



QUARTERLY PERFORMANCE REPORT

SAN BERNARDINO COUNTY
EMPLOYEES' RETIREMENT
ASSOCIATION

JUNE 30, 2021

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MARKET ENVIRONMENT

ECONOMIC ENVIRONMENT

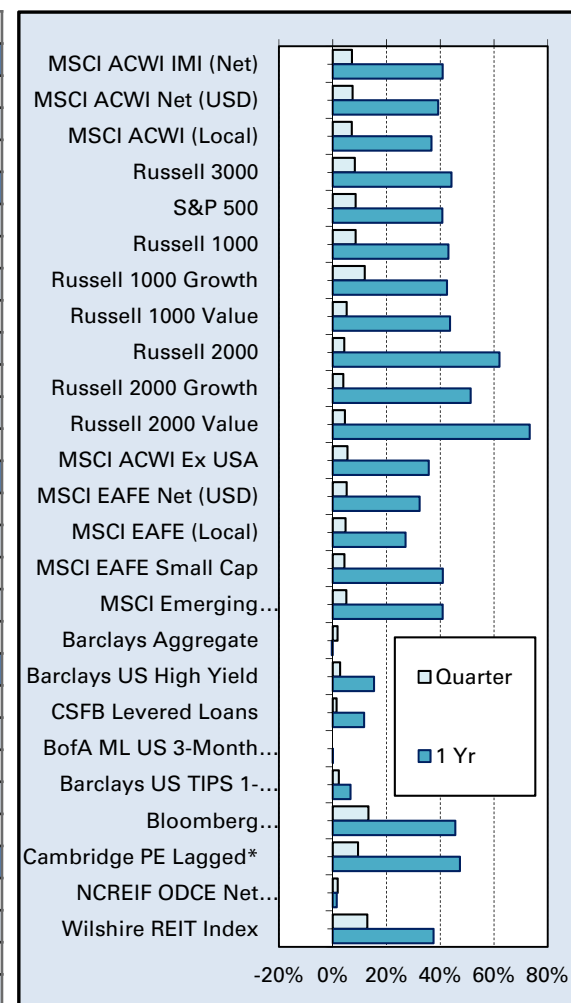
- **Q1 Real GDP (third estimate) grew at an annual rate of +6.4%.**
 - Retail sales ended May at +15.3% on a YoY basis. In the same period last year the YoY growth rate was -1.4%.
 - Corporate profits as a percent of GDP ended Q4 2020 at 10.1%, up from 8.1% on a YoY basis and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended May was 1.3. Levels have remained relatively constant since early 2010 with a spike to 1.7 in April 2020.
 - The U.S. trade deficit widened by 3.1% (ended May) as imports rose 1.2%.
- **The unemployment rate was 5.9% in Q2, down from 6.0% in Q1; U-6, a broader measure of unemployment, decreased to 9.8% in Q2 from 10.4% in Q1.**
 - The labor force participation rate ended Q2 at 61.6% up slightly from Q1's 61.5% after declining to 60.2% in April 2020 and is at levels below the 10 year pre-pandemic average of 63.0%.
- **The Case-Shiller Home Price Index (ended April) increased to 249.0 from 234.5 (in December) and remains at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally-adjusted CPI saw an uptick to 5.44% in Q2 from 2.74% in Q1; Capacity Utilization increased to 75.4% from 74.6% in Q1.**
- **Fed Funds rate remains at a targeted range of 0.00%-to-0.25%. The 10-year Treasury Yield (constant maturity) finished Q2 at 1.5% down from 1.6% in Q1.**
- **The Fed remains committed to continuing stimulative action as needed to support the US economy. The Fed's balance sheet continues to grow in the wake of the pandemic.**
- **S&P valuations increased in Q2 to 37.92 from 36.77 in Q1 and remains higher than the 10-year average of 27.2x.**
 - Cyclically adjusted Shiller PE ratio remains above the long-term average of 16.8x



MARKET ENVIRONMENT

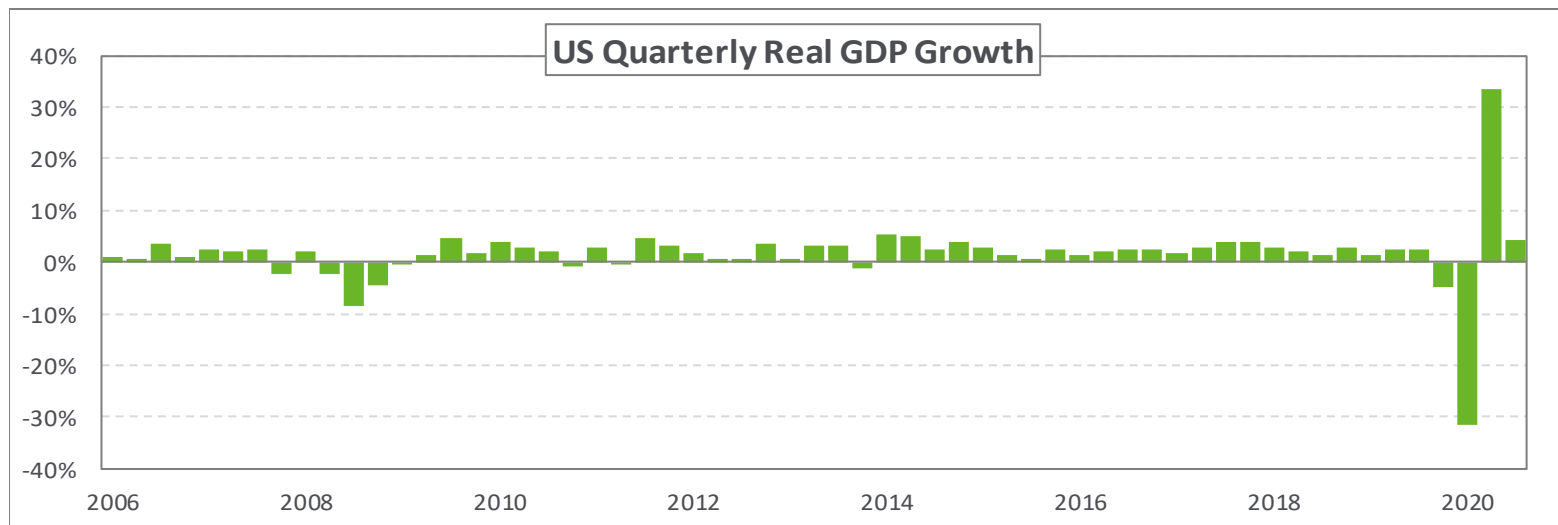
Q2 2021 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	7.18%	40.94%	14.24%	14.55%	9.90%
MSCI ACWI Net (USD)	World W/O Small Cap	7.39%	39.26%	14.57%	14.61%	9.90%
MSCI ACWI (Local)	World (Local Currency)	7.09%	36.77%	14.19%	14.47%	11.16%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	8.24%	44.16%	18.73%	17.88%	14.70%
S&P 500	Large Core	8.55%	40.79%	18.67%	17.65%	14.84%
Russell 1000	Large Core	8.54%	43.07%	19.16%	17.99%	14.90%
Russell 1000 Growth	Large Growth	11.93%	42.50%	25.14%	23.66%	17.87%
Russell 1000 Value	Large Value	5.21%	43.68%	12.42%	11.87%	11.61%
Russell 2000	Small Core	4.29%	62.02%	13.52%	16.47%	12.34%
Russell 2000 Growth	Small Growth	3.92%	51.36%	15.94%	18.76%	13.52%
Russell 2000 Value	Small Value	4.56%	73.28%	10.27%	13.62%	10.85%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	5.48%	35.72%	9.38%	11.08%	5.45%
MSCI EAFE Net (USD)	Int'l Developed	5.17%	32.35%	8.27%	10.28%	5.89%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	4.79%	27.08%	7.53%	10.01%	8.09%
MSCI EAFE Small Cap	Small Cap Int'l	4.34%	40.98%	8.40%	12.03%	8.38%
MSCI Emerging Markets	Emerging Equity	5.05%	40.90%	11.27%	13.03%	4.29%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	1.83%	-0.33%	5.34%	3.03%	3.39%
Barclays US High Yield	High Yield	2.74%	15.37%	7.44%	7.48%	6.66%
CSFB Levered Loans	Bank Loans	1.44%	11.67%	4.36%	5.04%	4.52%
BofA ML US 3-Month T-Bill	Cash	0.00%	0.09%	1.34%	1.17%	0.63%
Barclays US TIPS 1-10 Yr	Inflation	2.30%	6.60%	5.67%	3.61%	2.58%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	13.30%	45.61%	3.90%	2.40%	-4.44%
Cambridge PE Lagged*	Private Equity	9.45%	47.37%	17.56%	17.23%	14.29%
NCREIF ODCE Net Lagged*	Real Estate	1.89%	1.48%	3.97%	5.26%	8.67%
Wilshire REIT Index	REIT	12.85%	37.54%	10.06%	6.36%	9.38%

