

NORTH CAROLINA
DEPARTMENT OF STATE TREASURER



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INVESTMENT MANAGEMENT DIVISION

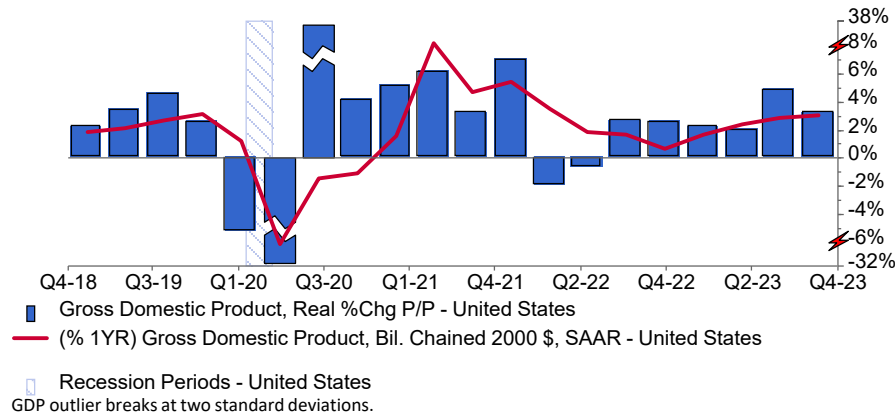
Performance Review

February 28, 2024



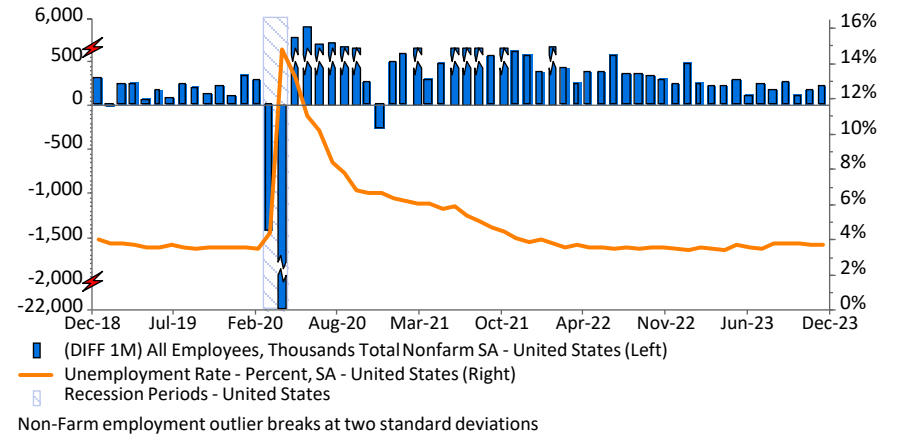
US Economic Environment

US Real GDP Growth



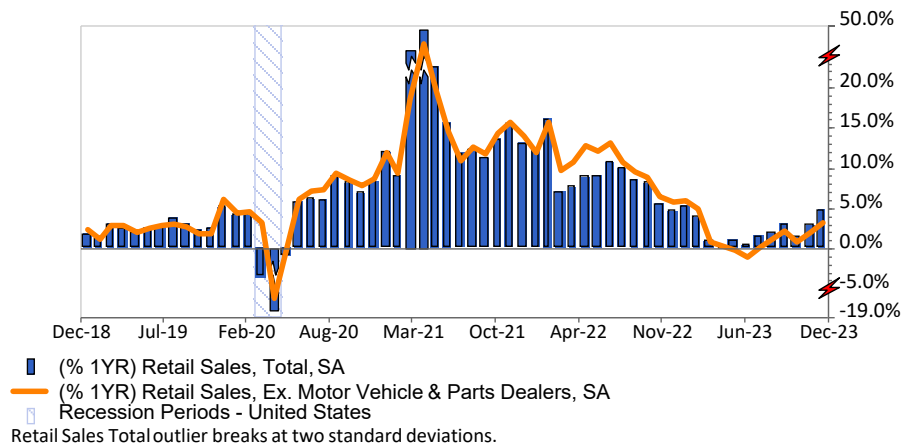
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US Change in NonFarm Employment & Unemployment Rate



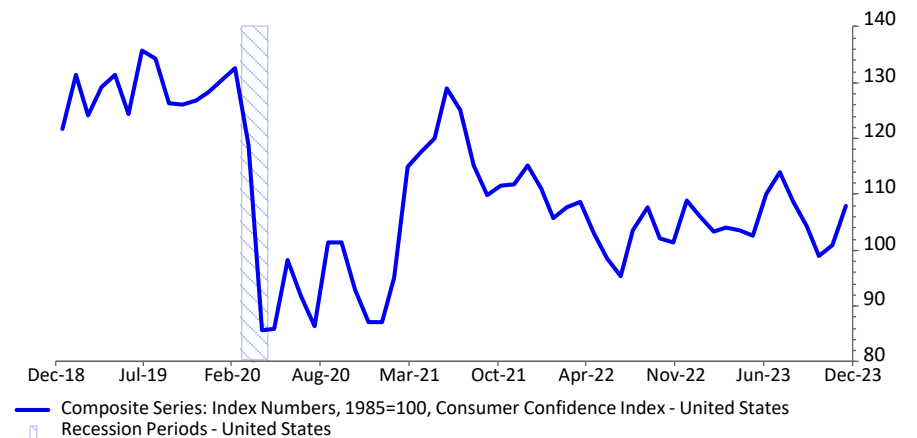
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US Retail Sales



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US Consumer Confidence

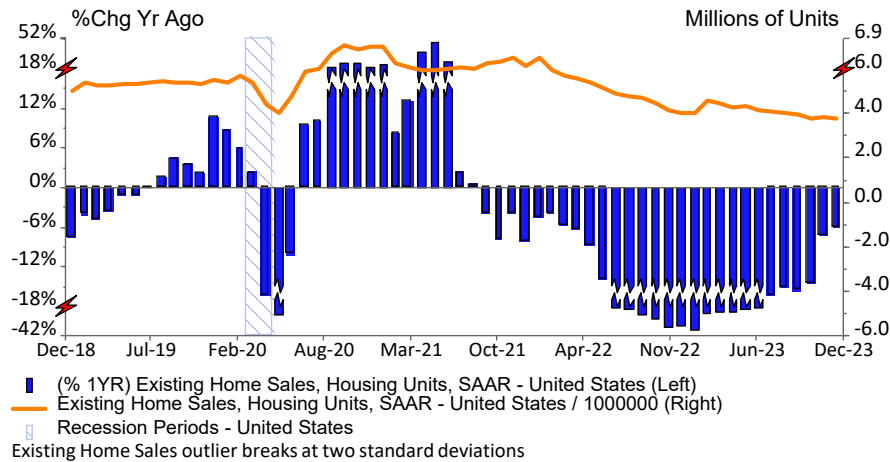


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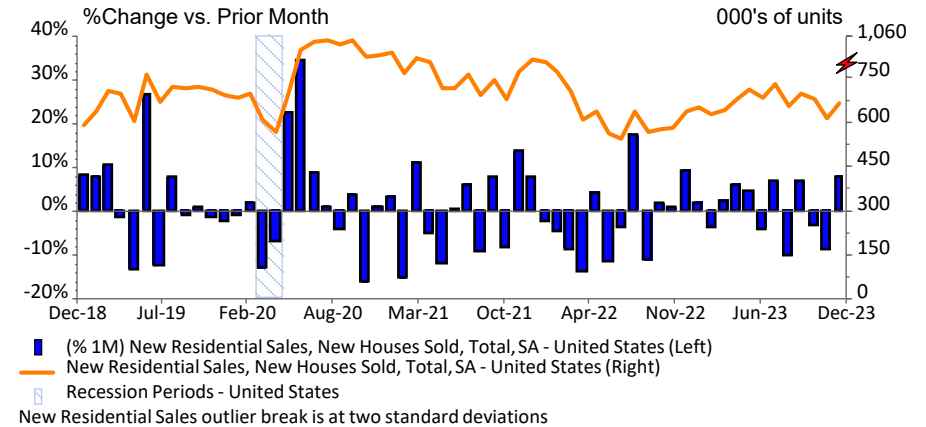
US Economic Environment

US Existing Home Sales



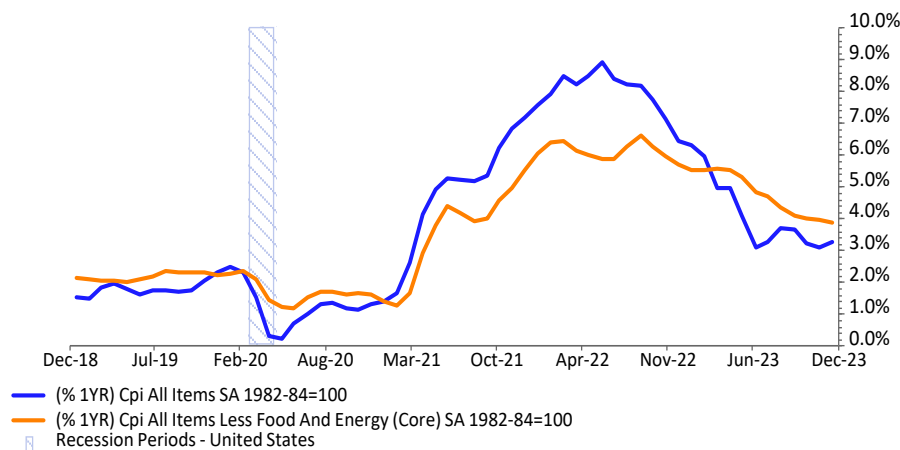
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US New Home Sales



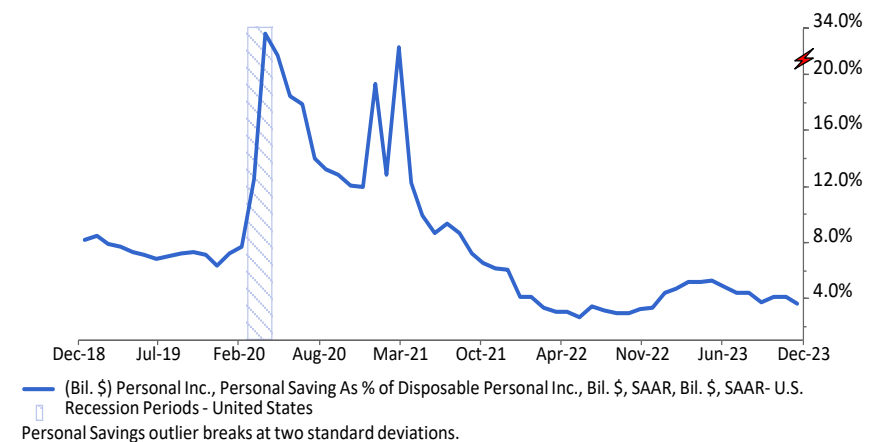
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US Consumer Price Inflation



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US Personal Savings Rate

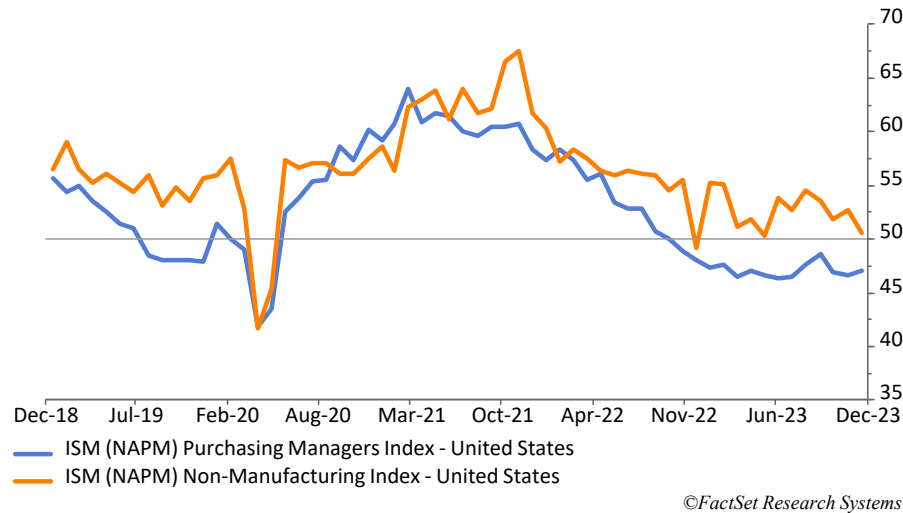


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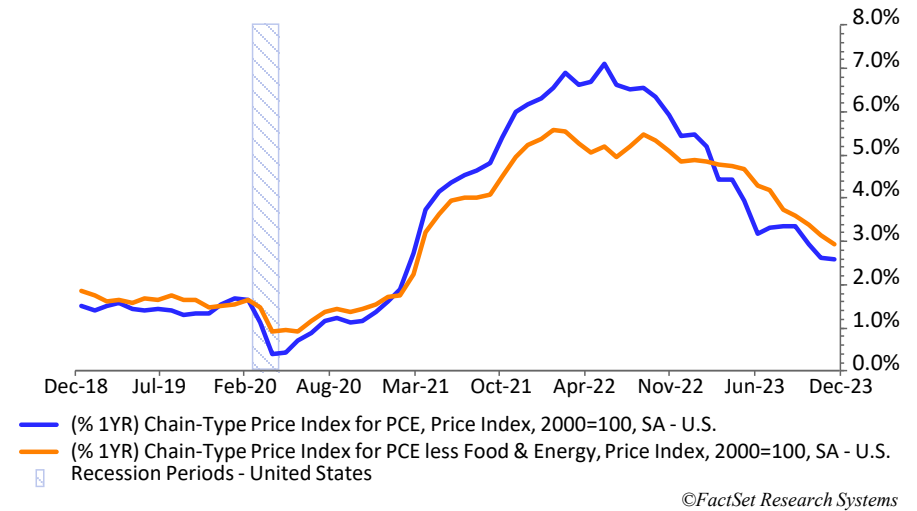


US and Global Economic Environment

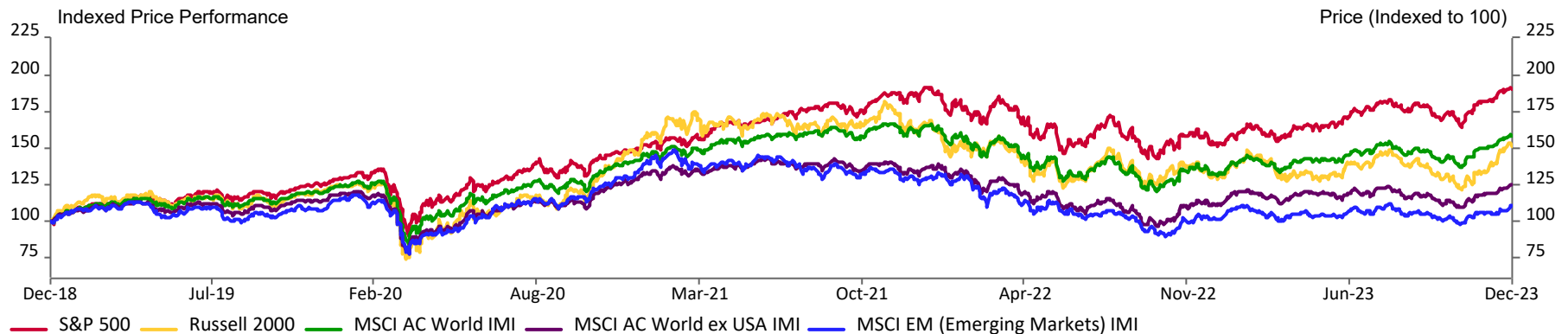
ISM Report on Business



US PCE Inflation



S&P 500 vs. Peers

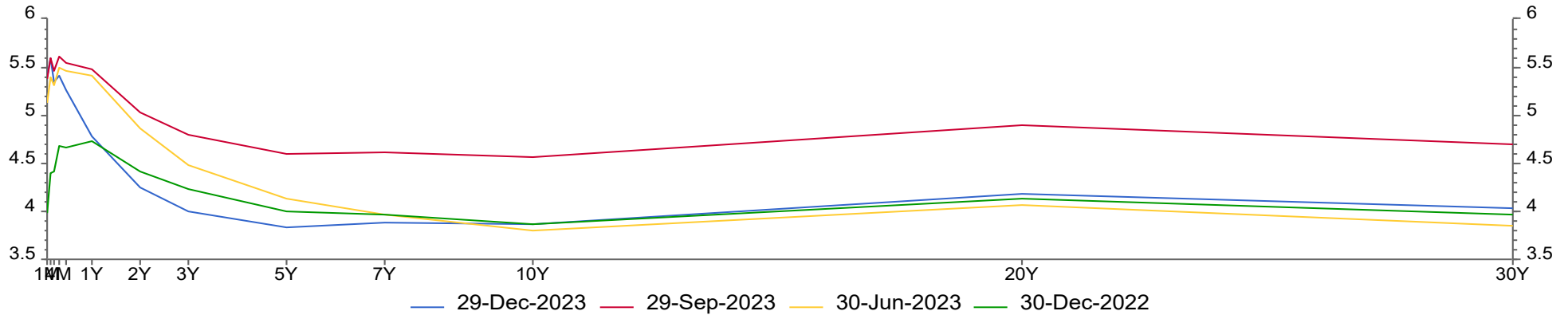


Source: FactSet Prices



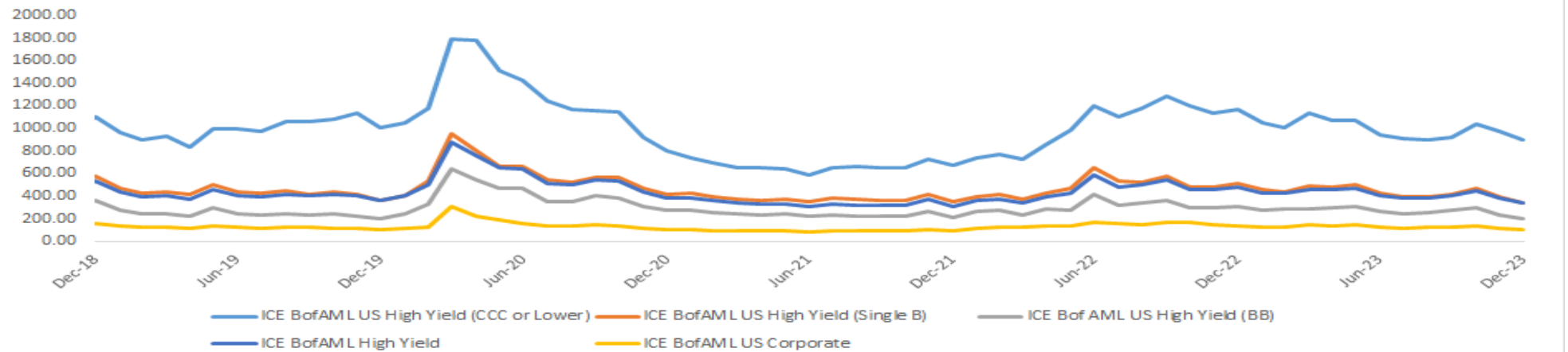
Market Environment

United States Treasury Yield Curve



Source: FactSet Interest Rate Database

Corporate Credit OAS (ICE BAML Indices)

