1%
Blue Wolf Capital Fund II, L.P.	2008	15,000,000	16,300,742	18,854,994	3,772,708	1.39	7.8%
Bridgepoint Europe IV	2008	13,328,694	13,493,094	14,279,459	5,313,488	1.45	9.3%
Coral's 2007 Institutional Momentum Fund, L.P.	2008	10,000,000	9,492,863	3,442,898	137,460	0.38	-15.5%
Crestview Partners II, L.P.	2008	22,500,000	26,080,909	33,407,111	8,439,739	1.60	12.5%
CVC European Equity Partners V, L.P.	2008	34,200,926	36,978,045	58,536,144	11,171,037	1.89	16.2%
Euro Choice IV L.P.	2008	19,387,157	17,913,130	15,237,835	10,298,280	1.43	7.5%
First Reserve Fund XII, L.P.	2008	20,000,000	22,216,378	10,896,672	4,194,669	0.68	-8.9%
GCM Grosvenor NYCPPF Emerging Manager Fund, L.P.	2008	59,909,091	73,335,068	64,939,952	39,585,868	1.43	10.6%
GI Partners Fund III L.P.	2008	17,500,000	18,907,003	29,395,326	298,542	1.57	13.0%
Landmark Equity Partners XIV, L.P.	2008	27,250,000	26,486,183	29,117,228	5,762,517	1.32	9.9%
Levine Leichtman Capital Partners IV, L.P.	2008	10,000,000	10,707,203	16,918,959	1,220,504	1.69	18.5%
Milestone Partners III, L.P.	2008	15,000,000	16,271,250	13,857,360	2,407,924	1.00	0.0%
NB New York City Growth Fund IA	2008	4,835,960	4,835,960	1,670,495	1,762,177	0.71	-4.5%
NGN BioMed Opportunity II, L.P.	2008	10,000,000	9,575,911	6,673,105	5,251,580	1.25	3.4%
Onex Partners III LP	2008	15,000,000	16,381,858	20,597,569	6,527,067	1.66	12.6%
Paladin III (NY City), L.P.	2008	30,000,000	40,209,181	28,310,127	33,682,344	1.54	9.1%
Relativity Fund, L.P.	2008	8,158,371	8,080,212	3,954,319	188	0.49	-11.2%

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Alternative Assets Manager Performance Detail

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	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	2008	15,000,000	17,461,787	14,066,982	5,967,928	1.15	3.8%
Yucaipa American Alliance Fund II, LP	2008	50,000,000	68,226,790	53,003,791	58,007,999	1.63	9.4%
Yucaipa Corporate Initiatives Fund II, LP	2008	14,030,930	13,766,113	4,995,600	7,919,975	0.94	-1.0%
FS Equity Partners VI, L.P.	2009	20,000,000	20,056,273	41,406,099	13,898,991	2.76	23.2%
Lexington Capital Partners VII, L.P.	2009	20,000,000	17,680,115	21,661,196	6,132,840	1.57	14.3%
Lincolnshire Equity Fund IV, L.P.	2009	7,500,000	7,985,924	9,090,144	3,320,149	1.55	11.0%
NorthBound Emerging Manager Custom Fund LP	2009	20,000,000	17,270,476	22,347,767	7,013,024	1.70	13.7%
Scale Venture Partners III, LP	2009	10,000,000	9,894,906	20,393,075	6,302,059	2.70	22.7%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	22,500,000	22,500,000	29,116,850	8,271,705	1.66	12.8%
Comvest Investment Partners IV, L.P.	2010	45,000,000	45,118,853	68,637,540	14,284,402	1.84	30.2%
Snow Phipps II, L.P.	2010	17,500,000	19,608,913	14,767,361	11,256,248	1.33	9.0%
Trident V, L.P.	2010	40,000,000	44,999,760	43,489,907	28,647,456	1.60	11.2%
American Securities Partners VI, L.P.	2011	50,000,000	53,701,254	80,586,526	22,156,717	1.91	21.9%
Ampersand 2011	2011	12,500,000	12,500,000	14,728,527	20,204,899	2.79	22.0%
AXA Secondary Fund V B L.P.	2011	80,000,000	65,914,540	90,778,240	15,003,171	1.60	15.8%
BC European Capital IX	2011	65,780,310	71,043,554	47,028,528	51,001,907	1.38	10.1%
BDCM Opportunity Fund III, L.P.	2011	20,000,000	28,670,592	13,003,796	25,024,815	1.33	8.3%
Blackstone Capital Partners VI, L.P.	2011	35,000,000	35,929,475	24,596,944	31,848,802	1.57	13.3%
EQT VI, L.P.	2011	48,696,260	50,469,323	52,592,945	32,405,986	1.68	14.2%
Pegasus Partners V, L.P.	2011	14,552,940	17,402,432	10,536,225	19,495,923	1.73	14.8%
Vista Equity Partners Fund IV, L.P.	2011	70,000,000	71,256,431	80,468,248	59,653,085	1.97	18.6%
Wellspring Capital Partners V, L.P.	2011	22,500,000	22,671,964	25,114,012	10,189,456	1.56	15.9%
Ares Corporate Opportunities Fund IV, L.P.	2012	50,000,000	51,119,497	26,656,380	45,351,444	1.41	12.0%
Green Equity Investors VI, L.P.	2012	55,000,000	58,990,863	35,244,528	59,383,601	1.60	16.0%
Neuberger Berman Strategic Co-Investment II LP	2012	60,000,000	56,570,045	50,536,800	38,202,664	1.57	16.4%
<u>NYCFPF - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>47,000,000</u>	<u>45,102,953</u>	<u>14,999,827</u>	<u>48,722,602</u>	<u>1.41</u>	<u>13.8%</u>
Palladium Equity Partners IV, L.P.	2012	35,000,000	28,646,766	16,099,449	26,542,250	1.49	14.1%
Platinum Equity Capital Partners III, L.P.	2012	50,000,000	40,954,128	57,891,649	18,306,414	1.86	36.9%
Summit Partners Growth Equity Fund VIII-A, L.P.	2012	75,000,000	84,494,818	108,742,306	59,144,942	1.99	26.0%
Trilantic Capital Partners V L.P.	2012	50,000,000	52,485,539	44,393,182	33,674,808	1.49	18.3%
Warburg Pincus Private Equity XI, L.P.	2012	80,000,000	85,115,264	55,869,821	76,192,244	1.55	14.0%
Apollo Investment Fund VIII, L.P.	2013	100,000,000	89,944,155	26,196,414	84,987,971	1.24	10.2%
Carlyle Partners VI, L.P.	2013	60,000,000	61,967,647	24,485,521	54,984,022	1.02	0.8%

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	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Crestview Partners III (Co-Investment B), L.P.	2013	15,000,000	13,736,032	740,414	14,753,644	1.13	6.8%
Crestview Partners III, L.P.	2013	45,000,000	27,090,782	4,886,264	29,799,353	1.28	14.0%
Landmark - NYC Fund I, L.P.	2013	23,000,000	18,695,471	11,494,902	15,898,983	1.47	18.0%
Landmark Equity Partners XV, L.P.	2013	67,000,000	45,631,065	31,374,568	28,045,773	1.30	14.4%
ASF VI B L.P.	2014	60,000,000	42,225,320	21,032,965	38,043,335	1.40	13.3%
ASF VI B NYC Co-Invest L.P.	2014	20,000,000	15,331,373	11,718,416	9,396,338	1.38	12.8%
Carlyle Partners VI, L.P. (Side Car)	2014	6,600,000	4,700,901	273,438	4,538,054	1.02	0.8%
CVC Capital Partners VI, L.P.	2014	88,133,484	85,914,174	22,818,186	88,985,199	1.30	14.3%
Lexington Capital Partners VIII, L.P.	2014	80,000,000	55,126,193	20,899,508	54,498,176	1.37	24.0%
Olympus Growth Fund VI, L.P.	2014	35,000,000	28,563,907	11,865,779	25,921,588	1.32	15.3%
Vista Equity Partners Fund V, L.P.	2014	85,000,000	97,597,477	76,412,223	93,503,443	1.74	22.7%
American Securities Partners VII, L.P.	2015	37,000,000	23,580,299	4,350,500	16,180,503	0.87	-9.4%
ASF VII B L.P.	2015	44,500,000	14,515,229	1,016,090	17,565,974	1.28	18.6%
ASF VII B NYC Co-Invest L.P.	2015	22,000,000	10,669,479	879,414	16,129,696	1.59	51.2%
Bridgepoint Europe V Co-Invest	2015	8,156,565	7,563,632	756,522	11,290,855	1.59	39.8%
Bridgepoint Europe V L.P.	2015	29,757,666	27,159,847	3,870,632	29,043,485	1.21	14.8%
Centerbridge Capital Partners III, L.P.	2015	11,100,000	6,208,232	2,041,906	5,630,087	1.24	11.0%
EQT VII, L.P.	2015	77,204,581	65,478,082	8,567,421	74,566,208	1.27	17.3%
<u>NYCFPF - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>63,000,000</u>	<u>17,626,614</u>	<u>714,008</u>	<u>20,028,444</u>	<u>1.18</u>	<u>20.9%</u>
Siris Partners III, L.P.	2015	15,000,000	12,595,680	6,852,975	7,796,422	1.16	9.6%
Warburg Pincus Private Equity XII, L.P.	2015	97,000,000	68,279,762	3,242,031	76,585,008	1.17	12.0%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	37,000,000	25,246,315	5,151,528	33,729,666	1.54	26.8%
Apax IX USD, L.P.	2016	60,000,000	26,566,882	569,050	31,333,194	1.20	NM
Platinum Equity Capital Partners IV, L.P.	2016	52,500,000	33,128,197	8,244,632	35,316,957	1.31	NM
Vista Equity Partners Fund VI, L.P.	2016	75,000,000	69,200,158	18,520,276	69,224,059	1.27	16.8%
Ares Corporate Opportunities Fund V, L.P.	2017	44,000,000	18,602,355	757,482	17,525,127	0.98	NM
BC European Capital X	2017	42,550,443	21,004,573	-	19,785,096	0.94	NM
BCEC X Co-Investment	2017	17,146,489	10,043,987	-	9,804,037	0.98	NM
Green Equity Investors VII, L.P.	2017	44,000,000	20,225,743	174,234	21,715,962	1.08	NM
KKR Americas Fund XII, L.P.	2017	75,000,000	25,828,451	494,426	24,984,079	0.99	NM
Palladium Equity Partners V, L.P.	2017	23,333,333	-	-	(863,430)	-	N/A
Warburg Pincus Financial Sector, L.P.	2017	62,000,000	16,241,112	3,162,000	11,057,072	0.88	NM
Apollo Investment Fund IX, L.P.	2018	154,000,000	-	-	(1,620,491)	-	N/A

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Bridgepoint Europe VI	2018	85,164,659	-	-	(742,167)	-	N/A
Bridgepoint Europe VI Co-Invest	2018	21,324,694	-	-	-	-	N/A
Crestview Partners IV (Co-Investment), L.P.	2018	16,666,667	-	-	-	-	N/A
Crestview Partners IV, L.P.	2018	50,000,000	-	-	-	-	N/A
CVC Capital Partners VII, L.P.	2018	93,682,695	14,702,454	-	15,751,774	1.07	NM
EQT VIII Co-Investment	2018	28,447,698	4,244,094	-	4,264,934	1.00	NM
EQT VIII, L.P.	2018	78,316,639	688,443	-	(269,889)	(0.39)	NM
Grain Communications Opportunity Fund II, L.P.	2018	6,500,000	1,293,019	-	1,117,785	0.86	NM
Platinum Equity Capital Partners IV Co-Investment, L.P.	2018	7,500,000	5,250,000	-	3,082,679	0.59	NM
Platinum Equity Small Cap Fund, L.P.	2018	28,500,000	1,390,067	-	998,165	0.72	NM
Siris Partners IV, L.P.	2018	62,000,000	-	-	(393,673)	-	N/A
Vista Equity Partners Fund VII, L.P.	2018	124,500,000	-	-	(103,368)	-	N/A
KKR European Fund V (USD)	2019	50,150,000	-	-	-	-	N/A
Lexington Capital Partners IX	2019	74,625,000	-	-	-	-	N/A
Welsh, Carson, Anderson & Stowe XIII, L.P.	2019	62,000,000	-	-	-	-	N/A

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Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			3,122,086,181	2,462,056,788	1,661,169,779	1,858,926,458	1.42	8.8%
TOTAL PRIVATE REAL ESTATE								
PRISA SA	2006	Core Portfolio	21,000,000	22,590,656	8,299,504	29,662,035	1.68	4.8%
Prologis Targeted U.S. Logistics Fund	2006	Core Portfolio	10,000,000	13,594,865	4,382,639	18,296,012	1.67	5.5%
RREEF America REIT II	2006	Core Portfolio	21,000,000	27,724,347	14,313,347	30,010,043	1.60	5.2%
UBS Trumbull Property Fund	2006	Core Portfolio	61,000,000	93,631,713	60,595,939	84,550,897	1.55	6.9%
Colony Realty Partners II	2007	Core Portfolio	20,000,000	21,420,211	5,540,084	-	0.26	-13.4%
Heitman HART	2007	Core Portfolio	28,000,000	44,006,550	16,006,550	61,676,229	1.77	8.0%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	15,000,000	17,613,742	6,016,786	21,657,890	1.57	4.7%
JP Morgan Strategic Property Fund	2007	Core Portfolio	56,000,000	62,422,616	-	127,993,731	2.05	8.1%
PRISA II	2007	Core Portfolio	60,278,867	63,729,327	19,566,277	90,500,322	1.73	5.9%
LaSalle Property Fund	2010	Core Portfolio	115,000,000	50,000,000	18,035,577	72,780,082	1.82	10.7%
Almanac Realty Securities VI	2012	Core Portfolio	50,000,000	33,444,956	31,835,639	14,059,732	1.37	12.8%
Almanac Realty Securities VI (Sidecar II)	2012	Core Portfolio	15,000,000	5,829,583	3,366,971	5,901,312	1.59	18.0%
NYC Asset Investor #2 LLC	2013	Core Portfolio	60,000,000	57,585,676	15,551,252	78,340,264	1.63	14.9%
MetLife Core Property Fund	2014	Core Portfolio	40,000,000	40,000,000	7,636,549	49,741,328	1.43	10.6%
Almanac Realty Securities VII	2015	Core Portfolio	50,000,000	35,264,189	8,790,828	35,813,715	1.26	14.0%
Almanac Realty Securities VII (Sidecar II)	2016	Core Portfolio	20,000,000	9,642,140	1,172,293	11,856,361	1.35	0.18
Exeter Industrial Core Club Fund II	2016	Core Portfolio	19,000,000	11,200,500	1,372,800	12,379,382	1.23	14.1%
Jamestown Premier Property Fund	2016	Core Portfolio	26,000,000	30,569,273	13,155,288	23,668,052	1.20	9.8%
NYCRS Artemis Co-Investment (SEM)	2016	Core Portfolio	35,000,000	34,135,897	12,542,064	28,545,723	1.20	21.9%
USAA Eagle Real Estate Fund	2016	Core Portfolio	75,000,000	51,466,351	-	60,840,008	1.18	8.8%
Brookfield Premier Real Estate Partners	2017	Core Portfolio	61,000,000	65,165,646	4,951,733	75,718,623	1.24	12.6%
Carlyle Property Investors	2017	Core Portfolio	61,000,000	63,707,016	3,439,388	66,110,511	1.09	7.7%
Lion Industrial Trust - 2007	2017	Core Portfolio	110,000,000	50,903,291	3,033,236	60,188,534	1.24	0.15
Almanac Realty Securities VIII	2019	Core Portfolio	42,000,000	105,660	-	(73,910)	N/A	N/A
Almanac Realty Securities VIII (Sidecar II)	2019	Core Portfolio	28,000,000	81,933	-	78,398	N/A	N/A
Heitman Core Real Estate Debt Income Trust	2019	Core Portfolio	28,000,000	10,093,253	183,721	10,022,092	1.01	7.1%
OCM Real Estate Opportunities Fund III	2003	Non-Core Portfolio	15,000,000	15,000,000	25,455,628	(225,670)	1.68	0.11
Blackstone Fund IV	2004	Non-Core Portfolio	15,000,000	19,220,353	25,041,516	1,707,589	1.39	10.1%
The City Investment Fund I	2004	Non-Core Portfolio	70,000,000	69,030,360	69,808,600	122,878	1.01	0.3%
Canyon Johnson Urban Fund II	2005	Non-Core Portfolio	20,000,000	17,977,405	7,949,305	68,219	0.45	-10.5%
AREA Real Estate Investment Fund V, LP	2006	Non-Core Portfolio	5,000,000	5,000,004	3,150,820	2,196,880	1.07	0.9%
Blackstone Real Estate Partners VI	2007	Non-Core Portfolio	40,000,000	44,681,307	84,670,161	3,945,728	1.98	13.2%
Carlyle Realty Partners V	2007	Non-Core Portfolio	20,000,000	25,278,089	30,060,551	5,384,687	1.40	8.2%
Colony Investors VIII	2007	Non-Core Portfolio	20,000,000	21,249,679	9,077,487	443,510	0.45	-11.5%
Metropolitan Workforce Housing Fund (SEM)	2007	Non-Core Portfolio	7,000,000	7,006,513	8,234,801	265,150	1.21	3.9%
AG Realty Fund VII	2008	Non-Core Portfolio	25,000,000	23,454,500	34,615,911	850,294	1.51	12.6%
American Value Partners Fund I (SEM)	2008	Non-Core Portfolio	15,000,000	11,355,858	10,239,833	1,393,276	1.02	0.5%

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

Through December 31, 2018

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Ares European Real Estate Fund III, LP	2008	Non-Core Portfolio	30,000,000	30,487,500	33,137,500	610,441	1.11	2.6%
PRISA III	2008	Non-Core Portfolio	30,000,000	35,657,776	-	94,790,112	2.66	12.1%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	30,000,000	13,301,089	2,412,403	2,558,561	0.37	-10.7%
Stockbridge Real Estate Fund III	2008	Non-Core Portfolio	27,000,000	26,998,145	16,829,753	14,679,693	1.17	0.02
Westbrook Real Estate Fund VII	2008	Non-Core Portfolio	10,000,000	11,185,421	10,072,729	3,254,160	1.19	3.0%
Thor Urban Property Fund II	2009	Non-Core Portfolio	20,000,000	27,398,054	27,390,625	8,521,495	1.31	7.8%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	30,000,000	26,594,360	28,716,164	12,152,034	1.54	8.9%
Blackstone Real Estate Partners Europe III (USD Vehicle)	2010	Non-Core Portfolio	35,000,000	36,370,372	47,722,197	6,584,904	1.49	11.2%
Canyon Johnson Urban Fund III	2010	Non-Core Portfolio	15,000,000	14,793,490	19,993,672	17,669	1.35	11.9%
Westbrook Real Estate Fund VIII	2010	Non-Core Portfolio	35,000,000	41,701,844	48,229,691	6,943,670	1.32	11.6%
Carlyle Realty Partners VI	2011	Non-Core Portfolio	40,000,000	38,307,837	61,040,291	5,522,150	1.74	25.6%
H/2 Special Opportunities Fund II	2011	Non-Core Portfolio	25,000,000	25,000,000	35,584,931	2,745,333	1.53	14.4%
Blackstone Real Estate Partners VII	2012	Non-Core Portfolio	100,000,000	122,459,208	131,063,002	69,073,135	1.63	17.5%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	60,000,000	67,370,981	86,083,089	48,723,699	2.00	21.9%
Divco West Fund III	2012	Non-Core Portfolio	70,000,000	68,667,971	116,815,524	1,703,088	1.73	23.9%
Taconic New York City Investment Fund LP	2012	Non-Core Portfolio	40,000,000	16,727,272	26,792,073	2,665,447	1.76	15.9%
NYC Asset Investor #1 LLC	2013	Non-Core Portfolio	30,000,000	32,831,437	12,980,477	28,318,224	1.26	6.7%
NYC Asset Investor #3 LLC	2013	Non-Core Portfolio	40,000,000	25,171,536	4,409,973	27,423,140	1.26	9.2%
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2014	Non-Core Portfolio	97,500,000	93,968,033	87,807,881	53,947,735	1.51	15.9%
Carlyle Realty Partners VII	2014	Non-Core Portfolio	60,000,000	49,684,231	31,461,545	37,028,761	1.38	0.16
Divco West Fund IV	2014	Non-Core Portfolio	70,000,000	69,301,157	100,300,860	14,057,277	1.65	26.0%
Lone Star Real Estate Fund III	2014	Non-Core Portfolio	75,000,000	70,306,161	85,223,357	9,784,894	1.35	15.0%
Avanath Affordable Housing Fund II (SEM)	2015	Non-Core Portfolio	5,000,000	4,861,193	303,331	7,118,943	1.53	13.8%
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	101,000,000	84,128,159	28,030,023	79,332,626	1.28	16.8%
H/2 Special Opportunities Fund III	2015	Non-Core Portfolio	40,000,000	40,000,000	24,654,313	26,042,060	1.27	11.4%
European Property Investors Special Opportunities IV (EPISO IV)	2016	Non-Core Portfolio	32,413,099	22,960,409	1,426,748	24,749,704	1.14	10.8%
PW Real Estate Fund III LP	2016	Non-Core Portfolio	30,811,730	19,019,205	2,427,186	23,467,220	1.36	26.7%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	24,000,000	12,215,745	2,753,681	10,966,441	1.12	11.7%
Divco West Fund V	2017	Non-Core Portfolio	40,000,000	19,347,184	-	20,186,531	1.04	4.0%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	27,000,000	14,452,977	3,710,502	13,431,580	1.19	19.4%
Exeter Industrial Value Fund IV	2017	Non-Core Portfolio	16,000,000	8,800,000	-	9,494,171	1.08	11.8%
H/2 Special Opportunities Fund IV	2017	Non-Core Portfolio	61,000,000	8,560,068	-	8,112,675	0.95	-3.5%
KKR CMBS B-Piece SMA	2017	Non-Core Portfolio	81,000,000	60,012,458	3,796,325	60,008,454	1.06	8.2%
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	92,700,000	12,374,968	3,244,992	7,525,657	0.87	-14.4%
Pramerica Real Estate Capital VI (PRECap VI)	2017	Non-Core Portfolio	32,630,522	16,525,447	7,518,994	11,946,460	1.18	20.5%
Basis Investment Group Fund I (SEM)	2018	Non-Core Portfolio	9,500,000	2,633,285	306,949	2,727,197	1.15	17.7%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	65,850,000	16,698,356	835,920	16,830,412	1.06	13.7%
AERMONT Real Estate Fund IV	2019	Non-Core Portfolio	19,401,963	-	-	(113,156)	N/A	N/A
Brookfield Strategic Real Estate Partners III	2019	Non-Core Portfolio	95,000,000	-	-	(476,046)	N/A	N/A

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

Alternative Assets Manager Performance Detail

Through December 31, 2018

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		683,005,610	326,856,920	70,216,823	334,495,436	1.2	13.0%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	60,000,000	49,007,719	12,417,056	58,885,623	1.5	12.5%
IFM Global Infrastructure Fund	2014	60,000,000	80,109,292	29,311,689	82,114,975	1.4	12.3%
Global Energy & Power Infrastructure Fund II	2014	40,000,000	33,810,054	19,309,352	27,773,931	1.4	37.3%
Global Infrastructure Partners III-A/B, L.P.	2016	71,000,000	50,568,883	1,126,981	49,793,608	1.0	0.6%
Brookfield Infrastructure Fund III, L.P.	2016	61,000,000	25,555,754	1,785,895	26,284,883	1.1	8.4%
Actis Energy 4	2016	39,600,000	20,679,095	3,049,927	20,669,000	114.7%	18.6%
EQT Infrastructure III (No.2) SCSp	2017	34,719,202	21,613,326	1,439,760	24,381,763	NM	NM
ASF VII Infrastructure L.P.	2017	42,000,000	4,643,168	1,446,475	4,158,417	NM	NM
Axium Infrastructure North America	2017	42,286,408	25,999,700	191,096	25,995,953	NM	NM
NYCRS EIG Energy Partners, L.P.	2017	42,350,000	4,519,855	138,591	4,572,510	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2018	10,590,000	-	-	-	NM	NM
KKR Global Infrastructure Investors III L.P.	2018	54,700,000	3,790,073	-	3,447,425	NM	NM
Global Energy & Power Infrastructure Fund III, L.P.	2018	54,700,000	-	-	-	NM	NM
Cardinal NR Sidecar Holdings L.P.	2018	6,560,000	6,560,000	-	6,417,349	NM	NM
EQT Infrastructure IV (No.2) USD SCSp	2019	63,500,000	-	-	-	NM	NM

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail

Through March 31, 2019

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		1,654,907,605	1,661,798,280	847,388,676	1,258,075,422	3.34%	7.59%
Avenue Special Situations Fund V, L.P.	2007	20,209,326	20,520,314	26,826,898	-		NM
Avenue Europe Special Sit. Fund, L.P.	2008	15,297,388	13,775,563	26,870,440	-		NM
PIMCO DiSCO Fund, L.P.	2008	63,000,000	63,179,655	85,872,192	-		11.23%
Alliance Bernstein PPIP Fund, L.P.	2009	27,775,890	27,775,890	38,205,542	-		15.57%
Torchlight Debt Opportunity Fund III, LLC	2009	35,000,000	37,314,271	55,514,899	-		13.36%
AG GECC PPIP Fund, L.P.	2010	27,000,000	27,052,129	41,724,862	-		20.19%
Avenue Special Situations Fund VI (A), L.P.	2011	45,000,000	46,135,636	45,817,894	3,149,434	-1.39%	1.39%
GoldenTree Managed Account	2011	88,000,000	82,502,006	-	129,084,509	5.26%	6.96%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	140,625,000	184,500,000	70,875,000	184,943,769	5.10%	7.29%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	105,000,000	95,550,000	27,781,909	93,248,191	0.06%	5.22%
Apollo Centre Street Partnership, L.P.	2012	162,500,000	228,807,597	117,713,714	142,193,564	2.78%	4.63%
FCO MA Centre Street L.P.	2012	90,000,000	169,883,051	99,670,342	107,691,529	1.82%	8.90%
OHA Centre Street Partnership, L.P.	2012	112,500,000	157,471,294	44,971,294	162,576,472	4.03%	7.92%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	55,000,000	55,000,000	-	57,951,646	2.69%	1.30%
Lone Star Fund VIII (U.S.), L.P.	2013	70,000,000	68,907,286	64,837,233	20,959,645	-0.16%	13.08%
Oaktree Opportunities Fund IX, L.P.	2013	70,000,000	70,000,000	30,026,801	51,415,545	5.97%	3.50%
Ares Centre Street Partnership, L.P.	2014	90,000,000	82,360,975	-	115,982,123	2.77%	10.04%
Brightwood Capital Fund III, L.P.	2015	22,000,000	17,853,821	6,564,316	15,176,308	2.12%	6.44%
Torchlight Debt Opportunity Fund V, LP	2015	46,000,000	32,200,000	4,745,886	35,811,536	1.17%	12.82%
Brightwood Capital Fund IV, LP	2016	55,000,000	27,500,000	2,293,646	28,621,166	2.99%	12.81%
ICG Centre Street Partnership, L.P.	2017	80,000,000	68,639,945	41,485,453	32,104,695	2.98%	9.12%
KKR OFI SMA	2017	171,000,000	59,388,386	15,355,886	51,230,549	5.37%	16.32%
Maranon Centre Street Partnership, L.P.	2018	64,000,000	25,480,460	234,469	25,934,741	1.70%	6.30%

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

Alternative Assets Manager Performance Detail

Through March 31, 2019

	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	2,595,702,041	1.56%	1.81%	0.46%	1.81%	0.81%	5.95%	3.79%	33.37%
TOTAL DIRECT HEDGE FUNDS	2,460,141,034	1.67%	1.81%	0.57%	1.81%	0.93%	6.17%	4.69%	39.94%
FUND OF FUNDS HEDGE FUNDS	135,561,007	-0.31%	1.69%	-1.58%	1.69%	-1.27%	3.01%	2.09%	17.37%
TOTAL DIRECT HEDGE FUNDS									
Caspian Select Credit Fund, L.P.	83,375,425	-0.26%	1.65%	1.36%	1.65%	1.99%	6.94%	3.77%	29.17%
D.E. Shaw Composite Fund, L.L.C.	270,227,712	0.96%	3.85%	10.00%	3.85%	10.49%	9.97%	13.08%	143.87%
Jefferies Structured Alpha Fund B, LLC	74,951,758	-0.06%	-0.06%	-0.06%	-0.06%			-0.06%	-0.06%
Voloridge Fund, LP	78,996,964	5.33%	5.33%	5.33%	5.33%			5.33%	5.33%
Voloridge Trading Aggressive Fund, LP	41,263,213	0.64%	0.64%	0.64%	0.64%			0.64%	0.64%
Relative Value	548,815,072	1.21%	3.88%	8.41%	3.88%	8.94%	9.41%	9.41%	91.96%
AlphaQuest Original LLC	146,752,008	3.95%	-6.59%	-18.91%	-6.59%	-16.01%		-2.05%	-3.73%
Brevan Howard AH Fund, L.P.	188,585,766	11.11%	1.68%	-5.54%	1.68%	23.30%		9.03%	18.02%
Florin Court Capital Fund	106,578,735	3.95%	3.37%	5.52%	3.37%			5.52%	5.52%
GSA Trend Fund LP	173,099,346	3.53%	-3.88%	-1.51%	-3.88%	-6.55%		-4.50%	-8.45%
Key Square Partners LP	194,835,847	-1.35%	5.89%	0.03%	5.89%	0.57%		0.13%	0.25%
Pharo Gaia Fund, LTD.	177,992,817	-0.29%	2.85%	8.64%	2.85%	-2.22%	13.53%	13.01%	50.33%
Pharo Macro Fund, Ltd.	163,713,488	0.53%	3.46%	4.93%	3.46%	-1.13%	10.03%	8.87%	63.00%
Tactical Trading	1,151,558,007	2.86%	0.92%	-1.78%	0.92%	-1.54%	3.50%	2.60%	20.74%
DL Partners Opportunities Fund LP	123,290,206	-1.73%	4.90%	2.32%	4.90%			2.32%	2.32%
Fir Tree Value Fund, L.P.	80,594,657	-1.83%	-1.80%	-8.24%	-1.80%	-8.77%	1.52%	-0.61%	-3.70%
Luxor Capital Partners Liquidating SPV, LLC	3,391,526	8.97%	8.92%	25.69%	8.92%			25.69%	25.69%
Luxor Capital Partners, LP	155,454,258	-0.93%	-0.95%	-0.19%	-0.95%	4.70%	18.80%	2.48%	12.58%
Perry Partners L.P.	3,504,026	15.70%	15.70%	-0.31%	15.70%	-0.32%	0.13%	-2.45%	-13.48%
Standard General Fund II L.P.	51,488,054	4.56%	5.80%	2.32%	5.80%	18.29%		8.55%	19.46%
Event Driven	417,722,727	-0.51%	1.58%	-1.29%	1.58%	2.81%	9.77%	2.60%	17.18%
Altimeter Partners Fund LP	56,090,687	-2.71%	7.39%	16.74%	7.39%	20.41%	13.89%	13.43%	47.48%
Gotham Targeted Neutral, LP	38,229,270	-0.44%	-0.20%	0.31%	-0.20%	-2.88%	0.86%	-0.48%	-1.98%
SRS Partners US, LP	140,201,489	3.41%	3.70%	3.23%	3.70%	3.34%	12.12%	7.54%	36.22%
Turiya Fund LP	107,523,782	0.90%	1.79%	-1.58%	1.79%	-11.69%	-0.40%	-2.00%	-7.29%
Long/Short Equity	342,045,228	1.14%	3.22%	3.27%	3.22%	-0.39%	6.10%	4.30%	27.37%
FUND OF FUNDS HEDGE FUNDS									
Fund of Funds Hedge Funds	135,561,007	-0.31%	1.69%	-1.58%	1.69%	-1.27%	3.01%	2.09%	17.37%

Information provided by Alpha Frontier



**New York City
Police Pension Fund, Subchapter Two**

Appendix D

Footnotes

Through March 31, 2019

- The Barclays Capital Aggregate (then known as the Lehman Brothers Aggregate) was used prior to 1/1/89. Effective 1/1/89, in the Government Sector, maturities of less than 5 years were dropped from the Salomon and Lehman indices. From that date until 7/1/99 the benchmark was the NYC Core + 5, from Lehman.
- Effective 7/1/94, the NYC Core + 5 Index includes BBB rated securities.
- Effective 7/1/99, the basis of the NYC Index was changed from Lehman Brothers to Salomon. Also effective 7/1/99, only Salomon indices have been used to compare all fixed income managers.
- Effective 4/1/03, the name of the benchmark provider was changed from Salomon to Citigroup.
- Effective 7/1/03, the “NYC-Loomis” benchmark index for the Loomis Sayles Enhanced Yield portfolio reflects a change from the Citigroup BB&B Index to the more appropriate Merrill Lynch High Yield Master II Index.
- Effective 7/1/09, the Core+5 program was restructured.
- The U.S. Gov’t sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov’t Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
- The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
- There were no changes to the Mortgage sector Index.

Through March 31, 2019

General Notes

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

Page Specific

Pages 10 - 15 - Portfolio Asset Allocation

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

Pages 16 - 18 - Performance Attribution: Total Plan

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

Through March 31, 2019

The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 32.85%*

*International Developed (EAFE) Markets: MSCI World Ex USA IMI Net * 8.72%*

*Emerging Markets: MSCI Emerging Markets * 5.91%*

*International Emerging Managers FOF: MSCI ACWI Ex US IMI Net * 0.60%*

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

*Private Equity: Russell 3000 + 300 b.p. per annum * 6.89%*

*Private Real Estate - Core: NFI - ODCE Net * 3.04%*

*Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 2.19%*

*Infrastructure: CPI + 4% * 1.02%*

*Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 6.00%*

*US Treasury Short Term: FTSE USBIG Treasury 1-3Y * 0.00%*

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

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

*US Treasury Long Duration: FTSE Treasury 10+ * 8.47%*

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

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

*Mortgage: FTSE Mortgage Index * 2.42%*

*ETI: ETI Custom Benchmark * 1.02%*

*Investment Grade Credit: NYC – Investment Grade Credit * 3.44%*

Through March 31, 2019

*High Yield: BBG BARC US High Yield 2% Issuer Capped * 7.82%*

*Bank Loans: Credit Suisse Leveraged Loan * 2.00%*

*TIPS: BBG BARC Gbl Inf-Lk: US TIPS (Dly) * 4.25%*

*Convertible Bonds: BofAML All Convertibles Ex Mandatory * 0.00%*

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.37%*

Page 19 – 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.



New York City
Police Officers' Variable Supplements Fund
Performance Overview as of March 31, 2019

Total Fund Overview



New York City Police Officers' Variable Supplements Fund

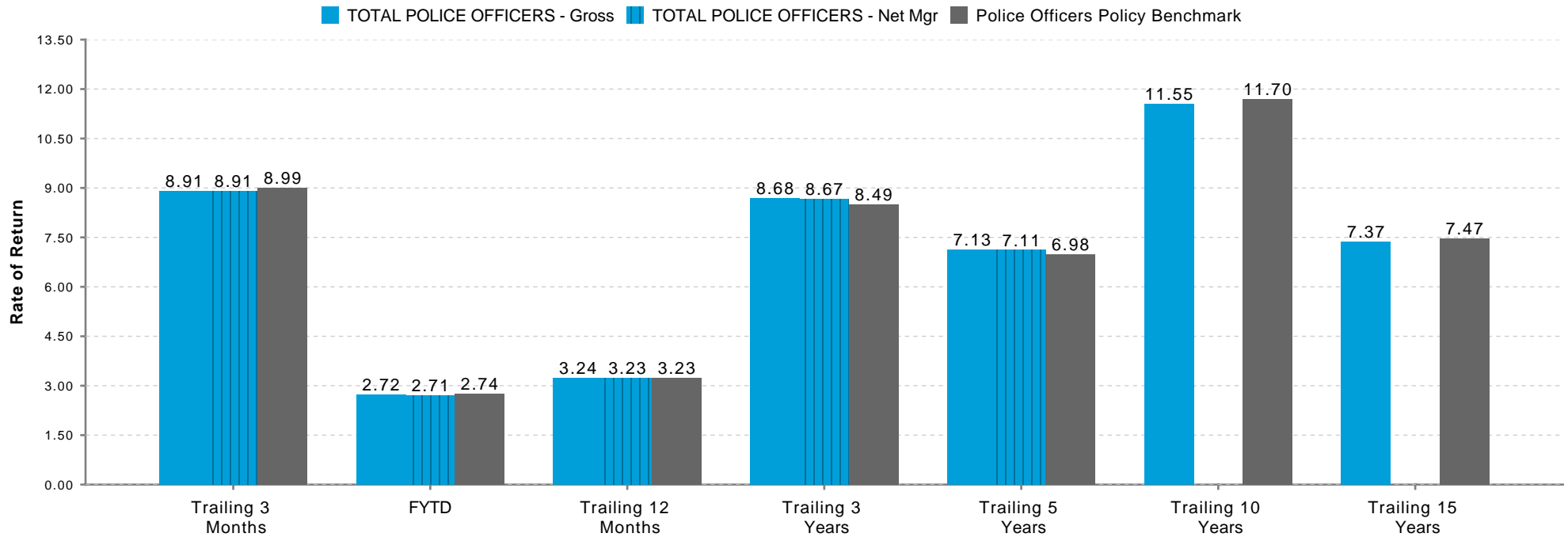
Table of Contents:

Performance Charts	p.3
Appendix A - Consolidated Performance Report	p.9
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Appendix C - Footnotes	p.16

Market Value (Billions)

TOTAL POLICE OFFICERS

\$1.8



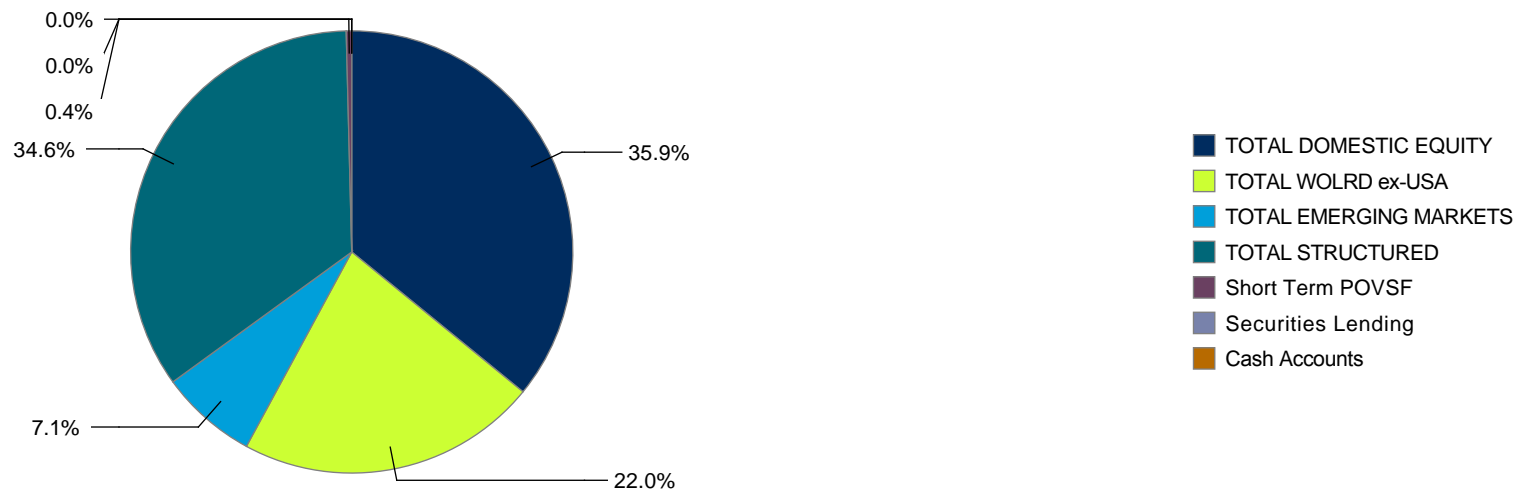
	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 7 Years	Benchmark 7 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation								
TOTAL POLICE OFFICERS	6.9	6.8	7.1	7.9	7.7	7.8	9.2	9.5

Market Value (Billions)

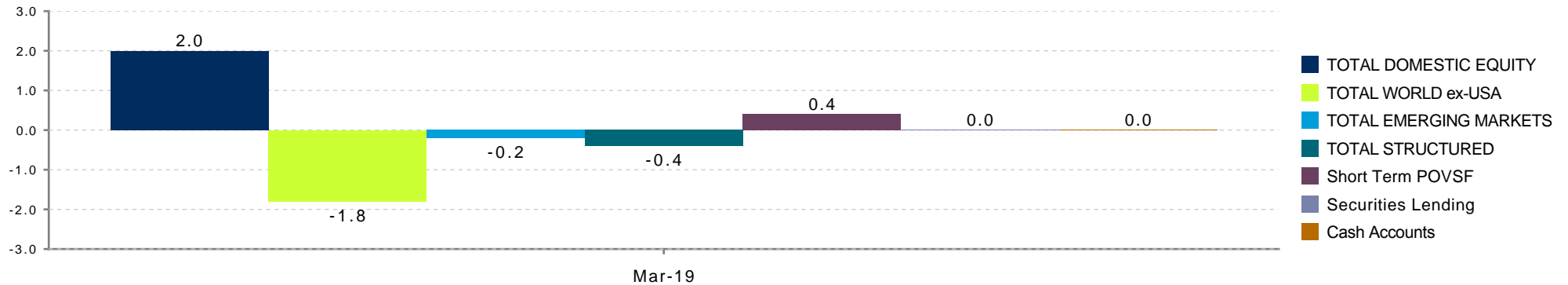
TOTAL POLICE OFFICERS

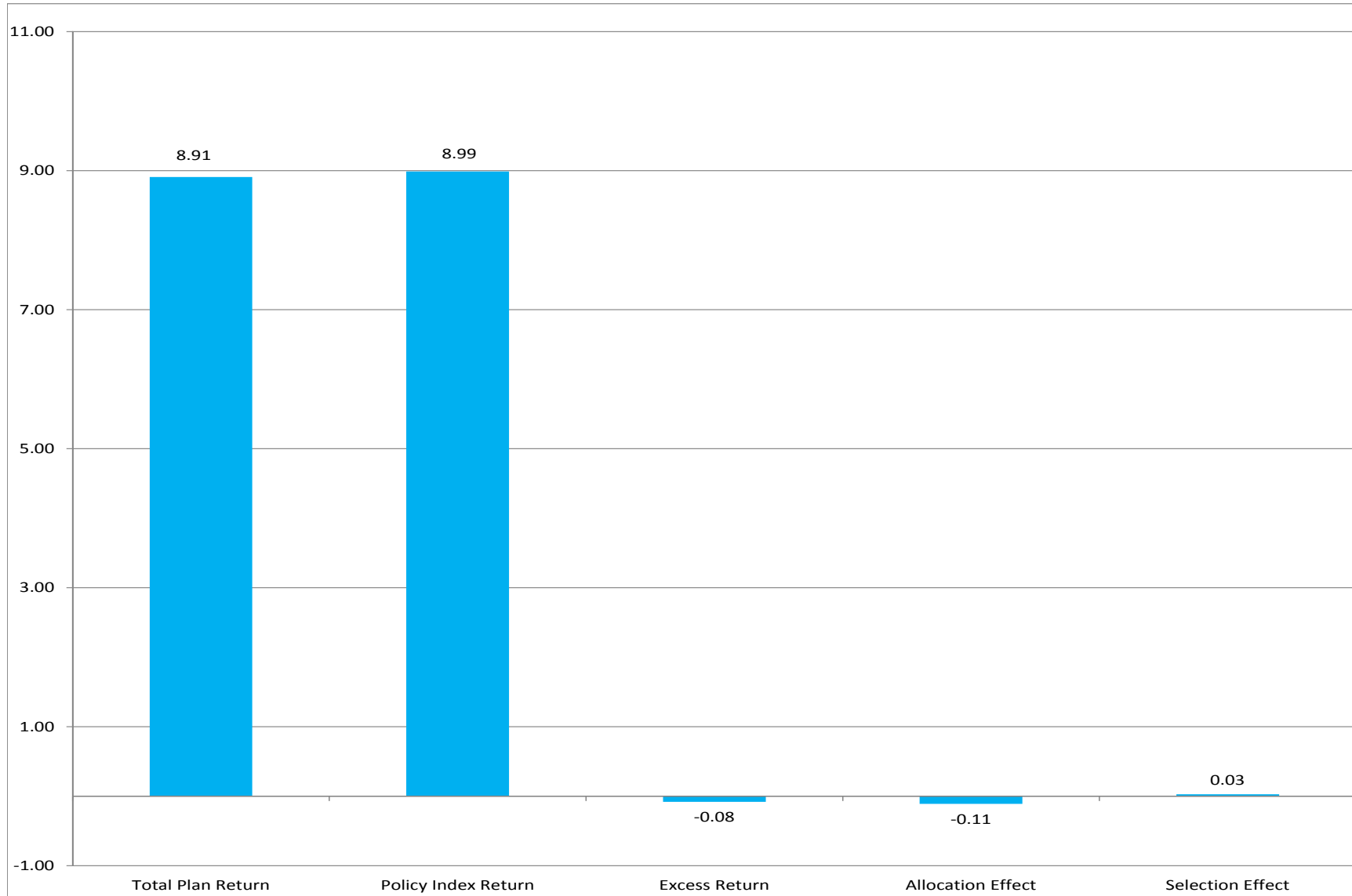
\$1.8

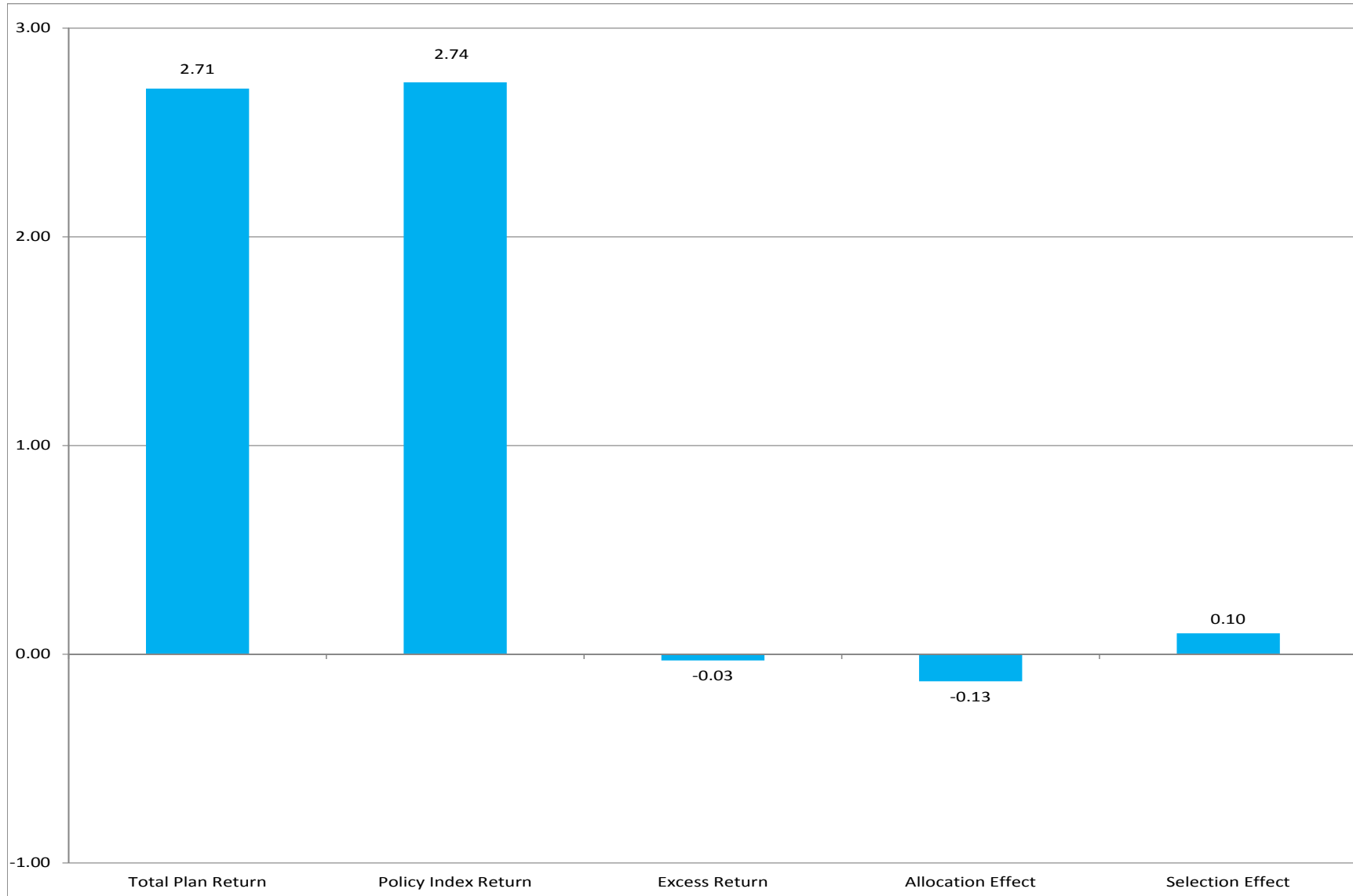
Asset Allocation



Relative Mix to Asset Weights









Allocation Effect - Asset Class Breakdown			
	<u>Quarter</u>	<u>FYTD</u>	<u>Benchmark</u>
TOTAL POLICE OFFICERS	-0.11	-0.13	Police Officers Policy Benchmark
TOTAL DOMESTIC EQUITY	0.04	-0.07	RUSSELL 3000
TOTAL DEVELOPED ex-US EQUITY	-0.04	0.07	MSCI World ex USA IMI Net
TOTAL EMERGING MARKETS	-0.01	-0.01	MSCI Emerging Markets
TOTAL STRUCTURED	-0.10	-0.12	Barclays Aggregate

Selection Effect - Asset Class Breakdown			
	<u>Quarter</u>	<u>FYTD</u>	<u>Benchmark</u>
TOTAL POLICE OFFICERS	0.03	0.10	Police Officers Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.01	-0.02	RUSSELL 3000
TOTAL DEVELOPED ex-US EQUITY	0.00	0.09	MSCI World ex USA IMI Net
TOTAL EMERGING MARKETS	0.01	0.01	MSCI Emerging Markets
TOTAL STRUCTURED	0.03	0.03	Barclays Aggregate



Through March 31, 2019

**NYC POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND
SECURITIES LENDING INCOME
March 31, 2019**

	<u>U. S. FIXED INCOME</u>	<u>U. S. EQUITY</u>	<u>INTERNATIONAL EQUITY</u>	<u>TOTAL</u>
2001	252,000	116,000	81,000	449,000
2002	139,000	72,000	82,000	293,000
2003	51,000	77,000	131,000	259,000
2004	91,000	115,000	126,000	332,000
2005	198,000	228,000	179,000	605,000
2006	169,000	305,000	180,000	654,000
2007	333,000	495,000	165,000	993,000
2008	873,000	881,000	201,000	1,955,000
2009	276,000	581,000	125,000	982,000
2010	85,000	243,000	80,000	408,000
2011	80,000	255,000	91,000	426,000
2012	38,000	271,000	47,000	356,000
2013	160,000	247,000	14,000	421,000
2014	20,000	33,000	140,000	193,000
2015	28,000	51,000	662,000	741,000
2016	40,000	422,000	527,000	989,000
2017	54,000	222,000	365,000	641,000
2018	31,184	159,754	513,412	704,349
2019 (3 months)	4,207	27,041	79,151	110,398
Since Inception	<u>2,922,391</u>	<u>4,800,795</u>	<u>3,788,562</u>	<u>11,511,748</u>



**New York City
Police Officers' Variable Supplements Fund**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	POVSF-TOTAL PORTFOLIO - GROSS	1,779	100.00	8.91	2.72	8.91	(5.75)	17.07	7.38	0.80	10.76	8.68	7.13	11.55	8.47	01/01/1988
	POVSF - ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL PORTFOLIO - NET MGR			8.91	2.71	8.91	(5.75)	17.05	7.36	0.78	10.74	8.67	7.11			
	POLICE OFFICERS POLICY BENCHMARK			8.99	2.74	8.99	(6.22)	17.25	7.15	0.31	11.14	8.49	6.98	11.70		
	EXCESS RETURN			(0.08)	(0.02)	(0.08)	0.46	(0.20)	0.21	0.47	(0.40)	0.18	0.13	(0.15)		
EQUITY RETURN SUMMARY																
17	POVSF-TOTAL EQUITY - GROSS	1,157	65.00	12.38	1.53	12.38	(9.49)	23.16	8.57	0.67	12.47	10.97	8.60	14.54	9.48	08/01/1993
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.00)	(0.02)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL EQUITY - NET MGR			12.37	1.52	12.37	(9.50)	23.15	8.56	0.67	12.46	10.96	8.59			
25	POVSF-TOTAL DOMESTIC EQUITY - GROSS	639	35.91	14.03	4.64	14.03	(5.08)	21.13	12.88	0.68	12.47	13.58	10.45	16.02	9.88	07/01/1991
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)			
	POVSF-TOTAL DOMESTIC EQUITY - NET MGR			14.03	4.64	14.03	(5.09)	21.13	12.87	0.68	12.46	13.58	10.45			
	RUSSELL 3000 (DAILY)			14.04	4.70	14.04	(5.24)	21.13	12.74	0.48	12.56	13.48	10.36	16.00	9.96	
	EXCESS RETURN			(0.02)	(0.06)	(0.02)	0.16	(0.00)	0.14	0.20	(0.09)	0.09	0.09	0.02	(0.08)	
35	POVSF-TOTAL SMALL CAP PASSIVE - GROSS	49	2.76	14.59	(5.22)	14.59	(10.96)	14.65	21.56	(4.36)	4.80	13.00	7.10		8.37	10/01/2013
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)			
	POVSF-TOTAL SMALL CAP PASSIVE - NET MGR			14.59	(5.22)	14.59	(10.96)	14.65	21.56	(4.36)	4.80	13.00	7.10			
	RUSSELL 2000 (DAILY)			14.58	(5.29)	14.58	(11.01)	14.65	21.31	(4.41)	4.89	12.92	7.05		8.24	
	EXCESS RETURN			0.00	0.07	0.00	0.05	0.00	0.25	0.05	(0.10)	0.07	0.04		0.13	
45	POVSF-TOTAL RUSSELL 1000 - GROSS	590	33.16	13.98	5.57	13.98									9.32	04/01/2018
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)									(0.00)	
	POVSF-TOTAL RUSSELL 1000 - NET MGR			13.98	5.56	13.98									9.31	
	RUSSELL 1000 (DAILY)			14.00	5.54	14.00									9.30	
	EXCESS RETURN			(0.02)	0.03	(0.02)									0.01	

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN SUMMARY															
57	POVSF-TOTAL WORLD ex-USA - GROSS	391	21.98	10.51	(2.84)	10.51	(14.27)	25.22	1.33		7.38			4.25	02/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)		(0.01)			(0.01)	
	POVSF-TOTAL WORLD ex-USA - NET MGR			10.51	(2.84)	10.51	(14.28)	25.21	1.31		7.36			4.24	
	WORLD EX USA CUSTOM BM			10.52	(3.22)	10.52	(14.68)	26.40	1.15		7.40			4.61	
	EXCESS RETURN			(0.01)	0.38	(0.01)	0.40	(1.19)	0.16		(0.03)			(0.37)	
67	POVSF-TOTAL EMERGING MARKETS - GROSS	127	7.14	10.05	0.73	10.05	(14.44)							5.00	07/01/2017
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	0.00							(0.05)	
	POVSF-TOTAL EMERGING MARKETS - NET MGR			10.04	0.71	10.04	(14.44)							4.96	
	MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)							4.96	
	EXCESS RETURN			0.13	0.12	0.13	0.13							(0.01)	

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN SUMMARY																
79	POVSF-TOTAL FIXED INCOME - GROSS	623	35.00	2.99	4.71	2.99	(0.20)	3.58	3.44	(0.34)	7.43	2.13	2.84	4.79	6.02	04/01/1991
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)	(0.04)	(0.07)	(0.03)	(0.04)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)	(0.04)	(0.07)	(0.03)	(0.04)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL FIXED INCOME - NET MGR			2.98	4.70	2.98	(0.22)	3.55	3.40	(0.38)	7.36	2.11	2.81			
87	POVSF-TOTAL STRUCTURED FIXED INCOME - GROSS	616	34.64	3.03	4.75	3.03	(0.24)	3.66	3.57	0.45	7.63	2.15	3.07	4.57	5.03	08/01/2000
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)	(0.04)	(0.07)	(0.03)	(0.04)			
	POVSF-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.02	4.74	3.02	(0.25)	3.63	3.53	0.41	7.55	2.13	3.04			
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65	0.55	5.97	2.03	2.74	3.77	4.82	
	EXCESS RETURN			0.08	0.10	0.08	(0.26)	0.09	0.88	(0.14)	1.59	0.10	0.29	0.81	0.21	
CASH SUMMARY																
99	Short Term - POVSF - GROSS	6	0.36	0.58	1.68	0.58	1.66	0.58	0.60	0.12	0.15					01/01/1988
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
	Short Term - POVSF - NET MGR			0.58	1.68	0.58	1.66	0.58	0.60	0.12	0.15					
103	Cash Account	0	0.00													
105	Securities Lending	0	0.00													



**New York City
Police Officers' Variable Supplements Fund**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	25	1.42	17.14	(3.01)	17.14	(9.14)	22.26	11.29	(1.30)	5.50
RUSSELL 2000 GROWTH DAILY			17.14	(3.15)	17.14	(9.31)	22.17	11.32	(1.38)	5.60
Excess			(0.01)	0.14	(0.01)	0.17	0.09	(0.02)	0.08	(0.11)
BlackRock US SCV R2000	24	1.34	11.99	(7.47)	11.99	(12.79)	7.34	31.71	(7.38)	4.11
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	4.22
Excess			0.07	0.04	0.07	0.08	(0.49)	(0.03)	0.09	(0.11)
BlackRock US LC R1000 Growth	0	0.00					30.25	7.06	5.77	12.91
RUSSELL 1000 GROWTH - DAILY							30.21	7.08	5.67	13.05
Excess							0.04	(0.02)	0.10	(0.14)
BlackRock US LC R1000 Value	0	0.00					13.65	17.31	(3.66)	13.39
RUSSELL 1000 VALUE (DAILY)							13.66	17.34	(3.83)	13.45
Excess							(0.01)	(0.03)	0.17	(0.06)
BlackRock US LMC R1000 Core	590	33.14	13.99	5.57	13.99					
RUSSELL 1000 (DAILY)			14.00	5.54	14.00					
Excess			(0.01)	0.03	(0.01)					
NON - US EQUITY										
SSGA WorldxUS LMC NYC Custom IDX	334	18.79	10.46	(1.97)	10.46	(13.64)	24.58	1.31		
NYC Custom World ex US Index			10.45	(2.41)	10.45	(14.09)	24.12	1.00		
Excess			0.01	0.44	0.01	0.45	0.47	0.31		
SSGA WorldxUS SC Custom IDX ¹	57	3.19	10.79	(7.76)	10.79	(17.97)				
World ex USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)				
Excess			(0.14)	0.03	(0.14)	0.10				

Public Markets Manager Performance Detail

Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EMERGING MARKETS										
BlackRock MSCI EM Core	127	7.12	10.04	0.71	10.04	(14.44)				
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)				
Excess			0.13	0.12	0.13	0.13				
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
SSGA Core-Core Plus US Agg	616	34.64	3.02	4.74	3.02	(0.25)				
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01				
Excess			0.08	0.10	0.08	(0.26)				
CASH										
Short Term POVSF	6	0.36	0.58	1.68	0.58	1.66	0.60	0.12	0.15	
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60	1.87	0.33	0.05	0.03	
Excess			(0.02)	0.02	(0.02)	(0.21)	0.28	0.07	0.11	
Cash Account	0	0.00								
Securities Lending	0	0.00								



**New York City
Police Officers' Variable Supplements Fund**

Appendix C

Footnotes



Through March 31, 2019

- Effective 4/1/03, the name of the Core +5 benchmark index provider was changed from Salomon to Citigroup.
- Effective 7/1/03, the “NYC-Loomis” benchmark index for the Loomis Sayles Enhanced Yield portfolio reflects a change from the Citigroup BB&B Index to the more appropriate Merrill Lynch High Yield Master II Index.
- Effective 7/1/09, the Core+5 program was restructured.
- The U.S. Gov’t sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov’t Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
- The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
- There were no changes to the Mortgage sector Index.
- The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.