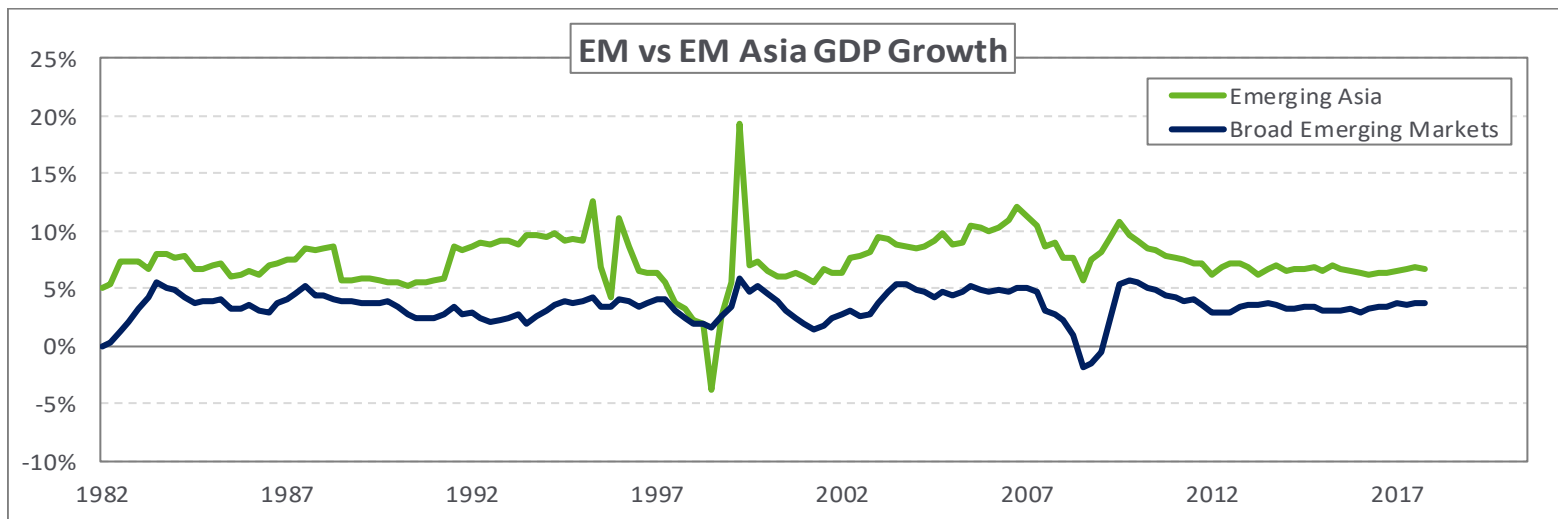


* As of 3/31/2021

GROSS DOMESTIC PRODUCT

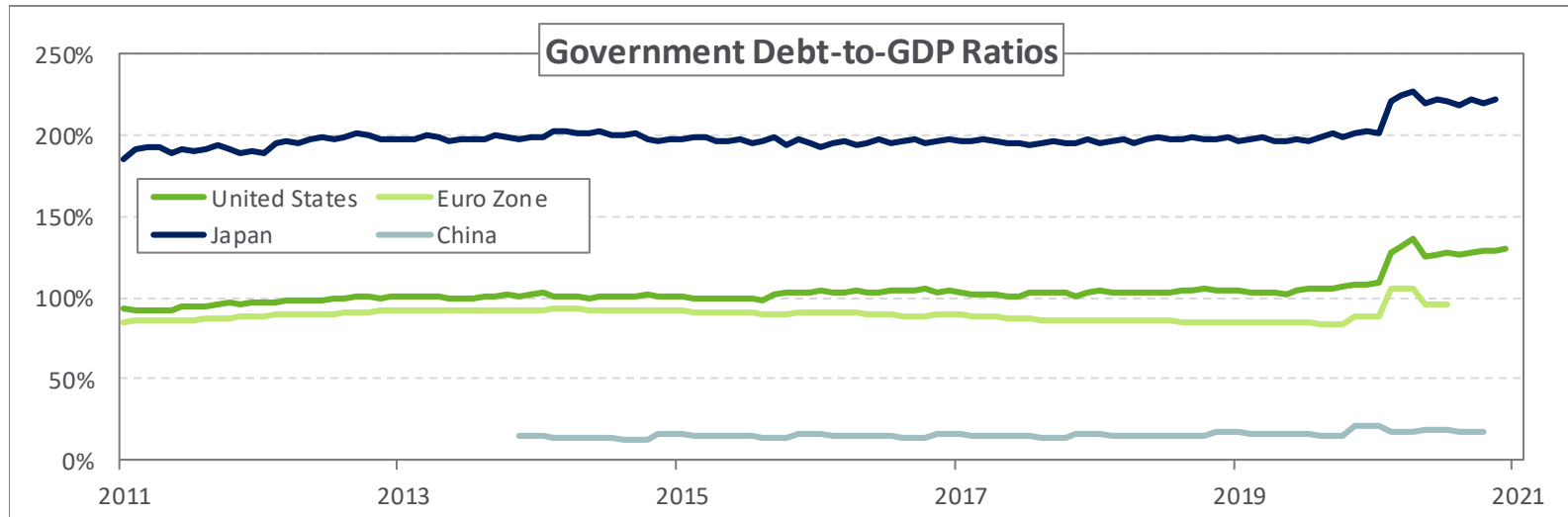


Source: Bureau of Economic Analysis, FactSet

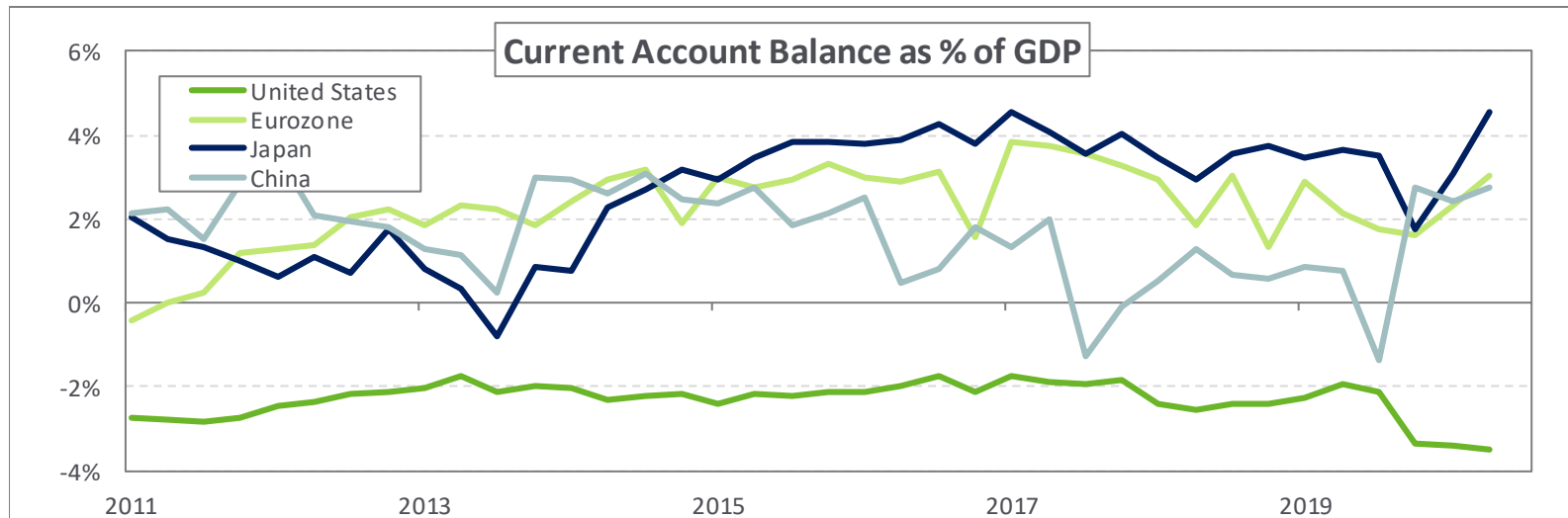


Source: IMF, FactSet

GROSS DOMESTIC PRODUCT METRICS



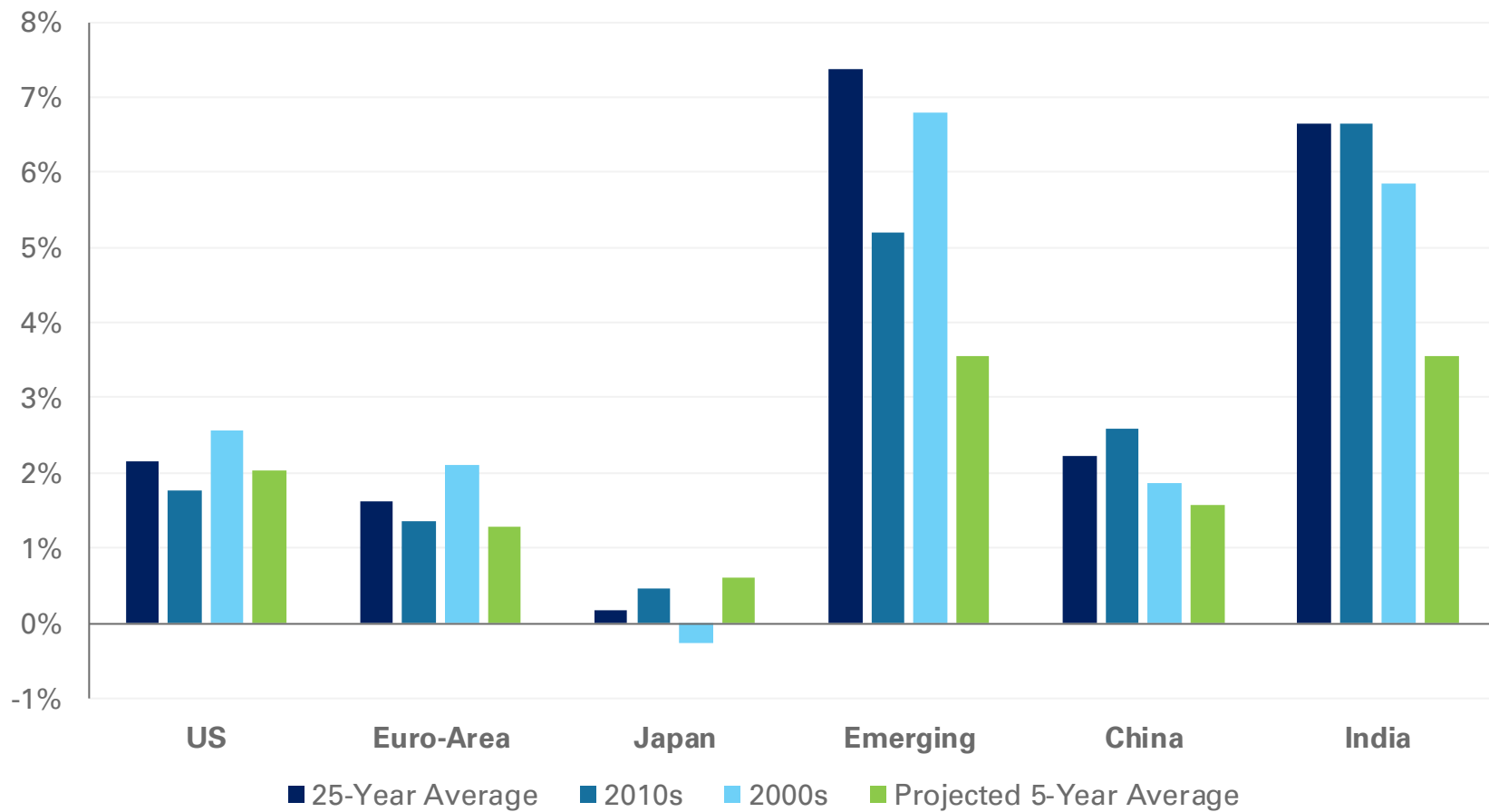
Source: IMF, FactSet



Source: FactSet

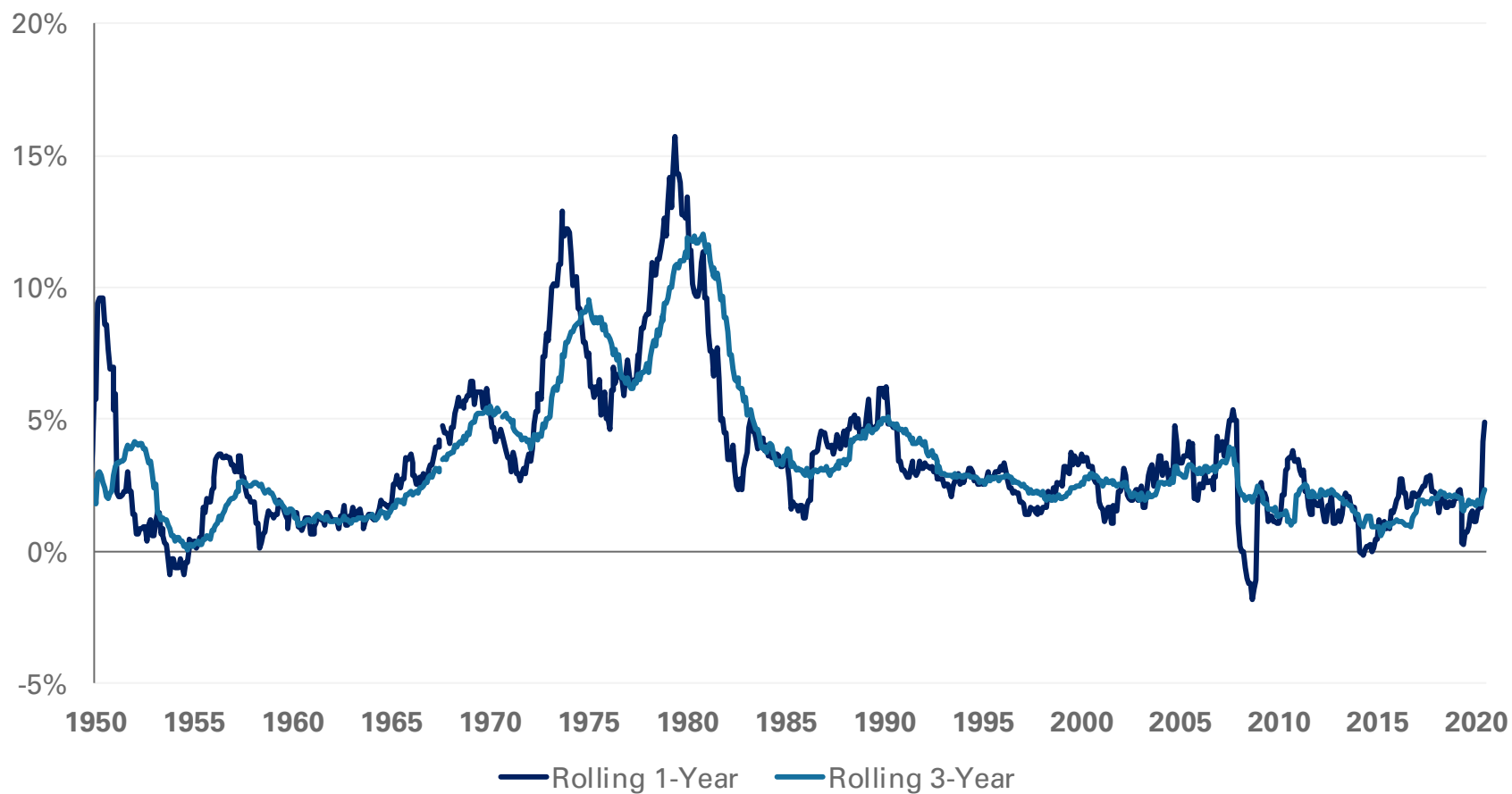
HISTORICAL INFLATION

IMF PROJECTIONS

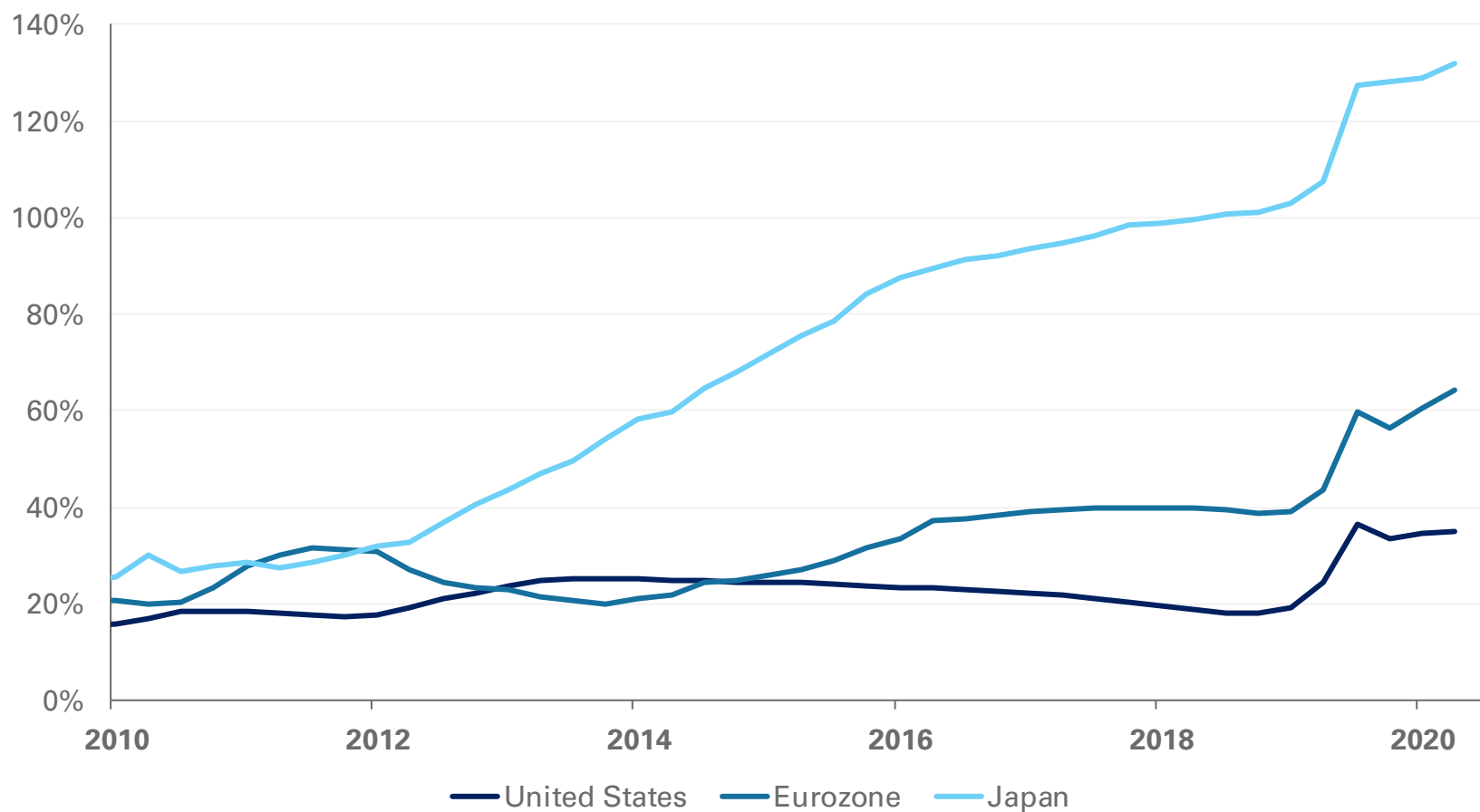


INFLATION

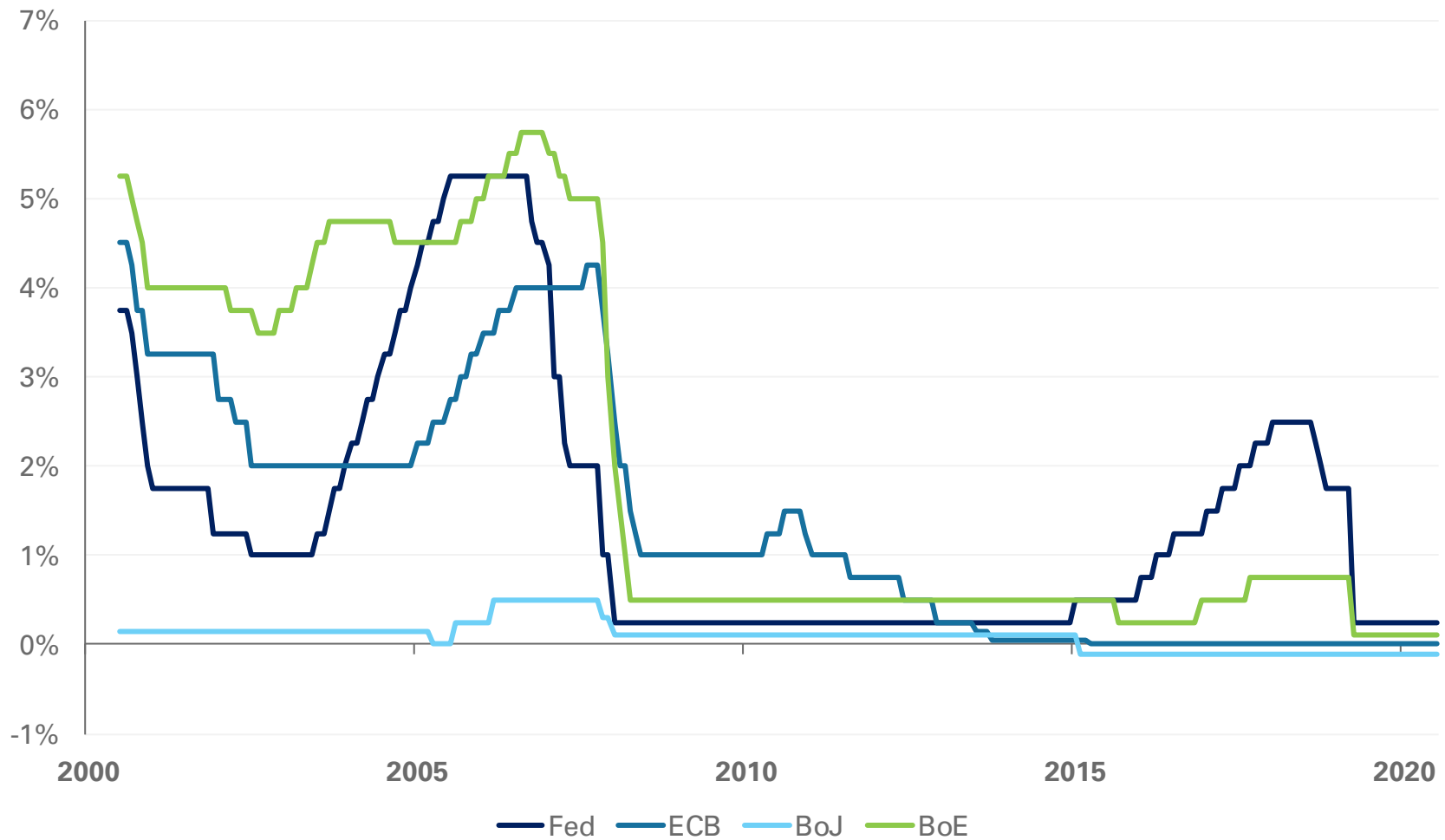
U.S. CONSUMER PRICE INDEX



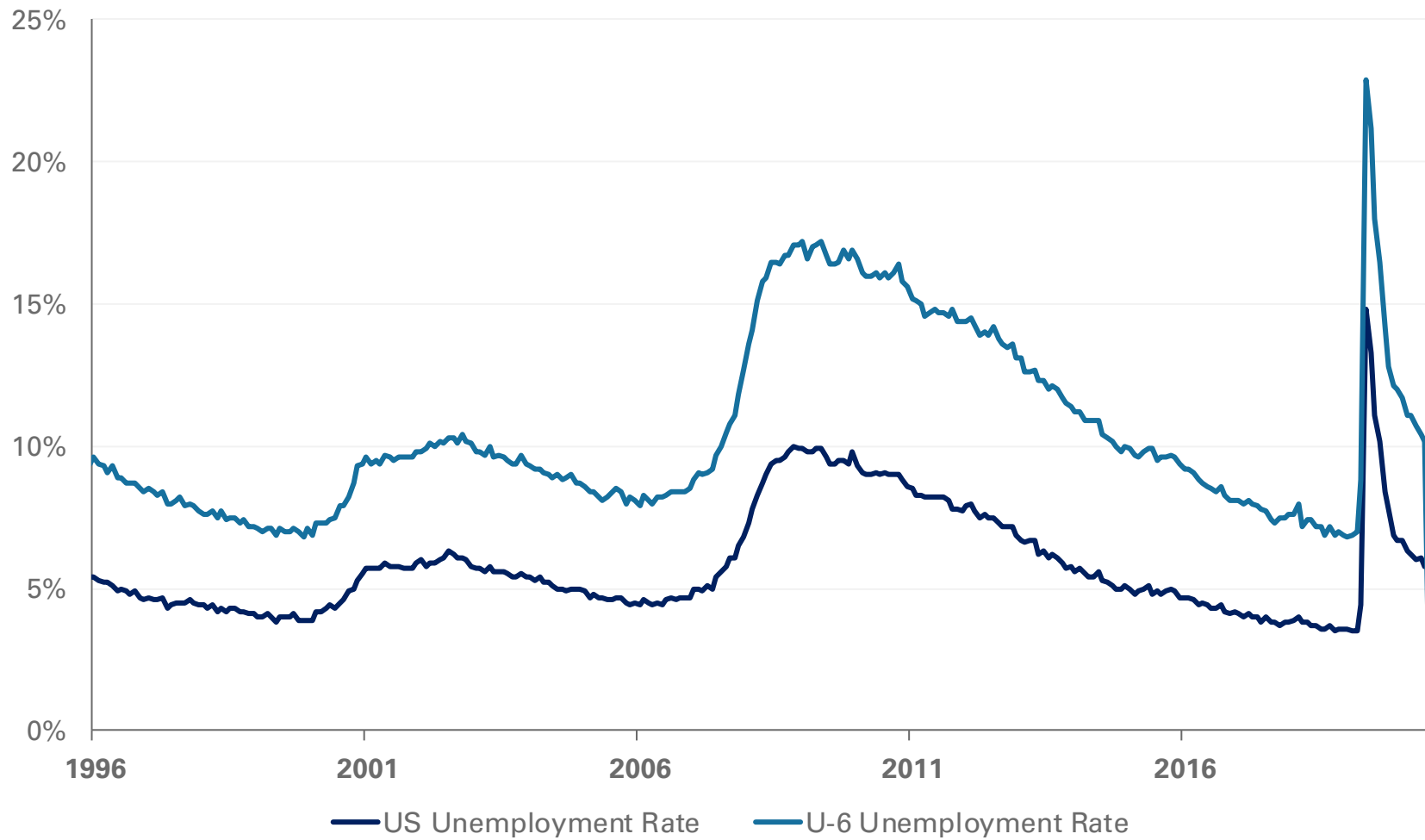
CENTRAL BANK BALANCE SHEETS AS A PERCENTAGE OF GDP



CENTRAL BANK POLICY RATES



U.S. UNEMPLOYMENT RATES



2021 SECOND QUARTER INSIGHTS FROM NEPC

Private Wealth

- [Taking Stock: Business Owners, Here's How to Make Your Portfolio Work for You](#)

Healthcare

- [NEPC's 2021 Healthcare Operating Funds Survey Results](#)

Taft-Hartley

- [Taking Stock: Taft-Hartley/ Multi-Employer Pension Plans Await ARPA 2.0](#)

Defined Benefit

- [Taking Stock: NEPC Q1 2021 Pension Monitor](#)
- [Taking Stock: NEPC April 2021 Pension Monitor](#)
- [Taking Stock: NEPC May 2021 Pension Monitor](#)

General Research

- [Quarterly Asset Class Review: Q1 2021](#)
- [Taking Stock: A Sneak Peek Into the 2021 NEPC \(Virtual\) Client Conference](#)
- [NEPC Market Outlook: Should Investors Be Bracing for a Tidal Wave of Inflation?](#)
- [Meeting You Where You Are: Client Input About the Future of Meetings](#)
- [11th Annual Investment Manager Webinar Replay](#)

Diversity, Equity, & Inclusion

- [Using Investing to Bring DEI Goals Within Reach](#)
- [NEPC's 2020 DEI Progress Report](#)



DIVERSITY, EQUITY AND INCLUSION AT NEPC

- This quarter, NEPC published our first annual [Diversity, Equity and Inclusion \(DEI\) Progress Report](#). We are happy to see that the Progress Report has sparked conversation, which you can read more about on [Institutional Investor](#) and [Banking Exchange](#).





TOTAL FUND PERFORMANCE

TOTAL FUND PERFORMANCE SUMMARY

NET OF FEES

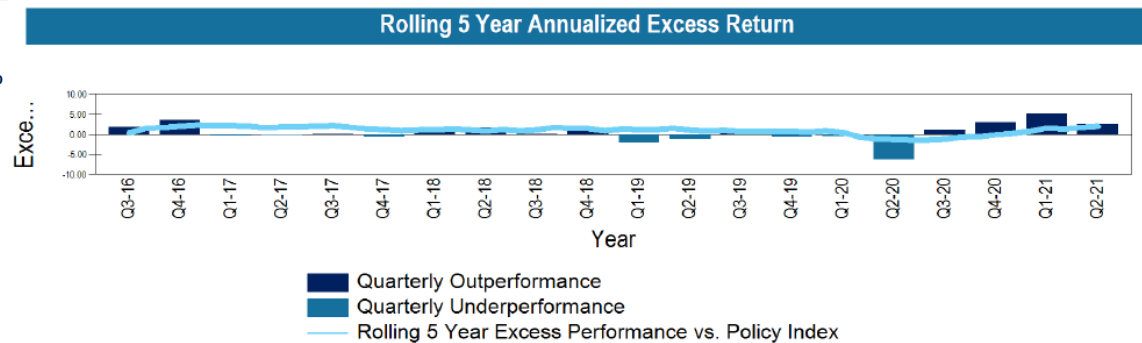
Ending June 30, 2021											
	Market Value	3 Mo	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank
Total Fund	\$13,403,544,826	6.9%	4	33.3%	1	10.6%	49	10.7%	40	8.3%	47
Policy Index		4.4%	77	19.7%	99	9.6%	84	8.8%	93	7.2%	81
S&P 500		8.5%	1	40.8%	1	18.7%	1	17.6%	1	14.8%	1
BBgBarc US Aggregate TR		1.8%	99	-0.3%	99	5.3%	99	3.0%	99	3.4%	99
60% MSCI ACWI (Net) / 40% FTSE WGBI		4.8%	59	22.7%	95	10.5%	50	9.5%	83	6.7%	90
InvMetrics Public DB > \$1B Net Median		4.9%		26.4%		10.4%		10.5%		8.1%	

In the year ended June 30, 2021 the Fund return of 33.3% ranked in the 1st percentile of Public Funds > \$1 Billion. The Fund's assets totaled \$13.40 billion, up from \$10.09 billion one year ago.

In the three-year period ended June 30, 2021 the Fund return of 10.6% ranked in the 49th percentile among its peers. The Sharpe Ratio over this period of 1.1 ranks in the 8th percentile.

In the five-year period ended June 30, 2021 the Fund return of 10.7% ranked in the 40th percentile among its peers. On a risk adjusted basis, the Fund's Sharpe Ratio ranked in the 1st percentile in its peer group while the Sortino Ratio ranked in the 13th percentile.

The preliminary InvMetrics Public DB > \$1B Net of Fee universe contains 35 observations as of June 30, 2021.



	3 Years Ending June 30, 2021					
	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	8.4%	1	1.1	8	1.2	14
InvMetrics Public DB > \$1B Net Median	11.0%	--	0.8	--	1.0	--

	5 Years Ending June 30, 2021					
	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	6.6%	1	1.4	1	1.4	13
InvMetrics Public DB > \$1B Net Median	8.9%	--	1.0	--	1.1	--

TOTAL FUND RISK ADJUSTED RETURNS

1 Year Ending June 30, 2021								
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	33.3%	1	7.5%	31	4.4	1	25.8	13
InvMetrics Public DB > \$1B Net Median	26.4%	--	8.2%	--	3.2	--	12.7	--

3 Years Ending June 30, 2021								
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	10.6%	49	8.4%	1	1.1	8	1.2	14
InvMetrics Public DB > \$1B Net Median	10.4%	--	11.0%	--	0.8	--	1.0	--

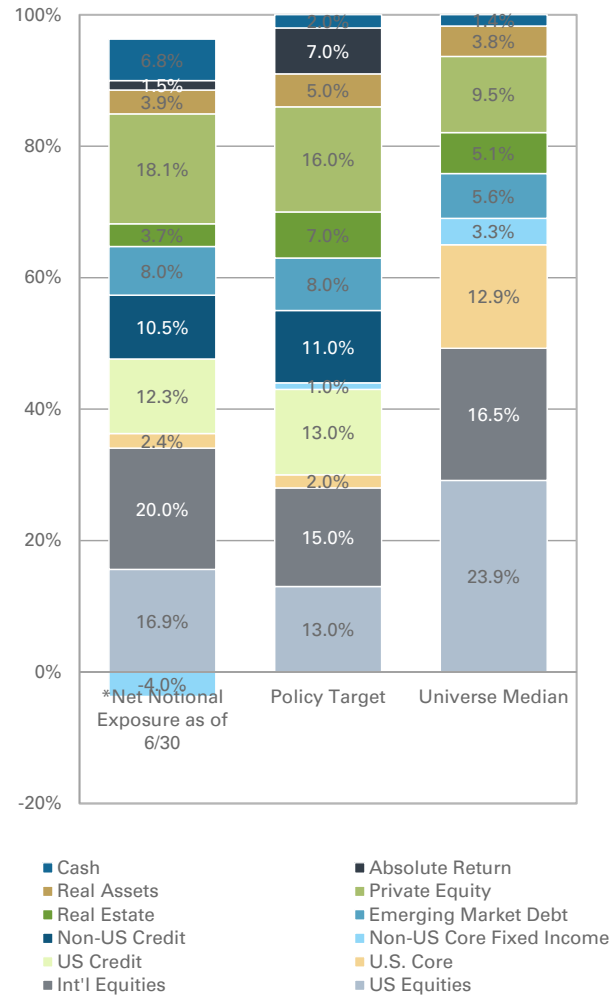
5 Years Ending June 30, 2021								
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	10.7%	40	6.6%	1	1.4	1	1.4	13
InvMetrics Public DB > \$1B Net Median	10.5%	--	8.9%	--	1.0	--	1.1	--

10 Years Ending June 30, 2021								
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Sortino Ratio	Sortino Ratio Rank
Total Fund	8.3%	47	5.7%	1	1.4	1	1.5	9
InvMetrics Public DB > \$1B Net Median	8.1%	--	8.3%	--	0.9	--	1.1	--

Sortino Ratio requires at least two negative points during the time period in order to calculate



ASSET ALLOCATION COMPLIANCE



Asset Class	*Net Notional Exposure	Net Notional Exposure as of 06/30	Policy Target	Difference	Policy Ranges	Within Range
US Equities	2,258,844	16.9%	13.0%	3.9%	8%-18%	Yes
Int'l Equities	2,674,483	20.0%	15.0%	5.0%	10%-20%	Yes
U.S. Core Fixed Income	318,500	2.4%	2.0%	0.4%	-3%-7%	Yes
US Credit	1,643,635	12.3%	13.0%	-0.7%	8%-18%	Yes
Non-US Core Fixed Income	(536,142)	-4.0%	1.0%	-5.0%	-4%-6%	Yes
Non-US Credit	1,406,614	10.5%	11.0%	-0.5%	6%-16%	Yes
Emerging Market Debt	1,071,035	8.0%	8.0%	0.0%	3%-13%	Yes
Real Estate	497,958	3.7%	7.0%	-3.3%	0%-14%	Yes
Private Equity	2,422,097	18.1%	16.0%	2.1%	6%-21%	Yes
Real Assets	525,581	3.9%	5.0%	-1.1%	0%-10%	Yes
Absolute Return	207,301	1.5%	7.0%	-5.5%	0%-12%	Yes
Cash	913,638	6.8%	2.0%	4.8%	0%-10%	Yes
Total	13,403,545	100.00%	100.00%			

*Notional values are sourced from Russell Investments.



INVESTMENT EXPOSURE SUMMARY

OVERLAY AS OF JUNE 30, 2021

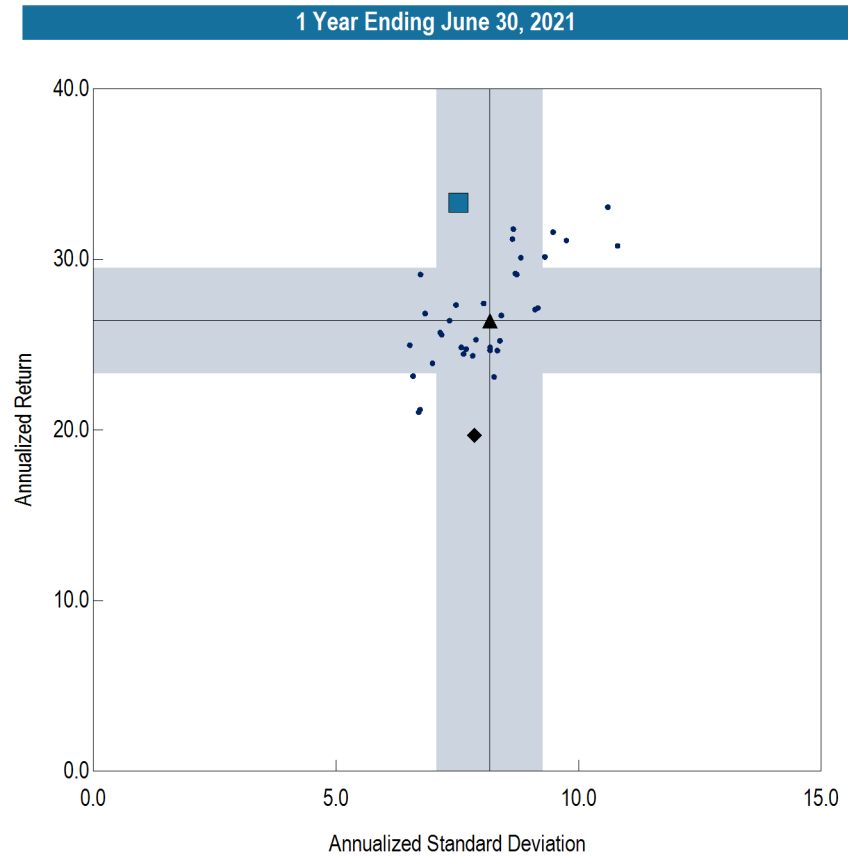
<u>Asset Class</u>	<u>Physical Exposure</u>		<u>Delta Adjusted Synthetic Exposure</u>		<u>Net Position</u>		<u>Overlay Target</u>		<u>Policy Target</u>	
Total Market Value	13,621.1	100.0 %	0.0	0.0 %	13,621.1	100.0 %	13,621.1	100.0 %	13,621.1	100.00 %
Cash	3,121.1	22.9 %	-2,511.2	-18.4 %	609.9	4.5 %	0.0	0.0 %	0.0	0.00 %
Cash	3,121.1	22.9 %	-2,511.2	-18.4 %	609.9	4.5 %	0.0	0.0 %	0.0	0.00 %
Equity	2,168.8	15.9 %	2,761.5	20.3 %	4,930.3	36.2 %	5,324.6	39.1 %	5,176.0	38.00 %
Emerging Markets	573.3	4.2 %	516.4	3.8 %	1,089.6	8.0 %	1,121.0	8.2 %	1,089.7	8.00 %
Equity Delta Hedge	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.00 %
International Developed	206.7	1.5 %	1,381.7	10.1 %	1,588.5	11.7 %	1,681.4	12.3 %	1,634.5	12.00 %
US Large Cap	1,388.6	10.2 %	386.9	2.8 %	1,775.4	13.0 %	2,031.7	14.9 %	1,975.1	14.50 %
US Small Cap	0.2	0.0 %	476.5	3.5 %	476.7	3.5 %	490.4	3.6 %	476.7	3.50 %
Fixed	4,231.3	31.1 %	-250.3	-1.8 %	3,981.0	29.2 %	4,196.6	30.8 %	4,079.5	29.95 %
EM High Yield CDX	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.0 %	0.0	0.00 %
Global ex US Fixed Income	2,550.7	18.7 %	-568.9	-4.2 %	1,981.8	14.5 %	2,129.8	15.6 %	2,070.4	15.20 %
High Yield	1,284.1	9.4 %	0.0	0.0 %	1,284.1	9.4 %	1,331.1	9.8 %	1,294.0	9.50 %
US Fixed Income	396.5	2.9 %	318.5	2.3 %	715.0	5.2 %	735.6	5.4 %	715.1	5.25 %
Other	4,099.9	30.1 %	0.0	0.0 %	4,099.9	30.1 %	4,099.9	30.1 %	4,365.6	32.05 %
Alternatives	31.7	0.2 %	0.0	0.0 %	31.7	0.2 %	31.7	0.2 %	27.2	0.20 %
Commodities	377.3	2.8 %	0.0	0.0 %	377.3	2.8 %	377.3	2.8 %	381.4	2.80 %
Infrastructure	118.8	0.9 %	0.0	0.0 %	118.8	0.9 %	118.8	0.9 %	163.5	1.20 %
Private Equity	2,291.7	16.8 %	0.0	0.0 %	2,291.7	16.8 %	2,291.7	16.8 %	2,410.9	17.70 %
Real Estate	483.6	3.6 %	0.0	0.0 %	483.6	3.6 %	483.6	3.6 %	585.7	4.30 %
Tactical Cash	796.8	5.8 %	0.0	0.0 %	796.8	5.8 %	796.8	5.8 %	796.8	5.85 %