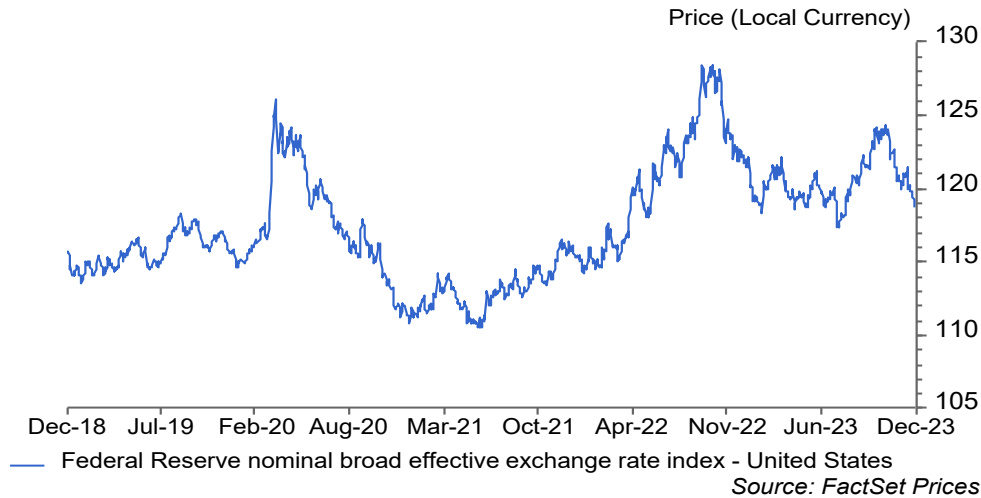


Source: Bloomberg

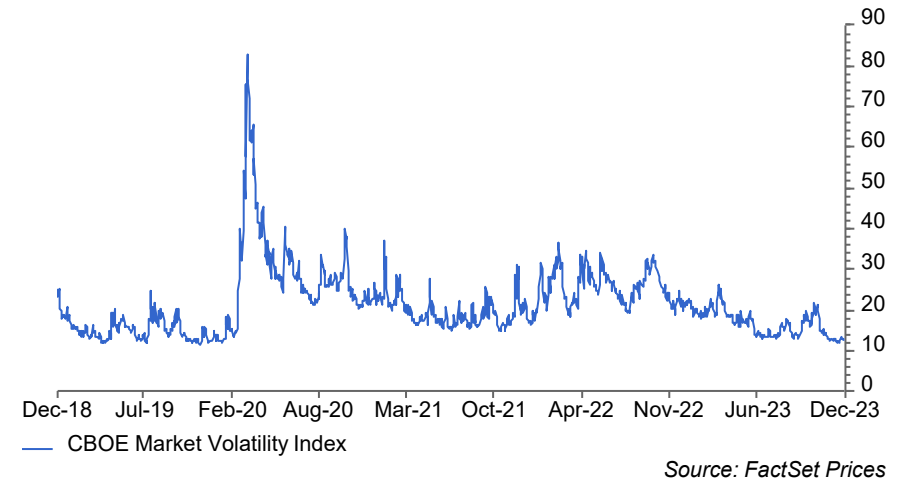


Market Environment

Closing Price Fed Nominal Broad Dollar Index



Closing Price CBOE VIX Index

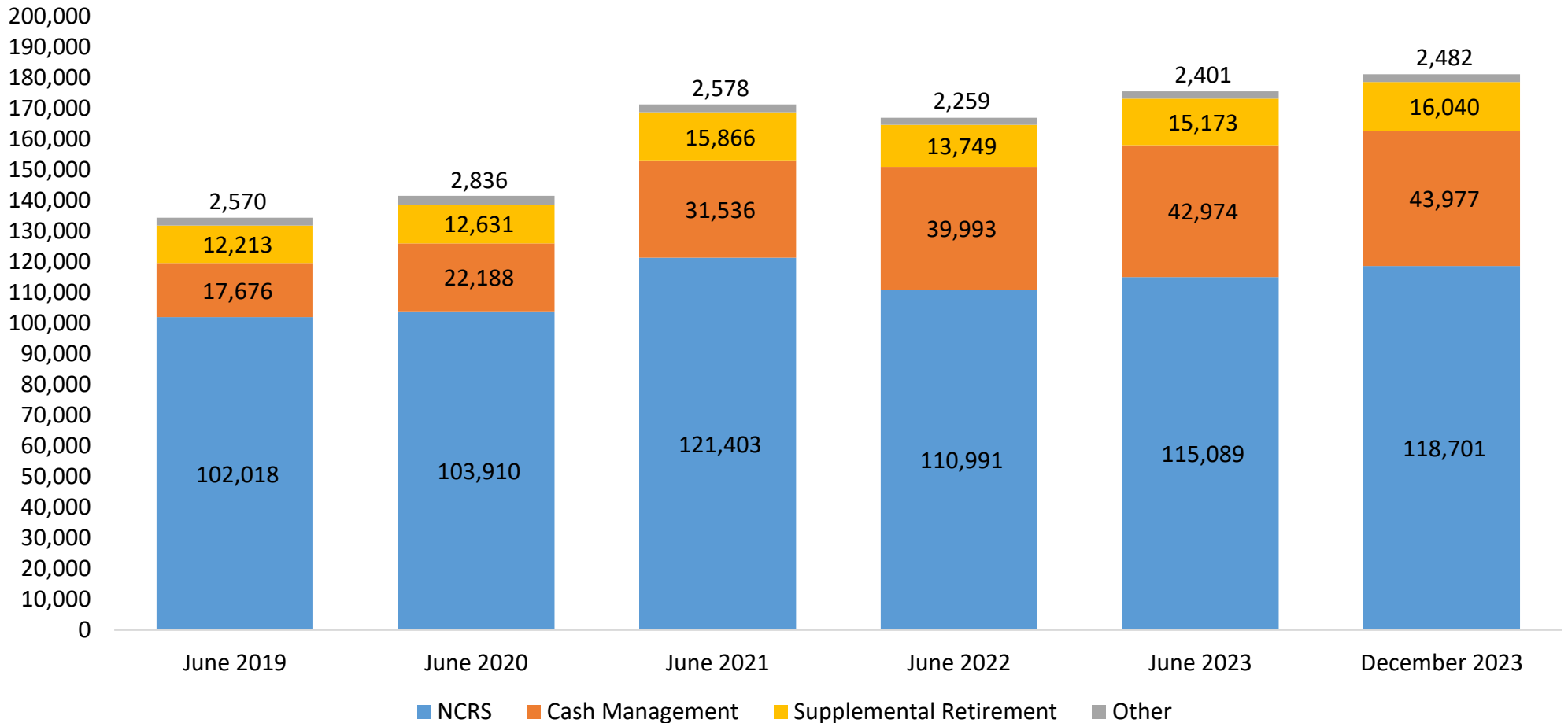


Countries	Real GDP YoY		Unemployment		CPI YoY		Countries	Real GDP YoY		Unemployment		CPI YoY	
	Date	Value	Date	Value	Date	Value		Date	Value	Date	Value	Date	Value
U.S.	12/23	3.1	12/23	3.7	12/23	3.4	Asia/Pacific/Latam						
Europe							China	12/23	5.2			12/23	-0.3
Germany	12/23	-0.2	12/23	5.8	12/23	3.7	India	09/23	7.6			12/23	4.9
France	12/23	0.7	11/23	7.3	12/23	3.7	Japan	09/23	1.5	12/23	2.4	12/23	2.6
U.K.	09/23	0.3	07/23	4.3	12/23	4.0	Indonesia	09/23	4.9			12/23	2.6
Italy	12/23	0.5	11/23	7.5	12/23	0.6	Brazil	09/23	2.0			12/23	4.6
Spain	12/23	2.0	11/23	11.9	12/23	3.1	Australia	09/23	2.1	12/23	3.9	12/23	4.1

Source: Bloomberg

Assets Under Management (\$MM)

\$181.2 billion as of December 31, 2023



Note: The Cash Management Program does not include Assets with Fiscal Agent, which are reflected in the Bond Proceeds Fund. These funds, which may have been reported in the Cash Management Program previously, have now been removed for all years shown in this report to more accurately reflect the Cash Management Program balance.



NCRS Asset Allocation

As of December 31, 2023

	Market Value (\$MM)	%	Target	Range		Relative %	Relative \$ (\$MM)
				Minimum	Maximum		
Growth	60,512	50.98%	55.0%	37.0%	68.0%	-4.02%	(4,774)
Public Equity	44,870	37.80%	38.0%	33.0%	43.0%	-0.20%	(237)
Private Equity	6,209	5.23%	7.0%	0.0%	8.8%	-1.77%	(2,100)
Non Core Real Estate	2,114	1.78%	3.0%	0.0%	8.0%	-1.22%	(1,447)
Opportunistic Fixed Income	7,319	6.17%	7.0%	0.0%	7.5%	-0.83%	(990)
Rates & Liquidity	43,849	36.94%	33.0%	23.0%	48.0%	3.94%	4,678
IG Fixed Income & Cash	33,955	28.61%	28.0%	23.0%	33.0%	0.61%	719
Pension Cash	9,894	8.34%	5.0%	0.0%	10.0%	3.34%	3,959
Inflation Sensitive & Diversifiers	11,888	10.02%	11.0%	4.0%	16.0%	-0.98%	(1,169)
Inflation Sensitive	5,528	4.66%	6.0%	2.0%	7.5%	-1.34%	(1,594)
Core Real Estate	6,360	5.36%	5.0%	2.0%	10.0%	0.36%	425
Multi-Strategy	2,452	2.07%	1.0%	0.0%	4.0%	1.07%	1,265
Grand Total	118,701	100.00%					



NCRS Asset Allocation (Preliminary)

As of February 21, 2024

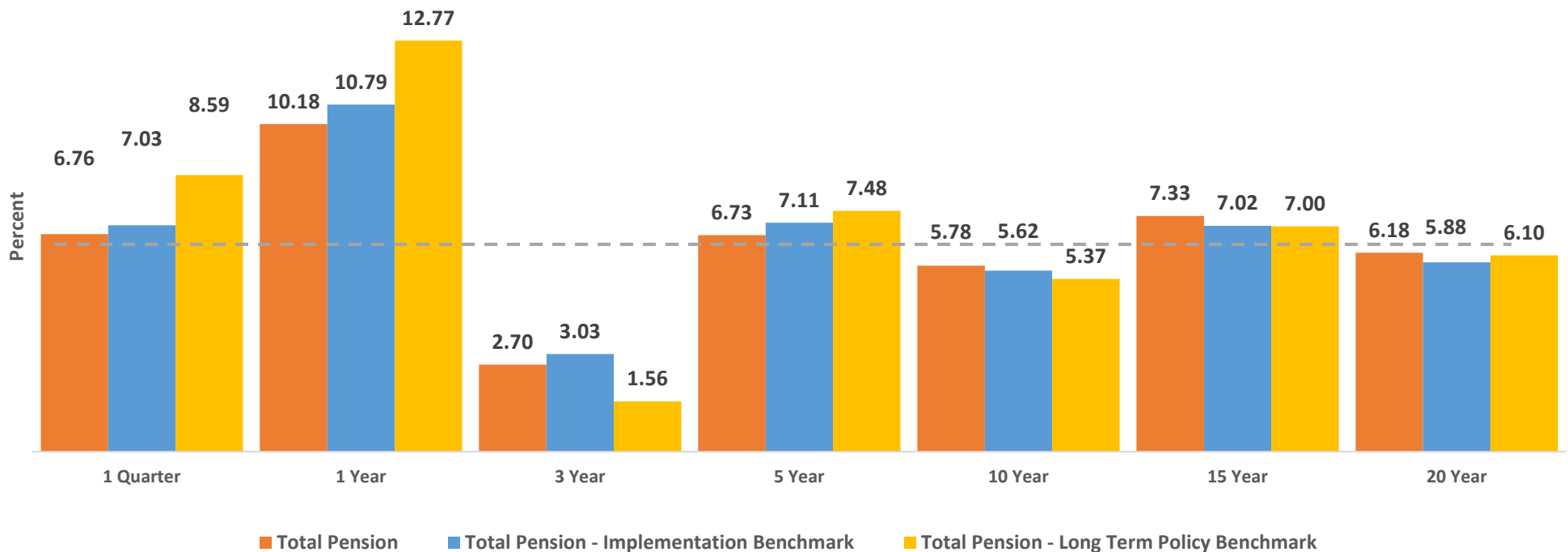
	Market Value (\$MM)	%	Target	Range		Relative %	Relative \$ (\$MM)
				Minimum	Maximum		
Growth	61,562	51.76%	55.0%	37.0%	68.0%	-3.24%	(3,857)
Public Equity	45,993	38.67%	38.0%	33.0%	43.0%	0.67%	795
Private Equity	6,089	5.12%	7.0%	0.0%	8.8%	-1.88%	(2,237)
Non Core Real Estate	2,128	1.79%	3.0%	0.0%	8.0%	-1.21%	(1,441)
Opportunistic Fixed Income	7,352	6.18%	7.0%	0.0%	7.5%	-0.82%	(974)
Rates & Liquidity	43,026	36.17%	33.0%	23.0%	48.0%	3.17%	3,775
IG Fixed Income & Cash	33,062	27.80%	28.0%	23.0%	33.0%	-0.20%	(242)
Pension Cash	9,964	8.38%	5.0%	0.0%	15.0%	3.38%	4,017
Inflation Sensitive & Diversifiers	11,861	9.97%	11.0%	4.0%	16.0%	-1.03%	(1,222)
Inflation Sensitive	5,566	4.68%	6.0%	2.0%	7.5%	-1.32%	(1,571)
Core Real Estate	6,295	5.29%	5.0%	2.0%	10.0%	0.29%	348
Multi-Strategy	2,493	2.10%	1.0%	0.0%	4.0%	1.10%	1,304
Grand Total	118,943	100.00%					



NCRS Total Net Portfolio Return vs. Benchmarks

As of December 31, 2023

Annualized Returns



Notes:

Actuarial Assumed Investment Return was lowered from 7.0% to 6.5% as of December 31, 2020

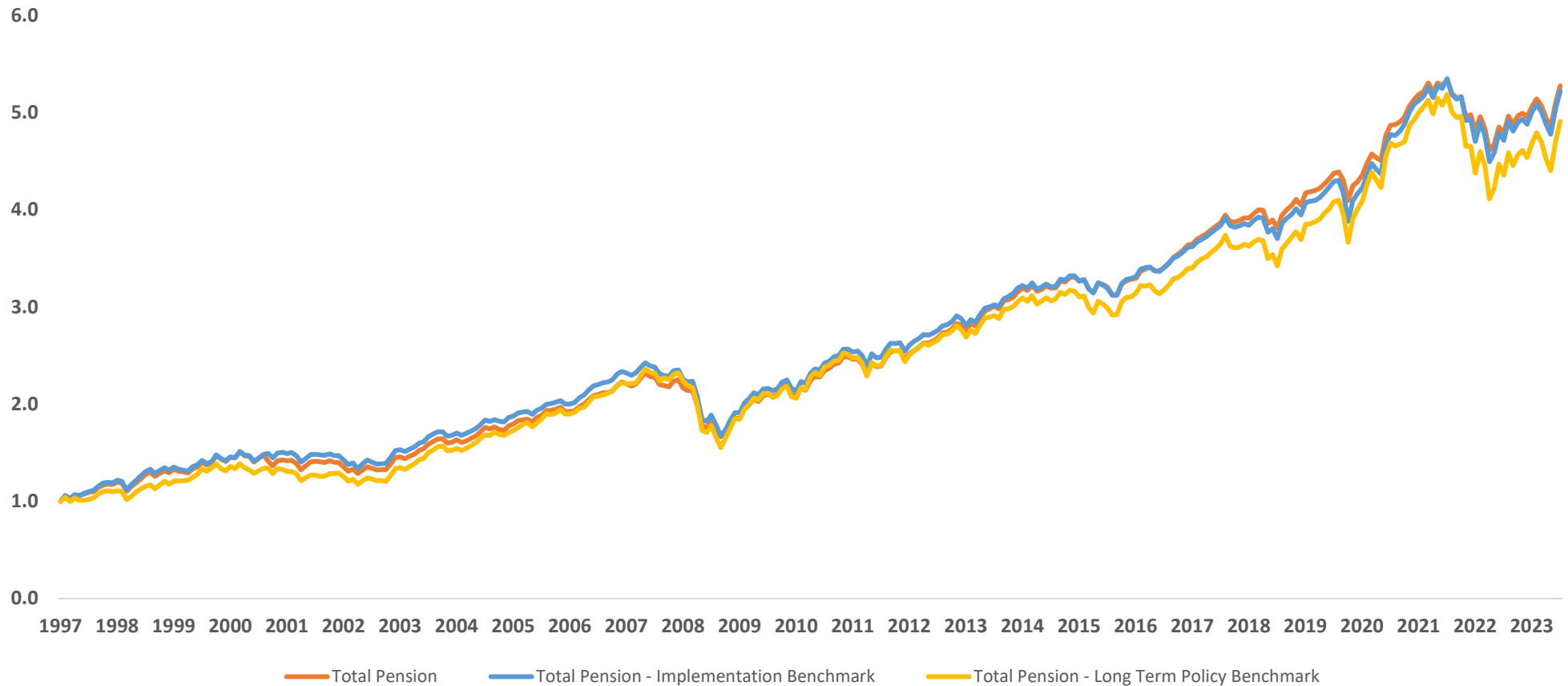
Returns for periods greater than one year are annualized.

