

# FUND EVALUATION REPORT

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## San Jose Federated City Employees' Retirement System

Quarterly Review  
June 30, 2016



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**Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.**

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# **Executive Summary**

## **As of June 30, 2016**

**The value of the San Jose Federated City Employees' Retirement System assets was \$1.92 billion on June 30, 2016, a decrease of approximately \$13 million from the end of the first quarter. The Retirement System had \$49 million of net outflows, offset by positive investment performance.**

- The Retirement System's net of fees performance for the quarter was strong at +1.8%, but it lagged the returns of the Policy and Custom Benchmarks. The Retirement System outperformed the peer Public Defined Benefit Plans > \$1 Billion Universe's median return of +1.7%, and the Retirement System ranked in the 40th percentile.
- The Retirement System returned +3.7% year-to-date, and -0.7% for the fiscal year, underperforming the Policy and Custom Benchmarks in both periods. The peer universe median was +2.7% and -0.5% over these same periods, ranking the Retirement System in the 12th and 58th percentiles, respectively. The System's standard deviation of returns was 5.9% for the fiscal year versus 8.1% for the peer median.
  - Real Assets was the best absolute performing asset class for the quarter and year-to-date periods, returning +5.8% and +11.3%, respectively. Real Assets' return was driven by strong performance from its subcomponents, particularly Infrastructure and Natural Resources.
  - Equity returned +0.1% for the quarter, underperforming the MSCI ACWI IMI benchmark's return of +1.1%. Equity's subcomponents returns were mixed for the quarter: Global Equity returned -0.4%, U.S. Equity returned +1.5%, International Equity returned -0.9%, Emerging Markets Equity returned -2.6%, and Marketable Alternative Equity returned 1.5%.
  - Fixed Income returned +2.0% for the quarter, underperforming the custom benchmark's return of +3.0%. Each of the components of Fixed Income had positive returns for the quarter: Global Core returned +1.7%, Non-Investment Grade Credit returned +2.6%, and Emerging Markets Debt returned +3.7%.
- The Retirement System added two investment managers during the quarter: Blackrock Long Government (Global Core), and AHL Partners (Global Macro). As previously discussed, Vontobel Emerging Markets was terminated in April 2016 after the resignation of Rajiv Jain. Proceeds from the termination were transferred to the Cash account.

## Artisan Global Value

- Artisan Global Value returned -0.5% for the quarter, underperforming the MSCI ACWI Value's return of +1.2%. Artisan has had very strong returns over the long-term, outperforming the benchmark by 280 basis points over the fiscal year and 3-year periods, and by an average of 620 basis points per year since inception. For the quarter, bank stock holdings, particularly those in the United Kingdom, were the largest detractor.

## Oberweis

- Oberweis International Opportunities returned +0.8% for the quarter, outperforming the MSCI EAFE Small Cap by 340 basis points. The strategy's underweighting of the financial sector (12.5% vs. 22.3%), and the United Kingdom in general, was beneficial in the wake of the Brexit vote. The strategy also had strong performance from underlying health care and consumer discretionary holdings.

## Pinnacle

- Pinnacle Natural Resources returned -1.7% for the quarter and -2.2% year-to-date, underperforming the Bloomberg Commodity Index's returns of +12.8% and +13.3% over the same periods, respectively. Pinnacle is a multi-manager fund that takes active exposure to energy, metals, agricultural commodities, soft commodities, and livestock. Throughout the quarter, Pinnacle's relative value and directional strategies within these sectors provided mixed results.

## Infrastructure and Natural Resources

- The Infrastructure and Natural Resources asset classes are invested passively through separately managed accounts with Rhumblin. The two investments, Rhumblin Brookfield Global Infrastructure and Rhumblin S&P Global Large MidCap Commodity and Natural Resources, have had strong returns in 2016. Year-to-date, the strategies returned +16.4% and +19.2%, respectively.

## Second Quarter Manager Summary

Investment Manager	Asset Class	Changes/ Announcements	Performance Concerns	Meketa Recommendation <sup>1</sup>	Comments
Artisan Global Value	Global Equity	---	---	---	---
Oberweis International Opps.	Int'l Small Cap Equity	---	---	---	---
Cove Street Small Cap Value	Small Cap Equity	---	---	---	---
Aberdeen Frontier Markets Equity	Frontier Markets Equity	Yes	---	Hold	Personnel Changes
Senator Global Opportunity	Long-Short Equity	---	---	---	---
Horizon Portfolio I	Long-Short Equity	Yes	---	Hold	Personnel Change
Sandler Plus	Long-Short Equity	Yes	---	Hold	Personnel Changes
Marshall Wace Eureka	Long-Short Equity	---	---	---	---
Voya Securitized Credit	Global Credit	---	---	---	---
Davidson Kempner Inst.	Long-Short Credit	---	---	---	---
BlueBay EM Select Debt	Global Credit	---	---	---	---
Credit Suisse Risk Parity	Commodities	Yes	---	Hold	Personnel Changes
Pinnacle Natural Resources	Commodities	---	---	---	---
First Quadrant Balanced Risk	Commodities	---	---	---	---

<sup>1</sup> The Meketa Investment Group recommendations are based on the noted organizational or resource changes at each manager.



## Aberdeen

- In December 2015, Aberdeen completed the acquisition of Arden Asset Management LLC, a provider of hedge fund solutions with offices in New York and London. Certain Arden vehicles were named in October 2010 in claims by the Fairfield Sentry Foreign Representatives in bankruptcy and in January 2012 the Madoff trustee in bankruptcy based on certain Arden vehicles having been past redeemers from so-called feeder funds. The Arden management company is bearing all expenses relating to these claims and AAMI believes there will be any recovery under the claims. Accordingly, the claims are expected to be resolved without any materially detrimental impact to AAMI.
- During the quarter, Aberdeen had three departures and one addition to the Global Emerging Markets team. No significant strategy changes are expected as a result of these personnel changes.

## Credit Suisse

- On June 1, 2016, Eric Varvel replaced Bob Jain as the Global Head of Asset Management. Credit Suisse previously announced on March 28, 2016, that Bob Jain had decided to leave the firm. Mr. Varvel has more than 25 years of experience at Credit Suisse, including his most recent roles as Chairman of the Emerging Markets and Sovereign Wealth Funds and senior advisor to the CEO.

## Horizon

- Subsequent to the end of the second quarter, Douglas Calder resigned as Director of the Boards of Horizon Portfolio Limited, Horizon Portfolio I Limited, and Horizon Asset Cayman Limited, the general partner of Horizon Portfolio LP. Mr. Calder will continue to serve as an advisor to the Horizon Funds. Mark Lewis has been appointed to replace Mr. Calder as the director of each of the Horizon Funds.



## Sandler

- During the second quarter, Sandler had one analyst departure and two analyst additions. The Firm also added a new sales and marketing person to market the Sandler Total Return Opportunities Fund, a new credit-focused fund offered by Sandler.
- Subsequent to the end of the quarter, Vanessa Barrett of Carne Global Financial Services (Cayman) Limited, was named to the Board of Directors as an outside director. Ms. Barrett replaced Don Seymour of DMS Offshore Investment Services. Prior to this change, both outside directors were from DMS.

## 2Q16 Review

As of June 30, 2016

## Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Russell Overlay Net Position	Policy	Policy Range	Within IPS Range?
<b>Equity</b>	<b>\$508,697,477</b>	<b>26.5%</b>	<b>30.1%</b>	<b>28.0%</b>	<b>20.0% - 36.0%</b>	<b>Yes</b>
US Equity	\$84,649,000	4.4%	4.9%	--	--	--
International Equity	\$157,482,896	8.2%	9.1%	--	--	--
Global Equity	\$133,753,208	7.0%	8.0%	--	--	--
Emerging Markets Equity	\$17,044,768	0.9%	2.1%	--	--	--
Marketable Alternative Equity	\$115,767,605	6.0%	6.0%	6.0%	3.0% - 9.0%	Yes
<b>Private Equity</b>	<b>\$72,034,084</b>	<b>3.8%</b>	<b>3.8%</b>	<b>9.0%</b>	<b>4.0% - 14.0%</b>	<b>No</b>
Private Equity	\$72,034,084	3.8%	3.8%	9.0%	4.0% - 14.0%	No
<b>Fixed Income</b>	<b>\$407,439,216</b>	<b>21.3%</b>	<b>19.1%</b>	<b>19.0%</b>	<b>9.0% - 29.0%</b>	<b>Yes</b>
Global Core	\$308,864,527	16.1%	13.9%	12.0%	7.0% - 17.0%	Yes
Non-Investment Grade Credit	\$47,512,055	2.5%	2.5%	4.0%	0.0% - 6.0%	Yes
Emerging Markets	\$51,062,634	2.7%	2.7%	3.0%	0.0% - 5.0%	Yes
<b>Private Debt</b>	<b>\$95,472,198</b>	<b>5.0%</b>	<b>5.0%</b>	<b>5.0%</b>	<b>0.0% - 10.0%</b>	<b>Yes</b>
<b>Real Assets</b>	<b>\$478,019,217</b>	<b>24.9%</b>	<b>24.9%</b>	<b>23.0%</b>	<b>15.0% - 30.0%</b>	<b>Yes</b>
Real Estate	\$126,257,082	6.6%	6.6%	7.0%	7.0% - 10.0%	No
Commodities	\$110,626,932	5.8%	5.8%	6.0%	2.0% - 10.0%	Yes
Infrastructure	\$140,717,991	7.3%	7.3%	5.0%	2.0% - 8.0%	Yes
Natural Resources	\$100,417,212	5.2%	5.2%	5.0%	2.0% - 5.0%	Yes
<b>Absolute Return</b>	<b>\$261,237,307</b>	<b>13.6%</b>	<b>13.6%</b>	<b>11.0%</b>	<b>6.0% - 16.0%</b>	<b>Yes</b>
<b>GTAA/Oppportunistic</b>	--	--	<b>0.0%</b>	<b>5.0%</b>	<b>0.0% - 7.0%</b>	<b>Yes</b>
<b>Cash</b>	<b>\$93,831,422</b>	<b>4.9%</b>	<b>3.5%</b>	<b>0.0%</b>	<b>0.0% - 5.0%</b>	<b>Yes</b>
<b>Total</b>	<b>\$1,916,730,921</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>		

<sup>1</sup> Data in the column titled "Russell Overlay Net Position" is based on physical exposures, adjusted for synthetic positions provided by Russell Investments.

<sup>2</sup> Global Equity includes <\$0.1 million of residuals from terminated managers or previous transitions.

<sup>3</sup> Cash includes the cash account, cash equitized in the Russell Investments Overlay program, cash from private manager distributions, and residuals from the Terminated Manager Account.



As of June 30, 2016

## Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Total Fund Aggregate</b>	<b>1,916,730,921</b>	<b>100.0</b>	<b>1.8</b>	<b>3.7</b>	<b>-0.7</b>	<b>-0.7</b>	<b>3.9</b>	<b>3.2</b>	<b>4.0</b>	<b>6.7</b>	<b>Jan-94</b>
<i>Total Fund Ex Overlay (net)</i>			1.9	3.3	-1.1	-1.1	3.8	3.1	3.9	6.7	Jan-94
<i>Consumer Price Index</i>			1.2	1.9	1.0	1.0	1.1	1.3	1.7	2.3	Jan-94
<i>San Jose FCERS Policy Benchmark</i>			2.9	5.8	1.3	1.3	4.4	3.8	4.6	6.9	Jan-94
<i>San Jose FCERS Custom Benchmark</i>			2.9	6.0	1.3	1.3	4.1	3.5	4.3	--	Jan-94
<i>InvestorForce Public DB &gt; \$1B Net Median</i>			1.7	2.7	-0.5	-0.5	6.0	6.0	5.3	7.1	Jan-94
<i>InvestorForce Public DB &gt; \$1B Net Rank</i>			40	12	58	58	94	99	99	71	Jan-94
<b>Equity</b>	<b>508,697,477</b>	<b>26.5</b>	<b>0.1</b>	<b>-0.3</b>	<b>-4.3</b>	<b>-4.3</b>	<b>5.8</b>	<b>5.3</b>	<b>--</b>	<b>6.9</b>	<b>May-10</b>
<i>MSCI ACWI IMI Net USD</i>			1.1	1.4	-3.9	-3.9	6.1	5.4	--	6.7	May-10
<b>Global Equity</b>	<b>133,753,208</b>	<b>7.0</b>	<b>-0.4</b>	<b>0.5</b>	<b>-2.3</b>	<b>-2.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-2.3</b>	<b>Jul-15</b>
<i>MSCI ACWI IMI Net USD</i>			1.1	1.4	-3.9	-3.9	--	--	--	-3.9	Jul-15
<b>U.S. Equity</b>	<b>84,649,000</b>	<b>4.4</b>	<b>1.5</b>	<b>4.0</b>	<b>0.6</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.6</b>	<b>Jul-15</b>
<i>Russell 3000</i>			2.6	3.6	2.1	2.1	--	--	--	2.1	Jul-15
<b>International Equity</b>	<b>157,482,896</b>	<b>8.2</b>	<b>-0.9</b>	<b>-3.6</b>	<b>-8.5</b>	<b>-8.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.5</b>	<b>Jul-15</b>
<i>MSCI EAFE</i>			-1.5	-4.4	-10.2	-10.2	--	--	--	-10.2	Jul-15
<b>Emerging Markets Equity</b>	<b>17,044,768</b>	<b>0.9</b>	<b>-2.6</b>	<b>-1.4</b>	<b>-10.2</b>	<b>-10.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-10.2</b>	<b>Jul-15</b>
<i>MSCI Emerging Markets</i>			0.7	6.4	-12.1	-12.1	--	--	--	-12.1	Jul-15
<b>Marketable Alternative Equity</b>	<b>115,767,605</b>	<b>6.0</b>	<b>1.5</b>	<b>-0.9</b>	<b>-2.1</b>	<b>-2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.0</b>	<b>Oct-14</b>
<i>HFRI Equity Hedge (Total) Index</i>			1.3	-0.5	-5.1	-5.1	--	--	--	-0.8	Oct-14

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Beginning in July 2012, fees are accounted for on a cash basis. Previously, fees were accounted for on an accrual basis.<sup>3</sup> Please see the Appendix for composition of the San Jose FCERS Policy Benchmark.<sup>4</sup> San Jose FCERS Custom Benchmark consists of the individual benchmarks that comprise the San Jose FCERS Policy Benchmark weighted accordingly to actual allocations and re-adjusted monthly.<sup>5</sup> Global Equity includes <\$0.1 million of residuals from terminated managers or previous transitions.<sup>5</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.<sup>6</sup> Cambridge Associates Private Equity Composite (40% Secondary and 60% Fund of Funds) used since 1Q14. Data for the Venture Economics Private Equity Index was used through 4Q13, but the index was discontinued in early 2014.

## Total Fund Aggregate

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Private Equity</b>	<b>72,034,084</b>	<b>3.8</b>	<b>0.1</b>	<b>1.8</b>	<b>2.4</b>	<b>2.4</b>	<b>11.5</b>	<b>10.8</b>	<b>7.0</b>	<b>6.4</b>	<b>Jan-06</b>
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	9.8	10.5	Jan-06
<b>Fixed Income Assets</b>	<b>407,439,216</b>	<b>21.3</b>	<b>2.0</b>	<b>3.9</b>	<b>2.2</b>	<b>2.2</b>	<b>2.0</b>	<b>--</b>	<b>--</b>	<b>2.8</b>	<b>Jan-12</b>
<i>Fixed Income Custom Benchmark</i>			3.0	9.0	9.4	9.4	2.9	--	--	1.8	Jan-12
<b>Global Core</b>	<b>308,864,527</b>	<b>16.1</b>	<b>1.7</b>	<b>3.5</b>	<b>3.2</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.2</b>	<b>Jul-15</b>
<i>Barclays Global Aggregate</i>			2.9	9.0	8.9	8.9	--	--	--	8.9	Jul-15
<b>Non-Investment Grade Credit</b>	<b>47,512,055</b>	<b>2.5</b>	<b>2.6</b>	<b>0.9</b>	<b>-2.9</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-6.8</b>	<b>Oct-14</b>
<i>50% BAML Global HY / 50% S&amp;P Global Leveraged Loan</i>			2.9	5.6	0.9	0.9	--	--	--	1.7	Oct-14
<b>Emerging Markets</b>	<b>51,062,634</b>	<b>2.7</b>	<b>3.7</b>	<b>9.6</b>	<b>2.1</b>	<b>2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.1</b>	<b>Jun-15</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			3.9	12.2	6.0	6.0	--	--	--	6.0	Jun-15
<b>Private Debt</b>	<b>95,472,198</b>	<b>5.0</b>	<b>-0.6</b>	<b>1.2</b>	<b>3.6</b>	<b>3.6</b>	<b>5.9</b>	<b>7.7</b>	<b>--</b>	<b>6.3</b>	<b>Dec-10</b>
<i>3-Month LIBOR + 5%</i>			1.4	2.8	5.5	5.5	5.3	5.4	--	5.4	Dec-10
<b>Real Assets</b>	<b>478,019,217</b>	<b>24.9</b>	<b>5.8</b>	<b>11.3</b>	<b>-1.9</b>	<b>-1.9</b>	<b>1.6</b>	<b>-3.4</b>	<b>--</b>	<b>-0.4</b>	<b>May-10</b>
<b>Real Estate</b>	<b>126,257,082</b>	<b>6.6</b>	<b>2.4</b>	<b>6.6</b>	<b>14.8</b>	<b>14.8</b>	<b>16.7</b>	<b>14.3</b>	<b>5.8</b>	<b>9.3</b>	<b>Jan-94</b>
<b>Core Real Estate</b>	<b>84,252,611</b>	<b>4.4</b>	<b>1.6</b>	<b>5.1</b>	<b>12.8</b>	<b>12.8</b>	<b>12.7</b>	<b>12.0</b>	<b>--</b>	<b>9.9</b>	<b>Jul-09</b>
<i>NCREIF ODCE Equal Weighted (net)</i>			2.0	4.2	11.2	11.2	12.1	11.7	--	9.6	Jul-09
<b>Private Real Estate</b>	<b>42,004,471</b>	<b>2.2</b>	<b>6.2</b>	<b>12.0</b>	<b>21.7</b>	<b>21.7</b>	<b>26.9</b>	<b>20.2</b>	<b>--</b>	<b>9.0</b>	<b>Jul-09</b>
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	11.5	--	10.3	Jul-09
<b>Commodities</b>	<b>110,626,932</b>	<b>5.8</b>	<b>4.3</b>	<b>4.7</b>	<b>-15.5</b>	<b>-15.5</b>	<b>-8.7</b>	<b>-9.8</b>	<b>--</b>	<b>-5.4</b>	<b>May-10</b>
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-6.4	May-10
<b>Infrastructure</b>	<b>140,717,991</b>	<b>7.3</b>	<b>7.6</b>	<b>16.4</b>	<b>3.9</b>	<b>3.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.8</b>	<b>Mar-14</b>
<i>DJ Brookfield Global Infrastructure Net TR USD</i>			7.4	16.2	3.2	3.2	--	--	--	4.9	Mar-14

<sup>1</sup> Fiscal Year begins July 1.

<sup>2</sup> Returns for the Fixed income, Private Debt, and Real Assets Aggregates are gross of fees through June 2015 and net of fees thereafter.

<sup>3</sup> Prior to 10/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 10/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.



