












NYC Police Pension Fund Investment Meeting (Public)

Schedule	Tuesday, June 20, 2023 10:00 AM — 2:00 PM EDT
Venue	Zoom Meeting
Organizer	Kim Boston

Agenda

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10:00 AM	Welcome and Opening	2
10:15 AM	Strategic Asset Allocation Capital Market Assumption Review:	3
	 POLICE Summary of 2023 LTCMA_vf.pdf	4
10:45 AM	Quarterly Presentation (Public): -Market Overview -Performance Update -Risk Update	26
	NON-INVESTMENT MATERIAL - QUARTERLY PERFORMANCE REPORTING SECTION (Public Reports):	27
	State Street Quarterly Fund Performance Overview (Public):	28
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	ETI Quarterly Report (Public):	134
	 ETI 1Q Qtrly Rpt (Public)_06.20.2023 (POLICE).pdf	135
	Private Equity Quarterly Report (Public):	141

 PE 4Q Qtrly Rpt (Public)_06.20.2023 (POLICE).pdf	142
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Infrastructure Quarterly Report (Public):	172
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 Risk 1Q Qtrly Report (Public)_06.20.2023 (POLICE).pdf	193
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-Basket Clause	
-Liquidity Analysis	
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 Liquidity Report_06.20.2023 (POLICE).pdf	226
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PUBLIC AGENDA -

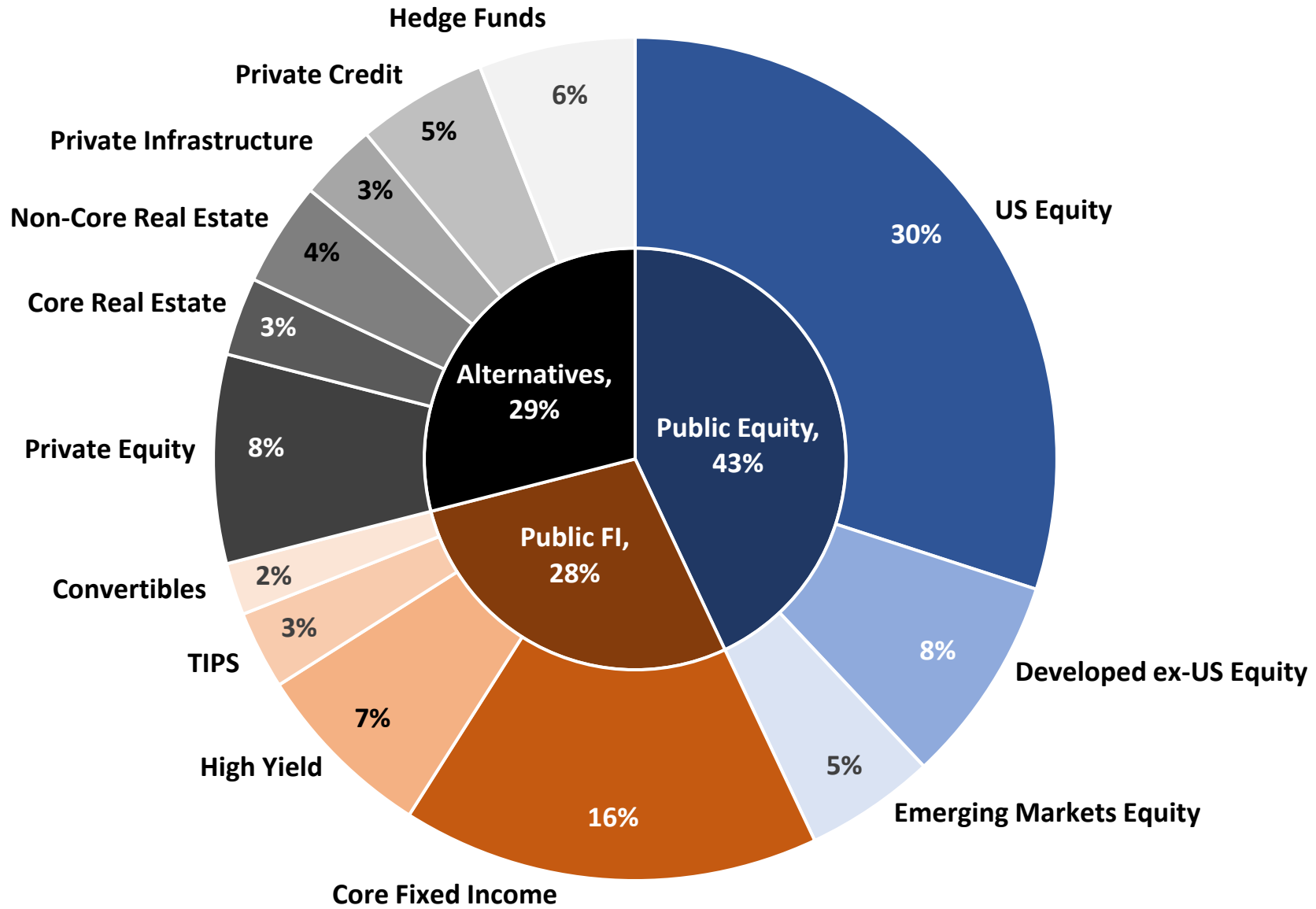
Welcome and Opening

Strategic Asset Allocation Capital Market Assumption Review:

2023 CAPITAL MARKET ASSUMPTIONS



POLICE ASSET ALLOCATION



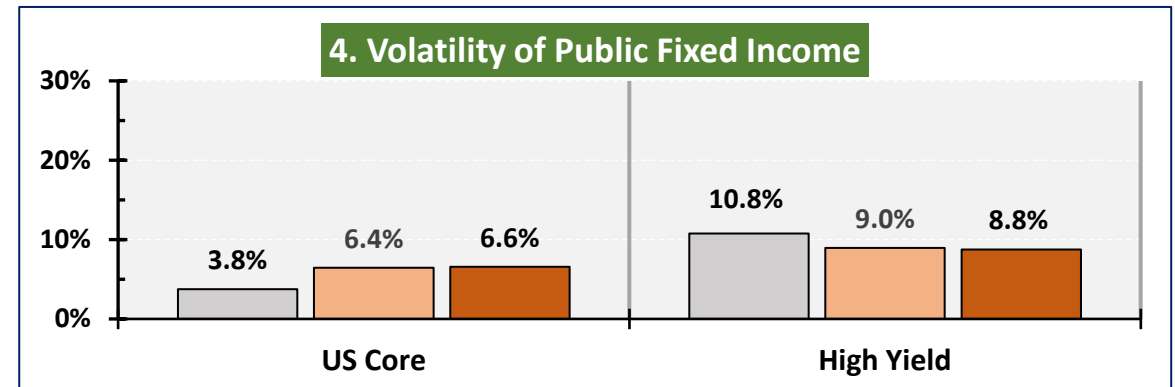
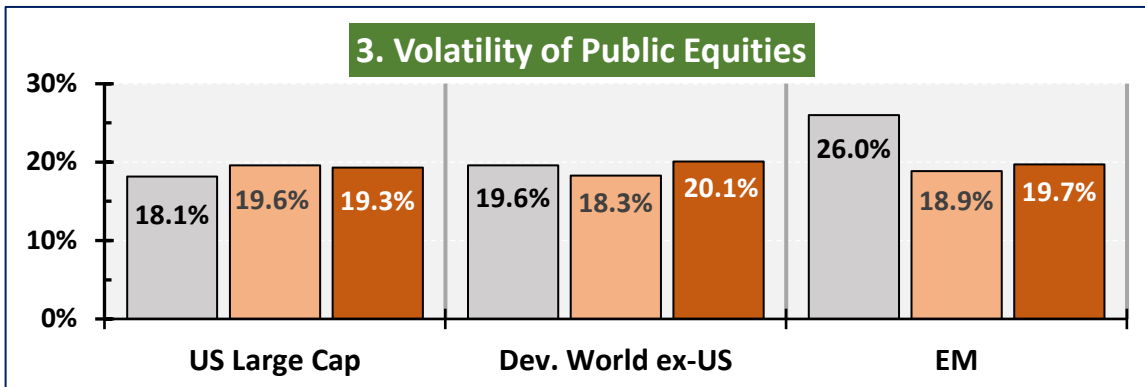
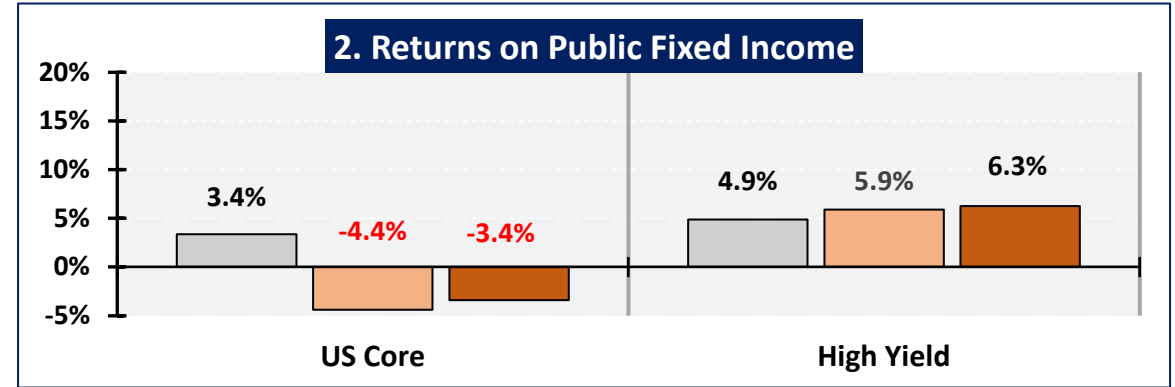
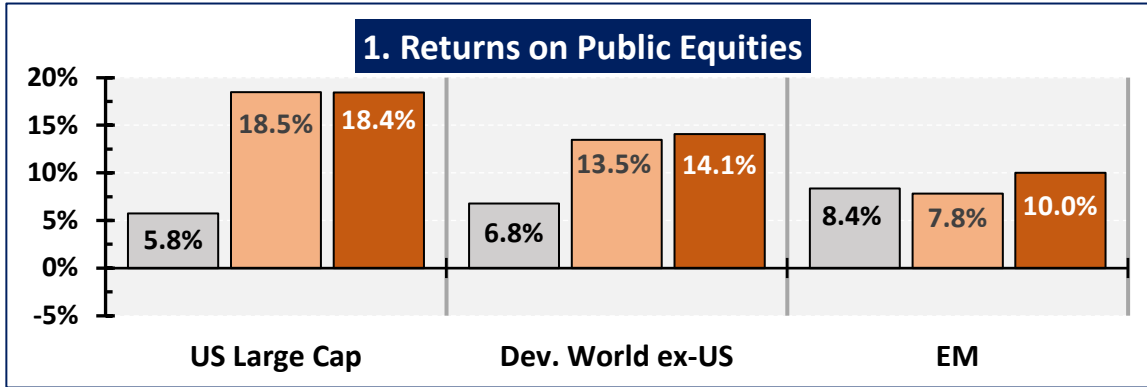
POLICE BASKET CLAUSE UTILIZATION

Market	Asset Class	Allocation Apr-28, 2023	Basket Clause		
			Category	Utilization	
Public Equity	US Equity	26.3%	Non-Basket Asset	0.0%	
	Foreign Equity	Dev. ex-US	8.8%	Excess over 10%	3.0%
		EM	4.3%		
Public Fixed Income	Core Fixed Income	23.7%	Non-Basket Asset	0.0%	
	TIPS	2.9%	Non-Basket Asset	0.0%	
	High Yield	4.6%	Excess over 10%	0.0%	
Alternatives	Private Equity	9.3%	Basket Asset	9.3%	
	Private Credit	6.7%	Basket Asset	6.7%	
	Real Assets	Infrastructure	2.1%	Excess over 10%	0.0%
		Real Estate	6.5%		
	Hedge Funds	5.1%	Basket Asset	5.1%	
TOTAL		100.2%	Utilization	24.1%	



1. REVIEW: 2019 ASSUMPTIONS VS REALIZED OUTCOME

Public Markets



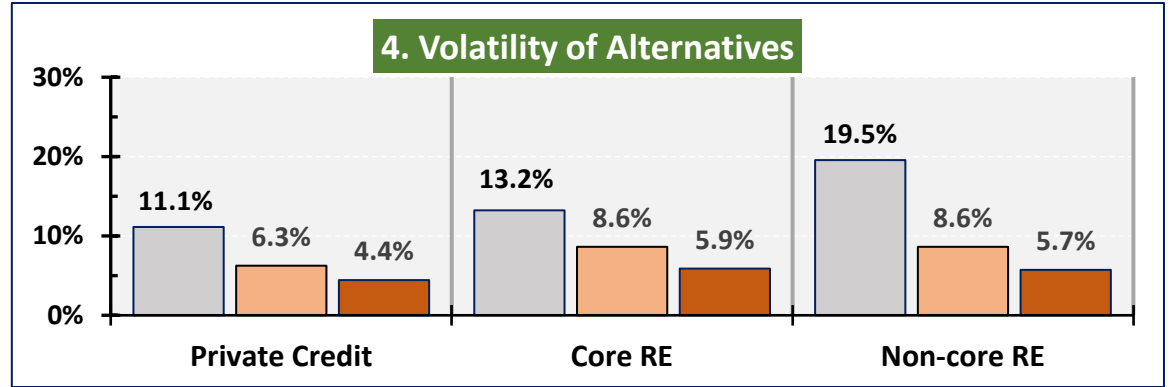
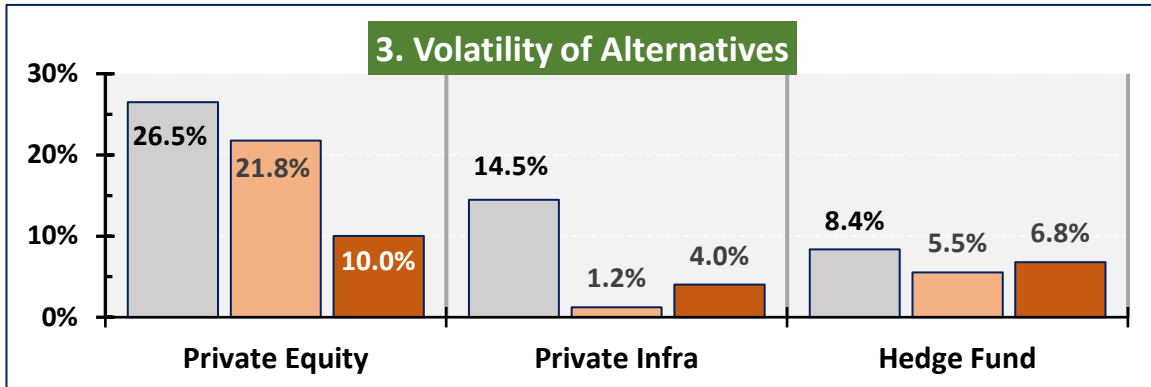
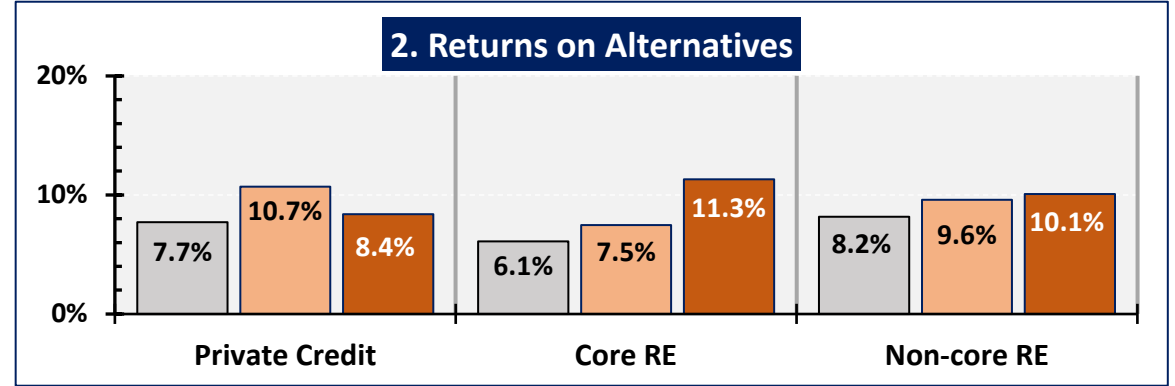
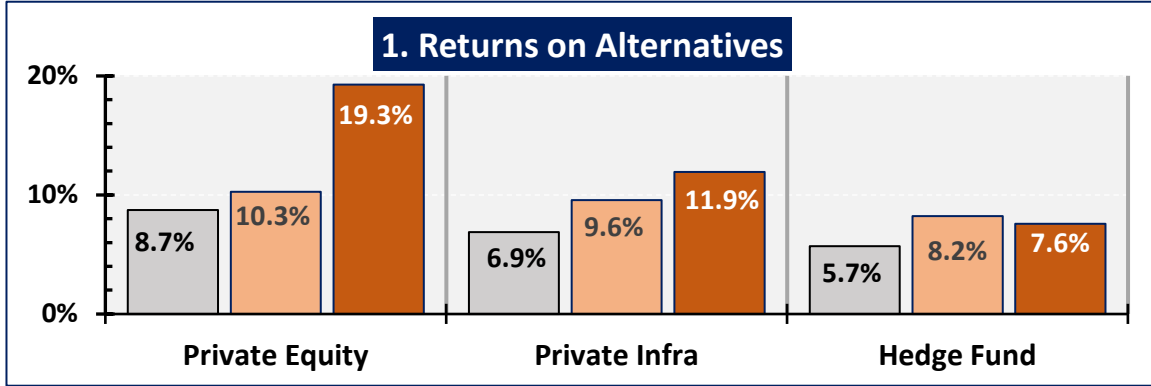
■ 2019 Assumptions - Average of the 10yr Capital Market Assumptions across five Systems

■ Benchmark Realized Outcome - Strategic Benchmark Performance from Q2 2019 to Q2 2023

■ Investment Realized Outcome - Realized performance net of fee from Q2 2019 to Q2 2023, average across five Systems

1. REVIEW: 2019 ASSUMPTIONS VS REALIZED OUTCOME

Private Markets



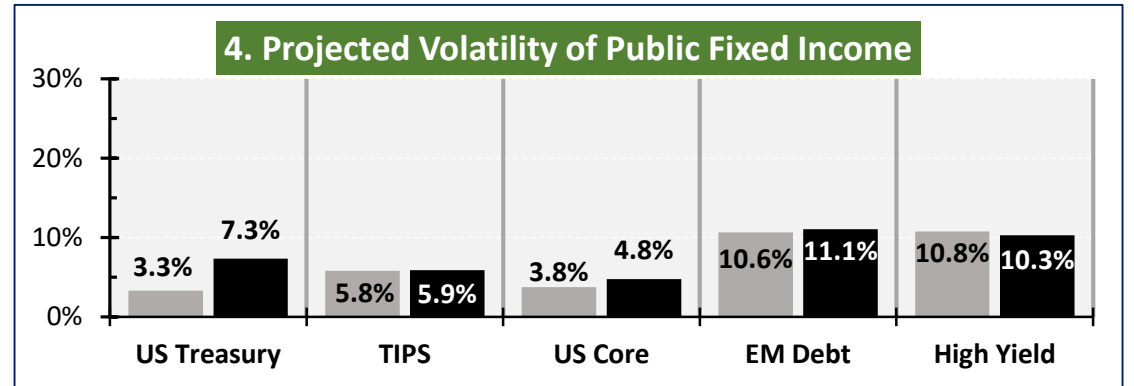
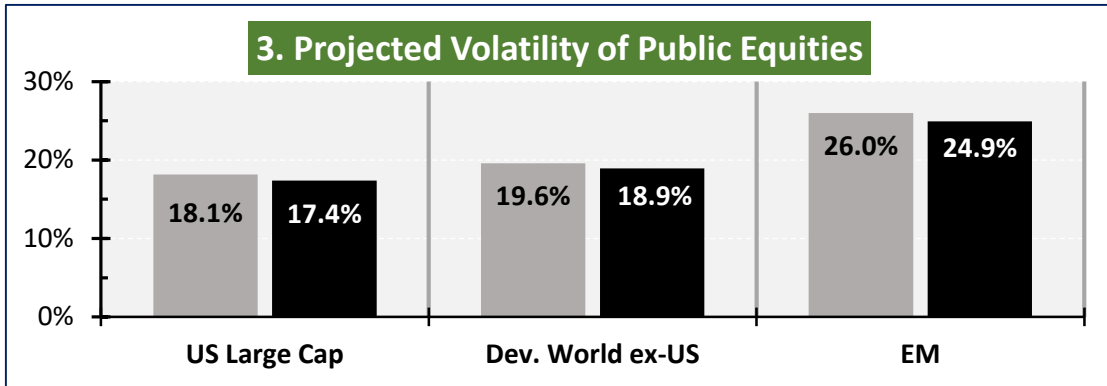
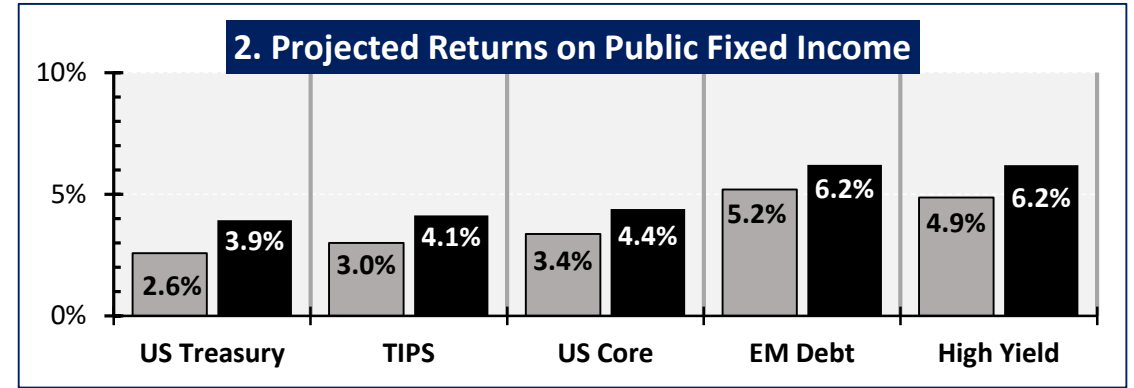
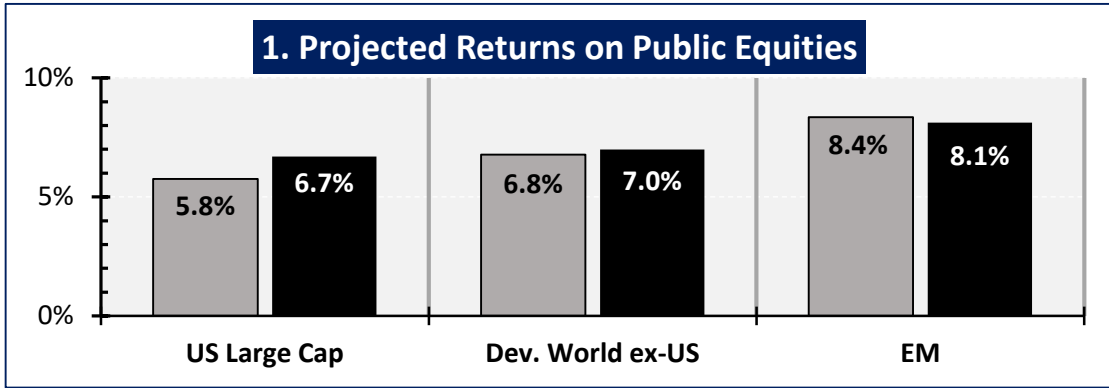
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2. COMPARE: MARKET ASSUMPTIONS FROM 2019 TO 2023

Public Markets

Average of Capital Market Assumptions across 5 General Consultants



■ 2019 Assumptions

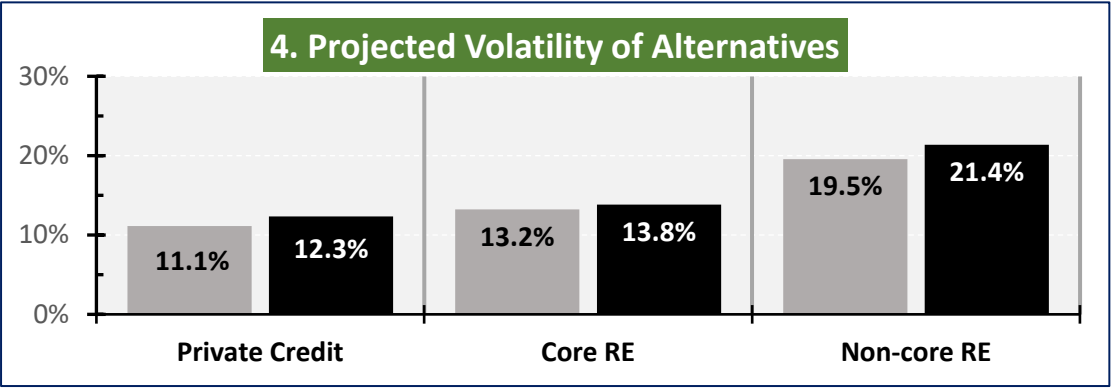
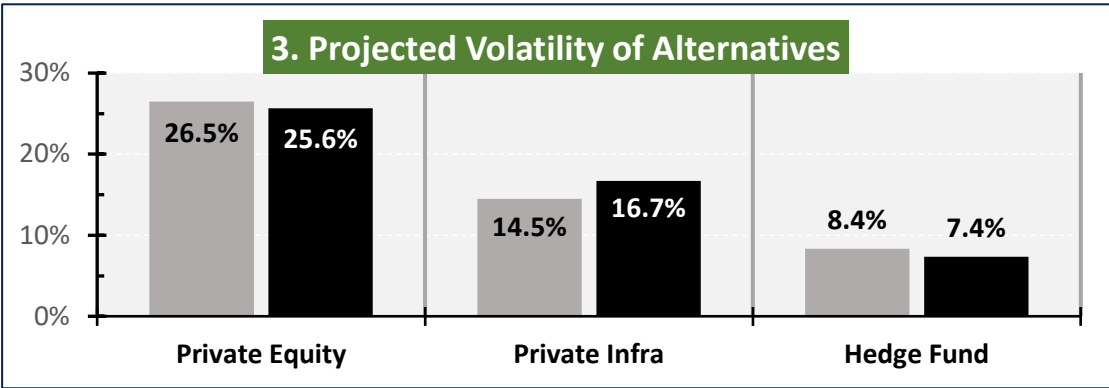
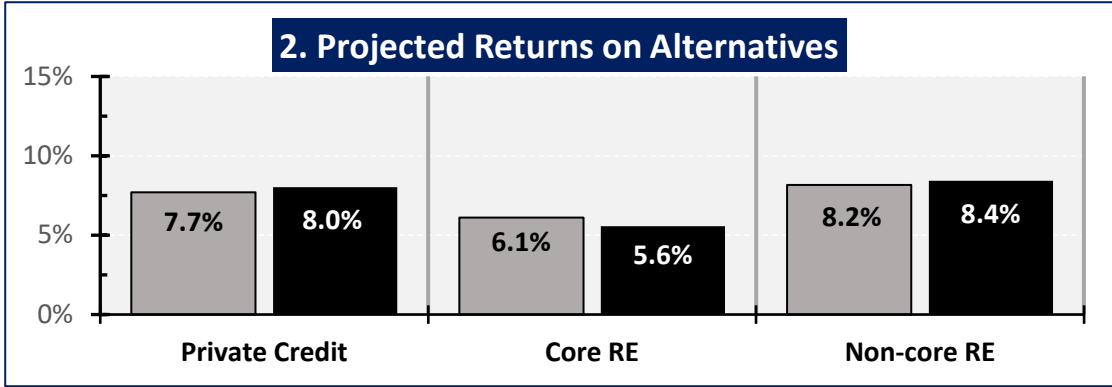
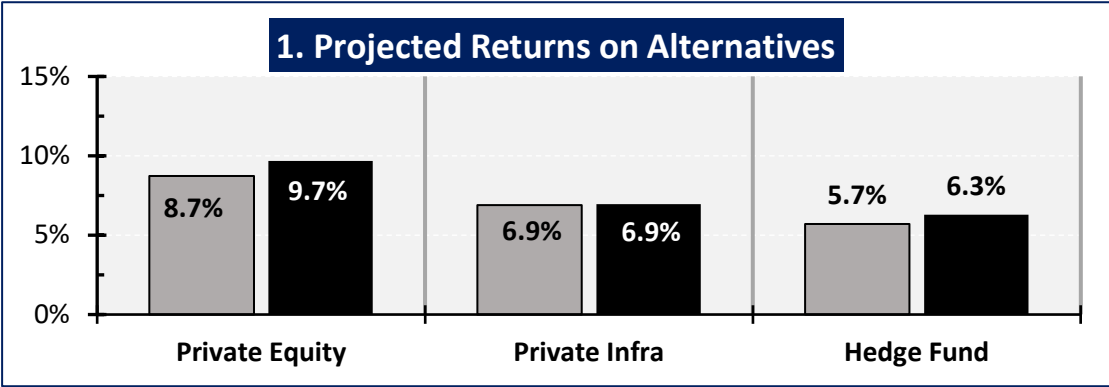
■ 2023 Assumptions



2. COMPARE: MARKET ASSUMPTIONS FROM 2019 TO 2023

Private Markets

Average of Capital Market Assumptions across 5 General Consultants



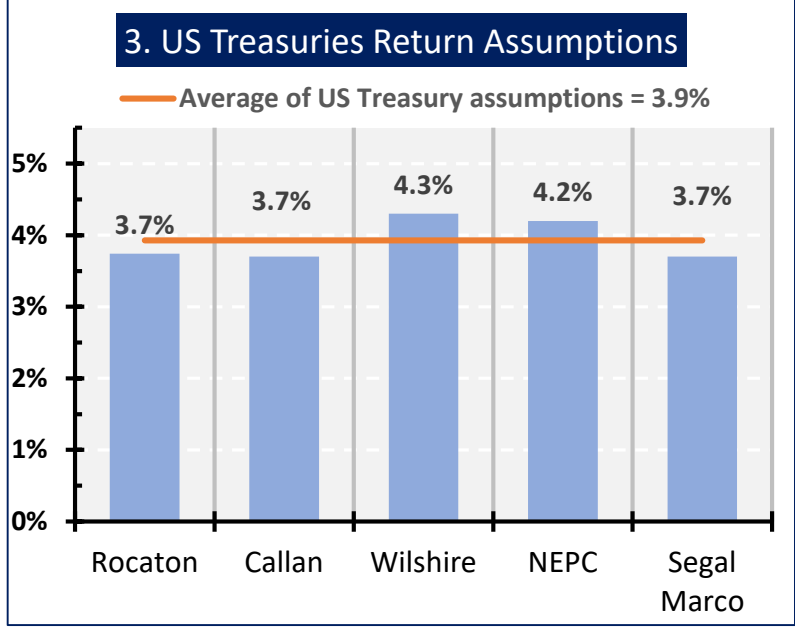
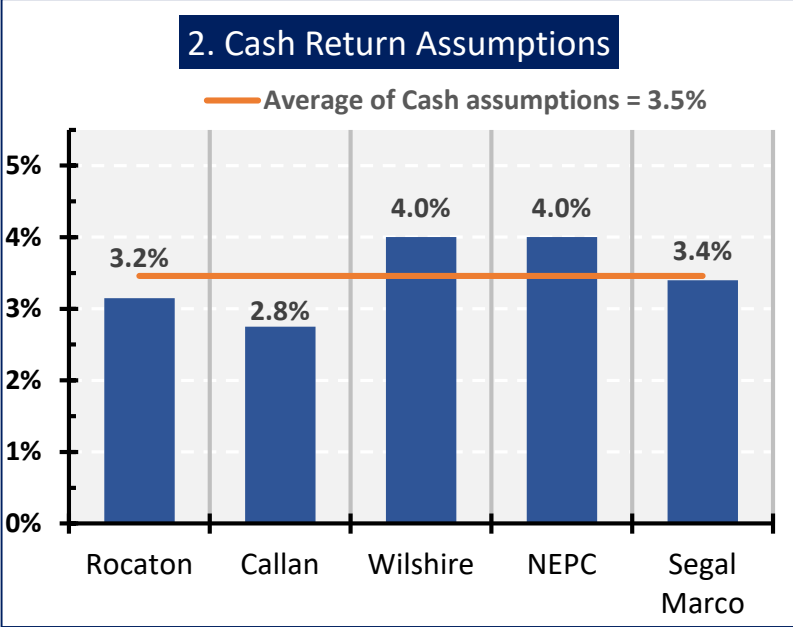
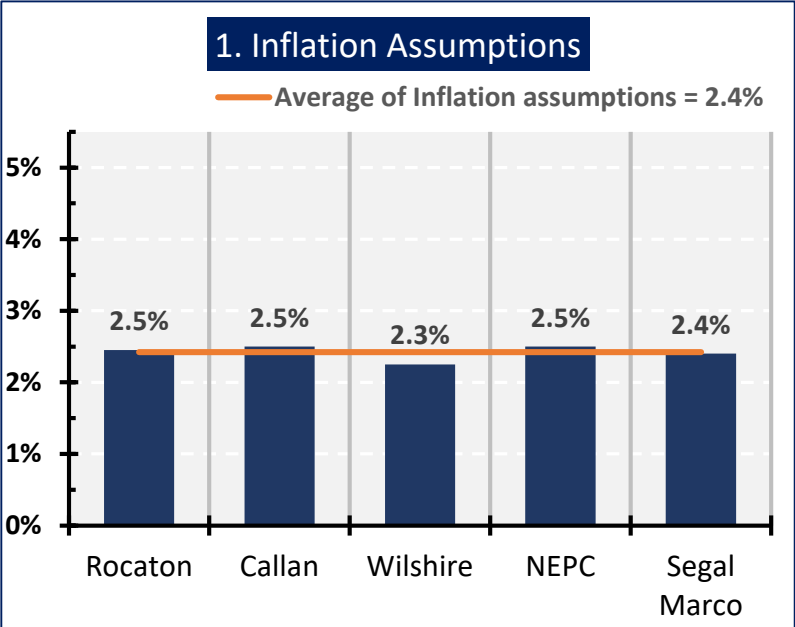
■ 2019 Assumptions

■ 2023 Assumptions



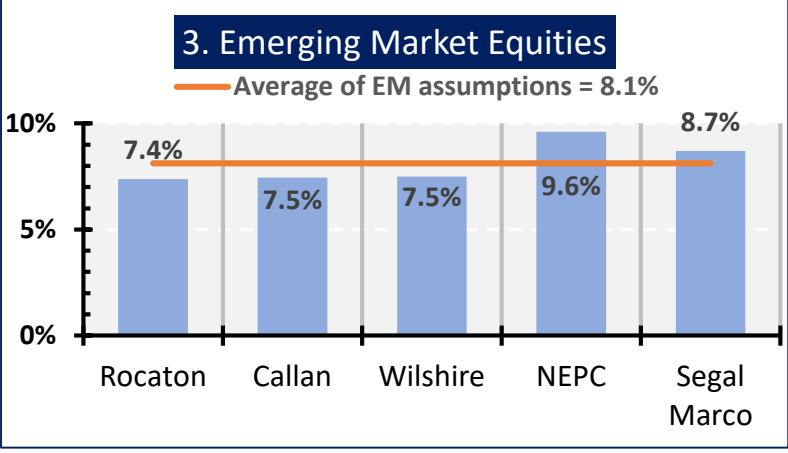
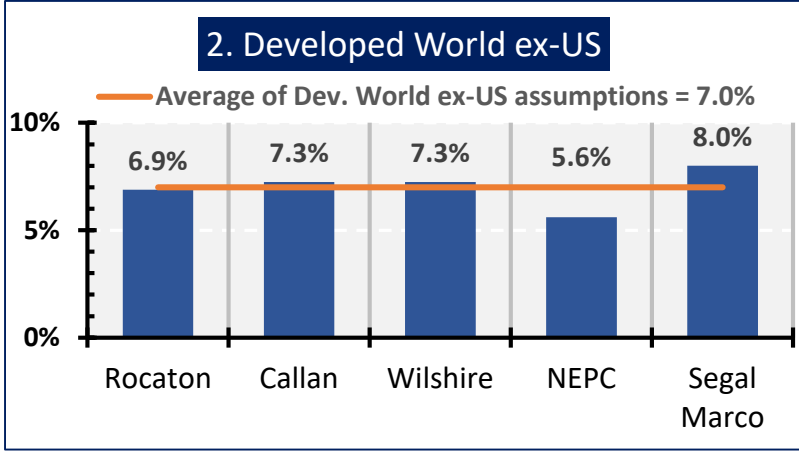
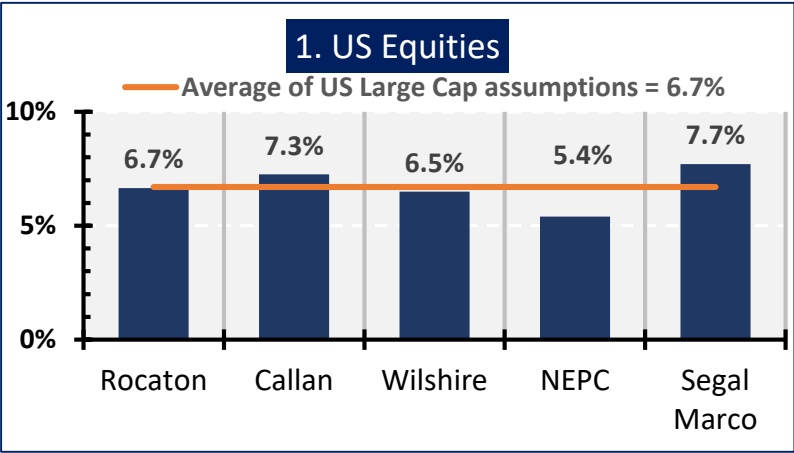
3. 2023 CAPITAL MARKET ASSUMPTIONS

Macro Assumptions

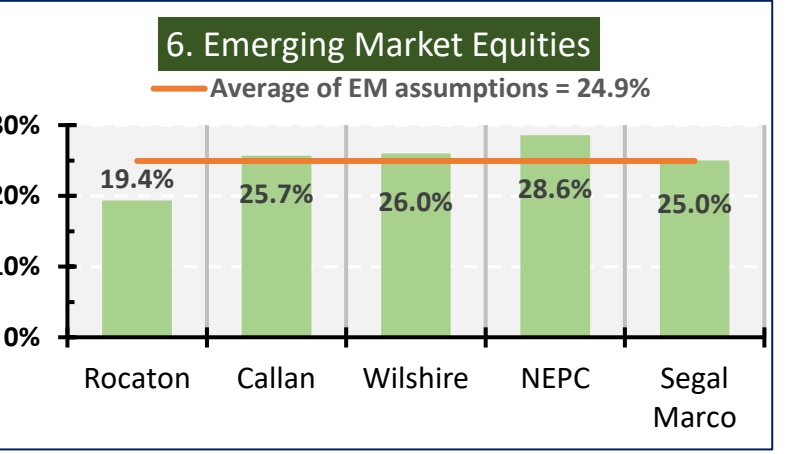
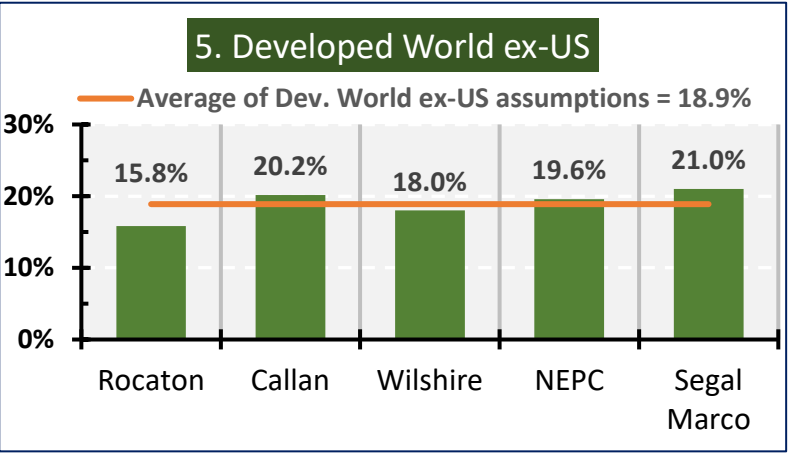
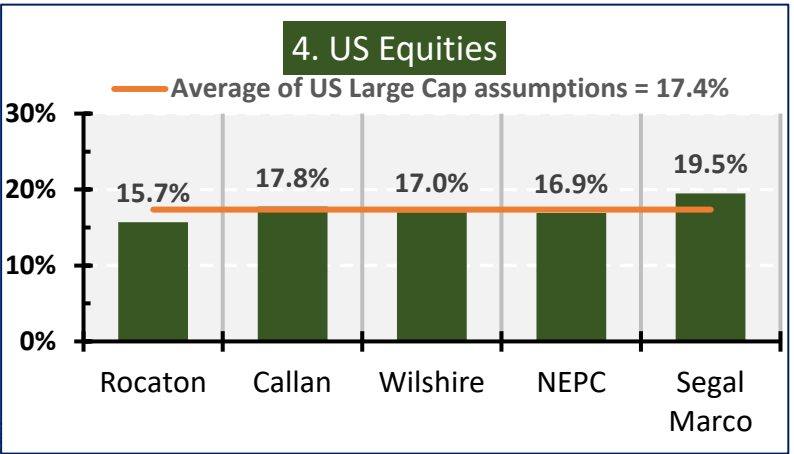


3. 2023 CAPITAL MARKET ASSUMPTIONS

Public Equity Return Assumptions

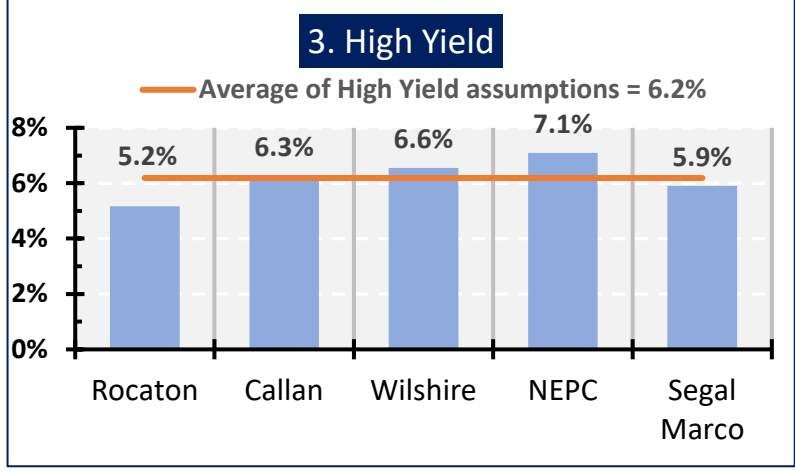
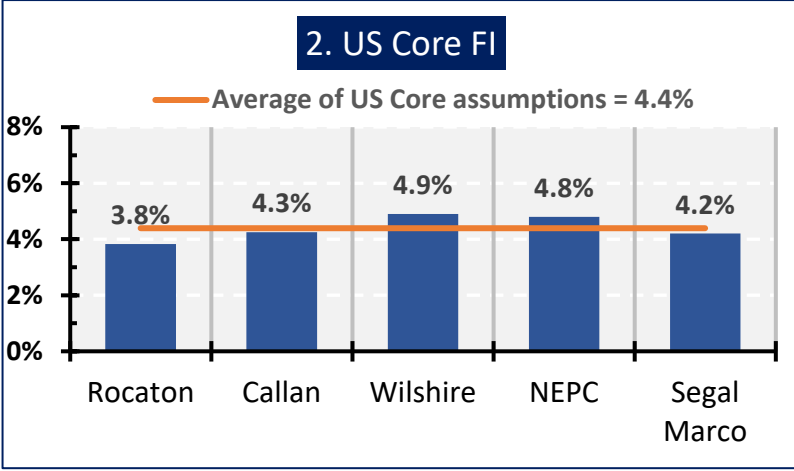
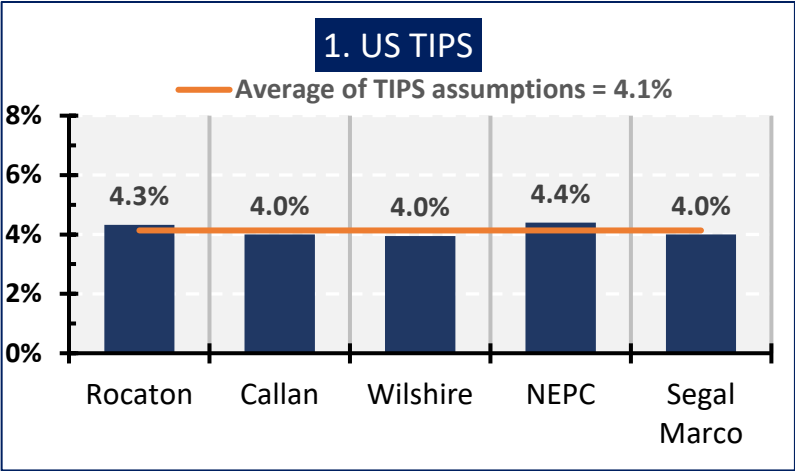


Public Equity Volatility Assumptions

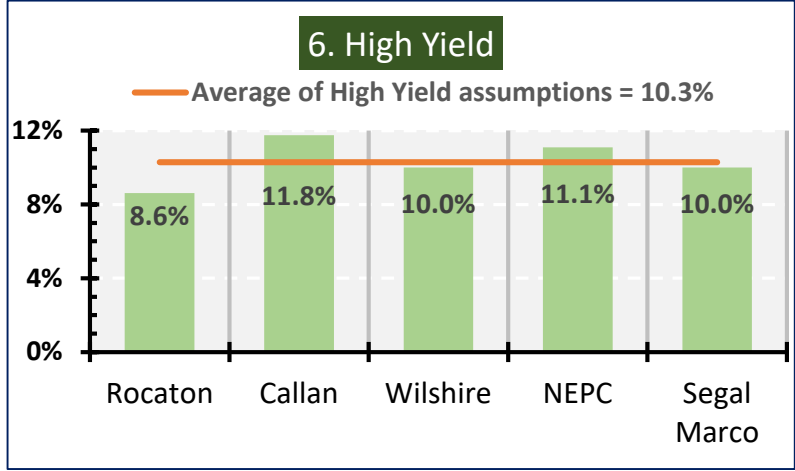
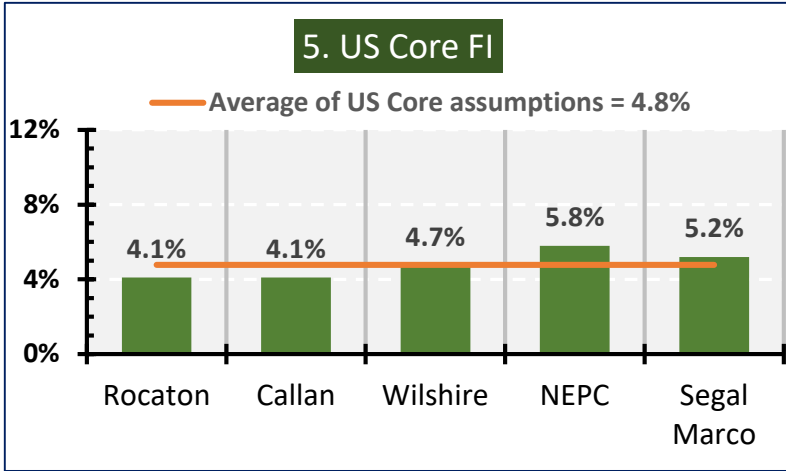
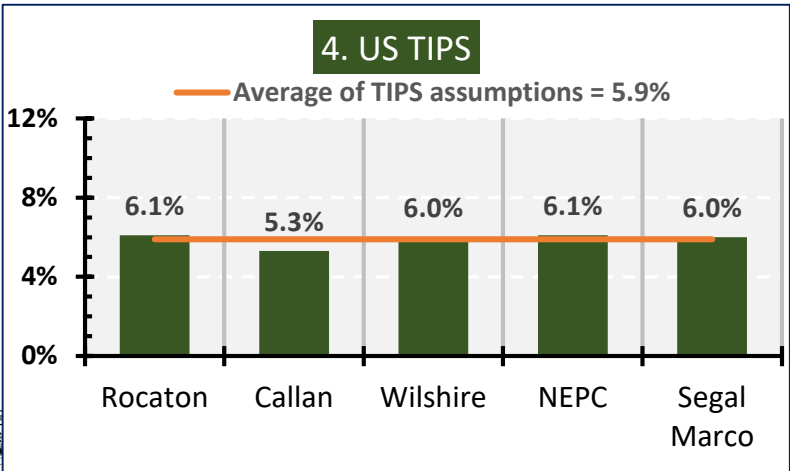


3. 2023 CAPITAL MARKET ASSUMPTIONS

Public Fixed Income Return Assumptions

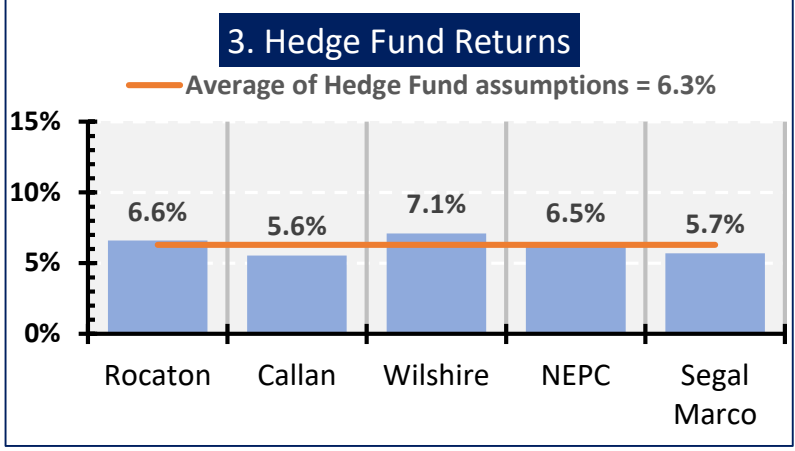
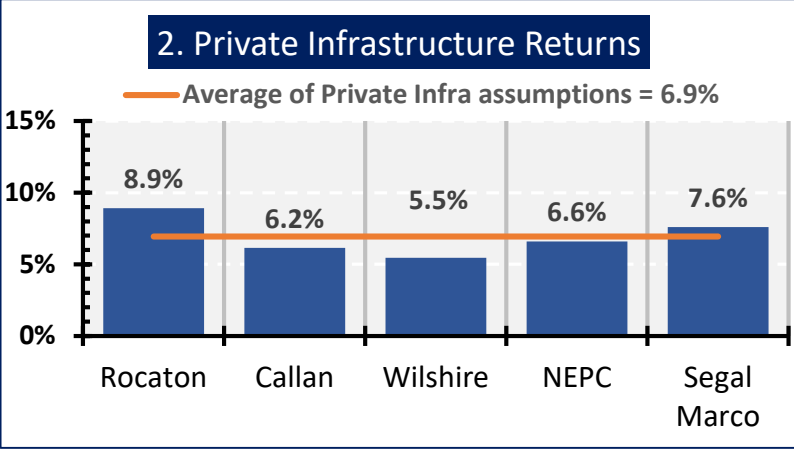
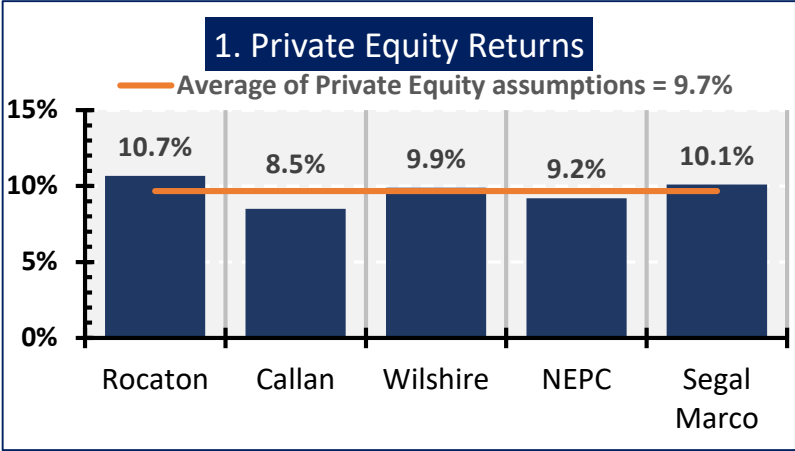


Public Fixed Income Volatility Assumptions

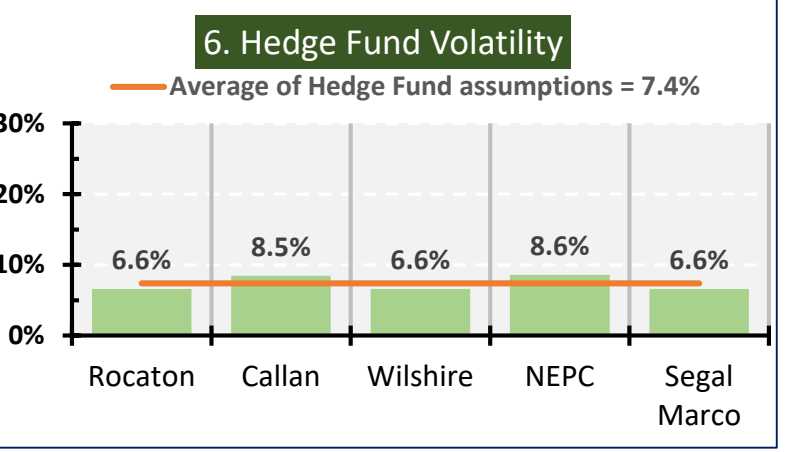
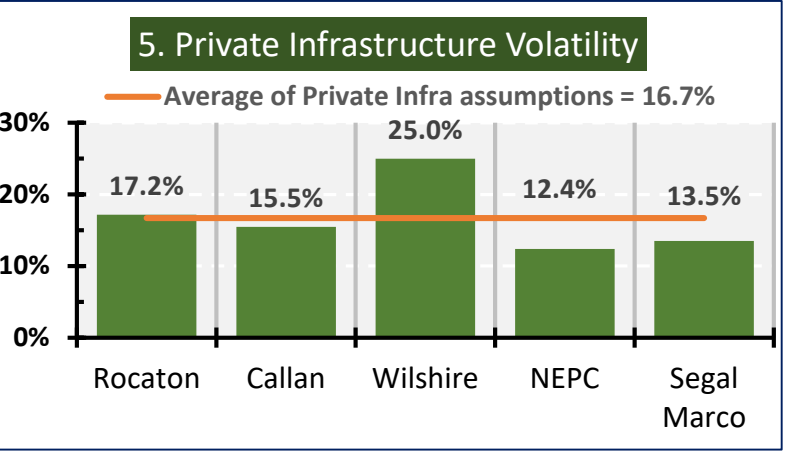
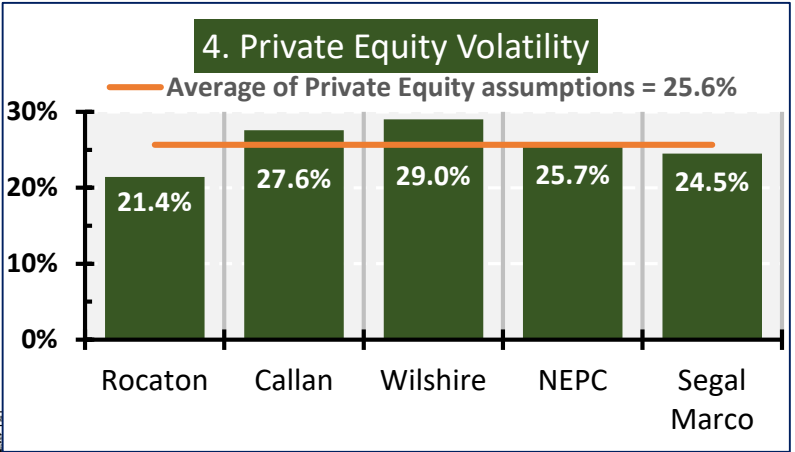


3. 2023 CAPITAL MARKET ASSUMPTIONS

Alternatives Return Assumptions

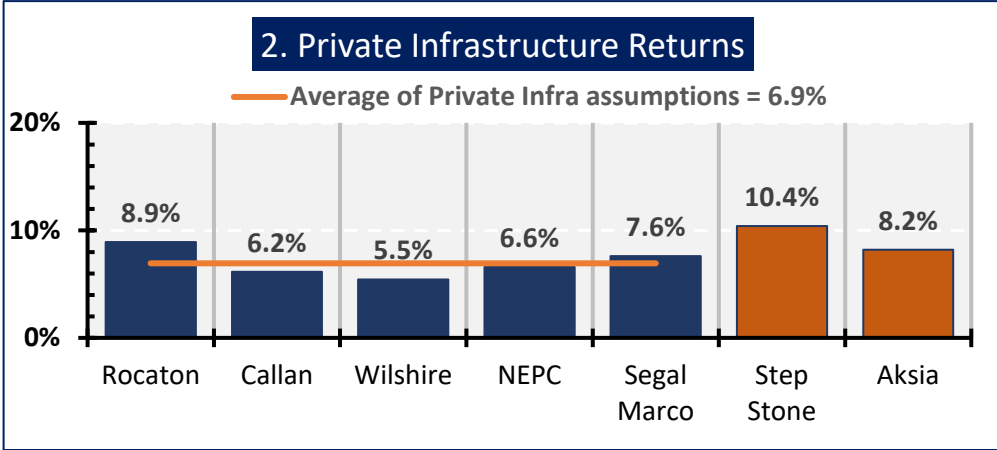
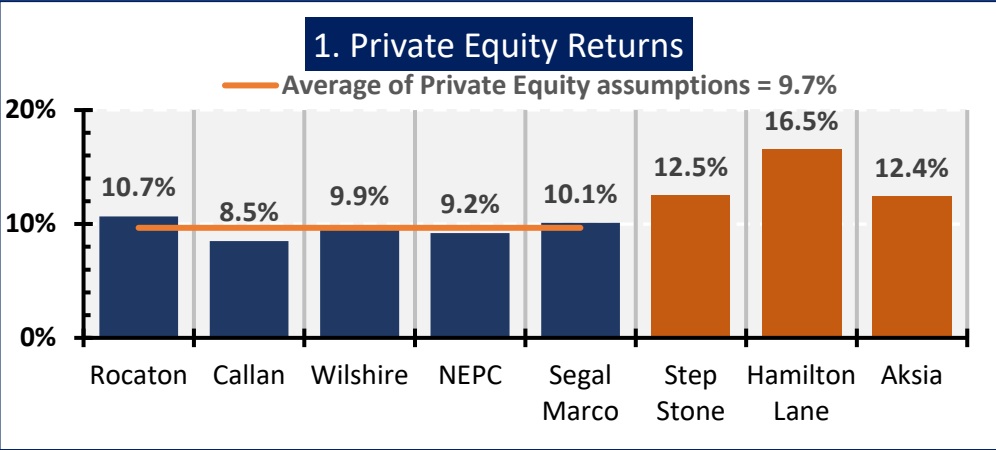


Alternative Volatility Assumptions

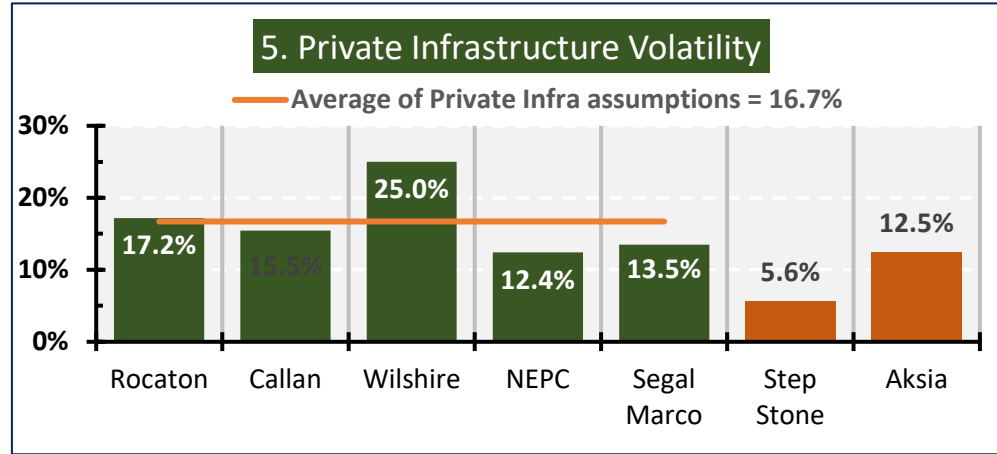
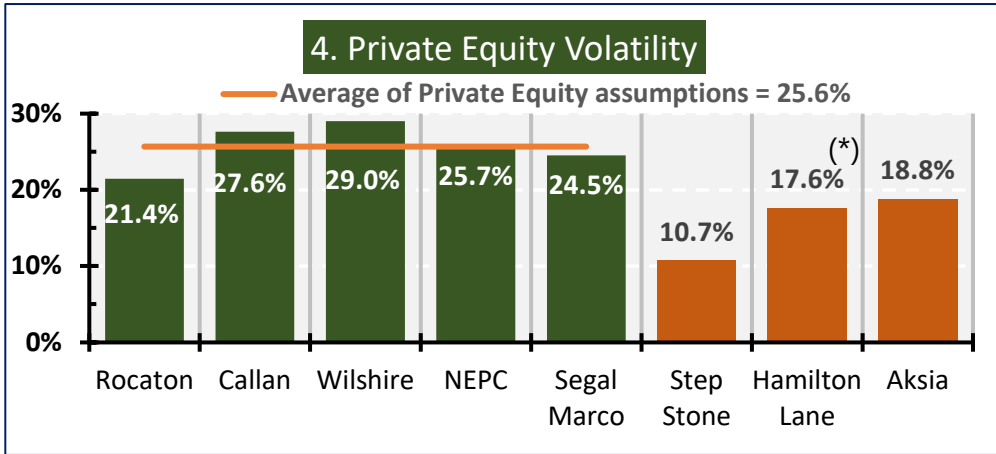


3. 2023 ASSUMPTIONS OF SPECIALIST CONSULTANTS

Alternatives Return Assumptions



Alternatives Volatility Assumptions

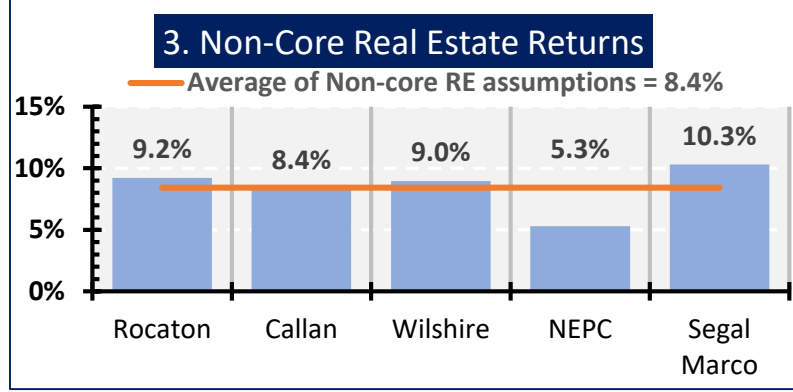
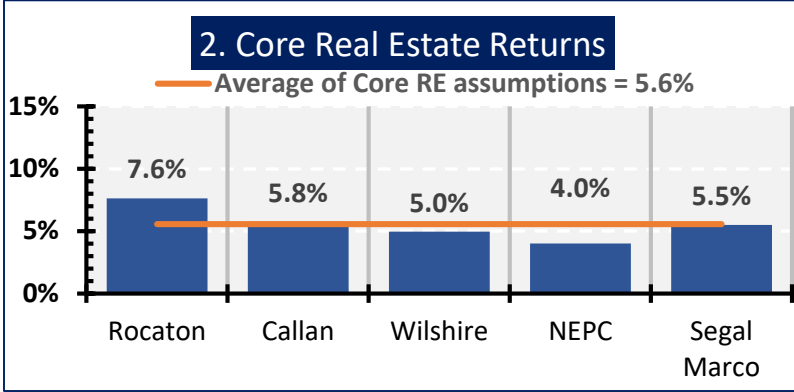
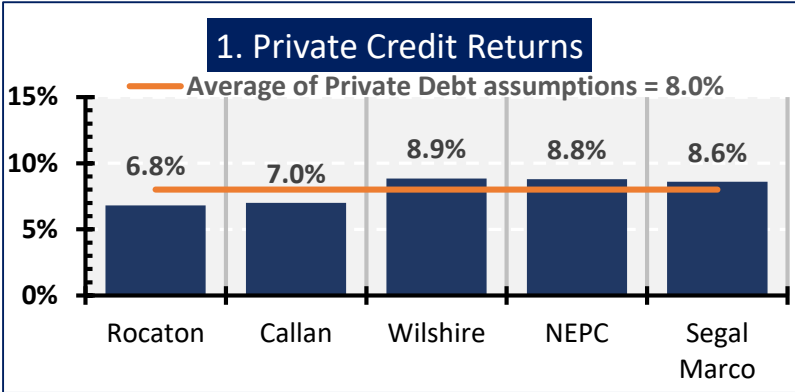


(*) Hamilton Lane reported the de-smoothed 20yr volatility

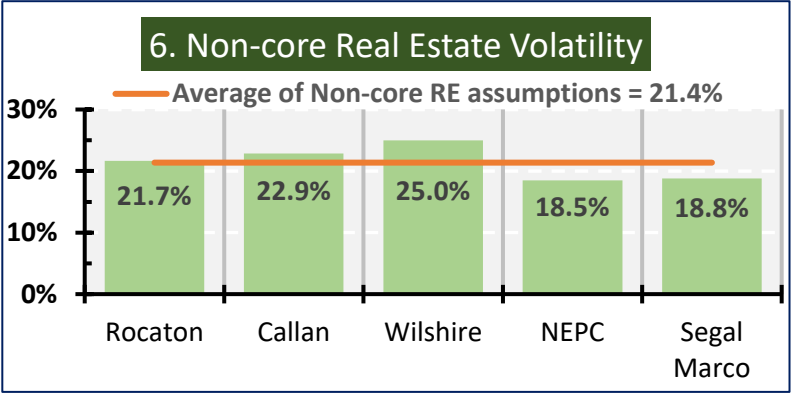
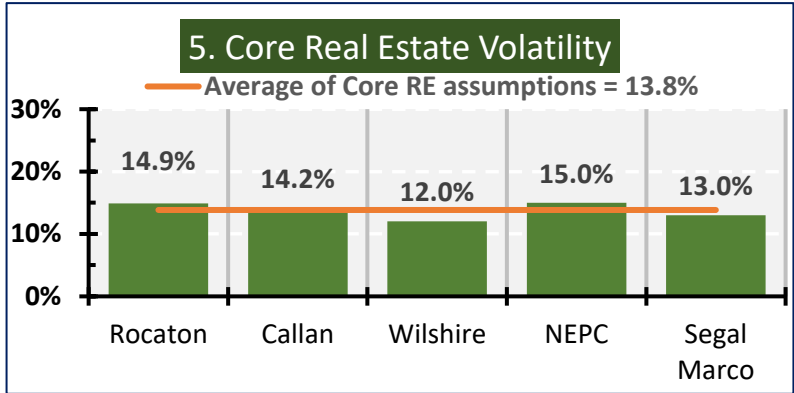
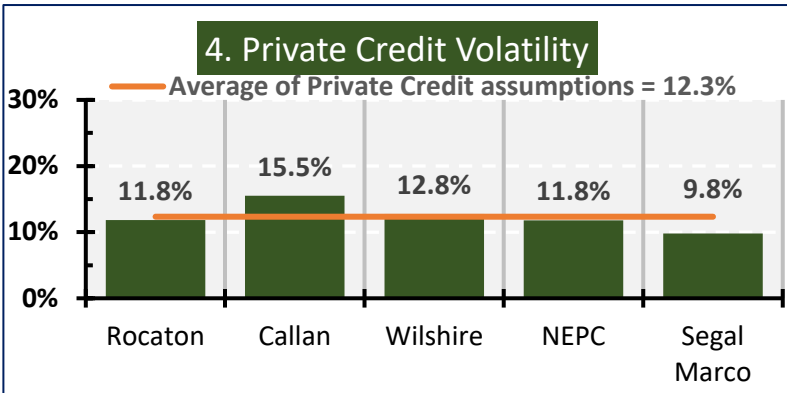


3. 2023 CAPITAL MARKET ASSUMPTIONS

Alternatives Return Assumptions

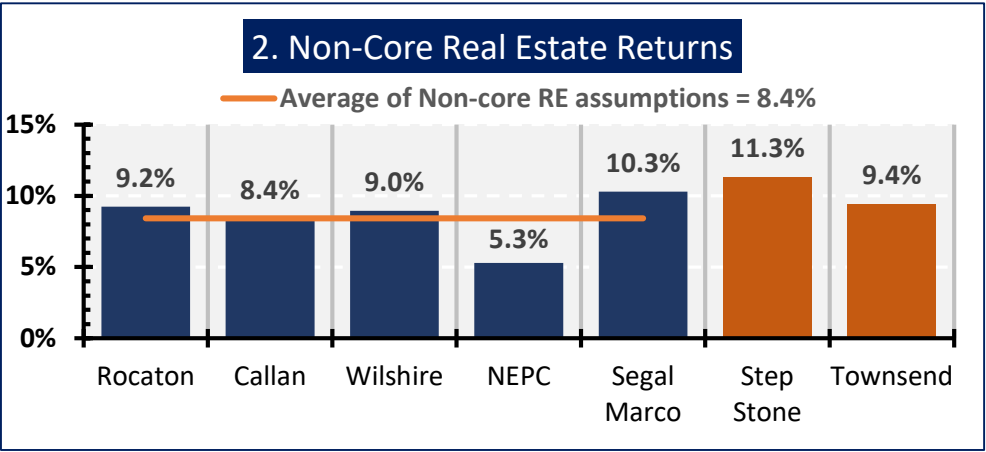
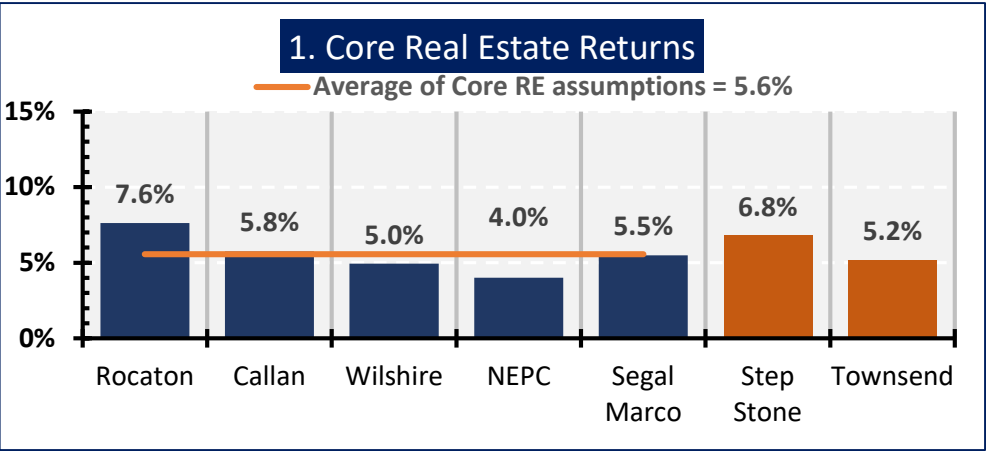


Alternatives Volatility Assumptions

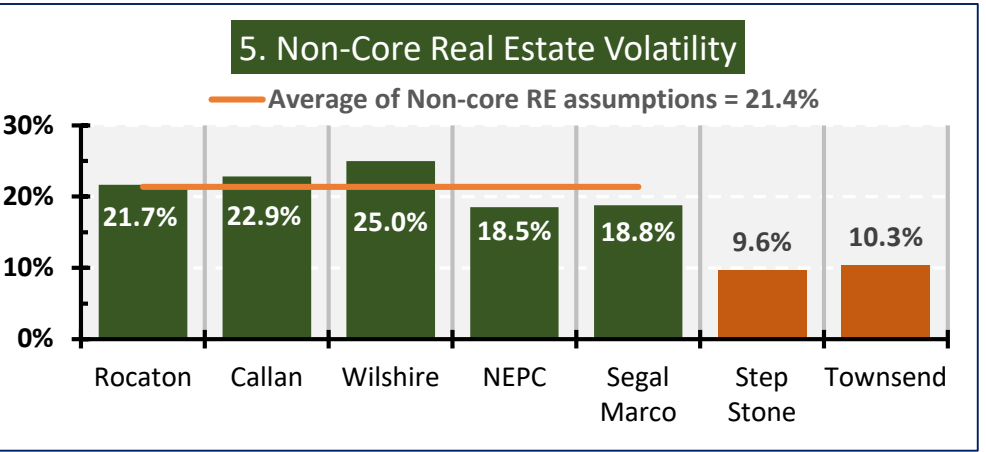
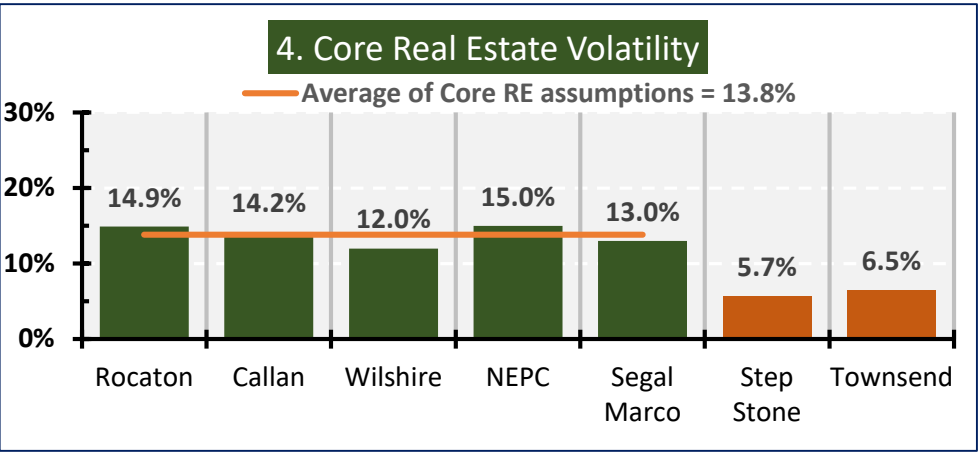


3. 2023 ASSUMPTIONS OF SPECIALIST CONSULTANTS

Alternatives Return Assumptions

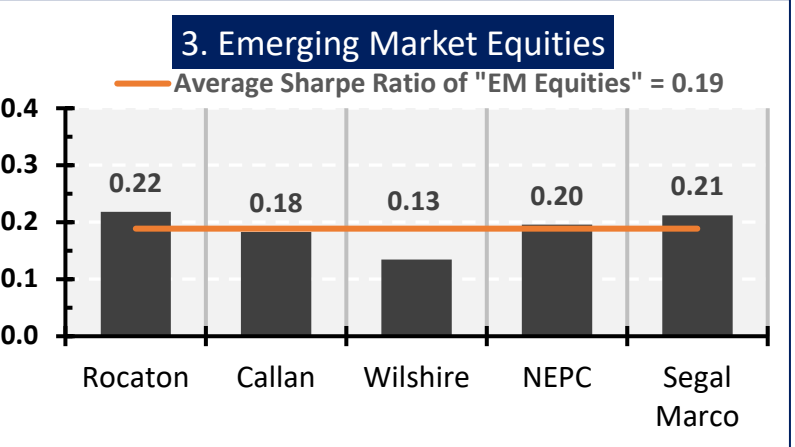
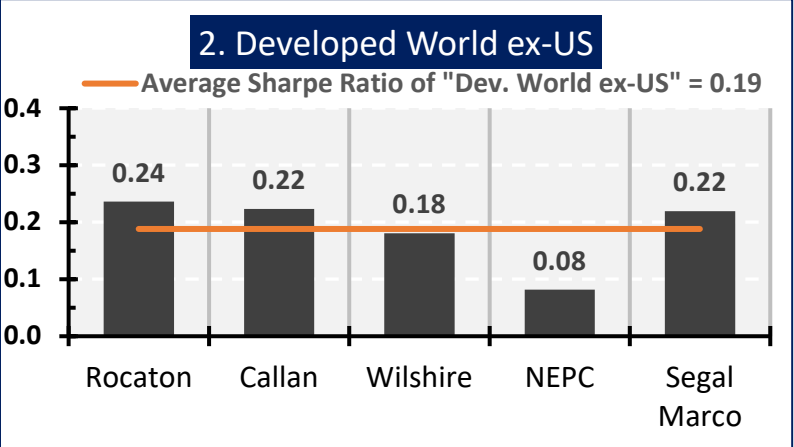
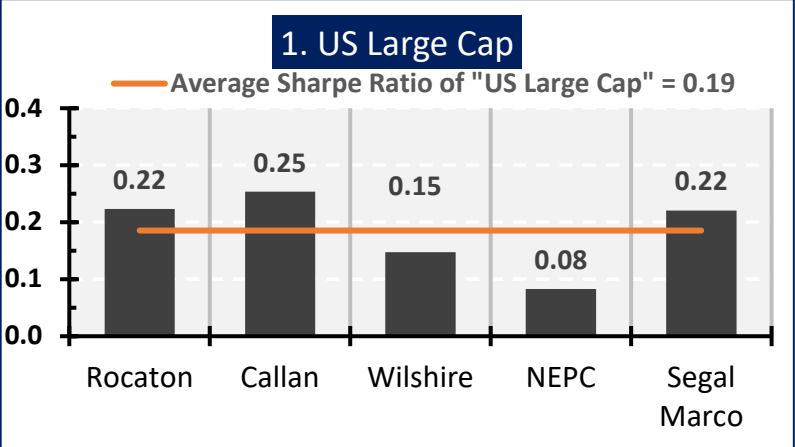