Through March 31, 2019

General Notes

- Returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.

Page Specific

Page 4 - Portfolio Asset Allocation

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

Pages 5 - 6 - Performance Attribution: Total Plan

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

Through March 31, 2019

The indexes and most recent policy weights are as follows:

*U.S. Equity: Russell 3000 * 33.90%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 23.80%*

*Emerging Markets: MSCI Emerging Markets * 7.30%*

*Domestic Fixed Income: Barclays Aggregate * 35.00%*

Page 7 – 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.



New York City
Police Superior Officers' Variable Supplements Fund
Performance Overview as of March 31, 2019

Total Fund Overview



New York City Police Superior Officers' Variable Supplements Fund

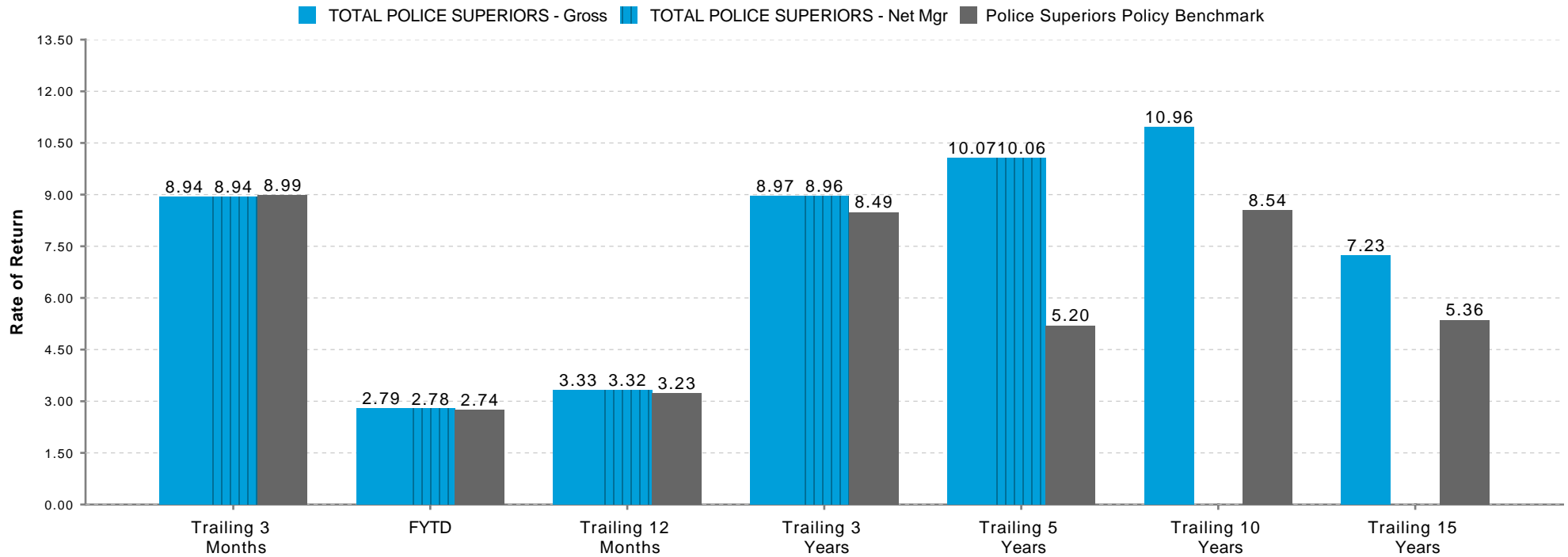
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TOTAL POLICE SUPERIORS

Market Value (Billions)

\$2.4



	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 7 Years	Benchmark 7 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation								
TOTAL POLICE SUPERIORS	7.0	6.8	10.1	7.6	7.3	6.8	8.7	8.8



Through March 31, 2019

**NYC POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND
SECURITIES LENDING INCOME
March 31, 2019**

	<u>U. S. FIXED INCOME</u>	<u>U. S. EQUITY</u>	<u>INTERNATIONAL EQUITY</u>	<u>TOTAL</u>
2001	54,000	119,000	11,000	184,000
2002	36,000	68,000	39,000	143,000
2003	32,000	87,000	120,000	239,000
2004	74,000	120,000	122,000	316,000
2005	204,000	244,000	126,000	574,000
2006	184,000	319,000	159,000	662,000
2007	358,000	503,000	138,000	999,000
2008	961,000	852,000	199,000	2,012,000
2009	271,000	515,000	96,000	882,000
2010	62,000	179,000	55,000	296,000
2011	46,000	178,000	8,000	232,000
2012	4,900	90,000	-	94,900
2013	-	21,000	-	21,000
2014	-	-	18,000	18,000
2015	9,500	30,000	304,000	343,500
2016	13,000	161,000	192,000	366,000
2017	11,000	65,000	117,000	193,000
2018	25,231	124,703	421,442	571,377
2019 (3 months)	5,611	57,653	105,563	168,827
Since Inception	<u>2,351,242</u>	<u>3,733,357</u>	<u>2,231,005</u>	<u>8,315,604</u>



**New York City
Police Superior Officers' Variable Supplements Fund**

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	PSOVSF-TOTAL PORTFOLIO - GROSS	2,350	100.00	8.94	2.79	8.94	(4.88)	17.07	7.25	0.23	25.70	8.97	10.07	10.96	8.40	01/01/1988
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)	(0.02)	(0.00)	(0.01)	(0.01)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL PORTFOLIO - NET MGR			8.94	2.78	8.94	(4.89)	17.06	7.23	0.21	25.69	8.96	10.06			
	POLICE SUPERIORS POLICY BENCHMARK			8.99	2.74	8.99	(6.22)	17.25	7.15	0.31	0.03	8.49	5.20	8.54		
	EXCESS RETURN			(0.05)	0.05	(0.05)	1.33	(0.19)	0.08	(0.10)	25.66	0.47	4.86	2.42		
EQUITY RETURN SUMMARY																
17	PSOVSF-TOTAL EQUITY - GROSS	1,535	65.34	12.37	1.61	12.37	(9.11)	21.99	8.60	0.63	(5.49)	10.78	5.98		08/01/2001	
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	0.00	(0.01)	(0.01)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	0.00	(0.01)	(0.01)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL EQUITY - NET MGR			12.37	1.61	12.37	(9.11)	21.97	8.59	0.62	(5.49)	10.77	5.97			
25	PSOVSF-TOTAL DOMESTIC EQUITY - GROSS	847	36.03	14.02	4.65	14.02	(4.87)	19.19	12.87	0.63		13.06		9.47	01/01/2015	
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)		(0.00)		(0.00)		
	PSOVSF-TOTAL DOMESTIC EQUITY - NET MGR			14.02	4.65	14.02	(4.88)	19.18	12.87	0.63		13.05		9.47		
	RUSSELL 3000 (DAILY)			14.04	4.70	14.04	(5.24)	21.13	12.74	0.48		13.48		9.72		
	EXCESS RETURN			(0.02)	(0.04)	(0.02)	0.37	(1.95)	0.13	0.15		(0.43)		(0.26)		

Consolidated Performance Report



Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN SUMMARY															
37	PSOVSF-TOTAL WORLD ex-USA - GROSS	522	22.19	10.51	(2.83)	10.51	(14.27)	25.23	1.33		7.38			4.26	02/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)		(0.01)			(0.01)	
	PSOVSF-TOTAL WORLD ex-USA - NET MGR			10.51	(2.84)	10.51	(14.28)	25.21	1.31		7.37			4.25	
	WORLD EX USA CUSTOM BM			10.52	(3.22)	10.52	(14.68)	26.40	1.15		7.40			4.61	
	EXCESS RETURN			(0.01)	0.38	(0.01)	0.40	(1.19)	0.16		(0.03)			(0.36)	
47	PSOVSF-TOTAL WORLD ex-USA - GROSS	522	22.19	10.51	(2.83)	10.51	(14.27)	25.23	1.33		7.38			4.26	02/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)		(0.01)			(0.01)	
	PSOVSF-TOTAL WORLD ex-USA - NET MGR			10.51	(2.84)	10.51	(14.28)	25.21	1.31		7.37			4.25	
	WORLD EX USA CUSTOM BM			10.52	(3.22)	10.52	(14.68)	26.40	1.15		7.40			4.61	
	EXCESS RETURN			(0.01)	0.38	(0.01)	0.40	(1.19)	0.16		(0.03)			(0.36)	
57	PSOVSF-TOTAL EMERGING MARKETS - GROSS	167	7.11	10.05	0.73	10.05	(14.44)							4.99	07/01/2017
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	0.01							(0.05)	
	PSOVSF-TOTAL EMERGING MARKETS - NET MGR			10.04	0.72	10.04	(14.44)							4.95	
	MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)							4.96	
	EXCESS RETURN			0.13	0.12	0.13	0.13							(0.02)	

Consolidated Performance Report



Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN SUMMARY																
69	PSOVSF-TOTAL FIXED INCOME - GROSS	815	34.66	2.99	4.71	2.99	0.27	3.56	3.37	(1.42)	0.09	2.33	1.75	4.30	5.84	04/01/1991
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)	(0.04)	0.00	(0.03)	(0.02)			
	EST MANAGEMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)	(0.04)	0.00	(0.03)	(0.02)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL FIXED INCOME - NET MGR			2.99	4.70	2.99	0.26	3.53	3.33	(1.46)	0.09	2.30	1.72			
77	PSOVSF-TOTAL STRUCTURED FIXED INCOME - GROSS	808	34.36	3.03	4.75	3.03	(0.24)	3.98	3.64			2.30			1.95	02/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.03)	(0.04)			(0.03)			(0.03)	
	PSOVSF-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.02	4.74	3.02	(0.25)	3.95	3.60			2.27			1.91	
	BBG BARC AGG (DLY)			2.94	4.65	2.94	0.01	3.54	2.65			2.03			1.81	
	EXCESS RETURN			0.08	0.10	0.08	(0.26)	0.40	0.95			0.25			0.10	
CASH SUMMARY																
89	Short Term - PSOVSF - GROSS	7	0.30	0.58	1.65	0.58	1.32	0.58	0.90	0.24	0.09					01/01/1999
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00			0.00	0.00	0.00					
	Short Term - PSOVSF - NET MGR			0.58	1.65	0.58			0.90	0.24	0.09					
93	Securities Lending	0	0.00													



**New York City
Police Superior Officers' Variable Supplements Fund**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail



Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	34	1.45	17.14	(3.01)	17.14	(9.14)	22.26	11.29	(1.30)	
RUSSELL 2000 GROWTH DAILY			17.14	(3.15)	17.14	(9.31)	22.17	11.32	(1.38)	
Excess			(0.01)	0.14	(0.01)	0.17	0.09	(0.02)	0.08	
BlackRock US SCV R2000	33	1.40	11.99	(7.47)	11.99	(12.79)	7.34	31.71	(7.38)	
RUSSELL 2000 VALUE DAILY			11.93	(7.51)	11.93	(12.86)	7.84	31.74	(7.47)	
Excess			0.07	0.04	0.07	0.08	(0.49)	(0.03)	0.09	
BlackRock US LC R1000 Growth	0	0.00					30.25	7.06	5.77	
RUSSELL 1000 GROWTH - DAILY							30.21	7.08	5.67	
Excess							0.04	(0.02)	0.10	
BlackRock US LC R1000 Value	0	0.00					13.65	17.31	(3.66)	
RUSSELL 1000 VALUE (DAILY)							13.66	17.34	(3.83)	
Excess							(0.01)	(0.03)	0.17	
BlackRock US LMC R1000 Core	780	33.18	13.98	5.55	13.98					
RUSSELL 1000 (DAILY)			14.00	5.54	14.00					
Excess			(0.02)	0.02	(0.02)					
NON - US EQUITY										
SSGA WorldxUS LMC NYC Custom IDX	446	18.96	10.46	(1.97)	10.46	(13.64)	24.58	1.31		
NYC Custom World ex US Index			10.45	(2.41)	10.45	(14.09)	24.12	1.00		
Excess			0.01	0.44	0.01	0.45	0.47	0.31		
SSGA WorldxUS SC Custom IDX ¹	76	3.23	10.79	(7.76)	10.79	(17.97)				
World ex USA SC PASSIVE CUSTOM BM			10.93	(7.80)	10.93	(18.07)				
Excess			(0.14)	0.03	(0.14)	0.10				

¹ Name changed from SSGA EAFE SC IDX 12.2017



Net Returns Through March 31, 2019

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2018	2017	2016	2015	2014
EMERGING MARKETS										
BlackRock MSCI EM Core	167	7.11	10.04	0.72	10.04	(14.44)				
MSCI EMERGING MARKETS			9.92	0.60	9.92	(14.57)				
Excess			0.13	0.12	0.13	0.13				
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
SSGA Core-Core Plus US Agg	808	34.36	3.02	4.74	3.02	(0.25)				
BBG BARC Agg (Dly)			2.94	4.65	2.94	0.01				
Excess			0.08	0.10	0.08	(0.26)				
CASH										
Short Term PSOVSF	7	0.30	0.58	1.65	0.58			0.90	0.24	
91 DAY TREASURY BILL (DAILY)			0.60	1.66	0.60			0.33	0.05	
Excess			(0.02)	(0.01)	(0.02)			0.57	0.19	
Securities Lending	0	0.00								



**New York City
Police Superior Officers' Variable Supplements Fund**

Appendix C

Footnotes



Through March 31, 2019

- Effective 4/1/03, the name of the Core +5 benchmark index provider was changed from Salomon to Citigroup.
- Effective 7/1/03, the “NYC-Loomis” benchmark index for the Loomis Sayles Enhanced Yield portfolio reflects a change from the Citigroup BB&B Index to the more appropriate Merrill Lynch High Yield Master II Index.
- Effective 7/1/09, the Core+5 program was restructured.
- The U.S. Gov’t sector benchmark Index was changed from the Citigroup Core+5 Treasury/Gov’t Sponsored Index to the Citigroup Core+5 Treasury/Agency Index.
- The Corporate and Yankee sectors were combined to form the new Investment Grade Credit sector. The benchmark for the new combined sector is the customized Citigroup Credit Index. For historical performance purposes, the old Corporate sector Index is linked to the new Credit sector Index.
- There were no changes to the Mortgage sector Index.
- The total Core+5 results and benchmark returns combine the three sectors. Historical total Core+5 returns continue to include the old Corporate and Yankee sector returns.



Through March 31, 2019

General Notes

- Returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.

Page Specific

Page 3 – Total Plan vs Policy Benchmark

- **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 * 33.90%*

International Developed (EAFE) Markets: MSCI World ex USA IMI Net 23.80%*

*Emerging Markets: MSCI Emerging Markets * 7.30%*

*Domestic Fixed Income: Barclays Aggregate * 35.00%*

*Cash: 91 Day T-Bill * 0.00%*

ETI Quarterly Report (Public):

Police Pension Fund - Economically Targeted Investments Quarterly Report

Public/Private Apartment Rehabilitation Program (PPAR)

Lenders*	BOA		CCD		CFSB		CPC		JPM		LIIF		NCBCI		NHS		WF		LISC		BE		HDC			
Contractual Commitment ¹	\$25.00		\$10.00		\$4.00		\$160.00		\$40.00		\$15.00		\$4.00		\$2.00		\$5.00		\$5.00		\$5.00		\$6.00			
Current Market Value ¹	\$12.78		\$6.60		\$1.20		\$103.70		\$19.26		\$7.66		\$0.85		\$0.33		\$0.65		\$0.57		\$0.00		\$0.00			
	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units		
Commitments Q1 (included in total)																										
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	1.19	114	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$1.19	114	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Delivered Q1 (included in total)																										
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$2.56	136	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.28	90	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.00	0	0.00	0	0.19	7	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	0.54	67	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.00	0	0.00	0	0.22	12	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$3.50	222	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.28	90	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Total Commitments																										
Bronx	\$0.00	0	\$0.81	157	\$0.00	0	\$27.30	1,689	\$6.76	459	\$0.94	61	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.53	101	\$0.00	0	\$0.00	0
Brooklyn	1.37	212	1.51	179	0.00	0	9.02	819	1.15	156	0.66	95	0.00	0	0.00	0	0.62	130	1.15	156	1.02	359	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.21	39	8.93	435	0.33	54	1.65	174	0.00	0	0.00	0	0.97	103	2.08	155	0.99	83	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	4.27	389	1.46	68	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.00	0	0.53	41	0.00	0	2.95	254	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$1.37	212	\$2.85	377	\$0.21	39	\$52.46	3,586	\$9.70	737	\$3.25	330	\$0.00	0	\$0.00	0	\$1.59	233	\$3.24	311	\$2.53	543	\$0.00	0	\$0.00	0
Historical Investments																										
Bronx	\$6.84	1,276	\$2.99	645	\$0.00	0	\$88.70	7,099	\$14.32	1,347	\$0.92	117	\$0.00	0	\$0.00	0	\$0.28	90	\$0.52	48	\$0.00	0	\$0.00	0	\$0.00	0
Brooklyn	2.25	142	1.57	302	0.00	0	90.05	4,935	1.50	137	3.22	401	0.00	0	0.33	7	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Manhattan	2.27	148	1.53	283	1.53	197	76.62	4,910	1.85	279	4.11	407	0.87	123	0.25	15	0.24	100	0.00	0	0.00	0	0.00	0	0.00	0
Queens	4.50	293	0.38	54	0.00	0	21.38	1,280	0.36	96	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Staten Island	0.00	0	0.00	0	0.00	0	2.86	111	0.00	0	0.00	0	0.00	0	0.00	0	0.09	67	0.00	0	0.00	0	0.00	0	0.00	0
Outside of NYC	0.48	39	0.00	0	0.00	0	9.06	461	1.54	123	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$16.32	1,898	\$6.47	1,284	\$1.53	197	\$288.67	18,796	\$19.57	1,982	\$8.24	925	\$0.87	123	\$0.58	22	\$0.61	257	\$0.52	48	\$0.00	0	\$0.00	0	\$0.00	0

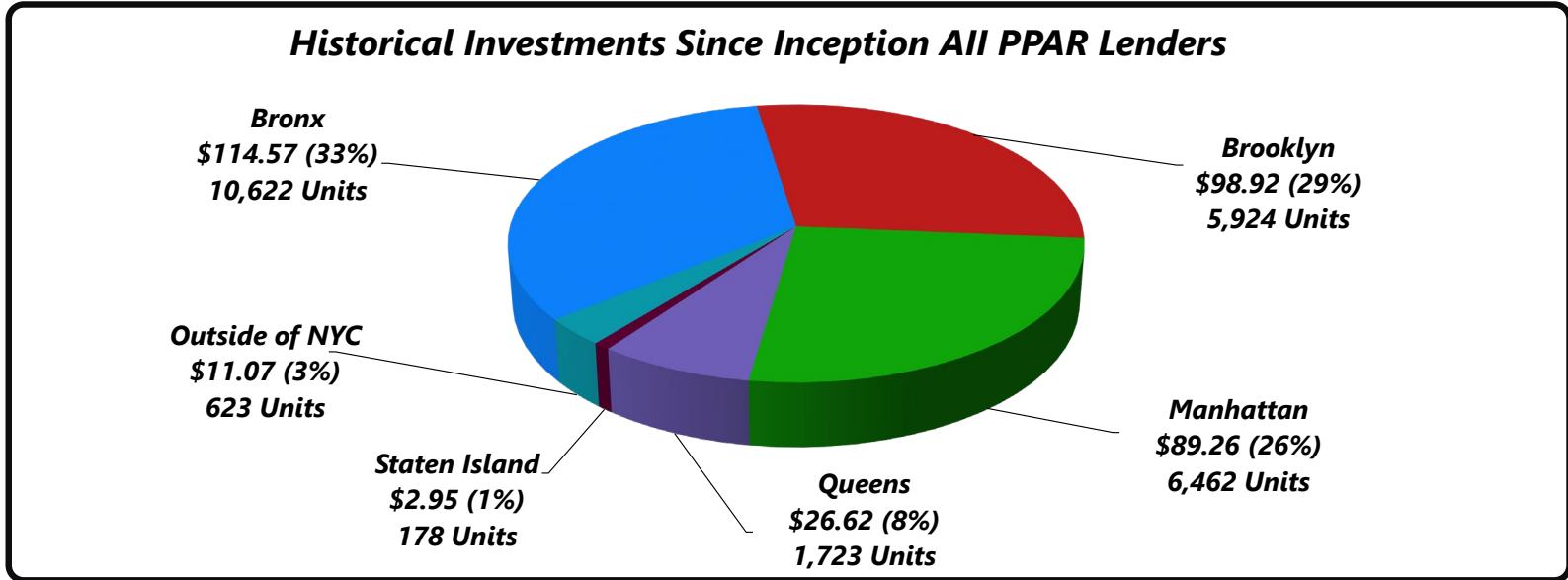
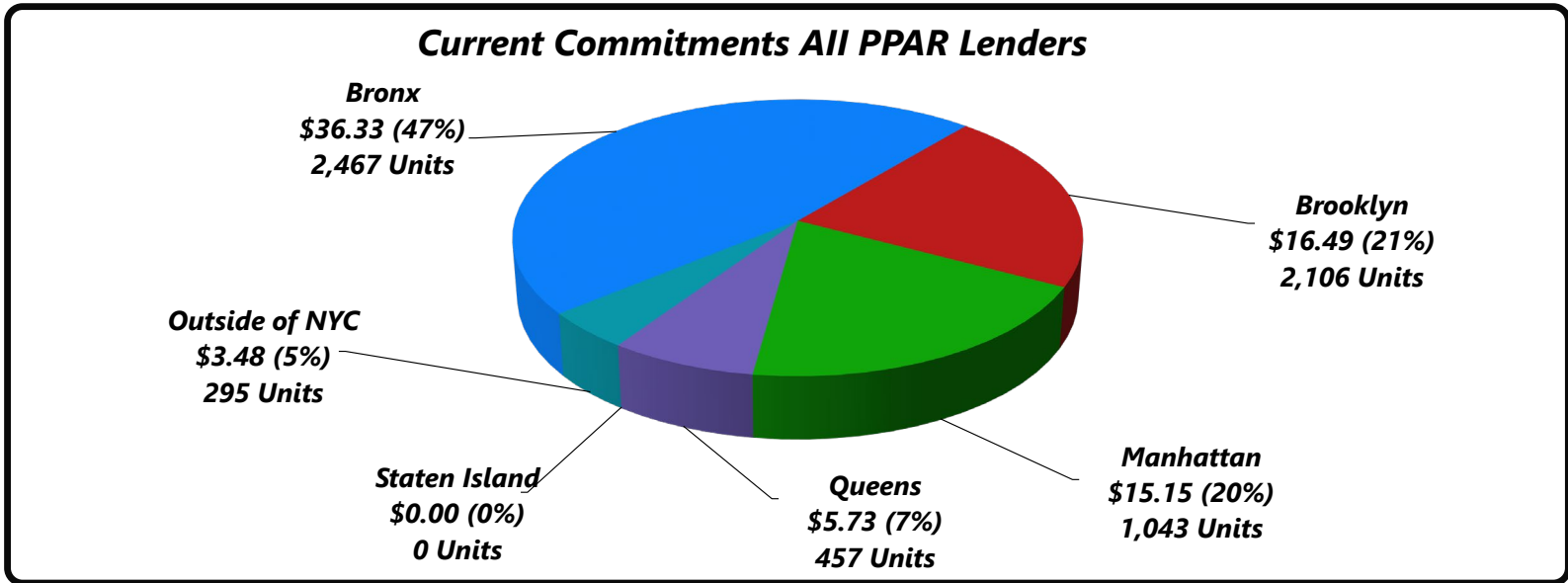
*Lenders : Bank of America, Citi Community Development, Carver Federal Savings Bank, The Community Preservation Corp, JP Morgan Chase, Low Income Investment Fund, NCB Capital Impact, Neighborhood Housing Service, Wells Fargo, Local Initiatives Support Corp, Bellwether Enterprise, NYC HDC

¹ Dollar amount listed in millions

Public/Private Apartment Rehabilitation Program (PPAR)

Lenders*	All Lender Totals	
Contractual Commitment ¹	\$281.00	
Current Market Value ¹	\$153.58	
	Dollars	Units
Commitments Q1 (included in total)		
Bronx	\$0.00	0
Brooklyn	0.00	0
Manhattan	0.00	0
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	1.19	114
Total	\$1.19	114
Delivered Q1 (included in total)		
Bronx	\$2.84	226
Brooklyn	0.19	7
Manhattan	0.54	67
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.22	12
Total	\$3.78	312
Total Commitments		
Bronx	\$36.33	2,467
Brooklyn	16.49	2,106
Manhattan	15.15	1,043
Queens	5.73	457
Staten Island	0.00	0
Outside of NYC	3.48	295
Total	\$77.19	6,368
Historical Investments		
Bronx	\$114.57	10,622
Brooklyn	98.92	5,924
Manhattan	89.26	6,462
Queens	26.62	1,723
Staten Island	2.95	178
Outside of NYC	11.07	623
Total	\$343.39	25,532

¹ Dollar amount listed in millions

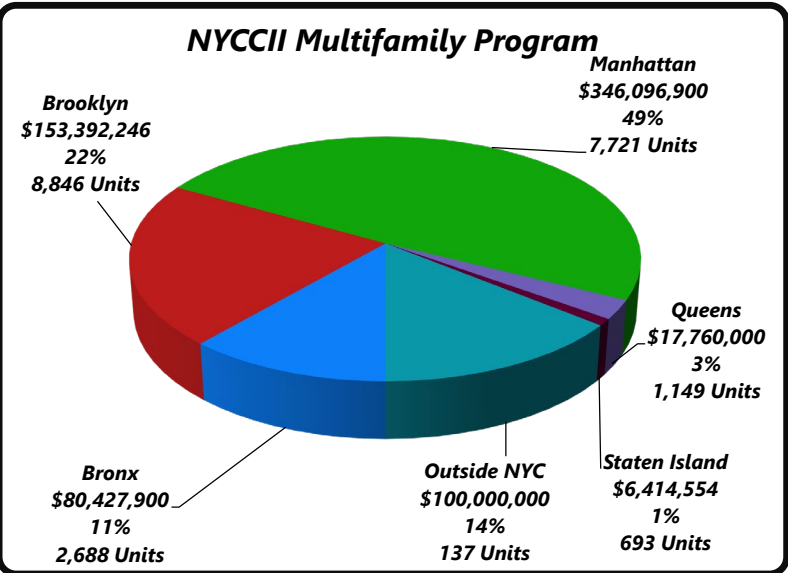


Police Pension Fund - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)
Market Value \$162.87 million¹

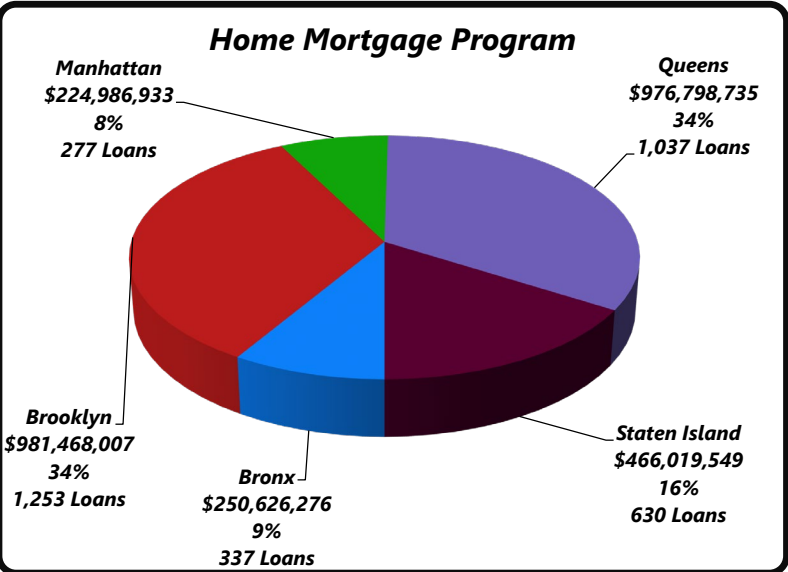
NYC Community Investment Initiative (NYCCII)

Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	Investments	Units ²	Investments	Units ²	Investments	Units ²
Bronx	\$27,600,000	1,886	\$52,827,900	802	\$80,427,900	2,688
Brooklyn	49,501,800	3,230	103,890,446	5,616	153,392,246	8,846
Manhattan	172,021,700	6,908	174,075,200	813	346,096,900	7,721
Queens	0	0	17,760,000	1,149	17,760,000	1,149
Staten Island	0	0	6,414,554	693	6,414,554	693
Outside NYC	0	0	100,000,000	137	100,000,000	137
Total	\$249,123,500	12,024	\$454,968,100	9,210	\$704,091,600	21,234



HIT Home Mortgage Program

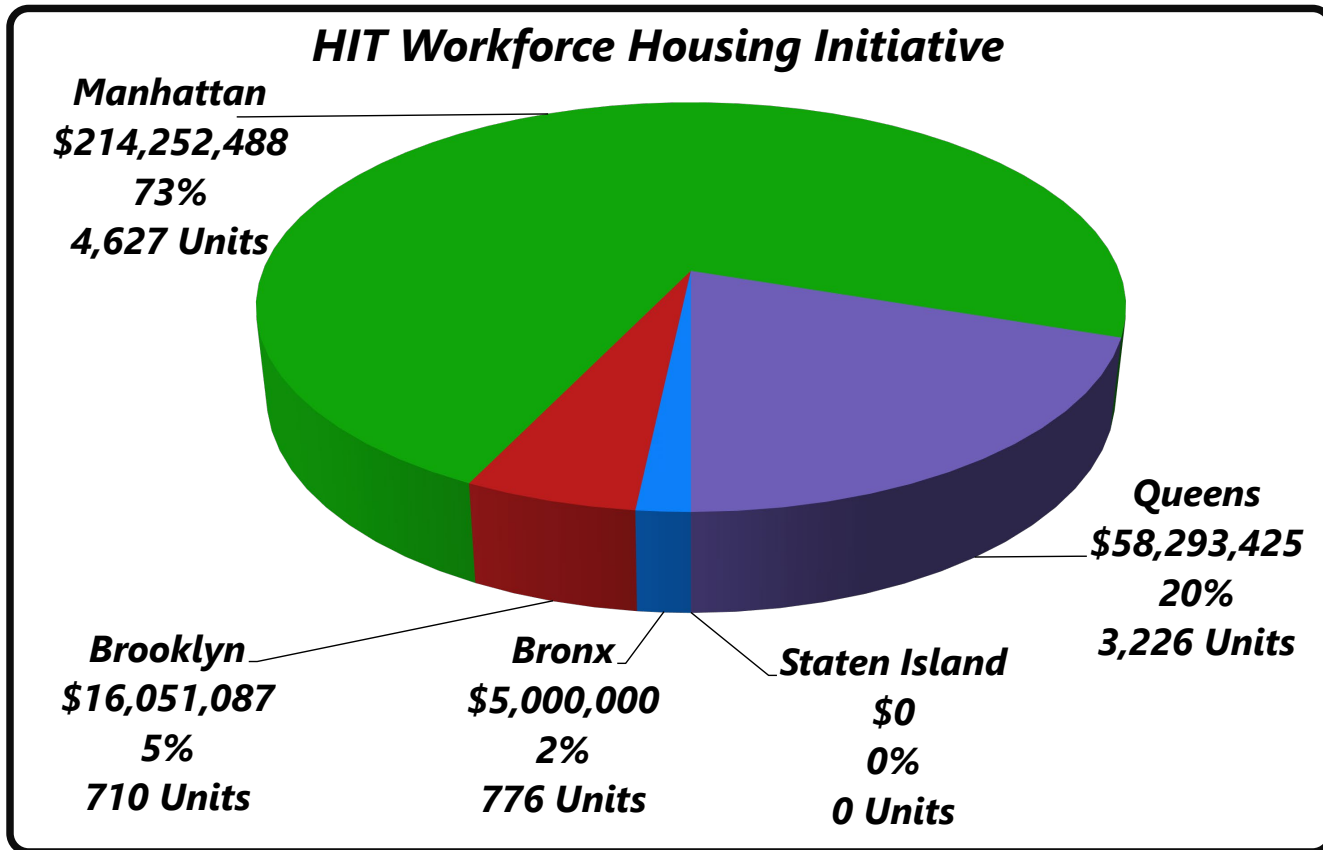
Borough	NYCCII Phase I: 2002 - 2005		NYCCII Phase II: 2006 - 2013		Grand Total	
	\$ Amount	Loans	\$ Amount	Loans	\$ Amount	Loans
Bronx	\$32,544,168	41	\$218,082,108	296	\$250,626,276	337
Brooklyn	116,575,736	138	864,892,271	1,115	981,468,007	1,253
Manhattan	10,742,253	12	214,244,680	265	224,986,933	277
Queens	82,399,317	64	894,399,418	973	976,798,735	1,037
Staten Island	106,039,089	191	359,980,460	439	466,019,549	630
Total	\$348,300,563	446	\$2,551,598,937	3,088	\$2,899,899,500	3,534



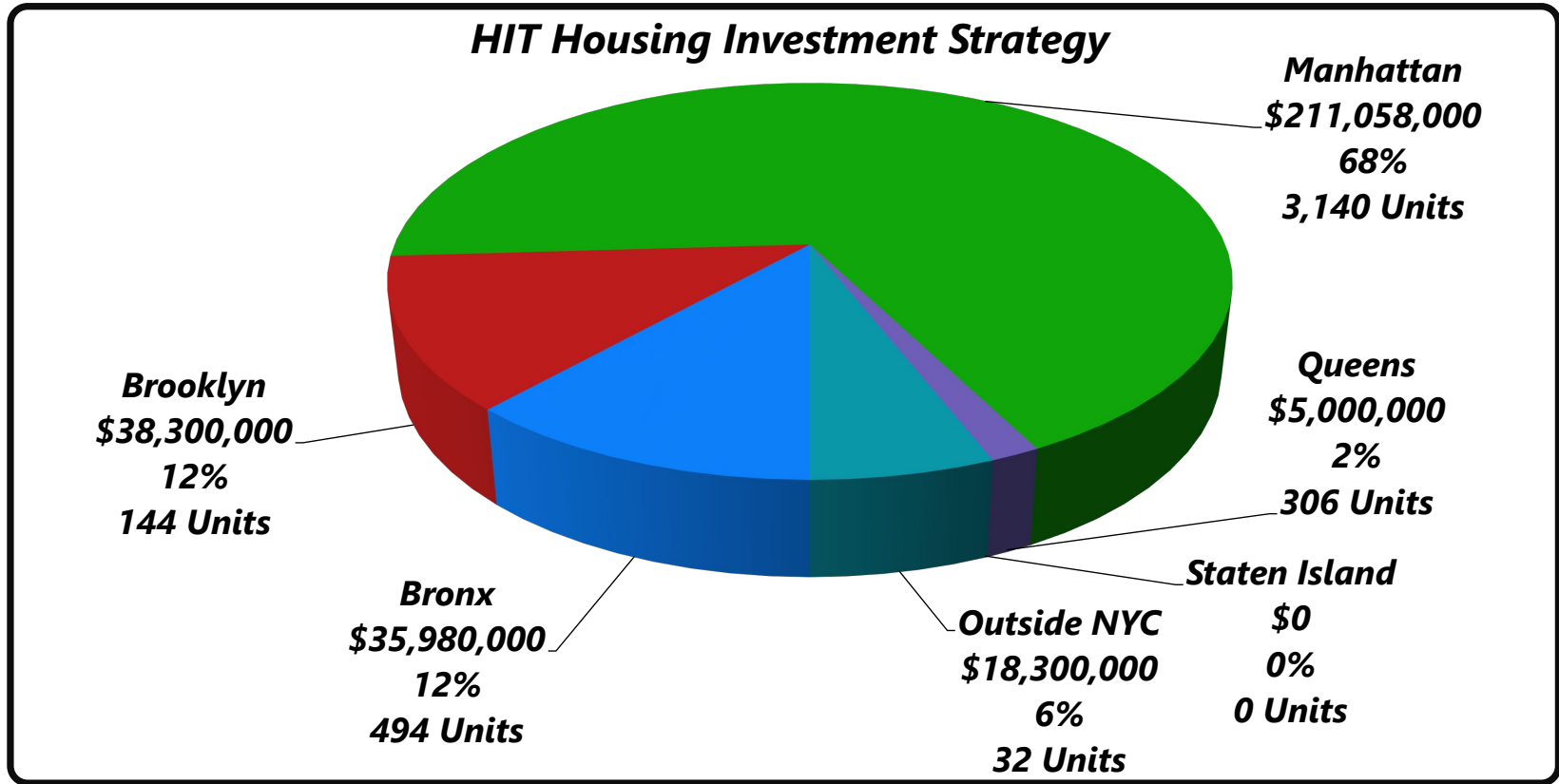
POLICE Loans	Phase I:	131	Phase II:	140	Total:	271
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¹Interest is reinvested
²Low/Moderate Income Units

AFL-CIO Housing Investment Trust (HIT)		
NYC Workforce Housing Initiative: 2009 - 2015		
	<u>Investments</u>	<u>LMI Units</u>
<u>Borough</u>	<u>Since Inception</u>	<u>Since Inception</u>
Bronx	\$5,000,000	776
Brooklyn	16,051,087	710
Manhattan	214,252,488	4,627
Queens	58,293,425	3,226
Staten Island	0	0
Total	\$293,597,000	9,339



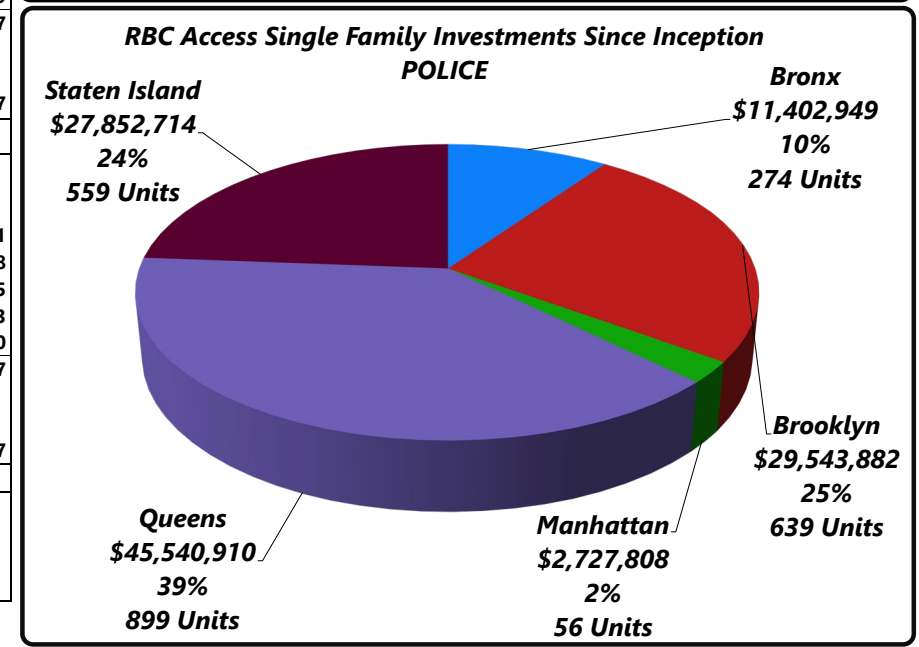
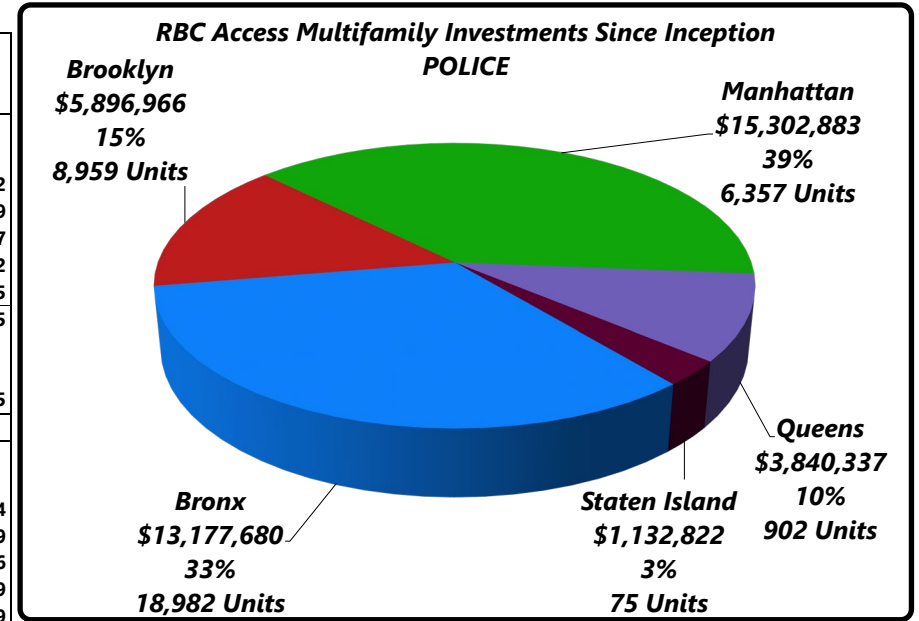
AFL-CIO Housing Investment Trust (HIT)					
HIT Housing Investment Strategy: 2015 - Q1 2019					
<u>Borough</u>	<u>Q1 Investments</u>	<u>Investments</u>		<u>LMI Units</u>	
		<u>Since Inception</u>	<u>Q1 LMI Units</u>	<u>Since Inception</u>	
Bronx	\$0	\$35,980,000	0	494	
Brooklyn	0	38,300,000	0	144	
Manhattan	0	211,058,000	0	3,140	
Queens	0	5,000,000	0	306	
Staten Island	0	0	0	0	
Outside NYC	0	18,300,000	0	32	
Total	\$0	\$308,638,000	0	4,116	



Police Pension Fund - Economically Targeted Investments Quarterly Report

RBC ACCESS CAPITAL STRATEGIES (Since Inception 2/1/07)

\$91.5 million Allocated (20.33% of total account)					
Market Value \$84.08 million					
Multifamily Investments Detail					
	\$ Invested¹		Units²		
	Q1	Total	Q1	Total	
Bronx	\$0	\$13,177,680	0	18,982	
Brooklyn	0	5,896,966	0	8,959	
Manhattan	0	15,302,883	0	6,357	
Queens	0	3,840,337	0	902	
Staten Island	0	1,132,822	0	75	
Total POLICE Multifamily Investments	\$0	\$39,350,687	0	35,275	
Multifamily Total All Systems	\$0	\$193,559,702	0	35,275	
Single Family Investments Detail					
	\$ Invested		Units		
	Q1	Total	Q1	Total	
Bronx	\$0	\$11,402,949	0	274	
Brooklyn	0	29,543,882	0	639	
Manhattan	0	2,727,808	0	56	
Queens	0	45,540,910	0	899	
Staten Island	0	27,852,714	0	559	
Total POLICE Single Family Investments	\$0	\$117,068,264	0	2,427	
Single Family Total All Systems	\$0	\$575,839,960	0	2,427	
Other Investments Detail					
	\$ Invested		Loans		
	Q1	Total	Q1	Total	
Bronx	\$0	\$137,228	0	1	
Brooklyn	0	1,095,869	0	8	
Manhattan	0	494,610	0	5	
Queens	0	110,480	0	3	
Staten Island	0	0	0	0	
Total POLICE Other Investments	\$0	\$1,838,186	0	17	
Other Investments Total All Systems	\$0	\$9,041,740	0	17	
Grand Total POLICE	\$0	\$158,257,137			
Grand Total All Systems	\$0	\$778,441,402			



¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.

² If not indicated otherwise, superintendent units are allocated based on building size.

Private Equity Quarterly Report (Public):



Private Equity Monitoring Report

For the period ended December 31, 2018

Report Prepared For:

New York City Police Pension Fund, Subchapter 2



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All data is as of December 31, 2018 unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

I. Executive Summary

The New York City Police Pension Fund, Subchapter 2 (“NYCPPF”) established the Alternative Investment Program (the “Program”) on January 1, 1997 on behalf of its beneficiaries to participate in attractive long-term investment opportunities and to provide diversification to its overall pension investment portfolio.

StepStone Group LP (“StepStone”) was engaged by NYCPPF on February 1, 2012 to provide private equity advisory services for prospective investment opportunities and monitoring and reporting services for existing and new investments.

Since inception through December 31, 2018, the Program has committed US\$6.2 billion to 224 partnership investments (the “Portfolio”). This quarterly monitoring report covers the performance of the Portfolio as of December 31, 2018 as well as significant activity that occurred during the fourth quarter of 2018.

Performance Summary

<i>US\$ in millions</i>	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Number of Managers	119	121	121	(2)	(2)
Number of Investments	224	220	208	4	16
Committed Capital ¹	\$6,190.4	\$6,041.6	\$5,470.6	\$148.8	\$719.8
Contributed Capital	\$5,073.0	\$4,951.1	\$4,716.2	\$121.9	\$356.8
Distributed Capital	\$4,954.5	\$4,773.9	\$4,357.1	\$180.6	\$597.4
Market Value	\$2,476.2	\$2,559.6	\$2,501.3	(\$83.4)	(\$25.1)
Total Value	\$7,430.7	\$7,333.5	\$6,858.4	\$97.2	\$572.3
Total Gain/(Loss)	\$2,357.7	\$2,382.4	\$2,142.2	(\$24.6)	\$215.5
Unfunded Commitment ²	\$1,802.0	\$1,754.6	\$1,375.2	\$47.4	\$426.8
Total Exposure ³	\$4,278.2	\$4,314.3	\$3,876.5	(\$36.1)	\$401.7
DPI ⁴	0.98x	0.96x	0.92x	0.01x	0.05x
TVM ⁵	1.46x	1.48x	1.45x	-0.02x	0.01x
IRR ⁶	10.7%	10.9%	10.8%	-23 bps	-11 bps
TVM Net of StepStone Fees ⁷	1.46x	1.48x	1.45x	-0.02x	0.01x
IRR Net of StepStone Fees ⁷	10.7%	10.9%	10.8%	-21 bps	-9 bps

¹ Committed Capital is presented net of any commitment releases or expirations and reflects foreign currency exchange rate fluctuations.

² Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³ Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴ DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital invested. DPI is calculated as Distributed Capital divided by Contributed Capital.

⁵ TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to capital invested, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital.

⁶ IRR, or Internal Rate is Return, is a performance metric that is calculated based on the Portfolio’s daily cash flows and market value as of quarter-end. IRR is net of fund manager’s fees, expenses and carried interest.

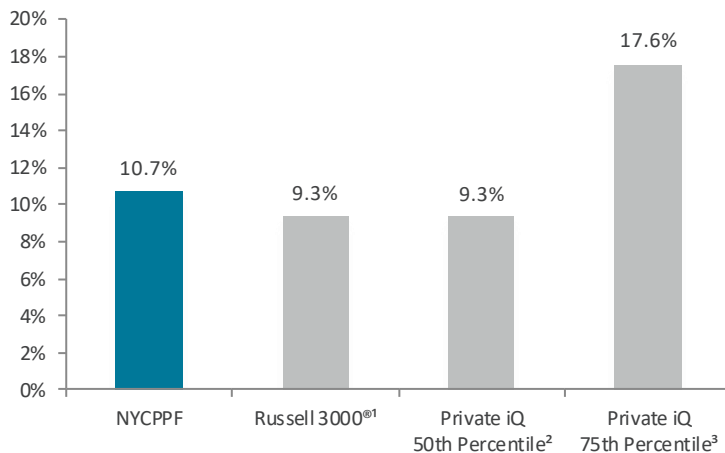
⁷ TVM and IRR Net of StepStone fees represent TVM and IRR net of fees paid by NYCPPF to StepStone.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Portfolio Performance vs. Benchmarks

The Portfolio's performance is measured against a dollar-weighted public benchmark, which produced the return that would have been earned if NYCPPF's private equity cash flows were invested in the Russell 3000® Index¹.

The following graph illustrates Portfolio IRR performance versus benchmarks as of December 31, 2018.



¹Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

²Private iQ benchmark reflects Equity (all sub-sectors), Mezzanine, Distressed, Oil & Gas Assets asset classes, 50th percentile, or median, IRR at December 31, 2018 for funds with vintage years from 1998 through 2018. The benchmark is a weighted average of the primary and secondary 50th percentile returns based on the Portfolio's market value as of December 31, 2018. Note: Data may be subject to change.

³Private iQ benchmark reflects Equity (all sub-sectors), Mezzanine, Distressed, Oil & Gas Assets asset classes, 50th percentile, or median, IRR at December 31, 2018 for funds with vintage years from 1998 through 2018. The benchmark is a weighted average of the primary and secondary 75th percentile returns based on the Portfolio's market value as of December 31, 2018. Note: Data may be subject to change.

The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Portfolio Diversification

By Strategy

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
Buyout	\$1,487.4	60.1%	\$1,239.9	68.8%	\$2,727.3	63.7%
Growth Equity	317.8	12.8%	130.5	7.2%	448.4	10.5%
Special Situations	174.8	7.1%	114.2	6.3%	289.1	6.8%
Energy	33.3	1.3%	4.7	0.3%	38.0	0.9%
Secondaries	168.3	6.8%	197.7	11.0%	366.0	8.6%
Co-Investment	131.6	5.3%	107.2	5.9%	238.8	5.6%
Other	163.0	6.6%	7.7	0.4%	170.7	4.0%
Total	\$2,476.2	100.0%	\$1,802.0	100.0%	\$4,278.2	100.0%

By Fund Geographic Focus

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
North America	\$1,671.7	67.5%	\$1,082.4	60.1%	\$2,754.0	64.4%
Global	416.5	16.8%	316.4	17.6%	732.9	17.1%
Western Europe	370.5	15.0%	401.6	22.3%	772.1	18.0%
Rest of World	17.6	0.7%	1.6	0.1%	19.2	0.4%
Total	\$2,476.2	100.0%	\$1,802.0	100.0%	\$4,278.2	100.0%

Fund Geographic Focus is based on a number of factors, including the GP-stated geographic focus, the number of investments within each region, invested capital by region, the location of the firm's offices and investment professionals, and the underlying fund currency.

