QUARTERLY PERFORMANCE REPORT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

February 24, 2020

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BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | PORTLAND | SAN FRANCISCO

MARKET ENVIRONMENT UPDATE & OUTLOOK

NEPC, LLC

ECONOMIC ENVIRONMENT

- **Q4 Real GDP (advanced estimate) increased at an annual rate of 2.1%.**
  - Retail sales ended November at +5.7% on a YoY basis. In the same period last year the YoY growth rate was 3.5%.
  - Corporate profits (ended July) as a percent of GDP decreased to 8.5% from 8.8% (in September) and remain elevated relative to historical levels.
  - The inventory-to-sales ratio ended November flat at 1.4 from June levels and has remained relatively constant since early 2010.
  - The U.S. trade deficit fell sharply ended November (-5.4% vs. October) as imports decreased.

- **The unemployment rate remained flat at 3.5% in Q4; U-6, a broader measure of unemployment, decreased to 6.7% from 6.9% during Q4.**

- **The Case-Shiller Home Price Index (ended October) increased to 212.4 from 212.2 (in September) and remains at levels higher than that of pre-financial crisis levels of 150.9.**

- **Rolling 12-month seasonally-adjusted CPI saw an up-tick to 2.29% from 1.74% ended Q4; Capacity Utilization decreased to 77% from 77.5% in Q4.**

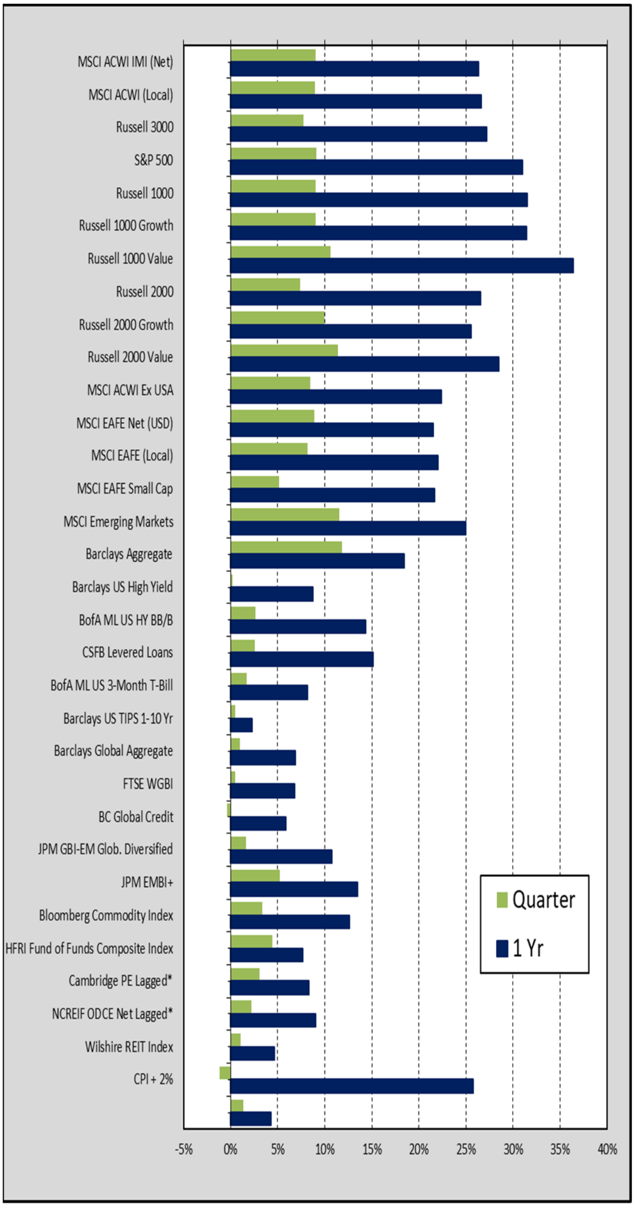
- **Fed Funds rate was decreased by 0.25% in Q4 to a targeted range of 1.50%-to-1.75%. The 10-year Treasury Yield (constant maturity) finished Q4 up to 1.9% from 1.7%.**

- **The Fed balance sheet increased in size ended Q4, and the European Central Bank balance sheet continues to grow.**
  - ECB held its benchmark refinance rate at 0%, deposit rates remain at -0.5%.

- **S&P valuations increased in Q4, remaining above the 10-year and long-term averages.**
  - Cyclically adjusted Shiller PE ratio (30.9x) is above the long-term average of 16.7x and above the 10-year average of 25.6x.

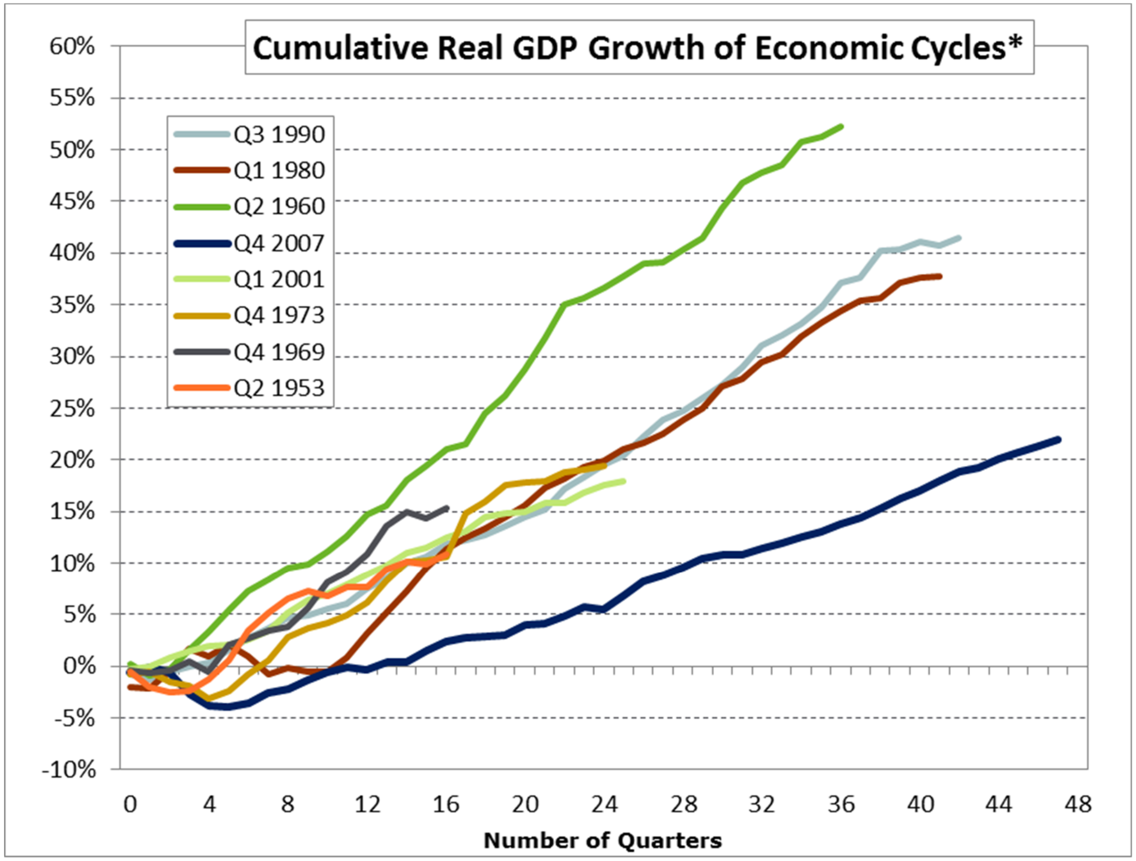
MARKET ENVIRONMENT – Q4 2019 OVERVIEW

		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	9.05%	26.35%	12.09%	8.34%	8.91%
MSCI ACWI Net (USD)	World W/O Small Cap	8.95%	26.60%	12.44%	8.41%	8.79%
MSCI ACWI (Local)	World (Local Currency)	7.73%	27.18%	11.56%	8.87%	9.66%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	9.10%	31.02%	14.57%	11.24%	13.42%
S&P 500	Large Core	9.07%	31.49%	15.27%	11.70%	13.56%
Russell 1000	Large Core	9.04%	31.43%	15.05%	11.48%	13.54%
Russell 1000 Growth	Large Growth	10.62%	36.39%	20.49%	14.63%	15.22%
Russell 1000 Value	Large Value	7.41%	26.54%	9.68%	8.29%	11.80%
Russell 2000	Small Core	9.94%	25.52%	8.59%	8.23%	11.83%
Russell 2000 Growth	Small Growth	11.39%	28.48%	12.49%	9.34%	13.01%
Russell 2000 Value	Small Value	8.49%	22.39%	4.77%	6.99%	10.56%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	8.92%	21.51%	9.87%	5.51%	4.97%
MSCI EAFE Net (USD)	Int'l Developed	8.17%	22.01%	9.56%	5.67%	5.50%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	5.19%	21.67%	7.66%	6.73%	7.24%
MSCI EAFE Small Cap	Small Cap Int'l	11.52%	24.96%	10.92%	8.85%	8.74%
MSCI Emerging Markets	Emerging Equity	11.84%	18.44%	11.57%	5.61%	3.68%
Domestic Fixed Income Benchmarks						
Barclays Aggregate	Core Bonds	0.18%	8.72%	4.03%	3.05%	3.75%
Barclays US High Yield	High Yield	2.61%	14.32%	6.37%	6.13%	7.57%
BofA ML US HY BB/B	High Yield	2.58%	15.14%	6.48%	6.12%	7.43%
CSFB Levered Loans	Bank Loans	1.68%	8.17%	4.48%	4.54%	5.18%
BofA ML US 3-Month T-Bill	Cash	0.46%	2.28%	1.67%	1.07%	0.58%
Barclays US TIPS 1-10 Yr	Inflation	1.00%	6.85%	2.79%	2.36%	2.57%
Global Fixed Income Benchmarks						
Barclays Global Aggregate	Global Core Bonds	0.48%	6.84%	4.27%	2.31%	2.48%
FTSE WGBI	World Gov. Bonds	-0.35%	5.90%	4.12%	2.03%	1.85%
BC Global Credit	Global Bonds	1.60%	10.74%	5.31%	3.15%	3.93%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	5.20%	13.47%	7.03%	2.78%	2.71%
JPM EMBI+	Em. Mkt. Bonds	3.38%	12.60%	4.90%	5.20%	6.10%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	4.42%	7.69%	-0.94%	-3.93%	-4.73%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	3.04%	8.34%	3.87%	2.36%	2.82%
Cambridge PE Lagged*	Private Equity	2.21%	9.02%	14.59%	11.64%	14.14%
NCREIF ODCE Net Lagged*	Real Estate	1.08%	4.65%	6.34%	8.36%	9.84%
Wilshire REIT Index	REIT	-1.14%	25.76%	7.63%	6.86%	11.94%
CPI + 2%	Inflation/Real Assets	1.33%	4.33%	4.15%	3.85%	3.78%



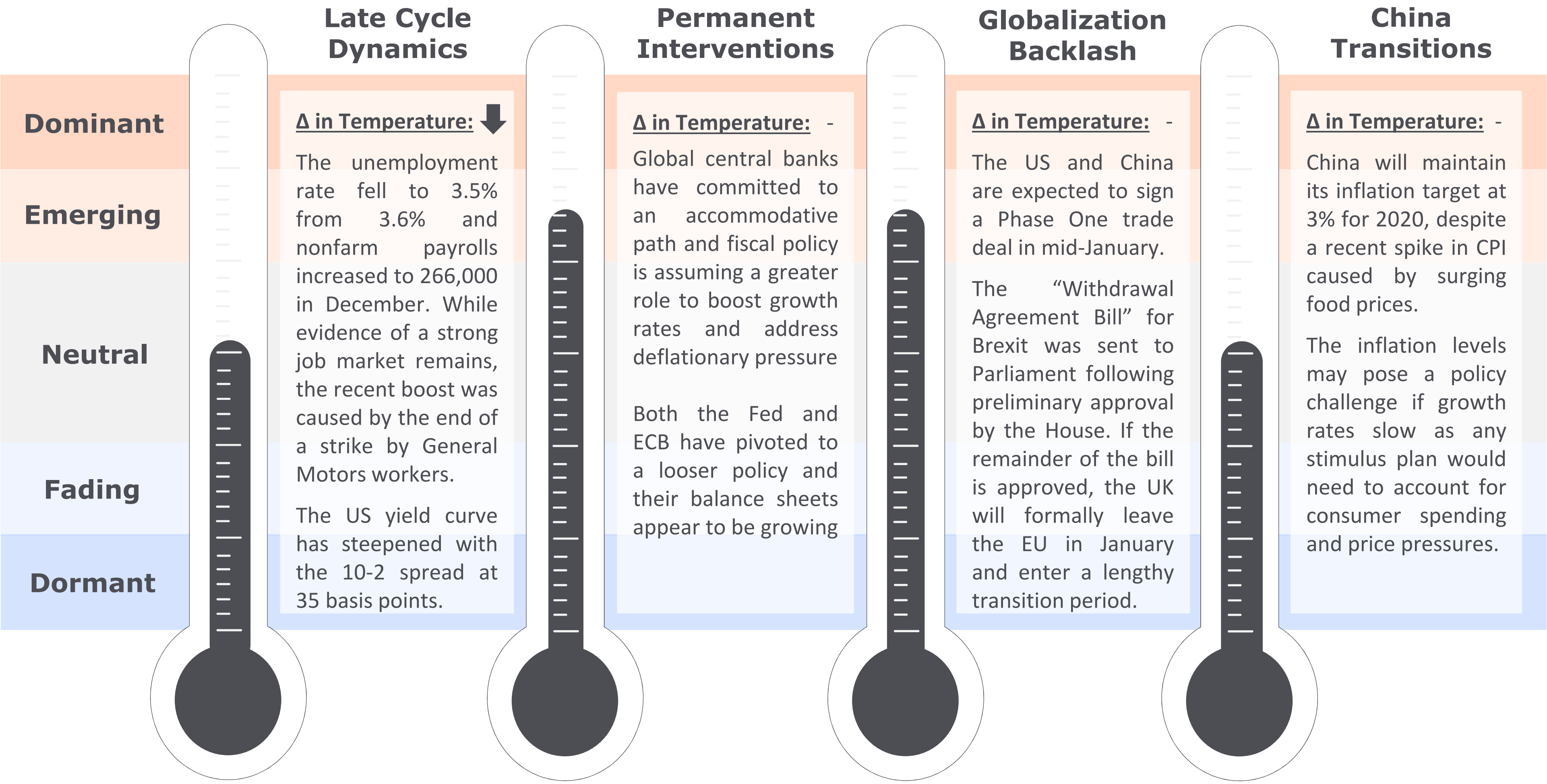
* As of 9/30/2019

CURRENT ECONOMIC CYCLE IS THE LONGEST SINCE CIVIL WAR IN 1857



ASSESSING THE KEY MARKET THEMES

Current Temperatures



Late Cycle Dynamics

Δ in Temperature: ⬇

The unemployment rate fell to 3.5% from 3.6% and nonfarm payrolls increased to 266,000 in December. While evidence of a strong job market remains, the recent boost was caused by the end of a strike by General Motors workers.

The US yield curve has steepened with the 10-2 spread at 35 basis points.

Permanent Interventions

Δ in Temperature: -

Global central banks have committed to an accommodative path and fiscal policy is assuming a greater role to boost growth rates and address deflationary pressure

Both the Fed and ECB have pivoted to a looser policy and their balance sheets appear to be growing

Globalization Backlash

Δ in Temperature: -

The US and China are expected to sign a Phase One trade deal in mid-January.

The "Withdrawal Agreement Bill" for Brexit was sent to Parliament following preliminary approval by the House. If the remainder of the bill is approved, the UK will formally leave the EU in January and enter a lengthy transition period.

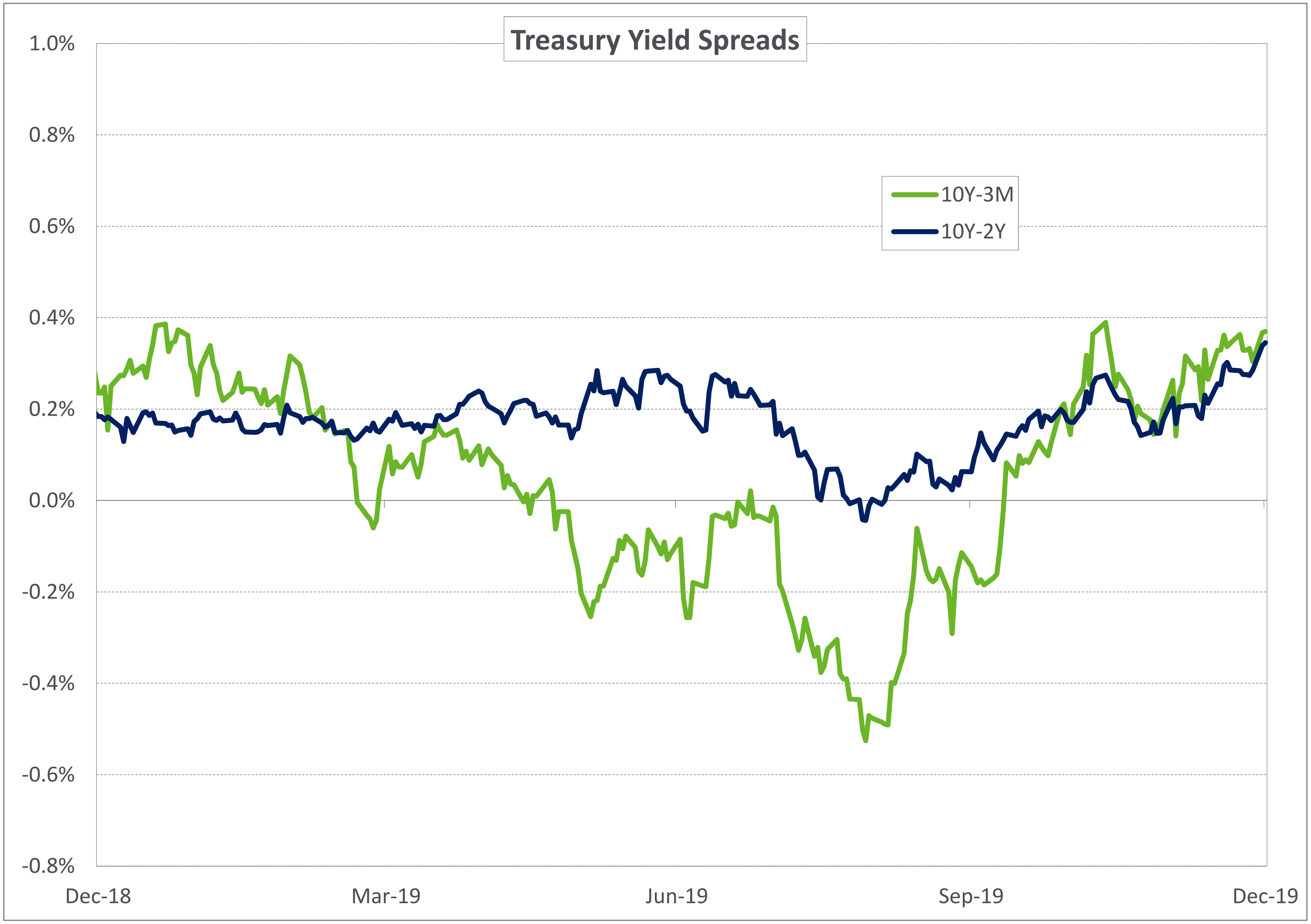
China Transitions

Δ in Temperature: -

China will maintain its inflation target at 3% for 2020, despite a recent spike in CPI caused by surging food prices.

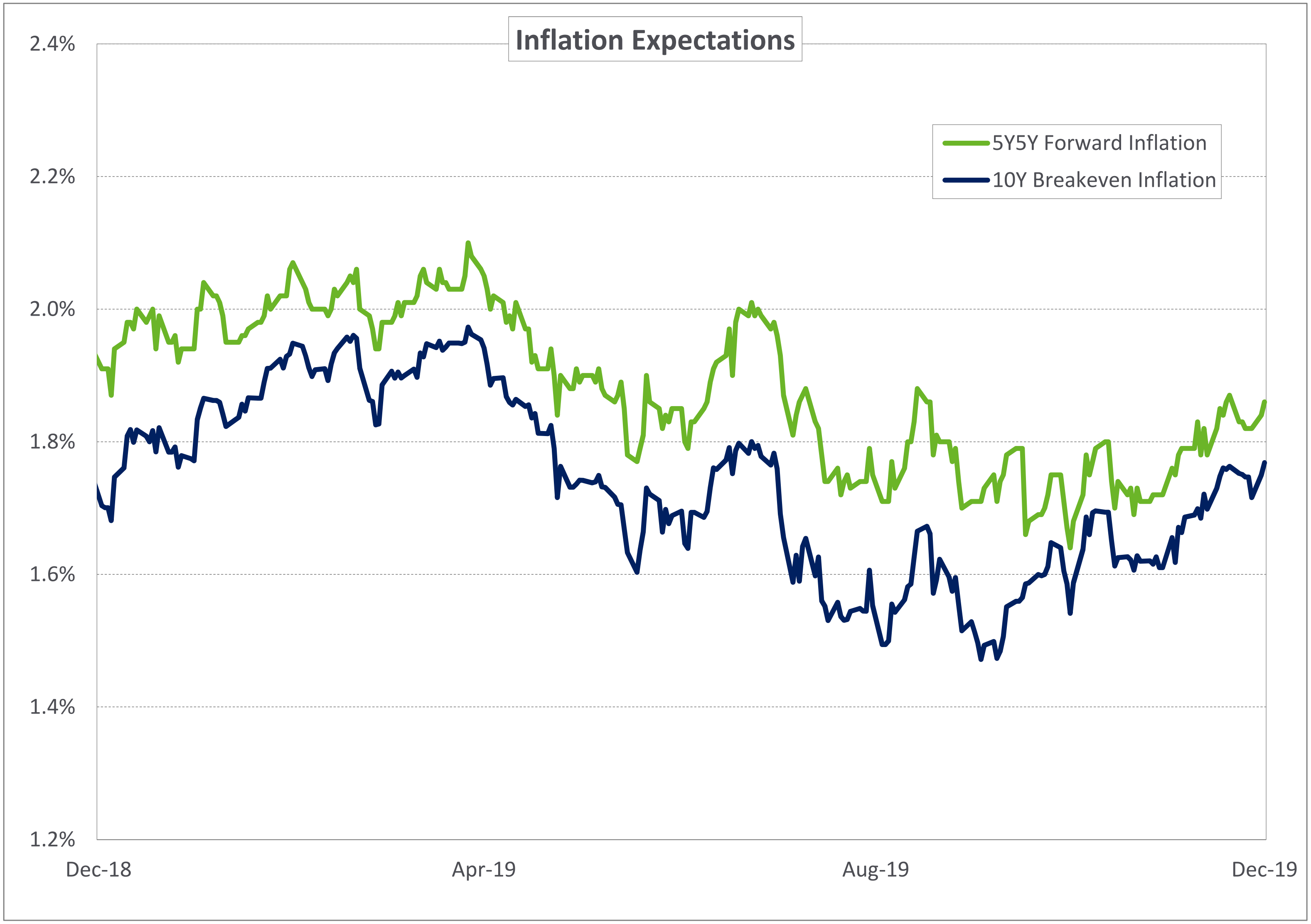
The inflation levels may pose a policy challenge if growth rates slow as any stimulus plan would need to account for consumer spending and price pressures.

THE YIELD CURVE STEEPENED DURING Q4



Source: FactSet

INFLATION EXPECTATIONS REMAIN LOW

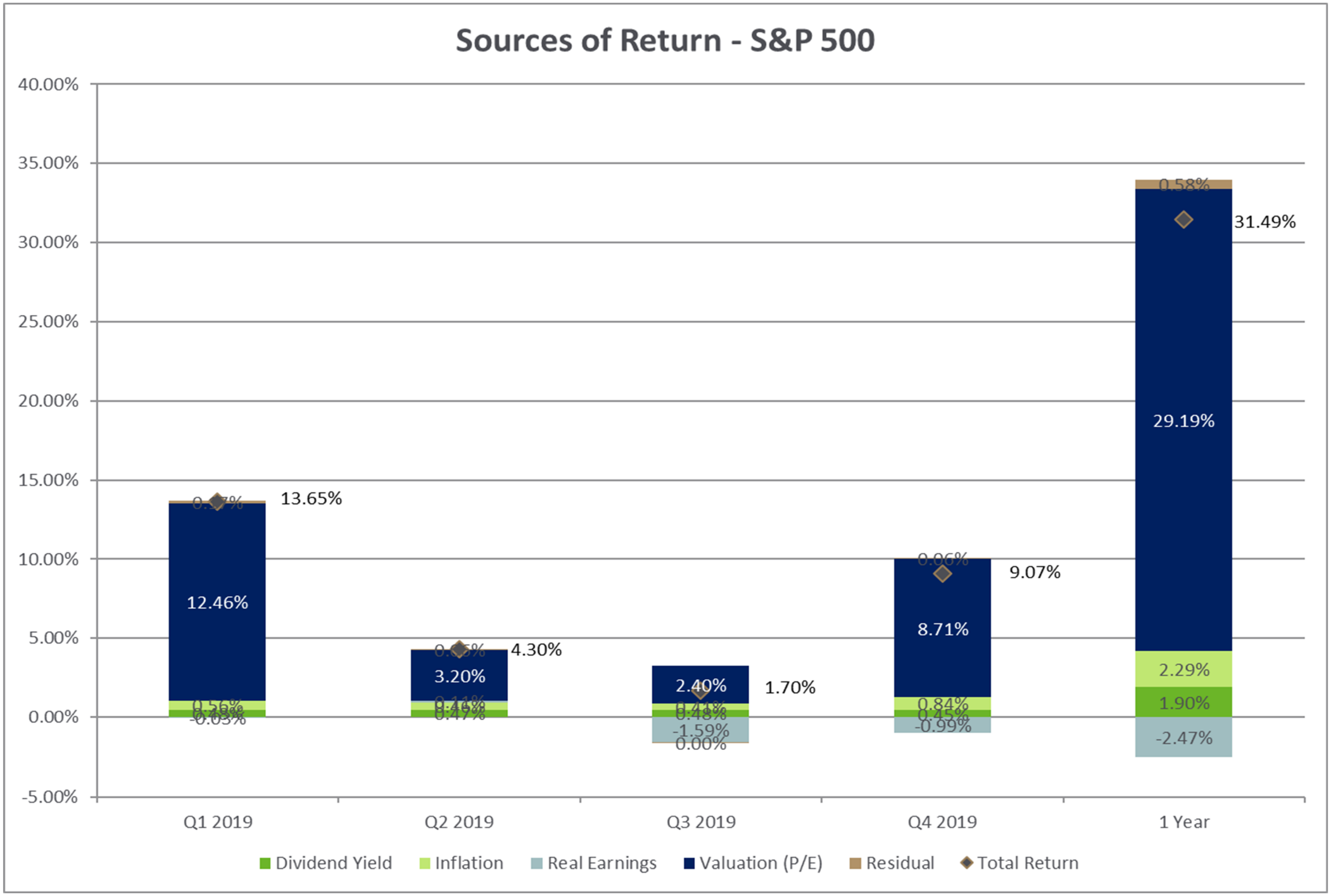


Source: FactSet

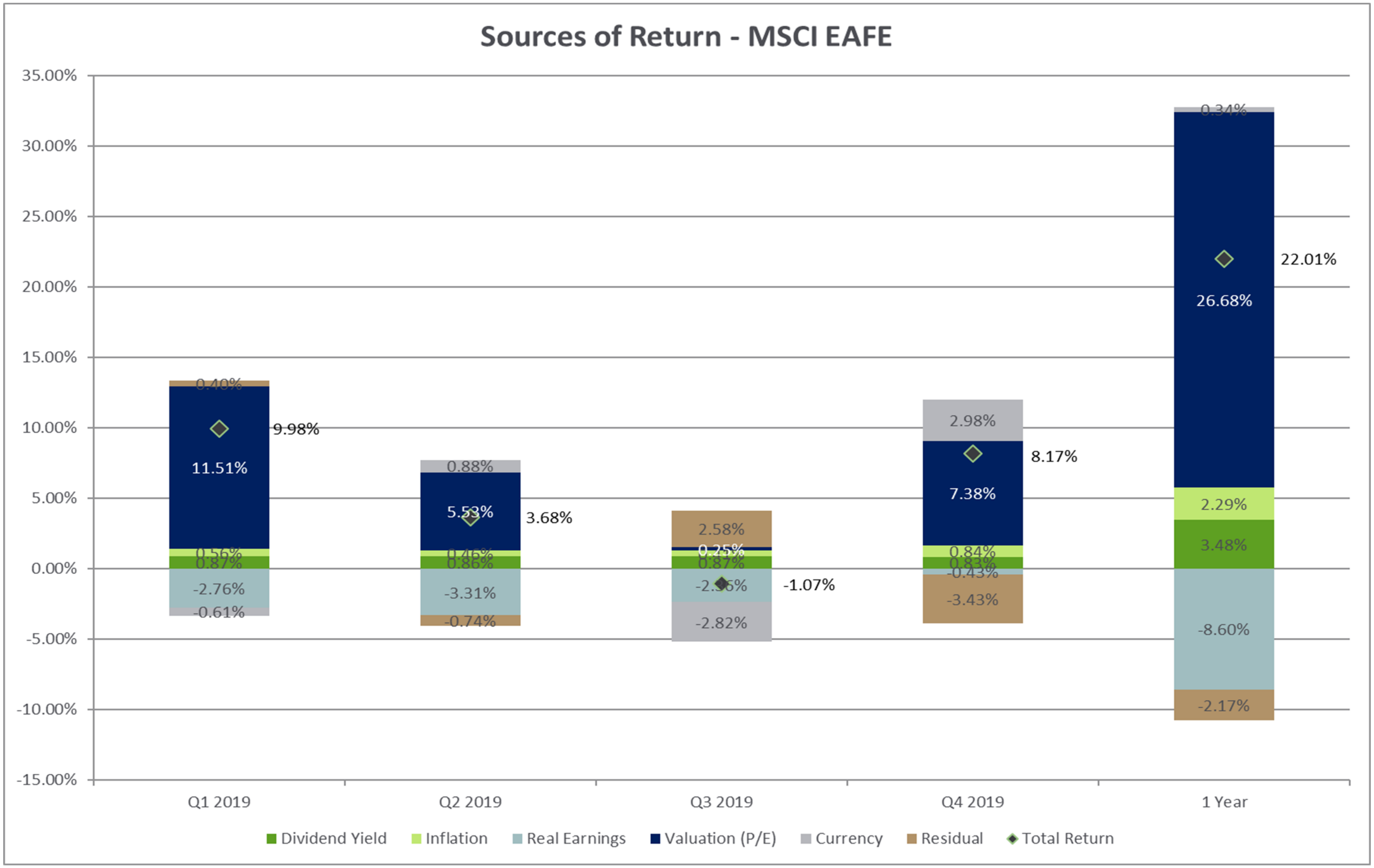
CCC SPREADS WIDENED DURING THE YEAR

Source: Bloomberg, FactSet

1 YEAR ATTRIBUTION OF S&P 500 RETURNS



1 YEAR ATTRIBUTION OF MSCI EAFE RETURNS



Spot Rates 1 USD = 0.890 Euro 1 USD = 0.880 Euro 1 USD = 0.917 Euro 1 USD = 0.891 Euro

TOTAL FUND PERFORMANCE SUMMARY

TOTAL FUND PERFORMANCE SUMMARY (NET)

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	Inception	Inception Date
Total Fund	**$6,148,524,885**	**5.2%**	**44**	**6.0%**	**21**	**18.7%**	**17**	**9.9%**	**20**	**7.4%**	**29**	**9.0%**	**18**	**8.1%**	**Apr-94**
Policy Index		*6.2%*	*7*	*7.1%*	*2*	*20.7%*	*9*	*10.6%*	*8*	*8.2%*	*7*	*9.1%*	*13*	*8.2%*	*Apr-94*
60% MSCI ACWI (Net) / 40% FTSE WGBI		*5.2%*	*45*	*5.6%*	*55*	*18.2%*	*26*	*9.2%*	*42*	*6.0%*	*96*	*6.2%*	*99*	*6.5%*	*Apr-94*
60% S&P 500 / 40% BBgBarc Aggregate		*5.5%*	*33*	*7.5%*	*1*	*22.2%*	*3*	*10.9%*	*7*	*8.4%*	*4*	*9.8%*	*1*	*8.5%*	*Apr-94*
InvMetrics Public DB > $1B Net Median		*5.1%*		*5.6%*		*17.0%*		*8.9%*		*6.8%*		*8.1%*		*7.6%*	*Apr-94*

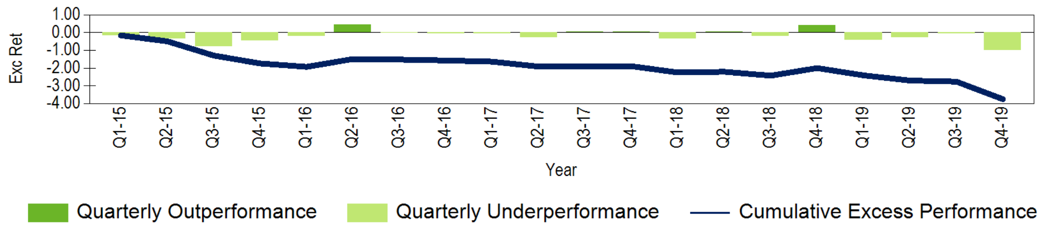
- For the five year period ending December 31, 2019, the Fund returned 7.4% trailing the policy index by 0.8% and ranking in the 29th percentile of its peers and outperforming the actuarial assumed rate of 7.25%. The Fund's volatility, as measured by standard deviation, ranked in the 76th percentile of its peers, and the risk-adjusted return, or Sharpe Ratio, ranks in the 52nd percentile. This means that the Fund has earned more return per unit of volatility taken than 48% of its peers.

