

QUARTERLY PERFORMANCE REPORT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

November 18, 2019

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VCERA
VENTURA COUNTY EMPLOYEES'
RETIREMENT ASSOCIATION



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MARKET ENVIRONMENT UPDATE AND OUTLOOK

NEPC, LLC

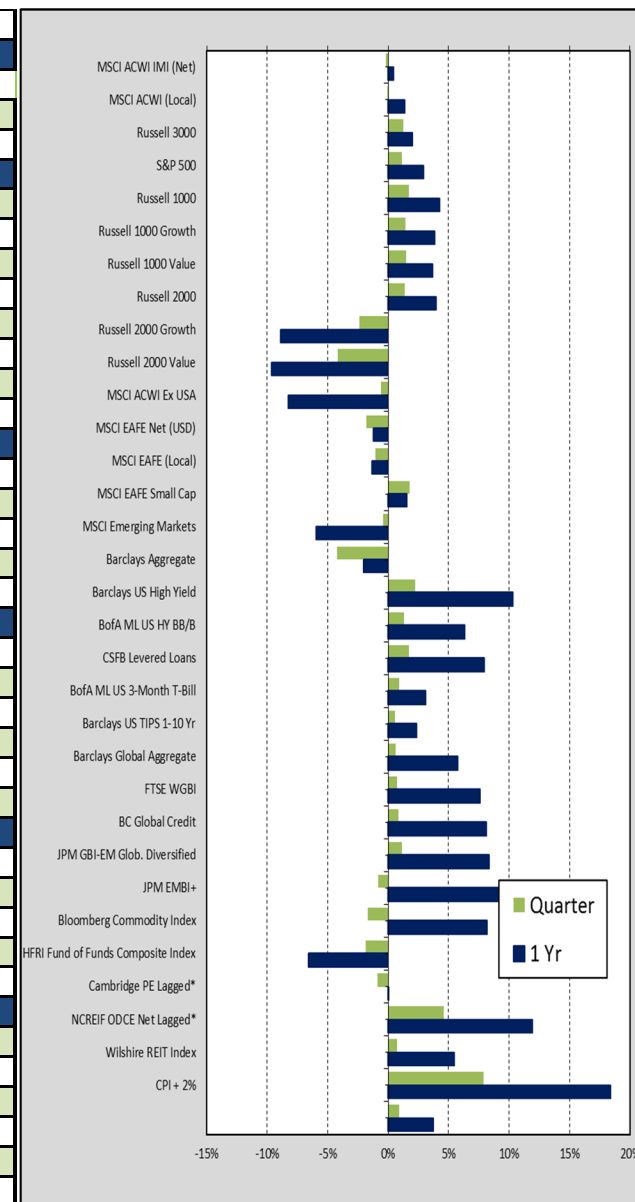
ECONOMIC ENVIRONMENT

- **Q3 Real GDP (advance estimate) increased at an annual rate of 1.9%.**
 - Retail sales ended August at +4.4% on a YoY basis. In the same period last year the YoY growth rate was 3.3%.
 - Corporate profits (ended April) as a percent of GDP increased to 8.7% from 8.5% (in January) and remain elevated relative to historical levels.
 - The inventory-to-sales ratio ended August flat at 1.4 from June levels and has remained relatively constant since early 2010.
 - The U.S. trade deficit widened ended August as imports increased at a faster pace than exports. The trade deficit with China declined sharply (3.1%).
- **The unemployment rate decreased to 3.5% in Q3 from 3.7% in Q2; U-6, a broader measure of unemployment, decreased to 6.9% from 7.2% during the third quarter.**
- **The Case-Shiller Home Price Index (ended August) increased to 212.1 from 210.9 (in June) and remains at levels higher than that of pre-financial crisis levels of 150.9.**
- **Rolling 12-month seasonally-adjusted CPI saw a down-tick to 1.74% from 1.78% ended Q2; Capacity Utilization decreased to 77.5% from 77.7% in Q3.**
- **Fed Funds rate was decreased by 0.50% in Q3 to a targeted range of 1.75%-to-2.00%. The 10-year Treasury Yield (constant maturity) finished Q3 down to 1.7% from 2.1%.**
- **The Fed balance sheet increased in size ended Q3, while the European Central Bank balance sheet continues to grow.**
 - The Fed voted to end (as of July 31), two months earlier than planned, the reduction of bonds held on its balance sheet.
 - ECB held its benchmark refinance rate at 0%, deposit rates were cut to -0.5% from -0.4%.
- **S&P valuations decreased in Q3, remaining above the 10-year and long-term averages.**
 - Cyclically adjusted Shiller PE ratio (28.91x) is above the long-term average of 16.6x and above the 10-year average of 25.3x.



MARKET ENVIRONMENT – Q3 2019 OVERVIEW

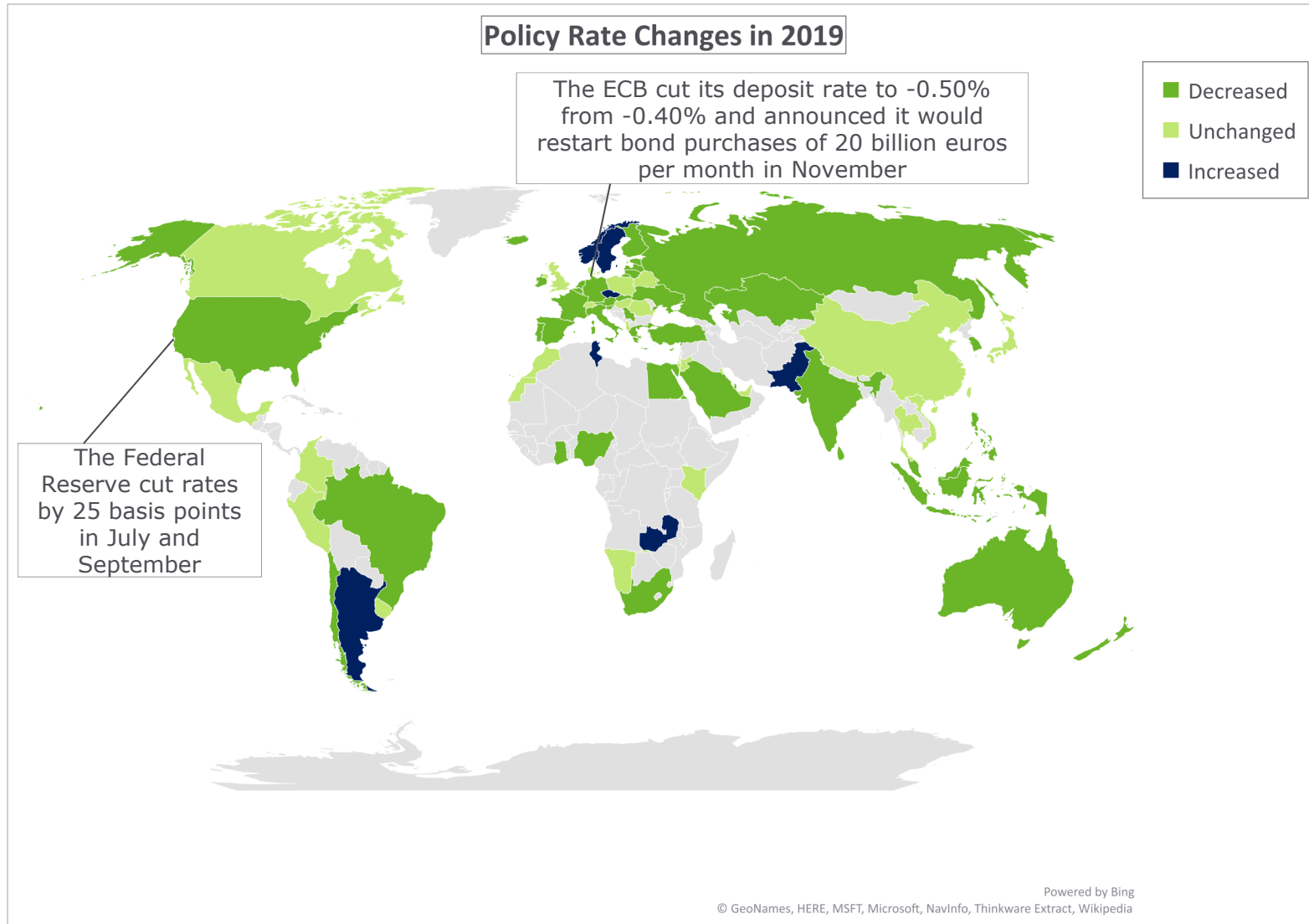
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	-0.18%	0.48%	9.36%	6.61%	8.45%
MSCI ACWI Net (USD)	World W/O Small Cap	-0.03%	1.38%	9.71%	6.65%	8.35%
MSCI ACWI (Local)	World (Local Currency)	1.27%	1.99%	10.29%	7.88%	9.36%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	1.16%	2.92%	12.83%	10.44%	13.08%
S&P 500	Large Core	1.70%	4.25%	13.39%	10.84%	13.24%
Russell 1000	Large Core	1.42%	3.87%	13.19%	10.62%	13.23%
Russell 1000 Growth	Large Growth	1.49%	3.71%	16.89%	13.39%	14.94%
Russell 1000 Value	Large Value	1.36%	4.00%	9.43%	7.79%	11.46%
Russell 2000	Small Core	-2.40%	-8.89%	8.23%	8.19%	11.19%
Russell 2000 Growth	Small Growth	-4.17%	-9.63%	9.79%	9.08%	12.25%
Russell 2000 Value	Small Value	-0.57%	-8.24%	6.54%	7.17%	10.06%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	-1.80%	-1.23%	6.33%	2.90%	4.46%
MSCI EAFE Net (USD)	Int'l Developed	-1.07%	-1.34%	6.48%	3.27%	4.90%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	1.75%	1.56%	8.30%	6.02%	7.04%
MSCI EAFE Small Cap	Small Cap Int'l	-0.44%	-5.93%	5.94%	6.02%	7.45%
MSCI Emerging Markets	Emerging Equity	-4.25%	-2.02%	5.97%	2.33%	3.37%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	2.27%	10.30%	2.92%	3.38%	3.75%
Barclays US High Yield	High Yield	1.33%	6.36%	6.07%	5.37%	7.94%
BofA ML US HY BB/B	High Yield	1.71%	7.95%	6.02%	5.50%	7.65%
CSFB Levered Loans	Bank Loans	0.92%	3.11%	4.68%	4.11%	5.38%
BofA ML US 3-Month T-Bill	Cash	0.56%	2.39%	1.54%	0.98%	0.54%
Barclays US TIPS 1-10 Yr	Inflation	0.60%	5.75%	1.94%	1.95%	2.69%
Global Fixed Income Benchmarks						
Barclays Global Aggregate	Global Core Bonds	0.71%	7.60%	1.59%	1.99%	2.34%
FTSE WGBI	World Gov. Bonds	0.85%	8.13%	1.19%	1.80%	1.69%
BC Global Credit	Global Bonds	1.15%	8.36%	3.20%	2.81%	3.82%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	-0.79%	10.13%	3.06%	0.55%	2.47%
JPM EMBI+	Em. Mkt. Bonds	-1.68%	8.20%	1.87%	4.31%	5.89%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	-1.84%	-6.58%	-1.50%	-7.18%	-4.32%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	-0.90%	0.01%	3.16%	1.95%	2.67%
Cambridge PE Lagged*	Private Equity	4.62%	11.93%	15.63%	11.70%	14.67%
NCREIF ODCE Net Lagged*	Real Estate	0.77%	5.47%	6.61%	8.77%	8.87%
Wilshire REIT Index	REIT	7.88%	18.39%	7.21%	10.17%	13.06%
CPI + 2%	Inflation/Real Assets	0.91%	3.76%	4.12%	3.57%	3.77%



* As of 6/30/2019



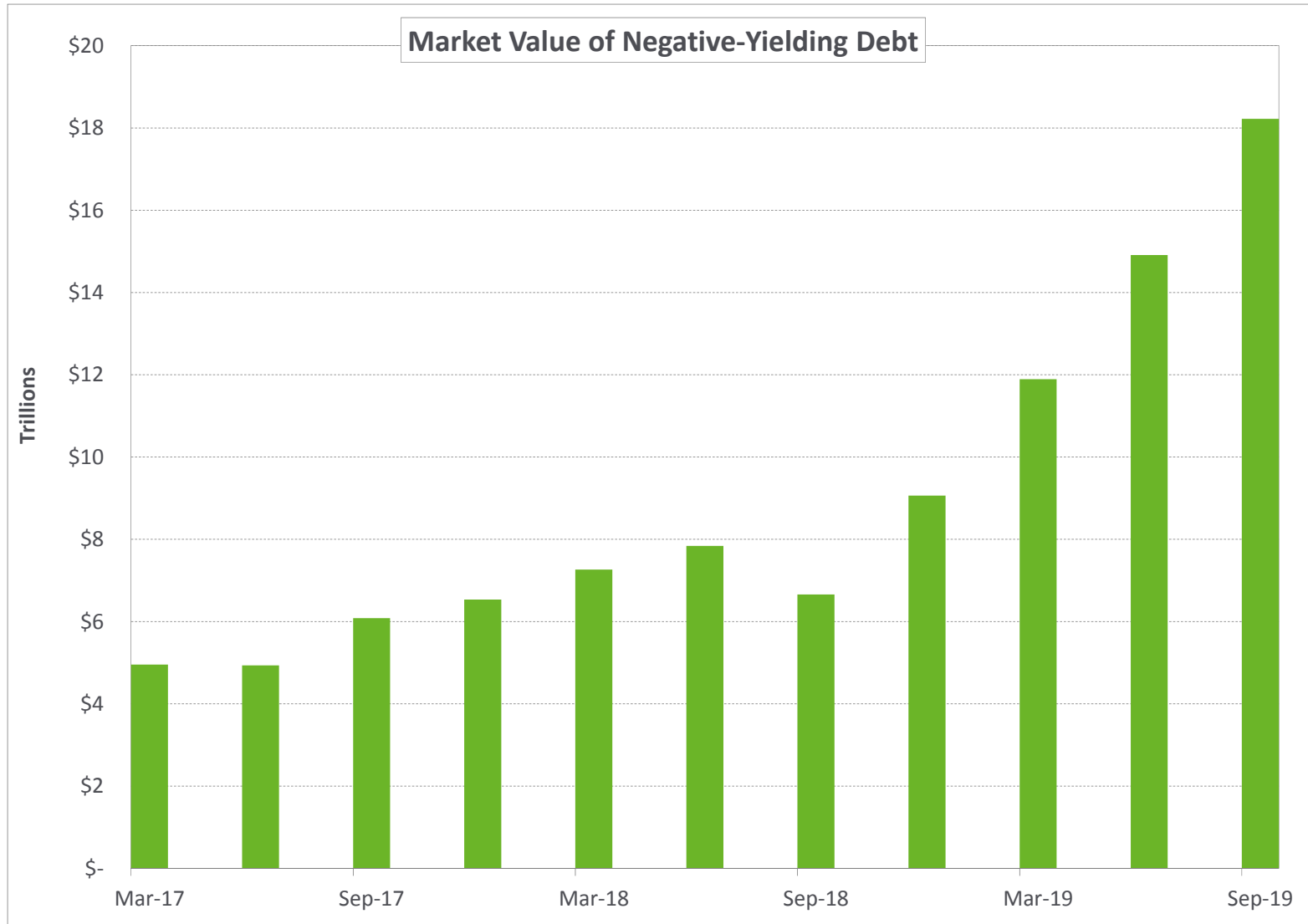
A SHIFT TOWARD EASIER MONETARY POLICY



Source: FactSet



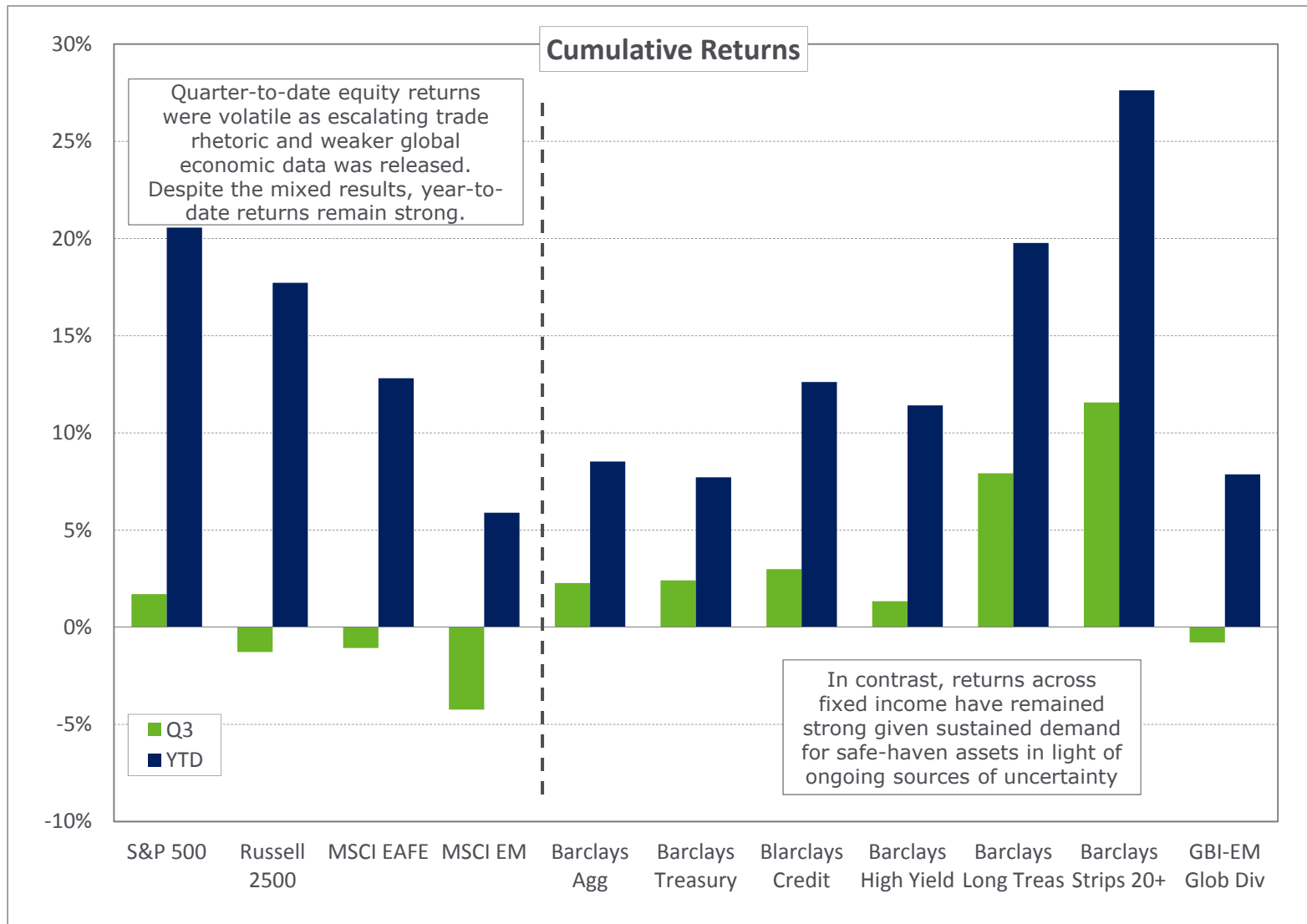
NEGATIVE YIELDS CONTINUE TO SPREAD



Source: FactSet



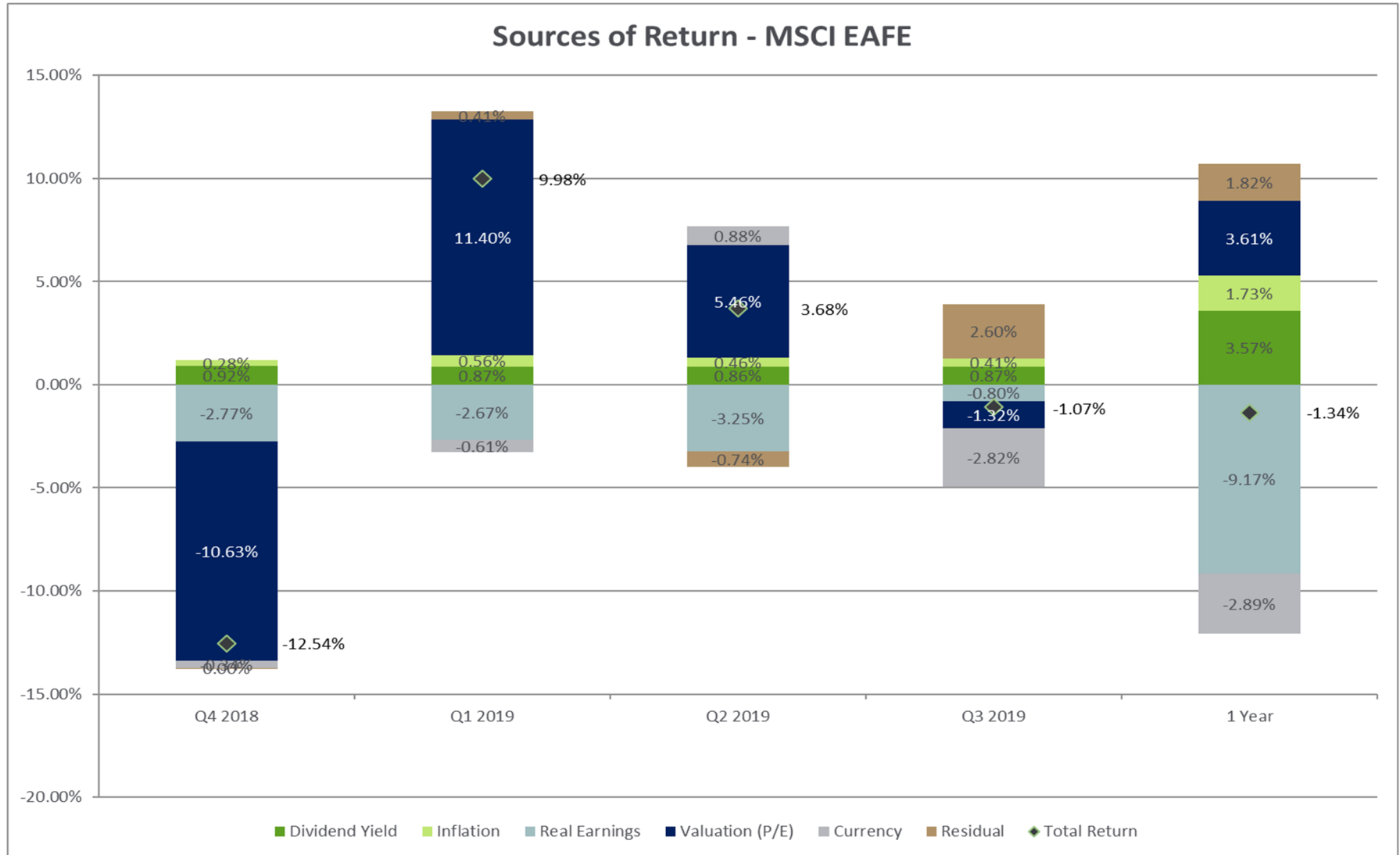
YTD RETURNS HAVE BEEN STRONG, QTD MIXED



Source: S&P, Russell, MSCI, Barclays, JP Morgan, FactSet; as of 09/30/2019



1 YEAR ATTRIBUTION OF MSCI EAFE RETURNS



Spot Rates

1 USD = 0.871 Euro

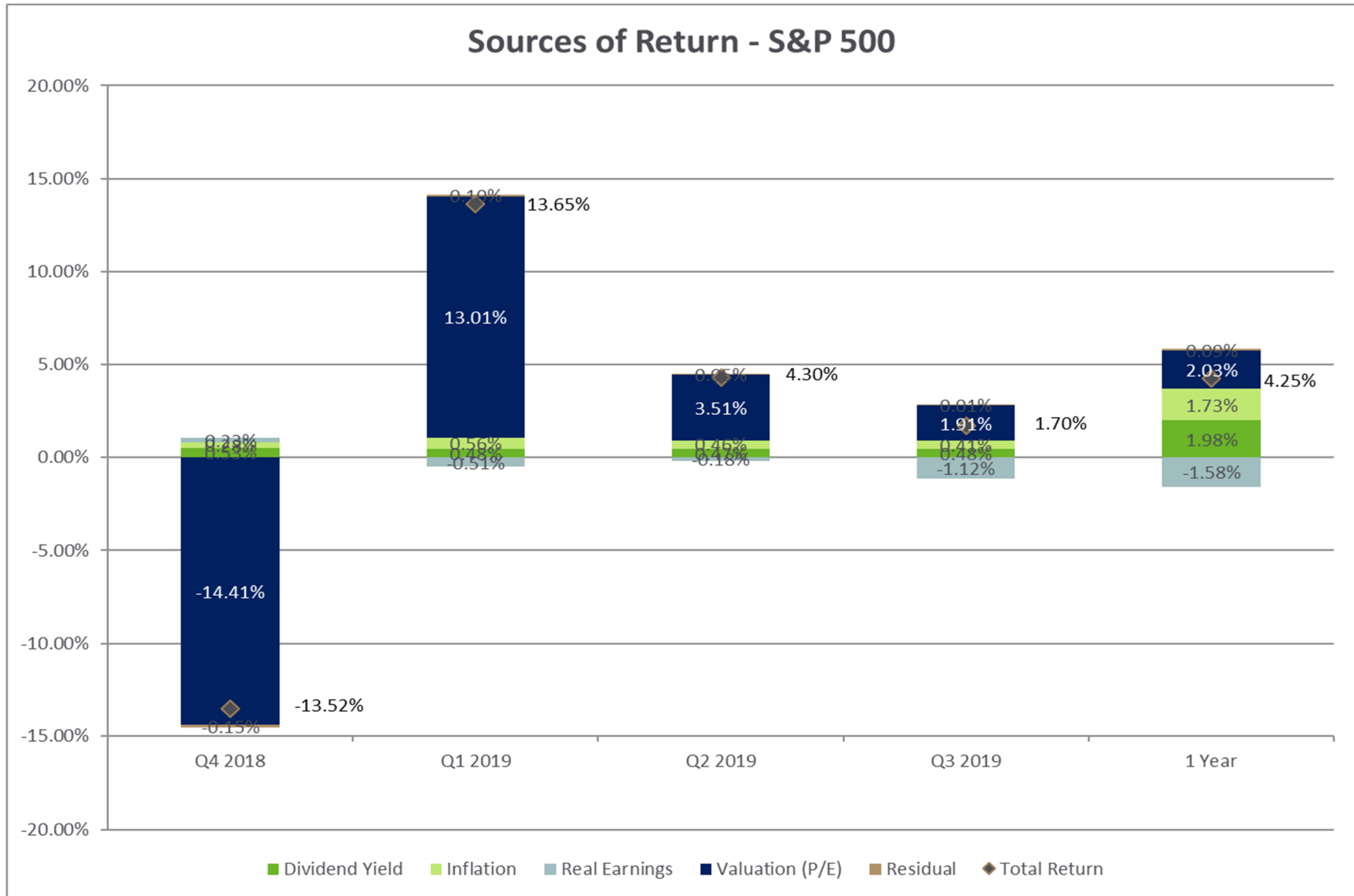
1 USD = 0.890 Euro

1 USD = 0.880 Euro

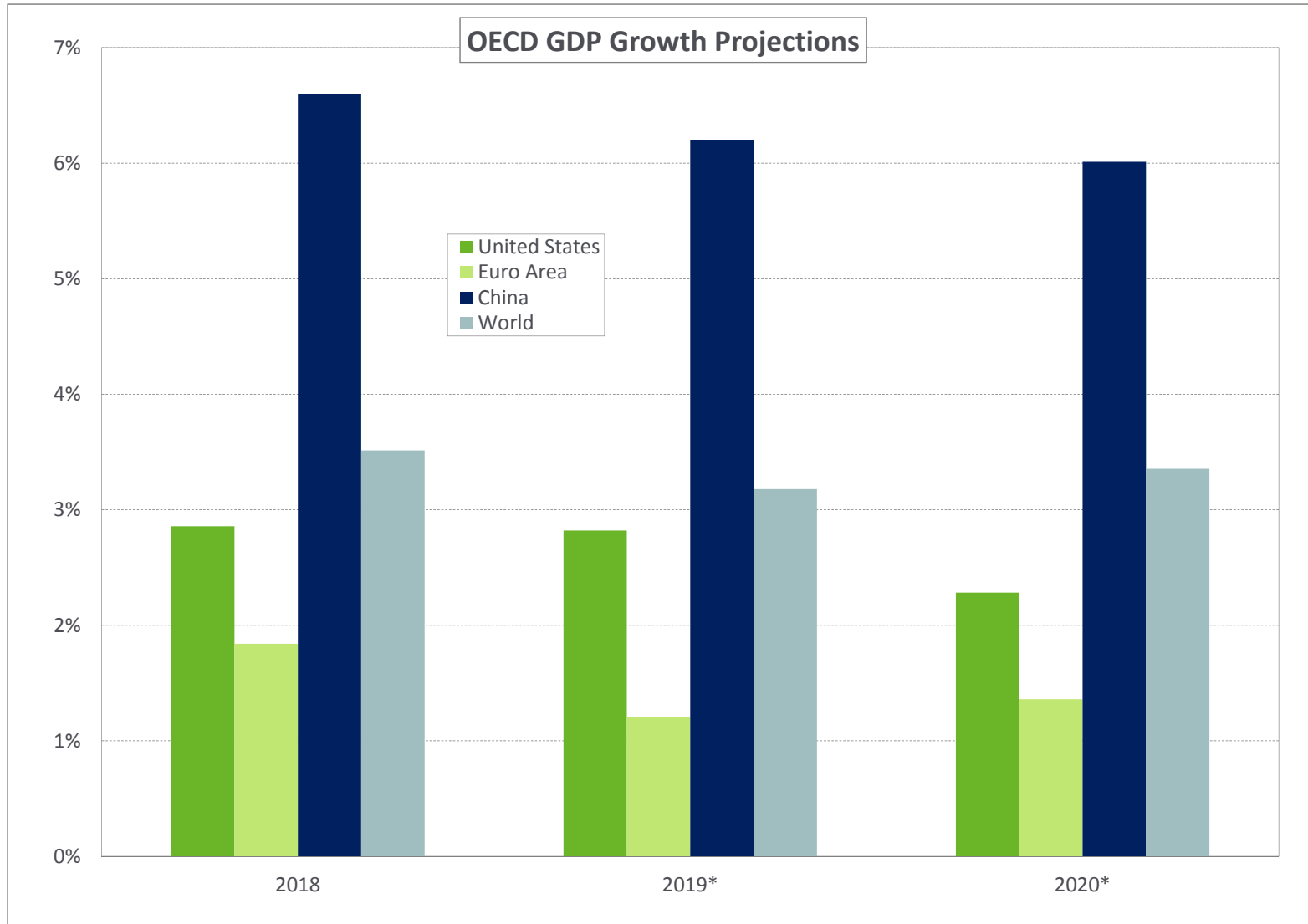
1 USD = 0.912 Euro



1 YEAR ATTRIBUTION OF S&P 500 RETURNS



THE ECONOMIC OUTLOOK HAS DETERIORATED



Source: OECD
2019 and 2020 data represents forecasted data as of 10/7/2019



2019 TRADE TIMELINE



TOTAL FUND PERFORMANCE SUMMARY

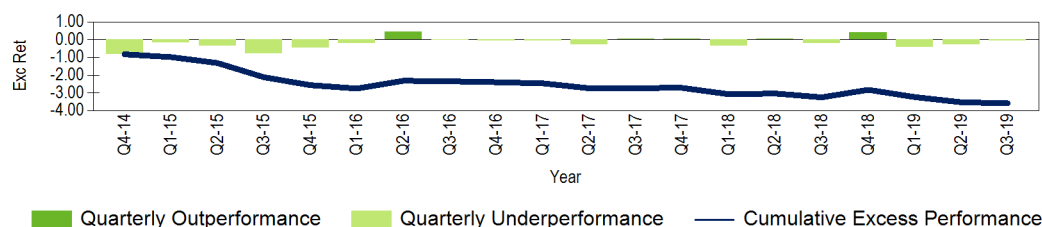
NEPC, LLC

Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE SUMMARY (NET)

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
Total Fund	\$5,901,631,997	0.8%	34	12.9%	22	4.3%	25	8.5%	15	6.5%	32	8.8%	18	8.0%	Apr-94
<i>Policy Index</i>		0.8%	30	13.7%	11	4.6%	21	8.9%	10	7.3%	10	8.7%	21	8.0%	Apr-94
<i>60% MSCI ACWI (Net) / 40% FTSE WGBI</i>		0.4%	64	12.4%	24	4.4%	23	6.4%	97	4.9%	97	5.9%	97	6.4%	Apr-94
<i>60% S&P 500 / 40% BBgBarc Aggregate</i>		2.0%	2	15.9%	1	7.1%	1	9.3%	6	8.0%	3	9.6%	1	8.4%	Apr-94
<i>InvMetrics Public DB > \$1B Net Median</i>		0.5%		10.8%		3.6%		7.7%		6.1%		8.0%		7.5%	Apr-94

Quarterly and Cumulative Excess Performance



- For the five year period ending September 30, 2019, the Fund returned 6.5% trailing the policy index by 0.8% and ranking in the 32nd percentile of its peers and underperforming the actuarial assumed rate of 7.25%. The Fund's volatility, as measured by standard deviation, ranked in the 74th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 57th percentile. This means that the Fund has earned more return per unit of volatility taken than 43% of its peers.