Alternatives Volatility Assumptions

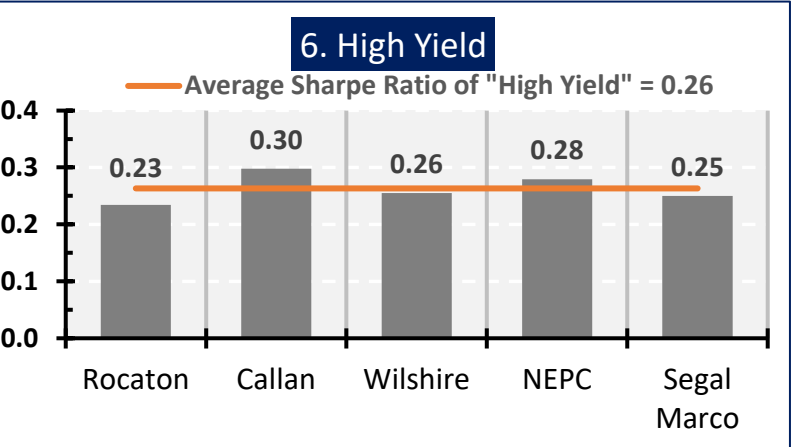
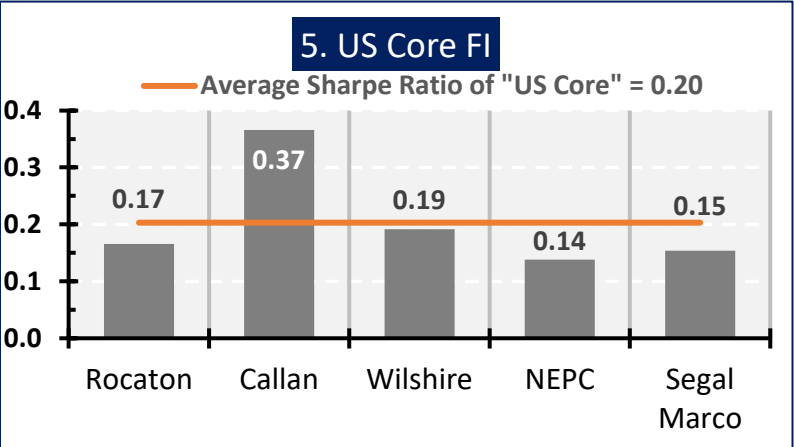
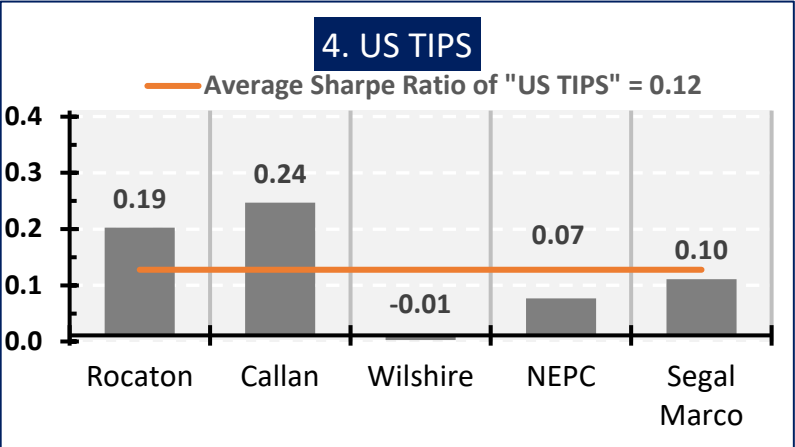


4. SHARPE RATIO

Assumed Sharpe for Public Equities

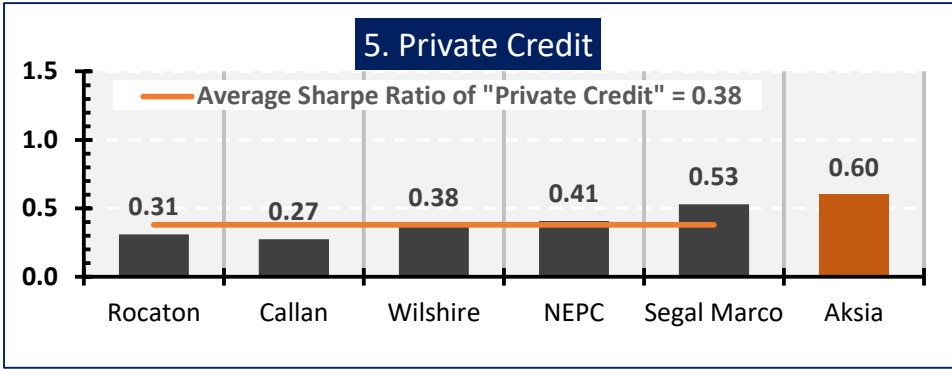
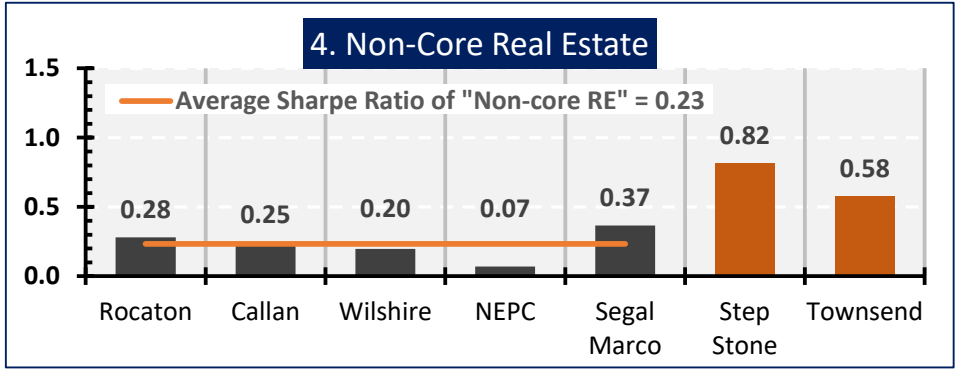
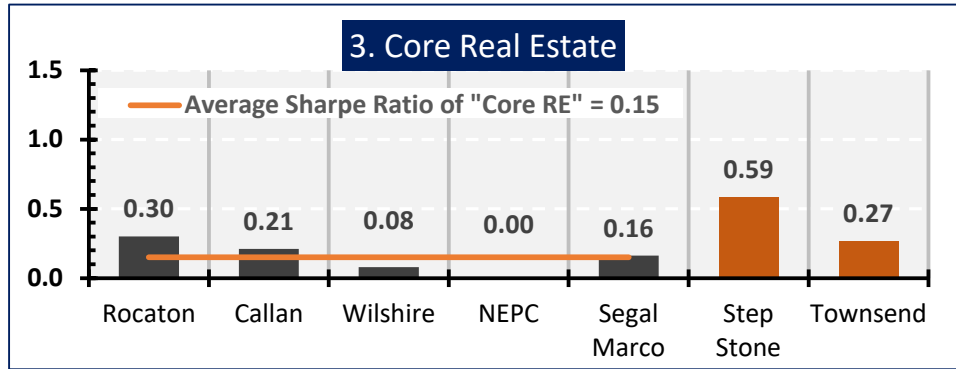
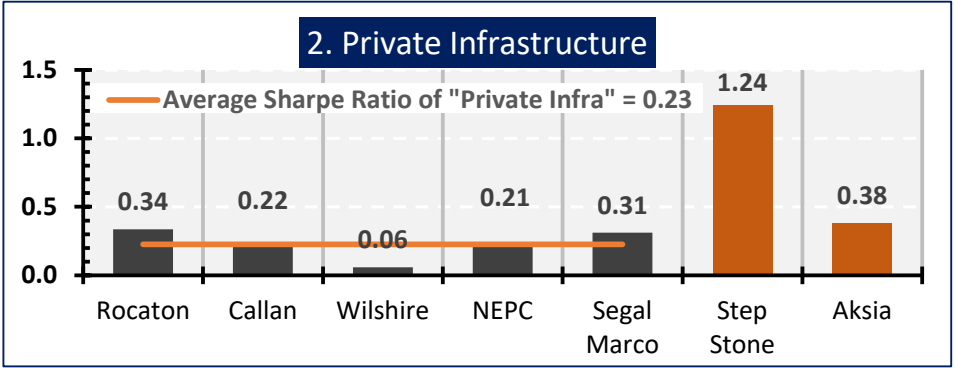
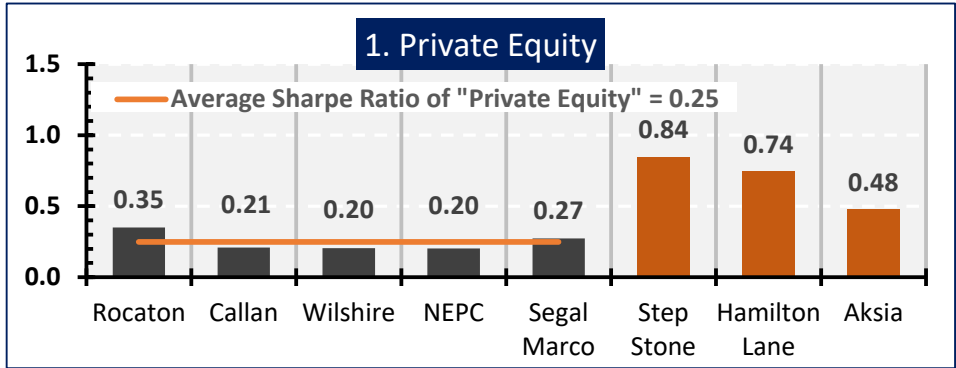


Assumed Sharpe for Public Fixed Income



4. SHARPE RATIO

Assumed Sharpe for Alternatives



APPENDIX

SUMMARY OF 2023 CAPITAL MARKET ASSUMPTIONS



4. MATRIX OF 2023 ASSUMPTIONS:

CORRELATION

Correlation with US Large Cap Equity

		Correlation with US Large Cap Equity							
		General Consultants							
		Rocaton	Callan	Wilshire	NEPC	Segal Marco	Average	Min	Max
Macro	Inflation	n/a	-0.02	-0.10	n/a	n/a	-0.06	-0.10	-0.02
	Cash	n/a	-0.06	-0.05	0.00	-0.23	-0.08	-0.23	0.00
Public Equity	US Large Cap	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	Dev. World ex-US	0.83	0.73	0.81	0.82	0.87	0.81	0.73	0.87
	EM	0.72	0.79	0.74	0.71	0.71	0.73	0.71	0.79
Public Fixed Income	US Treasury	-0.04	-0.05	n/a	-0.13	n/a	-0.07	-0.13	-0.04
	TIPS	0.26	-0.07	-0.05	-0.13	0.39	0.08	-0.13	0.39
	US Core	0.22	0.02	0.28	0.11	0.28	0.18	0.02	0.28
	EM Debt	0.58	0.65	n/a	0.67	0.56	0.62	0.56	0.67
	High Yield	0.67	0.75	0.54	0.66	0.78	0.68	0.54	0.78
Alts	Private Equity	0.86	0.79	0.72	0.91	0.75	0.81	0.72	0.91
	Private Infra	0.63	0.48	0.62	0.50	0.74	0.59	0.48	0.74
	Private Credit	0.58	0.69	0.68	0.63	0.44	0.60	0.44	0.69
	Core RE	0.66	0.44	0.55	0.46	0.09	0.44	0.09	0.66
	Non-core RE	0.65		n/a	0.55	0.58	0.59	0.55	0.65
	Hedge Fund	0.53	0.67	n/a	0.85	0.78	0.71	0.53	0.85



4. MATRIX OF 2023 ASSUMPTIONS:

CORRELATION

Correlation with US Core Fixed Income

		Correlation with US Core FI					Average	Min	Max
		General Consultants							
		Rocaton	Callan	Wilshire	NEPC	Segal Marco			
Macro	Inflation	n/a	-0.23	-0.12	n/a	n/a	-0.18	-0.23	-0.12
	Cash	n/a	0.15	0.18	0.16	0.00	0.12	0.00	0.18
Public Equity	US Large Cap	0.22	0.02	0.28	0.11	0.28	0.18	0.02	0.28
	Dev. World ex-US	0.26	0.00	0.13	0.10	0.27	0.15	0.00	0.27
	EM	0.21	-0.04	0.00	0.06	0.28	0.10	-0.04	0.28
Public Fixed Income	US Treasury	0.90	0.83	n/a	0.92	n/a	0.88	0.83	0.92
	TIPS	0.81	0.70	0.60	0.90	0.85	0.77	0.60	0.90
	US Core	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	EM Debt	0.58	0.19	n/a	0.55	0.51	0.46	0.19	0.58
	High Yield	0.27	0.09	0.24	0.27	0.43	0.26	0.09	0.43
Alts	Private Equity	0.20	-0.09	0.30	0.08	0.10	0.12	-0.09	0.30
	Private Infra	0.24	0.15	0.22	0.13	0.39	0.23	0.13	0.39
	Private Credit	0.06	0.00	0.24	0.14	0.08	0.10	0.00	0.24
	Core RE	0.41	0.14	0.19	0.17	-0.07	0.17	-0.07	0.41
	Non-core RE	0.39		n/a	0.21	0.02	0.21	0.02	0.39
	Hedge Fund	0.17	0.29	n/a	0.23	0.14	0.21	0.14	0.29



4. MATRIX OF 2023 ASSUMPTIONS:

RETURNS

Returns: 10yr Geometric Return Assumptions

		General Consultants				
		Rocaton	Callan	Wilshire	NEPC	Segal Marco
Macro	Inflation	2.5%	2.5%	2.3%	2.5%	2.4%
	Cash	3.2%	2.8%	4.0%	4.0%	3.4%
Public Equity	US Large Cap	6.7%	7.3%	6.5%	5.4%	7.7%
	Dev. World ex-US	6.9%	7.3%	7.3%	5.6%	8.0%
	EM	7.4%	7.5%	7.5%	9.6%	8.7%
Public Fixed Income	US Treasury	3.7%	3.7%	4.3%	4.2%	3.7%
	TIPS	4.3%	4.0%	4.0%	4.4%	4.0%
	US Core	3.8%	4.3%	4.9%	4.8%	4.2%
	EM Debt	6.2%	5.9%	n/a	7.1%	5.7%
	High Yield	5.2%	6.3%	6.6%	7.1%	5.9%
Alts	Private Equity	10.7%	8.5%	9.9%	9.2%	10.1%
	Private Infra	8.9%	6.2%	5.5%	6.6%	7.6%
	Private Credit	6.8%	7.0%	8.9%	8.8%	8.6%
	Core RE	7.6%	5.8%	5.0%	4.0%	5.5%
	Non-core RE	9.2%	8.4%	9.0%	5.3%	10.3%
	Hedge Fund	6.6%	5.6%	7.1%	6.5%	5.7%

General Consultants		
Average	Min	Max
2.4%	2.3%	2.5%
3.5%	2.8%	4.0%
6.7%	5.4%	7.7%
7.0%	5.6%	8.0%
8.1%	7.4%	9.6%
3.9%	3.7%	4.3%
4.1%	4.0%	4.4%
4.4%	3.8%	4.9%
6.2%	5.7%	7.1%
6.2%	5.2%	7.1%
9.7%	8.5%	10.7%
6.9%	5.5%	8.9%
8.0%	6.8%	8.9%
5.6%	4.0%	7.6%
8.4%	5.3%	10.3%
6.3%	5.6%	7.1%

Specialty Consultants			
Step Stone	Townsend	Hamilton Lane	Aksia
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
12.5%	-	16.5%	12.4%
10.4%	-	-	8.2% (*)
-	-	-	9.1%
6.8%	5.2%	-	-
11.3%	9.4%	-	-
-	-	-	-

(*) Aksia assumptions for Private Infra are based on Real Assets



4. MATRIX OF 2023 ASSUMPTIONS:

RISK

Risk: Volatility Assumptions

		General Consultants				
		Rocaton	Callan	Wilshire	NEPC	Segal Marco
Macro	Inflation	n/a	1.6%	1.8%	n/a	n/a
	Cash	n/a	0.9%	0.8%	0.6%	2.0%
Public Equity	US Large Cap	15.7%	17.8%	17.0%	16.9%	19.5%
	Dev. World ex-US	15.8%	20.2%	18.0%	19.6%	21.0%
	EM	19.4%	25.7%	26.0%	28.6%	25.0%
Public Fixed Income	US Treasury	7.8%	13.5%	5.0%	5.4%	5.0%
	TIPS	6.1%	5.3%	6.0%	6.1%	6.0%
	US Core	4.1%	4.1%	4.7%	5.8%	5.2%
	EM Debt	8.6%	10.7%	n/a	13.0%	12.0%
	High Yield	8.6%	11.8%	10.0%	11.1%	10.0%
Alts	Private Equity	21.4%	27.6%	29.0%	25.7%	24.5%
	Private Infra	17.2%	15.5%	25.0%	12.4%	13.5%
	Private Credit	11.8%	15.5%	12.8%	11.8%	9.8%
	Core RE	14.9%	14.2%	12.0%	15.0%	13.0%
	Non-core RE	21.7%	22.9%	25.0%	18.5%	18.8%
	Hedge Fund	6.6%	8.5%	6.6%	8.6%	6.6%

General Consultants		
Average	Min	Max
1.7%	1.6%	1.8%
1.1%	0.6%	2.0%
17.4%	15.7%	19.5%
18.9%	15.8%	21.0%
24.9%	19.4%	28.6%
7.3%	5.0%	13.5%
5.9%	5.3%	6.1%
4.8%	4.1%	5.8%
11.1%	8.6%	13.0%
10.3%	8.6%	11.8%
25.6%	21.4%	29.0%
16.7%	12.4%	25.0%
12.3%	9.8%	15.5%
13.8%	12.0%	15.0%
21.4%	18.5%	25.0%
7.4%	6.6%	8.6%

Specialty Consultants			
Step Stone	Townsend	Hamilton Lane	Aksia
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
10.7%	-	17.6% (*)	18.8%
5.6%	-	-	12.5% (**)
-	-	-	9.4%
5.7%	6.5%	-	-
9.6%	10.3%	-	-
-	-	-	-

(*) Desmoothed 20yr Volatility

(**) Aksia assumptions for Private Infra are based on Real Assets



4. MATRIX OF 2023 ASSUMPTIONS:

SHARPE RATIOS

Ranking: Assumed 10-year Sharpe Ratio

		General Consultants				
		Rocaton	Callan	Wilshire	NEPC	Segal Marco
Public Equity	US Large Cap	0.22	0.25	0.15	0.08	0.22
	Dev. World ex-US	0.24	0.22	0.18	0.08	0.22
	EM Equities	0.22	0.18	0.13	0.20	0.21
Public Fixed Income	US Treasury	0.08	0.07	0.06	0.04	0.06
	US TIPS	0.19	0.24	-0.01	0.07	0.10
	US Core	0.17	0.37	0.19	0.14	0.15
	EM Debt	0.35	0.29	n/a	0.24	0.19
	High Yield	0.23	0.30	0.26	0.28	0.25
Alts	Private Equity	0.35	0.21	0.20	0.20	0.27
	Private Infra	0.34	0.22	0.06	0.21	0.31
	Private Credit	0.31	0.27	0.38	0.41	0.53
	Core RE	0.30	0.21	0.08	0.00	0.16
	Non-core RE	0.28	0.25	0.20	0.07	0.37
	Hedge Fund	0.52	0.33	0.47	0.29	0.35

General Consultants		
Average	Min	Max
0.19	0.08	0.25
0.19	0.08	0.24
0.19	0.13	0.22
0.06	0.04	0.08
0.12	-0.01	0.24
0.20	0.14	0.37
0.27	0.19	0.35
0.26	0.23	0.30
0.25	0.20	0.35
0.23	0.06	0.34
0.38	0.27	0.53
0.15	0.00	0.30
0.23	0.07	0.37
0.39	0.29	0.52

Specialty Consultants			
Step Stone	Townsend	Hamilton Lane	Aksia
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
0.84	-	0.74	0.48
1.24	-	-	0.38
-	-	-	0.60
0.59	0.27	-	-
0.82	0.58	-	-
-	-	-	-



Quarterly Presentation (Public):

- Market Overview
- Performance Update
- Risk Update

NON-INVESTMENT MATERIAL -
QUARTERLY PERFORMANCE
REPORTING SECTION (Public Reports):

State Street Quarterly Fund Performance Overview (Public):



New York City
Police Pension Fund, Subchapter Two
Performance Overview as of March 31, 2023

Total Fund Overview



New York City Police Pension Fund, Subchapter Two

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Through March 31, 2023

Wilshire

1Q23 Capital Markets Commentary

U.S. Equity

The U.S. stock market was up 7.3% for the first quarter but is down -8.6% for the past 12 months. The best performing sectors were IT (+21.2%) and Communication Services (+19.8%). The worst performing were Financials (-5.2%) and Energy (-4.6%). From a size perspective, large-cap outperformed small-cap by 400 basis points. Growth stocks vastly outperformed value for the quarter but still trail meaningfully for the one-year return.

The yield curve inversion that began during the third quarter of last year worsened during the first quarter of 2023. The spread between the 10-year Treasury and 3-month T-Bill, arguably the strongest predictor of a pending recession, is at a level not seen since the early 1980s. The Federal Reserve's aggressive action has pushed the short-term rate to a spread of 1.37% above the benchmark ten-year. The probability of a recession in the next 12 months, according to the Federal Reserve Bank of New York, currently stands at 62%. The short end of the curve had been rising this quarter until early March when the FDIC announced that they had closed the failing Silicon Valley Bank. Market action quickly pushed the curve mostly below year-end 2022 levels.

GDP: Real GDP growth was positive during the fourth quarter, expanding an annualized 2.6%. Growth for all of 2022 was modest at 0.9% after a rebound year in 2021, when the economy grew by 5.7%. Consumer, business and government spending all contributed to growth during the fourth quarter. The Atlanta Fed's GDPNow forecast for the first quarter of 2023 currently stands at 2.5%.

Source: Bureau of Economic Analysis.

Interest Rates: The Treasury curve fell for maturities one year and higher during the first quarter and rose modestly in the shorter end of the curve. The 10-year Treasury closed at 3.47%, down 41 basis points. The 10-year real yield (i.e., net of inflation) fell 43 basis points to 1.15%. The Federal Open Market Committee increased their overnight rate by 0.50%, targeting a range of 4.75% to 5.00%. The committee's current median outlook is for a rate of approximately 5.1% by the end of 2023.

Source: U.S. Treasury.

Inflation: Consumer price changes have moderated as the Consumer Price Index rose 1.0% for the three months ending February. For the one-year period, the CPI was up 6.0%. The 10-year break-even inflation rate was little changed at 2.32% in March versus 2.30% in December.

Source: Dept. of Labor (BLS), U.S. Treasury.

Employment: Jobs growth remains solid, with an average of 351k jobs/month added during the three months ending in February. The unemployment rate was unchanged at 3.6%, as it was in November. Wage growth has slowed this year, up 0.2% in February, a likely welcome sign for the Federal Reserve.

Source: Dept. of Labor (BLS).

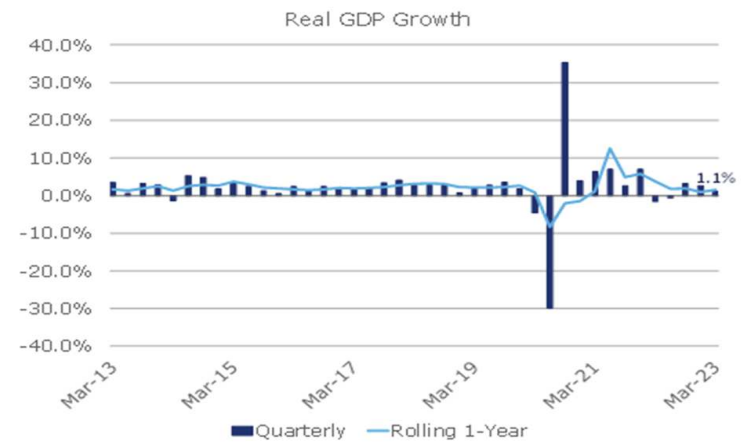
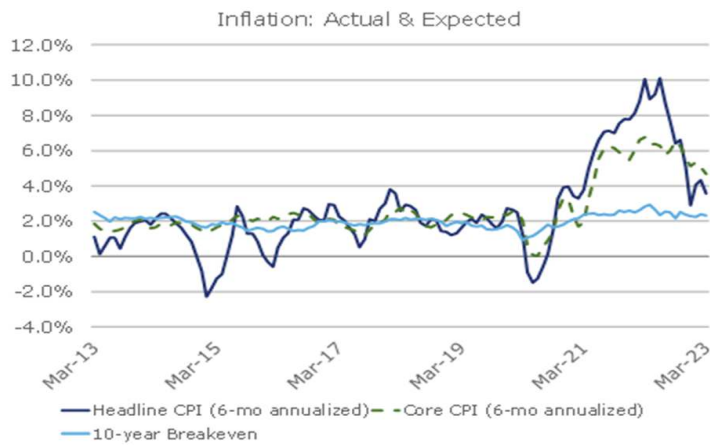


Through March 31, 2023

Wilshire

DATA SOURCES: BLOOMBERG

Inflation and Real GDP Growth



Through March 31, 2023

Wilshire

1Q23 Capital Markets Commentary (cont.)

Non-U.S. Equity

Performance results within international equity markets were positive for the first quarter, with developed outperforming emerging markets. The MSCI EAFE Index was up 8.47% for the quarter, while the MSCI Emerging Markets Index was up 3.96%. Banking weakness appeared in Europe as the Swiss bank, Credit Suisse, a key component of European finance, saw billions in depositor outflows in one day due to concerns of instability within the organization. Swiss authorities quickly pressed a plan for rival UBS to acquire the smaller bank at a reduced price, with Credit Suisse investors and creditors losing nearly everything. Across Europe, consumers continue to struggle with stubbornly high inflation and aggressive central bank tightening. China is quickly seeing benefits from its relaxed COVID-related restrictions as a key index measuring their services sector jumped in March to its highest level in more than a decade. The government has launched a concerted effort to attract foreign companies and boost foreign trade and investment.

Hedge Funds

In the first quarter, the Wilshire Liquid Alternative Index returned 1.20%, posting consecutive positive quarters for the first time since the first and second quarters of 2021. Equity hedge managers had a positive start to the year, with U.S.- and Asia-focused funds generating positive alpha on top of beta contribution, despite relative underperformance heading into the new year. Event-driven managers experienced a mixed Q1, with the risk-on environment in January being followed by a reversal in February and volatility in March surrounding issues in the U.S. banking sector. Merger arbitrage managers were impacted by negative news from the U.K. Capital Markets Authority on the \$68 billion Activision/Microsoft deal, casting significant doubt on the likelihood that the deal will close. Relative value managers enjoyed a positive Q1, supported by a favorable market backdrop and easing volatility. Macro managers had trouble navigating the risk-on period in January but quickly surged in February as previous trends in equities and yields resumed. The dramatic volatility in U.S. fixed income in March ultimately pushed many managers, especially trend followers, to negative returns for the quarter.

Fixed Income

The U.S. Treasury yield curve was up in the short-end (below 1-year) by approximately 50 basis points but fell across the remainder of the curve. The 10-year Treasury yield ended the quarter at 3.47%, down 41 basis points from December. Credit spreads were little changed during the quarter with investment grade up 8 basis points and high yield bonds down 14 basis points. The Federal Open Market Committee met twice during the quarter, as scheduled, and increased the overnight rate by 0.25% in both January and March, targeting a range of 4.75% to 5.00%. The Fed's "dot plot" is messaging that the current expectation is for another 25 basis point increase before the end of 2023 while markets are pricing a year-end rate that would be approximately 50 basis points lower than the current rate. Following the March meeting, Fed Chair Jerome Powell tried to ensure market participants that banking issues were isolated to a few banks and that the broader system was "sound and resilient."

Private Equity

Private investment has declined in three of the last four quarters, reflecting a more negative outlook on behalf of corporations relative to the spending habits of households, which appears to have deteriorated later in the quarter. Measures of corporate sentiment in combination with the recent challenges in the U.S. regional banking system, are indications that tighter monetary policy and financial conditions are beginning to weigh on corporations and the financial sector, which is likely to cause more material tightening of credit conditions and weigh on economic growth. Fundraising in North America slowed during the first quarter as 230 private equity funds secured a total of \$122.5 billion, compared to 329 funds raising \$141.8 billion in the fourth quarter of 2022. The largest funds to close during the quarter include Strategic Partners IX (\$22.2 billion), TSG 9 (\$6.0 billion) and West Street Global Growth Partners (\$5.2 billion). Similarly aggregate buyout deal value decreased in the quarter by -41.9% to \$86.8 billion from \$149.5 billion in Q4 2022. During the quarter 1,337 venture deals closed, valued at \$32.8 billion in aggregate value.

Through March 31, 2023

Wilshire

1Q23 Performance Commentary

Total Plan – For the first quarter of 2023 (1Q23), the Total Fund was valued at \$48.7 billion and returned 3.96% on a net-of-fee basis, underperforming the policy benchmark return of 4.91%. For the calendar year to date, the Total Fund returned 5.05%, outperforming the policy benchmark return of 4.14%.

- For the quarter, the Total Fund outperformed the median manager (3.66%) in the TUCS Public Plans greater than \$5 billion universe. For the calendar year, the Total Fund was below the median return (-3.58%).
- The strong relative performance for the last couple of quarters carried over to the trailing periods. The Total Fund returned 10.61% and 6.85%, net-of-fees for the three- and five-year periods. For the ten-year period, the Total Fund returned 8.03%, gross-of-fees. The Fund outperformed the policy benchmark returns of 10.01%, 6.62%, and 7.63%, respectively.

Total Domestic Equity Composite – The Total Fund has \$14.8 billion, or 30.4% invested in domestic equity. The composite remains predominately passively invested with 66.8% of the composite invested passively across market cap segments.

- For 1Q23, the Domestic Equity Composite returned 6.37% (net-of-fees), underperforming the Russell 3000 index return of 7.18%. Performance returns for the asset class segments ranged from 1.2% (Small Cap Passive) to 8.7% (Russell Top 200 Passive).
- In the active segments, three of four asset classes outperformed their respective index. The Emerging Managers segment had the strongest absolute and relative performance, returning 5.26% versus 2.74% for the index. The Active Small Cap segment also outperformed, returning 5.17% versus 2.74% for the Russell 2000. The Active Mid Cap outperformed, returning 5.16% versus 4.06% for the Russell Mid Cap.
- Active manager results were mixed for the quarter. Cooke and Bieler Small Cap Value outperformed the Russell 2000 Value index by a 4.50%; PIMCO RAFI US LMCE underperformed the Russell 1000 index by -4.91% for the quarter.

Through March 31, 2023

Wilshire

1Q23 Performance Commentary (cont.)

Total World ex-USA Composite – The Total Fund has \$3.7 billion, or 7.7% invested in developed international equities. The composite allocation is 77.2% Large & Mid Active, 9.1% Small Cap Active, and 13.7% passive.

- For 1Q23, the Total World ex-USA Composite returned 11.24%, overperforming the MSCI World Ex-US Custom Index which returned 7.58%. All segments overperformed their respective benchmarks.
- Individual active manager performance relative to their benchmarks were all positive. Causeway continued its run with the highest outperformance from last quarter by also having the highest this quarter, returning 14.68% versus 8.02% for its index.

Total Emerging Markets Composite – The Total Fund has \$2.3 billion or 4.8% invested in emerging markets. The composite allocation is 83.6% active and 16.4% passive.

- For 1Q23, the Emerging Markets Composite outperformed its policy benchmark, returning 5.16% (net-of-fees) versus the MSCI EM index return of 3.96%. Individual active manager performance was mixed. Baillie Gifford had the highest outperformance in the mix, beating its benchmark by 3.24%. UBS EM ACC trailed the MSCI EM index by 1.83%.

Total Hedge Funds Composite – The Total Fund has \$2.7 billion or 5.5% invested in hedge funds. For 1Q23, the hedge fund composite returned -1.79%, trailing the index which returned 1%.

Total Fixed Income Composite – The Total Fund has \$15.4 billion, or 31.7% invested in fixed income securities. The structure of the composite is 41.7% in Structured Fixed Income, 22.6% in High Yield, 13.8% in Opportunistic Fixed Income (OFI), 10.3% in TIPS, 6.1% in Convertible Bonds, 1.0% Core Plus Fixed Income, 2.6% in ETI, 1.9% in Short-Term Cash, and < 0.1% in Bank Loans.

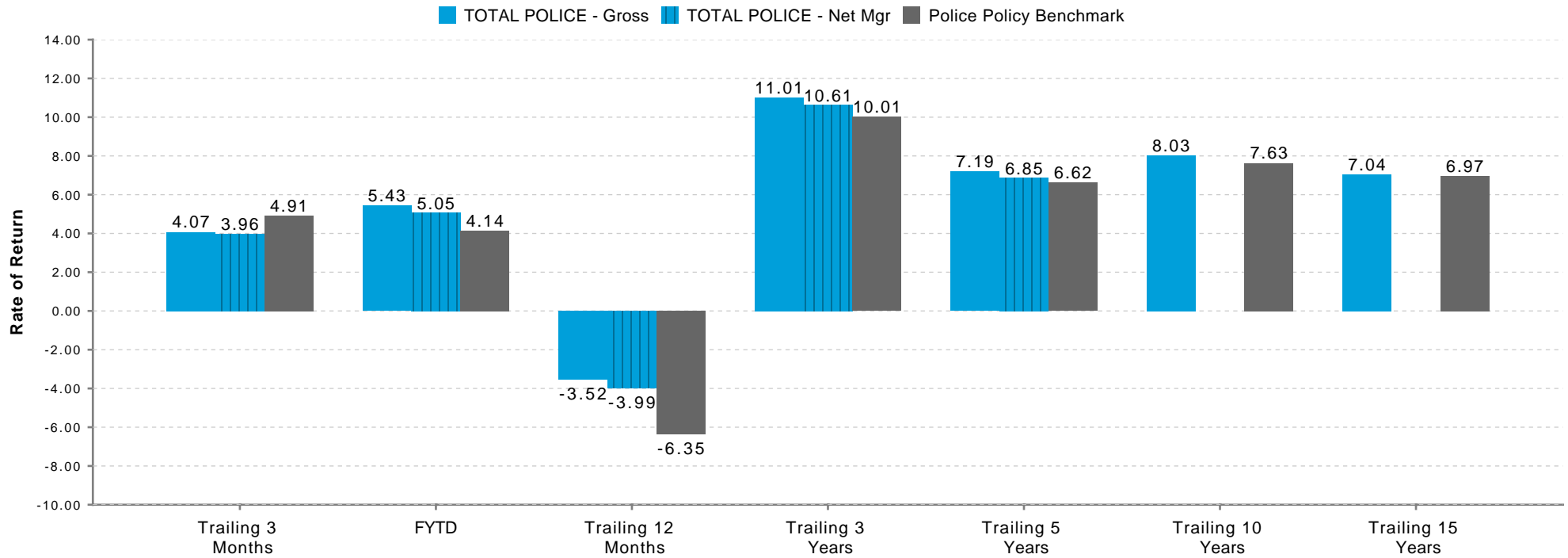
- For 1Q23, the Total Fixed Income Composite returned 3.44% (net-of-fees). All sectors produced positive returns.
- Structured Fixed Income had the strongest absolute performance, returning 3.96% net-of-fees, and overperforming the index which returned 3.69%. Targeted Investments had the strongest relative performance, returning 3.27% and its index returning 2.69%.
- Convertible Bonds had the weakest absolute and relative performance, returning 2.10% versus the index which returned 4.18%.
- Fixed income manager performance was mixed. Returns ranged from +2.78% (CPC Construction Facility) to -1.36% (Advent Convertible Bonds) relative to their benchmark.



Market Value (Billions)

TOTAL POLICE

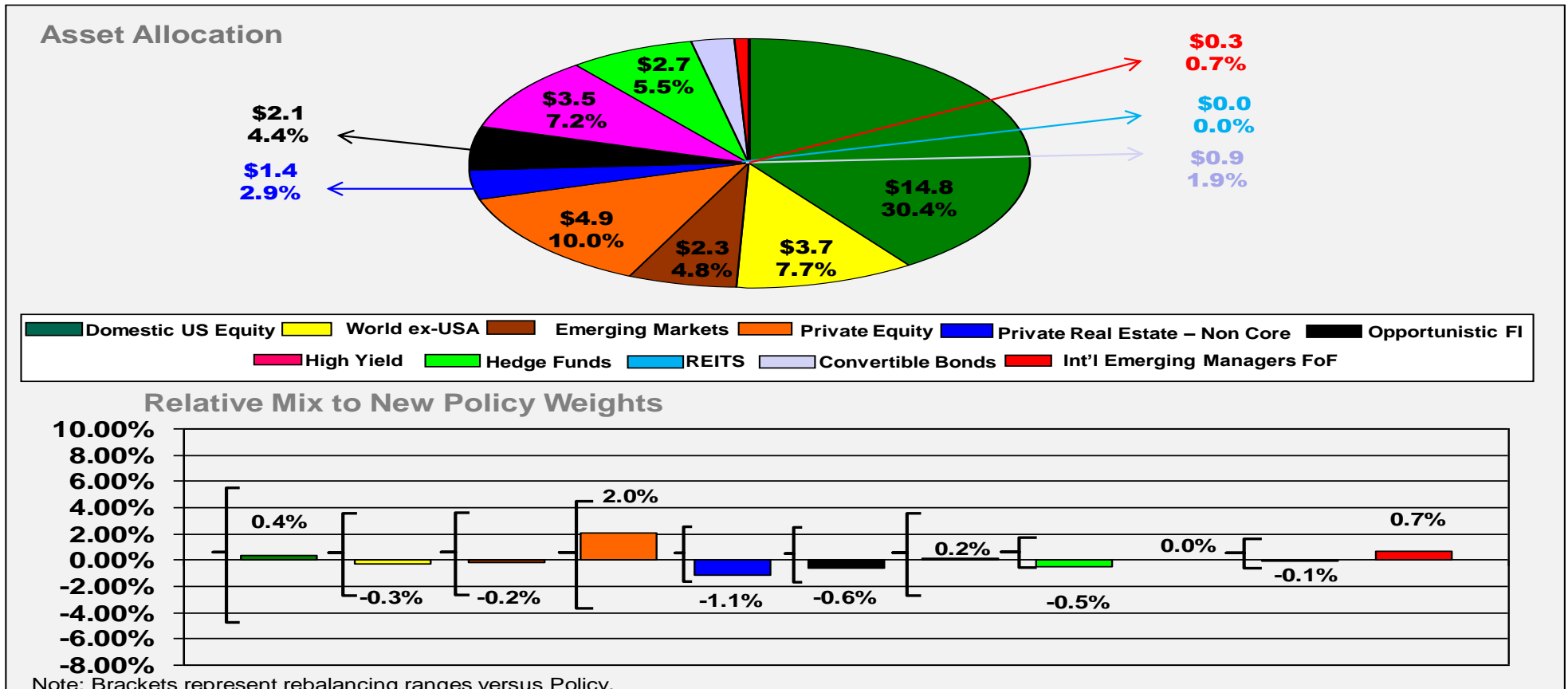
\$48.7



	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 10 Years	Benchmark 10 Years
Standard Deviation						
TOTAL POLICE	10.2	11.2	7.2	10.5	8.0	8.4

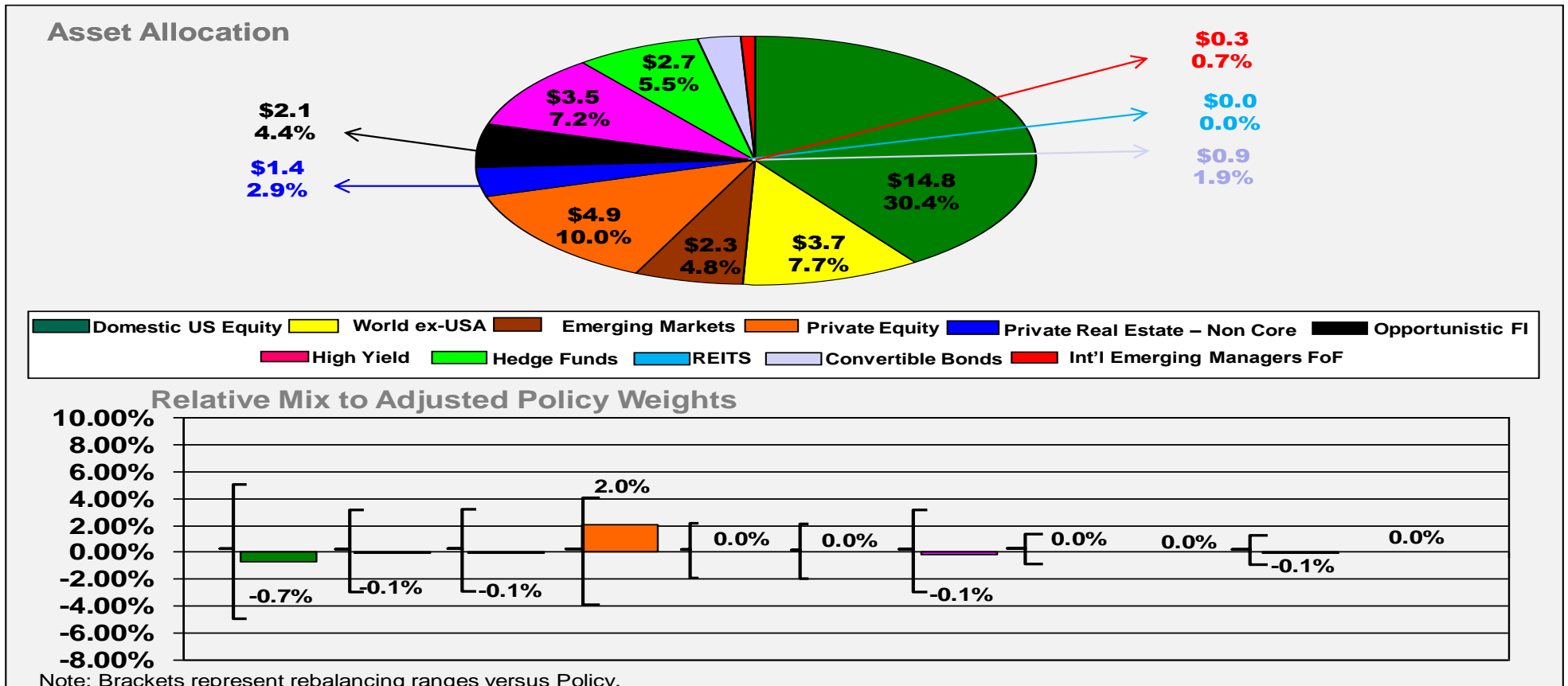


Portfolio Asset Allocation – Growth

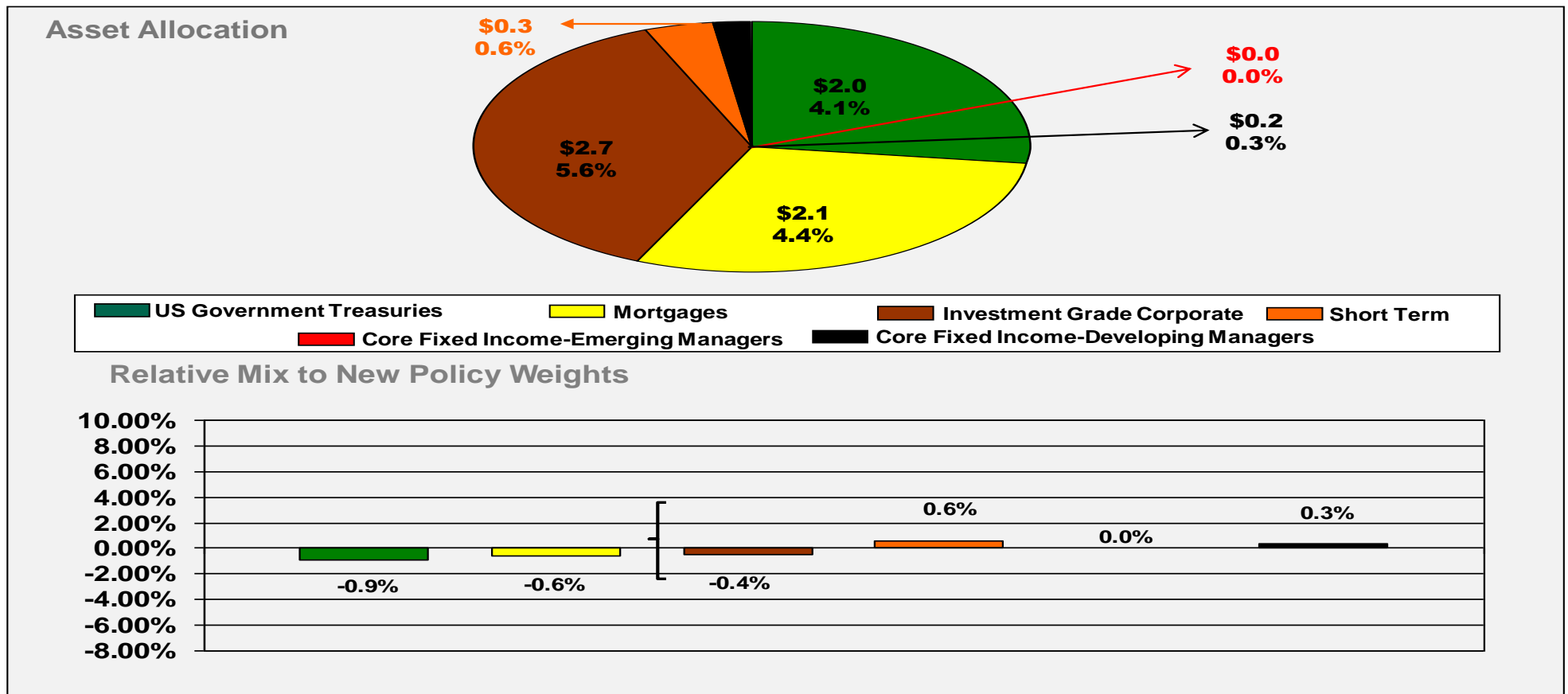




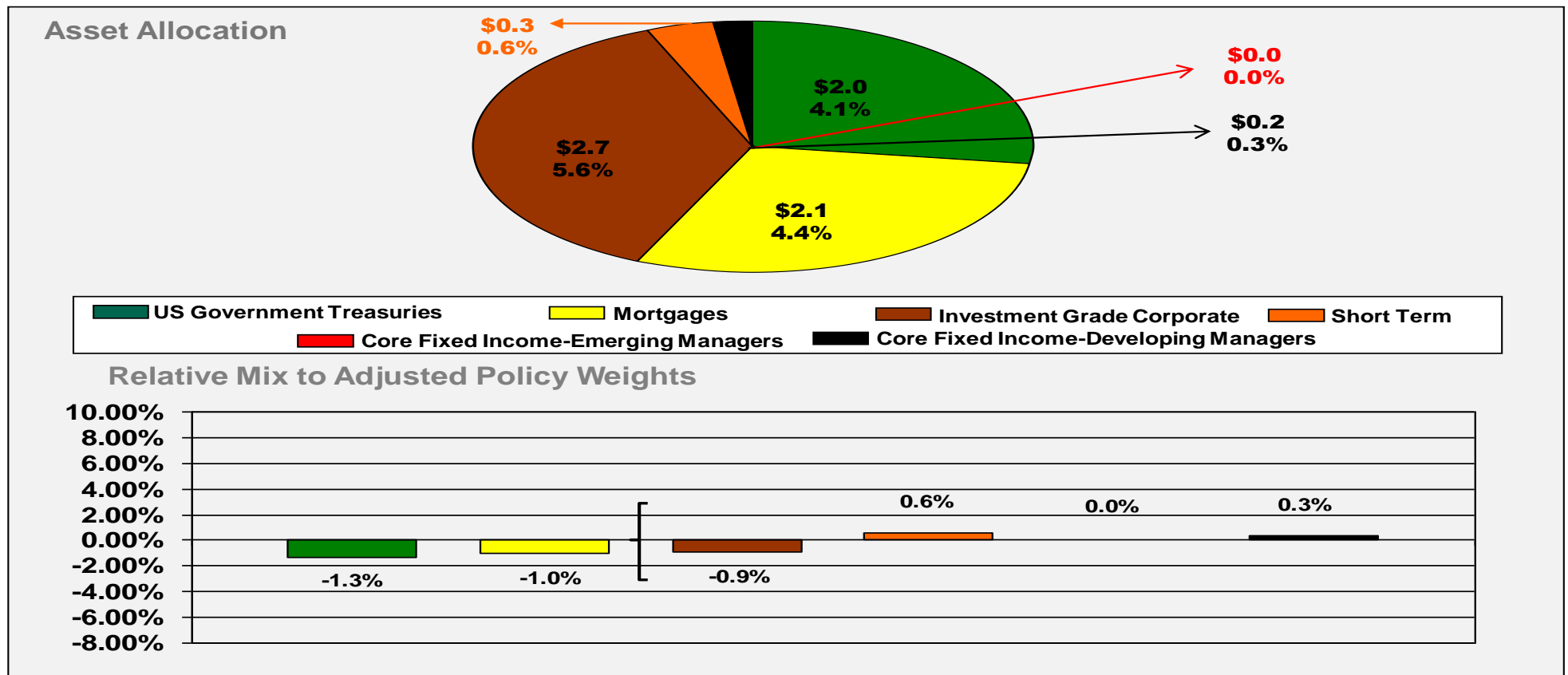
Portfolio Asset Allocation – Growth



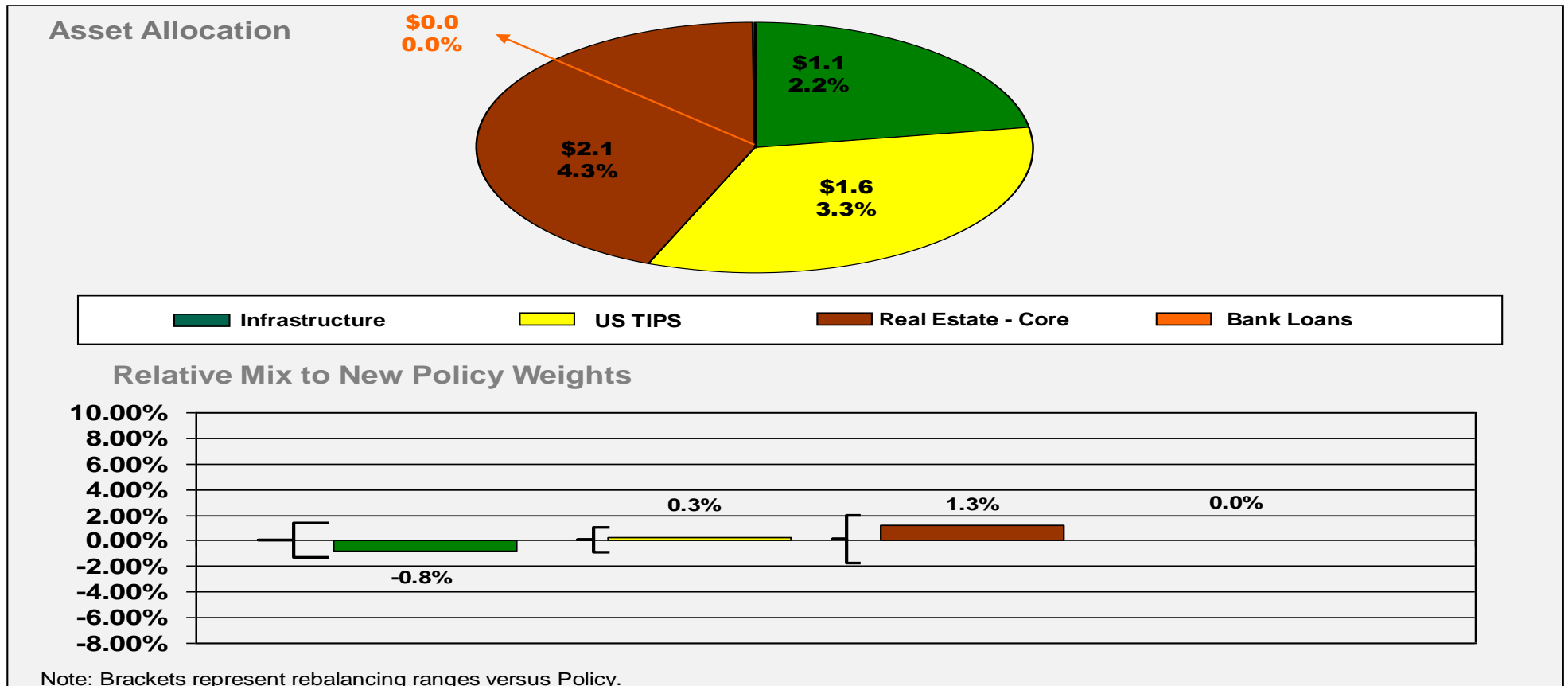
Portfolio Asset Allocation – Deflation Protection



Portfolio Asset Allocation – Deflation Protection

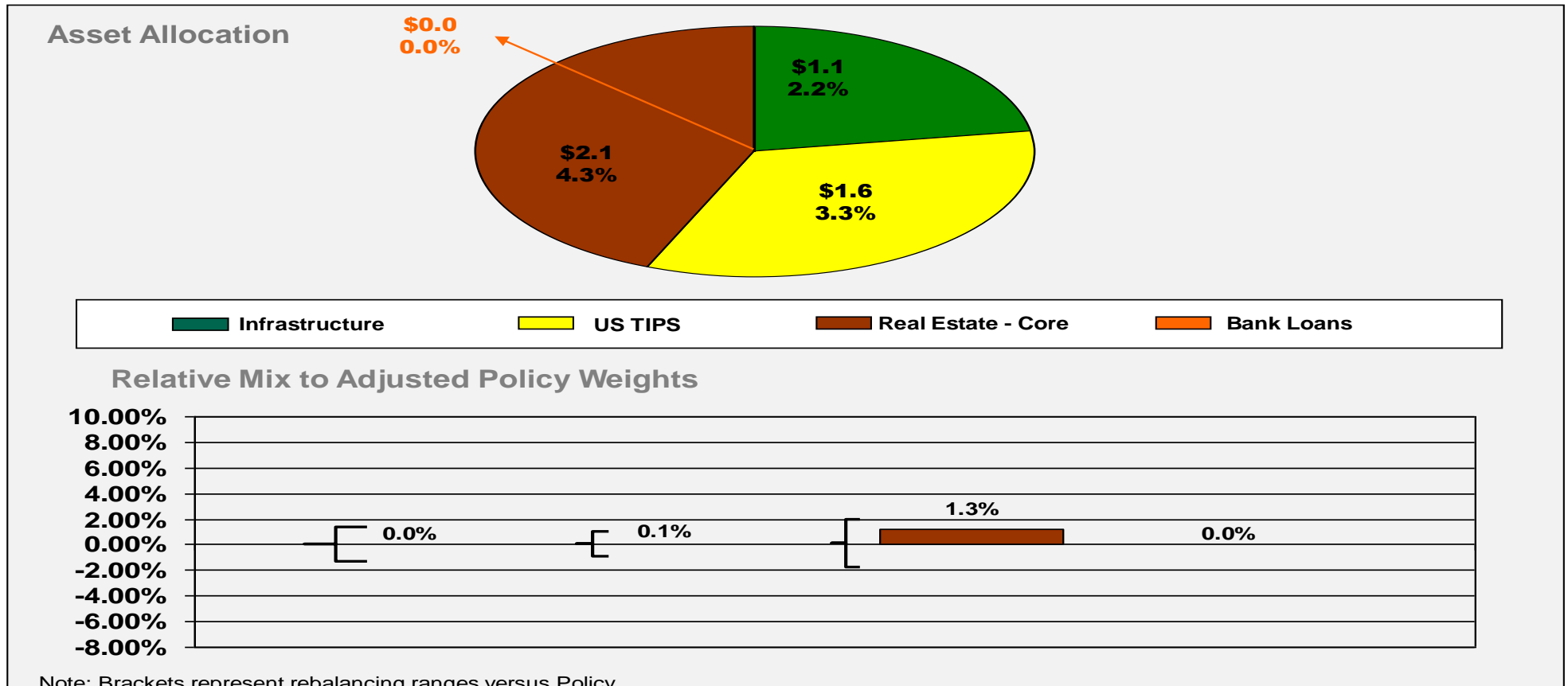


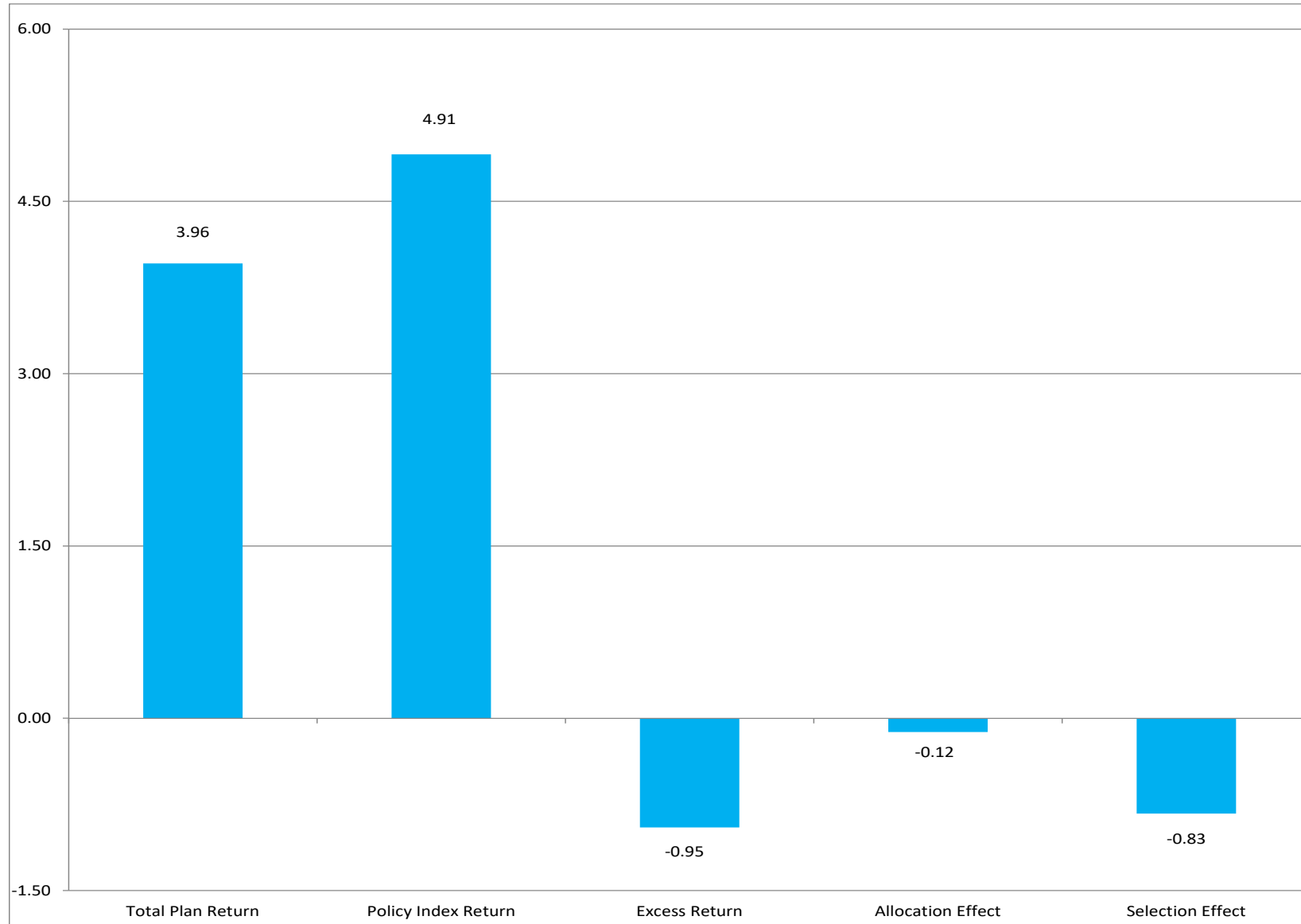
Portfolio Asset Allocation – Inflation Protection

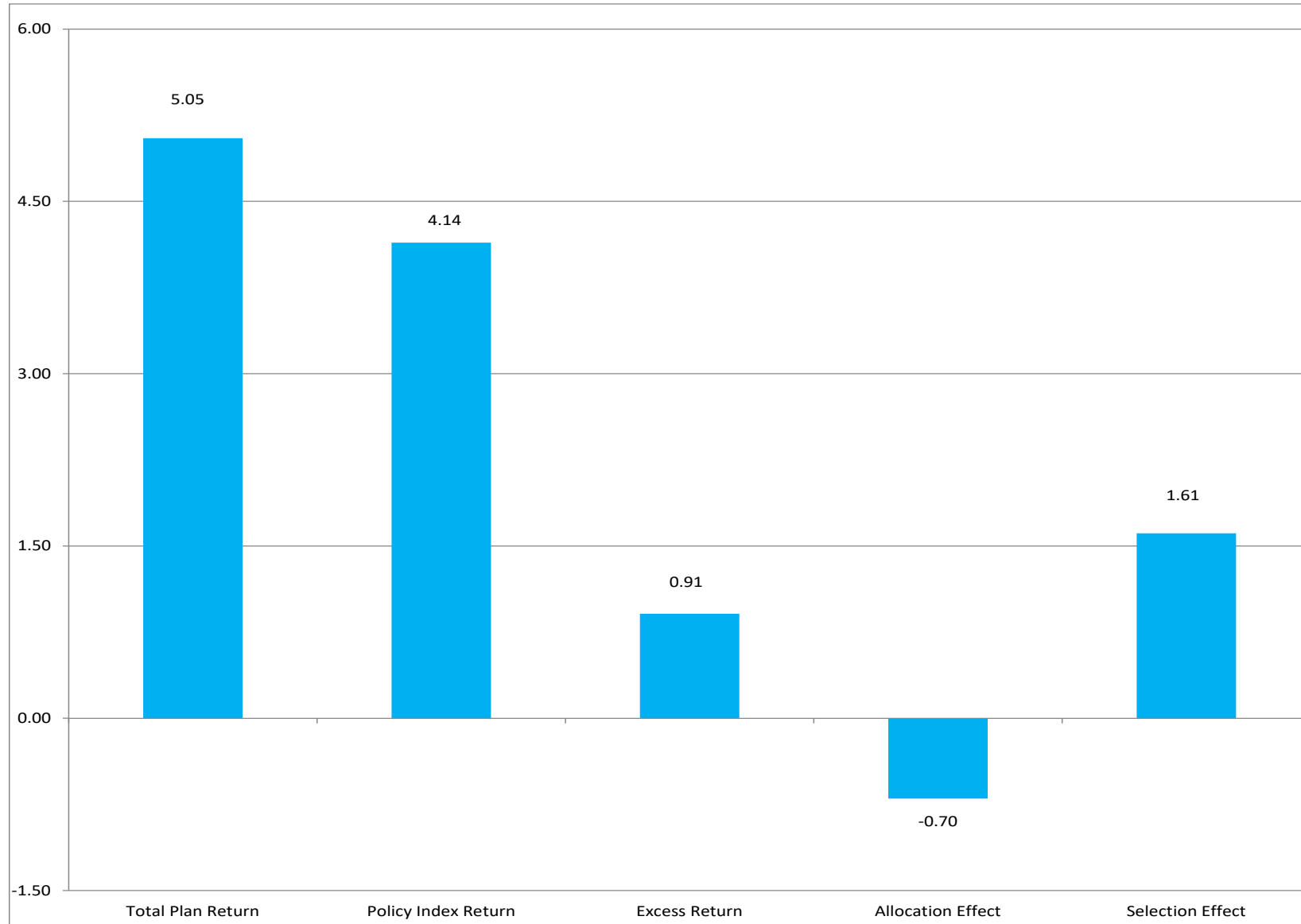


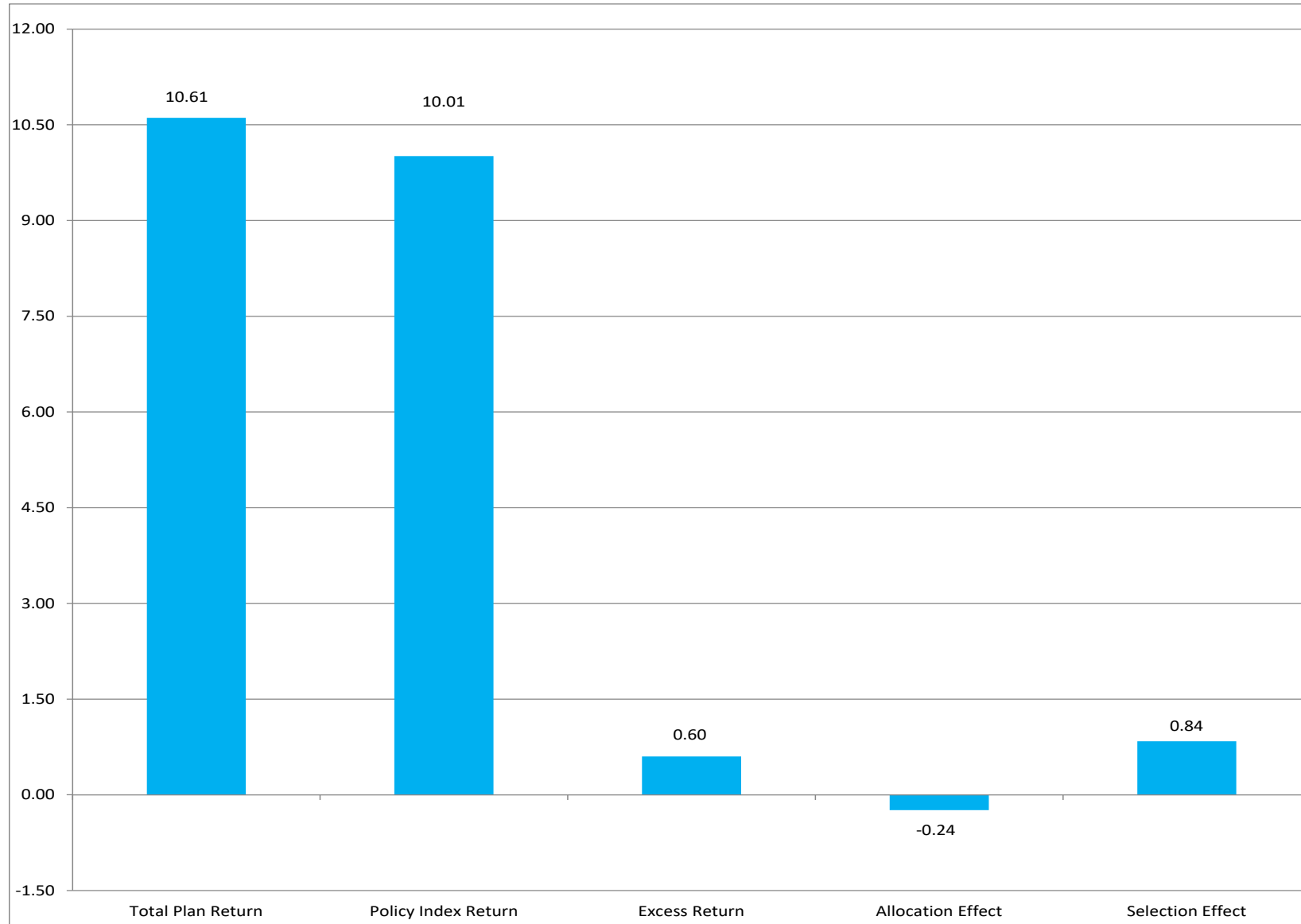


Portfolio Asset Allocation – Inflation Protection











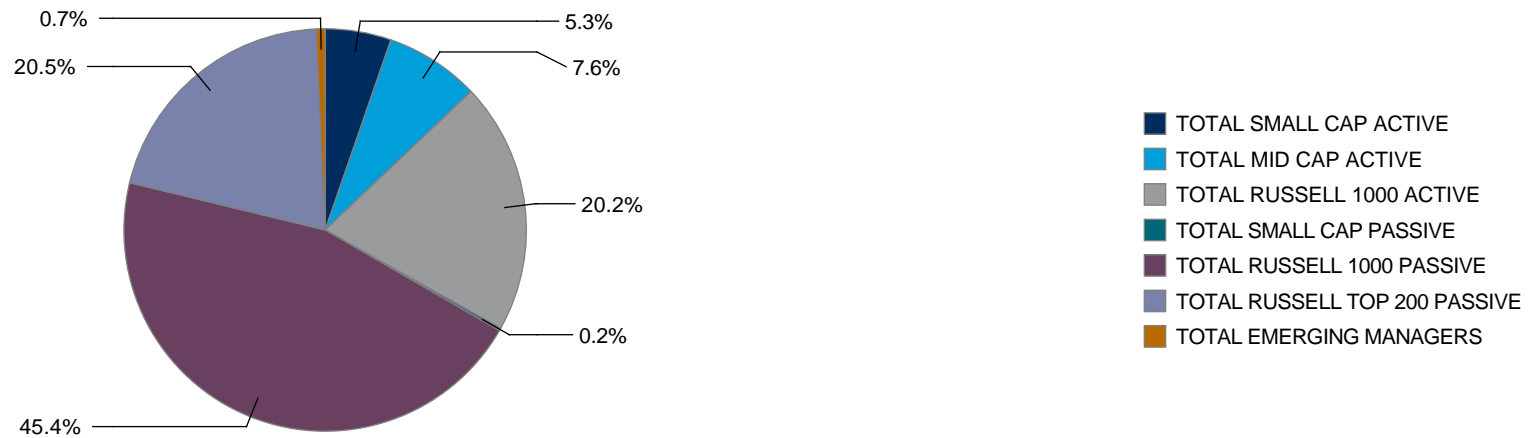
Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL POLICE	-0.12	-0.70	-0.24	Police Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.02	-0.13	-0.19	RUSSELL 3000
TOTAL WORLD ex-USA	-0.01	-0.05	-0.02	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	-0.01	-0.04	-0.04	MSCI Emerging Markets
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	0.00	0.00	-0.01	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	0.06	-0.35	-0.08	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	-0.12	-0.19	0.00	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	-0.01	0.00	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	-0.02	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.02	0.02	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.00	-0.01	-0.21	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	-0.02	0.05	0.22	FTSE US Government Bond 10+ Years Index
TOTAL INVESTMENT GRADE CORPORATE	0.01	0.01	0.07	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.02	0.03	0.03	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	-0.01	-0.01	-0.05	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	0.00	-0.02	0.05	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	-0.01	-0.02	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	0.00	0.00	0.11	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.03	0.02	-0.07	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL POLICE	-0.83	1.61	0.84	Police Policy Benchmark
TOTAL DOMESTIC EQUITY	-0.24	0.05	0.07	RUSSELL 3000
TOTAL WORLD ex-USA	0.27	0.28	0.09	MSCI World Ex USA IMI Net
TOTAL EMERGING MARKETS	0.06	0.12	0.06	MSCI Emerging Markets
TOTAL INTERNATIONAL FOF	0.01	0.01	0.00	MSCI ACWI Ex US IMI Net
TOTAL HEDGE FUNDS	-0.17	-0.13	-0.05	HFRI Fund of Funds Composite Index plus 1%
TOTAL PRIVATE EQUITY	-0.80	1.00	0.64	Russell 3K + 300bps
TOTAL PRIVATE REAL ESTATE - CORE	0.01	0.38	0.18	NCREIF ODCE net
TOTAL PRIVATE REAL ESTATE - NON CORE	0.05	0.18	0.02	NCREIF ODCE net + 200bps
TOTAL INFRASTRUCTURE	0.04	0.00	0.03	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.00	0.00	0.00	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.00	0.00	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.00	0.00	-0.01	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.01	0.02	-0.02	FTSE US Government Bond 10+ Years Index
TOTAL INVESTMENT GRADE CORPORATE	0.02	0.01	0.02	NYC Custom IGC Benchmark
TOTAL MORTGAGES	0.00	0.00	0.02	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.01	0.00	ETI Custom Benchmark
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.00	0.01	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	0.01	-0.01	0.03	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.02	Credit Suisse Lev Loan Index
TOTAL TIPS MANAGERS	0.00	0.00	0.00	Bloomberg Global Infl-Linked: U.S. TIPS
TOTAL CONVERTIBLE BONDS	-0.04	-0.02	-0.13	ICE BofA All US Conv Ex Mandatory
TOTAL OPPORTUNISTIC FIXED	-0.06	-0.32	-0.10	OFI - JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

Total Domestic Equity Asset Allocations: March 31, 2023



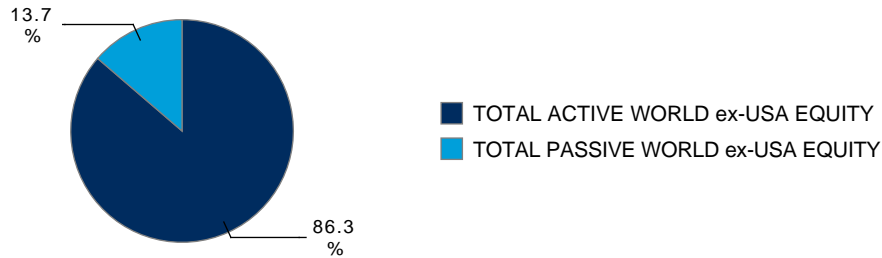
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL DOMESTIC EQUITY	\$14.8	30.4



	<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	5.4	5.3	(0.1)	5.2	2.7	2.4
TOTAL ACTIVE MID CAP	7.9	7.6	(0.3)	5.2	4.1	1.1
TOTAL RUSSELL 1000 ACTIVE	18.0	20.2	2.2	2.8	7.5	(4.7)
TOTAL SMALL CAP PASSIVE	0.3	0.2	(0.1)	1.2	2.7	(1.6)
TOTAL RUSSELL 1000 PASSIVE	45.5	45.4	(0.1)	7.4	7.5	(0.1)
TOTAL RUSSELL TOP 200 PASSIVE	22.3	20.5	(1.8)	8.7	8.7	(0.0)
TOTAL EMERGING MANAGERS	0.6	0.7	0.1	5.3	2.7	2.5