- For the three-year period, the Fund returned 9.9%, underperforming the policy index and ranking in the 20th percentile of its peers. The Fund's volatility ranks in the 71st percentile of its peers over this period, with the Fund's Sharpe Ratio ranking in the 51st percentile.

- For the one-year period, the Fund returned 18.7%, underperforming the policy index by 2.0% and ranking in the 17th 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 $983.4 million which includes a net investment gain of $310.1 million in the quarter. Assets increased from $5.20 billion one year ago to $6.15 billion.

Quarterly and Cumulative Excess Performance



3 Years Ending December 31, 2019

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	9.9%	20	7.0%	71	1.2	51	1.3	44
Policy Index	10.6%	8	7.3%	83	1.2	38	1.4	35
InvMetrics Public DB > $1B Net Median	8.9%	--	6.1%	--	1.2	--	1.3	--

5 Years Ending December 31, 2019

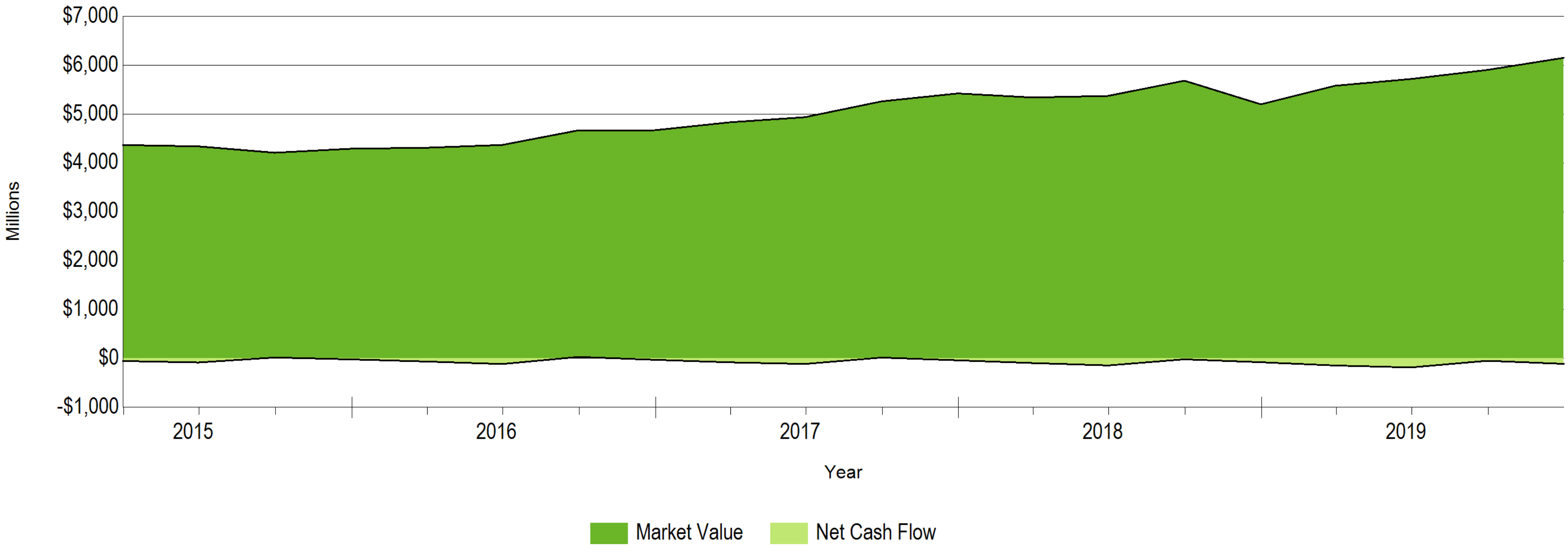
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Total Fund	7.4%	29	7.2%	76	0.9	52	1.2	44
Policy Index	8.2%	7	7.3%	79	1.0	31	1.3	32
InvMetrics Public DB > $1B Net Median	6.8%	--	6.4%	--	0.9	--	1.1	--

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 December 31, 2019

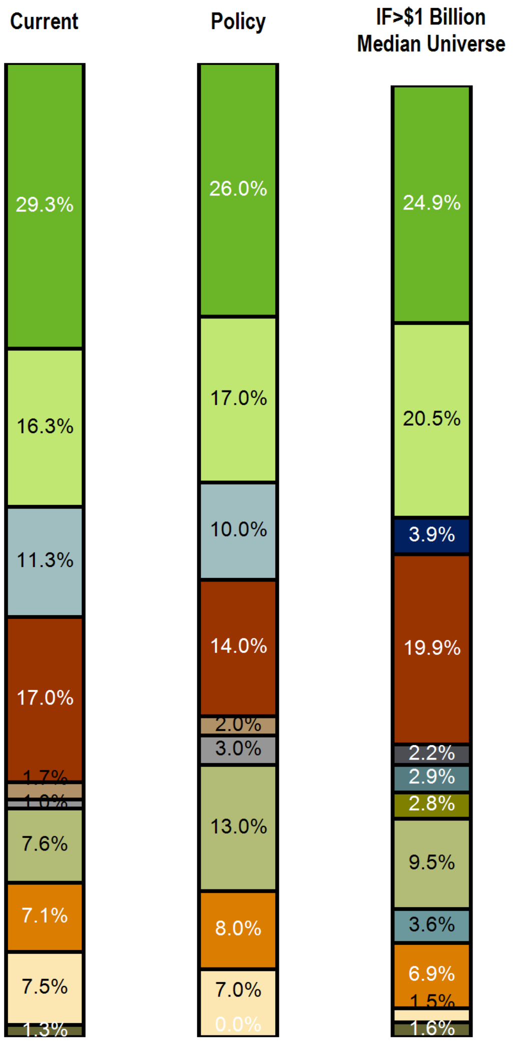


Summary of Cash Flows

	Last Three Months	Fiscal Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	$5,901,631,997	$5,716,158,441	$5,198,263,282	$4,668,717,739	$4,328,232,756
Net Cash Flow	-$63,234,338	$73,134,281	-$33,170,407	-$83,275,102	-$110,077,450
Net Investment Change	$310,127,226	$359,232,163	$983,432,010	$1,563,082,248	$1,930,369,580
Ending Market Value	$6,148,524,885	$6,148,524,885	$6,148,524,885	$6,148,524,885	$6,148,524,885

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	$1,799,934,440	29.3%	26.0%	3.3%	21.0% - 31.0%	**Yes**
Non-US Equity	$999,209,869	16.3%	17.0%	-0.7%	13.0% - 21.0%	**Yes**
Emerging Markets Equity	--	--	--	0.0%		--
Global Equity	$693,538,318	11.3%	10.0%	1.3%	7.0% - 13.0%	**Yes**
U.S. Fixed Income	$1,046,983,442	17.0%	14.0%	3.0%	14.0% - 22.0%	**Yes**
Treasury	$105,449,348	1.7%	2.0%	-0.3%	0.0% - 5.0%	**Yes**
Fixed Income - Emerging	--	--	--	0.0%		--
Fixed Income - Global	--	--	--	0.0%		--
GAA/Risk Parity	--	--	--	0.0%		--
Private Debt	$58,735,840	1.0%	3.0%	-2.0%	0.0% - 5.0%	**Yes**
Private Equity	$469,913,456	7.6%	13.0%	-5.4%	5.0% - 15.0%	**Yes**
Hedge Funds	--	--	--	0.0%		--
Real Estate	$434,522,276	7.1%	8.0%	-0.9%	0.0% - 9.0%	**Yes**
Real Assets	$461,440,014	7.5%	7.0%	0.5%	0.0% - 9.0%	**Yes**
Cash	$78,797,881	1.3%	0.0%	1.3%	0.0% - 3.0%	**Yes**
Total	**$6,148,524,885**	**100.0%**	**100.0%**			

*Difference between Policy and Current Allocation

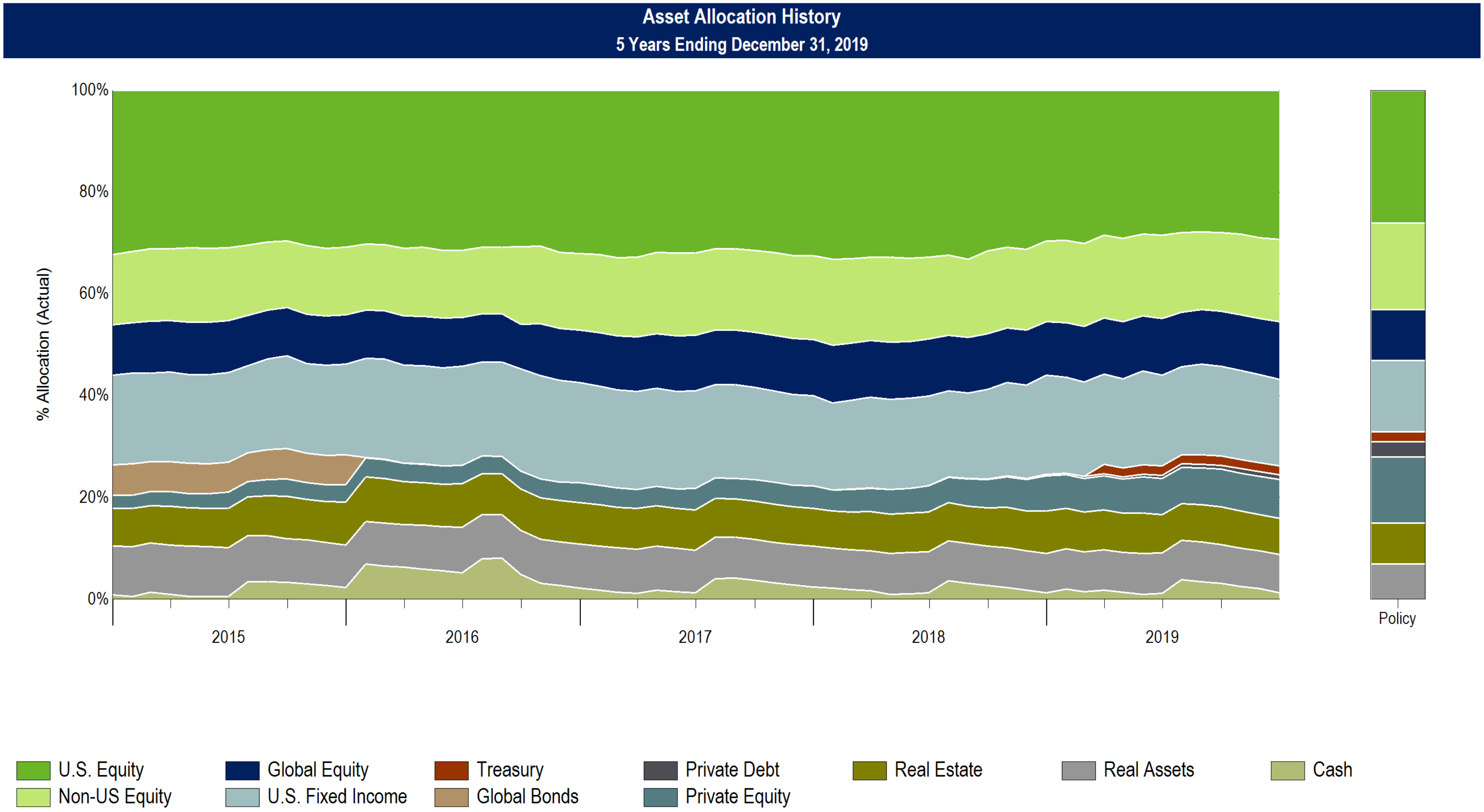
Cash represents assets in Parametric Overlay.

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%.

Asset Allocation vs. Policy Targets chart does not reflect Overlay adjusted weights.

Ventura County Employees' Retirement Association

TOTAL FUND ALLOCATION HISTORY

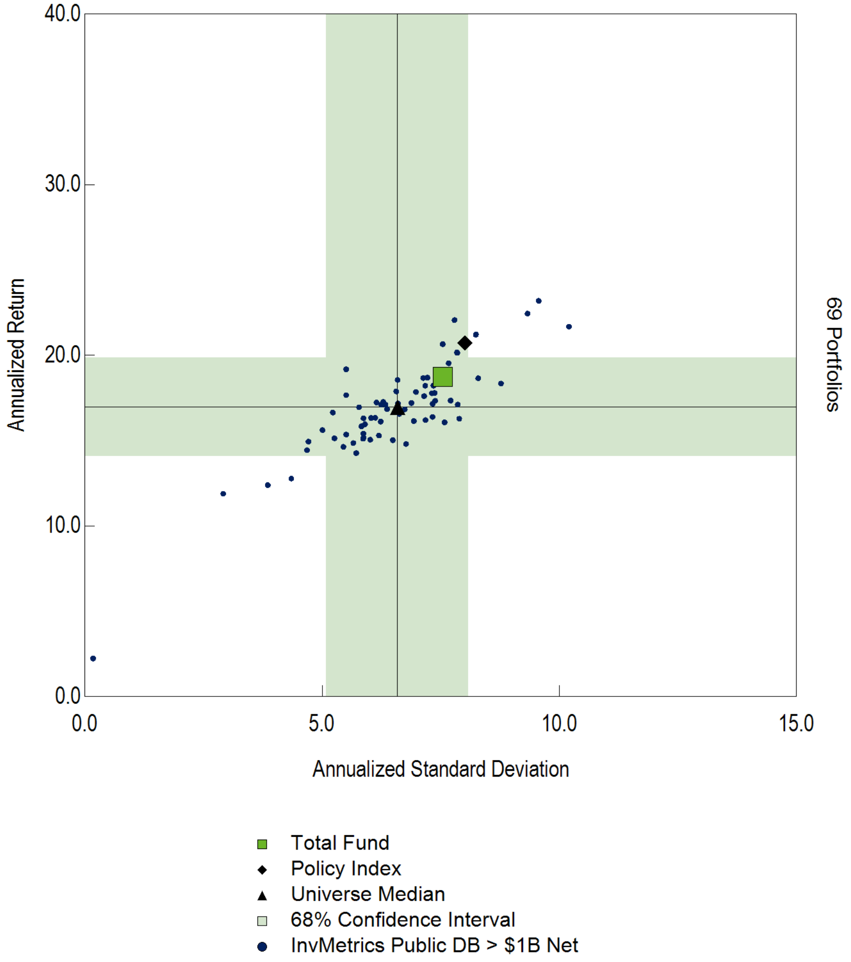


Policy Index shown is most recently approved index

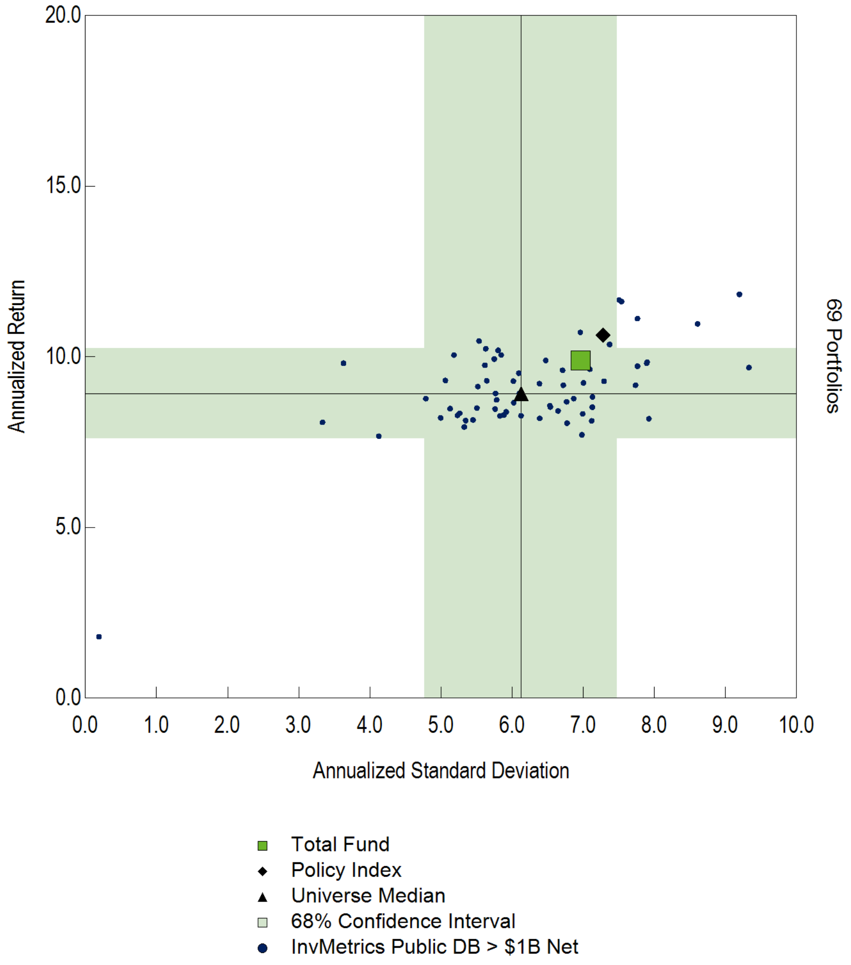
Ventura County Employees’ Retirement Association

TOTAL FUND RISK/RETURN

1 Years Ending December 31, 2019



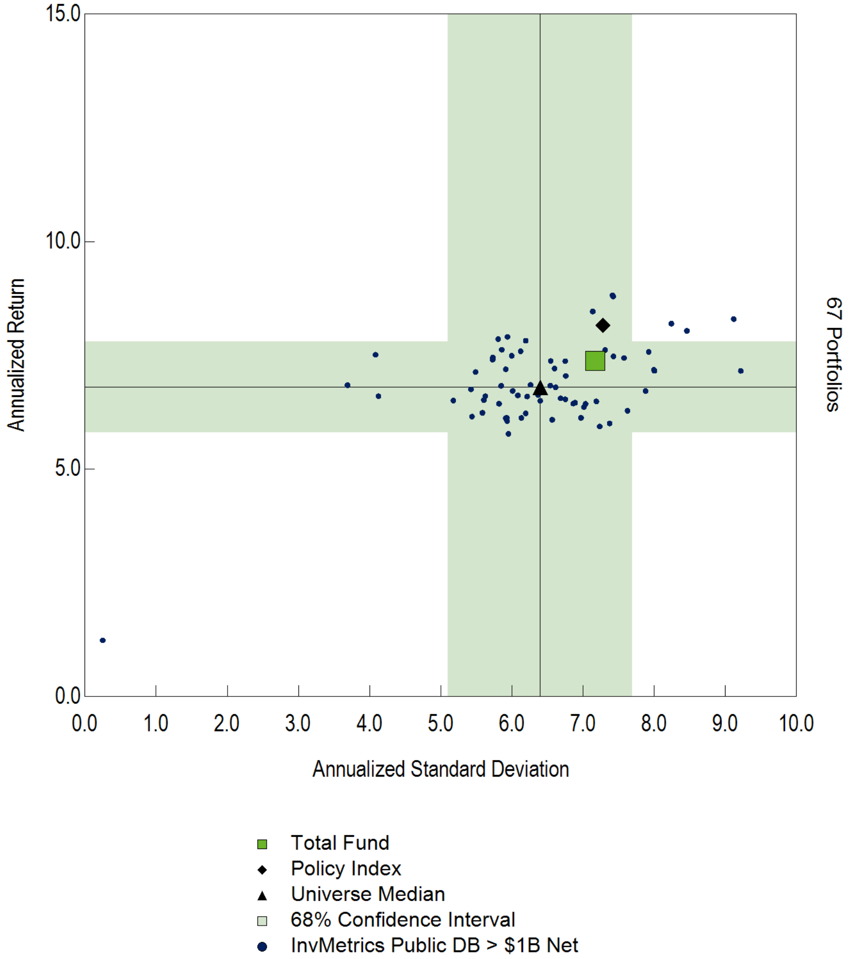
3 Years Ending December 31, 2019



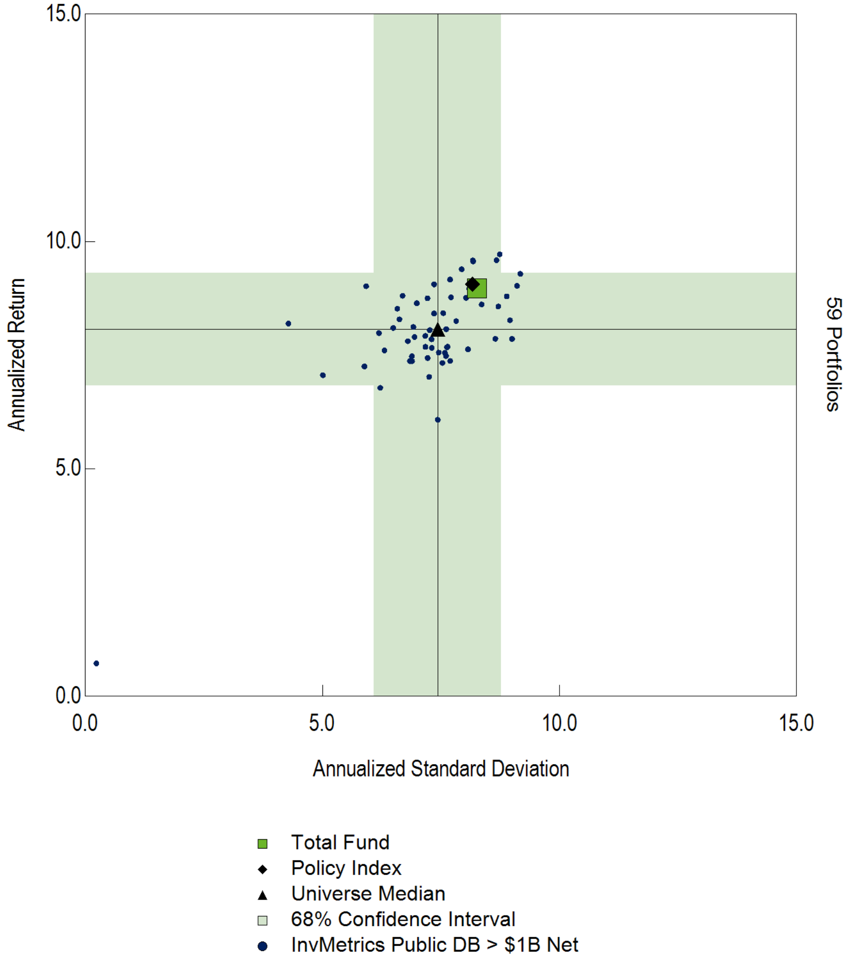
Ventura County Employees' Retirement Association

TOTAL FUND RISK/RETURN

5 Years Ending December 31, 2019



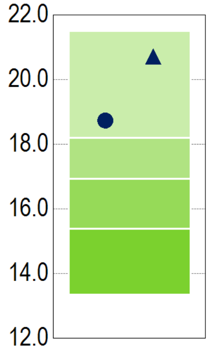
10 Years Ending December 31, 2019



TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

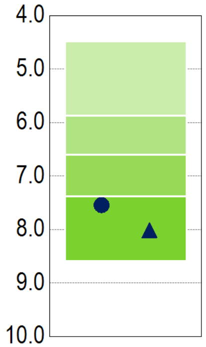
Total Fund vs. InvMetrics Public DB > $1B Net
1 Year

Anlzd Return



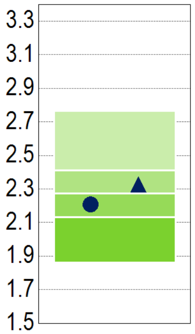
● Total Fund	
Value	18.7
Rank	17
▲ Policy Index	
Value	20.7
Rank	9
Universe	
5th %tile	21.5
25th %tile	18.2
Median	17.0
75th %tile	15.4
95th %tile	13.4

Anlzd Standard Deviation



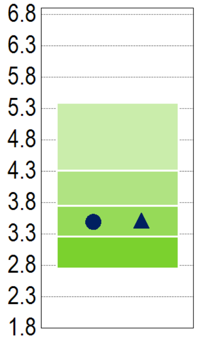
● Total Fund	
Value	7.5
Rank	79
▲ Policy Index	
Value	8.0
Rank	91
Universe	
5th %tile	4.5
25th %tile	5.9
Median	6.6
75th %tile	7.4
95th %tile	8.6

Sharpe Ratio



● Total Fund	
Value	2.2
Rank	62
▲ Policy Index	
Value	2.3
Rank	38
Universe	
5th %tile	2.8
25th %tile	2.4
Median	2.3
75th %tile	2.1
95th %tile	1.9

Sortino Ratio

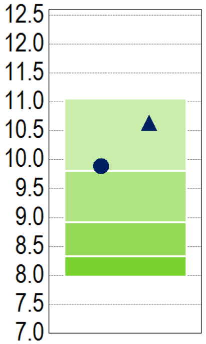


● Total Fund	
Value	3.5
Rank	64
▲ Policy Index	
Value	3.5
Rank	64
Universe	
5th %tile	5.4
25th %tile	4.3
Median	3.8
75th %tile	3.3
95th %tile	2.8

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

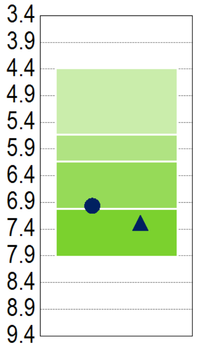
Total Fund vs. InvMetrics Public DB > $1B Net
3 Years

Anlzd Return



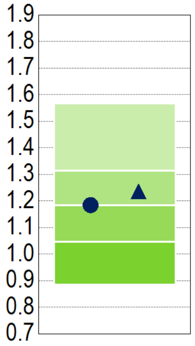
● Total Fund	
Value	9.9
Rank	20
▲ Policy Index	
Value	10.6
Rank	8
Universe	
5th %tile	11.1
25th %tile	9.8
Median	8.9
75th %tile	8.3
95th %tile	8.0

Anlzd Standard Deviation



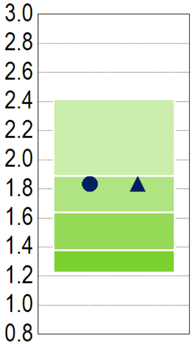
● Total Fund	
Value	7.0
Rank	71
▲ Policy Index	
Value	7.3
Rank	83
Universe	
5th %tile	4.4
25th %tile	5.6
Median	6.1
75th %tile	7.0
95th %tile	7.9

Sharpe Ratio



● Total Fund	
Value	1.2
Rank	51
▲ Policy Index	
Value	1.2
Rank	38
Universe	
5th %tile	1.6
25th %tile	1.3
Median	1.2
75th %tile	1.0
95th %tile	0.9

Sortino Ratio

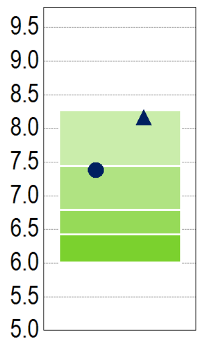


● Total Fund	
Value	1.8
Rank	33
▲ Policy Index	
Value	1.8
Rank	33
Universe	
5th %tile	2.4
25th %tile	1.9
Median	1.6
75th %tile	1.4
95th %tile	1.2

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

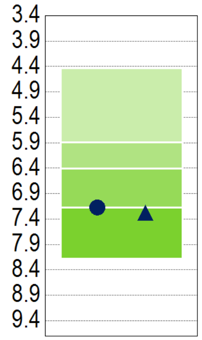
Total Fund vs. InvMetrics Public DB > $1B Net
5 Years

Anlzd Return



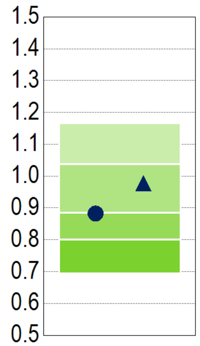
● Total Fund	
Value	7.4
Rank	29
▲ Policy Index	
Value	8.2
Rank	7
Universe	
5th %tile	8.3
25th %tile	7.4
Median	6.8
75th %tile	6.4
95th %tile	6.0

Anlzd Standard Deviation



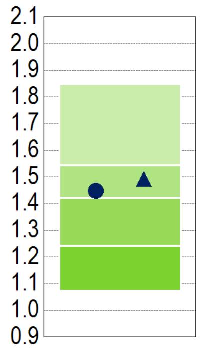
● Total Fund	
Value	7.2
Rank	76
▲ Policy Index	
Value	7.3
Rank	79
Universe	
5th %tile	4.4
25th %tile	5.9
Median	6.4
75th %tile	7.2
95th %tile	8.2

Sharpe Ratio



● Total Fund	
Value	0.9
Rank	52
▲ Policy Index	
Value	1.0
Rank	31
Universe	
5th %tile	1.2
25th %tile	1.0
Median	0.9
75th %tile	0.8
95th %tile	0.7

Sortino Ratio

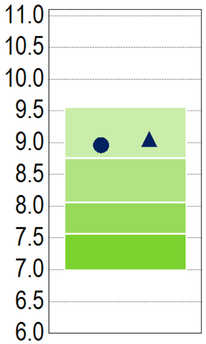


● Total Fund	
Value	1.4
Rank	46
▲ Policy Index	
Value	1.5
Rank	38
Universe	
5th %tile	1.8
25th %tile	1.5
Median	1.4
75th %tile	1.2
95th %tile	1.1

TOTAL FUND RISK STATISTICS VS. PEER UNIVERSE

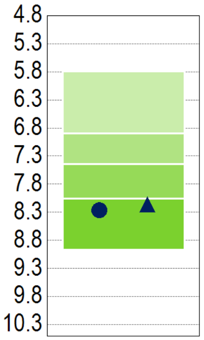
Total Fund vs. InvMetrics Public DB > $1B Net
10 Years

Anlzd Return



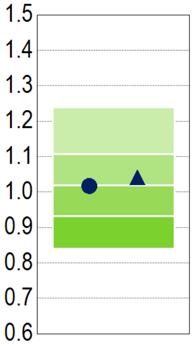
● Total Fund		
	Value	9.0
	Rank	18
▲ Policy Index		
	Value	9.1
	Rank	13
Universe		
	5th %tile	9.6
	25th %tile	8.8
	Median	8.1
	75th %tile	7.6
	95th %tile	7.0

Anlzd Standard Deviation



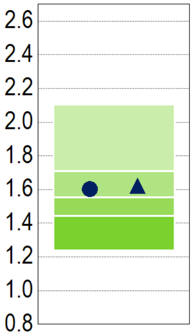
● Total Fund		
	Value	8.3
	Rank	84
▲ Policy Index		
	Value	8.2
	Rank	80
Universe		
	5th %tile	5.8
	25th %tile	6.9
	Median	7.4
	75th %tile	8.0
	95th %tile	9.0

Sharpe Ratio



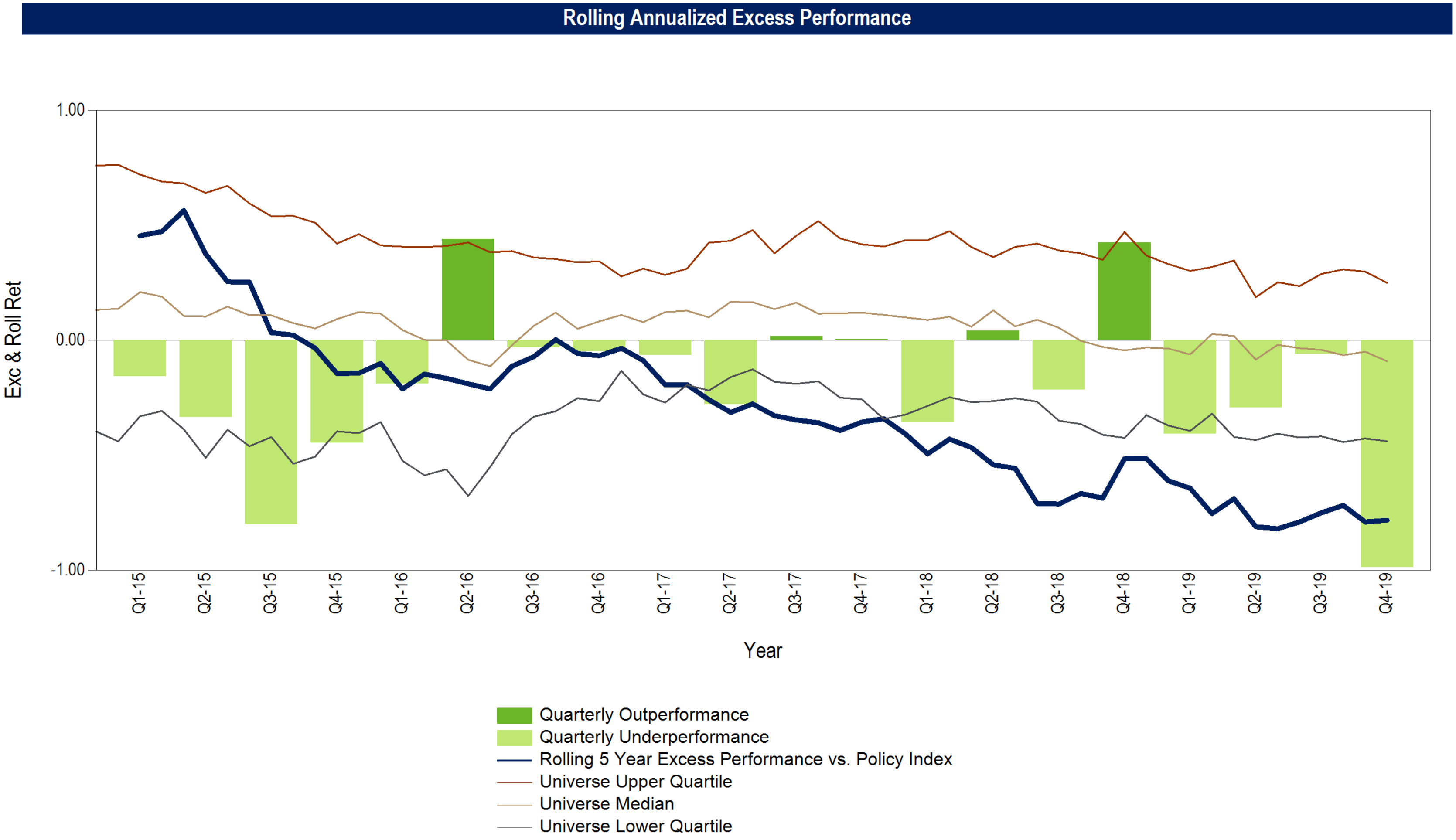
● Total Fund		
	Value	1.0
	Rank	51
▲ Policy Index		
	Value	1.0
	Rank	42
Universe		
	5th %tile	1.2
	25th %tile	1.1
	Median	1.0
	75th %tile	0.9
	95th %tile	0.8

