













NYC Teachers' Retirement System Investment Meeting (Public)

Schedule	Thursday, September 7, 2023 10:00 AM — 2:00 PM EDT
Venue	Zoom Meeting
Organizer	Wilfredo Suarez

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PUBLIC AGENDA -

Welcome and Opening

Quarterly Presentation (Public):

- Market Overview
- Performance Update
- Risk Update (if any questions)



TRS INVESTMENT MEETING

PUBLIC SESSION



September 7, 2023

US AND GLOBAL INFLATION

Fed chair warns US inflation battle not over and hints at further rate rises

Source: The Guardian

Europe's Economy Expanded in Spring, and Inflation Has Eased

Source: New York Times

Deflation: Why falling prices in China raise concerns

Source: BBC

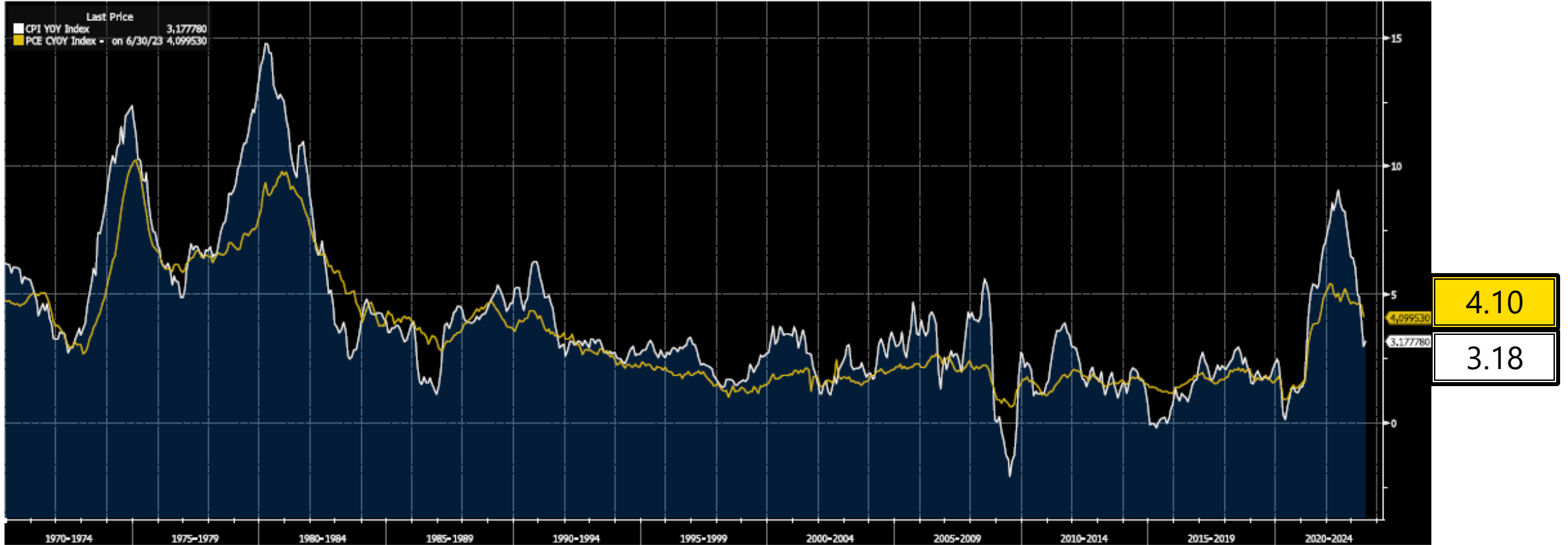


INFLATION

Inflation continues to moderate while personal consumption holds steady.

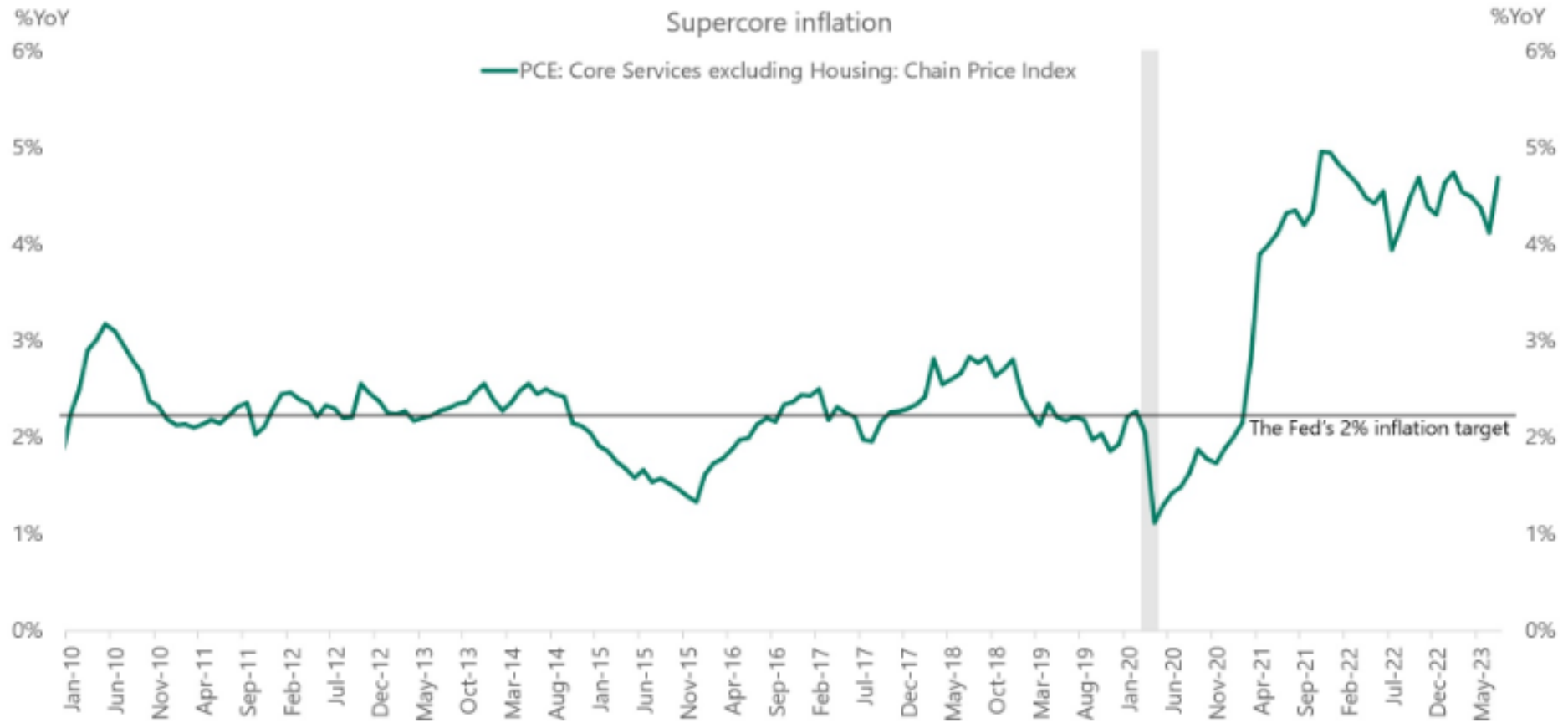
CPI YOY Index (US CPI Urban Consumers YoY NSA)

PCE CYOY Index (US Personal Consumption Expenditure Core Price Index YoY SA)



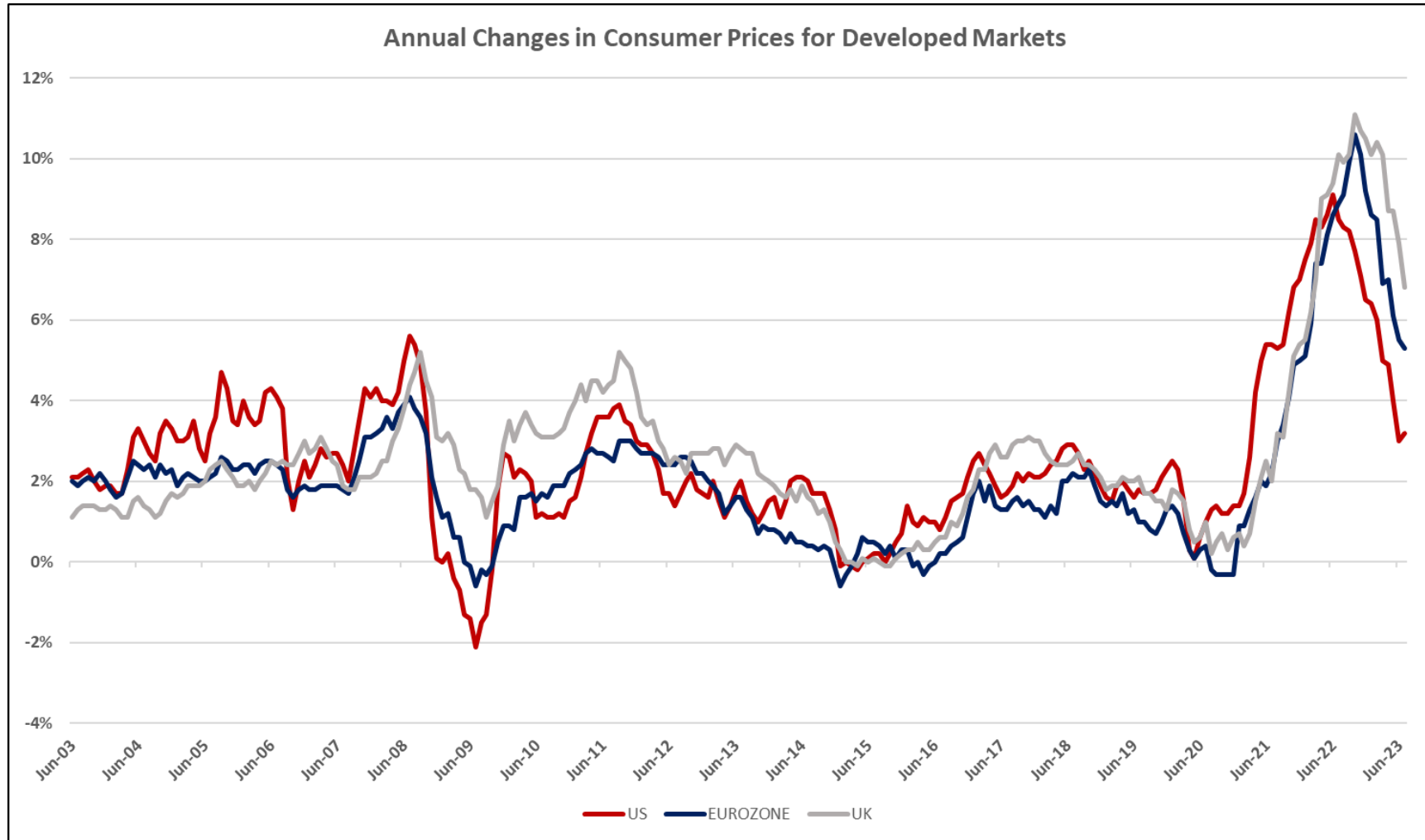
INFLATION NOT FALLING IN ALL SECTORS

Supercore inflation not moving down to the Fed's 2% inflation target



INFLATION AROUND THE WORLD

Eurozone and UK following trends in U.S.



US EMPLOYMENT

The US job market continues its cooldown, adding just 187,000 positions last month

Source: CNN

US jobs growth slowed more than forecast in July

Economy added 187,000 jobs and unemployment rate slipped to 3.5%

Source: Financial Times

Pace of U.S. Hiring Slows but Remains Solid

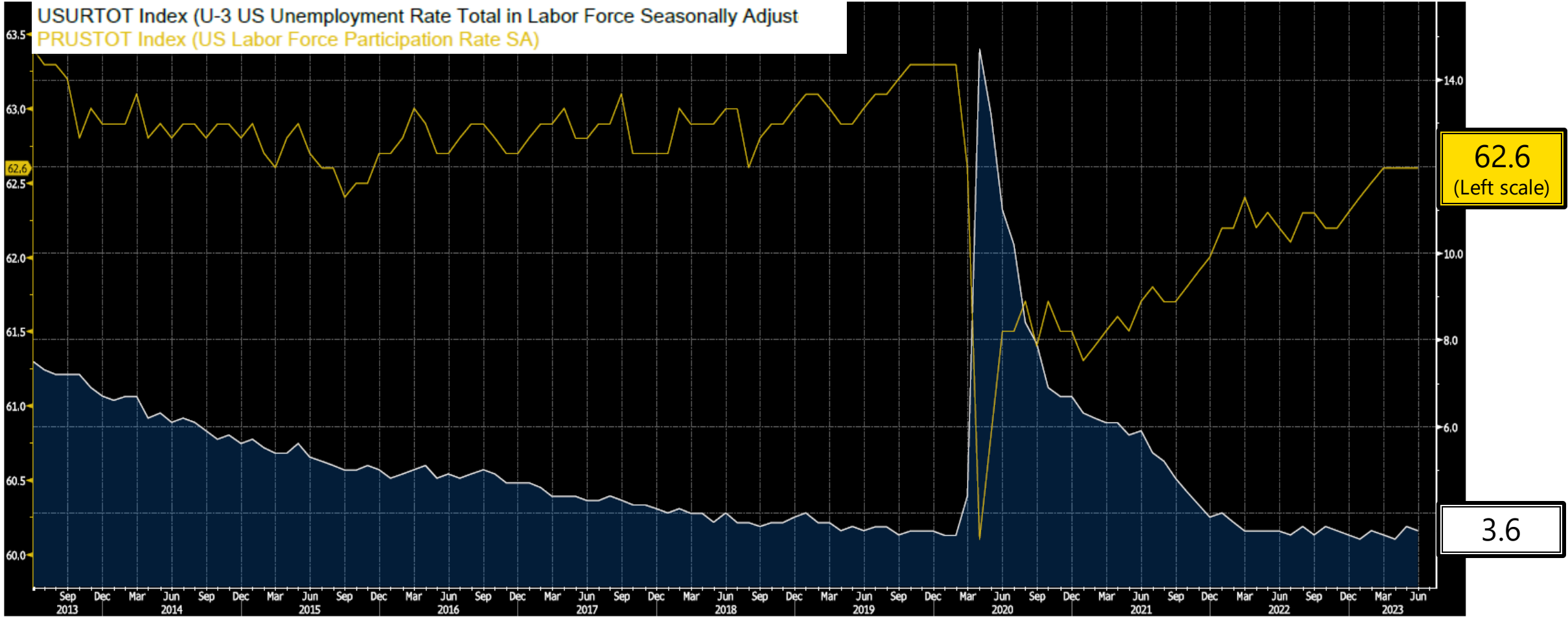
The labor market moderated in July, reflecting a cooling economy. But wages grew slightly more than expected, and are running faster than policymakers would like as they fight inflation.

Source: New York Times



UNEMPLOYMENT

Unemployment continues moderate decline and labor participation is steady.



US AND NON-US ECONOMIC GROWTH

Wall Street is hiking forecasts for economic growth

Source: Axios

Europe's economy is growing again as inflation continues to fall

Source: CNN

China's economy misses growth forecasts, raising the odds of more support for its tepid recovery

Source: AP

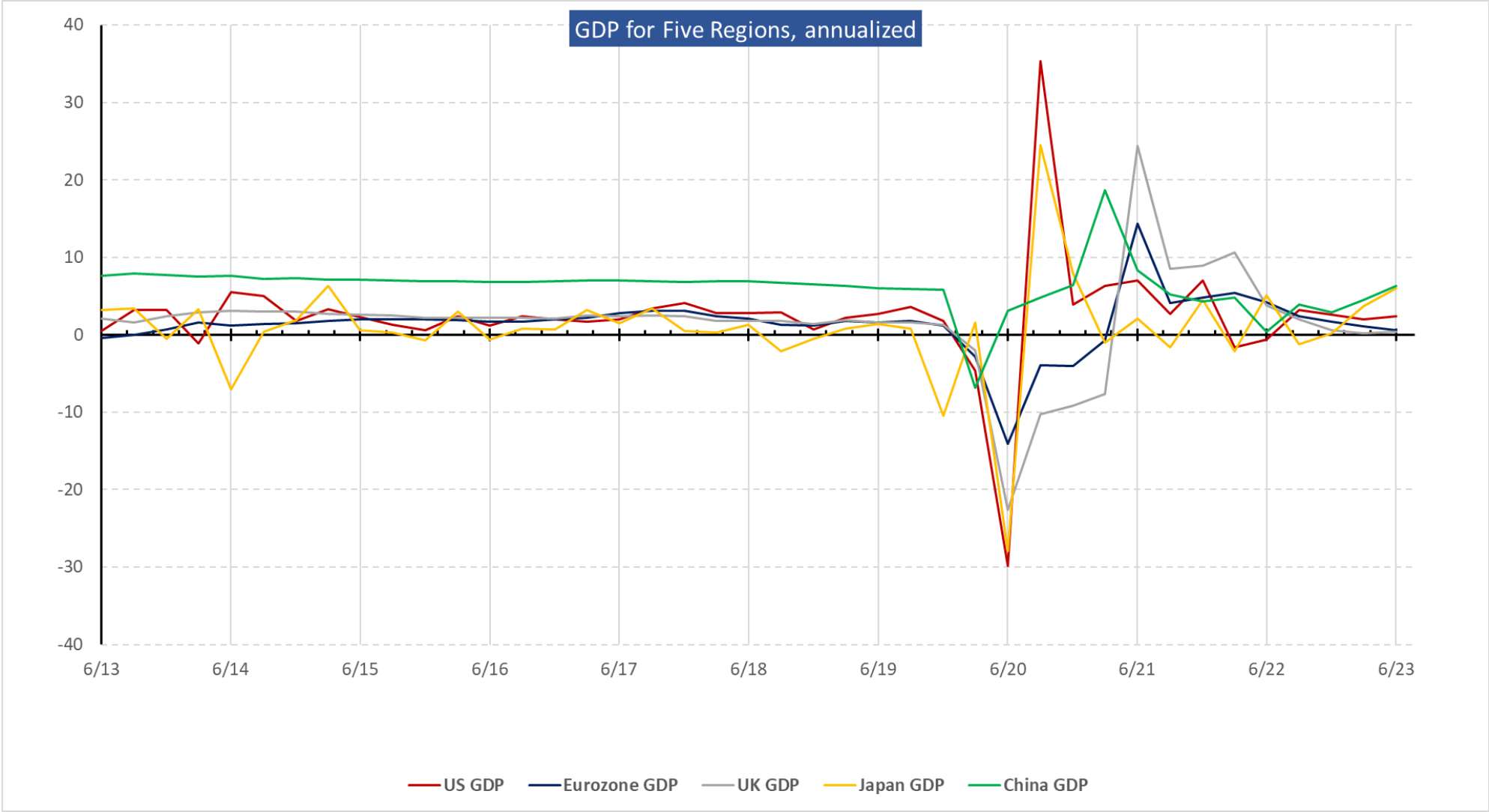
U.S. Economic Growth Accelerates, Defying Slowdown Expectations

Economy grew 2.4% last quarter, suggesting the U.S. is steering clear of recession

Source: WSJ



ECONOMIC GROWTH



US AND GLOBAL INTEREST RATES

Powell says Fed could raise interest rates further if economy, job market don't cool

Source: USA Today

Powell warns strong economy could lead to new interest rate hikes

Source: Bloomberg

Christine Lagarde vows to keep EU interest rates high 'as long as necessary' to slay the beast of inflation

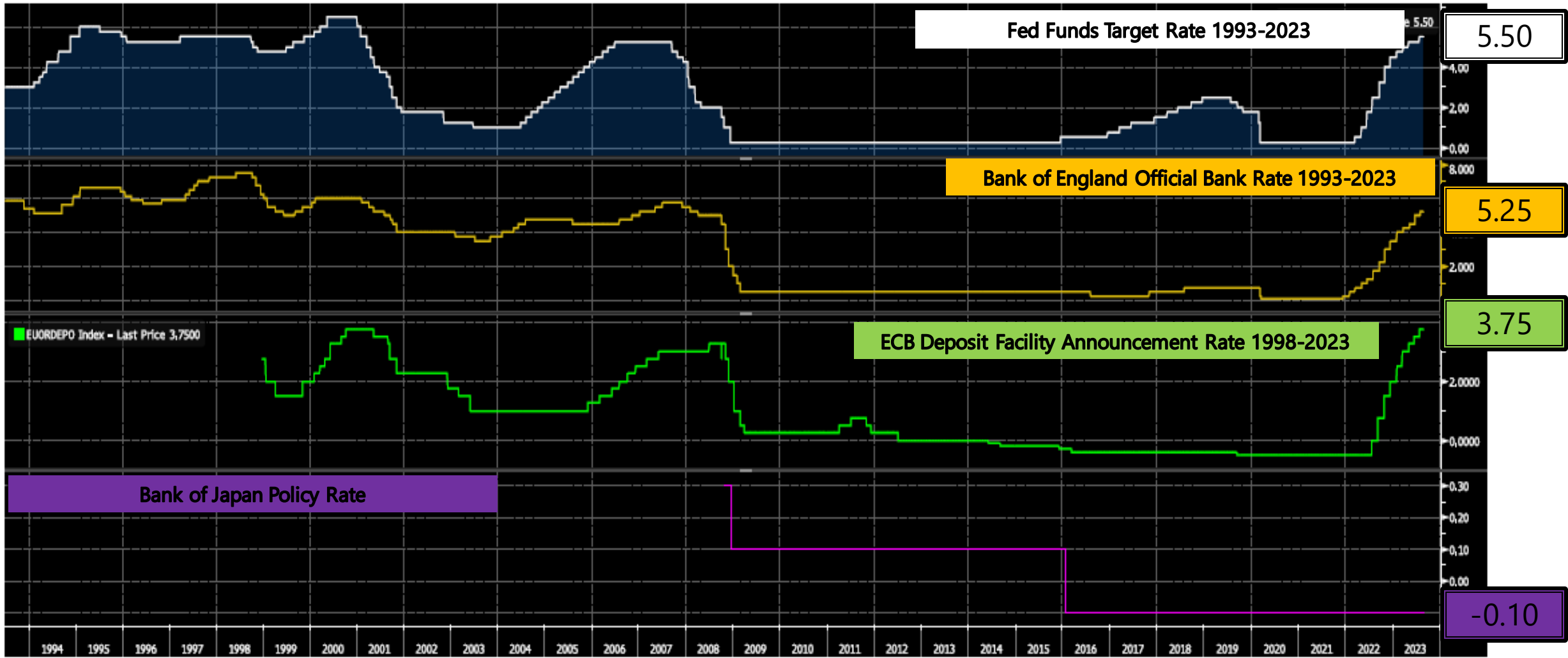
Source: Fortune

China cuts key interest rate as recovery falters

Source: BBC



GLOBAL RATE TARGETS



US CREDIT SPREADS AND US TREASURY YIELDS

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters

Treasury yields end Friday mixed after Powell signals more rate hikes ahead

Source: CNBC

Treasury Yields Hit Highest Since 2007 on Elevated Rate Fears

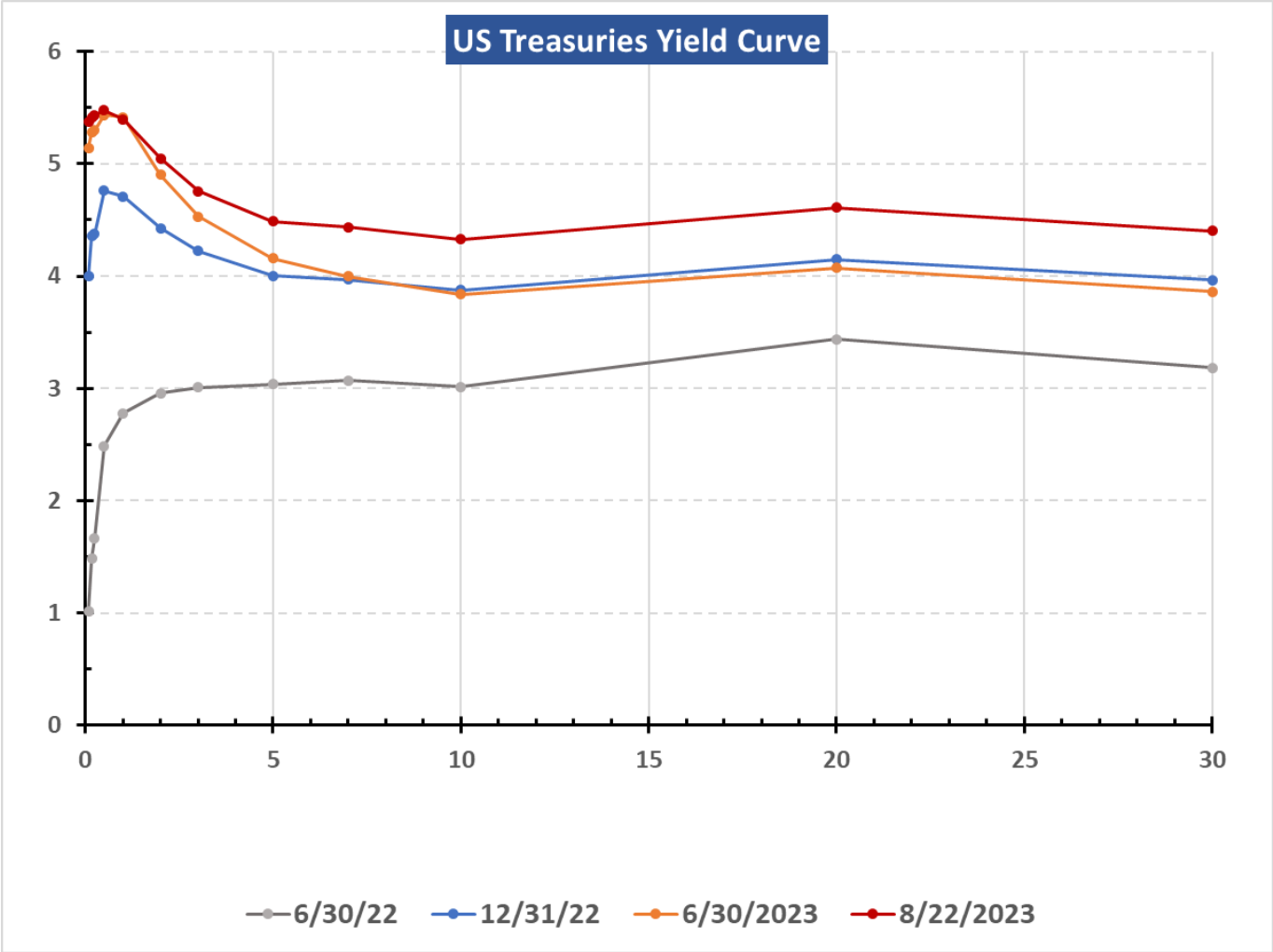
- Rising real yields reflect firmer economy and higher deficits
- 10-year yield hits 4.35%, highest level since financial crisis

Source: Bloomberg



U.S. TREASURY YIELDS AND SPREADS

The US Treasury yield curve has gone from normal to inverted over the last 18 months.



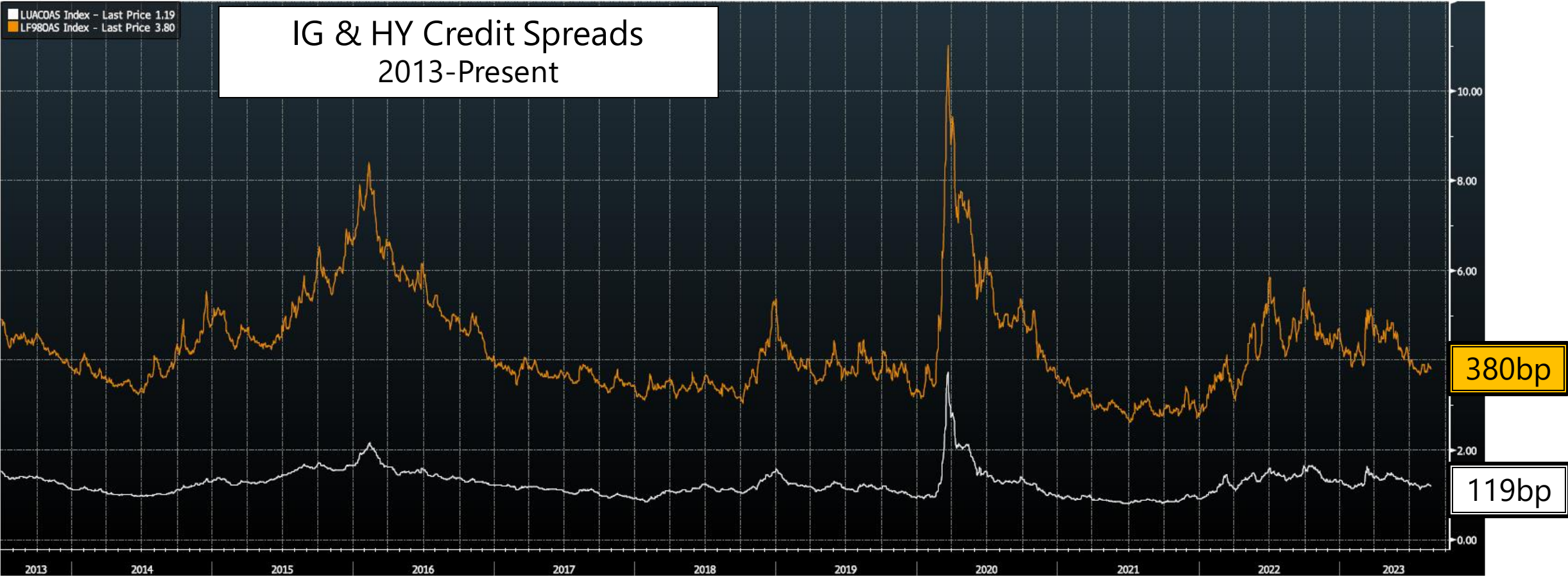
U.S. TREASURY YIELD HISTORY



10 Years Ended August 22, 2023



CREDIT SPREADS



10 Years Ended August 22, 2023



US STOCK AND BOND MARKET RETURNS

It's Been a Good Stretch for the Markets, but Not as Good as It Looks

While stocks, bonds and money market funds have generated positive returns for the year, a quirk in the calendar is creating deceptively strong performances.

Source: New York Times

The stock market has soared this year, but will it last? Experts weigh in

The Nasdaq has climbed roughly 36% this year, while the S&P 500 has jumped 18%.

Source: ABC

Analysis: Bond market's newfound economic optimism may be shortsighted

Source: Reuters



PUBLIC MARKET RETURNS, Q2-2023

Asset Class	Index	Q2-23	1 Year	3Year	5 Year	Expected*
Equities - U.S.	Russell 3000	8.39%	18.95%	13.89%	11.39%	5.80%
Equities - Developed Intl	MSCI World ex USA IMI Net	2.67%	16.35%	8.87%	4.17%	6.80%
Equities - Emerging Intl	MSCI EMERGING MARKETS	0.90%	1.75%	2.32%	0.93%	8.30%
Debt - US Govt Long Duration	FTSE Treasury 10+	-2.30%	-7.50%	-12.10%	-0.89%	2.65%
Debt - US Government	NYC Treas/Agency +5	-1.94%	-4.60%	-8.19%	0.00%	2.60%
Debt - Investment Grade	Bloomberg U.S. Corporate IG	-0.29%	1.55%	-3.43%	1.62%	3.60%
Debt - High Yield	Bloomberg U.S. HY -2% Issuer Cap	1.75%	9.07%	3.12%	3.34%	4.80%

*Average of consultant long-term arithmetic expected market returns as of 1H '20



WORLD EQUITY MARKETS

World Equity Indices						
Index	%Ytd	%YtdCur	P/E	Est FY1	Est FY2	DvYld
Americas						
DOW JONES	+4.41%	+4.41%	21.27	18.76	16.00	2.08
S&P 500	+15.37%	+15.37%	22.07	20.00	17.93	1.57
NASDAQ	+30.99%	+30.99%	48.51	28.89	23.19	0.80
S&P/TSX Comp	+3.16%	+2.93%	15.15	14.19	12.82	3.37
S&P/BMV IPC	+10.66%	+28.94%	13.86	12.64	11.03	3.63
IBOVESPA	+5.96%	+14.39%	7.92	8.43	7.78	5.29
EMEA						
Euro Stoxx 50	+13.12%	+14.18%	13.75	11.93	11.31	3.51
FTSE 100	-1.52%	+2.57%	11.25	10.55	10.03	4.17
CAC 40	+13.16%	+14.22%	13.84	12.34	11.75	3.21
DAX	+13.32%	+14.39%	16.00	11.36	10.39	3.70
IBEX 35	+15.45%	+16.54%	11.54	10.44	10.23	4.03
FTSE MIB	+20.45%	+21.58%	8.71	7.88	7.83	4.48
OMX STKH30	+6.39%	+0.89%	15.99	13.92	13.56	3.39
SWISS MKT	+2.91%	+7.56%	20.50	16.86	15.30	3.11
Asia/Pacific						
NIKKEI	+23.28%	+10.26%	17.90	18.36	16.84	1.90
HANG SENG	-8.34%	-8.86%	6.14	9.11	8.30	3.89
CSI 300	-3.07%	-8.31%	13.87	12.13	10.42	2.59
S&P/ASX 200	+1.72%	-4.12%	17.13	15.40	14.70	4.58



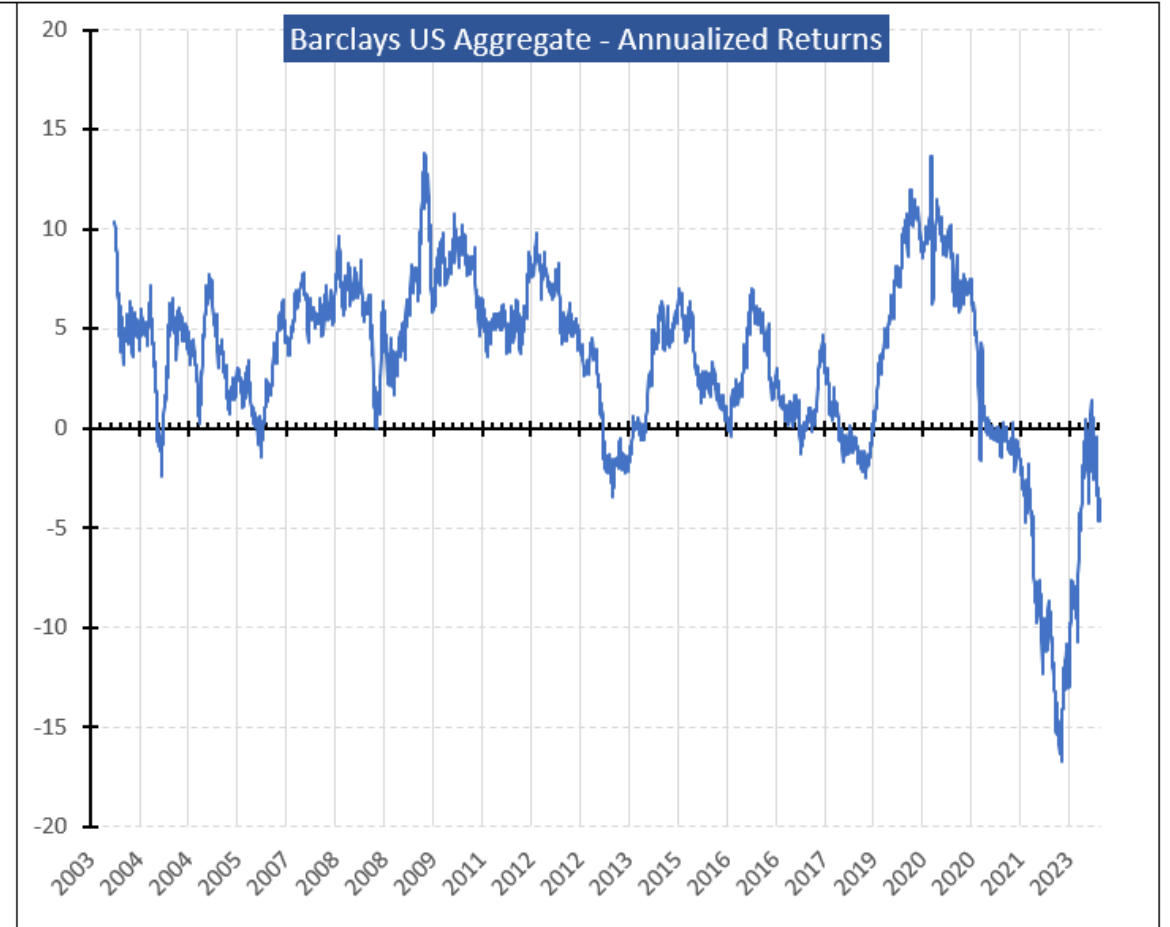
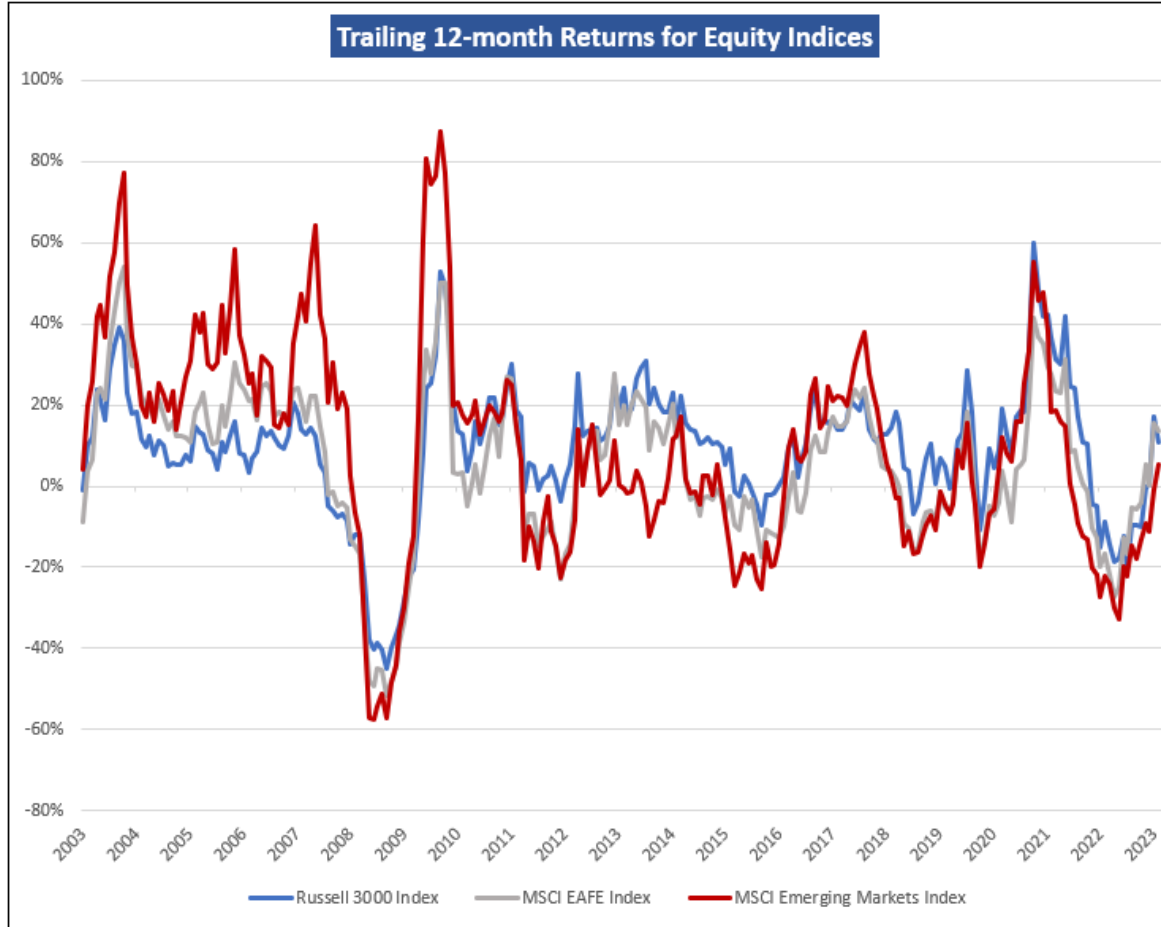
WORLD BOND MARKETS

World Bond Markets									
Maturity	10 Year				Data Range	YTD			
Region	RMI	Security		Yld	Low	Range	High	YTD Chg	
					◆ Avg ● Now				
1) Americas									
10) United States	☐	T 3 ⁷ / ₈ 08/33	⌵	4.216	3.305	◆ ●	4.338	+34.1	
11) Canada	☐	CAN2 ³ / ₄ 06/33	⌵	3.679	2.720	◆ ●	3.810	+38.2	
12) Brazil (USD)	☐	BRAZIL6 10/33	⌵	6.448	5.675	◆ ●	6.609	+36.5	
13) Argentina (USD)	☐	ARGENT8.28 33	⌵	0.000					
14) Mexico (USD)	☐	MEX3 ¹ / ₂ 02/34	⌵	5.797	5.078	◆ ●	5.978	-8.4	
2) EMEA									
20) United Kingdom	☐	UKT3 ¹ / ₄ 01/33	⌵	4.436	3.000	◆ ●	4.739	+77.9	
21) France	☐	FRTR 3 05/33	⌵	3.090	2.441	◆ ●	3.246	-.6	
22) Germany	☐	DBR 2.6 08/33	⌵	2.567	2.010	◆ ●	2.741	+.9	
23) Italy	☐	BTPS 4.35 33	⌵	4.229	3.746	◆ ●	4.601	-45.2	
24) Spain	☐	SPGB 3.55 33	⌵	3.586	2.950	◆ ●	3.751	-4.9	
25) Portugal	☐	PGB1.65 07/32	⌵	3.247	2.849	◆ ●	3.605	-32.6	
26) Sweden	☐	SGB1 ³ / ₄ 11/33	⌵	2.796	1.792	◆ ●	2.861	+48.1	
27) Netherlands	☐	NETHER2 ¹ / ₂ 33	⌵	2.903	2.259	◆ ●	3.087	+3.2	
28) Switzerland	☐	SWISS 3 ¹ / ₂ 33	⌵	0.918	.760	◆ ●	1.491	-62.6	
29) Greece	☐	GGB4 ¹ / ₄ 06/33	⌵	3.867	3.501	◆ ●	4.556	-63.8	
3) Asia/Pacific									
30) Japan	☐	JGB 0.4 06/33	⌵	0.658	.160	◆ ●	.663	+25.4	
31) Australia	☐	ACGB 3 11/33	⌵	4.137	3.180	◆ ●	4.319	+9.2	
32) New Zealand	☐	NZGB 3 ¹ / ₂ 33	⌵	4.995	3.895	◆ ●	5.124	+56.3	
33) South Korea	☐	KTB3 ¹ / ₄ 06/33	⌵	3.845	3.138	◆ ●	3.977	+31.3	
34) China	☐	CGB2.67 05/33	⌵	2.577	2.534	◆ ●	2.919	-25.3	



MARKET RETURNS

Trailing 12-month returns over the last 20 years



RECENT NEWS

Fitch downgrades US debt on debt ceiling drama and governance worries

Source: CNN

Fitch cuts US credit rating to AA+; Treasury calls it 'arbitrary'

Source: The Reuters

Germany plans to double AI funding in race with China, U.S.

Source: Reuters

AI Won't Supercharge the US Economy

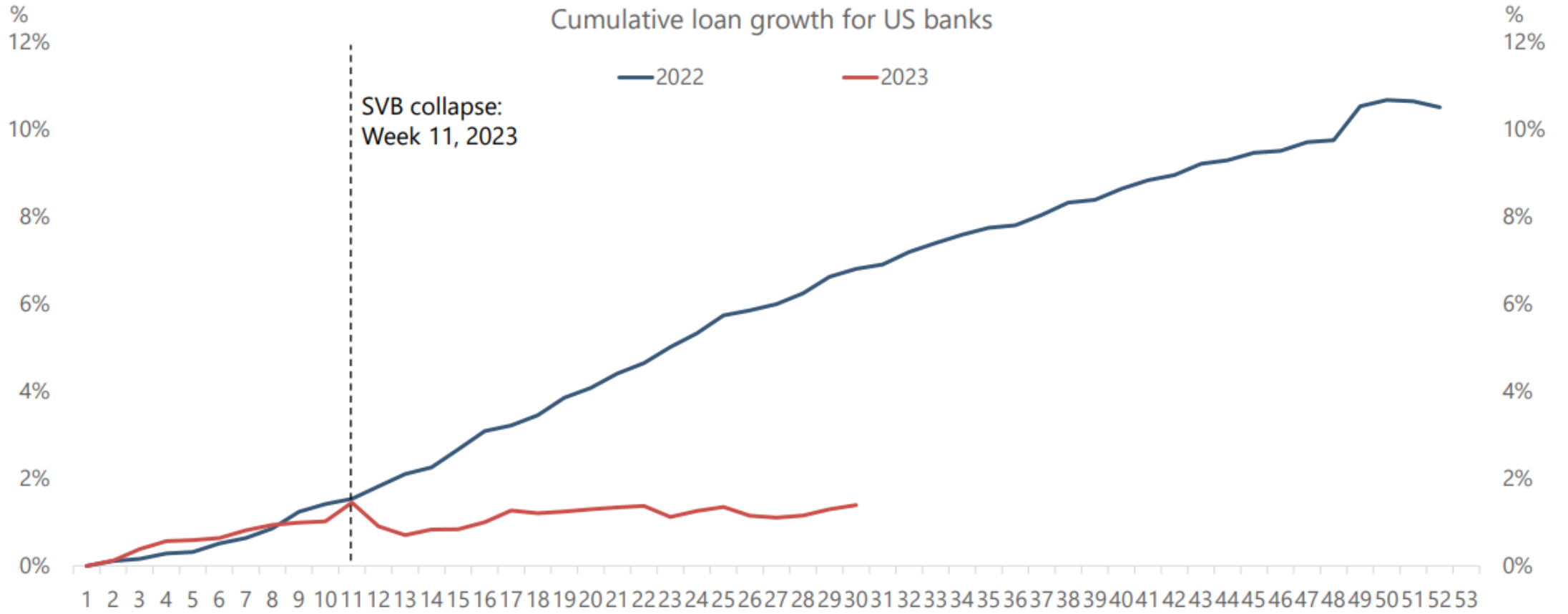
The technology will probably provide only a small boost to economic growth, but it could still have a significant impact in the long run.

Source: Bloomberg



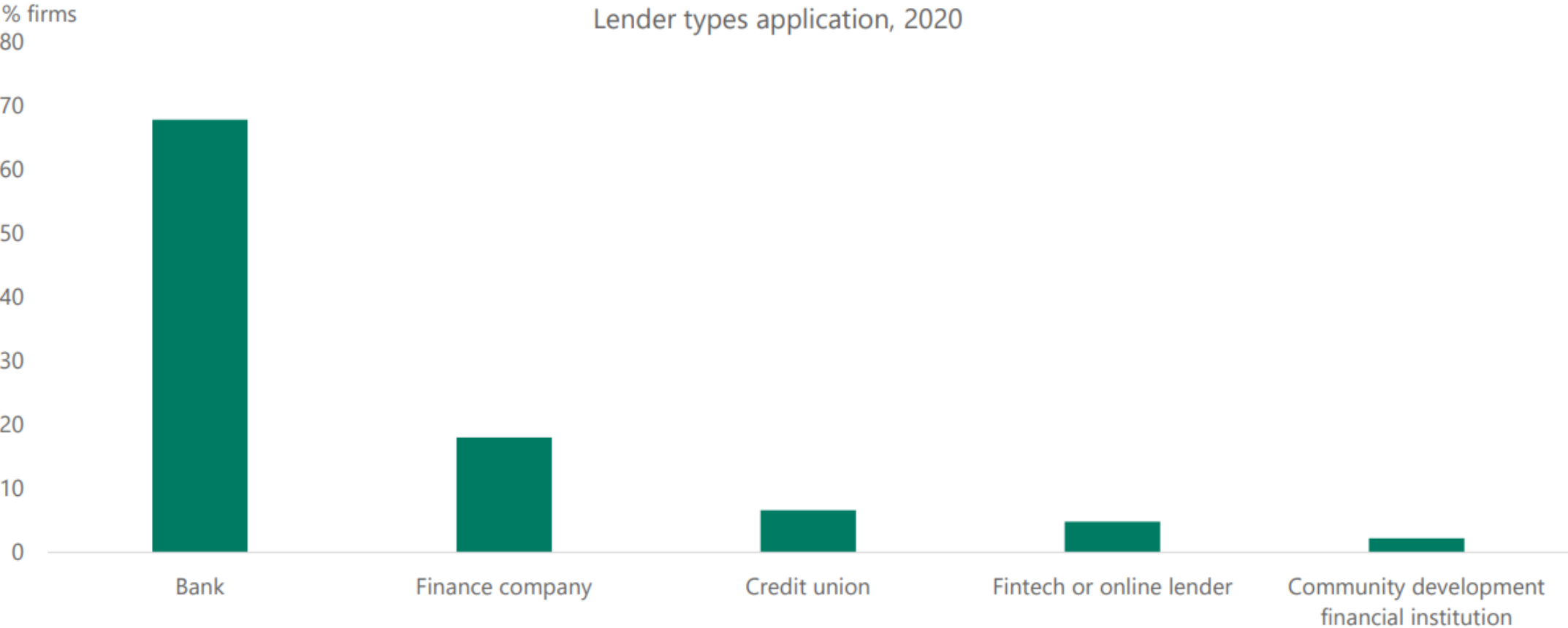
FOOD FOR THOUGHT

SVB having a permanent effect



FOOD FOR THOUGHT

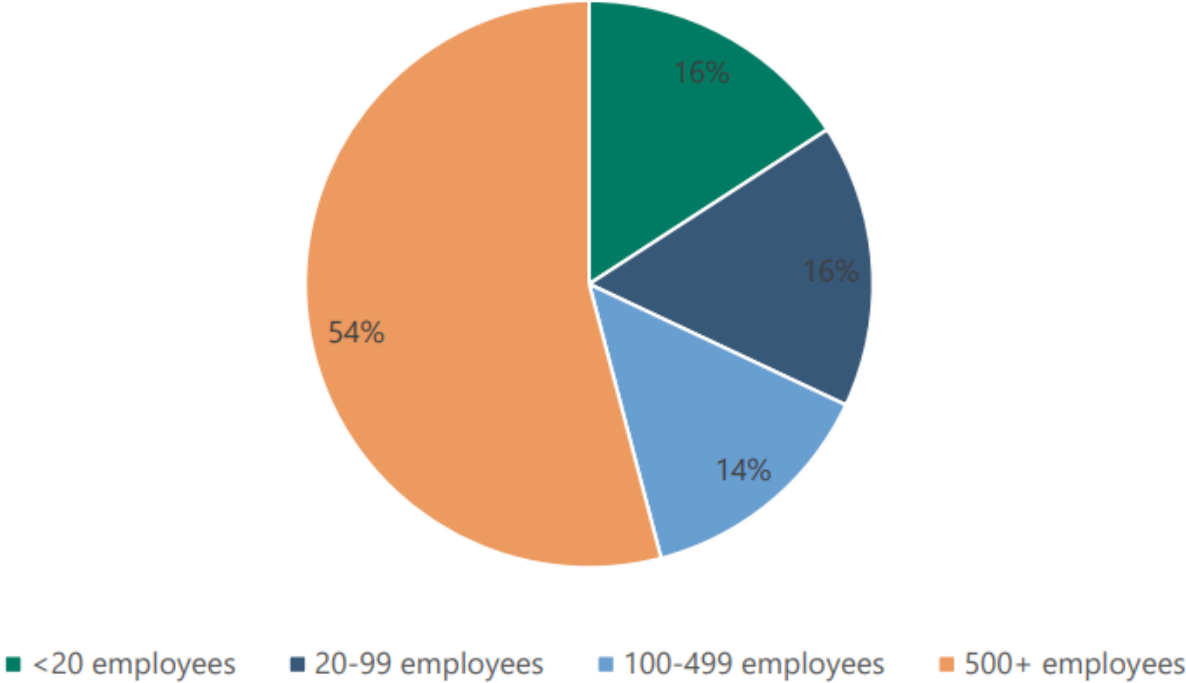
Banks are the most important source of financing for small businesses



FOOD FOR THOUGHT

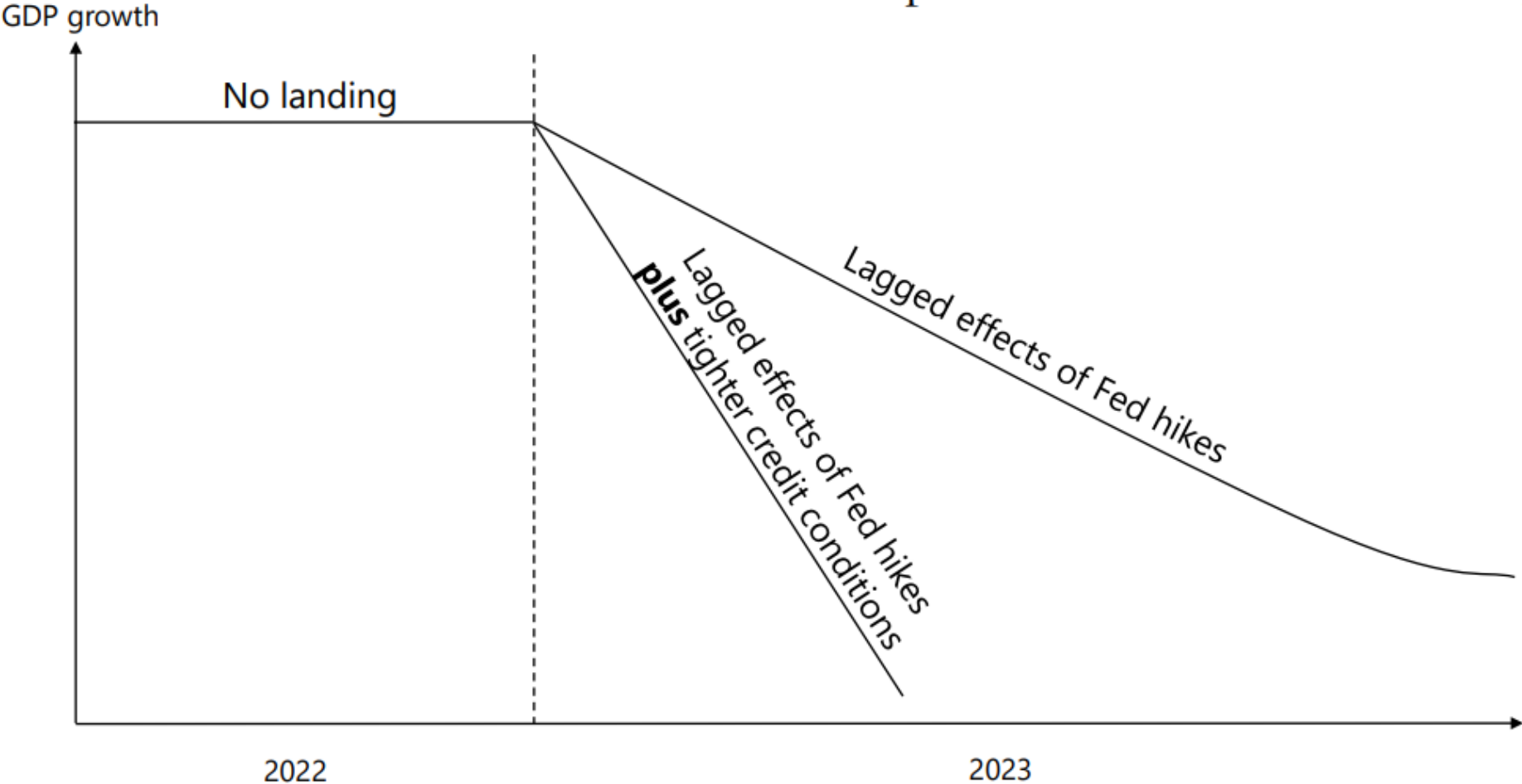
Half of US employment is in firms with fewer than 500 employees

Share of total employment by employment size of the firm, 2020



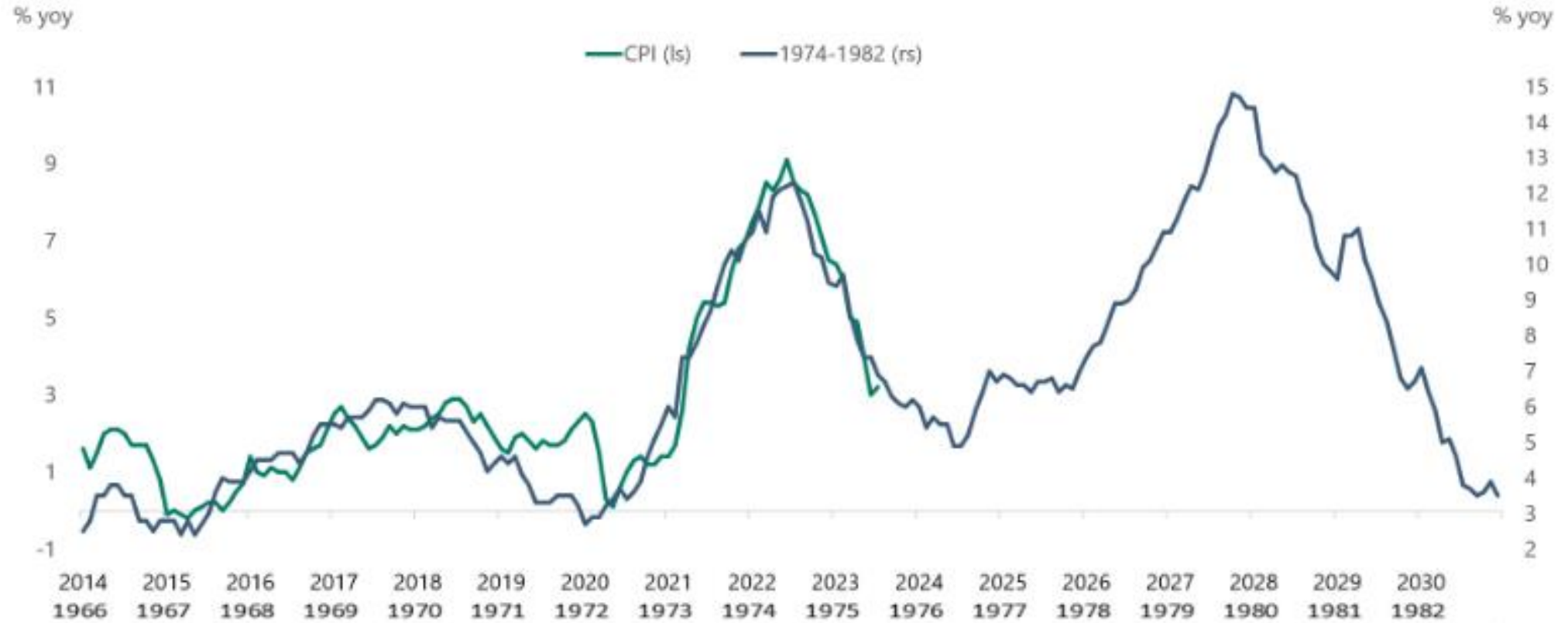
FOOD FOR THOUGHT

Lagged effects of Fed hikes combined with tighter credit conditions will create a sharper slowdown in the economy



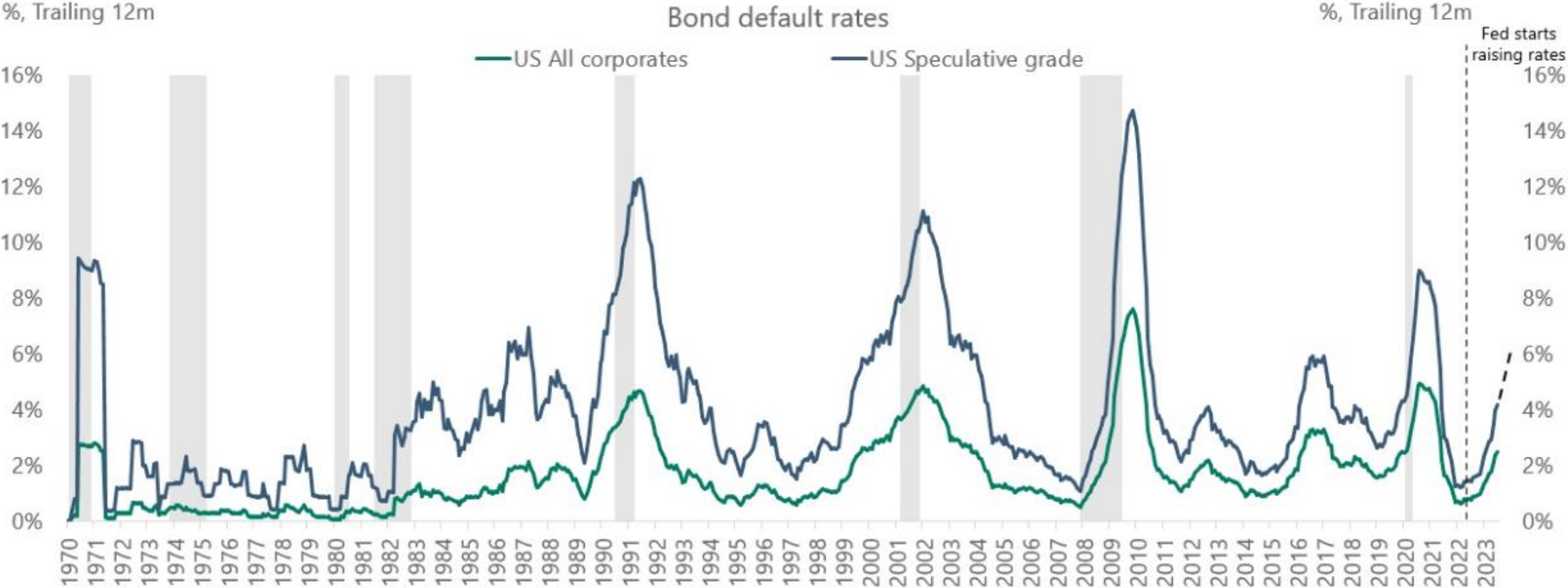
FOOD FOR THOUGHT

Inflation: Today vs 1970s



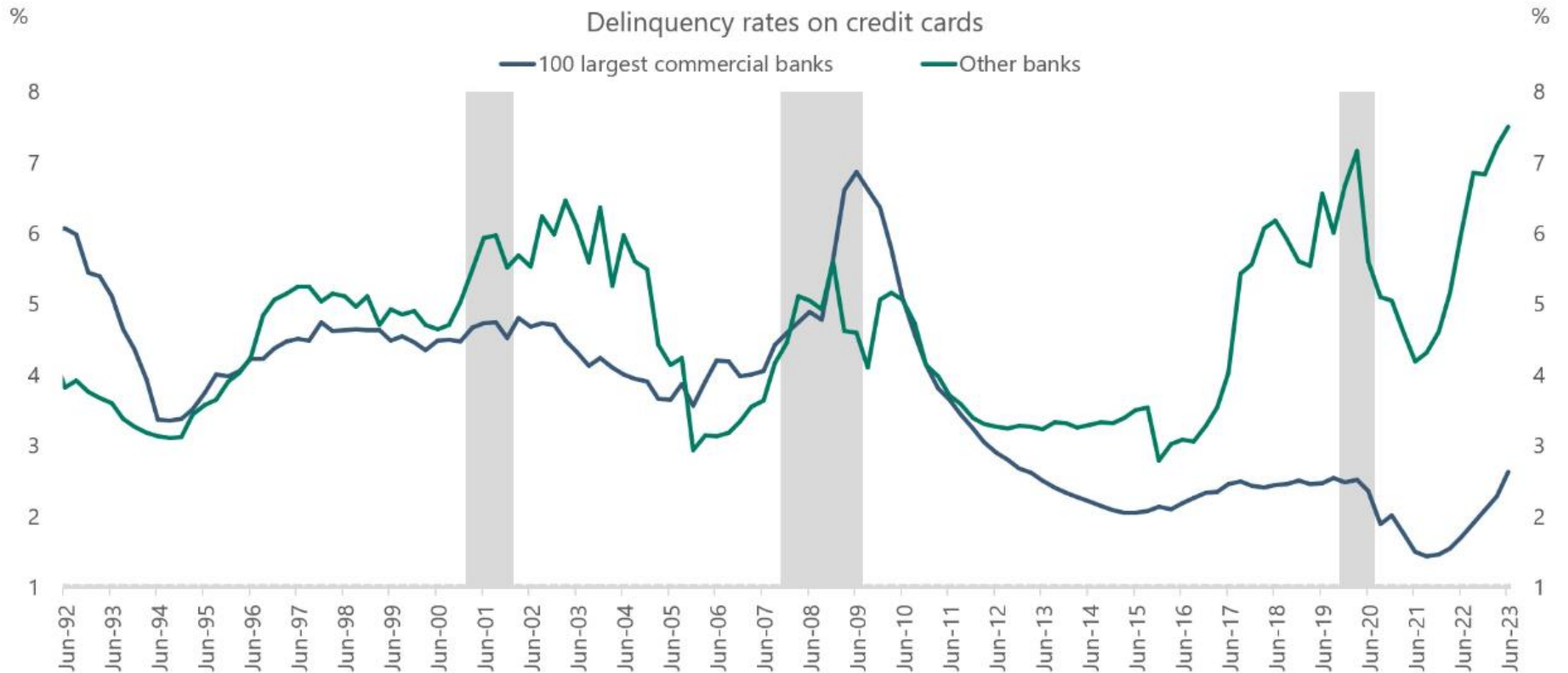
FOOD FOR THOUGHT

A default cycle has started, and markets are not paying attention



FOOD FOR THOUGHT

Credit card delinquency rates much higher for small banks



TRS PERFORMANCE REPORTING Q2-2023

TRS NET PLAN RETURNS AS OF 6/30/23

Aggregate Performance	3 Month	1 Year	3 Year	5 Year
TRS Total Plan	2.9	7.8	6.7	6.5
TRS Policy Return	2.9	6.8	6.2	6.3
Public Market Equivalent 65/35 Portfolio	4.0	11.9	6.6	6.4
Median Fund TUCS	2.8	7.7	9.7	7.7

Source: SSB



TRS NET PUBLIC MARKET RETURNS BY STRATEGY Page 34 of 277

AS OF 6/30/23

Investment Strategy	AUM				
	(\$ Millions)	3 Month	1 Year	3 Year	5 Year
U.S. Equity	25,082	8.6	18.7	13.3	11.2
World ex-U.S.	8,526	3.2	20.8	8.3	5.2
Emerging Markets	8,791	3.0	6.9	4.2	1.7
Core Fixed Income	22,806	(0.9)	(1.0)	(4.6)	1.7
TIPS	3,161	(1.4)	(1.4)	(0.1)	2.5
High Yield	4,858	1.6	8.8	3.6	3.7
ETI	628	(1.2)	(0.7)	(3.1)	1.3
Cash	458	1.5	4.1	1.6	2.2

Source: State Street



TRS PUBLIC MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	3 Month Excess	1 Year Excess	3 Year Excess	5 Year Excess
U.S. Equity	Russell 3000	17	(23)	(57)	(19)
World ex-U.S.	MSCI World ex-U.S. IMI	53	444	(60)	102
Emerging Markets	MSCI Emerging Markets	214	518	187	29
Core Fixed Income	NYC Custom Structured Index	4	15	11	(87)
TIPS	BB Global Inflation Linked TIPS	(3)	(0)	(3)	0
High Yield	NYC Custom High Yield Benchmark	(13)	(25)	43	39
ETI	NYC Custom ETI Benchmark	(56)	3	29	51
Total TRS	TRS Policy Benchmark	(8)	95	44	13



TRS NET PRIVATE MANAGER RETURNS BY STRATEGY AS OF 6/30/23

Investment Strategy	1 Year	3 Year	5 Year	10 Year	Since Inception
Private Equity	(0.5)	23.5	16.4	14.1	11.8
Private Real Estate Core	(2.8)	9.9	7.7	9.2	7.6
Private Real Estate Non-Core (Opp.)	(0.4)	13.0	9.3	11.2	12.1
Infrastructure	8.1	13.8	11.5	n/a	12.1
Opportunistic Fixed*	6.4	10.1	7.0	6.7	7.2

Returns for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: Hamilton Lane, State Street, StepStone Group



TRS PRIVATE MARKETS EXCESS RETURNS IN BP AS OF 6/30/23

Investment Strategy	Benchmark	1 Year Excess	3 Year Excess	5 Year Excess	10 Year Excess	Since Inception Excess
Private Equity	Russell 3000	701	580	617	234	138
Private Real Estate Core	NCREIF ODCE Net	110	240	110	70	210
Private Real Estate Non-Core (Opp.)	NCREIF ODCE Net	350	550	270	270	660
Infrastructure	5-year Rolling CPI +400bp	15	594	364	n/a	419
Opportunistic Fixed*	50% JPM Gbl HY/50% CS Levered Loan	(314)	483	276	220	183

Returns vs. benchmark for periods ended March 31, 2023, unless otherwise noted.

* Returns through June 30, 2023.

Source: Hamilton Lane, State Street, StepStone Group



TRS SUMMARY OF REBALANCING ACTIVITIES

- Activities between April 1, 2023 and June 30, 2023

From		Amount (\$MM)	To		Amount (\$MM)
World ex USA	Large & Mid Cap	435	Cash Desk		540
	Small Cap	30	Fixed Income	Long Term Treasury	400
US Equity	Large & Mid Cap	360		Short Term Treasury	300
	Large Cap	250		Intermediate Term Treasury	200
	Small Cap	90		Credit	150
Fixed Income	Intermediate Term Treasury	500		Mortgages	150
	Short Term Treasury	75			
Total Outflow		1,740	Total Inflow		1,740



RISK MANAGEMENT

QUARTERLY REVIEW

TRS: TOTAL PLAN SUMMARY

Summary	1. Market Portfolio		2. Policy Benchmark		3. TRS	
	Q2 '23	Change	Q2 '23	Change	Q2 '23	Change
Portfolio Construction						
Equity Allocation	60.0%	+0.0%	62.5%	+0.0%	62.9%	+0.4%
Interest Rates Duration (*)	2.5	-0.03	1.9	-0.03	1.9	-0.02
Credit Spread Duration (*)	1.5	-0.01	1.1	-0.01	0.9	-0.00
Portfolio Risks						
Total Risk	10.9%	-0.6%	10.6%	-0.6%	11.6%	-0.7%
Active Risk	n/a	n/a	n/a	n/a	1.9%	-0.1%
Beta to S&P 500	0.57	-0.00	0.56	-0.00	0.60	-0.01

Notes

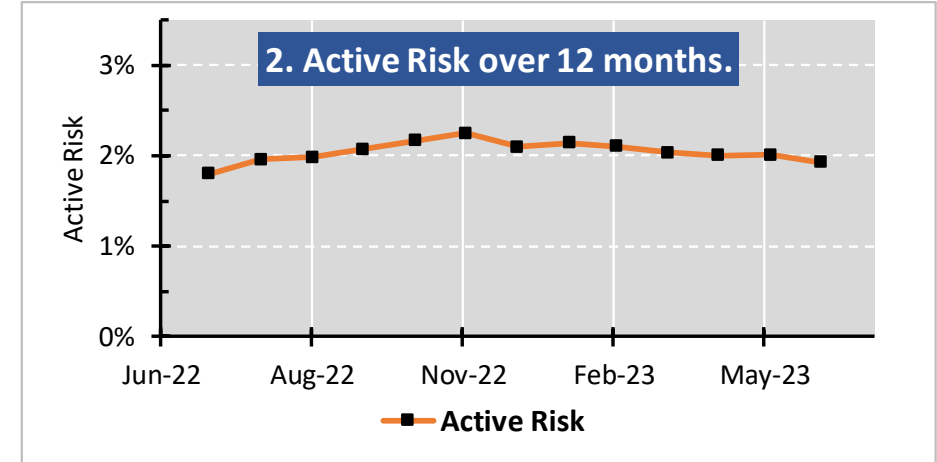
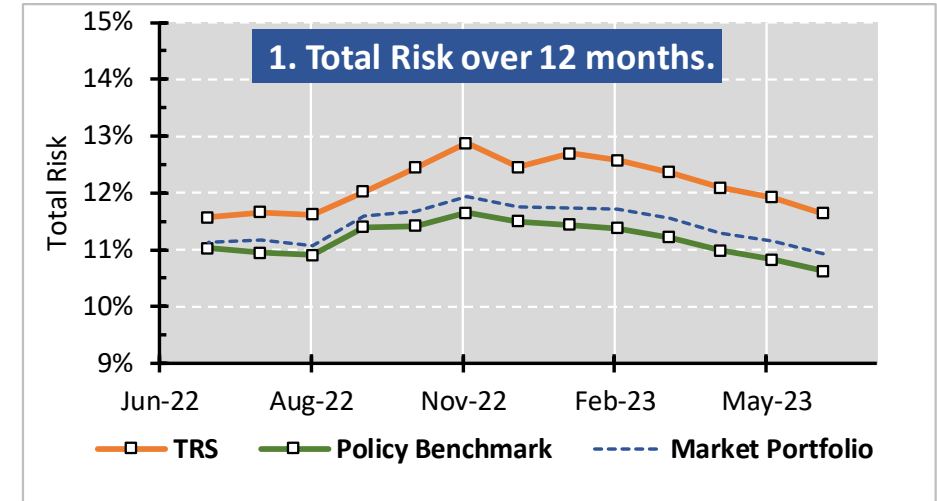
(*) - Public Markets Only

Market Portfolio:

60% MSCI ACWI + 40% Barclays US Agg

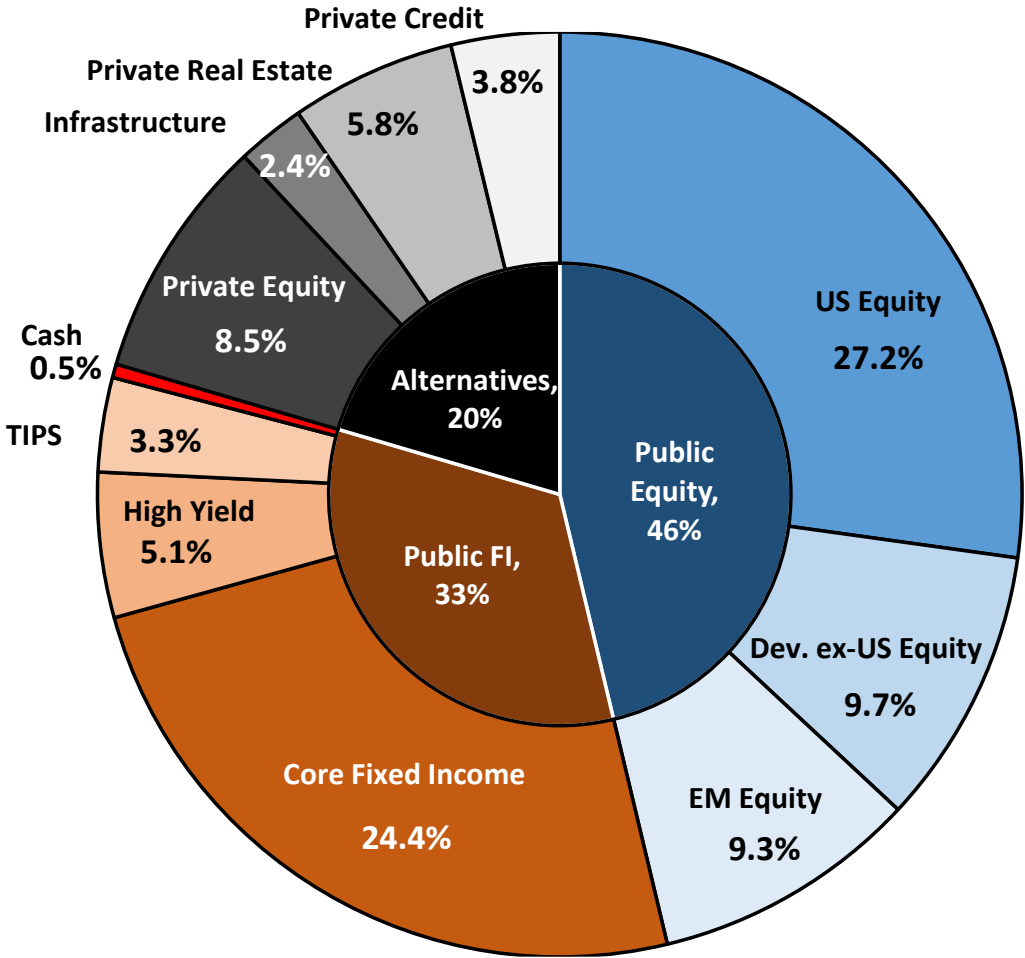
Policy Benchmark:

25% US Equity + 10% Developed Equity + 9.5% EM Equity + 25% Core FI + 4.5% HY + 3% Inflation Linked Bonds + 7% Private Equity + 3% RE Core + 4% RE Opportunistic + 4% Infrastructure + 5% Private Credit

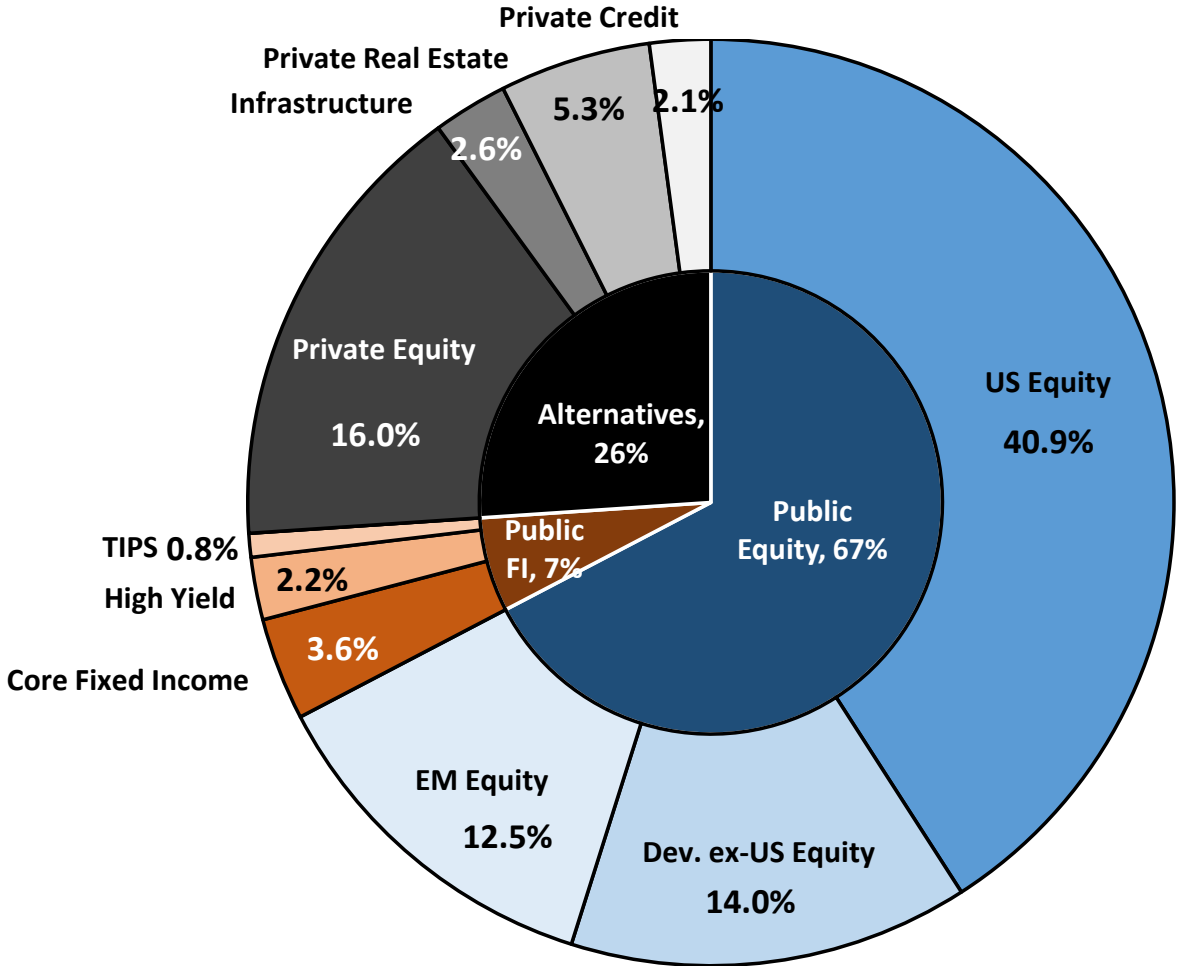


TRS: TWO VIEWS OF ALLOCATION

1. Asset Allocation

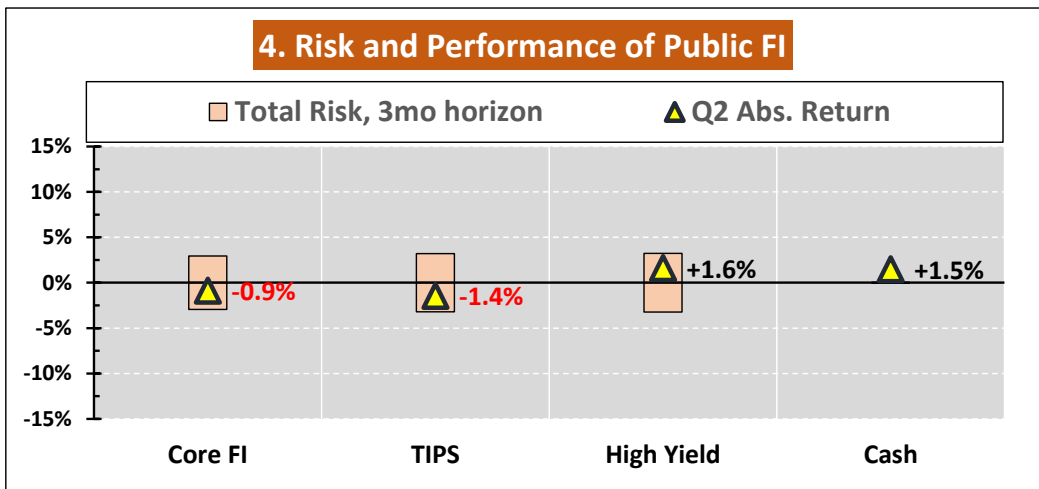
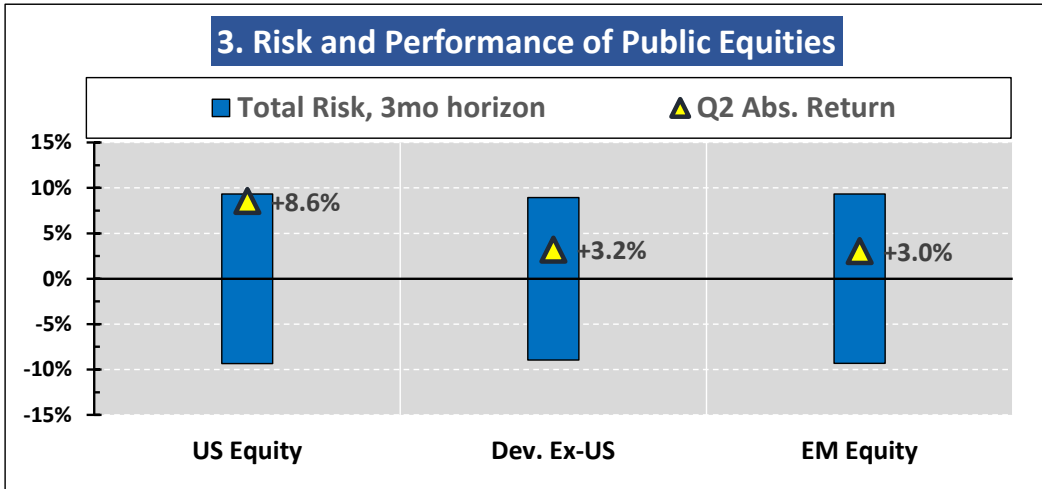
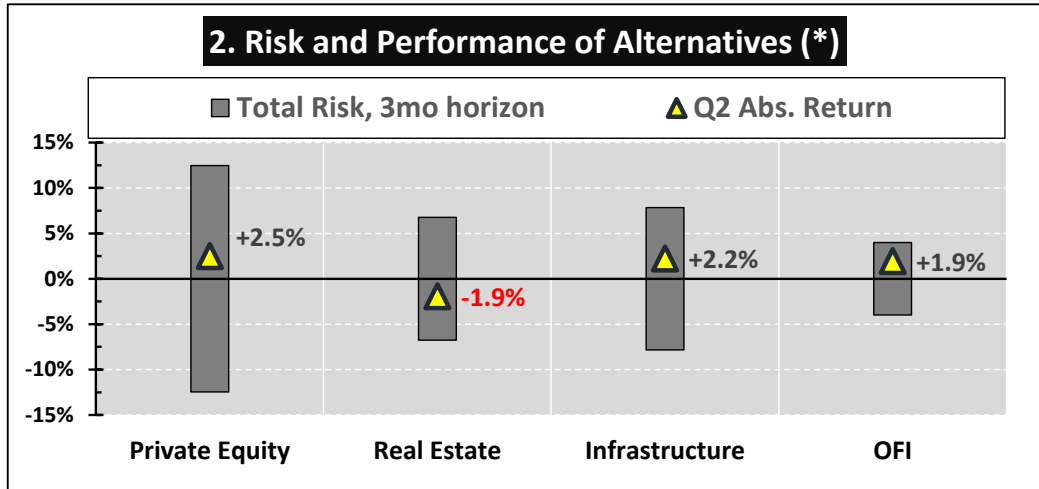
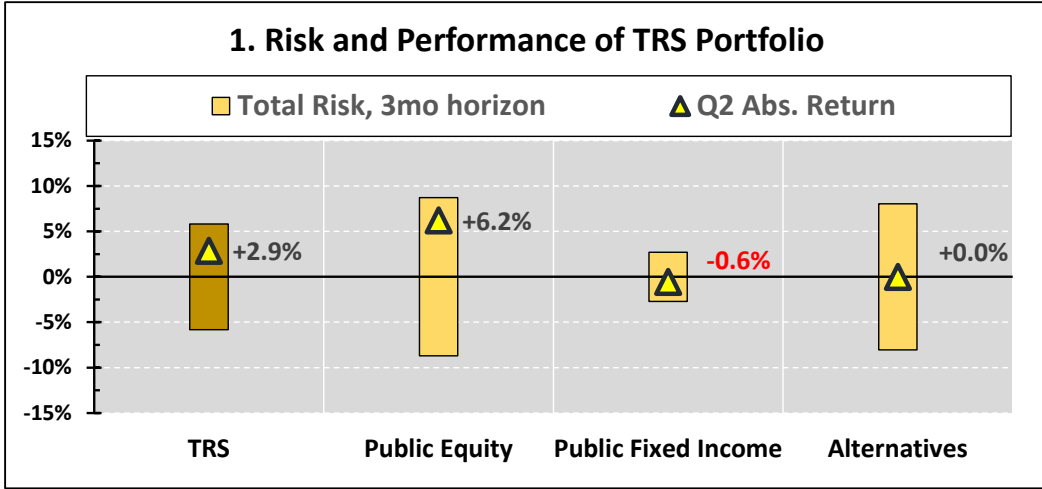


2. Risk Allocation



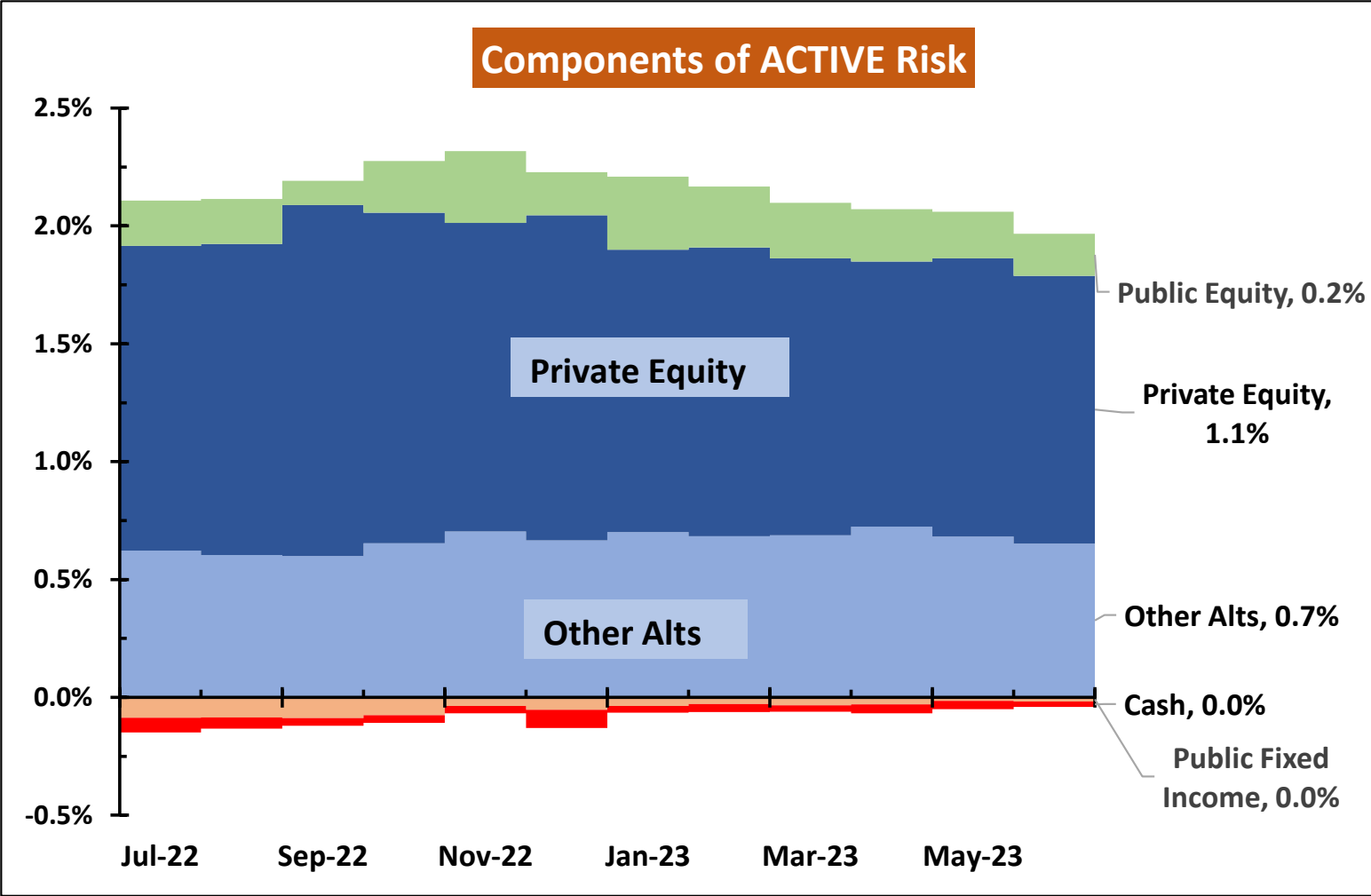
TRS: TOTAL RISK AND RETURN

How does 3mo Total Risk forecast compare to the Q2 Total Returns?



