



NEPC, LLC

YOU DEMAND MORE. So do we.<sup>SM</sup>



**Vermont Pension  
Investment Committee**  
**Fourth Fiscal Quarter 2017 Preliminary  
Investment Performance Analysis**

September 26, 2017

Christopher Levell, ASA, CFA, CAIA, Partner  
Margaret Belmondo, CIMA®, Senior Consultant  
Nedelina Petkova, Senior Analyst

255 State Street, Boston, MA 02109 | TEL: 617.374.1300 | FAX: 617.374.1313 | [www.nepc.com](http://www.nepc.com)

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

# NEPC Update



# Highlights of Second Quarter Happenings at NEPC

June 30, 2017

## NEPC Insights

- 2017 First Quarter Market Thoughts (April 2017)
- The French Election – A Sigh of Relief (May 2017)
- An Insight into a Goals-Based Asset Allocation Framework (May 2017)
- The Essential Guide to Third-Party Valuations for Hedge Fund Investors (May 2017)
- Market Chatter: What's Next for Puerto Rico Bondholders? (June 2017)
- Are US Equities Falling out of Favor? (June 2017)

## Webinar Replays

- NEPC's 7th Annual Investment Manager Webinar (May 2017)

To download NEPC's recent insights and webinar replays, visit: [www.NEPC.com/insights](http://www.NEPC.com/insights)

## Conference Recap

- NEPC hosted its 22<sup>nd</sup> Annual Investment Conference in Boston in May. This year's agenda focused on the uncertainty and challenges facing investors today. Over 200 NEPC clients attended the panel discussions, keynote presentations and breakout sessions. Thank you to everyone who took time out of their schedules to make this conference our biggest and, according to our attendees, our best one yet! Check out some pictures from the event here: <http://info.nepc.com/nepc-22nd-annual-investment-conference>



## Recent Updates

- Healthcare Financial Management Association (HFMA) has awarded NEPC's Healthcare practice with the "Peer Reviewed by HFMA ®" designation.\*



## NEPC Gives Back

- NEPC's Stacey Flier, CFA, Private Wealth Senior Consultant, hosted an educational day to discuss the importance of education and preparing for future careers to a group of 7th grade girls that attend St. Andrew Nativity School, a college-prep middle school in Portland, OR, that provides education for low-income, primarily minority, students of all religious backgrounds.
- NEPC participated in the J.P. Morgan Corporate Challenge Series, a world-wide series of 3.5-mile running events open to groups from organizations within the business and public sectors in Boston. The Corporate Challenge is set up to be the world's greenest road race, and this year the race made a donation to the Boston Children's Hospital Trust.



\*HFMA staff and volunteers determined that this business solution has met specific criteria developed under the HFMA Peer Review Process. HFMA does not endorse or guarantee the use of this business solution.

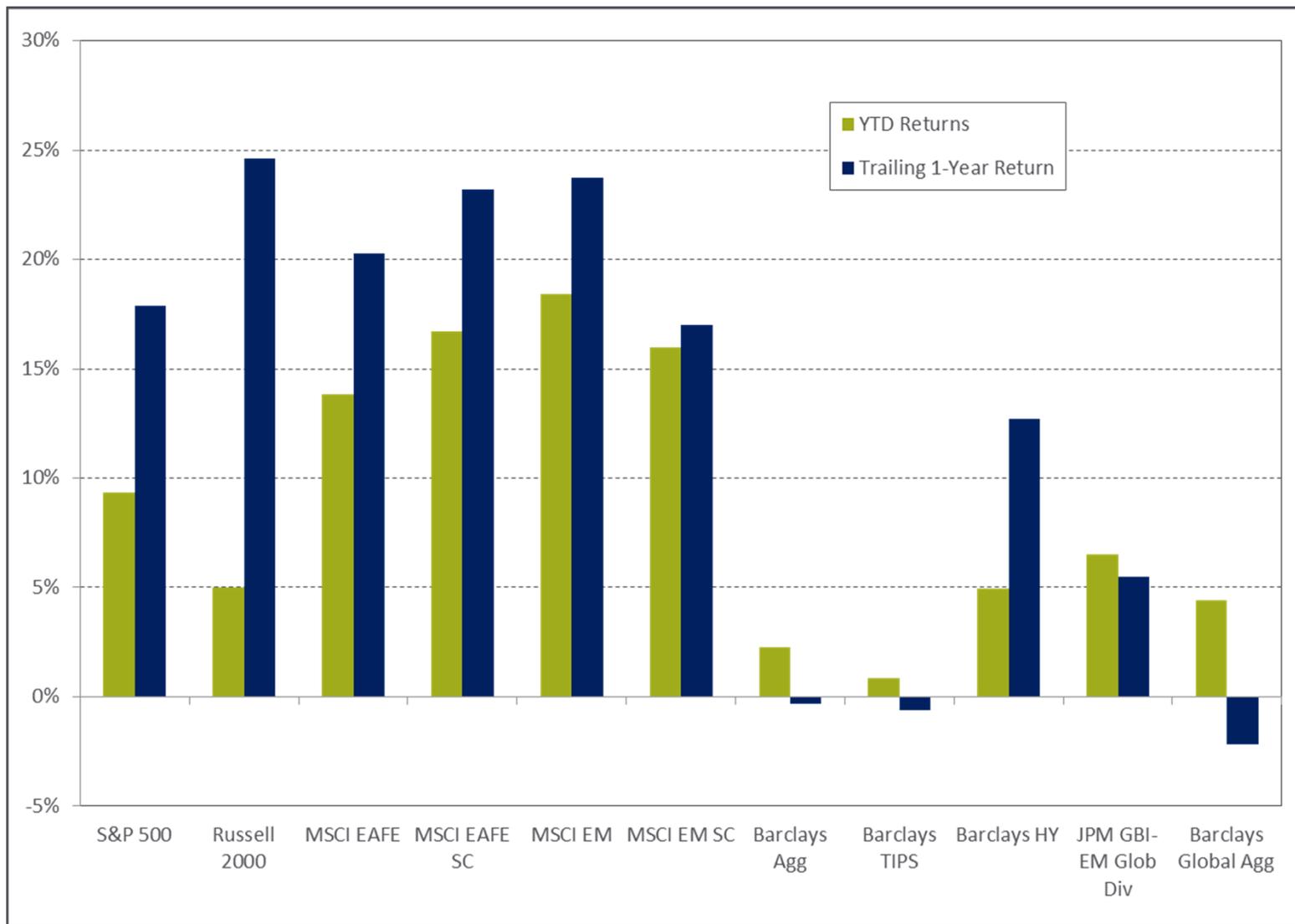
# Market Environment



- **The US economy is experiencing an extended economic growth cycle**
  - US consumers and a tightening labor market are driving the US economy
  - Growth recovery in Europe and the emerging markets reinforces US economic conditions
  - Stable economic growth is a positive backdrop but expected risk asset returns are subdued
- **Federal Reserve monetary policy remains on a gradual normalization path**
  - Despite the June increase, markets continue to price in a slow pace for Fed rate hikes
  - Market impact of the Fed's planned reduction of the \$4.5T balance sheet is untested
  - Chair Yellen's uncertain tenure may stoke market unease as her term expires in Feb. 2018
- **China is modestly tightening financial conditions to slow credit growth and manage an orderly transition to a consumer led economy**
  - Markets have responded positively to the PBOC's management of a more stable yuan
  - Capital outflow pressure persists and large scale currency devaluation remains a tail risk
  - Continued credit expansion and real estate development risk inflating asset price bubbles
- **Globalization backlash is disrupting the political and economic orthodoxy**
  - Outcomes of the French and UK elections have eased market fears but conditions driving anti-establishment political sentiment have not subsided
  - Capital market fundamentals may not be materially altered but risks stemming from globalization backlash likely lead to higher levels of currency volatility
  - Potential changes to US trade policy under the current administration remain uncertain

- **Trim US equity gains as US equity markets continue to rally**
  - Expanding valuations have driven recent gains and profit margins sit near all-time highs
- **Maintain overweight exposure to non-US developed market equities**
  - We believe a multi-year earnings recovery offers the potential for an elevated return
- **Emerging market equities remain attractive and offer robust total returns**
  - Fundamentals support an overweight relative to index weights (e.g. 15% to 20%)
- **Allocate to TIPS as inflation expectations are priced attractively**
  - Preserve US duration exposure with a bias to TIPS over core bonds
- **Reduce high yield bonds with credit spreads below long-term medians**
  - Credit markets continue to benefit from high demand in a low rate environment but current credit spread levels do not provide adequate compensation for the risks
- **For tactical investors, look to fund emerging local debt from risk assets**
  - Valuations for many emerging market currencies remain attractive despite the recent rally
- **Add macro hedge fund strategies for portfolio diversification benefits**
  - Systematic strategies tend to exhibit low correlation to equity markets

# Year to Date Performance: All Assets Have Moved Higher



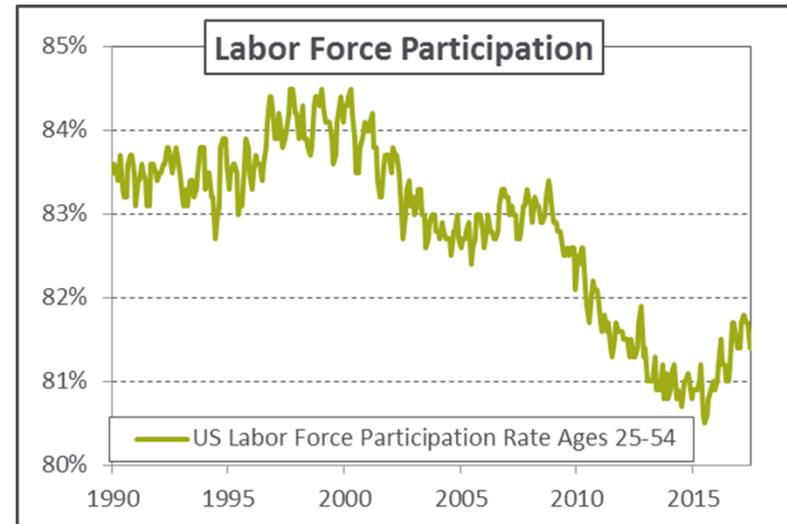
Source: S&P, Russell, MSCI, Barclays, JPM, Bloomberg  
As of 06/30/2017

### Extended US Economic Cycle

#### US recession concerns are muted

The US economy appears on a path of slow but steady growth as excess capacity is gradually absorbed by the economy

The labor market recovery has been strong but slack remains as many have yet to return to the workforce

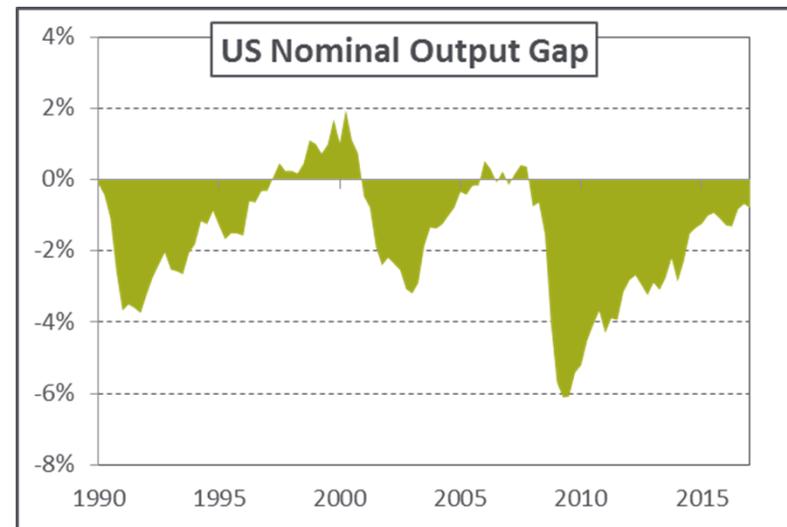


Source: FRED

#### US household balance sheets have room to expand and support further consumer spending gains

Improvement of economic conditions in Europe and emerging markets reinforce US economic gains as global growth factors synchronize

US corporate profitability is near all time highs and may be a challenge for companies to boost economic growth rate



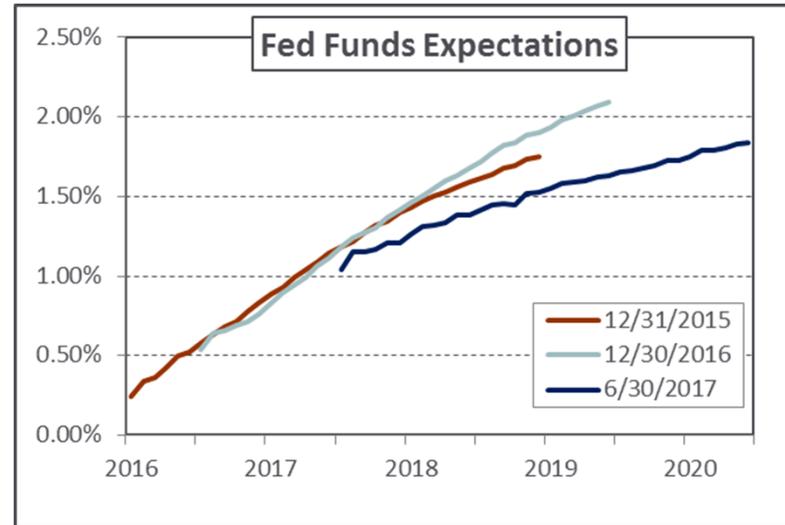
Source: Congressional Budget Office, Bloomberg

**Federal Reserve Gradualism**

**The Federal Reserve is expected to slowly increase interest rates**

Expected path of Fed policy through 2019 matters more than timing of the next hike as the disconnect between market expectations and Fed signaling has grown

A relatively accommodative Fed is likely to continue, unless there is a dramatic acceleration in inflation

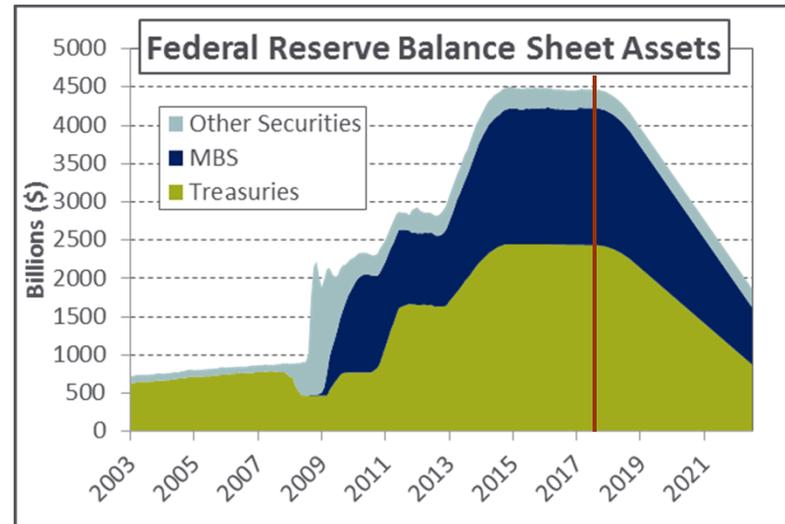


Source: Fed, Bloomberg

**Reduction of the Fed balance sheet will likely be a gradual process**

The market impact is untested but the Fed has announced a specific schedule to not reinvest a portion of the balance sheet securities that mature

Politics could intersect with Fed policy as Fed Chair Janet Yellen's term is set to expire in February 2018



Source: Fed, Bloomberg, NEPC

Forecast based on the June Fed Minutes: MBS assumes \$4B per month for 3-month intervals over 12 months with a \$20B cap; Treasuries assume \$6B per month for 3-month intervals over 12 months with a \$30B cap; Other Securities are assumed to stay constant

Despite Transparency, a Number of Outstanding Questions Remain...

**What does this mean for the future path of rate hikes?**

*“The evolution of the economy will warrant gradual increases in the federal funds rate over time to achieve and maintain maximum employment and stable prices.”*

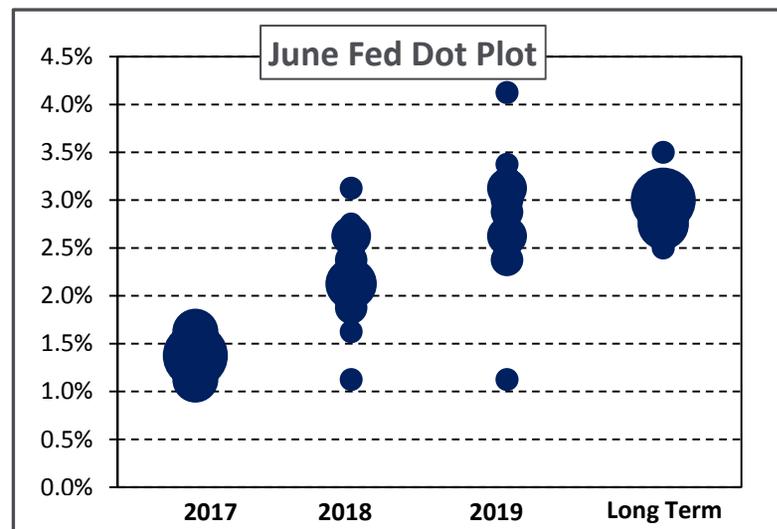
- Fed Chair Janet Yellen July 12<sup>th</sup>, 2017

**What implications does this have for other central banks?**

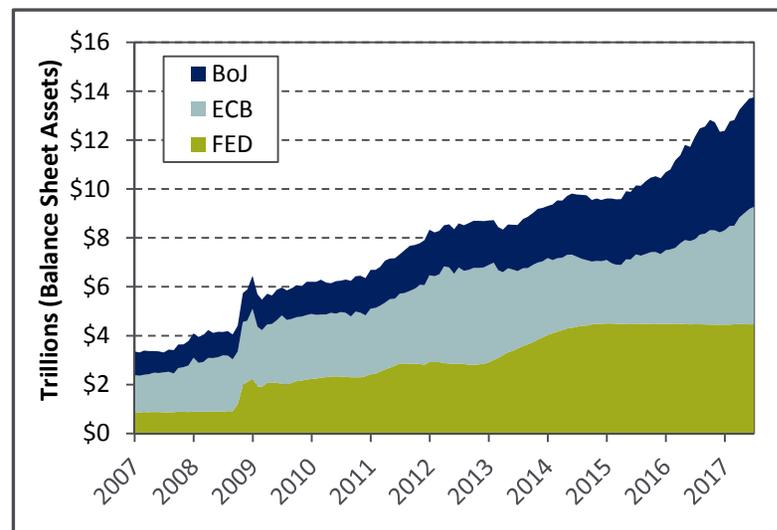
**ECB:** “A very substantial degree of monetary accommodation is still needed for underlying inflation pressures to gradually build...”

- ECB President Mario Draghi July 20<sup>th</sup>, 2017

**BoJ:** Though the monetary stimulus program remained unchanged in July, the 2% inflation target was postponed further – indicating ongoing stimulus measures will continue to be necessary



Source: Fed, NEPC



Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

## The Fed's Challenge

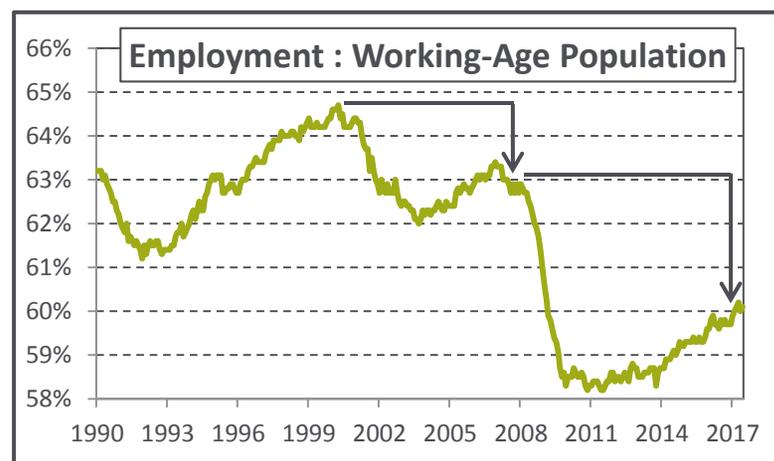
*“With further gradual adjustments in the stance of monetary policy, the economy will continue to expand at a moderate pace over the next couple of years, with the job market strengthening somewhat further and inflation rising to 2%”*

- Fed Chair Janet Yellen July 12<sup>th</sup>, 2017

- **The ongoing challenge for the Fed will be to balance continued strength in the labor market with lagging inflation**
  - Even with sustained improvements in unemployment, there has been significant difficulty reaching the 2% inflation target
- **Despite historically low unemployment, structural changes in demographics and the labor pool have introduced uncertainty regarding the remaining slack in the labor force**



Source: Bureau of Labor Statistics, Bloomberg



Source: Bureau of Labor Statistics  
Represents employed persons as a percentage of age 16+ population

China Transitions

**China is the global growth engine but faces fundamental transitions**

China’s economic transition is pivoting from a production to a service and consumption based economy

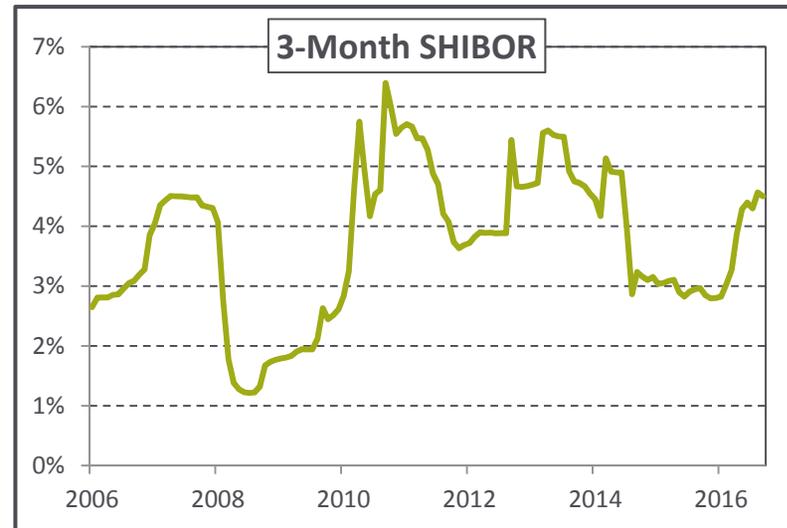
Fixed investment is required to sustain the production based economy and support labor force migration

Any disruption to these transitions will have global repercussions due to China’s role in the global economy