Sortino Ratio



● Total Fund		
	Value	1.6
	Rank	41
▲ Policy Index		
	Value	1.6
	Rank	39
Universe		
	5th %tile	2.1
	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

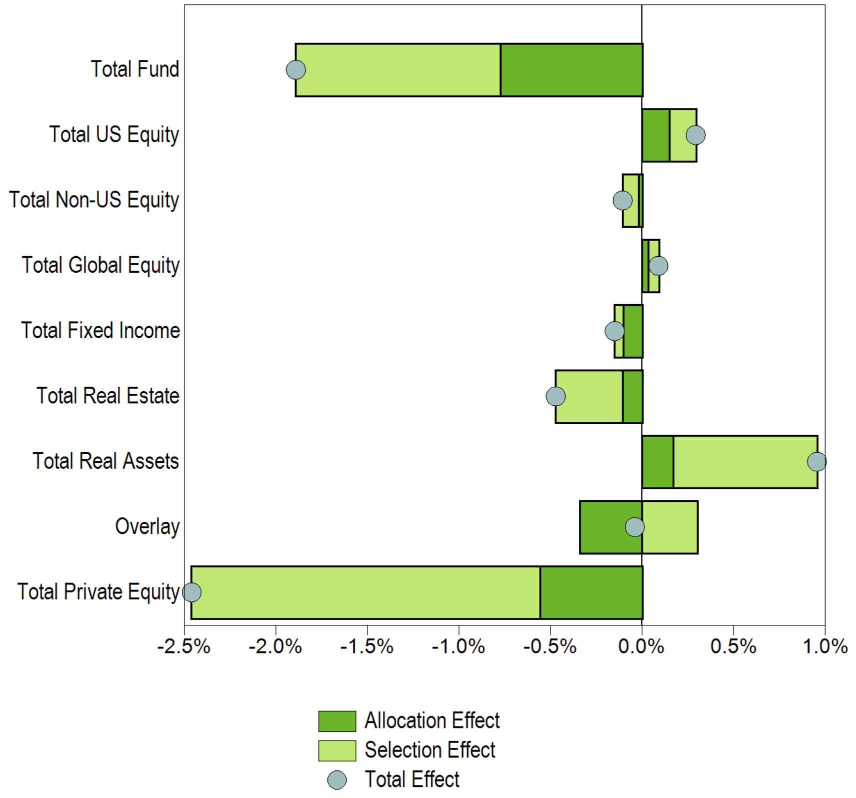
Attribution Effects
3 Months Ending December 31, 2019

Attribution Summary
3 Months Ending December 31, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	9.1%	9.1%	0.0%	0.0%	0.1%	0.1%
Total Non-US Equity	9.1%	8.9%	0.2%	0.0%	0.0%	0.0%
Total Global Equity	9.0%	9.0%	0.1%	0.0%	0.0%	0.0%
Total Fixed Income	0.5%	0.2%	0.3%	0.1%	-0.1%	0.0%
Total Real Estate	0.4%	1.3%	-0.9%	-0.1%	0.0%	0.0%
Total Real Assets	1.5%	0.6%	0.9%	0.1%	0.0%	0.0%
Overlay	7.0%	0.4%	6.6%	0.2%	-0.1%	0.0%
Total Private Equity	-1.7%	9.9%	-11.6%	-0.9%	-0.2%	-1.1%
Total	**5.2%**	**6.2%**	**-1.0%**	**-0.6%**	**-0.4%**	**-1.0%**

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
1 Year Ending December 31, 2019

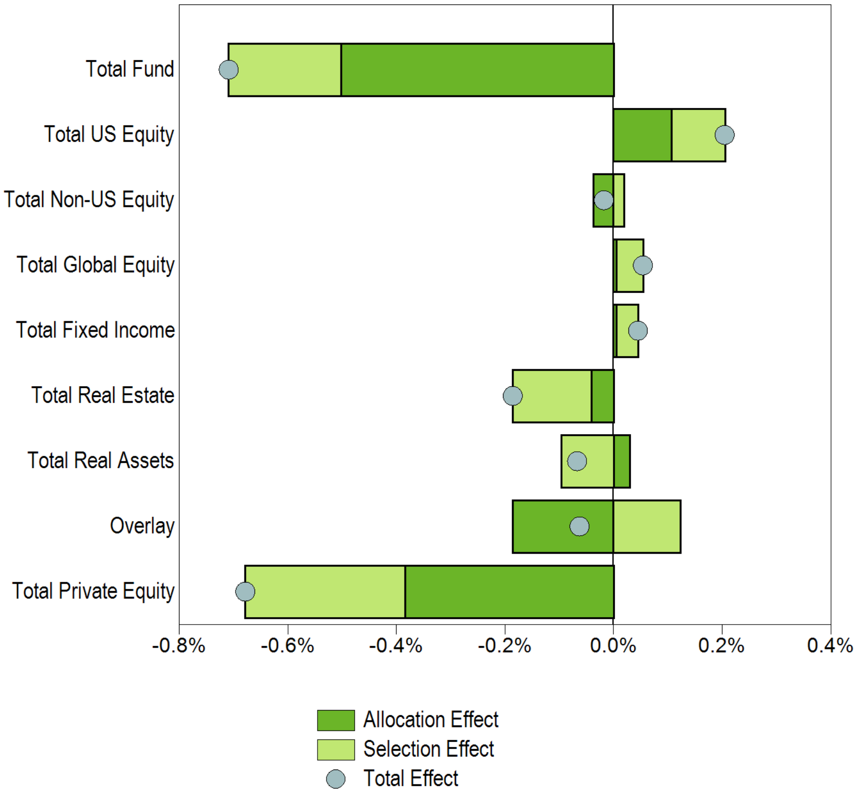


Attribution Summary
1 Year Ending December 31, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	31.6%	31.0%	0.5%	0.1%	0.2%	0.3%
Total Non-US Equity	21.0%	21.5%	-0.5%	-0.1%	0.0%	-0.1%
Total Global Equity	27.1%	26.6%	0.5%	0.1%	0.0%	0.1%
Total Fixed Income	8.5%	8.7%	-0.2%	0.0%	-0.1%	-0.1%
Total Real Estate	0.3%	4.4%	-4.1%	-0.4%	-0.1%	-0.5%
Total Real Assets	14.4%	5.3%	9.1%	0.8%	0.2%	1.0%
Overlay	15.5%	2.1%	13.4%	0.3%	-0.3%	0.0%
Total Private Equity	8.3%	34.9%	-26.5%	-1.9%	-0.6%	-2.5%
Total	**18.8%**	**20.7%**	**-1.9%**	**-1.1%**	**-0.8%**	**-1.9%**

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects
3 Years Ending December 31, 2019



Attribution Summary
3 Years Ending December 31, 2019

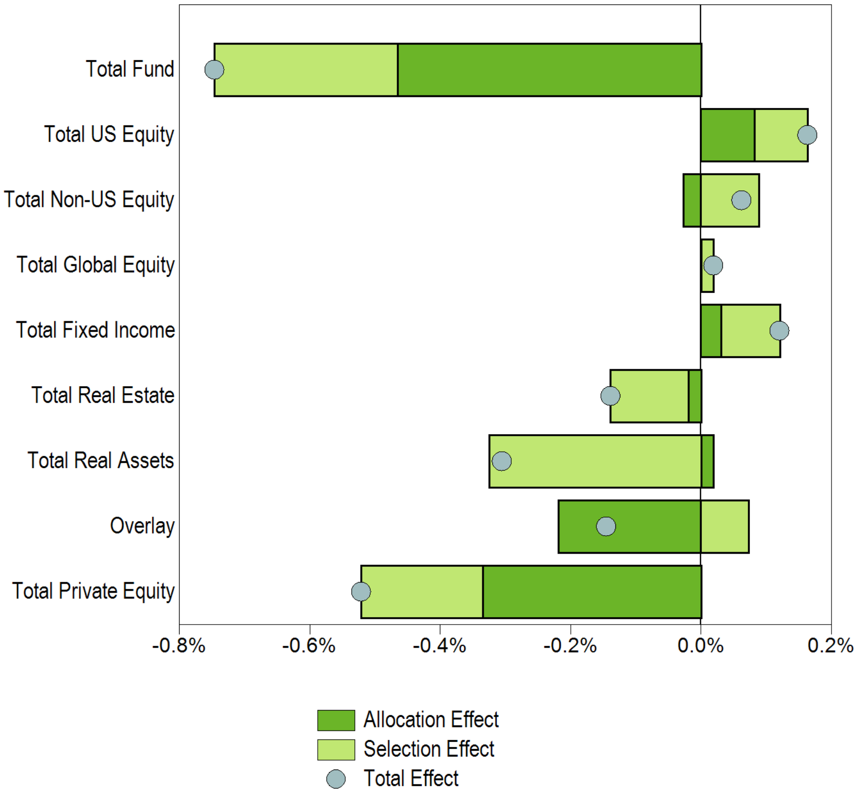
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	14.9%	14.6%	0.3%	0.1%	0.1%	0.2%
Total Non-US Equity	10.0%	9.9%	0.2%	0.0%	0.0%	0.0%
Total Global Equity	12.9%	12.4%	0.5%	0.0%	0.0%	0.1%
Total Fixed Income	4.2%	4.0%	0.2%	0.0%	0.0%	0.0%
Total Real Estate	4.4%	6.1%	-1.8%	-0.1%	0.0%	-0.2%
Total Real Assets	4.4%	5.8%	-1.5%	-0.1%	0.0%	-0.1%
Overlay	9.5%	1.6%	7.9%	0.1%	-0.2%	-0.1%
Total Private Equity	14.5%	18.0%	-3.5%	-0.3%	-0.4%	-0.7%
Total	**9.9%**	**10.6%**	**-0.7%**	**-0.2%**	**-0.5%**	**-0.7%**

Ventura County Employees’ Retirement Association

TOTAL FUND ATTRIBUTION ANALYSIS

Attribution Effects

5 Years Ending December 31, 2019



Attribution Summary

5 Years Ending December 31, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
Total US Equity	11.5%	11.2%	0.3%	0.1%	0.1%	0.2%
Total Non-US Equity	6.2%	5.5%	0.7%	0.1%	0.0%	0.1%
Total Global Equity	8.6%	8.4%	0.2%	0.0%	0.0%	0.0%
Total Fixed Income	3.4%	2.9%	0.5%	0.1%	0.0%	0.1%
Total Real Estate	6.5%	8.0%	-1.5%	-0.1%	0.0%	-0.1%
Total Real Assets	1.8%	5.7%	-3.8%	-0.3%	0.0%	-0.3%
Overlay	5.7%	1.1%	4.6%	0.1%	-0.2%	-0.2%
Total Private Equity	13.1%	14.5%	-1.4%	-0.2%	-0.3%	-0.5%
Total	**7.4%**	**8.2%**	**-0.8%**	**-0.3%**	**-0.5%**	**-0.8%**

Ventura County Employees’ Retirement Association

TOTAL FUND RISK STATISTICS

	1 Year Ending December 31, 2019											
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	56.8%	27.6%	32	12.8%	74	0.7%	35	0.4%	4	2.5	1	1.0
MSCI ACWI	--	26.6%	60	12.6%	73	0.0%	56	0.0%	1	--	--	1.0
Total US Equity	29.3%	31.6%	9	13.4%	62	0.8%	18	0.3%	4	1.9	2	1.0
Russell 3000	--	31.0%	16	13.5%	67	0.0%	29	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	21.0%	80	12.6%	67	-0.3%	66	0.7%	6	-0.8	92	1.0
MSCI ACWI ex USA	--	21.5%	70	12.7%	71	0.0%	63	0.0%	1	--	--	1.0
Total Global Equity	11.3%	27.1%	7	12.6%	80	0.6%	70	0.0%	1	11.4	1	1.0
MSCI ACWI	--	26.6%	10	12.6%	80	0.0%	72	0.0%	1	--	--	1.0
Total Fixed Income	19.9%	8.5%	59	2.8%	71	1.0%	61	0.7%	34	-0.3	60	0.8
Total Fixed Income Policy Index	--	8.7%	53	3.4%	92	0.0%	79	0.0%	1	--	--	1.0
Total US Fixed Income	17.0%	8.5%	45	2.6%	60	1.5%	34	1.1%	63	-0.2	62	0.7
BBgBarc US Aggregate TR	--	8.7%	33	3.4%	92	0.0%	74	0.0%	1	--	--	1.0
Total Real Assets	7.5%	14.4%	--	8.7%	--	8.9%	--	8.6%	--	1.1	--	1.0
Real Assets Index	--	5.3%	--	1.0%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.1%	0.3%	94	2.5%	69
NCREIF ODCE Net	--	4.4%	73	1.9%	52
Total Private Equity	7.4%	8.3%	52	5.5%	58
Russell 3000 + 3%	--	34.9%	1	13.5%	95

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 89 portfolios),Total Us Equity (InvMetrics Public DB US Eq consists of 174 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 122 portfolios),Total Global Equity (InvMetrics Public DB Glbl Eq consists of 46 portfolios),Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 90 portfolios),Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 108 portfolios),Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 60 portfolios) and Total Private Equity(InvMetrics Public DB Private Eq consists of 51 portfolios).

TOTAL FUND RISK STATISTICS

	3 Years Ending December 31, 2019											
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	56.8%	13.1%	19	11.4%	64	0.7%	22	0.8%	11	0.8	7	1.0
MSCI ACWI	--	12.4%	47	11.4%	59	0.0%	43	0.0%	1	--	--	1.0
Total US Equity	29.3%	14.9%	12	12.3%	45	0.4%	12	0.4%	4	0.8	4	1.0
Russell 3000	--	14.6%	16	12.4%	49	0.0%	18	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	10.0%	49	11.2%	15	0.4%	41	0.9%	9	0.2	48	1.0
MSCI ACWI ex USA	--	9.9%	55	11.5%	38	0.0%	54	0.0%	1	--	--	1.0
Total Global Equity	11.3%	12.9%	46	11.4%	77	0.5%	68	0.1%	1	5.6	1	1.0
MSCI ACWI	--	12.4%	60	11.4%	77	0.0%	71	0.0%	1	--	--	1.0
Total Fixed Income	19.9%	4.2%	58	2.4%	61	0.6%	52	0.7%	34	0.3	26	0.8
Total Fixed Income Policy Index	--	4.0%	65	2.9%	89	0.0%	76	0.0%	1	--	--	1.0
Total US Fixed Income	17.0%	4.2%	37	2.3%	69	0.7%	32	0.8%	61	0.2	35	0.8
BBgBarc US Aggregate TR	--	4.0%	45	2.9%	88	0.0%	76	0.0%	1	--	--	1.0
Total Real Assets	7.5%	4.4%	--	7.6%	--	-2.9%	--	7.5%	--	-0.2	--	1.3
Real Assets Index	--	5.8%	--	0.9%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.1%	4.4%	96	2.7%	61
NCREIF ODCE Net	--	6.1%	73	2.6%	59
Total Private Equity	7.4%	14.5%	38	5.6%	44
Russell 3000 + 3%	--	18.0%	16	12.4%	95

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 82 portfolios),Total Us Equity (InvMetrics Public DB US Eq consists of 167 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 111 portfolios),Total Global Equity (InvMetrics Public DB Glbl Eq consists of 41 portfolios),Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 85 portfolios),Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 106 portfolios),Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 59 portfolios) and Total Private Equity(InvMetrics Public DB Private Eq consists of 49 portfolios).

TOTAL FUND RISK STATISTICS

5 Years Ending December 31, 2019												
	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Tracking Error	Rank	Info Ratio	Rank	Beta
Total Equity	56.8%	9.5%	13	11.6%	59	1.2%	15	1.1%	19	1.0	1	1.0
MSCI ACWI	--	8.4%	73	11.8%	69	0.0%	59	0.0%	1	--	--	1.0
Total US Equity	29.3%	11.5%	10	12.2%	45	0.3%	13	0.3%	2	0.9	1	1.0
Russell 3000	--	11.2%	17	12.2%	47	0.0%	21	0.0%	1	--	--	1.0
Total Non-US Equity	16.3%	6.2%	42	12.0%	24	0.9%	34	1.1%	4	0.7	12	1.0
MSCI ACWI ex USA	--	5.5%	67	12.5%	70	0.0%	61	0.0%	1	--	--	1.0
Total Global Equity	11.3%	8.6%	49	11.8%	70	0.2%	76	0.8%	1	0.2	22	1.0
MSCI ACWI	--	8.4%	59	11.8%	70	0.0%	81	0.0%	1	--	--	1.0
Total Fixed Income	19.9%	3.4%	42	2.6%	42	0.9%	37	1.5%	48	0.3	20	0.8
Total Fixed Income Policy Index	--	2.9%	66	3.0%	71	0.0%	77	0.0%	1	--	--	1.0
Total US Fixed Income	17.0%	3.6%	23	2.5%	53	1.1%	22	1.6%	76	0.3	38	0.7
BBgBarc US Aggregate TR	--	3.0%	49	3.1%	84	0.0%	77	0.0%	1	--	--	1.0
Total Real Assets	7.5%	1.8%	--	9.1%	--	-8.6%	--	8.9%	--	-0.4	--	2.0
Real Assets Index	--	5.7%	--	0.9%	--	0.0%	--	0.0%	--	--	--	1.0

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank
Total Real Estate	7.1%	6.5%	94	3.4%	54
NCREIF ODCE Net	--	8.0%	61	3.5%	55
Total Private Equity	7.4%	13.1%	29	5.9%	53
Russell 3000 + 3%	--	14.6%	25	12.2%	94

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 78 portfolios),Total Us Equity (InvMetrics Public DB US Eq consists of 155 portfolios), Total Non-US Equity (InvMetrics Public DB ex-US Eq consists of 106 portfolios),Total Global Equity (InvMetrics Public DB Glbl Eq consists of 32 portfolios),Total Fixed Income (InvMetrics Public DB Total Fix Inc consists of 79 portfolios),Total US Fixed Income (InvMetrics Public DB US Fix Inc consists of 105 portfolios),Total Real Estate (InvMetrics Public DB Real Estate Pub+Priv consists of 56 portfolios) and Total Private Equity(InvMetrics Public DB Private Eq consists of 47 portfolios).

Ventura County Employees’ Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fund	**6,148,524,885**	**100.0**	**100.0**	**5.2**	**44**	**6.0**	**21**	**18.7**	**17**	**9.9**	**20**	**7.4**	**29**	**9.0**	**18**	**8.1**	**Apr-94**
Policy Index				6.2	7	7.1	2	20.7	9	10.6	8	8.2	7	9.1	13	8.2	Apr-94
Over/Under				-1.0		-1.1		-2.0		-0.7		-0.8		-0.1		-0.1	
60% MSCI ACWI (Net) / 40% FTSE WGBI				5.2	45	5.6	55	18.2	26	9.2	42	6.0	96	6.2	99	6.5	Apr-94
60% S&P 500 / 40% BBgBarc Aggregate				5.5	33	7.5	1	22.2	3	10.9	7	8.4	4	9.8	1	8.5	Apr-94
InvMetrics Public DB > $1B Net Median				5.1		5.6		17.0		8.9		6.8		8.1		7.6	Apr-94
Total Fund ex Parametric	**6,106,209,595**	**99.3**	**--**	**5.1**	**--**	**5.8**	**--**	**18.4**	**--**	**9.7**	**--**	**7.3**	**--**	**8.8**	**--**	**8.0**	**Apr-94**
Total Fund ex Private Equity	**5,693,929,826**	**92.6**	**--**	**5.8**	**19**	**6.3**	**14**	**19.6**	**14**	**9.7**	**30**	**7.2**	**38**	**--**	**--**	**8.9**	**Jan-12**
Policy Index				6.2	7	7.1	2	20.7	9	10.6	8	8.2	7	9.1	13	9.7	Jan-12
Over/Under				-0.4		-0.8		-1.1		-0.9		-1.0				-0.8	
InvMetrics Public DB > $1B Net Median				5.1		5.6		17.0		8.9		6.8		8.1		8.6	Jan-12
Total US Equity	**1,799,934,440**	**29.3**	**26.0**	**9.1**	**20**	**10.6**	**3**	**31.6**	**9**	**14.9**	**12**	**11.5**	**10**	**13.8**	**4**	**9.6**	**Dec-93**
Russell 3000				9.1	18	10.4	5	31.0	16	14.6	16	11.2	17	13.4	17	9.8	Dec-93
Over/Under				0.0		0.2		0.6		0.3		0.3		0.4		-0.2	
InvMetrics Public DB US Eq Net Median				8.4		9.4		29.9		13.6		10.6		12.9		9.5	Dec-93
Western U.S. Index Plus	251,003,186	4.1		9.4	32	11.3	18	33.5	21	15.7	32	12.3	22	15.2	7	6.9	May-07
S&P 500				9.1	36	10.9	23	31.5	35	15.3	36	11.7	28	13.6	24	8.4	May-07
Over/Under				0.3		0.4		2.0		0.4		0.6		1.6		-1.5	
eV US Large Cap Equity Net Median				8.3		9.6		28.9		13.3		10.1		12.6		8.1	May-07
Blackrock Russell 1000 Index	1,478,332,364	24.0		9.0	37	10.6	28	31.4	35	--	--	--	--	--	--	14.1	May-17
Russell 1000				9.0	37	10.6	28	31.4	35	15.0	37	11.5	30	13.5	25	14.1	May-17
Over/Under				0.0		0.0		0.0								0.0	
eV US Large Cap Equity Net Median				8.3		9.6		28.9		13.3		10.1		12.6		12.6	May-17
Blackrock Russell 2500 Index	70,598,890	1.1		8.5	35	7.2	44	27.8	57	--	--	--	--	--	--	9.9	May-17
Russell 2500				8.5	35	7.1	44	27.8	57	10.3	51	8.9	42	12.6	42	9.8	May-17
Over/Under				0.0		0.1		0.0								0.1	
eV US Small-Mid Cap Equity Net Median				7.8		6.7		28.6		10.5		8.4		12.1		9.6	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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Non-US Equity	**999,209,869**	**16.3**	**17.0**	**9.1**	**81**	**6.6**	**91**	**21.0**	**80**	**10.0**	**49**	**6.2**	**42**	**5.8**	**50**	**6.5**	**Mar-94**
MSCI ACWI ex USA				*8.9*	*88*	*7.0*	*85*	*21.5*	*70*	*9.9*	*55*	*5.5*	*67*	*5.0*	*82*	*5.3*	*Mar-94*
Over/Under				0.2		-0.4		-0.5		0.1		0.7		0.8		1.2	
MSCI EAFE				*8.2*	*94*	*7.0*	*84*	*22.0*	*63*	*9.6*	*69*	*5.7*	*62*	*5.5*	*63*	*5.0*	*Mar-94*
MSCI ACWI ex USA NR LCL				*6.2*	*99*	*8.0*	*37*	*22.2*	*61*	*8.9*	*82*	*7.1*	*19*	*7.0*	*5*	*--*	*Mar-94*
MSCI EAFE NR LCL				*5.2*	*99*	*7.0*	*83*	*21.7*	*69*	*7.7*	*96*	*6.7*	*26*	*7.2*	*4*	*5.0*	*Mar-94*
InvMetrics Public DB ex-US Eq Net Median				*9.8*		*7.7*		*22.8*		*10.0*		*5.9*		*5.7*		*5.9*	*Mar-94*
BlackRock ACWI ex-U.S. Index	510,579,539	8.3		9.2	65	7.4	63	21.9	77	10.1	71	5.9	60	5.4	78	3.1	Mar-07
MSCI ACWI ex USA IMI				*9.2*	*66*	*7.3*	*63*	*21.6*	*77*	*9.8*	*74*	*5.7*	*65*	*5.2*	*79*	*2.9*	*Mar-07*
Over/Under				0.0		0.1		0.3		0.3		0.2		0.2		0.2	
MSCI ACWI ex USA NR LCL				*6.2*	*99*	*8.0*	*49*	*22.2*	*74*	*8.9*	*83*	*7.1*	*34*	*7.0*	*48*	*3.8*	*Mar-07*
eV ACWI ex-US All Cap Equity Net Median				*9.8*		*7.9*		*25.1*		*11.2*		*6.5*		*6.9*		*3.9*	*Mar-07*
Sprucegrove	240,872,280	3.9		9.9	49	3.9	99	17.3	88	8.8	83	5.6	69	6.3	67	7.3	Mar-02
MSCI ACWI ex USA				*8.9*	*70*	*7.0*	*69*	*21.5*	*78*	*9.9*	*74*	*5.5*	*69*	*5.0*	*84*	*6.5*	*Mar-02*
Over/Under				1.0		-3.1		-4.2		-1.1		0.1		1.3		0.8	
MSCI EAFE				*8.2*	*83*	*7.0*	*69*	*22.0*	*76*	*9.6*	*76*	*5.7*	*66*	*5.5*	*78*	*6.0*	*Mar-02*
MSCI ACWI ex USA NR LCL				*6.2*	*99*	*8.0*	*49*	*22.2*	*74*	*8.9*	*83*	*7.1*	*34*	*7.0*	*48*	*5.6*	*Mar-02*
MSCI EAFE NR LCL				*5.2*	*99*	*7.0*	*69*	*21.7*	*77*	*7.7*	*88*	*6.7*	*45*	*7.2*	*43*	*4.8*	*Mar-02*
eV ACWI ex-US All Cap Equity Net Median				*9.8*		*7.9*		*25.1*		*11.2*		*6.5*		*6.9*		*7.1*	*Mar-02*
Hexavest	98,371,757	1.6		7.1	88	6.1	79	16.5	85	6.7	86	4.4	74	--	--	4.4	Dec-10
MSCI EAFE				*8.2*	*68*	*7.0*	*55*	*22.0*	*48*	*9.6*	*47*	*5.7*	*54*	*5.5*	*69*	*5.3*	*Dec-10*
Over/Under				-1.1		-0.9		-5.5		-2.9		-1.3				-0.9	
MSCI EAFE NR LCL				*5.2*	*96*	*7.0*	*54*	*21.7*	*50*	*7.7*	*74*	*6.7*	*39*	*7.2*	*36*	*7.5*	*Dec-10*
eV EAFE All Cap Equity Net Median				*8.7*		*7.1*		*21.6*		*9.4*		*5.9*		*6.4*		*6.1*	*Dec-10*
Walter Scott	149,386,293	2.4		8.7	76	8.6	31	27.5	36	14.5	11	9.5	13	--	--	7.1	Dec-10
MSCI ACWI ex USA				*8.9*	*70*	*7.0*	*69*	*21.5*	*78*	*9.9*	*74*	*5.5*	*69*	*5.0*	*84*	*4.3*	*Dec-10*
Over/Under				-0.2		1.6		6.0		4.6		4.0				2.8	
MSCI ACWI ex USA NR LCL				*6.2*	*99*	*8.0*	*49*	*22.2*	*74*	*8.9*	*83*	*7.1*	*34*	*7.0*	*48*	*6.9*	*Dec-10*
MSCI EAFE				*8.2*	*83*	*7.0*	*69*	*22.0*	*76*	*9.6*	*76*	*5.7*	*66*	*5.5*	*78*	*5.3*	*Dec-10*
eV ACWI ex-US All Cap Equity Net Median				*9.8*		*7.9*		*25.1*		*11.2*		*6.5*		*6.9*		*5.9*	*Dec-10*

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Global Equity	**693,538,318**	**11.3**	**10.0**	**9.0**	**26**	**9.1**	**20**	**27.1**	**7**	**12.9**	**46**	**8.6**	**49**	**8.7**	**25**	**6.6**	**May-05**
MSCI ACWI				*9.0*	*30*	*8.9*	*34*	*26.6*	*10*	*12.4*	*60*	*8.4*	*59*	*8.8*	*24*	*7.3*	*May-05*
Over/Under				0.0		0.2		0.5		0.5		0.2		-0.1		-0.7	
InvMetrics Public DB Glbl Eq Net Median				*8.2*		*8.7*		*25.0*		*12.9*		*8.5*		*6.1*		*6.2*	*May-05*
BlackRock MSCI ACWI Equity Index	693,538,318	11.3		9.0	41	9.1	32	27.1	45	12.9	39	8.9	39	--	--	10.8	Aug-12
MSCI ACWI				*9.0*	*43*	*8.9*	*36*	*26.6*	*47*	*12.4*	*44*	*8.4*	*45*	*8.8*	*59*	*10.4*	*Aug-12*
Over/Under				0.0		0.2		0.5		0.5		0.5				0.4	
eV All Global Equity Net Median				*8.6*		*8.2*		*26.1*		*11.7*		*8.0*		*9.3*		*10.4*	*Aug-12*

Ventura County Employees’ Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Private Equity	**454,595,059**	**7.4**	**13.0**	**-1.7**	**95**	**2.9**	**71**	**8.3**	**52**	**14.5**	**38**	**13.1**	**29**	**--**	**--**	**14.1**	**Jan-12**
Russell 3000 + 3%				*9.9*	*5*	*12.0*	*1*	*34.9*	*1*	*18.0*	*16*	*14.6*	*25*	*16.8*	*1*	*18.0*	*Jan-12*
Over/Under				-11.6		-9.1		-26.6		-3.5		-1.5				-3.9	
Cambridge Associates Global All PE (Qtr Lag)				*0.5*	*66*	*4.3*	*52*	*7.9*	*55*	*13.3*	*52*	*11.1*	*54*	*13.0*	*44*	*12.5*	*Jan-12*
InvMetrics Public DB Private Eq Net Median				*1.4*		*4.4*		*8.4*		*13.4*		*11.4*		*12.5*		*12.4*	*Jan-12*
Adams Street Global Fund Series	172,996,140	2.8		-5.5	--	-0.9	--	4.1	--	12.2	--	10.8	--	--	--	12.4	Jan-12
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*18.0*	*Jan-12*
Over/Under				-15.4		-12.9		-30.8		-5.8		-3.8				-5.6	
Harbourvest	97,630,843	1.6		-0.2	--	5.5	--	12.2	--	19.2	--	18.4	--	--	--	18.7	Aug-13
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*15.8*	*Aug-13*
Over/Under				-10.1		-6.5		-22.7		1.2		3.8				2.9	
Pantheon Global Secondary Funds	38,433,838	0.6		0.4	--	4.1	--	-0.4	--	13.2	--	12.2	--	--	--	11.6	Jan-12
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*18.0*	*Jan-12*
Over/Under				-9.5		-7.9		-35.3		-4.8		-2.4				-6.4	
Drive Capital Fund II	15,687,653	0.3		2.2	--	14.5	--	53.0	--	-0.3	--	--	--	--	--	-10.1	Sep-16
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*17.9*	*Sep-16*
Over/Under				-7.7		2.5		18.1		-18.3						-28.0	
Abbott Secondary Opportunities	17,294,394	0.3		-1.8	--	0.8	--	8.9	--	--	--	--	--	--	--	17.2	Jan-18
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*14.7*	*Jan-18*
Over/Under				-11.7		-11.2		-26.0								2.5	
Clearlake Capital Partners V	9,468,579	0.2		13.8	--	23.4	--	50.2	--	--	--	--	--	--	--	43.9	Mar-18
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*15.0*	*Mar-18*
Over/Under				3.9		11.4		15.3								28.9	

