



NEPC, LLC

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## Vermont Pension Investment Committee

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### Second Fiscal Quarter 2017 Preliminary Investment Performance Analysis

February 28<sup>th</sup>, 2016

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# NEPC Update



# Highlights of Fourth Quarter Happenings at NEPC

December 2016

## NEPC Insights

- NEPC's Election Perspective: The Race to the Bottom (October 2016)
- Interest Rate Risk and Asset/Liability Management for Cash Balance Plans (October 2016)
- 2016 3<sup>rd</sup> Quarter Market Thoughts (October 2016)
- Behind The Curtain: Operational Capabilities Are A Must for OCIOs (November 2016)
- NEPC's 2016 Hedge Fund Operational Due Diligence Survey Results (November 2016)
- NEPC Market Chatter: To PE or not to PE... That is the Question (November 2016)
- Caution: Construction Ahead – Healthcare Organizations Use Private Equity Investments to Support Innovation (December 2016)

## Webinar Replays

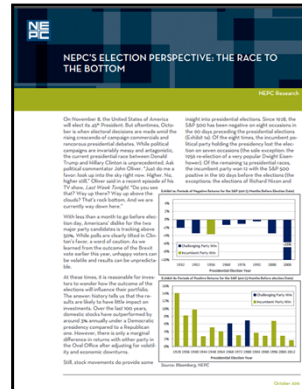
- Investor Insights – Perspectives on the 2016 US Election (November 2016)
- Defined Benefit Plan Trends Survey Results (December 2016)
- Digging Deeper on ESG (December 2016)

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

## Client Awards

We'd like to congratulate the following clients for their recent award wins at *Chief Investment Officer's 7th Annual 2016 Industry Innovation Awards*:

- Texas Tech University System's CIO, Tim Barrett as 2016 recipient of the Endowment Award
- MoDot & Patrol Employees' Retirement System's CIO, Larry Krummen as the 2016 recipient of the Public Defined Benefit Plan Below \$15 Billion Award
- State of Wisconsin Investment Board's CIO, David Villa as the 2016 recipient of the Public Defined Benefit Plan Above \$100 Billion Award



## Upcoming Events

NEPC's 22<sup>nd</sup> Annual Investment Conference will be held on May 9-10, 2017 at the InterContinental Hotel in Boston, MA. Details to come in the upcoming months!



## NEPC Gives Back

- NEPC employees sorted and prepared 6,853 pounds of food during a volunteer day at the Greater Boston Food Bank, an organization that works to end hunger in the area by providing people in need with healthy food and resources.
- During the month of November, NEPC's November team raised over \$5,000 to support men's health research.
- In support of Breast Cancer Awareness Month, NEPC employees wore their favorite pair of jeans with a purpose and participated in the American Cancer Society Denim Day by sporting denim and the color pink. Together, we raised over \$2,500.
- As part of our Annual United Way campaign, over 50 NEPC employees assembled Literacy Kits for children during the holiday season. The kits were filled with developmental games, arts and crafts supplies, and reading materials.

MARK YOUR CALENDAR!

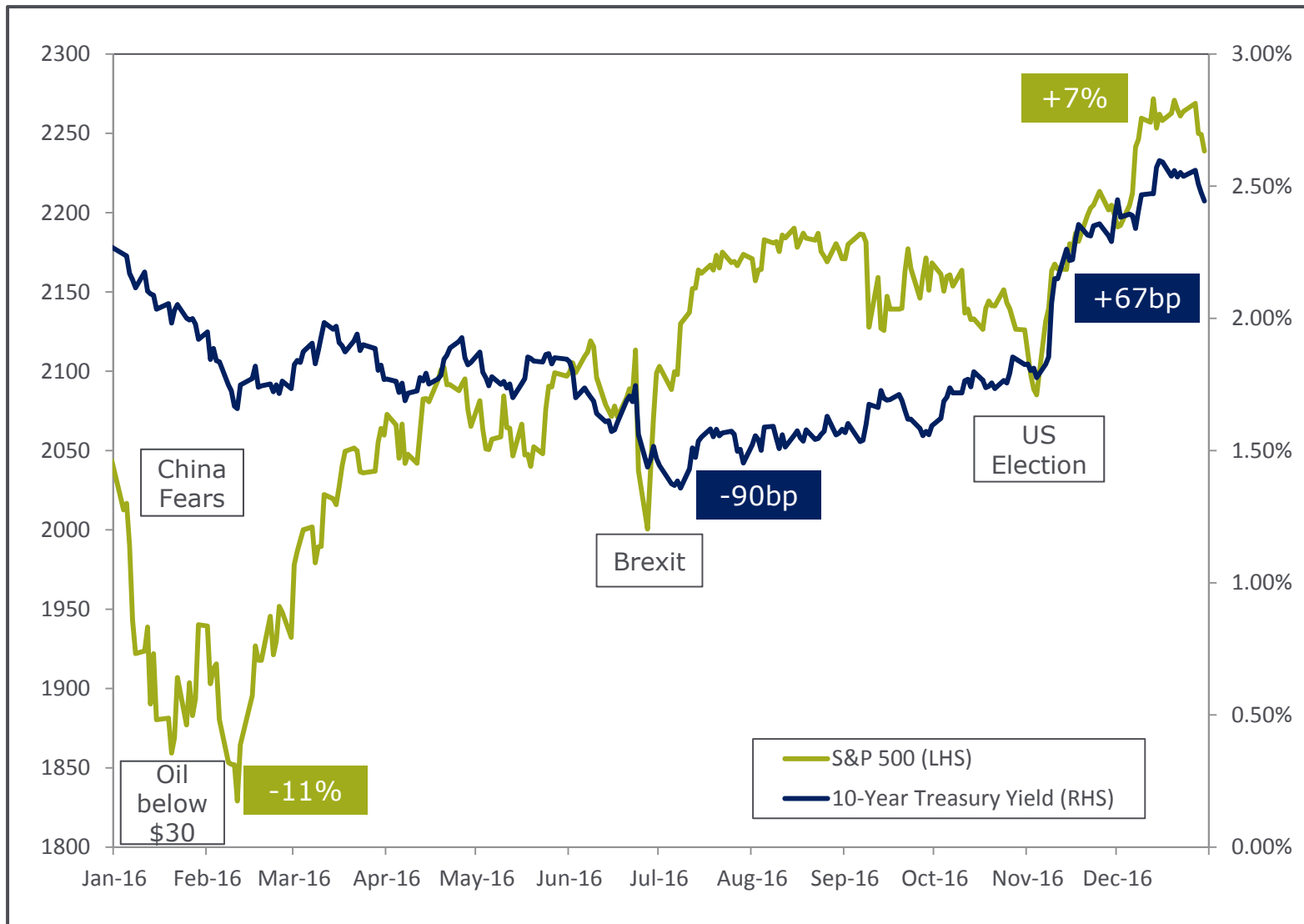
# Market Environment



- **Domestic equity markets led the way in the fourth quarter, shrugging off the appreciating dollar and a rate hike from the Fed.**
  - Large Cap equities, measured by the S&P 500 index, gained 12% for the quarter and ended the year up 11.9%
  - Small Cap equities, measured by the Russell 2000 index, gained 8.8% for the quarter ending the year up 21.3%
  - Value significantly outperformed growth across the market cap spectrum
- **Non-U.S. equity markets suffered losses as investors determine the positives and negatives in potential change in trade policies.**
  - Developed market equities, measured by MSCI EAFE index, fell by -0.7% for the quarter and ending the year up 1%
  - Emerging market equities, measured by MSCI EM index, fell by -4.2% for the quarter and ending the year up 11.2%
  - On a size basis, smaller cap stocks outperformed their larger counterparts

- **Risk takers were rewarded as we saw a rapid narrowing of credit spreads during the year. Lower credit quality such as high yield, emerging market debt and leverage loans outperformed nominal bonds. Optimism for greater economic growth translated to higher interest rates and expectations of rising inflation.**
  - The 10-year treasury yield rose 17.3bps in 2016, the largest rise since 2013
  - High yield and investment grade corporate bonds spreads narrowed to their lowest levels in 10 years
- Barclays Aggregate Bond index fell by -2.9% for the quarter, ending the year up 2.7%
- Barclays TIPS index fell by -2.4% for the quarter, ending the year up 4.7%
- Barclays High Yield Bond index gained 1.8% for the quarter, ending the year up 17.1%
- JPM EMBI Global Diversified index fell by -4.0% for the quarter, ending the year up 10.2%

# 2016: A Rollercoaster of Geopolitical Events



Source: Bloomberg, NEPC

# 2016: A Strong Year for Risk Assets



*\*Private Equity and NCREIF Real Estate lagged one quarter  
Source: NEPC, Barclays, S&P, Bloomberg, JPM, Russell, MSCI, HFRI, InvestorForce*



**Extended US Economic Cycle**

**Federal Reserve Gradualism**

**China Transitions**

**Globalization Backlash**

## Returns for Key Indices Ranked in Order of Performance

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
MSCI EMERGING MARKETS 32.17	MSCI EMERGING MARKETS 39.39	BC AGGREGATE 5.24	MSCI EMERGING MARKETS 78.51	RUSSELL 2000 GROWTH 29.09	BC AGGREGATE 7.84	MSCI EMERGING MARKETS 18.22	RUSSELL 2000 GROWTH 43.30	S&P 500 13.69	RUSSELL 1000 GROWTH 5.67	RUSSELL 2000 VALUE 31.74
MSCI EAFE 26.34	RUSSELL 1000 GROWTH 11.81	RUSSELL 2000 VALUE -28.92	RUSSELL 1000 GROWTH 37.21	RUSSELL 2000 26.85	RUSSELL 1000 GROWTH 2.64	RUSSELL 2000 VALUE 18.05	RUSSELL 2000 38.82	RUSSELL 1000 VALUE 13.45	S&P 500 1.38	RUSSELL 2000 21.31
RUSSELL 1000 VALUE 22.25	MSCI EAFE 11.17	RUSSELL 2000 -33.79	RUSSELL 2000 GROWTH 34.47	RUSSELL 2000 VALUE 24.5	S&P 500 2.11	RUSSELL 1000 VALUE 17.51	RUSSELL 2000 VALUE 34.52	RUSSELL 1000 13.24	RUSSELL 1000 0.92	RUSSELL 1000 VALUE 17.34
RUSSELL 2000 VALUE 23.48	RUSSELL 2000 GROWTH 7.06	RUSSELL 1000 VALUE -36.85	MSCI EAFE 31.78	MSCI EMERGING MARKETS 18.88	RUSSELL 1000 1.50	MSCI EAFE 17.32	RUSSELL 1000 GROWTH 33.48	RUSSELL 1000 GROWTH 13.05	BC AGGREGATE 0.55	RUSSELL 1000 12.05
RUSSELL 2000 18.37	BC AGGREGATE 6.97	S&P 500 -37.0	RUSSELL 1000 28.43	RUSSELL 1000 GROWTH 16.71	RUSSELL 1000 VALUE 0.39	RUSSELL 1000 16.42	RUSSELL 1000 33.11	BC AGGREGATE 5.97	MSCI EAFE -0.81	S&P 500 11.96
S&P 500 15.8	RUSSELL 1000 5.77	RUSSELL 1000 -37.6	RUSSELL 2000 27.16	RUSSELL 1000 16.10	RUSSELL 2000 GROWTH -2.91	RUSSELL 2000 16.35	RUSSELL 1000 VALUE 32.53	RUSSELL 2000 GROWTH 5.60	RUSSELL 2000 GROWTH -1.38	RUSSELL 2000 GROWTH 11.32
RUSSELL 1000 15.46	S&P 500 5.49	RUSSELL 1000 GROWTH -38.44	S&P 500 26.46	RUSSELL 1000 VALUE 15.51	RUSSELL 2000 -4.18	S&P 500 16.00	S&P 500 32.39	RUSSELL 2000 4.89	RUSSELL 1000 VALUE -3.83	MSCI EMERGING MARKETS 11.19
RUSSELL 2000 GROWTH 13.35	RUSSELL 1000 VALUE -0.17	RUSSELL 2000 GROWTH -38.54	RUSSELL 2000 VALUE 20.58	S&P 500 15.06	RUSSELL 2000 VALUE -5.50	RUSSELL 1000 GROWTH 15.26	MSCI EAFE 22.78	RUSSELL 2000 VALUE 4.22	RUSSELL 2000 -4.41	RUSSELL 1000 GROWTH 7.08
RUSSELL 1000 GROWTH 9.07	RUSSELL 2000 -1.56	MSCI EAFE -43.38	RUSSELL 1000 VALUE 19.69	MSCI EAFE 7.75	MSCI EAFE -12.14	RUSSELL 2000 GROWTH 14.59	BC AGGREGATE -2.02	MSCI EMERGING MARKETS -2.19	RUSSELL 2000 VALUE -7.46	BC AGGREGATE 2.65
BC AGGREGATE 4.33	RUSSELL 2000 VALUE -9.78	MSCI EMERGING MARKETS -53.33	BC AGGREGATE 5.93	BC AGGREGATE 6.54	MSCI EMERGING MARKETS -18.42	BC AGGREGATE 4.21	MSCI EMERGING MARKETS -2.60	MSCI EAFE -4.90	MSCI EMERGING MARKETS -14.93	MSCI EAFE 1.00

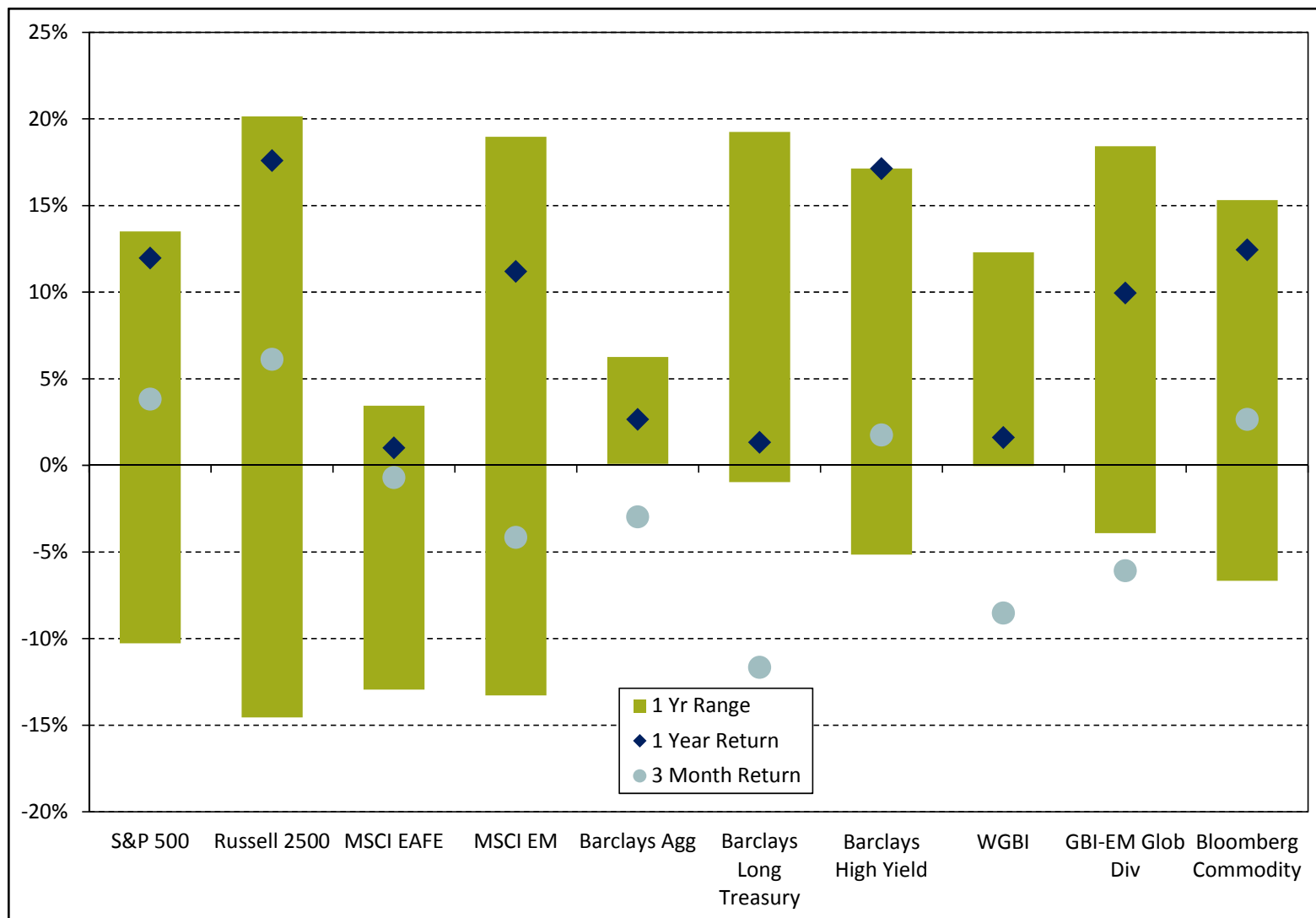
QTD	3 year	5 Year	10 Year
RUSSELL 2000 VALUE 14.07	S&P 500 8.87	RUSSELL 2000 VALUE 15.07	RUSSELL 1000 GROWTH 8.33
RUSSELL 2000 8.83	RUSSELL 1000 8.59	RUSSELL 1000 VALUE 14.80	RUSSELL 2000 GROWTH 7.76
RUSSELL 1000 VALUE 6.68	RUSSELL 1000 VALUE 8.59	RUSSELL 1000 14.69	RUSSELL 1000 7.08
RUSSELL 1000 3.83	RUSSELL 1000 GROWTH 8.55	S&P 500 14.66	RUSSELL 2000 7.07
S&P 500 3.82	RUSSELL 2000 VALUE 8.31	RUSSELL 2000 14.46	S&P 500 6.95
RUSSELL 2000 GROWTH 3.57	RUSSELL 2000 6.74	RUSSELL 1000 GROWTH 14.50	RUSSELL 2000 VALUE 6.26
RUSSELL 1000 GROWTH 1.01	RUSSELL 2000 GROWTH 5.05	RUSSELL 2000 GROWTH 13.74	RUSSELL 1000 VALUE 5.72
MSCI EAFE -0.71	BC AGGREGATE 3.03	MSCI EAFE 6.53	BC AGGREGATE 4.34
BC AGGREGATE -2.98	MSCI EAFE -1.60	BC AGGREGATE 2.23	MSCI EMERGING MARKETS 1.84
MSCI EMERGING MARKETS -4.16	MSCI EMERGING MARKETS -2.55	MSCI EMERGING MARKETS 1.28	MSCI EAFE 0.75

## Index Performance Summary as of 12/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Oct	Nov	Dec	Q4	YTD
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	-1.5%	3.8%	9.0%	-4.8%	11.2%	2.8%	8.8%	21.3%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	-4.2%	19.7%	1.1%	-4.5%	2.3%	4.4%	2.0%	18.3%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	-4.1%	8.5%	1.9%	6.1%	17.6%
<b>Barclays US Corp HY</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.4%	-0.5%	1.8%	1.8%	17.1%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	1.2%	2.5%	4.0%	-2.0%	3.9%	1.9%	3.8%	12.1%
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	-1.8%	3.7%	2.0%	3.8%	12.0%
<b>BBG Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	-0.5%	1.3%	1.8%	2.7%	11.8%
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	0.2%	-4.6%	0.2%	-4.2%	11.2%
<b>Barclays US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	6.8%	6.7%	2.3%	-2.1%	-4.9%	1.5%	-5.4%	10.2%
<b>JPM EMBI Global Div</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	5.0%	5.0%	4.0%	-1.2%	-4.1%	1.3%	-4.0%	10.2%
<b>JPM GBI-EM Global Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	-0.8%	-7.0%	1.9%	-6.1%	9.9%
<b>Credit Suisse Lev Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	1.3%	2.9%	3.1%	0.8%	0.3%	1.1%	2.3%	9.9%
<b>FTSE NAREIT Eqy REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	6.0%	7.0%	-1.4%	-5.7%	-1.7%	4.7%	-2.9%	8.5%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	0.2%	1.0%	5.3%	-1.7%	0.8%	2.2%	1.2%	7.9%
<b>BC Long US Govt/Credit</b>	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	7.3%	6.5%	1.2%	-2.8%	-5.8%	0.7%	-7.8%	6.7%
<b>Barclays US Agg Bond</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.8%	-2.4%	0.1%	-3.0%	2.6%
<b>Barclays US Agg Int.</b>	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.3%	1.4%	0.3%	-0.4%	-1.7%	0.0%	-2.0%	2.0%
<b>Citi WGBI</b>	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	-3.4%	-4.6%	-0.7%	-8.5%	1.6%
<b>BC US STRIPS 20+</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	11.4%	9.6%	-0.2%	-6.2%	-10.5%	-0.9%	-16.7%	1.4%
<b>BC US Gov/Cred 1-3 Yr</b>	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.0%	0.7%	0.0%	0.0%	-0.4%	0.1%	-0.4%	1.3%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	-2.0%	-2.0%	3.4%	-0.7%	1.0%
<b>CS Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	-2.2%	0.6%	1.7%	-0.2%	-0.2%	-	0.2%	0.3%
<b>Barclays Municipal</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	1.7%	2.6%	-0.3%	-1.0%	-3.7%	1.2%	-3.6%	0.2%

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

# Near Term Broad Market Performance Summary as of 12/30/2016



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

# State Teachers' Retirement System

**Total Fund Performance Summary - Net**

	Market Value	3 Mo	Rank	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	7 Yrs	Rank	10 Yrs	Rank
<b>Teachers Composite</b>	<b>\$1,677,216,966</b>	<b>0.1%</b>	<b>84</b>	<b>3.4%</b>	<b>76</b>	<b>9.3%</b>	<b>4</b>	<b>3.6%</b>	<b>70</b>	<b>6.2%</b>	<b>93</b>	<b>6.7%</b>	<b>77</b>	<b>3.9%</b>	<b>89</b>
<i>Policy Index</i>		-0.1%	89	3.3%	79	8.1%	25	3.4%	76	6.0%	95	6.0%	93	3.9%	88
<i>Allocation Index</i>		-0.2%	91	3.4%	77	8.1%	26	3.1%	82	5.8%	96	5.9%	94	3.8%	90
<i>InvestorForce Public DB Net Median</i>		0.7%		4.2%		7.4%		4.1%		7.8%		7.3%		4.9%	

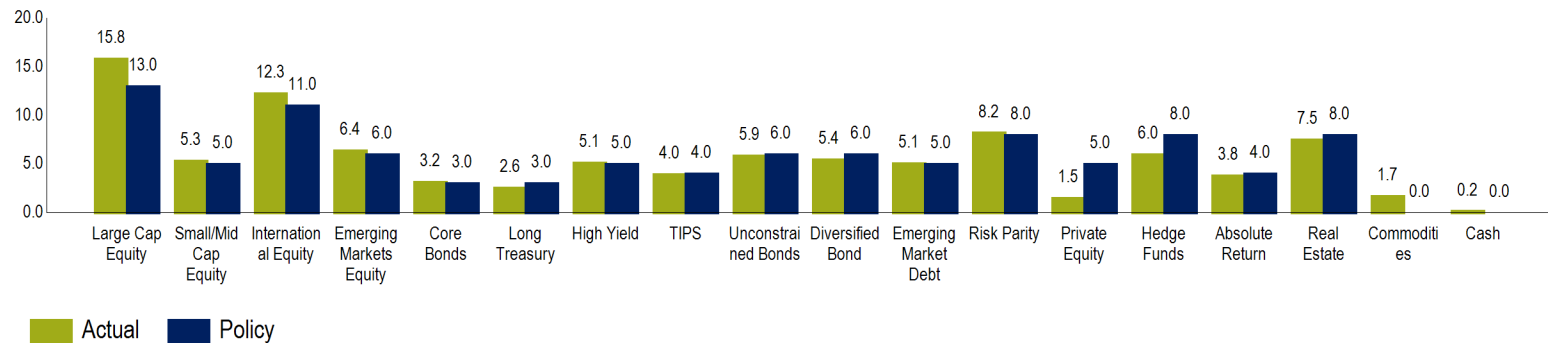
**3 Years Ending December 31, 2016**

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	3.64%	70	5.77%	24	0.61	56	1.17	33
Policy Index	3.45%	76	5.46%	11	0.61	56	1.14	35
Allocation Index	3.13%	82	5.62%	17	0.53	72	0.96	65

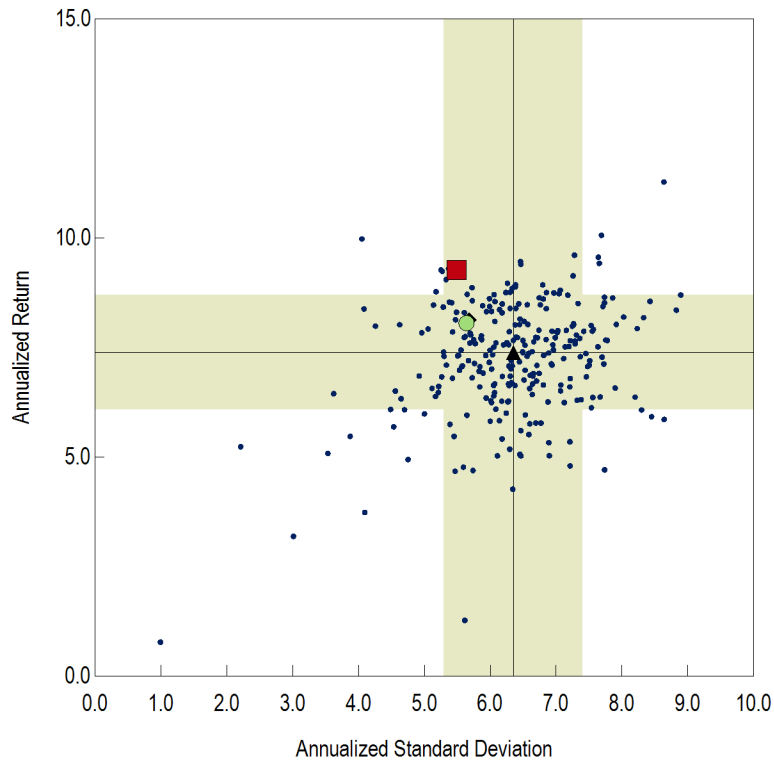
**5 Years Ending December 31, 2016**

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
Teachers Composite	6.20%	93	5.96%	29	1.03	81	1.74	63
Policy Index	6.03%	95	5.67%	18	1.05	77	1.70	67
Allocation Index	5.84%	96	5.74%	22	1.00	86	1.57	81

**Actual vs Target Allocation (%)**



1 Year Ending December 31, 2016



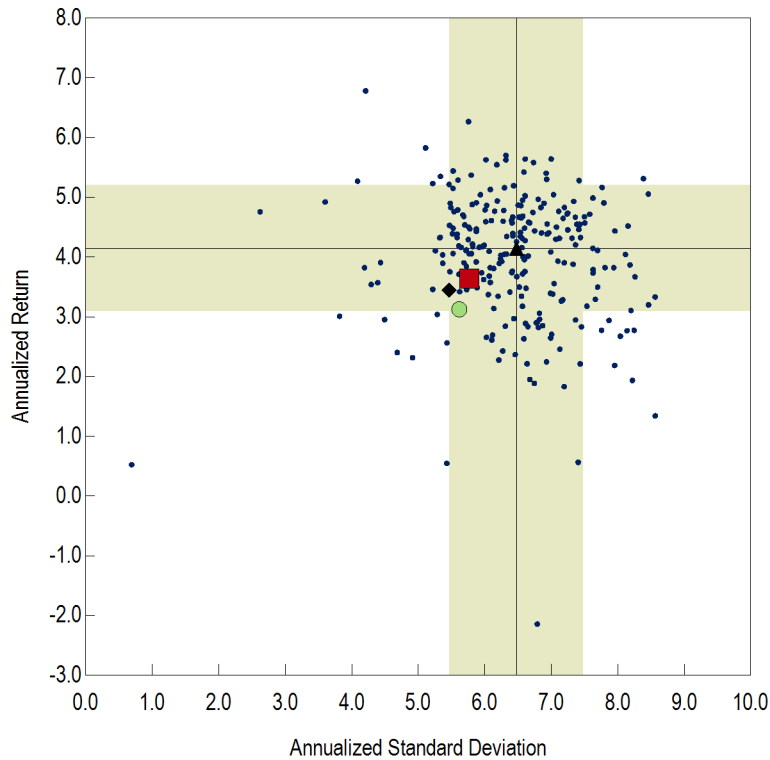
269 Portfolios

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

1 Year Ending December 31, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	9.28%	4	5.48%	17	1.64	5
Policy Index	8.13%	25	5.68%	23	1.38	12
S&P 500	11.96%	1	10.29%	99	1.13	46
Citi WGBI	1.60%	99	8.73%	99	0.15	99
MSCI ACWI	7.86%	33	11.25%	99	0.67	98
MSCI ACWI ex USA	4.50%	99	13.37%	99	0.31	99
InvestorForce Public DB Net Median	7.39%	--	6.35%	--	1.09	--

3 Years Ending December 31, 2016



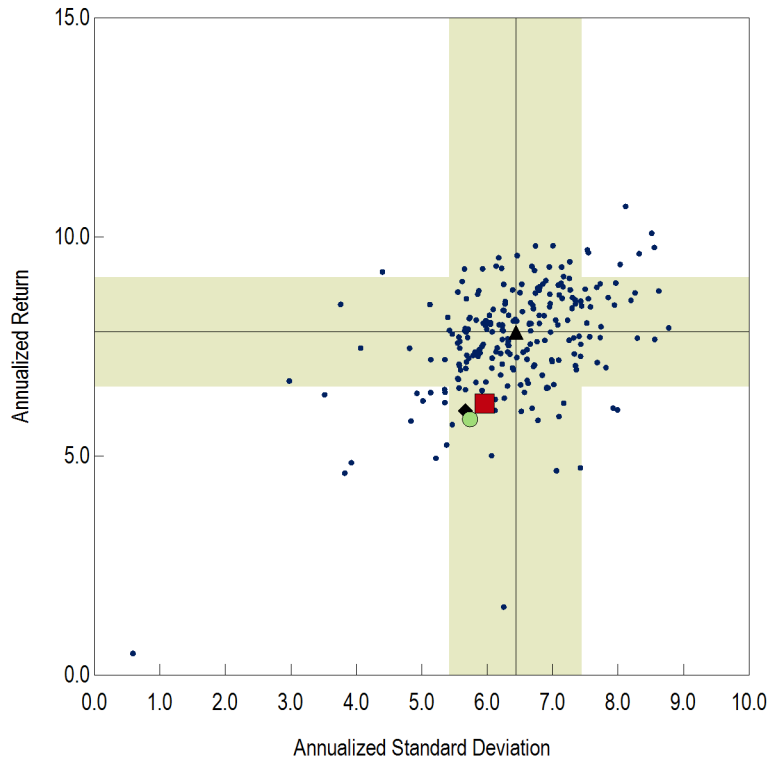
- Teachers Composite
- ◆ Policy Index
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- 68% Confidence Interval
- InvestorForce Public DB Net

3 Years Ending December 31, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	3.64%	70	5.77%	24	0.61	56
Policy Index	3.45%	76	5.46%	11	0.61	56
S&P 500	8.87%	1	10.74%	99	0.81	11
Citi WGBI	-0.84%	99	5.98%	31	-0.16	99
MSCI ACWI	3.13%	82	11.21%	99	0.27	98
MSCI ACWI ex USA	-1.78%	99	12.69%	99	-0.15	99
InvestorForce Public DB Net Median	4.15%	--	6.48%	--	0.62	--



5 Years Ending December 31, 2016

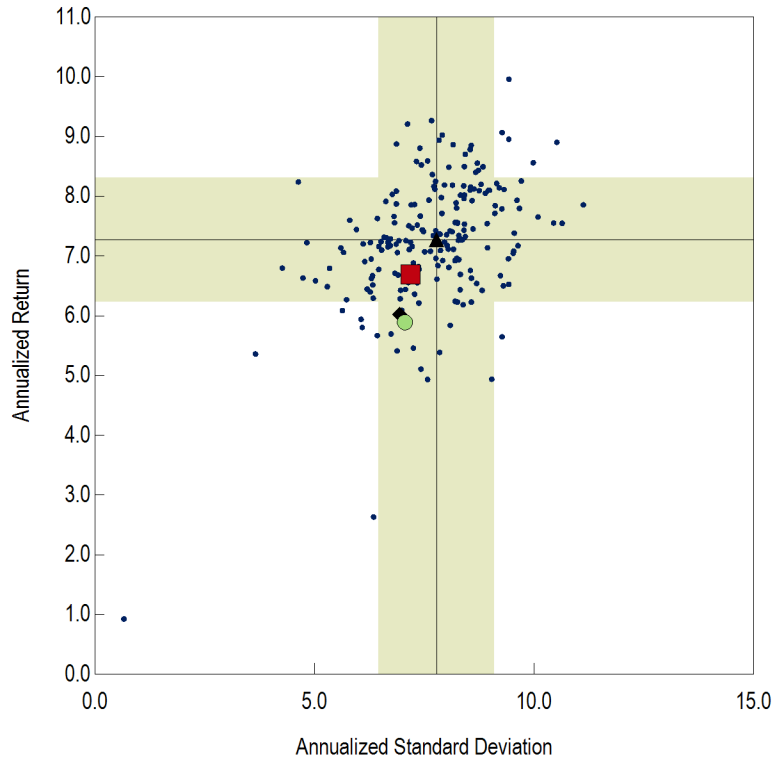


- Teachers Composite
- ◆ Policy Index
- Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Net

5 Years Ending December 31, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	6.20%	93	5.96%	29	1.03	81
Policy Index	6.03%	95	5.67%	18	1.05	77
S&P 500	14.66%	1	10.37%	99	1.40	11
Citi WGBI	-0.99%	99	5.34%	7	-0.20	99
MSCI ACWI	9.36%	5	11.39%	99	0.81	98
MSCI ACWI ex USA	5.00%	98	13.35%	99	0.37	99
InvestorForce Public DB Net Median	7.83%	--	6.44%	--	1.20	--

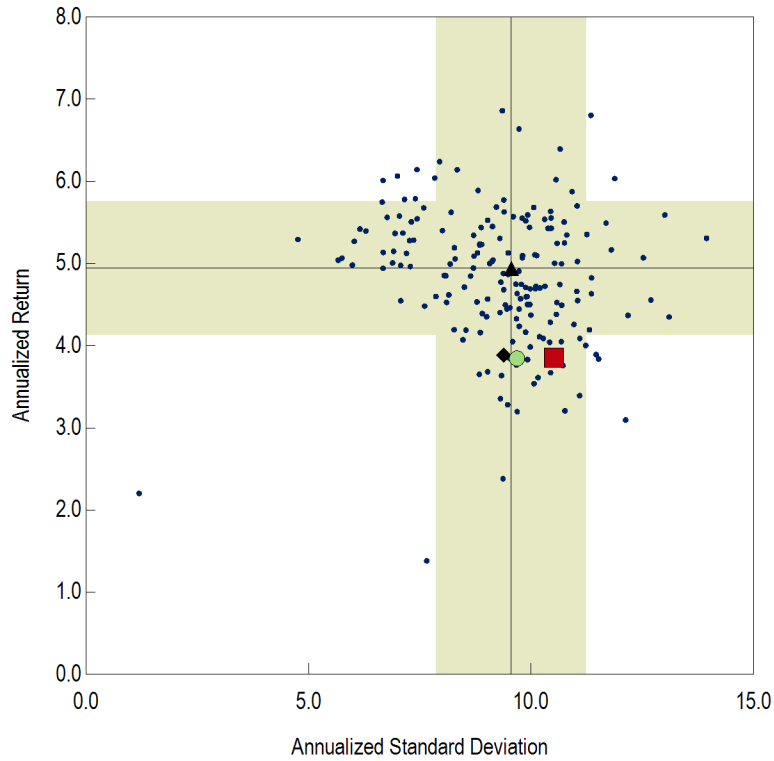
7 Years Ending December 31, 2016



7 Years Ending December 31, 2016

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	6.69%	77	7.18%	32	0.92	56
Policy Index	6.03%	93	6.94%	27	0.86	77
S&P 500	12.83%	1	12.67%	99	1.01	36
Citi WGBI	0.89%	99	5.71%	6	0.14	99
MSCI ACWI	7.26%	53	13.95%	99	0.51	99
MSCI ACWI ex USA	2.93%	99	15.77%	99	0.18	99
InvestorForce Public DB Net Median	7.27%	--	7.77%	--	0.94	--

10 Years Ending December 31, 2016

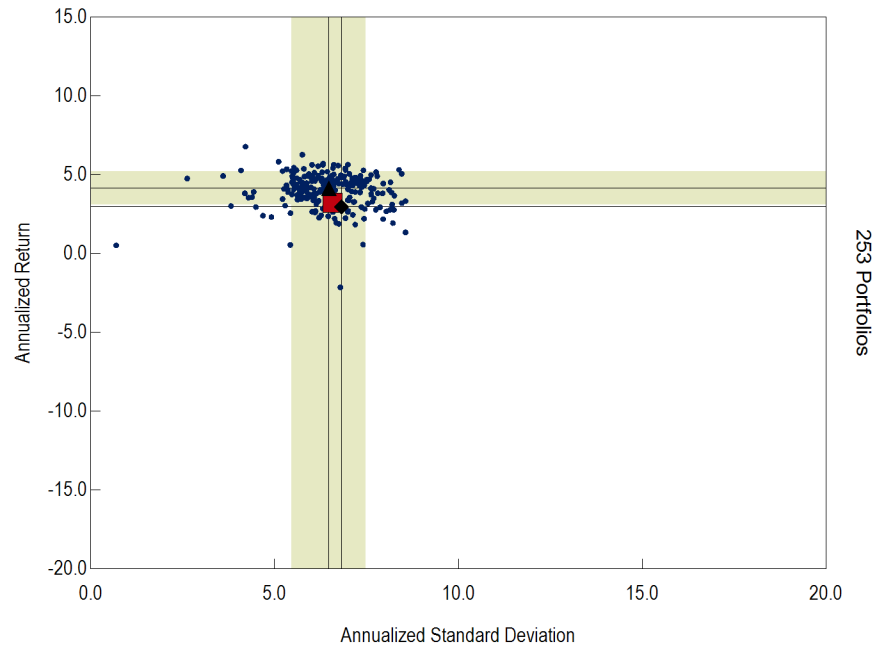


- Teachers Composite
- ◆ Policy Index
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10 Years Ending December 31, 2016

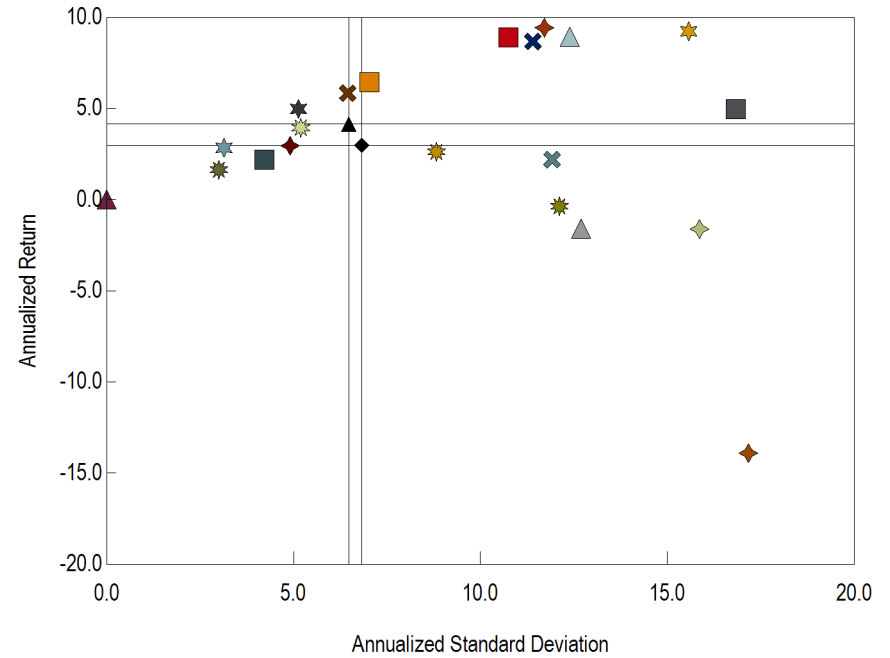
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank
Teachers Composite	3.85%	89	10.51%	78	0.30	92
Policy Index	3.88%	88	9.38%	45	0.34	81
S&P 500	6.95%	1	15.28%	99	0.41	60
Citi WGBI	2.99%	99	6.87%	8	0.34	81
MSCI ACWI	3.56%	95	16.98%	99	0.17	99
MSCI ACWI ex USA	0.96%	99	19.14%	99	0.02	99
InvestorForce Public DB Net Median	4.94%	--	9.55%	--	0.44	--

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending December 31, 2016



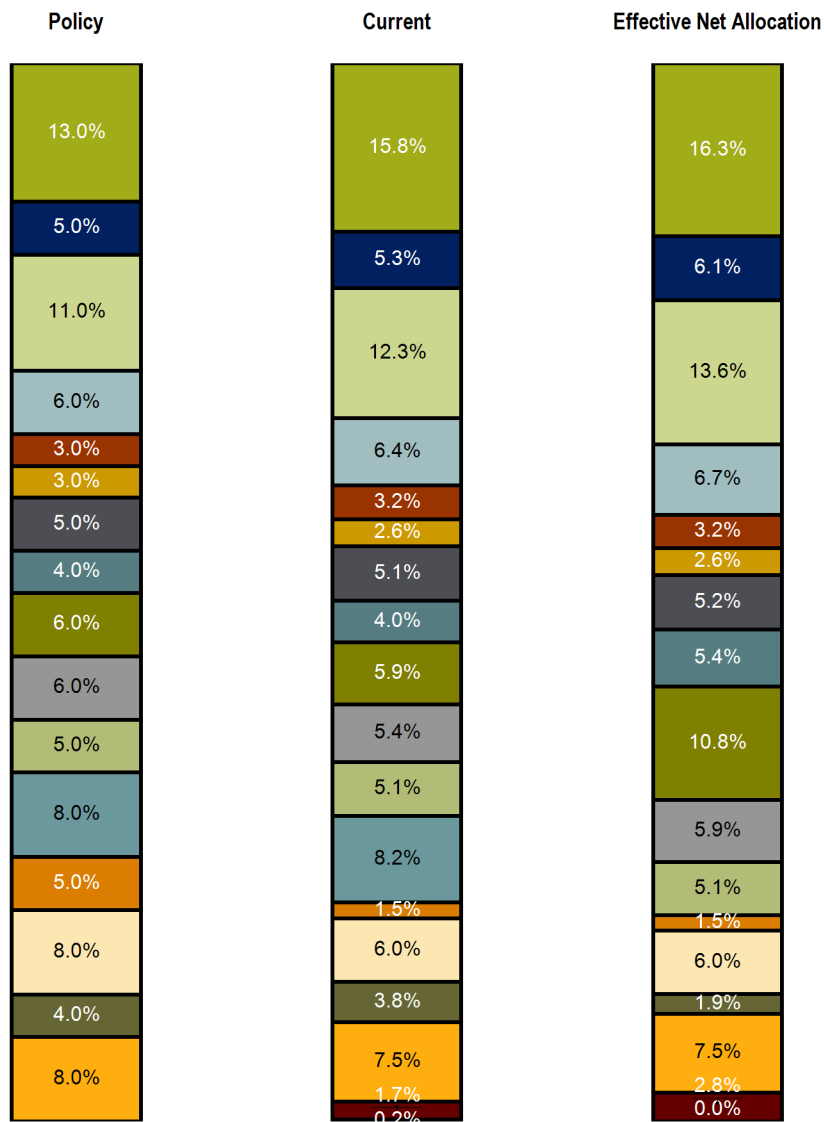
- Total Marketable Assets
- ◆ Total Marketable Assets Custom Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Net

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending December 31, 2016



- SSgA S&P 500 Cap-Wgt
- ◆ SSgA S&P 500 Equal-Wgt
- ▲ T. Rowe
- ▲ SSgA S&P 400
- ◆ Champlain
- ★ Wellington
- SSgA Russell 2000 Growth
- ◆ Acadian
- ★ Mondrian
- ▲ SSgA ACWI Ex US
- ◆ Aberdeen
- ★ PIMCO Core Plus
- Wellington DAS
- ★ PIMCO Unconstrained
- ◆ KDP
- ★ Guggenheim
- BlackRock TIPS
- ★ Wellington Opportunistic EMD
- ★ AQR Global Risk Premium
- ▲ Vermont Cash
- ◆ Schroder
- ◆ Total Marketable Assets Custom Index
- ▲ Universe Median
- 68% Confidence Interval

Total Fund Asset Allocation vs. Policy Targets



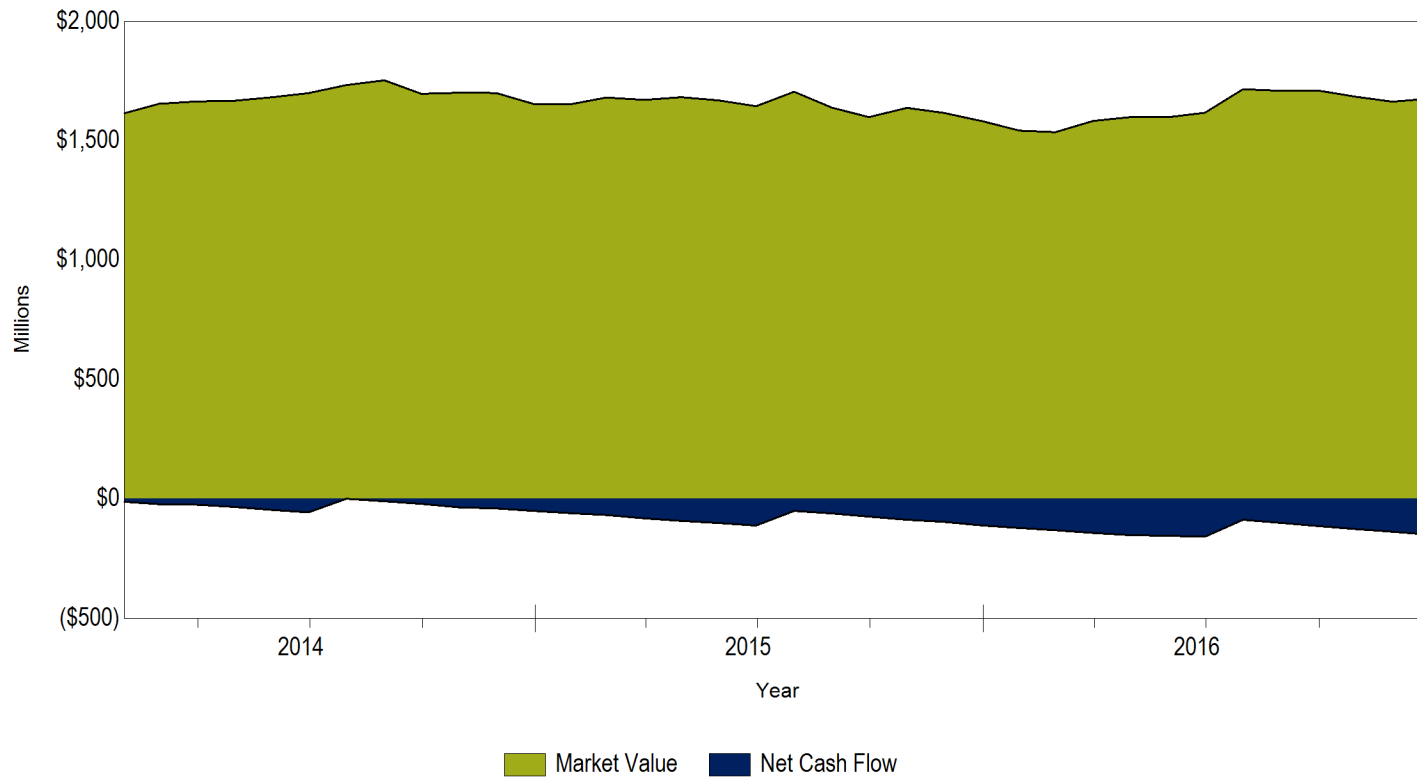
**Asset Allocation vs. Target**

	Policy	Current	Effective Net Allocation
Large Cap Equity	13.0%	15.8%	16.3%
Small/Mid Cap Equity	5.0%	5.3%	6.1%
International Equity	11.0%	12.3%	13.6%
Emerging Markets Equity	6.0%	6.4%	6.7%
Core Bonds	3.0%	3.2%	3.2%
Long Treasury	3.0%	2.6%	2.6%
High Yield	5.0%	5.1%	5.2%
TIPS	4.0%	4.0%	5.4%
Unconstrained Bonds	6.0%	5.9%	10.8%
Diversified Bond	6.0%	5.4%	5.9%
Emerging Market Debt	5.0%	5.1%	5.1%
Risk Parity	8.0%	8.2%	--
Private Equity	5.0%	1.5%	1.5%
Hedge Funds	8.0%	6.0%	6.0%
Absolute Return	4.0%	3.8%	1.9%
Real Estate	8.0%	7.5%	7.5%
Commodities	--	1.7%	2.8%
Cash	--	0.2%	0.0%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Effective Net Allocation breaks out the exposures of AQR Global Risk Premium and Mellon Dynamic Growth.  
 Hedge Funds include Grosvenor and Pinnacle Natural Resources, L.P.  
 Absolute Return includes Mellon Dynamic Growth and Allianz Structured Alpha.