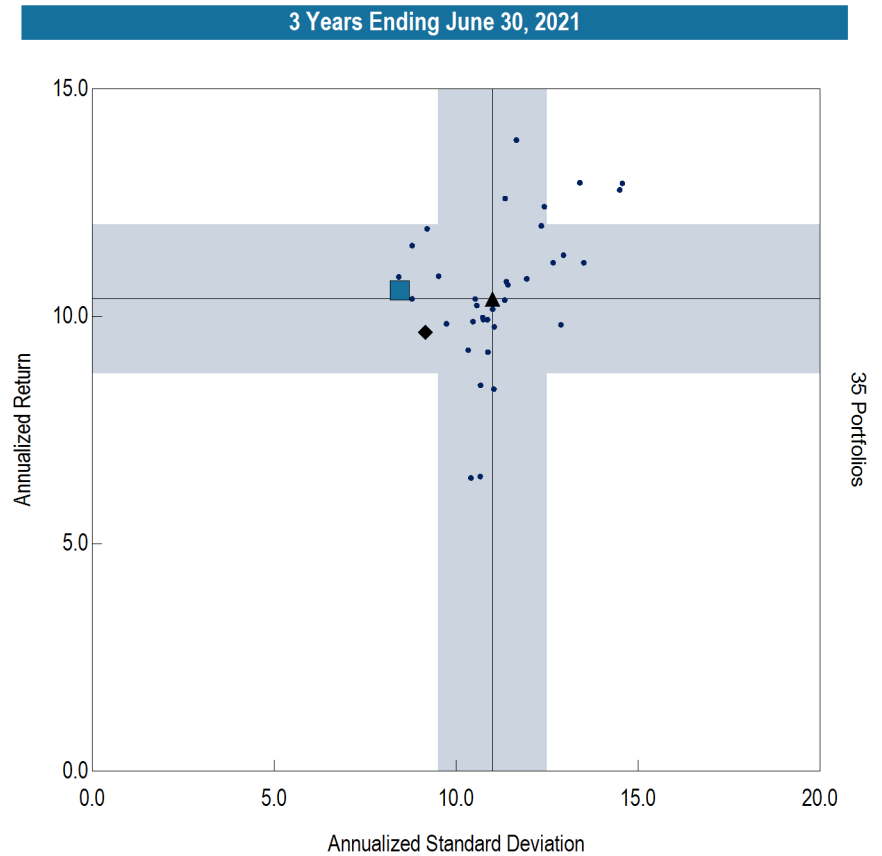
Source: Russell Investments

SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RISK/RETURN



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

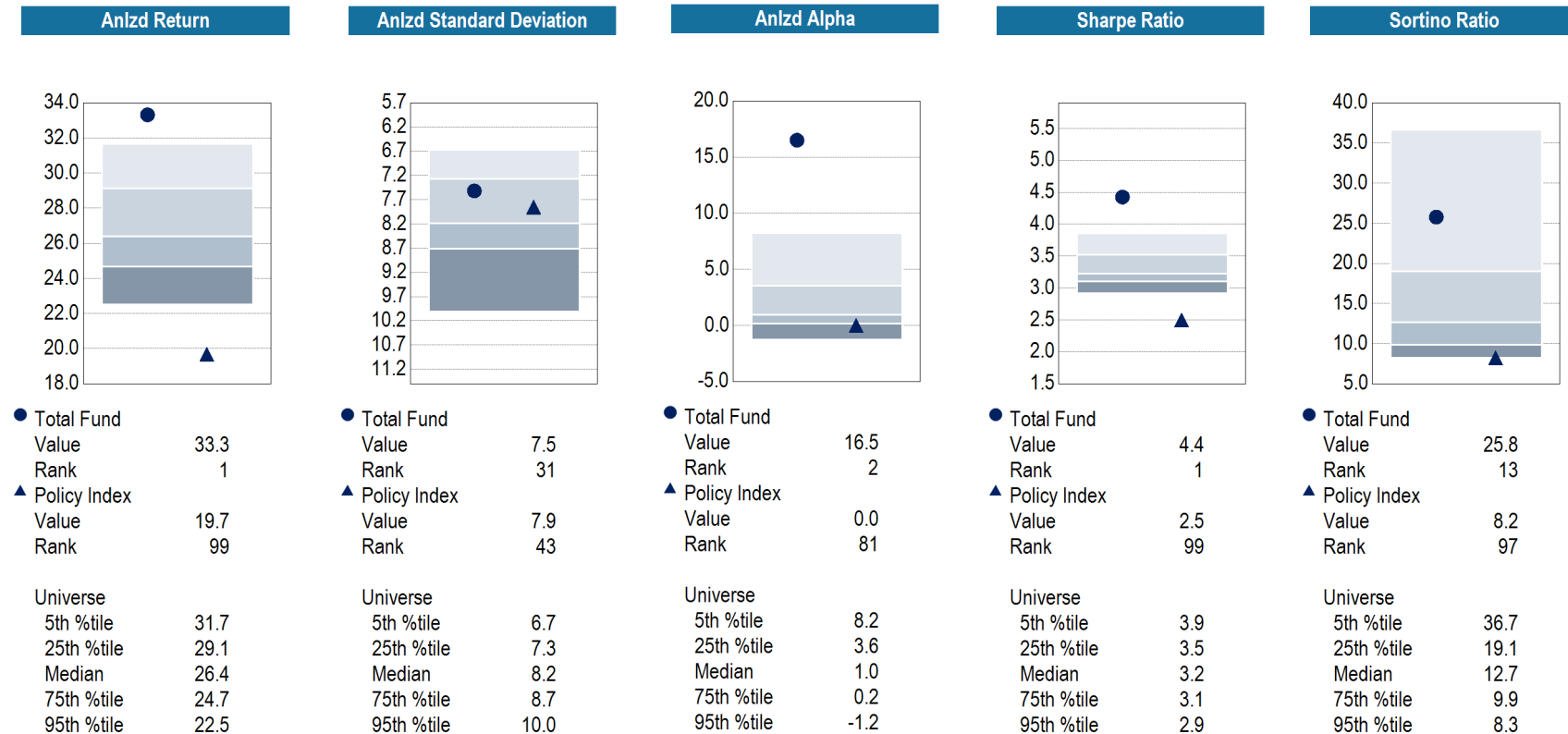
TOTAL FUND RISK/RETURN



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
1 Year



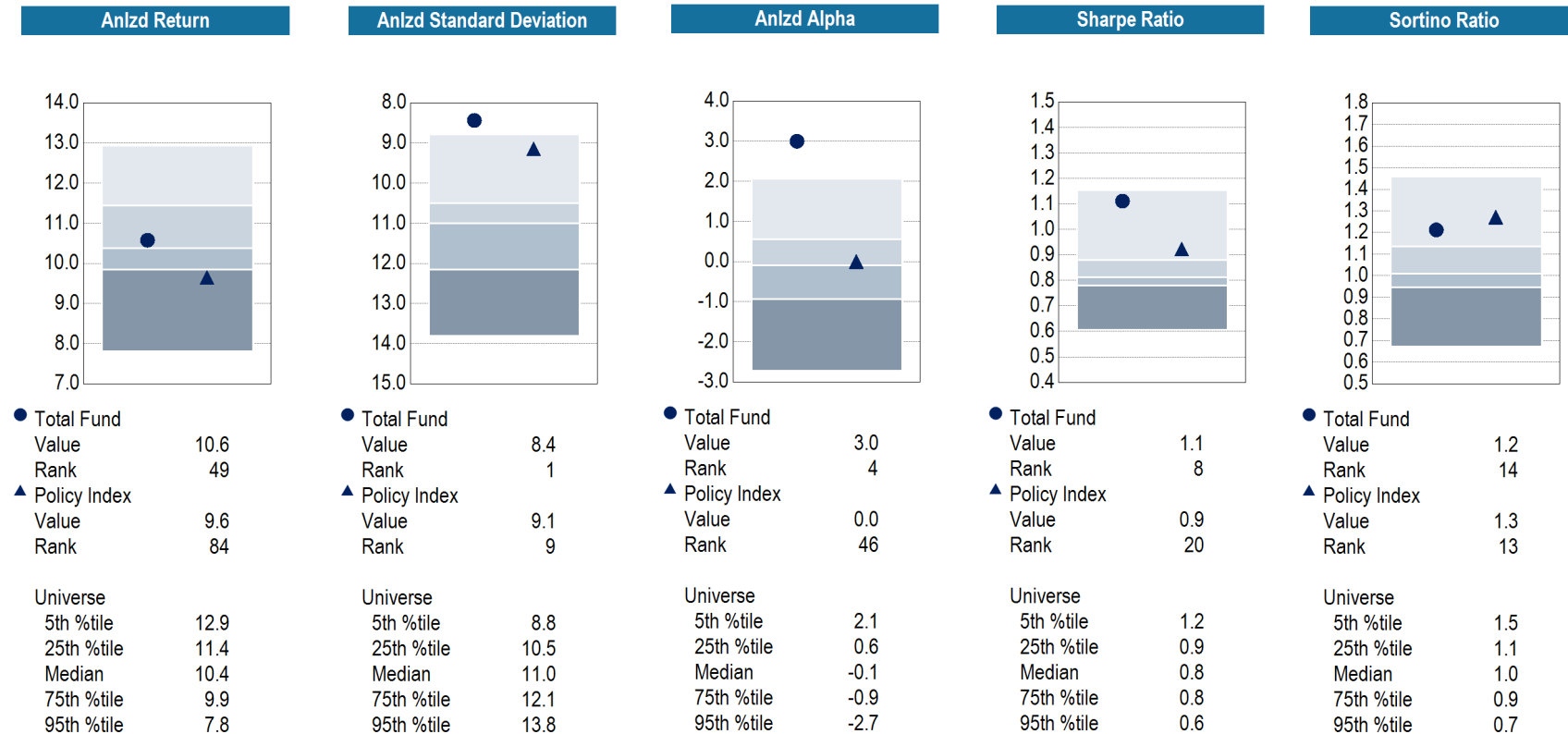
Sortino Ratio requires at least two negative points during the time period in order to calculate. Sample size is 35 Portfolios



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
3 Years



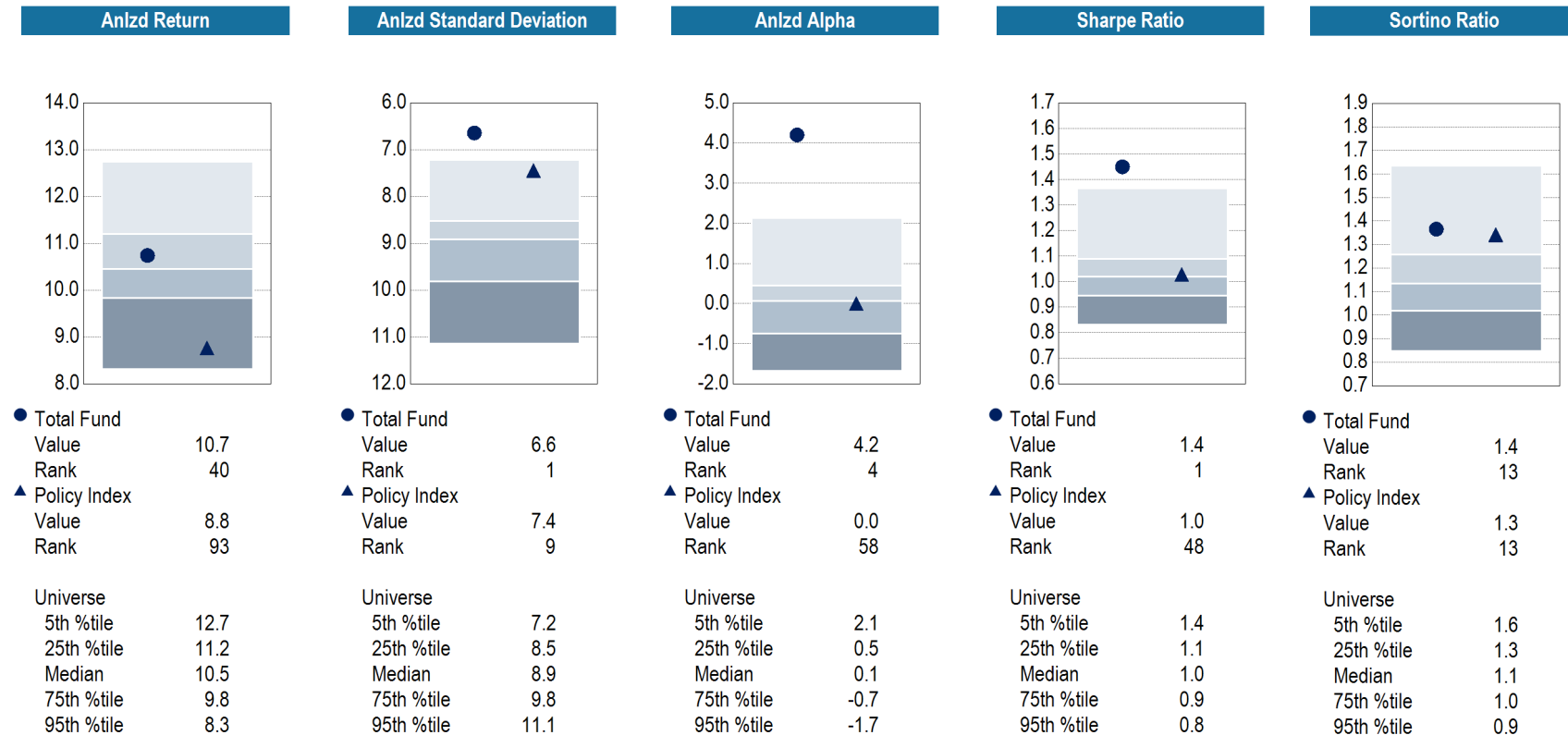
Sortino Ratio requires at least two negative points during the time period in order to calculate. Sample size is 35 Portfolios



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
5 Years



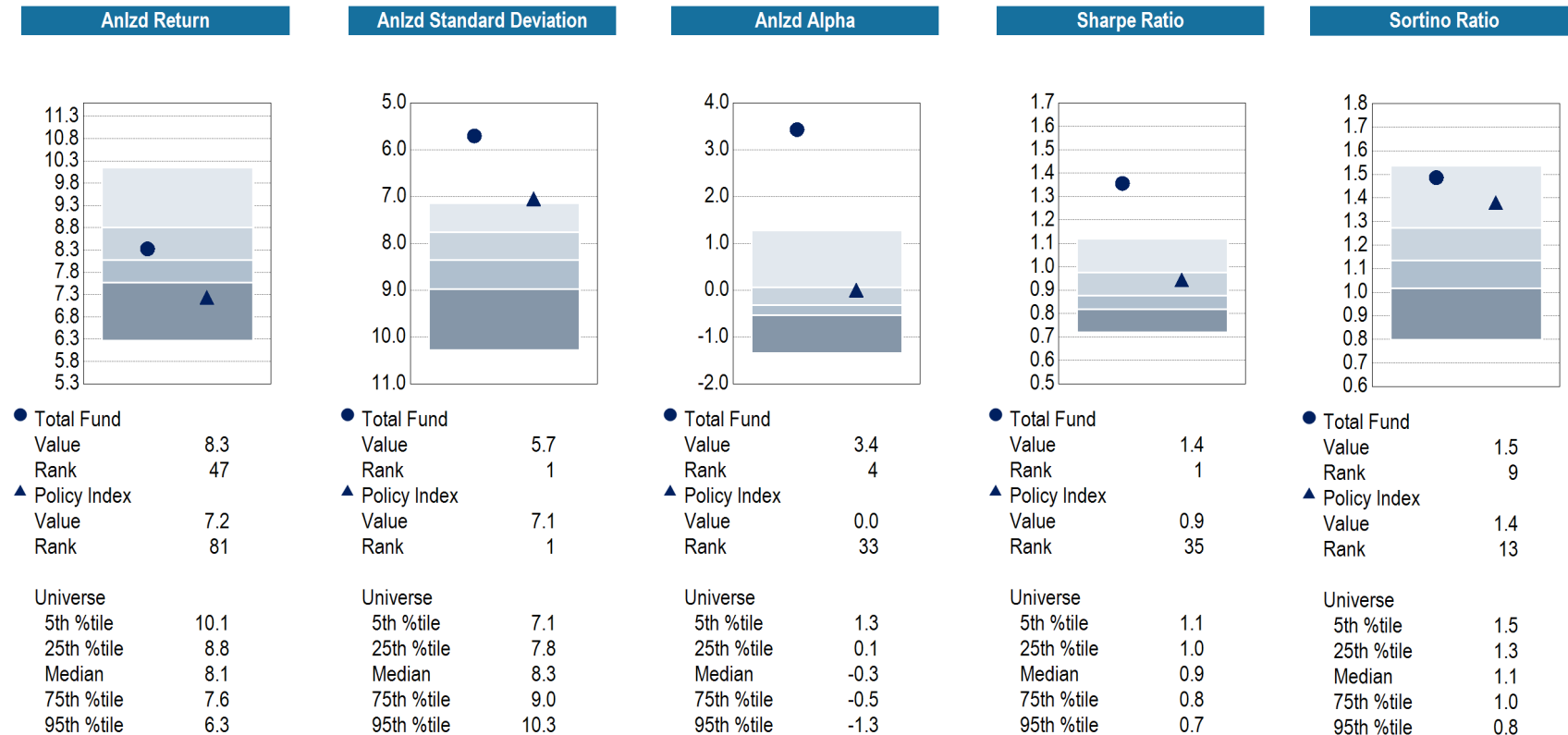
Sortino Ratio requires at least two negative points during the time period in order to calculate. Sample size is 35 Portfolios



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net (USD)
10 Years



Sortino Ratio requires at least two negative points during the time period in order to calculate. Sample size is 35 Portfolios



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

ASSET CLASS RISK STATISTICS

1 Years Ending June 30, 2021								
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity With Beta Overlay	16.9%	41.6%	96	13.6%	32	3.3%	-0.8	
Russell 3000	--	44.2%	56	15.0%	98	0.0%	--	--
International Equity With Beta Overlay	20.0%	33.6%	89	12.7%	20	4.3%	-0.6	
MSCI ACWI ex USA Gross	--	36.3%	74	14.7%	81	0.0%	--	--
Global Fixed Income With Beta Overlay	29.2%	23.5%	--	5.3%	--	6.4%	3.3	--
BBgBarc Global Aggregate TR	--	2.6%	--	5.3%	--	0.0%	--	--
U.S. Credit Strategies	12.3%	26.3%	1	5.6%	55	5.2%	2.6	1
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	--	12.6%	8	3.8%	1	0.0%	--	--
Non-U.S. Credit Composite	10.5%	22.7%	2	5.4%	98	12.1%	0.4	74
ICE BofA Euro High Yield Constrained TR	--	17.7%	2	11.8%	99	0.0%	--	--
Emerging Markets Debt Composite	8.2%	8.8%	56	4.1%	9	6.0%	0.3	68
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	7.1%	81	8.1%	60	0.0%	--	--
Alpha Pool Composite	13.2%	19.6%	46	5.6%	31	5.6%	3.0	4
91 Day T-Bill + 3%	--	3.1%	99	0.0%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	18.1%	52.9%	--	10.0%	--
CJA Global All PE (Qtr Lag)	--	52.5%	--	19.7%	--
Real Estate Composite	3.7%	7.5%	66	2.6%	61
NCREIF Property Index 1 Qtr. Lag	--	2.6%	95	2.4%	50
Real Assets Composite	3.9%	29.7%	--	7.6%	--
Real Assets Custom Blend	--	31.6%	--	8.7%	--

US Credit and Non-US Credit composites are based on physical assets.



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

ASSET CLASS RISK STATISTICS

3 Years Ending June 30, 2021								
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity With Beta Overlay	16.9%	15.4%	87	19.5%	53	3.1%	-1.1	
Russell 3000	--	18.7%	6	19.4%	48	0.0%	--	--
International Equity With Beta Overlay	20.0%	8.4%	83	16.6%	5	2.8%	-0.5	
MSCI ACWI ex USA Gross	--	9.9%	43	17.6%	22	0.0%	--	--
Global Fixed Income With Beta Overlay	29.2%	6.0%	--	7.8%	--	8.2%	0.2	--
BBgBarc Global Aggregate TR	--	4.2%	--	4.4%	--	0.0%	--	--
U.S. Credit Strategies	12.3%	9.1%	5	8.4%	90	6.9%	0.5	12
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	--	5.9%	89	8.6%	91	0.0%	--	--
Non-U.S. Credit Composite	10.5%	3.8%	98	9.2%	99	11.1%	-0.2	
ICE BofA Euro High Yield Constrained TR	--	5.5%	52	12.6%	99	0.0%	--	--
Emerging Markets Debt Composite	8.2%	0.8%	99	6.9%	3	9.3%	-0.5	
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	5.5%	64	11.0%	37	0.0%	--	--
Alpha Pool Composite	13.2%	4.8%	75	7.3%	40	7.4%	0.1	41
91 Day T-Bill + 3%	--	4.2%	83	0.3%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	18.1%	20.3%	--	9.3%	--
CJA Global All PE (Qtr Lag)	--	19.2%	--	14.4%	--
Real Estate Composite	3.7%	5.9%	22	2.3%	48
NCREIF Property Index 1 Qtr. Lag	--	4.9%	72	2.5%	51
Real Assets Composite	3.9%	7.5%	--	12.1%	--
Real Assets Custom Blend	--	5.3%	--	10.0%	--

US Credit and Non-US Credit composites are based on physical assets.



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

ASSET CLASS RISK STATISTICS

5 Years Ending June 30, 2021								
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Tracking Error	Info Ratio	Rank
Domestic Equity	10.4%	11.4%	--	13.9%	--	4.2%	-1.5	--
Russell 3000	--	17.9%	--	15.6%	--	0.0%	--	--
International Developed	1.5%	4.1%	99	11.1%	1	7.6%	-0.8	88
MSCI EAFE	--	10.3%	77	14.7%	30	0.0%	--	--
International Emerging	4.3%	9.3%	--	16.1%	--	4.0%	-0.9	--
MSCI Emerging Markets	--	13.0%	--	16.2%	--	0.0%	--	--
U.S. Credit Strategies	12.3%	9.2%	1	6.7%	89	5.7%	0.5	1
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	--	6.0%	15	6.8%	89	0.0%	--	--
Non-U.S. Credit Composite	10.5%	6.8%	2	7.4%	99	10.4%	0.0	68
ICE BofA Euro High Yield Constrained TR	--	6.4%	3	11.1%	99	0.0%	--	--
Emerging Markets Debt Composite	8.2%	3.1%	85	6.4%	4	8.0%	-0.1	--
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified	--	4.1%	69	9.4%	44	0.0%	--	--
Alpha Pool Composite	13.2%	6.7%	35	5.9%	35	5.9%	0.4	29
91 Day T-Bill + 3%	--	4.1%	86	0.2%	1	0.0%	--	--

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Private Equity Composite	18.1%	18.1%	--	7.5%	--
CJA Global All PE (Qtr Lag)	--	17.6%	--	11.8%	--
Real Estate Composite	3.7%	5.8%	86	2.6%	53
NCREIF Property Index 1 Qtr. Lag	--	5.8%	85	2.7%	53
Real Assets Composite	3.9%	6.3%	--	9.7%	--
Real Assets Custom Blend	--	4.0%	--	8.1%	--

Percent of Total equals 88.1% because Beta Overlay is not included as these statistics are not relevant for alternative asset classes.



INVESTMENT MANAGER TOP 10

ASSETS UNDER MANAGEMENT AS OF JUNE 30, 2021

Manager	Market Value	Portfolio %
Total Russell	1,161,710,199	8.67%
Total Tobam	1,037,063,884	7.74%
SSGA S&P500 Flagship Fund	938,027,354	7.00%
Total Pathway	794,437,122	5.93%
Total Ares	757,441,667	5.65%
Gramercy Funds Management	699,879,690	5.22%
Total Alcentra	609,249,546	4.55%
Total GoldenTree	604,391,101	4.51%
Total Partners Group	603,698,836	4.50%
Total Zais	587,565,646	4.38%
Total	7,793,465,045	58.15%



PUBLIC EQUITY PORTFOLIO

Public Equity Portfolio (28% Target)	US Equities (13% Target)	Large Cap (8%)	Russell Investments (Russell1000 Index) StateStreet Global Advisors S&P500 Index Fund TOBAM Anti-Benchmark US Equity Fund
		Small Cap (2%)	Russell Investments (Russell2000 Index)
		Volatility (3%)	Russell Investments (Russell1000 Index)
	International Equities (15% Target)	Developed Markets (6%)	Russell Investments (MSCI EAFE Index) TOBAM Anti-Benchmark World ex-US Fund
		Emerging Markets (6%)	Mondrian Emerging Markets Equity Fund LP Russell Investments (MSCI EM Index) TOBAM Anti-Benchmark EM Equity Fund
		Volatility (3%)	Russell Investments (MSCI EAFE Index)



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

GLOBAL EQUITY STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Equity	2,169,358,672	16.2	6.7	67	10.4	99	35.7	99	13.7	60	11.0	99	6.5	99
MSCI ACWI			<u>7.4</u>	27	<u>12.3</u>	85	<u>39.3</u>	84	<u>14.6</u>	33	<u>14.6</u>	40	<u>9.9</u>	80
Excess Return			-0.7		-1.9		-3.6		-0.9		-3.6		-3.4	
InvMetrics Public DB Total Eq Net Median			7.0		13.3		41.5		14.0		14.5		10.5	
Domestic Equity With Beta Overlay	2,258,843,846	16.9	7.0	69	13.4	99	41.6	96	15.4	87	13.3	99	--	--
Russell 3000			<u>8.2</u>	7	<u>15.1</u>	65	<u>44.2</u>	56	<u>18.7</u>	6	<u>17.9</u>	17	<u>14.7</u>	7
Excess Return			-1.2		-1.7		-2.6		-3.3		-4.6			
InvMetrics Public DB US Eq Net Median			7.4		15.3		44.3		17.0		16.7		13.5	
Domestic Equity	1,393,520,479	10.4	8.0	--	13.9	--	37.7	--	16.7	--	11.4	--	6.3	--
Russell 3000			<u>8.2</u>	--	<u>15.1</u>	--	<u>44.2</u>	--	<u>18.7</u>	--	<u>17.9</u>	--	<u>14.7</u>	--
Excess Return			-0.2		-1.2		-6.5		-2.0		-6.5		-8.4	
Tobam AB US Equity	454,304,700	3.4	6.9	46	11.4	83	34.9	91	14.0	59	--	--	--	--
Russell 3000			<u>8.2</u>	29	<u>15.1</u>	57	<u>44.2</u>	56	<u>18.7</u>	32	<u>17.9</u>	35	<u>14.7</u>	28
Excess Return			-1.3		-3.7		-9.3		-4.7					
eV All US Equity Net Median			6.6		15.9		46.1		15.6		15.8		12.9	
Large Cap Equity	938,967,184	7.0	8.5	26	15.2	56	39.2	76	17.7	39	12.5	78	7.8	99
S&P 500			<u>8.5</u>	25	<u>15.3</u>	56	<u>40.8</u>	69	<u>18.7</u>	33	<u>17.6</u>	36	<u>14.8</u>	26
Excess Return			0.0		-0.1		-1.6		-1.0		-5.1		-7.0	
eV All US Equity Net Median			6.6		15.9		46.1		15.6		15.8		12.9	
SSgA S&P500	938,027,354	7.0	8.5	26	15.2	56	40.8	69	18.3	35	14.4	61	10.5	86
S&P 500			<u>8.5</u>	25	<u>15.3</u>	56	<u>40.8</u>	69	<u>18.7</u>	33	<u>17.6</u>	36	<u>14.8</u>	26
Excess Return			0.0		-0.1		0.0		-0.4		-3.2		-4.3	
eV All US Equity Net Median			6.6		15.9		46.1		15.6		15.8		12.9	
Russell US Large Cap Volatility	939,830	0.0												
Small Cap Equity	248,595	0.0												
Russell US Small Cap Volatility	248,595	0.0												