## Total Fund Aggregate

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Natural Resources</b>	<b>100,417,212</b>	<b>5.2</b>	<b>9.8</b>	<b>19.2</b>	<b>-9.5</b>	<b>-9.5</b>	<b>-2.3</b>	--	--	<b>-5.2</b>	<b>Nov-12</b>
<i>S&amp;P Global Natural Resources Index TR USD</i>			7.0	16.9	-8.9	-8.9	-2.9	--	--	-4.9	Nov-12
<b>Absolute Return</b>	<b>261,237,307</b>	<b>13.6</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>3.3</b>	--	--	<b>3.7</b>	<b>Nov-12</b>
<i>HFRI Macro (Total) Index</i>			1.3	2.8	1.9	1.9	2.5	--	--	2.0	Nov-12
<b>Relative Value</b>	<b>112,178,707</b>	<b>5.9</b>	<b>2.4</b>	<b>1.0</b>	<b>-0.3</b>	<b>-0.3</b>	--	--	--	<b>2.9</b>	<b>Oct-14</b>
<i>HFRI Relative Value (Total) Index</i>			2.9	2.6	-0.3	-0.3	--	--	--	0.8	Oct-14
<b>Global Macro</b>	<b>149,058,600</b>	<b>7.8</b>	<b>-2.1</b>	<b>-0.1</b>	<b>1.8</b>	<b>1.8</b>	--	--	--	<b>1.2</b>	<b>Oct-14</b>
<i>HFRI Marco: Discretionary Thematic Index</i>			0.6	-0.2	-1.5	-1.5	--	--	--	-0.5	Oct-14
<b>Cash</b>	<b>93,831,422</b>	<b>4.9</b>									

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Cash includes the cash account, cash equitized in the Russell Investments Overlay program, cash from private manager distributions, and residuals from the Terminated Manager Account.

As of June 30, 2016

## Trailing Net Performance

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Equity</b>	<b>508,697,477</b>	<b>26.5</b>	<b>0.1</b>	<b>-0.3</b>	<b>-4.3</b>	<b>-4.3</b>	<b>5.8</b>	<b>5.3</b>	<b>--</b>	<b>6.9</b>	<b>May-10</b>
<i>MSCI ACWI IMI Net USD</i>			1.1	1.4	-3.9	-3.9	6.1	5.4	--	6.7	May-10
<b>Global Equity</b>	<b>133,753,208</b>	<b>7.0</b>	<b>-0.4</b>	<b>0.5</b>	<b>-2.3</b>	<b>-2.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-2.3</b>	<b>Jul-15</b>
<i>MSCI ACWI IMI Net USD</i>			1.1	1.4	-3.9	-3.9	--	--	--	-3.9	Jul-15
Artisan Global Value	133,275,203	7.0	-0.5	1.2	-2.0	-2.0	7.0	10.0	--	9.9	Mar-11
<i>MSCI ACWI Value Net USD</i>			1.2	2.0	-4.8	-4.8	4.2	4.2	--	3.7	Mar-11
Russell Currency Hedge	478,005	0.0									
<b>U.S. Equity</b>	<b>84,649,000</b>	<b>4.4</b>	<b>1.5</b>	<b>4.0</b>	<b>0.6</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>0.6</b>	<b>Jul-15</b>
<i>Russell 3000</i>			2.6	3.6	2.1	2.1	--	--	--	2.1	Jul-15
Northern Trust Russell 3000 Index	56,653,452	3.0	2.6	3.7	2.2	2.2	11.2	11.7	7.5	5.4	Sep-99
<i>Russell 3000</i>			2.6	3.6	2.1	2.1	11.1	11.6	7.4	5.3	Sep-99
Cove Street Small Cap Value	27,995,548	1.5	-0.8	4.9	-2.3	-2.3	--	--	--	1.5	May-14
<i>Russell 2000 Value</i>			4.3	6.1	-2.6	-2.6	--	--	--	1.5	May-14
<b>International Equity</b>	<b>157,482,896</b>	<b>8.2</b>	<b>-0.9</b>	<b>-3.6</b>	<b>-8.5</b>	<b>-8.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.5</b>	<b>Jul-15</b>
<i>MSCI EAFE</i>			-1.5	-4.4	-10.2	-10.2	--	--	--	-10.2	Jul-15
Northern Trust MSCI EAFE Index-NL	128,128,417	6.7	-1.3	-4.2	-9.9	-9.9	2.4	--	--	4.7	Nov-12
<i>MSCI EAFE</i>			-1.5	-4.4	-10.2	-10.2	2.1	--	--	4.4	Nov-12

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.<sup>3</sup> Global Equity includes <\$0.1 million of residuals from terminated managers or previous transitions. Global Equity includes a partial currency hedge initiated on August 21, 2015 of the following currencies: Australian Dollar, Canadian Dollar, Swiss Franc, Euro, British Pound Sterling, and Japanese Yen. As of the date of this report, the unrealized profit or loss was \$0.5 mm and the total net exposure of the hedge was \$28.1 mm.<sup>4</sup> The System initiated a partial currency hedge on August 21, 2015 of the following currencies: Australian Dollar, Canadian Dollar, Swiss Franc, Euro, British Pound Sterling, and Japanese Yen. As of the date of this report, the unrealized profit or loss was \$0.5 mm and the total net exposure of the hedge was \$28.1 mm.

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Oberweis International Opportunities	29,335,286	1.5	0.8	-1.2	--	--	--	--	--	2.9	Nov-15
<i>MSCI EAFE Small Cap</i>			-2.6	-3.2	--	--	--	--	--	-2.4	Nov-15
<b>Emerging Markets Equity</b>	<b>17,044,768</b>	<b>0.9</b>	<b>-2.6</b>	<b>-1.4</b>	<b>-10.2</b>	<b>-10.2</b>	--	--	--	<b>-10.2</b>	<b>Jul-15</b>
<i>MSCI Emerging Markets</i>			0.7	6.4	-12.1	-12.1	--	--	--	-12.1	Jul-15
Aberdeen Frontier Markets	17,044,768	0.9	-0.3	-3.3	-12.0	-12.0	--	--	--	-6.6	Dec-13
<i>MSCI Frontier Markets</i>			0.5	-0.5	-12.1	-12.1	--	--	--	-2.8	Dec-13
<i>MSCI Frontier Markets ex GCC NR USD</i>			1.9	1.5	-9.8	-9.8	--	--	--	-6.2	Dec-13
<b>Marketable Alternative Equity</b>	<b>115,767,605</b>	<b>6.0</b>	<b>1.5</b>	<b>-0.9</b>	<b>-2.1</b>	<b>-2.1</b>	--	--	--	<b>4.0</b>	<b>Oct-14</b>
<i>HFRI Equity Hedge (Total) Index</i>			1.3	-0.5	-5.1	-5.1	--	--	--	-0.8	Oct-14
Senator Global Opportunity Offshore Fund	34,605,153	1.8	0.6	-2.1	-9.3	-9.3	4.5	--	--	5.3	Apr-13
<i>HFRI Event-Driven (Total) Index</i>			2.9	2.2	-3.8	-3.8	2.0	--	--	2.4	Apr-13
Horizon Portfolio I	32,215,585	1.7	1.8	2.1	5.2	5.2	7.3	--	--	7.3	Jul-13
<i>HFRI Equity Hedge (Total) Index</i>			1.3	-0.5	-5.1	-5.1	3.0	--	--	3.0	Jul-13
Sandler Plus Offshore Fund Ltd	25,307,287	1.3	1.5	0.0	6.8	6.8	8.6	--	--	7.7	May-13
<i>HFRI Equity Hedge (Total) Index</i>			1.3	-0.5	-5.1	-5.1	3.0	--	--	2.7	May-13
Marshall Wace Eureka Fund	23,639,580	1.2	2.4	-2.9	0.4	0.4	--	--	--	7.1	Apr-14
<i>HFRI Equity Hedge (Total) Index</i>			1.3	-0.5	-5.1	-5.1	--	--	--	-0.3	Apr-14
<b>Private Equity</b>	<b>72,034,084</b>	<b>3.8</b>	<b>0.1</b>	<b>1.8</b>	<b>2.4</b>	<b>2.4</b>	<b>11.5</b>	<b>10.8</b>	<b>7.0</b>	<b>6.4</b>	<b>Jan-06</b>
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	9.8	10.5	Jan-06

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Cambridge Associates Private Equity Composite (40% Secondary and 60% Fund of Funds) used since 1Q14. Data for the Venture Economics Private Equity Index was used through 4Q13, but the index was discontinued in early 2014.



## Total Fund Aggregate

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Pantheon USA Fund VII	28,344,985	1.5	2.0	1.8	4.4	4.4	14.0	12.9	--	--	Jan-07
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	--	--	Jan-07
Partners Group Secondary 2011, L.P.	13,384,284	0.7	0.9	4.3	9.4	9.4	18.4	--	--	28.1	Nov-12
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	--	--	12.3	Nov-12
Pathway Private Equity Fund VIII	11,609,270	0.6	-1.1	-2.4	-3.7	-3.7	10.5	11.2	--	--	Aug-04
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	--	--	Aug-04
Pantheon Global Secondary Fund III 'B'	10,107,484	0.5	-1.1	-1.8	-2.9	-2.9	2.1	1.6	--	--	Jan-07
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	--	--	Jan-07
Partners Group Secondary 2008, L.P.	4,369,563	0.2	-5.1	10.0	-2.4	-2.4	6.3	7.0	--	--	Dec-08
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	--	--	Dec-08
Great Hill Equity Partners IV, LP	4,218,497	0.2	-2.5	6.1	11.6	11.6	26.0	34.3	--	--	Oct-08
<i>Cambridge Associates Private Equity Composite</i>			0.3	1.2	6.9	6.9	10.6	10.9	--	--	Oct-08
<b>Fixed Income Assets</b>	<b>407,439,216</b>	<b>21.3</b>	<b>2.0</b>	<b>3.9</b>	<b>2.2</b>	<b>2.2</b>	<b>2.0</b>	<b>--</b>	<b>--</b>	<b>2.8</b>	<b>Jan-12</b>
<i>Fixed Income Custom Benchmark</i>			3.0	9.0	9.4	9.4	2.9	--	--	1.8	Jan-12
<b>Global Core</b>	<b>308,864,527</b>	<b>16.1</b>	<b>1.7</b>	<b>3.5</b>	<b>3.2</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.2</b>	<b>Jul-15</b>
<i>Barclays Global Aggregate</i>			2.9	9.0	8.9	8.9	--	--	--	8.9	Jul-15
Northern Trust Intermediate Gov't 1-10 Year	109,772,426	5.7	1.2	3.6	3.9	3.9	2.4	--	--	1.6	Oct-12
<i>Barclays Int Govt.</i>			1.2	3.6	3.9	3.9	2.4	--	--	1.6	Oct-12
Northern Trust TIPS 0-5 Years	111,170,148	5.8	0.9	2.7	1.6	1.6	--	--	--	-0.2	Jul-14
<i>Barclays U.S. TIPS 0-5 Years</i>			0.8	2.7	1.7	1.7	--	--	--	-0.1	Jul-14

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Cambridge Associates Private Equity Composite (40% Secondary and 60% Fund of Funds) used since 1Q14. Data for the Venture Economics Private Equity Index was used through 4Q13, but the index was discontinued in early 2014.<sup>5</sup> Returns for the Fixed Income Aggregate are gross of fees through June 2015 and net of fees thereafter.<sup>4</sup> Prior to 10/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 10/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.

## Total Fund Aggregate

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Voya Securitized Credit	56,780,474	3.0	2.7	3.2	3.2	3.2	--	--	--	3.2	Jul-15
<i>Barclays Global Aggregate Securitized TR USD</i>			0.6	3.4	3.9	3.9	--	--	--	3.9	<i>Jul-15</i>
BlackRock Long Government Index	31,141,480	1.6	--	--	--	--	--	--	--	6.1	Jun-16
<b>Non-Investment Grade Credit</b>	<b>47,512,055</b>	<b>2.5</b>	<b>2.6</b>	<b>0.9</b>	<b>-2.9</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-6.8</b>	<b>Oct-14</b>
<i>50% BAML Global HY / 50% S&amp;P Global Leveraged Loan</i>			2.9	5.6	0.9	0.9	--	--	--	1.7	<i>Oct-14</i>
Claren Road Credit Fund	12,265,655	0.6	2.2	-2.2	-10.4	-10.4	-9.0	--	--	-9.0	Jul-13
<i>HFRI RV: Fixed Income-Corporate Index</i>			3.8	4.7	0.9	0.9	2.7	--	--	2.7	<i>Jul-13</i>
Davidson Kempner Institutional Partners, L.P.	35,246,400	1.8	2.8	2.5	2.0	2.0	4.0	--	--	4.7	Feb-13
<i>HFRI Event-Driven (Total) Index</i>			2.9	2.2	-3.8	-3.8	2.0	--	--	2.7	<i>Feb-13</i>
<b>Emerging Markets</b>	<b>51,062,634</b>	<b>2.7</b>	<b>3.7</b>	<b>9.6</b>	<b>2.1</b>	<b>2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.1</b>	<b>Jun-15</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			3.9	12.2	6.0	6.0	--	--	--	6.0	<i>Jun-15</i>
BlueBay Emerging Market Select Debt	51,062,634	2.7	3.7	9.6	2.1	2.1	--	--	--	2.1	Jul-15
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>			3.9	12.2	6.0	6.0	--	--	--	6.0	<i>Jul-15</i>
<b>Private Debt</b>	<b>95,472,198</b>	<b>5.0</b>	<b>-0.6</b>	<b>1.2</b>	<b>3.6</b>	<b>3.6</b>	<b>5.9</b>	<b>7.7</b>	<b>--</b>	<b>6.3</b>	<b>Dec-10</b>
<i>3-Month LIBOR + 5%</i>			1.4	2.8	5.5	5.5	5.3	5.4	--	5.4	<i>Dec-10</i>
Medley Opportunity Fund II	46,272,402	2.4	-0.4	-0.6	2.6	2.6	6.8	7.0	--	6.8	Jun-11
<i>3-Month LIBOR + 5%</i>			1.4	2.8	5.5	5.5	5.3	5.4	--	5.4	<i>Jun-11</i>
White Oak Direct Lending Account	34,491,350	1.8	0.5	12.0	17.5	17.5	9.1	7.9	--	6.7	Feb-11
<i>3-Month LIBOR + 5%</i>			1.4	2.8	5.5	5.5	5.3	5.4	--	5.4	<i>Feb-11</i>
GSO Direct Lending Account	14,708,446	0.8	-3.0	-12.0	-15.5	-15.5	-1.8	6.6	--	6.5	Mar-11
<i>3-Month LIBOR + 5%</i>			1.4	2.8	5.5	5.5	5.3	5.4	--	5.4	<i>Mar-11</i>

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Returns for the Private Debt Aggregate are gross of fees through June 2015 and net of fees thereafter.

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
<b>Real Assets</b>	<b>478,019,217</b>	<b>24.9</b>	<b>5.8</b>	<b>11.3</b>	<b>-1.9</b>	<b>-1.9</b>	<b>1.6</b>	<b>-3.4</b>	<b>--</b>	<b>-0.4</b>	<b>May-10</b>
<b>Real Estate</b>	<b>126,257,082</b>	<b>6.6</b>	<b>2.4</b>	<b>6.6</b>	<b>14.8</b>	<b>14.8</b>	<b>16.7</b>	<b>14.3</b>	<b>5.8</b>	<b>9.3</b>	<b>Jan-94</b>
<b>Core Real Estate</b>	<b>84,252,611</b>	<b>4.4</b>	<b>1.6</b>	<b>5.1</b>	<b>12.8</b>	<b>12.8</b>	<b>12.7</b>	<b>12.0</b>	<b>--</b>	<b>9.9</b>	<b>Jul-09</b>
<i>NCREIF ODCE Equal Weighted (net)</i>			2.0	4.2	11.2	11.2	12.1	11.7	--	9.6	Jul-09
PRISA	45,898,214	2.4	2.0	5.1	13.3	13.3	13.1	12.3	4.9	7.0	Jul-04
<i>NCREIF ODCE Equal Weighted (net)</i>			2.0	4.2	11.2	11.2	12.1	11.7	5.0	6.8	Jul-04
American Realty	38,354,398	2.0	1.2	5.2	12.3	12.3	12.2	11.6	--	4.7	Jan-07
<i>NCREIF ODCE Equal Weighted (net)</i>			2.0	4.2	11.2	11.2	12.1	11.7	--	4.5	Jan-07
<b>Private Real Estate</b>	<b>42,004,471</b>	<b>2.2</b>	<b>6.2</b>	<b>12.0</b>	<b>21.7</b>	<b>21.7</b>	<b>26.9</b>	<b>20.2</b>	<b>--</b>	<b>9.0</b>	<b>Jul-09</b>
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	11.5	--	10.3	Jul-09
DRA Growth & Income Fund VIII	12,858,614	0.7	1.1	3.7	10.9	10.9	--	--	--	10.5	Jan-15
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	--	--	--	11.8	Jan-15
DRA Growth and Income Fund VII	14,784,316	0.8	9.4	15.3	23.3	23.3	18.5	--	--	17.5	Apr-12
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	--	--	11.4	Apr-12
DRA Growth and Income Fund V	5,657,809	0.3	1.7	6.0	22.4	22.4	18.7	12.7	6.1	6.0	Jan-06
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	11.5	7.4	7.8	Jan-06
DRA Growth and Income Fund VI	3,490,975	0.2	2.0	10.9	21.5	21.5	24.7	21.2	--	10.7	Jan-08
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	11.5	--	5.9	Jan-08
Fidelity Real Estate Growth Fund III	3,272,059	0.2	3.2	6.2	12.8	12.8	23.5	19.4	--	-7.2	Jan-08
<i>NCREIF Property Index</i>			2.0	4.3	10.6	10.6	11.6	11.5	--	5.9	Jan-08

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Returns for the Real Assets Aggregate are gross of fees through June 2015 and net of fees thereafter.

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Tristan Capital Partners <i>NCREIF Property Index</i>	1,940,699	0.1	-4.0 2.0	9.2 4.3	-- --	-- --	-- --	-- --	-- --	9.2 4.3	Jan-16 Jan-16
<b>Commodities</b>	<b>110,626,932</b>	<b>5.8</b>	<b>4.3</b>	<b>4.7</b>	<b>-15.5</b>	<b>-15.5</b>	<b>-8.7</b>	<b>-9.8</b>	<b>--</b>	<b>-5.4</b>	<b>May-10</b>
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-6.4	May-10
Credit Suisse Risk Parity Commodity Index <i>Custom Risk Parity Commodity Benchmark</i>	55,633,182	2.9	8.3 7.9	9.2 8.4	-11.4 -11.6	-11.4 -11.6	-6.7 -6.9	-7.5 -7.6	-- --	-8.1 -8.2	Apr-11 Apr-11
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-11.5	Apr-11
Pinnacle Natural Resources, L.P. <i>Bloomberg Commodity Index TR USD</i>	39,132,200	2.0	-1.7 12.8	-2.2 13.3	-- --	-- --	-- --	-- --	-- --	-2.2 13.3	Jan-16 Jan-16
First Quadrant Risk Commodity <i>Custom Risk Parity Commodity Benchmark</i>	15,861,551	0.8	6.4 7.9	7.5 8.4	-13.8 -11.6	-13.8 -11.6	-8.3 -6.9	-10.6 -7.6	-- --	-11.0 -8.2	Apr-11 Apr-11
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-11.5	Apr-11
<b>Infrastructure</b>	<b>140,717,991</b>	<b>7.3</b>	<b>7.6</b>	<b>16.4</b>	<b>3.9</b>	<b>3.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.8</b>	<b>Mar-14</b>
<i>DJ Brookfield Global Infrastructure Net TR USD</i>			7.4	16.2	3.2	3.2	--	--	--	4.9	Mar-14
Rhumblin DJ Brookfield Global Infrastructure <i>DJ Brookfield Global Infrastructure Net TR USD</i>	140,708,278	7.3	7.6 7.4	16.4 16.2	3.9 3.2	3.9 3.2	-- --	-- --	-- --	-0.2 -0.9	Jun-15 Jun-15
SSgA DJ Brookfield Infrastructure Index	9,713	0.0									
<b>Natural Resources</b>	<b>100,417,212</b>	<b>5.2</b>	<b>9.8</b>	<b>19.2</b>	<b>-9.5</b>	<b>-9.5</b>	<b>-2.3</b>	<b>--</b>	<b>--</b>	<b>-5.2</b>	<b>Nov-12</b>
<i>S&amp;P Global Natural Resources Index TR USD</i>			7.0	16.9	-8.9	-8.9	-2.9	--	--	-4.9	Nov-12
Rhumblin S&P Global Large MidCap Commodity & NR <i>S&amp;P Global LargeMidCap Commodity and Resources GR USD</i>	100,340,092	5.2	9.8 9.7	19.2 19.9	-9.5 -9.2	-9.5 -9.2	-- --	-- --	-- --	-13.2 -13.0	Jun-15 Jun-15

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Custom Risk Parity Commodity Benchmark returns provided by Credit Suisse.<sup>3</sup> Tracking error due to a cash position resulting from a delay in the ability to invest in certain markets.