**Total Fund Asset Growth Summary**

3 Years Ending December 31, 2016



	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$1,710,896,076	\$1,617,794,214	\$1,582,816,776	\$1,646,698,342
Withdrawals	-\$54,423,655	-\$104,016,955	-\$444,443,677	-\$1,039,736,101
Contributions	\$17,635,019	\$112,029,468	\$405,218,117	\$889,329,397
Net Cash Flow	-\$36,788,636	\$8,012,513	-\$39,225,559	-\$150,406,704
Net Investment Change	\$3,109,526	\$51,410,240	\$133,625,750	\$180,925,328
Ending Market Value	\$1,677,216,966	\$1,677,216,966	\$1,677,216,966	\$1,677,216,966

## Vermont State Teachers

### Total Fund Asset Growth Summary by Manager

	Quarter Ending December 31, 2016					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Aberdeen	\$113,245,950	-\$209,954	\$209,954	\$0	-\$5,910,159	\$107,335,791
Acadian	\$68,527,035	-\$3,084,491	\$84,491	-\$3,000,000	\$210,462	\$65,737,496
Allianz Structured Alpha	\$30,628,411	-\$154,045	\$0	-\$154,045	\$575,917	\$31,050,283
AQR Global Risk Premium	\$140,868,656	-\$140,869	\$140,869	\$0	-\$3,214,195	\$137,654,462
BlackRock TIPS	\$68,206,195	-\$12,472	\$12,472	\$0	-\$1,630,840	\$66,575,356
Champlain	\$33,483,783	-\$68,129	\$68,129	\$0	\$1,428,737	\$34,912,520
GAM	\$175,077	\$0	\$0	\$0	\$1	\$175,078
GAM Unconstrained Bond	\$57,021,605	-\$47,556	\$47,556	\$0	\$658,875	\$57,680,479
Grosvenor	\$88,002,941	-\$6,205,634	\$0	-\$6,205,634	\$1,759,788	\$83,557,095
Guggenheim	\$65,891,508	-\$83,114	\$83,114	\$0	\$2,142,163	\$68,033,671
Harbourvest Dover VIII Fund	\$8,264,360	\$0	\$0	\$0	-\$392,017	\$7,872,343
Harbourvest Partners IX Buyout Fund	\$6,723,869	\$0	\$0	\$0	-\$93,084	\$6,630,785
Harbourvest Partners IX Credit Opportunities	\$923,755	\$0	\$0	\$0	\$58,936	\$982,691
Harbourvest Partners IX Venture Fund	\$4,868,951	\$0	\$0	\$0	\$175,586	\$5,044,537
Harbourvest Partners X Buyout Fund	\$1,125,250	\$0	\$698,660	\$698,660	-\$11,879	\$1,812,031
Harbourvest Partners X Venture Fund	\$570,700	\$0	\$256,651	\$256,651	-\$4,166	\$823,184
HIPEP VII	\$1,553,526	\$0	\$272,166	\$272,166	-\$48,480	\$1,777,213
KDP	\$17,682,935	-\$27,573	\$27,573	\$0	\$148,667	\$17,831,602
Mellon Dynamic Growth	\$33,417,944	-\$54,518	\$54,518	\$0	-\$471,936	\$32,946,008
Mondrian	\$68,303,862	-\$64,950	\$64,950	\$0	-\$320,301	\$67,983,561
Morgan Stanley Prime Property	\$57,737,966	-\$121,250	\$0	-\$121,250	\$1,508,103	\$59,124,819
PIMCO Core Plus	\$99,097,549	-\$5,072,137	\$72,137	-\$5,000,000	-\$2,881,536	\$91,216,013
PIMCO Unconstrained	\$39,904,162	-\$60,088	\$60,088	\$0	\$629,216	\$40,533,379
Pinnacle Natural Resources, L.P.	\$7,179,527	\$0	\$9,157,026	\$9,157,026	\$550,705	\$16,887,258
RREEF America REIT III	\$259,680	-\$1,006	\$0	-\$1,006	\$90	\$258,764

Vermont State Teachers

**Total Fund Asset Growth Summary by Manager**

	Quarter Ending December 31, 2016					Ending Market Value
	Beginning Market Value	Withdrawals	Contributions	Net Cash Flow	Net Investment Change	
Schroder	\$37,356,329	-\$9,157,026	\$0	-\$9,157,026	\$777,108	\$28,976,411
Siguler Guff	\$13,558,184	-\$8,905	\$3,883,835	\$3,874,930	\$0	\$17,433,114
SSgA ACWI Ex US	\$72,806,499	-\$9,313	\$9,313	\$0	-\$898,331	\$71,908,168
SSgA Barclays Aggregate Index	\$54,825,898	-\$6,161	\$6,161	\$0	-\$1,628,129	\$53,197,769
SSgA Russell 2000 Growth	\$7,286,520	-\$1,321	\$1,321	\$0	\$256,346	\$7,542,866
SSgA S&P 400	\$8,839,001	-\$1,467	\$1,467	\$0	\$653,038	\$9,492,040
SSgA S&P 500 Cap-Wgt	\$213,246,332	-\$29,014,848	\$14,848	-\$29,000,000	\$7,675,302	\$191,921,634
SSgA S&P 500 Equal-Wgt	\$71,170,717	-\$7,311	\$7,311	\$0	\$2,616,178	\$73,786,895
T. Rowe	\$2,510	\$0	\$0	\$0	-\$42	\$2,468
Transwestern / Aslan III	\$128,447	\$0	\$0	\$0	\$0	\$128,447
UBS Trumbull	\$48,300,297	-\$99,808	\$0	-\$99,808	\$806,910	\$49,007,398
Vermont Cash	\$1,005,599	-\$643,084	\$2,333,784	\$1,690,700	\$0	\$2,696,299
Wellington	\$33,441,188	-\$66,628	\$66,628	\$0	\$4,311,477	\$37,752,666
Wellington DAS	\$47,125,128	\$0	\$0	\$0	-\$3,760,849	\$43,364,279
Wellington Opportunistic EMD	\$88,138,229	\$0	\$0	\$0	-\$2,568,134	\$85,570,095
<b>Total</b>	<b>\$1,710,896,076</b>	<b>-\$54,423,655</b>	<b>\$17,635,019</b>	<b>-\$36,788,636</b>	<b>\$3,109,526</b>	<b>\$1,677,216,966</b>



# Vermont State Teachers

## 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
<b>Teachers Composite</b>	<b>1,677,216,966</b>	<b>100.0</b>	<b>100.0</b>	<b>0.1</b>	<b>84</b>	<b>3.4</b>	<b>76</b>	<b>9.3</b>	<b>4</b>	<b>3.6</b>	<b>70</b>	<b>6.2</b>	<b>93</b>	<b>3.9</b>	<b>89</b>
<i>Policy Index</i>				-0.1	89	3.3	79	8.1	25	3.4	76	6.0	95	3.9	88
<i>Allocation Index</i>				-0.2	91	3.4	77	8.1	26	3.1	82	5.8	96	3.8	90
<i>InvestorForce Public DB Net Median</i>				0.7		4.2		7.4		4.1		7.8		4.9	
<b>Total Marketable Assets</b>	<b>1,361,705,919</b>	<b>81.2</b>	<b>--</b>	<b>-0.1</b>	<b>90</b>	<b>3.4</b>	<b>77</b>	<b>10.0</b>	<b>1</b>	<b>3.2</b>	<b>81</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Total Marketable Assets Custom Index</i>				-0.3	93	3.4	77	8.5	18	3.0	84	--	--	--	--
<i>InvestorForce Public DB Net Median</i>				0.7		4.2		7.4		4.1		7.8		4.9	
<b>US Equity</b>	<b>355,411,089</b>	<b>21.2</b>	<b>18.0</b>	<b>4.8</b>	<b>45</b>	<b>9.4</b>	<b>50</b>	<b>14.7</b>	<b>37</b>	<b>8.6</b>	<b>22</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000</i>				4.2	51	8.8	54	12.7	45	8.4	25	14.7	32	7.1	53
<i>eA All US Equity Net Median</i>				4.2		9.3		11.7		6.8		13.5		7.2	
<b>Large Cap Comp</b>	<b>265,710,998</b>	<b>15.8</b>	<b>13.0</b>	<b>3.8</b>	<b>44</b>	<b>8.1</b>	<b>40</b>	<b>12.9</b>	<b>27</b>	<b>8.7</b>	<b>14</b>	<b>14.9</b>	<b>16</b>	<b>7.5</b>	<b>26</b>
<i>S&amp;P 500</i>				3.8	43	7.8	42	12.0	33	8.9	12	14.7	22	6.9	44
<i>eA US Large Cap Equity Net Median</i>				3.3		6.9		9.4		6.9		13.3		6.8	
<i>SSgA S&amp;P 500 Cap-Wgt</i>	191,921,634	11.4	10.0	3.9	42	7.9	42	12.0	32	8.9	12	14.7	21	--	--
<i>S&amp;P 500</i>				3.8	43	7.8	42	12.0	33	8.9	12	14.7	22	6.9	44
<i>SSgA S&amp;P 500 Equal-Wgt</i>	73,786,895	4.4	3.0	3.7	45	8.6	35	15.2	17	8.7	15	15.5	8	8.1	16
<i>S&amp;P 500 Equal Weighted</i>				3.8	43	8.5	36	14.8	18	8.7	14	15.5	8	8.4	11
<i>T. Rowe</i>	2,468	0.0	0.0												
<b>Small/Mid Cap Comp</b>	<b>89,700,091</b>	<b>5.3</b>	<b>5.0</b>	<b>7.8</b>	<b>30</b>	<b>13.6</b>	<b>36</b>	<b>20.6</b>	<b>18</b>	<b>9.1</b>	<b>10</b>	<b>15.4</b>	<b>18</b>	<b>8.7</b>	<b>27</b>
<i>Russell 2000</i>				8.8	22	18.7	12	21.3	15	6.7	37	14.5	28	7.1	65
<i>eA US Small-Mid Cap Equity Net Median</i>				5.3		11.2		15.1		5.7		13.4		7.7	
<i>SSgA S&amp;P 400</i>	9,492,040	0.6	0.5	7.4	18	11.8	26	20.6	16	8.9	18	15.3	19	--	--
<i>S&amp;P 400 MidCap</i>				7.4	17	11.9	26	20.7	15	9.0	17	15.3	18	9.2	16
<i>eA US Mid Cap Equity Net Median</i>				3.6		7.4		10.6		6.3		13.5		7.8	
<b>Champlain</b>	<b>34,912,520</b>	<b>2.1</b>	<b>2.0</b>	<b>4.1</b>	<b>48</b>	<b>9.6</b>	<b>38</b>	<b>19.2</b>	<b>18</b>	<b>9.4</b>	<b>13</b>	<b>15.2</b>	<b>22</b>	<b>--</b>	<b>--</b>
<i>Russell 2500</i>				6.1	28	13.1	18	17.6	21	6.9	45	14.5	31	7.7	58
<i>eA US Mid Cap Equity Net Median</i>				3.6		7.4		10.6		6.3		13.5		7.8	

# Vermont State Teachers

## 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
Wellington	37,752,666	2.3	2.0	12.7	45	17.5	75	22.6	70	9.2	28	15.1	48	9.2	13
<i>Russell 2000 Value</i>				14.1	28	24.2	17	31.7	15	8.3	44	15.1	49	6.3	84
<i>eA US Small Cap Value Equity Net Median</i>				12.0		20.6		26.2		8.0		14.9		7.6	
SSgA Russell 2000 Growth	7,542,866	0.4	0.5	3.5	36	13.2	35	11.3	45	5.0	44	13.7	41	--	--
<i>Russell 2000 Growth</i>				3.6	36	13.1	36	11.3	44	5.1	43	13.7	40	7.8	45
<i>eA US Small Cap Growth Equity Net Median</i>				2.7		11.4		10.4		4.0		12.8		7.5	
<b>Int'l Equity Comp</b>	<b>205,629,225</b>	<b>12.3</b>	<b>11.0</b>	<b>-0.5</b>	<b>27</b>	<b>5.5</b>	<b>40</b>	<b>5.5</b>	<b>12</b>	<b>0.3</b>	<b>33</b>	<b>7.1</b>	<b>57</b>	<b>1.0</b>	<b>69</b>
<i>MSCI EAFE</i>				-0.7	30	5.7	36	1.0	44	-1.6	65	6.5	69	0.7	77
<i>eA All EAFE Equity Net Median</i>				-2.3		4.6		0.6		-0.6		7.6		1.8	
Acadian	65,737,496	3.9	4.0	0.2	19	7.6	17	7.5	5	2.2	13	9.5	23	0.7	77
Mondrian	67,983,561	4.1	4.0	-0.6	28	3.5	60	4.3	16	-0.4	43	6.0	84	1.4	63
<i>MSCI EAFE</i>				-0.7	30	5.7	36	1.0	44	-1.6	65	6.5	69	0.7	77
SSgA ACWI Ex US	71,908,168	4.3	3.0	-1.2	25	5.6	27	4.7	24	-1.6	56	5.2	84	--	--
<i>MSCI ACWI ex USA</i>				-1.3	25	5.6	27	4.5	24	-1.8	58	5.0	85	1.0	71
<i>eA ACWI ex-US All Cap Equity Net Median</i>				-3.5		2.7		1.7		-0.7		7.1		1.8	
<b>Emerging Market Comp</b>	<b>107,335,791</b>	<b>6.4</b>	<b>6.0</b>	<b>-5.4</b>	<b>53</b>	<b>-0.1</b>	<b>75</b>	<b>12.5</b>	<b>26</b>	<b>-1.6</b>	<b>40</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Aberdeen	107,335,791	6.4	6.0	-5.4	53	-0.1	75	12.5	26	-1.6	40	2.2	61	--	--
<i>MSCI Emerging Markets</i>				-4.2	35	4.5	33	11.2	34	-2.6	61	1.3	79	1.8	68
<i>eA Emg Mkts Equity Net Median</i>				-5.2		2.5		8.2		-2.0		2.5		2.6	
<b>US Fixed Income</b>	<b>438,432,547</b>	<b>26.1</b>	<b>27.0</b>	<b>-1.5</b>	<b>47</b>	<b>0.3</b>	<b>29</b>	<b>5.9</b>	<b>31</b>	<b>3.9</b>	<b>30</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc US Aggregate TR</i>				-3.0	80	-2.5	81	2.6	57	3.0	50	2.2	64	4.3	54
<i>eA All US Fixed Inc Net Median</i>				-1.8		-1.0		3.3		3.0		2.9		4.4	
<b>Diversified Fixed</b>	<b>285,991,919</b>	<b>17.1</b>	<b>18.0</b>	<b>-2.5</b>	<b>66</b>	<b>-1.3</b>	<b>57</b>	<b>3.7</b>	<b>46</b>	<b>3.8</b>	<b>32</b>	<b>3.0</b>	<b>50</b>	<b>3.8</b>	<b>67</b>
<i>BBgBarc US Aggregate TR</i>				-3.0	80	-2.5	81	2.6	57	3.0	50	2.2	64	4.3	54
<i>eA All US Fixed Inc Net Median</i>				-1.8		-1.0		3.3		3.0		2.9		4.4	
PIMCO Core Plus	91,216,013	5.4	6.0	-3.1	85	-2.1	45	2.6	75	2.8	75	2.5	61	--	--
<i>BBgBarc US Aggregate TR</i>				-3.0	71	-2.5	74	2.6	71	3.0	60	2.2	79	4.3	78
Wellington DAS	43,364,279	2.6	3.0	-8.0	99	-7.8	99	-0.1	99	6.4	1	4.6	4	--	--
<i>Wellington Custom Benchmark*</i>				-7.2	99	-7.8	99	1.7	95	5.5	2	2.5	55	5.6	8

\*Wellington Custom Benchmark is comprised of equal weighted zero coupon bonds targeting a 10 year duration. Instruments include swaps from 7/1/07 thru 12/18/08, swaps and US Treasury STRIPS from 12/19/08 thru 12/29/08, and US Treasury STRIPS since 12/30/08.

Vermont State Teachers

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
SSgA Barclays Aggregate Index	53,197,769	3.2	3.0	-3.0	71	-2.5	76	2.6	72	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>				-3.0	71	-2.5	74	2.6	71	3.0	60	2.2	79	4.3	78
<i>3-Month Libor Total Return USD</i>				0.2	1	0.4	2	0.7	99	0.4	99	0.4	99	1.2	99
<i>eA US Core Fixed Inc Net Median</i>				-2.8		-2.1		3.1		3.1		2.7		4.6	
<b>Unconstrained Fixed Income</b>	<b>98,213,858</b>	<b>5.9</b>	<b>6.0</b>	<b>1.2</b>	<b>27</b>	<b>3.4</b>	<b>33</b>	<b>5.9</b>	<b>43</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>25% HY, 25% EMD, 50% BC Agg</i>				-2.1	85	0.4	79	8.1	26	4.1	10	4.3	45	5.8	18
<i>BBgBarc Global Aggregate TR</i>				-7.1	99	-6.3	99	2.1	90	-0.2	88	0.2	95	3.3	89
<i>eA Global Unconstrained Fixed Inc Net Median</i>				0.2		2.9		5.4		2.5		3.8		5.0	
PIMCO Unconstrained	40,533,379	2.4	2.5	1.3	24	3.9	23	5.3	60	1.6	69	1.3	91	--	--
<i>25% HY, 25% EMD, 50% BC Agg</i>				-2.1	85	0.4	79	8.1	26	4.1	10	4.3	45	5.8	18
<i>3-Month Libor Total Return USD</i>				0.2	51	0.4	78	0.7	92	0.4	84	0.4	95	1.2	99
GAM Unconstrained Bond	57,680,479	3.4	3.5	1.1	28	3.1	47	6.3	39	--	--	--	--	--	--
<i>3-Month LIBOR + 3%</i>				1.0	30	1.9	62	3.8	85	3.4	22	3.4	67	4.2	70
<i>eA Global Unconstrained Fixed Inc Net Median</i>				0.2		2.9		5.4		2.5		3.8		5.0	
<b>High Yield Comp</b>	<b>85,865,273</b>	<b>5.1</b>	<b>5.0</b>	<b>2.6</b>	<b>19</b>	<b>7.7</b>	<b>25</b>	<b>15.3</b>	<b>28</b>	<b>4.5</b>	<b>30</b>	<b>7.1</b>	<b>31</b>	<b>7.1</b>	<b>35</b>
<i>BBgBarc US High Yield TR</i>				1.8	46	7.4	31	17.1	12	4.7	26	7.4	24	7.5	17
<i>eA US High Yield Fixed Inc Net Median</i>				1.6		6.6		13.5		4.0		6.6		6.7	
KDP	17,831,602	1.1	1.0	0.7	89	4.3	82	10.9	76	3.0	80	5.0	92	--	--
<i>BBgBarc US High Yield TR</i>				1.8	46	7.4	31	17.1	12	4.7	26	7.4	24	7.5	17
<i>BofA Merrill Lynch US High Yield BB-B Rated</i>				1.3	67	6.3	58	14.7	39	4.9	23	7.1	31	6.9	36
Guggenheim	68,033,671	4.1	4.0	3.1	10	8.6	16	16.4	17	5.0	19	--	--	--	--
<i>BBgBarc US High Yield TR</i>				1.8	46	7.4	31	17.1	12	4.7	26	7.4	24	7.5	17
<i>eA US High Yield Fixed Inc Net Median</i>				1.6		6.6		13.5		4.0		6.6		6.7	

# Vermont State Teachers

## 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
<b>TIPS</b>	<b>66,575,356</b>	<b>4.0</b>	<b>4.0</b>												
BlackRock TIPS	66,575,356	4.0	4.0	-2.4	--	-1.5	--	4.7	--	2.2	--	0.8	--	--	--
BBgBarc US TIPS TR				-2.4	--	-1.5	--	4.7	--	2.3	--	0.9	--	4.4	--
<b>Emerging Market Debt</b>	<b>85,570,095</b>	<b>5.1</b>	<b>5.0</b>												
Wellington Opportunistic EMD	85,570,095	5.1	5.0	-2.9	34	2.0	14	12.9	18	5.8	5	6.1	18	--	--
JP Morgan EMBI Global TR				-4.2	60	-0.6	56	10.2	51	5.6	8	5.4	23	6.8	32
eA All Emg Mkts Fixed Inc Net Median				-4.0		-0.2		10.2		3.5		4.0		5.9	
<b>Risk Parity/GAA</b>	<b>137,654,462</b>	<b>8.2</b>	<b>8.0</b>	<b>-2.4</b>	<b>78</b>	<b>-0.2</b>	<b>74</b>	<b>8.5</b>	<b>18</b>	<b>1.7</b>	<b>47</b>	<b>4.4</b>	<b>49</b>	<b>3.8</b>	<b>60</b>
<b>Risk Parity</b>	<b>137,654,462</b>	<b>8.2</b>	<b>8.0</b>	<b>-2.4</b>	<b>78</b>	<b>-0.2</b>	<b>74</b>	<b>10.5</b>	<b>5</b>	<b>2.6</b>	<b>22</b>	<b>4.0</b>	<b>53</b>	<b>--</b>	<b>--</b>
eA Global TAA Net Median				-0.8		2.1		3.4		1.4		4.3		4.2	
AQR Global Risk Premium	137,654,462	8.2	8.0	-2.4	78	-0.2	74	10.5	5	2.6	22	4.0	53	--	--
60% MSCI World (Net) / 40% CITI WGBI				-2.4	78	0.6	69	5.3	37	2.1	31	5.9	23	3.8	59
<b>Cash</b>	<b>2,696,299</b>	<b>0.2</b>	<b>0.0</b>												
Vermont Cash	2,696,299	0.2	0.0	0.0	--	0.0	--	0.0	--	0.0	--	0.0	--	1.0	--
91 Day T-Bills				0.1	--	0.2	--	0.3	--	0.1	--	0.1	--	0.7	--
<b>Commodities</b>	<b>28,976,411</b>	<b>1.7</b>	<b>3.0</b>												
Schroder	28,976,411	1.7	3.0	2.8	--	0.6	--	16.8	--	-13.9	--	-10.4	--	--	--
Bloomberg Commodity Index				2.7	--	-1.3	--	11.8	--	-11.3	--	-9.0	--	-5.6	--
<b>Total Real Estate</b>	<b>125,952,542</b>	<b>7.5</b>	<b>8.0</b>	<b>1.7</b>	<b>--</b>	<b>3.7</b>	<b>--</b>	<b>8.2</b>	<b>--</b>	<b>11.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
NCREIF Property Index				1.7	--	3.5	--	8.0	--	11.0	--	10.9	--	6.9	--
NCREIF ODCE				2.1	--	4.2	--	8.8	--	12.1	--	12.2	--	5.8	--
Morgan Stanley Prime Property	59,124,819	3.5		2.4	--	4.7	--	9.2	--	12.7	--	13.2	--	6.1	--
UBS Trumbull	49,007,398	2.9		1.5	--	3.2	--	7.2	--	10.4	--	9.9	--	5.5	--
RREEF America REIT III	258,764	0.0		-0.4	--	-13.2	--	-16.8	--	3.5	--	9.5	--	-4.5	--
Transwestern / Aslan III	128,447	0.0		0.0	--	0.0	--	0.0	--	-2.0	--	9.4	--	-22.9	--
Siguler Guff	17,433,114	1.0		0.0	--	4.0	--	11.8	--	--	--	--	--	--	--

Risk Parity Composite formerly shown as Risk Parity/GAA.

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

Real Estate values are finalized as of 12/31/2016, except for Siguler Guff, it is preliminary.

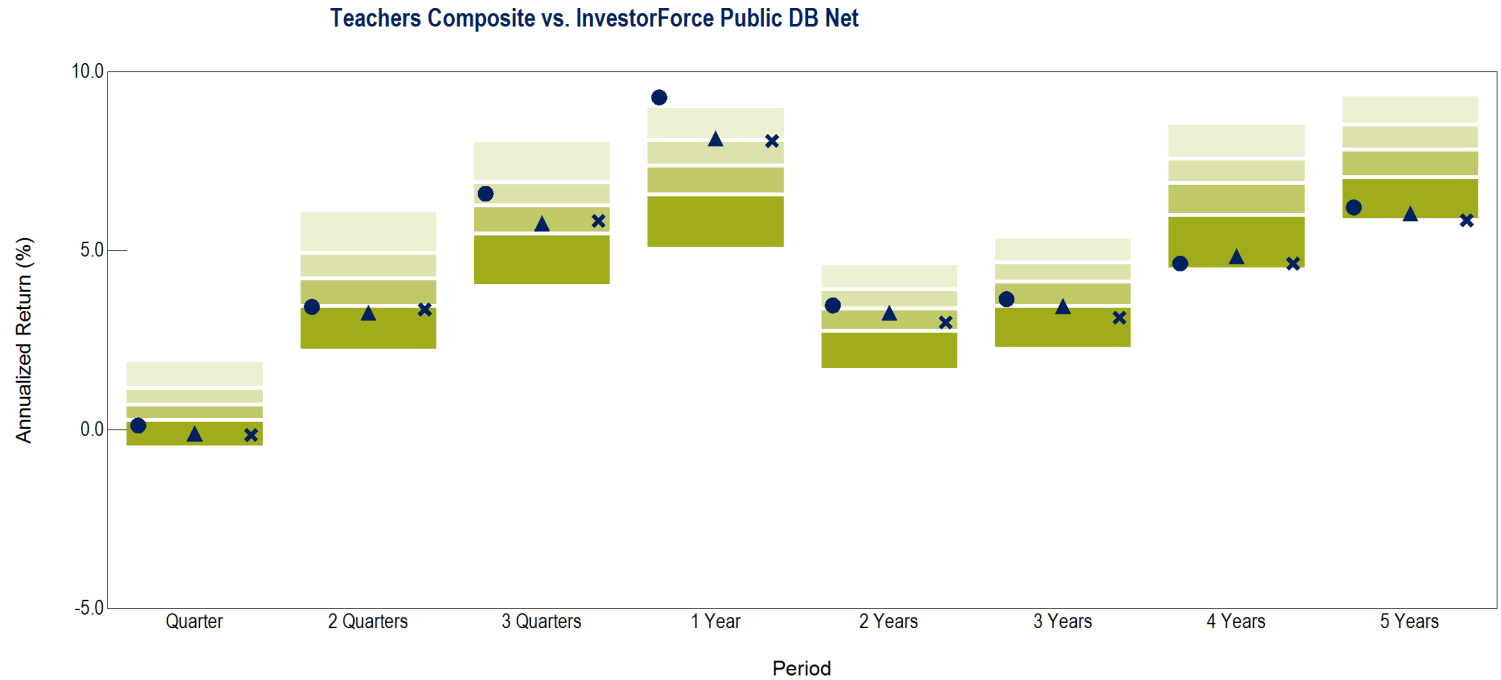
## Vermont State Teachers

### 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
<b>Absolute Return</b>	<b>164,615,722</b>	<b>9.8</b>	<b>9.0</b>	<b>1.4</b>	<b>47</b>	<b>3.3</b>	<b>56</b>	<b>0.7</b>	<b>57</b>	<b>0.9</b>	<b>66</b>	<b>5.1</b>	<b>48</b>	<b>--</b>	<b>--</b>
<i>HFRI Fund of Funds Composite Index</i>				0.9	61	3.2	57	0.5	59	1.2	57	3.4	77	1.3	92
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>				1.2		3.7		1.3		1.6		4.9		3.3	
Grosvenor	83,557,095	5.0	5.0	2.1	28	5.0	34	2.3	39	1.9	46	5.8	33	--	--
Mellon Dynamic Growth	32,946,008	2.0	2.0	-1.6	91	-0.7	91	0.1	62	3.0	32	6.1	24	2.7	67
<i>Mellon Dynamic Growth Benchmark</i>				-2.1	92	1.2	80	5.5	13	2.0	45	5.4	39	3.3	48
Allianz Structured Alpha	31,050,283	1.9	2.0	1.4	47	2.7	64	9.9	4	10.1	3	7.5	14	--	--
<i>91 Day T-Bills</i>				0.1	75	0.2	88	0.3	61	0.1	79	0.1	99	0.7	97
<i>eV Alt Fund of Funds - Multi-Strategy Median</i>				1.2		3.7		1.3		1.6		4.9		3.3	
Pinnacle Natural Resources, L.P.	16,887,258	1.0		3.4	--	1.7	--	--	--	--	--	--	--	--	--
<i>Bloomberg Commodity Index</i>				2.7	--	-1.3	--	11.8	--	-11.3	--	-9.0	--	-5.6	--
<i>eA Commodities Net Median</i>				--		--		--		--		--		--	
GAM	175,078	0.0	0.0												
<b>Private Equity</b>	<b>24,942,784</b>	<b>1.5</b>	<b>5.0</b>	<b>-1.2</b>	<b>--</b>	<b>4.0</b>	<b>--</b>	<b>10.5</b>	<b>--</b>	<b>14.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Cambridge Associates US All PE</i>				0.0	--	3.8	--	8.1	--	8.2	--	11.9	--	9.5	--
Harbourvest Partners IX Credit Opportunities	982,691	0.1													
Harbourvest Partners IX Venture Fund	5,044,537	0.3													
Harbourvest Partners IX Buyout Fund	6,630,785	0.4													
Harbourvest Partners X Venture Fund	823,184	0.0													
Harbourvest Partners X Buyout Fund	1,812,031	0.1													
Harbourvest Dover VIII Fund	7,872,343	0.5													
HIPEP VII	1,777,213	0.1													

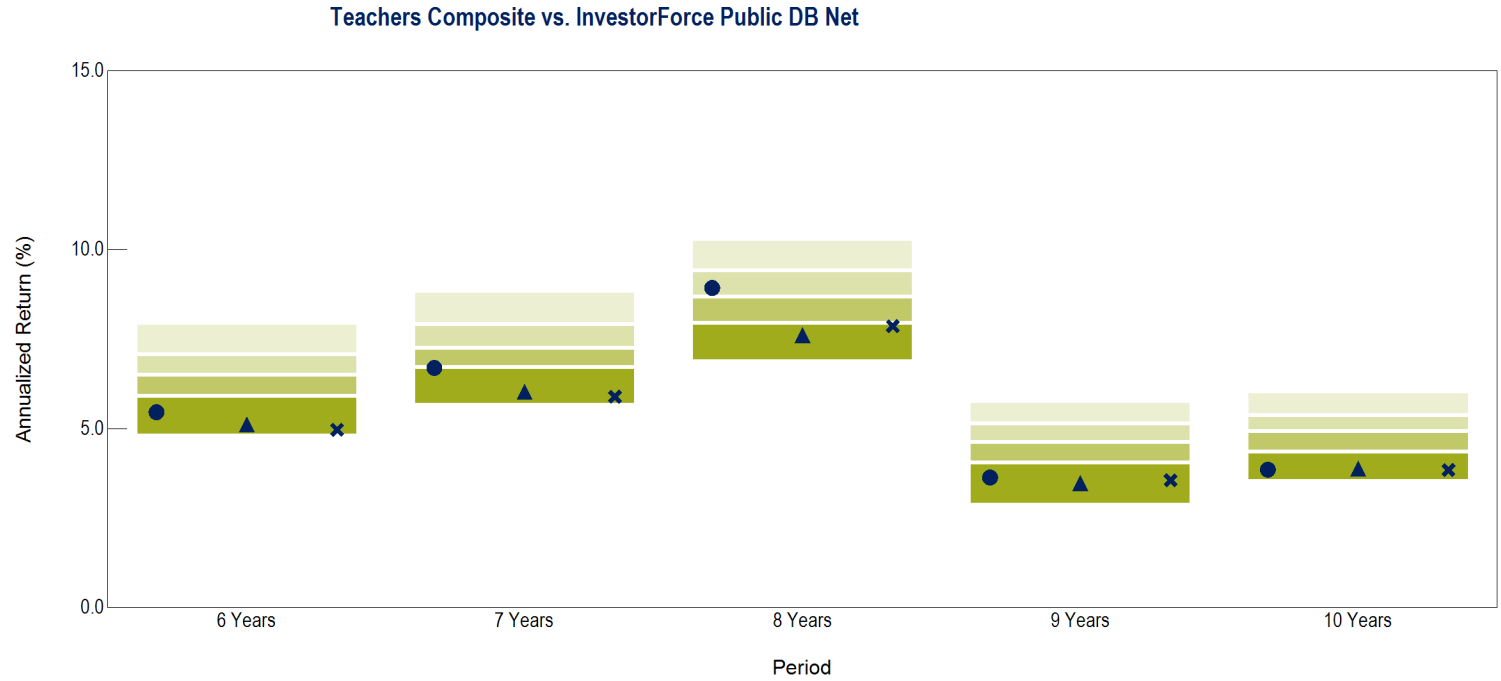
Absolute Return composite formerly shown as Hedge Funds composite. As of 04/01/2016, Absolute Return includes Mellon Dynamic Growth and Allianz Structured Alpha. Mellon Dynamic Growth was included in Risk Parity/GAA composite prior to 04/01/2016. Allianz Structured Alpha was included Diversified Fixed income composite prior to 04/01/2016. Mellon Dynamic Growth Benchmark: 60% MSCI All Country World Index IMI / 40% Citigroup GDP Weighted. Harbourvest values based on final Capital Account Statements for Q3, and preliminary values for Q4.

Total Fund Return Summary vs. Peer Universe - Net



	Return (Rank)															
5th Percentile	1.9	6.1	8.1	9.0	4.7	5.4	8.6	9.4								
25th Percentile	1.2	5.0	6.9	8.1	3.9	4.7	7.6	8.5								
Median	0.7	4.2	6.3	7.4	3.4	4.1	6.9	7.8								
75th Percentile	0.3	3.5	5.5	6.6	2.8	3.5	6.0	7.1								
95th Percentile	-0.5	2.2	4.0	5.0	1.7	2.3	4.5	5.9								
# of Portfolios	270	270	269	269	264	253	241	232								
● Teachers Composite	0.1 (84)	3.4 (76)	6.6 (39)	9.3 (4)	3.5 (46)	3.6 (70)	4.6 (95)	6.2 (93)								
▲ Policy Index	-0.1 (89)	3.3 (79)	5.8 (65)	8.1 (25)	3.3 (56)	3.4 (76)	4.8 (93)	6.0 (95)								
× Allocation Index	-0.2 (91)	3.4 (77)	5.8 (62)	8.1 (26)	3.0 (70)	3.1 (82)	4.6 (95)	5.8 (96)								

Total Fund Return Summary vs. Peer Universe - Net



	Return (Rank)									
5th Percentile	8.0		8.8		10.3		5.8		6.0	
25th Percentile	7.1		7.9		9.4		5.1		5.4	
Median	6.5		7.3		8.7		4.6		4.9	
75th Percentile	5.9		6.7		8.0		4.1		4.4	
95th Percentile	4.8		5.7		6.9		2.9		3.5	
# of Portfolios	214		204		196		191		184	
● Teachers Composite	5.5	(86)	6.7	(77)	8.9	(43)	3.6	(85)	3.9	(89)
▲ Policy Index	5.1	(92)	6.0	(93)	7.6	(83)	3.5	(88)	3.9	(88)
× Allocation Index	5.0	(93)	5.9	(94)	7.9	(78)	3.6	(87)	3.8	(90)

Total Fund Return Summary vs. Peer Universe - Net

Teachers Composite vs. InvestorForce Public DB Net

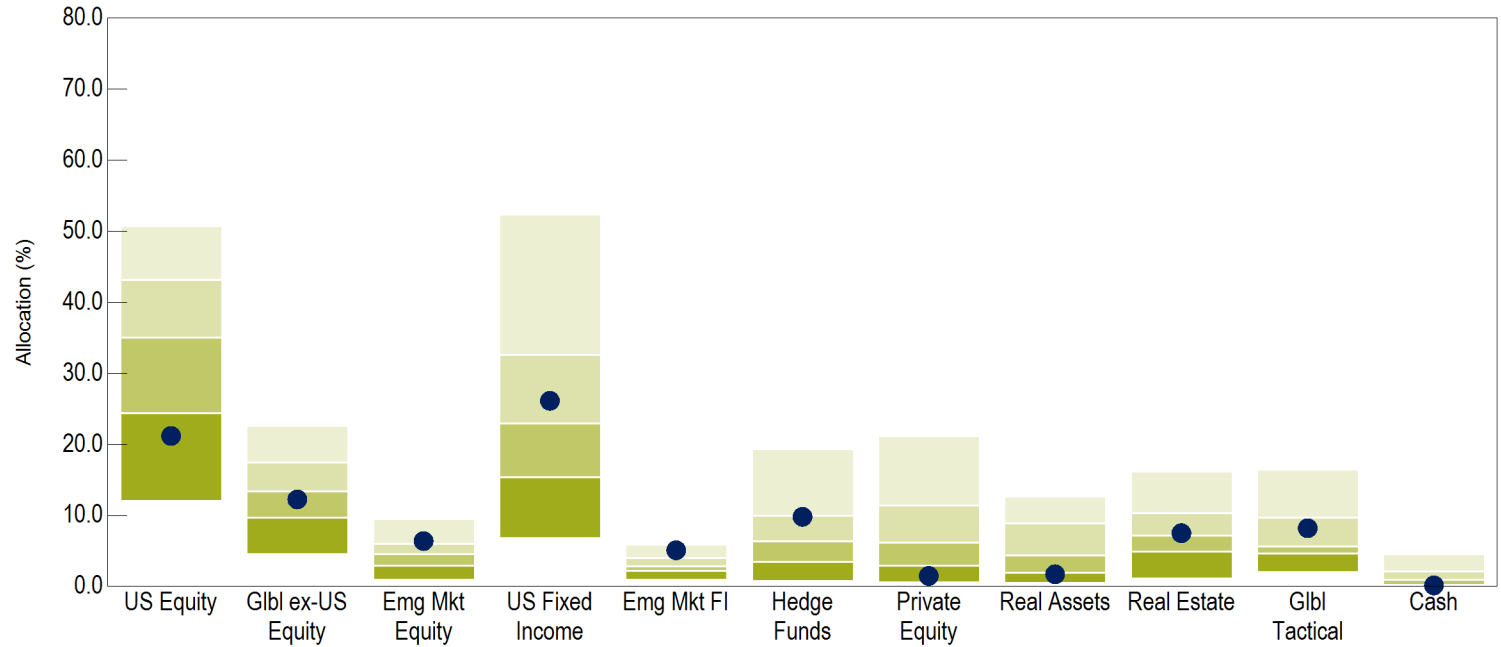


	Fiscal 2016		Fiscal 2015		Fiscal 2014		Fiscal 2013		Fiscal 2012		Fiscal 2011	
<b>Return (Rank)</b>												
5th Percentile	2.8		4.4		18.6		15.0		4.4		24.4	
25th Percentile	1.4		3.6		16.7		12.9		1.9		22.1	
Median	0.4		2.8		15.5		11.3		0.9		19.5	
75th Percentile	-0.9		1.6		14.1		9.9		0.0		15.9	
95th Percentile	-2.9		-0.1		11.9		7.4		-2.9		12.2	
# of Portfolios	258		231		173		192		147		137	
● Teachers Composite	1.4	(26)	-0.3	(96)	13.8	(83)	8.0	(94)	1.9	(26)	20.4	(39)
▲ Policy Index	1.4	(25)	0.1	(94)	13.7	(84)	7.7	(94)	0.9	(51)	18.5	(61)
× Allocation Index	0.9	(37)	0.0	(95)	13.1	(91)	8.0	(94)	0.6	(59)	18.4	(63)



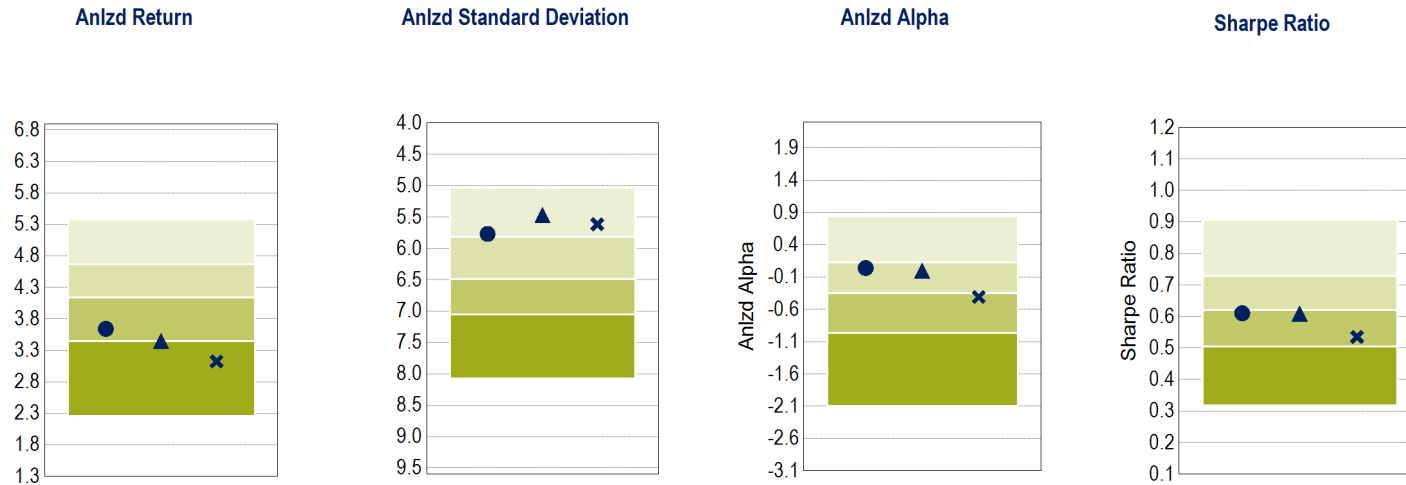
Total Fund Allocation vs. Peer Universe - Net

Total Plan Allocation vs. InvestorForce Public DB Net  
As of December 31, 2016



	Allocation (Rank)											
5th Percentile	50.8	22.6	9.5	52.3	5.9	19.3	21.2	12.7	16.2	16.5	4.6	--
25th Percentile	43.2	17.5	6.1	32.7	4.1	10.1	11.5	9.0	10.4	9.8	2.2	--
Median	35.1	13.5	4.6	23.1	2.9	6.4	6.3	4.4	7.3	5.7	1.1	--
75th Percentile	24.5	9.8	3.0	15.4	2.3	3.6	3.0	2.0	5.0	4.8	0.3	--
95th Percentile	12.1	4.7	1.0	6.9	1.0	0.9	0.7	0.6	1.3	2.1	0.0	--
# of Portfolios	227	217	127	230	46	92	123	69	160	69	232	--
● Teachers Composite	21.2 (84)	12.3 (59)	6.4 (21)	26.1 (39)	5.1 (16)	9.8 (28)	1.5 (91)	1.7 (85)	7.5 (47)	8.2 (37)	0.2 (83)	--

Teachers Composite vs. IFX Public DB Net  
3 Years



● Teachers Composite

Value	3.64
Rank	70
▲ Policy Index	
Value	3.45
Rank	76
✕ Allocation Index	
Value	3.13
Rank	82

Universe	
5th %tile	5.38
25th %tile	4.67
Median	4.15
75th %tile	3.46
95th %tile	2.26

● Teachers Composite

Value	5.77
Rank	24
▲ Policy Index	
Value	5.46
Rank	11
✕ Allocation Index	
Value	5.62
Rank	17

Universe	
5th %tile	5.03
25th %tile	5.81
Median	6.48
75th %tile	7.04
95th %tile	8.07

● Teachers Composite

Value	0.04
Rank	30
▲ Policy Index	
Value	0.00
Rank	32
✕ Allocation Index	
Value	-0.41
Rank	54

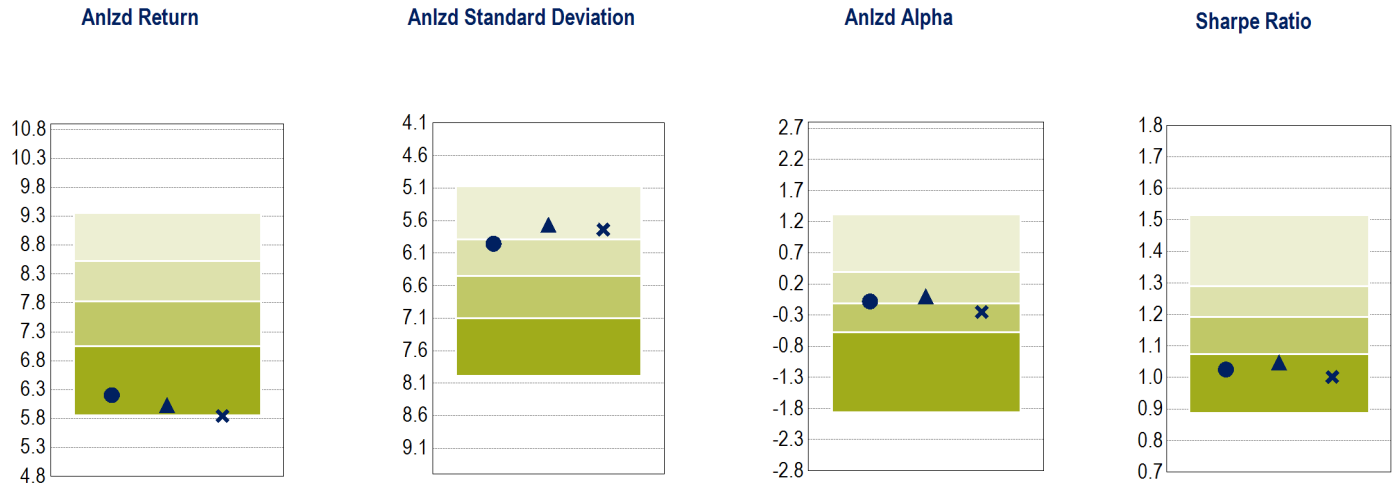
Universe	
5th %tile	0.84
25th %tile	0.13
Median	-0.34
75th %tile	-0.95
95th %tile	-2.08

● Teachers Composite

Value	0.61
Rank	56
▲ Policy Index	
Value	0.61
Rank	56
✕ Allocation Index	
Value	0.53
Rank	72

Universe	
5th %tile	0.91
25th %tile	0.73
Median	0.62
75th %tile	0.51
95th %tile	0.32

Teachers Composite vs. I/Fx Public DB Net  
5 Years



● Teachers Composite

Value	6.20
Rank	93
▲ Policy Index	
Value	6.03
Rank	95
✘ Allocation Index	
Value	5.84
Rank	96

Universe	
5th %tile	9.36
25th %tile	8.53
Median	7.83
75th %tile	7.06
95th %tile	5.87

● Teachers Composite

Value	5.96
Rank	29
▲ Policy Index	
Value	5.67
Rank	18
✘ Allocation Index	
Value	5.74
Rank	22

Universe	
5th %tile	5.08
25th %tile	5.88
Median	6.44
75th %tile	7.09
95th %tile	7.98

● Teachers Composite

Value	-0.08
Rank	48
▲ Policy Index	
Value	0.00
Rank	43
✘ Allocation Index	
Value	-0.25
Rank	59

Universe	
5th %tile	1.32
25th %tile	0.41
Median	-0.10
75th %tile	-0.57
95th %tile	-1.85