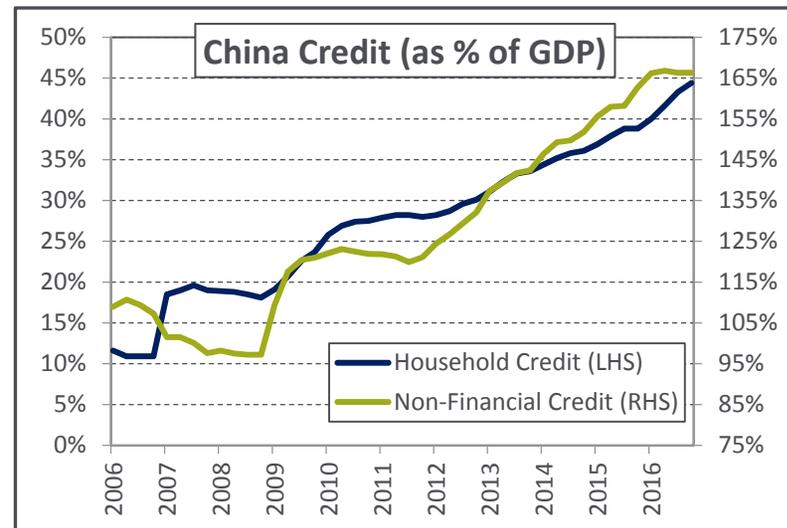
**China’s government is negotiating a balance between deleveraging and near term economic growth**

Unrestrained growth in credit and real estate markets pose a systematic risk

Concerns of capital outflows have forced greater intervention from the central bank to limit currency movements



Source: China Foreign Exchange Trade System, Bloomberg



Source: Bank for International Settlements

# State Municipal Employees' Retirement System

# Vermont Municipal Employees

## Total Fund Performance Summary - Net

	Market Value	3 Mo Rank	YTD Rank	Fiscal YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	7 Yrs Rank	10 Yrs Rank								
<b>Municipal Composite</b>	<b>\$604,084,965</b>	<b>2.7%</b>	<b>59</b>	<b>6.9%</b>	<b>62</b>	<b>10.8%</b>	<b>70</b>	<b>10.8%</b>	<b>70</b>	<b>3.6%</b>	<b>86</b>	<b>6.6%</b>	<b>90</b>	<b>7.8%</b>	<b>76</b>	<b>4.2%</b>	<b>80</b>
<i>Policy Index</i>		2.5%	77	6.3%	82	10.1%	84	10.1%	84	3.8%	81	6.5%	93	7.3%	90	4.3%	78
<i>Allocation Index</i>		2.7%	59	6.8%	66	10.6%	74	10.6%	74	3.8%	81	6.6%	91	7.3%	89	4.3%	78
<i>InvestorForce Public DB Net Median</i>		2.8%		7.3%		11.9%		11.9%		4.9%		8.2%		8.6%		5.0%	

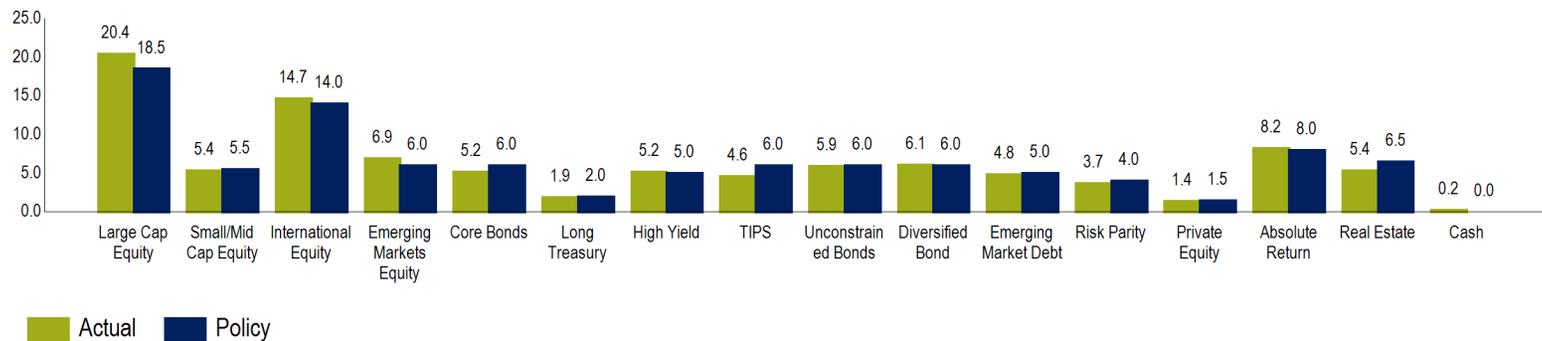
### 3 Years Ending June 30, 2017

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Municipal Composite	3.65%	86	5.72%	28	0.60	80	1.02	67
Policy Index	3.78%	81	5.24%	10	0.68	65	1.18	47
Allocation Index	3.79%	81	5.52%	22	0.64	73	1.08	60

### 5 Years Ending June 30, 2017

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Municipal Composite	6.64%	90	5.54%	33	1.17	84	2.02	72
Policy Index	6.48%	93	5.05%	13	1.25	74	2.24	49
Allocation Index	6.59%	91	5.19%	20	1.24	75	2.13	61

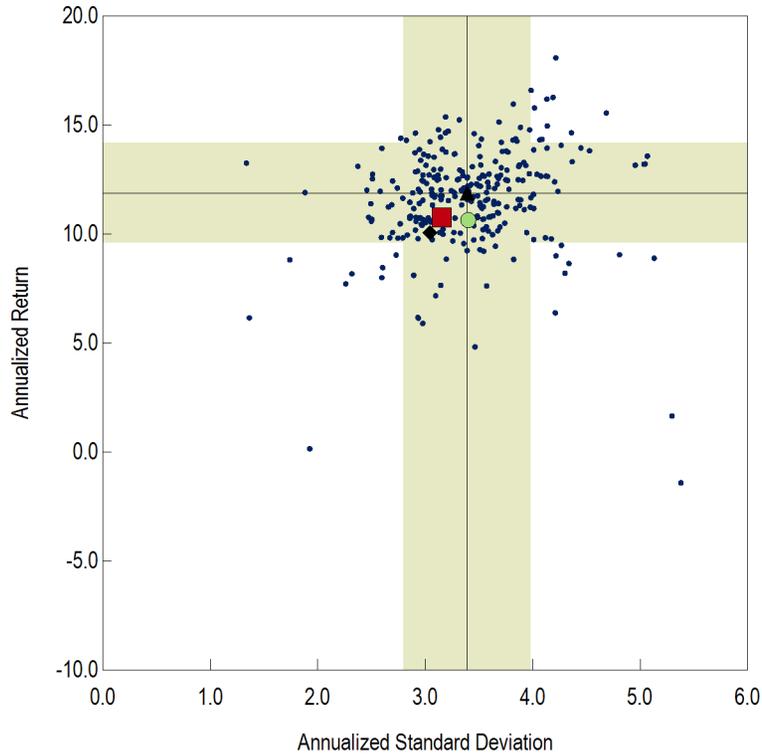
### Actual vs Target Allocation (%)



# Vermont Municipal Employees

## Total Fund Risk/Return - Net

1 Years Ending June 30, 2017



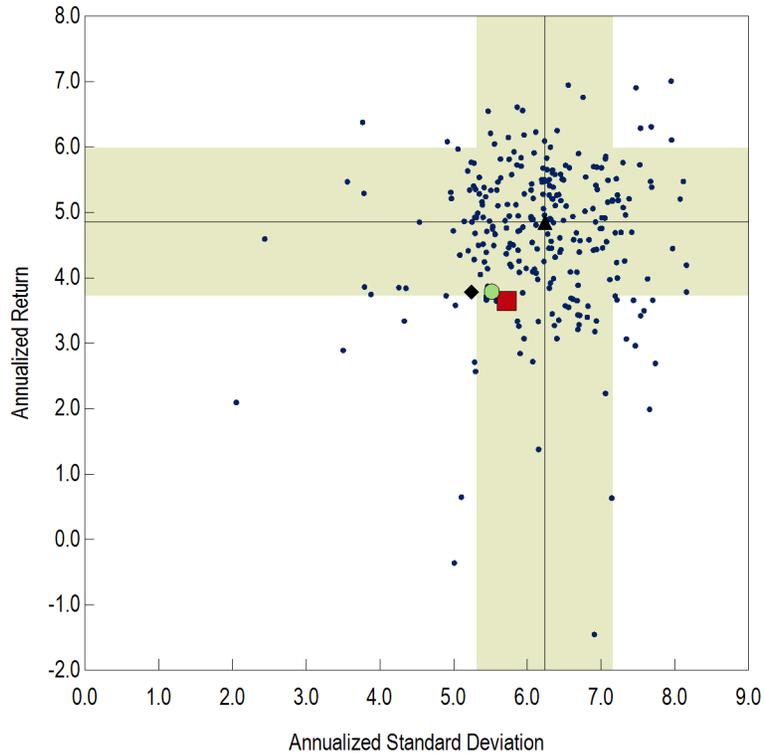
1 Year Ending June 30, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Municipal Composite	10.77%	70	3.15%	38	3.24	59
Policy Index	10.07%	84	3.05%	27	3.13	66
S&P 500	17.90%	1	6.09%	99	2.85	80
Citi WGBI	-4.14%	99	6.58%	99	-0.71	99
MSCI ACWI	18.78%	1	5.34%	99	3.42	45
MSCI ACWI ex USA	20.45%	1	7.16%	99	2.78	84
InvestorForce Public DB Net Median	11.88%	--	3.39%	--	3.34	--

# Vermont Municipal Employees

## Total Fund Risk/Return - Net

3 Years Ending June 30, 2017



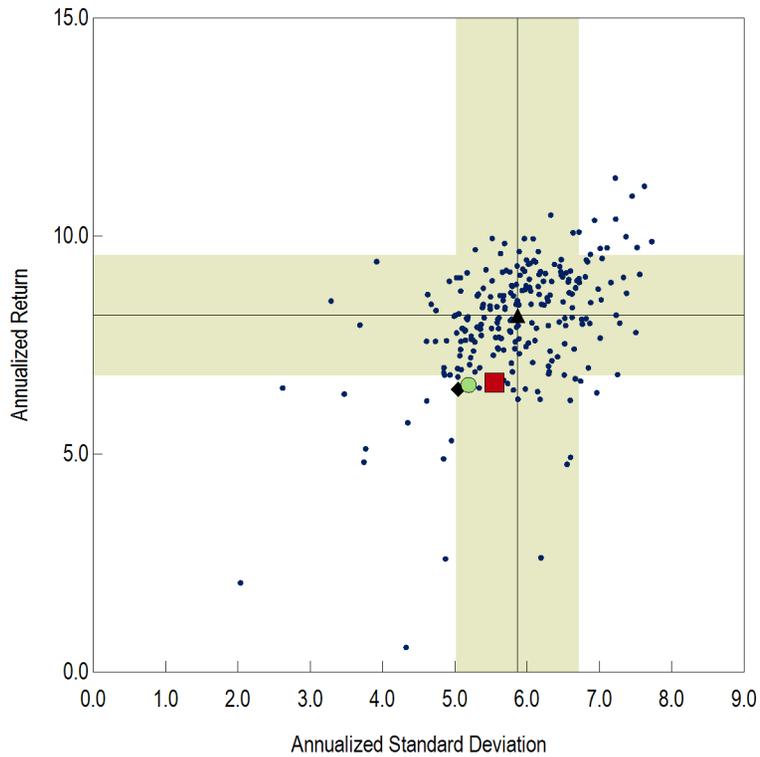
3 Years Ending June 30, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Municipal Composite	3.65%	86	5.72%	28	0.60	80
Policy Index	3.78%	81	5.24%	10	0.68	65
S&P 500	9.61%	1	10.35%	99	0.91	18
Citi WGBI	-1.00%	99	5.98%	40	-0.21	99
MSCI ACWI	4.82%	51	10.78%	99	0.43	96
MSCI ACWI ex USA	0.80%	99	12.44%	99	0.05	99
InvestorForce Public DB Net Median	4.85%	--	6.24%	--	0.74	--

# Vermont Municipal Employees

## Total Fund Risk/Return - Net

5 Years Ending June 30, 2017



5 Years Ending June 30, 2017

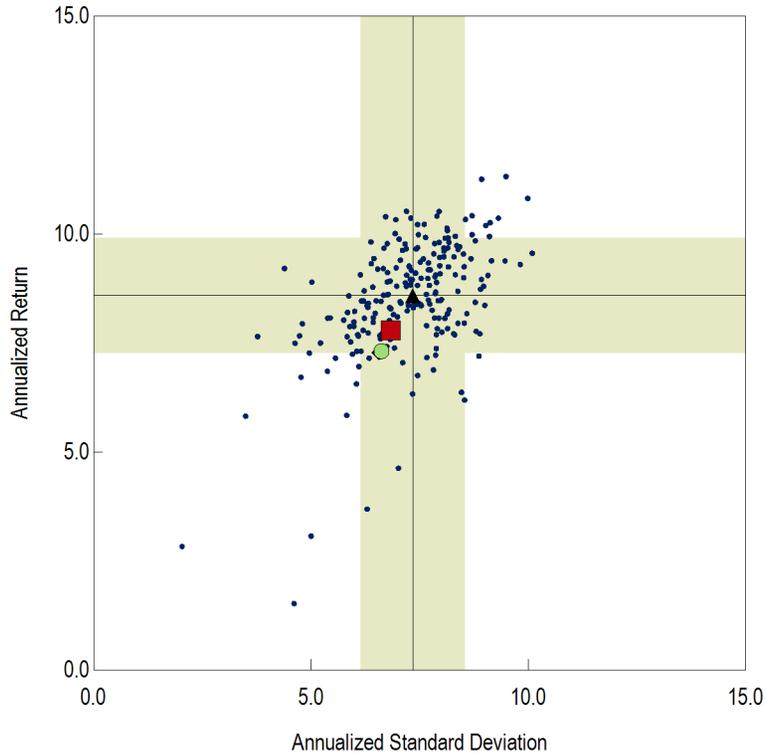
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Municipal Composite	6.64%	90	5.54%	33	1.17	84
Policy Index	6.48%	93	5.05%	13	1.25	74
S&P 500	14.63%	1	9.56%	99	1.51	23
Citi WGBI	-0.20%	99	5.33%	25	-0.07	99
MSCI ACWI	10.54%	2	9.97%	99	1.04	93
MSCI ACWI ex USA	7.22%	80	11.56%	99	0.61	99
InvestorForce Public DB Net Median	8.19%	--	5.87%	--	1.37	--



# Vermont Municipal Employees

## Total Fund Risk/Return - Net

7 Years Ending June 30, 2017



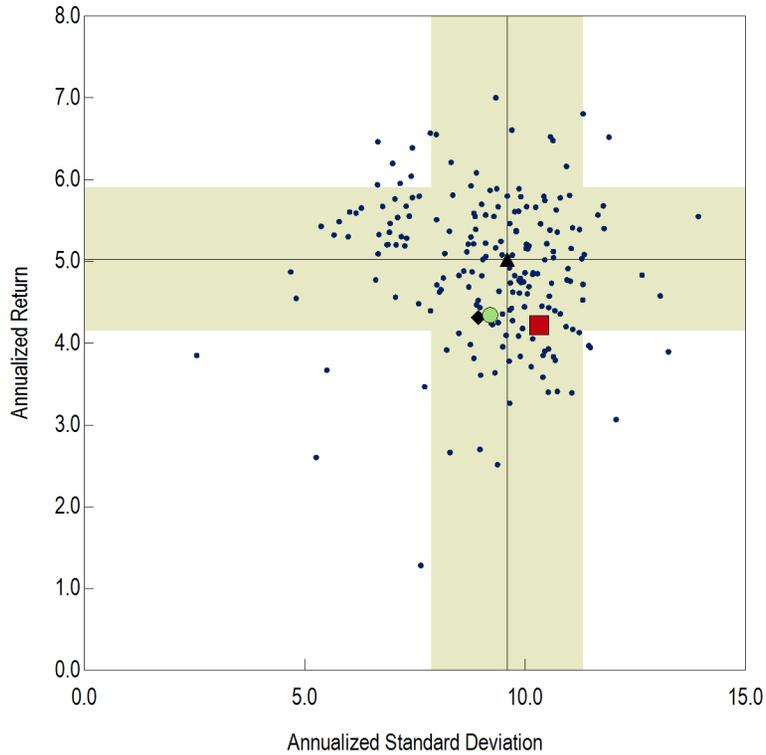
7 Years Ending June 30, 2017

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Municipal Composite	7.79%	76	6.84%	36	1.12	65
Policy Index	7.28%	90	6.56%	25	1.09	73
S&P 500	15.41%	1	11.69%	99	1.31	22
Citi WGBI	1.68%	99	5.67%	8	0.27	99
MSCI ACWI	10.48%	3	13.05%	99	0.79	98
MSCI ACWI ex USA	6.66%	96	14.97%	99	0.44	99
InvestorForce Public DB Net Median	8.59%	--	7.34%	--	1.17	--

# Vermont Municipal Employees

## Total Fund Risk/Return - Net

10 Years Ending June 30, 2017

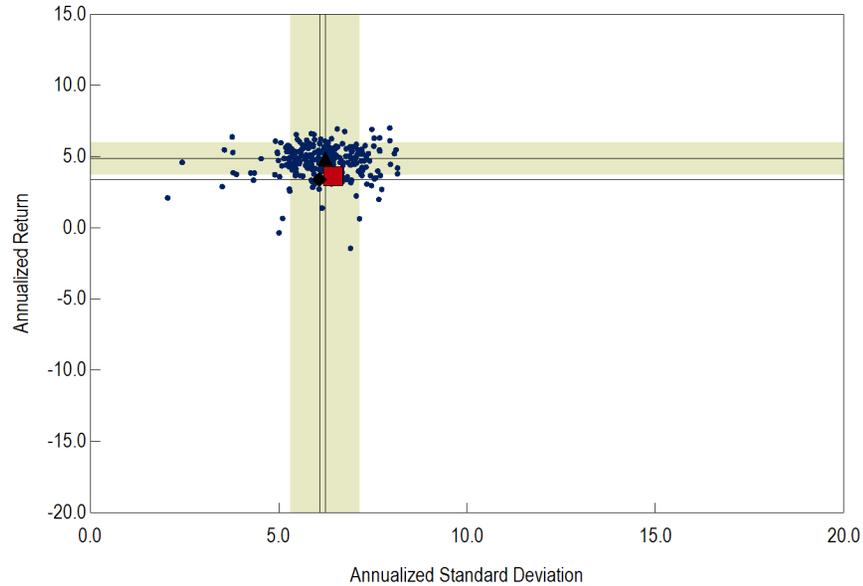


- Municipal Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Net

10 Years Ending June 30, 2017

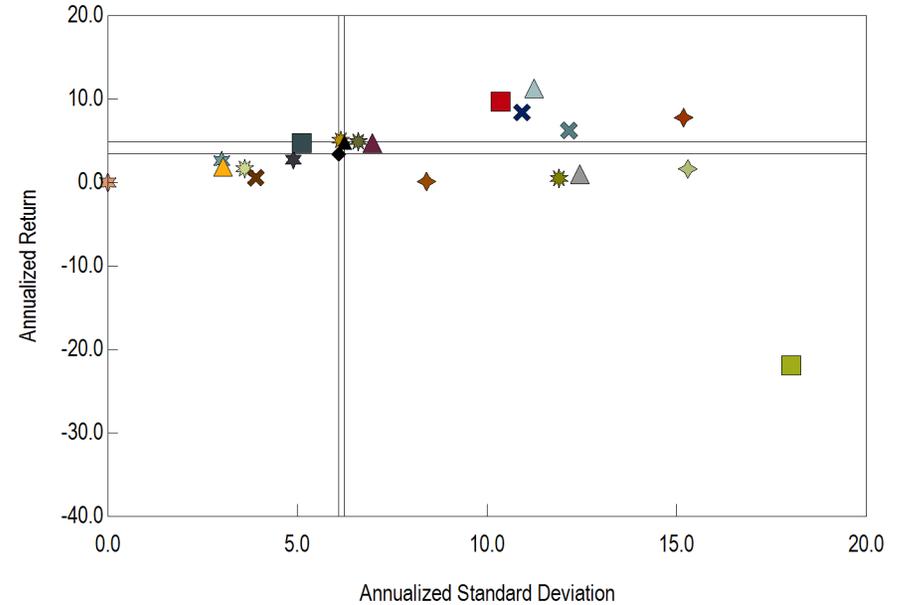
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Municipal Composite	4.22%	80	10.30%	72	0.37	84
Policy Index	4.31%	78	8.93%	36	0.43	64
S&P 500	7.18%	1	15.21%	99	0.44	59
Citi WGBI	3.49%	95	6.80%	9	0.45	57
MSCI ACWI	3.71%	93	16.95%	99	0.19	99
MSCI ACWI ex USA	1.13%	99	19.14%	99	0.04	99
InvestorForce Public DB Net Median	5.03%	--	9.59%	--	0.48	--

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2017



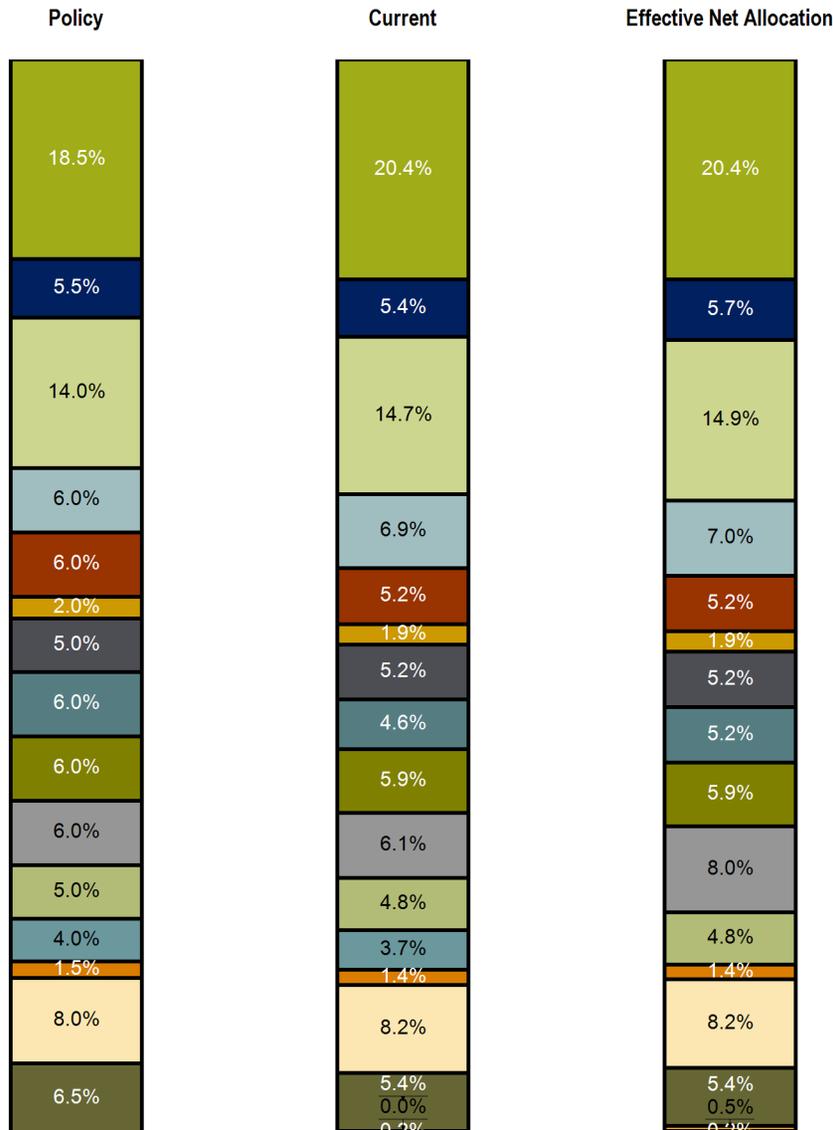
- Total Marketable Assets
- ◆ Total Marketable Assets Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Net