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

GLOBAL EQUITY STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
International Equity With Beta Overlay	2,674,483,183	20.0	4.3	96	11.2	8	33.6	89	8.4	83	10.1	90	--	--
MSCI ACWI ex USA Gross			<u>5.6</u>	52	<u>9.4</u>	49	<u>36.3</u>	74	<u>9.9</u>	43	<u>11.6</u>	38	<u>5.9</u>	78
Excess Return			-1.3		1.8		-2.7		-1.5		-1.5			
InvMetrics Public DB ex-US Eq Net Median			5.7		9.4		38.0		9.7		11.2		6.5	
International Equity	775,838,193	5.8	4.5	--	4.4	--	32.8	--	7.8	--	8.5	--	5.6	--
MSCI ACWI			<u>7.4</u>	--	<u>12.3</u>	--	<u>39.3</u>	--	<u>14.6</u>	--	<u>14.6</u>	--	<u>9.9</u>	--
Excess Return			-2.9		-7.9		-6.5		-6.8		-6.1		-4.3	
International Developed	205,901,815	1.5	2.7	99	2.4	99	20.7	99	5.0	99	4.1	99	8.3	36
MSCI EAFE			<u>5.2</u>	86	<u>8.8</u>	51	<u>32.3</u>	82	<u>8.3</u>	82	<u>10.3</u>	77	<u>5.9</u>	65
Excess Return			-2.5		-6.4		-11.6		-3.3		-6.2		2.4	
InvMetrics Public DB Dev Mkt ex-US Eq Net Median			5.5		8.9		35.3		10.7		11.4		7.3	
Russell International Volatility	16,451	0.0												
Tobam AB World Ex-US Equity	205,885,364	1.5	2.7	96	2.4	98	20.7	98	3.6	97	--	--	--	--
MSCI ACWI ex USA			<u>5.5</u>	60	<u>9.2</u>	55	<u>35.7</u>	71	<u>9.4</u>	66	<u>11.1</u>	68	<u>5.4</u>	84
Excess Return			-2.8		-6.8		-15.0		-5.8					
eV All ACWI ex-US Equity Net Median			6.1		9.5		40.2		11.1		12.7		7.6	
International Emerging	569,936,379	4.3	5.2	--	5.0	--	34.7	--	8.1	--	9.3	--	2.7	--
MSCI Emerging Markets			<u>5.0</u>	--	<u>7.4</u>	--	<u>40.9</u>	--	<u>11.3</u>	--	<u>13.0</u>	--	<u>4.3</u>	--
Excess Return			0.2		-2.4		-6.2		-3.2		-3.7		-1.6	
Mondrian	193,062,558	1.4	2.8	82	6.8	67	44.6	44	11.6	48	9.4	86	3.9	76
MSCI Emerging Markets			<u>5.0</u>	54	<u>7.4</u>	61	<u>40.9</u>	65	<u>11.3</u>	51	<u>13.0</u>	56	<u>4.3</u>	68
Excess Return			-2.2		-0.6		3.7		0.3		-3.6		-0.4	
eV Emg Mkts Equity Net Median			5.4		9.0		44.0		11.3		13.3		4.9	
Tobam	376,873,821	2.8	6.5	38	4.1	86	30.1	96	6.4	93	8.8	87	--	--
MSCI Emerging Markets			<u>5.0</u>	54	<u>7.4</u>	61	<u>40.9</u>	65	<u>11.3</u>	51	<u>13.0</u>	56	<u>4.3</u>	68
Excess Return			1.5		-3.3		-10.8		-4.9		-4.2			
eV Emg Mkts Equity Net Median			5.4		9.0		44.0		11.3		13.3		4.9	



GLOBAL DEBT STRATEGIES

Global Debt Strategies (35% Target)	US Fixed Income (15% Target)	Core Fixed Income (2%)	Russell Investments (Bloomberg Barclays US Agg. Bond TR Index)
		Credit Strategies/ High Yield Strategies (13%)	Apollo Credit Strategies Fund LP (MCA) Apollo Offshore Credit Fund LTD (MCA) Bardin Hill Direct Portfolio (MCA) Bardin Hill Solutions Fund LP (MCA) Beach Point Select Fund LP GoldenTree Distressed Debt Fund 2010 GoldenTree Asset Management SMA Kayne Anderson BDC (MCA) MacKay Shields High Yield Bond Strategy SMA Manulife Asset Management SMA Waterfall - Sutherland (Ready Cap) REIT Holdings LP (MCA) Waterfall Asset Management SMA (MCA) Waterfall Victoria Fund LP (MCA)
	Global Fixed Income (20% Target)	International Core (1%)	Russell Investments (Barclays Global Aggregate ex US Unhedged) Alcentra European Direct Lending Fund Alcentra Strategic Credit Fund Alcentra Limited SMA Alcentra Structured Credit Opportunity Fund III Alcentra Viaduct Fund LP Cairn Capital Limited SMA Cairn Capstone Special Opportunities Fund Cairn Pathfinder Fund I Cairn Pathfinder Fund III Marathon Asset Management SMA Marathon CLO Equity Fund Marathon European Credit Opportunity Fund II Marathon European Credit Opportunity Fund III Marathon Structured Product Strategies Fund Marathon Structured Product Strategies Fund II
		International Credit (11%)	
		Emerging Market Debt (8%)	Ashmore Emerging Markets MCA Gramercy Capital Solutions Fund (MCA) Gramercy Distressed Argentina Fund III Private (MCA) Gramercy Distressed Argentina Fund IV Private (MCA) Gramercy Distressed Opportunity Fund II (MCA) Gramercy Distressed Opportunity Fund III (MCA) Gramercy Emerging Markets Dislocation Fund (MCA) Gramercy Separate Account (MCA) Gramercy Venezuela Opportunity Fund (MCA) Gramercy Venezuela Opportunity Fund II (MCA) Gramercy Venezuela Special Situations Fund (MCA) Marathon Global Emerging Markets Fund PGIM Emerging Market Debt Opportunities Fund



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

GLOBAL DEBT STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Global Fixed Income With Beta Overlay	3,910,732,764	29.2	5.4	--	11.0	--	23.5	--	6.0	--	4.8	--	--	--
BBgBarc Global Aggregate TR			<u>1.3</u>	--	<u>-3.2</u>	--	<u>2.6</u>	--	<u>4.2</u>	--	<u>2.3</u>	--	<u>2.1</u>	--
Excess Return			4.1		14.2		20.9		1.8		2.5			
Total Fixed	4,161,132,764	31.0	4.9	1	9.7	2	20.3	2	5.0	63	6.8	2	5.6	3
InvMetrics Public DB Total Fix Inc Net Median			2.0		-0.7		3.4		5.5		3.6		3.9	
U.S. Credit Strategies	1,650,460,960	12.3	5.7	1	11.5	1	26.3	1	9.1	5	9.2	1	7.2	1
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index			<u>2.0</u>	93	<u>3.2</u>	6	<u>12.6</u>	8	<u>5.9</u>	89	<u>6.0</u>	15	<u>5.5</u>	9
Excess Return			3.7		8.3		13.7		3.2		3.2		1.7	
ICE BofA US High Yield TR			2.8	20	3.7	4	15.6	1	7.2	53	7.3	5	6.5	1
eV Global Credit Fixed Inc Net Median			2.5		-1.2		5.9		7.2		5.1		4.6	
Stone Tower Offshore Credit (Apollo)	361,985,514	2.7	2.5	--	6.5	--	17.8	--	6.0	--	6.2	--	6.9	--
Beach Point Capital (Formerly Post)	203,441,810	1.5	3.6	1	10.8	1	28.6	1	9.8	2	10.1	1	8.9	1
Mackay / Gold Coast	81,484,501	0.6	2.6	38	3.3	6	15.0	3	7.7	31	7.3	5	6.2	1
Stone Tower Credit (Apollo)	126,156,961	0.9	2.0	50	7.6	1	14.5	17	12.7	2	11.1	1	--	--
Gold Coast Capital IV	99,186,202	0.7	2.6	--	6.1	--	13.1	--	6.0	--	6.0	--	--	--
Waterfall Asset Management	38,158,500	0.3	15.5	--	29.2	--	77.1	--	12.6	--	14.1	--	--	--
Waterfall Victoria	57,819,091	0.4	3.1	--	9.1	--	15.3	--	6.6	--	7.9	--	--	--
KAYNE ANDERSON BDC, LLC	42,182,639	0.3	3.0	--	--	--	--	--	--	--	--	--	--	--
MD SASS Waterfall Victoria	28,739,659	0.2	22.3	--	34.9	--	-3.9	--	10.5	--	10.0	--	--	--
Golden Tree Distressed Debt	16,054,938	0.1	11.7	1	27.1	1	-9.6	99	-4.9	99	0.0	99	6.4	1
AG Capital	6,488	0.0	-2.0	99	-3.5	99	-5.3	99	14.5	1	8.1	1	4.8	45
Golden Tree Asset Management	588,418,884	4.4	10.5	1	16.1	1	41.2	1	13.3	1	12.5	1	10.0	1
Russell Interest Rate Hedging	6,825,771	0.1	-43.2	99	37.9	1	29.9	1	-33.8	99	-22.0	99	-27.1	99

SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

GLOBAL DEBT STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Non-U.S. Fixed Income Composite	2,510,671,805	18.7	4.4	1	8.6	2	16.4	2	2.5	99	5.3	5	4.5	18
<i>BBgBarc Global Aggregate ex US TR</i>			<u>0.9</u>	87	<u>-4.4</u>	99	4.6	33	<u>3.1</u>	99	<u>1.7</u>	99	<u>1.0</u>	99
Excess Return			3.5		13.0		11.8		-0.6		3.6		3.5	
<i>InvMetrics Public DB Total Fix Inc Net Median</i>			2.0		-0.7		3.4		5.5		3.6		3.9	
Non-U.S. Credit Composite	1,406,878,860	10.5	5.8	1	13.5	2	22.7	2	3.8	98	6.8	2	5.6	3
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	13	<u>-0.2</u>	31	<u>17.7</u>	2	<u>5.5</u>	52	<u>6.4</u>	3	<u>4.1</u>	36
Excess Return			3.4		13.7		5.0		-1.7		0.4		1.5	
Marathon/Gold Coast	261,547,839	2.0	3.7	1	5.9	1	11.7	9	8.8	6	10.5	1	7.1	1
Halcyon Asset Management	184,557,517	1.4	11.1	1	18.7	1	16.4	1	-2.7	99	2.6	99	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	75	<u>-0.2</u>	16	<u>17.7</u>	1	<u>5.5</u>	99	<u>6.4</u>	11	<u>4.1</u>	82
Excess Return			8.7		18.9		-1.3		-8.2		-3.8			
<i>eV Global Credit Fixed Inc Net Median</i>			2.5		-1.2		5.9		7.2		5.1		4.6	
Cairn Composite	351,523,958	2.6	4.4	1	8.9	1	18.4	1	5.0	99	7.1	6	4.3	67
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	75	<u>-0.2</u>	16	<u>17.7</u>	1	<u>5.5</u>	99	<u>6.4</u>	11	<u>4.1</u>	82
Excess Return			2.0		9.1		0.7		-0.5		0.7		0.2	
<i>eV Global Credit Fixed Inc Net Median</i>			2.5		-1.2		5.9		7.2		5.1		4.6	
Alcentra - KT1	468,213,775	3.5	5.0	--	19.1	--	34.6	--	4.3	--	8.5	--	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	--	<u>-0.2</u>	--	<u>17.7</u>	--	<u>5.5</u>	--	<u>6.4</u>	--	<u>4.1</u>	--
Excess Return			2.6		19.3		16.9		-1.2		2.1			
Alcentra SP1 - KT1	3,400,374	0.0	1.9	--	4.0	--	6.4	--	-29.4	--	--	--	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	--	<u>-0.2</u>	--	<u>17.7</u>	--	<u>5.5</u>	--	<u>6.4</u>	--	<u>4.1</u>	--
Excess Return			-0.5		4.2		-11.3		-34.9					
Alcentra SP2 - KT1	16,528,590	0.1	30.0	--	24.9	--	6.0	--	-7.6	--	--	--	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	--	<u>-0.2</u>	--	<u>17.7</u>	--	<u>5.5</u>	--	<u>6.4</u>	--	<u>4.1</u>	--
Excess Return			27.6		25.1		-11.7		-13.1					
Alcentra SP3 - KT1	56,834,089	0.4	7.4	--	28.5	--	80.4	--	6.6	--	--	--	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	--	<u>-0.2</u>	--	<u>17.7</u>	--	<u>5.5</u>	--	<u>6.4</u>	--	<u>4.1</u>	--
Excess Return			5.0		28.7		62.7		1.1					
Alcentra SP4 - KT1	64,272,718	0.5	7.5	--	7.0	--	16.8	--	--	--	--	--	--	--
<i>ICE BofA Euro High Yield Constrained TR</i>			<u>2.4</u>	--	<u>-0.2</u>	--	<u>17.7</u>	--	<u>5.5</u>	--	<u>6.4</u>	--	<u>4.1</u>	--
Excess Return			5.1		7.2		-0.9							



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

GLOBAL DEBT STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Emerging Markets Debt Composite	1,103,792,944	8.2	2.5	78	2.6	6	8.8	56	0.8	99	3.1	85	2.3	69
50% JPM EMBI Global Diversified/50% JPM GBI - EM Global Diversified			<u>3.8</u>	46	<u>-2.0</u>	74	<u>7.1</u>	81	<u>5.5</u>	64	<u>4.1</u>	69	<u>3.1</u>	67
Excess Return			-1.3		4.6		1.7		-4.7		-1.0		-0.8	
eV All Emg Mkts Fixed Inc Net Median			3.7		-0.7		9.1		6.5		4.9		4.4	
Ashmore Emerging Markets Liquid Investments	211,309,208	1.6	3.8	46	-2.0	74	7.1	81	5.5	64	4.1	69	--	--
JP Morgan GBI - EM Global Diversified Index			<u>3.5</u>	53	<u>-3.4</u>	83	<u>6.6</u>	85	<u>4.1</u>	81	<u>3.2</u>	83	<u>0.5</u>	82
Excess Return			0.3		1.4		0.5		1.4		0.9			
eV All Emg Mkts Fixed Inc Net Median			3.7		-0.7		9.1		6.5		4.9		4.4	
Ashmore Local Currency	69,739,326	0.5	4.8	1	-3.5	87	12.3	26	1.4	98	2.6	84	-0.4	99
JP Morgan ELMI+ TR USD			<u>2.0</u>	48	<u>-0.6</u>	53	<u>6.8</u>	51	<u>2.1</u>	98	<u>2.3</u>	86	<u>-0.3</u>	99
Excess Return			2.8		-2.9		5.5		-0.7		0.3		-0.1	
JP Morgan EMBI Global Index			3.9	4	-1.0	59	6.8	51	6.5	33	4.4	53	5.3	19
eV All Global Fixed Inc Net Median			1.9		-0.5		7.1		5.8		4.7		3.6	
Gramercy Funds Management LLC	699,879,690	5.2	1.2	98	3.2	4	3.7	99	-1.8	99	1.6	99	--	--
JP Morgan ELMI+ TR USD			<u>2.0</u>	89	<u>-0.6</u>	47	<u>6.8</u>	84	<u>2.1</u>	98	<u>2.3</u>	92	<u>-0.3</u>	97
Excess Return			-0.8		3.8		-3.1		-3.9		-0.7			
JP Morgan EMBI Global Index			3.9	38	-1.0	56	6.8	84	6.5	50	4.4	62	5.3	26
eV All Emg Mkts Fixed Inc Net Median			3.7		-0.7		9.1		6.5		4.9		4.4	
PGIM Fixed Income	122,864,720	0.9	3.4	58	8.7	1	31.1	1	8.5	9	8.9	1	--	--
50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified			<u>3.8</u>	46	<u>-2.0</u>	74	<u>7.1</u>	81	<u>5.5</u>	64	<u>4.1</u>	69	<u>3.1</u>	67
Excess Return			-0.4		10.7		24.0		3.0		4.8			
JP Morgan EMBI Global Index			3.9	38	-1.0	56	6.8	84	6.5	50	4.4	62	5.3	26
eV All Emg Mkts Fixed Inc Net Median			3.7		-0.7		9.1		6.5		4.9		4.4	

ABSOLUTE RETURN (ALPHA POOL)

Absolute Return (Alpha Pool) (7% Target)	Core & Credit Strategies (7%) - Apollo Global SMA (MCA) - Apollo MidCap Financial Holdings Trust (MCA) - Ares ECO Master Fund II, LTD (MCA) - Birch Grove Credit Strategies Fund - Corrum Capital Global Credit Opportunities Fund - Corrum Capital GCO Co-Invest Fund - StateStreet Global Advisors Short Term Treasury Strategy SMA - Zais Group SMA - Zais Opportunity Fund, LTD - Zais Zephyr A-6, LP - Zais Zephyr A-7, LP - Zais Zephyr A-8, LP
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SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

ALPHA POOL STRATEGIES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Alpha Pool Composite	1,766,671,143	13.2	2.7	44	5.0	62	19.6	46	4.8	75	6.7	35	5.5	15
91 Day T-Bill + 3%			<u>0.7</u>	85	<u>1.5</u>	98	<u>3.1</u>	99	<u>4.2</u>	83	<u>4.1</u>	86	<u>3.6</u>	58
Excess Return			2.0		3.5		16.5		0.6		2.6		1.9	
Alpha Liquidity (Ssga)	206,471,729	1.5	0.0	98	0.1	46	-0.2	97	1.7	98	1.4	97	0.9	98
Apollo Global Management	12,392,115	0.1	30.9	1	-13.3	99	3.4	80	13.4	1	18.0	1	--	--
Ares Eco Master Fund II	565,943,243	4.2	3.2	7	5.6	3	19.4	5	6.2	40	--	--	--	--
Birch Grove Credit Strategies	165,011,206	1.2	3.0	10	12.2	1	26.6	2	9.3	3	10.1	2	--	--
Corrum Capital	229,277,002	1.7	-4.4	99	-4.4	93	0.7	96	-3.9	99	1.7	94	1.9	87
Zais	139,009,243	1.0	4.8	1	8.5	1	37.3	1	1.1	98	6.0	27	6.9	3
Zais Group Invest Advisors	351,780,859	2.6	5.1	1	9.5	1	33.2	1	6.6	31	11.1	1	--	--
Zais Zephyr A 6 LP	0	0.0	16.4	1	18.7	1	101.6	1	12.1	2	13.2	1	--	--
Zais Zephyr 8	43,491,066	0.3	8.0	1	8.7	1	27.8	1	--	--	--	--	--	--
Zais Zephyr 7	53,294,680	0.4	2.6	25	8.9	1	23.7	3	--	--	--	--	--	--

PRIVATE ASSETS

Private Assets (16% Target)	Private Equity	Diversified	Adams Street SMA (MCA) Kayne Anderson Co-Invest (MCA) Partners Group SMA (MCA) Pathway Capital SMA (MCA) Pathway PE Fund VII LLC SL Capital European Strategic Partners 2004 SL Capital European Strategic Partners 2008
		Buyout Funds	Aurora Equity Partners IV Kayne Partners Fund IV LP (MCA) Kayne Partners Fund V LP (MCA) Partners Group Direct Equity 2016 (MCA) Partners Group Direct Investments 2012 LP (MCA) Partners Group European Buyout 2005 (A) LP Waterfall Sentinel Fund (MCA)
		Venture Funds	Industry Ventures Direct LP (MCA) Industry Ventures Direct II LP (MCA) Industry Ventures Direct III LP (MCA) Industry Ventures Fund VI LP (MCA) Industry Ventures MCA Industry Ventures Partnership Holdings II LP (MCA) Industry Ventures Partnership Holdings III LP (MCA) Industry Ventures Partnership Holdings III-A LP (MCA) Industry Ventures Partnership Holdings IV LP (MCA) Industry Ventures Partnership Holdings V LP (MCA) Industry Ventures Partnership Holdings VI LP (MCA) Industry Ventures Special Opportunities Fund II-A LP (MCA) Industry Ventures Tech Buyout, LP (MCA)
		Secondary Funds	Aberdeen Standard Secondary Opportunities Fund IV Industry Ventures Secondary VII LP (MCA) Industry Ventures Secondary VIII LP (MCA) Lexington Capital Partners VI Lexington Capital Partners VII Lexington Middle Market Investors I Lexington Middle Market Investors II Partners Group Secondary 2008 LP SL Capital Secondary Opportunities Fund I SL Capital Secondary Opportunities Fund II SL Capital Secondary Opportunities Fund III
		Sector Specific Funds	Kayne Anderson Energy Fund VII LP Tennenbaum Energy Opportunities Fund LP (MCA)
	Private Debt	Direct Lending	Ares Private Credit Solutions Fund (MCA) Kayne Anderson Capital Advisors I & II Kayne Anderson Renewables Opportunities Portfolio (MCA) Tennenbaum Lending Fund VIII LLC (MCA) Tennenbaum Waterman Fund LP (MCA)
		Credit/Distressed/ Opportunistic/ Special Situations	Ares ICOF II (MCA) Ares ICOF III (MCA) Ares SMA (MCA) Ares Special Situations Fund IV (MCA) Catalyst Fund LP II Crestline Portfolio Financing Fund Crestline Portfolio Financing Fund II Kayne Anderson CLO Partners II (MCA) Kayne Anderson Solutions Fund (MCA) Sigular Guff Distressed Opportunity Fund III LP Tennenbaum Co-Invest (MCA) Tennenbaum Opportunities Fund V LLC (MCA) Tennenbaum Opportunities Fund VI LLC (MCA) Tennenbaum Special Situations Fund IX LLC (MCA)



REAL ESTATE PORTFOLIO

Real Estate Portfolio (7% Target)	Core Real Estate (3.5%)	Core Real Estate	348 West Hospitality Invesco Real Estate Asia Fund Kayne Anderson Real Estate Debt III (MCA) Kayne Anderson Real Estate Debt IV (MCA) Marathon Real Estate Debt Fund PRISA II PGIM Real Estate Capital VI LP PGIM Real Estate Capital VII LP
	Non-Core Real Estate (3.5%)	Enhanced Real Estate/ High Return	Apollo Real Estate Fund II LP (MCA) Bryanston Retail Opportunity Fortress Japan Opportunity Fund II Kayne Anderson Real Estate Partners V LP (MCA) Morgan Stanley RE Fund V International Oaktree RE Opportunities Fund V PRISA III Starwood Global Opportunity Fund VII-A Walton Street Real Estate Fund V
		Real Estate Secondaries	Partners Group Real Estate Secondary 2013 A LP (MCA) Partners Group Real Estate Secondary 2017 A LP (MCA)



REAL ASSETS PORTFOLIO

Real Asset Portfolio (5% Target)	Commodities (2% Target)	Energy Spectrum Partners VI LP Pinnacle Natural Resources LP Pinnacle Physicals & Financing LTD
	Infrastructure (1% Target)	Kayne Anderson Acquisition LP (MCA) Kayne Anderson MLP Strategy (MCA)
	Timber (2% Target)	Hancock Timberland VIII LP Timbervest Crossover Partners II LP Timbervest Partners II LP



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

ALTERNATIVES - NET

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Private Equity Composite	2,422,096,997	18.1	15.6	--	25.0	--	52.9	--	20.3	--	18.1	--	14.5	--
C A Global All PE (Qtr Lag)			<u>9.6</u>	--	<u>26.5</u>	--	<u>52.5</u>	--	<u>19.2</u>	--	<u>17.6</u>	--	<u>14.0</u>	--
Excess Return			6.0		-1.5		0.4		1.1		0.5		0.5	
Russell 3000			8.2	--	15.1	--	44.2	--	18.7	--	17.9	--	14.7	--
C A US All PE (1 Qtr Lag)			9.4	--	22.0	--	47.4	--	17.6	--	17.2	--	14.3	--
Real Estate Composite	497,957,731	3.7	1.6	80	4.9	67	7.5	66	5.9	22	5.8	86	8.3	81
NCREIF Property Index 1 Qtr. Lag			<u>1.7</u>	79	<u>2.9</u>	85	<u>2.6</u>	95	<u>4.9</u>	72	<u>5.8</u>	85	<u>8.8</u>	74
Excess Return			-0.1		2.0		4.9		1.0		0.0		-0.5	
InvMetrics Public DB Real Estate Pub+Priv Net Median			3.6		6.1		7.9		5.4		6.5		9.0	
Real Assets Composite	525,581,462	3.9	7.8	--	12.2	--	29.7	--	7.5	--	6.3	--	4.1	--
Real Assets Custom Blend			<u>9.9</u>	--	<u>14.5</u>	--	<u>31.6</u>	--	<u>5.3</u>	--	<u>4.0</u>	--	<u>0.9</u>	--
Excess Return			-2.1		-2.3		-1.9		2.2		2.3		3.2	
67% Bloomberg Commodity/ 33% Barclays US TIPS			9.9	--	14.5	--	31.6	--	5.0	--	3.2	--	-1.7	--
Timber	31,605,589	0.2	-2.1	--	-3.0	--	-1.6	--	-4.1	--	-2.9	--	0.9	--
NCREIF Timberland 1 Qtr. Lag			<u>0.8</u>	--	<u>1.3</u>	--	<u>1.5</u>	--	<u>1.7</u>	--	<u>2.5</u>	--	<u>4.6</u>	--
Excess Return			-2.9		-4.3		-3.1		-5.8		-5.4		-3.7	
Infrastructure	105,466,249	0.8	15.1	--	29.0	--	85.5	--	9.6	--	14.3	--	4.7	--
Russell 3000			<u>8.2</u>	--	<u>15.1</u>	--	<u>44.2</u>	--	<u>18.7</u>	--	<u>17.9</u>	--	<u>14.7</u>	--
Excess Return			6.9		13.9		41.3		-9.1		-3.6		-10.0	
Commodities	388,509,624	2.9	6.1	--	7.9	--	13.7	--	10.9	--	8.4	--	5.0	--
Bloomberg Commodity Index			<u>13.3</u>	--	<u>21.2</u>	--	<u>45.6</u>	--	<u>3.9</u>	--	<u>2.4</u>	--	<u>-4.4</u>	--
Excess Return			-7.2		-13.3		-31.9		7.0		6.0		9.4	