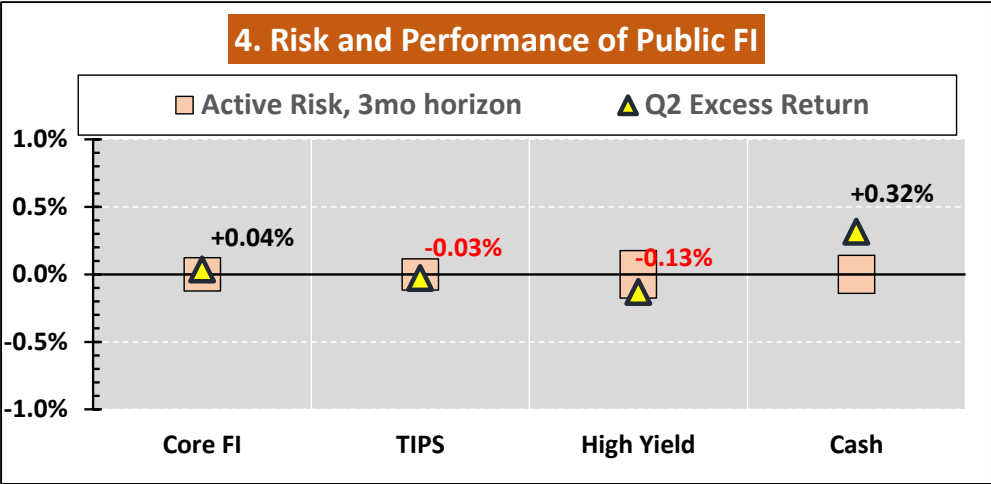
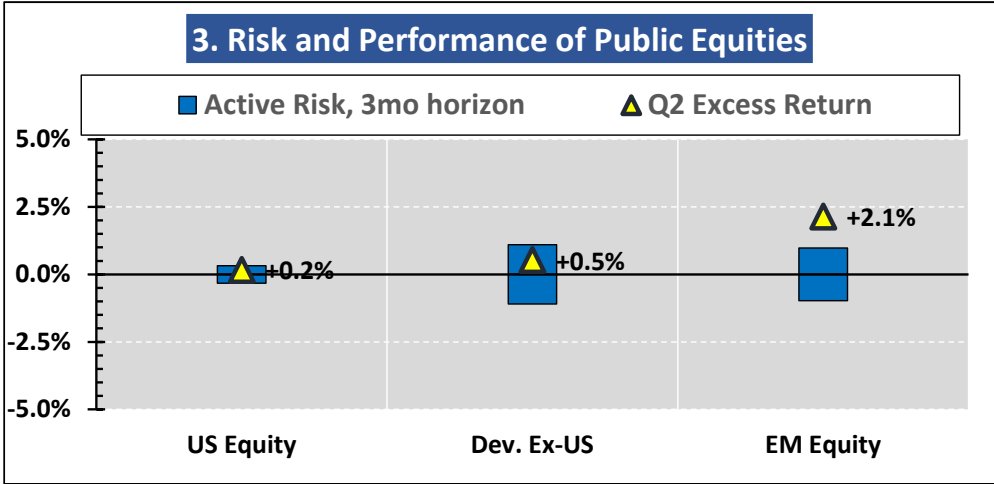
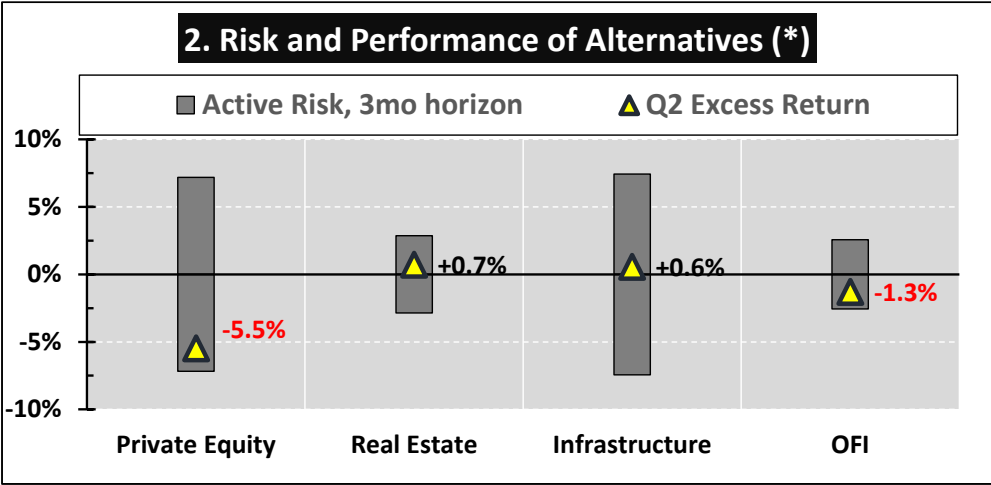
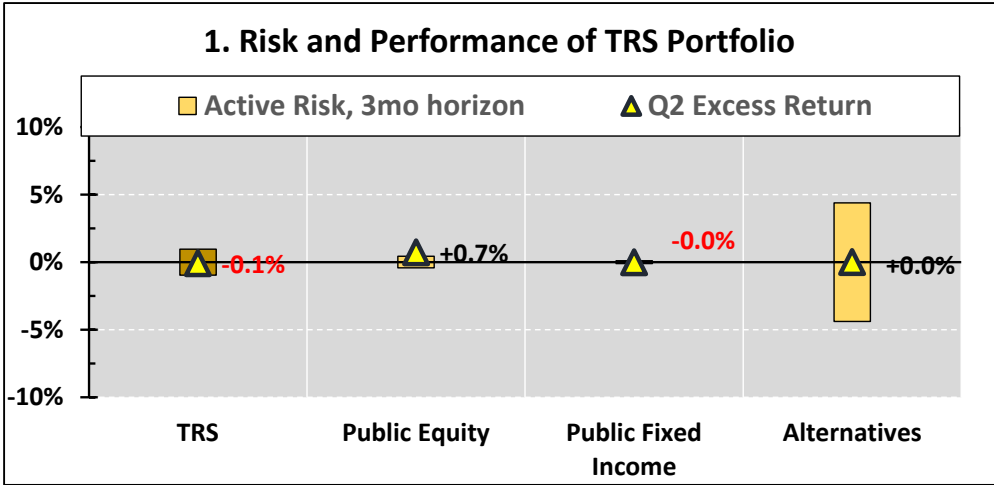
TRS: ACTIVE RISK

What are the contributors to **Active Risk**?



TRS: ACTIVE RISK AND EXCESS RETURN

How does 3mo Active Risk forecast compare to the Q2 Excess Returns?



Source: MSCI BarraOne, State Street
 (*) Based on State Street Accounting returns



FORWARD-LOOKING MARKETS: WORST MONTHLY SHOCK

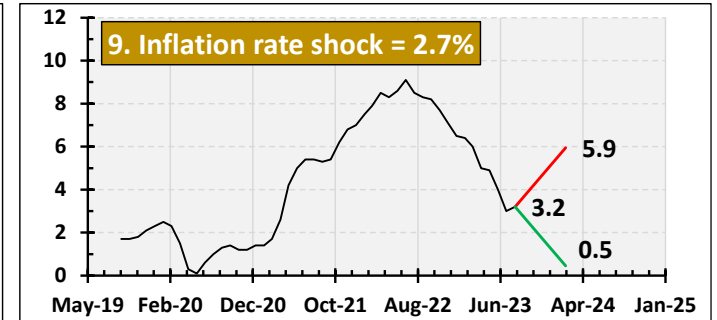
Equities



Rates



Commodities



TRS: FORWARD-LOOKING PERFORMANCE

How will the portfolio perform under the worst monthly market shock?

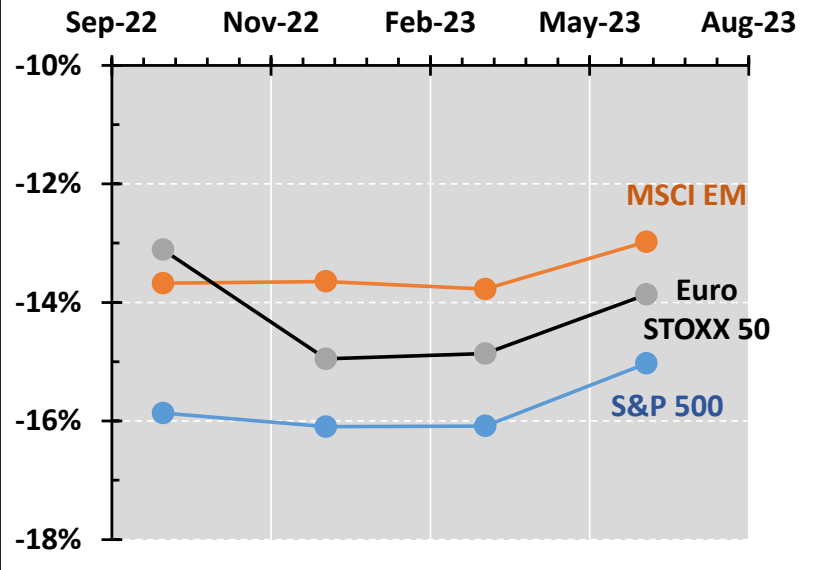
Market Factors				1. Absolute Return		2. Excess Return	
				Risk On	Risk Off	Risk On	Risk Off
Equities	1. S&P 500	Price	+25.1%	15.1%	-15.0%	+1.2%	-1.1%
	2. MSCI EM	Price	+25.5%	13.1%	-13.0%	+1.0%	-1.0%
	3. Euro STOXX 50	Price	+29.6%	14.0%	-13.9%	+1.3%	-1.2%
Rates	4. 2yr Treasury	Yield	-1.4%	1.4%	-1.2%	-0.1%	+0.1%
	5. 10yr Treasury	Yield	-1.6%	2.9%	-2.6%	+0.0%	+0.1%
	6. EUR/USD	Rate	+10.2%	6.7%	-6.6%	+0.7%	-0.6%
Commodities	7. Copper	Price	+33.3%	7.0%	-6.9%	+0.5%	-0.5%
	8. Oil	Price	+56.3%	4.4%	-4.4%	+0.3%	-0.3%
	9. Inflation	Rate	+2.7%	5.1%	-5.0%	+0.3%	-0.3%



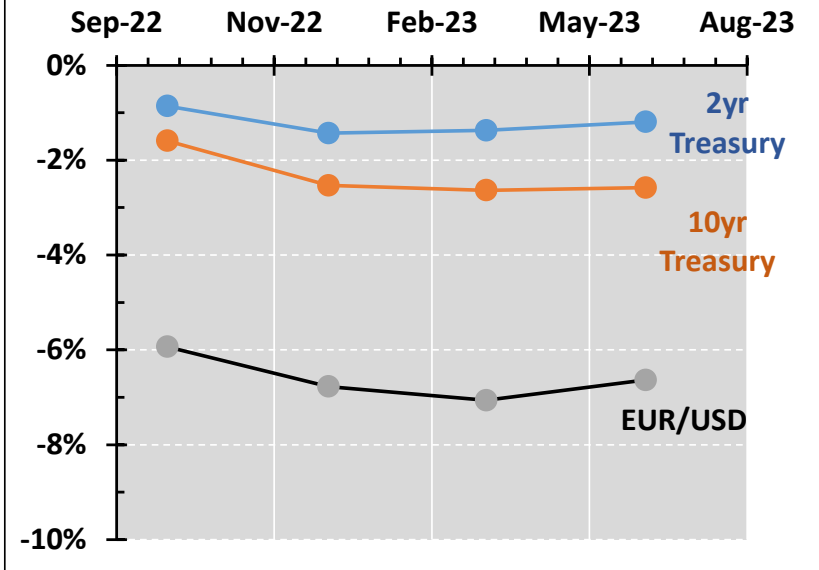
TRS: FORWARD-LOOKING PERFORMANCE

How did the "Worst Monthly Loss" evolve over time?

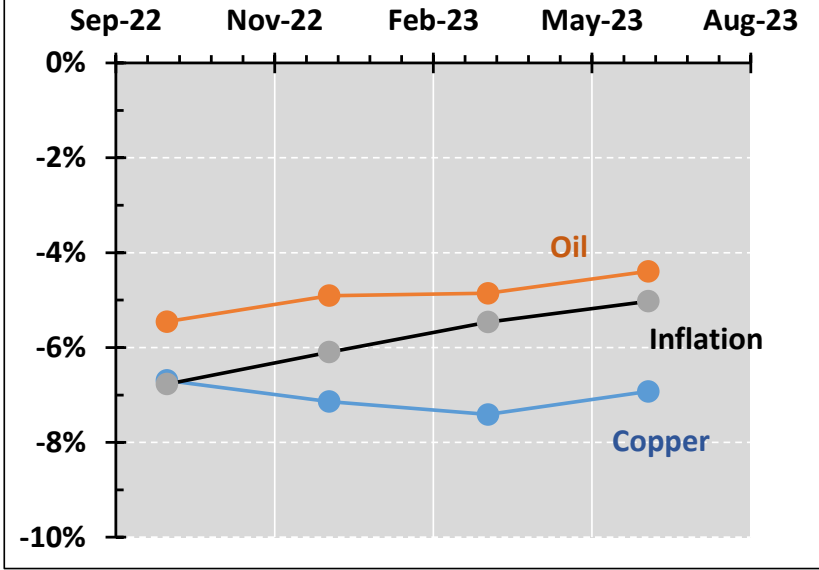
1. Worst Monthly Loss for the Equity Stress Test



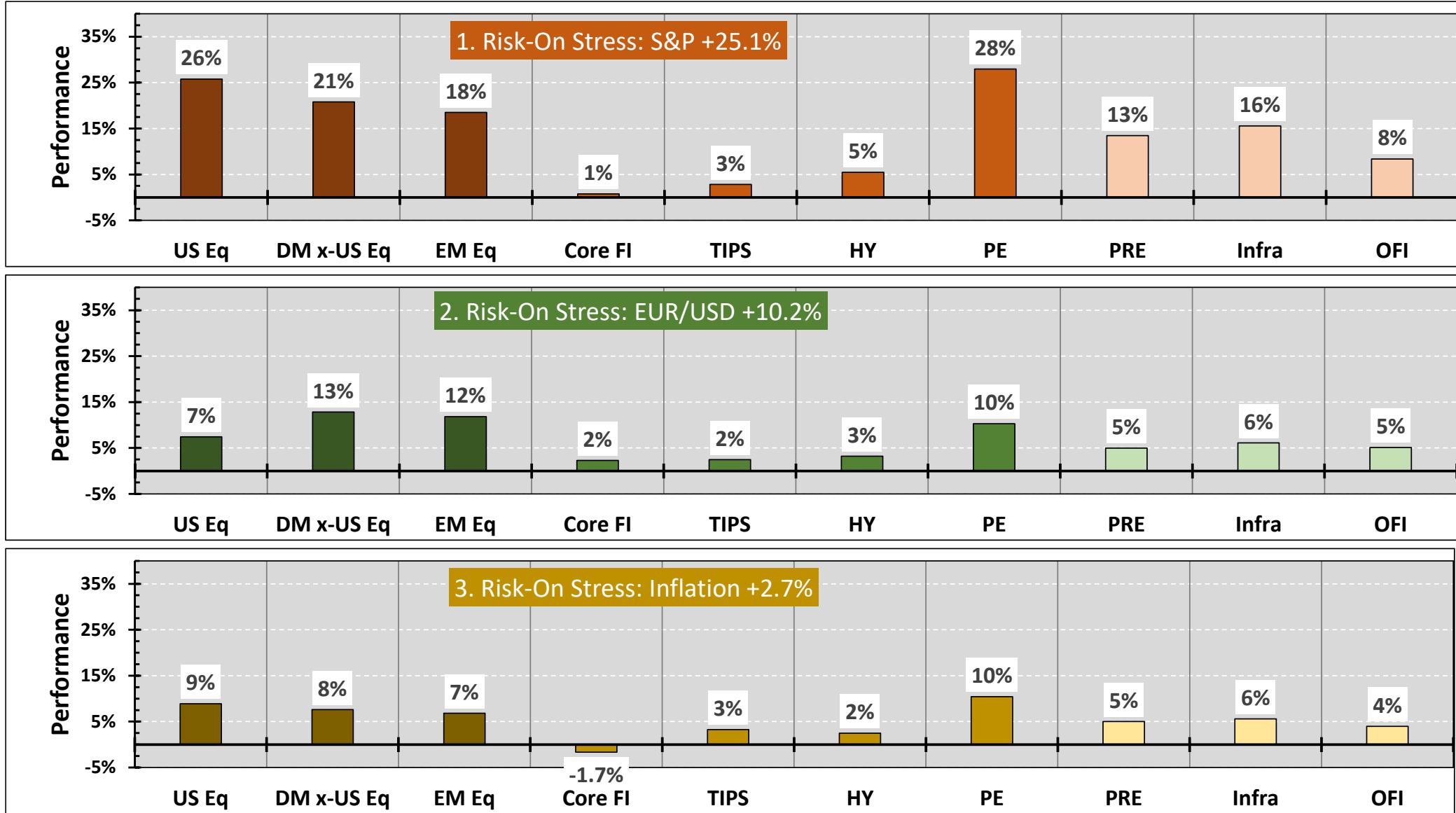
2. Worst Monthly Loss for the Rates Stress Test



3. Worst Monthly Loss for the Commodities Stress Test



TRS: FORWARD-LOOKING PERFORMANCE



Strategic Asset Allocation Discussion:

Teachers' Retirement System of the City of New York

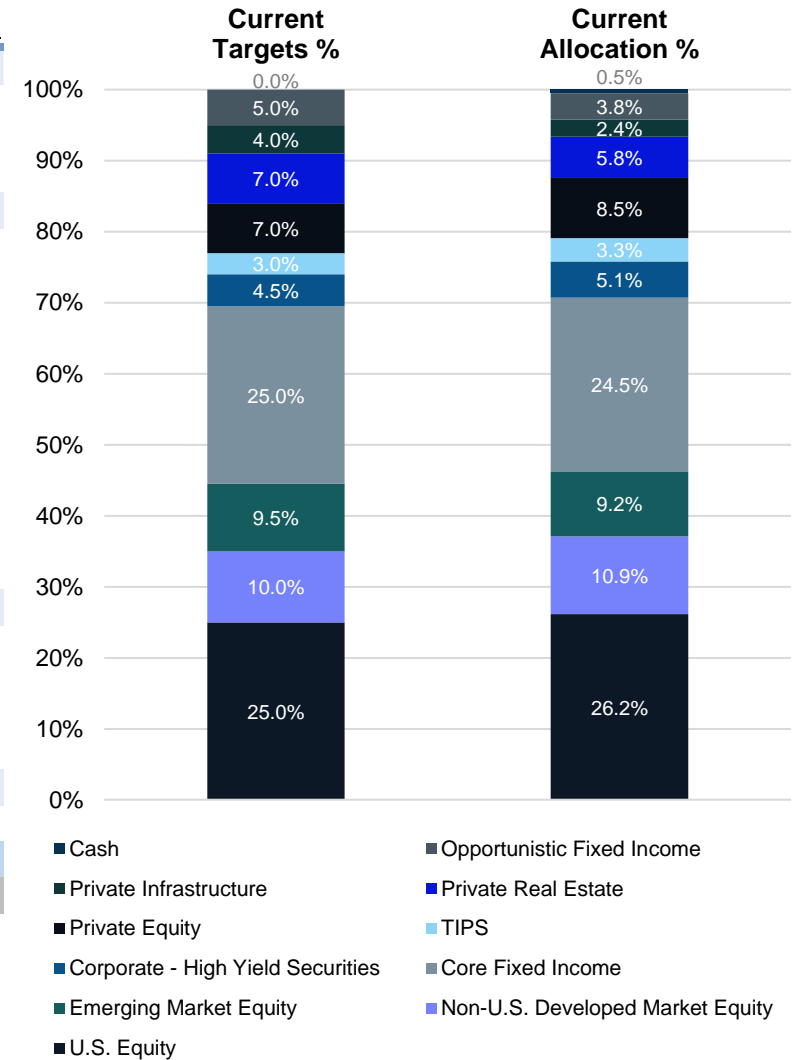
Strategic Asset Allocation Discussion

1

Strategic Asset Allocation Review

Setting a Baseline: Strategic Asset Allocation

	Current Targets %	Current Allocation %	Mkt Val \$ in Bn
Public Equity	44.5%	46.3%	\$44.3
U.S. Equity	25.0%	26.2%	25.1
Non-U.S. Developed Market Equity	10.0%	10.9%	10.5
Emerging Market Equity	9.5%	9.2%	8.8
Public Fixed Income	32.5%	32.8%	\$31.5
Core Fixed Income	25.0%	24.5%	23.4
U.S. Treasuries – All Maturities	14.0%	13.8%	13.2
U.S. Treasuries - Short Term (1-3 year)	2.5%	2.2%	2.1
U.S. Treasuries - Medium Term (1-10 year)	8.5%	8.7%	8.3
U.S. Treasuries - Long Term (>10 year)	3.0%	2.9%	2.8
Core Mortgage-Backed Securities	3.5%	4.7%	4.5
ETI	2.0%	0.7%	0.6
Credit - Investment Grade Corporates	5.5%	5.3%	5.1
Corporate - High Yield Securities	4.5%	5.1%	4.9
Treasury Inflation Protected Securities	3.0%	3.3%	3.2
Alternative Assets	23.0%	20.4%	\$19.6
Private Equity	7.0%	8.5%	8.2
Private Real Estate	7.0%	5.8%	5.5
Private Infrastructure	4.0%	2.4%	2.3
Opportunistic Fixed Income	5.0%	3.8%	3.6
Cash	0.0%	0.5%	\$0.5
Cash	0.0%	0.5%	0.5
Total	100.0%	100.0%	\$95.8
10-Year Expectations			
Expected Compound Return	7.07%		
Expected Arithmetic Return	7.64%		
Expected Standard Deviation	10.69%		
Expected Sharpe Ratio	0.42		



The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. There is no guarantee that objectives will be met. Source: GSAM. Provided as of June 30, 2023. All numbers reflect Multi-Asset Solutions' strategic assumptions as of June 30, 2023. Current allocation percentage and market value as of June 30, 2023. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns and do not assume manager alpha. Please see additional disclosures.

Optimization Framework and Observations

Objectives:

- Seeking to maintain a level of expected return at least consistent with the current portfolio and the 7% actuarial assumed rate of return.
- Maximizing Sharpe Ratio
- Portfolio beta generally consistent with that of the current portfolio and a broad public market proxy (63% Global Equity / 37% Fixed Income)
- Test the inclusion of CTA strategies and other asset classes

Basket Clause and Other Constraints:

- We generally constrained portfolios such that basket exposures provide adequate cushion relative to the newly raised basket clause limit of 35%. This constraint was also generally consistent with reasonable individual asset class constraints.
- Asset class minimums, active management, public equity exposure

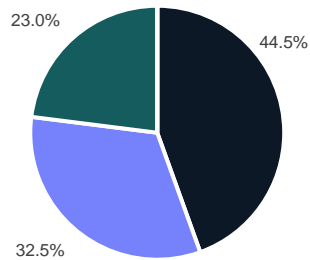
Observations

- The optimizer generally prefers to deploy equity risk in private markets with an emphasis on private equity and infrastructure
- Investment grade corporates are more compelling than relative to recent history; corporate high yield vs. opportunistic fixed income
- We believe there could be a compelling case for CTAs

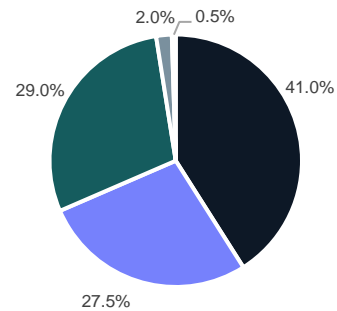
Illustrative Portfolios

Expected Risk and Return Characteristics – Based on SLTAs as of June 30, 2023

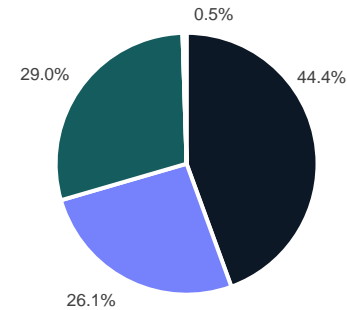
CURRENT TARGET



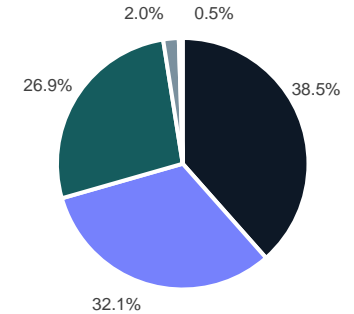
PORTFOLIO 1



PORTFOLIO 2



PORTFOLIO 3



■ Public Equity ■ Public Fixed Income ■ Alternative Assets ■ CTAs ■ Cash

Expected Arithmetic Return	7.64%
Expected Compound Return	7.07%
Expected Volatility	10.7%
Expect Sharpe Ratio	0.42
Total Basket	24.60%
Beta (to Global Equity)	0.69
Beta (to Global Agg)	1.12
Value At Risk (1yr 95%)	-9.0%
Value At Risk (1yr 99%)	-14.9%

Expected Arithmetic Return	7.87%
Expected Compound Return	7.26%
Expected Volatility	11.1%
Expect Sharpe Ratio	0.43
Total Basket	30.88%
Beta (to Global Equity)	0.72
Beta (to Global Agg)	1.10
Value At Risk (1yr 95%)	-9.3%
Value At Risk (1yr 99%)	-15.4%

Expected Arithmetic Return	8.05%
Expected Compound Return	7.38%
Expected Volatility	11.6%
Expect Sharpe Ratio	0.42
Total Basket	31.52%
Beta (to Global Equity)	0.75
Beta (to Global Agg)	1.11
Value At Risk (1yr 95%)	-9.9%
Value At Risk (1yr 99%)	-16.2%

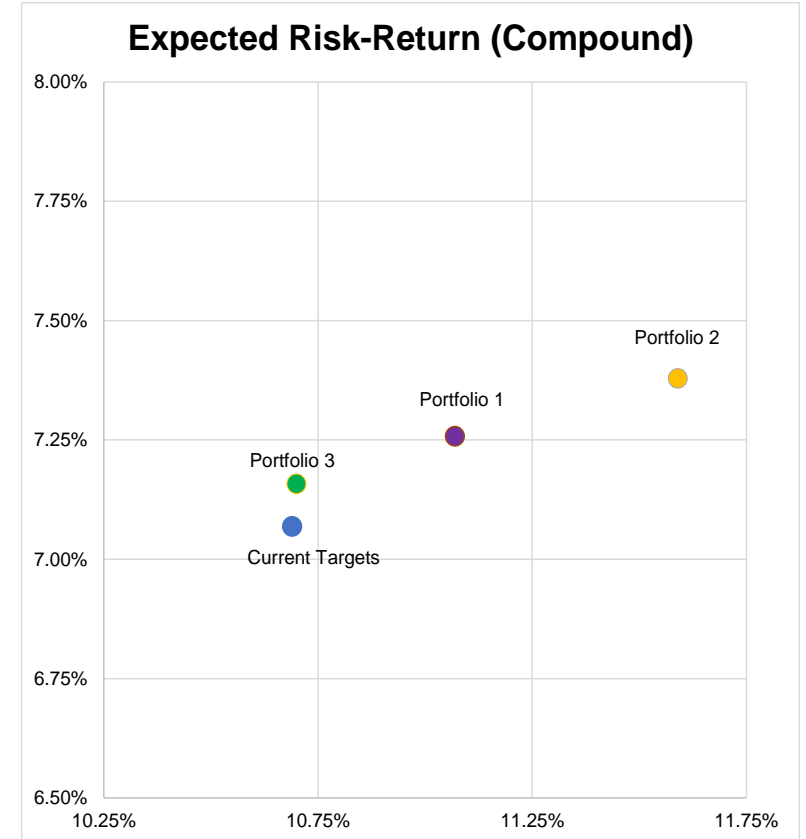
Expected Arithmetic Return	7.73%
Expected Compound Return	7.16%
Expected Volatility	10.7%
Expect Sharpe Ratio	0.43
Total Basket	28.58%
Beta (to Global Equity)	0.69
Beta (to Global Agg)	1.12
Value At Risk (1yr 95%)	-8.9%
Value At Risk (1yr 99%)	-14.9%

Source: New York City Bureau of Asset Management, Goldman Sachs. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures. The analysis is designed to give you insights into our views on how the portfolios might perform under different market conditions. All numbers reflect Multi-Asset Solutions' strategic assumptions as of June 30, 2023. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. The returns are net of estimated investment manager and advisory fees. Our investment advisory fees are described in Part 2 of our Form ADV. Please see additional disclosures. Although certain information has been obtained from public sources believed to be reliable, without independent verification, we do not guarantee its accuracy, completeness or fairness. Targets are subject to change and are current as of the date of this presentation. **For illustrative purposes only. Other portfolio allocations besides the illustrative allocations shown above may also be considered. This does not constitute a recommendation to adopt any particular asset allocation.** The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Illustrative Portfolios

Detailed Portfolio Allocations and Expected Risk/Returns Characteristics

	Current Targets	Portfolio 1	Portfolio 2	Portfolio 3
Public Equity	44.5%	41.0%	44.4%	38.5%
U.S. Equity	25.0%	24.0%	24.8%	22.5%
Non-U.S. Developed Market Equity	10.0%	12.1%	14.0%	11.4%
Emerging Market Equity	9.5%	4.9%	5.7%	4.6%
Public Fixed Income	32.5%	27.5%	26.1%	32.1%
Core Fixed Income	25.0%	22.5%	21.1%	25.6%
U.S. Treasuries – All Maturities	14.0%	9.0%	7.7%	3.8%
U.S. Treasuries - Short Term (1-3 year)	2.5%	1.6%		
U.S. Treasuries - Medium Term (1-10 year)	8.5%	5.5%		
U.S. Treasuries - 10-Year	0.0%	0.0%	0.0%	2.5%
U.S. Treasuries - Long Term (>10 year)	3.0%	1.9%		
U.S. Treasuries - Full Market		0.0%	7.7%	1.2%
Core Mortgage-Backed Securities	3.5%	3.5%	3.0%	4.7%
ETI*	2.0%	2.0%	2.0%	2.0%
Credit - Investment Grade Corporates	5.5%	8.0%	8.4%	15.1%
Corporate - High Yield Securities	4.5%	5.0%	5.0%	6.5%
Treasury Inflation Protected Securities	3.0%	0.0%	0.0%	0.0%
Alternative Assets	23.0%	29.0%	29.0%	26.9%
Private Equity	7.0%	10.0%	10.0%	9.5%
Private Real Estate	7.0%	8.0%	7.0%	7.0%
Private Infrastructure	4.0%	5.0%	6.0%	4.9%
Opportunistic Fixed Income	5.0%	6.0%	6.0%	5.5%
CTAs	0.0%	2.0%	0.0%	2.0%
CTAs		2.0%	0.0%	2.0%
Cash	0.0%	0.5%	0.5%	0.5%
Cash		0.5%	0.5%	0.5%
Total	100.0%	100.0%	100.0%	100.0%
<i>Total Basket Assets</i>	24.6%	30.9%	31.5%	28.6%
Expected Arithmetic	7.64%	7.87%	8.05%	7.73%
Expected Compound	7.07%	7.26%	7.38%	7.16%
Expected Vol	10.69%	11.07%	11.59%	10.70%
Sharpe	0.42	0.43	0.42	0.43



Source: New York City Bureau of Asset Management, Goldman Sachs. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures. The analysis is designed to give you insights into our views on how the portfolios might perform under different market conditions. All numbers reflect Multi-Asset Solutions' strategic assumptions as of June 30, 2023. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. The returns are net of estimated investment manager and advisory fees. Our investment advisory fees are described in Part 2 of our Form ADV. Please see additional disclosures. Although certain information has been obtained from public sources believed to be reliable, without independent verification, we do not guarantee its accuracy, completeness or fairness. Targets are subject to change and are current as of the date of this presentation. **For illustrative purposes only. Other portfolio allocations besides the illustrative allocations shown above may also be considered. This does not constitute a recommendation to adopt any particular asset allocation.** The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Capital Market Assumptions

Next 10 Years as of June 30, 2023

	Expected Compound Return	Expected Arithmetic Return	Expected Annualized Standard Deviation	Expected Manager Alpha
Public Equity				
U.S. Equity				
- US LC Passive	6.5%	7.7%	15.5%	
- US SC Active	7.6%	9.7%	20.8%	1.4%
Non-U.S. Developed Market Equity				
- DM LC Passive	6.9%	8.2%	16.1%	
- DM LC Active	7.2%	8.5%	16.5%	0.3%
- DM SC Active	8.3%	10.0%	18.4%	1.3%
Emerging Market Equity - Active				
- EM Active	8.0%	9.9%	19.8%	1.0%
- EM Passive	7.2%	9.1%	19.3%	
Public Fixed Income				
Core Fixed Income				
U.S. Treasuries – All Maturities				
U.S. Treasuries - Short Term (1-3 year)	3.4%	3.4%	1.5%	
U.S. Treasuries - Medium Term (1-10 year)	3.7%	3.7%	3.3%	
U.S. Treasuries - Long Term (>10 year)	3.9%	4.7%	12.0%	
U.S. Treasuries - Full Market	3.8%	3.9%	4.9%	
Core Mortgage-Backed Securities	3.9%	3.9%	3.6%	
ETI*	4.1%	4.2%	4.1%	
Credit - Investment Grade Corporates	4.8%	4.9%	5.6%	
Corporate - High Yield Securities	5.5%	5.9%	9.0%	0.3%
Treasury Inflation Protected Securities	4.6%	4.8%	6.1%	0.1%
Alternative Assets				
Private Equity	10.5%	12.8%	21.4%	3.8%
Private Real Estate - Core	7.6%	8.7%	14.9%	1.4%
Private Real Estate - Opportunistic	9.1%	11.4%	21.6%	2.7%
Private Infrastructure	8.8%	10.3%	17.2%	2.6%
Opportunistic Fixed Income	6.9%	7.6%	11.8%	1.8%
CTAs				
CTAs	2.9%	3.1%	6.1%	

*ETI modeled as Core Fixed Income.

The long-term risk-free rate is assumed to be 3.15% herein. Risk Free Rate is calculated as Multi-Asset Solutions' forward looking expected return on cash.

The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. There is no guarantee that objectives will be met. Source: GSAM. Provided as of June 30, 2023. All numbers reflect Multi-Asset Solutions' strategic assumptions as of June 30, 2023. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns and do not assume manager alpha. Please see additional disclosures.

2

Trend Following Strategies / Commodity Trading Advisors ("CTAs")

Trend Strategy Overview

Trend Strategy Background:

- Trend has been around for over 40 years and pre-date most other strategies
- Rely on technical (largely price and trading volume) data to generate buy and sell decisions
- Trend managers, known as Commodity Trading Advisors (CTAs), pursue systematic investment strategies that trade macro instruments based on forecasts derived from a wider range of data inputs and strategy styles across a range of asset classes.

Trend Characteristics:

- Most managers pursue trends that last multiple weeks (known as 'medium-term following' strategies).
- Some managers have been running successful strategies in the short-term (several days) as well as long-term (multiple months) space.
- Most strategies trade at least 50 different liquid futures and forwards markets, benefitting from diversification across multiple markets.

Why is Trend Potentially Useful in a Portfolio?

- Trend strategies provide key factor exposures (e.g., momentum) which are diversifying relative to traditional asset classes
- From a manager selection perspective, we believe that Trend managers' adaptation and innovation are key components of success and view that managers which invest substantially in ongoing research have a higher chance of maintaining strong risk-adjusted return profile over a range of different market regimes.

Source: XIG. For Illustrative Purpose Only.

Advantages:

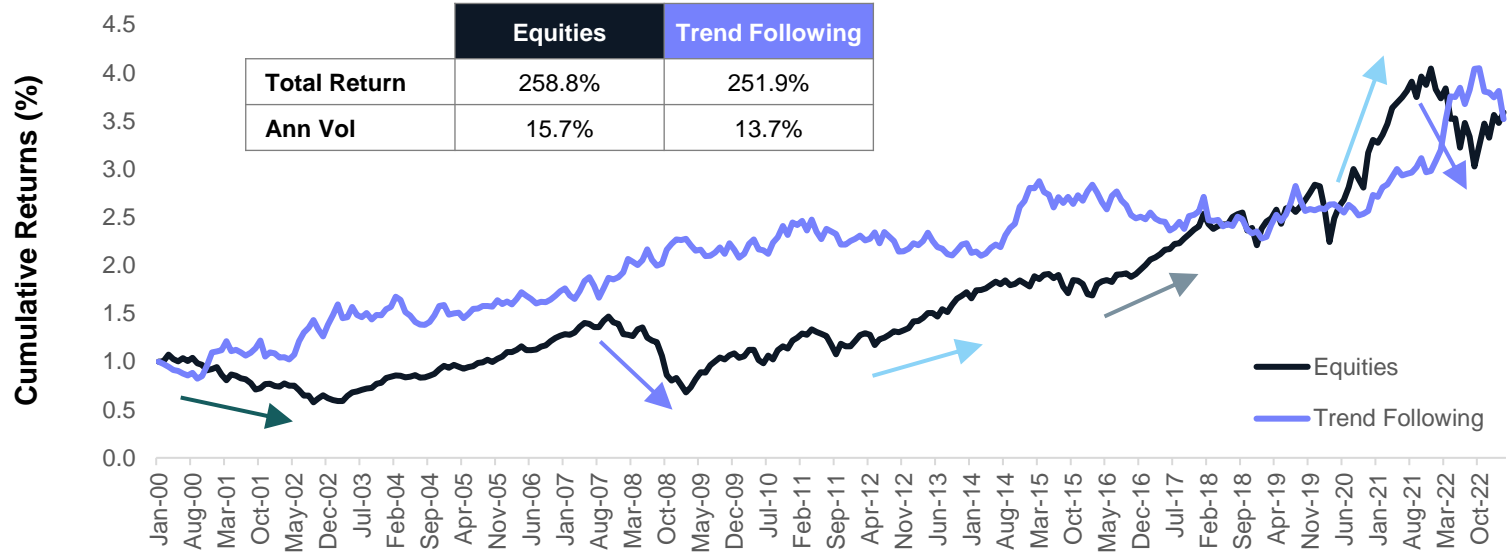
- Trend investing can provide additional diversification to traditional asset classes, potentially reducing portfolio risk and drawdowns
- Global diversification by region and asset class
- Cross Asset Class: Equities, Bonds, Rates, FX, and Credit

Considerations:

- May underperform during periods of volatility or sharp reversals
- Trading costs can be reduced by investing through a commingled vehicle

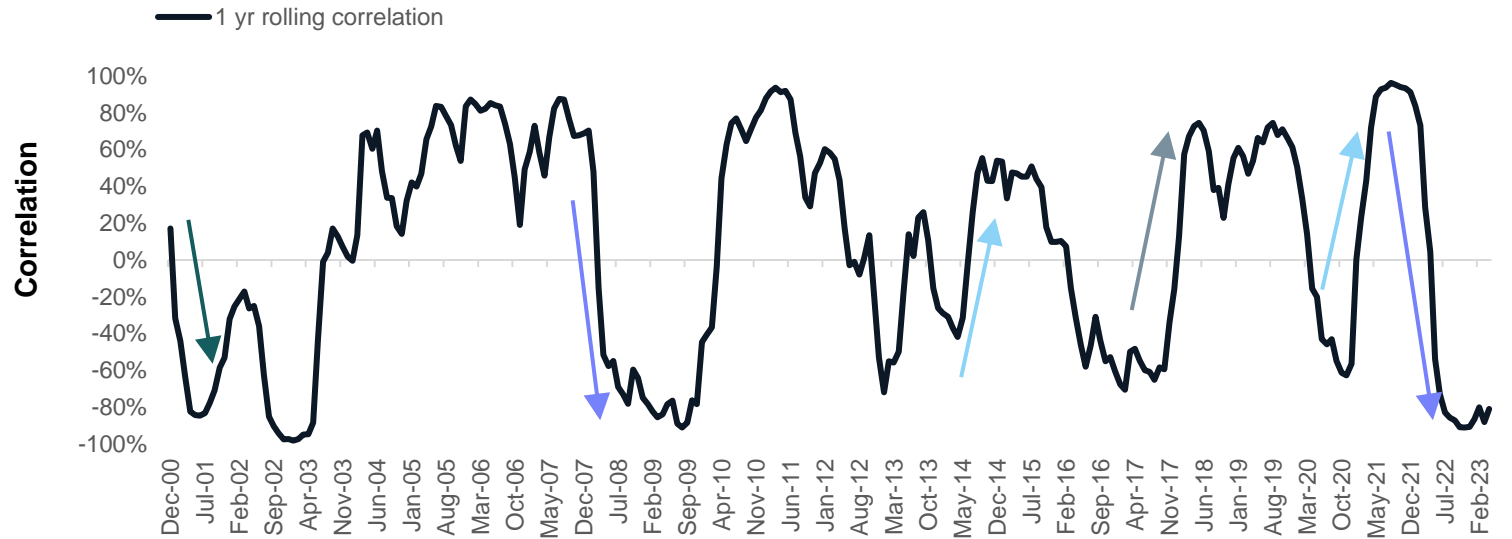
The Case for Trend Following Strategies

Potentially Profit from Both Upwards and Downwards Trends



- Historically low correlations in falling markets

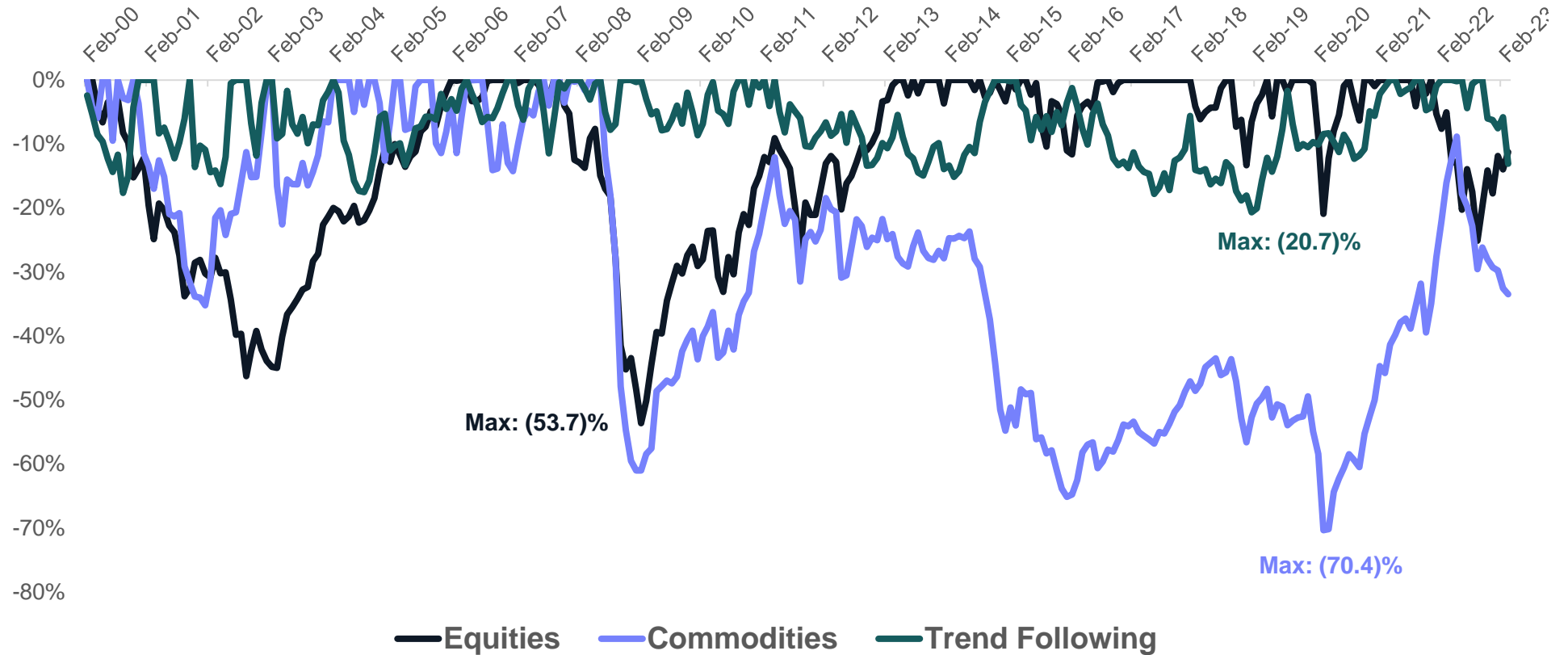
- Historically high correlations in rising markets



Source: Goldman Sachs Asset Management, Bloomberg. Equities: MSCI Daily TR Gross World USD Index (GDDUWI). Trend Following: SG Trend Index (NEIXCTAT). **Past performance does not guarantee future results, which may vary. Past correlations are not indicative of future correlations, which may vary**

The Case for Trend Following Strategies

Drawdown Analysis



Trend following strategies have the potential to

- *Deliver attractive risk-adjusted returns, even in market crises*
- *Diversify from traditional asset classes*
- *Avoid large drawdowns*

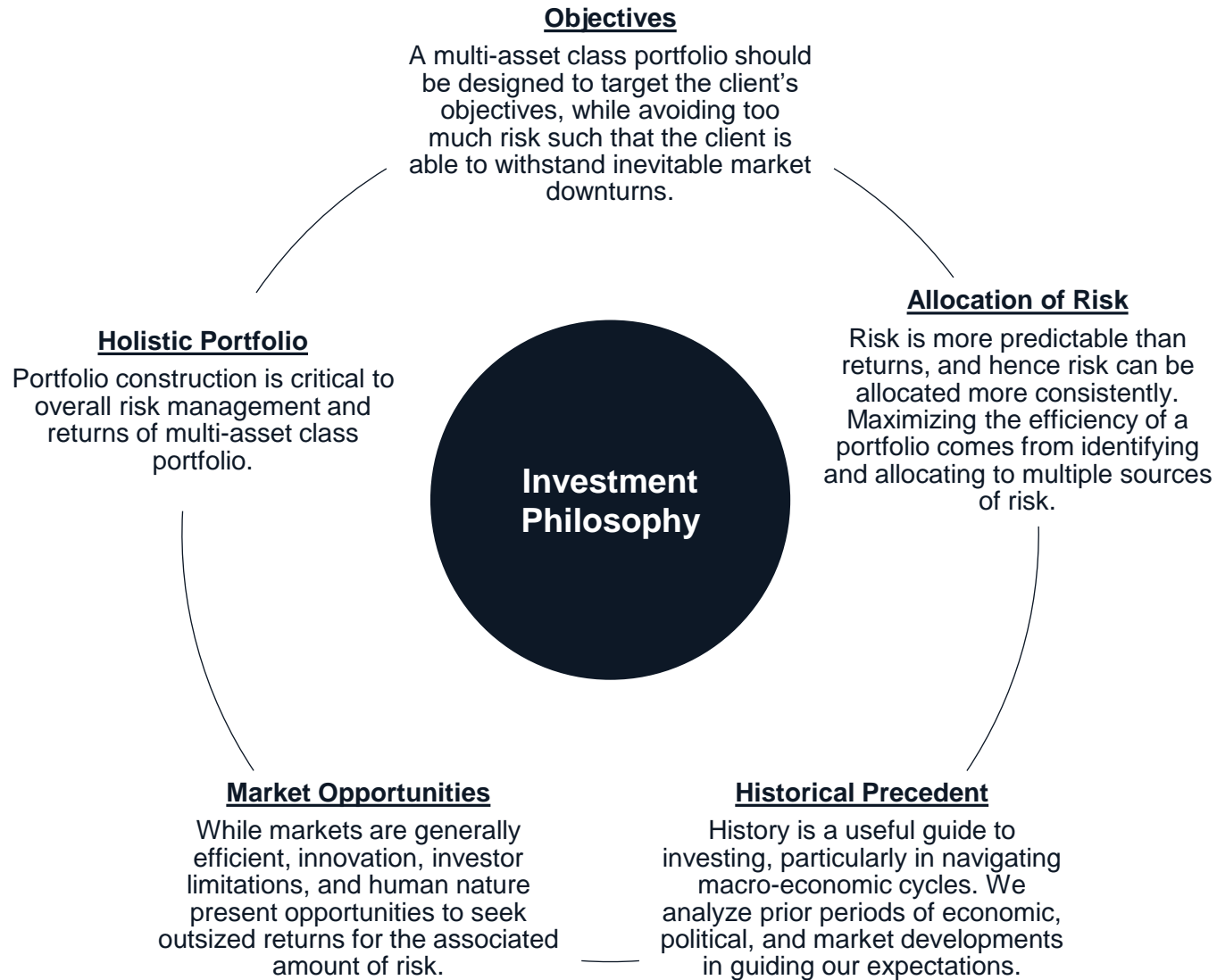
Source: Goldman Sachs Asset Management, Bloomberg. Equities: MSCI Daily TR Gross World USD Index (GDDUWI). Commodities: S&P GSCI Spot Index (SPGSCI). Trend Following: SG Trend Index (NEIXCTAT). **Past performance does not guarantee future results, which may vary.** Diversification does not protect an investor from market risk and does not ensure a profit.

Appendix A:

Additional Information

Investment Philosophy

Five Key Components in Our Approach to Multi-Asset Class Investing



For discussing purposes only. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

Review of Multi-Step Portfolio Management Approach

MAS Investment Approach



Source: Goldman Sachs Asset Management. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk. There is no guarantee that these objectives will be met

Defining the Investment Objective

Potential Solution for a Portion of a Wider Portfolio

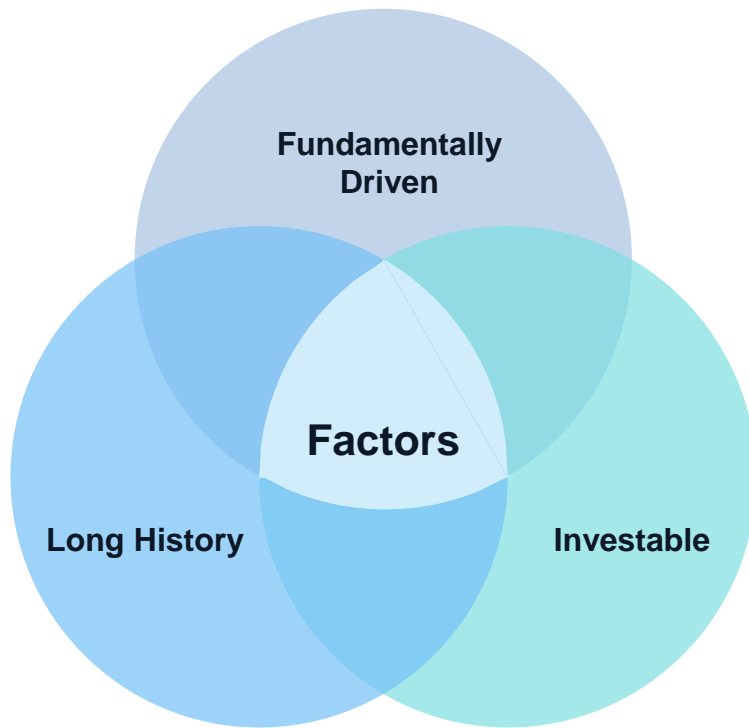
	Aligned to Wider Portfolio	Distinct from Wider Portfolio
Investment Objective	<ul style="list-style-type: none"> • More likely total return-oriented • Similar risk/return characteristics as wider client portfolio 	<ul style="list-style-type: none"> • Distinct risk/return objectives from wider client portfolio • Likely absolute return-oriented • Can be thematic, e.g. multi-asset alternatives
Opportunity Set	<ul style="list-style-type: none"> • Significant exposures to conventional asset classes • Additional novel exposures and dynamism • Relatively low usage of derivatives 	<ul style="list-style-type: none"> • Broad opportunity set beyond traditional exposures • Complementary to existing exposures • Typically medium-to-high use of derivative strategies
Benchmark	<ul style="list-style-type: none"> • Traditional Cash/Bonds/Equities • CPI + Spread • Cash + Spread 	<ul style="list-style-type: none"> • CPI + Spread • Cash + Spread

Source: GSAM, as of March 2023. Targets are subject to change and are current as of the date of this presentation. Targets are objectives and do not provide any assurance as to future results. The illustrative portfolio provided herein has certain limitations. Such portfolio is hypothetical and does not represent actual trading, and thus may not reflect material economic and market factors, such as liquidity constraints, that may have had an impact on the Adviser's actual decision-making. This information is shown for illustrative purposes only and does not constitute a recommendation of exposures for any client account. The exposures for the model portfolio will differ from the exposures for a client account because of specific client guidelines, objectives and restrictions. There is no guarantee that these objectives will be met.

Strategic Asset Allocation

Potential Sources of Return in a Multi-Asset Class Portfolio

We look to balance these potential sources of return, or “factors” in our portfolios

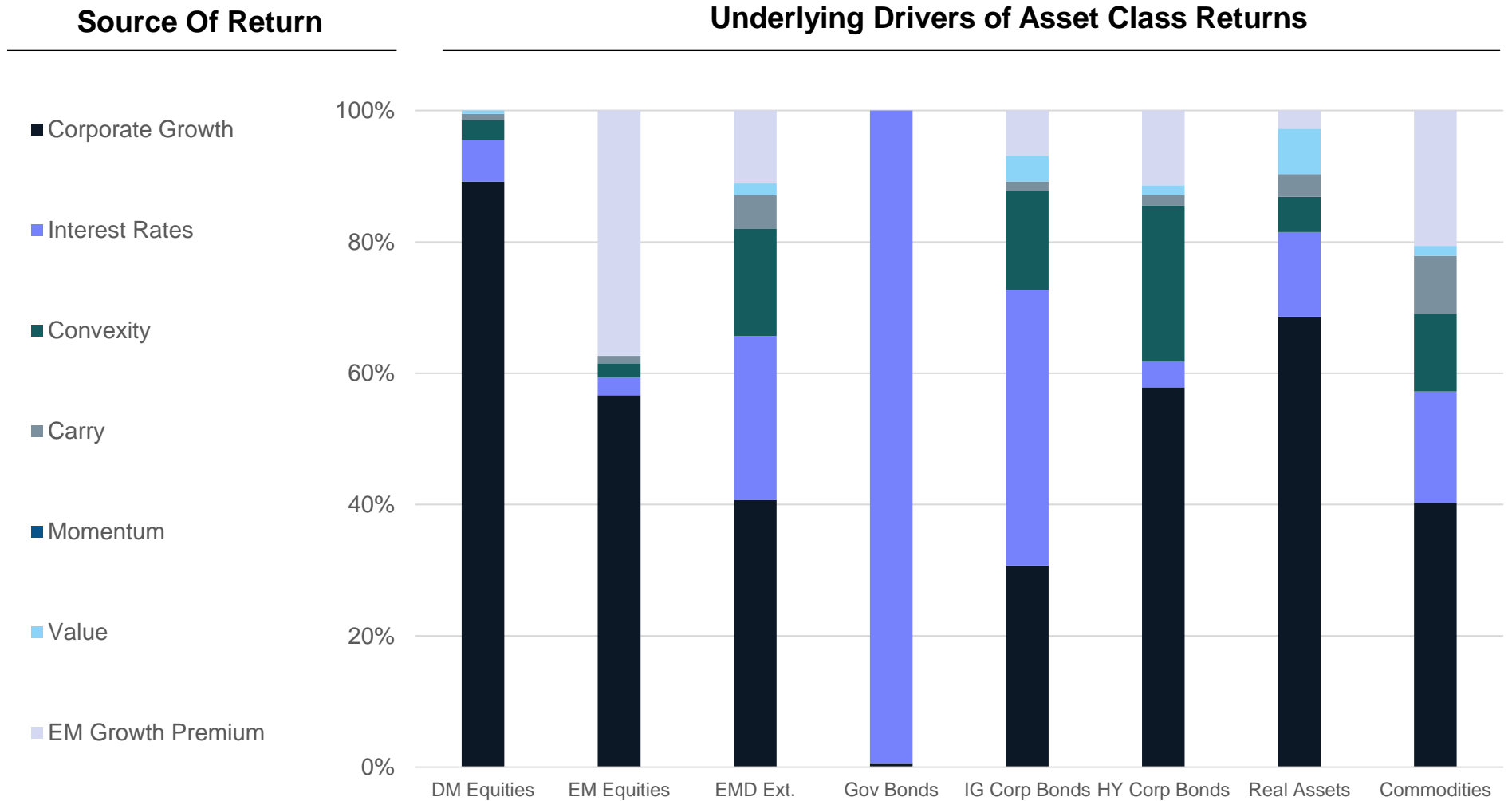


Factor	Potential Source of Return
Market Cap	Financing Corporate Growth
Rates	Term Lending to Low Risk Institutions
Rates Leverage Aversion	Investors aversion to taking leverage in bonds
Leverage Aversion	Investors aversion to taking leverage in credit and equity
Emerging Markets	Emerging Market Growth, productivity catch-up
Convexity	Risk-averse investors overpay for protection
Momentum	Long history of financial markets exhibiting trending behavior
Carry	Higher-yielding assets have higher return than lower-yielding assets
Value	Mean-reversion to the fair value
Active Risk	Prices in all markets often deviate from their fair values

For Illustrative Purposes Only. There is no guarantee that objectives will be met.

Strategic Asset Allocation

Factors help explain asset class behavior



By recognizing that returns can largely be explained by risks that cut across asset classes, investors may identify more independent and less correlated sources of return

Source: GSAM. For illustrative purposes only. With the exception of the Corporate Growth factor, all factors are tilts (beta to market cap is netted out). Global Equity is MSCI World USD, Eq- EM is MSCI EM Index USD, Real Assets is FTSE EPRA/NAREIT Developed Index, Commodities is Bloomberg Commodities Index, IG Credit is Bloomberg Barclays Global Aggregate –Corporate Index, Government Fixed Income is World Government Bond Index.

Why Allocate Risk to Factors and not Asset Classes?

To seek greater diversification we allocate risk to factors, rather than capital to asset classes

- Asset classes that share **common sources of risk** experience large correlation, and **low diversification benefits**
- We construct factors by grouping **lowly correlated sources** of return to seek **higher diversification benefits**

Asset Class Correlations

Asset Class	1	2	3	4	5	6	7
1. Fixed Income	1.00	0.08	0.28	0.08	0.28	0.12	-0.10
2. Public Equity	0.08	1.00	0.83	0.97	0.77	0.82	0.37
3. Hedge Funds	0.28	0.83	1.00	0.80	0.72	0.73	0.35
4. Private Equity	0.08	0.97	0.80	1.00	0.73	0.80	0.29
5. Real Estate	0.28	0.77	0.72	0.73	1.00	0.74	0.29
6. Infrastructure	0.12	0.82	0.73	0.80	0.74	1.00	0.39
7. Commodities	-0.10	0.37	0.35	0.29	0.29	0.39	1.00

Factor Correlations

Factors	1	2	3	4	5	6	7	8	9
1. Market Cap	1.00	-0.00	-0.03	-0.05	0.13	-0.01	0.12	0.02	0.02
2. Broad Rates	-0.00	1.00	-0.40	0.57	-0.14	0.25	-0.00	-0.23	-0.03
3 Rates LA	-0.03	-0.40	1.00	-0.41	-0.20	-0.22	-0.14	0.29	0.14
4. Leverage Aversion	-0.05	0.57	-0.41	1.00	0.14	0.24	0.15	-0.21	-0.05
5. Insurance	0.13	-0.14	-0.20	0.14	1.00	-0.10	0.34	0.01	0.07
6. Momentum	-0.01	0.25	-0.22	0.24	-0.10	1.00	0.03	-0.14	0.07
7. Carry	0.12	-0.00	-0.14	0.15	0.34	0.03	1.00	0.06	0.00
8. Value	0.02	-0.23	0.29	-0.21	0.01	-0.14	0.06	1.00	0.05
9. Emerging Markets	0.02	-0.03	0.14	-0.05	0.07	0.07	0.00	0.05	1.00



As of March 2020. Source: GSAM. For discussion purposes only. Past correlations are not indicative of future correlations, which may vary. Diversification does not protect an investor from market risk and does not ensure a profit. Alpha and tracking error assumptions reflect Multi-Asset Solutions' estimates based on Goldman Sachs Asset Management managers target alpha and tracking error, with a haircut of 25% to the target alpha to account for underlying investment vehicles' fees. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. All numbers reflect Multi-Asset Solutions' strategic assumptions as December 31 2022. Please see additional disclosures.

SAA Risk Budget

Reflects our views on the balance of risks we seek in our portfolios over the long-run

Risk Parity across factors is the right answer if **Sharpe Ratios are indeed equal across factors and uncorrelated**

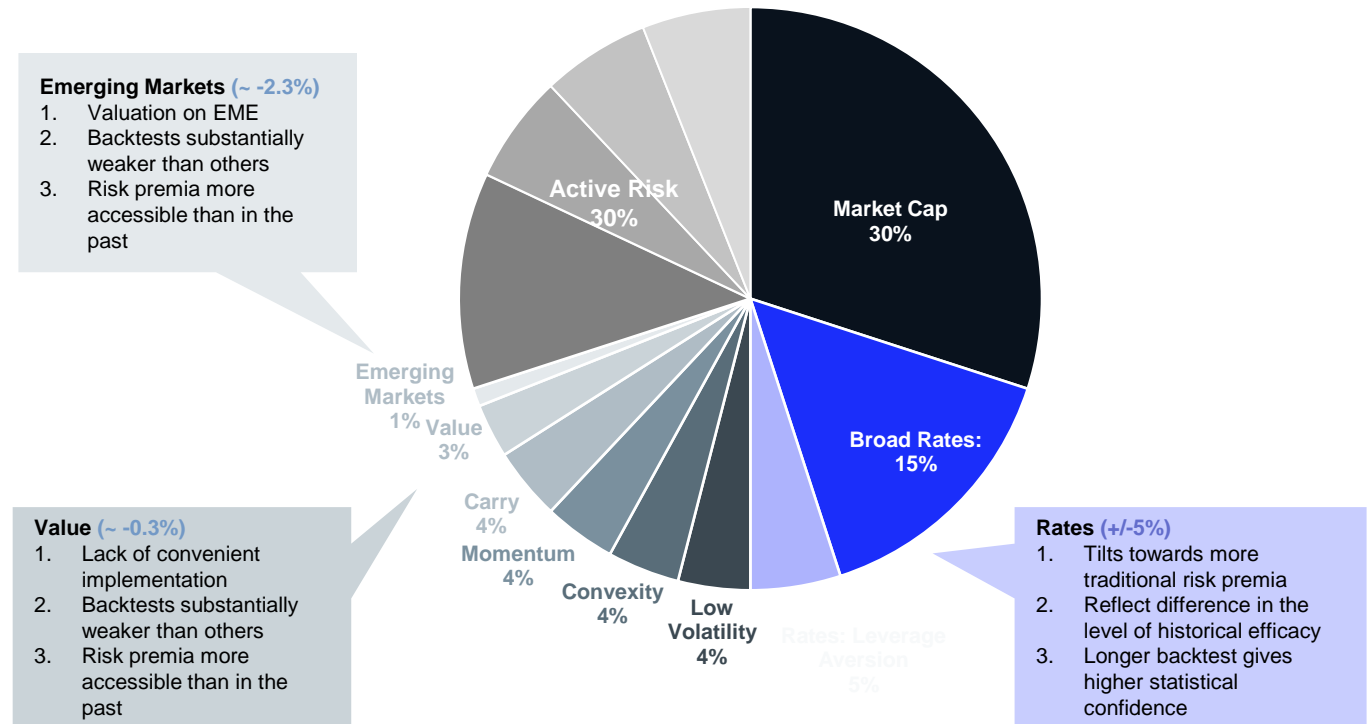
However, we believe this drives unrealistic implied views and potentially amplifies errors in overfitting “new” factors

Therefore, we would develop **views on certain factors** based fundamental insights:

In practice, adjustments are made on the basis of three considerations:

- Valuation
- Senior Investor Judgment
- Other Risk Measure

Deviating Away from Risk Parity: Final Risk Budget



For illustrative purposes only and should not be construed as investment advice or a recommendation to adopt any portfolio allocations. As of March 2021. Targets are subject to change and are current as of the date of this presentation. Targets are objectives and do not provide any assurance as to future results. Alpha and tracking error assumptions reflect Multi-Asset Solutions’ estimates based on Goldman Sachs Asset Management managers target alpha and tracking error, with a haircut of 25% to the target alpha to account for underlying investment vehicles’ fees. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns. All numbers reflect Multi-Asset Solutions’ strategic assumptions as December 31 2022. Please see additional disclosures.

Correlations

As of June 30, 2023

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Corporate High Yield Securities	1.00	0.58	0.54	0.68	0.64	0.79	0.18	0.54	0.26	0.58	0.61	0.35	-0.25	-0.05	0.65	0.61	0.66	0.61	0.66	-0.08	-0.07	-0.04
2 Private Equity	0.58	1.00	0.65	0.83	0.72	0.52	0.17	0.36	0.19	0.62	0.64	0.22	-0.17	-0.02	0.86	0.76	0.81	0.70	0.73	-0.06	-0.03	0.00
3 Private Infrastructure	0.54	0.65	1.00	0.70	0.61	0.52	0.18	0.42	0.25	0.56	0.62	0.30	-0.13	0.04	0.63	0.53	0.68	0.59	0.63	-0.01	0.03	0.05
4 DM LC Passive	0.68	0.83	0.70	1.00	0.85	0.60	0.19	0.43	0.22	0.60	0.69	0.27	-0.18	-0.03	0.87	0.73	0.98	0.81	0.89	-0.05	-0.04	-0.04
5 EM Passive	0.64	0.72	0.61	0.85	1.00	0.57	0.16	0.42	0.21	0.52	0.58	0.26	-0.13	-0.04	0.73	0.64	0.83	0.97	0.79	-0.06	-0.05	-0.03
6 Opportunistic Fixed Income	0.79	0.52	0.52	0.60	0.57	1.00	-0.02	0.36	0.06	0.52	0.55	0.20	-0.26	-0.24	0.58	0.56	0.59	0.54	0.61	-0.26	-0.26	-0.22
7 Core Mortgage-Backed Securities	0.18	0.17	0.18	0.19	0.16	-0.02	1.00	0.73	0.91	0.29	0.33	0.69	-0.14	0.83	0.19	0.08	0.19	0.16	0.18	0.78	0.85	0.75
8 Credit Investment Grade Corporates	0.54	0.36	0.42	0.43	0.42	0.36	0.73	1.00	0.89	0.52	0.56	0.75	-0.15	0.69	0.41	0.30	0.42	0.40	0.43	0.52	0.65	0.68
9 ETI*	0.26	0.19	0.25	0.22	0.21	0.06	0.91	0.89	1.00	0.39	0.41	0.80	-0.10	0.92	0.22	0.10	0.22	0.20	0.22	0.78	0.89	0.87
10 Private Real Estate Opportunistic	0.58	0.62	0.56	0.60	0.52	0.52	0.29	0.52	0.39	1.00	0.83	0.40	-0.12	0.19	0.64	0.60	0.59	0.49	0.56	0.09	0.15	0.21
11 Private Real Estate Core	0.61	0.64	0.62	0.69	0.58	0.55	0.33	0.56	0.41	0.83	1.00	0.43	-0.13	0.19	0.66	0.60	0.68	0.56	0.65	0.11	0.17	0.20
12 Treasury Inflation Protected Securities	0.35	0.22	0.30	0.27	0.26	0.20	0.69	0.75	0.80	0.40	0.43	1.00	-0.05	0.73	0.26	0.16	0.27	0.25	0.30	0.61	0.72	0.67
13 CTAs	-0.25	-0.17	-0.13	-0.18	-0.13	-0.26	-0.14	-0.15	-0.10	-0.12	-0.13	-0.05	1.00	0.03	-0.20	-0.18	-0.18	-0.13	-0.16	0.03	0.03	0.04
14 U.S. Treasuries Full Market	-0.05	-0.02	0.04	-0.03	-0.04	-0.24	0.83	0.69	0.92	0.19	0.19	0.73	0.03	1.00	-0.02	-0.11	-0.03	-0.04	-0.04	0.84	0.97	0.94
15 US LC Passive	0.65	0.86	0.63	0.87	0.73	0.58	0.19	0.41	0.22	0.64	0.66	0.26	-0.20	-0.02	1.00	0.84	0.85	0.70	0.76	-0.07	-0.03	0.01
16 US SC Active	0.61	0.76	0.53	0.73	0.64	0.56	0.08	0.30	0.10	0.60	0.60	0.16	-0.18	-0.11	0.84	1.00	0.74	0.64	0.75	-0.15	-0.13	-0.09
17 DM LC Active	0.66	0.81	0.68	0.98	0.83	0.59	0.19	0.42	0.22	0.59	0.68	0.27	-0.18	-0.03	0.85	0.74	1.00	0.81	0.89	-0.05	-0.04	-0.04
18 EM Active	0.61	0.70	0.59	0.81	0.97	0.54	0.16	0.40	0.20	0.49	0.56	0.25	-0.13	-0.04	0.70	0.64	0.81	1.00	0.78	-0.05	-0.05	-0.03
19 DM SC Active	0.66	0.73	0.63	0.89	0.79	0.61	0.18	0.43	0.22	0.56	0.65	0.30	-0.16	-0.04	0.76	0.75	0.89	0.78	1.00	-0.05	-0.04	-0.05
20 U.S. Treasuries Short Term (1-3 year)	-0.08	-0.06	-0.01	-0.05	-0.06	-0.26	0.78	0.52	0.78	0.09	0.11	0.61	0.03	0.84	-0.07	-0.15	-0.05	-0.05	-0.05	1.00	0.93	0.65
21 U.S. Treasuries Medium Term (1-10 year)	-0.07	-0.03	0.03	-0.04	-0.05	-0.26	0.85	0.65	0.89	0.15	0.17	0.72	0.03	0.97	-0.03	-0.13	-0.04	-0.05	-0.04	0.93	1.00	0.85
22 U.S. Treasuries Long Term (>10 year)	-0.04	0.00	0.05	-0.04	-0.03	-0.22	0.75	0.68	0.87	0.21	0.20	0.67	0.04	0.94	0.01	-0.09	-0.04	-0.03	-0.05	0.65	0.85	1.00

The economic and market forecasts presented herein have been generated by GSAM for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation. There is no guarantee that objectives will be met. Source: GSAM. Provided as of June 2023. All numbers reflect Multi-Asset Solutions' strategic assumptions as of June 30, 2023. Strategic long-term assumptions are subject to high levels of uncertainty regarding future economic and market factors that may affect future performance. They are hypothetical indications of a broad range of possible returns and do not assume manager alpha. Please see additional disclosures.

Appendix B:

Disclosures

Additional Information and Disclosures

Fund Risk Disclosures

The Goldman Sachs Multi-Manager Real Assets Strategy Fund invests primarily in “real assets”, which includes investments in companies and derivatives (futures, options, swaps and other instruments) that provide exposure to real assets. Real assets are defined broadly by the Fund and include any assets that have physical properties or inflation sensitive characteristics, such as energy, real estate, infrastructure, commodities, and inflation-linked or floating rate fixed income securities. The Fund allocates its assets among multiple investment managers who are unaffiliated with the Investment Adviser. **Different investment styles** (e.g., “quantitative”) tend to shift in and out of favor, and at times the Fund may underperform other funds that invest in similar asset classes. With respect to any portion of the Fund that is **not actively managed**, the Fund will not typically dispose of a security until the security is removed from the relevant index. The Fund’s investments are subject to **market risk**, which means that the value of the securities in which it invests may go up or down in response to the prospects of individual companies, particular sectors or governments and/or general economic conditions. The securities of **mid- and small-capitalization companies** involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements. **Investing in Real Estate Investment Trusts (“REITs”)** involves certain unique risks in addition to those risks associated with investing in the **real estate industry** in general. REITs whose underlying properties are concentrated in a particular industry or geographic region are also subject to risks affecting such industries and regions. The securities of REITs involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements because of interest rate changes, economic conditions and other factors. Because the Fund **concentrates its investments in the real estate group of industries**, the Fund is subject to greater risk of loss as a result of adverse economic, business, political, environmental or other developments affecting such group of industries than if its investments were more diversified across different industries. The Fund’s **investments in other pooled investment vehicles** subject it to additional expenses. **Foreign and emerging markets investments** may be more volatile and less liquid than investments in U.S. securities and are subject to the risks of currency fluctuations and adverse economic, social or political developments. The Fund may invest in **loans** directly, through loan assignments, or indirectly, by purchasing participations or sub-participations from financial institutions. Indirect purchases may subject the Fund to greater delays, expenses and risks than direct obligations in the case that a borrower fails to pay scheduled principal or interest. Investments in fixed income securities and loans are subject to the risks associated with debt securities generally, including **credit, liquidity and interest rate risk**. **Inflation protected securities (“IPS”)** are fixed income securities whose interest and principal payments are periodically adjusted according to the rate of inflation. The **market value of IPS** is not guaranteed, and will fluctuate in response to changes in real interest rates. **The market for IPS may be less developed or liquid, and more volatile**, than certain other securities markets. If **deflation** were to occur, IPS would likely decline in price. **Derivative instruments** may involve a high degree of financial risk. These risks include the risk that a small movement in the price of the underlying security or benchmark may result in a disproportionately large movement, unfavorable or favorable, in the price of the derivative instrument; the risk of default by a counterparty; and liquidity risk. The Fund’s borrowing and use of derivatives may result in **leverage**, which can make the Fund more volatile. The Fund is subject to the risk that exposure to the **commodities markets** may subject the Fund to greater volatility than investments in traditional securities. When the Fund enters into an uncleared over-the-counter transaction, it is subject to the risk that the direct **counterparty** will not perform its obligations under the transaction. At times, the Fund may be unable to sell **illiquid investments** without a substantial drop in price, if at all. The fund may have a **high rate of portfolio turnover**, which involves correspondingly greater expenses which must be borne by the Fund, and is also likely to result in short-term capital gains taxable to shareholders.

Additional Information and Disclosures

General Disclosures

THESE MATERIALS ARE PROVIDED SOLELY ON THE BASIS THAT THEY WILL NOT CONSTITUTE INVESTMENT ADVICE AND WILL NOT FORM A PRIMARY BASIS FOR ANY PERSON'S OR PLAN'S INVESTMENT DECISIONS, AND GOLDMAN SACHS IS NOT A FIDUCIARY WITH RESPECT TO ANY PERSON OR PLAN BY REASON OF PROVIDING THE MATERIAL OR CONTENT HEREIN. PLAN FIDUCIARIES SHOULD CONSIDER THEIR OWN CIRCUMSTANCES IN ASSESSING ANY POTENTIAL INVESTMENT COURSE OF ACTION.

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Views and opinions expressed are for informational purposes only and do not constitute a recommendation by Goldman Sachs Asset Management to buy, sell, or hold any security. Views and opinions are current as of the date of this presentation and may be subject to change, they should not be construed as investment advice.

Economic and market forecasts presented herein reflect a series of assumptions and judgments as of the date of this presentation and are subject to change without notice. These forecasts do not take into account the specific investment objectives, restrictions, tax and financial situation or other needs of any specific client. Actual data will vary and may not be reflected here. These forecasts are subject to high levels of uncertainty that may affect actual performance. Accordingly, these forecasts should be viewed as merely representative of a broad range of possible outcomes. These forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. Goldman Sachs has no obligation to provide updates or changes to these forecasts. Case studies and examples are for illustrative purposes only.

High-yield, lower-rated securities involve greater price volatility and present greater credit risks than higher-rated fixed income securities.

The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

The strategy may include the use of derivatives. Derivatives often involve a high degree of financial risk because a relatively small movement in the price of the underlying security or benchmark may result in a disproportionately large movement in the price of the derivative and are not suitable for all investors. No representation regarding the suitability of these instruments and strategies for a particular investor is made.

Index Benchmarks

Indices are unmanaged. The figures for the index reflect the reinvestment of all income or dividends, as applicable, but do not reflect the deduction of any fees or expenses which would reduce returns. Investors cannot invest directly in indices.

The indices referenced herein have been selected because they are well known, easily recognized by investors, and reflect those indices that the Investment Manager believes, in part based on industry practice, provide a suitable benchmark against which to evaluate the investment or broader market described herein. The exclusion of "failed" or closed hedge funds may mean that each index overstates the performance of hedge funds generally.

References to market or composite indices, benchmarks or other measures of relative market performance over a specified period of time (each, an 'index') are provided for your information only. Reference to this index does not imply that the portfolio will achieve returns, volatility or other results similar to the index. The composition of the index may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility or tracking error targets, all of which are subject to change over time. While the Adviser seeks to design a portfolio which will reflect appropriate risk and return features such as sector weights, credit quality and duration, the Client understands that such characteristics of the portfolio, as well as its volatility, may deviate to varying degrees from those of the benchmark.

Additional Information and Disclosures

General Disclosures

Conflicts of Interest

There may be conflicts of interest relating to the Alternative Investment and its service providers, including Goldman Sachs and its affiliates. These activities and interests include potential multiple advisory, transactional and other interests in securities and instruments that may be purchased or sold by the Alternative Investment. These are considerations of which investors should be aware and additional information relating to these conflicts is set forth in the offering materials for the Alternative Investment.

The risk management process includes an effort to monitor and manage risk, but should not be confused with, and does not imply, low risk.

Goldman Sachs does not provide legal, tax or accounting advice, unless explicitly agreed between you and Goldman Sachs (generally through certain services offered only to clients of Private Wealth Management). Any statement contained in this presentation concerning U.S. tax matters is not intended or written to be used and cannot be used for the purpose of avoiding penalties imposed on the relevant taxpayer. Notwithstanding anything in this document to the contrary, and except as required to enable compliance with applicable securities law, you may disclose to any person the US federal and state income tax treatment and tax structure of the transaction and all materials of any kind (including tax opinions and other tax analyses) that are provided to you relating to such tax treatment and tax structure, without Goldman Sachs imposing any limitation of any kind. Investors should be aware that a determination of the tax consequences to them should take into account their specific circumstances and that the tax law is subject to change in the future or retroactively and investors are strongly urged to consult with their own tax advisor regarding any potential strategy, investment or transaction.

Risk of Loss. Tactical tilts may involve a high degree of risk. No assurance can be made that profits will be achieved or that substantial losses will not be incurred.

Implementation. The Investment Manager may at certain times be unable, or may in its sole discretion elect not, to implement a specific tactical tilt due to a number of factors including, without limitation, the portfolio's then current asset allocation, costs associated with implementation, and investment restrictions applicable to the portfolio. The Investment Manager may in its sole discretion elect not to implement a specific tactical tilt for the portfolio or may cease implementing tactical tilts at any time, for a period of time or permanently.

Timing. The timing for implementing a tactical tilt or unwinding a position can materially affect the performance of such tactical tilt. For various reasons, Goldman Sachs may implement a tactical tilt or unwind a position for other clients of Goldman Sachs or for Goldman Sachs on its own behalf at a different time than implemented by the Investment Manager, which may result in different performance between the portfolio on the one hand and Goldman Sachs or other clients of Goldman Sachs on the other.

Potential Conflicts Relating to Goldman Sachs' Proprietary Activities and Activities on Behalf of Other Accounts. Tactical tilts may be implemented in various ways to take into account specific investment guidelines and constraints and other factors. The results of the tactical tilt investment activities of the portfolio may differ significantly from the results achieved by Goldman Sachs for its proprietary accounts and from the results achieved by Goldman Sachs for other clients. The Investment Manager will manage the portfolio in accordance with the portfolio's investment objectives and guidelines. However, Goldman Sachs may give advice, and take action, with respect to any current or future client accounts or on its own behalf that may compete or conflict with the investment decisions the Investment Manager may make on behalf of the portfolio, including with respect to the return of the investment, the timing or nature of action relating to the investment or the method of exiting the investment. Goldman Sachs may take opposite positions with respect to other client accounts or on its own behalf than are taken for the portfolio. Transactions undertaken by Goldman Sachs or client accounts may adversely impact the portfolio.

Use of Derivatives. Use of Derivatives in connection with tactical tilts involves risks different from, or possibly greater than, the risks associated with investing directly in securities or more traditional investments, depending upon the characteristics of the particular Derivative. Certain swaps, options and other derivative instruments may be subject to various types of risks, including market risk, liquidity risk, counterparty credit risk, legal risk and operations risk. In addition, swaps and other derivatives can involve significant economic leverage and may, in some cases, involve significant risk of loss. Derivatives may entail investment exposures that are greater than their cost would suggest, meaning that a small investment in derivatives could have a large potential impact on performance and may result in significant losses.

Additional Information and Disclosures

General Disclosures

Reliance on Models. Success with a tactical tilt strategy is largely dependent on constructing models that attempt to predict asset-class returns. These models may, for a variety of reasons, fail to accurately predict returns, including because future events may not necessarily follow historical norms or because of defects in the models. There is no assurance that any tactical tilt strategy will be implemented successfully.

Although certain information has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness. We have relied upon and assumed without independent verification, the accuracy and completeness of all information available from public sources.

Strategic Long Term Assumptions:

Alpha and tracking error assumptions reflect Multi-Asset Solutions' estimates for above-average active managers and are based on a historical study of the results of active management. Expected returns are estimates of hypothetical average returns of economic asset classes derived from statistical models. There can be no assurance that these returns can be achieved. Actual returns are likely to vary. Please see additional disclosures.

The data regarding strategic assumptions has been generated by MAS for informational purposes. As such data is estimated and based on a number of assumptions; it is subject to significant revision and may change materially with changes in the underlying assumptions. MAS has no obligation to provide updates or changes. The strategic long-term assumptions shown are largely based on proprietary models and do not provide any assurance as to future returns. They are not representative of how we will manage any portfolios or allocate funds to the asset classes.

Effect of fees on performance:

The following table provides a simplified example of the effect of management and incentive fees on portfolio returns. For example, assume a portfolio has a steady investment return, gross of fees, of 0.5% per month and total management fees of 0.1042% per month of the market value of the portfolio on the last day of the month and incentive fees of 5% of net profits. Management fees and incentive fees are deducted from the market value of the portfolio on that day. There are no cash flows during the period. The table shows that, assuming that other factors such as investment return and fees remain constant, the difference increases due to the compounding effect over time. Of course, the magnitude of the difference between gross-of-fee and net-of-fee returns will depend on a variety of factors, and the example has been intentionally simplified.

Period	Gross Return	Net Return	Differential
1 year	6.17%	4.61%	1.56%
2 years	12.72%	9.43%	3.29%
10 years	81.94%	56.89%	25.05%

Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.

Expected return models apply statistical methods and a series of fixed assumptions to derive estimates of hypothetical average asset class performance. Reasonable people may disagree about the appropriate statistical model and assumptions. These models have limitations, as the assumptions may not be consensus views, or the model may not be updated to reflect current economic or market conditions. These models should not be relied upon to make predictions of actual future account performance. Goldman Sachs Asset Management has no obligation to provide updates or changes to such data.

Additional Information and Disclosures

General Disclosures

Risk Considerations

Mutual funds are subject to various risks, as described fully in each Fund's prospectus. There can be no assurance that the Funds will achieve their investment objectives. The Funds may be subject to style risk, which is the risk that the particular investing style of the Fund (i.e., growth or value) may be out of favor in the marketplace for various periods of time.

Equity investments are subject to market risk, which means that the value of the securities in which it invests may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions. Different investment styles (e.g., "growth" and "value") tend to shift in and out of favor, and, at times, the strategy may underperform other strategies that invest in similar asset classes. The market capitalization of a company may also involve greater risks (e.g. "small" or "mid" cap companies) than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements, in addition to lower liquidity.

Investments in fixed income securities are subject to the risks associated with debt securities generally, including credit, liquidity, interest rate, prepayment and extension risk. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. The value of securities with variable and floating interest rates are generally less sensitive to interest rate changes than securities with fixed interest rates. Variable and floating rate securities may decline in value if interest rates do not move as expected. Conversely, variable and floating rate securities will not generally rise in value if market interest rates decline. Credit risk is the risk that an issuer will default on payments of interest and principal. Credit risk is higher when investing in high yield bonds, also known as junk bonds. Prepayment risk is the risk that the issuer of a security may pay off principal more quickly than originally anticipated. Extension risk is the risk that the issuer of a security may pay off principal more slowly than originally anticipated. All fixed income investments may be worth less than their original cost upon redemption or maturity.

High-yield, lower-rated securities involve greater price volatility and present greater credit risks than higher-rated fixed income securities. Emerging markets investments may be less liquid and are subject to greater risk than developed market investments as a result of, but not limited to, the following: inadequate regulations, volatile securities markets, adverse exchange rates, and social, political, military, regulatory, economic or environmental developments, or natural disasters.

Infrastructure investments are susceptible to various factors that may negatively impact their businesses or operations, including regulatory compliance, rising interest costs in connection with capital construction, governmental constraints that impact publicly funded projects, the effects of general economic conditions, increased competition, commodity costs, energy policies, unfavorable tax laws or accounting policies and high leverage.

An investment in Real Estate Investment Trusts ("REITs") involves certain unique risks in addition to those risks associated with investing in the real estate industry in general. REITs whose underlying properties are focused in a particular industry or geographic region are also subject to risks affecting such industries and regions. The securities of REITs involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements because of interest rate changes, economic conditions, tax code adjustments, and other factors.

Confidentiality

No part of this material may, without Goldman Sachs Asset Management's prior written consent, be (i) copied, photocopied or duplicated in any form, by any means, or (ii) distributed to any person that is not an employee, officer, director, or authorized agent of the recipient.

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Invitation to Join Labor Rights Investor
Network:

About the Labour Rights Investor Network: An Education and Exchange Platform on Freedom of Association and Collective Bargaining

What is the Labour Rights Investor Network?

The 'Labour Rights Investor Network' is a global investor network focusing on the rights to freedom of association and collective bargaining. The Network assists investors by acting as an education and exchange platform and a place to connect on issues related to freedom of association and collective bargaining.

The Network is composed of investors who commit to integrating labour rights into their stewardship practices, as outlined in the Investor Statement on the Rights to Freedom of Association and Collective Bargaining. The Network is open to asset managers, asset owners and other investment service providers.

What will the Network do?

The Coordinating Committee (detailed below) will facilitate knowledge building by providing resources and activities to meet the needs identified by members. This could include information about legal frameworks and risks related to freedom of association and collective bargaining, individual companies' practices, sector-wide risks, or relevant policy developments. In addition, the Coordinating Committee may also undertake activities to support individual members or groups of members when it is relevant to do so. Membership in the Network does not require participation in any particular activity, including any engagements. Members can opt in to chosen activities of interest.