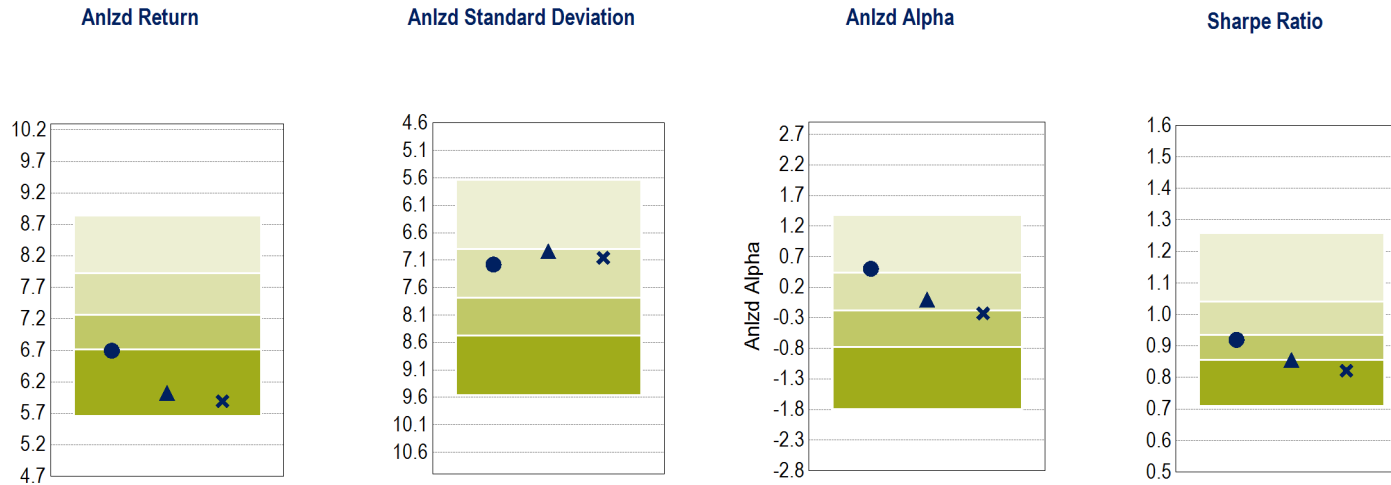
● Teachers Composite

Value	1.03
Rank	81
▲ Policy Index	
Value	1.05
Rank	77
✘ Allocation Index	
Value	1.00
Rank	86

Universe	
5th %tile	1.52
25th %tile	1.29
Median	1.20
75th %tile	1.08
95th %tile	0.89

Total Fund Risk Statistics vs. Peer Universe - Net

Teachers Composite vs. IFlx Public DB Net  
7 Years



● Teachers Composite

Value	6.69
Rank	77
▲ Policy Index	
Value	6.03
Rank	93
✘ Allocation Index	
Value	5.89
Rank	94

Universe	
5th %tile	8.84
25th %tile	7.93
Median	7.27
75th %tile	6.73
95th %tile	5.67

● Teachers Composite

Value	7.18
Rank	32
▲ Policy Index	
Value	6.94
Rank	27
✘ Allocation Index	
Value	7.06
Rank	29

Universe	
5th %tile	5.63
25th %tile	6.88
Median	7.77
75th %tile	8.46
95th %tile	9.54

● Teachers Composite

Value	0.50
Rank	21
▲ Policy Index	
Value	0.00
Rank	43
✘ Allocation Index	
Value	-0.23
Rank	54

Universe	
5th %tile	1.38
25th %tile	0.45
Median	-0.16
75th %tile	-0.77
95th %tile	-1.79

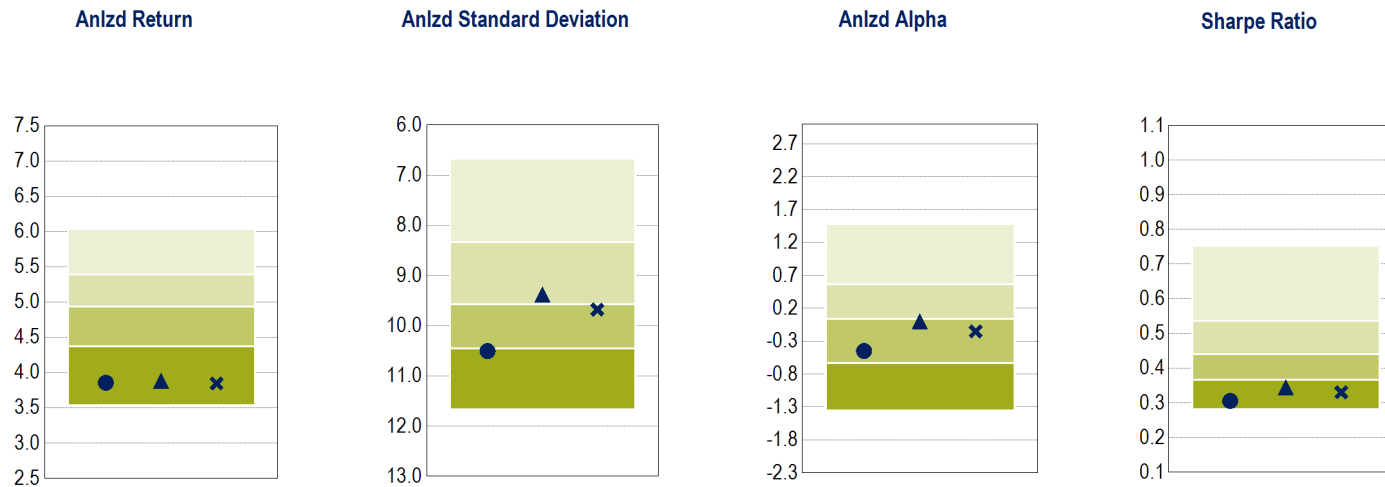
● Teachers Composite

Value	0.92
Rank	56
▲ Policy Index	
Value	0.86
Rank	77
✘ Allocation Index	
Value	0.82
Rank	84

Universe	
5th %tile	1.26
25th %tile	1.04
Median	0.94
75th %tile	0.86
95th %tile	0.71

Total Fund Risk Statistics vs. Peer Universe - Net

Teachers Composite vs. IFx Public DB Net  
10 Years



● Teachers Composite

Value	3.85
Rank	89
▲ Policy Index	
Value	3.88
Rank	88
✕ Allocation Index	
Value	3.84
Rank	90

Universe	
5th %tile	6.03
25th %tile	5.40
Median	4.94
75th %tile	4.38
95th %tile	3.55

● Teachers Composite

Value	10.51
Rank	78
▲ Policy Index	
Value	9.38
Rank	45
✕ Allocation Index	
Value	9.68
Rank	53

Universe	
5th %tile	6.67
25th %tile	8.33
Median	9.55
75th %tile	10.44
95th %tile	11.66

● Teachers Composite

Value	-0.45
Rank	71
▲ Policy Index	
Value	0.00
Rank	53
✕ Allocation Index	
Value	-0.15
Rank	58

Universe	
5th %tile	1.48
25th %tile	0.57
Median	0.04
75th %tile	-0.62
95th %tile	-1.35

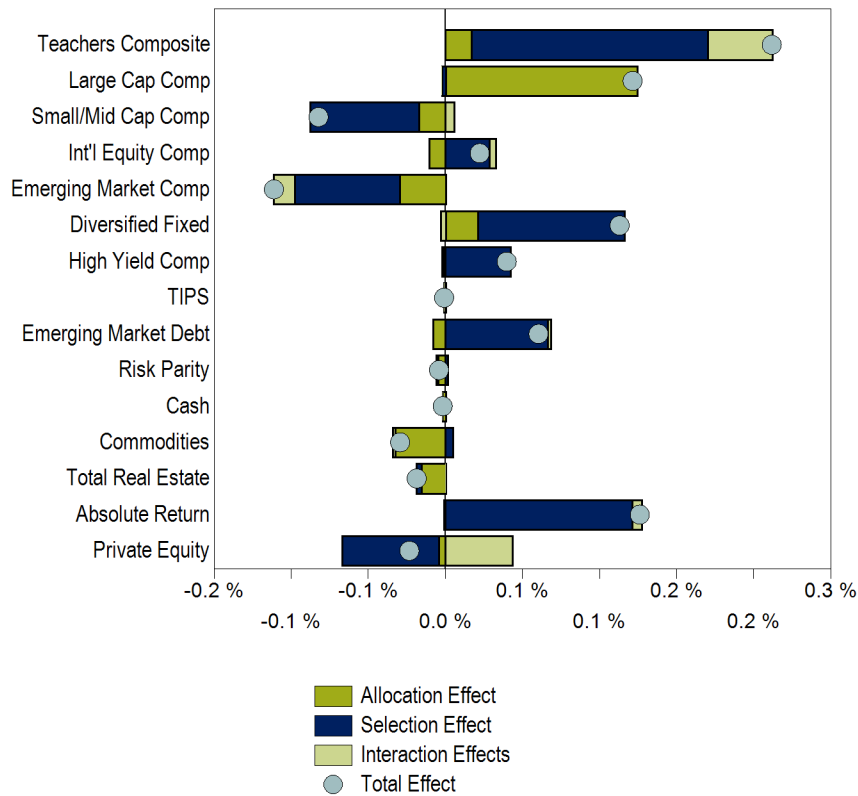
● Teachers Composite

Value	0.30
Rank	92
▲ Policy Index	
Value	0.34
Rank	81
✕ Allocation Index	
Value	0.33
Rank	85

Universe	
5th %tile	0.75
25th %tile	0.54
Median	0.44
75th %tile	0.37
95th %tile	0.28

Total Fund Attribution Analysis - Net

Attribution Effects Relative to Policy Index  
3 Months Ending December 31, 2016



Attribution Summary  
3 Months Ending December 31, 2016

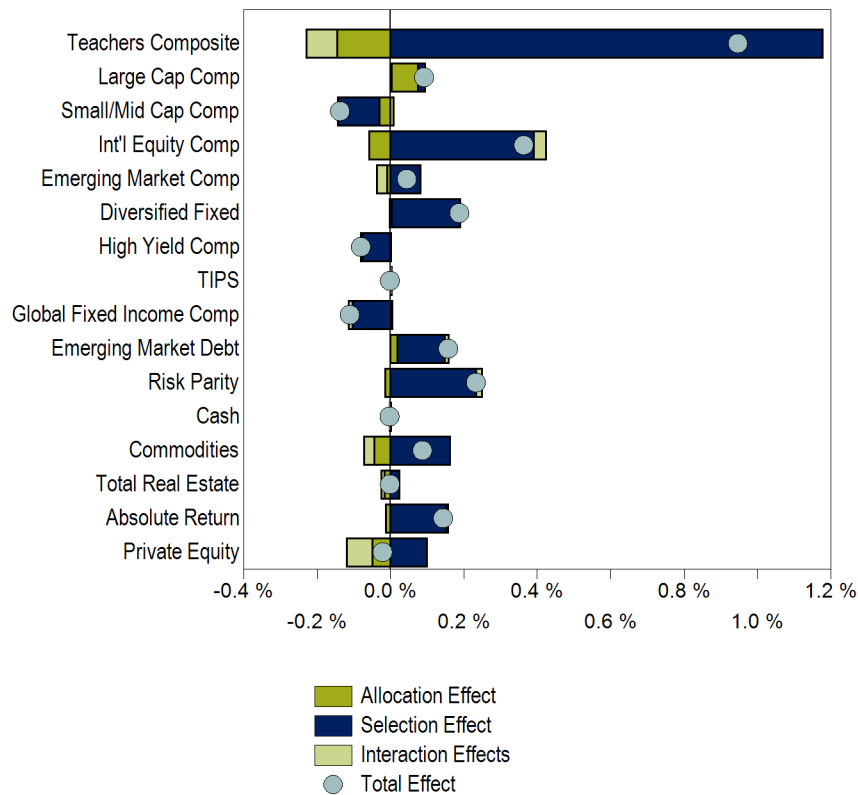
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	3.8%	3.8%	0.0%	0.0%	0.1%	0.0%	0.1%
Small/Mid Cap Comp	7.8%	9.1%	-1.3%	-0.1%	0.0%	0.0%	-0.1%
Int'l Equity Comp	-0.5%	-0.8%	0.3%	0.0%	0.0%	0.0%	0.0%
Emerging Market Comp	-5.4%	-4.2%	-1.2%	-0.1%	0.0%	0.0%	-0.1%
Diversified Fixed	-2.5%	-3.0%	0.5%	0.1%	0.0%	0.0%	0.1%
High Yield Comp	2.6%	1.8%	0.9%	0.0%	0.0%	0.0%	0.0%
TIPS	-2.4%	-2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Emerging Market Debt	-2.9%	-4.2%	1.3%	0.1%	0.0%	0.0%	0.1%
Risk Parity	-2.4%	-2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Commodities	2.8%	2.7%	0.2%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	1.7%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Absolute Return	1.4%	0.0%	1.4%	0.1%	0.0%	0.0%	0.1%
Private Equity	-1.2%	0.0%	-1.2%	-0.1%	0.0%	0.0%	0.0%
<b>Total</b>	<b>0.1%</b>	<b>-0.1%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.2%</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 policyindex 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 alongwith 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.

**Total Fund Attribution Analysis - Net**

**Attribution Effects Relative to Policy Index  
1 Year Ending December 31, 2016**



**Attribution Summary  
1 Year Ending December 31, 2016**

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Large Cap Comp	12.9%	12.7%	0.1%	0.0%	0.1%	0.0%	0.1%
Small/Mid Cap Comp	20.6%	22.8%	-2.2%	-0.1%	0.0%	0.0%	-0.1%
Int'l Equity Comp	5.5%	1.7%	3.8%	0.4%	-0.1%	0.0%	0.4%
Emerging Market Comp	12.5%	11.2%	1.3%	0.1%	0.0%	0.0%	0.0%
Diversified Fixed	3.7%	2.6%	1.0%	0.2%	0.0%	0.0%	0.2%
High Yield Comp	15.3%	17.1%	-1.8%	-0.1%	0.0%	0.0%	-0.1%
TIPS	4.7%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Global Fixed Income Comp	--	7.1%	--	-0.1%	0.0%	0.0%	-0.1%
Emerging Market Debt	12.9%	10.2%	2.7%	0.1%	0.0%	0.0%	0.2%
Risk Parity	8.5%	5.7%	2.8%	0.2%	0.0%	0.0%	0.2%
Cash	0.0%	0.3%	-0.3%	0.0%	0.0%	0.0%	0.0%
Commodities	16.8%	11.8%	5.0%	0.2%	0.0%	0.0%	0.1%
Total Real Estate	8.2%	8.0%	0.2%	0.0%	0.0%	0.0%	0.0%
Absolute Return	0.7%	-0.4%	1.1%	0.2%	0.0%	0.0%	0.1%
Private Equity	10.5%	8.1%	2.3%	0.1%	-0.1%	-0.1%	0.0%
<b>Total</b>	<b>9.1%</b>	<b>8.1%</b>	<b>0.9%</b>	<b>1.2%</b>	<b>-0.1%</b>	<b>-0.1%</b>	<b>0.9%</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 policyindex 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 alongwith 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 State Teachers

### Risk Statistics - 3 Years Ending December 31, 2016 - Net

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Teachers Composite	100.00%	3.64%	70	5.77%	24	0.04%	30	0.61	56	1.17	33	0.86%	24
Policy Index	--	3.45%	76	5.46%	11	0.00%	32	0.61	56	1.14	35	0.00%	1
US Equity	21.19%	8.64%	22	11.29%	29	0.09%	24	0.75	18	1.44	16	1.55%	2
Russell 3000	--	8.43%	25	11.04%	23	0.00%	25	0.75	18	1.33	23	0.00%	1
Large Cap Comp	15.84%	8.74%	14	10.86%	37	-0.20%	19	0.79	15	1.56	10	0.77%	1
S&P 500	--	8.87%	12	10.74%	30	0.00%	16	0.81	13	1.44	15	0.00%	1
Small/Mid Cap Comp	5.35%	9.13%	10	13.37%	44	3.59%	13	0.67	13	1.48	9	4.02%	2
Russell 2000	--	6.74%	37	15.99%	92	0.00%	53	0.41	51	0.74	50	0.00%	1
Int'l Equity Comp	12.26%	0.33%	33	11.92%	46	1.81%	32	0.02	33	0.03	34	2.19%	7
MSCI EAFE	--	-1.60%	65	12.64%	83	0.00%	65	-0.14	66	-0.24	65	0.00%	1
Emerging Market Comp	6.40%	-1.62%	40	15.86%	69	0.72%	40	-0.11	40	-0.22	47	5.37%	56
MSCI Emerging Markets	--	-2.55%	61	16.30%	81	0.00%	58	-0.16	59	-0.31	63	0.00%	1
US Fixed Income	26.14%	3.87%	30	3.09%	61	1.21%	30	1.21	28	1.86	29	1.66%	34
BBgBarc US Aggregate TR	--	3.03%	50	3.02%	59	0.00%	74	0.96	56	1.36	65	0.00%	1
Diversified Fixed	17.05%	3.77%	32	3.16%	62	0.83%	38	1.15	33	1.58	48	1.19%	23
BBgBarc US Aggregate TR	--	3.03%	50	3.02%	59	0.00%	74	0.96	56	1.36	65	0.00%	1
Unconstrained Fixed Income	5.86%	--	--	--	--	--	--	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg	--	4.12%	10	3.76%	52	0.00%	40	1.06	19	1.92	22	0.00%	1
High Yield Comp	5.12%	4.55%	30	5.03%	41	0.77%	36	0.88	37	1.62	47	1.62%	36
BBgBarc US High Yield TR	--	4.66%	26	6.09%	82	0.00%	63	0.75	60	1.77	35	0.00%	1
TIPS	3.97%	2.18%	38	4.22%	70	-0.12%	30	0.49	31	0.92	27	0.18%	3
BBgBarc US TIPS TR	--	2.26%	30	4.14%	65	0.00%	23	0.52	26	0.98	19	0.00%	1
Emerging Market Debt	5.10%	5.84%	5	6.45%	29	0.34%	15	0.89	15	1.48	13	1.33%	7
JP Morgan EMBI Global TR	--	5.59%	8	6.42%	29	0.00%	20	0.85	16	1.36	18	0.00%	1
Total Real Estate	7.51%	11.79%	--	4.92%	--	0.14%	--	2.37	--	306.02	--	1.14%	--
NCREIF Property Index	--	11.01%	--	4.53%	--	0.00%	--	2.40	--	285.71	--	0.00%	--
Absolute Return	9.81%	0.90%	66	3.39%	28	-0.20%	62	0.23	58	0.30	62	1.26%	1
HFRI Fund of Funds Composite Index	--	1.20%	57	3.49%	31	0.00%	58	0.31	51	0.41	54	0.00%	1
Risk Parity	8.21%	1.67%	47	7.67%	64	-0.17%	45	0.20	45	0.36	46	4.46%	38
60% MSCI World (Net) / 40% CITI WGBI	--	2.10%	31	7.24%	50	0.00%	41	0.27	40	0.58	29	0.00%	1

## Vermont State Teachers

### Risk Statistics - 5 Years Ending December 31, 2016 - Net

	% of Tot	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Anlzd AJ	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
Teachers Composite	100.00%	6.20%	93	5.96%	29	-0.08%	48	1.03	81	1.74	63	0.83%	20
Policy Index	--	6.03%	95	5.67%	18	0.00%	43	1.05	77	1.70	67	0.00%	1
US Equity	21.19%	--	--	--	--	--	--	--	--	--	--	--	--
Russell 3000	--	14.67%	32	10.65%	20	0.00%	26	1.37	13	2.27	17	0.00%	1
Large Cap Comp	15.84%	14.89%	16	10.54%	31	0.02%	18	1.40	11	2.45	8	0.81%	1
S&P 500	--	14.66%	22	10.37%	25	0.00%	19	1.40	10	2.34	14	0.00%	1
Small/Mid Cap Comp	5.35%	15.40%	18	12.62%	44	3.17%	25	1.21	19	2.34	8	3.49%	1
Russell 2000	--	14.46%	28	14.61%	85	0.00%	75	0.98	62	1.66	54	0.00%	1
Int'l Equity Comp	12.26%	7.15%	57	12.75%	40	1.05%	60	0.55	58	0.84	55	2.20%	6
MSCI EAFE	--	6.53%	69	13.51%	77	0.00%	80	0.48	77	0.73	73	0.00%	1
Emerging Market Comp	6.40%	--	--	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets	--	1.28%	79	16.16%	71	0.00%	80	0.07	80	0.12	78	0.00%	1
US Fixed Income	26.14%	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	--	2.23%	64	2.91%	51	0.00%	83	0.73	78	1.03	76	0.00%	1
Diversified Fixed	17.05%	3.00%	50	3.31%	64	0.62%	57	0.88	65	1.19	66	1.16%	23
BBgBarc US Aggregate TR	--	2.23%	64	2.91%	51	0.00%	83	0.73	78	1.03	76	0.00%	1
Unconstrained Fixed Income	5.86%	--	--	--	--	--	--	--	--	--	--	--	--
25% HY, 25% EMD, 50% BC Agg	--	4.35%	45	3.88%	53	0.00%	71	1.10	47	1.68	42	0.00%	1
High Yield Comp	5.12%	7.06%	31	4.57%	29	1.09%	28	1.53	25	2.60	42	1.42%	38
BBgBarc US High Yield TR	--	7.36%	24	5.52%	72	0.00%	65	1.32	59	2.60	42	0.00%	1
TIPS	3.97%	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US TIPS TR	--	0.89%	45	4.76%	68	0.00%	47	0.17	46	0.23	44	0.00%	1
Emerging Market Debt	5.10%	--	--	--	--	--	--	--	--	--	--	--	--
JP Morgan EMBI Global TR	--	5.44%	23	7.16%	31	0.00%	30	0.75	27	1.11	28	0.00%	1
Total Real Estate	7.51%	--	--	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index	--	10.91%	--	4.41%	--	0.00%	--	2.45	--	355.30	--	0.00%	--
Absolute Return	9.81%	5.06%	48	3.66%	39	1.71%	46	1.36	30	2.04	31	1.34%	1
HFRI Fund of Funds Composite Index	--	3.42%	77	3.48%	34	0.00%	73	0.96	57	1.37	55	0.00%	1
Risk Parity	8.21%	4.37%	49	7.76%	66	-0.91%	79	0.55	76	0.85	72	4.19%	40
60% MSCI World (Net) / 40% CITI WGBI	--	5.88%	23	7.35%	56	0.00%	55	0.79	28	1.35	19	0.00%	1

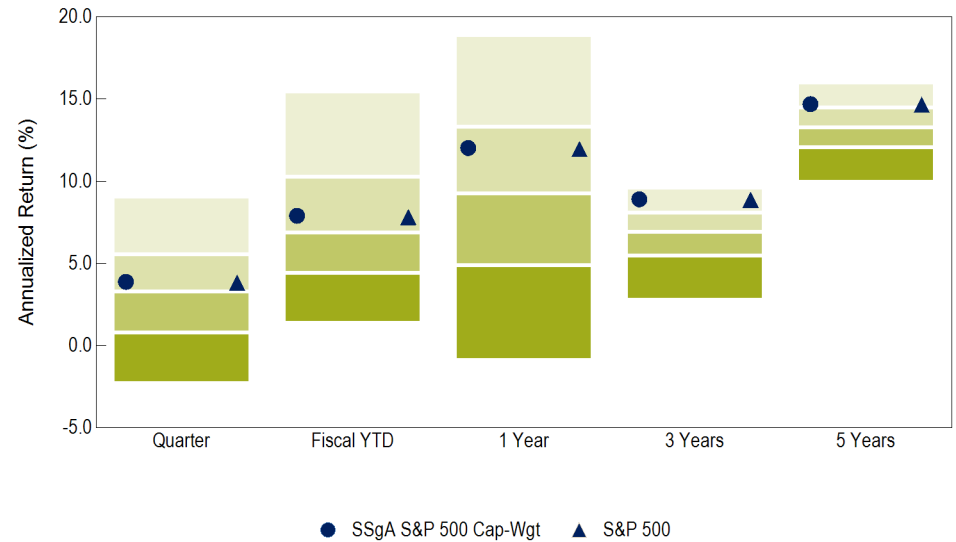


# Manager Characteristics

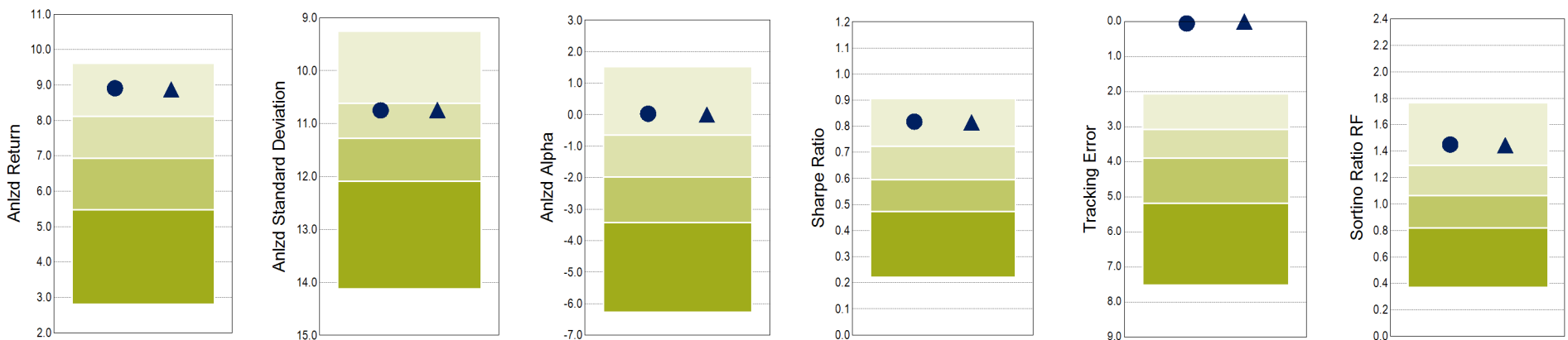
# SSgA S&P 500 Cap-Wgt

Using a replication process, we purchase each security for the Strategy in the same capitalization weight as it appears in the S&P 500 Index. Replication results in low turnover, accurate tracking, and low costs. SSgA's internal liquidity has allowed the firm to acquire many of the benchmark constituents for free. These free trading opportunities have allowed SSgA to gradually reduce security-level misweights while avoiding the open market. This process has resulted in portfolios that look and behave like the benchmark, and do so at a very low cost. SSgA's passive equity process objective is to remain fully invested in the equity market at all times. To accomplish this, it holds a small amount of unleveraged exchange-traded S&P 500® futures contracts to maintain full exposure. SSgA tends to hold approximately 1-3% of the strategy's value in suitable CFTC approved index futures contracts. This position in futures also allows the firm to accommodate cash flows into and out of the portfolio on a daily basis and to equitize dividend receivables to achieve closer tracking.

eA US Large Cap Equity Net Accounts



## 3 Year Risk Statistics



# SSgA S&P 500 Cap-Wgt

## Top Positive Contributors

## Top Negative Contributors

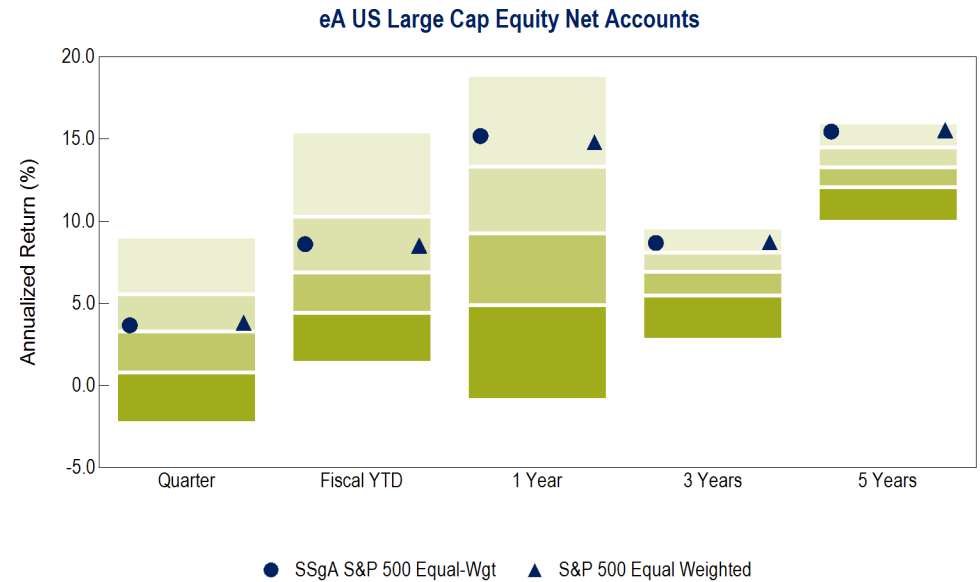
Characteristics	Portfolio	S&P 500	Top Positive Contributors		Top Negative Contributors			
			Relative Contribution %	Return %	Relative Contribution %	Return %		
Number of Holdings	505	505	EBAY (EBAY)	0.0%	-9.8%	ANTHEM (ANTM)	0.0%	15.2%
Weighted Avg. Market Cap. (\$B)	139.0	138.5	JP MORGAN CHASE & CO.	0.0%	30.5%	ANADARKO PETROLEUM	0.0%	10.1%
Median Market Cap. (\$B)	18.8	18.8	CITIGROUP	0.0%	26.2%	TWENTY-FIRST CENTURY FOX CL.B (FOX)	0.0%	10.1%
Price To Earnings	23.1	22.3	MICROSOFT (MSFT)	0.0%	8.6%	CHESAPEAKE ENERGY	0.0%	12.0%
Price To Book	4.7	4.4	NORTHERN TRUST	0.0%	31.6%	COMERICA	0.0%	44.4%
Price To Sales	3.5	3.3	SIMON PROPERTY GROUP	0.0%	-13.4%	DARDEN RESTAURANTS (DRI)	0.0%	19.7%
Return on Equity (%)	20.9	18.5	REGIONS FINL.NEW (RF)	0.0%	46.1%	JUNIPER NETWORKS	0.0%	17.9%
Yield (%)	2.1	2.1	M&T BANK	0.0%	35.4%	GENERAL MOTORS (GM)	0.0%	10.9%
Beta	1.0	1.0	GOLDMAN SACHS GP.	0.0%	48.9%	FIFTH THIRD BANCORP	0.0%	32.5%
R-Squared	1.0	1.0	PNC FINL.SVS.GP. (PNC)	0.0%	30.6%	QUANTA SERVICES (PWR)	0.0%	24.5%

## SSgA S&P 500 Cap-Wgt Performance Attribution vs. S&P 500

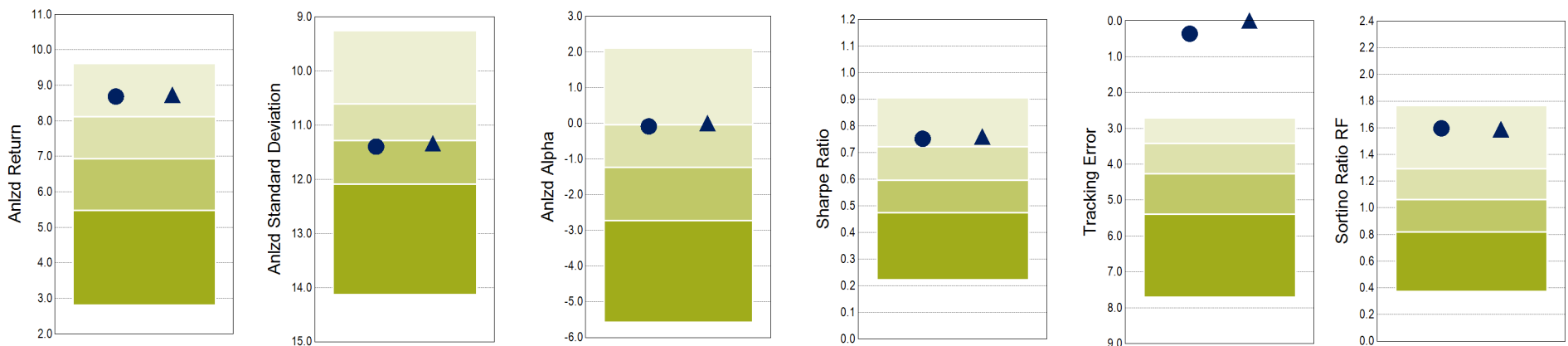
	Total Effects	Attribution Effects			Returns		Sector Weights		
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark	
Energy	0.0%	0.0%	0.0%	0.0%	7.3%	7.3%	7.2%	7.3%	
Materials	0.0%	0.0%	0.0%	0.0%	4.2%	4.8%	2.9%	2.8%	
Industrials	0.0%	0.0%	0.0%	0.0%	7.2%	6.8%	10.0%	10.3%	
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	2.3%	2.3%	12.3%	12.3%	
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-1.9%	-1.9%	9.9%	9.9%	
Health Care	0.0%	0.0%	0.0%	0.0%	-4.0%	-4.0%	14.7%	14.4%	
Financials	0.1%	0.8%	-0.5%	-0.1%	21.1%	16.2%	12.8%	15.8%	
Information Technology	0.0%	0.0%	0.0%	0.0%	1.2%	1.2%	21.3%	21.2%	
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	4.8%	4.8%	2.6%	2.6%	
Utilities	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	3.3%	3.3%	
Real Estate	-0.1%	0.0%	-0.1%	0.0%	-4.5%	-4.5%	3.0%	0.0%	
Cash	0.0%	--	--	--	--	--	0.0%	0.0%	
<b>Portfolio</b>	<b>0.0%</b>	<b>=</b>	<b>0.8%</b>	<b>+</b>	<b>-0.7%</b>	<b>+</b>	<b>-0.2%</b>	<b>3.8%</b>	<b>3.8%</b>
					<b>100.0%</b>	<b>100.0%</b>			

# SSgA S&P 500 Equal-Wgt

The Strategy is managed using a "passive" or "indexing" investment approach, by which SSgA attempts to match, before expenses, the performance of the Index. SSgA will typically attempt to invest in the securities comprising the Index, in the same proportions as they are represented in the Index. In some cases, it may not be possible or practicable to purchase all of the securities comprising the Index, or to hold them in the same weightings as they represent in the Index. In those circumstances, SSgA may employ a sampling or optimization technique to construct the portfolio in question. From time to time securities are added to or removed from the Index. SSgA may sell securities that are represented in the Index, or purchase securities that are not yet represented in the Index, in anticipation of their removal from or addition to the Index. The Strategy may at times purchase or sell futures contracts on the Index, or options on those futures, or engage in other transactions involving the use of derivatives, in lieu of investment directly in the securities making up the Index or to enhance the Strategy's replication of the Index return. The Strategy's return may not match the return of the Index.



## 3 Year Risk Statistics



# SSg S&P 500 Equal-Wgt

## Top Positive Contributors

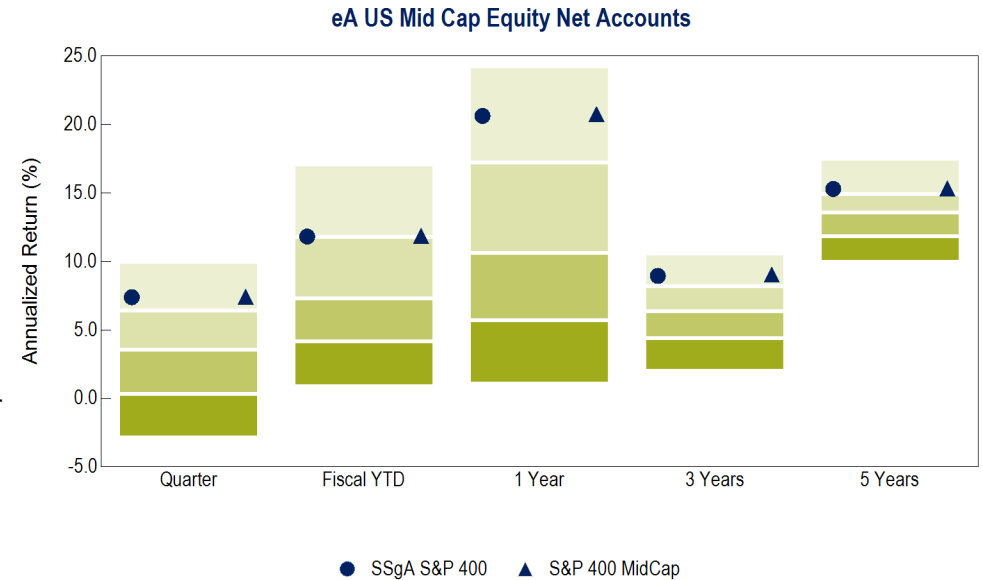
## Top Negative Contributors

Characteristics	Portfolio	S&P 500	Top Positive Contributors		Top Negative Contributors			
			Relative Contribution %	Return %	Relative Contribution %	Return %		
Number of Holdings	500	505	AMAZON.COM (AMZN)	0.2%	-10.4%	JP MORGAN CHASE & CO. (JPM)	-0.3%	30.5%
Weighted Avg. Market Cap. (\$B)	39.1	138.5	FACEBOOK CLASS A	0.1%	-10.3%	BANK OF AMERICA	-0.3%	41.7%
Median Market Cap. (\$B)	18.6	18.8	MEDTRONIC	0.1%	-17.1%	WELLS FARGO & CO	-0.2%	25.5%
Price To Earnings	23.5	22.3	TRANSOCEAN (RIG)	0.1%	38.3%	MICROSOFT	-0.2%	8.6%
Price To Book	4.3	4.4	COMERICA	0.1%	44.4%	BERKSHIRE HATHAWAY 'B' (BRKB)	-0.2%	12.8%
Price To Sales	3.0	3.3	ZIONS BANCORP. (ZION)	0.1%	39.0%	CITIGROUP (C)	-0.1%	26.2%
Return on Equity (%)	18.8	18.5	KEYCORP (KEY)	0.1%	50.9%	CHEVRON	-0.1%	15.5%
Yield (%)	1.9	2.1	REGIONS FINL.NEW	0.1%	46.1%	GENERAL ELECTRIC (GE)	-0.1%	7.5%
Beta	1.0	1.0	CITIZENS FINANCIAL GROUP (CFG)	0.1%	44.8%	APPLE	-0.1%	3.0%
R-Squared	0.9	1.0	LINCOLN NATIONAL	0.1%	41.8%	UNITEDHEALTH GROUP (UNH)	-0.1%	14.8%

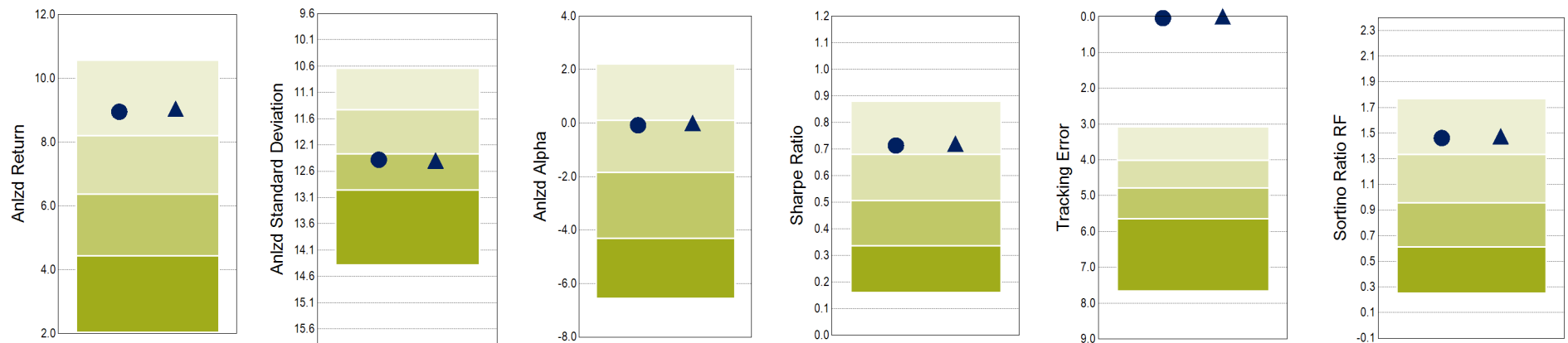
## SSg S&P 500 Equal-Wgt Performance Attribution vs. S&P 500

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	6.7%	7.3%	7.6%	7.3%			
Materials	0.1%	0.0%	0.1%	0.0%	4.5%	4.8%	5.4%	2.8%			
Industrials	0.3%	0.0%	0.2%	0.0%	7.1%	6.8%	13.7%	10.3%			
Consumer Discretionary	0.0%	0.0%	0.1%	0.0%	1.9%	2.3%	16.0%	12.3%			
Consumer Staples	0.1%	0.0%	0.1%	0.0%	-1.4%	-1.9%	7.0%	9.9%			
Health Care	-0.1%	-0.2%	0.1%	0.0%	-5.7%	-4.0%	11.8%	14.4%			
Financials	-0.2%	0.3%	-0.5%	-0.1%	18.2%	16.2%	13.0%	15.8%			
Information Technology	0.2%	0.4%	-0.1%	-0.2%	3.3%	1.2%	13.5%	21.2%			
Telecommunication Services	-0.1%	-0.1%	-0.1%	0.1%	1.0%	4.8%	1.0%	2.6%			
Utilities	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%	5.6%	3.3%			
Real Estate	-0.2%	0.0%	-0.2%	0.0%	-3.1%	-3.1%	5.5%	0.0%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>0.1%</b>	<b>=</b>	<b>0.4%</b>	<b>+</b>	<b>-0.2%</b>	<b>+</b>	<b>-0.1%</b>	<b>3.9%</b>	<b>3.8%</b>	<b>100.0%</b>	<b>100.0%</b>

The Strategy is managed using a "passive" or "indexing" investment approach, by which SSgA attempts to match, before expenses, the performance of the Index. SSgA will typically attempt to invest in the securities comprising the Index, in the same proportions as they are represented in the Index. In some cases, it may not be possible or practicable to purchase all of the securities comprising the Index, or to hold them in the same weightings as they represent in the Index. In those circumstances, SSgA may employ a sampling or optimization technique to construct the portfolio in question. From time to time securities are added to or removed from the Index. SSgA may sell securities that are represented in the Index, or purchase securities that are not yet represented in the Index, in anticipation of their removal from or addition to the Index. The Strategy may at times purchase or sell futures contracts on the Index, or options on those futures, or engage in other transactions involving the use of derivatives, in lieu of investment directly in the securities making up the Index or to enhance the Strategy's replication of the Index return. The Strategy's return may not match the return of the Index.