Implementation Benchmark is a blend of the Asset Class Benchmarks at policy weights. It is currently weighted as follows: 55% Growth Benchmark; 33% Rates & Liquidity Benchmark; 11% Inflation Sensitive & Diversifiers Benchmark; and 1% Multi-Strategy Benchmark.

Long-Term Policy Benchmark is comprised of 56% MSCI ACWI IMI Net, 28% BOAML 5+ Years U.S. Treasury Index, 6.5% Bloomberg Commodity Index, 5% BOAML 3 Month Treasury Bill Index, and 4.5% BOAML 1-3 Years U.S. Inflation-Linked Treasury Index.



Growth of a Dollar Through December 31, 2023



Notes:

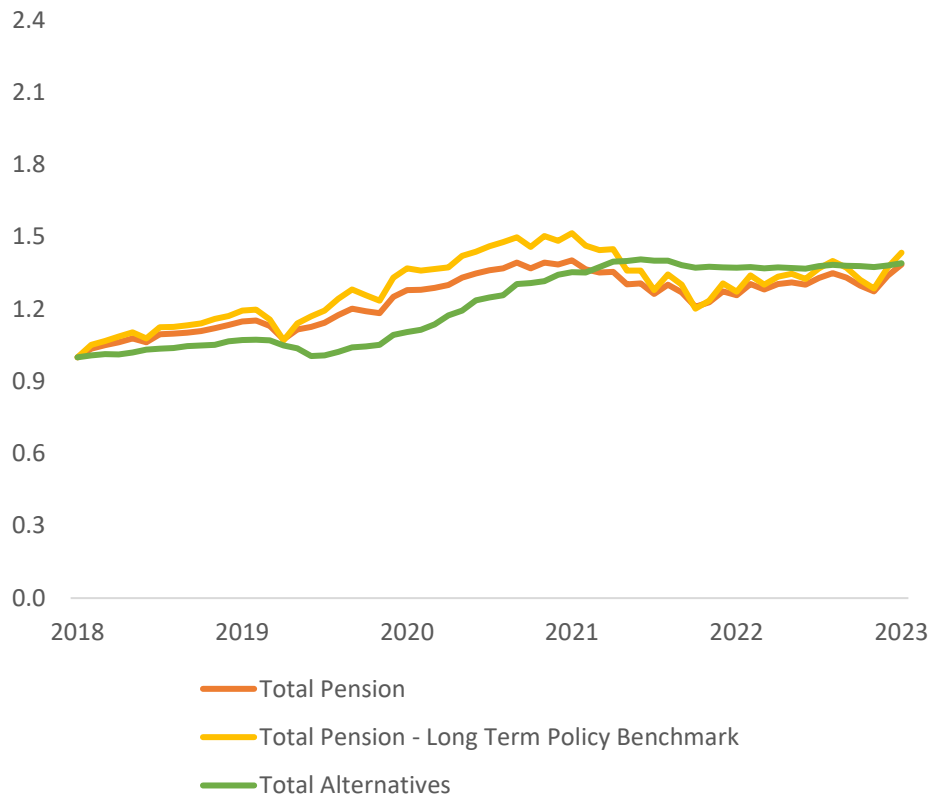
Implementation Benchmark is a blend of the Asset Class Benchmarks at policy weights. It is currently weighted as follows: 55% Growth Benchmark; 33% Rates & Liquidity Benchmark; 11% Inflation Sensitive & Diversifiers Benchmark; and 1% Multi-Strategy Benchmark. *Long-Term Policy Benchmark* is comprised of 56% MSCI ACWI IMI Net, 28% BOAML 5+ Years U.S. Treasury Index, 6.5% Bloomberg Commodity Index, 5% BOAML 3 Month Treasury Bill Index, and 4.5% BOAML 1-3 Years U.S. Inflation-Linked Treasury Index.

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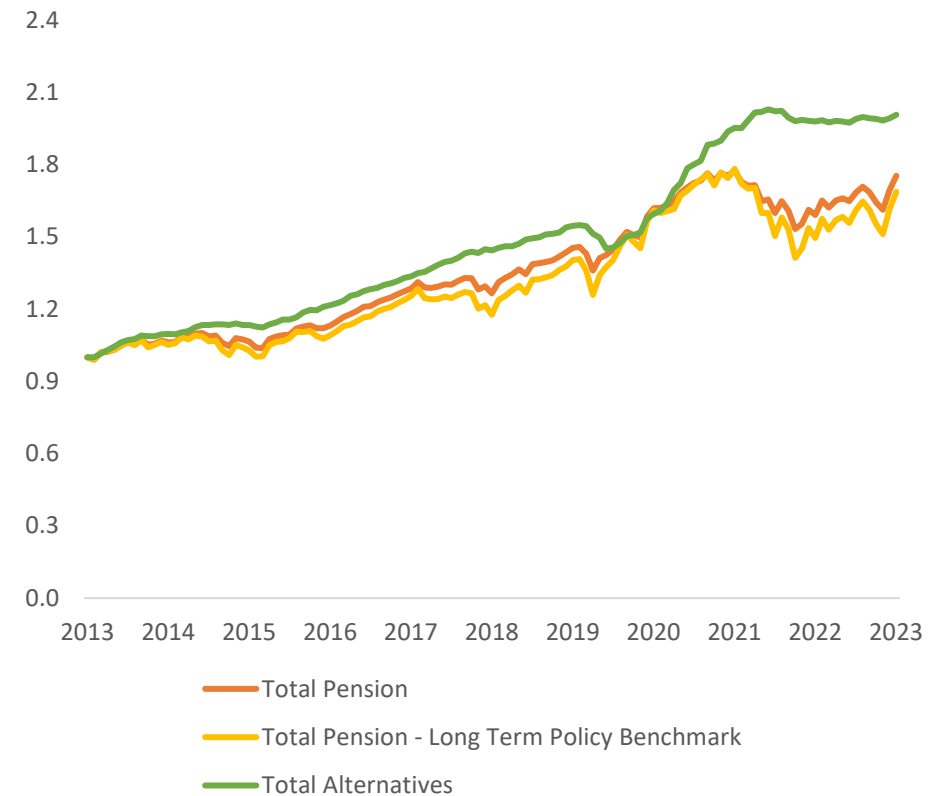
Growth of a Dollar

5 Years Ending December 31, 2023



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10 Years Ending December 31, 2023



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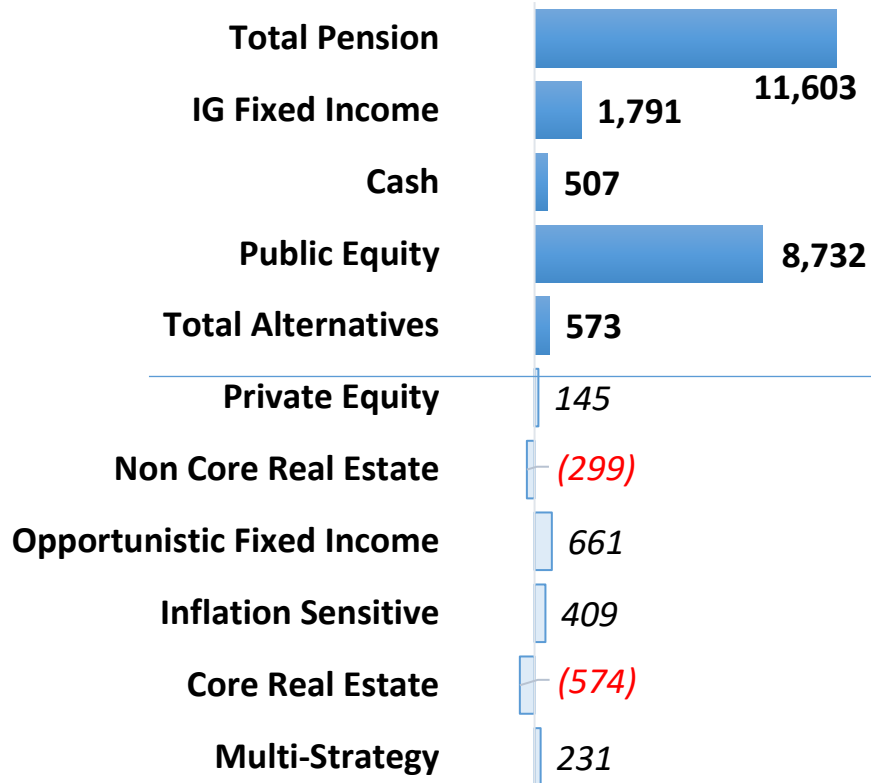
Note: NCRS Alternatives includes the following: Core Real Estate; Inflation Sensitive – Private Natural Resources; Inflation Sensitive – Real Assets and Other Diversifiers; Multi-Strategy Investments; Non-Core Real Estate; Opportunistic Fixed Income; Private Equity; Equity Hedge Strategies; and closed-end Public Natural Resource funds.



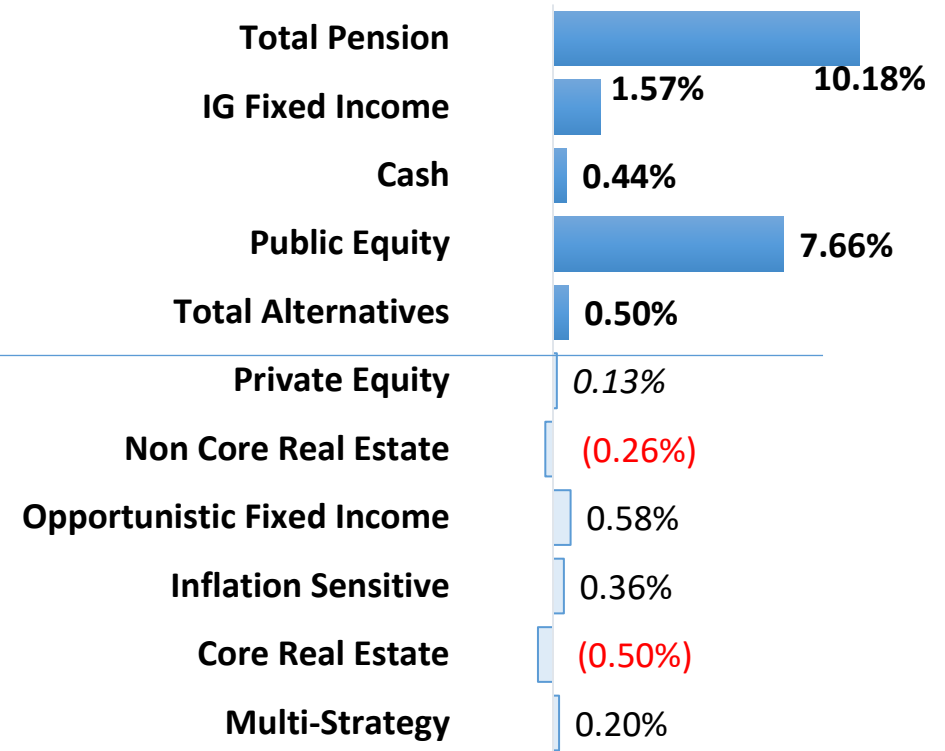
Estimated Contribution to Total Plan Return – 1 Year

As of December 31, 2023

Contribution to Total Plan \$ Earnings



Contribution to Total Plan % Returns



*Millions

Notes:

1.) Estimated Contributions are based on average market value and the total return for the period.

Contribution to Total Plan \$ Earnings = Average \$ Market Value * % Total Return for each asset class

Contribution to Total Plan % Returns = Average Market Value % weight * % Total Return for each asset class

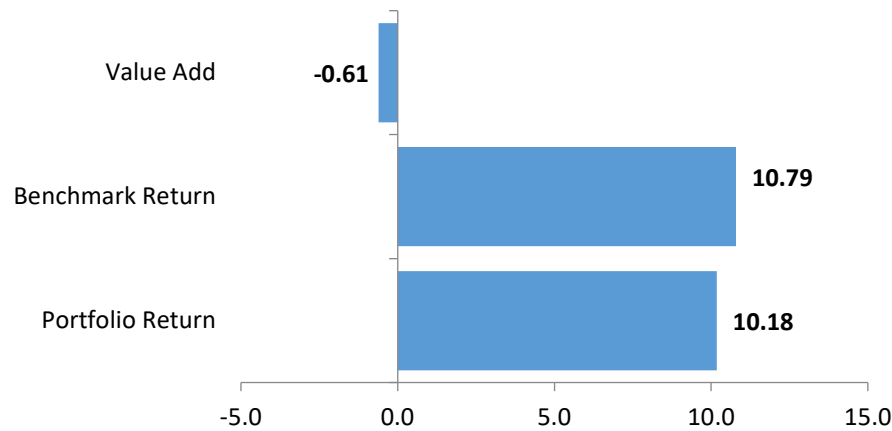
2.) Alternatives for this analysis include the following: Private Equity, Non-Core Real Estate, Opportunistic Fixed Income, Inflation Sensitive, Core Real Estate, and Multi-Strategy investments.