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2017



- SSgA S&P 500 Cap-Wgt
- ◆ SSgA S&P 500 Equal-Wgt
- T. Rowe
- ▲ Champlain
- ◆ Wellington
- ✱ Acadian
- ✱ Mondrian
- ▲ SSgA ACWI Ex US
- ◆ Aberdeen
- ✱ PIMCO Core Plus
- ✱ Z Terminated - Wellington DAS
- ▲ PIMCO Unconstrained
- ✱ KDP
- Guggenheim
- ✱ BlackRock TIPS
- ✱ Wellington Opportunistic EMD
- ▲ Mellon Dynamic Growth
- ◆ AQR Global Risk Premium
- ✱ Vermont Cash
- Z Terminated - Schroder
- ◆ Total Marketable Assets Custom Index
- ▲ Universe Median
- 68% Confidence Interval

Total Fund Asset Allocation vs. Policy Targets



Asset Allocation vs. Target

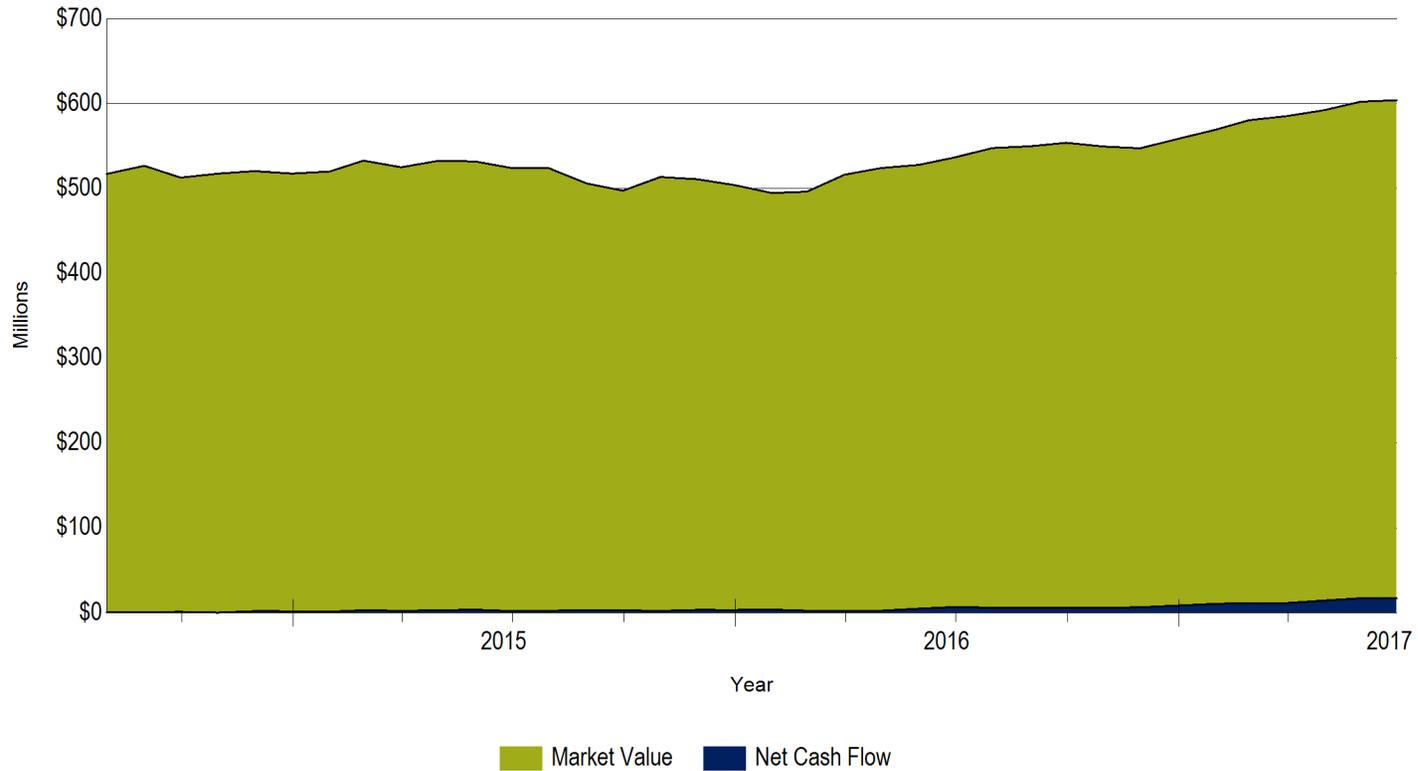
	Policy	Current	Effective Net Allocation
Large Cap Equity	18.5%	20.9%	20.4%
Small/Mid Cap Equity	5.5%	5.5%	5.7%
International Equity	14.0%	15.0%	14.9%
Emerging Markets Equity	6.0%	7.0%	7.0%
Core Bonds	6.0%	5.3%	5.2%
Long Treasury	2.0%	1.9%	1.9%
High Yield	5.0%	5.3%	5.2%
TIPS	6.0%	4.7%	5.2%
Unconstrained Bonds	6.0%	6.1%	5.9%
Diversified Bond	6.0%	6.2%	8.0%
Emerging Market Debt	5.0%	4.9%	4.8%
Risk Parity	4.0%	3.8%	4.8%
Private Equity	1.5%	1.4%	1.4%
Absolute Return	8.0%	8.4%	8.2%
Real Estate	6.5%	3.2%	5.4%
Commodities	--	--	0.5%
Cash	--	0.2%	0.2%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Effective Net Allocation breaks out the exposure of AQR Global Risk Premium. Absolute Return includes Grosvenor, Pinnacle Natural Resources, L.P., and Allianz Structured Alpha.

# Vermont Municipal Employees

## Total Fund Asset Growth Summary

3 Years Ending June 30, 2017



	Last Three Months	Year-To-Date	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$585,326,454	\$558,383,878	\$536,594,955	\$536,594,955	\$522,918,152
Contributions	\$66,538,302	\$72,606,739	\$91,613,657	\$91,613,657	\$308,675,982
Withdrawals	-\$60,951,467	-\$64,081,323	-\$81,428,283	-\$81,428,283	-\$291,767,983
Net Cash Flow	\$5,586,835	\$8,525,416	\$10,185,374	\$10,185,374	\$16,907,999
Net Investment Change	\$13,171,675	\$37,175,670	\$57,304,635	\$57,304,635	\$64,258,814
Ending Market Value	\$604,084,965	\$604,084,965	\$604,084,965	\$604,084,965	\$604,084,965



## Vermont Municipal Employees

### Total Fund Asset Growth Summary by Manager

	Quarter Ending June 30, 2017					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Aberdeen	\$39,061,679	\$73,605	-\$73,605	\$0	\$2,570,614	\$41,632,293
Acadian	\$26,123,551	\$28,745	-\$28,745	\$0	\$2,822,388	\$28,945,939
Allianz Structured Alpha	\$10,164,856	\$0	-\$40,726	-\$40,726	\$180,484	\$10,304,614
AQR Global Risk Premium	\$43,061,319	\$49,128	-\$21,353,674	-\$21,304,546	\$658,964	\$22,415,737
BlackRock TIPS	\$21,504,651	\$6,264,476	-\$3,567	\$6,260,909	-\$94,349	\$27,671,211
Champlain	\$13,096,781	\$3,724,185	-\$24,792	\$3,699,394	\$764,721	\$17,560,896
GAM	\$56,898	\$0	\$0	\$0	\$535	\$57,433
GAM Unconstrained Bond	\$20,565,665	\$0	-\$25,796	-\$25,796	\$424,344	\$20,964,213
Grosvenor	\$26,475,247	\$0	\$0	\$0	\$115,256	\$26,590,503
Guggenheim	\$23,737,018	\$26,955	-\$26,955	\$0	\$421,152	\$24,158,169
Harbourvest Dover Street Fund IX	\$547,184	\$247,649	\$0	\$247,649	\$0	\$794,834
Harbourvest Dover VIII Fund	\$2,285,327	\$0	-\$90,605	-\$90,605	\$0	\$2,194,722
Harbourvest Partners IX Buyout Fund	\$1,937,207	\$0	-\$19,695	-\$19,695	\$0	\$1,917,512
Harbourvest Partners IX Credit Opportunities	\$279,509	\$0	-\$5,333	-\$5,333	\$0	\$274,176
Harbourvest Partners IX Venture Fund	\$1,452,052	\$0	-\$5,797	-\$5,797	\$0	\$1,446,255
Harbourvest Partners X Buyout Fund	\$662,929	\$157,690	-\$54,870	\$102,820	\$0	\$765,749
Harbourvest Partners X Venture Fund	\$295,498	\$81,098	\$0	\$81,098	\$0	\$376,596
HIPEP VII	\$595,324	\$68,069	\$0	\$68,069	\$0	\$663,393
KDP	\$6,885,674	\$9,068	-\$9,068	\$0	\$124,085	\$7,009,759
Mellon Dynamic Growth	\$10,584,924	\$0	-\$10,680,409	-\$10,680,409	\$111,509	\$16,023
Mondrian	\$24,055,067	\$20,331	-\$20,331	\$0	\$1,053,621	\$25,108,688
Morgan Stanley Prime Property	\$13,496,090	\$0	\$0	\$0	\$0	\$13,496,090
PIMCO Core Plus	\$33,298,797	\$3,024,130	-\$24,130	\$3,000,000	\$578,076	\$36,876,872
PIMCO Unconstrained	\$14,737,862	\$20,703	-\$20,703	\$0	\$159,414	\$14,897,276
Pinnacle Natural Resources, L.P.	\$7,303,611	\$6,254,697	\$0	\$6,254,697	-\$736,465	\$12,821,844

## Vermont Municipal Employees

### Total Fund Asset Growth Summary by Manager

	Quarter Ending June 30, 2017					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
RREEF America REIT III	\$57,522	\$0	-\$246	-\$246	-\$1,416	\$55,859
Siguler Guff DREOF II	\$6,390,428	\$0	-\$177,651	-\$177,651	\$239,821	\$6,452,598
Siguler Guff DREOF II Co-Investment	\$1,259,767	\$0	\$0	\$0	\$28,733	\$1,288,501
SSgA ACWI Ex US	\$24,808,996	\$8,135,392	-\$4,593	\$8,130,799	\$1,638,164	\$34,577,959
SSgA Barclays Aggregate Index	\$17,221,596	\$13,867,325	-\$1,997	\$13,865,328	\$331,931	\$31,418,855
SSgA S&P 500 Cap-Wgt	\$82,934,616	\$9,198,080	-\$4,868	\$9,193,212	\$2,725,393	\$94,853,221
SSgA S&P 500 Equal-Wgt	\$27,789,093	\$2,730	-\$2,730	\$0	\$711,279	\$28,500,373
State Street Long U.S. Treasury Index	--	\$11,408,372	\$0	\$11,408,372	\$66,408	\$11,474,780
T. Rowe	\$1,141	\$0	\$0	\$0	\$0	\$1,141
Transwestern / Aslan III	\$28,766	\$0	\$0	\$0	\$0	\$28,766
UBS Trumbull	\$11,101,738	\$24,469	-\$24,469	\$0	\$130,689	\$11,232,427
Vermont Cash	\$835,416	\$822,516	-\$369,468	\$453,049	\$0	\$1,288,465
Wellington	\$11,993,412	\$3,027,941	-\$22,803	\$3,005,138	-\$198,792	\$14,799,757
Wellington Opportunistic EMD	\$28,444,414	\$0	\$0	\$0	\$707,054	\$29,151,468
Z Terminated - Schroder	\$6,412,516	\$0	-\$6,254,697	-\$6,254,697	-\$157,819	\$0
Z Terminated - SSgA Russell 2000 Growth	\$4,425,560	\$544	-\$3,005,681	-\$3,005,138	-\$1,420,422	\$0
Z Terminated - SSgA S&P 400	\$4,773,112	\$403	-\$3,699,796	-\$3,699,394	-\$1,073,718	\$0
Z Terminated - Wellington DAS	\$14,583,643	\$0	-\$14,873,665	-\$14,873,665	\$290,022	\$0
<b>Total</b>	<b>\$585,326,454</b>	<b>\$66,538,302</b>	<b>-\$60,951,467</b>	<b>\$5,586,835</b>	<b>\$13,171,675</b>	<b>\$604,084,965</b>

# Vermont Municipal Employees

## Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Municipal Composite</b>	<b>604,084,965</b>	<b>100.0</b>	<b>100.0</b>	<b>2.7</b>	<b>59</b>	<b>6.9</b>	<b>62</b>	<b>10.8</b>	<b>70</b>	<b>10.8</b>	<b>70</b>	<b>3.6</b>	<b>86</b>	<b>6.6</b>	<b>90</b>	<b>4.2</b>	<b>80</b>
<i>Policy Index</i>				2.5	77	6.3	82	10.1	84	10.1	84	3.8	81	6.5	93	4.3	78
<i>Allocation Index</i>				2.7	59	6.8	66	10.6	74	10.6	74	3.8	81	6.6	91	4.3	78
<i>InvestorForce Public DB Net Median</i>				2.8		7.3		11.9		11.9		4.9		8.2		5.0	
<b>Total Marketable Assets</b>	<b>513,323,094</b>	<b>85.0</b>	<b>--</b>	<b>3.1</b>	<b>28</b>	<b>8.0</b>	<b>18</b>	<b>11.7</b>	<b>54</b>	<b>11.7</b>	<b>54</b>	<b>3.6</b>	<b>86</b>	<b>6.6</b>	<b>92</b>	<b>--</b>	<b>--</b>
<i>Total Marketable Assets Custom Index</i>				2.9	44	7.1	55	10.6	74	10.6	74	3.4	90	6.6	91	--	--
<i>InvestorForce Public DB Net Median</i>				2.8		7.3		11.9		11.9		4.9		8.2		5.0	
<b>US Equity</b>	<b>155,715,387</b>	<b>25.8</b>	<b>24.0</b>	<b>2.7</b>	<b>52</b>	<b>7.9</b>	<b>48</b>	<b>18.0</b>	<b>59</b>	<b>18.0</b>	<b>59</b>	<b>9.2</b>	<b>26</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000</i>				3.0	46	8.9	39	18.5	55	18.5	55	9.1	27	14.6	34	7.3	46
<i>eA All US Equity Net Median</i>				2.8		7.6		19.1		19.1		7.6		13.8		7.1	
<b>Large Cap Comp</b>	<b>123,354,734</b>	<b>20.4</b>	<b>18.5</b>	<b>2.9</b>	<b>51</b>	<b>9.0</b>	<b>47</b>	<b>17.8</b>	<b>50</b>	<b>17.8</b>	<b>50</b>	<b>9.3</b>	<b>27</b>	<b>14.9</b>	<b>23</b>	<b>7.7</b>	<b>30</b>
<i>S&amp;P 500</i>				3.1	48	9.3	45	17.9	50	17.9	50	9.6	22	14.6	28	7.2	45
<i>eA US Large Cap Equity Net Median</i>				3.0		8.7		17.8		17.8		7.8		13.7		7.0	
<i>SSgA S&amp;P 500 Cap-Wgt</i>	94,853,221	15.7	14.0	3.1	48	9.3	45	18.0	49	18.0	49	9.6	22	14.7	28	--	--
<i>S&amp;P 500</i>				3.1	48	9.3	45	17.9	50	17.9	50	9.6	22	14.6	28	7.2	45
<i>SSgA S&amp;P 500 Equal-Wgt</i>	28,500,373	4.7	4.5	2.5	61	7.9	59	17.2	56	17.2	56	8.4	40	15.4	14	8.0	27
<i>S&amp;P 500 Equal Weighted</i>				2.5	61	8.1	58	17.3	56	17.3	56	8.5	37	15.5	13	8.3	19
<i>T. Rowe</i>	1,141	0.0	0.0														
<b>Small/Mid Cap Comp</b>	<b>32,360,653</b>	<b>5.4</b>	<b>5.5</b>	<b>1.7</b>	<b>65</b>	<b>4.5</b>	<b>71</b>	<b>18.2</b>	<b>61</b>	<b>18.2</b>	<b>61</b>	<b>9.1</b>	<b>19</b>	<b>14.6</b>	<b>27</b>	<b>8.2</b>	<b>29</b>
<i>Russell 2000</i>				2.5	51	5.0	69	24.6	15	24.6	15	7.4	38	13.7	44	6.9	62
<i>eA US Small-Mid Cap Equity Net Median</i>				2.5		6.6		19.7		19.7		6.6		13.4		7.4	
<i>Champlain</i>	17,560,896	2.9	2.8	4.8	24	10.6	33	21.3	18	21.3	18	11.3	4	16.0	12	--	--
<i>Russell 2500</i>				2.1	57	6.0	71	19.8	29	19.8	29	6.9	55	14.0	48	7.4	53
<i>eA US Mid Cap Equity Net Median</i>				2.5		8.1		17.2		17.2		7.2		14.0		7.6	
<i>Wellington</i>	14,799,757	2.4	2.8	-1.0	90	-2.4	93	14.6	94	14.6	94	7.8	33	13.0	65	8.1	17
<i>Russell 2000 Value</i>				0.7	56	0.5	64	24.9	30	24.9	30	7.0	46	13.4	60	5.9	76
<i>eA US Small Cap Value Equity Net Median</i>				0.9		1.7		22.3		22.3		6.7		14.0		6.9	

# Vermont Municipal Employees

## Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Int'l Equity Comp</b>	<b>88,632,586</b>	<b>14.7</b>	<b>14.0</b>	<b>7.0</b>	<b>40</b>	<b>16.1</b>	<b>31</b>	<b>22.6</b>	<b>32</b>	<b>22.6</b>	<b>32</b>	<b>2.7</b>	<b>44</b>	<b>10.1</b>	<b>43</b>	<b>1.3</b>	<b>69</b>
MSCI EAFE				6.1	67	13.8	61	20.3	48	20.3	48	1.1	77	8.7	67	1.0	76
eA All EAFE Equity Net Median				6.6		14.6		20.1		20.1		2.3		9.6		2.3	
Acadian	28,945,939	4.8	4.0	10.7	4	21.9	4	31.1	3	31.1	3	6.2	12	13.1	14	1.7	61
Mondrian	25,108,688	4.2	4.0	4.3	95	12.1	85	16.0	79	16.0	79	0.5	86	8.4	72	1.6	63
MSCI EAFE				6.1	67	13.8	61	20.3	48	20.3	48	1.1	77	8.7	67	1.0	76
SSgA ACWI Ex US	34,577,959	5.7	6.0	5.9	78	14.3	75	20.7	45	20.7	45	1.0	72	7.4	81	--	--
MSCI ACWI ex USA				5.8	79	14.1	76	20.5	45	20.5	45	0.8	74	7.2	82	1.1	75
eA ACWI ex-US All Cap Equity Net Median				6.9		15.8		20.0		20.0		2.4		9.2		2.5	
<b>Emerging Market Comp</b>	<b>41,632,293</b>	<b>6.9</b>	<b>6.0</b>	<b>6.4</b>	<b>51</b>	<b>18.8</b>	<b>56</b>	<b>18.7</b>	<b>71</b>	<b>18.7</b>	<b>71</b>	<b>1.6</b>	<b>55</b>	<b>3.9</b>	<b>74</b>	<b>--</b>	<b>--</b>
Aberdeen	41,632,293	6.9	6.0	6.4	51	18.8	56	18.7	71	18.7	71	1.6	55	3.9	75	--	--
MSCI Emerging Markets				6.3	53	18.4	62	23.7	42	23.7	42	1.1	68	4.0	73	1.9	66
eA Emg Mkts Equity Net Median				6.4		19.3		22.9		22.9		1.7		5.2		2.5	
<b>US Fixed Income</b>	<b>174,471,135</b>	<b>28.9</b>	<b>31.0</b>	<b>1.3</b>	<b>54</b>	<b>3.1</b>	<b>36</b>	<b>3.6</b>	<b>27</b>	<b>3.6</b>	<b>27</b>	<b>3.4</b>	<b>30</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Aggregate TR				1.4	50	2.3	56	-0.3	84	-0.3	84	2.5	52	2.2	61	4.5	52
eA All US Fixed Inc Net Median				1.4		2.5		0.9		0.9		2.5		2.8		4.5	
<b>Diversified Fixed</b>	<b>115,631,996</b>	<b>19.1</b>	<b>20.0</b>	<b>1.6</b>	<b>39</b>	<b>3.5</b>	<b>31</b>	<b>2.3</b>	<b>34</b>	<b>2.3</b>	<b>34</b>	<b>3.5</b>	<b>28</b>	<b>2.9</b>	<b>47</b>	<b>4.0</b>	<b>63</b>
BBgBarc US Aggregate TR				1.4	50	2.3	56	-0.3	84	-0.3	84	2.5	52	2.2	61	4.5	52
eA All US Fixed Inc Net Median				1.4		2.5		0.9		0.9		2.5		2.8		4.5	
PIMCO Core Plus	36,876,872	6.1	6.0	1.7	19	3.3	5	1.1	16	1.1	16	2.6	50	2.3	66	--	--
BBgBarc US Aggregate TR				1.4	64	2.3	65	-0.3	72	-0.3	72	2.5	59	2.2	72	4.5	76
SSgA Barclays Aggregate Index	31,418,855	5.2	6.0	1.4	68	2.2	71	-0.4	74	-0.4	74	--	--	--	--	--	--
BBgBarc US Aggregate TR				1.4	64	2.3	65	-0.3	72	-0.3	72	2.5	59	2.2	72	4.5	76
3-Month Libor Total Return USD				0.3	99	0.6	99	1.0	20	1.0	20	0.6	99	0.5	99	1.0	99
eA US Core Fixed Inc Net Median				1.5		2.4		0.2		0.2		2.6		2.5		4.7	
State Street Long U.S. Treasury Index	11,474,780	1.9		--	--	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Treasury Long TR				4.0	--	5.4	--	-7.2	--	-7.2	--	5.6	--	2.8	--	7.3	--