### 3 Year Risk Statistics





## Top Positive Contributors

## Top Negative Contributors

Characteristics	Portfolio	S&P 400 MidCap	Relative		Relative			
			Contribution %	Return %	Contribution %	Return %		
Number of Holdings	400	400	TCF FINANCIAL	0.0%	35.7%	POOL (POOL)	0.0%	10.8%
Weighted Avg. Market Cap. (\$B)	5.2	5.2	EAST WEST BANCORP	0.0%	39.2%	ENSCO CLASS A (ESV)	0.0%	14.5%
Median Market Cap. (\$B)	3.8	3.8	GATX	0.0%	39.1%	CONVERGYS	0.0%	-19.0%
Price To Earnings	25.5	24.3	ADVANCED MICRO DEVC. (AMD)	0.0%	64.1%	AKORN	0.0%	-19.9%
Price To Book	3.7	3.4	DANA HOLDING	0.0%	22.2%	COMMS.SALES & LEASING (CSAL)	0.0%	-17.2%
Price To Sales	2.8	2.4	AGCO	0.0%	17.6%	HNI (HNI)	0.0%	41.3%
Return on Equity (%)	15.5	14.0	CNO FINANCIAL GROUP	0.0%	26.0%	BANK OF THE OZARKS	0.0%	37.5%
Yield (%)	1.6	1.5	SVB FINANCIAL GROUP (SIVB)	0.0%	55.3%	COMMUNITY HEALTH SYSTEMS (CYH)	0.0%	-51.6%
Beta	1.0	1.0	LEIDOS HOLDINGS	0.0%	18.9%	LASALLE HOTEL PROPERTIES (LHO)	0.0%	29.6%
R-Squared	1.0	1.0	EMCOR GROUP (EME)	0.0%	18.8%	SENIOR HSG.PROPS.TRUST (SNH)	0.0%	-15.2%

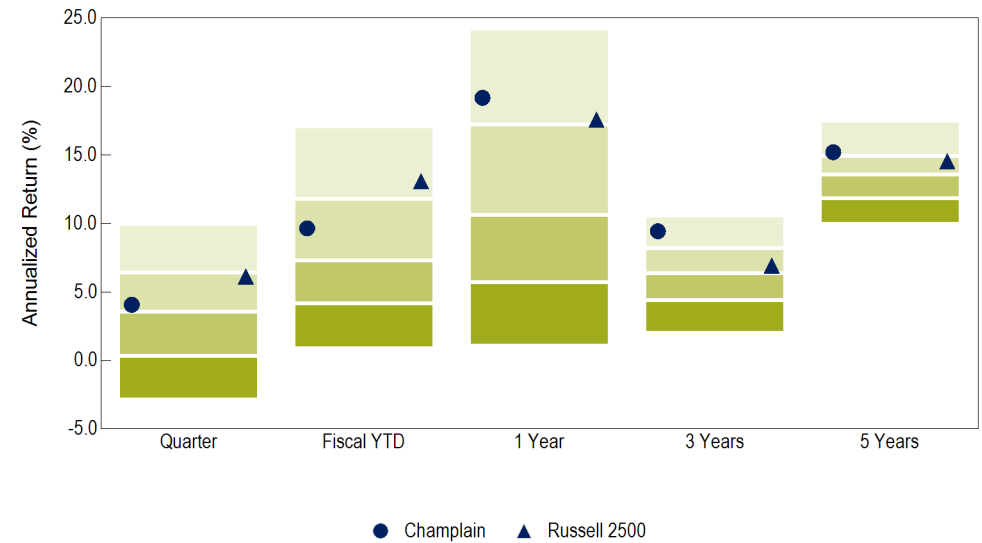
## SSgA S&P 400 Performance Attribution vs. S&P 400 MidCap

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	7.9%	7.9%	3.9%	3.9%			
Materials	0.0%	0.0%	0.0%	0.0%	6.6%	6.6%	7.3%	7.3%			
Industrials	0.0%	0.0%	0.0%	0.0%	12.7%	12.7%	14.3%	14.4%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	11.8%	11.8%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	4.3%	4.3%			
Health Care	0.0%	0.0%	0.0%	0.0%	-1.7%	-1.7%	8.2%	8.2%			
Financials	0.0%	0.0%	0.0%	0.0%	19.6%	19.6%	15.2%	15.2%			
Information Technology	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	17.4%	17.4%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	6.8%	6.8%	0.2%	0.2%			
Utilities	0.0%	0.0%	0.0%	0.0%	4.8%	4.7%	5.5%	5.5%			
Real Estate	0.0%	0.0%	0.0%	0.0%	-1.5%	-1.5%	11.8%	11.8%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>0.0%</b>	<b>=</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>7.4%</b>	<b>7.4%</b>	<b>100.0%</b>	<b>100.0%</b>

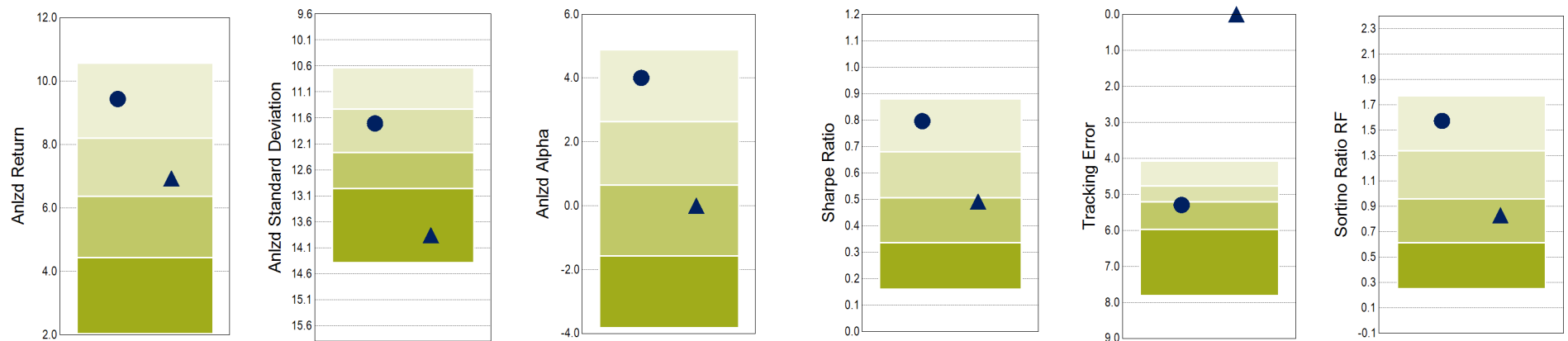
# Champlain

Champlain employs a fundamental, bottom-up approach to investing in equity assets. They believe that superior companies purchased at attractive valuations have the highest probability to wealth creation. Champlain seeks strong businesses with credible and sincere management and aims to buy shares of their stock at discounts to fair or intrinsic value. Portfolio construction applies sector weight guidelines and position size rules to manage risk. The portfolio will have some exposure to at least seven out of the eight largest sectors of the S&P 400, with a maximum weighting on 25% in any one sector. Individual positions will not represent more than 2% of the respective companies' outstanding shares and are limited to no more than 5% of assets under management. The portfolio typically holds 50-75 securities with average position sizes of 2%. The strategy's minimum market cap is \$1.5 billion at purchase and a maximum market cap of \$15 billion. In general, no more than 10% of portfolio in stocks with a market cap below \$2B and no more than 5% of portfolio in companies with market cap above \$20B.

eA US Mid Cap Equity Net Accounts



## 3 Year Risk Statistics



## Top Positive Contributors

## Top Negative Contributors

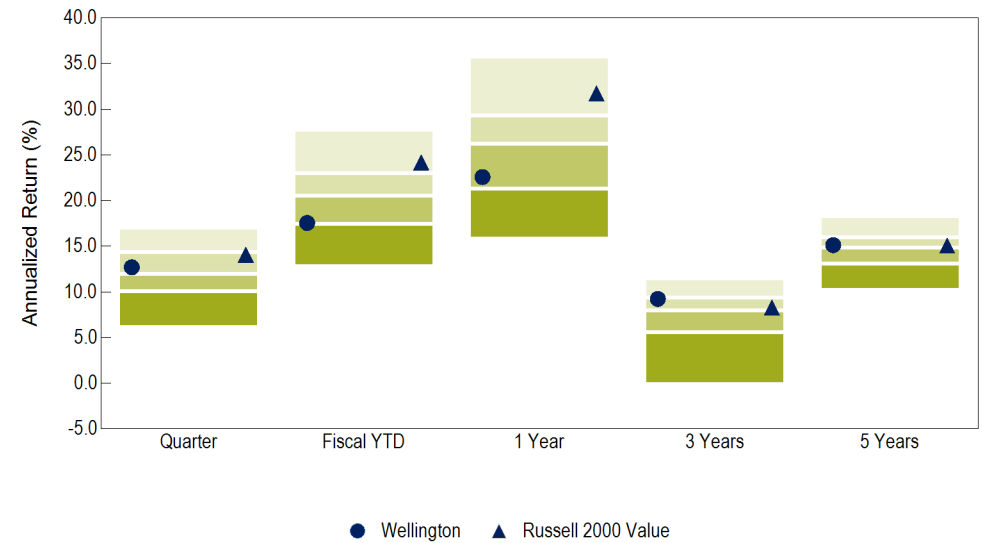
Characteristics			Relative		Relative			
	Portfolio	Russell 2500	Contribution %	Return %	Contribution %	Return %		
Number of Holdings	59	2,476	ENDURANCE SPY.HDG. (ENH)	1.0%	41.8%	WORKDAY CLASS A (WDAY)	-0.5%	-27.9%
Weighted Avg. Market Cap. (\$B)	8.6	4.2	ALLIED WORLD ASR.CO.HDG.	0.8%	33.6%	PALO ALTO NETWORKS (PANW)	-0.5%	-21.5%
Median Market Cap. (\$B)	6.7	1.1	FLOWERS FOODS	0.7%	33.4%	TREEHOUSE FOODS (THS)	-0.4%	-17.2%
Price To Earnings	30.5	24.8	NORTHERN TRUST (NTRS)	0.7%	31.6%	RED HAT (RHT)	-0.3%	-13.8%
Price To Book	4.3	3.2	PROSPERITY BCSH.	0.6%	31.4%	TABLEAU SOFTWARE CL.A (DATA)	-0.2%	-23.7%
Price To Sales	3.5	2.3	CULLEN FO.BANKERS (CFR)	0.5%	23.5%	WATERS	-0.2%	-15.2%
Return on Equity (%)	13.4	12.1	SVB FINANCIAL GROUP	0.4%	55.3%	SPLUNK	-0.2%	-12.8%
Yield (%)	1.1	1.4	COMMERCE BCSH. (CBSH)	0.4%	23.7%	FORTINET	-0.2%	-18.4%
Beta	0.8	1.0	CLARCOR	0.4%	27.4%	MOLSON COORS BREWING 'B' (TAP)	-0.2%	-11.0%
R-Squared	0.9	1.0	ROCKWELL AUTOMATION	0.3%	10.5%	STERIS	-0.2%	-7.4%

## Champlain Performance Attribution vs. Russell 2500

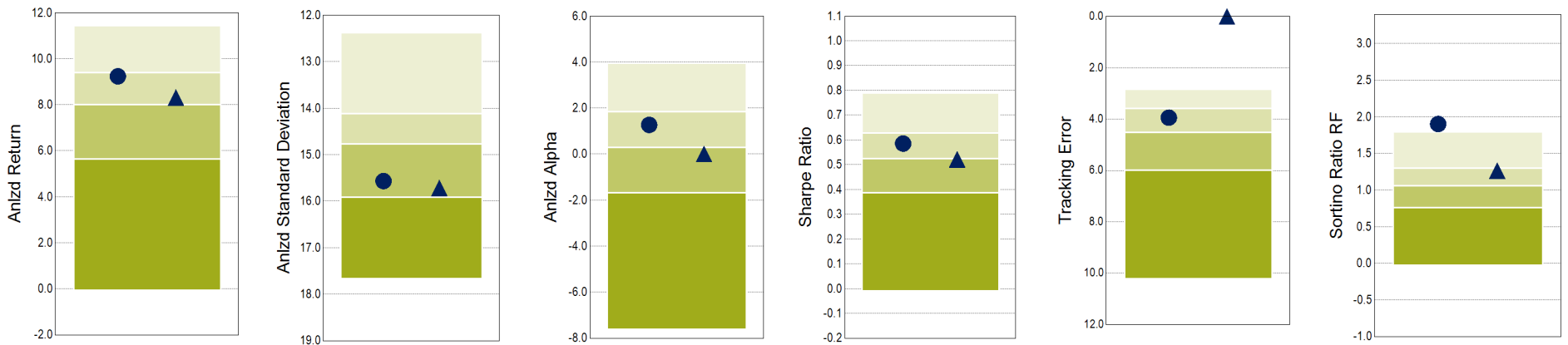
	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.3%	0.0%	-0.3%	0.0%	9.3%	9.0%	1.9%	4.7%			
Materials	-0.4%	-0.6%	-0.3%	0.5%	-4.7%	5.6%	1.3%	6.0%			
Industrials	-0.4%	-0.6%	0.3%	-0.1%	7.2%	11.2%	17.5%	15.1%			
Consumer Discretionary	-0.2%	0.2%	-0.3%	-0.1%	6.6%	5.3%	7.0%	12.8%			
Consumer Staples	0.3%	0.0%	0.1%	0.1%	2.2%	0.8%	12.7%	3.4%			
Health Care	0.0%	0.3%	-0.5%	0.2%	-3.6%	-6.0%	20.5%	11.8%			
Financials	1.8%	1.5%	0.2%	0.1%	29.1%	19.5%	16.7%	16.0%			
Information Technology	-2.3%	-1.8%	0.2%	-0.6%	-8.5%	3.4%	20.5%	15.1%			
Telecommunication Services	0.0%	--	0.0%	--	--	4.6%	0.0%	0.7%			
Utilities	-0.1%	--	-0.1%	--	--	3.9%	0.0%	3.8%			
Real Estate	0.1%	--	0.1%	--	--	-0.8%	0.0%	10.5%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	1.9%	0.0%			
<b>Portfolio</b>	<b>-1.7%</b>	<b>=</b>	<b>-1.0%</b>	<b>+</b>	<b>-0.8%</b>	<b>+</b>	<b>0.1%</b>	<b>4.5%</b>	<b>6.2%</b>	<b>100.0%</b>	<b>100.0%</b>

Wellington's investment objective is to seek long-term total returns in excess of the Russell 2000 Value Index by investing in conservatively-valued securities of high-quality, small cap companies. Wellington employ a bottom-up stock selection process that utilizes Wellington Management's proprietary, fundamental research to identify undervalued companies that have the potential for significant longer-term rewards. The investment universe consists of all stocks generally between US\$100 million and US\$2 billion in market capitalization. These stocks are reviewed for certain financial and valuation requirements that correspond with our investment process and philosophy. The Small Cap Value Team conducts their own proprietary research and leverages the broader research of the firm as appropriate. The Portfolio is expected to have a lower P/E ratio and other value-oriented characteristics relative to the overall small cap market, with a similar market capitalization. The return on equity is expected to be higher than the small cap value indexes, consistent with the high-quality focus.

eA US Small Cap Value Equity Net Accounts



### 3 Year Risk Statistics



Characteristics	Top Positive Contributors				Top Negative Contributors			
	Portfolio	Russell 2000 Value		Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	74	1,369	WEBSTER FINANCIAL (WBS)	0.9%	43.7%	ALSP.HLTHCR.SLTN.	-0.4%	-22.5%
Weighted Avg. Market Cap. (\$B)	2.0	2.0	FRED'S 'A'	0.8%	106.1%	HURON CNSL.GP.	-0.1%	-15.2%
Median Market Cap. (\$B)	1.4	0.7	INTERNATIONAL BCSH.	0.8%	37.0%	CHAS.RVR.LABS.INTL.	-0.1%	-8.6%
Price To Earnings	27.1	21.5	MUELLER INDUSTRIES	0.6%	23.6%	CATO 'A'	-0.1%	-7.6%
Price To Book	2.4	1.8	FIRST MIDWEST BANC. (FMBI)	0.5%	30.8%	STAGE STORES	-0.1%	-19.4%
Price To Sales	2.0	1.6	ACCO BRANDS (ACCO)	0.5%	35.4%	TYMAN	-0.1%	-6.2%
Return on Equity (%)	8.4	7.2	GATX	0.5%	39.1%	CRANSWICK (UKIR:CWK)	-0.1%	-4.1%
Yield (%)	1.6	1.6	HANCOCK HOLDING (HBHC)	0.5%	33.7%	AMSURG (EVHC)	-0.1%	-5.6%
Beta	1.0	1.0	MATTHEWS INTL.'A'	0.4%	26.8%	THERMON GROUP HOLDINGS	0.0%	-3.3%
R-Squared	0.9	1.0	TRIMAS (TRS)	0.4%	26.3%	LUXFER HOLDINGS ADR 1:01	0.0%	-4.8%

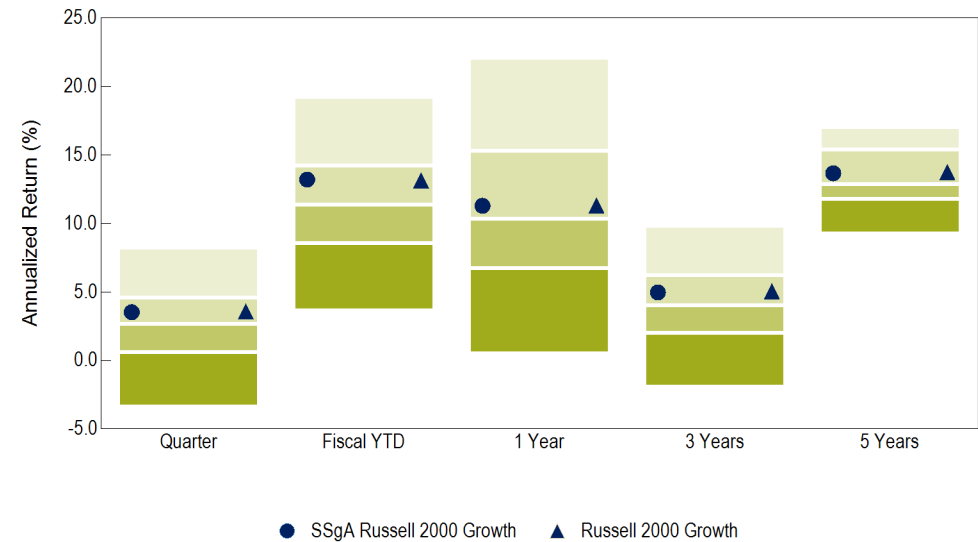
## Wellington Performance Attribution vs. Russell 2000 Value

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	0.0%	-0.1%	0.0%	20.7%	20.1%	4.8%	5.2%			
Materials	-0.3%	-0.4%	0.2%	-0.1%	6.4%	15.3%	5.8%	4.6%			
Industrials	2.2%	-0.3%	3.0%	-0.5%	11.8%	14.1%	34.1%	12.7%			
Consumer Discretionary	0.0%	1.1%	-0.5%	-0.7%	18.9%	8.1%	4.3%	10.6%			
Consumer Staples	-0.3%	-0.1%	0.1%	-0.2%	0.8%	9.7%	4.0%	2.9%			
Health Care	-0.1%	0.0%	-0.1%	0.0%	-2.1%	-1.8%	8.1%	4.9%			
Financials	-2.0%	1.7%	-2.9%	-0.7%	28.9%	23.5%	18.3%	30.8%			
Information Technology	-0.4%	-0.3%	-0.2%	0.0%	10.2%	12.8%	9.0%	10.5%			
Telecommunication Services	0.0%	--	0.0%	--	--	5.7%	0.0%	0.7%			
Utilities	0.0%	0.5%	-0.2%	-0.3%	12.0%	4.9%	2.9%	6.8%			
Real Estate	0.1%	0.9%	-0.3%	-0.5%	13.4%	4.8%	4.2%	10.3%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	4.6%	0.0%			
<b>Portfolio</b>	<b>-0.9%</b>	<b>=</b>	<b>3.1%</b>	<b>+</b>	<b>-1.0%</b>	<b>+</b>	<b>-3.0%</b>	<b>13.2%</b>	<b>14.0%</b>	<b>100.0%</b>	<b>100.0%</b>

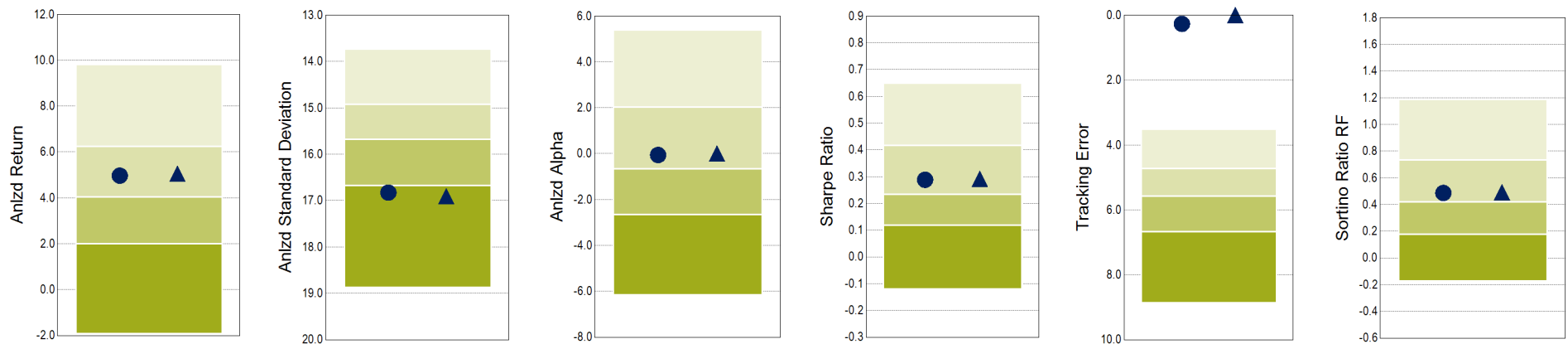
# SSgA Russell 2000 Growth

The Strategy is managed using a "passive" or "indexing" investment approach, by which SSgA attempts to match, before expenses, the performance of the Index. SSgA will typically attempt to invest in the securities comprising the Index, in the same proportions as they are represented in the Index. In some cases, it may not be possible or practicable to purchase all of the securities comprising the Index, or to hold them in the same weightings as they represent in the Index. In those circumstances, SSgA may employ a sampling or optimization technique to construct the portfolio in question. From time to time securities are added to or removed from the Index. SSgA may sell securities that are represented in the Index, or purchase securities that are not yet represented in the Index, in anticipation of their removal from or addition to the Index. The Strategy may at times purchase or sell futures contracts on the Index, or options on those futures, or engage in other transactions involving the use of derivatives, in lieu of investment directly in the securities making up the Index or to enhance the Strategy's replication of the Index return. The Strategy's return may not match the return of the Index.

eA US Small Cap Growth Equity Net Accounts



## 3 Year Risk Statistics



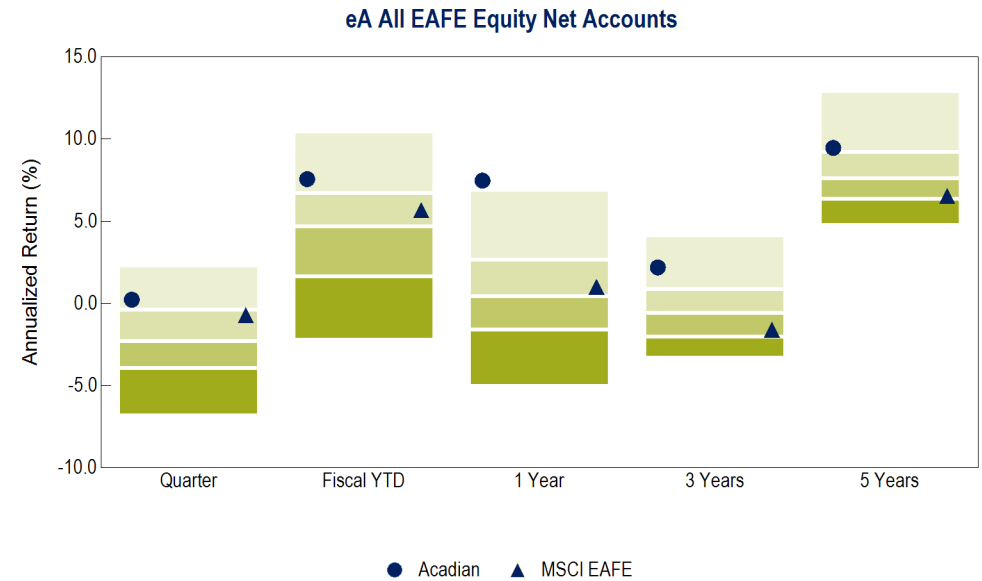
# SSgA Russell 2000 Growth

Characteristics			Top Positive Contributors			Top Negative Contributors		
	Portfolio	Russell 2000 Growth		Relative Contribution %	Return %		Relative Contribution %	Return %
Number of Holdings	1,134	1,177	WEBSTER FINANCIAL (WBS)	0.1%	43.7%	MICROSEMI (MSCC)	-0.1%	28.6%
Weighted Avg. Market Cap. (\$B)	2.2	2.2	SAREPTA THERAPEUTICS (SRPT)	0.1%	-55.3%	BANK OF THE OZARKS (OZRK)	-0.1%	37.5%
Median Market Cap. (\$B)	0.9	0.9	AK STEEL HLDG. (AKS)	0.1%	111.4%	TESARO	-0.1%	34.2%
Price To Earnings	29.2	29.0	OPHTHOTECH (OPHT)	0.1%	-89.5%	HOME BANCSHARES (HOMB)	0.0%	33.9%
Price To Book	5.1	4.8	PROSPERITY BCSH. (PB)	0.1%	31.4%	CLARCOR	0.0%	27.4%
Price To Sales	3.7	2.7	MENTOR GRAPHICS (MENT)	0.1%	39.7%	GRAND CANYON EDUCATION	0.0%	44.7%
Return on Equity (%)	16.9	15.0	WESTERN REFINING (WNR)	0.1%	44.9%	GOPRO CL.A (GPRO)	0.0%	-47.8%
Yield (%)	0.8	0.6	RADIAN GP. (RDN)	0.1%	32.7%	PRIMERICA (PRI)	0.0%	30.7%
Beta	1.0	1.0	CEMPRA	0.1%	-88.4%	CHEMOURS	0.0%	38.3%
R-Squared	1.0	1.0	TEXAS CAPITAL BANCSHARES	0.1%	42.8%	HNI (HNI)	0.0%	41.3%

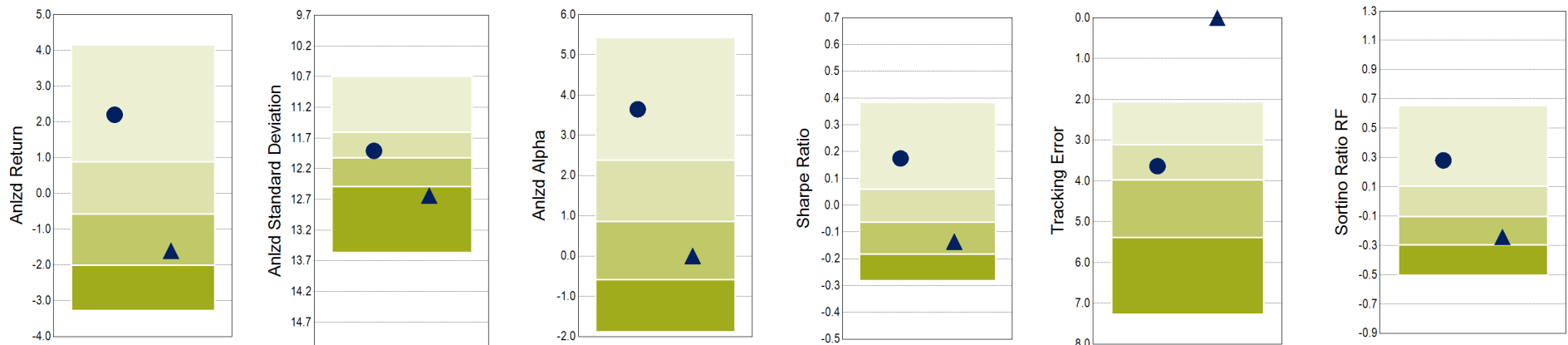
## SSgA Russell 2000 Growth Performance Attribution vs. Russell 2000 Growth

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.5%	0.1%	0.2%	0.2%	18.1%	7.5%	3.2%	1.2%			
Materials	0.2%	0.2%	0.0%	0.0%	11.4%	7.7%	4.7%	4.9%			
Industrials	0.0%	0.2%	-0.2%	0.0%	12.5%	11.2%	14.2%	15.7%			
Consumer Discretionary	-0.2%	0.0%	-0.2%	0.0%	7.9%	7.7%	12.7%	14.9%			
Consumer Staples	0.1%	0.1%	0.0%	0.0%	6.4%	3.4%	3.0%	3.1%			
Health Care	0.8%	0.2%	0.7%	-0.1%	-6.3%	-7.3%	14.0%	23.1%			
Financials	3.1%	0.2%	2.5%	0.5%	23.0%	19.3%	17.9%	5.0%			
Information Technology	0.5%	0.9%	-0.1%	-0.3%	4.7%	1.3%	17.7%	25.0%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	9.1%	12.5%	0.7%	0.8%			
Utilities	0.1%	0.0%	0.3%	-0.1%	5.3%	9.0%	3.8%	0.8%			
Real Estate	0.2%	0.1%	0.1%	0.0%	4.1%	2.9%	8.0%	5.4%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>5.3%</b>	<b>=</b>	<b>1.9%</b>	<b>+</b>	<b>3.2%</b>	<b>+</b>	<b>0.2%</b>	<b>8.8%</b>	<b>3.4%</b>	<b>100.0%</b>	<b>100.0%</b>

Acadian believes that the larger the pool of potential investments, the greater the potential opportunity an active manager has to add value. They believe that stocks and markets have many attributes that are related to potential outperformance, and that a successful investment approach must be multi-faceted and highly adaptable. They believe that objectivity is crucial to investment success. Acadian's quantitative process and extensive database allows them to apply their valuation techniques to over 40,000 stocks worldwide. They do not limit the universe other than to employ screens based on invest-ability and availability of data. For example, they only evaluate stocks that have sufficient daily trading volume to be appropriate for institutional investment. Other than these practical considerations, they consider our investment universe to encompass all institutionally investable stocks in the world.



### 3 Year Risk Statistics





## Top Positive Contributors

## Top Negative Contributors

Characteristics	MSCI EAFE		Relative Contribution %		Relative Contribution %			
	Portfolio	MSCI EAFE	Return %	Return %	Return %	Return %		
Number of Holdings	457	930	ROYAL DUTCH SHELL A	0.3%	12.1%	BERENDSEN	-0.2%	-33.4%
Weighted Avg. Market Cap. (\$B)	24.8	50.6	H LUNDBECK	0.2%	24.4%	NESTE	-0.1%	-9.7%
Median Market Cap. (\$B)	0.7	8.6	STORA ENSO 'R' (M:EGR)	0.2%	21.2%	TATA MOTORS (IN:TMO)	-0.1%	-13.4%
Price To Earnings	20.1	21.3	NESTLE 'R'	0.2%	-9.0%	HEINEKEN HLDG.	-0.1%	-13.0%
Price To Book	2.7	2.4	STMICROELECTRONICS (PAR)	0.2%	39.8%	KT ADR 2:1 (KT)	-0.1%	-12.2%
Price To Sales	1.4	1.7	ROYAL BANK OF CANADA	0.2%	10.7%	LONZA GROUP (S:LONN)	-0.1%	-9.4%
Return on Equity (%)	15.4	11.8	SWISS LIFE HOLDING (S:SLHN)	0.2%	9.3%	HSBC HDG. (ORD \$0.50) (UKIR:HSBA)	-0.1%	9.4%
Yield (%)	2.5	3.1	DEUTSCHE LUFTHANSA	0.1%	16.6%	EVONIK INDUSTRIES	-0.1%	-11.5%
Beta	0.9	1.0	STATOIL (N:STL)	0.1%	11.4%	NIPPON TELG. & TEL. (J:NTT)	-0.1%	-7.6%
R-Squared	0.9	1.0	BP SPN.ADR 1:6	0.1%	8.2%	COCHLEAR	-0.1%	-17.8%

## Acadian Performance Attribution vs. MSCI EAFE

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	-0.2%	0.7%	-0.4%	7.6%	10.4%	9.1%	5.0%			
Materials	-0.1%	-0.3%	0.3%	-0.1%	1.3%	3.5%	9.8%	7.5%			
Industrials	0.3%	0.2%	0.1%	0.0%	0.1%	-1.8%	15.1%	14.1%			
Consumer Discretionary	-0.6%	-0.9%	-0.1%	0.4%	-3.5%	1.6%	11.3%	12.3%			
Consumer Staples	0.9%	0.2%	0.3%	0.3%	-8.0%	-10.1%	5.1%	12.4%			
Health Care	0.4%	0.4%	0.0%	0.0%	-3.1%	-7.7%	15.0%	11.5%			
Financials	-1.0%	-0.8%	-1.1%	1.0%	6.8%	9.5%	12.8%	19.3%			
Information Technology	0.1%	0.1%	0.5%	-0.6%	-0.8%	-3.0%	13.3%	5.5%			
Telecommunication Services	0.1%	-0.1%	0.0%	0.2%	-9.6%	-6.8%	2.8%	4.9%			
Utilities	0.0%	-0.2%	0.0%	0.2%	-11.8%	-7.1%	2.3%	3.6%			
Real Estate	0.2%	0.4%	0.0%	-0.2%	-3.9%	-7.3%	3.5%	4.0%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>0.3%</b>	<b>=</b>	<b>-1.3%</b>	<b>+</b>	<b>0.5%</b>	<b>+</b>	<b>1.0%</b>	<b>-0.3%</b>	<b>-0.6%</b>	<b>100.0%</b>	<b>100.0%</b>

## Country Allocation

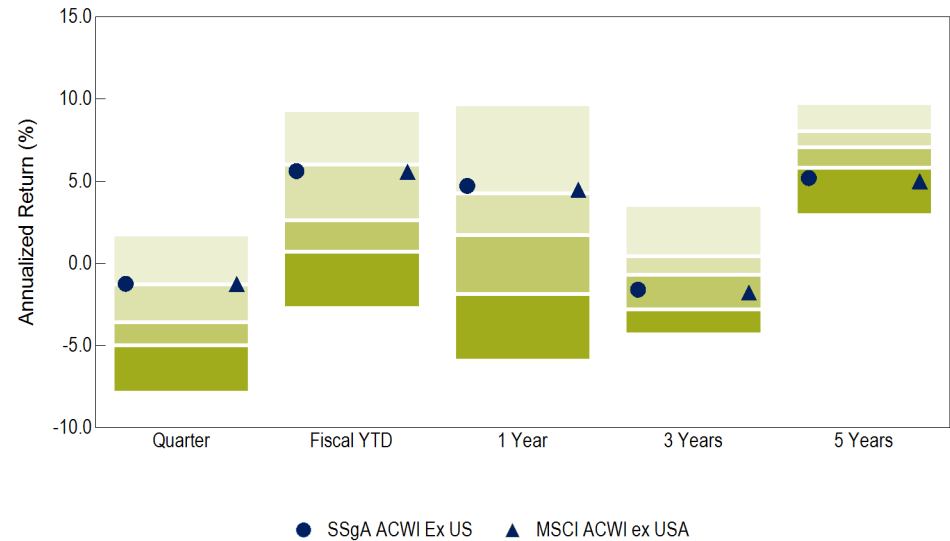
	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>Americas</b>				
Brazil*	1.5%	0.0%	-3.9%	2.0%
Canada	5.1%	0.0%	2.5%	3.3%
Mexico*	0.1%	0.0%	-12.7%	-7.9%
United States	0.1%	0.0%	6.8%	3.4%
<b>Total-Americas</b>	<b>6.9%</b>	<b>0.0%</b>	<b>0.9%</b>	<b>--</b>
<b>Europe</b>				
Austria	1.3%	0.2%	2.3%	6.5%
Belgium	0.8%	1.4%	1.5%	-11.8%
Denmark	1.1%	1.8%	18.4%	-8.8%
Finland	3.4%	1.0%	2.0%	-4.4%
France	5.0%	9.7%	7.1%	3.1%
Germany	10.8%	8.9%	-1.9%	1.5%
Greece*	0.1%	0.0%	25.0%	15.3%
Ireland	1.6%	0.5%	-2.8%	0.1%
Italy	2.0%	1.9%	2.3%	10.8%
Luxembourg	0.1%	0.0%	23.0%	-0.6%
Netherlands	4.1%	3.3%	2.6%	-2.0%
Norway	1.9%	0.6%	11.0%	2.6%
Poland*	0.3%	0.0%	2.0%	3.4%
Portugal	0.5%	0.1%	-7.6%	-3.0%
Russia*	0.1%	0.0%	17.1%	18.6%
Spain	1.7%	3.1%	4.0%	2.2%
Sweden	6.2%	2.8%	-2.4%	-0.8%
Switzerland	4.2%	9.0%	4.3%	-3.9%
United Kingdom	13.7%	18.5%	-3.4%	-0.8%
<b>Total-Europe</b>	<b>58.8%</b>	<b>62.8%</b>	<b>0.8%</b>	<b>-0.3%</b>

## Country Allocation

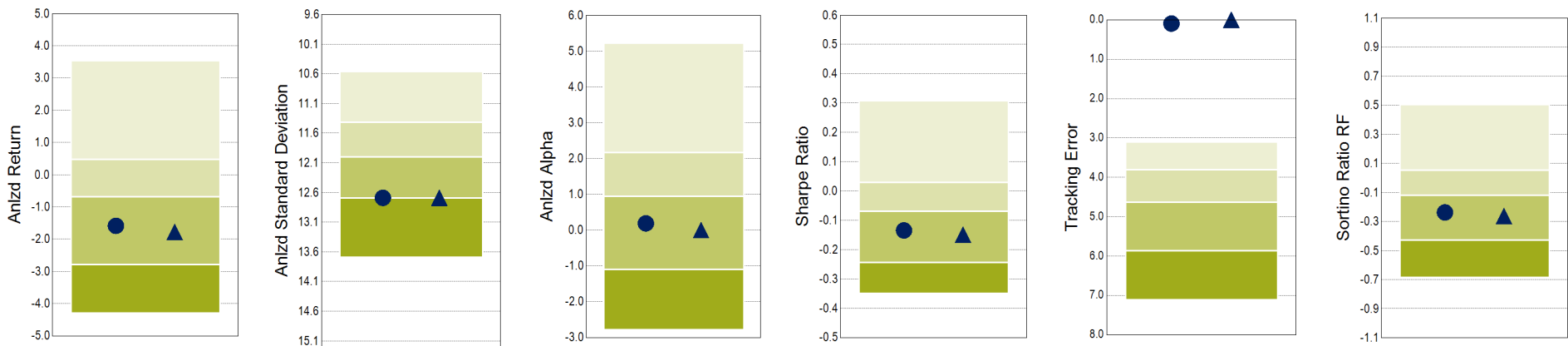
	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>AsiaPacific</b>				
Australia	4.7%	7.4%	-3.2%	0.8%
Hong Kong	0.5%	3.5%	-0.8%	-9.0%
India*	1.0%	0.0%	-0.8%	-0.5%
Japan	20.1%	24.0%	3.0%	-0.1%
Korea*	3.7%	0.0%	-2.2%	-3.7%
Malaysia*	0.1%	0.0%	-2.3%	-0.2%
New Zealand	0.8%	0.2%	-8.7%	-10.8%
Singapore	2.2%	1.3%	-4.0%	-3.6%
Taiwan*	0.4%	0.0%	2.0%	1.4%
Thailand*	0.1%	0.0%	8.0%	-2.3%
<b>Total-AsiaPacific</b>	<b>33.5%</b>	<b>36.4%</b>	<b>0.6%</b>	<b>-0.9%</b>
<b>Other</b>				
Israel	0.2%	0.7%	-1.7%	-10.9%
South Africa*	0.6%	0.0%	-2.0%	-1.0%
Turkey*	0.0%	0.0%	9.3%	-0.8%
<b>Total-Other</b>	<b>0.8%</b>	<b>0.7%</b>	<b>-1.4%</b>	<b>-10.9%</b>
<b>Totals</b>				
Developed	91.9%	100.0%	-1.5%	-0.7%
Emerging*	8.1%	0.0%	2.4%	--

The MSCI ACWI ex US Index Strategy tends to hold each security that is held in the benchmark index, but the strategy will not be perfectly weighted in every index constituent on a daily basis. Holding securities in the perfect weights would require increased trading and therefore would incur costs. Thus, there will be securities in the fund that are either over- or under-weighted relative to the benchmark. The individual security mis-weights are very minimal, usually within 1 basis point. However, in aggregate, these small mis-weights can add up and result in tracking error if the mis-weighted securities' performance is volatile. SSgA seek to replicate the index by attempting to hold every security in the fund in its appropriate index weight. SSgA trade only when there is a change to the Index, when we have participant cash flows, or when we receive significant dividend income into the fund.

### eA ACWI ex-US All Cap Equity Net Accounts



### 3 Year Risk Statistics



# SSgA ACWI Ex US

Characteristics	Portfolio	MSCI ACWI ex USA	Top Positive Contributors			Top Negative Contributors		
			Relative Contribution %	Return %	Relative Contribution %	Return %		
Number of Holdings	1,880	1,856	ADARO ENERGY	0.3%	38.3%	TELEKOMUNIKASI INDONESIA	-0.8%	-10.1%
Weighted Avg. Market Cap. (\$B)	49.3	49.2	UNITED TRACTORS (ID:UTR)	0.2%	16.3%	UNILEVER INDONESIA (ID:UNI)	-0.4%	-14.9%
Median Market Cap. (\$B)	6.8	6.7	SAMSUNG ELECTRONICS (KO:SGL)	0.2%	2.8%	BANK RAKYAT INDONESIA	-0.4%	-7.3%
Price To Earnings	21.0	20.2	NESTLE 'R'	0.1%	-9.0%	MATAHARI DEPARTMENT SOE. (ID:MDS)	-0.3%	-20.7%
Price To Book	3.1	2.5	ALIBABA GROUP HLDG.SPN. ADR 1:1 (BABA)	0.1%	-17.0%	BANK CENTRAL ASIA	-0.3%	-3.9%
Price To Sales	2.5	1.9	ANHEUSER-BUSCH INBEV (B:ABI)	0.1%	-18.1%	LIPPO KARAWACI	-0.2%	-29.5%
Return on Equity (%)	14.5	13.2	TENCENT HOLDINGS	0.1%	-10.9%	KALBE FARMA (ID:KAL)	-0.2%	-14.4%
Yield (%)	3.0	2.9	ROCHE HOLDING (S:ROG)	0.1%	-7.9%	SUMMARECON AGUNG	-0.2%	-26.9%
Beta	1.0	1.0	NOVARTIS 'R' (S:NOVN)	0.1%	-7.5%	ASTRA INTERNATIONAL	-0.2%	-2.8%
R-Squared	1.0	1.0	BRITISH AMERICAN TOBACCO	0.1%	-10.8%	INDOFOOD SUKSES MAKMUR (ID:IFO)	-0.2%	-11.8%

## SSgA ACWI Ex US Performance Attribution vs. MSCI ACWI ex USA

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.2%	0.3%	-0.4%	-0.1%	12.7%	8.4%	3.1%	6.6%			
Materials	-0.4%	-0.5%	-0.2%	0.2%	-4.3%	2.6%	5.5%	7.6%			
Industrials	-0.2%	-0.5%	-0.3%	0.5%	-7.5%	-2.2%	6.5%	11.7%			
Consumer Discretionary	-0.9%	-0.9%	0.3%	-0.4%	-6.6%	-0.9%	15.8%	11.4%			
Consumer Staples	-0.4%	-0.4%	-0.1%	0.0%	-12.4%	-10.0%	12.3%	10.8%			
Health Care	0.3%	-0.4%	0.1%	0.6%	-13.6%	-8.0%	3.1%	8.7%			
Financials	-2.3%	-2.4%	0.5%	-0.4%	-3.0%	6.9%	25.9%	21.7%			
Information Technology	0.4%	0.8%	0.0%	-0.4%	-0.8%	-4.9%	11.9%	9.6%			
Telecommunication Services	-0.8%	-0.3%	0.0%	-0.5%	-10.7%	-6.6%	10.6%	5.0%			
Utilities	0.0%	-0.1%	0.0%	0.1%	-10.0%	-7.0%	2.6%	3.3%			
Real Estate	-0.3%	-0.5%	0.0%	0.2%	-21.0%	-7.7%	2.7%	3.5%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-5.0%</b>	<b>=</b>	<b>-4.8%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>-0.1%</b>	<b>-6.1%</b>	<b>-1.2%</b>	<b>100.0%</b>	<b>100.0%</b>

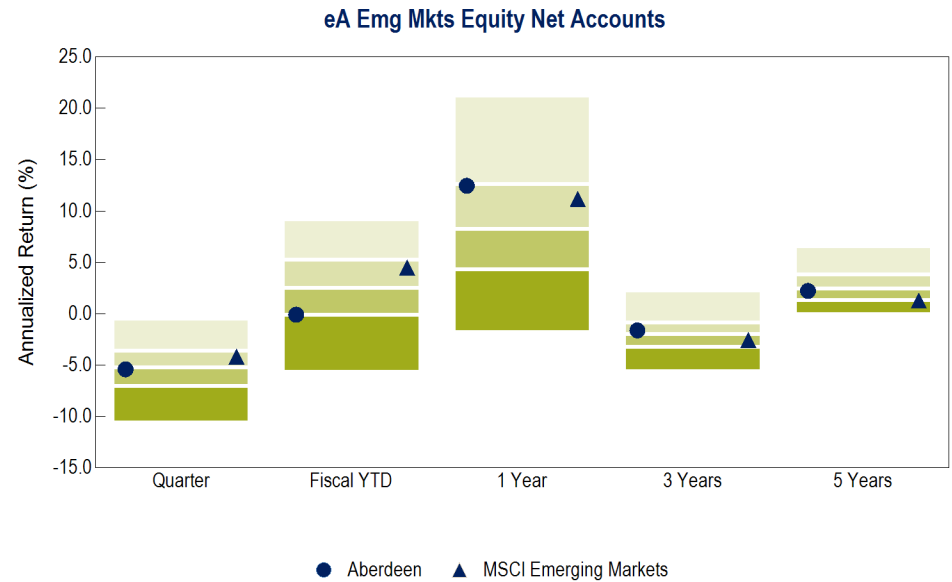
## Country Allocation

	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>Americas</b>				
Brazil*	0.0%	1.7%	2.3%	2.3%
Canada	0.1%	6.7%	3.4%	3.4%
Chile*	1.2%	0.3%	2.5%	2.4%
Colombia*	2.0%	0.1%	-2.3%	-2.3%
Mexico*	0.1%	0.9%	-7.8%	-7.8%
Peru*	0.0%	0.1%	-0.8%	2.5%
United States	0.0%	0.0%	-3.2%	3.4%
<b>Total-Americas</b>	<b>3.3%</b>	<b>9.8%</b>	<b>-0.7%</b>	<b>2.1%</b>
<b>Europe</b>				
Austria	0.0%	0.1%	6.5%	6.5%
Belgium	0.0%	1.0%	-11.8%	-11.8%
Czech Republic*	0.0%	0.0%	-2.4%	-2.4%
Denmark	0.1%	1.2%	-8.8%	-8.8%
Finland	0.0%	0.7%	-4.4%	-4.4%
France	0.0%	6.8%	3.0%	3.1%
Germany	0.0%	6.2%	1.5%	1.5%
Greece*	0.0%	0.1%	15.4%	15.4%
Hungary*	0.1%	0.1%	9.3%	9.3%
Ireland	0.0%	0.3%	-3.2%	0.1%
Italy	0.0%	1.3%	10.2%	10.8%
Luxembourg	0.0%	0.0%	-14.9%	-1.2%
Netherlands	0.0%	2.3%	1.8%	-2.0%
Norway	0.0%	0.5%	2.6%	2.6%
Poland*	0.0%	0.2%	4.1%	4.0%
Portugal	0.0%	0.1%	-3.0%	-3.0%
Russia*	0.0%	0.9%	18.8%	18.8%
Spain	0.0%	2.1%	2.3%	2.2%
Sweden	0.1%	2.0%	-0.6%	-0.8%
Switzerland	0.0%	6.3%	-3.8%	-3.9%
United Kingdom	0.1%	12.9%	-2.2%	-0.8%
<b>Total-Europe</b>	<b>0.6%</b>	<b>45.2%</b>	<b>1.1%</b>	<b>0.1%</b>

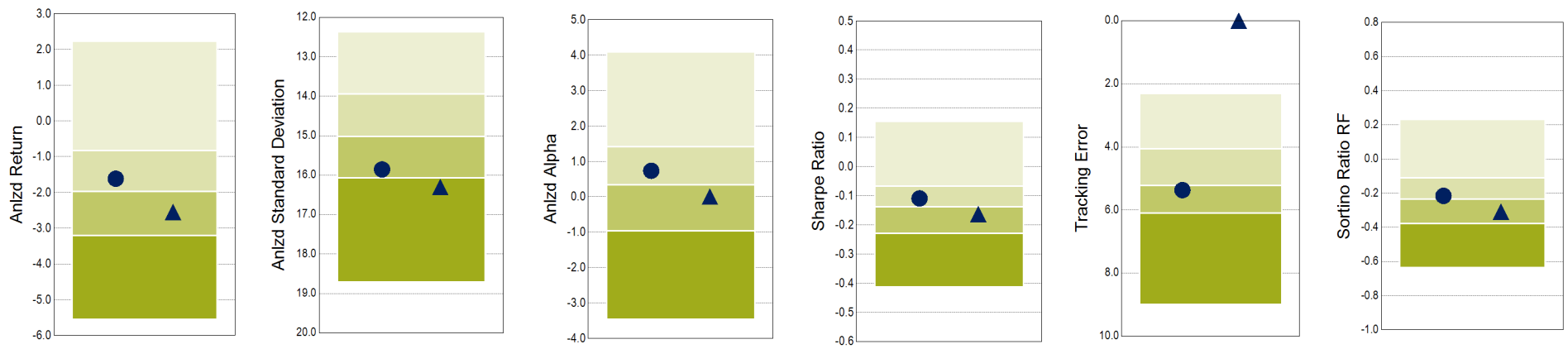
## Country Allocation

	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>AsiaPacific</b>				
Australia	0.0%	5.2%	0.8%	0.8%
China*	0.1%	6.3%	-2.4%	-6.9%
Hong Kong	0.3%	2.5%	-8.2%	-9.0%
India*	0.9%	1.9%	-7.8%	-7.8%
Indonesia*	56.5%	0.6%	-7.5%	-7.4%
Japan	11.3%	16.9%	-0.1%	-0.1%
Korea*	26.0%	3.5%	-6.8%	-6.9%
Malaysia*	0.0%	0.6%	-8.4%	-8.4%
New Zealand	0.0%	0.1%	-10.9%	-10.8%
Philippines*	0.1%	0.3%	-12.8%	-12.8%
Singapore	0.0%	0.9%	-3.1%	-3.6%
Taiwan*	0.6%	2.8%	-2.2%	-2.2%
Thailand*	0.1%	0.5%	-4.2%	-1.6%
<b>Total-AsiaPacific</b>	<b>95.9%</b>	<b>42.2%</b>	<b>-6.4%</b>	<b>-3.0%</b>
<b>Other</b>				
Egypt*	0.0%	0.0%	-23.3%	-23.3%
Israel	0.0%	0.5%	-12.8%	-10.0%
Qatar*	0.0%	0.2%	1.0%	1.0%
South Africa*	0.2%	1.7%	-3.7%	-3.8%
Turkey*	0.0%	0.3%	-13.7%	-13.7%
United Arab Emirates*	0.0%	0.2%	-0.2%	-0.9%
<b>Total-Other</b>	<b>0.2%</b>	<b>2.9%</b>	<b>-4.6%</b>	<b>-5.5%</b>
<b>Totals</b>				
Developed	12.1%	76.7%	-0.3%	-0.3%
Emerging*	87.9%	23.3%	-6.9%	-4.2%

Aberdeen believes, given the inefficiency of markets, that competitive long-term returns are achieved by identifying high quality stocks at attractive valuations and holding for the long term. It is their belief that sound fundamentals drive stock prices over time. They employ a fundamental bottom-up investment approach based upon a rigorous and disciplined proprietary research effort which originates with direct company due diligence visits. Portfolios are constructed to maximize their level of exposure to the most attractive companies filtered from the stock selection process. They run a representative or model' unconstrained portfolio that contains approximately 30 - 70 stocks at any given time. Once a stock has received unanimous approval by the team, the senior investment team members then decide which portfolio category it should enter (i.e. country, regional, Global Emerging Markets) and at what weighting. The Head of Global Emerging Markets then has responsibility to ensure that the decision is implemented.