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Northern Trust Global LargeMid Natural Resources	77,120	0.0									
<b>Absolute Return</b>	<b>261,237,307</b>	<b>13.6</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>3.3</b>	<b>--</b>	<b>--</b>	<b>3.7</b>	<b>Nov-12</b>
<i>HFRI Macro (Total) Index</i>			1.3	2.8	1.9	1.9	2.5	--	--	2.0	Nov-12
<b>Relative Value</b>	<b>112,178,707</b>	<b>5.9</b>	<b>2.4</b>	<b>1.0</b>	<b>-0.3</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.9</b>	<b>Oct-14</b>
<i>HFRI Relative Value (Total) Index</i>			2.9	2.6	-0.3	-0.3	--	--	--	0.8	Oct-14
DE Shaw	45,346,656	2.4	2.9	4.2	7.2	7.2	12.6	--	--	12.9	Apr-13
<i>HFRI Fund Weighted Composite Index</i>			1.8	1.2	-2.4	-2.4	2.9	--	--	2.5	Apr-13
Pine River Fund Ltd	33,181,159	1.7	4.3	-2.0	-8.8	-8.8	0.8	--	--	2.6	Jan-13
<i>HFRI Relative Value (Total) Index</i>			2.9	2.6	-0.3	-0.3	3.4	--	--	--	Jan-13
Hudson Bay Fund	15,207,626	0.8	1.3	1.6	-2.0	-2.0	--	--	--	0.3	Aug-13
<i>HFRI Relative Value (Total) Index</i>			2.9	2.6	-0.3	-0.3	--	--	--	3.3	Aug-13
Arrowgrass International Fund Ltd	18,443,266	1.0	-1.0	-1.3	0.0	0.0	3.9	--	--	5.3	Nov-12
<i>HFRI Relative Value (Total) Index</i>			2.9	2.6	-0.3	-0.3	3.4	--	--	4.1	Nov-12
<b>Global Macro</b>	<b>149,058,600</b>	<b>7.8</b>	<b>-2.1</b>	<b>-0.1</b>	<b>1.8</b>	<b>1.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.2</b>	<b>Oct-14</b>
<i>HFRI Marco: Discretionary Thematic Index</i>			0.6	-0.2	-1.5	-1.5	--	--	--	-0.5	Oct-14
Brevan Howard Fund, Limited	30,192,021	1.6	-3.0	-3.0	-5.1	-5.1	--	--	--	-5.1	Jul-15
<i>HFRI Macro (Total) Index</i>			1.3	2.8	1.9	1.9	--	--	--	1.9	Jul-15
Keynes Leveraged Quantitative Strategies Fund	19,465,200	1.0	-4.3	-2.7	--	--	--	--	--	-2.7	Jan-16
<i>HFRI Macro (Total) Index</i>			1.3	2.8	--	--	--	--	--	2.8	Jan-16
Dymon Asia Macro	20,190,000	1.1	1.9	1.9	--	--	--	--	--	0.9	Sep-15
<i>HFRI Macro (Total) Index</i>			1.3	2.8	--	--	--	--	--	2.6	Sep-15

<sup>1</sup> Fiscal Year begins July 1.

## Total Fund Aggregate

As of June 30, 2016

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Pharo Macro Fund, Ltd.	21,024,155	1.1	5.1	--	--	--	--	--	--	5.1	Apr-16
<i>HFRI Macro (Total) Index</i>			1.3	--	--	--	--	--	--	1.3	Apr-16
BlueTrend Fund Limited	19,651,294	1.0	-7.0	0.1	6.7	6.7	4.9	--	--	-0.5	Apr-13
<i>Barclay BTOP50 Index TR USD</i>			-1.7	0.4	2.8	2.8	3.9	--	--	3.1	Apr-13
Kepos Alpha Fund	19,016,325	1.0	-5.3	0.1	6.6	6.6	5.4	--	--	1.6	Mar-13
<i>HFRI Macro: Systematic Diversified Index</i>			0.9	3.9	3.2	3.2	4.0	--	--	3.1	Mar-13
MKP Opportunity Offshore, L.P.	9,519,605	0.5	-0.7	-3.7	-6.0	-6.0	--	--	--	-6.0	Aug-15
<i>HFRI Marco: Discretionary Thematic Index</i>			0.6	-0.2	-1.5	-1.5	--	--	--	-2.3	Aug-15
AHL Frontier Fund	10,000,000	0.5	--	--	--	--	--	--	--	--	Jun-16
Brevan Howard Multi-Strategy Fund Ltd	0	0.0									
<b>Cash</b>	<b>93,831,422</b>	<b>4.9</b>									
Russell Investments Overlay	24,613,979	1.3	0.0	0.2	0.2	0.2	0.1	--	--	0.1	Nov-11

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Cash includes the cash account, cash equitized in the Russell Investments Overlay program, cash from private manager distributions, and residuals from the Terminated Manager Account.<sup>3</sup> Overlay returns provided by Russell Investments.

As of June 30, 2016

## Fiscal Year Performance

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
<b>Total Fund Aggregate</b>	<b>-0.7</b>	<b>-1.0</b>	<b>14.2</b>	<b>8.0</b>	<b>-3.3</b>	<b>18.9</b>	<b>13.7</b>	<b>-17.0</b>	<b>-3.4</b>	<b>15.9</b>
<i>Total Fund Ex Overlay (net)</i>	<i>-1.1</i>	<i>-0.9</i>	<i>14.0</i>	<i>7.1</i>	<i>-2.6</i>	<i>18.9</i>	<i>13.7</i>	<i>-17.0</i>	<i>-3.4</i>	<i>15.9</i>
<i>Consumer Price Index</i>	<i>1.0</i>	<i>0.1</i>	<i>2.1</i>	<i>1.8</i>	<i>1.7</i>	<i>3.6</i>	<i>1.1</i>	<i>-1.4</i>	<i>5.0</i>	<i>2.7</i>
<i>San Jose FCERS Policy Benchmark</i>	<i>1.3</i>	<i>-1.5</i>	<i>13.9</i>	<i>8.8</i>	<i>-2.4</i>	<i>22.0</i>	<i>12.1</i>	<i>-15.3</i>	<i>-3.0</i>	<i>15.7</i>
<i>San Jose FCERS Custom Benchmark</i>	<i>1.3</i>	<i>-1.8</i>	<i>13.2</i>	<i>8.9</i>	<i>-3.2</i>	<i>18.6</i>	<i>11.4</i>	<i>-15.3</i>	<i>-2.8</i>	<i>18.3</i>
<b>Equity</b>	<b>-4.3</b>	<b>0.8</b>	<b>22.6</b>	<b>17.8</b>	<b>-7.1</b>	<b>31.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI IMI Net USD</i>	<i>-3.9</i>	<i>0.8</i>	<i>23.4</i>	<i>17.1</i>	<i>-6.9</i>	<i>31.0</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<b>Global Equity</b>	<b>-2.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI IMI Net USD</i>	<i>-3.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>Artisan Global Value</i>	<i>-2.0</i>	<i>0.6</i>	<i>24.4</i>	<i>27.7</i>	<i>2.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>MSCI ACWI Value Net USD</i>	<i>-4.8</i>	<i>-3.4</i>	<i>22.8</i>	<i>17.8</i>	<i>-7.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>Russell Currency Hedge</i>										
<b>U.S. Equity</b>	<b>0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000</i>	<i>2.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>Northern Trust Russell 3000 Index</i>	<i>2.2</i>	<i>7.4</i>	<i>25.2</i>	<i>21.6</i>	<i>3.9</i>	<i>32.5</i>	<i>16.3</i>	<i>-26.5</i>	<i>-12.6</i>	<i>20.2</i>
<i>Russell 3000</i>	<i>2.1</i>	<i>7.3</i>	<i>25.2</i>	<i>21.5</i>	<i>3.8</i>	<i>32.4</i>	<i>15.7</i>	<i>-26.6</i>	<i>-12.7</i>	<i>20.1</i>
<i>Cove Street Small Cap Value</i>	<i>-2.3</i>	<i>-1.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<i>Russell 2000 Value</i>	<i>-2.6</i>	<i>0.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Beginning in July 2012, fees are accounted for on a cash basis. Previously, fees were accounted for on an accrual basis.<sup>3</sup> Please see the Appendix for composition of the San Jose FCERS Policy Benchmark.<sup>4</sup> San Jose FCERS Custom Benchmark consists of the individual benchmarks that comprise the San Jose FCERS Policy Benchmark weighted accordingly to actual allocations and re-adjusted monthly.<sup>5</sup> Global Equity includes <\$0.1 million of residuals from terminated managers or previous transitions.<sup>5</sup> Returns for the Equity Aggregate are gross of fees through June 2015 and net of fees thereafter.<sup>6</sup> Global Equity includes a partial currency hedge initiated on August 21, 2015 of the following currencies: Australian Dollar, Canadian Dollar, Swiss Franc, Euro, British Pound Sterling, and Japanese Yen. As of the date of this report, the unrealized profit or loss was \$0.5 mm and the total net exposure of the hedge was \$28.1 mm.

## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
<b>International Equity</b>	<b>-8.5</b>	--	--	--	--	--	--	--	--	--
<i>MSCI EAFE</i>	-10.2	--	--	--	--	--	--	--	--	--
Northern Trust MSCI EAFE Index-NL	-9.9	-4.0	23.9	--	--	--	--	--	--	--
<i>MSCI EAFE</i>	-10.2	-4.2	23.6	--	--	--	--	--	--	--
Oberweis International Opportunities	--	--	--	--	--	--	--	--	--	--
<i>MSCI EAFE Small Cap</i>	--	--	--	--	--	--	--	--	--	--
<b>Emerging Markets Equity</b>	<b>-10.2</b>	--	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets</i>	-12.1	--	--	--	--	--	--	--	--	--
Aberdeen Frontier Markets	-12.0	-9.4	--	--	--	--	--	--	--	--
<i>MSCI Frontier Markets</i>	-12.1	-13.9	--	--	--	--	--	--	--	--
<i>MSCI Frontier Markets ex GCC NR USD</i>	-9.8	-13.9	--	--	--	--	--	--	--	--
<b>Marketable Alternative Equity</b>	<b>-2.1</b>	--	--	--	--	--	--	--	--	--
<i>HFRI Equity Hedge (Total) Index</i>	-5.1	--	--	--	--	--	--	--	--	--
Senator Global Opportunity Offshore Fund	-9.3	9.0	15.6	--	--	--	--	--	--	--
<i>HFRI Event-Driven (Total) Index</i>	-3.8	-0.8	11.2	--	--	--	--	--	--	--
Horizon Portfolio I	5.2	7.0	9.8	--	--	--	--	--	--	--
<i>HFRI Equity Hedge (Total) Index</i>	-5.1	2.4	12.5	--	--	--	--	--	--	--
Sandler Plus Offshore Fund Ltd	6.8	16.6	2.9	--	--	--	--	--	--	--
<i>HFRI Equity Hedge (Total) Index</i>	-5.1	2.4	12.5	--	--	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.



## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
Marshall Wace Eureka Fund	0.4	15.7	--	--	--	--	--	--	--	--
<i>HFRI Equity Hedge (Total) Index</i>	-5.1	2.4	--	--	--	--	--	--	--	--
<b>Private Equity</b>	<b>2.4</b>	<b>13.5</b>	<b>19.3</b>	<b>9.6</b>	<b>9.7</b>	<b>17.4</b>	<b>12.6</b>	<b>-23.8</b>	<b>14.0</b>	<b>2.9</b>
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	-22.9	9.8	22.4
Pantheon USA Fund VII	4.4	16.6	21.7	10.2	12.1	13.0	11.0	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	--	--	--
Partners Group Secondary 2011, L.P.	9.4	24.8	21.6	--	--	--	--	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	--	--	--	--	--	--	--
Pathway Private Equity Fund VIII	-3.7	14.5	22.2	10.9	14.0	21.2	16.2	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	--	--	--
Pantheon Global Secondary Fund III 'B'	-2.9	0.1	9.4	2.0	-0.1	14.0	10.3	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	--	--	--
Partners Group Secondary 2008, L.P.	-2.4	0.5	22.6	7.5	8.8	36.3	3.6	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	--	--	--
Great Hill Equity Partners IV, LP	11.6	41.9	26.4	29.0	69.1	-10.1	7.0	--	--	--
<i>Cambridge Associates Private Equity Composite</i>	6.9	5.8	19.6	13.2	9.6	19.1	23.1	--	--	--
<b>Fixed Income Assets</b>	<b>2.2</b>	<b>-0.7</b>	<b>4.5</b>	<b>3.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Fixed Income Custom Benchmark</i>	9.4	-7.1	7.4	-2.2	--	--	--	--	--	--
<b>Global Core</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Barclays Global Aggregate</i>	8.9	--	--	--	--	--	--	--	--	--

<sup>2</sup> Cambridge Associates Private Equity Composite (40% Secondary and 60% Fund of Funds) used since 1Q14. Data for the Venture Economics Private Equity Index was used through 4Q13, but the index was discontinued in early 2014. Not available at the time of this report.

<sup>5</sup> Returns for the Fixed Income Aggregate are gross of fees through June 2015 and net of fees thereafter.

<sup>4</sup> Prior to 10/1/2015, Fixed Income Custom Benchmark was 100% Barclays Global Aggregate. After 10/1/2015, Fixed Income Custom Benchmark consists of 80% Barclays Global Aggregate, 5% JPM GBI GD, 5% JPM EMBI GD, 5% S&P Global Leveraged Loan, and 5% BAML Global HY Index.



## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
Northern Trust Intermediate Gov't 1-10 Year	3.9	1.7	1.5	--	--	--	--	--	--	--
<i>Barclays Int Govt.</i>	3.9	1.8	1.5	--	--	--	--	--	--	--
Northern Trust TIPS 0-5 Years	1.6	-1.9	--	--	--	--	--	--	--	--
<i>Barclays U.S. TIPS 0-5 Years</i>	1.7	-1.9	--	--	--	--	--	--	--	--
Voya Securitized Credit	3.2	--	--	--	--	--	--	--	--	--
<i>Barclays Global Aggregate Securitized TR USD</i>	3.9	--	--	--	--	--	--	--	--	--
BlackRock Long Government Index	--	--	--	--	--	--	--	--	--	--
<i>Barclays LT Govt.</i>	--	--	--	--	--	--	--	--	--	--
<b>Non-Investment Grade Credit</b>	<b>-2.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>50% BAML Global HY / 50% S&amp;P Global Leveraged Loan</i>	0.9	--	--	--	--	--	--	--	--	--
Claren Road Credit Fund	-10.4	-16.9	1.2	--	--	--	--	--	--	--
<i>HFRI RV: Fixed Income-Corporate Index</i>	0.9	-1.4	9.0	--	--	--	--	--	--	--
Davidson Kempner Institutional Partners, L.P.	2.0	0.3	9.9	--	--	--	--	--	--	--
<i>HFRI Event-Driven (Total) Index</i>	-3.8	-0.8	11.2	--	--	--	--	--	--	--
<b>Emerging Markets</b>	<b>2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>	6.0	--	--	--	--	--	--	--	--	--
BlueBay Emerging Market Select Debt	2.1	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI GD / 50% JPM GBI-EM</i>	6.0	--	--	--	--	--	--	--	--	--
<b>Private Debt</b>	<b>3.6</b>	<b>4.0</b>	<b>10.2</b>	<b>11.5</b>	<b>9.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>3-Month LIBOR + 5%</i>	5.5	5.3	5.3	5.4	5.5	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Returns for the Real Assets Aggregate are gross of fees through June 2015 and net of fees thereafter.

## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
Medley Opportunity Fund II	2.6	7.9	10.2	9.7	4.6	--	--	--	--	--
3-Month LIBOR + 5%	5.5	5.3	5.3	5.4	5.5	--	--	--	--	--
White Oak Direct Lending Account	17.5	-1.4	12.2	15.0	-2.0	--	--	--	--	--
3-Month LIBOR + 5%	5.5	5.3	5.3	5.4	5.5	--	--	--	--	--
GSO Direct Lending Account	-15.5	3.8	7.9	14.0	27.4	--	--	--	--	--
3-Month LIBOR + 5%	5.5	5.3	5.3	5.4	5.5	--	--	--	--	--
<b>Real Assets</b>	<b>-1.9</b>	<b>-10.4</b>	<b>19.4</b>	<b>-10.1</b>	<b>-10.9</b>	<b>27.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Real Estate</b>	<b>14.8</b>	<b>22.0</b>	<b>13.4</b>	<b>9.7</b>	<b>12.2</b>	<b>15.3</b>	<b>-23.3</b>	<b>-24.2</b>	<b>10.7</b>	<b>21.7</b>
<b>Core Real Estate</b>	<b>12.8</b>	<b>13.1</b>	<b>12.1</b>	<b>9.9</b>	<b>12.0</b>	<b>18.9</b>	<b>-7.7</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>NCREIF ODCE Equal Weighted (net)</i>	11.2	13.6	11.4	10.8	11.5	19.3	-8.5	--	--	--
PRISA	13.3	13.3	12.7	9.7	12.6	20.5	-4.5	-37.7	7.0	17.6
<i>NCREIF ODCE Equal Weighted (net)</i>	11.2	13.6	11.4	10.8	11.5	19.3	-8.5	-31.4	7.5	16.0
American Realty	12.3	12.9	11.5	10.3	11.0	16.5	-12.1	-26.2	9.4	--
<i>NCREIF ODCE Equal Weighted (net)</i>	11.2	13.6	11.4	10.8	11.5	19.3	-8.5	-31.4	7.5	--
<b>Private Real Estate</b>	<b>21.7</b>	<b>45.5</b>	<b>15.3</b>	<b>9.4</b>	<b>12.3</b>	<b>12.0</b>	<b>-35.0</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>NCREIF Property Index</i>	10.6	13.0	11.2	10.7	12.0	16.7	-1.5	--	--	--
DRA Growth & Income Fund VIII	10.9	--	--	--	--	--	--	--	--	--
<i>NCREIF Property Index</i>	10.6	--	--	--	--	--	--	--	--	--
DRA Growth and Income Fund VII	23.3	17.3	15.2	16.6	--	--	--	--	--	--
<i>NCREIF Property Index</i>	10.6	13.0	11.2	10.7	--	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Returns for the Real Assets Aggregate are gross of fees through June 2015 and net of fees thereafter.

## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
DRA Growth and Income Fund V	22.4	27.0	7.8	3.7	4.6	8.4	-20.1	-10.6	17.2	9.1
<i>NCREIF Property Index</i>	10.6	13.0	11.2	10.7	12.0	16.7	-1.5	-19.6	9.2	17.2
DRA Growth and Income Fund VI	21.5	36.8	16.6	5.1	28.4	11.4	-15.1	-8.4	--	--
<i>NCREIF Property Index</i>	10.6	13.0	11.2	10.7	12.0	16.7	-1.5	-19.6	--	--
Fidelity Real Estate Growth Fund III	12.8	41.5	17.9	13.6	13.4	34.8	-68.4	-31.7	--	--
<i>NCREIF Property Index</i>	10.6	13.0	11.2	10.7	12.0	16.7	-1.5	-19.6	--	--
Tristan Capital Partners	--	--	--	--	--	--	--	--	--	--
<i>NCREIF Property Index</i>	--	--	--	--	--	--	--	--	--	--
<b>Commodities</b>	<b>-15.5</b>	<b>-22.4</b>	<b>16.0</b>	<b>-10.9</b>	<b>-11.8</b>	<b>27.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Bloomberg Commodity Index TR USD</i>	-13.3	-23.7	8.2	-8.0	-14.3	25.9	--	--	--	--
Credit Suisse Risk Parity Commodity Index	-11.4	-19.7	13.9	-7.4	-10.0	--	--	--	--	--
<i>Custom Risk Parity Commodity Benchmark</i>	-11.6	-20.1	14.3	-7.8	-9.5	--	--	--	--	--
<i>Bloomberg Commodity Index TR USD</i>	-13.3	-23.7	8.2	-8.0	-14.3	--	--	--	--	--
Pinnacle Natural Resources, L.P.	--	--	--	--	--	--	--	--	--	--
<i>Bloomberg Commodity Index TR USD</i>	--	--	--	--	--	--	--	--	--	--
First Quadrant Risk Commodity	-13.8	-25.1	19.3	-15.1	-12.7	--	--	--	--	--
<i>Custom Risk Parity Commodity Benchmark</i>	-11.6	-20.1	14.3	-7.8	-9.5	--	--	--	--	--
<i>Bloomberg Commodity Index TR USD</i>	-13.3	-23.7	8.2	-8.0	-14.3	--	--	--	--	--
<b>Infrastructure</b>	<b>3.9</b>	<b>-2.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>DJ Brookfield Global Infrastructure Net TR USD</i>	3.2	-3.7	--	--	--	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Tracking error due to a cash position resulting from a delay in the ability to invest in certain markets.

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
Rhumblin DJ Brookfield Global Infrastructure	3.9	--	--	--	--	--	--	--	--	--
<i>DJ Brookfield Global Infrastructure Net TR USD</i>	3.2	--	--	--	--	--	--	--	--	--
SSGA DJ Brookfield Infrastructure Index										
<b>Natural Resources</b>	<b>-9.5</b>	<b>-15.2</b>	<b>21.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>S&amp;P Global Natural Resources Index TR USD</i>	-8.9	-17.6	21.7	--	--	--	--	--	--	--
Rhumblin S&P Global Large MidCap Commodity & NR	-9.5	--	--	--	--	--	--	--	--	--
<i>S&amp;P Global LargeMidCap Commodity and Resources GR USD</i>	-9.2	--	--	--	--	--	--	--	--	--
Northern Trust Global LargeMid Natural Resources										
<b>Absolute Return</b>	<b>0.0</b>	<b>5.0</b>	<b>4.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>HFRI Macro (Total) Index</i>	1.9	4.1	1.5	--	--	--	--	--	--	--
<b>Relative Value</b>	<b>-0.3</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>HFRI Relative Value (Total) Index</i>	-0.3	--	--	--	--	--	--	--	--	--
DE Shaw	7.2	17.2	13.7	--	--	--	--	--	--	--
<i>HFRI Fund Weighted Composite Index</i>	-2.4	2.3	9.1	--	--	--	--	--	--	--
Pine River Fund Ltd	-8.8	7.5	4.4	--	--	--	--	--	--	--
<i>HFRI Relative Value (Total) Index</i>	-0.3	1.8	9.0	--	--	--	--	--	--	--
Hudson Bay Fund	-2.0	-2.9	--	--	--	--	--	--	--	--
<i>HFRI Relative Value (Total) Index</i>	-0.3	1.8	--	--	--	--	--	--	--	--
Arrowgrass International Fund Ltd	0.0	5.5	6.4	--	--	--	--	--	--	--
<i>HFRI Relative Value (Total) Index</i>	-0.3	1.8	9.0	--	--	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Tracking error due to a cash position resulting from a delay in the ability to invest in certain markets.

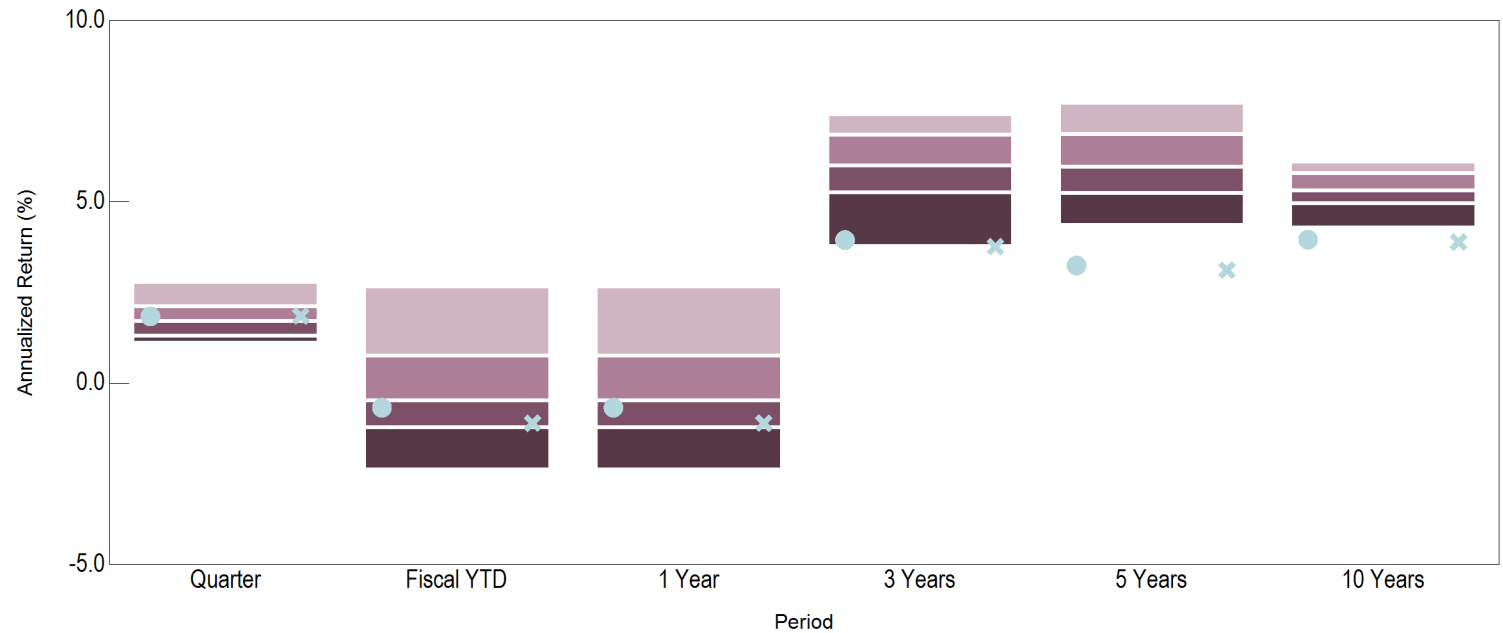
## Total Fund Aggregate

As of June 30, 2016

	Fiscal 2016 (%)	Fiscal 2015 (%)	Fiscal 2014 (%)	Fiscal 2013 (%)	Fiscal 2012 (%)	Fiscal 2011 (%)	Fiscal 2010 (%)	Fiscal 2009 (%)	Fiscal 2008 (%)	Fiscal 2007 (%)
<b>Global Macro</b>	<b>1.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>HFRI Marco: Discretionary Thematic Index</i>	-1.5	--	--	--	--	--	--	--	--	--
Brevan Howard Fund, Limited	-5.1	--	--	--	--	--	--	--	--	--
<i>HFRI Macro (Total) Index</i>	1.9	--	--	--	--	--	--	--	--	--
Keynes Leveraged Quantitative Strategies Fund	--	--	--	--	--	--	--	--	--	--
<i>HFRI Macro (Total) Index</i>	--	--	--	--	--	--	--	--	--	--
Dymon Asia Macro	--	--	--	--	--	--	--	--	--	--
<i>HFRI Macro (Total) Index</i>	--	--	--	--	--	--	--	--	--	--
Pharo Macro Fund, Ltd.	--	--	--	--	--	--	--	--	--	--
<i>HFRI Macro (Total) Index</i>	--	--	--	--	--	--	--	--	--	--
BlueTrend Fund Limited	6.7	3.0	4.9	--	--	--	--	--	--	--
<i>Barclay BTOP50 Index TR USD</i>	2.8	8.2	0.8	--	--	--	--	--	--	--
Kepos Alpha Fund	6.6	4.6	4.9	--	--	--	--	--	--	--
<i>HFRI Macro: Systematic Diversified Index</i>	3.2	8.6	0.2	--	--	--	--	--	--	--
MKP Opportunity Offshore, L.P.	-6.0	--	--	--	--	--	--	--	--	--
<i>HFRI Marco: Discretionary Thematic Index</i>	-1.5	--	--	--	--	--	--	--	--	--
AHL Frontier Fund	--	--	--	--	--	--	--	--	--	--
Brevan Howard Multi-Strategy Fund Ltd										
<b>Cash</b>										
Russell Investments Overlay	0.2	-0.2	0.2	0.8	--	--	--	--	--	--

<sup>1</sup> Fiscal Year begins July 1.<sup>2</sup> Overlay returns provided by Russell Investments.

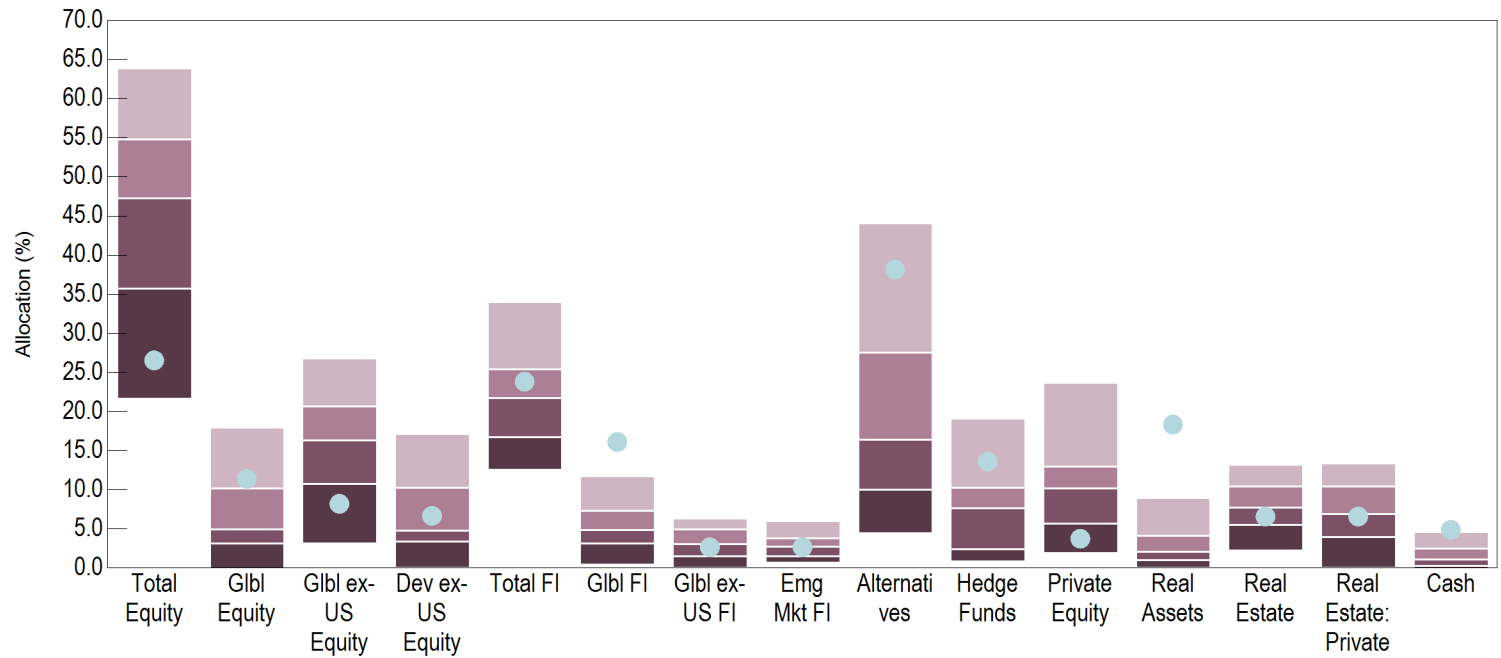
InvestorForce Public DB > \$1B Net Accounts



	Return (Rank)											
5th Percentile	2.8		2.7		2.7		7.4		7.7		6.1	
25th Percentile	2.1		0.8		0.8		6.9		6.9		5.8	
Median	1.7		-0.5		-0.5		6.0		6.0		5.3	
75th Percentile	1.3		-1.2		-1.2		5.3		5.3		5.0	
95th Percentile	1.1		-2.4		-2.4		3.8		4.4		4.3	
# of Portfolios	55		55		55		53		53		48	
● Total Fund Aggregate	1.8	(40)	-0.7	(58)	-0.7	(58)	3.9	(94)	3.2	(99)	4.0	(99)
▲ Total Fund Ex Overlay (net)	1.9	(40)	-1.1	(75)	-1.1	(75)	3.8	(98)	3.1	(99)	3.9	(99)



**Total Plan Allocation vs. InvestorForce Public DB > \$1B Net**  
As of June 30, 2016



	Allocation (Rank)															
5th Percentile	63.9	18.0	26.8	17.2	34.0	11.8	6.4	6.0	44.0	19.1	23.7	9.0	13.2	13.4	4.6	--
25th Percentile	54.8	10.3	20.8	10.4	25.5	7.4	5.0	3.9	27.6	10.4	13.0	4.2	10.5	10.5	2.6	--
Median	47.4	5.0	16.4	4.9	21.8	4.9	3.2	2.8	16.5	7.8	10.2	2.2	7.9	7.0	1.2	--
75th Percentile	35.8	3.3	10.9	3.5	16.8	3.2	1.6	1.6	10.1	2.5	5.8	1.1	5.6	4.1	0.4	--
95th Percentile	21.7	0.0	3.3	0.1	12.6	0.6	0.1	0.8	4.5	0.9	2.0	0.1	2.3	0.2	0.1	--
# of Portfolios	52	19	47	23	53	32	24	20	50	37	48	22	45	41	49	--
● Total Fund Aggregate	26.5 (87)	11.4 (23)	8.2 (81)	6.7 (46)	23.8 (33)	16.1 (1)	2.7 (58)	2.7 (60)	38.2 (7)	13.6 (20)	3.8 (83)	18.4 (1)	6.6 (70)	6.6 (56)	4.9 (5)	--





Equity

As of June 30, 2016

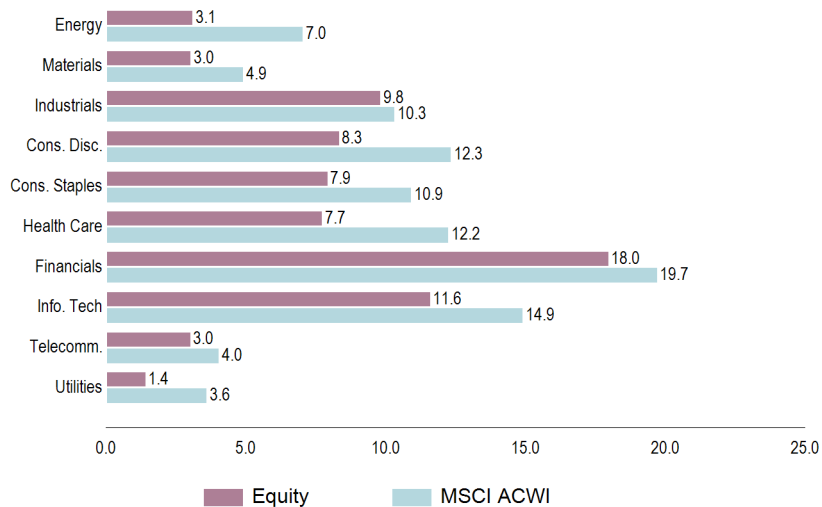
Asset Allocation on June 30, 2016

	Actual (\$)	Actual %
Aberdeen Frontier Markets	\$17,044,768	3.4%
Artisan Global Value	\$133,275,203	26.2%
Cove Street Small Cap Value	\$27,995,548	5.5%
Horizon Portfolio I	\$32,215,585	6.3%
Marshall Wace Eureka Fund	\$23,639,580	4.6%
Northern Trust MSCI EAFE Index-NL	\$128,128,417	25.2%
Northern Trust Russell 3000 Index	\$56,653,452	11.1%
Oberweis International Opportunities	\$29,335,286	5.8%
Russell Currency Hedge	\$478,005	0.1%
Sandler Plus Offshore Fund Ltd	\$25,307,287	5.0%
Senator Global Opportunity Offshore Fund	\$34,605,153	6.8%
Transition Accounts	\$19,193	0.0%
<b>Total</b>	<b>\$508,697,477</b>	<b>100.0%</b>

Total Equity Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	508.70	--	574.72
Number Of Holdings	3671	2481	3684
<b>Characteristics</b>			
Wtg. Avg. Market Cap. (Bil)	62.40	87.64	72.97
Median Market Cap (Bil)	3.25	8.09	3.14
P/E Ratio	21.14	21.27	20.49
Yield	2.53	2.63	2.81
EPS Growth - 5 Yrs.	7.25	7.52	6.73
Price to Book	3.45	3.22	3.35
Beta (holdings; domestic)	1.06	0.98	1.05

Sector Allocation (%) vs MSCI ACWI



Top 10 Holdings

SENATOR GL OPP OFFSH FD LTD MUTUAL FUND	6.8%
HORIZON PORTFOLIO I LIMITED LIMITED PARTNERSHIP	6.3%
SANDLER PLUS LP	5.0%
MARSHALL WACE FUNDS LIMITED PARTNERSHIP	4.7%
CASH - USD	3.3%
ORACLE	1.4%
MICROSOFT	1.2%
JOHNSON & JOHNSON	1.1%
MEDTRONIC	1.1%
BANK OF NEW YORK MELLON	1.1%
<b>Total</b>	<b>31.9%</b>



Fixed Income Assets

As of June 30, 2016

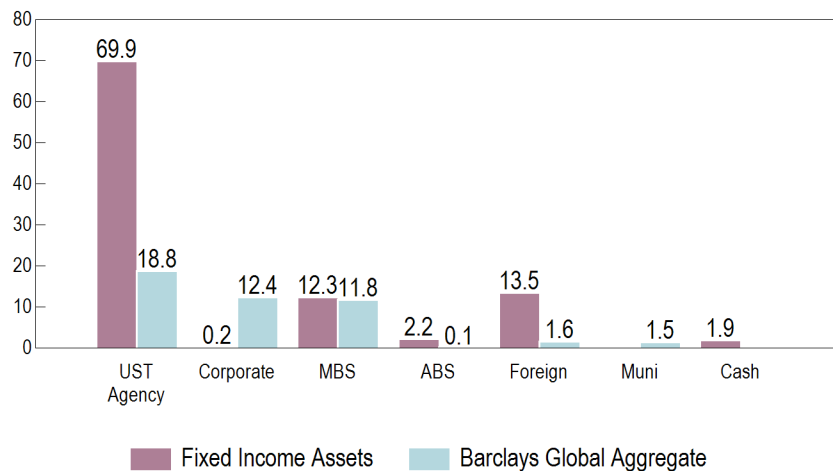
Asset Allocation on June 30, 2016

	Actual (\$)	Actual %
BlackRock Long Government Index	\$31,141,480	7.6%
BlueBay Emerging Market Select Debt	\$51,062,634	12.5%
Claren Road Credit Fund	\$12,265,655	3.0%
Davidson Kempner Institutional Partners, L.P.	\$35,246,400	8.7%
Northern Trust Intermediate Gov't 1-10 Year	\$109,772,426	26.9%
Northern Trust TIPS 0-5 Years	\$111,170,148	27.3%
Voya Securitized Credit	\$56,780,474	13.9%
<b>Total</b>	<b>\$407,439,216</b>	<b>100.0%</b>