After the initial year and as the Network progresses, the Coordinating Committee will consult with the investor members regarding the Network, including its governance structure and its activities.

Build knowledge on freedom of association and collective bargaining

The Coordinating Committee will organise the activities of the Network and provide practical resources to help advance investor knowledge of freedom of association and collective bargaining, so that investors can apply this understanding of the topic to strengthen stewardship activities.

Resources will include:

- Information about trade unions and the rights to freedom of association and collective bargaining;
- Practical workshops on responding to engagement challenges;
- Education sessions focused on particular geographies, sectors, or themes;
- Written resources that can be utilised by members in stewardship and internal engagements.

Provide information on company-level risks

The Labour Rights Investor Network will act as a platform through which members receive public information from other investors and trade unions globally regarding issues related to freedom of association and collective bargaining at specific companies or industries. The Coordinating Committee will not coordinate collaborative company engagement activities but will share and support relevant company engagement activities organised by members or other groups. The Coordinating Committee may also help support members in evaluating company statements.

Facilitate members embedding labour rights in the investment chain

Where there is member interest, the Network will support activities to incorporate freedom of association and collective bargaining throughout the investment chain. For example, the Network can facilitate sharing good practices on how to incorporate labour rights in engagement with service providers, such as ESG rating agencies or asset managers. The Network can also inform and support members participating in relevant policy consultations that shape company or investor activities in relation to freedom of association and collective bargaining.

What does it mean to be a member?

Expectations of members

By joining the Network, members commit to:

- Publicly endorse the Investor Statement on the Rights to Freedom of Association and Collective Bargaining by adding their organisation's name. This statement will be public on the Network's webpage, hosted on the Global Unions' Committee on Workers' Capital (CWC) (detailed below) website.
- Join regular Network meetings.
- Engage with the Network's resources and events.
- Work to incorporate labour rights into their engagement and stewardship activities.
- Promote labour rights and the Network itself where there are opportunities to do so.

Members are prohibited from sharing confidential, proprietary or material non-public information. If a network member inadvertently receives information believed to be material non-public information, then the requirements under the relevant securities laws apply.

Network members are invited to show leadership within the Network on the stewardship of labour rights, including leading relevant workstreams of interest. Members are encouraged to provide input into the activities of the Network.

How to join the Network?

If an investor has questions and would like to discuss the Network they should contact the Coordinating Committee detailed below.

To join the Network, the investor agrees to:

- Provide the Coordinating Committee with their organisation's current assets under management and the name and contact information of their representative for purposes of Network communications and activities. Members may be contacted by any member of the Coordinating Committee listed below.
- Act in line with and fulfil the expectations outlined in this document.
- Be listed publicly, unless an investor member requests otherwise. Assets under management will only be disclosed in aggregate.

Leaving the Network

Investors can join the Network on an ongoing basis, for an indefinite amount of time. If a member would like to leave the Network at any time, for any reason, they should contact the Coordinating Committee. The member's name will then be removed from the online version of the investor statement. Should there be a significant change in the running, structure or activities of the Network, as detailed in this document, all investor members will be consulted.

What is the governance of the Network?

The Network will be coordinated by the Global Unions' Committee on Workers' Capital (CWC), with the support of a Coordinating Committee of CWC participant organisations.

Coordinating Committee responsibilities

- Coordinate regular Network meetings for members, provide agendas and chair meetings.
- Develop and organise a programme of knowledge-sharing and capacity-building resources and activities for members by drawing on expertise and capabilities within and beyond the global trade union movement and other investor members.
- Offer interested members expertise and support on labour rights, including by drawing on a global network of labour rights experts.
- Promote the Network, including engaging with prospective members and organising opportunities for public communication. The Coordinating Committee is able to speak on behalf of the Network, but will not speak directly on behalf of individual investors or use names in communications without specific permission from the investor to do so.
- Provide space for unions and investors to exchange information related to labour rights.
- Seek input and feedback from investor members on activities and the running of the network.

Network Coordinating Committee

The following organisations are represented on the Coordinating Committee.

- **UNI Global Union** - UNI Global Union is the global trade union federation for the skills and services sectors, representing more than 20 million workers across 150 different countries. UNI Global Union's investor engagement team works with investors to support their engagement and stewardship with companies and across sub-sectors in the services sectors. UNI has also worked extensively in supporting investors to advance their knowledge, policy and practice on labour rights.
- **UFCW** - The United Food and Commercial Workers International Union (UFCW) represents 1.3 million workers in the U.S. and Canada in the food retail, food processing, and non-food retail industries. UFCW's capital stewardship department supports investor engagement with companies to drive more sustainable returns.
- **AFL-CIO** - The American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) is a federation of 60 national and international labour unions that represent 12.5 million working people. The AFL-CIO's Capital Stewardship Program seeks to ensure that retirement and employee benefit funds invested on behalf of working people are invested and managed in their long-term best interests.
- **SOC Investment Group** - The SOC Investment Group works with pension funds sponsored by unions affiliated with the Strategic Organizing Center (SOC), a coalition of unions representing millions of members, to enhance long-term shareholder value through active ownership. These funds have over \$250 billion in assets under management. The SOC Investment Group supports shareholder initiatives to ensure director accountability, sound human rights practices, and strong governance policies, reflecting the long-term interests of workers and their families invested in union pension funds.

- **CWC Secretariat** - The Global Unions' Committee on Workers' Capital (CWC) is an international labour network of over 600 labour representatives and asset owner board members that advocate for the responsible investment of workers' retirement savings. Founded over 20 years ago, it is a joint initiative of the International Trade Union Confederation, the Global Union Federations and the Trade Union Advisory Committee to the OECD. The Secretariat of the CWC is housed at the Shareholder Association for Research and Education (SHARE) in Canada.

Investor Statement on the Rights to Freedom of Association and Collective Bargaining

The undersigned investors and fiduciaries representing [XX] institutions and [XX] in combined assets under management or advice are writing to express our expectations regarding the rights to freedom of association and collective bargaining.

Labour rights are human rights.¹ The rights to freedom of association and collective bargaining are fundamental pillars of human freedom, established in the International Labour Organization Core Conventions, the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, and the UN Sustainable Development Goals. These rights guarantee that individual workers can join together in protected concerted workplace activity to better their working lives, improve the companies they work for, and contribute to the advancement of society.

Companies that respect labour rights reap many benefits, such as greater productivity, safer workplaces, and improved employee engagement.² Implementing labour rights requires varied approaches across different businesses, regions, and jurisdictions. The undersigned investors agree to three requests to boards and senior management at investee companies:

- Implement a strong governance framework that articulates the board's responsibility for oversight of labour rights based on ILO Core Conventions.
- Take action to respect workers' exercise of their fundamental rights to freedom of association and collective bargaining, for example, but not limited to: adopting labour rights due diligence processes, training management at all levels to meet labour rights standards, and committing to non-interference when workers seek to form or join unions.
- Provide enhanced disclosure of labour rights-related metrics – for example, but not limited to: percentage of workers covered by collective bargaining agreements, pending litigation and regulatory investigations regarding alleged labour rights violations, and any expenditure of company resources on union avoidance activities – which allow investors to assess company labour risk.

We encourage and welcome other investors and their representatives to join us in signing this statement.

¹International Labour Organization (ILO) Core Conventions and the ILO Declaration on Fundamental Principles and Rights at Work: ILO, Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87), https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312232; ILO, Right to Organize and Collective Bargaining Convention, 1949 (No. 98), https://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID,P12100_LANG_CODE:312243,en:NO; ILO, ILO Declaration on Fundamental Principles and Rights at Work and its Follow-Up (adopted 1998, amended 2022), https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---declaration/documents/normativeinstrument/wcms_716594.pdf; [United Nations Guiding Principles on Business and Human Rights \(UNGPs\)](#); [Organization for Economic Co-operation and Development \(OECD\) Guidelines for Multinational Enterprises \(MNEs\)](#); [United Nations Universal Declaration of Human Rights](#); [UN Sustainable Development Goals, Goal 8](#).

²See text and citations of Global Unions' Committee on Workers' Capital, *Shared Prosperity: The Investor Case for Freedom of Association and Collective Bargaining* (November 2022), <https://www.workerscapital.org/our-resources/shared-prosperity-the-investor-case-for-freedom-of-association-and-collective-bargaining/>.

Update on BAM University:

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

State Street Quarterly Fund Performance Overview (Public):



Teachers' Retirement System
of New York City
Performance Overview as of June 30, 2023

Total Fund Overview



Teachers' Retirement System of New York City

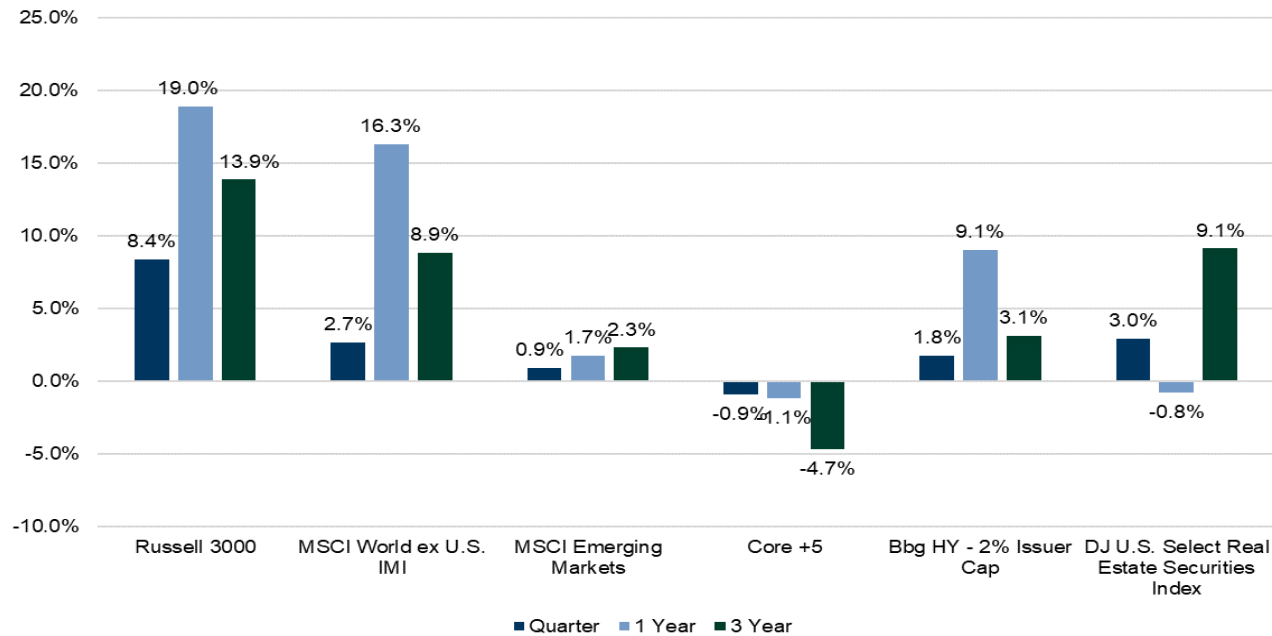
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Through June 30, 2023

Capital Market Performance



Market Backdrop: Global growth remained mixed in the second quarter as the US and Japanese data were resilient whereas Chinese and European growth momentum lost steam. In China, post reopening recovery fizzled out in Q2 with further pressure from weak property sector. In general, economies with more reliance on manufacturing witnessed weaker growth as evident from weaker global manufacturing PMIs. The resilience of the US economy was driven by strong consumption on the back of strong labor market. As a result of strong labor market, tentative signs of improvement in the housing data, resilient growth, and limited impact from the concerns around the regional banks on activity led to investors reassess their expectation of a US recession. In a nutshell, the expected downturn in US growth remained elusive and analysts postponed their expectation of recession. U.S. equity markets (as measured by the Russell 3000 Index) returned 8.4% for the quarter, with gains across nearly all styles and sectors. The best performing sector was Information Technology which was up

Through June 30, 2023

16.9% for the quarter ending June 30, 2023. Developed international and emerging equity markets were also positive, with the MSCI EAFE IMI Net Index (in USD terms) up 2.6% and the MSCI Emerging Markets Net Index (in USD terms) up 0.9% for the quarter. The U.S. Bond markets, as proxied by the Bloomberg US Aggregate, fell approximately -0.8% for the period, as the Treasury yields moved higher across the curve. On a relative basis, the Bloomberg Corporate Index detracted by -0.3% which underperformed the Bloomberg High Yield Index's 1.8% for the second quarter.

Total Fund Performance: The Teachers' Total Fund returned 2.87% (net of fees) for the quarter ending June 30, 2023, generating a return -8 basis points lower than the policy benchmark over the same period. During the quarter, allocations relative to targets contributed 11 basis points to relative performance of the Fund, driven primarily by the positive allocation effects of private equity, U.S. Treasury short term, U.S. Treasury intermediate, U.S. treasury long duration, IG corporate, and mortgage. The positive allocation effect was offset by the manager selection effect which took away (-18) basis points to relative returns. Manager selection in private equity and domestic equity notably contributed to the overall negative manager selection effect. For the one-year period ending June 30, 2023, the Total Fund returned 7.76% (net of fees), outperforming the policy benchmark by 95 basis points. For the three-year period ending June 30, 2023, the Total Fund returned 6.66% (net of fees), outperforming the policy benchmark by 44 basis points. The Total Fund fees for public market assets for the calendar year-to-date ending June 30, 2023, have been estimated at approximately 3 basis points. Please note that all composite and manager performance data in the sections below is reported net of fees.

- **Total Fund Asset Allocation - \$95.8 Billion:** As of June 30, 2023, the Fund had a total market value of \$95.8 billion, up from \$93.5 billion on March 31, 2023. In the Growth segment of the Total Fund, underweights to non-core private real estate of -1.5%, world ex-USA of -1.1%, and opportunistic fixed income of -1.3% were offset by overweights to private equity of 1.5%, domestic US equity of 1.2%, global equity of 1.0%, and international emerging managers FOF of 1.0%. This is consistent with the strategy to invest in more liquid assets while awaiting private real estate commitments to be drawn down. In the Deflation Protection segment of the Fund, short term investments and investments in core fixed income-developing managers were above long-term targets by 0.5% and 0.3% respectively. Finally, within the Inflation Protection segment of the Fund, infrastructure was about -1.6% below target whereas U.S. TIPS is 0.3% overweight target and core real estate is 0.3% overweight target, pending new commitments to and capital calls from private funds. As of June 30, 2023, the total private equity, infrastructure, and private real estate invested allocation was 16.7% versus their aggregate long-term allocation of 18.0%.
- **U.S. Equity - \$25.1 Billion, 26.2% of Fund:** The U.S. equity composite return of 8.56% outperformed the broad U.S. equity market, represented by the Russell 3000 Index, which returned 8.39% for the quarter. Approximately 91% of the U.S. equity composite is allocated to passively managed mandates. The actively managed portion of the U.S. equity composite, a majority of which was invested in smaller cap strategies, returned 5.52% during the quarter, underperforming the Russell 3000 Index return by 286 basis points. The small cap sub-composite returned 5.6% during the quarter, outperforming the Russell 2000 Index return of 5.2%. For the one-year period ending June 30, 2023, the U.S. equity composite underperformed the index, returning 18.72% versus



Through June 30, 2023

the Russell 3000 Index's return of 18.95%. Over the three-year period ending June 30, 2023, the total U.S. equity composite returned 13.31%, underperforming the Russell 3000 Index return of 13.89%.

- **Developed International Equity - \$8.5 Billion, 8.9% of Fund:** The Developed International Equity composite return of 3.21%, outperformed the MSCI World ex-USA Custom Benchmark's returned 2.67% during the quarter, outperforming its benchmark by 53 basis points. In contrast to the U.S. equity composite, the developed international equity composite was approximately 83% actively managed as of June 30, 2023. For the one-year period ending June 30, 2023, the overall composite returned 20.79%, outperforming the World ex-USA Custom Benchmark return of 16.35%. Over the three-year period ending June 30, 2023, the total developed international composite returned 8.27%, underperforming the benchmark return of 8.87% by 60 basis points.
- **Emerging Markets Equity - \$8.8 Billion, 9.2% of Fund:** Emerging market equities, as measured by the TRS Custom EM Index, returned 0.9% during the second quarter of 2023. During the same period, the emerging markets equity composite, which is about 84.2% actively managed, returned 3.04%, outperforming the TRS Custom EM Benchmark by 214 basis points. For the one-year period ending June 30, 2023, the emerging markets equity composite returned 6.93%, outperforming the benchmark return of 1.75%. For the three-year period ending June 30, 2023, the emerging markets equity composite returned 4.19%, outperforming the benchmark return of 2.32% by 187 basis points.
- **Structured Fixed Income - \$22.5 Billion, 23.5% of Fund:** The structured fixed income composite returned -0.88% while its custom structured benchmark returned -0.91% during the second quarter. Over the trailing one-year and three-year periods ending June 30, 2023, the structured fixed income composite returned -1.04% and -4.59%, respectively.
- **Core Fixed Income - \$258.9 Million, 0.3% of Fund:** The core fixed income composite returned -0.54% during the second quarter, outperforming the Bloomberg U.S. Aggregate Index return of -0.84% over the same period. Over the trailing one-year and three-year periods ending June 30, 2023, the core fixed income composite returned 0.28% and -2.99%, respectively. Over the same trailing one-year and three-year periods ending June 30, 2023, the Bloomberg U.S. Aggregate Index returned -0.94% and -3.96% respectively.
- **High Yield - \$4.9 Billion, 5.1% of Fund:** The corporate high yield market, as measured by the Bloomberg U.S. High Yield 1.8% Issuer Cap Index, returned 1.75% during the second quarter of 2023. The actively managed high yield composite underperformed the benchmark, returning 1.62% over the same period. For the one-year period ending June 30, 2023, this composite returned 8.82% while the High Yield Custom Benchmark returned 9.07%. Over the three-year period ending June 30, 2023, the composite returned 3.55%, outperforming its custom benchmark by 43 basis points.



Through June 30, 2023

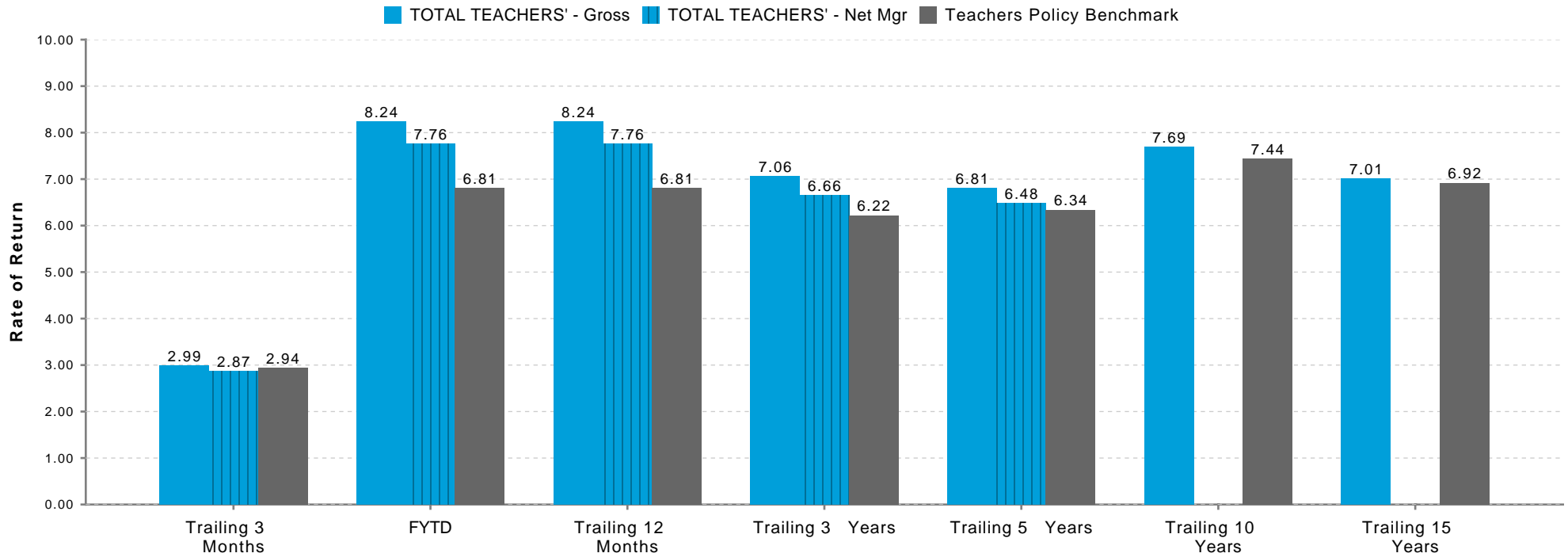
- **TIPS - \$3.2 Billion, 3.3% of Fund:** The broad U.S. TIPS market – Bloomberg Global Inflation-Linked U.S. TIPs index, returned -1.42% during the quarter ending June 30, 2023. The composite of TIPS managers (75% passive/25% active) returned -1.45% for the quarter and underperformed the benchmark by 3 basis points. For the one-year period ending June 30, 2023, the TIPS composite returned -1.4%, on par with the benchmark return of -1.4%. For the three-year period ending June 30, 2023, the composite returned -0.15% versus the benchmark's return of -0.12%.
- **Opportunistic Fixed Income - \$3.6 Billion, 3.8% of Fund:** The opportunistic fixed income composite is comprised of investments in sixteen funds, representing 16% of this composite's assets, and fifteen strategic separate account mandates, representing 84% of composite assets. These strategic mandates and funds call down capital as opportunities are identified and are still in the process of being funded. During the second quarter of 2023, the overall composite returned 1.93%, underperforming the blended benchmark of 50%/50% J.P Morgan Global High Yield Index and Credit Suisse Leveraged Loan Index +3%, which returned 3.22% over the same period. For the one-year period ending June 30, 2023, the overall composite returned 3.64%, underperforming the 13.02% return of the blended benchmark. Over the longer three-year period ending June 30, 2023, the opportunistic fixed income composite returned 10.89% versus the benchmark return of 8.03%.
- **Private Equity - \$8.1 Billion, 8.5% of Fund:** At the end of the second quarter of 2023, the private equity portfolio had \$8.15 billion in invested capital. The Fund currently has investments in 226 partnerships. Performance is reported separately by Teachers' Private Equity consultant.
- **Private Real Estate - \$5.5 Billion, 5.7% of Fund:** At the end of the second quarter of 2023, the private real estate portfolio had \$5.53 billion in invested capital. The composite has investments in 97 partnerships. Performance is reported separately by Teachers' Private Real Estate consultant.
- **Private Infrastructure – \$2.3 Billion, 2.4% of Fund:** At the end of the second quarter of 2023, the private infrastructure portfolio had \$2.3 billion in invested capital. The composite has investments in 38 partnerships and co-invest pools. Performance is reported separately by Teachers' Private Infrastructure consultant.



Market Value (Billions)

TOTAL TEACHERS'

\$95.8

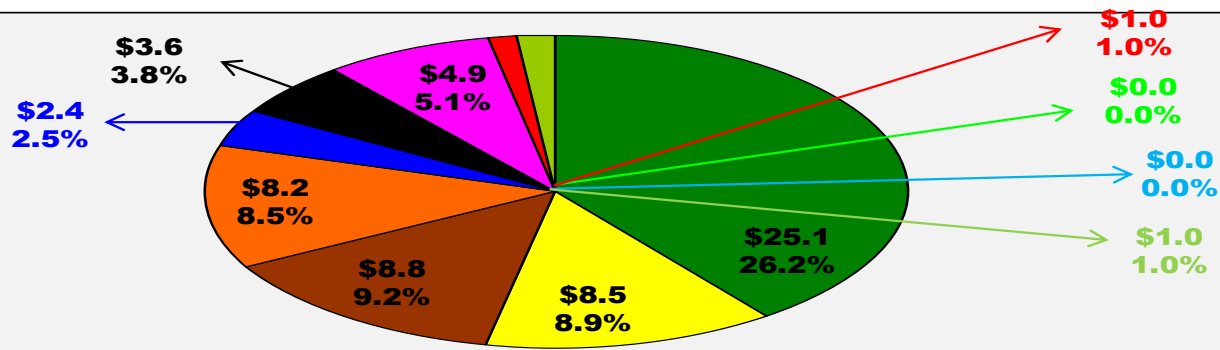


	Plan 3 Years	Benchmark 3 Years	Plan 5 Years	Benchmark 5 Years	Plan 7 Years	Benchmark 7 Years	Plan 10 Years
Standard Deviation							
TOTAL TEACHERS'	10.1	10.3	6.8	10.4	8.7	9.0	8.2

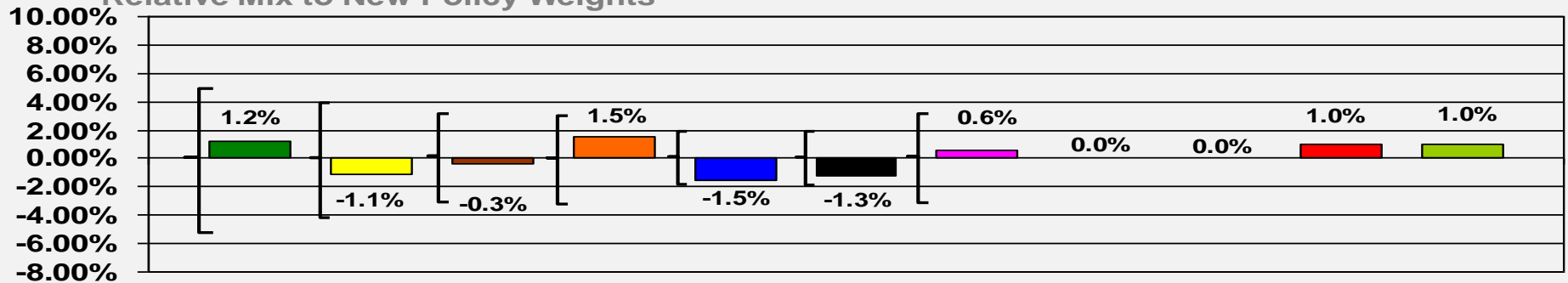


Portfolio Asset Allocation – Growth

Asset Allocation



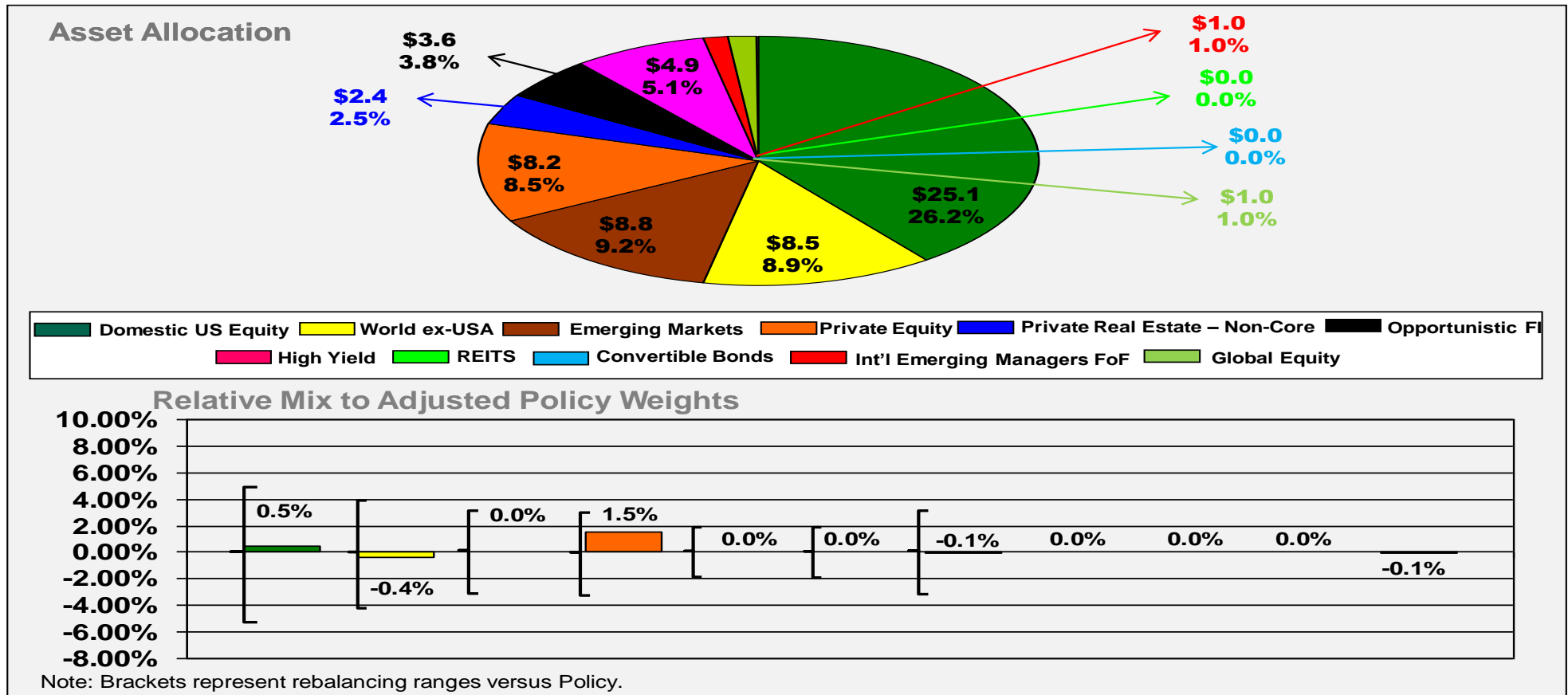
Relative Mix to New Policy Weights



Note: Brackets represent rebalancing ranges versus Policy.

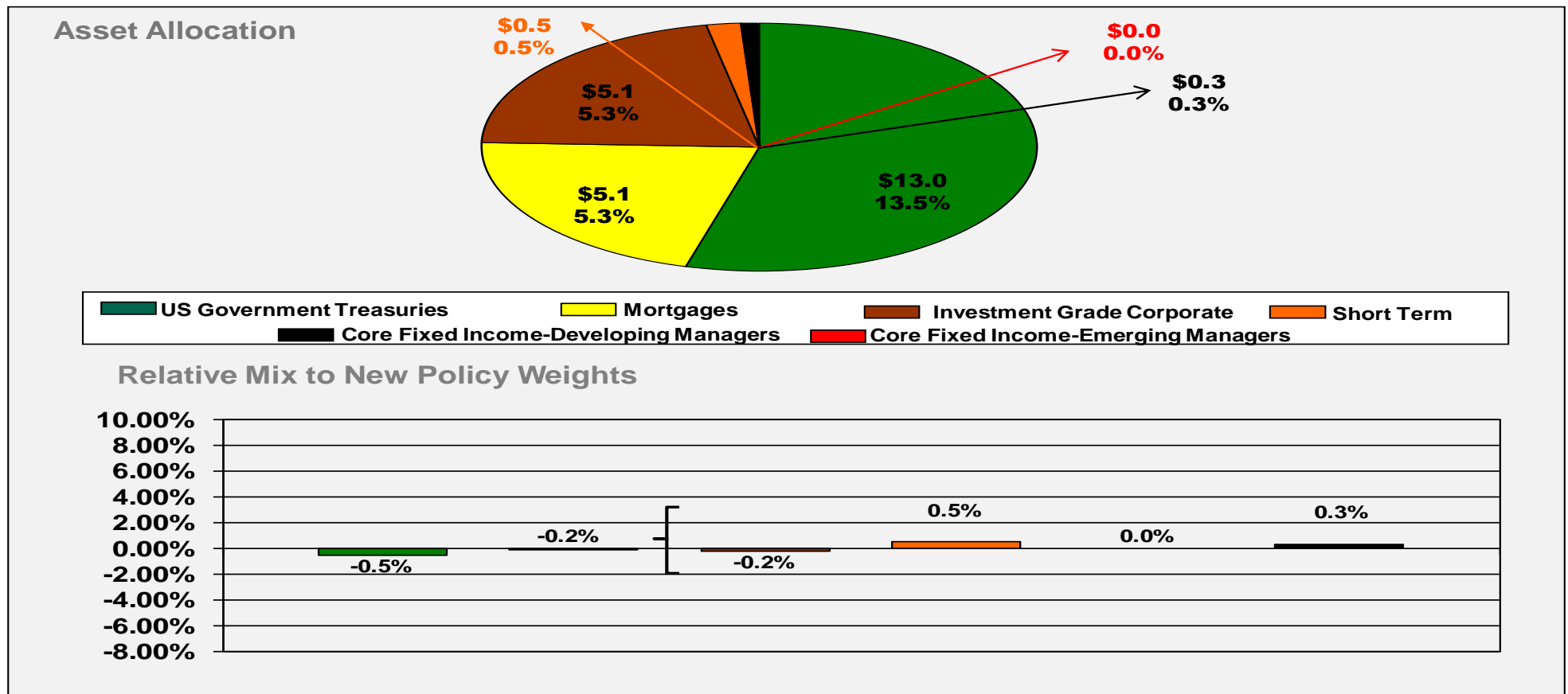


Portfolio Asset Allocation – Growth

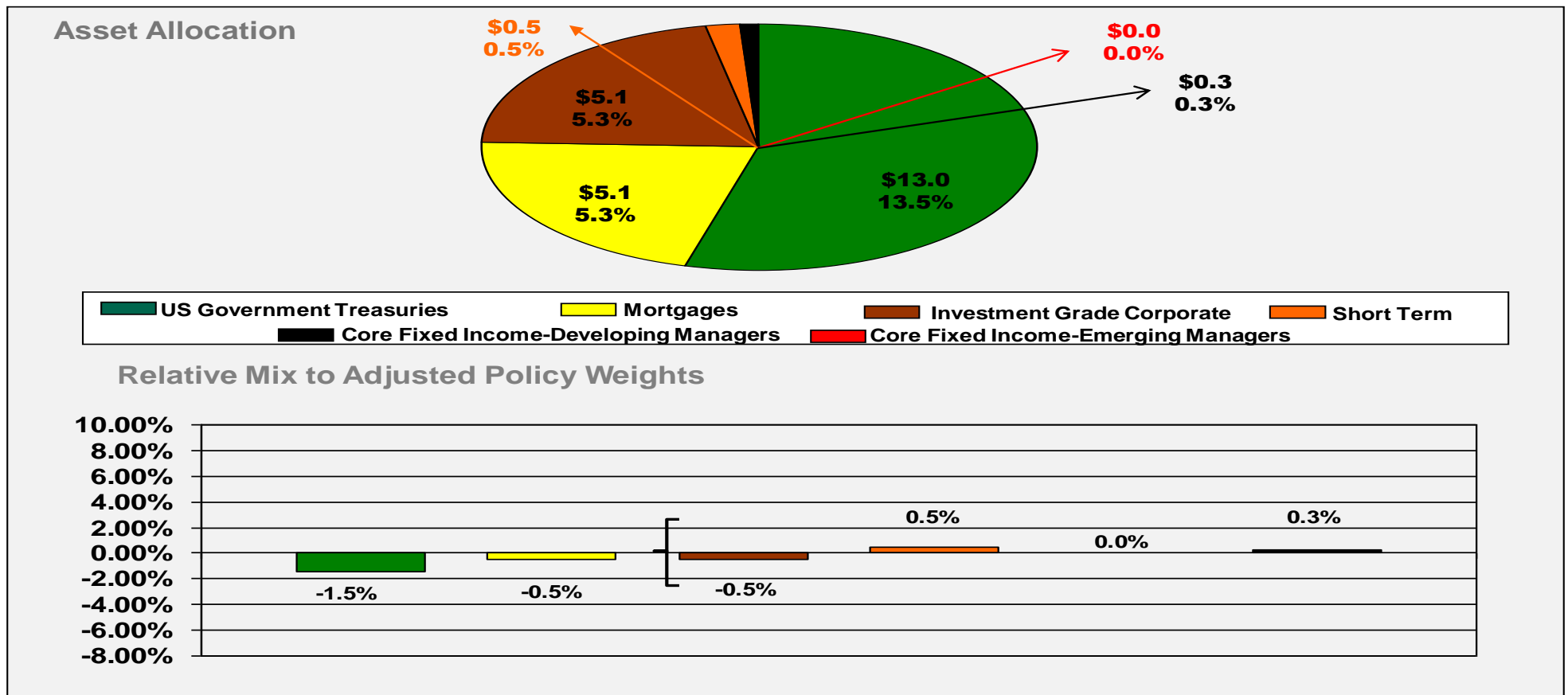




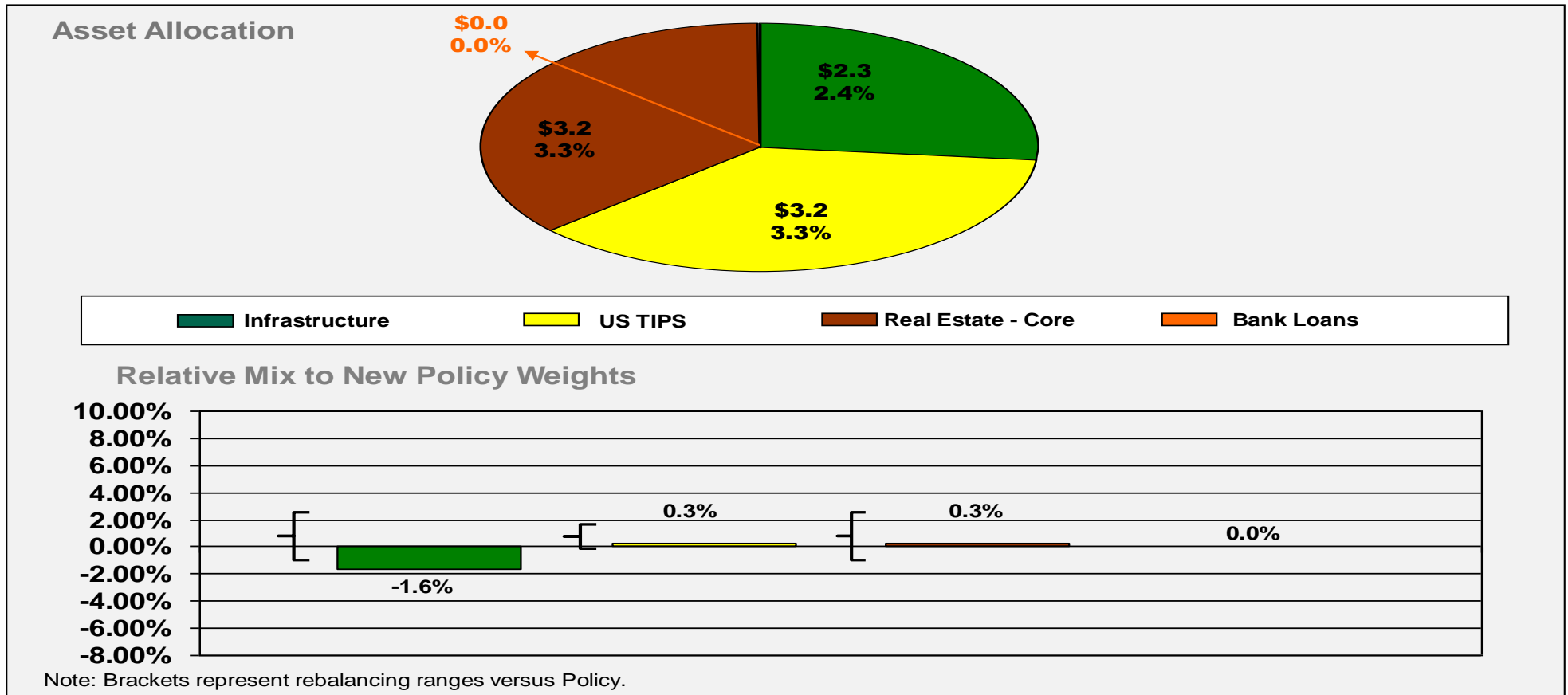
Portfolio Asset Allocation – Deflation Protection



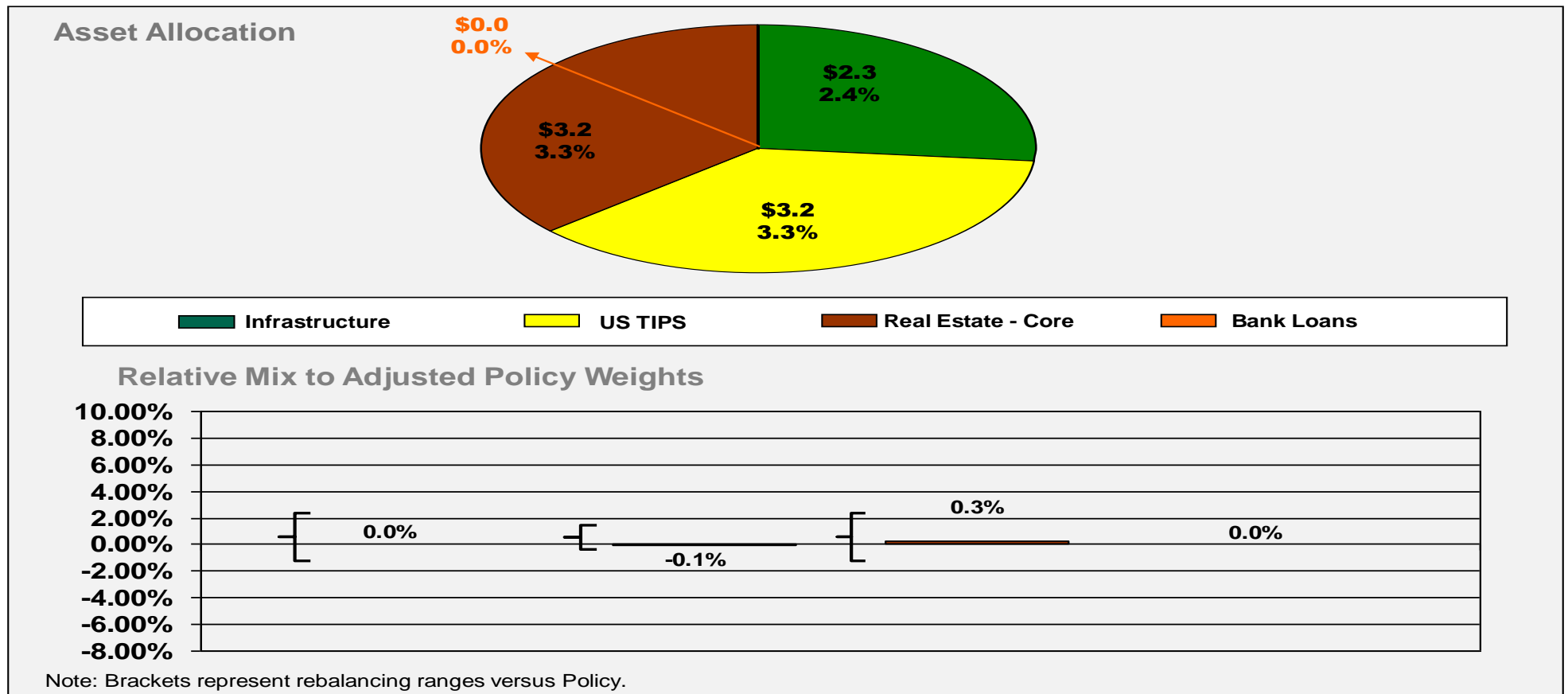
Portfolio Asset Allocation – Deflation Protection

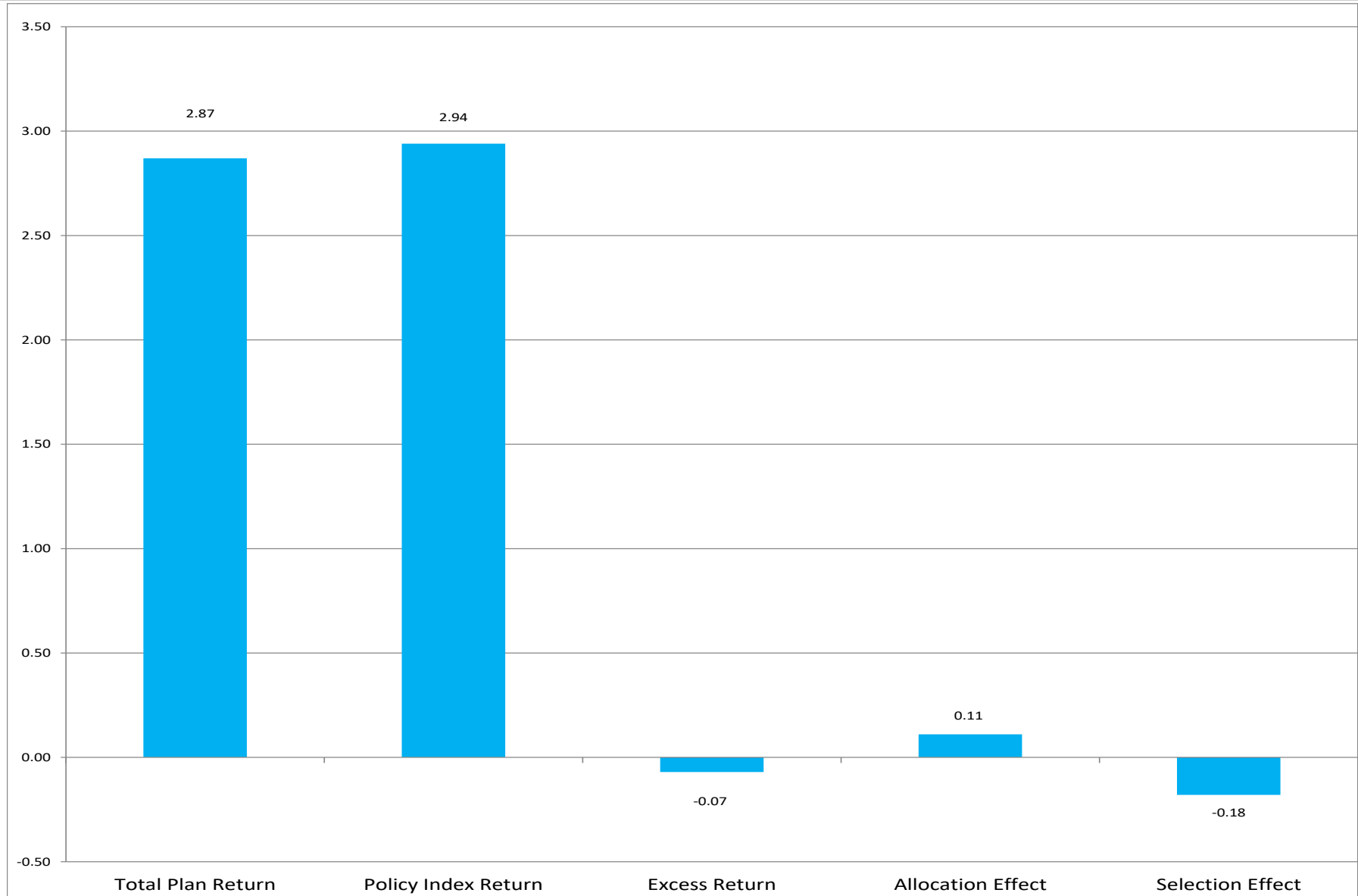


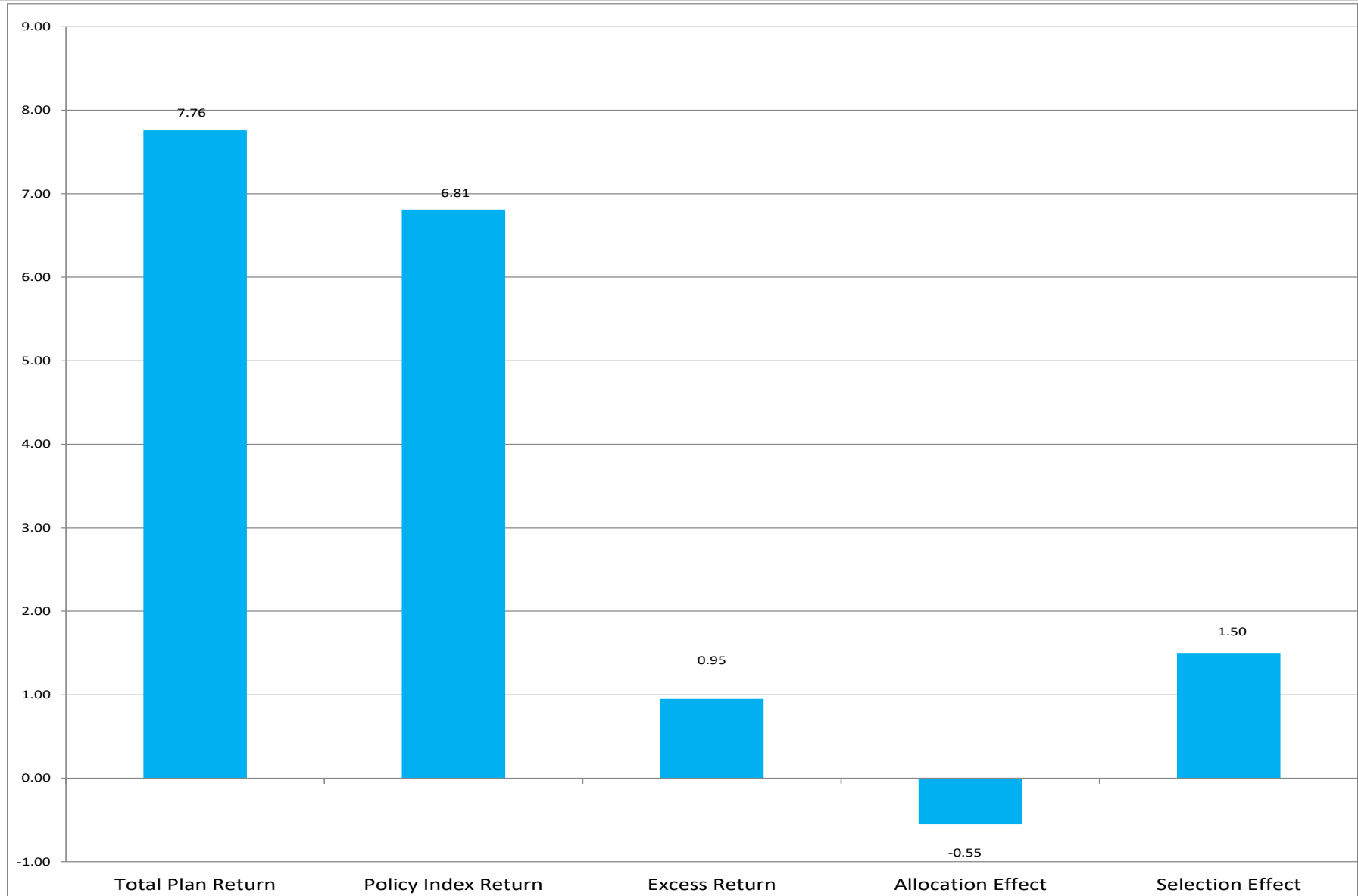
Portfolio Asset Allocation – Inflation Protection

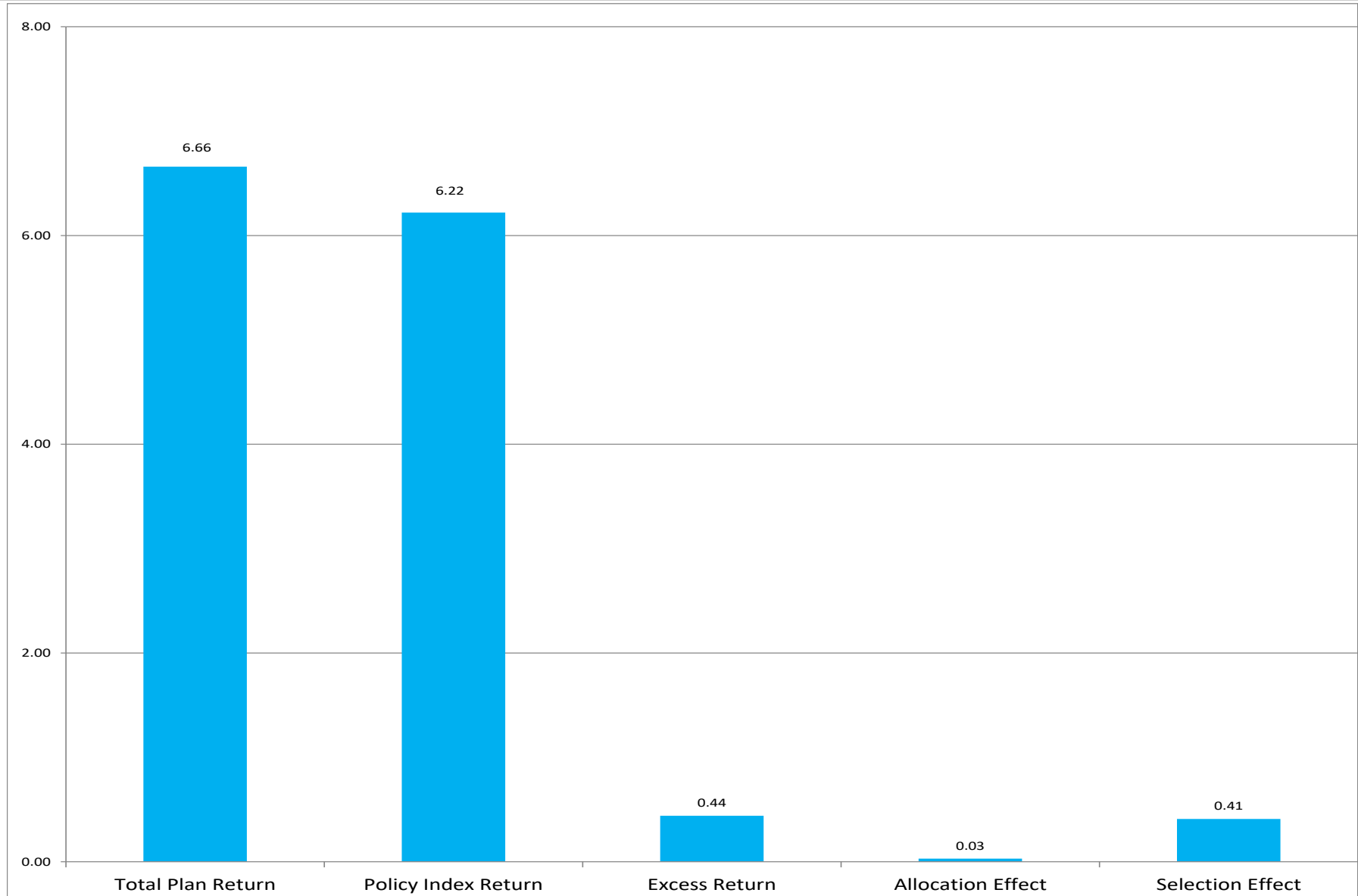


Portfolio Asset Allocation – Inflation Protection











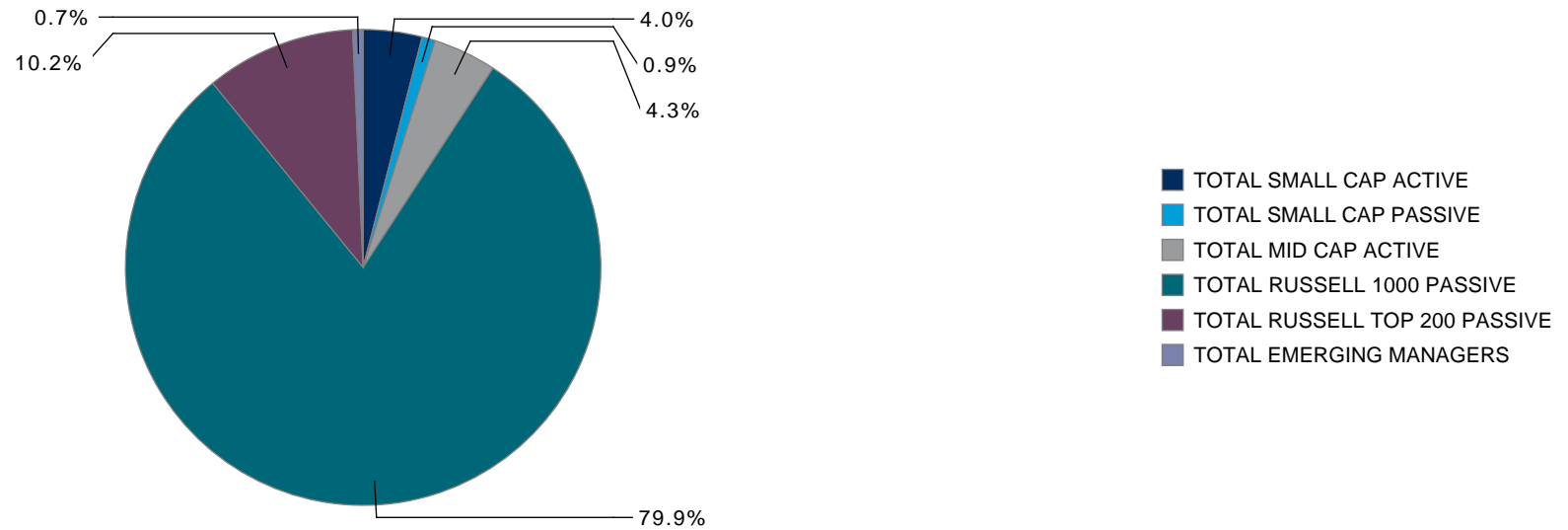
Allocation Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL TEACHERS'	0.11	-0.55	0.03	Teachers Policy Benchmark
TOTAL DOMESTIC EQUITY	0.00	-0.14	-0.07	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	-0.01	-0.08	-0.02	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	0.00	-0.02	0.00	MSCI World Index
TOTAL EMERGING MARKETS	0.00	-0.06	0.01	TRS Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.00	0.00	NYC Blended Custom Benchmark for FoF (TRS)
TOTAL REAL ESTATE SECURITIES	0.00	0.00	-0.02	DJ US SELECT REAL ESTATE SECURITIES INDEX
TOTAL PRIVATE EQUITY	0.07	-0.17	-0.03	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.02	-0.13	-0.04	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE - NON CORE	0.00	-0.01	0.01	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.00	0.00	0.00	CPI + 4%
TOTAL US TREASURY SHORT TERM	0.02	0.04	0.19	FTSE US Government Bond 1-3 Years Index
TOTAL US TREASURY INTERMEDIATE	0.01	-0.04	-0.06	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	-0.01	-0.02	-0.09	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.03	0.08	0.16	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	0.02	0.02	0.08	NYC Custom IGC Benchmark
TOTAL MORTGAGE	0.02	0.02	0.05	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	Teachers Custom Benchmark (No Cash)
TOTAL CORE FI- DEVELOPING MGRS	-0.01	-0.02	-0.03	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	0.00	-0.02	0.01	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.03	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	-0.01	-0.01	Bloomberg Global Inf-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	0.00	0.00	0.00	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	-0.01	0.00	-0.08	

Selection Effect - Asset Class Breakdown				
	Quarter	FYTD	3 Years	Benchmark
TOTAL TEACHERS'	-0.18	1.50	0.41	Teachers Policy Benchmark
TOTAL DOMESTIC EQUITY	0.04	-0.05	-0.15	RUSSELL 3000 (DAILY)
TOTAL WORLD ex-USA	0.05	0.38	-0.06	NYC Developed Equity Benchmark
TOTAL GLOBAL EQUITY	-0.01	0.04	-0.01	MSCI World Index
TOTAL EMERGING MARKETS	0.20	0.47	0.20	TRS Custom EM Index
TOTAL INTERNATIONAL FOF	0.00	0.02	0.00	NYC Blended Custom Benchmark for FoF (TRS)
TOTAL REAL ESTATE SECURITIES	0.00	0.00	0.00	DJ US SELECT REAL ESTATE SECURITIES INDEX
TOTAL PRIVATE EQUITY	-0.47	0.36	0.11	NYC R3000 +3% Lagged
TOTAL PRIVATE REAL ESTATE - CORE	-0.02	0.32	0.10	NCREIF ODCE NET
TOTAL PRIVATE REAL ESTATE - NON CORE	0.06	0.25	0.07	NCREIF ODCE NET +200
TOTAL INFRASTRUCTURE	0.01	0.01	0.05	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	0.01	0.00	USBIG TSY AGN 1-10
TOTAL ACTIVE GOVERNMENT	0.00	0.00	0.00	NYC - Treasury Agency Plus Five
TOTAL US TREASURY LONG DURATION	0.00	0.02	0.00	FTSE US Government Bond 10+ Years Index
TOTAL IG CORPORATE	0.01	0.02	0.00	NYC Custom IGC Benchmark
TOTAL MORTGAGE	0.00	0.01	0.01	NYC Custom Mortgage Benchmark
TOTAL ETI	0.00	0.00	0.00	Teachers Custom Benchmark (No Cash)
TOTAL CORE FI- DEVELOPING MGRS	0.00	0.00	0.00	Bloomberg U.S. Aggregate
TOTAL HIGH YIELD	-0.01	-0.01	0.02	High Yield Custom Benchmark
TOTAL BANK LOANS	0.00	0.00	-0.01	CSFB LEVERAGED LOAN INDEX
TOTAL TIPS MANAGERS	0.00	0.00	0.00	Bloomberg Global Inf-Linked: U.S. TIPS
TOTAL OPPORTUNISTIC FIXED	-0.05	-0.33	0.07	Opportunistic Fixed Income JPMGHY / CSFB 50/50 Blend Plus 300
TOTAL CASH	0.00	0.00	0.00	

Total Domestic Equity Asset Allocation: June 30, 2023



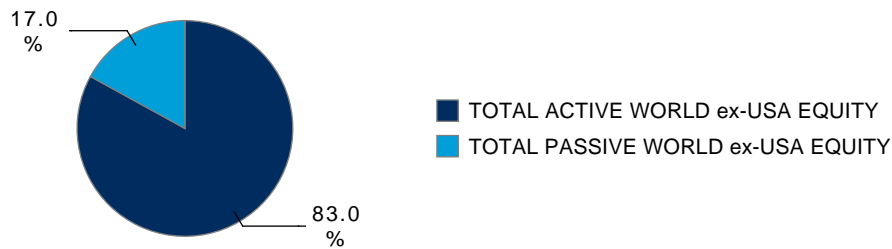
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL DOMESTIC EQUITY	\$25.1	26.2



	<u>Policy Weight</u>	<u>Actual Weight</u>	<u>Under/Over Weight</u>	<u>Quarterly Returns</u>		
				<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL SMALL CAP ACTIVE	5.1	4.0	(1.1)	6.2	5.2	1.0
TOTAL SMALL CAP PASSIVE	0.6	0.9	0.3	3.3	5.2	(1.9)
TOTAL MID CAP ACTIVE	4.8	4.3	(0.5)	5.3	4.8	0.5
TOTAL RUSSELL 1000 PASSIVE	74.8	79.9	5.1	8.7	8.6	0.1
TOTAL RUSSELL TOP 200 PASSIVE	14.1	10.2	(3.9)	10.3	9.9	0.4
TOTAL EMERGING MANAGERS	0.6	0.7	0.1	2.8	5.2	(2.4)



	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL WORLD ex-USA	\$8.5	8.9

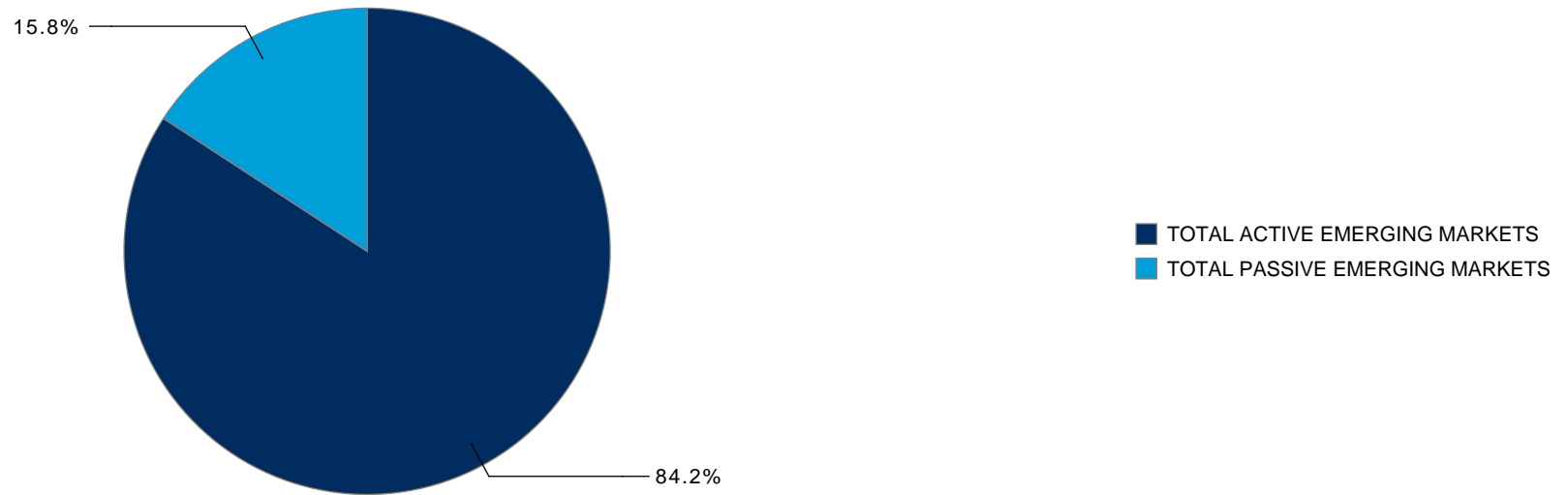


	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL WORLD ex-USA LARGE & MID ACTIVE	72.95	3.74	3.03	0.71
TOTAL WORLD ex-USA SMALL CAP ACTIVE	10.06	0.28	0.17	0.11
TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE	12.07	3.48	3.03	0.45
TOTAL WORLD ex-USA SMALL CAP PASSIVE	4.91	0.72	0.49	0.23
TOTAL WORLD ex-USA	100.00	3.21	2.67	0.53

Emerging Markets Equity Asset Allocation: June 30, 2023



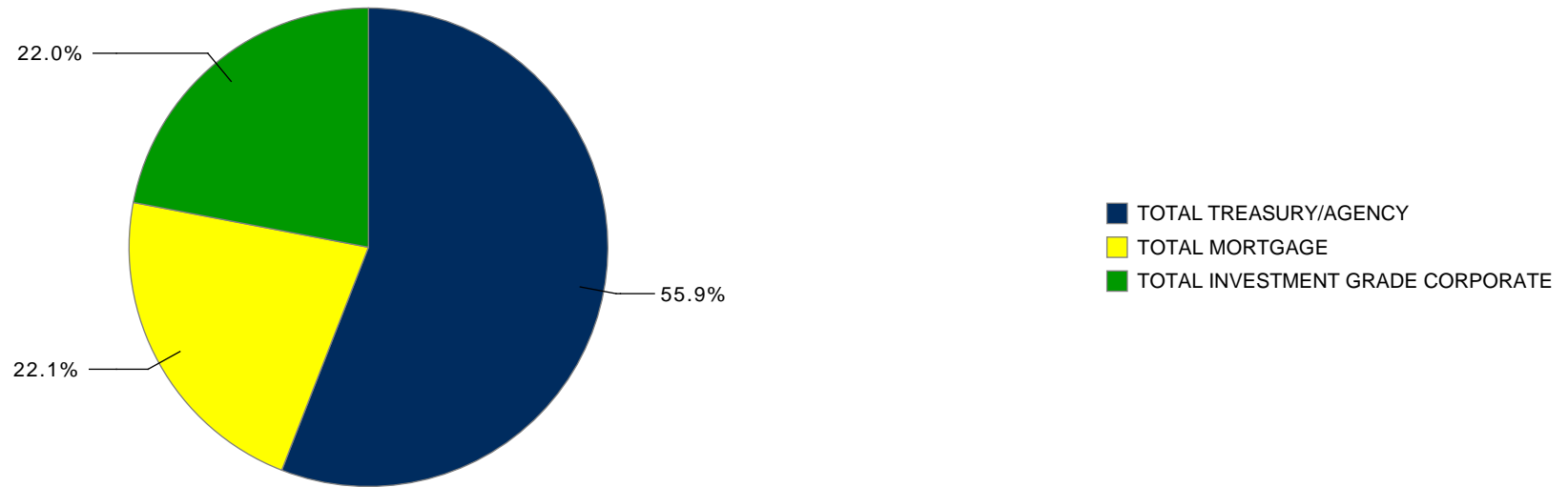
	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL EMERGING MARKETS	\$8.8	9.2



	<u>Asset Weight</u>	<u>Quarterly Returns</u>		
		<u>Fund</u>	<u>Benchmark</u>	<u>Excess</u>
TOTAL ACTIVE EMERGING MARKETS	84.21	3.40	0.90	2.50
TOTAL PASSIVE EMERGING MARKETS	15.79	1.17	0.90	0.27
TOTAL EMERGING MARKETS	100.00	3.04	0.90	2.14



	<u>Market Value (Billions)</u>	<u>% of plan</u>
TOTAL STRUCTURED + ETI	\$23.2	24.2



	<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	56.00	55.91	(0.09)	(1.28)	(1.26)	(0.02)
TOTAL MORTGAGE	22.00	22.12	0.12	(0.63)	(0.64)	0.02
TOTAL INVESTMENT GRADE CORPORATE	22.00	21.97	(0.03)	(0.12)	(0.29)	0.16

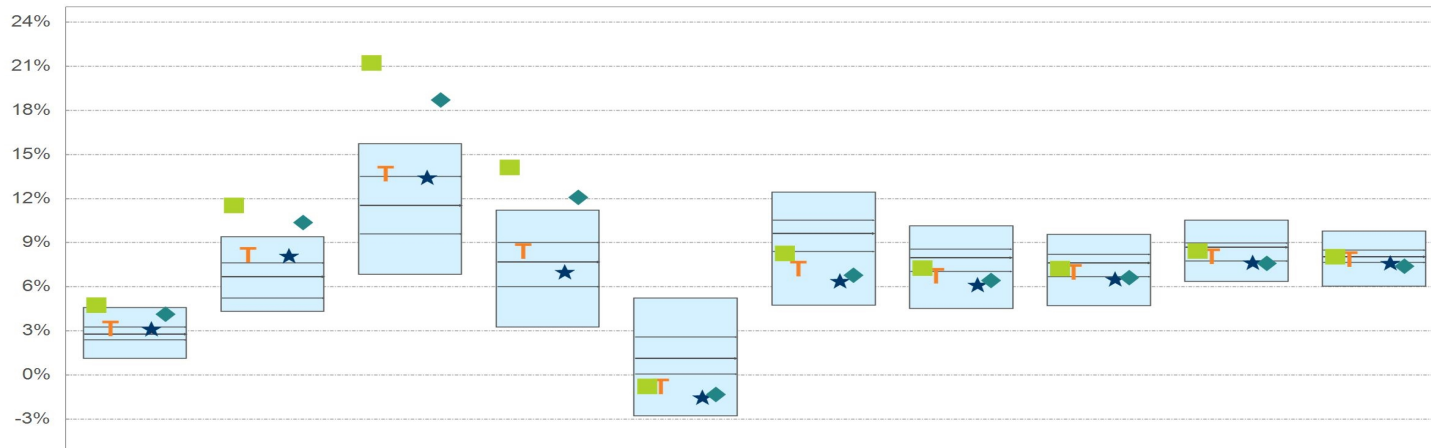


Through June 30, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Cumulative Periods Ending : June 30, 2023



Percentile Rankings	1 Qtr	2 Qtrs	3 Qtrs	1 Year	2 Years	3 Years	4 Years	5 Years	7 Years	10 Years
5th	4.60	9.40	15.74	11.20	5.23	12.45	10.14	9.56	10.53	9.80
25th	3.26	7.63	13.49	9.03	2.60	10.53	8.56	8.20	8.97	8.50
50th	2.77	6.69	11.55	7.69	1.13	9.64	7.97	7.62	8.68	8.06
75th	2.38	5.25	9.59	6.02	0.06	8.40	7.06	6.69	7.77	7.66
95th	1.13	4.32	6.84	3.28	-2.78	4.76	4.53	4.73	6.38	6.04
No. Of Obs	49	48	48	48	47	47	46	45	45	45
T Total System - Teacher	2.99 (39)	7.99 (19)	13.49 (25)	8.24 (39)	-0.97 (90)	7.06 (92)	6.57 (83)	6.81 (70)	7.87 (72)	7.69 (70)
★ Teachers Policy Benchm	2.94 (41)	7.93 (23)	13.26 (27)	6.81 (58)	-1.71 (92)	6.22 (94)	5.95 (94)	6.34 (84)	7.48 (82)	7.44 (75)
■ Public Mkt Equiv 25	4.55 (5)	11.33 (1)	21.03 (1)	13.93 (1)	-0.97 (90)	8.08 (79)	7.09 (72)	7.03 (65)	8.25 (63)	7.86 (63)
◆ Public Mkt Equiv 35	3.95 (9)	10.17 (1)	18.52 (1)	11.90 (1)	-1.50 (92)	6.58 (92)	6.23 (92)	6.43 (84)	7.39 (87)	7.21 (84)

Wilshire Trust Universe Comparison Service® (TUCS®)

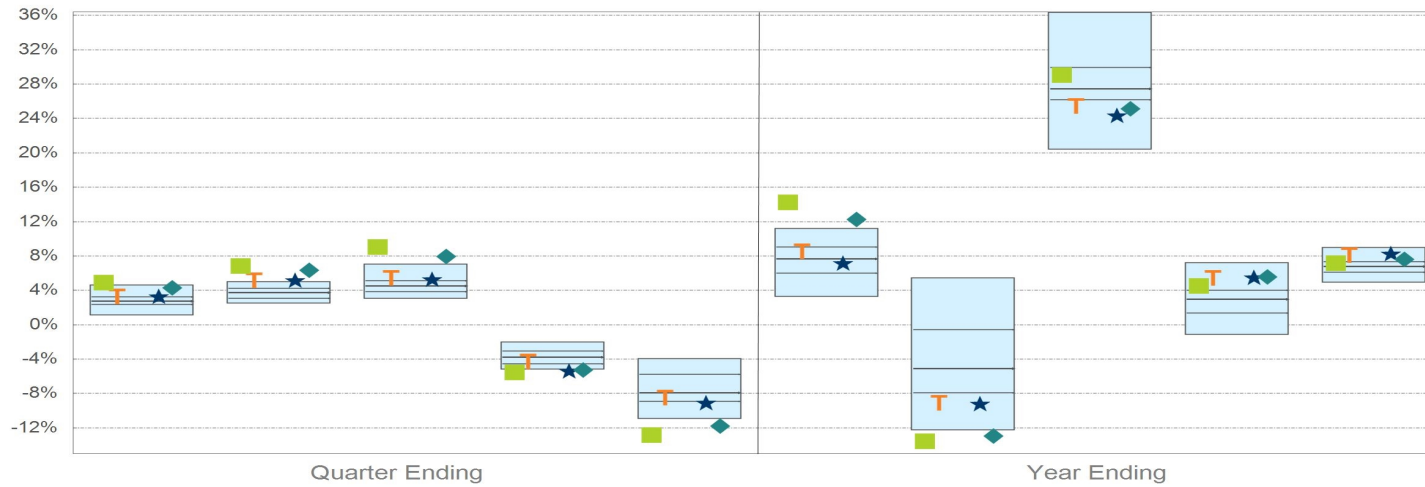


Through June 30, 2023



City of New York Performance Comparison

Total Returns of Master Trusts - Public : Plans > \$10 Billion
Consecutive Time Periods: June 30, 2023



Percentile Rankings	Jun 23	Mar 23	Dec 22	Sep 22	Jun 22	Jun 23	Jun 22	Jun 21	Jun 20	Jun 19
5th	4.60	5.01	7.07	-1.99	-3.96	11.20	5.46	36.35	7.21	9.00
25th	3.26	4.23	5.12	-3.06	-5.78	9.03	-0.56	29.92	4.01	7.31
50th	2.77	3.74	4.51	-3.76	-7.95	7.69	-5.13	27.44	2.95	6.77
75th	2.38	3.08	3.87	-4.57	-8.90	6.02	-7.91	26.17	1.35	6.14
95th	1.13	2.54	3.10	-5.15	-10.92	3.28	-12.22	20.44	-1.14	4.98
No. Of Obs	49	48	49	49	49	48	48	49	48	47
T Total System - Teacher	2.99 (39)	4.86 (9)	5.10 (29)	-4.62 (79)	-8.81 (70)	8.24 (39)	-9.39 (90)	25.13 (85)	5.10 (13)	7.75 (15)
★ Teachers Policy Benchm	2.94 (41)	4.84 (9)	4.94 (39)	-5.70 (100)	-9.43 (77)	6.81 (58)	-9.54 (90)	24.03 (88)	5.16 (11)	7.92 (13)
■ Public Mkt Equiv 25	4.55 (5)	6.48 (1)	8.71 (1)	-5.87 (100)	-13.15 (99)	13.93 (1)	-13.92 (99)	28.74 (35)	4.17 (23)	6.81 (45)
◆ Public Mkt Equiv 35	3.95 (9)	5.98 (1)	7.58 (1)	-5.59 (99)	-12.10 (99)	11.90 (1)	-13.30 (99)	24.77 (88)	5.21 (11)	7.25 (27)

Wilshire Trust Universe Comparison Service® (TUCS®)



TEACHERS 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	26,873.62	12,293.66	-	4.57	754.19	0.28	13,047.85	4.86
Small Cap Active:								
Small Cap Growth	1,235.53	9,738.32	-	78.82	629.93	18.87	10,368.25	83.92
Small Cap Value	630.76	6,394.38	-	101.38	-	-	6,394.38	101.38
Small Cap Core	271.00	1,127.24	-	41.60	-	-	1,127.24	41.60
Small Cap Fundamental Index	333.77	2,216.70	-	66.41	629.93	18.87	2,846.63	85.29
Mid Cap Active:								
Mid Cap Growth	319.83	1,070.27	-	33.46	-	-	1,070.27	33.46
Mid Cap Value	114.99	380.26	-	33.07	-	-	380.26	33.07
Mid Cap Core	192.65	676.63	-	35.12	-	-	676.63	35.12
Mid Cap Core	12.20	13.39	-	10.98	-	-	13.39	10.98
Other Active:								
Russell 1000 Fundamental	167.81	955.01	-	56.91	124.26	6.46	1,079.27	64.32
Legato (Emerging Manager- Equity)	167.81	955.01	-	56.91	124.26	7.40	1,079.27	64.32
U.S. Environmental Managers	-	-	-	-	-	-	-	-
Total US Active Equities	1,723.17	11,763.60	-	68.27	754.19	4.38	12,517.79	72.64
Small Cap Passive:								
Small Cap Passive	346.77	15.31	-	0.44	-	-	15.31	0.44
Mid Cap Passive:								
Mid Cap Passive	-	-	-	-	-	-	-	-
Russell / S&P Passive:								
Russell 1000 Growth Passive	24,803.68	514.75	-	0.21	-	-	514.75	0.21
Russell 1000 Value Passive	-	-	-	-	-	-	-	-
Russell 1000 Core Passive	24,252.34	489.06	-	0.20	-	-	489.06	0.20
Passive Russell 3000	0.00	-	-	-	-	-	-	-
Passive S&P 500	-	-	-	-	-	-	-	-
Passive Russell Top 200	551.33	25.69	-	0.47	-	-	25.69	0.47
Total US Passive Equities	25,150.45	530.06	-	0.21	-	-	530.06	0.21
Total International Equities	19,727.48	63,503.83	-	32.19	-	-	63,503.83	32.19
Active Total Global Equities								
Global Equity	583.55	3,098.76	-	53.10	-	-	3,098.76	53.10
Active Total World Ex USA:								
World Ex-USA Large & Mid Developed Growth Active	7,842.21	23,469.70	-	29.93	-	-	23,469.70	29.93
World Ex-USA Large & Mid Developed Value Active	3,790.94	10,630.28	-	28.04	-	-	10,630.28	28.04
World Ex-USA Developed Small Cap Active	3,107.87	8,735.66	-	28.11	-	-	8,735.66	28.11
Total World Ex USA	943.40	4,103.77	-	43.50	-	-	4,103.77	43.50
NON-U.S. Activist	0.00	-	-	-	-	-	-	-
NON-U.S. Environmental Managers	-	-	-	-	-	-	-	-
Active Emerging Markets	7,910.63	35,557.30	-	44.95	-	-	35,557.30	44.95
International Fund of Funds	761.83	3,800.97	-	49.89	-	-	3,800.97	49.89
Total Active International Equities	16,514.67	62,827.97	-	38.04	-	-	62,827.97	38.04
Int'l Passive Equities:								
World Ex-USA Small Cap Passive	3,212.81	675.86	-	2.10	-	-	675.86	2.10
World Ex-USA Large & Mid Cap Passive	629.76	191.88	-	3.05	-	-	191.88	3.05
Passive Global	1,498.52	182.42	-	1.22	-	-	182.42	1.22
Passive Emerging Markets	1,084.54	301.55	-	2.78	-	-	301.55	2.78
Total Int'l Passive Equities	3,212.81	675.86	-	2.10	-	-	675.86	2.10
Real Estate Equity Securities	0.03	-	-	-	-	-	-	-
Total Public Equities	47,184.69	78,896.25	-	16.72	754.19	0.16	79,650.44	16.88

Information Classification: Limited Access



TEACHERS 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	36,070.84	26,440.52	-	7.33	513.01	0.14	26,953.53	7.47	
Structured Program:									
Government Treas/Agency Sector	24,816.53	9,000.65	-	3.63	513.01	0.21	9,513.66	3.83	
Long Duration Treasury	11,707.32	1,238.06	-	1.06	-	-	1,238.06	1.06	
Mortgage Sector	2,834.16	283.78	-	1.00	-	-	283.78	1.00	
Investment Grade Credit Sector	4,832.56	3,414.97	-	7.07	513.01	1.06	3,927.98	8.13	
	5,442.49	4,063.84	-	7.47	-	-	4,063.84	7.47	
Developing Managers	279.80	515.55	-	18.43	-	-	515.55	18.43	
Emerging Managers	0.00	-	-	-	-	-	-	-	
TIPS:									
Active TIPS Managers	3,641.43	652.14	-	1.79	-	-	652.14	1.79	
Passive TIPS Managers	952.83	517.77	-	5.43	-	-	517.77	5.43	
	2,688.60	134.38	-	0.50	-	-	134.38	0.50	
High Yield	4,965.88	14,987.21	-	30.18	-	-	14,987.21	30.18	
Bank Loans	2.51	7.74	-	30.86	-	-	7.74	30.86	
Convertible Bonds	-	-	-	-	-	-	-	-	
ETI - Access - RBC	158.35	280.77	-	17.73	-	-	280.77	17.73	
ETI - AFL-CIO HIT	313.44	996.46	-	31.79	-	-	996.46	31.79	
Other ETI Programs (Internally Managed)	216.06	-	-	-	-	-	-	-	
Short Term (Internally Managed & Other)	1,676.83	-	-	-	-	-	-	-	
Total Public Markets	83,255.52	105,336.77	-	12.65	1,267.19	0.15	106,603.96	12.80	
INVESTMENT STYLE (PRIVATE MARKETS)									
Hedge Funds	-	-	-	-	-	-	-	-	
Private Equity	7,272.25	73,151.98	19,217.64	100.59	132,449.65	182.13	224,819.27	309.15	
Private Real Estate	4,579.49	48,363.37	15,247.94	138.90	47,237.46	103.15	110,848.77	242.05	
Infrastructure	1,471.12	27,647.21	7,106.36	236.24	(4,479.29)	(30.45)	30,274.28	205.79	
Opportunistic Fixed Income	3,149.13	22,023.23	10,291.76	102.62	3,004.10	9.54	35,319.09	112.16	
Total Private Markets	16,471.98	171,185.79	51,863.71	135.41	178,211.92	108.19	401,261.42	243.60	
Total Overall	99,727.51	276,522.55	51,863.71	32.93	179,479.12	18.00	507,865.38	50.93	

The overall carried interest and performance incentive fees paid by TEACHERS for the Fiscal Year: 18 BPS

General Footnotes:



**NYC TEACHERS' RETIREMENT SYSTEM
SECURITIES LENDING INCOME
June 30, 2023**

	<u>U. S. FIXED INCOME</u>	<u>U. S. EQUITY</u>	<u>INTERNATIONAL EQUITY</u>	<u>TOTAL</u>
1989	1,185,000	-	-	1,185,000
1990	885,000	-	-	885,000
1991	898,000	-	-	898,000
1992	1,692,000	193,000	300,000	2,185,000
1993	3,701,000	694,000	508,000	4,903,000
1994	4,314,000	1,360,000	696,000	6,370,000
1995	3,395,000	1,621,000	520,000	5,536,000
1996	2,874,000	1,738,000	879,000	5,491,000
1997	2,943,000	3,430,000	1,158,000	7,531,000
1998	4,793,000	4,549,000	1,499,000	10,841,000
1999	4,329,000	4,830,000	1,772,000	10,931,000
2000	4,282,000	4,963,000	2,300,000	11,545,000
2001	7,435,000	6,744,000	3,489,000	17,668,000
2002	4,401,000	5,578,000	2,530,000	12,509,000
2003	2,156,000	3,467,000	2,662,000	8,285,000
2004	2,949,000	4,413,000	2,550,000	9,912,000
2005	4,427,000	6,136,000	3,201,000	13,764,000
2006	4,282,000	9,789,000	2,868,000	16,939,000
2007	9,618,000	15,962,000	3,088,000	28,668,000
2008	27,299,000	27,400,000	5,129,000	59,828,000
2009	10,039,000	17,682,000	3,834,000	31,555,000
2010	4,271,000	11,122,000	3,200,000	18,593,000
2011	5,880,000	15,051,000	6,082,000	27,013,000
2012	8,113,000	18,853,000	4,915,000	31,881,000
2013	5,208,000	21,196,000	3,803,000	30,207,000
2014	2,195,000	9,191,000	6,079,000	17,465,000
2015	2,510,000	6,924,000	7,135,000	16,569,000
2016	2,861,000	10,325,000	5,376,000	18,562,000
2017	3,776,000	5,982,000	4,196,000	13,954,000
2018	3,302,655	3,899,058	6,252,432	13,454,145
2019	2,001,733	3,549,667	5,098,539	10,649,939
2020	1,576,262	2,486,236	3,378,392	7,440,891
2021	1,321,787	1,668,967	3,120,821	6,111,576
2022	2,559,528	1,883,748	2,193,347	6,636,623
2023 (6 Months)	<u>1,891,153</u>	<u>1,064,647</u>	<u>1,281,058</u>	<u>4,236,858</u>
Since Inception	<u>155,364,117</u>	<u>233,745,323</u>	<u>101,093,590</u>	<u>490,203,031</u>