- For the three-year period, the Fund returned 8.5%, underperforming the policy index and ranking in the 15th percentile of its peers. The Fund's volatility ranks in the 75th percentile of its peers over this period, with the Fund's Sharpe Ratio ranking in the 49th percentile.

- For the one-year period, the Fund returned 4.3%, underperforming the policy index by 0.3% and ranking in the 25th percentile of the Investment Metrics Public Funds > \$1 Billion Universe (Net of fees).

- For the one-year period, the Fund experienced a net investment gain of \$386.4 million which includes a net investment gain of \$250.1 million in the quarter. Assets increased from \$5.68 billion one year ago to \$5.90 billion.

3 Years Ending September 30, 2019

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	8.5%	15	7.0%	75	1.0	49	1.2	39
Policy Index	8.9%	10	7.3%	82	1.0	40	1.2	41
InvMetrics Public DB > \$1B Net Median	7.7%	--	6.1%	--	1.0	--	1.1	--

5 Years Ending September 30, 2019

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	6.5%	32	7.1%	74	0.8	57	1.1	43
Policy Index	7.3%	10	7.2%	75	0.9	33	1.1	35
InvMetrics Public DB > \$1B Net Median	6.1%	--	6.3%	--	0.8	--	1.0	--

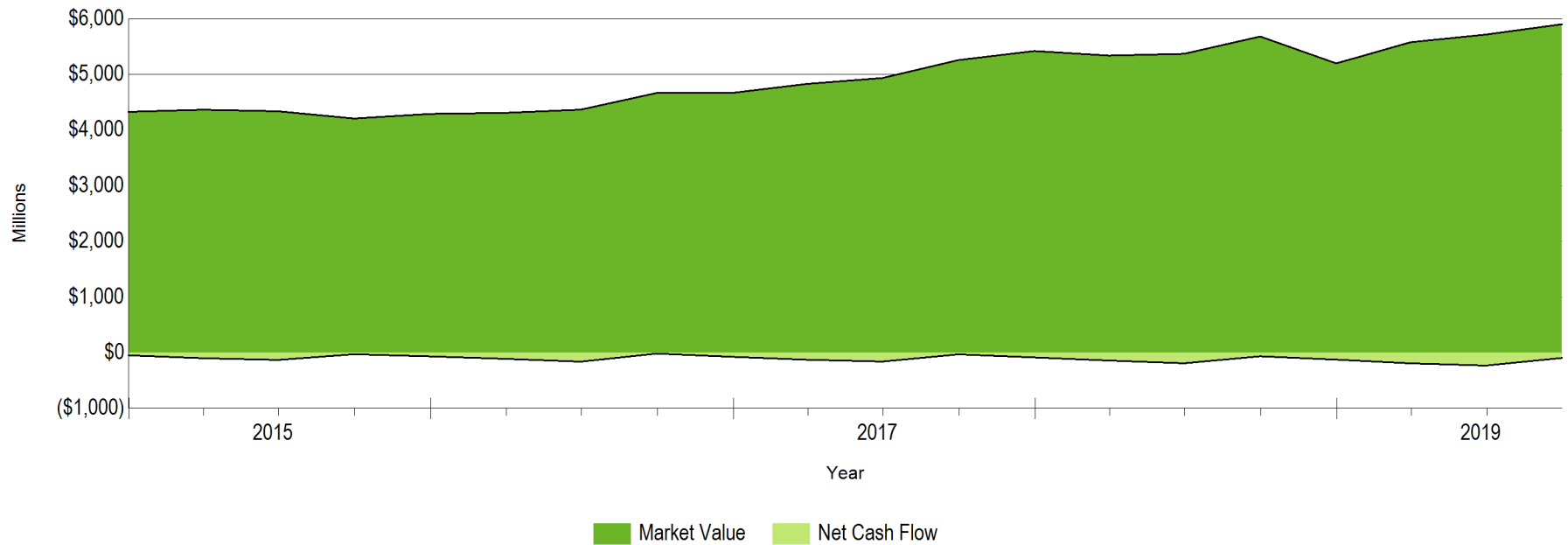
Policy Index as of July 2019: 26% Russell 3000 Index, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 +3%, 19% BBgBarc US Aggregate, 8% NCREIF ODCE, 7% CPI +2%.



Ventura County Employees' Retirement Association

TOTAL FUND ASSET GROWTH SUMMARY

Market Value History
5 Years Ending September 30, 2019

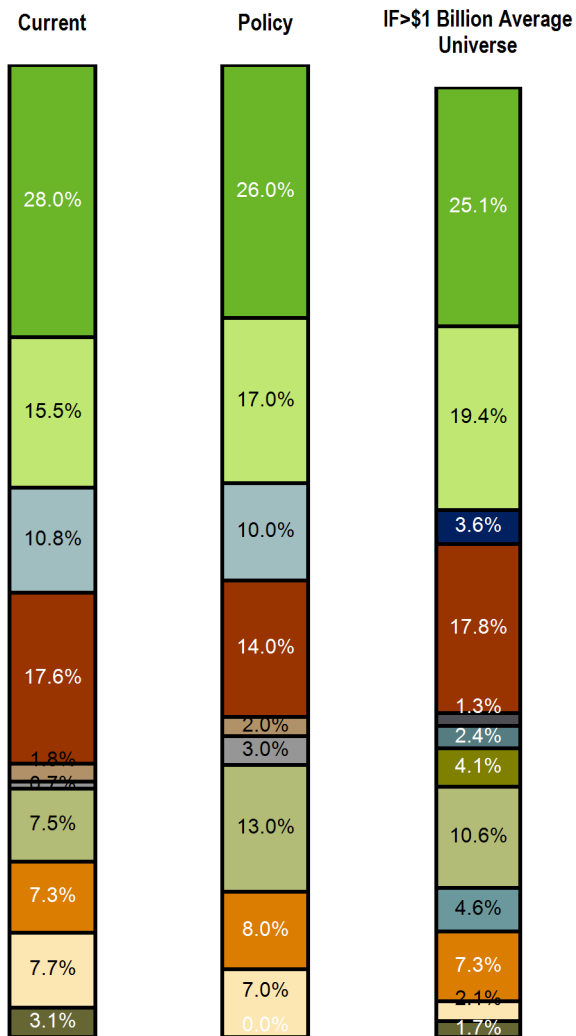


Summary of Cash Flows				
	Last Three Months	One Year	Three Years	Five Years
Beginning Market Value	\$5,716,158,441	\$5,681,345,338	\$4,666,540,419	\$4,328,104,648
Net Cash Flow	\$136,368,619	-\$29,843,537	-\$78,470,031	-\$93,938,648
Net Investment Change	\$49,104,937	\$250,130,196	\$1,313,561,609	\$1,667,465,998
Ending Market Value	\$5,901,631,997	\$5,901,631,997	\$5,901,631,997	\$5,901,631,997



Ventura County Employees' Retirement Association

TOTAL FUND ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target							
	Current	Current	Policy	Difference*	Policy Range	Within Range	
U.S. Equity	\$1,650,156,154	28.0%	26.0%	2.0%	21.0% - 31.0%	Yes	
Non-US Equity	\$915,243,992	15.5%	17.0%	-1.5%	13.0% - 21.0%	Yes	
Emerging Markets Equity	--	--	--	0.0%		--	
Global Equity	\$635,952,625	10.8%	10.0%	0.8%	7.0% - 13.0%	Yes	
U.S. Fixed Income	\$1,039,740,171	17.6%	14.0%	3.6%	14.0% - 22.0%	Yes	
Treasury	\$107,883,030	1.8%	2.0%	-0.2%	0.0% - 5.0%	Yes	
Fixed Income - Emerging	--	--	--	0.0%		--	
Fixed Income - Global	--	--	--	0.0%		--	
GAA/Risk Parity	--	--	--	0.0%		--	
Private Debt	\$43,699,809	0.7%	3.0%	-2.3%	0.0% - 5.0%	Yes	
Private Equity	\$440,424,192	7.5%	13.0%	-5.5%	5.0% - 15.0%	Yes	
Hedge Funds	--	--	--	0.0%		--	
Real Estate	\$432,886,846	7.3%	8.0%	-0.7%	0.0% - 9.0%	Yes	
Real Assets	\$454,395,092	7.7%	7.0%	0.7%	0.0% - 9.0%	Yes	
Cash	\$181,250,086	3.1%	0.0%	3.1%	0.0% - 3.0%	No	
Total	\$5,901,631,997	100.0%	100.0%				

Cash represents assets in Parametric Overlay

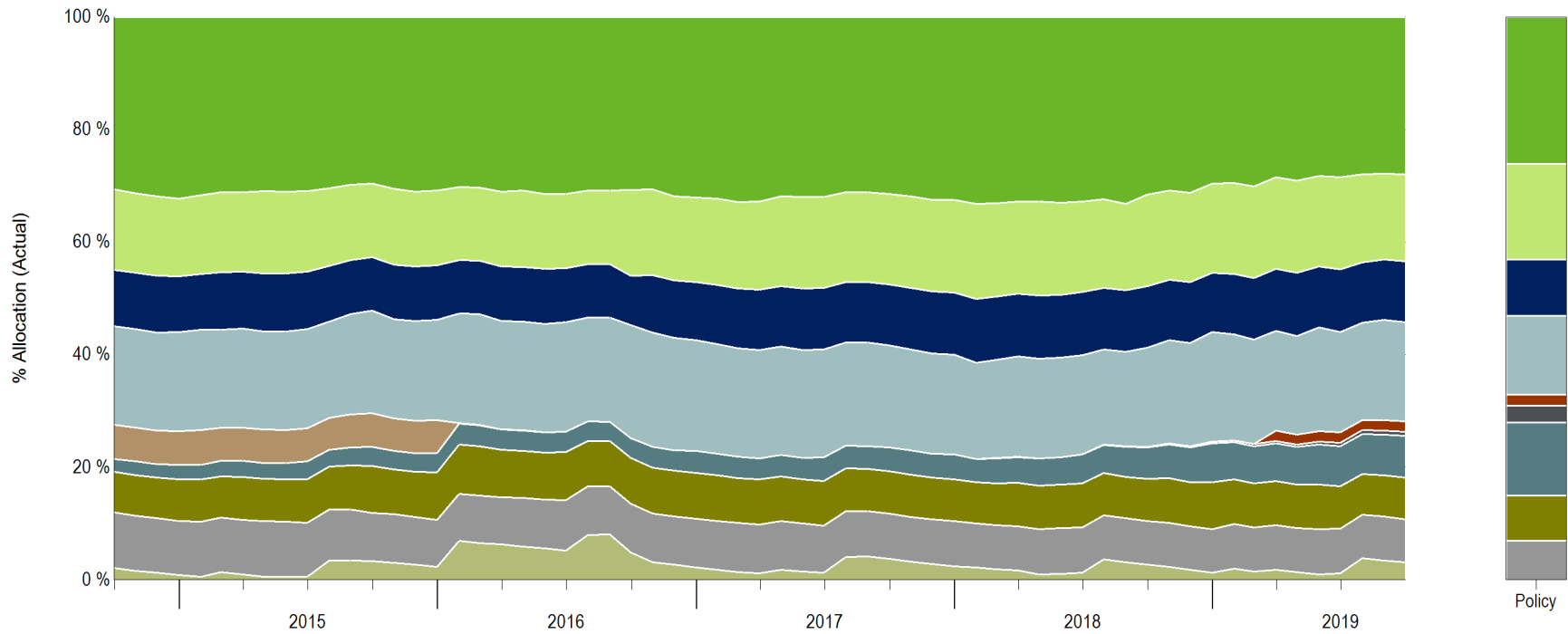
Policy Index as of July 2019: 26% Russell 3000 Index, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 +3%, 19% BBgBarc US Aggregate, 8% NCREIF ODCE, 7% CPI +2%



Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATION HISTORY

Asset Allocation History
5 Years Ending September 30, 2019



- U.S. Equity
- Global Equity
- Treasury
- Private Debt
- Real Estate
- Real Assets
- Cash
- Non-US Equity
- U.S. Fixed Income
- Global Bonds
- Private Equity

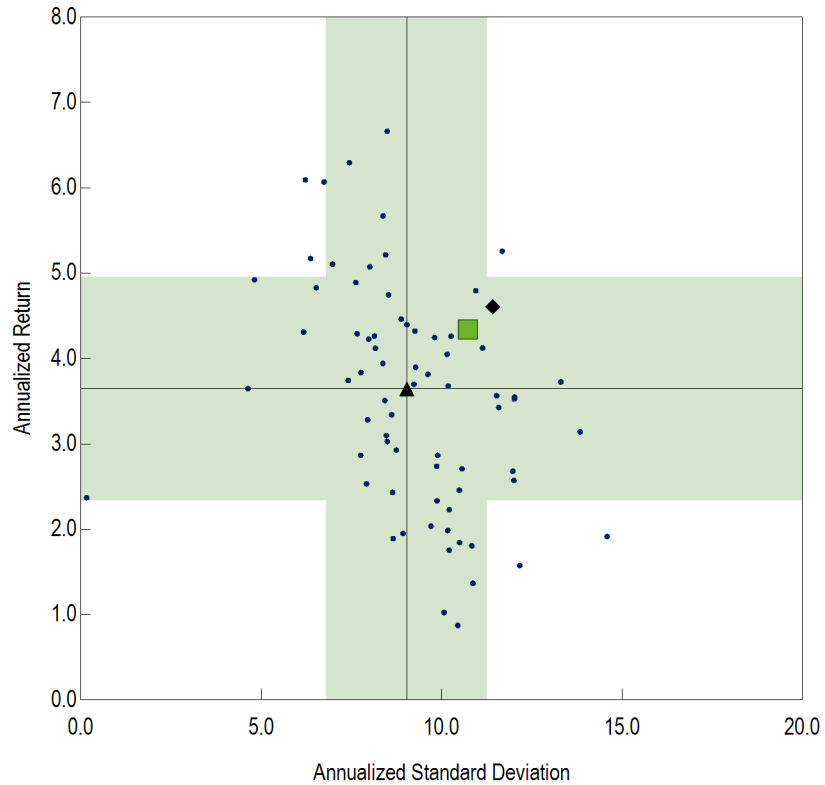
Policy Index shown is most recently approved index



Ventura County Employees' Retirement Association

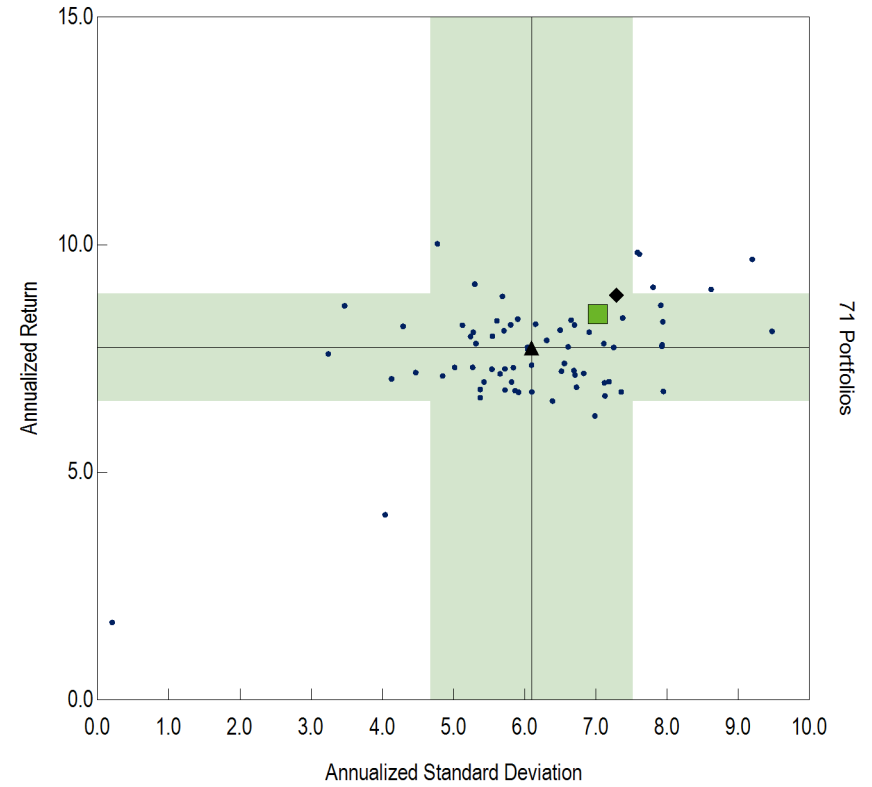
TOTAL FUND RISK/RETURN

1 Years Ending September 30, 2019



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

3 Years Ending September 30, 2019



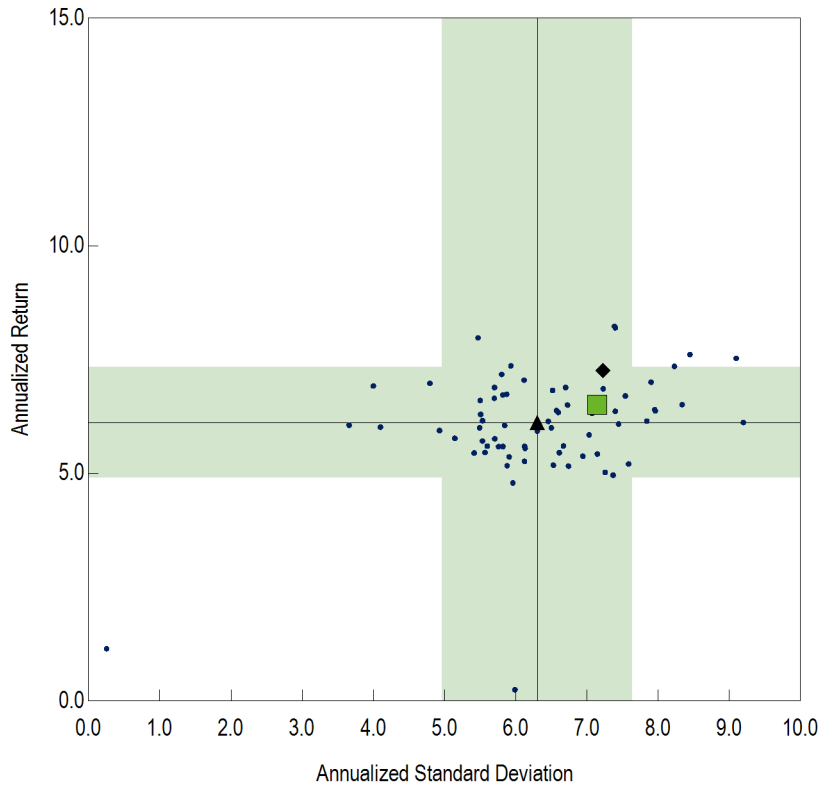
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



Ventura County Employees' Retirement Association

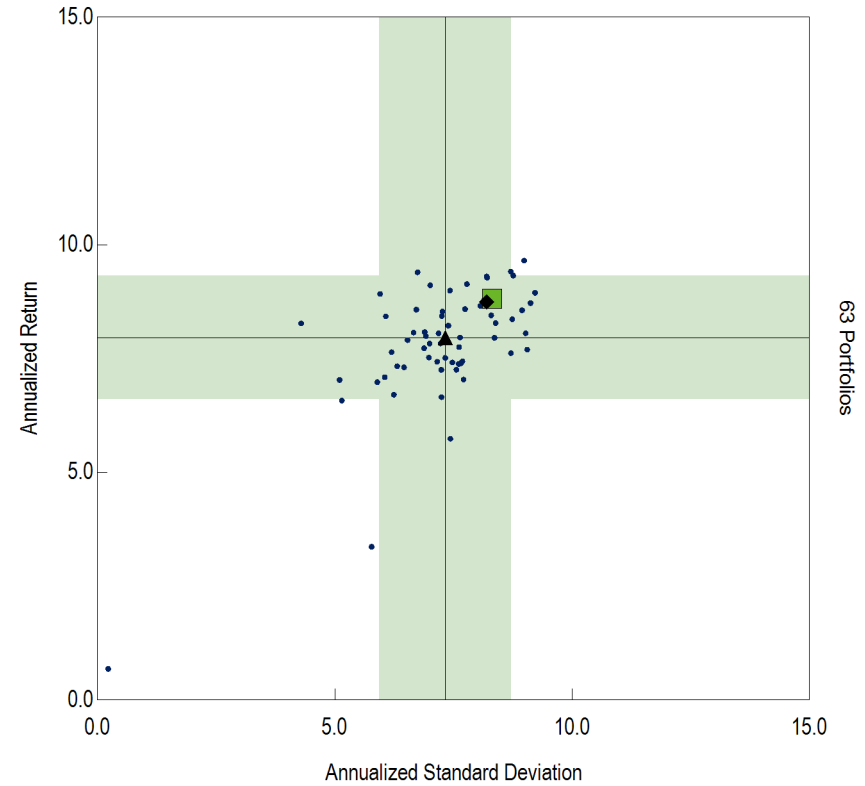
TOTAL FUND RISK/RETURN

5 Years Ending September 30, 2019



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

10 Years Ending September 30, 2019



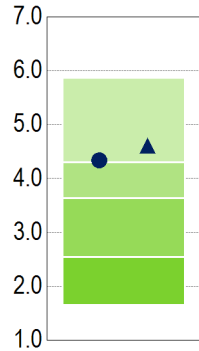
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB > \$1B Net



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

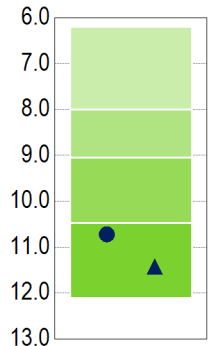
Total Fund vs. InvMetrics Public DB > \$1B Net 1 Year

Anlzd Return



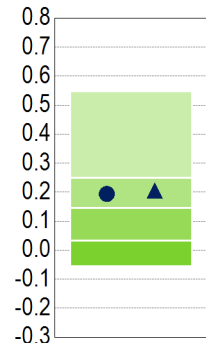
● Total Fund	
Value	4.3
Rank	25
▲ Policy Index	
Value	4.6
Rank	21
Universe	
5th %tile	5.9
25th %tile	4.3
Median	3.6
75th %tile	2.6
95th %tile	1.7

Anlzd Standard Deviation



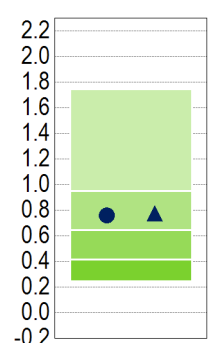
● Total Fund	
Value	10.7
Rank	80
▲ Policy Index	
Value	11.4
Rank	86
Universe	
5th %tile	6.2
25th %tile	8.0
Median	9.0
75th %tile	10.5
95th %tile	12.1

Sharpe Ratio



● Total Fund	
Value	0.2
Rank	42
▲ Policy Index	
Value	0.2
Rank	36
Universe	
5th %tile	0.5
25th %tile	0.3
Median	0.1
75th %tile	0.0
95th %tile	-0.1

Sortino Ratio



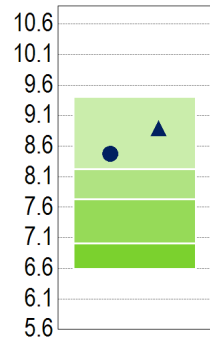
● Total Fund	
Value	0.8
Rank	38
▲ Policy Index	
Value	0.8
Rank	37
Universe	
5th %tile	1.7
25th %tile	1.0
Median	0.7
75th %tile	0.4
95th %tile	0.2



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

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

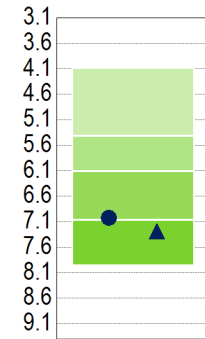
Anlzd Return



● Total Fund
Value 8.5
Rank 15
▲ Policy Index
Value 8.9
Rank 10

Universe
5th %tile 9.4
25th %tile 8.2
Median 7.7
75th %tile 7.0
95th %tile 6.6

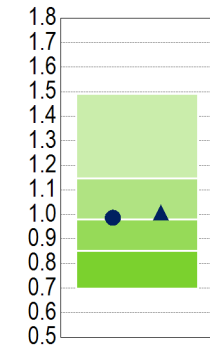
Anlzd Standard Deviation



● Total Fund
Value 7.0
Rank 75
▲ Policy Index
Value 7.3
Rank 82

Universe
5th %tile 4.1
25th %tile 5.4
Median 6.1
75th %tile 7.0
95th %tile 7.9

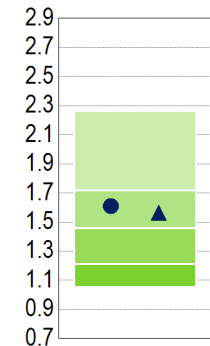
Sharpe Ratio



● Total Fund
Value 1.0
Rank 49
▲ Policy Index
Value 1.0
Rank 40

Universe
5th %tile 1.5
25th %tile 1.1
Median 1.0
75th %tile 0.9
95th %tile 0.7

Sortino Ratio



● Total Fund
Value 1.6
Rank 36
▲ Policy Index
Value 1.6
Rank 39

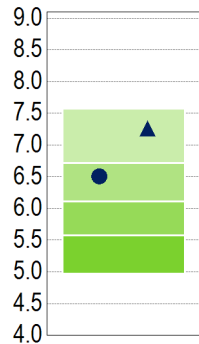
Universe
5th %tile 2.3
25th %tile 1.7
Median 1.5
75th %tile 1.2
95th %tile 1.1



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

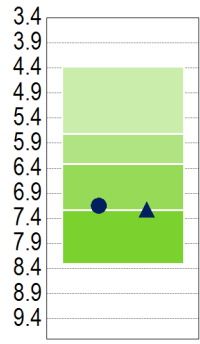
Total Fund vs. InvMetrics Public DB > \$1B Net 5 Years

Anlzd Return



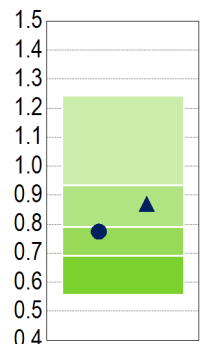
● Total Fund	
Value	6.5
Rank	32
▲ Policy Index	
Value	7.3
Rank	10
Universe	
5th %tile	7.6
25th %tile	6.7
Median	6.1
75th %tile	5.6
95th %tile	5.0

Anlzd Standard Deviation



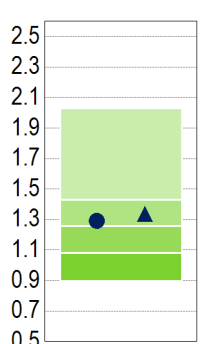
● Total Fund	
Value	7.1
Rank	74
▲ Policy Index	
Value	7.2
Rank	75
Universe	
5th %tile	4.4
25th %tile	5.7
Median	6.3
75th %tile	7.2
95th %tile	8.3

Sharpe Ratio



● Total Fund	
Value	0.8
Rank	57
▲ Policy Index	
Value	0.9
Rank	33
Universe	
5th %tile	1.2
25th %tile	0.9
Median	0.8
75th %tile	0.7
95th %tile	0.6

Sortino Ratio

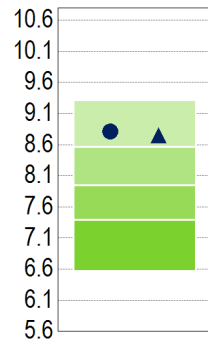


● Total Fund	
Value	1.3
Rank	43
▲ Policy Index	
Value	1.3
Rank	40
Universe	
5th %tile	2.0
25th %tile	1.4
Median	1.3
75th %tile	1.1
95th %tile	0.9

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

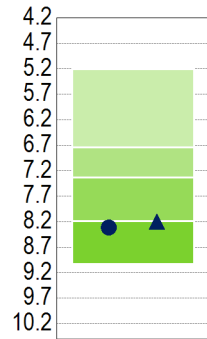
Total Fund vs. InvMetrics Public DB > \$1B Net 10 Years

Anlzd Return



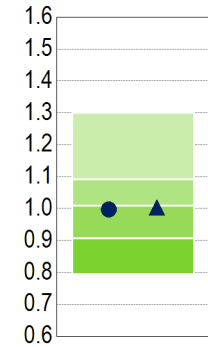
● Total Fund	
Value	8.8
Rank	18
▲ Policy Index	
Value	8.7
Rank	21
Universe	
5th %tile	9.3
25th %tile	8.6
Median	8.0
75th %tile	7.4
95th %tile	6.6

Anlzd Standard Deviation



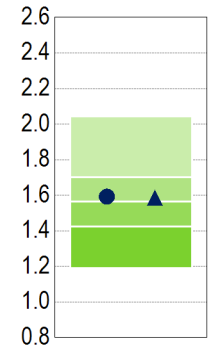
● Total Fund	
Value	8.3
Rank	82
▲ Policy Index	
Value	8.2
Rank	76
Universe	
5th %tile	5.2
25th %tile	6.7
Median	7.3
75th %tile	8.2
95th %tile	9.0