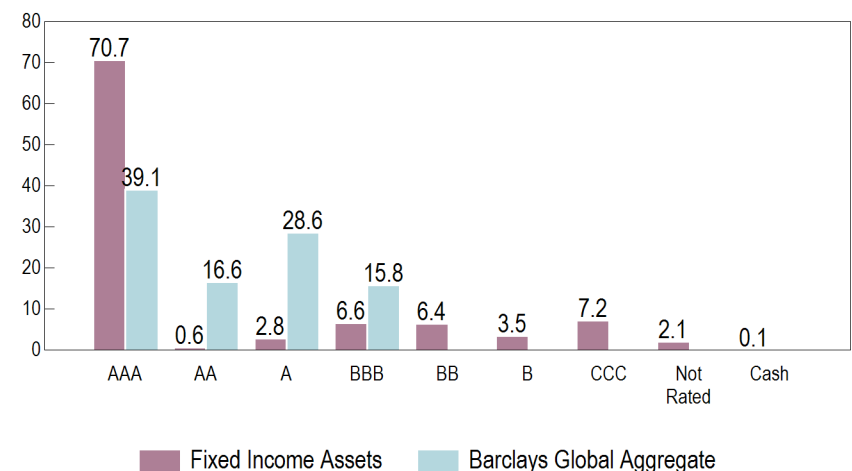
Fixed Income Assets Characteristics  
vs. Barclays Global Aggregate

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Fixed Income Characteristics</b>			
Yield to Maturity	2.4	1.1	2.4
Average Duration	4.5	6.9	3.3
Average Quality	AA	AA	AA
Weighted Average Maturity	3.3	10.8	3.4

Sector Allocation



Credit Quality Allocation



## Artisan Global Value

As of June 30, 2016

## Account Information

Account Name	Artisan Global Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	3/01/11
Account Type	Global Equity
Benchmark	MSCI ACWI Value Net USD
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Artisan Global Value	-0.5	-2.0	-2.0	7.0	10.0	--	9.9	Mar-11
MSCI ACWI Value Net USD	1.2	-4.8	-4.8	4.2	4.2	3.1	3.7	Mar-11

## Top 10 Holdings

CASH - USD	10.0%
ORACLE	5.1%
BANK OF NEW YORK MELLON	3.9%
SAMSUNG ELECTRONICS	3.8%
MEDTRONIC	3.8%
MICROSOFT	3.8%
ARCH CAP.GP.	3.7%
JOHNSON & JOHNSON	3.6%
MARSH & MCLENNAN	3.4%
TELEFONICA BRASIL PN ADR 1:1	3.3%
<b>Total</b>	<b>44.5%</b>

## Artisan Global Value Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	133.3	--	133.9
Number Of Holdings	51	2481	41
<b>Characteristics</b>			
Wtg. Avg. Market Cap. (Bil)	87.9	87.6	88.8
Median Market Cap (Bil)	31.2	8.1	31.7
P/E Ratio	21.0	21.3	20.0
Yield	2.3	2.6	2.4
EPS Growth - 5 Yrs.	6.3	7.5	3.8
Price to Book	2.7	3.2	2.8
Beta (holdings; domestic)	1.1	1.0	1.1
<b>Sector Distribution</b>			
Energy	2.5	7.0	2.9
Materials	0.0	4.9	0.0
Industrials	10.3	10.3	11.0
Consumer Discretionary	4.7	12.3	4.8
Consumer Staples	6.9	10.9	8.2
Health Care	7.4	12.2	7.7
Financials	30.9	19.7	32.8
Information Technology	24.0	14.9	29.5
Telecommunications Services	3.3	4.0	3.3
Utilities	0.0	3.6	0.0



## Northern Trust MSCI EAFE Index-NL

As of June 30, 2016

## Account Information

Account Name	Northern Trust MSCI EAFE Index-NL
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	11/01/12
Account Type	Global Equity
Benchmark	MSCI EAFE
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Northern Trust MSCI EAFE Index-NL	-1.3	-9.9	-9.9	2.4	--	--	4.7	Nov-12
MSCI EAFE	-1.5	-10.2	-10.2	2.1	1.7	1.6	4.4	Nov-12

## Top 10 Holdings

NESTLE 'R'	2.1%
NOVARTIS 'R'	1.6%
ROCHE HOLDING	1.6%
TOYOTA MOTOR	1.1%
HSBC HDG. (ORD \$0.50)	1.0%
BRITISH AMERICAN TOBACCO	1.0%
ROYAL DUTCH SHELL A(LON)	1.0%
ANHEUSER-BUSCH INBEV	0.9%
TOTAL	0.9%
BP	0.9%
<b>Total</b>	<b>12.3%</b>

## Northern Trust MSCI EAFE Index-NL Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	128.1	--	129.8
Number Of Holdings	961	930	959
<b>Characteristics</b>			
Wtg. Avg. Market Cap. (Bil)	51.6	51.3	50.7
Median Market Cap (Bil)	8.3	8.5	8.7
P/E Ratio	19.7	19.1	19.3
Yield	3.4	3.4	3.5
EPS Growth - 5 Yrs.	6.6	6.3	8.1
Price to Book	3.3	2.4	2.9
Beta (holdings; domestic)	1.0	1.0	1.0
<b>Sector Distribution</b>			
Energy	5.2	5.2	4.6
Materials	6.8	6.9	6.8
Industrials	13.4	13.3	13.3
Consumer Discretionary	12.1	12.2	13.1
Consumer Staples	13.3	13.3	12.7
Health Care	12.4	12.4	11.6
Financials	22.3	22.4	23.6
Information Technology	5.4	5.4	5.3
Telecommunications Services	5.1	5.2	5.1
Utilities	3.9	3.9	3.9



## Northern Trust Russell 3000 Index

As of June 30, 2016

## Account Information

Account Name	Northern Trust Russell 3000 Index
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	9/01/99
Account Type	Global Equity
Benchmark	Russell 3000
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Northern Trust Russell 3000 Index	2.6	2.2	2.2	11.2	11.7	7.5	5.4	Sep-99
<i>Russell 3000</i>	2.6	2.1	2.1	11.1	11.6	7.4	5.3	Sep-99

## Top 10 Holdings

APPLE	2.4%
MICROSOFT	1.8%
EXXON MOBIL	1.8%
JOHNSON & JOHNSON	1.5%
GENERAL ELECTRIC	1.3%
AMAZON.COM	1.3%
BERKSHIRE HATHAWAY 'B'	1.2%
AT&T	1.2%
FACEBOOK CLASS A	1.2%
VERIZON COMMUNICATIONS	1.0%
<b>Total</b>	<b>14.7%</b>

## Northern Trust Russell 3000 Index Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	56.7	--	55.2
Number Of Holdings	2562	3007	2645

## Characteristics

Wtg. Avg. Market Cap. (Bil)	106.5	106.3	107.5
Median Market Cap (Bil)	1.8	1.3	1.7
P/E Ratio	23.9	23.3	24.1
Yield	2.1	2.0	2.1
EPS Growth - 5 Yrs.	8.5	8.3	8.9
Price to Book	4.3	3.6	4.6
Beta (holdings; domestic)	1.0	1.0	1.0

## Sector Distribution

Energy	6.8	6.8	6.1
Materials	3.3	3.3	3.2
Industrials	10.6	10.5	10.9
Consumer Discretionary	13.0	12.9	13.7
Consumer Staples	9.4	9.4	9.2
Health Care	14.1	14.2	13.6
Financials	17.4	17.4	17.2
Information Technology	19.2	19.2	20.0
Telecommunications Services	2.6	2.7	2.5
Utilities	3.7	3.7	3.5



## Oberweis International Opportunities

As of June 30, 2016

## Account Information

Account Name	Oberweis International Opportunities
Account Structure	Separate Account
Investment Style	Active
Inception Date	11/01/15
Account Type	Global Equity
Benchmark	MSCI EAFE Small Cap
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Oberweis International Opportunities	0.8	--	--	--	--	--	2.9	Nov-15
MSCI EAFE Small Cap	-2.6	-3.7	-3.7	7.3	4.8	3.6	-2.4	Nov-15

## Top 10 Holdings

CASH - USD	3.2%
FRENI BREMBO	2.0%
ADMIRAL GROUP	1.9%
OPEN HOUSE	1.8%
HOCHTIEF	1.8%
LION	1.8%
AGGREKO	1.8%
GENMAB	1.8%
DEUTSCHE WOHNEN BR.SHS.	1.8%
MICRO FOCUS INTL.	1.7%
<b>Total</b>	<b>19.6%</b>

## Oberweis International Opportunities Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	29.3	--	29.1
Number Of Holdings	100	2240	34
<b>Characteristics</b>			
Wtg. Avg. Market Cap. (Bil)	4.0	2.1	6.2
Median Market Cap (Bil)	2.9	0.9	3.9
P/E Ratio	26.4	19.1	22.1
Yield	1.4	2.5	1.1
EPS Growth - 5 Yrs.	18.0	9.9	17.3
Price to Book	5.4	2.2	4.3
Beta (holdings; domestic)	0.8	0.9	0.8
<b>Sector Distribution</b>			
Energy	2.2	2.7	1.1
Materials	6.3	8.7	3.6
Industrials	19.9	21.7	22.3
Consumer Discretionary	21.9	16.3	37.0
Consumer Staples	11.2	7.6	22.5
Health Care	9.9	8.1	5.3
Financials	12.5	22.3	0.6
Information Technology	11.9	9.9	2.7
Telecommunications Services	1.0	1.1	3.7
Utilities	0.0	1.6	0.0



## Cove Street Small Cap Value

As of June 30, 2016

## Account Information

Account Name	Cove Street Small Cap Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	5/01/14
Account Type	US Equity
Benchmark	Russell 2000 Value
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Cove Street Small Cap Value	-0.8	-2.3	-2.3	--	--	--	1.5	May-14
Russell 2000 Value	4.3	-2.6	-2.6	6.4	8.1	5.2	1.5	May-14

## Top 10 Holdings

CASH - USD	8.5%
FMC	5.5%
VIASAT	5.2%
FORESTAR GROUP	4.8%
HERITAGE CRYSTAL CLEAN	4.4%
HALYARD HEALTH	3.8%
USG	3.7%
CARROLS RESTAURANT GP.	3.7%
VERIFONE SYSTEMS	3.5%
LIBERTY MEDIA SR.A	3.4%
<b>Total</b>	<b>46.4%</b>

## Cove Street Small Cap Value Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	28.0	--	28.2
Number Of Holdings	36	1361	4
<b>Characteristics</b>			
Wtg. Avg. Market Cap. (Bil)	1.7	1.6	3.2
Median Market Cap (Bil)	0.7	0.6	2.9
P/E Ratio	17.9	16.8	21.7
Yield	0.6	2.0	3.6
EPS Growth - 5 Yrs.	-9.3	7.6	10.9
Price to Book	2.5	1.5	9.0
Beta (holdings; domestic)	1.5	1.2	1.1

## Sector Distribution

Energy	1.8	5.1	0.0
Materials	8.5	4.5	25.7
Industrials	21.5	12.0	0.0
Consumer Discretionary	23.2	10.7	70.6
Consumer Staples	0.0	3.0	0.0
Health Care	3.8	4.6	0.0
Financials	14.5	41.3	0.0
Information Technology	17.2	10.2	0.0
Telecommunications Services	1.0	0.8	0.0
Utilities	0.0	7.7	0.0



## Aberdeen Frontier Markets

As of June 30, 2016

## Account Information

Account Name	Aberdeen Frontier Markets
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	12/01/13
Account Type	Global Equity
Benchmark	MSCI Frontier Markets
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Aberdeen Frontier Markets	-0.3	-12.0	-12.0	--	--	--	-6.6	Dec-13
MSCI Frontier Markets	0.5	-12.1	-12.1	1.0	1.5	0.2	-2.8	Dec-13
MSCI Frontier Markets ex GCC NR USD	1.9	-9.8	-9.8	-1.2	-1.1	0.2	-6.2	Dec-13

## Top 10 Holdings

VIETNAM DAIRY PRODUCTS	6.5%
SAFARICOM	6.0%
JOHN KEELLS HOLDINGS	4.7%
HIKMA PHARMACEUTICALS	4.6%
EAST AFRICAN BREWERIES	4.3%
EPAM SYSTEMS	4.3%
COCA COLA ICECEK	4.1%
MTN GROUP	3.9%
BRD GROUPE SOCIETE GL.	3.6%
BANK OF GEORGIA HDG.	3.6%
<b>Total</b>	<b>45.5%</b>

## Aberdeen Frontier Markets Characteristics

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Market Value</b>			
Market Value (Mil)	17.0	--	17.1
Number Of Holdings	47	117	47

## Characteristics

Wtg. Avg. Market Cap. (Bil)	3.8	3.8	3.7
Median Market Cap (Bil)	1.7	1.4	1.9
P/E Ratio	19.9	15.0	22.4
Yield	3.6	4.3	3.8
EPS Growth - 5 Yrs.	12.2	7.7	10.8
Price to Book	5.1	2.3	5.6
Beta (holdings; domestic)	1.1	1.1	1.1

## Sector Distribution

Energy	4.2	9.6	3.7
Materials	3.2	6.7	3.4
Industrials	7.0	2.7	8.2
Consumer Discretionary	1.3	1.1	1.9
Consumer Staples	32.9	8.2	32.7
Health Care	9.2	3.1	9.2
Financials	24.0	52.6	22.4
Information Technology	4.8	1.1	5.4
Telecommunications Services	13.3	13.5	13.0
Utilities	0.0	1.4	0.0





**Account Information**

Account Name	Northern Trust Intermediate Gov't 1-10 Year
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	10/01/12
Account Type	Global Fixed Income
Benchmark	Barclays Int Govt.
Universe	

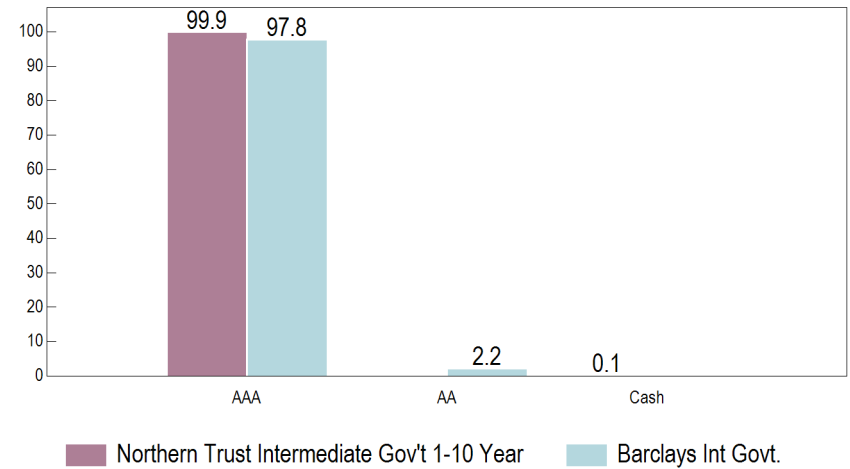
**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Northern Trust Intermediate Gov't 1-10 Year	1.2	3.9	3.9	2.4	--	--	1.6	Oct-12
Barclays Int Govt.	1.2	3.9	3.9	2.4	2.3	4.1	1.6	Oct-12

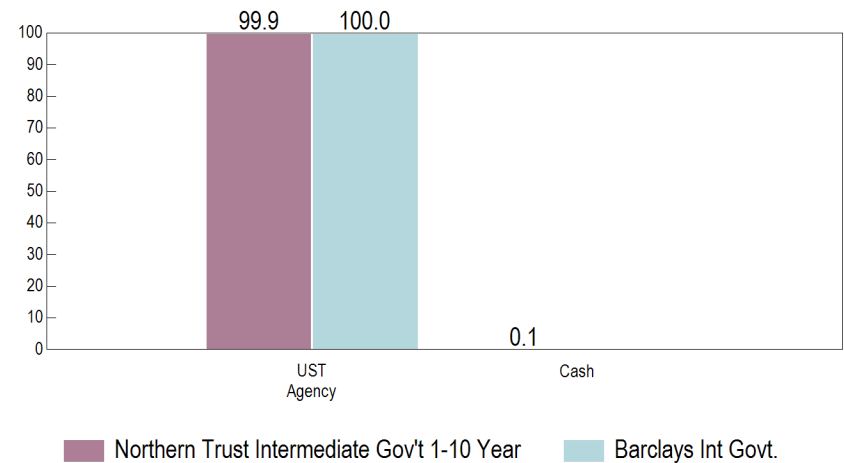
**Northern Trust Intermediate Gov't 1-10 Year Characteristics vs. Barclays Int Govt.**

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Fixed Income Characteristics</b>			
Yield to Maturity	0.9	0.9	1.1
Average Duration	3.9	3.9	3.8
Average Quality	AAA	AAA	AAA
Weighted Average Maturity	4.1	4.1	4.1

**Credit Quality Allocation**



**Sector Allocation**



**Account Information**

Account Name	Northern Trust TIPS 0-5 Years
Account Structure	Separate Account
Investment Style	Passive
Inception Date	7/01/14
Account Type	US Inflation Protected Fixed
Benchmark	Barclays U.S. TIPS 0-5 Years
Universe	

**Portfolio Performance Summary**

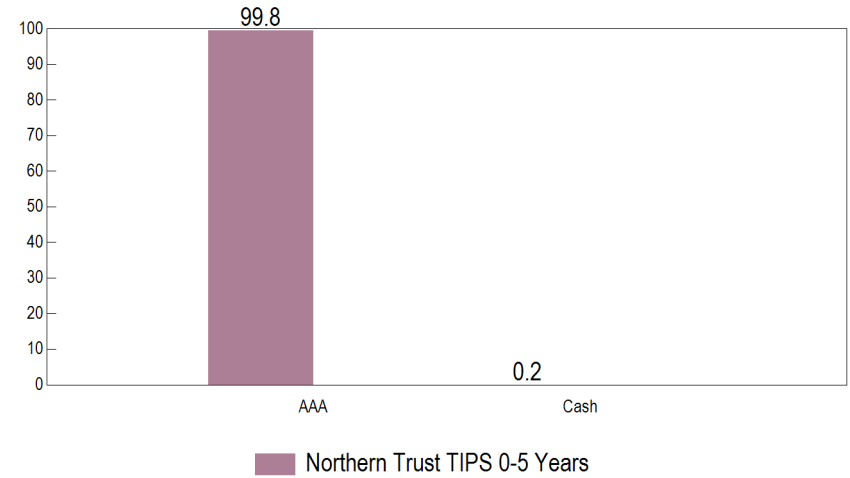
	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Northern Trust TIPS 0-5 Years	0.9	1.6	1.6	--	--	--	-0.2	Jul-14
Barclays U.S. TIPS 0-5 Years	0.8	1.7	1.7	0.6	0.6	2.9	-0.1	Jul-14

**Northern Trust TIPS 0-5 Years Characteristics**

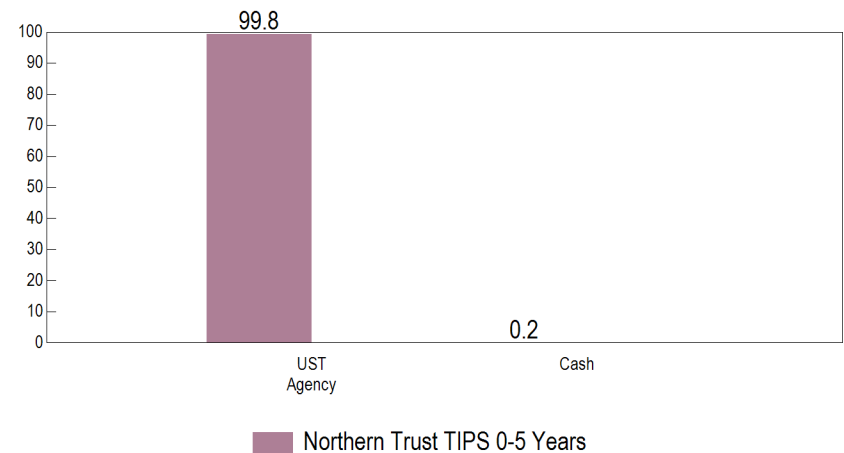
vs.