II. Market Overview

Executive Summary

Concerns over global trade, moderated economic data, and tightening central banks shocked equity markets in the fourth quarter of 2018. The MSCI Emerging Markets index outperformed developed markets, declining 7.8%, reversing the trend from earlier in the year. The MSCI Europe index fell 13.0%, as Prime Minister Theresa May postponed the vote on the controversial Withdrawal Agreement and uncertainty of a successful United Kingdom exit from the European Union came to the fore. The European Central Bank ended its stimulus program and downgraded economic forecasts, leading to speculation that interest rates would not be raised until later in 2019. The S&P 500 Total Return index was an underperformer, decreasing 13.5% for the quarter, with Energy decreasing 24.9% following lower demand from China and a potential oversupply. The US Federal Reserve raised interest rates in December, for a total of four increases in 2018, and signaled for only two interest rate increases in 2019 down from three previously.

In private markets, US leveraged buyout (“LBO”) debt volume decreased by 42.8% quarter-over-quarter, from US\$46.5 billion to US\$26.6 billion, more than twice the fourth quarter of 2017 and 50.2% higher than the 10-year quarterly average of US\$17.7 billion. According to data from S&P, purchase price multiples for US LBOs decreased to 10.3x EBITDA in the fourth quarter, down 7.0% from 11.0x EBITDA in the prior quarter, and above the 10-year average of 9.2x EBITDA. Average debt multiples of large corporate US LBO loans remained at 5.9x for the quarter, above the 10-year average of 5.2x. Equity contributions for US LBOs decreased to 42.9%, a 1.3% decrease quarter-over-quarter and slightly above the 10-year average of 42.3%.¹

Fundraising for global private equity totaled US\$130.3 billion in the fourth quarter of 2018, a 1.6% decrease compared to the prior quarter and a 50.2% increase from the fourth quarter of 2017. Geographically, the US represented 67.4% of total funds raised in the quarter, higher than the 10-year average of 59.5%. Funds raised in Europe, Asia, and the Rest of World made up 14.6%, 9.8% and 8.1%, respectively, of global fundraising for the quarter. Invested capital for private equity funds increased 33.0% quarter-over-quarter and increased 92.8% year-over-year, with US\$111.1 billion invested in 3,571 deals. A significant portion of the capital deployed was in the Industrials sector, accounting for 26.4% compared to the 10-year average of 11.8%.²

Private equity-backed IPO transaction volume decreased in the fourth quarter with US\$5.1 billion raised in 24 IPOs. The amount raised through IPOs decreased 38.2% compared to the prior quarter and 19.1% compared to the fourth quarter of 2017. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. M&A activity increased in the fourth quarter with a total value of US\$250.0 billion, a 66.7% increase compared to the prior quarter and a 19.3% increase compared to the fourth quarter of 2017. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter.³

¹ S&P US LBO Review, Q4 2018

² Thomson ONE data as of March 12, 2019. Please note, all data in this report from Thomson ONE is subject to revision as further data is made available.

³ Capital IQ Transaction Screening Report as of March 12, 2019

Capital Markets Overview

Public Equity Markets

Volatility in global public markets was sparked by moderated economic data, as US markets posted their first annual loss in nine years following lowered guidance from high profile information technology companies. Energy, Industrials, and Information Technology sectors for US equities declined 24.9%, 18.0%, and 17.7% for the quarter, respectively. Although volatility has returned, earnings growth for the S&P 500 was near 26.0% for the quarter, signaling strong corporate data.



The following table shows the returns of four major MSCI indices, as well as the S&P 500 and the S&P 500 Total Return Index, over various time horizons through December 31, 2018. Returns for time periods greater than one year are annualized. During the quarter, US markets decreased 13.5% followed by MSCI Europe down 13.0%. MSCI Asia and MSCI Emerging Markets decreased 11.3% and 7.8%, respectively.

Regional Indices

	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
MSCI Asia	(11.3%)	(15.6%)	3.9%	1.5%	5.1%
MSCI Europe	(13.0%)	(17.3%)	(0.8%)	(3.3%)	3.1%
MSCI EM	(7.8%)	(16.6%)	6.7%	(0.7%)	5.5%
MSCI ACWI	(13.1%)	(11.2%)	4.5%	2.2%	7.2%
S&P 500	(14.0%)	(6.2%)	7.0%	6.3%	10.7%
S&P 500 Total Return*	(13.5%)	(4.4%)	9.3%	8.5%	13.1%

For the period ended December 31, 2018

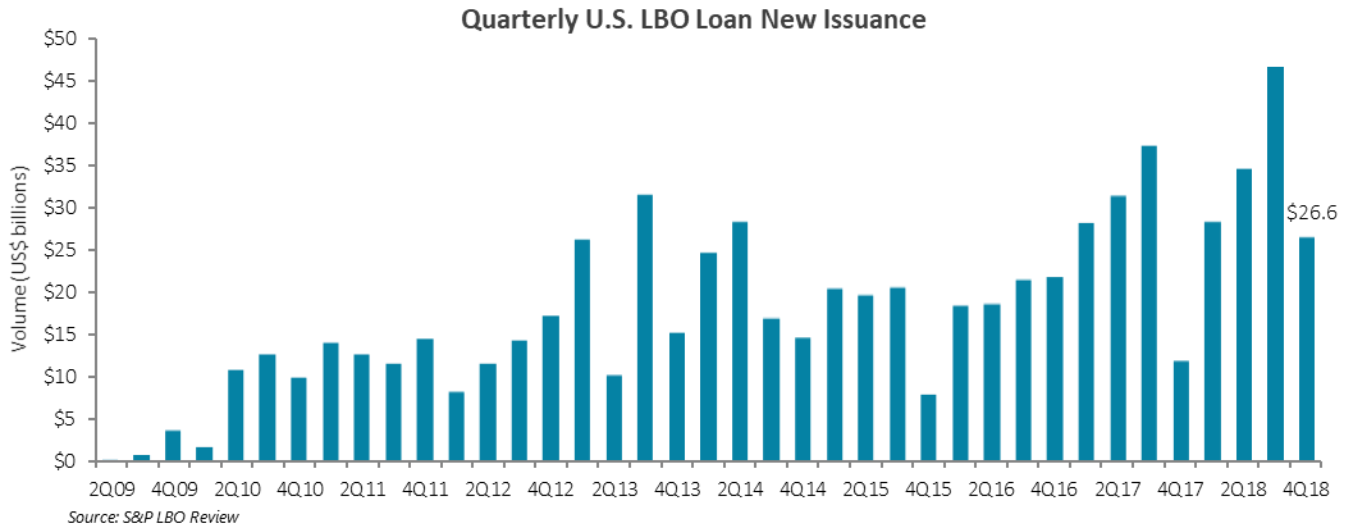
*Includes reinvestment of dividends.

Source: Capital IQ

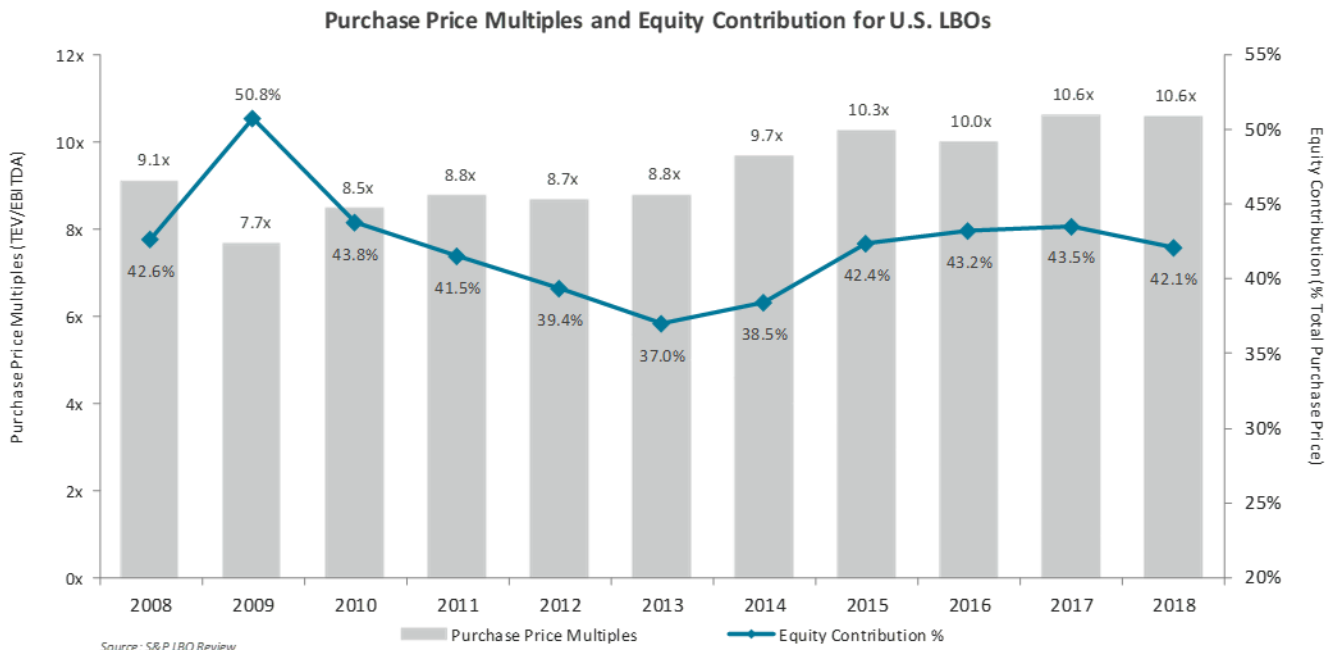
The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance presented.

Debt Markets

During the fourth quarter of 2018, US LBO new loan issuance totaled US\$26.6 billion, representing an increase of 42.8% from the prior quarter and an increase from US\$11.9 billion from the fourth quarter of 2017. The following chart shows the quarterly volume of US LBO new loan issuance for the past ten years.



The weighted average purchase price multiple for US LBO deals was 10.3x total enterprise value (“TEV”) to EBITDA in the fourth quarter, a decrease from 11.0x in the prior quarter and above the 10-year average of 9.2x. Average debt multiples of large corporate US LBO loans increased year-over-year from 5.8x EBITDA to 5.9x EBITDA, as equity contributions for US LBOs decreased from 43.5% to 42.1%. The following chart compares purchase price multiples and equity contribution percentages for US LBO deals.



Private Equity Market Overview

All Private Equity

The table below shows the pooled Internal Rate of Return (“IRR”) performance of global private equity investments by sector over various investment horizons through December 31, 2018. The All Private Equity benchmark had an IRR of (0.8%) for the quarter. Two out of five sectors were positive for the quarter, led by Venture Capital with 1.4%, followed by Small/Middle Buyouts with 0.7%, Mezzanine with 0.0%, Large Buyouts with (2.3%), and Energy with (11.1%)

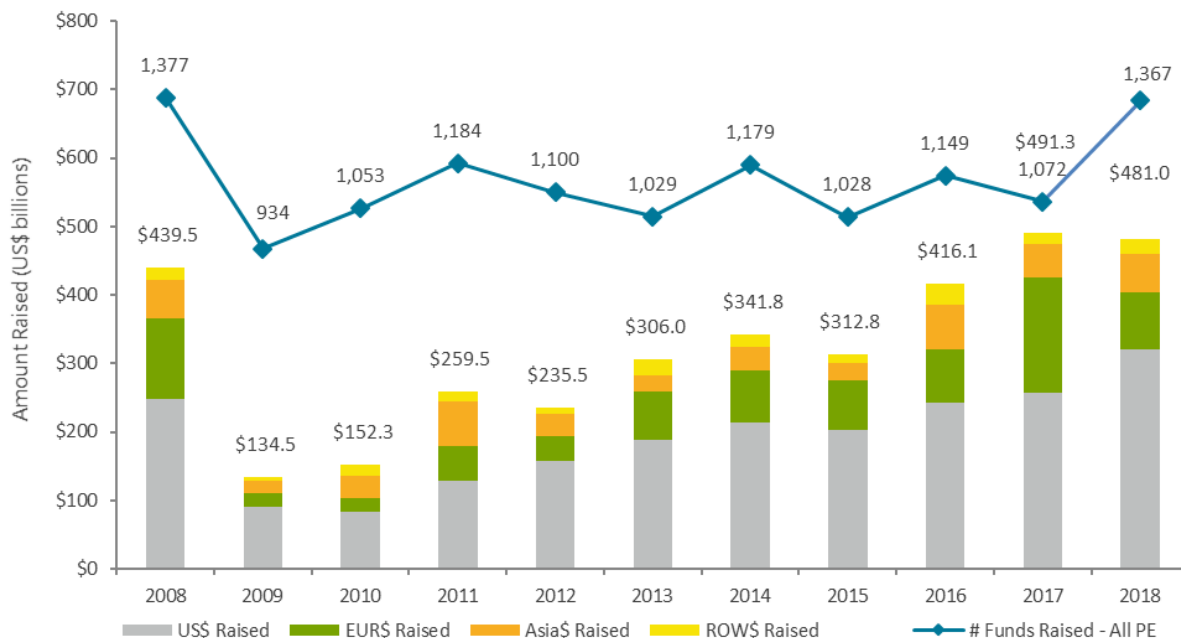
Sector	3 Mo	1 Yr	3 Yr	5 Yr	10 Yr
Small/Middle Buyouts (<\$3bn)	0.7%	9.7%	14.7%	11.8%	13.0%
Large Buyouts (>\$3bn)	(2.3%)	8.9%	14.6%	12.4%	14.6%
Mezzanine	0.0%	6.9%	8.9%	8.6%	9.2%
Energy	(11.1%)	(5.6%)	7.3%	(0.3%)	5.5%
Venture Capital	1.4%	21.1%	11.9%	15.3%	14.0%
All Private Equity	(0.8%)	10.9%	13.0%	11.7%	13.4%

Source: Burgiss PrivateIQ

Fundraising

Global private equity fundraising totaled US\$481.0 billion in 2018, representing a decrease of 2.1% year-over-year. Buyout fundraising totaled US\$326.1 billion in 2018, decreasing 10.4% compared to US\$364.1 billion in 2017. Venture Capital raised US\$78.3 billion in 2018, an increase of 18.6% compared to US\$66.0 billion in 2017. Geographically, the US represented 66.5% of total funds raised in the year, higher than the 10-year average of 59.6%. Funds raised in Europe, Asia, and the Rest of World made up 17.3%, 11.6% and 4.6%, respectively, of global fundraising for the year. The chart below shows annual private equity fundraising activity across all sectors.

Regional Fundraising by Year – All Private Equity

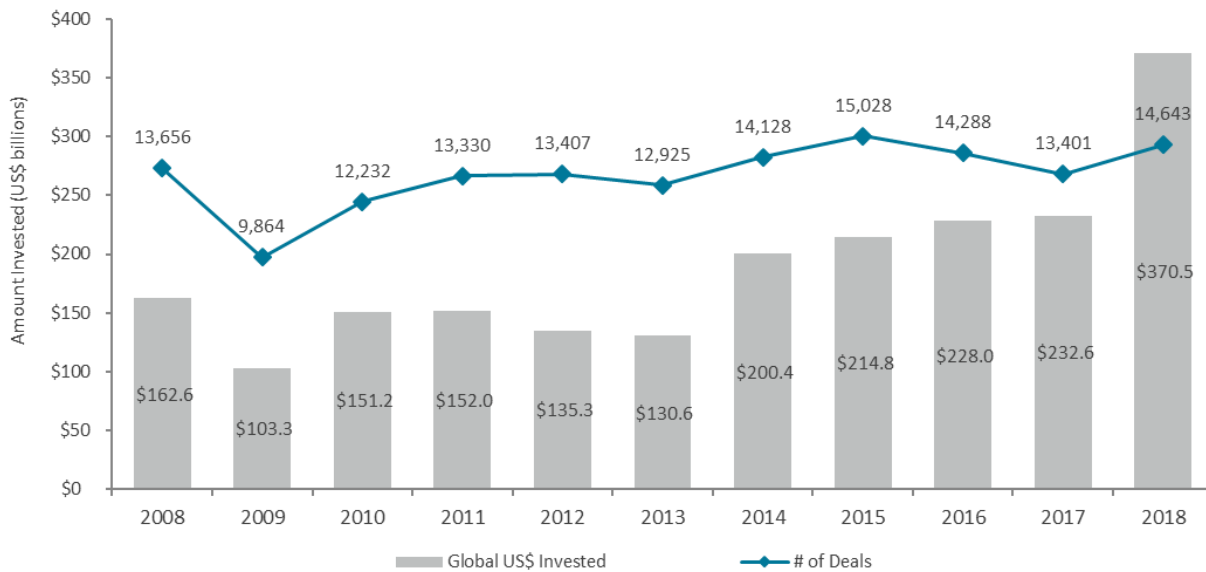


Source: Thomson ONE

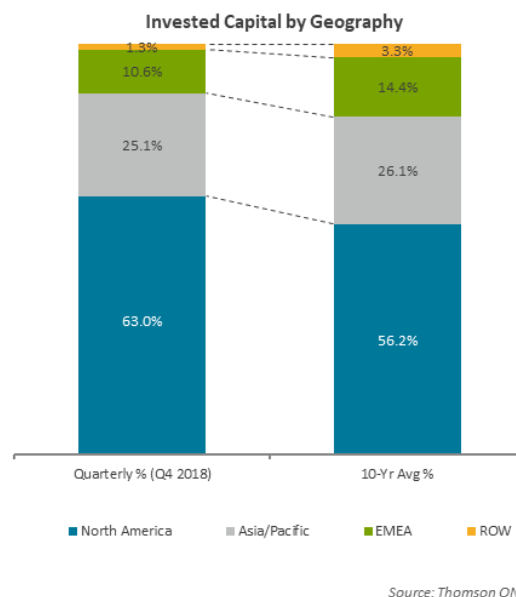
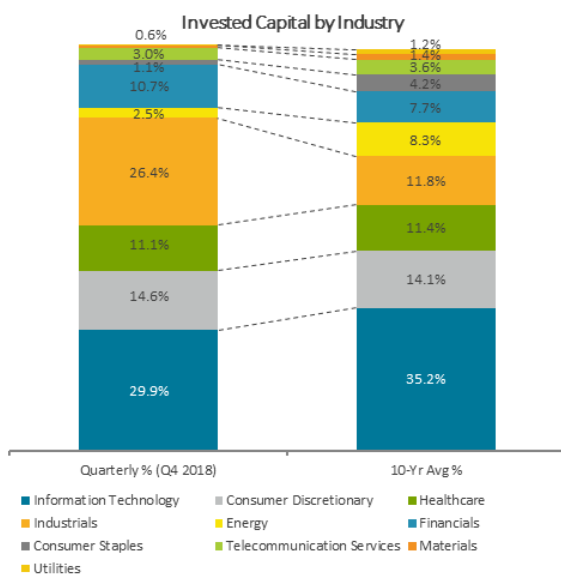
Investment Activity

Private equity funds invested US\$370.5 billion globally during 2018, representing an increase of 59.3% from US\$232.6 billion in 2017. The average investment size during the year was US\$25.3 million, an increase of 45.8% compared to the average investment size of US\$17.4 million in 2017.

Investment Activity - All Private Equity



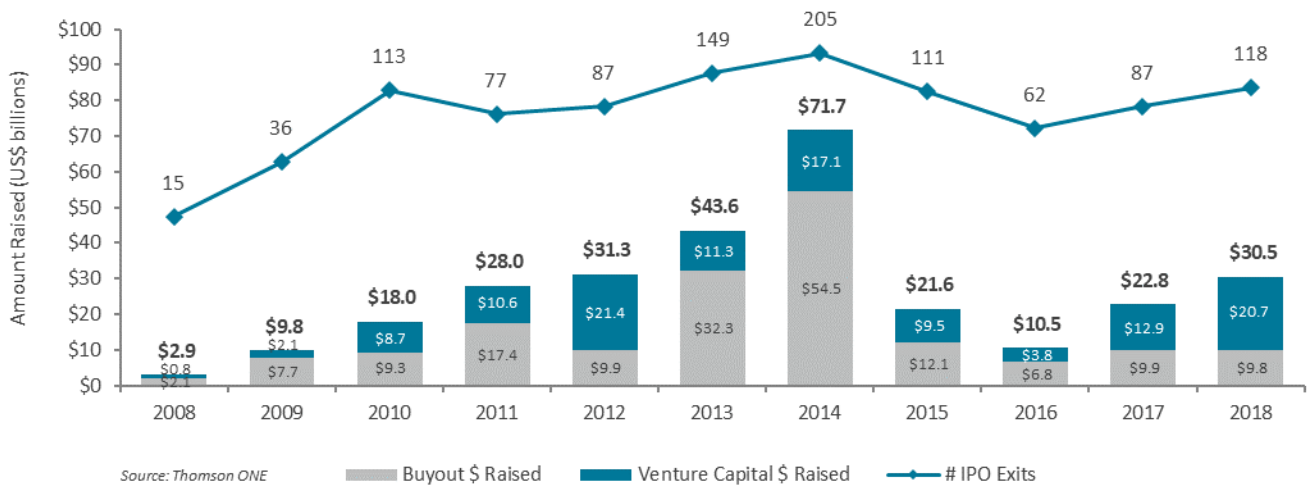
The graphs below depict the percentage of invested capital by industry and geography for the third quarter of 2018 and over the last ten years. The Financials sector had the largest departure from its 10-year average, accounting for US\$14.8 billion of transactions, or 15.8% of total capital invested by private equity firms, compared to its 10-year average of 8.1%. Considering geography, investment activity was above average in North America, comprising 57.1% of total capital invested compared to its 10-year historical average of 55.0%.



Deal Environment

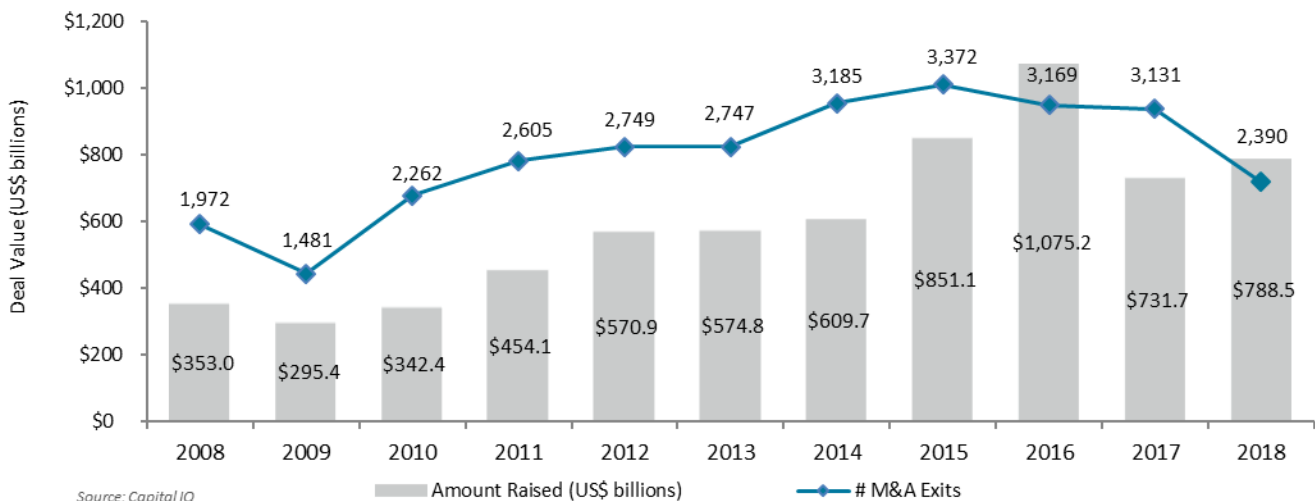
In 2018, the number of private equity-backed IPOs increased 35.6%, from 87 to 118, and the amount raised increased 33.9%, from US\$22.8 billion to US\$30.5 billion, compared to the prior year. The IPOs were comprised of 94 venture capital-backed IPOs that raised a total of US\$20.7 billion and 24 IPOs from buyouts that raised US\$9.8 billion. The largest IPOs of the quarter were completed by Tencent Music Entertainment Shenzhen Co Ltd (NYSE: TME), a provider of online music and music-centric social entertainment services in China, which raised US\$1.1 billion, and Moderna, Inc. (NASDAQ: MRNA), a developer of medicines based on messenger RNA (mRNA), which raised US\$604.4 million, together representing 33.0% of the total value for all IPOs in the quarter. The graph below shows the amount raised and the number of IPOs on the NYSE and NASDAQ.

IPO Activity by Strategy - All Private Equity



The number of private equity-backed Mergers and Acquisitions (“M&A”) declined 23.7%, and the total value of M&A deals increased 7.8% compared to the prior year. In the fourth quarter, there were 536 private-equity backed M&A deals totaling US\$250.0 billion. The largest M&A deals of the quarter were the US\$69.5 billion purchase of Aetna Inc. by CVS Health Corporation (NYSE:CVS) and the US\$53.4 billion purchase of Linde Aktiengesellschaft (DB:LNA) by Linde plc (XTRA:LIN). Together these deals represent 49.2% of the total value for all deals in the quarter. The graph below shows the deal value and the number of M&A deals.

M&A Activity - All Private Equity



III. Portfolio Review

Quarterly Highlights

- Cash Flow Activity** – During the fourth quarter of 2018, the Portfolio made US\$121.9 million of contributions and received US\$180.6 million of distributions, for a net cash inflow of US\$58.8 million, compared to a net cash inflow of US\$56.9 million during the prior quarter and a net cash inflow of US\$97.5 million during the fourth quarter of 2017. Contributions increased 25.7% from the prior quarter and decreased 20.9% from the fourth quarter of 2017. The most recent four quarter average of the Program’s contributions is US\$89.2 million. Distributions increased 17.4% from the prior quarter and decreased 28.2% from the fourth quarter of 2017. The most recent four quarter average of the Program’s distributions is US\$149.4 million.
- Recent Portfolio Activity** – During the fourth quarter of 2018, net of cash flow activity, the valuation of the Portfolio decreased by US\$24.6 million, or 1.0%, from the prior quarter. The decrease in Portfolio value is primarily attributable to a poor performance of Buyout funds during the quarter, which generated a US\$10.2 million decrease in valuation from the prior quarter-end. During the last twelve months, net of cash flow activity, the valuation of the Portfolio increased by US\$215.5 million, or 9.5%, from the quarter ended December 31, 2017.
- New Investment Commitment** – The Program closed on four new investment commitments during the fourth quarter of 2018, totaling US\$154.6 million.

<i>As of December 31, 2018 (US\$ in millions)</i>	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
KKR European Fund V (USD) SCSp	November 2018	Buyout	Europe	\$ 50.2
Grain Communications Opportunity Fund II, L.P.	December 2018	Buyout	North America	6.5
Palladium Equity Partners V, L.P.	December 2018	Buyout	North America	23.3
Lexington Capital Partners IX, L.P.	December 2018	Secondaries	Global	74.6
Total				\$ 154.6

- Subsequent Investment Commitments** – Subsequent to quarter-end through June 3, 2019, the Program has closed on five new investment commitments, totaling US\$303.9 million.

<i>As of June 3, 2019 (US\$ in millions)</i>	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Warburg Pincus Global Growth, L.P.	January 2019	Buyout	Global	\$ 80.0
ASF VIII L.P.	March 2019	Secondaries	Europe	111.0
ASF VIII B NYC Co-Invest L.P.	March 2019	Secondaries	Europe	55.0
Lindsay Goldberg V, L.P.	April 2019	Buyout	North America	55.0
Lexington Co-Invest Partners B, L.P.	May 2019	Secondaries	Global	2.9
Total				\$ 303.9

Investment Performance

Since Inception Performance

<i>US\$ in millions</i>	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Active Investments					
Number of Managers	104	105	106	(1)	(2)
Number of Investments	195	196	188	(1)	7
Committed Capital ¹	\$5,730.7	\$5,664.3	\$5,204.4	\$66.4	\$526.3
Contributed Capital	\$4,572.8	\$4,539.8	\$4,428.9	\$33.1	\$143.9
Distributed Capital	\$4,301.7	\$4,240.0	\$4,013.7	\$61.7	\$288.0
Market Value	\$2,476.2	\$2,559.6	\$2,501.3	(\$83.4)	(\$25.1)
Total Value	\$6,777.9	\$6,799.6	\$6,515.0	(\$21.7)	\$262.9
Total Gain/(Loss)	\$2,205.1	\$2,259.8	\$2,086.1	(\$54.7)	\$119.0
Unfunded Commitment ²	\$1,802.0	\$1,754.6	\$1,375.2	\$47.4	\$426.8
Total Exposure ³	\$4,278.2	\$4,314.3	\$3,876.5	(\$36.1)	\$401.7
DPI ⁴	0.94x	0.93x	0.91x	0.01x	0.03x
TVM ⁵	1.48x	1.50x	1.47x	-0.02x	0.01x
IRR ⁶	11.2%	11.3%	11.2%	-13 bps	-6 bps
Exited Investments					
Number of Managers	25	21	17	4	8
Number of Investments	29	24	20	5	9
Committed Capital ¹	\$459.7	\$377.3	\$266.2	\$82.4	\$193.5
Contributed Capital	\$500.2	\$411.4	\$287.3	\$88.8	\$212.9
Distributed Capital	\$652.8	\$533.9	\$343.4	\$118.9	\$309.4
Total Value	\$652.8	\$533.9	\$343.4	\$118.9	\$309.4
Total Gain/(Loss)	\$152.6	\$122.5	\$56.1	\$30.1	\$96.5
Unfunded Commitment ²	\$0.0	(\$0.0)	(\$0.0)	\$0.0	\$0.0
DPI ⁴	1.31x	1.30x	1.20x	0.01x	0.11x
TVM ⁵	1.31x	1.30x	1.20x	0.01x	0.11x
IRR ⁶	7.6%	7.8%	5.5%	-24 bps	+208 bps
Total Portfolio					
Number of Managers	119	121	121	(2)	(2)
Number of Investments	224	220	208	4	16
Committed Capital ¹	\$6,190.4	\$6,041.6	\$5,470.6	\$148.8	\$719.8
Contributed Capital	\$5,073.0	\$4,951.1	\$4,716.2	\$121.9	\$356.8
Distributed Capital	\$4,954.5	\$4,773.9	\$4,357.1	\$180.6	\$597.4
Market Value	\$2,476.2	\$2,559.6	\$2,501.3	(\$83.4)	(\$25.1)
Total Value	\$7,430.7	\$7,333.5	\$6,858.4	\$97.2	\$572.3
Total Gain/(Loss)	\$2,357.7	\$2,382.4	\$2,142.2	(\$24.6)	\$215.5
Unfunded Commitment ²	\$1,802.0	\$1,754.6	\$1,375.2	\$47.4	\$426.8
Total Exposure ³	\$4,278.2	\$4,314.3	\$3,876.5	(\$36.1)	\$401.7
DPI ⁴	0.98x	0.96x	0.92x	0.01x	0.05x
TVM ⁵	1.46x	1.48x	1.45x	-0.02x	0.01x
IRR ⁶	10.7%	10.9%	10.8%	-23 bps	-11 bps
TVM Net of StepStone Fees ⁷	1.46x	1.48x	1.45x	-0.02x	0.01x
IRR Net of StepStone Fees ⁷	10.7%	10.9%	10.8%	-21 bps	-9 bps

¹ Committed Capital is presented net of any commitment releases or expirations and reflects foreign currency exchange rate fluctuations. Total committed includes underlying fund commitments to the EM 2012 and 2015 Programs.

² Unfunded Commitment represents the aggregate remaining commitments to partnership investments.

³ Total Exposure represents the sum of Market Value and Unfunded Commitment.

⁴ DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital invested. DPI is calculated as Distributed Capital divided by Contributed Capital.

⁵ TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to capital invested, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital.

⁶ IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund manager's fees, expenses and carried interest.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Performance by Vintage Year

The following table and chart illustrate the Portfolio’s since inception investment performance by vintage year as of December 31, 2018 relative to the median quartile U.S. All Private Equity TVM and IRR benchmarks as provided by Burgiss Private IQ. Performance of funds that are less than two years old is not meaningful. Note that Burgiss Private IQ data is continuously updated and is therefore subject to change.

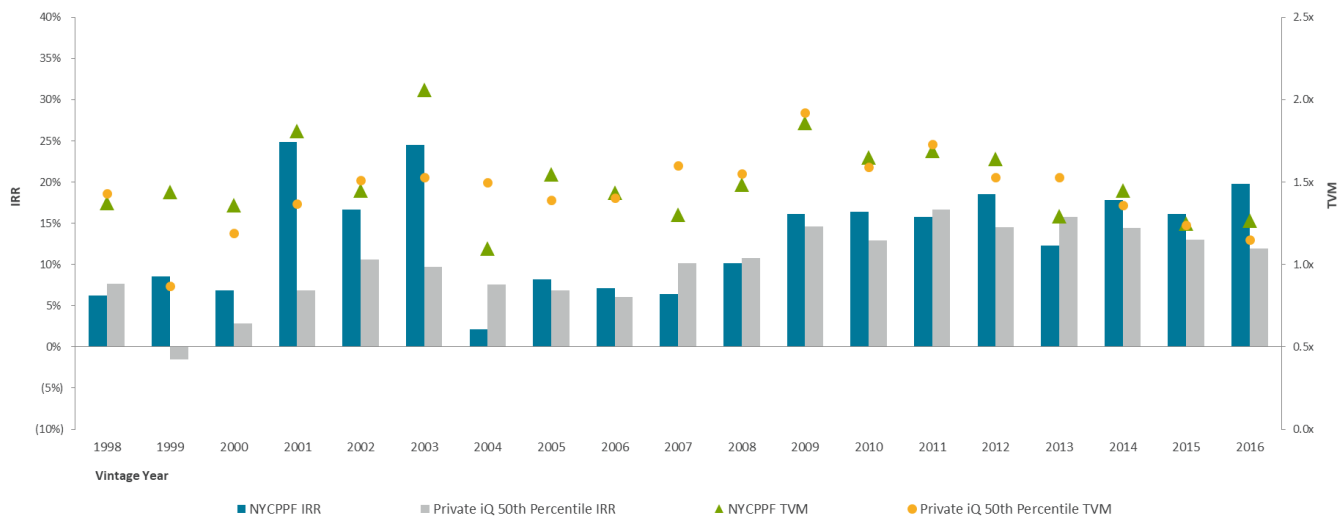
As of December 31, 2018 (US\$ in millions)

Vintage Year	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR	PME Return ¹	PME Spread ²	Private IQ U.S. All PE 50th Percentile TVM	Private IQ U.S. All PE 50th Percentile IRR
1998	\$20.0	\$20.1	\$27.6	\$0.0	\$0.0	\$0.0	1.37x	6.3%	3.4%	2.9%	1.43x	7.7%
1999	106.2	123.2	176.9	0.5	0.0	0.5	1.44x	8.5%	6.5%	2.1%	0.87x	(1.5%)
2000	58.0	69.7	91.7	3.1	3.7	6.8	1.36x	6.9%	6.2%	0.7%	1.19x	2.8%
2001	98.6	122.1	219.1	2.1	2.8	4.9	1.81x	24.9%	8.5%	16.4%	1.37x	6.9%
2002	56.1	55.3	80.0	0.1	1.5	1.6	1.45x	16.7%	7.3%	9.4%	1.51x	10.7%
2003	96.3	112.0	223.7	7.4	5.5	12.9	2.06x	24.5%	7.6%	16.9%	1.53x	9.7%
2004	185.6	203.0	205.5	17.7	5.2	22.9	1.10x	2.1%	6.5%	-4.3%	1.50x	7.5%
2005	327.4	352.5	461.6	83.3	10.7	94.1	1.55x	8.2%	7.0%	1.2%	1.39x	6.9%
2006	545.1	598.9	754.3	105.3	26.1	131.4	1.44x	7.1%	8.5%	-1.3%	1.41x	6.1%
2007	427.0	461.1	497.9	102.6	32.0	134.6	1.30x	6.4%	10.9%	-4.4%	1.60x	10.1%
2008	577.7	667.2	743.7	248.7	38.1	286.9	1.49x	10.2%	13.1%	-2.9%	1.55x	10.8%
2009	113.2	111.2	162.1	44.9	7.2	52.2	1.86x	16.2%	14.0%	2.2%	1.92x	14.6%
2010	102.5	109.7	126.9	54.2	18.1	72.3	1.65x	16.4%	12.1%	4.3%	1.59x	13.0%
2011	419.0	429.6	439.4	287.0	53.5	340.5	1.69x	15.8%	12.0%	3.8%	1.73x	16.7%
2012	462.0	465.1	399.7	362.9	63.7	426.6	1.64x	18.6%	9.9%	8.7%	1.53x	14.5%
2013	334.1	280.8	107.1	255.6	78.4	333.9	1.29x	12.3%	7.5%	4.8%	1.53x	15.7%
2014	390.6	344.1	167.8	330.4	95.3	425.7	1.45x	17.8%	7.3%	10.5%	1.36x	14.4%
2015	387.2	265.5	37.4	294.0	132.7	426.7	1.25x	16.2%	3.9%	12.2%	1.24x	13.0%
2016	187.5	128.9	27.3	135.9	80.4	216.3	1.27x	19.8%	2.3%	17.5%	1.15x	12.0%
2017	333.0	123.6	4.6	116.9	213.5	330.3	NM	NM	NM	NM	NM	NM
2018	776.4	29.3	0.0	23.7	746.9	770.6	NM	NM	NM	NM	NM	NM
2019	186.8	-	-	-	186.8	186.8	NM	NM	NM	NM	NM	NM
Total	\$6,190.4	\$5,073.0	\$4,954.5	\$2,476.2	\$1,802.0	\$4,278.2	1.46x	10.7%	9.3%	1.4%	1.34x	9.3%

¹ Russell 3000 PME+

² PME Spread is calculated as IRR minus PME Return.

As of December 31, 2018



Portfolio Periodic Returns vs. Russell 3000® Index

As of December 31, 2018	3 Month	1 Year	3 Year	5 Year	10 Year	Since Inception
NYCPPF IRR	-0.9%	9.0%	12.7%	10.8%	11.9%	10.7%
Russell 3000® ¹	-14.3%	-5.4%	9.6%	8.2%	14.0%	9.3%
Russell 3000® + 300 bps ²	-11.3%	-2.4%	12.6%	11.2%	17.0%	12.3%
NYCERS Outperformance/(Underperformance)						
vs. Russell 3000® + 300 bps ²	10.4%	11.4%	0.2%	(0.4%)	(5.1%)	(1.6%)

¹Return is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.

²Benchmark is a dollar-weighted PME+ calculation of daily changes in the Russell 3000® Index plus a 300 basis point illiquidity premium (the Opportunity Cost Benchmark).

Note: The referenced indices are shown for general market comparisons and are not meant to represent any particular fund. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Performance by Strategy / Sub-Strategy

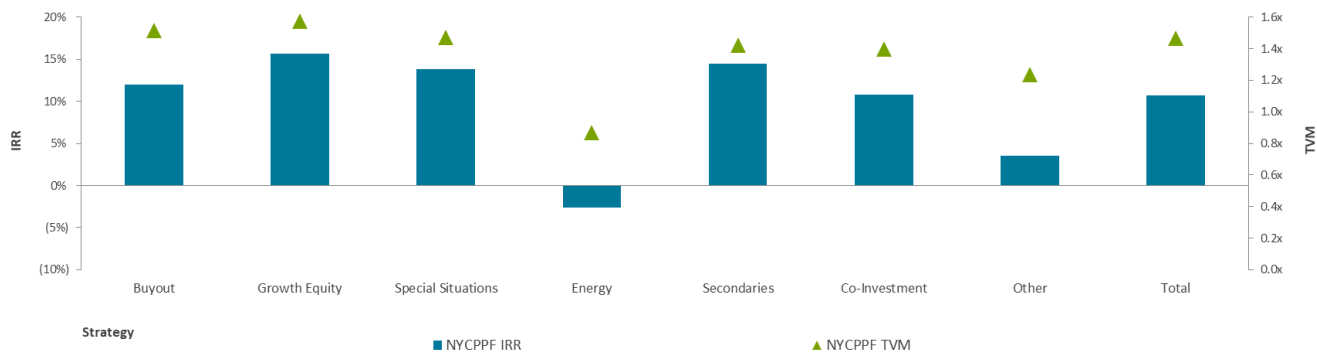
The following table and charts illustrate the Portfolio's since inception investment performance by strategy and sub-strategy as of December 31, 2018.

As of December 31, 2018 (US\$ in millions)

Strategy / Sub-Strategy	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded Commitment	Total Exposure	TVM	IRR
Buyout	\$3,978.5	\$3,226.1	\$3,397.1	\$1,487.4	\$1,239.9	\$2,727.3	1.51x	12.0%
Mega Buyout	1,330.3	788.0	652.3	481.9	642.9	1,124.7	1.44x	12.3%
Large Buyout	1,036.7	947.6	1,048.3	551.4	250.5	801.9	1.69x	22.9%
Middle-Market Buyout	894.7	736.1	856.0	242.8	279.6	522.4	1.49x	9.2%
Small Buyout	716.9	754.3	840.4	211.3	67.0	278.3	1.39x	8.0%
Growth Equity	477.6	414.2	335.4	317.8	130.5	448.4	1.58x	15.6%
Special Situations	377.4	316.3	290.9	174.8	114.2	289.1	1.47x	13.8%
Energy	130.0	141.2	89.7	33.3	4.7	38.0	0.87x	-2.6%
Secondaries	529.5	341.2	317.4	168.3	197.7	366.0	1.42x	14.5%
Co-Investment	315.1	217.5	172.9	131.6	107.2	238.8	1.40x	10.8%
Other	382.3	416.5	351.1	163.0	7.7	170.7	1.23x	3.5%
Venture Capital	342.8	367.8	283.9	162.5	5.4	167.9	1.21x	3.0%
Mezzanine	39.5	48.8	67.2	0.5	2.3	2.8	1.39x	12.2%
Total	\$6,190.4	\$5,073.0	\$4,954.5	\$2,476.2	\$1,802.0	\$4,278.2	1.46x	10.7%

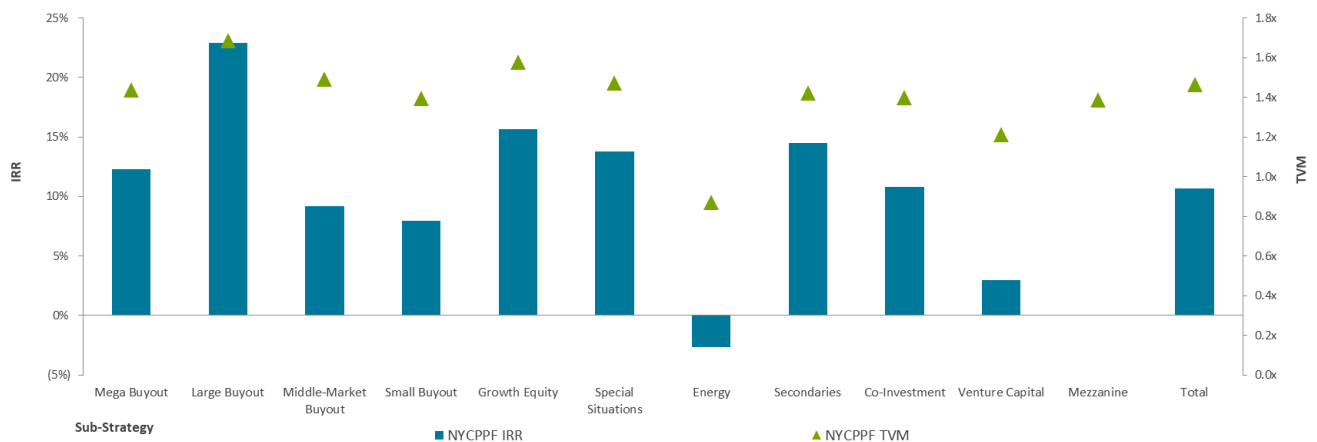
Performance by Strategy

As of December 31, 2018



Performance by Sub-Strategy

As of December 31, 2018



Portfolio Diversification

The following tables illustrate the Portfolio's diversification by strategy and fund geographic focus as of December 31, 2018.

By Strategy/Sub-Strategy

As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
Buyout	\$1,487.4	60.1%	\$1,239.9	68.8%	\$2,727.3	63.7%
Mega Buyout	481.9	19.5%	642.9	35.7%	1,124.7	26.3%
Large Buyout	551.4	22.3%	250.5	13.9%	801.9	18.7%
Middle-Market Buyout	242.8	9.8%	279.6	15.5%	522.4	12.2%
Small Buyout	211.3	8.5%	67.0	3.7%	278.3	6.5%
Growth Equity	317.8	12.8%	130.5	7.2%	448.4	10.5%
Special Situations	174.8	7.1%	114.2	6.3%	289.1	6.8%
Energy	33.3	1.3%	4.7	0.3%	38.0	0.9%
Secondaries	168.3	6.8%	197.7	11.0%	366.0	8.6%
Co-Investment	131.6	5.3%	107.2	5.9%	238.8	5.6%
Other	163.0	6.6%	7.7	0.4%	170.7	4.0%
Venture Capital	162.5	6.6%	5.4	0.3%	167.9	3.9%
Mezzanine	0.5	0.0%	2.3	0.1%	2.8	0.1%
Total	\$2,476.2	100.0%	\$1,802.0	100.0%	\$4,278.2	100.0%

By Fund Geographic Focus

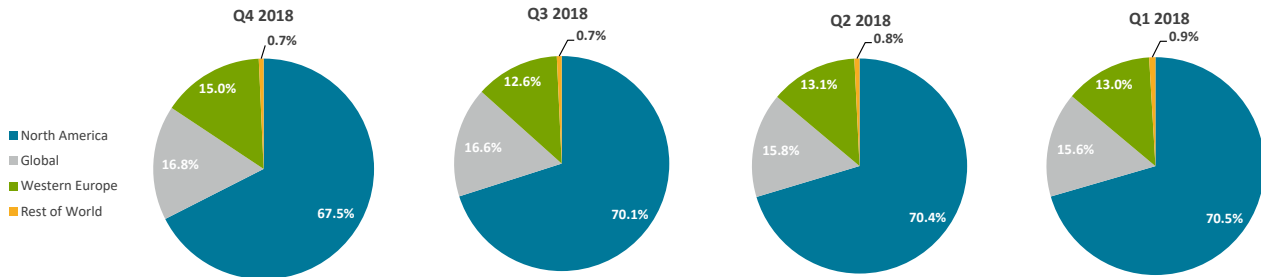
As of December 31, 2018 (US\$ in millions)	Market Value		Unfunded Commitment		Total Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
North America	\$1,671.7	67.5%	\$1,082.4	60.1%	\$2,754.0	64.4%
Global	416.5	16.8%	316.4	17.6%	732.9	17.1%
Western Europe	370.5	15.0%	401.6	22.3%	772.1	18.0%
Rest of World	17.6	0.7%	1.6	0.1%	19.2	0.4%
Total	\$2,476.2	100.0%	\$1,802.0	100.0%	\$4,278.2	100.0%

Fund Geographic Focus is based on a number of factors, including the GP-stated geographic focus, the number of investments within each region, invested capital by region, the location of the firm's offices and investment professionals, and the underlying fund currency.

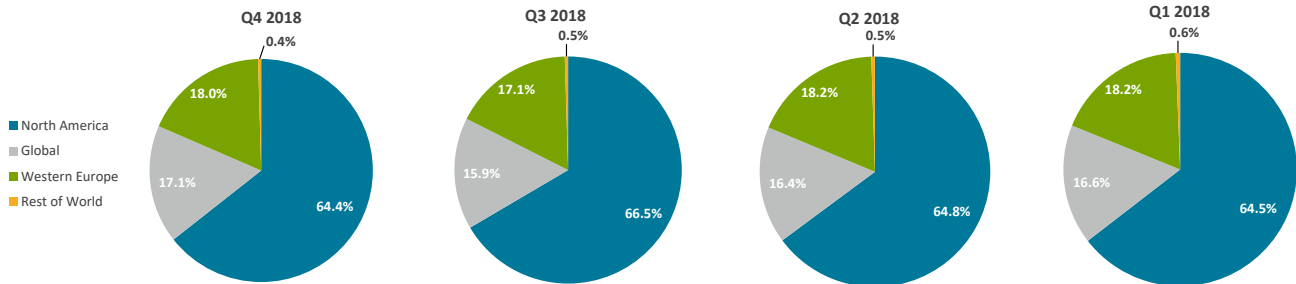
By Fund Geographic Focus

The following charts illustrate the Portfolio's diversification by fund geographic focus for the most recent four quarters as of December 31, 2018.

Geographic Exposure by Market Value



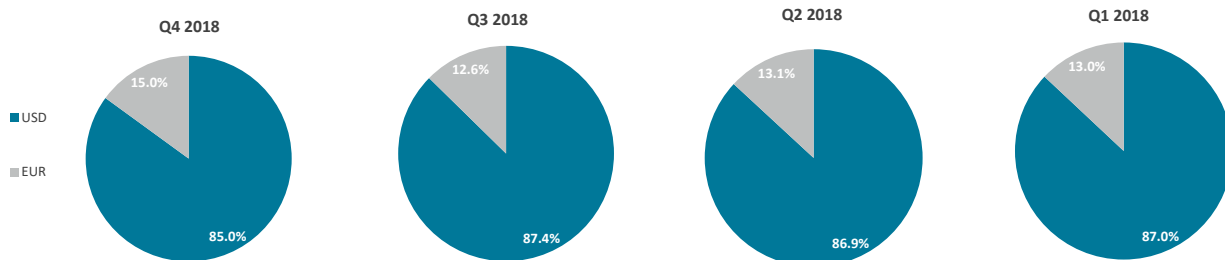
Geographic Exposure by Market Value + Unfunded



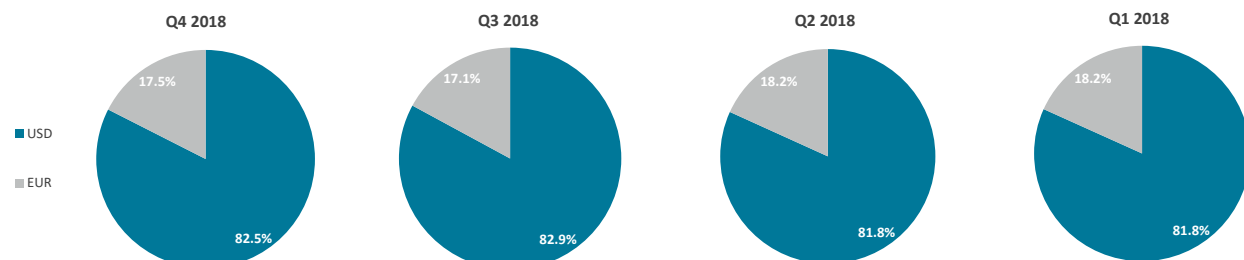
By Fund Currency

The following charts illustrate the Portfolio's diversification by fund currency for the most recent four quarters as of December 31, 2018.

Fund Currency Exposure by Market Value



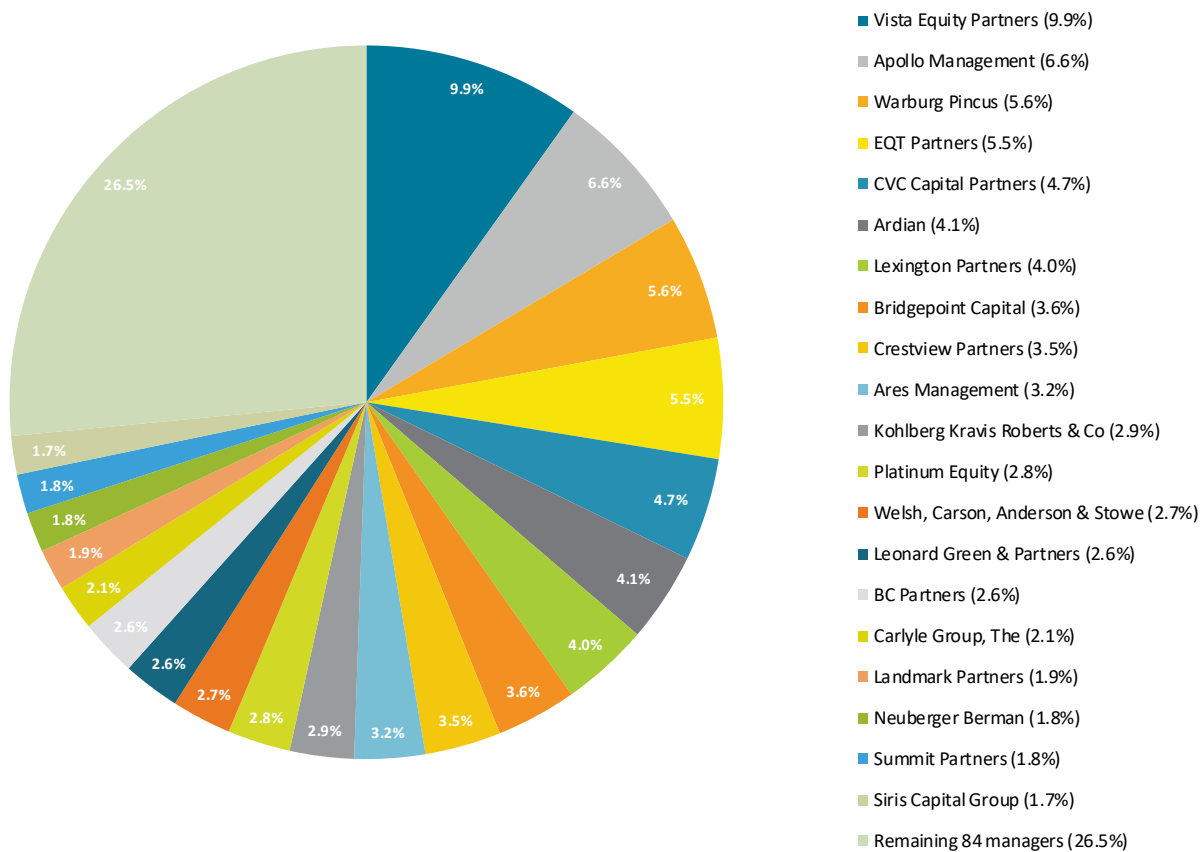
Fund Currency Exposure by Market Value + Unfunded



By Investment Manager

As of December 31, 2018, the Portfolio was highly diversified by investment manager, with 20 managers comprising US\$3.1 billion, or 73.5% of total exposure. The remaining 84 managers comprised 26.5% of total exposure as of quarter-end.