Sharpe Ratio



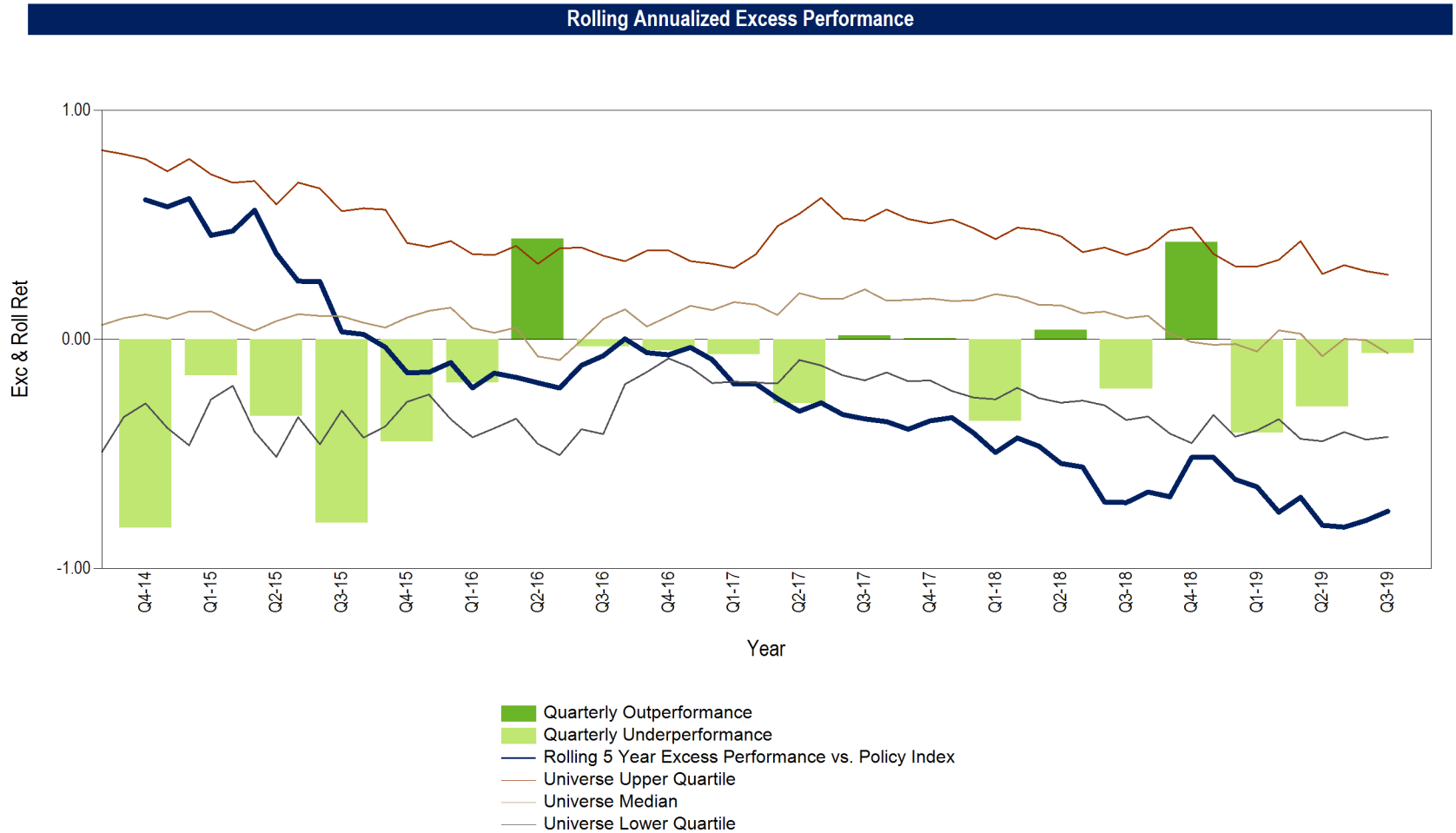
● Total Fund	
Value	1.0
Rank	59
▲ Policy Index	
Value	1.0
Rank	57
Universe	
5th %tile	1.3
25th %tile	1.1
Median	1.0
75th %tile	0.9
95th %tile	0.8

Sortino Ratio



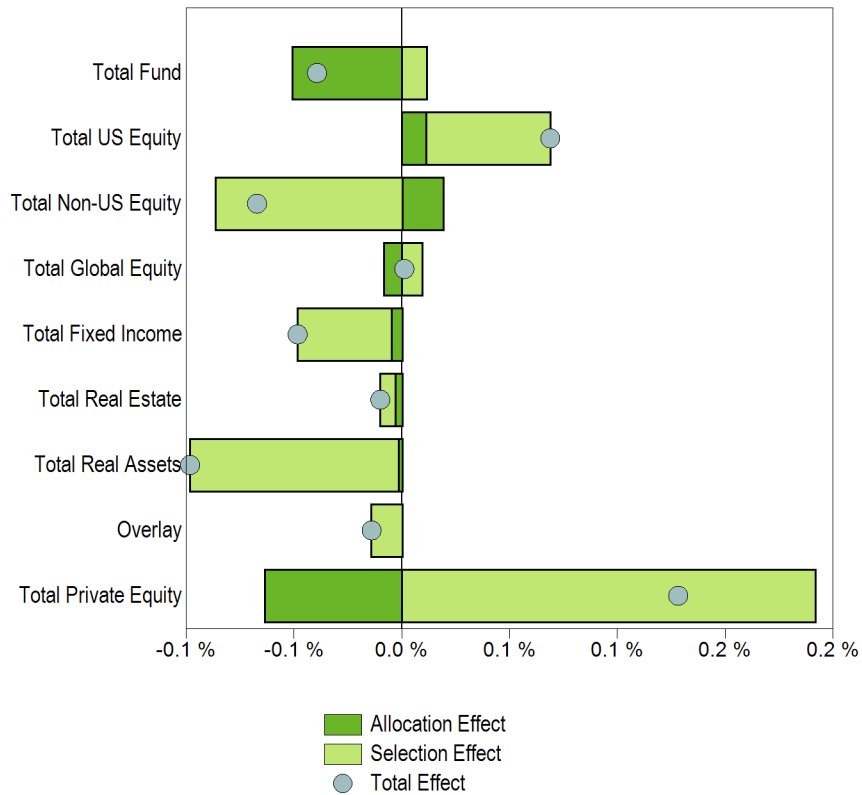
● Total Fund	
Value	1.6
Rank	47
▲ Policy Index	
Value	1.6
Rank	49
Universe	
5th %tile	2.0
25th %tile	1.7
Median	1.6
75th %tile	1.4
95th %tile	1.2

ROLLING 5 YEAR EXCESS RETURNS- NET OF FEES



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending September 30, 2019



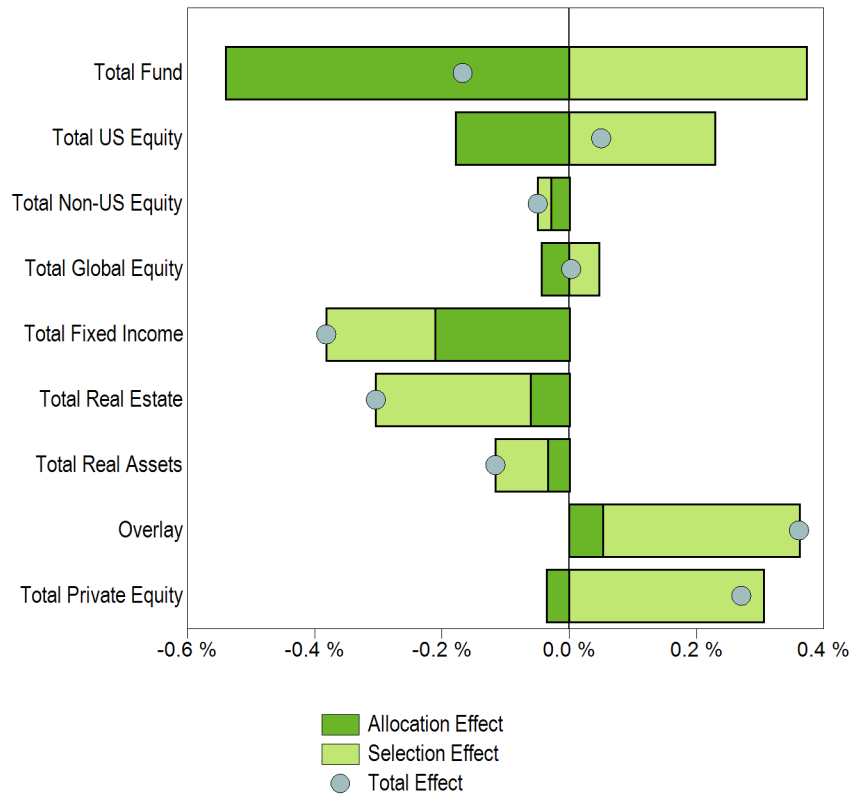
Attribution Summary						
3 Months Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	1.4%	1.2%	0.2%	0.1%	0.0%	0.1%
Total Non-US Equity	-2.3%	-1.8%	-0.5%	-0.1%	0.0%	-0.1%
Total Global Equity	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
Total Fixed Income	2.1%	2.3%	-0.2%	0.0%	0.0%	0.0%
Total Real Estate	1.0%	1.1%	-0.1%	0.0%	0.0%	0.0%
Total Real Assets	-0.5%	0.7%	-1.2%	-0.1%	0.0%	-0.1%
Overlay	-2.6%	0.5%	-3.1%	0.0%	0.0%	0.0%
Total Private Equity	4.6%	1.9%	2.7%	0.2%	-0.1%	0.1%
Total	0.8%	0.8%	0.0%	0.0%	-0.1%	0.0%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending September 30, 2019

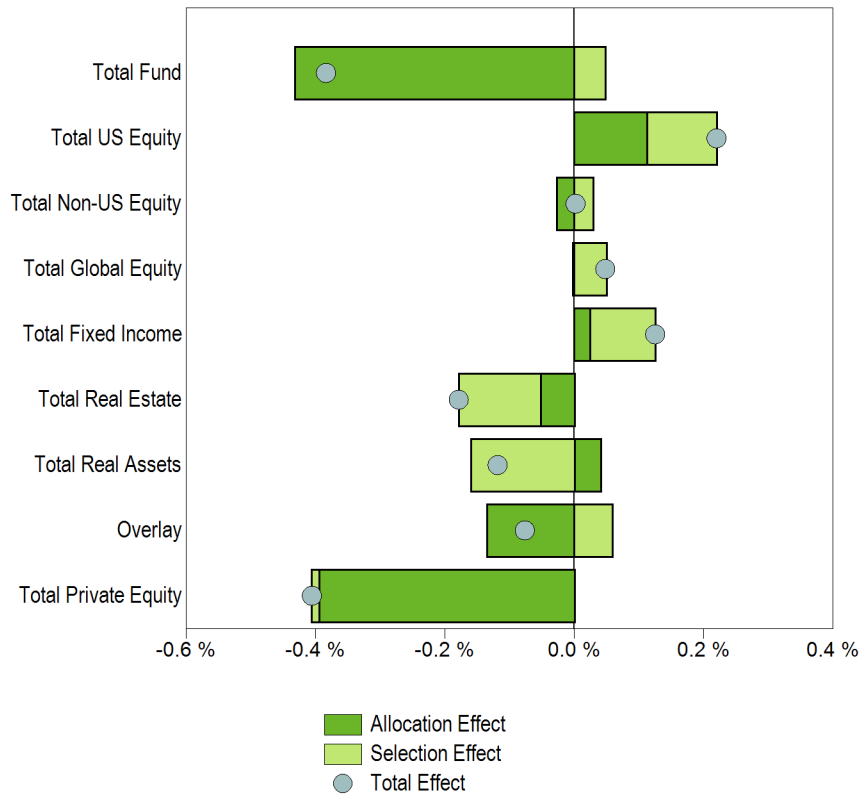


Attribution Summary						
1 Year Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	3.7%	2.9%	0.8%	0.2%	-0.2%	0.1%
Total Non-US Equity	-1.3%	-1.2%	-0.1%	0.0%	0.0%	0.0%
Total Global Equity	1.8%	1.4%	0.4%	0.0%	0.0%	0.0%
Total Fixed Income	9.4%	10.3%	-0.9%	-0.2%	-0.2%	-0.4%
Total Real Estate	1.5%	4.6%	-3.1%	-0.2%	-0.1%	-0.3%
Total Real Assets	3.9%	5.3%	-1.4%	-0.1%	0.0%	-0.1%
Overlay	20.7%	2.3%	18.5%	0.3%	0.1%	0.4%
Total Private Equity	13.7%	6.0%	7.7%	0.3%	0.0%	0.3%
Total	4.4%	4.6%	-0.2%	0.4%	-0.5%	-0.2%



TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Years Ending September 30, 2019



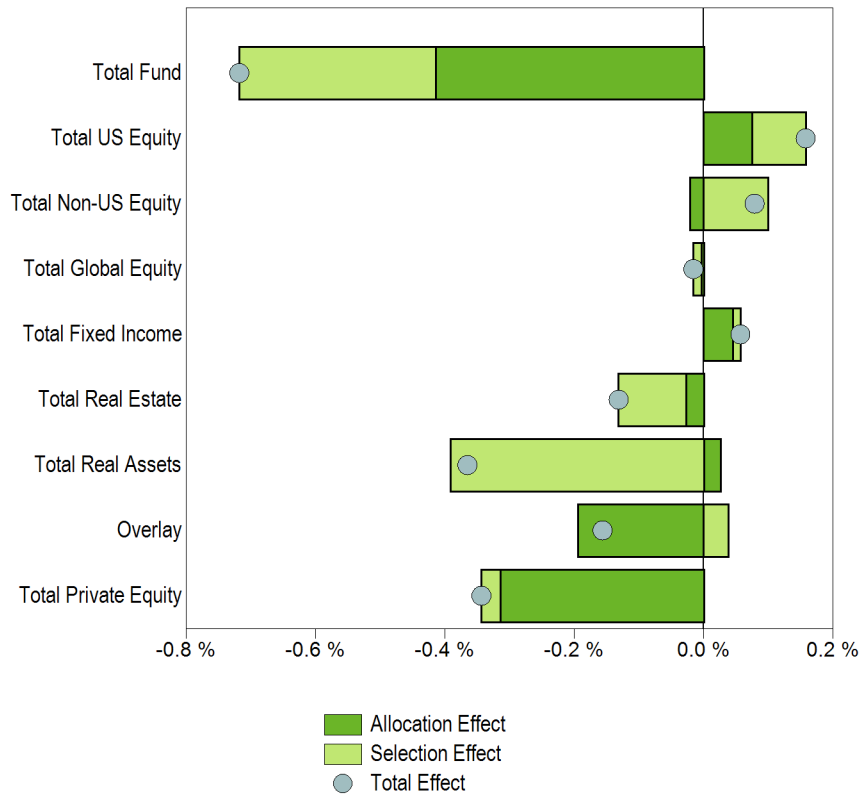
Attribution Summary						
3 Years Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	13.2%	12.8%	0.4%	0.1%	0.1%	0.2%
Total Non-US Equity	6.6%	6.3%	0.2%	0.0%	0.0%	0.0%
Total Global Equity	10.2%	9.7%	0.5%	0.0%	0.0%	0.0%
Total Fixed Income	3.4%	2.9%	0.5%	0.1%	0.0%	0.1%
Total Real Estate	4.8%	6.3%	-1.6%	-0.1%	-0.1%	-0.2%
Total Real Assets	3.7%	6.0%	-2.2%	-0.2%	0.0%	-0.1%
Overlay	7.0%	1.5%	5.5%	0.1%	-0.1%	-0.1%
Total Private Equity	16.5%	16.2%	0.3%	0.0%	-0.4%	-0.4%
Total	8.5%	8.9%	-0.4%	0.0%	-0.4%	-0.4%



Ventura County Employees' Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
5 Years Ending September 30, 2019



Attribution Summary						
5 Years Ending September 30, 2019						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	10.7%	10.4%	0.3%	0.1%	0.1%	0.1%
Total Non-US Equity	3.7%	2.9%	0.8%	0.1%	0.0%	0.1%
Total Global Equity	6.5%	6.7%	-0.1%	0.0%	0.0%	0.0%
Total Fixed Income	3.3%	3.1%	0.2%	0.0%	0.0%	0.1%
Total Real Estate	7.0%	8.4%	-1.3%	-0.1%	0.0%	-0.1%
Total Real Assets	0.9%	5.5%	-4.6%	-0.4%	0.0%	-0.4%
Overlay	4.3%	1.0%	3.3%	0.0%	-0.2%	-0.2%
Total Private Equity	13.9%	13.7%	0.1%	0.0%	-0.3%	-0.3%
Total	6.5%	7.3%	-0.7%	-0.3%	-0.4%	-0.7%



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

1 Year Ending September 30, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	1.8%	51	17.7%	71	0.5%	48	0.5%	2	0.9	23	1.0
MSCI ACWI	--	1.4%	62	17.4%	60	0.0%	60	0.0%	1	--	--	1.0
Total US Equity	28.0%	3.7%	25	19.3%	61	0.8%	23	0.3%	4	2.5	1	1.0
Russell 3000	--	2.9%	40	19.5%	68	0.0%	42	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	-1.3%	40	15.6%	31	-0.2%	45	1.0%	8	-0.1	--	1.0
MSCI ACWI ex USA	--	-1.2%	37	16.1%	60	0.0%	42	0.0%	1	--	--	1.0
Total Global Equity	10.8%	1.8%	62	17.4%	89	0.4%	60	0.0%	1	9.1	1	1.0
MSCI ACWI	--	1.4%	64	17.4%	89	0.0%	65	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	9.4%	21	3.2%	69	0.2%	46	0.7%	37	-1.3	--	0.9
Total Fixed Income Policy Index	--	10.3%	11	3.7%	84	0.0%	70	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	9.1%	30	3.0%	65	0.5%	38	1.0%	60	-1.2	--	0.8
BBgBarc US Aggregate TR	--	10.3%	10	3.7%	86	0.0%	66	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.9%	--	10.6%	--	-7.8%	--	10.3%	--	-0.1	--	3.1
Real Assets Index	--	5.3%	--	1.1%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	1.5%	90	3.0%	72
NCREIF ODCE Net	--	4.6%	69	2.0%	49
Total Private Equity	7.5%	13.7%	39	5.3%	58
Russell 3000 + 3%	--	6.0%	84	19.5%	99

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 69 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 145 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 91 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 40 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 69 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 89 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 51 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 20 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

3 Years Ending September 30, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	10.8%	24	11.4%	56	1.0%	13	1.1%	32	0.9	4	1.0
MSCI ACWI	--	9.7%	65	11.3%	52	0.0%	42	0.0%	1	--	--	1.0
Total US Equity	28.0%	13.2%	15	12.5%	40	0.4%	16	0.4%	4	0.9	5	1.0
Russell 3000	--	12.8%	27	12.5%	44	0.0%	20	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	6.6%	25	11.1%	14	0.4%	17	1.0%	6	0.2	19	1.0
MSCI ACWI ex USA	--	6.3%	33	11.4%	33	0.0%	27	0.0%	1	--	--	1.0
Total Global Equity	10.8%	10.2%	29	11.3%	75	0.5%	60	0.1%	1	5.6	1	1.0
MSCI ACWI	--	9.7%	56	11.3%	76	0.0%	63	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	3.4%	43	2.7%	58	0.8%	43	0.8%	41	0.6	16	0.8
Total Fixed Income Policy Index	--	2.9%	60	3.3%	85	0.0%	77	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	3.3%	29	2.7%	63	0.7%	27	0.9%	63	0.5	26	0.8
BBgBarc US Aggregate TR	--	2.9%	50	3.3%	91	0.0%	81	0.0%	1	--	--	1.0
Total Real Assets	7.7%	3.7%	--	7.7%	--	-5.8%	--	7.5%	--	-0.3	--	1.8
Real Assets Index	--	6.0%	--	0.9%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	4.8%	92	2.8%	58
NCREIF ODCE Net	--	6.3%	66	2.7%	54
Total Private Equity	7.5%	16.5%	27	5.5%	46
Russell 3000 + 3%	--	16.2%	28	12.5%	89

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 67 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 138 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 86 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 35 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 67 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 88 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 50 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 19 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND RISK STATISTICS

5 Years Ending September 30, 2019

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	54.2%	8.0%	40	11.6%	54	1.5%	13	1.1%	24	1.2	1	1.0
MSCI ACWI	--	6.7%	75	11.7%	64	0.0%	60	0.0%	1	--	--	1.0
Total US Equity	28.0%	10.7%	17	12.2%	42	0.3%	19	0.3%	2	0.9	1	1.0
Russell 3000	--	10.4%	27	12.2%	43	0.0%	27	0.0%	1	--	--	1.0
Total Non-US Equity	15.5%	3.7%	37	11.9%	26	0.9%	32	1.1%	4	0.7	12	1.0
MSCI ACWI ex USA	--	2.9%	61	12.5%	74	0.0%	57	0.0%	1	--	--	1.0
Total Global Equity	10.8%	6.5%	65	11.8%	68	-0.2%	76	0.8%	1	-0.2	--	1.0
MSCI ACWI	--	6.7%	61	11.7%	66	0.0%	74	0.0%	1	--	--	1.0
Total Fixed Income	20.2%	3.3%	43	2.6%	39	0.7%	29	1.5%	53	0.1	32	0.8
Total Fixed Income Policy Index	--	3.1%	53	3.0%	65	0.0%	81	0.0%	1	--	--	1.0
Total US Fixed Income	17.6%	3.4%	41	2.6%	52	0.8%	25	1.7%	77	0.0	51	0.7
BBgBarc US Aggregate TR	--	3.4%	44	3.1%	83	0.0%	76	0.0%	1	--	--	1.0
Total Real Assets	7.7%	0.9%	--	9.0%	--	-10.2%	--	8.8%	--	-0.5	--	2.3
Real Assets Index	--	5.5%	--	1.0%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.3%	7.0%	92	3.6%	51
NCREIF ODCE Net	--	8.4%	66	3.7%	53
Total Private Equity	7.5%	13.9%	32	5.7%	53
Russell 3000 + 3%	--	13.7%	34	12.2%	90

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Total Non-U.S. Equity Benchmark: MSCI ACWI ex US Free, prior to May 2002, the MSCI EAFE.

Composite rankings are used for Total Equity (InvMetrics Public DB Total Eq consists of 50 portfolios), Total US Equity (InvMetrics Public DB US Eq consists of 118 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 79 portfolios), Total Global Equity (InvMetrics Public DB Gbl Eq consists of 22 portfolios), Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 54 portfolios), Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 79 portfolios), Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 45 portfolios) and Total Private Equity (InvMetrics Public DB Private Eq consists of 17 portfolios).



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund	5,901,631,997	100.0	100.0	0.8	34	12.9	22	4.3	25	8.5	15	6.5	32	8.8	18	8.0	Apr-94
Policy Index				0.8	30	13.7	11	4.6	21	8.9	10	7.3	10	8.7	21	8.0	Apr-94
Over/Under				0.0		-0.8		-0.3		-0.4		-0.8		0.1		0.0	
60% MSCI ACWI (Net) / 40% FTSE WGBI				0.4	64	12.4	24	4.4	23	6.4	97	4.9	97	5.9	97	6.4	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate				2.0	2	15.9	1	7.1	1	9.3	6	8.0	3	9.6	1	8.4	Apr-94
InvMetrics Public DB > \$1B Net Median				0.5		10.8		3.6		7.7		6.1		8.0		7.5	Apr-94
Total Fund ex Parametric	5,865,021,230	99.4	--	0.7	--	12.7	--	3.9	--	8.4	--	6.4	--	8.7	--	7.9	Apr-94
Total Fund ex Private Equity	5,461,207,805	92.5	--	0.5	56	13.0	21	3.7	46	8.0	37	6.2	46	--	--	8.4	Jan-12
Policy Index				0.8	30	13.7	11	4.6	21	8.9	10	7.3	10	8.7	21	9.1	Jan-12
Over/Under				-0.3		-0.7		-0.9		-0.9		-1.1				-0.7	
InvMetrics Public DB > \$1B Net Median				0.5		10.8		3.6		7.7		6.1		8.0		8.2	Jan-12
Total US Equity	1,650,156,154	28.0	26.0	1.4	24	20.6	26	3.7	25	13.2	15	10.7	17	13.5	4	9.3	Dec-93
Russell 3000				1.2	36	20.1	37	2.9	40	12.8	27	10.4	27	13.1	16	9.6	Dec-93
Over/Under				0.2		0.5		0.8		0.4		0.3		0.4		-0.3	
InvMetrics Public DB US Eq Net Median				1.0		19.9		2.4		12.2		10.0		12.5		9.2	Dec-93
Western U.S. Index Plus	229,398,461	3.9		1.8	38	22.1	27	4.6	34	13.9	29	11.3	25	15.2	4	6.3	May-07
S&P 500				1.7	40	20.6	37	4.3	36	13.4	34	10.8	29	13.2	29	7.8	May-07
Over/Under				0.1		1.5		0.3		0.5		0.5		2.0		-1.5	
eV US Large Cap Equity Net Median				1.3		19.3		2.6		12.0		9.4		12.3		7.6	May-07
Blackrock Russell 1000 Index	1,355,717,249	23.0		1.4	45	20.5	38	3.9	39	--	--	--	--	--	--	11.6	May-17
Russell 1000				1.4	45	20.5	38	3.9	39	13.2	36	10.6	32	13.2	30	11.6	May-17
Over/Under				0.0		0.0		0.0								0.0	
eV US Large Cap Equity Net Median				1.3		19.3		2.6		12.0		9.4		12.3		10.5	May-17
Blackrock Russell 2500 Index	65,040,443	1.1		-1.2	56	17.8	55	-4.0	57	--	--	--	--	--	--	7.3	May-17
Russell 2500				-1.3	57	17.7	56	-4.0	57	9.5	50	8.6	40	12.2	38	7.2	May-17
Over/Under				0.1		0.1		0.0								0.1	
eV US Small-Mid Cap Equity Net Median				-0.6		18.2		-3.4		9.5		8.0		11.8		7.0	May-17

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance / Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result.

Policy Index as of July 2019: 26% Russell 3000 Index, 17% MSCI ACWI ex U.S., 10% MSCI ACWI, 13% Russell 3000 +3%, 19% BBgBarc US Aggregate, 8% NCREIF ODCE, 7% CPI +2%.

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Non-US Equity	915,243,992	15.5	17.0	-2.3	81	10.9	70	-1.3	40	6.6	25	3.7	37	5.2	46	6.2	Mar-94
MSCI ACWI ex USA				-1.8	41	11.6	59	-1.2	37	6.3	33	2.9	61	4.5	77	5.0	Mar-94
Over/Under				-0.5		-0.7		-0.1		0.3		0.8		0.7		1.2	
MSCI EAFE				-1.1	12	12.8	27	-1.3	41	6.5	27	3.3	50	4.9	56	4.7	Mar-94
MSCI ACWI ex USA NR LCL				1.7	1	15.1	8	2.6	5	8.5	6	6.0	4	6.8	5	--	Mar-94
MSCI EAFE NR LCL				1.8	1	15.7	7	1.6	8	8.3	7	6.0	4	7.0	4	4.9	Mar-94
InvMetrics Public DB ex-US Eq Net Median				-1.9		11.8		-1.9		5.9		3.2		5.0		5.5	Mar-94
BlackRock ACWI ex-U.S. Index	467,397,110	7.9		-1.7	37	11.6	67	-1.6	50	6.3	58	3.3	72	4.8	83	2.5	Mar-07
MSCI ACWI ex USA IMI				-1.7	38	11.4	68	-1.8	51	6.1	60	3.0	76	4.7	83	2.2	Mar-07
Over/Under				0.0		0.2		0.2		0.2		0.3		0.1		0.3	
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	3.4	Mar-07
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		3.3	Mar-07
Sprucegrove	218,927,679	3.7		-5.5	99	6.7	89	-5.2	80	6.4	58	3.0	76	5.5	79	6.8	Mar-02
MSCI ACWI ex USA				-1.8	42	11.6	68	-1.2	47	6.3	58	2.9	76	4.5	84	6.1	Mar-02
Over/Under				-3.7		-4.9		-4.0		0.1		0.1		1.0		0.7	
MSCI EAFE				-1.1	19	12.8	58	-1.3	47	6.5	55	3.3	72	4.9	82	5.7	Mar-02
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	5.3	Mar-02
MSCI EAFE NR LCL				1.8	2	15.7	36	1.6	19	8.3	24	6.0	24	7.0	37	4.5	Mar-02
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		6.7	Mar-02
Hexavest	91,705,172	1.6		-1.0	36	8.7	82	-0.4	27	4.0	79	2.1	76	--	--	3.7	Dec-10
MSCI EAFE				-1.1	38	12.8	49	-1.3	30	6.5	35	3.3	62	4.9	71	4.5	Dec-10
Over/Under				0.1		-4.1		0.9		-2.5		-1.2				-0.8	
MSCI EAFE NR LCL				1.8	4	15.7	19	1.6	13	8.3	21	6.0	11	7.0	28	7.1	Dec-10
eV EAFE All Cap Equity Net Median				-1.5		12.6		-2.9		5.9		4.2		6.1		5.3	Dec-10
Walter Scott	137,214,031	2.3		-0.1	10	17.4	29	6.1	4	9.5	10	7.2	12	--	--	6.3	Dec-10
MSCI ACWI ex USA				-1.8	42	11.6	68	-1.2	47	6.3	58	2.9	76	4.5	84	3.4	Dec-10
Over/Under				1.7		5.8		7.3		3.2		4.3				2.9	
MSCI ACWI ex USA NR LCL				1.7	2	15.1	38	2.6	14	8.5	21	6.0	24	6.8	43	6.4	Dec-10
MSCI EAFE				-1.1	19	12.8	58	-1.3	47	6.5	55	3.3	72	4.9	82	4.5	Dec-10
eV ACWI ex-US All Cap Equity Net Median				-1.9		13.5		-1.8		6.7		4.1		6.5		5.0	Dec-10



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Global Equity	635,952,625	10.8	10.0	0.1	67	16.6	24	1.8	62	10.2	29	6.5	65	8.2	29	6.0	May-05
MSCI ACWI				0.0	68	16.2	33	1.4	64	9.7	56	6.7	61	8.3	27	6.7	May-05
Over/Under				0.1		0.4		0.4		0.5		-0.2		-0.1		-0.7	
InvMetrics Public DB Gbl Eq Net Median				0.8		15.8		2.4		9.8		7.0		5.3		5.6	May-05
BlackRock MSCI ACWI Equity Index	635,952,625	10.8		0.1	44	16.6	49	1.8	43	10.2	34	7.1	45	--	--	9.8	Aug-12
MSCI ACWI				0.0	46	16.2	53	1.4	46	9.7	39	6.7	55	8.3	61	9.4	Aug-12
Over/Under				0.1		0.4		0.4		0.5		0.4				0.4	
eV All Global Equity Net Median				-0.2		16.5		0.8		8.9		6.9		9.0		9.6	Aug-12



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Private Equity	440,424,192	7.5	13.0	4.6	15	10.2	32	13.7	39	16.5	27	13.9	32	--	--	14.8	Jan-12
<i>Russell 3000 + 3%</i>				<u>1.9</u>	67	<u>22.7</u>	1	<u>6.0</u>	84	<u>16.2</u>	28	<u>13.7</u>	34	<u>16.4</u>	1	<u>17.2</u>	Jan-12
Over/Under				2.7		-12.5		7.7		0.3		0.2				-2.4	
<i>Cambridge Associates Global All PE (Qtr Lag)</i>				3.5	36	7.0	48	10.5	59	14.5	48	10.9	57	13.7	35	12.9	Jan-12
<i>InvMetrics Public DB Private Eq Net Median</i>				2.7		6.6		11.4		14.1		12.1		12.7		13.1	Jan-12
Adams Street Global Fund Series	188,002,128	3.2		4.9	--	10.2	--	15.0	--	15.5	--	12.6	--	--	--	13.7	Jan-12
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>17.2</u>	Jan-12
Over/Under				3.0		-12.5		9.0		-0.7		-1.1				-3.5	
Harbourvest	97,349,703	1.6		5.8	--	12.5	--	15.6	--	20.6	--	18.4	--	--	--	19.5	Aug-13
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>14.8</u>	Aug-13
Over/Under				3.9		-10.2		9.6		4.4		4.7				4.7	
Pantheon Global Secondary Funds	38,232,925	0.6		3.7	--	-0.9	--	2.1	--	15.1	--	11.6	--	--	--	11.9	Jan-12
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>17.2</u>	Jan-12
Over/Under				1.8		-23.6		-3.9		-1.1		-2.1				-5.3	
Drive Capital Fund II	13,073,592	0.2		12.0	--	49.7	--	47.5	--	-11.9	--	--	--	--	--	-11.6	Sep-16
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>15.9</u>	Sep-16
Over/Under				10.1		27.0		41.5		-28.1						-27.5	
Abbott Secondary Opportunities	16,439,950	0.3		2.6	--	10.9	--	15.3	--	--	--	--	--	--	--	21.1	Jan-18
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>10.9</u>	Jan-18
Over/Under				0.7		-11.8		9.3								10.2	
Clearlake Capital Partners V	7,659,117	0.1		8.4	--	32.0	--	55.2	--	--	--	--	--	--	--	40.4	Mar-18
<i>Russell 3000 + 3%</i>				<u>1.9</u>	--	<u>22.7</u>	--	<u>6.0</u>	--	<u>16.2</u>	--	<u>13.7</u>	--	<u>16.4</u>	--	<u>10.8</u>	Mar-18
Over/Under				6.5		9.3		49.2								29.6	

Private equity performance shown above is calculated using a time-weighted return methodology. Market values shown are cash-adjusted based on the current period's cash flows.