APPENDIX: PERFORMANCE SUMMARY

Real Estate

Real Assets

Private Equity



PROPRIETARY & CONFIDENTIAL

REAL ESTATE PERFORMANCE

AS OF MARCH 31, 2020

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Cumulative Distributions	Valuation	TVPI Ratio	IRR
American Realty Advisors	1996	128,009,773	128,009,773	0	278,446,295	0	2.18	6.89%
Tuckerman Multi-Family Development Fund III	2002	10,000,000	10,219,311	0	16,939,699	0	1.66	26.67%
CBRE Strategic Partners III	2003	10,000,000	10,000,000	0	12,698,783	0	1.27	8.02%
Prudential PRISA III	2003	75,000,000	61,852,541	13,147,459	53,254,642	61,103,519	1.74	17.19%
Walton Street Real Estate Fund IV, LP	2003	10,000,000	9,770,890	229,110	15,939,604	66,256	1.64	10.72%
Bryanston Retail Opportunity Fund, L.P.	2004	20,000,000	8,228,165	11,771,835	22,328,219	11,852,530	4.15	70.75%
Prudential PRISA II	2004	140,000,000	140,000,000	0	55,361,026	168,660,968	1.53	7.12%
RREEF America REIT III	2004	20,000,000	20,539,309	0	23,658,675	0	1.15	3.00%
BlackRock Diamond Property Fund	2005	25,000,000	25,000,000	0	15,233,347	0	0.61	-9.31%
CBRE Strategic Partners IV	2005	40,000,000	40,000,000	0	2,609,685	0	0.07	-27.76%
INVESCO Real Estate Fund I	2005	10,000,000	9,248,390	0	10,015,656	0	1.08	1.54%
LaSalle Income & Growth Fund IV	2005	20,000,000	19,469,417	0	13,482,024	0	0.69	-5.51%
North Haven Real Estate Fund V International	2005	27,500,000	27,377,414	122,586	32,070,486	1,157,221	1.21	6.81%
Prologis Japan Fund	2005	25,290,819	25,290,819	0	33,126,118	0	1.31	4.81%
Tri Continental Capital VII	2005	23,000,000	22,277,928	722,072	3,075,156	440,766	0.16	-15.61%
American Realty Value Add	2006	13,125,215	13,125,215	0	32,080,321	0	2.44	10.92%
Beacon Capital Strategic Partners IV, L.P.	2006	38,000,000	38,000,000	0	31,424,699	0	0.83	-3.26%
Fillmore East Fund	2006	25,000,000	31,403,818	0	20,777,177	0	0.66	-9.78%
Starwood Capital Hospitality Fund I-2	2006	30,000,000	30,000,000	0	27,879,087	2,487,048	1.01	0.16%
Starwood Opportunity Fund VII - A	2006	25,000,000	25,000,000	0	19,517,190	618,491	0.81	-2.35%
Walton Street Real Estate Fund V, LP	2006	40,000,000	40,000,000	0	26,758,768	2,761,743	0.74	-3.29%
Beacon Capital Strategic Partners V, L.P.	2007	18,000,000	18,000,000	0	11,174,695	0	0.62	-7.87%
Invesco Asian Real Estate Partners II (USD), LP	2007	20,000,000	8,412,833	1,569,056	11,465,147	0	1.36	7.52%
Invesco High Yield Debt Fund I	2007	20,000,000	20,000,000	0	8,567,605	0	0.43	-35.57%
Square Mile Partners II	2007	19,831,232	19,831,232	0	5,311,330	0	0.27	-19.11%
Fillmore West Fund	2008	20,000,000	19,561,557	0	21,175,799	0	1.08	1.14%
Square Mile Partners III LP	2008	20,000,000	19,730,190	269,810	28,756,613	51,831	1.46	11.50%
Starwood Debt Fund II, LP	2008	20,000,000	17,599,882	0	21,912,511	0	1.25	6.45%
Structured Real Estate III, LP (Guggenheim)	2008	20,000,000	20,000,000	0	16,320,664	0	0.82	-4.99%
Bryanston Real Estate Opportunity Fund II, L.P.	2009	20,000,000	8,589,256	0	11,847,997	0	1.38	10.19%
Fortress Japan Opportunity Fund II	2012	21,739,130	2,434,589	19,304,541	23,188,365	3,968,832	10.03	25.68%
Oaktree Real Estate Opportunities V	2012	25,000,000	25,000,000	0	38,093,074	1,895,399	1.57	12.94%
Invesco Real Estate Asia Fund	2014	51,732,500	51,732,500	0	14,037,368	69,800,422	1.55	7.56%
Partners Group RE Secondary 2013 (USD) A	2014	65,000,000	49,541,590	15,458,410	24,769,953	43,352,297	1.38	9.31%
Apollo US Real Estate Fund II	2015	20,000,000	14,344,929	5,655,071	4,987,840	13,410,127	1.28	8.23%
Primerica Real Estate Capital VI	2016	25,383,664	24,459,070	924,594	8,232,815	12,422,487	0.84	-10.63%
Kayne Anderson Real Estate Partners V	2017	20,000,000	16,400,000	3,600,000	1,193,140	20,674,956	1.35	16.37%
Partners Group RE Secondary 2017 (USD) A	2017	75,000,000	38,698,150	36,301,850	118,130	45,994,117	1.19	8.78%
Kayne Anderson Real Estate Debt III	2018	20,000,000	19,828,428	171,572	5,790,674	16,937,185	1.14	9.88%
Total: San Bernardino		1,256,612,333	1,128,977,196	109,247,966	1,003,620,378	477,656,195	1.30	4.13%



Note: All metrics are calculated since inception
* Denotes cash adjusted

REAL ASSETS PERFORMANCE

AS OF MARCH 31, 2021

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Cumulative Distributions	Valuation	TVPI Ratio	IRR
Hancock Timberland VII	2005	90,000,000	90,000,000	0	101,142,900	0	1.12	1.02%
Hancock Timberland VIII	2006	40,000,000	40,000,000	0	20,771,925	19,665,637	1.01	0.09%
Highstar Capital III, L.P.	2007	60,000,000	59,119,119	880,881	63,076,794	239,529	1.07	0.87%
Timbervest Partners II, L.P.	2007	50,000,000	50,000,000	0	49,225,000	3,218,415	1.05	0.49%
Timbervest Crossover Partners II, L.P.	2008	30,000,000	30,000,000	0	18,014,831	8,821,529	0.89	-1.55%
Fortress Transportation Infrastructure LLC	2015	45,403,354	45,403,354	0	41,902,882	45,750,564	1.93	-1.99%
Total: San Bernardino		315,403,354	314,522,473	880,881	294,134,332	77,695,674	1.18	0.40%



Note: All metrics are calculated since inception
 * Denotes cash adjusted

PRIVATE EQUITY PERFORMANCE

AS OF MARCH 31, 2021

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Cumulative Distributions	Valuation	TVPI Ratio	IRR
European Strategic Partners 2004	2004	238,620,736	221,331,191	17,289,545	277,541,806	3,690,411	1.27	3.99%
Partners Group MCA	2004	800,000,000	824,561,666	-24,561,666	622,755,316	579,309,357	1.46	8.55%
Pathway Private Equity Fund VII, L.P.	2004	904,500,000	855,742,267	48,757,733	1,293,496,414	362,304,253	1.93	11.85%
Aurora Equity Partners III, L.P.	2005	25,000,000	23,544,536	0	41,738,196	0	1.67	13.61%
Lexington Middle Market I	2005	25,000,000	24,771,942	228,058	38,379,402	2,240,442	1.64	11.45%
NB Secondary Opportunities I, LP	2005	20,000,000	18,500,843	0	24,330,105	0	1.32	6.49%
Lexington Capital Partners VI-B	2006	25,000,000	24,591,319	408,681	33,762,215	1,426,241	1.43	6.91%
Siguler Guff DOF II	2006	30,000,000	30,000,000	0	42,440,278	0	1.42	8.64%
TCW/Crescent Mezzanine IV, L.P.	2006	40,000,000	39,590,976	409,024	45,049,090	0	1.14	3.03%
Catalyst Fund II, L.P.	2007	10,000,000	9,956,944	43,056	3,859,103	33,987,556	3.78	13.48%
Tennenbaum Opportunities Fund V, L.P.	2007	10,000,000	10,000,000	0	12,100,359	2,294,359	1.44	5.23%
Apollo Investment Fund VII, L.P.	2008	10,000,000	8,789,116	1,210,884	16,721,096	769,612	1.99	22.66%
Aurora Resurgence Fund, L.P.	2008	15,000,000	5,653,009	0	10,350,965	0	1.82	17.60%
Industry Ventures Fund V	2008	10,000,000	9,500,000	500,000	27,196,010	295,603	2.89	29.32%
Lexington Middle Market II - Offshore	2008	10,000,000	9,773,736	226,264	14,427,815	2,950,466	1.77	14.51%
NB Secondary Opportunities II, LP	2008	20,000,000	17,080,642	0	26,888,038	0	1.54	14.40%
Siguler Guff DOF III	2008	10,000,000	9,700,000	300,000	14,197,418	1,828,991	1.65	10.75%
TCW/Crescent Mezzanine V, L.P.	2008	20,000,000	19,949,723	50,277	25,841,574	1,577,420	1.38	9.81%
Apollo European Principal Finance Fund (Feeder), L	2009	53,001,432	46,434,825	6,566,607	69,228,391	242,960	1.50	11.80%
DRI II, L.P.	2009	20,000,000	19,917,669	0	26,302,807	0	1.33	19.64%
Apollo PCPL Webb V	2010	4,844,398	4,844,398	0	5,196,757	0	1.07	6.04%
Apollo PCPL Webb VIII	2010	4,734,303	4,734,303	0	12,146,258	0	2.57	46.47%
European Strategic Partners 2008	2010	31,184,994	29,327,588	1,857,406	32,715,826	10,460,587	1.46	8.59%
Industry Ventures Fund VI	2011	20,000,000	18,400,000	1,600,000	22,213,502	3,085,635	1.37	8.22%
Lexington Capital Partners VII (Offshore)	2011	25,000,000	20,409,757	4,590,243	28,310,808	5,451,298	1.65	14.89%
Tennenbaum Opportunities Fund VI, L.P.	2011	20,000,000	9,501,887	10,498,113	11,776,939	7,074,029	1.98	8.58%
Aurora Equity Partners IV, L.P.	2012	20,000,000	17,262,661	2,737,339	36,905,236	4,209,265	2.07	18.67%
BNY Mellon - Alcentra Mezzanine III	2012	25,000,000	23,254,658	0	26,736,979	0	1.15	12.73%
Industry Ventures Partnership Holdings Fund II, L.P.	2012	25,000,000	23,500,000	1,500,000	30,080,554	68,442,325	4.19	25.57%
Tennenbaum Waterman Fund, LP	2012	70,000,000	70,000,000	0	59,103,234	70,022,595	1.84	11.53%
Industry Ventures Partnership Holdings Fund III, L.P.	2013	25,000,000	23,277,042	1,722,958	25,977,663	52,932,557	3.39	28.34%
Industry Ventures Secondary VII, L.P.	2013	25,000,000	22,975,000	2,025,000	27,881,523	18,280,618	2.01	18.48%



Note: All metrics are calculated since inception
* Denotes cash adjusted

PRIVATE EQUITY PERFORMANCE

AS OF MARCH 31, 2021

Investment Name	Vintage Year	Commitment Amount	Paid in Capital	Capital to be Funded	Cumulative Distributions	Valuation	TVPI Ratio	IRR
Industry Ventures Partnership Holdings Fund III-A, L.P.	2014	12,500,000	11,087,500	1,412,500	6,369,499	6,719,770	1.18	4.13%
Pathway SBCERA MCA	2014	250,000,000	214,752,565	35,247,435	34,549,500	482,181,144	2.41	25.40%
SL Capital SOF I LP	2014	25,000,000	21,296,677	3,703,323	22,321,189	7,885,846	1.42	11.28%
ARES European Loan Opp Fund	2015	15,000,000	8,413,136	0	7,613,498	0	0.90	-6.02%
Ares Special Situations Fund IV, LP	2015	50,000,000	47,686,469	2,313,531	4,788,063	50,394,757	1.16	3.86%
Tennenbaum Special Situations Fund IX	2015	50,000,000	36,349,480	13,650,520	16,441,949	45,695,540	1.71	15.24%
Industry Ventures Direct, LP	2016	25,000,000	22,095,425	2,904,575	1,917,517	41,839,891	1.98	28.58%
Industry Ventures Partnership Holdings IV, LP	2016	25,000,000	19,975,000	5,025,000	1,419,332	35,561,560	1.85	25.64%
Industry Ventures Special Opportunities II-A	2016	12,500,000	1,618,222	10,881,778	1,045,940	3,913,604	3.06	65.36%
TCP Direct Lending Fund VIII-L, LLC	2016	40,000,000	35,477,991	4,522,009	9,419,726	33,311,761	1.20	7.41%
Tennenbaum Energy Opportunities Fund, LP	2016	20,000,000	9,670,678	10,329,322	6,284,429	7,561,736	1.43	9.40%
Apollo Accord Fund, LP	2017	30,000,000	7,500,000	22,500,000	8,310,474	0	1.11	7.44%
Industry Ventures Secondary VIII	2017	25,000,000	22,125,000	2,875,000	9,475,389	44,615,675	2.44	65.36%
Kayne Anderson Energy Fund VII, L.P.	2017	10,000,000	8,614,431	1,385,569	215,495	3,433,341	0.42	-23.77%
Kayne Partners Fund IV (QP), LP	2017	20,000,000	16,388,054	3,611,946	0	24,426,118	1.48	19.02%
Kayne SBCERA MLP	2017	130,000,000	126,225,037	3,774,963	6,880,108	110,588,140	0.93	-2.26%
SL Capital SOF III LP	2017	25,000,000	16,322,191	8,677,809	3,376,275	22,752,472	1.60	25.57%
Crestline Portfolio Financing Fund	2018	50,000,000	36,161,186	13,838,814	3,209,411	40,564,022	1.21	11.89%
Industry Ventures Partnership Holdings V, LP	2018	25,000,000	14,750,000	10,250,000	283,205	22,608,046	1.55	53.42%
Industry Ventures Tech Buyout LP	2018	50,000,000	9,361,745	40,638,255	0	15,050,061	1.61	36.32%
Kayne Anderson Private Energy Income Fund II, L.P.	2018	20,000,000	3,880,000	16,120,000	1,825,911	6,161,168	2.06	42.87%
Kayne Flywheel Co-investment LLC	2018	8,000,000	6,400,000	1,600,000	3,227,873	11,976,934	2.38	50.86%
Kayne SBCERA (D.I.)	2018	45,000,000	40,660,422	4,339,578	43,395,618	7,968,851	1.26	24.63%
Kayne Solutions Fund LP	2018	20,000,000	8,808,998	11,191,002	10,220,390	4,662,907	1.69	39.86%
Industry Ventures Direct II, LP	2019	50,000,000	23,954,121	26,045,879	0	29,563,049	1.23	44.90%
Kayne Renewable Opportunities Partners (TE), LP	2019	100,000,000	12,138,899	87,861,101	3,860,092	13,830,080	1.46	21.14%
Waterfall Sentinel Co-Investments	2019	30,000,000	23,484,161	6,515,840	0	34,084,403	1.44	25.09%
Waterfall Sentinel Fund	2019	30,000,000	17,744,263	12,255,737	757,172	22,592,098	1.32	16.06%
Adams Street SBCERA	2020	50,000,000	26,421,446	23,578,554	0	39,316,110	1.49	101.18%
Kayne Anderson FRG	2020	30,000,000	30,000,000	0	40,363,248	-4,755,542	1.19	17.06%
Kayne CLO Partners II, LP	2020	50,000,000	36,713,375	13,286,625	16,935,789	24,269,185	1.13	20.18%
Total: San Bernardino		3,914,885,864	3,412,954,168	478,296,188	3,250,158,768	2,421,649,307	1.66	9.01%



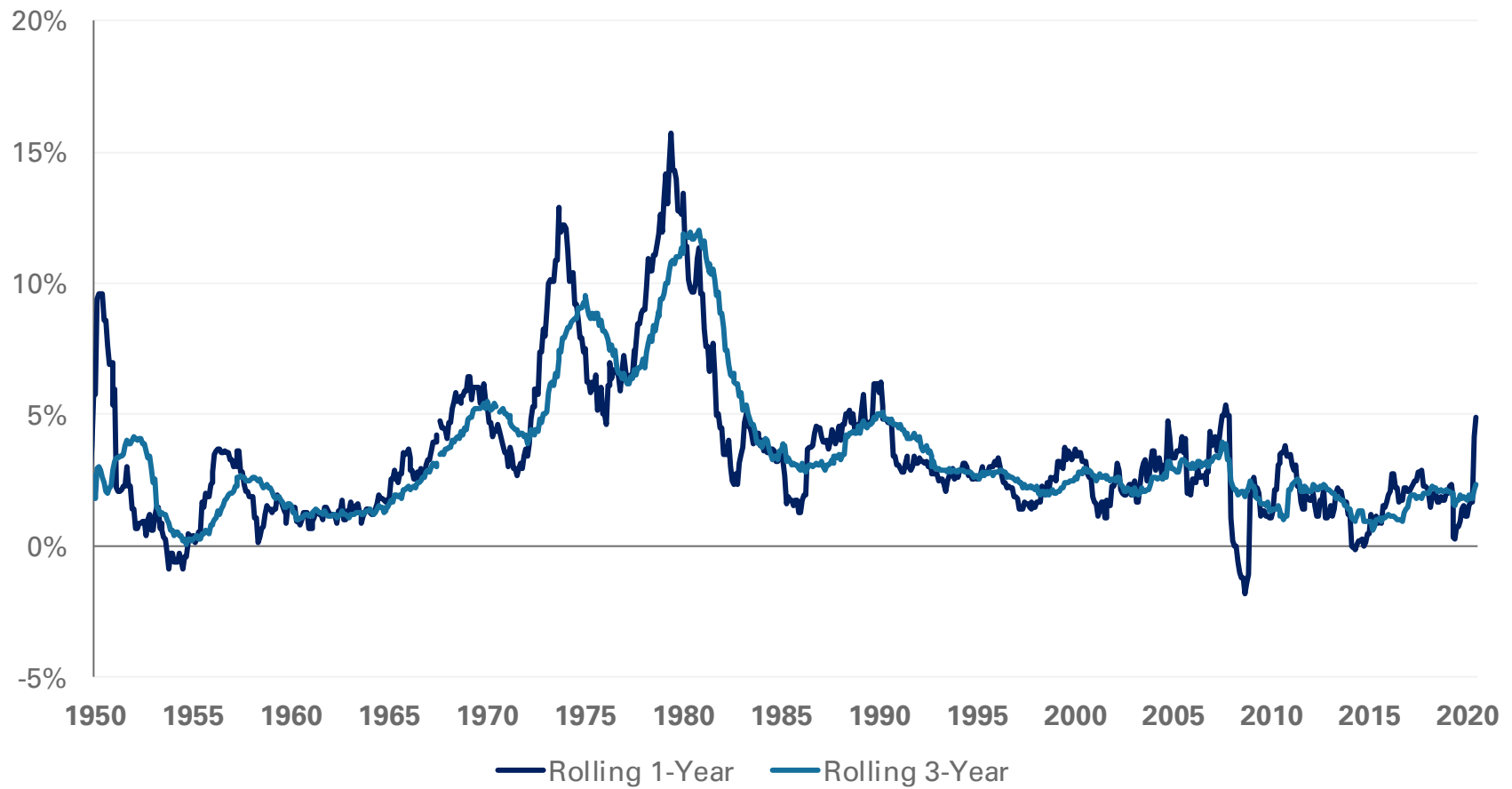
Note: All metrics are calculated since inception
 * Denotes cash adjusted