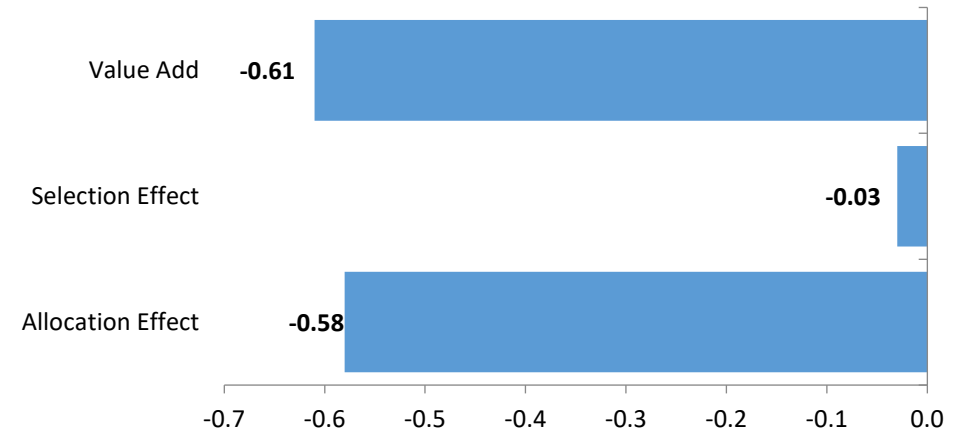
NCRS Net of Fees Return Attribution

Total Fund vs. Implementation Benchmark: 1 Year Ending December 31, 2023

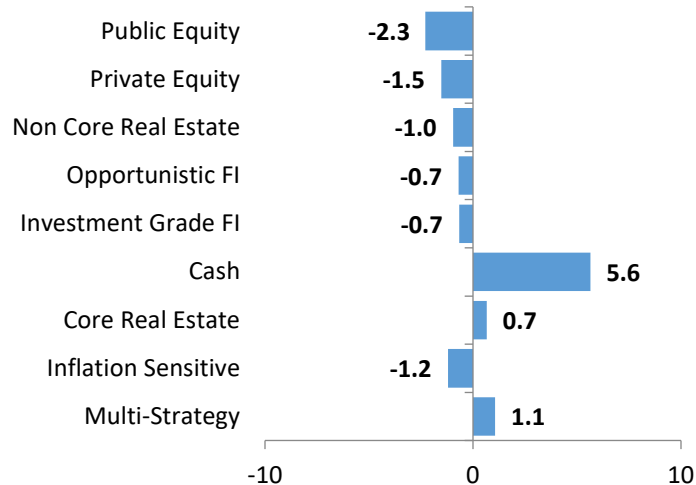
Total Fund Performance



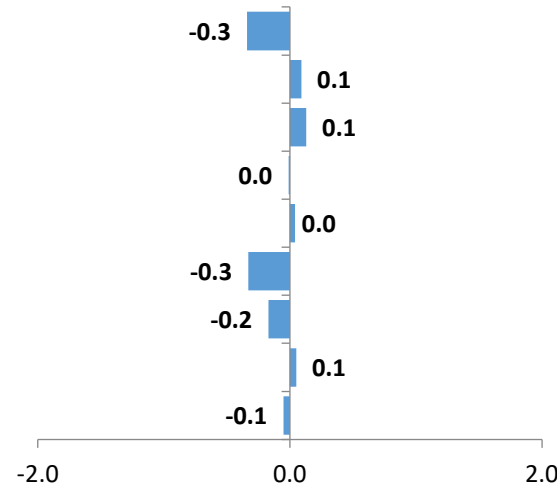
Attribution



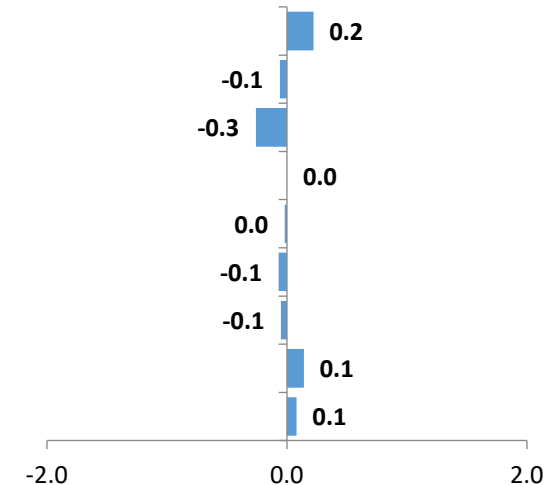
Avg Active Weight



Allocation Effect



Selection Effect

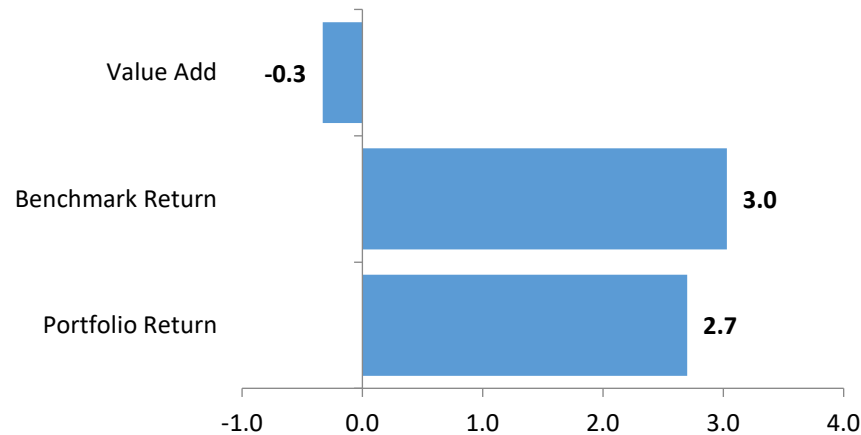




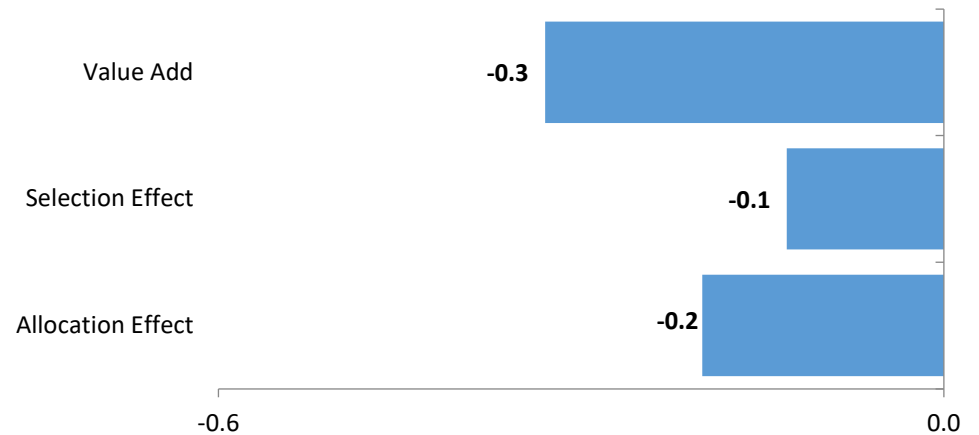
NCRS Net of Fees Return Attribution

Total Fund vs. Implementation Benchmark: 3 Years Ending December 31, 2023

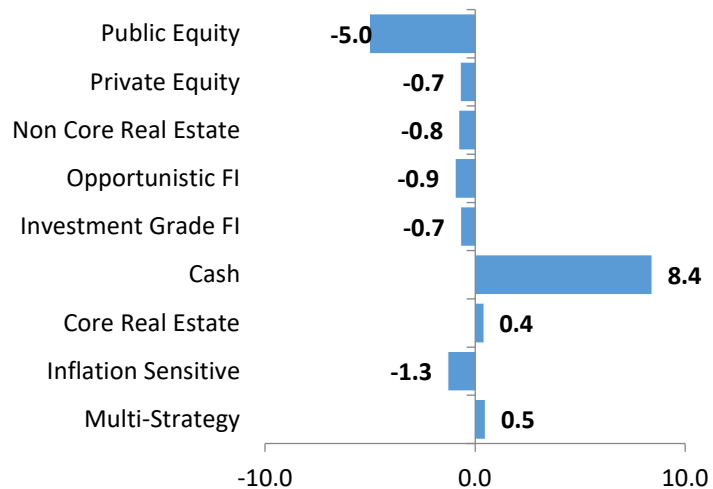
Total Fund Performance



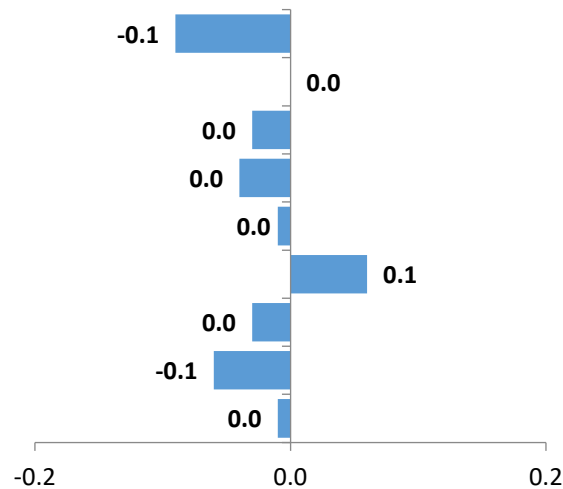
Attribution



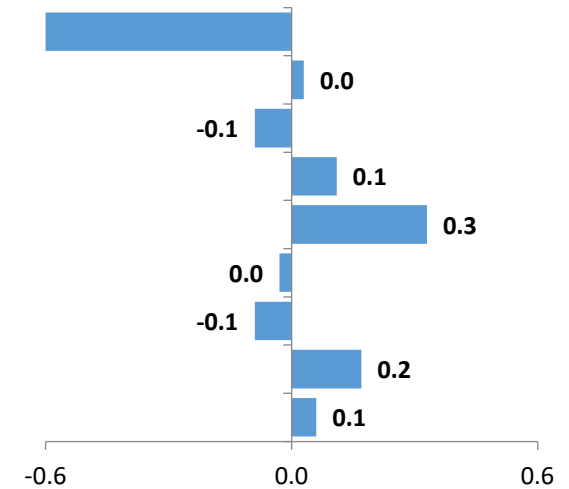
Avg Active Weight



Allocation Effect



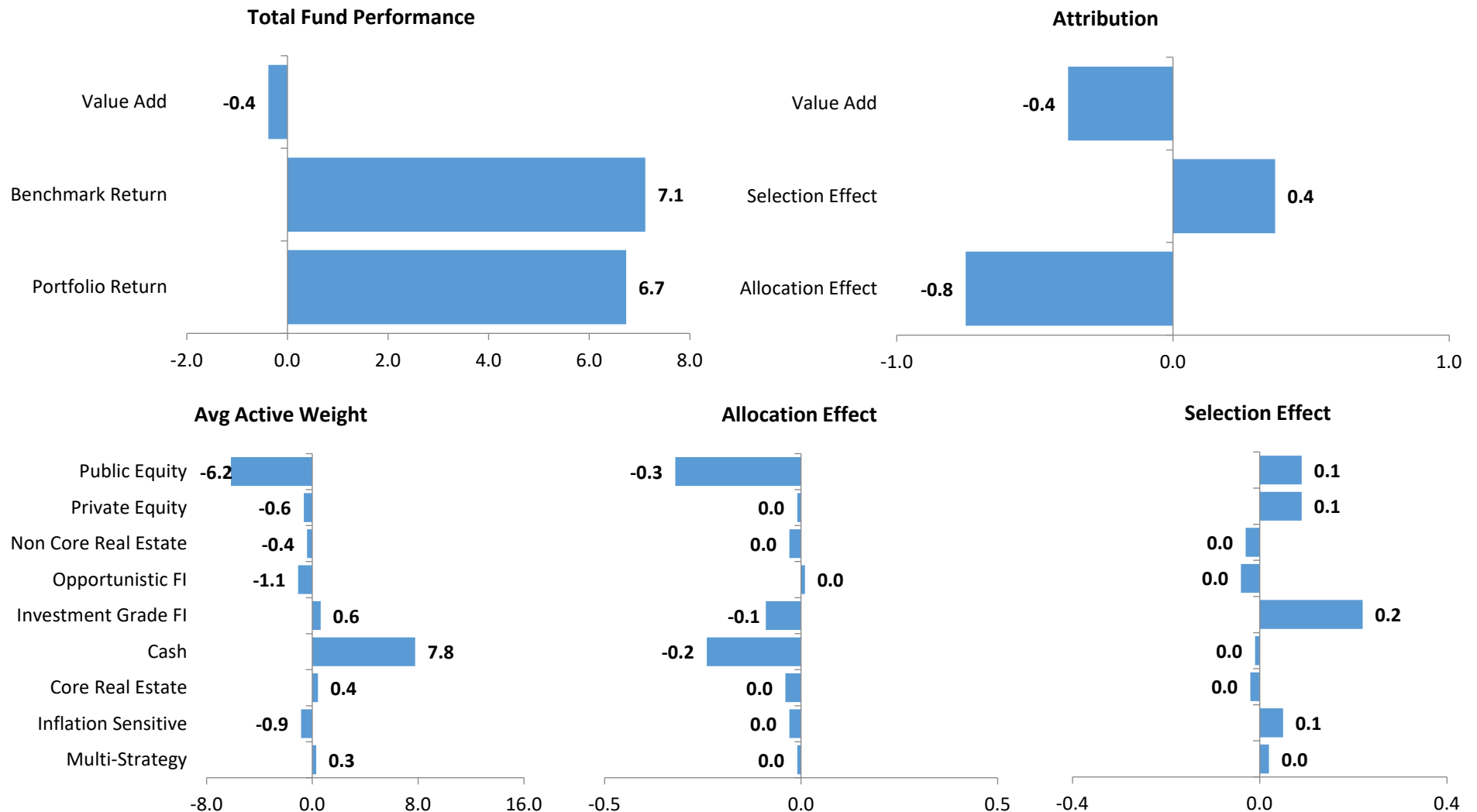
Selection Effect





NCRS Net of Fees Return Attribution

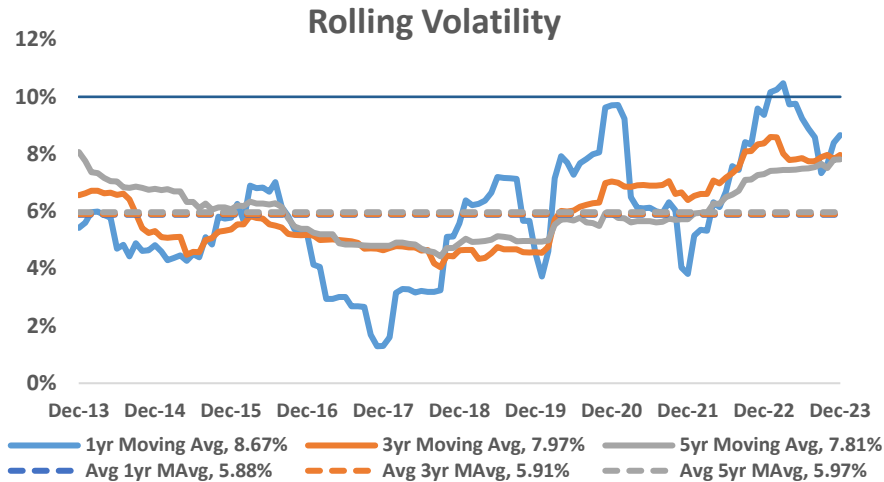
Total Fund vs. Implementation Benchmark: 5 Years Ending December 31, 2023