Adams Street Global Fund Series includes Adams Street 2010 U.S. Fund, 2010 Non-U.S. Developed Markets Fund, 2010 Non-U.S. Emerging Markets Fund, 2010 Direct Fund, 2013, and 2016 Global Fund.

Pantheon Global Secondary Funds includes Pantheon Global Secondary Fund IV and Global Secondary Fund V.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Battery Ventures XII	9,527,891	0.2		6.6	--	4.6	--	2.3	--	--	--	--	--	--	--	-2.5	Apr-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.7	Apr-18
Over/Under				4.7		-18.1		-3.7								-15.2	
Insight Venture Partners X	19,440,057	0.3		5.0	--	13.0	--	13.7	--	--	--	--	--	--	--	4.6	May-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	13.0	May-18
Over/Under				3.1		-9.7		7.7								-8.4	
GTCR Fund XII	6,132,507	0.1		0.0	--	-5.8	--	-11.1	--	--	--	--	--	--	--	-36.6	Jun-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.3	Jun-18
Over/Under				-1.9		-28.5		-17.1								-47.9	
Buenaventure One, LLC	26,460,264	0.4		-0.3	--	6.4	--	5.6	--	--	--	--	--	--	--	4.5	Jul-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.3	Jul-18
Over/Under				-2.2		-16.3		-0.4								-6.8	
ECI 11	3,134,735	0.1		8.7	--	18.8	--	--	--	--	--	--	--	--	--	15.7	Dec-18
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	11.6	Dec-18
Over/Under				6.8		-3.9										4.1	
The Resolute Fund IV L.P.	5,076,223	0.1		6.2	--	50.8	--	--	--	--	--	--	--	--	--	50.8	Jan-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	22.7	Jan-19
Over/Under				4.3		28.1										28.1	
GGV Capital VII L.P.	1,760,916	0.0		-6.3	--	--	--	--	--	--	--	--	--	--	--	-6.3	Feb-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.8	Feb-19
Over/Under				-8.2												-19.1	
GGV Discovery II, L.P.	410,826	0.0		-5.9	--	--	--	--	--	--	--	--	--	--	--	-5.9	Feb-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	12.8	Feb-19
Over/Under				-7.8												-18.7	
Drive Capital Overdrive Fund I	2,013,359	0.0		0.0	--	--	--	--	--	--	--	--	--	--	--	0.0	May-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.5	May-19
Over/Under				-1.9												-2.5	

Private equity performance shown above is calculated using a time-weighted return methodology. Market values shown are cash-adjusted based on the current period's cash flows.

Adams Street Global Fund Series includes Adams Street 2010 U.S. Fund, 2010 Non-U.S. Developed Markets Fund, 2010 Non-U.S. Emerging Markets Fund, 2010 Direct Fund, 2013, and 2016 Global Fund.

Pantheon Global Secondary Funds includes Pantheon Global Secondary Fund IV and Global Secondary Fund V.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Riverside Micro Cap Fund V, LP	1,763,440	0.0		21.3		--		--		--		--		--		-29.2	May-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.5	May-19
Over/Under				19.4												-31.7	
GGV Capital VII Plus, LP	546,100	0.0		0.0		--		--		--		--		--		0.0	Jun-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	9.3	Jun-19
Over/Under				-1.9												-9.3	
Astorg VII L.P.	340,057	0.0		-31.8		--		--		--		--		--		-31.8	Jul-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	1.9	Jul-19
Over/Under				-33.7												-33.7	
M/C Partners Fund VIII LP, Limited Partnership	393,657	0.0		-3.8		--		--		--		--		--		-3.8	Jul-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	1.9	Jul-19
Over/Under				-5.7												-5.7	
Genstar Capital Partners IX	778,621	0.0		--	--	--	--	--	--	--	--	--	--	--	--	--	Aug-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	0.2	Aug-19
Over/Under																	
Genstar IX Opportunities Fund I	366,591	0.0		--	--	--	--	--	--	--	--	--	--	--	--	0.0	Aug-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	0.2	Aug-19
Over/Under																-0.2	
ABRY Partners IX, LP	1,254,257	0.0		--	--	--	--	--	--	--	--	--	--	--	--	-20.6	Sep-19
Russell 3000 + 3%				1.9	--	22.7	--	6.0	--	16.2	--	13.7	--	16.4	--	2.0	Sep-19
Over/Under																-22.6	



VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date ¹	Outstanding Commitment ¹	Call Ratio	Add'l Fees ²	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Inception	
													Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	\$25,000,000	\$15,937,843	\$9,424,874	64%	--	\$2,625,000	\$16,439,952	\$19,064,952	\$3,127,109	19.0%	0.16x	1.2x
ABRY Partners IX	2019	12/6/2018	\$10,600,000	\$1,579,565	\$9,020,435	0%	--	--	\$1,254,256	\$1,254,256	(\$325,309)	-79.6%	--	0.79x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$15,213	\$29,417,857	\$38,552,632	\$67,970,489	\$30,512,776	14.6%	0.79x	1.82x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$22,325,249	\$3,174,751	88%	\$1,589	\$19,382,964	\$16,409,737	\$35,792,701	\$13,465,863	12.2%	0.87x	1.6x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,633,000	\$867,000	90%	--	\$2,514,266	\$10,156,556	\$12,670,822	\$5,037,822	11.1%	0.33x	1.66x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,066,500	\$433,500	95%	\$6,697	\$9,611,317	\$4,599,676	\$14,210,993	\$6,137,796	12.5%	1.19x	1.76x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$61,350,000	\$13,650,000	82%	\$10,728	\$13,610,624	\$76,965,453	\$90,576,077	\$29,215,349	11.9%	0.22x	1.48x
Adams Street 2016 Global Fund	2016	12/22/2016	\$60,000,000	\$31,620,000	\$28,380,000	53%	--	\$3,621,043	\$34,470,696	\$38,091,739	\$6,471,739	15.8%	0.11x	1.2x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	\$30,000,000	\$6,967,808	\$23,100,000	23%	\$67,808	\$0	\$7,168,225	\$7,168,225	\$132,609	3.8%	0x	1.03x
Advent International GPE IX	2019	5/23/2019	\$10,000,000	--	\$10,000,000	--	--	--	--	--	--	--	--	--
Astorg VII	2019	12/17/2018	\$8,438,268	\$437,999	\$8,000,269	5%	--	\$0	\$340,057	\$340,057	(\$97,942)	-59.9%	0x	0.78x
Battery Ventures XII	2018	2/1/2018	\$9,050,000	\$5,658,965	\$3,391,035	63%	--	\$0	\$5,734,624	\$5,734,624	\$75,659	2.1%	0x	1.01x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$3,540,555	\$1,509,445	70%	--	\$0	\$3,793,267	\$3,793,267	\$252,712	11.1%	0x	1.07x
Buenaventure One, LLC	2018	1/5/2018	\$91,426,500	\$9,950,000	\$65,645,910	28%	--	\$403,156	\$26,460,263	\$26,863,419	\$1,082,829	5.3%	0.02x	1.04x
CapVest Equity Partners IV	2019	7/11/2018	\$12,057,822	--	\$12,057,822	0%	--	--	(\$51,103)	(\$51,103)	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$6,420,101	\$4,137,237	65%	\$46,158	\$1,241,050	\$7,611,075	\$8,852,125	\$2,385,866	45.5%	0.19x	1.38x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$18,000,000	\$12,000,000	60%	--	\$6,147	\$18,953,238	\$18,959,385	\$959,385	6.2%	0x	1.05x
Drive Capital Fund II	2016	9/1/2016	\$15,000,000	\$9,407,887	\$5,595,323	63%	\$3,210	\$0	\$13,073,593	\$13,073,593	\$3,662,496	24.8%	0x	1.39x
Drive Capital Fund III	2019	4/5/2019	\$7,500,000	--	\$7,500,000	--	--	--	--	--	--	--	--	--
Drive Capital Overdrive Fund I	2019	4/5/2019	\$7,500,000	\$2,013,359	\$5,486,641	27%	--	\$0	\$1,959,469	\$1,959,469	(\$53,890)	-13.9%	0x	0.97x
ECI 11	2018	7/5/2018	\$9,302,954	\$2,853,854	\$6,449,100	31%	--	\$0	\$2,543,810	\$2,543,810	(\$310,044)	-22.6%	0x	0.89x
Flexpoint Fund IV-A	2019	7/2/2019	\$10,650,000	--	\$10,650,000	--	--	--	--	--	--	--	--	--
Flexpoint Overage Fund IV-A	2019	7/2/2019	\$3,550,000	--	\$3,550,000	--	--	--	--	--	--	--	--	--
Genstar Capital Partners IX	2019	2/21/2019	\$7,500,000	\$850,731	\$6,649,269	11%	--	--	\$778,621	\$778,621	(\$72,110)	-87.4%	--	0.92x
Genstar Capital Partners IX Opportunities Program	2019	2/21/2019	\$2,500,000	\$366,591	\$2,133,409	0%	--	\$0	\$366,591	\$366,591	\$0	0.0%	0x	1x
GGV Capital VII	2019	8/15/2018	\$10,160,000	\$1,879,600	\$8,280,400	19%	--	\$0	\$1,760,916	\$1,760,916	(\$118,684)	-13.6%	0x	0.94x
GGV Capital VII Plus	2019	8/15/2018	\$2,540,000	\$546,100	\$1,993,900	22%	--	\$0	\$546,100	\$546,100	\$0	0.0%	0x	1x
GGV Discovery II	2019	8/15/2018	\$2,100,000	\$430,500	\$1,669,500	21%	--	\$0	\$410,826	\$410,826	(\$19,674)	-13.6%	0x	0.95x
Great Hill Equity Partners VII	2019	6/28/2019	\$8,900,000	--	\$8,900,000	--	--	--	--	--	--	--	--	--
GTCR Fund XII	2017	9/29/2017	\$30,000,000	\$7,728,000	\$22,367,792	26%	--	\$540,067	\$5,823,243	\$6,363,310	(\$1,364,690)	-21.0%	0.07x	0.82x
HarbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$61,509,954	\$6,075,000	91%	\$84,954	\$71,696,542	\$25,656,949	\$97,353,491	\$35,758,583	20.9%	1.17x	1.58x
HarbourVest - Dover Street IX	2016	12/16/2016	\$60,000,000	\$40,800,000	\$19,200,000	68%	--	\$11,992,086	\$41,859,773	\$53,851,859	\$13,051,859	29.6%	0.29x	1.32x
HarbourVest - Dover Street X	2019	5/31/2019	\$40,000,000	--	\$40,000,000	--	--	--	\$186,467	\$186,467	--	--	--	--
HarbourVest - PRINS CO INVEST IV L.P.	2017	6/2/2017	\$30,000,000	\$24,464,388	\$5,732,352	82%	--	\$4,951,347	\$26,882,551	\$31,833,898	\$7,369,510	16.2%	0.2x	1.3x
HarbourVest - PRINS CO INVEST V L.P.	2019	7/31/2018	\$35,000,000	--	\$35,000,000	--	--	\$0	\$2,950,891	\$2,950,891	--	--	--	--
Hellman & Friedman Capital Partners IX	2019	9/28/2018	\$19,800,000	--	\$19,800,000	0%	--	--	(\$99,871)	(\$99,871)	--	--	--	--
Insight Venture Partners X	2017	10/13/2017	\$25,000,000	\$17,750,000	\$7,250,000	71%	--	\$8,561	\$19,440,049	\$19,448,610	\$1,698,610	11.5%	0x	1.1x
M/C Partners VIII	2019	4/2/2018	\$10,000,000	\$504,514	\$9,495,486	0%	--	\$0	\$393,657	\$393,657	(\$110,857)	-60.7%	0x	0.78x
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$17,652,142	\$7,347,858	71%	--	\$878,524	\$17,632,108	\$18,510,632	\$858,490	11.0%	0.05x	1.05x
Oak HC/FT Partners III	2019	7/31/2019	\$15,000,000	--	\$15,000,000	--	--	--	--	--	--	--	--	--
Pantheon Global Secondary Fund IV	2010	8/20/2010	\$15,000,000	\$9,960,000	\$5,040,000	66%	--	\$12,843,543	\$2,845,529	\$15,689,072	\$5,729,072	13.5%	1.29x	1.58x
Pantheon Global Secondary Fund V	2015	2/26/2015	\$50,000,000	\$33,566,509	\$16,433,491	67%	(\$162,514)	\$10,437,534	\$35,399,989	\$45,837,523	\$12,433,528	14.8%	0.31x	1.37x
The Resolute Fund IV	2018	5/2/2018	\$20,000,000	\$5,775,291	\$15,341,927	29%	--	\$1,971,794	\$5,076,222	\$7,048,016	\$1,272,725	65.7%	0.34x	1.22x
Riverside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	\$2,020,662	\$7,979,338	20%	--	\$0	\$1,763,440	\$1,763,440	(\$257,222)	-47.9%	0x	0.87x
TA XIII	2019	5/2/2019	\$10,000,000	--	\$10,000,000	--	--	--	--	--	--	--	--	--
Total VCERA Private Equity Program	--	5/21/2010	\$1,011,075,544	\$492,840,757	\$520,770,564	49%	\$73,843	\$197,753,422	\$476,109,527	\$673,862,949	\$177,961,965	14.9%	0.4x	1.37x

1. Includes recycled/recallable distributions received to date.

2. Add'l Fees represents notional interest paid/(received).

3. Add'l Fees for Pantheon Global Secondary Fund V includes notional interest paid/(received) and management fee rebates paid to VCERA.

Note: Private equity performance data is reported net of fees.

Performance shown is based on 9/30/2019 statement of investments produced by Abbott Capital.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total US Fixed Income	1,039,740,171	17.6	14.0	1.8	37	7.8	41	9.1	30	3.3	29	3.4	41	4.9	17	5.8	Feb-94
BBgBarc US Aggregate TR				2.3	20	8.5	21	10.3	10	2.9	50	3.4	44	3.7	52	5.3	Feb-94
Over/Under				-0.5		-0.7		-1.2		0.4		0.0		1.2		0.5	
InvMetrics Public DB US Fix Inc Net Median				1.6		7.3		8.1		2.9		3.2		3.8		5.3	Feb-94
BlackRock U.S. Debt Fund	244,507,946	4.1		2.3	27	8.6	42	10.3	22	3.0	55	3.4	50	3.8	56	5.2	Nov-95
BBgBarc US Aggregate TR				2.3	26	8.5	43	10.3	22	2.9	56	3.4	51	3.7	58	5.1	Nov-95
Over/Under				0.0		0.1		0.0		0.1		0.0		0.1		0.1	
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		5.0	Nov-95
Western	327,361,716	5.5		2.6	16	10.0	27	11.7	13	3.9	36	4.3	27	5.6	29	6.1	Dec-96
BBgBarc US Aggregate TR				2.3	26	8.5	43	10.3	22	2.9	56	3.4	51	3.7	58	5.2	Dec-96
Over/Under				0.3		1.5		1.4		1.0		0.9		1.9		0.9	
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		5.0	Dec-96
Reams	329,970,489	5.6		1.3	56	5.7	69	7.2	54	2.8	59	2.6	69	4.3	46	5.2	Sep-01
Reams Custom Index				0.6	92	1.9	97	2.6	94	1.9	85	1.3	93	2.5	79	3.8	Sep-01
Over/Under				0.7		3.8		4.6		0.9		1.3		1.8		1.4	
BBgBarc US Aggregate TR				2.3	26	8.5	43	10.3	22	2.9	56	3.4	51	3.7	58	4.5	Sep-01
3-Month LIBOR + 3%				1.3	56	4.1	80	5.6	66	5.0	22	4.4	27	3.9	55	4.8	Sep-01
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		4.5	Sep-01
Loomis Strategic Alpha	48,323,810	0.8		-0.1	98	3.5	85	2.4	95	3.0	53	2.5	72	--	--	2.6	Jul-13
BBgBarc US Aggregate TR				2.3	26	8.5	43	10.3	22	2.9	56	3.4	51	3.7	58	3.5	Jul-13
Over/Under				-2.4		-5.0		-7.9		0.1		-0.9				-0.9	
3-Month LIBOR + 3%				1.3	56	4.1	80	5.6	66	5.0	22	4.4	27	3.9	55	4.2	Jul-13
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		3.5	Jul-13
Loomis Sayles Multi Strategy	89,576,210	1.5		1.0	69	7.8	48	7.8	47	4.3	30	4.1	30	6.6	21	6.3	Jul-05
Loomis Custom Index				1.8	38	9.2	34	8.9	36	3.8	38	3.9	35	4.9	38	5.1	Jul-05
Over/Under				-0.8		-1.4		-1.1		0.5		0.2		1.7		1.2	
BBgBarc US Govt/Credit TR				2.6	16	9.7	29	11.3	14	3.2	50	3.6	44	3.9	54	4.3	Jul-05
eV All US Fixed Inc Net Median				1.4		7.4		7.6		3.1		3.4		4.1		4.2	Jul-05

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Barclays Aggregate

Loomis Custom Index: 65% Barclays Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index

As of January 2016, Loomis Strategic Alpha was moved from the Total Global Fixed Income composite to the Total US Fixed Income composite.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Private Debt	43,699,809	0.7	3.0	1.7	--	6.1	--	7.2	--	--	--	--	--	--	--	6.2	Jan-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				1.7	--	10.5	--	7.1	--	--	--	--	--	--	--	6.5	Jan-18
Over/Under				0.0		-4.4		0.1								-0.3	
CVI Credit Value Fund	18,953,232	0.3		1.4	--	5.1	--	6.1	--	--	--	--	--	--	--	5.6	Jan-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				1.7	--	10.5	--	7.1	--	--	--	--	--	--	--	6.5	Jan-18
Over/Under				-0.3		-5.4		-1.0								-0.9	
Monroe Capital Private Credit Fund III	17,632,109	0.3		2.1	--	8.2	--	--	--	--	--	--	--	--	--	8.2	Dec-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				1.7	--	10.5	--	7.1	--	--	--	--	--	--	--	8.3	Dec-18
Over/Under				0.4		-2.3										-0.1	
Bluebay Direct Lending Fund III	7,114,469	0.1		1.9	--	--	--	--	--	--	--	--	--	--	--	3.6	Apr-19
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				1.7	--	10.5	--	7.1	--	--	--	--	--	--	--	4.3	Apr-19
Over/Under				0.2												-0.7	
Treasuries	107,883,030	1.8	2.0	4.2	--	--	--	--	--	--	--	--	--	--	--	7.8	Apr-19
Reams 10-Year Treasuries	107,883,030	1.8		4.2	--	--	--	--	--	--	--	--	--	--	--	7.8	Apr-19
BBgBarc US Treasury 7-10 Yr TR				2.7	--	9.8	--	14.0	--	2.4	--	3.8	--	4.4	--	6.8	Apr-19
Over/Under				1.5												1.0	

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.



VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION PRIVATE DEBT LIMITED PARTNERSHIP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date ¹	Outstanding Commitment ¹	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	Since Inception		
											IRR	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
BlueBay Direct Lending III	2017	2/12/2019	\$25,000,000	\$6,887,418	\$18,112,582	28%	\$0	\$7,114,468	\$7,114,468	\$227,049	4.2%	0x	1.03x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$18,000,000	\$12,000,000	60%	\$6,147	\$18,953,232	\$18,959,379	\$959,379	6.2%	0x	1.05x
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$17,652,142	\$7,347,858	71%	\$878,524	\$17,632,109	\$18,510,633	\$858,491	10.9%	0.05x	1.05x
Total VCERA Private Debt Program	--		\$80,000,000	\$42,539,560	\$37,460,440	53%	\$884,671	\$43,699,809	\$44,584,480	\$2,044,919	8.2%	0.02x	1.05x

1. Includes recycled/recallable distributions received to date.

Note: Private debt performance data is reported net of fees.

Performance shown is based on 9/30/2019 cash-adjusted market values.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Real Estate	432,886,846	7.3	8.0	1.0	68	-0.1	93	1.5	90	4.8	92	7.0	92	8.9	73	7.6	Mar-94
<i>NCREIF ODCE Net</i>				<u>1.1</u>	67	<u>3.1</u>	68	<u>4.6</u>	69	<u>6.3</u>	66	<u>8.4</u>	66	<u>9.8</u>	68	<u>8.0</u>	<i>Mar-94</i>
Over/Under				-0.1		-3.2		-3.1		-1.5		-1.4		-0.9		-0.4	
<i>InvMetrics Public DB Real Estate Pub+Priv Net Median</i>				1.5		4.5		5.8		7.0		9.0		10.7		8.4	<i>Mar-94</i>
Prudential Real Estate	163,568,319	2.8		1.4	--	4.6	--	6.4	--	7.4	--	9.2	--	10.9	--	6.3	Jun-04
<i>NCREIF ODCE Net</i>				<u>1.1</u>	--	<u>3.1</u>	--	<u>4.6</u>	--	<u>6.3</u>	--	<u>8.4</u>	--	<u>9.8</u>	--	<u>7.0</u>	<i>Jun-04</i>
Over/Under				0.3		1.5		1.8		1.1		0.8		1.1		-0.7	
<i>NCREIF ODCE</i>				1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	10.9	--	8.0	<i>Jun-04</i>
UBS Real Estate	269,318,526	4.6		0.7	--	-2.7	--	-1.2	--	3.3	--	5.9	--	7.9	--	6.8	Mar-03
<i>NCREIF ODCE Net</i>				<u>1.1</u>	--	<u>3.1</u>	--	<u>4.6</u>	--	<u>6.3</u>	--	<u>8.4</u>	--	<u>9.8</u>	--	<u>7.2</u>	<i>Mar-03</i>
Over/Under				-0.4		-5.8		-5.8		-3.0		-2.5		-1.9		-0.4	
<i>NCREIF ODCE</i>				1.3	--	3.8	--	5.6	--	7.3	--	9.3	--	10.9	--	8.2	<i>Mar-03</i>

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.



Ventura County Employees' Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Real Assets	454,395,092	7.7	7.0	-0.5	--	12.7	--	3.9	--	3.7	--	0.9	--	--	--	4.4	Apr-13
Real Assets Index				0.7	--	4.7	--	5.3	--	6.0	--	5.5	--	--	--	6.2	Apr-13
Over/Under				-1.2		8.0		-1.4		-2.3		-4.6				-1.8	
Bridgewater All Weather Fund	339,831,982	5.8		1.6	--	13.7	--	8.6	--	5.9	--	4.4	--	--	--	5.4	Aug-13
CPI + 5% (Unadjusted)				1.5	--	6.0	--	6.8	--	7.2	--	6.6	--	--	--	6.6	Aug-13
Over/Under				0.1		7.7		1.8		-1.3		-2.2				-1.2	
Tortoise Energy Infrastructure	114,563,110	1.9		-6.2	--	9.9	--	-8.1	--	-1.8	--	-6.6	--	--	--	0.2	Apr-13
Tortoise MLP Index				-4.2	--	14.3	--	-4.8	--	-1.2	--	-8.0	--	--	--	-2.4	Apr-13
Over/Under				-2.0		-4.4		-3.3		-0.6		1.4				2.6	
Overlay	181,250,086	3.1	0.0														
Parametric	32,373,491	0.5															
Abbott Capital Cash	148,876,595	2.5															

Overlay performance is not applicable on an individual account level.

Color Coding: PERFORMANCE: Green-Over performance, Red-Under performance

Color Coding: RANKS: 1 - 25 Green - Positive Result, 26 - 50 Yellow, 50 - 75 Orange, 76 - 100 Red - Negative Result



MANAGER DUE DILIGENCE

NEPC, LLC

DUE DILIGENCE MONITOR

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

Investment Options	Performance (Recent Quarter)	Changes/Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
BlackRock Russell 1000 Index	-	-	-	-		10/2013
Western U.S. Index Plus	-	-	-	-		6/2014
BlackRock Russell 2500 Index	-	-	-	-		10/2013
BlackRock MSCI ACWI ex-U.S. Index	-	-	-	-		10/2013
Sprucegrove	Bottom Quartile	-	-	-		N/A
Hexavest	-	-	-	Watch (Board Driven)	On Watch for Performance Issues	1/2013
Walter Scott	Top Quartile	-	-	-		10/2012
BlackRock MSCI ACWI Index	-	-	-	-		10/2013
Adams Street	N/A	-	-	-		11/2013
HarbourVest	N/A	-	-	-		3/2014
Pantheon	N/A	-	-	-		1/2015
Drive	N/A	-	-	-		
Abbott Secondary Opps.	N/A	-	-	-		
Carval Credit Value	N/A	-	-	-		
Battery Ventures	N/A	-	-	-		
Buenaventure One	N/A	-	-	-		
Clearlake Capital	N/A	-	-	-		
BlackRock U.S. Debt Fund	-	-	-	-		10/2013
Western	Top Quartile	-	-	-		6/2014
Reams	-	-	-	-		11/2013



DUE DILIGENCE MONITOR

	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments	Last Onsite Conducted
Loomis Sayles Strategic Alpha	Bottom Quartile	-	-	-		11/2013
Loomis Sayles Multi-Sector Full Discretion	-	-	-	-		11/2013
Reams 10-Year Treasuries	-	-	-	-		11/2013
Monroe	-	-	-	-		12/2018
BlueBay	-	-	-	-		11/2016
Prudential	N/A	-	-	-		7/2014
RREEF	N/A	-	-	-		7/2013
UBS	N/A	-	-	Watch		8/2011
Bridgewater	N/A	-	-	-		9/2012
Tortoise	N/A	Yes	Watch	-	Acquisition of Advisory Research Team	8/2013
Parametric/Clifton	N/A	-	-	-		7/2013

NEPC Due Diligence Committee Recommendation Key

No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



DUE DILIGENCE MONITOR

The items below summarize any changes or announcements from your Plan managers/funds. A “Yes” indicates there was an announcement and a brief summary is provided separately. NEPC’s Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determines if any action should be taken by NEPC and/or by our clients. They rate events: No Action, Watch, Hold, Client Review or Terminate. NEPC considers ourselves to be a fiduciary, as ERISA defines the term in Section 3(21).

Investment Manager	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
Tortoise – Energy Infrastructure	Yes	Watch at the Firm Level

Manager Changes/Announcements

Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

NEPC Research was notified by Tortoise Capital Advisors (“Tortoise” or “the Firm”) that the Firm had reached a definitive agreement to acquire the midstream energy asset management business of Advisory Research Inc. (“Advisory”), from Piper Jaffray Companies. Piper Jaffray had acquired Advisory in 2010. The entire 6-person Advisory midstream energy infrastructure investment team, led by Senior Portfolio Managers Jim Cunnane, Jr. and Quinn Kiley, will join Tortoise. Advisory will maintain oversight of their current midstream energy offerings and client relationships. With the acquisition, Tortoise will gain Advisory’s private client focused, yield-oriented open end and closed end offerings, which Tortoise views as complimentary to their total return (albeit income leaning) focus. The investment teams of Tortoise and Advisory are expected to work independently of each other, while sharing macro views and distribution resources. The Advisory team will remain in their St. Louis, Missouri offices, and have signed 12-month employment contracts. The transaction is expected to close during the second half of 2019, subject to customary regulatory and closing conditions, including fund board/shareholder approval.

NEPC Research recommends Watch status at the firm level.

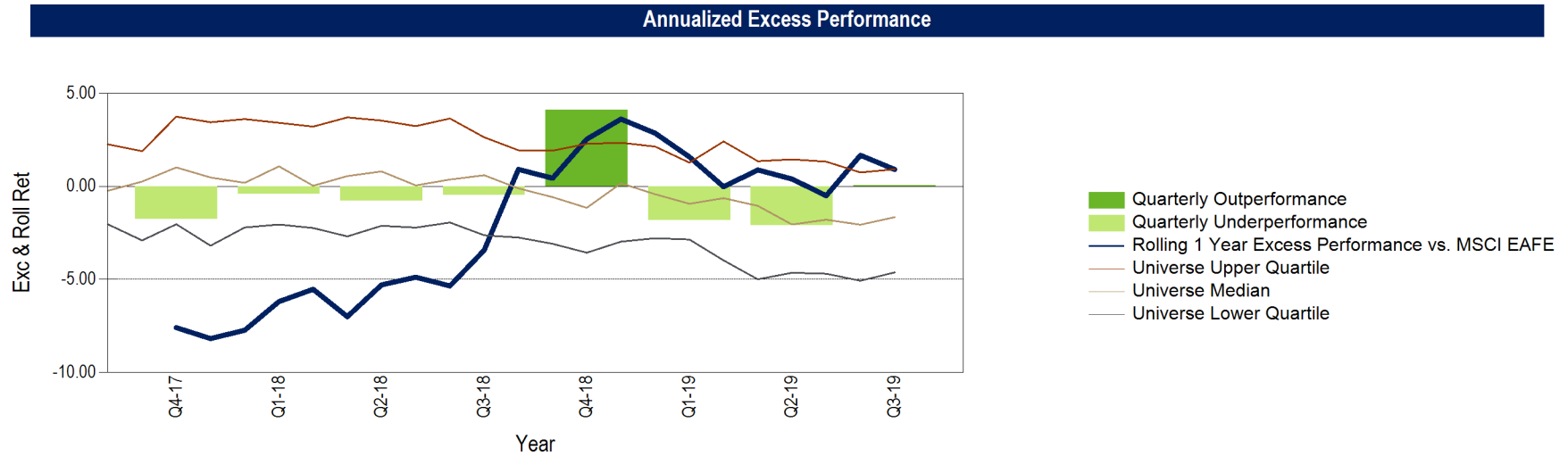
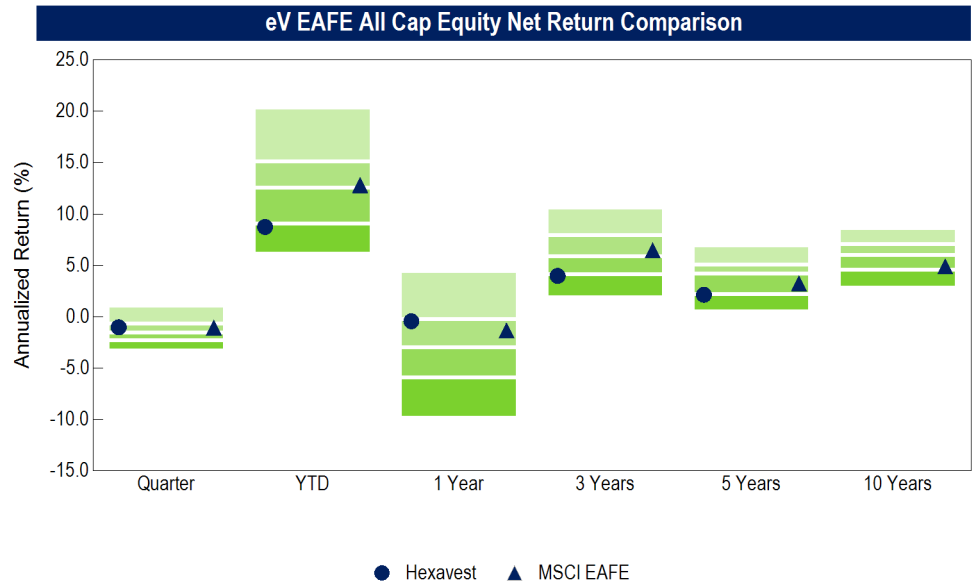
A legend key to our recommendations is provided below.