Portfolio Total Exposure by Investment Manager
 As of December 31, 2018

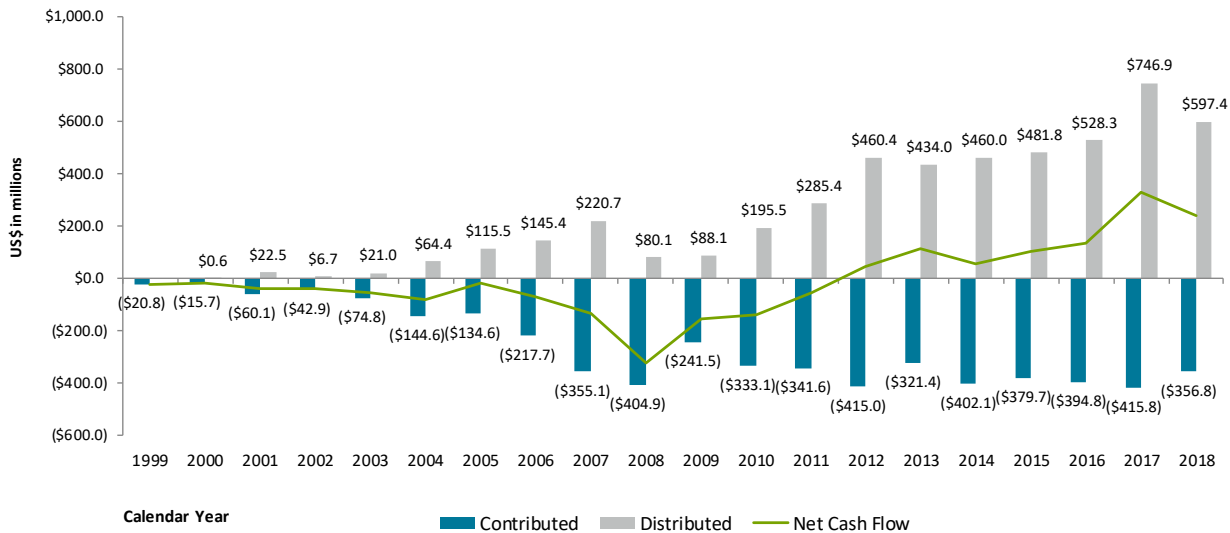


Portfolio Cash Flow Analysis

The following yearly and quarterly cash flow analysis is based on actual Portfolio cash flows during those time periods.

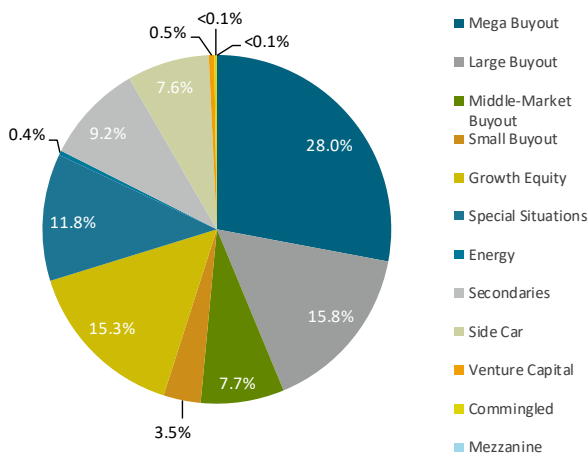
Year to Date Cash Flow Activity

During the 12 months ended December 31, 2018, the Portfolio made US\$356.8 million of contributions and received US\$597.4 million of distributions, for a net cash inflow of US\$240.6 million, compared to a net cash inflow of US\$331.0 million during the same period in the prior year. The graph below illustrates cash flow activity since inception by calendar year.

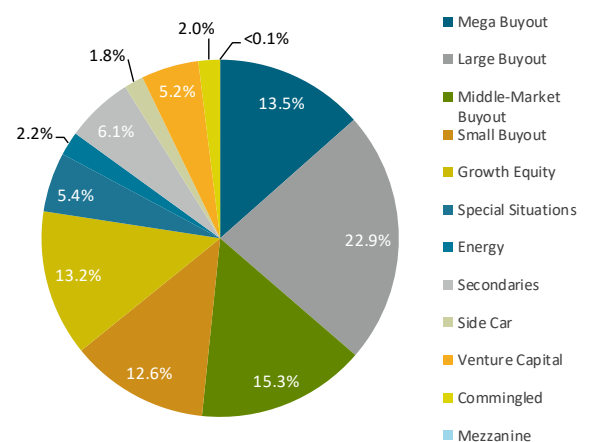


Buyout funds were the most active in terms of cash flow activity during 2018. Buyout funds drew down US\$196.0 million, or 54.9% of total contributions during 2018, and distributed US\$383.4 million, or 64.2% of total distributions during 2018.

2018 Total Contributed by Sub-Strategy

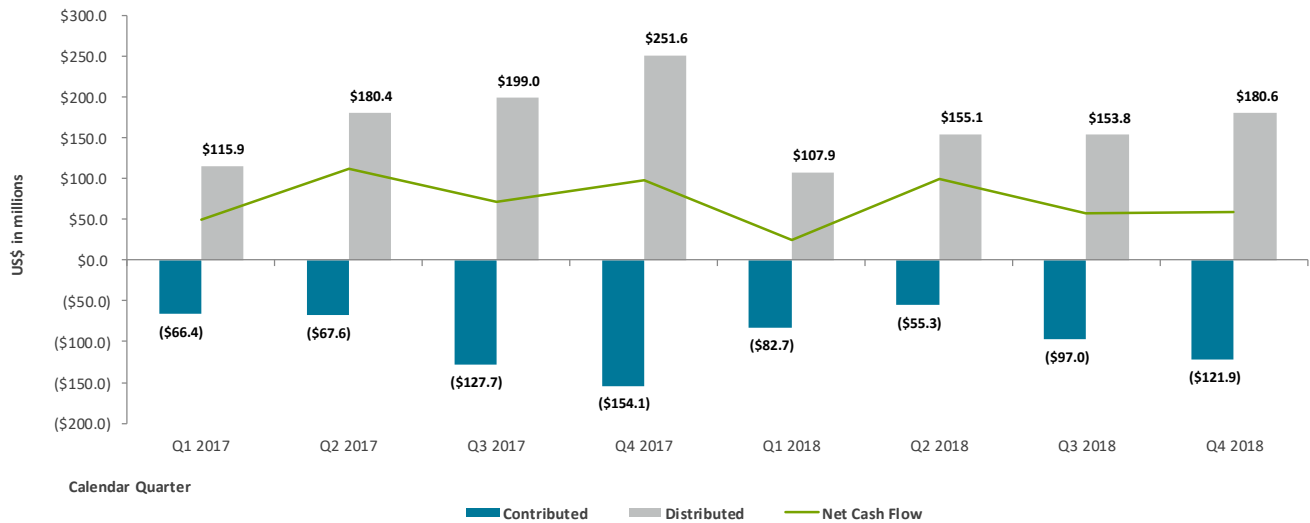


2018 Total Distributed by Sub-Strategy



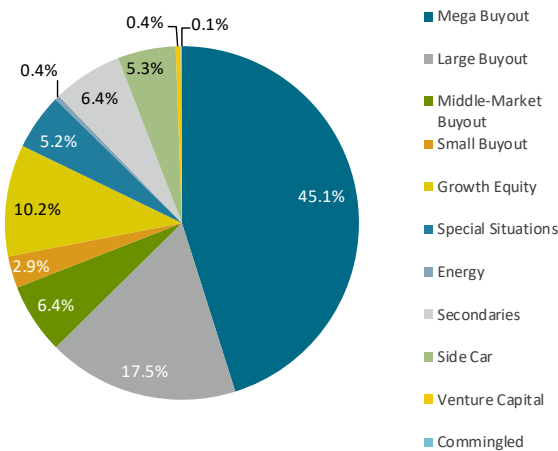
Quarterly Cash Flow Activity

During the fourth quarter of 2018, the Portfolio made US\$121.9 million of contributions and received US\$180.6 million of distributions, for a net cash inflow of US\$58.8 million. The graph below illustrates recent cash flow activity by quarter.

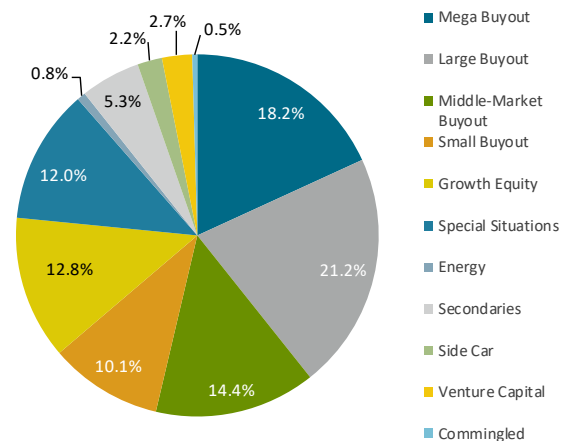


Buyout funds were the most active in terms of cash flow activity during fourth quarter of 2018. Buyout funds drew down US\$87.7 million, or 72.0% of total contributions during the quarter, and distributed US\$115.2 million, or 63.8% of total distributions during the quarter.

Q4 2018 Contributed by Sub-Strategy



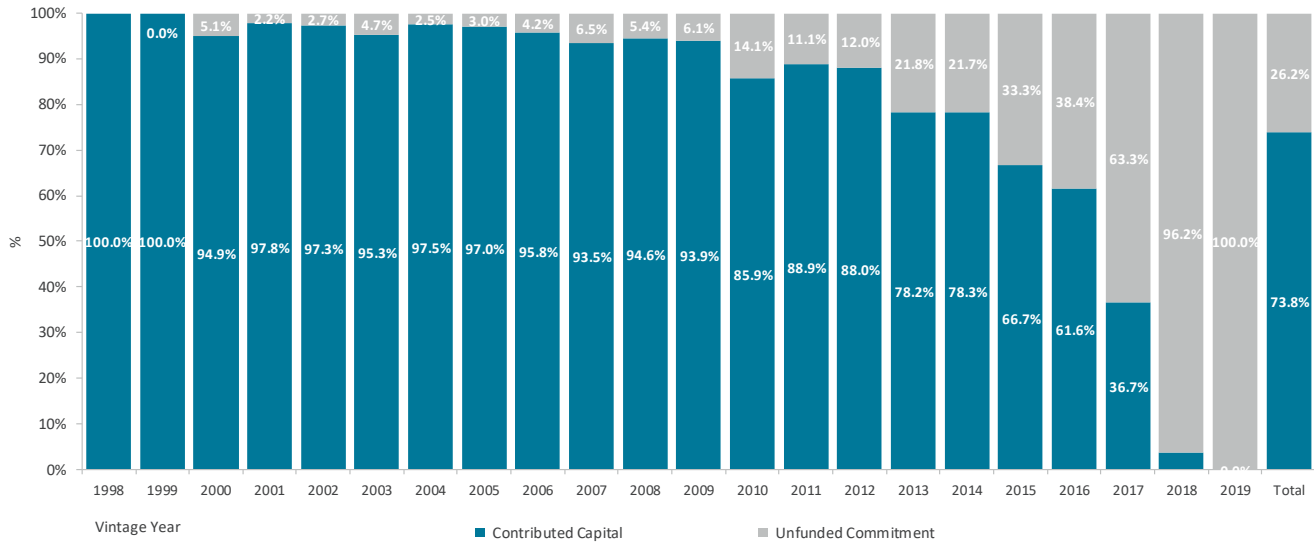
Q4 2018 Distributed by Sub-Strategy



Invested Capital by Vintage Year

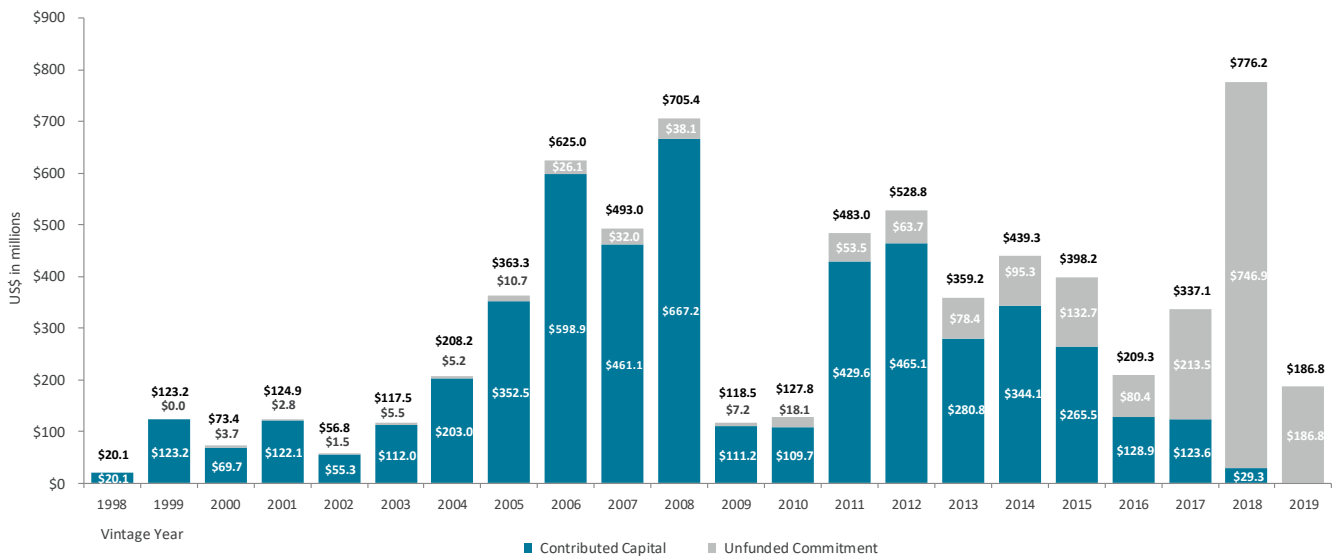
The following chart illustrates cumulative capital contributions as a percentage of total capital commitments, by fund vintage year, as of December 31, 2018.

Capital Contributions to Unfunded by Vintage Year (%)



The following chart illustrates cumulative capital contributions relative to unfunded commitment, by fund vintage year, as of December 31, 2018.

Capital Contributions to Unfunded by Vintage Year (US\$)



Portfolio Company-Level Analysis

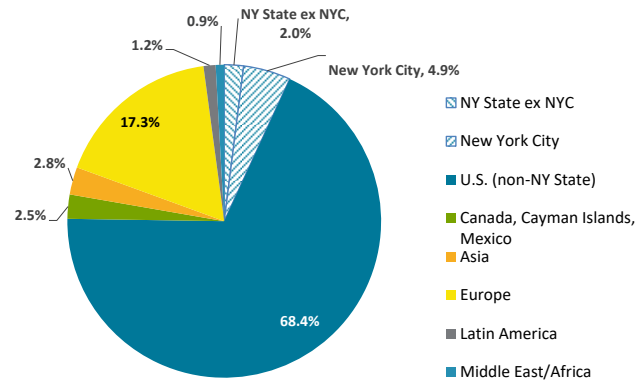
Geographic Exposure

The following charts illustrate the Portfolio’s total investment cost and current market value exposure by geography at the portfolio company level as of December 31, 2018. Please note that the geography is based upon the corporate headquarters of each portfolio company.

Geographic Exposure by Total Cost

As of December 31, 2018 (US\$ in millions)

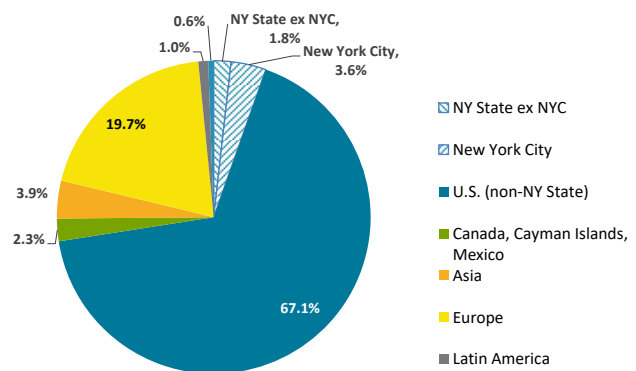
	Sum of Total Cost	% of Total
North America	\$3,507.6	77.7%
New York	309.5	6.9%
NY State ex NYC	89.5	2.0%
New York City	220.0	4.9%
U.S. (non-NY State)	3,085.5	68.4%
Canada, Cayman Islands, Mexico	112.7	2.5%
Asia	128.2	2.8%
Europe	780.6	17.3%
Latin America	56.0	1.2%
Middle East/Africa	39.4	0.9%
Total	\$4,511.9	100.0%



Geographic Exposure by Current Market Value

As of December 31, 2018 (US\$ in millions)

	Sum of Current Market Value	% of Total
North America	\$2,241.5	74.9%
New York	161.3	5.4%
NY State ex NYC	53.2	1.8%
New York City	108.1	3.6%
U.S. (non-NY State)	2,010.4	67.1%
Canada, Cayman Islands, Mexico	69.8	2.3%
Asia	116.9	3.9%
Europe	588.6	19.7%
Latin America	30.5	1.0%
Middle East/Africa	16.7	0.6%
Total*	\$2,994.1	100.0%

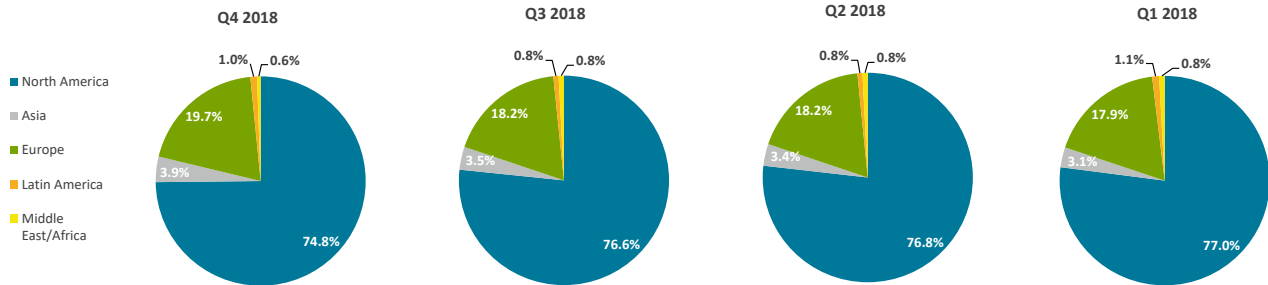


* Total portfolio company market value will not equal the Portfolio’s market value due to a fund’s cash holding and rounding estimates.

Geographic Exposure

The following charts illustrate the Portfolio's current exposure by geography at the portfolio company level for the most recent four quarters. Please note that the geography is based upon the corporate headquarters of each portfolio company.

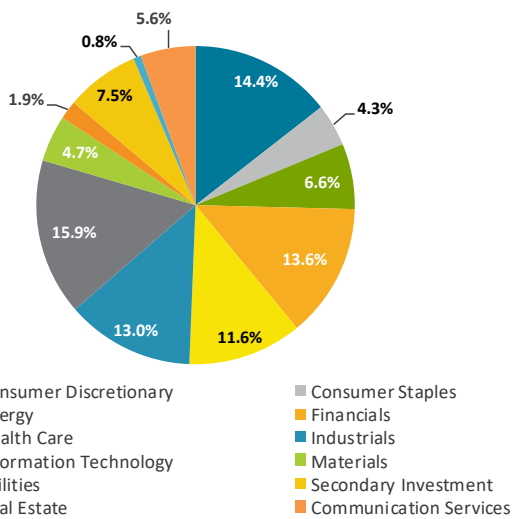
Geographic Exposure by Current Market Value



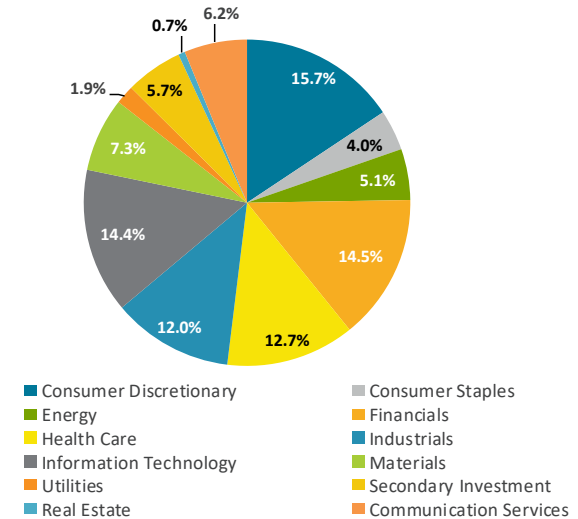
Industry Exposure

The following charts illustrate the Portfolio's total investment cost and current market value exposure by industry at the portfolio company level as of December 31, 2018. Please note that the Financials category includes investments in various debt securities.

Industry Exposure by Total Cost



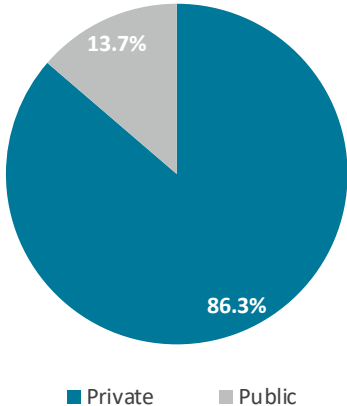
Industry Exposure by Current Market Value



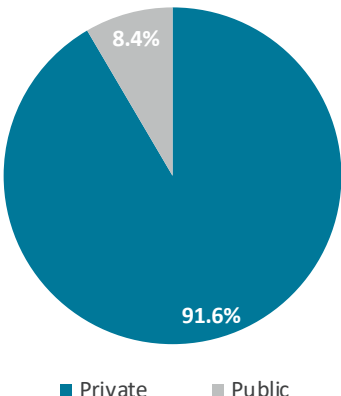
Public Market Exposure

As of quarter-end, publicly traded investments comprised 13.7% of the Portfolio’s total investment cost and 8.4% of the Portfolio’s exposed market value. The following charts illustrate the current public market exposure at the portfolio company level.

Public Market Exposure by Total Cost



Public Market Exposure Current Market Value



IV. Appendix

New York City Police Pension Fund, Subchapter 2
Private Equity Portfolio
As of December 31, 2018 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Active Investments										
1999	Cypress Merchant Banking Partners II, L.P.	3/29/1999	\$ 45,172,972	\$ 53,944,269	\$ 50,584,154	\$ 26,160	0.94x	(1.2%)	5.5%	(6.7%)
1999	Lincolnshire Equity Fund II, L.P.	10/20/1999	11,038,409	11,556,880	22,425,179	448,302	1.98x	24.6%	7.0%	17.6%
2000	Solera Partners, L.P.	5/26/2000	9,999,888	13,296,140	20,817,577	154,489	1.58x	7.5%	6.1%	1.4%
2000	SCP Private Equity Partners II, L.P.	6/15/2000	25,000,000	28,057,160	10,857,159	2,964,978	0.49x	(8.1%)	5.7%	(13.7%)
2001	Apollo Investment Fund V, L.P.	4/13/2001	35,000,000	54,551,027	107,618,495	347,692	1.98x	38.8%	8.3%	30.5%
2001	CVC European Equity Partners III, L.P.	9/4/2001	25,000,000	29,700,915	74,439,614	1,710,970	2.56x	41.0%	10.8%	30.3%
2002	Landmark Equity Partners XI, L.P.	10/23/2002	30,000,000	28,518,970	43,831,911	73,539	1.54x	23.3%	7.5%	15.8%
2003	FS Equity Partners V, L.P.	1/20/2003	15,000,000	12,851,976	25,116,883	1,305,176	2.06x	15.5%	5.0%	10.5%
2003	Blackstone Capital Partners IV, L.P.	2/26/2003	46,253,267	57,200,737	135,968,508	3,970,714	2.45x	36.3%	8.4%	27.9%
2003	Ares Corporate Opportunities Fund, L.P.	4/1/2003	35,000,000	41,988,154	62,593,160	2,104,502	1.54x	13.4%	7.4%	6.0%
2004	Markstone Capital Partners, LP	1/30/2004	10,000,000	11,724,772	4,955,651	68,054	0.43x	(45.0%)	10.3%	(55.3%)
2004	FdG Capital Partners II LP	8/30/2004	25,000,000	26,938,873	31,142,933	1,655,811	1.22x	3.8%	6.7%	(2.9%)
2004	Paladin Homeland Security Fund (NY City), L.P.	9/27/2004	30,000,000	33,026,562	12,572,023	44,325	0.38x	(14.2%)	6.2%	(20.4%)
2004	Lincolnshire Equity Fund III, L.P.	10/1/2004	15,000,000	14,983,501	21,199,805	5,812,466	1.80x	28.6%	10.5%	18.0%
2004	Yucaipa American Alliance Fund I, LP	10/1/2004	20,000,000	29,967,488	29,100,205	7,594,570	1.22x	4.8%	10.1%	(5.4%)
2004	Aurora Equity Partners III L.P.	11/16/2004	15,000,000	16,238,039	26,230,763	112,658	1.62x	13.5%	9.9%	3.6%
2004	Medica III Investments (International) L.P.	12/1/2004	10,000,000	10,000,000	4,237,089	2,406,000	0.66x	(8.2%)	(6.0%)	(2.2%)
2005	Palladium Equity Partners III, L.P.	11/12/2004	25,000,000	27,024,033	48,384,262	2,377,917	1.88x	14.7%	10.9%	3.8%
2005	New Mountain Partners II, L.P.	1/12/2005	7,741,935	7,011,896	13,507,602	121,535	1.94x	13.6%	4.4%	9.2%
2005	Carlyle Partners IV, L.P.	4/29/2005	50,000,000	51,531,593	100,780,768	1,052,504	1.98x	13.0%	4.0%	9.0%
2005	Prism Venture Partners V-A, L.P.	7/14/2005	20,000,000	20,508,481	12,708,069	335,055	0.64x	(8.7%)	8.3%	(17.0%)
2005	Arlington Capital Partners II, L.P.	7/29/2005	20,000,000	20,236,733	34,127,505	1,590,938	1.77x	11.3%	6.6%	4.7%
2005	Snow Phipps Group, L.P.	9/7/2005	10,000,000	11,913,742	10,457,308	5,107,446	1.31x	6.0%	10.3%	(4.3%)
2005	Blackstone Mezzanine Partners II, L.P.	10/10/2005	11,954,147	13,356,475	17,778,894	143,141	1.34x	7.8%	3.7%	4.2%
2005	Psilos Group Partners III, L.P.	10/24/2005	12,500,000	13,287,792	6,410,270	8,786,749	1.14x	2.1%	6.9%	(4.8%)
2005	FirstMark Capital I, L.P. (fka FirstMark IV)	11/21/2005	10,000,000	10,927,097	30,744,500	40,382,544	6.51x	33.9%	9.1%	24.8%
2005	USPF II Institutional Fund, L.P.	11/23/2005	20,000,000	26,379,750	26,432,183	8,037,684	1.31x	4.5%	7.4%	(2.9%)
2005	JP Morgan Fleming (Tranche A)	12/21/2005	40,000,000	39,723,512	37,295,182	15,390,559	1.33x	5.3%	10.3%	(5.0%)
2006	Aisling Capital II, LP	1/12/2006	2,500,000	2,945,044	2,852,895	111,030	1.01x	0.1%	7.6%	(7.5%)
2006	InterMedia Partners VII, L.P.	1/20/2006	12,500,000	14,599,097	14,795,867	124,605	1.20x	0.3%	9.7%	(9.4%)
2006	Falconhead Capital Partners II, L.P.	1/24/2006	15,000,000	16,846,651	16,818,185	4,812,535	1.28x	4.7%	8.6%	(3.9%)
2006	Terra Firma Capital Partners III, L.P.	3/8/2006	15,529,945	15,733,966	4,468,583	2,609,738	0.45x	(9.8%)	9.6%	(19.5%)
2006	Fenway Partners Capital Fund III, L.P.	3/29/2006	15,000,000	17,230,534	14,757,733	12,628,782	1.59x	7.4%	7.8%	(0.4%)
2006	Blackstone Capital Partners V, L.P.	4/13/2006	42,087,697	44,764,753	69,427,104	3,412,854	0.39x	(20.8%)	8.3%	(29.1%)
2006	Avista Capital Partners, L.P.	4/27/2006	20,000,000	26,295,958	32,016,285	569,552	1.24x	4.5%	6.3%	(1.7%)
2006	GSC Recovery III, L.P.	5/4/2006	5,000,000	5,645,685	6,641,597	49,738	1.19x	4.2%	6.8%	(2.5%)
2006	Apollo Investment Fund VI, L.P.	5/10/2006	45,000,000	57,919,123	81,693,522	5,353,077	1.50x	8.6%	7.5%	1.2%
2006	Landmark Equity Partners XIII, L.P.	5/11/2006	10,000,000	9,599,442	10,218,983	2,287,914	1.30x	5.3%	6.3%	(1.0%)
2006	Ares Corporate Opportunities Fund II, L.P.	5/23/2006	15,000,000	16,428,261	26,505,651	1,040,867	1.68x	13.1%	3.9%	9.3%
2006	Atlantic Equity Partners IV, L.P.	7/12/2006	25,124,928	23,058,118	3,339,239	12,061,868	0.67x	(4.7%)	9.2%	(13.9%)
2006	CCMP Capital Investors II, L.P.	8/17/2006	20,000,000	21,947,972	37,758,518	17,732	1.72x	13.5%	10.6%	2.9%
2006	Capital Partners Private Equity Income Fund, L.P.	8/23/2006	15,000,000	14,476,277	33,181,704	359,108	2.32x	21.1%	11.1%	10.0%
2006	CLP 2014 (fka Perseus Partners VII)	8/31/2006	15,000,000	17,549,750	6,900,265	(16,665)	0.39x	(20.8%)	13.0%	(33.9%)
2006	NB Co-Investment Partners LP	9/28/2006	60,000,000	60,616,170	85,745,060	2,450,402	1.45x	8.7%	5.7%	3.0%
2006	Euro Choice III L.P.	11/21/2006	26,707,385	26,875,176	27,706,882	3,484,206	1.16x	3.0%	11.8%	(8.9%)
2006	Thomas, Mc Nerney & Partners II, L.P.	11/30/2006	10,000,000	10,139,667	20,404,274	1,769,822	2.19x	16.4%	11.3%	5.0%
2006	Catterton Partners VI, L.P.	12/14/2006	20,000,000	22,775,054	33,300,876	9,357,680	1.87x	11.8%	8.5%	3.3%
2006	First Reserve Fund XI, L.P.	12/14/2006	20,000,000	21,253,053	13,273,524	1,119,317	0.68x	(8.9%)	6.6%	(15.4%)
2006	Permira IV, L.P.	12/14/2006	16,105,913	17,459,693	25,230,306	1,954,100	1.56x	8.6%	9.3%	(0.7%)
2006	Arsenal Capital Partners II, LP	12/19/2006	10,000,000	12,185,086	19,374,928	3,101,350	1.84x	11.6%	11.7%	(0.0%)
2006	RRE Ventures IV, L.P.	12/19/2006	15,000,000	18,975,463	10,524,928	16,722,694	1.44x	5.5%	10.1%	(4.6%)
2006	Collier International Partners V, L.P.	12/21/2006	10,000,000	8,744,365	11,318,085	878,704	1.39x	7.9%	10.5%	(2.6%)
2006	MidOcean Partners III, L.P.	12/21/2006	38,823,185	46,259,596	80,685,912	13,685,280	2.04x	12.9%	9.5%	3.4%
2006	GF Capital Private Equity Fund, L.P.	12/22/2006	10,000,000	10,482,415	13,284,185	5,309,758	1.77x	12.4%	11.4%	1.0%
2006	The Fourth Civen Fund	1/22/2007	13,517,898	14,218,057	20,507,894	10,341	1.44x	7.3%	7.5%	(0.2%)
2007	Pegasus Partners IV, L.P.	1/29/2007	15,000,000	18,131,266	11,927,259	4,863,275	0.93x	(1.5%)	10.9%	(12.4%)
2007	Olympus Capital Asia III, L.P.	1/31/2007	20,000,000	23,404,664	11,953,414	8,174,645	0.86x	(3.4%)	10.5%	(13.9%)
2007	FTVentures III, LP	3/1/2007	7,500,000	8,231,525	14,334,565	3,685,366	2.19x	15.8%	9.9%	5.9%
2007	Highland Consumer Fund I LP	3/16/2007	10,000,000	10,016,060	5,683,154	2,469,459	0.81x	(2.9%)	10.5%	(13.4%)
2007	Montreux Equity Partners IV, L.P.	3/27/2007	10,000,000	10,000,000	5,522,350	8,106,226	1.36x	4.9%	9.6%	(4.7%)
2007	Gleacher Mezzanine Fund II, L.P.	3/30/2007	10,000,000	9,197,768	12,187,028	83,690	1.33x	10.6%	11.7%	(1.1%)
2007	Quaker BioVentures II, L.P.	3/30/2007	15,000,000	14,294,055	12,327,681	2,803,216	1.06x	1.3%	12.4%	(11.0%)
2007	SCP Vitalife Partners II Fund	4/13/2007	15,000,000	15,074,774	1,184	6,919,645	0.46x	(9.7%)	6.8%	(16.6%)
2007	Comvest Investment Partners III, L.P.	5/15/2007	15,000,000	19,455,548	23,287,343	1,929,041	1.30x	6.4%	11.2%	(4.8%)
2007	Constellation Venture Capital III, L.P.	5/22/2007	15,000,000	17,145,021	8,397,431	4,452,163	0.75x	(4.8%)	15.0%	(19.8%)
2007	United States Power Fund III, L.P.	6/28/2007	15,000,000	17,746,993	17,852,552	4,442,700	1.26x	4.2%	9.2%	(5.0%)
2007	Carlyle Partners V, L.P.	7/6/2007	50,000,000	51,532,052	83,022,733	8,391,545	1.77x	13.7%	10.8%	3.0%

New York City Police Pension Fund, Subchapter 2
Private Equity Portfolio
As of December 31, 2018 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2007	PCG Clean Energy & Technology Fund (East), LLC	7/6/2007	40,000,000	36,190,929	7,196,357	9,538,693	0.46x	(10.8%)	12.8%	(23.6%)
2007	GSO Capital Opportunities Fund LP	7/16/2007	17,500,000	26,202,290	37,188,395	285,616	1.43x	17.4%	10.1%	7.3%
2007	New Mountain Partners III, L.P.	8/9/2007	35,000,000	35,653,120	47,462,355	23,075,761	1.98x	13.3%	12.0%	1.3%
2007	Vista Equity Partners Fund III, L.P.	10/3/2007	20,000,000	21,432,202	49,282,348	4,984,240	2.53x	27.2%	9.8%	17.5%
2007	Trilantic Capital Partners IV L.P.	10/22/2007	45,856,523	47,858,644	70,619,489	5,679,769	1.59x	13.9%	10.9%	3.0%
2007	Pine Brook Capital Partners, L.P.	1/11/2008	15,000,000	17,022,533	19,441,456	2,736,746	1.30x	7.3%	11.7%	(4.5%)
2008	Paladin III (NY City), L.P.	1/8/2008	30,000,000	40,209,181	28,310,127	33,682,344	1.54x	9.1%	11.0%	(1.9%)
2008	Relativity Fund, L.P.	1/17/2008	8,158,371	8,080,212	3,954,319	188	0.49x	(11.2%)	11.7%	(22.9%)
2008	Apollo Investment Fund VII, L.P.	1/28/2008	50,000,000	60,600,500	95,018,090	8,916,012	1.72x	22.9%	13.3%	9.5%
2008	NGN BioMed Opportunity II, L.P.	2/11/2008	10,000,000	9,575,911	6,673,105	5,251,580	1.25x	3.4%	14.4%	(11.0%)
2008	Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	3/3/2008	15,000,000	17,461,787	14,066,982	5,967,928	1.15x	3.8%	13.2%	(9.4%)
2008	Yucaipa American Alliance Fund II, LP	3/28/2008	50,000,000	68,226,790	53,003,791	58,007,999	1.63x	9.4%	11.3%	(1.9%)
2008	Milestone Partners III, L.P.	4/7/2008	15,000,000	16,271,250	13,857,360	2,407,924	1.00x	(0.0%)	12.4%	(12.4%)
2008	Levine Leichtman Capital Partners IV, L.P.	4/8/2008	10,000,000	10,707,203	16,918,959	1,220,504	1.69x	18.5%	14.0%	4.5%
2008	Coral's 2007 Institutional Momentum Fund, L.P.	5/13/2008	10,000,000	9,492,863	3,442,898	137,460	0.38x	(15.5%)	10.4%	(25.8%)
2008	Yucaipa Corporate Initiatives Fund II, LP	6/23/2008	14,030,930	13,766,113	4,995,600	7,919,975	0.94x	(1.0%)	11.3%	(12.3%)
2008	CVC European Equity Partners V, L.P.	7/21/2008	34,200,926	36,978,045	58,536,144	11,171,037	1.89x	16.2%	12.3%	3.9%
2008	GI Partners Fund III L.P.	7/29/2008	17,500,000	18,907,003	29,395,326	298,542	1.57x	13.0%	15.3%	(2.3%)
2008	Ares Corporate Opportunities Fund III, L.P.	7/30/2008	25,000,000	30,158,441	44,090,210	17,960,380	2.06x	20.4%	11.4%	9.0%
2008	GCM Grosvenor NYCPEP Emerging Manager Fund, L.P.	8/22/2008	59,909,091	73,335,068	64,939,952	39,585,868	1.43x	10.6%	12.3%	(1.7%)
2008	First Reserve Fund XII, L.P.	8/25/2008	20,000,000	22,216,378	10,896,672	4,194,669	0.68x	(8.9%)	16.5%	(25.4%)
2008	Landmark Equity Partners XIV, L.P.	9/19/2008	27,250,000	26,486,183	29,117,228	5,762,517	1.32x	9.9%	14.0%	(4.1%)
2008	Crestview Partners II, L.P.	10/1/2008	22,500,000	26,080,909	33,407,111	8,439,739	1.60x	12.5%	14.2%	(1.7%)
2008	NB New York City Growth Fund IA	10/17/2008	4,835,960	4,835,960	1,670,495	1,762,177	0.71x	(4.5%)	16.0%	(20.5%)
2008	Euro Choice IV L.P.	10/22/2008	19,387,157	17,913,130	15,237,835	10,298,280	1.43x	7.5%	12.5%	(5.0%)
2008	Avista Capital Partners II, L.P.	11/5/2008	35,000,000	45,362,795	70,074,340	6,474,592	1.69x	15.1%	14.5%	0.6%
2008	Blue Wolf Capital Fund II, L.P.	11/14/2008	15,000,000	16,300,742	18,854,994	3,772,708	1.39x	7.8%	15.4%	(7.6%)
2008	Bridgepoint Europe IV	11/14/2008	13,328,694	13,493,094	14,279,459	5,313,488	1.45x	9.3%	14.4%	(5.1%)
2008	Aising Capital III, LP	11/20/2008	7,000,000	7,899,724	13,282,464	3,635,153	2.14x	24.5%	13.5%	11.0%
2008	Onex Partners III LP	12/10/2008	15,000,000	16,381,858	20,597,569	6,527,067	1.66x	12.6%	14.3%	(1.7%)
2009	NorthBound Emerging Manager Custom Fund LP	1/29/2009	20,000,000	17,270,476	22,347,767	7,013,024	1.70x	13.7%	13.9%	(0.2%)
2009	Welsh, Carson, Anderson & Stowe XI, L.P.	2/10/2009	22,500,000	22,500,000	29,116,850	8,271,705	1.66x	12.8%	14.1%	(1.4%)
2009	Scale Venture Partners III, LP	5/1/2009	10,000,000	9,894,906	20,393,075	6,302,059	2.70x	22.7%	13.1%	9.6%
2009	FS Equity Partners VI, L.P.	7/27/2009	20,000,000	20,056,273	41,406,099	13,898,991	2.76x	23.2%	14.1%	9.1%
2009	Lincolnshire Equity Fund IV, L.P.	8/5/2009	7,500,000	7,985,924	9,090,144	3,320,149	1.55x	11.0%	12.8%	(1.7%)
2009	Lexington Capital Partners VII, L.P.	12/3/2009	20,000,000	17,680,115	21,661,196	6,132,840	1.57x	14.3%	13.7%	0.7%
2010	Snow Phipps II, L.P.	1/8/2010	17,500,000	19,608,913	14,767,361	11,256,248	1.33x	9.0%	12.4%	(3.4%)
2010	Trident V, L.P.	4/29/2010	40,000,000	44,999,760	43,489,907	28,647,456	1.60x	11.2%	11.6%	(0.4%)
2010	Comvest Investment Partners IV, L.P.	10/21/2010	45,000,000	45,118,853	68,637,540	14,284,402	1.84x	30.2%	13.2%	17.0%
2011	Blackstone Capital Partners VI, L.P.	1/24/2011	35,000,000	35,929,475	24,596,944	31,848,802	1.57x	13.3%	10.6%	2.7%
2011	Ampersand 2011	3/11/2011	12,500,000	12,500,000	14,728,527	20,024,899	2.79x	22.0%	11.2%	10.8%
2011	BDCM Opportunity Fund III, L.P.	4/8/2011	20,000,000	28,670,592	13,003,796	25,024,815	1.33x	8.3%	10.4%	(2.1%)
2011	AXA Secondary Fund V B L.P.	6/16/2011	80,000,000	65,914,540	90,778,240	15,003,171	1.60x	15.8%	14.3%	1.6%
2011	Wellspring Capital Partners V, L.P.	7/1/2011	22,500,000	22,671,964	25,114,012	10,189,456	1.56x	15.9%	11.1%	4.8%
2011	EQT VI, L.P.	8/1/2011	48,696,260	50,469,323	52,592,945	32,405,986	1.68x	14.2%	11.0%	3.2%
2011	Pegasus Partners V, L.P.	8/16/2011	14,552,940	17,402,432	10,536,225	19,495,923	1.73x	14.8%	12.1%	2.7%
2011	BC European Capital IX	9/19/2011	65,780,310	71,043,554	47,028,528	51,001,907	1.38x	10.1%	11.8%	(1.7%)
2011	American Securities Partners VI, L.P.	11/18/2011	50,000,000	53,701,254	80,586,526	22,156,717	1.91x	21.9%	12.2%	9.8%
2011	Vista Equity Partners Fund IV, L.P.	11/30/2011	70,000,000	71,256,431	80,468,248	59,653,085	1.97x	18.6%	12.1%	6.5%
2012	Warburg Pincus Private Equity XI, L.P.	5/24/2012	80,000,000	85,115,264	55,869,821	76,192,244	1.55x	14.0%	10.2%	3.8%
2012	Summit Partners Growth Equity Fund VIII-A, L.P.	6/14/2012	75,000,000	84,494,818	108,742,306	59,144,942	1.99x	26.0%	10.2%	15.9%
2012	NYCPEP - 2012 Emerging Manager Program ⁴	6/21/2012	47,000,000	45,102,953	14,999,827	48,722,602	1.41x	13.8%	7.6%	6.2%
2012	Trilantic Capital Partners V L.P.	9/20/2012	50,000,000	52,485,539	44,393,182	33,674,808	1.49x	18.3%	9.8%	8.5%
2012	Palladium Equity Partners IV, L.P.	10/10/2012	35,000,000	28,646,766	16,099,449	26,542,250	1.49x	14.1%	10.4%	3.7%
2012	Ares Corporate Opportunities Fund IV, L.P.	11/5/2012	50,000,000	51,119,497	26,656,380	45,351,444	1.41x	12.0%	8.5%	3.6%
2012	Green Equity Investors VI, L.P.	11/30/2012	55,000,000	58,990,863	35,244,528	59,383,601	1.60x	16.0%	9.4%	6.5%
2012	Platinum Equity Capital Partners III, L.P.	1/14/2013	50,000,000	40,954,128	57,891,649	18,306,414	1.86x	36.9%	11.6%	25.3%
2012	Neuberger Berman Strategic Co-Investment II LP	3/20/2013	60,000,000	56,570,045	50,536,800	38,202,664	1.57x	16.4%	9.8%	6.6%
2013	Carlyle Partners VI, L.P.	7/3/2013	60,000,000	61,967,647	24,485,521	54,984,022	1.02x	0.8%	7.4%	(6.6%)
2014	Carlyle Partners VI, L.P. (Side Car)	9/23/2014	6,600,000	4,700,901	273,438	4,538,054	1.02x	0.8%	7.5%	(6.7%)
2013	Landmark Equity Partners XV, L.P.	10/30/2013	67,000,000	45,631,065	31,374,568	28,045,773	1.30x	14.4%	8.5%	6.0%
2013	Landmark - NYC Fund I, L.P.	12/24/2013	23,000,000	18,695,471	11,494,902	15,898,983	1.47x	18.0%	6.6%	11.3%
2013	Apollo Investment Fund VIII, L.P.	12/11/2013	100,000,000	89,944,155	26,196,414	84,987,971	1.24x	10.2%	7.6%	2.7%
2014	CVC Capital Partners VI, L.P.	2/18/2014	88,133,484	85,914,174	22,818,186	88,985,199	1.30x	14.3%	6.2%	8.1%
2013	Crestview Partners III, L.P.	3/3/2015	45,000,000	27,090,782	4,886,264	29,799,353	1.28x	14.0%	4.9%	9.1%
2013	Crestview Partners III (Co-Investment B), L.P.	12/17/2015	15,000,000	13,736,032	740,414	14,753,644	1.13x	6.8%	7.3%	(0.6%)

**New York City Police Pension Fund, Subchapter 2
Private Equity Portfolio
As of December 31, 2018 (in USD)**

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
2014	Olympus Growth Fund VI, L.P.	1/21/2014	35,000,000	28,563,907	11,865,779	25,921,588	1.32x	15.3%	8.5%	6.7%
2014	ASF VI B L.P.	5/9/2014	60,000,000	42,225,320	21,032,965	38,043,335	1.40x	13.3%	8.2%	5.1%
2014	ASF VI B NYC Co-Invest L.P.	5/9/2014	20,000,000	15,331,373	11,718,416	9,396,338	1.38x	12.8%	6.8%	6.0%
2014	Vista Equity Partners Fund V, L.P.	9/8/2014	85,000,000	97,597,477	76,412,223	93,503,443	1.74x	22.7%	8.0%	14.7%
2014	Lexington Capital Partners VIII, L.P.	1/8/2015	80,000,000	55,125,193	20,899,508	54,498,176	1.37x	24.0%	5.7%	18.3%
2015	Siris Partners III, L.P.	5/4/2015	15,000,000	12,595,680	6,852,975	7,796,422	1.16x	9.6%	7.3%	2.3%
2015	Centerbridge Capital Partners III, L.P.	5/21/2015	11,100,000	6,208,232	2,041,906	5,630,087	1.24x	11.0%	6.8%	4.2%
2015	Welsh, Carson, Anderson & Stowe XII, L.P.	8/26/2015	37,000,000	25,246,315	5,151,528	33,729,666	1.54x	26.8%	5.3%	21.5%
2015	Warburg Pincus Private Equity XII, L.P.	12/21/2015	97,000,000	68,279,762	3,242,031	76,585,008	1.17x	12.0%	2.7%	9.4%
2015	ASF VII B L.P.	12/29/2015	44,500,000	14,515,229	1,016,090	17,565,974	1.28x	18.6%	2.2%	16.4%
2015	ASF VII B NYC Co-Invest L.P.	12/29/2015	22,000,000	10,669,479	879,414	16,129,696	1.59x	51.2%	(4.9%)	56.1%
2015	EQT VII, L.P.	1/8/2016	77,204,581	65,478,082	8,567,421	74,566,208	1.27x	17.3%	3.8%	13.5%
2015	American Securities Partners VII, L.P.	1/19/2016	37,000,000	23,580,299	4,350,500	16,180,503	0.87x	(9.4%)	6.8%	(16.2%)
2015	Bridgepoint Europe V L.P.	2/8/2016	29,757,666	27,159,847	3,870,632	29,043,485	1.21x	14.8%	4.8%	10.0%
2015	Bridgepoint Europe V Co-Invest	8/16/2016	8,156,565	7,563,632	756,522	11,290,855	1.59x	39.8%	2.0%	37.8%
2015	NYCPFF - 2015 Emerging Manager Program ⁵	2/22/2016	63,000,000	17,626,614	714,008	20,028,444	1.18x	20.9%	(2.6%)	23.5%
2016	Vista Equity Partners Fund VI, L.P.	6/28/2016	75,000,000	69,200,158	18,520,276	69,224,059	1.27x	16.8%	5.3%	11.6%
2016	Platinum Equity Capital Partners IV, L.P.	3/21/2017	52,500,000	33,128,197	8,244,632	35,316,957	1.31x	NM	NM	N/A
2018	Platinum Equity Capital Partners IV Co-Investment, L.P.	9/7/2018	7,500,000	5,250,000	-	3,082,679	0.59x	NM	NM	N/A
2016	Apax IX USD, L.P.	5/12/2017	60,000,000	26,566,882	569,050	31,333,194	1.20x	NM	NM	N/A
2017	Green Equity Investors VII, L.P.	5/12/2017	44,000,000	20,225,743	174,234	21,715,962	1.08x	NM	NM	N/A
2017	Ares Corporate Opportunities Fund V, L.P.	6/22/2017	44,000,000	18,602,355	757,482	17,525,127	0.98x	NM	NM	N/A
2017	KKR Americas Fund XII, L.P.	10/31/2017	75,000,000	25,828,451	494,426	24,984,079	0.99x	NM	NM	N/A
2017	BC European Capital X	12/14/2017	42,550,443	21,004,573	-	19,785,096	0.94x	NM	NM	N/A
2017	BCEC X Co-Investment	3/24/2017	17,146,489	10,043,987	-	9,804,037	0.98x	NM	NM	N/A
2017	Warburg Pincus Financial Sector, L.P.	1/5/2018	62,000,000	16,241,112	3,162,000	11,057,072	0.88x	NM	NM	N/A
2018	Platinum Equity Small Cap Fund, L.P.	6/27/2018	28,500,000	1,390,067	-	998,165	0.72x	NM	NM	N/A
2018	EQT VIII, L.P.	8/10/2018	78,316,639	688,443	-	(269,889)	(0.39x)	NM	NM	N/A
2018	EQT VIII Co-Investment	11/2/2018	28,447,698	4,244,094	-	4,264,934	1.00x	NM	NM	N/A
2018	CVC Capital Partners VII, L.P.	12/4/2018	93,682,695	14,702,454	-	15,751,774	1.07x	NM	NM	N/A
2018	Grain Communications Opportunity Fund II, L.P.	12/26/2018	6,500,000	1,293,019	-	1,117,785	0.86x	NM	NM	N/A
2017	Palladium Equity Partners V, L.P.	2/11/2019	23,333,333	-	-	(863,430)	-	N/A	N/A	N/A
2018	Vista Equity Partners Fund VII, L.P.	2/13/2019	124,500,000	-	-	(103,368)	-	N/A	N/A	N/A
2019	Welsh, Carson, Anderson & Stowe XIII, L.P.	3/14/2019	62,000,000	-	-	-	-	N/A	N/A	N/A
2018	Siris Partners IV, L.P.	3/15/2019	62,000,000	-	-	(393,673)	-	N/A	N/A	N/A
2018	Bridgepoint Europe VI	4/1/2019	85,164,659	-	-	(742,167)	-	N/A	N/A	N/A
2018	Bridgepoint Europe VI Co-Invest	5/7/2019	21,324,694	-	-	-	-	N/A	N/A	N/A
2018	Apollo Investment Fund IX, L.P.	N/A	154,000,000	-	-	(1,620,491)	-	N/A	N/A	N/A
2018	Crestview Partners IV, L.P.	N/A	50,000,000	-	-	-	-	N/A	N/A	N/A
2018	Crestview Partners IV (Co-Investment), L.P.	N/A	16,666,667	-	-	-	-	N/A	N/A	N/A
2019	KKR European Fund V (USD)	N/A	50,150,000	-	-	-	-	N/A	N/A	N/A
2019	Lexington Capital Partners IX	N/A	74,625,000	-	-	-	-	N/A	N/A	N/A
Total Portfolio⁶			\$ 6,200,103,510	\$ 5,073,003,344	\$ 4,954,504,937	\$ 2,476,225,529	1.46x	10.7%	9.3%	1.4%

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+ or Long-Nickels PME for investments with no distributed capital as of quarter-end.

³ PME Spread is calculated as IRR minus PME Return.

⁴ NYCPFF - 2012 Emerging Manager Program total commitment of \$47.0 million has been committed as of June 30, 2015.

⁵ NYCPFF - 2015 Emerging Manager Program total commitment amount includes the full amount allocated to the Program, of which \$53.3 million has been committed as of June 3, 2019.

⁶ Total Portfolio includes liquidated investments.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Police Pension Fund, Subchapter 2, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

New York City Police Pension Fund, Subchapter 2
Subsequent Commitments
As of December 31, 2018 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Multiple	IRR ¹	PME Return ²	PME Spread ³
Commitments Closed Subsequent to as of Date										
2018	KKR European Fund V (USD) SCSp	N/A	80,000,000	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A
2019	Grain Communications Opportunity Fund II, L.P.	12/26/2018	111,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	Palladium Equity Partners V, L.P.	2/11/2019	55,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	Lexington Capital Partners IX, L.P.	N/A	55,000,000	-	-	-	N/A	N/A	N/A	N/A
2019	Warburg Pincus Global Growth, L.P.	N/A	2,875,000	-	-	-	N/A	N/A	N/A	N/A
Total Commitments Closed Subsequent to as of Date			\$ 303,875,000	\$ -	\$ -	\$ -	N/A	N/A	N/A	N/A

¹ Performance for funds with less than eight (8) quarters of activity is not meaningful.

² Russell 3000 PME+ or Long-Nickels PME for investments with no distributed capital as of quarter-end.

³ PME Spread is calculated as IRR minus PME Return.

Note: IRRs presented are interim estimates and may not be indicative of the ultimate performance of fund investments due to a number of factors, such as the lack of industry valuation standards and the differences in the investment pace and strategy of various funds. Until a fund is liquidated, typically over 10 to 12 years, the IRR is only an interim estimated return. The IRR calculated in early years of a fund is not meaningful given the J-curve effect. The actual IRR performance of any fund is not known until all capital contributed and earnings have been distributed to the investor. The IRRs contained in this report are calculated by StepStone Group LP ("StepStone"), a consultant to the New York City Police Pension Fund, Subchapter 2, based on information provided by the general partners (e.g. cash flows and valuations). The IRR calculations and other information contained in this report have not been reviewed or confirmed by the general partners. The result of the IRR calculation may differ from that generated by the general partner or other limited partners. Differences in IRR calculations can be affected by cash-flow timing, the accounting treatment of carried interest, fund management fees, advisory fees, organizational fees, other fund expenses, sale of distributed stock, and valuations.

Real Estate Quarterly Report (Public):



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New York City Police Pension Fund

Supplemental Performance Analysis

Fourth Quarter 2018

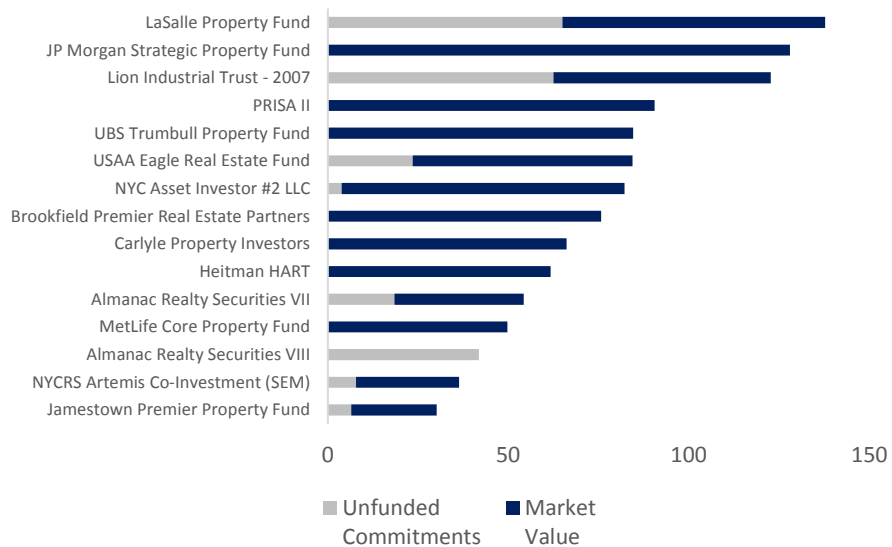


MANAGER DIVERSIFICATION

- The Portfolio is well-diversified by manager and fund.