	Portfolio Q2-16	Portfolio Q1-16
<b>Fixed Income Characteristics</b>		
Yield to Maturity	0.7	0.8
Average Duration	1.4	1.7
Average Quality	AAA	AAA
Weighted Average Maturity	2.6	2.5

**Credit Quality Allocation**



**Sector Allocation**



**Account Information**

Account Name	Voya Securitized Credit
Account Structure	Separate Account
Investment Style	Active
Inception Date	7/01/15
Account Type	Global Fixed Income
Benchmark	Barclays Global Aggregate Securitized TR USD
Universe	

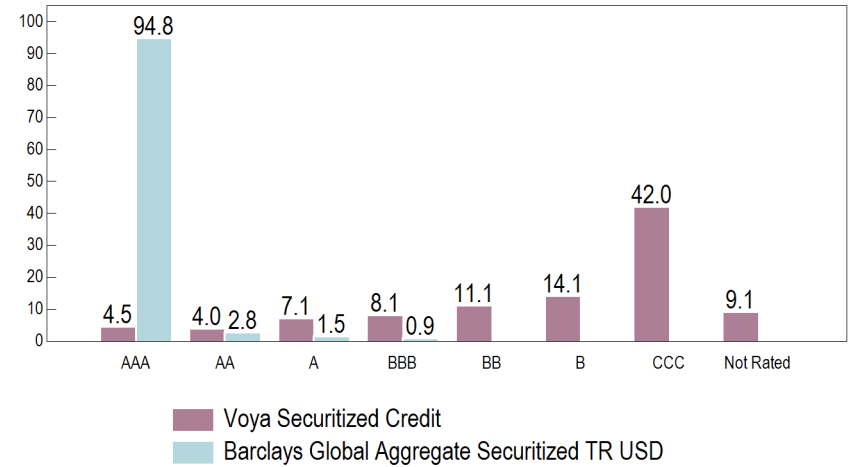
**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Voya Securitized Credit	2.7	3.2	3.2	--	--	--	3.2	Jul-15
Barclays Global Aggregate Securitized TR USD	0.6	3.9	3.9	2.8	2.5	--	3.9	Jul-15

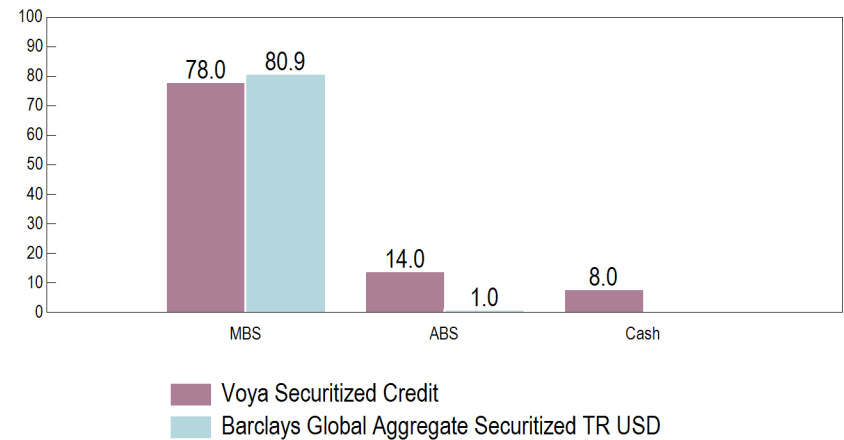
**Voya Securitized Credit Characteristics vs. Barclays Global Aggregate Securitized TR USD**

	Portfolio Q2-16	Index Q2-16	Portfolio Q1-16
<b>Fixed Income Characteristics</b>			
Yield to Maturity	6.0	1.7	6.0
Average Duration	2.6	3.0	2.6
Average Quality	CCC	AAA	CCC
Weighted Average Maturity	3.3	19.6	--

**Credit Quality Allocation**



**Sector Allocation**



**Account Information**

Account Name	<b>BlackRock Long Government Index</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Passive</b>
Inception Date	<b>6/01/16</b>
Account Type	<b>US Fixed Income Investment Grade</b>
Benchmark	<b>Barclays LT Govt.</b>
Universe	

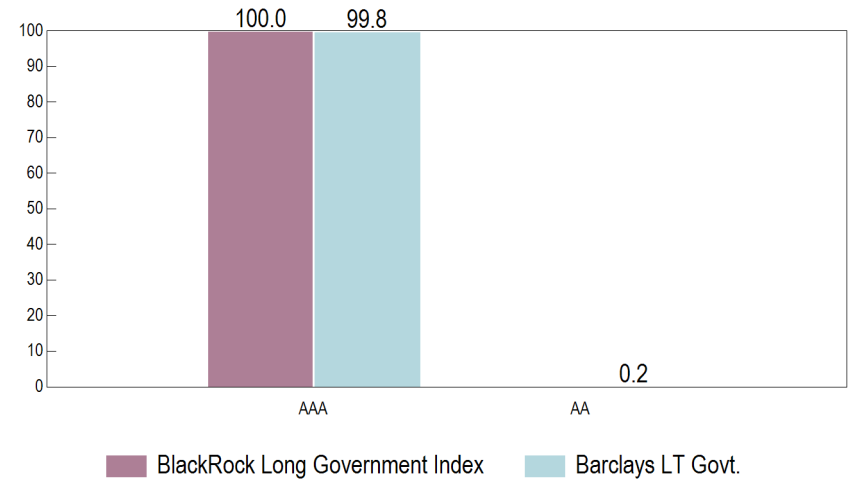
**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
BlackRock Long Government Index	--	--	--	--	--	--	6.1	Jun-16
Barclays LT Govt.	6.4	19.0	19.0	10.4	10.2	8.7	6.1	Jun-16

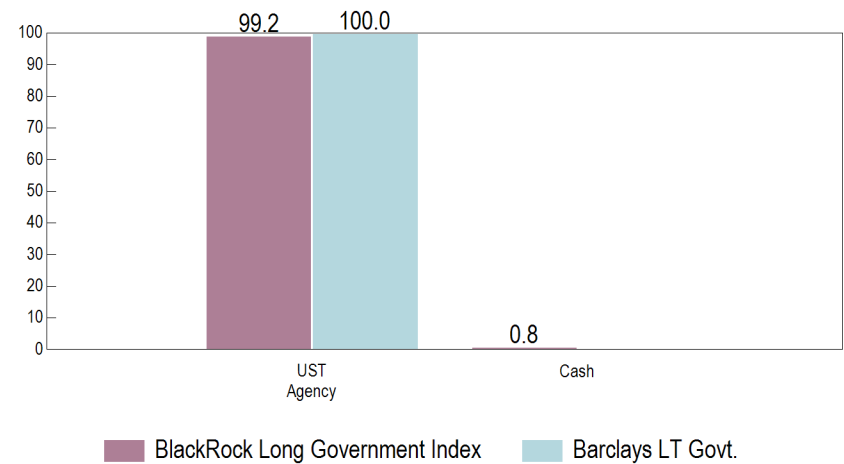
**BlackRock Long Government Index Characteristics vs. Barclays LT Govt.**

	Portfolio Q2-16	Index Q2-16
<b>Fixed Income Characteristics</b>		
Yield to Maturity	2.2	2.2
Average Duration	17.0	18.0
Average Quality	AAA	AAA
Weighted Average Maturity	--	24.9

**Credit Quality Allocation**



**Sector Allocation**



**Account Information**

Account Name	Claren Road Credit Fund
Account Structure	Other
Investment Style	Active
Inception Date	7/01/13
Account Type	Global Fixed Income
Benchmark	HFRI RV: Fixed Income-Corporate Index
Universe	

**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Claren Road Credit Fund	2.2	-10.4	-10.4	-9.0	--	--	-9.0	Jul-13
<i>HFRI RV: Fixed Income-Corporate Index</i>	3.8	0.9	0.9	2.7	3.4	3.6	2.7	Jul-13

**Account Information**

Account Name	Davidson Kempner Institutional Partners, L.P.
Account Structure	Other
Investment Style	Active
Inception Date	2/01/13
Account Type	Global Fixed Income
Benchmark	HFRI Event-Driven (Total) Index
Universe	

**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Davidson Kempner Institutional Partners, L.P.	2.8	2.0	2.0	4.0	--	--	4.7	Feb-13
<i>HFRI Event-Driven (Total) Index</i>	2.9	-3.8	-3.8	2.0	2.7	3.9	2.7	Feb-13

BlueBay Emerging Market Select Debt

As of June 30, 2016

Account Information

Account Name	BlueBay Emerging Market Select Debt
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	7/01/15
Account Type	International Emerging Market Debt
Benchmark	50% JPM EMBI GD / 50% JPM GBI-EM
Universe	

Portfolio Performance Summary

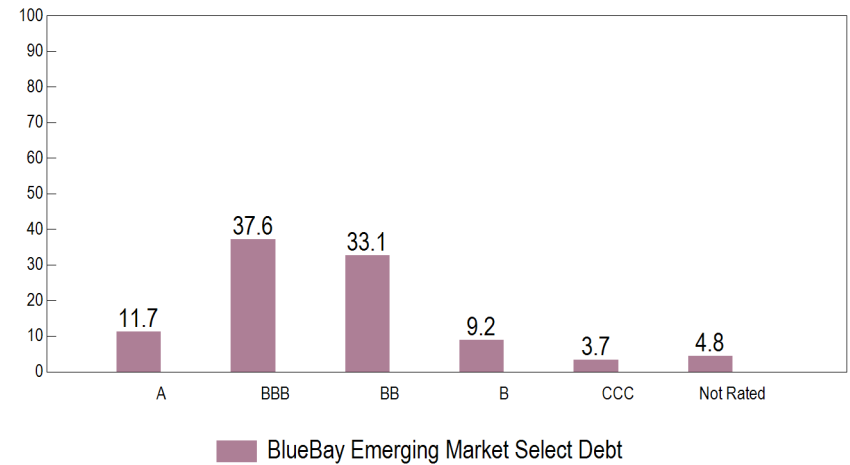
	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
BlueBay Emerging Market Select Debt	3.7	2.1	2.1	--	--	--	2.1	Jul-15
50% JPM EMBI GD / 50% JPM GBI-EM	3.9	6.0	6.0	1.8	2.1	6.9	6.0	Jul-15

BlueBay Emerging Market Select Debt Characteristics

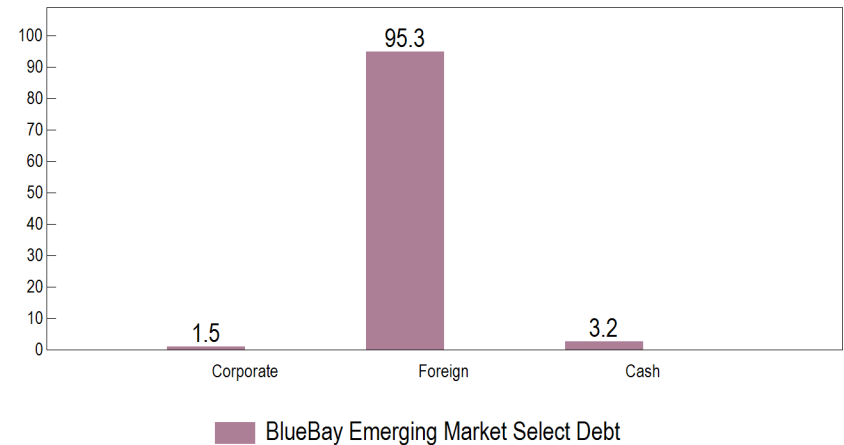
vs.

	Portfolio Q2-16	Portfolio Q1-16
<b>Fixed Income Characteristics</b>		
Yield to Maturity	5.6	5.9
Average Duration	6.9	6.3
Average Quality	BBB	BBB

Credit Quality Allocation



Sector Allocation



**Account Information**

Account Name	Credit Suisse Risk Parity Commodity Index
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/01/11
Account Type	Real Assets
Benchmark	Custom Risk Parity Commodity Benchmark
Universe	

**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Credit Suisse Risk Parity Commodity Index	8.3	-11.4	-11.4	-6.7	-7.5	--	-8.1	Apr-11
Custom Risk Parity Commodity Benchmark	7.9	-11.6	-11.6	-6.9	-7.6	--	-8.2	Apr-11
Bloomberg Commodity Index TR USD	12.8	-13.3	-13.3	-10.6	-10.8	-5.6	-11.5	Apr-11



**Account Information**

Account Name	<b>Pinnacle Natural Resources, L.P.</b>
Account Structure	<b>Other</b>
Investment Style	<b>Active</b>
Inception Date	<b>1/01/16</b>
Account Type	<b>Real Assets</b>
Benchmark	<b>Bloomberg Commodity Index TR USD</b>
Universe	

**Portfolio Performance Summary**

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Pinnacle Natural Resources, L.P.	-1.7	--	--	--	--	--	-2.2	Jan-16
<i>Bloomberg Commodity Index TR USD</i>	12.8	-13.3	-13.3	-10.6	-10.8	-5.6	13.3	Jan-16

## Rhumbline DJ Brookfield Global Infrastructure

As of June 30, 2016

## Account Information

Account Name	Rhumbline DJ Brookfield Global Infrastructure
Account Structure	Separate Account
Investment Style	Active
Inception Date	6/01/15
Account Type	Infrastructure
Benchmark	DJ Brookfield Global Infrastructure Net TR USD
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Rhumbline DJ Brookfield Global Infrastructure	7.6	3.9	3.9	--	--	--	-0.2	Jun-15
DJ Brookfield Global Infrastructure Net TR USD	7.4	3.2	3.2	8.5	--	--	-0.9	Jun-15

## Top 10 Holdings

NATIONAL GRID	7.1%
AMERICAN TOWER	5.8%
ENBRIDGE	4.7%
CROWN CASTLE INTL.	4.1%
KINDER MORGAN	4.1%
TRANSCANADA	3.9%
PG&E	3.8%
SEMPRA EN.	3.3%
SPECTRA ENERGY	3.0%
CONSOLIDATED EDISON	2.9%
<b>Total</b>	<b>42.6%</b>

## Rhumbline DJ Brookfield Global Infrastructure Characteristics

	Portfolio Q2-16	Portfolio Q1-16
<b>Market Value</b>		
Market Value (Mil)	140.7	130.8
Number Of Holdings	104	101
<b>Characteristics</b>		
Wtg. Avg. Market Cap. (Bil)	22.7	21.2
Median Market Cap (Bil)	6.1	6.3
P/E Ratio	27.8	26.0
Yield	3.5	3.7
EPS Growth - 5 Yrs.	3.4	3.3
Price to Book	3.0	2.7
Beta (holdings; domestic)	0.6	0.6
<b>Sector Distribution</b>		
Energy	24.8	24.3
Materials	0.0	0.0
Industrials	12.9	14.1
Consumer Discretionary	1.3	2.0
Consumer Staples	0.0	0.0
Health Care	0.0	0.0
Financials	10.3	9.7
Information Technology	0.1	0.1
Telecommunications Services	2.0	1.6
Utilities	46.9	46.8

## Rhumbline S&amp;P Global Large MidCap Commodity &amp; NR

As of June 30, 2016

## Account Information

Account Name	Rhumbline S&P Global Large MidCap Commodity & NR
Account Structure	Separate Account
Investment Style	Passive
Inception Date	6/01/15
Account Type	Infrastructure
Benchmark	S&P Global LargeMidCap Commodity and Resources GR USD
Universe	

## Portfolio Performance Summary

	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Return (%)	Since
Rhumbline S&P Global Large MidCap Commodity & NR	9.8	-9.5	-9.5	--	--	--	-13.2	Jun-15
S&P Global LargeMidCap Commodity and Resources GR USD	9.7	-9.2	-9.2	-4.0	-6.9	2.6	-13.0	Jun-15

## Top 10 Holdings

MONSANTO	7.1%
EXXON MOBIL	6.8%
SYNGENTA	5.6%
ARCHER-DANLS.-MIDL.	4.0%
BHP BILLITON	3.7%
CHEVRON	3.5%
RIO TINTO	3.0%
TOTAL	2.2%
ROYAL DUTCH SHELL B	2.1%
POTASH CORPORATION OF SASKATCHEWAN	2.1%
<b>Total</b>	<b>40.1%</b>

## Rhumbline S&amp;P Global Large MidCap Commodity &amp; NR Characteristics

	Portfolio Q2-16	Portfolio Q1-16
<b>Market Value</b>		
Market Value (Mil)	100.3	91.4
Number Of Holdings	185	38
<b>Characteristics</b>		
Wtg. Avg. Market Cap. (Bil)	62.3	37.0
Median Market Cap (Bil)	7.9	6.7
P/E Ratio	15.7	9.1
Yield	3.2	6.1
EPS Growth - 5 Yrs.	-8.3	-15.5
Price to Book	2.2	1.3
Beta (holdings; domestic)	1.3	1.4
<b>Sector Distribution</b>		
Energy	33.8	20.0
Materials	57.7	79.9
Industrials	0.0	0.0
Consumer Discretionary	0.0	0.0
Consumer Staples	8.3	0.0
Health Care	0.0	0.0
Financials	0.0	0.0
Information Technology	0.0	0.0
Telecommunications Services	0.0	0.0
Utilities	0.0	0.0



Time Period	%	Composition
10/1/2014-Present	28	MSCI ACWI IMI
	9	Cambridge Associates Private Equity Composite <sup>4</sup>
	24	Barclays Global Aggregate
	7	NCREIF Property
	6	Bloomberg Commodity Index
	5	DJ Brookfield Global Infrastructure Index
	5	S&P Global Natural Resources
	11	HFRI Macro Index <sup>1</sup>
	5	60% MSCI ACWI IMI/40% Barclays Global Aggregate <sup>2</sup>
1/1/2012-9/30/2014	31	MSCI ACWI IMI
	9	Cambridge Associates Private Equity Composite <sup>3</sup>
	5	NCREIF Property
	2.5	Barclays Intermediate Government
	1.25	Barclays U.S. TIPS
	1.25	Barclays U.S. TIPS 0-5 Years <sup>4</sup>
	5	3-Month LIBOR + 5%
	10	Risk Parity Commodities
	10	CPI-U + 5%
	25	HFRI Fund of Funds Composite
4/1/2011-12/31/2011	16	MSCI ACWI
	9	MSCI ACWI Value
	5	MSCI Emerging Markets
	5	MSCI EAFE Small Cap
	3	MSCI EAFE Growth
	3	Russell 3000
	2.5	Russell 2000 Growth
	2.5	Russell 2000 Value
	7.5	Russell Investments Barclays U.S. TIPS
	5	Barclays Intermediate Government
	2.5	Barclays Long U.S. Credit
	2.5	Merrill Lynch High Yield BB/B
	2.5	CSFB Leveraged Loan
	3	ML 300 Global Convertibles
	5	HFRI Weighted Composite
	5	NCREIF Property
6	Venture Economics Private Equity	

Time Period	%	Composition
4/1/2011-12/31/2011 (continued)	8	Custom Risk Parity Benchmark
	2	S&P Global Infrastructure
	5	3-Month LIBOR + 5%
4/1/2010-3/31/2011	16	MSCI ACWI
	9	MSCI ACWI Value
	5	MSCI Emerging Markets
	5	MSCI EAFE Small Cap
	3	MSCI EAFE Growth
	3	Russell 3000
	2.5	Russell 2000 Growth
	2.5	Russell 2000 Value
	7.5	Russell Investments Barclays U.S. TIPS
	5	Barclays Intermediate Government
	2.5	Barclays Long U.S. Credit
	2.5	Merrill Lynch High Yield BB/B
	2.5	CSFB Leveraged Loan
	3	ML 300 Global Convertibles
5	HFRI Weighted Composite	
5	NCREIF Property	
6	Venture Economics Private Equity	
8	Dow-Jones UBS Commodities	
2	S&P Global Infrastructure	
5	3-Month LIBOR + 5%	
7/1/09 - 3/31/2010	34	Russell 1000
	9	Russell 2000
	29	Barclays Aggregate
	7	S&P Citigroup WGBI
	15	MSCI ACWI ex U.S.
	6	NCREIF Property

<sup>1</sup> HFRI Macro Discretionary Thematic through 6/30/2015, HFRI Macro Index thereafter.