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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Battery Ventures XII	10,278,557	0.2		1.1	--	7.7	--	5.7	--	--	--	--	--	--	--	-1.6	Apr-18
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	17.0	*Apr-18*
Over/Under				-8.8		-4.3		-29.2								-18.6	
Insight Venture Partners X	23,887,278	0.4		7.4	--	12.7	--	21.4	--	--	--	--	--	--	--	8.5	May-18
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	17.4	*May-18*
Over/Under				-2.5		0.7		-13.5								-8.9	
GTCR Fund XII	6,702,509	0.1		-13.9	--	-13.9	--	-18.8	--	--	--	--	--	--	--	-38.0	Jun-18
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	16.2	*Jun-18*
Over/Under				-23.8		-25.9		-53.7								-54.2	
Buenaventure One, LLC	31,506,474	0.5		0.2	--	-0.1	--	6.7	--	--	--	--	--	--	--	3.9	Jul-18
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	16.5	*Jul-18*
Over/Under				-9.7		-12.1		-28.2								-12.6	
ECI 11	3,542,361	0.1		13.0	--	22.9	--	34.2	--	--	--	--	--	--	--	28.1	Dec-18
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	20.7	*Dec-18*
Over/Under				3.1		10.9		-0.7								7.4	
The Resolute Fund IV L.P	8,766,623	0.1		20.4	--	27.9	--	81.6	--	--	--	--	--	--	--	81.6	Jan-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	34.9	*Jan-19*
Over/Under				10.5		15.9		46.7								46.7	
GGV Capital VII L.P.	2,872,123	0.0		-17.7	--	-22.9	--	--	--	--	--	--	--	--	--	-22.9	Feb-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	23.9	*Feb-19*
Over/Under				-27.6		-34.9										-46.8	
GGV Discovery II, L.P.	499,251	0.0		3.4	--	-2.6	--	--	--	--	--	--	--	--	--	-2.6	Feb-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	23.9	*Feb-19*
Over/Under				-6.5		-14.6										-26.5	
Drive Capital Overdrive Fund I	2,696,095	0.0		-3.6	--	-3.6	--	--	--	--	--	--	--	--	--	-3.6	May-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	12.6	*May-19*
Over/Under				-13.5		-15.6										-16.2	

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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Riverside Micro Cap Fund V, LP	1,780,559	0.0		1.0		22.5		--		--		--		--		-28.5	May-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	12.6	*May-19*
Over/Under				-8.9		10.5										-41.1	
GGV Capital VII Plus, LP	827,466	0.0		0.3		0.3		--		--		--		--		0.3	Jun-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	20.1	*Jun-19*
Over/Under				-9.6		-11.7										-19.8	
Astorg VII L.P.	698,463	0.0		-20.5	--	-45.8	--	--	--	--	--	--	--	--	--	-45.8	Jul-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	12.0	*Jul-19*
Over/Under				-30.4		-57.8										-57.8	
M/C Partners Fund VIII LP. Limited Partnership	736,738	0.0		-15.1	--	-18.3	--	--	--	--	--	--	--	--	--	-18.3	Jul-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	12.0	*Jul-19*
Over/Under				-25.0		-30.3										-30.3	
Genstar Capital Partners IX	1,684,036	0.0		2.2	--	--	--	--	--	--	--	--	--	--	--	--	Aug-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	10.1	*Aug-19*
Over/Under				-7.7													
Genstar IX Opportunities Fund I	745,800	0.0		-0.3	--	--	--	--	--	--	--	--	--	--	--	-0.3	Aug-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	10.1	*Aug-19*
Over/Under				-10.2												-10.4	
ABRY Partners IX, LP	2,181,368	0.0		6.8	--	--	--	--	--	--	--	--	--	--	--	-15.2	Sep-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	12.1	*Sep-19*
Over/Under				-3.1												-27.3	
Advent International GPE IX LP	960,680	0.0		-35.5	--	--	--	--	--	--	--	--	--	--	--	-6.0	Nov-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	7.3	*Nov-19*
Over/Under				-45.4												-13.3	
Drive Capital Fund III LP	36,925	0.0		--	--	--	--	--	--	--	--	--	--	--	--	0.0	Dec-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	3.1	*Dec-19*
Over/Under																-3.1	
Oak HC/FT Partners III LP	859,875	0.0		--	--	--	--	--	--	--	--	--	--	--	--	0.0	Dec-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	3.1	*Dec-19*
Over/Under																-3.1	
TA XIII A LP	1,500,000	0.0		--	--	--	--	--	--	--	--	--	--	--	--	--	Dec-19
Russell 3000 + 3%				9.9	--	12.0	--	34.9	--	18.0	--	14.6	--	16.8	--	--	*Dec-19*
Over/Under																	

VENTURA COUNTY EMPLOYEES’ RETIREMENT ASSOCIATION

PRIVATE EQUITY LIMITED PARTNERSHIP PERFORMANCE

													Since Inception		
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	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	$25,000,000	$19,108,507	$6,254,210	76%	--	$4,625,000	$18,623,267	$23,248,267	$4,139,760	20.1%	0.24x	1.22x
ABRY Partners IX	2019	12/6/2018	$10,600,000	$2,373,722	$8,226,278	22%	--	--	$2,181,367	$2,181,367	($192,355)	-23.6%	--	0.92x
Adams Street 2010 U.S. Fund	2010	5/21/2010	$42,500,000	$37,442,500	$5,057,500	88%	$15,213	$33,006,870	$34,829,485	$67,836,355	$30,378,642	14.1%	0.88x	1.81x
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	$19,845,682	$15,856,563	$35,702,245	$13,375,407	11.9%	0.89x	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	$10,156,295	$12,670,561	$5,037,561	10.6%	0.33x	1.66x
Adams Street 2010 Direct Fund	2010	5/21/2010	$8,500,000	$8,066,500	$433,500	95%	$6,697	$9,748,384	$4,551,168	$14,299,552	$6,226,355	12.4%	1.21x	1.77x
Adams Street 2013 Global Fund	2013	6/27/2013	$75,000,000	$61,350,000	$13,650,000	82%	$10,728	$15,450,212	$75,257,920	$90,708,132	$29,347,404	11.3%	0.25x	1.48x
Adams Street 2016 Global Fund	2016	12/22/2016	$60,000,000	$32,880,000	$27,120,000	55%	--	$3,621,043	$35,480,187	$39,101,230	$6,221,230	12.8%	0.11x	1.19x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	$30,000,000	$6,967,808	$23,100,000	23%	$67,808	--	$7,038,691	$7,038,691	$3,075	1.0%	--	1.01x
Advent International GPE IX	2019	5/23/2019	$10,000,000	$1,150,000	$8,850,000	--	--	--	$960,680	$960,680	($189,320)	-60.3%	--	0.84x
Astorg VII	2019	12/17/2018	$8,625,609	$908,094	$7,717,515	11%	--	--	$692,705	$692,705	($215,389)	-67.0%	--	0.76x
Battery Ventures XII	2018	2/1/2018	$9,050,000	$5,998,340	$3,051,660	66%	--	--	$6,112,532	$6,112,532	$114,192	2.2%	--	1.02x
Battery Ventures XII Side Fund	2018	2/1/2018	$5,050,000	$3,848,605	$1,201,395	76%	--	--	$4,140,620	$4,140,620	$292,015	9.1%	--	1.08x
Buenaventure One, LLC	2018	1/5/2018	$102,316,500	$30,730,590	$71,585,910	30%	--	$403,156	$31,717,466	$32,120,622	$1,390,032	5.0%	0.01x	1.05x
CapVest Equity Partners IV	2019	7/11/2018	$12,346,457	--	$12,346,457	--	--	--	($52,327)	($52,327)	--	--	--	--
Clearlake Capital Partners V	2017	12/22/2017	$9,950,000	$7,283,333	$3,326,845	73%	$46,158	$1,363,988	$9,004,329	$10,368,317	$3,038,826	44.1%	0.19x	1.42x
Drive Capital Fund II	2016	9/1/2016	$15,000,000	$11,682,584	$3,320,626	78%	$3,210	--	$15,687,658	$15,687,658	$4,001,864	22.2%	--	1.34x
Drive Capital Fund III	2019	4/5/2019	$7,500,000	$36,925	$7,463,075	0%	--	--	$36,925	$36,925	--	--	--	--
Drive Capital Overdrive Fund I	2019	4/5/2019	$7,500,000	$2,795,767	$4,704,233	37%	--	--	$2,696,095	$2,696,095	($99,672)	-9.3%	--	0.96x
ECI 11	2018	7/5/2018	$9,739,754	$2,853,854	$6,885,900	29%	--	--	$2,715,851	$2,715,851	($138,003)	-6.7%	--	0.95x
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	$1,738,245	$5,761,755	23%	--	--	$1,703,331	$1,703,331	($34,914)	-10.1%	--	0.98x
Genstar Capital Partners IX Opportunities Program	2019	2/21/2019	$2,500,000	$747,352	$1,752,648	30%	--	--	$746,588	$746,588	($764)	-0.4%	--	1x
GGV Capital VII	2019	8/15/2018	$10,160,000	$3,454,400	$6,705,600	34%	--	--	$3,283,464	$3,283,464	($170,936)	-11.8%	--	0.95x
GGV Capital VII Plus	2019	8/15/2018	$2,540,000	$825,500	$1,714,500	33%	--	--	$826,921	$826,921	$1,421	0.4%	--	1x
GGV Discovery II	2019	8/15/2018	$2,100,000	$504,000	$1,596,000	24%	--	--	$499,251	$499,251	($4,749)	-1.9%	--	0.99x
Great Hill Equity Partners VII	2019	6/28/2019	$8,900,000	--	$8,900,000	--	--	--	--	--	--	--	--	--
Green Equity Investors VIII	2019	10/18/2019	$15,000,000	--	$15,000,000	--	--	--	--	--	--	--	--	--
GTCR Fund XII	2017	9/29/2017	$30,000,000	$9,303,000	$20,792,792	31%	--	$540,067	$8,684,443	$9,224,510	($78,490)	-0.9%	0.06x	0.99x
HarbourVest - Dover Street VIII	2013	5/30/2013	$67,500,000	$61,509,954	$6,075,000	91%	$84,954	$71,696,542	$26,282,640	$97,979,182	$36,384,274	20.7%	1.17x	1.59x
HarbourVest - Dover Street IX	2016	12/16/2016	$60,000,000	$43,200,000	$16,800,000	72%	--	$14,071,299	$45,681,656	$59,752,955	$16,552,955	30.6%	0.33x	1.38x
HarbourVest - Dover Street X	2019	5/31/2019	$40,000,000	--	$40,000,000	--	--	--	$405,658	$405,658	--	--	--	--
HarbourVest - PRTNS CO INVEST IV L.P.	2017	6/2/2017	$30,000,000	$24,464,388	$5,732,352	82%	--	$4,951,347	$26,994,457	$31,945,804	$7,481,416	14.5%	0.2x	1.31x
HarbourVest - PRTNS CO INVEST V L.P.	2019	7/31/2018	$35,000,000	$5,250,000	$29,750,000	--	--	--	$4,699,120	$4,699,120	($550,880)	-24.4%	--	0.9x
Hellman & Friedman Capital Partners IX	2019	9/28/2018	$19,800,000	--	$19,800,000	--	--	--	($126,154)	($126,154)	--	--	--	--
Insight Venture Partners X	2017	10/13/2017	$25,000,000	$20,625,000	$4,375,000	83%	--	$8,561	$23,708,801	$23,717,362	$3,092,362	15.5%	0x	1.15x
M/C Partners VIII	2019	4/2/2018	$10,000,000	$955,984	$9,044,016	10%	--	--	$736,738	$736,738	($219,246)	-51.1%	--	0.77x
Oak HC/FT Partners III	2019	7/31/2019	$15,000,000	$953,043	$14,046,957	6%	--	--	$859,875	$859,875	($93,168)	-61.8%	--	0.9x
Pantheon Global Secondary Fund IV	2010	8/20/2010	$15,000,000	$9,960,000	$5,040,000	66%	--	$13,140,543	$2,596,999	$15,737,542	$5,777,542	13.4%	1.32x	1.58x
Pantheon Global Secondary Fund V	2015	2/26/2015	$50,000,000	$35,116,509	$14,883,491	70%	($162,514)	$11,637,534	$35,309,367	$46,946,901	$11,992,906	13.2%	0.33x	1.34x
The Resolute Fund IV	2018	5/2/2018	$20,000,000	$8,242,991	$12,874,227	41%	--	$1,974,204	$7,801,154	$9,775,358	$1,532,367	49.2%	0.24x	1.19x
Riverside Micro-Cap Fund V	2018	8/21/2018	$10,000,000	$2,020,662	$7,979,338	20%	--	--	$1,780,559	$1,780,559	($240,103)	-23.8%	--	0.88x
TA XIII	2019	5/2/2019	$10,000,000	$1,500,000	$8,500,000	15%	--	--	$1,370,078	$1,370,078	($129,922)	-89.0%	--	0.91x
Total VCERA Private Equity Program	***--***	***5/21/2010***	***$982,878,320***	***$495,806,406***	***$489,660,531***	***50%***	***$73,843***	***$208,598,698***	***$471,532,423***	***$680,131,121***	***$184,023,695***	***14.4%***	***0.42x***	***1.37x***

1. Includes recycled/recallable distributions received to date.

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

2. 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 12/31/2019 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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total US Fixed Income	**1,046,983,442**	**17.0**	**14.0**	**0.7**	**21**	**2.5**	**26**	**8.5**	**45**	**4.2**	**37**	**3.6**	**23**	**4.8**	**16**	**5.8**	**Feb-94**
BBgBarc US Aggregate TR				*0.2*	*70*	*2.5*	*32*	*8.7*	*33*	*4.0*	*45*	*3.0*	*49*	*3.7*	*53*	*5.3*	*Feb-94*
Over/Under				0.5		0.0		-0.2		0.2		0.6		1.1		0.5	
InvMetrics Public DB US Fix Inc Net Median				*0.3*		*2.2*		*8.1*		*3.9*		*3.0*		*3.9*		*5.7*	*Feb-94*
BlackRock U.S. Debt Fund	244,960,616	4.0		0.2	84	2.4	44	8.7	45	4.1	48	3.1	53	3.8	55	5.1	Nov-95
BBgBarc US Aggregate TR				*0.2*	*84*	*2.5*	*44*	*8.7*	*45*	*4.0*	*49*	*3.0*	*54*	*3.7*	*56*	*5.1*	*Nov-95*
Over/Under				0.0		-0.1		0.0		0.1		0.1		0.1		0.0	
eV All US Fixed Inc Net Median				*0.6*		*2.2*		*8.1*		*4.0*		*3.2*		*4.0*		*4.9*	*Nov-95*
Western	329,243,179	5.4		0.5	55	3.1	27	10.6	28	5.2	27	4.1	32	5.5	28	6.1	Dec-96
BBgBarc US Aggregate TR				*0.2*	*84*	*2.5*	*44*	*8.7*	*45*	*4.0*	*49*	*3.0*	*54*	*3.7*	*56*	*5.1*	*Dec-96*
Over/Under				0.3		0.6		1.9		1.2		1.1		1.8		1.0	
eV All US Fixed Inc Net Median				*0.6*		*2.2*		*8.1*		*4.0*		*3.2*		*4.0*		*5.0*	*Dec-96*
Reams	333,072,839	5.4		0.9	31	2.2	51	6.6	64	3.2	68	3.2	50	4.3	45	5.2	Sep-01
Reams Custom Index				*0.5*	*62*	*1.0*	*94*	*2.4*	*98*	*2.0*	*92*	*1.4*	*93*	*2.5*	*79*	*3.7*	*Sep-01*
Over/Under				0.4		1.2		4.2		1.2		1.8		1.8		1.5	
BBgBarc US Aggregate TR				*0.2*	*84*	*2.5*	*44*	*8.7*	*45*	*4.0*	*49*	*3.0*	*54*	*3.7*	*56*	*4.4*	*Sep-01*
3-Month LIBOR + 3%				*1.2*	*23*	*2.5*	*40*	*5.4*	*75*	*5.1*	*29*	*4.5*	*28*	*3.9*	*53*	*4.8*	*Sep-01*
eV All US Fixed Inc Net Median				*0.6*		*2.2*		*8.1*		*4.0*		*3.2*		*4.0*		*4.4*	*Sep-01*
Loomis Strategic Alpha	48,739,417	0.8		0.8	35	0.7	99	4.3	83	2.7	77	2.6	66	--	--	2.6	Jul-13
BBgBarc US Aggregate TR				*0.2*	*84*	*2.5*	*44*	*8.7*	*45*	*4.0*	*49*	*3.0*	*54*	*3.7*	*56*	*3.3*	*Jul-13*
Over/Under				0.6		-1.8		-4.4		-1.3		-0.4				-0.7	
3-Month LIBOR + 3%				*1.2*	*23*	*2.5*	*40*	*5.4*	*75*	*5.1*	*29*	*4.5*	*28*	*3.9*	*53*	*4.2*	*Jul-13*
eV All US Fixed Inc Net Median				*0.6*		*2.2*		*8.1*		*4.0*		*3.2*		*4.0*		*3.4*	*Jul-13*
Loomis Sayles Multi Strategy	90,967,391	1.5		1.5	19	2.4	44	9.4	36	5.6	24	4.5	28	6.4	20	6.3	Jul-05
Loomis Custom Index				*1.0*	*28*	*2.8*	*31*	*10.2*	*30*	*4.6*	*34*	*3.9*	*35*	*4.8*	*37*	*5.1*	*Jul-05*
Over/Under				0.5		-0.4		-0.8		1.0		0.6		1.6		1.2	
BBgBarc US Govt/Credit TR				*0.0*	*91*	*2.6*	*37*	*9.7*	*33*	*4.3*	*41*	*3.2*	*49*	*4.0*	*51*	*4.3*	*Jul-05*
eV All US Fixed Inc Net Median				*0.6*		*2.2*		*8.1*		*4.0*		*3.2*		*4.0*		*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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Private Debt	**74,054,236**	**1.2**	**3.0**	**2.1**	**--**	**3.9**	**--**	**8.4**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**6.5**	**Jan-18**
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*2.5*	--	*4.2*	--	*13.3*	--	--	--	--	--	--	--	*7.0*	*Jan-18*
Over/Under				-0.4		-0.3		-4.9								-0.5	
CVI Credit Value Fund	23,849,221	0.4		1.9	--	3.3	--	7.1	--	--	--	--	--	--	--	5.8	Jan-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*2.5*	--	*4.2*	--	*13.3*	--	--	--	--	--	--	--	*7.0*	*Jan-18*
Over/Under				-0.6		-0.9		-6.2								-1.2	
Monroe Capital Private Credit Fund III	17,723,940	0.3		2.8	--	5.0	--	11.2	--	--	--	--	--	--	--	10.3	Dec-18
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*2.5*	--	*4.2*	--	*13.3*	--	--	--	--	--	--	--	*10.2*	*Dec-18*
Over/Under				0.3		0.8		-2.1								0.1	
Bluebay Direct Lending Fund III	8,912,679	0.1		4.1	--	6.1	--	--	--	--	--	--	--	--	--	7.9	Apr-19
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps				*2.5*	--	*4.2*	--	*13.3*	--	--	--	--	--	--	--	*6.9*	*Apr-19*
Over/Under				1.6		1.9										1.0	
Pimco Private Income Fund	8,250,000	0.1		0.0	--	--	--	--	--	--	--	--	--	--	--	0.0	Nov-19
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*7.3*	*Nov-19*
Over/Under				-9.9												-7.3	
Bridge Debt Strategies III Limited Partner	15,318,397	0.2		--	--	--	--	--	--	--	--	--	--	--	--	--	Dec-19
Russell 3000 + 3%				*9.9*	--	*12.0*	--	*34.9*	--	*18.0*	--	*14.6*	--	*16.8*	--	*3.1*	*Dec-19*
Over/Under																	
Treasuries	**105,449,348**	**1.7**	**2.0**	**-2.3**	**--**	**1.9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**5.4**	**Apr-19**
Reams 10-Year Treasuries	105,449,348	1.7		-2.3	--	1.9	--	--	--	--	--	--	--	--	--	5.4	Apr-19
BBgBarc US Treasury 7-10 Yr TR				*-1.2*	--	*1.5*	--	*8.5*	--	*3.9*	--	*2.9*	--	*4.5*	--	*5.5*	*Apr-19*
Over/Under				-1.1		0.4										-0.1	

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

VENTURA COUNTY EMPLOYEES’ RETIREMENT ASSOCIATION

PRIVATE DEBT LIMITED PARTNERSHIP PERFORMANCE

												Since Inception	
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**	**IRR**	**Distributions to Paid In Multiple (DPI)**	**Total Value to Paid In Multiple (TVPI)**
BlueBay Direct Lending III	2019	2/12/2019	$25,000,000	$8,381,683	$16,618,317	34%	$0	$8,912,679	$8,912,679	$530,996	8.9%	0x	1.06x
Bridge Debt Strategies III	2019	12/20/2019	$25,000,000	$15,318,397	$9,681,603	61%	$0	$15,318,397	$15,318,397	$0	0.0%	0x	1x
CVI Credit Value Fund IV	2017	12/31/2017	$30,000,000	$22,500,000	$7,500,000	75%	$6,147	$23,849,221	$23,855,368	$1,355,368	6.5%	0x	1.06x
Monroe Capital Private Credit Fund III	2018	9/5/2018	$25,000,000	$17,652,142	$7,347,858	71%	$1,273,921	$17,723,940	$18,997,861	$1,345,719	11.2%	0.07x	1.08x
PIMCO Private Income Fund	2019	3/25/2019	$55,000,000	$8,250,000	$46,750,000	15%	$0	$8,250,000	$8,250,000	$0	0.0%	0x	1x
Total VCERA Private Debt Program	***--***		***$160,000,000***	***$72,102,222***	***$87,897,778***	***45%***	***$1,280,068***	***$74,054,236***	***$75,334,304***	***$3,232,083***	***8.3%***	***0.02x***	***1.04x***

1. Includes recycled/recallable distributions received to date.

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

Performance shown is based on 12/31/2019 cash-adjusted market values.

Ventura County Employees’ Retirement Association

TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value ($)	% of Portfolio	Policy %	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Real Estate	**434,522,276**	**7.1**	**8.0**	**0.4**	**94**	**1.4**	**86**	**0.3**	**94**	**4.4**	**96**	**6.5**	**94**	**9.3**	**79**	**7.5**	**Mar-94**
NCREIF ODCE Net				*1.3*	*46*	*2.4*	*64*	*4.4*	*73*	*6.1*	*73*	*8.0*	*61*	*10.4*	*72*	*7.9*	*Mar-94*
Over/Under				-0.9		-1.0		-4.1		-1.7		-1.5		-1.1		-0.4	
InvMetrics Public DB Real Estate Pub+Priv Net Median				*1.3*		*2.9*		*5.9*		*7.2*		*8.2*		*11.1*		*8.4*	*Mar-94*
Prudential Real Estate	165,564,252	2.7		1.2	--	2.7	--	5.9	--	7.0	--	8.7	--	11.3	--	6.3	Jun-04
NCREIF ODCE Net				*1.3*	--	*2.4*	--	*4.4*	--	*6.1*	--	*8.0*	--	*10.4*	--	*6.9*	*Jun-04*
Over/Under				-0.1		0.3		1.5		0.9		0.7		0.9		-0.6	
NCREIF ODCE				*1.5*	--	*2.8*	--	*5.3*	--	*7.1*	--	*9.0*	--	*11.4*	--	*7.9*	*Jun-04*
UBS Real Estate	268,958,024	4.4		-0.1	--	0.6	--	-2.8	--	2.8	--	5.3	--	8.3	--	6.7	Mar-03
NCREIF ODCE Net				*1.3*	--	*2.4*	--	*4.4*	--	*6.1*	--	*8.0*	--	*10.4*	--	*7.1*	*Mar-03*
Over/Under				-1.4		-1.8		-7.2		-3.3		-2.7		-2.1		-0.4	
NCREIF ODCE				*1.5*	--	*2.8*	--	*5.3*	--	*7.1*	--	*9.0*	--	*11.4*	--	*8.1*	*Mar-03*

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	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Real Assets	**461,440,014**	**7.5**	**7.0**	**1.5**	**--**	**1.0**	**--**	**14.4**	**--**	**4.4**	**--**	**1.8**	**--**	**--**	**--**	**4.5**	**Apr-13**
Real Assets Index				*0.6*	--	*1.3*	--	*5.3*	--	*5.8*	--	*5.7*	--	--	--	*6.0*	*Apr-13*
Over/Under				0.9		-0.3		9.1		-1.4		-3.9				-1.5	
Bridgewater All Weather Fund	348,681,911	5.7		2.6	--	4.2	--	16.7	--	7.4	--	4.9	--	--	--	5.6	Aug-13
CPI + 5% (Unadjusted)				*1.3*	--	*2.8*	--	*7.4*	--	*7.2*	--	*6.9*	--	--	--	*6.6*	*Aug-13*
Over/Under				1.3		1.4		9.3		0.2		-2.0				-1.0	
Tortoise Energy Infrastructure	112,758,102	1.8		-1.7	--	-7.9	--	8.0	--	-3.3	--	-5.3	--	--	--	-0.1	Apr-13
Tortoise MLP Index				*-2.9*	--	*-7.0*	--	*10.9*	--	*-3.3*	--	*-6.3*	--	--	--	*-2.7*	*Apr-13*
Over/Under				1.2		-0.9		-2.9		0.0		1.0				2.6	
Overlay	**78,797,881**	**1.3**	**0.0**														
Parametric	40,677,675	0.7															
Abbott Capital Cash	38,120,207	0.6															

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
BlackRock Russell 1000 Index	-	-	-	-	
Western U.S. Index Plus	-	-	-	-	
BlackRock Russell 2500 Index	-	-	-	-	
BlackRock MSCI ACWI ex-U.S. Index	-	-	-	-	
Sprucegrove	-	-	-	-	
Hexavest	Bottom Quartile	-	-	Watch (Board Driven)	On Watch for Performance Issues
Walter Scott	Bottom Quartile	-	-	-	
BlackRock MSCI ACWI Index	-	-	-	-	
Adams Street	N/A	-	-	-	
HarbourVest	N/A	-	-	-	
Pantheon	N/A	-	-	-	
Drive	N/A	-	-	-	
Abbott Secondary Opps.	N/A	-	-	-	
Carval Credit Value	N/A	-	-	-	
PIMCO PIF	N/A	-	-	-	
Bridge Debt Strategies	N/A	-	-	-	
BlackRock U.S. Debt Fund	-	-	-	-	
Western	Top Quartile	-	-	-	
Reams	-	-	-	-	

DUE DILIGENCE MONITOR

	Performance (Recent Quarter)	Changes/ Announcements (Recent Quarter)	NEPC DD Committee Rec.	Plan Rec.	Comments
Loomis Sayles Strategic Alpha	-	-	-	-	
Loomis Sayles Multi-Sector Full Discretion	Top Quartile	-	-	-	
Reams 10-Year Treasuries	-	-	-	-	
Monroe	-	-	-	-	
BlueBay	-	-	-	-	
Prudential	N/A	-	-	-	
UBS	N/A	Yes	Watch	Watch	
Bridgewater	N/A	-	-	-	
Tortoise	N/A	-	Watch	-	Acquisition of Advisory Research Team
Parametric/Clifton	N/A	-	-	-	

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
UBS – Trumbull Property Fund	Yes	Watch

Manager Changes/Announcements

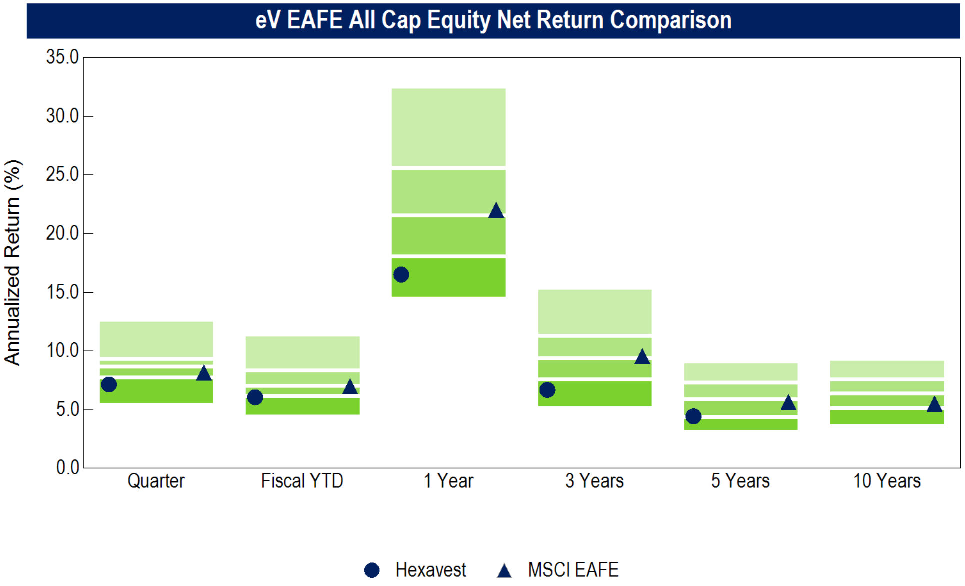
Below is a summary of manager changes, announcements and due diligence events since the issuance of our last quarterly report.

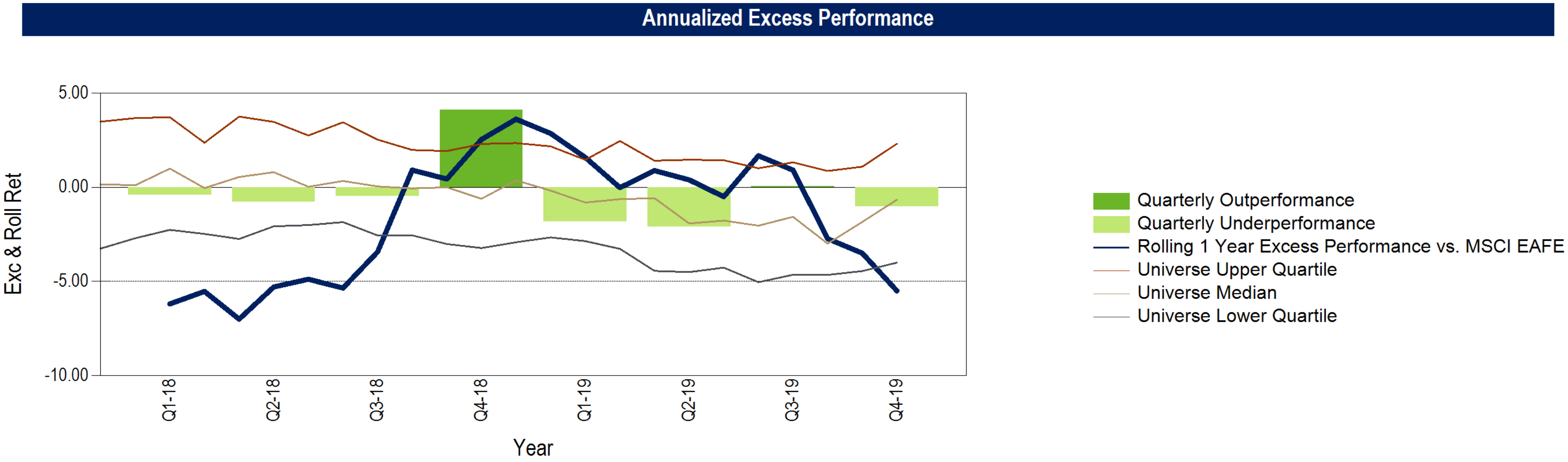
UBS Asset Management ("UBS," the "Manager," or the "Firm") notified investors of two recent senior leadership changes within the US Real Estate team. Effectively immediately, Matt Johnson will replace Matt Lynch as the new Head of Real Estate in the US and Rod Chu will replace Jack Connelly as Head of Transactions for real estate in the US. Concurrent with this announcement, UBS announced that Mr. Lynch and Mr. Connelly have decided to leave the Firm to pursue other opportunities. UBS does not anticipate any major day-to-day changes as a result of these changes. NEPC is hopeful that these changes will be a positive development for UBS and for the Trumbull Property Fund, but it is too early to determine the long-term impact at this time. In the near-term, there is additional uncertainty as Mr. Johnson or Mr. Chu may make further changes to the team or processes. NEPC is therefore recommending a WATCH status for the Trumbull Property Fund and will continue to closely monitor the Fund and Firm.

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.