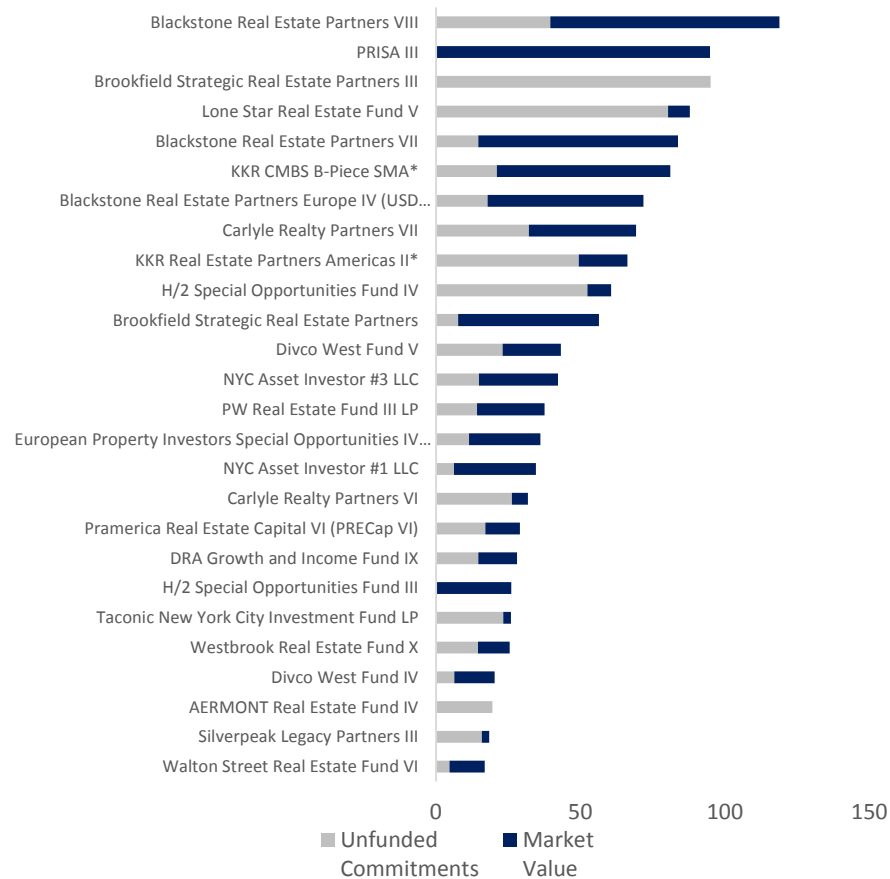
Core / Core Plus Portfolio Composition

Top 15 Holdings



Non-Core Portfolio Composition

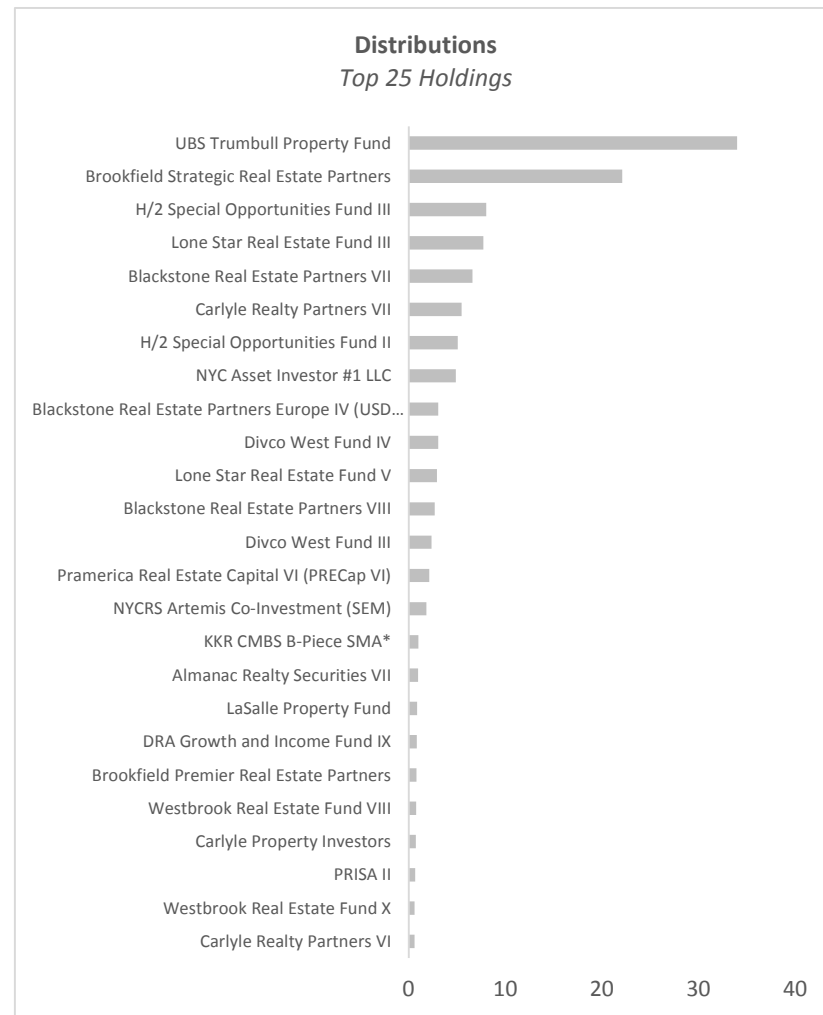
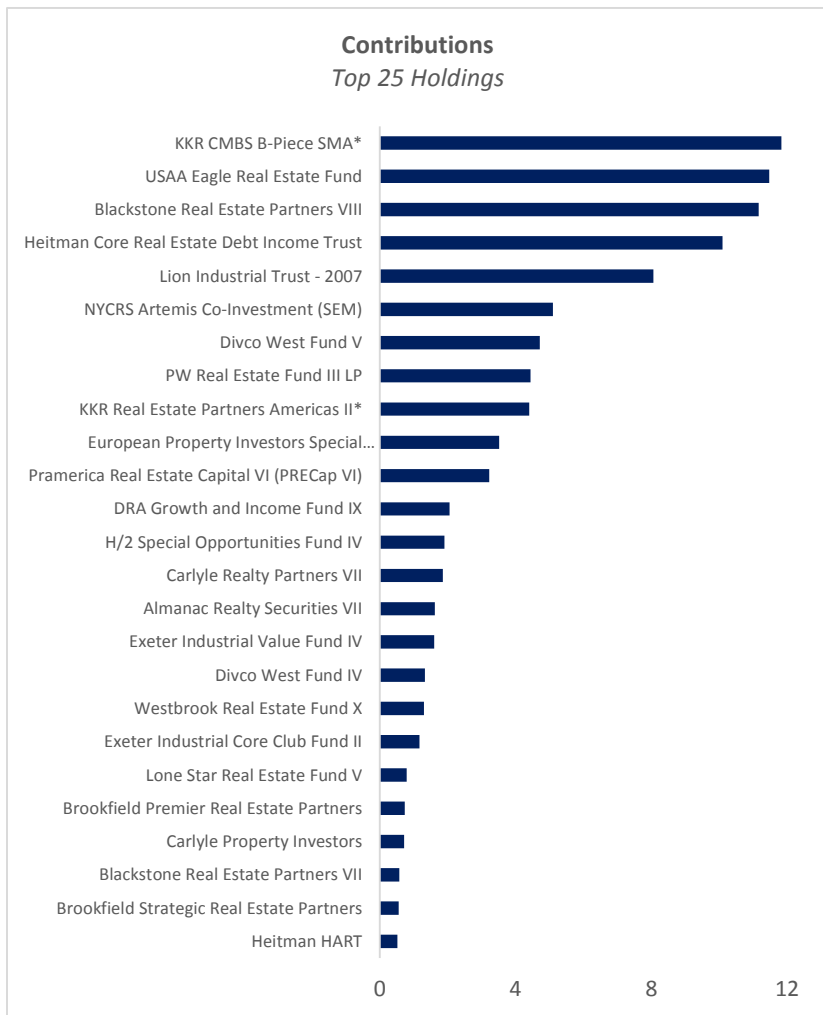
Top 25 Holdings



Note: Top fund positions represent >85% of the RE Portfolio.

FOURTH QUARTER CASH FLOW ACTIVITY

- Distributions for the Quarter totaled \$126.0 million while contributions totaled \$95.7 million.



Note: Top fund positions represent >85% of the Cash Flows.

CORE / CORE PLUS PORTFOLIO PERFORMANCE SUMMARY

- The Core / Core Plus Portfolio has generated a net IRR of 7.0% and 1.4x multiple since its inception. A summary of the top 15 positions (by market value) in the Core / Core Plus Portfolio's performance as of December 31, 2018 is included below.

FUNDING STATUS & CASH FLOW ACTIVITY (in U.S. Dollars)					PERFORMANCE	
Investment	Vintage	Funded	Market Value	Total Distributed	Net IRR	Equity Multiple
JP Morgan Strategic Property Fund	2006	62,422,616	127,993,731	0	8.1	2.1
PRISA II	2007	63,729,327	90,500,322	19,566,277	5.9	1.7
UBS Trumbull Property Fund	2006	93,631,713	84,550,897	60,595,939	6.9	1.6
NYC Asset Investor #2 LLC	2013	57,585,676	78,340,264	15,551,252	14.9	1.6
Brookfield Premier Real Estate Partners	2016	65,165,646	75,718,623	4,951,733	12.6	1.2
LaSalle Property Fund	2010	50,000,000	72,780,082	18,035,577	10.7	1.8
Carlyle Property Investors	2017	63,707,016	66,110,511	3,439,388	7.7	1.1
Heitman HART	2007	44,006,550	61,676,229	16,006,550	8.0	1.8
USAA Eagle Real Estate Fund	2015	51,466,351	60,840,008	0	8.8	1.2
Lion Industrial Trust - 2007	2017	50,903,291	60,188,534	3,033,236	14.6	1.2
MetLife Core Property Fund	2014	40,000,000	49,741,328	7,636,549	10.6	1.4
Almanac Realty Securities VII	2015	35,264,189	35,813,715	8,790,828	14.0	1.3
RREEF America REIT II	2006	27,724,347	30,010,043	14,313,347	5.2	1.6
PRISA SA	2006	22,590,656	29,662,035	8,299,504	4.8	1.7
NYCRS Artemis Co-Investment (SEM)	2016	34,135,897	28,545,723	12,542,064	21.9	1.2
Total		762,333,275	952,472,045	192,762,244		

Note: Top fund positions represent >85% of the Core/ Core Plus RE Portfolio.

NON-CORE PORTFOLIO PERFORMANCE SUMMARY

- The Non-Core Portfolio has generated a net IRR of 10.4% and 1.4x multiple since its inception. A summary of the top 15 positions (by market value) in the Non-Core Portfolio's performance as of December 31, 2018 is included below.

FUNDING STATUS & CASH FLOW ACTIVITY (in U.S. Dollars)					PERFORMANCE	
Investment	Vintage	Funded	Market Value	Total Distributed	Net IRR	Equity Multiple
PRISA III	2008	35,657,776	94,790,112	0	12.1	2.7
Blackstone Real Estate Partners VIII	2015	84,128,159	79,332,626	28,030,023	16.8	1.3
Blackstone Real Estate Partners VII	2012	122,459,208	69,073,135	131,063,002	17.5	1.6
KKR CMBS B-Piece SMA*	2017	60,012,458	60,008,454	3,796,325	8.2	1.1
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2013	93,968,033	53,947,735	87,807,881	15.9	1.5
Brookfield Strategic Real Estate Partners	2012	67,370,981	48,723,699	86,083,089	21.9	2.0
Carlyle Realty Partners VII	2014	49,684,231	37,028,761	31,461,545	15.9	1.4
NYC Asset Investor #1 LLC	2013	32,831,437	28,318,224	12,980,477	6.7	1.3
NYC Asset Investor #3 LLC	2013	25,171,536	27,423,140	4,409,973	9.2	1.3
H/2 Special Opportunities Fund III	2014	40,000,000	26,042,060	24,654,313	11.4	1.3
European Property Investors Special Opportunities IV (EPISO IV)	2015	22,960,409	24,749,704	1,426,748	10.8	1.1
PW Real Estate Fund III LP	2016	19,019,205	23,467,220	2,427,186	26.7	1.4
Divco West Fund V	2016	19,347,184	20,186,531	0	4.0	1.0
KKR Real Estate Partners Americas II*	2018	16,698,356	16,830,412	835,920	13.7	1.1
Stockbridge Real Estate Fund III	2008	26,998,145	14,679,693	16,829,753	2.3	1.2
Total		716,307,118	624,601,506	431,806,235		

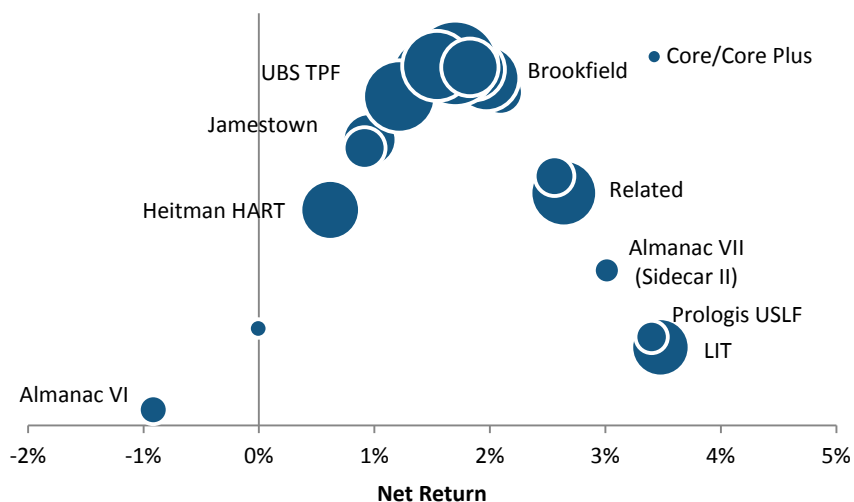
Note: Top fund positions represent >75% of the Non-Core RE Portfolio.

CORE / CORE PLUS PERFORMANCE HIGHLIGHTS

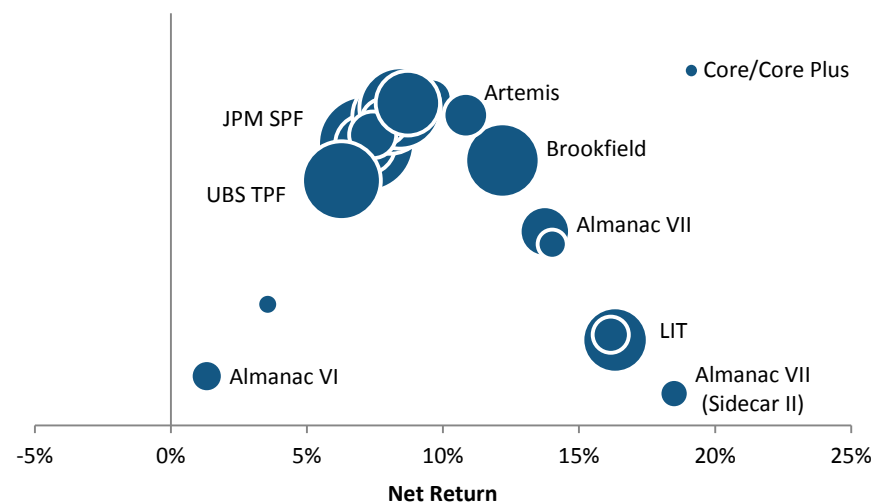
- During the Quarter, the Core / Core Plus Portfolio generated a net return of 1.7%, outperforming NFI-ODCE by 20 bps.
- The top five funds that generated the strongest performance during the Quarter were: Lion Industrial Trust, Prologis USLF, Almanac Realty Securities VII (Sidecar II), NYC Asset Investor #2 LLC (Related), and NYCRS Artemis Co-Investment (SEM).
- As part of a core rebalancing plan, additional commitments to Lion Industrial Trust, USAA Eagle, LaSalle Property Fund were made during the Quarter, and an additional commitment to MetLife will be made in 1Q19. In addition, a recommendation for a redemption from UBS TPF was approved for Police based on a performance review of the Core / Core Plus Portfolio.

Quarterly Performance – Core / Core Plus	Un-Annualized	Annualized
Income	0.9%	3.7%
Appreciation	1.1%	4.4%
Total Gross	2.0%	8.2%
Total Net	1.7%	7.1%

Distribution of Quarterly Returns



Distribution of 1-Year Returns



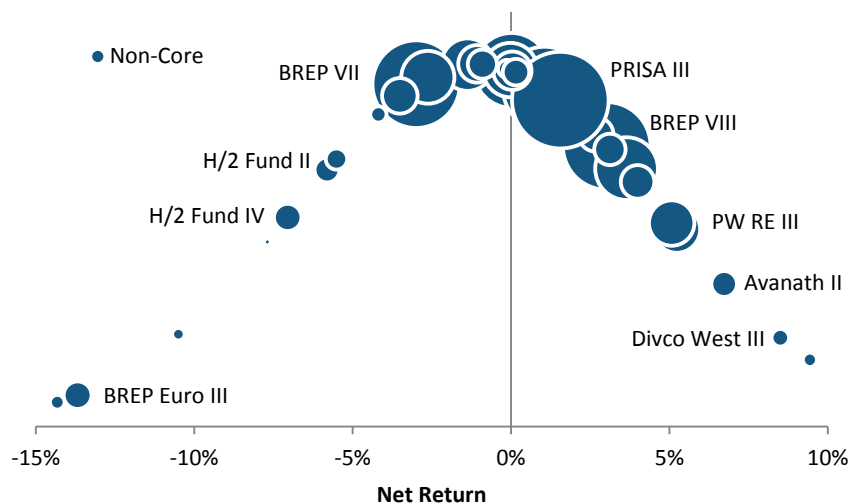
*Note that bubble size is based on average invested capital.

NON-CORE PERFORMANCE HIGHLIGHTS

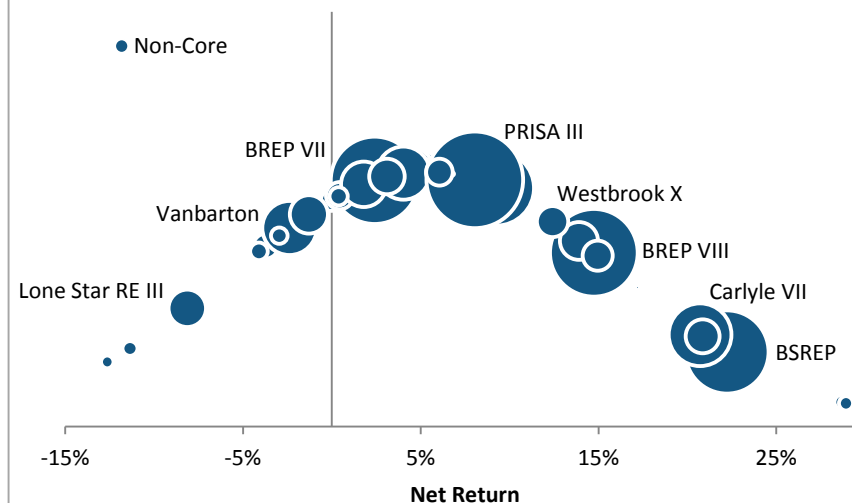
- During the Quarter, the Non-Core Portfolio generated a net return of 0.5%.
- The top funds that generated the strongest performance during the Quarter were: Taconic New York City Investment Fund LP, AREA Real Estate Investment Fund V, LP, Divco West Fund III, Avanath Affordable Housing Fund II (SEM), and European Property Investors Special Opportunities IV (EPISO IV).
- The larger positions in the Non-Core Portfolio also generated strong performance. The one-year returns for PRISA III, BREP VIII, KKR CMBS B-Piece SMA, and BREP Euro IV were above the median return for the Non-Core Portfolio.

Quarterly Performance – Non-Core	Un-Annualized	Annualized
Income	0.8%	3.3%
Appreciation	0.0%	-0.2%
Total Gross	0.8%	3.1%
Total Net	0.5%	2.2%

Distribution of Quarterly Returns



Distribution of 1-Year Returns



*Note that bubble size is based on average invested capital. For scaling purposes, the following funds' returns were excluded from the quarterly distribution chart: AG Realty Fund VII (-21.2%) and Taconic New York City Investment Fund LP (30.9%) and the 1-year distribution chart: AG Realty Fund VII (-22.6%), Ares European Real Estate Fund III, LP (-52.6%), Blackstone Real Estate Partners Europe III (USD Vehicle) (-22.5%), and Thor Urban Property Fund II (-15.7%).

FOURTH QUARTER FUND HIGHLIGHTS

Fund Background and Performance

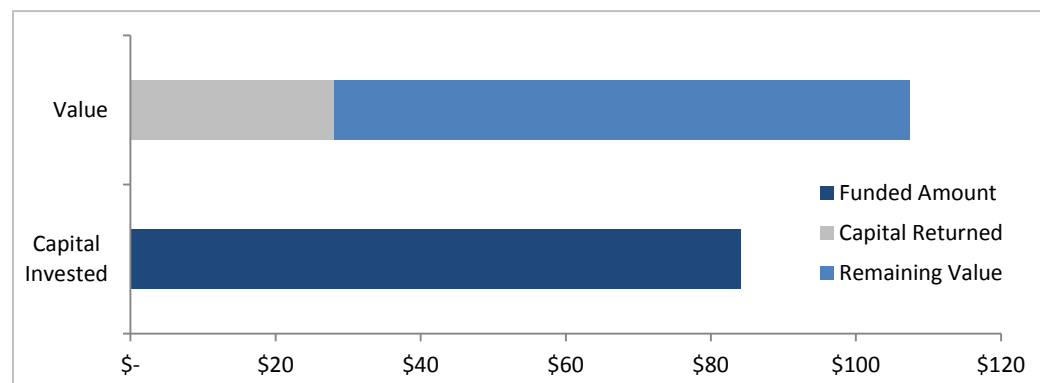
Fund Name	Blackstone Real Estate Partners VIII (BREP VIII)
Manager Name	Blackstone Group
Year of Investment	2015
Portfolio	Non-Core
Capital Contributed	\$84.1 million
Net Multiple to Date	1.3x
Net IRR to Date	16.8%

Fund Highlight

BREP VIII generated a total gross return of 3.8% comprised of (0.1%) in losses and 3.8% in appreciation. The net return after fees was 3.0%. During the Quarter, the portfolio increased in valuation by \$505 million, or 3.8%. Realizations to date represent 36% of the Fund's invested equity, and the Fund distributed \$411 million during the Quarter. The Fund's life science office portfolio experienced progress in leasing and strong core market fundamentals, with the operating portion of the portfolio being 96% leased by quarter-end. Further, the Fund's multifamily portfolio saw strong quarterly rent growth and outperformance due to non-core asset sales. The Fund's retail portfolio decreased in value by 5% during the Quarter, reflecting market pricing and a challenging operating environment.

Top 10 Holdings Based on GAV

Property Name	Property Type	City	State/Country
BioMed Realty Trust	Office	Various	Various
Gramercy Property Trust	Mixed	Various	US, China and UK
Iconic Resorts Portfolio	Hotel	Various	Various, US
Santander/Popular JV – REO & NPL Portfolio	Mixed	Various	Various, Spain
GE Capital Real Estate - U.S. Equity Portfolio	Mixed	Various	Various, US
RioCan U.S. Grocery Anchored Power Center Portfolio	Retail	Various	Various, US
Greystar Multifamily Portfolio	Residential	Various	Various, US
International market Centers	Office	Various	Various, US
Bridge Multifamily Portfolio	Residential	Various	Various, US
Sponda Plc	Mixed	Various	Various



FOURTH QUARTER FUND HIGHLIGHTS

Fund Background and Performance

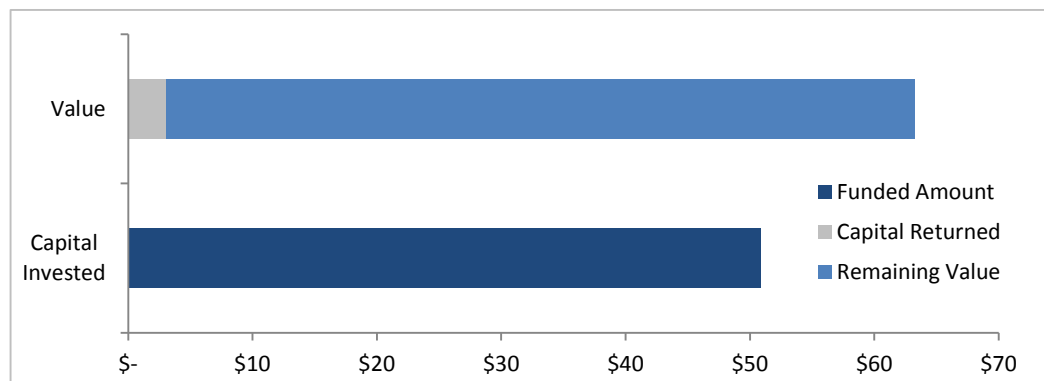
Fund Name	Lion Industrial Trust
Manager Name	Clarion Partners
Year of Investment	2017
Portfolio	Core / Core-Plus
Capital Contributed	\$50.9 million
Net Multiple to Date	1.2x
Net IRR to Date	14.6%

Fund Highlight

LIT generated a total gross return of 4.0% comprised of 1.3% in income and 2.7% in appreciation. The net return after fees was 3.5%. During the Quarter, the Fund's valuation increase resulted from strong rent growth and slight cap rate compression, as well as gains from development projects totaling \$46.9 million. The Fund acquired 12 investments at a combined gross purchase price of \$182.7 million in markets including Baltimore, Los Angeles, and Pennsylvania. Further, the Fund disposed of seven projects across Austin, Dallas, Memphis, North/Central Florida, and Seattle at a combined sales price of \$214.8 million.

Top 10 Holdings Based on GAV

Property Name	Property Type	City	State/Country
Cranbury Logistics Ctr-Bldg 1	Industrial	Newark	NJ
Stryker Business Center Ph II	Industrial	Seattle	WA
I-215 Building B	Industrial	Riverside	CA
N San Bernardino Bus Park-FEDEX	Industrial	Los Angeles	CA
Cranbury Logistics Ctr-Bldg 2	Industrial	Newark	NJ
Mattel Distribution Facility	Industrial	Los Angeles	CA
Exit 10 Industrial Avenue	Industrial	Newark	NJ
Southgate Bldg 3	Industrial	Los Angeles	CA
Tradepoint Bldg 2	Industrial	Dallas	TX
Fall River Distribution Center	Industrial	Boston	MA



FOURTH QUARTER FUND HIGHLIGHTS

Fund Background and Performance

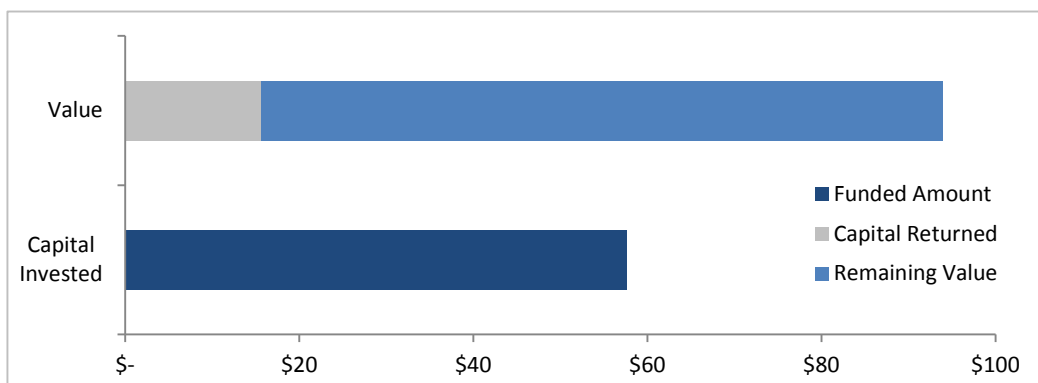
Fund Name	NYC Asset Investor #2 LLC (Related)
Manager Name	Related
Year of Investment	2013
Portfolio	Core / Core-Plus
Capital Contributed	\$57.6 million
Net Multiple to Date	1.6x
Net IRR to Date	14.9%

Fund Highlight

Related had a total gross return of 3.2% comprised of (0.1%) in losses and 3.3% in appreciation. The net return after fees was 2.6%. Since inception, the Fund has realized \$34.8 million of invested equity. The Fund sold 13 assets during 2018 at a combined sales price of \$81.3 million. Subsequent to Quarter-end, the Fund sold an additional asset in Northern Bronx and anticipates the sale of an additional asset in April 2019 for a combined sales price of \$99.5 million. Occupancy at Quarter-end was 95.6%, up from 92.0% at year-end 2017.

Top 10 Holdings Based on GAV

Property Name	Property Type	City	State/Country
Northern Bronx Portfolio I	Multifamily	New York	NY
Northern Bronx Portfolio III	Multifamily	New York	NY
Northern Bronx Portfolio II	Multifamily	New York	NY
Central Bronx Portfolio	Multifamily	New York	NY
Story Towers	Multifamily	New York	NY
Williamsburg Portfolio	Multifamily	New York	NY
Brooklyn Portfolio	Multifamily	New York	NY
Noble Mansion	Multifamily	New York	NY
Marine Park	Multifamily	New York	NY
Lincoln Place	Multifamily	New York	NY



FOURTH QUARTER FUND HIGHLIGHTS

Fund Background and Performance

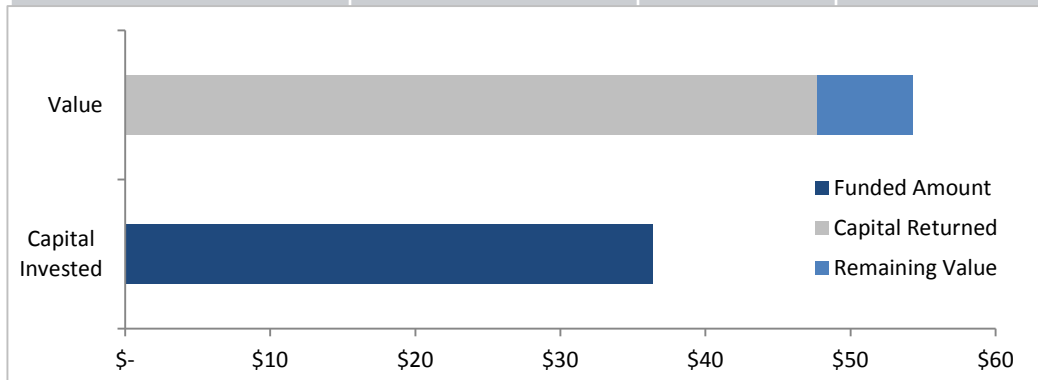
Fund Name	Blackstone Real Estate Partners Europe III (USD Vehicle) (BREP Europe III)
Manager Name	Blackstone Group
Year of Investment	2008
Portfolio	Non-Core
Capital Contributed	\$36.4 million
Net Multiple to Date	1.5x
Net IRR to Date	11.2%

Fund Highlight

The Fund's total gross return for the quarter was (16.4%) comprised solely of depreciation. The net return after fees was (13.7%). The portfolio's valuation decrease quarter-over-quarter was largely due to its retail portfolio and the challenging market environment in Turkey following a governmental decree that all leases be denominated in Turkish Lira, rather than the euro. Further, negative leasing forecasts and decreases in NOI projections for retail assets, combined with continued requests for rent concessions by tenants have also contributed to the valuation decrease for the Fund.

Top 10 Holdings Based on GAV

Property Name	Property Type	City	State/Country
Multi-Corporation	Retail	Various	Various
Paul Doumer	Office	Paris	France
Franciacorta Outlet Center	Retail	Milian	Italy
Chiswick Park	Office	London	UK
Italian Mixed Use Portfolio #1	Mixed	Various	Italy
Turkey Retail Portfolio	Retail	Various	Turkey
BREP Poland Retail Venture III	Retail	Various	Poland
BREP Poland Retail Venture II	Retail	Various	Poland
IVG Debt	Office	Various	Europe
Broadgate Estate	Cash	London	UK



Infrastructure Quarterly Report (Public):



Infrastructure Monitoring Report

For the period ended December 31, 2018

Report Prepared For:

New York City Police Pension Fund, Subchapter 2



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All data is as of December 31, 2018 unless otherwise noted.

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. ACTUAL PERFORMANCE MAY VARY.

I. Executive Summary

New York City Police Pension Fund, Subchapter 2 (“NYCPPF”) established the Infrastructure Program (the “Program”) in December of 2012 on behalf of its beneficiaries to participate in attractive long-term investment opportunities and to provide diversification to its overall pension investment portfolio.

The inclusion of infrastructure in the NYCPPF pension portfolio allows for global investments in facilities or assets that provide core essential services critical to the operation and development of economies. Typically infrastructure investments have high barriers to entry due to significant capital expenditure requirements, exclusive long term contracts or regulatory requirements. Infrastructure investments are comprised of long useful-life assets with high tangible value and relatively low value erosion over time.

The Program seeks to invest in opportunities in a variety of infrastructure sectors, including but not limited to, transportation, energy, power, utilities, water, wastewater, communications and social infrastructure.

StepStone Group LP (“StepStone”) was engaged by NYCPPF on October 20, 2014 to provide infrastructure advisory services for prospective investment opportunities and monitoring and reporting services for existing and new investments.

Since inception through December 31, 2018, the Program has committed US\$683.4 million to 15 partnership investments (the “Portfolio”). This quarterly monitoring report covers the performance of the Portfolio as of December 31, 2018 as well as significant activity that occurred during the fourth quarter of 2018.

Allocation Summary

NYCPPF has an Infrastructure allocation target of 2% of total pension assets. As of December 31, 2018, the market value of NYCPPF Infrastructure Program represented approximately 0.9% of total pension assets, a 17 basis point increase from the prior quarter.

As the Program matures, the percentage of its market value relative to the total NYCPPF pension assets will continue to increase.

<i>US\$ in millions*</i>	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Total Pension Assets*	\$36,902.0	\$40,558.0	\$39,148.0	(\$3,656.0)	(\$2,246.0)
Total Infrastructure Assets	\$334.5	\$300.7	\$206.6	\$33.8	\$127.9
% Allocation to Infrastructure (Target of 2%)	0.9%	0.7%	0.5%	+17 bps	+38 bps

*NYCPPF total Pension Assets are as of quarter-end (or, if not yet available, the most recent month-end prior to quarter-end) as reported by The New York City Comptroller’s Office on www.comptroller.nyc.gov

Performance Summary

As of December 31, 2018, the Infrastructure Program has achieved a Total Value to Paid-In multiple of 1.2x invested capital and an IRR of 13.0%. Note that, given the relative immaturity of the Portfolio and underlying fund investments, the current performance to-date is not meaningful.

US\$ in millions*	December 31, 2018	September 30, 2018	December 31, 2017	Quarterly Change	Yearly Change
Number of Managers	10	10	9	0	1
Number of Investments	15	13	10	2	5
Committed Capital ¹	\$683.0	\$614.4	\$495.8	\$68.6	\$187.2
Contributed Capital	\$326.9	\$281.8	\$193.7	\$45.1	\$133.2
Distributed Capital	\$70.2	\$56.3	\$34.7	\$13.9	\$35.5
Market Value	\$334.5	\$300.7	\$206.6	\$33.8	\$127.9
Total Value	\$404.7	\$356.9	\$241.3	\$47.8	\$163.4
Total Gain/(Loss)	\$77.9	\$75.1	\$47.6	\$2.7	\$30.2
Unfunded Commitment	\$392.5	\$364.9	\$314.5	\$27.5	\$78.0
Exposure ²	\$727.0	\$665.6	\$521.1	\$61.4	\$205.8
DPI ³	0.2x	0.2x	0.2x	0.0x	0.0x
TVPI ⁴	1.2x	1.3x	1.2x	0.0x	0.0x
IRR ⁵	13.0%	14.1%	13.4%	-1.1%	-0.4%
TVPI Net of StepStone Fees ⁶	1.2x	1.3x	1.2x	-0.1x	0.0x
IRR Net of StepStone Fees ⁶	12.9%	14.1%	13.3%	-1.2%	-0.4%

* Note that amounts may not total due to rounding. **Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.**

¹ Committed Capital is presented net of any commitment releases or expirations and reflects foreign currency exchange rate fluctuations. Note that the Base/(US\$) committed capital for foreign currency-denominated investments as of respective quarter-end dates is calculated as follows: (total net amount funded in Base currency) + (unfunded commitment in Local currency * quarter-end exchange rate). StepStone utilizes S&P Capital IQ as the source for quarter-end exchange rates to calculate committed capital.

² Exposure represents the sum of Market Value and Unfunded Commitment.

³ DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital invested. DPI is calculated as Distributed Capital divided by Contributed Capital.

⁴ TVPI, or Total Value to Paid-In Multiple, is a performance metric that measures total value created by the Portfolio relative to capital invested, without consideration for time. TVPI is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital.

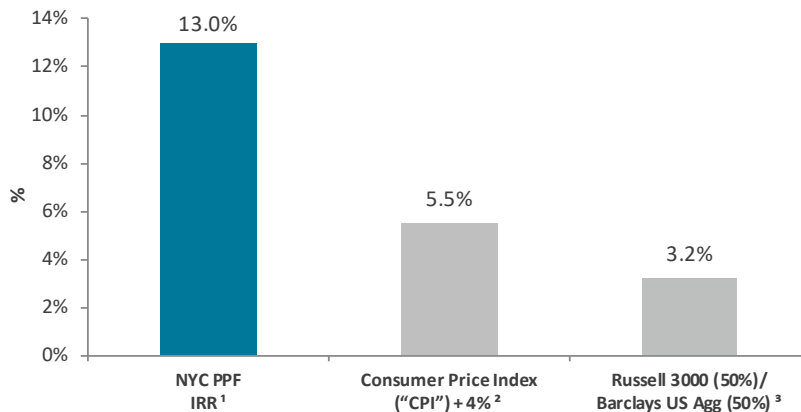
⁵ IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund managers' fees, expenses and carried interest.

⁶ TVPI and IRR Net of StepStone fees represent TVPI and IRR net of fees paid by NYCPPF to StepStone through the quarter-end date.

Portfolio Performance vs. Benchmarks

The performance benchmark for the Infrastructure Portfolio is to meet or exceed the Consumer Price Index (“CPI”) plus 4% net of fees over a rolling 5-year period. The Infrastructure Portfolio’s performance is also measured against a dollar-weighted public benchmark, which produced the return that would have been earned if NYCPPF’s infrastructure cash flows were invested in an index of 50% Russell 3000® and 50% Barclays U.S. Aggregate®. The Infrastructure Portfolio is expected to generate a total return, net of investment management fees, of at least 6.5%.

The following graph illustrates Portfolio IRR performance versus benchmarks as of December 31, 2018.



¹NYCPPF since inception Internal Rate of Return (“IRR”) is calculated based on the Portfolio’s daily cash flows and market value as of quarter-end. IRR is net of fund managers’ fees, expenses and carried interest. **Past performance is not necessarily indicative of future results.**

²Consumer Price Index (“CPI”) benchmark represents the compound annual growth rate of the Consumer Price Index for All Urban Consumers and All Items, as provided by the U.S. Department of Labor: Bureau of Labor Statistics, calculated over a five-year rolling period plus a 4.0% premium.

³ Benchmark is a dollar-weighted PME+ calculation of daily changes in 50% of the Russell 3000® Index and 50% of the Barclays U.S. Aggregate® Index. These index comparisons are being provided solely for informational purposes as an indication of returns that could be earned by investors by making similar investments in the indexes and should not be relied upon for any purpose. An investor cannot directly invest in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

Portfolio Diversification

The Program’s objective is to build a Portfolio that is diversified by investment strategy, asset type, and geography. The target investment strategy ranges are as follows:

- Core Infrastructure Investments: 60% to 100%; and
- Non-Core Infrastructure Investments: 0% to 40%.

Actual percentages may differ substantially from these targets during the initial years of the Program. The following table illustrates the current diversification of the Portfolio by fund strategy, geography and industry focus.

	Market Value		Unfunded Commitment		Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
<i>As of December 31, 2018. (US\$ In millions)</i>						
By Strategy:						
Core	289.4	86.5%	356.2	90.7%	645.6	88.8%
Non-Core	45.1	13.5%	36.3	9.3%	81.4	11.2%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%
By Geographic Focus:						
Global	130.2	38.9%	85.5	21.8%	215.7	29.7%
North America	11.0	3.3%	48.6	12.4%	59.5	8.2%
OECD	193.3	57.8%	258.4	65.8%	451.7	62.1%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%
By Industry Focus:						
Diversified	281.5	84.2%	257.5	65.6%	538.9	74.1%
Energy	53.0	15.8%	135.0	34.4%	188.0	25.9%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%

II. Infrastructure Market Overview

Market Update¹

Towards the end of 2018, the US policy outlook grew increasingly uncertain, and commodity prices came under pressure. US crude oil prices dropped below US\$50 per barrel in Q4 2018 for the first time in more than a year after Saudi Arabia and Iran increased production and exports. Despite this, central banks in Canada and the US are expected to continue rate hikes in 2019. The US economy posted solid growth in Q4 2018, while Canada's economy slowed as oil prices slumped. There was strong activity with midstream in North America, with total completed transactions in the sector of c.US\$2.0 billion over the quarter. Notable midstream transactions that reached financial close during the quarter include a US\$950 million Caprock midstream acquisition by Blackstone and its portfolio company, EagleClaw Midstream. Q4 2018 marked another quarter of strong deal flow for the renewables sector. A joint venture comprising Axiom and Manulife acquired a further 55% interest in AltaGas's British Columbia hydroelectric generation portfolio for C\$1.4 billion, bringing the joint venture's total interest in the portfolio to 90%. Additionally, GE Energy Financial Services announced the sale of a US\$1.0 billion portfolio of 20 renewable energy, contracted natural gas-fired generation and midstream assets to Apollo Global Management. Consolidated Edison's US\$1.6 billion acquisition of a 981MW renewable energy portfolio from Sempra Energy also reached financial close. Activity was similarly robust in the utilities sector. Aqua America agreed to acquire SteelRiver's natural gas distribution company, Peoples Gas, for an enterprise value of US\$4.3 billion. Oncor acquired InfraREIT, a Texas electric transmission company, for an enterprise value of US\$2.2 billion. The acquisition implies a transaction multiple of 12.6x EBITDA. Lastly, SteelRiver announced the sale of the Trans Bay Cable, a 53-mile electricity transmission line, to NextEra Energy for US\$1.0 billion.

In Europe, M&A activity in the transport sector continued to be robust during the fourth quarter of 2018. In the airports sub-sector, Vinci acquired a 50.01% stake in Gatwick Airport for £2.9 billion in equity, with the transaction valuing the asset at approximately 20x EBITDA. Following the transaction, Vinci will manage 50.01% of the asset and GIP, which previously managed the whole asset, will manage 49.99%. In the rolling stock sub-sector, Morgan Stanley closed its public tender offer for all outstanding shares in VTG AG, a listed German railcar lessor, originally launched in July 2018. Morgan Stanley acquired a further 42% stake in the company, increasing its holding to 71%, with the transaction implying an acquisition multiple of approximately 13x EBITDA. In the carparking sub-sector, Indigo, which is backed by Ardian, agreed to sell its UK, Germany, Czech Republic and Slovakia subsidiaries to its Spanish peer, Saba Infraestructuras, for an undisclosed fee. In the telecommunications sector, Italy's Benetton sold a 20% stake in Cellnex, a Spanish telecom towers group, to ADIA, and a 6% stake to GIC. The deal valued Cellnex at approximately 18x EBITDA. Also, Digital Colony acquired Open Cell, an indoor mobile signal systems provider, for an undisclosed amount. In the utilities sector, AIMCo agreed to acquire a majority stake in Eolia Renovables, a Spanish wind and solar developer, from Oaktree for an undisclosed amount. Separately, Orsted reached financial close on the £4.5 billion sale of its 50% stake in the under-construction 1.2GW Hornsea 1 Project to GIP. The project is the largest offshore wind project in the world. In the storage sector, IFM and Vitol announced the acquisition of a 50% stake in VTTI, an owner and operator of oil and refined products terminals in the Netherlands, from Buckeye Partners for US\$975 million in equity.

In Latin America, activity was robust and concentrated in the power, renewables, and transport sectors in Brazil. The largest brownfield transactions closing over the quarter included the acquisition of Ascenty Data Centers in Brazil by a joint venture between Digital Realty and Brookfield Infrastructure for US\$2.3 billion. China's State Grid also acquired an additional 48% stake in a Brazilian renewable energy developer, CPFL Energias Renováveis, for US\$1.0 billion, bringing its total ownership to 95%. Greenfield activity dominated larger transactions occurring over the quarter. Brazil had various transmission line projects granted, including the Bel Monte Transmission Line II requiring capital of US\$2.2 billion and won by State Grid, the Paraiso Transmission Line requiring US\$287 million, and Santa Cantarina Transmission Line requiring US\$353 million. A Chilean transmission project requiring capital of US\$435 million was also granted to Transelec. The transport sector was also active. A concession for Ruta del Cacao, a highway project in Colombia requiring capital of US\$625 million, was granted to a

¹ Data used in this section is Q4 2018 data from InfraNews and Preqin.

consortium that included the Ashmore Group and Ferrovial. A concession for a new terminal project at the International Airport in Florianópolis (US\$385 million) was awarded to Zurich Airport, and a concession for the expansion of runways and terminals at the International Airport in Porto Alegre (US\$601 million) was awarded to Fraport. Both airports are in Brazil.

Several notable transactions occurred in Australia, particularly in the renewables sector. In the wind sub-sector, the largest project to reach financial close was Tilt Renewables' 336MW Dundonnell Wind Farm. The A\$560 million project is located 23km north-east of Mortlake in the Western District of Victoria. It will be powered by 80 wind turbines and construction is anticipated to commence in January 2019. In the solar sub-sector, the largest project to reach financial close was Maoneng's 255MW Sunraysia Solar Farm. The project achieved financial close with the sale of a 90.1% stake to John Laing. The project will be one of the largest utility scale solar farms in Australia. In social infrastructure, a consortium comprising the Link Group, the Commonwealth Bank of Australia and Morgan Stanley Infrastructure acquired Property Exchange Australia ("PEXA"), an electronic property settlement company, from existing shareholders. The consortium acquired PEXA for an enterprise value of A\$1.6 billion. Additionally, AMP Capital's Community Infrastructure Fund ("CommIF") reached financial close on its acquisition of a further 6.8% stake in the Victorian Desalination Plant. CommIF acquired the additional stake for A\$100 million from InfraRed Capital. This increased its total stake to 16.5%, giving it the largest ownership interest in the asset.

III. Portfolio Review

Quarterly Highlights

- **New Investment Commitment** – During the fourth quarter of 2018, the Program closed on two new investments totaling US\$70.1 million. This is shown in the table below.

US\$ in millions

Investment	Month and Year Closed	Vintage Year	Strategy	Geographic Focus	Industry Focus	Committed Capital
Cardinal NR Sidecar Holdings L.P.	October 2018	2018	Infrastructure	North America	Diversified	\$6.6
EQT Infrastructure IV (No.2) USD SCSp	December 2018	2019	Infrastructure	OECD	Diversified	63.5
Total						\$70.1

- **Subsequent Investment Commitments** – Subsequent to quarter-end, the Program closed on two new investment commitments totaling US\$118.6 million. This is shown in the table below.

US\$ in millions

Investment	Month and Year Closed	Vintage Year	Strategy	Geographic Focus	Industry Focus	Committed Capital
Ardian Infrastructure Fund V B S.C.S., SICAV-RAIF	March 2019	2019	Infrastructure	OCED	Diversified	\$46.5
Global Infrastructure Partners IV, L.P.	March 2019	2019	Infrastructure	OCED	Diversified	72.1
Total						\$118.6

- **Cash Outflow Decreased** – During the fourth quarter of 2018, the Program made US\$45.1 million of contributions and received US\$13.9 million of distributions, for a net cash outflow of US\$31.1 million. This compared to a net cash outflow of US\$36.5 million during the prior quarter.
- **Valuation Increased** – During the fourth quarter of 2018, net of cash flow activity, the valuation of the Portfolio increased by approximately US\$2.7 million, or 0.8%, from the prior quarter. The valuation increase primarily reflects the increase in value of underlying investments in Actis Energy 4.
- **New Underlying Fund Investments** – During the fourth quarter of 2018, 12 new investment positions were added to the Portfolio.

US\$ in millions

Company	Fund(s)	Investment Date	Stage	Industry	Country	Exposed Invested Capital	Exposed Market Value	TVM
N.A. Residential Energy Infrastructure Business	Brookfield Infrastructure Fund III, L.P.	Oct-18	Private	Utilities	Canada	5.7	5.8	1.0x
Western Canadian Midstream Business	Brookfield Infrastructure Fund III, L.P.	Oct-18	Private	Midstream	United States	4.2	4.4	1.0x
Western Renewables Partners LLC	Global Energy & Power Infrastructure Fund II	Nov-18	Private	Renewables	United States	4.2	4.2	1.0x
N.A. Residential Energy Infrastructure Business	Cardinal NR Sidecar Holdings L.P.	Oct-18	Private	Utilities	Canada	3.9	3.9	1.0x
Hornsea 1	Global Infrastructure Partners III, L.P.	Nov-18	Private	Renewables	United Kingdom	2.9	2.9	1.0x
SFR Filiale SAS	KKR Global Infrastructure Investors III L.P.	Nov-18	Private	Telecom	United States	2.8	2.8	1.0x
Saur SAS	EQT Infrastructure III (No.2) SCSp	Nov-18	Private	Utilities	France	2.7	2.7	1.0x
U.S. Data Center Business	Brookfield Infrastructure Fund III, L.P.	Dec-18	Private	Telecom	United States	2.5	2.5	1.0x
Axiom Quatro AcquisitionCo	Axinfra US II LP	Dec-18	Private	Conventional Power	United States	2.3	2.3	1.0x
Limetree Bay Ventures LLC	Global Energy & Power Infrastructure Fund II	Nov-18	Private	Midstream	United States	1.3	1.3	1.0x
ASF Lecco	ASF VII Infrastructure L.P.	Dec-18	Private	Other	Italy	0.6	0.8	1.2x
Opdenergy, S.A.U.	NYCRS EIG Energy Partners, L.P.	Dec-18	Private	Utilities	Spain	0.0	0.0	1.0x

- **No Company Exits** – There were no exits of investment positions during the quarter.

Performance by Vintage Year

The following table illustrates the Portfolio's since-inception investment performance by vintage year as of December 31, 2018. Note that the performance of funds that are less than two years old is not meaningful.

As of December 31, 2018 (US\$ in millions)

Vintage Year	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Total Value	Total Gain/ (Loss)	Unfunded Commitment	Exposure	DPI	TVPI	IRR
2013	\$60.0	\$49.0	\$12.4	\$58.9	\$71.3	\$22.3	\$13.7	\$72.6	0.3x	1.5x	12.5%
2014	100.0	113.9	48.6	109.9	158.5	44.6	9.8	119.7	0.4x	1.4x	15.2%
2016	171.6	96.8	6.0	96.7	102.7	5.9	81.7	178.5	0.1x	1.1x	5.8%
2017	161.4	56.8	3.2	59.1	62.3	5.5	107.5	166.6	NM	NM	NM
2018	126.6	10.4	-	9.9	9.9	-	116.2	126.1	NM	NM	NM
2019	63.5	-	-	-	-	-	63.5	63.5	NM	NM	NM
Total	\$683.0	\$326.9	\$70.2	\$334.5	\$404.7	\$77.9	\$392.5	\$727.0	0.2x	1.2x	13.0%

Performance by Strategy and Industry Focus

The following table illustrates the Portfolio's since-inception investment performance by strategy and industry focus as of December 31, 2018.

As of December 31, 2018 (US\$ in millions)

Strategy/Industry	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Total Value	Total Gain/ (Loss)	Unfunded Commitment	Exposure	DPI	TVPI	IRR
Core	\$608.7	\$284.6	\$65.7	\$289.4	\$355.2	\$70.6	\$356.2	\$645.6	0.2x	1.3x	12.5%
Diversified	461.0	246.2	46.3	257.1	303.4	57.1	243.1	500.2	0.2x	1.2x	10.9%
Energy	147.6	38.3	19.4	32.3	51.8	13.5	113.0	145.4	0.5x	1.4x	35.3%
Non-Core	74.3	42.3	4.5	45.1	49.5	7.2	36.3	81.4	0.1x	1.1x	23.3%
Diversified	34.7	21.6	1.4	24.4	25.8	4.2	14.3	38.7	0.1x	1.1x	28.6%
Energy	39.6	20.7	3.0	20.7	23.7	3.0	22.0	42.6	0.1x	1.1x	18.6%
Total	\$683.0	\$326.9	\$70.2	\$334.5	\$404.7	\$77.9	\$392.5	\$727.0	0.2x	1.2x	13.0%

Performance by Geographic Focus

The following table and charts illustrate the Portfolio's since-inception investment performance by geographic focus as of December 31, 2018.

As of December 31, 2018 (US\$ in millions)

Geographic Focus	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Total Value	Total Gain/ (Loss)	Unfunded Commitment	Exposure	DPI	TVPI	IRR
Global	\$195.3	\$116.9	\$18.7	\$130.2	\$148.9	\$32.1	\$85.5	\$215.7	0.2x	1.3x	13.2%
North America	59.5	11.1	0.1	11.0	11.1	0.0	48.6	59.5	0.0x	1.0x	1.0%
OECD	428.2	198.9	51.4	193.3	244.7	45.7	258.4	451.7	0.3x	1.2x	13.0%
Total	\$683.0	\$326.9	\$70.2	\$334.5	\$404.7	\$77.9	\$392.5	\$727.0	0.2x	1.2x	13.0%

*Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Portfolio Diversification

By Strategy, Geography and Industry Focus

The Program’s objective is to build a Portfolio that is diversified by investment strategy, asset type, and geography. The target investment strategy ranges are as follows:

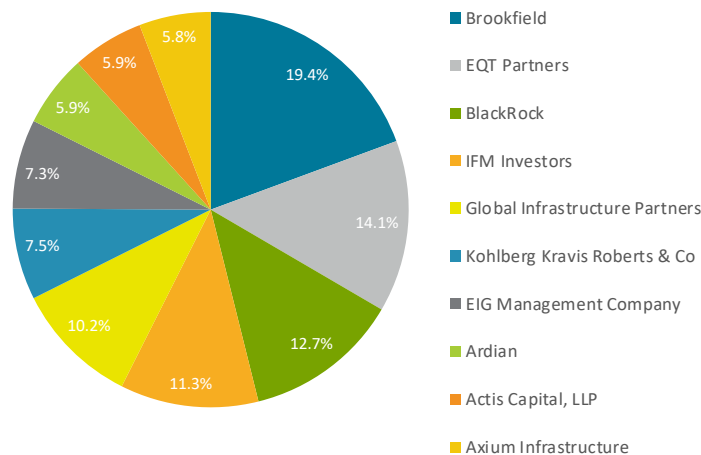
- Core Infrastructure Investments: 60% to 100%; and
- Non-Core Infrastructure Investments: 0% to 40%.

Actual percentages may differ substantially from these targets during the initial years of the Program. The following table illustrates the current diversification of the Portfolio by fund strategy, geography and industry focus.