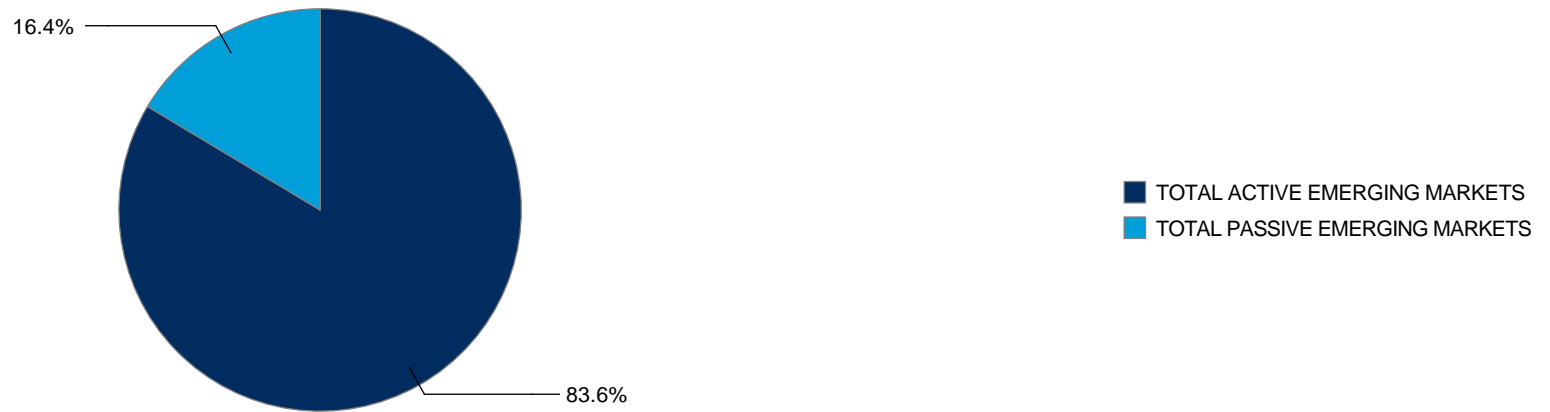
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL WORLD ex-USA	\$3.7	7.7



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	77.22	12.52	8.02	4.50
TOTAL WORLD ex-USA SMALL CAP ACTIVE	9.08	7.44	6.53	0.92
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	7.75	8.09	8.02	0.07
TOTAL WORLD ex-USA SMALL CAP PASSIVE	5.95	5.02	4.99	0.03
TOTAL WORLD ex-USA	100.00	11.24	7.58	3.66



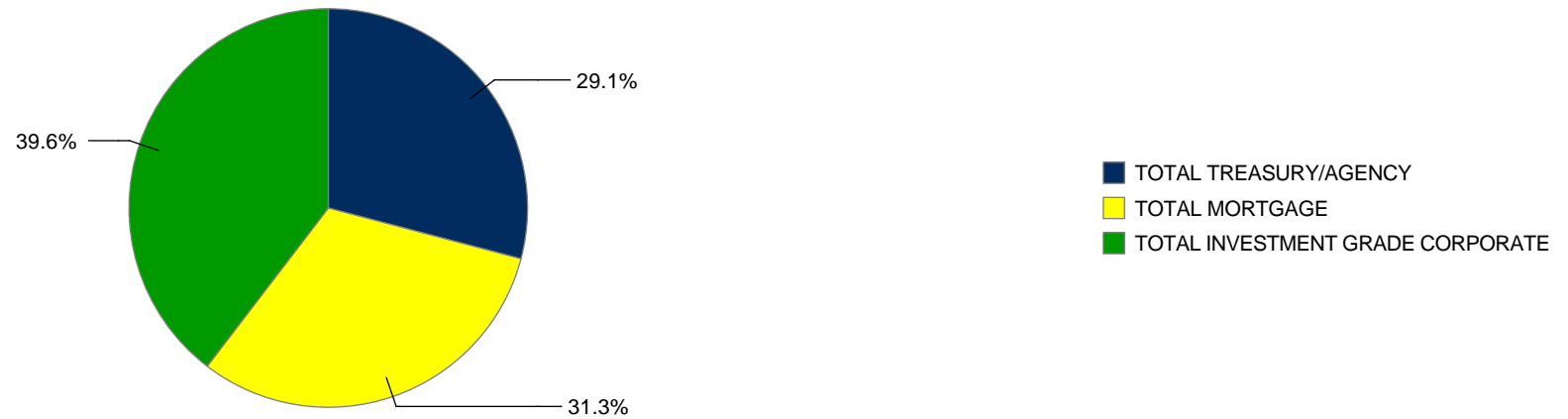
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL EMERGING MARKETS	\$2.3	4.8



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	83.64	5.35	3.96	1.39
TOTAL PASSIVE EMERGING MARKETS	16.36	4.20	3.96	0.24
TOTAL EMERGING MARKETS	100.00	5.16	3.96	1.20



	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL STRUCTURED + ETI	\$6.8	14.0



	<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	31.25	29.10	(2.15)	5.20	5.09	0.10
TOTAL MORTGAGE	31.25	31.28	0.03	2.77	2.53	0.24
TOTAL INVESTMENT GRADE CORPORATE	37.50	39.62	2.12	3.92	3.50	0.42

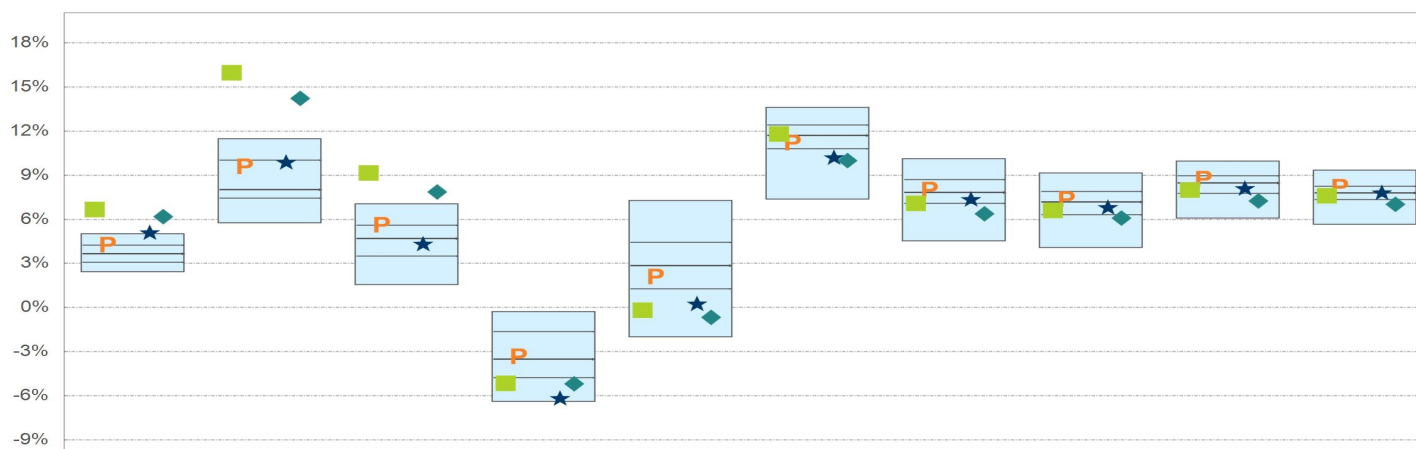


Through March 31, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Cumulative Periods Ending : March 31, 2023



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	5.01	11.48	7.04	-0.27	7.29	13.62	10.13	9.14	9.95	9.33
25th	4.23	10.03	5.61	-1.65	4.43	12.41	8.69	7.88	8.97	8.23
50th	3.66	8.01	4.70	-3.52	2.85	11.70	7.82	7.19	8.47	7.80
75th	3.08	7.43	3.51	-4.76	1.26	10.79	7.07	6.31	7.76	7.33
95th	2.43	5.75	1.57	-6.37	-2.00	7.37	4.52	4.09	6.08	5.66
No. Of Obs	48	48	47	46	45	45	42	42	42	42
P Total System - Police	4.07 (31)	9.40 (35)	5.43 (27)	-3.52 (50)	1.93 (61)	11.01 (68)	7.82 (50)	7.19 (50)	8.56 (47)	8.03 (40)
★ Police Policy Benchmark	4.91 (5)	9.70 (27)	4.14 (65)	-6.35 (94)	0.08 (91)	10.01 (87)	7.17 (65)	6.62 (62)	7.92 (65)	7.63 (62)
■ Public Mkt Equiv 25	6.48 (1)	15.76 (1)	8.97 (1)	-5.36 (85)	-0.39 (91)	11.60 (52)	6.90 (75)	6.39 (67)	7.78 (72)	7.42 (72)
◆ Public Mkt Equiv 35	5.98 (1)	14.02 (1)	7.65 (1)	-5.38 (85)	-0.86 (94)	9.78 (87)	6.19 (94)	5.90 (84)	7.04 (91)	6.81 (89)

Wilshire Trust Universe Comparison Service® (TUCS®)

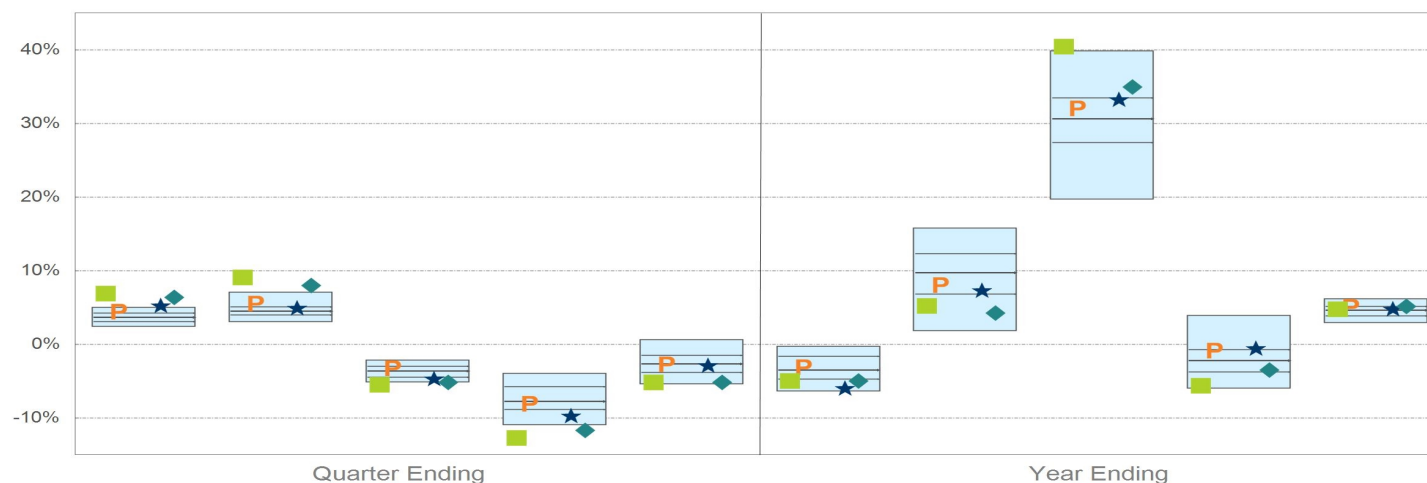


Through March 31, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: March 31, 2023



Percentile Rankings	Mar 23	Dec 22	Sep 22	Jun 22	Mar 22	Mar 23	Mar 22	Mar 21	Mar 20	Mar 19
5th	5.01	7.07	-2.13	-3.96	0.62	-0.27	15.83	39.92	3.93	6.21
25th	4.23	5.10	-2.99	-5.78	-1.50	-1.65	12.31	33.49	-0.74	5.15
50th	3.66	4.49	-3.64	-7.79	-2.66	-3.52	9.76	30.63	-2.18	4.63
75th	3.08	3.97	-4.50	-8.86	-3.80	-4.76	6.81	27.46	-3.78	3.86
95th	2.43	3.10	-5.15	-10.92	-5.39	-6.37	1.83	19.75	-5.99	2.97
No. Of Obs	48	49	48	47	49	46	48	49	46	48
P Total System - Police	4.07 (31)	5.12 (23)	-3.63 (47)	-8.48 (63)	-3.13 (60)	-3.52 (50)	7.69 (66)	31.67 (39)	-1.22 (34)	4.72 (43)
★ Police Policy Benchmark	4.91 (5)	4.57 (45)	-5.08 (90)	-10.07 (85)	-3.27 (62)	-6.35 (94)	6.95 (70)	32.92 (27)	-0.89 (25)	4.42 (54)
■ Public Mkt Equiv 25	6.48 (1)	8.71 (1)	-5.87 (100)	-13.15 (99)	-5.58 (99)	-5.36 (85)	4.85 (90)	40.10 (1)	-6.04 (96)	4.36 (56)
◆ Public Mkt Equiv 35	5.98 (1)	7.58 (1)	-5.59 (99)	-12.10 (99)	-5.60 (99)	-5.38 (85)	3.88 (94)	34.58 (19)	-3.90 (79)	4.74 (41)

Wilshire Trust Universe Comparison Service® (TUCS®)

POLICE RETIREMENT SYSTEM
 INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022

INVESTMENT STYLE (EQUITIES)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS
Total US Equities	16,252.07	11,841.09	-	7.29	75.90	0.05	11,916.99	7.33
Small Cap Active:								
Small Cap Growth	916.16	6,138.42	-	67.00	-	-	6,138.42	67.00
Small Cap Value	418.03	3,767.12	-	90.12	-	-	3,767.12	90.12
Small Cap Core	342.99	1,922.33	-	56.05	-	-	1,922.33	56.05
Small Cap Fundamental Index	155.15	448.97	-	28.94	-	-	448.97	28.94
	0.00	-	-	-	-	-	-	-
Mid Cap Active:								
Mid Cap Growth	629.86	1,717.56	-	27.27	-	-	1,717.56	27.27
Mid Cap Value	102.17	170.13	-	16.65	-	-	170.13	16.65
Mid Cap Core	88.99	240.88	-	27.07	-	-	240.88	27.07
	438.70	1,306.55	-	29.78	-	-	1,306.55	29.78
Other Active:								
Russell 1000 Fundamental	3,438.88	3,704.41	-	10.77	75.90	0.22	3,780.31	10.99
Legato (Emerging Manager- Equity)	3,336.32	3,120.78	-	9.35	-	-	3,120.78	9.35
U.S. Environmental Managers	102.56	583.63	-	56.91	75.90	7.40	659.53	64.31
	-	-	-	-	-	-	-	-
Total US Active Equities	4,984.90	11,560.39	-	23.19	75.90	0.15	11,636.28	23.34
Small Cap Passive:								
Small Cap Passive	54.85	1.51	-	0.27	-	-	1.51	0.27
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	11,212.32	279.20	-	0.25	-	-	279.20	0.25
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	9,530.73	193.25	-	0.20	-	-	193.25	0.20
Passive Russell 3000	0.00	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	1,681.60	85.95	-	0.51	-	-	85.95	0.51
Total US Passive Equities	11,267.17	280.71	-	0.25	-	-	280.71	0.25
Total International Equities	7,160.48	22,627.17	-	31.60	-	-	22,627.17	31.60
Active Total Global Equities								
Global Equity	-	-	-	-	-	-	-	-
Active Total World Ex USA:								
World Ex-USA Large & Mid Developed Growth Active	3,556.54	10,078.56	-	28.34	-	-	10,078.56	28.34
World Ex-USA Large & Mid Developed Value Active	1,675.52	4,703.42	-	28.07	-	-	4,703.42	28.07
World Ex-USA Developed Small Cap Active	1,503.33	4,132.48	-	27.49	-	-	4,132.48	27.49
Total World Ex USA	377.69	1,242.66	-	32.90	-	-	1,242.66	32.90
NON-U.S. Activist	0.00	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total Active International Equities	2,267.04	10,827.11	-	47.76	-	-	10,827.11	47.76
International Fund of Funds	313.18	1,489.97	-	47.58	-	-	1,489.97	47.58
Total Active International Equities	6,136.75	22,395.64	-	36.49	-	-	22,395.64	36.49
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	1,023.72	231.53	-	2.26	-	-	231.53	2.26
World Ex-USA Large & Mid Cap Passive	308.25	93.66	-	3.04	-	-	93.66	3.04
Passive Global	393.42	48.62	-	1.24	-	-	48.62	1.24
Passive Emerging Markets	322.06	89.24	-	2.77	-	-	89.24	2.77
Total Int'l Passive Equities	1,023.72	231.53	-	2.26	-	-	231.53	2.26
Real Estate Equity Securities	-	-	-	-	-	-	-	-
Total Public Equities	23,412.55	34,468.26	-	14.72	75.90	0.03	34,544.16	14.75

POLICE RETIREMENT SYSTEM									
INVESTMENT MANAGEMENT FEES INCURRED FOR FISCAL YEAR ENDED JUNE 30, 2022									
INVESTMENT STYLE (FIXED INCOME)	Avg. Net Asset Value FY 2022 (\$MM)	Base Mgmt. Fees (\$M)	Partnership Fees (\$M)	Base Mgmt. Fees & Partnership Fees in BPS	Performance / Carry Fees in (\$M)	Performance / Carry Fees in BPS	Total Investment Mgmt. Fees in (\$M)	Total Investment Mgmt. Fees in BPS	
Total Fixed Income	15,264.95	20,160.88	-	13.21	421.88	0.28	20,582.76	13.48	
Structured Program:	7,675.95	4,293.37	-	5.59	421.88	0.55	4,715.24	6.14	
Government Treas/Agency Sector	1,074.10	128.83	-	1.20	-	-	128.83	1.20	
Long Duration Treasury	1,455.66	145.63	-	1.00	-	-	145.63	1.00	
Mortgage Sector	2,099.33	1,302.98	-	6.21	421.88	2.01	1,724.86	8.22	
Investment Grade Credit Sector	3,046.86	2,715.92	-	8.91	-	-	2,715.92	8.91	
Developing Managers	173.76	327.14	-	18.83	-	-	327.14	18.83	
Emerging Managers	-	-	-	-	-	-	-	-	
TIPS:	1,700.87	348.23	-	2.05	-	-	348.23	2.05	
Active TIPS Managers	533.47	289.88	-	5.43	-	-	289.88	5.43	
Passive TIPS Managers	1,167.41	58.35	-	0.50	-	-	58.35	0.50	
High Yield	3,622.78	11,145.27	-	30.76	-	-	11,145.27	30.76	
Bank Loans	1.33	3.52	-	26.47	-	-	3.52	26.47	
Convertible Bonds	989.95	3,325.75	-	33.60	-	-	3,325.75	33.60	
ETI - Access - RBC	91.86	162.88	-	17.73	-	-	162.88	17.73	
ETI - AFL-CIO HIT	174.49	554.72	-	31.79	-	-	554.72	31.79	
Other ETI Programs (Internally Managed)	163.16	-	-	-	-	-	-	-	
Short Term (Internally Managed & Other)	670.79	-	-	-	-	-	-	-	
Total Public Markets	38,677.50	54,629.15	-	14.12	497.78	0.13	55,126.92	14.25	
INVESTMENT STYLE (PRIVATE MARKETS)									
Hedge Funds	2,702.31	27,493.33	2,777.98	112.02	40,972.90	151.62	71,244.21	263.64	
Private Equity	4,376.94	48,771.74	14,621.76	144.84	65,689.20	150.08	129,082.70	294.92	
Private Real Estate	2,982.83	27,922.28	10,930.91	130.26	35,390.85	118.65	74,244.04	248.90	
Infrastructure	755.33	12,977.75	3,320.12	215.77	(2,609.85)	(34.55)	13,688.02	181.22	
Opportunistic Fixed Income	1,951.82	13,641.85	6,426.18	102.82	2,491.14	12.76	22,559.16	115.58	
Total Private Markets	12,769.24	130,806.95	38,076.95	132.26	141,934.24	111.15	310,818.13	243.41	
Total Overall	51,446.74	185,436.09	38,076.95	43.45	142,432.01	27.69	365,945.05	71.13	

The overall carried interest and performance incentive fees paid by POLICE for the Fiscal Year: 27.69 BPS

General Footnotes:



**NYC POLICE DEPARTMENT PENSION FUND
SECURITIES LENDING INCOME
March 31, 2023**

	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	4,489,228	5,671,849	2,523,145	12,684,222
2020	4,479,643	3,762,175	1,664,657	9,906,474
2021	8,001,616	4,614,622	642,413	13,258,650
2022	10,038,441	4,082,820	498,240	14,619,501
2023 (3 Months)	<u>2,015,414</u>	<u>1,270,274</u>	<u>91,218</u>	<u>3,376,907</u>
Since Inception	<u>121,660,290</u>	<u>162,781,662</u>	<u>70,384,505</u>	<u>354,826,457</u>



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

Appendix A

Consolidated Performance Report

Consolidated Performance Report

Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	POLICE-TOTAL PORTFOLIO - GROSS	48,653	100.00	4.07	5.43	4.07	(6.71)	(10.19)	14.61	15.00	(3.52)	11.01	7.19	8.03	8.49	07/01/1987
	POLICE - ESTIMATED INVESTMENT FEES			(0.11)	(0.38)	(0.11)	(0.46)	(0.43)	(0.50)	(0.25)	(0.47)	(0.41)	(0.35)			
	EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.08)	(0.03)	(0.11)	(0.10)	(0.12)	(0.11)	(0.10)	(0.11)	(0.11)			
	EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.08)	(0.30)	(0.08)	(0.35)	(0.33)	(0.38)	(0.14)	(0.37)	(0.30)	(0.24)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL PORTFOLIO - NET MGR			3.96	5.05	3.96	(7.17)	(10.62)	14.11	14.76	(3.99)	10.61	6.85			
	POLICE POLICY BENCHMARK			4.91	4.14	4.91	(8.84)	(13.65)	13.62	15.50	(6.35)	10.01	6.62	7.63		
	EXCESS RETURN			(0.95)	0.91	(0.95)	1.67	3.04	0.49	(0.74)	2.36	0.60	0.23	0.40		
EQUITY RETURN DETAIL																
18	POLICE-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - GROSS	33,223	68.28	4.33	6.92	4.33	(5.73)	(9.66)	20.72	16.91	(3.31)	16.44	9.13	10.29	8.53	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.13)	(0.50)	(0.13)	(0.64)	(0.58)	(0.70)	(0.29)	(0.62)	(0.54)	(0.45)			
	EST MANAGEMENT FEES			(0.13)	(0.50)	(0.13)	(0.64)	(0.58)	(0.70)	(0.29)	(0.62)	(0.54)	(0.45)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - NET MGR			4.19	6.42	4.19	(6.37)	(10.24)	20.02	16.63	(3.94)	15.89	8.68			
26	POLICE-TOTAL EQUITY - GROSS	21,165	43.50	7.14	10.72	7.14	(16.89)	(17.85)	18.47	19.15	(6.41)	16.96	7.73	9.51	8.82	08/01/1993
	ESTIMATED INVESTMENT FEES			(0.04)	(0.12)	(0.04)	(0.12)	(0.12)	(0.19)	(0.18)	(0.14)	(0.18)	(0.16)			
	EST MANAGEMENT FEES			(0.04)	(0.12)	(0.04)	(0.12)	(0.12)	(0.19)	(0.18)	(0.14)	(0.18)	(0.16)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL EQUITY - NET MGR			7.10	10.59	7.10	(17.01)	(17.96)	18.28	18.97	(6.55)	16.78	7.57			
34	POLICE-TOTAL DOMESTIC EQUITY - GROSS	14,778	30.37	6.39	10.03	6.39	(12.75)	(16.99)	25.26	18.72	(7.33)	18.84	10.19	11.49	11.03	12/01/1984
	ESTIMATED INVESTMENT FEES			(0.02)	(0.07)	(0.02)	(0.07)	(0.06)	(0.11)	(0.11)	(0.07)	(0.10)	(0.09)			
	POLICE-TOTAL DOMESTIC EQUITY - NET MGR			6.37	9.96	6.37	(12.81)	(17.06)	25.15	18.61	(7.40)	18.74	10.09			
	RUSSELL 3000 (DAILY)			7.18	9.75	7.18	(13.87)	(19.21)	25.66	20.89	(8.58)	18.48	10.45	11.73	11.13	
	EXCESS RETURN			(0.81)	0.21	(0.81)	1.05	2.15	(0.51)	(2.27)	1.18	0.27	(0.36)	(0.25)	(0.10)	
44	POLICE-TOTAL SMALL CAP ACTIVE - GROSS	791	1.62	5.34	10.54	5.34	(22.46)	(20.02)	14.55	24.01	(8.20)	18.60	6.12	9.23	8.27	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.16)	(0.53)	(0.16)	(0.51)	(0.51)	(0.85)	(0.86)	(0.58)	(0.82)	(0.68)			
	POLICE-TOTAL SMALL CAP ACTIVE - NET MGR			5.17	10.01	5.17	(22.98)	(20.53)	13.70	23.15	(8.78)	17.78	5.44			
	RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(25.20)	(20.44)	14.82	19.96	(11.61)	17.51	4.71	8.04	7.47	
	EXCESS RETURN			2.43	3.26	2.43	2.22	(0.10)	(1.12)	3.19	2.82	0.27	0.73	1.20	0.80	

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN DETAIL															
56	POLICE-TOTAL SMALL CAP PASSIVE - GROSS	29	0.06	1.19	5.31	1.19	(17.49)	(17.59)	27.88	15.48	(11.88)	21.97	6.89	8.55	10/01/2013
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		
	POLICE-TOTAL SMALL CAP PASSIVE - NET MGR			1.19	5.31	1.19	(17.49)	(17.59)	27.87	15.48	(11.88)	21.96	6.89		
	RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(25.20)	(20.44)	14.82	19.96	(11.61)	17.51	4.71	7.03	
	EXCESS RETURN			(1.55)	(1.44)	(1.55)	7.70	2.85	13.05	(4.48)	(0.28)	4.45	2.18	1.52	
66	POLICE-TOTAL MIDCAP - GROSS	1,129	2.32	5.24	8.38	5.24	(24.24)	(23.34)	10.72	26.32	(9.68)	14.12	4.39	8.64	7.81
	ESTIMATED INVESTMENT FEES			(0.08)	(0.24)	(0.08)	(0.29)	(0.22)	(0.74)	(1.19)	(0.26)	(0.72)	(0.68)		
	POLICE-TOTAL MIDCAP - NET MGR			5.16	8.14	5.16	(24.52)	(23.56)	9.99	25.13	(9.94)	13.40	3.71		
	RUSSELL MIDCAP (DAILY)			4.06	9.70	4.06	(17.30)	(17.32)	22.58	17.10	(8.78)	19.20	8.05	10.05	9.39
	EXCESS RETURN			1.10	(1.56)	1.10	(7.22)	(6.24)	(12.60)	8.03	(1.16)	(5.79)	(4.34)	(1.41)	(1.57)
86	POLICE-TOTAL RUSSELL 1000 ACTIVE - GROSS	2,990	6.14	2.83	11.19	2.83	(8.63)	(7.36)	25.83	6.89	(3.43)	20.30	8.47	10.68	8.57
	ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.02)	(0.09)	(0.09)	(0.12)	(0.12)	(0.09)	(0.11)	(0.11)		
	POLICE-TOTAL RUSSELL 1000 ACTIVE - NET MGR			2.81	11.11	2.81	(8.71)	(7.44)	25.71	6.77	(3.52)	20.18	8.36		
	RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(13.04)	(19.13)	26.45	20.96	(8.39)	18.55	10.87	12.01	9.26
	EXCESS RETURN			(4.65)	1.18	(4.65)	4.32	11.68	(0.74)	(14.19)	4.88	1.63	(2.51)	(1.33)	(0.69)
96	POLICE-TOTAL RUSSELL 1000 PASSIVE - GROSS	6,708	13.79	7.37	9.82	7.37	(12.66)	(18.83)	26.46	21.20	(8.13)	18.64	11.06	11.06	04/01/2018
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	
	POLICE-TOTAL RUSSELL 1000 PASSIVE - NET MGR			7.37	9.82	7.37	(12.66)	(18.83)	26.46	21.20	(8.13)	18.64	11.05	11.05	
	RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(13.04)	(19.13)	26.45	20.96	(8.39)	18.55	10.87	10.87	
	EXCESS RETURN			(0.09)	(0.11)	(0.09)	0.38	0.29	0.01	0.23	0.26	0.09	0.19	0.19	
106	POLICE-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	3,034	6.24	8.66	10.01	8.66	(12.19)	(20.39)	27.79	22.45	(9.01)	18.01		11.84	05/01/2018
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)		(0.01)	
	POLICE-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			8.66	10.01	8.66	(12.19)	(20.39)	27.79	22.44	(9.01)	18.00		11.83	
	RUSSELL TOP 200 INDEX (DAILY)			8.67	10.00	8.67	(11.46)	(19.77)	27.90	22.37	(8.27)	18.36		12.01	
	EXCESS RETURN			(0.01)	0.01	(0.01)	(0.73)	(0.63)	(0.11)	0.07	(0.74)	(0.36)		(0.18)	
116	POLICE-TOTAL FUND OF FUNDS - GROSS	98	0.20	5.39	10.43	5.39	(16.87)	(15.68)	25.65	20.00	(2.68)	24.43	9.06	8.88	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.13)	(0.41)	(0.13)	(0.48)	(0.48)	(0.70)	(0.60)	(0.56)	(0.67)	(0.57)	(0.57)	
	POLICE-TOTAL FUND OF FUNDS - NET MGR			5.26	10.03	5.26	(17.35)	(16.17)	24.95	19.40	(3.24)	23.76	8.49	8.31	
	RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(25.20)	(20.44)	14.82	19.96	(11.61)	17.51	4.71	5.75	
	EXCESS RETURN			2.52	3.28	2.52	7.85	4.27	10.13	(0.56)	8.36	6.25	3.78	2.56	

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
EQUITY RETURN DETAIL																
128	POLICE-TOTAL WORLD ex-USA - GROSS	3,735	7.68	11.31	17.41	11.31	(24.45)	(19.51)	7.78	22.39	(0.67)	14.80	4.97	6.81	6.28	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.07)	(0.21)	(0.07)	(0.18)	(0.18)	(0.26)	(0.28)	(0.23)	(0.27)	(0.25)			
	EST MANAGEMENT FEES			(0.07)	(0.21)	(0.07)	(0.18)	(0.18)	(0.26)	(0.28)	(0.23)	(0.27)	(0.25)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL WORLD ex-USA - NET MGR			11.24	17.21	11.24	(24.62)	(19.69)	7.52	22.11	(0.90)	14.53	4.72			
	WORLD EX-USA CUSTOM BM			7.58	13.32	7.58	(17.73)	(15.26)	12.39	8.32	(3.85)	13.46	3.46	5.23	5.41	
	EXCESS RETURN			3.66	3.89	3.66	(6.90)	(4.44)	(4.87)	13.79	2.95	1.07	1.26	1.58	0.87	
138	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	2,884	5.93	12.60	18.74	12.60	(25.71)	(20.20)	5.59	26.25	0.96	14.80	5.61		5.88	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.08)	(0.25)	(0.08)	(0.20)	(0.22)	(0.29)	(0.35)	(0.28)	(0.31)	(0.29)	(0.29)		
	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			12.52	18.49	12.52	(25.91)	(20.42)	5.30	25.91	0.68	14.49	5.32		5.59	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			8.02	13.96	8.02	(16.76)	(14.29)	12.62	7.59	(2.74)	13.49	3.80		3.95	
	EXCESS RETURN			4.50	4.53	4.50	(9.15)	(6.13)	(7.32)	18.32	3.42	0.99	1.52		1.64	
148	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	339	0.70	7.53	14.29	7.53	(23.11)	(19.17)	19.17	19.53	(6.42)	17.67	4.12		7.87	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.09)	(0.28)	(0.09)	(0.25)	(0.26)	(0.39)	(0.36)	(0.30)	(0.38)	(0.39)			
	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			7.44	14.01	7.44	(23.35)	(19.43)	18.78	19.17	(6.72)	17.28	3.74			
	S&P EPAC SMALL CAP USD NET			6.53	10.57	6.53	(26.27)	(22.69)	8.06	13.78	(8.88)	11.90	0.45		5.25	
	EXCESS RETURN			0.92	3.44	0.92	2.92	3.26	10.72	5.38	2.16	5.39	3.28		2.62	
158	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	222	0.46	5.02	9.60	5.02	(22.69)	(20.23)	11.31	13.22	(9.80)	13.68	1.87		5.21	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	0.02	(0.01)	(0.02)	0.01	(0.03)	(0.04)	0.01	(0.02)	(0.02)	(0.03)		
	POLICE-TOTAL TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			5.02	9.62	5.02	(22.71)	(20.23)	11.27	13.18	(9.79)	13.66	1.85		5.18	
	WORLD EX USA SC PASSIVE CUSTOM BM			4.99	9.52	4.99	(23.02)	(20.58)	11.14	12.78	(10.13)	13.43	1.54		4.88	
	EXCESS RETURN			0.03	0.10	0.03	0.31	0.36	0.14	0.40	0.34	0.23	0.31		0.30	
168	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - GROSS	289	0.59	8.09	14.14	8.09	(16.31)	(13.85)	12.91	8.10	(2.34)	13.89	4.15	5.31	4.90	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	0.02	(0.00)	(0.01)	0.01	(0.01)	(0.01)	0.01	(0.00)	(0.01)			
	POLICE-TOTAL TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - NET MGR			8.09	14.16	8.09	(16.32)	(13.84)	12.90	8.09	(2.33)	13.88	4.14			
	NYC CUSTOM WORLD EX US INDEX			8.02	13.96	8.02	(16.76)	(14.29)	12.62	7.59	(2.74)	13.49	3.80	5.01	4.59	
	EXCESS RETURN			0.07	0.20	0.07	0.43	0.45	0.28	0.50	0.41	0.39	0.34	0.31	0.31	

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EQUITY RETURN DETAIL															
180	POLICE-EMERGING MARKETS - GROSS	2,332	4.79	5.26	3.79	5.26	(27.22)	(20.90)	(0.85)	16.54	(10.36)	9.28	(0.89)	2.48	11/01/1996
	ESTIMATED INVESTMENT FEES			(0.10)	(0.32)	(0.10)	(0.30)	(0.32)	(0.42)	(0.39)	(0.36)	(0.43)	(0.34)		
	POLICE-EMERGING MARKETS - NET MGR			5.16	3.47	5.16	(27.52)	(21.22)	(1.27)	16.15	(10.72)	8.85	(1.24)		
	MSCI EMERGING MARKETS			3.96	0.84	3.96	(25.28)	(20.09)	(2.54)	18.31	(10.70)	7.83	(0.91)	2.00	
	EXCESS RETURN			1.20	2.63	1.20	(2.24)	(1.13)	1.27	(2.16)	(0.02)	1.02	(0.33)	0.49	
190	POLICE-EMERGING MARKETS ACTIVE - GROSS	1,950	4.01	5.47	4.25	5.47	(27.57)	(21.07)	(0.67)	15.23	(10.30)	9.67	(1.14)	2.59	6.89 04/01/2004
	ESTIMATED INVESTMENT FEES			(0.12)	(0.37)	(0.12)	(0.34)	(0.37)	(0.48)	(0.53)	(0.42)	(0.52)	(0.44)		
	POLICE-EMERGING MARKETS ACTIVE - NET MGR			5.35	3.88	5.35	(27.91)	(21.44)	(1.15)	14.70	(10.73)	9.15	(1.58)		
	MSCI EMERGING MARKETS			3.96	0.84	3.96	(25.28)	(20.09)	(2.54)	18.31	(10.70)	7.83	(0.91)	2.00	6.38
	EXCESS RETURN			1.39	3.03	1.39	(2.62)	(1.34)	1.39	(3.61)	(0.02)	1.32	(0.68)	0.60	0.51
200	POLICE-EMERGING MARKETS PASSIVE - GROSS	382	0.78	4.20	1.25	4.20	(24.78)	(19.57)	(2.08)	17.29	(10.20)	8.03	(0.73)	2.17	1.15 04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)		
	POLICE-EMERGING MARKETS PASSIVE - NET MGR			4.20	1.23	4.20	(24.79)	(19.57)	(2.10)	17.27	(10.22)	8.01	(0.75)		
	MSCI EMERGING MARKETS			3.96	0.84	3.96	(25.28)	(20.09)	(2.54)	18.31	(10.70)	7.83	(0.91)	2.00	1.05
	EXCESS RETURN			0.24	0.39	0.24	0.49	0.52	0.44	(1.04)	0.49	0.18	0.16	0.18	0.10
210	POLICE-TOTAL INTERNATIONAL FUND OF FUND - GROSS	320	0.66	8.05	11.78	8.05	(22.33)	(19.37)	9.67	16.22	(4.90)	12.68	3.43	5.70	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.13)	(0.40)	(0.13)	(0.37)	(0.38)	(0.60)	(0.64)	(0.45)	(0.59)	(0.53)	(0.53)	
	POLICE-TOTAL INTERNATIONAL FUND OF FUND - NET MGR			7.93	11.38	7.93	(22.69)	(19.75)	9.07	15.58	(5.35)	12.10	2.90	5.17	
	MSCI ACWI EX USA IMI NET			6.56	9.85	6.56	(19.86)	(16.58)	8.53	11.12	(5.84)	12.20	2.35	4.35	
	EXCESS RETURN			1.37	1.53	1.37	(2.84)	(3.17)	0.55	4.46	0.49	(0.11)	1.08	0.82	



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ALTERNATIVE EQUITY RETURN DETAIL																
228	POLICE-TOTAL HEDGE FUNDS* - NET MGR	2,657	5.46	(1.79)	0.33	(1.79)	0.17	0.32	5.91	16.91	(2.42)	5.32	4.97	4.55	4.52	07/01/2011
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			0.96	2.85	0.96	(4.55)	(4.36)	7.23	11.98	(0.95)	8.23	4.13	4.27	3.98	
	EXCESS RETURN			(2.75)	(2.53)	(2.75)	4.72	4.68	(1.32)	4.93	(1.47)	(2.91)	0.84	0.28	0.53	
238	POLICE-TOTAL DIRECT HEDGE FUNDS* - NET MGR	2,657	5.46	(1.79)	0.33	(1.79)	0.21	0.33	5.95	17.67	(2.42)	5.34	5.13	4.69	5.26	01/01/2012
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			0.96	2.85	0.96	(4.55)	(4.36)	7.23	11.98	(0.95)	8.23	4.13	4.27	4.64	
	EXCESS RETURN			(2.75)	(2.53)	(2.75)	4.76	4.68	(1.28)	5.69	(1.47)	(2.90)	1.01	0.42	0.63	
248	POLICE-TOTAL PERMAL HEDGE FUNDS* - NET MGR															
	HFRI FUND OF FUNDS COMPOSITE INDEX + 1%			0.96	2.85	0.96	(4.55)	(4.36)	7.23	11.98	(0.95)	8.23	4.13	4.27	3.98	
	EXCESS RETURN															

*Information provided by Alpha Frontier.

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
ALTERNATIVE EQUITY RETURN DETAIL																
266	POLICE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	4,874	10.02	0.99	(0.72)	0.99	31.31	6.12	50.48	16.49	0.77	21.95	18.85	16.66	14.89	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.48)	(1.58)	(0.48)	(3.79)	(2.17)	(4.40)	(1.20)	(2.09)	(2.55)	(1.93)			
	POLICE-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			0.51	(2.30)	0.51	27.53	3.95	46.08	15.30	(1.31)	19.40	16.92			
	NYC R3000 +3% LAGGED			7.96	(12.75)	7.96	15.25	(15.11)	35.74	18.42	(16.73)	10.27	12.03	15.39	12.99	
	EXCESS RETURN			(7.45)	10.45	(7.45)	12.27	19.06	10.34	(3.12)	15.42	9.13	4.89	1.27	1.90	
276	POLICE-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	3,460	7.11	(2.19)	0.69	(2.19)	34.21	20.24	23.54	1.04	8.84	12.07	11.05	12.88	9.18	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.24)	(0.91)	(0.24)	(2.41)	(1.97)	(1.62)	(0.69)	(1.65)	(0.70)	(1.09)			
	POLICE-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			(2.43)	(0.23)	(2.43)	31.80	18.27	21.91	0.35	7.19	11.36	9.96			
	NCREIF NFI-ODCE NET + 100 BP			(3.14)	(7.39)	(3.14)	29.57	7.61	22.21	1.35	(2.95)	8.53	7.62	9.55		
	EXCESS RETURN			0.71	7.16	0.71	2.23	10.66	(0.29)	(1.00)	10.14	2.84	2.34	3.33		
286	POLICE-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	1,065	2.19	4.25	7.99	4.25	18.30	14.07	16.92	7.89	14.49	13.91	13.31	14.93	12/01/2013	
	ESTIMATED INVESTMENT FEES			(0.28)	(2.54)	(0.28)	(2.93)	(3.72)	(2.62)	(1.35)	(3.48)	(2.54)	(2.13)	(2.67)		
	POLICE-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			3.97	5.45	3.97	15.37	10.35	14.30	6.53	11.01	11.38	11.18	12.26		
	CPI + 4%			1.94	5.46	1.94	13.29	10.70	11.48	5.37	9.19	9.56	8.03	6.87		
	EXCESS RETURN			2.03	(0.01)	2.03	2.08	(0.35)	2.82	1.16	1.82	1.81	3.15	5.39		

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN DETAIL																
298	POLICE-TOTAL FIXED INCOME - GROSS	15,430	31.72	3.49	2.20	3.49	(8.71)	(11.47)	2.82	10.39	(4.24)	0.74	2.99	3.08	7.53	02/01/1980
	ESTIMATED INVESTMENT FEES			(0.05)	(0.13)	(0.05)	(0.13)	(0.13)	(0.15)	(0.15)	(0.16)	(0.15)	(0.14)			
	EST MANAGEMENT FEES			(0.05)	(0.13)	(0.05)	(0.13)	(0.13)	(0.15)	(0.15)	(0.16)	(0.15)	(0.14)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL FIXED INCOME - NET MGR			3.44	2.07	3.44	(8.85)	(11.60)	2.66	10.25	(4.40)	0.59	2.85			
306	POLICE-TOTAL FIXED INCOME (ex OFI & CASH) - GROSS	13,012		3.69	2.16	3.69	(11.29)	(13.72)	1.12	11.50	(5.55)	(0.32)	2.46	2.87	11/01/2013	
	ESTIMATED INVESTMENT FEES			(0.04)	(0.11)	(0.04)	(0.12)	(0.12)	(0.14)	(0.15)	(0.13)	(0.14)	(0.14)	(0.14)		
	EST MANAGEMENT FEES			(0.04)	(0.11)	(0.04)	(0.12)	(0.12)	(0.14)	(0.15)	(0.13)	(0.14)	(0.14)	(0.14)		
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POLICE-TOTAL FIXED INCOME (ex OFI & CASH) - NET MGR			3.65	2.05	3.65	(11.41)	(13.84)	0.98	11.35	(5.68)	(0.46)	2.32	2.73		
314	POLICE-TOTAL STRUCTURED FIXED INCOME - GROSS	6,438	13.23	3.98	(0.17)	3.98	(12.58)	(16.56)	(2.56)	13.70	(6.79)	(4.52)	1.58	2.01	6.72	01/01/1985
	ESTIMATED INVESTMENT FEES			(0.01)	(0.04)	(0.01)	(0.05)	(0.04)	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)			
	POLICE-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.96	(0.21)	3.96	(12.63)	(16.60)	(2.61)	13.64	(6.83)	(4.57)	1.53			
	NYC CUSTOM STRUCTURED INDEX-POLICE			3.69	(0.55)	3.69	(12.31)	(16.38)	(2.50)	15.71	(6.86)	(4.57)	2.34	2.43		
	EXCESS RETURN			0.27	0.34	0.27	(0.32)	(0.22)	(0.11)	(2.08)	0.02	0.00	(0.82)	(0.42)		
324	POLICE-TOTAL GOVERNMENT - GROSS	1,988	4.09	5.20	(2.79)	5.20	(13.12)	(21.06)	(6.15)	12.87	(10.08)	(8.98)	(0.19)	0.68	6.09	02/01/1987
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)			
	POLICE-TOTAL GOVERNMENT - NET MGR			5.20	(2.80)	5.20	(13.13)	(21.07)	(6.16)	12.84	(10.09)	(8.99)	(0.21)			
	CUSTOM GOVERNMENT BENCHMARK - POLICE			5.09	(3.06)	5.09	(13.32)	(21.50)	(6.11)	17.72	(10.42)	(8.91)	1.23	1.77		
	EXCESS RETURN			0.10	0.26	0.10	0.20	0.43	(0.04)	(4.88)	0.33	(0.08)	(1.44)	(1.09)		
334	POLICE-TOTAL MORTGAGE - GROSS	1,743	3.58	2.67	(0.72)	2.67	(8.75)	(11.60)	(0.81)	4.42	(4.58)	(2.75)	0.53	1.22	5.53	02/01/1987
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.06)	(0.04)	(0.05)	(0.06)	(0.04)	(0.05)	(0.05)			
	POLICE-TOTAL MORTGAGE - NET MGR			2.66	(0.75)	2.66	(8.81)	(11.63)	(0.85)	4.36	(4.63)	(2.80)	0.48			
	NYC CUSTOM MORTGAGE BENCHMARK			2.53	(0.88)	2.53	(9.03)	(11.81)	(1.04)	3.91	(4.85)	(3.44)	0.28	1.02	5.33	
	EXCESS RETURN			0.13	0.13	0.13	0.22	0.18	0.19	0.45	0.23	0.65	0.20	0.20	0.20	
344	POLICE-TOTAL INVESTMENT GRADE CORPORATE - GROSS	2,707	5.56	3.95	2.17	3.95	(14.54)	(16.23)	(0.73)	9.76	(5.68)	(0.20)	1.68	2.49	6.29	01/01/1987
	ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.02)	(0.08)	(0.07)	(0.09)	(0.11)	(0.08)	(0.09)	(0.10)			
	POLICE-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			3.92	2.10	3.92	(14.62)	(16.30)	(0.83)	9.65	(5.76)	(0.29)	1.59			
	NYC CUSTOM IGC BENCHMARK			3.50	1.84	3.50	(14.19)	(15.76)	(0.85)	9.70	(5.55)	(0.74)	1.50	2.15		
	EXCESS RETURN			0.42	0.26	0.42	(0.43)	(0.54)	0.02	(0.06)	(0.21)	0.46	0.09	0.34		

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN DETAIL																
356	POLICE-TOTAL CORE FI- DEVELOPING MGRS - GROSS	162	0.33	3.28	1.04	3.28	(10.57)	(12.61)	(0.84)	8.82	(4.27)	(1.06)	1.50	1.92	3.57	05/01/2009
	ESTIMATED INVESTMENT FEES			(0.05)	(0.15)	(0.05)	(0.17)	(0.17)	(0.19)	(0.21)	(0.18)	(0.19)	(0.20)			
	POLICE-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			3.23	0.90	3.23	(10.74)	(12.77)	(1.02)	8.62	(4.45)	(1.25)	1.31			
	BLOOMBERG U.S. AGGREGATE			2.96	(0.09)	2.96	(10.29)	(13.01)	(1.54)	7.51	(4.78)	(2.77)	0.91	1.36	2.67	
	EXCESS RETURN			0.27	0.99	0.27	(0.44)	0.24	0.52	1.11	0.33	1.53	0.40	0.55	0.91	
376	POLICE-TOTAL TIPS - GROSS	1,593	3.27	3.46	0.00	3.46	(5.12)	(11.90)	5.88	11.11	(6.23)	1.75	2.96	1.51	3.54	06/01/2005
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)			
	POLICE-TOTAL TIPS - NET MGR			3.45	(0.01)	3.45	(5.14)	(11.92)	5.86	11.09	(6.25)	1.73	2.94			
	BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			3.34	0.02	3.34	(5.14)	(11.85)	5.96	10.99	(6.06)	1.75	2.94	1.49	3.44	
	EXCESS RETURN			0.11	(0.04)	0.11	0.00	(0.07)	(0.10)	0.10	(0.19)	(0.02)	0.00	0.03	0.10	
386	POLICE-TOTAL CONVERTIBLE BONDS - GROSS	936	1.92	2.19	4.91	2.19	(11.04)	(9.85)	7.25	14.81	(6.38)	9.23	5.48	7.00	6.76	07/01/2008
	ESTIMATED INVESTMENT FEES			(0.09)	(0.27)	(0.09)	(0.29)	(0.31)	(0.35)	(0.42)	(0.32)	(0.37)	(0.37)			
	POLICE-TOTAL CONVERTIBLE BONDS - NET MGR			2.10	4.64	2.10	(11.34)	(10.15)	6.90	14.39	(6.70)	8.86	5.10			
	ICE BOFA ALL US CONV EX MANDATORY			4.18	5.79	4.18	(22.73)	(19.58)	4.12	52.05	(11.40)	15.06	9.80	10.08	9.26	
	EXCESS RETURN			(2.07)	(1.14)	(2.07)	11.40	9.43	2.78	(37.66)	4.69	(6.20)	(4.69)	(3.08)	(2.50)	
396	POLICE-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	394	0.81	3.32	0.85	3.32	(8.74)	(11.08)	(0.56)	6.91	(2.86)	(2.12)	1.76	2.73	7.18	12/01/1984
	ESTIMATED INVESTMENT FEES			(0.04)	(0.13)	(0.04)	(0.15)	(0.15)	(0.16)	(0.18)	(0.17)	(0.16)	(0.18)	(0.20)	(0.11)	
	POLICE-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			3.27	0.71	3.27	(8.89)	(11.23)	(0.72)	6.74	(3.02)	(2.28)	1.58	2.54	7.08	
	POLICE CUSTOM BENCHMARK (NO CASH)			2.69	(0.13)	2.69	(8.95)	(11.39)	(1.09)	5.83	(4.12)	(2.68)	0.93	1.46		
	EXCESS RETURN			0.59	0.84	0.59	0.05	0.16	0.36	0.91	1.10	0.40	0.66	1.08		
406	POLICE-TOTAL HIGH YIELD - GROSS	3,489	7.17	3.73	7.34	3.73	(11.65)	(10.15)	5.91	7.63	(3.08)	6.59	3.74	4.25	7.01	10/01/1994
	ESTIMATED INVESTMENT FEES			(0.08)	(0.25)	(0.08)	(0.27)	(0.27)	(0.33)	(0.34)	(0.30)	(0.33)	(0.32)			
	POLICE-TOTAL HIGH YIELD - NET MGR			3.65	7.09	3.65	(11.92)	(10.43)	5.58	7.29	(3.38)	6.25	3.42			
	HIGH YIELD CUSTOM BENCHMARK			3.57	7.19	3.57	(12.82)	(11.18)	5.26	7.05	(3.35)	5.88	3.17	3.86	6.25	
	EXCESS RETURN			0.08	(0.10)	0.08	0.90	0.76	0.32	0.24	(0.03)	0.37	0.24	0.39	0.76	
416	POLICE- TOTAL BANK LOANS - GROSS	1	0.00							1.68						12/01/2012
	ESTIMATED INVESTMENT FEES									(0.29)						
	POLICE-TOTAL BANK LOANS - NET MGR									1.40						
	CSFB LEVERAGED LOAN INDEX						(2.68)	(1.06)	5.40	2.78						
	EXCESS RETURN									(1.38)						
426	POLICE-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	2,127	4.37	2.81	2.02	2.81	8.18	0.64	18.00	5.49	2.34	8.62	7.16	7.36	7.89	10/01/2007
	ESTIMATED INVESTMENT FEES			(0.16)	(0.28)	(0.16)	(0.27)	(0.24)	(0.30)	(0.17)	(0.36)	(0.27)	(0.23)			
	POLICE-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			2.65	1.74	2.65	7.91	0.40	17.70	5.32	1.98	8.35	6.93			
	OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			4.07	9.50	4.07	(4.95)	(2.79)	8.29	7.22	2.79	10.70	6.38	7.12	8.33	
	EXCESS RETURN			(1.42)	(7.76)	(1.42)	12.87	3.18	9.41	(1.90)	(0.81)	(2.34)	0.55	0.25	(0.44)	

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	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
CASH SUMMARY															
438	Short Term - POLICE - GROSS	292	0.60	1.11	2.45	1.11	0.04	1.36	0.07	0.56	2.55	0.88	1.38	1.02	04/01/1982
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Short Term - POLICE - NET MGR			1.11	2.45	1.11	0.04	1.36	0.07	0.56	2.55	0.88	1.38	1.02	
442	Cash Account	0	0.00												
444	Securities Lending	0	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, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	\$8	0.02	6.07	10.71	6.07	(26.38)	3.35	34.42	28.39	(9.14)
RUSSELL 2000 GROWTH DAILY			6.07	10.72	6.07	(26.36)	2.83	34.63	28.48	(9.31)
Excess			(0.00)	(0.02)	(0.00)	(0.02)	0.51	(0.21)	(0.09)	0.17
BlackRock US SCV R2000	\$21	0.04								
RUSSELL 2000 VALUE DAILY										
Excess										
Brown Asset Mgmt US SCG	\$189	0.39	9.39	3.76	9.39	(36.94)	(4.29)	45.60	29.71	0.98
RUSSELL 2000 GROWTH DAILY			6.07	10.72	6.07	(26.36)	2.83	34.63	28.48	(9.31)
Excess			3.32	(6.96)	3.32	(10.58)	(7.13)	10.97	1.23	10.29
William Blair-US SCG	\$140	0.29	6.65	16.60	6.65	(21.13)	13.69	40.07		
RUSSELL 2000 GROWTH DAILY			6.07	10.72	6.07	(26.36)	2.83	34.63		
Excess			0.58	5.88	0.58	5.22	10.85	5.44		
Cooke and Bieler-US SCV	\$111	0.23	3.84	8.14	3.84	(17.98)	18.12	9.61		
RUSSELL 2000 VALUE DAILY			(0.66)	2.74	(0.66)	(14.48)	28.27	4.63		
Excess			4.50	5.40	4.50	(3.50)	(10.15)	4.97		
Pzena-US SCV	\$207	0.43	2.65	12.68	2.65	(6.62)	29.91	0.61		
RUSSELL 2000 VALUE DAILY			(0.66)	2.74	(0.66)	(14.48)	28.27	4.63		
Excess			3.31	9.94	3.31	7.86	1.64	(4.03)		
DFA US SCC	\$143	0.29	3.22	10.45	3.22	(12.25)	28.44	12.43	21.78	(12.54)
RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(20.44)	14.82	19.96	25.52	(11.01)
Excess			0.48	3.70	0.48	8.19	13.62	(7.54)	(3.74)	(1.52)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
RAFI US SCE	\$0	0.00								(11.57)
RUSSELL 2000 (DAILY)										(11.01)
Excess										(0.56)
Earnest-US MCC	\$243	0.50	4.57	6.08	4.57					
RUSSELL MIDCAP (DAILY)			4.06	9.70	4.06					
Excess			0.51	(3.62)	0.51					
Wellington US MCC	\$251	0.52	4.22	9.15	4.22	(23.16)	9.99	25.12	32.70	(7.35)
S&P 400 MIDCAP INDEX (DAILY)			3.81	12.17	3.81	(13.06)	24.76	13.66	26.20	(11.08)
Excess			0.42	(3.01)	0.42	(10.10)	(14.77)	11.46	6.50	3.73
MFS-US MCG	\$425	0.87	6.60	9.52	6.60					
RUSSELL MIDCAP GROWTH (DAILY)			9.14	15.91	9.14					
Excess			(2.54)	(6.38)	(2.54)					
Cooke and Bieler-US MCV	\$210	0.43	4.12	6.55	4.12					
RUSSELL MIDCAP VALUE (DAILY)			1.32	6.40	1.32					
Excess			2.80	0.16	2.80					
BlackRock US LMC R1000 Core	\$6,708	13.79	7.37	9.82	7.37	(18.83)	26.46	21.20	31.48	
RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(19.13)	26.45	20.96	31.43	
Excess			(0.09)	(0.11)	(0.09)	0.29	0.01	0.23	0.06	
SSGA-US LC Russell TOP 200 Core	\$3,034	6.24	8.66	10.01	8.66	(20.39)	27.79	22.44	31.74	
RUSSELL TOP 200 INDEX (DAILY)			8.67	10.00	8.67	(19.77)	27.90	22.37	31.75	
Excess			(0.01)	0.01	(0.01)	(0.63)	(0.11)	0.07	(0.01)	
PIMCO RAFI US LMCE	\$1,583	3.25	2.55	13.50	2.55	(3.21)	28.14	4.47	25.42	(6.92)
RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(19.13)	26.45	20.96	31.43	(4.78)
Excess			(4.91)	3.57	(4.91)	15.92	1.68	(16.49)	(6.01)	(2.13)

Public Markets Manager Performance Detail

Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Legal General US LMCE	\$1,407	2.89	3.10	8.53	3.10	(12.05)	22.90	9.58		
RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(19.13)	26.45	20.96		
Excess			(4.36)	(1.40)	(4.36)	7.08	(3.56)	(11.38)		
FUND OF FUNDS										
POLICE-FUND OF FUNDS	\$98	0.20	5.26	10.03	5.26	(16.17)	24.95	19.40	23.33	(8.27)
RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(20.44)	14.82	19.96	25.52	(11.01)
Excess			2.52	3.28	2.52	4.27	10.13	(0.56)	(2.19)	2.74
POLICE-TOTAL LEGATO	\$98	0.20	5.26	10.03	5.26	(16.17)	24.95	19.40	23.33	(8.20)
RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(20.44)	14.82	19.96	25.52	(11.01)
Excess			2.52	3.28	2.52	4.27	10.13	(0.56)	(2.19)	2.82
NON - US EQUITY										
Baillie Gifford WorldxUS LMCC	\$589	1.21	14.03	15.71	14.03	(38.20)	(7.32)	66.73	37.00	(15.37)
NYC Developed Growth Benchmark ^[1]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			6.01	1.75	6.01	(23.91)	(19.94)	59.14	14.51	(1.28)
Walter Scott WorldxUS LMCC	\$826	1.70	13.19	17.99	13.19	(22.40)	12.81	17.99	28.51	(7.68)
NYC Developed Growth Benchmark ^[1]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			5.18	4.03	5.18	(8.11)	0.19	10.40	6.02	6.41
Causeway WorldxUS LMCV	\$732	1.50	14.68	24.51	14.68	(6.96)	9.75	6.53	21.35	(18.34)
NYC Developed Value Benchmark ^[2]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			6.66	10.55	6.66	7.33	(2.87)	(1.06)	(1.14)	(4.25)
Sprucegrove WorldxUS LMCC	\$732	1.51	9.00	16.04	9.00	(11.77)	8.11	4.85	17.62	(13.67)
NYC Developed Value Benchmark ^[2]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.98	2.08	0.98	2.52	(4.52)	(2.74)	(4.87)	0.42

Public Markets Manager Performance Detail

Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Acadian WorldxUS SCC	\$280	0.58	7.79	14.35	7.79	(18.98)	20.49	15.82	21.82	(19.22)
S&P EPAC Small Cap USD NET			6.53	10.57	6.53	(22.69)	8.06	13.78	23.71	(18.58)
Excess			1.26	3.77	1.26	3.71	12.43	2.03	(1.89)	(0.65)
Fidelity WorldxUS SCC	\$0	0.00								(18.22)
S&P EPAC Small Cap USD NET										(18.58)
Excess										0.36
Alger EAFE SCC	\$58	0.12	5.89	12.58	5.89	(21.65)	11.79	9.71		
MSCI EAFE SMALL CAP NET (DAILY)			4.92	9.54	4.92	(21.39)	10.10	12.34		
Excess			0.97	3.04	0.97	(0.26)	1.69	(2.63)		
SSGA WorldxUS LMC NYC Custom IDX	\$289	0.59	8.09	14.16	8.09	(13.84)	12.90	8.09	22.75	(14.05)
NYC Custom World ex US Index ^[3]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.07	0.20	0.07	0.45	0.28	0.50	0.26	0.04
SSGA WorldxUS SC Custom IDX ^[4]	\$222	0.46	5.02	9.62	5.02	(20.23)	11.27	13.18	25.67	(17.97)
World ex USA SC PASSIVE CUSTOM BM ^[5]			4.99	9.52	4.99	(20.58)	11.14	12.78	25.41	(18.07)
Excess			0.03	0.10	0.03	0.36	0.14	0.40	0.26	0.10
EMERGING MARKETS										
Acadian EM	\$410	0.84	6.34	2.92	6.34	(20.76)	6.09	10.72	15.71	(17.27)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			2.39	2.08	2.39	(0.67)	8.63	(7.59)	(2.71)	(2.70)
Baillie Gifford EM	\$440	0.91	7.20	5.06	7.20	(27.55)	(9.04)	29.61	28.50	(15.37)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			3.24	4.21	3.24	(7.45)	(6.50)	11.30	10.08	(0.80)
DFA EM	\$400	0.82	3.37	3.36	3.37	(11.12)	11.49	2.36	9.73	(12.06)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			(0.59)	2.52	(0.59)	8.97	14.03	(15.95)	(8.69)	2.50

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Parametric EM	\$3	0.01							14.20	(14.33)
MSCI EMERGING MARKETS									18.42	(14.57)
Excess									(4.22)	0.24
Pzena-EM ACV	\$234	0.48	6.79	10.14	6.79	(6.95)	6.73			
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)			
Excess			2.83	9.30	2.83	13.14	9.27			
Sands-EM LCG	\$208	0.43	5.98	3.63	5.98	(33.94)	(8.63)			
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)			
Excess			2.02	2.78	2.02	(13.85)	(6.09)			
UBS-EM ACC	\$255	0.52	2.13	(0.64)	2.13	(24.73)	(8.68)			
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)			
Excess			(1.83)	(1.49)	(1.83)	(4.64)	(6.14)			
BlackRock MSCI EM Core	\$382	0.78	4.20	1.23	4.20	(19.57)	(2.10)	17.27	18.76	(14.44)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			0.24	0.39	0.24	0.52	0.44	(1.04)	0.34	0.13
INTERNATIONAL FOF										
POLICE-TOTAL INTERNATIONAL FOF	\$320	0.66	7.93	11.38	7.93	(19.75)	9.07	15.58	25.10	(15.05)
MSCI ACWI ex USA IMI Net			6.56	9.85	6.56	(16.58)	8.53	11.12	21.63	(14.76)
Excess			1.37	1.53	1.37	(3.17)	0.55	4.46	3.47	(0.29)
POLICE-TOTAL INTERNATIONAL XPONANCE	\$162	0.33	7.55	11.82	7.55	(16.97)	9.06	16.72	22.55	(14.14)
MSCI ACWI ex USA IMI Net			6.56	9.85	6.56	(16.58)	8.53	11.12	21.63	(14.76)
Excess			0.99	1.97	0.99	(0.38)	0.53	5.60	0.92	0.62
POLICE-TOTAL INTERNATIONAL LEADING EDGE	\$158	0.32	8.32	10.92	8.32	(22.44)	9.02	14.51	27.61	(16.50)
MSCI ACWI ex USA IMI Net			6.56	9.85	6.56	(16.58)	8.53	11.12	21.63	(14.76)
Excess			1.76	1.07	1.76	(5.86)	0.50	3.39	5.97	(1.74)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
BlackRock Mortgages	\$1,099	2.26	2.56	(0.70)	2.56	(11.46)	(0.85)	4.47	6.89	0.97
NYC Custom Mortgage Benchmark ⁽⁶⁾			2.53	(0.88)	2.53	(11.81)	(1.04)	3.91	6.68	1.01
Excess			0.03	0.18	0.03	0.35	0.19	0.56	0.21	(0.04)
Wellington Mortgages	\$644	1.32	2.82	(0.82)	2.82	(11.94)	(0.81)			
Bloomberg US Mortgage Backed Securities			2.53	(0.88)	2.53	(11.81)	(1.04)			
Excess			0.29	0.06	0.29	(0.12)	0.23			
T Rowe Price-Corporate	\$1,139	2.34	3.99	1.91	3.99	(16.46)	(0.65)	8.68	14.56	(2.39)
NYC Custom IGC Benchmark ⁽⁷⁾			3.50	1.84	3.50	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.48	0.07	0.48	(0.70)	0.19	(1.02)	1.17	(0.48)
Voya-Corporate	\$324	0.67	4.14	2.38	4.14	(16.25)				
Bloomberg U.S. Corporate Inv Grade			3.50	1.84	3.50	(15.76)				
Excess			0.64	0.54	0.64	(0.49)				
BlackRock Corporate	\$213	0.44	4.16	2.33	4.16	(15.97)	(0.88)	10.71	14.09	(1.96)
NYC Custom IGC Benchmark ⁽⁷⁾			3.50	1.84	3.50	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.65	0.50	0.65	(0.21)	(0.03)	1.01	0.69	(0.05)
Taplin Corporate	\$100	0.21	3.82	2.56	3.82	(16.68)	(0.57)	11.24	15.66	(3.47)
NYC Custom IGC Benchmark ⁽⁷⁾			3.50	1.84	3.50	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.32	0.72	0.32	(0.92)	0.28	1.54	2.26	(1.56)
Prudential Corporate	\$255	0.52	4.12	2.49	4.12	(16.18)	(0.44)	9.79	13.91	(1.93)
NYC Custom IGC Benchmark ⁽⁷⁾			3.50	1.84	3.50	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.62	0.65	0.62	(0.42)	0.41	0.09	0.51	(0.02)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Fidelity Corporate	\$119	0.24	3.33	1.47	3.33	(16.20)	(0.45)	10.92	14.79	(2.26)
NYC Custom IGC Benchmark ^[7]			3.50	1.84	3.50	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			(0.17)	(0.37)	(0.17)	(0.44)	0.40	1.22	1.40	(0.35)
Neuberger Berman-Corporate	\$556	1.14	3.64	2.14	3.64	(16.13)				
Bloomberg U.S. Corporate Inv Grade			3.50	1.84	3.50	(15.76)				
Excess			0.14	0.30	0.14	(0.37)				
SSGA LI Treasury	\$6	0.01	4.95	(2.87)	4.95	(21.90)	(3.50)	12.76	10.66	(0.21)
NYC - Treasury Agency Plus Five			4.90	(2.71)	4.90	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.06	(0.17)	0.06	(1.32)	0.28	(0.09)	0.26	(0.16)
BlackRock LI Treasury	\$29	0.06	4.93	(2.33)	4.93	(20.57)	(3.90)	12.39	10.49	(0.18)
NYC - Treasury Agency Plus Five			4.90	(2.71)	4.90	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.04	0.38	0.04	0.01	(0.12)	(0.47)	0.10	(0.13)
SSGA ST Treasury 1-3Y ^[8]	\$16	0.03	1.63	0.81	1.63	(3.71)	(0.58)	3.12	3.60	1.50
FTSE US Government Bond 1-3 Years Index			1.61	0.72	1.61	(3.74)	(0.58)	3.09	3.56	1.56
Excess			0.02	0.09	0.02	0.03	(0.01)	0.03	0.04	(0.06)
SSGA IT Treasury 1-10Y ^[9]	\$735	1.51	2.37	0.16	2.37	(7.74)	(1.78)	5.74	5.08	2.04
USBIG TSY AGN 1-10			2.40	0.03	2.40	(7.79)	(1.66)	5.72	5.18	1.42
Excess			(0.02)	0.12	(0.02)	0.05	(0.12)	0.02	(0.09)	0.62
SSGA LT Treasury 10Y Plus	\$1,201	2.47	7.06	(4.64)	7.06	(29.59)	(4.79)	17.48	14.89	(1.84)
FTSE US Government Bond 10+ Years Index			6.84	(5.33)	6.84	(29.75)	(4.63)	17.72	14.89	(1.89)
Excess			0.22	0.69	0.22	0.16	(0.16)	(0.25)	(0.01)	0.05
HIGH YIELD										
Brigade High Yield	\$505	1.04	2.65	2.79	2.65	(13.34)	7.34	7.07	15.23	
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	
Excess			(0.91)	(4.40)	(0.91)	(2.16)	2.08	0.02	0.91	

Public Markets Manager Performance Detail

Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Eaton Vance High Yield	\$419	0.86	3.95	7.87	3.95	(9.44)	4.94	5.10	14.62	
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	
Excess			0.39	0.68	0.39	1.75	(0.32)	(1.95)	0.30	
Mackay Shields High Yield	\$453	0.93	4.05	7.83	4.05	(8.10)	5.33	7.87	14.40	
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	
Excess			0.49	0.64	0.49	3.09	0.07	0.83	0.08	
Neuberger Berman High Yield	\$402	0.83	3.30	7.38	3.30	(11.17)	4.43	6.07	14.18	(1.99)
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.27)	0.19	(0.27)	0.01	(0.83)	(0.98)	(0.14)	0.09
Nomura High Yield	\$527	1.08	4.25	8.34	4.25	(10.80)	6.37	7.68	13.89	
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	
Excess			0.69	1.15	0.69	0.38	1.11	0.64	(0.43)	
Oaktree High Yield	\$294	0.61	3.26	7.78	3.26	(9.68)	5.02	7.33	13.99	(3.42)
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.30)	0.58	(0.30)	1.51	(0.24)	0.28	(0.32)	(1.34)
Stone Harbor High Yield	\$3	0.01							14.12	(2.63)
Bloomberg U.S. HY - 2% Issuer Cap									14.32	(2.08)
Excess									(0.20)	(0.54)
T Rowe Price High Yield	\$490	1.01	3.74	7.78	3.74	(11.00)	6.30	7.17	15.60	(2.36)
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	(2.08)
Excess			0.17	0.58	0.17	0.18	1.04	0.12	1.28	(0.28)
Shenkman High Yield	\$395	0.81	3.88	7.96	3.88	(8.43)	4.55	6.38	14.29	(5.95)
Bloomberg U.S. HY - 2% Issuer Cap			3.57	7.19	3.57	(11.18)	5.26	7.05	14.32	(2.08)
Excess			0.31	0.76	0.31	2.75	(0.71)	(0.67)	(0.03)	(3.86)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
BANK LOANS										
Barings Bank Loans	\$1	0.00						1.12	7.82	0.38
CSFB LEVERAGED LOAN INDEX								2.78	8.17	1.14
Excess								(1.66)	(0.36)	(0.76)
Credit Suisse Bank Loans	\$0	0.00						1.81	8.31	1.04
CSFB LEVERAGED LOAN INDEX								2.78	8.17	1.14
Excess								(0.96)	0.13	(0.10)
Pinebridge Bank Loans	\$1	0.00								
CSFB LEVERAGED LOAN INDEX										
Excess										
TIPS										
SSGA TIPS	\$1,094	2.25	3.46	(0.01)	3.46	(11.92)	5.92	11.15	8.44	(1.30)
Bloomberg Global Infi-Linked: U.S. TIPS			3.34	0.02	3.34	(11.85)	5.96	10.99	8.43	(1.26)
Excess			0.13	(0.04)	0.13	(0.08)	(0.04)	0.16	0.02	(0.03)
BlackRock TIPS	\$500	1.03	3.43	(0.02)	3.43	(11.90)	5.72	11.01	8.43	(1.18)
Bloomberg Global Infi-Linked: U.S. TIPS			3.34	0.02	3.34	(11.85)	5.96	10.99	8.43	(1.26)
Excess			0.09	(0.04)	0.09	(0.06)	(0.23)	0.02	0.00	0.09
CONVERTIBLE BONDS										
Advent Convertible Bonds	\$395	0.81	2.40	6.12	2.40	(11.59)	0.40	17.14	12.79	(1.92)
ICE BofA US Convertibles - Yield Alter			3.76	6.84	3.76	(13.77)	2.09	13.34	15.40	(0.42)
Excess			(1.36)	(0.72)	(1.36)	2.18	(1.69)	3.80	(2.61)	(1.50)
Victory Convertible Bonds	\$541	1.11	1.89	3.59	1.89	(9.08)	12.32	12.19	20.49	0.66
ICE BofA All IG US Convertibles			(0.47)	1.74	(0.47)	(7.73)	10.42	7.57	20.88	3.35
Excess			2.36	1.85	2.36	(1.34)	1.90	4.62	(0.39)	(2.69)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
CORE FI-DEVELOPING MANAGERS										
LM Capital-Core Plus	\$67	0.14	3.18	0.91	3.18	(12.48)	(1.04)	8.49	9.75	(1.40)
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.22	1.01	0.22	0.53	0.50	0.98	1.03	(1.41)
Pugh-CorePlus	\$28	0.06	3.27	0.50	3.27	(13.26)	(1.26)			
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)			
Excess			0.31	0.60	0.31	(0.25)	0.28			
GIA-Core Plus	\$67	0.14	3.26	1.05	3.26	(12.86)	(0.90)	7.48	9.84	(0.98)
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.30	1.15	0.30	0.15	0.64	(0.03)	1.12	(1.00)
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	\$160	0.33	2.87	(1.34)	2.87	(13.55)	(1.04)	6.20	7.78	0.16
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)	7.51	8.72	0.01
Excess			(0.09)	(1.25)	(0.09)	(0.54)	0.50	(1.31)	(0.94)	0.15
RBC Access MBS	\$82	0.17	2.60	(0.85)	2.60	(12.00)	(1.03)	6.14	7.21	0.49
Access RBC Benchmark			2.41	(0.62)	2.41	(10.38)	(1.46)	4.69	6.05	1.17
Excess			0.19	(0.23)	0.19	(1.61)	0.43	1.45	1.16	(0.69)
CPC Construction Facility	\$9	0.02	4.19	6.52	4.19	3.79	3.88	0.67	6.86	4.14
CPC CONST BENCHMARK			1.41	3.78	1.41	3.75	2.42	2.73	4.09	3.99
Excess			2.78	2.74	2.78	0.03	1.46	(2.06)	2.77	0.15
BOA PPAR FNMA	\$3	0.01	4.36	4.77	4.36	(8.50)	(1.89)	6.12	13.54	2.33
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			1.75	4.91	1.75	2.78	(1.52)	0.98	5.74	0.47
BOA PPAR GNMA	\$5	0.01	2.97	2.76	2.97	(6.61)	(1.18)	7.45	8.44	2.42
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.29	2.77	0.29	3.53	(0.36)	3.14	1.70	0.79

Public Markets Manager Performance Detail

Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
Citibank PPAR FNMA	\$5	0.01	4.73	4.15	4.73	(11.34)	(1.56)	7.06	19.71	2.63
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			2.12	4.29	2.12	(0.06)	(1.19)	1.92	11.91	0.77
Citibank PPAR GNMA	\$2	0.00	3.19	3.81	3.19	(5.04)	(1.10)	8.31	5.33	1.90
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.51	3.82	0.51	5.10	(0.29)	4.00	(1.41)	0.27
CFSB PPAR FNMA	\$0	0.00	4.94	4.00	4.94	(12.29)	(2.05)			
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)			
Excess			2.34	4.14	2.34	(1.01)	(1.67)			
CFSB PPAR GNMA	\$1	0.00	3.09	3.18	3.09	(5.29)	0.03	8.01	5.91	0.99
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.42	3.19	0.42	4.85	0.84	3.69	(0.82)	(0.65)
CPC PPAR FNMA	\$55	0.11	4.48	3.99	4.48	(10.21)	1.14	7.00	13.18	2.31
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			1.87	4.13	1.87	1.07	1.51	1.87	5.38	0.45
POLICE-CPC PPAR GNMA	\$33	0.07	3.17	3.33	3.17	(5.26)	(0.73)	8.00	4.95	0.63
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.49	3.34	0.49	4.88	0.09	3.68	(1.78)	(1.00)
ECLF PPAR FNMA	\$1	0.00	5.01	4.23	5.01	(11.97)	(1.65)			
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)			
Excess			2.40	4.36	2.40	(0.69)	(1.28)			
JPMC PPAR FNMA	\$24	0.05	4.41	3.02	4.41	(11.48)	(1.84)	8.33	14.68	1.68
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			1.81	3.16	1.81	(0.21)	(1.47)	3.19	6.88	(0.18)