**Teachers' Retirement System
of New York City**

Appendix A

Consolidated Performance Report

Consolidated Performance Report



Through June 30, 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 TRS-TOTAL PORTFOLIO - GROSS	95,844	100.00	2.99	8.24	7.99	(9.39)	(12.60)	11.94	14.78	8.24	7.06	6.81	7.69	8.29	07/01/1987
TRS - ESTIMATED INVESTMENT FEES			(0.12)	(0.49)	(0.22)	(0.38)	(0.38)	(0.43)	(0.24)	(0.49)	(0.40)	(0.33)			
EST MANAGEMENT FEES - PUBLIC MARKET (ACCRUAL)			(0.03)	(0.11)	(0.05)	(0.10)	(0.10)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)			
EST MANAGEMENT FEES - ALTERNATIVE MARKETS (CASH)			(0.09)	(0.38)	(0.17)	(0.28)	(0.28)	(0.32)	(0.13)	(0.38)	(0.29)	(0.22)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
TRS-TOTAL PORTFOLIO - NET MGR			2.87	7.76	7.77	(9.77)	(12.98)	11.51	14.54	7.76	6.66	6.48			
TRS POLICY BENCHMARK			2.94	6.81	7.93	(9.54)	(13.56)	11.06	13.93	6.81	6.22	6.34	7.44		
EXCESS RETURN			(0.08)	0.95	(0.16)	(0.23)	0.58	0.45	0.62	0.95	0.44	0.13	0.25		
EQUITY RETURN SUMMARY															
18 TRS-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - GROSS	60,336	62.95	4.95	12.96	11.12	(10.54)	(13.95)	19.66	18.12	12.96	12.64	9.53	10.29	8.40	04/01/2004
ESTIMATED INVESTMENT FEES			(0.18)	(0.75)	(0.32)	(0.57)	(0.56)	(0.68)	(0.33)	(0.75)	(0.62)	(0.48)			
EST MANAGEMENT FEES			(0.18)	(0.75)	(0.32)	(0.57)	(0.56)	(0.68)	(0.33)	(0.75)	(0.62)	(0.48)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
TRS-TOTAL EQUITY (INCLUDES ALTERNATIVES & REITS) - NET MGR			4.77	12.22	10.80	(11.10)	(14.52)	18.98	17.80	12.22	12.01	9.05			
26 TRS-TOTAL EQUITY - GROSS	44,345	46.27	6.27	17.14	14.67	(19.63)	(20.48)	16.26	20.44	17.14	10.56	8.17	9.45		12/01/1990
ESTIMATED INVESTMENT FEES			(0.05)	(0.21)	(0.10)	(0.13)	(0.14)	(0.20)	(0.18)	(0.21)	(0.19)	(0.17)			
EST MANAGEMENT FEES			(0.05)	(0.21)	(0.10)	(0.13)	(0.14)	(0.20)	(0.18)	(0.21)	(0.19)	(0.17)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
TRS-TOTAL EQUITY - NET MGR			6.22	16.92	14.56	(19.76)	(20.61)	16.06	20.26	16.92	10.37	8.00			
34 TRS-TOTAL DOMESTIC EQUITY - GROSS	25,082	26.17	8.57	18.79	16.60	(14.49)	(20.26)	25.40	21.28	18.79	13.37	11.24	12.27	10.64	12/01/1990
ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.03)	(0.04)	(0.04)	(0.06)	(0.05)	(0.06)	(0.05)	(0.05)			
TRS-TOTAL DOMESTIC EQUITY - NET MGR			8.56	18.72	16.57	(14.53)	(20.30)	25.35	21.23	18.72	13.31	11.20			
RUSSELL 3000 (DAILY)			8.39	18.95	16.17	(13.87)	(19.21)	25.66	20.89	18.95	13.89	11.39	12.34	10.67	
EXCESS RETURN			0.17	(0.23)	0.40	(0.66)	(1.09)	(0.31)	0.34	(0.23)	(0.57)	(0.19)	(0.07)	(0.03)	
44 TRS-TOTAL SMALL CAP - GROSS	1,231	1.28	5.81	12.35	10.70	(26.00)	(25.40)	11.25	23.70	12.35	6.42	3.83	9.95	14.32	05/01/2009
ESTIMATED INVESTMENT FEES			(0.20)	(0.67)	(0.36)	(0.45)	(0.45)	(0.67)	(0.68)	(0.67)	(0.65)	(0.54)			
TRS-TOTAL SMALL CAP - NET MGR			5.61	11.68	10.34	(26.45)	(25.85)	10.57	23.02	11.68	5.78	3.28			
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	8.26	11.53	
EXCESS RETURN			0.40	(0.63)	2.26	(1.25)	(5.41)	(4.25)	3.06	(0.63)	(5.05)	(0.93)	1.70	2.79	
54 TRS-TOTAL MID CAP - GROSS	1,074	1.12	5.35	15.74	10.84					15.74					02/01/2011
ESTIMATED INVESTMENT FEES			(0.10)	(0.43)	(0.20)					(0.43)					
TRS-TOTAL MID CAP - NET MGR			5.26	15.30	10.64					15.30					
RUSSELL MIDCAP (DAILY)			4.76	14.92	9.01	(17.30)	(17.32)	22.58	17.10	14.92					
EXCESS RETURN			0.50	0.38	1.63					0.38					
64 TRS-TOTAL RUSSELL 1000 - GROSS	20,049	20.92	8.73	19.16	16.94	(13.66)	(19.91)	26.37	21.08	19.16	13.78	11.77		11.94	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)	
TRS-TOTAL RUSSELL 1000 - NET MGR			8.73	19.16	16.93	(13.66)	(19.91)	26.37	21.08	19.16	13.78	11.77		11.94	
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(13.04)	(19.13)	26.45	20.96	19.36	14.09	11.92		12.07	
EXCESS RETURN			0.15	(0.21)	0.25	(0.63)	(0.79)	(0.09)	0.11	(0.21)	(0.31)	(0.15)		(0.13)	



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EQUITY RETURN SUMMARY															
76	TRS-TOTAL RUSSELL TOP 200 PASSIVE - GROSS	2,563	2.67	10.26	20.56	19.96				20.56				1.25	03/01/2022
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.00)				(0.01)				(0.01)	
	TRS-TOTAL RUSSELL TOP 200 PASSIVE - NET MGR			10.26	20.56	19.95				20.56				1.25	
	RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42				20.88				3.34	
	EXCESS RETURN			0.37	(0.32)	0.53				(0.32)				(2.10)	
86	TRS-TOTAL EMERGING MANAGER - GROSS	165	0.17	3.02	13.88	8.65	(17.06)	(15.86)	25.59	19.96	13.88	16.56	7.98	9.00	05/01/2017
	ESTIMATED INVESTMENT FEES			(0.20)	(0.64)	(0.34)	(0.48)	(0.48)	(0.70)	(0.60)	(0.64)	(0.66)	(0.58)	(0.58)	
	TRS-TOTAL EMERGING MANAGER - NET MGR			2.82	13.24	8.30	(17.54)	(16.35)	24.89	19.36	13.24	15.89	7.40	8.42	
	RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(25.20)	(20.44)	14.82	19.96	12.31	10.82	4.21	6.38	
	EXCESS RETURN			(2.39)	0.93	0.22	7.66	4.09	10.07	(0.60)	0.93	5.07	3.19	2.04	
96	TRS-TOTAL WORLD ex-USA - GROSS	8,526	8.90	3.27	21.08	14.98	(24.34)	(20.14)	8.97	19.66	21.08	8.53	5.44	6.93	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.07)	(0.29)	(0.14)	(0.18)	(0.19)	(0.26)	(0.28)	(0.29)	(0.26)	(0.25)		
	TRS-TOTAL WORLD ex-USA - NET MGR			3.21	20.79	14.84	(24.52)	(20.32)	8.71	19.38	20.79	8.27	5.19		
	WORLD EX-USA CUSTOM BM			2.67	16.35	10.46	(17.73)	(15.26)	12.39	8.32	16.35	8.87	4.17	5.63	5.48
	EXCESS RETURN			0.53	4.44	4.38	(6.79)	(5.06)	(3.69)	11.05	4.44	(0.60)	1.02	1.30	1.22
106	TRS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - GROSS	6,220	6.49	3.82	23.99	17.34	(25.98)	(20.90)	7.09	23.66	23.99	8.54	6.28	6.03	11/01/2013
	ESTIMATED INVESTMENT FEES			(0.07)	(0.35)	(0.16)	(0.20)	(0.22)	(0.30)	(0.34)	(0.35)	(0.30)	(0.30)	(0.29)	
	TRS-TOTAL WORLD ex-USA LARGE & MID ACTIVE - NET MGR			3.74	23.64	17.18	(26.19)	(21.12)	6.79	23.31	23.64	8.24	5.98	5.73	
	NYC CUSTOM WORLD EX-USA LG & MID ACT INDEX			3.03	17.41	11.29	(16.76)	(14.29)	12.62	7.59	17.41	9.30	4.58	4.17	
	EXCESS RETURN			0.71	6.22	5.89	(9.43)	(6.83)	(5.83)	15.73	6.22	(1.06)	1.40	1.57	
116	TRS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - GROSS	858	0.90	0.39	13.01	7.12	(23.55)	(20.69)	16.97	15.42	13.01	8.79	3.20	7.84	05/01/2013
	ESTIMATED INVESTMENT FEES			(0.11)	(0.51)	(0.24)	(0.33)	(0.34)	(0.51)	(0.52)	(0.51)	(0.48)	(0.46)		
	TRS-TOTAL WORLD ex-USA SMALL CAP ACTIVE - NET MGR			0.28	12.50	6.89	(23.87)	(21.03)	16.46	14.90	12.50	8.31	2.74		
	S&P EPAC SMALL CAP USD NET			0.17	10.76	6.71	(26.27)	(22.69)	8.06	13.78	10.76	5.12	0.86	5.83	5.14
	EXCESS RETURN			0.11	1.74	0.18	2.40	1.67	8.40	1.11	1.74	3.19	1.88	2.01	2.01
126	TRS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - GROSS	419	0.44	0.73	10.03	5.89	(23.36)	(21.25)	11.26	13.80	10.03	6.27	2.01	5.13	02/01/2014
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)	
	TRS-TOTAL WORLD ex-USA SMALL CAP PASSIVE - NET MGR			0.72	10.00	5.88	(23.38)	(21.27)	11.23	13.77	10.00	6.24	1.97	5.10	
	WORLD EX USA SC PASSIVE CUSTOM BM			0.49	10.05	5.50	(23.02)	(20.58)	11.14	12.78	10.05	6.42	1.83	4.80	
	EXCESS RETURN			0.23	(0.04)	0.38	(0.36)	(0.69)	0.09	0.98	(0.04)	(0.18)	0.15	0.30	
136	TRS-TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - GROSS	1,030	1.07	3.48	17.02	12.09	(17.41)	(15.63)	12.52	8.43	17.02	8.96	4.62	5.56	07/01/2011
	ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)		
	TRS-TOTAL WORLD ex-USA LARGE & MID CAP PASSIVE - NET MGR			3.48	17.01	12.09	(17.42)	(15.64)	12.51	8.41	17.01	8.95	4.61		
	NYC CUSTOM WORLD EX US INDEX			3.03	17.41	11.29	(16.76)	(14.29)	12.62	7.59	17.41	9.30	4.58	5.43	4.69
	EXCESS RETURN			0.45	(0.41)	0.79	(0.66)	(1.35)	(0.12)	0.83	(0.41)	(0.36)	0.03	0.14	0.17

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EQUITY RETURN SUMMARY																
148	TRS-TOTAL EMERGING MARKETS - GROSS	8,791	9.17	3.13	7.37	8.93	(28.02)	(21.77)	(0.24)	17.61	7.37	4.60	2.12	2.75	0.91	02/01/2011
	ESTIMATED INVESTMENT FEES			(0.09)	(0.44)	(0.20)	(0.28)	(0.33)	(0.40)	(0.39)	(0.44)	(0.41)	(0.37)			
	TRS-TOTAL EMERGING MARKETS - NET MGR			3.04	6.93	8.73	(28.30)	(22.10)	(0.64)	17.22	6.93	4.19	1.75			
	TRS CUSTOM EM INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	1.46	2.70		
	EXCESS RETURN			2.14	5.18	3.84	(3.02)	(2.01)	1.90	(1.09)	5.18	1.87	0.29	0.05		
158	TRS-TOTAL ACTIVE EMERGING MARKETS - GROSS	7,402	7.72	3.51	8.34	9.55	(28.39)	(21.95)	0.07	16.37	8.34	5.10	2.04	2.86	1.94	04/01/2012
	ESTIMATED INVESTMENT FEES			(0.11)	(0.52)	(0.23)	(0.31)	(0.38)	(0.45)	(0.53)	(0.52)	(0.48)	(0.46)			
	TRS-TOTAL ACTIVE EMERGING MARKETS - NET MGR			3.40	7.81	9.32	(28.70)	(22.33)	(0.38)	15.84	7.81	4.61	1.58			
	TRS CUSTOM EM INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	1.46	2.70	1.76	
	EXCESS RETURN			2.50	6.06	4.43	(3.41)	(2.24)	2.16	(2.46)	6.06	2.30	0.12	0.15	0.18	
168	TRS-TOTAL PASSIVE EMERGING MARKETS - GROSS	1,388	1.45	1.17	2.51	5.68	(25.35)	(19.87)	(2.47)	18.17	2.51	2.69	1.60	2.22	0.47	04/01/2011
	ESTIMATED INVESTMENT FEES			(0.01)	(0.03)	(0.01)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)			
	TRS-TOTAL PASSIVE EMERGING MARKETS - NET MGR			1.17	2.48	5.67	(25.38)	(19.89)	(2.50)	18.14	2.48	2.66	1.57			
	TRS CUSTOM EM PASSIVE INDEX			0.90	1.75	4.89	(25.28)	(20.09)	(2.54)	18.31	1.75	2.32	1.46			
	EXCESS RETURN			0.27	0.73	0.78	(0.09)	0.20	0.04	(0.17)	0.73	0.34	0.11			
178	TRS-TOTAL INTERNATIONAL FUND OF FUNDS - GROSS	954	1.00	2.61	15.02	11.13	(22.64)	(19.50)	10.27	13.94	15.02	7.68	3.96	5.17	05/01/2017	
	ESTIMATED INVESTMENT FEES			(0.20)	(0.66)	(0.35)	(0.38)	(0.40)	(0.68)	(0.59)	(0.66)	(0.61)	(0.56)	(0.57)		
	TRS-TOTAL INTERNATIONAL FUND OF FUNDS - NET MGR			2.41	14.36	10.78	(23.02)	(19.90)	9.59	13.34	14.36	7.07	3.40	4.61		
	NYC BLENDED CUSTOM BENCHMARK FOR FOF (TRS)			2.38	12.47	9.10	(19.86)	(16.58)	8.53	11.44	12.47	7.33	3.52	4.54		
	EXCESS RETURN			0.02	1.89	1.67	(3.17)	(3.32)	1.06	1.91	1.89	(0.26)	(0.12)	0.07		
188	TRS-TOTAL GLOBAL EQUITY - GROSS	991	1.03	5.85	23.37	16.78	(23.42)	(25.10)	22.67	21.32	23.37	10.47		10.37	08/01/2018	
	ESTIMATED INVESTMENT FEES			(0.14)	(0.63)	(0.30)	(0.42)	(0.39)	(0.70)	(0.70)	(0.63)	(0.60)		(0.62)		
	TRS-TOTAL GLOBAL EQUITY - NET MGR			5.72	22.73	16.48	(23.83)	(25.49)	21.97	20.62	22.73	9.87		9.75		
	MSCI WORLD INDEX			6.83	18.51	15.09	(14.34)	(18.14)	21.82	15.90	18.51	12.18		8.55		
	EXCESS RETURN			(1.11)	4.22	1.39	(9.49)	(7.35)	0.16	4.72	4.22	(2.31)		1.20		

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ALTERNATIVE EQUITY RETURN DETAIL																
200	TRS-TOTAL REAL ESTATE SECURITIES - GROSS	-													01/01/2003	
	ESTIMATED INVESTMENT FEES															
	TRS-TOTAL REAL ESTATE SECURITIES - NET MGR															
	DJ US SELECT REAL ESTATE SECURITIES INDEX					(6.41)		45.91	(11.20)							
	EXCESS RETURN															
210	TRS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - GROSS	8,152	8.51	3.11	2.13	4.75	28.95	4.56	48.10	19.19	2.13	26.39	19.29	16.45	14.00	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.62)	(2.11)	(1.02)	(3.30)	(2.04)	(3.97)	(1.11)	(2.11)	(2.61)	(1.92)			
	TRS-TOTAL PRIVATE EQUITY (TIME WEIGHTED) - NET MGR			2.49	0.03	3.73	25.65	2.51	44.13	18.08	0.03	23.77	17.37			
	NYC R3000 +3% LAGGED			7.96	(5.81)	16.55	15.25	(15.11)	35.74	18.42	(5.81)	21.99	13.74	14.97	13.27	
	EXCESS RETURN			(5.47)	5.84	(12.82)	10.40	17.63	8.38	(0.34)	5.84	1.79	3.63	1.48	0.74	
220	TRS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - GROSS	5,538	5.78	(1.69)	(0.40)	(3.65)	31.26	18.67	23.44	0.23	(0.40)	12.67	9.40	11.06	9.87	04/01/2004
	ESTIMATED INVESTMENT FEES			(0.23)	(1.28)	(0.50)	(2.46)	(1.98)	(1.83)	(0.69)	(1.28)	(1.53)	(1.16)			
	TRS-TOTAL PRIVATE REAL ESTATE (TIME WEIGHTED) - NET MGR			(1.92)	(1.68)	(4.14)	28.80	16.69	21.61	(0.45)	(1.68)	11.14	8.24			
	NCREIF NFI-ODCE NET + 100 BP			(2.64)	(9.83)	(5.69)	29.57	7.61	22.21	1.35	(9.83)	8.11	6.61	8.84		
	EXCESS RETURN			0.72	8.15	1.55	(0.76)	9.08	(0.59)	(1.80)	8.15	3.03	1.63	2.22		
230	TRS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - GROSS	2,301	2.40	3.14	11.13	7.19	17.45	13.72	18.02	9.70	11.13	16.34	13.97	14.45	12/01/2013	
	ESTIMATED INVESTMENT FEES			(0.92)	(3.70)	(1.24)	(3.07)	(3.82)	(2.86)	(1.26)	(3.70)	(2.89)	(2.26)	(2.62)		
	TRS-TOTAL INFRASTRUCTURE (TIME WEIGHTED) - NET MGR			2.22	7.43	5.95	14.38	9.90	15.16	8.44	7.43	13.45	11.71	11.82		
	CPI + 4%			1.67	7.22	3.63	13.29	10.70	11.48	5.37	7.22	9.97	8.05	6.87		
	EXCESS RETURN			0.56	0.22	2.32	1.09	(0.80)	3.68	3.06	0.22	3.48	3.66	4.95		

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FIXED INCOME RETURN SUMMARY															
242 TRS-TOTAL FIXED INCOME - GROSS	35,507	37.05	(0.26)	0.84	2.92	(7.79)	(10.69)	0.38	9.59	0.84	(1.59)	2.31	2.99	7.28	02/01/1980
ESTIMATED INVESTMENT FEES			(0.03)	(0.11)	(0.06)	(0.08)	(0.08)	(0.09)	(0.11)	(0.11)	(0.09)	(0.10)			
EST MANAGEMENT FEES			(0.03)	(0.11)	(0.06)	(0.08)	(0.08)	(0.09)	(0.11)	(0.11)	(0.09)	(0.10)			
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
TRS-TOTAL FIXED INCOME - NET MGR			(0.28)	0.73	2.86	(7.87)	(10.77)	0.29	9.48	0.73	(1.69)	2.21			
250 TRS-TOTAL FIXED INCOME (ex OFI & CASH) - GROSS	31,454	32.82	(0.54)	0.43	2.74	(9.57)	(12.26)	(0.89)	10.35	0.43	(2.75)	1.87		2.51	11/01/2013
ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.04)	(0.07)	(0.07)	(0.08)	(0.11)	(0.08)	(0.08)	(0.09)		(0.12)	
EST MANAGEMENT FEES			(0.02)	(0.08)	(0.04)	(0.07)	(0.07)	(0.08)	(0.11)	(0.08)	(0.08)	(0.09)		(0.12)	
EST INCENTIVE FEES															
EST OTHER FEES															
EST FEE OFFSETS															
TRS-TOTAL FIXED INCOME (ex OFI & CASH) - NET MGR			(0.56)	0.35	2.70	(9.64)	(12.33)	(0.97)	10.24	0.35	(2.83)	1.78		2.39	
258 TRS-TOTAL STRUCTURED FIXED INCOME - GROSS	22,547	23.52	(0.87)	(1.01)	2.29	(9.78)	(12.78)	(3.21)	12.32	(1.01)	(4.55)	1.70	2.35	6.59	01/01/1985
ESTIMATED INVESTMENT FEES			(0.01)	(0.04)	(0.02)	(0.03)	(0.03)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)		
TRS-TOTAL STRUCTURED FIXED INCOME - NET MGR			(0.88)	(1.04)	2.27	(9.81)	(12.81)	(3.25)	12.27	(1.04)	(4.59)	1.66			
NYC CUSTOM STRUCTURED INDEX-TRS			(0.91)	(1.18)	2.20	(9.75)	(12.88)	(3.01)	14.64	(1.18)	(4.68)	2.53	2.83		
EXCESS RETURN			0.03	0.14	0.07	(0.06)	0.07	(0.24)	(2.37)	0.14	0.09	(0.88)	(0.49)		
268 TRS-TOTAL GOVERNMENT - GROSS	12,957	13.52	(1.28)	(1.93)	1.81	(8.22)	(11.77)	(5.12)	13.36	(1.93)	(5.69)	1.57	2.04	6.27	01/01/1987
ESTIMATED INVESTMENT FEES			(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)			
TRS-TOTAL GOVERNMENT - NET MGR			(1.28)	(1.94)	1.80	(8.23)	(11.78)	(5.13)	13.34	(1.94)	(5.70)	1.56			
CUSTOM GOVERNMENT BENCHMARK - TEACHERS			(1.26)	(2.14)	1.93	(8.26)	(12.19)	(4.62)	19.49	(2.14)	(5.56)	3.45	3.38		
EXCESS RETURN			(0.02)	0.20	(0.13)	0.04	0.41	(0.50)	(6.16)	0.20	(0.14)	(1.89)	(1.34)		
278 TRS-TOTAL MORTGAGE - GROSS	4,499	4.69	(0.53)	(1.36)	2.20	(9.21)	(12.04)	(1.10)	4.95	(1.36)	(3.53)	0.31	1.35	5.46	02/01/1987
ESTIMATED INVESTMENT FEES			(0.02)	(0.06)	(0.03)	(0.06)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)			
TRS-TOTAL MORTGAGE - NET MGR			(0.55)	(1.43)	2.16	(9.28)	(12.10)	(1.16)	4.89	(1.43)	(3.60)	0.26			
NYC CUSTOM MORTGAGE BENCHMARK			(0.64)	(1.52)	1.87	(9.03)	(11.81)	(1.04)	3.91	(1.52)	(3.75)	0.10	1.16	5.28	
EXCESS RETURN			0.10	0.09	0.30	(0.25)	(0.29)	(0.12)	0.98	0.09	0.16	0.15	0.18	0.18	
288 TRS-TOTAL INVESTMENT GRADE CORPORATE - GROSS	5,091	5.31	(0.10)	1.74	3.63	(14.43)	(16.20)	(0.84)	10.21	1.74	(3.34)	1.84	2.78	6.14	01/01/1987
ESTIMATED INVESTMENT FEES			(0.02)	(0.08)	(0.05)	(0.06)	(0.06)	(0.09)	(0.11)	(0.08)	(0.08)	(0.09)			
TRS-TOTAL INVESTMENT GRADE CORPORATE - NET MGR			(0.12)	1.66	3.58	(14.49)	(16.26)	(0.93)	10.10	1.66	(3.42)	1.75			
NYC CUSTOM IGC BENCHMARK			(0.29)	1.55	3.21	(14.19)	(15.76)	(0.85)	9.70	1.55	(3.43)	1.62	2.45		
EXCESS RETURN			0.16	0.11	0.38	(0.30)	(0.50)	(0.08)	0.40	0.11	0.01	0.13	0.33		
298 TRS-TOTAL CORE FI- DEVELOPING MGRS - GROSS	259	0.27	(0.49)	0.47	2.78	(10.44)	(12.51)	(0.85)	9.24	0.47	(2.81)	1.59		1.69	06/01/2015
ESTIMATED INVESTMENT FEES			(0.05)	(0.19)	(0.10)	(0.16)	(0.16)	(0.18)	(0.20)	(0.19)	(0.18)	(0.19)		(0.19)	
TRS-TOTAL CORE FI- DEVELOPING MGRS - NET MGR			(0.54)	0.28	2.68	(10.61)	(12.67)	(1.04)	9.03	0.28	(2.99)	1.40		1.50	
BLOOMBERG U.S. AGGREGATE			(0.84)	(0.94)	2.09	(10.29)	(13.01)	(1.54)	7.51	(0.94)	(3.96)	0.77	0.97		
EXCESS RETURN			0.31	1.22	0.59	(0.31)	0.34	0.51	1.53	1.22	0.97	0.82	0.71		

Consolidated Performance Report



Through June 30, 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															
320 TRS-TOTAL TIPS - GROSS	3,161	3.30	(1.44)	(1.38)	1.97	(5.12)	(11.85)	5.87	11.12	(1.38)	(0.13)	2.51	2.11	3.43	06/01/2005
ESTIMATED INVESTMENT FEES			(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)		
TRS-TOTAL TIPS - NET MGR			(1.45)	(1.40)	1.96	(5.14)	(11.87)	5.85	11.09	(1.40)	(0.15)	2.50			
BLOOMBERG GLOBAL INFL-LINKED: U.S. TIPS			(1.42)	(1.40)	1.87	(5.14)	(11.85)	5.96	10.99	(1.40)	(0.12)	2.49	2.08	3.31	
EXCESS RETURN			(0.03)	(0.00)	0.09	0.00	(0.02)	(0.10)	0.10	(0.00)	(0.03)	0.00	0.03	0.11	
340 TRS-TOTAL TARGETED INVESTMENTS (NO CASH) - GROSS	628	0.65	(1.16)	(0.56)	2.07	(8.82)	(11.33)	(0.51)	6.90	(0.56)	(2.95)	1.46	2.51	7.02	12/01/1984
ESTIMATED INVESTMENT FEES			(0.05)	(0.19)	(0.10)	(0.17)	(0.17)	(0.18)	(0.20)	(0.19)	(0.18)	(0.20)	(0.22)	(0.14)	
TRS-TOTAL TARGETED INVESTMENTS (NO CASH) - NET MGR			(1.20)	(0.75)	1.97	(8.99)	(11.49)	(0.69)	6.70	(0.75)	(3.13)	1.27	2.29	6.88	
TEACHERS CUSTOM BENCHMARK (NO CASH)			(0.65)	(0.78)	2.04	(9.03)	(11.49)	(1.15)	5.98	(0.78)	(3.42)	0.76	1.59		
EXCESS RETURN			(0.56)	0.03	(0.07)	0.04	(0.00)	0.46	0.72	0.03	0.29	0.51	0.70		
350 TRS-TOTAL HIGH YIELD - GROSS	4,858	5.07	1.70	9.15	5.48	(11.72)	(10.18)	6.04	7.47	9.15	3.87	4.06	4.59	5.61	08/01/1998
ESTIMATED INVESTMENT FEES			(0.08)	(0.34)	(0.16)	(0.26)	(0.27)	(0.33)	(0.35)	(0.34)	(0.32)	(0.32)			
TRS-TOTAL HIGH YIELD - NET MGR			1.62	8.82	5.32	(11.99)	(10.45)	5.71	7.12	8.82	3.55	3.73			
HIGH YIELD CUSTOM BENCHMARK			1.75	9.07	5.38	(12.82)	(11.18)	5.26	7.05	9.07	3.12	3.34	4.20	5.24	
EXCESS RETURN			(0.13)	(0.25)	(0.06)	0.84	0.73	0.45	0.07	(0.25)	0.43	0.39	0.39	0.37	
360 TRS- TOTAL BANK LOANS - GROSS	1	-						(7.84)	1.39						11/01/2012
ESTIMATED INVESTMENT FEES								(0.29)	(0.29)						
TRS-TOTAL BANK LOANS - NET MGR								(8.13)	1.10						
CSFB LEVERAGED LOAN INDEX						(2.68)	(1.06)	5.40	2.78						
EXCESS RETURN								(13.53)	(1.68)						
370 TRS-TOTAL OPPORTUNISTIC FIXED INCOME - GROSS	3,595	3.75	2.02	4.03	4.74	8.50	0.96	18.09	5.21	4.03	11.19	7.18	6.94	7.24	10/01/2007
ESTIMATED INVESTMENT FEES			(0.08)	(0.39)	(0.24)	(0.26)	(0.26)	(0.29)	(0.15)	(0.39)	(0.30)	(0.24)			
TRS-TOTAL OPPORTUNISTIC FIXED INCOME - NET MGR			1.93	3.64	4.51	8.24	0.70	17.81	5.06	3.64	10.89	6.95			
OPPORTUNISTIC FIXED INCOME JPMGHY / CSFB 50/50 BLEND PLUS 300			3.22	13.02	7.42	(4.95)	(2.79)	8.29	7.22	13.02	8.03	6.80	7.45	8.41	
EXCESS RETURN			(1.28)	(9.39)	(2.91)	13.19	3.48	9.51	(2.17)	(9.39)	2.86	0.15	(0.50)	(1.17)	
CASH SUMMARY															
382 Short Term TRS - GROSS	457	0.48	1.25	3.66	2.36	(0.03)	1.24	0.08	0.56	3.66	1.26	1.52	1.14		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 TRS - NET MGR			1.25	3.66	2.36	(0.03)	1.24	0.08	0.56	3.66	1.26	1.52	1.14		
386 Cash Account	1	0.00													
388 Securities Lending	0	0.00													
390 KKR Cash Account															



**Teachers' Retirement System
of New York City**

Appendix B

Public Markets Manager Performance Detail

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
EQUITY SUMMARY										
US EQUITY										
Cooke and Bieler-US SCV	131	0.14	7.35	16.09	11.48	(17.98)	17.89	9.36		
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63		
Excess			4.17	10.09	8.98	(3.50)	(10.38)	4.73		
T Rowe Price-US SCV	127	0.13	3.75	7.01	4.68	(18.54)	23.26			
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27			
Excess			0.56	1.00	2.18	(4.06)	(5.01)			
PanAgora-US SCC	210	0.22	4.82	16.17	7.65	(17.32)	21.35	14.49		
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96		
Excess			(0.38)	3.86	(0.44)	3.12	6.53	(5.47)		
Wellington-US SCC	113	0.12	5.45	15.64	11.36	(24.16)				
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)				
Excess			0.24	3.33	3.27	(3.73)				
BlackRock US SCG R2000	12	0.01	7.19	19.93	14.05	(26.13)	5.02	34.23	28.70	(9.26)
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63	28.48	(9.31)
Excess			0.13	1.40	0.49	0.22	2.18	(0.41)	0.22	0.05
BlackRock US SCV R2000	208	0.22	3.13	6.45	2.66	(15.36)	27.54	4.81	22.73	(12.74)
RUSSELL 2000 VALUE DAILY			3.18	6.01	2.50	(14.48)	28.27	4.63	22.39	(12.86)
Excess			(0.05)	0.45	0.15	(0.88)	(0.74)	0.18	0.34	0.13
Brown-US SCG	429	0.45	7.39	11.23	17.47	(37.62)	(3.56)	45.20	30.13	1.18
RUSSELL 2000 GROWTH DAILY			7.05	18.53	13.55	(26.36)	2.83	34.63	28.48	(9.31)
Excess			0.33	(7.30)	3.92	(11.27)	(6.39)	10.56	1.64	10.49
BlackRock US LMC R1000 Core	20,049	20.92	8.73	19.16	16.93	(19.91)	26.37	21.08	31.38	
RUSSELL 1000 (DAILY)			8.58	19.36	16.68	(19.13)	26.45	20.96	31.43	
Excess			0.15	(0.21)	0.25	(0.79)	(0.09)	0.11	(0.05)	

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Earnest-US MCC	162	0.17	3.79	10.77	8.39					
RUSSELL MIDCAP (DAILY)			4.76	14.92	9.01					
Excess			(0.97)	(4.16)	(0.62)					
MFS-US MCG	213	0.22	5.96	16.17	12.92					
RUSSELL MIDCAP GROWTH (DAILY)			6.23	23.13	15.94					
Excess			(0.27)	(6.96)	(3.02)					
Westfield-US MCG	215	0.22	8.54	22.50	18.73					
RUSSELL MIDCAP GROWTH (DAILY)			6.23	23.13	15.94					
Excess			2.31	(0.63)	2.79					
Cooke and Bieler-US MCV	237	0.25	5.97	12.92	10.34					
RUSSELL MIDCAP VALUE (DAILY)			3.86	10.50	5.23					
Excess			2.11	2.41	5.11					
Victory-US MCV	247	0.26	2.26	14.11	4.31					
RUSSELL MIDCAP VALUE (DAILY)			3.86	10.50	5.23					
Excess			(1.60)	3.61	(0.92)					
SSGA-US LC Russell TOP 200 Core	2,563	2.67	10.26	20.56	19.95					
RUSSELL TOP 200 INDEX (DAILY)			9.89	20.88	19.42					
Excess			0.37	(0.32)	0.53					
INTERNATIONAL FOF										
FUND OF FUNDS										
TOTAL FUNDS OF FUNDS	165	0.17	2.82	13.24	8.30	(16.35)	24.89	19.36	23.40	(8.24)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.39)	0.93	0.22	4.09	10.07	(0.60)	(2.13)	2.77
TRS-TOTAL LEGATO	165	0.17	2.82	13.24	8.30	(16.35)	24.89	19.36	23.40	(8.17)
RUSSELL 2000 (DAILY)			5.21	12.31	8.09	(20.44)	14.82	19.96	25.52	(11.01)
Excess			(2.39)	0.93	0.22	4.09	10.07	(0.60)	(2.13)	2.84

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
NON - US EQUITY										
Causeway WorldxUS LMCC	1,511	1.58	4.86	31.18	20.93	(7.75)	11.10	2.49	24.15	(18.74)
NYC Developed Value Benchmark ^[1]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			1.83	13.77	9.64	6.55	(1.52)	(5.09)	1.66	(4.65)
Sprucegrove WorldxUS LMCC	1,597	1.67	3.83	22.61	15.52	(11.52)	8.57	4.07	20.72	(14.09)
NYC Developed Value Benchmark ^[1]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.80	5.19	4.23	2.77	(4.05)	(3.52)	(1.77)	(0.00)
Baillie Gifford WorldxUS LMCC	1,440	1.50	2.77	19.21	16.00	(38.93)	(2.83)	59.46	36.88	(14.96)
NYC Developed Growth Benchmark ^[2]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			(0.26)	1.79	4.71	(24.64)	(15.45)	51.87	14.39	(0.87)
Walter Scott WorldxUS LMCC	1,671	1.74	3.40	21.63	16.30	(21.44)	13.17	19.92	27.75	(7.69)
NYC Developed Growth Benchmark ^[2]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.37	4.22	5.01	(7.14)	0.54	12.34	5.25	6.40
Acadian WorldxUS SCC	480	0.50	0.25	12.89	7.14	(19.95)	19.94	14.96	20.79	(19.67)
S&P EPAC Small Cap USD NET			0.17	10.76	6.71	(22.69)	8.06	13.78	23.71	(18.58)
Excess			0.08	2.13	0.44	2.75	11.88	1.17	(2.92)	(1.09)
Fidelity WorldxUS SCC	249	0.26	0.81	12.08	7.16	(22.67)	12.90	17.77	25.49	(18.23)
S&P EPAC Small Cap USD NET			0.17	10.76	6.71	(22.69)	8.06	13.78	23.71	(18.58)
Excess			0.64	1.32	0.45	0.02	4.84	3.98	1.78	0.35
Algert EAFE SCC	129	0.14	(0.63)	11.88	5.42	(21.74)	11.63	9.66		
MSCI EAFE SMALL CAP NET (DAILY)			0.58	10.18	5.53	(21.39)	10.10	12.34		
Excess			(1.21)	1.70	(0.10)	(0.35)	1.53	(2.68)		
SSGA WorldxUS LMC NYC Custom IDX	1,030	1.07	3.48	17.01	12.09	(15.64)	12.51	8.41	22.67	(13.55)
NYC Custom World ex US Index ^[3]			3.03	17.41	11.29	(14.29)	12.62	7.59	22.49	(14.09)
Excess			0.45	(0.41)	0.79	(1.35)	(0.12)	0.83	0.18	0.54

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
SSGA WorldxUS SC Custom IDX ^[4]	419	0.44	0.72	10.00	5.88	(21.27)	11.23	13.77	25.56	(17.82)
World ex USA SC PASSIVE CUSTOM BM ^[5]			0.49	10.05	5.50	(20.58)	11.14	12.78	25.41	(18.07)
Excess			0.23	(0.04)	0.38	(0.69)	0.09	0.98	0.15	0.25
EMERGING MARKETS										
Acadian EM	1,593	1.66	3.82	7.78	10.36	(19.47)	9.37	13.62	19.36	
TRS Custom EM Index ^[6]			0.90	1.75	4.89	(20.09)	(2.54)	18.31	15.98	
Excess			2.93	6.03	5.48	0.62	11.91	(4.68)	3.38	
AQR-EM SCC	432	0.45	7.14	13.82	9.92	(15.05)	21.19			
MSCI EM Small Cap - Net Return			6.39	13.28	10.50	(18.02)	18.75			
Excess			0.75	0.54	(0.58)	2.97	2.44			
Baillie Gifford EM	1,890	1.97	2.82	7.41	10.60	(29.91)	(8.43)	30.48	23.71	(14.39)
TRS Custom EM Index ^[6]			0.90	1.75	4.89	(20.09)	(2.54)	18.31	15.98	(13.39)
Excess			1.92	5.66	5.71	(9.81)	(5.89)	12.18	7.73	(1.00)
DFA EM	1,606	1.68	3.91	7.86	8.60	(12.30)	11.45	4.07	9.16	(13.17)
TRS Custom EM Index ^[6]			0.90	1.75	4.89	(20.09)	(2.54)	18.31	15.98	(13.39)
Excess			3.01	6.11	3.71	7.79	14.00	(14.23)	(6.82)	0.23
Parametric EM	0	0.00							10.51	(14.52)
TRS Custom EM Index ^[6]									15.98	(13.39)
Excess									(5.47)	(1.12)
RBC-EM ACG	810	0.85	3.05	10.88	9.33	(13.64)	(3.65)			
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)	(2.54)			
Excess			2.15	9.13	4.44	6.45	(1.11)			
Sands-EM LCG	505	0.53	3.49	7.48	9.94	(34.22)	(8.99)			
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)	(2.54)			
Excess			2.59	5.73	5.05	(14.13)	(6.45)			

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
UBS-EM ACC	567	0.59	0.44	0.86	3.04	(24.77)	(9.24)			
MSCI EMERGING MARKETS			0.90	1.75	4.89	(20.09)	(2.54)			
Excess			(0.45)	(0.89)	(1.85)	(4.68)	(6.69)			
BlackRock MSCI EM Core	1,388	1.45	1.17	2.48	5.67	(19.89)	(2.50)	18.14	15.70	(12.87)
TRS Custom EM Passive Index ^[7]			0.90	1.75	4.89	(20.09)	(2.54)	18.31	15.98	(12.99)
Excess			0.27	0.73	0.78	0.20	0.04	(0.17)	(0.27)	0.12
TRS-TOTAL INTERNATIONAL FOF	954	1.00	2.41	14.36	10.78	(19.90)	9.59	13.34	23.79	(15.50)
NYC Blended Custom Benchmark for FoF (TRS) ^[8]			2.38	12.47	9.10	(16.58)	8.53	11.44	21.62	(14.39)
Excess			0.02	1.89	1.67	(3.32)	1.06	1.91	2.18	(1.11)
TRS-TOTAL INTERNATIONAL BIVIUM	326	0.34	2.02	14.96	10.67	(18.84)	11.52	12.42	25.83	(18.16)
NYC Blended Custom Benchmark for FoF (TRS) ^[8]			2.38	12.47	9.10	(16.58)	8.53	11.44	21.62	(14.39)
Excess			(0.36)	2.49	1.57	(2.25)	3.00	0.98	4.21	(3.77)
TRS-TOTAL INTERNATIONAL XPONANCE	326	0.34	2.75	14.87	10.56	(17.65)	8.79	15.00	21.96	(14.12)
NYC Blended Custom Benchmark for FoF (TRS) ^[8]			2.38	12.47	9.10	(16.58)	8.53	11.44	21.62	(14.39)
Excess			0.36	2.40	1.46	(1.07)	0.26	3.57	0.34	0.27
TRS-TOTAL INTERNATIONAL LEADING EDGE	302	0.32	2.46	13.31	11.17	(23.27)	8.43	12.62	23.62	(14.15)
NYC Blended Custom Benchmark for FoF (TRS) ^[8]			2.38	12.47	9.10	(16.58)	8.53	11.44	21.62	(14.39)
Excess			0.07	0.84	2.07	(6.69)	(0.09)	1.18	2.01	0.24
GLOBAL EQUITY										
Fiera-Global	378	0.39	5.56	20.66	14.16	(17.90)	26.22	20.62	34.11	
MSCI World Index			6.83	18.51	15.09	(18.14)	21.82	15.90	27.67	
Excess			(1.27)	2.15	(0.93)	0.24	4.40	4.72	6.44	
Nordea-Global MCG	204	0.21	1.99	14.35	9.56					
MSCI World Index			6.83	18.51	15.09					
Excess			(4.84)	(4.16)	(5.53)					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Morgan Stanley-Global	189	0.20	11.55	37.08	34.55	(40.38)				
MSCI AC WORLD (Daily Const)			6.18	16.53	13.93	(18.36)				
Excess			5.38	20.55	20.61	(22.01)				
Pictet-Global ACC	220	0.23	4.82		14.00					
MSCI World Index			6.83		15.09					
Excess			(2.01)		(1.09)					
REAL ESTATE SECURITIES										
TRS-TOTAL MORGAN STANLEY REITS	0	0.00							19.02	(7.88)
Morgan Stanley Custom RESI Index									23.10	(4.22)
Excess									(4.08)	(3.66)
FIXED INCOME SUMMARY										
STRUCTURED FIXED INCOME										
BlackRock Mortgages	2,313	2.41	(0.52)	(1.34)	2.05	(11.66)	(0.93)	5.00	6.88	1.00
NYC Custom Mortgage Benchmark ⁽⁹⁾			(0.64)	(1.52)	1.87	(11.81)	(1.04)	3.91	6.68	1.01
Excess			0.13	0.18	0.19	0.15	0.11	1.09	0.21	(0.01)
BlackRock Mortgages NA	3	0.00								
NYC Custom Mortgage Benchmark ⁽⁹⁾										
Excess										
PIMCO MORT	1,245	1.30	(0.49)	(1.51)	2.36	(12.93)	(1.64)			
Bloomberg US Mortgage Backed Securities			(0.64)	(1.52)	1.87	(11.81)	(1.04)			
Excess			0.15	0.01	0.50	(1.12)	(0.59)			
Ramirez-Mortgages - Bivium	36	0.04	(0.67)		1.56					
Bloomberg US Mortgage Backed Securities			(0.64)		1.87					
Excess			(0.02)		(0.31)					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Semper-Mortgages - Bivium	36	0.04	(0.67)		1.92					
Bloomberg US Mortgage Backed Securities			(0.64)		1.87					
Excess			(0.03)		0.06					
Wellington Mortgages	867	0.91	(0.67)	(1.47)	2.16	(11.90)	(0.95)			
Bloomberg US Mortgage Backed Securities			(0.64)	(1.52)	1.87	(11.81)	(1.04)			
Excess			(0.02)	0.05	0.29	(0.09)	0.09			
BlackRock Corporate	(0)	0.00						10.12	14.06	(1.99)
NYC Custom IGC Benchmark ^[10]								9.70	13.40	(1.90)
Excess								0.42	0.66	(0.09)
Neuberger Berman-Corporate	1,400	1.46	(0.00)	2.11	3.64	(16.17)				
Bloomberg U.S. Corporate Inv Grade			(0.29)	1.55	3.21	(15.76)				
Excess			0.28	0.56	0.43	(0.41)				
Pinebridge-Corporate	910	0.95	(0.17)	0.49	2.77	(15.64)				
NYC Custom IGC Benchmark ^[10]			(0.29)	1.55	3.21	(15.76)				
Excess			0.12	(1.06)	(0.43)	0.12				
T Rowe Price-Corporate	1,834	1.91	(0.21)	1.57	3.68	(16.53)	(0.68)	9.63	14.61	(2.41)
NYC Custom IGC Benchmark ^[10]			(0.29)	1.55	3.21	(15.76)	(0.85)	9.70	13.40	(1.90)
Excess			0.08	0.03	0.47	(0.76)	0.17	(0.07)	1.22	(0.51)
Voya-Corporate	875	0.91	(0.04)	2.38	4.07	(16.26)				
Bloomberg U.S. Corporate Inv Grade			(0.29)	1.55	3.21	(15.76)				
Excess			0.25	0.83	0.86	(0.49)				
Barksdale-Credit - Bivium	21	0.02	(0.23)		3.36					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			0.05		0.15					

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Ducenta Squared-Credit - Bivium	26	0.03	(0.51)		3.11					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			(0.22)		(0.10)					
Integrity-Credit - Bivium	26	0.03	(0.83)		2.87					
Bloomberg U.S. Corporate Inv Grade			(0.29)		3.21					
Excess			(0.54)		(0.34)					
New Century-IT Treasury - Bivium	30	0.03	(1.06)		1.23					
USBIG TSY AGN 1-10			(1.11)		1.26					
Excess			0.06		(0.02)					
HGK Asset Management-IT Treasury- Bivium	30	0.03	(1.28)		0.98					
USBIG TSY AGN 1-10			(1.11)		1.26					
Excess			(0.17)		(0.28)					
SSGA LI Treasury	96	0.10	(1.87)	(4.23)	2.94	(20.75)	(3.76)	13.46	10.50	(0.20)
NYC - Treasury Agency Plus Five			(1.94)	(4.60)	2.86	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.08	0.37	0.08	(0.17)	0.02	0.60	0.11	(0.15)
BlackRock LI Treasury	55	0.06	(1.91)	(4.19)	2.94	(20.61)	(3.85)	12.37	10.35	(0.18)
NYC - Treasury Agency Plus Five			(1.94)	(4.60)	2.86	(20.58)	(3.78)	12.85	10.40	(0.05)
Excess			0.03	0.41	0.08	(0.03)	(0.07)	(0.49)	(0.05)	(0.13)
SSGA ST Treasury 1-3Y	1,864	1.94	(0.58)	0.26	1.05	(3.65)	(0.60)	2.63	3.56	1.51
FTSE US Government Bond 1-3 Years Index			(0.56)	0.16	1.04	(3.74)	(0.58)	3.09	3.56	1.56
Excess			(0.01)	0.10	0.01	0.09	(0.03)	(0.46)	0.00	(0.05)
SSGA LT Treasury 10Y Plus	2,636	2.75	(2.34)	(6.83)	4.54	(29.60)	(4.87)	17.63	14.88	(1.84)
FTSE US Government Bond 10+ Years Index			(2.30)	(7.50)	4.39	(29.75)	(4.63)	17.72	14.89	(1.89)
Excess			(0.04)	0.68	0.16	0.15	(0.24)	(0.09)	(0.01)	0.05

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
SSGA IT Treasury 1-10Y ⁽¹⁾	8,246	8.60	(1.13)	(0.98)	1.24	(7.77)	(1.78)	5.74	5.08	2.05
USBIG TSY AGN 1-10			(1.11)	(1.08)	1.26	(7.79)	(1.66)	5.72	5.18	1.42
Excess			(0.02)	0.10	(0.02)	0.01	(0.12)	0.03	(0.09)	0.63
Brigade High Yield	639	0.67	2.85	5.72	5.53	(13.16)	8.58	7.70	15.73	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			1.09	(3.35)	0.15	(1.98)	3.32	0.65	1.41	
Eaton Vance High Yield	790	0.82	1.14	9.12	5.19	(9.36)	4.83	5.86	14.52	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			(0.61)	0.05	(0.19)	1.82	(0.43)	(1.18)	0.21	
Neuberger Berman High Yield	799	0.83	1.20	8.61	4.55	(11.14)	4.38	6.07	14.16	(2.01)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.55)	(0.46)	(0.83)	0.04	(0.88)	(0.98)	(0.16)	0.08
Nomura High Yield	654	0.68	1.86	10.17	6.28	(10.81)	6.55	8.45	13.99	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			0.11	1.10	0.90	0.37	1.29	1.41	(0.33)	
Oaktree High Yield	503	0.52	1.61	9.30	4.72	(9.70)	4.71	7.22	14.01	(3.49)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.15)	0.23	(0.66)	1.48	(0.55)	0.18	(0.31)	(1.41)
Stone Harbor High Yield	0	0.00								(2.65)
Bloomberg U.S. HY - 2% Issuer Cap										(2.08)
Excess										(0.56)
T Rowe Price High Yield	646	0.67	1.68	9.67	5.51	(10.96)	6.20	7.16	15.55	(2.30)
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	(2.08)
Excess			(0.08)	0.60	0.13	0.22	0.94	0.11	1.23	(0.22)

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Mackay Shields High Yield	828	0.86	1.34	9.19	5.50	(8.39)	5.48	7.94	13.96	
Bloomberg U.S. HY - 2% Issuer Cap			1.75	9.07	5.38	(11.18)	5.26	7.05	14.32	
Excess			(0.41)	0.12	0.12	2.79	0.22	0.90	(0.36)	
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)
Voya Bank Loans	0	0.00					(11.20)	(0.06)	7.74	0.33
CSFB LEVERAGED LOAN INDEX							5.40	2.78	8.17	1.14
Excess							(16.60)	(2.84)	(0.44)	(0.81)
Pinebridge Bank Loans	0	0.00								
CSFB LEVERAGED LOAN INDEX										
Excess										
TIPS										
SSGA TIPS	2,382	2.49	(1.44)	(1.41)	1.97	(11.89)	5.90	11.15	8.44	(1.30)
Bloomberg Global Infl-Linked: U.S. TIPS			(1.42)	(1.40)	1.87	(11.85)	5.96	10.99	8.43	(1.26)
Excess			(0.02)	(0.01)	0.10	(0.04)	(0.05)	0.15	0.02	(0.04)
BlackRock TIPS	779	0.81	(1.45)	(1.50)	1.92	(11.92)	5.72	11.01	8.42	(1.18)
Bloomberg Global Infl-Linked: U.S. TIPS			(1.42)	(1.40)	1.87	(11.85)	5.96	10.99	8.43	(1.26)
Excess			(0.03)	(0.11)	0.05	(0.07)	(0.23)	0.02	(0.01)	0.08

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
CORE FI - DEVELOPING MANAGERS										
LM Capital-Core Plus	117	0.12	(0.54)	0.39	2.67	(12.38)	(1.07)	9.27	9.76	(1.35)
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.30	1.33	0.58	0.63	0.47	1.76	1.04	(1.36)
GIA-Core Plus	87	0.09	(0.50)	0.46	2.72	(12.66)	(0.80)	7.78	10.13	(1.01)
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			0.34	1.40	0.63	0.35	0.74	0.27	1.41	(1.02)
Pugh-CorePlus	55	0.06	(0.57)	(0.22)	2.64	(13.29)	(1.32)			
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)			
Excess			0.27	0.72	0.54	(0.28)	0.22			
ECONOMICALLY TARGETED INVESTMENTS										
AFL-CIO Housing Investment Trust	285	0.30	(0.90)	(2.23)	1.94	(13.55)	(1.04)	6.20	7.78	0.16
Bloomberg U.S. Aggregate			(0.84)	(0.94)	2.09	(13.01)	(1.54)	7.51	8.72	0.01
Excess			(0.05)	(1.29)	(0.15)	(0.54)	0.50	(1.31)	(0.94)	0.15
RBC Access MBS	141	0.15	(0.79)	(1.64)	1.79	(12.00)	(1.03)	6.14	7.21	0.49
Access RBC Benchmark			(0.76)	(1.37)	1.64	(10.38)	(1.46)	4.69	6.05	1.17
Excess			(0.04)	(0.27)	0.15	(1.61)	0.43	1.45	1.16	(0.69)
CPC Construction Facility	16	0.02	0.61	7.17	4.82	3.80	3.89	0.67	6.87	4.14
CPC CONST BENCHMARK			1.50	5.33	2.93	3.75	2.42	2.73	4.09	3.99
Excess			(0.88)	1.84	1.89	0.04	1.46	(2.06)	2.78	0.15
BOA PPAR FNMA	4	0.00	(2.63)	2.02	1.61	(8.50)	(1.89)	6.12	13.54	2.33
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.18)	2.60	(0.53)	2.78	(1.52)	0.98	5.74	0.47
Citibank PPAR FNMA	18	0.02	(2.64)	1.40	1.96	(11.34)	(1.56)	7.06	19.71	2.63
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.19)	1.98	(0.19)	(0.06)	(1.19)	1.92	11.91	0.77

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
Citibank PPAR GNMA	4	0.00	(1.31)	2.45	1.83	(5.04)	(1.10)	8.31	5.33	1.90
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.85	(0.45)	5.10	(0.29)	4.00	(1.41)	0.27
CFSB PPAR FNMA	0	0.00	(2.85)	1.03	1.95	(12.29)	(2.05)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.41)	1.62	(0.20)	(1.01)	(1.67)			
CFSB PPAR GNMA	2	0.00	(1.31)	1.83	1.74	(5.29)	0.03	8.01	5.91	0.99
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.92)	2.23	(0.53)	4.85	0.84	3.69	(0.82)	(0.65)
CPC PPAR FNMA	89	0.09	(2.39)	1.51	1.99	(10.21)	1.14	7.00	13.18	2.31
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(1.94)	2.10	(0.16)	1.07	1.51	1.87	5.38	0.45
ECLF PPAR FNMA	2	0.00	(2.85)	1.26	2.02	(11.97)	(1.65)			
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)			
Excess			(2.40)	1.84	(0.13)	(0.69)	(1.28)			
TRS-CPC PPAR GNMA	43	0.04	(1.24)	2.04	1.89	(5.12)	(0.62)	8.04	4.89	0.77
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.85)	2.44	(0.39)	5.02	0.20	3.73	(1.85)	(0.86)
LIIF PPAR FNMA	10	0.01	(2.61)	2.64	1.89	(9.29)	(1.75)	6.44	16.35	2.27
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(2.16)	3.22	(0.25)	1.99	(1.37)	1.30	8.55	0.41
LIIF PPAR GNMA	2	0.00	1.87	4.69	4.06	(2.79)	0.84	6.19	5.54	2.53
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			2.26	5.09	1.78	7.35	1.65	1.87	(1.19)	0.89

Public Markets Manager Performance Detail



Net Returns Through June 30, 2023

	Market Value (\$MM)	% of Total	3 Months	FYTD	CYTD	2022	2021	2020	2019	2018
LISC PPAR FNMA	4	0.00	(2.89)	(4.11)	1.96	(16.45)	(1.69)	31.93	14.95	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.45)	(3.52)	(0.18)	(5.17)	(1.32)	26.80	7.15	
NCBCI PPAR FNMA	0	0.00	(1.10)	2.26	1.95	(4.39)	0.66	8.49	4.08	2.00
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	1.86
Excess			(0.65)	2.85	(0.19)	6.89	1.03	3.36	(3.72)	0.15
NCBCI PPAR GNMA	1	0.00	(1.06)	2.16	1.91	(4.17)	0.95	8.16	3.69	1.23
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.67)	2.56	(0.37)	5.97	1.77	3.85	(3.04)	(0.41)
NHS PPAR GNMA	0	0.00	(0.90)	2.61	2.16	(3.56)	1.26	7.11	2.90	0.54
GNMA Plus 65bps			(0.39)	(0.40)	2.28	(10.14)	(0.82)	4.31	6.73	1.63
Excess			(0.51)	3.01	(0.12)	6.58	2.08	2.80	(3.84)	(1.09)
Wells Fargo PPAR FNMA	8	0.01	(2.92)	1.40	1.92	(11.70)	(1.86)	28.61	21.71	
FNMA Plus 85bps			(0.45)	(0.59)	2.14	(11.28)	(0.37)	5.14	7.80	
Excess			(2.47)	1.98	(0.22)	(0.42)	(1.48)	23.48	13.91	
CASH										
Short Term TRS	457	0.48	1.25	3.66	2.36	1.24	0.08	0.56	2.25	1.96
ICE BofA US 3-Month Treasury Bill			1.17	3.59	2.25	1.46	0.05	0.67	2.28	1.87
Excess			0.08	0.06	0.10	(0.21)	0.03	(0.11)	(0.03)	0.09
Cash Account	1	0.00								
Securities Lending	0	0.00								



**Teachers' Retirement System
of New York City**

Appendix C

Alternative Assets Manager Performance Detail

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
TOTAL PRIVATE EQUITY		15,175,153,495	11,605,731,297	10,324,743,992	8,041,763,250	1.58x	11.76%
TOTAL LIQUIDATED		1,167,362,862	1,199,654,490	1,558,155,029	-	1.30x	
TOTAL ACTIVE		14,007,790,633	10,406,076,808	8,766,588,963	8,041,763,250	1.62x	
TOTAL ACTIVE							
Cypress Merchant Banking Partners II, LP	1999	50,000,000	53,983,573	50,623,035	18,471	0.94x	-1.18%
Lincolnshire Equity Fund II, L.P.	1999	15,000,000	14,446,100	28,316,507	(150,118)	1.95x	24.56%
SCP Private Equity Partners II, L.P.	2000	20,000,000	22,196,012	8,429,680	1,404,677	0.44x	-8.62%
Apollo Investment Fund V, L.P.	2001	30,000,000	46,758,049	92,244,552	255,099	1.98x	38.77%
Ares Corporate Opportunities Fund, L.P.	2003	15,000,000	18,004,666	26,835,382	18,060	1.49x	13.06%
Blackstone Capital Partners IV, L.P.	2003	30,000,000	30,690,321	77,506,027	193,686	2.53x	37.80%
FS Equity Partners V, L.P.	2003	25,000,000	20,251,319	41,007,776	1,412,093	2.09x	15.23%
FdG Capital Partners II, L.P.	2004	35,000,000	37,720,808	44,959,148	770,176	1.21x	3.65%
LCP X Co-Invest Partners B, L.P.	2004	32,000,000	6,309,556	-	7,680,621	1.22x	N/M
Lincolnshire Equity Fund III, L.P.	2004	25,000,000	25,234,072	38,888,584	7,282,256	1.83x	27.40%
Markstone Capital Partners, L.P.	2004	35,000,000	40,766,689	17,074,753	163,685	0.42x	-31.46%
New York/Fairview Emerging Managers (Tranche A), L.P.	2004	24,000,000	24,646,553	26,681,821	360,339	1.10x	1.56%
Yucaipa American Alliance Fund I, L.P.	2004	55,000,000	80,825,203	95,185,290	392,376	1.18x	3.97%
JP Morgan Fleming (Tranche A), L.P.	2005	31,000,000	31,363,744	36,635,024	3,613,607	1.28x	4.56%
Leeds Equity Partners V, L.P.	2005	40,000,000	39,871,980	94,886,224	4,074,585	2.48x	18.46%
Snow Phipps Group, L.P.	2005	15,000,000	18,286,257	16,668,046	6,843,064	1.29x	4.64%
USPF II Institutional Fund, L.P.	2005	35,000,000	46,164,567	55,381,287	429,424	1.21x	3.25%
Aisling Capital II, L.P.	2006	4,500,000	5,099,563	5,112,601	200,061	1.04x	0.74%
Ampersand 2006, L.P.	2006	15,000,000	15,000,000	46,844,870	109,873	3.13x	16.90%
Apollo Investment Fund VI, L.P.	2006	35,000,000	45,048,207	67,409,336	630,506	1.51x	8.63%
BDCM Opportunity Fund II, L.P.	2006	25,000,000	37,325,097	102,347,045	2,180,500	2.80x	18.34%
Blackstone Capital Partners V, L.P.	2006	75,600,000	76,564,529	129,564,127	684,636	1.70x	8.52%
Catterton Partners VI, L.P.	2006	30,000,000	34,300,531	59,205,324	7,227,632	1.94x	11.43%
Cinven Fourth Fund	2006	43,264,875	45,626,616	65,913,468	26,533	1.45x	7.37%
First Reserve Fund XI, L.P.	2006	30,000,000	34,241,400	22,947,827	28,315	0.67x	-9.75%
GF Capital Private Equity Fund, L.P.	2006	15,000,000	15,773,790	20,491,630	8,866,511	1.86x	11.51%
Landmark Equity Partners XIII, L.P.	2006	25,000,000	23,702,196	31,591,655	0	1.33x	5.02%
MidOcean Partners III, L.P.	2006	40,000,000	46,544,144	103,912,185	74,196	2.23x	13.57%
RRE Ventures IV, L.P.	2006	25,000,000	31,834,512	47,674,283	8,938,916	1.78x	6.77%
Carlyle Partners V, L.P.	2007	50,000,000	50,852,090	90,770,111	2,477,843	1.83x	13.36%
Co-Investment Partners Europe, L.P.	2007	26,414,943	29,219,332	35,984,150	413,531	1.25x	4.33%
FTVentures III, L.P.	2007	14,081,947	15,022,056	25,170,138	3,636,583	1.92x	10.89%
GSO Capital Opportunities Fund, L.P.	2007	30,000,000	48,291,339	67,124,625	601,710	1.40x	17.30%
Halyard Capital Fund II, L.P.	2007	15,000,000	13,118,287	16,133,696	4,078,240	1.54x	6.96%
Lexington Capital Partners VIII, L.P.	2007	150,000,000	136,436,353	135,444,040	92,172,546	1.67x	16.72%
Montreux Equity Partners IV, L.P.	2007	15,000,000	14,930,359	8,224,849	11,202,917	1.30x	3.11%
Nautic Partners VI, L.P.	2007	20,000,000	21,570,994	52,273,786	1,672,580	2.50x	18.61%

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	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
New Mountain Partners III, L.P.	2007	35,000,000	37,359,628	88,424,718	1,469,446	2.41x	14.58%
PCG Clean Energy & Technology Fund East, L.P.	2007	60,000,000	51,863,265	16,764,849	1,898,697	0.36x	-12.83%
Pegasus Partners IV, L.P.	2007	20,000,000	26,489,188	20,637,860	2,586,064	0.88x	-2.62%
Pine Brook Capital Partners, L.P.	2007	22,500,000	24,896,117	33,888,331	633,804	1.39x	8.36%
Quaker BioVentures II, L.P.	2007	15,000,000	14,977,775	16,629,447	173,705	1.12x	2.48%
RLJ Equity Partners Fund I, L.P.	2007	15,000,000	15,531,821	19,184,523	1,746,804	1.35x	6.75%
SCP Vitalife Partners II, L.P.	2007	15,000,000	15,074,774	1,184	2,770,910	0.18x	-13.41%
StarVest Partners II, L.P.	2007	20,000,000	20,106,956	10,249,653	5,208,644	0.77x	-3.16%
Trilantic Capital Partners IV L.P.	2007	53,311,339	54,491,733	83,191,204	3,126,977	1.58x	13.46%
USPF III Institutional Fund, L.P.	2007	30,000,000	35,493,985	45,518,432	894,365	1.31x	4.38%
Vista Equity Partners Fund III, L.P.	2007	25,000,000	26,945,636	63,903,684	2,915,302	2.48x	26.82%
Aisling Capital III, L.P.	2008	10,500,000	11,846,807	28,176,543	65,174	2.38x	26.46%
Apollo Investment Fund VII, L.P.	2008	50,000,000	61,129,618	107,053,422	587,711	1.76x	23.15%
Ares Corporate Opportunities Fund III, L.P.	2008	60,000,000	71,462,853	155,339,754	777,483	2.18x	20.87%
Avista Capital Partners II, L.P.	2008	50,000,000	66,131,931	106,253,389	2,240,554	1.64x	14.38%
Blue Wolf Capital Fund II, L.P.	2008	20,000,000	22,032,020	37,201,244	114,915	1.69x	10.72%
Bridgepoint Europe IV, L.P.	2008	26,449,821	24,946,822	34,548,608	4,623,185	1.57x	9.57%
First Reserve Fund XII, L.P.	2008	30,000,000	33,919,785	17,607,913	0	0.52x	-24.88%
GCM Grosvenor TRSCNY Emerging Manager Fund, L.P.	2008	59,373,737	75,573,014	91,375,483	24,763,656	1.54x	9.78%
GI Partners III, L.P.	2008	30,000,000	32,411,558	50,818,605	14,125	1.57x	12.96%
Landmark Equity Partners XIV, L.P.	2008	50,000,000	48,702,046	61,500,739	3,343,351	1.33x	8.84%
LCP IX Co-Invest Partners B, L.P.	2008	28,375,000	13,905,169	5,689,860	17,841,178	1.69x	N/M
New York/Fairview Emerging Managers (Tranche B), L.P.	2008	35,000,000	35,461,815	77,359,488	16,869,194	2.66x	17.73%
NGN BioMed Opportunity II, L.P.	2008	15,000,000	14,363,866	11,509,657	7,728,410	1.34x	3.54%
Onex Partners III, L.P.	2008	40,000,000	43,900,754	65,803,784	6,823,887	1.65x	11.38%
Paladin III (NY City), L.P.	2008	20,000,000	27,139,705	57,154,221	7,816,229	2.39x	14.21%
Riverstone/Carlyle Global Energy & Power Fund IV	2008	32,500,000	35,116,069	39,590,439	12,150	1.13x	3.18%
Yucaipa American Alliance Fund II, L.P.	2008	75,000,000	104,010,896	113,116,699	61,192,681	1.68x	7.97%
Yucaipa Corporate Initiatives Fund II, L.P.	2008	35,000,000	32,157,997	28,759,946	462,619	0.91x	-1.25%
Lincolnshire Equity Fund IV, L.P.	2009	12,500,000	12,881,737	15,522,307	3,491,137	1.48x	8.22%
Welsh, Carson, Anderson & Stowe XI, L.P.	2009	30,000,000	30,000,000	47,826,193	2,077,881	1.66x	11.51%
JP Morgan Fleming (Tranche B), L.P.	2010	10,000,000	10,726,813	14,441,826	5,200,321	1.83x	10.49%
Trident V, L.P.	2010	35,000,000	41,666,606	58,337,364	21,150,124	1.91x	11.97%
American Securities Partners VI, L.P.	2011	100,000,000	112,030,961	196,059,692	59,465,230	2.28x	21.86%
Ampersand 2011, L.P.	2011	17,500,000	17,500,000	56,677,681	138,042	3.25x	21.80%
AXA Secondary Fund V L.P.	2011	160,000,000	85,770,811	132,424,082	198,036	1.55x	13.58%
BC European Capital IX, L.P.	2011	69,022,637	75,665,263	91,497,089	27,971,337	1.58x	10.55%
Blackstone Capital Partners VI, L.P.	2011	60,000,000	62,129,810	81,115,752	25,230,109	1.71x	11.16%
EQT VI, L.P.	2011	48,535,350	52,423,237	91,271,218	56,586	1.74x	13.63%
Pegasus Partners V, L.P.	2011	20,789,916	26,762,486	15,150,824	13,011,535	1.05x	1.07%
Platinum Equity Capital Partners III, L.P.	2011	115,000,000	112,458,282	211,759,014	21,405,668	2.07x	35.82%
Vista Equity Partners Fund IV, L.P.	2011	100,000,000	100,471,783	127,859,045	76,514,704	2.03x	14.89%

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	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
Ares Corporate Opportunities Fund IV, L.P.	2012	105,000,000	116,013,103	178,378,735	36,763,939	1.85x	14.71%
Green Equity Investors VI, L.P.	2012	100,000,000	112,893,978	118,861,075	106,842,627	2.00x	14.10%
<u>NYCTRS - 2012 Emerging Manager Program</u>	<u>2012</u>	<u>158,050,000</u>	<u>169,632,939</u>	<u>273,298,214</u>	<u>99,914,112</u>	<u>N/A</u>	<u>N/A</u>
Trilantic Capital Partners V (North America), L.P.	2012	70,000,000	73,504,534	101,942,456	23,624,375	1.71x	15.59%
Warburg Pincus Private Equity XI, L.P.	2012	175,000,000	180,379,074	221,230,044	79,904,568	1.67x	11.39%
Apollo Investment Fund VIII, L.P.	2013	200,000,000	196,313,478	217,181,849	74,404,196	1.49x	10.02%
ASF VI, L.P.	2013	112,000,000	90,217,360	116,030,148	16,474,204	1.47x	12.25%
Carlyle Partners VI, L.P.	2013	125,000,000	135,784,510	205,486,080	56,362,248	1.93x	15.66%
Crestview Partners III, L.P.	2013	75,000,000	69,906,395	42,175,271	64,288,719	1.52x	11.94%
Landmark Equity Partners XV, L.P.	2013	113,000,000	90,758,387	105,361,040	22,946,640	1.41x	11.69%
Levine Leichtman Capital Partners IV, L.P.	2013	25,000,000	26,635,586	42,262,426	2,367,912	1.68x	17.76%
ASF VI NYC Co-Invest, L.P.	2014	38,000,000	31,784,197	39,489,655	8,366,985	1.51x	12.32%
Bridgepoint Europe V, L.P.	2014	86,362,635	81,011,404	114,399,874	49,751,809	2.03x	19.65%
Carlyle Partners VI, L.P. - Side Car	2014	7,072,349	10,036,120	12,707,663	7,267,776	1.99x	12.26%
Crestview Partners III (Co-Investment B), L.P.	2014	25,000,000	25,908,372	1,253,803	30,624,299	1.23x	3.76%
CVC Capital Partners VI, L.P.	2014	204,970,239	191,625,021	211,349,092	177,726,013	2.03x	17.13%
Olympus Growth Fund VI, L.P.	2014	100,000,000	101,530,668	108,074,410	82,958,903	1.88x	16.70%
Vista Equity Partners Fund V, L.P.	2014	125,000,000	156,797,206	183,480,625	166,145,896	2.23x	19.54%
ASF VII B NYC Co-Invest, L.P.	2015	67,000,000	41,383,721	41,199,868	35,674,631	1.86x	20.56%
ASF VII, L.P.	2015	134,000,000	88,807,620	69,806,066	74,855,342	1.63x	17.04%
Bridgepoint Europe V Co-Invest	2015	25,242,363	23,183,477	48,206,508	14,251,016	2.69x	27.12%
Centerbridge Capital Partners III, L.P.	2015	33,500,000	44,254,786	41,996,020	32,614,844	1.69x	18.56%
<u>NYCTRS - 2015 Emerging Manager Program</u>	<u>2015</u>	<u>217,250,000</u>	<u>199,826,743</u>	<u>68,334,052</u>	<u>288,459,363</u>	<u>N/A</u>	<u>N/A</u>
Siris Partners III, L.P.	2015	45,000,000	47,413,992	35,827,533	34,757,579	1.49x	11.81%
Welsh, Carson, Anderson & Stowe XII, L.P.	2015	110,500,000	106,786,202	156,189,841	103,933,800	2.44x	27.01%
American Securities Partners VII, L.P.	2016	111,000,000	109,753,574	58,240,909	151,336,212	1.91x	16.15%
Apax IX USD, L.P.	2016	178,000,000	192,004,776	214,599,950	173,247,602	2.02x	23.22%
BC European Capital X Metro Co-Investment L.P.	2016	49,070,877	51,166,779	16,690,761	78,471,633	1.86x	15.68%
Platinum Equity Capital Partners IV, L.P.	2016	156,000,000	156,514,794	147,240,498	177,974,367	2.08x	25.03%
Vista Equity Partners Fund VI, L.P.	2016	223,000,000	280,623,704	236,246,537	338,360,610	2.05x	19.56%
Ares Corporate Opportunities Fund V, L.P.	2017	134,000,000	145,371,738	66,780,367	129,593,335	1.35x	9.63%
BC European Capital X, L.P.	2017	127,213,986	119,891,900	21,473,706	155,253,761	1.47x	10.58%
CVC Capital Partners VII, L.P.	2017	152,275,626	149,749,498	39,030,615	220,403,648	1.73x	23.30%
Green Equity Investors VII, L.P.	2017	134,000,000	128,114,978	105,806,133	166,275,950	2.12x	22.61%
KKR Americas Fund XII, L.P.	2017	223,000,000	211,236,034	95,620,587	273,501,236	1.75x	20.91%
Leeds Weld Equity Partners IV, L.P.	2017	15,000,000	15,441,454	20,171,550	26,143	1.31x	4.23%
Lexington Capital Partners IX, L.P.	2017	85,125,000	67,904,784	18,349,372	82,143,819	1.48x	30.92%
Palladium Equity Partners V, L.P.	2017	26,666,667	16,997,640	4,637,751	17,708,842	1.31x	10.33%
Apollo Investment Fund IX, L.P.	2018	256,000,000	221,870,693	79,126,199	246,109,613	1.47x	25.04%
ASF VIII, L.P.	2018	158,000,000	82,071,708	20,175,776	102,505,278	1.49x	25.07%
Bridgepoint Europe VI, L.P.	2018	96,128,883	80,475,148	8,350,883	106,861,261	1.43x	18.80%
EQT VIII SCSP	2018	72,448,696	86,795,960	52,954,847	95,507,400	1.71x	23.81%

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EQT VIII SCSP (Co-Invest)	2018	31,618,213	30,497,733	23,715,688	39,299,255	2.07x	37.35%
ICG Strategic Equity Fund III LP	2018	41,111,763	26,066,607	9,278,531	40,677,117	1.92x	39.36%
Platinum Equity Capital Partners IV, L.P. (Co-Invest)	2018	22,000,000	15,429,959	3,069,976	19,076,149	1.44x	9.25%
Platinum Equity Small Cap Fund, L.P.	2018	32,500,000	23,626,424	5,394,771	40,255,315	1.93x	30.40%
Siris Partners IV, L.P.	2018	71,000,000	58,954,365	8,449,441	83,937,738	1.57x	18.79%
Vista Equity Partners Fund VII, L.P.	2018	142,000,000	127,785,084	13,734,137	148,770,047	1.27x	10.75%
Apax X, L.P.	2019	95,000,000	76,455,121	5,975,954	86,001,142	1.20x	N/M
ASF VIII B NYC Co-Invest, L.P.	2019	79,000,000	32,224,078	6,904,997	42,381,049	1.53x	37.75%
Blackstone Capital Partners VIII, L.P.	2019	99,000,000	56,201,892	3,295,067	61,839,083	1.16x	N/M
Bridgepoint Europe VI Co-Invest	2019	24,239,231	18,469,641	0	29,659,290	1.61x	19.88%
Crestview Partners IV (FF), L.P.	2019	19,000,000	10,729,016	3,558,025	14,705,875	1.70x	N/M
Crestview Partners IV, L.P.	2019	57,000,000	32,187,050	9,240,318	38,980,127	1.50x	N/M
KKR European Fund V, L.P. - USD	2019	89,000,000	76,950,014	15,025,020	75,350,596	1.17x	8.96%
Lindsay Goldberg V, L.P.	2019	79,000,000	39,364,226	10,777,267	43,396,549	1.38x	N/M
<u>NYCTRS - 2019 Emerging Manager Program</u>	<u>2019</u>	<u>240,000,000</u>	<u>41,582,150</u>	<u>3,398,734</u>	<u>69,937,776</u>	<u>N/A</u>	<u>N/A</u>
Platinum Equity Capital Partners V, L.P.	2019	142,000,000	138,170,033	15,777,637	191,917,742	1.50x	25.40%
Trilantic Capital Partners VI (North America), L.P.	2019	46,000,000	39,500,824	4,130,184	53,220,682	1.45x	21.69%
Warburg Pincus Global Growth, L.P.	2019	114,000,000	99,997,355	1,027,094	137,441,850	1.38x	15.08%
WCAS XIII, L.P.	2019	71,000,000	59,129,811	21,977,859	60,068,382	1.39x	23.78%
BC European Capital XI, L.P.	2020	99,000,000	42,838,150	242,692	45,502,027	1.07x	N/M
Clearlake Capital Partners VI, L.P.	2020	42,000,000	42,498,706	3,518,078	63,169,973	1.57x	N/M
EQT IX (NO.2) USD SCSP	2020	83,678,500	82,197,141	8,178,132	89,617,409	1.19x	N/M
EQT IX Co-Invest Platform (No. 3) SCSP	2020	22,821,500	22,658,760	380,528	23,345,001	1.05x	N/M
FTV VI, L.P.	2020	24,000,000	23,561,460	2,756,608	37,498,193	1.71x	30.98%
Green Equity Investors VIII Coinvest N, L.P.	2020	33,000,000	23,631,170	0	28,170,060	1.19x	N/M
Green Equity Investors VIII, L.P.	2020	99,000,000	86,278,168	802,095	97,788,396	1.14x	N/M
Hg Genesis 9 L.P.	2020	45,490,698	36,949,670	7,664,042	35,380,064	1.16x	N/M
ICG Strategic Equity Co-Investment Fund III LP	2020	20,555,881	15,192,897	9,145,908	19,673,027	1.90x	N/M
KKR Asian Fund IV SCSP	2020	94,000,000	34,001,969	260,381	33,242,604	0.99x	N/M
NYC-Northbound Emerging Managers Program, L.P.	2020	192,000,000	64,596,364	1,101,099	89,695,591	1.41x	N/M
T2 Energy Transition Co-Invest	2020	20,072,973	13,878,253	188,398	18,448,812	1.34x	N/M
T2 Energy Transition Fund	2020	37,478,513	25,884,890	5,178,356	25,443,618	1.18x	N/M
Valor Equity Partners V, L.P.	2020	23,500,000	19,658,903	56,565	26,933,461	1.37x	N/M
Apax Digital II L.P.	2021	45,000,000	1,605,372	-	335,157	0.21x	N/M
Ares Corporate Opportunities Fund VI, L.P.	2021	100,000,000	87,924,485	19,407,688	78,906,207	1.12x	N/M
Ares Private Opportunities (NYC), L.P.	2021	60,000,000	40,731,784	-	42,278,810	1.04x	N/M
BC European Capital XI Metro Co-Investment 2, L.P.	2021	45,000,000	29,210,856	-	33,784,374	1.16x	N/M
Centerbridge Capital Partners IV - N Co-Invest, L.P.	2021	32,000,000	24,318,705	1,453,696	34,196,043	1.47x	N/M
Centerbridge Capital Partners IV, L.P.	2021	64,000,000	27,377,998	-	42,656,445	1.56x	N/M
Clearlake Capital Partners VII, L.P.	2021	144,000,000	73,977,761	3,505	76,644,538	1.04x	N/M
CVC Capital Partners VIII, L.P.	2021	151,421,621	87,025,715	506,310	93,442,148	1.08x	N/M
Grain Communications Opportunity Fund III, L.P.	2021	21,000,000	13,330,838	50,845	12,247,651	0.92x	N/M

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

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
HarbourVest Centre Street Co-Investment Fund, L.P.	2021	156,000,000	83,642,006	-	81,290,690	0.97x	N/M
ICG Strategic Equity Co-Investment Fund IV-A LP	2021	47,000,000	39,053,163	-	45,131,410	1.16x	N/M
ICG Strategic Equity Fund IV LP	2021	94,000,000	50,926,146	6,531,730	68,463,857	1.47x	N/M
Insight Partners XII Buyout Annex Fund, L.P.	2021	32,000,000	20,320,000	-	18,534,812	0.91x	N/M
Insight Partners XII, L.P.	2021	96,000,000	66,676,775	106,087	57,390,095	0.86x	N/M
KKR North America Fund XIII SCSp	2021	160,000,000	53,621,055	0	48,648,760	0.91x	N/M
Landmark NYC Fund I, L.P.	2021	37,000,000	33,782,342	40,573,290	21,510,328	1.84x	18.10%
One Rock Capital Partners III, L.P.	2021	39,000,000	28,998,422	3,992,437	33,223,252	1.28x	N/M
PECP V Co-Investment, L.P.	2021	35,500,000	35,026,005	5,380,151	65,423,501	2.02x	N/M
Permira VIII	2021	139,486,524	21,275,411	0	20,428,629	0.96x	N/M
Reverence Capital Partners Opportunities Fund V (FOO) (PE Fund III), L.P.	2021	13,000,000	2,669,050	29,914	2,660,011	1.01x	N/M
Reverence Capital Partners Opportunities Fund V (PE Fund III), L.P.	2021	35,000,000	7,875,910	80,540	7,139,954	0.92x	N/M
Stellax Capital Partners II, L.P.	2021	46,500,000	28,891,707	1,896,573	29,241,550	1.08x	N/M
The Resolute Fund V, L.P.	2021	65,500,000	55,059,073	973,626	81,532,383	1.50x	N/M
TPG Rise Climate Co-Invest, L.P.	2021	91,666,667	23,009,260	-	32,714,295	1.42x	N/M
TPG Rise Climate, L.P.	2021	45,833,333	12,379,134	235,530	14,393,325	1.18x	N/M
Vistria Fund IV, LP	2021	48,000,000	35,441,882	676,551	36,418,026	1.05x	N/M
Warburg Pincus Financial Sector II, L.P.	2021	84,500,000	33,215,976	547,466	42,120,630	1.28x	N/M
Apax XI, L.P.	2022	128,000,000	-	-	(1,140,446)	N/A	N/A
EQT X Co-Invest	2022	36,000,000	6,553,936	-	6,520,111	0.99x	N/M
EQT X USD SCSp	2022	108,000,000	1,806,118	1,806,118	(952,026)	0.47x	N/M
FTV VII, L.P.	2022	53,036,100	20,153,718	-	19,882,202	0.99x	N/M
GEI IX Co-invest N, L.P.	2022	40,000,000	-	-	-	N/A	N/A
Green Equity Investors IX, L.P.	2022	120,000,000	-	-	(213,979)	N/A	N/A
Growth VII-Centre, L.P.	2022	11,933,120	3,493,522	-	3,488,913	1.00x	N/M
Hg Genesis 10 L.P.	2022	68,351,692	875,055	-	812,583	0.93x	N/M
Hg N1 Co-Invest L.P.	2022	24,000,000	7,871,157	-	8,769,470	1.11x	N/M
Hg Saturn 3, L.P.	2022	48,000,000	482,630	-	1,068,724	2.21x	N/M
Integrum Capital Partners LP	2022	20,000,000	1,394,276	3,749,543	698,737	3.19x	N/M
Integrum NYC Co-Invest LP	2022	12,000,000	-	-	-	N/A	N/A
KKR European Fund VI (USD) SCSp	2022	81,000,000	-	-	(1,253,050)	N/A	N/A
Lexington Capital Partners X, L.P.	2022	96,000,000	-	-	3,173,912	N/A	N/A
LightBay Investment Partners II	2022	30,000,000	2,684,795	-	2,250,460	0.84x	N/M
N11 Co-Investment, SCSp	2022	38,290,003	-	-	-	N/A	N/A
Nordic Capital Fund XI, L.P.	2022	87,022,735	-	-	(934,255)	N/A	N/A
PECP VI Co-Investment, L.P.	2022	50,750,000	-	-	-	N/A	N/A
Platinum Equity Capital Partners VI, L.P.	2022	152,250,000	11,481,864	1,337,742	8,001,891	0.81x	N/M
Raine Partners IV LP	2022	32,000,000	-	-	(919,912)	N/A	N/A
Thoma Bravo Co-Invest Opportunities XV-1, L.P.	2022	40,000,000	20,940,771	-	20,455,207	0.98x	N/M
Thoma Bravo Fund XV, L.P.	2022	120,000,000	64,456,646	79,106	64,034,127	0.99x	N/M
Warburg Pincus Global Growth 14, L.P.	2022	91,740,000	18,793,331	289,499	17,972,224	0.97x	N/M
WCAS XIV N Co-Invest, L.P.	2022	32,000,000	-	-	-	N/A	N/A

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

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year (Cash Flow)	Commitments	Contributions	Distributions	Market Value	Investment Multiple	ITD IRR%
WCAS XIV, L.P.	2022	96,000,000	8,682,807	-	5,690,739	0.66x	N/M
WPGG 14 Co-Invest-N, L.P.	2022	55,050,000	5,566,404	-	5,455,572	0.98x	N/M
Apollo Investment Fund X, L.P.	2023	120,000,000	-	-	(1,899,440)	N/A	N/A
Apollo Investment Fund X, L.P. - Side Car	2023	40,000,000	-	-	-	N/A	N/A
Bridgepoint Europe VII Co-Invest (NYC)	2023	29,098,227	-	-	-	N/A	N/A
Bridgepoint Europe VII L.P.	2023	58,196,454	-	-	(996,420)	N/A	N/A
Valor Equity Partners VI, L.P.	2023	43,500,000	7,552,090	-	6,535,288	0.87x	N/M
Vista Co-Invest Fund 2022- 4	2023	40,000,000	8,270,379	-	8,270,746	1.00x	N/M
Vista Equity Partners Fund VIII, L.P.	2023	120,000,000	16,176,306	-	14,250,821	0.88x	N/M

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

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL PRIVATE REAL ESTATE			9,002,083,572	6,648,206,110	3,831,402,767	5,394,428,549	1.39	9.0%
TOTAL PRIVATE REAL ESTATE								
JP Morgan Strategic Property Fund	2006	Core Portfolio	86,000,000	144,669,574	185,576,090	84,374,474	1.87	7.2%
PRISA	2006	Core Portfolio	36,000,000	38,793,503	21,636,354	59,701,753	2.10	5.3%
Prologis Targeted US Logistics Fund	2006	Core Portfolio	20,000,000	24,232,774	7,841,381	44,748,033	2.17	8.6%
RREEF America REIT II	2006	Core Portfolio	85,000,000	96,527,452	33,881,133	117,616,085	1.57	6.0%
UBS Trumbull Property Fund	2006	Core Portfolio	106,000,000	165,744,451	203,513,445	54,277,117	1.56	6.0%
Heitman America Real Estate Trust, L.P.	2007	Core Portfolio	48,000,000	87,351,050	46,998,652	130,818,991	2.04	7.6%
JP Morgan Special Situation Property Fund	2007	Core Portfolio	15,000,000	27,599,732	18,584,317	23,790,139	1.54	4.8%
PRISA II	2007	Core Portfolio	63,374,139	67,585,272	33,944,192	112,846,176	2.17	6.2%
LaSalle Property Fund	2010	Core Portfolio	104,000,000	103,620,297	36,010,658	148,305,016	1.78	9.3%
Almanac Realty Securities VI	2012	Core Portfolio	100,000,000	62,409,719	69,268,201	13,511,088	1.33	9.0%
Almanac Realty Securities VI (Sidecar III)	2012	Core Portfolio	35,000,000	11,751,378	10,959,011	5,277,837	1.38	8.8%
NYC Asset Investor #2	2013	Core Portfolio	145,000,000	152,122,748	62,588,614	89,703,411	1.00	0.0%
MetLife Core Property Fund	2014	Core Portfolio	80,000,000	80,000,000	32,374,466	124,105,177	1.96	9.6%
Almanac Realty Securities VII	2015	Core Portfolio	65,000,000	65,330,014	52,528,169	38,570,772	1.39	11.6%
Almanac Realty Securities VII (Sidecar III)	2015	Core Portfolio	20,000,000	16,497,461	11,976,607	11,592,270	1.43	12.4%
USAA Eagle Real Estate Fund	2015	Core Portfolio	98,000,000	109,502,628	17,151,487	141,502,440	1.45	6.9%
Artemis Co-Investment1	2016	Core Portfolio	70,000,000	81,851,531	107,286,854	22,580,067	1.59	16.6%
Brookfield Premier Real Estate Partners	2016	Core Portfolio	171,000,000	216,916,818	45,916,818	285,348,672	1.53	10.6%
Exeter Core Industrial Club Fund II	2016	Core Portfolio	37,000,000	36,036,053	15,792,815	69,654,870	2.37	20.9%
Jamestown Premier Property Fund	2016	Core Portfolio	64,961,594	76,599,841	31,011,022	33,647,529	0.84	-4.5%
Carlyle Property Investors	2017	Core Portfolio	119,000,000	153,192,488	34,192,488	223,300,864	1.68	12.2%
Lion Industrial Trust	2017	Core Portfolio	98,000,000	142,621,185	34,400,351	290,880,700	2.28	19.6%
Almanac Realty Securities VIII	2018	Core Portfolio	51,000,000	31,007,697	7,105,448	30,579,938	1.22	12.1%
Almanac Realty Securities VIII (Sidecar II)	2018	Core Portfolio	34,000,000	21,050,991	5,324,106	22,965,838	1.34	18.4%
Heitman Core Real Estate Debt Income Trust2	2018	Core Portfolio	112,000,000	135,512,561	23,512,561	125,522,007	1.10	3.8%
Artemis Income and Growth Fund	2019	Core Portfolio	101,000,000	80,561,278	21,130,417	61,645,175	1.03	1.8%
Harrison Street Core Property Fund	2019	Core Portfolio	100,000,000	118,435,847	14,901,869	131,662,138	1.24	7.2%
Harrison Street Core Property Fund Co-Investment	2019	Core Portfolio	50,000,000	48,855,255	4,246,223	63,631,592	1.39	13.1%
Cortland Growth and Income, L.P.	2020	Core Portfolio	123,000,000	140,488,717	17,488,717	170,206,120	1.34	12.9%
Exeter Core Industrial Fund III	2020	Core Portfolio	84,800,000	83,333,333	9,146,667	89,262,293	1.18	9.7%
LaSalle GPS Co-Investment Program - Core	2021	Core Portfolio	92,000,000	56,766,594	2,397,167	58,602,548	1.07	6.6%
RREEF Core Plus Industrial Fund	2021	Core Portfolio	112,500,000	115,744,284	3,244,284	133,670,074	1.18	13.8%
TPG Real Estate Thematic Advantage Core-Plus JV IV, L.P.	2021	Core Portfolio	150,000,000	70,685,679	60,319	70,529,996	1.00	NM
EQT Exeter Industrial Core-Plus Fund IV	2022	Core Portfolio	157,000,000	15,134,800	-	13,221,985	0.87	NM
Blackstone Real Estate Partners IV L.P.	2004	Non-Core Portfolio	25,000,000	31,995,656	45,682,668	220,175	1.43	10.3%
Apollo Real Estate Investment Fund V	2006	Non-Core Portfolio	5,000,000	5,000,000	5,811,917	5,032	1.16	1.9%
American Value Partners Fund I1	2007	Non-Core Portfolio	25,000,000	17,872,806	19,225,030	209,962	1.09	1.8%
Blackstone Real Estate Partners VI L.P.	2007	Non-Core Portfolio	50,000,000	54,639,707	109,162,459	205,087	2.00	13.4%
Carlyle Realty Partners V, L.P.	2007	Non-Core Portfolio	12,750,000	19,084,009	28,366,497	32,650	1.49	8.9%