# Vermont Municipal Employees

## Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Unconstrained Fixed Income</b>	<b>35,861,488</b>	<b>5.9</b>	<b>6.0</b>	<b>1.5</b>	<b>62</b>	<b>4.2</b>	<b>48</b>	<b>7.9</b>	<b>30</b>	<b>7.9</b>	<b>30</b>	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg				1.8	48	3.9	59	4.3	76	4.3	76	3.6	16	4.2	43	6.1	26
BBgBarc Global Aggregate TR				2.6	21	4.4	43	-2.2	99	-2.2	99	-0.4	97	0.8	98	3.7	91
eA Global Unconstrained Fixed Inc Net Median				1.8		4.1		7.0		7.0		2.5		4.0		5.5	
PIMCO Unconstrained	14,897,276	2.5	2.5	0.9	94	3.1	76	7.0	50	7.0	50	1.9	74	1.5	97	--	--
25% HY, 25% EMD, 50% BC Agg				1.8	48	3.9	59	4.3	76	4.3	76	3.6	16	4.2	43	6.1	26
3-Month Libor Total Return USD				0.3	95	0.6	99	1.0	98	1.0	98	0.6	90	0.5	99	1.0	99
GAM Unconstrained Bond	20,964,213	3.5	3.5	1.9	43	5.1	32	8.5	26	8.5	26	--	--	--	--	--	--
3-Month LIBOR + 3%				1.1	90	2.1	93	4.1	80	4.1	80	3.6	15	3.5	64	4.0	89
eA Global Unconstrained Fixed Inc Net Median				1.8		4.1		7.0		7.0		2.5		4.0		5.5	
<b>High Yield Comp</b>	<b>31,167,928</b>	<b>5.2</b>	<b>5.0</b>	<b>1.7</b>	<b>71</b>	<b>3.7</b>	<b>81</b>	<b>11.5</b>	<b>43</b>	<b>11.5</b>	<b>43</b>	<b>4.3</b>	<b>31</b>	<b>6.4</b>	<b>37</b>	<b>7.1</b>	<b>36</b>
BBgBarc US High Yield TR				2.2	35	4.9	24	12.7	27	12.7	27	4.5	28	6.9	25	7.7	14
eA US High Yield Fixed Inc Net Median				2.0		4.4		11.3		11.3		3.8		6.3		6.8	
KDP	7,009,759	1.2	1.0	1.7	71	3.5	82	8.0	87	8.0	87	2.7	83	4.6	93	--	--
BBgBarc US High Yield TR				2.2	35	4.9	24	12.7	27	12.7	27	4.5	28	6.9	25	7.7	14
BofA Merrill Lynch US High Yield BB-B Rated				2.2	29	4.6	44	11.2	52	11.2	52	4.5	26	6.7	31	7.1	36
Guggenheim	24,158,169	4.0	4.0	1.7	72	3.7	78	12.6	29	12.6	29	4.7	22	--	--	--	--
BBgBarc US High Yield TR				2.2	35	4.9	24	12.7	27	12.7	27	4.5	28	6.9	25	7.7	14
eA US High Yield Fixed Inc Net Median				2.0		4.4		11.3		11.3		3.8		6.3		6.8	

# Vermont Municipal Employees

## Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>TIPS</b>	<b>27,671,211</b>	<b>4.6</b>	<b>6.0</b>														
BlackRock TIPS	27,671,211	4.6	6.0	-0.4	--	0.9	--	-0.6	--	-0.6	--	0.6	--	0.2	--	--	--
BBgBarc US TIPS TR				-0.4	--	0.9	--	-0.6	--	-0.6	--	0.6	--	0.3	--	4.3	--
<b>Emerging Market Debt</b>	<b>29,151,468</b>	<b>4.8</b>	<b>5.0</b>														
Wellington Opportunistic EMD	29,151,468	4.8	5.0	2.5	48	6.8	62	9.0	27	9.0	27	5.1	9	5.9	14	--	--
JP Morgan EMBI Global TR				2.2	61	6.2	74	5.5	86	5.5	86	4.6	18	5.2	29	7.3	22
eA All Emg Mkts Fixed Inc Net Median				2.4		7.8		7.3		7.3		2.4		3.7		6.3	
<b>Risk Parity/GAA</b>	<b>22,431,760</b>	<b>3.7</b>	<b>4.0</b>	<b>1.0</b>	<b>84</b>	<b>5.3</b>	<b>59</b>	<b>5.0</b>	<b>78</b>	<b>5.0</b>	<b>78</b>	<b>0.4</b>	<b>79</b>	<b>4.3</b>	<b>59</b>	<b>4.1</b>	<b>64</b>
Mellon Dynamic Growth	16,023	0.0	0.0	1.2	47	4.1	38	3.4	82	3.4	82	4.7	18	6.5	30	2.9	50
Mellon Dynamic Growth Benchmark				3.7	9	8.0	12	9.3	35	9.3	35	2.8	43	6.2	33	3.6	34
eV Alt Fund of Funds - Multi-Strategy Median				1.0		3.2		7.2		7.2		2.0		5.2		2.9	
<b>Risk Parity</b>	<b>22,415,737</b>	<b>3.7</b>	<b>4.0</b>	<b>1.2</b>	<b>82</b>	<b>5.8</b>	<b>53</b>	<b>5.5</b>	<b>73</b>	<b>5.5</b>	<b>73</b>	<b>0.1</b>	<b>83</b>	<b>4.2</b>	<b>62</b>	<b>--</b>	<b>--</b>
eA Global TAA Net Median				2.5		6.3		7.0		7.0		1.5		5.0		4.3	
AQR Global Risk Premium	22,415,737	3.7	4.0	1.2	82	5.8	53	5.5	73	5.5	73	0.1	83	4.1	62	--	--
60% MSCI World (Net) / 40% CITI WGBI				3.6	26	8.2	34	8.8	40	8.8	40	2.9	32	6.7	24	4.1	64
<b>Cash</b>	<b>1,288,465</b>	<b>0.2</b>	<b>0.0</b>														
Vermont Cash	1,288,465	0.2	0.0	0.0	--	0.0	--	0.0	--	0.0	--	0.0	--	0.0	--	0.7	--
91 Day T-Bills				0.2	--	0.4	--	0.5	--	0.5	--	0.2	--	0.2	--	0.4	--

Risk Parity Composite formerly shown as Risk Parity/GAA.

Mellon Dynamic Growth Benchmark: 60% MSCI All Country World Index IMI / 40% Citigroup GDP Weighted.

## Vermont Municipal Employees

### Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Real Estate</b>	<b>32,554,241</b>	<b>5.4</b>	<b>6.5</b>	<b>1.2</b>	<b>--</b>	<b>2.5</b>	<b>--</b>	<b>6.7</b>	<b>--</b>	<b>6.7</b>	<b>--</b>	<b>9.3</b>	<b>--</b>	<b>10.8</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>NCREIF Property Index</i>				1.8	--	3.3	--	7.0	--	7.0	--	10.2	--	10.5	--	6.4	--
<i>NCREIF ODCE</i>				1.7	--	3.5	--	7.9	--	7.9	--	11.3	--	11.8	--	5.2	--
UBS Trumbull	11,232,427	1.9		1.0	--	1.9	--	4.6	--	4.6	--	7.6	--	8.1	--	4.2	--
Siguler Guff DREOF II	6,452,598	1.1		3.9	--	4.2	--	12.5	--	12.5	--	10.2	--	--	--	--	--
Siguler Guff DREOF II Co-Investment	1,288,501	0.2		2.3	--	5.9	--	--	--	--	--	--	--	--	--	--	--
RREEF America REIT III	55,859	0.0		-2.9	--	-3.6	--	-16.1	--	-16.1	--	-2.4	--	6.6	--	-5.6	--
Morgan Stanley Prime Property	13,496,090	2.2		0.0	--	1.9	--	6.7	--	6.7	--	10.4	--	11.8	--	4.9	--
Transwestern / Aslan III	28,766	0.0		0.0	--	0.0	--	0.0	--	0.0	--	6.4	--	16.1	--	-21.3	--
<b>Absolute Return</b>	<b>49,774,393</b>	<b>8.2</b>	<b>8.0</b>	<b>-0.2</b>	<b>80</b>	<b>-0.2</b>	<b>91</b>	<b>4.1</b>	<b>75</b>	<b>4.1</b>	<b>75</b>	<b>0.0</b>	<b>80</b>	<b>4.5</b>	<b>64</b>	<b>--</b>	<b>--</b>
<i>HFRI Fund of Funds Composite Index</i>				0.7	62	3.1	54	6.4	57	6.4	57	1.5	59	3.9	70	0.9	91
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>				1.0		3.2		7.2		7.2		2.0		5.2		2.9	
Grosvenor	26,590,503	4.4	3.0	0.4	70	2.2	65	7.5	49	7.5	49	1.7	54	5.6	42	--	--
Allianz Structured Alpha	10,304,614	1.7	2.0	1.4	41	2.3	65	5.0	67	5.0	67	8.0	6	6.4	31	--	--
<i>91 Day T-Bills</i>				0.2	73	0.4	88	0.5	91	0.5	91	0.2	78	0.2	98	0.4	94
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>				1.0		3.2		7.2		7.2		2.0		5.2		2.9	
Pinnacle Natural Resources, L.P.	12,821,844	2.1	3.0	-3.0	--	-10.9	--	-9.4	--	-9.4	--	--	--	--	--	--	--
<i>Bloomberg Commodity Index</i>				-3.0	--	-5.3	--	-6.5	--	-6.5	--	-14.8	--	-9.2	--	-6.5	--
GAM	57,433	0.0	0.0														

Absolute Return composite formerly shown as Hedge Funds composite. As of 04/01/2016, Absolute Return includes Allianz Structured Alpha.

Allianz Structured Alpha was included Diversified Fixed income composite prior to 04/01/2016.

Real Estate performance reported on a quarterly basis. NCREIF Property is available 25 days after quarter end.

Real Estate values are preliminary as of 06/30/2017. Morgan Stanley will be liquidated, funding UBS and SSgA Long US Treasury Index.

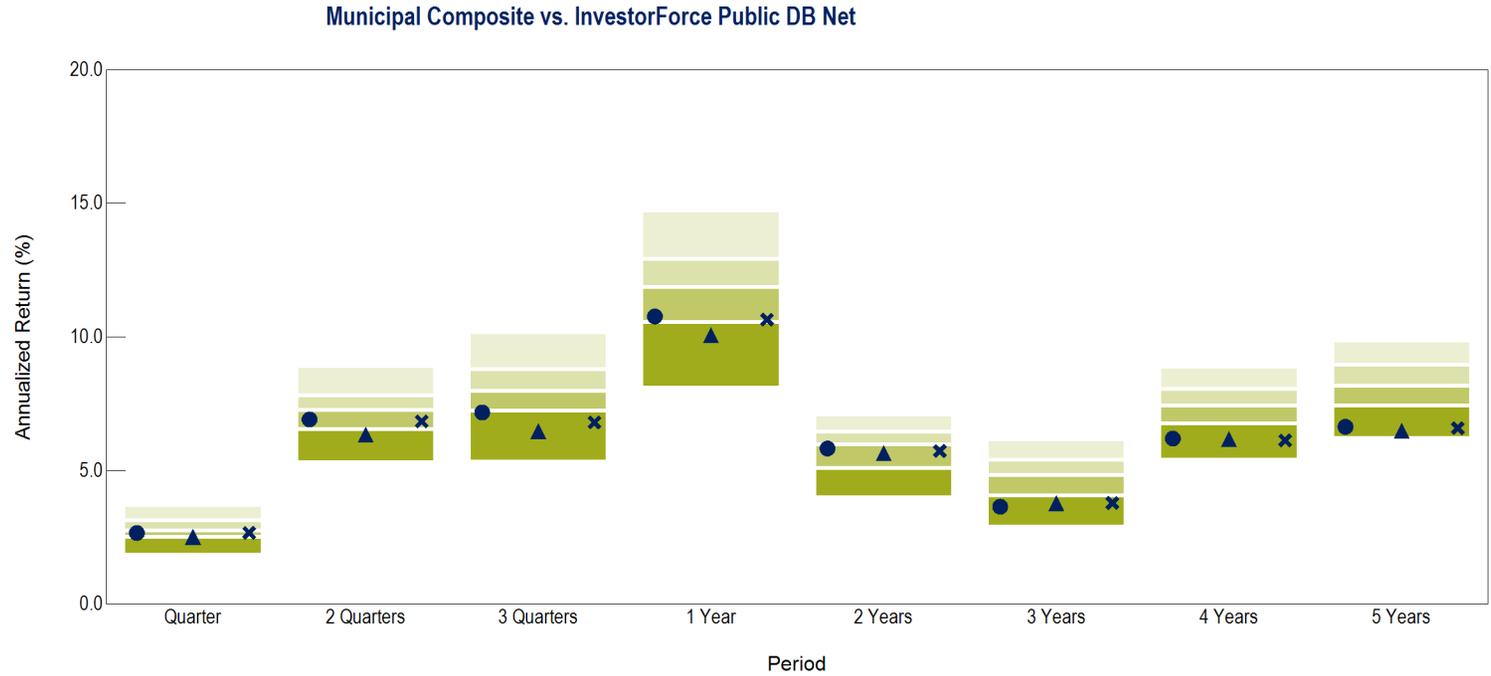
## Vermont Municipal Employees

### Total Fund Performance Detail - Net

	Market Value (\$)	% of Portfolio	Policy %	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Equity</b>	<b>8,433,237</b>	<b>1.4</b>	<b>1.5</b>	<b>0.0</b>	<b>--</b>	<b>0.3</b>	<b>--</b>	<b>7.9</b>	<b>--</b>	<b>7.9</b>	<b>--</b>	<b>12.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Cambridge Associates US All PE</i>				0.0	--	4.3	--	13.3	--	13.3	--	8.4	--	12.7	--	9.0	--
Harbourvest Partners IX Credit Opportunities	274,176	0.0															
Harbourvest Partners IX Venture Fund	1,446,255	0.2															
Harbourvest Partners IX Buyout Fund	1,917,512	0.3															
Harbourvest Partners X Venture Fund	376,596	0.1															
Harbourvest Partners X Buyout Fund	765,749	0.1															
Harbourvest Dover VIII Fund	2,194,722	0.4															
Harbourvest Dover Street Fund IX	794,834	0.1															
HIPEP VII	663,393	0.1															

Harbourvest values based on final Capital Account Statements for Q1, and cash adjusted through Q2.

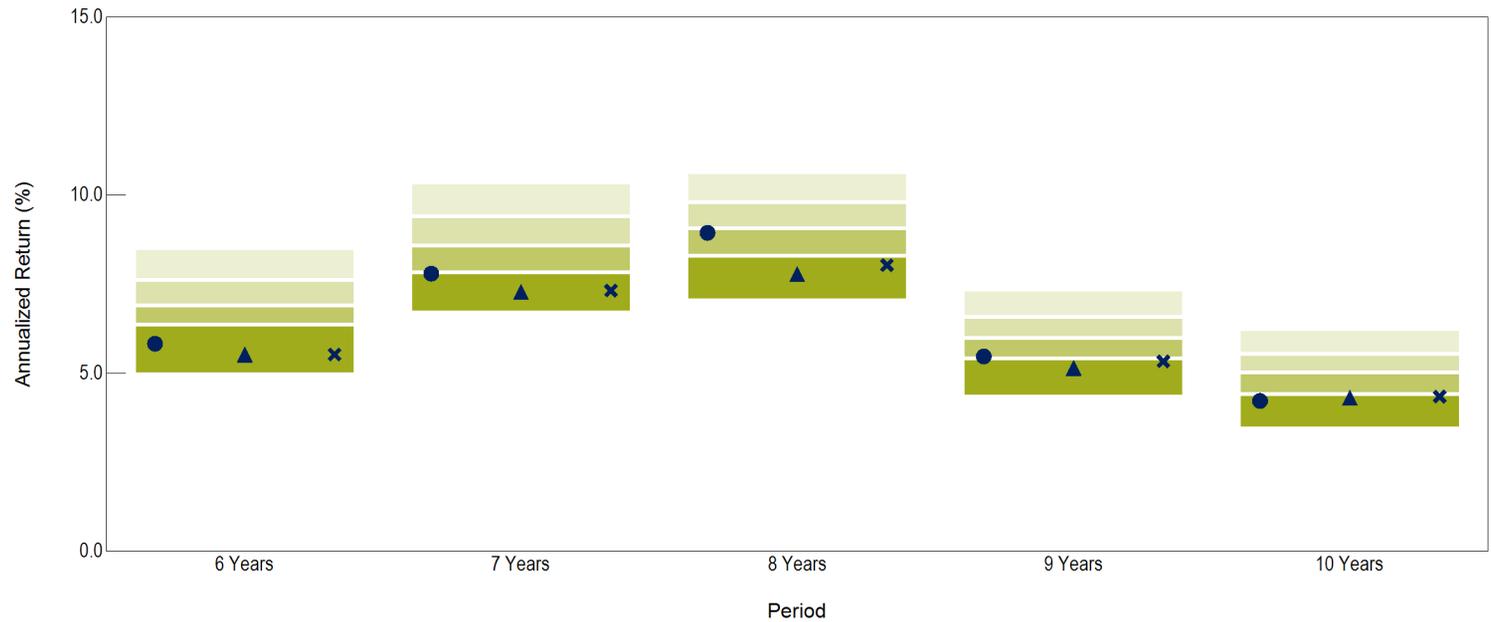
Total Fund Return Summary vs. Peer Universe - Net



	Return (Rank)															
<b>5th Percentile</b>	3.7		8.9		10.2		14.7		7.1		6.2		8.9		9.9	
<b>25th Percentile</b>	3.2		7.8		8.8		12.9		6.5		5.4		8.1		9.0	
<b>Median</b>	2.8		7.3		8.0		11.9		6.0		4.9		7.4		8.2	
<b>75th Percentile</b>	2.5		6.6		7.3		10.6		5.1		4.1		6.8		7.4	
<b>95th Percentile</b>	1.9		5.3		5.4		8.1		4.0		2.9		5.4		6.2	
<b># of Portfolios</b>	283		283		282		282		278		269		255		245	
<b>● Municipal Composite</b>	2.7	(59)	6.9	(62)	7.2	(77)	10.8	(70)	5.8	(56)	3.6	(86)	6.2	(88)	6.6	(90)
<b>▲ Policy Index</b>	2.5	(77)	6.3	(82)	6.5	(90)	10.1	(84)	5.7	(59)	3.8	(81)	6.2	(88)	6.5	(93)
<b>× Allocation Index</b>	2.7	(59)	6.8	(66)	6.8	(87)	10.6	(74)	5.7	(58)	3.8	(81)	6.1	(90)	6.6	(91)

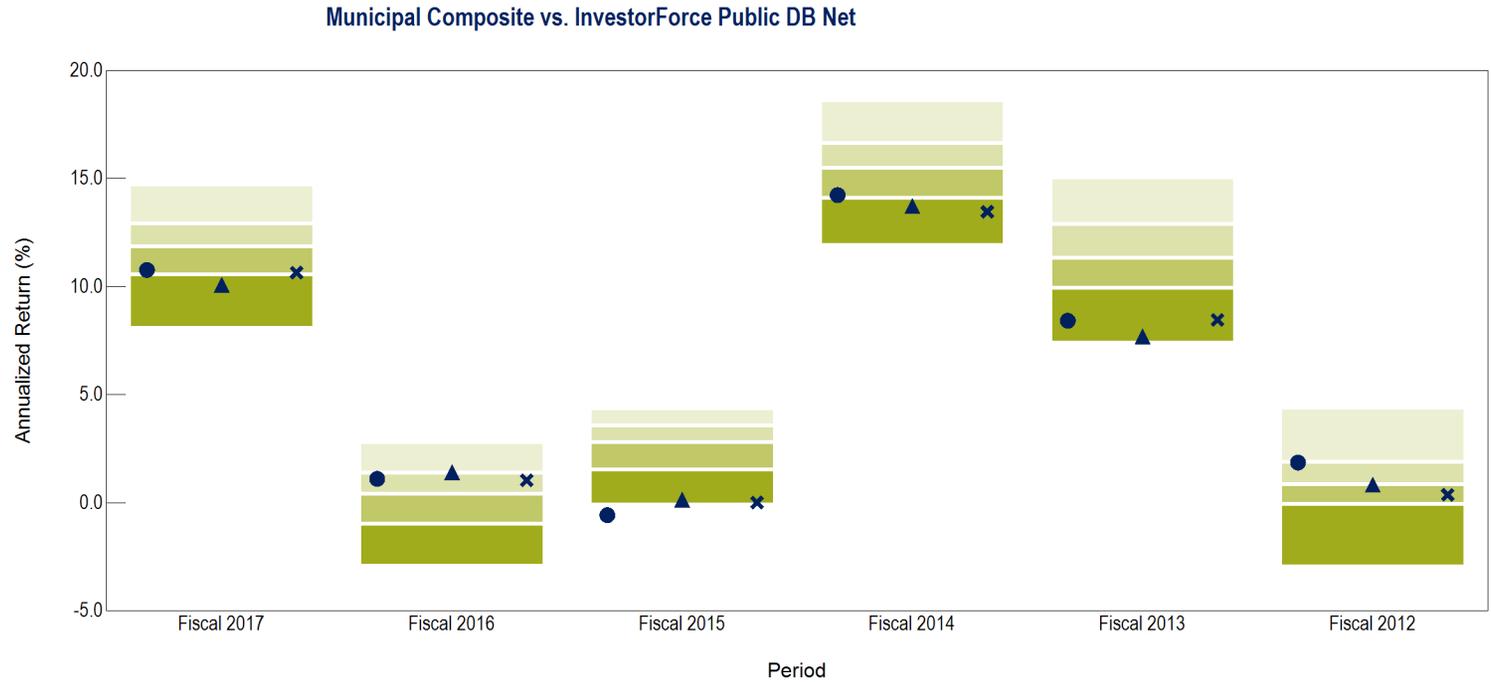
Total Fund Return Summary vs. Peer Universe - Net

Municipal Composite vs. InvestorForce Public DB Net



	Return (Rank)									
5th Percentile	8.5		10.3		10.6		7.3		6.2	
25th Percentile	7.6		9.4		9.8		6.6		5.5	
Median	6.9		8.6		9.1		6.0		5.0	
75th Percentile	6.4		7.8		8.3		5.4		4.4	
95th Percentile	5.0		6.7		7.0		4.4		3.5	
# of Portfolios	230		220		211		206		199	
● Municipal Composite	5.8	(87)	7.8	(76)	8.9	(54)	5.5	(73)	4.2	(80)
▲ Policy Index	5.5	(92)	7.3	(90)	7.8	(87)	5.1	(84)	4.3	(78)
× Allocation Index	5.5	(92)	7.3	(89)	8.0	(84)	5.3	(80)	4.3	(78)