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
LIIF PPAR FNMA	\$6	0.01	4.62	5.39	4.62	(9.29)	(1.75)	6.44	16.35	2.27
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			2.01	5.52	2.01	1.99	(1.37)	1.30	8.55	0.41
LIIF PPAR GNMA	\$1	0.00	2.15	2.76	2.15	(2.79)	0.84	6.19	5.54	2.53
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.53)	2.77	(0.53)	7.35	1.65	1.87	(1.19)	0.89
LISC PPAR FNMA	\$2	0.00	5.00	(1.25)	5.00	(16.45)	(1.69)	31.93	14.95	
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	
Excess			2.40	(1.11)	2.40	(5.17)	(1.32)	26.80	7.15	
NCBCI PPAR FNMA	\$0	0.00	3.09	3.40	3.09	(4.39)	0.66	8.49	4.08	2.00
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	1.86
Excess			0.49	3.54	0.49	6.89	1.03	3.36	(3.72)	0.15
NCBCI PPAR GNMA	\$1	0.00	3.00	3.25	3.00	(4.17)	0.95	8.16	3.69	1.23
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.32	3.26	0.32	5.97	1.77	3.85	(3.04)	(0.41)
NHS PPAR GNMA	\$0	0.00	3.08	3.54	3.08	(3.56)	1.26	7.11	2.90	0.54
GNMA Plus 65bps			2.68	(0.01)	2.68	(10.14)	(0.82)	4.31	6.73	1.63
Excess			0.40	3.55	0.40	6.58	2.08	2.80	(3.84)	(1.09)
Wells Fargo PPAR FNMA	\$2	0.00	4.99	4.45	4.99	(11.70)	(1.86)	28.61	21.71	
FNMA Plus 85bps			2.61	(0.14)	2.61	(11.28)	(0.37)	5.14	7.80	
Excess			2.38	4.59	2.38	(0.42)	(1.48)	23.48	13.91	
CASH										
Short Term POLICE	\$292	0.60	1.11	2.45	1.11	1.36	0.07	0.56	2.25	1.96
ICE BofA US 3-Month Treasury Bill			1.07	2.40	1.07	1.46	0.05	0.67	2.28	1.87
Excess			0.04	0.06	0.04	(0.09)	0.02	(0.11)	(0.04)	0.08

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
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, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		10,019,334,139	7,839,423,052	7,508,714,690	4,819,704,504	1.57	11.9%
TOTAL LIQUIDATED		923,884,346	875,129,777	1,144,254,009	-	1.31	
TOTAL ACTIVE		9,095,449,792	6,964,293,276	6,364,460,681	4,819,704,504	1.61	
TOTAL ACTIVE							
Cypress Merchant Banking Partners II	1999	50,000,000	53,944,269	50,584,154	18,471	0.94	-1.2%
Lincolnshire Equity Fund II	1999	12,000,000	11,556,880	22,653,206	205,578	1.98	24.6%
SCP Private Equity Partners II	2000	25,000,000	28,057,160	10,857,159	2,009,822	0.46	-8.2%
Apollo Investment Fund V	2001	35,000,000	54,551,027	107,618,495	298,210	1.98	38.8%
CVC European Equity Partners III	2001	25,000,000	29,700,915	74,439,614	1,736,328	2.56	41.0%
Ares Corporate Opportunities Fund	2003	35,000,000	41,988,154	62,593,160	44,268	1.49	13.1%
Blackstone Capital Partners IV	2003	50,000,000	57,243,283	140,466,805	138,959	2.46	36.3%
FS Equity Partners V	2003	15,000,000	12,851,976	25,116,883	1,169,298	2.05	15.3%
FdG Capital Partners II	2004	25,000,000	26,938,873	32,109,117	562,348	1.21	3.7%
Lincolnshire Equity Fund III	2004	15,000,000	15,140,443	23,333,150	4,305,271	1.83	27.4%
Markstone Capital Partners	2004	10,000,000	11,724,772	4,955,651	46,767	0.43	-32.1%
Medica III	2004	10,000,000	10,000,000	4,237,089	1,224,000	0.55	-10.4%
Yucaipa American Alliance Fund I	2004	20,000,000	29,967,488	35,202,784	142,682	1.18	4.0%
Arlington Capital Partners II	2005	20,000,000	20,236,733	35,601,071	132,178	1.77	11.3%
FirstMark Capital I	2005	10,000,000	10,927,097	81,630,571	13,879,327	8.74	34.3%
JP Morgan Fleming (Tranche A)	2005	38,202,736	40,169,558	45,399,080	4,517,801	1.24	3.9%
Palladium Equity Partners III	2005	25,000,000	26,957,947	49,968,438	66,526	1.86	14.4%
Snow Phipps Group	2005	10,000,000	12,252,715	11,173,908	4,526,126	1.28	4.7%
USPF II Institutional Fund	2005	20,000,000	26,379,750	31,646,439	238,679	1.21	3.3%
Aisling Capital II	2006	2,500,000	2,945,044	2,888,350	117,534	1.02	0.4%
Apollo Investment Fund VI	2006	45,000,000	57,919,123	86,669,134	863,951	1.51	8.6%
Ares Corporate Opportunities Fund II	2006	15,000,000	16,428,261	27,416,564	23,857	1.67	13.1%
Atlantic Equity Partners IV	2006	25,124,928	23,646,318	27,218,750	10,098,678	1.58	4.1%
Blackstone Capital Partners V	2006	42,875,000	44,836,072	73,452,979	331,392	1.65	8.0%
Catterton Partners VI	2006	20,000,000	22,775,054	39,378,258	4,788,181	1.94	11.4%
Coller International Partners V	2006	10,000,000	8,744,365	11,926,848	34,738	1.37	7.4%
Euro Choice III (fka LODH Private Equity - Euro Choice III)	2006	25,000,000	26,875,177	31,197,148	-	1.16	2.9%
Falconhead Capital Partners II	2006	15,000,000	17,444,709	26,696,756	629,089	1.57	6.7%
First Reserve Fund XI	2006	20,000,000	21,253,053	14,072,670	9,391	0.66	-9.4%
GF Capital Private Equity Fund	2006	10,000,000	10,488,825	13,756,928	5,912,234	1.88	11.5%
Landmark Equity Partners XIII	2006	10,000,000	9,611,868	12,729,337	4,826	1.32	5.4%
MidOcean Partners III	2006	40,000,000	46,651,712	104,019,753	78,816	2.23	13.6%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
NB Co-Investment Partners (fka LB Co-Investment Partners)	2006	60,000,000	60,636,285	87,765,301	1,281,416	1.47	8.7%
Permira Europe IV	2006	15,008,760	17,598,872	25,807,592	3,434,319	1.66	9.1%
RRE Ventures IV	2006	15,000,000	19,132,774	28,636,639	5,333,060	1.78	6.8%
The Fourth Cinvn Fund	2006	13,031,286	14,218,068	20,526,266	8,473	1.44	7.4%
Carlyle Partners V	2007	50,000,000	51,704,249	91,883,753	3,076,285	1.84	13.7%
ComVest Investment Partners III	2007	15,000,000	19,413,857	26,864,189	-	1.38	7.6%
Constellation Venture Capital III	2007	15,000,000	17,324,813	15,025,182	73,418	0.87	-1.8%
FTVentures III	2007	7,500,000	8,305,870	16,330,604	2,318,438	2.25	15.3%
Gleacher Mezzanine Fund II	2007	10,000,000	9,187,454	12,341,453	1,090	1.34	10.7%
GSO Capital Opportunities Fund I	2007	17,500,000	26,202,290	37,188,395	353,713	1.43	17.3%
Highland Consumer Fund I	2007	10,000,000	10,016,060	7,086,044	662,975	0.77	-3.2%
Montreux Equity Partners IV	2007	10,000,000	10,000,000	5,529,696	8,215,270	1.37	3.8%
New Mountain Partners III	2007	35,000,000	37,063,348	88,128,438	1,470,149	2.42	14.6%
Olympus Capital Asia III	2007	20,000,000	23,419,622	13,072,161	1,295,048	0.61	-10.7%
Paladin III (NY City)	2007	30,000,000	42,398,853	85,435,293	9,495,393	2.24	13.1%
PCG Clean Energy & Technology Fund (East)	2007	40,000,000	36,190,929	11,176,554	3,208,220	0.40	-10.7%
Pegasus Partners IV	2007	15,000,000	18,305,016	13,916,527	1,909,491	0.86	-2.7%
Pine Brook Capital Partners	2007	15,000,000	17,049,917	22,348,380	1,087,659	1.37	7.9%
Quaker BioVentures II	2007	15,000,000	14,519,055	16,169,727	171,932	1.13	2.5%
SCP Vitalife Partners II	2007	15,000,000	15,074,774	1,184	2,857,546	0.19	-13.5%
Trilantic Capital Partners IV (fka LBMB IV)	2007	60,000,000	46,752,136	71,807,185	2,479,859	1.59	13.4%
United States Power Fund III	2007	15,000,000	17,746,993	22,759,218	540,437	1.31	4.4%
Vista Equity Partners Fund III	2007	20,000,000	21,524,228	51,092,965	1,516,615	2.44	26.8%
Aisling Capital III	2008	7,000,000	7,897,575	18,784,405	44,747	2.38	26.5%
Apollo Investment Fund VII	2008	50,000,000	61,320,784	106,475,389	572,599	1.75	22.6%
Ares Corporate Opportunities Fund III	2008	25,000,000	30,631,947	64,840,701	306,646	2.13	20.2%
Avista Capital Partners II	2008	35,000,000	46,132,085	74,217,122	1,522,027	1.64	14.4%
Blue Wolf Capital Fund II	2008	15,000,000	16,498,604	27,875,522	90,003	1.70	10.7%
Bridgepoint Europe IV	2008	15,467,000	13,655,346	18,614,266	2,172,466	1.52	9.4%
Crestview Partners II	2008	22,500,000	27,451,748	42,211,573	10,760,214	1.93	14.0%
CVC European Equity Partners V	2008	38,425,000	37,009,815	72,074,919	682,080	1.97	16.4%
Euro Choice IV	2008	23,847,000	18,070,659	23,364,445	1,102,236	1.35	5.8%
First Reserve Fund XII	2008	20,000,000	22,216,378	11,556,671	26,118	0.52	-17.9%
GCM Grosvenor NYCPPF Emerging Manager Fund	2008	59,909,091	76,829,032	93,487,239	24,462,700	1.54	9.9%
GI Partners Fund III	2008	17,500,000	18,910,516	29,647,962	8,238	1.57	13.0%
Landmark Equity Partners XIV	2008	27,250,000	26,614,795	33,641,763	2,111,765	1.34	9.4%
Levine Leichtman Capital Partners IV	2008	10,000,000	10,707,203	16,958,693	882,629	1.67	17.8%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Milestone Partners III	2008	15,000,000	16,394,499	14,546,799	2,449,252	1.04	0.6%
NGN BioMed Opportunity II	2008	10,000,000	9,575,911	7,673,105	5,152,274	1.34	3.6%
Onex Partners III	2008	15,000,000	16,452,255	24,665,881	2,495,732	1.65	11.4%
Riverstone-Carlyle Global Energy and Power Fund IV	2008	15,000,000	17,280,862	18,682,797	7,254	1.08	2.1%
Yucaipa American Alliance Fund II	2008	50,000,000	68,624,624	74,695,169	37,416,992	1.63	7.7%
Yucaipa Corporate Initiatives Fund II	2008	14,030,930	13,778,130	12,321,839	189,656	0.91	-1.3%
FS Equity Partners VI	2009	20,000,000	20,181,907	57,040,708	9,584,219	3.30	23.8%
Lexington Capital Partners VII	2009	20,000,000	17,919,483	27,007,793	2,681,743	1.66	13.9%
Lincolnshire Equity Fund IV-A	2009	7,500,000	8,110,778	9,695,121	2,095,331	1.45	8.3%
NorthBound Emerging Manager Custom Fund (fka NB Emergi	2009	20,000,000	17,467,088	24,585,323	4,389,069	1.66	12.1%
Scale Venture Partners III	2009	10,000,000	9,963,534	25,528,663	3,754,285	2.94	22.8%
Welsh, Carson, Anderson & Stowe XI	2009	22,500,000	22,345,669	36,175,176	1,570,033	1.69	11.7%
ComVest Investment Partners IV	2010	45,000,000	47,130,449	77,747,314	7,473,656	1.81	27.9%
Snow Phipps II	2010	17,500,000	21,312,223	19,027,236	10,850,793	1.40	8.0%
Trident V	2010	40,000,000	47,342,906	64,808,445	25,737,983	1.91	12.1%
American Securities Partners VI	2011	50,000,000	56,040,402	98,091,366	28,390,386	2.26	21.9%
Ampersand 2011	2011	12,500,000	12,500,000	40,484,057	99,285	3.25	21.8%
AXA Secondary Fund V B	2011	80,000,000	65,913,485	105,641,760	220,574	1.61	15.4%
BC European Capital IX	2011	73,854,229	74,938,182	90,964,838	28,840,188	1.60	10.8%
BDCM Opportunity Fund III	2011	20,000,000	29,851,855	26,484,084	30,029,067	1.89	11.1%
Blackstone Capital Partners VI	2011	35,000,000	37,552,003	53,070,840	14,145,631	1.79	12.5%
EQT VI	2011	52,782,532	52,028,947	90,760,922	55,947	1.75	13.6%
Pegasus Partners V	2011	14,552,940	18,683,049	15,908,192	8,330,941	1.30	5.9%
Platinum Equity Capital Partners III	2011	50,000,000	42,881,970	86,056,208	10,169,723	2.24	36.0%
Vista Equity Partners Fund IV	2011	70,000,000	72,581,211	91,848,481	49,903,083	1.95	14.7%
Wellspring Capital Partners V	2011	22,500,000	23,897,572	33,741,734	7,037,788	1.71	15.3%
Ares Corporate Opportunities Fund IV	2012	50,000,000	53,375,360	81,943,999	18,641,484	1.88	14.8%
Green Equity Investors VI	2012	55,000,000	61,542,477	64,907,849	57,931,407	2.00	14.3%
NB Strategic Co Investment II	2012	60,000,000	58,636,521	58,636,207	19,427,747	1.33	8.4%
<u>NYCP - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>47,000,000</u>	<u>50,263,667</u>	<u>79,008,382</u>	<u>28,957,931</u>	<u>2.15</u>	<u>17.7%</u>
Palladium Equity Partners IV	2012	35,000,000	35,883,387	25,259,172	31,138,412	1.57	10.0%
Summit Partners Growth Equity Fund VIII-A	2012	75,000,000	85,772,685	173,044,831	40,100,194	2.48	26.6%
Trilantic Capital Partners V (North America)	2012	50,000,000	56,367,119	74,619,811	18,131,997	1.65	15.6%
Warburg Pincus Private Equity XI	2012	80,000,000	84,421,577	109,591,612	30,332,230	1.66	11.6%
Apollo Investment Fund VIII	2013	100,000,000	96,881,638	104,396,749	41,255,456	1.50	10.3%
ASF VI B	2013	60,000,000	49,411,579	63,906,970	8,702,326	1.47	12.3%
Carlyle Partners VI	2013	60,000,000	65,264,284	96,467,622	29,472,739	1.93	15.5%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Crestview Partners III	2013	45,000,000	40,553,100	21,770,965	40,682,844	1.54	12.4%
Landmark - NYC Fund I	2013	23,000,000	21,073,912	24,823,701	12,309,948	1.76	15.8%
Landmark Equity Partners XV	2013	67,000,000	53,783,232	62,172,322	14,249,071	1.42	12.0%
ASF VI B NYC Co-Invest	2014	20,000,000	17,174,627	21,056,313	4,864,740	1.51	12.5%
Bridgepoint Europe V	2014	28,961,400	28,430,354	38,873,511	16,727,719	1.96	18.8%
Carlyle Partners VI - Side Car	2014	6,600,000	4,813,013	6,081,253	3,729,678	2.04	12.8%
Crestview Partners III (Co-Investment B)	2014	15,000,000	15,533,155	740,414	17,589,307	1.18	3.1%
CVC Capital Partners VI	2014	100,000,000	95,576,242	101,319,255	90,958,574	2.01	17.3%
Lexington Capital Partners VIII	2014	80,000,000	72,644,496	70,682,377	50,647,085	1.67	17.2%
Olympus Growth Fund VI	2014	35,000,000	35,530,196	31,450,588	36,613,212	1.92	17.5%
Vista Equity Partners Fund V	2014	85,000,000	106,082,744	124,589,071	106,224,698	2.18	19.4%
ASF VII B	2015	44,500,000	29,160,080	21,709,175	26,404,060	1.65	17.4%
ASF VII B NYC Co-Invest	2015	22,000,000	15,323,687	14,573,084	12,180,645	1.75	19.1%
Bridgepoint Europe V Co-Invest	2015	7,797,300	7,461,349	15,514,722	4,487,966	2.68	27.3%
Centerbridge Capital Partners III	2015	11,100,000	14,631,428	13,883,003	10,790,780	1.69	19.1%
EQT VII	2015	74,573,325	82,999,713	121,759,407	40,682,369	1.96	22.4%
<u>NYCP - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>53,250,000</u>	<u>50,327,576</u>	<u>20,653,131</u>	<u>74,630,645</u>	<u>1.89</u>	<u>24.1%</u>
Siris Partners III	2015	15,000,000	15,958,628	12,096,473	11,591,207	1.48	12.2%
Warburg Pincus Private Equity XII	2015	97,000,000	97,029,442	81,020,161	119,242,946	2.06	19.1%
Welsh, Carson, Anderson & Stowe XII	2015	37,000,000	34,564,637	49,839,497	36,537,213	2.50	27.7%
American Securities Partners VII	2016	37,000,000	36,081,847	14,282,884	53,744,487	1.89	16.4%
Apax IX	2016	60,000,000	64,720,711	72,337,062	59,676,755	2.04	24.2%
BCEC X Metro Co-Investment	2016	16,436,288	17,055,593	5,565,378	24,531,022	1.76	15.0%
Platinum Equity Capital Partners IV	2016	52,500,000	50,877,002	48,526,638	59,937,621	2.13	26.2%
Vista Equity Partners Fund VI	2016	75,000,000	93,076,803	78,020,286	106,253,210	1.98	19.2%
Ares Corporate Opportunities Fund V	2017	44,000,000	47,690,981	21,102,960	44,175,999	1.37	10.6%
BC European Capital X	2017	41,090,720	39,963,967	7,157,902	49,011,240	1.41	9.8%
CVC Capital Partners VII	2017	91,222,540	89,631,070	14,019,316	132,252,756	1.63	22.7%
Green Equity Investors VII	2017	44,000,000	42,067,605	33,335,294	55,050,013	2.10	23.2%
KKR Americas Fund XII	2017	75,000,000	71,018,472	31,006,800	90,465,332	1.71	21.4%
Palladium Equity Partners V	2017	23,333,333	14,699,487	4,057,906	14,223,054	1.24	8.7%
Warburg Pincus Financial Sector	2017	62,000,000	62,376,327	23,851,815	88,162,975	1.80	22.8%
Apollo Investment Fund IX	2018	154,000,000	132,724,864	45,856,729	139,754,831	1.40	24.5%
ASF VIII B	2018	111,000,000	55,820,830	11,331,372	73,625,421	1.52	28.5%
Bridgepoint Europe VI	2018	91,613,395	67,381,118	7,276,500	87,700,599	1.41	19.5%
EQT VIII	2018	83,833,040	74,087,226	45,883,601	87,346,663	1.80	28.1%
EQT VIII (Co-Invest)	2018	29,324,457	26,121,330	20,566,149	34,450,543	2.11	40.2%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Platinum Equity Capital Partners IV Co-Investment	2018	5,250,000	5,260,213	1,046,583	7,029,974	1.54	11.6%
Platinum Equity Small Cap Fund	2018	28,500,000	20,647,250	4,659,493	34,342,570	1.89	32.1%
Siris Partners IV	2018	62,000,000	51,481,273	7,378,385	72,188,592	1.55	19.9%
Vista Equity Partners Fund VII	2018	124,500,000	100,169,157	1,138,973	129,981,534	1.31	12.1%
Apax X	2019	66,500,000	53,518,585	4,183,168	57,505,029	1.15	16.4%
ASF VIII B NYC Co-Invest	2019	55,500,000	23,464,763	4,518,113	32,209,803	1.57	45.3%
Blackstone Capital Partners VIII	2019	69,500,000	35,073,851	2,313,204	38,669,492	1.17	14.5%
Bridgepoint Europe VI Co-Invest	2019	22,903,349	16,093,430	-	25,265,981	1.57	21.0%
Crestview IV Co-Invest	2019	16,666,667	8,572,234	2,274,192	12,398,932	1.71	64.2%
Crestview Partners IV	2019	50,000,000	25,716,702	5,862,289	32,984,187	1.51	47.0%
KKR European Fund V (USD)	2019	50,150,000	43,373,369	8,466,344	42,163,898	1.17	9.7%
Lexington Capital Partners IX	2019	74,625,000	59,340,814	14,644,478	73,389,256	1.48	36.2%
Lindsay Goldberg V	2019	55,500,000	26,504,194	7,571,371	28,871,589	1.37	29.7%
<u>NYCP - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>45,416,667</u>	<u>21,086,772</u>	<u>2,154,391</u>	<u>33,604,448</u>	<u>1.70</u>	<u>29.0%</u>
Platinum Equity Capital Partners V	2019	119,000,000	115,327,099	13,817,101	158,088,815	1.49	28.6%
Trilantic Capital Partners VI (North America)	2019	40,000,000	34,407,961	3,189,919	46,813,033	1.45	22.2%
Warburg Pincus Global Growth	2019	80,000,000	70,052,396	580,000	93,251,042	1.34	15.1%
WCAS XIII	2019	62,000,000	51,488,587	18,353,231	52,799,658	1.38	27.2%
BC Partners XI - USD	2020	69,300,000	26,289,730	-	26,219,103	1.00	-0.2%
Clearlake Capital Partners VI	2020	30,000,000	30,356,218	2,512,913	43,437,960	1.51	30.8%
EQT IX	2020	58,535,500	51,624,551	5,321,728	54,727,430	1.16	13.0%
EQT IX (Co-Invest)	2020	15,964,500	15,850,657	266,194	16,207,337	1.04	2.7%
FTV VI	2020	7,500,000	7,050,000	-	12,246,686	1.74	35.4%
Green Equity Investors VIII	2020	69,500,000	60,569,016	563,088	65,953,099	1.10	7.3%
Green Equity Investors VIII Coinvest N	2020	23,200,000	16,613,428	-	18,880,688	1.14	8.0%
Hg Genesis 9	2020	31,838,337	25,763,447	5,364,830	24,116,191	1.14	18.6%
KKR Asian Fund IV	2020	65,000,000	23,513,386	180,051	22,401,857	0.96	-4.3%
Lexington IX Co-Invest	2020	24,875,000	12,189,994	4,699,724	16,123,115	1.71	44.3%
NYC-Northbound Emerging Managers Program	2020	111,000,000	33,735,017	636,573	40,012,507	1.20	25.6%
Platinum Equity Capital Partners V Co-investment	2020	29,750,000	29,352,777	4,508,718	51,242,275	1.90	68.4%
Valor Equity Partners V	2020	16,500,000	14,738,215	-	20,471,034	1.39	25.2%
Apax Digital Fund II	2021	33,000,000	1,177,273	-	339,972	0.29	
BC Partners XI Metro Coinvestment	2021	31,500,000	20,447,599	-	21,347,797	1.04	4.5%
Centerbridge Capital Partners IV	2021	67,000,000	28,661,344	-	42,866,130	1.50	65.7%
Centerbridge Capital Partners IV – N Co-Invest	2021	33,000,000	24,736,819	1,499,125	33,630,285	1.42	76.8%
Clearlake Capital Partners VII	2021	105,000,000	43,080,390	2,556	41,979,079	0.97	-5.0%
CVC Capital Partners VIII	2021	108,829,033	60,918,000	-	63,061,251	1.04	7.0%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Grain Communications Opportunity Fund III	2021	15,000,000	8,488,589	12,045	7,553,364	0.89	-11.0%
HarbourVest Centre Street Co-Investment Fund	2021	110,000,000	53,679,479	-	52,095,357	0.97	-3.3%
ICG Strategic Equity Co-Investment Fund IV	2021	33,000,000	27,420,306	-	30,478,209	1.11	15.8%
ICG Strategic Equity Fund IV	2021	66,000,000	34,738,204	4,586,108	44,077,528	1.40	34.1%
Insight Partners XII	2021	69,750,000	46,073,344	77,079	37,647,513	0.82	-19.6%
Insight Partners XII Buyout Annex Fund	2021	23,250,000	14,763,750	-	13,659,805	0.93	-8.2%
KKR Americas Fund XIII	2021	117,000,000	32,978,489	-	29,405,173	0.89	-22.2%
One Rock Capital Partners III	2021	27,500,000	18,366,473	2,815,180	19,993,632	1.24	27.5%
Permira VIII	2021	104,959,800	-	-	(970,308)	0.00	
PSG V	2021	97,000,000	41,677,740	3,106,611	40,159,965	1.04	6.7%
Reverence Capital Partners Opportunities Fund V (FOO) (PE F	2021	13,000,000	2,952,232	3,554	2,954,881	1.00	0.4%
Reverence Capital Partners Opportunities Fund V (PE Fund III)	2021	37,000,000	8,929,693	10,114	8,370,039	0.94	-11.4%
Stelllex Capital Partners II	2021	33,000,000	20,398,327	1,240,490	20,294,509	1.06	8.0%
The Resolute Fund V	2021	46,000,000	31,979,486	151,998	52,720,997	1.65	79.9%
Vistria Fund IV	2021	45,000,000	33,024,249	634,266	33,515,476	1.03	5.3%
Warburg Pincus Financial Sector II	2021	61,500,000	23,807,240	-	29,504,375	1.24	24.4%
EQT X	2022	75,750,000	620,570	620,570	(1,032,636)	-0.66	
EQT X (Co-Invest)	2022	25,250,000	4,596,858	-	4,568,413	0.99	-9.8%
FTV VII	2022	39,719,980	15,093,592	-	14,722,108	0.98	-3.9%
FTV VII Co-Invest	2022	8,936,990	2,616,379	-	2,616,340	1.00	
Green Equity Investors IX	2022	87,375,000	-	-	(116,491)	0.00	
Green Equity Investors IX Co-Invest	2022	29,125,000	-	-	-	0.00	
Hg Genesis 10	2022	45,816,984	391,717	-	83,554	0.21	
Hg NYC Co-Invest	2022	16,800,000	5,509,810	-	5,597,163	1.02	4.4%
Hg Saturn 3	2022	33,600,000	254,992	-	(24,832)	-0.10	
Lexington Capital Partners X Co-Invest	2022	30,000,000	4,849,737	-	5,795,111	1.19	57.3%
Nordic Capital XI	2022	59,052,000	-	-	(359,994)	0.00	
Nordic N11 Co-Investment	2022	24,679,424	-	-	-	0.00	
Platinum Equity Capital Partners VI (Co-Invest)	2022	35,500,000	-	-	-	0.00	
Raine Partners IV	2022	23,333,333	-	-	(513,953)	0.00	
Thoma Bravo XV	2022	84,000,000	45,082,479	18,201	43,450,105	0.96	-10.1%
Thoma Bravo XV Co-Invest	2022	28,000,000	11,318,579	-	10,629,208	0.94	-12.0%
Warburg Pincus Global Growth 14	2022	64,220,000	12,969,141	-	12,529,887	0.97	-14.1%
Welsh, Carson, Anderson & Stowe XIV N Co-Invest	2022	30,000,000	-	-	-	0.00	
WPGG 14 Co-Invest-N	2022	38,530,000	3,895,977	-	3,821,477	0.98	-6.0%
Apax XI	2023	90,000,000	-	-	(480,663)	0.00	
KKR European Fund VI (USD)	2023	31,500,000	-	-	(389,757)	0.00	

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Lexington Capital Partners X	2023	90,000,000	-	-	2,604,510	0.00	
Platinum Equity Capital Partners VI	2023	106,500,000	6,218,015	-	4,867,060	0.78	-99.1%
Welsh, Carson, Anderson & Stowe XIV	2023	90,000,000	2,794,615	-	695,113	0.25	

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail

Through December 31, 2022

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total	Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			5,029,828,294	4,189,825,090		2,898,590,728	3,409,554,746	1.49	9.3%
TOTAL PRIVATE REAL ESTATE									
PRISA SA	2006	Core Portfolio	21,000,000	22,590,656		12,377,449	35,745,501	2.13	5.5%
Prologis Targeted U.S. Logistics Fund	2006	Core Portfolio	80,000,000	83,594,865		7,667,933	106,766,168	1.37	8.5%
RREEF America REIT II	2006	Core Portfolio	21,000,000	27,724,347		18,304,645	38,127,844	2.04	6.1%
UBS Trumbull Property Fund	2006	Core Portfolio	61,000,000	94,902,063		116,607,008	33,815,089	1.59	0.06
Heitman HART	2007	Core Portfolio	28,000,000	48,686,125		67,234,914	34,335,211	2.09	8.0%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	15,000,000	17,613,742		8,273,553	25,236,806	1.90	5.1%
JP Morgan Strategic Property Fund	2007	Core Portfolio	56,000,000	62,422,616		78,282,360	68,909,499	2.36	7.5%
PRISA II	2007	Core Portfolio	60,278,867	63,729,327		31,658,109	110,520,827	2.23	6.5%
LaSalle Property Fund	2010	Core Portfolio	115,000,000	115,000,000		35,434,215	169,845,102	1.79	10.1%
Almanac Realty Securities VI	2012	Core Portfolio	50,000,000	33,444,956		36,587,072	6,818,303	1.30	8.9%
Almanac Realty Securities VI (Sidecar II)	2012	Core Portfolio	15,000,000	5,829,583		5,302,452	2,610,228	1.36	8.2%
NYC Asset Investor #2 LLC	2013	Core Portfolio	60,000,000	60,259,071		25,136,824	36,107,626	1.02	0.3%
MetLife Core Property Fund	2014	Core Portfolio	99,000,000	99,000,000		23,780,950	139,321,783	1.65	10.7%
Almanac Realty Securities VII	2015	Core Portfolio	50,000,000	48,513,083		38,275,556	30,450,077	1.42	12.0%
Almanac Realty Securities VII (Sidecar II)	2016	Core Portfolio	20,000,000	11,388,003		10,909,247	8,382,259	1.69	16.9%
Exeter Industrial Core Club Fund II	2016	Core Portfolio	19,000,000	18,505,000		7,517,400	36,009,713	2.35	21.6%
Jamestown Premier Property Fund	2016	Core Portfolio	26,000,000	38,223,765		15,390,869	23,413,747	1.02	0.4%
NYCRS Artemis Co-Investment	2016	Core Portfolio	35,000,000	40,650,018		48,223,093	17,049,861	1.61	17.1%
USAA Eagle Real Estate Fund	2016	Core Portfolio	75,000,000	75,000,000		19,240,594	87,954,102	1.43	7.3%
Brookfield Premier Real Estate Partners	2017	Core Portfolio	61,000,000	80,621,950		20,941,959	116,201,409	1.70	11.7%
Carlyle Property Investors	2017	Core Portfolio	61,000,000	77,895,782		17,527,242	115,785,412	1.71	13.2%
Lion Industrial Trust - 2007	2017	Core Portfolio	110,000,000	146,229,445		20,676,197	283,373,586	2.08	21.5%
Almanac Realty Securities VIII	2019	Core Portfolio	42,000,000	23,740,139		4,951,967	24,003,526	1.22	13.0%
Almanac Realty Securities VIII (Sidecar II)	2019	Core Portfolio	28,000,000	16,346,187		3,999,954	18,033,755	1.35	20.0%
Artemis Real Estate Partners Income and Growth Fund	2019	Core Portfolio	18,000,000	13,286,822		3,603,643	10,882,462	1.09	5.9%
Harrison Street Core Property Fund, L.P.	2019	Core Portfolio	20,000,000	23,433,510		2,980,374	26,383,009	1.25	8.2%
Heitman Core Real Estate Debt Income Trust	2019	Core Portfolio	28,000,000	34,837,028		6,837,028	33,965,199	1.17	4.9%
HSRE-Centre Street Core Co-Investment, L.P.	2019	Core Portfolio	10,000,000	9,629,304		848,545	12,849,692	1.42	15.5%
Cortland Partners Growth and Income Fund	2020	Core Portfolio	60,000,000	66,104,055		7,143,649	92,948,922	1.51	20.2%
Exeter Industrial Core Fund III, LP	2020	Core Portfolio	63,600,000	62,500,000		6,070,000	67,103,217	1.17	10.6%
Kayne Anderson Core Real Estate Fund	2020	Core Portfolio	30,000,000	33,457,773		3,824,613	36,871,952	1.22	8.6%
Ares Industrial Real Estate Fund LP	2021	Core Portfolio	120,000,000	124,032,045		4,032,045	151,569,036	1.25	20.5%
EQT Exeter Industrial Core-Plus Fund IV, LP	2022	Core Portfolio	79,000,000	7,615,600		-	6,777,682	0.89	-11.1%
TPG Real Estate Thematic Advantage Core-Plus	2022	Core Portfolio	75,000,000	32,482,640		-	32,948,759	1.01	1.6%
Blackstone Fund IV	2004	Non-Core Portfolio	15,000,000	19,220,353		27,428,335	123,448	1.43	10.4%
The City Investment Fund I	2004	Non-Core Portfolio	70,000,000	69,030,360		69,908,414	(211)	1.01	0.3%
AREA Real Estate Investment Fund V, LP	2006	Non-Core Portfolio	5,000,000	5,000,004		5,748,863	5,617	1.15	1.7%
Blackstone Real Estate Partners VI	2007	Non-Core Portfolio	40,000,000	44,681,307		88,486,997	694,868	2.00	13.2%
Carlyle Realty Partners V	2007	Non-Core Portfolio	20,000,000	25,421,745		38,746,479	38,872	1.53	9.0%
Colony Investors VIII	2007	Non-Core Portfolio	20,000,000	21,249,679		9,444,327	-	0.44	-11.3%

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, 2022

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total	Distributions	Market Value	Total Value Multiple	Net IRR%
Metropolitan Workforce Housing Fund	2007	Non-Core Portfolio	7,000,000	7,006,513		8,372,246	125,137	1.21	3.8%
AG Realty Fund VII	2008	Non-Core Portfolio	25,000,000	23,454,500		35,345,911	41,189	1.51	12.5%
American Value Partners Fund I	2008	Non-Core Portfolio	15,000,000	11,355,858		10,415,981	659,875	0.98	-0.5%
Ares European Real Estate Fund III, LP	2008	Non-Core Portfolio	30,000,000	30,487,500		33,642,499	104,765	1.11	2.6%
PRISA III	2008	Non-Core Portfolio	30,000,000	35,657,776		-	153,105,829	4.29	12.3%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	30,000,000	13,301,089		2,817,899	1,227,253	0.30	-11.0%
Stockbridge Real Estate Fund III	2008	Non-Core Portfolio	27,000,000	26,998,145		16,829,753	16,349,876	1.23	2.4%
Westbrook Real Estate Fund VII	2008	Non-Core Portfolio	10,000,000	11,262,377		11,315,155	1,381,873	1.13	0.02
Thor Urban Property Fund II	2009	Non-Core Portfolio	20,000,000	27,398,054		27,390,625	2,632,783	1.10	2.8%
Walton Street Real Estate Fund VI	2009	Non-Core Portfolio	30,000,000	26,594,360		30,436,207	12,797,554	1.63	0.08
Blackstone Real Estate Partners Europe III (USD Vehicle)	2010	Non-Core Portfolio	35,000,000	37,036,441		50,581,050	2,789,363	1.44	10.0%
Westbrook Real Estate Fund VIII	2010	Non-Core Portfolio	35,000,000	41,891,114		48,229,691	4,668,784	1.26	9.4%
Carlyle Realty Partners VI	2011	Non-Core Portfolio	40,000,000	38,974,550		62,919,635	3,442,216	1.70	24.3%
H/2 Special Opportunities Fund II	2011	Non-Core Portfolio	25,000,000	25,000,000		36,431,004	419,166	1.47	13.2%
Blackstone Real Estate Partners VII	2012	Non-Core Portfolio	100,000,000	127,599,436		197,656,974	20,582,292	1.71	15.7%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	60,000,000	70,072,398		120,883,533	19,030,953	2.00	18.5%
Divco West Fund III	2012	Non-Core Portfolio	70,000,000	68,667,971		118,718,249	-	1.73	23.9%
Taconic New York City Investment Fund LP	2012	Non-Core Portfolio	40,000,000	16,727,272		27,365,442	2,981,342	1.81	15.5%
NYC Asset Investor #1 LLC	2013	Non-Core Portfolio	30,000,000	33,562,598		17,143,938	18,481,827	1.06	1.1%
NYC Asset Investor #3 LLC	2013	Non-Core Portfolio	40,000,000	28,825,276		7,666,718	26,667,394	1.19	3.3%
Blackstone Real Estate Partners Europe IV (USD Vehicle)	2014	Non-Core Portfolio	97,500,000	95,510,429		120,618,397	16,898,664	1.44	11.5%
Carlyle Realty Partners VII	2014	Non-Core Portfolio	60,000,000	55,225,289		71,043,959	14,898,432	1.56	14.7%
Divco West Fund IV	2014	Non-Core Portfolio	70,000,000	69,301,157		113,886,341	4,490,629	1.71	24.9%
Lone Star Real Estate Fund III	2014	Non-Core Portfolio	75,000,000	70,306,161		95,126,613	351,705	1.36	14.1%
Blackstone Real Estate Partners VIII	2015	Non-Core Portfolio	101,000,000	114,974,147		118,839,704	78,389,502	1.72	17.0%
H/2 Special Opportunities Fund III	2015	Non-Core Portfolio	40,000,000	41,540,719		41,454,645	9,714,017	1.23	6.9%
European Property Investors Special Opportunities IV (EPISO IV)	2016	Non-Core Portfolio	32,413,099	29,618,202		12,268,122	28,019,733	1.36	7.9%
PW Real Estate Fund III LP	2016	Non-Core Portfolio	30,811,730	25,418,467		62,662,079	11,841,694	2.93	30.9%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	24,000,000	23,300,911		20,471,578	8,361,250	1.24	0.10
Divco West Fund V	2017	Non-Core Portfolio	40,000,000	27,238,380		7,280,519	27,670,550	1.28	6.5%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	27,000,000	27,548,835		25,505,618	20,022,142	1.65	18.1%
Exeter Industrial Value Fund IV	2017	Non-Core Portfolio	16,000,000	15,109,020		30,854,814	2,350,262	2.20	30.6%
H/2 Special Opportunities Fund IV	2017	Non-Core Portfolio	61,000,000	61,000,000		13,823,361	58,603,082	1.19	5.7%
KKR CMBS B-Piece SMA	2017	Non-Core Portfolio	81,000,000	72,294,174		29,935,482	74,621,098	1.45	9.9%
Lone Star Real Estate Fund V	2017	Non-Core Portfolio	92,700,000	29,968,214		15,344,714	10,514,944	0.86	-7.2%
Pramerica Real Estate Capital VI (PRECap VI)	2017	Non-Core Portfolio	32,630,522	35,519,434		28,764,627	11,884,900	1.14	7.3%
Basis Investment Group Fund I	2018	Non-Core Portfolio	9,500,000	9,987,685		5,574,900	7,600,754	1.32	12.1%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	65,850,000	68,948,735		89,124,453	22,120,000	1.61	28.4%
AERMONT Real Estate Fund IV	2019	Non-Core Portfolio	19,401,963	13,466,804		-	10,950,085	0.81	-12.2%
Blackstone Real Estate Partners IX	2019	Non-Core Portfolio	101,000,000	102,138,207		33,148,606	116,951,054	1.47	30.7%
Brookfield Strategic Real Estate Partners III	2019	Non-Core Portfolio	95,000,000	82,202,137		21,512,971	86,177,185	1.31	13.3%
Blackstone Real Estate Partners Europe VI (EURO Vehicle)	2020	Non-Core Portfolio	69,992,113	44,741,173		21,447,550	32,519,934	1.21	13.4%
Divco West Fund VI	2020	Non-Core Portfolio	50,000,000	24,213,518		816,373	23,496,185	1.00	0.4%

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, 2022

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total	Distributions	Market Value	Total Value Multiple	Net IRR%
DRA Growth & Income Fund X	2020	Non-Core Portfolio	36,000,000	28,388,843		8,601,589	27,384,925	1.27	25.3%
ElmTree Net Lease Fund IV	2020	Non-Core Portfolio	40,000,000	25,618,429		1,418,807	31,825,364	1.30	27.8%
GreenOak Asia III (USD Vehicle)	2020	Non-Core Portfolio	40,000,000	34,669,174		23,582,272	14,816,925	1.11	13.5%
BIG Real Estate Fund II	2021	Non-Core Portfolio	20,000,000	10,506,981		3,885,257	6,825,695	1.02	3.5%
CIREP Centre Street, L.P.	2021	Non-Core Portfolio	75,000,000	45,588,235		-	54,699,890	1.20	22.5%
Exeter Industrial Value Fund V	2021	Non-Core Portfolio	30,000,000	29,539,058		-	43,986,174	1.49	38.1%
KKR Real Estate Partners Americas III	2021	Non-Core Portfolio	105,000,000	61,769,932		4,175,248	59,935,172	1.04	4.8%
KKR Real Estate Partners Europe II	2021	Non-Core Portfolio	50,150,000	34,972,939		11,247,273	28,048,994	1.12	12.8%
KKR Real Estate Securities Dislocation Opportunity Co-Investment Fur	2021	Non-Core Portfolio	58,000,000	34,745,683		39,089,928	4,821,729	1.26	35.9%
PGIM Real Estate Capital VII (USD Feeder) SCSp	2021	Non-Core Portfolio	51,000,000	14,290,446		1,087,894	14,946,580	1.12	14.8%
Rialto Real Estate Fund IV	2021	Non-Core Portfolio	53,000,000	35,634,239		4,813,567	33,718,694	1.08	7.9%
Westbrook Real Estate Fund XI	2021	Non-Core Portfolio	25,000,000	11,500,418		4,846,866	8,907,123	1.20	0.23
Almanac Realty Securities IX, L.P.	2022	Non-Core Portfolio	35,300,000	4,554,608		-	4,228,609	0.93	-9.4%
Artemis Real Estate Partners Healthcare Fund II	2022	Non-Core Portfolio	70,000,000	12,239,810		2,769,217	8,674,534	0.93	-9.3%
Brookfield Strategic Real Estate Partners IV	2022	Non-Core Portfolio	131,000,000	26,074,024		-	30,001,095	1.15	16.6%
Carlyle Realty Partners IX	2022	Non-Core Portfolio	100,000,000	5,594,383		-	3,778,187	0.68	-58.2%
CIREP Centre Street II	2022	Non-Core Portfolio	75,000,000	8,312,808		-	6,713,718	0.81	-19.7%
LBA Logistics Value Fund IX	2022	Non-Core Portfolio	49,000,000	13,192,308		-	12,262,337	0.93	-11.6%
TPG Real Estate Partners IV	2022	Non-Core Portfolio	96,000,000	6,074,910		-	4,766,205	0.78	-23.4%
Almanac Realty Securities IX Co-Investment	2023	Non-Core Portfolio	17,700,000	1,219,888		-	1,295,566	1.06	6.3%

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Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		1,664,190,277	1,025,052,951	377,502,320	1,001,473,758	1.3x	12.0%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	60,000,000	53,790,219	54,878,560	52,000,515	2.0x	13.0%
Global Energy & Power Infrastructure Fund II	2014	40,000,000	43,540,420	43,201,887	13,923,622	1.3x	14.5%
IFM Global Infrastructure Fund	2014	60,000,000	80,109,292	36,295,053	115,663,703	1.9x	11.6%
Actis Energy 4	2016	39,600,000	39,655,124	49,233,767	7,811,000	1.4x	14.4%
ASF VII Infrastructure L.P.	2016	42,000,000	30,482,646	10,778,333	34,158,261	1.5x	16.3%
Brookfield Infrastructure Fund III, L.P.	2016	61,000,000	41,446,172	16,668,602	42,988,105	1.4x	10.4%
Global Infrastructure Partners III-A/B, L.P.	2016	71,000,000	72,175,722	32,613,121	73,728,144	1.5x	10.6%
Axiom Infrastructure North America (2017)	2017	42,662,239	44,515,305	12,688,476	47,258,252	1.3x	8.6%
EQT Infrastructure III (No.2) SCSp	2017	34,730,354	38,731,037	54,309,603	17,352,320	1.9x	20.8%
NYCRS EIG Energy Partners, L.P.	2017	42,350,000	25,729,676	13,435,432	16,061,253	1.1x	7.5%
Cardinal NR Sidecar Holdings L.P.	2018	6,560,000	6,604,308	2,180,901	9,944,869	1.8x	17.5%
EQT Infrastructure IV (No.2) USD SCSp	2018	63,500,000	57,084,335	10,126,576	61,971,440	1.3x	11.2%
Global Infrastructure Partners IV-A/B, L.P.	2018	72,100,000	55,207,691	116,980	58,231,773	1.1x	6.0%
KKR Global Infrastructure Investors III L.P.	2018	54,700,000	47,421,833	12,181,528	45,172,781	1.2x	10.1%
Ardian Infrastructure Fund V B	2019	44,078,595	30,606,117	1,183,485	34,784,057	1.2x	14.8%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	2019	6,000,000	6,026,930	838,388	8,362,883	1.5x	15.5%
Brookfield Infrastructure Fund IV, L.P.	2019	62,000,000	51,413,019	11,461,779	54,914,315	1.3x	13.7%
Global Energy & Power Infrastructure Fund III, L.P.	2019	54,700,000	40,380,890	8,280,504	40,948,300	1.2x	13.5%
Actis Energy 5	2020	62,000,000	8,398,674	-	3,884,000	0.5x	-90.2%
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	2020	43,860,000	7,380,102	-	7,880,848	1.1x	6.5%
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	2020	5,100,000	5,151,000	309,543	6,306,324	1.2x	9.6%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	2020	8,600,000	7,816,517	-	11,917,635	1.5x	25.1%
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	2020	7,013,942	7,037,046	-	9,050,926	1.3x	10.7%
EQT Infrastructure V (No.2) USD SCSp	2020	74,000,000	41,531,645	4,827,212	38,464,657	1.0x	4.6%
ASF VIII Infrastructure B L.P.	2021	55,000,000	6,370,583	744,507	6,378,875	NM	NM
Axiom Infrastructure North America (2021)	2021	37,361,504	24,946,238	521,271	25,264,990	NM	NM
Basalt Infrastructure Partners III	2021	46,000,000	31,066,212	-	32,391,812	NM	NM
KKR Global Infrastructure Investors IV (USD) SCSp	2021	82,000,000	34,428,897	434,568	34,713,645	NM	NM
Stonepeak Infrastructure Fund IV, L.P.	2021	68,000,000	24,120,676	192,245	26,292,253	NM	NM
Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	2021	24,525,000	22,128,059	-	23,658,101	1.1x	16.9%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through December 31, 2022

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	2021	9,000,000	7,614,507	-	7,685,699	1.0x	0.7%
Ardian Infra Fund V Co-Invest Eden	2022	9,423,042	9,423,042	-	9,832,980	NM	NM
Ardian Infra Fund V Co-Invest Lemon	2022	7,334,397	6,674,202	-	6,740,664	NM	NM
Basalt Infrastructure Partners IV A L.P.	2022	71,600,000	-	-	-	NM	NM
BIP III Ride Co-Investment L.P. (Project Ride)	2022	6,728,104	6,728,104	-	7,239,176	NM	NM
Blackrock Global Infrastructure Fund IV	2022	57,000,000	3,740,373	-	3,514,499	NM	NM
Brookfield Infrastructure Fund V, LP	2022	71,570,000	-	-	222,771	NM	NM
InfraVia European Fund V SCSp	2022	50,503,100	5,576,340	-	4,758,308	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2022	10,590,000	-	-	-	-	0.0%

Information provided by the New York City Police Retirement Systems Consultants

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		2,455,631,399	2,719,029,155	1,500,752,106	2,126,477,386	1.58%	7.34%
Avenue Special Situations Fund V, L.P.	2007	20,209,326	20,520,314	26,826,898	-	-	10.89%
Avenue Europe Special Sit. Fund, L.P.	2008	14,801,485	13,775,563	26,870,440	-	-	13.82%
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	46,616,914	4,624,406	0.00%	2.21%
GoldenTree Managed Account	2011	88,000,000	88,552,006	-	158,160,255	2.63%	5.84%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	140,625,000	260,718,750	153,140,625	212,059,932	2.13%	6.09%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	105,000,000	127,096,073	27,781,909	141,300,024	2.74%	4.51%
Apollo Centre Street Partnership, L.P.	2012	205,833,333	444,611,582	282,046,152	253,934,527	2.66%	6.45%
FCO MA Centre Street L.P.	2012	90,000,000	180,220,295	189,297,103	60,538,003	0.00%	8.96%
OHA Centre Street Partnership, L.P.	2012	168,750,000	213,721,294	46,997,388	289,587,845	2.85%	8.18%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	55,000,000	55,000,000	-	64,950,557	0	2.09%
Lone Star Fund VIII (U.S.), L.P.	2013	70,000,000	68,907,286	72,113,354	9,891,924	-	8.09%
Oaktree Opportunities Fund IX, L.P.	2013	70,000,000	70,000,000	56,467,396	59,974,957	0.00%	7.55%
Ares Centre Street Partnership, L.P.	2014	90,000,000	90,000,000	-	163,008,297	-	8.54%
Brightwood Capital Fund III, L.P.	2015	22,000,000	17,853,821	17,974,339	6,586,816	0.00%	6.69%
Torchlight Debt Opportunity Fund V, LP	2015	46,000,000	36,800,000	44,090,088	4,510,937	0.27%	10.56%
Brightwood Capital Fund IV, LP	2016	55,000,000	55,000,000	21,730,157	49,694,307	-	7.59%
ICG Centre Street Partnership, L.P.	2017	80,000,000	124,457,746	81,081,760	66,510,434	0.00%	8.44%
KKR OFI SMA	2017	171,000,000	132,225,816	38,493,045	128,877,487	0.00%	7.39%
Maranon Centre Street Partnership, L.P. -	2018	64,000,000	61,033,778	1,841,119	79,658,065	1.95%	8.36%
FCO MA Centre Street II (PF) LP	2019	90,000,000	128,658,391	80,401,045	66,715,974	0.00%	12.68%
Torchlight Debt Fund VI, LP -	2019	51,000,000	62,771,273	38,524,723	37,174,207	0.93%	8.65%
FCO MA Centre Street II EXP (P) LP	2020	45,000,000	20,529,447	4,748,722	17,441,452	0.00%	6.86%
GCM Grosvenor NYC Emerging OFI Managers, L.P. - Class A	2020	51,000,000	45,375,543	14,309,636	42,407,007	0.00%	19.43%
KKR-NYC Credit C L.P.	2020	32,386,364	22,790,451	1,146,879	20,984,289	0.00%	-2.05%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitmen	2020	56,250,000	43,593,750	-	52,783,214	2.44%	10.68%
Torchlight Debt Fund VII, LP	2020	47,000,000	25,878,736	2,378,736	25,537,554	0.20%	6.09%
400 Capital Centre Street LP	2021	39,000,000	38,442,492	2,975,430	37,482,175	0.00%	4.84%
Barings Centre Street CLO Equity Partnership L.P.	2022	55,000,000	12,877,644	1,418,376	12,116,930	0.00%	11.96%
Brightwood Capital Fund V, LP	2022	47,000,000	18,886,169	-	21,164,030	0.00%	11.16%
Centre Street CarVal Partnership LP	2022	63,000,000	15,750,000	-	16,622,137	3.51%	11.66%
GCM Grosvenor NYC EM OFI 2022-1	2022	50,000,000	4,502,909	-	4,502,909	0.00%	0.00%

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

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
KLCP Domestic Fund III LP	2022	45,000,000	15,520,445	162,376	16,282,684	0.00%	9.89%
Torchlight Debt Fund VIII, LP	2023	30,000,000	1,500,000	-	1,394,052	-7.06%	-35.96%

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Above data is not final and subject to change

Alternative Assets Manager Performance Detail



Through March 31, 2023

	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	2,657,182,372	-1.73%	-1.79%	0.33%	-1.79%	-2.42%	5.26%	4.53%	68.33%
TOTAL DIRECT HEDGE FUNDS	2,657,182,372	-1.73%	-1.79%	0.33%	-1.79%	-2.42%	5.28%	5.21%	77.77%
FUND OF FUNDS HEDGE FUNDS	-	0.00%		0.00%	0.00%	-6.46%	-4.02%	-0.50%	-5.27%
TOTAL DIRECT HEDGE FUNDS									
D.E. Shaw Composite Fund, L.L.C.	328,301,435	-0.41%	1.14%	7.87%	1.14%	14.12%	21.36%	14.86%	375.01%
Voloridge Fund, LP	166,560,738	-0.17%	-3.88%	0.41%	-3.88%	4.57%	7.44%	13.79%	69.45%
Voloridge Trading Aggressive Fund, LP	25,204,548	3.01%	6.96%	18.94%	6.96%	29.05%	19.60%	21.56%	121.90%
Relative Value	520,066,721	-0.17%	-0.26%	5.97%	-0.26%	11.58%	15.86%	12.54%	277.85%
AlphaQuest Original LLC	212,353,977	-7.30%	-11.45%	-11.65%	-11.45%	-2.29%	2.67%	5.85%	39.31%
Brevan Howard Special Opportunities AC Fund Limited	76,579,318	-0.13%	-0.40%	-27.07%	-0.40%			-27.07%	-27.07%
Florin Court Capital Fund	181,663,650	-5.86%	-5.98%	-1.90%	-5.98%	3.11%	14.37%	13.40%	79.86%
Gemsstock Fund LP	106,325,600	-7.85%	-15.29%	-16.85%	-15.29%	-15.35%		12.53%	38.36%
GreshamQuant - ACAR Fund, LLC	172,425,295	-2.32%	-1.01%	-4.49%	-1.01%	-5.46%	17.41%	16.52%	77.43%
Key Square Partners LP	102,402,671	0.04%	1.08%	8.01%	1.08%	2.86%	9.39%	0.90%	5.38%
Pharo Gaia Fund, LTD.	204,384,609	-0.98%	-1.58%	-4.00%	-1.58%	-4.16%	-3.22%	3.48%	28.52%
Tactical Trading	1,056,135,121	-3.94%	-5.58%	-7.84%	-5.58%	-5.83%	1.88%	3.69%	50.72%
Caspian Select Credit Fund, L.P.	89,137,674	0.54%	4.49%	4.20%	4.49%	-3.07%	8.92%	3.89%	51.76%
DL Partners Opportunities Fund LP	130,428,121	0.80%	-0.01%	-1.64%	-0.01%	-7.06%	6.12%	1.81%	8.24%
Luxor Capital Partners Liquidating SPV, LLC.	2,714,214	-0.04%	-0.12%	3.37%	-0.12%	4.19%	9.09%	0.13%	0.59%
Luxor Capital Partners, LP	119,075,793	-8.05%	-8.96%	-10.40%	-8.96%	-21.69%	-10.01%	-1.66%	-13.77%
Standard General Fund II L.P.	35,866,955	-19.01%	-21.95%	-32.23%	-21.95%	-38.93%	-1.33%	-2.94%	-16.79%
Event Driven	377,222,756	-4.39%	-4.55%	-7.22%	-4.55%	-15.36%	-0.58%	1.25%	14.51%
Altimeter Partners Fund LP	40,917,792	4.08%	15.67%	-9.24%	15.67%	-33.59%	-6.54%	1.04%	7.58%
Caledonia Fund (US), L.P.	76,137,357	6.65%	18.02%	39.35%	18.02%	11.03%		-15.09%	-23.86%
Kontiki Onshore Fund	162,855,870	5.92%	1.63%	7.87%	1.63%			8.57%	8.57%
SRS Partners US, LP	239,737,941	-0.50%	2.57%	22.28%	2.57%	1.50%	16.38%	10.79%	132.94%
Turiya Fund LP	184,108,813	0.31%	4.39%	13.72%	4.39%	5.79%	18.56%	6.14%	58.74%
Long/Short Equity	703,757,773	2.15%	5.00%	15.63%	5.00%	1.89%	9.56%	5.20%	63.88%
FUND OF FUNDS HEDGE FUNDS									
EnTrustPermal Management LLC - Managed Account	-	0.00%		0.00%	0.00%	-6.46%	-4.02%	-0.50%	-5.27%

Information provided by Alpha Frontier



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

Appendix D

Footnotes



Through March 31, 2023

General Notes

- Estimated management fees for public market investments are calculated on an accrual basis without adjustment for management fee caps. Alternative investment (Private Market) fees are recorded on a cash basis and are not inclusive of carried interest paid. Since not all alternative managers currently provide detailed fee disclosure, the alternative investment fees noted here are not comprehensive.
- Returns greater than 1 year are annualized.
- Public Market returns are Net of Manager Fees for periods after January 2014 and Gross of investment advisory fees for other periods unless otherwise indicated.
- Public market excess returns for periods prior to 2014 are based on Gross performance.

Page Specific

Pages 9 - 14 - Portfolio Asset Allocation

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

Pages 15 - 17 - 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



Through March 31, 2023

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 * 31.01%

International Developed (EAFE) Markets: MSCI World Ex USA IMI Net * 7.76%

Emerging Markets: MSCI Emerging Markets * 4.87%

International Emerging Managers FOF: MSCI ACWI Ex US IMI Net * 0.65%

REITs: Dow Jones Real Estate Securities * 0.00%

Private Equity: Russell 3000 + 300 b.p. per annum * 8.00%

Private Real Estate - Core: NFI - ODCE Net * 3.00%

Private Real Estate – Non Core: NFI - ODCE Net + 200bps * 2.87%

Infrastructure: CPI + 4% * 2.15%

Hedge Funds: HFRI Fund of Funds Composite Index plus 1% * 5.64%

US Treasury Short Term: FTSE US Government Bond 1-3 Years Index * 0.00%

US Treasury Intermediate: USBIG TSY AGN 1-10 * 2.14%

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

US Treasury Long Duration: FTSE US Government Bond 10+ Years Index * 3.20%

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

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

Mortgage: Bloomberg US Mortgage Backed Securities * 4.54%



Through March 31, 2023

*ETI: ETI Custom Benchmark * 0.80%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 6.45%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 7.29%*

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

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.21%*

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

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 4.42%*

Page 18 – 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 underperforming their benchmark and to show the basis point effect that this is having on Plan performance.



Through March 31, 2023

-
- [1] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.
 - [2] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.
 - [3] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.
 - [4] Name changed from SSGA MSCI EAFE Small Cap Index 12.2017
 - [5] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).
 - [6] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.
 - [7] NYC Custom IGC Benchmark: Beginning 3.2021 benchmark changed from NYC - Investment Grade Credit to Bloomberg U.S. Corporate Inv Grade.
 - [8] Assets were in transition from 9/29/17 to 11/30/17
 - [9] Assets were in transition from 9/29/17 to 2/11/19



New York City
Police Superior Officers' Variable Supplements Fund
Performance Overview as of March 31, 2023

Total Fund Overview



New York City Police Superior Officers' Variable Supplements Fund

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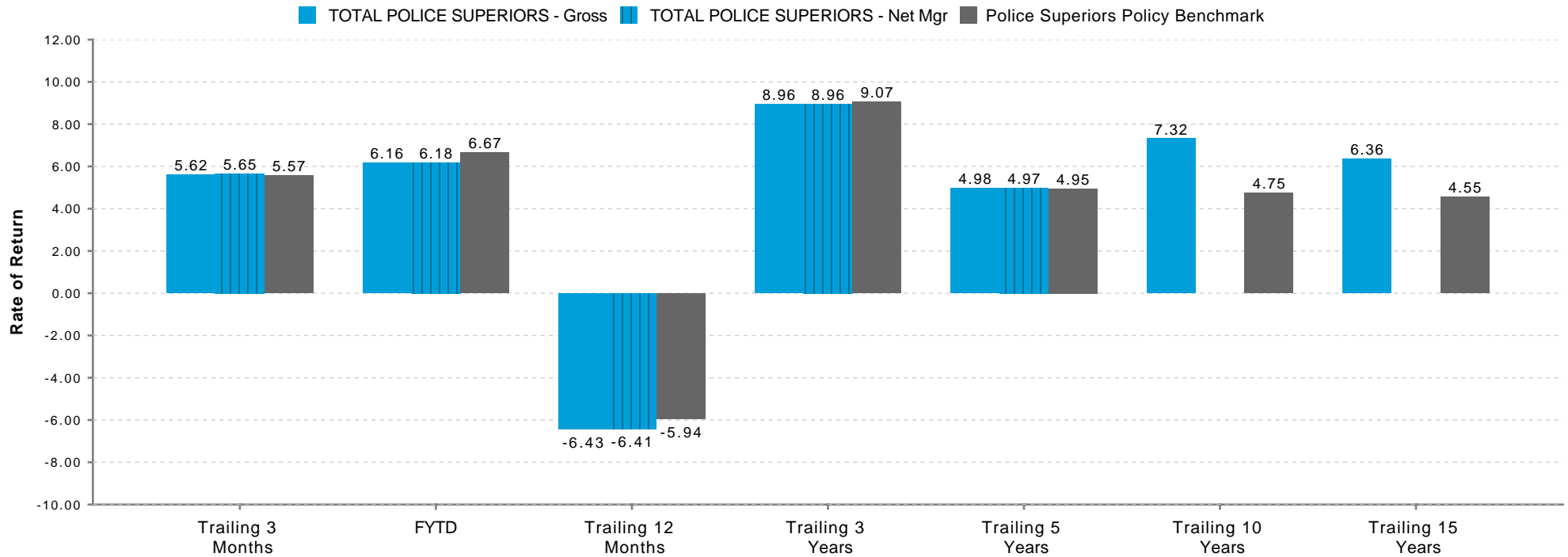
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Market Value (Billions)

TOTAL POLICE SUPERIORS

\$2.8



	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 SUPERIORS	13.3	13.4	5.0	12.6	10.9	11.0	10.1	10.0



Through March 31, 2023

**NYC POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND
SECURITIES LENDING INCOME
March 31, 2023**

	<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	59,821	177,189	476,530	713,539
2020	130,920	147,332	420,310	698,562
2021	259,085	190,695	402,255	852,035
2022	383,767	224,967	314,534	923,268
2023 (3 Months)	64,826	95,455	60,767	221,049
Since Inception	<u>3,244,051</u>	<u>4,511,341</u>	<u>3,799,838</u>	<u>11,555,230</u>



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

Appendix A

Consolidated Performance Report

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CVTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	PSOVSF-TOTAL PORTFOLIO - GROSS	2,771	100.00	5.62	6.16	5.62	(13.91)	(16.28)	11.39	13.64	(6.43)	8.96	4.98	7.32	8.06	01/01/1988
	ESTIMATED INVESTMENT FEES			0.03	0.03	0.03	(0.01)	(0.00)	(0.01)	(0.01)	0.02	0.00	(0.00)			
	EST MANAGEMENT FEES			0.03	0.03	0.03	(0.01)	(0.00)	(0.01)	(0.01)	0.02	0.00	(0.00)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL PORTFOLIO - NET MGR			5.65	6.18	5.65	(13.91)	(16.28)	11.38	13.63	(6.41)	8.96	4.97			
	POLICE SUPERIORS POLICY BENCHMARK			5.57	6.67	5.57	(14.24)	(15.86)	10.52	13.79	(5.94)	9.07	4.95	4.75		
	EXCESS RETURN			0.07	(0.49)	0.07	0.32	(0.43)	0.86	(0.16)	(0.47)	(0.10)	0.02	2.58		
EQUITY RETURN SUMMARY																
17	PSOVSF-TOTAL EQUITY - GROSS	1,797	64.85	6.98	9.71	6.98	(16.10)	(18.04)	18.30	16.64	(7.36)	15.86	6.96			08/01/2001
	ESTIMATED INVESTMENT FEES			(0.00)	0.00	(0.00)	(0.00)	0.00	(0.01)	(0.01)	0.00	(0.00)	(0.01)			
	EST MANAGEMENT FEES			(0.00)	0.00	(0.00)	(0.00)	0.00	(0.01)	(0.01)	0.00	(0.00)	(0.01)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL EQUITY - NET MGR			6.97	9.72	6.97	(16.11)	(18.04)	18.29	16.63	(7.36)	15.86	6.95			
25	PSOVSF-TOTAL DOMESTIC EQUITY - GROSS	1,066	38.48	7.18	9.55	7.18	(13.70)	(19.29)	25.85	21.12	(8.68)	18.58	10.46	10.16		01/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	(0.00)	(0.00)	0.00	(0.00)	0.00	(0.00)	(0.00)	0.00	(0.00)	(0.00)		
	PSOVSF-TOTAL DOMESTIC EQUITY - NET MGR			7.18	9.55	7.18	(13.69)	(19.29)	25.86	21.12	(8.69)	18.58	10.46	10.15		
	RUSSELL 3000 (DAILY)			7.18	9.75	7.18	(13.87)	(19.21)	25.66	20.89	(8.58)	18.48	10.45	10.28		
	EXCESS RETURN			(0.00)	(0.20)	(0.00)	0.17	(0.08)	0.19	0.23	(0.10)	0.11	0.01	(0.12)		

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN SUMMARY															
37	PSOVSF-TOTAL WORLD ex-USA - GROSS	531	19.17	7.64	13.47	7.64	(17.27)	(14.84)	12.72	8.83	(3.47)	13.85	3.90		01/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	0.02	(0.00)	(0.01)	0.01	(0.02)	(0.02)	0.01	(0.01)	(0.01)		
	PSOVSF-TOTAL WORLD ex-USA - NET MGR			7.64	13.49	7.64	(17.28)	(14.83)	12.71	8.81	(3.46)	13.84	3.89		
	WORLD EX-USA CUSTOM BM			7.58	13.32	7.58	(17.73)	(15.26)	12.39	8.32	(3.85)	13.46	3.46		
	EXCESS RETURN			0.06	0.17	0.06	0.44	0.42	0.31	0.49	0.40	0.39	0.43		
47	PSOVSF-TOTAL WORLD ex-USA - GROSS	531	19.17	7.64	13.47	7.64	(17.27)	(14.84)	12.72	8.83	(3.47)	13.85	3.90		01/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	0.02	(0.00)	(0.01)	0.01	(0.02)	(0.02)	0.01	(0.01)	(0.01)		
	PSOVSF-TOTAL WORLD ex-USA - NET MGR			7.64	13.49	7.64	(17.28)	(14.83)	12.71	8.81	(3.46)	13.84	3.89		
	WORLD EX USA CUSTOM BM			7.58	13.32	7.58	(17.73)	(15.26)	12.39	8.32	(3.85)	13.46	3.46		
	EXCESS RETURN			0.06	0.17	0.06	0.44	0.42	0.31	0.49	0.40	0.39	0.43		
57	PSOVSF-TOTAL EMERGING MARKETS - GROSS	199	7.20	4.20	1.17	4.20	(24.63)	(19.57)	(1.94)	17.29	(10.20)	8.07	(0.70)	2.20	07/01/2017
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	
	PSOVSF-TOTAL EMERGING MARKETS - NET MGR			4.20	1.15	4.20	(24.63)	(19.58)	(1.97)	17.27	(10.22)	8.05	(0.72)	2.17	
	MSCI EMERGING MARKETS			3.96	0.84	3.96	(25.28)	(20.09)	(2.54)	18.31	(10.70)	7.83	(0.91)	2.04	
	EXCESS RETURN			0.24	0.31	0.24	0.65	0.51	0.57	(1.04)	0.48	0.23	0.21	0.13	

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN SUMMARY																
69	PSOVSF-TOTAL FIXED INCOME - GROSS	974	35.15	3.18	(0.00)	3.18	(10.13)	(12.88)	(1.72)	7.58	(4.60)	(2.76)	0.96	0.92	5.10	04/01/1991
	ESTIMATED INVESTMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00			
	EST MANAGEMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	PSOVSF-TOTAL FIXED INCOME - NET MGR			3.26	0.07	3.26	(10.15)	(12.89)	(1.74)	7.56	(4.53)	(2.75)	0.96			
77	PSOVSF-TOTAL STRUCTURED FIXED INCOME - GROSS	965	34.84	3.20	(0.02)	3.20	(10.24)	(13.00)	(1.76)	7.71	(4.67)	(2.78)	0.96	1.03	02/01/2015	
	ESTIMATED INVESTMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00	(0.01)		
	PSOVSF-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.28	0.05	3.28	(10.26)	(13.01)	(1.77)	7.69	(4.60)	(2.77)	0.96	1.01		
	BLOOMBERG U.S. AGGREGATE			2.96	(0.09)	2.96	(10.29)	(13.01)	(1.54)	7.51	(4.78)	(2.77)	0.91	0.94		
	EXCESS RETURN			0.32	0.14	0.32	0.04	(0.00)	(0.23)	0.19	0.18	0.00	0.05	0.08		
CASH SUMMARY																
89	Short Term - PSOVSF - GROSS	9	0.32	1.11	2.60	1.11	0.26	1.70	0.50	0.08	2.79	1.01	1.31		01/01/1999	
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
	Short Term - PSOVSF - NET MGR			1.11	2.60	1.11	0.26	1.70	0.50	0.08	2.79	1.01				
93	Securities Lending	0	-													



**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, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	\$32	1.16	6.07	10.71	6.07	(26.38)	3.35	34.41	28.39	(9.14)
RUSSELL 2000 GROWTH DAILY			6.07	10.72	6.07	(26.36)	2.83	34.63	28.48	(9.31)
Excess			(0.00)	(0.02)	(0.00)	(0.02)	0.51	(0.22)	(0.09)	0.17
BlackRock US SCV R2000	\$29	1.05	(0.53)	2.84	(0.53)	(14.51)	28.48	4.87	22.60	(12.79)
RUSSELL 2000 VALUE DAILY			(0.66)	2.74	(0.66)	(14.48)	28.27	4.63	22.39	(12.86)
Excess			0.12	0.10	0.12	(0.03)	0.21	0.24	0.20	0.08
BlackRock US LMC R1000 Core	\$1,005	36.27	7.46	9.74	7.46	(19.21)	26.56	21.15	31.19	
RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(19.13)	26.45	20.96	31.43	
Excess			(0.00)	(0.19)	(0.00)	(0.08)	0.10	0.19	(0.23)	
NON - US EQUITY										
SSGA WorldxUS LMC NYC Custom IDX	\$456	16.44	8.09	14.16	8.09	(13.84)	12.90	8.09	22.75	(13.64)
NYC Custom World ex US Index ^[1]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.07	0.20	0.07	0.45	0.28	0.50	0.26	0.45
SSGA WorldxUS SC Custom IDX ^[2]	\$76	2.73	5.02	9.62	5.02	(20.23)	11.60	13.16	25.68	(17.97)
World ex USA SC PASSIVE CUSTOM BM ^[3]			4.99	9.52	4.99	(20.58)	11.14	12.78	25.41	(18.07)
Excess			0.03	0.10	0.03	0.36	0.46	0.38	0.27	0.10
EMERGING MARKETS										
BlackRock MSCI EM Core	\$199	7.20	4.20	1.15	4.20	(19.58)	(1.97)	17.27	18.76	(14.44)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			0.24	0.31	0.24	0.51	0.57	(1.04)	0.34	0.13

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
SSGA-Core US Agg	\$965	34.84	3.28	0.05	3.28	(13.01)	(1.77)	7.69	8.76	(0.25)
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.32	0.14	0.32	(0.00)	(0.23)	0.19	0.05	(0.26)
CASH										
Short Term PSOVSF	\$9	0.32	1.11	2.60	1.11	1.70	0.50	0.08	2.10	
ICE BofA US 3-Month Treasury Bill			1.07	2.40	1.07	1.46	0.05	0.67	2.28	
Excess			0.04	0.20	0.04	0.24	0.45	(0.58)	(0.18)	
Securities Lending	\$0	0.00								



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

Appendix C

Footnotes



Through March 31, 2023

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.
- Returns greater than 1 year are annualized.

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: Bloomberg Aggregate * 35.00%*

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

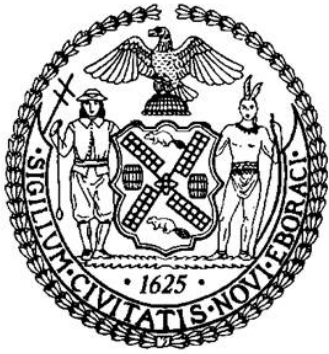


Through March 31, 2023

[1] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.

[2] Name changed from SSGA EAFE SC IDX 12.2017

[3] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).