<sup>2</sup> Policy Benchmark from 10/1/14 through 5/31/15, 60% MSCI ACWI IMI/40% Barclays Global Aggregate thereafter.

<sup>3</sup> Cambridge Associates Private Equity Composite (40% Secondary and 60% Fund of Funds) used since 1Q14. Data for the Venture Economics Private Equity Index was used through 4Q13, but the index was discontinued in early 2014. Not available at the time of this report.

<sup>4</sup> Barclays U.S. TIPS 1-5 Years through 6/30/14, Barclays U.S. TIPS 0-5 Years thereafter.



# **Global Macroeconomic Outlook June 2016**

## Global Economic Outlook<sup>1</sup>

**Increased uncertainty related to the recent “Brexit” vote led to yet another reduction in projections for global growth.**

- The IMF reduced their 2016 global growth forecast by 0.1%, to 3.1%, and lowered its 2017 forecast by the same amount, to 3.4%.
- In advanced economies, the IMF outlook fell from 1.9% to 1.8% for 2016, and from 2.0% to 1.8% for 2017. Downward revisions related to Brexit were concentrated in European countries, with U.K. growth projections lowered 0.9% in 2017 to 1.3% and German’s growth projections lowered 0.4% to 1.2%. Growth forecasts for the U.S. and Japan both declined 0.2% for 2016, remained unchanged for the U.S. in 2017, and increased by 0.2% for Japan in 2017.
- Emerging economy growth projections stayed the same for the next two years and remain higher than those for developed economies. Economic environments within emerging market countries remain uneven. Improvements are projected in Russia due to higher oil prices, and in Brazil due to a smaller-than-projected GDP contraction in the first quarter. The forecast for China did not change.

	Real GDP (%)			Inflation (%)		
	IMF 2016 Forecast	IMF 2017 Forecast	Actual 10 Year Average	IMF 2016 Forecast	IMF 2017 Forecast	Actual 10 Year Average
World	3.1	3.4	3.7	2.8	3.0	4.0
U.S.	2.2	2.5	1.4	0.8	1.5	2.0
European Union	1.8	1.9	1.1	0.4	1.3	1.9
Japan	0.3	0.1	0.5	-0.2	1.2	0.2
China	6.6	6.2	9.5	1.8	2.0	2.9
Emerging Markets (ex. China)	2.7	3.5	4.5	6.1	5.6	7.4

<sup>1</sup> Source: IMF. World Economic Outlook. April 2016 edition with available updates from July 2016. “Actual 10 Year Average” represents data from 2006 to 2015. Data after 2015 is an estimate.

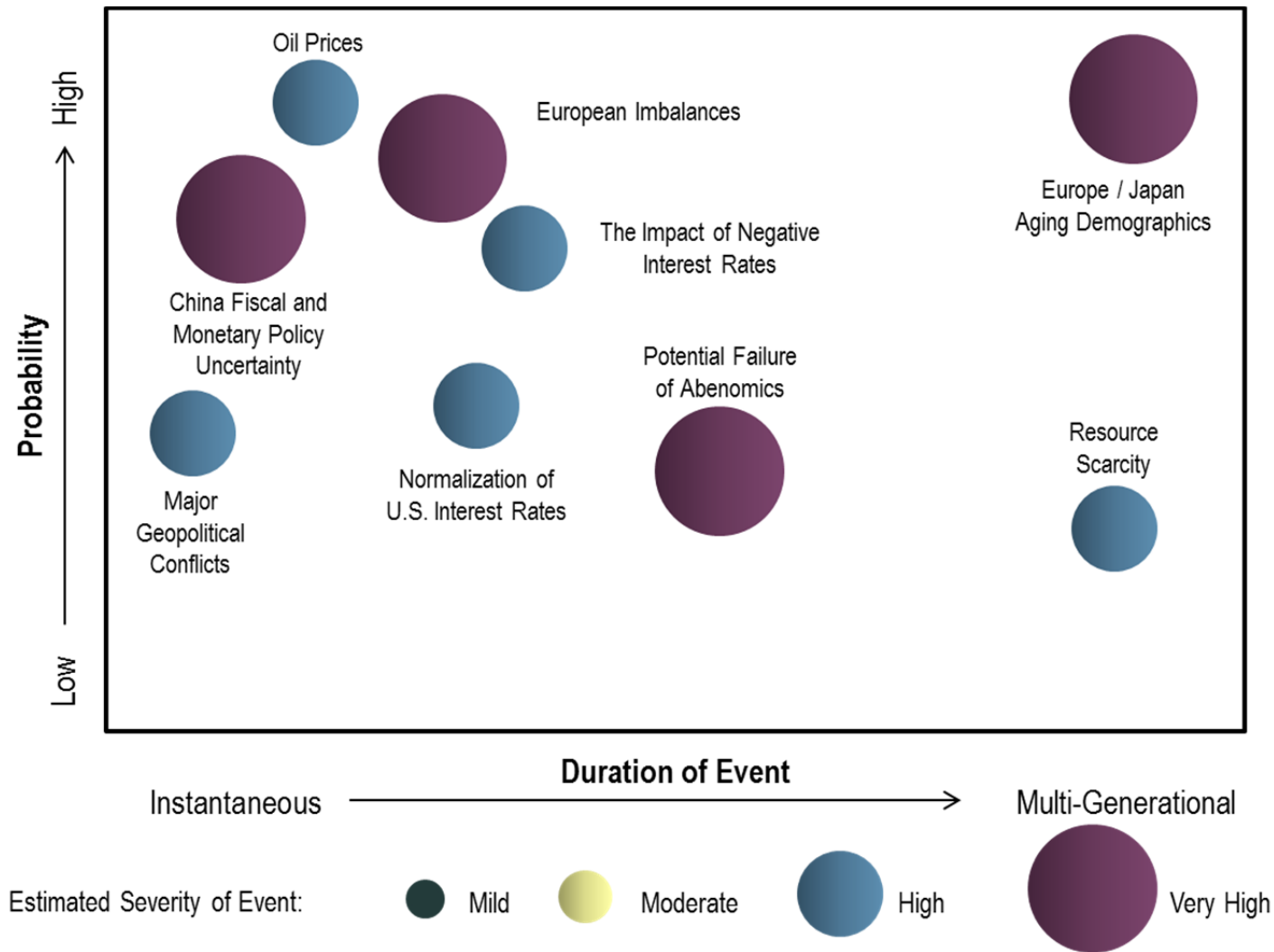
## Global Economic Outlook, Continued

**Given the recent vote for the U.K. to leave the European Union (EU), the pace of U.S. monetary tightening will probably be further delayed, with additional stimulus in Europe, Japan, and China likely.**

- After their initial 0.25% rate increase to 0.5% in December of last year, the U.S. Federal Reserve has made no additional rate increases. The recent “Brexit” vote pushed market expectations for the next rate increase out to 2017.
- The Bank of England (BOE) recently decided to keep interest rates unchanged until more economic data related to the impact of the referendum vote comes in. It is expected that the BOE will cut interest rates at their next meeting this summer. The European Central Bank (ECB) did not make any policy changes at their June meeting, keeping bank deposit rates at -0.4% and its key interest rate at close to 0%. In further efforts to stimulate growth and prices, the ECB continues to offer very cheap loans to banks and to buy government and corporate bonds.
- The Bank of Japan (BOJ) has made no significant recent changes to its very aggressive monetary policy. The yen’s continued strength in light of global uncertainties has weighed on the BOJ’s efforts to fan inflation. It is likely, given continued low inflation and weak growth, that the BOJ will continue to expand its stimulative efforts.
- To fight slowing growth, the People’s Bank of China (PBOC) has cut interest rates six times since the end of 2014 and reduced bank reserve requirements. The PBOC has more room than other major central banks to make further cuts if needed.

**Several issues are of primary concern: 1) declining growth in China, along with uncertain fiscal and monetary policies; 2) continued economic sluggishness in Europe, and risks related to the U.K.’s exit from the European Union; 3) weakening economic activity in the U.S.; 4) divergent growth in emerging economies.**

### Macroeconomic Risk Matrix





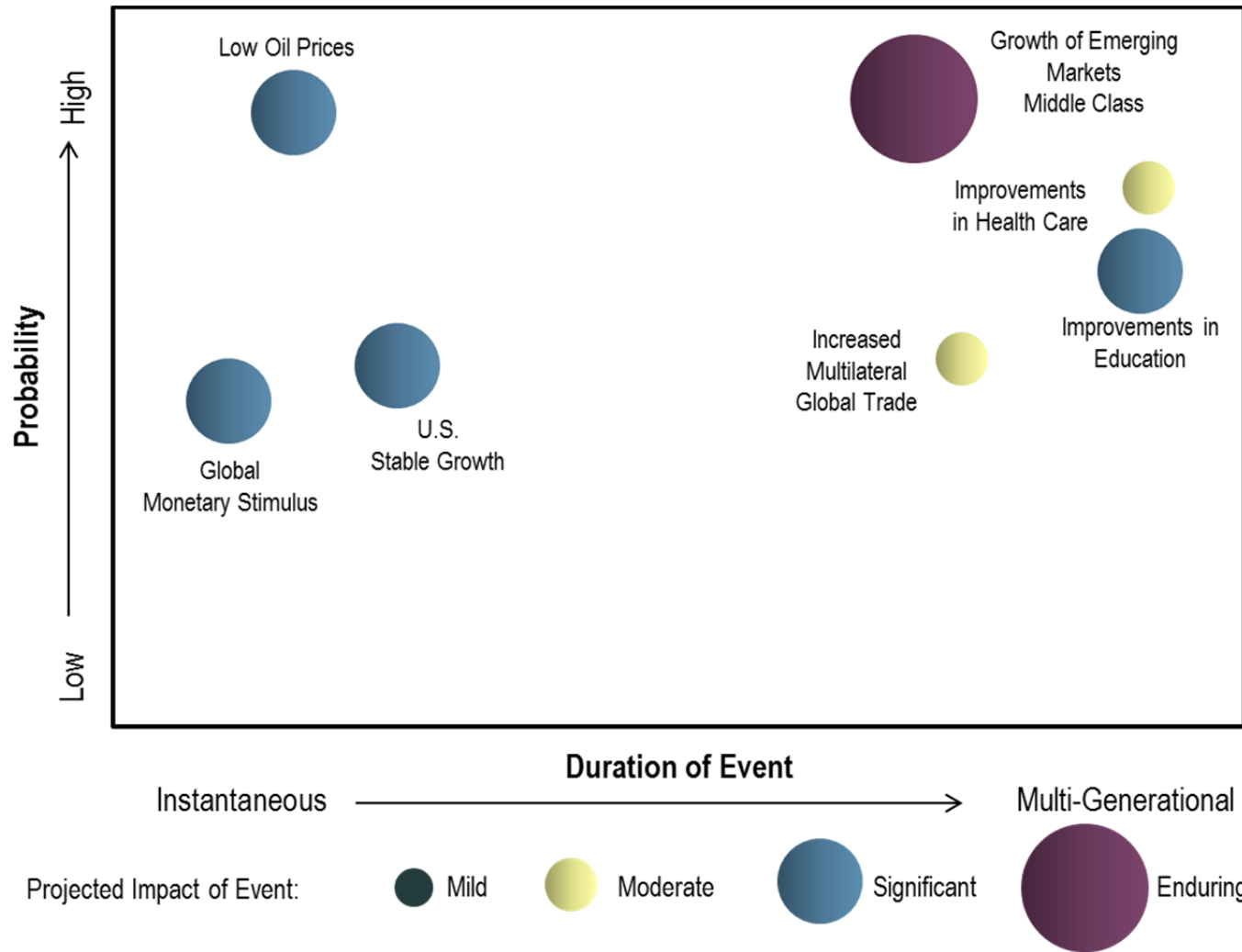
## Macroeconomic Risk Overviews

<b>Low Oil Prices</b>	<p>Although oil prices recently increased, they remain historically low. An extended period of low oil prices will hurt countries such as Iran, Russia, and Venezuela that depend heavily on oil export revenues. Low prices will continue to hurt oil exploration and production (E&amp;P) companies, and companies that support the oil industry. Recently, the stress of low oil prices has particularly affected E&amp;P companies, with bond defaults ticking up. The risk of increased geopolitical tensions also exists with depressed oil prices.</p>
<b>European Imbalances</b>	<p>The crisis is rooted in structural issues in the Eurozone related to the combination of a single currency combined with 17 fiscal authorities. In the broader European Union, tensions exist, as highlighted in the recent U.K. referendum, related to policies on immigration, laws, and budgetary contributions. Additional countries leaving either group, particularly the Eurozone, could set a dangerous precedent, especially if they ultimately experience growth. The massive influx of refugees into Europe from the Middle East and North Africa exacerbates economic stress.</p>
<b>Potential Failure of Abenomics</b>	<p>Japan is engaged in a historic stimulus program, referred to as “Abenomics” to fight its decades of deflation. The plan includes monetary, fiscal, and structural components. If Japan overshoots with its policies, or dramatically changes them unexpectedly, it could prove disruptive to markets and growth.</p>
<b>Europe/Japan Aging Demographics</b>	<p>In Japan and Europe, birth rates have declined for decades, resulting in populations becoming older and smaller relative to the rest of the world. These demographic trends will have a negative long-term impact on GDP growth and fiscal budgets, amplifying debt problems.</p>
<b>Major Geopolitical Conflicts</b>	<p>Recently, a military coup was attempted in Turkey that was ultimately thwarted. Since, thousands were detained or fired and a state of emergency was declared. The recent attacks in the U.S., Europe, and Turkey further highlight the continued threat of terrorism. Within Europe, this complicates the refugee crisis, as countries try to balance maintaining open borders with preventing terrorists from entering their countries. Other unresolved geopolitical issues remain, including the civil war in Syria and North Korea’s nuclear aspirations.</p>

## Macroeconomic Risk Overviews, Continued

<b>China Fiscal and Monetary Policy Uncertainty</b>	<p>China's recent policies, first to support its equity markets and then to devalue its currency, created heightened volatility in global markets. The process of transitioning from a growth model based on fixed asset investment by the government, to a model of consumption-based growth will be difficult. Similar measures responding to slowing growth or to support stock prices could prove disruptive and decrease confidence in China's government. China's abandonment of its support of the yuan, and a resulting major devaluation of the currency, could prove particularly disruptive to global markets and trade.</p>
<b>Normalization of U.S. Interest Rates</b>	<p>After the Global Financial Crisis, the U.S., injected massive amounts of liquidity into the financial system in an effort to prevent depression-like declines in economic activity. Additionally, the central bank reduced short-term interest rates to record lows. Although it appears that the Federal Reserve will pause its interest rate increases, once they resume tightening this could weigh on growth globally, particularly in emerging economies.</p>
<b>Resource Scarcity</b>	<p>The increasing world population, urbanization, and a growing middle class, particularly in emerging economies, could all lead to a scarcity of resources, including food, water, land, energy, and minerals. As demand continues to grow and supply declines, certain commodity prices may skyrocket, hurting the living standards of many and increasing the risk of geopolitical conflicts.</p>
<b>The Impact of Negative Interest Rates</b>	<p>Recently monetary policy amongst major central banks has diverged. The U.S. stopped its bond-buying program and increased interest rates last year, while in Europe and Japan, rates are expected to remain low with deposit rates in negative territory. The hope of negative interest rates is to stimulate economic activity, but it is possible that they could have unintended consequences. If banks absorb the impact of negative interest rates, that could weigh on profit margins and lending, while charging customers to hold their cash may lead to funds being withdrawn from banks. Both results could lead to less lending, not more, and ultimately a decline in economic activity.</p>

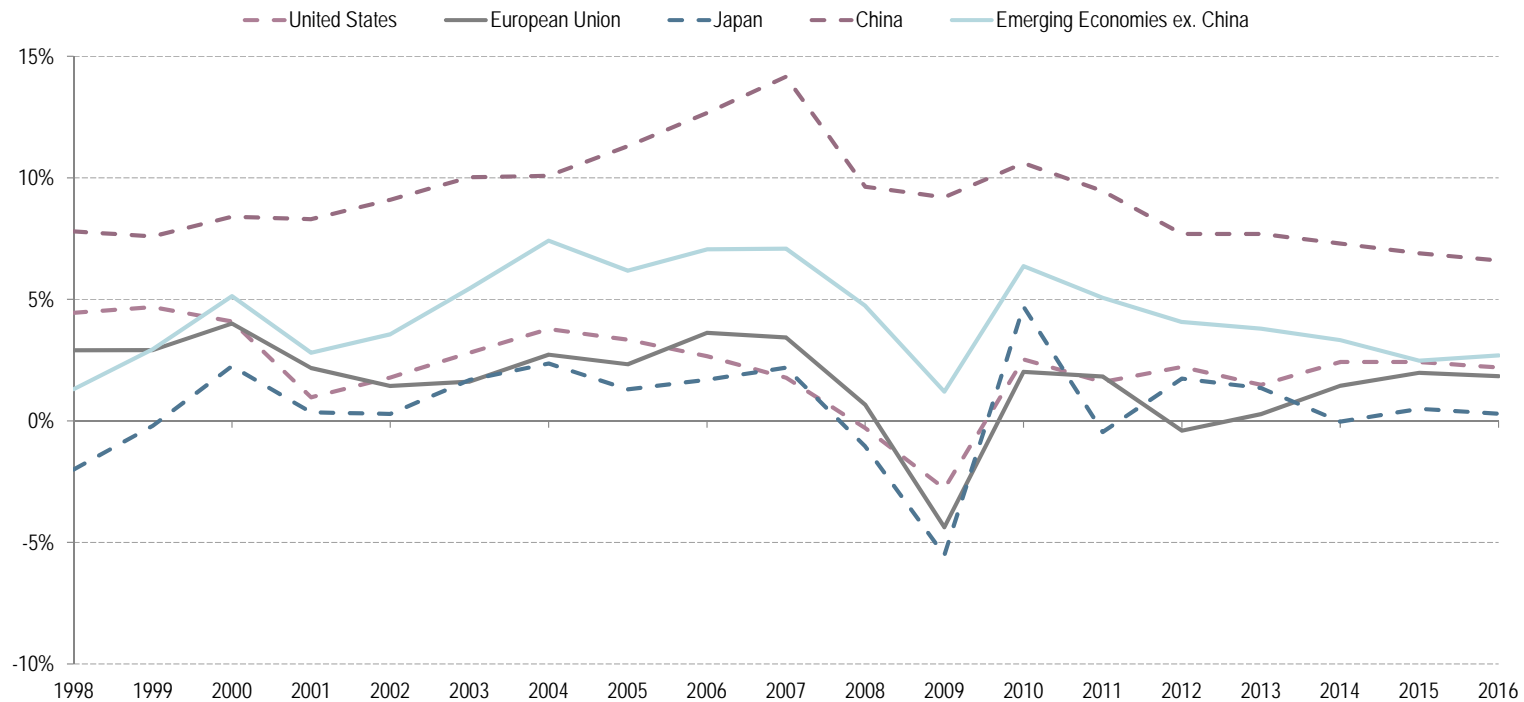
### Positive Macroeconomic Trends Matrix