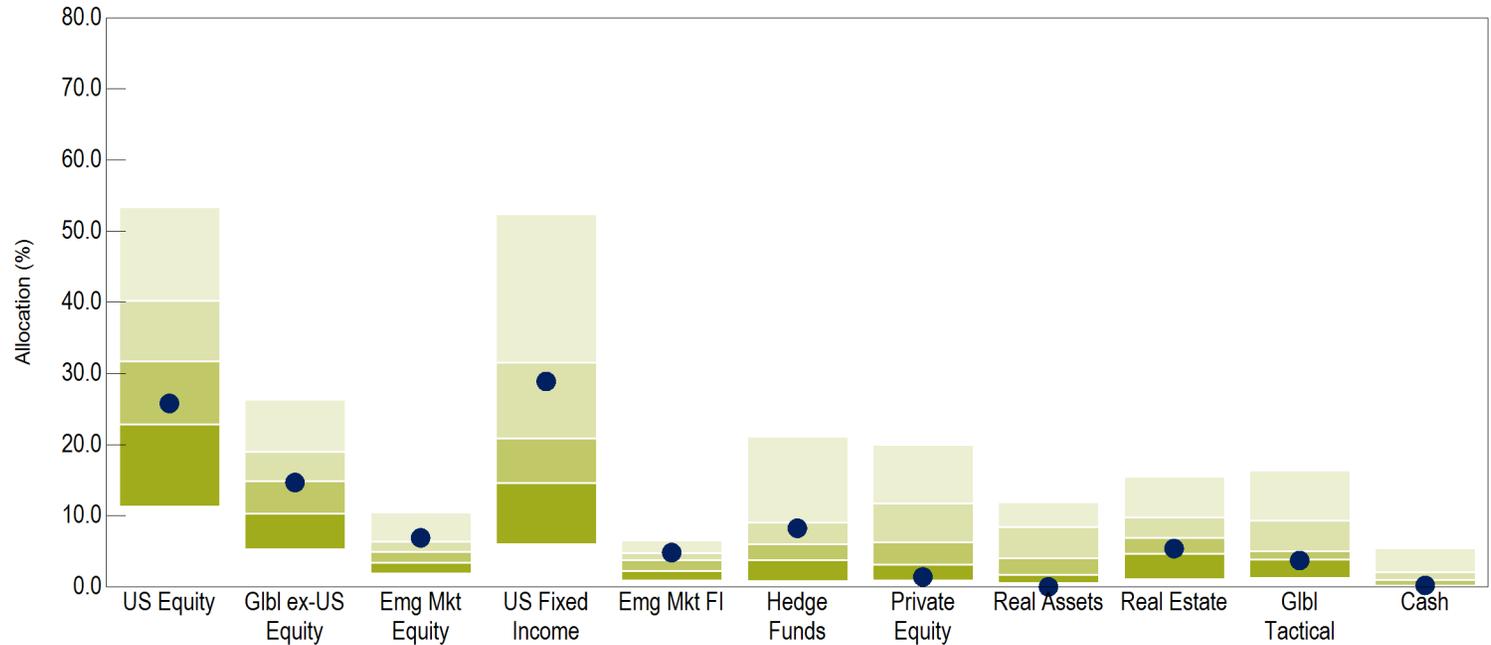
Total Fund Return Summary vs. Peer Universe - Net



	Return (Rank)											
5th Percentile	14.7		2.8		4.4		18.6		15.0	4.4		
25th Percentile	12.9		1.4		3.6		16.7		12.9	1.9		
Median	11.9		0.4		2.8		15.5		11.3	0.9		
75th Percentile	10.6		-0.9		1.6		14.1		9.9	0.0		
95th Percentile	8.1		-2.9		-0.1		11.9		7.4	-2.9		
# of Portfolios	282		258		231		173		192	147		
● Municipal Composite	10.8	(70)	1.1	(33)	-0.6	(97)	14.2	(72)	8.4	(92)	1.9	(26)
▲ Policy Index	10.1	(84)	1.4	(25)	0.1	(94)	13.7	(84)	7.7	(94)	0.8	(52)
× Allocation Index	10.6	(74)	1.0	(33)	0.0	(95)	13.5	(89)	8.5	(92)	0.4	(66)

Total Fund Allocation vs. Peer Universe - Net

Total Plan Allocation vs. InvestorForce Public DB Net  
As of June 30, 2017

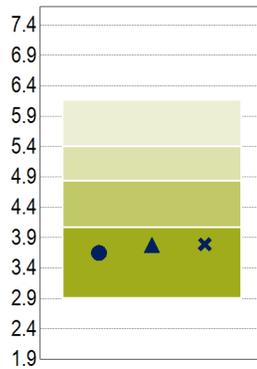


	Allocation (Rank)											
5th Percentile	53.3	26.3	10.4	52.4	6.5	21.1	20.0	11.9	15.5	16.4	5.4	--
25th Percentile	40.3	19.1	6.4	31.6	4.9	9.1	11.8	8.5	9.9	9.4	2.1	--
Median	31.8	15.0	5.0	20.9	3.8	6.1	6.4	4.1	7.0	5.1	1.0	--
75th Percentile	22.9	10.4	3.5	14.7	2.3	3.8	3.3	1.8	4.8	3.9	0.3	--
95th Percentile	11.4	5.3	2.0	6.0	1.0	0.9	1.0	0.6	1.2	1.4	0.0	--
# of Portfolios	203	228	142	205	47	97	124	71	172	65	244	--
● Municipal Composite	25.8 (66)	14.7 (52)	6.9 (22)	28.9 (33)	4.8 (27)	8.2 (31)	1.4 (89)	0.0 (99)	5.4 (62)	3.7 (79)	0.2 (81)	--

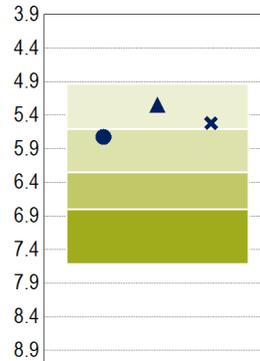
Total Fund Risk Statistics vs. Peer Universe - Net

Municipal Composite vs. IFx Public DB Net  
3 Years

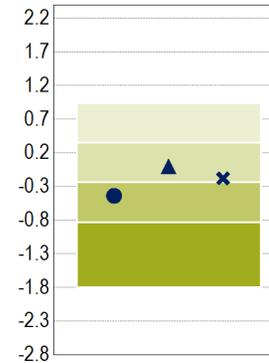
Anlzd Return



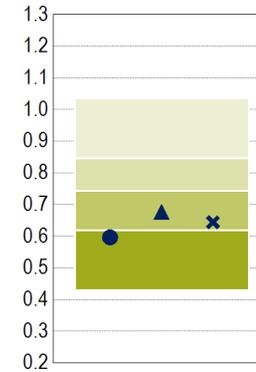
Anlzd Standard Deviation



Anlzd Alpha



Sharpe Ratio



● Municipal Composite

Value 3.65  
Rank 86

▲ Policy Index

Value 3.78  
Rank 81

× Allocation Index

Value 3.79  
Rank 81

Universe

5th %tile 6.17  
25th %tile 5.42  
Median 4.85  
75th %tile 4.08  
95th %tile 2.92

● Municipal Composite

Value 5.72  
Rank 28

▲ Policy Index

Value 5.24  
Rank 10

× Allocation Index

Value 5.52  
Rank 22

Universe

5th %tile 4.93  
25th %tile 5.60  
Median 6.24  
75th %tile 6.79  
95th %tile 7.61

● Municipal Composite

Value -0.44  
Rank 62

▲ Policy Index

Value 0.00  
Rank 37

× Allocation Index

Value -0.18  
Rank 48

Universe

5th %tile 0.94  
25th %tile 0.36  
Median -0.22  
75th %tile -0.82  
95th %tile -1.79

● Municipal Composite

Value 0.60  
Rank 80

▲ Policy Index

Value 0.68  
Rank 65

× Allocation Index

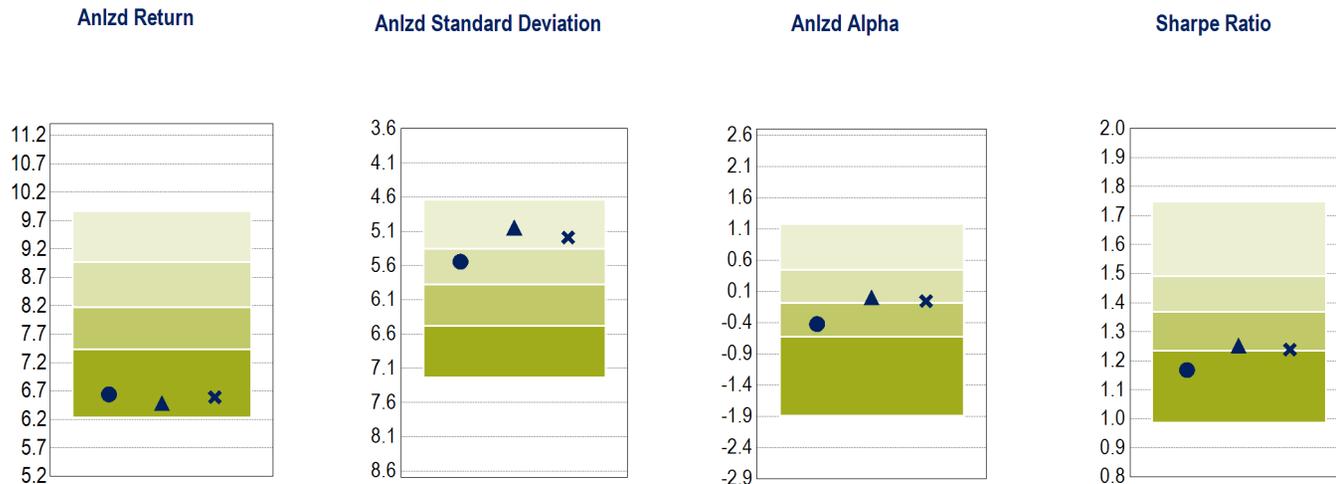
Value 0.64  
Rank 73

Universe

5th %tile 1.04  
25th %tile 0.85  
Median 0.74  
75th %tile 0.62  
95th %tile 0.43

Total Fund Risk Statistics vs. Peer Universe - Net

Municipal Composite vs. IFx Public DB Net  
5 Years



● Municipal Composite

Value	6.64
Rank	90
▲ Policy Index	
Value	6.48
Rank	93
✕ Allocation Index	
Value	6.59
Rank	91

Universe	
5th %tile	9.87
25th %tile	8.98
Median	8.19
75th %tile	7.44
95th %tile	6.24

● Municipal Composite

Value	5.54
Rank	33
▲ Policy Index	
Value	5.05
Rank	13
✕ Allocation Index	
Value	5.19
Rank	20

Universe	
5th %tile	4.63
25th %tile	5.34
Median	5.87
75th %tile	6.47
95th %tile	7.22

● Municipal Composite

Value	-0.43
Rank	68
▲ Policy Index	
Value	0.00
Rank	46
✕ Allocation Index	
Value	-0.06
Rank	49

Universe	
5th %tile	1.18
25th %tile	0.45
Median	-0.08
75th %tile	-0.62
95th %tile	-1.88

● Municipal Composite

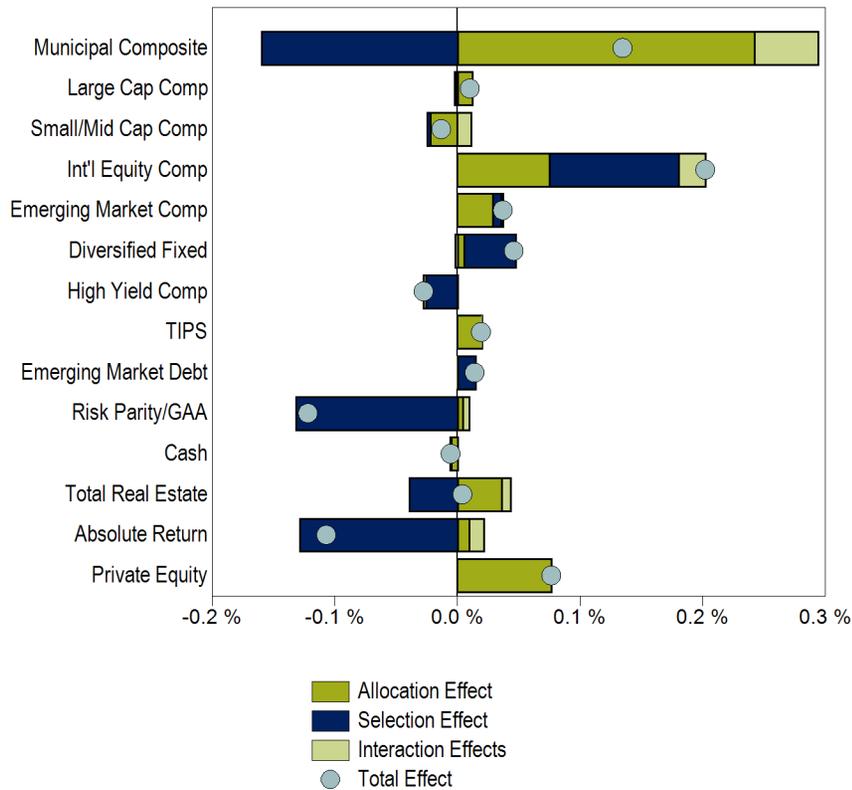
Value	1.17
Rank	84
▲ Policy Index	
Value	1.25
Rank	74
✕ Allocation Index	
Value	1.24
Rank	75

Universe	
5th %tile	1.75
25th %tile	1.49
Median	1.37
75th %tile	1.24
95th %tile	0.99

# Vermont Municipal Employees

## Total Fund Attribution Analysis - Net

Attribution Effects Relative to Policy Index  
3 Months Ending June 30, 2017



Attribution Summary  
3 Months Ending June 30, 2017

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	2.9%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Small/Mid Cap Comp	1.7%	1.6%	0.2%	0.0%	0.0%	0.0%	0.0%
Int'l Equity Comp	7.0%	6.0%	1.0%	0.1%	0.1%	0.0%	0.2%
Emerging Market Comp	6.4%	6.3%	0.1%	0.0%	0.0%	0.0%	0.0%
Diversified Fixed	1.6%	1.4%	0.2%	0.0%	0.0%	0.0%	0.0%
High Yield Comp	1.7%	2.2%	-0.5%	0.0%	0.0%	0.0%	0.0%
TIPS	-0.4%	-0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	2.5%	2.2%	0.3%	0.0%	0.0%	0.0%	0.0%
Risk Parity/GAA	1.0%	3.6%	-2.5%	-0.1%	0.0%	0.0%	-0.1%
Cash	0.0%	0.2%	-0.2%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	1.2%	1.8%	-0.6%	0.0%	0.0%	0.0%	0.0%
Absolute Return	-0.2%	1.3%	-1.4%	-0.1%	0.0%	0.0%	-0.1%
Private Equity	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
<b>Total</b>	<b>2.7%</b>	<b>2.5%</b>	<b>0.2%</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.1%</b>

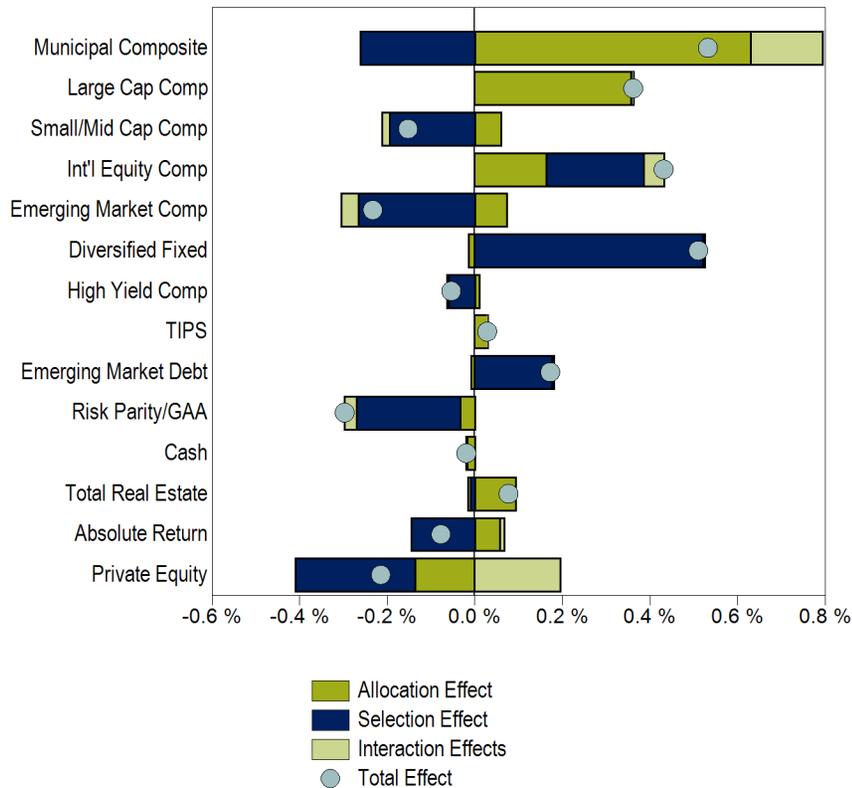
Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated returns shown on the performance report.

The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index asset weights the underlying policy indices of each option in the plan and the respective benchmark.

The allocation, selection, and interaction effects are calculated using the custom index described above along with the policy or target weight of each composite. May not add up due to rounding.

Absolute Return's Wtd. index Return is calculated using a weighting of the respective benchmarks for each underlying strategy part of the composite.

Attribution Effects Relative to Policy Index  
1 Year Ending June 30, 2017



Attribution Summary  
1 Year Ending June 30, 2017

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	17.8%	17.8%	0.0%	0.0%	0.4%	0.0%	0.4%
Small/Mid Cap Comp	18.2%	22.0%	-3.7%	-0.2%	0.1%	0.0%	-0.2%
Int'l Equity Comp	22.6%	20.3%	2.3%	0.2%	0.2%	0.0%	0.4%
Emerging Market Comp	18.7%	23.7%	-5.0%	-0.3%	0.1%	0.0%	-0.2%
Diversified Fixed	2.3%	-0.3%	2.6%	0.5%	0.0%	0.0%	0.5%
High Yield Comp	11.5%	12.7%	-1.2%	-0.1%	0.0%	0.0%	-0.1%
TIPS	-0.6%	-0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	9.0%	5.5%	3.4%	0.2%	0.0%	0.0%	0.2%
Risk Parity/GAA	5.0%	8.8%	-3.8%	-0.2%	0.0%	0.0%	-0.3%
Cash	0.0%	0.5%	-0.5%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	6.7%	7.0%	-0.2%	0.0%	0.1%	0.0%	0.1%
Absolute Return	4.1%	5.7%	-1.6%	-0.1%	0.1%	0.0%	-0.1%
Private Equity	7.9%	13.3%	-5.4%	-0.3%	-0.1%	0.2%	-0.2%
<b>Total</b>	<b>11.0%</b>	<b>10.2%</b>	<b>0.8%</b>	<b>-0.3%</b>	<b>0.6%</b>	<b>0.2%</b>	<b>0.5%</b>

Note: Plan attribution calculations are returns based and the results shown reflect the composites shown. As a result, the total returns shown may vary from the calculated returns shown on the performance report. The target return shown for each composite is a custom index, based on aggregated policy indices. This policy index asset weights the underlying policy indices of each option in the plan and the respective benchmark. The allocation, selection, and interaction effects are calculated using the custom index described above along with the policy or target weight of each composite. May not add up due to rounding.

Absolute Return's Wtd. index Return is calculated using a weighting of the respective benchmarks for each underlying strategy part of the composite.

Asset Allocation Effect - Measures VPIC's ability to effectively allocate their portfolio's assets to various asset classes. The allocation effect determines whether the overweighting or underweighting of asset classes relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is overweighted in an asset class that outperforms the benchmark. Negative allocation occurs when the portfolio is overweighted in an asset class that underperforms the benchmark and underweighted in an asset class that outperforms the benchmark.

Selection Effect - Measures VPIC's ability to select managers within a given asset class relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by VPIC's allocation to the asset class. The weight of the manager in the portfolio determines the size of the effect -- the larger the manager, the larger the effect is, positive or negative.

Interaction Effect - The interaction effect measures the combined impact of VPIC's manager selection and manager allocation decisions within an asset class. For example, if VPIC had superior manager selection and overweighted that particular asset class, the interaction effect is positive. If VPIC had superior manager selection, but underweighted that asset class, the interaction effect is negative. In this case, VPIC did not take advantage of the superior manager selection by allocating more assets to that asset class.