NEPC Due Diligence Committee Recommendation Key	
No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.



Ventura County Employees' Retirement Association

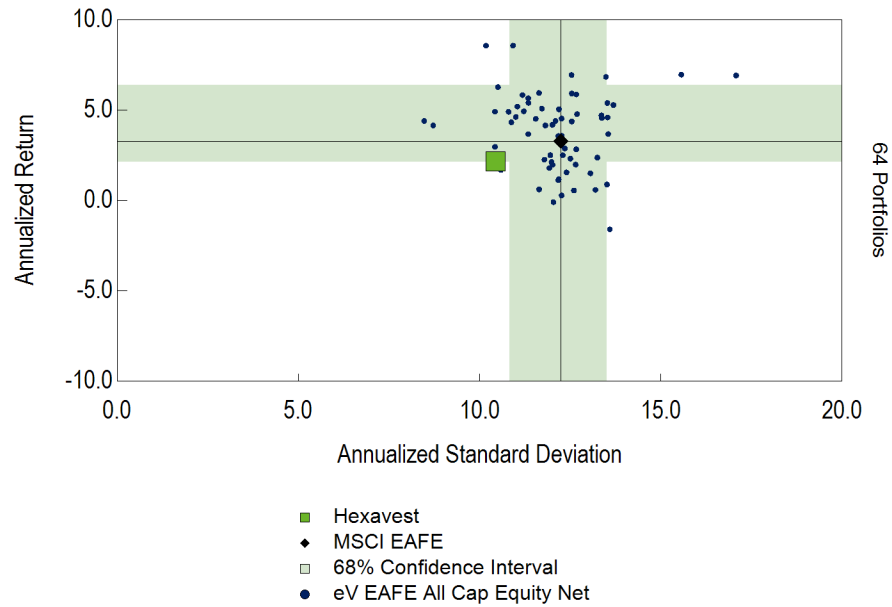
HEXAVEST



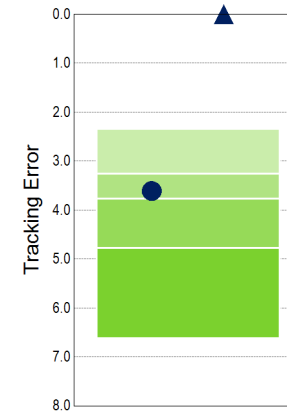
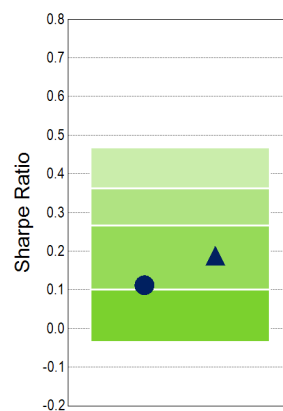
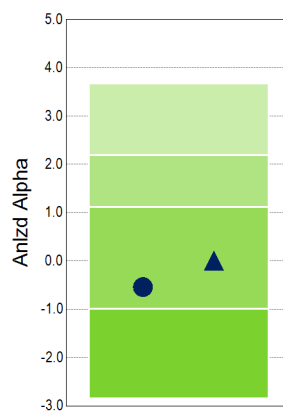
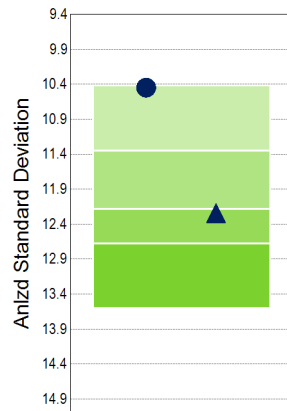
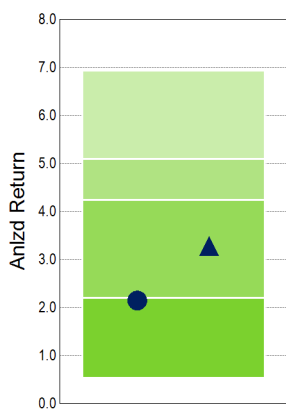
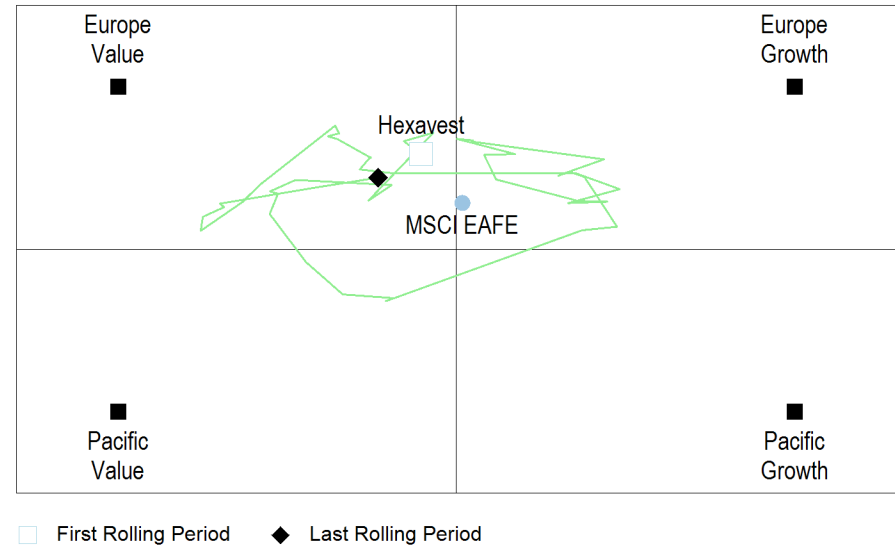
Ventura County Employees' Retirement Association

HEXAVEST

5 Year Risk Return



5 Year Style Map



- Hexavest
- ▲ MSCI EAFE
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Total Fund	-3.6	16.0	8.6	-0.9	6.3	18.1	14.0	0.3	15.1	24.2	-30.9
Policy Index	-3.6	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1
Over/Under	0.0	-0.3	0.2	-1.7	-0.5	0.9	1.1	-0.2	1.9	3.2	-3.8
60% MSCI ACWI (Net) / 40% FTSE WGBI	-5.8	17.1	5.5	-2.6	2.3	11.4	10.3	-1.8	10.0	21.3	-24.1
60% S&P 500 / 40% BBgBarc Aggregate	-2.3	14.2	8.3	1.3	10.6	17.6	11.3	4.7	12.1	18.4	-22.1
Total Fund ex Parametric*	-3.7	15.9	8.6	-0.9	6.3	17.8	13.7	0.6	14.5	23.3	-30.3
Total Fund ex Private Equity	-4.8	15.9	8.6	-1.4	6.1	16.2	13.3	--	--	--	--
Policy Index	-3.6	16.3	8.4	0.8	6.8	17.2	12.9	0.5	13.2	21.0	-27.1
Over/Under	-1.2	-0.4	0.2	-2.2	-0.7	-1.0	0.4	--	--	--	--
Total US Equity	-5.0	21.4	13.0	0.5	12.5	34.0	16.9	0.9	18.5	29.2	-40.0
Russell 3000	-5.2	21.1	12.7	0.4	12.4	33.5	16.4	1.1	17.5	28.6	-37.2
Over/Under	0.2	0.3	0.3	0.1	0.1	0.5	0.5	-0.2	1.0	0.6	-2.8
Western U.S. Index Plus	-5.3	22.7	13.8	1.1	14.2	32.9	20.7	1.0	24.7	42.6	-56.3
S&P 500	-4.4	21.8	12.0	1.4	13.7	32.4	16.0	2.1	15.1	26.5	-37.0
Over/Under	-0.9	0.9	1.8	-0.3	0.5	0.5	4.7	-1.1	9.6	16.1	-19.3
Blackrock Russell 1000 Index	-4.7	--	--	--	--	--	--	--	--	--	--
Russell 1000	-4.8	21.7	12.1	0.9	13.2	33.1	16.4	1.5	16.1	28.4	-37.6
Over/Under	0.1	--	--	--	--	--	--	--	--	--	--
Blackrock Russell 2500 Index	-9.9	--	--	--	--	--	--	--	--	--	--
Russell 2500	-10.0	16.8	17.6	-2.9	7.1	36.8	17.9	-2.5	26.7	34.4	-36.8
Over/Under	0.1	--	--	--	--	--	--	--	--	--	--



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Total Non-US Equity	-13.0	26.5	6.6	-4.8	-3.6	16.3	17.9	-13.6	13.5	37.4	-44.1
<i>MSCI ACWI ex USA</i>	<i>-14.2</i>	<i>27.2</i>	<i>4.5</i>	<i>-5.7</i>	<i>-3.9</i>	<i>15.3</i>	<i>16.8</i>	<i>-13.7</i>	<i>11.2</i>	<i>41.4</i>	<i>-45.5</i>
Over/Under	1.2	-0.7	2.1	0.9	0.3	1.0	1.1	0.1	2.3	-4.0	1.4
<i>MSCI EAFE</i>	<i>-13.8</i>	<i>25.0</i>	<i>1.0</i>	<i>-0.8</i>	<i>-4.9</i>	<i>22.8</i>	<i>17.3</i>	<i>-12.1</i>	<i>7.8</i>	<i>31.8</i>	<i>-43.4</i>
<i>MSCI ACWI ex USA NR LCL</i>	<i>-10.6</i>	<i>18.2</i>	<i>7.0</i>	<i>1.9</i>	<i>6.0</i>	<i>20.1</i>	<i>16.3</i>	<i>-12.2</i>	<i>7.6</i>	<i>31.7</i>	<i>-40.9</i>
<i>MSCI EAFE NR LCL</i>	<i>-11.0</i>	<i>15.2</i>	<i>5.3</i>	<i>5.3</i>	<i>5.9</i>	<i>26.9</i>	<i>17.3</i>	<i>-12.2</i>	<i>4.8</i>	<i>24.7</i>	<i>-40.3</i>
BlackRock ACWI ex-U.S. Index	-14.6	28.1	4.7	-4.5	-3.8	16.0	17.2	-14.1	12.8	43.1	-45.6
<i>MSCI ACWI ex USA IMI</i>	<i>-14.8</i>	<i>27.8</i>	<i>4.4</i>	<i>-4.6</i>	<i>-3.9</i>	<i>15.8</i>	<i>17.0</i>	<i>-14.3</i>	<i>12.7</i>	<i>43.6</i>	<i>-46.0</i>
Over/Under	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-0.5	0.4
<i>MSCI ACWI ex USA NR LCL</i>	<i>-10.6</i>	<i>18.2</i>	<i>7.0</i>	<i>1.9</i>	<i>6.0</i>	<i>20.1</i>	<i>16.3</i>	<i>-12.2</i>	<i>7.6</i>	<i>31.7</i>	<i>-40.9</i>
Sprucegrove	-13.8	27.5	11.9	-9.1	-3.2	17.1	17.2	-10.7	18.8	36.2	-42.4
<i>MSCI ACWI ex USA</i>	<i>-14.2</i>	<i>27.2</i>	<i>4.5</i>	<i>-5.7</i>	<i>-3.9</i>	<i>15.3</i>	<i>16.8</i>	<i>-13.7</i>	<i>11.2</i>	<i>41.4</i>	<i>-45.5</i>
Over/Under	0.4	0.3	7.4	-3.4	0.7	1.8	0.4	3.0	7.6	-5.2	3.1
<i>MSCI EAFE</i>	<i>-13.8</i>	<i>25.0</i>	<i>1.0</i>	<i>-0.8</i>	<i>-4.9</i>	<i>22.8</i>	<i>17.3</i>	<i>-12.1</i>	<i>7.8</i>	<i>31.8</i>	<i>-43.4</i>
<i>MSCI ACWI ex USA NR LCL</i>	<i>-10.6</i>	<i>18.2</i>	<i>7.0</i>	<i>1.9</i>	<i>6.0</i>	<i>20.1</i>	<i>16.3</i>	<i>-12.2</i>	<i>7.6</i>	<i>31.7</i>	<i>-40.9</i>
<i>MSCI EAFE NR LCL</i>	<i>-11.0</i>	<i>15.2</i>	<i>5.3</i>	<i>5.3</i>	<i>5.9</i>	<i>26.9</i>	<i>17.3</i>	<i>-12.2</i>	<i>4.8</i>	<i>24.7</i>	<i>-40.3</i>
Hexavest	-11.3	17.4	3.8	-1.4	-4.3	20.2	13.7	-9.6	--	--	--
<i>MSCI EAFE</i>	<i>-13.8</i>	<i>25.0</i>	<i>1.0</i>	<i>-0.8</i>	<i>-4.9</i>	<i>22.8</i>	<i>17.3</i>	<i>-12.1</i>	<i>7.8</i>	<i>31.8</i>	<i>-43.4</i>
Over/Under	2.5	-7.6	2.8	-0.6	0.6	-2.6	-3.6	2.5	--	--	--
<i>MSCI EAFE NR LCL</i>	<i>-11.0</i>	<i>15.2</i>	<i>5.3</i>	<i>5.3</i>	<i>5.9</i>	<i>26.9</i>	<i>17.3</i>	<i>-12.2</i>	<i>4.8</i>	<i>24.7</i>	<i>-40.3</i>
Walter Scott	-7.1	26.6	5.1	-0.4	-3.5	11.8	20.4	-9.3	--	--	--
<i>MSCI ACWI ex USA</i>	<i>-14.2</i>	<i>27.2</i>	<i>4.5</i>	<i>-5.7</i>	<i>-3.9</i>	<i>15.3</i>	<i>16.8</i>	<i>-13.7</i>	<i>11.2</i>	<i>41.4</i>	<i>-45.5</i>
Over/Under	7.1	-0.6	0.6	5.3	0.4	-3.5	3.6	4.4	--	--	--
<i>MSCI ACWI ex USA NR LCL</i>	<i>-10.6</i>	<i>18.2</i>	<i>7.0</i>	<i>1.9</i>	<i>6.0</i>	<i>20.1</i>	<i>16.3</i>	<i>-12.2</i>	<i>7.6</i>	<i>31.7</i>	<i>-40.9</i>
<i>MSCI EAFE</i>	<i>-13.8</i>	<i>25.0</i>	<i>1.0</i>	<i>-0.8</i>	<i>-4.9</i>	<i>22.8</i>	<i>17.3</i>	<i>-12.1</i>	<i>7.8</i>	<i>31.8</i>	<i>-43.4</i>
Total Global Equity	-9.0	24.5	9.0	-3.8	1.9	22.0	14.4	-3.9	11.4	17.8	-37.3
<i>MSCI ACWI</i>	<i>-9.4</i>	<i>24.0</i>	<i>7.9</i>	<i>-2.4</i>	<i>4.2</i>	<i>22.8</i>	<i>16.1</i>	<i>-7.3</i>	<i>12.7</i>	<i>34.6</i>	<i>-42.2</i>
Over/Under	0.4	0.5	1.1	-1.4	-2.3	-0.8	-1.7	3.4	-1.3	-16.8	4.9
BlackRock MSCI ACWI Equity Index	-9.0	24.5	8.4	-2.0	4.6	23.2	--	--	--	--	--
<i>MSCI ACWI</i>	<i>-9.4</i>	<i>24.0</i>	<i>7.9</i>	<i>-2.4</i>	<i>4.2</i>	<i>22.8</i>	<i>16.1</i>	<i>-7.3</i>	<i>12.7</i>	<i>34.6</i>	<i>-42.2</i>
Over/Under	0.4	0.5	0.5	0.4	0.4	0.4	--	--	--	--	--



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Total Private Equity	18.7	16.9	7.6	14.7	19.0	17.9	10.3	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	21.1	-7.8	-8.5	11.2	3.1	-19.6	-9.6				
<i>Cambridge Associates Global All PE (Qtr Lag)</i>	<i>16.4</i>	<i>15.9</i>	<i>8.5</i>	<i>7.0</i>	<i>16.3</i>	<i>15.9</i>	<i>13.0</i>	<i>12.6</i>	<i>17.1</i>	<i>-9.3</i>	<i>-7.2</i>
Adams Street Global Fund Series	19.6	13.4	7.1	10.3	19.6	15.7	10.8	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	22.0	-11.3	-9.0	6.8	3.7	-21.8	-9.1				
Harbourvest	22.7	23.2	6.7	28.5	18.5	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	25.1	-1.5	-9.4	25.0	2.6						
Pantheon Global Secondary Funds	17.3	24.1	15.5	6.4	16.7	14.9	0.9	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	19.7	-0.6	-0.6	2.9	0.8	-22.6	-19.0				
Drive Capital Fund II	-2.5	-33.7	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	-0.1	-58.4									
Abbott Secondary Opportunities	26.0	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under	28.4										
Clearlake Capital Partners V	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under											
Battery Ventures XII	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under											
Insight Venture Partners X	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under											
GTCR Fund XII	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under											
Buenaventure One, LLC	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<i>-2.4</i>	<i>24.7</i>	<i>16.1</i>	<i>3.5</i>	<i>15.9</i>	<i>37.5</i>	<i>19.9</i>	<i>4.1</i>	<i>20.4</i>	<i>32.1</i>	<i>-35.3</i>
Over/Under											



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
ECI 11	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
The Resolute Fund IV L.P.	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
GGV Capital VII L.P.	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
GGV Discovery II, L.P.	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
Drive Capital Overdrive Fund I	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
Riverside Micro Cap Fund V, LP	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
GGV Capital VII Plus, LP	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
Astorg VII L.P.	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
M/C Partners Fund VIII LP. Limited Partnership	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
Genstar Capital Partners IX	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
Genstar IX Opportunities Fund I	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											
ABRY Partners IX, LP	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000 + 3%</i>	<u>-2.4</u>	<u>24.7</u>	<u>16.1</u>	<u>3.5</u>	<u>15.9</u>	<u>37.5</u>	<u>19.9</u>	<u>4.1</u>	<u>20.4</u>	<u>32.1</u>	<u>-35.3</u>
Over/Under											



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Total US Fixed Income	0.0	4.4	4.9	0.3	3.0	-0.1	9.6	7.3	10.6	25.6	-8.7
<i>BBgBarc US Aggregate TR</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
Over/Under	0.0	0.9	2.3	-0.2	-3.0	1.9	5.4	-0.5	4.1	19.7	-13.9
BlackRock U.S. Debt Fund	0.0	3.6	2.7	0.6	6.2	-2.0	4.3	7.9	6.7	6.0	5.4
<i>BBgBarc US Aggregate TR</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
Over/Under	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.2
Western	-0.6	6.0	4.1	0.9	7.4	-1.2	9.7	7.3	11.3	18.9	-8.9
<i>BBgBarc US Aggregate TR</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
Over/Under	-0.6	2.5	1.5	0.4	1.4	0.8	5.5	-0.5	4.8	13.0	-14.1
Reams	0.7	2.5	6.0	0.3	-3.6	2.5	10.0	8.4	10.0	33.6	-11.0
<i>Reams Custom Index</i>	<i>2.4</i>	<i>1.3</i>	<i>0.7</i>	<i>0.3</i>	<i>0.2</i>	<i>-0.5</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
Over/Under	-1.7	1.2	5.3	0.0	-3.8	3.0	5.8	0.6	3.5	27.7	-16.2
<i>BBgBarc US Aggregate TR</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
3-Month LIBOR + 3%	5.4	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2
Loomis Strategic Alpha	0.6	3.3	6.1	-1.0	2.4	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>	<i>4.2</i>	<i>7.8</i>	<i>6.5</i>	<i>5.9</i>	<i>5.2</i>
Over/Under	0.6	-0.2	3.5	-1.5	-3.6	--	--	--	--	--	--
3-Month LIBOR + 3%	5.4	4.4	3.8	3.3	3.2	3.3	3.5	3.3	3.4	3.8	6.2
Loomis Sayles Multi Strategy	-0.8	8.4	8.2	-2.3	6.8	1.4	16.7	4.2	13.6	37.6	-19.7
<i>Loomis Custom Index</i>	<i>-0.6</i>	<i>4.5</i>	<i>7.0</i>	<i>-1.2</i>	<i>4.6</i>	<i>0.8</i>	<i>7.5</i>	<i>7.1</i>	<i>8.7</i>	<i>18.8</i>	<i>-4.6</i>
Over/Under	-0.2	3.9	1.2	-1.1	2.2	0.6	9.2	-2.9	4.9	18.8	-15.1
<i>BBgBarc US Govt/Credit TR</i>	<i>-0.4</i>	<i>4.0</i>	<i>3.0</i>	<i>0.1</i>	<i>6.0</i>	<i>-2.4</i>	<i>4.8</i>	<i>8.7</i>	<i>6.6</i>	<i>4.5</i>	<i>5.7</i>



Ventura County Employees' Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Private Debt	4.7	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under	3.6										
CVI Credit Value Fund	4.6	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under	3.5										
Monroe Capital Private Credit Fund III	--	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under											
Bluebay Direct Lending Fund III	--	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	<u>1.1</u>	--	--	--	--	--	--	--	--	--	--
Over/Under											
Treasuries	--	--	--	--	--	--	--	--	--	--	--
Reams 10-Year Treasuries	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Treasury 7-10 Yr TR	<u>0.9</u>	<u>2.6</u>	<u>1.1</u>	<u>1.6</u>	<u>9.0</u>	<u>-6.0</u>	<u>4.2</u>	<u>15.6</u>	<u>9.4</u>	<u>-6.0</u>	<u>18.0</u>
Over/Under											



Ventura County Employees' Retirement Association

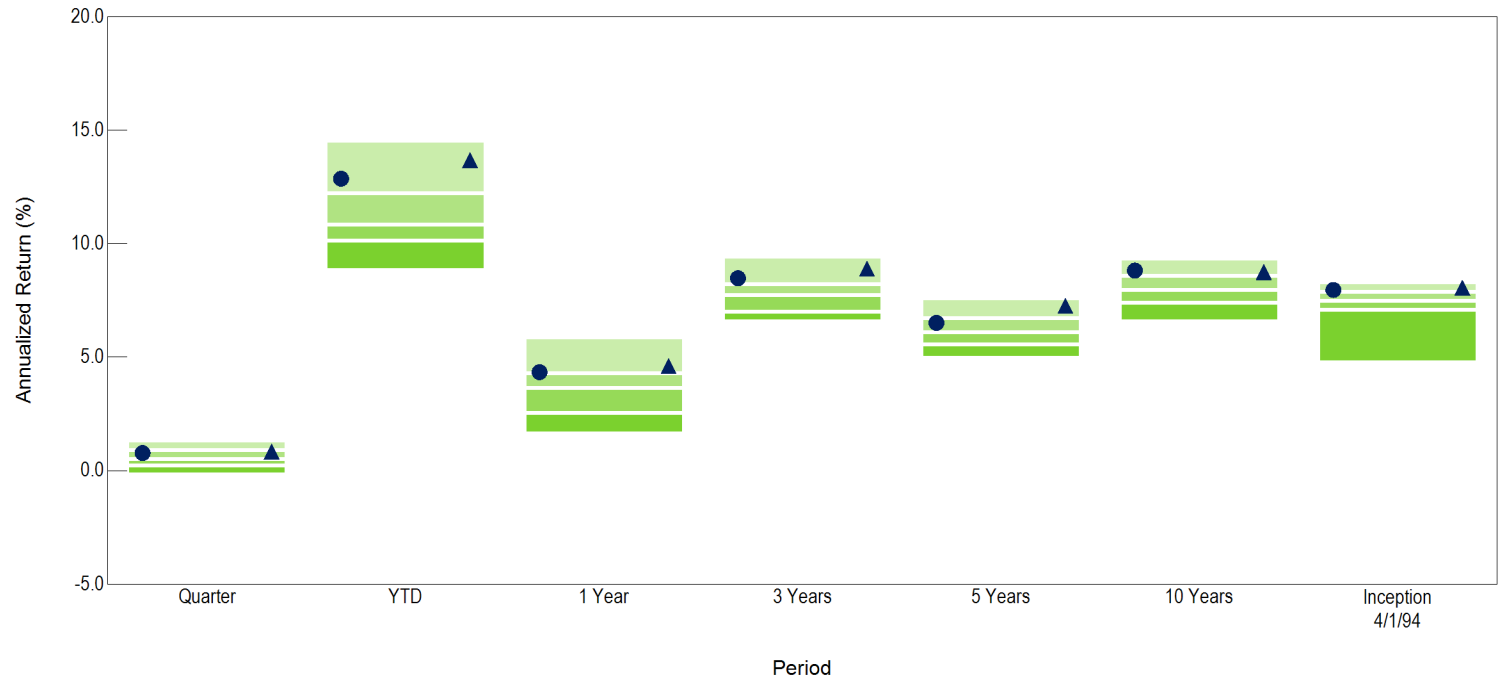
TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)
Total Real Estate	6.9	5.9	6.8	12.8	11.6	10.6	9.1	14.4	15.4	-31.2	-16.0
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	-0.5	-0.8	-1.0	-1.2	0.1	-2.3	-0.7	-0.6	0.1	-0.8	-5.3
Prudential Real Estate	8.2	7.0	8.2	14.5	12.5	13.8	8.8	18.0	17.2	-34.8	-13.6
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	0.8	0.3	0.4	0.5	1.0	0.9	-1.0	3.0	1.9	-4.4	-2.9
NCREIF ODCE	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0
UBS Real Estate	6.2	5.4	6.2	11.9	10.6	9.3	9.0	12.1	15.9	-22.9	-8.3
NCREIF ODCE Net	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>	<u>9.8</u>	<u>15.0</u>	<u>15.3</u>	<u>-30.4</u>	<u>-10.7</u>
Over/Under	-1.2	-1.3	-1.6	-2.1	-0.9	-3.6	-0.8	-2.9	0.6	7.5	2.4
NCREIF ODCE	8.3	7.6	8.8	15.0	12.5	13.9	10.9	16.0	16.4	-29.8	-10.0
Total Real Assets	-7.3	7.2	11.7	-13.8	10.2	--	--	--	--	--	--
Real Assets Index	<u>6.0</u>	<u>6.2</u>	<u>6.2</u>	<u>4.8</u>	<u>4.8</u>	<u>28.8</u>	<u>5.4</u>	<u>8.8</u>	--	--	--
Over/Under	-13.3	1.0	5.5	-18.6	5.4	--	--	--	--	--	--
Bridgewater All Weather Fund	-5.0	11.9	10.0	-6.8	7.6	--	--	--	--	--	--
CPI + 5% (Unadjusted)	<u>7.0</u>	<u>7.2</u>	<u>7.2</u>	<u>5.8</u>	<u>5.8</u>	--	--	--	--	--	--
Over/Under	-12.0	4.7	2.8	-12.6	1.8	--	--	--	--	--	--
Tortoise Energy Infrastructure	-13.3	-3.5	15.9	-27.1	15.7	--	--	--	--	--	--
Tortoise MLP Index	<u>-13.7</u>	<u>-5.7</u>	<u>21.0</u>	<u>-34.1</u>	<u>8.0</u>	<u>28.8</u>	<u>5.4</u>	<u>8.8</u>	--	--	--
Over/Under	0.4	2.2	-5.1	7.0	7.7	--	--	--	--	--	--
Overlay											
Parametric											
Abbott Capital Cash											



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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

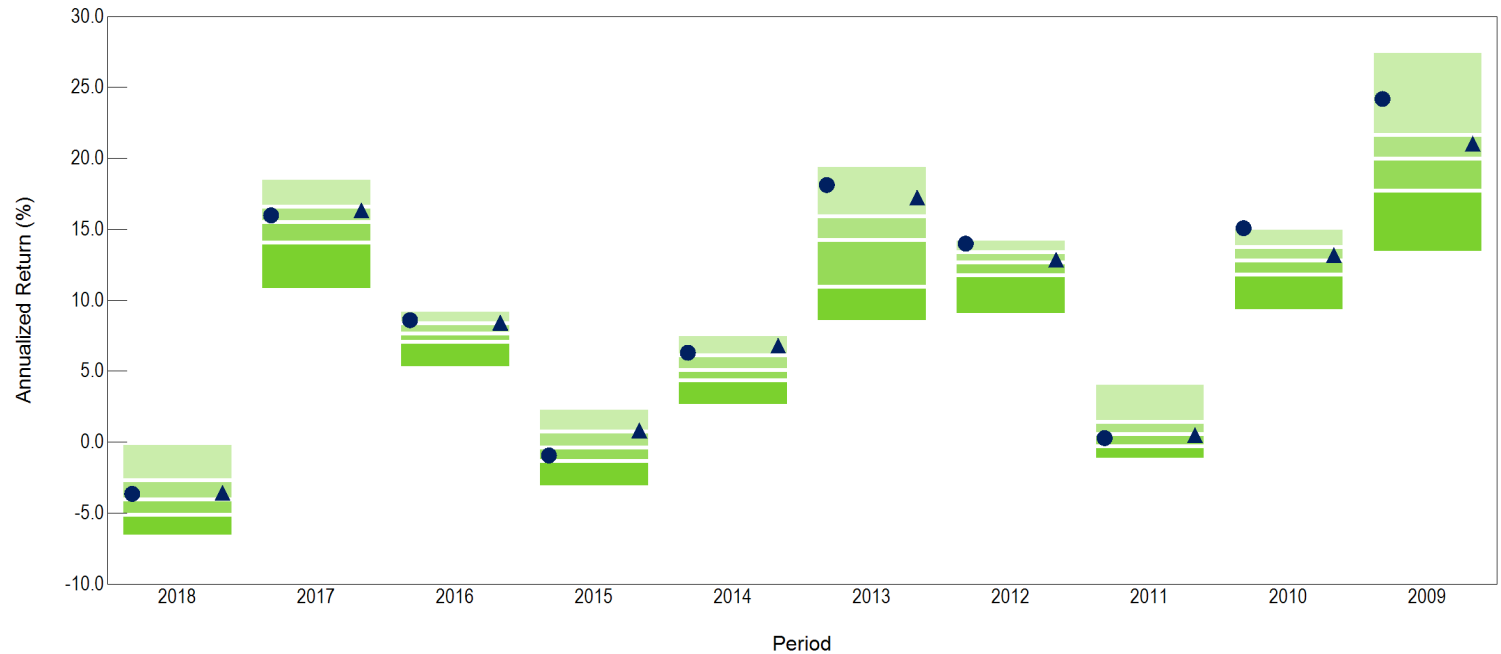


	Return (Rank)													
5th Percentile	1.3	14.5	5.9	9.4	7.6	9.3	8.3							
25th Percentile	0.9	12.2	4.3	8.2	6.7	8.6	7.9							
Median	0.5	10.8	3.6	7.7	6.1	8.0	7.5							
75th Percentile	0.2	10.1	2.6	7.0	5.6	7.4	7.1							
95th Percentile	-0.2	8.9	1.7	6.6	5.0	6.6	4.8							
# of Portfolios	71	71	71	71	69	63	35							
● Total Fund	0.8	(34)	12.9	(22)	4.3	(25)	8.5	(15)	6.5	(32)	8.8	(18)	8.0	(21)
▲ Policy Index	0.8	(30)	13.7	(11)	4.6	(21)	8.9	(10)	7.3	(10)	8.7	(21)	8.0	(15)



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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