As of December 31, 2018. (US\$ In millions)	Market Value		Unfunded Commitment		Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
By Strategy:						
Core	289.4	86.5%	356.2	90.7%	645.6	88.8%
Non-Core	45.1	13.5%	36.3	9.3%	81.4	11.2%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%
By Geographic Focus:						
Global	130.2	38.9%	85.5	21.8%	215.7	29.7%
North America	11.0	3.3%	48.6	12.4%	59.5	8.2%
OECD	193.3	57.8%	258.4	65.8%	451.7	62.1%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%
By Industry Focus:						
Diversified	281.5	84.2%	257.5	65.6%	538.9	74.1%
Energy	53.0	15.8%	135.0	34.4%	188.0	25.9%
Total	334.5	100.0%	392.5	100.0%	727.0	100.0%

By Investment Manager

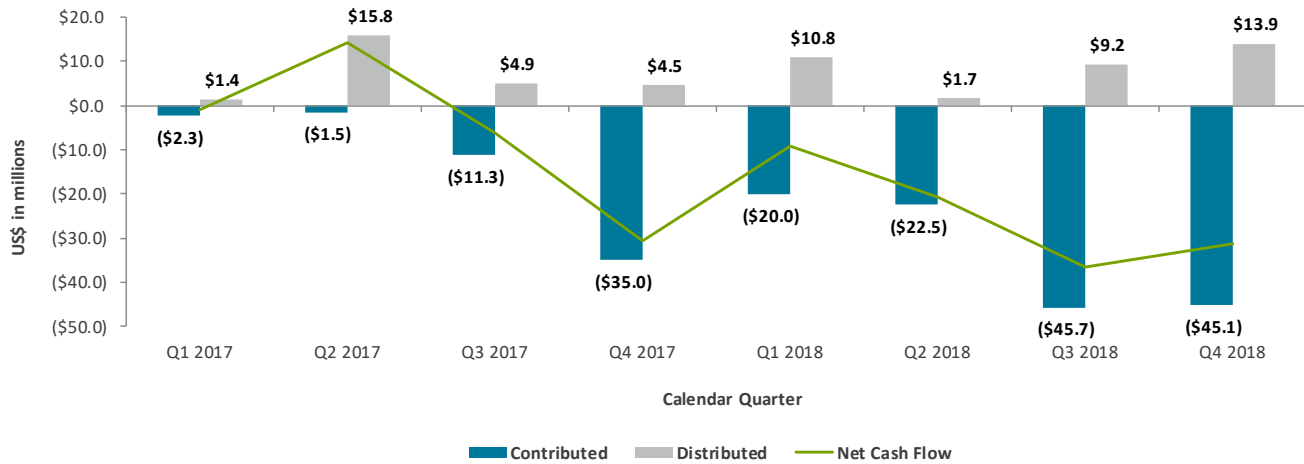
As of December 31, 2018, the Program had made 15 investment commitments to ten managers. NYCPPF seeks to limit its exposure to any single manager to no more than 10% of the total Real Assets Program when fully invested. As the Program matures and closes on additional commitments, the single manager exposure is expected to decline significantly. Below is the Portfolio’s current exposure by manager.



Portfolio Cash Flow Analysis

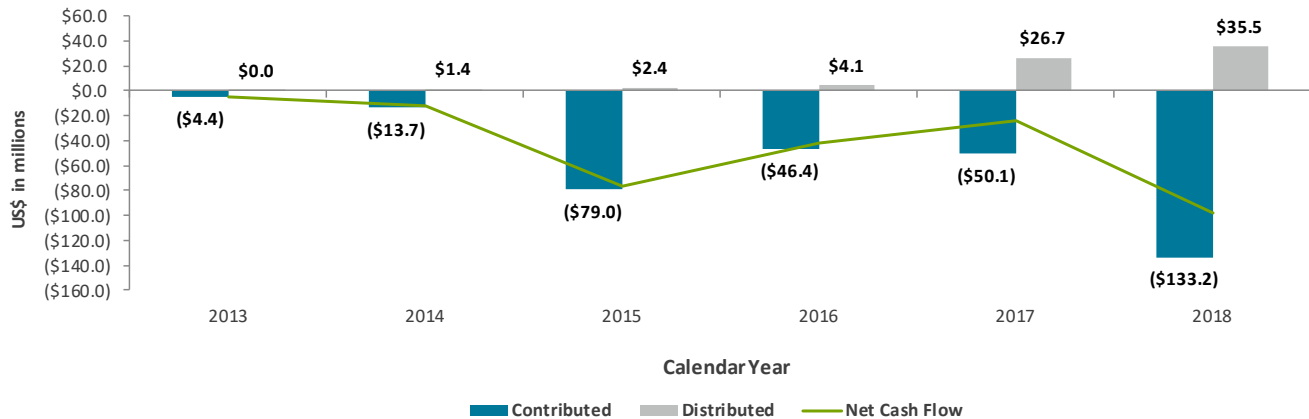
Quarterly Cash Flow Activity

During the fourth quarter of 2018, the Program made US\$45.1 million of contributions and received US\$13.9 million of distributions, for a net cash outflow of US\$31.1 million. As of December 31, 2018, 12 fund investments in the Portfolio had cash flow activity. As the Program's commitment and investment activity increases, net cash outflow is expected to increase. The graph below illustrates cash flow activity since inception by calendar quarter.



Annual Cash Flow Activity

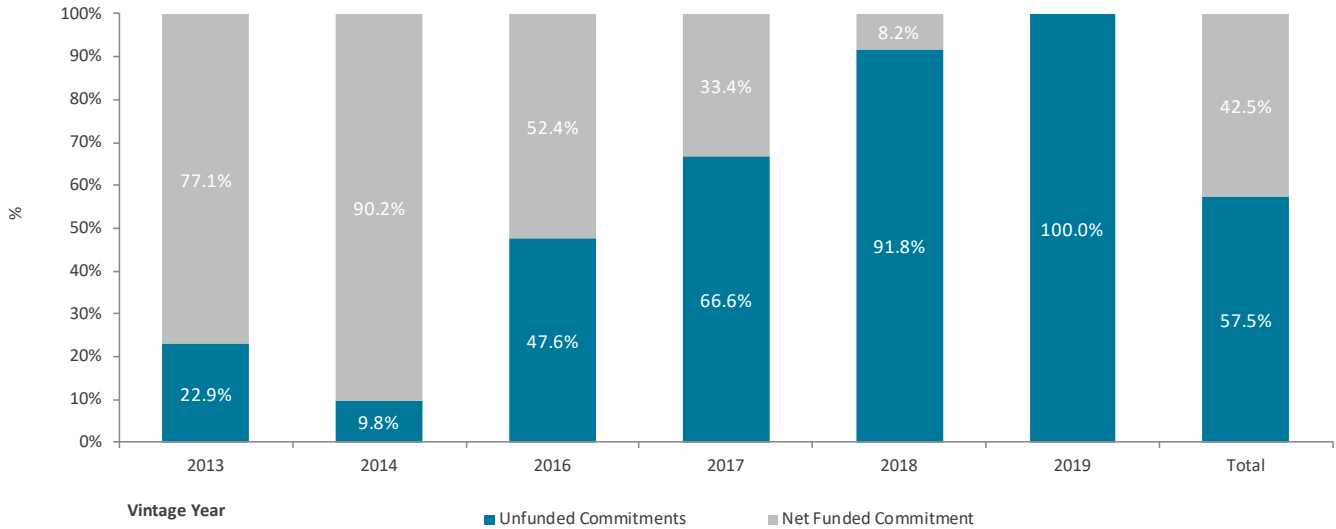
During 2018, the Program made US\$133.2 million of contributions and received US\$35.5 million of distributions, for a net cash outflow of US\$97.7 million. The graph below illustrates cash flow activity since inception by calendar year.



Net Funded and Unfunded Commitments by Vintage Year

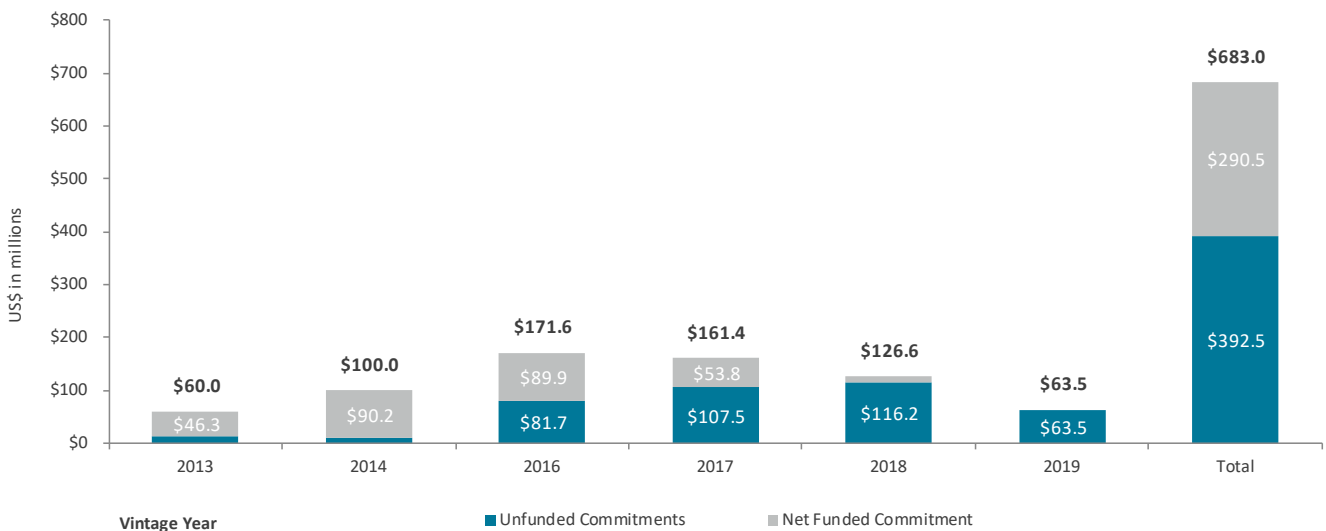
The following chart illustrates the Portfolio’s net funded commitments (defined as total contributions inside commitment less any returns of excess capital and recallable distributions) as a percentage of total capital commitments, by fund vintage year, as of December 31, 2018. Overall, the Portfolio was 57.5% unfunded as of quarter-end.

Net Funded and Unfunded Commitment by Vintage Year (%)



The following chart illustrates the Portfolio’s net funded commitments relative to total capital commitments, by fund vintage year, as of December 31, 2018. Overall, the Portfolio had US\$392.5 million of unfunded commitments as of quarter-end.

Net Funded and Unfunded Commitment by Vintage Year (US\$ millions)

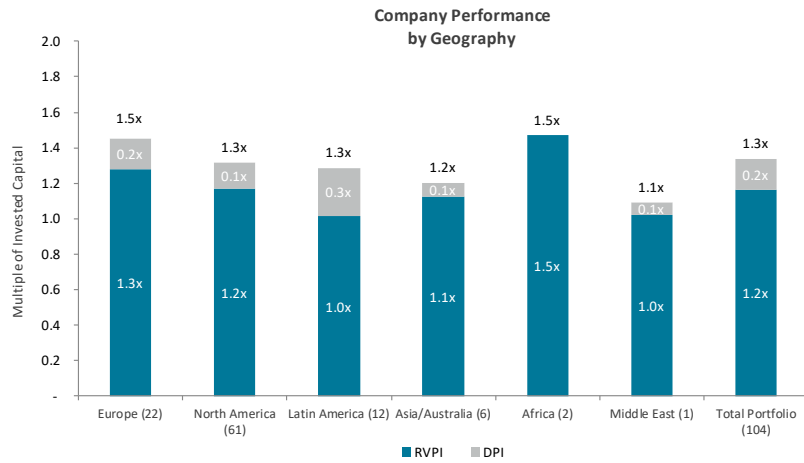
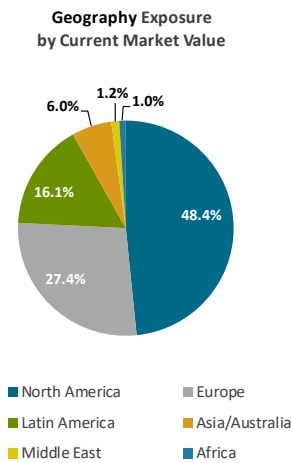


Portfolio Company-Level Analysis

As of quarter-end, the Portfolio had exposure to 103 unique unrealized portfolio companies/investment positions. As the Portfolio matures, the number of unique portfolio companies/investment positions is expected to increase significantly. On the individual fund level, all current investments are within the single investment limitation of 15% of total fund size. The Program's individual portfolio investment exposure is relatively concentrated as a result of the relative immaturity of the Program.

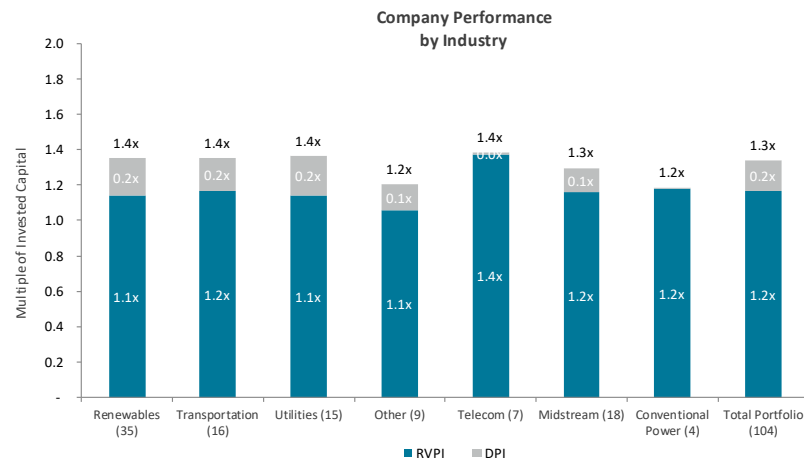
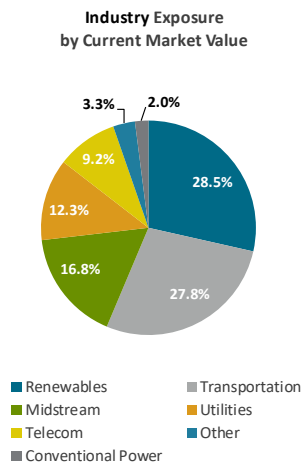
Geographic Exposure and Performance

The following charts illustrate the Portfolio's current exposure and performance by geographic region at the portfolio company level.



Industry Exposure and Performance

The following charts illustrate the Portfolio's current exposure and performance by industry at the portfolio company level.

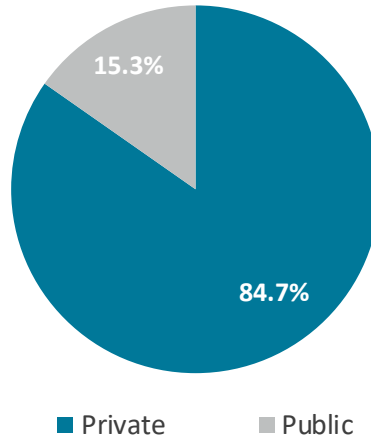


*Multiples may not add to total multiple due to rounding.

Public Market Exposure

As of quarter-end, publicly traded investments comprised 15.3% of the Portfolio's exposed market value. The following chart illustrates the current public market exposure at the portfolio company level.

Public Market Exposure Current Market Value



IV. Risk Management Matrix

Category	Requirement	Status	Status Notes
Allocation	NYCPPF has an Infrastructure allocation target of 2% of total pension assets.	✓	<p>The market value of NYCPPF Infrastructure Program represents approximately 0.9% of total pension assets.</p> <p>As the Program matures, its market value as a percentage of the total NYCPPF pension assets and the total Real Assets Program is expected to increase.</p>
Performance vs. Benchmarks	<p>The performance benchmark for the Infrastructure Portfolio is to meet or exceed: (i) The Consumer Price Index (“CPI”) plus 4% net of fees over a rolling 5-year period and (ii) A dollar-weighted PME+ (“PME”) calculation of daily changes in 50% of the Russell 3000® Index and 50% of the Barclays U.S. Aggregate® Index.</p> <p>The Infrastructure Portfolio is expected to generate a total return, net of investment management fees, of at least 6.5%.</p>	✓	<p>As of December 31, 2018, the Portfolio outperformed the CPI and PME benchmark by 7.4% and 9.7%, respectively.</p> <p>However, given the relative immaturity of the Portfolio, the current performance to-date versus benchmarks is not meaningful.</p>
Strategy Diversification	<p>Core Infrastructure Investments: 60-100% Non-Core Infrastructure Investments: 0-40%</p> <p>Actual percentages may differ substantially from these targets during the initial years of the Program.</p>	✓	<p>The Program is in compliance with the Core/Non-Core allocation ranges. Currently the Program has 88.8% exposure to Core investments and 11.2% exposure to Non-Core investments.</p>
Asset Type & Location Diversification	<p>The Program will seek diversification by asset type, revenue drivers, and geography. The portfolio may include a variety of assets including but not limited to electricity transmission, pipelines, airports, toll roads, communication towers and electric generators, windmills etc. to vary the sources of revenue to the portfolio.</p>	✓	<p>Given the relative immaturity of the Portfolio, it is not yet diversified by asset type.</p> <p>The asset types and geographic location of current Portfolio investments are in compliance with the Program’s Investment Policy Statement and Permissible Markets.</p>
Leverage	<p>The average leverage of all investments in the Program is to be no higher than 65%.</p>	✓	<p>The Program is in compliance with the average leverage limitation. The current leverage level is 36.7%¹.</p>
Single Investment Size & Manager Diversification	<p>The maximum commitment to a single investment is limited to no more than 15% of the aggregate committed capital of each fund.</p> <p>The maximum commitment to a single manager is limited to 10% of the total Real Assets Program allocation when fully invested.</p>	✓	<p>On the individual fund level, all current investments are in compliance with the single investment limitation of 15% of total fund size.</p> <p>The Program is in compliance with the single manager limitation of 10% of the total Infrastructure Program.</p> <p>The Program’s manager exposure is currently relatively concentrated as a result of the relative immaturity of the Program. Manager diversification is expected to increase as the Program closes on new investment commitments.</p>

¹The Program’s leverage level is calculated by using a weighted average of each underlying investment’s leverage and Net Asset Value as of December 31, 2018.

New York City Police Pension Fund, Subchapter 2
Infrastructure Portfolio
As of December 31, 2018

Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Market Value	TVPI	IRR
Active Investments:								
2013	Brookfield Infrastructure Fund II, L.P.	7/8/2013	\$60,000,000	\$49,007,719	\$12,417,056	\$58,885,623	1.5x	12.5%
2014	IFM Global Infrastructure Fund	1/2/2014	\$60,000,000	\$80,109,292	\$29,311,689	\$82,114,975	1.4x	12.3%
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$40,000,000	\$33,810,054	\$19,309,352	\$27,773,931	1.4x	37.3%
2016	Global Infrastructure Partners III-A/B, L.P.	1/29/2016	\$71,000,000	\$50,568,883	\$1,126,981	\$49,793,608	1.0x	0.6%
2016	Brookfield Infrastructure Fund III, L.P.	4/15/2016	\$61,000,000	\$25,555,754	\$1,785,895	\$26,284,883	1.1x	8.4%
2016	Actis Energy 4	12/16/2016	\$39,600,000	\$20,679,095	\$3,049,927	\$20,669,000	1.1x	18.6%
2017	EQT Infrastructure III (No.2) SCSp	2/18/2017	\$34,719,202	\$21,613,326	\$1,439,760	\$24,381,763	NM	NM
2017	ASF VII Infrastructure L.P.	4/24/2017	\$42,000,000	\$4,643,168	\$1,446,475	\$4,158,417	NM	NM
2017	Axium Infrastructure North America	8/14/2017	\$42,286,408	\$25,999,700	\$191,096	\$25,995,953	NM	NM
2017	NYCRS EIG Energy Partners, L.P.	8/14/2017	\$42,350,000	\$4,519,855	\$138,591	\$4,572,510	NM	NM
2018	NYCRS EIG Energy Partners Co-Investment, L.P.	1/12/2018	\$10,590,000	-	-	-	NM	NM
2018	KKR Global Infrastructure Investors III L.P.	3/29/2018	\$54,700,000	\$3,790,073	-	\$3,447,425	NM	NM
2018	Global Energy & Power Infrastructure Fund III, L.P.	7/3/2018	\$54,700,000	-	-	-	NM	NM
2018	Cardinal NR Sidecar Holdings L.P.	10/5/2018	\$6,560,000	\$6,560,000	-	\$6,417,349	NM	NM
2019	EQT Infrastructure IV (No.2) USD SCSp	12/20/2018	\$63,500,000	-	-	-	NM	NM
Total			\$683,005,610	\$326,856,920	\$70,216,823	\$334,495,436	1.2x	13.0%

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

Risk Quarterly Report (Public):

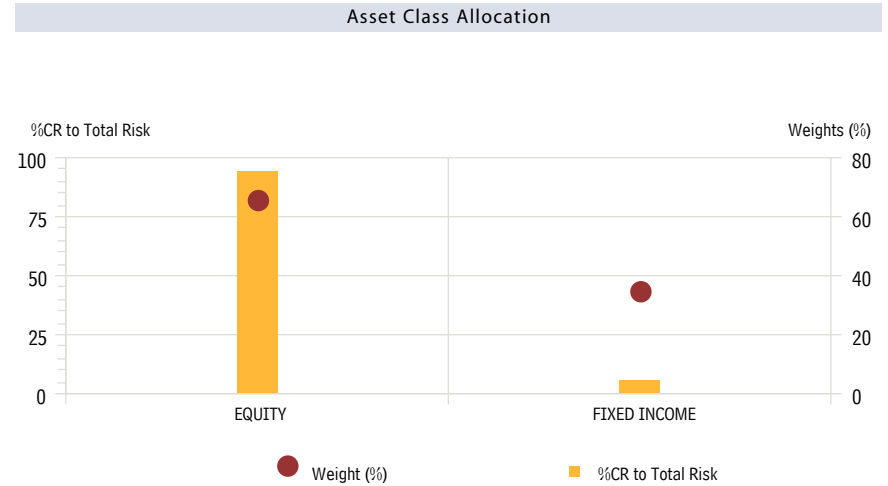
BarraOne Total Plan Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: zTest_POLICE_Total Plan
BENCHMARK: zTest_POLICE_New_Policy
POSITIONS: 13,652

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 38,283,647,323
ACCEPTED: 13,461

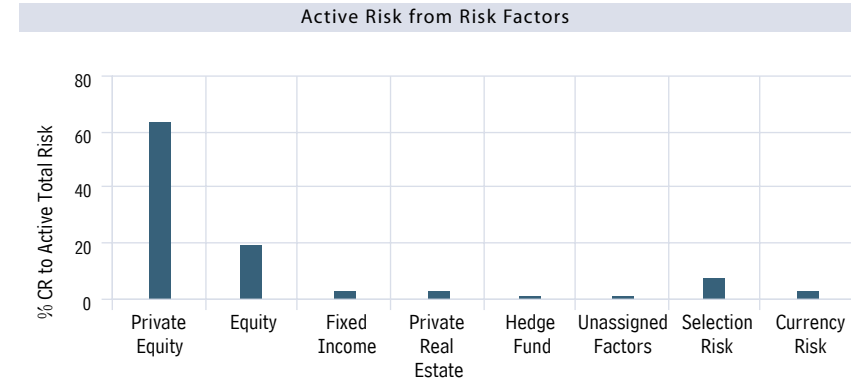
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	7.70	Total	38,283,647,323	100.00	7.70	7.70	100.00
Benchmark Risk	7.42	EQUITY	24,939,343,068	65.14	11.23	7.26	94.31
Active Risk	1.01	FIXED INCOME	13,344,304,256	34.86	2.92	0.44	5.69
Portfolio Beta	1.03						
Effective Duration	2.25						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	7.70	100.00	1.00	1.01	100.00	1.00
Local Market Risk	7.39	96.02	1.00	0.98	97.13	0.99
Common Factor Risk	7.36	95.65	0.99	0.91	89.52	0.95
Equity	6.83	88.78	0.97	0.19	18.82	0.42
Fixed Income	0.25	3.24	0.25	0.03	3.35	0.19
Hedge Fund	0.00	0.02	0.01	0.01	0.78	0.09
Private Real Estate	0.19	2.47	0.58	0.03	2.73	0.11
Private Equity	0.09	1.11	0.11	0.65	63.76	0.80
Selection Risk	0.03	0.38	0.06	0.08	7.61	0.28
Currency Risk	0.31	3.98	0.40	0.03	2.87	0.19



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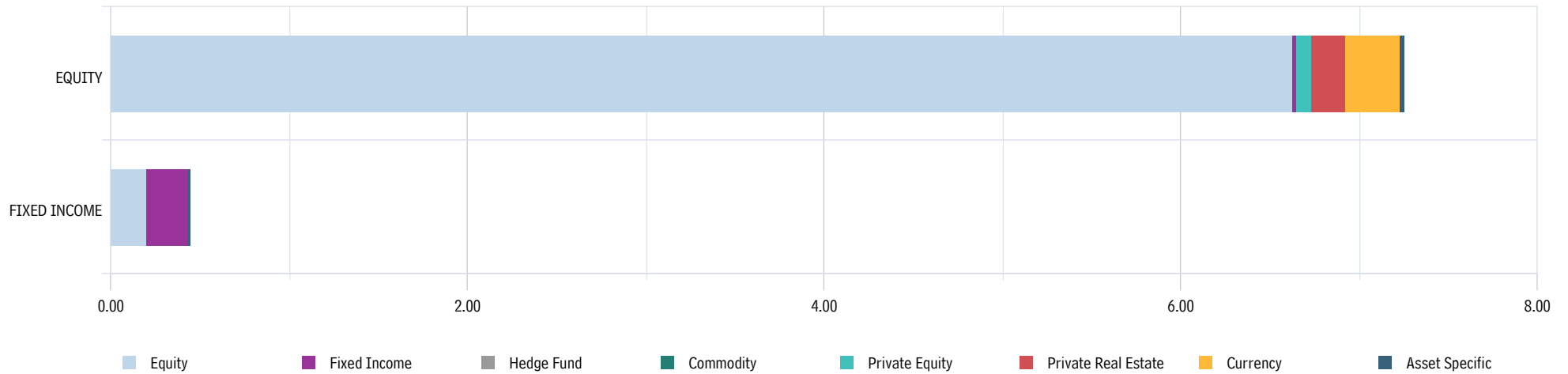
BarraOne Total Plan Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: zTest_POLICE_Total Plan
 BENCHMARK: zTest_POLICE_New_Policy
 POSITIONS: 13,652

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 38,283,647,323
 ACCEPTED: 13,461

Risk Contribution Breakdown by Risk Type

Asset Name	Mkt Value	Weight (%)	Eff Weight (%)	Total Risk	%CR to Total Risk	Port Risk Contribution	Risk Contribution								
							Equity	Fixed Income	Hedge Fund	Commodity	Private Real Estate	Private Equity	Currency	Asset Specific	
Total	38,283,647,323	100.00	100.00	7.70	100.00	7.70	6.83	0.25	0.00	0.00	0.00	0.19	0.09	0.31	0.03
EQUITY	24,939,343,068	65.14	65.14	11.23	94.31	7.26	6.63	0.02	0.00	0.00	0.00	0.19	0.08	0.30	0.03
FIXED INCOME	13,344,304,256	34.86	34.86	2.92	5.69	0.44	0.20	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00



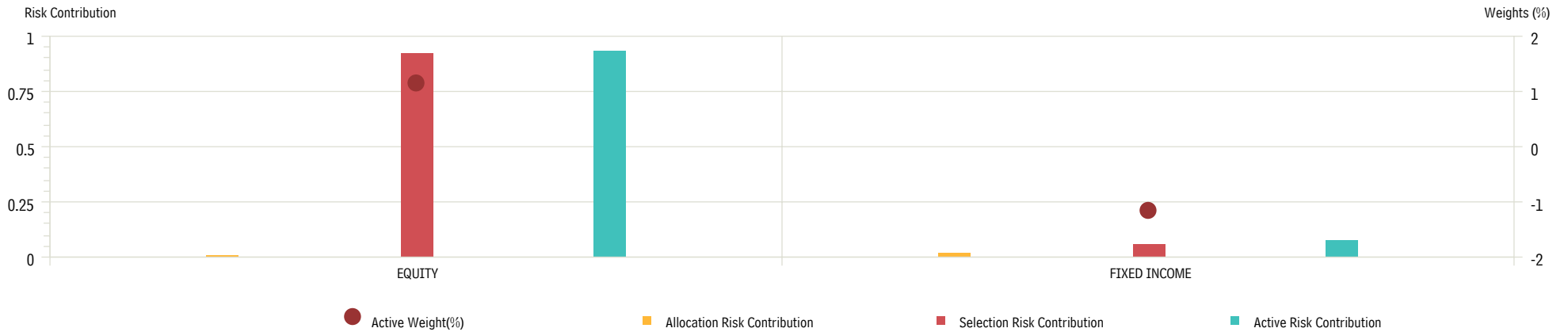
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 BENCHMARK: zTest_POLICE_New_Policy
 POSITIONS: 13,652

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 38,283,647,323
 ACCEPTED: 13,461

Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active	
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution	
Active Total Risk				0.03			0.98	1.01	
EQUITY	1.14	3.82	0.27	0.01	1.46	0.97	0.92	0.93	
FIXED INCOME	-1.14	6.80	-0.27	0.02	0.57	0.30	0.06	0.08	



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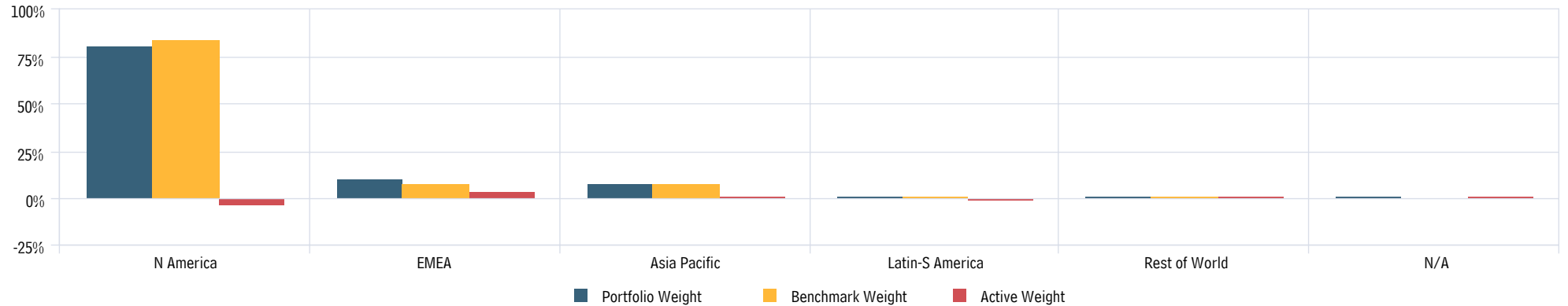
BarraOne Total Plan Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: zTest_POLICE_Total Plan
 BENCHMARK: zTest_POLICE_New_Policy
 POSITIONS: 13,652

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 38,283,647,323
 ACCEPTED: 13,461

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	7.70	1.01	100.00	0.01
N America	80.47	84.25	-3.78	7.14	0.81	79.55	-0.00
EMEA	10.17	7.26	2.90	12.05	0.17	16.43	0.03
Asia Pacific	7.75	7.27	0.48	12.84	0.03	2.61	0.02
Latin-S America	0.83	0.86	-0.03	21.03	0.01	0.93	0.04
Rest of World	0.43	0.36	0.07	4.37	0.00	0.11	-0.01
N/A	0.35	0.00	0.35	8.48	0.00	0.37	0.01



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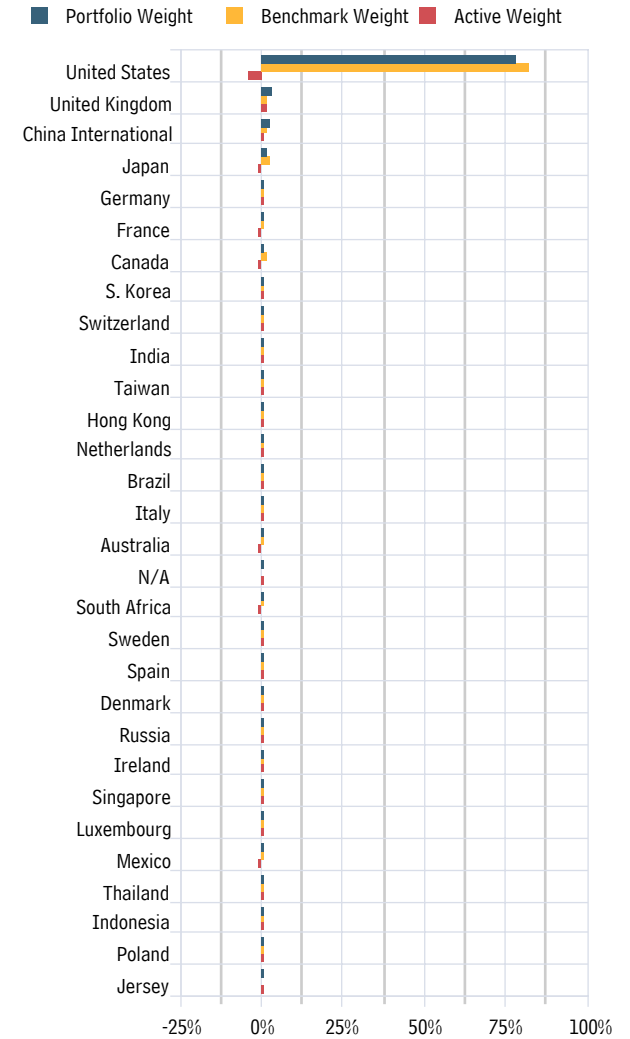
BarraOne Total Plan Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: zTest_POLICE_Total Plan
BENCHMARK: zTest_POLICE_New_Policy
POSITIONS: 13,652

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 38,283,647,323
ACCEPTED: 13,461

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	7.70	1.01	100.00	0.01
United States	78.43	82.42	-3.99	7.05	0.77	76.31	-0.00
United Kingdom	3.15	1.74	1.41	12.39	0.06	6.10	0.03
China International	2.14	1.93	0.21	19.01	0.01	0.71	0.03
Japan	1.85	2.07	-0.22	14.95	0.01	0.80	0.02
Germany	1.00	0.84	0.16	15.01	0.02	1.64	0.03
France	0.98	1.01	-0.03	14.98	0.01	0.82	0.04
Canada	0.96	1.28	-0.32	10.56	0.01	0.94	0.02
S. Korea	0.96	0.80	0.16	18.21	0.01	0.50	0.02
Switzerland	0.82	0.77	0.05	12.75	0.01	0.85	0.03
India	0.76	0.57	0.19	20.48	0.00	0.39	0.02
Taiwan	0.69	0.68	0.01	16.05	0.00	0.11	0.02
Hong Kong	0.69	0.32	0.37	13.96	0.00	0.41	0.02
Netherlands	0.66	0.48	0.19	14.29	0.02	1.54	0.02
Brazil	0.64	0.45	0.19	31.18	0.02	1.97	0.07
Italy	0.59	0.27	0.32	17.05	0.02	1.59	0.03
Australia	0.36	0.61	-0.24	14.30	-0.01	-0.58	0.02
N/A	0.36	0.00	0.36	8.58	0.00	0.38	0.01
South Africa	0.34	0.37	-0.03	25.87	-0.00	-0.10	0.04
Sweden	0.33	0.26	0.07	17.93	0.01	0.89	0.04
Spain	0.33	0.27	0.06	14.89	0.00	0.28	0.02
Denmark	0.30	0.15	0.16	16.84	0.01	0.69	0.04
Russia	0.29	0.25	0.04	23.53	0.00	0.32	0.04
Ireland	0.29	0.15	0.14	4.13	-0.00	-0.12	0.00
Singapore	0.26	0.14	0.12	14.68	0.00	0.26	0.02
Luxembourg	0.25	0.12	0.13	7.97	-0.00	-0.05	-0.00
Mexico	0.24	0.25	-0.01	19.54	0.00	0.23	0.02
Thailand	0.22	0.14	0.08	16.45	0.00	0.16	0.02
Indonesia	0.20	0.18	0.02	21.23	0.00	0.17	0.01
Poland	0.17	0.08	0.09	21.24	0.00	0.47	0.04
Jersey	0.13	0.00	0.13	3.28	-0.00	-0.21	-0.02



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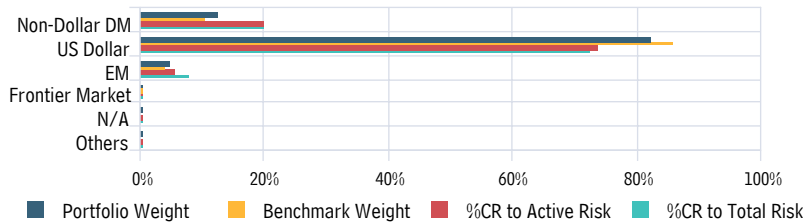
BarraOne Total Plan Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: zTest_POLICE_Total Plan
BENCHMARK: zTest_POLICE_New_Policy
POSITIONS: 13,652

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 38,283,647,323
ACCEPTED: 13,461

Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	31,510,638,302.22	79.00	72.44
Euro	1,473,783,379.84	6.74	6.17
British Pound Sterling	882,722,632.87	5.23	3.75
Hong Kong Dollar	753,122,915.28	0.80	3.24
Japanese Yen	701,639,998.82	0.62	2.40

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Korean Won	354,487,122.47	0.38	1.45
Indian Rupee	278,378,238.71	0.37	0.95
New Taiwan Dollar	264,256,510.76	0.11	0.95
Brazilian Real	241,150,419.12	1.98	1.30
South African Rand	129,840,947.51	-0.11	0.71

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)								
	Portfolio	Benchmark	Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)	
Total	100.00	100.00	0.00	7.70	7.70	100.00	1.01	100.00	
US Dollar	82.31	85.62	-3.31	6.89	5.58	72.44	0.80	79.00	
Euro	3.85	2.58	1.27	14.64	0.47	6.17	0.07	6.74	
British Pound Sterling	2.31	1.40	0.91	16.05	0.29	3.75	0.05	5.23	
Hong Kong Dollar	1.97	1.74	0.23	17.56	0.25	3.24	0.01	0.80	
Japanese Yen	1.83	1.96	-0.13	15.05	0.18	2.40	0.01	0.62	
Korean Won	0.93	0.78	0.14	18.15	0.11	1.45	0.00	0.38	
Swiss Franc	0.78	0.73	0.05	13.36	0.08	1.09	0.01	0.84	
Indian Rupee	0.73	0.55	0.18	20.97	0.07	0.95	0.00	0.37	
New Taiwan Dollar	0.69	0.68	0.01	16.05	0.07	0.95	0.00	0.11	
Brazilian Real	0.63	0.43	0.20	31.68	0.10	1.30	0.02	1.98	
Canadian Dollar	0.54	0.83	-0.29	16.52	0.07	0.97	0.01	0.71	
South African Rand	0.34	0.35	-0.01	25.98	0.05	0.71	-0.00	-0.11	
Australian Dollar	0.33	0.57	-0.23	15.03	0.04	0.51	-0.01	-0.65	
Danish Krone	0.30	0.15	0.16	16.87	0.03	0.42	0.01	0.69	
Swedish Krona	0.29	0.22	0.07	17.76	0.04	0.53	0.01	0.61	



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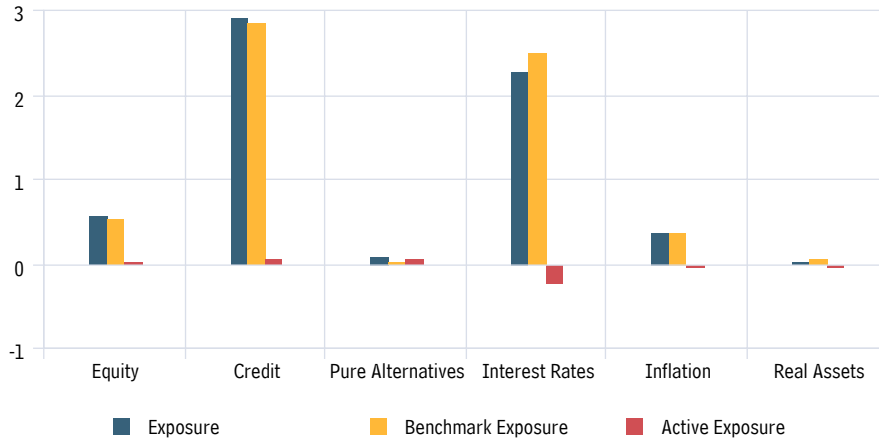
BarraOne Total Plan Macro Summary

Macro factor models attribute the risk of the Barra Integrated Model to a far smaller set of factors. At the highest level, we use just six factors, representing the primary drivers of total risk and return for a global, multi-asset class portfolio that reduces the number of factors in an integrated factor model by aggregating selected groups of factors into single factors. Tier I is the highest level of the Macro Factor Scheme which has 6 factors.

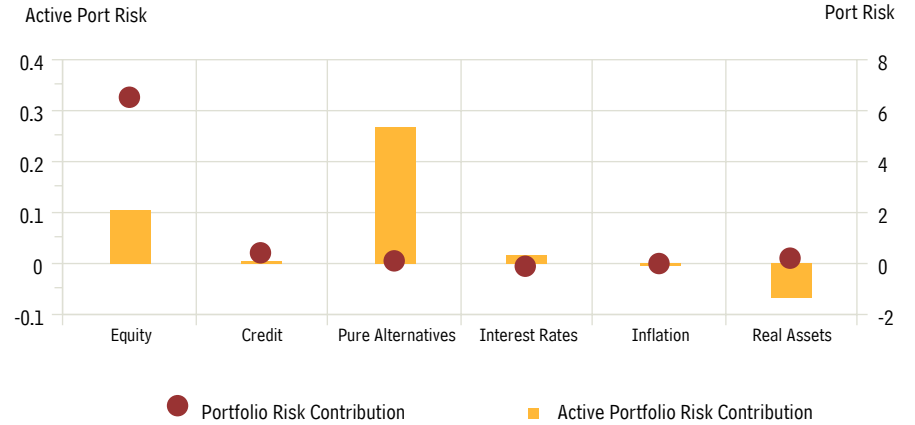
COMPANY: NYCRS - POLICE
 PORTFOLIO: zTest_POLICE_Total Plan
 BENCHMARK: zTest_POLICE_New_Policy
 POSITIONS: 13,652
 MODEL: BIM303L (Tier 1 Macro Factors)

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 38,283,643,990
 ACCEPTED: 13,461

Macro Factor Exposures



Macro Factor Risk Contribution



Risk Decomposition

Risk Source	Exposure			Contribution			
	Exposure	Benchmark Exposure	Active Exposure	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Total Risk	-	-	-	7.72	100.00	1.02	100.00
Local Market Risk	-	-	-	7.41	96.05	0.99	97.23
Common Factor Risk	-	-	-	7.38	95.68	0.91	88.90
Equity	0.58	0.55	0.03	6.56	84.97	0.11	10.54
Credit	2.92	2.85	0.07	0.46	5.95	0.00	0.45
Pure Alternatives	0.10	0.05	0.05	0.07	0.86	0.27	26.24
Interest Rates	2.28	2.49	-0.22	-0.11	-1.47	0.02	1.64
Inflation	0.37	0.39	-0.02	0.04	0.48	-0.00	-0.07
Real Assets	0.04	0.06	-0.03	0.23	2.94	-0.07	-6.68
Factor Residual Risk	-	-	-	0.15	1.95	0.58	56.78
Selection Risk	-	-	-	0.03	0.37	0.08	8.32
Currency Risk	-	-	-	0.30	3.95	0.03	2.77

Tier 1 Macro Factor Scheme has six factors

Factor	Exposure Type	Description
Equity	Membership (weights)	Global Public and Private Equity
Credit	Sensitivities (durations)	Sensitivity to global credit spreads
Pure Alternatives	Membership (weights)	Investment strategy return of Private Equity and Hedge Funds net of public factor returns
Interest Rates	Sensitivities (durations)	Sensitivity to global interest rates
Inflation	Sensitivities (durations)	Sensitivity to breakeven inflation
Real Assets	Membership (weights)	Real Estate and Commodities

Factor Residual Risk

Risk Source	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Commodities	0.00	0.00	0.00	0.00
Equity	0.28	3.66	0.09	8.47
Fixed Income	-0.14	-1.75	0.01	1.42
Hedge Fund	-0.02	-0.26	0.07	7.11
Private Equity	0.04	0.53	0.31	30.35
Private Real Estate	-0.04	-0.47	0.09	9.10
Unassigned Factors	0.02	0.25	0.00	0.33



BarraOne Total Plan Summary

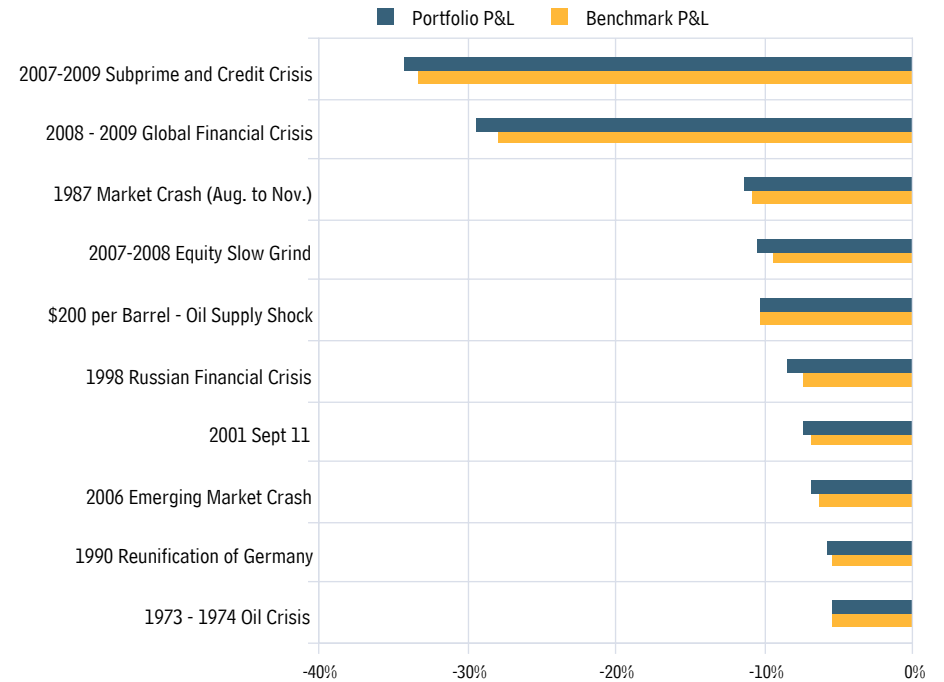
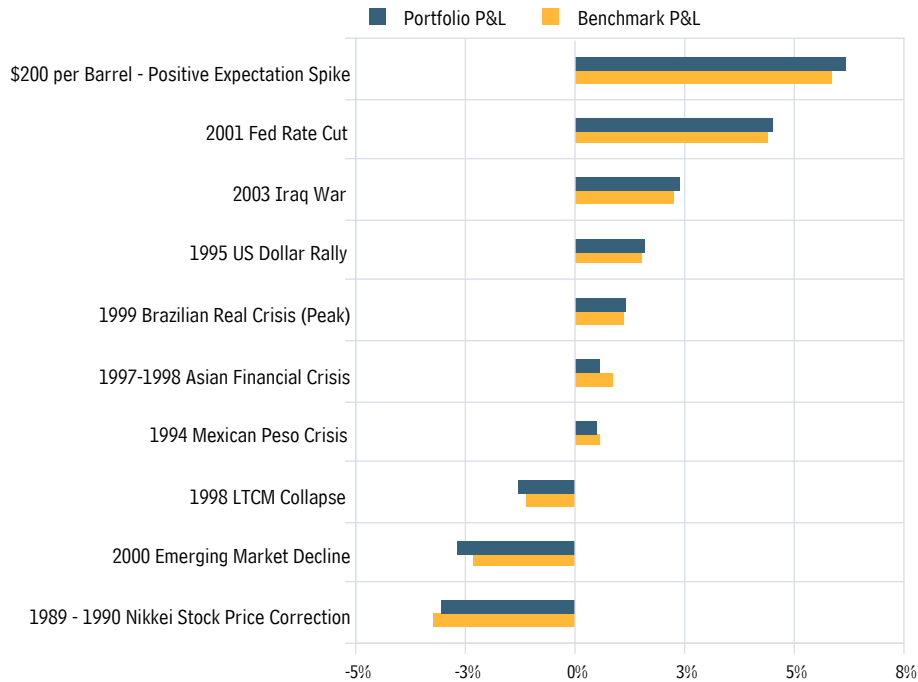
COMPANY: NYCRC - POLICE
 PORTFOLIO: zTest_POLICE_Total Plan
 BENCHMARK: zTest_POLICE_New_Policy
 POSITIONS: 13,652
 MODEL: BIM303L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 38,283,647,323
 ACCEPTED: 13,461

Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
\$200 per Barrel - Positive Expectation S	6.19	5.83	2,369,076,518
2001 Fed Rate Cut	4.52	4.40	1,729,970,976
2003 Iraq War	2.40	2.28	919,778,124
1995 US Dollar Rally	1.58	1.51	603,851,502
1999 Brazilian Real Crisis (Peak)	1.16	1.13	442,862,330
1997-1998 Asian Financial Crisis	0.58	0.87	221,575,931
1994 Mexican Peso Crisis	0.52	0.52	197,600,713
1998 LTCM Collapse	-1.26	-1.07	-481,511,346
2000 Emerging Market Decline	-2.68	-2.30	-1,025,918,439
1989 - 1990 Nikkei Stock Price Correctio	-3.05	-3.21	-1,166,803,933

Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-34.26	-33.25	-13,117,089,854
2008 - 2009 Global Financial Crisis	-29.35	-27.87	-11,237,132,265
1987 Market Crash (Aug. to Nov.)	-11.32	-10.88	-4,335,043,909
2007-2008 Equity Slow Grind	-10.37	-9.45	-3,968,154,912
\$200 per Barrel - Oil Supply Shock	-10.29	-10.25	-3,939,019,738
1998 Russian Financial Crisis	-8.51	-7.46	-3,256,674,238
2001 Sept 11	-7.41	-6.81	-2,837,467,795
2006 Emerging Market Crash	-6.91	-6.35	-2,645,485,194
1990 Reunification of Germany	-5.68	-5.37	-2,175,269,246
1973 - 1974 Oil Crisis	-5.38	-5.33	-2,057,856,074



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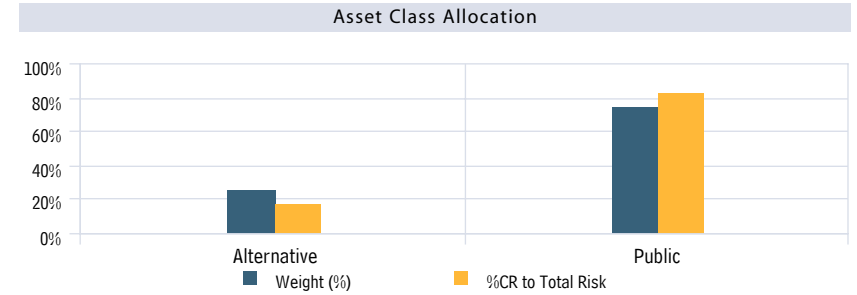
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 6,717
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 24,939,343,068
ACCEPTED: 6,584

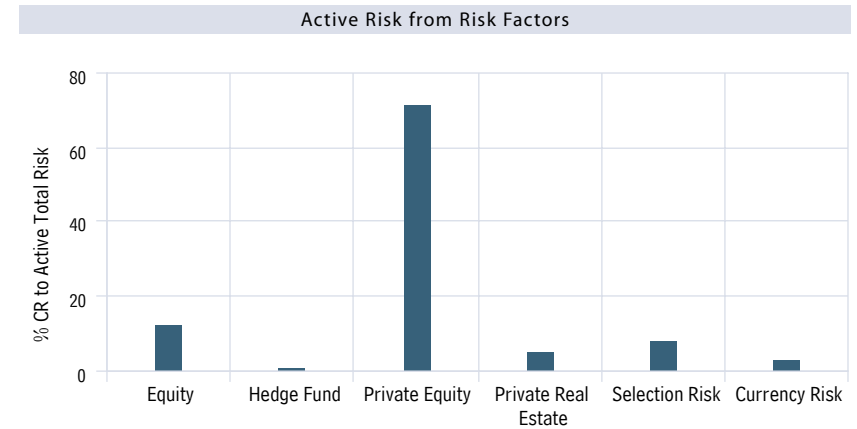
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	11.23	Total	24,939,343,068	100.00	11.23	11.23	100.00
Benchmark Risk	10.99	Alternative	6,530,546,711	26.19	8.81	2.00	17.81
Active Risk	1.46	Public	18,408,796,356	73.81	12.60	9.23	82.19
Portfolio Beta	1.01						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	11.23	100.00	1.00	1.46	100.00	1.00
Local Market Risk	10.79	96.10	1.00	1.43	97.47	0.99
Common Factor Risk	10.75	95.69	0.99	1.31	89.54	0.95
Equity	10.30	91.72	0.99	0.18	12.34	0.35
Style	0.14	1.28	0.59	0.06	3.78	0.23
Industry	10.16	90.43	0.99	0.13	8.56	0.31
Fixed Income	0.02	0.18	0.43	0.00	0.26	0.09
Nominal Rates	-0.01	-0.11	-0.29	-0.00	-0.24	-0.08
Credit	0.03	0.29	0.65	0.01	0.65	0.19
Hedge Fund	0.00	0.02	0.01	0.01	0.89	0.09
Private Real Estate	0.28	2.53	0.56	0.07	4.70	0.17
Private Equity	0.14	1.21	0.11	1.04	71.28	0.84
Selection Risk	0.05	0.40	0.06	0.12	7.93	0.28
Currency Risk	0.44	3.90	0.38	0.04	2.53	0.19



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BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 6,717
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 24,939,343,068
ACCEPTED: 6,584

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	11.23	1.46	100.00	0.01
Asia Pacific	11.70	10.85	0.85	13.01	0.02	1.68	0.01
EMEA	13.41	9.15	4.26	13.57	0.21	14.44	0.03
Latin-S America	1.10	1.07	0.04	23.89	0.01	0.92	0.05
N America	73.51	78.77	-5.26	11.35	1.21	82.96	0.01
N/A	0.00	0.00	0.00	10.16	0.00	0.00	0.00
Rest of World	0.27	0.15	0.11	9.47	-0.00	-0.00	0.00



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BarraOne Equity Summary

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BENCHMARK: EQUITY
POSITIONS: 6,717
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ANALYSIS DATE: March 31, 2019
MARKET VALUE: 24,939,343,068
ACCEPTED: 6,584