## Vermont Municipal Employees

### Risk Statistics - 3 Years Ending June 30, 2017 - Net

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Municipal Composite	100.00%	3.65%	86	5.72%	28	-0.42%	60	0.60	80	1.02	67	0.91%	34
Policy Index	--	3.78%	81	5.24%	10	0.00%	36	0.68	65	1.18	47	0.00%	1
US Equity	25.78%	9.17%	26	10.86%	29	-0.05%	29	0.82	21	1.38	23	1.47%	2
Russell 3000	--	9.10%	27	10.63%	25	0.00%	29	0.83	19	1.37	24	0.00%	1
Large Cap Comp	20.42%	9.28%	27	10.46%	36	-0.41%	31	0.86	24	1.56	19	0.69%	1
S&P 500	--	9.61%	22	10.35%	34	0.00%	24	0.91	18	1.52	21	0.00%	1
Small/Mid Cap Comp	5.36%	9.15%	19	12.77%	44	3.14%	22	0.70	20	1.34	13	4.08%	2
Russell 2000	--	7.36%	38	15.38%	93	0.00%	61	0.46	57	0.77	53	0.00%	1
Int'l Equity Comp	14.67%	2.72%	44	11.78%	42	1.63%	45	0.21	44	0.37	42	2.08%	7
MSCI EAFE	--	1.15%	77	12.42%	76	0.00%	78	0.07	78	0.13	76	0.00%	1
Emerging Market Comp	6.89%	1.62%	55	15.29%	61	0.63%	55	0.09	57	0.17	49	5.16%	56
MSCI Emerging Markets	--	1.07%	68	16.06%	78	0.00%	67	0.05	67	0.10	66	0.00%	1
US Fixed Income	28.88%	3.43%	30	2.98%	61	1.27%	27	1.07	26	1.58	29	1.69%	36
BBgBarc US Aggregate TR	--	2.48%	52	2.90%	59	0.00%	76	0.77	61	1.07	66	0.00%	1
Diversified Fixed	19.14%	3.53%	28	3.03%	62	1.16%	28	1.09	24	1.38	39	1.24%	25
BBgBarc US Aggregate TR	--	2.48%	52	2.90%	59	0.00%	76	0.77	61	1.07	66	0.00%	1
High Yield Comp	5.16%	4.30%	31	5.03%	42	0.64%	40	0.81	44	1.46	48	1.62%	37
BBgBarc US High Yield TR	--	4.48%	28	6.09%	83	0.00%	57	0.70	55	1.56	40	0.00%	1
TIPS	4.58%	0.59%	26	3.90%	70	-0.05%	21	0.09	22	0.16	21	0.18%	4
BBgBarc US TIPS TR	--	0.63%	23	3.83%	59	0.00%	18	0.10	18	0.18	18	0.00%	1
Emerging Market Debt	4.83%	5.05%	9	6.14%	28	0.44%	15	0.78	13	1.21	16	1.32%	9
JP Morgan EMBI Global TR	--	4.64%	18	6.04%	27	0.00%	25	0.73	21	1.07	22	0.00%	1
Total Real Estate	5.39%	9.32%	--	4.00%	--	0.15%	--	2.27	--	125.25	--	1.18%	--
NCREIF Property Index	--	10.16%	--	4.28%	--	0.00%	--	2.32	--	136.87	--	0.00%	--
Absolute Return	8.24%	0.03%	80	3.15%	21	-1.28%	76	-0.07	83	-0.08	83	1.66%	6
HFRI Fund of Funds Composite Index	--	1.53%	59	3.30%	27	0.00%	56	0.39	51	0.45	56	0.00%	1
Risk Parity/GAA	3.71%	0.44%	79	7.29%	61	-2.01%	80	0.03	79	0.05	78	4.38%	39
60% MSCI World (Net) / 40% CITI WGBI	--	2.86%	32	7.04%	55	0.00%	42	0.37	38	0.74	26	0.00%	1

## Vermont Municipal Employees

### Risk Statistics - 5 Years Ending June 30, 2017 - Net

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Municipal Composite	100.00%	6.64%	90	5.54%	33	-0.41%	67	1.17	84	2.02	72	0.85%	27
Policy Index	--	6.48%	93	5.05%	13	0.00%	46	1.25	74	2.24	49	0.00%	1
US Equity	25.78%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	14.58%	34	9.80%	18	0.00%	29	1.47	12	2.53	17	0.00%	1
Large Cap Comp	20.42%	14.91%	23	9.67%	28	0.15%	22	1.52	10	2.86	8	0.72%	1
S&P 500	--	14.63%	28	9.56%	24	0.00%	26	1.51	11	2.61	18	0.00%	1
Small/Mid Cap Comp	5.36%	14.60%	27	11.93%	46	3.09%	41	1.21	30	2.43	12	3.48%	1
Russell 2000	--	13.70%	44	13.88%	87	0.00%	85	0.98	75	1.61	70	0.00%	1
Int'l Equity Comp	14.67%	10.06%	43	11.20%	38	1.89%	42	0.88	37	1.63	29	2.09%	7
MSCI EAFE	--	8.69%	67	11.74%	71	0.00%	79	0.73	72	1.28	67	0.00%	1
Emerging Market Comp	6.89%	3.93%	74	14.40%	70	0.18%	71	0.26	73	0.44	69	4.74%	51
MSCI Emerging Markets	--	3.96%	73	14.40%	70	0.00%	75	0.26	72	0.44	69	0.00%	1
US Fixed Income	28.88%	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	--	2.21%	61	2.86%	52	0.00%	83	0.72	77	0.98	74	0.00%	1
Diversified Fixed	19.14%	2.92%	47	3.18%	64	0.62%	53	0.87	62	1.11	64	1.14%	24
BBgBarc US Aggregate TR	--	2.21%	61	2.86%	52	0.00%	83	0.72	77	0.98	74	0.00%	1
High Yield Comp	5.16%	6.45%	37	4.39%	30	0.82%	35	1.43	36	2.26	47	1.37%	37
BBgBarc US High Yield TR	--	6.89%	25	5.28%	76	0.00%	64	1.27	58	2.37	41	0.00%	1
TIPS	4.58%	0.20%	56	4.56%	73	-0.06%	55	0.01	55	0.01	55	0.16%	1
BBgBarc US TIPS TR	--	0.27%	37	4.52%	59	0.00%	40	0.02	40	0.03	40	0.00%	1
Emerging Market Debt	4.83%	5.90%	14	6.65%	28	0.91%	16	0.86	16	1.20	15	1.27%	7
JP Morgan EMBI Global TR	--	5.20%	29	6.81%	31	0.00%	30	0.74	26	1.04	30	0.00%	1
Total Real Estate	5.39%	10.75%	--	4.58%	--	0.11%	--	2.31	--	174.50	--	1.39%	--
NCREIF Property Index	--	10.49%	--	4.30%	--	0.00%	--	2.40	--	170.08	--	0.00%	--
Absolute Return	8.24%	4.52%	64	3.53%	33	0.79%	57	1.23	44	1.88	40	1.63%	7
HFRI Fund of Funds Composite Index	--	3.86%	70	3.25%	27	0.00%	67	1.14	49	1.51	53	0.00%	1
Risk Parity/GAA	3.71%	4.31%	59	7.21%	63	-1.79%	82	0.58	71	0.85	74	4.08%	44
60% MSCI World (Net) / 40% CITI WGBI	--	6.75%	24	6.63%	53	0.00%	47	0.99	17	2.07	5	0.00%	1

# Appendix

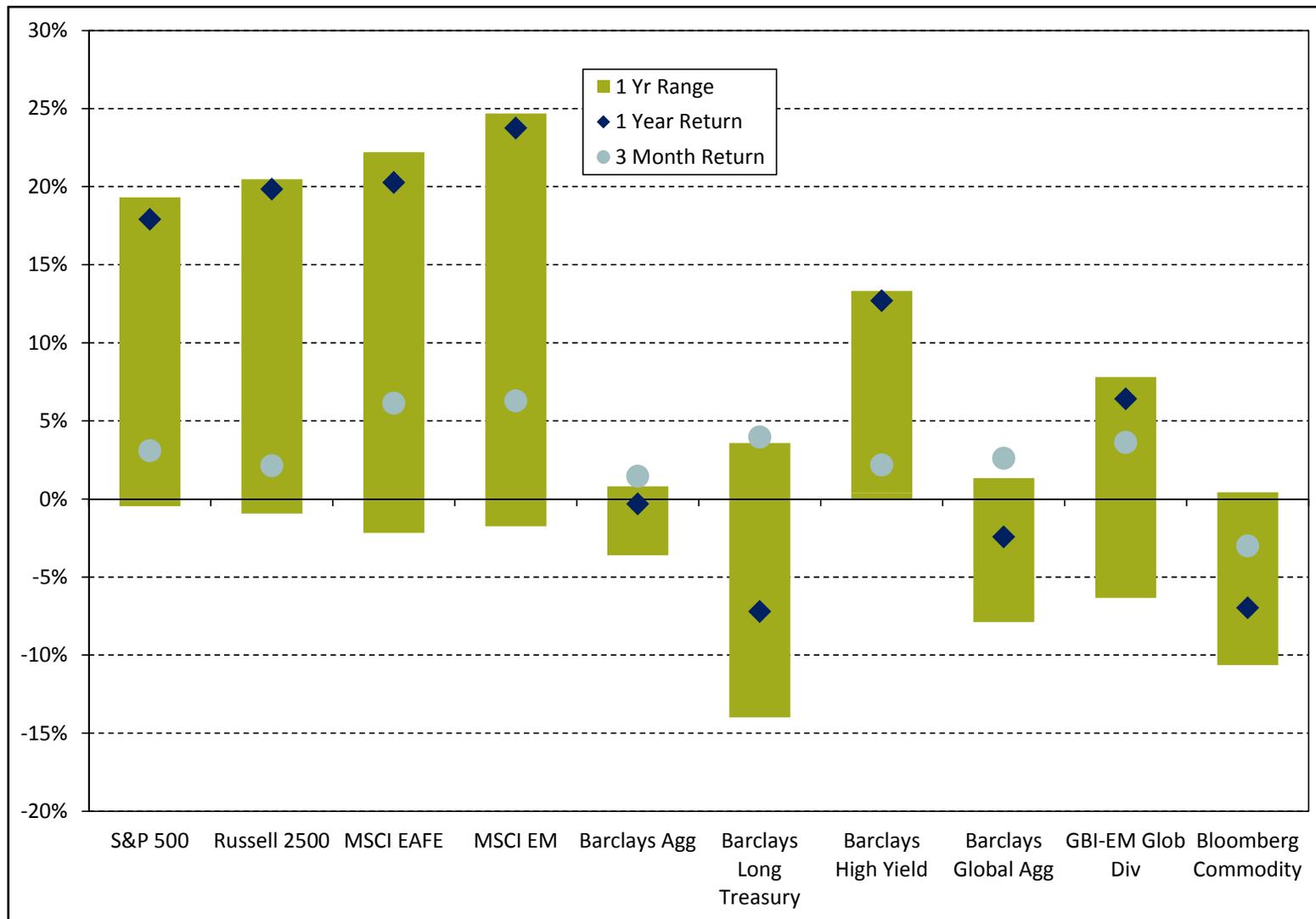


## Index Performance Summary as of 06/30/2017

	2009	2010	2011	2012	2013	2014	2015	2016	Q1	April	May	June	Q2	YTD
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	11.4%	2.2%	3.0%	1.0%	6.3%	18.4%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	7.2%	2.5%	3.7%	-0.2%	6.1%	13.8%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	6.9%	1.6%	2.2%	0.5%	4.3%	11.5%
<b>JPM GBI-EM Global Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	6.5%	1.2%	2.0%	0.5%	3.6%	10.4%
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	6.1%	1.0%	1.4%	0.6%	3.1%	9.3%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	6.0%	1.1%	1.3%	0.7%	3.1%	9.3%
<b>BC US STRIPS 20+ Yr</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	1.8%	1.8%	3.1%	1.1%	6.1%	8.0%
<b>BC US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	1.7%	1.6%	2.1%	1.0%	4.7%	6.4%
<b>JPM EMBI Glob Div</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	3.9%	1.6%	0.9%	-0.1%	2.2%	6.2%
<b>BC US Govt/Cred Long</b>	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	6.7%	1.6%	1.6%	2.0%	0.8%	4.4%	6.0%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	3.8%	0.8%	-1.1%	2.5%	2.1%	6.0%
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	2.5%	1.1%	-2.0%	3.5%	2.5%	5.0%
<b>BC US Corporate HY</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	2.7%	1.2%	0.9%	0.1%	2.2%	4.9%
<b>BC Global Agg</b>	-6.5%	-5.3%	-5.3%	-4.1%	2.7%	-0.6%	3.3%	2.1%	1.8%	1.1%	1.5%	-0.1%	2.6%	4.4%
<b>BC Municipal</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	1.6%	0.7%	1.6%	-0.4%	2.0%	3.6%
<b>CS Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	2.1%	0.4%	0.8%	-	1.3%	3.4%
<b>FTSE NAREIT Eqy REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	1.2%	0.1%	-0.8%	2.2%	1.5%	2.7%
<b>BC US Agg Bond</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	0.8%	0.8%	0.8%	-0.1%	1.4%	2.3%
<b>CS Leveraged Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	9.9%	1.2%	0.4%	0.4%	-0.1%	0.8%	2.0%
<b>BC US Agg Interm</b>	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.0%	0.7%	0.6%	0.5%	-0.3%	0.9%	1.6%
<b>BC TIPS</b>	11.4%	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	1.3%	0.6%	0.0%	-0.9%	-0.4%	0.9%
<b>BC US Govt/Cred 1-3 Yr</b>	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.3%	0.4%	0.2%	0.2%	0.0%	0.3%	0.7%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	3.9%	-1.3%	-4.5%	-0.6%	-6.4%	-2.7%
<b>BBG Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	-2.3%	-1.5%	-1.4%	-0.3%	-3.2%	-5.6%

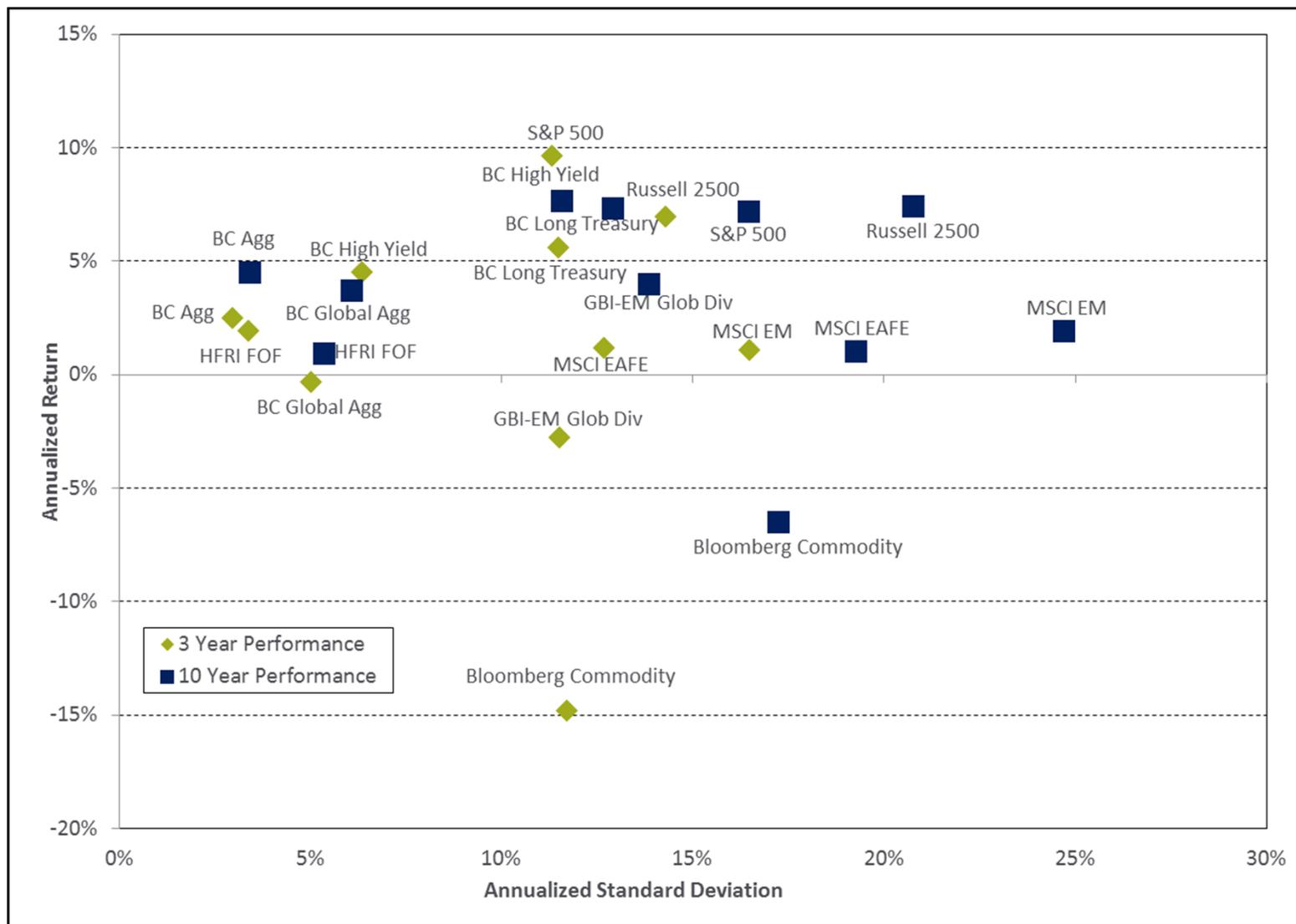
Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse

# Near Term Broad Market Performance Summary as of 06/30/2017



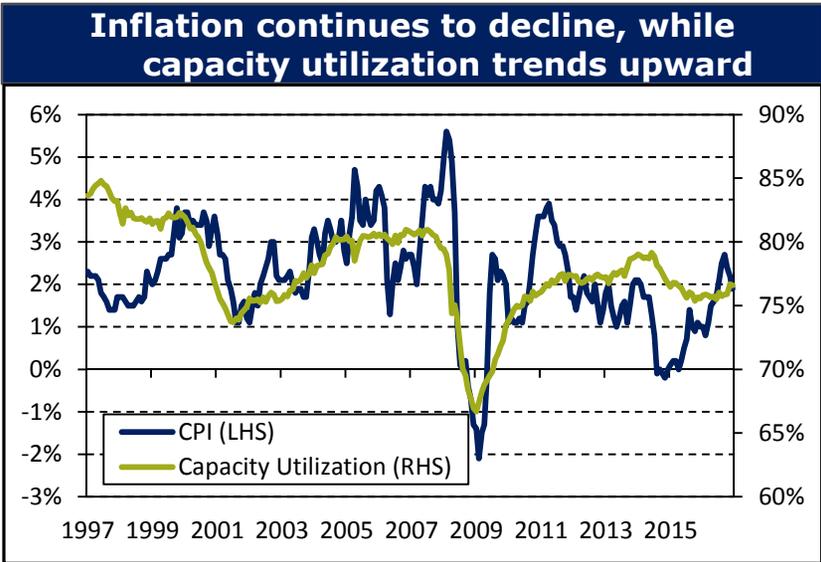
Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, JP Morgan  
 \*1 Yr Range: Represents range of cumulative high/low daily index returns for an investment made one year ago

# Long Term Broad Market Performance Summary as of 06/30/2017

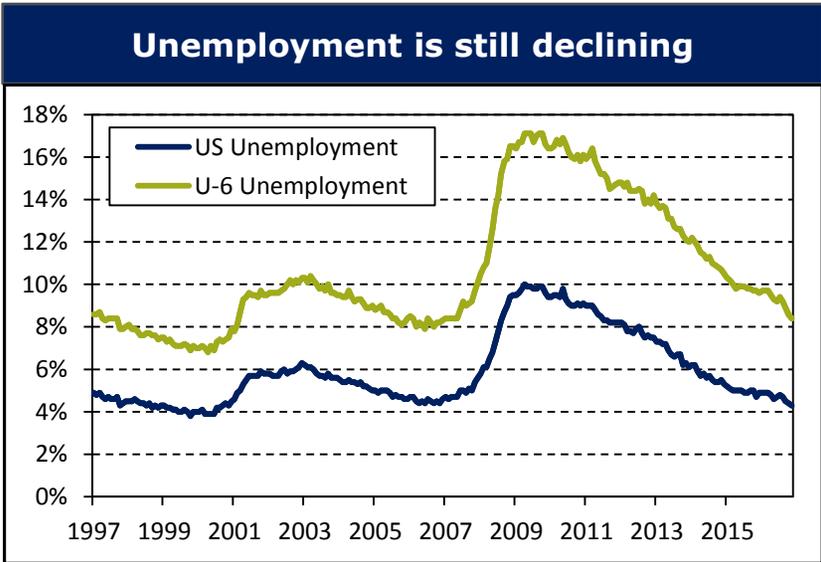


Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, JP Morgan

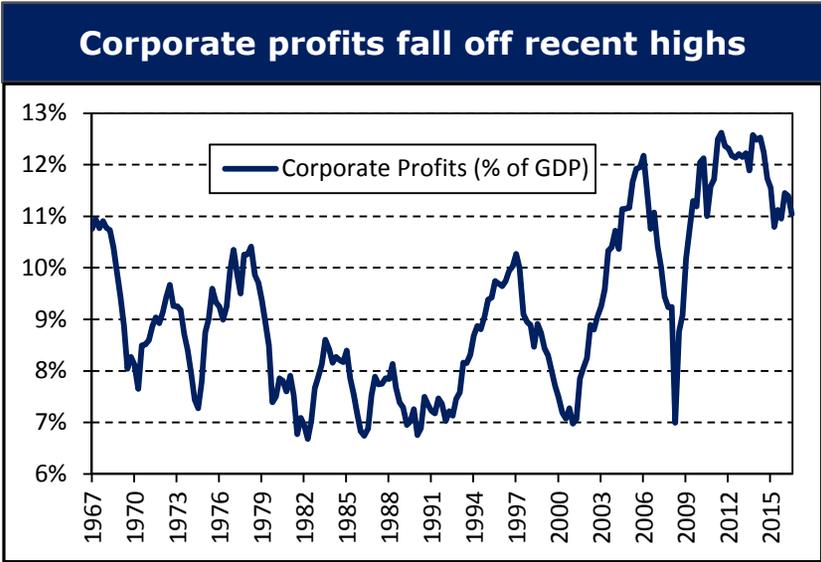
# US Economic Indicators



Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics



Source: Bloomberg, Bureau of Labor Statistics



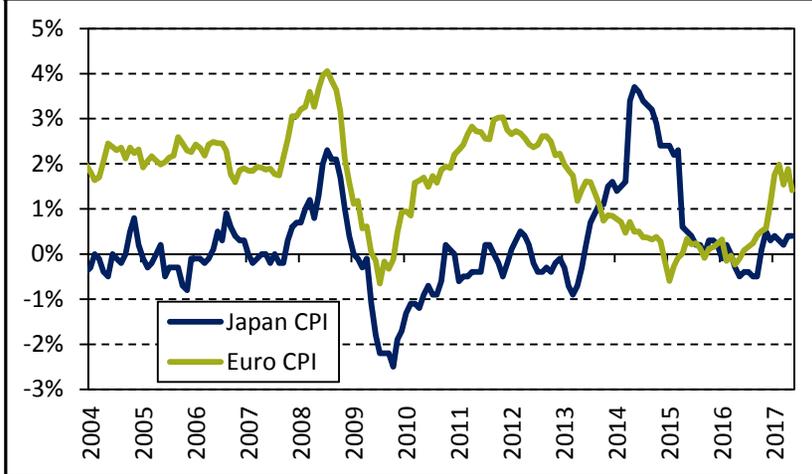
Source: Bloomberg, Bureau of Economic Analysis



Source: Bloomberg, Institute for Supply Management

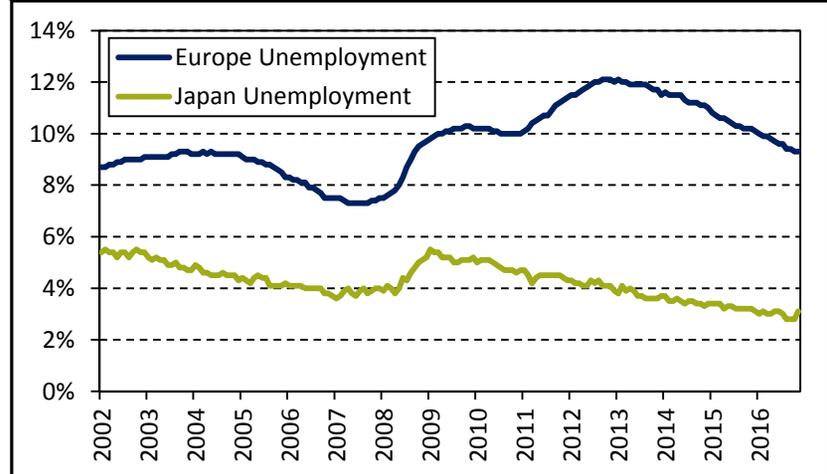
# International Economic Indicators

## Eurozone inflation fell to 1.4%, remaining below the 2% target



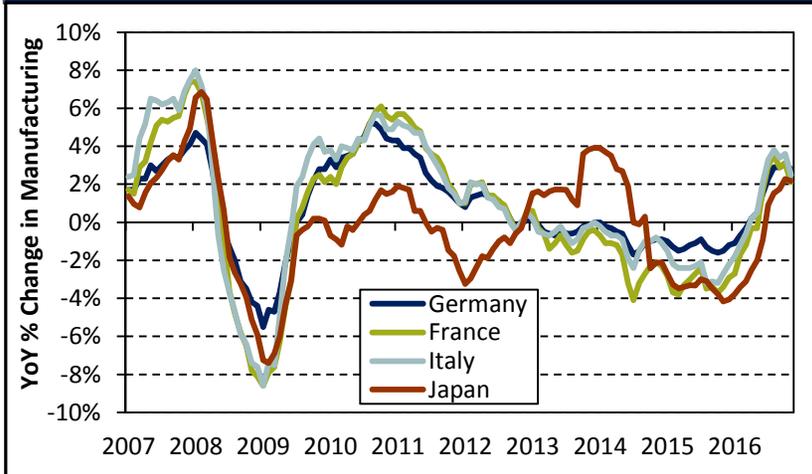
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