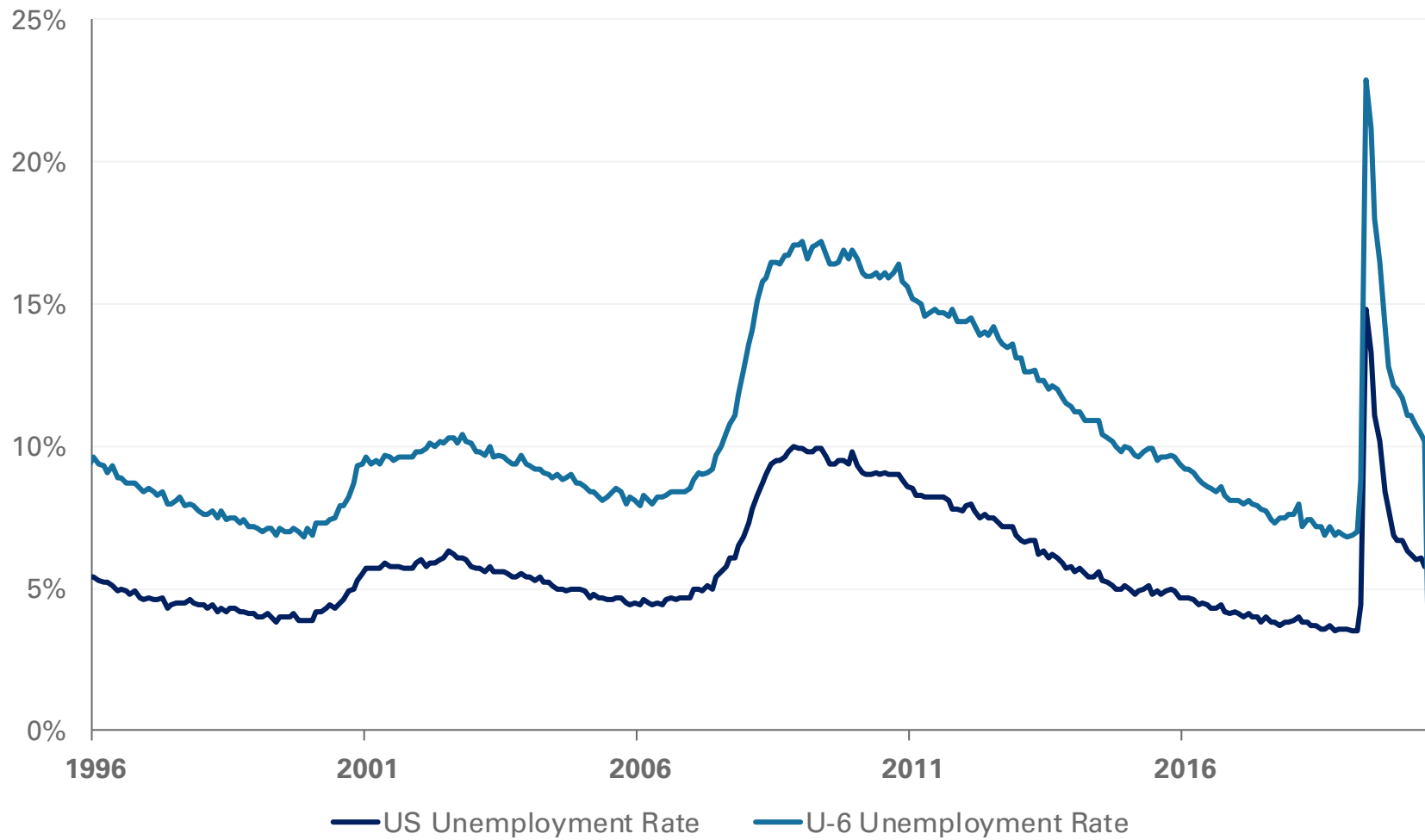
APPENDIX: MACRO MARKET ENVIRONMENT

INFLATION

U.S. CONSUMER PRICE INDEX

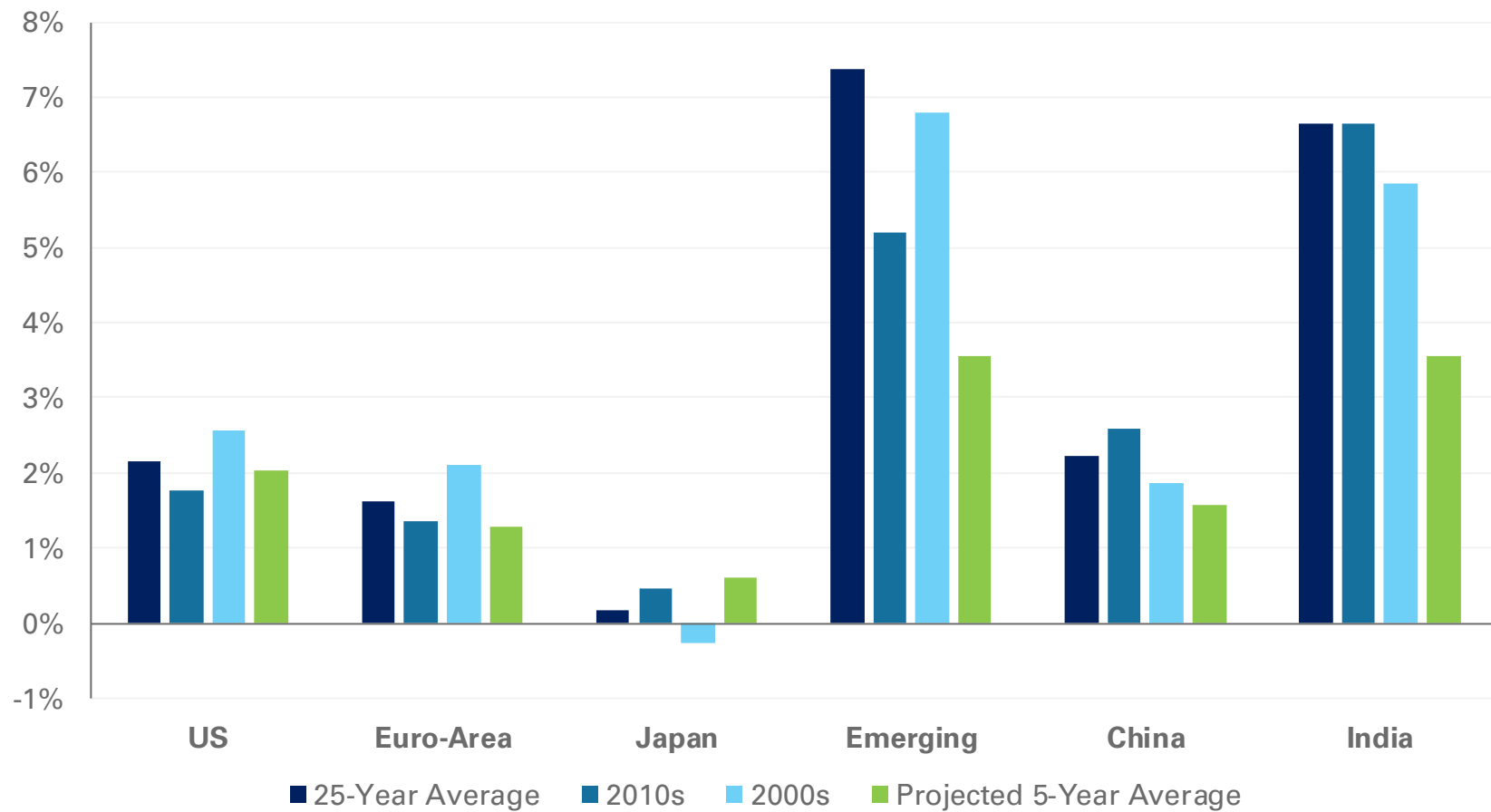


U.S. UNEMPLOYMENT RATES

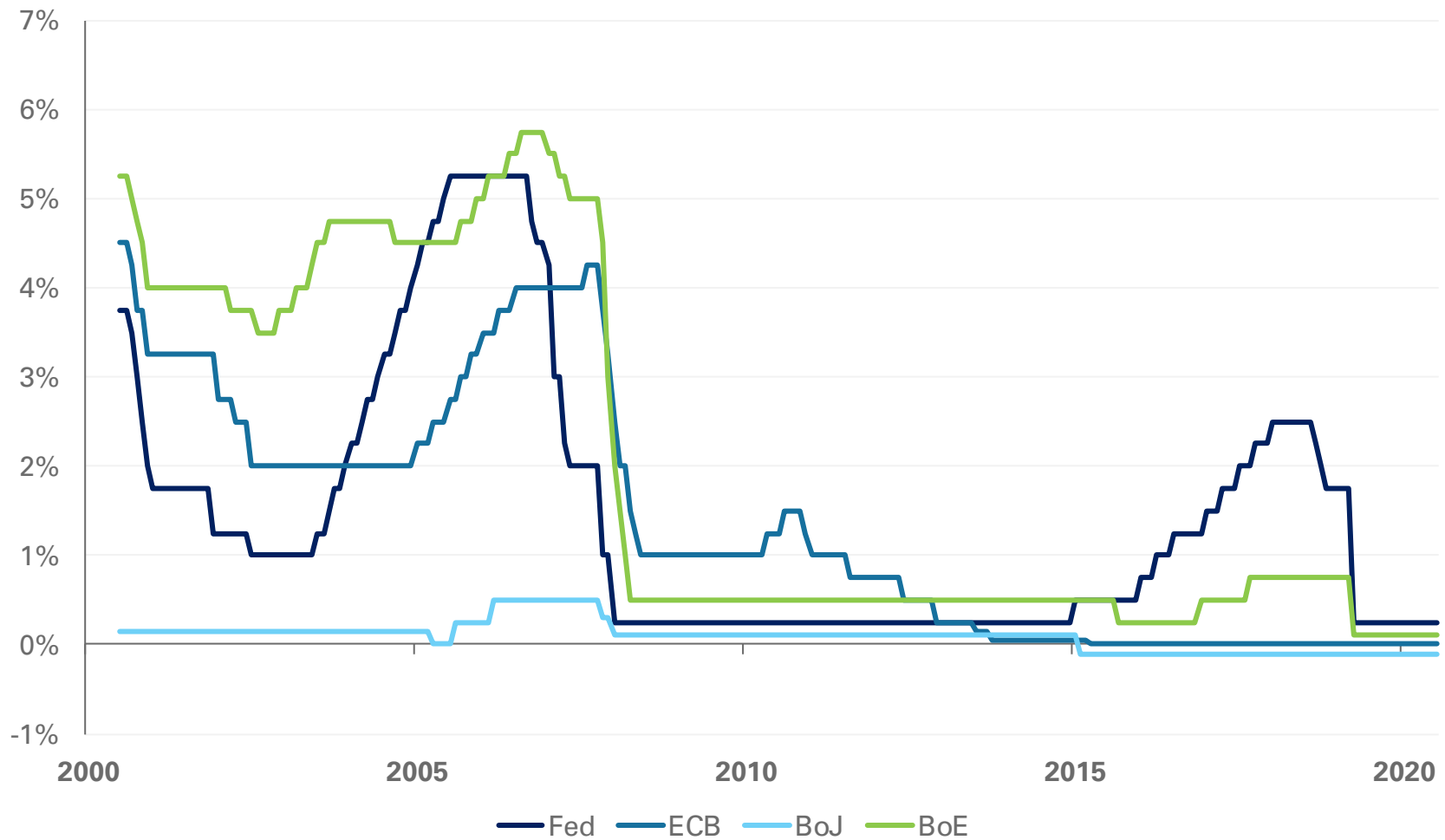


HISTORICAL INFLATION

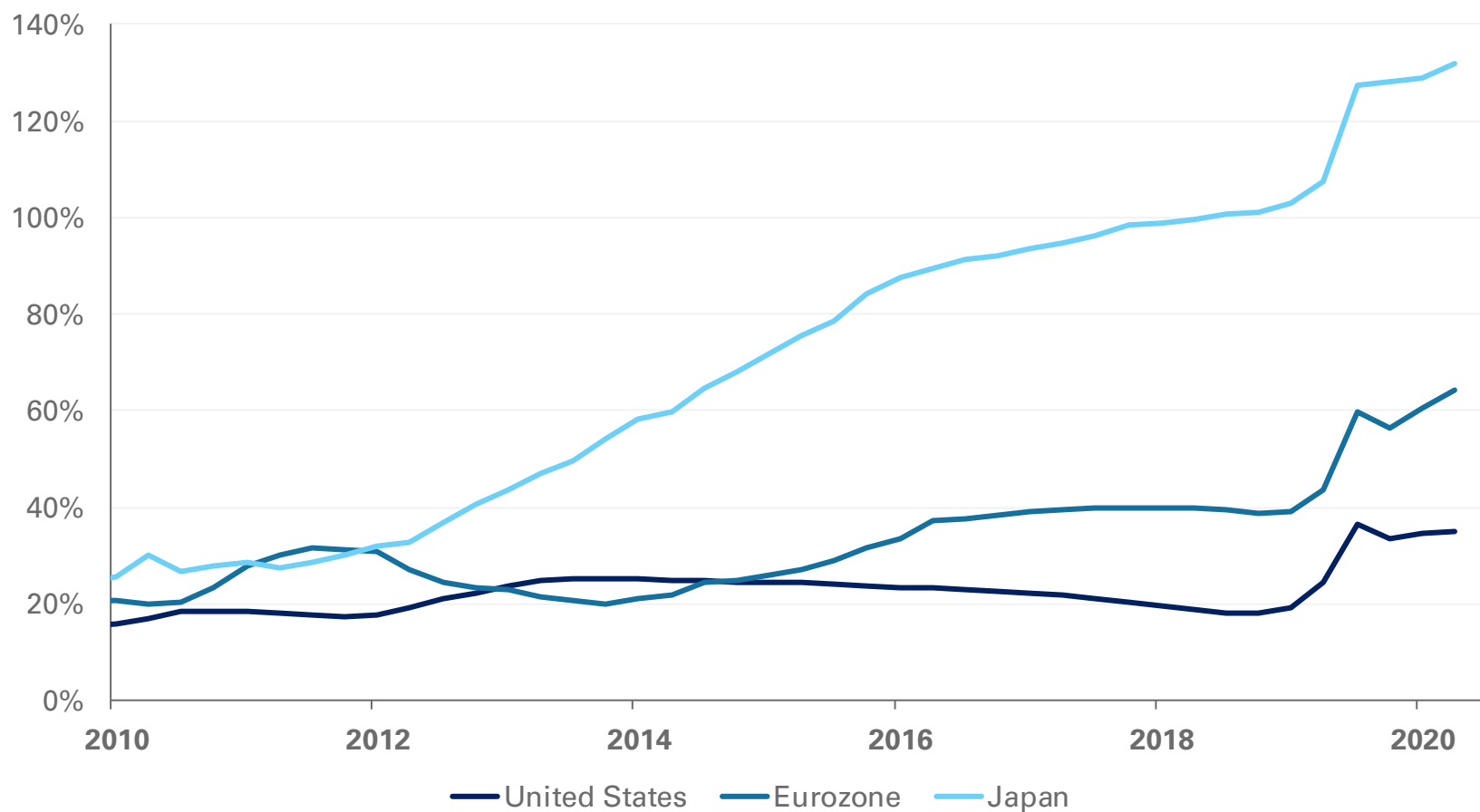
IMF PROJECTIONS



CENTRAL BANK POLICY RATES



CENTRAL BANK BALANCE SHEETS AS A PERCENTAGE OF GDP



CURRENCIES

RELATIVE TO THE U.S. DOLLAR

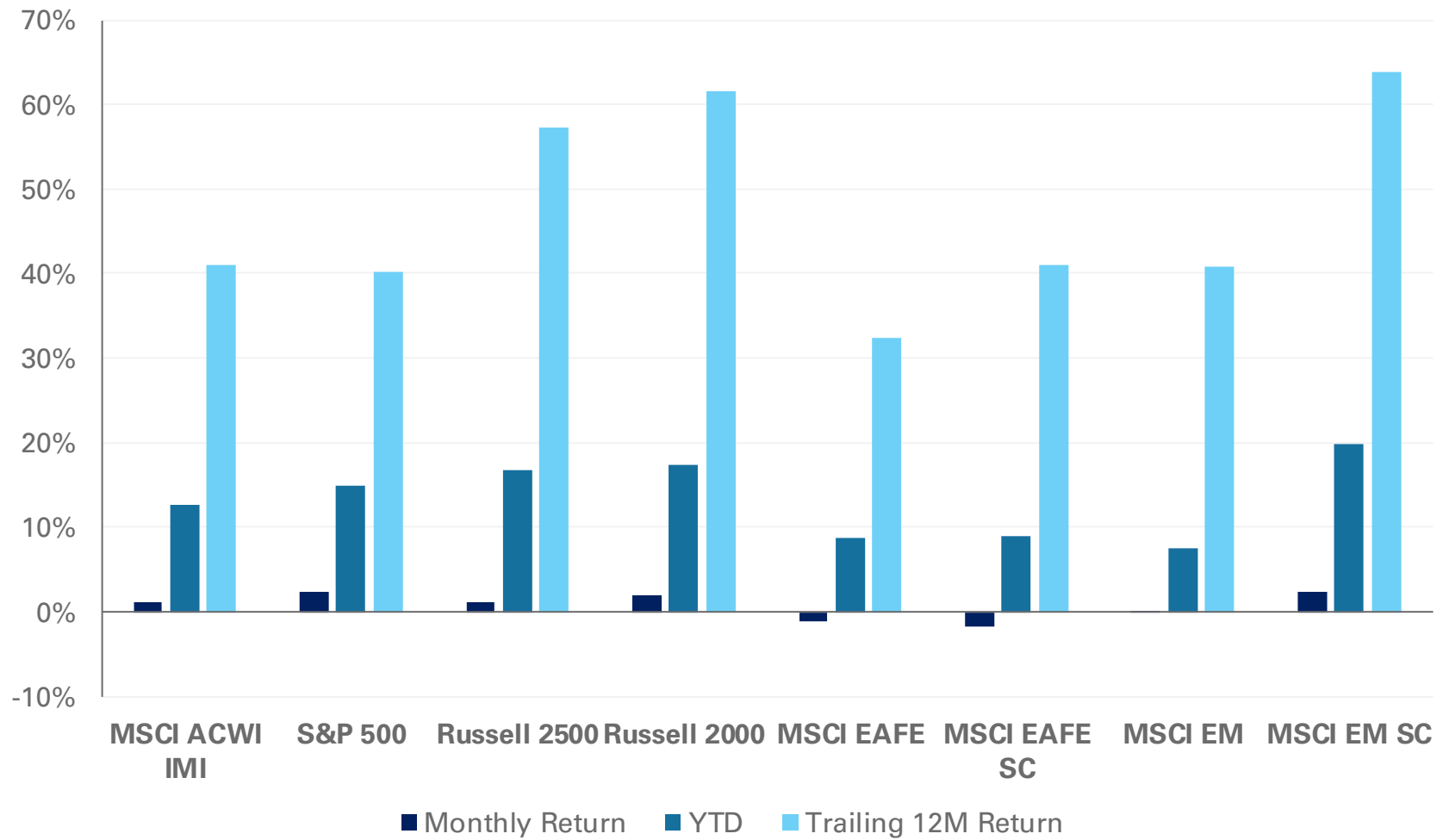
Currencies	Spot	1 Month	YTD	1 Year
Euro	1.19	-3.0%	-3.1%	5.6%
British Pound	1.38	-2.8%	1.1%	11.8%
Japanese Yen	110.99	-1.4%	-7.0%	-2.8%
Swiss Franc	0.92	-2.7%	-4.4%	2.5%
Australian Dollar	0.75	-3.0%	-2.7%	9.0%
New Zealand Dollar	1.43	-4.0%	-3.0%	8.5%
Canadian Dollar	1.24	-2.4%	2.9%	10.0%
Chinese Yuan	6.46	-1.6%	1.2%	9.5%
Taiwanese Dollar	27.86	-0.9%	0.8%	5.9%
Korean Won	1126	-1.3%	-3.5%	6.8%
Vietnmaese Dong	23016	0.1%	0.3%	0.8%
Thai Baht	32.05	-2.5%	-6.5%	-3.6%
Philippines Peso	48.82	-2.3%	-1.6%	2.1%
Indian Rupee	74.33	-2.3%	-1.7%	1.6%
Russian Ruble	73.05	0.4%	1.2%	-2.5%
Mexican Peso	19.91	0.0%	0.1%	16.1%
Brazilian Real	5.02	4.6%	3.5%	9.4%
Chilean Peso	0.02	-0.1%	0.0%	17.0%
Argentine Peso	95.73	-1.1%	-12.2%	-26.4%
South African Rand	14.28	-3.9%	2.9%	21.7%



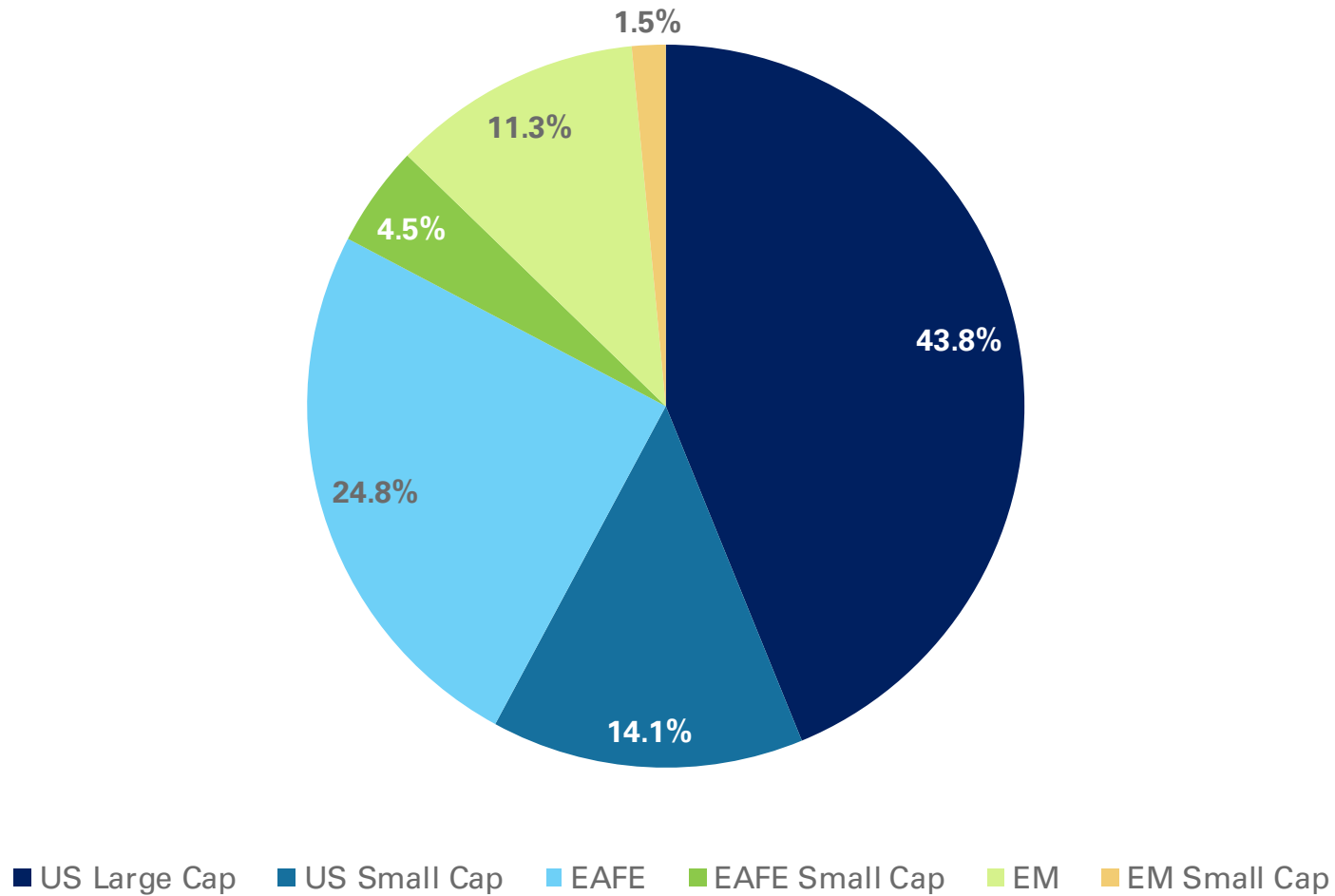


EQUITY

EQUITY INDEX PERFORMANCE

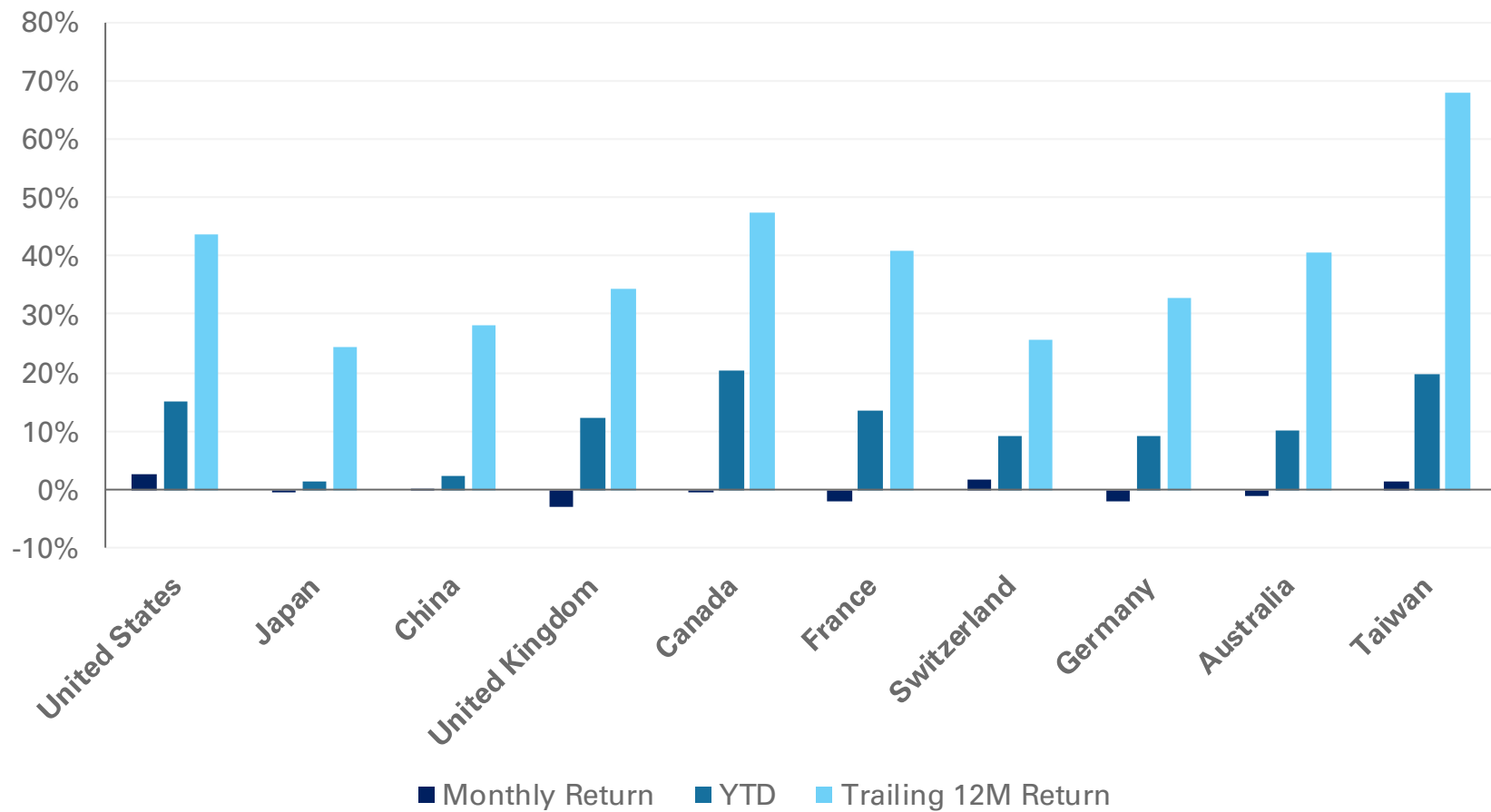


MSCI ACWI IMI WEIGHTS

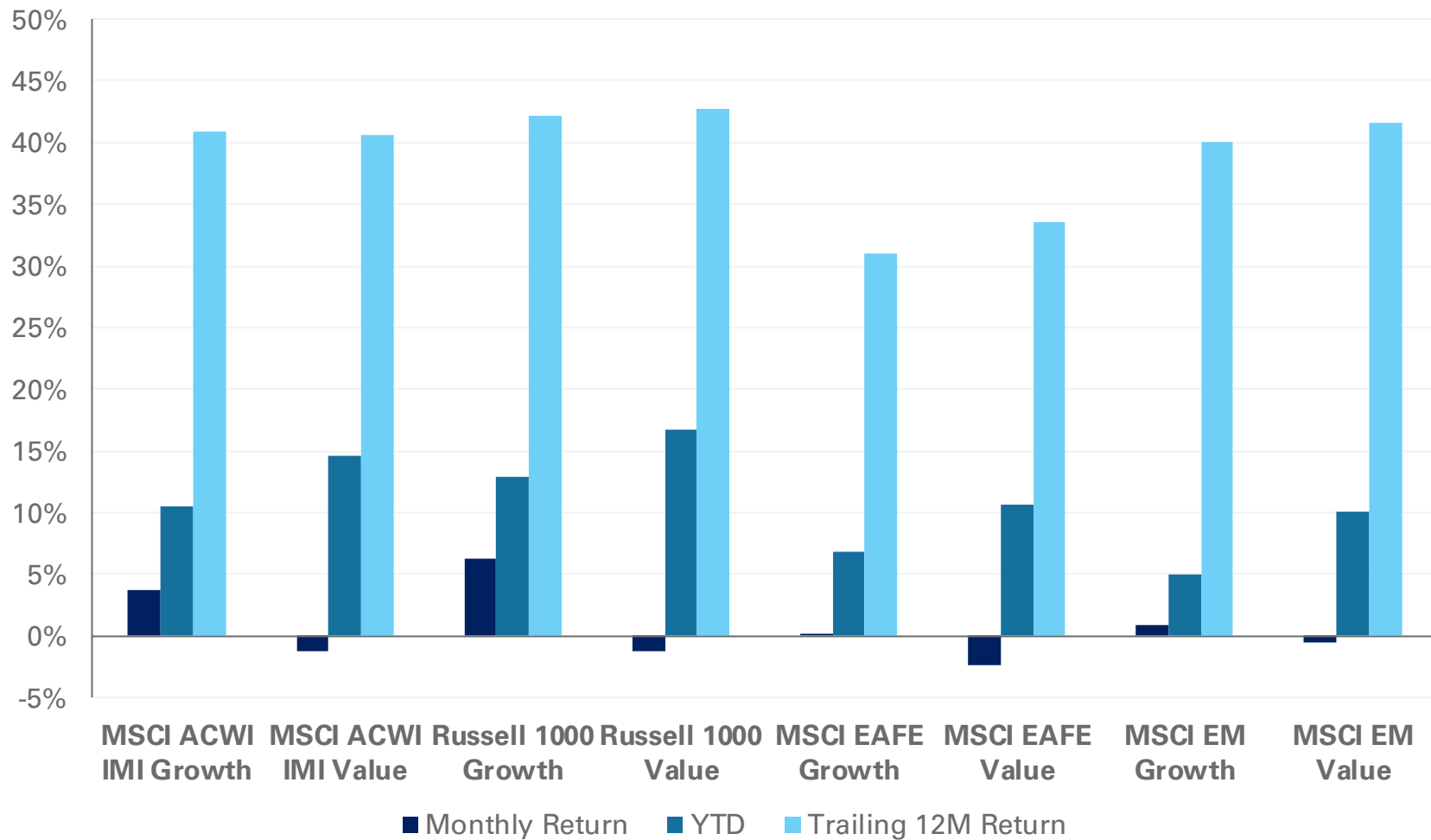


EQUITY INDEX PERFORMANCE

TOP 10 COUNTRIES BY MARKET CAP IN MSCI ACWI IMI INDEX



STYLE INDEX PERFORMANCE



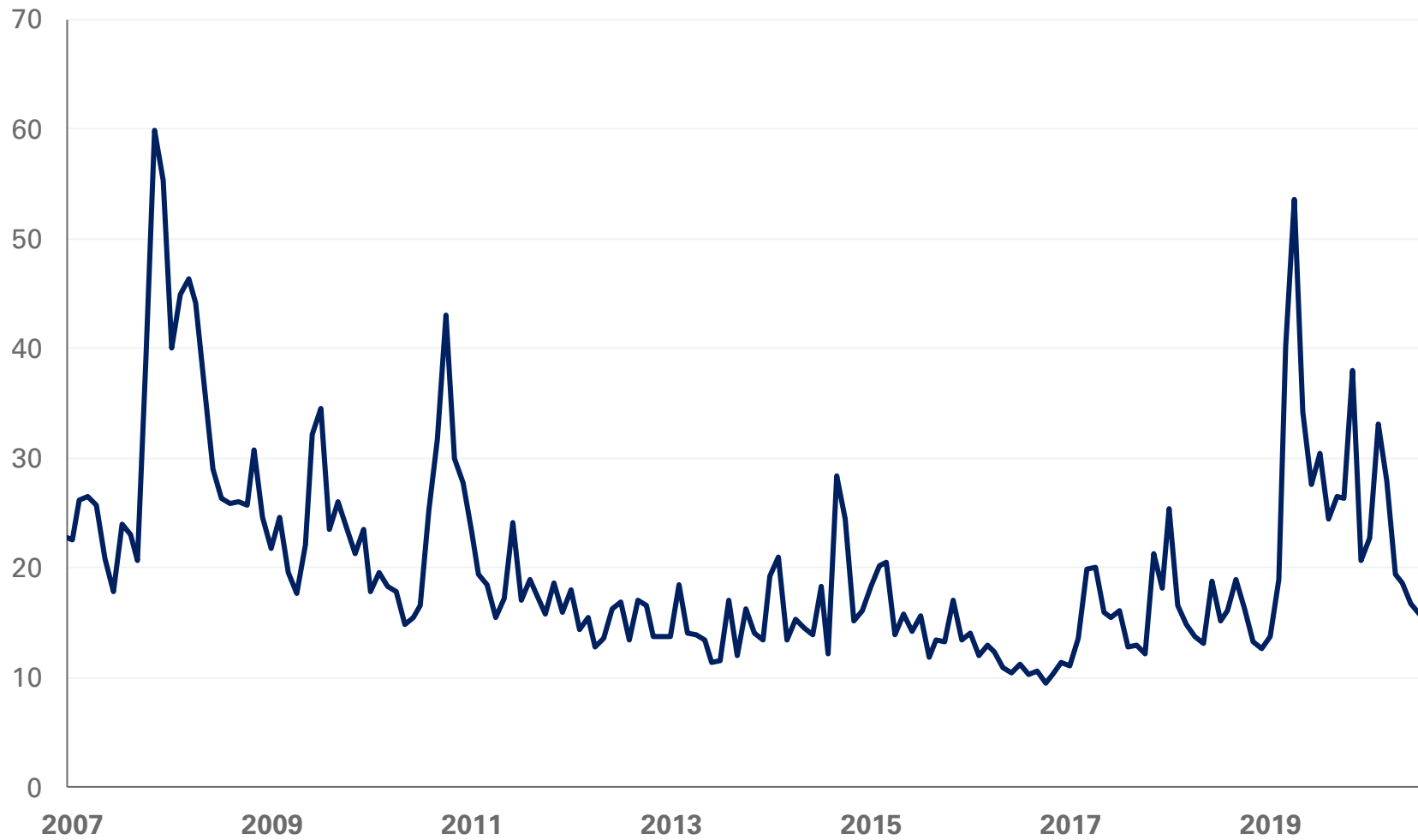
SECTOR INDEX PERFORMANCE

	Monthly Return	YTD	Trailing 12M Return	Index Weight
MSCI ACWI IMI	1.2%	12.7%	12.7%	100.0%
Communication Services	2.0%	15.2%	15.2%	8.6%
Consumer Discretionary	2.2%	10.0%	10.0%	12.9%
Consumer Staples	-0.5%	5.2%	5.2%	6.6%
Energy	3.6%	30.5%	30.5%	3.4%
Financials	-3.3%	18.5%	18.5%	13.9%
Health Care	3.1%	9.2%	9.2%	11.6%
Industrials	-1.1%	13.6%	13.6%	10.9%
Information Technology	5.9%	12.4%	12.4%	20.8%
Materials	-3.7%	13.3%	13.3%	5.3%
Real Estate	0.9%	14.3%	14.3%	3.5%
Utilities	-2.5%	0.9%	0.9%	2.6%