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Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Metropolitan Workforce Housing Fund1	2007	Non-Core Portfolio	10,500,000	10,509,770	12,558,389	320,998	1.23	4.0%
Blackstone Real Estate Partners Europe III - USD	2008	Non-Core Portfolio	50,000,000	43,946,251	71,296,154	2,132,953	1.67	15.7%
Silverpeak Legacy Partners III	2008	Non-Core Portfolio	30,000,000	12,312,686	4,777,890	578,799	0.44	-10.9%
Stockbridge Real Estate III	2008	Non-Core Portfolio	22,500,000	22,498,458	14,024,794	13,542,940	1.23	2.3%
Thor Urban Property Fund II	2008	Non-Core Portfolio	12,500,000	17,123,783	17,824,777	177,318	1.05	1.7%
Westbrook Real Estate Fund VIII, L.P.	2009	Non-Core Portfolio	50,000,000	59,855,411	68,952,803	6,663,790	1.26	9.4%
Carlyle Realty Partners VI, L.P.	2011	Non-Core Portfolio	70,000,000	76,545,625	108,897,052	6,055,036	1.50	19.8%
H2 Special Opportunities Fund II2	2011	Non-Core Portfolio	40,000,000	40,045,335	58,385,494	670,700	1.47	13.2%
Brookfield Strategic Real Estate Partners	2012	Non-Core Portfolio	125,000,000	135,675,745	199,553,705	18,396,525	1.61	13.5%
Taconic New York City Investment Fund	2012	Non-Core Portfolio	70,000,000	29,272,728	47,996,467	5,204,533	1.82	15.5%
Lone Star Real Estate Fund III, L.P.2	2013	Non-Core Portfolio	190,000,000	181,714,995	244,593,474	807,971	1.35	14.1%
NYC Asset Investor #1	2013	Non-Core Portfolio	60,000,000	77,553,105	44,715,774	37,265,719	1.06	1.1%
NYC Asset Investor #3	2013	Non-Core Portfolio	96,000,000	70,010,913	19,323,205	63,543,980	1.18	3.1%
Carlyle Realty Partners VII, L.P.	2014	Non-Core Portfolio	120,000,000	111,491,232	134,052,785	29,380,694	1.47	12.7%
DivcoWest Fund IV	2014	Non-Core Portfolio	25,000,000	24,750,416	40,948,231	1,414,823	1.71	25.1%
DRA Growth and Income Fund VIII	2014	Non-Core Portfolio	75,000,000	91,861,224	95,290,642	19,462,310	1.25	6.9%
H2 Special Opportunities III2	2014	Non-Core Portfolio	65,000,000	67,503,668	67,443,994	17,160,135	1.25	7.3%
European Property Investors Special Opportunities 4 LP	2015	Non-Core Portfolio	65,175,463	59,315,022	24,489,629	57,179,062	1.38	7.9%
DivcoWest Fund V	2016	Non-Core Portfolio	78,000,000	62,207,874	22,767,479	54,209,802	1.24	5.8%
H2 Special Opportunities IV2	2016	Non-Core Portfolio	119,000,000	119,915,211	27,934,952	118,063,975	1.22	6.2%
PW Real Estate Fund III	2016	Non-Core Portfolio	65,408,912	50,758,862	124,724,209	24,075,445	2.93	30.7%
Westbrook Real Estate Fund X	2016	Non-Core Portfolio	47,000,000	45,685,040	40,065,416	16,078,128	1.23	9.3%
Basis Investment Group Real Estate Fund I1,2	2017	Non-Core Portfolio	19,400,000	20,381,808	13,586,668	13,260,877	1.32	11.5%
DRA Growth and Income Fund IX	2017	Non-Core Portfolio	56,000,000	61,836,293	58,462,231	41,765,841	1.62	17.9%
Exeter Industrial Value Fund IV, L.P.	2017	Non-Core Portfolio	34,000,000	31,961,900	65,421,713	4,970,802	2.20	30.7%
NYCRS-KKR CMBS Retention Partners2	2017	Non-Core Portfolio	159,000,000	144,278,014	62,215,176	128,869,869	1.32	7.2%
Pramerica Real Estate Capital VI2	2017	Non-Core Portfolio	68,554,042	71,107,089	57,520,690	24,675,339	1.16	7.5%
KKR Real Estate Partners Americas II	2018	Non-Core Portfolio	135,380,000	138,524,000	173,004,861	42,443,379	1.56	24.8%
Aermont Capital Real Estate Fund IV	2019	Non-Core Portfolio	82,153,196	58,481,842	-	48,358,895	0.83	-9.7%
Blackstone Real Estate Partners Europe VI L.P.	2019	Non-Core Portfolio	111,000,000	70,098,360	32,050,086	57,347,073	1.28	17.7%
Blackstone Real Estate Partners IX L.P.	2019	Non-Core Portfolio	184,000,000	188,411,638	60,913,655	214,386,424	1.46	27.1%
Brookfield Strategic Real Estate Partners III, L.P.	2019	Non-Core Portfolio	193,000,000	168,983,183	76,322,947	139,642,108	1.28	13.8%
Grosvenor Real Estate Emerging Manager SMA1	2019	Non-Core Portfolio	264,000,000	175,682,707	24,825,242	164,657,489	1.08	6.8%
Westbrook Real Estate Fund XI	2019	Non-Core Portfolio	92,000,000	48,482,596	24,144,061	33,573,065	1.19	21.5%
DivcoWest Fund VI	2020	Non-Core Portfolio	93,000,000	47,103,070	1,518,454	44,434,599	0.98	-2.1%
DRA Growth and Income Fund X	2020	Non-Core Portfolio	67,000,000	60,887,591	18,370,152	60,502,373	1.30	26.3%
ElmTree U.S. Net Lease Fund IV, L.P.	2020	Non-Core Portfolio	78,000,000	52,451,836	35,505,910	36,931,621	1.38	28.9%
Exeter Industrial Value Fund V, L.P.	2020	Non-Core Portfolio	56,000,000	55,139,576	-	82,619,443	1.50	31.7%
GreenOak Asia III	2020	Non-Core Portfolio	99,000,000	102,972,645	56,790,591	53,062,298	1.07	8.9%
KKR RE Europe II	2020	Non-Core Portfolio	89,000,000	64,716,928	20,093,236	45,436,241	1.01	1.2%
KKR Real Estate Securities Dislocation Opportunity Co-Investment Strat	2020	Non-Core Portfolio	113,000,000	67,694,181	76,157,980	9,728,851	1.27	35.4%
Pramerica Real Estate Capital VII2	2020	Non-Core Portfolio	99,000,000	26,693,476	2,271,044	28,510,564	1.15	14.5%

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Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Style Sector	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Aermont Capital Real Estate Fund V	2021	Non-Core Portfolio	124,976,227	-	-	(1,580,129)		NM
Almanac Realty Securities IX Sidecar II	2021	Non-Core Portfolio	50,000,000	3,451,864	-	3,701,085	1.07	NM
Almanac Realty Securities IX, L.P.	2021	Non-Core Portfolio	100,000,000	13,071,697	5,080	12,040,134	0.92	NM
Basis Investment Group Real Estate Fund II2	2021	Non-Core Portfolio	57,000,000	26,736,392	7,983,518	19,943,619	1.04	5.6%
Brookfield Strategic Real Estate Partners IV	2021	Non-Core Portfolio	150,000,000	54,651,812	2,668,769	57,543,149	1.10	NM
Carlyle Realty Partners IX, L.P.	2021	Non-Core Portfolio	150,000,000	8,391,574	-	4,900,061	0.58	NM
Cerberus Institutional Real Estate Partners V SMA	2021	Non-Core Portfolio	106,000,000	69,582,634	4	84,000,421	1.21	19.2%
KKR Real Estate Partners Americas III SCSp	2021	Non-Core Portfolio	150,000,000	90,335,313	6,696,500	75,597,378	0.91	-8.9%
LaSalle GPS Co-investment Program - Non-Core	2021	Non-Core Portfolio	138,000,000	51,751,379	1,697,424	52,049,323	1.04	3.6%
LBA Logistics Value Fund IX	2021	Non-Core Portfolio	95,000,000	25,576,923	-	23,081,886	0.90	NM
Mesirow Financial Real Estate Value Fund IV	2021	Non-Core Portfolio	40,500,000	17,213,027	594,000	18,826,773	1.13	13.0%
NYC Hudson Multifamily Green Fund	2021	Non-Core Portfolio	130,650,000	57,883,149	15,495,090	42,533,513	1.00	0.3%
Rialto Real Estate Fund IV - Debt, LP2	2021	Non-Core Portfolio	120,000,000	96,907,486	10,932,016	91,110,676	1.05	5.1%
Artemis Real Estate Partners Healthcare Fund II	2022	Non-Core Portfolio	103,000,000	19,787,312	5,298,878	12,741,686	0.91	NM
Blackstone Real Estate Partners X, LP	2022	Non-Core Portfolio	195,000,000	730,265	-	232,892	0.32	NM
Cerberus Institutional Real Estate Partners VI SMA	2022	Non-Core Portfolio	155,000,000	28,633,005	3	25,146,342	0.88	NM
Crow Holdings Realty Partners X	2022	Non-Core Portfolio	150,000,000	-	-	(510,247)		NM
EQT Exeter Industrial Value Fund VI, LP	2022	Non-Core Portfolio	150,000,000	-	-	-		NM
TPG Real Estate Partners IV, L.P.	2022	Non-Core Portfolio	157,000,000	9,935,010	-	7,180,569	0.72	NM
Waterton Residential Property Venture XV	2023	Non-Core Portfolio	150,000,000	-	-	-		NM

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Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
TOTAL INFRASTRUCTURE		3,954,569,228	2,293,059,500	921,147,595	2,178,866,397	1.4x	12.1%
TOTAL INFRASTRUCTURE INVESTMENTS							
Brookfield Infrastructure Fund II, L.P.	2013	140,000,000	122,394,996	129,849,893	117,414,777	2.0x	13.1%
Global Energy & Power Infrastructure Fund II	2014	90,000,000	98,167,056	97,361,356	30,118,308	1.3x	13.8%
IFM Global Infrastructure Fund	2014	140,000,000	196,505,133	95,325,571	262,277,770	1.8x	11.0%
KKR Global Infrastructure Investors II L.P.	2014	100,000,000	107,003,939	157,506,597	47,522,555	1.9x	19.0%
Actis Energy 4	2016	72,600,000	72,701,055	90,261,902	13,797,000	1.4x	14.0%
ASF VII Infrastructure L.P.	2016	65,000,000	49,025,879	17,154,957	54,421,283	1.5x	15.4%
Brookfield Infrastructure Fund III, L.P.	2016	119,000,000	86,163,220	32,449,301	89,801,733	1.4x	11.1%
Global Infrastructure Partners III-A/B, L.P.	2016	139,000,000	140,978,462	66,134,099	144,372,826	1.5x	10.5%
Axiom Infrastructure North America (2017)	2017	66,030,248	69,056,681	20,543,662	73,806,825	1.4x	8.6%
EQT Infrastructure III (No.2) SCSp	2017	63,569,661	72,695,535	99,600,805	35,224,637	1.9x	20.9%
NYCRS EIG Energy Partners, L.P.	2017	64,710,000	39,408,214	22,595,003	23,091,632	1.2x	7.6%
Cardinal NR Sidecar Holdings L.P.	2018	9,000,000	9,060,788	2,992,090	14,174,135	1.9x	17.5%
EQT Infrastructure IV (No.2) USD SCSp	2018	87,000,000	79,132,105	13,897,337	88,748,151	1.3x	11.5%
Global Infrastructure Partners IV-A/B, L.P.	2018	113,200,000	86,707,086	512,570	92,304,932	1.1x	5.9%
KKR Global Infrastructure Investors III L.P.	2018	75,000,000	65,937,207	17,041,351	59,503,649	1.2x	7.3%
Ardian Infrastructure Fund V B	2019	70,164,821	48,751,017	1,876,256	57,765,587	1.2x	15.4%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	2019	10,000,000	10,051,289	1,435,734	14,416,963	1.6x	15.5%
Brookfield Infrastructure Fund IV, L.P.	2019	97,000,000	91,138,650	19,556,097	97,152,659	1.3x	13.5%
Global Energy & Power Infrastructure Fund III, L.P.	2019	75,000,000	64,171,127	11,799,088	65,922,383	1.2x	13.1%
Actis Energy 5	2020	148,000,000	20,048,447	-	9,045,000	0.5x	-73.5%
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	2020	69,500,000	16,167,187	-	17,046,257	1.1x	5.6%
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	2020	8,100,000	8,181,000	491,627	10,030,035	1.2x	8.9%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	2020	20,500,000	18,655,618	-	31,670,979	1.7x	28.2%
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	2020	16,658,113	16,712,983	-	21,760,694	1.3x	10.2%
EQT Infrastructure V (No.2) USD SCSp	2020	177,000,000	125,955,802	12,941,257	123,505,784	1.1x	9.0%
ASF VIII Infrastructure B L.P.	2021	166,000,000	19,227,587	3,419,956	16,995,950	1.1x	6.8%
Axiom Infrastructure North America (2021)	2021	113,385,360	115,685,478	3,717,654	116,598,107	1.0x	8.6%
Basalt Infrastructure Partners III	2021	140,000,000	94,549,341	-	101,738,872	1.1x	6.4%
KKR Global Infrastructure Investors IV (USD) SCSp	2021	249,000,000	104,546,055	1,319,603	93,566,689	0.9x	-15.1%
Stonepeak Infrastructure Fund IV, L.P.	2021	207,000,000	91,277,054	585,219	99,204,969	1.1x	9.1%

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

Alternative Assets Manager Performance Detail



Through March 31, 2023

	Vintage Year	Original Commitment	Total Contributions	Total Distributions	Market Value	Total Value Multiple	Net IRR%
Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	2021	9,059,000	8,173,623	-	9,478,381	1.2x	24.6%
Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	2021	28,500,000	24,112,602	-	24,335,803	1.0x	0.6%
Ardian Infra Fund V Co-Invest Eden	2022	28,440,456	28,440,456	-	31,742,279	NM	NM
Ardian Infra Fund V Co-Invest Lemon	2022	22,138,814	20,119,334	-	20,589,043	NM	NM
BIP III Ride Co-Investment L.P. (Project Ride)	2022	20,379,329	20,379,329	-	22,662,616	NM	NM
Blackrock Global Infrastructure Fund IV	2022	159,000,000	10,433,673	-	8,937,146	NM	NM
Brookfield Infrastructure Fund V, LP	2022	198,360,000	-	-	(1,378,573)	NM	NM
InfraVia European Fund V SCSp	2022	155,093,426	41,344,493	778,609	39,498,560	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	2022	16,180,000	-	-	-	-	0.0%
EQT Infrastructure VI (No.2) USD SCSp	2023	203,000,000	-	-	-	NM	NM
Global Infrastructure Partners V-A/B, L.P.	2023	203,000,000	-	-	-	NM	NM

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

Alternative Assets Manager Performance Detail



Through June 30, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
TOTAL OPPORTUNISTIC FIXED INCOME		4,248,609,940	4,494,941,750	2,373,965,005	3,590,786,285	0.66%	7.10%
Avenue Special Situations Fund V, L.P.	2007	25,261,658	25,650,392	33,533,622	-		10.89%
Avenue Europe Special Sit. Fund, L.P.	2008	19,999,797	18,559,393	35,192,684	-		12.68%
PIMCO DiSCO Fund, L.P.	2008	150,000,000	150,427,750	204,457,599	-		11.23%
Torchlight Debt Opportunity Fund III, LLC	2009	50,000,000	53,306,159	79,307,054	-		13.36%
Avenue Special Situations Fund VI (A), L.P.	2011	70,000,000	71,766,544	72,515,200	7,074,286	0.00%	2.17%
GoldenTree Managed Account	2011	140,000,000	140,878,192	-	253,966,522	0.50%	5.79%
Marathon Centre Street Partnership, L.P. - Asset Class	2011	218,750,000	419,781,250	238,218,750	321,172,780	0.48%	5.28%
AG Centre Street Partnership, L.P. - CC Asset Class	2012	180,000,000	217,878,984	47,626,130	245,524,267	2.41%	4.54%
Apollo Centre Street Partnership, L.P.	2012	340,416,667	735,318,661	466,460,450	432,814,437	1.06%	6.65%
FCO MA Centre Street L.P.	2012	140,000,000	280,801,310	297,472,849	91,739,837	0.00%	8.85%
OHA Centre Street Partnership, L.P.	2012	262,500,000	332,455,346	73,107,049	456,946,705	1.25%	8.10%
Contrarian Centre Street Partnership, L.P. - Asset Class	2013	90,000,000	90,000,000	-	105,112,940	0.04%	1.89%
Lone Star Fund VIII (U.S.), L.P.	2013	130,000,000	127,970,674	133,924,800	17,818,801	0.00%	7.89%
Oaktree Opportunities Fund IX, L.P.	2013	100,000,000	100,000,000	90,067,707	82,251,034	0.00%	7.90%
Ares Centre Street Partnership, L.P.	2014	140,000,000	140,000,000	-	264,410,670	0.00%	8.85%
Brightwood Capital Fund III, L.P.	2015	35,000,000	28,403,806	28,595,535	10,529,433	0.00%	6.63%
Torchlight Debt Opportunity Fund V, LP	2015	67,000,000	53,600,000	64,215,398	6,173,101	1.52%	10.33%
Brightwood Capital Fund IV, LP	2016	87,500,000	87,500,000	35,521,929	78,838,342	0.00%	7.42%
ICG Centre Street Partnership, L.P.	2017	120,000,000	197,378,138	137,067,483	97,306,126	0.00%	8.49%
KKR OFI SMA	2017	294,000,000	227,150,593	66,181,026	226,719,611	0.00%	7.53%
Maranon Centre Street Partnership, L.P. -	2018	112,000,000	106,398,791	2,811,639	143,068,435	2.05%	8.53%
FCO MA Centre Street II (TR) LP	2019	140,000,000	208,323,512	131,379,856	105,448,521	0.00%	11.49%
Torchlight Debt Fund VI, LP -	2019	95,000,000	116,926,883	71,761,742	69,773,517	0.83%	8.37%
FCO MA Centre Street II EXP (TR) LP	2020	70,000,000	34,762,745	7,386,904	30,632,578	0.00%	7.26%
GCM Grosvenor NYC Emerging OFI Managers, L.P. - Class A	2020	133,000,000	118,332,299	38,279,111	122,394,555	0.00%	23.24%
KKR-NYC Credit C L.P.	2020	55,681,818	39,177,596	1,971,827	36,585,136	0.00%	-0.96%
Marathon Centre Street Partnership, L.P. - Asset Class - Subsequent Commitment	2020	87,500,000	67,812,500	-	76,652,816	0.19%	5.92%
Torchlight Debt Fund VII, LP	2020	90,000,000	49,555,026	4,555,026	49,503,311	0.76%	5.93%
400 Capital Centre Street LP	2021	76,000,000	74,913,575	5,798,274	73,997,812	0.00%	4.93%
Barings Centre Street CLO Equity Partnership L.P.	2022	95,000,000	31,134,998	4,865,645	29,212,251	0.00%	19.76%
Brightwood Capital Fund V, LP	2022	59,000,000	23,708,170	461,539	26,775,441	0.00%	11.05%

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

Alternative Assets Manager Performance Detail



Through June 30, 2023

	Vintage Year	Commitment - Closing (Base)	Contributions Cumulative (Local)	Distributions Cumulative	Final Market Value	3 Month Base%	Inception IRR%
Centre Street CarVal Partnership LP	2022	115,000,000	28,750,000	-	30,507,248	1.84%	8.37%
GCM Grosvenor NYC EM OFI 2022-1	2022	95,000,000	9,820,042	77,752	9,680,864	0.00%	-1.37%
KLCP Domestic Fund III LP	2022	110,000,000	45,293,986	1,140,630	47,544,002	0.00%	10.03%
Crestline Opportunity Fund V Onshore T/STE, L.P.	2023	70,000,000	20,454,435	9,795	20,444,640		0.00%
Napier Park Centre Street CLO Partnership Fund LP	2023	95,000,000	9,500,000	-	9,500,000		0.00%
Torchlight Debt Fund VIII, LP	2023	90,000,000	11,250,000	-	10,666,266	-0.71%	-26.05%

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



**Teachers' Retirement System
of New York City**

Appendix D

Footnotes



Through June 30, 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 8 - 13 - Portfolio Asset Allocation

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

Pages 14 - 16 - Performance Attribution: Total Plan

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



Through June 30, 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 * 25.65%*

*International Developed (EAFE) Markets: MSCI World ex USA IMI Net * 9.30%*

*International Active- Global: MSCI World Net Dividends Index * 1.10%*

*Emerging Markets: MSCI Custom TRS Emerging Markets (Net) * 9.18%*

*International Emerging Managers FoF: NYC Blended Custom Benchmark for FoF * 0.97%*

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

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

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

*Private Real Estate – Non-Core: NFI - ODCE Net + 200bps * 2.51%*

*Infrastructure : CPI + 4% * 2.39%*

*US Treasury Short Term: FTSE US Government Bond 1-3 Years Index * 2.67%*

*US Treasury Intermediate: USBIG TSY AGN 1-10 * 9.08%*

*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 Managers: Bloomberg U.S. Aggregate * 0.00%*

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

*Mortgage: Bloomberg US Mortgage Backed Securities * 5.15%*



Through June 30, 2023

*ETI: ETI Custom Benchmark * 0.67%*

*Investment Grade Corporate: NYC Custom IGC Benchmark * 5.82%*

*High Yield: Bloomberg U.S. HY - 2% Issuer Cap * 5.08%*

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

*TIPS: Bloomberg Global Infl-Linked: U.S. TIPS * 3.40%*

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

*Opportunistic Fixed: OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum * 3.84%*

Page 17 – Allocation and Selection Effects - Asset Class Breakdown

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



Through June 30, 2023

-
- [1] NYC Developed Value Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Value Net to MSCI World ex USA Net Index.
 - [2] NYC Developed Growth Benchmark: Beginning 8.2017 benchmark changed from MSCI EAFE Growth to MSCI World ex USA Net Index.
 - [3] NYC Custom World ex US Index: Beginning 2.2017 benchmark changed from MSCI EAFE to MSCI World ex USA Net Index.
 - [4] Name changed from SSGA MSCI EAFE Small Cap Index 12.2017
 - [5] World ex USA SC PASSIVE CUSTOM BM: Beginning 12.2017 benchmark changed from MSCI EAFE Small Cap Net to MSCI World ex US Small Cap (Net).
 - [6] TRS Custom EM Index: Beginning 7.2018 benchmark changed from FTSE Custom NYC Teachers Emerging Index to MSCI Custom TRS Emerging Markets (Net). Beginning 11.2019 benchmark changed to MSCI Emerging Markets.
 - [7] TRS Custom EM Passive Index: Beginning 11.2019 benchmark changed from MSCI Custom TRS Emerging Markets (Net) to MSCI Emerging Markets.
 - [8] NYC Blended Custom Benchmark for FoF (TRS): Beginning 2.2020 benchmark composition changed from 85% MSCI World ex USA IMI NR / 15% MSCI Custom TRS Emerging Markets (Net) to MSCI ACWI ex USA IMI Net.
 - [9] NYC Custom Mortgage Benchmark: Beginning 9.2020 benchmark changed from FTSE Mortgage Index to Bloomberg US Mortgage Backed Securities.
 - [10] NYC Custom IGC Benchmark: Beginning 3.2021 benchmark changed from NYC - Investment Grade Credit to Bloomberg U.S. Corporate Inv Grade..
 - [11] Assets were in transition from 9/29/17 to 2/11/19

ETI Quarterly Report (Public):

Teachers' Retirement System - Economically Targeted Investments Quarterly Report Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	Bank of America		Citi Community Development		Carver Federal Savings Bank		The Community Preservation Corp		Low Income Investment Fund		NCB Capital Impact*		Neighborhood Housing Service		Wells Fargo		Local Initiatives Support Corp		Enterprise Cmty Loan Fund		NYC HDC	
Contractual Commitment	\$30.00		\$40.00		\$9.00		\$250.00		\$25.00		\$0.00		\$3.00		\$20.00		\$10.00		\$10.00		\$10.00	
Current Market Value	\$3.85		\$22.03		\$2.07		\$131.19		\$11.50		\$1.23		\$0.17		\$7.75		\$4.24		\$1.79		\$0.00	
Commitments Q2 (included in total)	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$1.48	75	\$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	0.19	6	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	0.83	28	4.72	207	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
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
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
Total	\$0.00	0	\$0.00	0	\$0.00	0	\$1.02	34	\$6.20	282	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0
Delivered Q2 (included in total)																						
Bronx	\$0.00	0	\$0.00	0	\$0.00	0	\$1.96	52	\$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	1.42	50	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	0.86	18	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
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
Outside of NYC	0.00	0	0.00	0	0.00	0	2.06	73	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	\$6.30	193	\$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	\$27.35	954	\$1.48	75	\$0.00	0	\$0.00	0	\$0.00	0	\$2.67	90	\$1.09	101	\$0.00	0
Brooklyn	0.00	0	1.05	0	0.00	0	7.29	215	1.11	95	0.00	0	0.00	0	0.00	0	0.86	74	0.00	0	0.00	0
Manhattan	0.00	0	0.00	0	0.00	0	11.40	561	5.80	289	0.00	0	0.00	0	0.00	0	2.29	113	0.46	26	0.00	0
Queens	0.00	0	0.00	0	0.00	0	3.18	120	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
Outside of NYC	0.00	0	0.00	0	0.00	0	10.87	253	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	\$1.05	0	\$0.00	0	\$60.09	2,103	\$8.39	459	\$0.00	0	\$0.00	0	\$0.00	0	\$5.83	277	\$1.55	127	\$0.00	0
Historical Investments																						
Bronx	\$1.75	60	\$14.08	802	\$0.00	0	\$82.65	5,375	\$3.11	178	\$0.00	0	\$0.00	0	\$1.13	90	\$1.09	48	\$0.00	0	\$0.00	0
Brooklyn	1.86	54	9.21	481	0.00	0	101.34	4,632	5.46	401	0.00	0	0.33	7	2.49	130	1.59	82	2.11	360	0.00	0
Manhattan	2.24	100	3.24	283	3.12	236	56.73	3,719	8.61	498	1.59	123	0.25	15	4.83	203	2.08	65	0.00	0	0.00	0
Queens	5.62	293	0.66	54	0.00	0	24.89	1,007	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	0.23	8	0.00	0	0.00	0	0.00	0	0.36	67	0.00	0	0.00	0	0.00	0
Outside of NYC	0.60	39	2.11	41	0.00	0	22.24	797	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
Total	\$12.06	546	\$29.29	1,661	\$3.12	236	\$288.08	15,538	\$17.17	1,077	\$1.59	123	\$0.58	22	\$8.80	490	\$4.75	195	\$2.11	360	\$0.00	0

Note: Dollar amount listed in millions

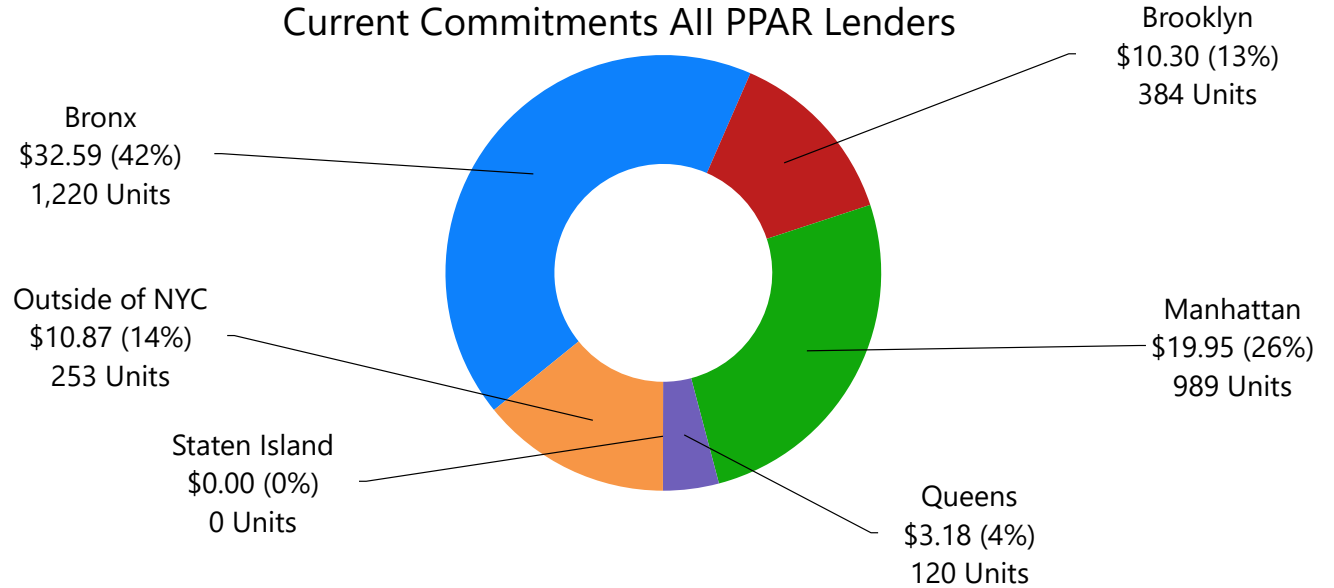
* NCB Capital Impact's Buy-Sell Agreement terminated effective 7/29/2014.

Teachers' Retirement System - Economically Targeted Investments Quarterly Report

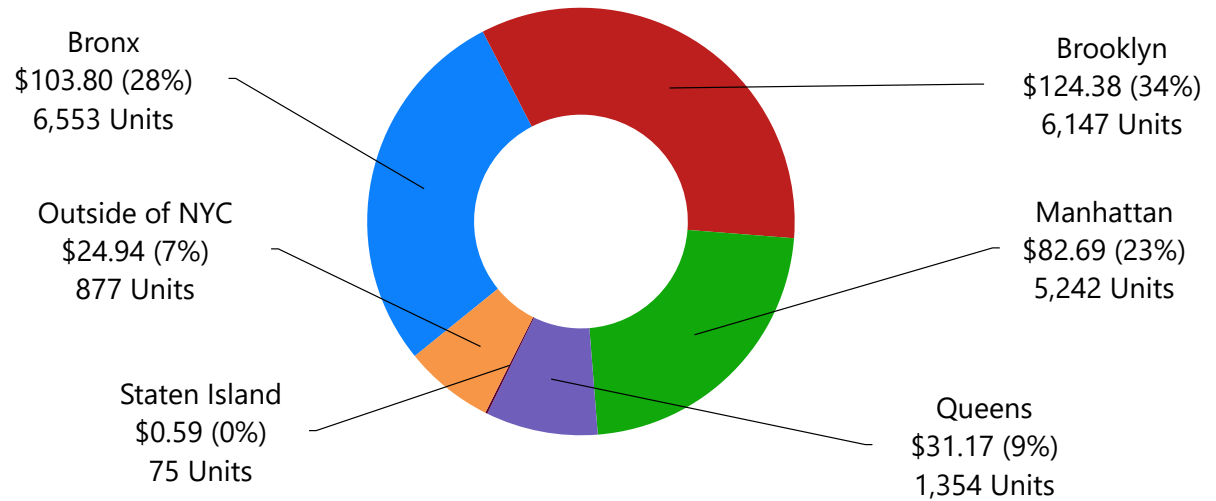
Public/Private Apartment Rehabilitation Program (PPAR)

Lenders	All Lender Totals	
Contractual Commitment ¹	\$407.00	
Current Market Value ¹	\$185.81	
	Dollars	Units
Commitments Q2 (included in total)		
Bronx	\$1.48	75
Brooklyn	0.19	6
Manhattan	5.56	235
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	0.00	0
Total	\$7.22	316
Delivered Q2 (included in total)		
Bronx	\$1.96	52
Brooklyn	1.42	50
Manhattan	0.86	18
Queens	0.00	0
Staten Island	0.00	0
Outside of NYC	2.06	73
Total	\$6.30	193
Total Commitments		
Bronx	\$32.59	1,220
Brooklyn	10.30	384
Manhattan	19.95	989
Queens	3.18	120
Staten Island	0.00	0
Outside of NYC	10.87	253
Total	\$76.90	2,966
Historical Investments		
Bronx	\$103.80	6,553
Brooklyn	124.38	6,147
Manhattan	82.69	5,242
Queens	31.17	1,354
Staten Island	0.59	75
Outside of NYC	24.94	877
Total	\$367.56	20,248

Current Commitments All PPAR Lenders



Historical Investments Since Inception All PPAR Lenders



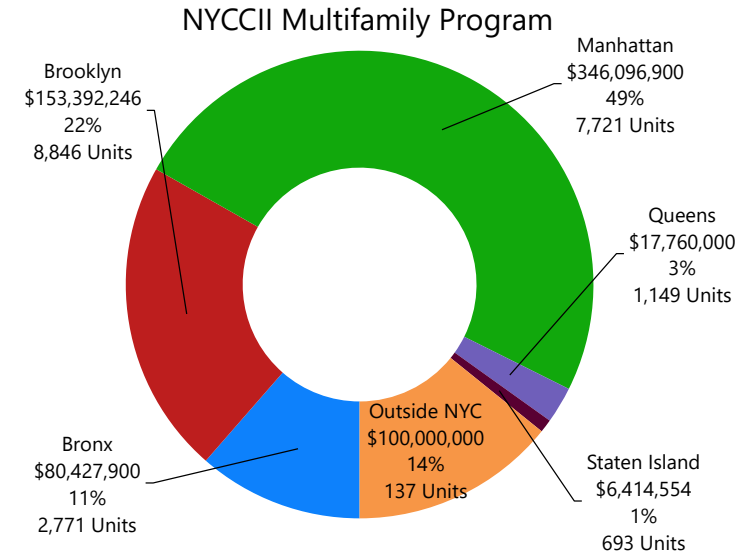
Note: Dollar amount listed in millions

Teachers' Retirement System - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)
Market Value \$284.52 million¹

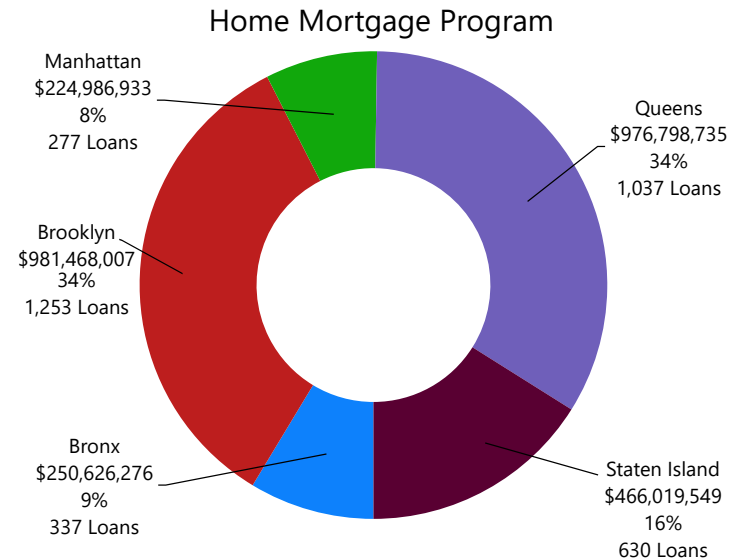
NYC Community Investment Initiative (NYCCII)

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



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



TEACHERS Loans	Phase I:	133	Phase II:	2,022	Total:	2,155
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¹Interest is reinvested

²Low/Moderate Income Units

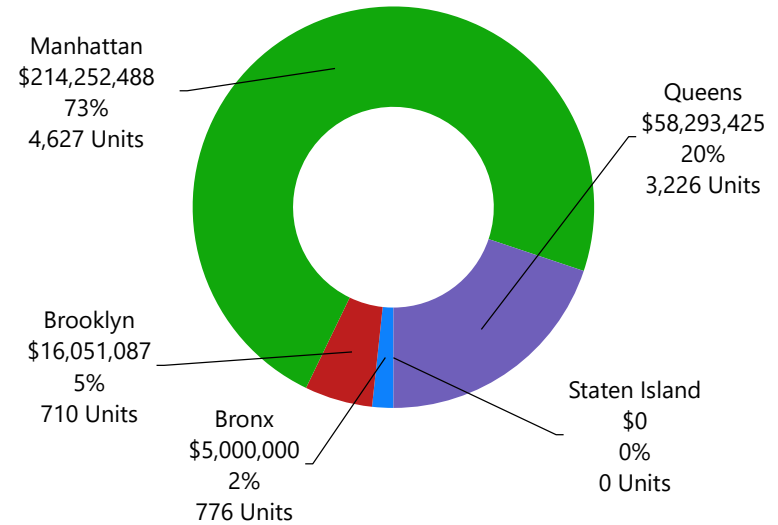
Teachers' Retirement System - Economically Targeted Investments Quarterly Report

AFL-CIO Housing Investment Trust (HIT)

NYC Workforce Housing Investments: 2009 - 2015

Borough	Investments	LMI Units
	Since Inception	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

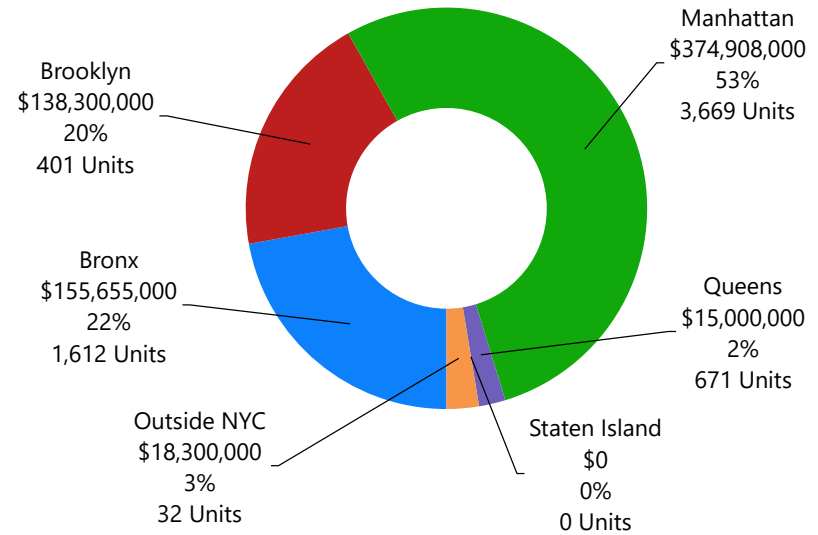
NYC Workforce Housing Investments



HIT Housing Investment Strategy: 2015 - Q2 2023

Borough	Q2 Investments	Investments	Q2	LMI Units
		Since Inception	Units	Since Inception
Bronx	\$0	\$155,655,000	0	1,612
Brooklyn	0	138,300,000	0	401
Manhattan	93,650,000	374,908,000	234	3,669
Queens	0	15,000,000	0	671
Staten Island	0	0	0	0
Outside NYC	0	18,300,000	0	32
Total	\$93,650,000	\$702,163,000	234	6,385

HIT Housing Investment Strategy



Teachers' Retirement System - Economically Targeted Investments Quarterly Report

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

\$157.5 million Allocated (35% of total account)
Market Value \$141.25 million

Multifamily Investments Detail	\$ Invested ¹		Units ²	
	Q2	Total	Q2	Total
Bronx	\$358,750	\$49,890,360	180	20,149
Brooklyn	0	28,208,850	0	15,373
Manhattan	0	43,919,547	0	7,281
Queens	0	7,547,884	0	920
Staten Island	0	1,950,260	0	75
Total TEACHERS Multifamily Investments	\$358,750	\$131,516,900	180	43,798
Multifamily Total All Systems	\$1,025,000	\$375,762,572	180	43,798

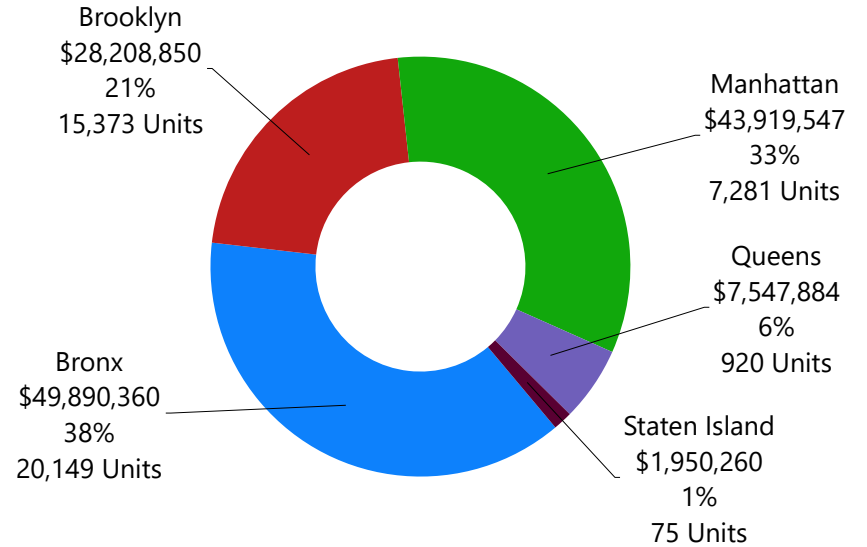
Single Family Investments Detail	\$ Invested		Units	
	Q2	Total	Q2	Total
Bronx	\$410,962	\$25,960,535	2	322
Brooklyn	465,629	64,933,568	3	731
Manhattan	0	5,705,134	0	65
Queens	1,232,793	100,179,680	7	1,052
Staten Island	1,477,108	67,199,763	10	709
Total TEACHERS Single Family Investments	\$3,586,492	\$263,978,681	22	2,879
Single Family Total All Systems	\$10,247,120	\$754,224,803	22	2,879

Other Investments Detail	\$ Invested		Loans	
	Q2	Total	Q2	Total
Bronx	\$0	\$236,250	0	1
Brooklyn	0	1,886,641	0	8
Manhattan	0	851,517	0	5
Queens	0	190,201	0	3
Staten Island	0	0	0	0
Total TEACHERS Other Investments	\$0	\$3,164,609	0	17
Other Investments Total All Systems	\$0	\$9,041,740	0	17

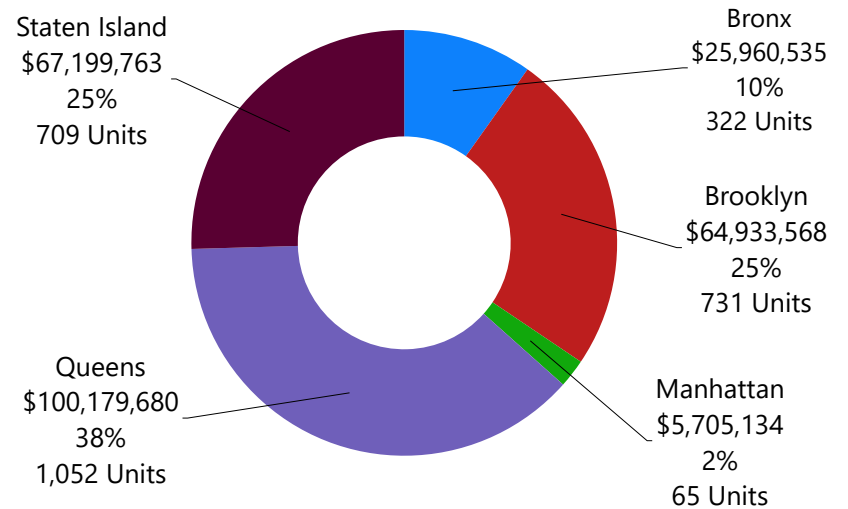
Grand Total TEACHERS	\$3,945,242	\$398,660,190
Grand Total All Systems	\$11,272,120	\$1,139,029,115

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



Teachers' Retirement System - Economically Targeted Investments Quarterly Report

ETI Real Estate Equity Investments

Total Market Value \$190.65 million

Hudson Market Value \$63.68 million

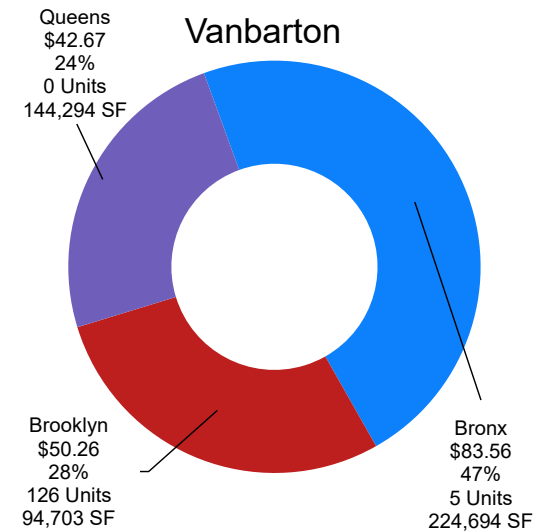
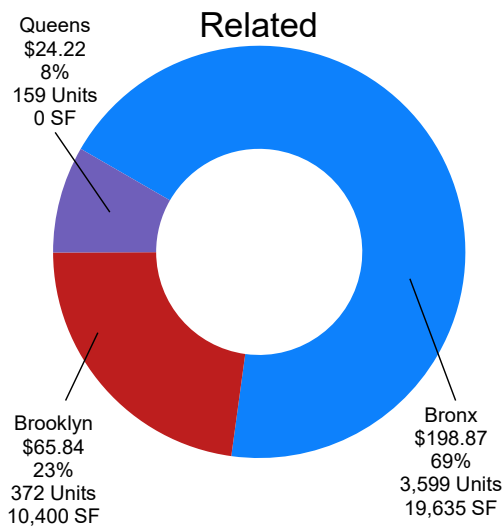
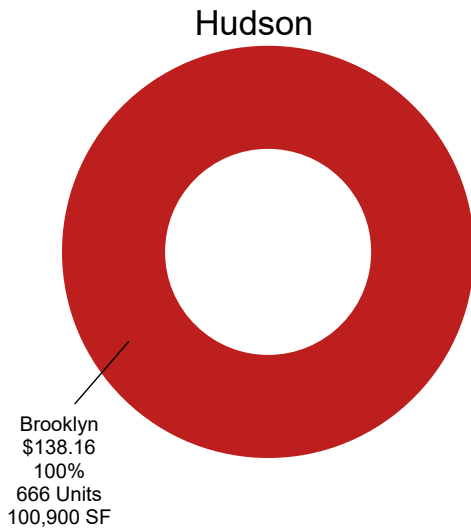
Borough	Gross Capital Invested	Total Units	Workforce Units	Comm. SF
Bronx	\$0.00	0	0	0
Brooklyn	138.16	666	666	100,900
Manhattan	0.00	0	0	0
Queens	0.00	0	0	0
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$138.16	666	666	100,900

Related Market Value \$89.70 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 \$37.27 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	42.67	0	0	144,294
Staten Island	0.00	0	0	0
Outside NYC	0.00	0	0	0
Totals	\$176.49	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):



Teachers' Retirement System of the City of New York - Public

First Quarter 2023 Report



We Enrich Lives & Safeguard Futures

- Do the right thing
- Integrity, candor and collaboration
- The pursuit of excellence
- A spirit of competition that inspires innovation
- Promoting equity and inclusion from within

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Executive Summary



Portfolio Update

Executive Summary

- Total Active Committed Capital of \$13,824.5M for the NYC Teachers Portfolio; 236 Active Partnerships across 96 Active GPs
- Since Inception net IRR of 11.77%

Activity Update

- The Portfolio made 7 new commitments totaling \$450.8M year-to-date
- The Portfolio liquidated four investments during the first quarter of 2023
- Contributions of \$243.2M outpaced distributions of \$157.3M during the quarter
- Contributions of \$1,218.4M outpaced distributions of \$852.7M during the last 12 months

Performance Update

- 11.77% Since Inception Net IRR remained relatively steady from last quarter
 - Vista Equity Partners Fund VI, L.P. appreciated \$22.8M during the quarter
 - Valor Equity Partners IV, L.P. depreciated \$5.8M during the quarter

Exposure Update

- 2021 Vintage Year investments accounted for 16.3% of Total Exposure as of March 31, 2023
 - 2021 Vintage Year investments accounted for 13.7% of Portfolio NAV

Portfolio Snapshot

- Portfolio performance was positive for the quarter
- Net Value Gain of \$231.3M during the quarter
- Positive one-quarter point-to-point IRR of 2.99%

Client Overview

1999

Program Inception

Russell 3000 Index PME +300 bps

Public Benchmark

8.6%

Current Allocation

7.0% +/- 3.0%

Target Allocation

NYC Teachers Portfolio

(USD in Millions)	12/31/2022	3/31/2023	Change
Active Partnerships	233	236	3
Active GP Relationships	96	96	-
Active Committed Capital	\$13,465.6	\$13,824.5	\$358.9
Liquidated Commitments	\$787.0	\$887.0	\$100.0
Commitments Sold	\$288.5	\$288.5	-
Unfunded Commitment	\$4,250.8	\$4,487.4	\$236.6
Capital Contributed	\$11,362.5	\$11,605.7	\$243.2
Capital Distributed	\$10,167.4	\$10,324.7	\$157.3
D/PI Ratio	0.89x	0.89x	-
Market Value	\$7,724.6	\$8,041.8	\$317.2
Total Value Multiple (TVPI)	1.57x	1.58x	0.01x
Avg. Age of Commitments	6.6 years	6.2 years	(0.4 years)

Since Inception IRR Performance

Portfolio Net IRR ¹	11.76%	11.77%	1 bp
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¹ Portfolio Net IRR, net of General Partner fees and gross of Hamilton Lane fees

Note: Totals may not sum due to rounding



Activity Update



Commitment Activity

- The Portfolio made 7 new commitments totaling \$450.8M during the first quarter of 2023
 - 7 existing GP relationships

(USD in Millions)	Bridgepoint Europe VII L.P.	Bridgepoint Europe VII Co-Invest (NYC)	Valor Equity Partners VI, L.P.	Vista Equity Partners Fund VIII, L.P.
General Partner	Bridgepoint Capital Ltd.	Bridgepoint Capital Ltd.	Valor Equity Partners	Vista Equity Partners
Existing Manager	Yes	Yes	Yes	Yes
Closing Date	2/27/2023	2/27/2023	2/28/2023	3/8/2023
Capital Committed	\$58.2 (53.5 EUR)	\$29.1 (26.8 EUR)	\$43.5	\$120.0
Strategy	Large Buyout	Large Buyout	Growth Equity	Mega Buyout
Geographic Focus	Western Europe	Western Europe	North America	North America
Fund Currency	EUR	EUR	USD	USD
Fund Size	\$5,788.0	N/A	\$2,750.0	\$4,916.6

(USD in Millions)	Vista Co-Invest Fund 2022- 4	Apollo Investment Fund X, L.P.	Apollo Investment Fund X, L.P. - Side Car
General Partner	Vista Equity Partners	Apollo Management	Apollo Management
Existing Manager	Yes	Yes	Yes
Closing Date	3/8/2023	3/30/2023	3/30/2023
Capital Committed	\$40.0	\$120.0	\$40.0
Strategy	Mega Buyout	Mega Buyout	Mega Buyout
Geographic Focus	North America	Global	Global
Fund Currency	USD	USD	USD
Fund Size	N/A	\$14,400.0	N/A

Subsequent Commitment Activity

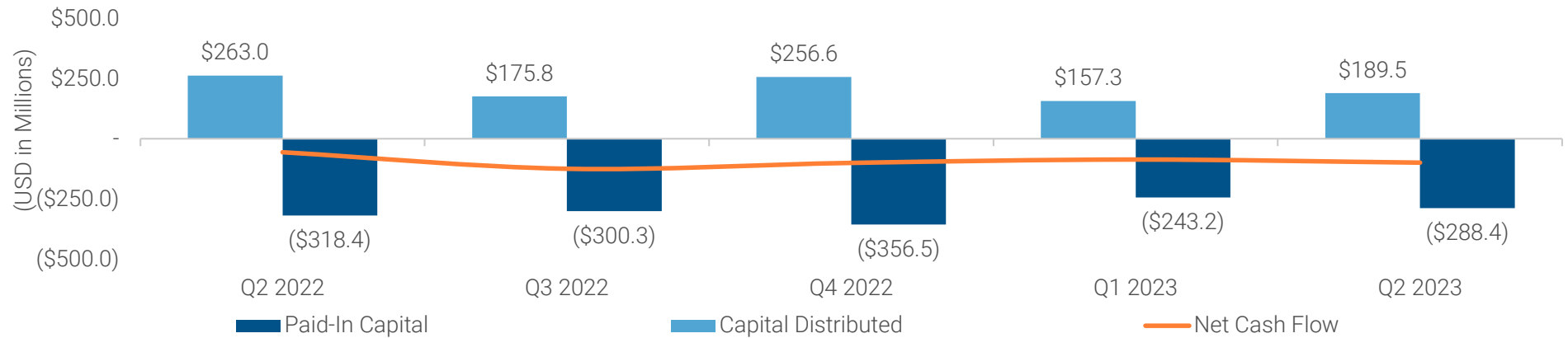
- Subsequent to quarter end, the Portfolio made seven new commitments totaling \$356.1M during the second quarter of 2023
 - 4 existing GP relationships
 - 2 new GP relationships

(USD in Millions)	ASF IX B NYC Co-Invest L.P.	Ardian Secondary Fund IX, L.P.	New 2ND Capital N Sidecar, L.P.	New 2ND Capital Fund III, L.P.
General Partner	Ardian	Ardian	New 2ND Capital	New 2ND Capital
Existing Manager	Yes	Yes	No	No
Closing Date	4/11/2023	4/11/2023	5/19/2023	5/19/2023
Capital Committed	\$86.7	\$57.8	\$9.9	\$19.8
Strategy	Secondaries	Secondaries	Secondaries	Secondaries
Geographic Focus	North America	North America	North America	North America
Fund Currency	USD	USD	USD	USD
Fund Size	N/A	\$698.0	N/A	\$850.0

(USD in Millions)	Clayton, Dubilier & Rice Fund XII, L.P.	EQT Future SCSP	EQT Co-Invest Platform (No.15) SCSP
General Partner	Clayton, Dubilier & Rice	EQT Limited	EQT Limited
Existing Manager	No	Yes	Yes
Closing Date	5/26/2023	6/28/2023	6/28/2023
Capital Committed	\$78.0	\$51.9 (47.5 EUR)	\$51.9 (47.5 EUR)
Strategy	Mega Buyout	Mid Buyout	Mid Buyout
Geographic Focus	North America	Western Europe	Western Europe
Fund Currency	USD	EUR	EUR
Fund Size	\$23,000.0	\$4,437.0	N/A

Quarterly Cash Flow Summary

Quarterly Net Cash Flow Activity



Top Contributors During the First Quarter (USD in Millions)

Investment	Vintage Year	Strategy	Paid-In Capital	% of Total
Permira VIII	2021	Mega Buyout	\$21.3	8.8%
Ares Private Opportunities (NYC), L.P.	2021	Special Situations	\$19.5	8.0%
Vista Equity Partners Fund VIII, L.P.	2023	Mega Buyout	\$16.2	6.7%
Clearlake Capital Partners VII, L.P.	2021	Special Situations	\$14.9	6.1%
Vista Equity Partners Fund VII, L.P.	2018	Mega Buyout	\$13.5	5.6%
Total			\$85.4	35.1%

Top Contributors During the First Quarter (USD in Millions)

Investment	Vintage Year	Strategy	Capital Distributed	% of Total
Olympus Growth Fund VI, L.P.	2014	Middle-Market Buyout	\$18.2	11.6%
CVC Capital Partners VII, L.P.	2017	Mega Buyout	\$15.6	9.9%
American Securities Partners VII, L.P.	2016	Large Buyout	\$14.4	9.1%
Vista Equity Partners Fund VII, L.P.	2018	Mega Buyout	\$12.4	7.9%
CVC Capital Partners VI, L.P.	2014	Mega Buyout	\$8.7	5.5%
Total			\$69.4	44.1%

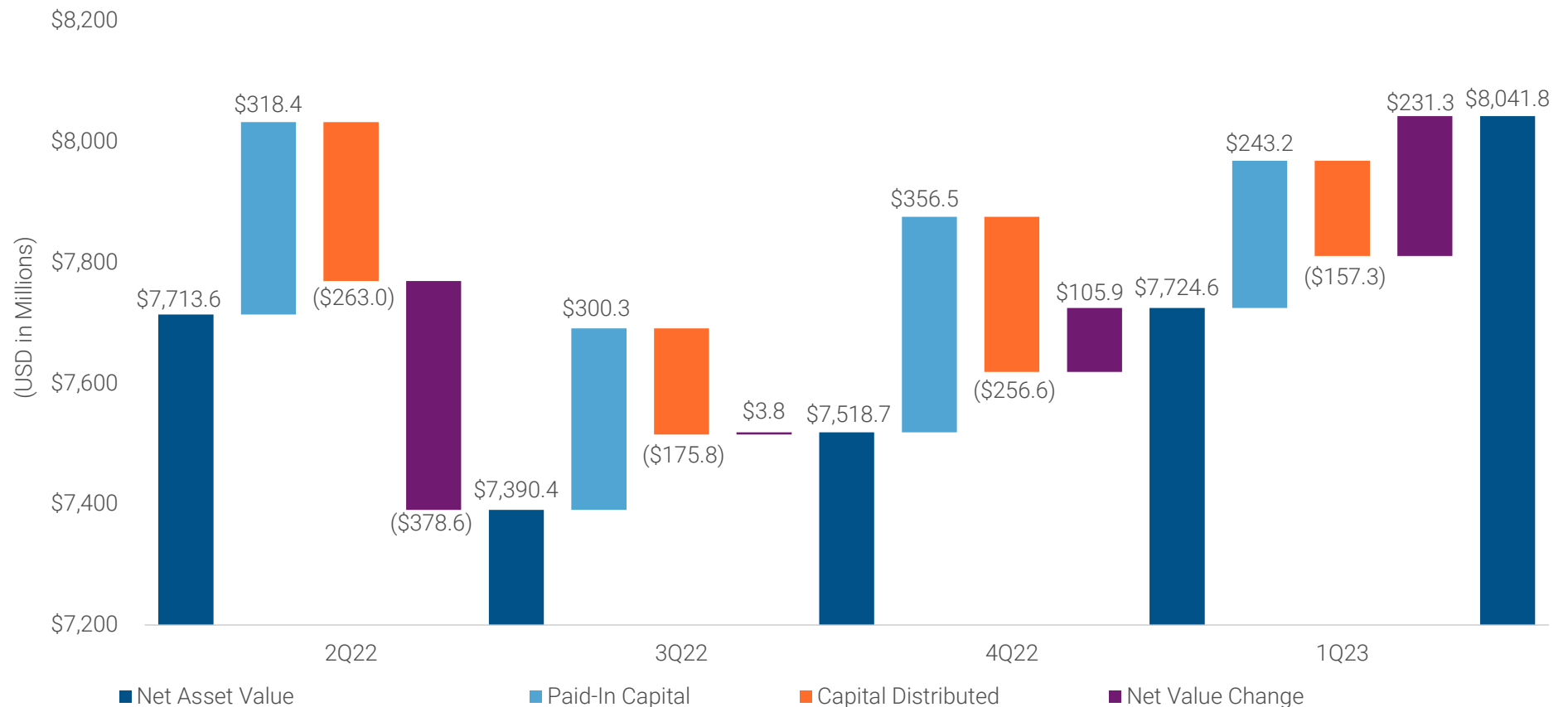


Performance Update



Net Value Bridge

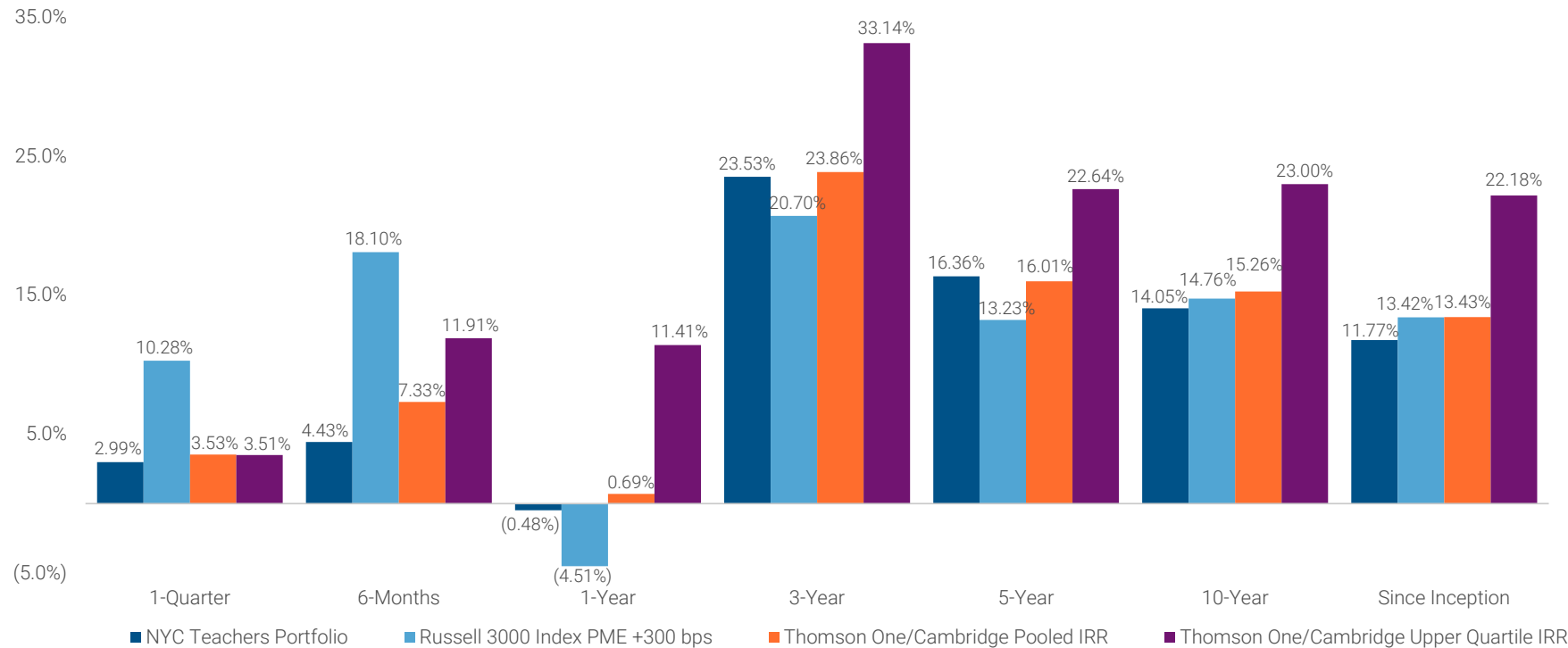
- Total Portfolio Net Value gain of \$231.3M during the quarter
 - 129 partnerships generated Net Value Gains, \$281.3M, while 93 generated Net Value Losses (\$49.9M)
 - The remaining 18 active partnerships generated no value change during the period
- Net Value Change isolates the realized and unrealized performance of the underlying investments made by the partnerships within the Portfolio. The Net Value Bridge illustrates these movements:



Portfolio IRR Performance

- 11.77% Since Inception Portfolio IRR trailed the Russell 3000 Index PME benchmark by 165 bps
 - (0.48%) 1-Year IRR outperformed the Russell 3000 Index PME benchmark by 403 bps

NYC Teachers Portfolio Performance vs. Benchmarks



Time Horizon	Portfolio IRR	Russell 3000 Index PME +300 bps	Spread Over/Under	Thomson One/Cambridge Pooled IRR	Spread Over/Under	Thomson One/Cambridge Upper Quartile IRR	Spread Over/Under
1-Quarter	2.99%	10.28%	(729 bps)	3.53%	(54 bps)	3.51%	(52 bps)
6-Months	4.43%	18.10%	(1,367 bps)	7.33%	(290 bps)	11.91%	(748 bps)
1-Year	(0.48%)	(4.51%)	403 bps	0.69%	(117 bps)	11.41%	(1,189 bps)
3-Year	23.53%	20.70%	283 bps	23.86%	(33 bps)	33.14%	(961 bps)
5-Year	16.36%	13.23%	313 bps	16.01%	35 bps	22.64%	(628 bps)
10-Year	14.05%	14.76%	(71 bps)	15.26%	(121 bps)	23.00%	(895 bps)
Since Inception	11.77%	13.42%	(165 bps)	13.43%	(166 bps)	22.18%	(1,041 bps)

Note: Private Equity benchmark is provided by ThomsonOne/Cambridge and reflects U.S. Buyout Funds Pooled IRR and Upper Quartile IRR as of March 31, 2023 for funds with vintage years 1999 to 2020. PME+ is the Russell 3000 Total Return Index and incorporates the PME+ methodology. This calculation includes a 3% premium.

Performance Summary by Strategy

NYC Teachers Portfolio Performance Summary by Strategy as of March 31, 2023				
Investment Strategy	Capital Committed ⁽¹⁾	IRR	Cambridge Associates Median IRR ⁽²⁾	Cambridge Associates Upper IRR ⁽²⁾
Buyout	\$7,960,829,390	12.50%	13.61%	22.18%
Mega Buyout	4,104,855,783	15.23%	13.50%	20.05%
Large Buyout	2,151,695,601	15.41%	15.39%	22.78%
Middle-Market Buyout	1,001,978,006	9.93%	12.25%	20.80%
Small Buyout	702,300,000	8.96%	14.14%	23.46%
Growth Equity	1,132,182,569	12.22%	10.63%	19.69%
Multi-Strategy	605,788,679	5.74%	10.15%	18.76%
Secondaries	1,567,167,644	14.78%	14.78%	22.07%
Special Situations	2,196,000,000	19.83%	12.07%	19.97%
Other	362,500,000	3.15%	10.15%	18.76%

⁽¹⁾ Commitments in the above table do not include liquidated/sold investments..

⁽²⁾ Multi-Strategy and Other benchmarks reflect the Cambridge Associates Global All Private Equity benchmark

Performance Summary by Vintage Year

NYC Teachers Portfolio Performance Summary by Vintage Year as of March 31, 2023						
Vintage Year	Capital Committed ⁽¹⁾	IRR	Cambridge Associates Median IRR ⁽²⁾	Cambridge Associates Upper IRR ⁽²⁾	PME Return ⁽³⁾	PME Spread ⁽⁴⁾
1999	\$65,000,000	7.46%	9.29%	14.15%	6.33%	1.13%
2000	20,000,000	5.59%	14.31%	22.32%	5.50%	0.08%
2001	30,000,000	18.78%	20.53%	30.28%	7.63%	11.15%
2002	-	N/A	N/A	N/A	6.83%	N/A
2003	85,000,000	19.64%	13.59%	19.24%	6.55%	13.09%
2004	174,000,000	2.55%	10.84%	14.02%	7.76%	(5.20%)
2005	81,000,000	5.15%	8.12%	12.14%	6.97%	(1.82%)
2006	363,364,875	8.14%	9.02%	16.40%	9.11%	(0.97%)
2007	481,308,228	6.26%	13.76%	17.69%	11.69%	(5.44%)
2008	703,823,557	12.61%	14.08%	20.22%	13.48%	(0.88%)
2009	42,500,000	9.52%	23.27%	26.62%	14.91%	(5.39%)
2010	45,000,000	11.66%	14.84%	22.61%	12.54%	(0.88%)
2011	690,847,903	16.70%	16.59%	23.14%	13.28%	3.41%
2012	467,750,000	13.60%	17.04%	24.61%	12.30%	1.30%
2013	746,600,000	13.13%	16.88%	30.56%	12.55%	0.58%
2014	798,782,875	17.51%	18.71%	22.72%	11.93%	5.59%
2015	443,242,363	21.67%	18.01%	24.08%	11.84%	9.84%
2016	741,070,877	20.80%	22.05%	26.07%	11.54%	9.25%
2017	855,156,279	17.63%	23.21%	31.58%	9.70%	7.93%
2018	1,050,057,555	21.32%	21.38%	29.53%	7.87%	13.45%
2019	1,037,739,230	21.98%	20.83%	28.32%	3.34%	18.64%
2020	856,598,064	17.37%	17.36%	22.94%	(0.59%)	17.95%
2021	1,891,408,145	17.85%	7.92%	13.92%	(0.58%)	18.43%
2022	1,703,423,650	N/M	N/M	N/M	N/M	N/A
2023	450,794,681	N/M	N/M	N/M	N/M	N/A

⁽¹⁾ Commitments in the above table do not include liquidated/sold investments..

⁽²⁾ Cambridge Associates Benchmark – US Buyouts as of 3/31/2023

⁽³⁾ PME Return is the Russell 3000 Total Return Index and incorporates the PME+ methodology

⁽⁴⁾ PME Spread is the percentage difference between the IRR and PME Benchmark for each respective vintage year

Performance Summary by Geography

NYC Teachers Portfolio Performance Summary by Region ⁽¹⁾⁽²⁾ as of March 31, 2023						
Region	Capital Committed	Paid-In Capital	Capital Distributed	Reported Market Value	IRR	Total Value Multiple
North America	\$8,137,931,487	\$7,790,465,723	\$7,546,818,909	\$5,127,592,209	12.17%	1.63x
Western Europe	2,289,910,955	1,624,856,551	977,532,703	1,494,661,355	11.67%	1.52x
Global/Rest of World	3,396,625,840	2,190,409,028	1,800,392,379	1,419,509,682	10.77%	1.47x
Total	\$13,824,468,282	\$11,605,731,302	\$10,324,743,991	\$8,041,763,246	11.77%	1.58x

Note: Commitments in the above table do not include liquidated/sold investments.

⁽¹⁾Prior to a partnership being 75% drawn, region focus is based on the GP-stated geographic strategy. Subsequent to a partnership being 75% drawn, fund geographic focus is based on actual portfolio company exposure by total invested. Partnerships with less than 75% of total invested capital allocated to one geographic region are classified as Global.

⁽²⁾Fund Geographic Focus is based on a number of factors, including the GP-stated geographic focus, the number of investments within each region, invested capital by region, the location of the firm's offices and investment professionals, and the underlying fund currency.



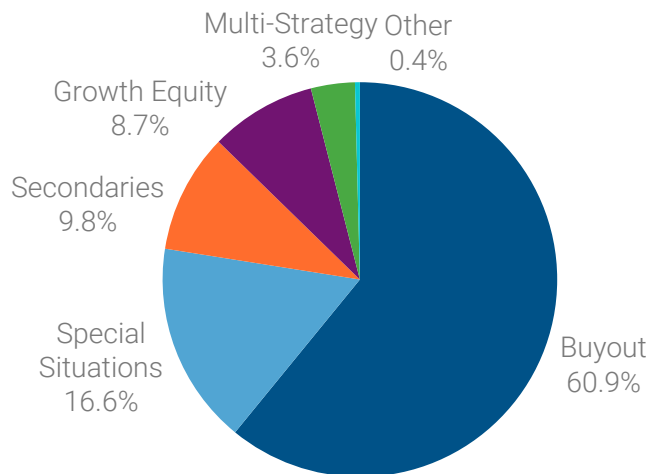
Exposure Update



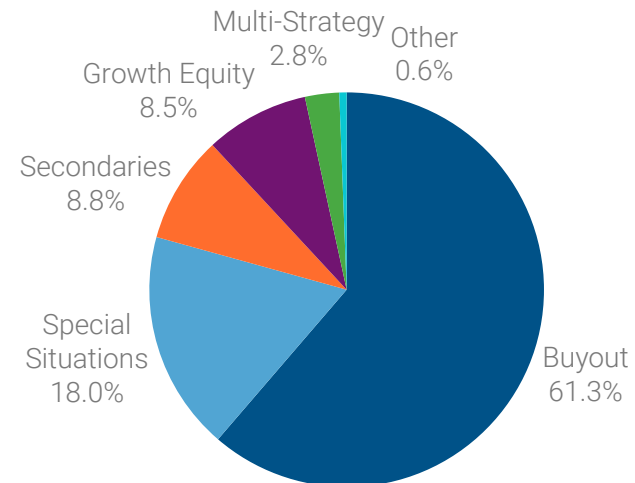
Diversification by Strategy

The pie charts below represent the industry diversification of the Portfolio as of March 31, 2023. Industry diversification is measured by the Portfolio's exposed market value of the underlying portfolio companies.

**Strategy Diversification
by Total Exposure
As of March 31, 2023**



**Strategy Diversification
by Market Value
As of March 31, 2023**

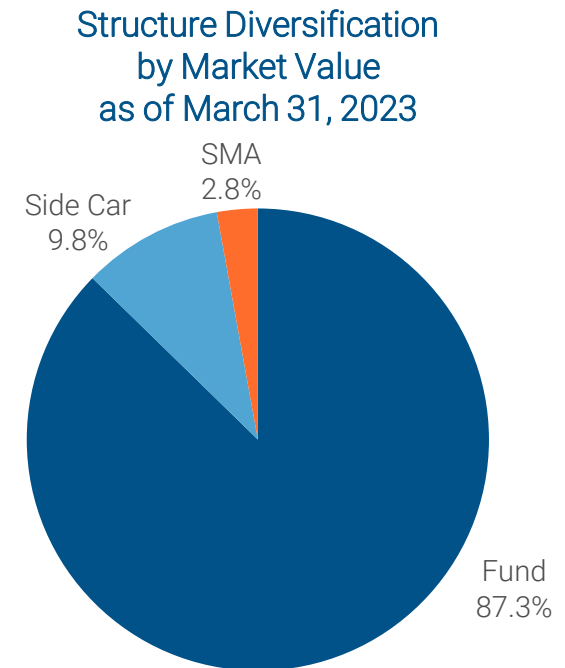
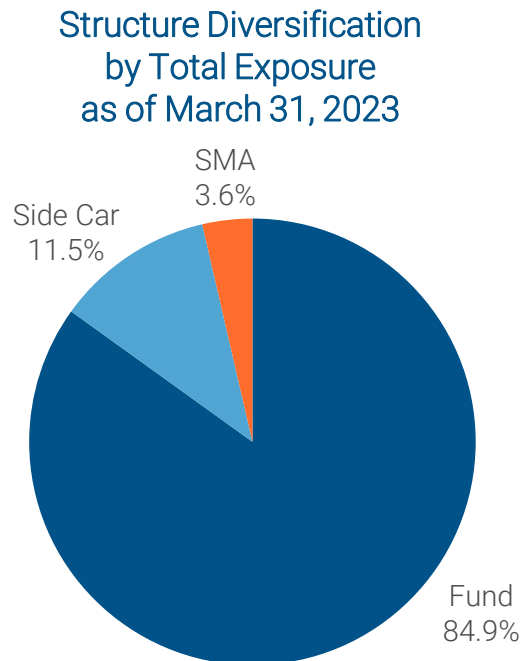


As of March 31, 2023

	Sum of Current Exposed Market Value	% of Total
North America	\$6,250.0	68%
U.S. (non-NY State)	\$5,647.5	61%
U.S. (NY State)	\$602.4	7%
New York City	\$168.5	2%
Non-New York City	\$433.9	5%
Western Europe	\$2,128.8	23%
Rest of World	\$573.7	6%
Asia	\$238.0	3%
Total	\$9,190.5	100%

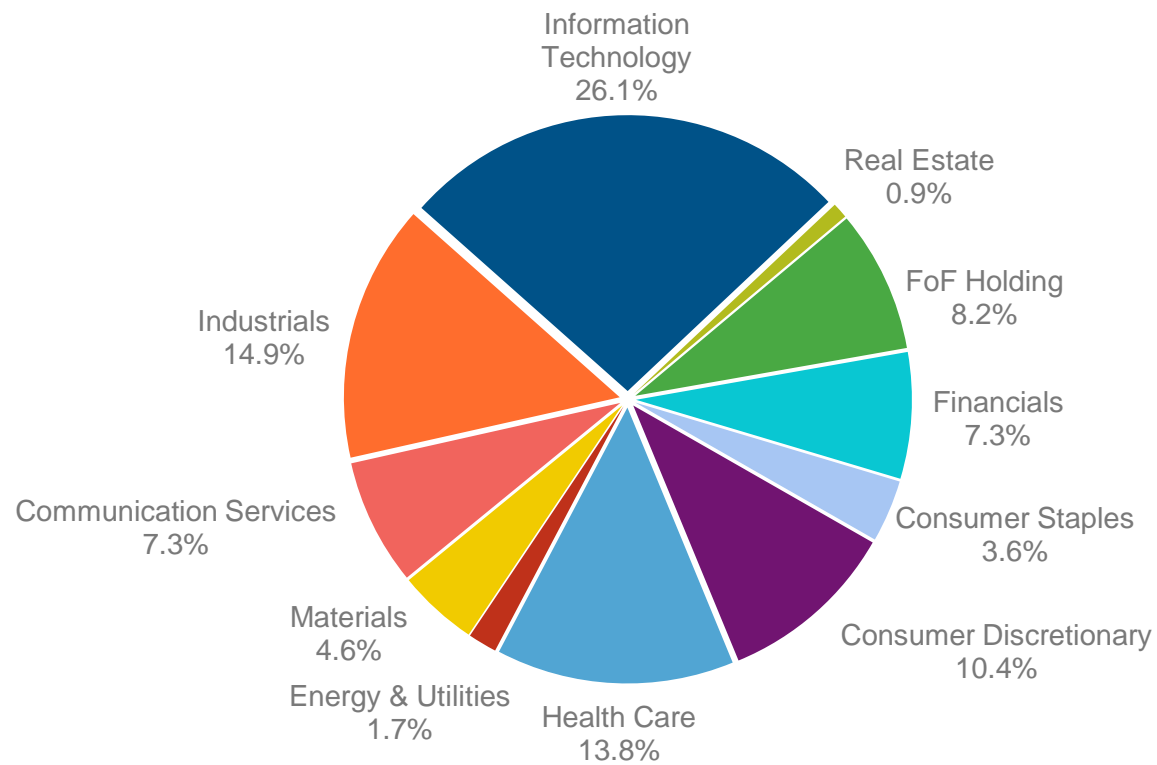
Fund Structure

- The pie charts below represent the diversification of the Portfolio by structure as of March 31, 2023.