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	11.23	1.46	100.00	0.01
United States	71.02	76.62	-5.60	11.31	1.17	80.13	0.02
United Kingdom	4.25	2.18	2.07	13.79	0.09	5.91	0.04
China International	3.29	3.01	0.28	19.01	0.01	0.46	0.04
Japan	2.81	3.06	-0.25	15.05	0.01	0.51	0.02
S. Korea	1.47	1.22	0.25	18.34	0.01	0.34	0.03
Germany	1.43	1.10	0.34	16.02	0.02	1.26	0.04
France	1.43	1.44	-0.01	15.47	0.01	0.77	0.04
Switzerland	1.20	1.14	0.06	13.32	0.01	0.70	0.03
India	1.13	0.86	0.27	20.99	0.01	0.36	0.03
Taiwan	1.06	1.06	-0.00	16.05	0.00	0.07	0.03
Hong Kong	1.05	0.49	0.56	13.96	0.00	0.24	0.02
Brazil	0.97	0.68	0.29	31.60	0.03	1.86	0.07
Italy	0.87	0.30	0.57	17.56	0.02	1.33	0.04
Canada	0.86	1.29	-0.43	16.06	0.01	0.97	0.04
Netherlands	0.72	0.46	0.26	18.91	0.02	1.11	0.04
Australia	0.53	0.89	-0.36	15.05	-0.01	-0.39	0.02
South Africa	0.52	0.55	-0.03	26.00	-0.00	-0.09	0.04
Sweden	0.51	0.34	0.17	18.14	0.01	0.69	0.04
Denmark	0.45	0.23	0.22	17.22	0.01	0.62	0.04
Russia	0.45	0.35	0.09	23.53	0.00	0.20	0.04
Spain	0.44	0.38	0.06	16.56	0.00	0.24	0.03
Singapore	0.39	0.20	0.18	15.15	0.00	0.20	0.03
Thailand	0.34	0.22	0.12	16.45	0.00	0.13	0.03
Mexico	0.30	0.25	0.05	23.53	0.00	0.17	0.04
Indonesia	0.28	0.20	0.08	22.70	0.00	0.12	0.03
Poland	0.26	0.11	0.15	21.35	0.01	0.43	0.05
Malaysia	0.19	0.21	-0.02	15.42	0.00	0.01	0.03
Norway	0.18	0.09	0.09	21.88	0.01	0.36	0.05
Turkey	0.16	0.05	0.11	35.38	0.00	0.29	0.05
Belgium	0.13	0.13	0.00	20.66	0.00	0.20	0.04



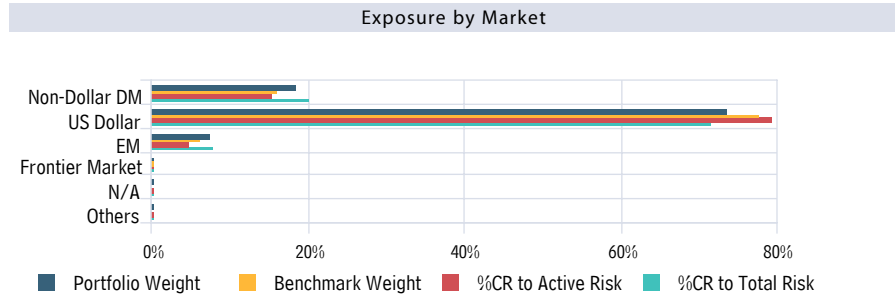
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BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 6,717
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 24,939,343,068
ACCEPTED: 6,584

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	18,339,061,693.83	82.21	71.53	Korean Won	354,486,612.74	0.27	1.51
Euro	1,323,116,324.37	5.28	6.06	Indian Rupee	278,378,238.71	0.34	0.96
British Pound Sterling	866,953,516.01	4.41	3.95	New Taiwan Dollar	264,256,471.40	0.07	1.00
Hong Kong Dollar	753,122,915.28	0.56	3.42	Brazilian Real	241,150,419.12	1.86	1.35
Japanese Yen	701,639,998.81	0.51	2.54	South African Rand	129,840,947.51	-0.09	0.73

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	11.23	11.23	100.00	1.46	100.00
US Dollar	73.53	77.53	-3.99	11.14	8.03	71.53	1.20	82.21
Euro	5.31	4.03	1.28	15.20	0.68	6.06	0.08	5.28
British Pound Sterling	3.48	2.18	1.29	16.20	0.44	3.95	0.06	4.41
Hong Kong Dollar	3.02	2.71	0.31	17.56	0.38	3.42	0.01	0.56
Japanese Yen	2.81	3.06	-0.25	15.05	0.28	2.54	0.01	0.51
Korean Won	1.42	1.22	0.20	18.15	0.17	1.51	0.00	0.27
Swiss Franc	1.19	1.14	0.06	13.35	0.13	1.15	0.01	0.70
Indian Rupee	1.12	0.86	0.26	20.97	0.11	0.96	0.00	0.34
New Taiwan Dollar	1.06	1.06	-0.00	16.05	0.11	1.00	0.00	0.07
Brazilian Real	0.97	0.68	0.29	31.68	0.15	1.35	0.03	1.86
Canadian Dollar	0.82	1.29	-0.47	16.35	0.11	1.00	0.01	0.94
South African Rand	0.52	0.55	-0.03	25.98	0.08	0.73	-0.00	-0.09
Australian Dollar	0.51	0.89	-0.37	15.04	0.06	0.53	-0.01	-0.40
Danish Krone	0.45	0.23	0.22	17.22	0.05	0.44	0.01	0.62
Swedish Krona	0.44	0.34	0.10	17.78	0.06	0.56	0.01	0.54



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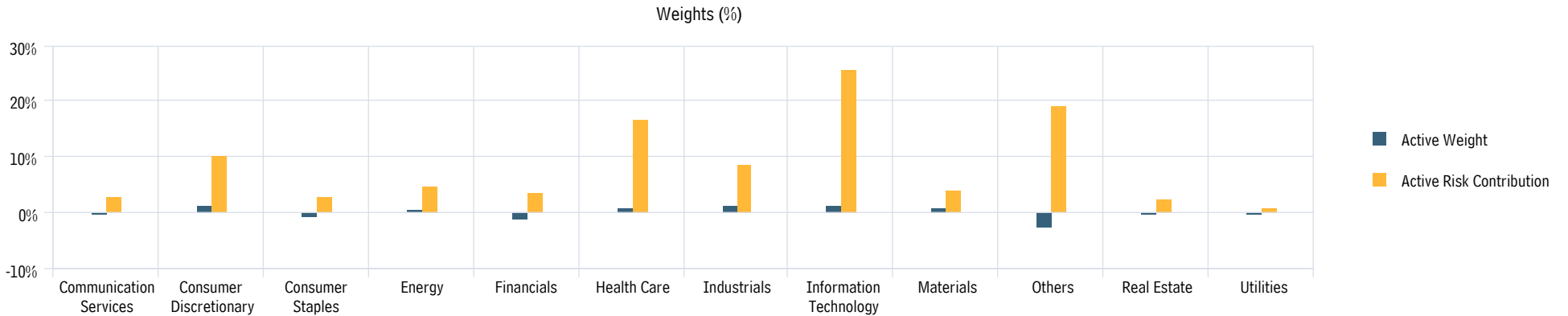
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: EQUITY
BENCHMARK: EQUITY
POSITIONS: 6,717
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 24,939,343,068
ACCEPTED: 6,584

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	11.23	1.46	100.00	0.01
Communication Services	6.63	7.13	-0.50	13.29	0.04	2.54	0.03
Consumer Discretionary	9.71	8.70	1.01	15.07	0.15	10.07	0.04
Consumer Staples	5.29	5.94	-0.66	10.51	0.04	2.53	0.03
Energy	5.18	4.70	0.48	19.73	0.07	4.68	0.06
Financials	11.56	12.79	-1.22	13.29	0.05	3.34	0.03
Health Care	10.87	10.00	0.87	14.02	0.24	16.66	0.05
Industrials	9.30	8.32	0.98	14.73	0.13	8.73	0.04
Information Technology	15.65	14.43	1.23	16.78	0.37	25.45	0.06
Materials	4.28	3.48	0.80	15.69	0.05	3.70	0.04
Others	16.03	18.77	-2.73	4.42	0.28	19.06	-0.00
Real Estate	2.96	3.14	-0.18	11.35	0.04	2.41	0.01
Utilities	2.54	2.61	-0.06	9.87	0.01	0.83	0.01



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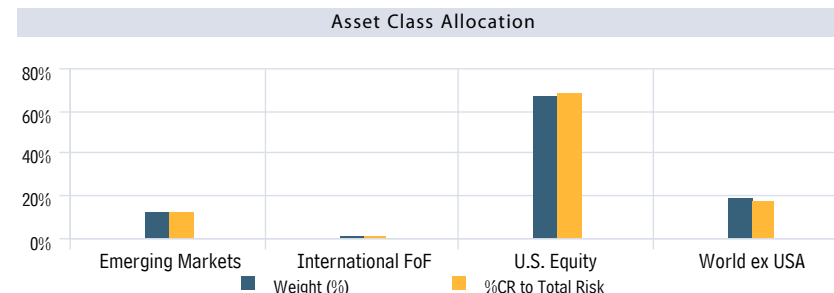
BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 6,292
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 18,408,796,356
ACCEPTED: 6,210

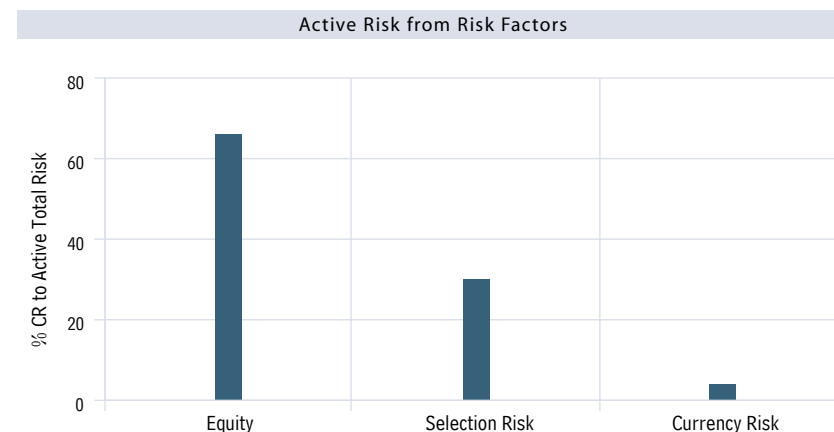
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	12.60	Total	18,408,796,356	100.00	12.60	12.60	100.00
Benchmark Risk	12.47	Emerging Markets	2,381,713,446	12.94	15.01	1.59	12.61
Active Risk	0.45	International FoF	235,681,896	1.28	12.35	0.14	1.14
Portfolio Beta	1.01	U.S. Equity	12,284,167,374	66.73	13.14	8.56	67.94
		World ex USA	3,507,233,641	19.05	13.20	2.31	18.31



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	12.60	100.00	1.00	0.45	100.00	1.00
Local Market Risk	12.07	95.73	0.99	0.43	95.93	0.98
Common Factor Risk	12.01	95.26	0.99	0.29	66.19	0.81
Equity	12.00	95.25	0.99	0.29	65.94	0.81
Style	0.21	1.65	0.64	0.17	37.92	0.64
Industry	11.80	93.59	0.99	0.12	28.01	0.53
Selection Risk	0.06	0.47	0.07	0.13	29.75	0.55
Currency Risk	0.54	4.27	0.39	0.02	4.07	0.20



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BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 6,292
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 18,408,796,356
ACCEPTED: 6,210

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	12.60	0.45	100.00	0.00
Asia Pacific	14.67	15.10	-0.42	13.27	0.09	20.17	0.01
EMEA	13.33	12.74	0.59	14.64	0.18	40.66	0.02
Latin-S America	1.39	1.48	-0.09	24.06	-0.01	-1.35	0.05
N America	70.29	70.47	-0.17	13.06	0.18	41.07	0.01
Rest of World	0.32	0.21	0.10	9.67	-0.00	-0.55	-0.01



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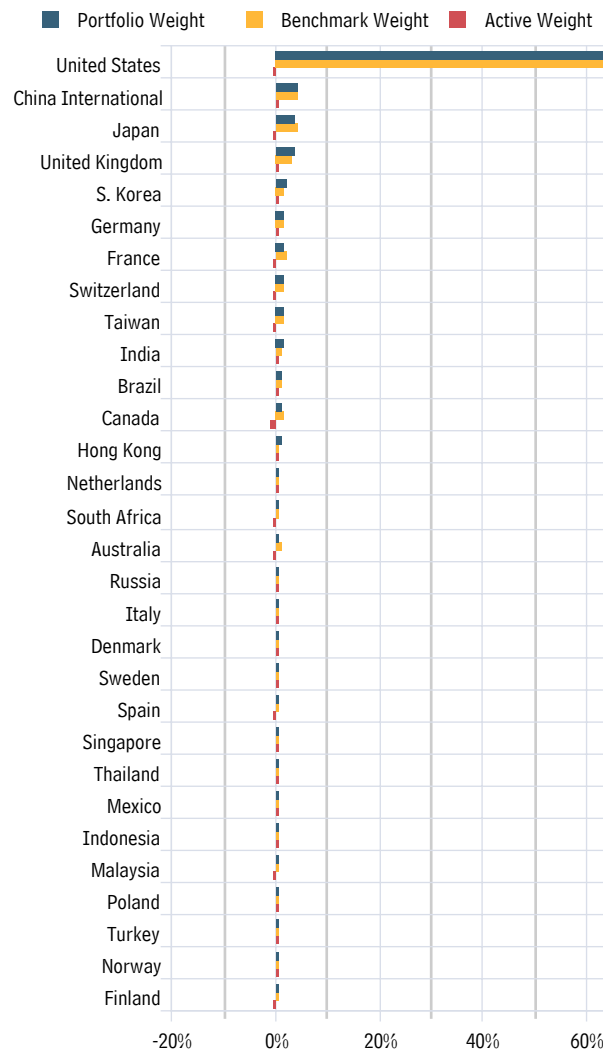
BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 6,292
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 18,408,796,356
ACCEPTED: 6,210

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	12.60	0.45	100.00	0.00
United States	67.16	67.47	-0.31	13.09	0.12	26.29	0.04
China International	4.25	4.19	0.06	18.90	0.01	2.62	0.07
Japan	3.81	4.26	-0.45	15.06	0.05	10.47	0.03
United Kingdom	3.50	3.03	0.46	16.02	0.04	9.39	0.06
S. Korea	1.95	1.70	0.25	18.38	0.01	1.77	0.05
Germany	1.58	1.52	0.06	16.85	0.03	5.89	0.06
France	1.48	2.00	-0.52	15.15	-0.00	-0.63	0.05
Switzerland	1.47	1.58	-0.11	13.17	0.02	4.47	0.04
Taiwan	1.44	1.48	-0.04	16.05	0.00	1.01	0.05
India	1.40	1.19	0.21	20.91	0.01	1.85	0.06
Brazil	1.23	0.94	0.28	32.12	0.03	7.56	0.12
Canada	0.95	1.80	-0.85	16.37	0.01	1.18	0.05
Hong Kong	0.83	0.69	0.15	19.04	0.01	1.89	0.06
Netherlands	0.75	0.64	0.12	20.40	0.03	6.23	0.06
South Africa	0.70	0.77	-0.06	26.00	-0.00	-0.48	0.07
Australia	0.63	1.23	-0.61	15.57	-0.00	-0.50	0.04
Russia	0.60	0.49	0.11	23.53	0.01	1.71	0.08
Italy	0.58	0.42	0.16	22.74	0.02	4.96	0.07
Denmark	0.51	0.32	0.20	17.34	0.01	1.61	0.06
Sweden	0.51	0.47	0.04	18.06	0.01	1.42	0.06
Spain	0.49	0.53	-0.04	18.21	0.01	1.64	0.04
Singapore	0.46	0.28	0.18	15.41	0.00	0.98	0.06
Thailand	0.44	0.31	0.14	16.50	0.00	0.79	0.05
Mexico	0.40	0.35	0.05	23.76	0.00	0.64	0.06
Indonesia	0.36	0.28	0.08	23.02	0.00	0.82	0.06
Malaysia	0.26	0.29	-0.03	15.43	0.00	0.16	0.05
Poland	0.25	0.15	0.10	21.91	0.00	0.96	0.07
Turkey	0.22	0.07	0.15	35.38	0.01	2.20	0.10
Norway	0.20	0.13	0.08	22.68	0.01	1.91	0.08
Finland	0.15	0.18	-0.03	17.37	0.00	0.39	0.05



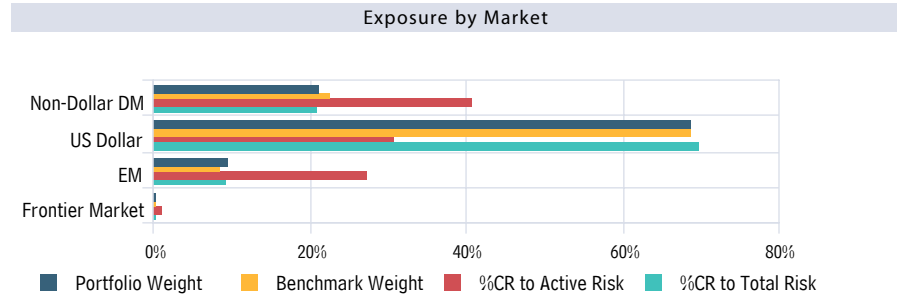
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BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 6,292
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 18,408,796,356
ACCEPTED: 6,210

Portfolio Allocation by Currency



Developed Market Currency				Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)	Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	12,668,591,219.88	30.21	69.86	Korean Won	346,983,130.78	1.40	1.80
Euro	972,681,615.65	18.78	5.68	New Taiwan Dollar	264,256,471.40	1.01	1.22
Hong Kong Dollar	751,354,832.12	4.66	4.18	Indian Rupee	254,270,084.18	1.71	1.06
Japanese Yen	700,922,873.25	10.47	3.11	Brazilian Real	225,960,062.14	7.56	1.54
British Pound Sterling	643,108,585.30	9.41	3.52	South African Rand	129,840,947.51	-0.47	0.90

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	12.60	12.60	100.00	0.45	100.00
US Dollar	68.82	68.74	0.08	13.06	8.80	69.86	0.13	30.21
Euro	5.28	5.61	-0.32	15.82	0.72	5.68	0.08	18.78
Hong Kong Dollar	4.08	3.78	0.30	17.56	0.53	4.18	0.02	4.66
Japanese Yen	3.81	4.26	-0.45	15.06	0.39	3.11	0.05	10.47
British Pound Sterling	3.49	3.04	0.46	16.03	0.44	3.52	0.04	9.41
Korean Won	1.88	1.70	0.19	18.19	0.23	1.80	0.01	1.40
Swiss Franc	1.47	1.58	-0.11	13.16	0.16	1.25	0.02	4.46
New Taiwan Dollar	1.44	1.48	-0.04	16.05	0.15	1.22	0.00	1.01
Indian Rupee	1.38	1.19	0.19	20.88	0.13	1.06	0.01	1.71
Brazilian Real	1.23	0.94	0.28	32.12	0.19	1.54	0.03	7.56
Canadian Dollar	0.92	1.80	-0.87	16.15	0.12	0.99	0.00	0.83
South African Rand	0.71	0.77	-0.06	25.98	0.11	0.90	-0.00	-0.47
Australian Dollar	0.61	1.23	-0.62	15.57	0.07	0.59	-0.00	-0.51
Danish Krone	0.51	0.32	0.20	17.34	0.05	0.42	0.01	1.61
Russian Ruble	0.48	0.44	0.04	24.28	0.06	0.51	0.00	0.84



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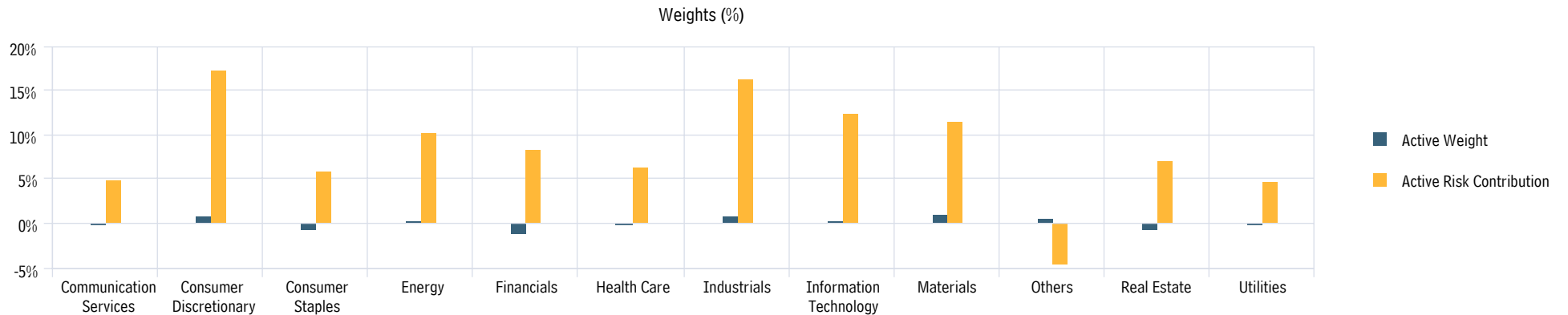
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public
POSITIONS: 6,292
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 18,408,796,356
ACCEPTED: 6,210

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	12.60	0.45	100.00	0.00
Communication Services	8.45	8.74	-0.29	13.31	0.02	4.75	0.04
Consumer Discretionary	11.39	10.76	0.64	14.94	0.08	17.22	0.06
Consumer Staples	6.61	7.42	-0.80	10.29	0.03	5.89	0.03
Energy	6.19	5.87	0.31	19.57	0.05	10.15	0.08
Financials	14.81	16.07	-1.27	13.27	0.04	8.31	0.05
Health Care	12.03	12.04	-0.01	13.54	0.03	6.40	0.03
Industrials	10.86	10.25	0.61	14.81	0.07	16.36	0.06
Information Technology	17.66	17.32	0.34	16.63	0.06	12.44	0.05
Materials	5.33	4.46	0.88	15.73	0.05	11.47	0.07
Others	0.60	0.02	0.59	0.62	-0.02	-4.64	0.00
Real Estate	3.17	3.84	-0.67	12.19	0.03	7.09	0.02
Utilities	2.89	3.21	-0.32	11.16	0.02	4.57	0.01



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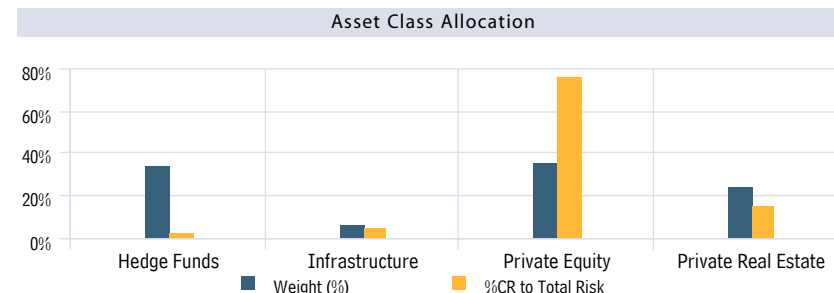
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative
BENCHMARK: Alternative
POSITIONS: 425
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 6,530,546,711
ACCEPTED: 374

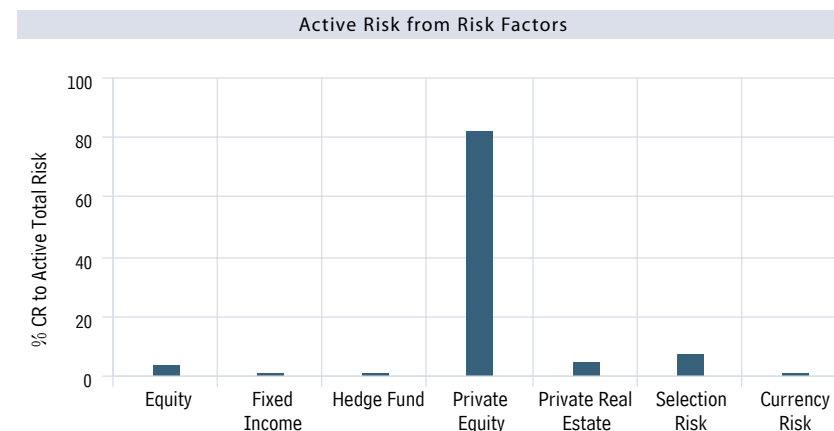
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	8.81	Total	6,530,546,711	100.00	8.81	8.81	100.00
Benchmark Risk	7.76	Hedge Funds	2,219,005,060	33.98	3.91	0.25	2.83
Active Risk	5.21	Infrastructure	377,737,597	5.78	10.74	0.50	5.64
Portfolio Beta	0.92	Private Equity	2,345,123,457	35.91	19.32	6.69	75.97
		Private Real Estate	1,588,680,597	24.33	8.71	1.37	15.56



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	8.81	100.00	1.00	5.21	100.00	1.00
Local Market Risk	8.66	98.39	1.00	5.15	98.95	0.99
Common Factor Risk	8.50	96.51	0.99	4.78	91.87	0.96
Equity	4.70	53.37	0.80	0.19	3.66	0.18
Style	-0.02	-0.20	-0.09	0.02	0.36	0.05
Industry	4.72	53.56	0.80	0.17	3.30	0.17
Fixed Income	0.07	0.79	0.38	0.01	0.14	0.05
Nominal Rates	-0.03	-0.35	-0.19	-0.00	-0.03	-0.01
Credit	0.10	1.14	0.52	0.01	0.21	0.06
Hedge Fund	0.05	0.52	0.07	0.05	0.99	0.10
Private Real Estate	1.15	13.04	0.59	0.25	4.86	0.20
Private Equity	2.53	28.73	0.54	4.28	82.21	0.91
Selection Risk	0.17	1.88	0.14	0.37	7.08	0.27
Currency Risk	0.14	1.61	0.25	0.05	1.05	0.10



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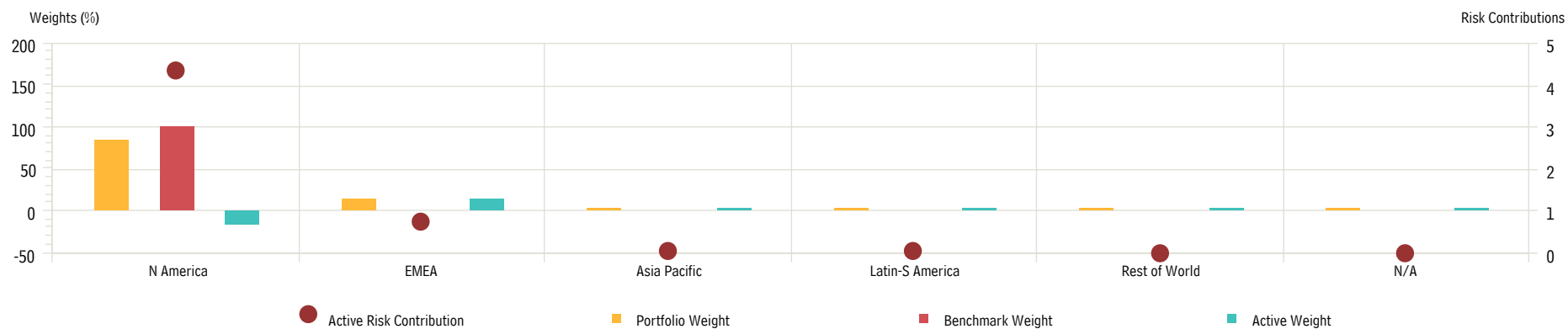
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
 PORTFOLIO: Alternative
 BENCHMARK: Alternative
 POSITIONS: 425
 MODEL: BIM303L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 6,530,546,711
 ACCEPTED: 374

Portfolio Allocation by Region

Region	Weight (%)			Total Risk	Active Risk CR	% of Active TR	MC to Total Tracking Error
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	8.81	5.21	100.00	0.05
Asia Pacific	3.34	0.00	3.34	12.80	0.04	0.68	0.01
EMEA	13.65	0.00	13.65	14.24	0.73	13.97	0.05
Latin-S America	0.30	0.00	0.30	32.97	0.06	1.15	0.20
N America	82.58	100.00	-17.42	9.02	4.38	84.15	0.02
N/A	0.01	0.00	0.01	10.16	0.00	0.00	0.01
Rest of World	0.12	0.00	0.12	18.74	0.00	0.06	0.02



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BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Alternative
BENCHMARK: Alternative
POSITIONS: 425
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 6,530,546,711
ACCEPTED: 374

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	8.81	5.21	100.00	0.05
United States	81.89	100.00	-18.11	8.97	4.30	82.63	0.01
United Kingdom	6.37	0.00	6.37	17.38	0.36	6.97	0.05
Italy	1.69	0.00	1.69	18.08	0.06	1.13	0.03
Hong Kong	1.67	0.00	1.67	13.65	0.02	0.46	0.00
France	1.26	0.00	1.26	21.52	0.07	1.36	0.05
Germany	1.00	0.00	1.00	15.42	0.05	0.91	0.04
Netherlands	0.63	0.00	0.63	18.42	0.03	0.62	0.04
Canada	0.63	0.00	0.63	19.73	0.08	1.49	0.11
China International	0.57	0.00	0.57	25.16	0.00	0.09	-0.00
Sweden	0.50	0.00	0.50	23.04	0.03	0.55	0.05
Switzerland	0.42	0.00	0.42	21.62	0.02	0.46	0.05
India	0.37	0.00	0.37	26.46	0.00	0.04	-0.00
Spain	0.33	0.00	0.33	12.96	0.01	0.24	0.03
Poland	0.29	0.00	0.29	25.83	0.02	0.29	0.04
Denmark	0.27	0.00	0.27	24.73	0.02	0.36	0.06
Brazil	0.24	0.00	0.24	38.42	0.06	1.06	0.22
Australia	0.24	0.00	0.24	13.26	0.00	0.05	0.00
Ireland	0.22	0.00	0.22	16.40	0.01	0.21	0.04
Singapore	0.17	0.00	0.17	22.24	0.00	0.01	-0.01
Israel	0.17	0.00	0.17	31.98	0.01	0.28	0.08
Belgium	0.13	0.00	0.13	22.59	0.01	0.16	0.06
Norway	0.12	0.00	0.12	26.11	0.01	0.12	0.04
China	0.12	0.00	0.12	18.52	0.00	0.02	0.00
S. Korea	0.11	0.00	0.11	29.48	0.00	0.01	-0.00
Portugal	0.11	0.00	0.11	18.74	0.00	0.09	0.04
Greece	0.09	0.00	0.09	40.57	0.01	0.11	0.05
Vietnam	0.08	0.00	0.08	25.90	0.00	0.02	0.00
Finland	0.07	0.00	0.07	24.52	0.00	0.08	0.05
Indonesia	0.06	0.00	0.06	30.46	0.00	0.00	-0.01
Thailand	0.05	0.00	0.05	31.61	0.00	0.00	-0.01



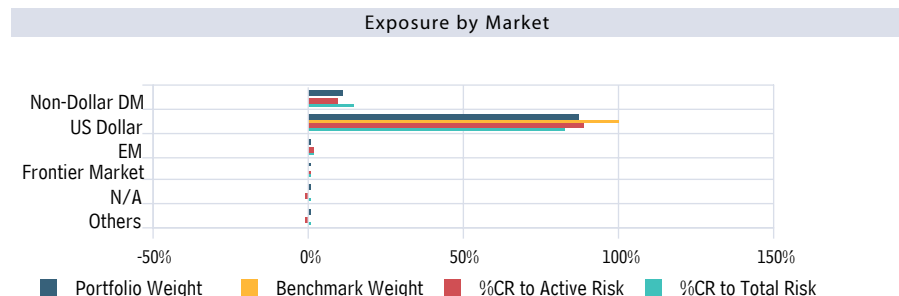
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BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Alternative
BENCHMARK: Alternative
POSITIONS: 425
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 6,530,546,711
ACCEPTED: 374

Portfolio Allocation by Currency



Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	5,670,470,473.95	86.50	82.60
Euro	350,434,708.72	4.89	6.39
British Pound Sterling	223,844,930.70	3.65	4.83
CNH	36,996,216.12	0.08	0.66
Canadian Dollar	34,570,082.81	1.47	1.14

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
CNH	36,996,216.12	0.08	0.66
Indian Rupee	24,108,154.53	0.04	0.32
Polish Zloty	19,199,044.56	0.29	0.36
Brazilian Real	15,190,356.98	1.06	0.63
Korean Won	7,503,481.96	0.01	0.12

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)				Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active						
Total	100.00	100.00	0.00		8.81	8.81	100.00	5.21	100.00
US Dollar	86.83	100.00	-13.17		8.54	7.27	82.60	4.50	86.50
Euro	5.37	0.00	5.37		16.05	0.56	6.39	0.25	4.89
British Pound Sterling	3.43	0.00	3.43		19.97	0.43	4.83	0.19	3.65
CNH	0.57	0.00	0.57		23.96	0.06	0.66	0.00	0.08
Canadian Dollar	0.53	0.00	0.53		23.16	0.10	1.14	0.08	1.47
Swedish Krona	0.50	0.00	0.50		23.04	0.07	0.80	0.03	0.55
Swiss Franc	0.41	0.00	0.41		22.23	0.05	0.59	0.02	0.45
Indian Rupee	0.37	0.00	0.37		26.46	0.03	0.32	0.00	0.04
Polish Zloty	0.29	0.00	0.29		25.83	0.03	0.36	0.02	0.29
Danish Krone	0.27	0.00	0.27		24.73	0.04	0.42	0.02	0.36
Australian Dollar	0.24	0.00	0.24		13.26	0.02	0.19	0.00	0.05
Brazilian Real	0.23	0.00	0.23		39.88	0.06	0.63	0.06	1.06
Singapore Dollar	0.17	0.00	0.17		22.44	0.01	0.14	0.00	0.01
New Israeli Sheqel	0.17	0.00	0.17		31.98	0.02	0.28	0.01	0.28
Korean Won	0.11	0.00	0.11		29.48	0.01	0.12	0.00	0.01



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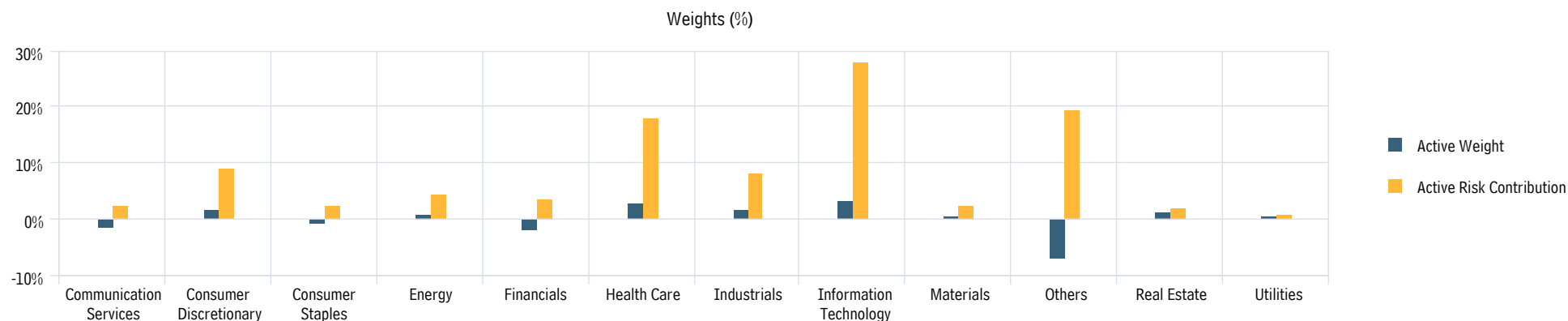
BarraOne Equity Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Alternative
BENCHMARK: Alternative
POSITIONS: 425
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 6,530,546,711
ACCEPTED: 374

Portfolio Allocation by GICS Sector

GICS Sector	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	0.00	8.81	5.21	100.00	0.05
Communication Services	1.51	3.02	-1.52	17.65	0.12	2.30	0.02
Consumer Discretionary	4.96	3.46	1.51	18.94	0.46	8.92	0.05
Consumer Staples	1.54	2.18	-0.63	17.58	0.13	2.48	0.03
Energy	2.33	1.69	0.64	23.77	0.22	4.22	0.06
Financials	2.42	4.39	-1.97	16.29	0.19	3.57	0.02
Health Care	7.59	4.78	2.81	20.54	0.93	17.92	0.07
Industrials	4.91	3.38	1.53	16.87	0.42	8.11	0.05
Information Technology	10.00	7.03	2.97	23.02	1.45	27.82	0.08
Materials	1.31	0.98	0.32	19.09	0.12	2.38	0.05
Others	59.52	66.68	-7.15	4.54	1.01	19.43	-0.00
Real Estate	2.35	1.35	1.00	9.74	0.11	2.04	0.02
Utilities	1.56	1.07	0.49	6.04	0.04	0.81	0.01



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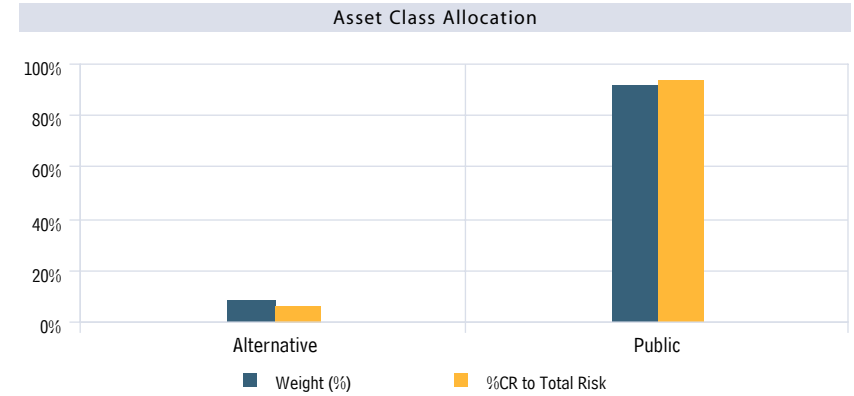
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

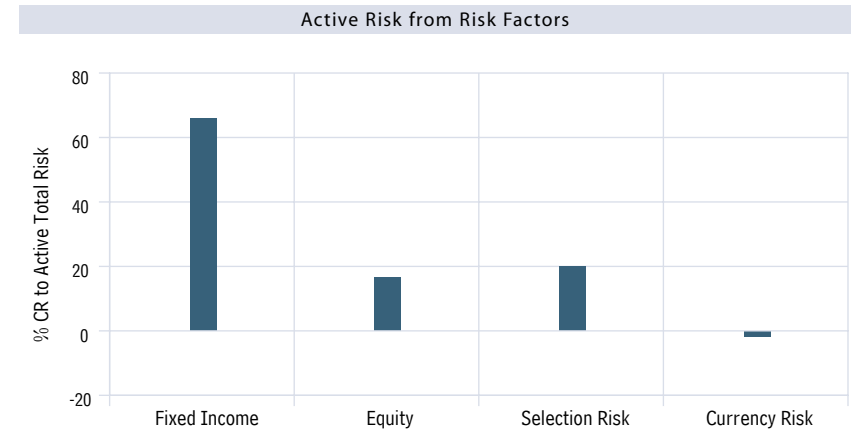
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	2.92	Total	13,344,304,256	100.00	2.92	2.92	100.00
Benchmark Risk	3.18	Alternative	1,064,806,200	7.98	6.68	0.19	6.55
Active Risk	0.57	Public	12,279,498,056	92.02	3.01	2.73	93.45
Portfolio Beta	0.90						
Cont. to Eff. Duration	6.36						
Convexity	0.78						
Yield to Worst (%)	3.20						
OAS to Swap (bp)	131.54						



Risk Factor Breakdown

Risk Source	Risk Decomposition			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	2.92	100.00	1.00	0.57	100.00	1.00
Local Market Risk	2.91	99.59	1.00	0.58	101.51	1.00
Common Factor Risk	2.90	99.32	1.00	0.47	81.89	0.89
Equity	0.16	5.60	0.27	0.09	16.29	0.40
Style	0.01	0.39	0.07	0.05	9.27	0.27
Industry	0.15	5.21	0.27	0.04	7.02	0.28
Fixed Income	2.73	93.72	0.98	0.37	65.47	0.80
Nominal Rates	2.04	69.97	0.73	0.23	40.01	0.63
Real Rates	0.38	13.02	0.82	-0.01	-1.17	-0.24
Credit	0.31	10.72	0.20	0.15	26.63	0.50
Selection Risk	0.01	0.27	0.05	0.11	19.62	0.44
Currency Risk	0.01	0.41	0.25	-0.01	-1.51	-0.18



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BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

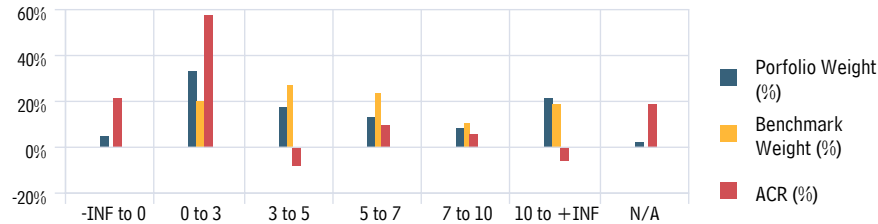
CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

Portfolio by Factor Breakdowns

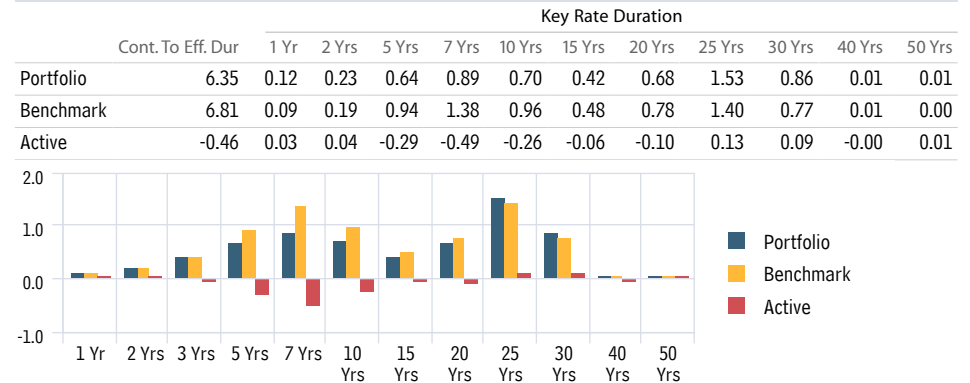
Spread Factor	Top 10 Spread Factor									
	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR		Active Port	to TR	to AR	to AR%
US Swap Shift	0.14	3.97	2.91	1.06	0.00	0.38	-0.03	0.06	9.80	
US Conventional 30 yr Mortgage	0.37	0.20	0.50	-0.30	-0.00	-0.26	0.02	0.03	4.91	
US Swap Butterfly	0.06	-1.69	-0.34	-1.34	-0.00	-0.21	0.01	0.02	3.22	
US Consumer Discretionary CCC	3.25	0.03	0.01	0.02	0.01	0.23	0.02	0.01	2.52	
US Consumer Discretionary B	1.77	0.08	0.04	0.04	0.00	0.20	0.03	0.01	2.41	
US Energy B	3.59	0.06	0.04	0.02	0.01	0.16	0.03	0.01	2.14	
US Industrials B	1.77	0.04	0.01	0.03	0.00	0.20	0.01	0.01	1.73	
US Materials B	2.28	0.03	0.01	0.02	0.00	0.19	0.01	0.01	1.65	
US Health Care B	1.90	0.03	0.01	0.02	0.00	0.17	0.01	0.01	0.88	
US Materials CCC	3.19	0.01	0.00	0.01	0.01	0.21	0.00	0.00	0.82	

Term Structure	Top 10 Term Structure									
	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR		Active Port	to TR	to AR	to AR%
US Shift	0.48	5.28	5.85	-0.57	-0.00	-0.58	1.78	0.16	27.80	
US Butterfly	0.13	0.69	-0.44	1.13	0.00	0.51	-0.02	0.07	12.79	
US Twist	0.18	2.69	2.73	-0.05	-0.00	-0.17	0.27	0.00	0.24	
US Implied Volatility	15.30	-0.00	-0.00	0.00	0.01	0.07	0.01	0.00	0.19	
FR Shift	0.39	-0.00	0.00	-0.00	-0.00	-0.30	-0.00	0.00	0.03	
EUR Implied Volatility	10.47	-0.00	0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	
FR Butterfly	0.11	0.00	0.00	0.00	0.00	0.07	-0.00	0.00	0.00	
GB Twist	0.18	-0.00	0.00	-0.00	-0.00	-0.12	-0.00	0.00	0.00	
CA Shift	0.47	-0.00	0.00	-0.00	-0.00	-0.42	-0.00	0.00	0.00	
SE Twist	0.23	-0.00	0.00	-0.00	-0.00	-0.20	-0.00	0.00	0.00	

%CR to Active Risk by Duration Buckets



Key Rate Duration



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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	2.92	0.57	100.00	0.01
United States	92.28	92.72	-0.44	3.00	0.48	84.75	-0.01
Canada	1.15	1.26	-0.11	4.39	0.01	0.93	-0.00
United Kingdom	1.10	0.96	0.13	4.08	0.01	1.40	-0.00
N/A	1.03	0.00	1.03	8.59	0.03	5.60	0.01
Luxembourg	0.71	0.33	0.38	7.99	0.01	1.77	0.01
Ireland	0.64	0.28	0.36	2.10	0.01	0.95	-0.00
Netherlands	0.56	0.52	0.04	5.29	0.00	0.70	-0.00
Jersey	0.38	0.00	0.38	3.28	0.01	1.06	-0.00
Germany	0.20	0.39	-0.20	2.27	-0.00	-0.18	-0.01
Euro. Monetary Union	0.17	0.00	0.17	7.18	0.00	0.00	-0.01
France	0.15	0.26	-0.11	10.97	0.00	0.10	-0.00
Mexico	0.13	0.26	-0.13	4.09	0.00	0.26	-0.02
Caymans	0.12	0.00	0.12	8.82	0.00	0.80	0.02
Switzerland	0.12	0.13	-0.00	3.99	0.00	0.14	-0.01
Spain	0.11	0.06	0.04	3.95	0.00	0.22	-0.01
Israel	0.08	0.03	0.05	7.42	0.00	0.09	-0.01
United Arab Emirates	0.08	0.03	0.05	5.44	0.00	0.09	-0.01
Belgium	0.08	0.15	-0.07	7.49	0.00	0.09	-0.03
Italy	0.06	0.21	-0.14	11.56	-0.00	-0.17	-0.01
Australia	0.06	0.11	-0.05	6.71	0.00	0.08	-0.01
India	0.06	0.06	0.00	7.87	0.00	0.02	-0.01
New Zealand	0.06	0.04	0.02	10.02	0.00	0.08	0.01
China	0.06	0.10	-0.04	8.54	0.00	0.19	-0.01
Bermuda	0.06	0.03	0.02	6.26	0.00	0.13	0.00
Venezuela	0.05	0.00	0.05	10.70	0.00	0.16	0.00
Indonesia	0.04	0.13	-0.08	10.52	-0.00	-0.03	-0.02
Austria	0.04	0.02	0.03	28.94	0.00	0.46	0.03
Chile	0.04	0.03	0.02	4.31	0.00	0.01	-0.02
Colombia	0.04	0.08	-0.04	7.14	0.00	0.06	-0.02
Japan	0.04	0.31	-0.27	2.68	-0.00	-0.28	-0.01



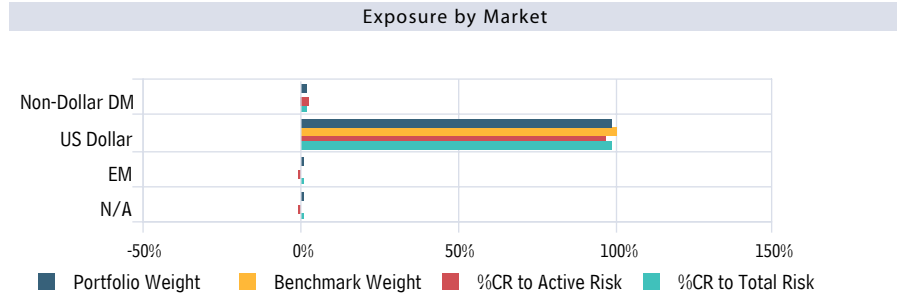
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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	13,171,576,608.39	93.48	98.48
Euro	150,667,055.47	5.52	1.36
British Pound Sterling	15,769,116.87	0.60	0.07
Danish Krone	2,849,784.70	0.05	0.02
Canadian Dollar	1,807,683.39	0.27	0.05

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
CNH	132,760.80	0.00	0.00
Korean Won	509.73	0.00	0.00
New Taiwan Dollar	39.36	0.00	0.00
Mexican Peso	0.03	0.00	0.00

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)								
	Portfolio	Benchmark	Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)	
Total	100.00	100.00	-0.00	2.92	2.92	100.00	0.57	100.00	
US Dollar	98.71	100.00	-1.29	2.91	2.87	98.48	0.53	93.48	
Euro	1.13	0.00	1.13	10.43	0.04	1.36	0.03	5.52	
British Pound Sterling	0.12	0.00	0.12	12.60	0.00	0.07	0.00	0.60	
Danish Krone	0.02	0.00	0.02	12.36	0.00	0.02	0.00	0.05	
Canadian Dollar	0.01	0.00	0.01	95.38	0.00	0.05	0.00	0.27	
Norwegian Krone	0.01	0.00	0.01	54.70	0.00	0.02	0.00	0.08	
Swedish Krona	0.00	0.00	0.00	25.30	0.00	0.00	0.00	0.00	
CNH	0.00	0.00	0.00	12.54	0.00	0.00	0.00	0.00	
Australian Dollar	0.00	0.00	0.00	12.52	0.00	0.00	0.00	0.00	
Singapore Dollar	0.00	0.00	0.00	4.17	0.00	0.00	0.00	0.00	
Swiss Franc	0.00	0.00	0.00	72.54	0.00	0.00	0.00	0.01	
Korean Won	0.00	0.00	0.00	7.03	0.00	0.00	0.00	0.00	
New Taiwan Dollar	0.00	0.00	0.00	3.70	0.00	0.00	0.00	0.00	
Mexican Peso	0.00	0.00	0.00	11.60	0.00	0.00	0.00	0.00	
Japanese Yen	0.00	0.00	0.00	7.69	0.00	0.00	-0.00	-0.00	



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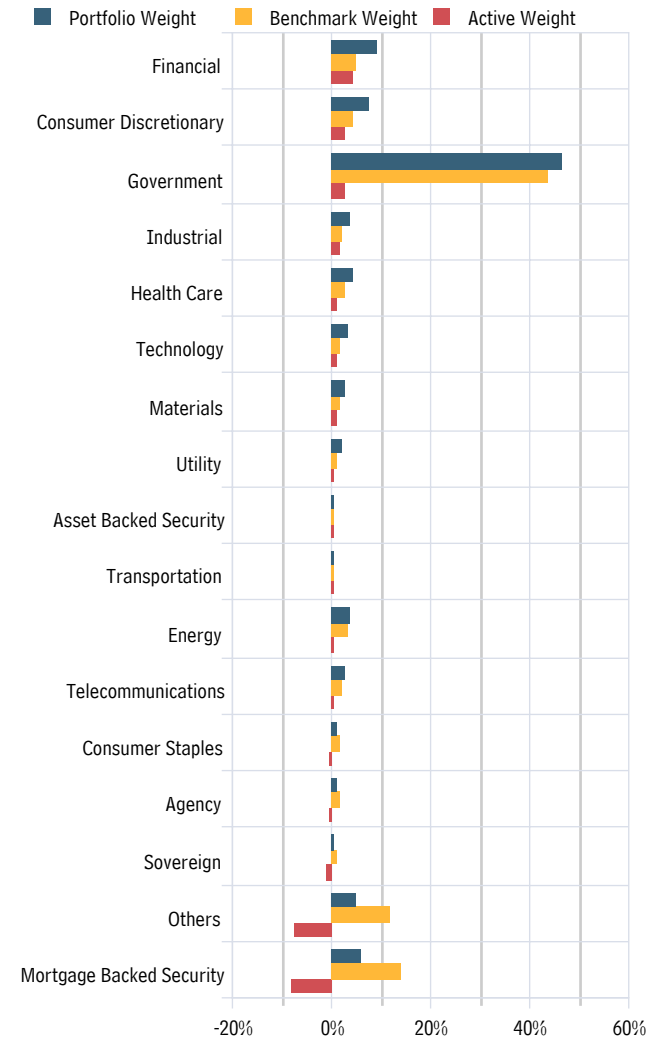
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	6.35	2.92	0.57	100.00	0.01
Government	46.48	43.73	2.75	4.59	4.84	0.02	3.73	-0.02
Financial	9.01	4.91	4.10	0.24	2.22	0.10	17.25	-0.00
Consumer Discretionary	7.49	4.55	2.93	0.20	4.17	0.10	16.96	0.00
Mortgage Backed Security	5.94	13.81	-7.86	0.26	3.02	-0.01	-1.00	-0.02
Others	4.71	12.12	-7.41	0.03	6.92	0.01	0.89	0.00
Health Care	4.28	2.97	1.31	0.13	4.35	0.06	10.47	-0.00
Industrial	3.57	2.18	1.39	0.08	4.16	0.05	9.57	0.00
Energy	3.52	3.18	0.34	0.15	8.99	0.02	4.05	0.00
Technology	3.02	1.88	1.14	0.10	6.28	0.05	9.03	0.00
Materials	2.63	1.64	1.00	0.07	5.09	0.03	5.86	0.00
Telecommunications	2.46	2.43	0.03	0.09	5.61	0.01	1.88	-0.00
Utility	1.92	1.29	0.63	0.07	3.27	0.03	4.60	-0.01
Consumer Staples	1.21	1.48	-0.27	0.06	3.55	0.01	1.37	-0.01
Agency	1.20	1.53	-0.33	0.10	4.75	-0.01	-1.58	-0.02
Transportation	0.78	0.42	0.36	0.03	2.86	0.01	1.98	-0.01
Asset Backed Security	0.73	0.12	0.61	0.04	3.59	0.01	1.54	-0.00
Commercial Mortgage Backed	0.39	0.07	0.32	0.02	2.58	0.01	0.88	-0.00
Collateralized Loan Obligat	0.25	0.00	0.25	0.07	72.69	0.07	11.56	0.25
Sovereign	0.21	1.04	-0.83	0.01	5.87	0.00	0.30	-0.02
Local/Provincial	0.19	0.20	-0.01	0.01	6.08	0.00	0.38	-0.01
Collateralized Debt Obligat	0.01	0.00	0.01	-0.00	14.20	0.00	0.15	0.05
Supranational	0.00	0.45	-0.45	0.00	1.59	0.00	0.13	-0.02
Covered bond	0.00	0.00	-0.00	0.00	0.59	-0.00	-0.00	-0.00