HEXAVEST

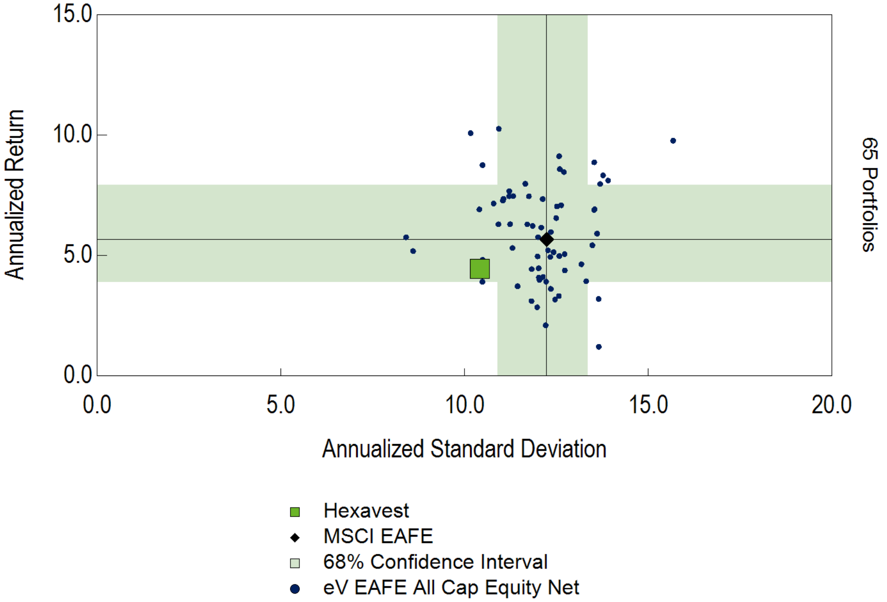

eV EAFE All Cap Equity Net Return Comparison
Annualized Return (%)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Quarter
Fiscal YTD
1 Year
3 Years
5 Years
10 Years
Hexavest
MSCI EAFE


Annualized Excess Performance
Exc & Roll Ret
5.00
0.00
-5.00
-10.00
Q1-18
Q2-18
Q3-18
Q4-18
Q1-19
Q2-19
Q3-19
Q4-19
Year
Quarterly Outperformance
Quarterly Underperformance
Rolling 1 Year Excess Performance vs. MSCI EAFE
Universe Upper Quartile
Universe Median
Universe Lower Quartile

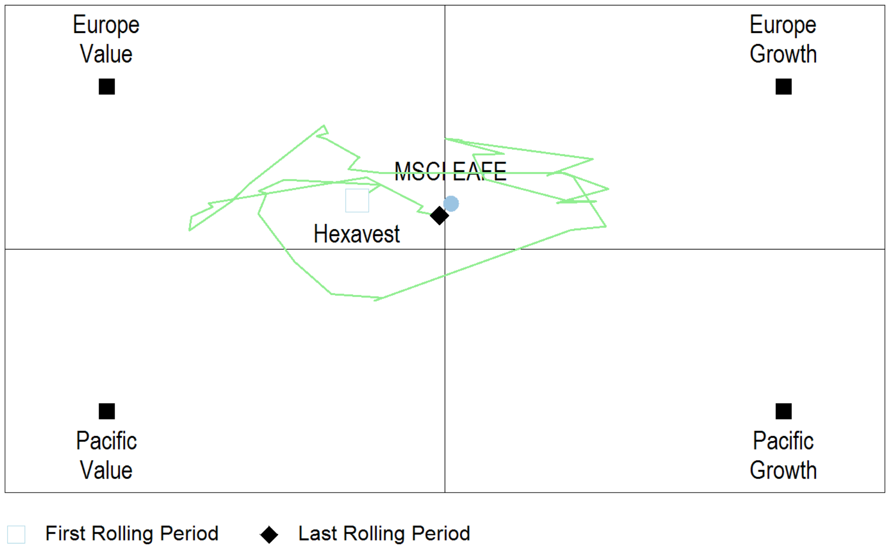
Ventura County Employees’ Retirement Association

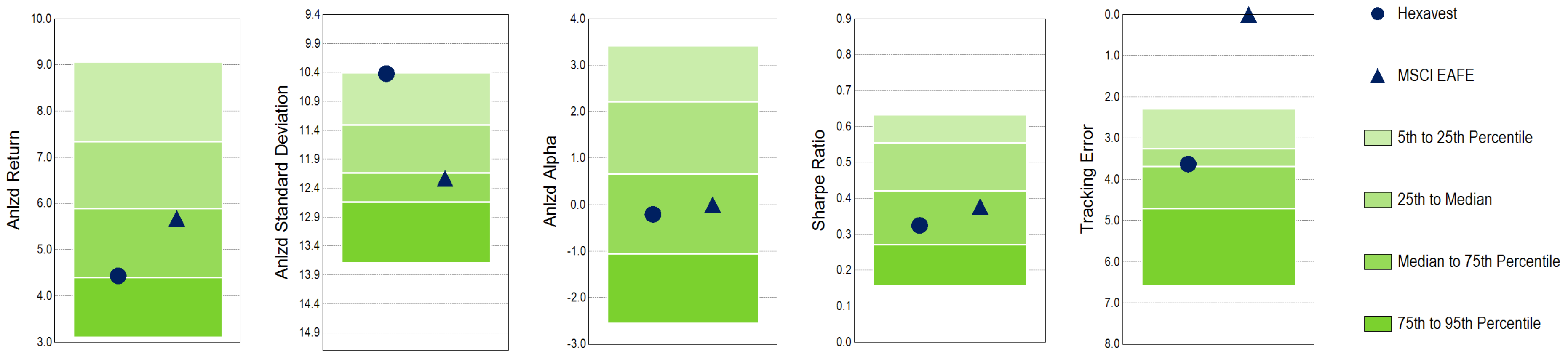
HEXAVEST

5 Year Risk Return



5 Year Style Map





Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Total Fund	**18.7**	**-3.6**	**16.0**	**8.6**	**-0.9**	**6.3**	**18.1**	**14.0**	**0.3**	**15.1**	**24.2**
Policy Index	*20.7*	*-3.6*	*16.3*	*8.4*	*0.8*	*6.8*	*17.2*	*12.9*	*0.5*	*13.2*	*21.0*
Over/Under	-2.0	0.0	-0.3	0.2	-1.7	-0.5	0.9	1.1	-0.2	1.9	3.2
60% MSCI ACWI (Net) / 40% FTSE WGBI	*18.2*	*-5.8*	*17.1*	*5.5*	*-2.6*	*2.3*	*11.4*	*10.3*	*-1.8*	*10.0*	*21.3*
60% S&P 500 / 40% BBgBarc Aggregate	*22.2*	*-2.3*	*14.2*	*8.3*	*1.3*	*10.6*	*17.6*	*11.3*	*4.7*	*12.1*	*18.4*
Total Fund ex Parametric	**18.4**	**-3.7**	**15.9**	**8.6**	**-0.9**	**6.3**	**17.8**	**13.7**	**0.6**	**14.5**	**23.3**
Total Fund ex Private Equity	**19.6**	**-4.8**	**15.9**	**8.6**	**-1.4**	**6.1**	**16.2**	**13.3**	**--**	**--**	**--**
Policy Index	*20.7*	*-3.6*	*16.3*	*8.4*	*0.8*	*6.8*	*17.2*	*12.9*	*0.5*	*13.2*	*21.0*
Over/Under	-1.1	-1.2	-0.4	0.2	-2.2	-0.7	-1.0	0.4			
Total US Equity	**31.6**	**-5.0**	**21.4**	**13.0**	**0.5**	**12.5**	**34.0**	**16.9**	**0.9**	**18.5**	**29.2**
Russell 3000	*31.0*	*-5.2*	*21.1*	*12.7*	*0.4*	*12.4*	*33.5*	*16.4*	*1.1*	*17.5*	*28.6*
Over/Under	0.6	0.2	0.3	0.3	0.1	0.1	0.5	0.5	-0.2	1.0	0.6
Western U.S. Index Plus	33.5	-5.3	22.7	13.8	1.1	14.2	32.9	20.7	1.0	24.7	42.6
S&P 500	*31.5*	*-4.4*	*21.8*	*12.0*	*1.4*	*13.7*	*32.4*	*16.0*	*2.1*	*15.1*	*26.5*
Over/Under	2.0	-0.9	0.9	1.8	-0.3	0.5	0.5	4.7	-1.1	9.6	16.1
Blackrock Russell 1000 Index	31.4	-4.7	--	--	--	--	--	--	--	--	--
Russell 1000	*31.4*	*-4.8*	*21.7*	*12.1*	*0.9*	*13.2*	*33.1*	*16.4*	*1.5*	*16.1*	*28.4*
Over/Under	0.0	0.1									
Blackrock Russell 2500 Index	27.8	-9.9	--	--	--	--	--	--	--	--	--
Russell 2500	*27.8*	*-10.0*	*16.8*	*17.6*	*-2.9*	*7.1*	*36.8*	*17.9*	*-2.5*	*26.7*	*34.4*
Over/Under	0.0	0.1									

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Total Non-US Equity	**21.0**	**-13.0**	**26.5**	**6.6**	**-4.8**	**-3.6**	**16.3**	**17.9**	**-13.6**	**13.5**	**37.4**
MSCI ACWI ex USA	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*-3.9*	*15.3*	*16.8*	*-13.7*	*11.2*	*41.4*
Over/Under	-0.5	1.2	-0.7	2.1	0.9	0.3	1.0	1.1	0.1	2.3	-4.0
MSCI EAFE	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*	*-4.9*	*22.8*	*17.3*	*-12.1*	*7.8*	*31.8*
MSCI ACWI ex USA NR LCL	*22.2*	*-10.6*	*18.2*	*7.0*	*1.9*	*6.0*	*20.1*	*16.3*	*-12.2*	*7.6*	*31.7*
MSCI EAFE NR LCL	*21.7*	*-11.0*	*15.2*	*5.3*	*5.3*	*5.9*	*26.9*	*17.3*	*-12.2*	*4.8*	*24.7*
BlackRock ACWI ex-U.S. Index	21.9	-14.6	28.1	4.7	-4.5	-3.8	16.0	17.2	-14.1	12.8	43.1
MSCI ACWI ex USA IMI	*21.6*	*-14.8*	*27.8*	*4.4*	*-4.6*	*-3.9*	*15.8*	*17.0*	*-14.3*	*12.7*	*43.6*
Over/Under	0.3	0.2	0.3	0.3	0.1	0.1	0.2	0.2	0.2	0.1	-0.5
MSCI ACWI ex USA NR LCL	*22.2*	*-10.6*	*18.2*	*7.0*	*1.9*	*6.0*	*20.1*	*16.3*	*-12.2*	*7.6*	*31.7*
Sprucegrove	17.3	-13.8	27.5	11.9	-9.1	-3.2	17.1	17.2	-10.7	18.8	36.2
MSCI ACWI ex USA	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*-3.9*	*15.3*	*16.8*	*-13.7*	*11.2*	*41.4*
Over/Under	-4.2	0.4	0.3	7.4	-3.4	0.7	1.8	0.4	3.0	7.6	-5.2
MSCI EAFE	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*	*-4.9*	*22.8*	*17.3*	*-12.1*	*7.8*	*31.8*
MSCI ACWI ex USA NR LCL	*22.2*	*-10.6*	*18.2*	*7.0*	*1.9*	*6.0*	*20.1*	*16.3*	*-12.2*	*7.6*	*31.7*
MSCI EAFE NR LCL	*21.7*	*-11.0*	*15.2*	*5.3*	*5.3*	*5.9*	*26.9*	*17.3*	*-12.2*	*4.8*	*24.7*
Hexavest	16.5	-11.3	17.4	3.8	-1.4	-4.3	20.2	13.7	-9.6	--	--
MSCI EAFE	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*	*-4.9*	*22.8*	*17.3*	*-12.1*	*7.8*	*31.8*
Over/Under	-5.5	2.5	-7.6	2.8	-0.6	0.6	-2.6	-3.6	2.5		
MSCI EAFE NR LCL	*21.7*	*-11.0*	*15.2*	*5.3*	*5.3*	*5.9*	*26.9*	*17.3*	*-12.2*	*4.8*	*24.7*
Walter Scott	27.5	-7.1	26.6	5.1	-0.4	-3.5	11.8	20.4	-9.3	--	--
MSCI ACWI ex USA	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*-3.9*	*15.3*	*16.8*	*-13.7*	*11.2*	*41.4*
Over/Under	6.0	7.1	-0.6	0.6	5.3	0.4	-3.5	3.6	4.4		
MSCI ACWI ex USA NR LCL	*22.2*	*-10.6*	*18.2*	*7.0*	*1.9*	*6.0*	*20.1*	*16.3*	*-12.2*	*7.6*	*31.7*
MSCI EAFE	*22.0*	*-13.8*	*25.0*	*1.0*	*-0.8*	*-4.9*	*22.8*	*17.3*	*-12.1*	*7.8*	*31.8*
Total Global Equity	**27.1**	**-9.0**	**24.5**	**9.0**	**-3.8**	**1.9**	**22.0**	**14.4**	**-3.9**	**11.4**	**17.8**
MSCI ACWI	*26.6*	*-9.4*	*24.0*	*7.9*	*-2.4*	*4.2*	*22.8*	*16.1*	*-7.3*	*12.7*	*34.6*
Over/Under	0.5	0.4	0.5	1.1	-1.4	-2.3	-0.8	-1.7	3.4	-1.3	-16.8
BlackRock MSCI ACWI Equity Index	27.1	-9.0	24.5	8.4	-2.0	4.6	23.2	--	--	--	--
MSCI ACWI	*26.6*	*-9.4*	*24.0*	*7.9*	*-2.4*	*4.2*	*22.8*	*16.1*	*-7.3*	*12.7*	*34.6*
Over/Under	0.5	0.4	0.5	0.5	0.4	0.4	0.4				

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Total Private Equity	**8.3**	**18.7**	**16.9**	**7.6**	**14.7**	**19.0**	**17.9**	**10.3**	**--**	**--**	**--**
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-26.6	21.1	-7.8	-8.5	11.2	3.1	-19.6	-9.6			
Cambridge Associates Global All PE (Qtr Lag)	*7.9*	*16.4*	*15.9*	*8.5*	*7.0*	*16.3*	*15.9*	*13.0*	*12.6*	*17.1*	*-9.3*
Adams Street Global Fund Series	4.1	19.6	13.4	7.1	10.3	19.6	15.7	10.8	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-30.8	22.0	-11.3	-9.0	6.8	3.7	-21.8	-9.1			
Harbourvest	12.2	22.7	23.2	6.7	28.5	18.5	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-22.7	25.1	-1.5	-9.4	25.0	2.6					
Pantheon Global Secondary Funds	-0.4	17.3	24.1	15.5	6.4	16.7	14.9	0.9	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-35.3	19.7	-0.6	-0.6	2.9	0.8	-22.6	-19.0			
Drive Capital Fund II	53.0	-2.5	-33.7	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	18.1	-0.1	-58.4								
Abbott Secondary Opportunities	8.9	26.0	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-26.0	28.4									
Clearlake Capital Partners V	50.2	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	15.3										
Battery Ventures XII	5.7	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-29.2										
Insight Venture Partners X	21.4	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-13.5										
GTCR Fund XII	-18.8	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-53.7										
Buenaventure One, LLC	6.7	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-28.2										
ECI 11	34.2	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under	-0.7										

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
The Resolute Fund IV L.P	81.6	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under	46.7										
GGV Capital VII L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
GGV Discovery II, L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Drive Capital Overdrive Fund I	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Riverside Micro Cap Fund V, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
GGV Capital VII Plus, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Astorg VII L.P.	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
M/C Partners Fund VIII LP. Limited Partnership	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Genstar Capital Partners IX	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Genstar IX Opportunities Fund I	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
ABRY Partners IX, LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Advent International GPE IX LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Drive Capital Fund III LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under											
Oak HC/FT Partners III LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under											
TA XIII A LP	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*15.9*	*37.5*	*19.9*	*4.1*	*20.4*	*32.1*
Over/Under											

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Total US Fixed Income	**8.5**	**0.0**	**4.4**	**4.9**	**0.3**	**3.0**	**-0.1**	**9.6**	**7.3**	**10.6**	**25.6**
BBgBarc US Aggregate TR	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Over/Under	-0.2	0.0	0.9	2.3	-0.2	-3.0	1.9	5.4	-0.5	4.1	19.7
BlackRock U.S. Debt Fund	8.7	0.0	3.6	2.7	0.6	6.2	-2.0	4.3	7.9	6.7	6.0
BBgBarc US Aggregate TR	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Over/Under	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1
Western	10.6	-0.6	6.0	4.1	0.9	7.4	-1.2	9.7	7.3	11.3	18.9
BBgBarc US Aggregate TR	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Over/Under	1.9	-0.6	2.5	1.5	0.4	1.4	0.8	5.5	-0.5	4.8	13.0
Reams	6.6	0.7	2.5	6.0	0.3	-3.6	2.5	10.0	8.4	10.0	33.6
Reams Custom Index	2.4	2.4	1.3	0.7	0.3	0.2	-0.5	4.2	7.8	6.5	5.9
Over/Under	4.2	-1.7	1.2	5.3	0.0	-3.8	3.0	5.8	0.6	3.5	27.7
BBgBarc US Aggregate TR	*8.7*	*0.0*	*3.5*	*2.6*	*0.5*	*6.0*	*-2.0*	*4.2*	*7.8*	*6.5*	*5.9*
3-Month LIBOR + 3%	*5.4*	*5.4*	*4.4*	*3.8*	*3.3*	*3.2*	*3.3*	*3.5*	*3.3*	*3.4*	*3.8*
Loomis Strategic Alpha	4.3	0.6	3.3	6.1	-1.0	2.4	--	--	--	--	--
BBgBarc US Aggregate TR	8.7	0.0	3.5	2.6	0.5	6.0	-2.0	4.2	7.8	6.5	5.9
Over/Under	-4.4	0.6	-0.2	3.5	-1.5	-3.6					
3-Month LIBOR + 3%	*5.4*	*5.4*	*4.4*	*3.8*	*3.3*	*3.2*	*3.3*	*3.5*	*3.3*	*3.4*	*3.8*
Loomis Sayles Multi Strategy	9.4	-0.8	8.4	8.2	-2.3	6.8	1.4	16.7	4.2	13.6	37.6
Loomis Custom Index	10.2	-0.6	4.5	7.0	-1.2	4.6	0.8	7.5	7.1	8.7	18.8
Over/Under	-0.8	-0.2	3.9	1.2	-1.1	2.2	0.6	9.2	-2.9	4.9	18.8
BBgBarc US Govt/Credit TR	*9.7*	*-0.4*	*4.0*	*3.0*	*0.1*	*6.0*	*-2.4*	*4.8*	*8.7*	*6.6*	*4.5*

Ventura County Employees’ Retirement Association

TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Private Debt	**8.4**	**4.7**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	13.3	1.1	--	--	--	--	--	--	--	--	--
Over/Under	-4.9	3.6									
CVI Credit Value Fund	7.1	4.6	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	13.3	1.1	--	--	--	--	--	--	--	--	--
Over/Under	-6.2	3.5									
Monroe Capital Private Credit Fund III	11.2	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	13.3	1.1	--	--	--	--	--	--	--	--	--
Over/Under	-2.1										
Bluebay Direct Lending Fund III	--	--	--	--	--	--	--	--	--	--	--
50% BofA ML US HY BB-B Constrained Index/ 50% Credit Suisse Leveraged Loan Index +150bps	13.3	1.1	--	--	--	--	--	--	--	--	--
Over/Under											
Pimco Private Income Fund	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Bridge Debt Strategies III Limited Partner	--	--	--	--	--	--	--	--	--	--	--
Russell 3000 + 3%	34.9	-2.4	24.7	16.1	3.5	15.9	37.5	19.9	4.1	20.4	32.1
Over/Under											
Treasuries	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
Reams 10-Year Treasuries	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Treasury 7-10 Yr TR	8.5	0.9	2.6	1.1	1.6	9.0	-6.0	4.2	15.6	9.4	-6.0
Over/Under											

Ventura County Employees’ Retirement Association

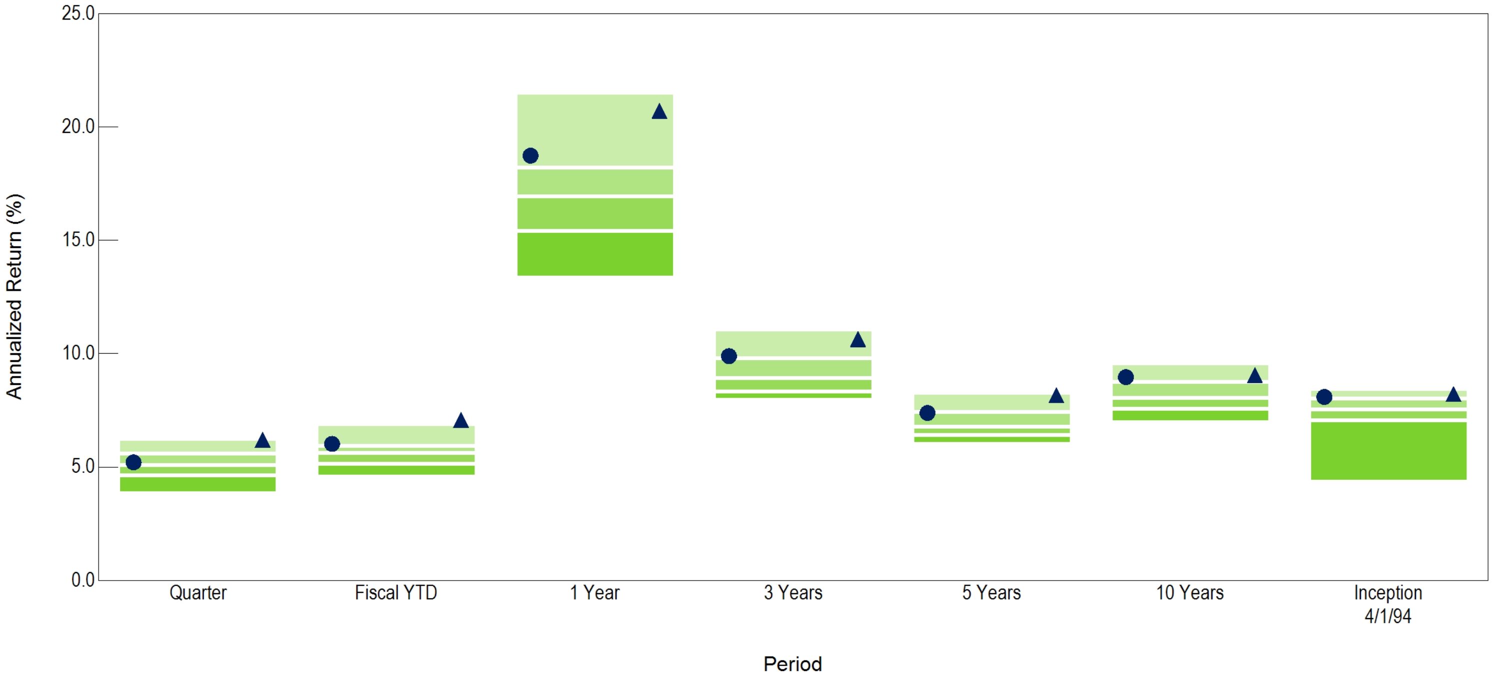
TOTAL FUND CALENDAR YEAR RETURN SUMMARY

	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)
Total Real Estate	**0.3**	**6.9**	**5.9**	**6.8**	**12.8**	**11.6**	**10.6**	**9.1**	**14.4**	**15.4**	**-31.2**
NCREIF ODCE Net	*4.4*	*7.4*	*6.7*	*7.8*	*14.0*	*11.5*	*12.9*	*9.8*	*15.0*	*15.3*	*-30.4*
Over/Under	-4.1	-0.5	-0.8	-1.0	-1.2	0.1	-2.3	-0.7	-0.6	0.1	-0.8
Prudential Real Estate	5.9	8.2	7.0	8.2	14.5	12.5	13.8	8.8	18.0	17.2	-34.8
NCREIF ODCE Net	*4.4*	*7.4*	*6.7*	*7.8*	*14.0*	*11.5*	*12.9*	*9.8*	*15.0*	*15.3*	*-30.4*
Over/Under	1.5	0.8	0.3	0.4	0.5	1.0	0.9	-1.0	3.0	1.9	-4.4
NCREIF ODCE	*5.3*	*8.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*	*10.9*	*16.0*	*16.4*	*-29.8*
UBS Real Estate	-2.8	6.2	5.4	6.2	11.9	10.6	9.3	9.0	12.1	15.9	-22.9
NCREIF ODCE Net	*4.4*	*7.4*	*6.7*	*7.8*	*14.0*	*11.5*	*12.9*	*9.8*	*15.0*	*15.3*	*-30.4*
Over/Under	-7.2	-1.2	-1.3	-1.6	-2.1	-0.9	-3.6	-0.8	-2.9	0.6	7.5
NCREIF ODCE	*5.3*	*8.3*	*7.6*	*8.8*	*15.0*	*12.5*	*13.9*	*10.9*	*16.0*	*16.4*	*-29.8*
Total Real Assets	**14.4**	**-7.3**	**7.2**	**11.7**	**-13.8**	**10.2**	**--**	**--**	**--**	**--**	**--**
Real Assets Index	*5.3*	*6.0*	*6.2*	*6.2*	*4.8*	*4.8*	*28.8*	*5.4*	*8.8*	--	--
Over/Under	9.1	-13.3	1.0	5.5	-18.6	5.4					
Bridgewater All Weather Fund	16.7	-5.0	11.9	10.0	-6.8	7.6	--	--	--	--	--
CPI + 5% (Unadjusted)	*7.4*	*7.0*	*7.2*	*7.2*	*5.8*	*5.8*	--	--	--	--	--
Over/Under	9.3	-12.0	4.7	2.8	-12.6	1.8					
Tortoise Energy Infrastructure	8.0	-13.3	-3.5	15.9	-27.1	15.7	--	--	--	--	--
Tortoise MLP Index	*10.9*	*-13.7*	*-5.7*	*21.0*	*-34.1*	*8.0*	*28.8*	*5.4*	*8.8*	--	--
Over/Under	-2.9	0.4	2.2	-5.1	7.0	7.7					
Overlay											
Parametric											
Abbott Capital Cash											

Ventura County Employees’ Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

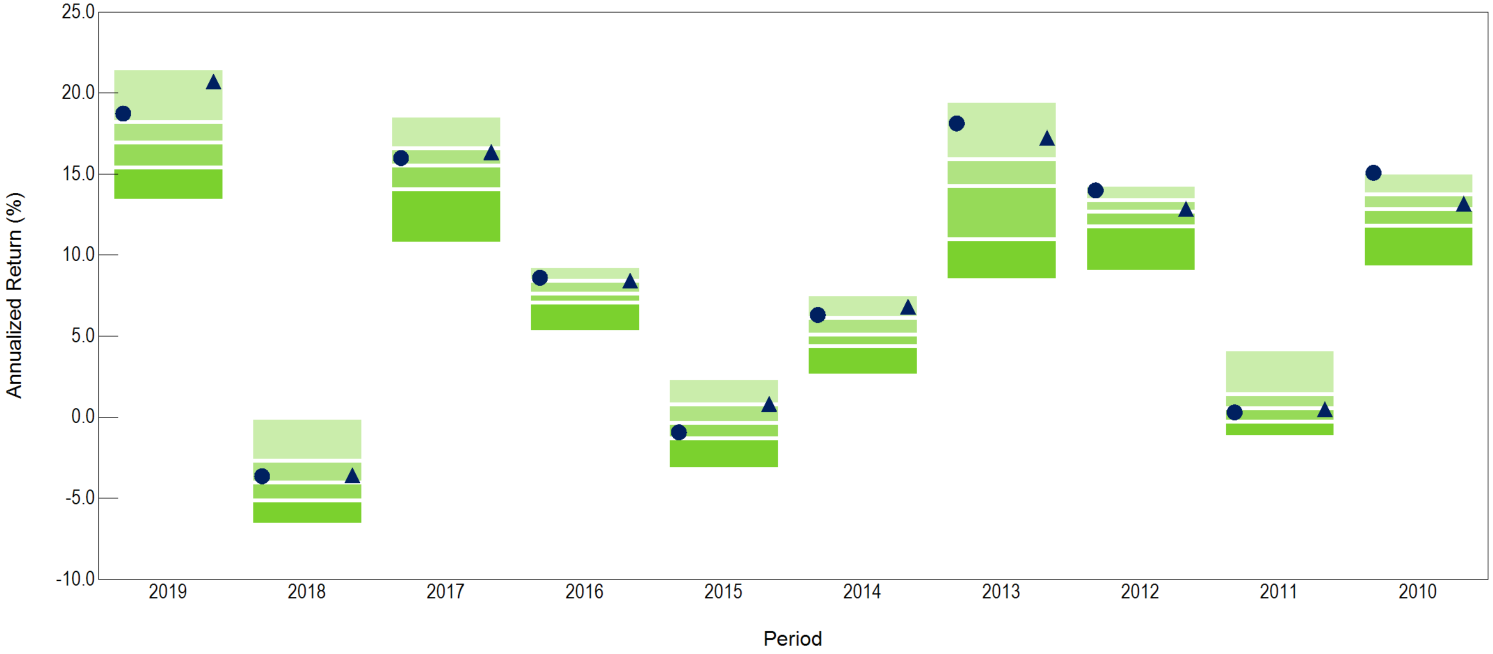
Total Fund vs. InvMetrics Public DB > $1B Net



	Return (Rank)													
5th Percentile	6.2		6.9		21.5		11.1		8.3		9.6		8.4	
25th Percentile	5.6		5.9		18.2		9.8		7.4		8.8		8.0	
Median	5.1		5.6		17.0		8.9		6.8		8.1		7.6	
75th Percentile	4.6		5.1		15.4		8.3		6.4		7.6		7.1	
95th Percentile	3.9		4.6		13.4		8.0		6.0		7.0		4.4	
# of Portfolios	69		69		69		69		67		59		32	
● **Total Fund**	5.2	(44)	6.0	(21)	18.7	(17)	9.9	(20)	7.4	(29)	9.0	(18)	8.1	(23)
▲ **Policy Index**	6.2	(7)	7.1	(2)	20.7	(9)	10.6	(8)	8.2	(7)	9.1	(13)	8.2	(16)

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

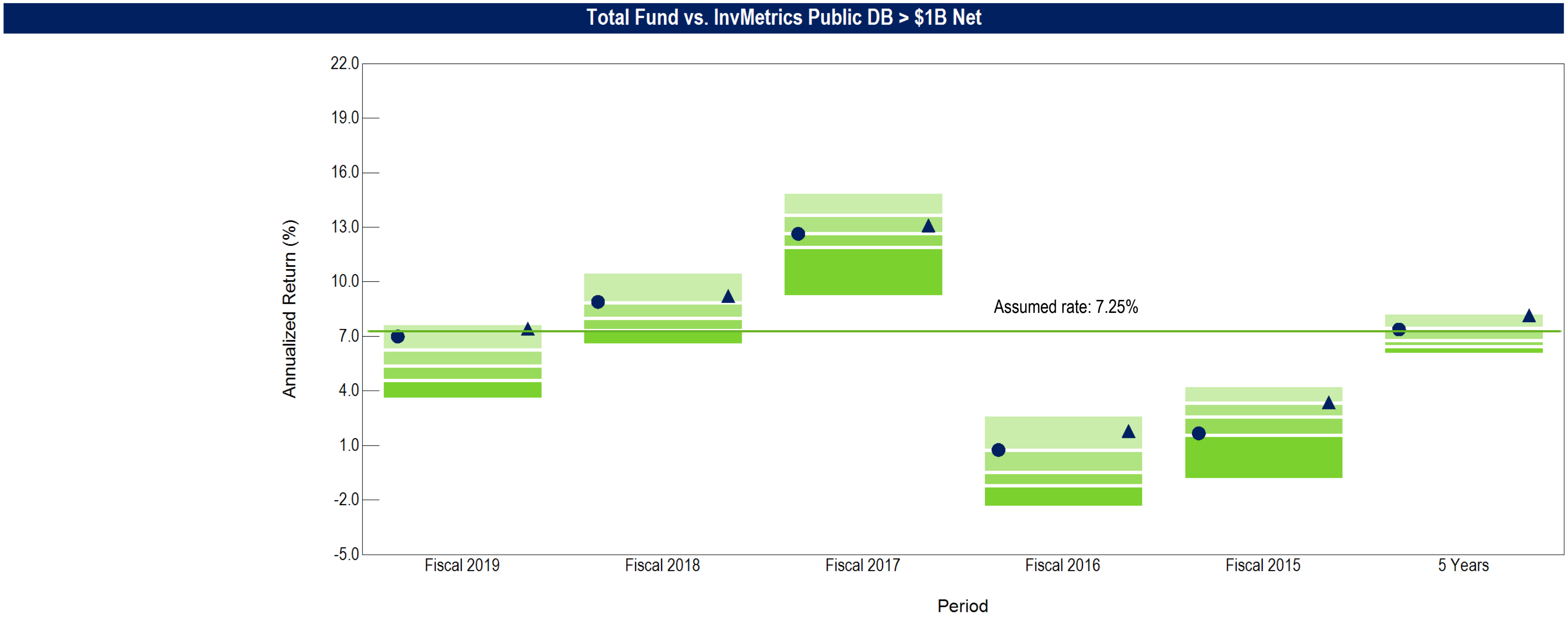
Total Fund vs. InvMetrics Public DB > $1B Net



	Return (Rank)																			
5th Percentile	21.5		-0.1		18.6		9.3		2.4		7.6		19.5		14.3		4.2		15.1	
25th Percentile	18.2		-2.7		16.6		8.4		0.8		6.1		16.0		13.4		1.5		13.8	
Median	17.0		-4.0		15.6		7.7		-0.4		5.1		14.3		12.7		0.6		12.8	
75th Percentile	15.4		-5.1		14.1		7.1		-1.3		4.4		11.0		11.8		-0.3		11.8	
95th Percentile	13.4		-6.6		10.7		5.3		-3.2		2.6		8.5		9.0		-1.2		9.3	
# of Portfolios	69		63		61		62		57		55		48		44		42		41	
● **Total Fund**	18.7	(17)	-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)
▲ **Policy Index**	20.7	(9)	-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)