### 3 Year Risk Statistics



## Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	63	832
Weighted Avg. Market Cap. (\$B)	31.1	48.4
Median Market Cap. (\$B)	13.8	4.6
Price To Earnings	19.4	18.3
Price To Book	3.4	2.6
Price To Sales	2.7	5.2
Return on Equity (%)	18.3	16.3
Yield (%)	2.5	2.6
Beta	0.9	1.0
R-Squared	0.9	1.0

## Top Positive Contributors

	Relative Contribution %	Return %
TENARIS ADS. 1:2 (TS)	0.4%	26.8%
LUKOIL OAO ADR. (LON) (UKIR:LKOD)	0.4%	17.1%
VALE ON ADR 1:1	0.3%	39.3%
MAGNIT	0.2%	10.6%
VALE PREFERRED ADR 1:1	0.2%	47.2%
TRUWORTHS INTL. (R:TRUJ)	0.2%	12.8%
PETROCHINA 'H' (K:PECH)	0.1%	13.6%
BANCO SANTANDER-CHILE SPN.ADR 1:400 (BSAC)	0.1%	5.7%
MASSMART (R:MSMJ)	0.1%	6.9%
SAMSUNG ELTN.PREF. (KO:SEP)	0.1%	1.3%

## Top Negative Contributors

	Relative Contribution %	Return %
AIA GROUP (K:AGP)	-0.6%	-15.1%
FOM.ECO.MEXNO.SAB DE CV SPN.ADR 1:10 (FMX)	-0.5%	-16.6%
AYALA LAND (PH:ALI)	-0.4%	-20.5%
HOUSING DEVELOPMENT FIN. (IN:HDF)	-0.3%	-11.1%
BANK OF THE PHILP.ISLE. (PH:BPI)	-0.3%	-16.7%
ULTRATECH CEMENT (IN:URC)	-0.3%	-17.2%
AKBANK	-0.3%	-17.0%
TKI.GARANTI BKSI. (TK:GAR)	-0.3%	-18.2%
BIM BIRLESIK MAGAZALAR	-0.2%	-15.6%
ICT.TUNGGAL PRAKARSA (ID:INC)	-0.2%	-14.0%

## Aberdeen Performance Attribution vs. MSCI Emerging Markets

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.2%	0.0%	0.1%	11.8%	8.4%	7.3%	6.9%			
Materials	-0.6%	-0.6%	0.2%	-0.1%	-3.4%	4.0%	9.0%	6.8%			
Industrials	0.3%	0.0%	0.1%	0.2%	-1.7%	-6.2%	1.4%	5.9%			
Consumer Discretionary	0.8%	0.6%	0.1%	0.1%	-2.4%	-9.7%	9.9%	10.6%			
Consumer Staples	-0.3%	0.2%	-0.7%	0.1%	-6.6%	-10.6%	16.8%	7.8%			
Health Care	0.3%	0.5%	0.1%	-0.3%	4.7%	-10.0%	1.1%	2.6%			
Financials	-2.4%	-1.6%	0.1%	-0.9%	-8.7%	-0.7%	29.4%	23.7%			
Information Technology	1.2%	1.4%	0.4%	-0.6%	-3.0%	-6.4%	12.1%	23.8%			
Telecommunication Services	0.0%	-0.3%	0.0%	0.2%	-8.1%	-6.2%	5.2%	6.1%			
Utilities	0.2%	--	0.1%	--	--	-7.0%	0.0%	3.0%			
Real Estate	-0.6%	-0.1%	-0.4%	-0.1%	-11.8%	-10.0%	7.7%	2.7%			
Cash	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-0.8%</b>	<b>=</b>	<b>0.5%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>-1.3%</b>	<b>-5.0%</b>	<b>-4.2%</b>	<b>100.0%</b>	<b>100.0%</b>

## Country Allocation

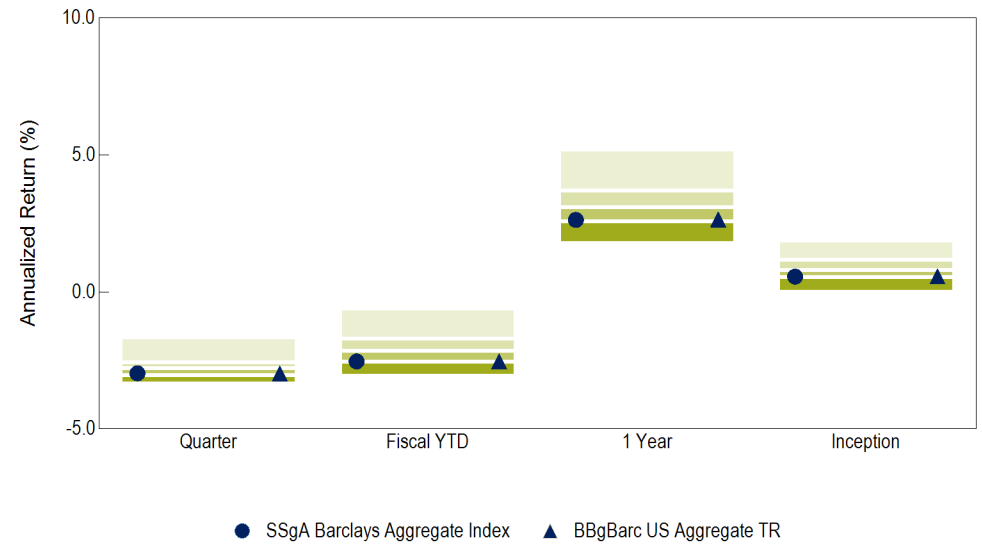
	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>Americas</b>				
Brazil*	11.8%	7.4%	-1.4%	2.3%
Chile*	1.2%	1.1%	5.7%	2.4%
Mexico*	7.9%	3.7%	-9.6%	-7.8%
United States	1.6%	0.0%	-2.4%	3.4%
<b>Total-Americas</b>	<b>22.5%</b>	<b>13.0%</b>	<b>-4.0%</b>	<b>-0.7%</b>
<b>Europe</b>				
Hungary*	1.1%	0.3%	4.7%	9.3%
Luxembourg	1.5%	0.0%	26.8%	-4.2%
Poland*	1.3%	1.1%	-6.8%	4.0%
Portugal	1.4%	0.0%	-10.4%	-2.9%
Russia*	4.5%	3.7%	13.9%	18.8%
United Kingdom	1.9%	0.0%	2.7%	-0.9%
<b>Total-Europe</b>	<b>11.7%</b>	<b>5.5%</b>	<b>7.7%</b>	<b>14.7%</b>

## Country Allocation

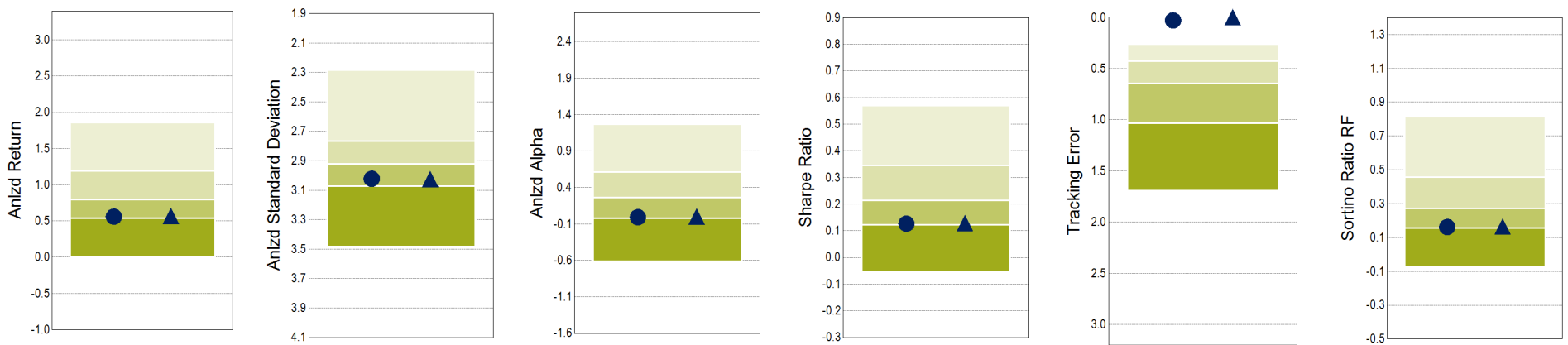
	Manager Allocation (USD)	Index Allocation (USD)	Manager Return (USD)	Index Return (USD)
<b>AsiaPacific</b>				
China*	1.2%	27.2%	13.6%	-6.9%
Hong Kong	12.3%	0.0%	-12.0%	-9.0%
India*	16.5%	8.3%	-8.0%	-7.8%
Indonesia*	5.3%	2.8%	-5.7%	-7.4%
Korea*	6.2%	14.9%	-2.0%	-6.9%
Malaysia*	1.7%	2.7%	-9.3%	-8.4%
Philippines*	4.5%	1.3%	-18.5%	-12.8%
Taiwan*	4.9%	12.1%	-4.6%	-2.2%
Thailand*	5.0%	2.2%	-5.2%	-1.6%
<b>Total-AsiaPacific</b>	<b>57.5%</b>	<b>71.4%</b>	<b>-7.8%</b>	<b>-6.2%</b>
<b>Other</b>				
South Africa*	3.4%	7.1%	9.6%	-3.8%
Turkey*	4.9%	1.2%	-17.0%	-13.7%
<b>Total-Other</b>	<b>8.3%</b>	<b>10.2%</b>	<b>-6.2%</b>	<b>-4.6%</b>
<b>Totals</b>				
Developed	18.6%	0.0%	-6.4%	--
Emerging*	81.4%	100.0%	-4.7%	-4.2%



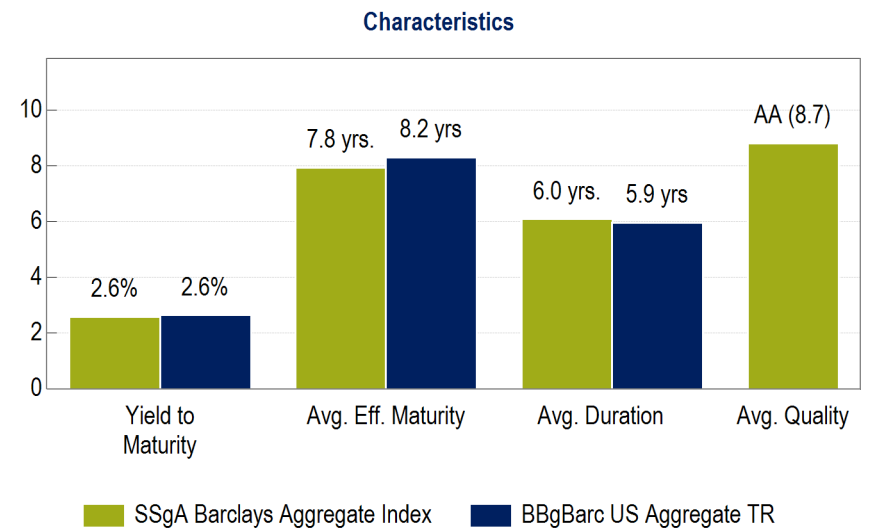
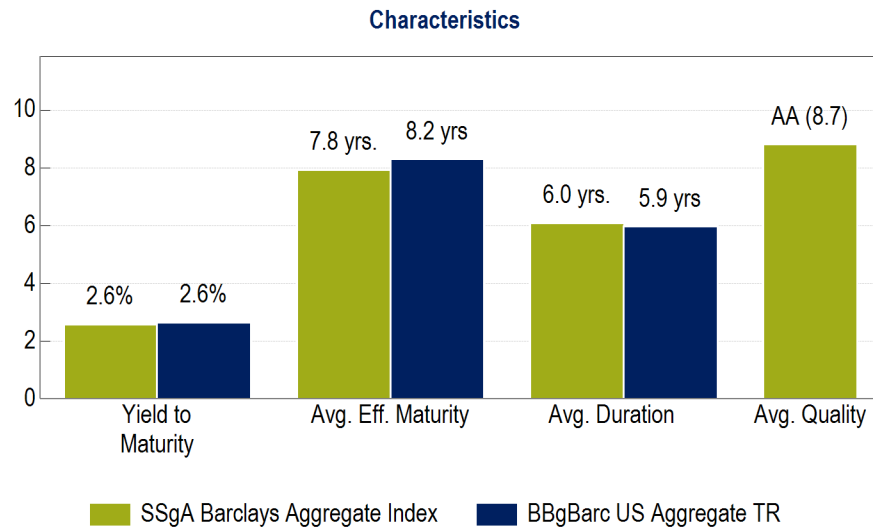
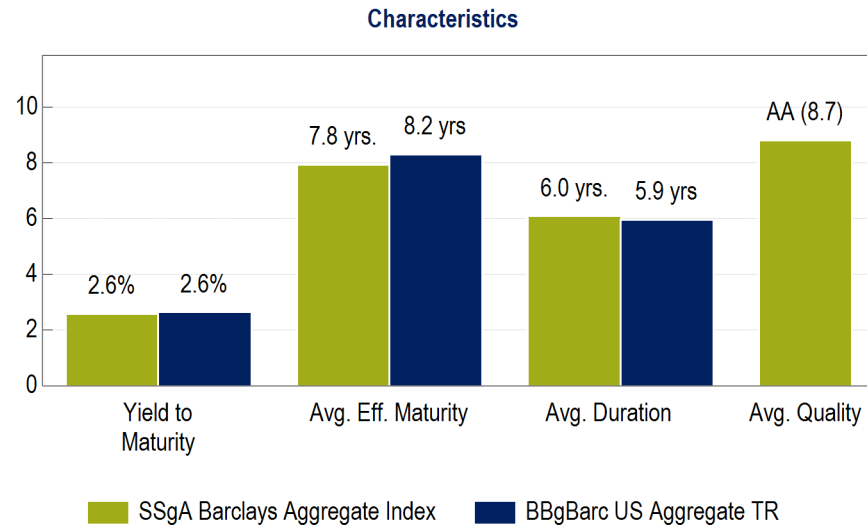
eA US Core Fixed Inc Net Accounts



## Since Inception Risk Statistics

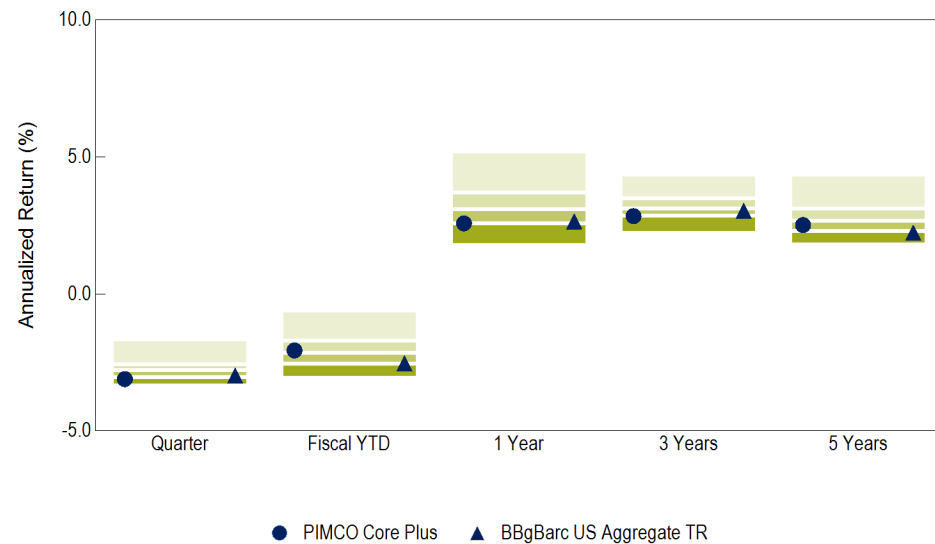


# SSgA Barclays Aggregate Index

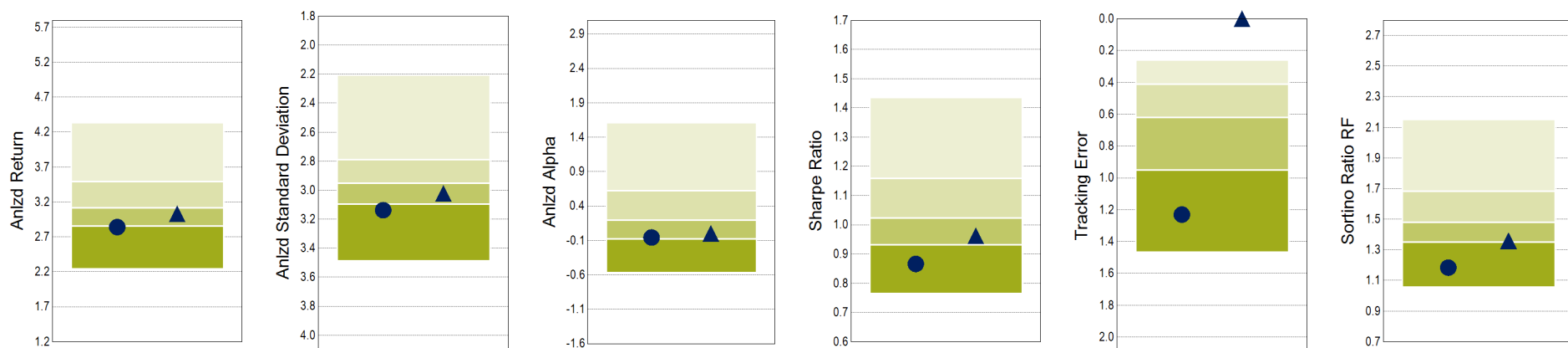


PIMCO's investment process expects to generate above-benchmark returns by building diversified, risk-averse portfolios based upon their long-term secular outlook. This is achieved by analyzing fundamental global trends in such areas as political factors, inflation, volatility, growth, and currency, amongst others. The three to five-year secular outlook is the core element of their decision-making process, and serves as a framework for portfolio implementation. In applying the secular outlook to the portfolio, such tools as duration position, yield curve posture and sector allocation are expressed to best represent the firm's view on the macro-economic environment. Bottom-up analysis of specific securities is also an important part of the firm's philosophy. Bonds are evaluated on a rich/cheap basis and fundamental research determines strong portfolio candidates.

### eA US Core Fixed Inc Net Accounts



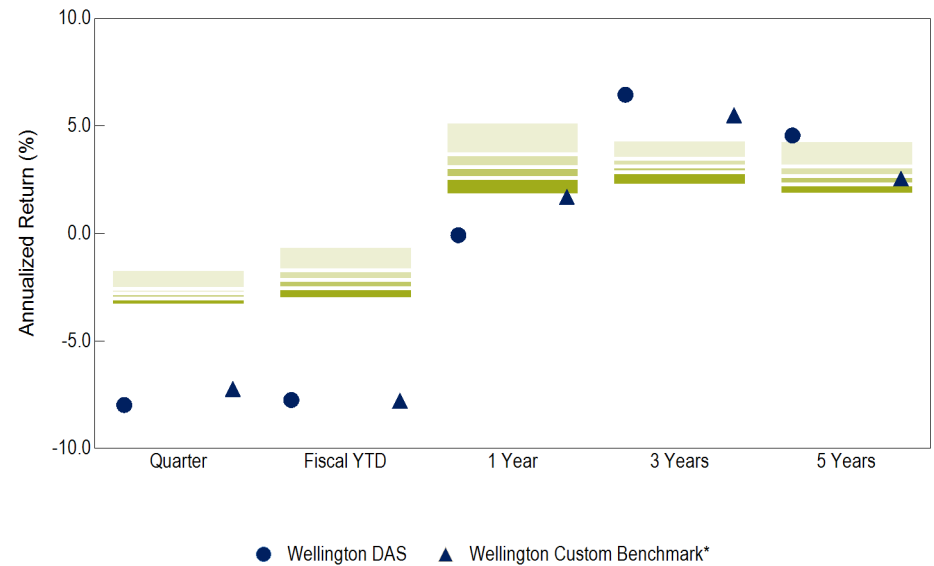
### 3 Year Risk Statistics



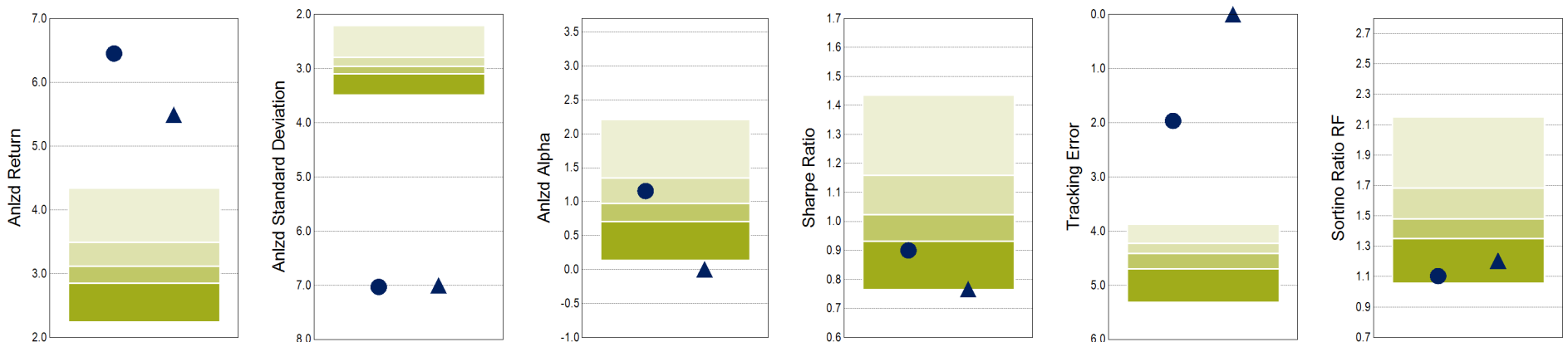
# Wellington DAS

The objective of the Diversified Alpha Strategies - Absolute Return (DAS) Portfolio is to provide positive absolute returns over cash or other market exposure (beta) over rolling 3-year periods with expected volatility of 3 to 6%. The DAS Portfolio aims to provide consistent returns by investing in diverse, market-neutral alpha sources that have low or negative correlations with each other. The mix of alpha sources is rebalanced periodically, and the target mix may change over time. The DAS Portfolio can be combined with desired market (beta) exposure through the use of derivative instruments. Drawing on a diversified basket of alpha sources from across a broad investment universe, rather than a single alpha source, should increase the efficiency of the return/risk ratio and increase the likelihood of achieving consistent returns. For this reason, the DAS Portfolio includes a variety of alpha sources: market neutral equity and fixed income strategies, overlay strategies (currency, fixed income, asset allocation), and long-only equity strategies from which they try to remove structural market risk through short equity index future or swap positions. The allocation to each alpha source is determined in a contribution to risk framework in the context of the expected aggregate DAS Portfolio characteristics. The target weights of the underlying alpha sources have been set using risk budgeting, with a goal of achieving a balanced contribution to risk across the alpha sources, rather than focusing only on the absolute or percent cash allocation.

eA US Core Fixed Inc Net Accounts

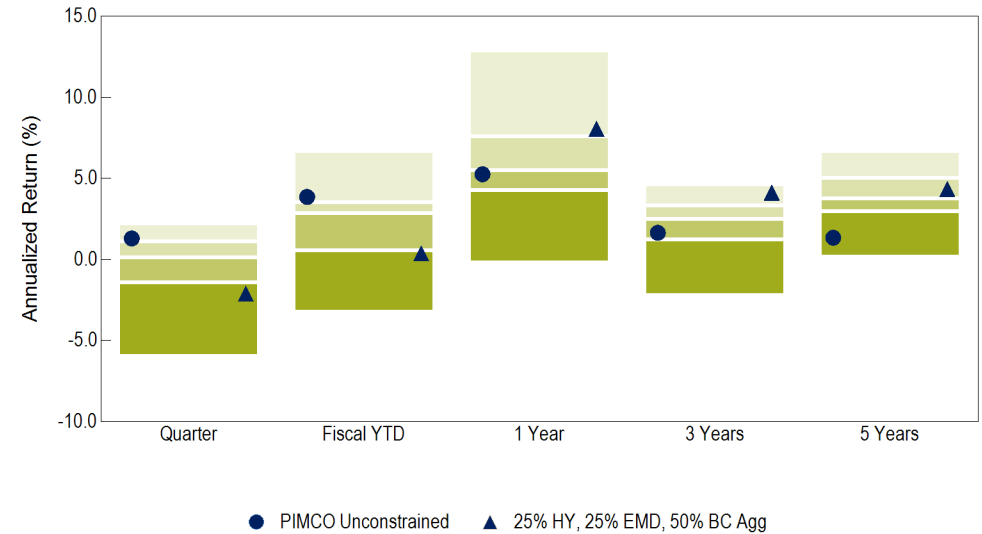


## 3 Year Risk Statistics

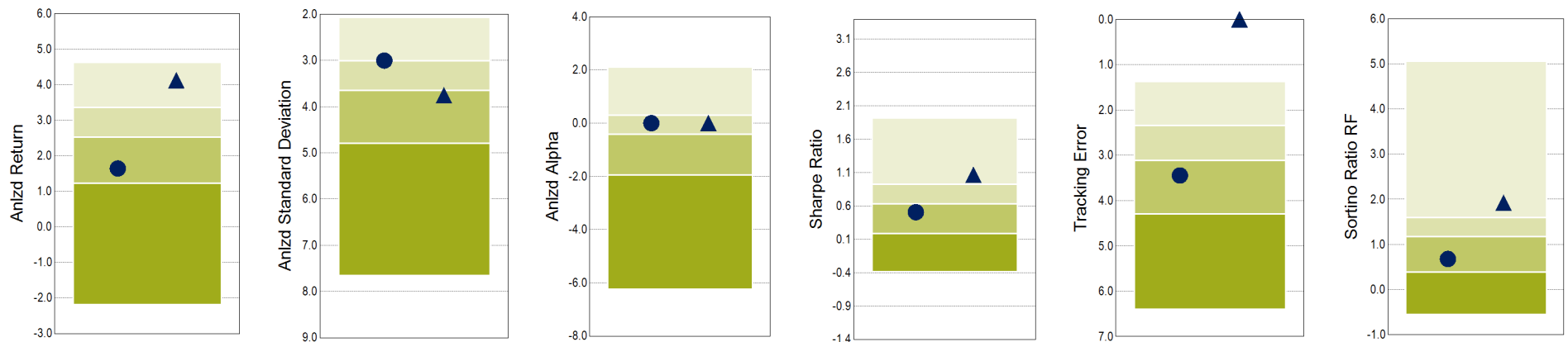


The PIMCO Unconstrained Bond Strategy is an absolute return-oriented, investment grade quality fixed income strategy that embodies PIMCO's secular thinking, global themes, and integrated investment process without the constraints of a benchmark or significant sector/instrument limitations. The strategy is designed to offer the traditional benefits of a core bond portfolio - seeks maximum long-term return consistent with capital preservation and prudent management- but with higher potential alpha and the potential to mitigate downside risk to a greater degree than what is reasonably possible from traditional active fixed income management approaches as the strategy allows for more manager discretion to adjust duration exposure, allocate across sectors and otherwise express the firm's active views. The strategy is governed by PIMCO's investment philosophy and unique, disciplined secular investment process, which focuses on long-term economic, social and political trends that may have lasting impacts on investment returns.

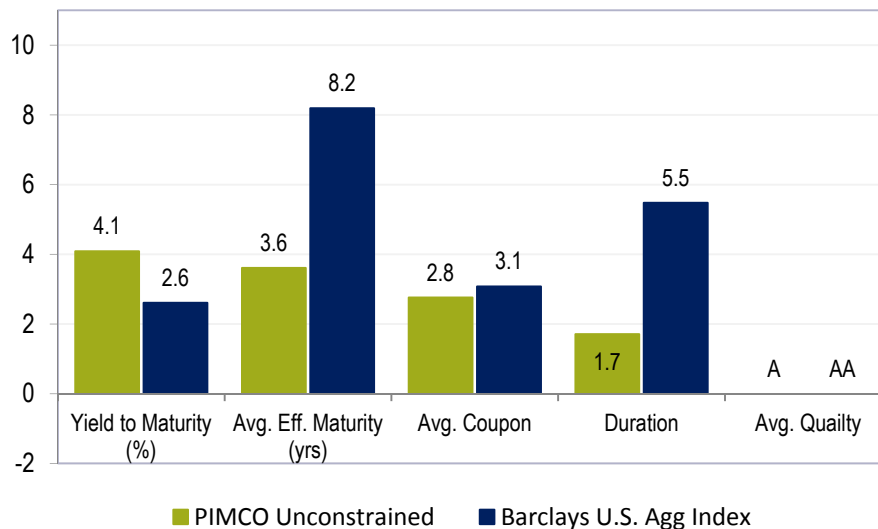
eA Global Unconstrained Fixed Inc Net Accounts



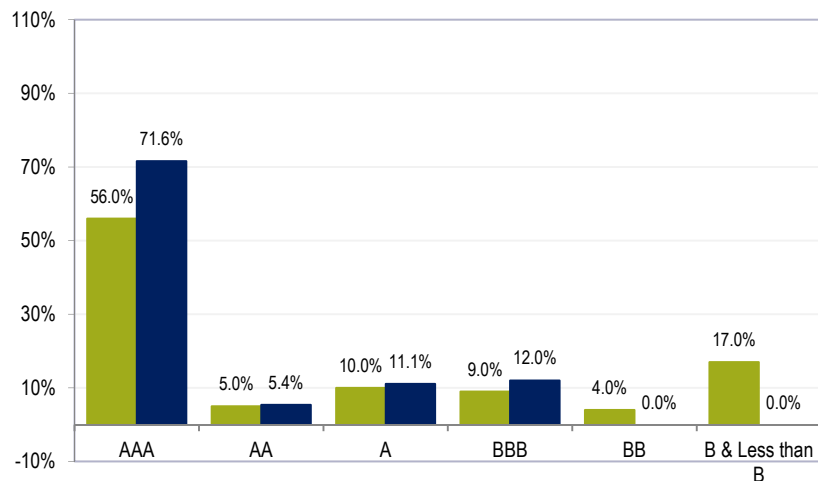
### 3 Year Risk Statistics



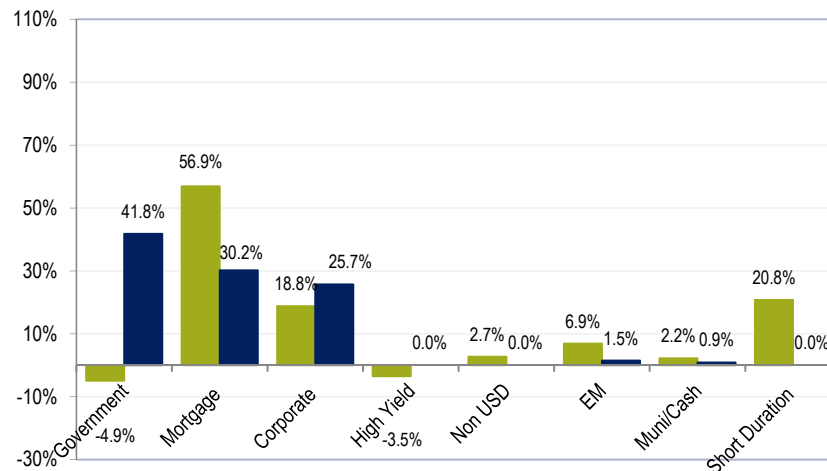
### Characteristics



### Quality Rating



### Sectors



Source: PIMCO



# GAM Unconstrained Bond - USD GIPS Composite

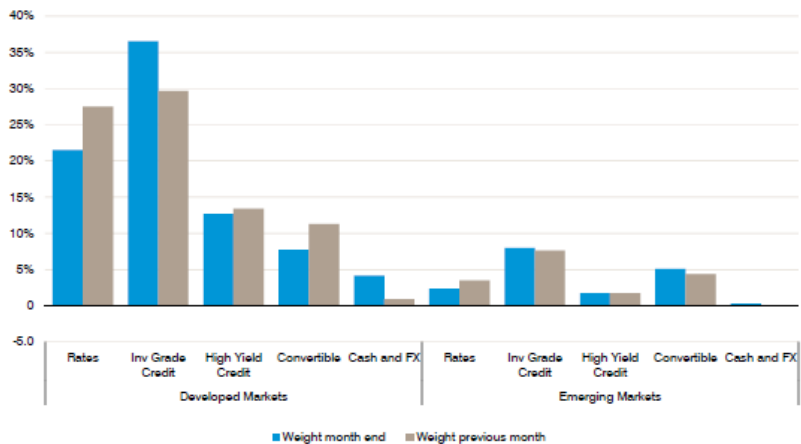
## Portfolio Sensitivity

Investment strategy	Month end			
	Bond Weight (%)	Bonds Duration Contribution	Derivatives Duration Contribution	Total Duration Contribution
Developed Markets	89.3	3.94	-5.20	-1.26
Rates	20.8	1.90	-5.20	-3.30
Inv Grade Credit	41.9	1.54	0.00	1.54
High Yield Credit	14.4	0.28	0.00	0.28
Convertible	12.2	0.21	0.00	0.21
Cash and FX	0.0	0.00	0.01	0.01
Emerging Markets	2.9	0.09	0.98	1.07
Rates	2.4	0.08	0.98	1.06
Inv Grade Credit	0.0	0.00	0.00	0.00
High Yield Credit	0.0	0.00	0.00	0.00
Convertible	0.5	0.01	0.00	0.01
Cash and FX	0.0	0.00	0.00	0.00
<b>Total</b>	<b>92.2</b>	<b>4.03</b>	<b>-4.23</b>	<b>-0.19</b>

## Characteristics

	Month end
	GAM Unconstrained Bond Strategy*
Value at Risk % (97.5%, 22 days)	1.61
Coupon %	2.63
Yield to Maturity %	2.53
Years to Maturity	8.44
Effective Duration	-0.19
Spread Duration	2.55
Equity Delta**	-0.15
Currency Delta	1.14
Credit Quality***	A

## Portfolio Overview



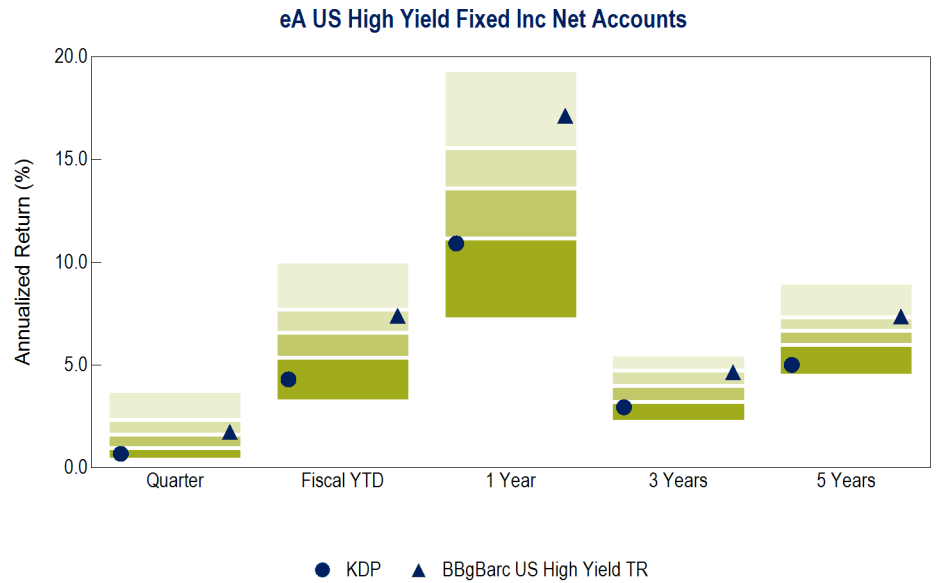
Source: GAM



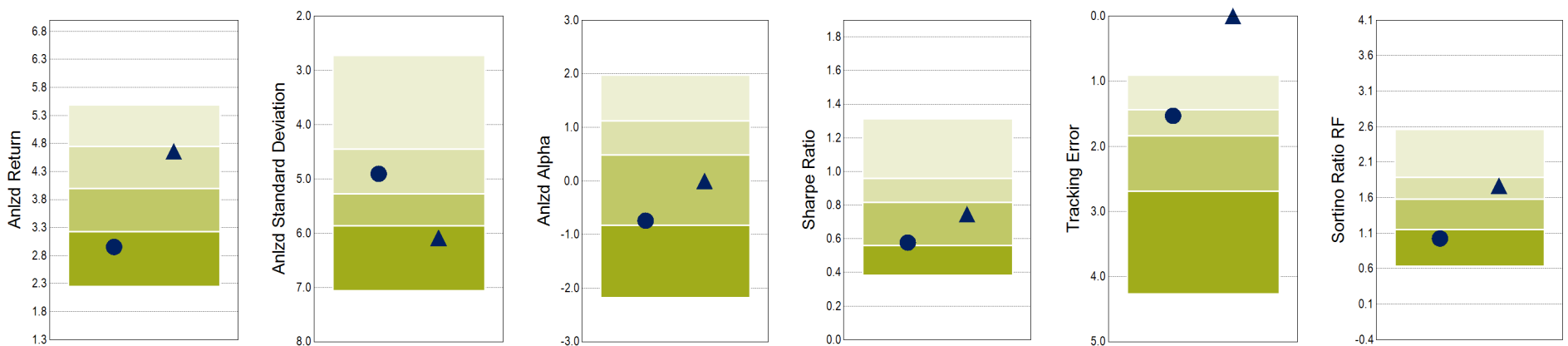
NEPC, LLC

December 31, 2016

KDP believes that the key to delivering superior risk-adjusted returns lies in controlling credit risk. To do this the firm combines rigorous, bottom-up credit analysis with an active, top-down management approach that ensures a strong overall credit profile and broad portfolio diversification. KDP employs a value-oriented approach to investing that leverages our strong fundamental research capabilities, and seeks to take advantage of market inefficiencies and anomalies on an opportunistic basis in order to capture excess credit spread. KDP places a strong emphasis on issuer, industry and sector diversification, and tends to focus on larger companies, as they tend to be more resilient in times of difficulty and their securities tend to be more liquid. KDP uses a proprietary "Default Risk Ranking (DRR)" System to screen securities eligible for purchase in its portfolios. By assigning default risk probabilities to companies covered, the DRR system is used to identify securities that are overvalued or undervalued relative to the market. The firm minimizes portfolio volatility in part by investing in securities of companies that exhibit greater resilience in times of financial distress. KDP focuses on companies with good management, stable to improving earnings, good balance sheet liquidity and a strong competitive position in industries with favorable underlying fundamentals.

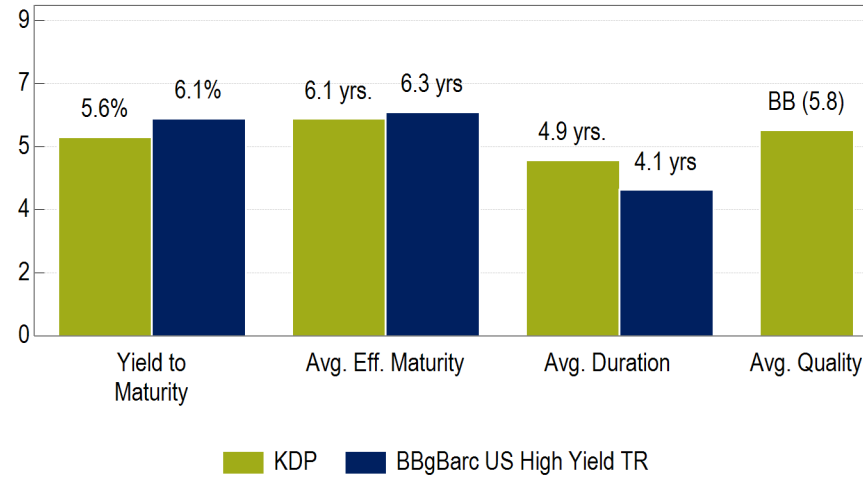


### 3 Year Risk Statistics

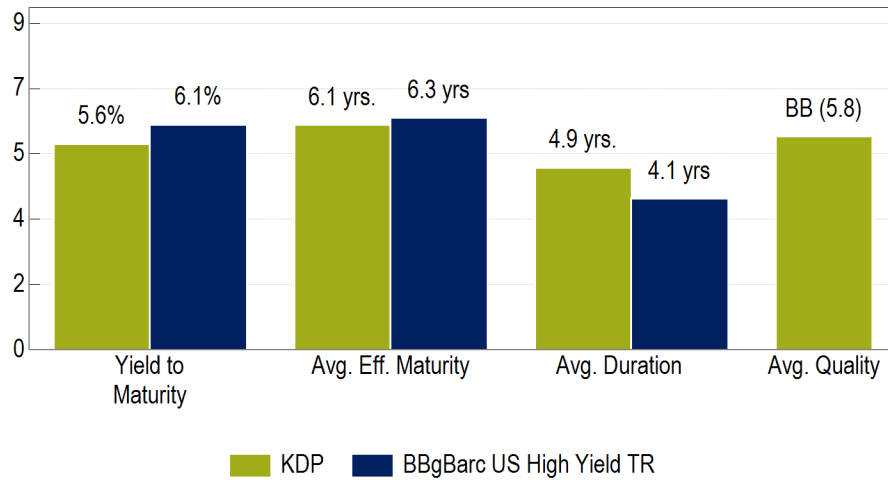




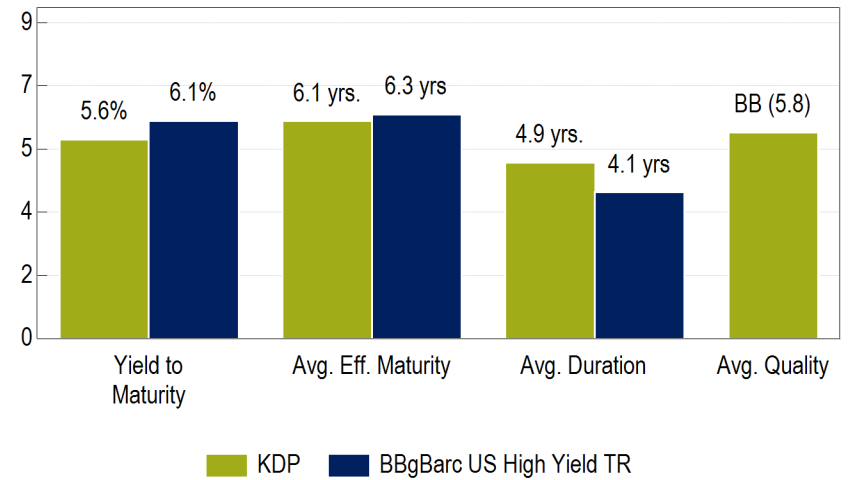
Characteristics



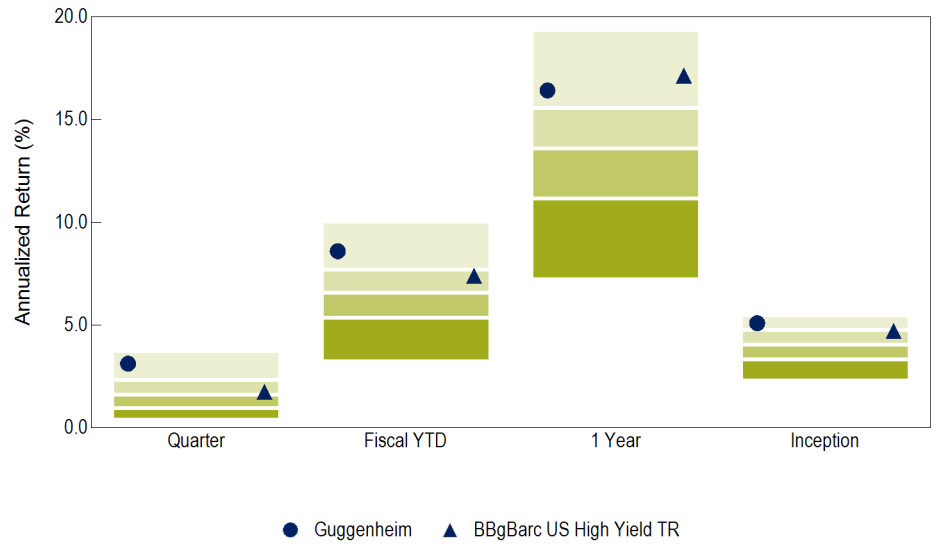
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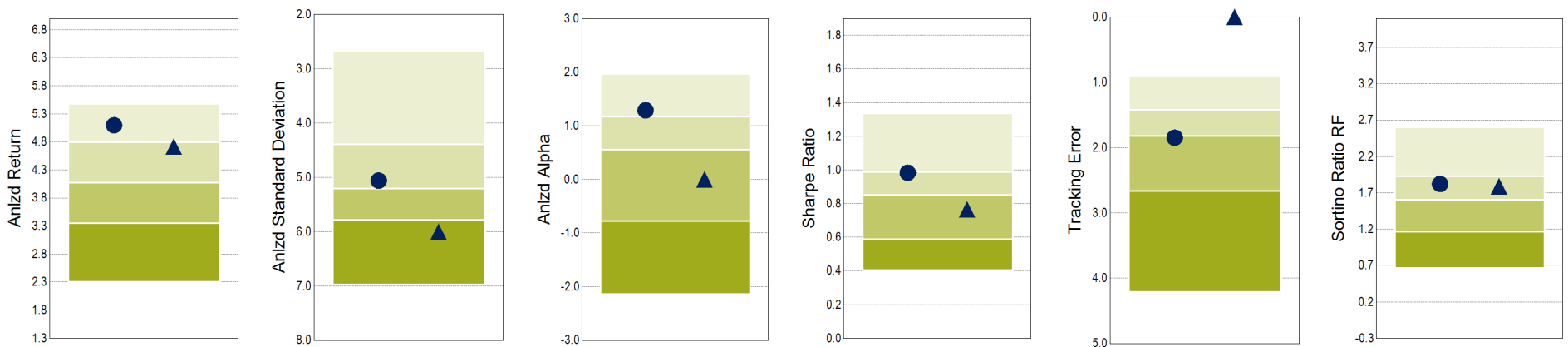
Characteristics



eA US High Yield Fixed Inc Net Accounts



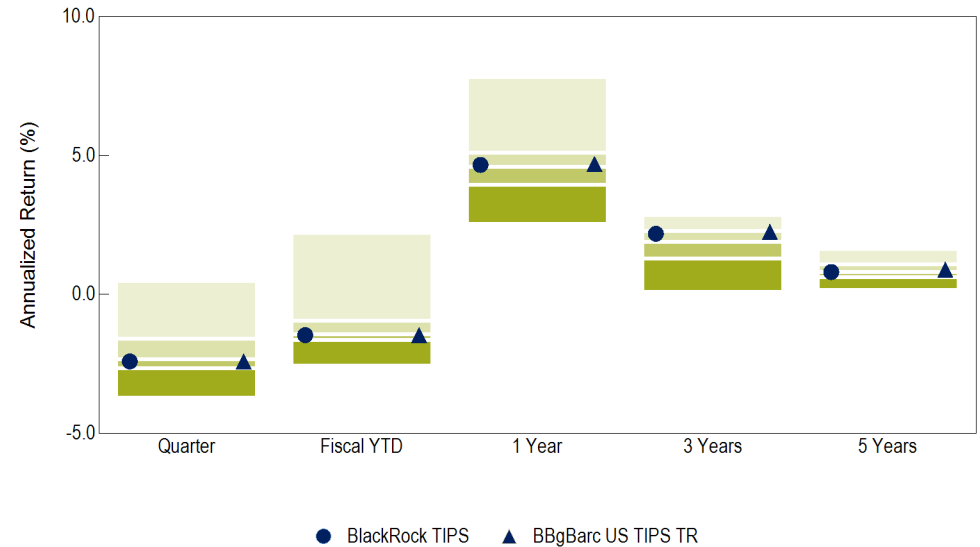
Since Inception Risk Statistics



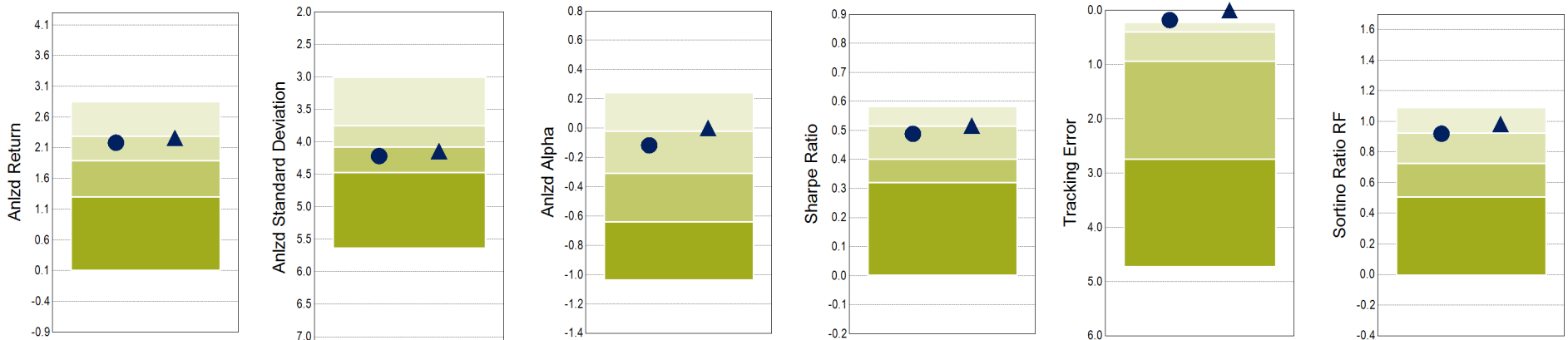
# BlackRock TIPS

In the management of an inflation-linked bond portfolio, BlackRock will utilize multiple strategies to outperform the index. These include: duration and yield curve positioning, technical supply/demand anomalies related primarily to the ILB auction cycle, seasonal factors related to non-seasonally adjusted inflation-linked indices, break-even spread between ILBs and nominal securities, and, if applicable, sector and country allocation. The team compares nominal yields with real yields and factor in their views on inflation. If the yield spread is less than the inflation rate, then ILBs are considered to trade cheaply to nominal bonds and have greater relative value. The portfolio currently holds about 31 positions, out of 27-29 issues in the benchmark. Turnover is moderate, at around 100-150%.