Holdings Diversification

Underlying Investment Diversification by Industry As of March 31, 2023





Appendix



Portfolio Summary by Investments

Teachers' Retirement System of the City of New York
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Active Investments										
1999	Cypress Merchant Banking Partners II, LP	7/8/1999	\$50,000,000	\$53,983,573	\$50,623,035	\$18,471	0.94x	(1.18%)	5.55%	(6.72%)
1999	Lincolnshire Equity Fund II, L.P.	2/26/2001	15,000,000	14,446,100	28,316,507	(150,118)	1.95x	24.56%	6.90%	17.66%
2000	SCP Private Equity Partners II, L.P.	1/19/2001	20,000,000	22,196,012	8,429,680	1,404,677	0.44x	(8.62%)	5.58%	(14.19%)
2001	Apollo Investment Fund V, L.P.	8/23/2001	30,000,000	46,758,049	92,244,552	255,099	1.98x	38.77%	8.33%	30.44%
2003	Ares Corporate Opportunities Fund, L.P.	5/4/2004	15,000,000	18,004,666	26,835,382	18,060	1.49x	13.06%	7.37%	5.69%
2003	Blackstone Capital Partners IV, L.P.	1/10/2003	30,000,000	30,690,321	77,506,027	193,686	2.53x	37.80%	8.23%	29.57%
2003	FS Equity Partners V, L.P.	5/30/2003	25,000,000	20,251,319	41,007,776	1,412,093	2.09x	15.23%	4.93%	10.29%
2017	Leeds Weld Equity Partners IV, L.P.	12/13/2004	15,000,000	15,441,454	20,171,550	26,143	1.31x	4.23%	5.50%	(1.27%)
2004	FdG Capital Partners II, L.P.	8/30/2004	35,000,000	37,720,808	44,959,148	770,176	1.21x	3.65%	6.74%	(3.09%)
2004	Lincolnshire Equity Fund III, L.P.	12/23/2004	25,000,000	25,234,072	38,888,584	7,282,256	1.83x	27.40%	11.38%	16.02%
2004	Markstone Capital Partners, L.P.	7/21/2004	35,000,000	40,766,689	17,074,753	163,685	0.42x	(31.46%)	10.80%	(42.26%)
2004	New York/Fairview Emerging Managers (Tranche A), L.P.	10/21/2004	24,000,000	24,646,553	26,681,821	360,339	1.10x	1.56%	8.70%	(7.15%)
2004	Yucaipa American Alliance Fund I, L.P.	10/1/2004	55,000,000	80,825,203	95,185,290	392,376	1.18x	3.97%	10.70%	(6.73%)
2005	JP Morgan Fleming (Tranche A), L.P.	12/21/2005	31,000,000	31,363,744	36,635,024	3,613,607	1.28x	4.56%	10.86%	(6.30%)
2005	Snow Phipps Group, L.P.	8/2/2007	15,000,000	18,286,257	16,668,046	6,843,064	1.29x	4.64%	11.12%	(6.48%)
2005	USPF II Institutional Fund, L.P.	11/23/2005	35,000,000	46,164,567	55,381,287	429,424	1.21x	3.25%	7.66%	(4.40%)
2006	Aisling Capital II, L.P.	1/12/2006	4,500,000	5,099,563	5,112,601	200,061	1.04x	0.74%	7.96%	(7.23%)
2006	Ampersand 2006, L.P.	7/6/2007	15,000,000	15,000,000	46,844,870	109,873	3.13x	16.90%	8.92%	7.98%
2006	Apollo Investment Fund VI, L.P.	5/10/2006	35,000,000	45,048,207	67,409,336	630,506	1.51x	8.63%	7.58%	1.05%
2006	BDCM Opportunity Fund II, L.P.	12/28/2006	25,000,000	37,325,097	102,347,045	2,180,500	2.80x	18.34%	11.69%	6.65%
2006	Blackstone Capital Partners V, L.P.	4/13/2006	75,600,000	76,564,529	129,564,127	684,636	1.70x	8.52%	8.40%	0.12%
2006	Catterton Partners VI, L.P.	12/14/2006	30,000,000	34,300,531	59,205,324	7,227,632	1.94x	11.43%	9.07%	2.36%
2006	Cinven Fourth Fund	1/22/2007	43,264,875	45,626,616	65,913,468	26,533	1.45x	7.37%	7.64%	(0.28%)
2006	First Reserve Fund XI, L.P.	12/22/2006	30,000,000	34,241,400	22,947,827	28,315	0.67x	(9.75%)	6.27%	(16.02%)
2006	GF Capital Private Equity Fund, L.P.	3/20/2008	15,000,000	15,773,790	20,491,630	8,866,511	1.86x	11.51%	12.18%	(0.67%)
2006	Landmark Equity Partners XIII, L.P.	5/15/2006	25,000,000	23,702,196	31,591,655	-	1.33x	5.02%	6.91%	(1.89%)
2006	MidOcean Partners III, L.P.	6/19/2007	40,000,000	46,544,144	103,912,185	74,196	2.23x	13.57%	9.97%	3.60%
2006	RRE Ventures IV, L.P.	10/25/2006	25,000,000	31,834,512	47,674,283	8,938,916	1.78x	6.77%	11.65%	(4.89%)
2007	Carlyle Partners V, L.P.	9/28/2007	50,000,000	50,852,090	90,770,111	2,477,843	1.83x	13.36%	11.00%	2.36%
2007	Co-Investment Partners Europe, L.P.	12/5/2008	26,414,943	29,219,332	35,984,150	413,531	1.25x	4.33%	15.21%	(10.88%)
2007	FTVentures III, L.P.	3/1/2007	14,081,947	15,022,056	25,170,138	3,636,583	1.92x	10.89%	10.10%	0.79%
2007	GSO Capital Opportunities Fund, L.P.	8/15/2008	30,000,000	48,291,339	67,124,625	601,710	1.40x	17.30%	10.13%	7.18%
2007	Halyard Capital Fund II, L.P.	11/2/2007	15,000,000	13,118,287	16,133,696	4,078,240	1.54x	6.96%	9.93%	(2.97%)
2007	Montreux Equity Partners IV, L.P.	3/27/2007	15,000,000	14,930,359	8,224,849	11,202,917	1.30x	3.11%	9.92%	(6.81%)
2007	Nautic Partners VI, L.P.	6/30/2008	20,000,000	21,570,994	52,273,786	1,672,580	2.50x	18.61%	11.99%	6.63%
2007	New Mountain Partners III, L.P.	9/25/2007	35,000,000	37,359,628	88,424,718	1,469,446	2.41x	14.58%	13.19%	1.39%
2007	PCG Clean Energy & Technology Fund East, L.P.	4/25/2008	60,000,000	51,863,265	16,764,849	1,898,697	0.36x	(12.83%)	12.83%	(25.66%)
2007	Pegasus Partners IV, L.P.	10/9/2007	20,000,000	26,489,188	20,637,860	2,586,064	0.88x	(2.62%)	11.10%	(13.72%)
2007	Pine Brook Capital Partners, L.P.	4/7/2008	22,500,000	24,896,117	33,888,331	633,804	1.39x	8.36%	12.09%	(3.73%)
2007	Quaker BioVentures II, L.P.	4/18/2008	15,000,000	14,977,775	16,629,447	173,705	1.12x	2.48%	12.60%	(10.12%)
2007	RLJ Equity Partners Fund I, L.P.	4/14/2009	15,000,000	15,531,821	19,184,523	1,746,804	1.35x	6.75%	13.78%	(7.03%)
2007	SCP Vitalife Partners II, L.P.	1/10/2008	15,000,000	15,074,774	1,184	2,770,910	0.18x	(13.41%)	(0.50%)	(12.91%)
2007	StarVest Partners II, L.P.	12/8/2008	20,000,000	20,106,956	10,249,653	5,208,644	0.77x	(3.16%)	13.59%	(16.74%)
2007	Trilantic Capital Partners IV L.P.	10/22/2007	53,311,339	54,491,733	83,191,204	3,126,977	1.58x	13.46%	11.23%	2.23%
2007	USPF III Institutional Fund, L.P.	7/10/2007	30,000,000	35,493,985	45,518,432	894,365	1.31x	4.38%	9.94%	(5.55%)
2007	Vista Equity Partners Fund III, L.P.	11/30/2007	25,000,000	26,945,636	63,903,684	2,915,302	2.48x	26.82%	9.86%	16.96%
2008	Aisling Capital III, L.P.	11/20/2008	10,500,000	11,846,807	28,176,543	65,174	2.38x	26.46%	14.31%	12.14%
2008	Apollo Investment Fund VII, L.P.	4/16/2008	50,000,000	61,129,618	107,053,422	587,711	1.76x	23.15%	13.73%	9.42%
2008	Ares Corporate Opportunities Fund III, L.P.	7/30/2008	60,000,000	71,462,853	155,339,754	777,483	2.18x	20.87%	12.07%	8.79%
2008	Avista Capital Partners II, L.P.	12/31/2008	50,000,000	66,131,931	106,253,389	2,240,554	1.64x	14.38%	14.66%	(0.28%)

Portfolio Summary by Investments

Teachers' Retirement System of the City of New York
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Active Investments										
2008	Blue Wolf Capital Fund II, L.P.	11/14/2008	20,000,000	22,032,020	37,201,244	114,915	1.69x	10.72%	15.36%	(4.64%)
2008	Bridgepoint Europe IV, L.P.	9/30/2008	26,449,821	24,946,822	34,548,608	4,623,185	1.57x	9.57%	14.69%	(5.12%)
2008	First Reserve Fund XII, L.P.	11/14/2008	30,000,000	33,919,785	17,607,913	-	0.52x	(24.88%)	17.19%	(42.07%)
2008	GCM Grosvenor TRSCNY Emerging Manager Fund, L.P.	8/22/2008	59,373,737	75,573,014	91,375,483	24,763,656	1.54x	9.78%	13.30%	(3.52%)
2008	GI Partners III, L.P.	7/29/2008	30,000,000	32,411,558	50,818,605	14,125	1.57x	12.96%	15.32%	(2.37%)
2008	Landmark Equity Partners XIV, L.P.	9/19/2008	50,000,000	48,702,046	61,500,739	3,343,351	1.33x	8.84%	13.09%	(4.26%)
2005	Leeds Equity Partners V, L.P.	7/28/2008	40,000,000	39,871,980	94,886,224	4,074,585	2.48x	18.46%	13.90%	4.56%
2013	Levine Leichtman Capital Partners IV, L.P.	9/22/2008	25,000,000	26,635,586	42,262,426	2,367,912	1.68x	17.76%	14.19%	3.57%
2008	New York/Fairview Emerging Managers (Tranche B), L.P.	5/28/2008	35,000,000	35,461,815	77,359,488	16,869,194	2.66x	17.73%	12.99%	4.74%
2008	NGN BioMed Opportunity II, L.P.	10/31/2008	15,000,000	14,363,866	11,509,657	7,728,410	1.34x	3.54%	14.75%	(11.21%)
2008	Onex Partners III, L.P.	3/31/2009	40,000,000	43,900,754	65,803,784	6,823,887	1.65x	11.38%	14.98%	(3.60%)
2008	Paladin III (NY City), L.P.	1/8/2008	20,000,000	27,139,705	57,154,221	7,816,229	2.39x	14.21%	12.14%	2.07%
2008	Riverstone/Carlyle Global Energy & Power Fund IV	9/29/2008	32,500,000	35,116,069	39,590,439	12,150	1.13x	3.18%	13.90%	(10.72%)
2008	Yucaipa American Alliance Fund II, L.P.	3/28/2008	75,000,000	104,010,896	113,116,699	61,192,681	1.68x	7.97%	12.15%	(4.18%)
2008	Yucaipa Corporate Initiatives Fund II, L.P.	6/23/2008	35,000,000	32,157,997	28,759,946	462,619	0.91x	(1.25%)	12.44%	(13.69%)
2009	Lincolnshire Equity Fund IV, L.P.	8/7/2009	12,500,000	12,881,737	15,522,307	3,491,137	1.48x	8.22%	13.38%	(5.16%)
2009	Welsh, Carson, Anderson & Stowe XI, L.P.	2/10/2009	30,000,000	30,000,000	47,826,193	2,077,881	1.66x	11.51%	15.01%	(3.49%)
2010	JP Morgan Fleming (Tranche B), L.P.	3/31/2008	10,000,000	10,726,813	14,441,826	5,200,321	1.83x	10.49%	13.10%	(2.61%)
2010	Trident V, L.P.	12/30/2010	35,000,000	41,666,606	58,337,364	21,150,124	1.91x	11.97%	12.39%	(0.42%)
2011	American Securities Partners VI, L.P.	1/10/2012	100,000,000	112,030,961	196,059,692	59,465,230	2.28x	21.86%	12.93%	8.93%
2011	Ampersand 2011, L.P.	3/11/2011	17,500,000	17,500,000	56,677,681	138,042	3.25x	21.80%	13.00%	8.81%
2011	AXA Secondary Fund V L.P.	8/11/2011	160,000,000	85,770,811	132,424,082	198,036	1.55x	13.58%	15.31%	(1.74%)
2011	BC European Capital IX, L.P.	9/19/2011	69,022,637	75,665,263	91,497,089	27,971,337	1.58x	10.55%	13.31%	(2.76%)
2011	Blackstone Capital Partners VI, L.P.	1/24/2011	60,000,000	62,129,810	81,115,752	25,230,109	1.71x	11.16%	12.25%	(1.10%)
2011	EQT VI, L.P.	8/1/2011	48,535,350	52,423,237	91,271,218	56,586	1.74x	13.63%	13.00%	0.63%
2011	Pegasus Partners V, L.P.	8/16/2011	20,789,916	26,762,486	15,150,824	13,011,535	1.05x	1.07%	13.60%	(12.53%)
2011	Vista Equity Partners Fund IV, L.P.	11/30/2011	100,000,000	100,471,783	127,859,045	76,514,704	2.03x	14.89%	13.04%	1.85%
2012	Green Equity Investors VI, L.P.	11/30/2012	100,000,000	112,893,978	118,861,075	106,842,627	2.00x	14.10%	12.20%	1.90%
2012	Ares Corporate Opportunities Fund IV, L.P.	11/5/2012	105,000,000	116,013,103	178,378,735	36,763,939	1.85x	14.71%	11.77%	2.94%
2011	Platinum Equity Capital Partners III, L.P.	1/14/2013	115,000,000	112,458,282	211,759,014	21,405,668	2.07x	35.82%	13.01%	22.81%
2012	Trilantic Capital Partners V (North America), L.P.	9/20/2012	70,000,000	73,504,534	101,942,456	23,624,375	1.71x	15.59%	12.27%	3.32%
2012	Warburg Pincus Private Equity XI, L.P.	5/24/2012	175,000,000	180,379,074	221,230,044	79,904,568	1.67x	11.39%	12.69%	(1.30%)
2012	NYCTRS - 2012 Emerging Manager Program*	2/7/2013	158,050,000	169,632,939	273,298,214	99,914,112	N/A	N/A	N/A	N/A
2013	Apollo Investment Fund VIII, L.P.	12/11/2013	200,000,000	196,313,478	217,181,849	74,404,196	1.49x	10.02%	13.21%	(3.19%)
2013	Carlyle Partners VI, L.P.	7/3/2013	125,000,000	135,784,510	205,486,080	56,362,248	1.93x	15.66%	12.79%	2.86%
2014	CVC Capital Partners VI, L.P.	2/18/2014	204,970,239	211,625,021	211,349,092	177,726,013	2.03x	17.13%	11.85%	5.28%
2013	Landmark Equity Partners XV, L.P.	10/30/2013	113,000,000	90,758,387	105,361,040	22,946,640	1.41x	11.69%	12.28%	(0.59%)
2021	Landmark NYC Fund I, L.P.	12/24/2013	37,000,000	33,782,342	40,573,290	21,510,328	1.84x	18.10%	11.24%	6.86%
2013	Crestview Partners III, L.P.	3/3/2015	75,000,000	69,906,395	42,175,271	64,288,719	1.52x	11.94%	11.23%	0.71%
2014	Crestview Partners III (Co-Investment B), L.P.	12/17/2015	25,000,000	25,908,372	1,253,803	30,624,299	1.23x	3.76%	11.92%	(8.16%)
2014	Carlyle Partners VI, L.P. - Side Car	9/23/2014	7,072,349	10,036,120	12,707,663	7,267,776	1.99x	12.26%	13.28%	(1.02%)
2014	Olympus Growth Fund VI, L.P.	1/21/2014	100,000,000	101,530,668	108,074,410	82,958,903	1.88x	16.70%	12.15%	4.54%
2013	ASF VI, L.P.	5/9/2014	112,000,000	90,217,360	116,030,148	16,474,204	1.47x	12.25%	12.07%	0.18%
2014	ASF VI NYC Co-Invest, L.P.	5/9/2014	38,000,000	31,784,197	39,489,655	8,366,985	1.51x	12.32%	9.60%	2.72%
2015	Centerbridge Capital Partners III, L.P.	5/21/2015	33,500,000	44,254,786	41,996,020	32,614,844	1.69x	18.56%	11.18%	7.38%
2007	Lexington Capital Partners VIII, L.P.	1/8/2015	150,000,000	136,436,353	135,444,040	92,172,546	1.67x	16.72%	12.06%	4.67%
2014	Vista Equity Partners Fund V, L.P.	9/8/2014	125,000,000	156,797,206	183,480,625	166,145,896	2.23x	19.54%	11.16%	8.38%
2015	Siris Partners III, L.P.	5/4/2015	45,000,000	47,413,992	35,827,533	34,757,579	1.49x	11.81%	11.99%	(0.18%)
2016	American Securities Partners VII, L.P.	7/8/2016	111,000,000	109,753,574	58,240,909	151,336,212	1.91x	16.15%	11.90%	4.25%
2015	ASF VII, L.P.	12/29/2015	134,000,000	88,807,620	69,806,066	74,855,342	1.63x	17.04%	12.97%	4.07%

Portfolio Summary by Investments

Teachers' Retirement System of the City of New York
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Active Investments										
2015	ASF VII B NYC Co-Invest, L.P.	12/29/2015	67,000,000	41,383,721	41,199,868	35,674,631	1.86x	20.56%	10.73%	9.83%
2014	Bridgepoint Europe V, L.P.	2/8/2016	86,362,635	81,011,404	114,399,874	49,751,809	2.03x	19.65%	13.75%	5.89%
2015	NYCTRS - 2015 Emerging Manager Program**	2/22/2016	217,250,000	199,826,743	68,334,052	288,459,363	N/A	N/A	N/A	N/A
2015	Welsh, Carson, Anderson & Stowe XII, L.P.	8/26/2015	110,500,000	106,786,202	156,189,841	103,933,800	2.44x	27.01%	12.01%	15.00%
2015	Bridgepoint Europe V Co-Invest	2/8/2016	25,242,363	23,183,477	48,206,508	14,251,016	2.69x	27.12%	10.91%	16.21%
2016	Vista Equity Partners Fund VI, L.P.	6/28/2016	223,000,000	280,623,704	236,246,537	338,360,610	2.05x	19.56%	11.60%	7.96%
2016	Apax IX USD, L.P.	5/12/2017	178,000,000	192,004,776	214,599,950	173,247,602	2.02x	23.22%	12.07%	11.15%
2016	Platinum Equity Capital Partners IV, L.P.	3/21/2017	156,000,000	156,514,794	147,240,498	177,974,367	2.08x	25.03%	11.17%	13.86%
2017	Ares Corporate Opportunities Fund V, L.P.	6/22/2017	134,000,000	145,371,738	66,780,367	129,593,335	1.35x	9.63%	11.42%	(1.79%)
2017	Green Equity Investors VII, L.P.	5/12/2017	134,000,000	128,114,978	105,806,133	166,275,950	2.12x	22.61%	11.24%	11.37%
2017	BC European Capital X, L.P.	12/14/2017	127,213,986	119,891,900	21,473,706	155,253,761	1.47x	10.58%	10.32%	0.26%
2016	BC European Capital X Metro Co-Investment L.P.	3/24/2017	49,070,877	51,166,779	16,690,761	78,471,633	1.86x	15.68%	10.41%	5.27%
2017	KKR Americas Fund XII, L.P.	2/27/2018	223,000,000	211,236,034	95,620,587	273,501,236	1.75x	20.91%	8.22%	12.69%
2017	Palladium Equity Partners V, L.P.	2/11/2019	26,666,667	16,997,640	4,637,751	17,708,842	1.31x	10.33%	11.80%	(1.47%)
2017	CVC Capital Partners VII, L.P.	6/30/2018	152,275,626	149,749,498	39,030,615	220,403,648	1.73x	23.30%	7.42%	15.88%
2018	Apollo Investment Fund IX, L.P.	3/15/2019	256,000,000	221,870,693	79,126,199	246,109,613	1.47x	25.04%	5.45%	19.59%
2018	Bridgepoint Europe VI, L.P.	4/1/2019	96,128,883	80,475,148	8,350,883	106,861,261	1.43x	18.80%	8.31%	10.48%
2018	EQT VIII SCSP	8/10/2018	72,448,696	86,795,960	52,954,847	95,507,400	1.71x	23.81%	11.58%	12.23%
2019	Bridgepoint Europe VI Co-Invest	5/7/2019	24,239,231	18,469,641	-	29,659,290	1.61x	19.88%	9.61%	10.27%
2018	Siris Partners IV, L.P.	3/15/2019	71,000,000	58,954,365	8,449,441	83,937,738	1.57x	18.79%	7.89%	10.89%
2018	Platinum Equity Capital Partners IV, L.P. (Co-Invest)	9/7/2018	22,000,000	15,429,959	3,069,976	19,076,149	1.44x	9.25%	8.41%	0.83%
2018	Platinum Equity Small Cap Fund, L.P.	6/27/2018	32,500,000	23,626,424	5,394,771	40,255,315	1.93x	30.40%	4.48%	25.92%
2018	EQT VIII SCSP (Co-Invest)	11/2/2018	31,618,213	30,497,733	23,715,688	39,299,255	2.07x	37.35%	8.47%	28.88%
2018	Vista Equity Partners Fund VII, L.P.	2/13/2019	142,000,000	127,785,084	13,734,137	148,770,047	1.27x	10.75%	7.76%	2.99%
2019	Crestview Partners IV (FF), L.P.	10/28/2020	19,000,000	10,729,016	3,558,025	14,705,875	1.70x	N/M	N/M	N/M
2019	Crestview Partners IV, L.P.	10/28/2020	57,000,000	32,187,050	9,240,318	38,980,127	1.50x	N/M	N/M	N/M
2019	KKR European Fund V, L.P. - USD	1/15/2020	89,000,000	76,950,014	15,025,020	75,350,596	1.17x	8.96%	6.64%	2.32%
2017	Lexington Capital Partners IX, L.P.	12/20/2019	85,125,000	67,904,784	18,349,372	82,143,819	1.48x	30.92%	3.68%	27.23%
2018	ASF VIII, L.P.	3/15/2019	158,000,000	82,071,708	20,175,776	102,505,278	1.49x	25.07%	9.98%	15.08%
2019	ASF VIII B NYC Co-Invest, L.P.	3/15/2019	79,000,000	32,224,078	6,904,997	42,381,049	1.53x	37.75%	4.63%	33.12%
2019	Warburg Pincus Global Growth, L.P.	3/26/2019	114,000,000	99,997,355	1,027,094	137,441,850	1.38x	15.08%	5.43%	9.65%
2008	LCP IX Co-Invest Partners B, L.P.	9/29/2020	28,375,000	13,905,169	5,689,860	17,841,178	1.69x	N/M	N/M	N/M
2019	Lindsay Goldberg V, L.P.	4/29/2020	79,000,000	39,364,226	10,777,267	43,396,549	1.38x	N/M	N/M	N/M
2019	WCAS XIII, L.P.	3/14/2019	71,000,000	59,129,811	21,977,859	60,068,382	1.39x	23.78%	4.37%	19.42%
2019	Apax X, L.P.	11/10/2020	95,000,000	76,455,121	5,975,954	86,001,142	1.20x	N/M	N/M	N/M
2019	Platinum Equity Capital Partners V, L.P.	12/27/2019	142,000,000	138,170,033	15,777,637	191,917,742	1.50x	25.40%	0.51%	24.89%
2021	PECP V Co-Investment, L.P.	7/1/2021	35,500,000	35,026,005	5,380,151	65,423,501	2.02x	N/M	N/M	N/M
2019	Trilantic Capital Partners VI (North America), L.P.	8/8/2019	46,000,000	39,500,824	4,130,184	53,220,682	1.45x	21.69%	3.67%	18.01%
2019	Blackstone Capital Partners VIII, L.P.	5/19/2020	99,000,000	56,201,892	3,295,067	61,839,083	1.16x	N/M	N/M	N/M
2019	NYCTRS - 2019 Emerging Manager Program***	9/25/2019	240,000,000	41,582,150	3,398,734	69,937,776	N/A	N/A	N/A	N/A
2018	ICG Strategic Equity Fund III LP	3/4/2020	41,111,763	26,066,607	9,278,531	40,677,117	1.92x	39.36%	3.29%	36.07%
2020	Green Equity Investors VIII Coinvest N, L.P.	5/20/2020	33,000,000	23,631,170	-	28,170,060	1.19x	N/M	N/M	N/M
2020	Green Equity Investors VIII, L.P.	10/21/2020	99,000,000	86,278,168	802,095	97,788,396	1.14x	N/M	N/M	N/M
2020	Clearlake Capital Partners VI, L.P.	5/22/2020	42,000,000	42,498,706	3,518,078	63,169,973	1.57x	N/M	N/M	N/M
2020	FTV VI, L.P.	3/18/2020	24,000,000	23,561,460	2,756,608	37,498,193	1.71x	30.98%	5.09%	25.89%
2021	CVC Capital Partners VIII, L.P.	12/14/2021	151,421,621	87,025,715	506,310	93,442,148	1.08x	N/M	N/M	N/M
2020	Hg Genesis 9 L.P.	3/2/2021	45,490,698	36,949,670	7,664,042	35,380,064	1.16x	N/M	N/M	N/M
2020	ICG Strategic Equity Co-Investment Fund III LP	11/27/2020	20,555,881	15,192,897	9,145,908	19,673,027	1.90x	N/M	N/M	N/M
2020	NYC-Northbound Emerging Managers Program, L.P.	5/5/2021	192,000,000	64,596,364	1,101,099	89,695,591	1.41x	N/M	N/M	N/M
2021	One Rock Capital Partners III, L.P.	6/21/2021	39,000,000	28,998,422	3,992,437	33,223,252	1.28x	N/M	N/M	N/M

Portfolio Summary by Investments

Teachers' Retirement System of the City of New York
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Active Investments										
2021	Stellex Capital Partners II, L.P.	4/22/2021	46,500,000	28,891,707	1,896,573	29,241,550	1.08x	N/M	N/M	N/M
2021	BC European Capital XI Metro Co-Investment 2, L.P.	4/13/2021	45,000,000	29,210,856	-	33,784,374	1.16x	N/M	N/M	N/M
2020	BC European Capital XI, L.P.	7/30/2021	99,000,000	42,838,150	242,692	45,502,027	1.07x	N/M	N/M	N/M
2020	EQT IX (NO.2) USD SCSP	2/5/2021	83,678,500	82,197,141	8,178,132	89,617,409	1.19x	N/M	N/M	N/M
2020	EQT IX Co-Invest Platform (No. 3) SCSP	4/12/2021	22,821,500	22,658,760	380,528	23,345,001	1.05x	N/M	N/M	N/M
2020	KKR Asian Fund IV SCSP	5/27/2021	94,000,000	34,001,969	260,381	33,242,604	0.99x	N/M	N/M	N/M
2020	T2 Energy Transition Co-Invest	2/19/2021	20,072,973	13,878,253	188,398	18,448,812	1.34x	N/M	N/M	N/M
2020	T2 Energy Transition Fund	3/5/2021	37,478,513	25,884,890	5,178,356	25,443,618	1.18x	N/M	N/M	N/M
2021	The Resolute Fund V, L.P.	9/7/2021	65,500,000	55,059,073	973,626	81,532,383	1.50x	N/M	N/M	N/M
2020	Valor Equity Partners V, L.P.	1/28/2021	23,500,000	19,658,903	56,565	26,933,461	1.37x	N/M	N/M	N/M
2021	Grain Communications Opportunity Fund III, L.P.	4/30/2021	21,000,000	13,330,838	50,845	12,247,651	0.92x	N/M	N/M	N/M
2021	ICG Strategic Equity Co-Investment Fund IV-A LP	4/15/2021	47,000,000	39,053,163	-	45,131,410	1.16x	N/M	N/M	N/M
2021	ICG Strategic Equity Fund IV LP	5/21/2021	94,000,000	50,926,146	6,531,730	68,463,857	1.47x	N/M	N/M	N/M
2021	Centerbridge Capital Partners IV, L.P.	12/6/2021	64,000,000	27,377,998	-	42,656,445	1.56x	N/M	N/M	N/M
2021	HarbourVest Centre Street Co-Investment Fund, L.P.	8/12/2021	156,000,000	83,642,006	-	81,290,690	0.97x	N/M	N/M	N/M
2021	Vistria Fund IV, LP	10/14/2021	48,000,000	35,441,882	676,551	36,418,026	1.05x	N/M	N/M	N/M
2021	Apax Digital II L.P.	11/10/2022	45,000,000	1,605,372	-	335,157	0.21x	N/M	N/M	N/M
2021	Ares Corporate Opportunities Fund VI, L.P.	10/13/2021	100,000,000	87,924,485	19,407,688	78,906,207	1.12x	N/M	N/M	N/M
2021	Ares Private Opportunities (NYC), L.P.	9/23/2022	60,000,000	40,731,784	-	42,278,810	1.04x	N/M	N/M	N/M
2021	Centerbridge Capital Partners IV - N Co-Invest, L.P.	10/28/2021	32,000,000	24,318,705	1,453,696	34,196,043	1.47x	N/M	N/M	N/M
2021	Clearlake Capital Partners VII, L.P.	4/26/2022	144,000,000	73,977,761	3,505	76,644,538	1.04x	N/M	N/M	N/M
2021	Insight Partners XII Buyout Annex Fund, L.P.	8/25/2021	32,000,000	20,320,000	-	18,534,812	0.91x	N/M	N/M	N/M
2021	Insight Partners XII, L.P.	8/27/2021	96,000,000	66,676,775	106,087	57,390,095	0.86x	N/M	N/M	N/M
2021	KKR North America Fund XIII SCSP	5/5/2022	160,000,000	53,621,055	-	48,648,760	0.91x	N/M	N/M	N/M
2021	Warburg Pincus Financial Sector II, L.P.	7/26/2021	84,500,000	33,215,976	547,466	42,120,630	1.28x	N/M	N/M	N/M
2021	Permira VIII	3/20/2023	139,486,524	21,275,411	-	20,428,629	0.96x	N/M	N/M	N/M
2021	Reverence Capital Partners Opportunities Fund V (FOO) (PE Fund III), L.P.	6/7/2022	13,000,000	2,669,050	29,914	2,660,011	1.01x	N/M	N/M	N/M
2021	Reverence Capital Partners Opportunities Fund V (PE Fund III), L.P.	6/7/2022	35,000,000	7,875,910	80,540	7,139,954	0.92x	N/M	N/M	N/M
2021	TPG Rise Climate Co-Invest, L.P.	3/2/2022	91,666,667	23,009,260	-	32,714,295	1.42x	N/M	N/M	N/M
2021	TPG Rise Climate, L.P.	6/14/2022	45,833,333	12,379,134	235,530	14,393,325	1.18x	N/M	N/M	N/M
2022	FTV VII, L.P.	1/14/2022	53,036,100	20,153,718	-	19,882,202	0.99x	N/M	N/M	N/M
2022	Green Equity Investors IX, L.P.	N/A	120,000,000	-	-	(213,979)	N/A	N/A	N/A	N/A
2022	Raine Partners IV LP	N/A	32,000,000	-	-	(919,912)	N/A	N/A	N/A	N/A
2022	Growth VII-Centre, L.P.	3/21/2022	11,933,120	3,493,522	-	3,488,913	1.00x	N/M	N/M	N/M
2022	WCAS XIV N Co-Invest, L.P.	N/A	32,000,000	-	-	-	N/A	N/A	N/A	N/A
2022	WCAS XIV, L.P.	12/27/2022	96,000,000	8,682,807	-	5,690,739	0.66x	N/M	N/M	N/M
2022	EQT X Co-Invest	12/9/2022	36,000,000	6,553,936	-	6,520,111	0.99x	N/M	N/M	N/M
2022	EQT X USD SCSP	12/2/2022	108,000,000	1,806,118	1,806,118	(952,026)	0.47x	N/M	N/M	N/M
2022	GEI IX Co-invest N, L.P.	N/A	40,000,000	-	-	-	N/A	N/A	N/A	N/A
2022	Hg Genesis 10 L.P.	9/23/2022	68,351,692	875,055	-	812,583	0.93x	N/M	N/M	N/M
2022	Hg N1 Co-Invest L.P.	6/30/2022	24,000,000	7,871,157	-	8,769,470	1.11x	N/M	N/M	N/M
2022	Hg Saturn 3, L.P.	7/5/2022	48,000,000	482,630	-	1,068,724	2.21x	N/M	N/M	N/M
2004	LCP X Co-Invest Partners B, L.P.	6/29/2022	32,000,000	6,309,556	-	7,680,621	1.22x	N/M	N/M	N/M
2022	Lexington Capital Partners X, L.P.	N/A	96,000,000	-	-	3,173,912	N/A	N/A	N/A	N/A
2022	LightBay Investment Partners II	9/29/2022	30,000,000	2,684,795	-	2,250,460	0.84x	N/M	N/M	N/M
2022	Nordic Capital Fund XI, L.P.	N/A	87,022,735	-	-	(934,255)	N/A	N/A	N/A	N/A
2022	PECP VI Co-Investment, L.P.	N/A	50,750,000	-	-	-	N/A	N/A	N/A	N/A
2022	Platinum Equity Capital Partners VI, L.P.	12/12/2022	152,250,000	11,481,864	1,337,742	8,001,891	0.81x	N/M	N/M	N/M
2022	Thoma Bravo Co-Invest Opportunities XV-1, L.P.	6/10/2022	40,000,000	20,940,771	-	20,455,207	0.98x	N/M	N/M	N/M
2022	Thoma Bravo Fund XV, L.P.	6/10/2022	120,000,000	64,456,646	79,106	64,034,127	0.99x	N/M	N/M	N/M

Portfolio Summary by Investments

Teachers' Retirement System of the City of New York
Private Equity Portfolio
As of March 31, 2023 (in USD)

Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Active Investments										
2022	Apax XI, L.P.	N/A	128,000,000	-	-	(1,140,446)	N/A	N/A	N/A	N/A
2022	N11 Co-Investment, SCSp	N/A	38,290,003	-	-	-	N/A	N/A	N/A	N/A
2022	Warburg Pincus Global Growth 14, L.P.	8/15/2022	91,740,000	18,793,331	289,499	17,972,224	0.97x	N/M	N/M	N/M
2022	WPGG 14 Co-Invest-N, L.P.	9/9/2022	55,050,000	5,566,404	-	5,455,572	0.98x	N/M	N/M	N/M
2022	Integrum Capital Partners LP	12/2/2022	20,000,000	1,394,276	3,749,543	698,737	3.19x	N/M	N/M	N/M
2022	Integrum NYC Co-Invest LP	N/A	12,000,000	-	-	-	N/A	N/A	N/A	N/A
2022	KKR European Fund VI (USD) SCSp	N/A	81,000,000	-	-	(1,253,050)	N/A	N/A	N/A	N/A
2023	Apollo Investment Fund X, L.P.	N/A	120,000,000	-	-	(1,899,440)	N/A	N/A	N/A	N/A
2023	Apollo Investment Fund X, L.P. - Side Car	N/A	40,000,000	-	-	-	N/A	N/A	N/A	N/A
2023	Bridgepoint Europe VII Co-Invest (NYC)	N/A	29,098,227	-	-	-	N/A	N/A	N/A	N/A
2023	Bridgepoint Europe VII L.P.	N/A	58,196,454	-	-	(996,420)	N/A	N/A	N/A	N/A
2023	Valor Equity Partners VI, L.P.	3/31/2023	43,500,000	7,552,090	-	6,535,288	0.87x	N/M	N/M	N/M
2023	Vista Co-Invest Fund 2022- 4	3/31/2023	40,000,000	8,270,379	-	8,270,746	1.00x	N/M	N/M	N/M
2023	Vista Equity Partners Fund VIII, L.P.	3/28/2023	120,000,000	16,176,306	-	14,250,821	0.88x	N/M	N/M	N/M
Total Active Investments			14,007,790,633	10,406,076,808	8,766,588,963	8,041,763,250	1.62x			
Total Exited Investments			1,167,362,862	1,199,654,490	1,558,155,029	-	1.30x			
Total Portfolio¹			15,175,153,495	\$11,605,731,297	\$10,324,743,992	\$8,041,763,250	1.58x	11.76%	10.42%	1.34%
Vintage Year	Investment	First Drawdown	Committed Capital	Paid-In Capital	Distributed Capital	Market Value	Multiple	IRR ²	PME Benchmark ³	PME Spread ⁴
Commitments Closed Subsequent to March 31, 2023										
2023	Ardian Secondary Fund IX, L.P.	N/A	57,800,000	-	-	-	N/A	N/A	N/A	N/A
2023	ASF IX B NYC Co-Invest L.P.	N/A	86,700,000	-	-	-	N/A	N/A	N/A	N/A
2023	Clayton, Dubilier & Rice Fund XII, L.P.	N/A	78,000,000	-	-	-	N/A	N/A	N/A	N/A
2023	EQT Co-Invest Platform (No.15) SCSp	N/A	51,940,099	-	-	-	N/A	N/A	N/A	N/A
2023	EQT Future SCSp	N/A	51,940,099	-	-	-	N/A	N/A	N/A	N/A
2023	New 2ND Capital Fund III, L.P.	N/A	19,800,000	-	-	-	N/A	N/A	N/A	N/A
2023	New 2ND Capital N Sidecar, L.P.	N/A	9,900,000	-	-	-	N/A	N/A	N/A	N/A
Total Commitments Closed Subsequent to as of Date										

*Please note that the NYCTRS - 2012 Emerging Manager Program includes the total commitment amount of \$165.05 million. The Program's original commitment amount of \$175 million was subsequently revised to \$165.05 million, all of which has been committed as of March 31, 2023. The remaining \$9.95 million was reallocated to the NYCTRS - 2015 Emerging Manager Program.

**Please note that the NYCTRS - 2015 Emerging Manager Program includes the total commitment amount of \$198.5 million. The Program's original commitment amount of \$209.95 million, which included the original \$200 million commitment and the \$9.95 million reallocation from the NYCTRS - 2012 Emerging Manager Program, was subsequently revised to \$198.5 million. As of March 31, 2023, all \$198.5 million has been committed, and the remaining \$11.45 million was reallocated to the NYCTRS - 2019 Emerging Manager Program.

***Please note that the NYCTRS - 2019 Emerging Manager Program commitment amount totals \$251.45 million, which includes the Program's original \$240 million commitment and the \$11.45 million reallocation from the NYCTRS - 2015 Emerging Manager Program. As of March 31, 2023, \$50 million has been committed.

¹ Please note that the Total Portfolio is inclusive of liquidated investments in the TRS Portfolio and include sales proceeds from the 2012 Secondary Sale Partnerships.

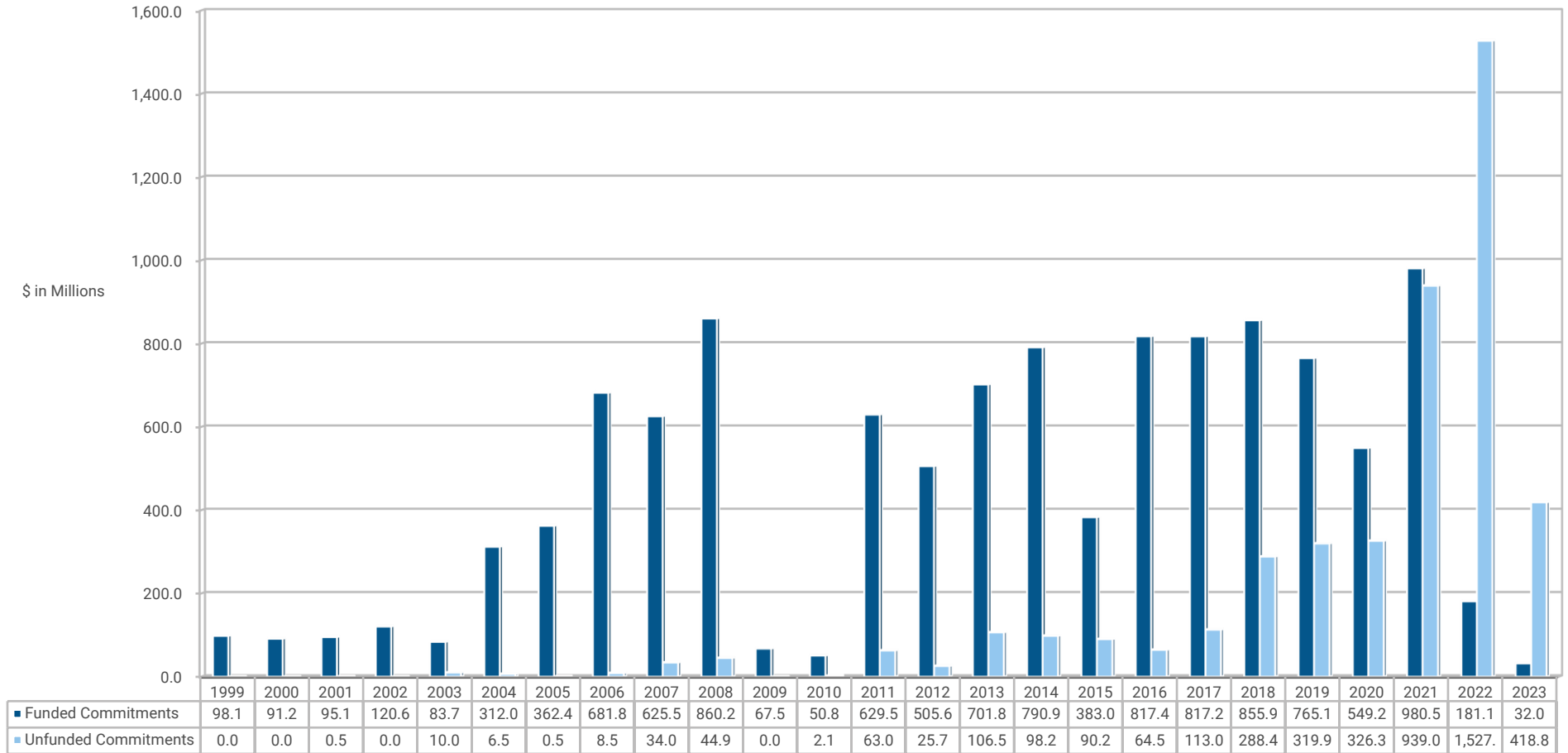
² Performance for funds with less than 8 quarters of activity is not yet meaningful.

³ The total PME is the Russell 3000 Total Return Index and incorporates the PME + methodology for all partnerships where distributions have occurred, and incorporates the Long Nickel methodologies for those partnerships that have not yet had any distributions to date. The fund PME is the Russell 3000 Total Return Index and incorporates the PME+ methodology for all partnerships where distributions have occurred.

⁴ PME Spread is the percentage difference between the IRR and PME Benchmark for each respective partnership.

Note: Where available, March 31, 2023 reported valuations were used. In the absence of March 31, 2023 reported values, market values have been adjusted forward using interim cashflows through March 31, 2023. The IRR calculated in the early years of a fund is not meaningful given the j-curve effect. The aggregate portfolio performance figures for IRR and multiple are as of March 31, 2023.

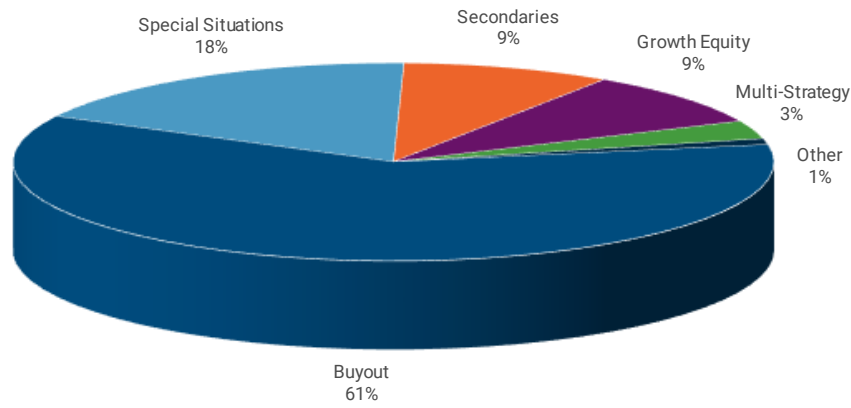
Commitments by Vintage Year



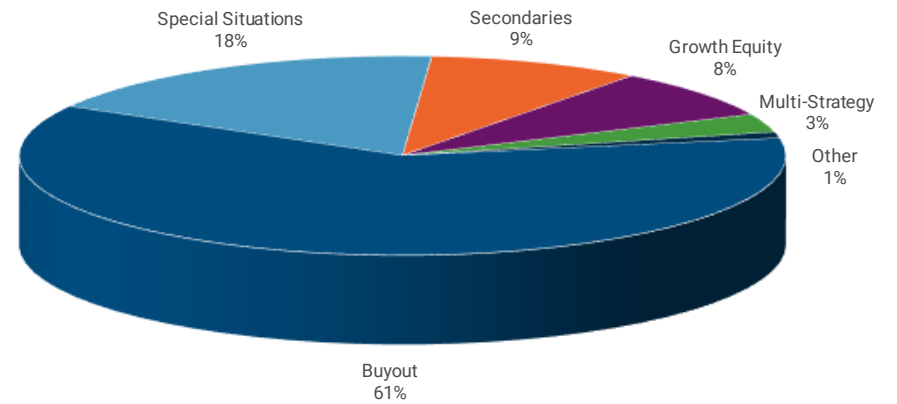
Note: Chart as of 3/31/2023

Portfolio Strategic Diversification

As of March 31, 2023

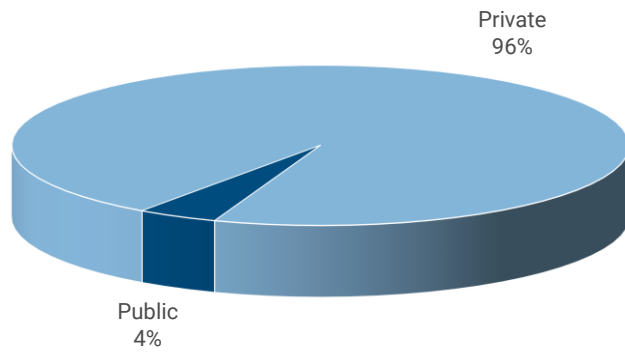


As of December 31, 2022

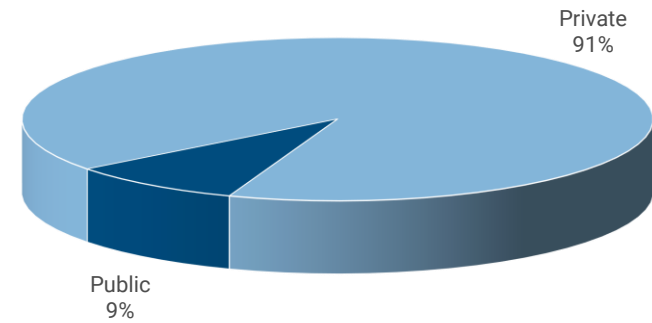


Public vs. Private Holdings

Based on Number of Companies



Based on Reported Market Value



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The PDS and target market determination for the Hamilton Lane Global Private Assets Fund (AUD) can be obtained by calling 02 9293 7950 or visiting our website www.hamiltonlane.com.au.

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Real Estate Quarterly Report (Public):



Quarterly Real Estate Report

For the period ended March 31, 2023

Prepared at the Specific Request of:

Client:

New York City Public Pension Funds

Portfolio:

NYC TRS - Real Estate



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All data is as of March 31, 2023 unless otherwise noted.

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

EXECUTIVE SUMMARY

StepStone Group LP (“StepStone”) was engaged by Teachers' Retirement System of the City of New York (“NYCTRS”) to provide Real Estate services for prospective investment opportunities, as well as portfolio management on NYCTRS' portfolio (the “Portfolio”). Inception date of the Portfolio was on December 2002.

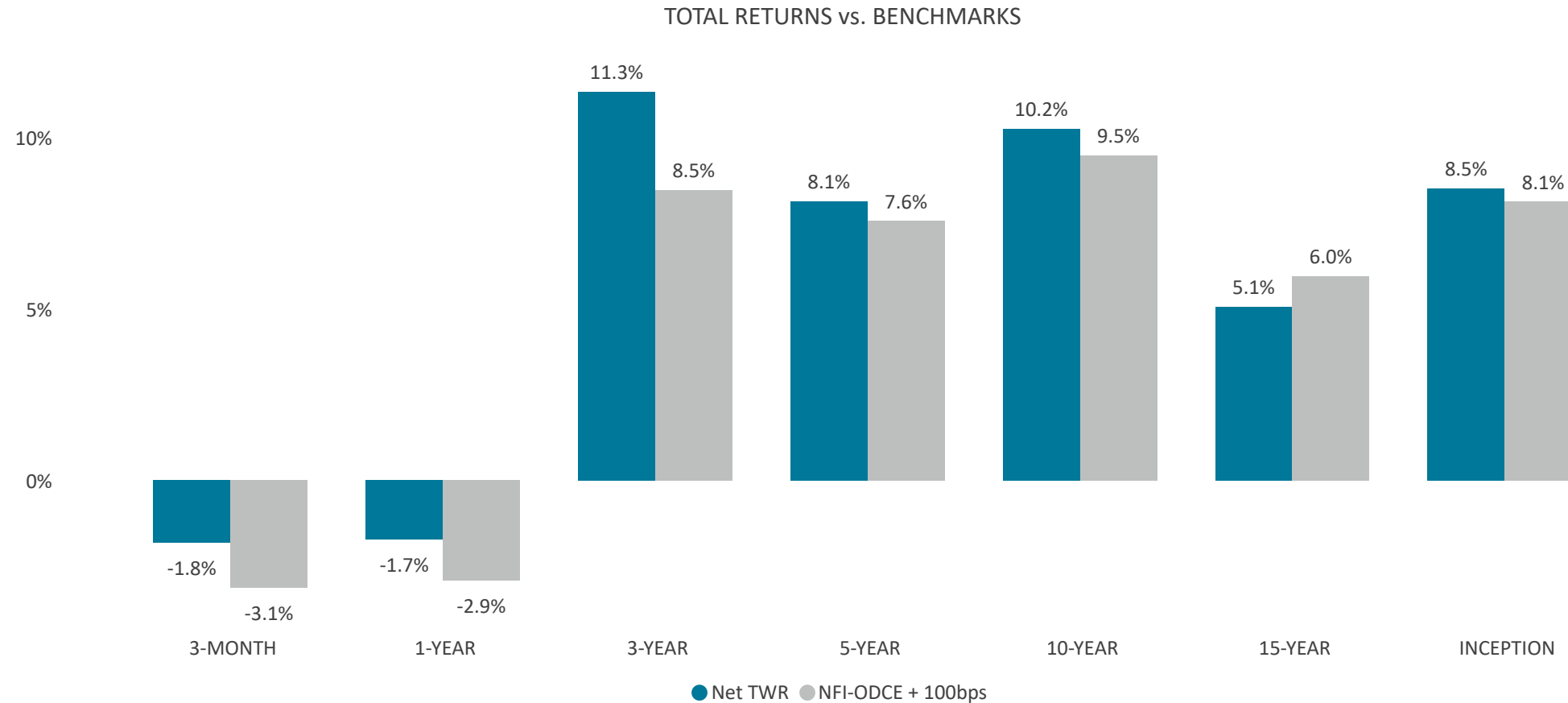
The following table illustrates the Portfolio's since inception investment performance as of March 31, 2023, as well as the quarter-over-quarter and year-over-year change.

\$US in millions ▲	INCEPTION TO CURRENT QUARTER	INCEPTION TO PRIOR QUARTER	INCEPTION TO PRIOR YEAR	QUARTERLY Δ	ANNUAL Δ
Number of Managers	58	57	56	1	2
Number of Investments	115	114	107	1	8
Number of Active Managers	48	47	47	1	1
Number of Active Investments	101	100	94	1	7
Active Investments Only					
Committed Capital	\$9,002.1	\$8,849.9	\$7,859.1	\$152.2	\$1,143.0
Unfunded Commitment	3,187.4	3,187.1	2,746.4	\$0.3	\$441.1
Total Exposure	8,581.9	8,613.1	7,903.2	(\$31.3)	\$678.7
Total Contributed	6,648.2	6,475.4	5,772.2	\$172.8	\$876.0
Total Distributed	3,831.4	3,726.3	3,277.3	\$105.1	\$554.1
Total Market Value	5,394.4	5,426.0	5,156.8	(\$31.6)	\$237.6
Since Inception G/L	2,577.6	2,677.0	2,661.9	(99.3)	(84.3)
Since Inception Returns, Includes Liquidated Investments					
Net DPI	0.63x	0.63x	0.63x	0.00x	0.00x
Gross TVM	1.49x	1.51x	1.57x	(0.03x)	(0.08x)
Gross IRR	12.2%	12.7%	13.5%	(48 bps)	(134 bps)
Net TVM	1.39x	1.41x	1.46x	-0.02x	-0.07x
Net IRR	9.3%	9.8%	10.6%	(47 bps)	(130 bps)

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

The following table illustrates the Portfolio's periodic returns as of March 31, 2023 compared to benchmarks. The NFI-ODCE contains data from 26 core, open-ended funds investing in the United States. For the current quarter, the NFI-ODCE contained performance data from 3,544 investments, totaling over \$341.4 billion of gross real estate assets.



The NFI-ODCE differs from the NCREIF Property Index because it includes leverage, reports returns gross and net of fees, and all reporting funds must qualify according to the NFI-ODCE diversification and other standards (e.g., fund level leverage below 40%). The referenced benchmark is shown for general market comparison and is not meant to represent any particular fund. An investor cannot directly invest in the NFI-ODCE index. Moreover, the benchmark does 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 following charts outline the Portfolio's diversification by strategy and geographic regions, the limits of which are governed by the Policy Statement and Annual Plan. Funds that do not yet have NAVs are not included in the Allocation by Region analysis.

As of March 31, 2023. In USD millions.

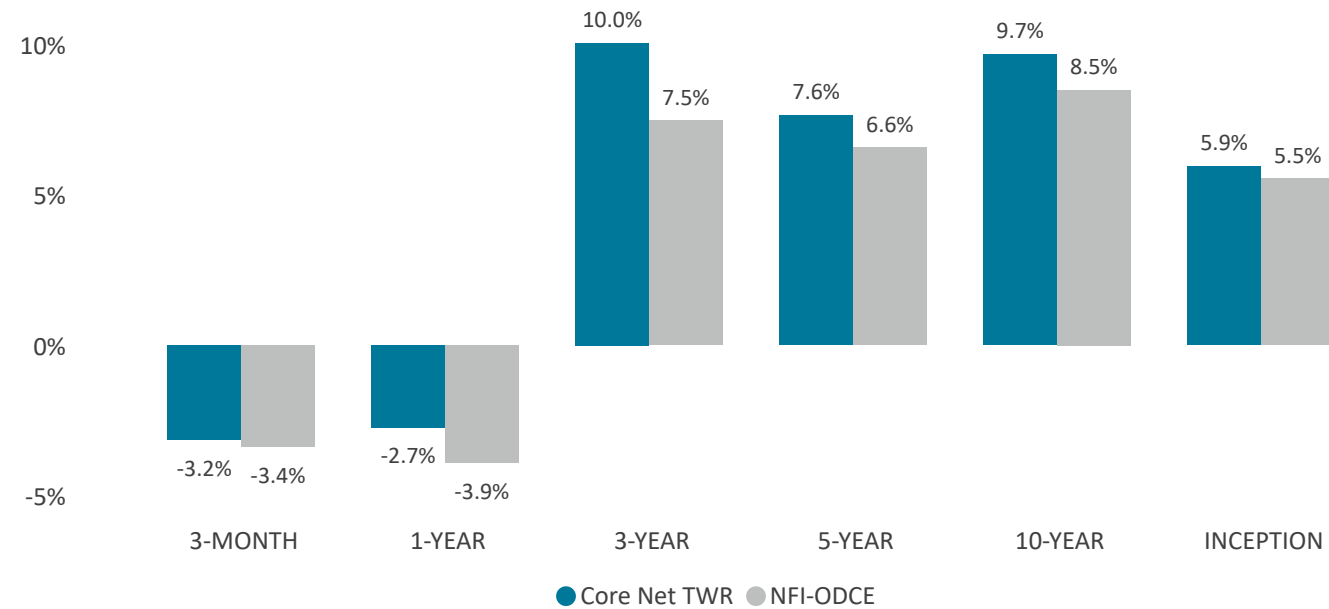
Allocation by Strategy	Net Asset Value	Net Asset Value (%)	Unfunded	Unfunded (%)	Total Exposure	Total Exposure (%)
Core	3,097.7	57%	351.6	11%	3,449.2	40%
Non-Core	2,296.8	43%	2,835.9	89%	5,132.6	60%
Total	5,394.4	100%	3,187.4	100%	8,581.9	100%
Emerging	201.0	4%	126.9	4%	327.9	4%
Debt	568.6	11%	163.9	5%	732.5	9%

Allocation by Region	Net Asset Value	%	Unfunded	%	Total Exposure	%
North America	4,748.6	88%	2,806.4	88%	7,554.5	88%
Europe	471.7	9%	278.7	9%	750.5	9%
Asia	151.6	3%	89.6	3%	241.2	3%
Rest of World	22.5	0%	13.3	0%	35.7	0%
Total	5,394.4	100%	3,187.4	100%	8,581.9	100%

CORE AND NON-CORE PERFORMANCE VS BENCHMARKS

The following graphs measure the Portfolio's Core and Non-Core performance against chosen benchmarks. The Portfolio's Core Time Weighted Returns are benchmarked against the NFI-ODCE. The Portfolio uses IRR by vintage year as a measurement of its Non-Core performance. A public market equivalent (PME) of 60% Russell 3000 and 40% Barclays Capital Aggregate Bond Index is used to measure the Portfolio's Non-Core Performance. The PME is calculated using the Portfolio cash flows to produce a return that would have been earned if the Portfolio cash flows were invested in the PME. Core Portfolio inception date is 4Q 2006.

CORE NET TWR vs. BENCHMARK



	2002	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-Core PME	9.8%	8.2%	8.0%	7.9%	8.0%	9.9%	11.0%	8.6%	9.2%	8.5%	7.6%	8.1%	7.9%	7.8%	7.3%	6.5%	4.2%	2.5%	(3.3%)	17.9%	NM
Non-Core Net IRR	11.1%	25.1%	(10.4%)	1.9%	8.2%	1.7%	9.2%	11.9%	17.0%	14.0%	8.4%	10.7%	8.6%	13.6%	11.9%	24.8%	14.8%	18.8%	3.1%	NM	NM

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

NON-CORE NET IRR VS PME RETURNS

The following graph measures the Portfolio's Non-Core performance against chosen benchmarks. The Portfolio uses IRR by vintage year as a measurement of its Non-Core performance. A public market equivalent (PME) of 60% Russell 3000 and 40% Barclays Capital Aggregate Bond Index is used to measure the Portfolio's Non-Core Performance. The PME is calculated using the Portfolio cash flows to produce a return that would have been earned if the Portfolio cash flows were invested in the PME.

Vintage Year	First Quartile	Second Quartile	Third Quartile	Quartile Ranking	Net IRR	PME+
2002	29.2%	19.0%	8.1%	Third	11.1%	9.8%
2004	15.4%	3.7%	(3.7%)	First	25.1%	8.2%
2005	4.7%	1.4%	(7.6%)	Fourth	(10.4%)	8.0%
2006	3.8%	(2.3%)	(7.8%)	Second	1.9%	7.9%
2007	7.1%	2.9%	(5.6%)	First	8.2%	8.0%
2008	10.9%	5.8%	(2.2%)	Third	1.7%	9.9%
2009	13.5%	9.8%	5.5%	Third	9.2%	11.0%
2010	16.2%	11.2%	6.4%	Second	11.9%	8.6%
2011	18.0%	12.2%	5.8%	Second	17.0%	9.2%
2012	17.9%	11.5%	8.9%	Second	14.0%	8.5%
2013	15.4%	10.8%	3.9%	Third	8.4%	7.6%
2014	13.5%	7.1%	1.7%	Second	10.7%	8.1%
2015	13.7%	9.1%	2.7%	Third	8.6%	7.9%
2016	14.7%	9.7%	3.6%	Second	13.6%	7.8%
2017	18.3%	11.8%	5.1%	Second	11.9%	7.3%
2018	17.2%	11.6%	7.2%	First	24.8%	6.5%
2019	17.0%	10.0%	1.5%	Second	14.8%	4.2%
2020	24.0%	13.2%	2.0%	Second	18.8%	2.5%
2021	20.0%	12.0%	0.0%	Third	3.1%	(3.3%)
2022	4.3%	(9.0%)	(26.1%)	NM	NM	17.9%
2023	(11.7%)	(16.2%)	(34.6%)	NM	NM	NM

PORTFOLIO PROFILE

New York City Employees Retirement Systems has allocated 7.5% of the total plan to Real Estate. The Real Estate Portfolio's objective is to generate a total net return that exceeds the Benchmark NFI-ODCE +100 bps total net return measured over full market cycles. Note: Beginning in Q1-2020, Total, Core/Core-Plus, and Non-Core real estate allocations changed to 7.5%, 3.5%, and 4%, respectively.

As of March 31, 2023. In USD millions.

NYC TRS - Real Estate	
Total Plan Assets (\$)	\$93,460,469,654
Real Estate Allocation (%)	7.5%
Real Estate Allocation (\$)	7,009,535,224
Real Estate Core Allocation (%)	3.5%
Real Estate Core Allocation (\$)	3,271,116,438
Real Estate Non-Core Allocation (%)	4.0%
Real Estate Non-Core Allocation (\$)	3,738,418,786
Number of Active Managers	48
Number of Active Investments	101

Total Portfolio - Active Investments Only	
Net Asset Value	\$5,394,428,549
Unfunded	3,187,441,081
Commitment	9,002,083,572
Total Exposure	8,581,869,631
Total Exposure as a % of Target	122.4%
NAV as a % of Target	77.0%
% Plan Assets (NAV / Exposure)	5.8% / 9.2%

Core / Core-Plus - Active Investments Only	
Net Asset Value	\$3,097,653,183
Unfunded	351,569,276
Commitment	2,833,635,733
Total Exposure	3,449,222,459
Total Exposure as a % of Target	105.4%
NAV as a % of Target	94.7%
% Plan Assets (NAV / Exposure)	3.3% / 3.7%

Non-Core - Active Investments Only	
Net Asset Value	\$2,296,775,366
Unfunded	2,835,871,806
Commitment	6,168,447,839
Total Exposure	5,132,647,172
Total Exposure as a % of Target	137.3%
NAV as a % of Target	61.4%
% Plan Assets (NAV / Exposure)	2.5% / 5.5%

Net Returns - Active and Liquidated Investments

Quarterly Net TWR	-1.8%
1-Year Net TWR	-1.7%
2-Year Net TWR	13.0%
3-Year Net TWR	11.3%
5-Year Net TWR	8.1%
10-Year Net TWR	10.2%
15-Year Net TWR	5.1%
ITD Net TWR	8.5%
NFI-ODCE +100bps	8.1%
Net IRR	9.3%
Net TVM	1.4x

Category	Requirement	Portfolio Status
Benchmark	Comprised of NFI-ODCE (Net) +100 bps	Portfolio returns outperform the benchmark over the quarter-to-date, one, three, five, and ten-year time periods, while underperforming the fifteen-year benchmark.
Portfolio Construction	Core/Core-Plus (3%)	Market value plus unfunded commitment place the Portfolio at 40.2% Core/Core-Plus and 59.8% Non-Core. Based on market value, the Portfolio is 57.4% Core/Core-Plus and 42.6% Non-Core.
	Non-Core (4%)	
Real Estate Allocation	Target 7%	Market value plus committed capital place the Portfolio at 9.2% of total plan assets. Based on market value, the Portfolio is 5.8% of total plan assets' market value.
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	All property type allocations are compliant
Geographic Diversification	Diversified geographically; Max 25% Ex-U.S.	All geographic allocations are compliant.
LTV	65.0%	The leverage (41.4%) is compliant.
Manager Exposure	20% of real estate allocation	All manager allocations are compliant.

Note: Beginning in Q1-2020, Total, Core/Core-Plus, and Non-Core real estate allocations changed to 7%, 3%, and 4%, respectively.

PORTFOLIO REVIEW

Quarterly Highlights

Cash Flow Activity

During the first quarter of 2023, the Portfolio made \$172.8 million of contributions and received \$105.1 million of distributions, for a net cash outflow of (\$67.7) million, compared to a net cash outflow of (\$39.7) million during the fourth quarter of 2022. Contributions decreased (14.1%) from the prior quarter and decreased (38.5%) from the first quarter of 2022. The last twelve month (“LTM”) quarterly average of the Portfolio's contributions is \$229.0 million. Distributions decreased (34.9%) from the prior quarter and decreased (26.6%) from the first quarter of 2022. The LTM quarterly average of the Portfolio's distributions is \$144.9 million.

Recent Portfolio Activity

During the first quarter of 2023, net of cash flow activity, the Portfolio's value decreased (\$99.3) million, or (1.8%) from the prior quarter. During the LTM period, net of cash flow activity, the Portfolio's value increased \$573.9 million, or 11.1%, from the first quarter of 2022.

New Investment Commitments

During the first quarter of 2023, the Portfolio closed on 1 new investments, totaling \$150.0 million of committed capital.

Fund Name	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Waterton Residential Property Venture XV	Jan, 2023	Non-Core	US	150.0

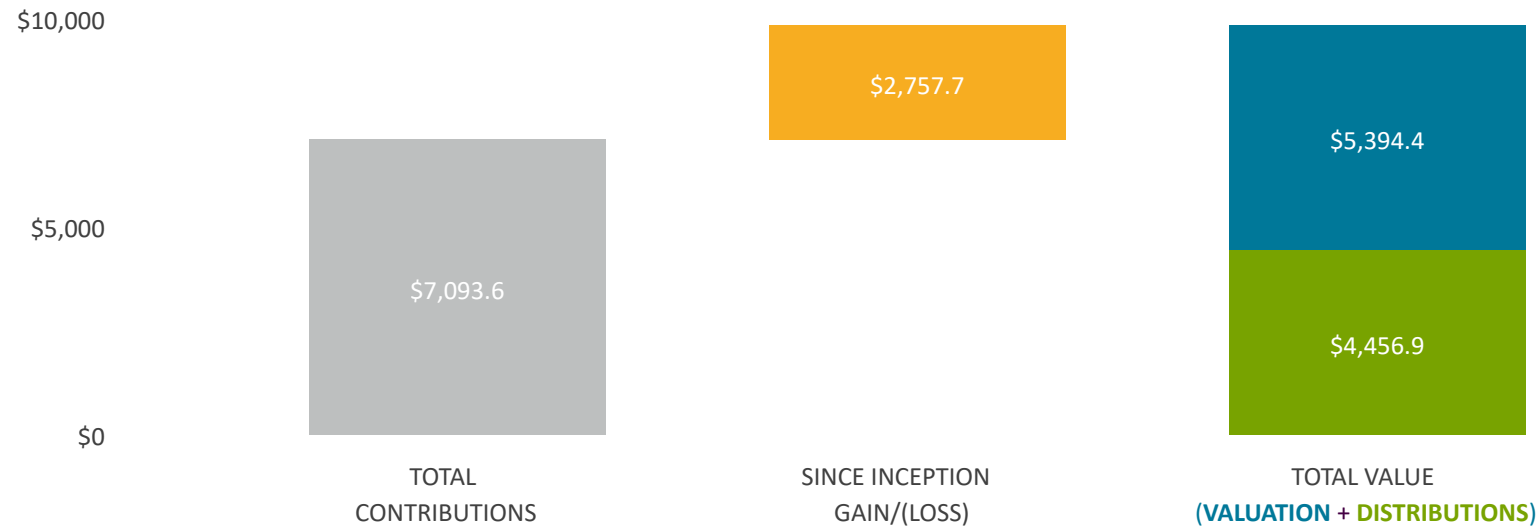
Subsequent Investment Commitments

During the second quarter of 2023, the Portfolio closed on 1 new investments.\$120.1

Fund Name	Month Closed	Sub-Strategy	Geographic Focus	Committed Capital
Blackstone Real Estate Partners Europe VII SCSp	Jun, 2023	Non-Core	Europe	120.1

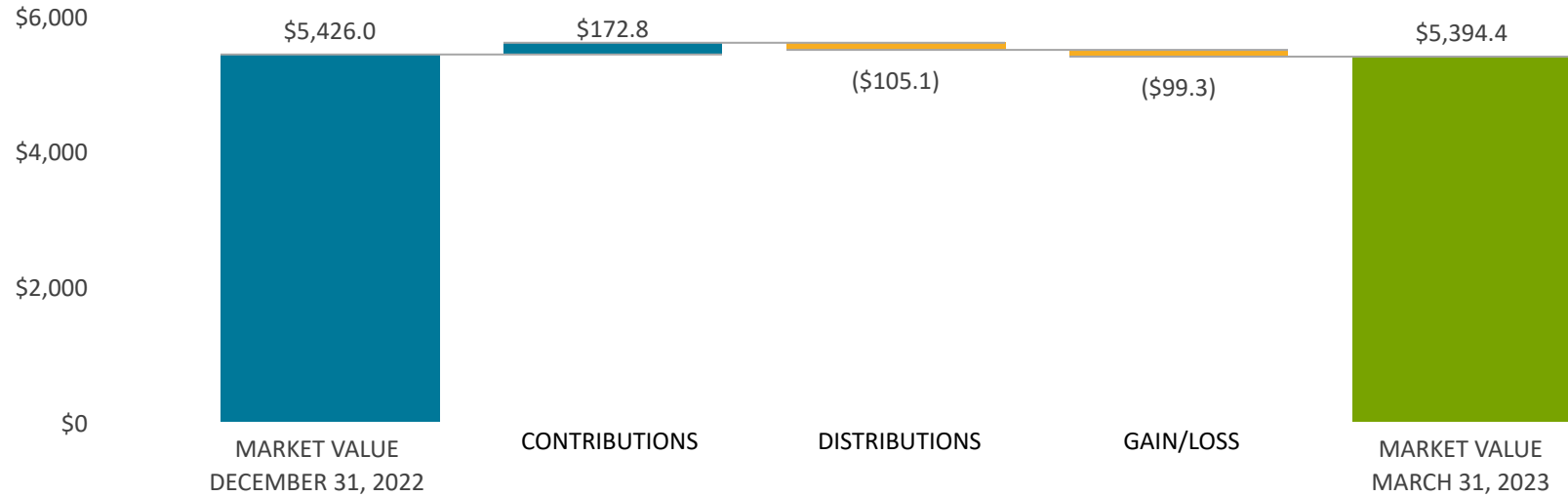
SINCE INCEPTION VALUATION MOVEMENT

Through March 31, 2023, NYC TRS - Real Estate's portfolio has generated a gain of \$2,757.7 million.



QUARTERLY VALUATION MOVEMENT

During the first quarter of 2023, the value of NYC TRS - Real Estate's portfolio decreased by (\$99.3) million, or (1.8%).



Quarterly Top Investment Gains and Losses

As of March 31, 2023. In USD millions.

INVESTMENT	\$	%
ElmTree U.S. Net Lease Fund IV, L.P.	\$6.7	11%
H2 Special Opportunities IV	\$3.7	3%
Brookfield Strategic Real Estate Partners III, L.P.	\$1.9	1%
Blackstone Real Estate Partners Europe VI L.P.	\$1.9	4%
Cerberus Institutional Real Estate Partners V SMA	\$1.5	2%
Largest Increases in Value	\$15.7	4%

INVESTMENT	\$	%
Cortland Growth and Income, L.P.	(\$20.3)	(11%)
Jamestown Premier Property Fund	(\$13.1)	(28%)
Brookfield Premier Real Estate Partners	(\$11.5)	(4%)
RREEF America REIT II	(\$7.0)	(6%)
DRA Growth and Income Fund VIII	(\$5.8)	(23%)
Largest Decreases in Value	(\$57.7)	(8%)

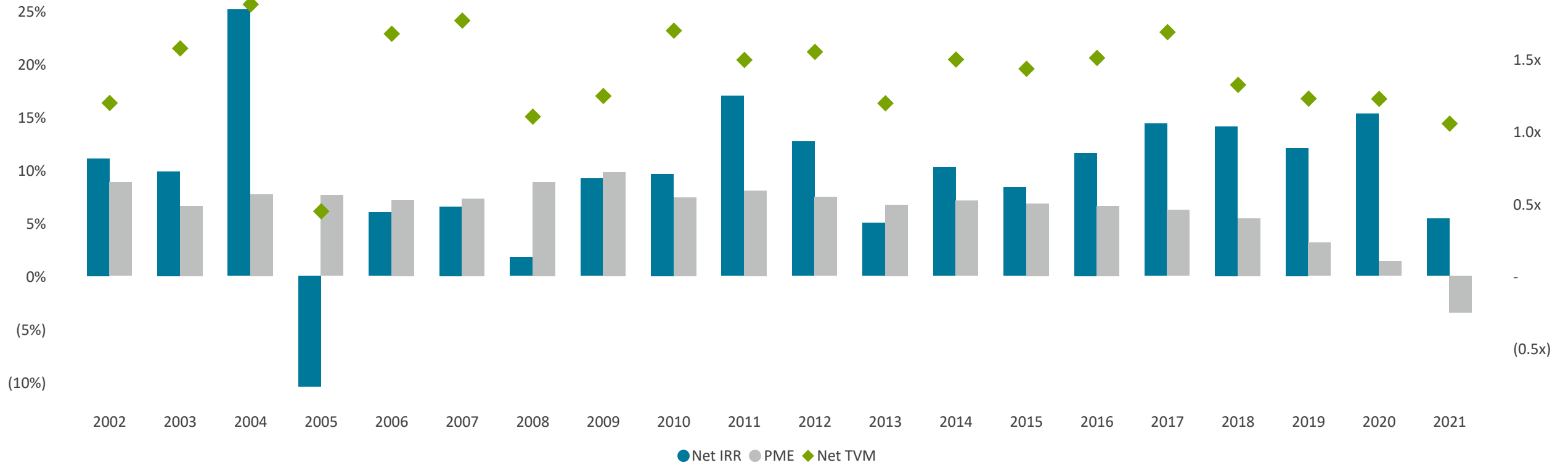
PERFORMANCE BY VINTAGE YEAR

The following table and chart illustrate the Portfolio's since inception investment performance by vintage year, relative to a blended PME benchmark comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at a 50/50 ratio. The PME benchmark is used to measure the Portfolio's performance, using the respective vintage year Portfolio cash flows to produce a return that would have been earned if those same vintage year cash flows were invested in the PME.

As of March 31, 2023. In USD millions.

Vintage Year	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	Net TVM	Net DPI	Net IRR	PME Returns	PME Spread
2002	15.0	13.7	16.4	0.0	0.0	0.0	1.2x	1.2x	11.1%	8.8%	2.3%
2003	15.0	15.0	23.6	0.0	0.0	0.0	1.6x	1.6x	9.8%	6.6%	3.3%
2004	245.0	222.7	417.8	0.2	(0.0)	0.2	1.9x	1.9x	25.1%	7.7%	17.4%
2005	30.0	27.0	12.0	0.0	0.0	0.0	0.4x	0.4x	(10.4%)	7.6%	(18.0%)
2006	353.0	493.5	465.0	360.7	0.5	361.2	1.7x	0.9x	6.0%	7.2%	(1.2%)
2007	250.6	309.9	278.5	268.2	12.3	280.5	1.8x	0.9x	6.5%	7.3%	(0.8%)
2008	171.4	140.1	137.7	16.4	10.0	26.4	1.1x	1.0x	1.7%	8.9%	(7.1%)
2009	90.0	103.6	122.1	6.7	4.3	11.0	1.2x	1.2x	9.2%	9.8%	(0.6%)
2010	129.0	128.6	69.7	148.3	0.0	148.3	1.7x	0.5x	9.6%	7.4%	2.2%
2011	110.0	116.6	167.3	6.7	22.7	29.4	1.5x	1.4x	17.0%	8.0%	8.9%
2012	330.0	239.1	327.8	42.4	62.1	104.5	1.5x	1.4x	12.7%	7.4%	5.2%
2013	561.0	513.2	420.9	191.3	55.0	246.3	1.2x	0.8x	5.0%	6.7%	(1.7%)
2014	365.0	375.6	370.1	191.5	61.4	253.0	1.5x	1.0x	10.2%	7.1%	3.1%
2015	258.2	261.1	124.8	248.8	22.4	271.2	1.4x	0.5x	8.3%	6.8%	1.5%
2016	652.4	690.0	415.5	623.7	40.4	664.1	1.5x	0.6x	11.6%	6.6%	5.0%
2017	554.0	625.4	325.8	727.7	24.3	752.0	1.7x	0.5x	14.4%	6.2%	8.2%
2018	332.4	326.1	208.9	221.5	54.1	275.6	1.3x	0.6x	14.1%	5.4%	8.7%
2019	1,177.2	958.0	258.5	914.9	392.4	1,307.3	1.2x	0.3x	12.1%	3.1%	8.9%
2020	901.8	701.5	237.3	620.7	235.9	856.5	1.2x	0.3x	15.3%	1.4%	13.9%
2021	1,766.6	758.7	51.8	746.6	1,041.8	1,788.3	1.1x	0.1x	5.4%	(3.5%)	8.8%
2022	1,067.0	74.2	5.3	58.0	998.1	1,056.1	0.9x	0.1x	NM	16.4%	NM
2023	150.0	0.0	0.0	0.0	150.0	150.0	-	-	NM	NM	NM
TOTAL	9,524.4	7,093.6	4,456.9	5,394.4	3,187.4	8,581.9	1.4x	0.6x	9.3%	6.7%	2.6%

PERFORMANCE BY VINTAGE YEAR (CONT.)



The PME Spread is calculated as the IRR minus the blended PME. Performance of funds that are less than one year old are not meaningful. Note that Russell 3000 and Barclays Capital Aggregate Bond Index data are continuously updated and are therefore subject to change. Performance of funds that are less than one year old are not meaningful and therefore left blank. Blended PME benchmark comprised of Russell 3000 and Barclays Capital Aggregate Bond Index at a 50/50 ratio.

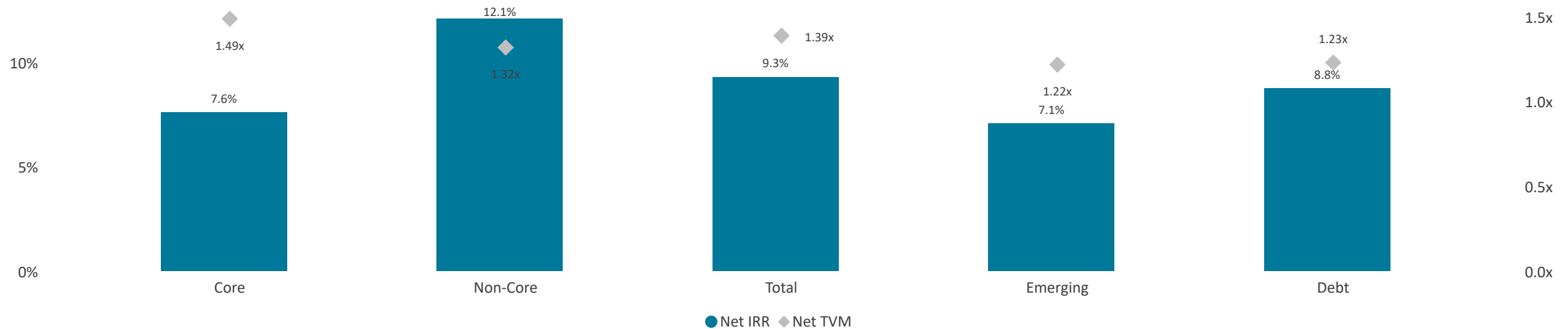
PERFORMANCE BY STRATEGY¹

The following table illustrates the Portfolio's since inception investment performance by strategy and sub-strategy as of March 31, 2023.

As of March 31, 2023. In USD millions.

Strategy	# of Inv	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	Net TVM	Net IRR	PME	PME Spread	Leverage
Core	36	2,863.6	2,912.0	1,237.2	3,097.7	351.6	3,449.2	1.49x	7.6%	5.6%	2.0%	39.1%
Non-Core	79	6,660.8	4,181.6	3,219.7	2,296.8	2,835.9	5,132.6	1.32x	12.1%	7.9%	4.2%	44.6%
Total	115	9,524.4	7,093.6	4,456.9	5,394.4	3,187.4	8,581.9	1.39x	9.3%	6.7%	2.6%	41.4%
Emerging	7	409.9	327.0	197.3	201.0	126.9	327.9	1.22x	7.1%	N/A	N/A	6.6%
Debt	11	1,049.0	930.8	576.4	568.6	163.9	732.5	1.23x	8.8%	N/A	N/A	24.3%

The following chart illustrates the IRR and TVM of the Portfolio's various strategies and sub-strategies side by side. Both metrics are important to measure investment returns. IRR takes into account the time value of money and is generally favored by investors that are more yield driven over shorter investment horizons. The TVM equity multiple is the ratio of distributions plus current market value over the amount of capital contributed.



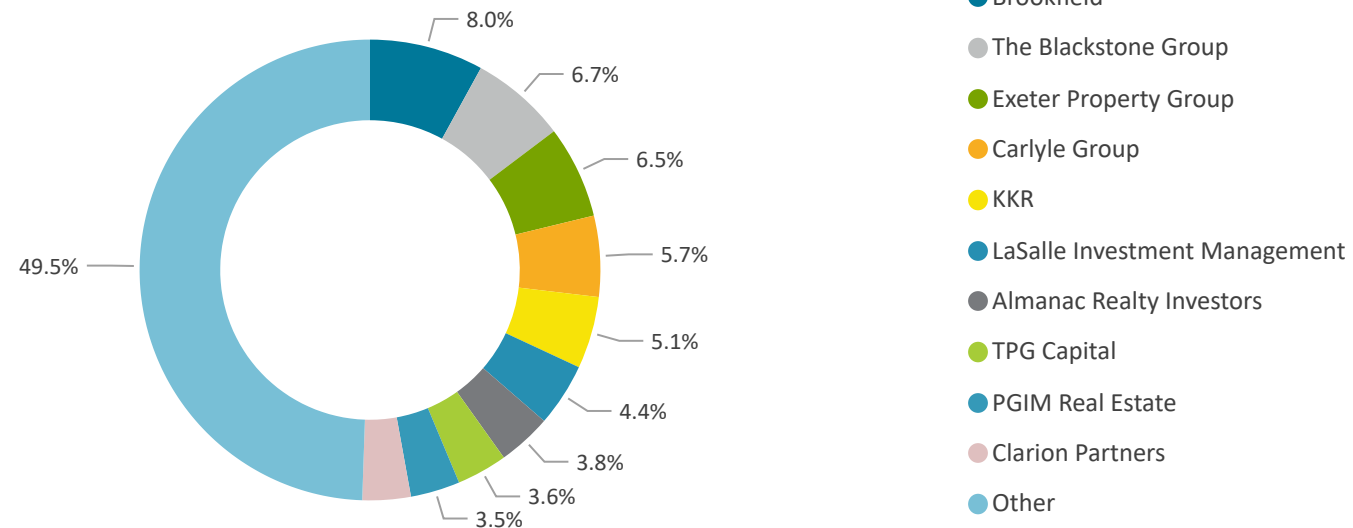
¹Russell 3000 and Barclays Capital Aggregate Bond Index are blended at the ratios of 40/60, 60/40 and 50/50 for the core, non-core and total portfolio PMEs, respectively.

TOP 10 - MANAGER HOLDINGS

As of the first quarter of 2023, the Portfolio is well diversified by manager, with 48 active managers and US\$8.6 billion total exposure.

Manager	No. of Investments	Commitment	Contributions	Distributions	NAV	Unfunded	Exposure	% of Portfolio	Net IRR	Net TVM	Net DPI
Brookfield	4	639.0	576.2	324.5	500.9	185.0	685.9	8.0%	12.3%	1.4x	0.6x
The Blackstone Group	7	615.0	389.8	319.1	274.5	302.3	576.9	6.7%	14.7%	1.5x	0.8x
Exeter Property Group	6	518.8	221.6	90.4	259.7	297.0	556.8	6.5%	21.7%	1.6x	0.4x
Carlyle Group	5	471.8	368.7	305.5	263.7	223.2	486.8	5.7%	13.1%	1.5x	0.8x
KKR	5	646.4	505.5	338.2	302.1	132.1	434.1	5.1%	11.8%	1.3x	0.7x
LaSalle Investment Management	3	334.0	212.1	40.1	259.0	121.6	380.6	4.4%	8.9%	1.4x	0.2x
Almanac Realty Investors	8	455.0	224.6	157.2	138.2	184.8	323.1	3.8%	10.5%	1.3x	0.7x
TPG Capital	2	307.0	80.6	0.1	77.7	227.1	304.8	3.6%	(4.4%)	1.0x	0.0x
PGIM Real Estate	4	266.9	204.2	115.4	225.7	71.6	297.3	3.5%	6.0%	1.7x	0.6x
Clarion Partners	1	98.0	142.6	34.4	290.9	0.0	290.9	3.4%	19.6%	2.3x	0.2x
TOTAL - Top 10 Managers	45	4,351.9	2,926.0	1,724.7	2,592.5	1,744.8	4,337.2	50.5%	11.5%	1.5x	0.6x

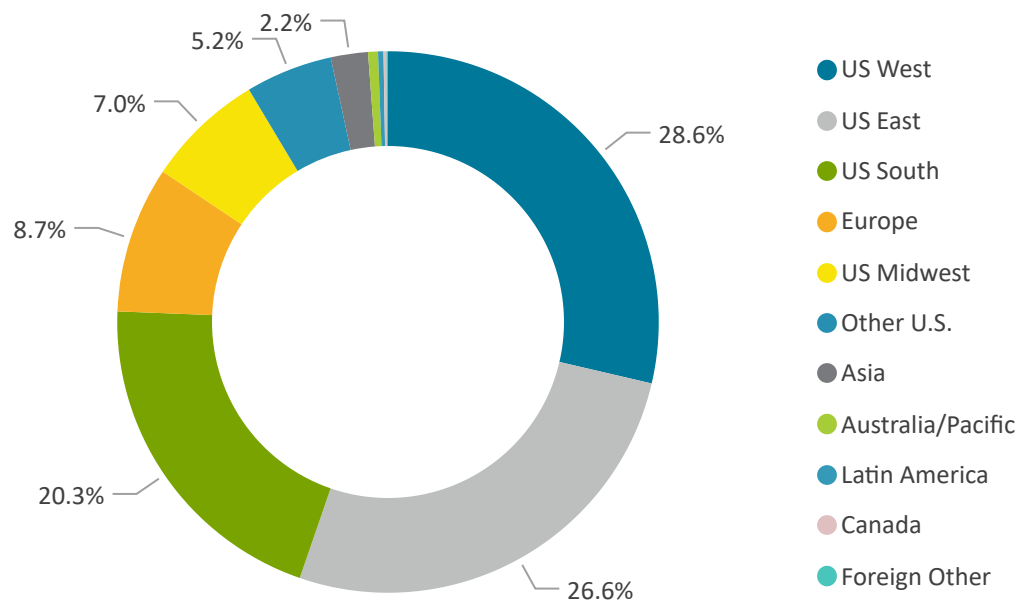
As of March 31, 2023. In USD millions.



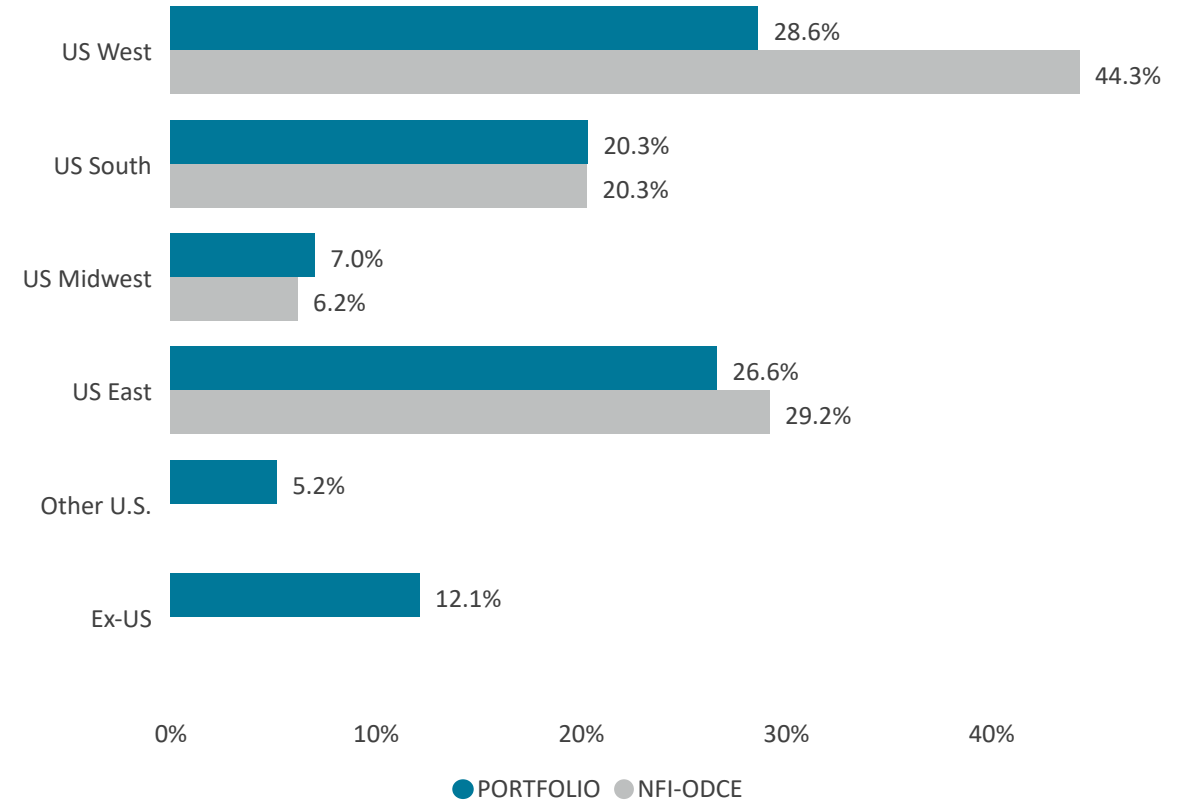
PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - GEOGRAPHY

The following chart illustrates the portfolio's current exposure vs. benchmarks as of March 31, 2023.

GEOGRAPHIC DIVERSIFICATION



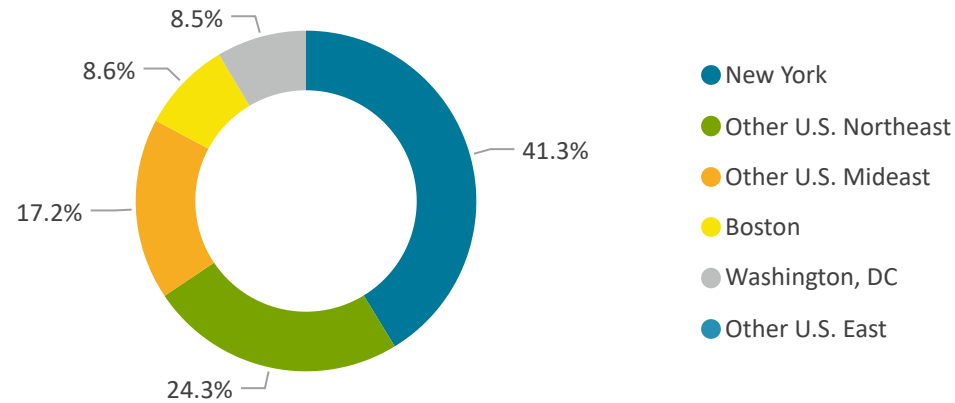
GEOGRAPHIC EXPOSURE VS. BENCHMARK



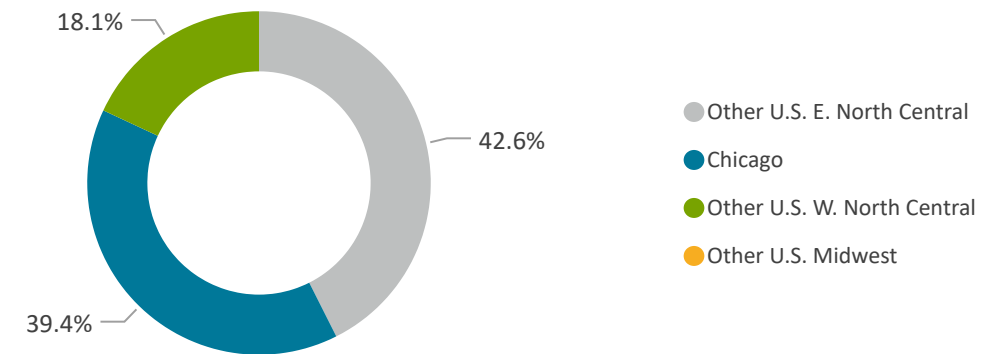
PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - GEOGRAPHY DETAILED

The following chart illustrates the portfolio's current exposure as of March 31, 2023.

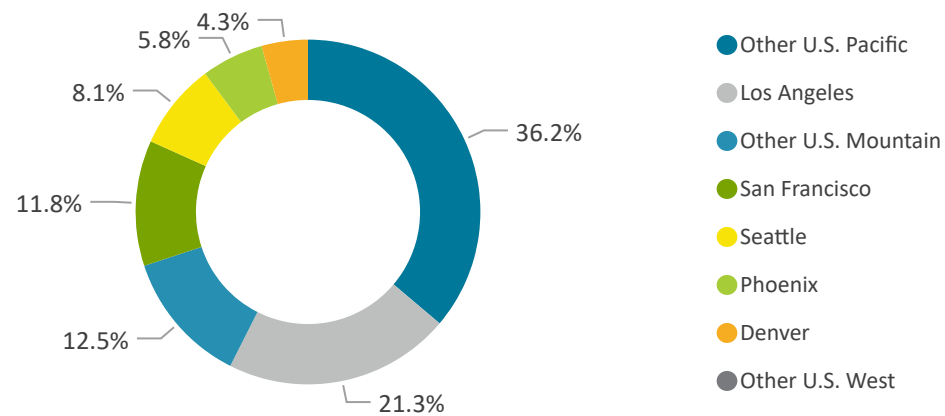
U.S. EAST EXPOSURE DETAIL 26.6%



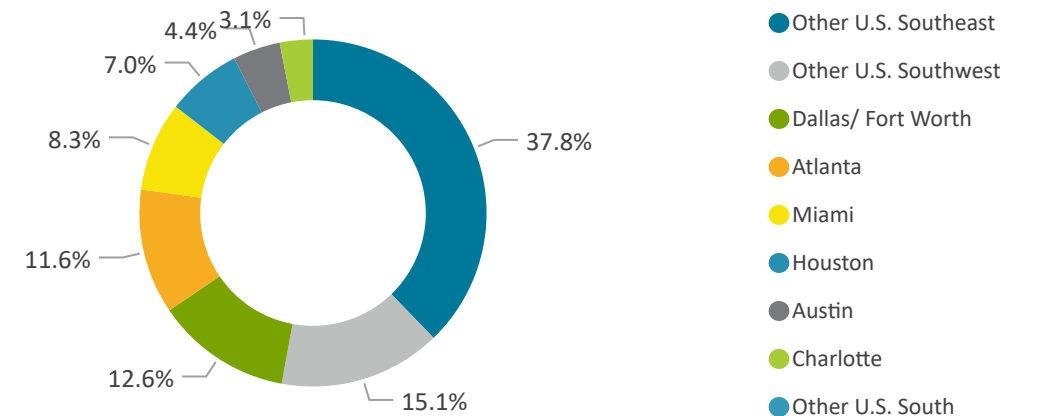
U.S. MIDWEST EXPOSURE DETAIL 7.0%



U.S. WEST EXPOSURE DETAIL 28.6%

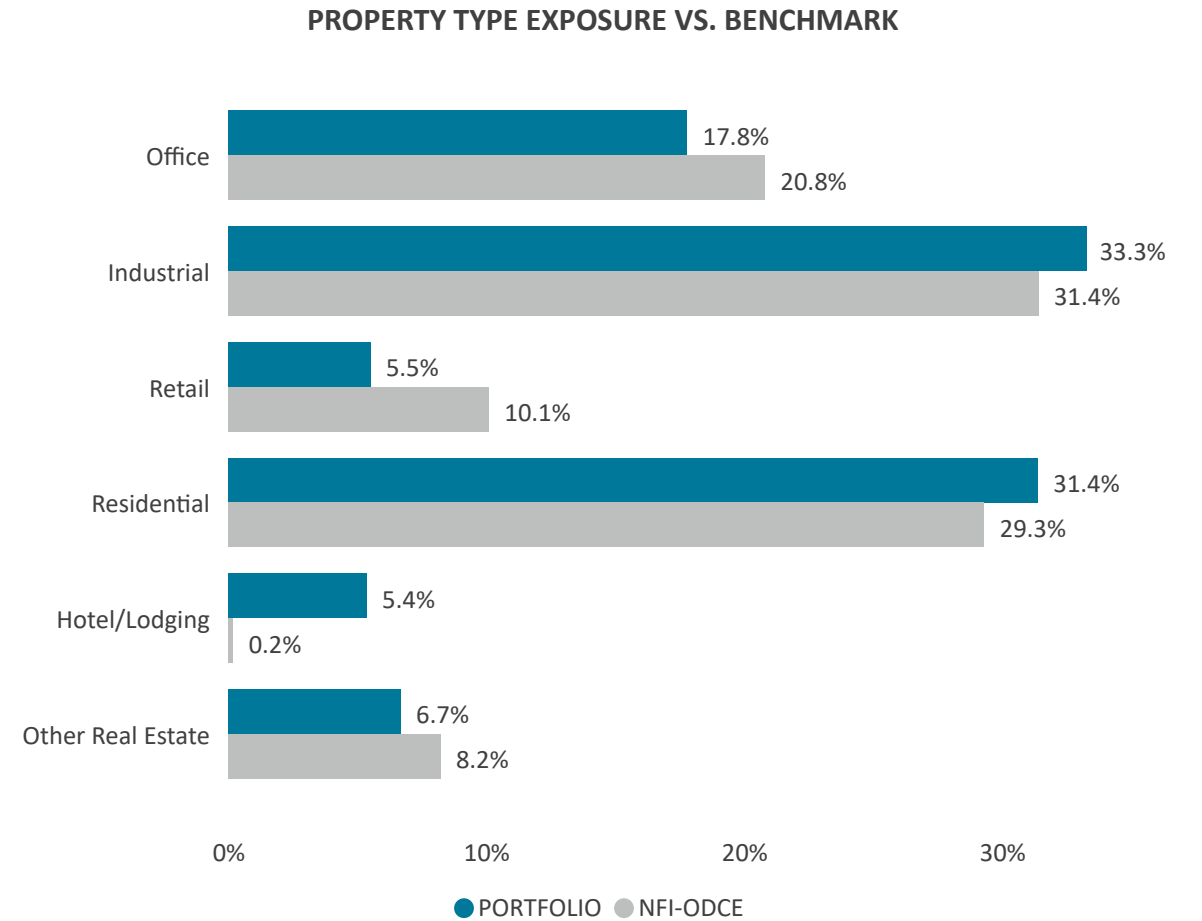
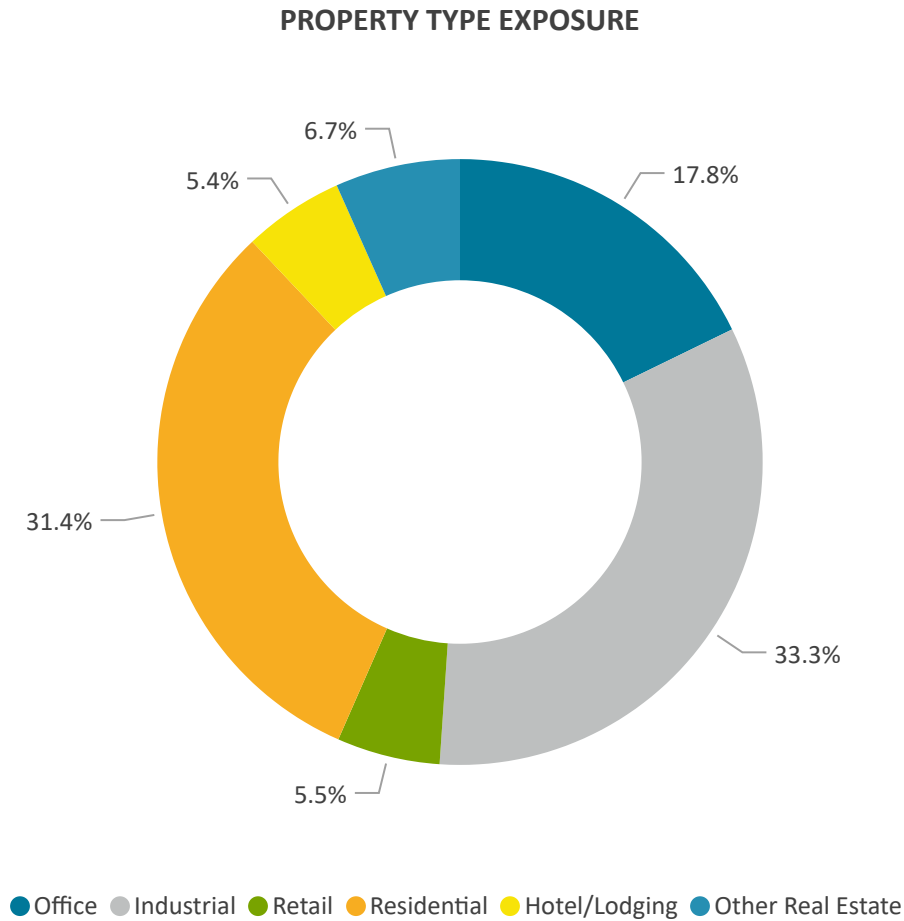


U.S. SOUTH EXPOSURE DETAIL 20.3%



PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - PROPERTY TYPE

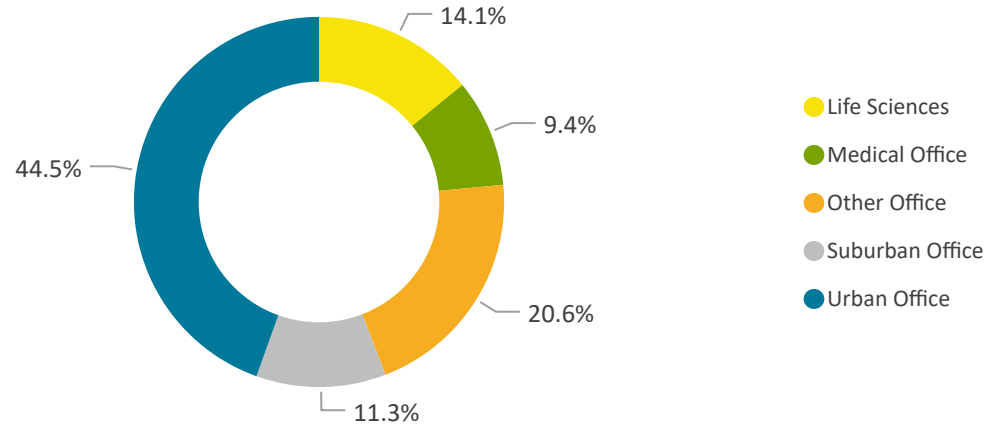
The following chart illustrates the portfolio's current exposure vs. benchmarks as of March 31, 2023.