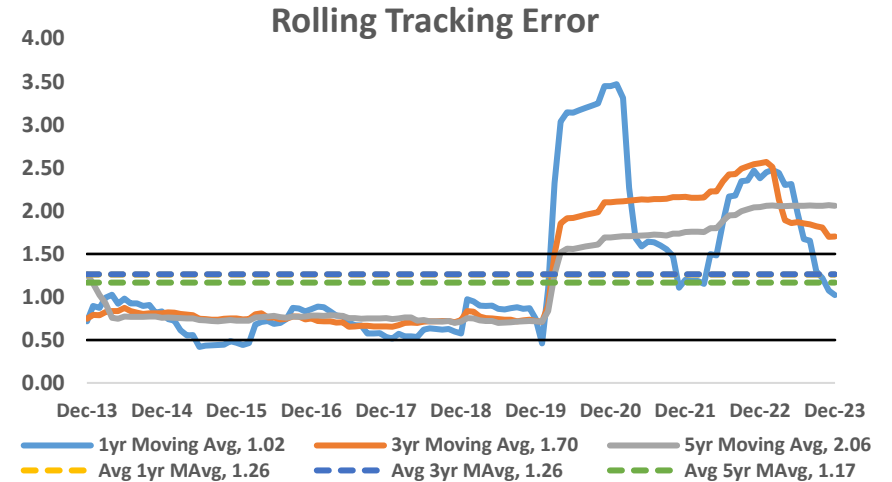


NCRS Net of Fees Risk Metrics

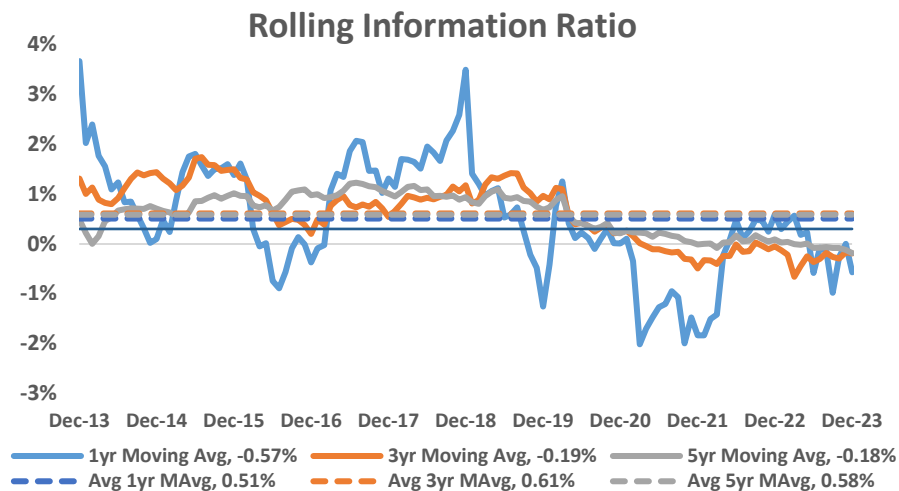
As of December 31, 2023



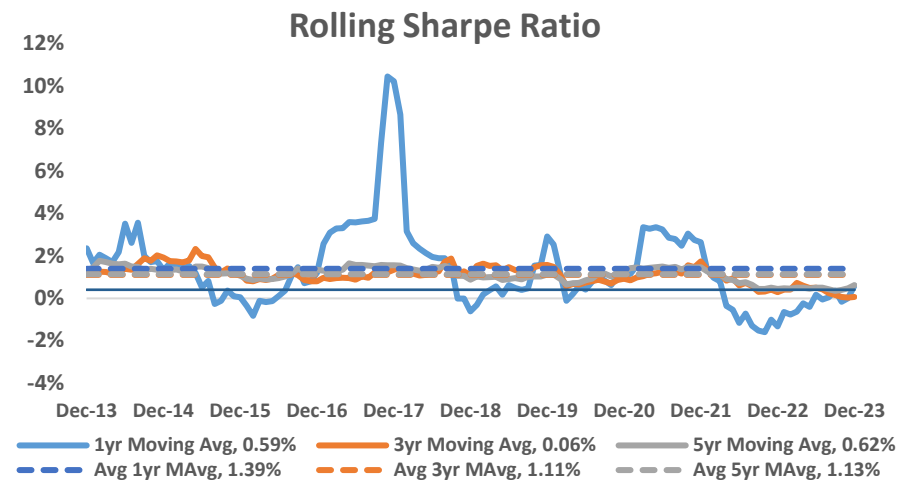
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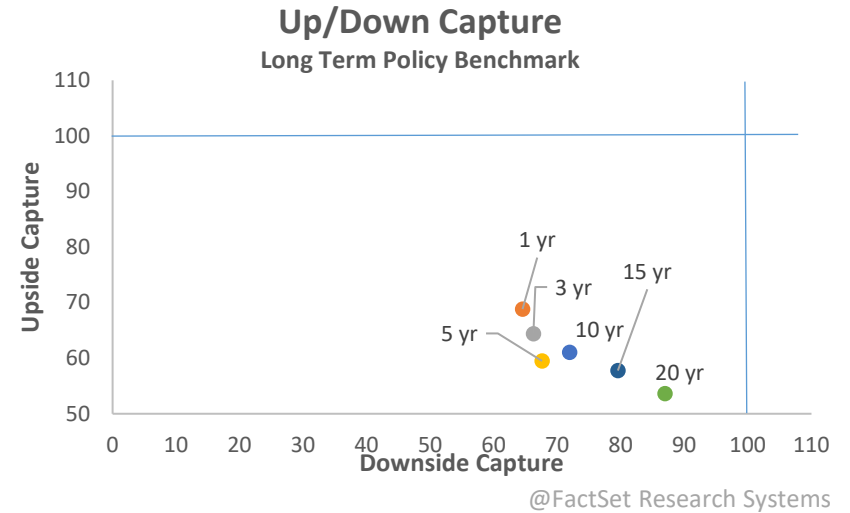
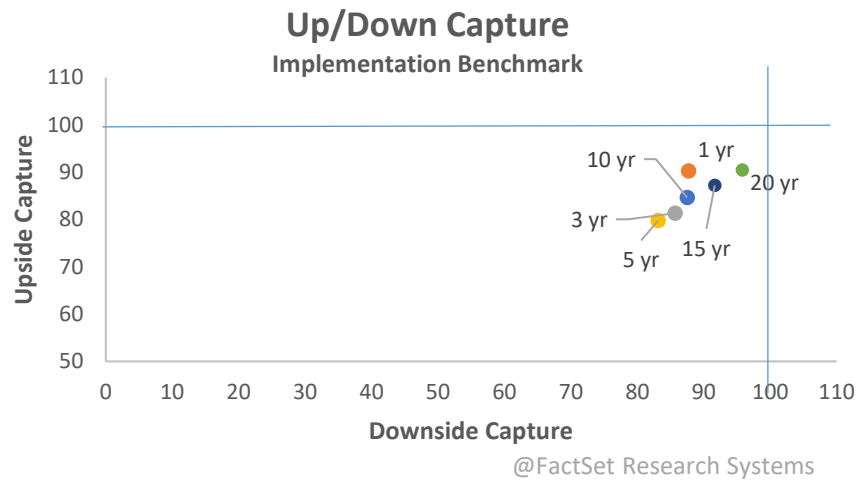


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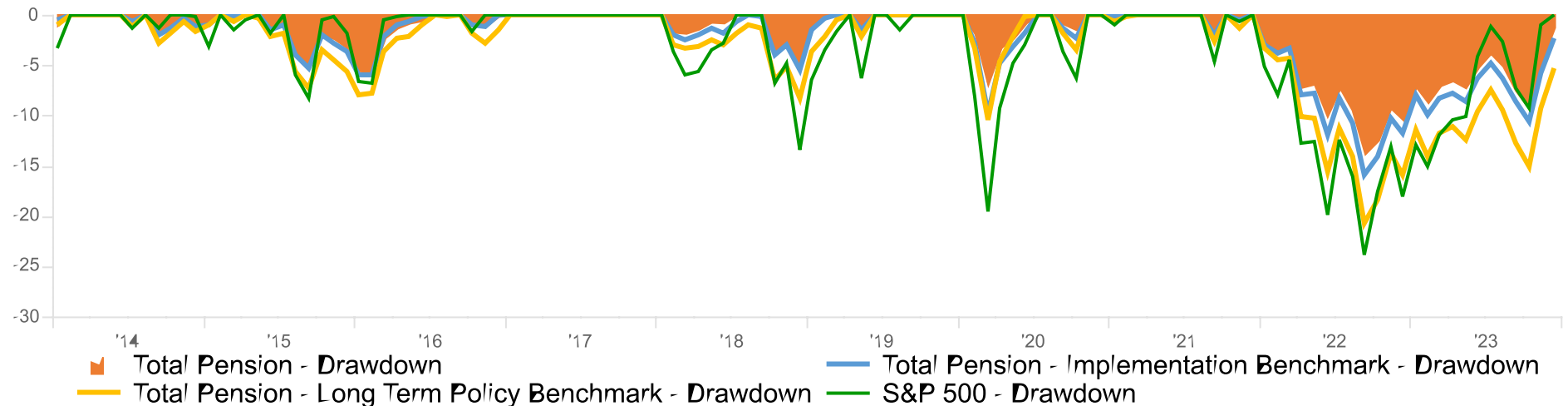


NCRS Net of Fees Risk Metrics

As of December 31, 2023



Drawdown



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NCRS Gross of Fees Return and Risk

BNY Mellon Universe: US Public Funds > \$20B; Data as of December 31, 2023

Returns	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
25th Percentile	11.96	7.03	9.88	7.86	9.50	7.71
Median Percentile	10.86	6.02	9.55	7.69	9.04	7.45
75th Percentile	8.83	3.95	8.10	6.75	8.10	7.16
NCRS	10.48	3.02	7.06	6.25	7.80	6.59
Percentile Rank (1 = highest performance)	60	87	87	80	80	86

Risk	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
25th Percentile	9.34	9.74	10.21	8.32	8.98	9.10
Median Percentile	8.40	8.72	8.91	7.25	7.80	8.49
75th Percentile	6.44	7.21	7.84	6.70	7.05	7.95
NCRS	8.34	7.86	7.76	6.45	7.03	7.36
Percentile Rank (1 = highest risk)	54	60	94	80	80	93

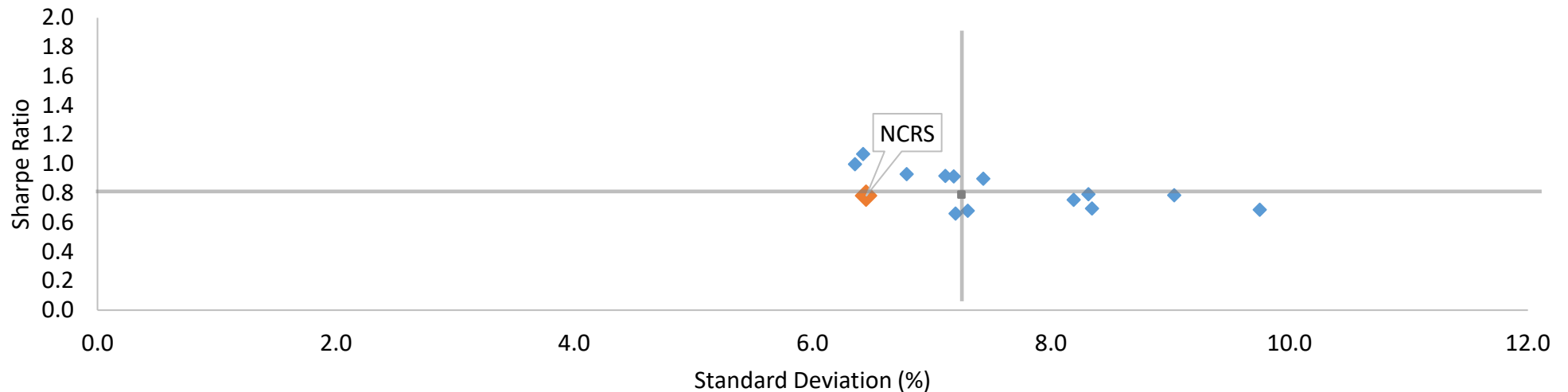


NCRS Gross of Fees Sharpe Ratio

BNY Mellon Universe: US Public Funds > \$20B; Data as of December 31, 2023

Sharpe	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
25th Percentile	0.93	0.69	0.92	0.92	1.06	0.76
Median Percentile	0.77	0.42	0.81	0.79	0.97	0.71
75th Percentile	0.53	0.23	0.67	0.69	0.88	0.66
NCRS	0.65	0.14	0.68	0.78	0.98	0.71
Percentile Rank (1 = highest performance)	67	87	74	60	47	50

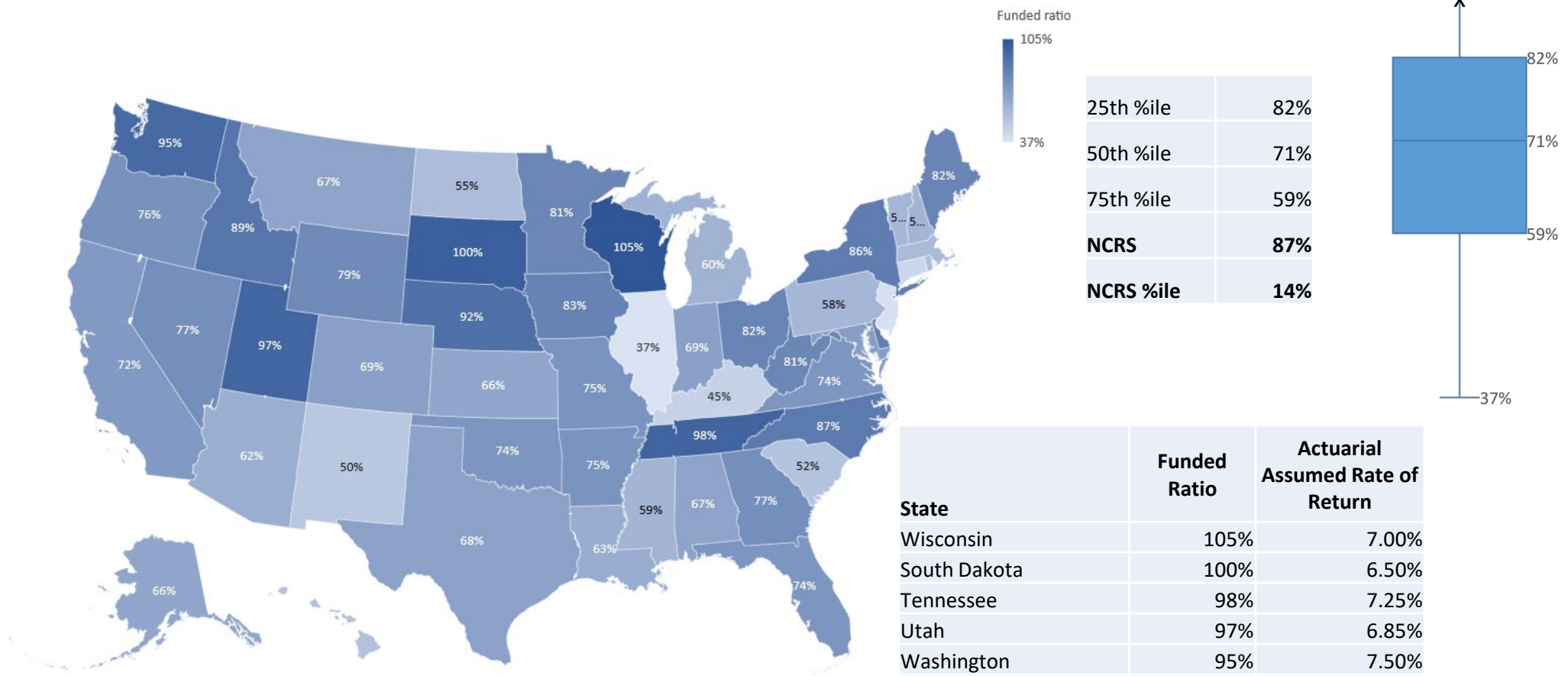
10 Year Plot: Sharpe Ratio vs. Volatility



Note: Data shown is gross of fees with the exception of incentive payments, which have been deducted from NAV when applicable.



Funded Status Universe Comparison U.S. Public Funds

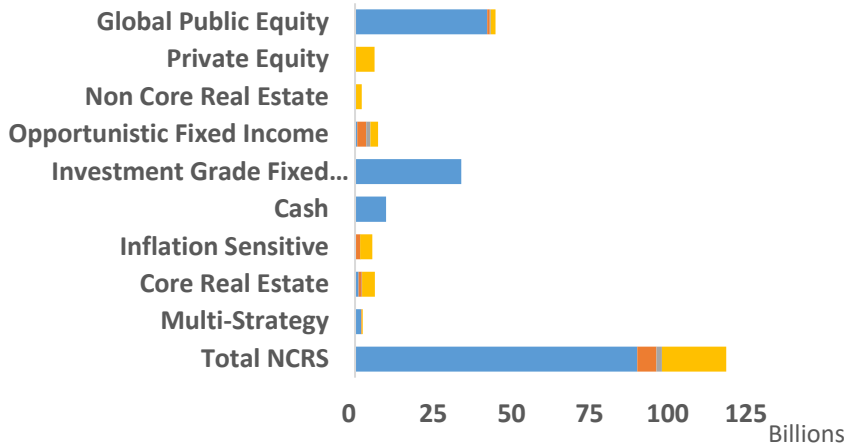


Source: Pew Charitable Trusts & PublicPlansData.org, Data as of 2020

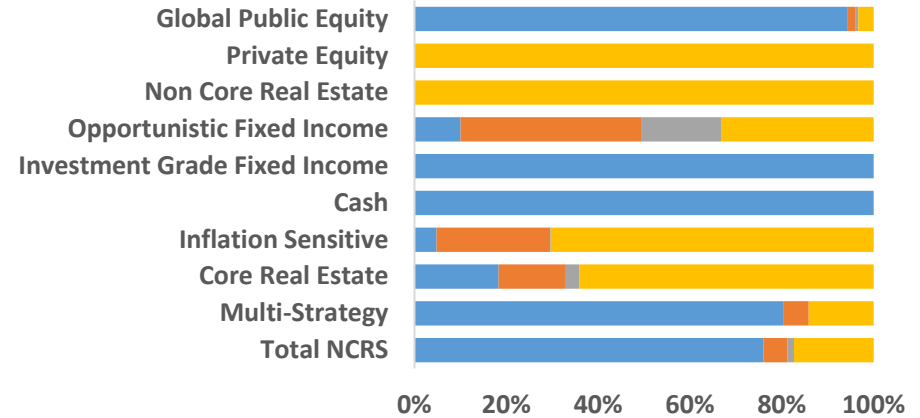


NCRS Liquidity Profile As of December 31, 2023

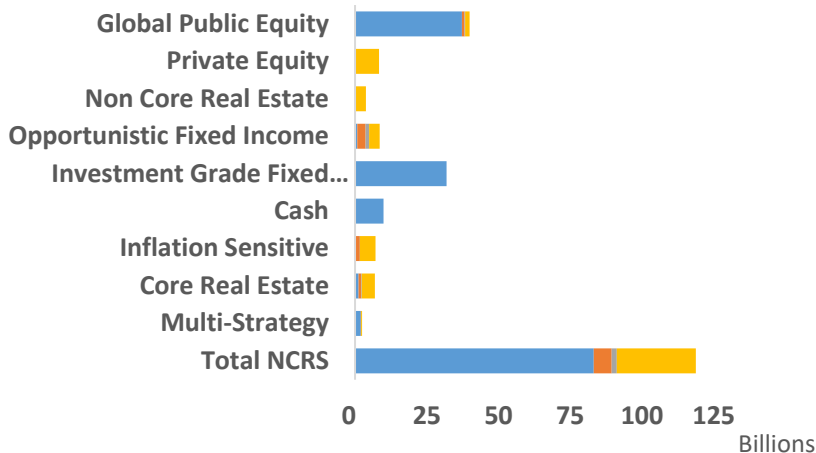
Liquidity Allocation (\$ Market Value)



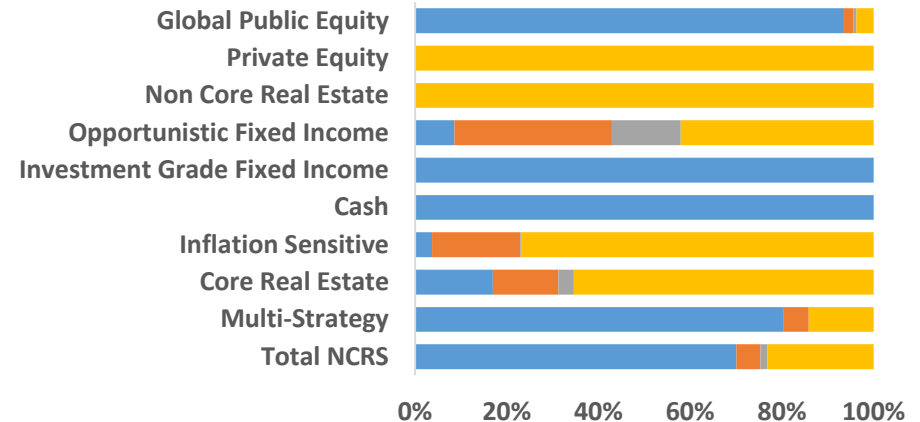
Liquidity Allocation (% Market Value)