## Japan unemployment increased off previous month lows



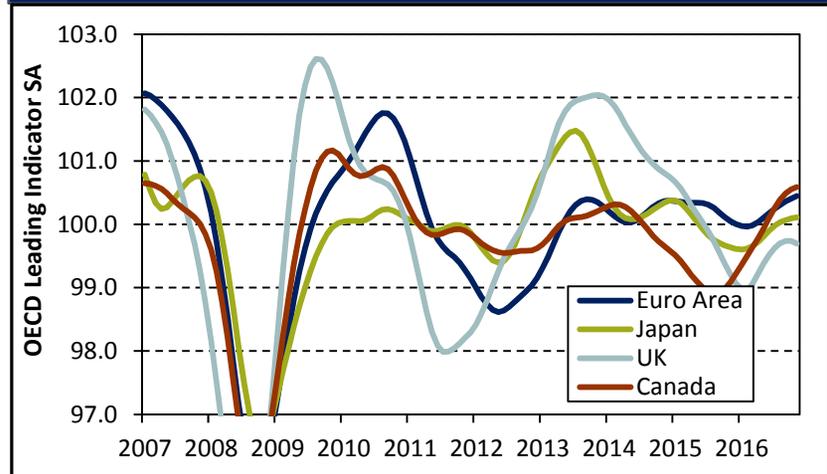
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

## Manufacturing has fallen, though still remains elevated



Source: Bloomberg, OECD, Eurostat

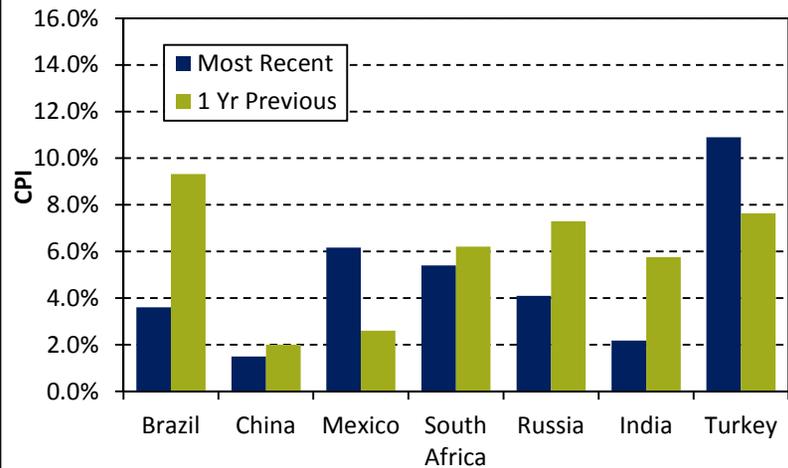
## UK leading indicators have begun to decline



Source: Bloomberg, OECD

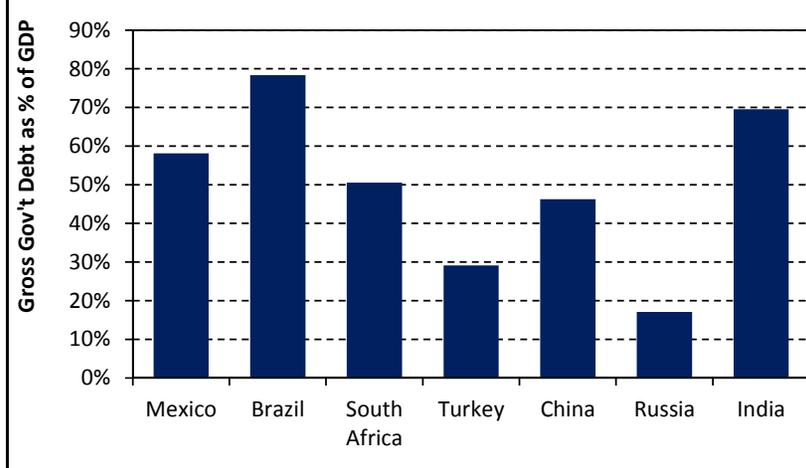
# Emerging Market Economic Indicators

## EM inflation varies by country



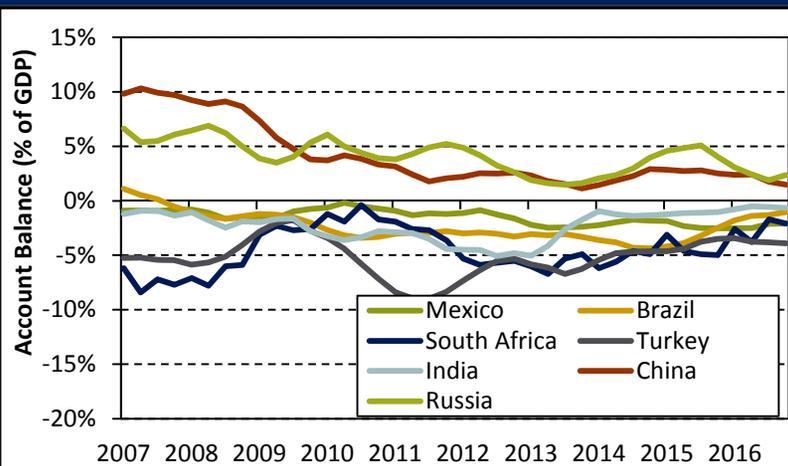
Source: Bloomberg

## Relatively healthy debt/GDP ratios



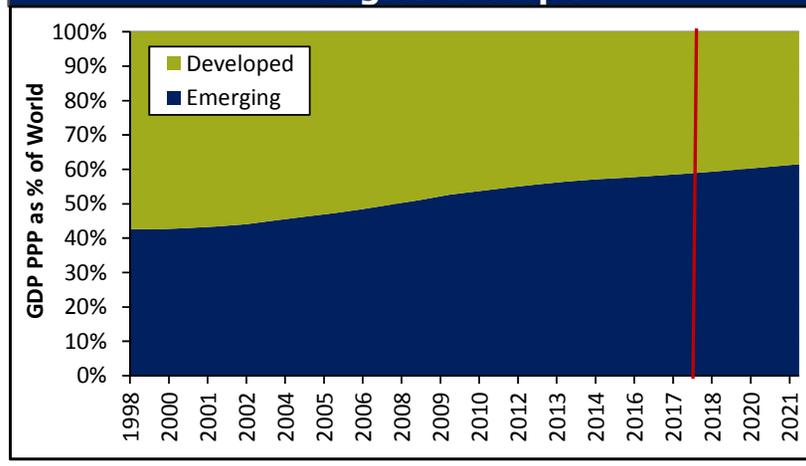
Source: Bloomberg, IMF

## Account balances remain steady



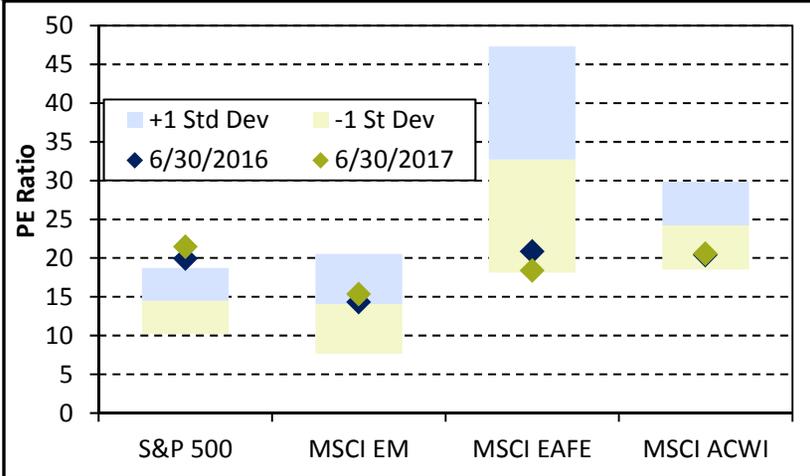
Source: Bloomberg

## EM continues trending higher as a percent of global output



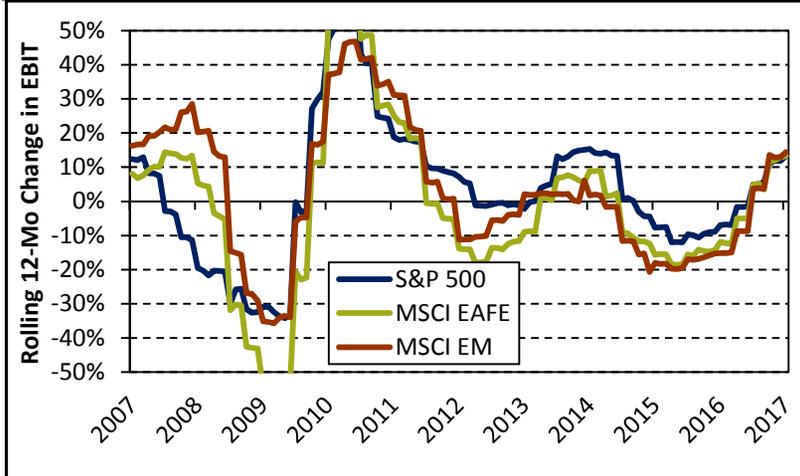
Source: Bloomberg, IMF

## EAFE valuations remain lower than the previous year



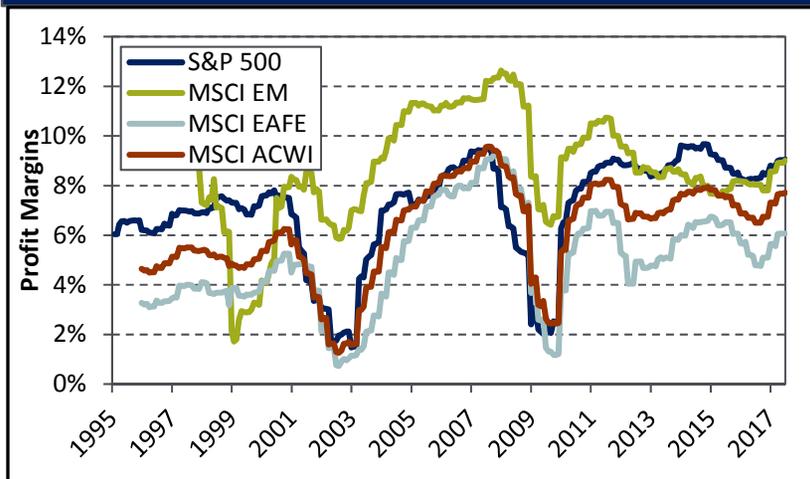
Source: Bloomberg, Standard and Poors, MSCI \*MSCI EAFE is ex UK Telecom  
\*Standard deviation calculations on 20 years of data except S&P 500 (30 years)

## Rolling annual earnings growth continues trending upward off contraction



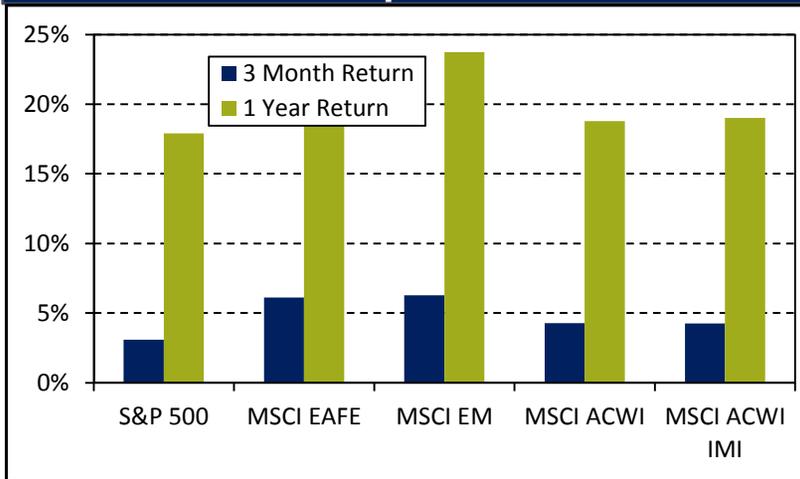
Source: Bloomberg, Standard and Poors, MSCI

## Profit margins continue to improve



Source: Bloomberg, MSCI

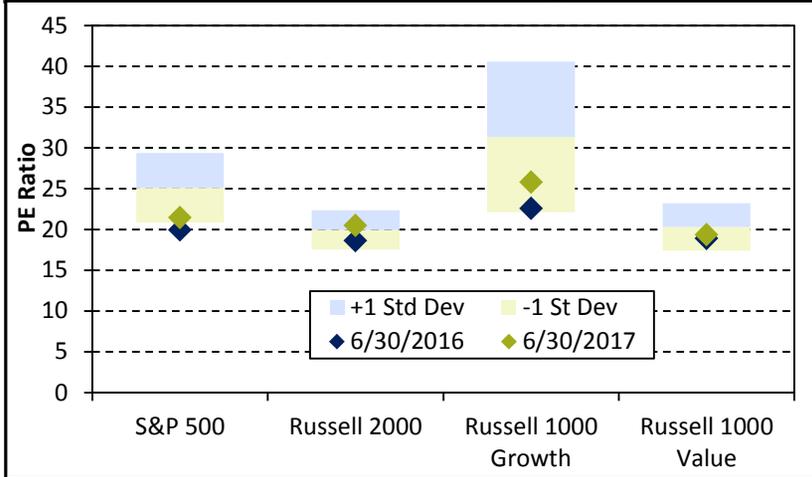
## Equities have experienced positive short-term performance



Source: Bloomberg, MSCI

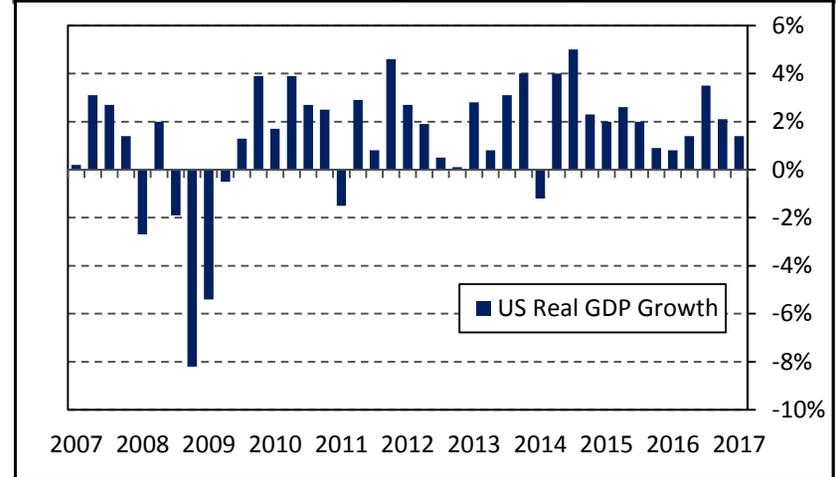
# US Equity

## US equity valuations remain elevated relative to last year



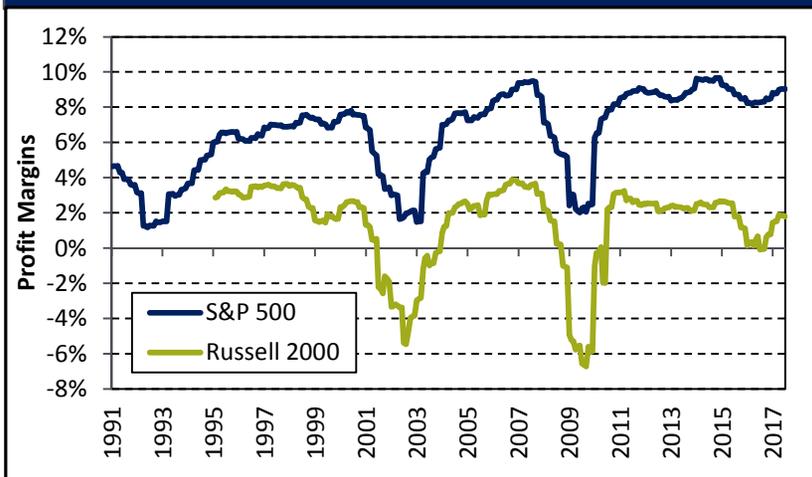
Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive\* Standard deviation calculations based on 20 years of data

## Real GDP growth declined significantly from the previous quarter



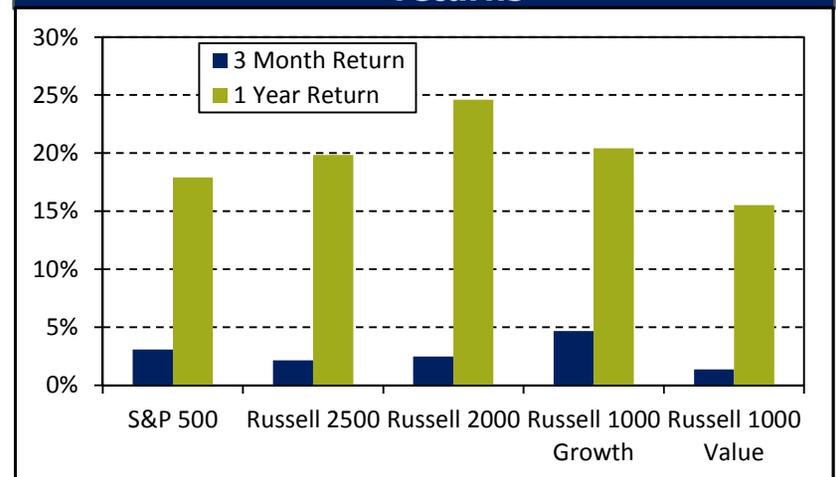
Source: Bloomberg, Bureau of Economic Analysis

## Profit margins experience an uptick



Source: Bloomberg, Standard and Poors, Russell

## US equity continues to post positive returns

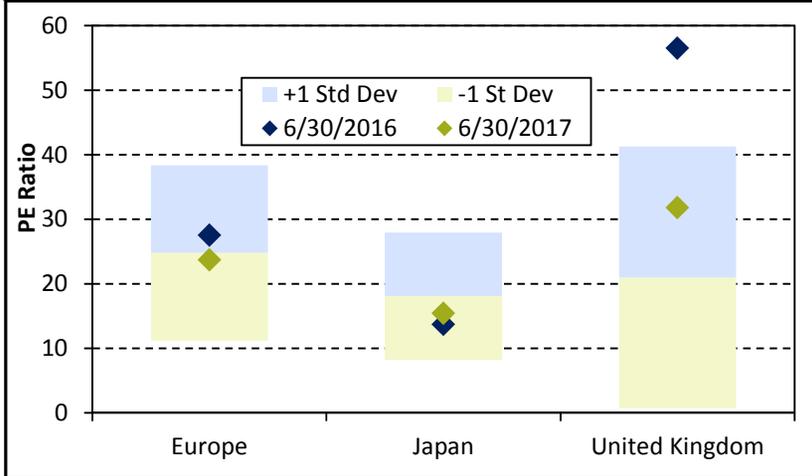


Source: Bloomberg, Standard and Poors, Russell



# International Equity

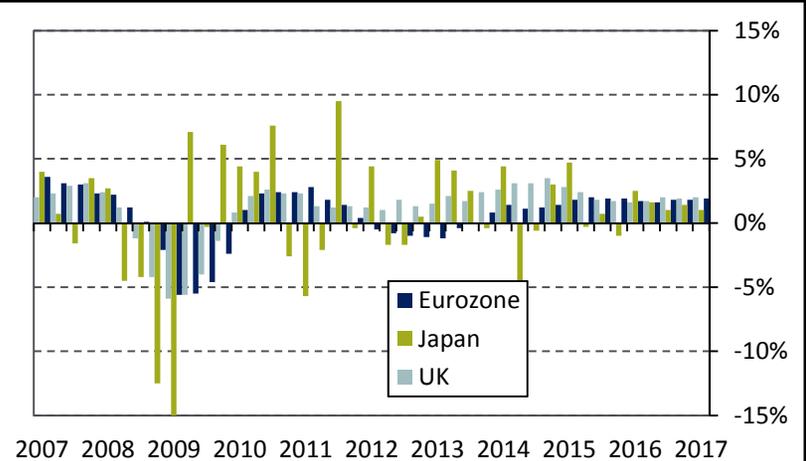
## UK and Europe PEs remain below previous year levels



Source: Bloomberg, MSCI, FTSE \*UK represented by FTSE 100 Index

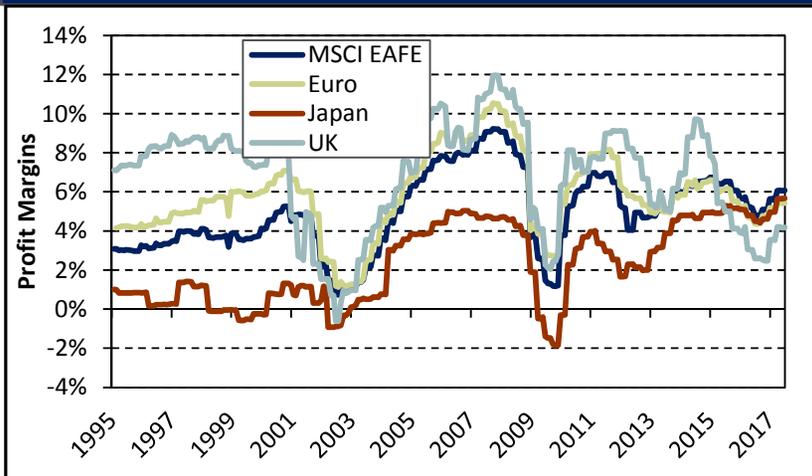
\*Standard deviation calculations based on 20 years of data, with Europe since 12/1998