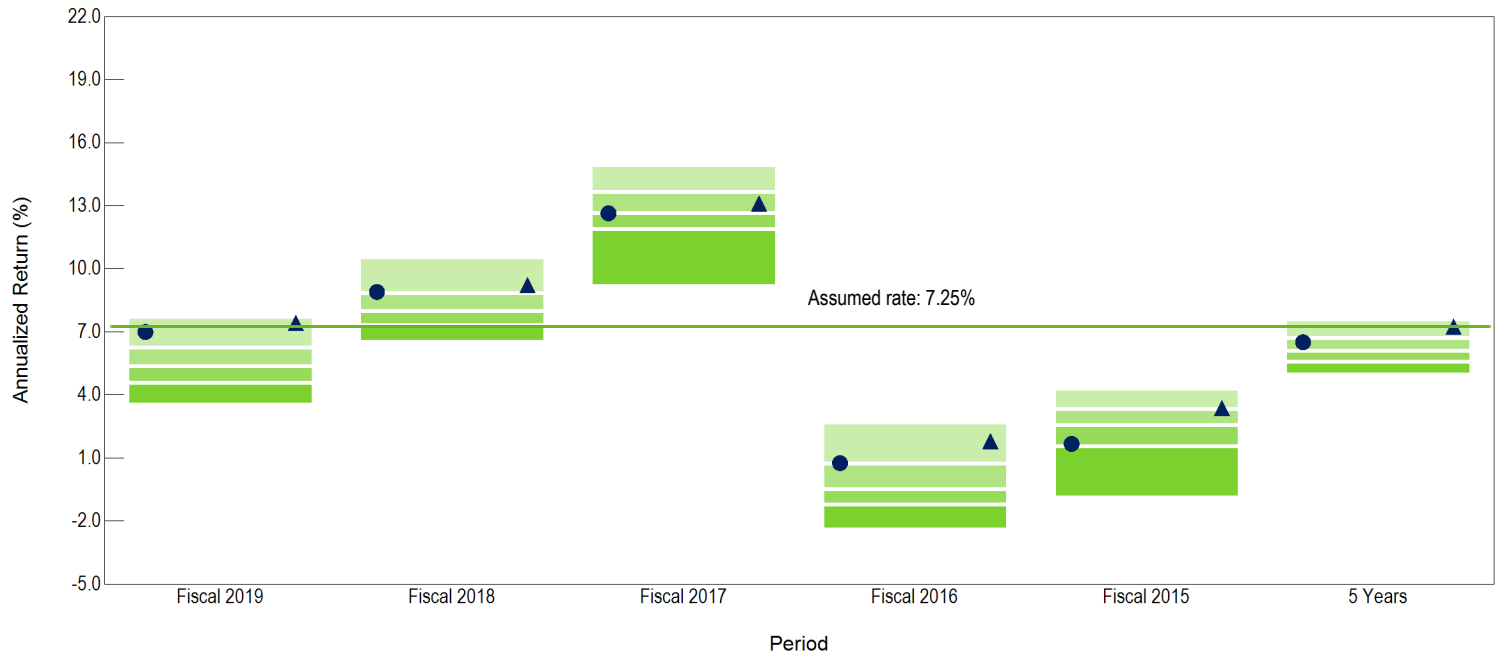


	Return (Rank)																					
5th Percentile	-0.1	18.6	9.3	2.4	7.6	19.5	14.3	4.2	15.1	27.5												
25th Percentile	-2.7	16.6	8.4	0.8	6.1	16.0	13.4	1.5	13.8	21.7												
Median	-4.0	15.6	7.7	-0.4	5.1	14.3	12.7	0.6	12.8	20.0												
75th Percentile	-5.1	14.1	7.1	-1.3	4.4	11.0	11.8	-0.3	11.8	17.7												
95th Percentile	-6.6	10.7	5.3	-3.2	2.6	8.5	9.0	-1.2	9.3	13.4												
# of Portfolios	63	61	62	57	55	48	44	42	41	40												
● Total Fund	-3.6	(42)	16.0	(37)	8.6	(15)	-0.9	(65)	6.3	(20)	18.1	(10)	14.0	(15)	0.3	(61)	15.1	(6)	24.2	(16)		
▲ Policy Index	-3.6	(41)	16.3	(29)	8.4	(25)	0.8	(25)	6.8	(12)	17.2	(14)	12.9	(41)	0.5	(55)	13.2	(44)	21.0	(33)		



TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

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

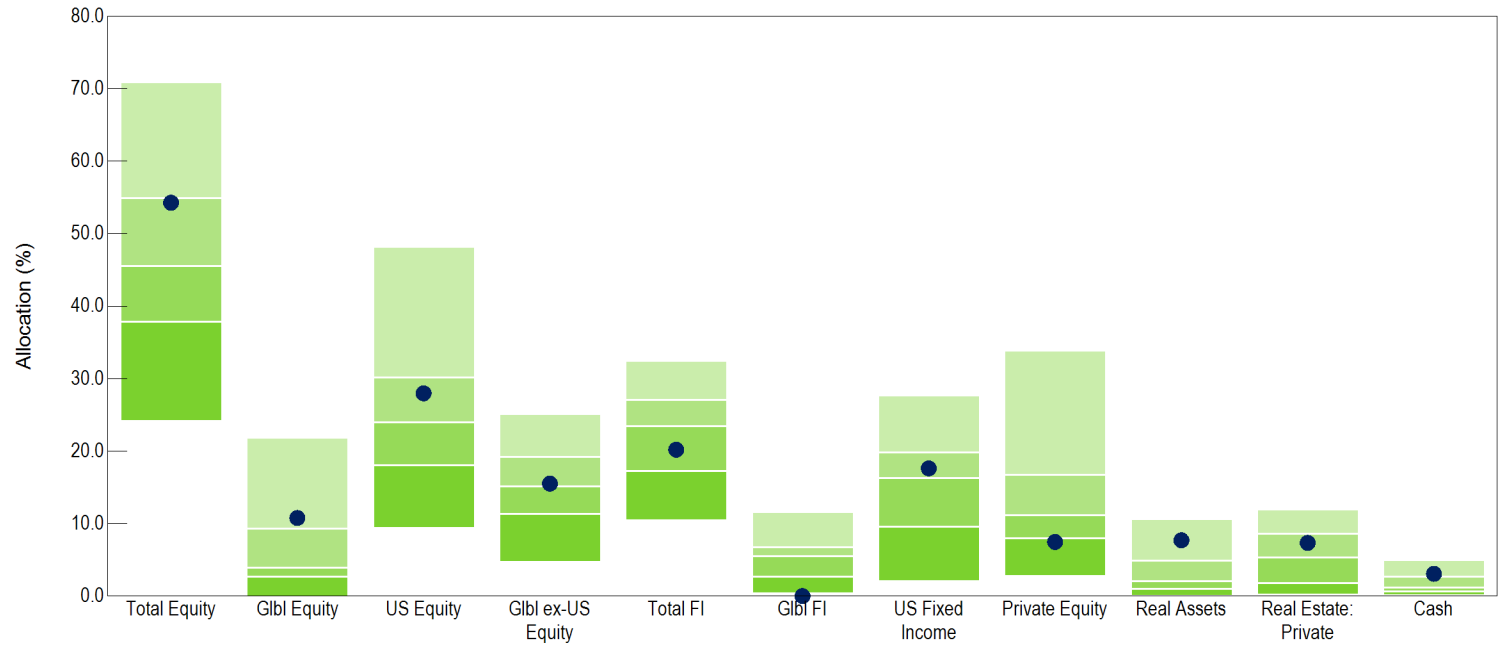


	Fiscal 2019		Fiscal 2018		Fiscal 2017		Fiscal 2016		Fiscal 2015		5 Years	
	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)	Return	(Rank)
5th Percentile	7.7		10.5		14.9		2.7		4.3		7.6	
25th Percentile	6.3		8.8		13.7		0.8		3.3		6.7	
Median	5.4		8.0		12.7		-0.5		2.6		6.1	
75th Percentile	4.6		7.3		11.9		-1.2		1.6		5.6	
95th Percentile	3.5		6.5		9.2		-2.4		-0.9		5.0	
# of Portfolios	77		51		65		55		53		69	
● Total Fund	7.0	(15)	8.9	(23)	12.6	(53)	0.8	(26)	1.7	(71)	6.5	(32)
▲ Policy Index	7.4	(7)	9.2	(13)	13.1	(37)	1.8	(9)	3.4	(25)	7.3	(10)



TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

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



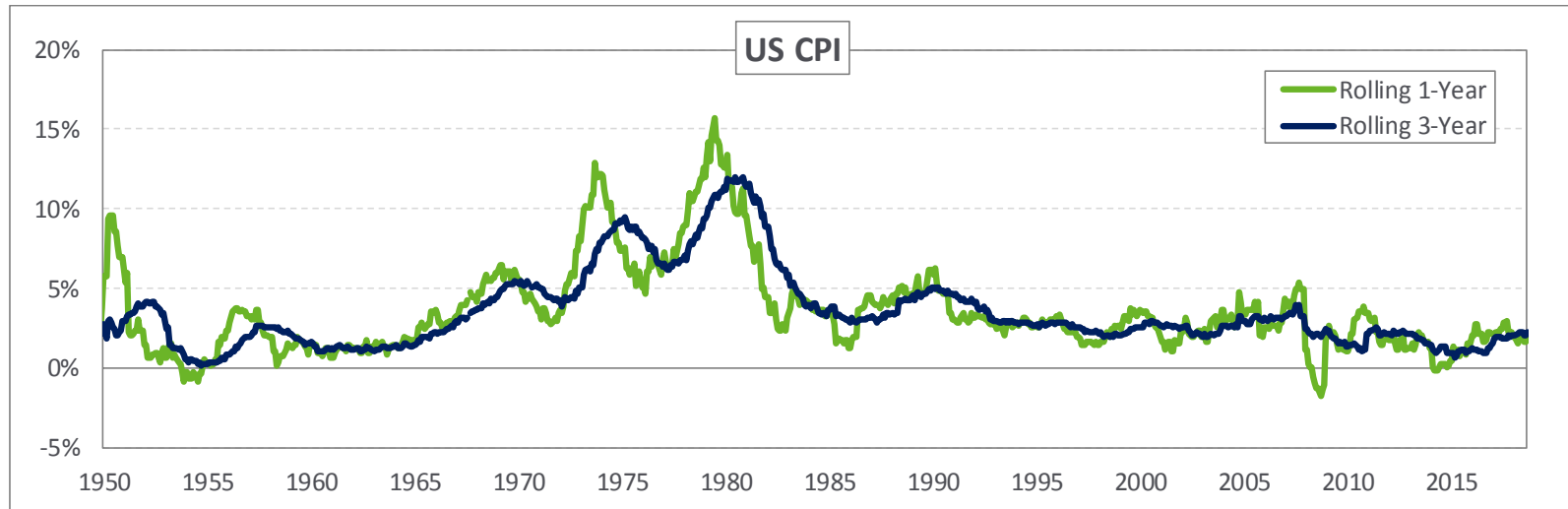
	Allocation (Rank)																						
5th Percentile	70.9	21.9	48.2	25.1	32.4	11.6	27.7	33.9	10.6	12.0	4.9	--											
25th Percentile	55.0	9.4	30.2	19.3	27.2	6.8	19.9	16.8	5.0	8.7	2.7	--											
Median	45.6	4.0	24.1	15.2	23.5	5.6	16.3	11.2	2.2	5.4	1.3	--											
75th Percentile	37.9	2.8	18.1	11.4	17.3	2.8	9.6	8.0	1.1	1.8	0.7	--											
95th Percentile	24.2	0.1	9.5	4.8	10.6	0.4	2.2	2.8	0.2	0.3	0.2	--											
# of Portfolios	54	24	43	52	54	23	42	48	24	46	54	--											
• Total Fund	54.2	(29)	10.8	(18)	28.0	(35)	15.5	(50)	20.2	(66)	0.0	(99)	17.6	(45)	7.5	(82)	7.7	(12)	7.3	(38)	3.1	(19)	--



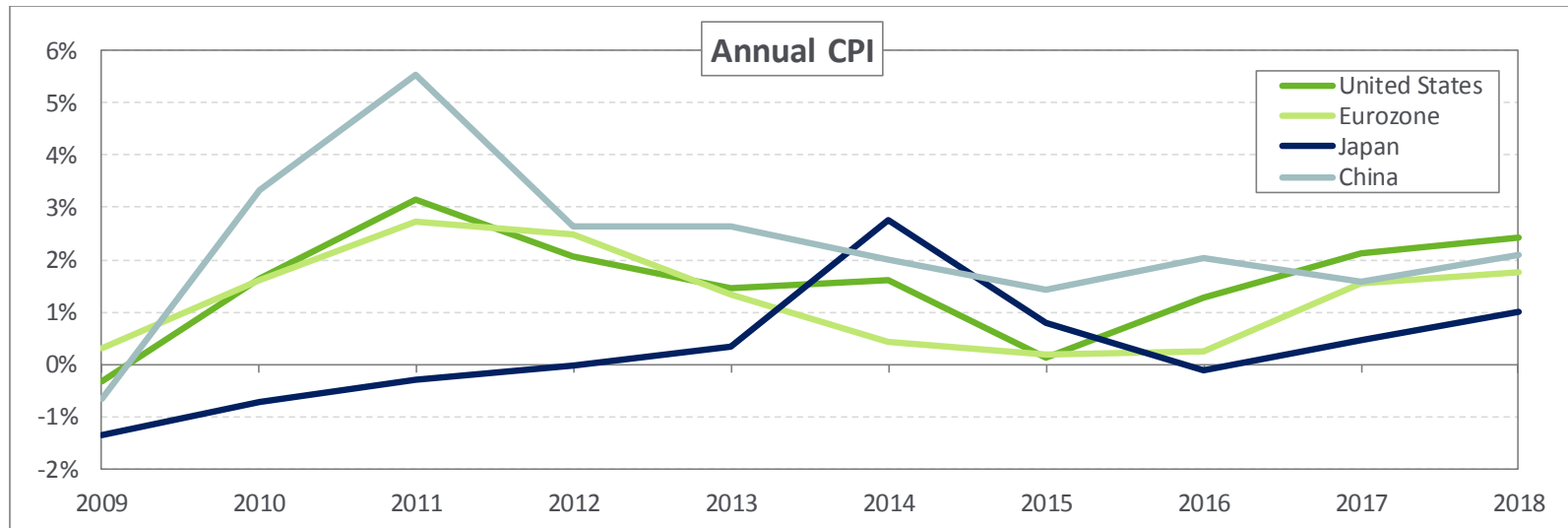
MACRO

NEPC, LLC

INFLATION



Source: Bureau of Labor Statistics, FactSet



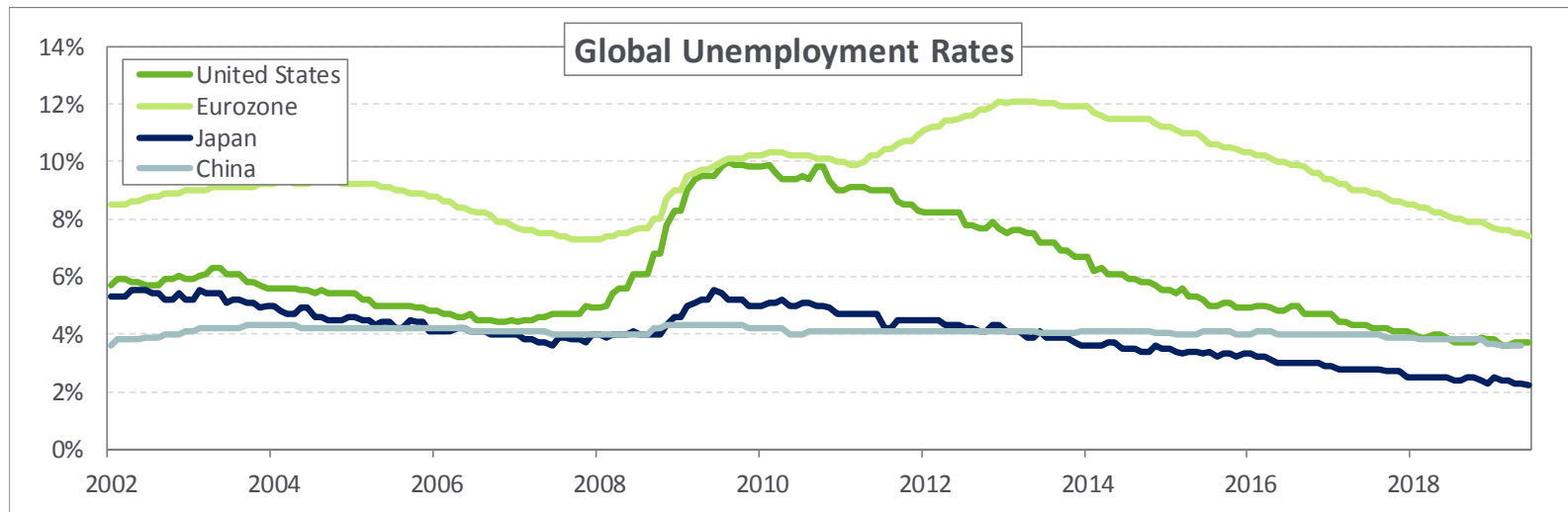
Source: FactSet



UNEMPLOYMENT



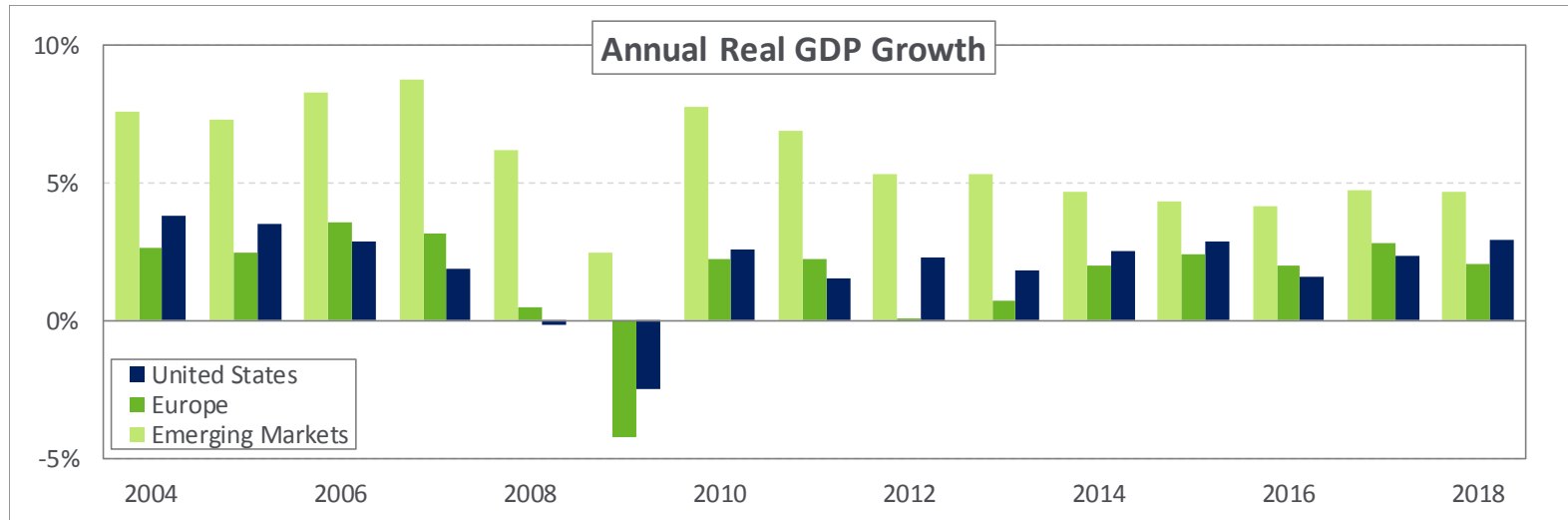
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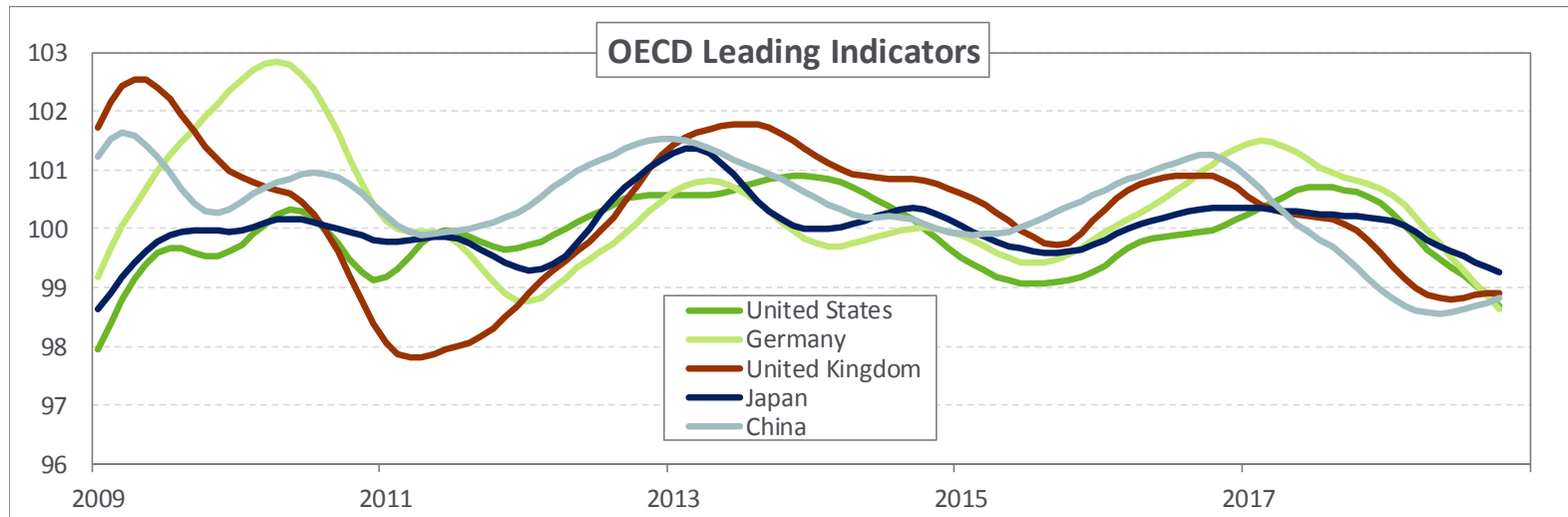
Source: FactSet



ECONOMIC INDICATORS



Source: Bureau of Economic Analysis, Oxford Economics, FactSet



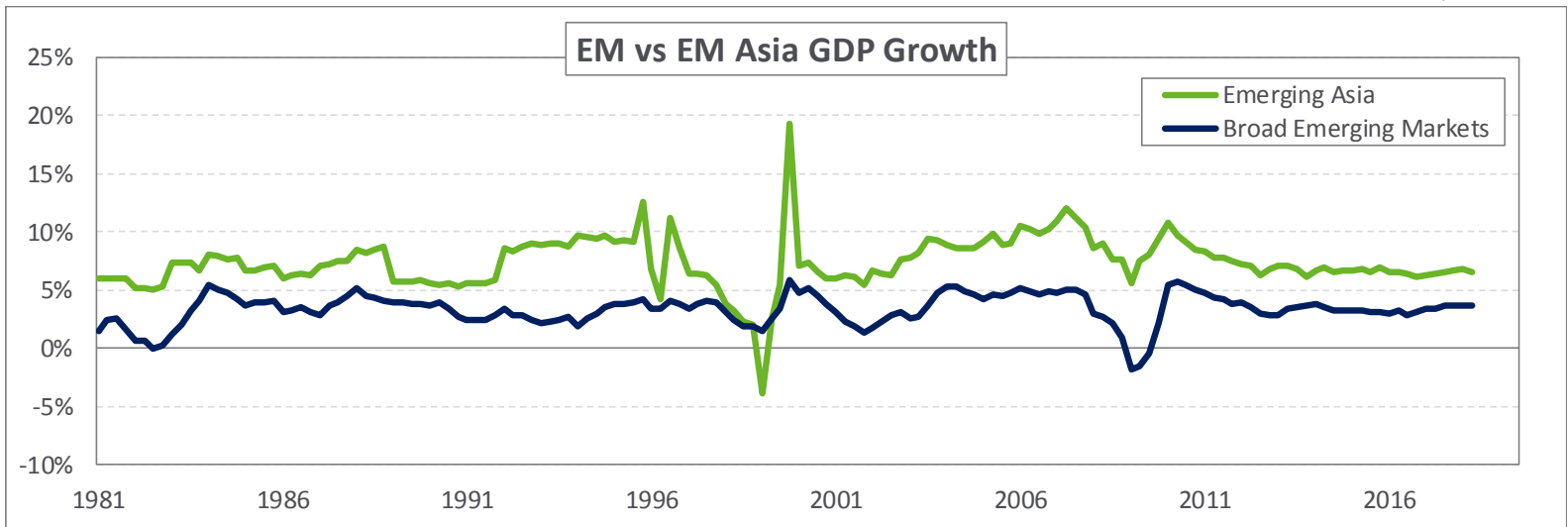
Source: OECD, FactSet



GROSS DOMESTIC PRODUCT



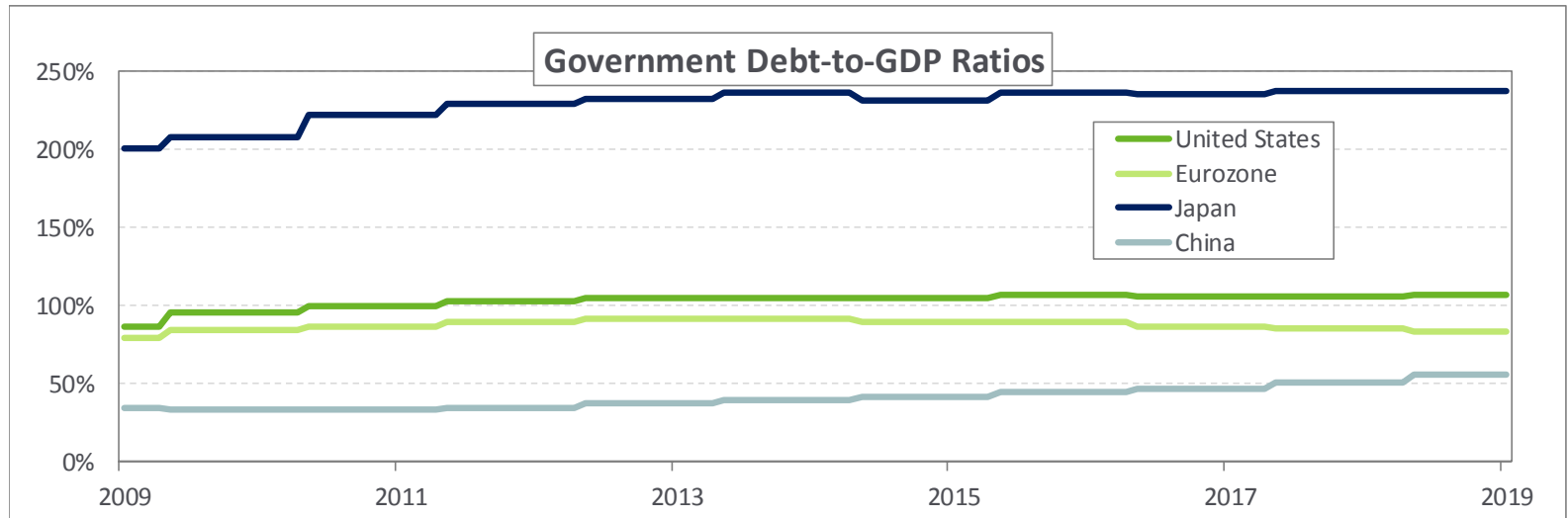
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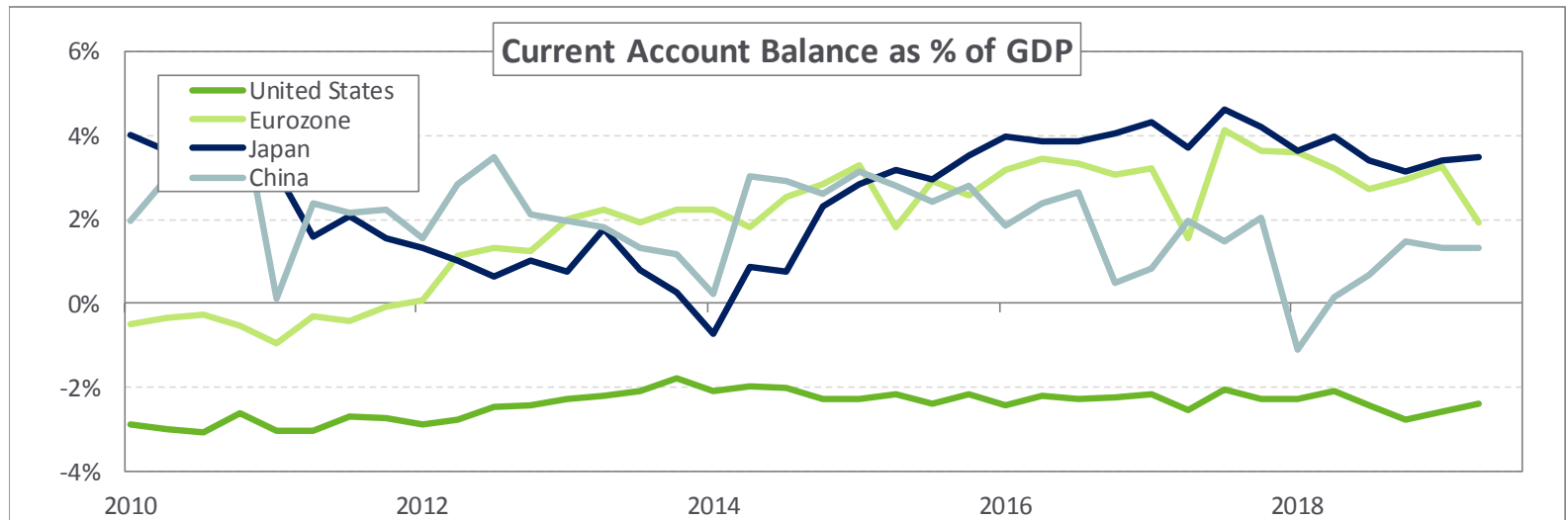
Source: IMF, FactSet