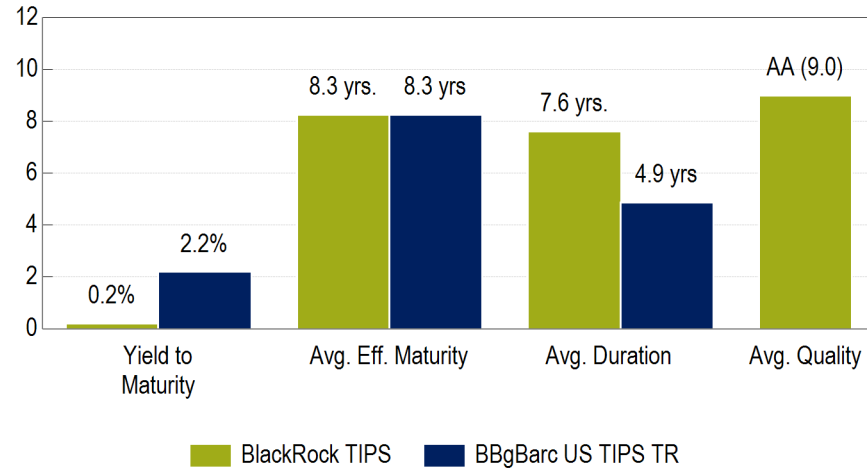
eA TIPS / Infl Indexed Fixed Inc Net Accounts



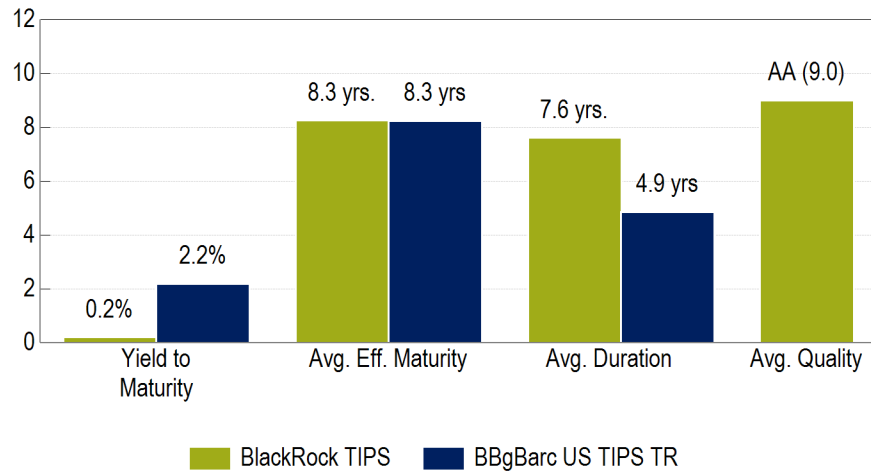
## 3 Year Risk Statistics



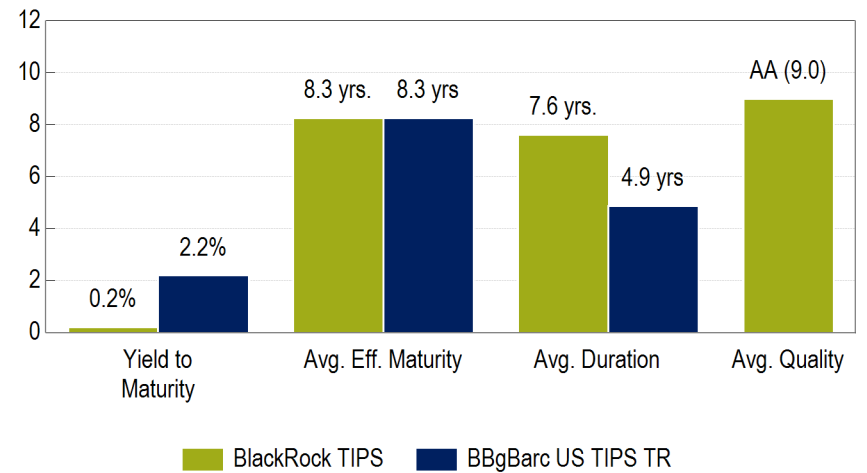
Characteristics



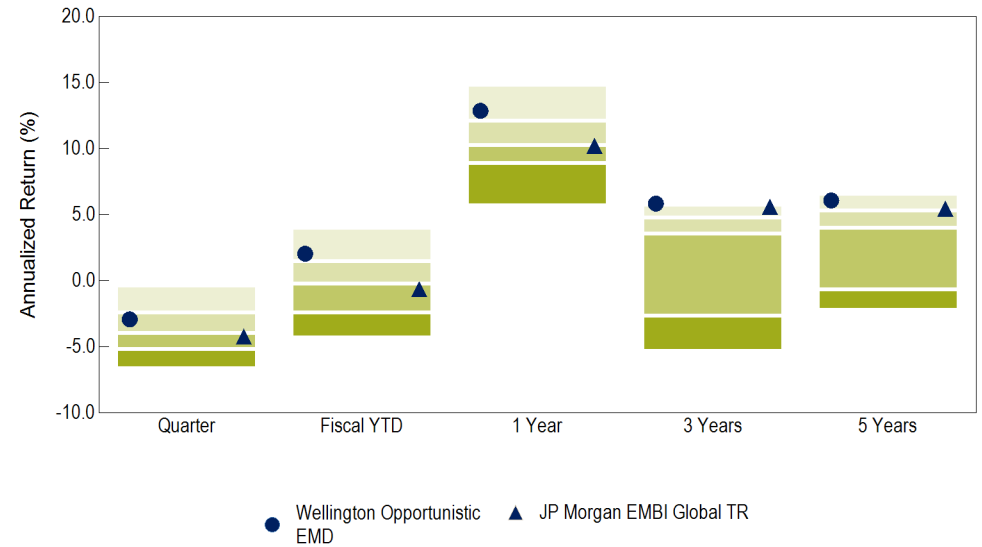
Characteristics



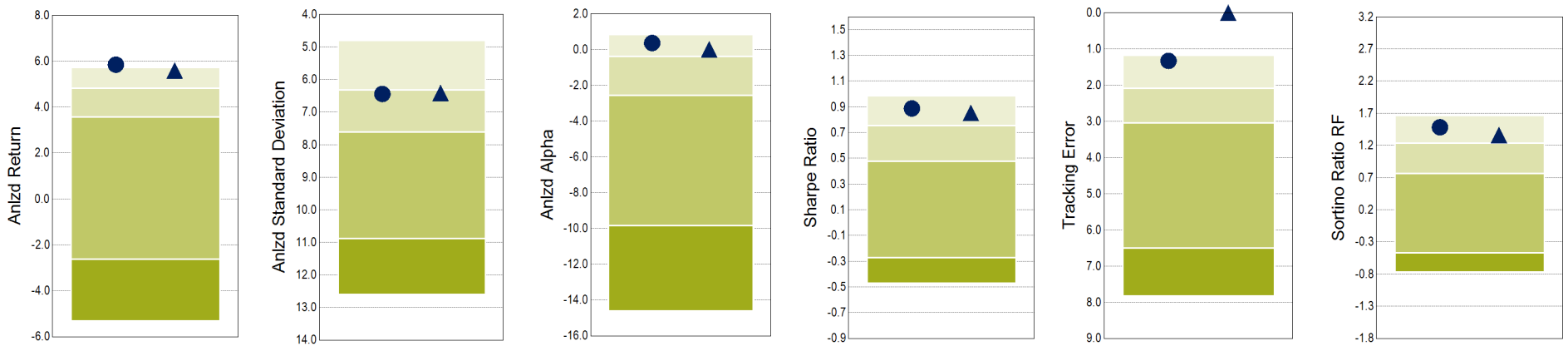
Characteristics



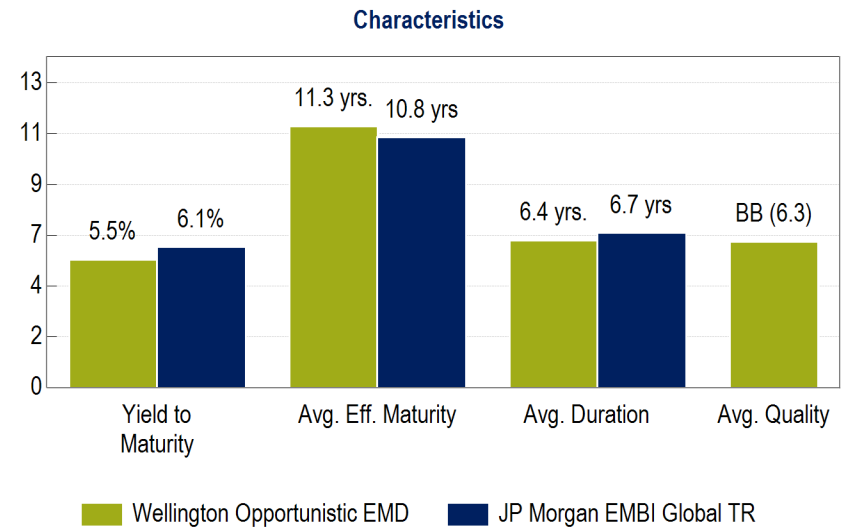
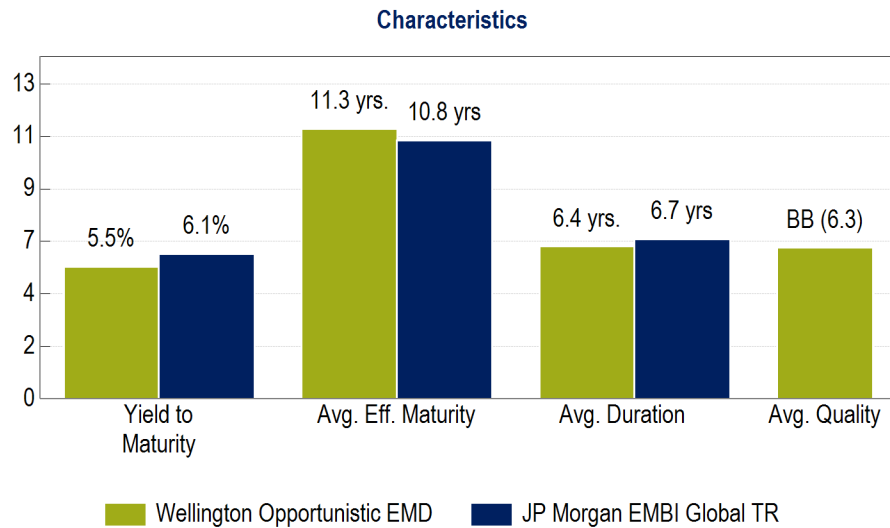
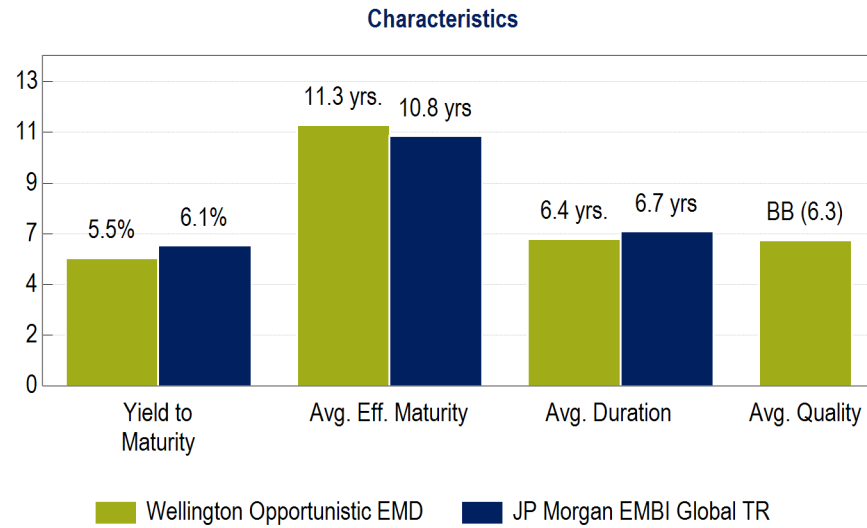
eA All Emg Mkts Fixed Inc Net Accounts



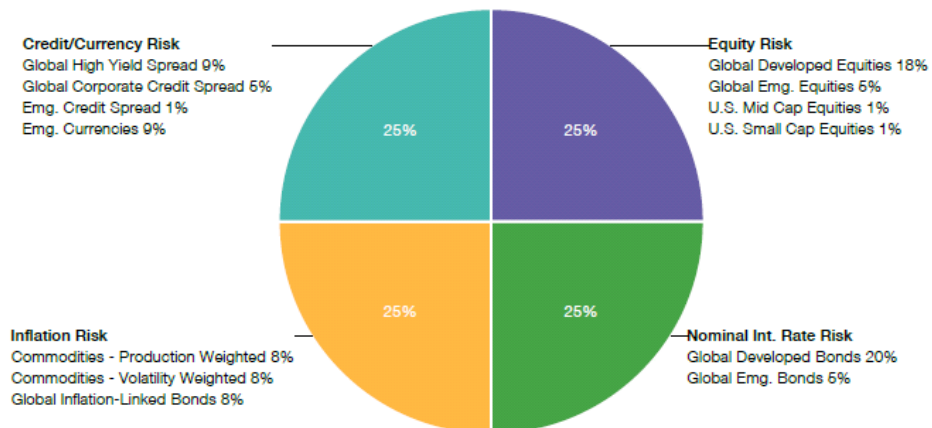
## 3 Year Risk Statistics



# Wellington Opportunistic EMD



## Risk Allocation



## Estimated Exposure Breakdown

	Long Exposure (% of NAV)
<b>Equity Risk</b>	
Global Developed Equities	27%
Global Emerging Equities	6%
U.S. Mid Cap Equities	2%
U.S. Small Cap Equities	1%
<b>Total Equity Risk</b>	<b>36%</b>
<b>Nominal Interest Rate Risk</b>	
Global Developed Bonds	95%
Global Emerging Bonds	22%
<b>Total Nominal Interest Rate Risk</b>	<b>118%</b>
<b>Inflation Risk</b>	
Commodities - Production Weighted	8%
Commodities - Volatility Weighted	14%
Global Inflation-Linked Bonds	37%
<b>Total Inflation Risk</b>	<b>59%</b>
<b>Credit/Currency Risk</b>	
Global High Yield Spread	33%
Global Corporate Credit Spread	59%
Emerging Credit Spread	4%
Emerging Currencies	19%
<b>Total Credit/Currency Risk</b>	<b>114%</b>
<b>Total Fund Exposures</b>	<b>327%</b>

	Long Exposure (% of NAV)
<b>Equity Market Exposures</b>	
Americas	21%
Europe	6%
Asia ex-Japan	6%
Japan	2%
<b>Total Equity Market Exposures</b>	<b>36%</b>
<b>Bond Market Exposures - Nominal and Inflation-Linked</b>	
Americas	64%
Europe	63%
Asia	28%
<b>Total Bond Market Exposures</b>	<b>155%</b>
<b>Emerging Currency Exposures</b>	
Asia	5%
Europe	8%
Latin America	5%
Dollar Block ex-U.S.	0%
<b>Total Emerging Currency Exposures</b>	<b>19%</b>

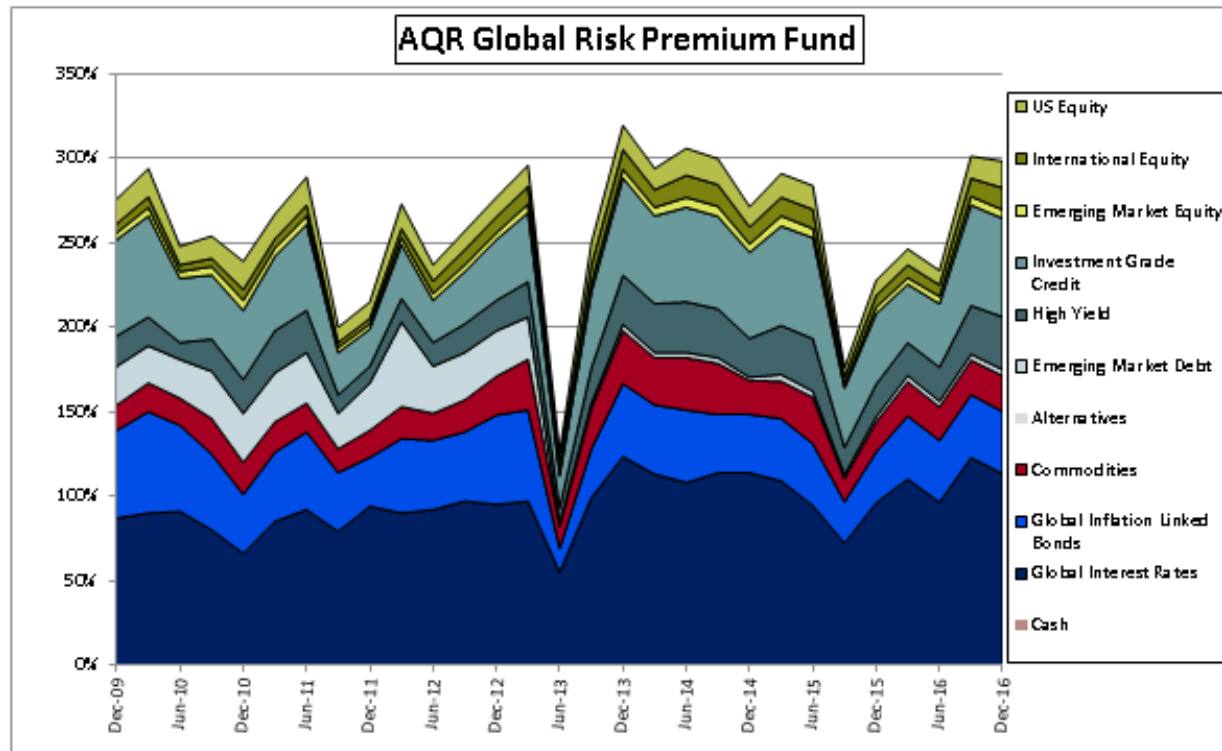
Source: AQR



NEPC, LLC

December 31, 2016

# AQR Global Risk Premium Fund





# Grosvenor Institutional Partners, LP

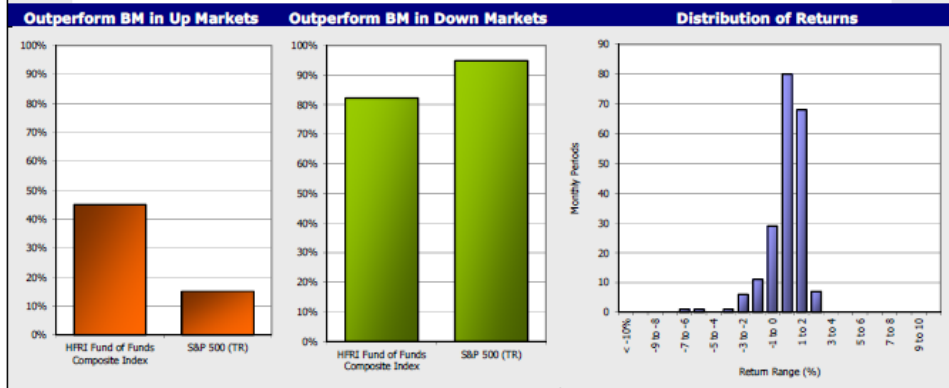
Grosvenor Institutional Partners, LP  
Grosvenor Capital Management, LP



Benchmark 1 (BM1): HFRI Fund of Funds Composite Index  
Benchmark 2 (BM2): S&P 500 (TR)

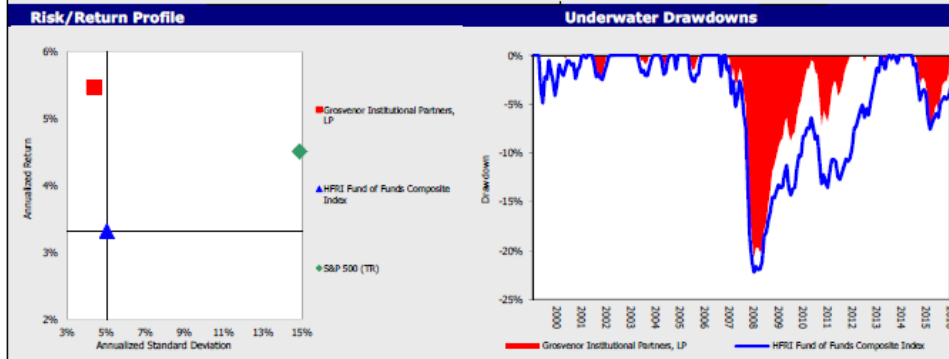
Monthly Performance (%) Net of Fees													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2016	-3.0%	-1.5%	0.4%	1.1%	1.1%	-0.7%	1.1%	1.5%	0.4%	0.0%	0.7%	1.4%	2.4%
2015	-0.4%	1.6%	0.5%	0.2%	0.9%	-0.5%	0.6%	-1.5%	-1.6%	0.6%	0.1%	-0.6%	-0.2%
2014	0.0%	1.6%	-0.1%	-0.6%	0.8%	1.1%	-0.7%	0.8%	-0.2%	-0.3%	0.6%	0.3%	3.3%
2013	2.6%	0.6%	1.4%	0.8%	1.7%	-0.6%	1.7%	0.2%	1.7%	1.3%	1.6%	1.1%	15.2%
2012	1.6%	1.8%	0.9%	-0.1%	-1.4%	0.4%	0.8%	1.2%	0.8%	0.5%	0.7%	1.2%	8.6%
2011	0.9%	1.0%	0.0%	0.9%	-0.1%	-1.1%	-0.2%	-2.8%	-2.7%	1.7%	-0.7%	-0.6%	-3.7%
2010	0.7%	0.3%	1.6%	0.9%	-1.8%	-0.9%	0.7%	0.3%	1.8%	1.2%	0.5%	1.5%	6.8%
2009	1.2%	0.1%	-0.6%	0.1%	2.7%	0.9%	2.2%	1.8%	2.3%	0.7%	1.0%	1.1%	14.2%
2008	-2.4%	1.4%	-1.7%	0.2%	1.5%	-0.6%	-2.0%	-1.3%	-6.9%	-5.3%	-3.2%	-2.2%	-20.6%
2007	1.7%	0.8%	1.4%	1.4%	2.3%	0.4%	0.8%	-2.1%	1.3%	2.7%	-0.6%	0.5%	11.1%

Statistical Analysis	Fund	BM1	BM2
<b>Returns</b>			
Annualized Compound ROR	5.5%	3.3%	4.5%
3 Yr Return	1.8%	1.2%	8.9%
5 Yr Return	5.7%	3.4%	14.7%
Best Month	2.7%	5.2%	10.9%
Worst Month	-6.9%	-6.5%	-16.8%
% Positive Months	76.0%	64.2%	61.8%
<b>Risk</b>			
Standard Deviation	4.4%	5.0%	14.9%
3 Yr Standard Deviation	3.5%	3.5%	10.7%
5 Yr Standard Deviation	3.5%	3.5%	10.4%
Sharpe Ratio (3.5%)	0.5	0.0	0.1
Sortino Ratio (7.0%)	-0.4	-0.8	-0.2
Downside Deviation (7.0%)	3.8%	4.4%	11.4%
Max Drawdown	-20.7%	-22.2%	-50.9%
Months In Maximum Drawdown	14	14	16
Months To Recover	47	66	37



<b>Comparison To Benchmark(s)</b>			
Monthly Alpha		0.2%	0.4%
Annualized Alpha		2.9%	4.7%
Beta		0.7	0.2
Correlation		0.9	0.5
R-Squared		74.1%	26.6%

<b>Annual Returns</b>			
2016-(YTD)	2.4%	0.5%	12.0%
2015	-0.2%	-0.3%	1.4%
2014	3.3%	3.4%	13.7%
2013	15.2%	9.0%	32.4%
2012	8.6%	4.8%	16.0%
2011	-3.7%	-5.7%	2.1%



<b>Latest Returns</b>			
Last Month	1.4%	0.9%	2.0%
Last 3 Months	2.1%	0.9%	3.8%
Last Year	2.4%	0.5%	12.0%
2-Year	1.1%	0.1%	6.5%
3-Year	1.8%	1.2%	8.9%
4-Year	5.0%	3.1%	14.3%
5-Year	5.7%	3.4%	14.7%

<b>Drawdown Analysis</b>			
1	-20.7%	-22.2%	-50.9%
2	-7.2%	-7.6%	-44.7%
3	-2.4%	-4.9%	-8.4%
4	-2.1%	-2.7%	-6.8%
5	-1.4%	-2.5%	-6.6%

\*\*\*Past Performance is not indicative of future results. Ratios are calculated based on a risk-free rate of 3.8%. Actual ratios may vary depending on the actual risk-free rate and life of the fund\*\*\*

# Mellon Dynamic Growth Fund

		Country	Current Month %	
Growth 64.7%	Developed ex-U.S. Equity 38.5%	Australia	5.4	
		Canada	1.1	
		Euro	0.2	
		France	1.3	
		Germany	5.5	
		Hong Kong	-0.2	
		Italy	1.3	
		Japan	10.3	
		Netherlands	0.8	
		Spain	0.9	
		Switzerland	2.2	
		United Kingdom	8.5	
		Other	1.2	
		U.S. Equity 21.0%	United States	21.0
		High Yield Bonds 5.2%		5.2
Defensive 56.0%	Developed ex U.S. Bonds -22.2%		-22.2	
	U.S. Bonds 78.2%		78.2	
Real 10.9%	Commodity 5.9%		5.9	
	Inflation-Linked Bonds 5.1%		5.1	

		Country	Current Month %
Diversifying Strategies Currency 100.0%	U.S. 118.3%	United States	118.3
	Developed ex-U.S. -18.3%	Australia	3.5
		Canada	-4.6
		Denmark	0.2
		Euro	-18.4
		Japan	-2.4
		New Zealand	6.6
		Norway	3.7
		Sweden	2.2
		Switzerland	6.6
		United Kingdom	-16.4
		Other	0.7

1. Any collective investment funds presented are maintained by The Bank of New York Mellon. Employees of Mellon Capital manage the assets of any collective investment funds in their capacity as dual officers of The Bank of New York Mellon. Not all investors may be eligible to invest in the fund(s) shown above.

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Source: Mellon Capital Management



NEPC, LLC

December 31, 2016

# Mellon Dynamic Growth Fund

	Fund Return %	Growth					Defensive			Real		Diversifying Strategies
		Developed ex-U.S. Equity	U.S. Equity	EM Equity	High Yield Bonds	EM Debt	Government Bonds ex-U.S.	U.S. Bonds	IG Corporates	Commodity	Inflation - Linked Bonds	Currency
Month-to-Date	0.84	1.91	0.22	0.00	0.10	0.00	-1.00	-0.21	0.00	-0.34	0.04	0.12
Quarter-to-Date	-1.41	2.26	0.09	0.00	0.10	0.00	-0.32	-4.27	0.00	-0.41	-0.27	1.40
Year-to-Date	0.84	-0.81	0.05	0.00	1.16	0.00	-2.07	-0.48	0.00	-0.19	0.19	2.99
1 Year	0.84	-0.81	0.05	0.00	1.16	0.00	-2.07	-0.48	0.00	-0.19	0.19	2.99
3 Year	3.75	1.56	0.33	-0.28	0.37	0.01	-1.30	0.89	0.05	-0.09	0.14	2.07
5 Year	6.89	2.84	2.63	-0.05	0.32	-0.04	-0.19	0.55	0.11	0.01	0.16	0.55
7 Year	-	-	-	-	-	-	-	-	-	-	-	-
10 Year	-	-	-	-	-	-	-	-	-	-	-	-
Since Inception <sup>2</sup>	6.63	1.70	2.35	-0.11	0.24	-0.03	0.38	0.51	0.15	0.05	0.33	1.06

Source: Mellon Capital Management



NEPC, LLC

December 31, 2016

# Appendix



## Index Performance Summary as of 12/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Oct	Nov	Dec	Q4	YTD
<b>US Small/Mid Cap</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	-4.1%	8.5%	1.9%	6.1%	17.6%
<b>US High Yield</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.4%	-0.5%	1.8%	1.8%	17.1%
<b>EM Equity</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	0.2%	-4.6%	0.2%	-4.2%	11.2%
<b>US Large Cap</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	-1.8%	3.7%	2.0%	3.8%	12.0%
<b>Commodities</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	-0.5%	1.3%	1.8%	2.7%	11.8%
<b>EM Local Credit</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	-0.8%	-7.0%	1.9%	-6.1%	9.9%
<b>US Credit</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.8%	-2.4%	0.1%	-3.0%	2.6%
<b>Global Credit</b>	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	-3.4%	-4.6%	-0.7%	-8.5%	1.6%
<b>US Long Treasuries</b>	-12.9%	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	8.2%	6.4%	-0.4%	-4.1%	-7.4%	-0.5%	-11.7%	1.3%
<b>Int'l Developed Equity</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	-2.0%	-2.0%	3.4%	-0.7%	1.0%

S&P 500 = US Large Cap  
 Russell 2500 = US Small/Mid Cap  
 MSCI EAFE = International Developed Equity  
 MSCI EM = Emerging Market Equity  
 Barclays Agg = US Credit  
 Barclays Long Treasury = US Long Treasuries  
 Barclays High Yield = US HY  
 WGBI = Global Credit  
 GBI-EM Global Diversified = EM Local Credit  
 Bloomberg Commodity = Commodities

Source: Bloomberg, Barclays, S&P, Russell, MSCI, JP Morgan, Credit Suisse



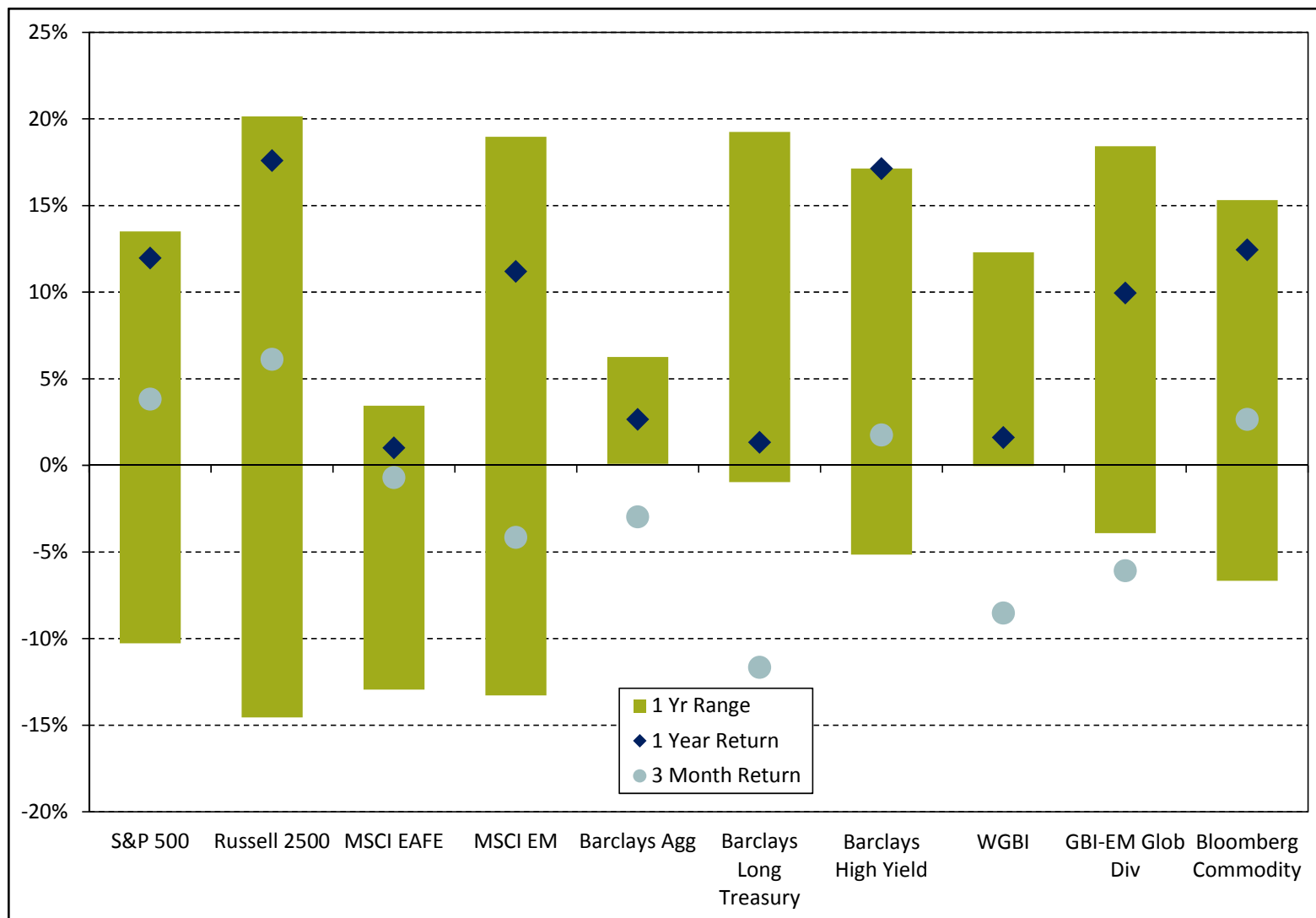
NEPC, LLC

## Index Performance Summary as of 12/30/2016

	2009	2010	2011	2012	2013	2014	2015	Q1	Q2	Q3	Oct	Nov	Dec	Q4	YTD
<b>Russell 2000</b>	27.2%	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	-1.5%	3.8%	9.0%	-4.8%	11.2%	2.8%	8.8%	21.3%
<b>Alerian MLP</b>	76.4%	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	-4.2%	19.7%	1.1%	-4.5%	2.3%	4.4%	2.0%	18.3%
<b>Russell 2500</b>	34.4%	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	0.4%	3.6%	6.6%	-4.1%	8.5%	1.9%	6.1%	17.6%
<b>Barclays US Corp HY</b>	58.2%	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	3.4%	5.5%	5.6%	0.4%	-0.5%	1.8%	1.8%	17.1%
<b>Russell 1000</b>	28.4%	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	1.2%	2.5%	4.0%	-2.0%	3.9%	1.9%	3.8%	12.1%
<b>S&amp;P 500</b>	26.5%	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	1.3%	2.5%	3.9%	-1.8%	3.7%	2.0%	3.8%	12.0%
<b>BBG Commodity</b>	18.9%	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	0.4%	12.8%	-3.9%	-0.5%	1.3%	1.8%	2.7%	11.8%
<b>MSCI EM</b>	78.5%	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	5.7%	0.7%	9.0%	0.2%	-4.6%	0.2%	-4.2%	11.2%
<b>Barclays US Long Credit</b>	16.8%	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	6.8%	6.7%	2.3%	-2.1%	-4.9%	1.5%	-5.4%	10.2%
<b>JPM EMBI Global Div</b>	29.8%	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	5.0%	5.0%	4.0%	-1.2%	-4.1%	1.3%	-4.0%	10.2%
<b>JPM GBI-EM Global Div</b>	22.0%	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	11.0%	2.7%	2.7%	-0.8%	-7.0%	1.9%	-6.1%	9.9%
<b>Credit Suisse Lev Loan</b>	44.9%	10.0%	1.8%	9.4%	6.2%	2.1%	-0.4%	1.3%	2.9%	3.1%	0.8%	0.3%	1.1%	2.3%	9.9%
<b>FTSE NAREIT Eqy REITs</b>	28.0%	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	6.0%	7.0%	-1.4%	-5.7%	-1.7%	4.7%	-2.9%	8.5%
<b>MSCI ACWI</b>	34.6%	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	0.2%	1.0%	5.3%	-1.7%	0.8%	2.2%	1.2%	7.9%
<b>BC Long US Govt/Credit</b>	1.9%	10.2%	22.5%	8.8%	-8.8%	19.3%	-3.3%	7.3%	6.5%	1.2%	-2.8%	-5.8%	0.7%	-7.8%	6.7%
<b>Barclays US Agg Bond</b>	5.9%	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	3.0%	2.2%	0.5%	-0.8%	-2.4%	0.1%	-3.0%	2.6%
<b>Barclays US Agg Int.</b>	6.5%	6.1%	6.0%	3.6%	-1.0%	4.1%	1.2%	2.3%	1.4%	0.3%	-0.4%	-1.7%	0.0%	-2.0%	2.0%
<b>Citi WGBI</b>	2.6%	5.2%	6.4%	1.6%	-4.0%	-0.5%	-3.6%	7.1%	3.4%	0.3%	-3.4%	-4.6%	-0.7%	-8.5%	1.6%
<b>BC US STRIPS 20+</b>	-36.0%	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	11.4%	9.6%	-0.2%	-6.2%	-10.5%	-0.9%	-16.7%	1.4%
<b>BC US Gov/Cred 1-3 Yr</b>	3.8%	2.8%	1.6%	1.3%	0.6%	0.8%	0.7%	1.0%	0.7%	0.0%	0.0%	-0.4%	0.1%	-0.4%	1.3%
<b>MSCI EAFE</b>	31.8%	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	-3.0%	-1.5%	6.4%	-2.0%	-2.0%	3.4%	-0.7%	1.0%
<b>CS Hedge Fund</b>	18.6%	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	-2.2%	0.6%	1.7%	-0.2%	-0.2%	-	0.2%	0.3%
<b>Barclays Municipal</b>	12.9%	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	1.7%	2.6%	-0.3%	-1.0%	-3.7%	1.2%	-3.6%	0.2%

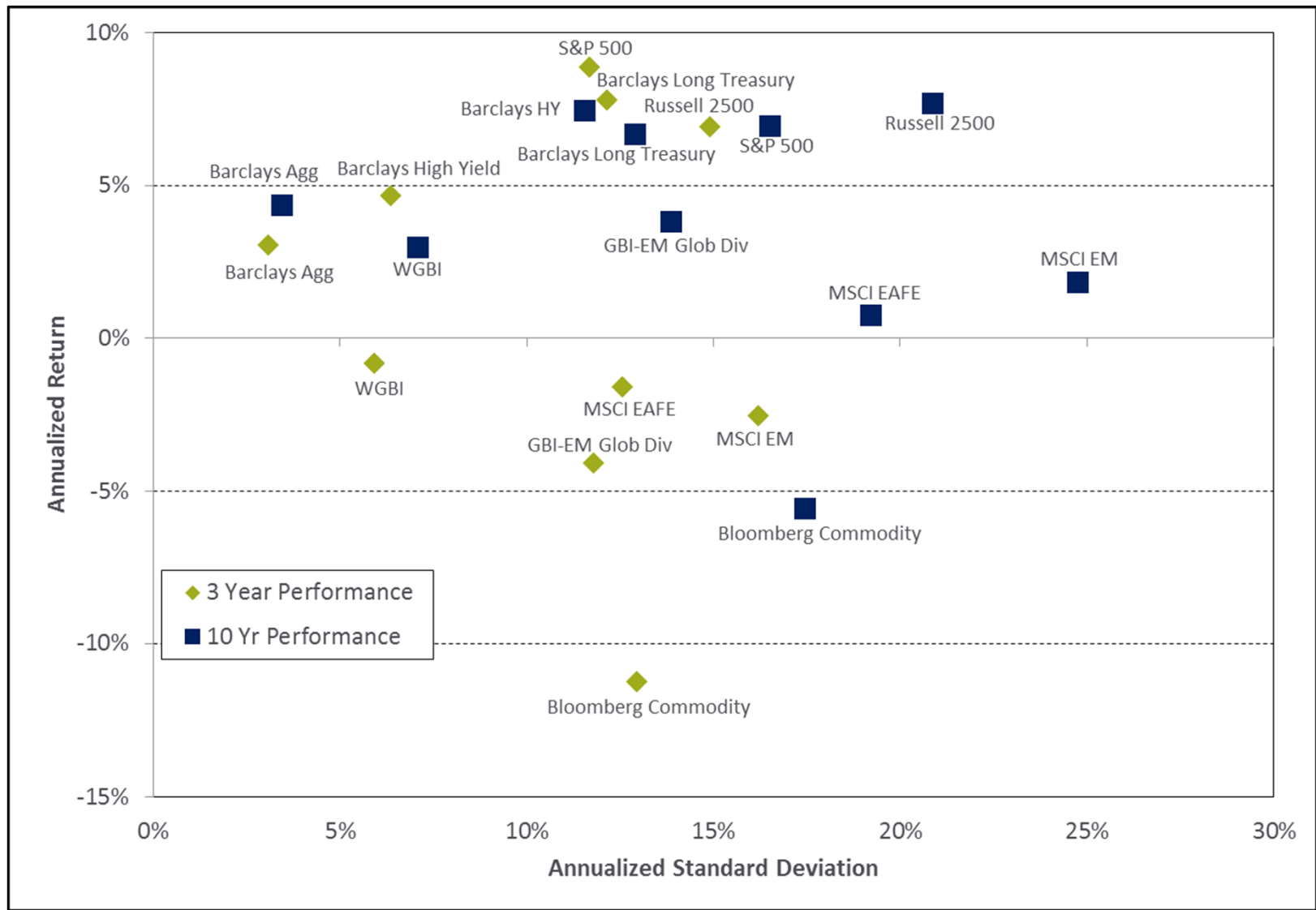
Source: Bloomberg, Barclays, Alerian, Nareit, MSCI, JP Morgan, Credit Suisse

# Near Term Broad Market Performance Summary as of 12/30/2016



Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, 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 12/30/2016

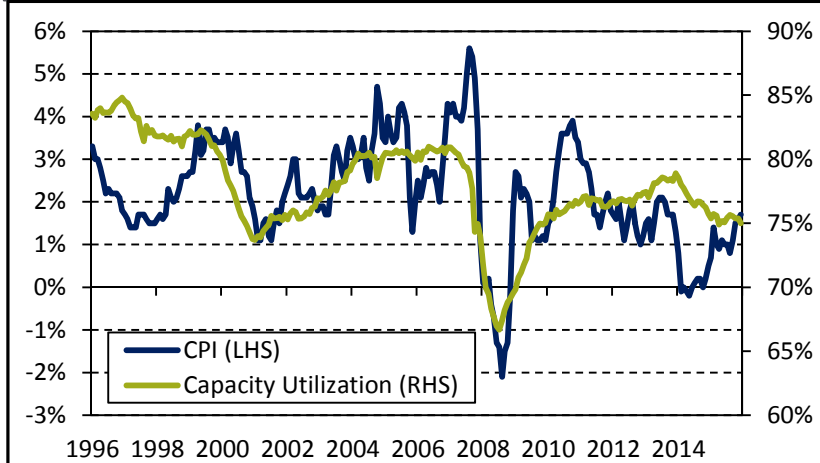


Source: Bloomberg, Standard and Poors, Russell, MSCI, Barclays, Citigroup, JP Morgan



# US Economic Indicators

## Inflation continues rising



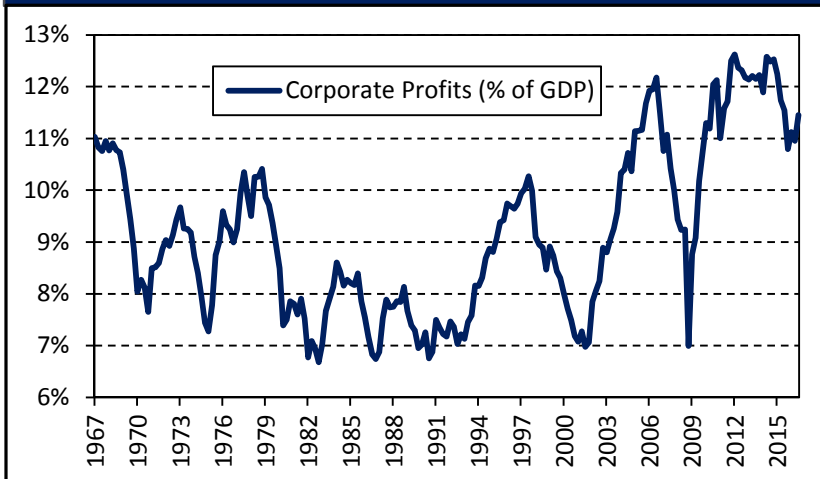
Source: Bloomberg, Federal Reserve, Bureau of Labor Statistics

## Unemployment has steadied



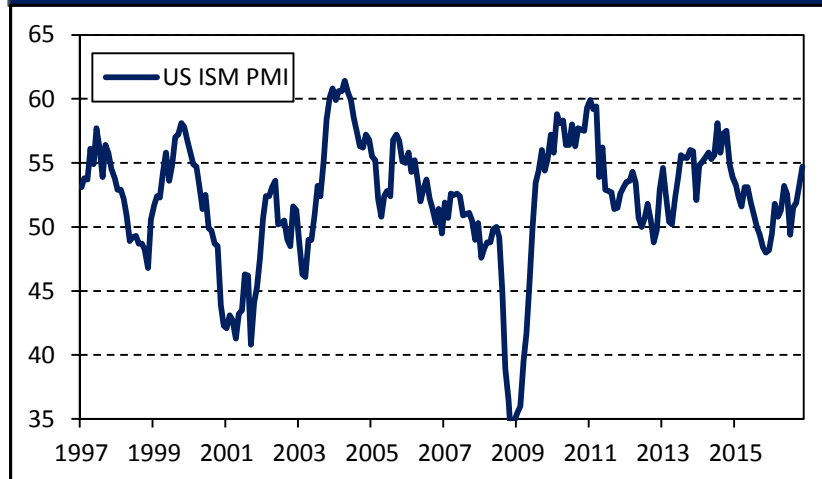
Source: Bloomberg, Bureau of Labor Statistics

## Corporate profits experience an uptick



Source: Bloomberg, Bureau of Economic Analysis

## Manufacturing shows modest strength

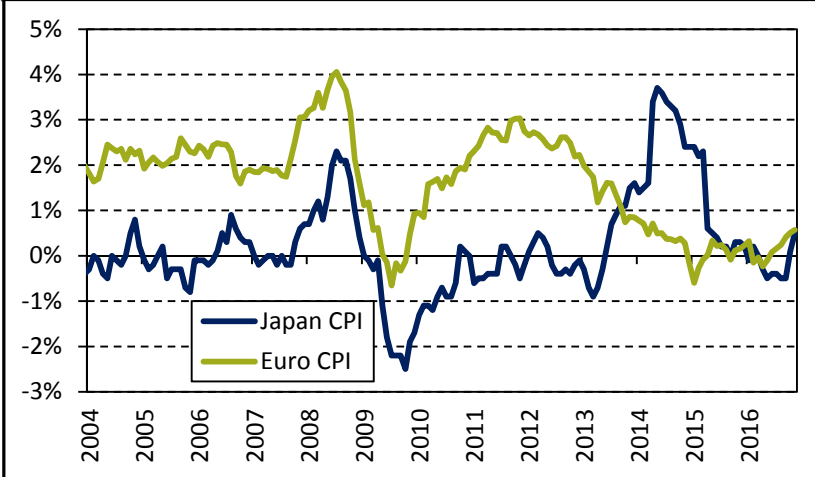


Source: Bloomberg, Institute for Supply Management



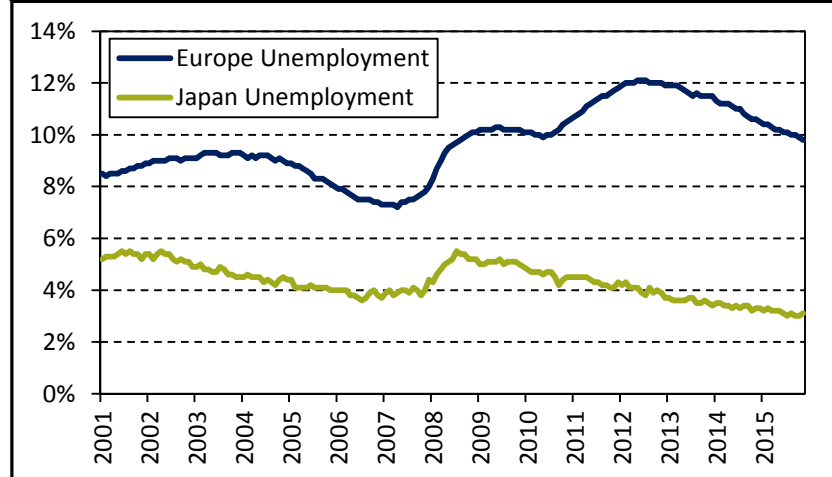
# International Economic Indicators

## Inflation has increased



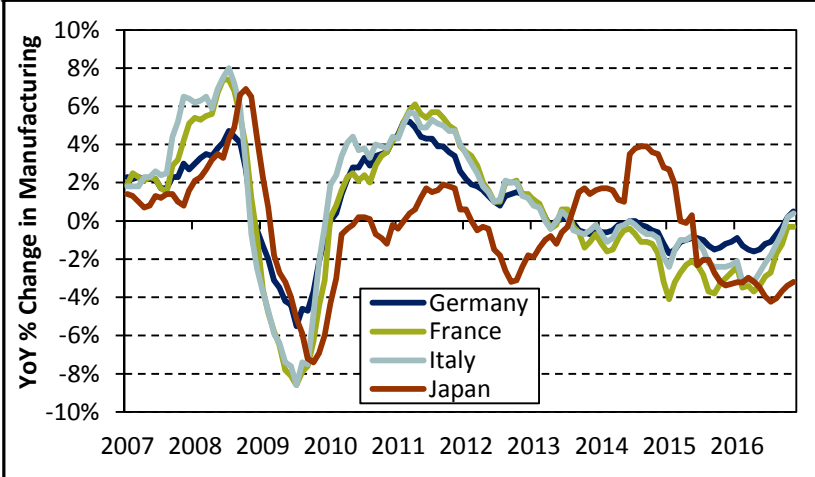
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