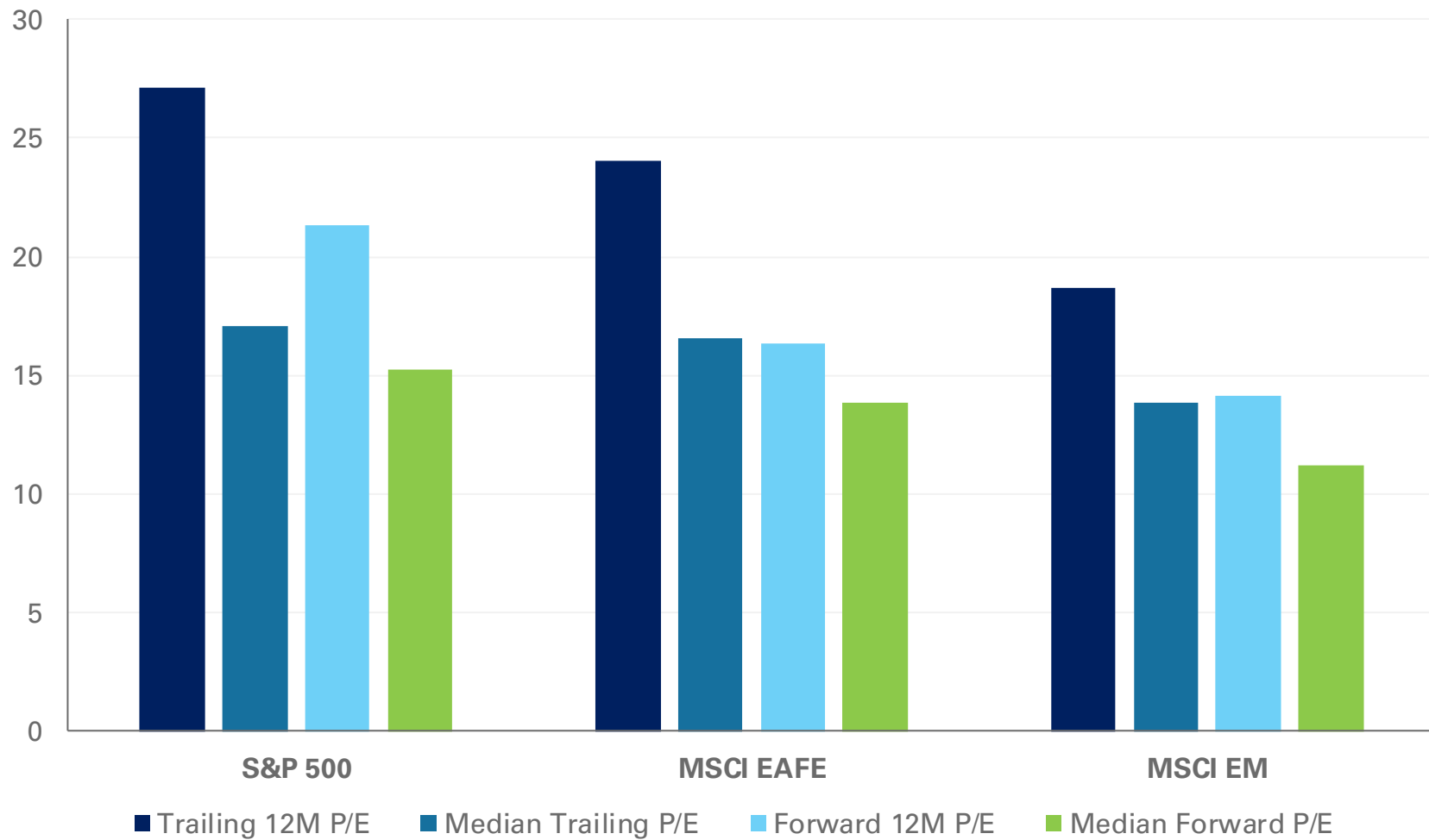
	Monthly Return	YTD	Trailing 12M Return	Index Weight
S&P 500	2.3%	15.0%	15.0%	100.0%
Communication Services	2.7%	19.5%	19.5%	11.1%
Consumer Discretionary	3.8%	10.2%	10.2%	12.3%
Consumer Staples	-0.3%	4.6%	4.6%	5.9%
Energy	4.6%	44.7%	44.7%	2.9%
Financials	-3.0%	25.3%	25.3%	11.3%
Health Care	2.3%	11.6%	11.6%	13.0%
Industrials	-2.2%	16.1%	16.1%	8.5%
Information Technology	6.9%	13.6%	13.6%	27.4%
Materials	-5.4%	14.2%	14.2%	2.6%
Real Estate	3.1%	22.8%	22.8%	2.6%
Utilities	-2.2%	1.9%	1.9%	2.5%



EQUITY VOLATILITY INDEX (VIX)



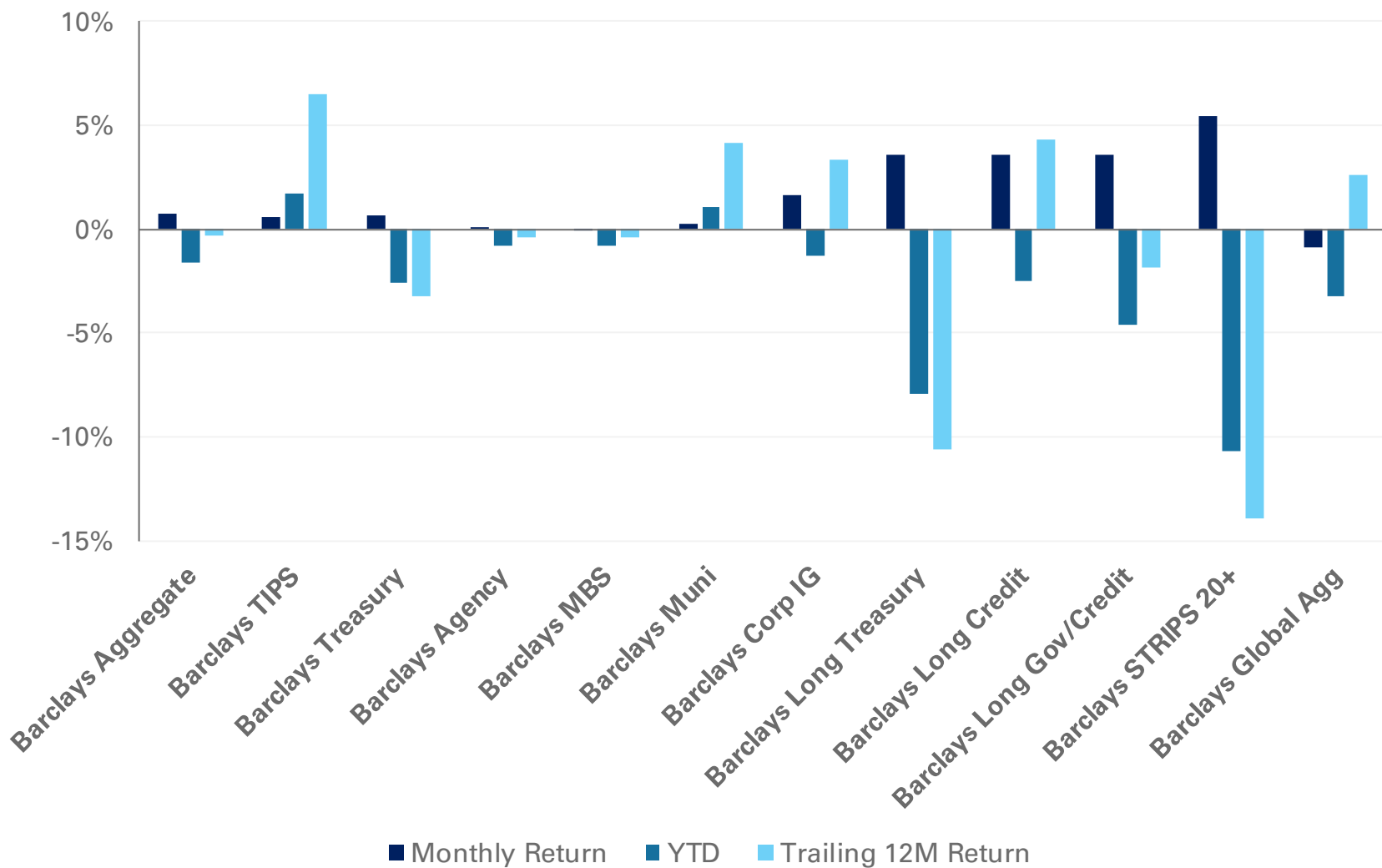
GLOBAL EQUITY VALUATIONS





SAFE-HAVEN FIXED INCOME

SAFE-HAVEN FIXED INCOME PERFORMANCE

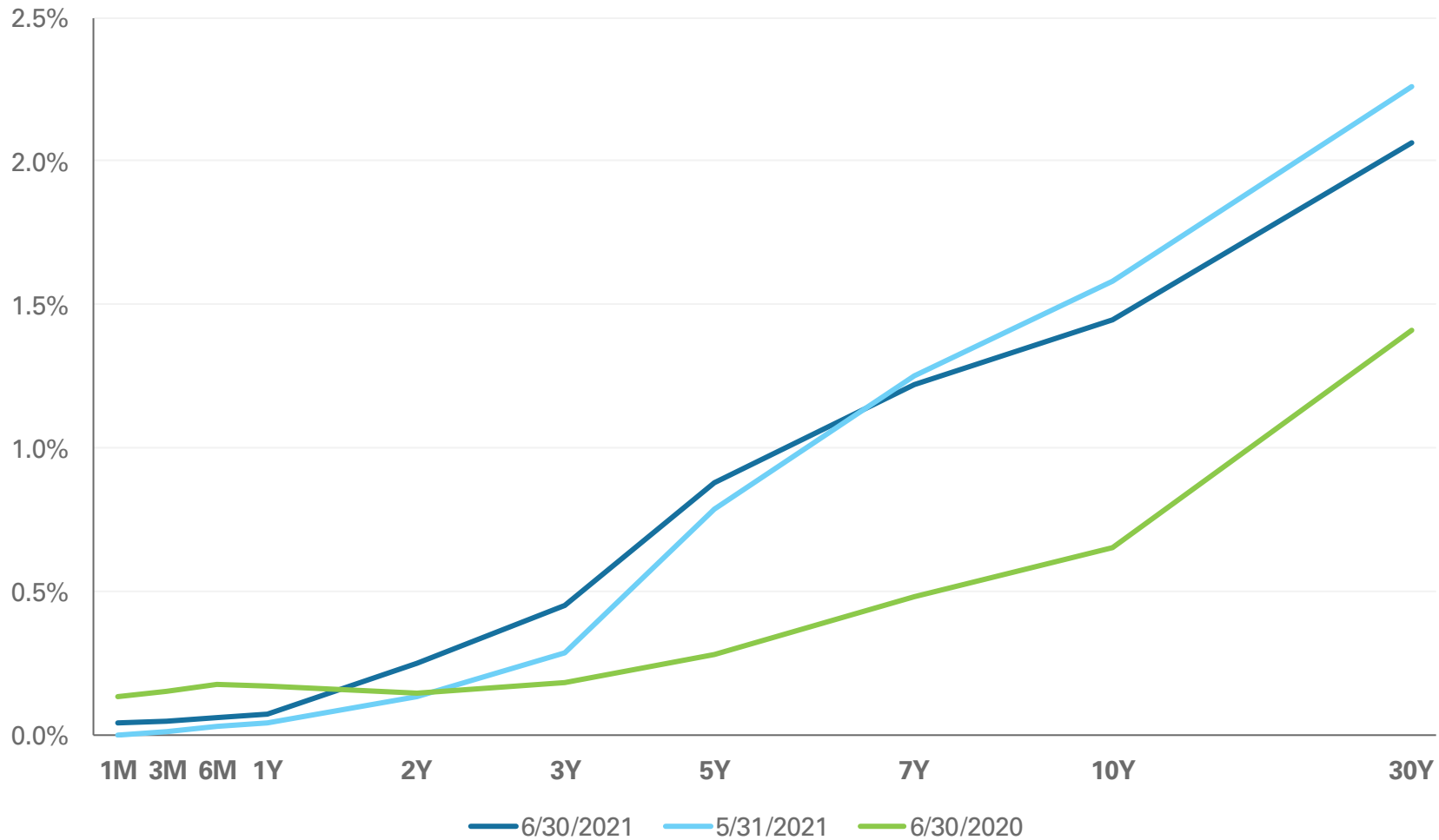


FIXED INCOME CHARACTERISTICS

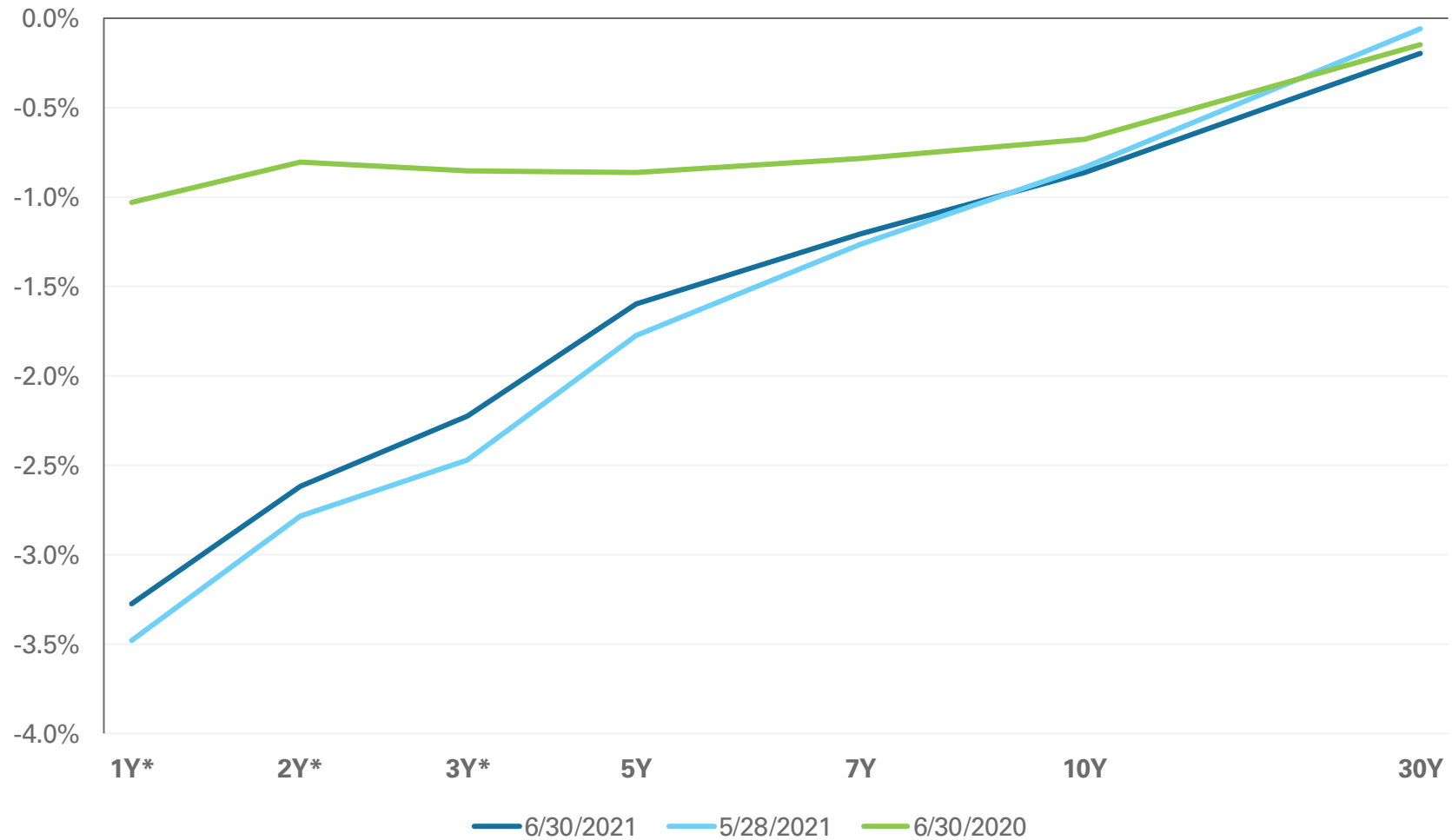
	Yield to Worst	Spread (bps)	Duration (Years)
Barclays Aggregate	1.50%	32	6.6
Barclays TIPS	1.07%	-	6.6
Barclays Treasury	0.95%	-	7.0
Barclays Agency	0.78%	3	3.9
Barclays MBS	1.77%	27	4.2
Barclays Muni	1.02%	-	5.1
Barclays Corp IG	2.04%	80	8.7
Barclays Long Treasury	2.03%	-	18.8
Barclays Long Credit	3.08%	118	15.2
Barclays Long Gov/Credit	2.66%	71	16.6
Barclays STRIPS 20+	2.14%	-	26.9
Barclays Global Agg	1.12%	33	7.5



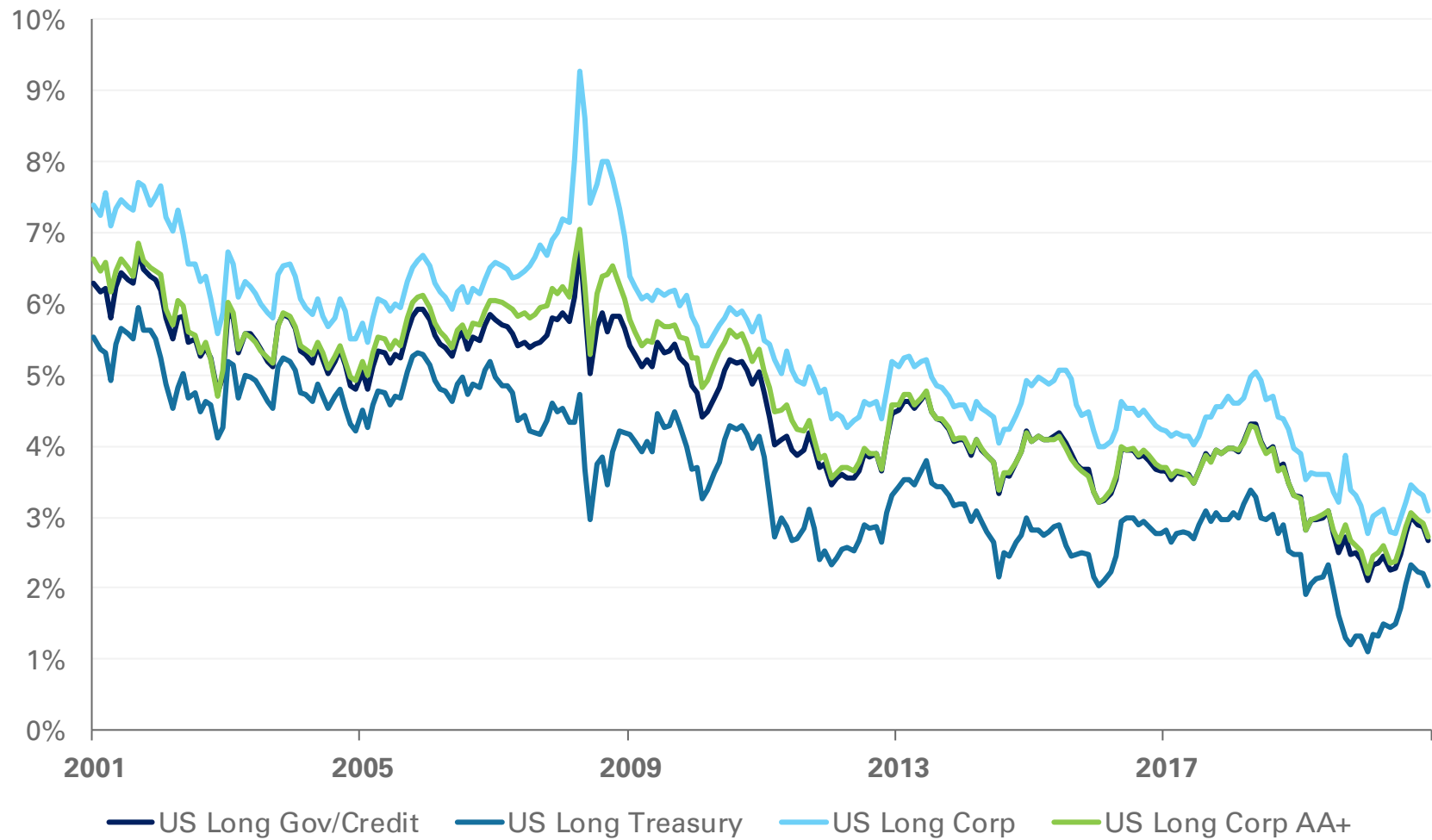
US TREASURY YIELD CURVE



US TREASURY REAL YIELD CURVE



LONG DURATION YIELDS



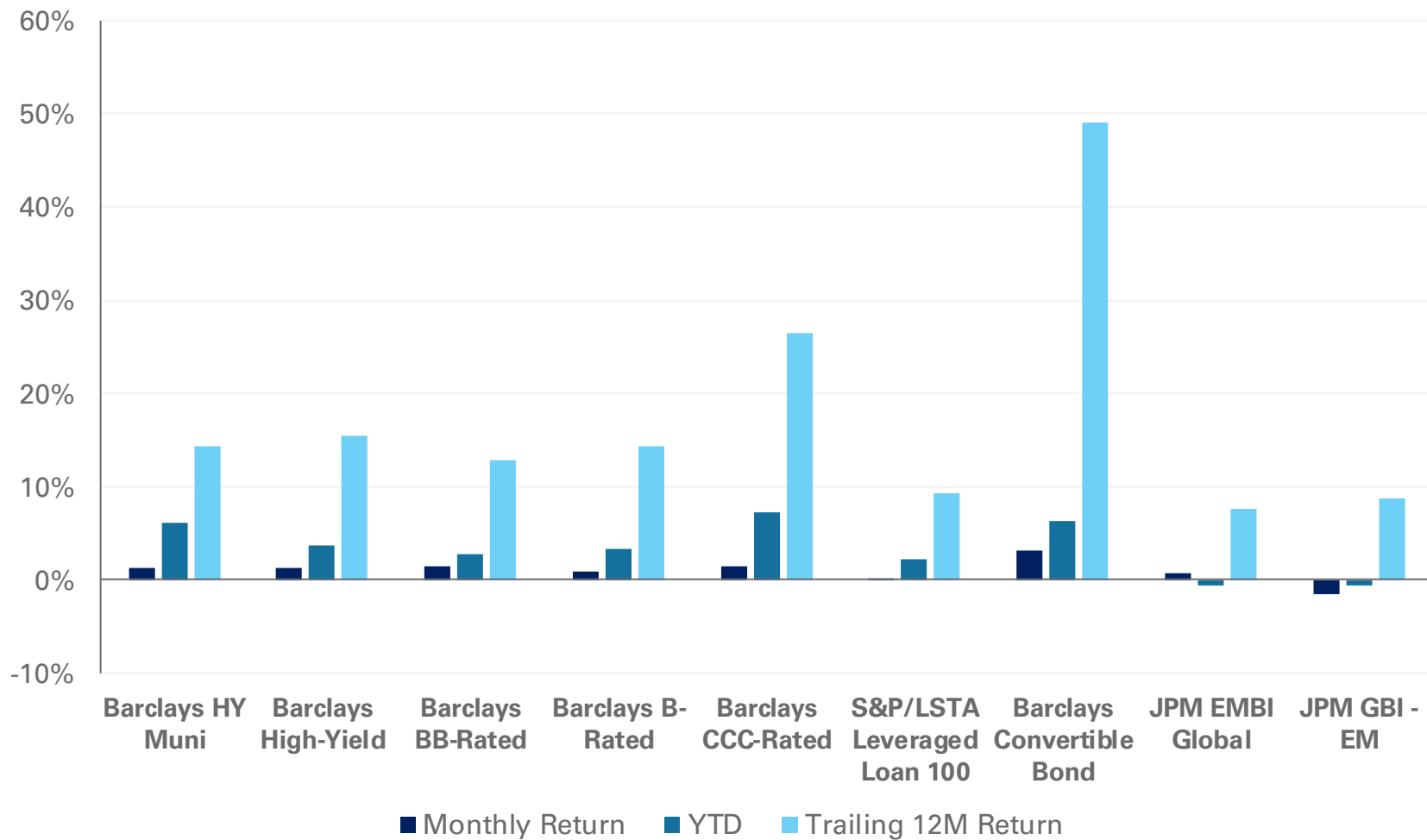
LONG DURATION CORPORATE SPREADS





RETURN-SEEKING CREDIT

RETURN-SEEKING CREDIT INDEX PERFORMANCE

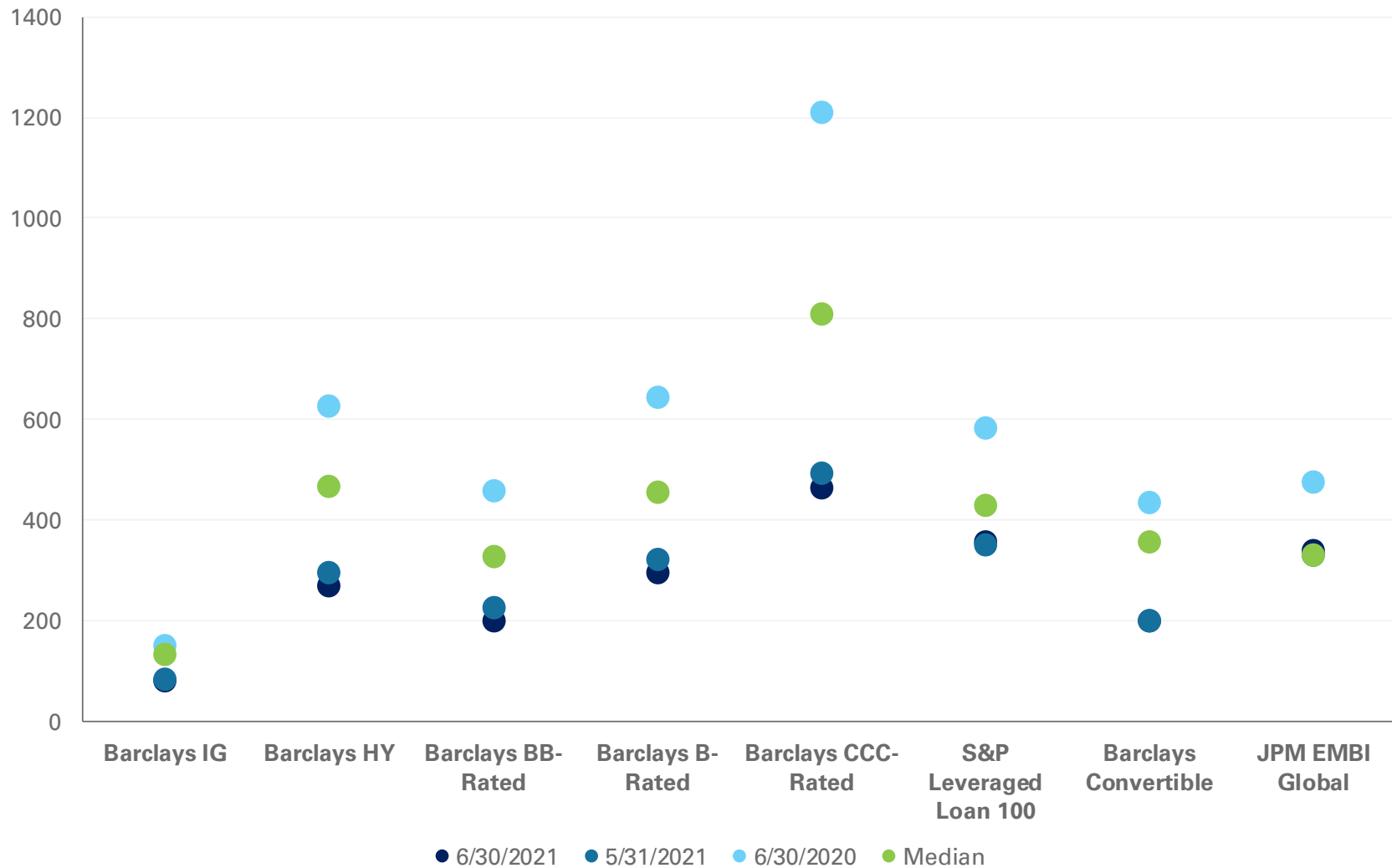


RETURN-SEEKING CREDIT CHARACTERISTICS

	Yield to Worst	Spread (bps)	Duration (Years)
Barclays HY Muni	3.09%	-	5.9
Barclays High-Yield	3.75%	268	3.8
Barclays BB-Rated	3.04%	200	4.7
Barclays B-Rated	4.06%	294	3.0
Barclays CCC-Rated	5.65%	462	2.5
S&P/LSTA Leveraged Loan 100	3.70%	355	-
Barclays Convertible Bond	1.16%	198	1.7
JPM EMBI Global	4.91%	339	7.8
JPM GBI - EM	4.68%	-	5.4