Liquidity Allocation (\$ Market Value + Unfunded)



Liquidity Allocation (% Market Value + Unfunded)

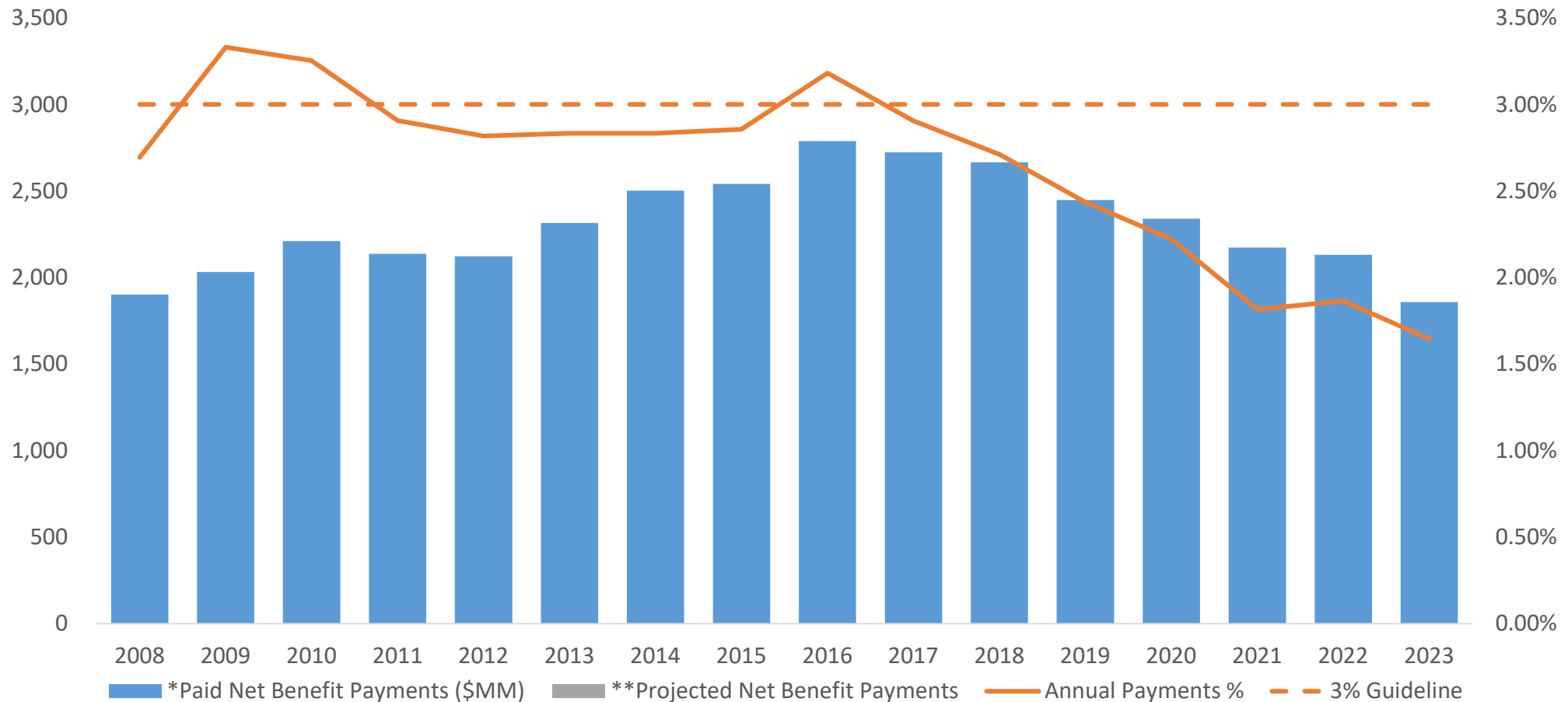


Note: ■ Level 1 Liquidity = T+3; ■ Level 2 = T+3 to 12 Months; ■ Level 3 = 12 to 24 Months; ■ Level 4 = Greater than 24 Months



NCRS Liquidity Profile

Net benefit payments by calendar year

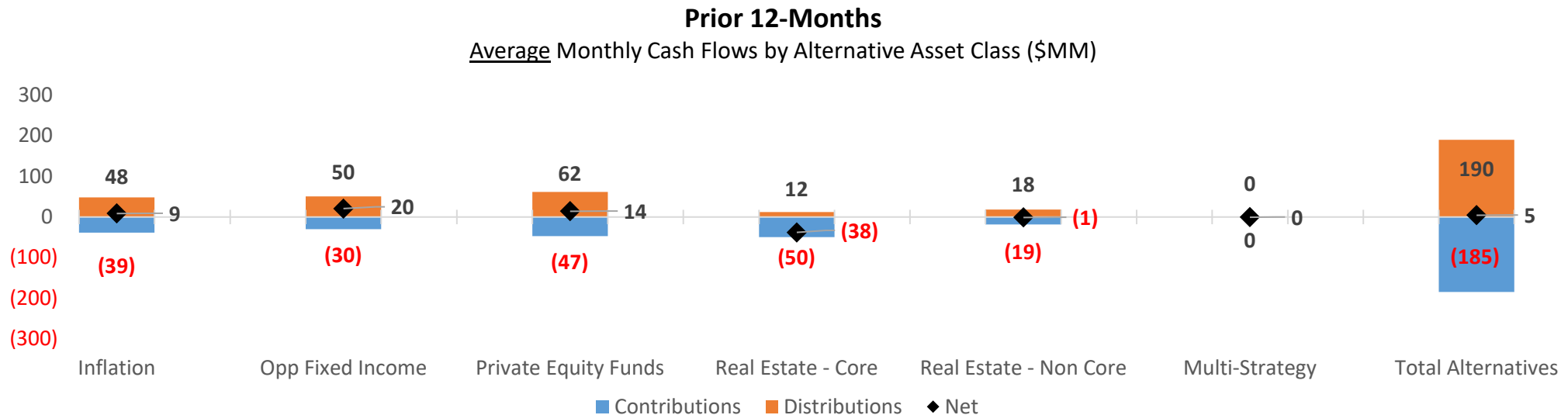
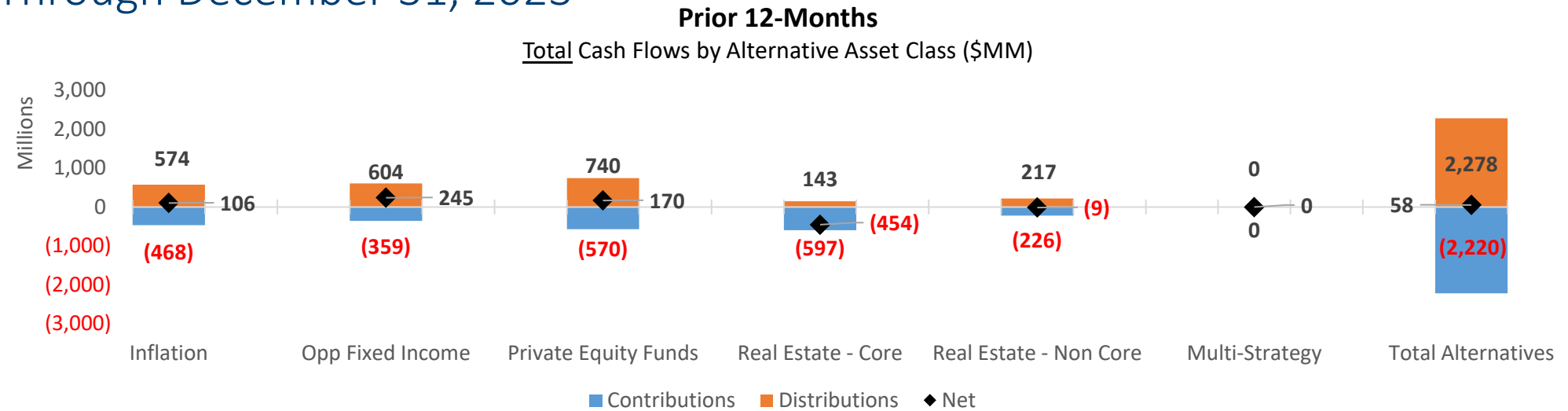


*Benefit payments exclude transfers from the Retiree Health Premium Fund as of January 1, 2022

**Projected Net Benefit Payments for remainder of calendar year



NCRS Alternatives Liquidity Profile Through December 31, 2023

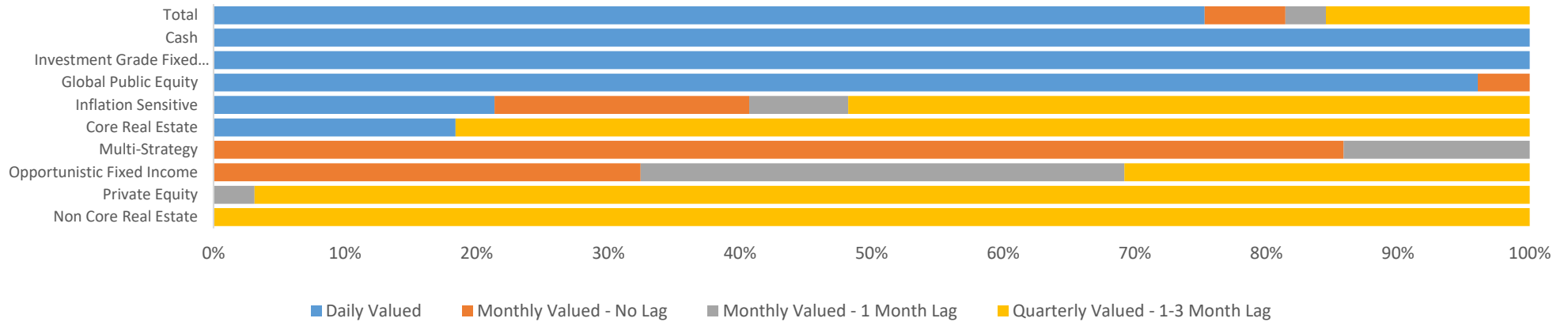




NCRS Valuation Lag Profile

As of December 31, 2023

PORTFOLIO VALUATION LAG



VALUATION LAG BY PORTFOLIO in Millions





NCRS Asset Class Net of Fees Performance

As of December 31, 2023

	Market Value (\$MM)	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years
Growth	\$60,512	16.60	5.35	10.86	8.25	10.02	7.43
Benchmark ¹		16.37	6.32	10.68	7.53	9.37	6.93
Public Equity	\$44,870	22.30	3.64	11.72	8.00	10.62	7.48
Benchmark ²		21.58	5.44	11.42	7.60	9.96	6.93
Private Equity	\$6,209	2.42	12.61	12.92	12.37	9.93	9.93
Benchmark ³		3.45	12.11	11.15	10.53	9.98	11.76
Non-Core Real Estate	\$2,114	-13.66	2.43	3.48	8.76	4.00	6.34
Benchmark ⁴		-3.19	6.70	5.24	6.66	3.10	6.79
Opportunistic Fixed Income	\$7,319	9.67	8.11	6.13	5.09	7.00	-
Benchmark ⁵		9.75	6.14	6.62	3.75	4.65	-
Rates & Liquidity	\$43,849	5.65	-1.57	2.25	2.66	3.83	4.25
Benchmark ⁶		5.92	-3.93	1.23	2.29	3.33	3.84
IG Fixed Income	\$33,955	5.92	-3.20	1.82	2.47	3.70	4.16
Benchmark ⁷		5.98	-4.35	1.07	2.24	3.29	3.81
Cash	\$9,894	4.44	1.92	1.81	1.41	-	-
Benchmark ⁸		5.08	2.20	1.84	1.22	-	-
Inflation Sensitive & Diversifiers	\$11,888	-1.78	6.12	4.48	4.58	2.74	4.18
Benchmark ⁹		-1.20	5.71	4.36	4.16	2.02	3.77
Inflation Sensitive	\$5,528	7.92	9.76	5.43	3.79	0.75	3.64
Benchmark ¹⁰		5.14	6.07	4.17	2.09	0.83	4.20
Core Real Estate	\$6,360	-9.27	3.19	3.97	6.07	5.73	5.92
Benchmark ¹¹		-8.43	5.17	4.50	6.59	5.46	6.38
Multi-Strategy	\$2,452	10.31	4.32	4.56	4.02	7.01	5.14
Benchmark ¹²		6.66	1.37	3.58	2.98	6.18	5.91
Total Pension Plan	\$118,701	10.18	2.70	6.73	5.78	7.33	6.18
Implementation Benchmark ¹³		10.79	3.03	7.11	5.62	7.02	5.88
Long-Term Policy Benchmark ¹⁴		12.77	1.56	7.48	5.37	7.00	6.10

See slide 44 for benchmark descriptions



NCRS Calendar Year Asset Class Return Diversification

As of December 31, 2023

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Public Equity 26.27%	Non-Core Real Estate 19.45%	Non-Core Real Estate 14.84%	Non-Core Real Estate 11.73%	Public Equity 24.44%	Private Equity 18.32%	Public Equity 27.91%	Public Equity 22.23%	Private Equity 48.03%	Inflation Sensitive 9.43%	Public Equity 22.3%
Multi-Strategy 22.61%	Private Equity 14.02%	Private Equity 9.20%	Public Equity 7.33%	Multi-Strategy 13.58%	Non-Core Real Estate 13.32%	Total Pension 14.88%	Private Equity 18.86%	Opportunistic Fixed Income 17.46%	Non-Core Real Estate 6.6%	Multi-Strategy 10.31%
Opportunistic Fixed Income 16.56%	Core Real Estate 10.41%	Core Real Estate 8.28%	Inflation Sensitive 7.19%	Total Pension 13.53%	Inflation Sensitive 6.88%	Multi-Strategy 14.82%	Total Pension 11.30%	Non-Core Real Estate 16.75%	Core Real Estate 5.76%	Total Pension 10.18%
Non-Core Real Estate 12.88%	IG Fixed Income & Cash 8.51%	Multi-Strategy 0.85%	Opportunistic Fixed Income 7.09%	Non-Core Real Estate 12.40%	Opportunistic Fixed Income 5.69%	Core Real Estate 10.71%	IG Fixed Income & Cash 9.34%	Public Equity 14.51%	Pension Cash 1.22%	Opportunistic Fixed Income 9.67%
Total Pension 12.28%	Total Pension 6.19%	Pension Cash 0.58%	Core Real Estate 6.68%	Private Equity 11.95%	Core Real Estate 5.67%	IG Fixed Income & Cash 10.33%	Opportunistic Fixed Income 2.85%	Core Real Estate 14.51%	Opportunistic Fixed Income (1.91%)	Inflation Sensitive 7.92%
Private Equity 11.72%	Public Equity 3.68%	Total Pension 0.29%	Total Pension 6.26%	Core Real Estate 10.12%	Pension Cash 1.88%	Non-Core Real Estate 9.93%	Pension Cash 1.06%	Inflation Sensitive 11.97%	Multi-Strategy (4.48%)	IG Fixed Income & Cash 5.92%
Core Real Estate 11.28%	Opportunistic Fixed Income 3.40%	IG Fixed Income & Cash 0.28%	Private Equity 6.05%	Inflation Sensitive 7.53%	IG Fixed Income & Cash (0.57%)	Private Equity 8.15%	Non-Core Real Estate 0.45%	Total Pension 9.71%	Private Equity (5.81%)	Pension Cash 4.44%
Inflation Sensitive (1.32%)	Multi-Strategy 2.69%	Public Equity (1.26%)	Multi-Strategy 6.00%	Opportunistic Fixed Income 7.05%	Total Pension (1.47%)	Opportunistic Fixed Income 3.61%	Core Real Estate (0.13%)	Multi-Strategy 7.74%	Total Pension (10.39%)	Private Equity 2.42%
IG Fixed Income & Cash (3.49%)	Pension Cash 0.45%	Opportunistic Fixed Income (2.61%)	IG Fixed Income & Cash 3.24%	IG Fixed Income & Cash 4.42%	Multi-Strategy (4.79%)	Pension Cash 2.20%	Inflation Sensitive (3.50%)	Pension Cash 0.15%	IG Fixed Income & Cash (12.74%)	Core Real Estate (9.27%)
	Inflation Sensitive (0.65%)	Inflation Sensitive (9.05%)	Pension Cash 0.98%	Pension Cash 1.12%	Public Equity (9.32%)	Inflation Sensitive 2.09%	Multi-Strategy (4.13%)	IG Fixed Income & Cash (1.84%)	Public Equity (20.5%)	Non-Core Real Estate (13.66%)