## Europe unemployment edges lower



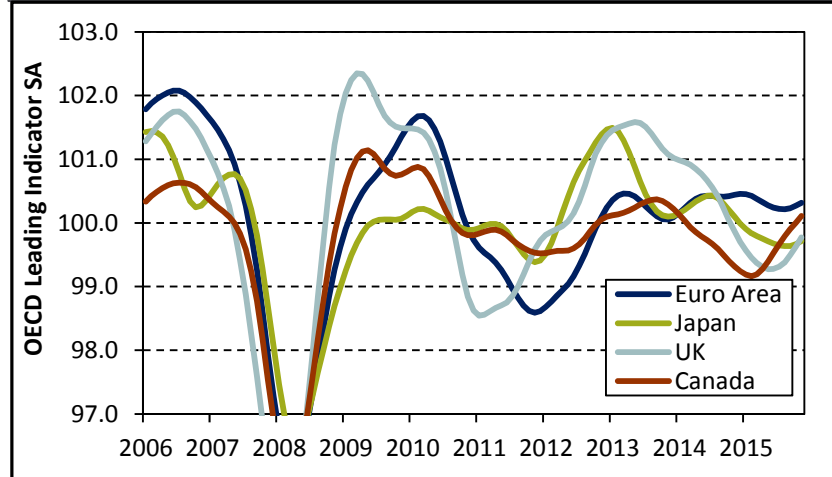
Source: Bloomberg, Japan Ministry of Internal Affairs and Communications, Eurostat

## Manufacturing steadies after showing modest improvement



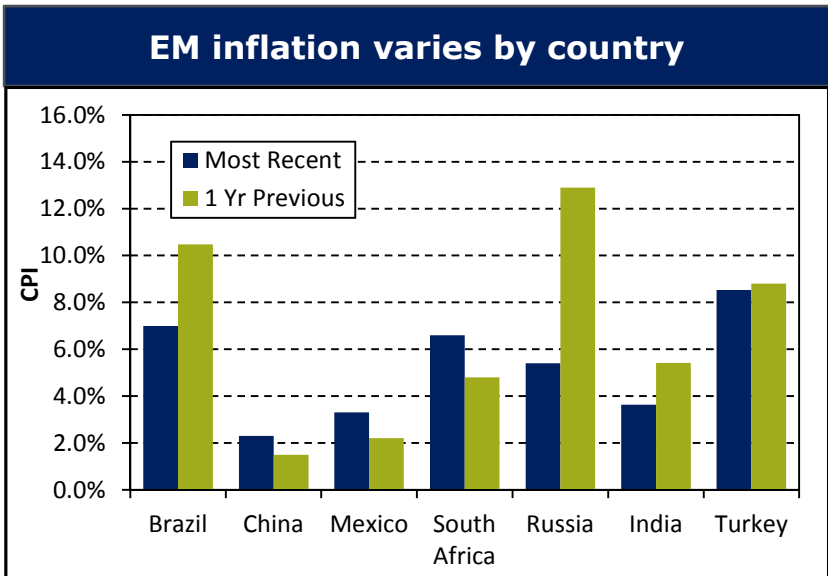
Source: Bloomberg, OECD, Eurostat

## Leading indicators mostly trending higher

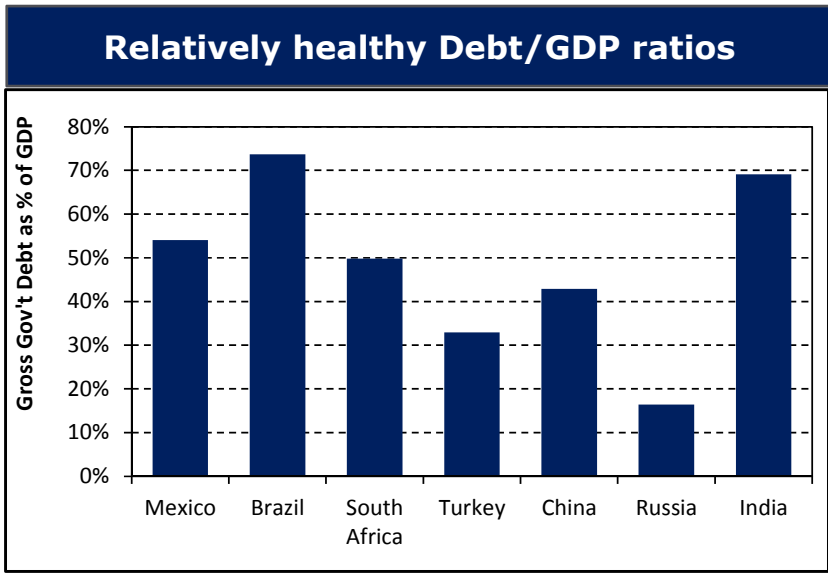


Source: Bloomberg, OECD

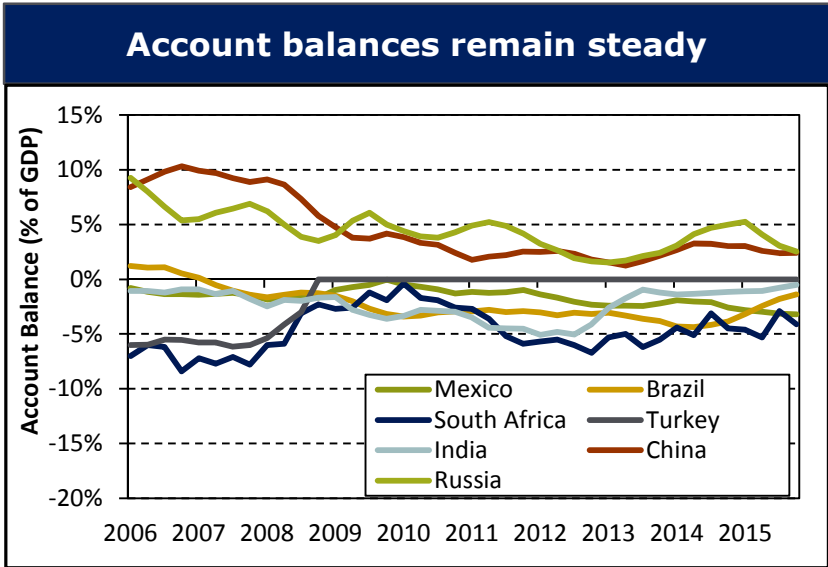
# Emerging Market Economic Indicators



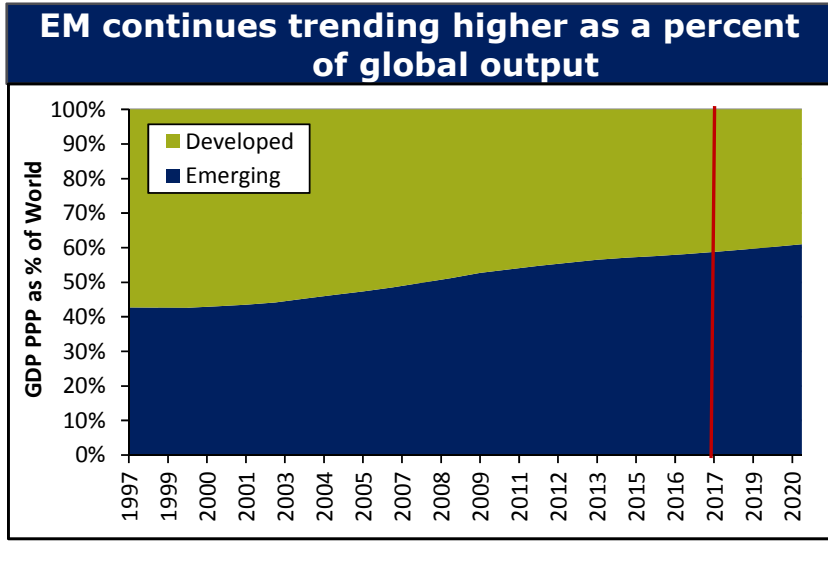
Source: Bloomberg



Source: Bloomberg, IMF



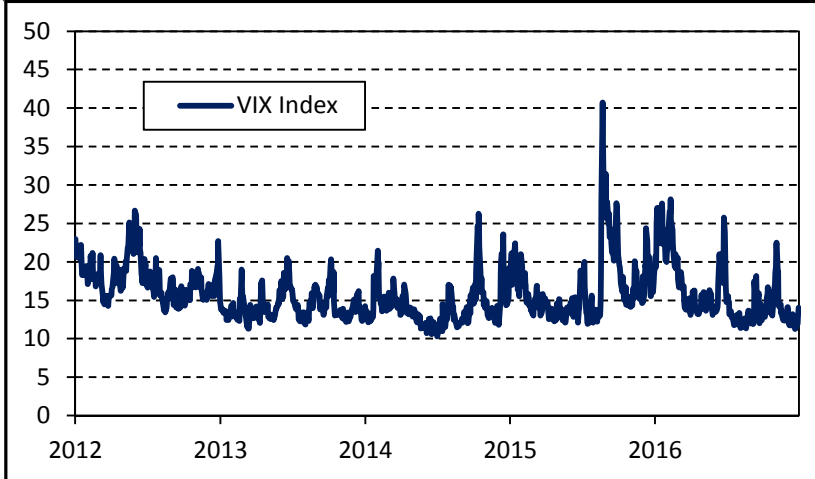
Source: Bloomberg



Source: Bloomberg, IMF

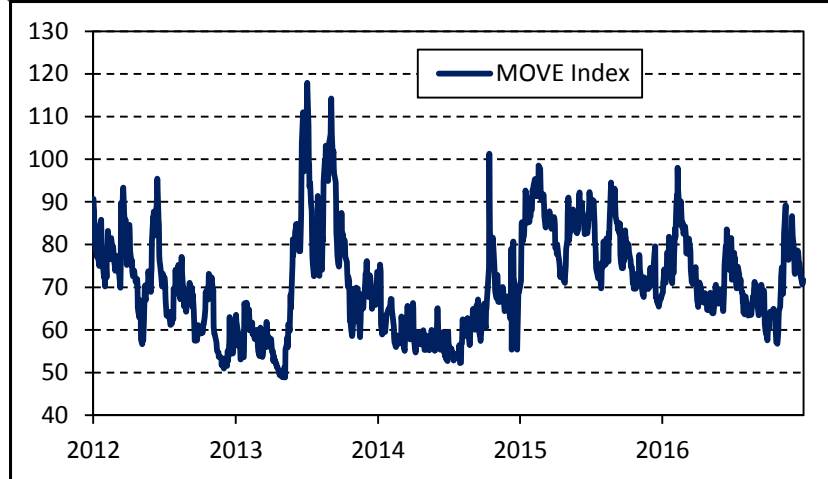
# Volatility

## Equity volatility remains low



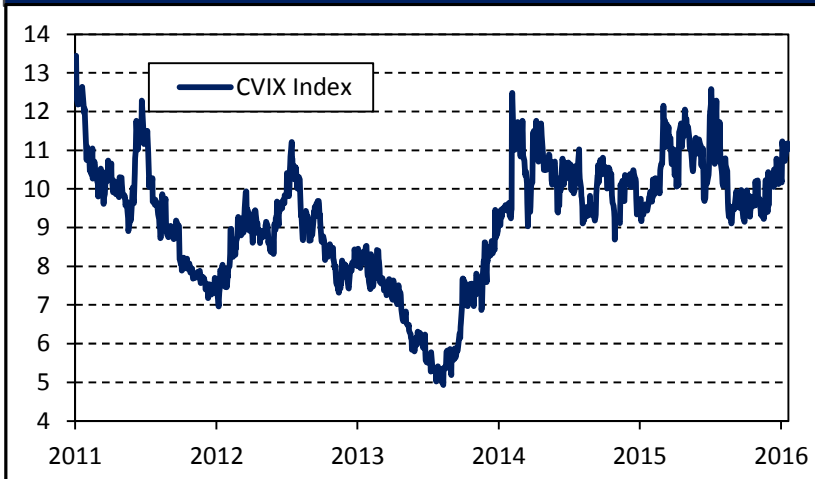
Source: Bloomberg, CBOE

## Treasury volatility continues to be elevated



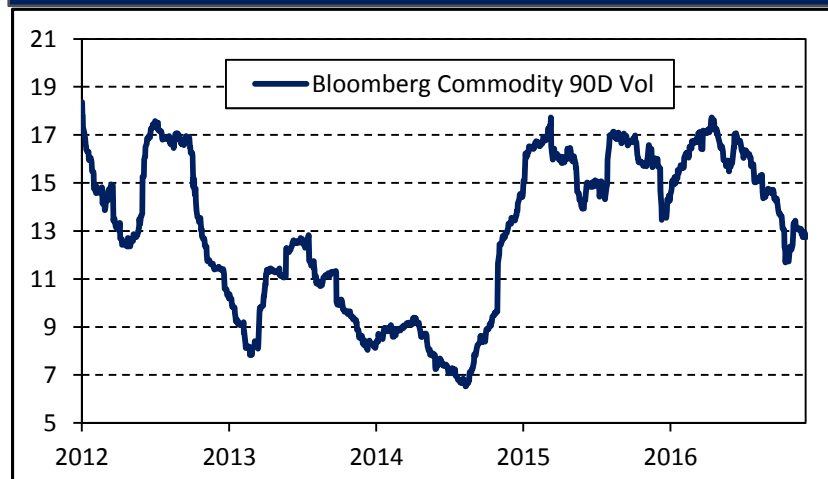
Source: Bloomberg, Merrill Lynch

## Currency volatility increased



Source: Bloomberg, Deutsche Bank

## Commodity volatility has subsided

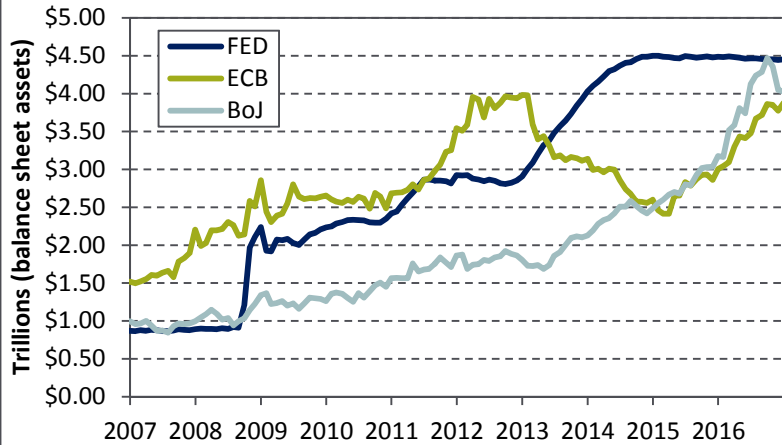


Source: Bloomberg, Merrill Lynch



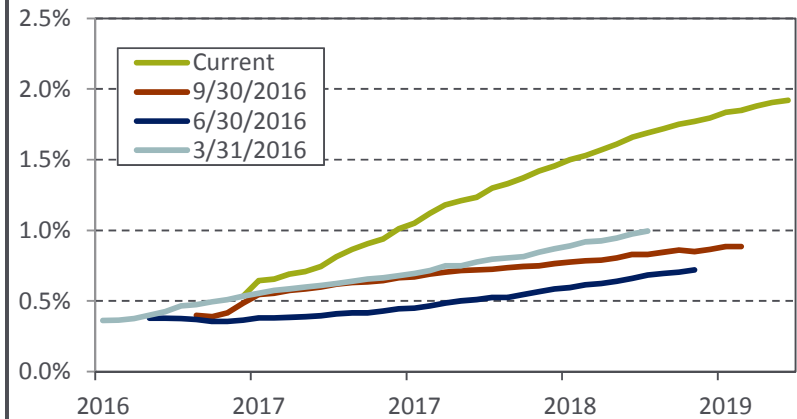
# Central Banks

## Yen depreciation has decreased the value of BoJ's balance sheet



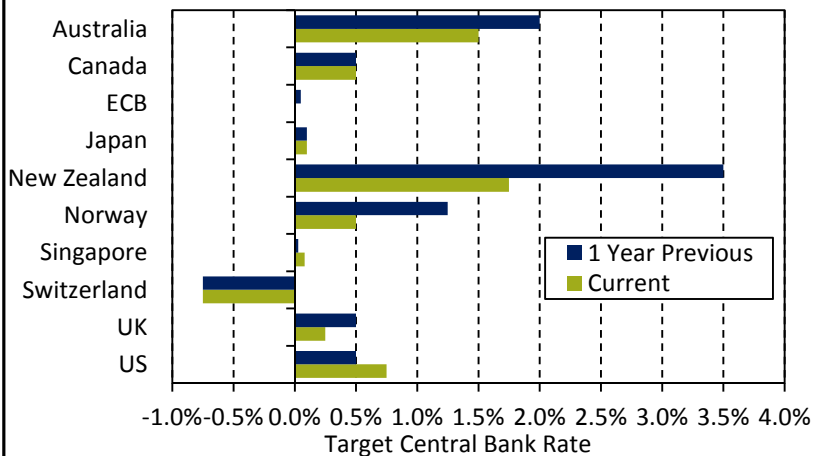
Source: Bloomberg, Federal Reserve, Bank of Japan, ECB, NEPC

## Market expectations for interest rates have increased dramatically post rate hike



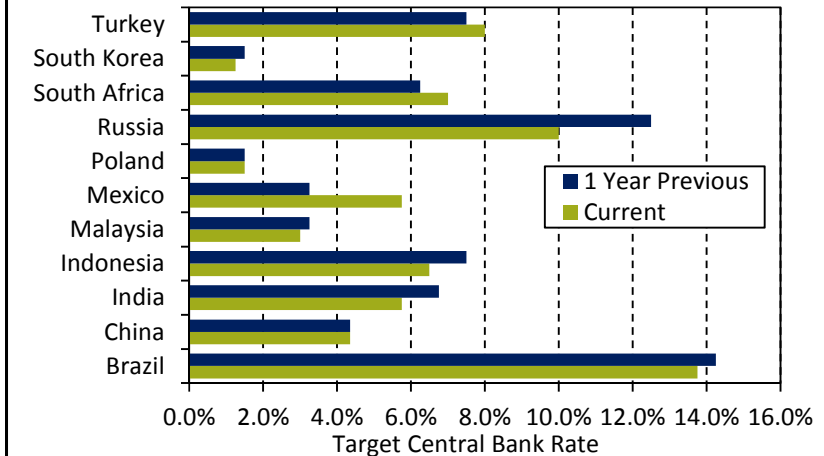
Source: Bloomberg, Federal Reserve

## Developed market interest rates are mostly lower than the previous year



Source: Bloomberg

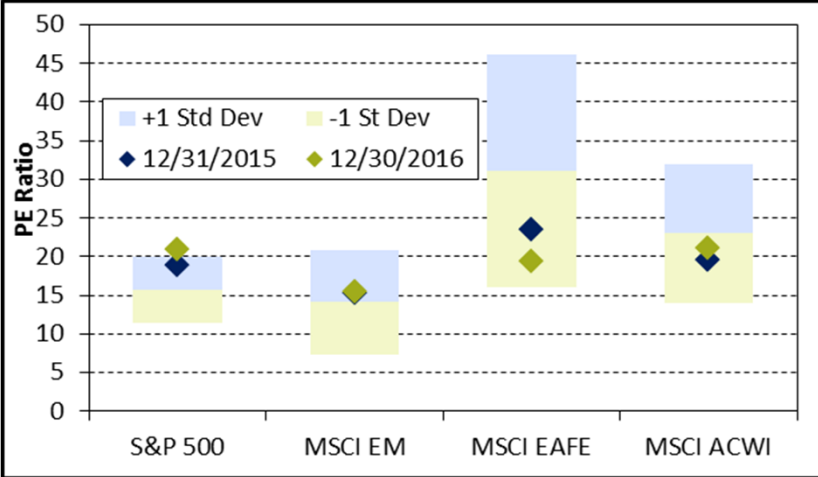
## EM central bank policies vary by country-specific economic conditions



Source: Bloomberg

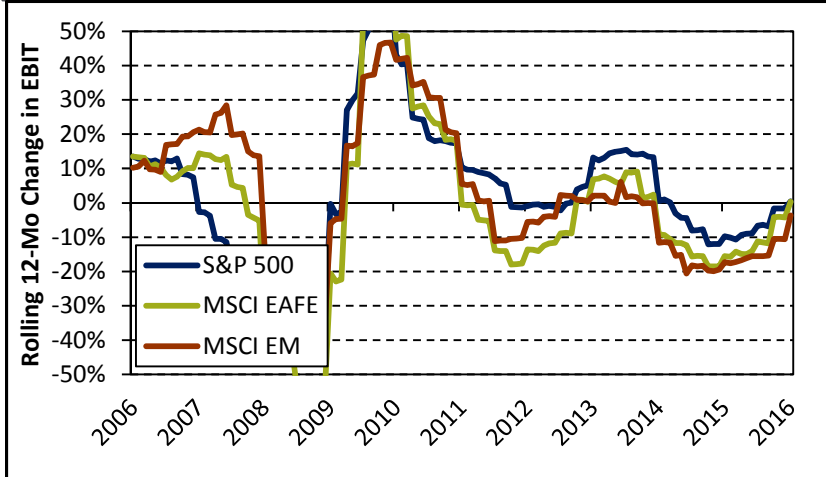


**EAFE's current valuation is lower than the previous year**



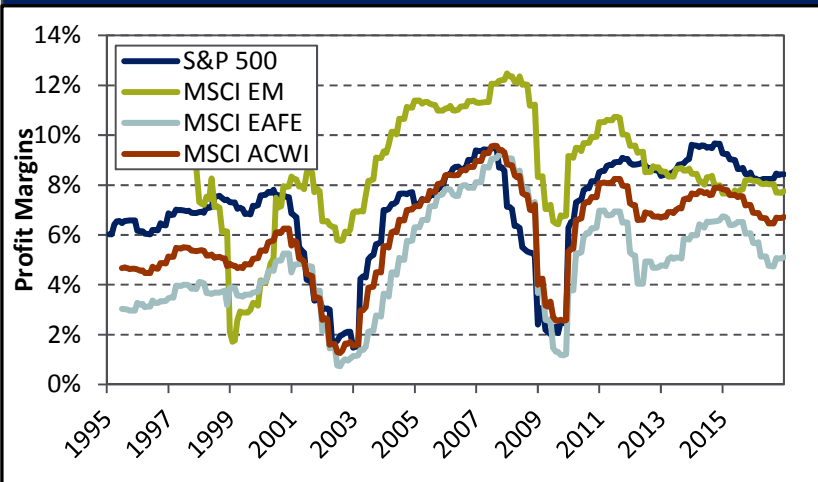
Source: Bloomberg, Standard and Poors, MSCI \*MSCI EAFE is ex UK Telecom  
\*Standard deviation calculations on 20 years of data except S&P 500 (30 years)

**Rolling annual earnings growth trending upwards off lows**



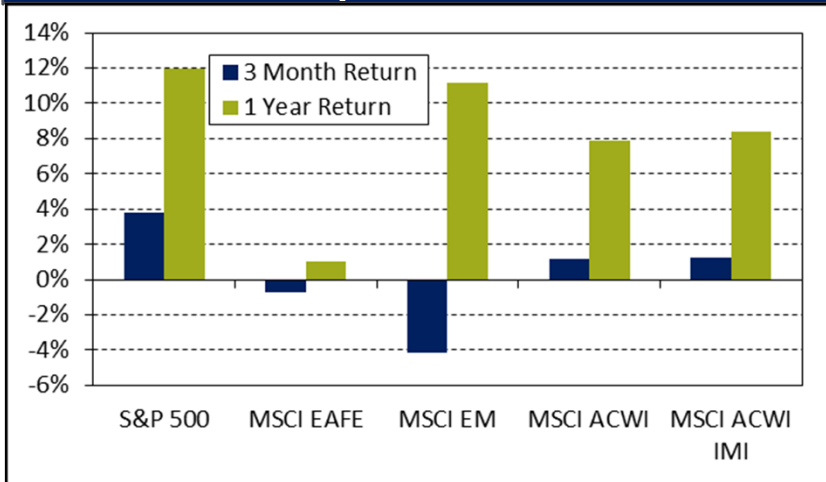
Source: Bloomberg, Standard and Poors, MSCI

**Profit margins slightly increased**



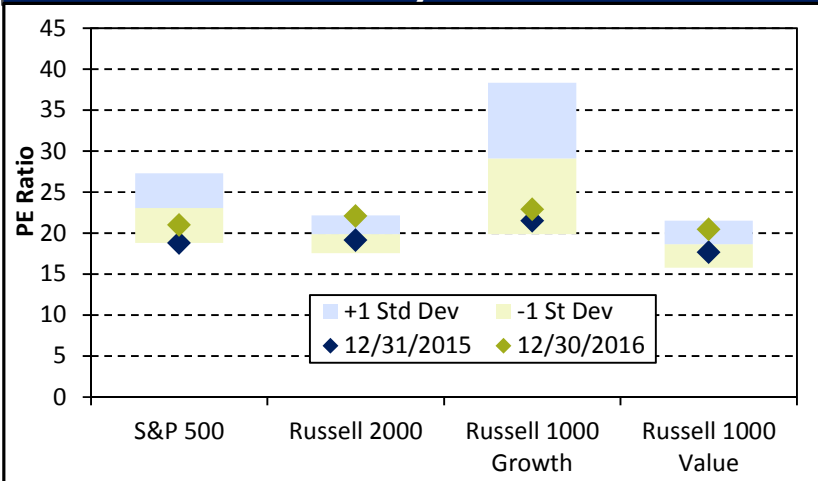
Source: Bloomberg, MSCI

**EM has experienced lack-luster short-term performance**



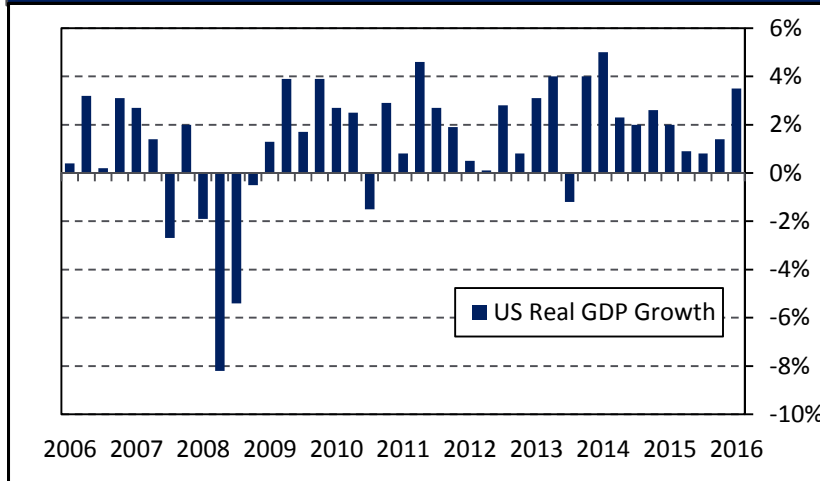
Source: Bloomberg, MSCI

**US equity valuations are higher than last year**



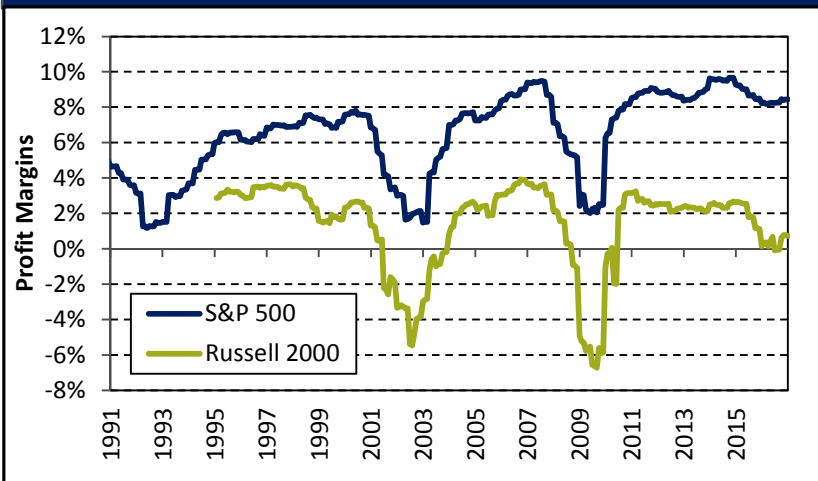
Source: Bloomberg, Standard and Poors, Russell \*Russell 2000 PE is index adjusted positive\* Standard deviation calculations based on 20 years of data

**GDP growth remains strong**



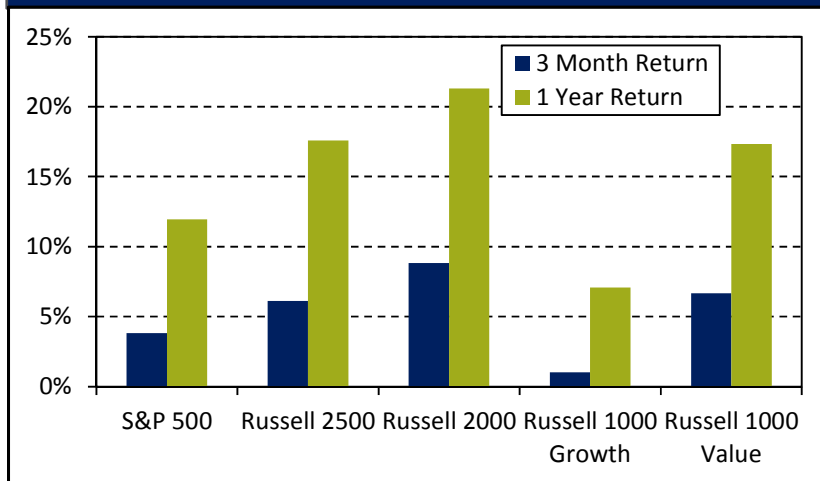
Source: Bloomberg, Bureau of Economic Analysis

**Profit margins hold steady**



Source: Bloomberg, Standard and Poors, Russell

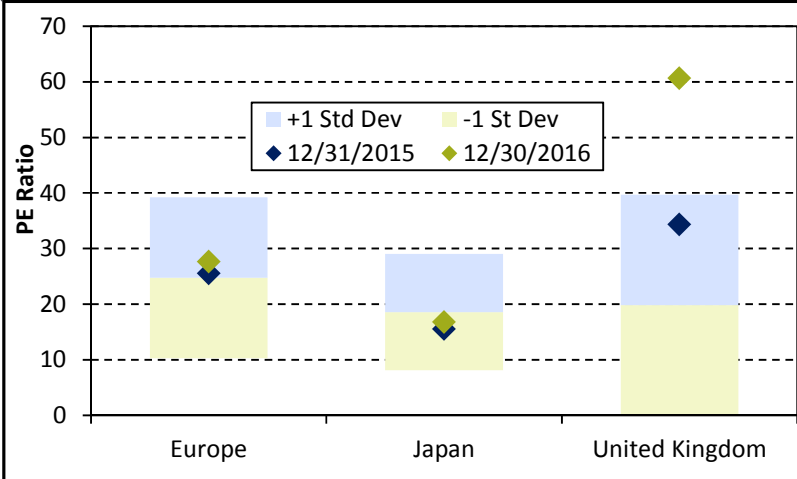
**US equity posts positive short-term returns**



Source: Bloomberg, Standard and Poors, Russell

# International Equity

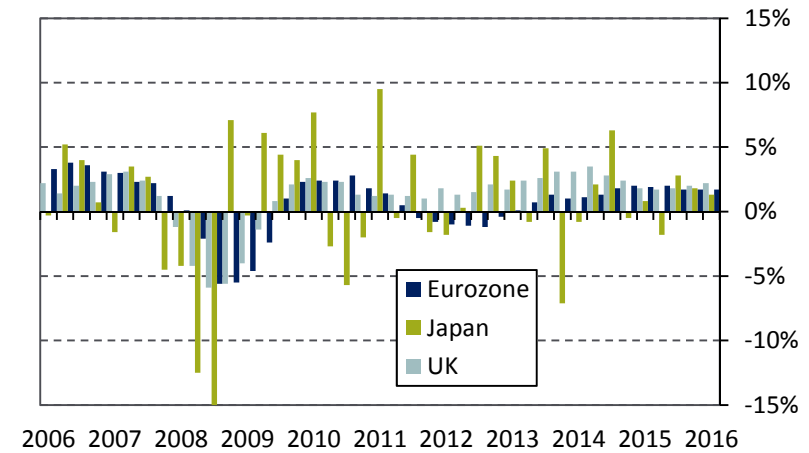
## UK PE ratios remain elevated



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

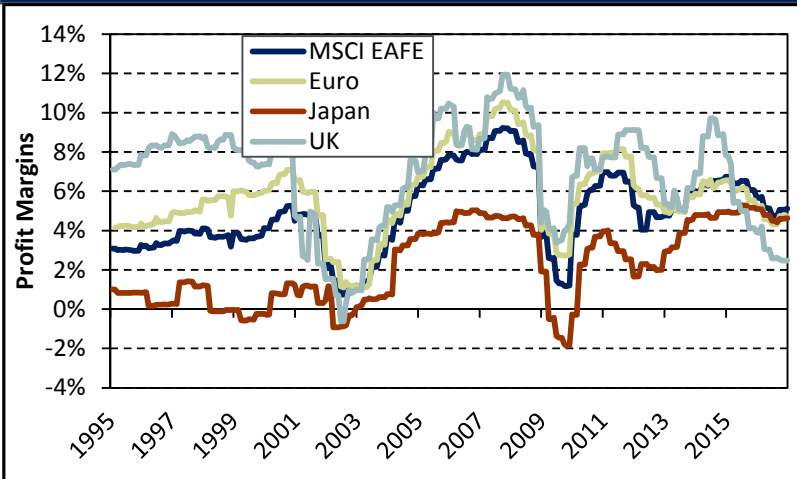
\*Standard deviation calculations based on 20 years of data, with Europe since 12/1998

## International growth steadies



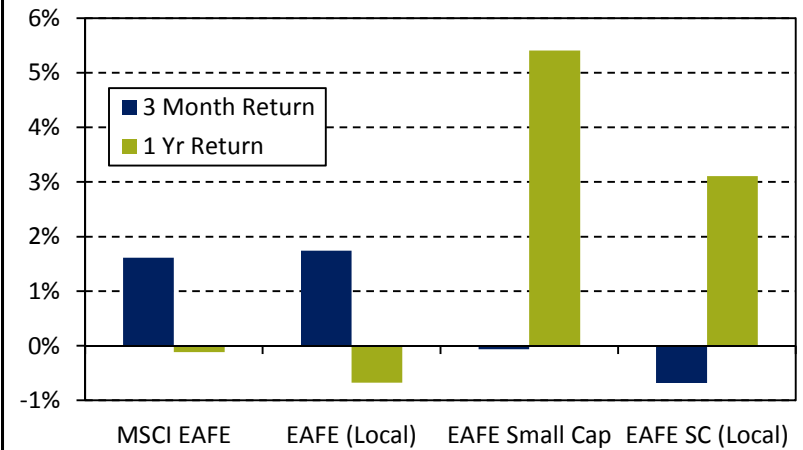
Source: Bloomberg

## UK margins continue to decline



Source: Bloomberg, MSCI

## Short-term small cap returns have been lack-luster



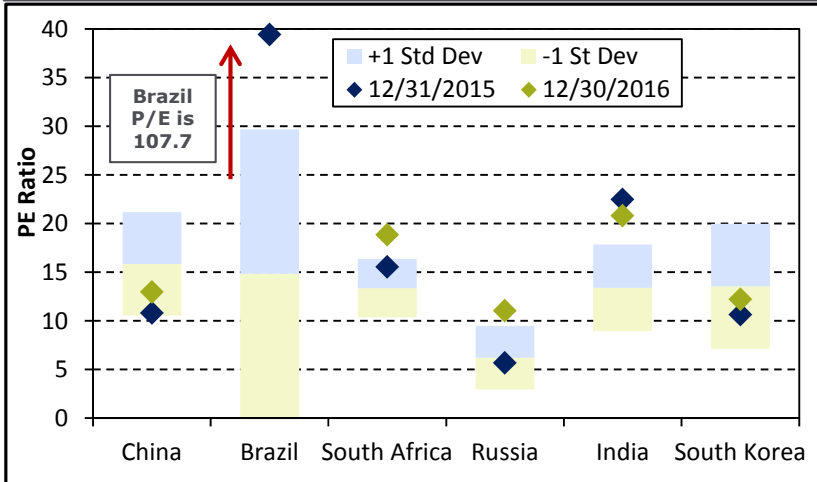
Source: Bloomberg, MSCI





# Emerging Markets Equity

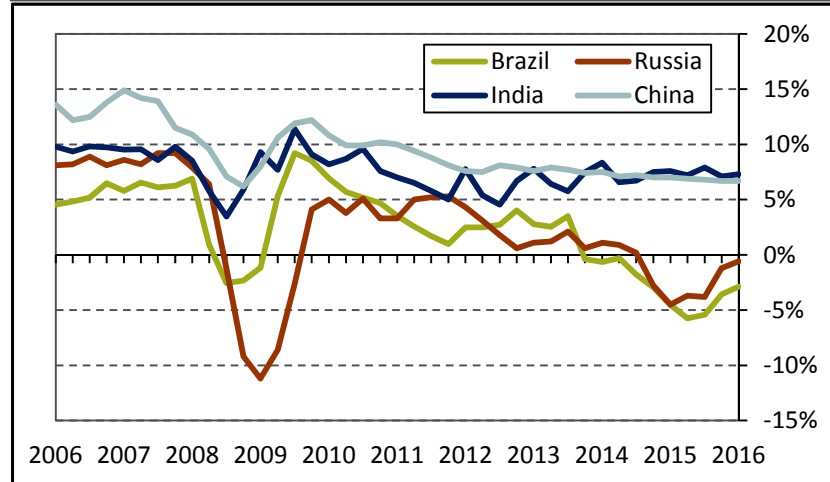
## Regional valuations similar year over year with the exception of Brazil



Source: Bloomberg, MSCI

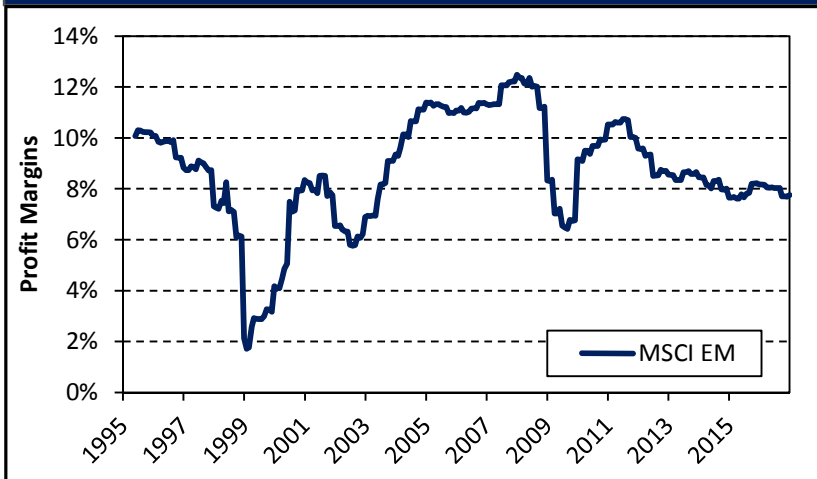
\*Standard deviation calculations based on 20 years of data, with Russia since 01/1998

## Russia and Brazil experience rebounds off earnings contractions



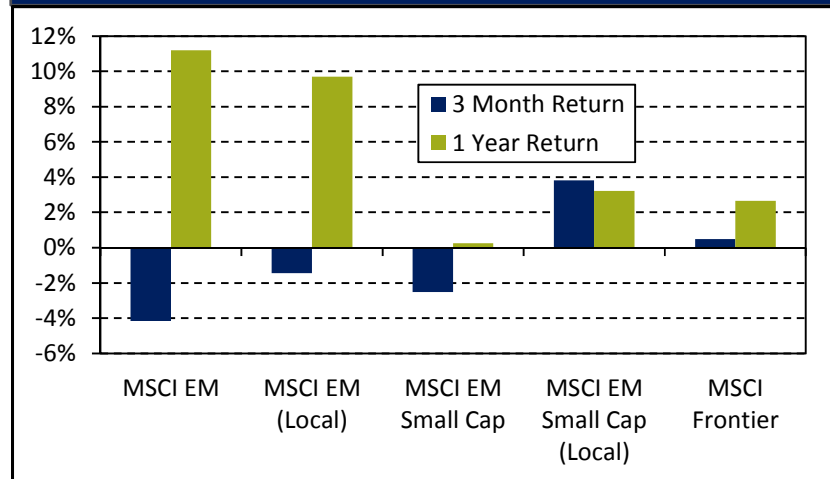
Source: Bloomberg

## Profit margins in line with history



Source: Bloomberg, MSCI

## EM local indices have outperformed dollar-denominated



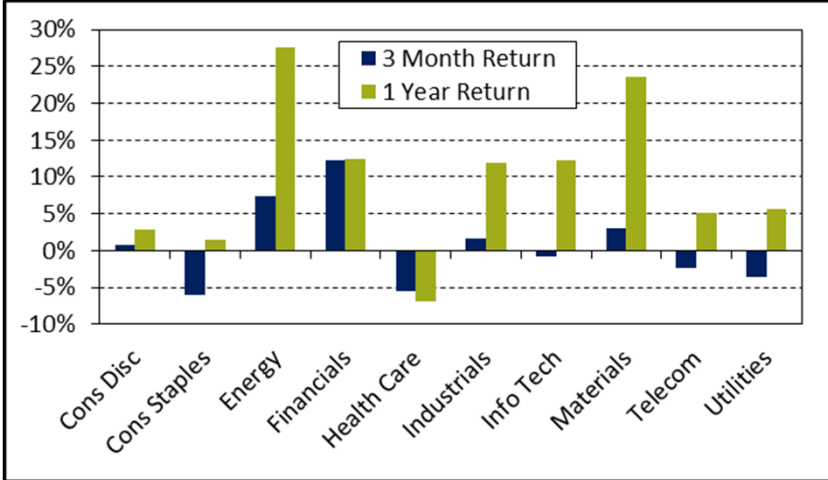
Source: Bloomberg, MSCI



NEPC, LLC

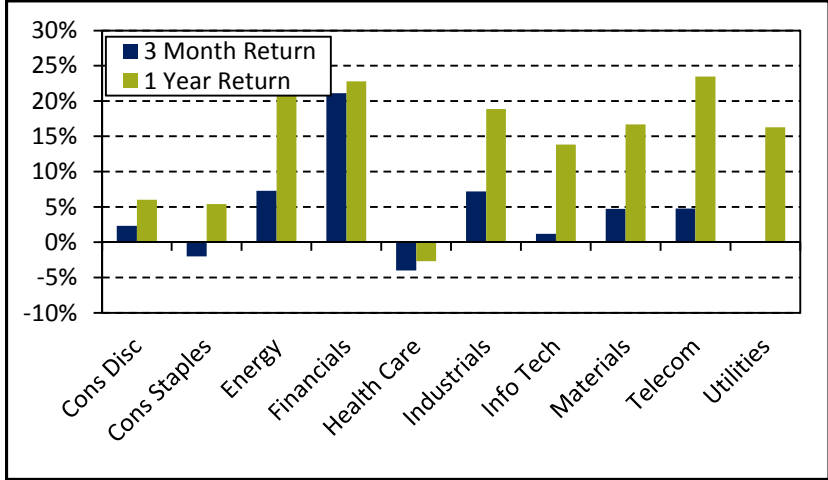
# Global Equity by Sector

## Energy and Financials lead MSCI ACWI short-term returns



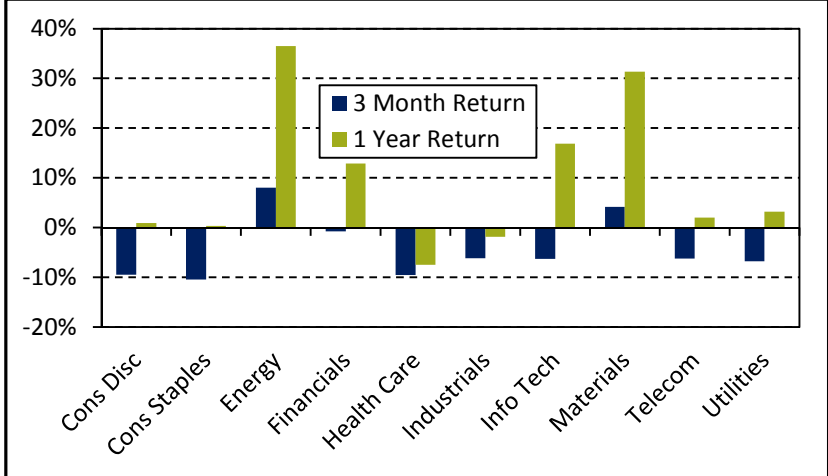
Source: Bloomberg, MSCI

## Healthcare and Consumer Staples drag S&P 500 short-term returns



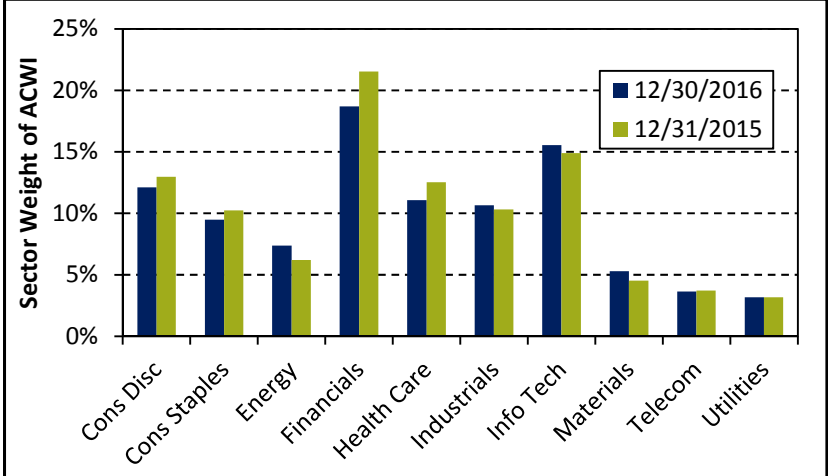
Source: Bloomberg, Standard and Poors

## Energy and Materials continue their strong performance in EM



Source: Bloomberg, MSCI

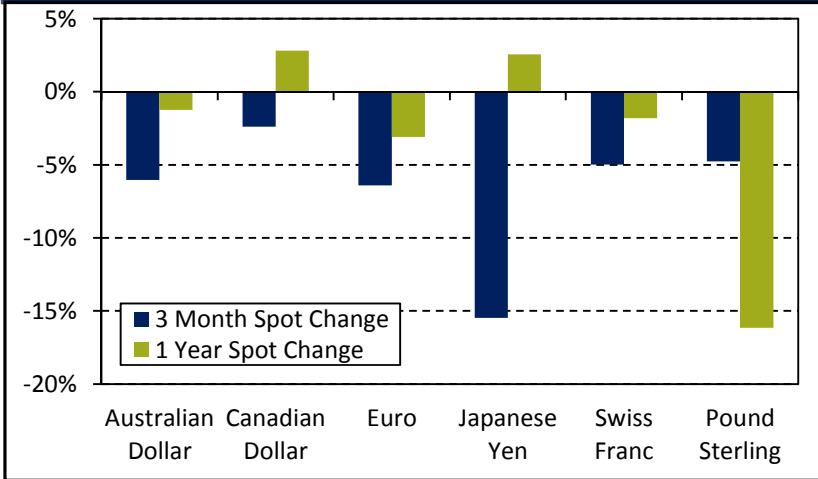
## Financials sector weight has decreased significantly