Ventura County Employees’ Retirement Association

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE

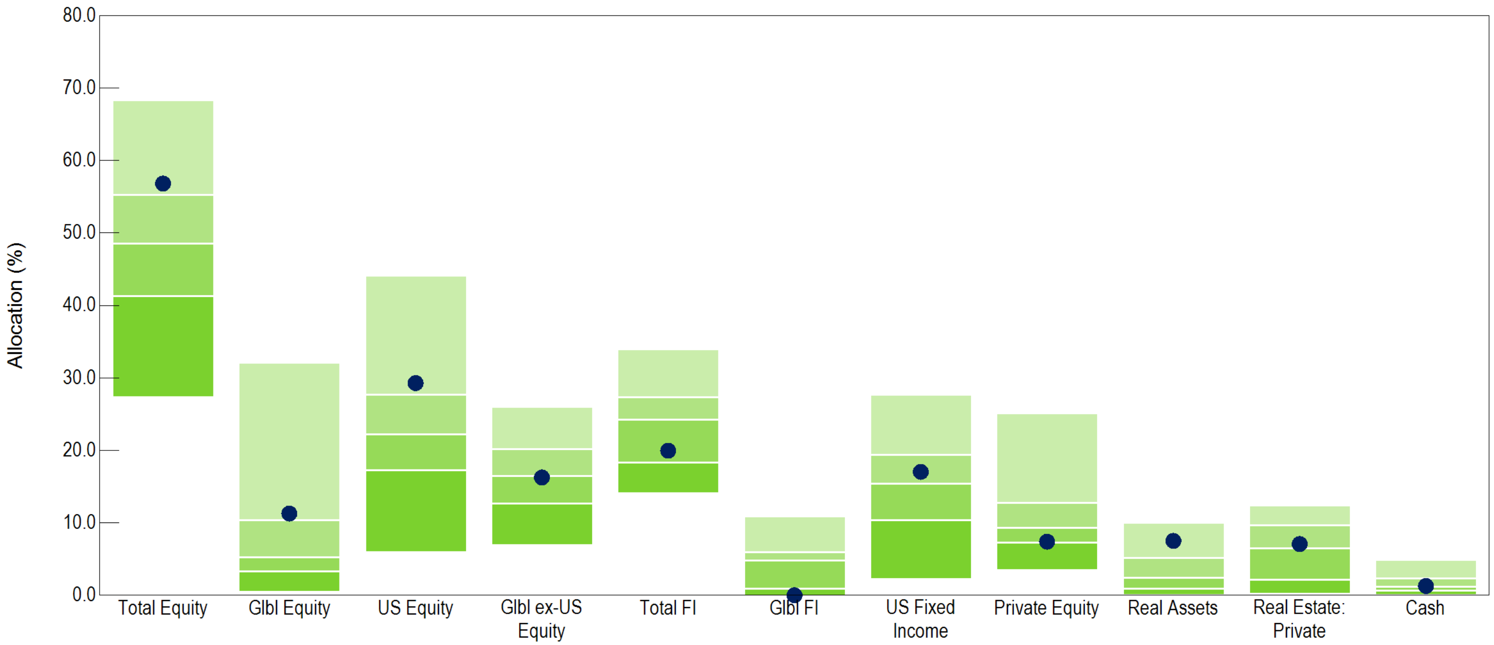


	Return (Rank)											
5th Percentile	7.7		10.5		14.9		2.7		4.3		8.3	
25th Percentile	6.3		8.8		13.7		0.8		3.3		7.4	
Median	5.4		8.0		12.7		-0.5		2.6		6.8	
75th Percentile	4.6		7.3		11.9		-1.2		1.6		6.4	
95th Percentile	3.5		6.5		9.2		-2.4		-0.9		6.0	
# of Portfolios	77		51		65		55		53		67	
● **Total Fund**	7.0	(15)	8.9	(23)	12.6	(53)	0.8	(26)	1.7	(71)	7.4	(29)
▲ **Policy Index**	7.4	(7)	9.2	(13)	13.1	(37)	1.8	(9)	3.4	(25)	8.2	(7)

Ventura County Employees’ Retirement Association

TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE

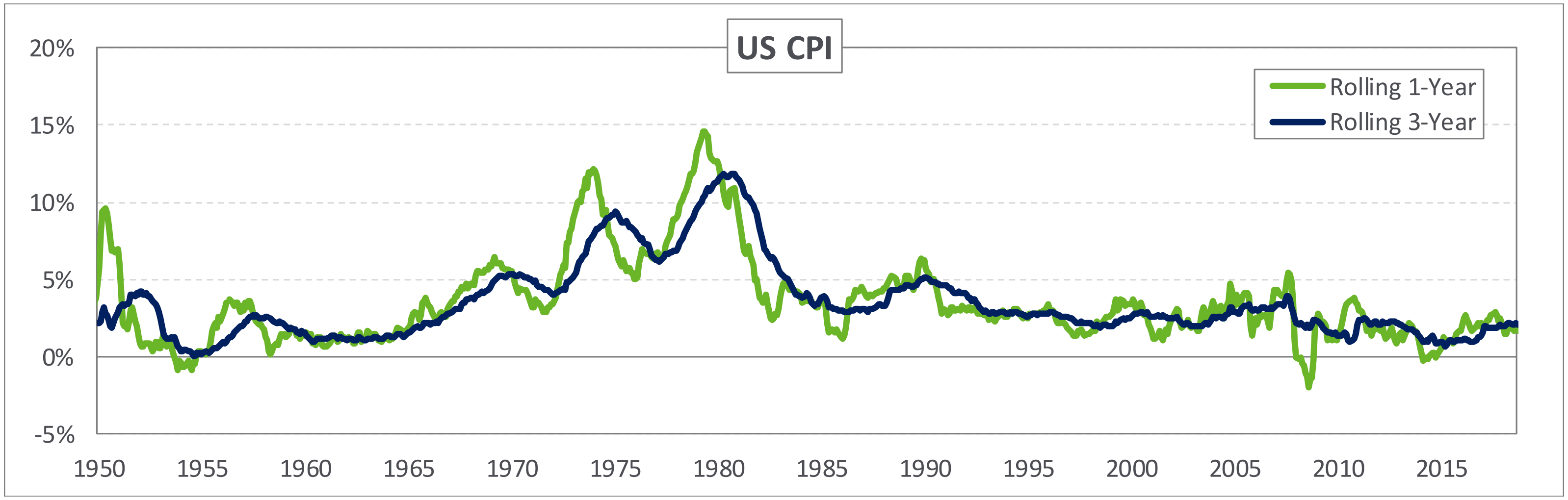
Total Plan Allocation vs. InvMetrics Public DB > $1B Net



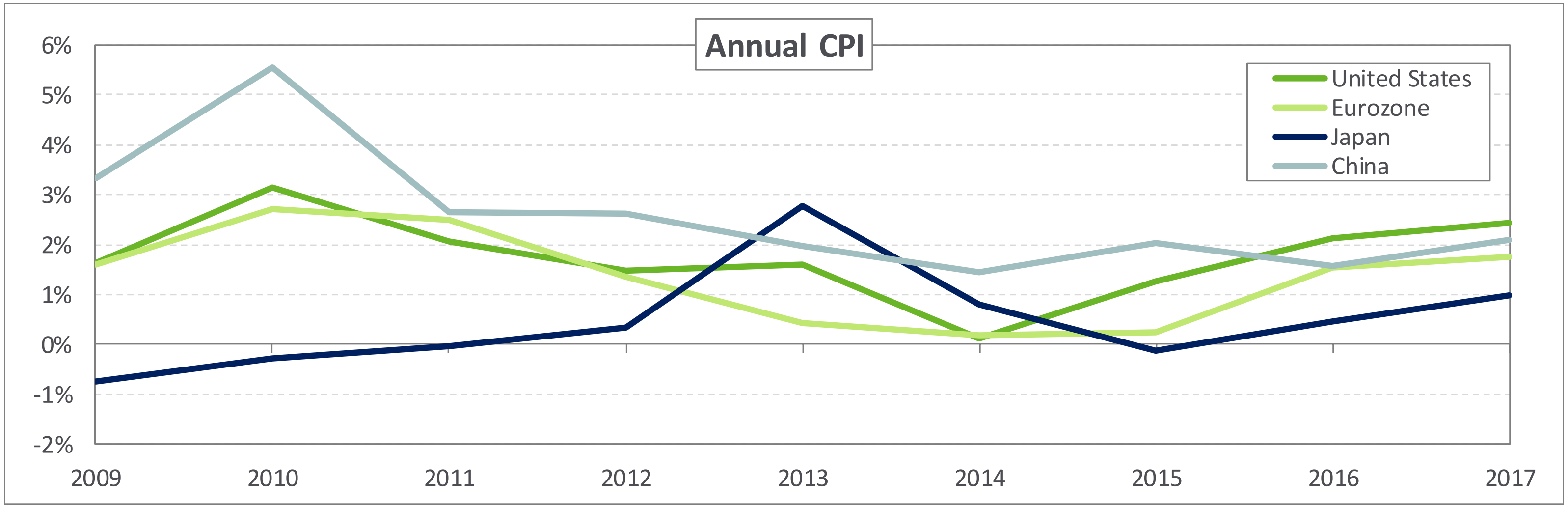
	Allocation (Rank)																					
5th Percentile	68.3		32.1		44.1		26.0		34.0		10.9		27.7		25.1		10.0		12.4		4.9	--
25th Percentile	55.3		10.5		27.8		20.2		27.4		6.0		19.4		12.9		5.3		9.8		2.4	--
Median	48.6		5.3		22.3		16.6		24.3		4.9		15.5		9.4		2.5		6.5		1.3	--
75th Percentile	41.3		3.4		17.4		12.8		18.4		1.0		10.5		7.3		1.0		2.2		0.7	--
95th Percentile	27.4		0.6		6.1		7.0		14.2		0.0		2.3		3.6		0.1		0.3		0.1	--
# of Portfolios	57		26		47		55		57		28		48		51		27		49		58	-- --
● **Total Fund**	56.8	(22)	11.3	(21)	29.3	(24)	16.3	(52)	19.9	(69)	0.0	(89)	17.0	(43)	7.4	(75)	7.5	(11)	7.1	(44)	1.3	(51)	--

MACRO

INFLATION



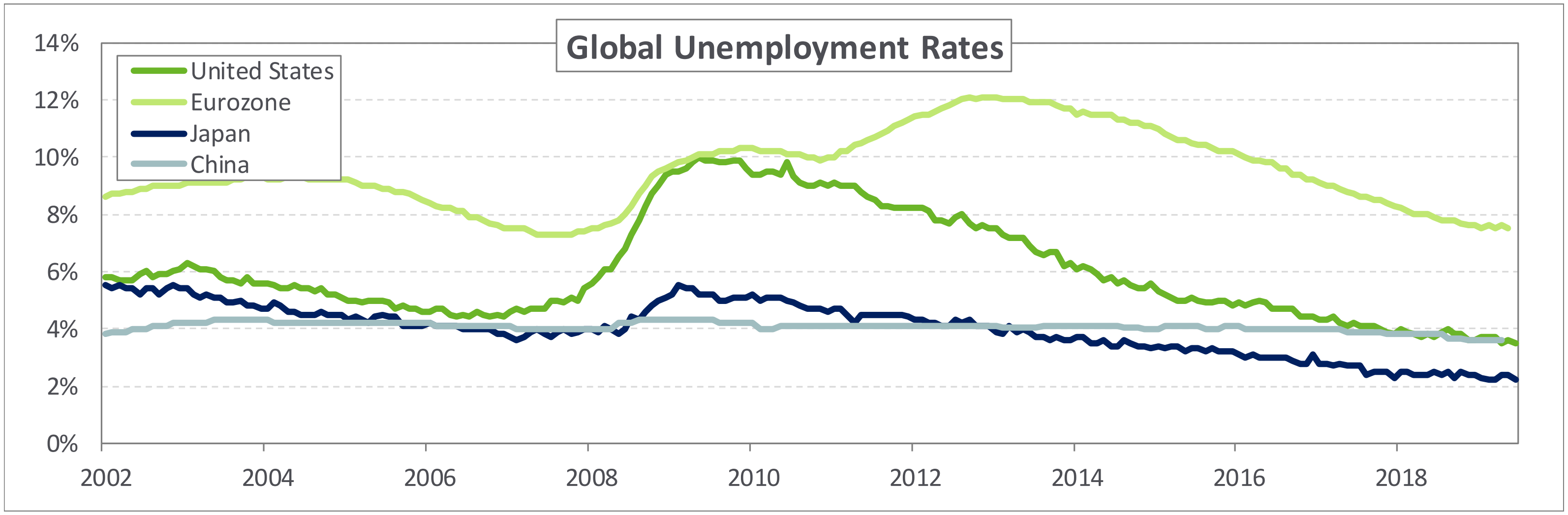
Source: Bureau of Labor Statistics, FactSet