GROSS DOMESTIC PRODUCT METRICS



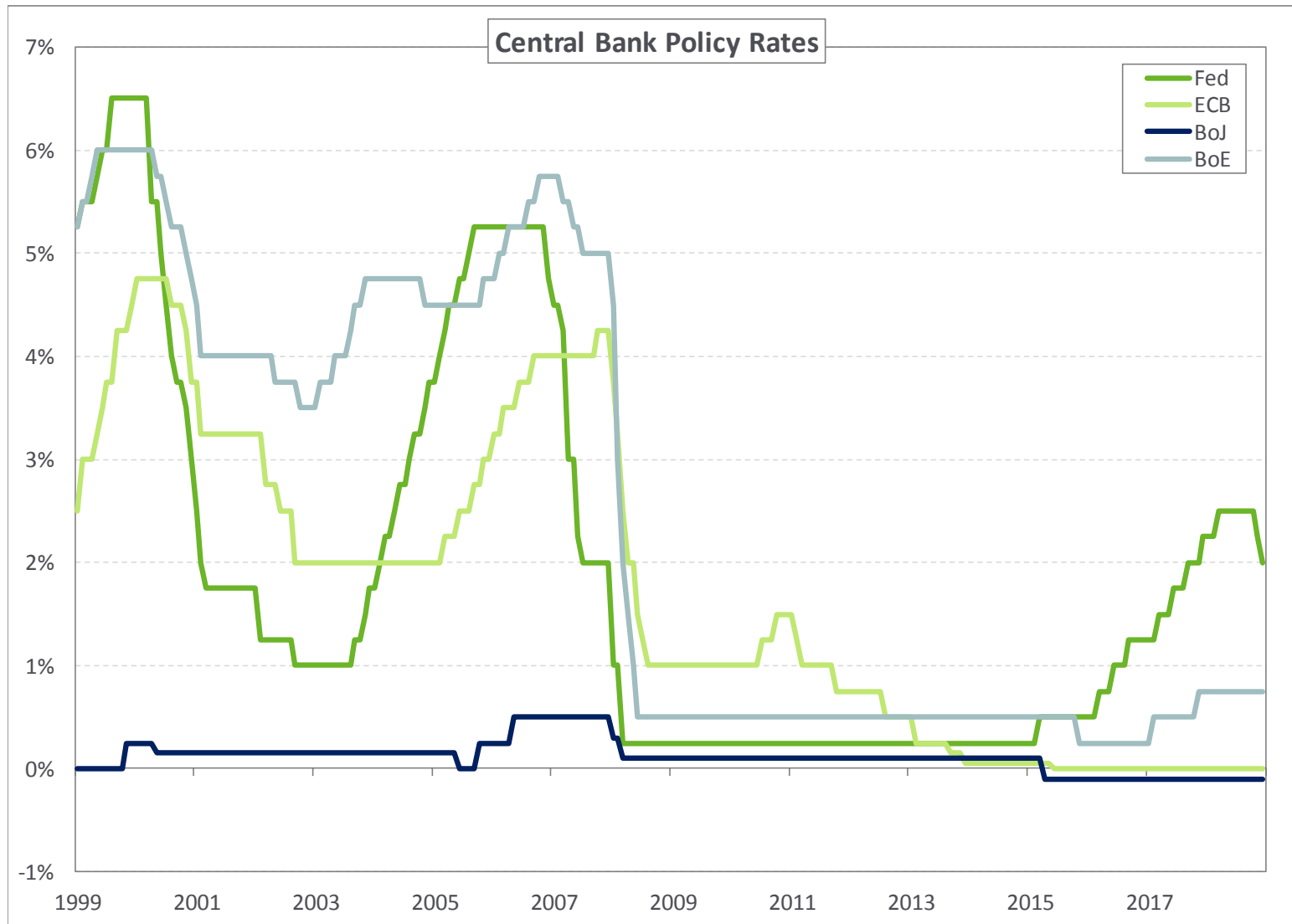
Source: IMF, FactSet



Source: FactSet



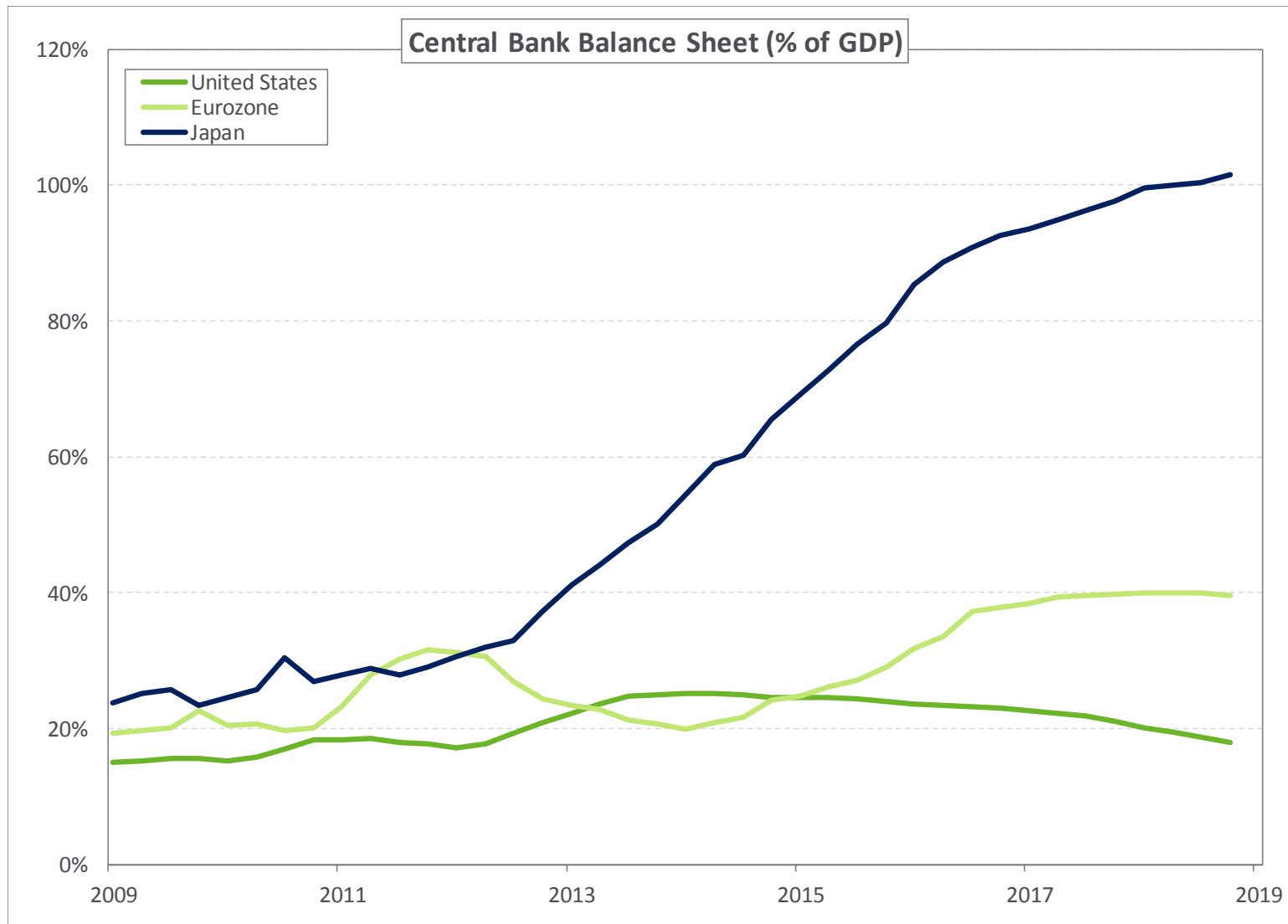
CENTRAL BANK RATES



Source: Federal Reserve, ECB, Bank of Japan, Bank of England, FactSet



CENTRAL BANK BALANCE SHEETS



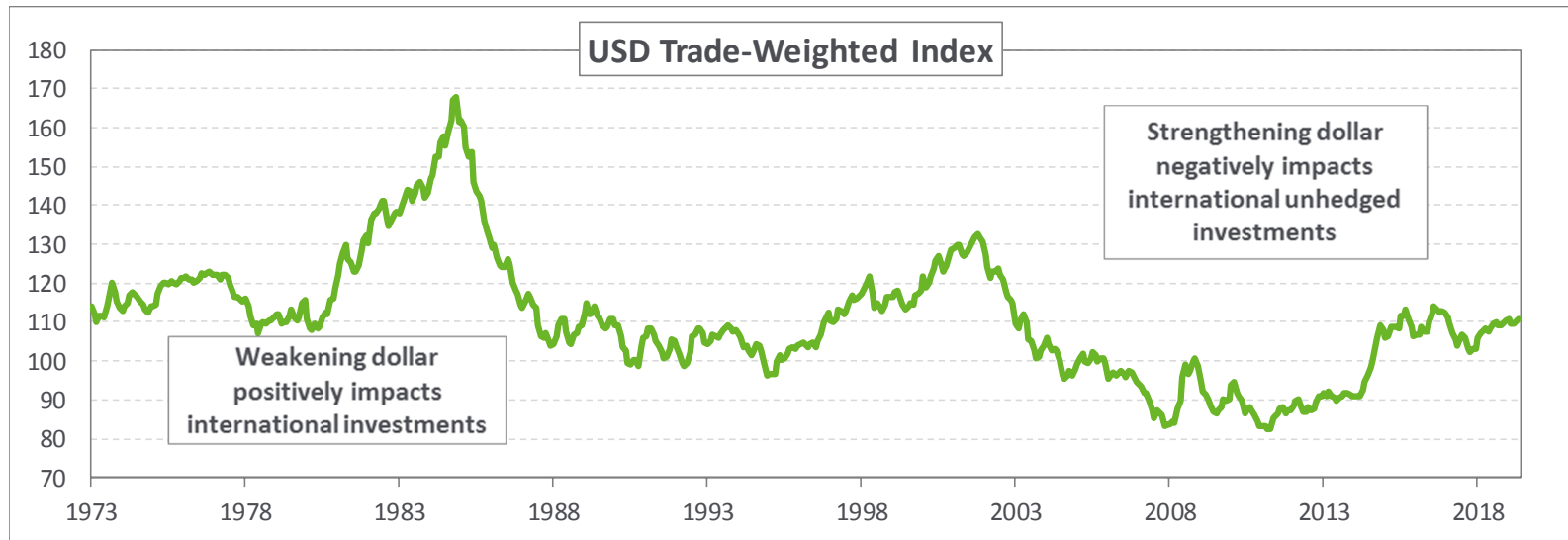
Source: FactSet



CURRENCIES

% Change Relative to USD				
Currencies	Spot	1 Month	YTD	1 Year
Euro	1.09	-1.00%	-4.63%	-5.89%
British Pound	1.23	1.19%	-3.24%	-5.53%
Japanese Yen	108.08	1.82%	-1.49%	-5.16%
Swiss Franc	1.00	0.78%	1.15%	1.38%
Australian Dollar	0.67	0.10%	-4.20%	-6.58%
Chinese Yuan	7.14	-0.10%	3.97%	3.75%
Brazilian Real	4.17	0.80%	7.47%	3.40%
Russian Ruble	64.88	-2.60%	-6.47%	-0.98%
Indian Rupee	70.87	-0.75%	1.51%	-2.74%
Mexican Peso	19.74	-1.61%	0.26%	5.78%
South African Rand	15.16	-0.14%	5.40%	6.76%

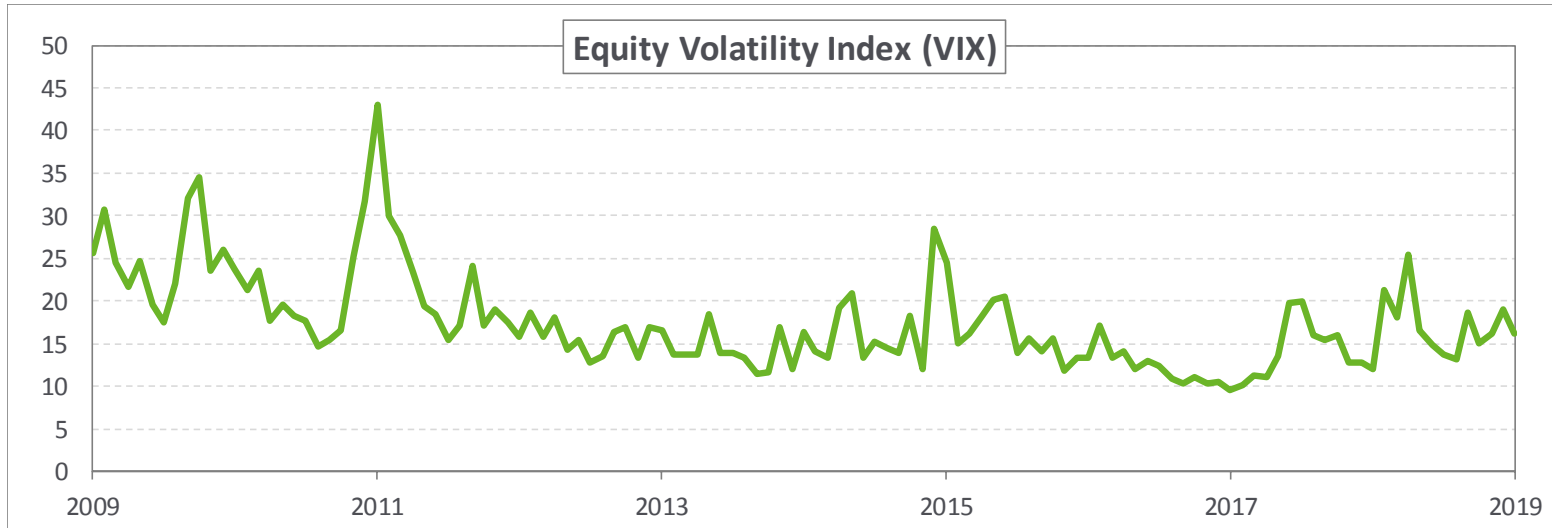
Source: FactSet



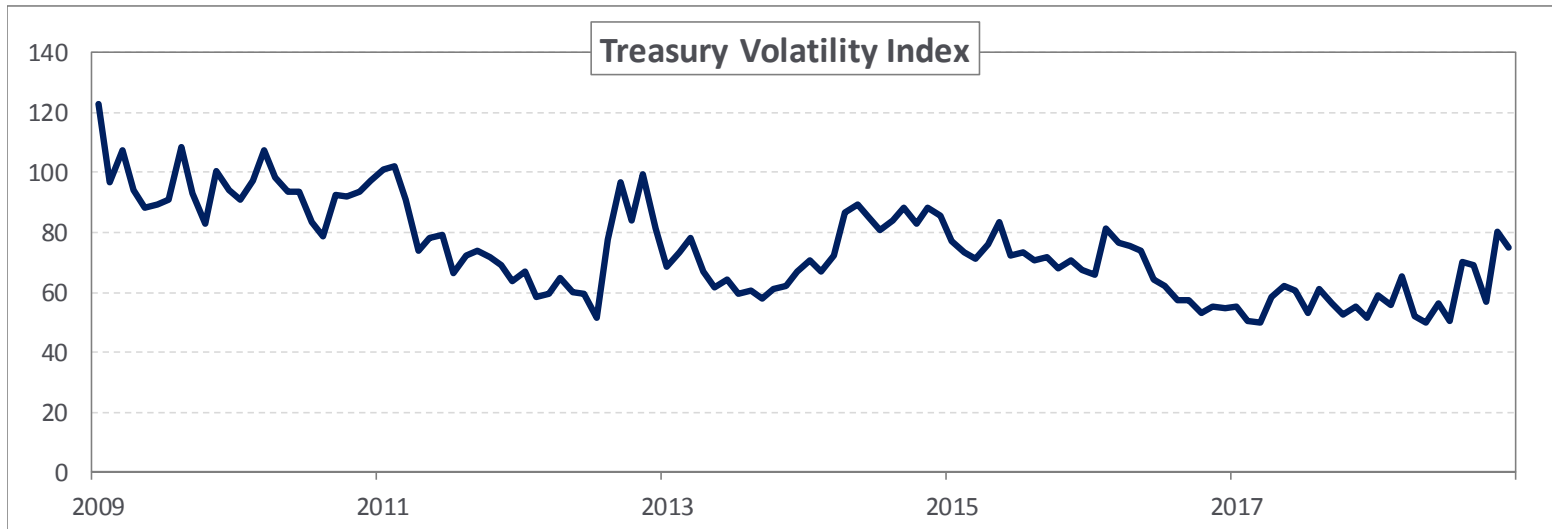
Source: FactSet



VOLATILITY



Source: CBOE, FactSet



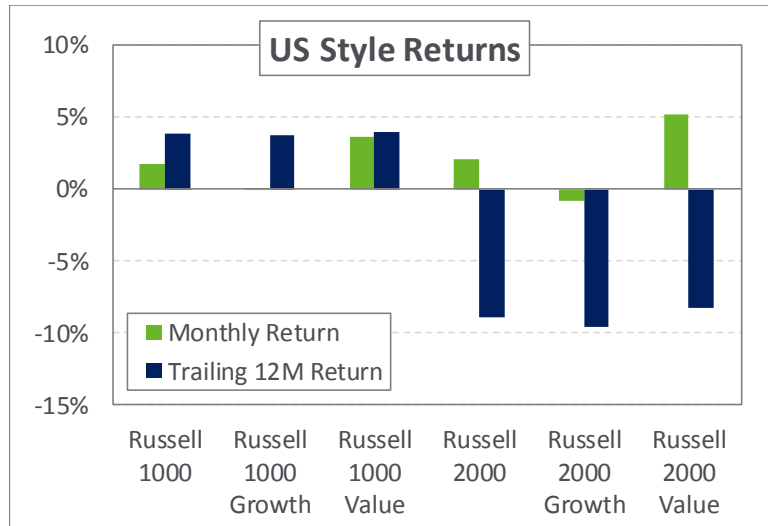
Source: Merrill Lynch, FactSet



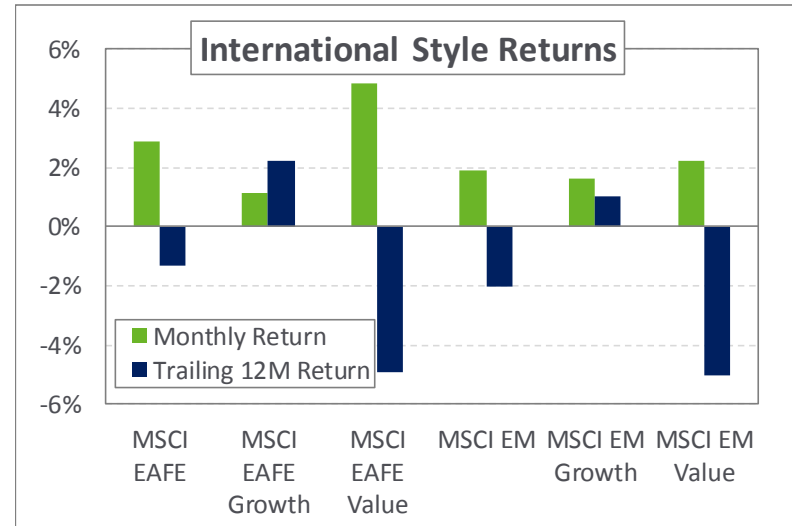
EQUITY

NEPC, LLC

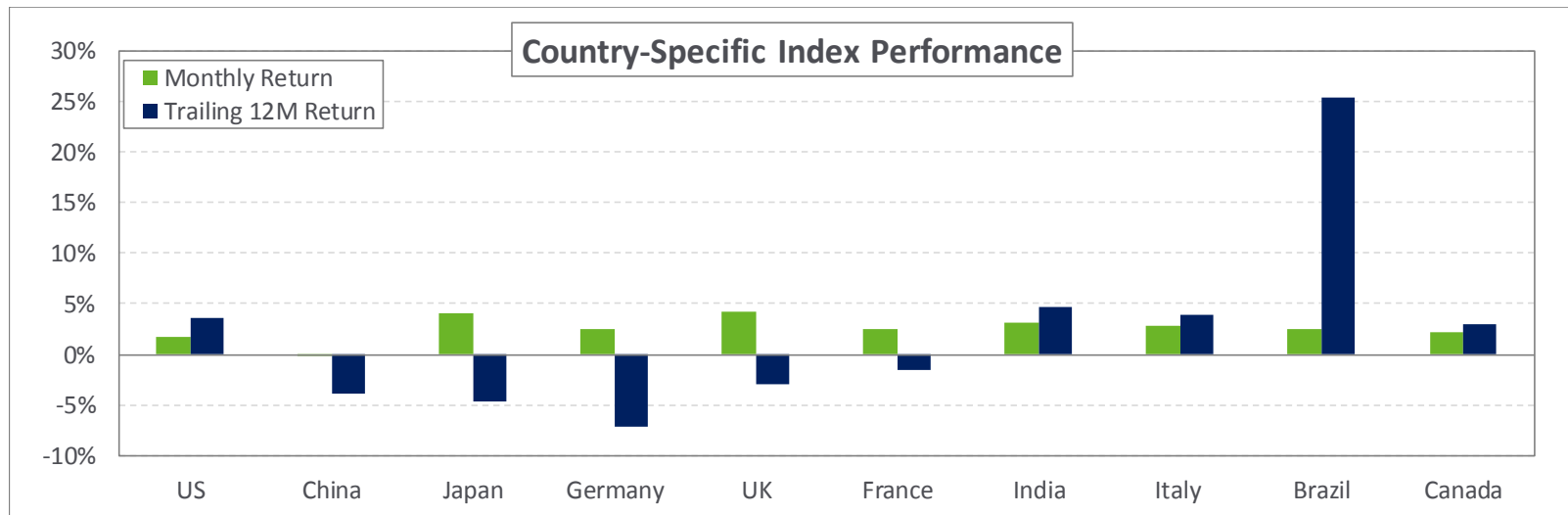
EQUITY INDEX PERFORMANCE



Source: Russell, FactSet



Source: MSCI, FactSet



Source: MSCI, FactSet
Represents returns in USD



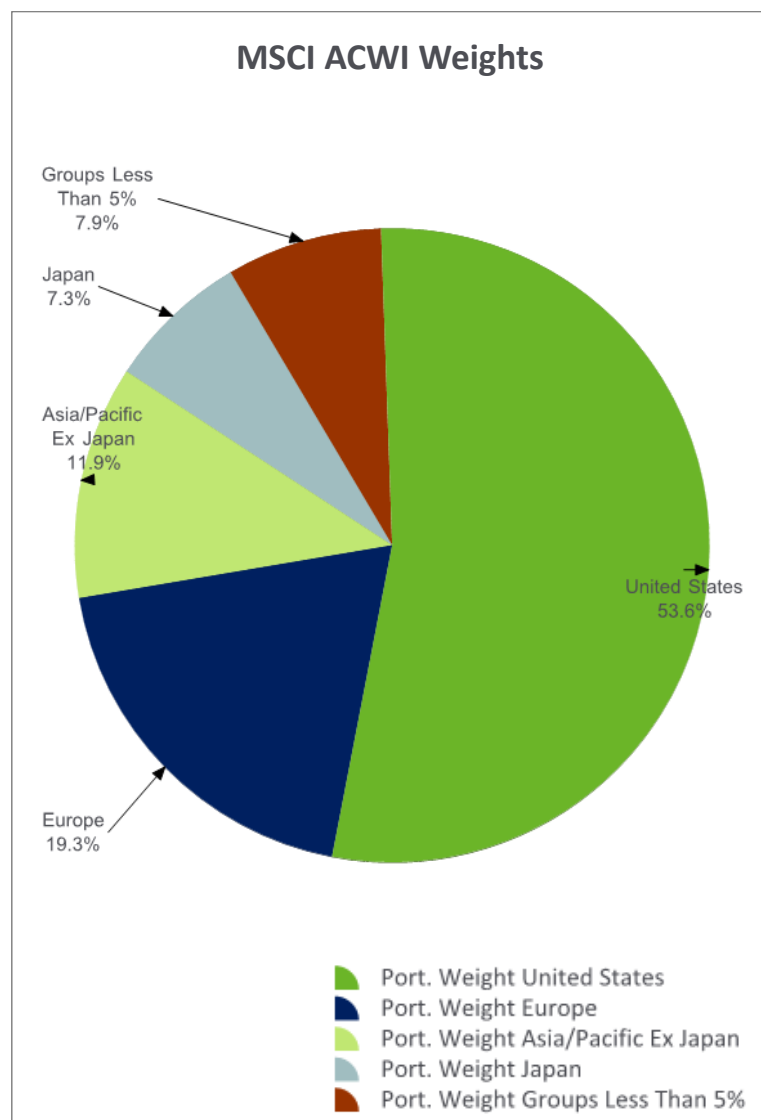
INDEX COMPOSITION

	MTD	QTD	YTD	Index Weight
S&P 500	1.9%	1.7%	20.6%	100.0%
Communication Services	0.0%	0.2%	2.2%	10.4%
Consumer Discretionary	0.1%	0.1%	2.3%	10.1%
Consumer Staples	0.1%	0.5%	1.7%	7.6%
Energy	0.2%	-0.3%	0.4%	4.5%
Financials	0.6%	0.2%	2.6%	12.9%
Health Care	0.0%	-0.3%	1.0%	13.7%
Industrials	0.3%	0.1%	2.1%	9.3%
Information Technology	0.3%	0.7%	6.0%	21.9%
Materials	0.1%	0.0%	0.5%	2.7%
Real Estate	0.0%	0.2%	0.9%	3.2%
Utilities	0.1%	0.3%	0.9%	3.6%

Source: S&P, FactSet

	MTD	QTD	YTD	Index Weight
MSCI ACWI	2.1%	0.0%	16.2%	100.0%
Communication Services	0.0%	0.0%	1.3%	8.8%
Consumer Discretionary	0.1%	0.0%	1.9%	10.8%
Consumer Staples	0.1%	0.3%	1.5%	8.6%
Energy	0.2%	-0.3%	0.5%	5.5%
Financials	0.8%	-0.2%	2.3%	16.7%
Health Care	0.0%	-0.2%	1.0%	11.3%
Industrials	0.3%	-0.1%	1.8%	10.5%
Information Technology	0.3%	0.4%	3.9%	16.3%
Materials	0.1%	-0.2%	0.5%	4.7%
Real Estate	0.0%	0.1%	0.6%	3.3%
Utilities	0.1%	0.2%	0.6%	3.5%

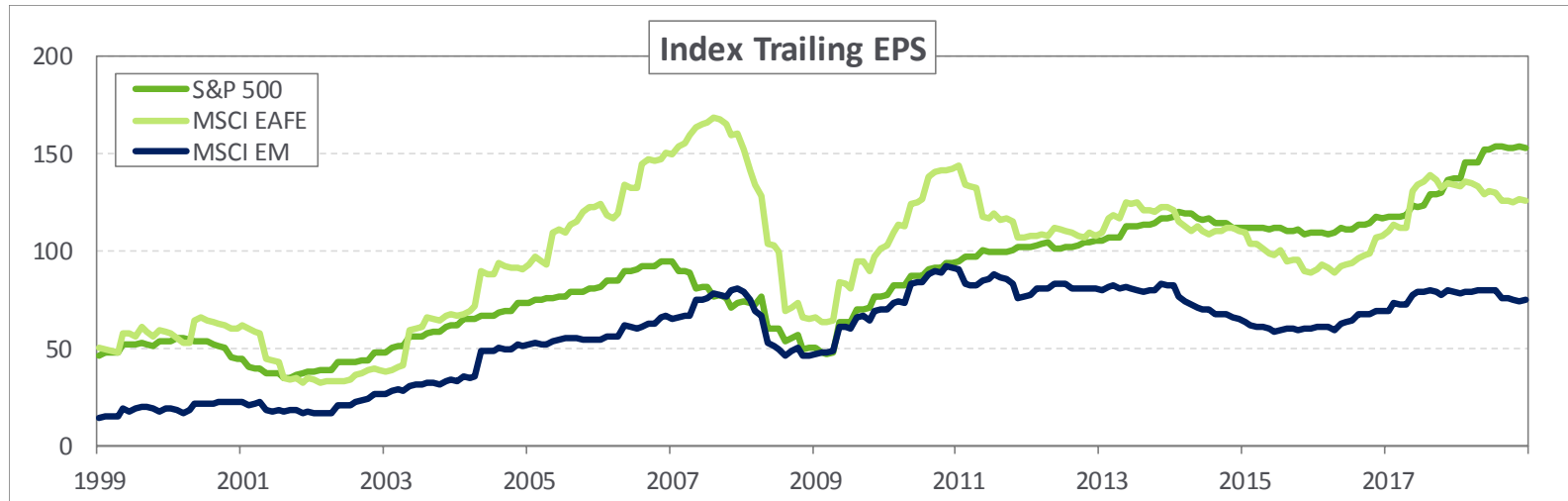
Source: MSCI, FactSet



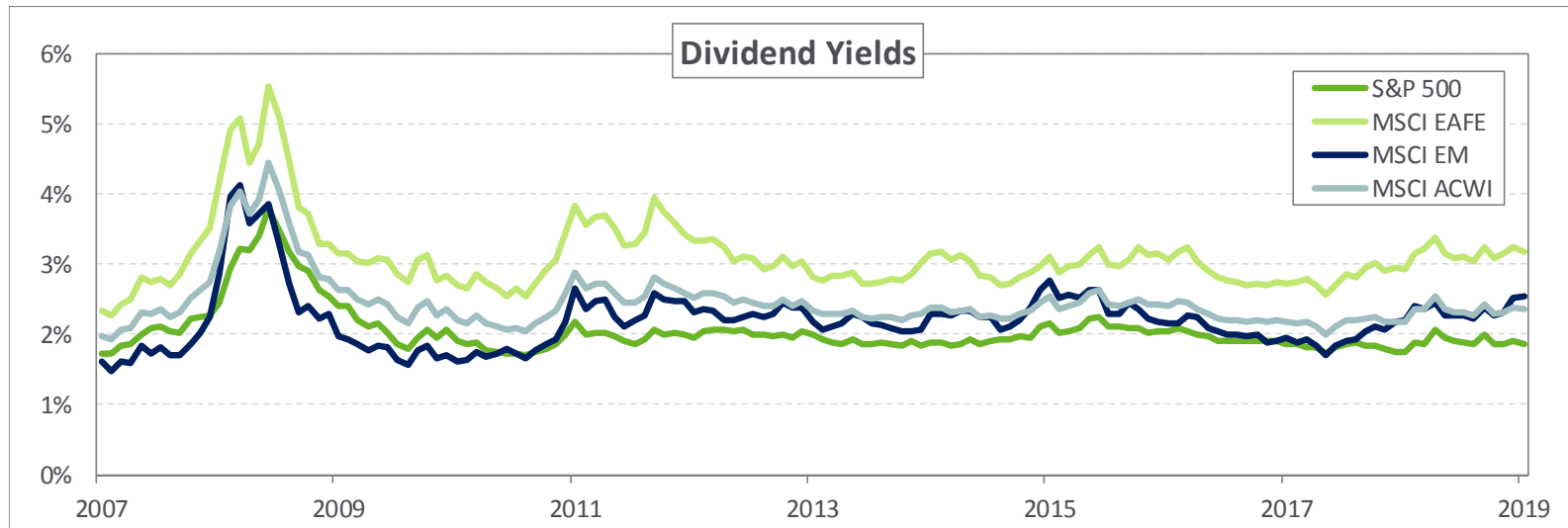
Source: MSCI, FactSet



EARNINGS & YIELDS



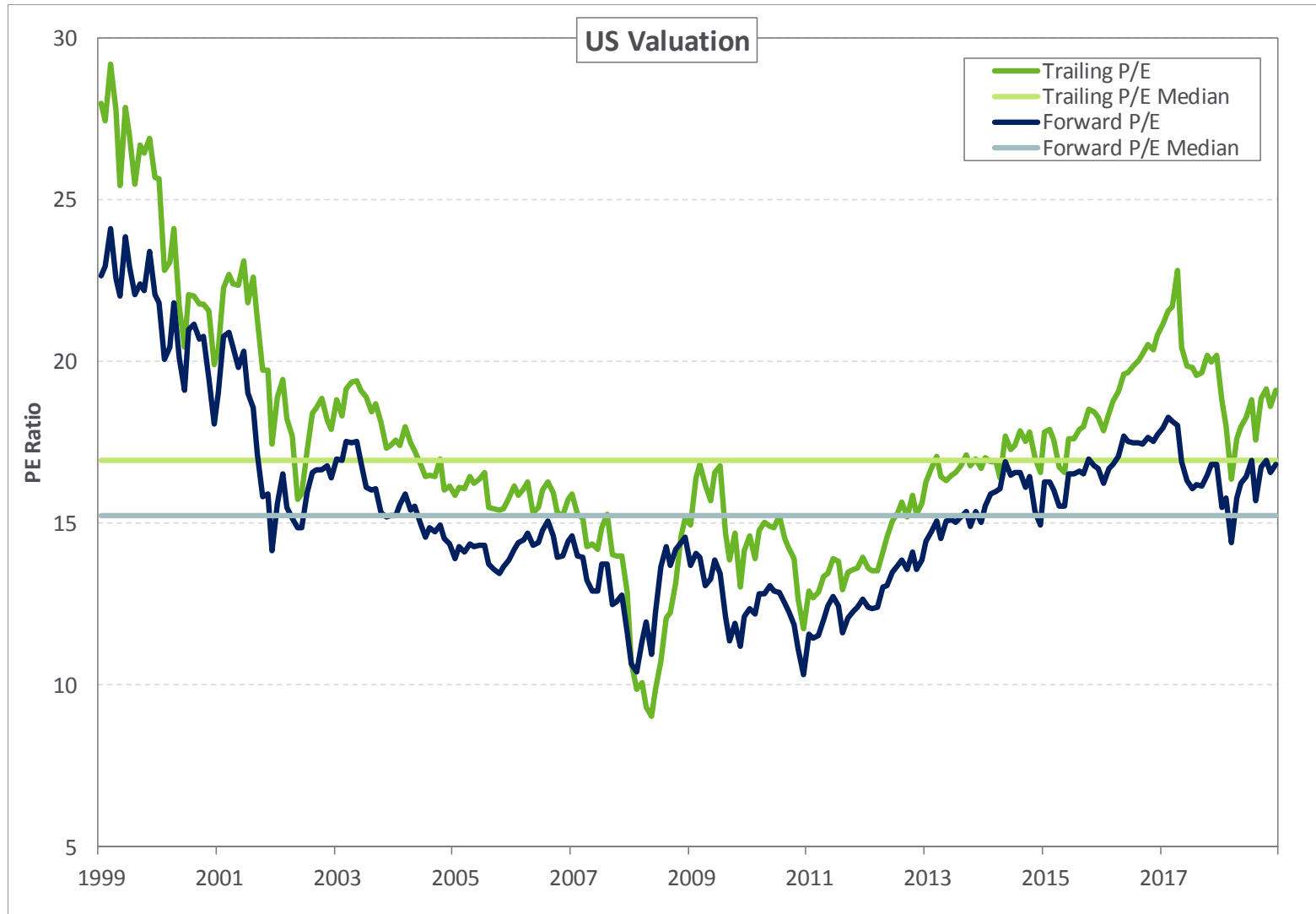
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Source: FactSet