Source: Bloomberg, MSCI

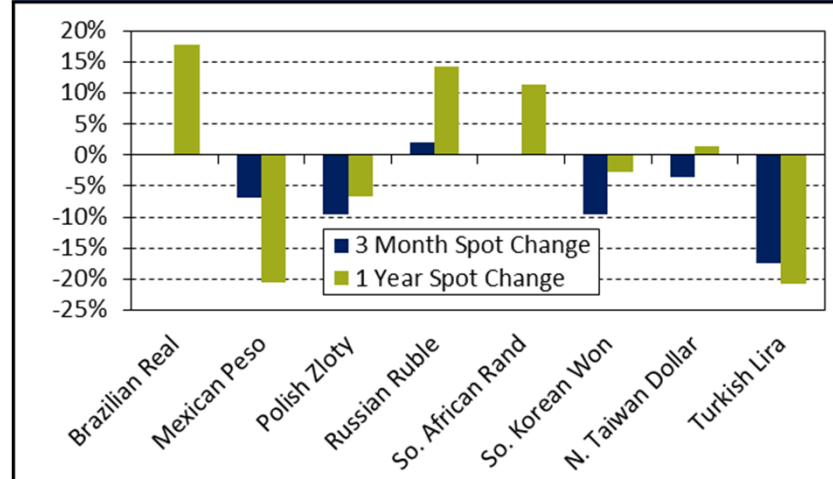
# Currencies

## Developed currencies have declined versus the dollar



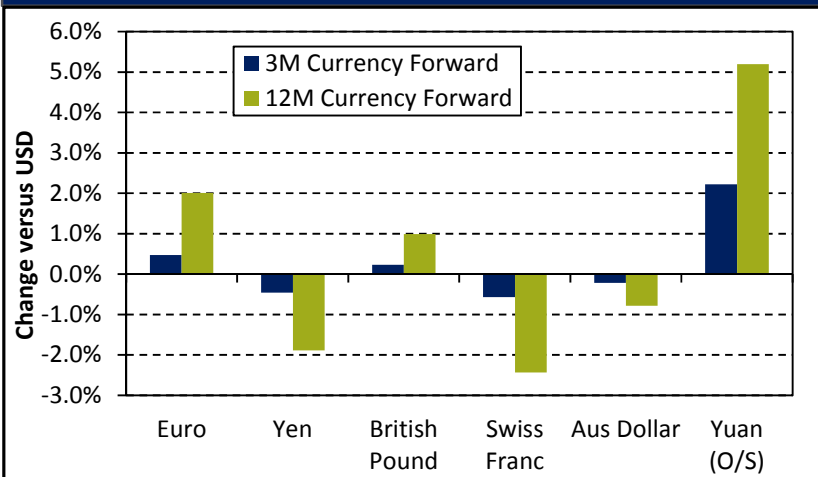
Source: Bloomberg

## A number of currencies have experienced sharp depreciation



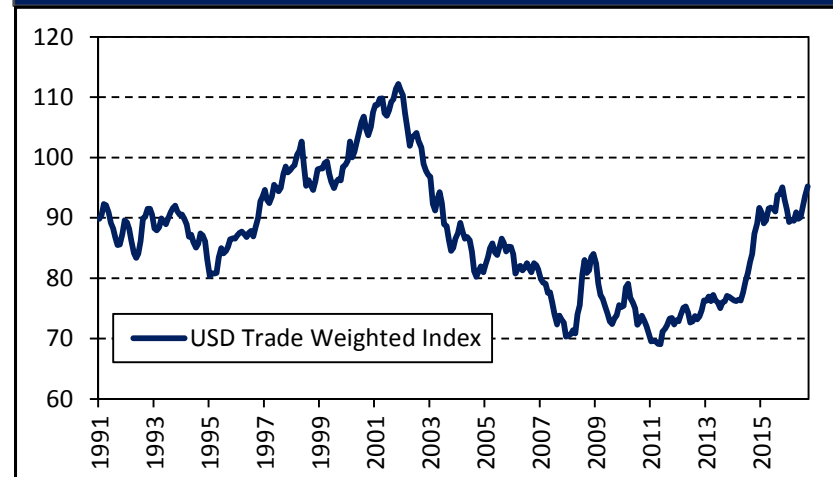
Source: Bloomberg

## USD expectations vary across developed markets



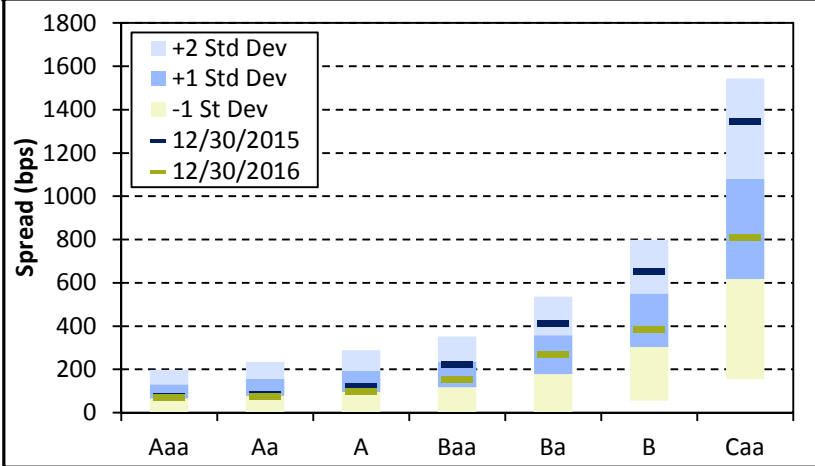
Source: Bloomberg

## Dollar strength persists



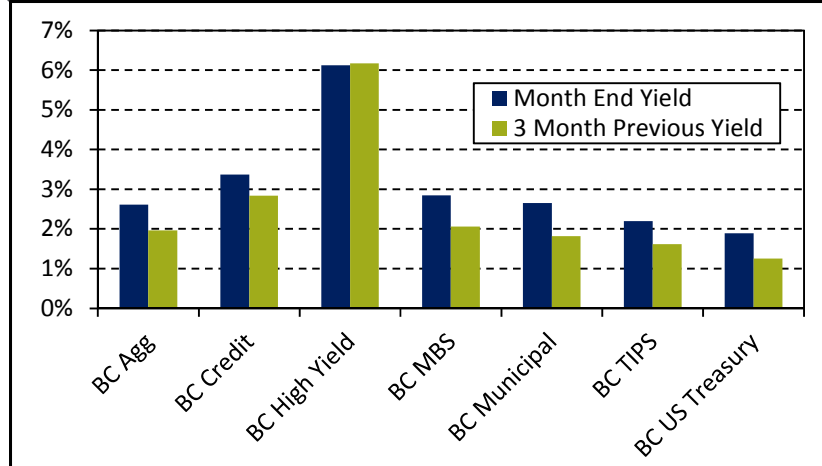
Source: Bloomberg, Federal Reserve

**Spreads remain lower than the previous year**



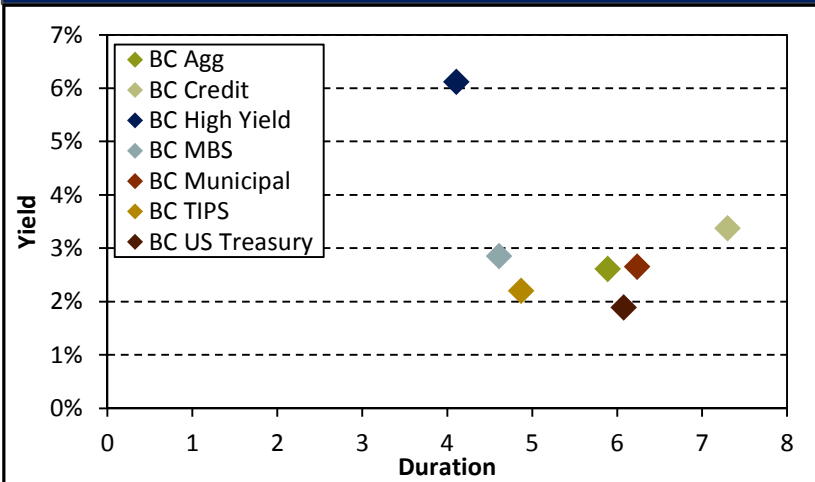
Source: Bloomberg, Barclays  
\*Standard deviation calculations based on 20 years of data

**Fixed income yields have increased**



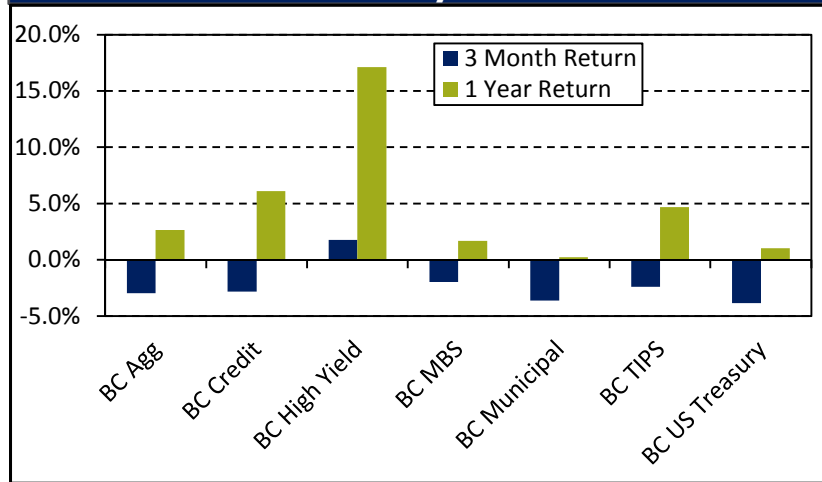
Source: Bloomberg, Barclays

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



Source: Bloomberg, Barclays

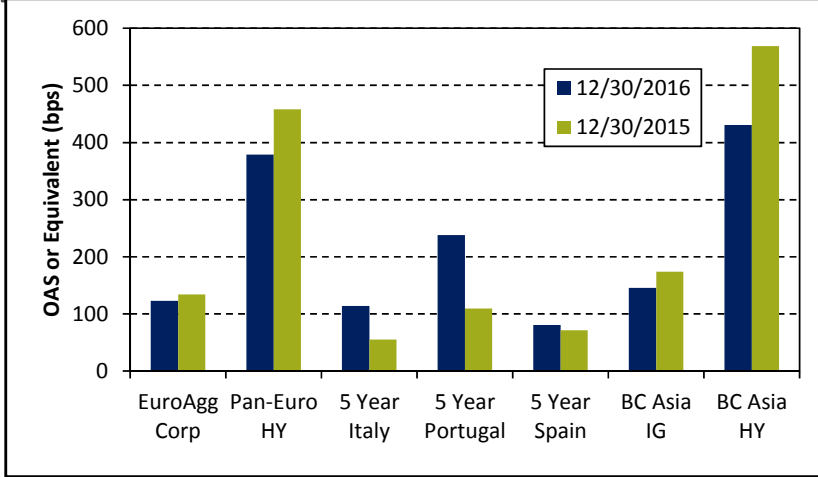
**Fixed income returns have broadly declined with recent yield increases**



Source: Bloomberg, Barclays

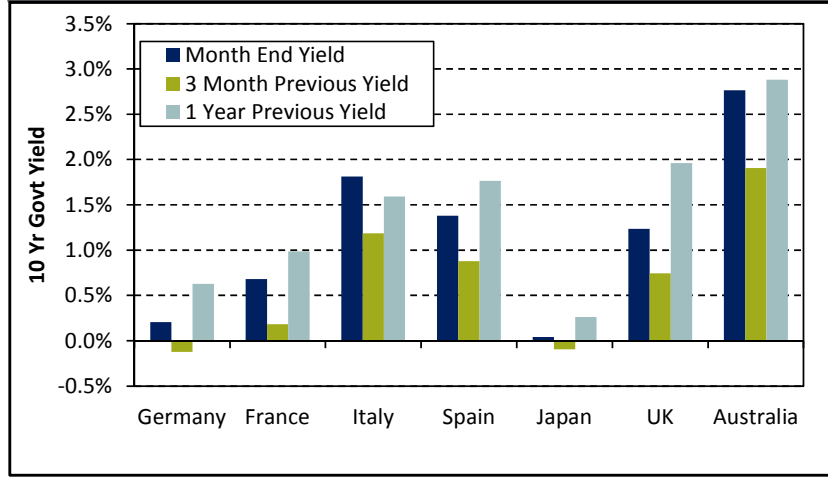
# International Developed Fixed Income

## European periphery yields vary relative to Germany



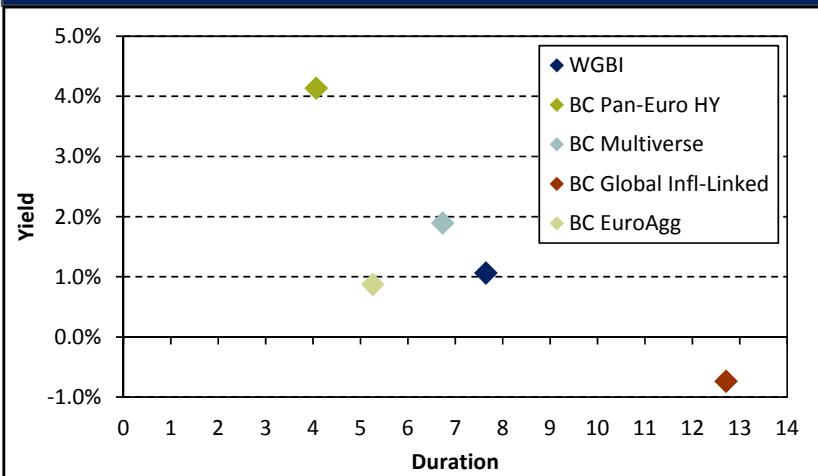
Source: Barclays, Bloomberg, \*European periphery spreads are over equivalent German Bund

## Global yields have increased post rate hike



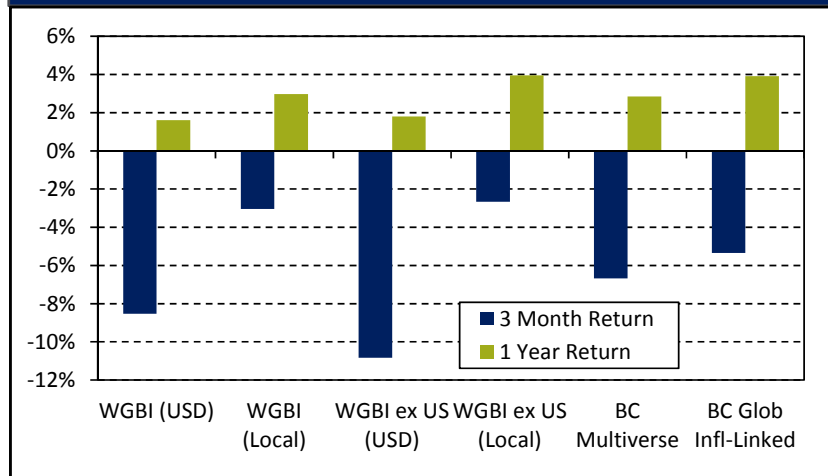
Source: Bloomberg

## Low yields persist in global bond universe



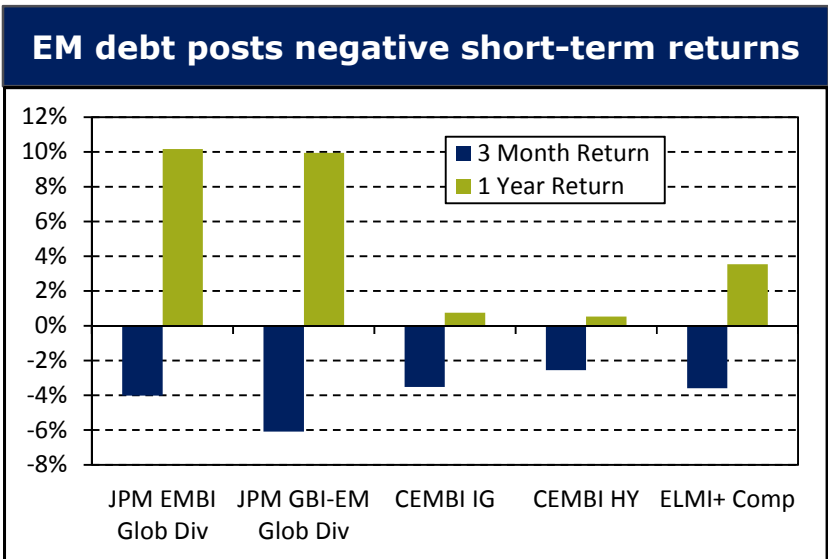
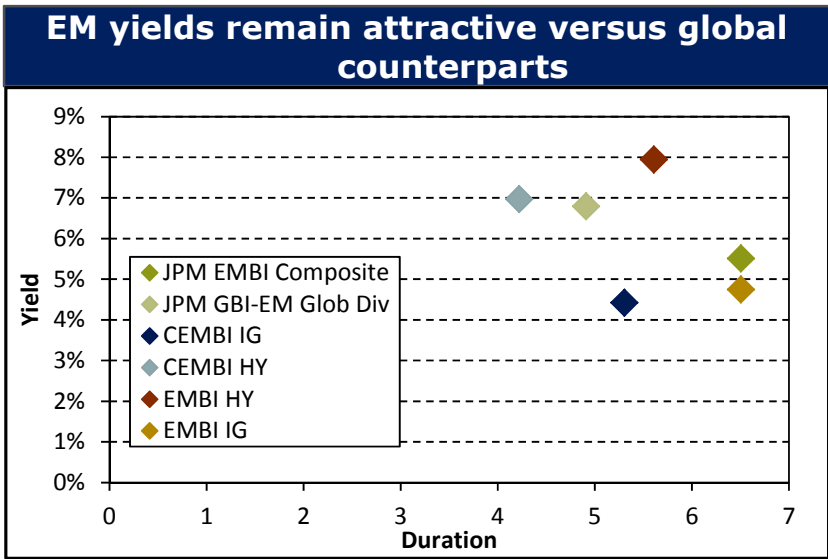
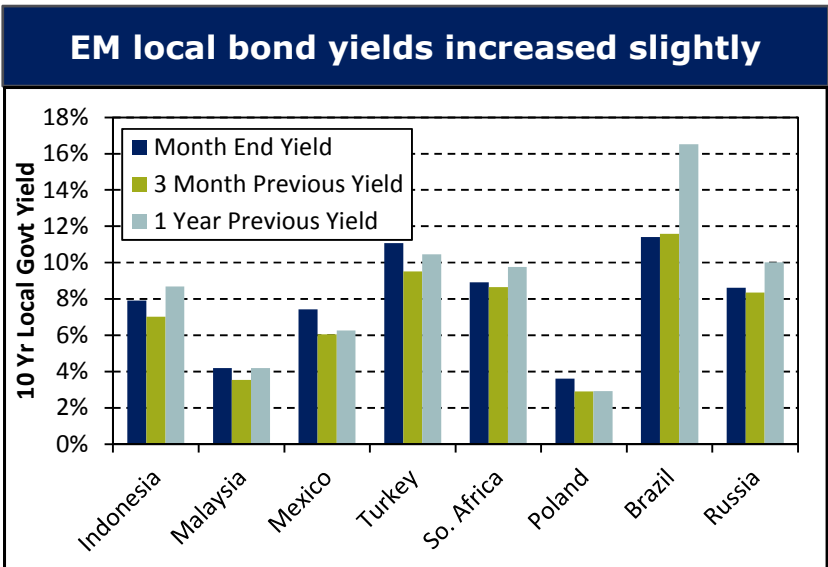
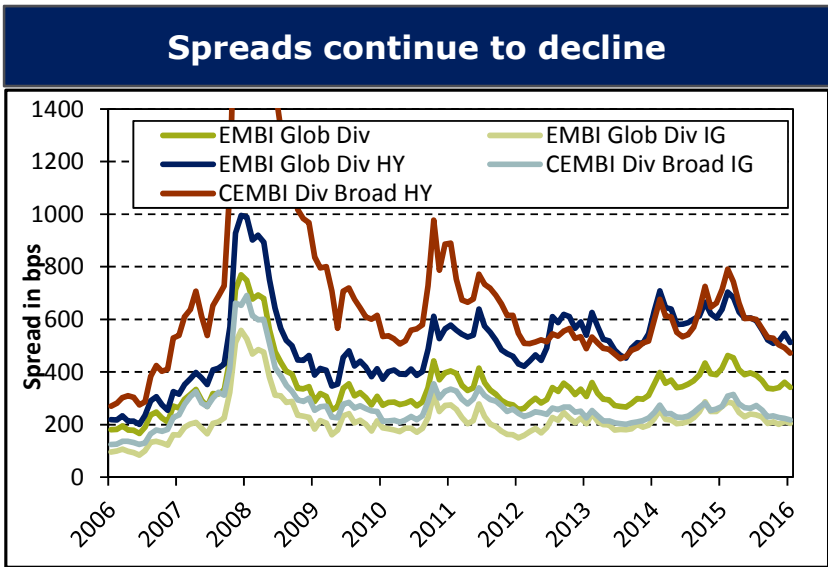
Source: Bloomberg, Citigroup, Barclays

## Global bond returns hurt by rising yields

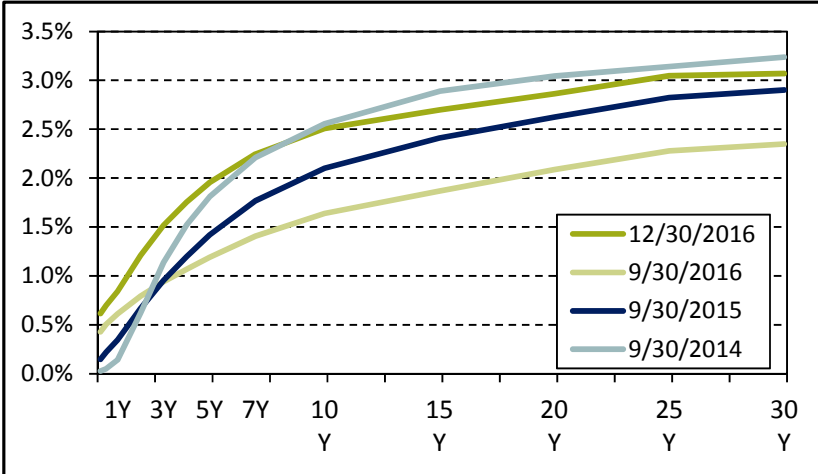


Source: Bloomberg, Citigroup, Barclays

# Emerging Markets Fixed Income

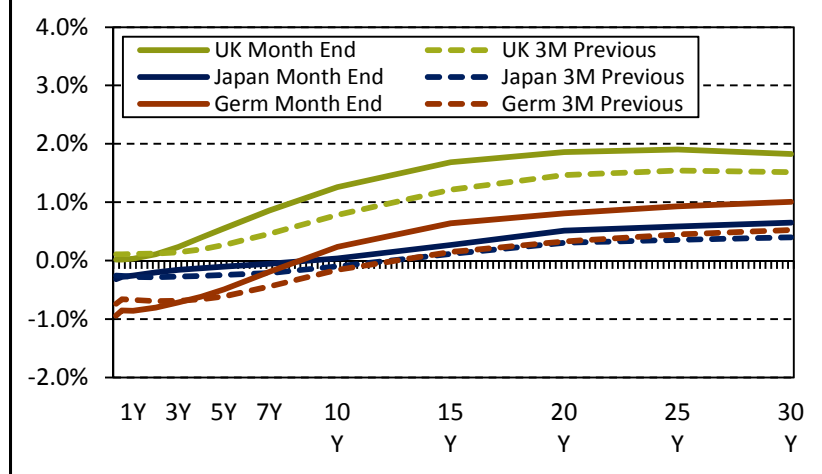


**Rate expectations have increased relative to three months prior**



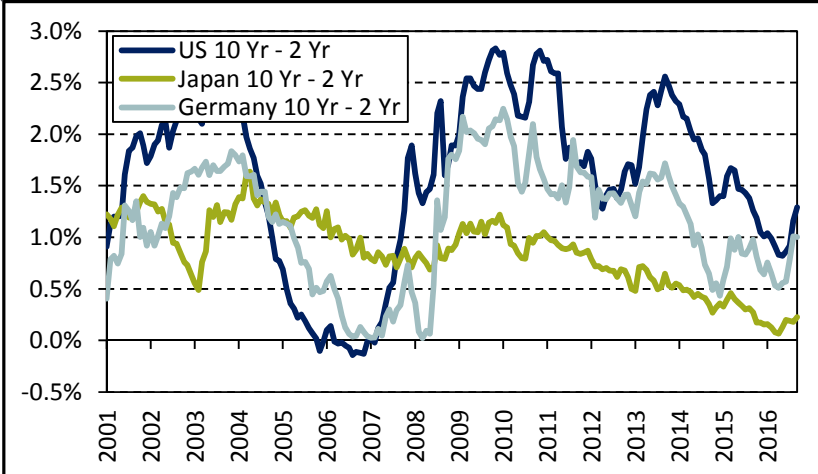
Source: Bloomberg

**Interest rate expectations continue increasing**



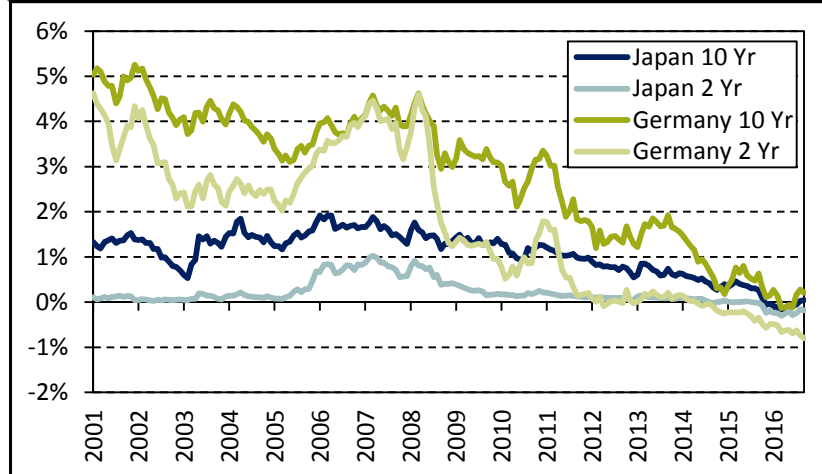
Source: Bloomberg

**10-2 spreads spiked with recent increase in yield**



Source: Bloomberg

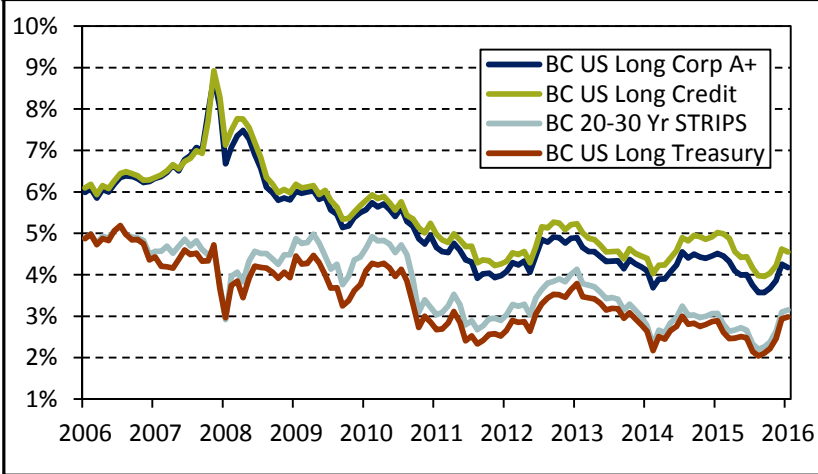
**Sovereign bond yields remain in negative or neutral territory**



Source: Bloomberg

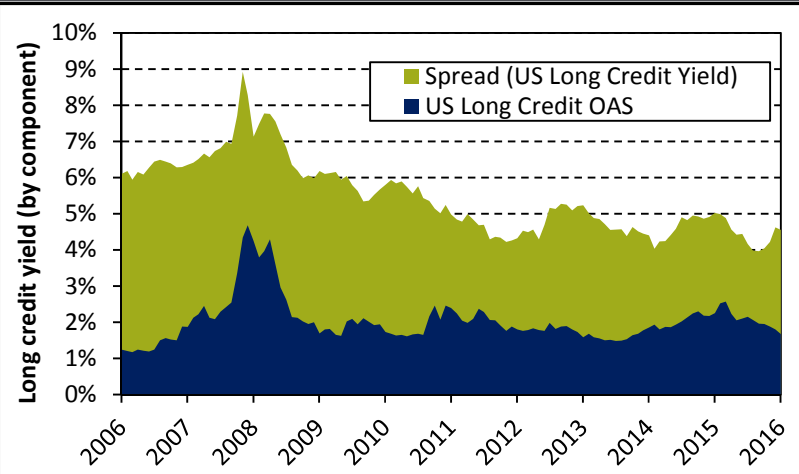
# Long Rates and Liability

## Long duration yields have steadied



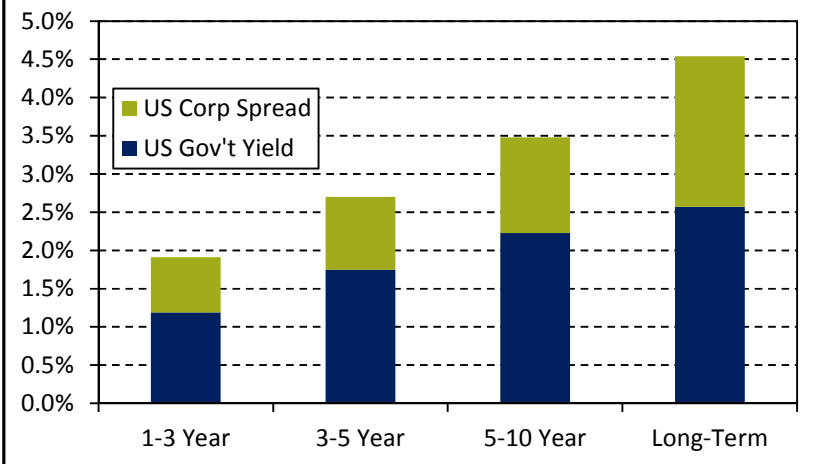
Source: Bloomberg, Citigroup, Barclays

## Long credit yield increases



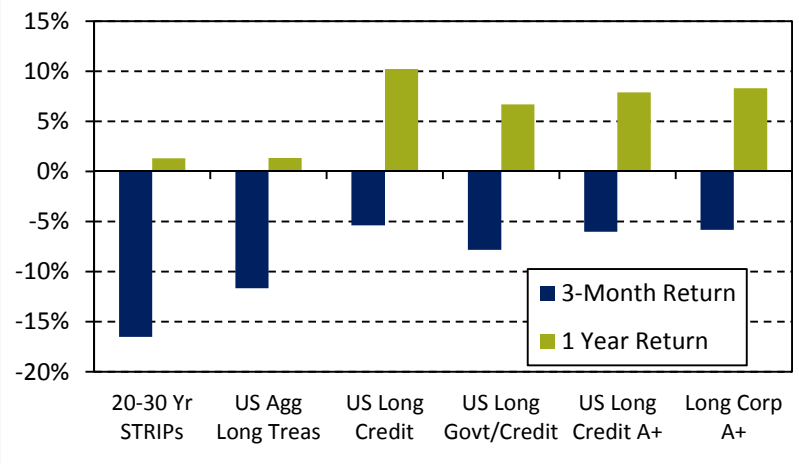
Source: Bloomberg, US Treasury, Barclays, NEPC

## Yield and spread components continue to offer modest returns



Source: Bloomberg, Barclays

## Long duration fixed income posted large short-term losses

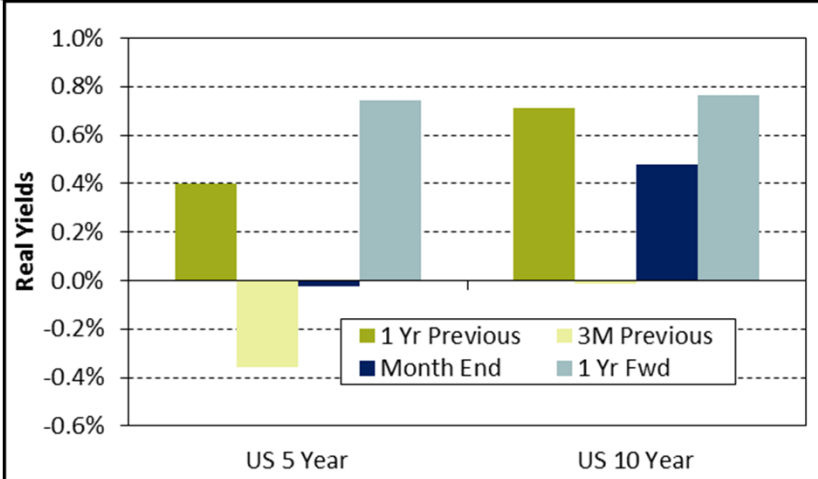


Source: Bloomberg, Barclays



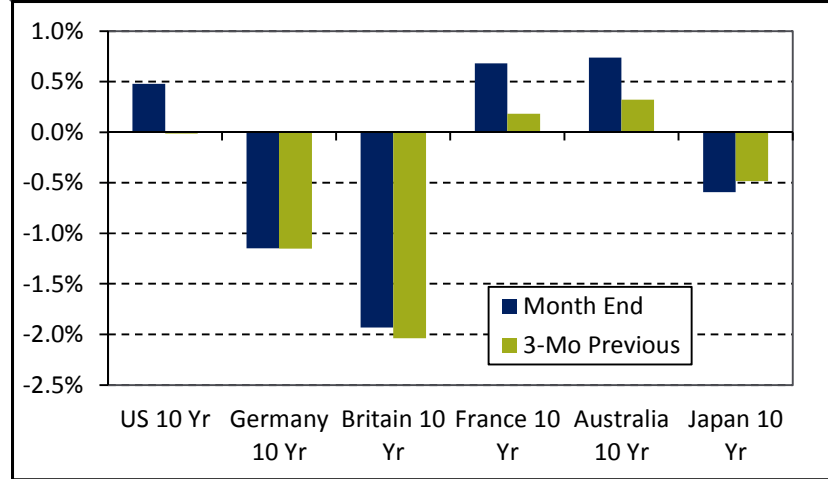
# Inflation and Real Rates

## US 10-year real yields increased from three months prior



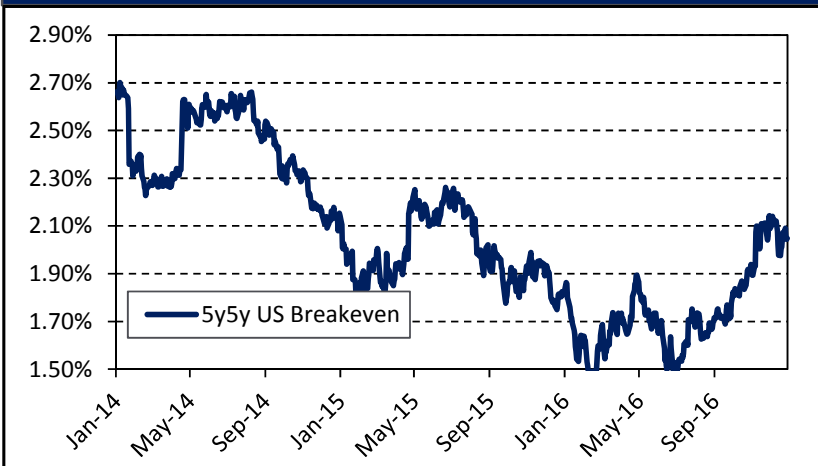
Source: Bloomberg

## With the exception of Japan, global real yields have increased



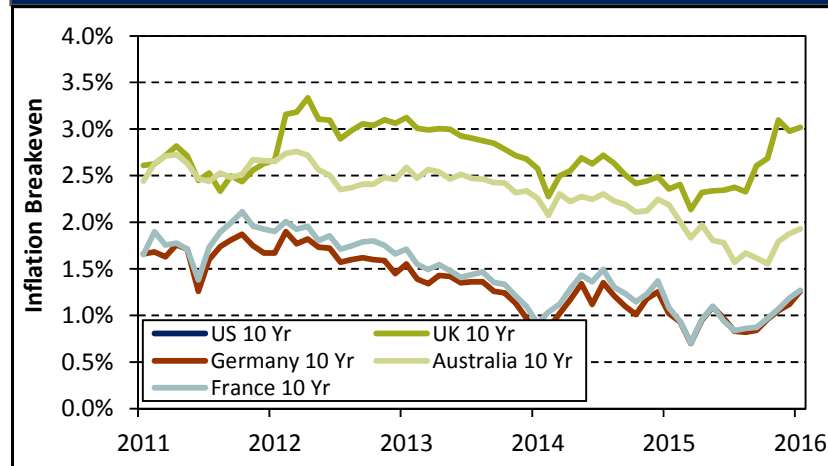
Source: Bloomberg

## US inflation expectations have increased but remain low



Source: Bloomberg

## Global inflation expectations continue to increase

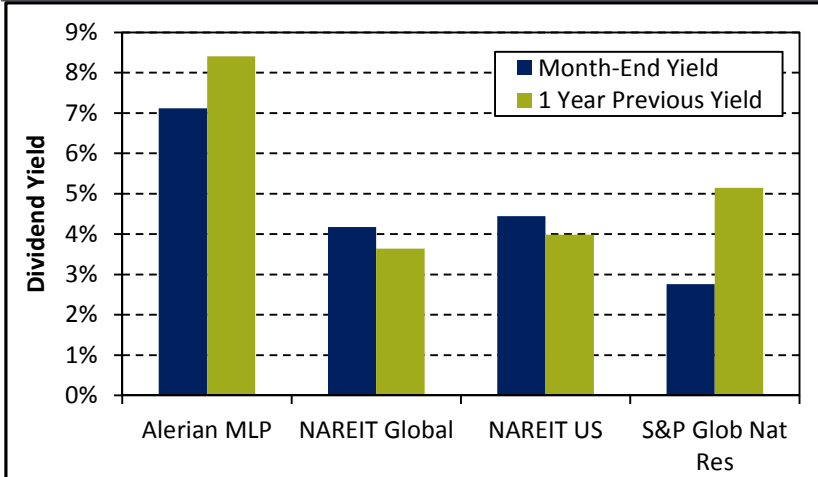


Source: Bloomberg



# Inflation Sensitive Growth Assets

## REITs yields are higher than the previous year



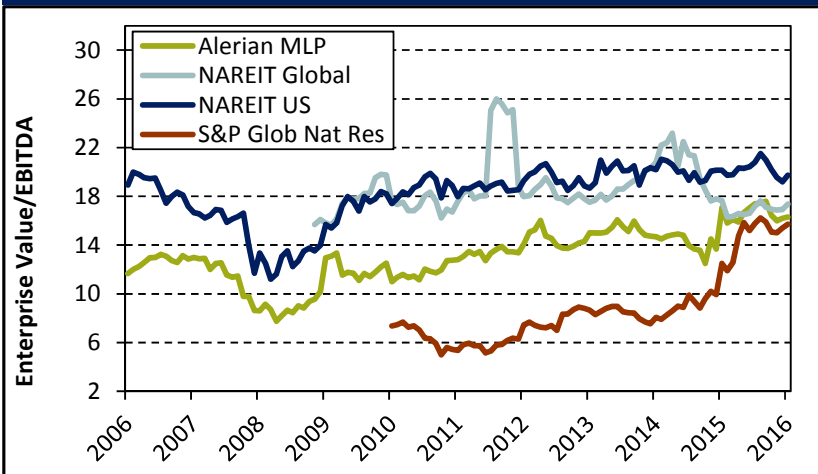
Source: Bloomberg, Alerian, Nareit, Standard and Poors

## Sustained recovery in commercial real estate occupancy rates



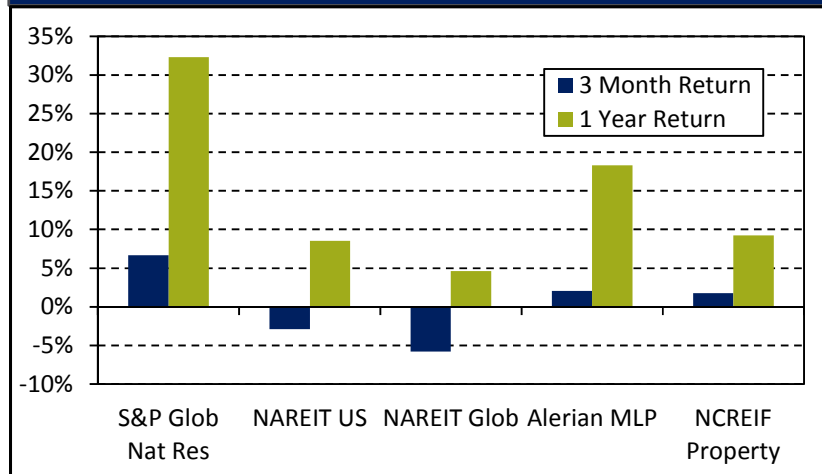
Source: NCREIF

## US REIT valuations have steadied



Source: Bloomberg, US Census Bureau

## REITs have underperformed in recent months

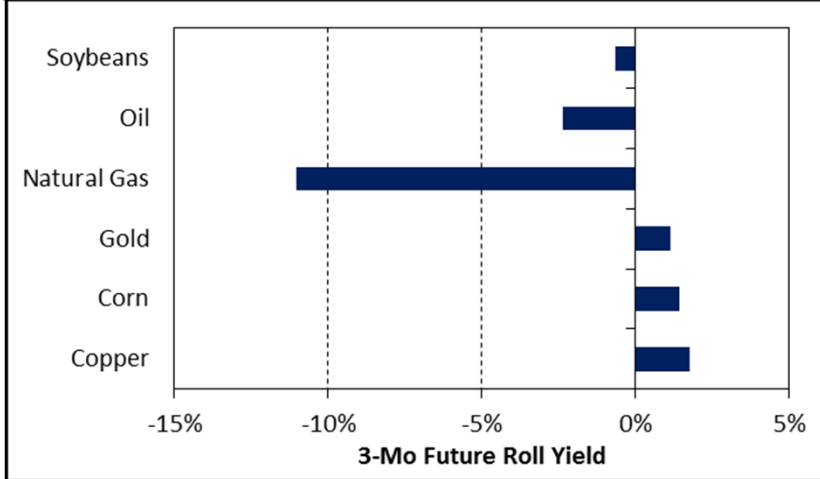


Source: Bloomberg, Alerian, Nareit, Standard and Poors



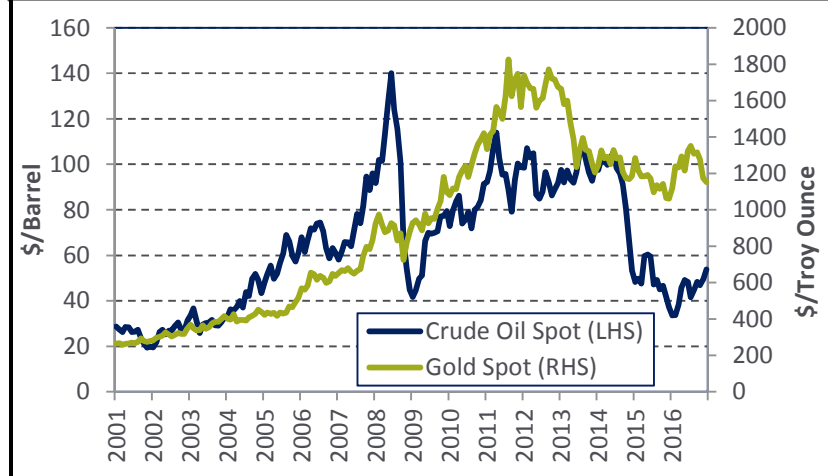
# Commodities

## Negative roll yields remain a hurdle for investing directly in oil and natural gas



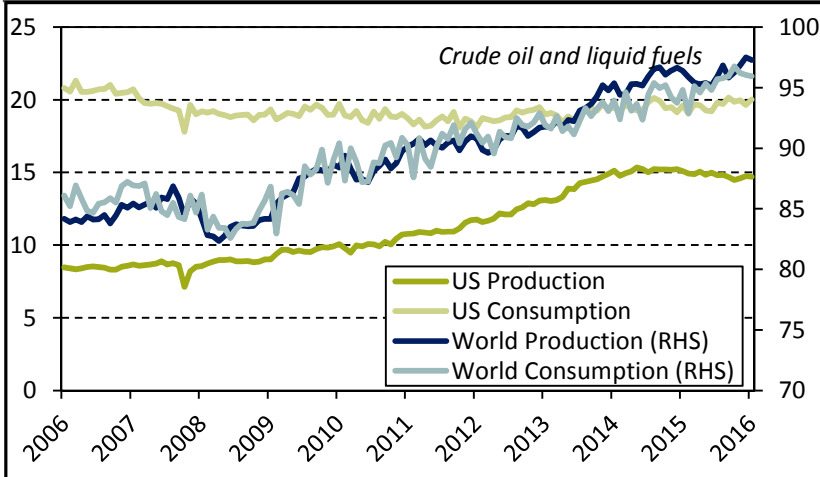
Source: Bloomberg

## Gold continues to decline post-election



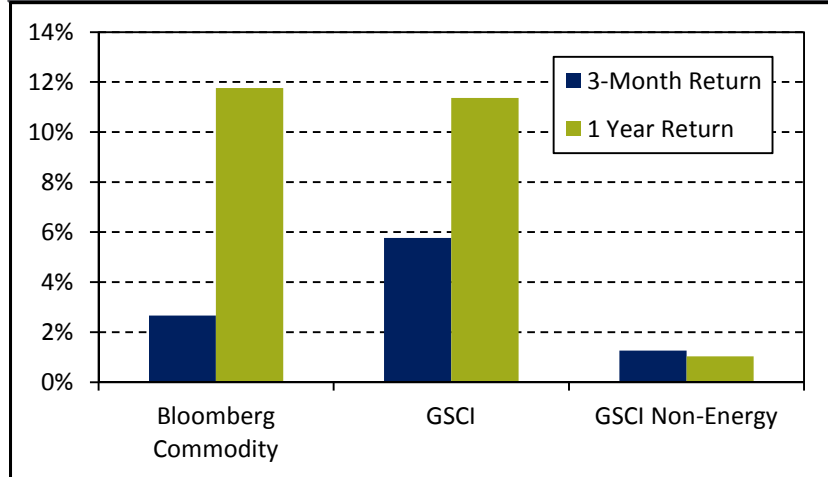
Source: Bloomberg

## World production has slightly declined with recent OPEC agreement



Source: Bloomberg, US Department of Energy \*Crude oil and liquid fuels

## Commodities post strong short-term returns



Source: Bloomberg, Standard and Poors



## Glossary of Investment Terminology

The calculation methodology for each measure of performance is outlined below.

Measurement	Description	Equation
<b>Policy Target</b>	Measures policy allocation decisions.	= TARGET ASSET WEIGHTS X INDEX RETURNS
<b>Allocation Index</b>	Measures actual allocation decisions. Deviations from the policy target can be derived. (Allocation Index – Policy Index)	= ACTUAL ASSET WEIGHTS X INDEX RETURNS
<b>Composite (Total Return)</b>	Measures actual performance and can derive active management decisions. (Composite – Allocation Index)	= ACTUAL ASSET WEIGHTS X ACTUAL RETURNS

The calculation methodology for each measure of attribution is outlined below.

Measurement	Description	Equation
<b>Allocation Effect</b>	Measure the effects of overweighting or underweighting managers and asset classes.	= (ACTUAL MANAGER WEIGHT – POLICY TARGET WEIGHT) X POLICY INDEX RETURN
<b>Selection Effect</b>	Measures the managers’ ability to add excess return relative to the policy index.	= (ACTUAL MANAGER RETURN – INDEX RETURN) X POLICY TARGET WEIGHT
<b>Interaction Effect</b>	Measures the cross correlation of both selection and allocation affects and is often referred to as an “error term”.	= (ACTUAL MANAGER RETURN X (ACTUAL MANAGER WEIGHT – POLICY TARGET WEIGHT)) – ((MANAGER WEIGHT – POLICY TARGET WEIGHT) X INDEX RETURN)

- **Past performance is no guarantee of future results.**
- **The goal of this report is to provide a basis for monitoring financial markets. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.**
- **Information on market indices was provided by 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.**
- **All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.**
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