New, Incremental, & Unfunded Investment Commitments

Since November 15th IAC Meeting

As of December 31, 2023

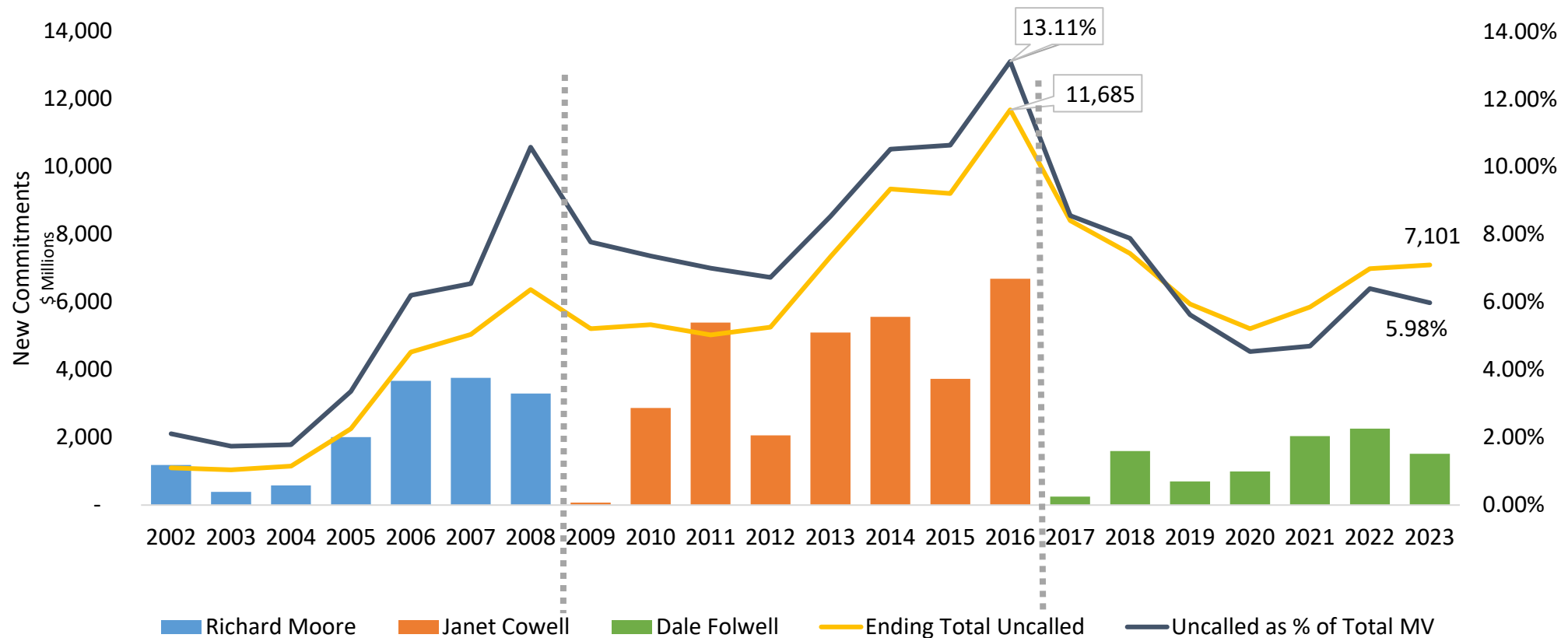
<u>Fund Name</u>	<u>Firm Name</u>	<u>New or Incremental Commitment (\$MM)</u>	<u>Closing Date</u>
Public Equity			
Private Equity			
NCL Invest III – PE OOA	Ares Management	\$200	11/9/23
Non-Core Real Estate			
Northpond Retail Partners	Northpond Partners	\$200	11/7/23
Opportunistic Fixed Income			
Inflation Sensitive			
Core Real Estate			
NorthRock Core	Rockwood Capital	\$127.3	11/8/23
Multi-Strategy			

<u>Asset Class</u>	<u>Unfunded Commitments (\$MM)</u>
Public Equity	0
Private Equity	2,126
Non-Core Real Estate	1,651
Opportunistic Fixed Income	1,231
Inflation Sensitive	1,578
Core Real Estate	514
Multi Strategy	0
Total	7,101



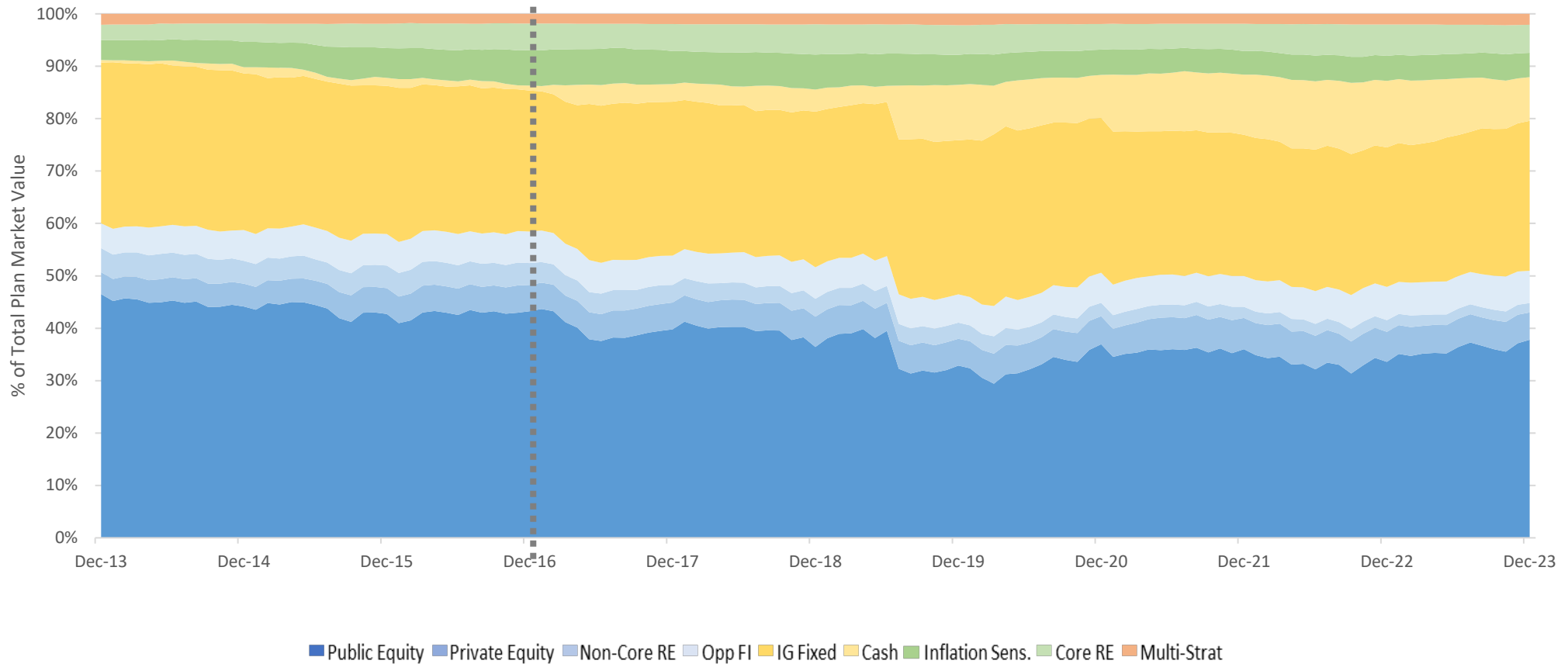
New and Total Unfunded Private Asset Class Commitments

By Calendar Year of Closing through December 31, 2023





Asset Allocation History as of December 31, 2023





Exited Investments

Since November 15th IAC Meeting

<u>Fund Name</u>	<u>Redemption Amount (\$MM)</u>	<u>Redemption Effective</u>
Public Equity		
None		
Private Equity		
None		
Non-Core Real Estate		
None		
Opportunistic Fixed Income		
None		
Inflation Sensitive		
None		
Core Real Estate		
None		
Multi Strategy		
None		



Top 20 Investment Managers

As of December 31, 2023

	Manager	Market Value (\$)	Uncalled (\$)	% MV	% MV Cum.
1	Internal Fixed Income	43,849,141,355	-	36.9%	36.9%
2	Internal Equity	20,686,891,454	-	17.4%	54.4%
3	BlackRock, Inc.	9,752,895,020	-	8.2%	62.6%
4	Wellington Management	3,570,915,891	-	3.0%	65.6%
5	Baillie Gifford	3,280,339,038	-	2.8%	68.4%
6	Mondrian Investment Partners Limited	3,045,730,416	-	2.6%	70.9%
7	Walter Scott & Partners	2,595,366,377	-	2.2%	73.1%
8	Rockwood Capital	2,583,865,879	130,138,562	2.2%	75.3%
9	Blackstone Group	2,384,716,920	1,112,114,796	2.0%	77.3%
10	Ares Management	2,322,155,126	1,636,909,493	2.0%	79.3%
11	Gladius Capital Management LP	2,105,506,579	-	1.8%	81.0%
12	ValueAct Capital	1,766,441,758	-	1.5%	82.5%
13	Angelo, Gordon & Co.	1,686,156,294	28,278,793	1.4%	83.9%
14	HPS Investment Partners, LLC	1,267,189,843	95,287,626	1.1%	85.0%
15	LBA Realty	1,263,044,507	131,683,168	1.1%	86.1%
16	DoubleLine Capital LP	886,865,897	-	0.7%	86.8%
17	Earnest Partners	879,984,740	-	0.7%	87.6%
18	Campbell Group LLC, The	832,072,624	-	0.7%	88.3%
19	Monarch Alternative Capital	752,300,000	-	0.6%	88.9%
20	Franklin Templeton Investments	736,325,368	-	0.6%	89.5%
	77 Remaining Managers*	12,453,110,789	3,966,622,413	10.5%	100.0%
	Total	118,701,015,875	7,101,034,852	100.0%	100.0%

*Manager count consists of all manager accounts with a market value greater than \$5.0 million and new, not yet funded, accounts.



Appendix



NCRS Public Equity Net of Fees Performance

As of December 31, 2023

	Market Value (\$MM)	3 Month	1 Year	3 Years	5 Years	10 Years
Public Equity	\$44,870	11.54	22.30	3.64	11.72	8.00
Benchmark ²		11.14	21.58	5.44	11.42	7.60
Domestic Portfolio	\$25,554	12.60	27.14	8.19	15.50	11.48
Russell 3000		12.07	25.96	8.54	15.16	11.48
Non-US Portfolio	\$19,313	10.14	16.39	(1.29)	7.64	4.66
Custom Benchmark		9.81	15.62	1.53	7.18	3.97

Russell 3000: Data is sourced from BNY Mellon

Non-US Custom Benchmark: As of October 2010, the Non U.S. Benchmark is the MSCI ACWI ex US IMI Net Index. Prior to October 2010, the Non-U.S. Benchmark was a blend of MSCI EAFE and MSCI Emerging Markets at policy weights. This data is also sourced from BNY Mellon

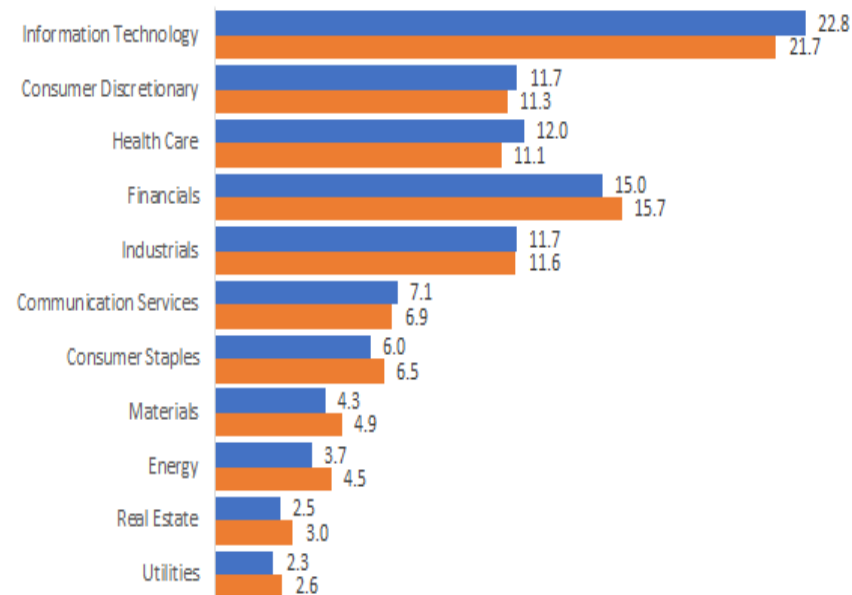


NCRS Public Equity Portfolio Characteristics

As of December 31, 2023

Portfolio Characteristics		
	Portfolio	MSCI ACWI IMI
Price/Earnings	19.9	18.0
Dividend Yield	1.8	2.0
Price/Book	2.8	2.6
Market Capitalization	411,762	415,318
Return On Equity	19.9	19.9

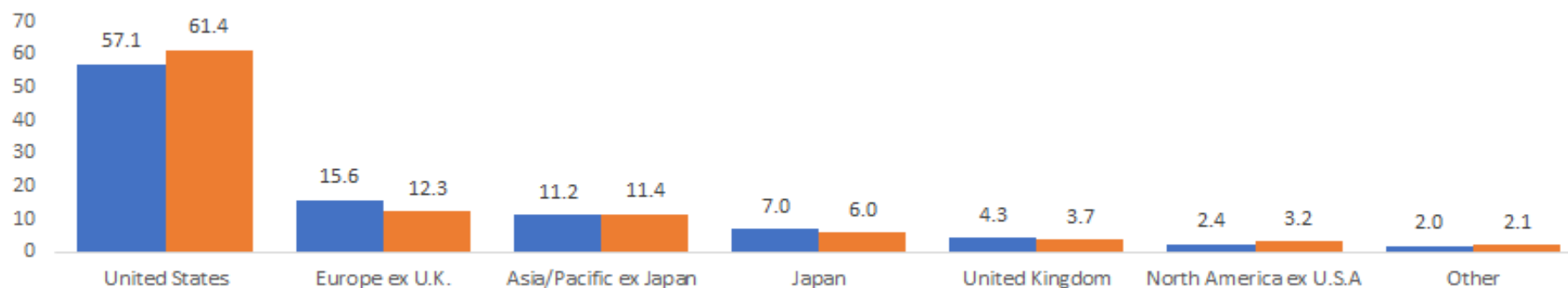
@FactSet Research Systems



■ Portfolio ■ Benchmark

Portfolio Pricing & Analytics Source: FactSet
Benchmark Pricing & Analytics Source: FactSet

Total Equity Regional Allocation



■ Portfolio ■ Benchmark

Portfolio Pricing & Analytics Source: FactSet
Benchmark Pricing & Analytics Source: FactSet



NCRS Private Equity Portfolio

As of December 31, 2023

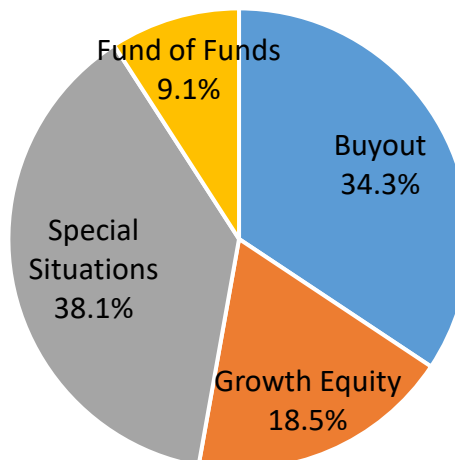
Net of Fees Performance (%)

	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Private Equity	\$6,209	0.52	2.42	12.61	12.92	12.37
Benchmark³		(0.00)	3.45	12.11	11.15	10.53
Buyout	\$2,131	0.31	1.05	15.52	14.90	12.63
Growth	\$1,147	(4.11)	(3.35)	1.86	9.35	12.56
Special Situations	\$2,363	4.13	8.98	18.91	13.12	9.89
Fund of Funds	\$566	(2.94)	(4.04)	12.01	10.93	12.51

IRR by Vintage Year

	<u>Pre-2004</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Total</u>
NCRS	12.03	6.81	5.09	3.33	9.34	10.06	8.78	19.68	8.59	13.64	11.93	14.25	18.31	20.80	18.84	17.83	N/A	2.71	7.35	4.38	N/A	9.98
# of Funds	28	3	11	21	15	17	3	1	6	6	9	4	9	6	7	3	N/A	1	4	2	N/A	156

Strategy Allocation (Based on Valuation)



*Private Equity returns include a stock distribution account, in the amount of roughly \$2 million, which does not fall under any specific sub-section.