## International growth has steadied



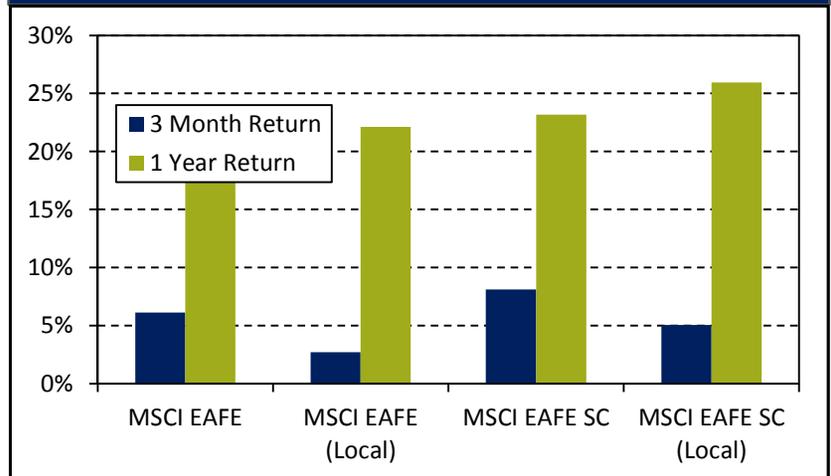
Source: Bloomberg

## Profit margins continue trending higher



Source: Bloomberg, MSCI

## Strong short-term performance for EAFE

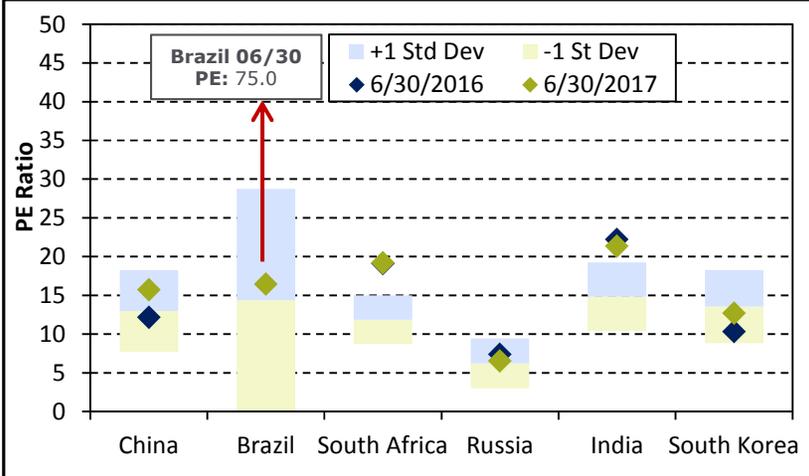


Source: Bloomberg, MSCI



# Emerging Markets Equity

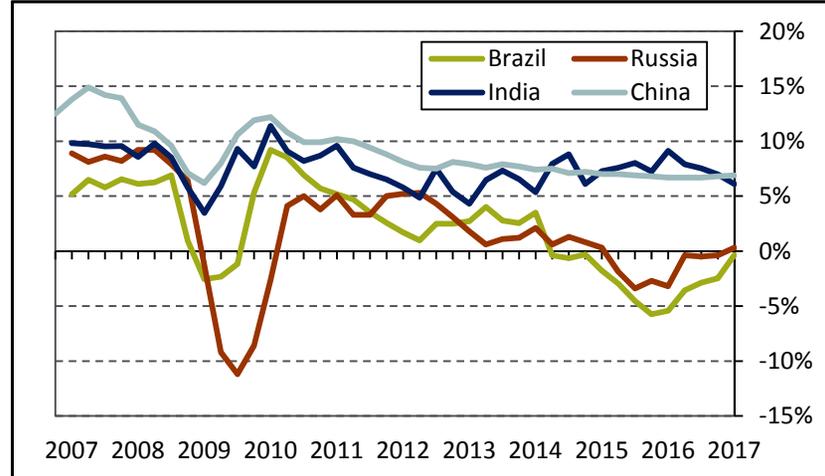
## India's valuation fell below the previous year, though still remains elevated



Source: Bloomberg, MSCI

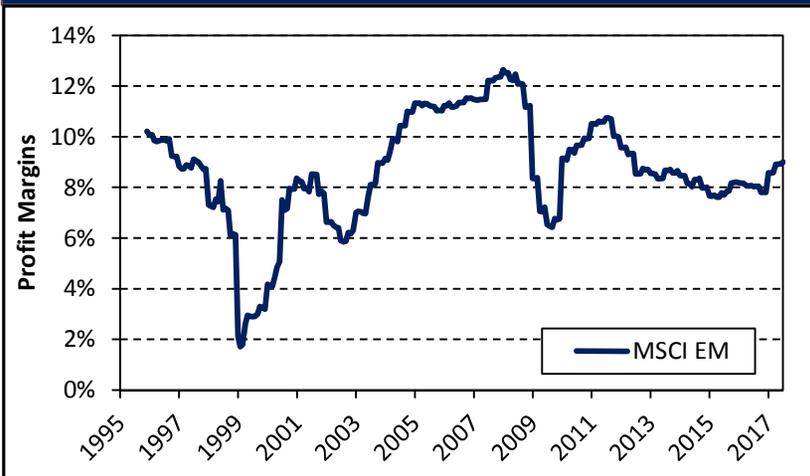
\*Standard deviation calculations based on 20 years of data, with Russia since 01/1998

## Brazil continues to rebound off earnings contraction



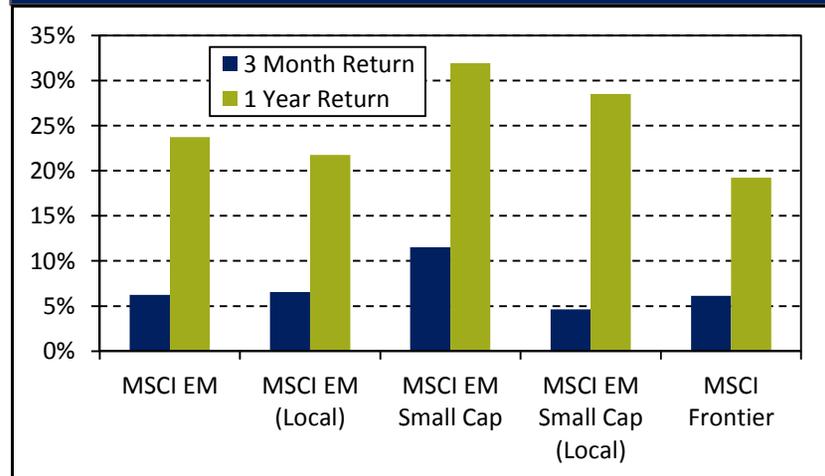
Source: Bloomberg

## Profit margins continue trending upward



Source: Bloomberg, MSCI

## EM posts strong short-term returns

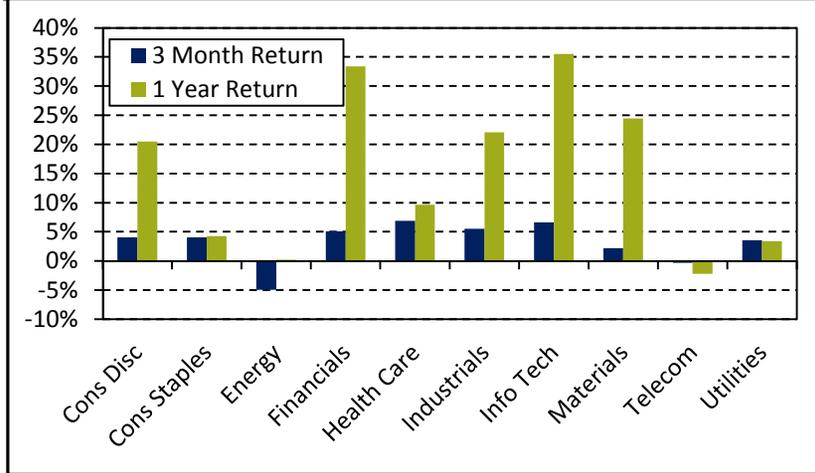


Source: Bloomberg, MSCI



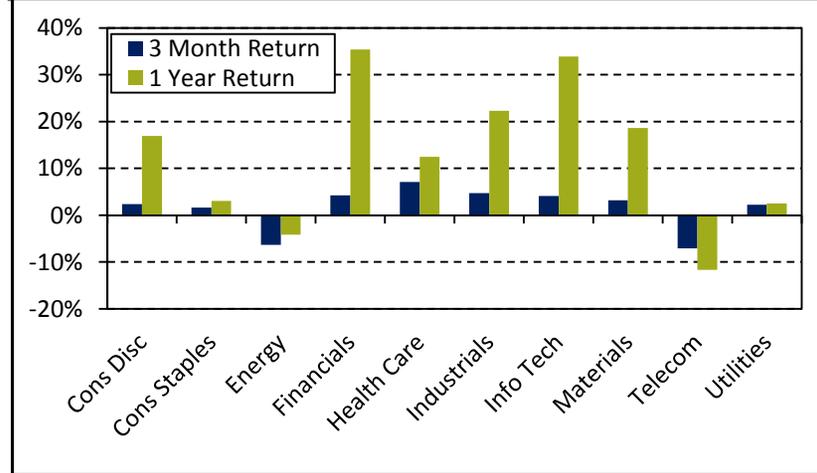
# Global Equity by Sector

## Ex-energy and telecom, MSCI ACWI has posted broad short-term returns



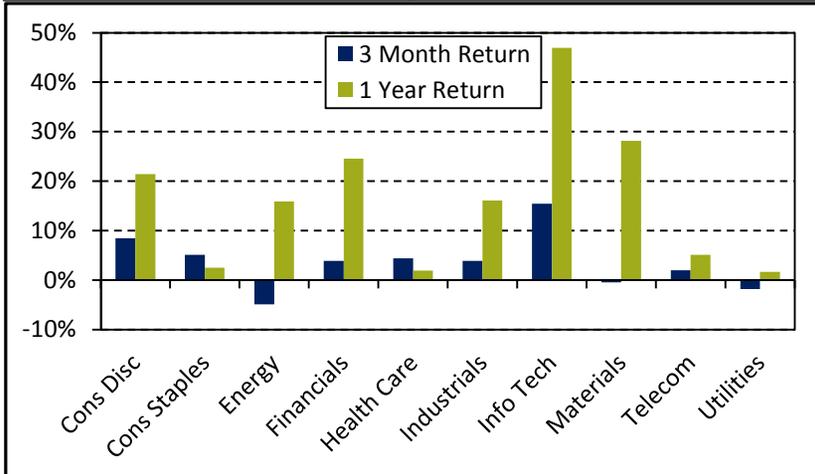
Source: Bloomberg, MSCI

## Energy and telecom sectors drag S&P 500 short-term returns



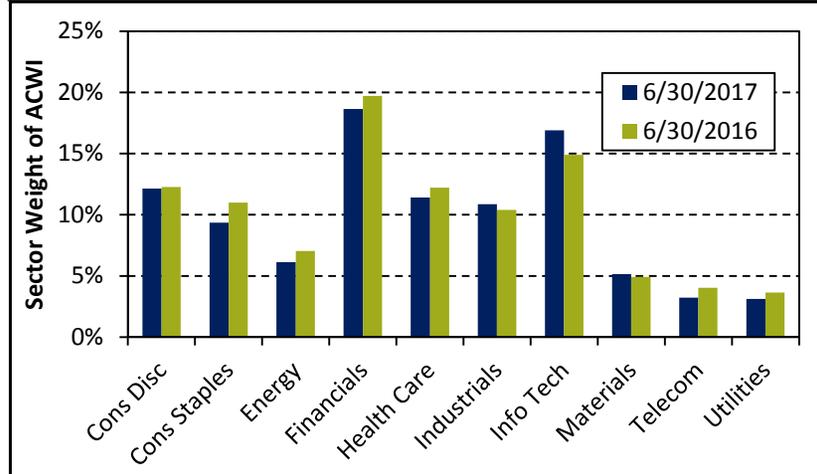
Source: Bloomberg, Standard and Poors

## MSCI EM short-term returns have been lead by Info Tech



Source: Bloomberg, MSCI

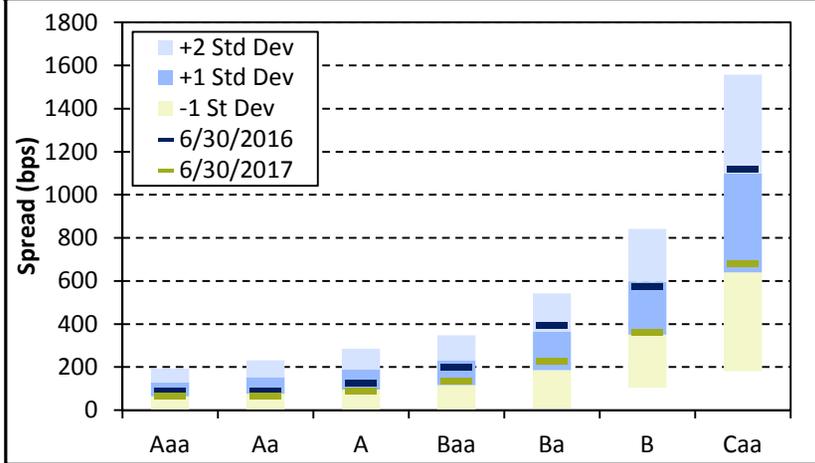
## Financials sector weight has decreased in favor of Info Tech and Industrials



Source: Bloomberg, MSCI

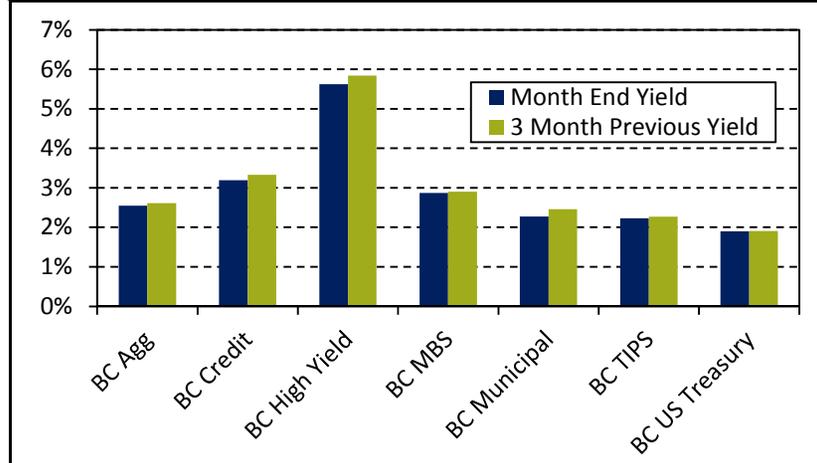


**Spreads remain lower than the previous year**



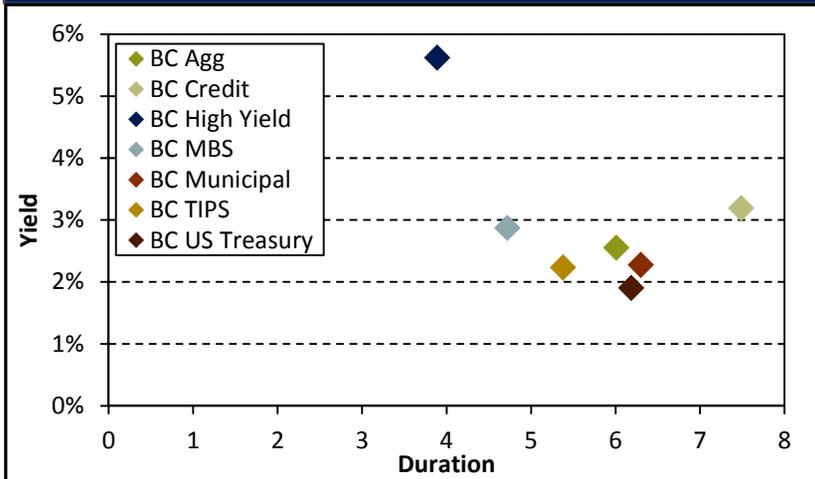
Source: Bloomberg, Barclays  
\*Standard deviation calculations based on 20 years of data

**Yields have declined slightly relative to three months prior**



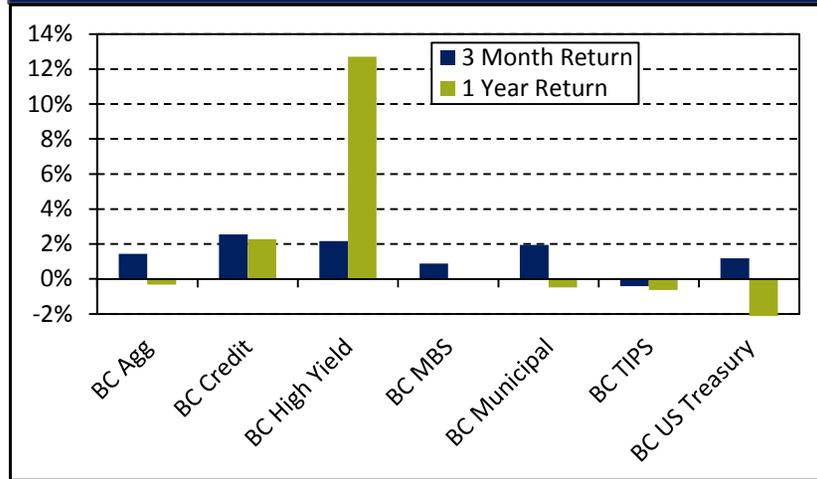
Source: Bloomberg, Barclays

**Similar duration/yield profiles among core indices**



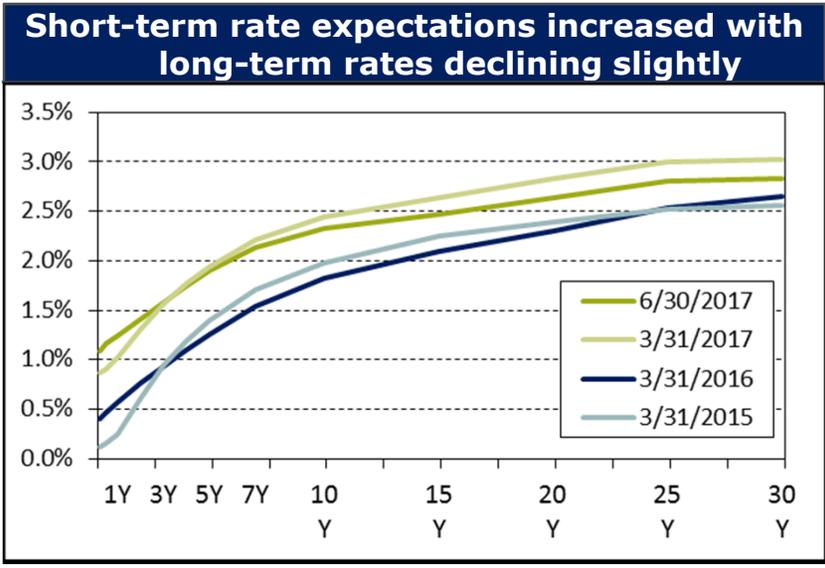
Source: Bloomberg, Barclays

**Ex-TIPS, fixed income indices post positive short-term returns**

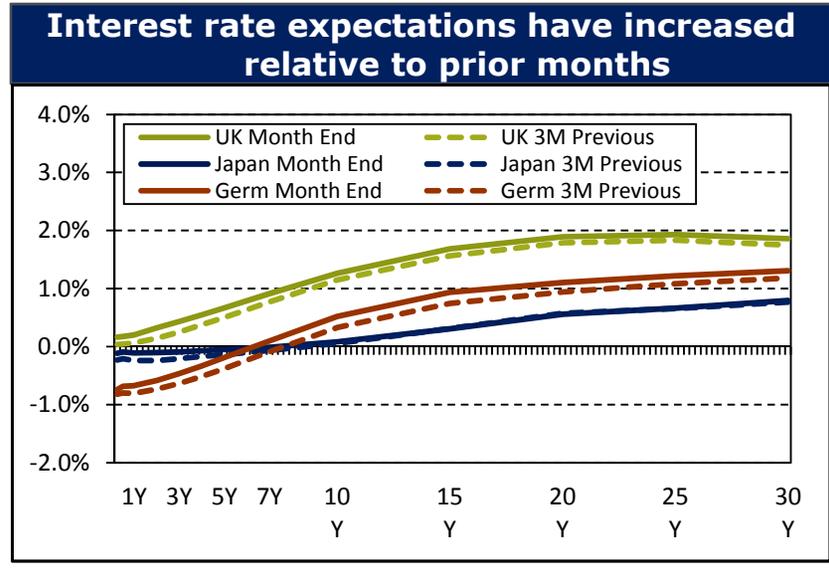


Source: Bloomberg, Barclays

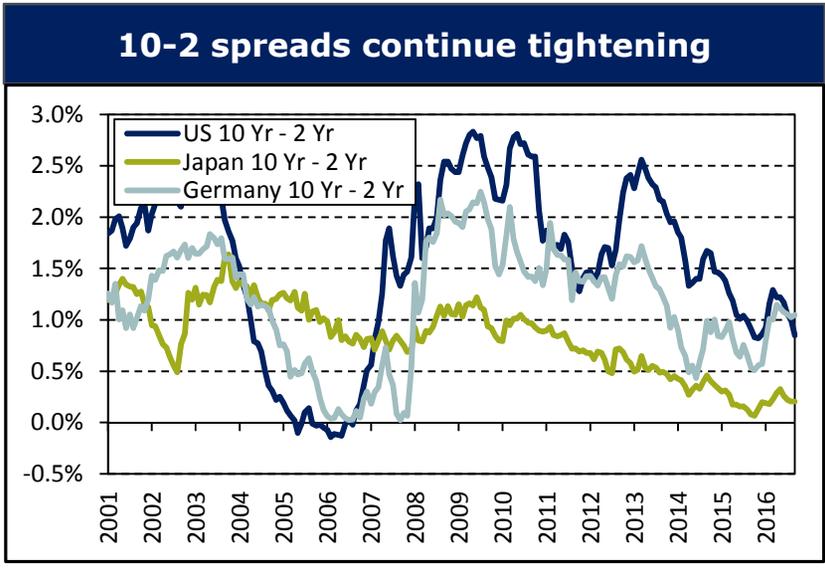
# Rates



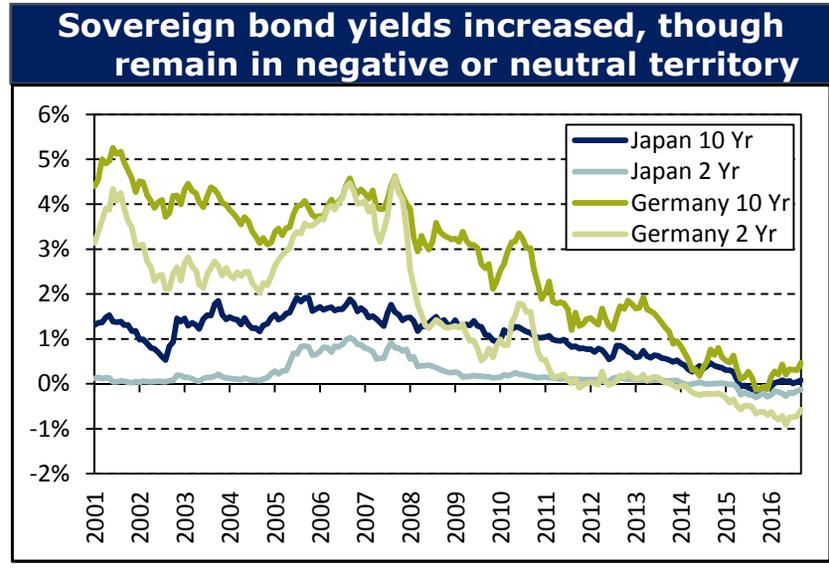
Source: Bloomberg



Source: Bloomberg



Source: Bloomberg



Source: Bloomberg