New York City
Police Officers' Variable Supplements Fund
Performance Overview as of March 31, 2023

Total Fund Overview



New York City Police Officers' Variable Supplements Fund

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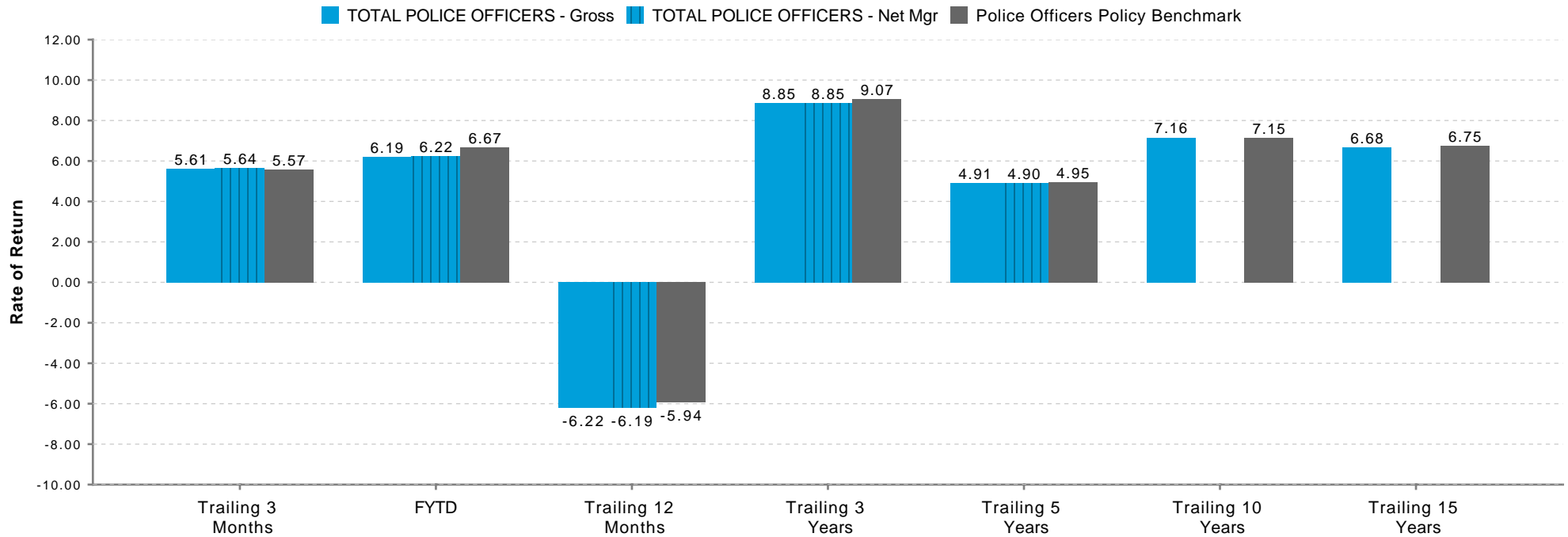
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Market Value (Billions)

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	13.2	13.4	4.9	12.6	10.8	11.0	10.1	10.3

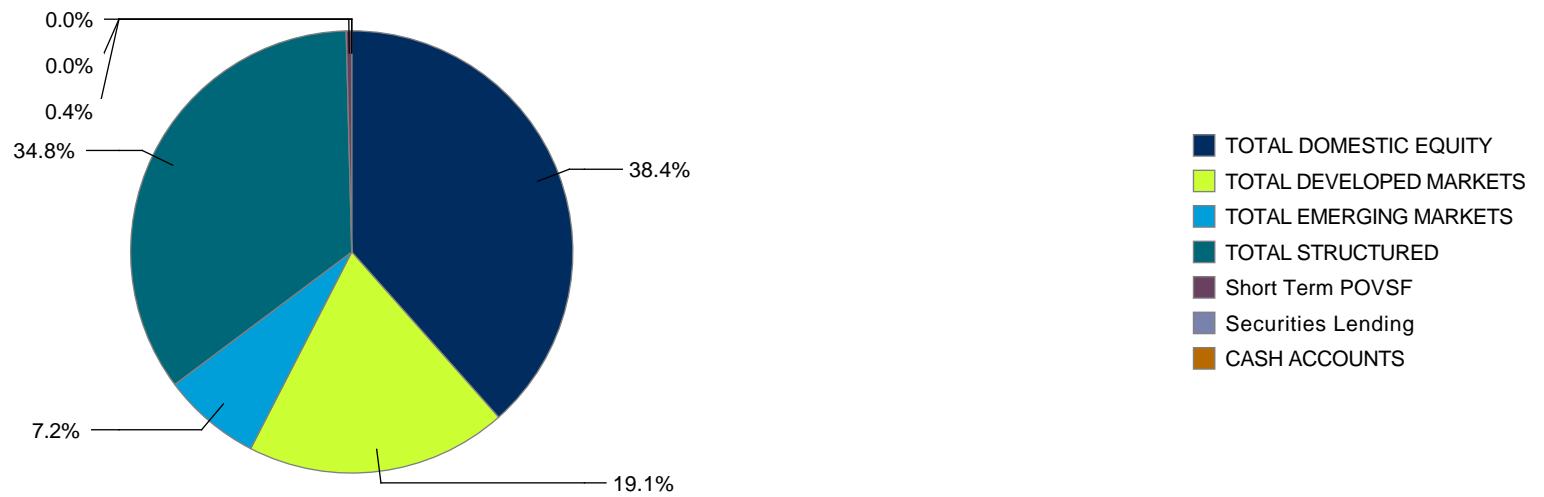


Market Value (Billions)

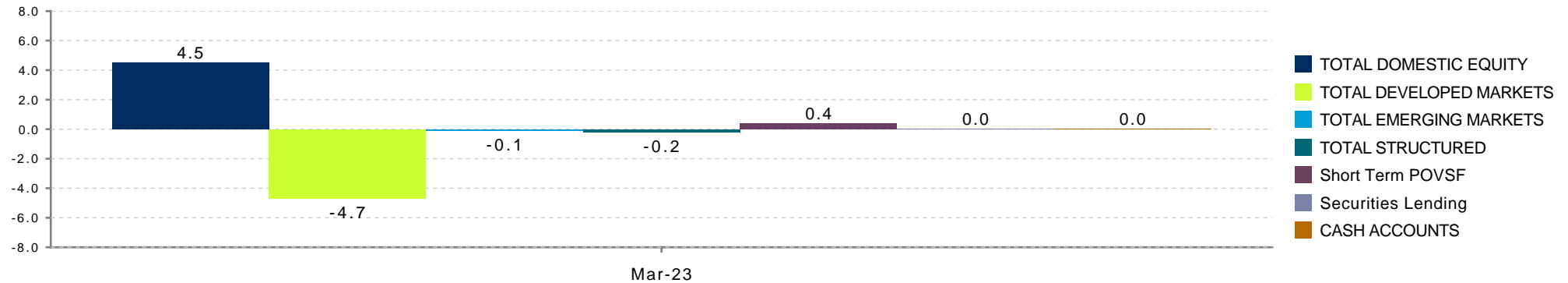
TOTAL POLICE OFFICERS

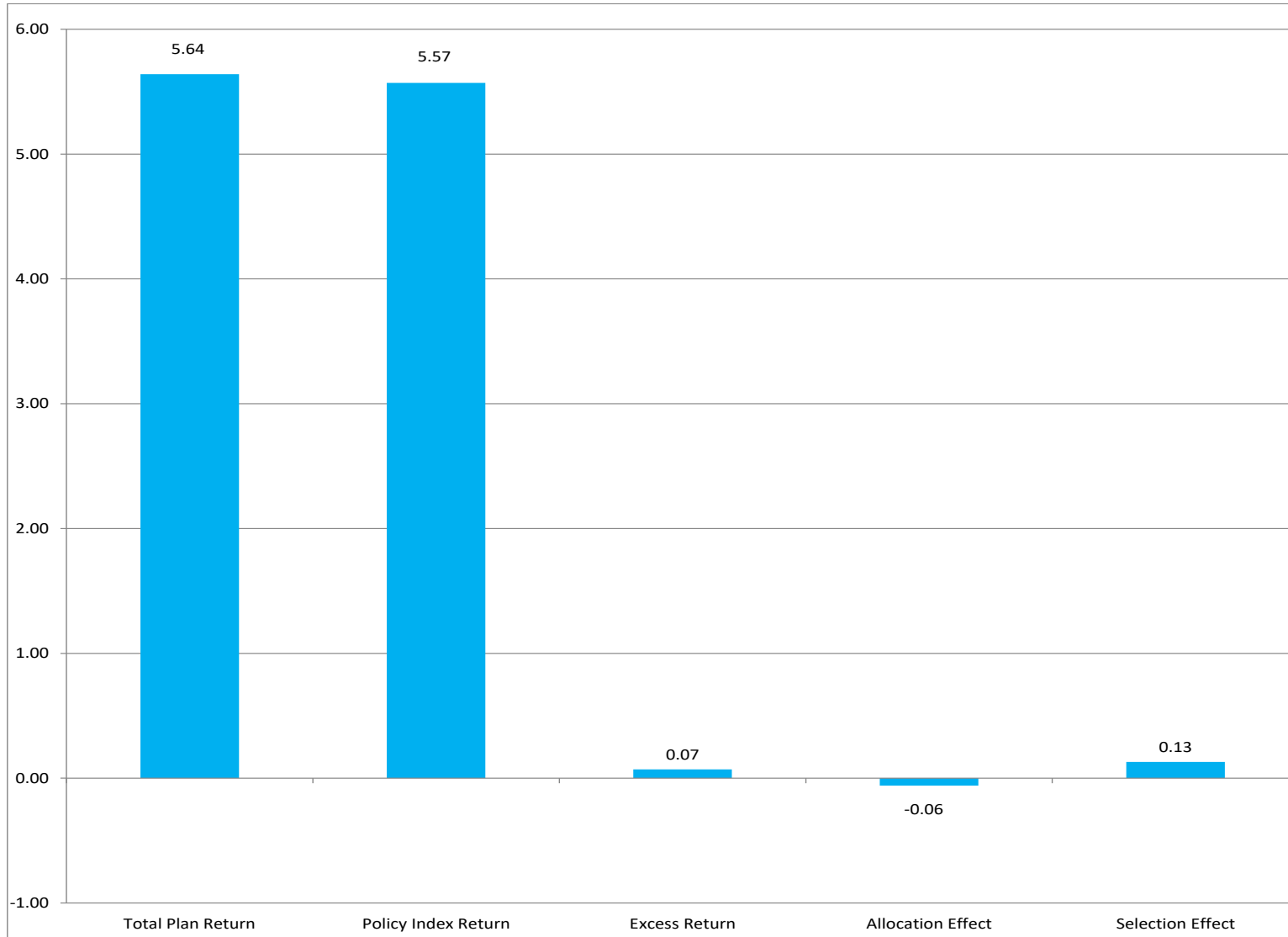
\$1.8

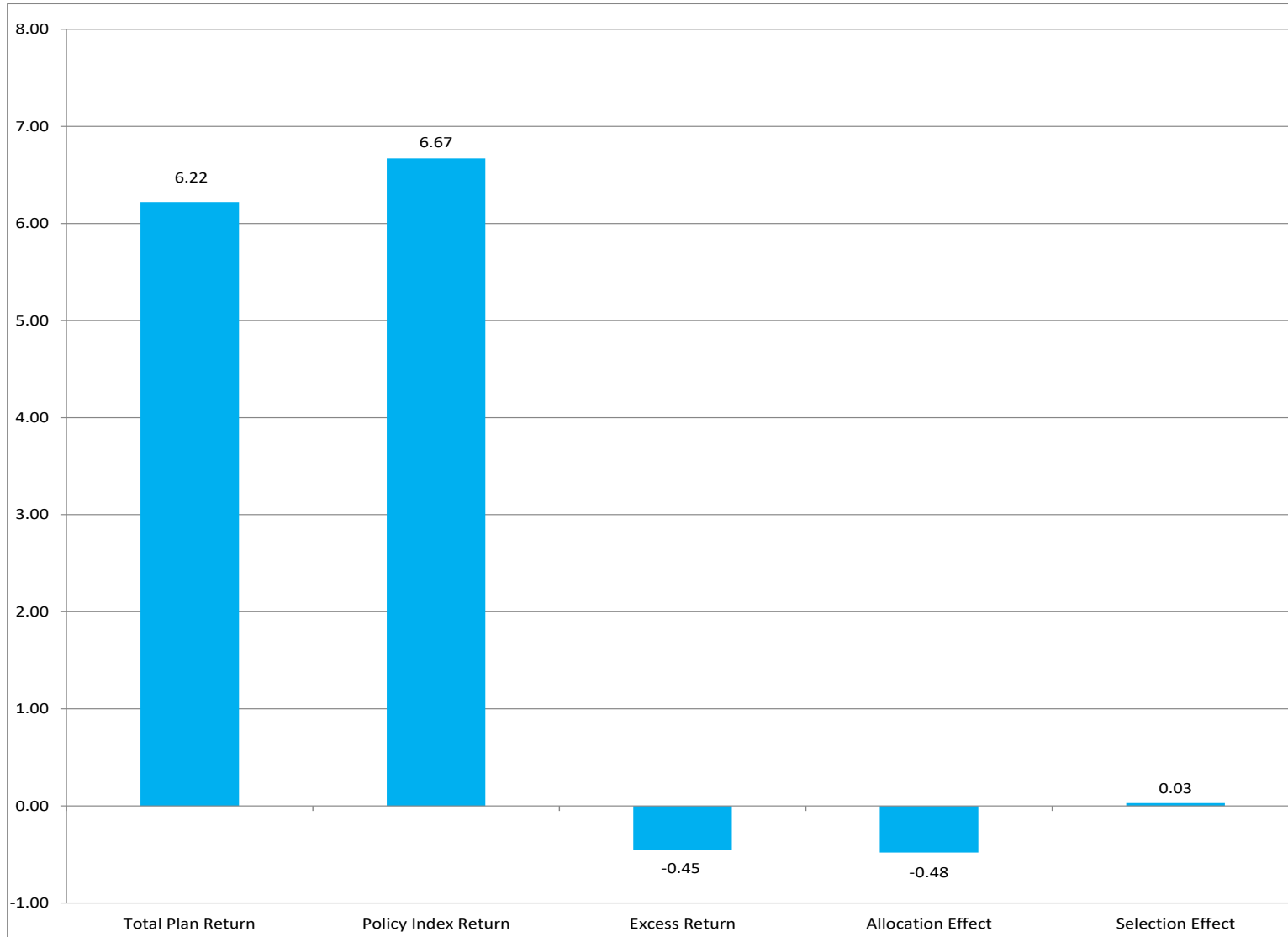
Asset Allocation



Relative Mix to Asset Weights









Allocation Effect - Asset Class Breakdown			
	<u>Quarter</u>	<u>FYTD</u>	<u>Benchmark</u>
TOTAL POLICE OFFICERS	-0.06	-0.48	Police Officers Policy Benchmark
TOTAL DOMESTIC EQUITY	0.07	0.07	RUSSELL 3000
TOTAL WORLD ex-USA	-0.11	-0.39	MSCI World ex USA IMI Net
TOTAL EMERGING MARKETS	-0.01	-0.07	MSCI Emerging Markets
TOTAL STRUCTURED	-0.02	-0.10	Bloomberg Aggregate

Selection Effect - Asset Class Breakdown			
	<u>Quarter</u>	<u>FYTD</u>	<u>Benchmark</u>
TOTAL POLICE OFFICERS	0.13	0.03	Police Officers Policy Benchmark
TOTAL DOMESTIC EQUITY	0.00	-0.07	RUSSELL 3000
TOTAL WORLD ex-USA	0.01	0.03	MSCI World ex USA IMI Net
TOTAL EMERGING MARKETS	0.02	0.03	MSCI Emerging Markets
TOTAL STRUCTURED	0.10	0.05	Bloomberg Aggregate

Securities Lending Income



Through March 31, 2023

NYC POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND
SECURITIES LENDING INCOME
March 31, 2023

	<u>U. S.</u> <u>FIXED INCOME</u>	<u>U. S.</u> <u>EQUITY</u>	<u>INTERNATIONAL</u> <u>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	42,181	112,685	344,166	499,031
2020	80,896	89,562	263,871	434,329
2021	158,793	113,405	246,572	518,770
2022	244,017	140,537	199,718	584,272
2023 (3 Months)	41,914	61,144	39,288	142,347
Since Inception	<u>3,485,985</u>	<u>5,291,088</u>	<u>4,803,027</u>	<u>13,580,099</u>



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

Appendix A

Consolidated Performance Report

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
SYSTEM RETURN SUMMARY																
5	POVSF-TOTAL PORTFOLIO - GROSS	1,796	100.00	5.61	6.19	5.61	(13.83)	(16.09)	11.33	13.11	(6.22)	8.85	4.91	7.16	8.11	01/01/1988
	POVSF - ESTIMATED INVESTMENT FEES			0.03	0.03	0.03	(0.01)	(0.00)	(0.01)	(0.01)	0.02	0.00	(0.00)			
	EST MANAGEMENT FEES			0.03	0.03	0.03	(0.01)	(0.00)	(0.01)	(0.01)	0.02	0.00	(0.00)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL PORTFOLIO - NET MGR			5.64	6.22	5.64	(13.84)	(16.09)	11.32	13.10	(6.19)	8.85	4.90			
	POLICE OFFICERS POLICY BENCHMARK			5.57	6.67	5.57	(14.24)	(15.86)	10.52	13.79	(5.94)	9.07	4.95	7.15		
	EXCESS RETURN			0.07	(0.46)	0.07	0.40	(0.23)	0.80	(0.69)	(0.26)	(0.21)	(0.05)	0.01		
EQUITY RETURN SUMMARY																
17	POVSF-TOTAL EQUITY - GROSS	1,162	64.71	6.97	9.72	6.97	(16.19)	(18.09)	18.26	16.52	(7.41)	15.82	6.90	9.57	9.29	08/01/1993
	ESTIMATED INVESTMENT FEES			(0.00)	0.00	(0.00)	(0.00)	0.00	(0.01)	(0.01)	0.00	(0.00)	(0.01)			
	EST MANAGEMENT FEES			(0.00)	0.00	(0.00)	(0.00)	0.00	(0.01)	(0.01)	0.00	(0.00)	(0.01)			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL EQUITY - NET MGR			6.97	9.72	6.97	(16.19)	(18.09)	18.26	16.51	(7.41)	15.82	6.89			
25	POVSF-TOTAL DOMESTIC EQUITY - GROSS	690	38.41	7.17	9.54	7.17	(13.91)	(19.44)	25.78	20.82	(8.84)	18.44	10.35	11.73	9.99	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			7.17	9.54	7.17	(13.91)	(19.44)	25.78	20.82	(8.84)	18.45	10.35			
	RUSSELL 3000 (DAILY)			7.18	9.75	7.18	(13.87)	(19.21)	25.66	20.89	(8.58)	18.48	10.45	11.73	10.08	
	EXCESS RETURN			(0.01)	(0.21)	(0.01)	(0.04)	(0.23)	0.12	(0.07)	(0.26)	(0.03)	(0.10)	(0.00)	(0.09)	
35	POVSF-TOTAL SMALL CAP PASSIVE - GROSS	40	2.22	2.71	6.69	2.71	(24.88)	(20.46)	15.59	20.13	(11.63)	17.78	4.87	7.19	10/01/2013	
	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 SMALL CAP PASSIVE - NET MGR			2.71	6.69	2.71	(24.88)	(20.46)	15.59	20.13	(11.63)	17.78	4.86			
	RUSSELL 2000 (DAILY)			2.74	6.75	2.74	(25.20)	(20.44)	14.82	19.96	(11.61)	17.51	4.71	7.03		
	EXCESS RETURN			(0.03)	(0.06)	(0.03)	0.32	(0.03)	0.77	0.17	(0.02)	0.27	0.16	0.16		
45	POVSF-TOTAL RUSSELL 1000 - GROSS	650	36.19	7.46	9.74	7.46	(13.07)	(19.35)	26.52	20.92	(8.65)	18.44	10.79	10.79	04/01/2018	
	ESTIMATED INVESTMENT FEES			0.00	0.00	0.00	0.00	0.00	0.00	(0.00)	0.00	0.00	(0.00)	(0.00)		
	POVSF-TOTAL RUSSELL 1000 - NET MGR			7.46	9.74	7.46	(13.07)	(19.35)	26.52	20.92	(8.65)	18.44	10.79	10.79		
	RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(13.04)	(19.13)	26.45	20.96	(8.39)	18.55	10.87	10.87		
	EXCESS RETURN			(0.00)	(0.19)	(0.00)	(0.03)	(0.22)	0.07	(0.04)	(0.26)	(0.12)	(0.08)	(0.08)		

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date
EQUITY RETURN SUMMARY															
57	POVSF-TOTAL WORLD ex-USA - GROSS	343	19.11	7.65	13.47	7.65	(17.17)	(14.73)	12.71	8.87	(3.34)	13.94	3.93	5.03	02/01/2015
	ESTIMATED INVESTMENT FEES			(0.00)	0.02	(0.00)	(0.01)	0.01	(0.02)	(0.02)	0.01	(0.01)	(0.01)	(0.01)	
	POVSF-TOTAL WORLD ex-USA - NET MGR			7.64	13.49	7.64	(17.18)	(14.72)	12.69	8.85	(3.32)	13.93	3.92	5.02	
	WORLD EX-USA CUSTOM BM			7.58	13.32	7.58	(17.73)	(15.26)	12.39	8.32	(3.85)	13.46	3.46	5.00	
	EXCESS RETURN			0.06	0.17	0.06	0.55	0.54	0.30	0.53	0.53	0.48	0.46	0.02	
67	POVSF-TOTAL EMERGING MARKETS - GROSS	129	7.19	4.20	1.18	4.20	(24.61)	(19.50)	(2.00)	17.29	(10.13)	8.08	(0.70)	2.20	07/01/2017
	ESTIMATED INVESTMENT FEES			(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	
	POVSF-TOTAL EMERGING MARKETS - NET MGR			4.20	1.16	4.20	(24.62)	(19.51)	(2.02)	17.27	(10.15)	8.06	(0.72)	2.18	
	MSCI EMERGING MARKETS			3.96	0.84	3.96	(25.28)	(20.09)	(2.54)	18.31	(10.70)	7.83	(0.91)	2.04	
	EXCESS RETURN			0.24	0.31	0.24	0.67	0.58	0.52	(1.04)	0.56	0.24	0.19	0.14	

Consolidated Performance Report



Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	FYE 2022	CYE 2022	CYE 2021	CYE 2020	1 Year	3 Year	5 Year	10 Year	ITD	Inception Date	
FIXED INCOME RETURN SUMMARY																
79	POVSF-TOTAL FIXED INCOME - GROSS	634	35.29	3.17	0.02	3.17	(10.10)	(12.82)	(1.73)	7.57	(4.54)	(2.75)	0.96	1.46	5.26	04/01/1991
	ESTIMATED INVESTMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00			
	EST MANAGEMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00			
	EST INCENTIVE FEES															
	EST OTHER FEES															
	EST FEE OFFSETS															
	POVSF-TOTAL FIXED INCOME - NET MGR			3.25	0.09	3.25	(10.11)	(12.83)	(1.75)	7.55	(4.48)	(2.74)	0.96			
87	POVSF-TOTAL STRUCTURED FIXED INCOME - GROSS	626	34.85	3.20	(0.01)	3.20	(10.25)	(12.99)	(1.77)	7.72	(4.66)	(2.78)	0.96	1.56	4.14	08/01/2000
	ESTIMATED INVESTMENT FEES			0.08	0.07	0.08	(0.01)	(0.01)	(0.01)	(0.02)	0.06	0.01	0.00			
	POVSF-TOTAL STRUCTURED FIXED INCOME - NET MGR			3.28	0.06	3.28	(10.27)	(13.01)	(1.78)	7.70	(4.59)	(2.77)	0.96			
	BLOOMBERG U.S. AGGREGATE			2.96	(0.09)	2.96	(10.29)	(13.01)	(1.54)	7.51	(4.78)	(2.77)	0.91	1.36	3.96	
	EXCESS RETURN			0.32	0.15	0.32	0.03	0.00	(0.24)	0.19	0.19	0.00	0.05	0.20	0.18	
CASH SUMMARY																
99	Short Term - POVSF - GROSS	8	0.45	1.11	2.60	1.11	0.26	1.69	0.45	0.40	2.79	1.10	1.43			01/01/1988
	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 - POVSF - NET MGR			1.11	2.60	1.11	0.26	1.69	0.45	0.40	2.79	1.10	1.43			
103	Cash Account	0	-													
105	Securities Lending	0	-													



**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, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
BlackRock US SCG R2000	\$20	1.13	6.07	10.71	6.07	(26.38)	3.35	34.42	28.39	(9.14)
RUSSELL 2000 GROWTH DAILY			6.07	10.72	6.07	(26.36)	2.83	34.63	28.48	(9.31)
Excess			(0.00)	(0.02)	(0.00)	(0.02)	0.51	(0.21)	(0.09)	0.17
BlackRock US SCV R2000	\$20	1.09	(0.53)	2.84	(0.53)	(14.51)	28.48	4.87	22.60	(12.79)
RUSSELL 2000 VALUE DAILY			(0.66)	2.74	(0.66)	(14.48)	28.27	4.63	22.39	(12.86)
Excess			0.12	0.10	0.12	(0.03)	0.21	0.24	0.20	0.08
BlackRock US LMC R1000 Core	\$650	36.19	7.46	9.74	7.46	(19.35)	26.52	20.92	31.26	
RUSSELL 1000 (DAILY)			7.46	9.93	7.46	(19.13)	26.45	20.96	31.43	
Excess			(0.00)	(0.19)	(0.00)	(0.22)	0.07	(0.04)	(0.16)	
NON - US EQUITY										
SSGA WorldxUS LMC NYC Custom IDX	\$295	16.40	8.09	14.16	8.09	(13.73)	12.90	8.09	22.75	(13.64)
NYC Custom World ex US Index ^[1]			8.02	13.96	8.02	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.07	0.20	0.07	0.56	0.28	0.50	0.26	0.45
SSGA WorldxUS SC Custom IDX ^[2]	\$49	2.70	5.02	9.62	5.02	(20.04)	11.52	13.16	25.67	(17.97)
World ex USA SC PASSIVE CUSTOM BM ^[3]			4.99	9.52	4.99	(20.58)	11.14	12.78	25.41	(18.07)
Excess			0.03	0.10	0.03	0.55	0.39	0.38	0.26	0.10
EMERGING MARKETS										
BlackRock MSCI EM Core	\$129	7.19	4.20	1.16	4.20	(19.51)	(2.02)	17.27	18.76	(14.44)
MSCI EMERGING MARKETS			3.96	0.84	3.96	(20.09)	(2.54)	18.31	18.42	(14.57)
Excess			0.24	0.31	0.24	0.58	0.52	(1.04)	0.34	0.13

Public Markets Manager Performance Detail



Net Returns Through March 31, 2023

	Market Value (\$MM)	% of Total	3 Month	FYTD	CYTD	2022	2021	2020	2019	2018
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
SSGA-Core US Agg	\$626	34.85	3.28	0.06	3.28	(13.01)	(1.78)	7.70	8.75	(0.25)
Bloomberg U.S. Aggregate			2.96	(0.09)	2.96	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.32	0.15	0.32	0.00	(0.24)	0.19	0.04	(0.26)
CASH										
Short Term POVSF	\$8	0.45	1.11	2.60	1.11	1.69	0.45	0.40	2.10	1.66
ICE BofA US 3-Month Treasury Bill			1.07	2.40	1.07	1.46	0.05	0.67	2.28	1.87
Excess			0.04	0.21	0.04	0.24	0.40	(0.26)	(0.18)	(0.21)
Cash Account	\$0	0.00								
Securities Lending	\$0	0.00								



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

Appendix C

Footnotes



Through March 31, 2023

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.
- Returns greater than 1 year are annualized.

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, 2023

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: Bloomberg 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.



Through March 31, 2023

[1] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.

[2] Name changed from SSGA EAFE SC IDX 12.2017

[3] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).

ETI Quarterly Report (Public):

Public/Private Apartment Rehabilitation Program (PPAR)

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		Enterprise Cmty Loan Fund		NYC HDC			
Contractual Commitment	\$25.00		\$10.00		\$4.00		\$160.00		\$40.00		\$15.00		\$0.00		\$2.00		\$5.00		\$5.00		\$5.00		\$6.00			
Current Market Value	\$8.30		\$7.00		\$1.18		\$88.55		\$24.26		\$7.12		\$0.69		\$0.17		\$2.03		\$2.15		\$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	\$0.82	31	\$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	0.57	61	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	1.15	291	0.83	69	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	0.00	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
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$2.55	383	\$0.83	69	\$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	\$0.00	0	\$0.77	80	\$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	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
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.77	80	\$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 Commitments																										
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$19.43	1,031	\$3.02	121	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$1.29	90	\$0.53	101	\$0.00	0	\$0.00	0
Brooklyn	0.00	0	0.26	0	0.00	0	5.50	259	0.42	67	0.66	95	0.00	0	0.00	0	0.00	0	0.42	74	0.00	0	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	7.34	260	1.03	97	0.64	82	0.00	0	0.00	0	0.00	0	1.11	113	0.22	26	0.00	0	0.00	0
Queens	0.00	0	0.00	0	0.00	0	2.03	120	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	8.31	326	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	\$0.26	0	\$0.00	0	\$42.62	1,996	\$4.47	285	\$1.30	177	\$0.00	0	\$0.00	0	\$0.00	0	\$2.81	277	\$0.75	127	\$0.00	0	\$0.00	0
Historical Investments																										
Bronx	\$6.84	1,276	\$3.81	802	\$0.00	0	\$97.73	7,756	\$19.92	1,733	\$1.85	178	\$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	2.74	481	0.00	0	95.04	5,512	2.23	226	3.22	401	0.00	0	0.33	7	0.62	130	0.77	82	1.02	360	0.00	0	0.00	0
Manhattan	2.27	148	1.53	283	1.74	236	78.65	5,059	2.18	333	5.11	498	0.87	123	0.25	15	1.21	203	1.01	65	0.00	0	0.00	0	0.00	0
Queens	4.50	293	0.38	54	0.00	0	22.97	1,362	1.82	164	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	0.53	41	0.00	0	12.97	724	2.52	197	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	\$8.98	1,661	\$1.74	236	\$310.22	20,524	\$28.67	2,653	\$10.18	1,077	\$0.87	123	\$0.58	22	\$2.20	490	\$2.30	195	\$1.02	360	\$0.00	0	\$0.00	0

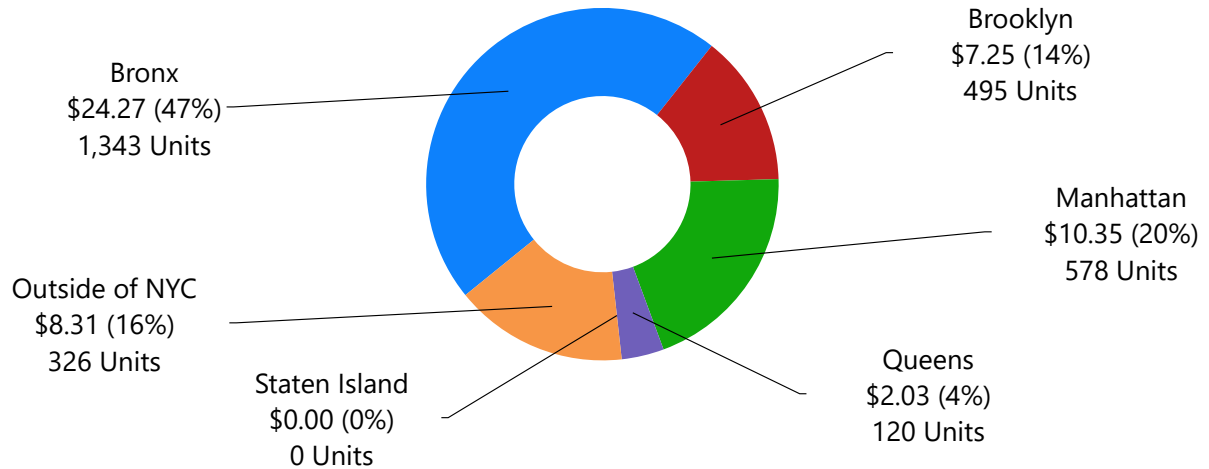
Note: Dollar amount listed in millions

* NCB Capital Impact's Buy-Sell Agreement terminated effective 7/29/2014.

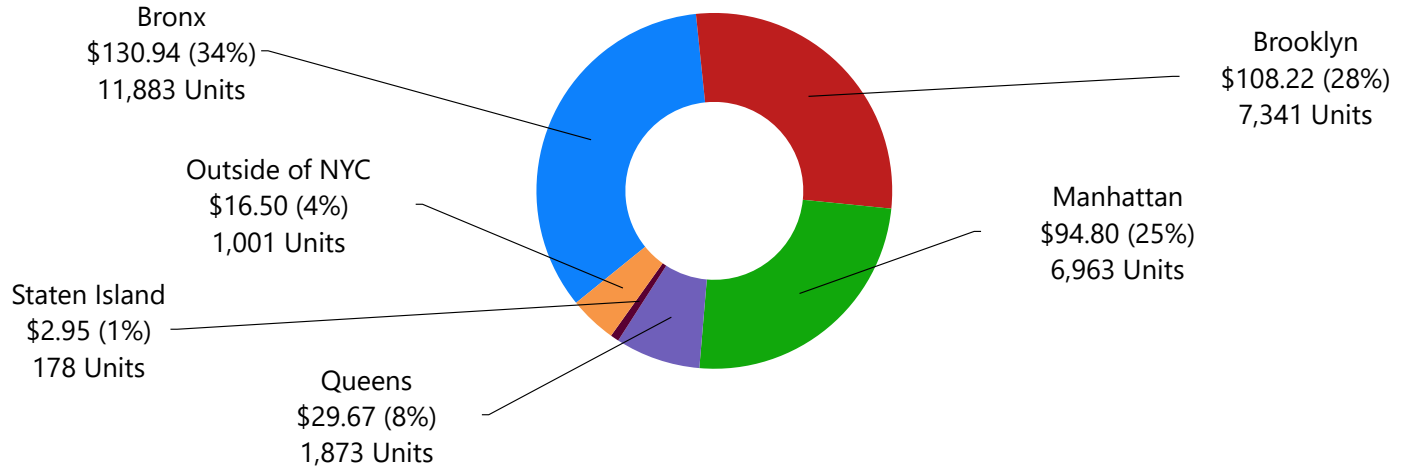
Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	All Lender Totals	
Contractual Commitment	\$277.00	
Current Market Value	\$141.44	
	Dollars	Units
Commitments Q1 (included in total)		
Bronx	\$0.82	31
Brooklyn	0.57	61
Manhattan	1.98	360
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.00	0
Total	\$3.37	452
Delivered Q1 (included in total)		
Bronx	\$0.77	80
Brooklyn	0.00	0
Manhattan	0.00	0
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.00	0
Total	\$0.77	80
Total Commitments		
Bronx	\$24.27	1,343
Brooklyn	7.25	495
Manhattan	10.35	578
Queens	2.03	120
Staten Island	0.00	0
Outside of NYC	8.31	326
Total	\$52.22	2,862
Historical Investments		
Bronx	\$130.94	11,883
Brooklyn	108.22	7,341
Manhattan	94.80	6,963
Queens	29.67	1,873
Staten Island	2.95	178
Outside of NYC	16.50	1,001
Total	\$383.08	29,239

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



Note: Dollar amount listed in millions

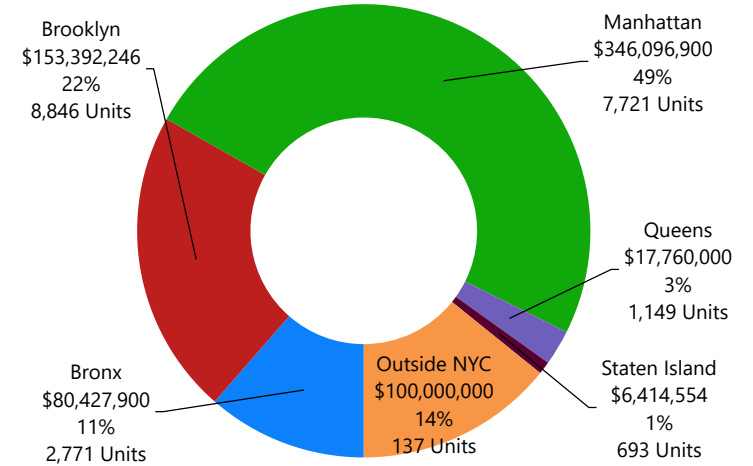
Police Pension Fund - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT) Market Value \$159.82 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	2,010	\$52,827,900	761	\$80,427,900	2,771
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	12,148	\$454,968,100	9,169	\$704,091,600	21,317

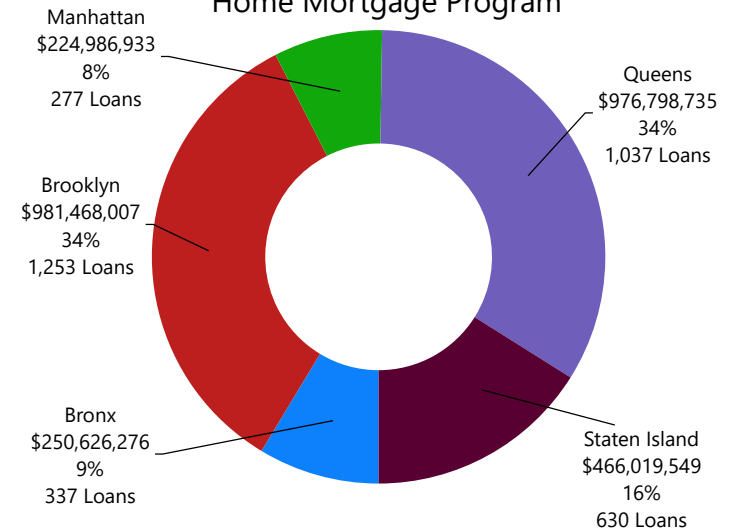
NYCCII Multifamily Program



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

Home Mortgage Program



POLICE Loans	Phase I:	131	Phase II:	140	Total:	271
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¹Interest is reinvested

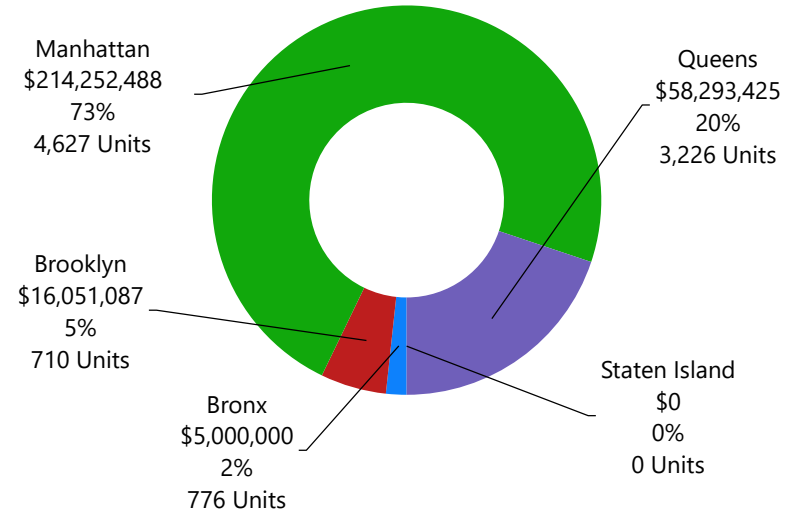
²Low/Moderate Income Units

AFL-CIO Housing Investment Trust (HIT)

NYC Workforce Housing Investments: 2009 - 2015

Borough	Investments Since Inception	LMI Units Since Inception
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

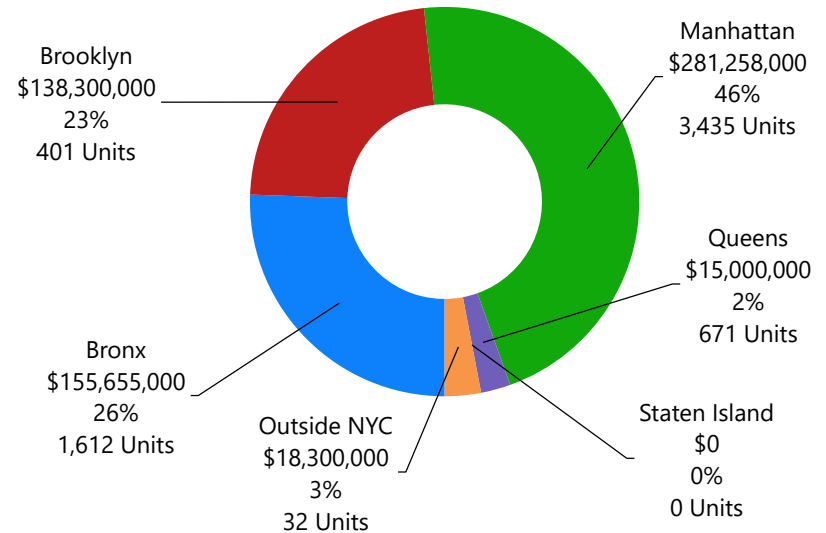
NYC Workforce Housing Investments



HIT Housing Investment Strategy: 2015 - Q1 2023

Borough	Q1 Investments	Investments Since Inception	Q1 Units	LMI Units Since Inception
Bronx	\$0	\$155,655,000	0	1,612
Brooklyn	0	138,300,000	0	401
Manhattan	0	281,258,000	0	3,435
Queens	0	15,000,000	0	671
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$0	\$608,513,000	0	6,151

HIT Housing Investment Strategy



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 \$81.90 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q1	Total	Q1	Total
Bronx	\$0	\$28,770,790	0	19,969
Brooklyn	0	16,385,312	0	15,373
Manhattan	0	25,510,983	0	7,281
Queens	0	4,384,242	0	920
Staten Island	0	1,132,822	0	75
Total POLICE Multifamily Investments	\$0	\$76,184,148	0	43,618
Multifamily Total All Systems	\$0	\$374,737,572	0	43,618

Single Family Investments Detail	\$ Invested		Units	
	Q1	Total	Q1	Total
Bronx	\$0	\$14,840,652	0	320
Brooklyn	108,571	37,446,663	1	728
Manhattan	0	3,313,868	0	65
Queens	688,245	57,474,005	7	1,045
Staten Island	443,209	38,175,250	5	699
Total POLICE Single Family Investments	\$1,240,025	\$151,250,439	13	2,857
Single Family Total All Systems	\$6,099,483	\$743,976,582	13	2,857

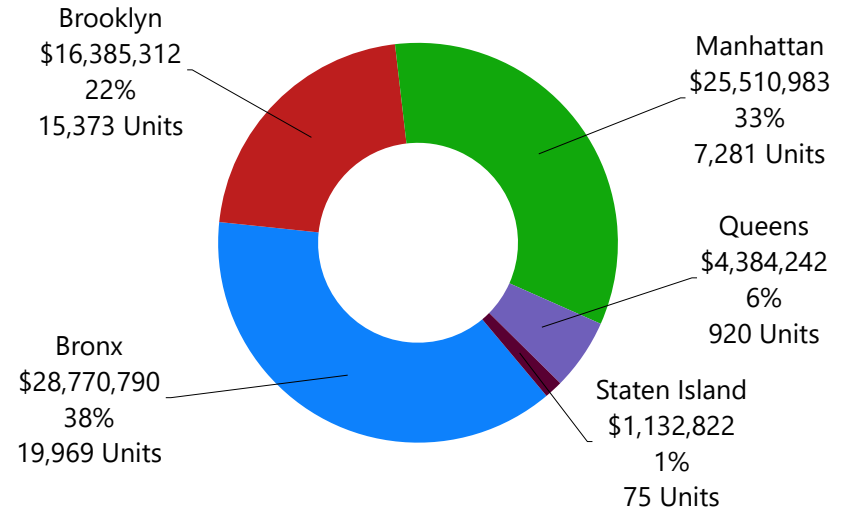
Other Investments Detail	\$ Invested		Loans	
	Q1	Total	Q1	Total
Bronx	\$0	\$137,228	0	1
Brooklyn	0	1,095,869	0	8
Manhattan	0	494,610	0	5
Queens	0	110,480	0	3
Staten Island	0	0	0	0
Total POLICE Other Investments	\$0	\$1,838,186	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

Grand Total POLICE	\$1,240,025	\$229,272,773
Grand Total All Systems	\$6,099,483	\$1,127,755,893

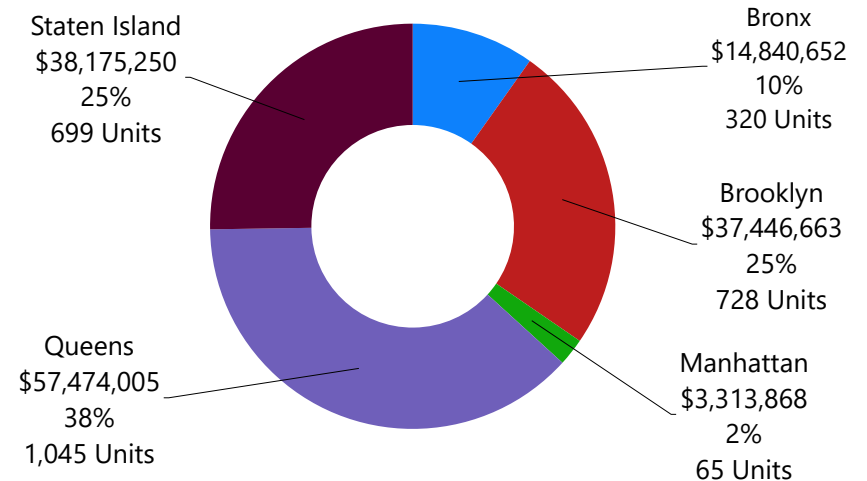
¹ Certain bond investment amounts are allocated pro rata across boroughs based upon unit count.

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

RBC Access Multifamily Investments Since Inception



RBC Access Single Family Investments Since Inception



ETI Real Estate Equity Investments

Total Market Value \$87.03 million

Hudson Market Value \$30.27 million

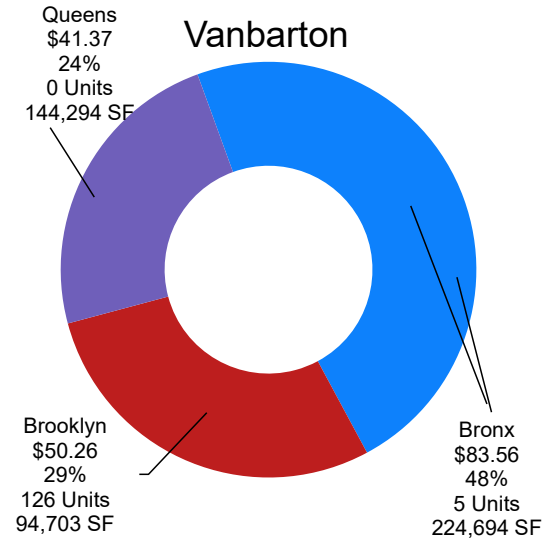
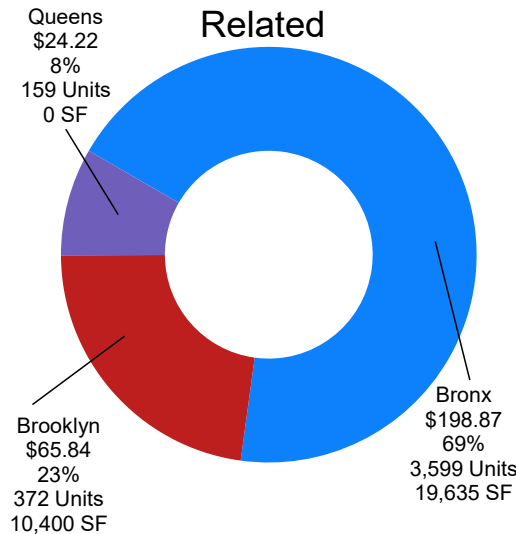
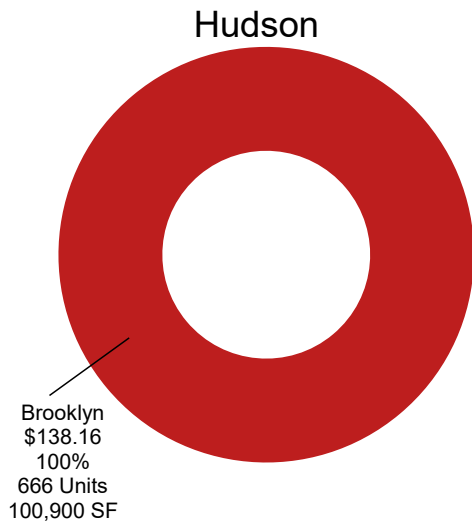
Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$0.00	0	0	0
Brooklyn	138.16	666	666	100,900
Manhattan	0.00	0	0	0
Queens	0.00	0	0	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$138.16	666	666	100,900

Related Market Value \$38.03 million

Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$198.87	3,599	3,356	19,635
Brooklyn	65.84	372	212	10,400
Manhattan	0.00	0	0	0
Queens	24.22	159	151	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$288.93	4,130	3,719	30,035

Vanbarton (Emmes) Market Value \$18.73 million

Borough	Gross			
	Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$83.56	5	2	224,694
Brooklyn	50.26	126	61	94,703
Manhattan	0.00	0	0	0
Queens	41.37	0	0	144,294
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$175.19	131	63	463,691



*All information is derived from reports submitted by individual managers and State Street Bank, and is reported on a quarter lag. Performance has not been reviewed by consultants or custodial bank.

**Dollar amounts listed in millions.

Private Equity Quarterly Report (Public):

Comptroller of the City of New York

NYCP - Comptroller of the City of New York

Public Report

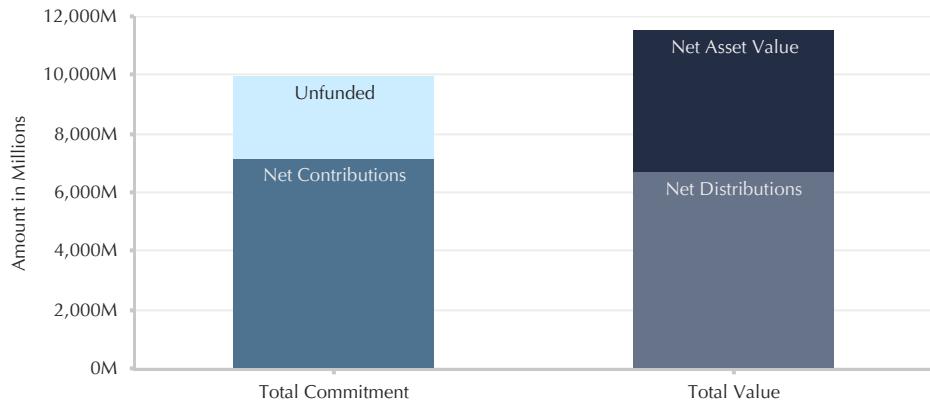
As Of December 2022

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Comptroller of the City of New York

Summary

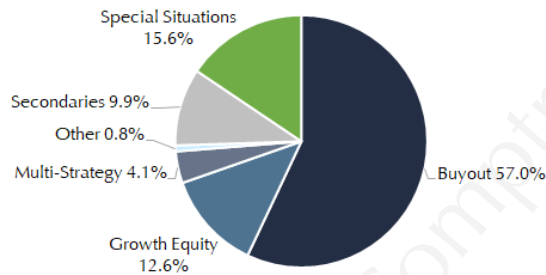


Portfolio Summary

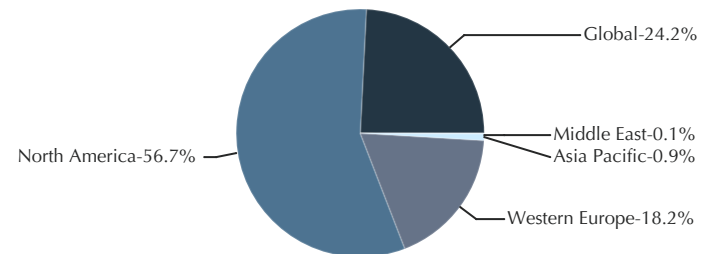
Total Pension Assets	\$47.3 bn as of 12/31/2022		
GP Relationships	108		
Holdings	246		
# of New Investments within the quarter*	3		
# of Closed Investments within the quarter*	3		
# of Underlying Active Investments	2457		
% of Public Companies	8.1%		
Total Commitment Amount	\$10.0 bn		
Net Contributions	\$7.1 bn		
Net Distributions	\$6.7 bn		
Net Asset Value	\$4.8 bn		
Weighted Average Age	9.5Y		
Unfunded Commitment	\$2.8 bn		
Minimum Annual Pacing	1.4 bn		
Maximum Annual Pacing	1.4 bn		
Portfolio Allocation	10.2%		
Minimum Target Allocation	4.0%		
Maximum Target Allocation	12.0%		
1Y IRR	-3.5%	2Y IRR	16.1%
5Y IRR	15.3%	7Y IRR	15.0%
10Y IRR	13.6%	ITD IRR**	11.9%
ITD TVPI**	1.6x	3Y IRR	18.2%

* Oct-2022 - Dec-2022
 ** Jan-1999 - Dec-2022

Total Exposure by Strategy



Total Exposure by Region



Position Analytics data based on GP provided information as of Dec-2022
 IRR not meaningful for investments held less than 24 months
 Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age
 Total Exposure = Unfunded + NAV

Strategy Portfolio Summary

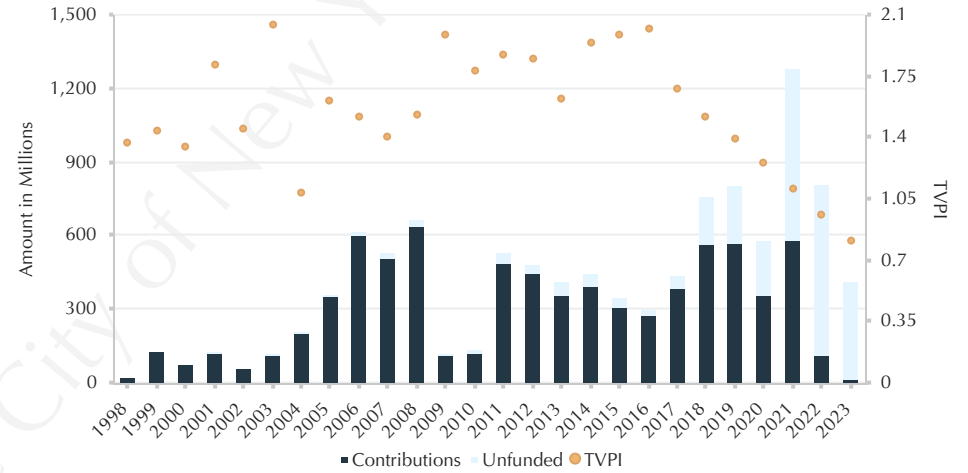
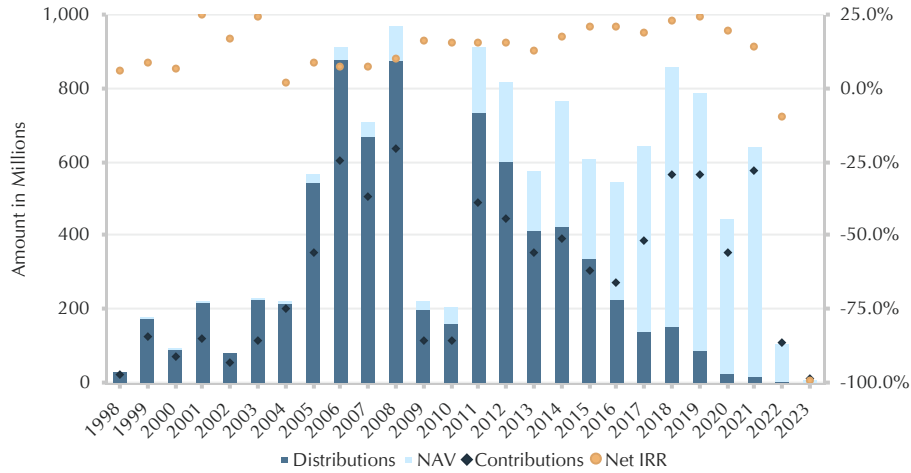
	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Buyout	139	9.6	2,772.7	5,582.8	1,588.6	4,361.4	4,383.2	4,313.5	12.5%	1.6x
Growth Equity	29	6.9	625.7	1,017.5	340.1	965.8	750.6	642.4	16.3%	1.7x
Multi-Strategy	10	11.9	150.5	615.1	160.7	311.2	452.5	418.0	5.5%	1.3x
Other	21	15.0	54.2	438.5	4.5	58.6	484.5	576.8	3.9%	1.3x
Secondaries	20	8.5	412.7	1,008.8	347.1	759.8	660.5	589.7	15.4%	1.5x
Special Situations	27	8.1	803.9	1,356.6	386.7	1,190.6	1,108.2	968.2	18.5%	1.6x
NYCP - Comptroller of the City of New York	246	9.5	4,819.7	10,019.3	2,827.6	7,647.3	7,839.4	7,508.7	11.9%	1.6x

Investment Type Portfolio Summary

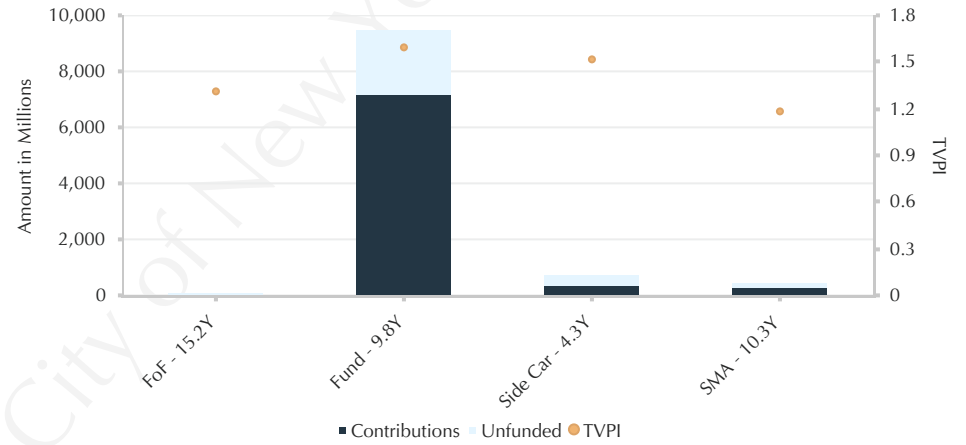
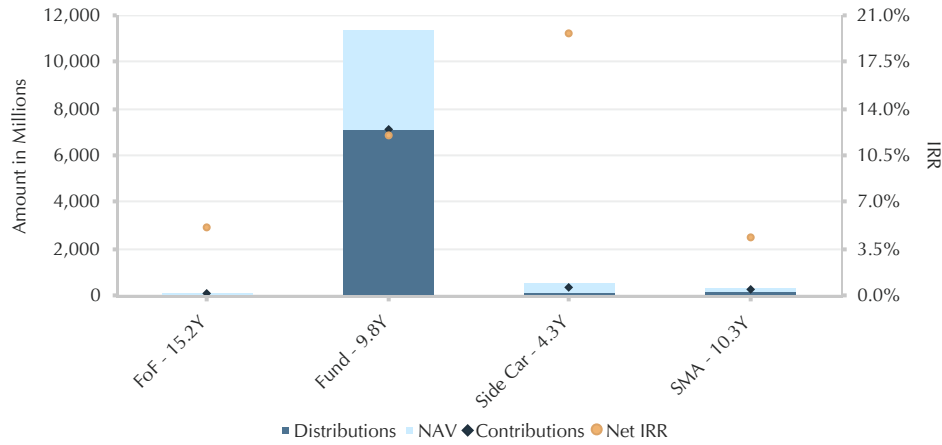
	# Of Funds	Weighted Average Age	NAV (\$mm)	Total Commitment (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Annualized IRR	TVPI
Direct Investments	211	9.8	4,326.9	9,022.1	2,402.6	6,729.5	7,293.8	7,221.9	11.8%	1.6x
Co-Investments	35	6.4	492.8	997.2	425.0	917.8	545.6	286.8	12.5%	1.4x
NYCP - Comptroller of the City of New York	246	9.5	4,819.7	10,019.3	2,827.6	7,647.3	7,839.4	7,508.7	11.9%	1.6x

¹ IRR not meaningful for investments held less than 24 months

Performance Review by Vintage Year

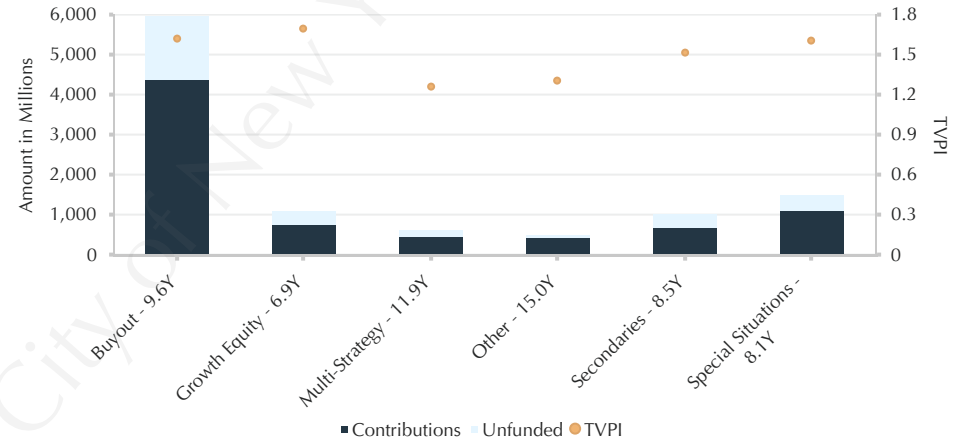
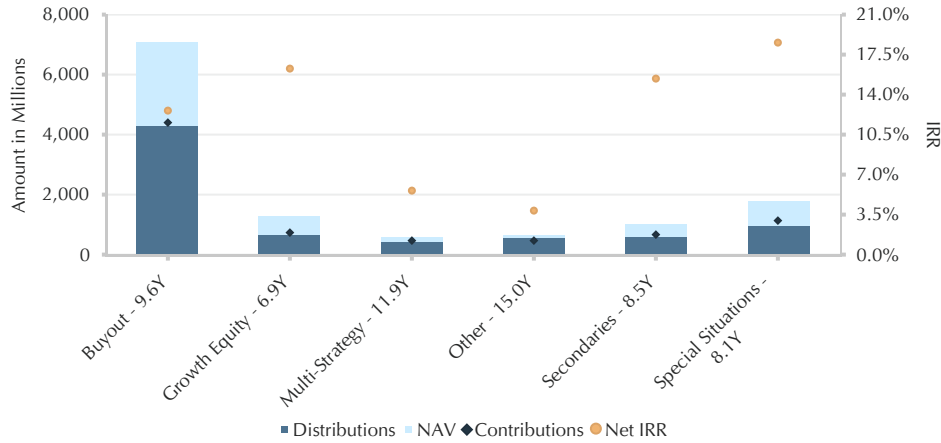


Performance Review by Structure

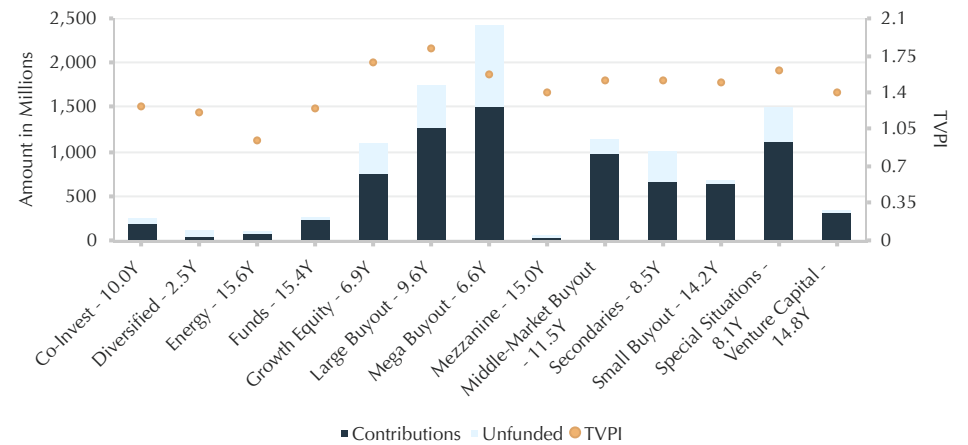
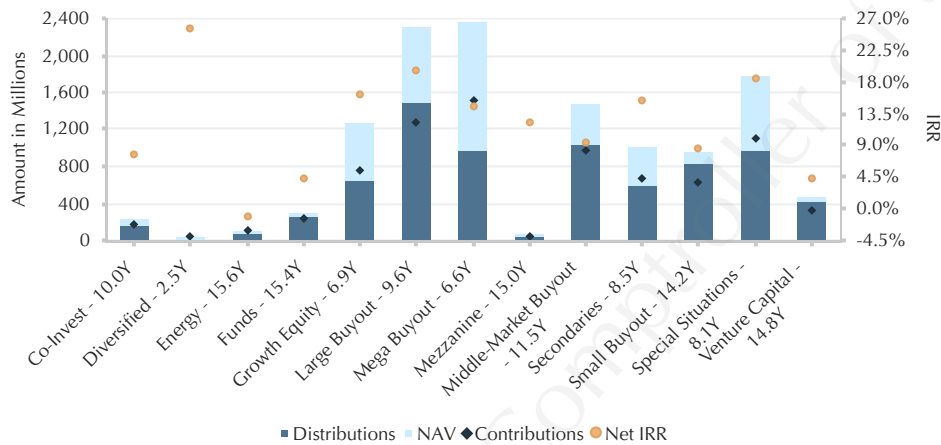


Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Review by Strategy



Performance Review by Sub-Strategy



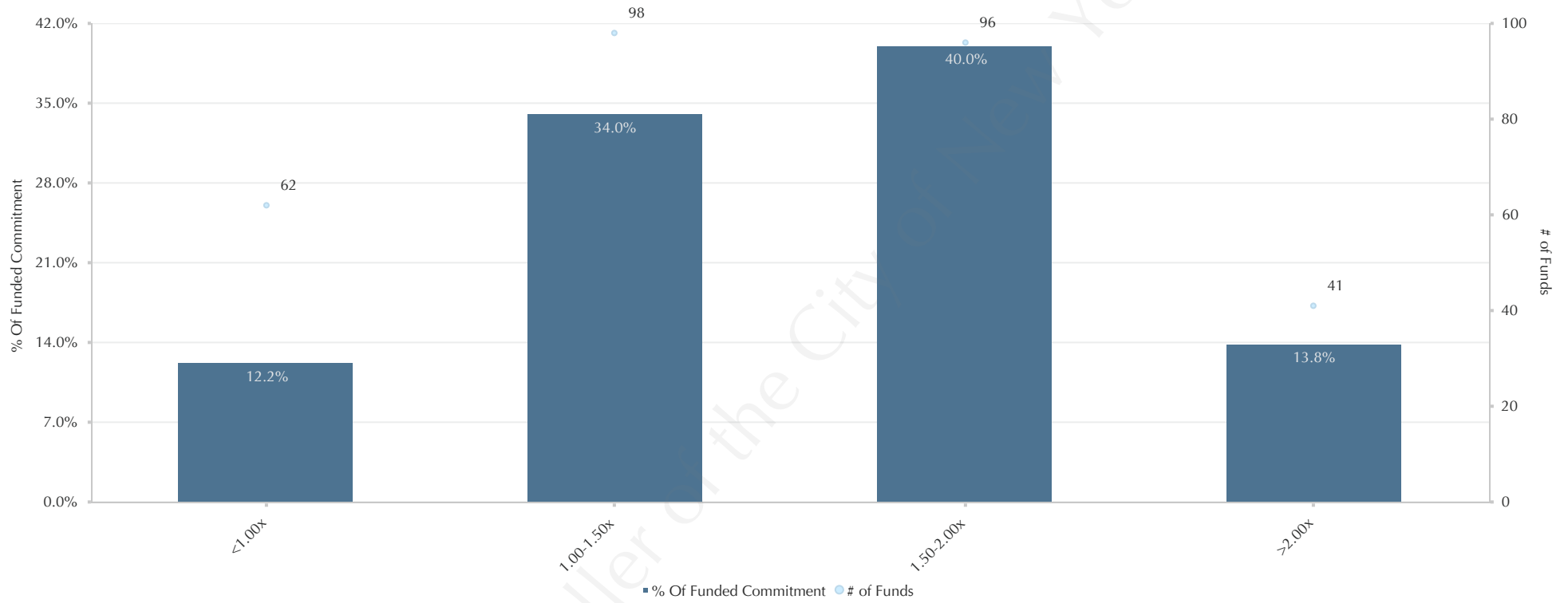
Weighted Average Age (WAA) is based on contributions
 WAA is calculated as the sum of the individual contributions divided by the overall contribution and then multiplied by the age

Performance Statistics

As Of Dec-2022	Dec-2021	Mar-2022	Jun-2022	Sep-2022	Dec-2022	% Change (YTD)	% Change (Quarter)	% Change (Annual)	Dec-2022 Active	Dec-2022 Liquidated
Committed Capital	8,809.5	9,092.5	9,760.9	9,978.3	10,019.3	13.7%	0.4%	13.7%	9,095.4	923.9
Unfunded Commitment	2,410.0	2,552.0	3,002.2	2,996.9	2,827.6	17.3%	-5.6%	17.3%	2,827.6	0.0
Net Contributed Capital	6,363.3	6,495.9	6,698.4	6,897.1	7,139.5	12.2%	3.5%	12.2%	6,212.1	927.4
Net Distributed Capital	6,210.2	6,338.6	6,454.7	6,574.9	6,705.4	8.0%	2.0%	8.0%	5,610.4	1,095.0
Recallable Capital	744.4	755.3	787.4	794.8	803.3	7.9%	1.1%	7.9%	754.1	49.2
Net Asset Value	4,709.7	4,706.5	4,634.2	4,627.9	4,819.7	2.3%	4.1%	2.3%	4,819.7	0.0
Net Gain/Loss	4,656.6	4,648.8	4,493.2	4,409.5	4,489.0	-3.6%	1.8%	-3.6%	4,219.9	269.1
Total Value	10,919.9	11,045.1	11,088.9	11,202.9	11,525.1	5.5%	2.9%	5.5%	10,430.1	1,095.0
Total Exposure (mm)	7,119.7	7,258.5	7,636.4	7,624.8	7,647.3	7.4%	0.3%	7.4%	7,647.3	0.0
DPI	1.0x	1.0x	1.0x	1.0x	1.0x	0.0x	0.0x	0.0x	0.9x	1.3x
Total Value to Paid-In (TVPI)	1.7x	1.7x	1.6x	1.6x	1.6x	-0.1x	0.0x	-0.1x	1.6x	1.3x
Net Internal Rate of Return (IRR)	12.7%	12.5%	12.2%	11.9%	11.9%	-0.8%	-0.1%	-0.8%	13.2%	6.6%

Total Exposure = Unfunded + NAV

TVPI Distribution



Strategy	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Buyout	57.5%	5,582.8	4,383.2	4,313.5	1,588.6	4,361.4	2,703.1	2,772.7	12.5%	1.6x
Growth Equity	13.0%	1,017.5	750.6	642.4	340.1	965.8	517.5	625.7	16.3%	1.7x
Multi-Strategy	3.1%	615.1	452.5	418.0	160.7	311.2	116.0	150.5	5.5%	1.3x
Other	1.1%	438.5	484.5	576.8	4.5	58.6	146.5	54.2	3.9%	1.3x
Secondaries	8.6%	1,008.8	660.5	589.7	347.1	759.8	342.0	412.7	15.4%	1.5x
Special Situations	16.7%	1,356.6	1,108.2	968.2	386.7	1,190.6	663.9	803.9	18.5%	1.6x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x
SubStrategy										
Co-Invest	1.5%	279.1	183.0	158.8	65.3	138.1	48.6	72.8	7.7%	1.3x
Diversified	0.8%	111.0	33.7	0.6	77.3	117.3	6.9	40.0	n.m. ¹	1.2x
Energy	0.0%	90.0	104.9	98.7	0.5	1.3	-5.3	0.8	-1.0%	0.9x
Funds	0.8%	225.0	235.7	258.6	18.1	55.8	60.6	37.7	4.3%	1.3x
Growth Equity	13.0%	1,017.5	750.6	642.4	340.1	965.8	517.5	625.7	16.3%	1.7x
Large Buyout	17.0%	1,610.0	1,265.2	1,487.8	476.0	1,293.9	1,040.5	817.9	19.7%	1.8x
Mega Buyout	28.9%	2,328.0	1,503.8	965.6	915.4	2,306.2	852.6	1,390.8	14.5%	1.6x
Mezzanine	0.0%	41.5	48.7	67.5	1.9	2.2	19.1	0.4	12.2%	1.4x
Middle-Market Buyout	9.2%	1,032.0	976.8	1,032.3	161.8	604.5	498.2	442.7	9.4%	1.5x
Secondaries	8.6%	1,008.8	660.5	589.7	347.1	759.8	342.0	412.7	15.4%	1.5x
Small Buyout	2.5%	612.8	637.3	827.8	35.5	156.8	311.8	121.3	8.5%	1.5x
Special Situations	16.7%	1,356.6	1,108.2	968.2	386.7	1,190.6	663.9	803.9	18.5%	1.6x
Venture Capital	1.1%	307.0	330.9	410.6	2.1	55.1	132.8	53.0	4.3%	1.4x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x

Vintage	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2023	0.2%	408.0	9.0	0.0	399.0	406.3	-1.7	7.3	n.m. ¹	0.8x
2022	2.1%	798.2	108.4	1.7	695.0	797.7	-3.9	102.8	n.m. ¹	1.0x
2021	13.0%	1,277.3	578.3	14.1	700.4	1,325.1	60.5	624.7	n.m. ¹	1.1x
2020	8.7%	559.0	352.9	24.1	221.4	640.6	90.3	419.2	19.9%	1.3x
2019	14.5%	765.3	565.3	86.1	234.7	934.2	220.4	699.5	24.5%	1.4x
2018	14.6%	727.7	563.3	150.8	193.4	898.4	292.5	705.0	22.7%	1.5x
2017	10.5%	398.1	383.6	136.4	49.0	554.3	258.1	505.3	19.0%	1.7x
2016	6.6%	248.4	270.5	226.1	23.2	343.1	275.6	320.0	21.1%	2.0x
2015	5.6%	317.5	305.3	336.9	36.8	307.3	302.1	270.5	21.0%	2.0x
2014	7.1%	386.5	392.7	423.5	50.8	391.0	371.0	340.2	17.5%	1.9x
2013	3.3%	379.1	352.9	411.6	55.3	216.5	220.0	161.3	13.0%	1.6x
2012	4.5%	412.0	443.4	600.2	34.8	252.0	374.1	217.2	15.6%	1.8x
2011	3.7%	481.2	486.9	733.1	40.9	218.2	423.4	177.2	15.6%	1.9x
2010	0.9%	102.5	115.8	161.6	14.8	58.8	89.9	44.1	15.4%	1.8x
2009	0.5%	122.5	111.8	198.1	5.8	29.9	110.4	24.1	15.9%	2.0x
2008	1.9%	630.0	634.9	876.3	25.4	117.9	333.8	92.5	9.8%	1.5x
2007	0.8%	485.8	504.7	668.4	22.4	63.2	204.4	40.7	7.1%	1.4x
2006	0.7%	551.0	600.8	877.2	12.3	45.3	309.4	32.9	7.6%	1.5x
2005	0.5%	332.4	353.2	543.5	3.0	26.3	213.6	23.4	8.4%	1.6x
2004	0.1%	184.8	203.2	214.8	4.3	10.6	17.9	6.3	1.9%	1.1x
2003	0.0%	100.0	112.1	228.2	4.2	5.5	117.4	1.4	24.4%	2.0x
2002	-	60.0	55.3	80.1	0.0	0.0	24.8	0.0	16.7%	1.4x

	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
2001	0.0%	100.0	122.1	219.1	0.9	2.9	99.0	2.0	24.9%	1.8x
2000	0.0%	60.0	69.7	91.7	0.0	2.0	24.0	2.0	6.7%	1.3x
1999	0.0%	112.0	123.2	177.6	0.0	0.2	54.6	0.2	8.6%	1.4x
1998	-	20.0	20.1	27.6	0.0	0.0	7.5	0.0	6.3%	1.4x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x

Structure

FoF	0.0%	66.9	65.1	84.0	3.5	4.6	20.0	1.1	5.2%	1.3x
Fund	88.6%	8,846.1	7,148.4	7,112.3	2,316.2	6,586.1	4,233.7	4,269.9	12.1%	1.6x
Side Car	8.7%	718.2	362.6	128.1	359.7	779.7	185.5	420.0	19.7%	1.5x
SMA	2.7%	388.2	263.3	184.4	148.2	276.9	49.8	128.7	4.4%	1.2x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x

Region

Asia Pacific	0.5%	85.0	46.9	13.3	44.3	68.0	-10.0	23.7	-8.6%	0.8x
Global	20.6%	2,289.6	1,467.2	1,259.5	858.0	1,851.5	785.7	993.5	13.4%	1.5x
Middle East	0.1%	35.0	36.8	9.2	0.0	4.1	-23.5	4.1	-14.0%	0.4x
North America	60.5%	5,987.3	5,153.9	5,341.1	1,418.9	4,333.0	3,101.3	2,914.1	11.5%	1.6x
Western Europe	18.3%	1,622.5	1,134.6	885.7	506.4	1,390.7	635.4	884.3	14.6%	1.6x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x

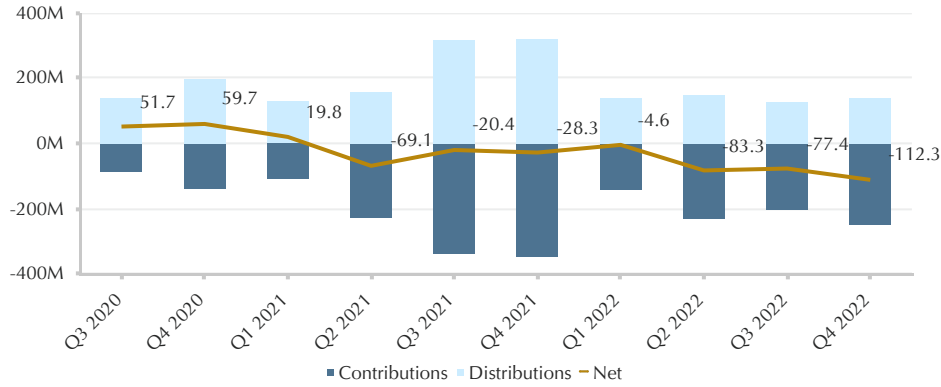
AssetClass	NAV Weight	Total Commitment (\$mm)	Contributions (\$mm)	Distributions (\$mm)	Unfunded Commitment (\$mm)	Total Exposure (\$mm)	Gain/Loss (\$mm)	NAV (\$mm)	Net IRR	TVPI
Private Credit	0.0%	41.5	48.7	67.5	1.9	2.2	19.1	0.4	12.2%	1.4x
Private Equity	99.9%	9,847.8	7,649.6	7,331.4	2,820.8	7,636.1	4,497.1	4,815.3	12.2%	1.6x
Real Assets	0.1%	130.0	141.1	109.9	4.9	8.9	-27.1	4.0	-3.9%	0.8x
NYCP - Comptroller of the City of New York	100.0%	10,019.3	7,839.4	7,508.7	2,827.6	7,647.3	4,489.0	4,819.7	11.9%	1.6x

¹ IRR not meaningful for investments held less than 24 months

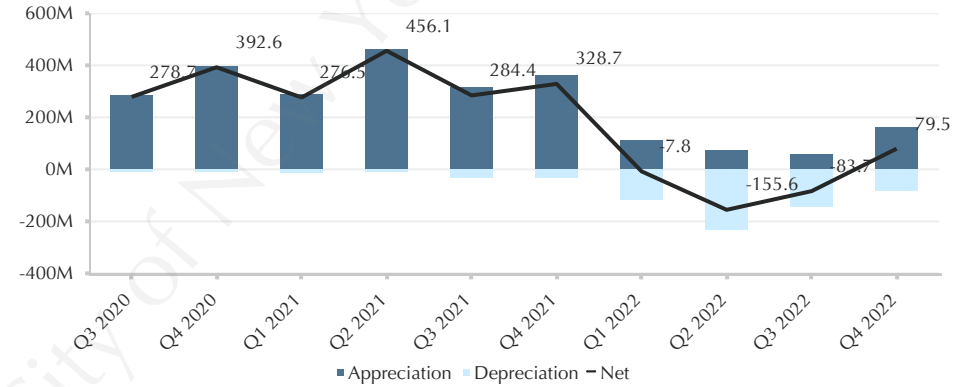
* Total figures take into account all current and closed portfolio positions as at Dec-2022

Total Exposure = Unfunded + NAV

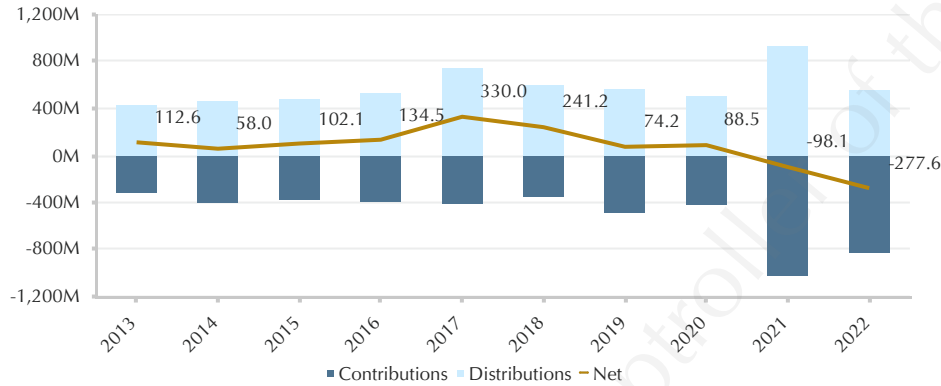
Cash Flows Quarterly



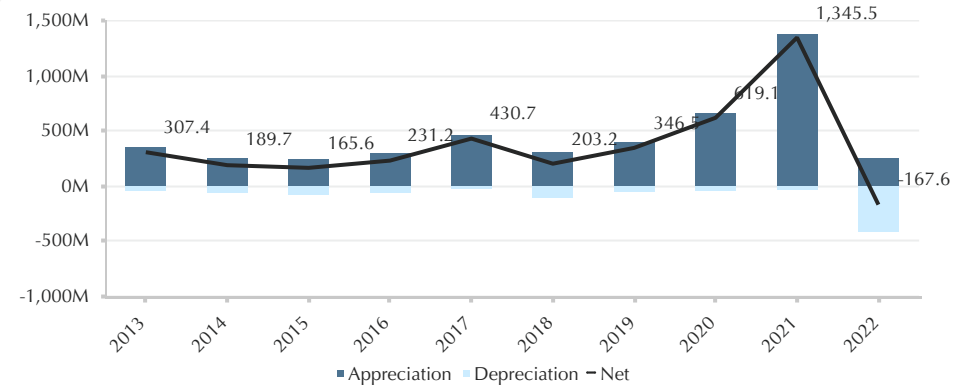
Appreciation/Depreciation Quarterly



Cash Flows Yearly



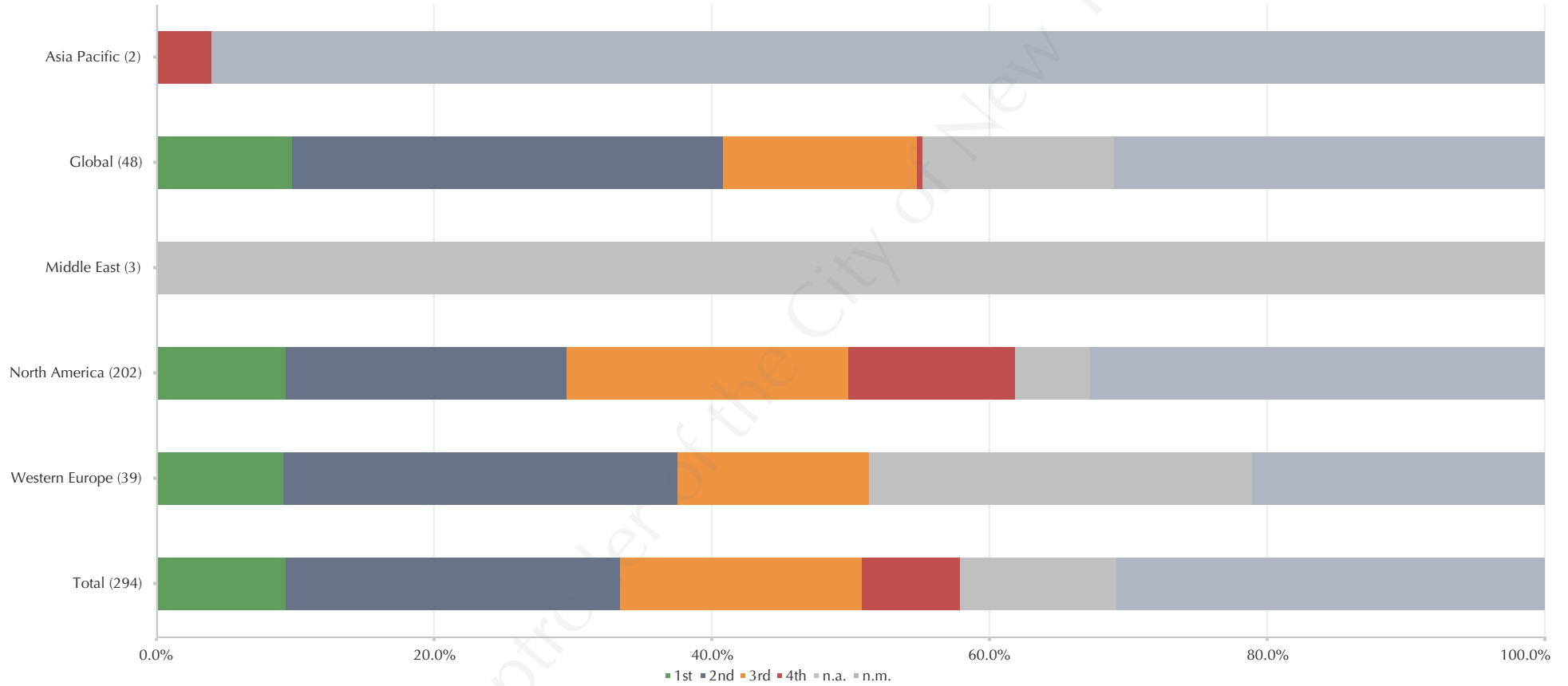
Appreciation/Depreciation Yearly



Portfolio IRR vs Benchmarks

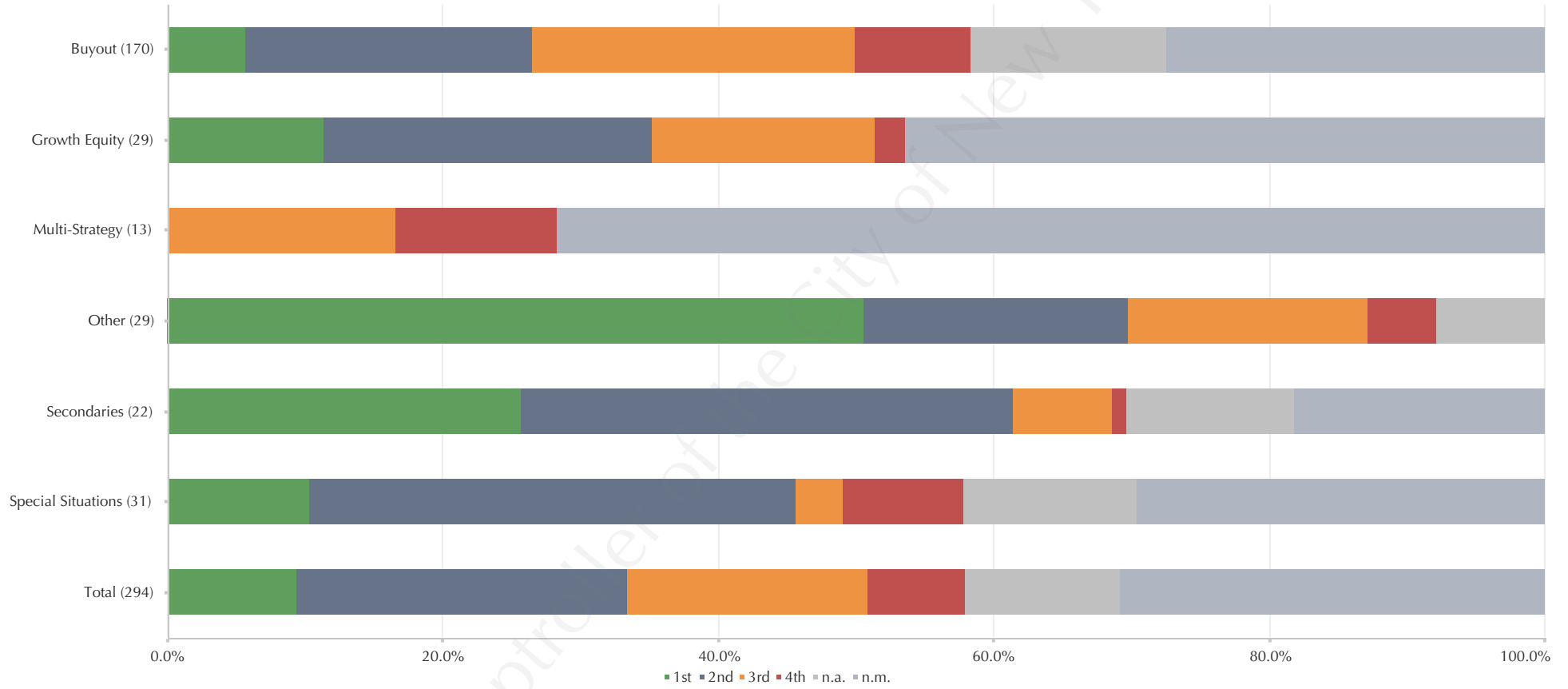
PERFORMANCE VERSUS BENCHMARKS						
12/31/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	1.7%	-3.5%	18.2%	15.3%	13.6%	11.9%
Russell 3000 PME+	7.2%	-18.2%	5.6%	8.2%	12.5%	9.9%
<i>Difference</i>	-5.5%	14.7%	12.7%	7.2%	1.1%	1.9%
Russell 3000 +300bps PME+	8.1%	-15.9%	9.2%	11.7%	16.4%	13.1%
<i>Difference</i>	-6.4%	12.4%	9.0%	3.6%	-2.8%	-1.2%
9/30/2022	1 QTR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	INCEPTION
Program IRR	-1.8%	1.8%	19.3%	16.2%	13.8%	11.9%
Cambridge Associates	-1.6%	-2.8%	19.8%	16.2%	13.6%	10.9%
<i>Difference</i>	-0.2%	4.7%	-0.5%	0.0%	0.2%	1.0%

By Region



n.m. : IRR is not meaningful
 n.a. :Not available Benchmark data

By Strategy



n.m. : IRR is not meaningful
 n.a. :Not available Benchmark data

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Real Estate Quarterly Report (Public):

Portfolio Profile

The New York City Police Pension Fund has allocated 7.0% (+/- 2%) of the total plan to Real Estate. The Real Estate Portfolio's objective is to generate a total net return that exceeds the NFI-ODCE+100 bps total net return measured over full market cycles.

Portfolio Statistics (December 31st, 2022)

Total Plan Assets	\$47.3 billion
Target Real Estate Allocation (%)	7%
Target Real Estate Allocation (\$)	\$3.3 billion
Total Real Estate Market Value	\$3.4 billion
Real Estate Unfunded Commitments	\$1.3 billion
Total Real Estate Exposure	\$4.7 billion
Number of Investments	103
Number of Managers	49

Net Returns (as of December 31st, 2022)

4Q22 Time-Weighted Net Return:	-2.2%
1 Year Time Weighted Net Return:	6.8%
3 Year Time Weighted Net Return:	11.3%
5 Year Time Weighted Net Return:	9.8%
Inception-to-Date (ITD) Time-Weighted:	8.1%
ITD Net IRR:	9.3%
ITD Net Equity Multiple:	1.5x

Investment Guidelines

Style Sector:	Target	•3% Core/Core Plus •4% Non-Core
Benchmark	NFI-ODCE Index +100 bps net over full market cycles	
Region Diversification	Maximum 25% Int'l	
Investment Diversification	Limit 15% to a single investment	
Manager Diversification	Limit 20% to a single manager	
Leverage	65%	

Fourth Quarter Investment Activity

No new investment activity occurred during the Quarter.

OVERVIEW

Prolonged high inflation, discouraging interest rates, escalating debt costs and pessimistic views on economic growth have all contributed to property acquisitions plunging in the final quarter. Year over year, deal volumes have contracted by 47%. Capital is expected to remain on the sidelines, as sellers are apprehensive towards taking a significant haircut on asking prices. Inversely, buyers are standing pat awaiting a further decrease in valuations that are accretive.

Tangible effects of these challenges can be witnessed in the EMEA region, with deal volume falling 70% YOY. Transaction activity in the U.K. was down 64%, in Germany by 85% and in France by 45%. Germany was the most affected of the top 10 global markets, particularly hampered with sanctions on Russian energy exports and spikes in financing costs resulting in yield compression. These headwinds have seen the number of completed deals at its lowest in a decade.

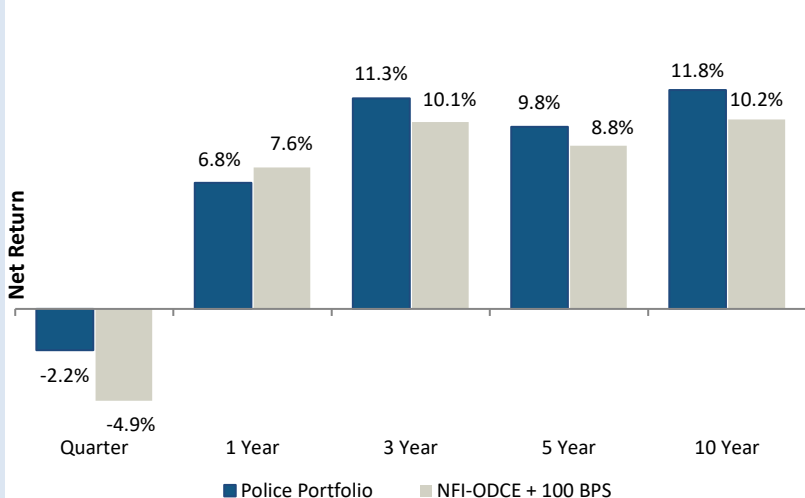
Global Total Commercial Real Estate Volume - 2021 - 2022

\$ US Billions	Q4 2022		Q4 2021		% Change	
	Q4 2022	Q4 2021	Q4 22 - Q4 21	2022	2021	% Change Full Year
Americas	126	341	-63%	674	784	-14%
EMEA	55	178	-69%	305	442	-31%
Asia Pacific	253	302	-16%	831	903	-8%
Total	435	820	-47%	1810	2130	-15%

Source: Real Capital Analytics, Inc., Q4' 22

The New York City Police Pension Fund ("Police") Real Estate Portfolio is, and has been, well positioned to take advantage of conditions in the real estate marketplace. In the period reflected in the rolling ten-year returns, Police performance exceeds the benchmark by 160 basis points. At the end of the Fourth Quarter 2022, the Portfolio achieved a total gross return of -2.3% which was comprised of 0.7% in income and -3.0% in appreciation. The net return for the Quarter was -2.2%. The Portfolio exceeds the benchmark over the three-year, five-year and ten-year time periods on a net basis. A detailed analysis of the Portfolio's real estate performance is found later in this Executive Summary.

Performance vs. Benchmark



FUNDING AND COMPOSITION

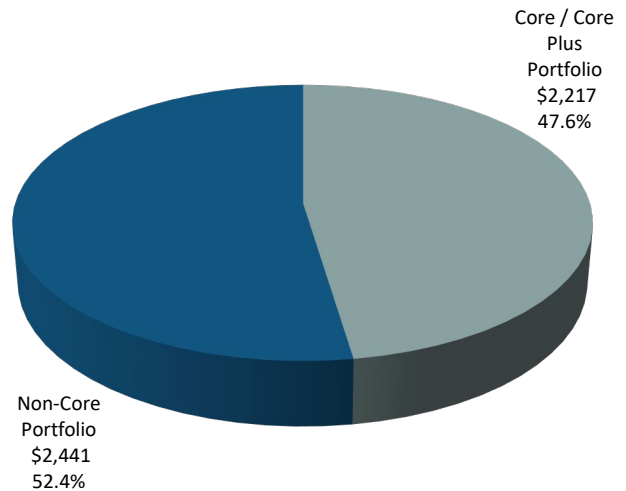
At the end of the Fourth Quarter, the Portfolio was funded at \$3.4 billion, or 7.2% of total plan assets. A total of \$1.3 billion in unfunded commitments are still outstanding. Unfunded commitments decreased by \$79.0 million from the Third Quarter 2022.

New contributions for the Quarter totaled \$80.2 million, offset by approximately \$82.0 million in distributions and withdrawals. Total distributions were weighted to the Non-Core sector.

Shown in the pie chart to the right is the current risk sector exposure calculated by Market Value + Unfunded Commitments. The Core / Core Plus component accounts for 47.6% of the Portfolio exposure during the Quarter. The Non-Core component accounts for 52.4% of the Portfolio exposure.

A more detailed break-down of the Portfolio Composition is shown in the table below. Attached as Exhibit A is a matrix which demonstrates compliance with various Investment Policy Statement guidelines.

Real Estate Exposure



New York City Police Pension Fund		
Total Plan Assets	12/31/2022	47,279
Real Estate Allocation (%)		7.0
Real Estate Allocation (\$)		3,310
Real Estate Core Allocation (%)		3.0
Real Estate Core Allocation (\$)		1,418
Real Estate Non-Core Allocation (%)		4.0
Real Estate Allocation (\$)		1,891
Style Sector Allocation		
Funded (Market Value) Core / Core Plus Portfolio (\$)		2,041
Funded (Market Value) Non-Core Portfolio (\$)		1,355
Unfunded Core / Core Plus Portfolio		176
Unfunded Non-Core Portfolio		1087
Funded (Market Value) and Committed Statistics		
Core / Core Plus Portfolio (%)		47.6
Non-Core Portfolio (%)		52.4
Core / Core Plus Committed (\$)		2217
Non-Core Committed (\$)		2441
\$ Committed		4658
% Committed on Real Estate Allocation		140.7
% Committed on Total Plan Assets		9.9
Funded (Market Value) Statistics		
% Core / Core Plus Funded (Market Value) of Total Plan Assets		4.3
% Non-Core Funded (Market Value) of Total Plan Assets		2.9
% Funded (Market Value) of Total Plan Assets		7.2
% Funded (Market Value) of Total Real Estate Allocation		102.6

PERFORMANCE

During the Quarter under review, the Police Real Estate Portfolio produced a -2.3% total gross return. The total net return for the Quarter was -2.2%. On a rolling one-year basis, a total gross return of 8.3% was recorded. On a net basis, the total return was 6.8%. On a gross and net basis, the Police Portfolio exceeds the NFI-ODCE over the one, three, five, and ten-year time periods. The benchmark return contemplates a 100-bps premium over the ODCE net return over full market cycles. This benchmark is exceeded over the three, five, and ten-year time periods. The various components of the Portfolio returns are depicted in the chart below. Recent underperformance correlates to volatility and current market conditions. Despite slight negative performance this quarter, strong historical returns have been consistent across the portfolio. Outperformance relative to the benchmark is still driven by the portfolio's industrial and alternative property type investments.

Core/Core Plus

As of December 31, 2022, the market value of the Core / Core Plus Portfolio was \$2.0 billion, or 60.1% on an invested basis. On a funded and committed basis, the Core/ Core Plus Portfolio totaled \$2.2 billion, or 47.6% of the total Portfolio. The Core / Core plus Portfolio generated a -3.9% total gross return for the Quarter comprised of 0.8% in income and -4.7% in appreciation. The total net return for the Quarter was -3.8%.

A significant contributor to the Quarterly return in this sector was Almanac Realty Securities VII, which generated a 5.0% total net return. A significant detractor from the Core / Core Plus Portfolio was LaSalle Property Fund, which generated a -4.7% total net return.

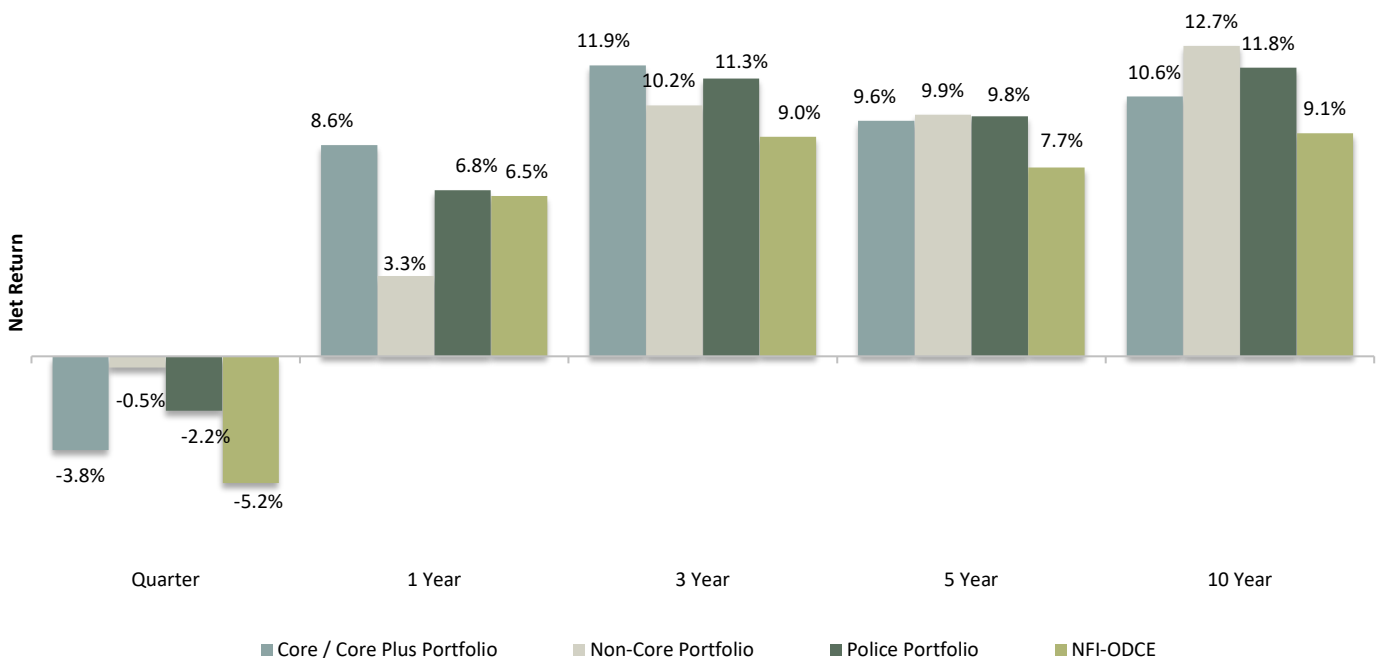
The Core / Core Plus Portfolio achieved a 11.9% net return over the three-year period ending December 31, 2022. Within the Core / Core Plus Funds, Lion Industrial Trust was a significant contributor, generating a 25.1% total net return. NYC Asset Investor #2 LLC was a significant detractor, generating a -7.4% total net return over the period.

Non-Core

As of December 31, 2022, the market value of the Non-Core Portfolio was \$1.4 billion, or 39.9% on an invested basis. On a funded and committed basis, the Non-Core Portfolio totaled \$2.4 billion, or 52.4% of the total Portfolio. The Non-Core Portfolio generated a -0.6% total gross return for the Quarter comprised of 0.6% in income and -1.2% in appreciation. The total net return for the Quarter was -0.5%.

A significant contributor to the Quarterly return in this sector was Blackstone Real Estate Partners Europe VI, which generated an 18.0% total net return. A significant detractor from the Non-Core Portfolio was PRISA III, which generated a -2.6% total net return.

The Non-Core Portfolio generated a three-year net return of 10.2%. Within the Non-Core Portfolio, Blackstone Real Estate Partners IX was a significant contributor, generated a 29.2% total net return. H/2 Special Opportunities Fund IV was a significant detractor, generating a -15.0% total net return over the period.



PERFORMANCE

Portfolio Performance

At the end of the Fourth Quarter 2022, the Portfolio had a cumulative market value of \$3.4 billion. Total market value plus unfunded commitments was \$4.7 billion. During the Quarter, the Portfolio achieved a total gross return of -2.3% which was comprised of 0.7% in income and -3.0% in appreciation. The Portfolio achieved a total net return of -2.2%. Since inception, the Portfolio has a net IRR of 9.3% and an equity multiple of 1.5x. Note, attached as Exhibit B are performance metrics relating to investments within the Portfolio.

Brief reviews of select Funds are found below. Note, that attached as Exhibit C are charts relating to fund contributions to returns during different relevant periods.

Blackstone Real Estate Partners IX. BREP IX generated a total net return of 1.2%. Over a trailing one-year period, the fund has generated a gross return of 18.9% and a net return of 14.1%. Positive contributors to fund performance included value increases for certain logistics investments concentrated in markets with strong outperformance such as the western U.S. as well as gains on interest rate hedges across the portfolio.

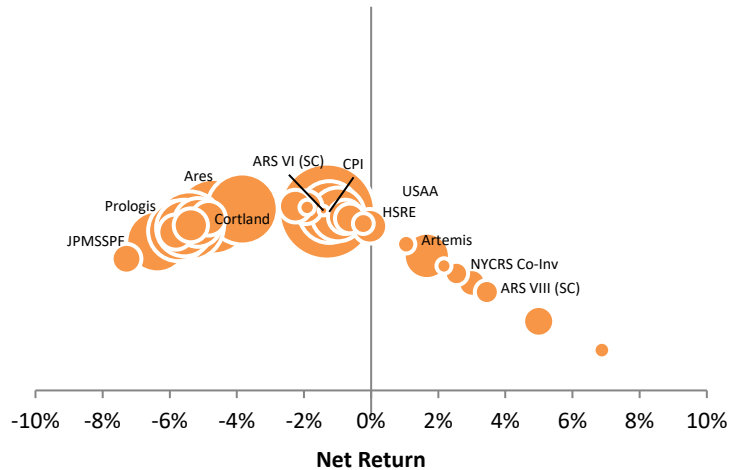
Lion Industrial Trust. Lion Industrial Trust generated a total gross return of -1.6% comprised of 0.7% in income and -2.3% in appreciation. The net return after fees was -1.3%. The trailing one-year net return is 21.9%. Valuations for the Fund's operating properties decreased 1.8% on a gross basis for the quarter, driven primarily by increases in cap rates and discount rates, which were primarily offset by rent growth. Despite the slight negative returns this quarter, LIT continues to be a strong performer, with a since inception IRR of 21.5%.

PW Real Estate Fund III LP. During the Quarter, PW Real Estate Fund III produced a total gross return of 9.2% comprised of 0.0% in income and 9.2% in appreciation. The net return after fees was 9.4%. Performance continues to be driven primarily by the Fund's investment strategy of investing in select niche property types.

KKR Real Estate Securities Dislocation Opportunity Co-Investment Fund . During the Quarter, KKR RESDOC generated a total gross return of 19.5% comprised of 2.7% in income and 16.8% in appreciation. The net return after fees was 19.5%. The Fund was formed to pursue open market purchases of publicly-traded securities and debt in the US, Europe, and Asia to capitalize on the dislocation observed amongst real estate and REITs. As of 4Q22, 112% of invested capital has been returned.

Core/Core Plus	1-Year	3-Year	5-Year	S.I. IRR
Net Return	8.6%	11.9%	9.6%	8.2%

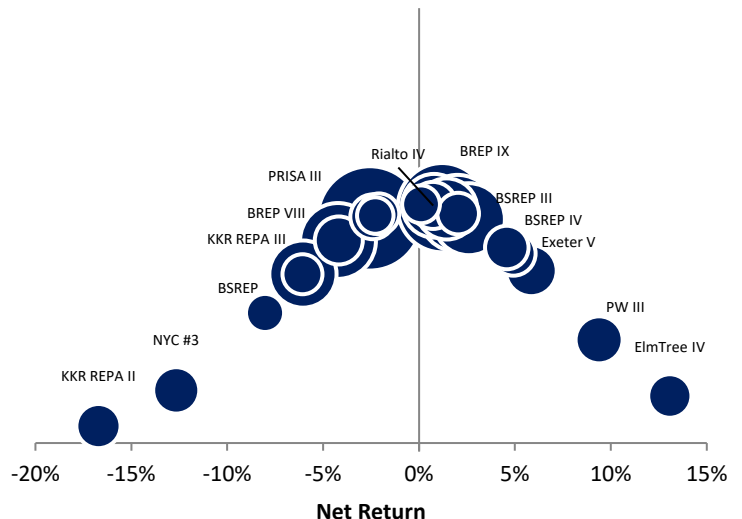
Core / Core Plus: Distribution of Quarterly Returns



Note: Bubble size based on Average Invested Capital. Due to scaling, the net return for NYC Asset Investor #2 LLC of -24.02% and net return for Jamestown Premier Property Fund of -13.02% is not shown on the chart.

Non-Core	1-Year	3-Year	5-Year	S.I. IRR
Net Return	3.3%	10.2%	9.9%	10.5%

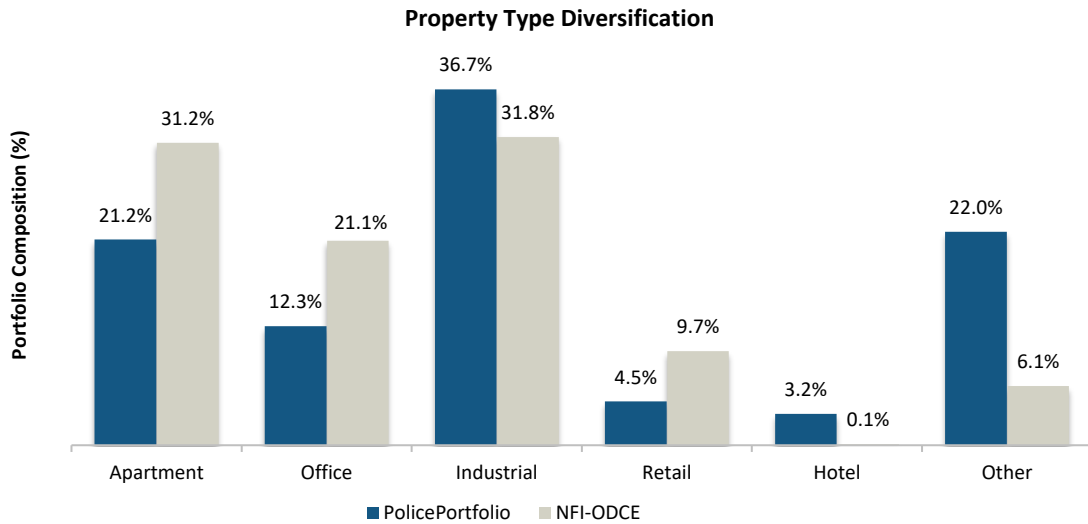
Non-Core: Distribution of Quarterly Returns
(Top 25 Positions by NAV)



Note: Bubble size based on Average Invested Capital. Due to scaling, the net return for KKR REPA II of -16.71% is not shown on the chart.

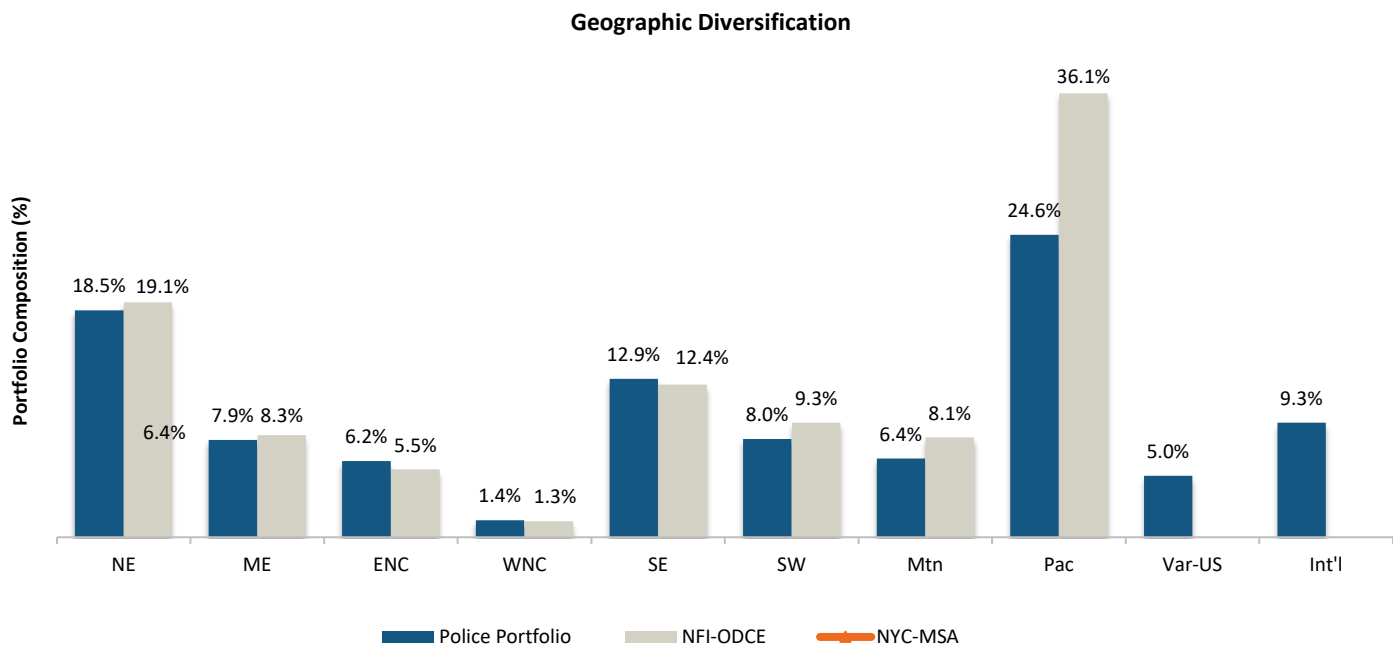
PROPERTY TYPE DIVERSIFICATION

The diversification of the current Portfolio by property type is shown below and compared to the diversification of the NCREIF-ODCE at the end of the Quarter. Relative to the ODCE, the Portfolio is underweight to multi-family, office, and retail. The Portfolio is overweight to industrial, hotel and other property types. Other property types primarily include debt-related investments and non-traditional property types such as for sale residential, self storage, land, data centers, senior living, healthcare, medical office and student housing.



GEOGRAPHIC DIVERSIFICATION

The diversification of the current funded Portfolio by geographic region is shown below and compared to the diversification of the NFI-ODCE at the end of the Quarter. The ODCE is a US-only index. The domestic portion of the Portfolio is well diversified relative to the ODCE. The 9.3% international exposure is appropriate for the risk and return profile of Police and consistent with the long-term target. Exposure to the NYC MSA is also included, which stands at 6.4% as of December 31, 2022.



MARKET UPDATE

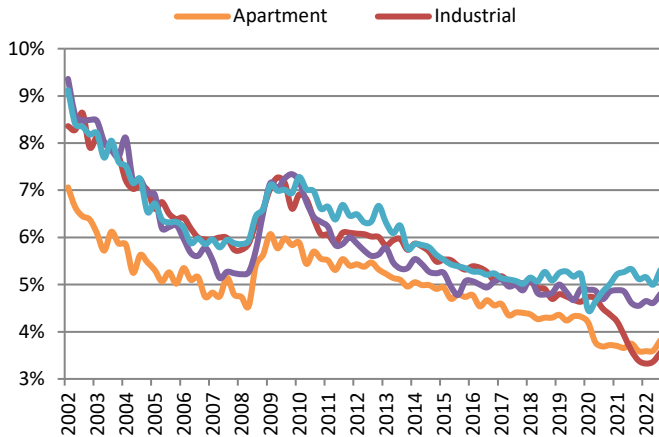
General

- An array of headwinds have emerged including the potential for “higher for longer” interest rates, persistent inflation, various geopolitical events, and widespread global supply chain struggles. The S&P 500 was offered a reprieve, returning 7.6% during the fourth quarter despite locking in its worst annual performance since 2008, producing a total return of -18.1%. The MSCI US REIT index broke its losing streak of three consecutive down quarters, posting a gross fourth quarter return of 5.2%.
- During the fourth quarter, GDP increased at an annualized rate of 2.7%. This positive growth was propped up by government spending, a resilient labor market and consumer spending. As a result of the atrocities of the Russia-Ukraine war, Saudi-Iranian oil concerns, and a rise in protectionist measures, commodity pricing has skyrocketed in lockstep with persistent inflation, which is anticipated to carry over well into 2023. Federal reserve officials remain committed to taming inflation and reducing the central bank’s balance sheet for the foreseeable future, approving seven interest rate hikes throughout 2022, with more anticipated during 2023.

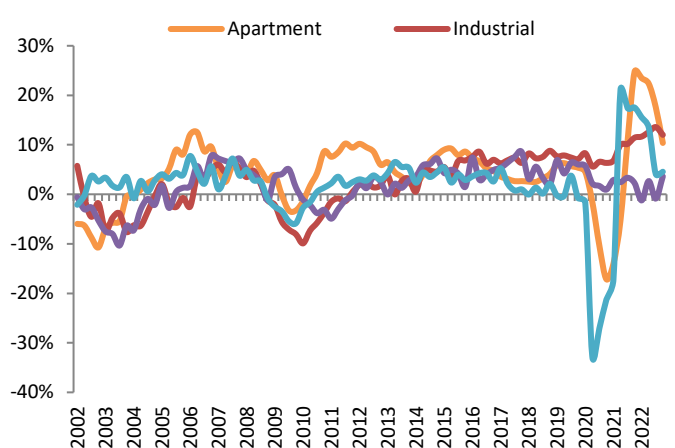
Commercial Real Estate

- To wrap up 2022, total CRE transaction activity for the quarter decreased by -62% YoY, with annual transaction activity down -15% YoY. The office sector transaction volumes in the U.S. have notably not recovered to pre-pandemic levels. While office sector fundamentals signaled mild improvement, the sector faces significant headwinds in the capital markets, driven by a dramatic increase in the cost of debt and the evolving nature of white-collar employers’ stance on return-to-office.
- Transaction cap rates (4.9%) remained relatively flat, expanding only 2 bps during the quarter. This increase comes after historic low cap rates in experienced in 4Q21 and 2Q22. Current valuation cap rates expanded for all major property sectors, led by retail (+30 bps), and followed by apartment (+23 bps), industrial (+19 bps) and office (+19 bps).
- NOI growth has substantially diverged between property sectors. Apartment sector fundamentals are as strong as ever. With the affordability of home ownership seemingly eroded, Apartment NOI expanded (+10%) YoY. Industrial NOI expanded (+12%) YoY on the back of companies’ investments in direct-to-customer distribution.
- 10-year treasury bond yields remained elevated, ending the quarter at 3.9%. As economists expected rates moved significantly higher throughout 2022, with the potential to climb further in 2023.

Current Value Cap Rates by Property Type



4 Qtr Rolling NOI Growth



Sources: Bureau of Economic Analysis, U.S. Census Bureau, St. Louis Fed, NCREIF, Real Capital Analytics, Bloomberg LP., Preqin.

EXHIBIT A: COMPLIANCE MATRIX

Category	Requirement	Portfolio Status
Benchmark	NFI-ODCE (net) +100 bps over full market cycles	<i>Portfolio returns outperform the benchmark over the three, five, and ten-year time periods.</i>
Portfolio Composition	Core/Core Plus (3% of RE Allocation)	<i>The portfolio is funded (market value) and committed at 140.7% of real estate allocation with a portfolio composition of 47.6% core/core plus and 52.4% non-core. Based on market value, the core/core plus portfolio is funded at 60.1% and the non-core portfolio is funded at 39.9%.</i>
	Non Core (4% of RE Allocation)	
Real Estate Allocation	Target of 7.0%	<i>Funded (market value) and committed dollars place the portfolio at 9.9% of total plan assets.</i>
	Currently Funded at 7.2%	
Property Type Diversification	Up to 40% Multifamily Up to 35% Industrial Up to 45% Office Up to 35% Retail Up to 25% Hotel Up to 20% Other Up to 15% Debt*	<i>The portfolio has a slight overweight (+1.7%) to the industrial property type and (+2.0%) to other property types driven by market views that favored the sector. Unfunded commitments are weighted to diversified strategies and will help increase exposure to multiple property types.</i>
Geographic Diversification	Diversified geographically Max 25% Ex-US	<i>All geographic type locations are in compliance based on market value.</i>
LTV	65%	<i>Portfolio is in compliance (currently 42.7%).</i>
Manager Exposure	20% of real estate allocation	<i>Manager exposure is in compliance based on market value.</i>

**Debt has been established as a separate category with a 15% allocation in the Annual Plan. For reporting purposes, debt investments are included in the "Other" category in the performance report.*

The New York City Police Pension Fund

Executive Summary: Fourth Quarter 2022 Performance Measurement Report

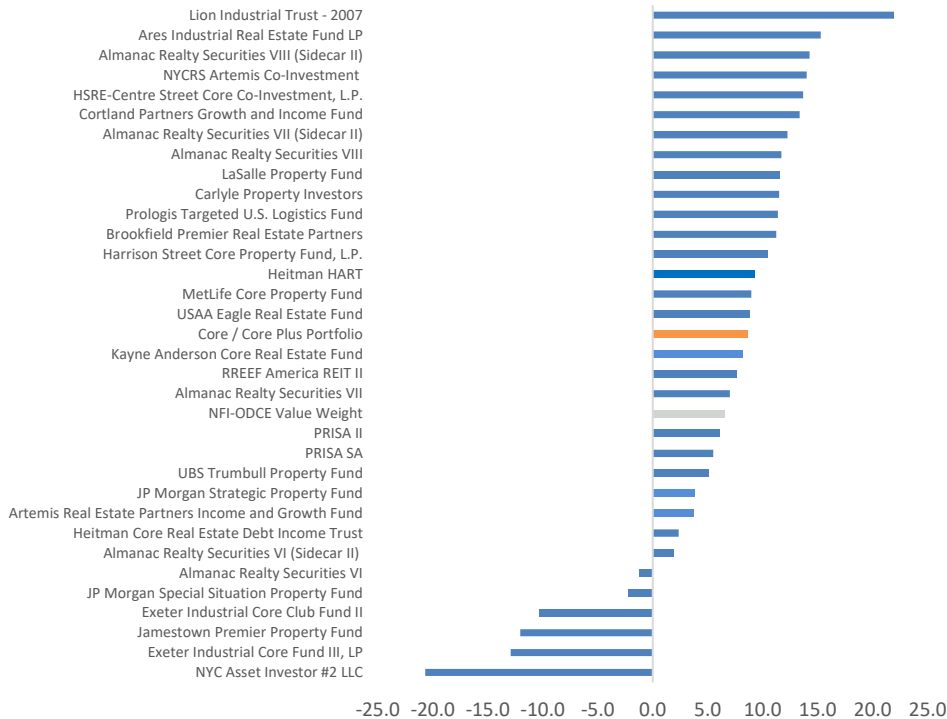
Real Estate

EXHIBIT B: Fourth Quarter 2022 FOIL

Vintage Year	Fund Name	Style Sector	Geographic Play	First Draw Down	Capital Committed	Contributions	Distributions	Market Value	Equity Multiple	Net IRR
2012	Almanac Realty Securities VI	Core / Core Plus Portfolio	Developed Americas	6/6/2012	50,000,000	33,444,956	-36,587,072	6,818,303	1.3	8.9
2012	Almanac Realty Securities VII (Sidecar II)	Core / Core Plus Portfolio	Developed Americas	7/31/2012	15,000,000	5,829,583	-5,302,452	2,610,228	1.4	8.2
2015	Almanac Realty Securities VII	Core / Core Plus Portfolio	Developed Americas	4/24/2015	50,000,000	48,513,083	-38,275,556	30,450,077	1.4	12.0
2016	Almanac Realty Securities VIII (Sidecar II)	Core / Core Plus Portfolio	Developed Americas	12/9/2016	20,000,000	11,388,003	-10,899,347	6,383,259	1.7	16.9
2019	Almanac Realty Securities VIII	Core / Core Plus Portfolio	Developed Americas	12/21/2018	42,000,000	23,740,139	-4,951,967	24,005,526	1.2	13.0
2019	Almanac Realty Securities VIII (Sidecar II)	Core / Core Plus Portfolio	Developed Americas	12/21/2018	28,000,000	16,346,187	-3,999,954	18,033,755	1.3	20.5
2021	Ares Industrial Real Estate Fund LP	Core / Core Plus Portfolio	Developed Americas	9/30/2021	120,000,000	124,032,045	-4,032,045	151,569,036	1.3	20.5
2019	Artemis Real Estate Partners Income and Growth Fund	Core / Core Plus Portfolio	Developed Americas	10/18/2019	18,000,000	13,286,822	-3,603,643	10,882,462	1.1	5.9
2017	Brookfield Premier Real Estate Partners	Core / Core Plus Portfolio	Developed Americas	11/22/2016	61,000,000	80,621,950	-20,941,959	116,201,409	1.7	11.7
2017	Carlyle Property Investors	Core / Core Plus Portfolio	Developed Americas	7/31/2017	61,000,000	77,895,782	-17,527,242	115,785,412	1.7	13.2
2020	Cortland Partners Growth and Income Fund	Core / Core Plus Portfolio	Developed Americas	7/1/2020	60,000,000	66,104,055	-7,143,649	92,948,922	1.5	20.2
2020	EQI Exter Industrial Core-Plus Fund IV, LP	Core / Core Plus Portfolio	Developed Americas	9/30/2020	79,000,000	7,615,600	0	6,777,682	0.9	-11.1
2016	Exter Industrial Core Club Fund II	Core / Core Plus Portfolio	Developed Americas	5/20/2016	19,000,000	18,505,000	-7,517,400	36,009,713	2.4	21.6
2020	Exter Industrial Core Fund III, LP	Core / Core Plus Portfolio	Developed Americas	2/19/2020	63,600,000	62,500,000	-6,070,000	67,103,217	1.2	10.6
2019	Harrison Street Core Property Fund, LP	Core / Core Plus Portfolio	Developed Americas	10/4/2019	20,000,000	23,433,510	-2,980,374	26,383,009	1.3	8.2
2019	Heitman Core Real Estate Debt Income Trust	Core / Core Plus Portfolio	Developed Americas	11/2/2018	28,000,000	34,837,028	-6,837,028	33,965,199	1.2	4.9
2019	Heitman HART	Core / Core Plus Portfolio	Developed Americas	3/29/2017	28,000,000	48,886,125	-67,234,914	34,335,211	2.1	8.0
2019	HSRE-Centre Street Core Co-Investment, L.P.	Core / Core Plus Portfolio	Developed Americas	5/31/2019	10,000,000	9,629,304	-848,545	12,849,692	1.4	15.5
2016	Jamestown Premier Property Fund	Core / Core Plus Portfolio	Developed Americas	2/4/2016	26,000,000	38,223,765	-15,390,869	23,413,747	1.0	0.4
2007	JP Morgan Special Situation Property Fund	Core / Core Plus Portfolio	Developed Americas	12/1/2007	15,000,000	17,614,742	-8,273,553	25,236,806	1.9	5.1
2007	JF Morgan Strategic Property Fund	Core / Core Plus Portfolio	Developed Americas	1/24/2007	56,000,000	62,422,616	-78,282,360	68,909,499	2.4	7.5
2020	Kayne Anderson Core Real Estate Fund	Core / Core Plus Portfolio	Developed Americas	4/1/2020	30,000,000	33,451,773	-3,834,613	38,814,613	1.2	6.1
2010	LaSalle Property Fund	Core / Core Plus Portfolio	Developed Americas	7/1/2010	115,000,000	115,000,000	-35,434,215	169,845,102	1.8	10.1
2017	Lion Industrial Trust - 2007	Core / Core Plus Portfolio	Developed Americas	1/1/2017	110,000,000	146,229,445	-20,676,197	283,373,586	2.1	21.5
2014	MetLife Core Property Fund	Core / Core Plus Portfolio	Developed Americas	7/1/2014	99,000,000	99,000,000	-23,780,950	139,321,783	1.6	10.7
2013	NYC Asset Investor #2 LLC	Core / Core Plus Portfolio	Developed Americas	7/9/2013	60,000,000	60,259,071	-25,136,824	36,107,626	1.0	0.3
2016	NYCRS Artemis Co-Investment	Core / Core Plus Portfolio	Developed Americas	2/24/2016	35,000,000	40,650,018	-48,223,093	17,049,861	1.6	17.1
2007	PRISA II	Core / Core Plus Portfolio	Developed Americas	6/30/2007	60,278,867	63,729,327	-31,658,109	110,520,827	2.2	6.5
2006	PRISA SA	Core / Core Plus Portfolio	Developed Americas	9/29/2006	21,000,000	22,590,656	-12,377,449	35,745,501	2.1	5.5
2006	PROLOGIS Targeted U.S. Logistics Fund	Core / Core Plus Portfolio	Developed Americas	10/1/2006	80,000,000	83,594,865	-7,667,933	106,766,168	1.4	8.5
2006	BREIT American REIT II	Core / Core Plus Portfolio	Developed Americas	10/1/2006	21,000,000	27,721,347	-18,304,645	38,127,844	2.0	6.1
2022	TPG Real Estate Thematic Advantage Core-Plus	Core / Core Plus Portfolio	Developed Americas	3/30/2022	75,000,000	82,482,640	0	32,948,759	1.0	1.6
2006	UBS Trumbull Property Fund	Core / Core Plus Portfolio	Developed Americas	9/28/2006	61,000,000	94,902,063	-116,607,008	33,815,089	1.6	6.2
2016	USAAG Eagle Real Estate Fund	Core / Core Plus Portfolio	Developed Americas	12/1/2015	75,000,000	75,000,000	-19,240,594	87,954,102	1.4	7.3
Core / Core Plus Portfolio					1,719,289,500	1,719,289,500	-709,641,459	2,041,117,364	1.6	8.2
2019	AERMONT Real Estate Fund IV	Non-Core Portfolio	Developed Europe	4/18/2019	19,401,963	13,466,804	0	10,950,085	0.8	-12.2
2008	AG Realty Fund VII	Non-Core Portfolio	Developed Americas	5/20/2008	23,454,500	23,454,500	-35,345,911	41,189	1.5	12.5
2023	Almanac Realty Securities IX Co-Investment	Non-Core Portfolio	Developed Americas	11/10/2022	17,700,000	0	1,219,886	0	1.1	6.3
2022	Almanac Realty Securities IX LP	Non-Core Portfolio	Developed Americas	6/30/2022	35,300,000	4,554,608	0	4,225,609	0.9	-9.4
2008	American Value Partners Fund I	Non-Core Portfolio	Developed Americas	10/18/2007	15,000,000	11,385,958	-10,415,981	659,879	1.0	-0.5
2006	AREA Real Estate Investment Fund V, LP	Non-Core Portfolio	Developed Americas	6/15/2006	5,000,000	5,000,004	-5,748,864	5,617	1.2	1.7
2008	Ares European Real Estate Fund III, LP	Non-Core Portfolio	Developed Europe	5/6/2008	30,487,500	30,487,500	-33,642,499	104,765	1.1	2.6
2022	Artemis Real Estate Partners Healthcare Fund II	Non-Core Portfolio	Developed Americas	7/15/2022	70,000,000	12,239,810	-2,769,217	8,674,534	0.9	-9.9
2018	Basis Investment Group Fund I	Non-Core Portfolio	Developed Americas	11/16/2017	9,500,000	9,987,685	-5,574,900	7,600,754	1.3	12.1
2021	BIG Real Estate Fund II	Non-Core Portfolio	Developed Americas	6/30/2021	20,000,000	10,506,981	-3,885,257	6,825,695	1.0	3.5
2004	Blackstone Fund IV	Non-Core Portfolio	Developed Americas	5/10/2004	15,000,000	19,220,353	-27,428,335	123,448	1.4	10.0
2010	Blackstone Real Estate Partners Europe III (USD Vehicle)	Non-Core Portfolio	Developed Europe	10/24/2010	37,000,000	37,036,441	-50,081,050	2,789,363	1.4	10.0
2014	Blackstone Real Estate Partners Europe IV (USD Vehicle)	Non-Core Portfolio	Identified	12/23/2013	95,000,000	95,510,429	-120,618,397	16,898,664	1.4	11.5
2014	Blackstone Real Estate Partners Europe VI (EURO Vehicle)	Non-Core Portfolio	Developed Europe	11/20/2013	69,992,113	45,747,1793	-21,447,550	23,519,930	1.5	10.7
2019	Blackstone Real Estate Partners IX	Non-Core Portfolio	Global	9/23/2019	101,000,000	102,138,207	-23,148,606	116,951,054	1.5	30.7
2007	Blackstone Real Estate Partners VI	Non-Core Portfolio	Developed Americas	9/27/2007	40,000,000	44,681,307	-88,486,997	694,868	2.0	13.2
2012	Blackstone Real Estate Partners VII	Non-Core Portfolio	Global	3/31/2012	100,000,000	127,599,436	-197,656,974	20,582,292	1.7	15.7
2015	Blackstone Real Estate Partners VIII	Non-Core Portfolio	Global	8/18/2015	101,000,000	114,974,147	-178,839,704	7,389,502	1.7	17.0
2012	Brookfield Strategic Real Estate Partners	Non-Core Portfolio	Global	9/20/2012	60,000,000	70,072,398	-120,883,533	19,030,953	2.0	18.5
2019	Brookfield Strategic Real Estate Partners III	Non-Core Portfolio	Global	4/12/2019	95,000,000	82,202,137	-215,121,971	86,177,185	1.3	13.3
2022	Brookfield Strategic Real Estate Partners IV	Non-Core Portfolio	Global	8/1/2022	131,000,000	26,074,024	0	30,001,995	1.2	-16.2
2022	Carlyle Realty Partners IX	Non-Core Portfolio	Developed Americas	9/30/2022	100,000,000	5,598,383	0	3,778,187	0.7	-58.2
2014	Carlyle Realty Partners VI	Non-Core Portfolio	Developed Americas	8/27/2014	20,000,000	28,397,165	-38,746,479	8,919,873	1.5	9.0
2014	Carlyle Realty Partners VII	Non-Core Portfolio	Developed Americas	9/14/2014	40,000,000	38,974,550	-62,919,635	3,442,216	1.7	24.3
2014	Carlyle Realty Partners VIII	Non-Core Portfolio	Developed Americas	6/30/2014	60,000,000	55,225,289	-17,043,959	14,898,432	1.6	14.7
2022	CIREP Centre Street II	Non-Core Portfolio	Identified	11/22/2022	75,000,000	8,312,808	0	6,713,718	0.8	-19.7
2021	CIREP Centre Street, L.P.	Non-Core Portfolio	Global	7/19/2021	75,000,000	45,588,235	0	5,469,890	1.2	22.5
2007	Colony Investors VIII	Non-Core Portfolio	Global	9/18/2007	20,000,000	21,249,679	-9,444,327	0	0.4	-11.3
2012	Divox West Fund III	Non-Core Portfolio	Developed Americas	12/30/2011	70,000,000	68,667,971	-118,718,249	0	1.7	23.9
2014	Divox West Fund IV	Non-Core Portfolio	Developed Americas	1/15/2014	70,000,000	69,301,157	-113,886,341	4,490,629	1.7	24.9
2017	Divox West Fund V	Non-Core Portfolio	Developed Americas	12/11/2016	40,000,000	27,238,380	-7,280,519	27,670,550	1.3	6.5
2017	Divox West Fund VI	Non-Core Portfolio	Developed Americas	11/16/2016	50,000,000	45,540,719	-816,373	32,928,873	1.0	6.8
2020	DRA Growth & Income Fund X	Non-Core Portfolio	Developed Americas	3/25/2020	36,000,000	28,388,842	-8,601,589	27,384,925	1.3	25.3
2017	DRA Growth & Income Fund IX	Non-Core Portfolio	Developed Americas	3/9/2017	27,000,000	27,548,835	-25,505,618	20,022,142	1.7	18.7
2010	ElmTree Net Lease Fund III	Non-Core Portfolio	Developed Americas	7/1/2010	40,000,000	25,618,429	-1,418,807	31,825,364	1.3	27.8
2016	European Property Investors Special Opportunities IV (EPISIV)	Non-Core Portfolio	Developed Europe	12/18/2015	32,413,099	29,618,022	-12,268,122	28,019,733	1.4	7.9
2017	Exter Industrial Value Fund IV	Non-Core Portfolio	Developed Americas	9/20/2017	16,000,000	15,109,020	-30,854,814	2,350,262	2.2	30.6
2021	Exter Industrial Value Fund V	Non-Core Portfolio	Developed Americas	10/23/2020	30,000,000	29,539,058	0	43,986,174	1.5	38.1
2020	GreenOak Asia III (USD Vehicle)	Non-Core Portfolio	Developed Asia	4/17/2020	40,000,000	34,669,174	-23,282,272	14,816,925	1.1	13.5
2011	H2 Special Opportunities Fund II	Non-Core Portfolio	Developed Americas	1/31/2011	25,000,000	25,000,000	-36,431,004	419,166	1.1	13.2
2015	H2 Special Opportunities Fund III	Non-Core Portfolio	Developed Americas	12/29/2014	40,000,000	41,540,719	-41,454,645	9,714,017	1.7	6.9
2017	H2 Special Opportunities Fund IV	Non-Core Portfolio	Developed Americas	11/15/2016	61,000,000	61,000,000	-123,821,361	58,603,082	1.2	5.7
2017	KKR CMBS B-Piece SMA	Non-Core Portfolio	Developed Americas	9/27/2017	81,000,000	72,294,174	-29,935,482	74,621,098	1.4	9.9
2018	KKR Real Estate Partners Americas II	Non-Core Portfolio	Developed Americas	2/9/2018	65,850,000	68,948,735	-89,124,453	22,120,000	1.6	28.4
2021	KKR Real Estate Partners Americas III	Non-Core Portfolio	Developed Americas	11/23/2021	105,000,000	61,769,932	-4,175,248	59,935,172	1.0	4.8
2021	KKR Real Estate Partners Europe II	Non-Core Portfolio	Developed Europe	9/1/2021	50,000,000	34,972,939	-11,247,273	28,048,994	1.1	12.8
2021	KKR Real Estate Securities Dislocation Opportunity Co-Investment Fund	Non-Core Portfolio	Developed Americas	10/9/2020	18,000,000	34,745,683	-39,089,928	4,821,729	1.3	35.9
2022	LBA Logistics Value Fund IX	Non-Core Portfolio	Developed Americas	2/22/2022	49,000,000	13,192,308	0	12,262,337	0.9	-11.6
2014	Lone Star Real Estate Fund III	Non-Core Portfolio	Global	5/30/2014	70,306,161	70,306,161	-95,126,613	351,705		

EXHIBIT C : CORE / CORE PLUS PERFORMANCE SUMMARY

Core / Core Plus One Year Net Time-Weighted Returns



Core / Core Plus Three Year Net Time-Weighted Returns



EXHIBIT C : NON-CORE PERFORMANCE SUMMARY

Non-Core Three Year Net Time-Weighted Returns

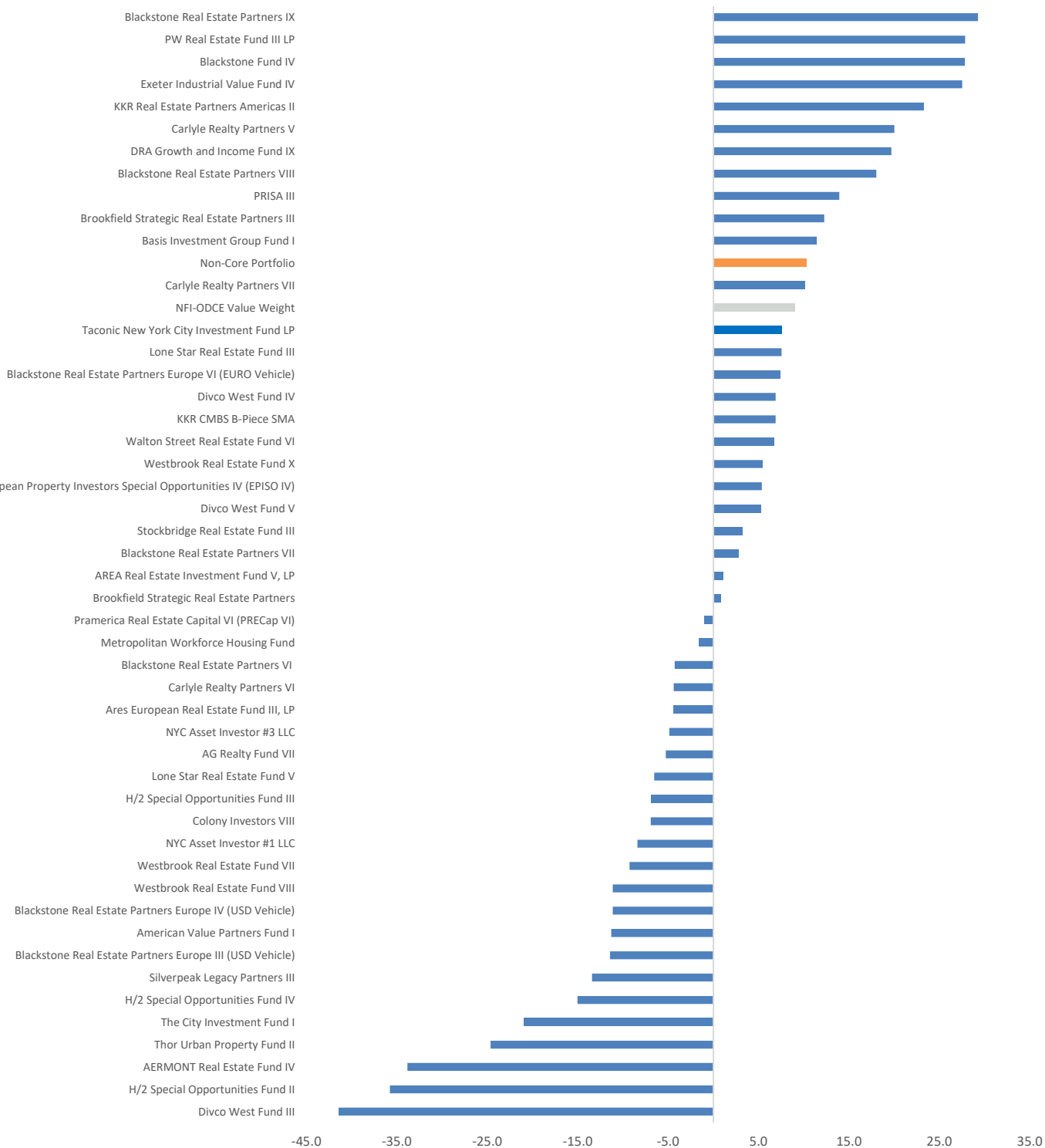
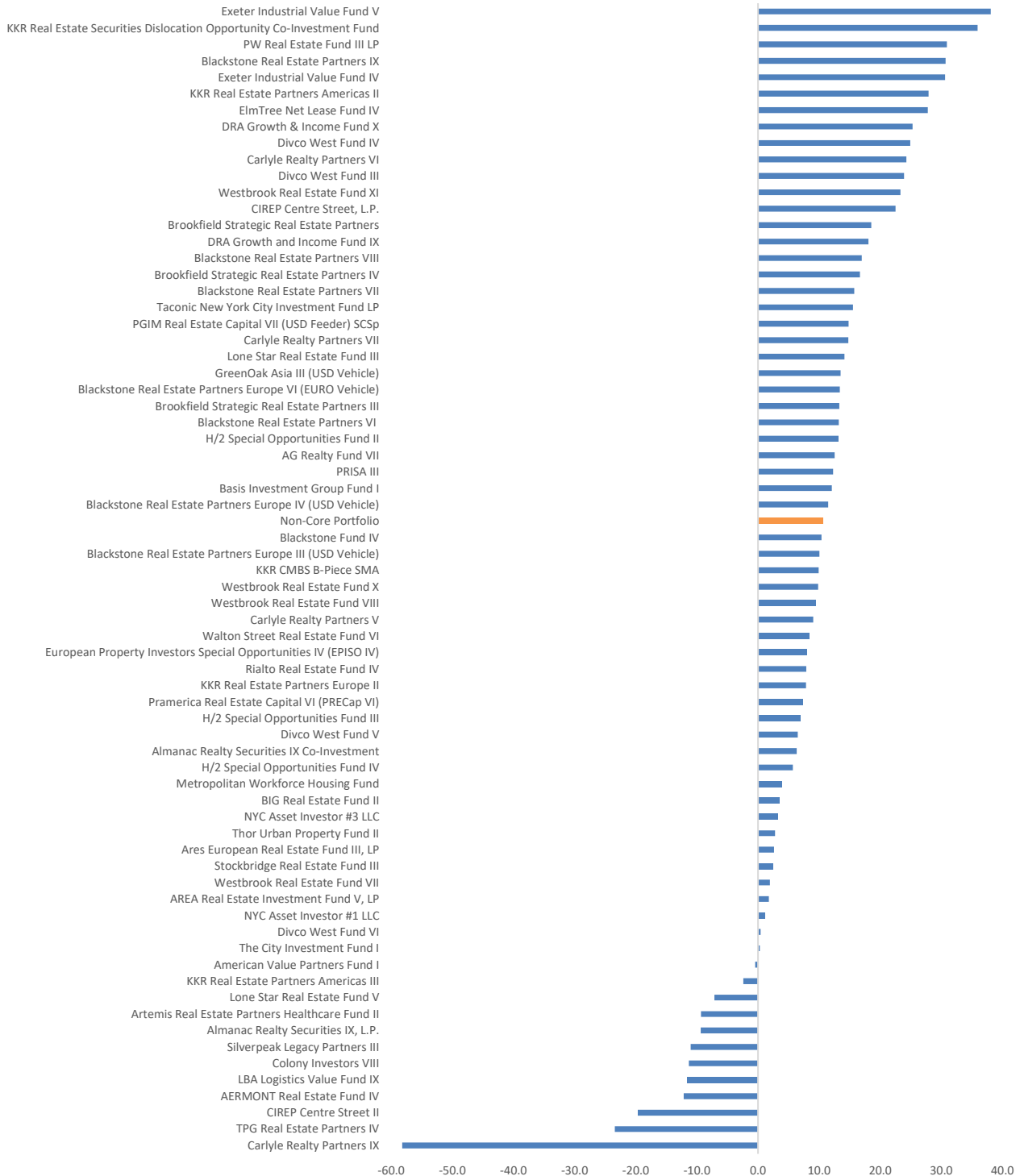


EXHIBIT C : NON-CORE PERFORMANCE SUMMARY

Non-Core Since Inception Net IRRs



Infrastructure Quarterly Report (Public):



Infrastructure Monitoring Report

For the period ended December 31, 2022

Prepared at the Specific Request of:

Client: New York City Police Pension Fund, Subchapter 2

Portfolio: NYC POLICE Infrastructure



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All data is as of December 31, 2022 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, 2022, the Program has committed US\$1,710.3 million to 40 partnership investments (the “Portfolio”). This quarterly monitoring report covers the performance of the Portfolio as of December 31, 2022 as well as significant activity that occurred during the fourth quarter of 2022.

Allocation Summary

NYCPPF has an Infrastructure allocation target of 3% of total pension assets. As of December 31, 2022, the market value of NYCPPF Infrastructure Program represented approximately 2.1% of total pension assets, an 8-basis point increase from the prior quarter.

<i>US\$ in millions*</i>	December 31, 2022	September 30, 2022	December 31, 2021	Quarterly Change	Yearly Change
Total Pension Assets*	\$47,279.4	\$45,045.4	\$53,574.0	\$2,233.9	(\$6,294.6)
Total Infrastructure Assets	\$1,001.5	\$915.9	\$777.5	\$85.6	\$223.9
% Allocation to Infrastructure (Target of 3%)	2.1%	2.0%	1.5%	+8 bps	+67 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, 2022, the Infrastructure Program has achieved a Total Value to Paid-In multiple of 1.3x invested capital and an IRR of 12.0%.

US\$ in millions*	December 31, 2022	September 30, 2022	December 31, 2021	Quarterly Change	Yearly Change
Number of Managers	14	13	12	1	2
Number of Investments	40	37	32	3	8
Committed Capital ¹	\$1,710.3	\$1,580.0	\$1,393.8	\$130.3	\$316.5
Contributed Capital	\$1,025.1	\$945.3	\$724.8	\$79.7	\$300.3
Distributed Capital	\$377.5	\$341.6	\$228.8	\$35.9	\$148.8
Market Value	\$1,001.5	\$915.9	\$777.5	\$85.6	\$223.9
Total Value	\$1,379.0	\$1,257.4	\$1,006.3	\$121.5	\$372.7
Total Gain/(Loss)	\$353.9	\$312.1	\$281.5	\$41.8	\$72.4
Unfunded Commitment	\$783.0	\$720.2	\$743.7	\$62.8	\$39.2
Exposure ²	\$1,784.4	\$1,636.1	\$1,521.3	\$148.3	\$263.2
Net DPI ³	0.4x	0.4x	0.3x	0.0x	0.1x
Net TVPI⁴	1.3x	1.3x	1.4x	0.0x	0.0x
Net IRR⁵	12.0%	11.6%	13.0%	0.4%	-1.0%
TVPI Net of StepStone Fees ⁶	1.3x	1.3x	1.4x	0.0x	0.0x
IRR Net of StepStone Fees ⁶	12.0%	11.6%	13.0%	0.4%	-1.0%

* 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.

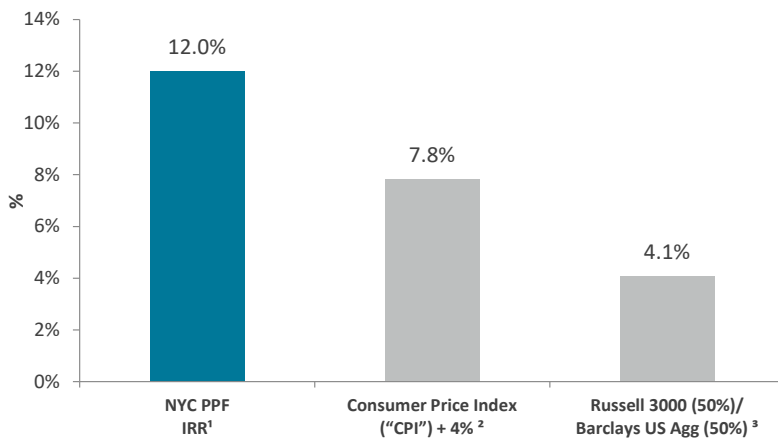
⁵ IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter-end. IRR is net of fund managers' fees, expenses and carried interest.

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. IRR and TVPI for certain vehicles may have been impacted by StepStone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

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, 2022.



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, 2022. (US\$ In millions)</i>						
By Strategy:						
Core	844.7	84.3%	660.7	84.4%	1,505.4	84.4%
Non-Core	156.8	15.7%	122.2	15.6%	279.0	15.6%
Total	1,001.5	100.0%	783.0	100.0%	1,784.4	100.0%
By Geographic Focus:						
Global	267.7	26.7%	465.8	59.5%	733.5	41.1%
North America	156.4	15.6%	161.4	20.6%	317.8	17.8%
OECD	577.4	57.7%	155.8	19.9%	733.2	41.1%
Total	1,001.5	100.0%	783.0	100.0%	1,784.4	100.0%
By Industry Focus:						
Communication	68.5	6.8%	4.6	0.6%	73.0	4.1%
Diversified	734.6	73.4%	573.4	73.2%	1,307.9	73.3%
Energy	135.6	13.5%	143.4	18.3%	278.9	15.6%
Renewables	6.7	0.7%	0.7	0.1%	7.5	0.4%
Secondaries	40.5	4.0%	60.9	7.8%	101.4	5.7%
Transportation	15.6	1.6%	-	0.0%	15.6	0.9%
Total	1,001.5	100.0%	783.0	100.0%	1,784.4	100.0%

II. Infrastructure Market Overview

UK & Europe Infrastructure Activity

During the quarter, the UK and European infrastructure market continued to exhibit robust deal flow. Most notably, several large transactions were completed in the telecommunications, power and utilities, renewables and transport sectors.

In the telecommunications sector, DIF Capital partners agreed to acquire a majority stake in German fibre operator Ruhrfibre for €180 million. Ruhrfibre is aiming to build a fibre network across the German city of Essen, constituting some 153,000 connections by the end of 2025.

In the power and utilities sector, Scottish and Southern Electric (“SSE”) agreed to sell 25% of its high-voltage electricity transmission infrastructure to Ontario Teachers’ Pension Plan (“OTPP”). OTPP will pay SSE a consideration of ~€1.7 billion, implying an enterprise value of ~€9.7 billion which translates to ~2x its regulated asset value (~€4.2 billion). The transaction reached financial close on 30 November 2022. EQT agreed to sell a 50% stake in Saur Group to a consortium of DIF Capital Partners and Dutch insurance company, PGGM for 14x EV/EBITDA. Saur is one of the largest French water and wastewater companies with an estimated 17% market share in 2022. EQT has agreed the transaction and aims to close the transaction before Q2 2023. On 21 December 2022, KKR Infrastructure acquired ContourGlobal, a formerly listed independent power producer with thermal and renewable power generation assets. KKR agreed to pay 263.3p a share, implying an enterprise value of £4.92 billion, acquiring the company from Reservoir Capital.

In the renewables sector, JP Morgan Asset Management has agreed to acquire a 60% stake in Falck Renewables for €1.5 billion on 26-Oct-2022. JP Morgan will pay €8.81 per share of Falck Renewables, a 29.2% premium on its three-month volume-weighted average share price. Falck Renewables has 1.32GW of installed capacity in the UK, Italy, US, Spain, France, Norway and Sweden, with an asset mix of wind power, solar power, energy-from-waste, and biomass.

In the transport sector, Morgan Stanley Infrastructure Partners reached financial close on its 73% stake sale in VTG, a German railcar lessor to a consortium of Global Infrastructure Partners (“GIP”) and the Abu Dhabi Investment Authority (“ADIA”), implying an enterprise value for VTG of ~€6 billion. VTG owns 94,000 rail freight wagons and 9,000 tank containers, the remaining 27% of VTG is owned by OMERS and co-investors. After the closing of the transaction, OMERS announced it had increased its stake to 33.3% after acquiring ~6% from GIP and ADIA. The transaction reached financial close on 22-Dec-2022.

In Oct-2022, Heathrow Airport announced it had raised a four-year £1.32 billion sustainability-linked loan. In Dec-2022, London City Airport raised a £534 million term loan and £62m RCF from a group of banks and Newcastle Airport closed a £208 million refinancing.

Also during the quarter, Royal Schiphol Group announced that it had divested its remain 3.9% stake in Aéroports de Paris to various investors including the French airports operator Aéroports de Paris (“Groupe ADP”) as well as Canada Pension Plan Investment Board (“CPP Investments”). The transaction was part of a formal disposal process for an 8% cross-shareholdings held by Groupe ADP and Royal Schiphol Group, which is expected to complete by 30-May-2023. CPP Investments will hold a 5.64% stake valued at €791m in Groupe ADP once the transaction concludes. In Oct-2022, Royal Schiphol Group signed an agreement in principle to purchase a 40% stake in Maastricht Aachen Airport (“MAA”) in Limburg, the Netherlands, for a €4.2m consideration. Under the agreement, the two parties agreed to jointly invest in the future of MAA, the second-largest cargo airport in the Netherlands.