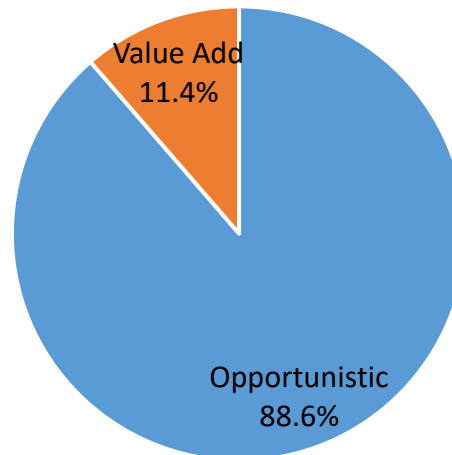
NCRS Non-Core Real Estate Portfolio

As of December 31, 2023

Net of Fees Performance (%)						
	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Non-Core Real Estate	\$2,114	(3.55)	(13.66)	2.43	3.48	8.76
Benchmark ⁴		(1.80)	(3.19)	6.70	5.24	6.66
Opportunistic	\$1,874	(3.38)	(12.01)	3.74	4.43	8.95
Value Add	\$240	(4.80)	(24.66)	(4.44)	(1.07)	6.81

IRR by Vintage Year																						
	Pre-2004	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
NCRS	8.91	15.69	-1.47	2.74	2.01	15.31	N/A	15.90	17.17	14.11	11.40	2.10	7.66	8.54	N/A	13.36	18.97	N/A	N/A	-9.36	0.00	6.29
# of Funds	16	3	15	13	8	6	N/A	6	7	5	7	7	6	7	N/A	1	1	N/A	N/A	4	1	112

Strategy Allocation (Based on Valuation)





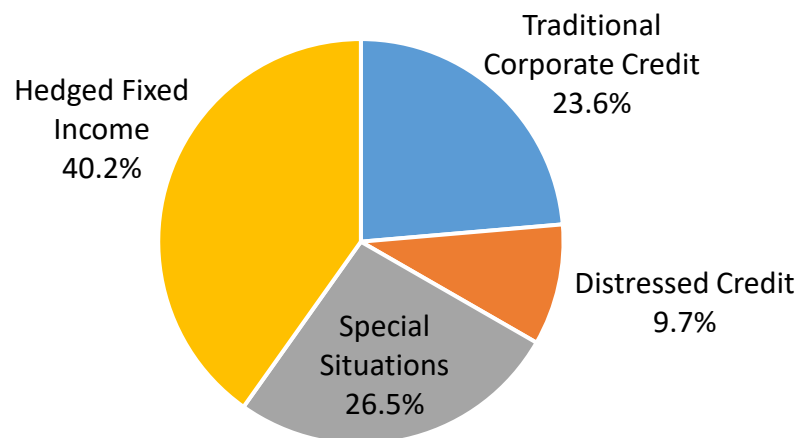
NCRS Opportunistic Fixed Income Portfolio

As of December 31, 2023

Net of Fees Performance (%)						
	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Opportunistic Fixed Income	\$7,319	2.40	9.67	8.11	6.13	5.09
Benchmark ⁵		3.37	9.75	6.14	6.62	3.75
Traditional Corporate Credit	\$1,730	2.09	12.97	5.38	5.49	5.19
Distressed Credit	\$708	2.32	9.68	11.74	9.15	8.24
Special Situations	\$1,942	2.96	8.73	10.76	6.68	8.04
Hedged Fixed Income	\$2,940	2.23	8.58	7.34	5.83	3.70

IRR by Vintage Year																				
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
NCRS	2.87	N/A	16.91	7.55	22.42	5.11	4.98	3.30	5.06	3.80	8.31	7.48	10.96	N/A	7.60	14.07	9.53	7.04	14.42	6.17
# of Funds	1	N/A	1	3	1	4	9	2	7	3	1	8	2	N/A	1	2	1	2	1	49

Strategy Allocation (Based on Valuation)





NCRS Rates & Liquidity Portfolio

As of December 31, 2023

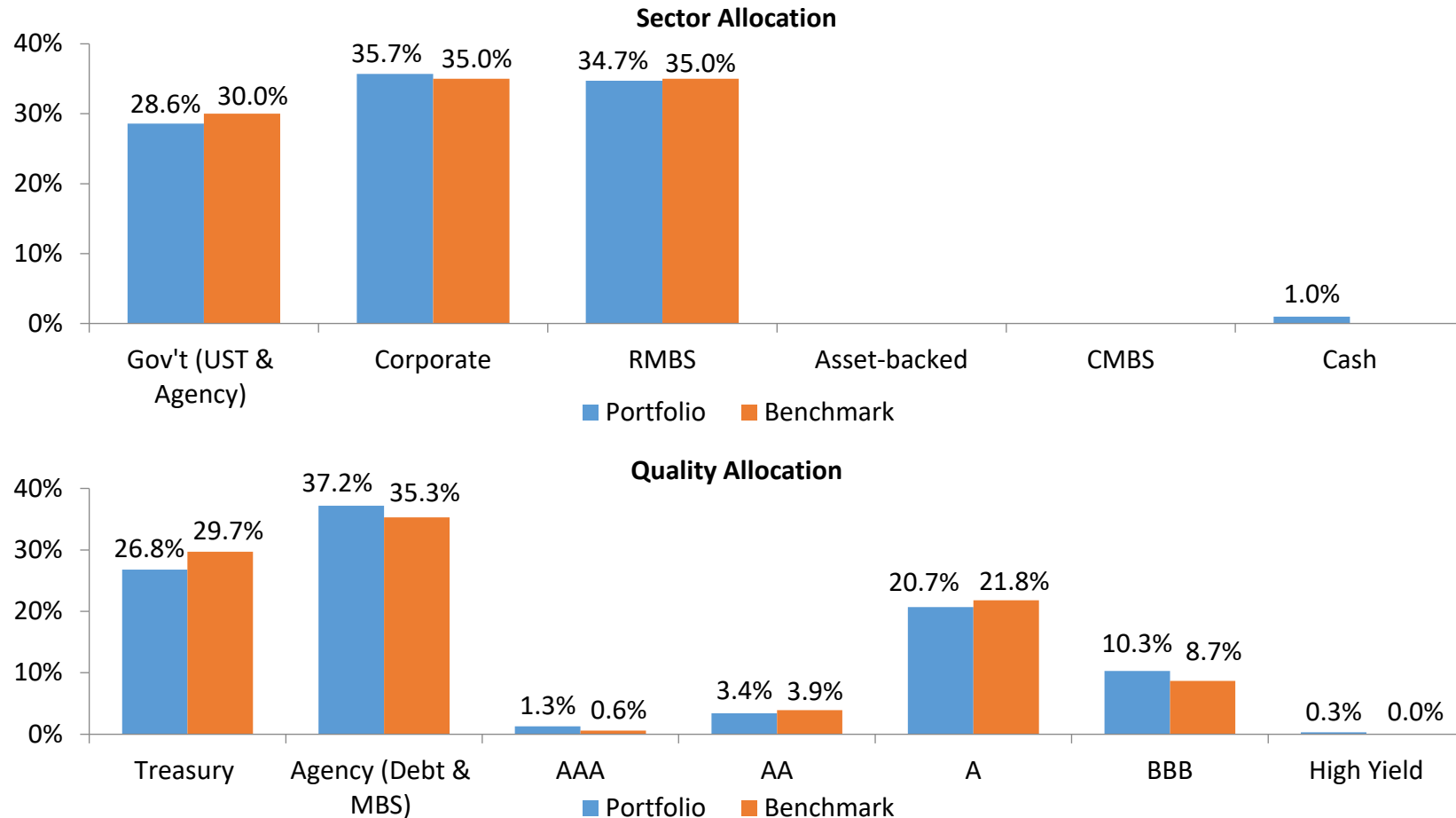
Net of Fees Performance (%)						
	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Rates & Liquidity	\$43,849	6.31	5.65	(1.57)	2.25	2.66
Benchmark ⁶		7.21	5.92	(3.93)	1.23	2.29
IG Fixed Income	\$33,955	7.87	5.92	(3.20)	1.82	2.47
Core Fixed Income	\$29,976	8.72	6.09	(3.85)	1.73	2.50
IG Fixed Income Cash	\$2,107	1.09	3.74	1.60	1.60	-
IG Short Credit	\$1,872	2.69	5.39	-	-	-
Pension Cash	\$9,894	1.27	4.44	1.92	1.81	1.41

Core Fixed Income Portfolio Characteristics			
	<u>Avg. Coupon</u>	<u>Yield to Worst</u>	<u>Effective Duration</u>
Government (Treasury & Agency)	3.5%	4.0%	10.9
Corporate	4.4%	5.0%	9.0
Mortgage	3.6%	4.6%	5.2
Total	3.8%	4.6%	8.2



NCRS Core Fixed Income Portfolio Characteristics

As of December 31, 2023



Benchmark: The Core Fixed Income Benchmark is a custom BOAML Core Investment Grade Index comprised of the following weightings: 30% BOAML 5+ Years Governments, 35% BOAML 5+ Years Investment Grade Corporates, and 35% BOAML Mortgage Master



NCRS Inflation Sensitive Portfolio

As of December 31, 2023

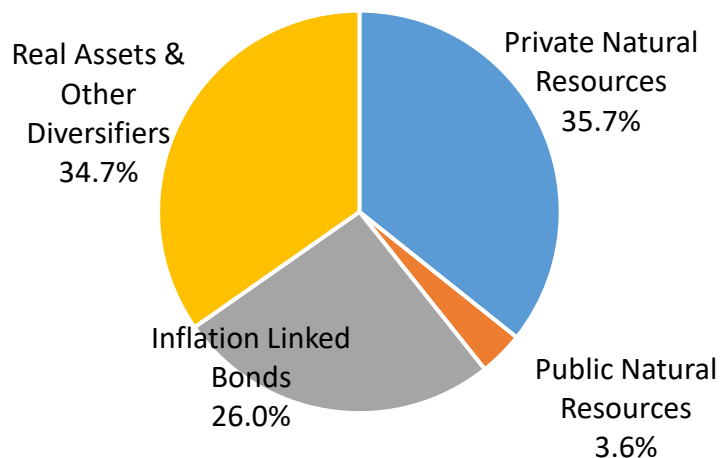
Net of Fees Performance (%)

	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Inflation Sensitive	\$5,528	0.31	7.92	9.76	5.43	3.79
Benchmark ¹⁰		2.19	5.14	6.07	4.17	2.09
Private Natural Resources	\$1,975	0.44	14.85	13.30	4.85	3.96
Public Natural Resources	\$198	(4.42)	(7.71)	10.82	7.63	(1.11)
Inflation Linked Bonds	\$1,437	2.67	8.06	2.63	3.62	-
Real Assets & Other Diversifiers	\$1,919	(1.03)	2.40	11.09	7.66	8.12

IRR by Vintage Year

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>Total</u>
NCRS	1.76	-7.73	-5.67	N/A	-5.61	-5.76	5.35	7.08	7.31	8.46	3.41	8.21	21.98	28.77	N/A	32.38	N/A	-0.99	2.59
# of Funds	3	2	2	N/A	3	9	7	11	12	4	3	1	3	2	N/A	5	N/A	2	69

Strategy Allocation (Based on Valuation)





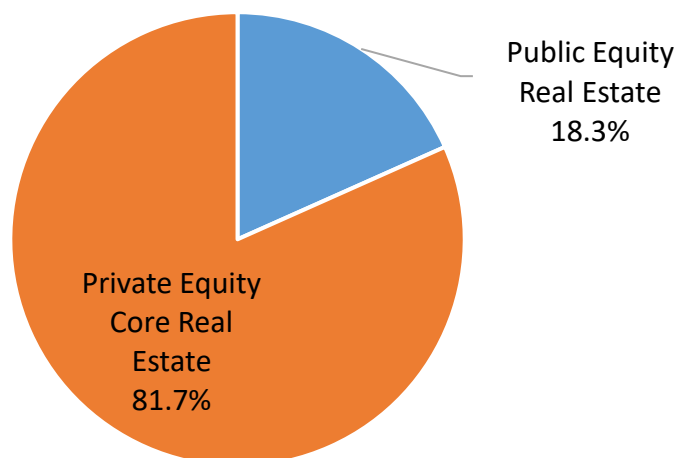
NCRS Core Real Estate Portfolio

As of December 31, 2023

Net of Fees Performance (%)						
	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Core Real Estate	\$6,360	0.42	(9.27)	3.19	3.97	6.07
Benchmark ¹¹		1.26	(8.43)	5.17	4.50	6.59
Public Equity Real Estate	\$1,166	15.99	14.05	0.78	4.34	5.21
Private Equity Core Real Estate	\$5,194	(2.56)	(13.11)	3.27	3.74	6.09

IRR by Vintage Year																						
	Pre-2004	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
NCRS	7.51	9.74	-8.33	4.20	1.39	6.36	N/A	23.62	N/A	N/A	4.87	4.32	2.82	6.63	N/A	15.77	N/A	N/A	6.59	N/A	N/A	6.32
# of Funds	5	1	1	2	3	1	N/A	1	N/A	N/A	2	6	2	9	N/A	1	N/A	N/A	3	N/A	N/A	37

Strategy Allocation (Based on Valuation)



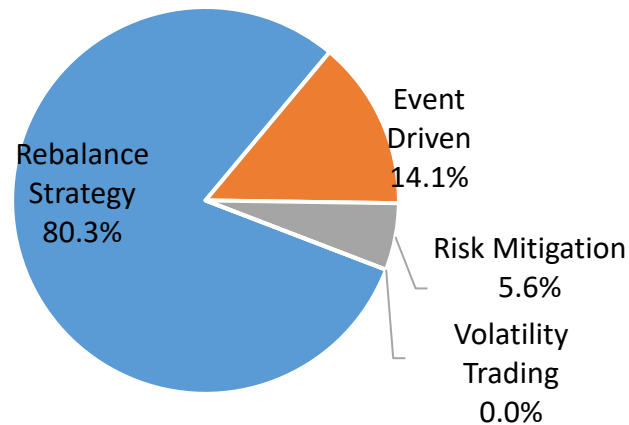


NCRS Multi-Strategy Portfolio

As of December 31, 2023

Net of Fees Performance (%)						
	Market Value	3 Month	1 Year	3 Years	5 Years	10 Years
Multi-Strategy	\$2,452	4.08	10.31	4.32	4.56	4.02
Benchmark ¹²		3.68	6.66	1.37	3.58	2.98
Rebalance Strategy	\$1,968	5.01	11.26	4.02	6.27	5.09
Event Driven	\$347	2.30	10.66	7.61	5.02	-
Risk Mitigation	\$137	(3.86)	(2.35)	0.44	(1.76)	-
Volatility Trading	-	-	-	-	-	-

Strategy Allocation (Based on Valuation)



Notes:

All data presented are based on currently available information at time of publication and may be revised subsequently.

1. The Growth Benchmark is a blend of the Public Equity Benchmark, Private Equity Benchmark, Non-Core Real Estate Benchmark, & Opportunistic FI Benchmark at policy weights.
2. The Public Equity Benchmark is a dynamically weighted combination of the MSCI ACWI IMI Net (Long-Only) and a beta adjusted MSCI ACWI IMI Net (Hedged Equity).
3. The Private Equity Benchmark is comprised of the following Burgiss Group Private iQ indices: Effective 7/1/2022 at 45% Buyout, 25% Venture Capital, and 30% Distressed.
4. The Non-Core Real Estate Benchmark is comprised of the following Burgiss Group Private iQ indices: 80% U.S. Non-Core Real Estate (Opportunistic and Value-Added) and 20% Non-U.S. Non-Core Real Estate (Opportunistic and Value-Added).
5. The Opportunistic Fixed Income Benchmark is comprised of 50% HFRX Distressed Securities Index, 20% HFRX Relative Value Index, 15% Credit Suisse Leveraged Loan Index, and 15% BOAML High Yield Index.
6. The Rates & Liquidity Benchmark is a blend of the IG Fixed Income & Cash Benchmark and the Pension Cash Benchmark at policy weights.
7. The IG Fixed Income & Cash Benchmark is comprised 10% iMoneyNet First Tier Institutional Money Market Funds Net Index and 90% custom BOAML Core Investment Grade Index. The custom BOAML core index comprised of the following weightings: 30% BOAML 5+ Years Governments, 35% BOAML 5+ Years Investment Grade Corporates, and 35% BOAML Mortgage Master.
8. The Pension Cash Benchmark is the iMoneyNet First Tier Institutional Money Market Funds Net Index.
9. The Inflation Sensitive & Diversifiers Benchmark is a blend of the Inflation Sensitive Benchmark and the Core Real Estate Benchmark at policy weights.
10. The Inflation Sensitive Benchmark is the dynamically weighted combination of the Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index (TIPS), the Bloomberg Commodities Index (Commodities), and a combination of the benchmarks of investments classified within Private Natural Resources or Other Real Assets and Diversifiers.
11. The Core Real Estate Benchmark is comprised of 80% Custom NCREIF ODCE Net Index and 20% FTSE EPRA NAREIT Global Index.
12. The Multi-Strategy Benchmark is comprised of a dynamically weighted combination of the HFRX ED: Multi-Strategy Index, net of fees, and the market value weighted benchmarks for any other total fund strategies within the Portfolio.
13. The Implementation Benchmark is a blend of the Asset Class Benchmarks at policy weights. It is currently weighted as follows: 55% Growth Benchmark, 33% Rates & Liquidity Benchmark, 11% Inflation Sensitive & Diversifiers Benchmark, and 1% Multi-Strategy Benchmark.
14. The Long-Term Policy Benchmark is comprised of 56% MSCI ACWI IMI Net, 28% BOAML 5+ Years U.S. Treasury Index, 6.5% Bloomberg Commodity Index, 5% BOAML 3 Month Treasury Bill Index, and 4.5% BOAML 1-3 Years U.S. Inflation-Linked Treasury Index.

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