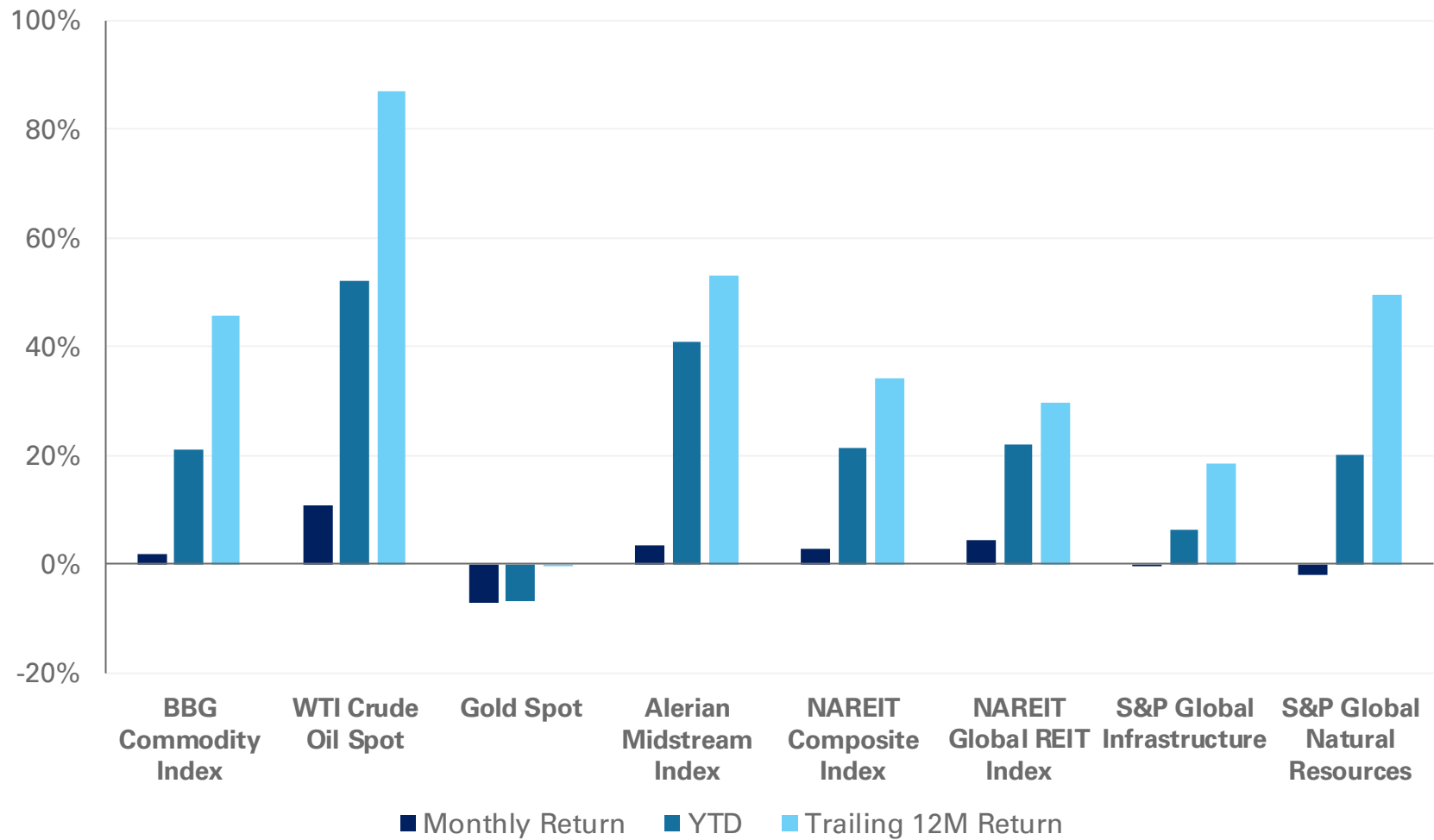
CREDIT SPREADS





REAL ASSETS

REAL ASSETS INDEX PERFORMANCE



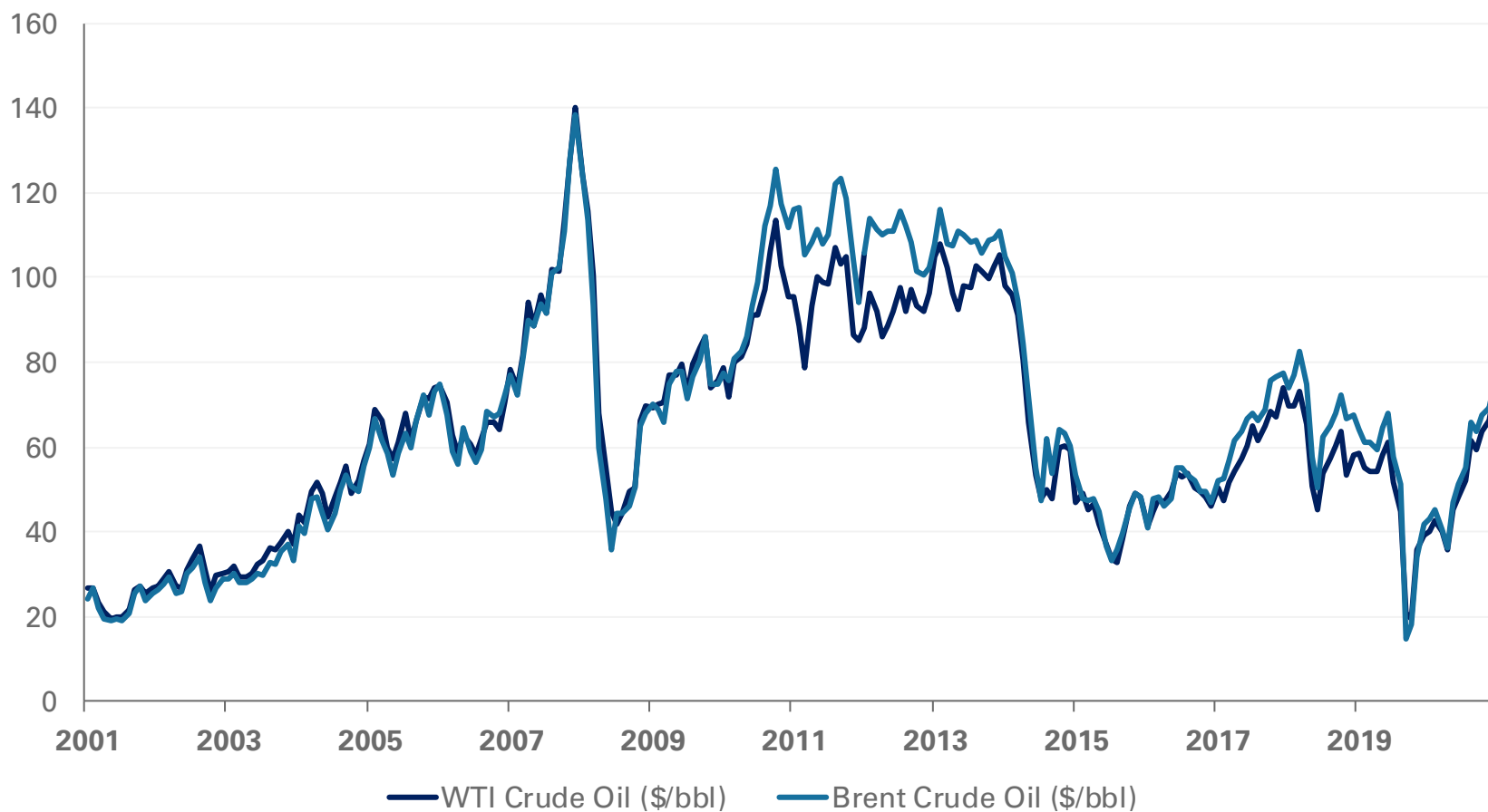
REAL ASSETS INDEX PERFORMANCE

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	1.9%	13.3%	21.1%	45.4%	3.9%	2.4%
Bloomberg Sub Agriculture Index	-0.2%	12.8%	20.4%	63.3%	10.5%	0.4%
Coffee	-2.9%	25.8%	19.2%	44.5%	0.6%	-7.6%
Corn	-0.5%	18.8%	38.9%	85.0%	13.6%	2.6%
Cotton	2.4%	2.3%	4.3%	30.2%	-3.0%	4.1%
Soybean	-2.2%	4.6%	14.8%	69.4%	14.5%	0.9%
Soybean Oil	2.2%	31.8%	67.0%	145.9%	29.2%	13.2%
Sugar	2.6%	20.6%	20.4%	47.4%	8.0%	-6.9%
Wheat	1.5%	8.5%	4.0%	31.2%	6.3%	-1.0%
Bloomberg Sub Energy	11.4%	23.2%	44.6%	53.9%	-10.4%	-3.8%
Brent Crude	9.2%	20.7%	48.8%	77.0%	-1.5%	7.1%
Heating Oil	4.3%	19.7%	43.7%	66.7%	-5.4%	2.9%
Natural Gas	21.1%	30.3%	34.2%	25.2%	-20.4%	-19.6%
Unleaded Gas	4.9%	14.9%	48.1%	88.8%	-0.8%	5.0%
WTI Crude Oil	10.9%	24.4%	52.4%	81.1%	-13.3%	-3.0%
Bloomberg Sub Industrial Metals	-3.2%	9.4%	17.6%	49.1%	7.5%	11.0%
Aluminum	1.7%	13.5%	25.6%	50.6%	2.9%	6.8%
Copper	-8.4%	7.0%	21.5%	55.0%	12.4%	13.1%
Nickel	0.5%	13.2%	9.2%	40.6%	6.5%	13.2%
Zinc	-2.9%	5.0%	6.9%	41.5%	4.1%	9.1%
Bloomberg Sub Precious Metals	-6.9%	3.9%	-5.7%	4.1%	11.6%	4.8%
Gold	-7.0%	3.2%	-7.0%	-3.9%	10.6%	4.7%
Silver	-6.6%	6.5%	-1.2%	38.0%	15.2%	5.3%
Bloomberg Sub Livestock	-2.8%	-1.5%	8.8%	26.8%	-6.7%	-4.9%
Lean Hogs	-11.3%	0.2%	27.8%	81.3%	-11.8%	-10.4%
Live Cattle	3.5%	-2.8%	-0.6%	6.1%	-4.0%	-1.6%



OIL MARKETS

WTI VERSUS BRENT CRUDE SPOT PRICES



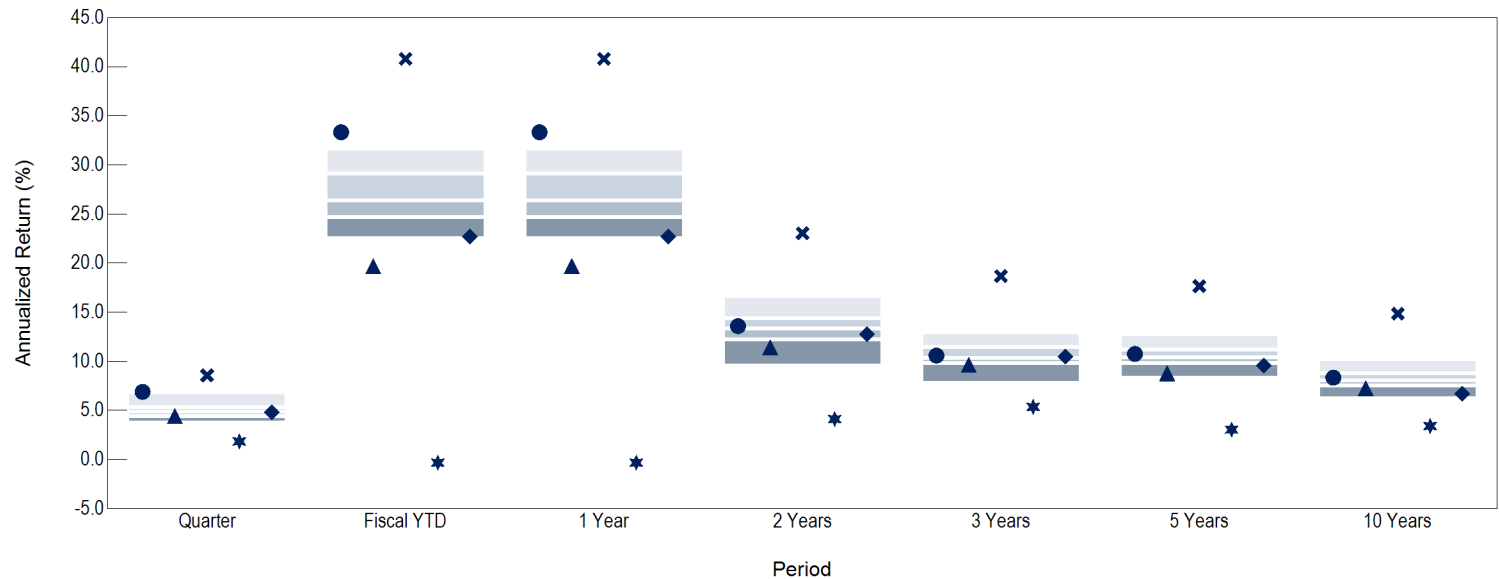
GOLD SPOT PRICE



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

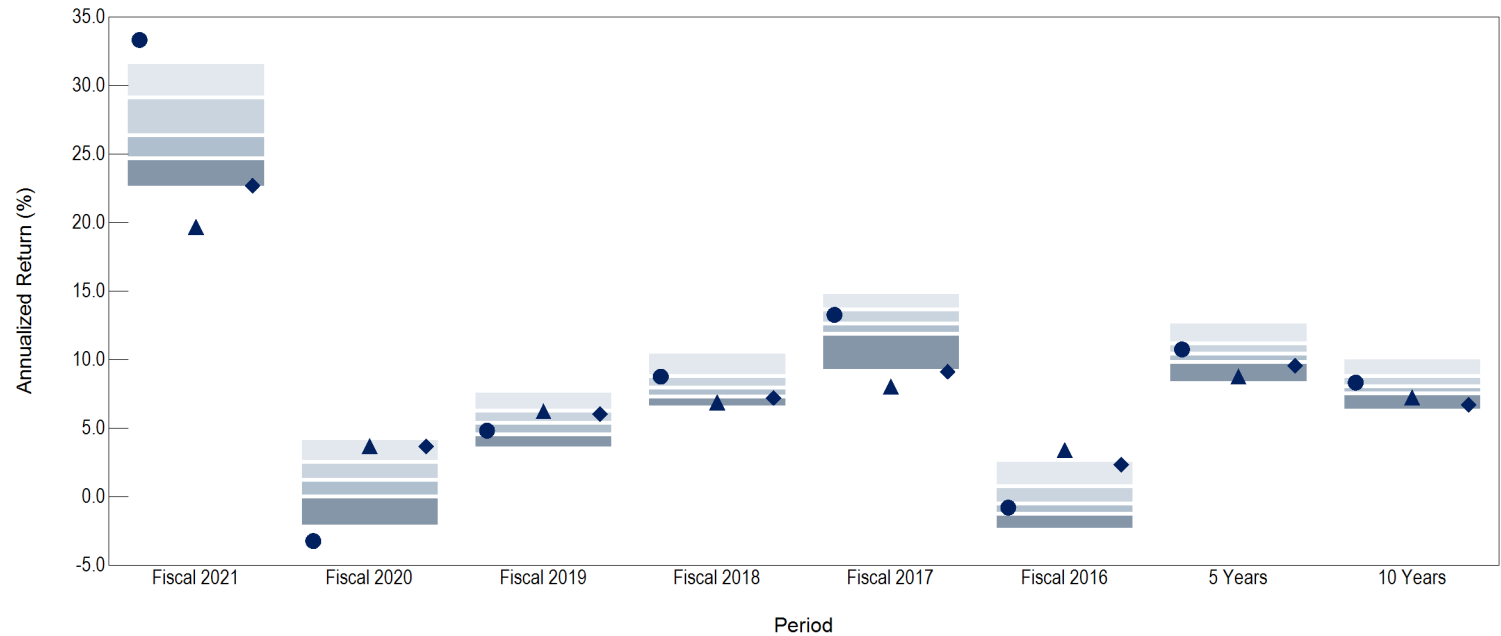
Total Fund vs. InvMetrics Public DB > \$1B Net



		Return (Rank)													
5th Percentile		6.8		31.7		31.7		16.6		12.9		12.7		10.1	
25th Percentile		5.3		29.1		29.1		14.4		11.4		11.2		8.8	
Median		4.9		26.4		26.4		13.4		10.4		10.5		8.1	
75th Percentile		4.5		24.7		24.7		12.2		9.9		9.8		7.6	
95th Percentile		3.8		22.5		22.5		9.6		7.8		8.3		6.3	
# of Portfolios		35		35		35		35		35		35		33	
●	Total Fund	6.9 (4)		33.3 (1)		33.3 (1)		13.6 (46)		10.6 (49)		10.7 (40)		8.3 (47)	
▲	Policy Index	4.4 (77)		19.7 (99)		19.7 (99)		11.4 (87)		9.6 (84)		8.8 (93)		7.2 (81)	
×	S&P 500	8.5 (1)		40.8 (1)		40.8 (1)		23.0 (1)		18.7 (1)		17.6 (1)		14.8 (1)	
*	BBgBarc US Aggregate TR	1.8 (99)		-0.3 (99)		-0.3 (99)		4.1 (99)		5.3 (99)		3.0 (99)		3.4 (99)	
◆	60% MSCI ACWI (Net) / 40% FTSE WGBI	4.8 (59)		22.7 (95)		22.7 (95)		12.8 (67)		10.5 (50)		9.5 (83)		6.7 (90)	

SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

Total Fund vs. InvMetrics Public DB > \$1B Net



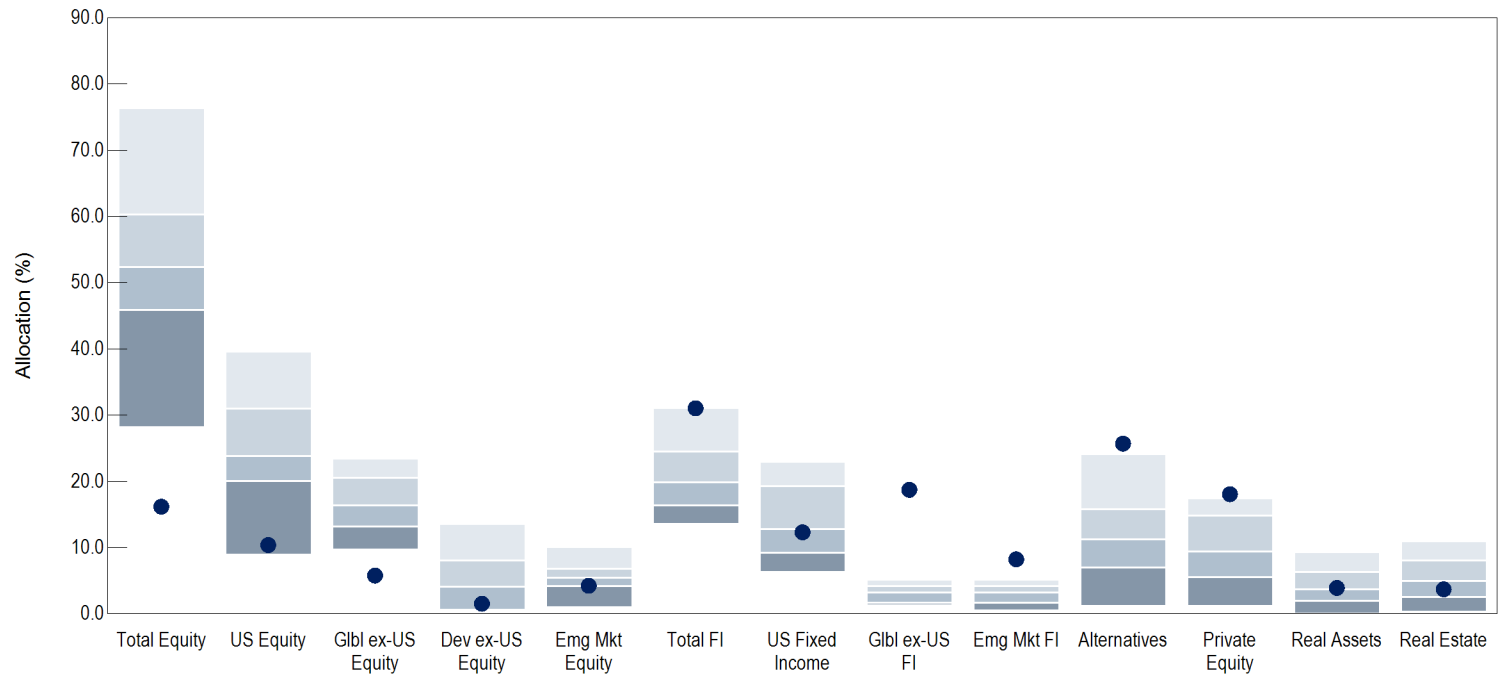
	Return (Rank)							
5th Percentile	31.7	4.2	7.7	10.5	14.9	2.7	12.7	10.1
25th Percentile	29.1	2.6	6.3	8.8	13.7	0.8	11.2	8.8
Median	26.4	1.3	5.4	8.0	12.7	-0.5	10.5	8.1
75th Percentile	24.7	0.0	4.6	7.3	11.9	-1.2	9.8	7.6
95th Percentile	22.5	-2.2	3.5	6.5	9.2	-2.4	8.3	6.3
# of Portfolios	35	71	77	51	65	55	35	33
● Total Fund	33.3 (1)	-3.2 (98)	4.8 (69)	8.8 (29)	13.3 (33)	-0.8 (66)	10.7 (40)	8.3 (47)
▲ Policy Index	19.7 (99)	3.7 (14)	6.2 (27)	6.9 (91)	8.0 (96)	3.4 (1)	8.8 (93)	7.2 (81)
◆ 60% MSCI ACWI (Net) / 40% FTSE WGBI	22.7 (95)	3.7 (14)	6.0 (31)	7.2 (79)	9.1 (96)	2.3 (8)	9.5 (83)	6.7 (90)



SAN BERNARDINO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

Total Plan Allocation vs. InvMetrics Public DB > \$1B Net



	Allocation (Rank)													
5th Percentile	76.4	39.6	23.5	13.6	10.1	31.1	23.0	5.1	5.1	24.1	17.4	9.3	11.0	--
25th Percentile	60.4	31.0	20.7	8.2	6.9	24.6	19.3	4.3	4.3	15.9	15.0	6.4	8.2	--
Median	52.4	23.9	16.5	4.2	5.6	19.9	12.9	3.3	3.3	11.4	9.5	3.8	5.1	--
75th Percentile	46.0	20.2	13.3	0.7	4.3	16.5	9.3	1.8	1.8	7.1	5.6	2.1	2.6	--
95th Percentile	28.3	9.0	9.9	0.7	1.1	13.7	6.4	1.4	0.7	1.3	1.3	0.1	0.4	--
# of Portfolios	26	17	22	13	19	26	17	12	12	25	21	11	22	--
● Total Fund	16.2 (99)	10.4 (93)	5.8 (99)	1.5 (68)	4.3 (76)	31.0 (6)	12.3 (64)	18.7 (1)	8.2 (1)	25.7 (4)	18.1 (5)	3.9 (50)	3.7 (69)	--

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Past performance is no guarantee of future results.

Returns for pooled funds, e.g. mutual funds and collective investment trusts, are collected from third parties; they are not generally calculated by NEPC. Returns for separate accounts, with some exceptions, are calculated by NEPC. Returns are reported net of manager fees unless otherwise noted.

A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

NEPC’s preferred data source is the plan’s custodian bank or record-keeper. If data cannot be obtained from one of the preferred data sources, data provided by investment managers may be used. Information on market indices and security characteristics is received from additional providers. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within. In addition, some index returns displayed in this report or used in calculation of a policy index, allocation index or other custom benchmark may be preliminary and subject to change.

All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv