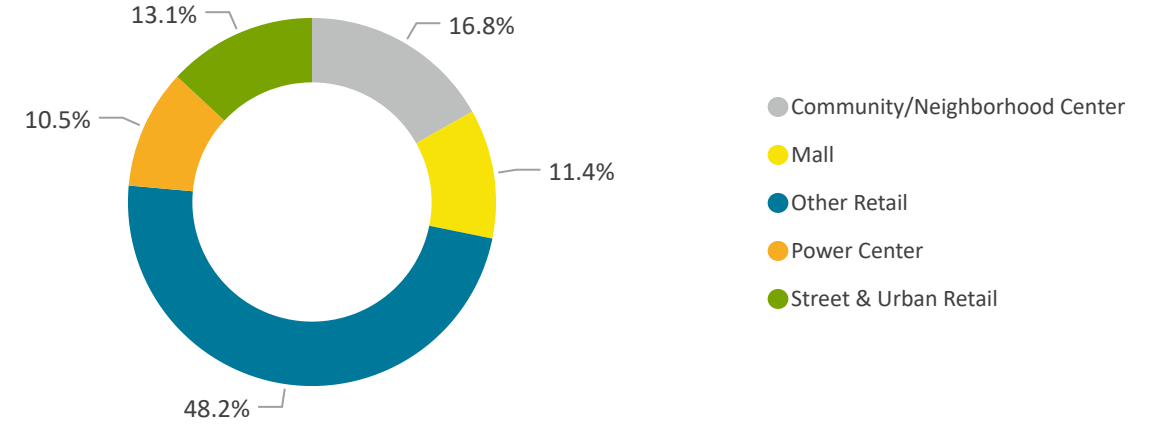
PORTFOLIO UNDERLYING HOLDINGS DIVERSIFICATION - PROPERTY TYPE DETAILED

The following chart illustrates the portfolio's current exposure as of March 31, 2023.

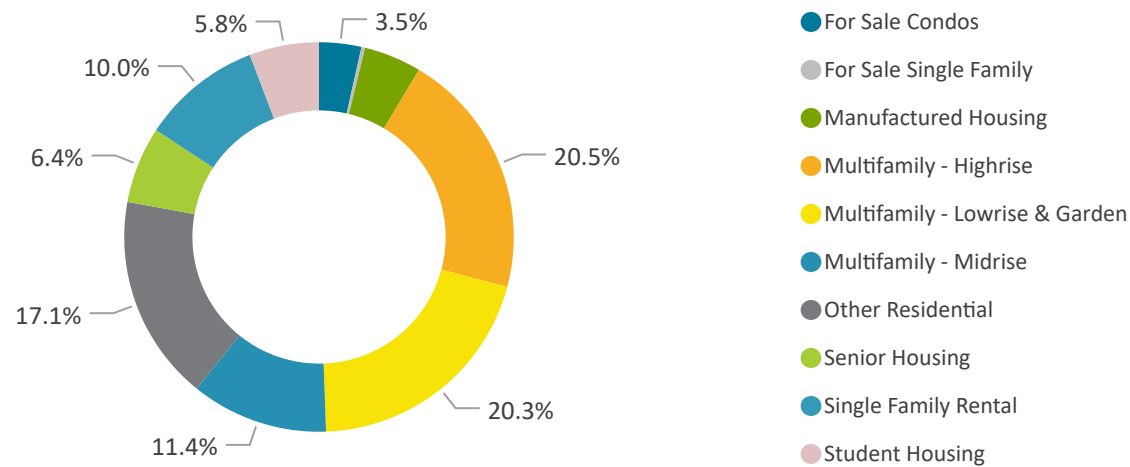
OFFICE EXPOSURE - PROPERTY SUB-TYPE DETAIL 17.8%



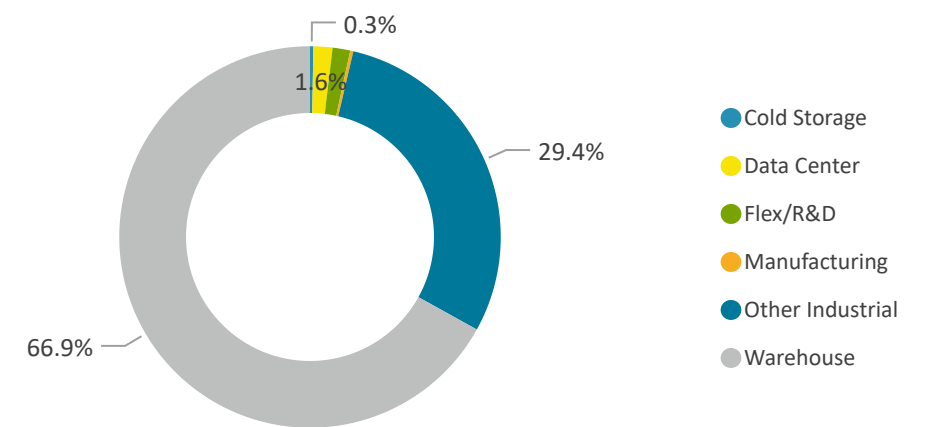
RETAIL EXPOSURE - PROPERTY SUB-TYPE DETAIL 5.5%



RESIDENTIAL EXPOSURE - PROPERTY SUB-TYPE DETAIL 31.4%



INDUSTRIAL EXPOSURE - PROPERTY SUB-TYPE DETAIL 33.3%



ACTIVE CORE PORTFOLIO PERFORMANCE

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
JP Morgan Strategic Property Fund	2006	12/5/2006	\$86.0	\$144.7	\$185.6	\$84.4	\$0.0	\$84.4	1.3x	1.9x	7.2%
PRISA	2006	9/28/2006	\$36.0	\$38.8	\$21.6	\$59.7	\$0.0	\$59.7	0.6x	2.1x	5.3%
Prologis Targeted US Logistics Fund	2006	10/1/2006	\$20.0	\$24.2	\$7.8	\$44.7	\$0.0	\$44.7	0.3x	2.2x	8.6%
RREEF America REIT II	2006	10/2/2006	\$85.0	\$96.5	\$33.9	\$117.6	\$0.0	\$117.6	0.4x	1.6x	6.0%
UBS Trumbull Property Fund	2006	9/28/2006	\$106.0	\$165.7	\$203.5	\$54.3	\$0.0	\$54.3	1.2x	1.6x	6.0%
Heitman America Real Estate Trust, L.P.	2007	3/29/2007	\$48.0	\$87.4	\$47.0	\$130.8	\$0.0	\$130.8	0.5x	2.0x	7.6%
JP Morgan Special Situation Property Fund	2007	1/5/2007	\$15.0	\$27.6	\$18.6	\$23.8	\$0.0	\$23.8	0.7x	1.5x	4.8%
PRISA II	2007	6/29/2007	\$63.4	\$67.6	\$33.9	\$112.8	\$0.0	\$112.8	0.5x	2.2x	6.2%
LaSalle Property Fund	2010	7/1/2010	\$104.0	\$103.6	\$36.0	\$148.3	\$0.0	\$148.3	0.3x	1.8x	9.3%
Almanac Realty Securities VI	2012	6/6/2012	\$100.0	\$62.4	\$69.3	\$13.5	\$0.0	\$13.5	1.1x	1.3x	9.0%
Almanac Realty Securities VI (Sidecar III)	2012	8/10/2012	\$35.0	\$11.8	\$11.0	\$5.3	\$0.0	\$5.3	0.9x	1.4x	8.8%
NYC Asset Investor #2	2013	7/9/2013	\$145.0	\$152.1	\$62.6	\$89.7	\$0.0	\$89.7	0.4x	1.0x	0.0%
MetLife Core Property Fund	2014	7/1/2014	\$80.0	\$80.0	\$32.4	\$124.1	\$0.0	\$124.1	0.4x	2.0x	9.6%
Almanac Realty Securities VII	2015	4/24/2015	\$65.0	\$65.3	\$52.5	\$38.6	\$9.5	\$48.1	0.8x	1.4x	11.6%
Almanac Realty Securities VII (Sidecar III)	2015	12/9/2015	\$20.0	\$16.5	\$12.0	\$11.6	\$4.3	\$15.9	0.7x	1.4x	12.4%
USAA Eagle Real Estate Fund	2015	12/1/2015	\$98.0	\$109.5	\$17.2	\$141.5	\$0.0	\$141.5	0.2x	1.4x	6.9%
Artemis Co-Investment	2016	2/24/2016	\$70.0	\$81.9	\$107.3	\$22.6	\$5.2	\$27.8	1.3x	1.6x	16.6%
Brookfield Premier Real Estate Partners	2016	11/22/2016	\$171.0	\$216.9	\$45.9	\$285.3	\$0.0	\$285.3	0.2x	1.5x	10.6%
Exeter Core Industrial Club Fund II	2016	5/20/2016	\$37.0	\$36.0	\$15.8	\$69.7	\$1.0	\$70.6	0.4x	2.4x	20.9%
Jamestown Premier Property Fund	2016	2/4/2016	\$65.0	\$76.6	\$31.0	\$33.6	\$0.0	\$33.6	0.4x	0.8x	(4.5%)

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

ACTIVE CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Carlyle Property Investors	2017	7/3/2017	\$119.0	\$153.2	\$34.2	\$223.3	\$0.0	\$223.3	0.2x	1.7x	12.2%
Lion Industrial Trust	2017	1/3/2017	\$98.0	\$142.6	\$34.4	\$290.9	\$0.0	\$290.9	0.2x	2.3x	19.6%
Almanac Realty Securities VIII	2018	12/21/2018	\$51.0	\$31.0	\$7.1	\$30.6	\$23.7	\$54.3	0.2x	1.2x	12.1%
Almanac Realty Securities VIII (Sidecar II)	2018	12/21/2018	\$34.0	\$21.1	\$5.3	\$23.0	\$13.8	\$36.8	0.3x	1.3x	18.4%
Heitman Core Real Estate Debt Income Trust	2018	11/7/2018	\$112.0	\$135.5	\$23.5	\$125.5	\$0.0	\$125.5	0.2x	1.1x	3.8%
Artemis Income and Growth Fund	2019	10/18/2019	\$101.0	\$80.6	\$21.1	\$61.6	\$33.5	\$95.1	0.3x	1.0x	1.8%
Harrison Street Core Property Fund	2019	10/4/2019	\$100.0	\$118.4	\$14.9	\$131.7	\$0.0	\$131.7	0.1x	1.2x	7.2%
Harrison Street Core Property Fund Co-Investment	2019	5/13/2019	\$50.0	\$48.9	\$4.2	\$63.6	\$1.9	\$65.5	0.1x	1.4x	13.1%
Cortland Growth and Income, L.P.	2020	7/1/2020	\$123.0	\$140.5	\$17.5	\$170.2	\$0.0	\$170.2	0.1x	1.3x	12.9%
Exeter Core Industrial Fund III	2020	2/19/2020	\$84.8	\$83.3	\$9.1	\$89.3	\$1.5	\$90.7	0.1x	1.2x	9.7%
LaSalle Centre Street GPS Co-Investment Program - Core	2021	8/17/2021	\$92.0	\$56.8	\$2.4	\$58.6	\$35.4	\$94.0	0.0x	1.1x	6.6%
RREEF Core Plus Industrial Fund	2021	4/5/2021	\$112.5	\$115.7	\$3.2	\$133.7	\$0.0	\$133.7	0.0x	1.2x	13.8%
TPG Real Estate Thematic Advantage Core-Plus JV IV, L.P.	2021	3/29/2022	\$150.0	\$70.7	\$0.1	\$70.5	\$80.0	\$150.6	0.0x	1.0x	(0.2%)
EQT Exeter Industrial Core-Plus Fund IV	2022	9/30/2022	\$157.0	\$15.1	\$0.0	\$13.2	\$141.9	\$155.1	0.0x	0.9x	NM
Total: Active Core Investments			\$2,833.6	\$2,878.5	\$1,222.0	\$3,097.7	\$351.6	\$3,449.2	0.4x	1.5x	7.9%

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

ACTIVE NON-CORE PORTFOLIO PERFORMANCE

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Blackstone Real Estate Partners IV L.P.	2004	5/14/2004	\$25.0	\$32.0	\$45.7	\$0.2	(\$0.0)	\$0.2	1.4x	1.4x	10.3%
Apollo Real Estate Investment Fund V	2006	6/15/2006	\$5.0	\$5.0	\$5.8	\$0.0	\$0.5	\$0.5	1.2x	1.2x	1.9%
American Value Partners Fund I	2007	10/18/2007	\$25.0	\$17.9	\$19.2	\$0.2	\$7.1	\$7.3	1.1x	1.1x	1.8%
Blackstone Real Estate Partners VI L.P.	2007	7/28/2006	\$50.0	\$54.6	\$109.2	\$0.2	\$3.9	\$4.1	2.0x	2.0x	13.4%
Carlyle Realty Partners V, L.P.	2007	8/27/2007	\$12.8	\$19.1	\$28.4	\$0.0	\$1.2	\$1.3	1.5x	1.5x	8.9%
Metropolitan Workforce Housing Fund	2007	7/12/2007	\$10.5	\$10.5	\$12.6	\$0.3	\$0.0	\$0.3	1.2x	1.2x	4.0%
Blackstone Real Estate Partners Europe III - USD	2008	10/24/2008	\$50.0	\$43.9	\$71.3	\$2.1	\$9.0	\$11.2	1.6x	1.7x	15.7%
Silverpeak Legacy Partners III	2008	6/4/2008	\$30.0	\$12.3	\$4.8	\$0.6	\$0.0	\$0.6	0.4x	0.4x	(10.9%)
Stockbridge Real Estate III	2008	9/9/2008	\$22.5	\$22.5	\$14.0	\$13.5	\$0.0	\$13.5	0.6x	1.2x	2.3%
Thor Urban Property Fund II	2008	10/30/2008	\$12.5	\$17.1	\$17.8	\$0.2	\$0.9	\$1.1	1.0x	1.1x	1.7%
Westbrook Real Estate Fund VIII, L.P.	2009	12/28/2009	\$50.0	\$59.9	\$69.0	\$6.7	\$4.3	\$11.0	1.2x	1.3x	9.4%
Carlyle Realty Partners VI, L.P.	2011	9/28/2011	\$70.0	\$76.5	\$108.9	\$6.1	\$22.7	\$28.8	1.4x	1.5x	19.8%
H2 Special Opportunities Fund II	2011	2/14/2011	\$40.0	\$40.0	\$58.4	\$0.7	\$0.0	\$0.7	1.5x	1.5x	13.2%
Brookfield Strategic Real Estate Partners	2012	9/20/2012	\$125.0	\$135.7	\$199.6	\$18.4	\$21.4	\$39.8	1.5x	1.6x	13.5%
Taconic New York City Investment Fund	2012	7/5/2012	\$70.0	\$29.3	\$48.0	\$5.2	\$40.7	\$45.9	1.6x	1.8x	15.5%
Lone Star Real Estate Fund III, L.P.	2013	2/28/2014	\$190.0	\$181.7	\$244.6	\$0.8	\$11.9	\$12.7	1.3x	1.4x	14.1%
NYC Asset Investor #1	2013	6/25/2013	\$60.0	\$77.6	\$44.7	\$37.3	\$17.1	\$54.4	0.6x	1.1x	1.1%
NYC Asset Investor #3	2013	9/20/2013	\$96.0	\$70.0	\$19.3	\$63.5	\$26.0	\$89.5	0.3x	1.2x	3.1%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Carlyle Realty Partners VII, L.P.	2014	7/1/2014	\$120.0	\$111.5	\$134.1	\$29.4	\$57.6	\$87.0	1.2x	1.5x	12.7%
DivcoWest Fund IV	2014	1/15/2014	\$25.0	\$24.8	\$40.9	\$1.4	\$2.2	\$3.7	1.7x	1.7x	25.1%
DRA Growth and Income Fund VIII	2014	9/29/2014	\$75.0	\$91.9	\$95.3	\$19.5	\$1.6	\$21.0	1.0x	1.2x	6.9%
H2 Special Opportunities III	2014	12/29/2014	\$65.0	\$67.5	\$67.4	\$17.2	\$0.0	\$17.2	1.0x	1.3x	7.3%
European Property Investors Special Opportunities 4 LP	2015	12/18/2015	\$65.2	\$59.3	\$24.5	\$57.2	\$8.6	\$65.8	0.4x	1.4x	7.9%
DivcoWest Fund V	2016	12/21/2016	\$78.0	\$62.2	\$22.8	\$54.2	\$15.8	\$70.0	0.4x	1.2x	5.8%
H2 Special Opportunities IV	2016	11/15/2016	\$119.0	\$119.9	\$27.9	\$118.1	\$0.0	\$118.1	0.2x	1.2x	6.2%
PW Real Estate Fund III	2016	10/7/2016	\$65.4	\$50.8	\$124.7	\$24.1	\$14.7	\$38.7	2.5x	2.9x	30.7%
Westbrook Real Estate Fund X	2016	7/18/2016	\$47.0	\$45.7	\$40.1	\$16.1	\$3.8	\$19.9	0.9x	1.2x	9.3%
Basis Investment Group Real Estate Fund I	2017	11/16/2017	\$19.4	\$20.4	\$13.6	\$13.3	\$2.8	\$16.1	0.7x	1.3x	11.5%
DRA Growth and Income Fund IX	2017	3/9/2017	\$56.0	\$61.8	\$58.5	\$41.8	\$4.8	\$46.6	0.9x	1.6x	17.9%
Exeter Industrial Value Fund IV, L.P.	2017	9/20/2017	\$34.0	\$32.0	\$65.4	\$5.0	\$1.9	\$6.9	2.0x	2.2x	30.7%
NYCRS-KKR CMBS Retention Partners	2017	9/27/2017	\$159.0	\$144.3	\$62.2	\$128.9	\$17.2	\$146.1	0.4x	1.3x	7.2%
Pramerica Real Estate Capital VI	2017	4/20/2017	\$68.6	\$71.1	\$57.5	\$24.7	(\$2.5)	\$22.2	0.8x	1.2x	7.5%
KKR Real Estate Partners Americas II	2018	2/9/2018	\$135.4	\$138.5	\$173.0	\$42.4	\$16.6	\$59.0	1.2x	1.6x	24.8%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Aermont Capital Real Estate Fund IV	2019	4/18/2019	\$82.2	\$58.5	\$0.0	\$48.4	\$23.7	\$72.0	0.0x	0.8x	(9.7%)
Blackstone Real Estate Partners Europe VI L.P.	2019	11/20/2019	\$111.0	\$70.1	\$32.1	\$57.3	\$60.7	\$118.0	0.5x	1.3x	17.7%
Blackstone Real Estate Partners IX L.P.	2019	9/23/2019	\$184.0	\$188.4	\$60.9	\$214.4	\$34.5	\$248.8	0.3x	1.5x	27.1%
Brookfield Strategic Real Estate Partners III, L.P.	2019	4/12/2019	\$193.0	\$169.0	\$76.3	\$139.6	\$65.7	\$205.3	0.5x	1.3x	13.8%
Grosvenor Real Estate Emerging Manager SMA	2019	5/19/2020	\$264.0	\$175.7	\$24.8	\$164.7	\$111.7	\$276.4	0.1x	1.1x	6.8%
Westbrook Real Estate Fund XI	2019	12/22/2020	\$92.0	\$48.5	\$24.1	\$33.6	\$60.9	\$94.5	0.5x	1.2x	21.5%
DivcoWest Fund VI	2020	11/6/2020	\$93.0	\$47.1	\$1.5	\$44.4	\$46.6	\$91.1	0.0x	1.0x	(2.1%)
DRA Growth and Income Fund X	2020	3/25/2020	\$67.0	\$60.9	\$18.4	\$60.5	\$17.7	\$78.2	0.3x	1.3x	26.3%
ElmTree U.S. Net Lease Fund IV, L.P.	2020	7/16/2020	\$78.0	\$52.5	\$35.5	\$36.9	\$26.2	\$63.2	0.7x	1.4x	28.9%
Exeter Industrial Value Fund V, L.P.	2020	10/23/2020	\$56.0	\$55.1	\$0.0	\$82.6	\$0.9	\$83.5	0.0x	1.5x	31.7%
GreenOak Asia III	2020	4/16/2020	\$99.0	\$103.0	\$56.8	\$53.1	\$34.1	\$87.1	0.6x	1.1x	8.9%
KKR RE Europe II	2020	9/1/2021	\$89.0	\$64.7	\$20.1	\$45.4	\$34.1	\$79.5	0.3x	1.0x	1.2%
KKR Real Estate Securities Dislocation Opportunity Co-Investment Strategy	2020	10/9/2020	\$113.0	\$67.7	\$76.2	\$9.7	\$0.7	\$10.4	1.1x	1.3x	35.4%
Pramerica Real Estate Capital VII (USD)	2020	1/28/2021	\$99.0	\$26.7	\$2.3	\$28.5	\$74.1	\$102.6	0.1x	1.2x	14.5%

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Aermont Capital Real Estate Fund V	2021		\$125.0	\$0.0	\$0.0	(\$1.6)	\$125.0	\$123.4	0.0x	0.0x	NM
Almanac Realty Securities IX Sidecar II	2021	11/10/2022	\$50.0	\$3.5	\$0.0	\$3.7	\$46.5	\$50.2	0.0x	1.1x	NM
Almanac Realty Securities IX, L.P.	2021	6/13/2022	\$100.0	\$13.1	\$0.0	\$12.0	\$86.9	\$99.0	0.0x	0.9x	NM
Basis Investment Group Real Estate Fund II	2021	6/30/2021	\$57.0	\$26.7	\$8.0	\$19.9	\$37.0	\$56.9	0.3x	1.0x	5.6%
Brookfield Strategic Real Estate Partners IV	2021	8/11/2022	\$150.0	\$54.7	\$2.7	\$57.5	\$98.0	\$155.5	0.0x	1.1x	NM
Carlyle Realty Partners IX, L.P.	2021	10/11/2022	\$150.0	\$8.4	\$0.0	\$4.9	\$141.6	\$146.5	0.0x	0.6x	NM
Cerberus Institutional Real Estate Partners V SMA	2021	7/19/2021	\$106.0	\$69.6	\$0.0	\$84.0	\$36.4	\$120.4	0.0x	1.2x	19.2%
KKR Real Estate Partners Americas III SCSp	2021	11/23/2021	\$150.0	\$90.3	\$6.7	\$75.6	\$63.5	\$139.1	0.1x	0.9x	(8.9%)
LaSalle Centre Street GPS Co-investment Program - Non-Core	2021	9/28/2021	\$138.0	\$51.8	\$1.7	\$52.0	\$86.2	\$138.3	0.0x	1.0x	3.6%
LBA Logistics Value Fund IX	2021	2/22/2022	\$95.0	\$25.6	\$0.0	\$23.1	\$69.4	\$92.5	0.0x	0.9x	(12.7%)
Mesirow Financial Real Estate Value Fund IV	2021	6/10/2021	\$40.5	\$17.2	\$0.6	\$18.8	\$24.0	\$42.9	0.0x	1.1x	13.0%
NYC Hudson Multifamily Green Fund	2021	7/1/2021	\$130.7	\$57.9	\$15.5	\$42.5	\$88.3	\$130.8	0.3x	1.0x	0.3%
Rialto Real Estate Fund IV - Debt, LP	2021	1/14/2021	\$120.0	\$96.9	\$10.9	\$91.1	\$23.4	\$114.5	0.1x	1.1x	5.1%
Artemis Real Estate Partners Healthcare Fund II	2022	7/15/2022	\$103.0	\$19.8	\$5.3	\$12.7	\$88.5	\$101.2	0.3x	0.9x	NM
Blackstone Real Estate Partners X, LP	2022	3/24/2023	\$195.0	\$0.7	\$0.0	\$0.2	\$194.3	\$194.5	0.0x	0.3x	NM
Cerberus Institutional Real Estate Partners VI SMA	2022	11/22/2022	\$155.0	\$28.6	\$0.0	\$25.1	\$126.4	\$151.5	0.0x	0.9x	NM
Crow Holdings Realty Partners X	2022		\$150.0	\$0.0	\$0.0	(\$0.5)	\$150.0	\$149.5	0.0x	0.0x	NM
EQT Exeter Industrial Value Fund VI, LP	2022		\$150.0	\$0.0	\$0.0	\$0.0	\$150.0	\$150.0	0.0x	0.0x	NM
TPG Real Estate Partners IV, L.P.	2022	12/22/2022	\$157.0	\$9.9	\$0.0	\$7.2	\$147.1	\$154.2	0.0x	0.7x	NM

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ACTIVE NON-CORE PORTFOLIO PERFORMANCE (CONT.)

As of March 31, 2023. In USD millions.

INVESTMENT	VINTAGE YEAR	FIRST CASH FLOW	COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
Waterton Residential Property Venture XV	2023		\$150.0	\$0.0	\$0.0	\$0.0	\$150.0	\$150.0	0.0x	0.0x	NM
Total: Active Non-Core Investments			\$6,168.4	\$3,769.7	\$2,609.4	\$2,296.8	\$2,835.9	\$5,132.6	0.7x	1.3x	11.1%
Total Active Investments			COMMIT	CONT	DIST	NAV	UNFUNDED	EXPOSURE	NET DPI	NET TVM	NET IRR
NYC TRS - Real Estate			\$9,002.1	\$6,648.2	\$3,831.4	\$5,394.4	\$3,187.4	\$8,581.9	0.6x	1.4x	9.0%

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FOOTNOTES

[Executive Summary - pg. 3](#)

Number of Managers and Investments include active funds. Liquidated funds are not included. Committed Capital represents original commitments to partnership investments. Unfunded Commitment represents the aggregate remaining commitments to partnership investments. Total Exposure represents the sum of Market Value and Unfunded Commitment. DPI, or Distributed to Paid-In Multiple, is a performance metric that measures distributions received relative to capital interest. DPI is calculated as Distributions divided by Contributions. TVM, or Total Value Multiple, is a performance metric that measures total value created by the Portfolio relative to Contributions, without consideration for time. TVM is calculated as Total Value, which is comprised of Market Value plus Distributions, divided by Contributions. -IRR, or Internal Rate of Return, is a performance metric that is calculated based on the Portfolio's daily cash flows and market value as of quarter end. IRR is net of fund manager's fees, expenses, and carried interest. TVM and IRR Net of fees represent TVM and IRR net of fees. DPI, TVM and IRR are since inceptions values up until the current quarter.

Infrastructure Quarterly Report (Public):

QUARTERLY MONITORING REPORT

For the period ended March 31, 2023

Report Prepared For:

Teachers' Retirement System of the City of New York - Infrastructure



IMPORTANT INFORMATION

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On September 20, 2021, StepStone Group Inc. acquired Greenspring Associates, Inc. ("Greenspring"). Upon the completion of this acquisition, the management agreement of each Greenspring vehicle was assigned to StepStone Group LP.

The presentation is being made based on the understanding that each recipient has sufficient knowledge and experience to evaluate the merits and risks of investing in private market products. All expressions of opinion are intended solely as general market commentary and do not constitute investment advice or a guarantee of returns. All expressions of opinion are as of the date of this document, are subject to change without notice and may differ from views held by other businesses of StepStone. All valuations are based on current values calculated in accordance with StepStone's Valuation Policies and may include both realized and unrealized investments. Due to the inherent uncertainty of valuation, the stated value may differ significantly from the value that would have been used had a ready market existed for all of the portfolio investments, and the difference could be material. The long-term value of these investments may be lesser or greater than the valuations provided. StepStone Group LP, its affiliates and employees are not in the business of providing tax, legal or accounting advice. Any tax-related statements contained in these materials are provided for illustration purposes only and cannot be relied upon for the purpose of avoiding tax penalties. Any taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor. Prospective investors should inform themselves and take appropriate advice as to any applicable legal requirements and any applicable taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant to the subscription, purchase, holding, exchange, redemption or disposal of any investments. Each prospective investor is urged to discuss any prospective investment with its legal, tax and regulatory advisors in order to make an independent determination of the suitability and consequences of such an investment.

An investment involves a number of risks and there are conflicts of interest.

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All data is as of March 31, 2023 unless otherwise noted.

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

PERFORMANCE SUMMARY

The Teachers' Retirement System of the City of New York ("NYCTRS") 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 NYCTRS 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 NYCTRS 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 March 31, 2023, the Program has committed US\$4,282.3 million to 43 partnership investments (the "Portfolio"). This quarterly monitoring report covers the performance of the Portfolio as of March 31, 2023 as well as significant activity that occurred during Q1 2023.

ALLOCATION SUMMARY

NYCTRS has an Infrastructure allocation target of 4% of total pension assets. As of March 31, 2023, the market value of NYCTRS Infrastructure Program represented approximately 2.4% of total pension assets, a 10 bps change from the prior quarter.

As of March 31, 2023. In USD millions.

	INCEPTION TO MARCH 31, 2023	INCEPTION TO DECEMBER 31, 2022	INCEPTION TO MARCH 31, 2022	QUARTERLY Δ	ANNUAL Δ
Total Pension Assets	\$90,122.9	\$85,956.6	\$103,973.0	\$4,166.3	(\$13,850.1)
Total Infrastructure Assets	\$2,177.2	\$1,988.5	\$1,676.7	\$188.7	\$500.4
% Allocation to Infrastructure	2.4%	2.3%	1.6%	10 bps	80 bps

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.

PERFORMANCE SUMMARY CONTINUED

As of March 31, 2023, the Infrastructure Program has achieved a Total Value to Paid-In multiple of 1.4x invested capital and an IRR of 12.1%.

As of March 31, 2023. In USD millions.

	INCEPTION TO MARCH 31, 2023	INCEPTION TO DECEMBER 31, 2022	INCEPTION TO MARCH 31, 2022	QUARTERLY Δ	ANNUAL Δ
Number of Managers	14	14	13	0	1
Number of Investments	43	41	35	2	8
Number of Active Investments	43	41	35	2	8
Committed Capital	\$4,282.3	\$3,873.1	\$3,159.9	\$409.2	\$1,122.4
Unfunded Commitment	2,203.1	1,947.4	1,661.0	255.7	542.1
Total Exposure	4,380.3	3,935.9	3,337.8	444.4	1,042.5
Total Contributed	2,293.1	2,135.7	1,669.1	157.4	624.0
Total Distributed	921.1	894.2	652.3	27.0	268.8
Total Market Value	2,177.2	1,988.5	1,676.7	188.7	500.4
Since Inception G/L	805.2	747.0	660.0	58.3	145.2
Total Value	\$3,098.3	\$2,882.6	\$2,329.1	\$215.7	\$769.2
Net DPI	0.4x	0.4x	0.4x		
Net TVM	1.4x	1.3x	1.4x		
Net IRR	12.1%	12.1%	13.1%	(1 bps)	(101 bps)

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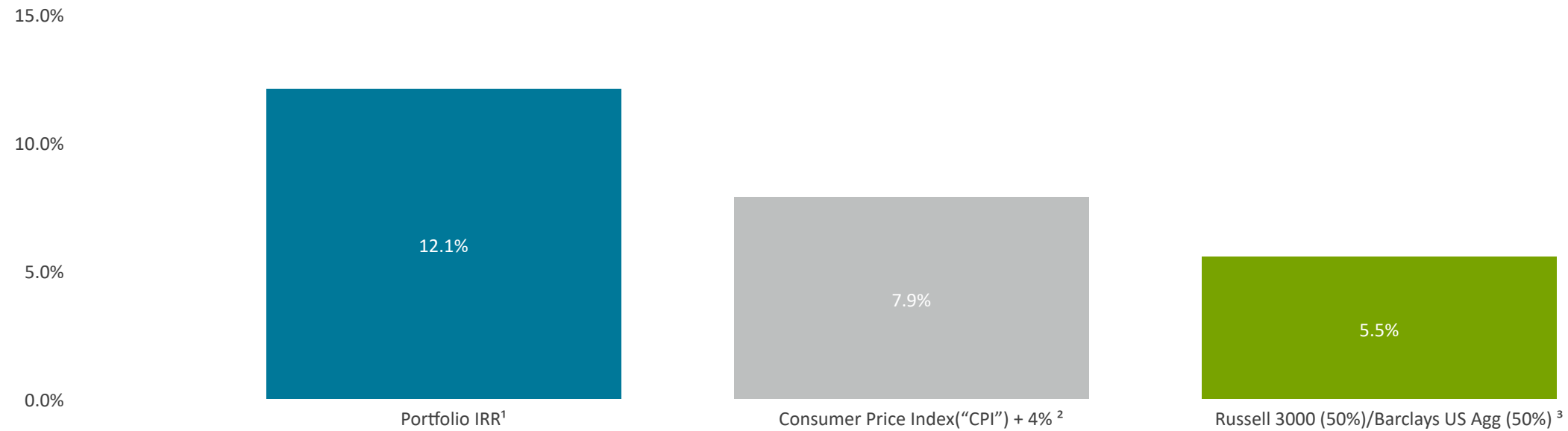
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"Market Value" may not tie to financial statements due to timing variances related to underlying manager capital activity.

PORTFOLIO PERFORMANCE VS. BENCHMARK

The following graph illustrates Portfolio IRR performance versus benchmarks as of March 31, 2023.



1. NYCTRS 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.
2. Consumer 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.

As of March 31, 2023. In USD millions.

STRATEGY	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Core	\$1,843.4	84.7%	\$1,759.9	79.9%	\$3,603.3	82.3%
Non-Core	\$333.8	15.3%	\$443.2	20.1%	\$777.0	17.7%
Total	\$2,177.2	100.0%	\$2,203.1	100.0%	\$4,380.3	100.0%

GEO FOCUS	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Global	\$671.4	30.8%	\$1,369.2	62.1%	\$2,040.6	46.6%
OECD	\$1,146.4	52.7%	\$469.8	21.3%	\$1,616.2	36.9%
North America	\$359.3	16.5%	\$364.1	16.5%	\$723.5	16.5%
Total	\$2,177.2	100.0%	\$2,203.1	100.0%	\$4,380.3	100.0%

INDUSTRY	MARKET VALUE	MARKET VALUE % OF TOTAL	UNFUNDED	UNFUNDED % OF TOTAL	EXPOSURE	EXPOSURE % OF TOTAL
Diversified	\$1,673.1	76.8%	\$1,764.4	80.1%	\$3,437.5	78.5%
Energy	\$246.0	11.3%	\$265.4	12.0%	\$511.3	11.7%
Commodities Logistics	\$71.4	3.3%	\$163.9	7.4%	\$235.3	5.4%
Communication	\$129.0	5.9%	\$7.2	0.3%	\$136.2	3.1%
Transportation	\$37.1	1.7%	\$0.0	0.0%	\$37.1	0.8%
Renewables	\$20.6	0.9%	\$2.3	0.1%	\$22.8	0.5%
Total	\$2,177.2	100.0%	\$2,203.1	100.0%	\$4,380.3	100.0%

PORTFOLIO REVIEW

QUARTERLY HIGHLIGHTS

- New Investment Commitments – During the first quarter of 2023, the Program closed on 2 new investment commitments totaling \$406.0 million.

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	STRATEGY	GEO FOCUS	INDUSTRY FOCUS	COMMITTED CAPITAL
EQT Infrastructure VI (No.2) USD SCSp	Mar-2023	2023	Infrastructure	Global	Diversified	\$203.0
Global Infrastructure Partners V-A/B, L.P.	Mar-2023	2023	Infrastructure	OECD	Diversified	\$203.0
Total						\$406.0

- Subsequent to quarter-end, the Program closed on 2 new investment commitments.

In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	STRATEGY	GEO FOCUS	INDUSTRY FOCUS	COMMITTED CAPITAL
Ardian Infrastructure Fund VI	Jun-2023	2023	Infrastructure	OECD	Diversified	\$223.6
Elite Co-Invest AIV, L.P.	Jul-2023	2023	Infrastructure	Europe	Renewables	\$29.1
Total						\$252.7

PORTFOLIO REVIEW CONTINUED

- New Underlying Fund Investments – During the first quarter of 2023, 17 investment positions were added to the Portfolio. Below is a list of the top ten based on invested capital.

As of March 31, 2023. In USD millions.

COMPANY	INVESTMENT DATE	STAGE	INDUSTRY	COUNTRY	EXPOSED INVESTED CAPITAL	EXPOSED MARKET VALUE
European Telecom Towers (DFMG)	Feb-2023	Private	Telecom	Germany	\$25.0	\$25.4
PSO	Mar-2023	Private	Telecom	Poland	\$19.1	\$19.7
Intrado	Jan-2023	Private	Telecom	United States	\$16.0	\$16.0
Environmental 360 Solutions Ltd.	Jan-2023	Private	Sustainability	Canada	\$8.8	\$8.7
Lines of Credit - Pooled Contribution	Feb-2023	Private	Other	United States	\$6.1	\$6.1
Greenvolt - Energias Renováveis, S.A.	Feb-2023	Public	Sustainability	Portugal	\$2.9	\$2.8
Grand Valley Wind	Feb-2023	Private	Sustainability	Canada	\$1.7	\$1.7
Catalyze, Inc.	Feb-2023	Private	Sustainability	United States	\$1.7	\$1.7
Seraya Partners Fund I, L.P.	Feb-2023	Private	Other	Singapore	\$1.6	\$1.4
Pinnacle Power Limited	Mar-2023	Private	Utilities	United Kingdom	\$1.5	\$1.5

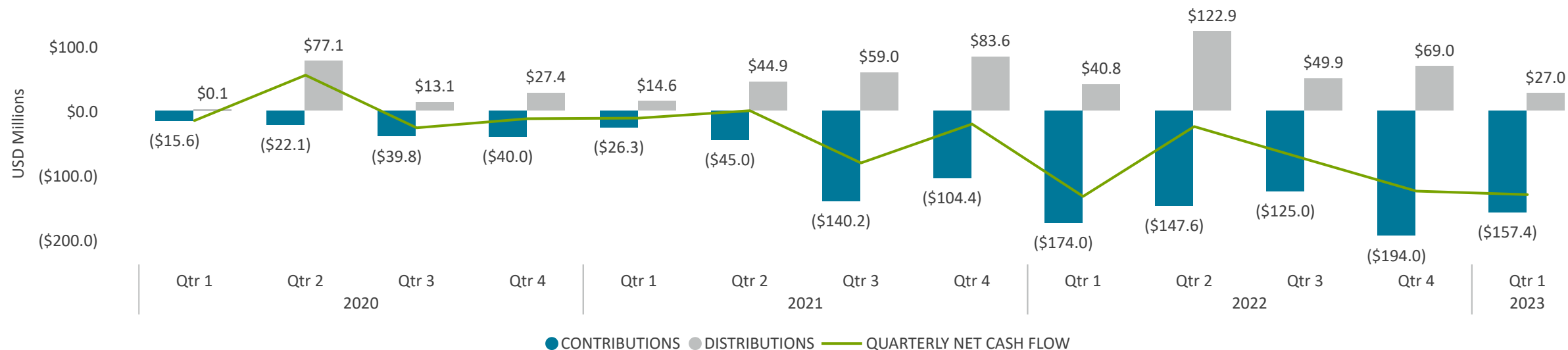
- Company Exits – During the first quarter of 2023, 1 investment position exited the Portfolio.

As of March 31, 2023. In USD millions.

COMPANY	INVESTMENT DATE	EXIT DATE	STAGE	INDUSTRY	COUNTRY	INVESTED CAPITAL	TOTAL VALUE
SNC-Lavalin Compression Services, LLC	Jul-2018	Feb-2023	Private	Midstream	United States	\$2.5	\$3.3

QUARTERLY CASH FLOW ACTIVITY

During the first quarter of 2023, the portfolio contributed \$157.4 million and received \$27.0 million of distributions, for a net cash outflow of \$130.4 million.



QUARTERLY TOP CONTRIBUTIONS AND DISTRIBUTIONS

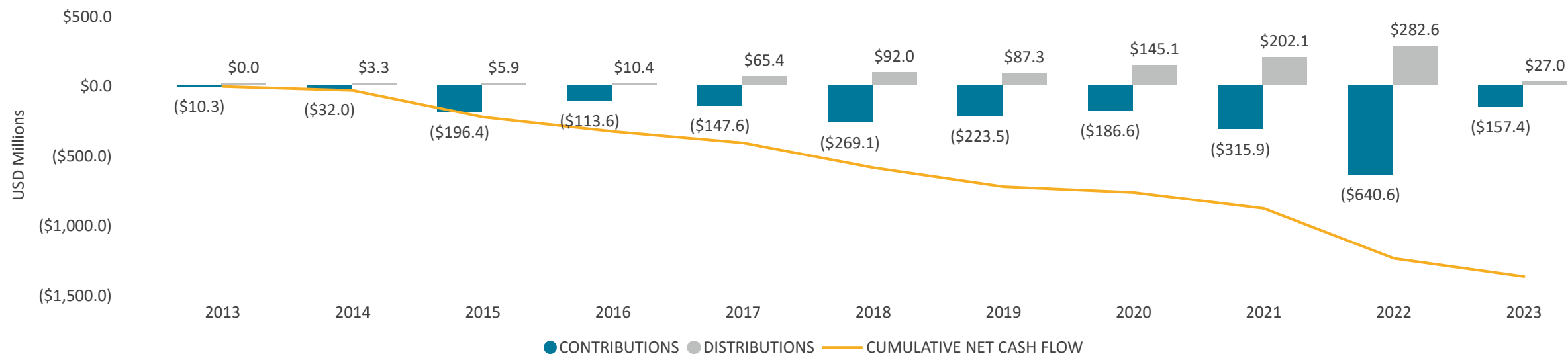
As of March 31, 2023. In USD millions.

INVESTMENT	CONTRIBUTIONS	% OF TOTAL
Axiom Infrastructure North America (2021)	\$40.3	25.6%
EQT Infrastructure V (No.2) USD SCSp	\$26.6	16.9%
InfraVia European Fund V SCSp	\$24.4	15.5%
Stonepeak Infrastructure Fund IV, L.P.	\$17.9	11.3%
Brookfield Infrastructure Fund III, L.P.	\$12.2	7.7%
Top 5 Contributions	\$121.3	77.0%

INVESTMENT	DISTRIBUTIONS	% OF TOTAL
KKR Global Infrastructure Investors II L.P.	\$7.2	26.6%
Brookfield Infrastructure Fund II, L.P.	\$3.0	11.0%
ASF VII Infrastructure L.P.	\$2.6	9.5%
Global Infrastructure Partners III-A/B, L.P.	\$2.3	8.6%
Axiom Infrastructure North America (2021)	\$2.1	8.0%
Top 5 Distributions	\$17.2	63.6%

SINCE INCEPTION ANNUAL CASH FLOW ACTIVITY

During the three months ended March 31, 2023, the portfolio contributed \$157.4 million and received \$27.0 million of distributions, for a net cash outflow of \$130.4 million.



YEAR-TO-DATE TOP CONTRIBUTIONS AND DISTRIBUTIONS

As of March 31, 2023. In USD millions.

INVESTMENT	CONTRIBUTIONS	% OF TOTAL
Axiom Infrastructure North America (2021)	\$40.3	25.6%
EQT Infrastructure V (No.2) USD SCSp	\$26.6	16.9%
InfraVia European Fund V SCSp	\$24.4	15.5%
Stonepeak Infrastructure Fund IV, L.P.	\$17.9	11.3%
Brookfield Infrastructure Fund III, L.P.	\$12.2	7.7%
Top 5 Contributions	\$121.3	77.0%

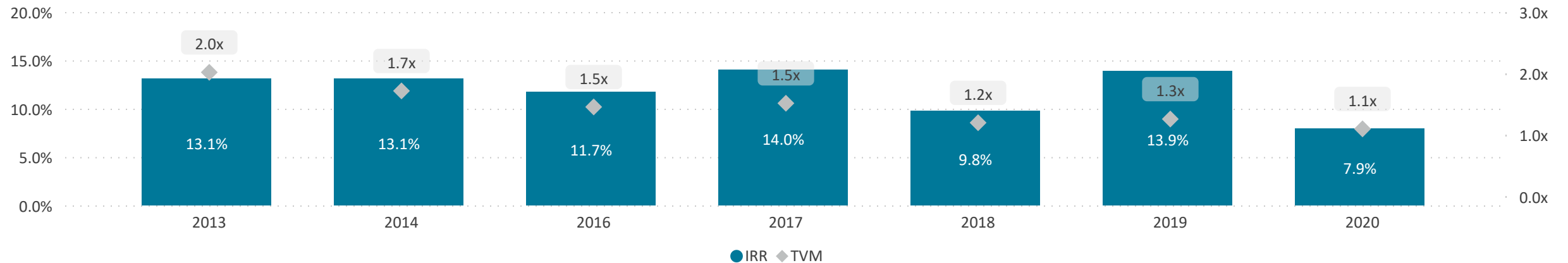
INVESTMENT	DISTRIBUTIONS	% OF TOTAL
KKR Global Infrastructure Investors II L.P.	\$7.2	26.6%
Brookfield Infrastructure Fund II, L.P.	\$3.0	11.0%
ASF VII Infrastructure L.P.	\$2.6	9.5%
Global Infrastructure Partners III-A/B, L.P.	\$2.3	8.6%
Axiom Infrastructure North America (2021)	\$2.1	8.0%
Top 5 Distributions	\$17.2	63.6%

PERFORMANCE BY VINTAGE YEAR

The following table illustrates the Portfolio's since-inception investment performance by vintage year as of March 31, 2023.

As of March 31, 2023. In USD millions.

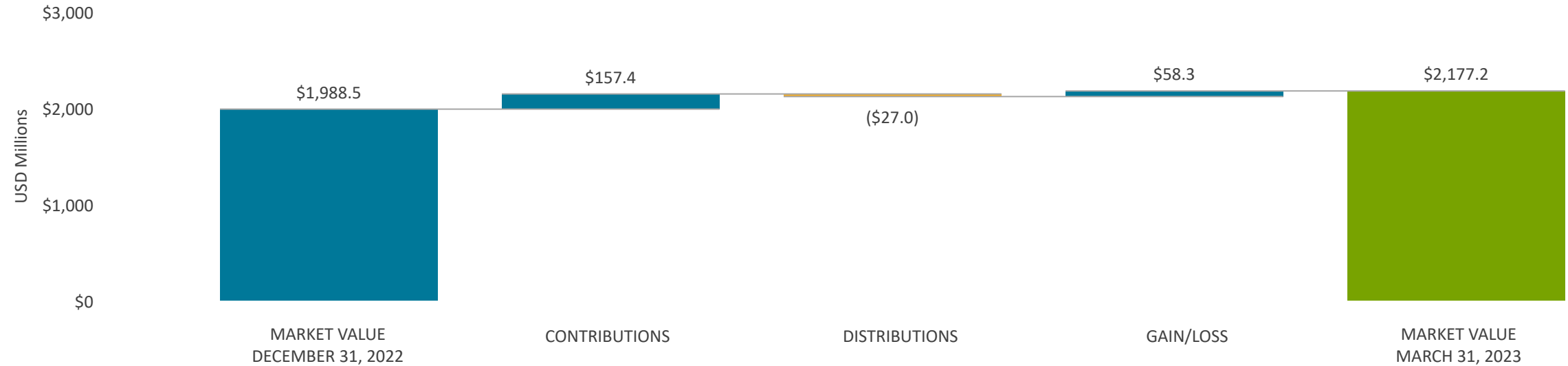
VINTAGE YEAR	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	TOTAL EXPOSURE	TOTAL EXPOSURE % OF TOTAL	NET DPI	NET TVM	NET IRR
2013	\$140.0	\$122.4	\$129.8	\$117.4	\$247.3	\$28.0	\$145.4	3%	1.1x	2.0x	13.1%
2014	\$330.0	\$401.7	\$350.2	\$339.9	\$690.1	\$7.6	\$347.5	8%	0.9x	1.7x	13.1%
2016	\$395.6	\$348.9	\$206.0	\$302.4	\$508.4	\$107.5	\$409.9	9%	0.6x	1.5x	11.7%
2017	\$194.3	\$181.2	\$142.7	\$132.1	\$274.9	\$32.2	\$164.3	4%	0.8x	1.5x	14.0%
2018	\$284.2	\$240.8	\$34.4	\$254.7	\$289.2	\$62.5	\$317.2	7%	0.1x	1.2x	9.8%
2019	\$252.2	\$214.1	\$34.7	\$235.3	\$269.9	\$48.8	\$284.0	6%	0.2x	1.3x	13.9%
2020	\$439.8	\$205.7	\$13.4	\$213.1	\$226.5	\$245.0	\$458.1	10%	0.1x	1.1x	7.9%
2021	\$912.9	\$457.6	\$9.0	\$461.9	\$471.0	\$459.0	\$920.9	21%	NM	NM	NM
2022	\$927.3	\$120.7	\$0.8	\$120.3	\$121.1	\$806.6	\$926.9	21%	NM	NM	NM
2023	\$406.0	\$0.0	\$0.0	\$0.0	\$0.0	\$406.0	\$406.0	9%	NM	NM	NM
Total	\$4,282.3	\$2,293.1	\$921.1	\$2,177.2	\$3,098.3	\$2,203.1	\$4,380.3	100%	0.4x	1.4x	12.1%



* Performance of funds with less than two years of activity is not considered meaningful.

QUARTERLY VALUATION MOVEMENT

During the first quarter of 2023, the value of NYCTRS - Infrastructure's portfolio increased by \$58.3 million, or 2.9%.



QUARTERLY TOP INVESTMENT GAINS AND LOSSES

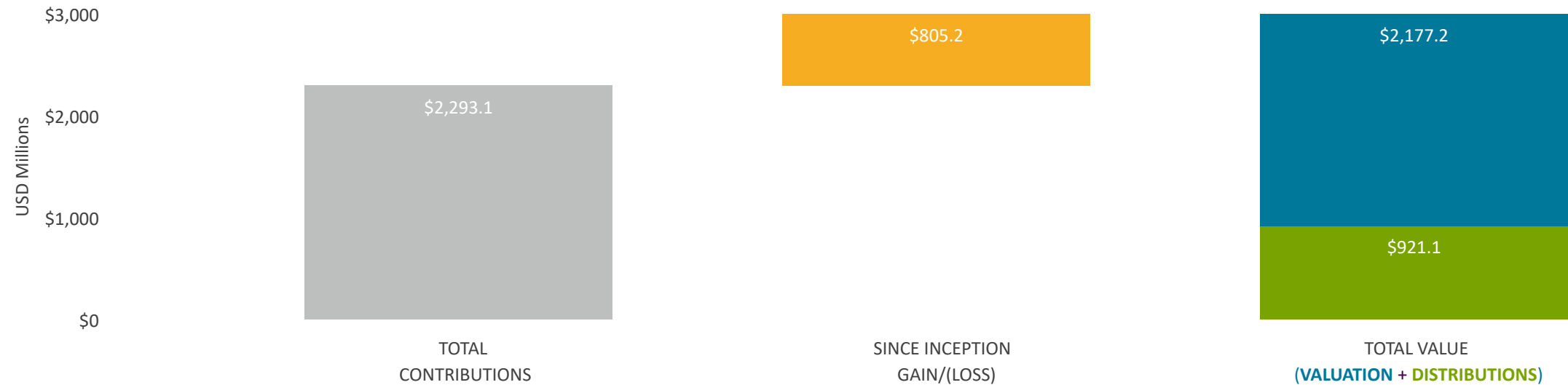
As of March 31, 2023. In USD millions.

INVESTMENT	\$	%
IFM Global Infrastructure Fund	\$9.3	3.7%
EQT Infrastructure V (No.2) USD SCSp	\$6.3	6.8%
KKR Global Infrastructure Investors II L.P.	\$6.0	12.4%
KKR Global Infrastructure Investors III L.P.	\$4.4	8.0%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	\$3.2	11.3%
Top 5 Gains	\$29.2	6.1%

INVESTMENT	\$	%
Brookfield Infrastructure Fund V, LP	(\$2.0)	(323.3%)
DIF Infrastructure VII SCSp	(\$1.7)	
Global Energy & Power Infrastructure Fund II	(\$1.3)	(4.0%)
Blackrock Global Infrastructure Fund IV	(\$0.9)	(8.8%)
ASF VIII Infrastructure B L.P.	(\$0.6)	(3.3%)
Bottom 5 Losses	(\$6.5)	(10.7%)

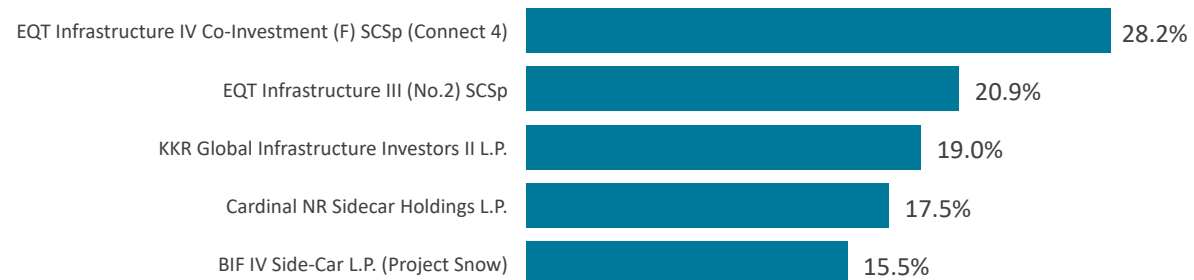
SINCE INCEPTION VALUATION MOVEMENT

Through March 31, 2023, NYCTRS - Infrastructure's portfolio has generated a gain of \$805.2 million.



SINCE INCEPTION TOP PERFORMING INVESTMENTS

TOP 5 PERFORMING INVESTMENTS BY IRR

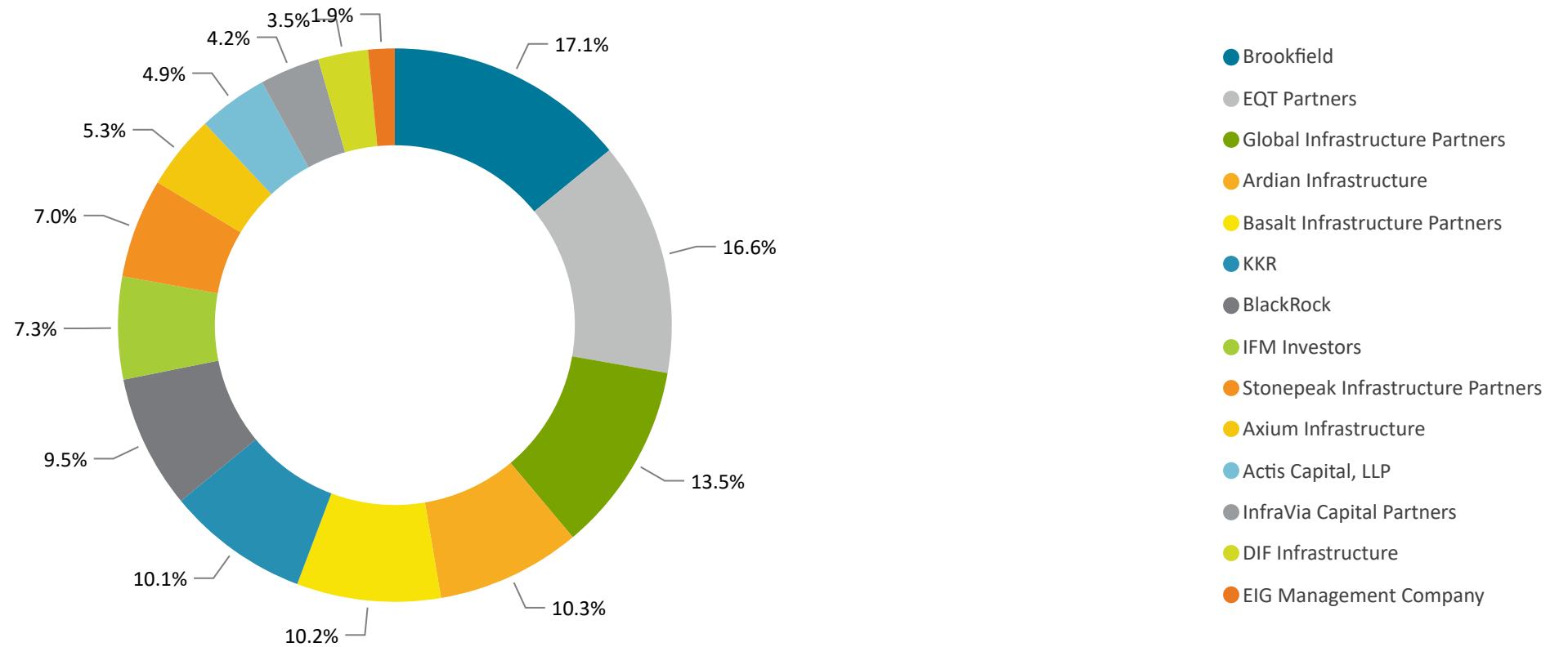


TOP 5 PERFORMING INVESTMENTS BY TVM



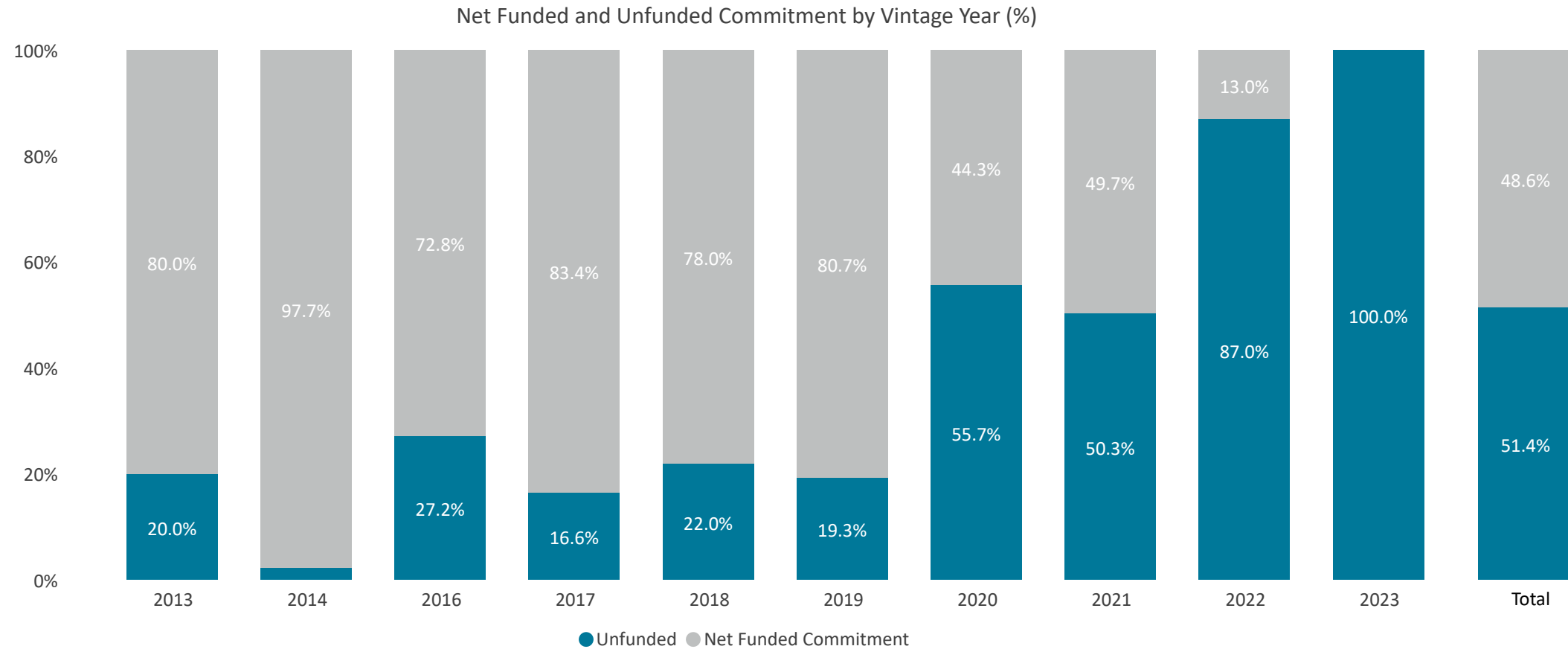
MANAGER DIVERSIFICATION

As of March 31, 2023, the Program had made 14 investment commitments to 43 managers. NYCTRS 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.



NET UNFUNDED AND UNFUNDED COMMITMENT BY VINTAGE YEAR

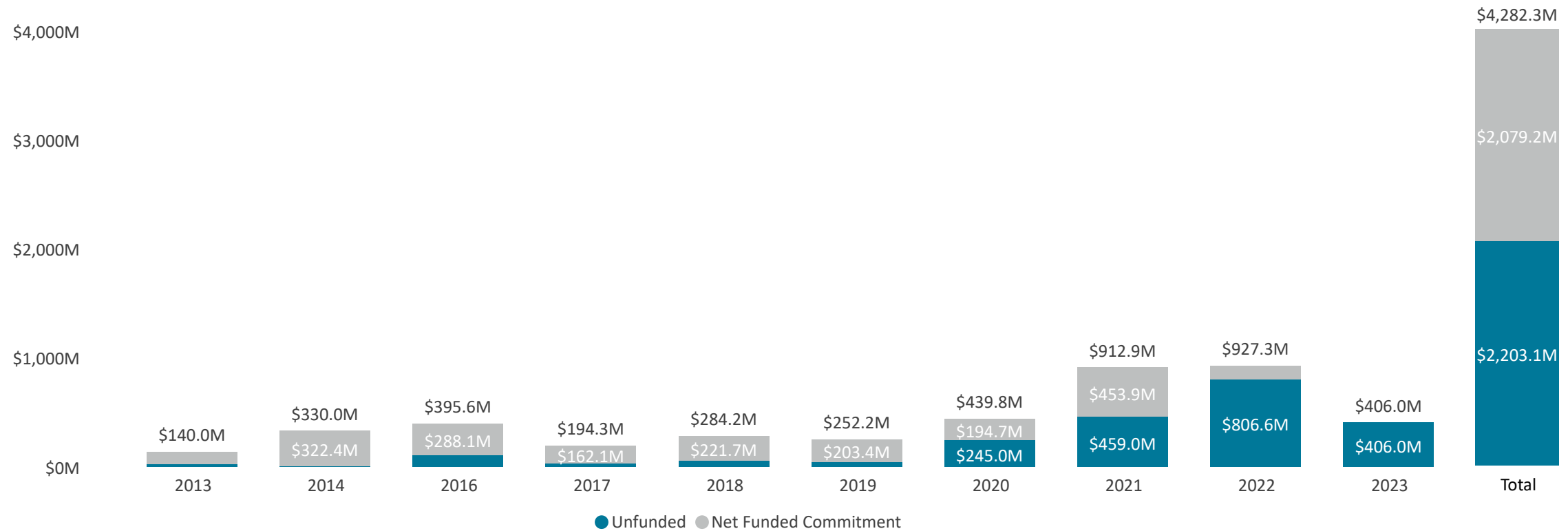
The following chart illustrates the Portfolio's net funded commitments (defined as total contributions inside commitment less any returns of excess capital and recallable distributions) as a percentage of total capital commitments, by fund vintage year, as of March 31, 2023. Overall, the Portfolio was 51.4% unfunded as of quarter-end.



NET UNFUNDED AND UNFUNDED COMMITMENT BY VINTAGE YEAR CONTINUED

The following chart illustrates the Portfolio's net funded commitments relative to total capital commitments, by fund vintage year, as of March 31, 2023. Overall, the Portfolio had US\$2,203.1 million of unfunded commitments as of quarter-end.

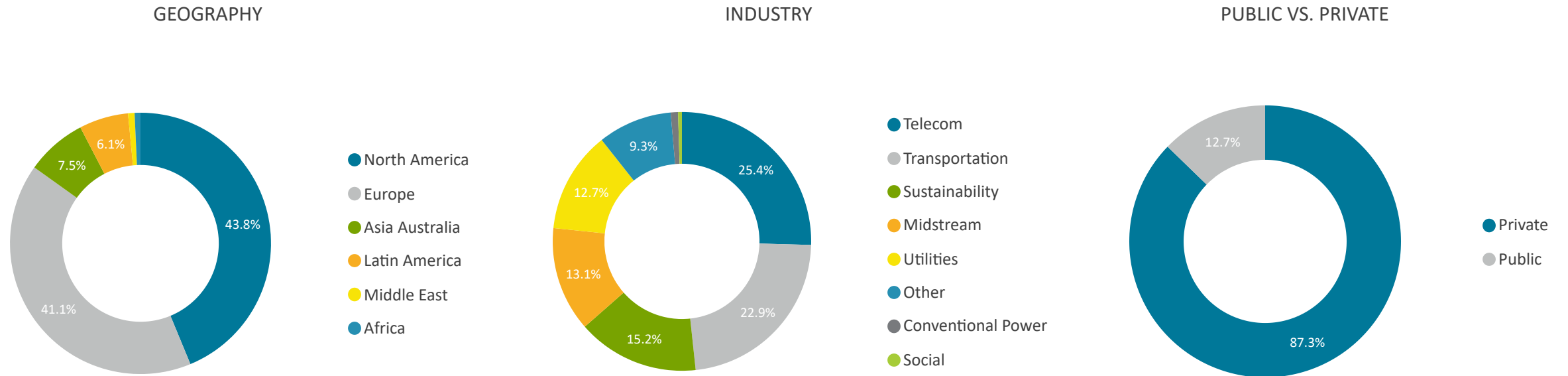
Net Funded and Unfunded Commitment by Vintage Year (US\$ millions)



PORTFOLIO COMPANY LEVEL ANALYSIS

As of quarter-end, the Portfolio had exposure to 359 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.

The following chart illustrates the portfolio's diversification by geography, industry, and publicly-traded vs. privately-held assets based on Market Value at the portfolio company level as of March 31, 2023.



SCHEDULE OF INVESTMENTS

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	GEO FOCUS	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	NET DPI	NET TVM	NET IRR
Actis Energy 4	Dec-2016	2016	Global	\$72.6	\$72.7	\$90.3	\$13.8	\$104.1	\$27.5	1.2x	1.4x	14.0%
Actis Energy 5	Jun-2020	2020	Global	\$148.0	\$20.0	\$0.0	\$9.0	\$9.0	\$128.0	NM	NM	NM
Ardian Infra Fund V Co-Invest Eden	Feb-2022	2022	OECD	\$28.4	\$28.4	\$0.0	\$31.7	\$31.7	\$0.0	NM	NM	NM
Ardian Infra Fund V Co-Invest Lemon	Dec-2022	2022	OECD	\$22.1	\$20.1	\$0.0	\$20.6	\$20.6	\$2.3	NM	NM	NM
Ardian Infrastructure Fund V B	Mar-2019	2019	OECD	\$70.2	\$48.8	\$1.9	\$57.8	\$59.6	\$21.9	0.0x	1.2x	15.4%
ASF VII Infrastructure L.P.	Apr-2017	2016	OECD	\$65.0	\$49.0	\$17.2	\$54.4	\$71.6	\$17.1	0.3x	1.5x	15.4%
ASF VIII Infrastructure B L.P.	Aug-2021	2021	Global	\$166.0	\$19.2	\$3.4	\$17.0	\$20.4	\$146.8	NM	NM	NM
Axium Infrastructure North America (2017)	Aug-2017	2017	North America	\$66.0	\$69.1	\$20.5	\$73.8	\$94.4	\$0.0	0.3x	1.4x	8.6%
Axium Infrastructure North America (2021)	Sep-2021	2021	North America	\$113.4	\$115.7	\$3.7	\$116.6	\$120.3	(\$0.0)	NM	NM	NM
Basalt Infrastructure Partners III	Feb-2021	2021	Global	\$140.0	\$94.5	\$0.0	\$101.7	\$101.7	\$45.5	NM	NM	NM
Basalt Infrastructure Partners IV A L.P.	Oct-2022	2022	Global	\$198.4	\$0.0	\$0.0	\$0.0	\$0.0	\$198.4	NM	NM	NM
BIP III Ride Co-Investment L.P. (Project Ride)	Aug-2022	2022	OECD	\$20.4	\$20.4	\$0.0	\$22.7	\$22.7	\$0.0	NM	NM	NM
BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	Jul-2020	2020	Global	\$69.5	\$16.2	\$0.0	\$17.0	\$17.0	\$53.3	0.0x	1.1x	5.6%
Blackrock Global Infrastructure Fund IV	Jun-2022	2022	Global	\$159.0	\$10.4	\$0.0	\$8.9	\$8.9	\$148.6	NM	NM	NM
Brookfield Infrastructure Fund II, L.P.	Jul-2013	2013	Global	\$140.0	\$122.4	\$129.8	\$117.4	\$247.3	\$28.0	1.1x	2.0x	13.1%
Brookfield Infrastructure Fund III Co-Inv (aka Cardinal NR Sidecar)	Oct-2018	2018	North America	\$9.0	\$9.1	\$3.0	\$14.2	\$17.2	\$0.0	0.3x	1.9x	17.5%
Brookfield Infrastructure Fund III, L.P.	Apr-2016	2016	Global	\$119.0	\$86.2	\$32.4	\$89.8	\$122.3	\$47.8	0.4x	1.4x	11.1%
Brookfield Infrastructure Fund IV Co-Investment (Snow)	Oct-2019	2019	Global	\$10.0	\$10.1	\$1.4	\$14.4	\$15.9	\$0.0	0.1x	1.6x	15.5%
Brookfield Infrastructure Fund IV, L.P.	May-2019	2019	OECD	\$97.0	\$91.1	\$19.6	\$97.2	\$116.7	\$12.2	0.2x	1.3x	13.5%
Brookfield Infrastructure Fund V, LP	Jul-2022	2022	North America	\$198.4	\$0.0	\$0.0	(\$1.4)	(\$1.4)	\$198.4	NM	NM	NM
DIF Infrastructure VII SCSp	Nov-2022	2022	Global	\$129.3	\$0.0	\$0.0	(\$1.7)	(\$1.7)	\$129.3	NM	NM	NM
EQT Infrastructure III (No.2) SCSp	Feb-2017	2017	Global	\$63.6	\$72.7	\$99.6	\$35.2	\$134.8	\$3.6	1.4x	1.9x	20.9%
EQT Infrastructure IV (No.2) USD SCSp	Dec-2018	2018	OECD	\$87.0	\$79.1	\$13.9	\$88.7	\$102.6	\$17.4	0.2x	1.3x	11.5%
EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	Jul-2019	2020	OECD	\$8.1	\$8.2	\$0.5	\$10.0	\$10.5	\$0.0	0.1x	1.3x	8.9%
EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	Aug-2020	2020	Global	\$20.5	\$18.7	\$0.0	\$31.7	\$31.7	\$1.9	0.0x	1.7x	28.2%
EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	Jun-2020	2020	OECD	\$16.7	\$16.7	\$0.0	\$21.8	\$21.8	\$0.0	0.0x	1.3x	10.2%
EQT Infrastructure V (No.2) USD SCSp	Oct-2020	2020	Global	\$177.0	\$126.0	\$12.9	\$123.5	\$136.4	\$61.8	NM	NM	NM
EQT Infrastructure VI (No.2) USD SCSp	Mar-2023	2023	Global	\$203.0	\$0.0	\$0.0	\$0.0	\$0.0	\$203.0	NM	NM	NM
Global Energy & Power Infrastructure Fund II	Apr-2014	2014	OECD	\$90.0	\$98.2	\$97.4	\$30.1	\$127.5	\$2.7	1.0x	1.3x	13.8%

* Performance of funds with less than two years of activity is not considered meaningful.

SCHEDULE OF INVESTMENTS CONTINUED

As of March 31, 2023. In USD millions.

INVESTMENT	CLOSING DATE	VINTAGE YEAR	GEO FOCUS	COMMIT	CONT	DIST	NAV	TOTAL VALUE	UNFUNDED	NET DPI	NET TVM	NET IRR
Global Energy & Power Infrastructure Fund III, L.P.	Jul-2018	2019	OECD	\$75.0	\$64.2	\$11.8	\$65.9	\$77.7	\$14.7	0.2x	1.2x	13.1%
Global Infrastructure Partners III-A/B, L.P.	Jan-2016	2016	OECD	\$139.0	\$141.0	\$66.1	\$144.4	\$210.5	\$15.1	0.5x	1.5x	10.5%
Global Infrastructure Partners IV-A/B, L.P.	Mar-2019	2018	OECD	\$113.2	\$86.7	\$0.5	\$92.3	\$92.8	\$32.3	0.0x	1.1x	5.9%
Global Infrastructure Partners V-A/B, L.P.	Mar-2023	2023	OECD	\$203.0	\$0.0	\$0.0	\$0.0	\$0.0	\$203.0	NM	NM	NM
IFM Global Infrastructure Fund	Jan-2014	2014	OECD	\$140.0	\$196.5	\$95.3	\$262.3	\$357.6	\$0.0	0.5x	1.8x	11.0%
InfraVia European Fund V SCSp	Feb-2022	2022	OECD	\$155.1	\$41.3	\$0.8	\$39.5	\$40.3	\$113.5	NM	NM	NM
KKR Global Infrastructure Investors II L.P.	Jun-2015	2014	OECD	\$100.0	\$107.0	\$157.5	\$47.5	\$205.0	\$4.9	1.5x	1.9x	19.0%
KKR Global Infrastructure Investors III L.P.	Mar-2018	2018	OECD	\$75.0	\$65.9	\$17.0	\$59.5	\$76.5	\$12.8	0.3x	1.2x	7.3%
KKR Global Infrastructure Investors IV (USD) SCSp	May-2021	2021	Global	\$249.0	\$104.5	\$1.3	\$93.6	\$94.9	\$145.8	NM	NM	NM
NYCRS EIG Energy Partners Co-Investment, L.P.	Jan-2018	2022	North America	\$16.2	\$0.0	\$0.0	\$0.0	\$0.0	\$16.2	NM	NM	NM
NYCRS EIG Energy Partners, L.P.	Aug-2017	2017	North America	\$64.7	\$39.4	\$22.6	\$23.1	\$45.7	\$28.6	0.6x	1.2x	7.6%
Stonepeak Infrastructure Fund IV, L.P.	Feb-2021	2021	North America	\$207.0	\$91.3	\$0.6	\$99.2	\$99.8	\$115.7	NM	NM	NM
Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	Dec-2021	2021	North America	\$9.1	\$8.2	\$0.0	\$9.5	\$9.5	\$0.9	NM	NM	NM
Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	Apr-2021	2021	North America	\$28.5	\$24.1	\$0.0	\$24.3	\$24.3	\$4.4	NM	NM	NM
Total				\$4,282.3	\$2,293.1	\$921.1	\$2,177.2	\$3,098.3	\$2,203.1	0.4x	1.4x	12.1%

* Performance of funds with less than two years of activity is not considered meaningful.

RISK MANAGEMENT MATRIX

Category	Requirement	Status	Status Notes
Allocation	NYCTRS has an Infrastructure allocation target of 4% of total pension assets.	✓	The market value of NYCTRS Infrastructure Program represented approximately 2.4% of total pension assets
Performance vs. Benchmarks	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. The Infrastructure Portfolio is expected to generate a total return, net of investment management fees, of at least 6.5%	✓	As of March 31, 2023, the Portfolio outperformed the CPI and PME benchmark by 4.2% and 6.6%, respectively.
Strategy Diversification	Core Infrastructure Investments: 60-100% Non-Core Infrastructure Investments: 0-40% Actual percentages may differ substantially from these targets during the initial years of the Program.	✓	The Program is in compliance with the Core/Non-Core allocation ranges. Currently the Program has 82.3% exposure to Core investments and 17.7% 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 35.5%.
Single Investment Size & Manager Diversification	The maximum commitment to a single investment is limited to no more than 15% of the aggregate committed capital of each fund. The maximum commitment to a single manager is limited to 20% of the total Infrastructure Program allocation when fully invested.	✓	On the individual fund level, all current investments are in compliance with the single investment limitation of 15% of total fund size. The Program is in compliance with the single manager limitation of 20% of the total Infrastructure Program.

¹The Program's leverage level is calculated by using a weighted average of each underlying investment's leverage and Net Asset Value as of March 31, 2023.

APPENDIX

MARKET UPDATE

North America

Notable transactions completed and announced over the quarter include:

- Brookfield Super-Core Infrastructure entered into a definitive agreement to acquire an additional 30% stake in FirstEnergy Transmission from First Energy Corp. for US\$3.5 billion. Brookfield's purchased a 19.9% stake in FirstEnergy Transmission in May 2022
- EQT Active Core Infrastructure and PSP announced the take-private acquisition of Radius Global Infrastructure for a total enterprise value of US\$3.0 billion. Radius owns and acquires critical digital infrastructure, including ground, tower, rooftop, and in-building cell sites, in over 20 countries
- Stonepeak completed its acquisition of Intrado Life & Safety from Apollo Global Management for US\$2.4 billion. Intrado Life & Safety provides public emergency telecommunications services with a 40-year track record of connecting citizens to 911 services
- A subsidiary of Hydro-Québec completed its acquisition of a 100% stake in Great River Hydro from ArcLight Energy Partners for US\$2.0 billion. Great River Hydro owns 13 hydropower generating stations with a combined installed capacity of 589MW
- A Consortium led by Invenergy, including CDPQ and Blackstone, entered an agreement to acquire a 1.4GW portfolio of renewable assets (10 wind and four solar assets) that are unregulated, contracted, and operational, from American Electric Power for US\$1.5 billion
- Vistra Corp. executed a definitive agreement to acquire Energy Harbor Corp. for US\$3.43 billion, composed of US\$3 billion in cash and a 15% stake in a newly-formed subsidiary named Vistra Vision. Vistra Vision will merge each company's nuclear and retail businesses with a portfolio of existing renewable and storage projects. Following the transaction, Vistra will own the second-largest competitive nuclear fleet in the US
- KKR's credit and infrastructure funds committed an additional US\$1.15 billion to expand Altavair's global portfolio of leased commercial aircraft. KKR acquired a 50% stake in Altavair in 2019. The company acquires, leases, re-purposes, and sells commercial jet aircraft and engines
- ACS Group acquired a total of ~57% stake in a Texas toll road SH-288 for US\$1.15 billion from Israel's Clal Insurance, InfraRed Capital Partners, Northleaf Capital Partners, and Star America
- Silicon Ranch closed a US\$600 million equity raise led by Manulife Investment Management, TD Greystone Fund, and Mountain Group Partners. Silicon Ranch owns 5GW of contracted solar and battery storage systems across the US and Canada
- Brookfield Global Transition Fund invested up to US\$500 million of growth capital into California Bioenergy. California Bioenergy partners with dairy farmers to design, build, own, and operate renewable natural gas projects via 50 operational manure digesters

Europe

During the quarter, the European infrastructure market continued in line with 2022 activity. Some notable transactions were completed in the Renewables, Power & Utilities and Transport sector.