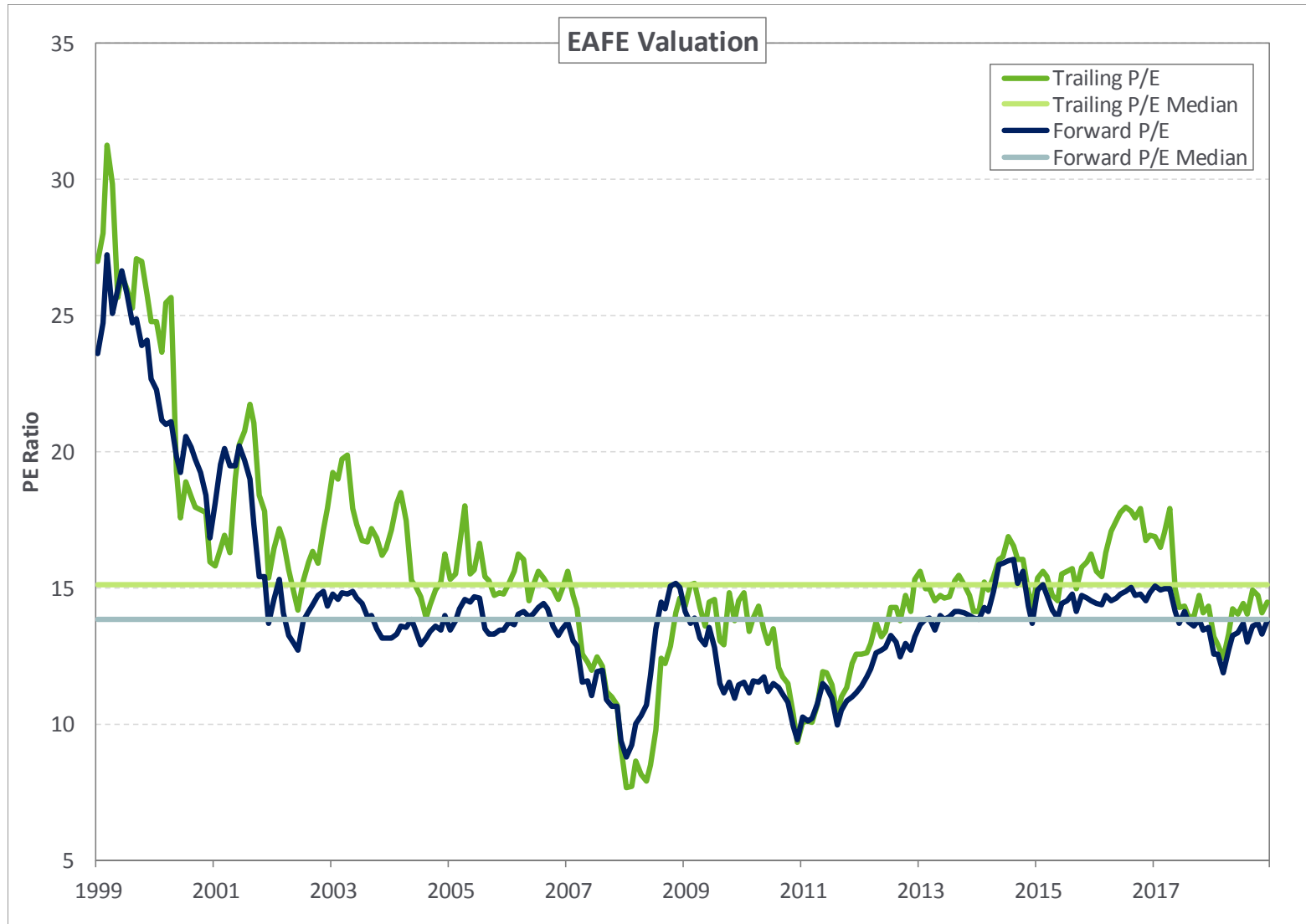
US EQUITY VALUATIONS



Source: S&P, FactSet



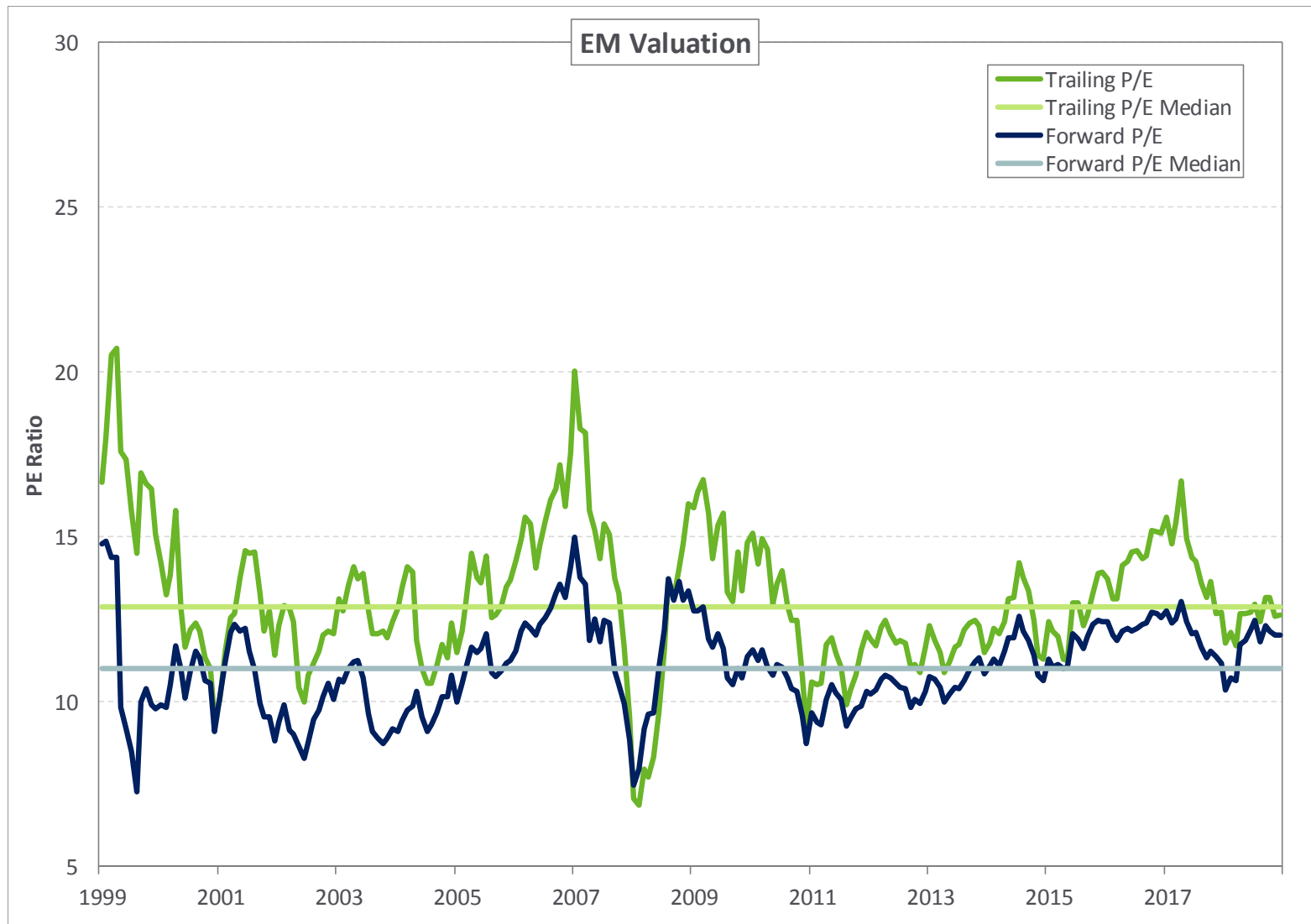
EAFE EQUITY VALUATIONS



Source: MSCI, FactSet



EM EQUITY VALUATIONS



Source: MSCI, FactSet



CREDIT

NEPC, LLC

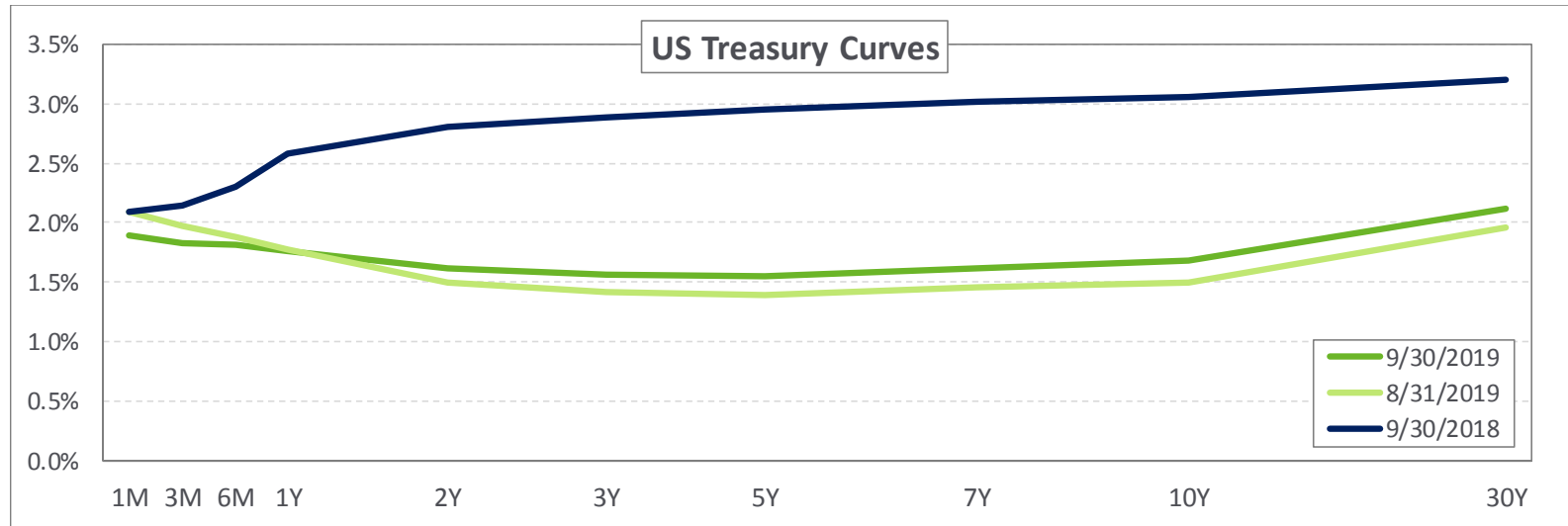
FIXED INCOME CHARACTERISTICS

	Averages			Total Returns (%)		
	Yield to Worst	Spread (bps)	Duration (Years)	1-Month	YTD	1-Year
Barclays Aggregate	2.26%	46	5.8	-0.5%	8.5%	10.3%
Barclays Treasury	1.72%	-	6.6	-0.8%	7.7%	10.4%
Barclays Agency	1.87%	11	4.1	-0.5%	6.0%	8.0%
Barclays MBS	2.45%	46	2.7	0.1%	5.6%	7.8%
Barclays ABS	2.04%	37	2.2	-0.1%	4.1%	5.4%
Barclays CMBS	2.19%	56	5.4	-0.7%	8.0%	10.3%
Barclays Corp IG	2.91%	115	7.8	-0.7%	13.2%	12.9%
Barclays Muni	1.86%	-	5.2	-0.8%	6.7%	8.5%
Barclays HY Muni	4.06%	-	6.7	-0.2%	9.7%	10.0%
Barclays TIPS	1.88%	-	4.9	-1.4%	7.6%	7.1%
Barclays HY	5.65%	373	3.1	0.4%	11.4%	6.3%
Barclays Global Agg	1.30%	44	7.2	-1.0%	6.3%	7.6%
JPM EMBI Glob Div	-	336	7.3	-0.5%	13.0%	11.5%
JPM GBI - EM	4.94%	-	5.4	1.0%	7.9%	10.1%

Source: Barclays, JP Morgan, FactSet



TREASURIES



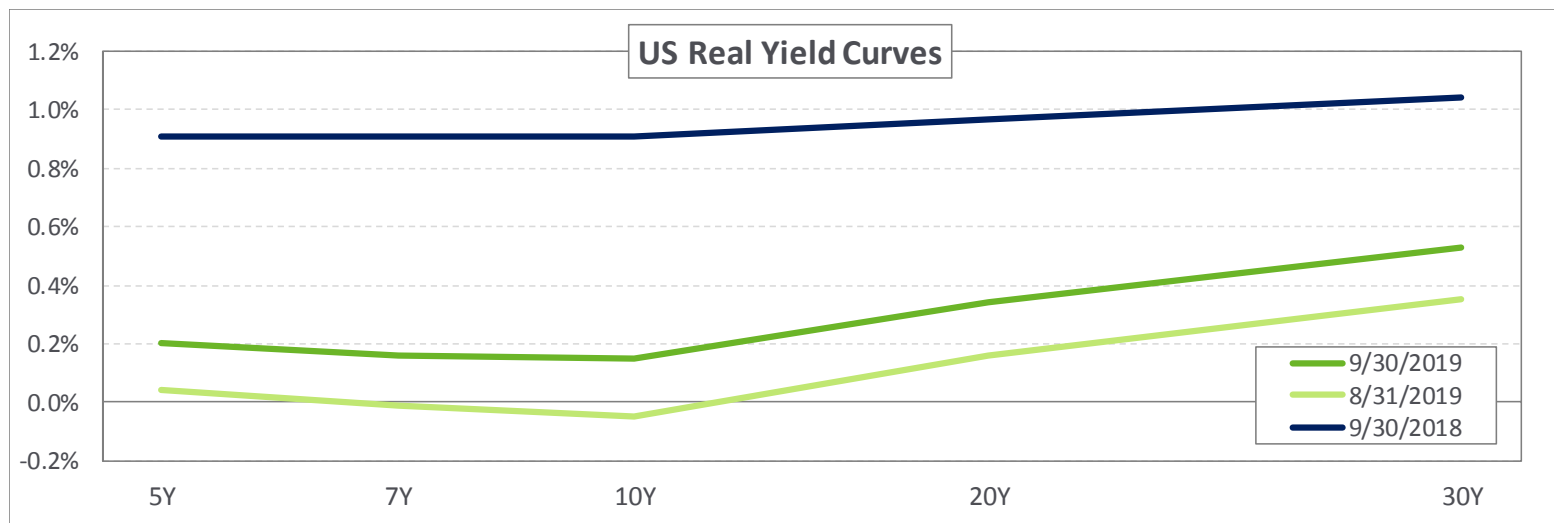
Source: FactSet

	Yield (%)			Total Return (%)	
	Current	1 Month Ago	12 Months Ago	1 Month	12 Months
3M Treasury	1.82%	1.98%	2.15%	0.17%	2.39%
6M Treasury	1.82%	1.87%	2.30%	0.17%	2.64%
2Y Treasury	1.62%	1.50%	2.81%	-0.13%	4.37%
5Y Treasury	1.55%	1.39%	2.95%	-0.62%	9.16%
10Y Treasury	1.68%	1.50%	3.05%	-1.41%	15.15%
30Y Treasury	2.12%	1.96%	3.20%	-3.08%	27.40%

Source: FactSet



REAL YIELDS



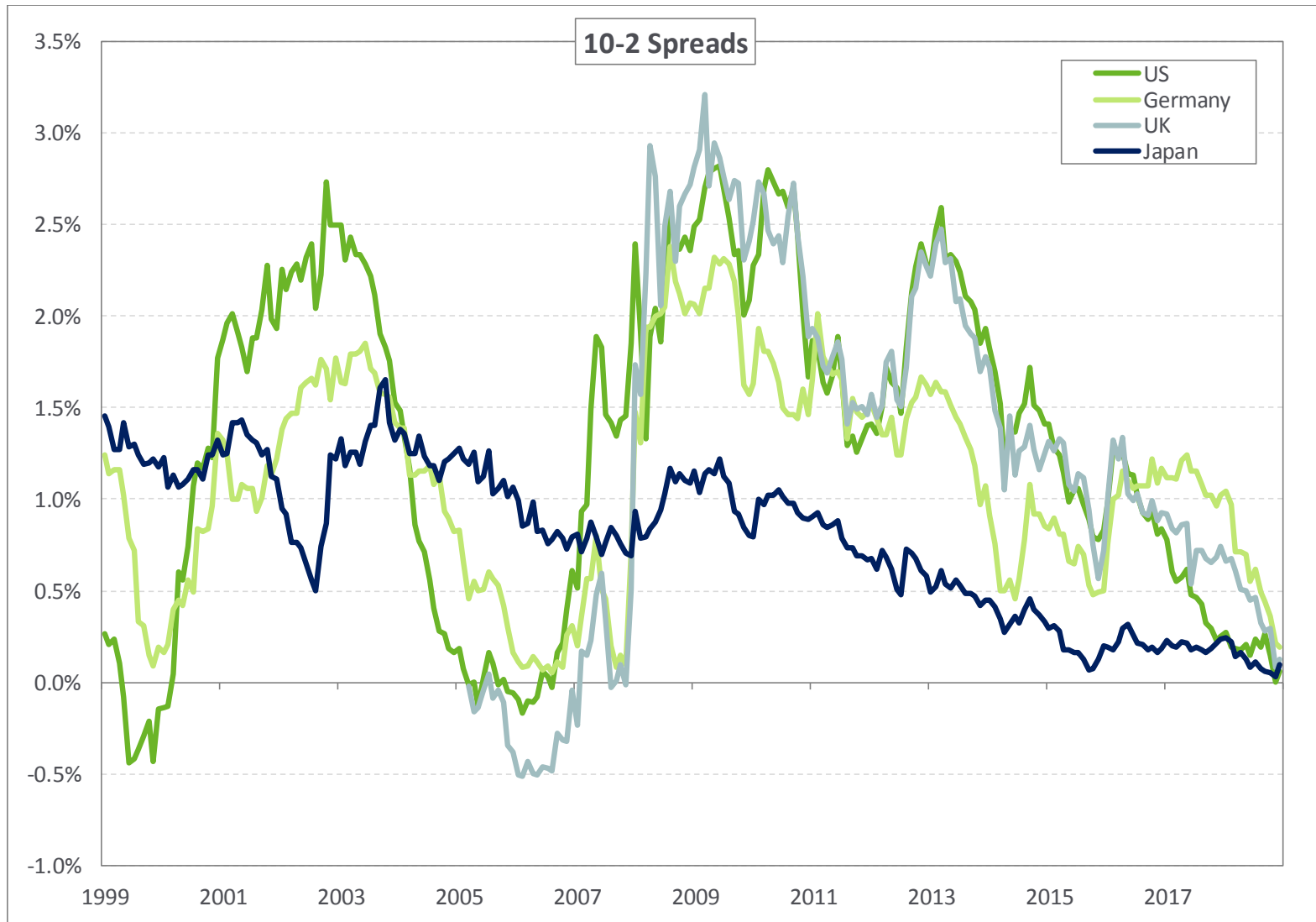
Source: FactSet

	Real Rates			Breakeven Rates	
	Current	1 Month Ago	12 Months Ago	Current	12 Months Ago
2-Year	-0.21%	-0.26%	0.30%	1.34%	3.11%
5-Year	-0.26%	-0.33%	0.37%	1.23%	3.25%
10-Year	-0.26%	-0.37%	0.44%	1.23%	3.40%
20-Year	-0.18%	-0.30%	0.52%	1.40%	3.56%
30-Year	-0.11%	-0.25%	0.56%	1.53%	3.64%

Source: FactSet



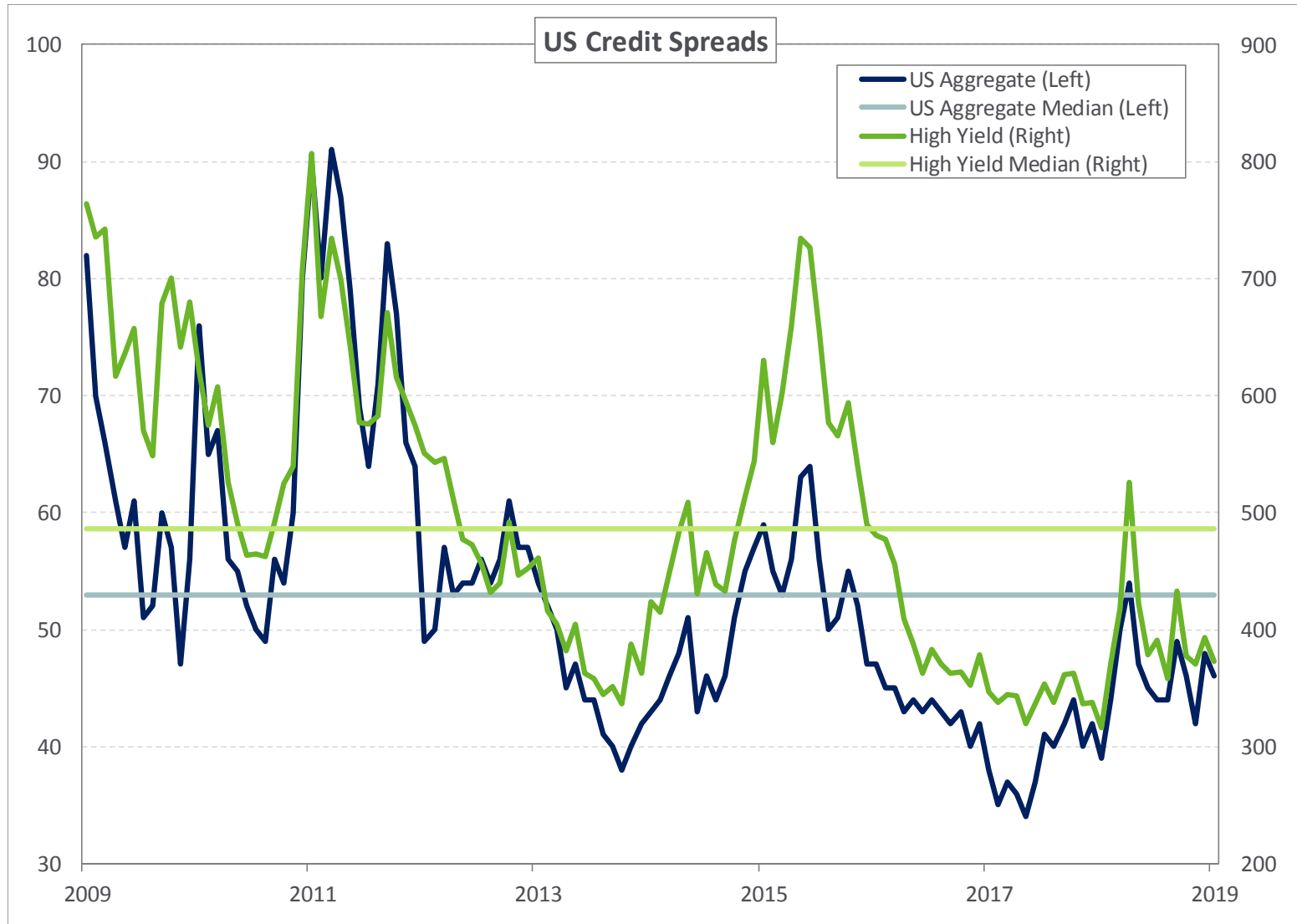
NOMINAL YIELDS



Source: FactSet



CREDIT SPREADS



Source: Barclays, FactSet



REAL ASSETS

NEPC, LLC

REAL ASSETS INDEX PERFORMANCE

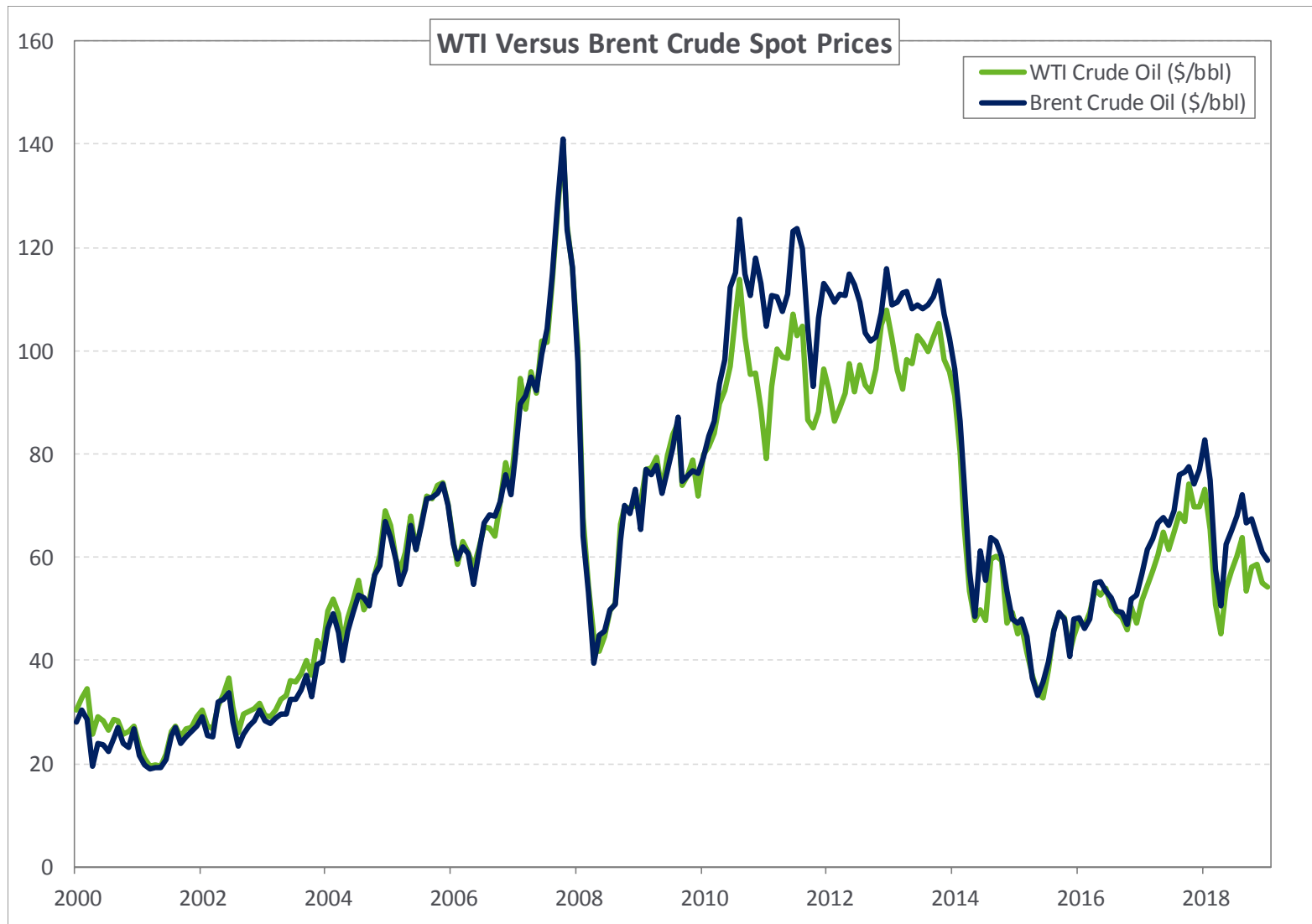
Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	1.2%	-1.8%	3.1%	-6.5%	-1.5%	-7.2%
Bloomberg Sub Agriculture Index	4.2%	-6.1%	-5.0%	-4.9%	-9.6%	-7.2%
Coffee	4.6%	-10.3%	-10.1%	-12.9%	-21.1%	-20.5%
Corn	5.1%	-10.2%	-3.3%	-0.7%	-6.1%	-6.7%
Cotton	3.6%	-7.5%	-15.7%	-21.4%	-3.2%	0.1%
Soybean	4.4%	-1.3%	-3.1%	0.1%	-6.7%	-3.2%
Soybean Oil	1.1%	1.4%	1.5%	-3.5%	-8.0%	-5.9%
Sugar	3.9%	-8.0%	-4.3%	3.4%	-23.4%	-11.4%
Wheat	7.4%	-6.1%	-2.5%	-4.9%	-4.9%	-8.6%
Bloomberg Sub Energy	1.1%	-4.5%	5.6%	-21.5%	-0.8%	-16.8%
Brent Crude	1.4%	-6.0%	16.7%	-23.6%	6.8%	-14.2%
Heating Oil	3.3%	-2.6%	14.1%	-17.7%	6.4%	-10.0%
Natural Gas	0.4%	-1.7%	-24.2%	-24.1%	-17.4%	-26.4%
Unleaded Gas	4.4%	-4.4%	27.4%	-20.2%	1.9%	-11.7%
WTI Crude Oil	-1.3%	-6.6%	18.1%	-26.1%	1.9%	-18.9%
Bloomberg Sub Industrial Metals	0.5%	2.4%	7.2%	-2.1%	5.8%	-1.7%
Aluminum	-1.5%	-4.7%	-8.4%	-18.3%	0.3%	-4.6%
Copper	1.2%	-4.8%	-1.1%	-7.2%	4.3%	-3.9%
Nickel	-4.5%	35.5%	60.9%	36.4%	16.8%	0.0%
Zinc	9.4%	-3.0%	3.0%	-0.9%	4.2%	2.4%
Bloomberg Sub Precious Metals	-4.4%	5.3%	12.8%	20.4%	0.9%	2.2%
Gold	-3.5%	3.8%	14.2%	22.4%	3.0%	3.3%
Silver	-7.2%	10.5%	8.5%	14.2%	-5.1%	-1.3%
Bloomberg Sub Livestock	7.5%	0.8%	-6.1%	-5.5%	5.8%	-6.6%
Lean Hogs	10.8%	3.3%	-5.0%	-7.2%	4.3%	-11.7%
Live Cattle	5.7%	-0.7%	-7.4%	-5.6%	6.0%	-4.0%

Source: Bloomberg, FactSet

Bloomberg subindex total return indices reflects the return of the underlying one month commodity futures price movements



OIL MARKETS



Source: FactSet



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- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.
- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.
- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.
- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