North America Infrastructure Activity

Activity in the North American infrastructure market saw an uplift relative to the prior quarter with respect to deal volumes. Although there was a decline in the number of deals, growth in reported average deal size resulted in a rise in total deal volume. During the quarter, 86 infrastructure transactions closed in North America with an aggregate value of US\$63.5 billion.

The renewable energy sector saw an increase in deal volumes and number of deals from the previous quarter. In October, TotalEnergies closed its acquisition of a 50% stake in Clearway Energy Group (“CEG”) for US\$1.6 billion. CEG has 7.7 GW of wind and solar assets in operation through its listed subsidiary CWEN and has a 25 GW pipeline of renewable and storage projects. In the same month, RWE AG announced the acquisition of Con Edison Clean Energy Businesses, Inc for US\$6.8 billion. The clean energy businesses (“CEBs”) have approximately 3 GW of projects in service in the US. Around mid-October, a subsidiary of Hydro-Québec has reached an agreement to acquire Great River Hydro, owner of 13 hydroelectric power plants with a total installed capacity of 589 MW in New England, from affiliates of Arclight Capital Partners for US\$2.0 billion. At the end of October, AVANGRID announced that they were looking to sell their renewable energy and other assets to raise US\$2.0 billion in capital. During the same month, NextEra Energy reached an agreement to acquire a portfolio of renewable natural gas facilities for US\$1.1 billion from Energy Powers Partners. In December, BP closed its acquisition Archaea Energy, a Houston-based renewable natural gas firm, for US\$4.1 billion.

In the telecommunications sector, Apollo Global Management closed its acquisition of Lumen Technologies’ for US\$7.5 billion in October. Within the same month, Wren House Infrastructure Management announced its acquisition for a minority stake (10%) of a US-based wireless and towers operator Phoenix Tower International for EUR504 million (~US\$546 million). In November, Partners Group closed its acquisition of EdgeCore Digital Infrastructure, a US data centre developer and operator, for US\$1.2 billion. In December, DigitalBridge Partners II and an affiliate of IFM Investors closed their acquisition of Switch, a data centre company that owns and operates five campuses, for US\$11.0 billion. The five campuses include 16 colocation facilities, 5.1-million gross square feet, and power availability of 508 MW.

In the conventional power and utilities sector, Hecate Grid, an energy storage JV backed by Hecate Energy and InfraRed Capital Partners, announced in October that they were planning to raise US\$500 million in equity commitments to support growth. In December, GIC closed its acquisition of a 19.9% stake in Duke Energy Indiana for US\$2.05 billion.

In the transport sector, Norfolk Southern Corporation announced in November that it will acquire all the city-owned assets of the Cincinnati Southern Railway, an approximately 337-mile railroad that runs from Cincinnati, Ohio to Chattanooga, Tennessee, for US\$1.6 billion. In December, CPPIB and OMERS sold their 66.67% stake in Chicago Skyway, the owner of a long-term lease on an 8-mile-long toll road that connects the Indiana Toll Road to the Dan Ryan Expressway on Chicago's South Side, to Atlas Arteria for US\$3.4 billion. Around mid-December, a joint venture among GIC, Wren House Infrastructure, and OMERS closed their acquisition of Direct ChassisLink from Apollo and EQT infrastructure for US\$4.5 billion. Within the same month, CMA CGM Group announced that it will acquire Global Container Terminals’ (GCT) US East Coast assets for ~US\$3.0 billion. GCT also operates two terminals in British Columbia, Canada.

Australia and New Zealand Infrastructure Activity

Deal flow in the Australian and New Zealand markets remained robust during the fourth quarter of 2022, and the year ended with several major deals achieving financial close.

Activity in the energy and renewables sector was buoyed by several major transactions being launched or closed across the region. Most notably, Brookfield Asset Management and MidOcean Energy launched a bid to take ASX listed Origin Energy private. The take-private of Origin was the largest transaction during the quarter, and at A\$9.0/share represented an enterprise value of ~A\$18.4 billion. Brookfield and MidOcean Energy are expected to complete due diligence early-2023, with exclusivity granted by Origin until 16-Jan-2023. In a separate transaction, MidOcean Energy was shortlisted as Preferred

Proponent for Tokyo Gas' stake in a portfolio of four Australian LNG projects for ~A\$3.4 billion. Under the terms of the agreement, MidOcean will acquire Tokyo Gas' interest in Gorgon LNG (1%), Ichthys LNG (1.575%), Pluto LNG (5%) and Queensland Curtis LNG (1.25%). In New Zealand, electricity and gas distribution business, Vector Limited, sold its smarter metering business to QIC Private Capital at an enterprise value of NZ\$1.7 billion, including ~NZ\$980 million of debt. Vector's smart metering business covered more than 2 million meters across New Zealand and Australia.

In the renewables sector, Partners Group agreed to sell its A\$4 billion portfolio of renewables assets, CWP Renewables, to Squadron Energy though the deal is subject to regulatory approvals. CWP Renewables' portfolio represents 1.1GW of operational onshore wind assets, a construction ready 414MW wind farm and 30MW battery project.

In the telecommunications sector, Vodafone New Zealand finalised the sale of its 80% stake in mobile tower assets ("Aotearoa Towers") to a joint venture between InfraRed Capital Partners and Northleaf Capital Partners, with Infratil holding the remaining 20%. The 80% stake was acquired for ~NZ\$1.7 billion. Aotearoa Towers represents 1,464 tower sites in New Zealand covering 98% of the population.

In the transport sector, Stonepeak and Spirit Super agreed to acquire GeelongPort from a Brookfield and SAS State Super consortium. GeelongPort is estimated to have sold at A\$1.2 billion and an implied 17x EV/EBITDA. The sale of GeelongPort to Stonepeak and Spirit Super follows the original consortium (including Palisade, Commonwealth Super Corporation and Spirit Super) walking away from an initial bid in early-2022 following concerns from the Australian Competition and Consumer Commission on Palisade's ownership of Port of Portland, ~290km away from GeelongPort. Also in the transport sector, Amber Infrastructure Group and DIF finalised their acquisition of Rail First Asset Management, Australia's third largest rolling stock owner and lesser, from Anchorage Capital Partners in a deal valued at A\$425 million and an implied 11x EV/EBITDA.

III. Portfolio Review

Quarterly Highlights

- **New Investment Commitments** – During the fourth quarter of 2022, the Program closed on three new investment commitments totaling US\$125.1 million.

US\$ in millions

Investment	Month and Year Closed	Vintage Year	Strategy	Geographic Focus	Industry Focus	Committed Capital
Basalt Infrastructure Partners IV A L.P.	October 2022	2022	Infrastructure	Global	Diversified	\$71.6
DIF VII	November 2022	2022	Infrastructure	Global	Diversified	46.1
InfraLemon SCA (Project Lemon)	December 2022	2022	Infrastructure	OECD	Diversified	7.3
Total						\$125.1

- **Subsequent Investment Commitments** – Subsequent to quarter-end, the Program closed on two new investment commitments.

US\$ in millions

Investment	Month and Year Closed	Vintage Year	Strategy	Geographic Focus	Industry Focus	Committed Capital
EQT Infrastructure VI (No. 2) USD SCSp	March 2023	2023	Infrastructure	Global	Diversified	\$81.0
Global Infrastructure Partners V-A/B, L.P.	March 2023	2023	Infrastructure	OECD	Diversified	81.0
Total						\$162.0

- **Cash Outflow Increased** – During the fourth quarter of 2022, the Program made US\$79.7 million of contributions and received US\$35.9 million of distributions, for a net cash outflow of US\$43.8 million.
- **Valuation Increased** – During the fourth quarter of 2022, net of cash flow activity, the valuation of the Portfolio increased by approximately US\$41.8 million, or 4.36%, from the prior quarter. The valuation increase primarily reflects the increase in value of underlying investments in Ardian Infrastructure Fund V B and IFM Global Infrastructure Fund.
- **New Underlying Fund Investments** – During the fourth quarter of 2022, 19 investment positions were added to the Portfolio. Below is a list of the top ten based on invested capital.

US\$ in millions

Company	Fund(s)	Investment Date	Stage	Industry	Country	Exposed Invested Capital	Exposed Market Value	TVM
Switch, Inc.	IFM Global Infrastructure Fund	Nov-22	Private	Telecom	United States	11.4	11.4	1.0x
Greenyellow Vente d Energie S.A.S.U	InfraLemon SCA (Project Lemon)	Oct-22	Private	Sustainability	France	6.8	6.7	1.0x
Greenyellow Vente d Energie S.A.S.U	ARDIAN Infrastructure Fund V B S.C.S., SICAV-RAIF	Oct-22	Private	Sustainability	France	5.6	5.6	1.0x
Jupiter Power LLC	Blackrock Global Infrastructure Fund IV	Dec-22	Private	Utilities	United States	5.5	5.5	1.0x
ContourGlobal plc	KKR Global Infrastructure Investors IV (USD) SCSp	Nov-22	Private	Utilities	United Kingdom	5.3	5.3	1.0x
VTG Aktiengesellschaft	Global Infrastructure Partners IV, L.P.	Dec-22	Private	Transportation	Germany	4.2	4.2	1.0x
Atlas Renewable Energy	Global Infrastructure Partners IV, L.P.	Dec-16	Private	Sustainability	Chile	3.9	3.9	1.0x
Axiom Es Holdings LLC	AxInfra US II LP (Class A Units)	Oct-22	Private	Other	United States	3.1	3.2	1.0x
Channelside Intermediate Holdco, Inc	KKR Global Infrastructure Investors IV (USD) SCSp	Nov-22	Private	Social	United States	3.1	3.1	1.0x
Axiom Es Holdings LLC	AxInfra US II LP (Class G Units)	Oct-22	Private	Other	United States	3.0	3.0	1.0x

- **Company Exits** – During the fourth quarter of 2022, two investment position exited the Portfolio.

US\$ in millions

Company	Fund(s)	Investment Date	Exit Date	Stage	Industry	Country	Invested Capital	Total Value	TVM
Atlas Renewable Energy	Actis Energy 4	Dec-16	Oct-22	Private	Sustainability	Chile	9.7	18.7	1.9x
Hornsea 1	Global Infrastructure Partners III, L.P.	Nov-18	Oct-22	Private	Sustainability	United Kingdom	6.1	10.0	1.7x

Performance by Vintage Year

The following table illustrates the Portfolio's since-inception investment performance by vintage year as of December 31, 2022. Note that the performance of funds that are less than two years old is not considered meaningful.

As of December 31, 2022 (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	\$53.8	\$54.9	\$52.0	\$106.9	\$53.1	\$10.6	\$62.6	1.0x	2.0x	13.0%
2014	100.0	123.6	79.5	129.6	209.1	85.4	1.2	130.8	0.6x	1.7x	12.0%
2016	213.6	183.8	109.3	158.7	268.0	84.2	62.5	221.2	0.6x	1.5x	11.8%
2017	119.7	109.0	80.4	80.7	161.1	52.1	21.6	102.3	0.7x	1.5x	13.6%
2018	196.9	166.3	24.6	175.3	199.9	33.6	43.6	218.9	0.1x	1.2x	10.7%
2019	166.8	128.4	21.8	139.0	160.8	32.3	45.2	184.2	0.2x	1.3x	14.0%
2020	200.6	77.3	5.1	77.5	82.6	5.3	127.4	204.9	0.1x	1.1x	5.5%
2021	321.9	150.7	1.9	156.4	158.3	7.6	172.0	328.4	NM	NM	NM
2022	330.9	32.1	-	32.3	32.3	0.2	298.8	331.1	NM	NM	NM
Total	\$1,710.3	\$1,025.1	\$377.5	\$1,001.5	\$1,379.0	\$353.9	\$783.0	\$1,784.4	0.4x	1.3x	12.0%

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, 2022.

As of December 31, 2022 (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	\$1,415.8	\$819.6	\$258.7	\$844.7	\$1,103.4	\$283.8	\$660.7	\$1,505.4	0.3x	1.3x	11.6%
Communication	42.9	39.2	-	41.2	41.2	2.0	3.8	45.0	NM	1.1x	7.2%
Diversified	1,040.6	566.5	162.6	616.8	779.4	212.9	520.5	1,137.3	0.3x	1.4x	11.3%
Energy	215.2	157.7	83.8	123.9	207.6	49.9	74.7	198.6	0.5x	1.3x	12.0%
Renewables	7.3	6.7	-	6.7	6.7	0.1	0.7	7.5	NM	NM	NM
Secondaries	97.0	36.9	11.5	40.5	52.1	15.2	60.9	101.4	0.3x	1.4x	16.3%
Transportation	12.7	12.8	0.8	15.6	16.4	3.7	-	15.6	0.1x	1.3x	15.8%
Non-Core	\$294.5	\$205.4	\$118.8	\$156.8	\$275.6	\$70.2	\$122.2	\$279.0	0.6x	1.3x	14.3%
Communication	20.7	20.0	0.3	27.3	27.6	7.6	0.8	28.1	0.0x	1.4x	14.9%
Diversified	172.2	137.3	69.3	117.8	187.1	49.7	52.8	170.6	0.5x	1.4x	15.6%
Energy	101.6	48.1	49.2	11.7	60.9	12.9	68.6	80.3	1.0x	1.3x	11.1%
Total	\$1,710.3	\$1,025.1	\$377.5	\$1,001.5	\$1,379.0	\$353.9	\$783.0	\$1,784.4	0.4x	1.3x	12.0%

Performance by Geographic Focus

The following table and charts illustrate the Portfolio's since-inception investment performance by geographic focus as of December 31, 2022.

As of December 31, 2022 (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	\$747.5	\$320.4	\$181.9	\$267.7	\$449.6	\$129.2	\$465.8	\$733.5	0.6x	1.4x	13.2%
North America	312.6	155.7	29.0	156.4	185.4	29.7	161.4	317.8	0.2x	1.2x	9.5%
OECD	650.2	549.0	166.5	577.4	744.0	195.0	155.8	733.2	0.3x	1.4x	11.7%
Total	\$1,710.3	\$1,025.1	\$377.5	\$1,001.5	\$1,379.0	\$353.9	\$783.0	\$1,784.4	0.4x	1.3x	12.0%

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. Unless otherwise indicated, all underlying investment attribution and performance information presented is net of fees and expenses charged by the underlying investment, but gross of StepStone vehicle/account fees and expenses. Where indicated, net return figures presented for StepStone vehicle/account performance include fees and expenses paid to StepStone.

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%.

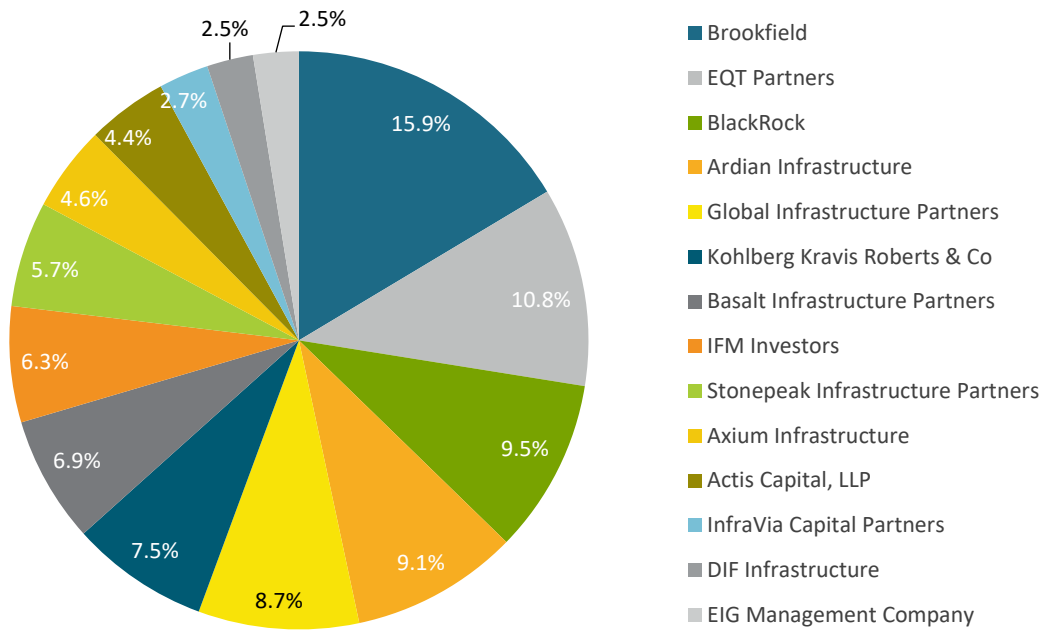
Actual percentages may differ substantially from these targets during the initial years of the Program. The following table illustrates the current diversification of the Portfolio by fund strategy, geography and industry focus.

As of December 31, 2022. (US\$ In millions)

	Market Value		Unfunded Commitment		Exposure	
	\$	% of Total	\$	% of Total	\$	% of Total
By Strategy:						
Core	844.7	84.3%	614.6	83.4%	1,459.3	83.9%
Non-Core	156.8	15.7%	122.2	16.6%	279.0	16.1%
Total	1,001.5	100.0%	736.8	100.0%	1,738.3	100.0%
By Geographic Focus:						
Global	267.7	26.7%	419.7	57.0%	687.3	39.5%
North America	156.4	15.6%	161.4	21.9%	317.8	18.3%
OECD	577.4	57.7%	155.8	21.1%	733.2	42.2%
Total	1,001.5	100.0%	736.8	100.0%	1,738.3	100.0%
By Industry Focus:						
Communication	68.5	6.8%	4.6	0.6%	73.0	4.2%
Diversified	734.6	73.4%	527.2	71.6%	1,261.8	72.6%
Energy	135.6	13.5%	143.4	19.5%	278.9	16.0%
Renewables	6.7	0.7%	0.7	0.1%	7.5	0.4%
Secondaries	40.5	4.0%	60.9	8.3%	101.4	5.8%
Transportation	15.6	1.6%	-	0.0%	15.6	0.9%
Total	1,001.5	100.0%	736.8	100.0%	1,738.3	100.0%

By Investment Manager

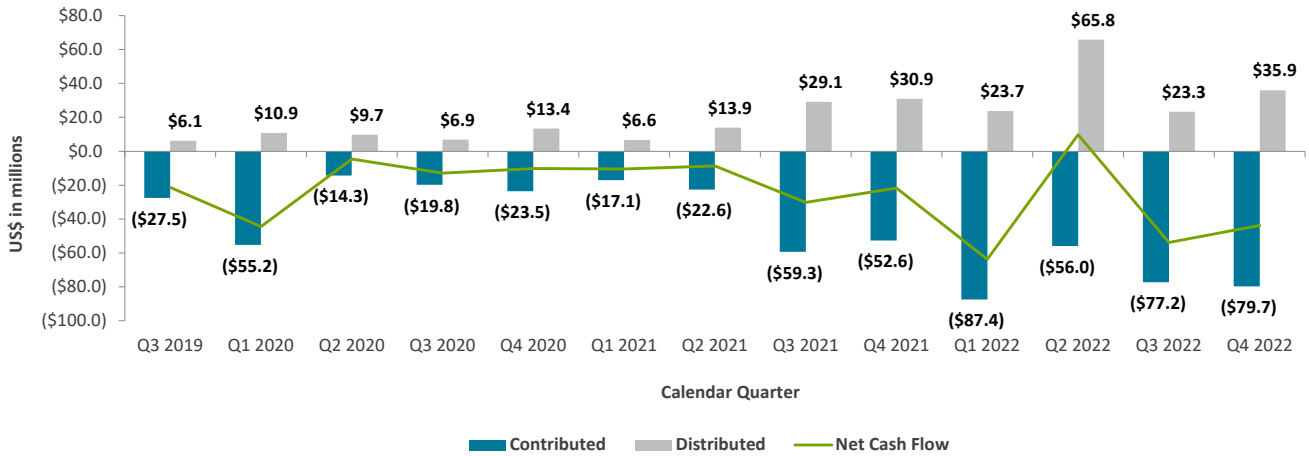
As of December 31, 2022, the Program had made 40 investment commitments to 14 managers. NYCPFF seeks to limit its exposure to any single manager to no more than 20% of the total Infrastructure Program when fully invested. As the Program matures and closes on additional commitments, the single manager exposure is expected to decline significantly. Below is the Portfolio's current exposure by manager.



Portfolio Cash Flow Analysis

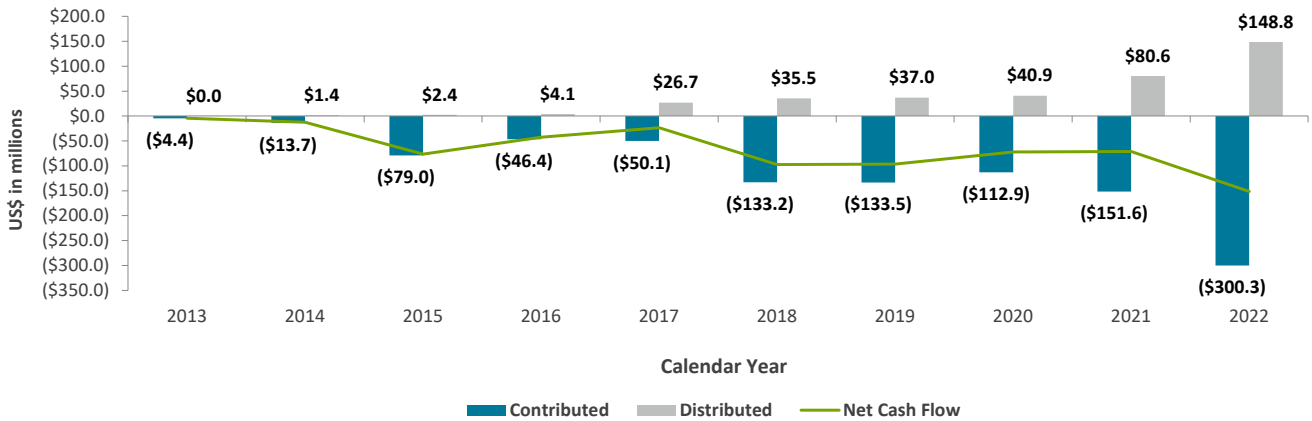
Quarterly Cash Flow Activity

During the fourth quarter of 2022, the Program made US\$79.7 million of contributions and received US\$35.9 million of distributions, for a net cash outflow of US\$43.8 million. As of December 31, 2022, 34 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.



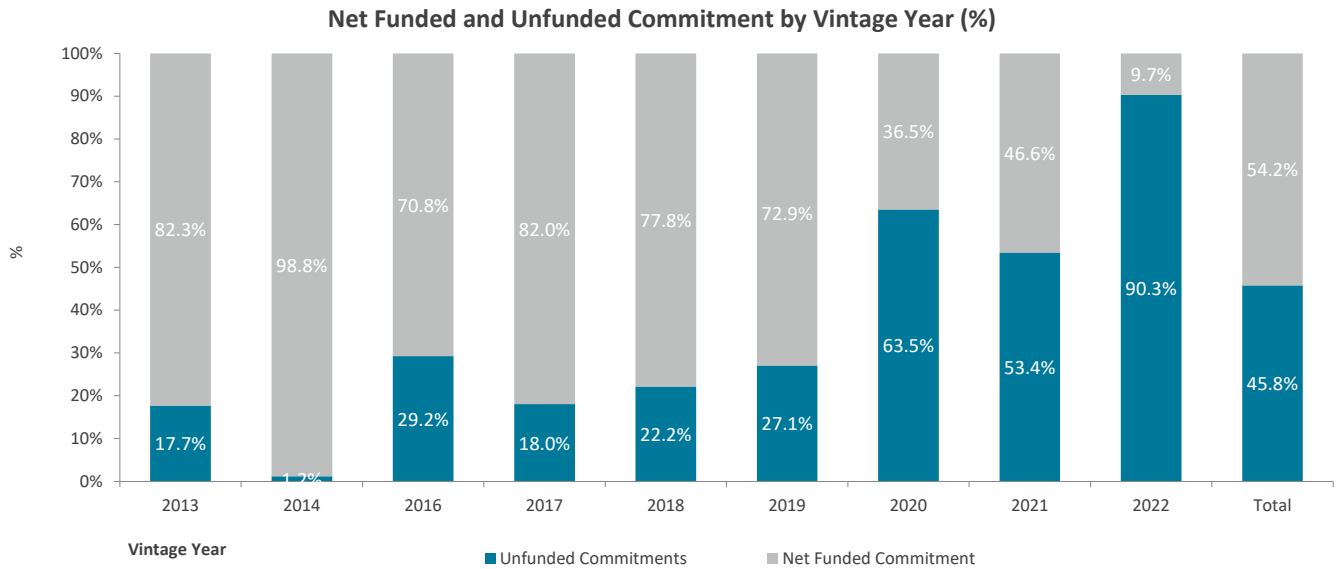
Annual Cash Flow Activity

During 2022, the Program made US\$300.3 million of contributions and received US\$148.8 million of distributions, for a net cash outflow of US\$151.5 million. The graph below illustrates cash flow activity since inception by calendar year.

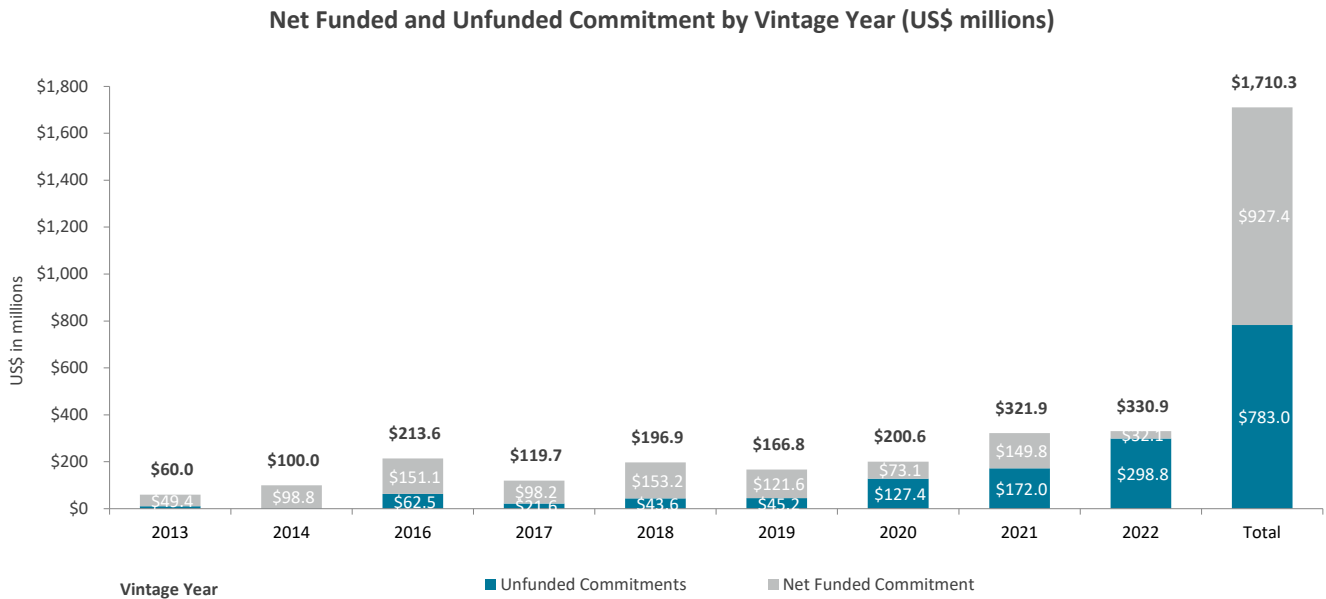


Net Funded and Unfunded Commitments by Vintage Year

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, 2022. Overall, the Portfolio was 45.8% unfunded as of quarter-end.



The following chart illustrates the Portfolio’s net funded commitments relative to total capital commitments, by fund vintage year, as of December 31, 2022. Overall, the Portfolio had US\$783.0 million of unfunded commitments as of quarter-end.

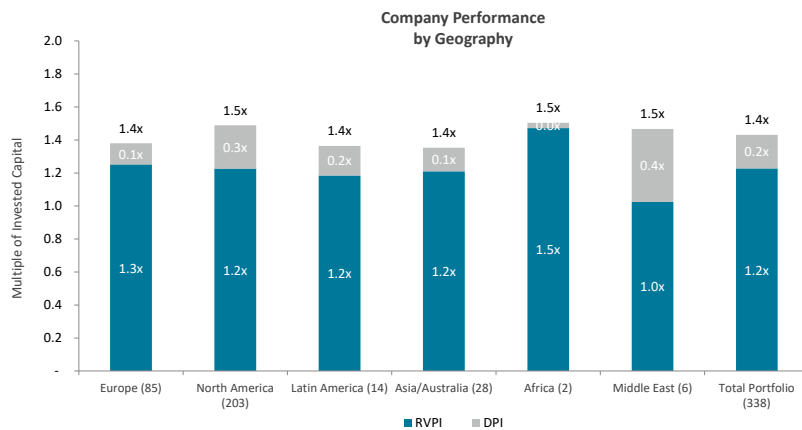
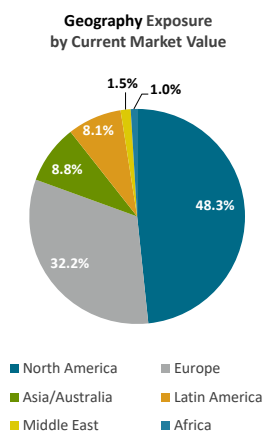


Portfolio Company-Level Analysis

As of quarter-end, the Portfolio had exposure to 338 unrealized portfolio companies/investment positions. As the Portfolio matures, the number of 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.

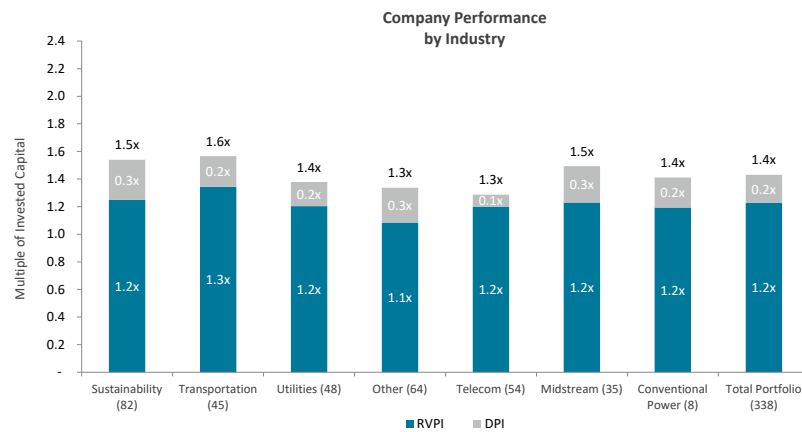
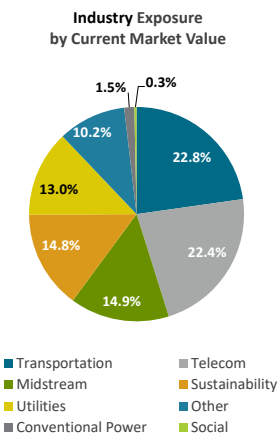
Geographic Exposure and Performance

The following charts illustrate the Portfolio’s current exposure and performance by geographic region at the portfolio company level representing active investments only.



Industry Exposure and Performance

The following charts illustrate the Portfolio’s current exposure and performance by industry at the portfolio company level representing active investments only.

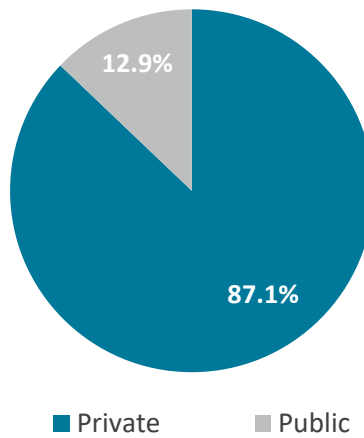


*Multiples may not add to total multiple due to rounding.

Public Market Exposure

As of quarter-end, publicly traded investments comprised 12.9% of the Portfolio's exposed market value. The following chart illustrates the current public market exposure at the portfolio company level representing active investments only.

Public Market Exposure Current Market Value



IV. Risk Management Matrix

Category	Requirement	Status	Status Notes
Allocation	NYCPPF has an Infrastructure allocation target of 3% of total pension assets.	✓	The market value of NYCPPF Infrastructure Program represents approximately 2.1% of total pension assets.
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>	✓	As of December 31, 2022, the Portfolio outperformed the CPI and PME benchmark by 4.2% and 7.9%, respectively.
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>	✓	The Program is in compliance with the Core/Non-Core allocation ranges. Currently the Program has 83.9% exposure to Core investments and 16.1% exposure to Non-Core investments.
Asset Type & Location Diversification	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.	✓	The asset types and geographic location of current Portfolio investments are in compliance with the Program’s Investment Policy Statement and Permissible Markets.
Leverage	The average leverage of all investments in the Program is to be no higher than 65%.	✓	The Program is in compliance with the average leverage limitation. The current leverage level is 39.2% ¹ .
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 20% of the total Infrastructure 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 20% of the total Infrastructure Program.</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, 2022.

New York City Police Pension Fund, Subchapter 2
Infrastructure Portfolio
As of December 31, 2022

Vintage Year	Investment	Closing Date	Committed Capital	Contributed Capital	Distributed Capital	Market Value	Unfunded	TVPI	IRR
Active Investments:									
2013	Brookfield Infrastructure Fund II, L.P.	7/8/2013	\$60,000,000	\$53,790,219	\$54,878,560	\$52,000,515	\$10,613,364	2.0x	13.0%
2014	IFM Global Infrastructure Fund	1/2/2014	\$60,000,000	\$80,109,292	\$36,295,053	\$115,663,703	-	1.9x	11.6%
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$40,000,000	\$43,540,420	\$43,201,887	\$13,923,622	\$1,193,090	1.3x	14.5%
2016	Global Infrastructure Partners III-A/B, L.P.	1/29/2016	\$71,000,000	\$72,175,722	\$32,613,121	\$73,728,144	\$7,855,454	1.5x	10.6%
2016	Brookfield Infrastructure Fund III, L.P.	4/15/2016	\$61,000,000	\$41,446,172	\$16,668,602	\$42,988,105	\$27,321,808	1.4x	10.4%
2016	Actis Energy 4	12/16/2016	\$39,600,000	\$39,655,124	\$49,233,767	\$7,811,000	\$15,019,581	1.4x	14.4%
2017	EQT Infrastructure III (No.2) SCSp	2/18/2017	\$34,730,354	\$38,731,037	\$54,309,603	\$17,352,320	\$2,838,555	1.9x	20.8%
2016	ASF VII Infrastructure L.P.	4/24/2017	\$42,000,000	\$30,482,646	\$10,778,333	\$34,158,261	\$12,272,534	1.5x	16.3%
2017	Axium Infrastructure North America (2017)	8/14/2017	\$42,662,239	\$44,515,305	\$12,688,476	\$47,258,252	-	1.3x	8.6%
2017	NYCRS EIG Energy Partners, L.P.	8/14/2017	\$42,350,000	\$25,729,676	\$13,435,432	\$16,061,253	\$18,749,931	1.1x	7.5%
2022	NYCRS EIG Energy Partners Co-Investment, L.P.	1/12/2018	\$10,590,000	-	-	-	\$10,590,000	-	0.0%
2018	KKR Global Infrastructure Investors III L.P.	3/29/2018	\$54,700,000	\$47,421,833	\$12,181,528	\$45,172,781	\$9,991,757	1.2x	10.1%
2019	Global Energy & Power Infrastructure Fund III, L.P.	7/3/2018	\$54,700,000	\$40,380,890	\$8,280,504	\$40,948,300	\$16,885,350	1.2x	13.5%
2018	Cardinal NR Sidecar Holdings L.P.	10/5/2018	\$6,560,000	\$6,604,308	\$2,180,901	\$9,944,869	-	1.8x	17.5%
2018	EQT Infrastructure IV (No.2) USD SCSp	12/20/2018	\$63,500,000	\$57,084,335	\$10,126,576	\$61,971,440	\$13,423,011	1.3x	11.2%
2019	Ardian Infrastructure Fund V B	3/4/2019	\$44,078,595	\$30,606,117	\$1,183,485	\$34,784,057	\$13,633,375	1.2x	14.8%
2018	Global Infrastructure Partners IV-A/B, L.P.	3/11/2019	\$72,100,000	\$55,207,691	\$116,980	\$58,231,773	\$20,200,769	1.1x	6.0%
2019	Brookfield Infrastructure Fund IV, L.P.	5/10/2019	\$62,000,000	\$51,413,019	\$11,461,779	\$54,914,315	\$14,658,197	1.3x	13.7%
2020	EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	7/30/2019	\$5,100,000	\$5,151,000	\$309,543	\$6,306,324	-	1.2x	9.6%
2019	Brookfield Infrastructure Fund IV Co-Investment (Snow)	10/25/2019	\$6,000,000	\$6,026,930	\$838,388	\$8,362,883	-	1.5x	15.5%
2020	EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	6/11/2020	\$7,013,942	\$7,037,046	-	\$9,050,926	-	1.3x	10.7%
2020	Actis Energy 5	6/30/2020	\$62,000,000	\$8,398,674	-	\$3,884,000	\$53,601,326	0.5x	-90.2%
2020	BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	7/3/2020	\$43,860,000	\$7,380,102	-	\$7,880,848	\$36,479,898	1.1x	6.5%
2020	EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	8/18/2020	\$8,600,000	\$7,816,517	-	\$11,917,635	\$809,302	1.5x	25.1%
2020	EQT Infrastructure V (No.2) USD SCSp	10/29/2020	\$74,000,000	\$41,531,645	\$4,827,212	\$38,464,657	\$36,551,067	1.0x	4.6%
2021	Basalt Infrastructure Partners III	2/5/2021	\$46,000,000	\$31,066,212	-	\$32,391,812	\$14,933,788	NM	NM
2021	Stonepeak Infrastructure Fund IV, L.P.	2/16/2021	\$68,000,000	\$24,120,676	\$192,245	\$26,292,253	\$43,883,539	NM	NM
2021	Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	4/16/2021	\$9,000,000	\$7,614,507	-	\$7,685,699	\$1,385,493	1.0x	0.7%
2021	KKR Global Infrastructure Investors IV (USD) SCSp	5/24/2021	\$82,000,000	\$34,428,897	\$434,568	\$34,713,645	\$48,009,277	NM	NM
2021	ASF VIII Infrastructure B L.P.	8/3/2021	\$55,000,000	\$6,370,583	\$744,507	\$6,378,875	\$48,629,417	NM	NM
2021	Axium Infrastructure North America (2021)	9/3/2021	\$37,361,504	\$24,946,238	\$521,271	\$25,264,990	\$12,799,254	NM	NM
2021	Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	12/10/2021	\$24,525,000	\$22,128,059	-	\$23,658,101	\$2,396,941	1.1x	16.9%
2022	Ardian Infra Fund V Co-Invest Eden	2/21/2022	\$9,423,042	\$9,423,042	-	\$9,832,980	-	NM	NM
2022	InfraVia European Fund V SCSp	2/25/2022	\$50,503,100	\$5,576,340	-	\$4,758,308	\$44,934,466	NM	NM
2022	Blackrock Global Infrastructure Fund IV	6/30/2022	\$57,000,000	\$3,740,373	-	\$3,514,499	\$53,259,627	NM	NM
2022	Brookfield Infrastructure Fund V, LP	7/18/2022	\$71,570,000	-	-	\$222,771	\$71,570,000	NM	NM
2022	BIP III Ride Co-Investment L.P. (Project Ride)	8/2/2022	\$6,728,104	\$6,728,104	-	\$7,239,176	-	NM	NM
2022	Basalt Infrastructure Partners IV A L.P.	10/7/2022	\$71,600,000	-	-	-	\$71,600,000	NM	NM
2022	DIF Infrastructure VII SCSp	11/15/2022	\$46,123,927	-	-	-	\$46,123,927	NM	NM
2022	Ardian Infra Fund V Co-Invest Lemon	12/22/2022	\$7,334,397	\$6,674,202	-	\$6,740,664	\$740,128	NM	NM
Total			\$1,710,314,205	\$1,025,052,951	\$377,502,320	\$1,001,473,758	\$782,954,228	1.3x	12.0%

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):

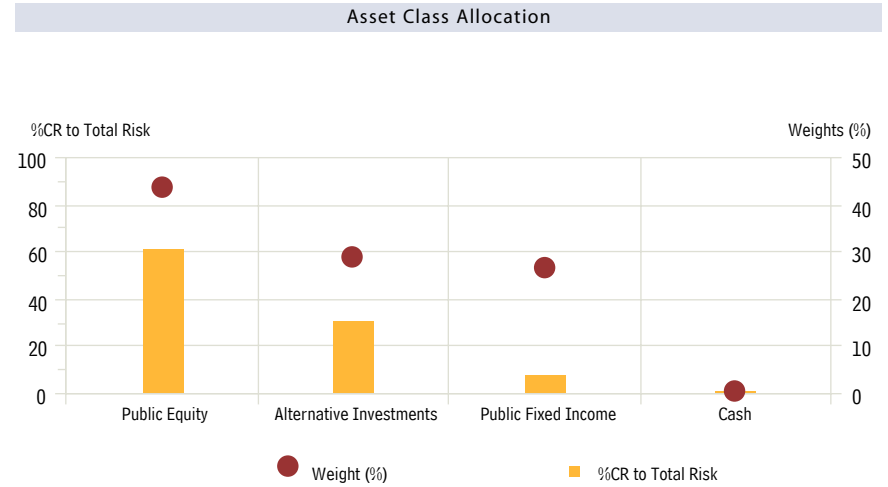
BarraOne Total Plan Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: POLICE_Plan3
BENCHMARK: POLICE_Policy3
POSITIONS: 23,427

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 47,988,354,295
ACCEPTED: 23,184

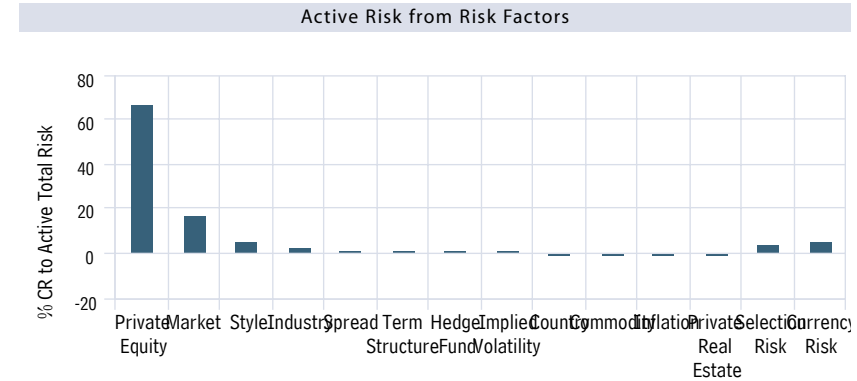
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	12.90	Total	47,988,354,295	100.00	12.90	12.90	100.00
Benchmark Risk	11.89	Public Equity	21,063,106,649	43.89	18.46	7.93	61.43
Active Risk	2.11	Alternative Investments	13,851,866,094	28.87	14.50	3.95	30.61
Portfolio Beta	1.07	Public Fixed Income	12,931,540,850	26.95	6.45	1.03	7.97
Effective Duration	1.89	Cash	141,840,701	0.30	0.04	0.00	0.00



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	12.90	100.00	1.00	2.11	100.00	1.00
Local Market Risk	12.30	95.31	1.00	2.00	94.77	0.99
Common Factor Risk	12.27	95.12	1.00	1.91	90.70	0.97
Private Real Estate	0.68	5.24	0.71	-0.04	-1.71	-0.10
Implied Volatility	0.02	0.16	0.45	0.00	0.00	0.05
Industry	0.08	0.59	0.15	0.05	2.14	0.19
Inflation	0.08	0.58	0.42	-0.01	-0.60	-0.17
Market	10.12	78.45	0.97	0.35	16.45	0.44
Private Equity	0.23	1.77	0.13	1.40	66.42	0.82
Spread	0.77	5.96	0.71	0.04	1.80	0.30
Style	0.10	0.77	0.27	0.10	4.88	0.28
Term Structure	0.21	1.63	0.11	0.02	1.13	0.09
Selection Risk	0.03	0.19	0.04	0.09	4.08	0.20
Currency Risk	0.61	4.69	0.56	0.11	5.23	0.33



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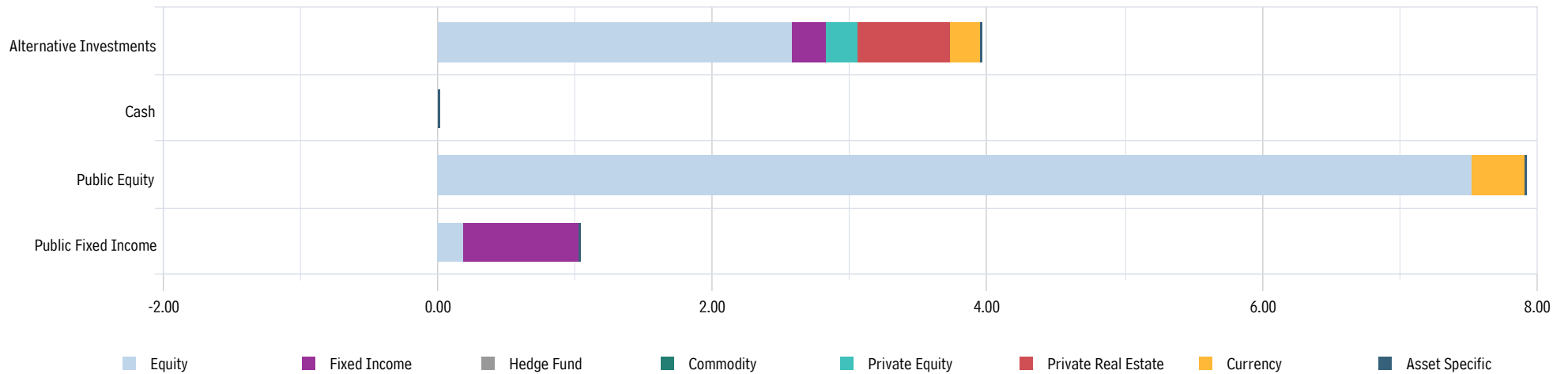
BarraOne Total Plan Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: POLICE_Plan3
BENCHMARK: POLICE_Policy3
POSITIONS: 23,427

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 47,988,354,295
ACCEPTED: 23,184

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	47,988,354,295	100.00	-	12.90	100.00	12.90	10.30	1.07	0.00	-0.00	0.68	0.23	0.61	0.03
Alternative Investments	13,851,866,094	28.87	-	14.50	30.61	3.95	2.59	0.23	0.00	-0.00	0.68	0.23	0.22	0.00
Cash	141,840,701	0.30	-	0.04	0.00	0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Equity	21,063,106,649	43.89	-	18.46	61.43	7.93	7.52	0.00	0.00	0.00	0.00	0.00	0.39	0.02
Public Fixed Income	12,931,540,850	26.95	-	6.45	7.97	1.03	0.19	0.84	0.00	0.00	0.00	0.00	0.00	0.00



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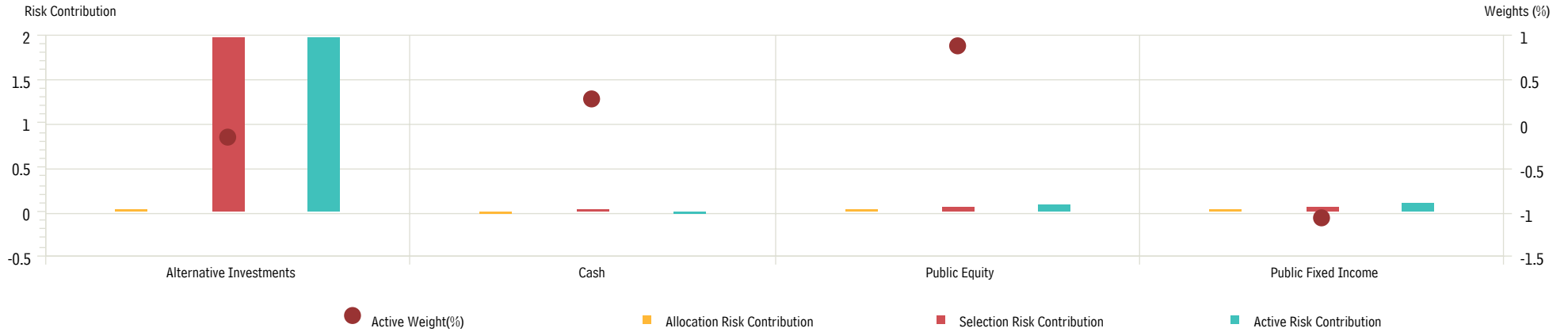
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Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active	
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution	Risk Contribution
Active Total Risk				0.05				2.06	2.11
Alternative Investments	-0.13	3.18	-0.38	0.00	6.93	0.98	1.96	1.96	
Cash	0.30	11.91	-0.41	-0.01	0.25	0.06	0.00	-0.01	
Public Equity	0.89	7.12	0.42	0.03	0.83	0.13	0.05	0.08	
Public Fixed Income	-1.05	9.53	-0.35	0.03	0.93	0.20	0.05	0.09	



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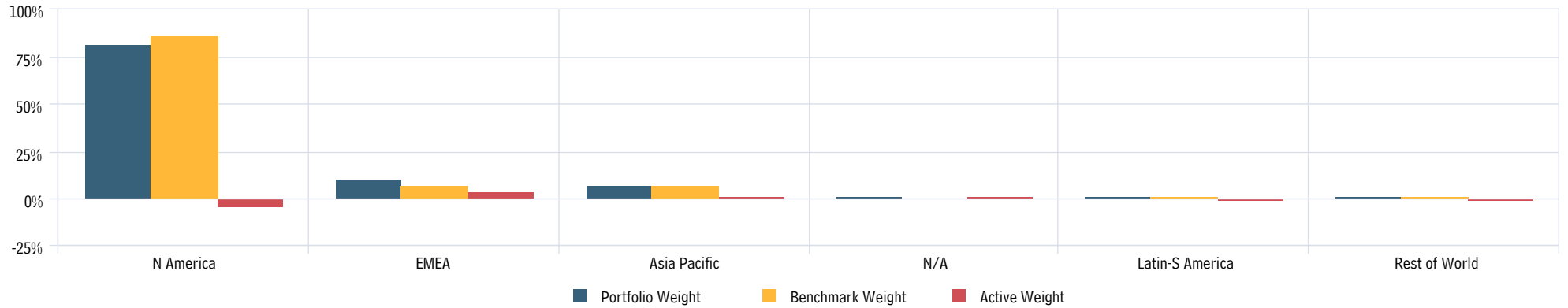
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Portfolio Allocation by Region

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	12.90	2.11	100.00	0.02
N America	81.46	85.56	-4.10	12.43	1.74	82.42	0.00
EMEA	10.34	6.66	3.67	18.78	0.33	15.79	0.04
Asia Pacific	6.80	6.70	0.10	17.76	0.02	1.08	0.02
N/A	0.63	0.00	0.63	14.95	0.00	0.17	0.01
Latin-S America	0.48	0.52	-0.04	25.71	-0.00	-0.04	0.04
Rest of World	0.29	0.56	-0.27	9.51	0.01	0.57	-0.02



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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	12.90	2.11	100.00	0.02
United States	79.61	83.90	-4.29	12.39	1.68	79.82	0.00
United Kingdom	2.88	1.42	1.46	18.33	0.10	4.96	0.04
China International	1.52	1.37	0.15	30.43	-0.00	-0.19	0.02
Japan	1.41	1.66	-0.26	17.57	0.00	0.17	0.01
Canada	1.27	1.50	-0.23	13.63	0.03	1.33	0.01
France	1.20	1.01	0.19	19.52	0.02	0.76	0.05
Germany	1.20	0.73	0.47	21.96	0.04	1.86	0.05
India	0.96	0.65	0.31	21.28	0.01	0.35	0.02
Netherlands	0.86	0.49	0.37	23.14	0.03	1.53	0.04
Switzerland	0.82	0.76	0.06	18.11	0.01	0.70	0.03
Taiwan	0.79	0.76	0.03	26.17	0.00	0.13	0.03
S. Korea	0.74	0.62	0.13	26.26	0.01	0.39	0.05
Spain	0.47	0.22	0.26	19.44	0.02	0.94	0.05
Euro. Monetary Union	0.45	0.00	0.45	26.44	0.03	1.47	0.06
Sweden	0.43	0.25	0.18	29.11	0.03	1.19	0.09
Australia	0.43	0.62	-0.19	21.00	-0.00	-0.17	0.04
Italy	0.42	0.29	0.13	22.70	0.01	0.70	0.04
Hong Kong	0.41	0.28	0.14	21.78	0.00	0.19	-0.00
Brazil	0.41	0.25	0.16	35.08	0.01	0.41	0.05
Denmark	0.40	0.23	0.18	22.94	0.02	0.80	0.04
Hong Kong	0.38	0.00	0.38	17.69	-0.00	-0.23	-0.01
Ireland	0.27	0.20	0.06	14.86	0.00	0.22	0.01
China	0.25	0.36	-0.11	26.77	0.01	0.27	-0.01
N/A	0.24	0.00	0.24	18.37	0.01	0.42	0.04
Luxembourg	0.21	0.23	-0.02	7.24	0.00	0.04	-0.03
Belgium	0.21	0.11	0.10	17.83	0.00	0.17	0.02
Singapore	0.19	0.15	0.05	17.00	0.00	0.09	0.01
Mexico	0.16	0.18	-0.02	21.87	0.00	0.04	0.03
Indonesia	0.15	0.11	0.04	23.64	0.00	0.10	0.01
South Africa	0.14	0.18	-0.03	30.38	-0.00	-0.06	0.06



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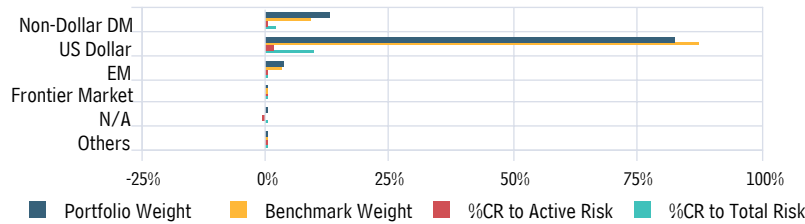
BarraOne Total Plan Summary

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POSITIONS: 23,427

CURRENCY: USD
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ACCEPTED: 23,184

Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	39,663,397,183.83	81.07	76.84
Euro	2,357,764,443.45	8.17	7.22
British Pound Sterling	1,051,904,808.91	5.44	3.28
Hong Kong Dollar	808,806,587.48	0.14	1.88
Japanese Yen	655,862,501.08	-0.02	1.36

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	450,345,407.11	0.36	0.93
New Taiwan Dollar	377,494,035.84	0.13	1.00
Korean Won	342,144,521.39	0.29	1.11
Brazilian Real	193,171,337.41	0.40	0.59
Chinese Yuan	116,200,218.52	0.17	0.24

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	12.90	12.90	100.00	2.11	100.00	
US Dollar	82.65	87.13	-4.47	12.11	9.92	76.84	1.71	81.07	
Euro	4.91	2.45	2.46	21.62	0.93	7.22	0.17	8.17	
British Pound Sterling	2.19	1.06	1.13	22.88	0.42	3.28	0.11	5.44	
Hong Kong Dollar	1.69	1.49	0.20	30.98	0.24	1.88	0.00	0.14	
Japanese Yen	1.37	1.54	-0.18	18.05	0.18	1.36	-0.00	-0.02	
Indian Rupee	0.94	0.65	0.29	21.56	0.12	0.93	0.01	0.36	
New Taiwan Dollar	0.79	0.76	0.03	26.18	0.13	1.00	0.00	0.13	
Swiss Franc	0.78	0.71	0.07	18.87	0.12	0.94	0.01	0.70	
Canadian Dollar	0.74	0.83	-0.09	21.21	0.14	1.10	0.02	0.97	
Korean Won	0.71	0.60	0.12	26.30	0.14	1.11	0.01	0.29	
Brazilian Real	0.40	0.24	0.16	35.46	0.08	0.59	0.01	0.40	
Danish Krone	0.40	0.22	0.18	22.94	0.07	0.54	0.02	0.79	
Australian Dollar	0.38	0.53	-0.16	23.77	0.08	0.60	-0.00	-0.22	
Swedish Krona	0.37	0.24	0.13	29.42	0.09	0.70	0.02	0.92	
Chinese Yuan	0.24	0.26	-0.02	27.55	0.03	0.24	0.00	0.17	



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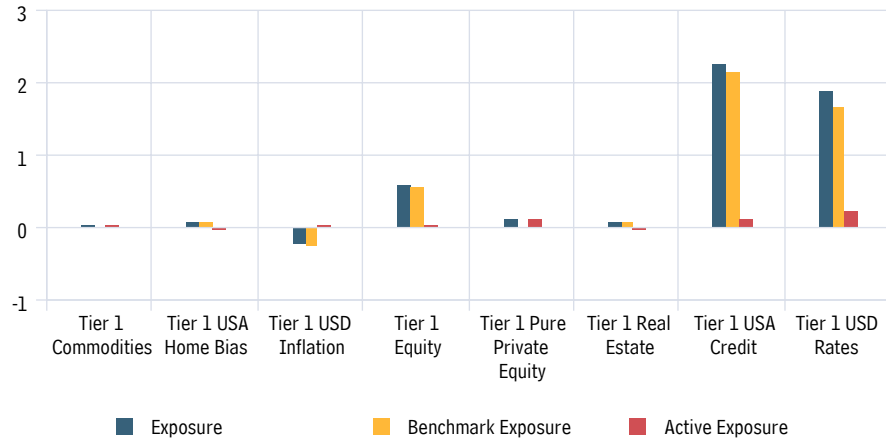
BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

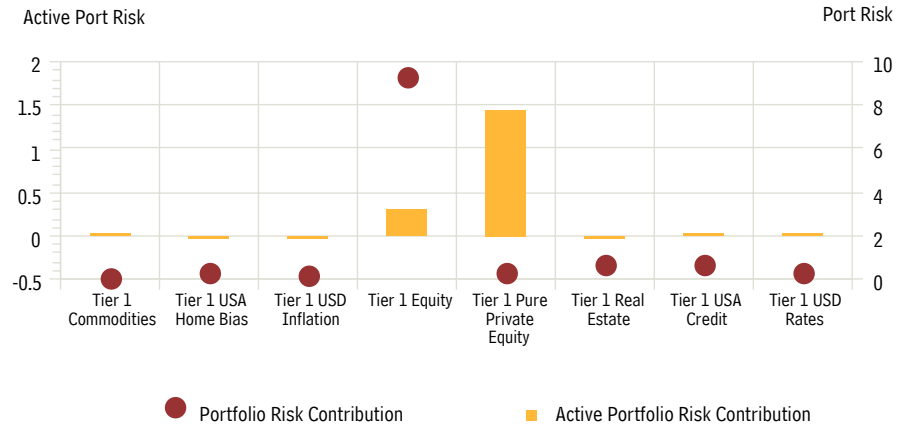
COMPANY: NYCERS - POLICE
 PORTFOLIO: POLICE_Plan3
 BENCHMARK: POLICE_Policy3
 POSITIONS: 23,427
 MODEL: MAC.L Tier 1 USA

CURRENCY: USD
 ANALYSIS DATE: March 31, 2023
 MARKET VALUE: 47,988,354,295
 ACCEPTED: 23,184

Macro Factor Exposures



Macro Factor Risk Contribution



BarraOne Tier 1 USA Factor Summary

Tier 1 factors describe the most important drivers of the markets and provide a platform for the factor-based asset-allocation framework. They provide a lens for strategic asset allocation and are designed for board level reporting.

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Risk Source	Risk Decomposition						
	Exposure			Contribution			
	Exposure	Benchmark Exposure	Active Exposure	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Total Risk	-	-	-	12.90	100.00	2.11	100.00
Local Market Risk	-	-	-	12.30	95.31	2.00	94.77
Common Factor Risk	-	-	-	12.27	95.12	1.91	90.70
Commodity	-	-	-	0.00	0.01	0.00	0.05
Tier 1 Commodities	0.00	0.00	0.00	0.00	0.01	0.00	0.05
Country	-	-	-	0.25	1.91	-0.00	-0.09
Tier 1 USA Home Bias	0.07	0.07	-0.00	0.25	1.91	-0.00	-0.09
Factor Residual Risk	-	-	-	0.98	7.56	0.16	7.49
Inflation	-	-	-	0.06	0.50	-0.01	-0.27
Tier 1 USD Inflation	-0.23	-0.27	0.05	0.06	0.50	-0.01	-0.27
Interaction within Common Factor	-	-	-	N/A	-	N/A	-
Market	-	-	-	9.28	71.95	0.32	15.23
Tier 1 Equity	0.58	0.54	0.04	9.28	71.95	0.32	15.23
Private Equity	-	-	-	0.24	1.84	1.46	69.00
Tier 1 Pure Private Equity	0.11	0.00	0.11	0.24	1.84	1.46	69.00
Private Real Estate	-	-	-	0.59	4.60	-0.04	-1.90
Tier 1 Real Estate	0.07	0.08	-0.01	0.59	4.60	-0.04	-1.90
Spread	-	-	-	0.65	5.02	0.01	0.70
Tier 1 USA Credit	2.24	2.15	0.10	0.65	5.02	0.01	0.70
Term Structure	-	-	-	0.22	1.72	0.01	0.50
Tier 1 USD Rates	1.90	1.66	0.23	0.22	1.72	0.01	0.50
Specific Risk	-	-	-	0.03	0.19	0.09	4.08
Currency Risk	-	-	-	0.61	4.69	0.11	5.23
Currency/Market Interaction	-	-	-	N/A	-	N/A	-

Tier 1 Macro Factor Scheme has six factors		
Tier 1 Factor	Exposure Type	Description
Equity	Membership (weights)	USA Equity
Pure Private Equity	Membership (weights)	USA Private Equity
Real Estate	Membership (weights)	USA Real Estate
USA Credit	Sensitivities (durations)	Sensitive to USA credit spreads
USD Inflation	Sensitivities (durations)	Sensitive to USD inflation protected assets
USD Rates	Sensitivities (durations)	Sensitive to Govt rate exposure
Commodities	Membership (weights)	Sensitive to Commodities
USA Home Bias		USA Home Bias factor returns is very similar to that of a portfolio long the MSCI USA IMI index and short the currency-hedged MSCI ACWI ex-US IMI index.

Factor Residual Risk				
Risk Source	Portfolio Risk Contribution	% Portfolio Risk	Active Portfolio Risk Contribution	% Active Risk
Basis	-0.00	-0.00	-0.00	-0.00
Commodity	-0.00	-0.04	-0.00	-0.07
Country	-0.00	-0.02	-0.00	-0.02
Hedge Fund	0.00	0.01	0.00	0.22
Implied Volatility	0.02	0.16	0.00	0.00
Industry	0.08	0.59	0.05	2.14
Inflation	0.01	0.09	-0.01	-0.33
Interaction within Factor Residual Risk	N/A	-	N/A	-
Market	0.59	4.59	0.03	1.31
Private Equity	-0.01	-0.07	-0.05	-2.58
Private Real Estate	0.08	0.63	0.00	0.19
Spread	0.12	0.94	0.02	1.10
Style	0.10	0.77	0.10	4.88
Term Structure	-0.01	-0.09	0.01	0.63



BarraOne Total Plan Summary

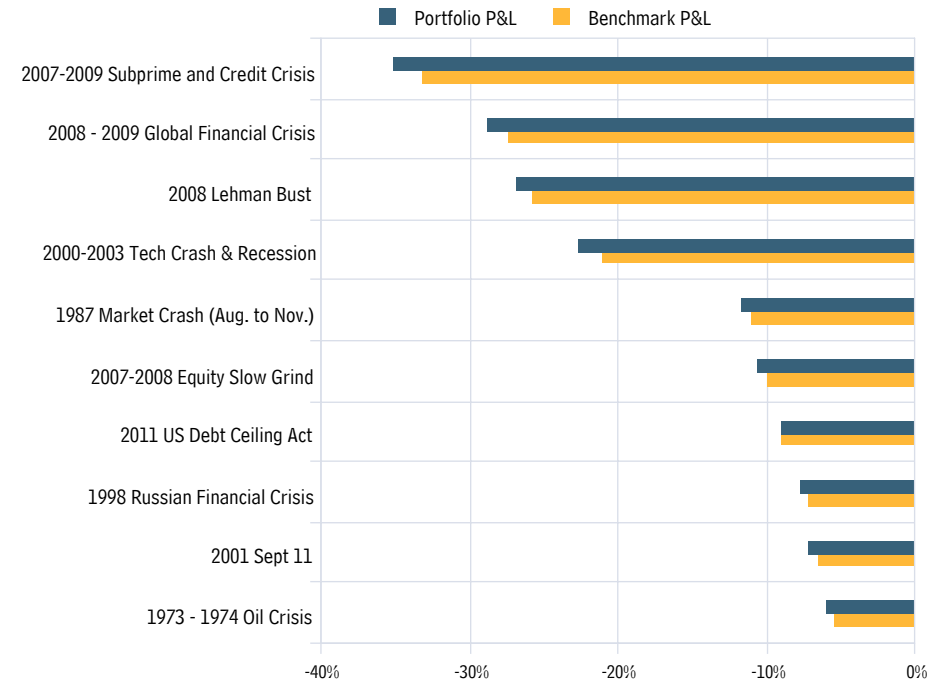
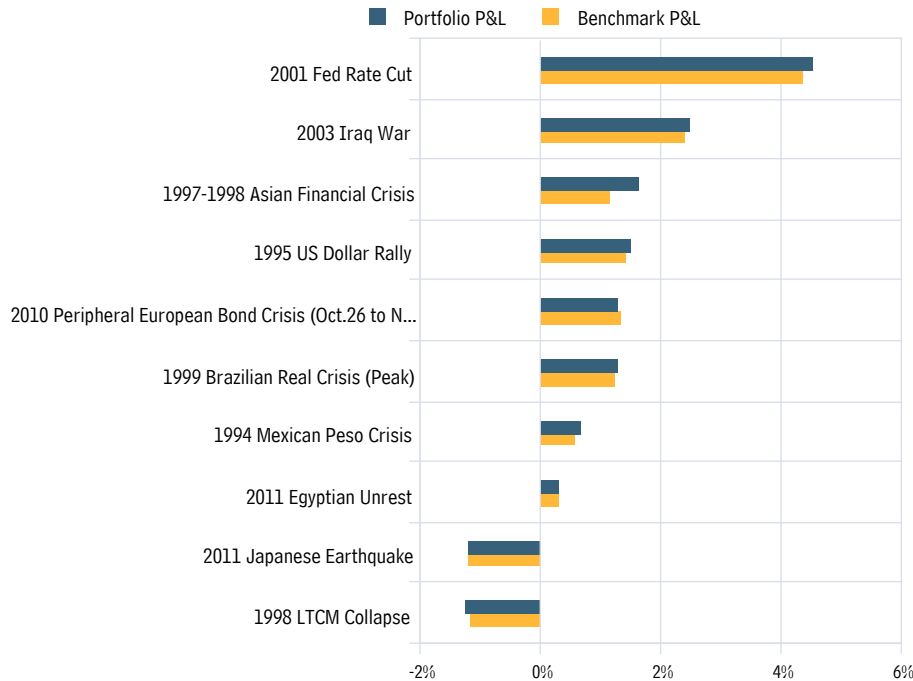
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Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2001 Fed Rate Cut	4.53	4.38	2,176,097,319
2003 Iraq War	2.50	2.39	1,197,645,422
1997-1998 Asian Financial Crisis	1.65	1.15	790,316,010
1995 US Dollar Rally	1.49	1.43	716,246,613
2010 Peripheral European Bond Crisis (Oc	1.30	1.35	624,091,804
1999 Brazilian Real Crisis (Peak)	1.29	1.24	621,104,608
1994 Mexican Peso Crisis	0.65	0.56	312,079,755
2011 Egyptian Unrest	0.32	0.33	155,408,351
2011 Japanese Earthquake	-1.20	-1.20	-575,751,244
1998 LTCM Collapse	-1.26	-1.16	-603,887,138

Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-35.12	-33.20	-16,853,965,129
2008 - 2009 Global Financial Crisis	-28.88	-27.40	-13,858,933,037
2008 Lehman Bust	-26.78	-25.69	-12,853,279,021
2000-2003 Tech Crash & Recession	-22.79	-21.02	-10,935,866,435
1987 Market Crash (Aug. to Nov.)	-11.66	-10.93	-5,595,974,659
2007-2008 Equity Slow Grind	-10.54	-9.86	-5,060,169,213
2011 US Debt Ceiling Act	-9.03	-8.96	-4,334,233,062
1998 Russian Financial Crisis	-7.77	-7.15	-3,726,400,333
2001 Sept 11	-7.21	-6.49	-3,461,931,078
1973 - 1974 Oil Crisis	-5.98	-5.47	-2,871,606,201



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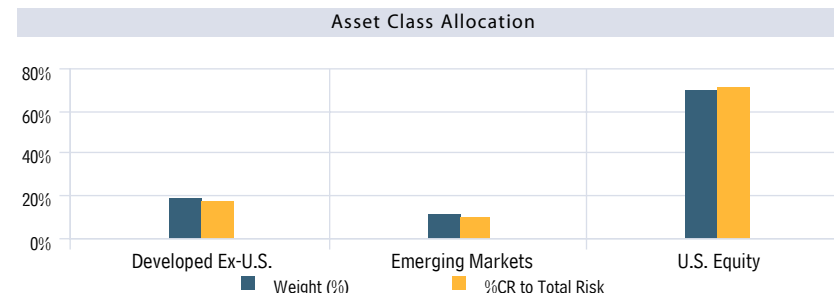
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public Equity
POSITIONS: 11,403
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 21,063,106,649
ACCEPTED: 11,292

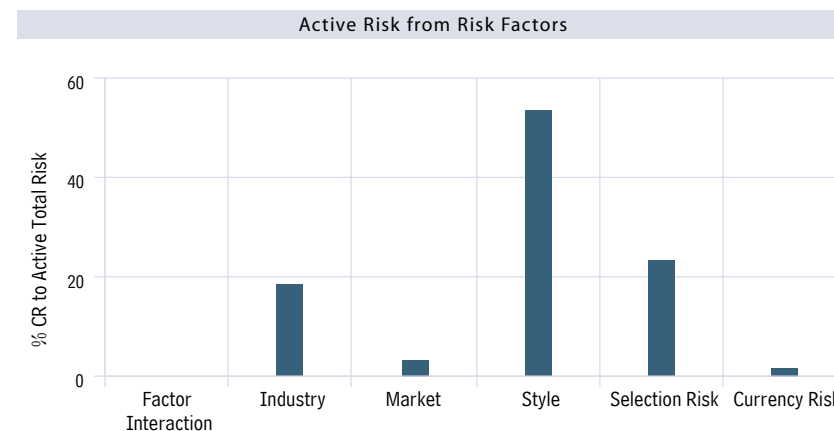
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	18.46	Total	21,063,106,649	100.00	18.46	18.46	100.00
Benchmark Risk	18.59	Developed Ex-U.S.	3,985,643,223	18.92	19.38	3.40	18.40
Active Risk	0.83	Emerging Markets	2,359,749,838	11.20	20.07	1.84	9.99
Portfolio Beta	0.99	U.S. Equity	14,717,713,588	69.87	19.21	13.22	71.61



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	18.46	100.00	1.00	0.83	100.00	1.00
Local Market Risk	17.64	95.53	1.00	0.81	98.20	0.99
Common Factor Risk	17.56	95.13	1.00	0.62	75.05	0.87
Industry	0.10	0.53	0.11	0.15	18.58	0.49
Market	17.55	95.08	0.99	0.03	3.12	0.13
Style	-0.09	-0.46	-0.14	0.44	53.48	0.77
Selection Risk	0.07	0.40	0.06	0.19	23.15	0.48
Currency Risk	0.83	4.47	0.54	0.01	1.80	0.14



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BarraOne Equity Summary

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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	18.46	0.83	100.00	0.01
Asia Pacific	13.87	14.40	-0.53	18.67	0.06	7.18	0.02
EMEA	11.77	12.16	-0.39	21.57	0.04	4.31	0.02
Latin-S America	0.78	0.95	-0.17	29.02	-0.00	-0.33	0.03
N America	73.34	72.15	1.20	19.21	0.74	89.12	-0.00
Rest of World	0.23	0.35	-0.12	16.50	-0.00	-0.28	0.02



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BarraOne Equity Summary

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BENCHMARK: Public Equity
POSITIONS: 11,403
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MARKET VALUE: 21,063,106,649
ACCEPTED: 11,292

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	18.46	0.83	100.00	0.01
United States	70.84	69.84	1.01	19.24	0.72	86.90	-0.04
China International	3.46	3.18	0.28	30.43	0.02	1.98	-0.01
Japan	2.84	3.59	-0.75	18.93	0.00	0.53	-0.04
United Kingdom	2.64	2.47	0.18	22.95	0.02	2.79	-0.01
France	1.84	2.09	-0.26	21.39	0.00	0.37	-0.01
Taiwan	1.79	1.77	0.02	26.18	0.00	0.32	-0.01
India	1.69	1.50	0.19	21.81	0.01	1.62	0.00
S. Korea	1.65	1.38	0.26	26.59	0.01	1.49	-0.02
Germany	1.56	1.44	0.12	24.07	0.00	0.29	-0.02
Switzerland	1.39	1.66	-0.27	18.71	0.00	0.24	-0.03
Canada	1.19	1.95	-0.76	22.00	-0.01	-1.45	-0.02
Netherlands	1.05	0.77	0.28	31.80	0.00	0.25	-0.02
Hong Kong	0.86	0.45	0.41	23.21	0.02	2.30	0.01
Brazil	0.79	0.56	0.23	35.33	0.01	1.53	0.00
Australia	0.70	1.24	-0.54	24.84	-0.01	-1.01	-0.02
Italy	0.69	0.41	0.27	24.61	0.01	0.73	-0.01
Denmark	0.64	0.51	0.13	22.14	0.00	0.41	-0.03
Sweden	0.53	0.56	-0.03	30.16	0.00	0.16	-0.02
Spain	0.43	0.43	-0.00	22.52	0.00	0.25	-0.01
Singapore	0.40	0.21	0.18	17.45	0.00	0.51	-0.01
Indonesia	0.34	0.22	0.12	23.98	0.01	0.65	-0.00
China	0.33	0.61	-0.28	35.42	-0.01	-0.81	-0.01
Thailand	0.31	0.26	0.05	23.29	0.00	0.51	-0.01
South Africa	0.31	0.41	-0.10	31.16	-0.00	-0.17	-0.02
Mexico	0.27	0.31	-0.03	26.89	0.00	0.20	-0.01
Ireland	0.21	0.13	0.08	32.10	0.00	0.42	0.00
Belgium	0.20	0.17	0.04	21.94	0.00	0.02	-0.01
Finland	0.13	0.16	-0.04	27.01	-0.00	-0.03	-0.00
Norway	0.12	0.11	0.00	29.93	0.00	0.11	-0.01
United Arab Emirates	0.11	0.14	-0.03	21.65	-0.00	-0.08	-0.00



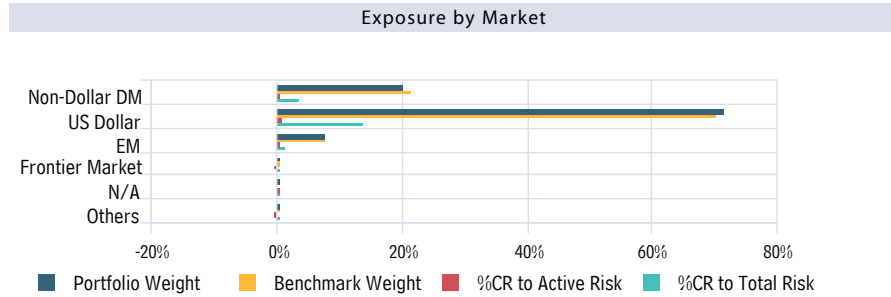
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BarraOne Equity Summary