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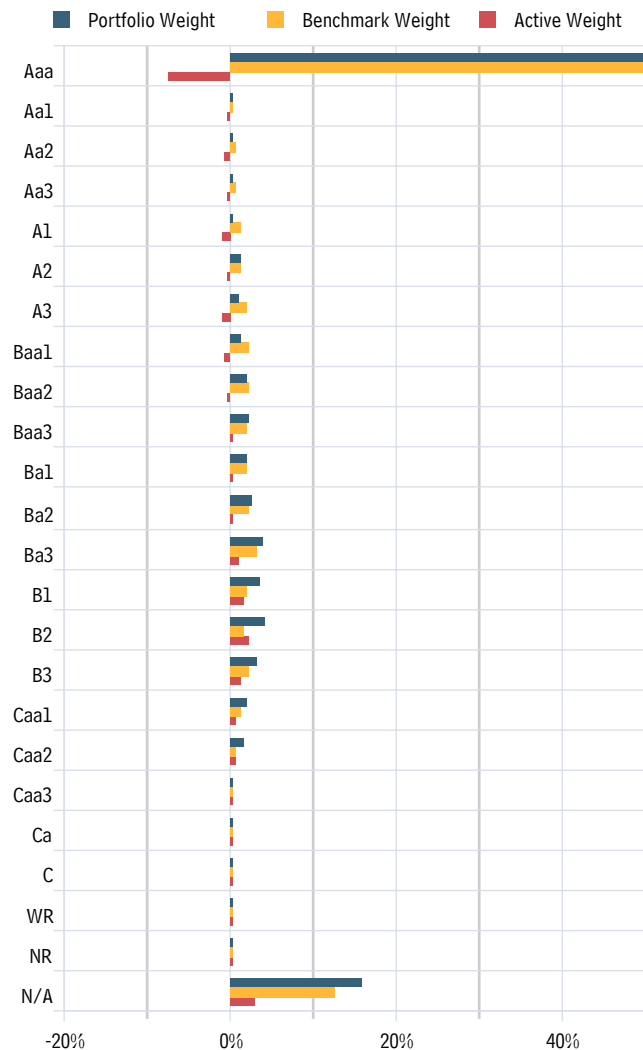
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: FIXED INCOME
BENCHMARK: Fixed Income
POSITIONS: 6,935
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 13,344,304,256
ACCEPTED: 6,877

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	6.35	6.79	2.92	0.57	100.00
Aaa	52.18	59.45	-7.27	4.94	9.57	4.64	-0.01	-1.35
Aa1	0.24	0.28	-0.04	0.01	5.59	6.84	0.00	0.35
Aa2	0.13	0.63	-0.51	0.01	10.27	5.45	-0.00	-0.24
Aa3	0.13	0.58	-0.45	0.01	7.40	3.57	-0.00	-0.26
A1	0.31	1.41	-1.10	0.03	9.27	4.67	-0.00	-0.08
A2	1.17	1.35	-0.18	0.05	4.63	5.57	0.02	3.15
A3	1.11	1.93	-0.82	0.08	7.56	3.81	0.00	0.57
Baa1	1.45	2.12	-0.67	0.10	6.91	3.49	0.01	1.62
Baa2	1.98	2.37	-0.39	0.15	7.61	3.93	0.00	0.79
Baa3	2.30	1.86	0.44	0.11	5.01	2.72	0.01	2.08
Ba1	1.90	1.85	0.05	0.06	4.25	3.45	0.01	1.39
Ba2	2.52	2.18	0.34	0.07	3.38	3.07	0.01	1.39
Ba3	3.96	3.09	0.87	0.11	3.25	3.40	0.02	3.99
B1	3.42	1.89	1.53	0.08	3.03	4.73	0.04	6.59
B2	4.07	1.72	2.36	0.08	3.12	5.36	0.06	10.72
B3	3.28	2.13	1.15	0.09	3.21	5.85	0.03	4.95
Caa1	1.79	1.24	0.55	0.04	2.85	7.47	0.02	3.63
Caa2	1.47	0.72	0.75	0.03	3.28	10.01	0.03	4.68
Caa3	0.14	0.09	0.05	0.00	3.02	10.24	0.00	0.25
Ca	0.13	0.12	0.01	0.00	2.40	5.13	0.00	0.24
C	0.06	0.03	0.03	0.00	9.40	23.94	0.00	0.12
WR	0.42	0.19	0.23	0.01	3.27	8.78	0.01	2.09
NR	0.11	0.04	0.07	0.07	76.98	164.32	0.06	10.89
Not Rated	15.74	12.73	3.01	0.19	1.63	3.78	0.24	42.43



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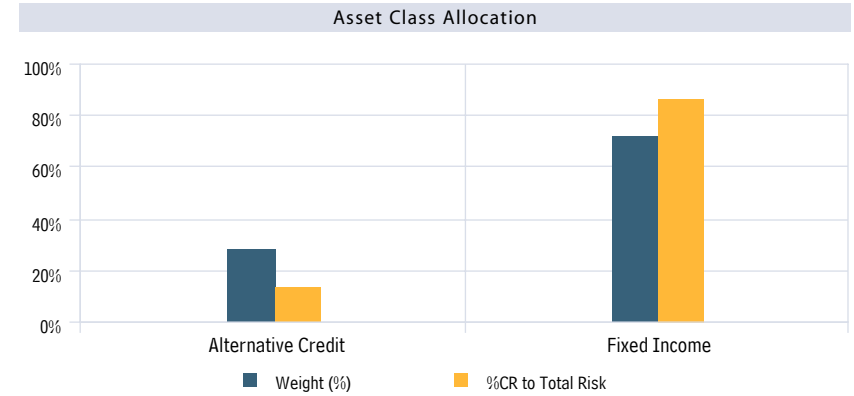
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

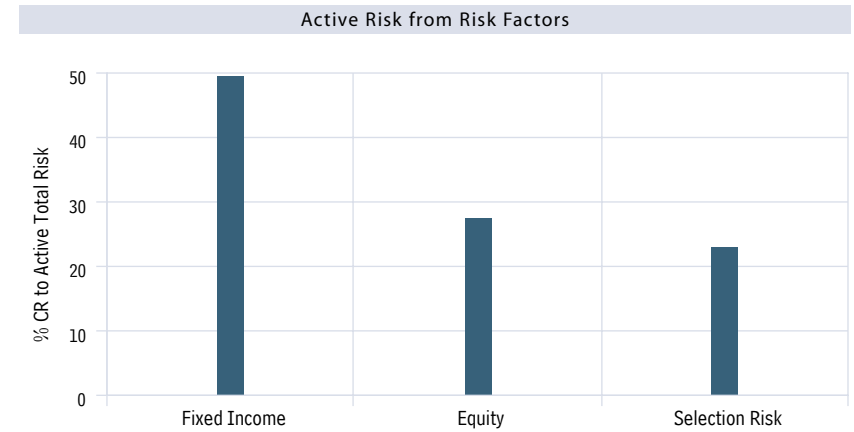
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	3.01	Total	12,279,498,056	100.00	3.01	3.01	100.00
Benchmark Risk	3.18	Alternative Credit	3,493,924,248	28.45	4.54	0.40	13.37
Active Risk	0.51	Fixed Income	8,785,573,807	71.55	4.03	2.61	86.63
Portfolio Beta	0.94						
Cont. to Eff. Duration	6.69						
Convexity	0.89						
Yield to Worst (%)	2.75						
OAS to Swap (bp)	91.96						



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	3.01	100.00	1.00	0.51	100.00	1.00
Local Market Risk	3.01	100.00	1.00	0.51	100.02	1.00
Common Factor Risk	3.01	99.80	1.00	0.39	77.04	0.88
Equity	0.05	1.59	0.13	0.14	27.54	0.59
Style	0.00	0.03	0.03	0.05	10.33	0.37
Industry	0.05	1.56	0.13	0.09	17.20	0.56
Fixed Income	2.96	98.21	0.99	0.25	49.50	0.75
Nominal Rates	2.43	80.65	0.83	0.06	11.25	0.22
Real Rates	0.43	14.11	0.85	-0.00	-0.87	-0.08
Credit	0.10	3.45	0.07	0.20	39.12	0.67
Selection Risk	0.01	0.20	0.04	0.12	22.98	0.48



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BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

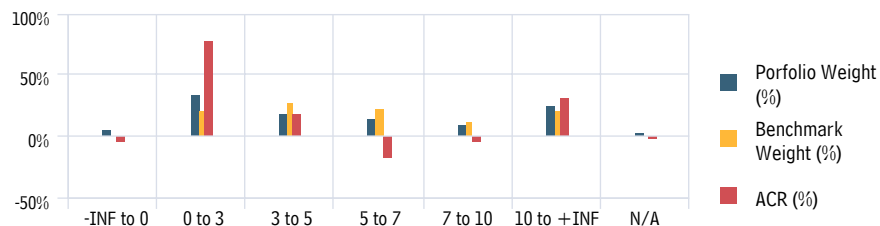
CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

Portfolio by Factor Breakdowns

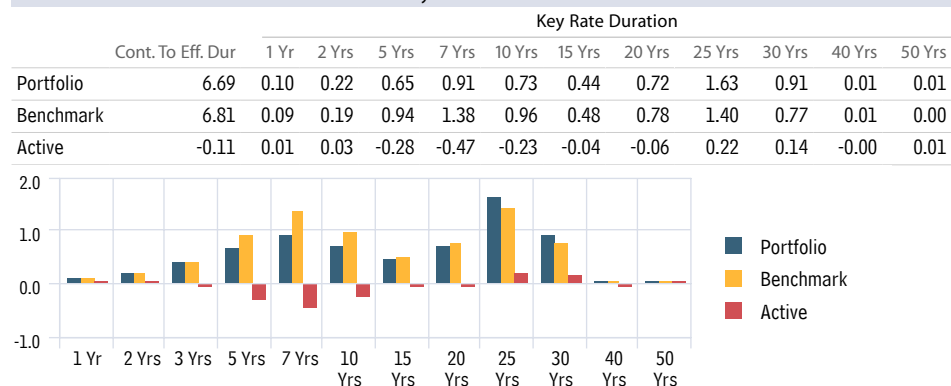
Spread Factor	Volatility	Top 10 Spread Factor								
		Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%	
US BB	1.02	0.00	0.44	-0.43	-0.01	-0.50	0.00	0.22	43.58	
US Conventional 30 yr Mortgage	0.37	0.22	0.50	-0.28	-0.00	-0.41	0.02	0.04	8.35	
US Swap Shift	0.14	2.29	2.91	-0.62	-0.00	-0.15	-0.05	0.01	2.58	
US GNMA 30 yr Mortgage Spread	0.31	0.11	0.21	-0.10	-0.00	-0.40	0.00	0.01	2.46	
US Energy CCC	7.93	0.01	0.01	-0.00	-0.02	-0.29	0.00	0.01	1.56	
US Telecom BBB	0.57	0.03	0.05	-0.02	-0.00	-0.42	0.00	0.00	0.92	
US Swap Butterfly	0.06	-0.83	-0.34	-0.49	-0.00	-0.14	0.01	0.00	0.90	
US Conventional 15 yr Mortgage	0.28	0.01	0.05	-0.04	-0.00	-0.39	0.00	0.00	0.83	
US AA	0.22	0.00	0.07	-0.06	-0.00	-0.25	0.00	0.00	0.66	
US Energy BBB	0.66	0.05	0.06	-0.01	-0.00	-0.36	0.00	0.00	0.66	

Term Structure	Volatility	Top 10 Term Structure								
		Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%	
US Butterfly	0.13	0.79	-0.44	1.23	0.00	0.31	-0.03	0.05	9.56	
US Inflation-protected	0.32	0.41	0.29	0.12	0.00	0.40	0.01	0.02	2.97	
US Twist	0.18	3.01	2.73	0.27	0.00	0.22	0.33	0.01	2.08	
US Implied Volatility	15.30	-0.00	-0.00	0.00	0.04	0.23	0.01	0.00	0.70	
US Municipal Twist	0.22	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.01	
US Municipal Butterfly	0.16	-0.00	-0.00	-0.00	0.00	0.02	0.00	-0.00	-0.00	
US Municipal Shift	0.44	0.01	0.00	0.00	-0.00	-0.17	0.00	-0.00	-0.05	
US Inflation-protected	0.15	-0.25	-0.20	-0.05	0.00	0.03	0.01	-0.00	-0.05	
US Shift	0.48	5.55	5.85	-0.29	0.00	0.04	2.12	-0.01	-1.04	
US Inflation-protected	0.47	1.14	1.03	0.12	-0.00	-0.36	0.40	-0.02	-3.79	

%CR to Active Risk by Duration Buckets



Key Rate Duration



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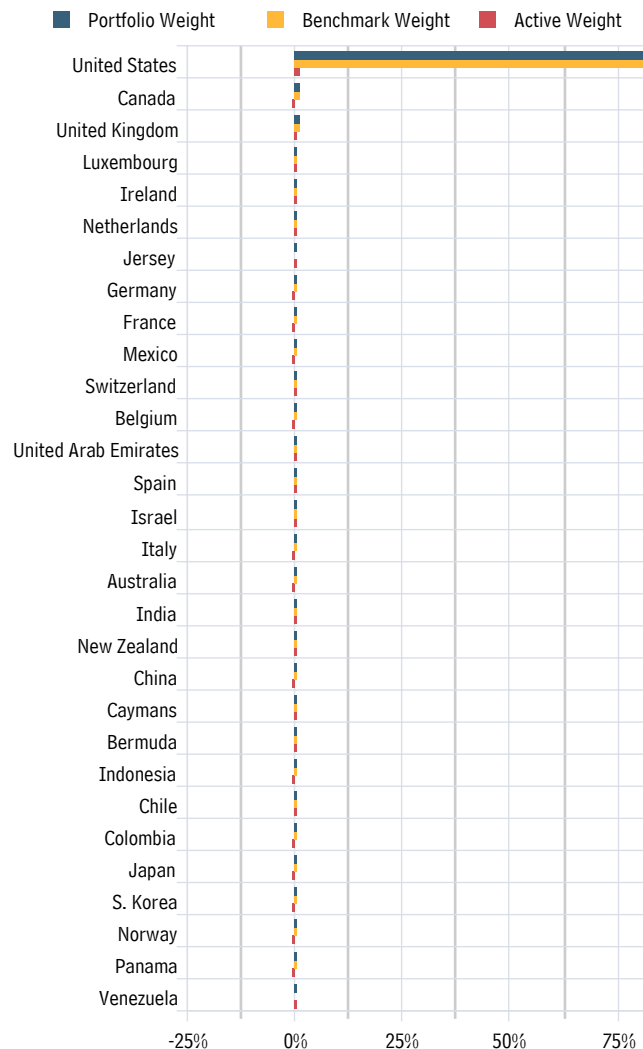
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	3.01	0.51	100.00	0.01
United States	93.89	92.72	1.17	3.11	0.50	98.12	-0.01
Canada	1.15	1.26	-0.11	3.72	-0.00	-0.57	-0.02
United Kingdom	0.97	0.96	0.01	3.77	0.00	0.32	-0.02
Luxembourg	0.68	0.33	0.35	7.32	-0.00	-0.33	-0.02
Ireland	0.67	0.28	0.39	2.04	0.00	0.96	-0.01
Netherlands	0.52	0.52	0.00	5.74	-0.00	-0.63	-0.02
Jersey	0.41	0.00	0.41	0.00	0.01	1.03	-0.00
Germany	0.18	0.39	-0.21	1.85	-0.00	-0.39	-0.01
France	0.15	0.26	-0.11	7.46	0.00	0.03	-0.01
Mexico	0.14	0.26	-0.12	4.09	0.00	0.68	-0.02
Switzerland	0.13	0.13	0.01	3.94	-0.00	-0.03	-0.02
Belgium	0.08	0.15	-0.07	7.49	-0.00	-0.06	-0.01
United Arab Emirates	0.08	0.03	0.05	5.25	0.00	0.10	-0.02
Spain	0.08	0.06	0.01	1.87	0.00	0.17	-0.01
Israel	0.07	0.03	0.05	7.57	0.00	0.01	-0.02
Italy	0.07	0.21	-0.14	11.56	0.00	0.47	-0.04
Australia	0.07	0.11	-0.04	6.75	-0.00	-0.22	-0.01
India	0.06	0.06	0.01	7.87	-0.00	-0.02	-0.02
New Zealand	0.06	0.04	0.02	10.02	-0.00	-0.01	-0.01
China	0.06	0.10	-0.03	8.54	-0.00	-0.17	-0.02
Caymans	0.06	0.00	0.05	7.24	-0.00	-0.12	-0.02
Bermuda	0.06	0.03	0.02	6.61	0.00	0.13	-0.02
Indonesia	0.05	0.13	-0.08	10.74	0.00	0.12	-0.03
Chile	0.05	0.03	0.02	4.31	0.00	0.00	-0.01
Colombia	0.05	0.08	-0.03	7.14	0.00	0.12	-0.03
Japan	0.04	0.31	-0.27	2.68	-0.00	-0.38	-0.01
S. Korea	0.02	0.06	-0.04	3.96	-0.00	-0.05	-0.01
Norway	0.02	0.06	-0.04	2.16	-0.00	-0.07	-0.00
Panama	0.02	0.03	-0.01	5.96	0.00	0.04	-0.02
Venezuela	0.02	0.00	0.02	2.62	0.00	0.03	-0.01



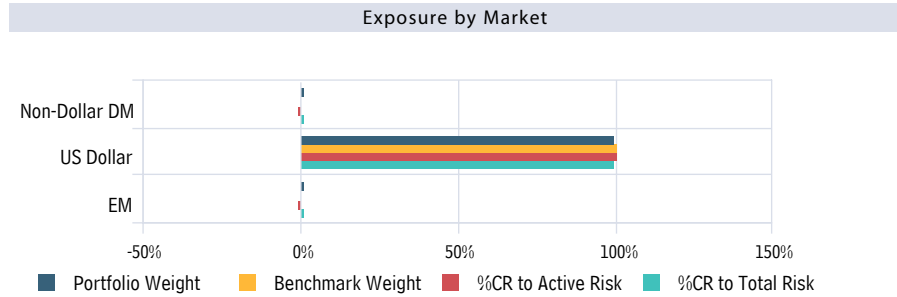
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BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	12,279,485,602.93	100.00	100.00
Euro	11,903.85	0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Korean Won	509.73	-0.00	0.00
New Taiwan Dollar	39.36	0.00	0.00

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)				Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active						
Total	100.00	100.00	-0.00		3.01	3.01	100.00	0.51	100.00
US Dollar	100.00	100.00	-0.00		3.01	3.01	100.00	0.51	100.00
Euro	0.00	0.00	0.00		6.87	0.00	0.00	0.00	0.00
Korean Won	0.00	0.00	0.00		7.03	0.00	0.00	-0.00	-0.00
New Taiwan Dollar	0.00	0.00	0.00		3.70	0.00	0.00	0.00	0.00



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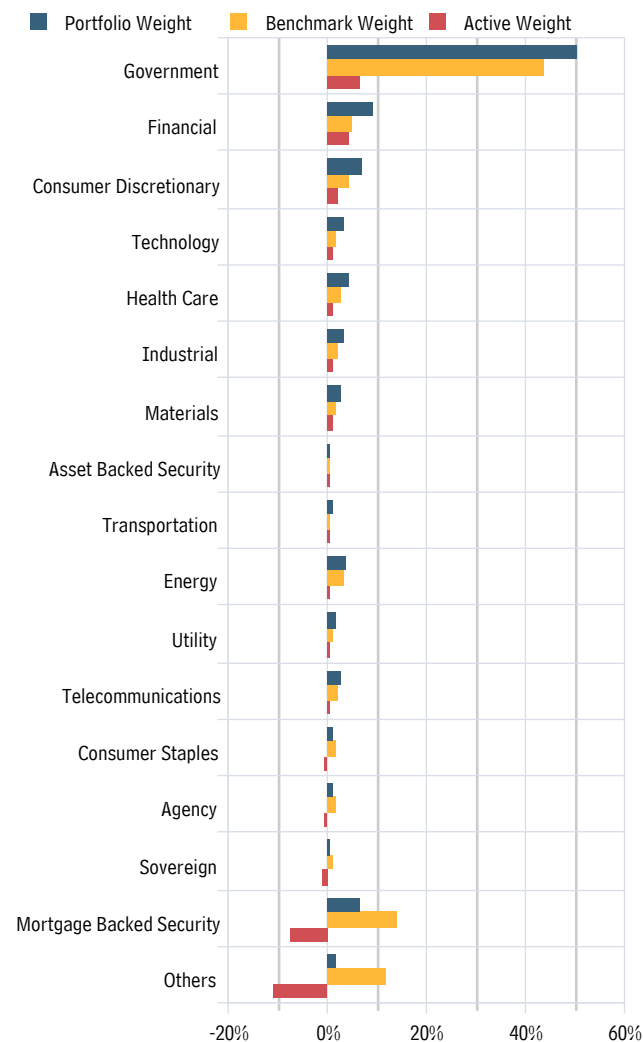
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	6.69	3.01	0.51	100.00	0.01
Government	50.24	43.73	6.51	4.96	4.83	0.14	28.39	0.00
Financial	9.28	4.91	4.38	0.25	2.14	0.02	4.90	-0.01
Consumer Discretionary	6.88	4.55	2.32	0.20	4.10	-0.03	-5.84	-0.02
Mortgage Backed Security	6.42	13.81	-7.38	0.28	3.02	-0.03	-5.40	-0.01
Health Care	4.20	2.97	1.23	0.13	4.43	-0.03	-6.70	-0.02
Energy	3.55	3.18	0.37	0.15	8.71	-0.02	-3.21	-0.03
Industrial	3.18	2.18	1.00	0.08	4.07	-0.02	-4.17	-0.02
Technology	3.16	1.88	1.28	0.11	6.43	-0.06	-12.27	-0.03
Materials	2.56	1.64	0.92	0.07	4.78	-0.01	-1.98	-0.02
Telecommunications	2.51	2.43	0.09	0.09	5.41	0.00	0.79	-0.03
Utility	1.59	1.29	0.30	0.07	3.20	0.00	0.57	-0.00
Others	1.45	12.12	-10.67	0.00	0.16	0.53	103.58	-0.05
Agency	1.30	1.53	-0.23	0.11	4.76	0.00	0.19	-0.00
Consumer Staples	1.29	1.48	-0.19	0.07	3.60	-0.01	-1.25	-0.01
Transportation	0.83	0.42	0.41	0.03	2.90	-0.00	-0.32	-0.01
Asset Backed Security	0.78	0.12	0.66	0.04	3.48	0.01	1.17	-0.00
Commercial Mortgage Backed	0.41	0.07	0.34	0.02	2.49	0.00	0.70	-0.00
Sovereign	0.19	1.04	-0.85	0.01	6.13	0.01	2.11	-0.02
Local/Provincial	0.16	0.20	-0.04	0.01	5.51	-0.00	-0.32	-0.01
Supranational	0.00	0.45	-0.45	0.00	1.59	-0.00	-0.93	-0.00
Covered bond	0.00	0.00	-0.00	0.00	0.59	-0.00	-0.00	-0.00
Collateralized Debt Obligat	0.00	0.00	-0.00	0.00	0.00	-0.00	-0.00	-0.00



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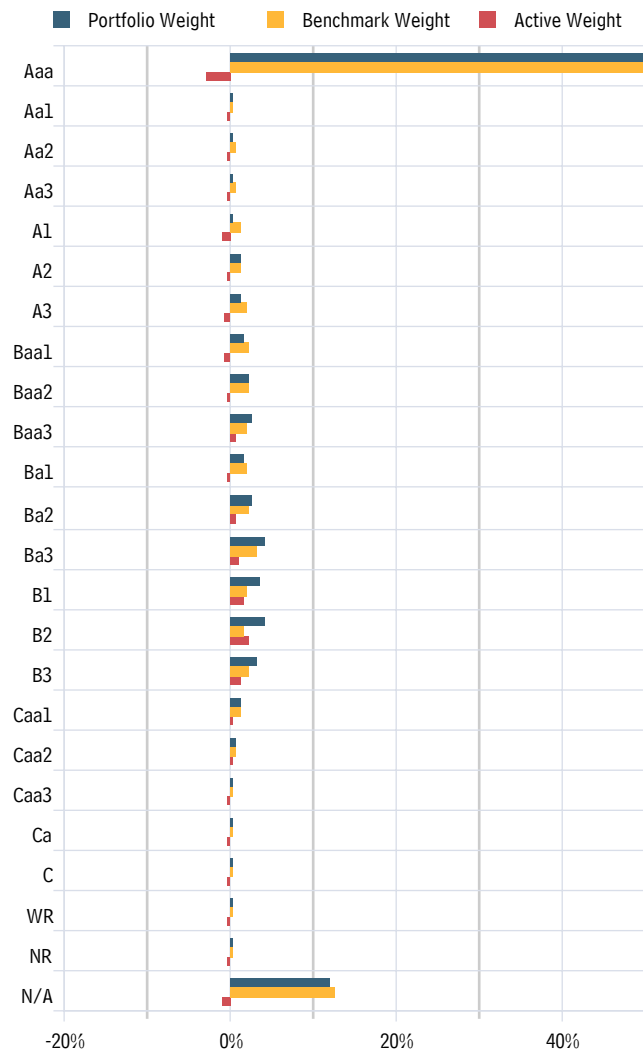
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public
BENCHMARK: Fixed Income
POSITIONS: 6,913
MODEL: BIM303L

CURRENCY: USD
ANALYSIS DATE: March 31, 2019
MARKET VALUE: 12,279,498,056
ACCEPTED: 6,858

Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	6.69	6.91	3.01	0.51	100.00
Aaa	56.59	59.45	-2.85	5.36	9.57	4.64	0.09	18.30
Aa1	0.26	0.28	-0.02	0.01	5.59	6.84	-0.00	-0.39
Aa2	0.17	0.63	-0.46	0.02	9.23	4.52	-0.00	-0.81
Aa3	0.14	0.58	-0.44	0.01	7.40	3.57	-0.00	-0.52
A1	0.34	1.41	-1.07	0.03	9.27	4.67	-0.00	-0.93
A2	1.27	1.35	-0.08	0.06	4.63	5.57	-0.02	-3.93
A3	1.21	1.93	-0.73	0.09	7.56	3.81	-0.00	-0.38
Baa1	1.60	2.12	-0.52	0.11	7.03	3.56	-0.00	-0.94
Baa2	2.17	2.37	-0.20	0.16	7.68	3.96	0.00	0.17
Baa3	2.49	1.86	0.63	0.12	5.05	2.73	0.00	0.90
Ba1	1.58	1.85	-0.27	0.06	4.26	3.53	0.01	2.42
Ba2	2.70	2.18	0.52	0.08	3.39	3.09	-0.00	-0.23
Ba3	4.18	3.09	1.09	0.12	3.25	3.40	-0.01	-1.46
B1	3.54	1.89	1.65	0.08	3.05	4.76	-0.02	-3.91
B2	4.13	1.72	2.41	0.08	3.12	5.39	-0.03	-6.06
B3	3.28	2.13	1.14	0.09	3.18	5.86	-0.01	-2.54
Caa1	1.44	1.24	0.20	0.04	2.76	7.04	0.00	0.17
Caa2	0.77	0.72	0.05	0.02	3.30	10.95	0.01	1.03
Caa3	0.06	0.09	-0.03	0.00	2.55	19.69	0.00	0.28
Ca	0.01	0.12	-0.11	0.00	2.55	11.97	0.00	0.66
C	0.00	0.03	-0.03	0.00	2.27	19.92	0.00	0.11
WR	0.16	0.19	-0.02	0.00	3.07	5.28	-0.00	-0.18
NR	0.03	0.04	-0.01	0.00	1.52	1.30	-0.00	-0.02
Not Rated	11.89	12.73	-0.84	0.15	1.36	2.67	0.50	98.27



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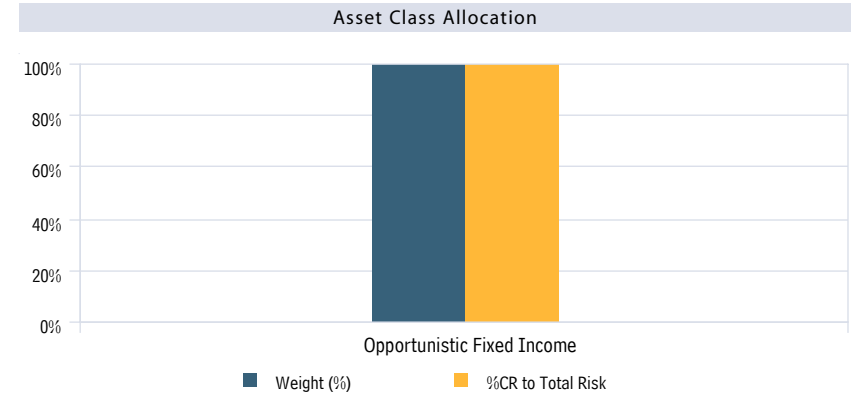
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
 PORTFOLIO: Alternative
 BENCHMARK: 50_HY-50_LEVLOAN, 50% JPM Global High Yield/50% CS Lvkd Loan
 POSITIONS: 22
 MODEL: BIM303L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 1,064,806,200
 ACCEPTED: 19

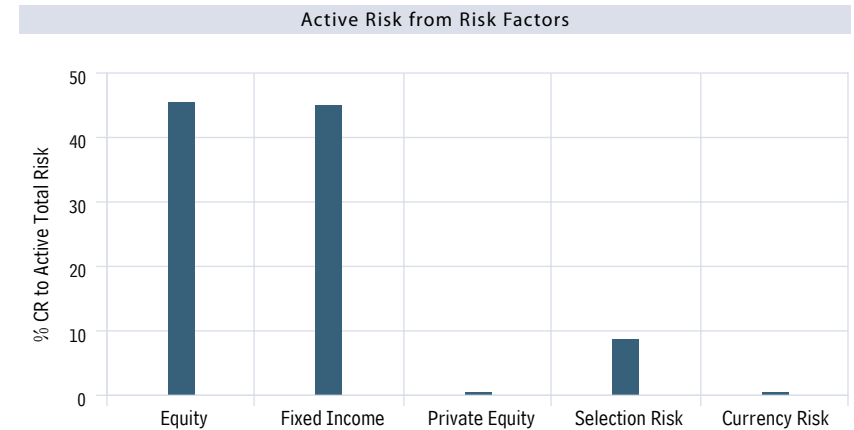
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	6.68	Total	1,064,806,200	100.00	6.68	6.68	100.00
Benchmark Risk	4.74	Opportunistic Fixed Income	1,064,806,200	100.00	6.68	6.68	100.00
Active Risk	4.72						
Portfolio Beta	1.00						
Cont. to Eff. Duration	2.48						
Convexity	-0.51						
Yield to Worst (%)	16.73						
OAS to Swap (bp)	856.08						



Risk Factor Breakdown

Risk Source	Risk Decomposition			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	6.68	100.00	1.00	4.72	100.00	1.00
Local Market Risk	6.62	99.21	1.00	4.70	99.55	0.99
Common Factor Risk	6.45	96.65	0.98	4.28	90.74	0.95
Equity	3.17	47.49	0.83	2.14	45.35	0.56
Style	0.80	11.93	0.43	0.77	16.36	0.42
Industry	2.37	35.56	0.78	1.37	29.00	0.45
Fixed Income	3.27	49.01	0.84	2.13	45.08	0.55
Nominal Rates	-0.31	-4.61	-0.28	0.01	0.27	0.04
Real Rates	0.00	0.00	0.15	0.02	0.42	0.06
Credit	3.58	53.62	0.84	2.09	44.39	0.57
Private Equity	0.01	0.15	0.04	0.01	0.30	0.06
Selection Risk	0.17	2.56	0.16	0.42	8.81	0.30
Currency Risk	0.05	0.79	0.09	0.02	0.45	0.04



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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Alternative
 BENCHMARK: 50_HY-50_LEVLOAN, 50% JPM Global High Yield/50% CS Lvqd Loan
 POSITIONS: 22
 MODEL: BIM303L

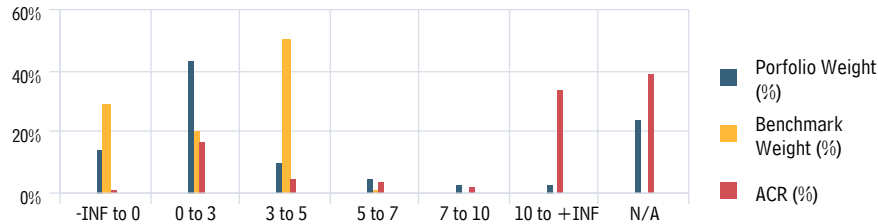
CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 1,064,806,200
 ACCEPTED: 19

Portfolio by Factor Breakdowns

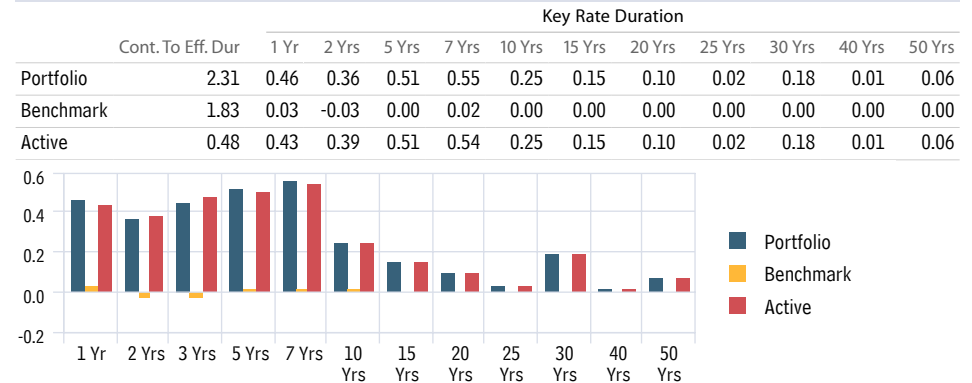
Spread Factor	Top 10 Spread Factor									
	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR		Active Port	to TR	to AR	to AR%
US Swap Shift	0.14	23.25	3.78	19.48	0.00	0.67	1.56	1.83	38.71	
US BB	1.02	0.00	3.16	-3.16	-0.00	-0.03	0.00	0.11	2.28	
US Swap Butterfly	0.06	-11.57	-0.81	-10.75	-0.00	-0.13	0.10	0.09	1.92	
US Consumer Discretionary CCC	3.25	0.18	0.03	0.15	0.00	0.08	0.35	0.04	0.79	
US CCC	2.88	0.07	0.01	0.07	0.00	0.05	0.14	0.01	0.22	
EUR Swap Shift	0.16	0.48	0.00	0.48	0.00	0.13	0.01	0.01	0.21	
US Energy CCC	7.93	0.04	0.00	0.04	0.00	0.03	0.14	0.01	0.20	
US Industrials CCC	2.42	0.13	0.01	0.11	0.00	0.03	0.19	0.01	0.19	
GB Swap Shift	0.26	0.10	0.00	0.10	0.00	0.32	0.01	0.01	0.18	
US Consumer Staples BBB	0.34	-0.08	0.00	-0.08	-0.00	-0.31	-0.01	0.01	0.18	

Term Structure	Top 10 Term Structure									
	Volatility	Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR		Active Port	to TR	to AR	to AR%
US Twist	0.18	-1.01	0.90	-1.91	-0.00	-0.09	0.02	0.03	0.67	
US Inflation-protected	0.47	0.00	0.52	-0.52	-0.00	-0.07	0.00	0.02	0.36	
EUR Implied Volatility	10.47	-0.00	0.00	-0.00	-0.02	-0.19	0.01	0.01	0.18	
US Implied Volatility	15.30	-0.00	0.00	-0.00	-0.05	-0.30	0.00	0.00	0.06	
US Inflation-protected	0.32	0.00	-0.56	0.56	0.00	0.01	-0.00	0.00	0.06	
US Butterfly	0.13	-0.52	0.03	-0.55	-0.00	-0.01	-0.01	0.00	0.01	
FR Shift	0.39	-0.02	0.00	-0.02	-0.00	-0.07	0.00	0.00	0.01	
GB Twist	0.18	-0.01	0.00	-0.01	-0.00	-0.18	0.00	0.00	0.00	
US Municipal Butterfly	0.16	-0.04	0.00	-0.04	-0.00	-0.01	-0.00	0.00	0.00	
EUR Butterfly	0.10	-0.01	0.00	-0.01	-0.00	-0.02	0.00	0.00	0.00	

%CR to Active Risk by Duration Buckets



Key Rate Duration



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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Alternative
 BENCHMARK: 50_HY-50_LEVLOAN, 50% JPM Global High Yield/50% CS Lvqd Loan
 POSITIONS: 22
 MODEL: BIM303L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 1,064,806,200
 ACCEPTED: 19

Top 30 Countries by Weight%

Country of Exposure	Weight (%)			Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active				
Total	100.00	100.00	-0.00	6.68	4.72	100.00	0.05
United States	73.71	94.64	-20.93	7.22	3.94	83.49	0.02
N/A	12.90	0.00	12.90	8.59	0.45	9.51	0.03
United Kingdom	2.57	0.63	1.93	8.59	0.05	1.00	0.01
Euro. Monetary Union	2.13	0.00	2.13	7.18	0.01	0.13	0.00
Canada	1.15	1.33	-0.19	19.83	0.03	0.73	0.01
Netherlands	1.01	0.87	0.14	8.64	0.01	0.13	0.00
Luxembourg	0.99	1.23	-0.24	32.06	0.02	0.45	0.01
Caymans	0.88	0.17	0.72	13.03	0.05	1.01	0.05
Austria	0.56	0.02	0.54	28.94	0.04	0.87	0.07
Puerto Rico	0.44	0.00	0.44	16.59	0.04	0.76	0.08
Venezuela	0.43	0.00	0.43	15.86	0.00	0.03	0.00
Spain	0.42	0.00	0.42	11.08	0.01	0.11	0.01
Germany	0.41	0.13	0.28	7.63	0.00	0.05	0.01
Ireland	0.34	0.22	0.11	10.67	0.00	0.05	0.01
Singapore	0.30	0.00	0.30	4.17	0.00	0.00	0.00
Denmark	0.27	0.00	0.27	12.36	0.00	0.05	0.01
Greece	0.23	0.00	0.23	33.11	0.02	0.34	0.07
Brazil	0.22	0.00	0.22	11.14	0.01	0.17	0.04
Israel	0.19	0.00	0.19	7.40	0.00	0.01	0.00
Latvia	0.15	0.00	0.15	9.94	0.00	0.01	0.00
France	0.13	0.18	-0.06	87.05	0.03	0.62	0.03
N/A	0.10	0.00	0.10	13.61	0.00	0.07	0.03
Norway	0.10	0.02	0.08	56.12	0.01	0.17	0.07
Sweden	0.08	0.00	0.08	57.25	0.00	0.02	0.01
United Arab Emirates	0.07	0.00	0.07	9.74	0.00	0.00	0.00
Argentina	0.07	0.00	0.07	10.25	0.00	0.01	0.01
Jersey	0.05	0.05	-0.00	306.36	0.01	0.22	0.12
Bermuda	0.04	0.04	0.00	3.24	-0.00	-0.01	0.00
Iceland	0.02	0.00	0.02	9.28	0.00	0.00	0.01
Indonesia	0.01	0.00	0.01	6.24	-0.00	-0.00	-0.00



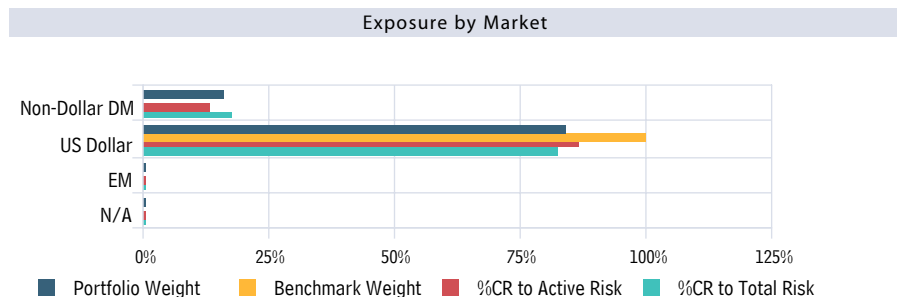
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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Alternative
 BENCHMARK: 50_HY-50_LEVLOAN, 50% JPM Global High Yield/50% CS Lvgd Loan
 POSITIONS: 22
 MODEL: BIM303L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2019
 MARKET VALUE: 1,064,806,200
 ACCEPTED: 19

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	892,091,005.46	86.85	82.46
Euro	150,655,151.62	11.44	15.18
British Pound Sterling	15,769,116.87	0.83	1.16
Danish Krone	2,849,784.70	0.05	0.10
Canadian Dollar	1,807,683.39	0.62	0.81

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
CNH	132,760.80	0.00	0.01
Mexican Peso	0.03	0.00	0.00

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)			Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark	Active					
Total	100.00	100.00	-0.00	6.68	6.68	100.00	4.72	100.00
US Dollar	83.78	100.00	-16.22	6.73	5.51	82.46	4.10	86.85
Euro	14.15	0.00	14.15	10.43	1.01	15.18	0.54	11.44
British Pound Sterling	1.48	0.00	1.48	12.60	0.08	1.16	0.04	0.83
Danish Krone	0.27	0.00	0.27	12.36	0.01	0.10	0.00	0.05
Canadian Dollar	0.17	0.00	0.17	95.38	0.05	0.81	0.03	0.62
Norwegian Krone	0.10	0.00	0.10	54.70	0.02	0.25	0.01	0.17
Swedish Krona	0.02	0.00	0.02	25.30	0.00	0.01	0.00	0.01
CNH	0.01	0.00	0.01	12.54	0.00	0.01	0.00	0.00
Australian Dollar	0.01	0.00	0.01	12.52	0.00	0.01	0.00	0.00
Singapore Dollar	0.01	0.00	0.01	4.17	0.00	0.00	0.00	0.00
Swiss Franc	0.00	0.00	0.00	72.54	0.00	0.02	0.00	0.01
Mexican Peso	0.00	0.00	0.00	11.60	0.00	0.00	0.00	0.00
Japanese Yen	0.00	0.00	0.00	7.69	-0.00	-0.00	-0.00	-0.00



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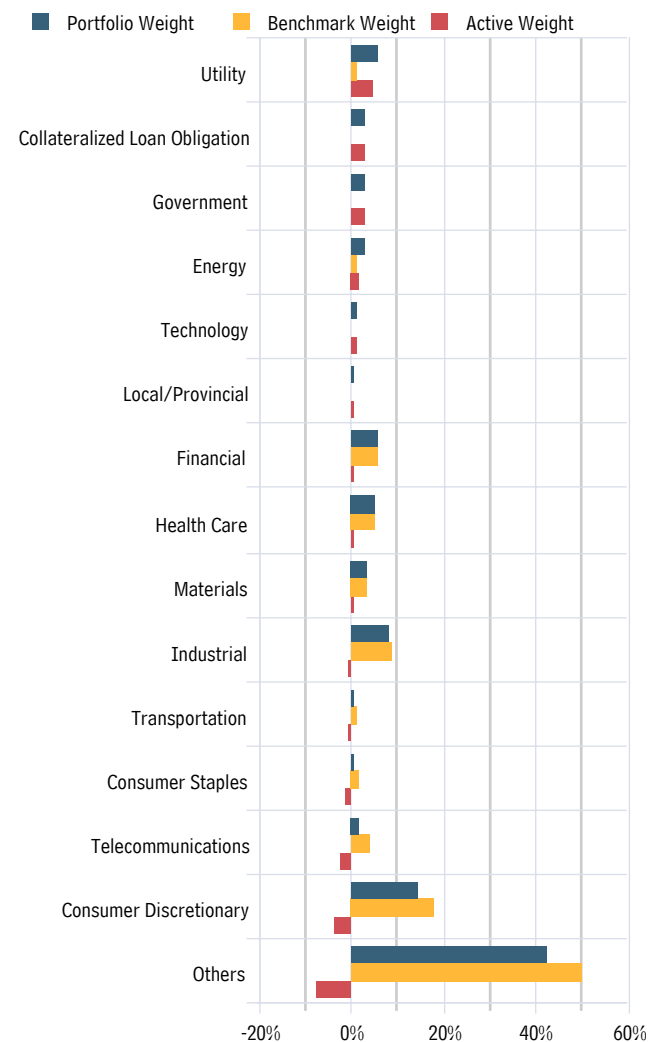
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Portfolio Allocation by Bond Sector

Sector	Weight (%)			Cont. To Eff. Dur	Total Risk	Active Risk CR	%CR to Active TR	MC to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	2.31	6.68	4.72	100.00	0.05
Others	42.28	50.07	-7.80	0.31	9.63	2.61	55.33	0.02
Consumer Discretionary	14.51	17.73	-3.22	0.20	5.18	0.13	2.74	0.01
Industrial	8.04	8.63	-0.59	0.11	6.49	0.12	2.49	0.01
Financial	5.86	5.75	0.11	0.14	5.42	0.04	0.81	0.01
Utility	5.78	1.30	4.49	0.08	7.57	0.07	1.42	0.01
Health Care	5.20	5.09	0.10	0.06	4.67	0.03	0.60	0.00
Materials	3.47	3.44	0.02	0.09	12.32	0.05	1.01	0.01
Collateralized Loan Obligat	3.10	0.00	3.10	0.85	72.69	1.55	32.87	0.50
Government	3.08	0.00	3.08	0.35	5.94	-0.01	-0.15	-0.00
Energy	3.07	1.33	1.75	0.07	17.24	0.05	0.98	0.01
Telecommunications	1.82	4.12	-2.31	0.02	11.32	0.01	0.15	0.00
Technology	1.41	0.00	1.41	0.02	5.91	0.01	0.13	0.00
Local/Provincial	0.53	0.00	0.53	0.03	13.61	0.04	0.77	0.07
Mortgage Backed Security	0.41	0.00	0.41	0.02	3.12	0.00	0.05	0.01
Sovereign	0.40	0.00	0.40	0.00	16.34	0.00	0.03	0.00
Consumer Staples	0.30	1.45	-1.15	-0.06	21.84	0.01	0.23	-0.00
Transportation	0.21	1.08	-0.86	0.00	2.51	-0.00	-0.00	0.00
Collateralized Debt Obligat	0.17	0.00	0.17	-0.01	14.20	0.01	0.21	0.06
Asset Backed Security	0.17	0.00	0.17	0.01	9.69	0.01	0.20	0.06
Commercial Mortgage Backed	0.14	0.00	0.14	0.01	7.55	0.01	0.11	0.04
Agency	0.03	0.00	0.03	0.00	25.27	0.00	0.01	0.01



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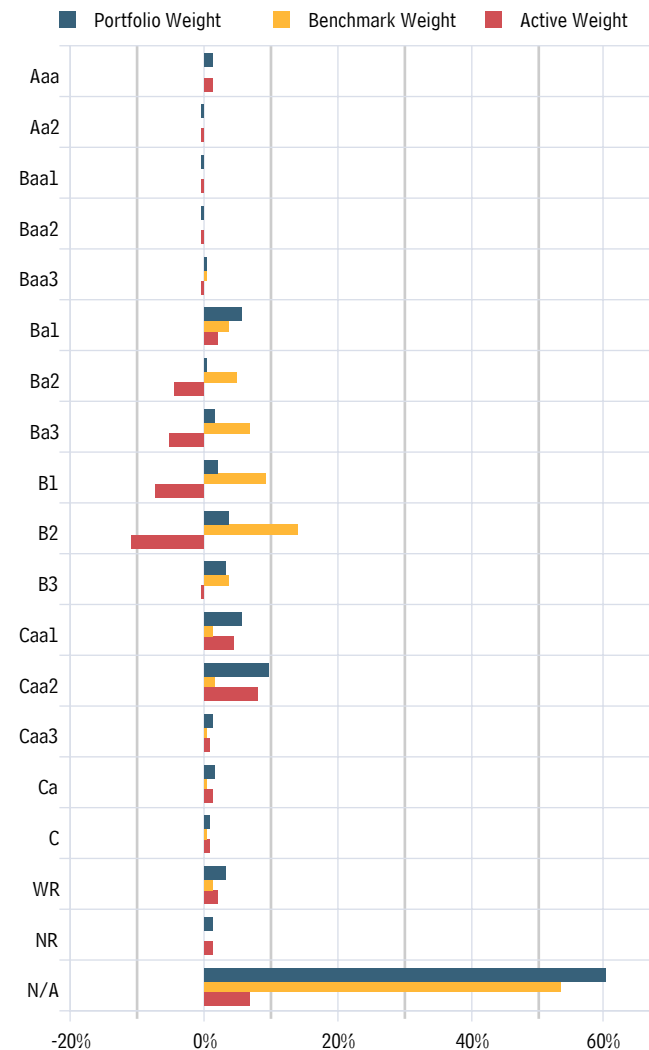
BarraOne Fixed Income Summary

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 ANALYSIS DATE: March 31, 2019
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Portfolio Allocation by Moody's Rating

Rating	Weight (%)			Cont. To Eff. Dur	Spread Duration	Total Risk	Active Risk CR	%CR to Active TR
	Portfolio	Benchmark	Active					
Total	100.00	100.00	0.00	2.31	4.70	6.68	4.72	100.00
Aaa	1.26	0.00	1.26	0.15	11.79	6.30	-0.01	-0.12
Aa2	-0.38	0.00	-0.38	-0.02	4.87	6.79	-0.00	-0.03
Baa1	-0.31	0.00	-0.31	-0.04	14.12	10.73	0.00	0.04
Baa2	-0.20	0.00	-0.20	-0.03	15.66	10.10	0.00	0.06
Baa3	0.15	0.26	-0.12	-0.01	-4.38	21.01	0.00	0.04
Ba1	5.61	3.46	2.15	0.07	4.23	4.45	0.00	0.02
Ba2	0.51	4.73	-4.22	0.01	2.25	4.18	0.00	0.03
Ba3	1.41	6.80	-5.39	0.02	3.22	5.91	0.01	0.27
B1	2.01	9.20	-7.18	0.04	2.68	4.70	-0.00	-0.05
B2	3.48	14.20	-10.72	0.05	3.04	5.19	-0.00	-0.10
B3	3.39	3.79	-0.40	0.09	3.54	6.22	0.02	0.33
Caa1	5.78	1.25	4.53	0.09	3.08	10.24	0.06	1.22
Caa2	9.45	1.57	7.88	0.15	3.27	10.75	0.11	2.38
Caa3	1.15	0.19	0.97	0.02	3.29	8.99	0.02	0.44
Ca	1.48	0.18	1.30	0.01	2.39	5.07	0.02	0.51
C	0.71	0.00	0.71	0.05	9.43	24.05	0.02	0.44
WR	3.32	1.15	2.17	0.08	3.38	12.19	0.09	1.91
NR	1.02	0.00	1.02	0.85	101.55	217.43	1.52	32.19
Not Rated	60.15	53.21	6.93	0.73	2.90	6.99	2.85	60.44



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APPENDICES:

Basket Clause

As of 3/31/2019

Basket Limit	25.00%
Basket Consumed	22.62%
Remaining Capacity	2.38%

	Basket-Eligible Assets*			Basket Assets	Total
	Non-Basket Assets	Non-Contributing	Contributing		
FIXED INCOME	30.09%	4.33%	0.01%	5.39%	39.82%
U.S. Fixed	16.02%	3.88%	0.01%	5.23%	25.14%
Cash/Equivalent	8.45%	---	---	0.00%	8.45%
TIPS	4.17%	---	---	---	4.17%
Convertible Bonds	1.74%	0.01%	0.00%	0.04%	1.79%
OFI	0.03%	0.11%	0.00%	2.79%	2.94%
High Yield	0.31%	3.68%	0.00%	0.93%	4.92%
Bank Loans	0.06%	0.05%	0.00%	1.46%	1.57%
ETI Investments	0.92%	---	---	0.01%	0.94%
Core/Core Plus	0.34%	0.02%	---	0.01%	0.37%
U.S. Structured	14.07%	0.45%	---	0.16%	14.68%
Credit	2.08%	0.45%	---	0.04%	2.57%
Mortgages	1.82%	---	---	0.12%	1.94%
ST Treasury	2.13%	---	---	---	2.13%
Treasury/Agency	4.62%	---	---	---	4.62%
MT Treasury	0.01%	---	---	---	0.01%
LT Treasury	3.41%	---	---	---	3.41%
EQUITY	27.61%	15.34%	5.25%	11.98%	60.18%
Public Equity	27.60%	9.98%	5.25%	0.14%	42.97%
U.S. Equity	27.40%	0.77%	0.40%	0.09%	28.67%
EAFE	0.16%	5.56%	2.92%	0.02%	8.66%
Emerging Markets	0.04%	3.66%	1.92%	0.03%	5.64%
Alternative Investments	0.02%	5.36%	---	11.84%	17.21%
Hedge Funds	---	---	---	6.00%	6.00%
Infrastructure	0.00%	0.90%	---	---	0.90%
Private RE/Core	---	2.59%	---	---	2.59%
Private RE/Non-Core	0.00%	1.87%	---	---	1.87%
Private Equity	0.02%	---	---	5.83%	5.85%
TOTAL ASSETS	57.70%	19.67%	5.26%	17.37%	100.00%
	Non-Basket:	77.38%	Basket:	22.62%	

This analysis shows basket consumption by investment mandate on a security look-through basis.

* Basket Eligible Assets are subject to the following thresholds - above which investment consumes basket capacity: 10% aggregate portfolio weight for investments in non-U.S. listed equities; 10% aggregate portfolio weight for real assets; and 10% aggregate portfolio weight for investments in high yield bonds and foreign debt issues that are registered with the SEC. To the extent that the value of investments in a particular category exceeds a threshold, the excess consumes basket capacity.

In the above table, the investment of cash held as collateral under the system's securities lending program, is included as a Non-Basket Asset in the Cash/Equivalent line.



Liquidity Analysis

AUM as of March 31, 2019

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$18,420	\$18,420	\$18,420	\$18,420
U.S.	12,294	12,294	12,294	12,294
EAFE Equity	3,508	3,508	3,508	3,508
Emerging Markets	2,618	2,618	2,618	2,618
PUBLIC FIXED INCOME	\$12,702	\$12,381	\$12,544	\$12,544
Short Term Securities	520	520	520	520
U.S. Government	4,334	4,334	4,334	4,334
Long Duration Treasury	0	0	0	0
Mortgages				
Core Mortgages	907	907	907	907
ETI	405	84	247	247
Credit - Investment Grade	2,013	2,013	2,013	2,013
Corporate - High Yield	2,084	2,084	2,084	2,084
Corporate - Bank Loans	660	660	660	660
UST - Inflation Protected	1,778	1,778	1,778	1,778
ALTERNATIVE ASSETS	\$8,607	\$1,368	\$2,829	\$3,078
Private Equity	2,479	0	0	0
Private Real Estate	1,902	0	0	0
Infrastructure	381	0	0	0
Opportunistic Fixed Income	1,246	935	1,246	1,246
Hedge Funds	2,598	433	1,583	1,832
Total Assets	\$39,729	\$32,169	\$33,793	\$34,042
Total Illiquid \$		\$7,560	\$5,936	\$5,687
Total Illiquid %		19.0%	14.9%	14.3%
Unfunded OFI Commitments	\$127			
Unfunded INF Commitments	\$545			
Unfunded PE Commitments	\$1,936			
Unfunded RE Commitments	\$1,198			
Total commitments \$	\$3,805			
Total commitments %	9.6%			



Police Liquidity Profile - Static Analysis

03/31/19

AUM as of March 31, 2019

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$7,560	\$5,936	\$5,687
Total Illiquid %	28.5%	22.4%	21.5%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
Total Assets	\$39,729	\$32,169	\$33,793	\$34,042

Private Equity, Real Estate, Infrastructure and Opportunistic Fixed Income Stress Case

Unfunded OFI Commitments	\$25	\$51
Unfunded INF Commitments	\$109	\$218
Unfunded PE Commitments Drawn	\$387	\$774
Unfunded RE Commitments Drawn	\$240	\$479
Total commitments \$	\$761	\$1,522
Total commitments %	1.9%	3.8%

Total Illiquid \$	\$6,697	\$7,209
Total Illiquid %	16.9%	18.1%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

See Assumptions Page for Full Details

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$7,560	\$6,697	\$7,209
Total Illiquid %	28.5%	25.3%	27.2%

Note: Assumes zero realizations, no new commitments and a five-year investment period; funded out of liquids