Source: FactSet

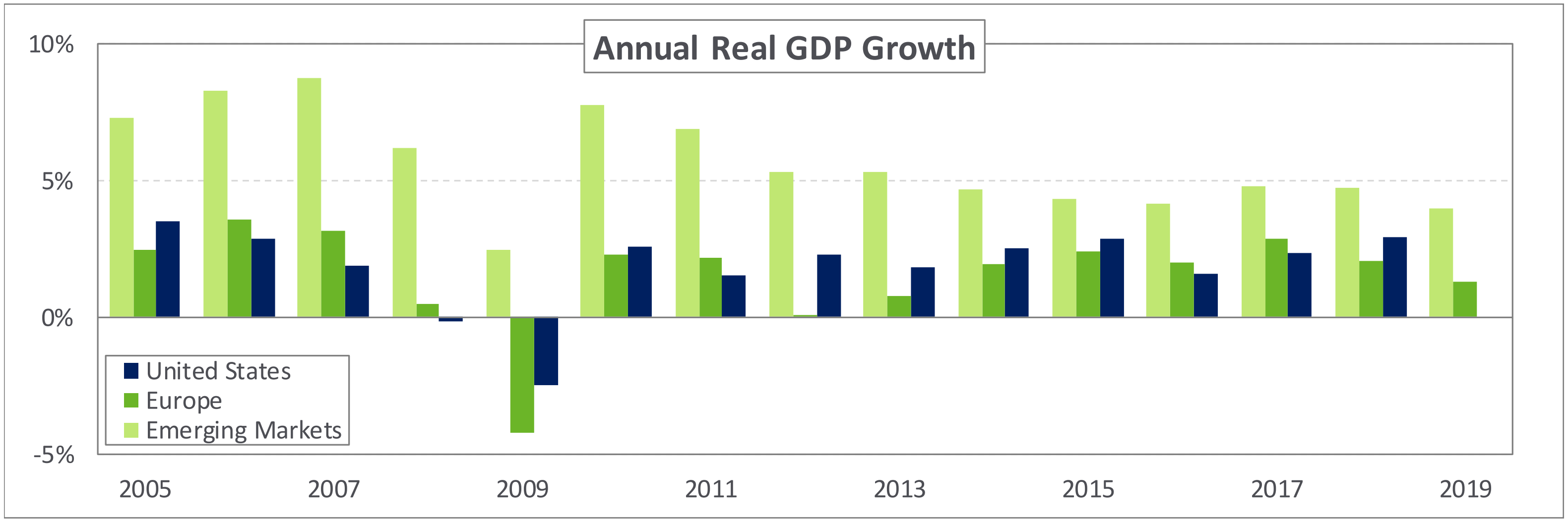
UNEMPLOYMENT

Source: FactSet

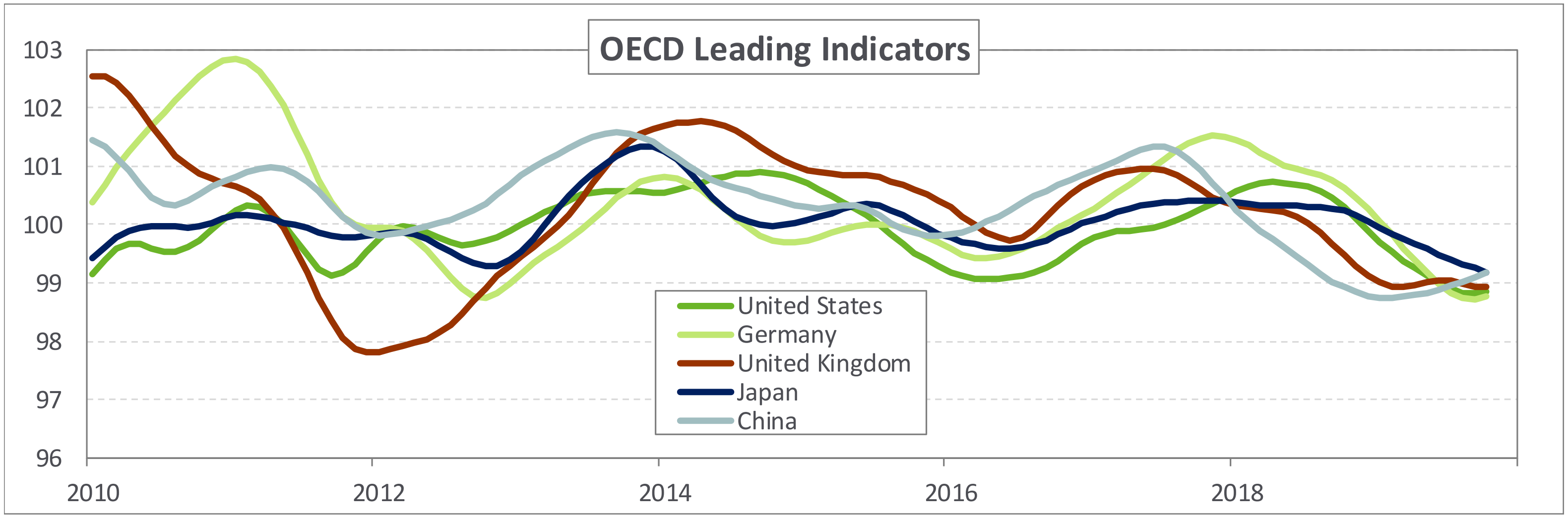


Source: FactSet

ECONOMIC INDICATORS

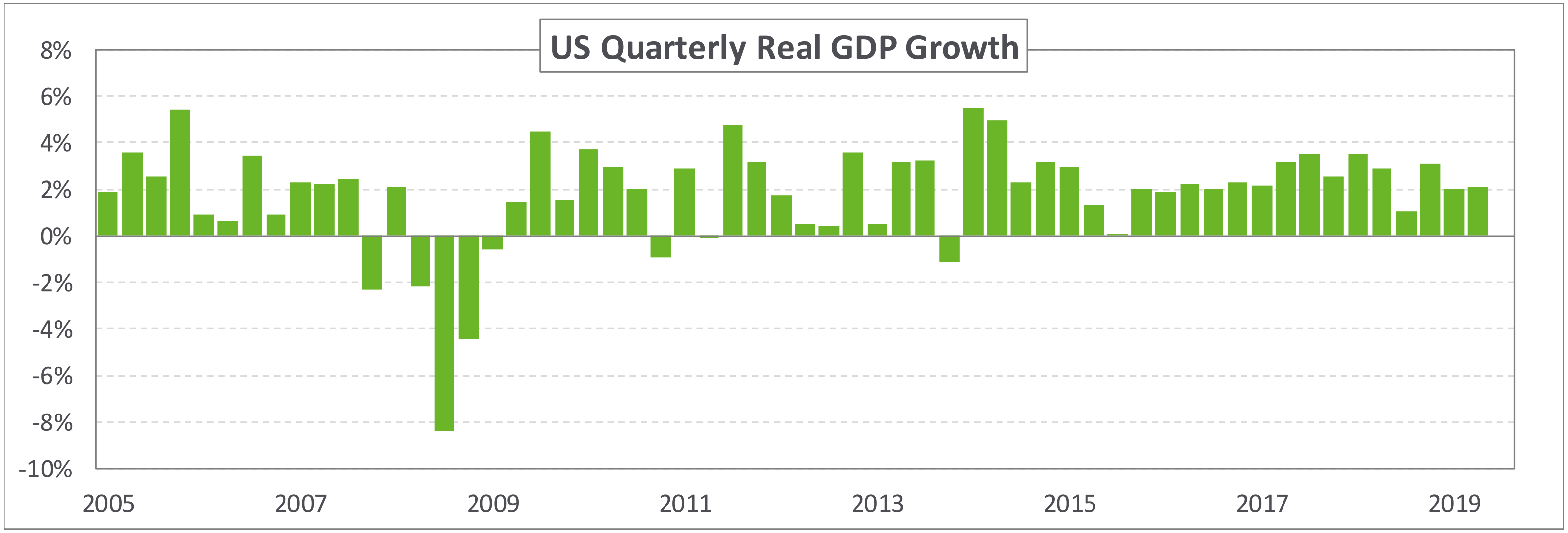


Source: Bureau of Economic Analysis, Oxford Economics, FactSet

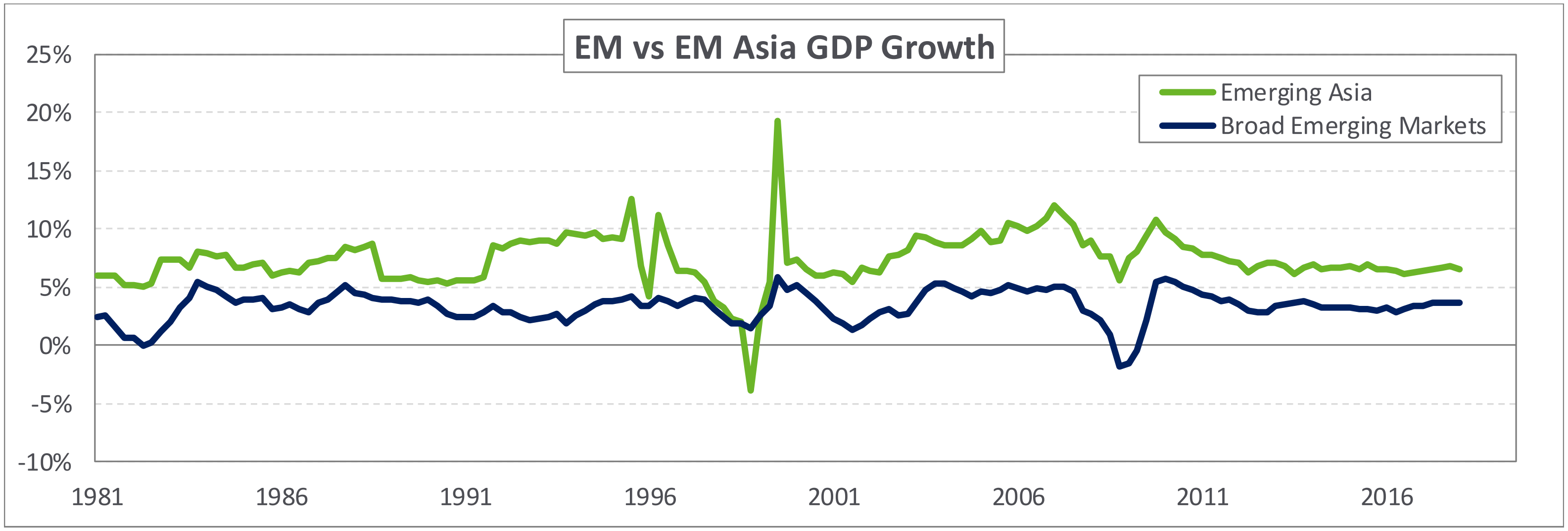


Source: OECD, FactSet

GROSS DOMESTIC PRODUCT

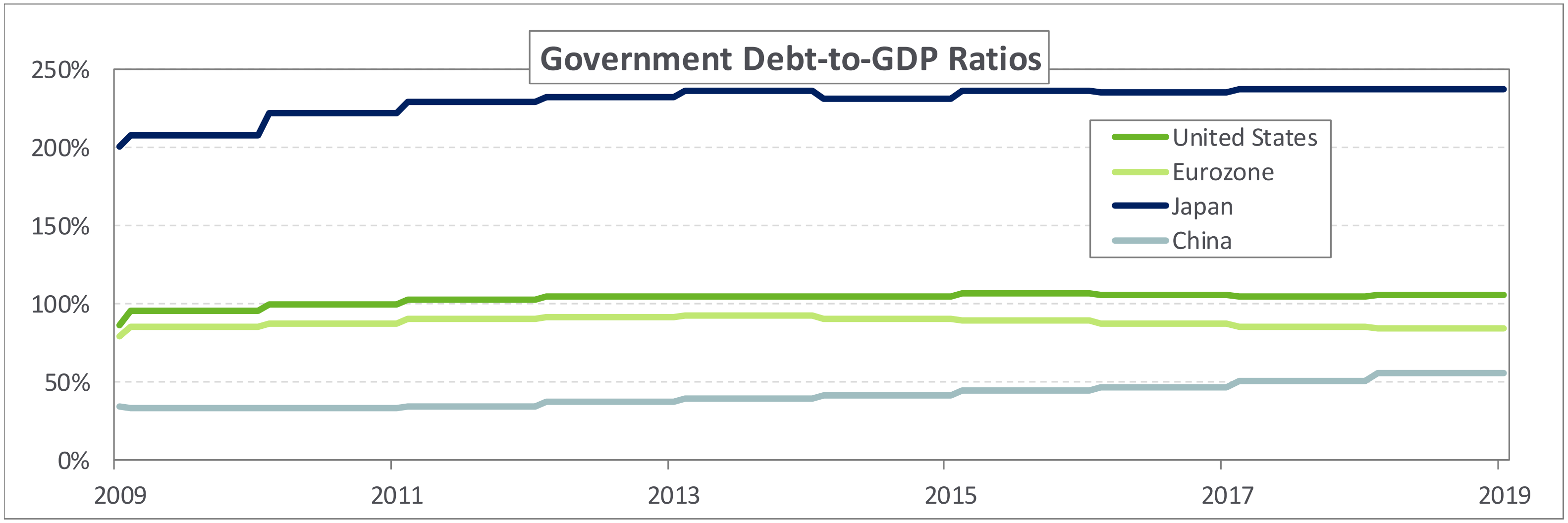


Source: Bureau of Economic Analysis, FactSet

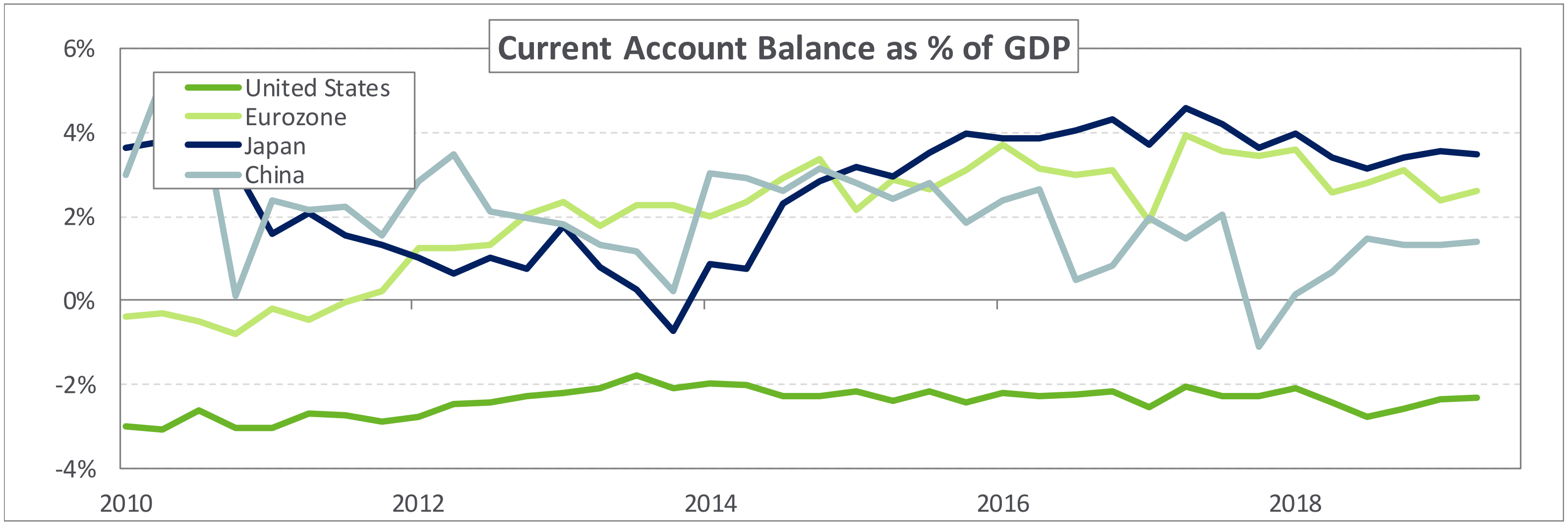


Source: IMF, FactSet

GROSS DOMESTIC PRODUCT METRICS

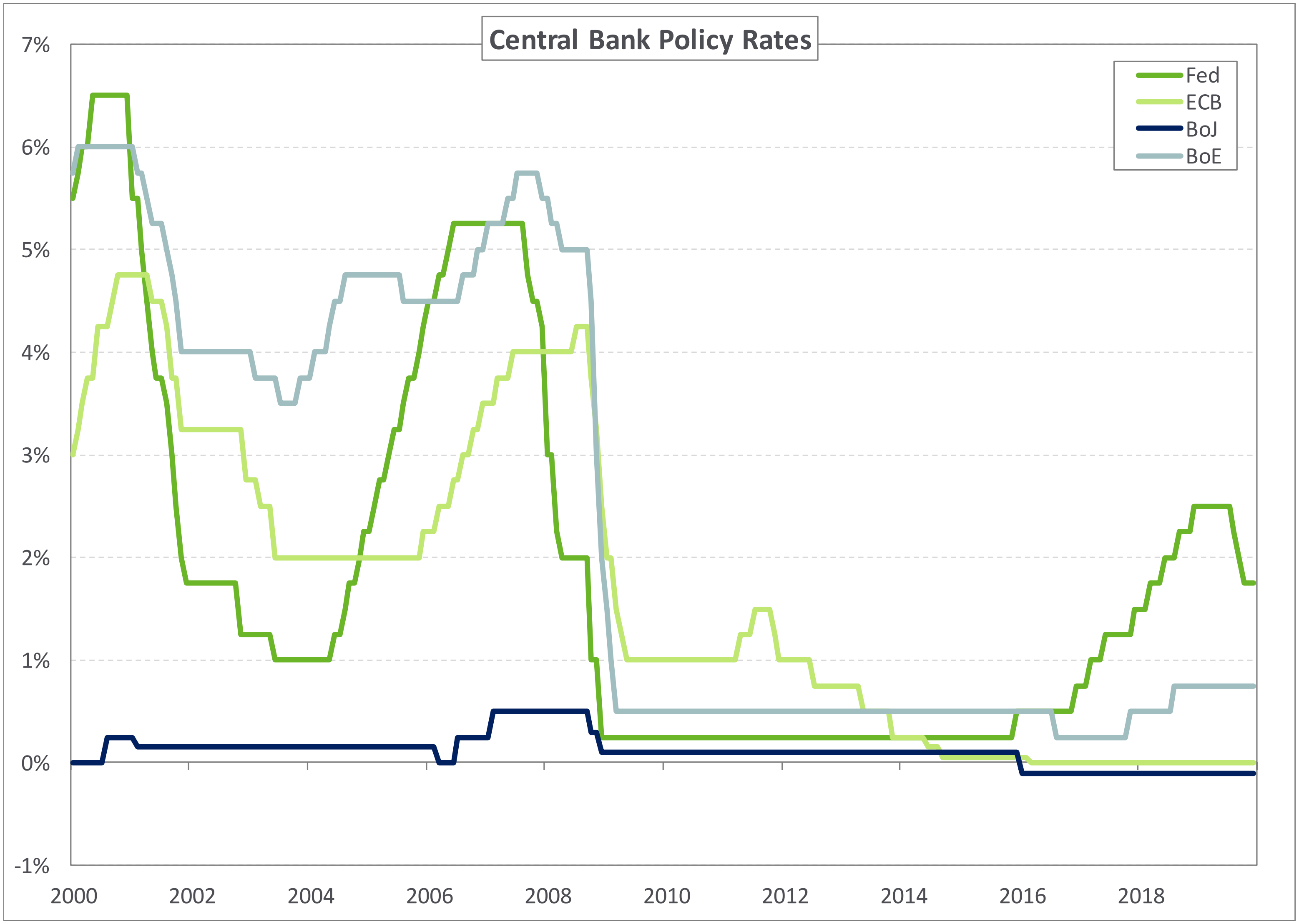


Source: IMF, FactSet



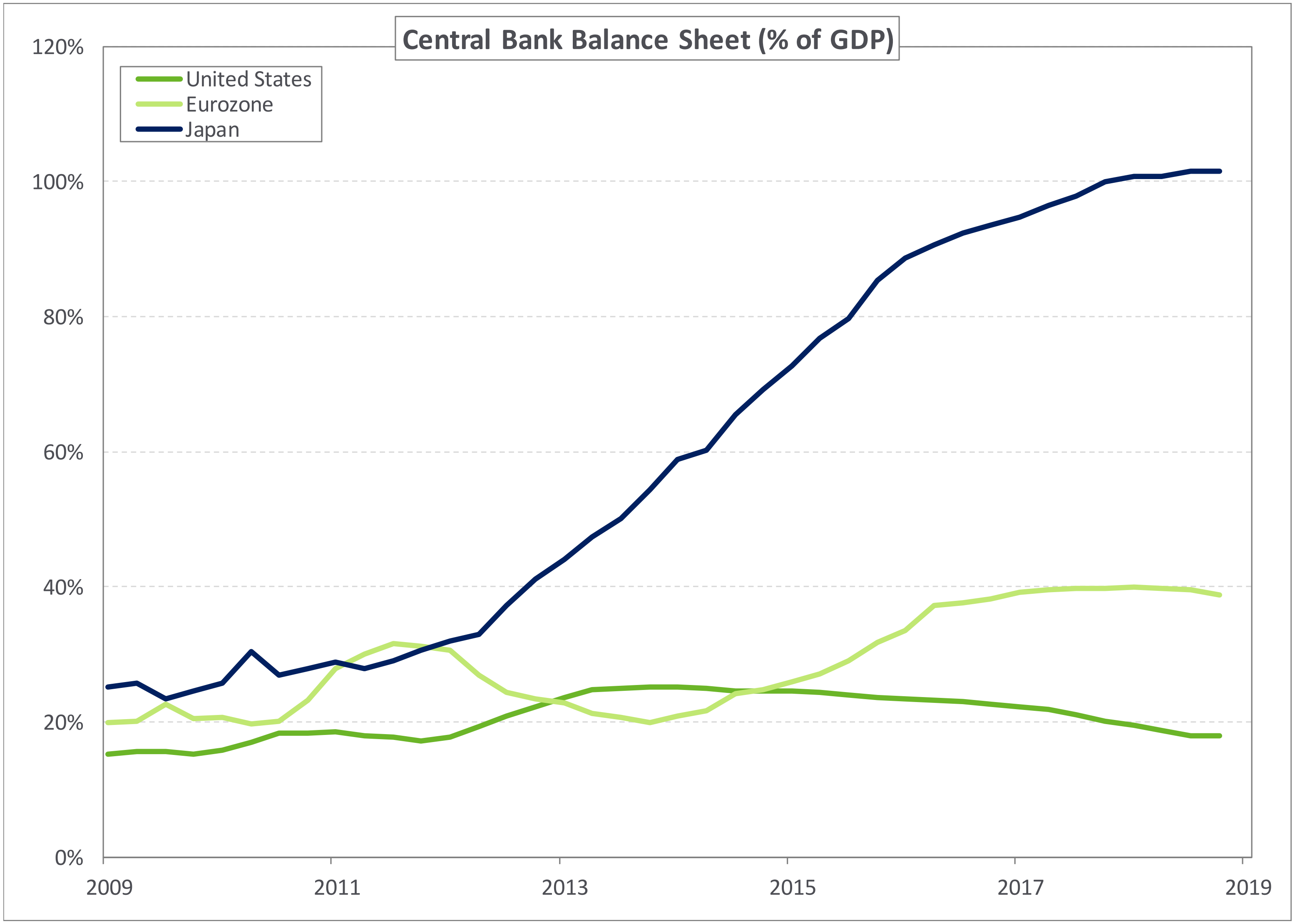
Source: FactSet

CENTRAL BANK RATES



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

CENTRAL BANK BALANCE SHEETS

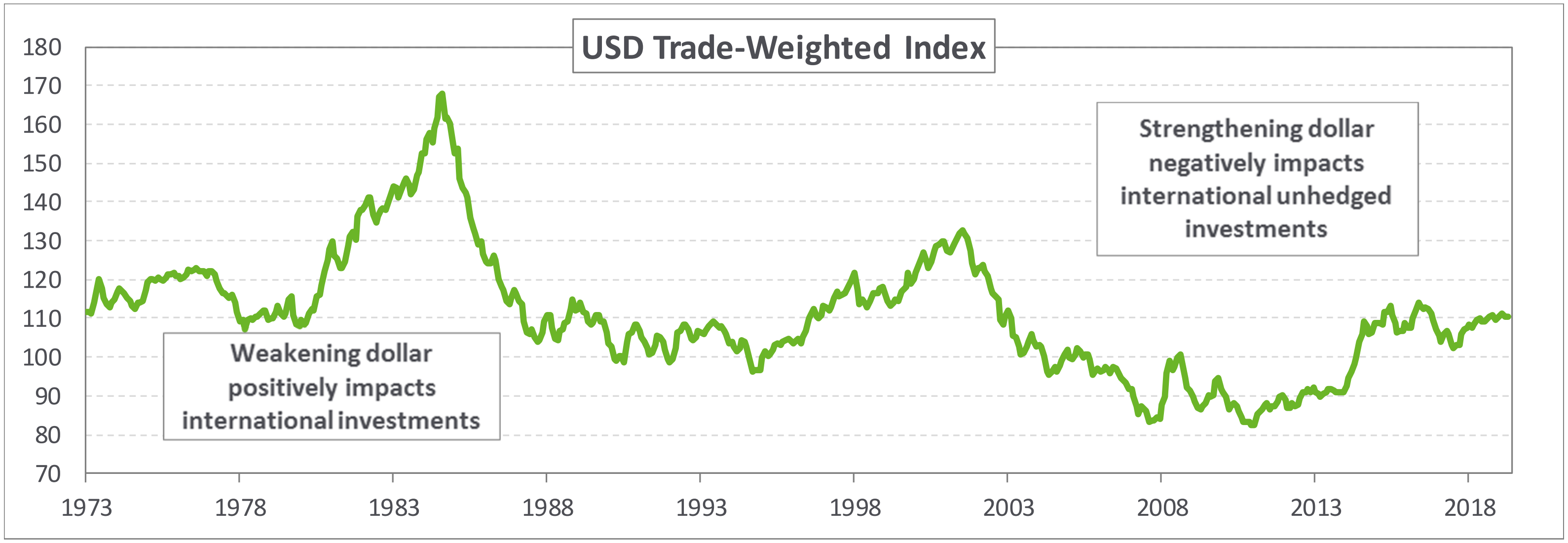


Source: FactSet

CURRENCIES

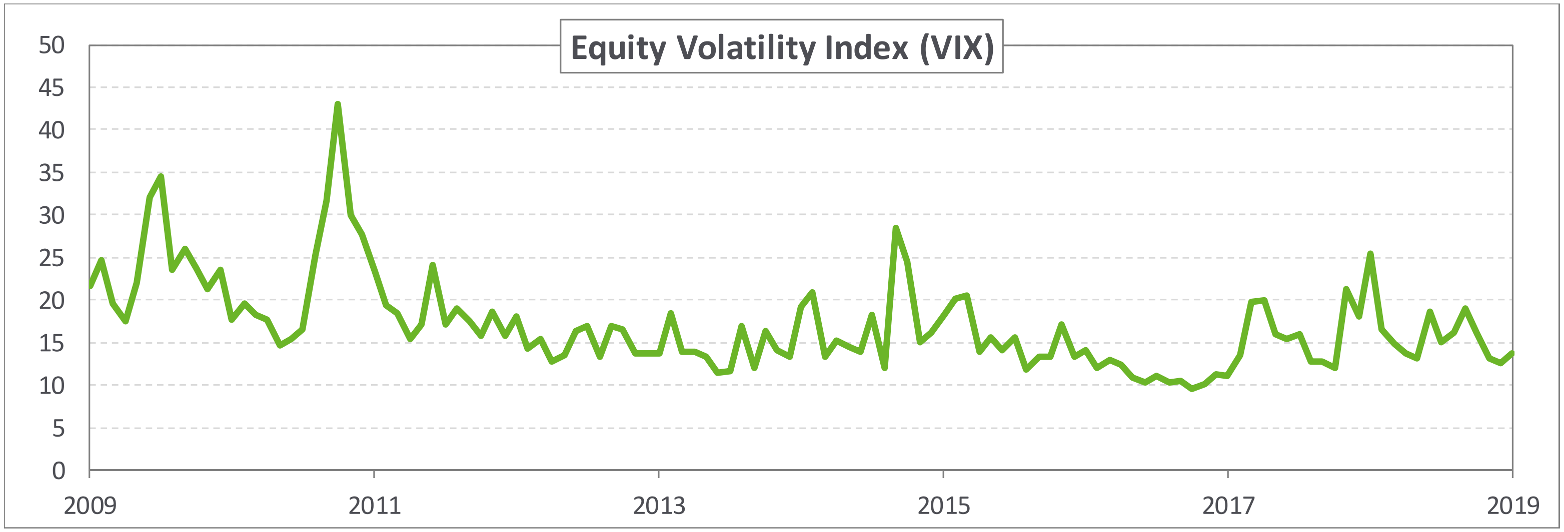
	% Change Relative to USD			
Currencies	**Spot**	**1 Month**	**YTD**	**1 Year**
Euro	**1.12**	1.80%	-1.81%	-1.81%
British Pound	**1.32**	2.42%	4.02%	4.02%
Japanese Yen	**108.68**	-0.76%	-0.95%	-0.95%
Swiss Franc	**0.97**	-3.10%	-1.77%	-1.77%
Australian Dollar	**0.70**	3.93%	-0.15%	-0.15%
Chinese Yuan	**6.97**	-0.87%	1.46%	1.46%
Brazilian Real	**4.02**	-4.86%	3.79%	3.79%
Russian Ruble	**62.11**	-3.36%	-10.47%	-10.47%
Indian Rupee	**71.38**	-0.50%	2.24%	2.24%
Mexican Peso	**18.88**	-3.19%	-4.11%	-4.11%
South African Rand	**13.98**	-4.57%	-2.79%	-2.79%

Source: FactSet

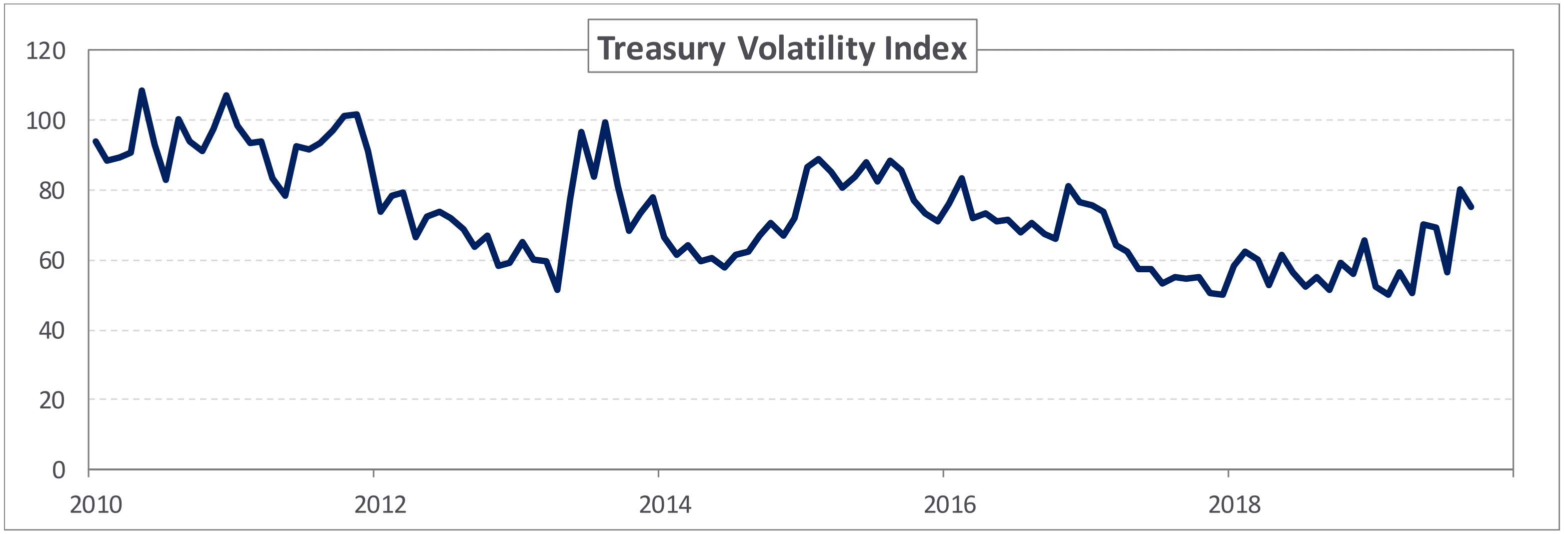


Source: FactSet

VOLATILITY



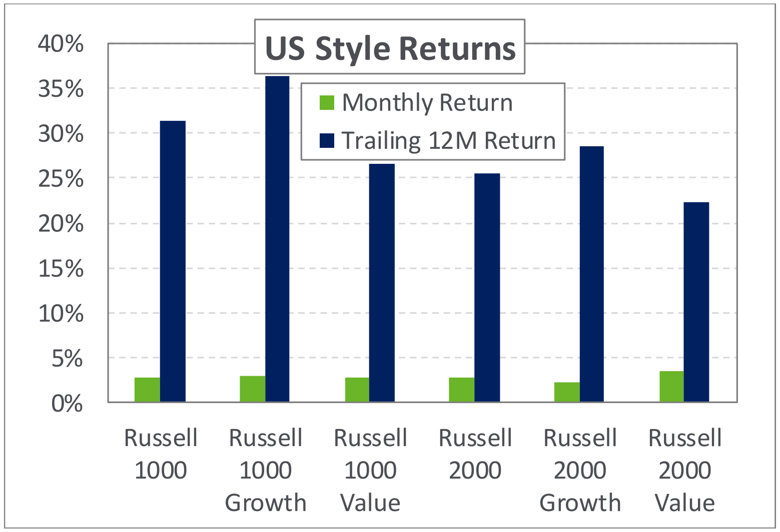
Source: CBOE, FactSet



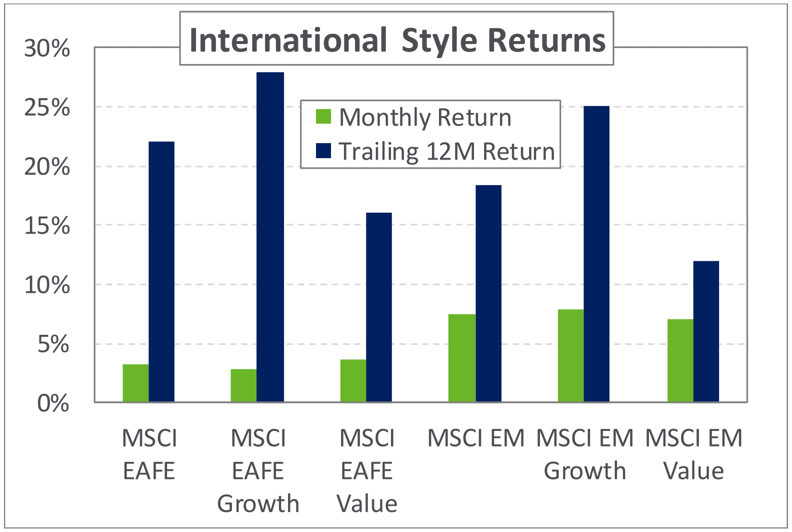
Source: Merrill Lynch, FactSet

EQUITY

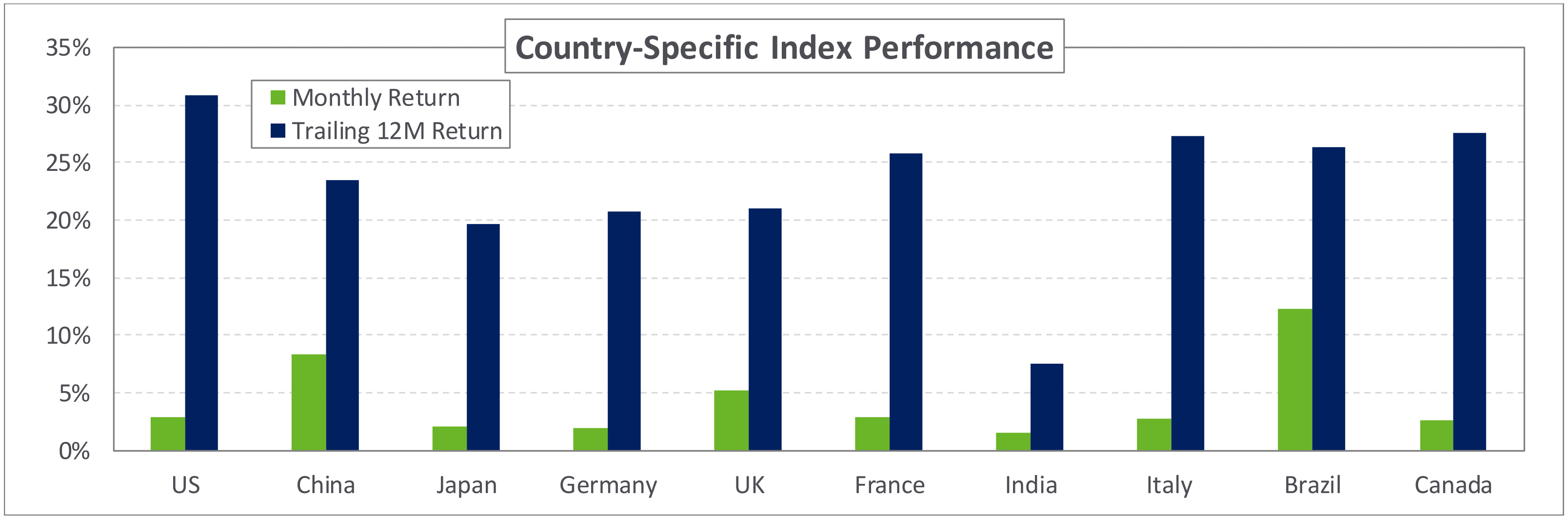
EQUITY INDEX PERFORMANCE



Source: Russell, FactSet



Source: MSCI, FactSet



Source: MSCI, FactSet
Represents returns in USD

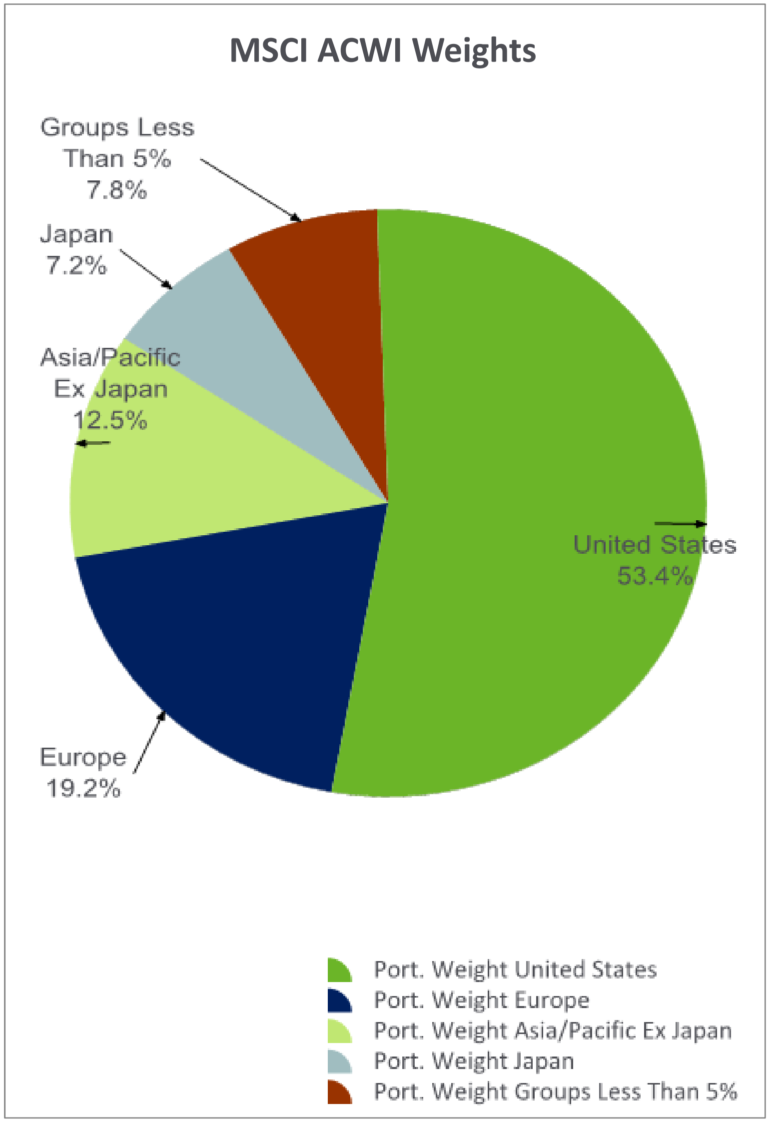
INDEX COMPOSITION

	MTD	QTD	YTD	Index Weight
S&P 500	**3.0%**	**9.1%**	**31.5%**	**100.0%**
Communication Services	0.2%	1.0%	3.3%	10.4%
Consumer Discretionary	0.3%	0.4%	2.9%	9.8%
Consumer Staples	0.2%	0.3%	2.1%	7.2%
Energy	0.3%	0.2%	0.7%	4.3%
Financials	0.4%	1.4%	4.1%	13.0%
Health Care	0.5%	1.9%	2.9%	14.2%
Industrials	0.0%	0.5%	2.8%	9.1%
Information Technology	1.0%	3.2%	9.8%	23.2%
Materials	0.1%	0.2%	0.7%	2.7%
Real Estate	0.0%	0.0%	0.9%	2.9%
Utilities	0.1%	0.0%	0.9%	3.3%

Source: S&P, FactSet

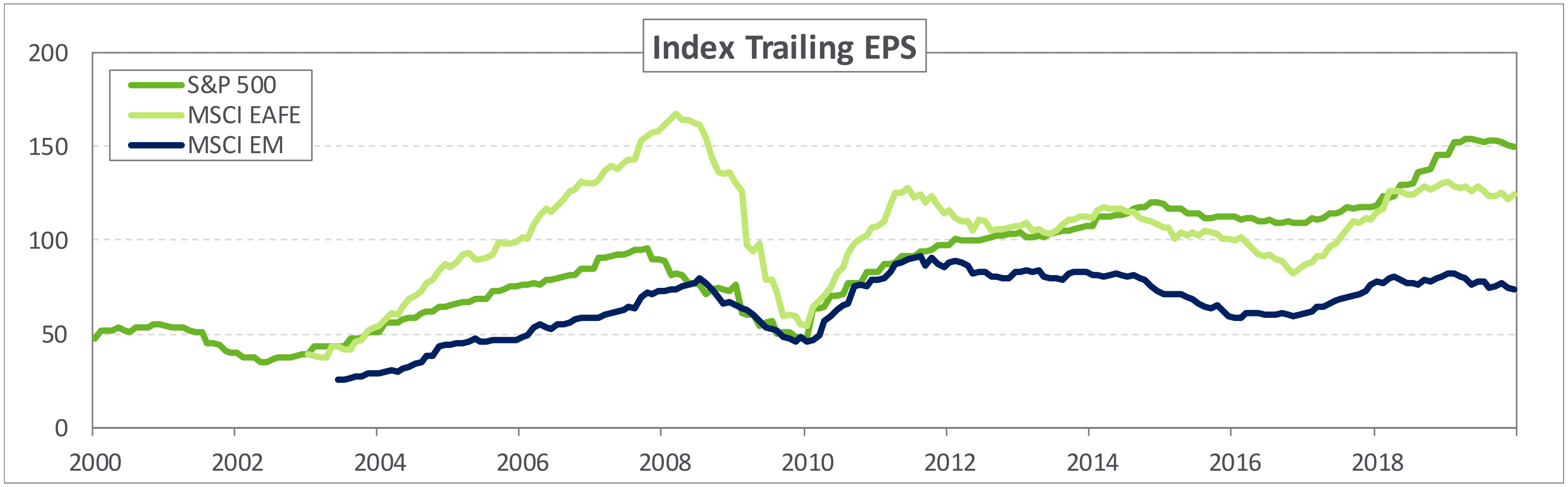
	MTD	QTD	YTD	Index Weight
MSCI ACWI	**3.5%**	**9.0%**	**26.6%**	**100.0%**
Communication Services	0.3%	0.7%	2.2%	8.7%
Consumer Discretionary	0.4%	0.9%	3.0%	10.8%
Consumer Staples	0.2%	0.2%	1.9%	8.0%
Energy	0.3%	0.3%	0.8%	5.2%
Financials	0.6%	1.5%	4.0%	16.7%
Health Care	0.4%	1.5%	2.6%	11.8%
Industrials	0.1%	0.8%	2.8%	10.3%
Information Technology	0.8%	2.4%	6.6%	17.1%
Materials	0.2%	0.4%	1.0%	4.8%
Real Estate	0.1%	0.1%	0.8%	3.2%
Utilities	0.1%	0.1%	0.8%	3.3%