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BENCHMARK: Public Equity
POSITIONS: 11,403
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 21,063,106,649
ACCEPTED: 11,292

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	15,037,369,756.17	88.03	73.26	New Taiwan Dollar	377,493,996.00	0.32	1.60
Euro	1,294,572,444.16	2.34	6.77	Indian Rupee	355,576,983.09	1.60	1.19
Hong Kong Dollar	802,329,760.68	2.78	3.05	Korean Won	333,623,272.26	1.35	1.74
Japanese Yen	597,927,858.40	0.53	2.06	Brazilian Real	167,160,853.10	1.53	0.84
British Pound Sterling	548,398,162.33	2.70	2.78	Indonesian Rupiah	71,832,337.11	0.65	0.26

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	18.46	18.46	100.00	0.83	100.00
US Dollar	71.39	70.06	1.33	19.22	13.52	73.26	0.73	88.03
Euro	6.15	5.70	0.45	22.99	1.25	6.77	0.02	2.34
Hong Kong Dollar	3.81	3.46	0.35	31.09	0.56	3.05	0.02	2.78
Japanese Yen	2.84	3.59	-0.75	18.93	0.38	2.06	0.00	0.53
British Pound Sterling	2.60	2.47	0.14	23.08	0.51	2.78	0.02	2.70
New Taiwan Dollar	1.79	1.77	0.02	26.18	0.30	1.60	0.00	0.32
Indian Rupee	1.69	1.50	0.19	21.80	0.22	1.19	0.01	1.60
Korean Won	1.58	1.38	0.20	26.53	0.32	1.74	0.01	1.35
Swiss Franc	1.39	1.66	-0.27	18.71	0.21	1.16	0.00	0.24
Canadian Dollar	1.16	1.93	-0.77	21.69	0.23	1.22	-0.01	-1.49
Brazilian Real	0.79	0.56	0.23	35.33	0.16	0.84	0.01	1.53
Australian Dollar	0.70	1.24	-0.54	24.84	0.15	0.81	-0.01	-1.01
Danish Krone	0.64	0.51	0.13	22.14	0.10	0.55	0.00	0.41
Singapore Dollar	0.40	0.21	0.18	17.45	0.05	0.27	0.00	0.51
Swedish Krona	0.39	0.56	-0.17	29.84	0.10	0.53	-0.00	-0.18



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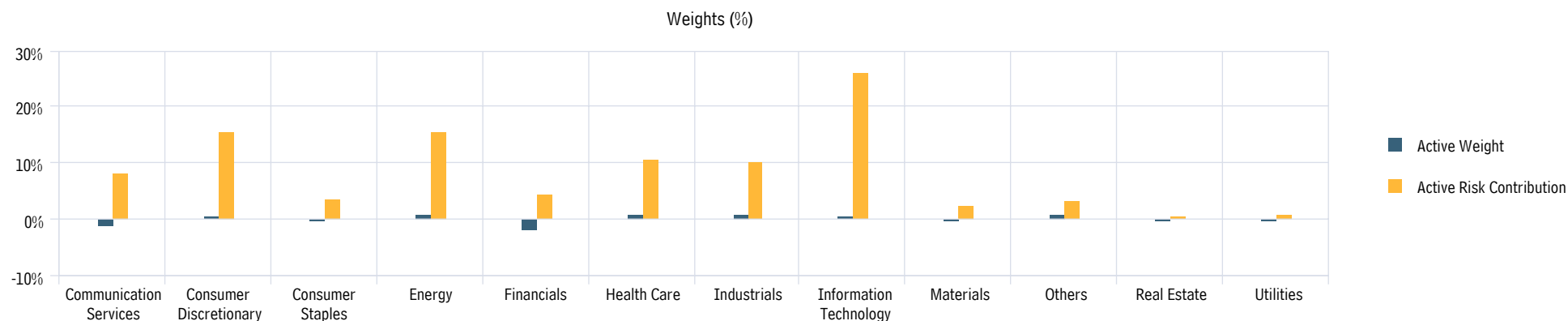
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Equity
BENCHMARK: Public Equity
POSITIONS: 11,403
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 21,063,106,649
ACCEPTED: 11,292

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	18.46	0.83	100.00	0.01
Communication Services	6.17	7.31	-1.14	23.72	0.07	8.22	-0.07
Consumer Discretionary	11.24	10.92	0.32	24.86	0.13	15.56	-0.04
Consumer Staples	7.04	7.21	-0.17	13.02	0.03	3.35	-0.01
Energy	5.54	4.86	0.69	28.15	0.13	15.48	0.05
Financials	13.63	15.50	-1.87	20.43	0.04	4.37	-0.02
Health Care	13.30	12.43	0.86	15.36	0.09	10.37	-0.02
Industrials	11.16	10.47	0.69	19.79	0.08	9.95	-0.01
Information Technology	21.58	21.01	0.57	23.58	0.22	26.10	-0.08
Materials	4.47	4.59	-0.13	21.49	0.02	2.25	-0.00
Others	0.76	0.00	0.76	0.86	0.03	3.03	-0.00
Real Estate	2.34	2.81	-0.47	21.89	0.00	0.36	-0.03
Utilities	2.78	2.89	-0.10	19.09	0.01	0.96	-0.02



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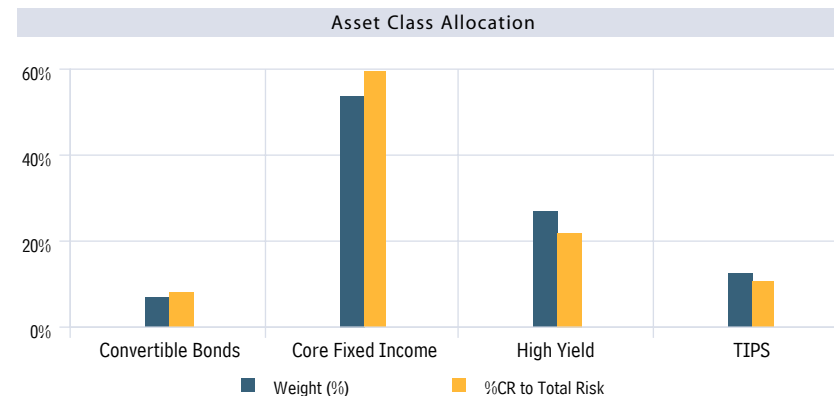
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public Fixed Income
BENCHMARK: Public Fixed Income
POSITIONS: 11,536
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 12,931,540,850
ACCEPTED: 11,416

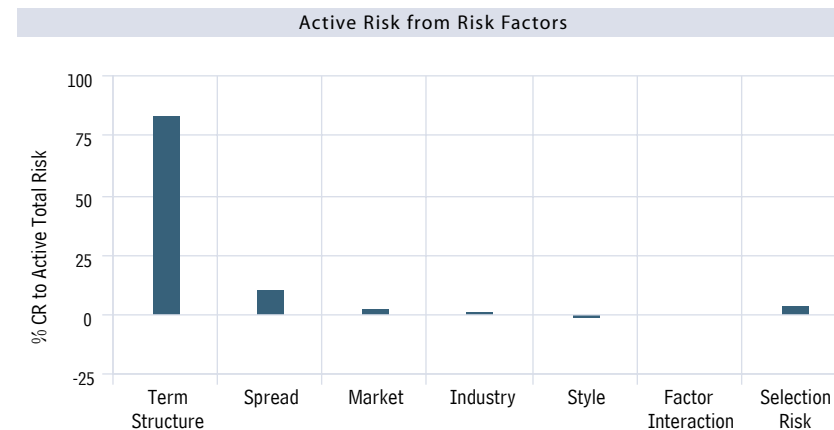
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	6.45	Total	12,931,540,850	100.00	6.45	6.45	100.00
Benchmark Risk	5.72	Convertible Bonds	922,591,912	7.13	12.42	0.51	7.85
Active Risk	0.93	Core Fixed Income	6,976,693,024	53.95	7.75	3.82	59.30
Portfolio Beta	1.12	High Yield	3,442,010,382	26.62	6.87	1.41	21.95
Cont. to Eff. Duration	6.35	TIPS	1,590,245,532	12.30	6.88	0.70	10.90
Convexity	0.76						
Yield to Worst (%)	8.98						
OAS to Swap (bp)	146.12						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	6.45	100.00	1.00	0.93	100.00	1.00
Local Market Risk	6.45	100.00	1.00	0.93	100.01	1.00
Common Factor Risk	6.44	99.87	1.00	0.89	96.19	0.98
Implied Volatility	0.08	1.31	0.55	0.00	0.37	0.26
Industry	-0.00	-0.04	-0.02	0.01	0.60	0.05
Inflation	0.04	0.62	0.06	-0.00	-0.21	-0.03
Market	0.28	4.29	0.45	0.02	2.36	0.19
Spread	1.05	16.26	0.36	0.09	9.92	0.30
Style	0.03	0.45	0.18	-0.01	-0.56	-0.03
Term Structure	4.96	77.00	0.80	0.78	83.78	0.88
Selection Risk	0.01	0.12	0.04	0.04	3.82	0.20



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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Public Fixed Income
BENCHMARK: Public Fixed Income
POSITIONS: 11,536
MODEL: MAC.L

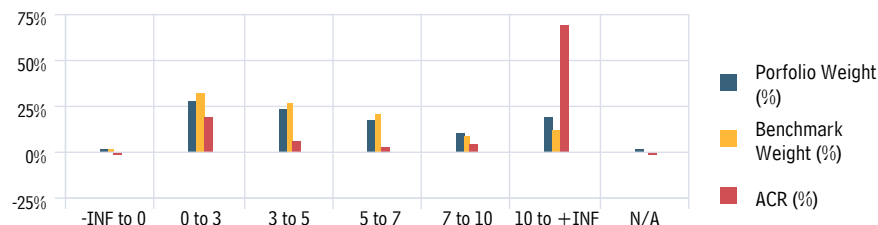
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Portfolio by Factor Breakdowns

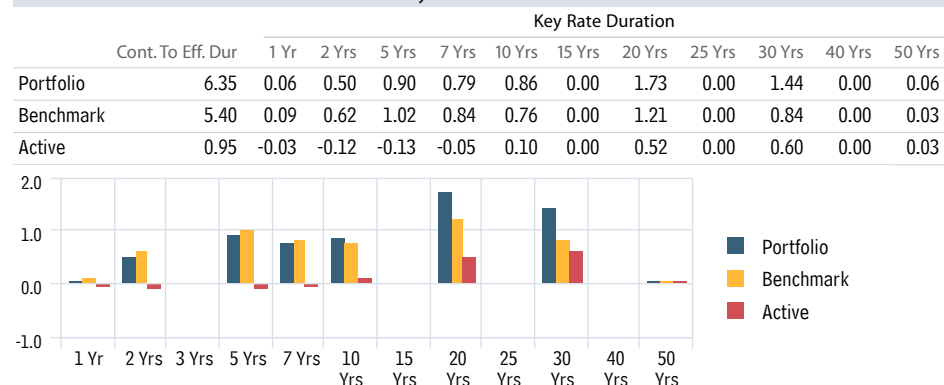
Spread Factor	Volatility	Top 10 Spread Factor				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
US Financials - Banking IG Spr	54.34	0.28	0.10	0.19	0.16	0.30	0.06	0.03	3.24	
US Financials - Capital Market	50.45	0.13	0.05	0.08	0.15	0.30	0.03	0.01	1.38	
US Agency MBS GNMA Prepayment	0.44	-0.06	0.00	-0.06	-0.00	-0.45	0.01	0.01	1.23	
US Health Care - Equipment & S	43.84	0.17	0.08	0.08	0.13	0.31	0.03	0.01	1.17	
US Utilities - Electric Utilit	38.92	0.18	0.10	0.08	0.12	0.30	0.03	0.01	0.99	
US Real Estate IG Spread	39.53	0.12	0.04	0.07	0.11	0.28	0.02	0.01	0.87	
US Health Care - Pharmaceutica	56.68	0.09	0.06	0.04	0.17	0.30	0.02	0.01	0.68	
US Bank Loan Consumer Discreti	26.08	0.11	0.00	0.11	0.06	0.21	0.01	0.01	0.63	
US MBS All Spread	0.38	0.10	0.00	0.10	0.00	0.14	0.01	0.01	0.56	
US Energy - Oil & Gas IG Sprea	46.48	0.15	0.11	0.05	0.11	0.23	0.03	0.01	0.54	

Term Structure	Volatility	Top 10 Term Structure				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
USD Rate 30Y	0.89	1.44	0.84	0.60	0.01	0.85	1.00	0.46	49.27	
USD Rate 20Y	0.93	1.73	1.21	0.51	0.01	0.81	1.25	0.38	41.34	
USD Rate 10Y	1.09	1.17	1.09	0.08	0.01	0.73	1.02	0.06	6.82	
USD Rate 50Y	0.89	0.06	0.03	0.03	0.01	0.85	0.04	0.03	2.71	
USD Muni Rates 20Y	1.04	0.01	0.00	0.01	0.01	0.63	0.01	0.00	0.51	
USD Muni Rates 10Y	1.07	0.01	0.00	0.01	0.01	0.63	0.00	0.00	0.37	
USD Rate 6M	1.05	0.01	0.00	0.00	0.00	0.24	0.00	0.00	0.11	
USD Muni Rates 5Y	1.13	0.00	0.00	0.00	0.01	0.55	0.00	0.00	0.10	
USD Muni Rates 2Y	1.19	0.00	0.00	0.00	0.01	0.48	0.00	0.00	0.02	
USD Muni Rates 1Y	1.12	0.00	0.00	0.00	0.01	0.45	0.00	0.00	0.01	

%CR to Active Risk by Duration Buckets



Key Rate Duration



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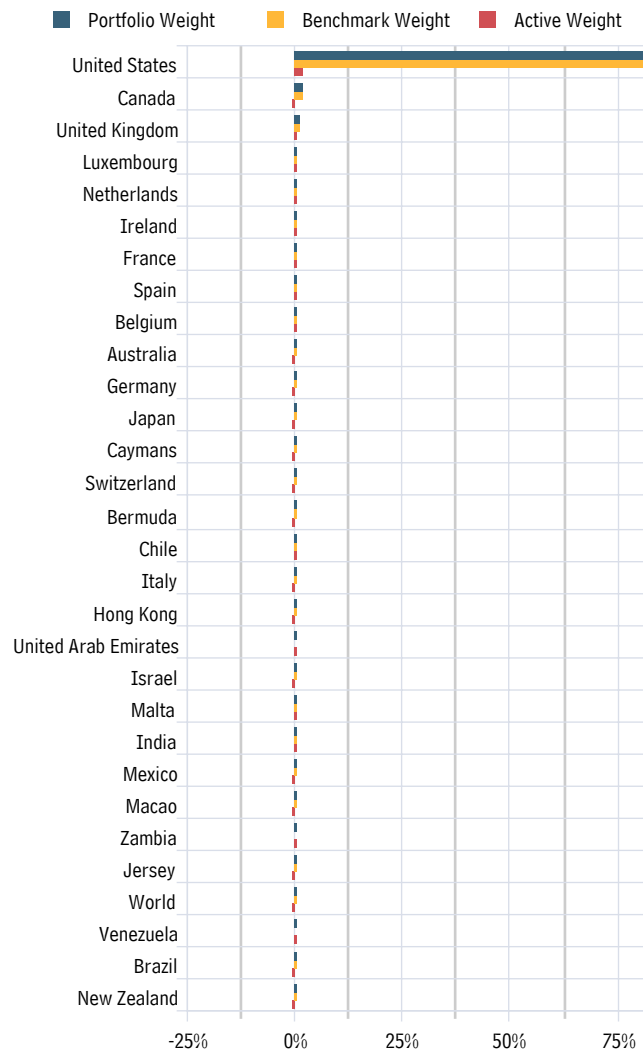
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Fixed Income
BENCHMARK: Public Fixed Income
POSITIONS: 11,536
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 12,931,540,850
ACCEPTED: 11,416

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	6.45	0.93	100.00	0.01
United States	93.13	91.15	1.97	6.55	0.90	97.17	0.05
Canada	1.65	1.76	-0.11	5.40	0.01	1.48	0.03
United Kingdom	1.46	0.98	0.48	6.36	-0.01	-1.07	0.04
Luxembourg	0.47	0.44	0.02	9.26	-0.00	-0.07	0.04
Netherlands	0.44	0.38	0.06	8.37	-0.00	-0.08	0.05
Ireland	0.42	0.40	0.03	6.87	0.00	0.03	0.04
France	0.37	0.28	0.09	8.76	-0.00	-0.23	0.04
Spain	0.21	0.10	0.11	7.00	-0.00	-0.22	0.04
Belgium	0.20	0.12	0.08	13.80	0.01	0.69	0.10
Australia	0.19	0.23	-0.04	6.69	0.00	0.03	0.03
Germany	0.15	0.26	-0.11	8.76	0.00	0.49	0.03
Japan	0.15	0.42	-0.27	6.10	0.01	0.86	0.03
Caymans	0.13	0.15	-0.02	7.35	0.00	0.08	0.03
Switzerland	0.12	0.13	-0.00	8.51	-0.00	-0.06	0.04
Bermuda	0.10	0.13	-0.02	15.70	0.00	0.07	0.03
Chile	0.10	0.05	0.05	4.35	-0.00	-0.45	0.04
Italy	0.09	0.30	-0.21	11.15	-0.00	-0.15	0.05
Hong Kong	0.08	0.25	-0.17	8.82	0.00	0.36	0.03
United Arab Emirates	0.08	0.00	0.08	5.15	-0.00	-0.24	0.01
Israel	0.08	0.17	-0.09	8.47	0.00	0.05	0.04
Malta	0.06	0.03	0.03	25.45	-0.00	-0.02	0.03
India	0.05	0.01	0.04	5.81	-0.00	-0.12	0.01
Mexico	0.05	0.17	-0.12	4.52	-0.01	-0.67	0.07
Macao	0.04	0.10	-0.06	9.33	0.00	0.08	0.03
Zambia	0.04	0.00	0.04	3.06	-0.00	-0.13	0.01
Jersey	0.02	0.03	-0.00	8.67	0.00	0.03	0.04
World	0.01	0.76	-0.75	4.26	0.02	1.67	0.02
Venezuela	0.01	0.00	0.01	0.84	-0.00	-0.06	0.00
Brazil	0.01	0.02	-0.01	6.37	-0.00	-0.02	0.04
New Zealand	0.01	0.03	-0.02	6.50	0.00	0.02	0.03



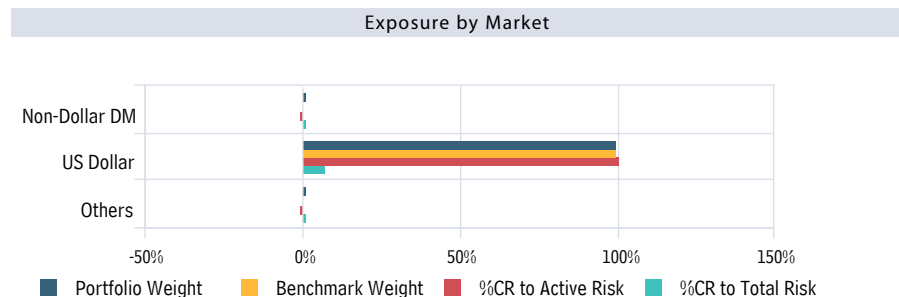
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BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Public Fixed Income
BENCHMARK: Public Fixed Income
POSITIONS: 11,536
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 12,931,540,850
ACCEPTED: 11,416

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	12,930,990,720.68	100.01	100.00
XXX	493,316.56	-0.01	0.00
British Pound Sterling	56,189.23	-0.00	0.00
Euro	623.73	-0.00	0.00
Canadian Dollar	0.00	0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
XXX	493,316.56	-0.01	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	6.45	6.45	100.00	0.93	100.00
US Dollar	100.00	100.00	-0.00	6.45	6.45	100.00	0.93	100.01
XXX	0.00	0.00	0.00	4.30	0.00	0.00	-0.00	-0.01
British Pound Sterling	0.00	0.00	0.00	58.21	0.00	0.00	-0.00	-0.00
Euro	0.00	0.00	0.00	7.62	0.00	0.00	-0.00	-0.00
Canadian Dollar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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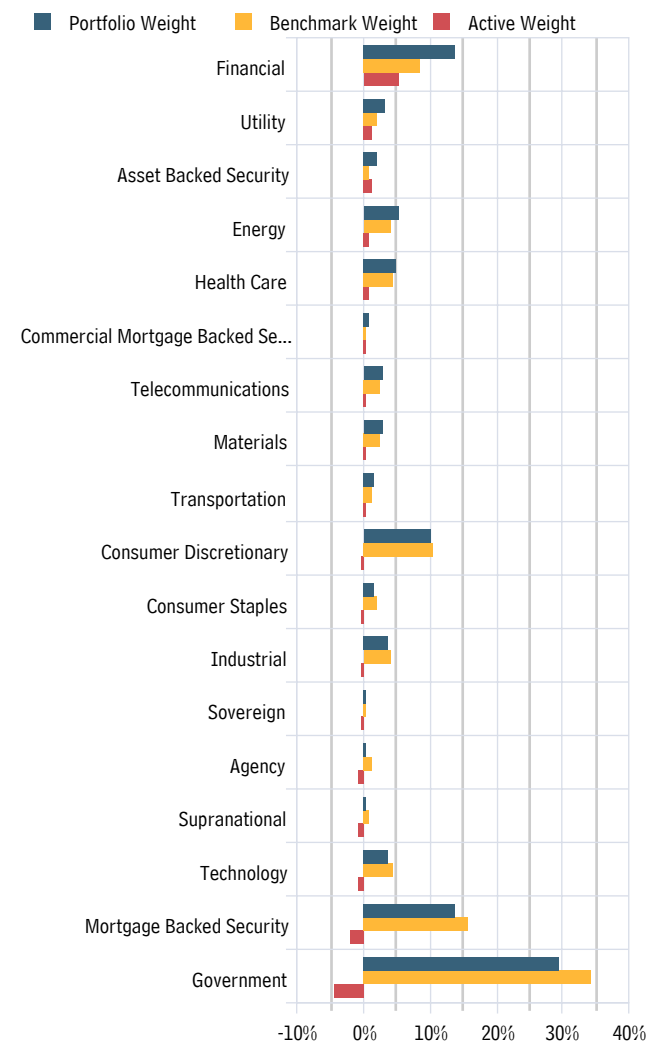
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,536
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2023
 MARKET VALUE: 12,931,540,850
 ACCEPTED: 11,416

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	6.45	0.93	100.00	0.01
Government	29.53	34.07	-4.54	2.77	8.14	0.67	71.80	0.06
Mortgage Backed Security	13.69	15.58	-1.89	0.86	7.06	0.05	5.53	0.05
Financial	13.54	8.49	5.05	0.65	6.57	0.07	7.46	0.04
Consumer Discretionary	10.05	10.39	-0.34	0.44	8.82	0.05	5.07	0.04
Energy	5.06	4.15	0.91	0.22	7.16	-0.01	-1.43	0.04
Health Care	4.95	4.28	0.68	0.30	7.65	0.05	4.96	0.05
Technology	3.75	4.56	-0.81	0.18	7.67	0.03	3.14	0.05
Industrial	3.68	4.09	-0.41	0.15	6.87	0.01	0.94	0.04
Utility	3.36	2.07	1.29	0.19	8.34	0.03	3.11	0.06
Telecommunications	2.75	2.46	0.29	0.17	8.49	0.02	1.83	0.06
Materials	2.63	2.38	0.25	0.10	6.30	-0.01	-0.97	0.04
Asset Backed Security	1.84	0.72	1.12	0.08	4.36	-0.01	-1.35	0.03
Consumer Staples	1.56	1.93	-0.38	0.10	6.94	0.01	0.84	0.05
Transportation	1.49	1.36	0.13	0.06	7.41	-0.00	-0.51	0.04
Commercial Mortgage Backed	0.83	0.53	0.30	0.02	2.92	-0.01	-1.33	0.02
Others	0.48	0.00	0.48	0.02	3.83	-0.01	-1.09	0.00
Agency	0.45	1.07	-0.62	0.02	5.75	0.02	2.59	0.03
Local/Provincial	0.33	0.54	-0.20	0.02	6.14	-0.01	-0.70	0.05
Supranational	0.01	0.76	-0.75	0.00	4.26	0.02	1.67	0.02
Sovereign	0.00	0.56	-0.56	0.00	7.83	-0.01	-1.54	0.07



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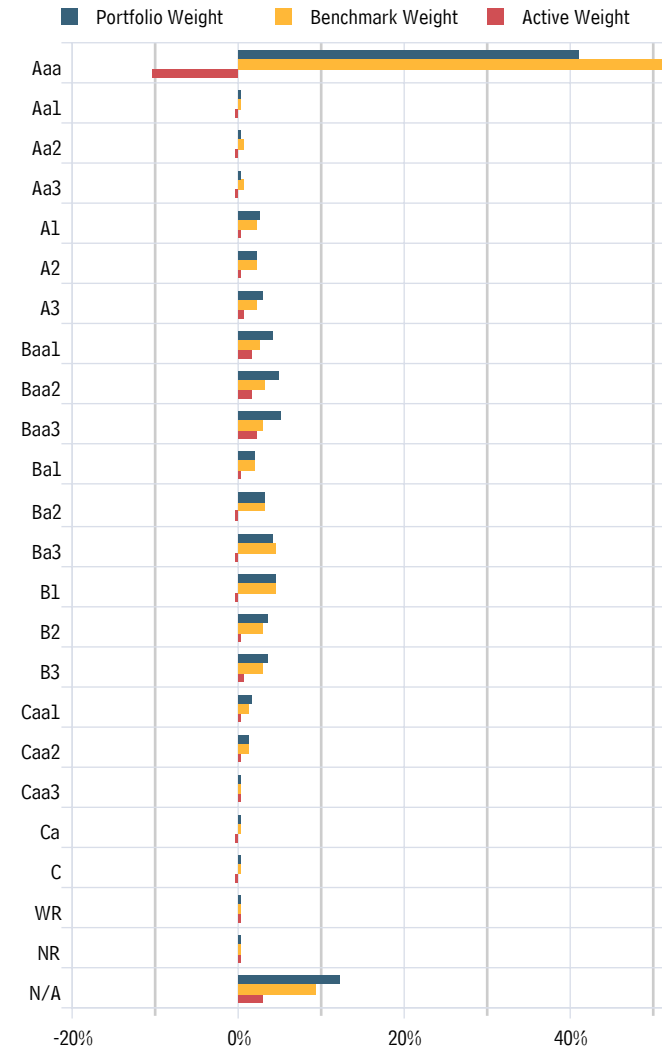
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,536
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: March 31, 2023
 MARKET VALUE: 12,931,540,850
 ACCEPTED: 11,416

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	6.58	6.45	0.93	100.00
Aaa	41.07	51.32	-10.25	3.45	8.60	7.67	0.69	74.24
Aa1	0.03	0.12	-0.09	0.00	8.83	8.14	0.00	0.03
Aa2	0.23	0.64	-0.41	0.02	10.71	9.56	-0.00	-0.14
Aa3	0.26	0.49	-0.23	0.03	9.93	9.24	-0.00	-0.03
A1	2.47	2.17	0.29	0.16	6.91	6.84	0.02	1.78
A2	2.32	2.13	0.20	0.17	7.58	7.46	0.01	1.57
A3	2.83	2.11	0.71	0.22	8.04	8.51	0.04	4.01
Baa1	4.18	2.56	1.62	0.28	7.11	7.84	0.03	3.51
Baa2	4.71	3.14	1.57	0.35	7.82	8.11	0.06	6.13
Baa3	5.31	2.91	2.40	0.27	5.24	6.26	0.01	1.11
Ba1	2.02	1.84	0.18	0.10	5.45	6.58	0.00	0.02
Ba2	3.15	3.30	-0.16	0.13	4.31	6.29	0.01	0.54
Ba3	4.23	4.48	-0.25	0.15	3.82	5.57	0.01	0.60
B1	4.37	4.43	-0.06	0.16	3.84	6.36	-0.00	-0.53
B2	3.49	3.05	0.43	0.12	3.56	7.12	-0.00	-0.50
B3	3.45	2.93	0.51	0.11	3.23	8.46	-0.01	-0.73
Caa1	1.56	1.25	0.31	0.05	3.43	12.80	0.00	0.08
Caa2	1.29	1.15	0.13	0.04	3.35	11.13	-0.00	-0.48
Caa3	0.23	0.17	0.05	0.01	2.84	14.32	-0.00	-0.45
Ca	0.11	0.18	-0.07	0.00	1.84	15.77	-0.00	-0.18
C	0.01	0.01	-0.00	0.00	3.19	40.01	0.00	0.00
WR	0.26	0.10	0.16	0.01	2.69	10.37	-0.00	-0.19
NR	0.25	0.08	0.17	0.00	0.65	17.23	-0.00	-0.13
Not Rated	12.17	9.41	2.76	0.52	4.54	6.98	0.09	9.74



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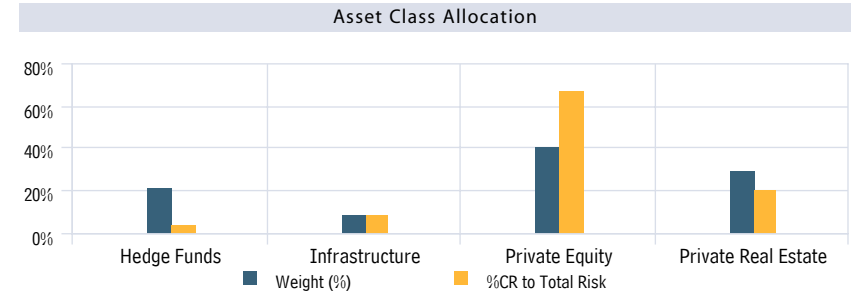
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 435
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 11,973,382,579
ACCEPTED: 432

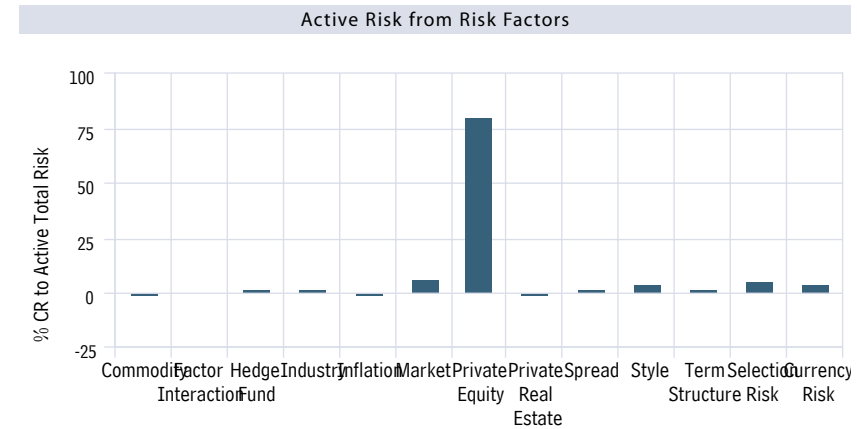
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	15.69	Total	11,973,382,579	100.00	15.69	15.69	100.00
Benchmark Risk	12.50	Hedge Funds	2,581,471,522	21.56	5.38	0.65	4.11
Active Risk	7.35	Infrastructure	1,064,770,419	8.89	16.67	1.36	8.63
Portfolio Beta	1.11	Private Equity	4,868,075,483	40.66	26.50	10.47	66.72
		Private Real Estate	3,459,065,155	28.89	14.40	3.22	20.53



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	15.69	100.00	1.00	7.35	100.00	1.00
Local Market Risk	15.00	95.58	1.00	7.10	96.53	0.99
Common Factor Risk	14.95	95.26	0.99	6.78	92.22	0.97
Hedge Fund	0.02	0.15	0.04	0.03	0.46	0.07
Private Real Estate	2.81	17.88	0.73	-0.03	-0.42	-0.02
Commodity	-0.04	-0.25	-0.18	-0.01	-0.15	-0.05
Industry	0.16	1.03	0.21	0.10	1.32	0.13
Inflation	-0.00	-0.00	0.00	-0.02	-0.23	-0.10
Market	8.65	55.14	0.88	0.48	6.47	0.29
Private Equity	2.76	17.61	0.42	5.90	80.20	0.90
Spread	0.16	1.02	0.61	0.06	0.86	0.24
Style	0.41	2.58	0.49	0.27	3.61	0.27
Term Structure	0.02	0.12	0.04	0.01	0.10	0.02
Selection Risk	0.05	0.32	0.06	0.32	4.31	0.21
Currency Risk	0.69	4.42	0.48	0.26	3.47	0.24



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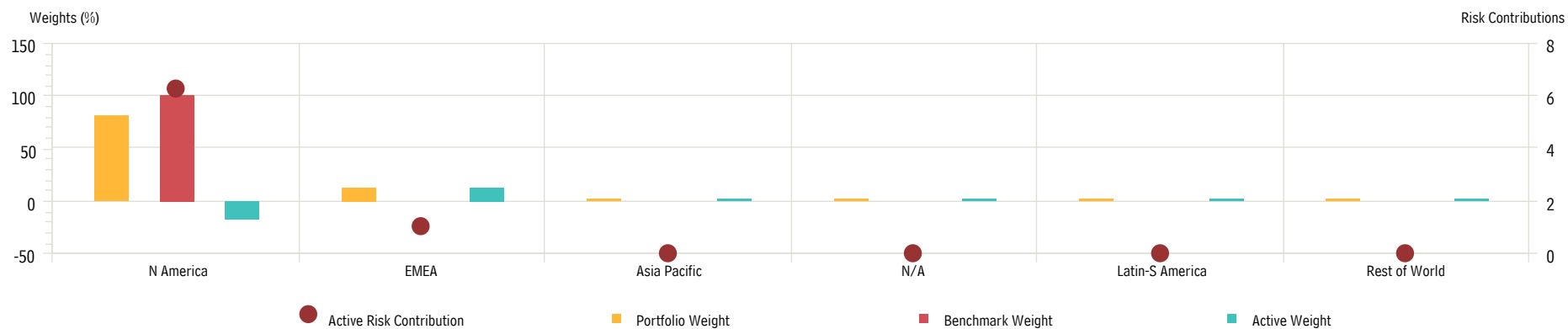
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 MODEL: MAC.L

CURRENCY: USD
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 ACCEPTED: 432

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	15.69	7.35	100.00	0.07
Asia Pacific	2.37	0.00	2.37	14.80	0.03	0.43	0.01
EMEA	13.71	0.00	13.71	21.26	1.02	13.80	0.07
Latin-S America	0.38	0.00	0.38	32.24	0.01	0.19	0.04
N America	81.91	100.00	-18.09	16.04	6.29	85.47	0.03
N/A	1.54	0.00	1.54	17.64	0.00	0.04	0.00
Rest of World	0.08	0.00	0.08	24.61	0.00	0.06	0.05



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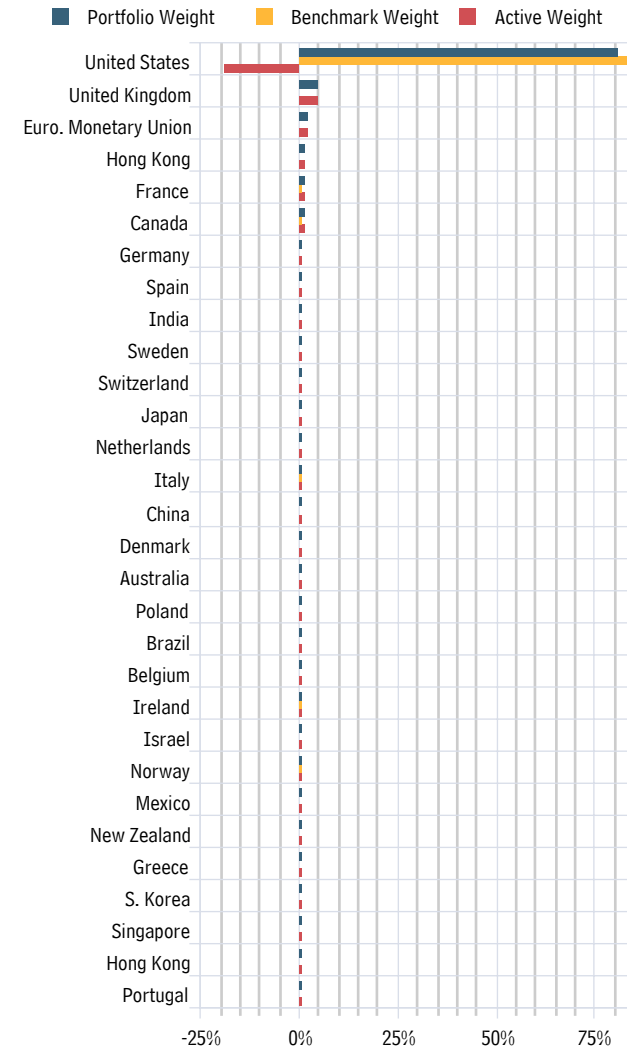
BarraOne Equity Summary

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PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 435
MODEL: MAC.L

CURRENCY: USD
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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	15.69	7.35	100.00	0.07
United States	80.77	99.99	-19.21	16.01	6.16	83.72	0.05
United Kingdom	4.75	0.00	4.75	21.41	0.34	4.56	0.10
Euro. Monetary Union	1.77	0.00	1.77	26.84	0.11	1.47	0.09
Hong Kong	1.54	0.00	1.54	17.69	0.00	0.04	0.03
France	1.20	0.00	1.20	22.53	0.09	1.26	0.10
Canada	1.14	0.01	1.13	20.60	0.13	1.76	0.14
Germany	0.97	0.00	0.97	17.41	0.05	0.67	0.07
Spain	0.93	0.00	0.93	23.04	0.08	1.14	0.11
India	0.83	0.00	0.83	22.64	0.02	0.24	0.05
Sweden	0.78	0.00	0.78	31.80	0.09	1.21	0.14
Switzerland	0.70	0.00	0.70	24.60	0.06	0.78	0.11
Japan	0.48	0.00	0.48	13.77	-0.00	-0.02	0.02
Netherlands	0.45	0.00	0.45	21.14	0.03	0.45	0.10
Italy	0.44	0.00	0.44	23.37	0.03	0.45	0.10
China	0.43	0.00	0.43	18.48	0.00	0.01	0.03
Denmark	0.41	0.00	0.41	31.92	0.05	0.63	0.14
Australia	0.32	0.00	0.32	20.30	0.01	0.12	0.05
Poland	0.27	0.00	0.27	33.01	0.03	0.35	0.12
Brazil	0.26	0.00	0.26	43.43	0.01	0.18	0.07
Belgium	0.26	0.00	0.26	31.66	0.01	0.20	0.08
Ireland	0.21	0.00	0.21	13.69	0.00	0.05	0.04
Israel	0.16	0.00	0.16	32.88	0.01	0.16	0.10
Norway	0.14	0.00	0.14	26.84	0.01	0.17	0.11
Mexico	0.10	0.00	0.10	16.56	0.00	0.02	0.04
New Zealand	0.09	0.00	0.09	22.35	0.00	0.03	0.05
Greece	0.07	0.00	0.07	41.28	0.01	0.13	0.15
S. Korea	0.07	0.00	0.07	19.79	0.00	0.02	0.05
Singapore	0.06	0.00	0.06	19.21	0.00	0.02	0.04
Hong Kong	0.05	0.00	0.05	21.81	0.00	0.01	0.04
Portugal	0.05	0.00	0.05	15.11	0.00	0.00	0.03



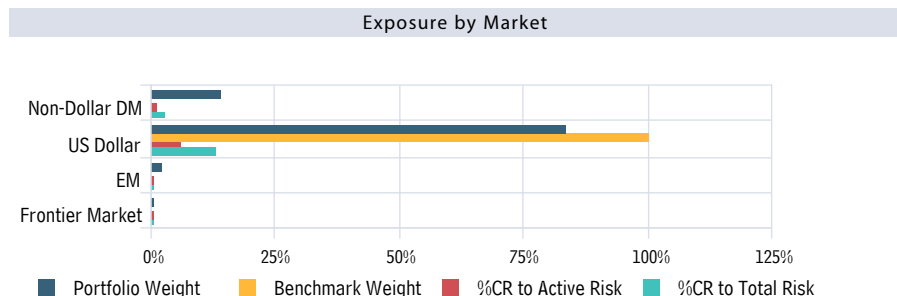
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BENCHMARK: Alternative
POSITIONS: 435
MODEL: MAC.L

CURRENCY: USD
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ACCEPTED: 432

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	10,021,085,254.47	83.15	82.04	Indian Rupee	99,381,044.40	0.24	0.59
Euro	756,113,532.65	6.22	6.82	Chinese Yuan	48,612,050.67	0.02	0.18
British Pound Sterling	453,956,847.82	4.82	4.71	Polish Zloty	32,134,421.73	0.35	0.33
Canadian Dollar	115,568,554.99	1.80	1.33	Brazilian Real	31,349,147.96	0.18	0.29
Swedish Krona	93,825,326.85	1.21	1.19	Korean Won	8,520,787.94	0.02	0.05

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	15.69	15.69	100.00	7.35	100.00	
US Dollar	83.69	100.00	-16.31	15.55	12.88	82.04	6.12	83.15	
Euro	6.31	0.00	6.31	21.36	1.07	6.82	0.46	6.22	
British Pound Sterling	3.79	0.00	3.79	25.98	0.74	4.71	0.35	4.82	
Canadian Dollar	0.97	0.00	0.97	24.04	0.21	1.33	0.13	1.80	
Indian Rupee	0.83	0.00	0.83	22.64	0.09	0.59	0.02	0.24	
Swedish Krona	0.78	0.00	0.78	31.80	0.19	1.19	0.09	1.21	
Swiss Franc	0.69	0.00	0.69	24.71	0.11	0.72	0.06	0.78	
Japanese Yen	0.48	0.00	0.48	13.77	0.02	0.15	-0.00	-0.02	
Danish Krone	0.41	0.00	0.41	31.92	0.09	0.56	0.05	0.63	
Chinese Yuan	0.41	0.00	0.41	19.49	0.03	0.18	0.00	0.02	
Australian Dollar	0.32	0.00	0.32	20.30	0.05	0.30	0.01	0.12	
Polish Zloty	0.27	0.00	0.27	33.01	0.05	0.33	0.03	0.35	
Brazilian Real	0.26	0.00	0.26	43.43	0.04	0.29	0.01	0.18	
New Israeli Sheqel	0.16	0.00	0.16	32.88	0.04	0.23	0.01	0.16	
Norwegian Krone	0.12	0.00	0.12	33.33	0.03	0.18	0.01	0.18	



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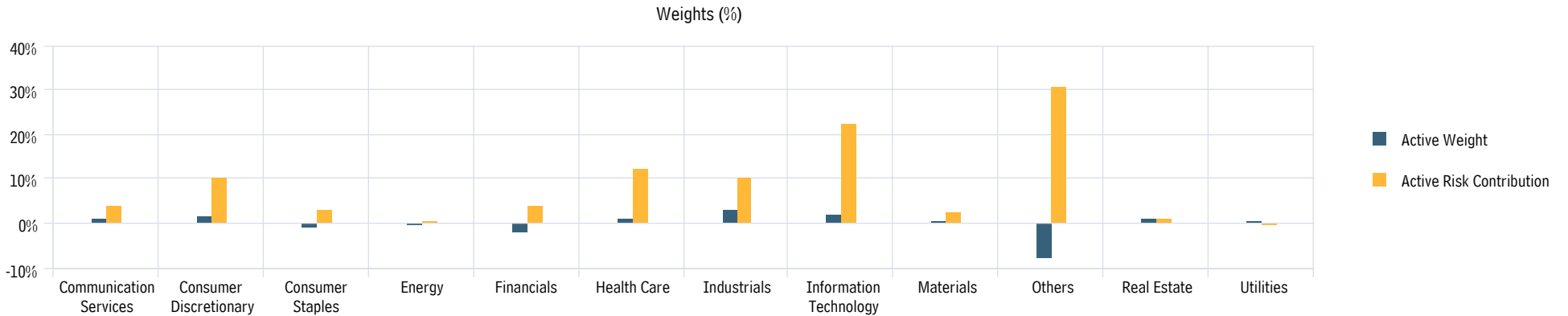
BarraOne Equity Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative Equity
BENCHMARK: Alternative
POSITIONS: 435
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 11,973,382,579
ACCEPTED: 432

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	15.69	7.35	100.00	0.07
Communication Services	3.54	2.52	1.02	21.36	0.28	3.79	0.11
Consumer Discretionary	4.96	3.45	1.52	32.54	0.76	10.39	0.15
Consumer Staples	1.46	2.21	-0.75	22.51	0.22	2.99	0.08
Energy	1.36	1.54	-0.18	18.35	0.05	0.69	0.07
Financials	2.68	4.47	-1.79	25.50	0.28	3.78	0.10
Health Care	5.77	4.68	1.09	24.90	0.88	12.02	0.11
Industrials	6.42	3.31	3.11	22.43	0.75	10.23	0.12
Information Technology	9.94	8.21	1.73	31.81	1.64	22.29	0.14
Materials	1.42	0.98	0.44	27.75	0.20	2.67	0.13
Others	59.10	66.67	-7.57	11.13	2.23	30.38	0.02
Real Estate	1.84	1.04	0.80	13.16	0.07	0.95	0.07
Utilities	1.53	0.93	0.60	8.76	-0.01	-0.18	0.02



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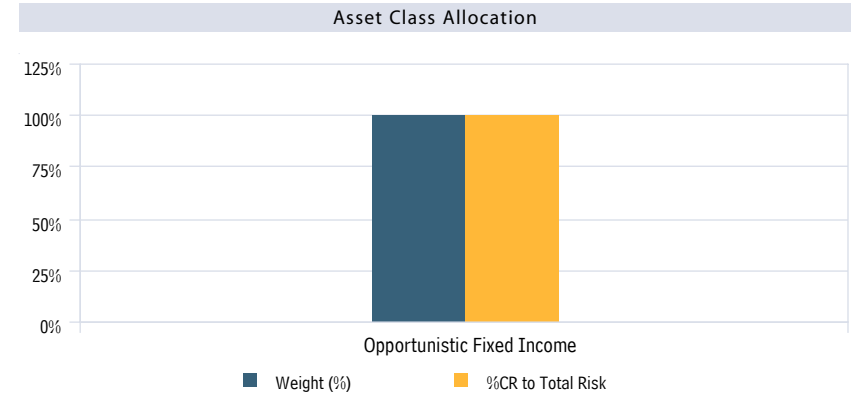
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN
POSITIONS: 31
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 2,126,882,995
ACCEPTED: 31

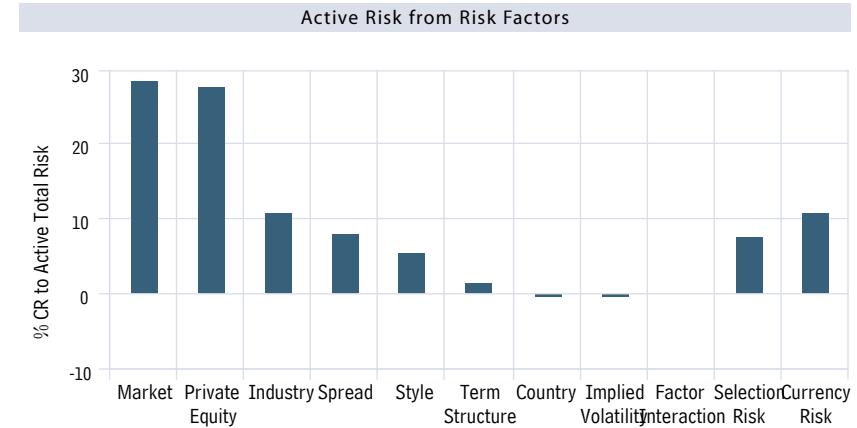
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	9.26	Total	2,126,882,995	100.00	9.26	9.26	100.00
Benchmark Risk	4.79	Opportunistic Fixed Income	2,126,882,995	100.00	9.26	9.26	100.00
Active Risk	5.76						
Portfolio Beta	1.64						
Cont. to Eff. Duration	2.20						
Convexity	0.15						
Yield to Worst (%)	7.79						
OAS to Swap (bp)	538.69						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	9.26	100.00	1.00	5.76	100.00	1.00
Local Market Risk	8.59	92.85	0.99	5.13	89.16	0.98
Common Factor Risk	8.32	89.93	0.98	4.69	81.46	0.94
Country	-0.00	-0.04	-0.04	-0.01	-0.11	-0.07
Implied Volatility	0.04	0.40	0.49	-0.01	-0.24	-0.34
Industry	0.48	5.15	0.27	0.62	10.72	0.35
Market	1.93	20.87	0.77	1.65	28.60	0.66
Private Equity	1.00	10.79	0.33	1.61	27.88	0.53
Spread	4.28	46.25	0.81	0.45	7.87	0.36
Style	0.36	3.89	0.43	0.31	5.45	0.37
Term Structure	0.24	2.62	0.10	0.07	1.29	0.11
Selection Risk	0.27	2.92	0.17	0.44	7.70	0.28
Currency Risk	0.66	7.15	0.51	0.62	10.84	0.48



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BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
 PORTFOLIO: Alternative FI
 BENCHMARK: 50_HY-50_LEVLOAN
 POSITIONS: 31
 MODEL: MAC.L

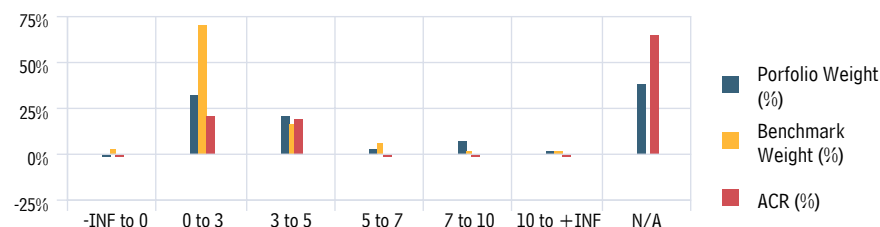
CURRENCY: USD
 ANALYSIS DATE: March 31, 2023
 MARKET VALUE: 2,126,882,995
 ACCEPTED: 31

Portfolio by Factor Breakdowns

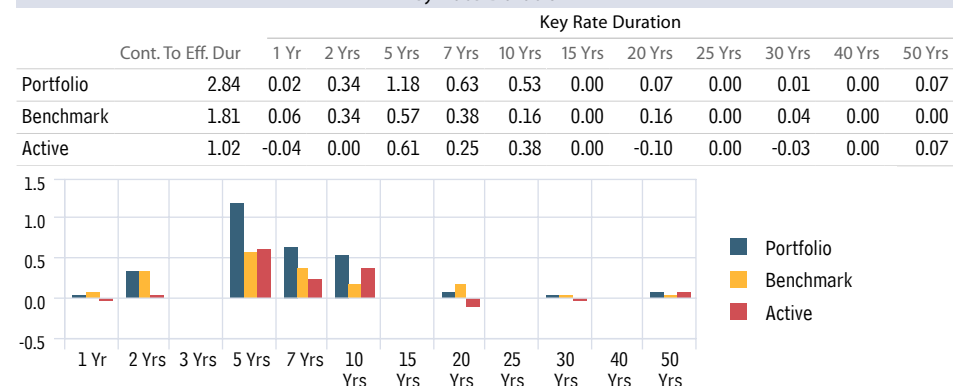
Spread Factor	Volatility	Top 10 Spread Factor								
		Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%	
EU Consumer Discretionary Spre	54.23	3.22	0.03	3.19	0.30	0.56	1.28	0.96	16.73	
US Corporate HY Spread	46.53	1.35	0.00	1.35	0.25	0.53	0.48	0.33	5.77	
GB Consumer Discretionary Spre	39.13	0.23	0.03	0.20	0.18	0.47	0.06	0.04	0.65	
EM Europe Spread	55.88	0.09	0.00	0.09	0.27	0.47	0.03	0.02	0.40	
EU Health Care Spread	53.39	0.11	0.05	0.06	0.28	0.53	0.04	0.02	0.29	
NL Corporate Spread	6.19	1.15	0.05	1.10	0.01	0.20	0.02	0.01	0.23	
US Industrials HY Spread	50.21	0.72	0.67	0.05	0.25	0.51	0.26	0.01	0.22	
EM Mexico Corporate Spread DTS	42.52	0.05	0.00	0.05	0.18	0.43	0.01	0.01	0.15	
US IG Steepener	37.80	-0.02	-0.08	0.06	0.12	0.32	-0.00	0.01	0.12	
GB Telecoms Spread	37.22	0.06	0.03	0.03	0.19	0.50	0.02	0.01	0.10	

Term Structure	Volatility	Top 10 Term Structure								
		Exposure (Residual)				Correlation	Contribution (Residual)			
		Portfolio	Benchmark	Active	MCAR	Active Port	to TR	to AR	to AR%	
EUR Rate 5Y	1.15	0.34	0.00	0.34	0.00	0.08	0.05	0.03	0.52	
USD Rate 10Y	1.09	0.56	0.31	0.25	0.00	0.06	0.07	0.02	0.26	
GBP Rate 2Y	1.50	0.03	0.00	0.03	0.00	0.15	0.01	0.01	0.12	
GBP Rate 5Y	1.49	0.03	0.00	0.03	0.00	0.16	0.01	0.01	0.11	
USD Rate 5Y	1.18	0.91	0.80	0.12	0.00	0.03	0.09	0.00	0.09	
USD Rate 1M	1.14	0.03	0.07	-0.04	-0.00	-0.11	-0.01	0.00	0.08	
GBP Rate 10Y	1.32	0.02	0.00	0.02	0.00	0.16	0.01	0.00	0.08	
EUR Rate 10Y	1.04	0.02	0.00	0.02	0.00	0.10	0.00	0.00	0.04	
EUR Rate 2Y	1.16	0.03	0.00	0.03	0.00	0.05	0.00	0.00	0.03	
USD Rate 50Y	0.89	0.04	0.00	0.04	0.00	0.04	0.00	0.00	0.03	

%CR to Active Risk by Duration Buckets



Key Rate Duration



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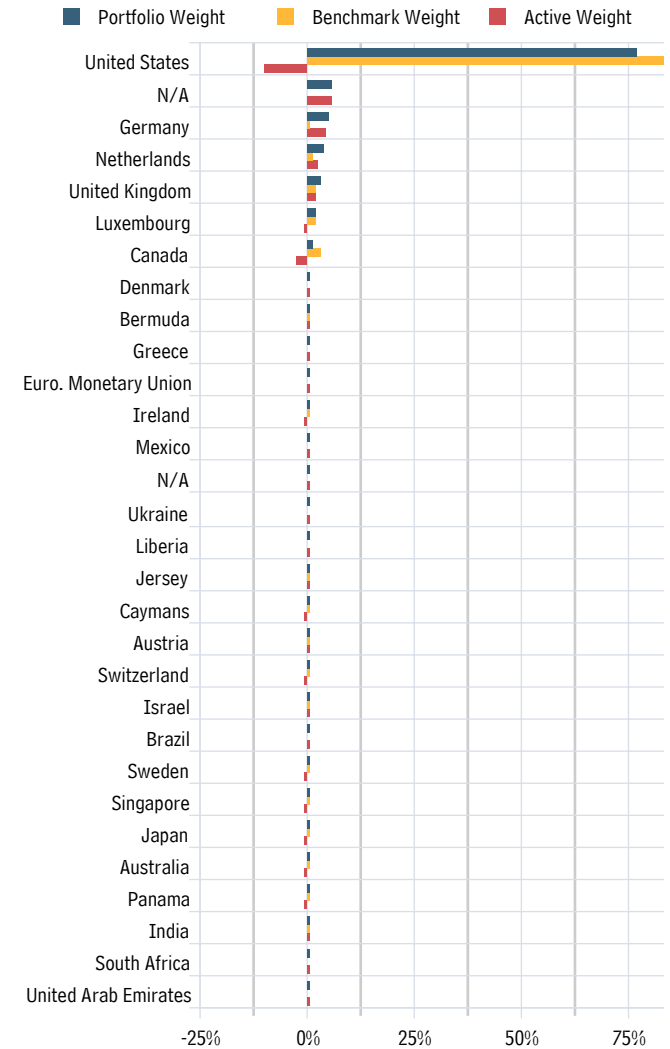
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN
POSITIONS: 31
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 2,126,882,995
ACCEPTED: 31

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	9.26	5.76	100.00	0.06
United States	77.09	86.99	-9.90	7.78	3.31	57.51	0.04
N/A	5.40	0.00	5.40	18.40	0.57	9.84	0.13
Germany	5.15	0.64	4.51	33.19	0.98	17.05	0.18
Netherlands	3.78	1.04	2.74	24.38	0.47	8.13	0.12
United Kingdom	3.25	1.65	1.60	13.91	0.23	3.94	0.06
Luxembourg	1.86	2.08	-0.21	6.03	0.00	0.06	0.03
Canada	0.95	3.41	-2.46	8.73	0.04	0.69	0.02
Denmark	0.46	0.00	0.46	50.00	0.06	1.01	0.14
Bermuda	0.39	0.08	0.31	3.73	-0.00	-0.05	0.01
Greece	0.39	0.00	0.39	24.92	0.04	0.73	0.13
Euro. Monetary Union	0.34	0.00	0.34	18.97	0.03	0.52	0.06
Ireland	0.18	0.76	-0.58	18.41	0.00	0.08	0.03
Mexico	0.16	0.00	0.16	11.96	0.00	0.07	0.05
N/A	0.14	0.00	0.14	4.30	-0.00	-0.06	0.00
Ukraine	0.13	0.00	0.13	46.94	0.02	0.42	0.22
Liberia	0.10	0.00	0.10	4.47	-0.00	-0.03	0.01
Jersey	0.08	0.02	0.06	8.01	0.00	0.00	0.05
Caymans	0.08	0.31	-0.23	13.02	0.01	0.09	0.03
Austria	0.07	0.02	0.05	17.01	0.01	0.09	0.08
Switzerland	0.06	0.22	-0.15	9.80	0.00	0.01	0.03
Israel	0.06	0.02	0.04	12.92	0.00	0.02	0.05
Brazil	0.05	0.00	0.05	25.25	0.00	0.06	0.09
Sweden	0.05	0.07	-0.02	14.94	0.00	0.06	0.05
Singapore	0.05	0.06	-0.01	6.70	0.00	0.00	-0.00
Japan	0.05	0.08	-0.04	17.58	0.00	0.06	0.03
Australia	0.03	0.35	-0.32	51.26	0.01	0.13	0.03
Panama	0.03	0.10	-0.07	8.17	0.00	0.02	0.01
India	0.02	0.02	0.00	10.02	0.00	0.01	0.03
South Africa	0.02	0.00	0.02	81.65	0.00	0.07	0.22
United Arab Emirates	0.02	0.00	0.02	9.33	0.00	0.00	0.03



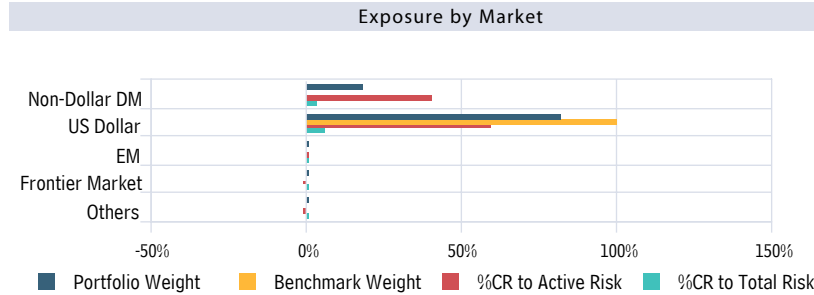
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BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN
POSITIONS: 31
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 2,126,882,995
ACCEPTED: 31

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	1,745,870,870.30	59.68	64.58	XXX	2,990,496.36	-0.06	0.01
Euro	308,889,954.69	35.21	30.68	South African Rand	451,410.80	0.07	0.06
British Pound Sterling	51,465,391.02	3.69	3.49	Albanian Lek	3,700.06	0.00	0.00
Danish Krone	9,800,241.33	1.01	0.81	United Arab Emirates Dirham	0.00	-0.00	0.00
Canadian Dollar	6,898,064.74	0.24	0.25	Chilean Peso	0.00	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	9.26	9.26	100.00	5.76	100.00
US Dollar	82.09	100.00	-17.91	7.63	5.98	64.58	3.44	59.68
Euro	14.52	0.00	14.52	22.91	2.84	30.68	2.03	35.21
British Pound Sterling	2.42	0.00	2.42	17.53	0.32	3.49	0.21	3.69
Danish Krone	0.46	0.00	0.46	50.18	0.08	0.81	0.06	1.01
Canadian Dollar	0.32	0.00	0.32	9.78	0.02	0.25	0.01	0.24
XXX	0.14	0.00	0.14	4.30	0.00	0.01	-0.00	-0.06
Japanese Yen	0.05	0.00	0.05	17.58	0.00	0.04	0.00	0.03
South African Rand	0.02	0.00	0.02	81.65	0.01	0.06	0.00	0.07
Norwegian Krone	0.02	0.00	0.02	41.72	0.00	0.04	0.00	0.05
Swedish Krona	0.01	0.00	0.01	34.88	0.00	0.03	0.00	0.03
Swiss Franc	0.00	0.00	0.00	349.77	0.00	0.00	0.00	0.00
Albanian Lek	0.00	0.00	0.00	8.84	0.00	0.00	0.00	0.00
Singapore Dollar	0.00	0.00	0.00	4.82	0.00	0.00	-0.00	-0.00
United Arab Emirates Dirham	0.00	0.00	0.00	0.05	0.00	0.00	-0.00	-0.00
Chilean Peso	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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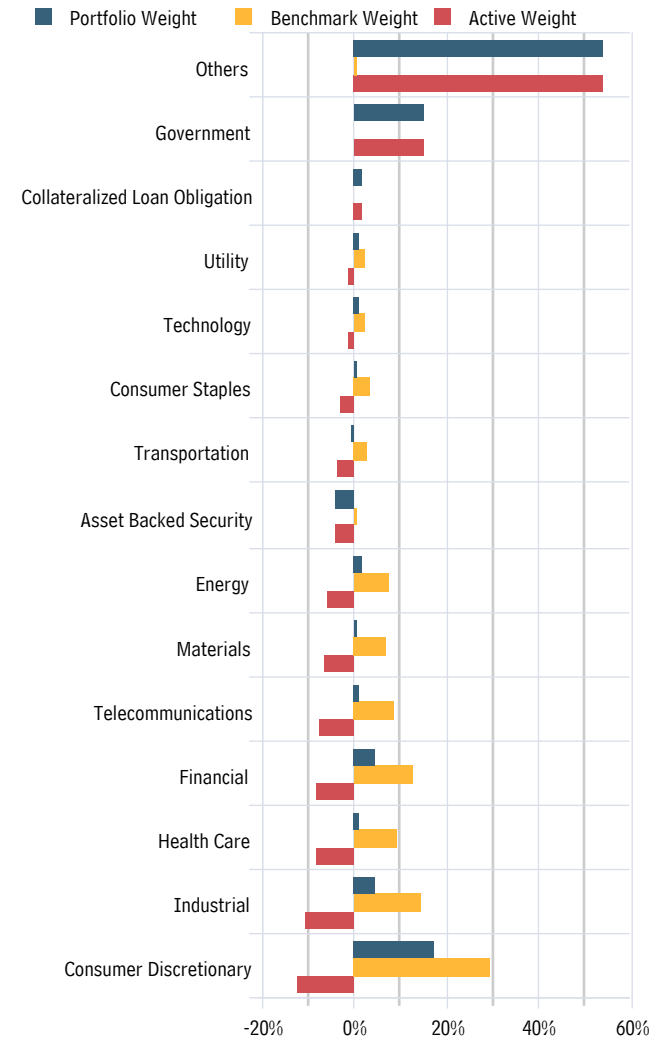
BarraOne Fixed Income Summary

COMPANY: NYCRS - POLICE
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN
POSITIONS: 31
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 2,126,882,995
ACCEPTED: 31

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	2.84	9.26	5.76	100.00	0.06
Others	54.07	0.01	54.07	0.30	11.30	4.27	74.14	0.08
Consumer Discretionary	17.67	29.63	-11.96	0.82	17.55	1.63	28.37	0.06
Government	14.96	0.00	14.96	1.33	6.09	-0.35	-6.02	0.00
Financial	4.54	12.48	-7.95	0.07	4.97	0.04	0.65	0.02
Industrial	4.40	14.71	-10.30	0.09	9.01	0.13	2.19	0.03
Energy	1.57	7.32	-5.75	0.08	5.91	0.01	0.22	0.03
Collateralized Loan Obligat	1.50	0.00	1.50	-0.06	16.29	0.07	1.13	0.07
Utility	1.41	2.38	-0.96	0.05	4.17	-0.00	-0.06	0.02
Health Care	1.27	9.39	-8.12	0.03	19.26	0.01	0.20	0.03
Telecommunications	1.11	8.57	-7.45	0.05	8.27	-0.01	-0.13	0.03
Technology	0.90	2.18	-1.28	0.03	20.76	0.04	0.65	0.06
Materials	0.86	7.08	-6.22	0.03	8.56	0.02	0.42	0.03
Consumer Staples	0.66	3.28	-2.62	0.02	5.45	0.00	0.04	0.03
Sovereign	0.13	0.00	0.13	0.01	46.94	0.02	0.42	0.22
Local/Provincial	0.02	0.11	-0.09	0.00	9.12	0.00	0.04	0.00
Collateralized Debt Obligat	-0.01	0.00	-0.01	-0.00	4.54	0.00	0.00	0.00
Trust Preferred Security	-0.01	0.00	-0.01	0.00	1.77	0.00	0.00	0.00
Commercial Mortgage Backed	-0.05	0.00	-0.05	-0.00	2.13	0.00	0.02	0.01
Transportation	-0.77	2.83	-3.60	-0.00	44.58	-0.13	-2.29	0.06
Asset Backed Security	-4.23	0.03	-4.26	-0.00	5.85	0.00	0.02	0.03



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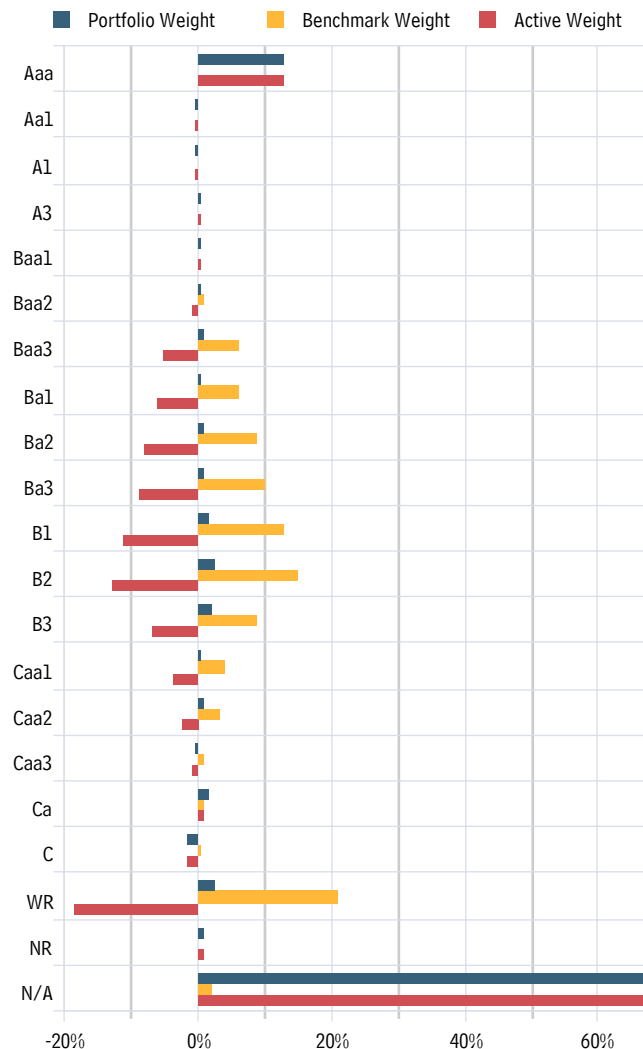
BarraOne Fixed Income Summary

COMPANY: NYCRC - POLICE
PORTFOLIO: Alternative FI
BENCHMARK: 50_HY-50_LEVLOAN
POSITIONS: 31
MODEL: MAC.L

CURRENCY: USD
ANALYSIS DATE: March 31, 2023
MARKET VALUE: 2,126,882,995
ACCEPTED: 31

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	2.84	3.19	9.26	5.76	100.00
Aaa	12.98	0.00	12.98	1.16	5.54	6.13	-0.30	-5.23
Aa1	-0.00	0.00	-0.00	0.00	8.62	1.83	0.00	0.00
A1	-0.00	0.00	-0.00	0.00	9.04	2.88	0.00	0.00
A3	0.30	0.00	0.30	0.00	0.22	1.59	-0.01	-0.11
Baa1	0.03	0.00	0.03	0.00	3.14	6.09	-0.00	-0.00
Baa2	0.03	1.00	-0.97	0.00	11.47	23.48	-0.00	-0.05
Baa3	0.68	5.99	-5.31	0.08	6.17	10.85	0.04	0.65
Ba1	0.14	6.09	-5.95	0.05	20.21	27.56	0.03	0.45
Ba2	0.94	8.78	-7.84	0.07	5.01	7.66	0.06	0.96
Ba3	0.88	9.90	-9.02	0.06	5.55	7.59	0.05	0.86
B1	1.63	12.79	-11.16	0.09	4.13	7.14	0.02	0.41
B2	2.36	15.05	-12.68	0.05	2.30	6.48	0.04	0.64
B3	1.91	8.91	-7.00	0.05	2.35	4.99	-0.08	-1.45
Caa1	0.26	3.90	-3.64	0.02	1.22	29.02	-0.12	-2.03
Caa2	0.81	3.09	-2.28	0.03	2.88	10.86	-0.08	-1.47
Caa3	-0.22	0.75	-0.96	0.02	7.44	27.17	-0.02	-0.30
Ca	1.71	0.95	0.76	0.07	2.51	24.18	0.08	1.47
C	-1.63	0.11	-1.74	-0.01	4.18	6.47	0.03	0.44
WR	2.38	20.77	-18.40	0.05	1.32	5.76	0.28	4.85
NR	0.83	0.00	0.83	-0.06	18.89	18.55	0.04	0.68
Not Rated	73.99	1.94	72.05	1.11	2.06	11.11	5.71	99.23



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APPENDICES:

- Basket Clause

- Liquidity Analysis

BASKET CLAUSE ANALYSIS

Trustee Reporting
As of 3/31/2023

Basket Limit	35.00%
Basket Consumed	23.90%
Remaining Capacity	11.10%

	Basket-Eligible Assets*				Total
	Non-Basket Assets	Non-Contributing	Contributing	Basket Assets	
FIXED INCOME	25.36%	5.03%	0.02%	6.08%	36.48%
U.S. Fixed	13.66%	4.59%	0.02%	5.61%	23.88%
Cash/Equivalent	7.26%	---	---	0.00%	7.26%
TIPS	3.04%	---	---	---	3.04%
Convertible Bonds	1.63%	0.05%	0.02%	0.10%	1.79%
OFI	0.03%	0.12%	0.00%	3.92%	4.07%
High Yield	0.70%	4.41%	0.00%	1.57%	6.67%
Bank Loans	0.00%	---	---	0.00%	0.00%
ETI Investments	0.72%	---	---	0.01%	0.73%
Core/Core Plus	0.28%	0.02%	---	0.01%	0.31%
U.S. Structured	11.70%	0.43%	---	0.47%	12.60%
Credit	4.45%	0.43%	---	0.28%	5.17%
Mortgages	3.44%	---	---	0.18%	3.63%
ST Treasury	0.03%	---	---	---	0.03%
Treasury/Agency	0.07%	---	---	---	0.07%
MT Treasury	1.41%	---	---	---	1.41%
LT Treasury	2.30%	---	---	---	2.30%
EQUITY	27.12%	18.60%	3.30%	14.51%	63.52%
Public Equity	27.11%	9.95%	3.30%	0.02%	40.39%
U.S. Equity	26.77%	1.10%	0.37%	0.00%	28.24%
EAFE	0.17%	5.59%	1.85%	0.01%	7.62%
Emerging Markets	0.17%	3.26%	1.08%	0.02%	4.53%
Alternative Investments	0.00%	8.65%	---	14.48%	23.13%
Hedge Funds	---	---	---	5.17%	5.17%
Infrastructure	0.00%	2.02%	---	0.00%	2.02%
Private RE/Core	0.00%	3.94%	---	---	3.94%
Private RE/Non-Core	---	2.69%	---	0.00%	2.69%
Private Equity	0.00%	---	---	9.32%	9.32%
TOTAL ASSETS	52.47%	23.62%	3.32%	20.58%	100.00%
	Non-Basket:	76.10%	Basket:	23.90%	

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.



AUM as of March 31, 2023

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$21,165	\$21,165	\$21,165	\$21,165
U.S.	14,778	14,778	14,778	14,778
EAFE Equity	3,735	3,735	3,735	3,735
Emerging Markets	2,651	2,651	2,651	2,651
PUBLIC FIXED INCOME	\$13,303	\$12,993	\$13,151	\$13,151
Short Term Securities	292	292	292	292
U.S. Government	1,988	1,988	1,988	1,988
Long Duration Treasury	0	0	0	0
Mortgages				
Core Mortgages	1,743	1,743	1,743	1,743
ETI	394	83	241	241
Credit - Investment Grade	3,804	3,804	3,804	3,804
Corporate - High Yield	3,489	3,489	3,489	3,489
Corporate - Bank Loans	1	1	1	1
UST - Inflation Protected	1,593	1,593	1,593	1,593
ALTERNATIVE ASSETS	\$14,185	\$1,844	\$3,506	\$3,826
Private Equity	4,874	0	0	0
Private Real Estate	3,460	0	0	0
Infrastructure	1,065	0	0	0
Opportunistic Fixed Income	2,127	1,595	2,127	2,127
Hedge Funds	2,659	249	1,379	1,699
Total Assets	\$48,653	\$36,001	\$37,822	\$38,142
Total Illiquid \$		\$12,652	\$10,831	\$10,511
Total Illiquid %		26.0%	22.3%	21.6%
Unfunded OFI Commitments	\$574			
Unfunded INF Commitments	\$609			
Unfunded PE Commitments	\$2,846			
Unfunded RE Commitments	\$1,337			
Total commitments \$	\$5,367			
Total commitments %	11.0%			



Police Liquidity Profile - Static Analysis

AUM as of March 31, 2023

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$12,652	\$10,831	\$10,511
Total Illiquid %	39.0%	33.4%	32.4%

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	\$48,653	\$36,001	\$37,822	\$38,142

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

Unfunded OFI Commitments		\$115	\$230
Unfunded INF Commitments		\$122	\$244
Unfunded PE Commitments Drawn		\$569	\$1,139
Unfunded RE Commitments Drawn		\$267	\$535
Total commitments \$		\$1,073	\$2,147
Total commitments %		2.2%	4.4%

Total Illiquid \$		\$11,905	\$12,658
Total Illiquid %		24.5%	26.0%

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 \$	\$12,652	\$11,905	\$12,658
Total Illiquid %	39.0%	36.7%	39.0%

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



Additional Assumptions

Alternative Assets Liquidation Estimates: Private Equity, Private Real Estate, and Infrastructure: assumes no liquidations in 2-year horizon; Opportunistic Fixed Income: assumes 75% immediate availability and 100% availability within one year; Hedge Funds: estimates provided by consultant.

Illiquid Ratio: Illiquid investment value for each of the three time horizons as a percentage of current AUM. The ratio is calculated under three scenarios: 1) Unadjusted estimated illiquid value to current total assets. 2) Unadjusted estimated illiquid values to current total assets after a 33% decline. 3) Estimated illiquid value after Fixed Income Stress Case to current total assets after a 33% decline.

Unfunded Commitments: Uses custodian value at month end.

Denominator Effect: Measures Illiquid Ratio for each time horizon after an assumed 33% decline in portfolio value.

Fixed Income Stress Case: Measures impact of new commitments to illiquid asset classes assuming no capital calls and a level 5-year pacing schedule.