- KKR has agreed to sell a 50% stake in renewable energy developer X-Elio to co-shareholder Brookfield for an implied price of US\$900 million, valuing the company at US\$1.8 billion. The remaining 50% stake will be acquired by Brookfield as a follow-on investment through the original fund investment
- Arjun Infrastructure Partners has invested €300 million, acquiring a 30% stake in Amarenco, an independent, solar-focused power producer. Amarenco owns ~400MW of operating solar plants and recently expanded its portfolio with the acquisition of Infracapital's 90% stake in Infram, a French solar JV
- GIC has invested ~€1 billion into Portuguese utility operator, EDP's, renewables arm, as part of an equity raise. GIC subscribed to 43 million of the 51 million shares available
- Lightsource bp has agreed to sell a solar PV portfolio in Spain to Spanish managers Plenium Partners. The value of the transaction has not been disclosed but is estimated to be worth ~€300 million. Lightsource bp's Spanish portfolio includes ~250MW of operational solar PV
- CVC Capital Partners has agreed to sell PKP Energetyka, a Polish electricity distribution network serving rail networks, to state-owned power company PGE. The deal valued the company at an enterprise value of PLN 5.94 billion (~€1.27 billion) implying an EBITDA multiple of ~8.5x. The equity price was PLN 1.9 billion (~€0.4 billion), with the remainder of the transaction funded by debt
- Macquarie Asset Management ("MAM") has agreed to sell its 25% stake in Energie Steiermark ("ESTAG") an Austrian natural gas and electricity grid network, to the Provincial Government of Styria for €525 million. ESTAG operates a 31,300km electricity grid and a 4,200km natural gas supply network
- MAM has also agreed to sell its 24% stake in Open Grid Europe ("OGE"), to Belgian gas transmission operator, Fluxys. Both parties declined to disclose pricing, however, the stake has an estimated valuation of €800 million. OGE has a regulated asset base of ~€4 billion
- Macquarie AirFinance ("MAF") announced a US\$2.2 billion fleet acquisition from Kuwait's Aviation Lease and Finance Company. MAF's shareholders, Macquarie Asset Management, PGGM Infrastructure Fund and Australian Retirement Trust are providing US\$600 million of equity to fund the acquisition of 53 passenger aircraft and an order of 20 Boeing 737 MAX aircraft
- Alpen Glasfaser, a €1 billion Austrian fiber JV between Meridiam and Magenta Telekom has been approved by the EU Commission. The company will now begin to roll out a fiber network across 650,000 homes primarily in rural areas and medium-sized towns in Austria

Australia

Australia and New Zealand infrastructure market activity remained robust during the first quarter of 2023. Energy and renewables activity has been particularly prevalent over the past six months, contrasted against a gradual slowdown in telecommunications sector activity following several major transactions reaching financial close during 2022

Notable transactions occurring during the quarter included the following:

- Brookfield Asset Management and EIG Global Energy Partner's bid to take ASX listed Origin Energy private. During the quarter, GIC and Temasek joined the bidding consortium and in February, it announced a binding Scheme Implementation Deed to take Origin private. At A\$8.9/share the deal represents an enterprise value of ~A\$18.7 billion. Take-private of Origin is subject to customary regulatory review and approval processes before it can close
- Financial close was reached for Partners Group's sale of its A\$4 billion portfolio of renewables assets, CWP Renewables, to Squadron Energy. CWP Renewables' portfolio represents 1.1GW of operational onshore wind assets, a construction ready 414MW wind farm and 30MW battery project
- Electricity distribution and transmission business Spark Infrastructure progressed the carve-out of its renewables development platform, Spark Renewables, shortlisting three proponents including APA Group, Engie and Tenaga Nasional
- Greenfield renewables activity was buoyed by an Acciona led JV reaching financial close on the 1.02GW MacIntyre Wind Precinct in Queensland Australia. The 180 turbine precinct is expected to cost A\$1.96 billion, for which A\$1.1 billion in financing was raised through a green loan provided by a range of international lenders
- Palisade Investment Partners launched an ~A\$1.1 billion debt refinancing linked to its renewables portfolio, whilst Igneo Infrastructure Partners reached financial close on an ~A\$990 million partial refinancing of its Atmos Renewables solar and wind portfolio
- In the telecommunications sector, TPG received RFPs from Uniti Group, Vocus Communications and Pacific Equity Partners for the sale of its fiber-to-the-building ("FTTB") wholesale broadband business, following its functional separation from TPG. The FTTB business, Vision Network, has ~135,000 customers and its network passes ~400,000 connections. Research analysts estimate the value of Vision Network at ~A\$950 million
- In the transport sector, a consortium of investors led by New Zealand Superannuation Fund launched the sale of its stake in the Melbourne based toll-road concession owner, ConnectEast Group. ConnectEast Group owns the 40km EastLink toll road concession and was listed up until 2011 when it was acquired for A\$2 billion. The motorway opened on June 29, 2008 and the concession expires on November 30, 2043
- A JV comprised of M Infrastructure Group and PT Asian Bulk Logistics reached financial close on the acquisition of Australian east coast rail haulage business, OneRail, from Aurizon

Teachers' Retirement System of the City of New York
Infrastructure Portfolio
As of March 31, 2023

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	\$140,000,000	\$122,394,996	\$129,849,893	\$117,414,777	\$27,977,540	2.0x	13.1%
2014	IFM Global Infrastructure Fund	1/2/2014	\$140,000,000	\$196,505,133	\$95,325,571	\$262,277,770	-	1.8x	11.0%
2014	Global Energy & Power Infrastructure Fund II	4/16/2014	\$90,000,000	\$98,167,056	\$97,361,356	\$30,118,308	\$2,684,454	1.3x	13.8%
2014	KKR Global Infrastructure Investors II L.P.	6/12/2015	\$100,000,000	\$107,003,939	\$157,506,597	\$47,522,555	\$4,938,841	1.9x	19.0%
2016	Global Infrastructure Partners III-A/B, L.P.	1/29/2016	\$139,000,000	\$140,978,462	\$66,134,099	\$144,372,826	\$15,087,453	1.5x	10.5%
2016	Brookfield Infrastructure Fund III, L.P.	4/15/2016	\$119,000,000	\$86,163,220	\$32,449,301	\$89,801,733	\$47,753,273	1.4x	11.1%
2016	Actis Energy 4	12/16/2016	\$72,600,000	\$72,701,055	\$90,261,902	\$13,797,000	\$27,535,903	1.4x	14.0%
2017	EQT Infrastructure III (No.2) SCSp	2/18/2017	\$63,569,661	\$72,695,535	\$99,600,805	\$35,224,637	\$3,573,420	1.9x	20.9%
2016	ASF VII Infrastructure L.P.	4/24/2017	\$65,000,000	\$49,025,879	\$17,154,957	\$54,421,283	\$17,134,101	1.5x	15.4%
2017	Axium Infrastructure North America (2017)	8/14/2017	\$66,030,248	\$69,056,681	\$20,543,662	\$73,806,825	-	1.4x	8.6%
2017	NYCRS EIG Energy Partners, L.P.	8/14/2017	\$64,710,000	\$39,408,214	\$22,595,003	\$23,091,632	\$28,600,076	1.2x	7.6%
2022	NYCRS EIG Energy Partners Co-Investment, L.P.	1/12/2018	\$16,180,000	-	-	-	\$16,180,000	-	0.0%
2018	KKR Global Infrastructure Investors III L.P.	3/29/2018	\$75,000,000	\$65,937,207	\$17,041,351	\$59,503,649	\$12,808,762	1.2x	7.3%
2019	Global Energy & Power Infrastructure Fund III, L.P.	7/3/2018	\$75,000,000	\$64,171,127	\$11,799,088	\$65,922,383	\$14,658,312	1.2x	13.1%
2018	Cardinal NR Sidecar Holdings L.P.	10/5/2018	\$9,000,000	\$9,060,788	\$2,992,090	\$14,174,135	-	1.9x	17.5%
2018	EQT Infrastructure IV (No.2) USD SCSp	12/20/2018	\$87,000,000	\$79,132,105	\$13,897,337	\$88,748,151	\$17,379,181	1.3x	11.5%
2019	Ardian Infrastructure Fund V B	3/4/2019	\$70,164,821	\$48,751,017	\$1,876,256	\$57,765,587	\$21,898,009	1.2x	15.4%
2018	Global Infrastructure Partners IV-A/B, L.P.	3/11/2019	\$113,200,000	\$86,707,086	\$512,570	\$92,304,932	\$32,288,471	1.1x	5.9%
2019	Brookfield Infrastructure Fund IV, L.P.	5/10/2019	\$97,000,000	\$91,138,650	\$19,556,097	\$97,152,659	\$12,213,535	1.3x	13.5%
2020	EQT Infrastructure IV Co-Investment (B) SCSp (Saber)	7/30/2019	\$8,100,000	\$8,181,000	\$491,627	\$10,030,035	-	1.2x	8.9%
2019	Brookfield Infrastructure Fund IV Co-Investment (Snow)	10/25/2019	\$10,000,000	\$10,051,289	\$1,435,734	\$14,416,963	-	1.6x	15.5%
2020	EQT Infrastructure IV Co-Investment (G) SCSp (Lightspeed)	6/11/2020	\$16,658,113	\$16,712,983	-	\$21,760,694	-	1.3x	10.2%
2020	Actis Energy 5	6/30/2020	\$148,000,000	\$20,048,447	-	\$9,045,000	\$127,951,553	0.5x	-73.5%
2020	BIS NYC Infrastructure Emerging Manager Opportunities Fund, L.P.	7/3/2020	\$69,500,000	\$16,167,187	-	\$17,046,257	\$53,332,813	1.1x	5.6%
2020	EQT Infrastructure IV Co-Investment (F) SCSp (Connect)	8/18/2020	\$20,500,000	\$18,655,618	-	\$31,670,979	\$1,906,026	1.7x	28.2%
2020	EQT Infrastructure V (No.2) USD SCSp	10/29/2020	\$177,000,000	\$125,955,802	\$12,941,257	\$123,505,784	\$61,828,567	1.1x	9.0%
2021	Basalt Infrastructure Partners III	2/5/2021	\$140,000,000	\$94,549,341	-	\$101,738,872	\$45,450,659	1.1x	6.4%
2021	Stonepeak Infrastructure Fund IV, L.P.	2/16/2021	\$207,000,000	\$91,277,054	\$585,219	\$99,204,969	\$115,735,777	1.1x	9.1%
2021	Stonepeak Tiger (Co-Invest) Holdings (I-B) LP	4/16/2021	\$28,500,000	\$24,112,602	-	\$24,335,803	\$4,387,398	1.0x	0.6%
2021	KKR Global Infrastructure Investors IV (USD) SCSp	5/24/2021	\$249,000,000	\$104,546,055	\$1,319,603	\$93,566,689	\$145,784,280	0.9x	-15.1%
2021	ASF VIII Infrastructure B L.P.	8/3/2021	\$166,000,000	\$19,227,587	\$3,419,956	\$16,995,950	\$146,772,413	1.1x	6.8%
2021	Axium Infrastructure North America (2021)	9/3/2021	\$113,385,360	\$115,685,478	\$3,717,654	\$116,598,107	(\$0)	1.0x	8.6%
2021	Stonepeak Patagonia (Co-Invest) Holdings LP (Project Panther)	12/10/2021	\$9,059,000	\$8,173,623	-	\$9,478,381	\$885,377	1.2x	24.6%
2022	Ardian Infra Fund V Co-Invest Eden	2/21/2022	\$28,440,456	\$28,440,456	-	\$31,742,279	-	NM	NM
2022	InfraVia European Fund V SCSp	2/25/2022	\$155,093,426	\$41,344,493	\$778,609	\$39,498,560	\$113,461,352	NM	NM
2022	Blackrock Global Infrastructure Fund IV	6/30/2022	\$159,000,000	\$10,433,673	-	\$8,937,146	\$148,566,327	NM	NM
2022	Brookfield Infrastructure Fund V, LP	7/18/2022	\$198,360,000	-	-	(\$1,378,573)	\$198,360,000	NM	NM
2022	BIP III Ride Co-Investment L.P. (Project Ride)	8/2/2022	\$20,379,329	\$20,379,329	-	\$22,662,616	-	NM	NM
2022	Basalt Infrastructure Partners IV A L.P.	10/7/2022	\$198,400,000	-	-	-	\$198,400,000	NM	NM
2022	DIF Infrastructure VII SCSp	11/15/2022	\$129,323,227	-	-	(\$1,716,177)	\$129,323,227	NM	NM
2022	Ardian Infra Fund V Co-Invest Lemon	12/22/2022	\$22,138,814	\$20,119,334	-	\$20,589,043	\$2,260,440	NM	NM
2023	EQT Infrastructure VI (No.2) USD SCSp	3/1/2023	\$203,000,000	-	-	-	\$203,000,000	NM	NM
2023	Global Infrastructure Partners V-A/B, L.P.	3/31/2023	\$203,000,000	-	-	-	\$203,000,000	NM	NM
Total			\$4,282,292,454	\$2,293,059,500	\$921,147,595	\$2,177,150,220	\$2,203,117,539	1.4x	12.1%

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):

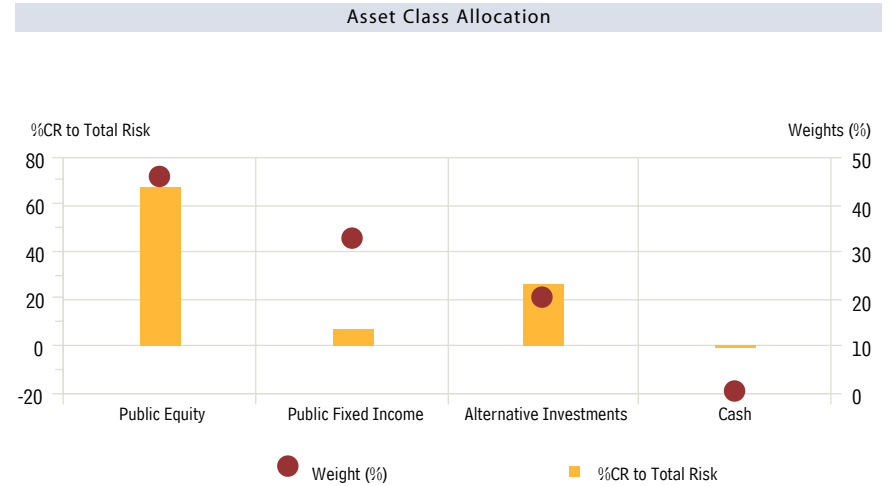
BarraOne Total Plan Summary

COMPANY: NYCERS - TEACHERS
 PORTFOLIO: TRS_Plan3
 BENCHMARK: TRS_Policy3
 POSITIONS: 30,563

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 95,552,643,023
 ACCEPTED: 30,027

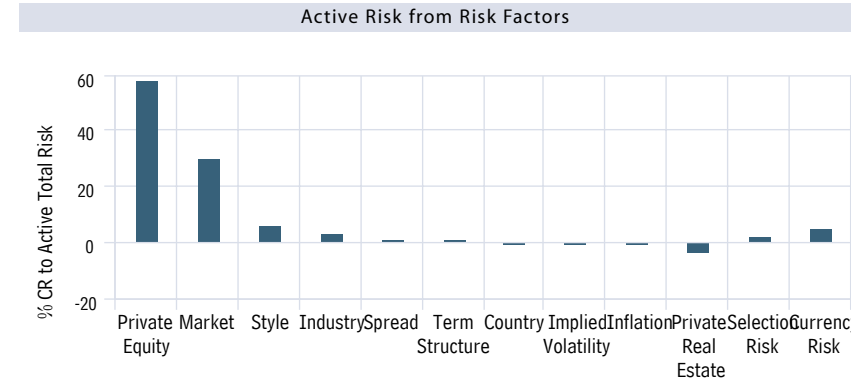
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	11.69	Total	95,552,643,023	100.00	11.69	11.69	100.00
Benchmark Risk	10.59	Public Equity	44,235,950,357	46.29	17.44	7.89	67.48
Active Risk	1.98	Public Fixed Income	31,301,528,074	32.76	5.41	0.76	6.51
Portfolio Beta	1.09	Alternative Investments	19,557,191,152	20.47	16.16	3.04	26.01
Effective Duration	2.07	Cash	457,973,440	0.48	0.06	-0.00	-0.00



Risk Factor Breakdown

Risk Source	Risk Decomposition			Risk Decomposition		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	11.69	100.00	1.00	1.98	100.00	1.00
Local Market Risk	10.97	93.85	1.00	1.89	95.43	0.99
Common Factor Risk	10.94	93.57	1.00	1.84	93.10	0.98
Private Real Estate	0.48	4.10	0.70	-0.07	-3.73	-0.13
Implied Volatility	0.02	0.13	0.46	-0.00	-0.04	-0.22
Industry	0.10	0.85	0.20	0.06	3.06	0.24
Inflation	0.06	0.55	0.40	-0.02	-0.89	-0.18
Market	9.08	77.65	0.96	0.59	29.86	0.54
Private Equity	0.19	1.66	0.13	1.15	57.98	0.76
Spread	0.53	4.57	0.70	0.01	0.46	0.15
Style	0.17	1.48	0.60	0.12	6.22	0.39
Term Structure	0.31	2.61	0.15	0.00	0.21	0.07
Selection Risk	0.03	0.28	0.05	0.05	2.33	0.15
Currency Risk	0.72	6.15	0.61	0.09	4.57	0.34



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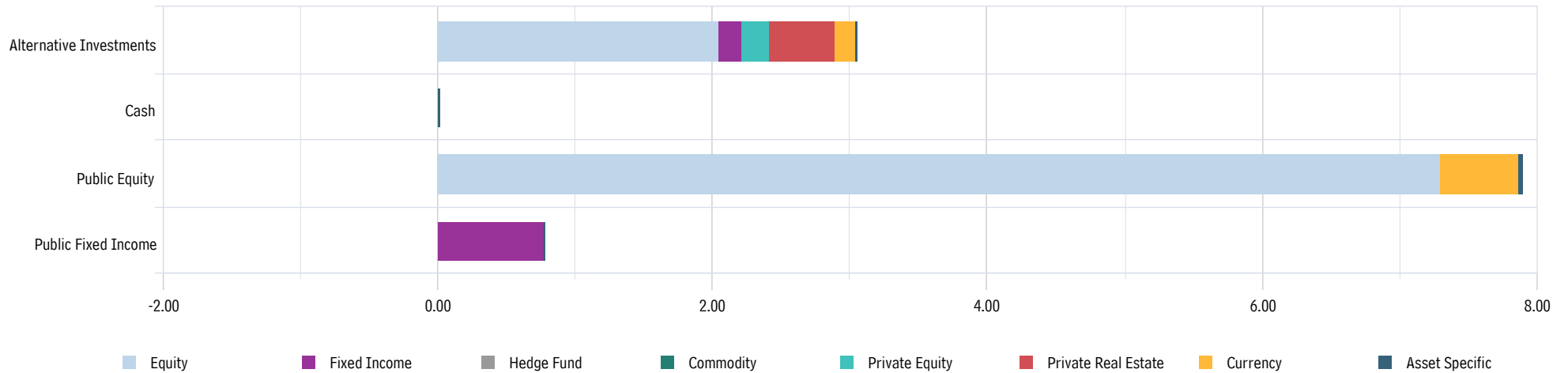
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Risk Contribution Breakdown by Risk Type

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	95,552,643,023	100.00	-	11.69	100.00	11.69	9.35	0.92	0.00	0.00	0.00	0.48	0.19	0.72	0.03
Alternative Investments	19,557,191,152	20.47	-	16.16	26.01	3.04	2.05	0.16	0.00	0.00	0.00	0.48	0.19	0.15	0.00
Cash	457,973,440	0.48	-	0.06	-0.00	-0.00	0.00	-0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Equity	44,235,950,357	46.29	-	17.44	67.48	7.89	7.29	-0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.03
Public Fixed Income	31,301,528,074	32.76	-	5.41	6.51	0.76	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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Allocation Selection

Asset Class	Active Weight(%)	Allocation			Selection			Active	
		Volatility	Correlation	Risk Contribution	Volatility	Correlation	Risk Contribution	Risk Contribution	
Active Total Risk				0.06			1.92	1.98	
Alternative Investments	-2.53	3.90	-0.26	0.03	8.86	0.98	1.77	1.80	
Cash	0.48	10.60	-0.50	-0.03	0.28	0.06	0.00	-0.03	
Public Equity	1.79	7.16	0.54	0.07	0.86	0.31	0.12	0.19	
Public Fixed Income	0.26	9.60	-0.48	-0.01	0.20	0.34	0.02	0.01	



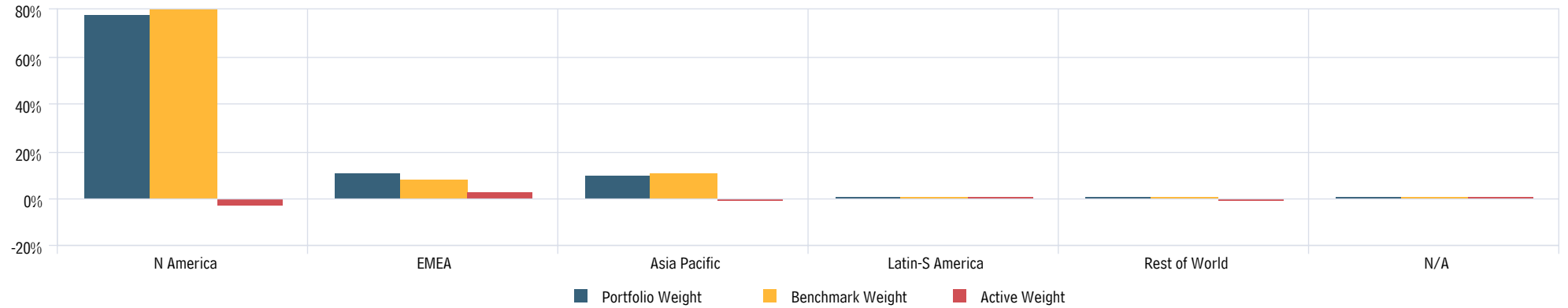
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Portfolio Allocation by Region

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	11.69	1.98	100.00	0.02
N America	77.34	79.99	-2.65	10.83	1.65	83.37	0.01
EMEA	10.95	8.10	2.85	18.11	0.31	15.68	0.04
Asia Pacific	10.26	10.56	-0.30	17.12	0.01	0.41	0.02
Latin-S America	0.92	0.89	0.02	26.68	0.00	0.01	0.04
Rest of World	0.35	0.46	-0.11	9.75	0.00	0.14	-0.02
N/A	0.19	0.00	0.18	17.39	0.01	0.38	0.04



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 ACCEPTED: 30,027

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	11.69	1.98	100.00	0.02
United States	75.26	78.14	-2.88	10.76	1.60	80.80	0.01
United Kingdom	2.84	1.78	1.06	18.14	0.11	5.40	0.04
China International	2.37	2.35	0.02	27.61	-0.02	-1.14	0.02
Japan	1.83	2.15	-0.31	16.68	0.00	0.13	0.01
India	1.65	1.40	0.24	20.07	0.01	0.56	0.02
Taiwan	1.51	1.49	0.02	23.66	-0.00	-0.01	0.03
Canada	1.32	1.62	-0.30	14.28	0.02	1.10	0.02
Germany	1.31	0.83	0.48	20.74	0.04	1.84	0.06
S. Korea	1.31	1.17	0.14	25.09	0.01	0.36	0.05
France	1.26	1.16	0.10	19.84	0.01	0.67	0.06
Switzerland	1.04	0.95	0.09	16.94	0.02	0.95	0.03
Netherlands	0.98	0.52	0.46	23.37	0.04	2.10	0.06
Brazil	0.62	0.54	0.08	34.52	0.01	0.31	0.05
Italy	0.51	0.32	0.19	21.45	0.02	0.84	0.05
Australia	0.49	0.73	-0.24	21.24	-0.01	-0.26	0.04
Sweden	0.49	0.29	0.19	26.28	0.02	1.09	0.09
Hong Kong	0.46	0.26	0.21	22.26	0.00	0.11	-0.00
Denmark	0.43	0.28	0.15	20.74	0.01	0.68	0.04
Spain	0.43	0.27	0.16	17.65	0.01	0.53	0.04
Mexico	0.36	0.28	0.08	24.05	0.00	0.23	0.04
Ireland	0.34	0.25	0.09	15.03	0.01	0.31	0.01
Euro. Monetary Union	0.33	0.00	0.33	25.63	0.02	1.17	0.07
Indonesia	0.28	0.18	0.10	21.41	0.00	0.10	0.01
South Africa	0.23	0.31	-0.08	28.37	-0.00	-0.25	0.06
Singapore	0.22	0.14	0.09	15.18	0.00	0.08	0.01
Belgium	0.20	0.13	0.07	16.26	0.00	0.15	0.02
China	0.20	0.48	-0.28	45.25	0.01	0.74	-0.01
N/A	0.19	0.00	0.19	17.39	0.01	0.38	0.04
Thailand	0.17	0.19	-0.03	22.31	0.00	0.00	0.02
Luxembourg	0.15	0.19	-0.05	8.29	0.00	0.10	-0.03



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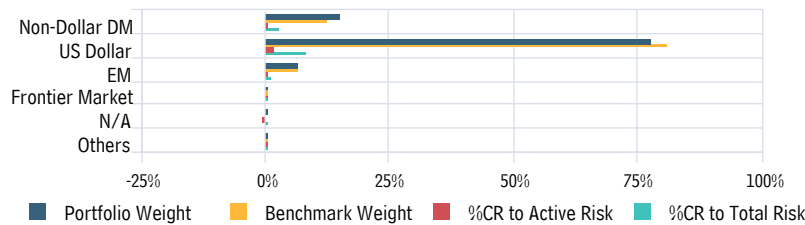
BarraOne Total Plan Summary

COMPANY: NYCERS - TEACHERS
 PORTFOLIO: TRS_Plan3
 BENCHMARK: TRS_Policy3
 POSITIONS: 30,563

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 95,552,643,023
 ACCEPTED: 30,027

Portfolio Allocation by Currency

Exposure by Market



Developed Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	74,046,421,547.17	82.48	68.95
Euro	5,083,291,070.05	8.22	8.25
British Pound Sterling	2,298,334,839.97	5.38	3.64
Hong Kong Dollar	2,226,653,689.65	-0.34	2.98
Japanese Yen	1,705,191,398.31	-0.12	1.89

Emerging Market Currency

Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	1,564,215,979.81	0.55	1.72
New Taiwan Dollar	1,436,759,539.89	-0.02	2.00
Korean Won	1,235,098,479.92	0.36	2.15
Brazilian Real	586,539,455.26	0.31	0.93
Mexican Peso	328,384,131.27	0.23	0.47

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	11.69	11.69	100.00	1.98	100.00	
US Dollar	77.49	80.69	-3.20	10.60	8.06	68.95	1.63	82.48	
Euro	5.32	3.06	2.26	20.51	0.96	8.25	0.16	8.22	
British Pound Sterling	2.41	1.32	1.09	20.97	0.43	3.64	0.11	5.38	
Hong Kong Dollar	2.33	2.45	-0.12	30.08	0.35	2.98	-0.01	-0.34	
Japanese Yen	1.78	2.01	-0.22	17.09	0.22	1.89	-0.00	-0.12	
Indian Rupee	1.64	1.39	0.25	20.17	0.20	1.72	0.01	0.55	
New Taiwan Dollar	1.50	1.48	0.02	23.68	0.23	2.00	-0.00	-0.02	
Korean Won	1.29	1.17	0.12	25.22	0.25	2.15	0.01	0.36	
Swiss Franc	0.98	0.90	0.08	16.87	0.14	1.16	0.01	0.68	
Canadian Dollar	0.87	1.05	-0.18	19.98	0.15	1.32	0.01	0.72	
Brazilian Real	0.61	0.52	0.09	34.82	0.11	0.93	0.01	0.31	
Australian Dollar	0.45	0.66	-0.20	22.70	0.09	0.76	-0.01	-0.34	
Danish Krone	0.43	0.27	0.15	20.77	0.07	0.57	0.01	0.68	
Swedish Krona	0.38	0.29	0.09	26.60	0.09	0.73	0.01	0.66	
Mexican Peso	0.34	0.27	0.08	25.07	0.06	0.47	0.00	0.23	



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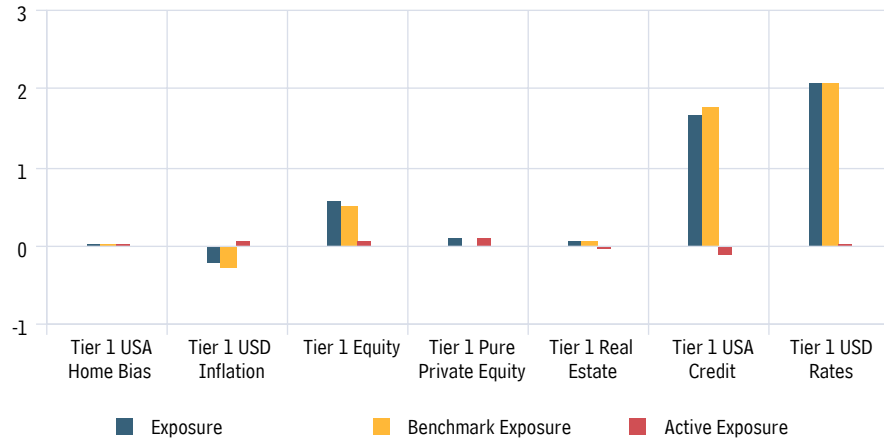
BarraOne Tier 1 USA Factor Summary

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.

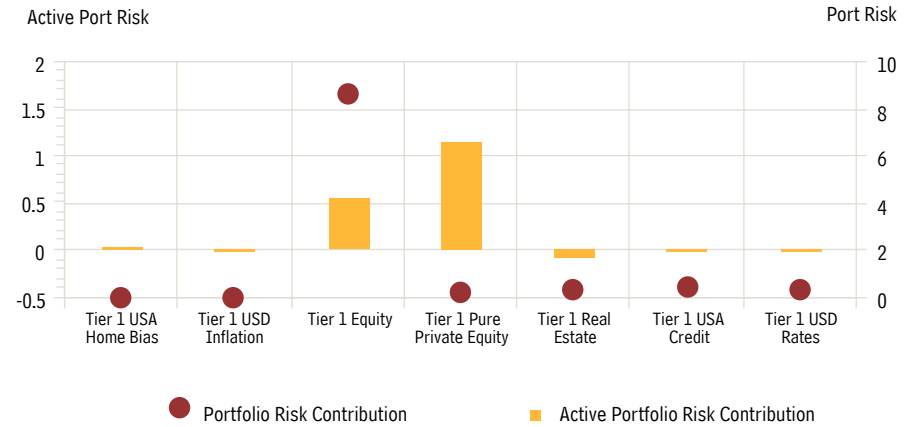
COMPANY: NYCERS - TEACHERS
 PORTFOLIO: TRS_Plan3
 BENCHMARK: TRS_Policy3
 POSITIONS: 30,563
 MODEL: MAC.L Tier 1 USA

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 95,552,643,023
 ACCEPTED: 30,027

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	-	-	-	11.69	100.00	1.98	100.00
Local Market Risk	-	-	-	10.97	93.85	1.89	95.43
Common Factor Risk	-	-	-	10.94	93.57	1.84	93.10
Country	-	-	-	0.04	0.32	0.01	0.32
Tier 1 USA Home Bias	0.01	0.01	0.00	0.04	0.32	0.01	0.32
Factor Residual Risk	-	-	-	0.90	7.68	0.26	13.19
Inflation	-	-	-	0.05	0.46	-0.01	-0.46
Tier 1 USD Inflation	-0.22	-0.29	0.06	0.05	0.46	-0.01	-0.46
Interaction within Common Factor	-	-	-	N/A	-	N/A	-
Market	-	-	-	8.63	73.85	0.54	27.14
Tier 1 Equity	0.58	0.51	0.06	8.63	73.85	0.54	27.14
Private Equity	-	-	-	0.19	1.65	1.14	57.80
Tier 1 Pure Private Equity	0.10	0.00	0.10	0.19	1.65	1.14	57.80
Private Real Estate	-	-	-	0.35	3.00	-0.08	-4.02
Tier 1 Real Estate	0.05	0.08	-0.03	0.35	3.00	-0.08	-4.02
Spread	-	-	-	0.46	3.90	-0.02	-0.86
Tier 1 USA Credit	1.68	1.78	-0.10	0.46	3.90	-0.02	-0.86
Term Structure	-	-	-	0.32	2.70	-0.00	-0.01
Tier 1 USD Rates	2.08	2.08	0.01	0.32	2.70	-0.00	-0.01
Specific Risk	-	-	-	0.03	0.28	0.05	2.33
Currency Risk	-	-	-	0.72	6.15	0.09	4.57
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
Country	-0.00	-0.03	-0.00	-0.02
Implied Volatility	0.02	0.13	-0.00	-0.04
Industry	0.10	0.85	0.06	3.06
Inflation	0.01	0.09	-0.01	-0.43
Interaction within Factor Residual Risk	N/A	-	N/A	-
Market	0.41	3.48	0.05	2.39
Private Equity	0.00	0.01	0.00	0.18
Private Real Estate	0.13	1.10	0.01	0.29
Spread	0.08	0.68	0.03	1.32
Style	0.17	1.48	0.12	6.22
Term Structure	-0.01	-0.09	0.00	0.22

BarraOne Total Plan Summary

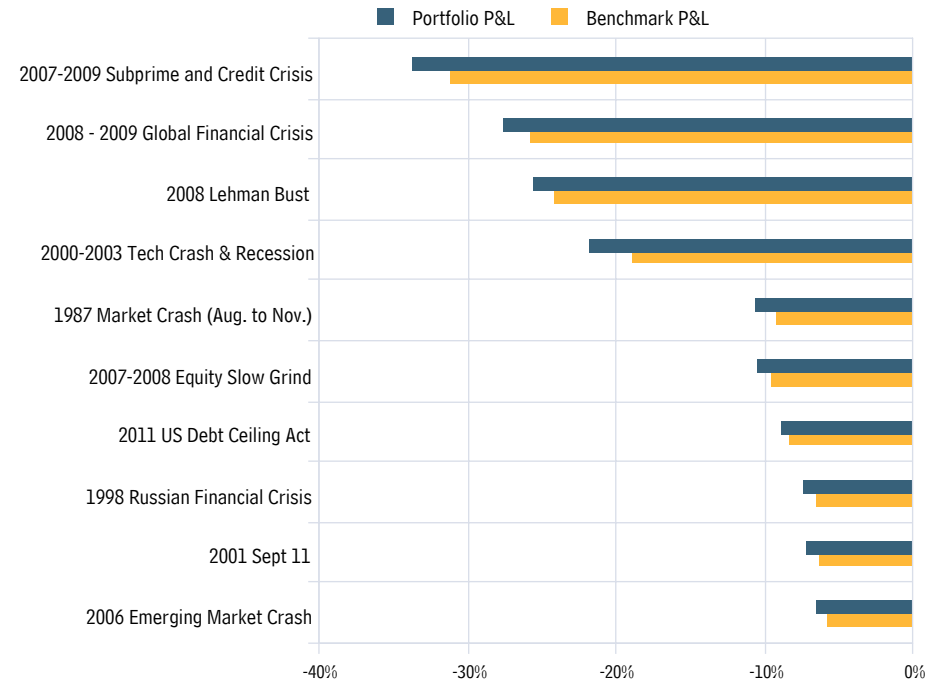
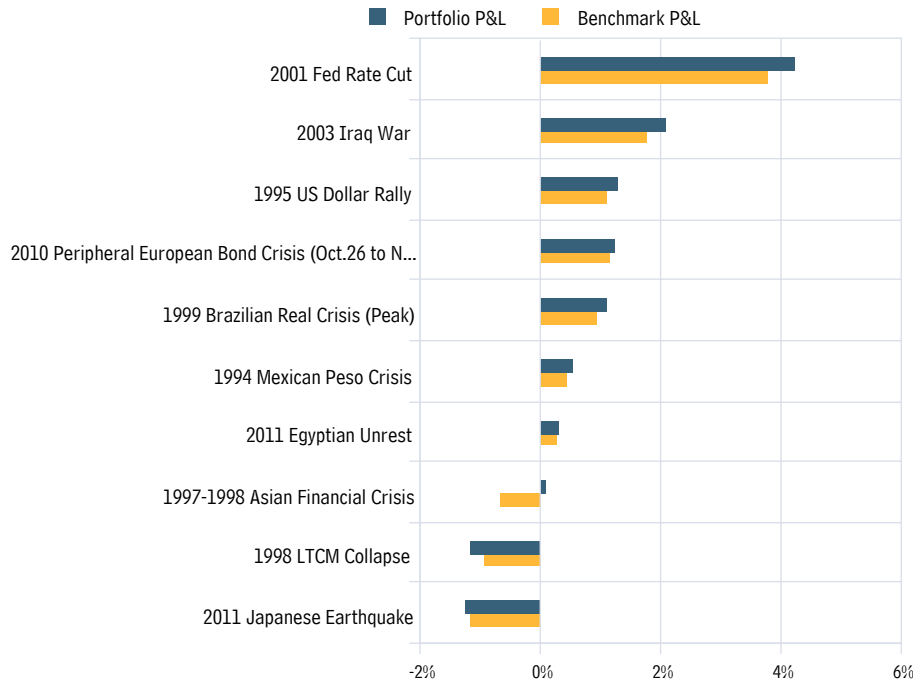
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 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
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 ACCEPTED: 30,027

Stress Scenarios

Top 10 Best Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2001 Fed Rate Cut	4.20	3.77	4,015,784,738
2003 Iraq War	2.09	1.77	1,997,531,252
1995 US Dollar Rally	1.31	1.12	1,247,088,165
2010 Peripheral European Bond Crisis (Oc	1.24	1.17	1,185,098,166
1999 Brazilian Real Crisis (Peak)	1.09	0.95	1,046,212,850
1994 Mexican Peso Crisis	0.52	0.44	495,054,921
2011 Egyptian Unrest	0.32	0.27	303,436,025
1997-1998 Asian Financial Crisis	0.07	-0.66	64,795,215
1998 LTCM Collapse	-1.17	-0.95	-1,117,171,414
2011 Japanese Earthquake	-1.23	-1.17	-1,173,830,213

Top 10 Worst Scenarios			
Scenario	Portfolio P&L	Benchmark P&L	Market Change (\$)
2007-2009 Subprime and Credit Crisis	-33.67	-31.21	-32,169,938,470
2008 - 2009 Global Financial Crisis	-27.61	-25.68	-26,382,724,688
2008 Lehman Bust	-25.59	-24.22	-24,455,858,243
2000-2003 Tech Crash & Recession	-21.87	-18.91	-20,897,822,181
1987 Market Crash (Aug. to Nov.)	-10.57	-9.14	-10,096,273,637
2007-2008 Equity Slow Grind	-10.47	-9.56	-10,000,219,099
2011 US Debt Ceiling Act	-8.85	-8.24	-8,453,077,442
1998 Russian Financial Crisis	-7.35	-6.51	-7,018,446,350
2001 Sept 11	-7.12	-6.31	-6,805,024,069
2006 Emerging Market Crash	-6.44	-5.81	-6,149,720,895



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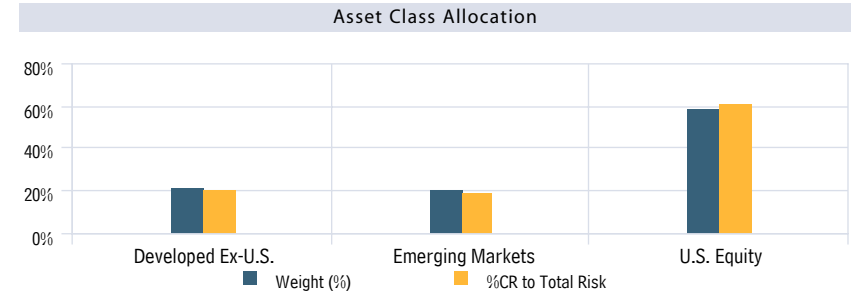
BarraOne Equity Summary

COMPANY: NYCRS - TEACHERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 18,981
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 44,235,950,357
 ACCEPTED: 18,711

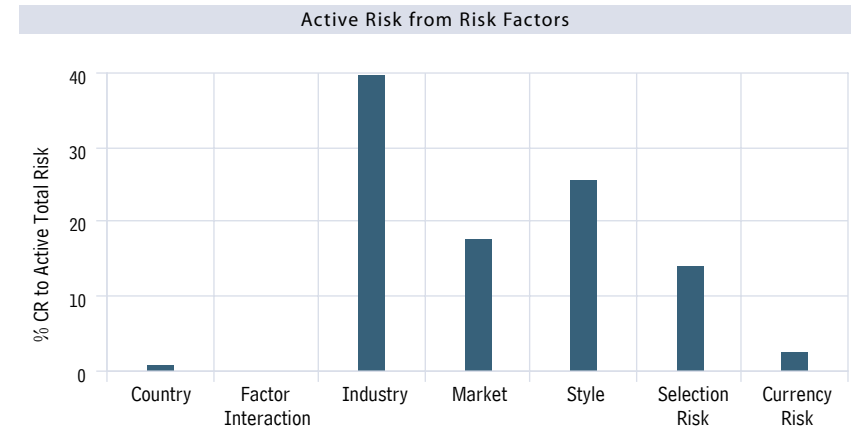
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	17.44	Total	44,235,950,357	100.00	17.44	17.44	100.00
Benchmark Risk	17.20	Developed Ex-U.S.	9,490,841,116	21.46	17.91	3.61	20.71
Active Risk	0.86	Emerging Markets	8,872,494,292	20.06	18.65	3.22	18.45
Portfolio Beta	1.01	U.S. Equity	25,872,614,949	58.49	18.68	10.61	60.84



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	17.44	100.00	1.00	0.86	100.00	1.00
Local Market Risk	16.27	93.29	1.00	0.84	97.57	0.98
Common Factor Risk	16.18	92.75	0.99	0.72	83.49	0.91
Country	-0.01	-0.04	-0.04	0.01	0.72	0.14
Industry	0.17	0.95	0.17	0.34	39.60	0.68
Market	15.76	90.35	0.99	0.15	17.55	0.49
Style	0.26	1.49	0.64	0.22	25.63	0.54
Selection Risk	0.09	0.54	0.07	0.12	14.08	0.38
Currency Risk	1.17	6.71	0.59	0.02	2.43	0.13



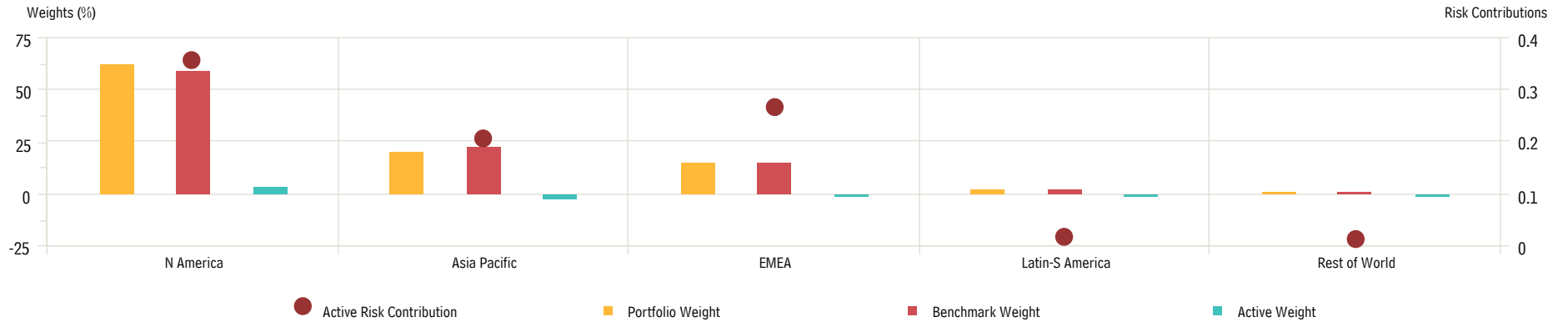
BarraOne Equity Summary

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 BENCHMARK: Public Equity
 POSITIONS: 18,981
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CURRENCY: USD
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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	17.44	0.86	100.00	0.01
Asia Pacific	20.90	23.00	-2.10	17.62	0.21	23.80	-0.03
EMEA	14.61	15.32	-0.71	20.11	0.27	31.08	-0.00
Latin-S America	1.69	1.91	-0.22	28.11	0.02	2.16	-0.03
N America	62.44	59.13	3.31	18.56	0.36	41.38	0.02
Rest of World	0.36	0.64	-0.28	15.74	0.01	1.58	-0.05



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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	17.44	0.86	100.00	0.01
United States	59.44	56.23	3.22	18.65	0.30	34.48	0.07
China International	5.13	5.28	-0.15	27.61	0.04	4.06	-0.02
Japan	3.57	4.51	-0.94	17.75	0.06	7.50	0.02
India	3.29	3.12	0.17	20.32	0.03	3.15	0.03
Taiwan	3.25	3.33	-0.08	23.68	0.01	1.06	0.02
United Kingdom	3.11	2.96	0.15	21.36	0.07	8.47	0.03
S. Korea	2.77	2.63	0.14	25.35	0.01	0.63	0.02
France	2.04	2.50	-0.46	20.78	0.02	2.32	0.05
Germany	1.92	1.73	0.18	23.10	0.02	2.88	0.05
Switzerland	1.81	2.02	-0.21	16.98	0.02	2.42	0.03
Netherlands	1.42	0.93	0.48	28.15	0.02	2.65	0.07
Canada	1.37	2.38	-1.01	21.00	0.06	6.56	0.02
Brazil	1.21	1.17	0.04	34.70	0.01	1.59	0.01
Hong Kong	0.98	0.50	0.48	22.66	-0.02	-2.51	-0.01
Italy	0.86	0.53	0.33	22.99	0.01	1.47	0.05
Australia	0.81	1.48	-0.67	23.80	0.04	4.28	0.03
Denmark	0.74	0.62	0.12	20.93	0.01	0.63	0.05
Sweden	0.72	0.65	0.07	27.72	0.01	1.21	0.07
Mexico	0.71	0.60	0.11	25.60	0.00	0.09	0.03
Indonesia	0.60	0.41	0.19	21.56	-0.01	-0.59	0.02
South Africa	0.47	0.69	-0.21	28.68	0.01	0.97	0.01
Spain	0.47	0.53	-0.06	20.91	0.01	1.03	0.03
Singapore	0.42	0.25	0.17	16.57	-0.00	-0.48	0.02
Thailand	0.36	0.44	-0.08	22.31	0.00	0.14	-0.00
Ireland	0.35	0.19	0.16	26.66	0.00	0.42	0.06
China	0.28	1.03	-0.75	62.57	0.04	4.84	0.01
Belgium	0.25	0.19	0.06	20.29	-0.00	-0.07	0.02
United Arab Emirates	0.18	0.28	-0.10	20.61	0.00	0.48	0.00
Poland	0.18	0.18	-0.00	31.50	0.00	0.13	0.04
Finland	0.17	0.18	-0.01	25.04	0.00	0.32	0.04



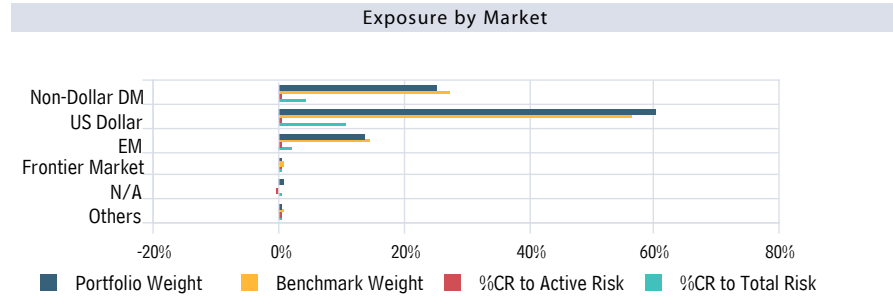
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Portfolio Allocation by Currency



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	26,631,577,253.30	35.30	62.39	Indian Rupee	1,456,232,813.81	3.15	2.40
Euro	3,347,608,241.35	11.12	8.50	New Taiwan Dollar	1,436,759,489.74	1.06	2.94
Hong Kong Dollar	2,224,185,510.94	5.66	4.49	Korean Won	1,218,364,030.88	0.66	3.12
Japanese Yen	1,578,648,671.02	7.50	2.62	Brazilian Real	535,364,887.43	1.59	1.30
British Pound Sterling	1,355,055,369.14	8.61	3.21	Mexican Peso	311,899,521.54	0.09	0.68

Top 15 Currencies by Weight%

Currency of Exposure	Weight (%)		Active	Total Risk	CR to TR	CR to TR (%)	CR to AR	CR to AR (%)
	Portfolio	Benchmark						
Total	100.00	100.00	-0.00	17.44	17.44	100.00	0.86	100.00
US Dollar	60.20	56.61	3.59	18.60	10.88	62.39	0.31	35.30
Euro	7.57	6.87	0.69	21.76	1.48	8.50	0.10	11.12
Hong Kong Dollar	5.03	5.50	-0.47	30.10	0.78	4.49	0.05	5.66
Japanese Yen	3.57	4.51	-0.94	17.75	0.46	2.62	0.06	7.50
Indian Rupee	3.29	3.12	0.17	20.32	0.42	2.40	0.03	3.15
New Taiwan Dollar	3.25	3.33	-0.08	23.68	0.51	2.94	0.01	1.06
British Pound Sterling	3.06	2.96	0.10	21.47	0.56	3.21	0.07	8.61
Korean Won	2.75	2.63	0.13	25.35	0.54	3.12	0.01	0.66
Swiss Franc	1.82	2.02	-0.21	16.98	0.25	1.45	0.02	2.42
Canadian Dollar	1.32	2.35	-1.03	20.61	0.24	1.37	0.06	6.60
Brazilian Real	1.21	1.17	0.04	34.70	0.23	1.30	0.01	1.59
Australian Dollar	0.81	1.48	-0.67	23.80	0.17	0.95	0.04	4.28
Danish Krone	0.74	0.62	0.12	20.93	0.11	0.65	0.01	0.63
Mexican Peso	0.71	0.60	0.11	25.60	0.12	0.68	0.00	0.09
CNH	0.69	0.00	0.69	5.86	0.01	0.08	-0.03	-3.80



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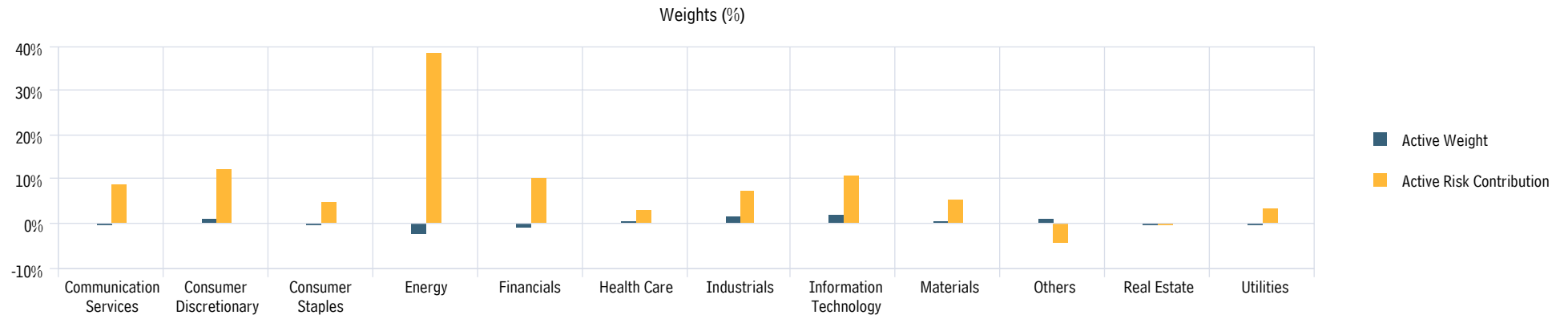
BarraOne Equity Summary

COMPANY: NYCRS - TEACHERS
 PORTFOLIO: Public Equity
 BENCHMARK: Public Equity
 POSITIONS: 18,981
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 44,235,950,357
 ACCEPTED: 18,711

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	17.44	0.86	100.00	0.01
Communication Services	6.79	7.36	-0.57	22.23	0.08	8.79	0.06
Consumer Discretionary	12.34	11.55	0.79	22.48	0.11	12.33	0.07
Consumer Staples	6.40	6.95	-0.55	11.95	0.04	4.81	0.02
Energy	2.04	4.64	-2.60	26.49	0.33	38.15	-0.05
Financials	15.42	16.50	-1.08	19.11	0.09	10.30	0.04
Health Care	11.41	11.05	0.35	14.43	0.03	3.08	0.04
Industrials	12.11	10.50	1.61	18.60	0.06	7.06	0.05
Information Technology	22.92	21.17	1.74	22.37	0.09	10.90	0.09
Materials	5.47	5.04	0.43	20.54	0.05	5.56	0.03
Others	0.81	0.00	0.81	1.61	-0.04	-4.25	-0.00
Real Estate	2.18	2.49	-0.31	20.12	-0.00	-0.19	0.04
Utilities	2.12	2.75	-0.63	17.06	0.03	3.47	0.01



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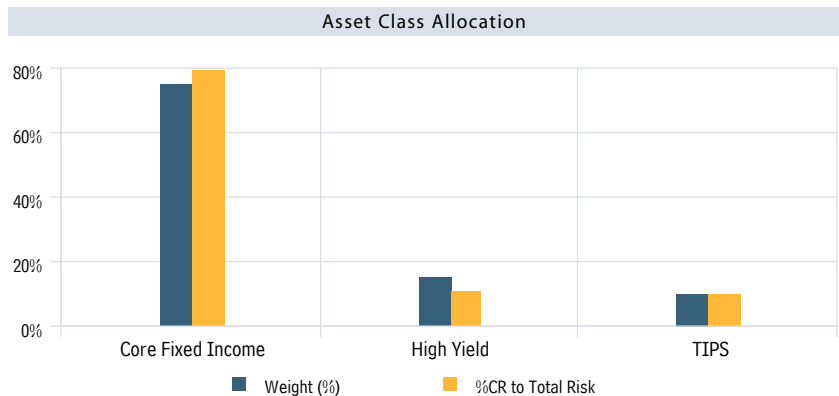
BarraOne Fixed Income Summary

COMPANY: NYCRC - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

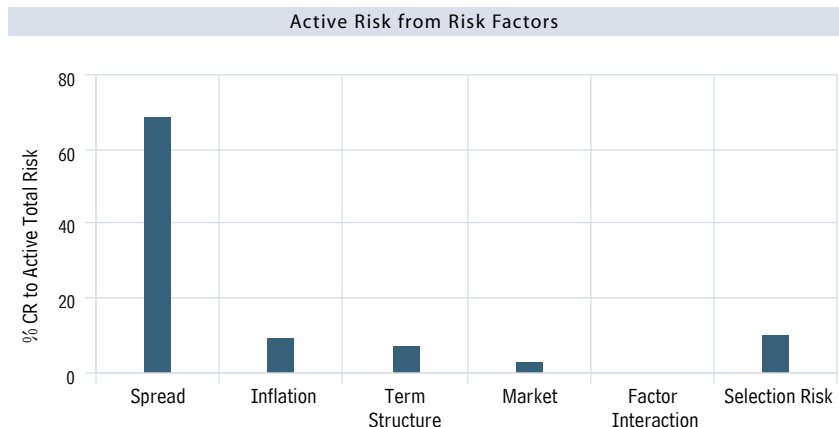
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	5.41	Total	31,301,528,074	100.00	5.41	5.41	100.00
Benchmark Risk	5.41	Core Fixed Income	23,346,638,845	74.59	5.89	4.29	79.37
Active Risk	0.20	High Yield	4,802,796,103	15.34	6.45	0.58	10.76
Portfolio Beta	1.00	TIPS	3,152,093,126	10.07	6.40	0.53	9.87
Cont. to Eff. Duration	5.87						
Convexity	0.66						
Yield to Worst (%)	4.84						
OAS to Swap (bp)	90.68						



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	5.41	100.00	1.00	0.20	100.00	1.00
Local Market Risk	5.41	100.00	1.00	0.20	99.92	1.00
Common Factor Risk	5.41	99.97	1.00	0.18	89.84	0.95
Implied Volatility	0.05	0.91	0.46	0.00	1.33	0.39
Inflation	-0.05	-1.01	-0.11	0.02	9.14	0.62
Market	0.00	0.04	0.24	0.01	2.76	0.57
Spread	0.22	4.10	0.13	0.14	68.35	0.92
Term Structure	5.19	95.99	0.93	0.01	7.28	0.47
Selection Risk	0.00	0.02	0.02	0.02	10.08	0.32



BarraOne Fixed Income Summary

COMPANY: NYCRS - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

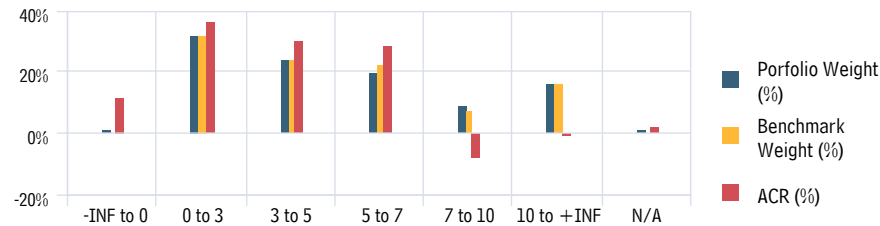
CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

Portfolio by Factor Breakdowns

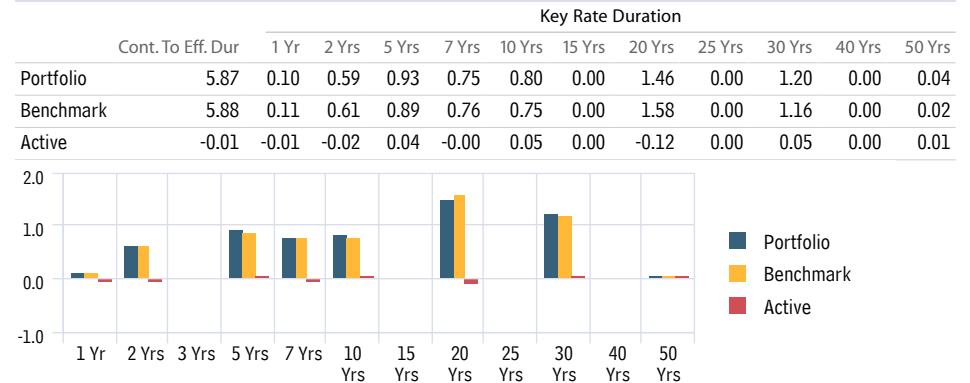
Spread Factor	Volatility	Top 10 Spread Factor				Correlation	Contribution (Residual)			
		Exposure (Residual)					Active Port	to TR	to AR	to AR%
		Portfolio	Benchmark	Active	MCAR					
US Financials - Banking IG Spr	51.65	0.20	0.13	0.06	0.39	0.76	0.02	0.02	12.16	
US Consumer Discretionary HY S	51.36	0.66	0.60	0.06	0.40	0.78	0.02	0.02	11.92	
US MBS All Spread	0.37	0.08	0.00	0.08	0.00	0.52	0.01	0.02	7.80	
US Financials HY Spread	41.34	0.30	0.25	0.04	0.33	0.80	-0.00	0.01	6.91	
US Bank Loan Consumer Discreti	24.57	0.07	0.00	0.07	0.19	0.76	0.00	0.01	6.89	
US ABS Home Equity Spread	29.68	0.08	0.00	0.08	0.17	0.57	-0.00	0.01	6.69	
US Financials - Capital Market	48.13	0.10	0.07	0.04	0.37	0.76	0.01	0.01	6.57	
US Health Care - Pharmaceutica	54.21	0.11	0.08	0.03	0.36	0.67	0.01	0.01	6.05	
US ABS Miscellaneous Spread	31.20	0.05	0.00	0.05	0.21	0.67	-0.00	0.01	4.93	
US Health Care HY Spread	45.72	0.17	0.14	0.03	0.34	0.74	0.01	0.01	4.51	

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 20Y	0.89	1.45	1.58	-0.13	-0.00	-0.26	1.15	0.03	14.31	
USD Rate 2Y	1.27	0.59	0.61	-0.02	-0.00	-0.34	0.56	0.01	5.34	
USD Rate 1Y	1.22	0.10	0.11	-0.01	-0.00	-0.33	0.08	0.00	2.48	
USD Muni Rates 20Y	1.04	0.01	0.00	0.01	0.00	0.24	0.00	0.00	0.68	
USD Muni Rates 10Y	1.06	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.43	
USD Muni Rates 5Y	1.12	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.15	
USD Muni Rates 2Y	1.18	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.03	
USD Muni Rates 1Y	1.13	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.01	
USD Rate 6M	1.04	0.00	0.00	0.00	-0.00	-0.30	0.00	-0.00	-0.38	
USD Rate 1M	1.52	0.00	0.00	0.00	-0.00	-0.26	0.00	-0.00	-0.39	

%CR to Active Risk by Duration Buckets



Key Rate Duration



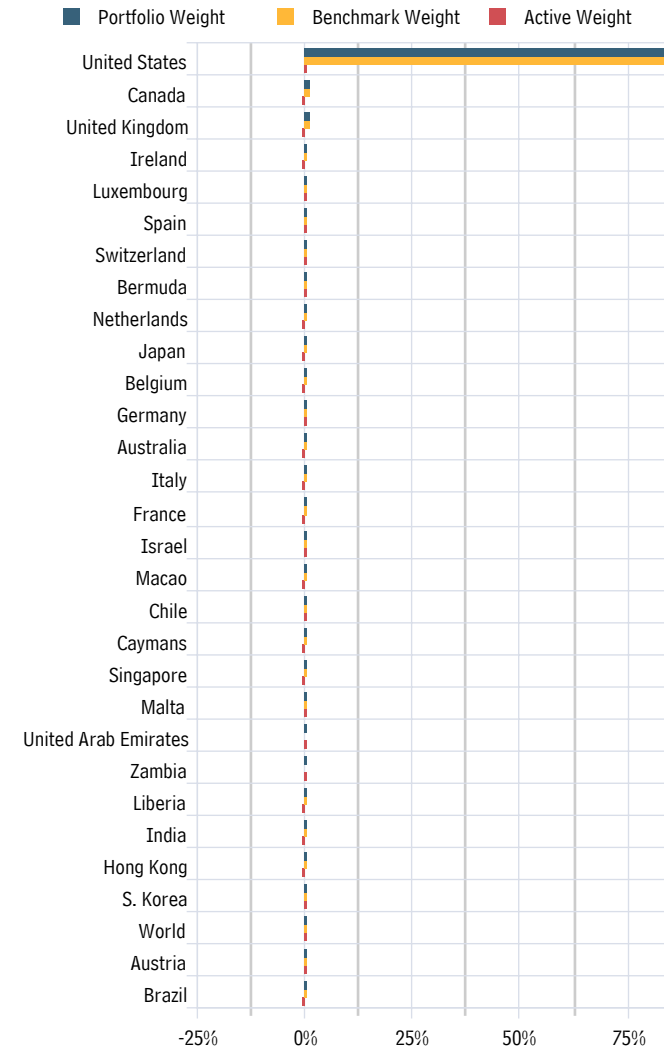
BarraOne Fixed Income Summary

COMPANY: NYCRC - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

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	5.41	0.20	100.00	0.00
United States	95.28	94.74	0.54	5.46	0.19	95.60	0.01
Canada	1.09	1.21	-0.12	5.19	0.00	1.06	0.01
United Kingdom	1.06	1.15	-0.09	5.38	0.00	0.87	0.01
Ireland	0.36	0.37	-0.01	5.85	-0.00	-0.70	0.02
Luxembourg	0.27	0.24	0.03	10.86	0.00	1.26	0.04
Spain	0.20	0.10	0.09	5.12	0.00	0.26	0.01
Switzerland	0.17	0.12	0.05	5.36	-0.00	-0.33	0.00
Bermuda	0.16	0.09	0.06	5.23	0.00	0.33	0.03
Netherlands	0.15	0.18	-0.03	8.52	-0.00	-0.48	0.03
Japan	0.14	0.42	-0.27	5.61	0.00	1.30	-0.01
Belgium	0.14	0.14	-0.00	12.58	0.00	0.09	0.00
Germany	0.13	0.08	0.05	6.47	0.00	0.74	0.02
Australia	0.11	0.17	-0.06	7.09	0.00	0.06	0.01
Italy	0.09	0.16	-0.06	6.37	-0.00	-2.13	0.03
France	0.08	0.10	-0.02	11.31	0.00	0.82	0.04
Israel	0.06	0.01	0.05	6.57	0.00	0.60	0.02
Macao	0.06	0.14	-0.09	7.84	-0.00	-0.75	0.02
Chile	0.06	0.01	0.05	4.84	0.00	0.74	0.03
Caymans	0.05	0.05	-0.00	6.69	-0.00	-0.03	0.04
Singapore	0.05	0.08	-0.03	26.00	0.00	0.28	0.00
Malta	0.05	0.02	0.03	35.62	0.00	2.20	0.16
United Arab Emirates	0.04	0.00	0.04	4.16	0.00	0.39	0.02
Zambia	0.03	0.00	0.03	2.37	0.00	0.13	0.01
Liberia	0.02	0.03	-0.01	4.51	-0.00	-0.01	0.01
India	0.02	0.04	-0.01	4.61	-0.00	-0.30	0.03
Hong Kong	0.02	0.07	-0.05	17.20	-0.00	-0.06	0.01
S. Korea	0.02	0.00	0.02	2.03	-0.00	-0.01	-0.00
World	0.02	0.00	0.02	2.68	-0.00	-0.04	-0.00
Austria	0.02	0.01	0.01	10.70	0.00	0.18	0.04
Brazil	0.01	0.06	-0.04	10.36	-0.00	-1.36	0.06



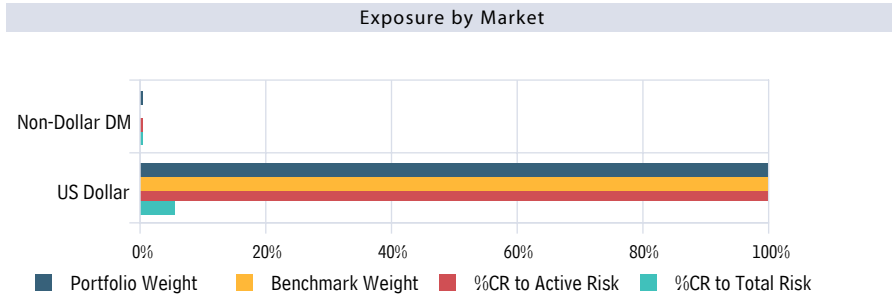
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BarraOne Fixed Income Summary

COMPANY: NYCRS - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	31,301,127,025.45	99.98	100.00
Canadian Dollar	348,413.99	0.01	0.00
British Pound Sterling	50,897.23	0.01	0.00
Euro	1,737.41	0.00	0.00

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)

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	5.41	5.41	100.00	0.20	100.00
US Dollar	100.00	100.00	-0.00	5.41	5.41	100.00	0.20	99.98
Canadian Dollar	0.00	0.00	0.00	6.71	0.00	0.00	0.00	0.01
British Pound Sterling	0.00	0.00	0.00	53.56	0.00	0.00	0.00	0.01
Euro	0.00	0.00	0.00	7.34	0.00	0.00	0.00	0.00



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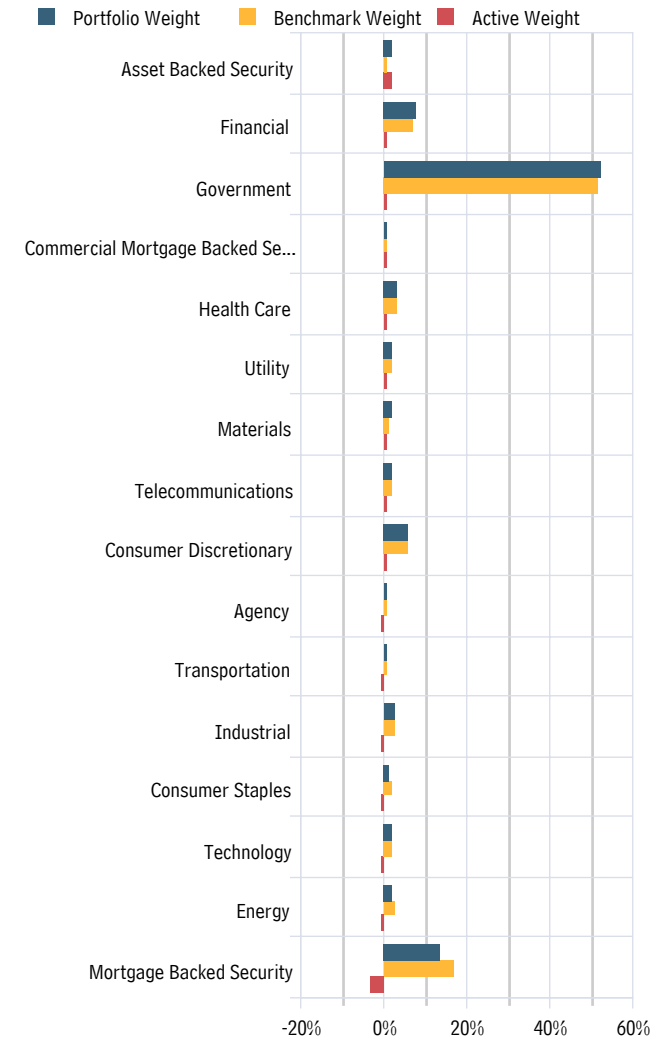
BarraOne Fixed Income Summary

COMPANY: NYCRC - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

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	5.87	5.41	0.20	100.00	0.00
Government	52.05	51.48	0.56	3.27	5.56	-0.00	-0.99	-0.00
Mortgage Backed Security	13.69	16.92	-3.23	0.83	6.68	0.05	26.73	-0.01
Financial	7.94	7.07	0.87	0.38	5.58	0.06	27.35	0.02
Consumer Discretionary	5.66	5.60	0.05	0.27	7.65	0.04	19.71	0.04
Health Care	3.27	2.93	0.34	0.24	7.86	0.03	13.35	0.02
Industrial	2.54	2.74	-0.20	0.11	5.94	0.00	0.80	0.03
Asset Backed Security	2.10	0.00	2.10	0.07	3.68	0.01	2.93	0.00
Energy	2.04	2.76	-0.72	0.09	5.94	-0.00	-1.92	0.03
Utility	1.91	1.81	0.10	0.13	6.64	0.01	2.71	0.01
Telecommunications	1.72	1.65	0.07	0.12	8.63	0.00	1.14	0.03
Materials	1.69	1.60	0.09	0.07	5.34	0.00	2.13	0.03
Technology	1.62	2.09	-0.47	0.11	7.65	-0.00	-0.01	0.02
Consumer Staples	1.27	1.66	-0.39	0.09	7.01	-0.00	-2.32	0.01
Agency	0.81	0.82	-0.01	0.03	4.33	0.00	0.46	-0.00
Transportation	0.79	0.82	-0.02	0.04	5.63	0.01	2.52	0.02
Commercial Mortgage Backed	0.50	0.00	0.50	0.01	2.12	0.00	0.90	0.00
Local/Provincial	0.21	0.03	0.17	0.01	6.05	0.00	1.21	0.01
Others	0.17	0.00	0.17	0.01	7.98	0.01	3.37	0.00
Supranational	0.02	0.00	0.02	0.00	2.68	-0.00	-0.04	-0.00
Sovereign	0.01	0.00	0.00	0.00	7.62	-0.00	-0.01	-0.01



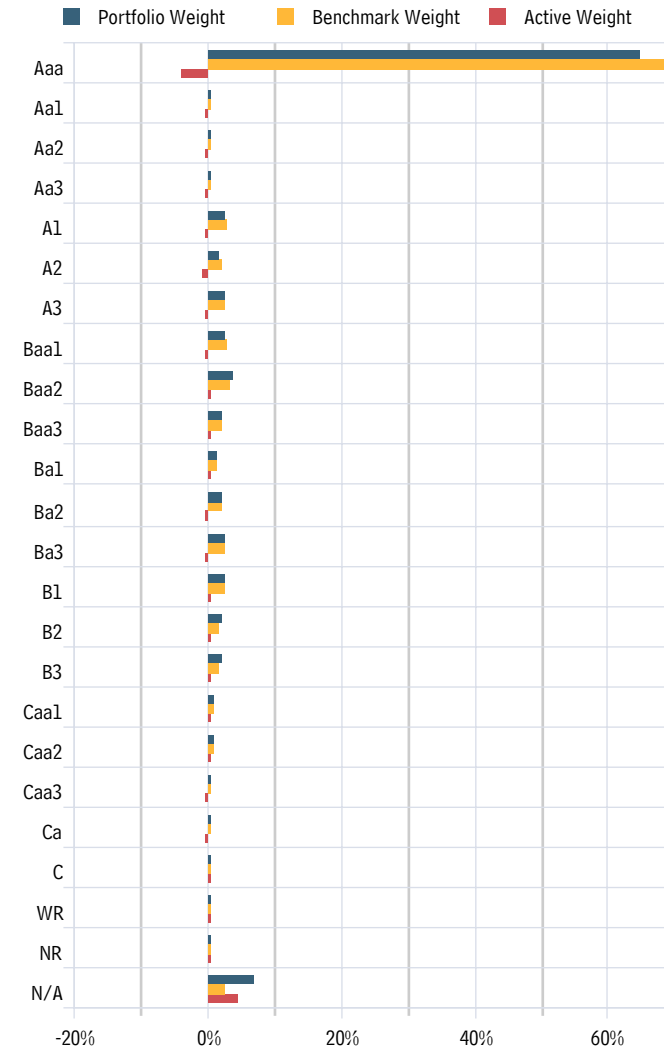
BarraOne Fixed Income Summary

COMPANY: NYCRS - TEACHERS
 PORTFOLIO: Public Fixed Income
 BENCHMARK: Public Fixed Income
 POSITIONS: 11,127
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 31,301,528,074
 ACCEPTED: 10,872

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	5.87	6.12	5.41	0.20	100.00
Aaa	64.69	68.53	-3.84	3.98	6.35	5.64	0.07	35.56
Aa1	0.02	0.02	-0.00	0.00	2.25	2.58	-0.00	-0.06
Aa2	0.13	0.46	-0.33	0.01	11.59	9.83	0.00	0.81
Aa3	0.28	0.47	-0.19	0.03	10.27	9.48	0.00	0.71
A1	2.27	2.72	-0.46	0.17	7.60	7.16	0.01	6.92
A2	1.47	2.09	-0.63	0.10	6.83	6.48	0.00	1.68
A3	2.34	2.56	-0.22	0.17	7.61	7.21	0.00	2.38
Baa1	2.49	2.73	-0.24	0.19	8.10	7.80	0.01	5.24
Baa2	3.49	3.26	0.23	0.25	7.54	7.34	0.01	7.23
Baa3	2.18	1.88	0.30	0.11	5.44	5.87	-0.01	-2.75
Ba1	1.19	1.12	0.08	0.06	5.41	6.12	0.00	2.14
Ba2	1.82	1.87	-0.05	0.07	4.15	5.62	0.00	1.62
Ba3	2.34	2.52	-0.18	0.08	3.72	5.22	-0.00	-1.80
B1	2.59	2.48	0.11	0.10	3.91	6.25	0.01	3.82
B2	2.00	1.71	0.29	0.06	3.35	6.23	0.02	8.90
B3	2.07	1.64	0.43	0.06	3.26	7.84	0.03	16.01
Caa1	0.92	0.65	0.28	0.02	2.92	10.34	0.02	8.99
Caa2	0.85	0.74	0.11	0.03	3.38	11.40	0.01	2.77
Caa3	0.06	0.11	-0.05	0.00	3.65	19.73	-0.01	-4.12
Ca	0.04	0.11	-0.07	0.00	2.59	16.95	-0.01	-5.27
C	0.02	0.01	0.01	0.00	3.24	21.12	0.00	0.35
WR	0.12	0.07	0.05	0.00	2.66	7.40	0.00	1.95
NR	0.01	0.00	0.01	0.00	2.83	3.47	0.00	0.02
Not Rated	6.63	2.26	4.37	0.37	6.27	5.45	0.01	6.89



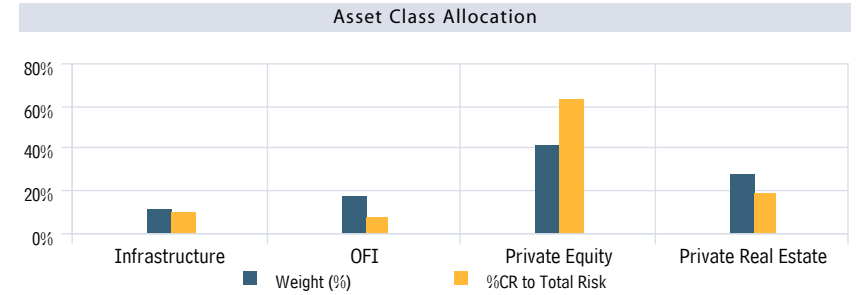
BarraOne Equity Summary

COMPANY: NYCERS - TEACHERS
 PORTFOLIO: Alternative Investments
 BENCHMARK: Alternative Investments
 POSITIONS: 427
 MODEL: MAC.L

CURRENCY: USD
 ANALYSIS DATE: June 30, 2023
 MARKET VALUE: 19,557,191,152
 ACCEPTED: 426

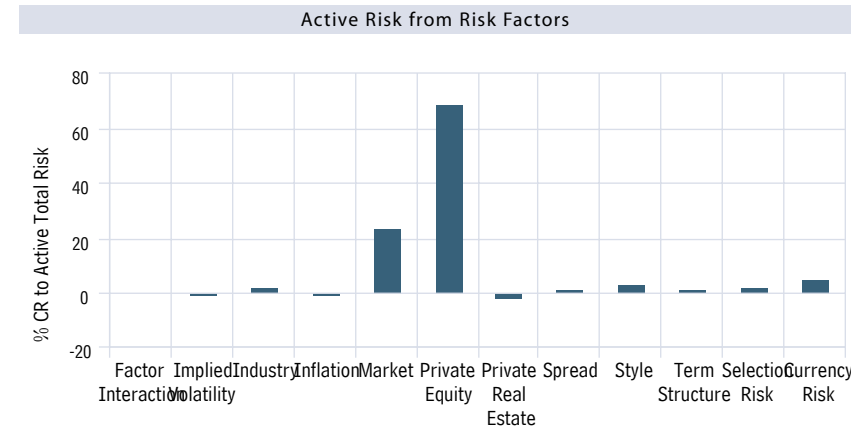
Total Plan Summary

Risk Summary		Asset Class Contribution to Risk					
Statistic	Value	Asset Class	Mkt Value	Weight (%)	Total Risk	Risk Contribution	%CR to TR
Total Risk	16.16	Total	19,557,191,152	100.00	16.16	16.16	100.00
Benchmark Risk	10.89	Infrastructure	2,279,296,716	11.65	15.69	1.69	10.46
Active Risk	8.86	OFI	3,595,297,294	18.38	8.02	1.22	7.56
Portfolio Beta	1.27	Private Equity	8,145,671,361	41.65	25.09	10.22	63.25
		Private Real Estate	5,536,925,781	28.31	13.61	3.03	18.74



Risk Factor Breakdown

Risk Source	Portfolio			Active		
	Risk Contribution	% Risk	Correlation	Risk Contribution	% Risk	Correlation
Total Risk	16.16	100.00	1.00	8.86	100.00	1.00
Local Market Risk	15.54	96.16	1.00	8.43	95.10	0.99
Common Factor Risk	15.50	95.92	1.00	8.25	93.09	0.98
Private Real Estate	2.37	14.65	0.70	-0.22	-2.45	-0.11
Implied Volatility	-0.00	-0.02	-0.36	-0.01	-0.06	-0.21
Industry	0.17	1.06	0.20	0.15	1.68	0.18
Inflation	0.00	0.00	0.00	-0.08	-0.87	-0.16
Market	8.68	53.74	0.86	2.05	23.16	0.46
Private Equity	3.34	20.69	0.45	6.10	68.80	0.83
Spread	0.62	3.81	0.63	0.01	0.07	0.02
Style	0.29	1.82	0.36	0.24	2.68	0.28
Term Structure	0.03	0.18	0.04	0.01	0.11	0.04
Selection Risk	0.04	0.25	0.05	0.18	2.01	0.14
Currency Risk	0.62	3.84	0.47	0.43	4.90	0.33



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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	16.16	8.86	100.00	0.09
Asia Pacific	2.26	0.18	2.08	13.11	0.04	0.45	0.01
EMEA	16.07	1.77	14.30	19.46	1.25	14.10	0.06
Latin-S America	0.52	0.01	0.51	25.73	0.02	0.22	0.04
N America	80.05	97.82	-17.77	16.77	7.50	84.65	0.03
N/A	0.91	0.00	0.91	17.39	0.04	0.49	0.05
Rest of World	0.19	0.22	-0.03	12.25	0.01	0.08	-0.01



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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	16.16	8.86	100.00	0.09
United States	78.41	97.07	-18.67	16.81	7.33	82.76	0.07
United Kingdom	5.15	0.41	4.74	20.88	0.42	4.71	0.10
Germany	1.86	0.13	1.73	19.19	0.11	1.26	0.08
Euro. Monetary Union	1.62	0.00	1.62	25.28	0.12	1.34	0.11
Canada	1.60	0.72	0.88	17.04	0.17	1.90	0.09
France	1.43	0.07	1.36	21.17	0.12	1.31	0.11
Netherlands	1.33	0.19	1.14	19.91	0.08	0.88	0.08
N/A	0.91	0.00	0.91	17.39	0.04	0.49	0.08
Sweden	0.74	0.02	0.72	27.91	0.08	0.94	0.14
Spain	0.72	0.01	0.71	23.04	0.07	0.82	0.13
Switzerland	0.69	0.05	0.64	27.36	0.07	0.84	0.13
Japan	0.65	0.01	0.63	13.05	-0.00	-0.05	0.03
India	0.56	0.02	0.54	20.55	0.01	0.16	0.06
Denmark	0.42	0.00	0.42	25.72	0.04	0.43	0.13
Italy	0.41	0.16	0.25	26.22	0.04	0.47	0.09
Australia	0.39	0.07	0.32	19.68	0.02	0.19	0.06
China	0.32	0.00	0.32	15.13	0.00	0.01	0.04
Ireland	0.31	0.19	0.12	11.18	0.01	0.06	0.04
Luxembourg	0.29	0.50	-0.21	5.86	0.00	0.05	0.02
Brazil	0.27	0.01	0.26	41.35	0.02	0.18	0.10
Poland	0.27	0.00	0.27	30.57	0.03	0.29	0.13
Belgium	0.21	0.00	0.21	26.02	0.01	0.16	0.11
Norway	0.16	0.01	0.14	22.74	0.01	0.15	0.11
Mexico	0.15	0.00	0.15	13.44	0.00	0.02	0.05
New Zealand	0.14	0.01	0.12	23.12	0.01	0.06	0.07
Greece	0.12	0.00	0.12	32.07	0.01	0.15	0.14
Portugal	0.10	0.00	0.10	14.12	0.00	0.01	0.05
Israel	0.10	0.00	0.09	27.77	0.01	0.09	0.11
S. Korea	0.09	0.00	0.09	18.73	0.00	0.03	0.06
Colombia	0.08	0.00	0.08	30.60	0.00	0.03	0.07



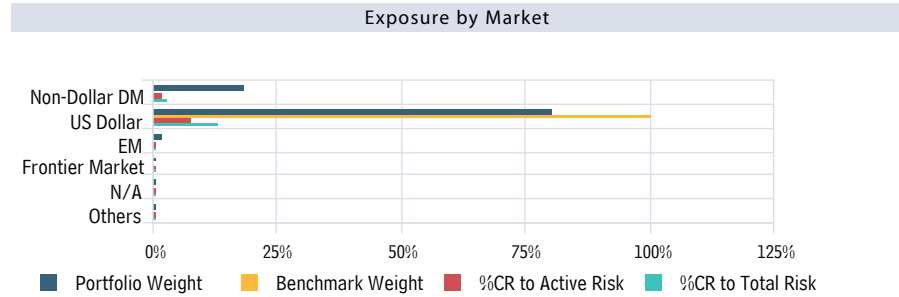
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Portfolio Allocation by Currency



Developed Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
US Dollar	15,655,743,891.96	83.20	81.01
Euro	1,735,681,091.29	7.09	8.34
British Pound Sterling	943,228,573.60	4.80	4.99
Canadian Dollar	247,127,887.31	1.80	1.50
Swedish Krona	143,818,047.90	0.93	0.94

Emerging Market Currency			
Top Five	Exposure \$	CR to AR (%)	CR to TR (%)
Indian Rupee	107,983,166.00	0.15	0.35
Chinese Yuan	56,142,194.11	0.03	0.13
Polish Zloty	52,574,897.30	0.29	0.28
Brazilian Real	51,174,567.83	0.18	0.26
Korean Won	16,734,436.06	0.03	0.06

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	16.16	16.16	100.00	8.86	100.00
US Dollar	80.05	100.00	-19.95	16.55	13.09	81.01	7.37	83.20
Euro	8.87	0.00	8.87	19.22	1.35	8.34	0.63	7.09
British Pound Sterling	4.82	0.00	4.82	22.31	0.81	4.99	0.43	4.80
Canadian Dollar	1.26	0.00	1.26	21.12	0.24	1.50	0.16	1.80
Swedish Krona	0.74	0.00	0.74	28.15	0.15	0.94	0.08	0.93
Swiss Franc	0.67	0.00	0.67	21.48	0.09	0.57	0.05	0.54
Japanese Yen	0.65	0.00	0.65	13.05	0.03	0.20	-0.00	-0.05
Indian Rupee	0.55	0.00	0.55	20.72	0.06	0.35	0.01	0.15
Danish Krone	0.42	0.00	0.42	25.90	0.07	0.44	0.04	0.43
Australian Dollar	0.39	0.00	0.39	19.68	0.05	0.34	0.02	0.17
Chinese Yuan	0.29	0.00	0.29	16.77	0.02	0.13	0.00	0.03
Polish Zloty	0.27	0.00	0.27	30.57	0.05	0.28	0.03	0.29
Brazilian Real	0.26	0.00	0.26	42.70	0.04	0.26	0.02	0.18
New Zealand Dollar	0.14	0.00	0.14	23.12	0.02	0.10	0.00	0.06
Norwegian Krone	0.12	0.00	0.12	29.76	0.03	0.16	0.01	0.16



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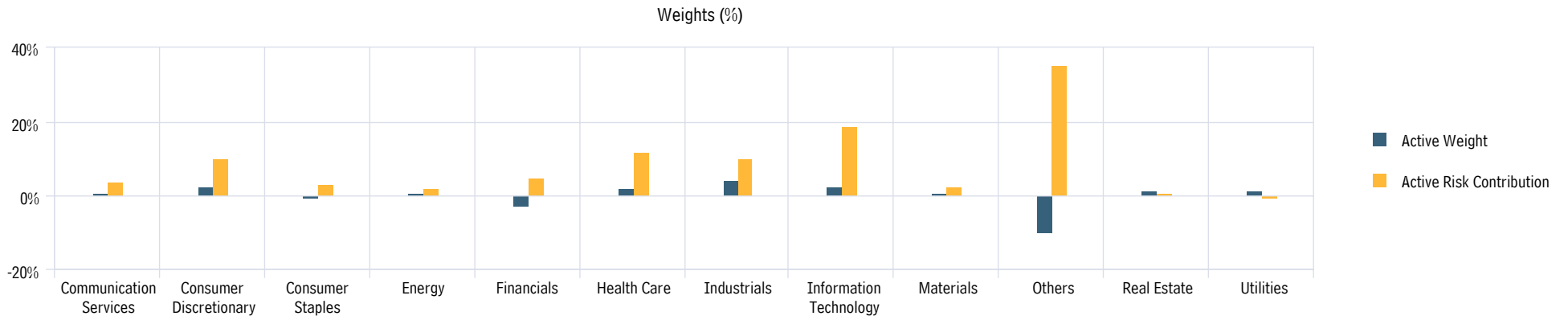
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Portfolio Allocation by GICS Sector

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	16.16	8.86	100.00	0.09
Communication Services	4.40	3.72	0.68	19.24	0.31	3.55	0.11
Consumer Discretionary	7.13	4.69	2.44	25.22	0.87	9.78	0.15
Consumer Staples	1.66	2.32	-0.66	21.19	0.24	2.69	0.09
Energy	2.67	2.40	0.27	23.62	0.15	1.67	0.09
Financials	1.58	4.44	-2.86	54.29	0.40	4.52	0.08
Health Care	6.70	4.80	1.89	23.44	1.03	11.57	0.13
Industrials	7.89	4.03	3.86	20.12	0.88	9.98	0.13
Information Technology	10.67	8.39	2.28	28.66	1.63	18.39	0.16
Materials	1.48	1.32	0.15	27.23	0.22	2.53	0.15
Others	51.67	61.78	-10.11	11.97	3.10	34.95	0.03
Real Estate	2.28	1.13	1.15	11.40	0.06	0.70	0.08
Utilities	1.88	0.98	0.90	8.28	-0.03	-0.33	0.03



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APPENDICES:

- Basket Clause

- Liquidity Analysis

BASKET CLAUSE ANALYSIS

Trustee Reporting
As of 06/30/2023

Basket Limit	35.00%
Basket Consumed	22.99%
Remaining Capacity	12.01%

	Basket-Eligible Assets*			Basket Assets	Total
	Non-Basket Assets	Non-Contributing	Contributing		
FIXED INCOME	30.43%	3.82%	0.00%	5.42%	39.68%
U.S. Fixed	8.56%	3.43%	0.00%	4.72%	16.72%
Cash/Equivalent	4.10%	---	---	0.00%	4.10%
TIPS	3.17%	---	---	---	3.17%
Convertible Bonds	---	---	---	---	---
OFI	0.03%	0.10%	0.00%	3.52%	3.66%
High Yield	0.41%	3.31%	0.00%	1.18%	4.90%
Bank Loans	0.00%	---	---	0.00%	0.00%
ETI Investments	0.62%	---	---	0.01%	0.63%
Core/Core Plus	0.23%	0.02%	---	0.01%	0.26%
U.S. Structured	21.87%	0.39%	---	0.71%	22.96%
Credit	4.34%	0.39%	---	0.38%	5.11%
Mortgages	4.56%	---	---	0.33%	4.88%
ST Treasury	1.87%	---	---	---	1.87%
Treasury/Agency	0.15%	---	---	---	0.15%
MT Treasury	8.32%	---	---	---	8.32%
LT Treasury	2.64%	---	---	---	2.64%
EQUITY	24.93%	17.82%	9.37%	8.19%	60.32%
Public Equity	24.92%	10.00%	9.37%	0.04%	44.32%
U.S. Equity	23.86%	0.64%	0.60%	---	25.11%
EAFE	0.19%	4.71%	4.41%	0.01%	9.31%
Emerging Markets	0.27%	4.44%	4.16%	0.03%	8.90%
Global	0.60%	0.20%	0.19%	0.00%	1.00%
Real Estate Equity	---	---	---	---	---
Alternative Investments	0.01%	7.83%	---	8.15%	16.00%
Infrastructure	0.01%	2.28%	---	0.00%	2.29%
Private RE/Core	0.00%	3.12%	---	0.01%	3.13%
Private RE/Non-Core	0.00%	2.42%	---	0.00%	2.42%
Private Equity	0.00%	---	---	8.15%	8.16%
TOTAL ASSETS	55.37%	21.65%	9.37%	13.61%	100.00%
	Non-Basket:	77.01%	Basket:	22.99%	

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 June 30, 2023

	Current MV	Liquid Assets		
		Today	1 Year	2 Years
PUBLIC EQUITY	\$44,345	\$44,345	\$44,345	\$44,345
U.S.	25,082	25,082	25,082	25,082
EAFE Equity	8,526	8,526	8,526	8,526
Emerging Markets	9,745	9,745	9,745	9,745
Global Equity	991	991	991	991
PUBLIC FIXED INCOME	\$31,913	\$31,582	\$31,883	\$31,883
Short Term Securities	458	458	458	458
U.S. Government	12,957	12,957	12,957	12,957
Long Duration Treasury	0	0	0	0
Mortgages				
Core Mortgages	4,499	4,499	4,499	4,499
ETI	628	297	598	598
Credit - Investment Grade	5,350	5,350	5,350	5,350
Corporate - High Yield	4,858	4,858	4,858	4,858
Corporate - Bank Loans	1	1	1	1
UST - Inflation Protected	3,161	3,161	3,161	3,161
ALTERNATIVE ASSETS	\$19,587	\$2,696	\$3,595	\$3,595
Private Equity	8,152	0	0	0
Private Real Estate	5,538	0	0	0
Infrastructure	2,301	0	0	0
Opportunistic Fixed Income	3,595	2,696	3,595	3,595
Total Assets	\$95,844	\$78,624	\$79,823	\$79,823
Total Illiquid \$		\$17,221	\$16,021	\$16,021
Total Illiquid %		18.0%	16.7%	16.7%
Unfunded OFI Commitments	\$1,123			
Unfunded INF Commitments	\$2,057			
Unfunded PE Commitments	\$4,566			
Unfunded RE Commitments	\$2,548			
Total commitments \$	\$10,591			
Total commitments %	11.0%			



TRS Liquidity Profile - Static Analysis

AUM as of June 30, 2023

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$17,221	\$16,021	\$16,021
Total Illiquid %	27.0%	25.1%	25.1%

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	\$95,844	\$78,624	\$79,823	\$79,823

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

Unfunded OFI Commitments	\$225	\$449
Unfunded INF Commitments	\$411	\$823
Unfunded PE Commitments Drawn	\$913	\$1,826
Unfunded RE Commitments Drawn	\$569	\$1,138
Total commitments \$	\$2,118	\$4,236
Total commitments %	2.2%	4.4%

Total Illiquid \$	\$18,140	\$20,258
Total Illiquid %	18.9%	21.1%

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

See Assumptions Page for Full Details

Denominator Effect - Decrease AUM by One-Third

Total Illiquid \$	\$17,221	\$18,140	\$20,258
Total Illiquid %	27.0%	28.4%	31.7%

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.