Source: MSCI, FactSet

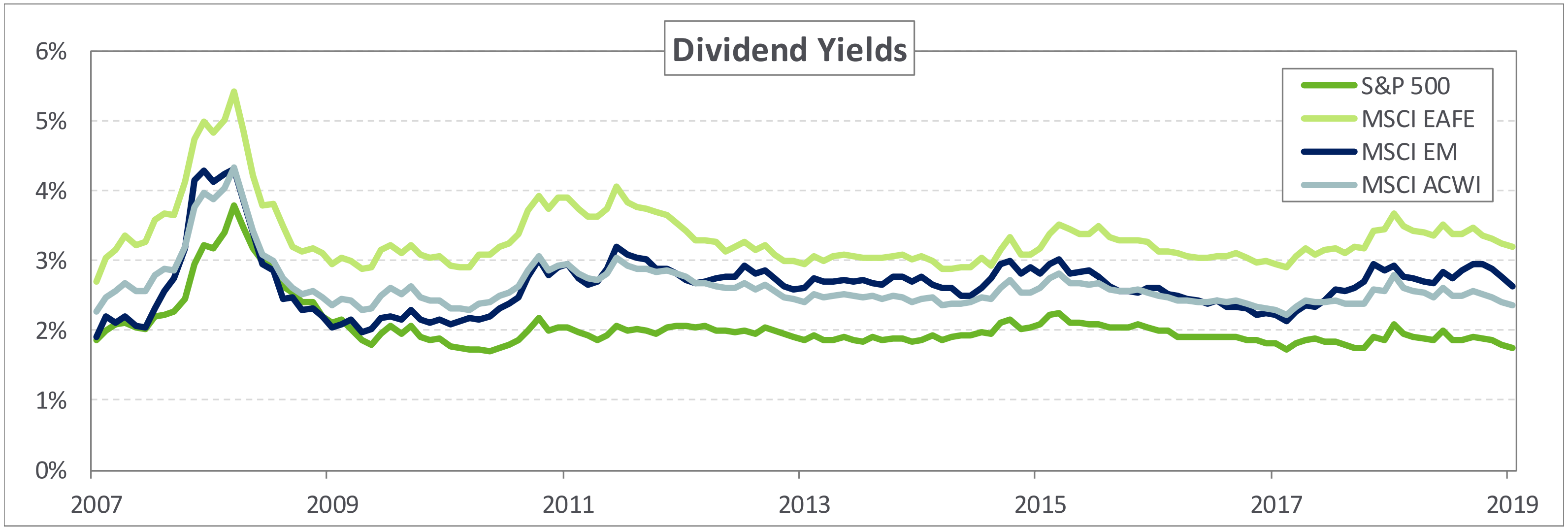


Source: MSCI, FactSet

EARNINGS & YIELDS

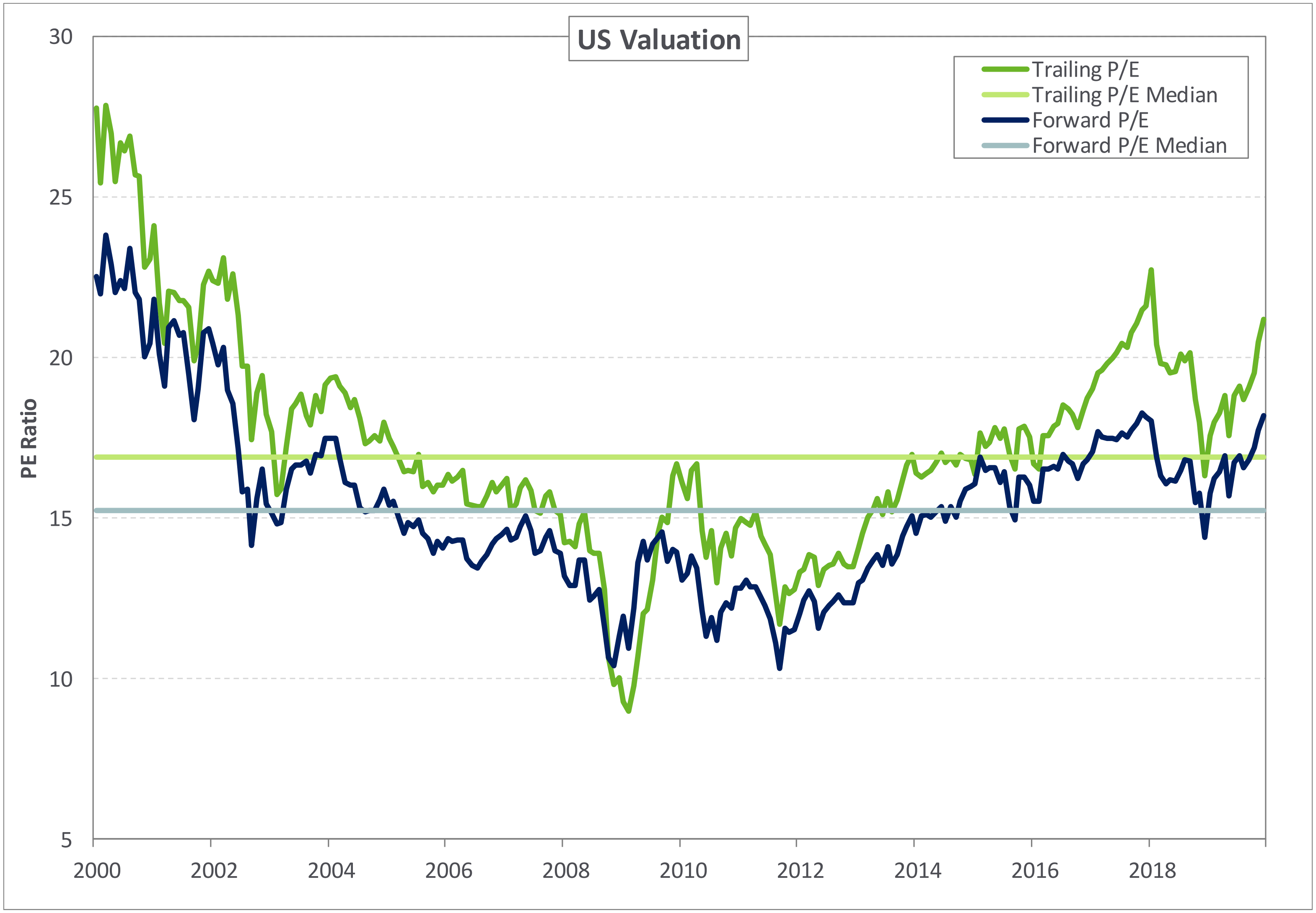


Source: FactSet



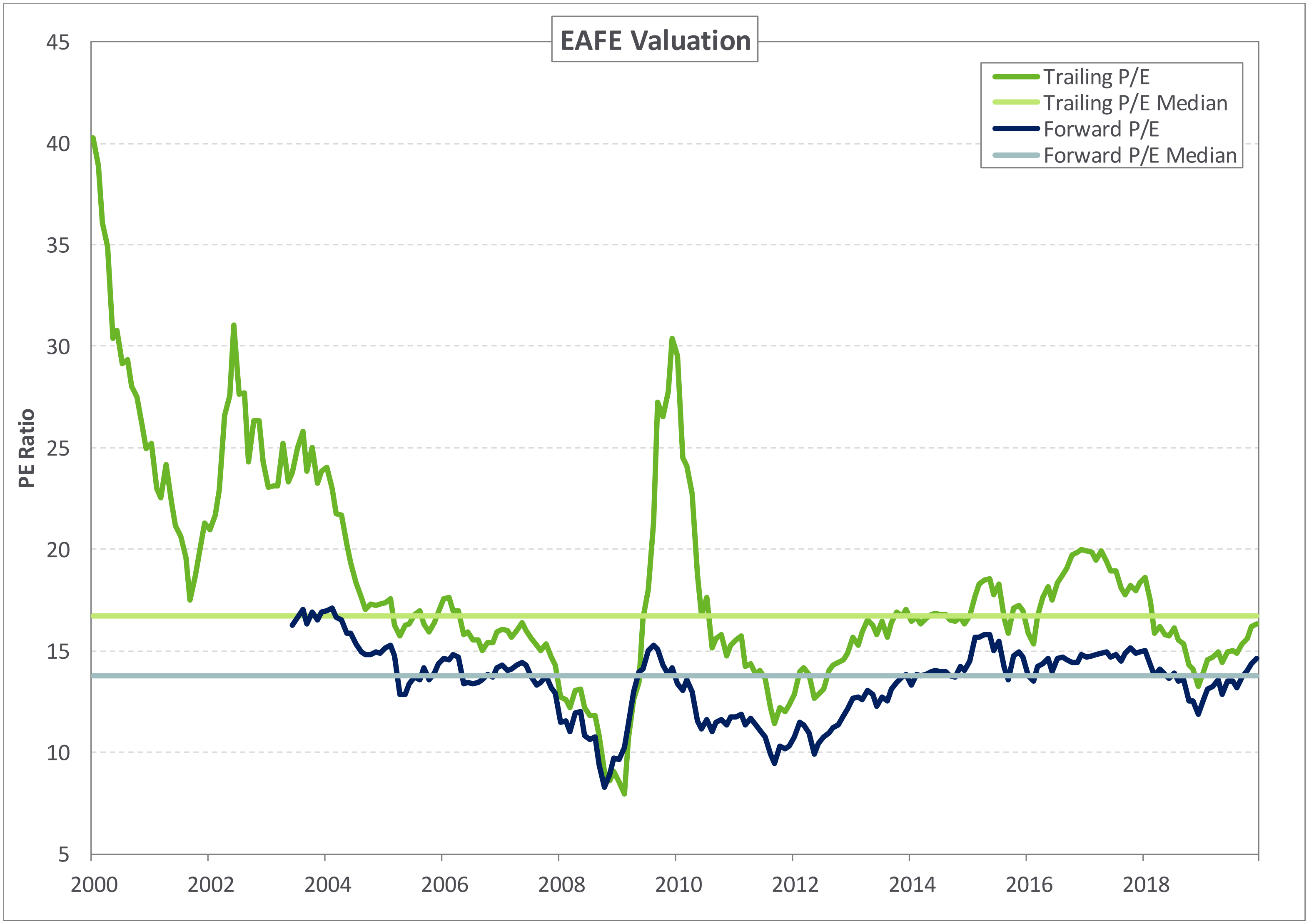
Source: FactSet

US EQUITY VALUATIONS



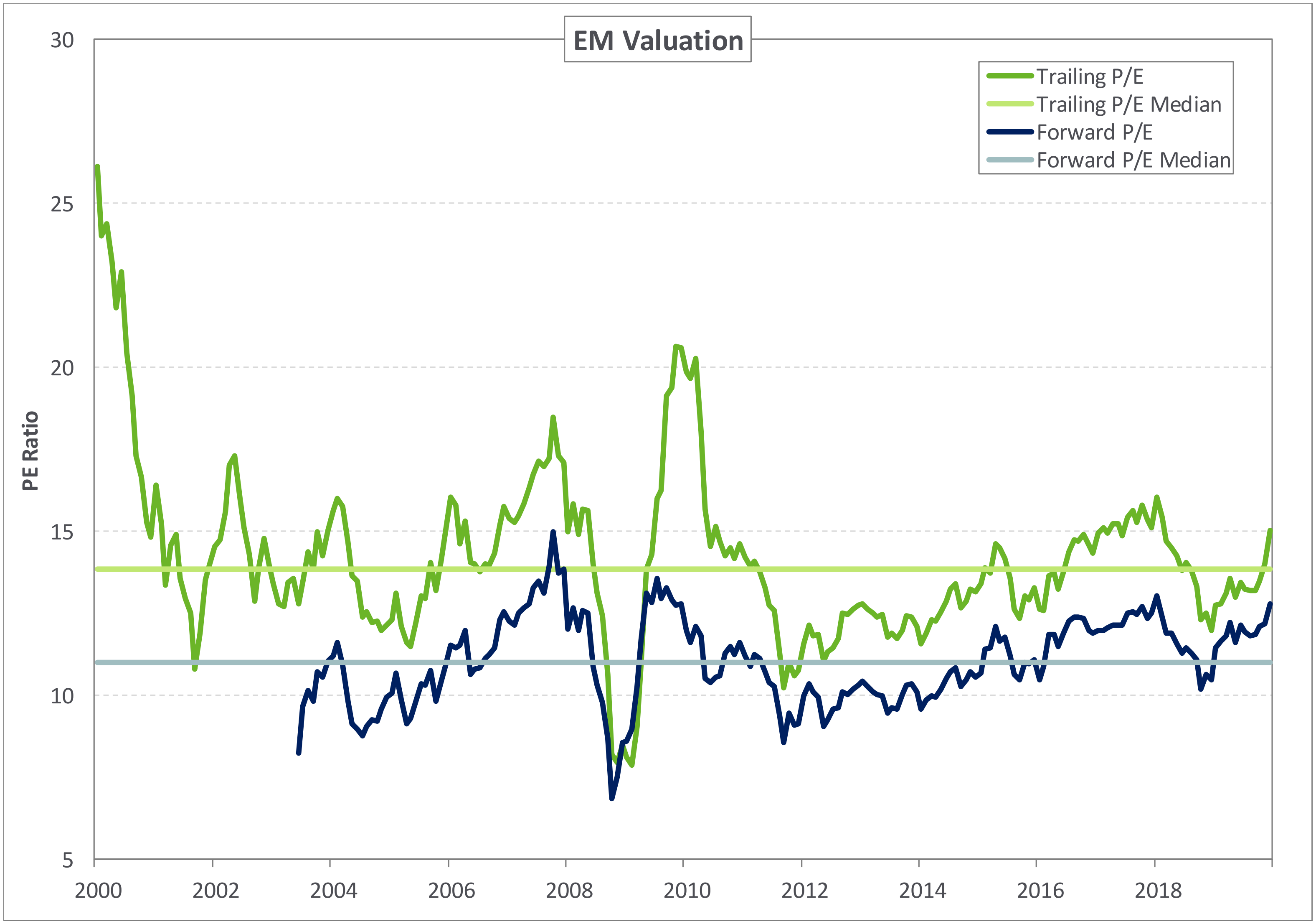
Source: S&P, FactSet

EAFE EQUITY VALUATIONS



Source: MSCI, FactSet

EM EQUITY VALUATIONS



Source: MSCI, FactSet

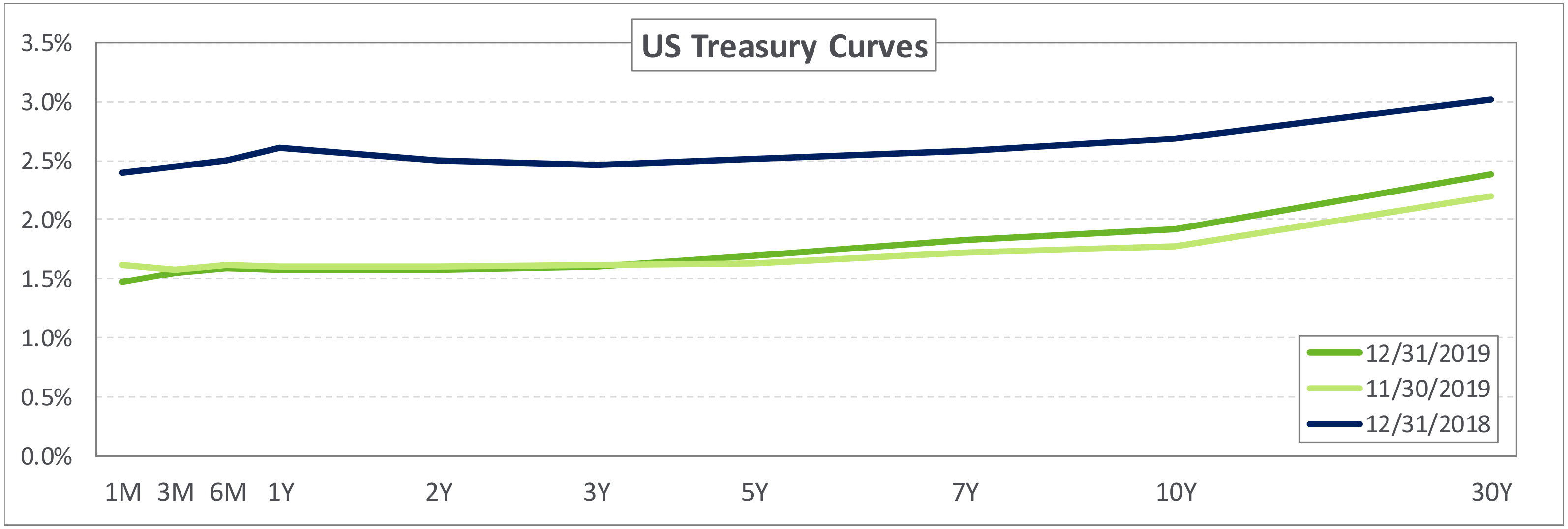
CREDIT

FIXED INCOME CHARACTERISTICS

	Averages			Total Returns (%)		
	Yield to Worst	Spread (bps)	Duration (Years)	1-Month	YTD	1-Year
Barclays Aggregate	2.31%	39	5.9	-0.1%	8.7%	8.7%
Barclays Treasury	1.80%	-	6.5	-0.6%	6.8%	6.8%
Barclays Agency	1.87%	10	4.1	-0.2%	5.9%	5.9%
Barclays MBS	2.54%	39	3.2	0.3%	6.3%	6.3%
Barclays ABS	2.05%	44	2.1	0.1%	4.5%	4.5%
Barclays CMBS	2.35%	58	5.6	-0.5%	7.5%	7.5%
Barclays Corp IG	2.84%	93	7.9	0.3%	14.5%	14.5%
Barclays Muni	1.78%	-	5.3	0.3%	7.5%	7.5%
Barclays HY Muni	4.02%	-	7.1	0.3%	10.6%	10.6%
Barclays TIPS	1.99%	-	4.7	0.4%	8.4%	8.4%
Barclays HY	5.19%	336	3.1	2.0%	14.3%	14.3%
Barclays Global Agg	1.45%	38	7.1	0.6%	6.8%	6.8%
JPM EMBI Glob Div	-	289	7.5	2.0%	15.0%	15.0%
JPM GBI - EM	4.88%	-	5.4	4.1%	13.4%	13.4%

Source: Barclays, JP Morgan, FactSet

TREASURIES

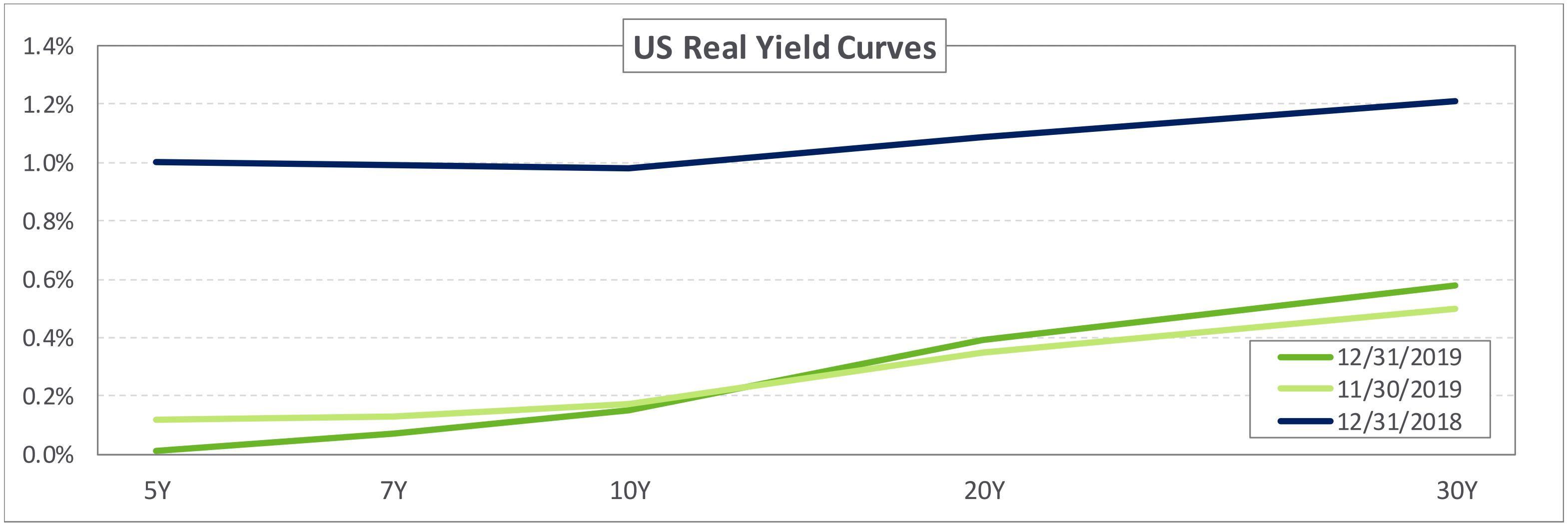


Source: FactSet

	Yield (%)			Total Return (%)	
	Current	1 Month Ago	12 Months Ago	1 Month	12 Months
3M Treasury	1.55%	1.58%	2.45%	0.14%	2.28%
6M Treasury	1.59%	1.61%	2.50%	0.16%	2.57%
2Y Treasury	1.57%	1.60%	2.50%	0.23%	3.49%
5Y Treasury	1.69%	1.62%	2.51%	-0.08%	5.91%
10Y Treasury	1.92%	1.78%	2.68%	-1.02%	8.91%
30Y Treasury	2.39%	2.20%	3.01%	-3.51%	16.33%

Source: FactSet

REAL YIELDS

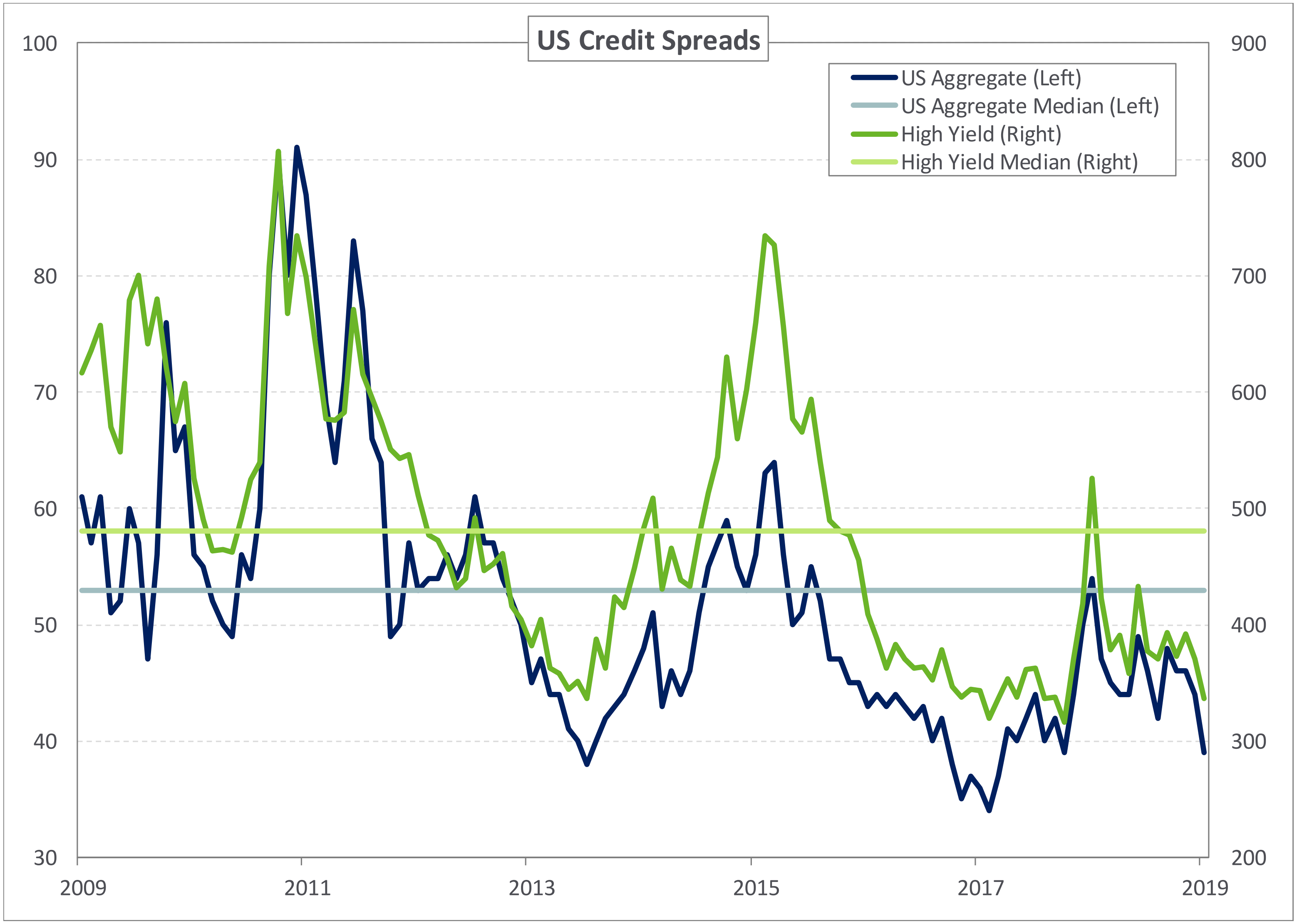


Source: FactSet

	Real Rates			Breakeven Rates	
	Current	**1 Month Ago**	**12 Months Ago**	**Current**	**12 Months Ago**
2-Year	-0.47%	-0.44%	0.55%	1.56%	1.50%
5-Year	-0.44%	-0.43%	0.51%	1.62%	1.52%
10-Year	-0.35%	-0.42%	0.56%	1.68%	1.60%
20-Year	-0.22%	-0.32%	0.64%	1.53%	1.59%
30-Year	-0.13%	-0.27%	0.74%	1.81%	1.80%

Source: FactSet

CREDIT SPREADS

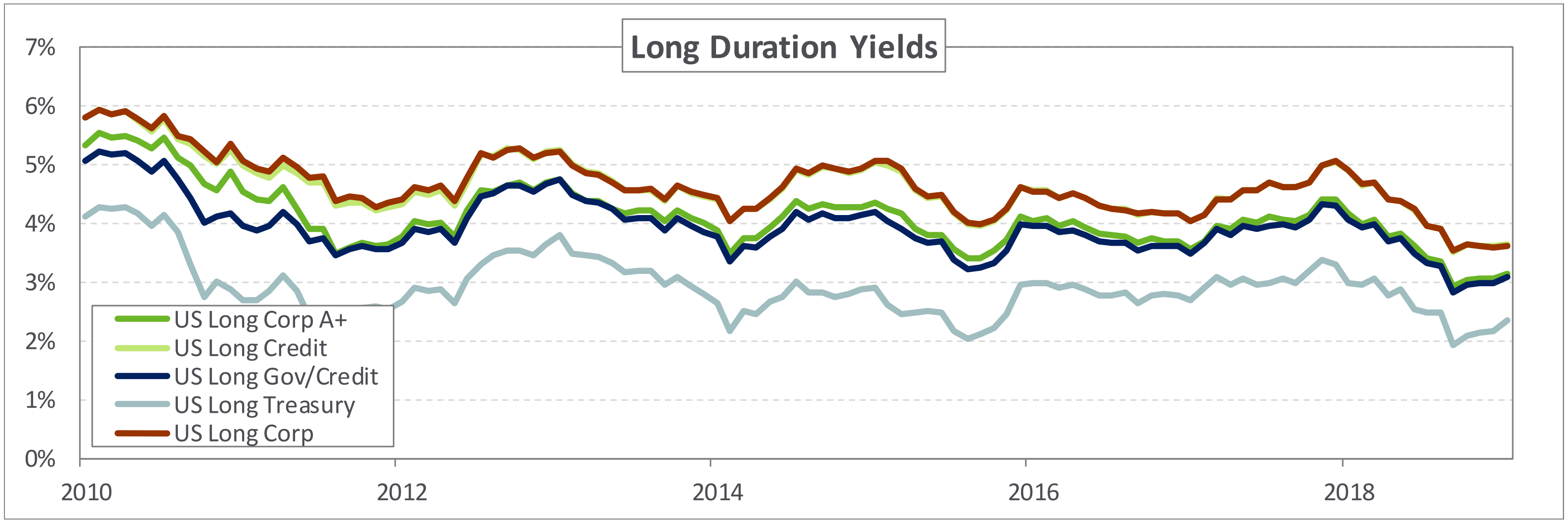


Source: Barclays, FactSet

LONG DURATION

Index	Current	1 Month Ago	12 Months Ago	Duration
Barclays Long Treasury	2.3%	2.2%	3.0%	18.0
Barclays 20+ STRIPS	2.4%	2.2%	3.1%	26.2
Barclays Long Credit	3.6%	3.6%	4.9%	14.1
Barclays Long Gov/Credit	3.1%	3.0%	4.1%	15.7
Barclays Long Corp A+	3.3%	3.2%	4.4%	15.1

Source: Barclays, FactSet



Source: Barclays, FactSet

REAL ASSETS

NEPC, LLC

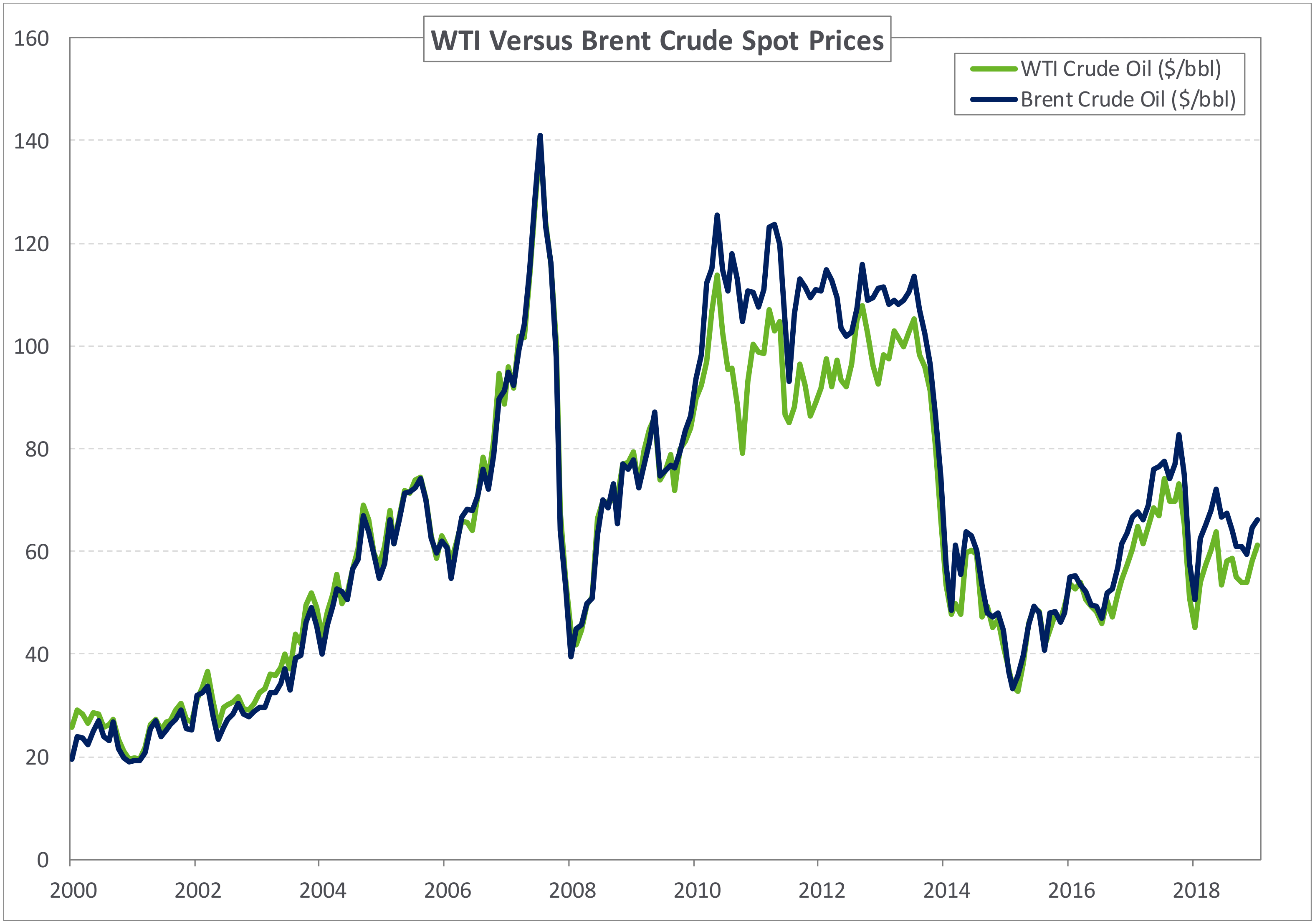
REAL ASSETS INDEX PERFORMANCE

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	**5.0%**	**4.4%**	**7.7%**	**7.7%**	**-0.9%**	**-3.9%**
Bloomberg Sub Agriculture Index	**5.8%**	**7.1%**	**1.7%**	**1.7%**	**-6.9%**	**-7.0%**
Coffee	9.1%	24.8%	12.1%	12.1%	-11.5%	-14.1%
Corn	1.8%	-2.0%	-5.2%	-5.2%	-7.3%	-10.3%
Cotton	5.8%	10.9%	-6.4%	-6.4%	-0.8%	2.1%
Soybean	7.4%	2.6%	-0.6%	-0.6%	-6.9%	-4.6%
Soybean Oil	12.9%	18.1%	19.8%	19.8%	-3.4%	-2.2%
Sugar	3.9%	6.5%	1.9%	1.9%	-17.4%	-8.0%
Wheat	3.3%	12.2%	9.3%	9.3%	-0.3%	-10.1%
Bloomberg Sub Energy	**6.9%**	**5.8%**	**11.7%**	**11.7%**	**-2.3%**	**-7.9%**
Brent Crude	10.4%	16.2%	35.4%	35.4%	9.6%	-2.1%
Heating Oil	8.0%	9.2%	24.5%	24.5%	6.5%	-1.6%
Natural Gas	-3.0%	-17.2%	-37.1%	-37.1%	-26.3%	-23.3%
Unleaded Gas	6.1%	13.4%	44.3%	44.3%	2.1%	-0.2%
WTI Crude Oil	11.0%	13.9%	34.3%	34.3%	4.0%	-7.7%
Bloomberg Sub Industrial Metals	**3.1%**	**-0.2%**	**7.0%**	**7.0%**	**3.7%**	**-0.5%**
Aluminum	1.8%	5.0%	-3.8%	-3.8%	1.6%	-2.4%
Copper	5.2%	8.5%	7.2%	7.2%	2.9%	-1.1%
Nickel	2.6%	-17.6%	32.4%	32.4%	11.6%	-2.2%
Zinc	-0.1%	-4.1%	-1.2%	-1.2%	0.3%	2.7%
Bloomberg Sub Precious Metals	**3.9%**	**3.7%**	**16.9%**	**16.9%**	**7.4%**	**3.7%**
Gold	3.6%	3.3%	18.0%	18.0%	8.9%	4.4%
Silver	4.9%	5.0%	13.8%	13.8%	2.7%	1.5%
Bloomberg Sub Livestock	**1.6%**	**0.1%**	**-6.0%**	**-6.0%**	**-0.6%**	**-5.5%**
Lean Hogs	4.9%	-14.9%	-19.1%	-19.1%	-9.5%	-11.9%
Live Cattle	-0.1%	9.3%	1.2%	1.2%	4.2%	-2.1%

Source: Bloomberg, FactSet

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

OIL MARKETS



Source: FactSet

INVESTMENT GUIDELINES

- **Blackrock Russell 1000 Index Fund**
  - The Blackrock Russell 1000 Index Fund shall be invested and reinvested primarily in a portfolio of Equity Securities with the objective of approximating as closely as practicable the capitalization weighted total rate of return of the Russell 1000 Index (large cap companies).
- **Blackrock Russell 2500 Index Fund**
  - The Blackrock Russell 2500 Index Fund shall be invested and reinvested primarily in a portfolio of Equity Securities with the objective of approximating as closely as practicable the capitalization weighted total rate of return of the Russell 2500 Index (mid and small cap companies).
- **Western Asset Management Index Plus Separate Account**
  - The objective of the Portfolio is to maximize the long term total return in the Portfolio while providing a core domestic equity exposure to the Standard & Poor's ("S&P") 500 Index and managing Portfolio risk. The Manager shall aim to exceed the total return of the S&P 500 index with all dividends reinvested in the index by 75 basis points on an annualized basis over a full market cycle.
- **Blackrock MSCI ACWI ex-U.S. IMI Index Fund**
  - The BlackRock MSCI ACWI ex-U.S. IMI Index Fund shall be invested and reinvested in a portfolio of International Equity Securities whose total rates of return will approximate as closely as practicable the capitalization-weighted total rates of return of the equity markets of selected non-U.S. developed and emerging countries.
- **Blackrock MSCI ACWI Equity Index Fund**
  - The BlackRock MSCI ACWI Equity Index Fund shall be invested and reinvested primarily in a portfolio of U.S. Equity Securities and International Equity Securities with the objective of approximating as closely as practicable the capitalization-weighted total rates of return of the equity markets of the U.S, non-U.S. developed and emerging countries.
- **Hexavest EAFE Equity Fund**
  - The Fund seeks to provide investors with capital appreciation and income generation by using a top-down approach and investing primarily in equity and quasi equity securities located in Europe, Australasia and the Far East ("EAFE") and which form part of the MSCI EAFE Index. The Fund seeks to achieve a rate of return that will exceed that of the index net of fees, and achieve a high ranking relative to similar funds over a full market cycle.

INVESTMENT GUIDELINES

- **Sprucegrove U.S. International Pooled Fund**
  - The Fund seeks to maximize the long-term rate of return while seeking to preserve investment capital by investing primarily in equity and quasi-equity securities of companies with more value characteristics located in developed markets in the Europe, Australasia and the Far East ("EAFE") Index and to outperform the index, net of fees and achieve a high ranking relative to similar funds over a full market cycle.
- **Walter Scott & Partners International Fund**
  - The Fund will invest in equity securities that meet certain quantitative and qualitative investment criteria and will seek long-term capital appreciation. The Fund will tend to focus on those industries or sectors with more growth characteristics and experiencing upper quartile economic growth and may avoid industries which are in secular economic decline. The Fund seeks to outperform the MSCI Europe, Australasia and the Far East ("EAFE") Index net of fees, and achieve a high ranking relative to similar funds over a full market cycle.
- **Blackrock U.S. Debt Index Fund**
  - The U.S. Debt Index Fund shall be invested and reinvested primarily in a portfolio of Debt Securities with the objective of approximating as closely as practicable the total rate of return of the market for Debt Securities as defined by the Bloomberg Barclays U.S. Aggregate Bond Index.
- **Western Asset Management Core Plus Fixed Income Separate Account**
  - The objective of the Portfolio is to provide above-average total return in a manner that is consistent with the typical rate-of-return volatility exhibited by broad market fixed income portfolios. The Fund will seek to outperform the Bloomberg Barclays U.S. Aggregate Index, net of fees, over a full market cycle.
- **Reams Unconstrained Fixed Income Separate Account**
  - The Portfolio will be broadly diversified across markets, sectors, securities, and maturities in a manner consistent with accepted standards of prudence. The objective of the Portfolio is to maximize risk-adjusted total return by systematically pursuing relative value opportunities throughout all sectors of the fixed income market. The Portfolio will seek returns in excess of the Bloomberg/Barclays U.S Aggregate Bond Index and/or the three month London Interbank Offered Rate (“LIBOR”) in U.S. dollars plus 3% net of fees with an expected risk volatility goal of approximately 4 to 6% over a full market cycle.

INVESTMENT GUIDELINES

- **Loomis, Sayles & Company Multisector Full Discretion Separate Account**
  - The fixed income portfolio should be broadly diversified across markets, sectors, securities, and maturities in a manner consistent with accepted standards of prudence. The objective of the Portfolio is to provide above-average total return in a manner that is consistent with the typical rate-of-return volatility exhibited by broad market fixed income portfolios. The return of the Manager should exceed that of the custom benchmark (30% of the rate of return of the Citigroup High-Yield Index, 5% of the rate of return of the J.P. Morgan Non-U.S. Hedged Bond Index and 65% of the rate of return of the Bloomberg Barclays U.S. Aggregate Bond Index), net of fees, over a full market cycle.
- **Loomis, Sayles & Company Strategic Alpha Fund**
  - The objective of the Fund is to provide absolute returns in excess of the Bloomberg/Barclays U.S Aggregate Bond Index and/or the three month London Interbank Offered Rate ("LIBOR") in U.S. dollars plus 3% net of fees with an expected risk volatility goal of approximately 4 to 6% over a full market cycle.
- **Reams 10-Year Treasuries**
  - The portfolio shall be invested in 10-Year U.S. Treasury Debt Securities with the objective of returning the rate of return on a 10-Year U.S. Treasury Debt Security.
- **Bridgewater Associates All Weather Portfolio**
  - The investment objective of the Fund is to seek to provide attractive returns with relatively limited risks, with no material bias to perform better or worse in any particular type of economic environment. In other words, the portfolio seeks to perform approximately as well in rising or falling inflation periods, or in periods of strong or weak economic growth. To achieve this objective, the Fund holds investments in different asset classes that have different biases to economic conditions. The Manager will seek to outperform the CPI + 4% (Unadjusted) benchmark net of fees over a full market cycle.
- **Tortoise Energy Infrastructure Master Limited Partnership**
  - The Manager will invest in master limited partnerships with an investment approach that emphasizes a long-term, buy-and-hold philosophy with low turnover in an effort to achieve a portfolio characterized by high current income, high growth and low volatility. The Manager invests primarily in long-haul pipelines and gathering & processing pipelines. The Manager will seek to outperform the Wells Fargo MLP Index net of fees over a full market cycle.

INVESTMENT GUIDELINES

- **PGIM Real Estate Property Investment Separate Account**
  - PRISA is a broadly diversified equity real estate portfolio that invests primarily in existing, income-producing properties with strong cash flow that is expected to increase over time and thereby provide the potential for capital appreciation. The Fund's performance objective is to produce a total return each year that meets or exceeds the National Council of Real Estate Investment Fiduciaries Fund Index – Open-End Diversified Core Equity ("NCREIF-ODCE") net of fees, while maintaining the benefits of a broadly diversified, core real estate portfolio.
- **UBS Realty Investors Trumbull Property Fund**
  - The Fund seeks to provide investors with strategic market access to high-quality private commercial real estate with the financial objective of providing superior risk-adjusted returns across the real estate cycles. Maximize the quality and growth of the Fund's income by acquiring and aggressively managing high quality assets in major US metropolitan markets to minimize risk through diversification by property type, geographic location and economic sector. The Fund's performance objective is to outperform the National Council of Real Estate Investment Fiduciaries Fund Index – Open-End Diversified Core Equity ("NCREIF-ODCE") index net of fees, and a 5% real rate of return (inflation-adjusted return) over a full market cycle.

INFORMATION DISCLAIMER

Information Disclaimer

- Past performance is no guarantee of future results.
- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.
- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.
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Reporting Methodology

- 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.