## Positive Macroeconomic Trends Overviews

<b>Low Oil Prices</b>	Although oil prices have recently increased, they remain low from a historical perspective. Low oil prices will likely have a positive impact on global growth, particularly for energy importers like China, Japan, and India. Consumers should benefit from falling oil prices, in the form of lower prices for gasoline and heating oil.
<b>U.S. Stable Growth</b>	The U.S. economy has stabilized since the Global Financial Crisis, with GDP growth improving and unemployment declining. Continued stabilization in the world's largest economy should improve employment and growth domestically, and increase demand for goods and services from abroad.
<b>Growth of Emerging Markets Middle Class</b>	In emerging economies, the size of the middle class is projected to grow significantly over the next twenty years. This growing middle class should increase consumption globally, which in turn will drive GDP growth and create jobs.
<b>Increased Multilateral Global Trade</b>	The pace of globalization has accelerated, particularly in emerging economies. Increased trade and investment, and access to foreign capital and export markets for corporations, should lead to greater global growth. The recent U.K. vote to leave the European Union, along with anti-trade sentiment in the U.S., could weigh on trade going forward.
<b>Improvements in Education/Healthcare</b>	Literacy rates and average life spans have increased globally, particularly in the emerging economies. Higher literacy rates will drive future growth, helping people learn new skills and improve existing skills. When people live longer, it increases incentives to make long-term investments in education and training, resulting in a more productive work force and ultimately more growth.
<b>Global Monetary Stimulus</b>	Developed market central banks embarked on a massive monetary stimulus campaign in the aftermath of the Global Financial Crisis. The U.S., European, and Japanese central banks continue to maintain interest rates at record lows. Japan has embarked on an unprecedented asset purchase program, while the European Central Bank began its own program. In contrast, the U.S. ended its bond-buying program and increased interest rates once in December of 2015. Given the recent events in the European Union, it is unlikely that the Fed will raise interest rates further in the short-term. Additionally, many emerging market central banks have reduced interest rates to stimulate growth. If central banks continue to provide liquidity and keep interest rates low, this should stimulate growth.

## Global Real Gross Domestic Product (GDP) Growth<sup>1</sup>



- Global growth remains weak, with the dynamic of emerging economies growing faster than developed economies remaining intact.
- The recent decision of the United Kingdom to leave the European Union could weigh on growth in Europe and elsewhere. The slowing of China's economy remains another key concern, with a particular impact on commodity exporting countries.

<sup>1</sup> Source: IMF. World Economic Outlook. April 2016 edition with available updates from July 2016. GDP data after 2015 are IMF estimates.

## Major Currency Values versus the U.S. Dollar<sup>1</sup>



- After strengthening in 2015 against most major currencies, the U.S. dollar has posted mixed results in 2016, but is overall weaker.
- After the “Brexit” vote, the British pound declined significantly in value, while safe haven currencies like the Japanese yen increased. The recent strengthening of the yen hurt their central bank’s efforts to stimulate inflation.

<sup>1</sup> Source: Thomson Reuters. Data is as of June 30, 2016.

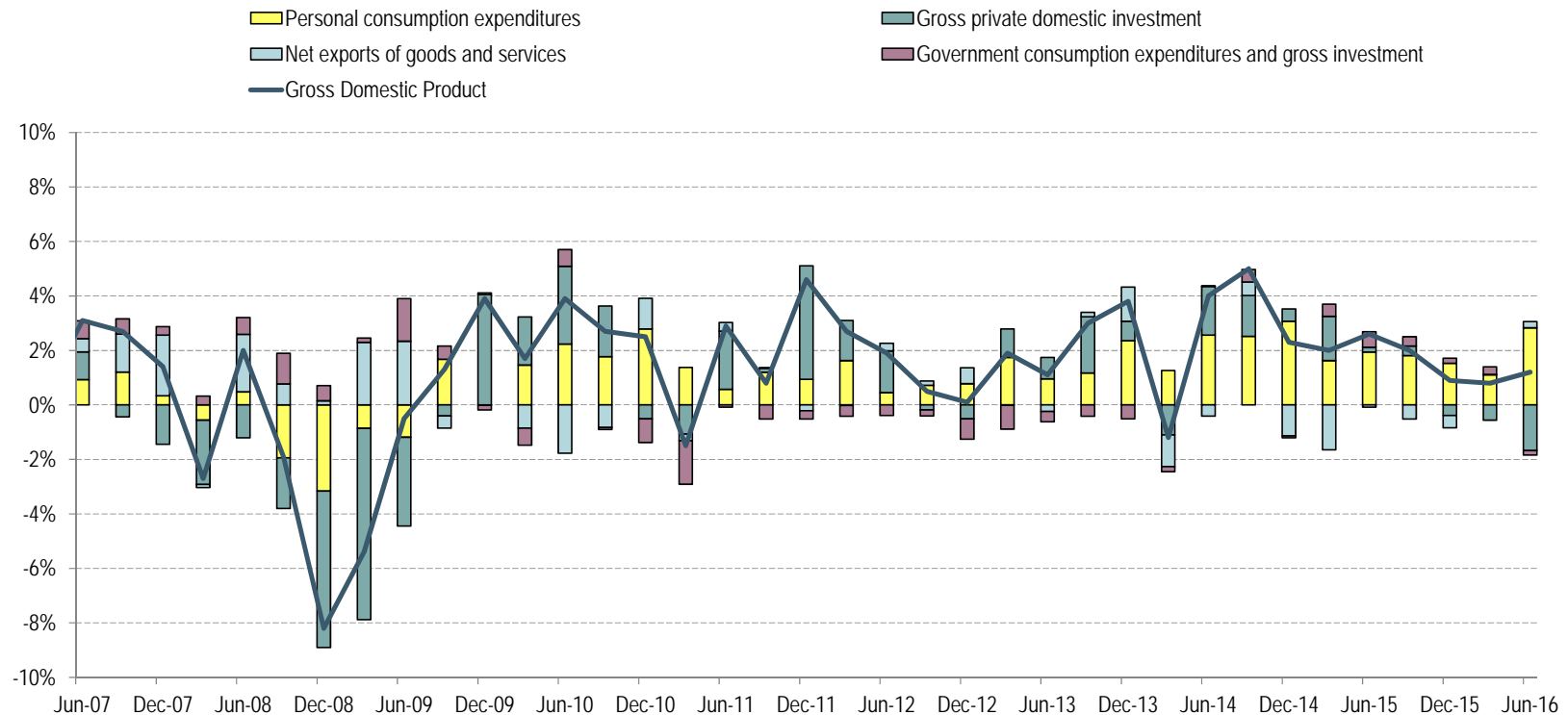
### Probability of Federal Funds Rate Increase<sup>1</sup>

Federal Reserve Meeting Date	Probability of Rate Increase As of 12/31/2015	Federal Reserve Meeting Date	Probability of Rate Increase As of 6/30/2016
1/27/2016	0%	7/29/2016	0%
3/16/2016	51%	9/21/2016	0%
4/27/2016	56%	11/2/2016	0%
6/15/2016	75%	12/14/2016	9%
7/29/2016	79%	2/1/2017	9%
9/21/2016	87%	5/3/2017	13%
11/2/2016	90%	3/15/2017	14%
12/14/2016	93%	6/14/2017	23%
2/1/2017	95%	7/26/2017	22%
		9/20/2017	31%
		11/1/2017	32%
		12/13/2017	40%

- Going into 2016, market expectations were for up to four rate increases by the Federal Reserve. To date, there has not been a rate increase since the initial increase in December of last year.
- Post “Brexit,” the probability of a rate increase fell to below 50% all the way through the end of 2017.
- If the Fed continues to delay further increasing rates this could continue to benefit U.S. stocks and bonds.

<sup>1</sup> Source: Bloomberg.

## U.S. Real Gross Domestic Product (GDP) Growth<sup>1</sup>

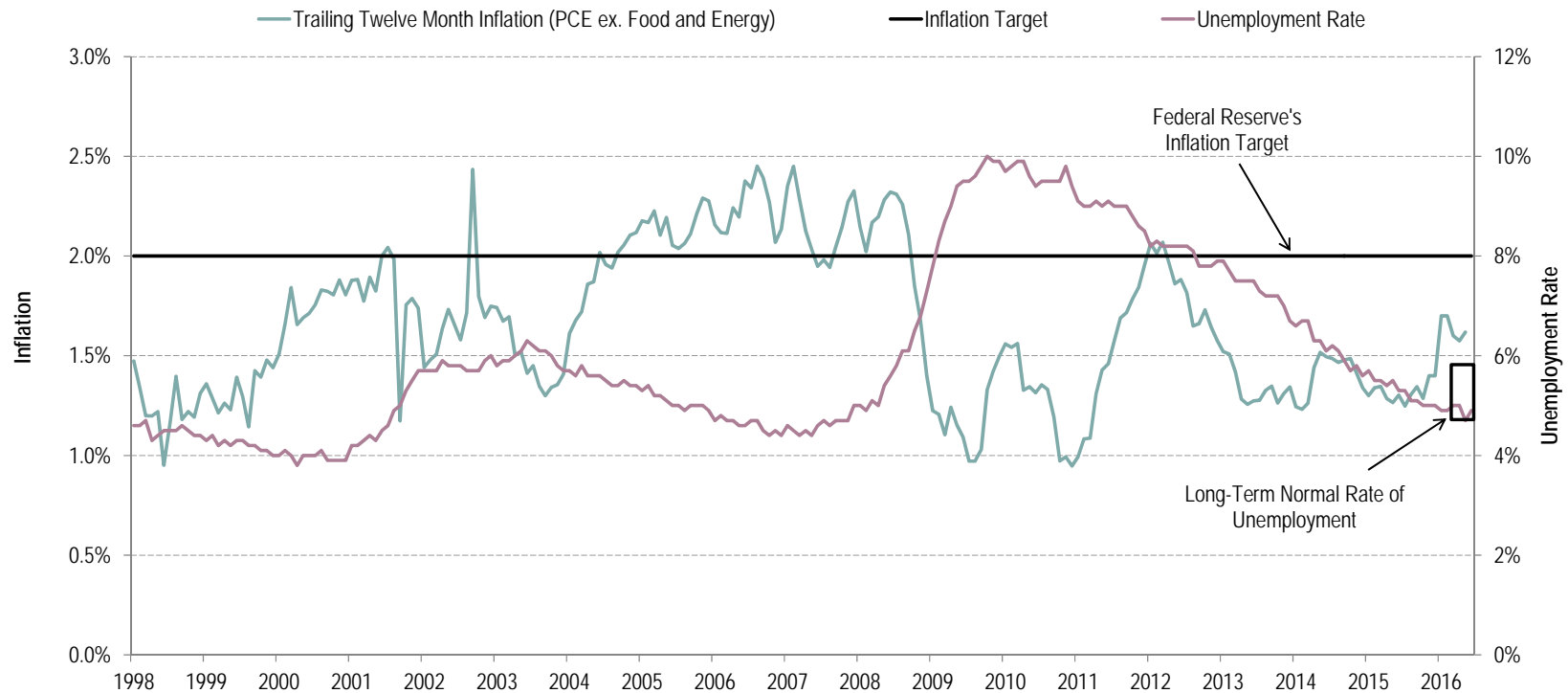


- U.S. GDP grew at an annual rate of 1.2% in the second quarter, less than half the expected level. Revisions were also made to prior quarters, including a downward revision (0.8% versus 1.1%) for the first quarter.
- Over the quarter, an increase in consumer spending was offset in part by a decline in inventory spending by businesses.

<sup>1</sup> Source: U.S. Bureau of Economic Analysis. Data is as of the first quarter of 2016 and represents the third estimate.



## U.S. Inflation & Employment<sup>1</sup>

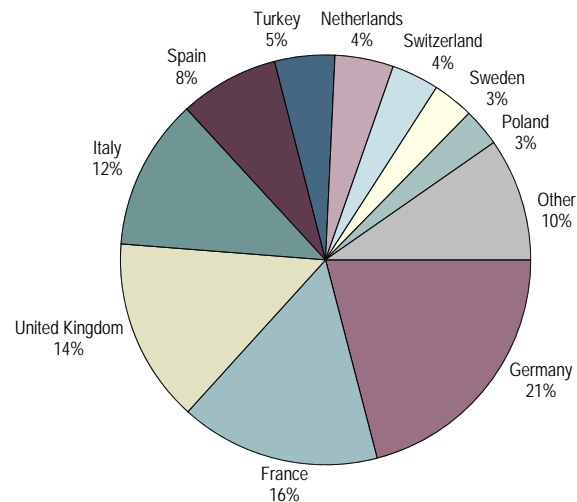


- Despite improving conditions domestically, the Fed remains cautious in the pace of rate increases in light of the recent “Brexit” vote and slowing growth in China.
- The Federal Reserve’s preferred measure of inflation recently increased, but remains below its 2.0% target. Further increases in prices could complicate the Fed’s rate decision given the global uncertainties.

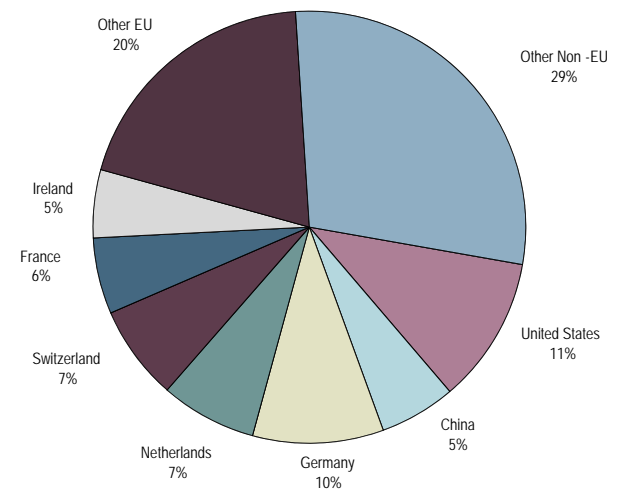
<sup>1</sup> Source: Bureau of Labor Statistics. Unemployment data is as of June 30, 2016 and PCE data is as of May 31, 2016. Federal Open Market Committee (FOMC) participants’ recent estimates of long-term normal unemployment had a median value of 4.9% and a range of 4.7% to 5.8%.

## European Union Overview

Aggregate European Union GDP<sup>1</sup>



United Kingdom Export Destinations<sup>2</sup>

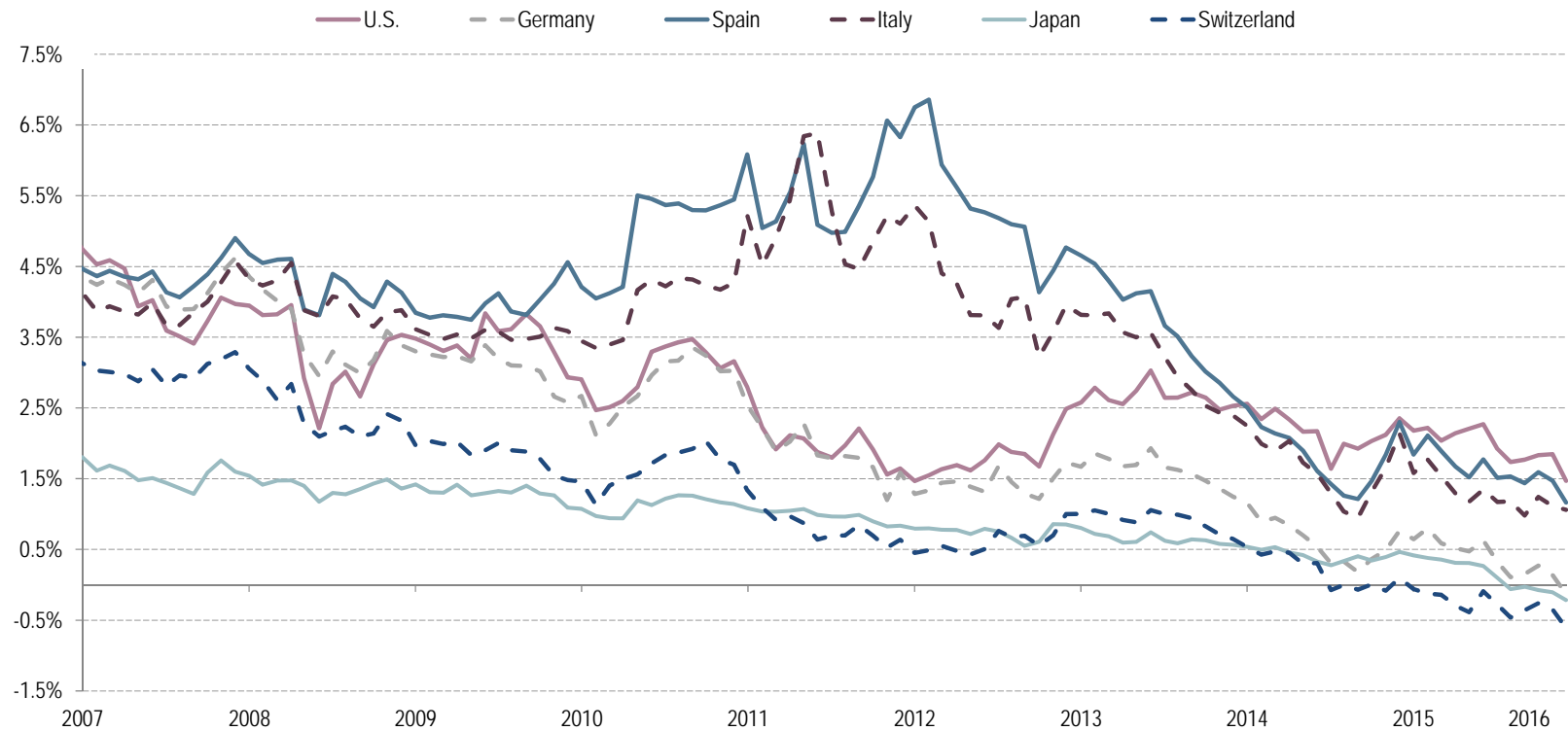


- The European Union is made up of 28 countries and is an economic/political union. The U.K. makes up approximately 14% of its GDP and exports a majority of its goods to other member countries.
- In late June, the U.K. held a referendum on whether or not to stay in the European Union. The result was a vote in favor of leaving.
- Subsequent to the vote, equity markets declined, the pound fell approximately 10%, and Prime Minister David Cameron resigned. Since then markets have stabilized and a new prime minister, Theresa May, entered office.
- Going forward, key considerations will be the impact of the decision on trade and foreign investment in the U.K.

<sup>1</sup> Source: Eurostat. Represents April 2016 data.

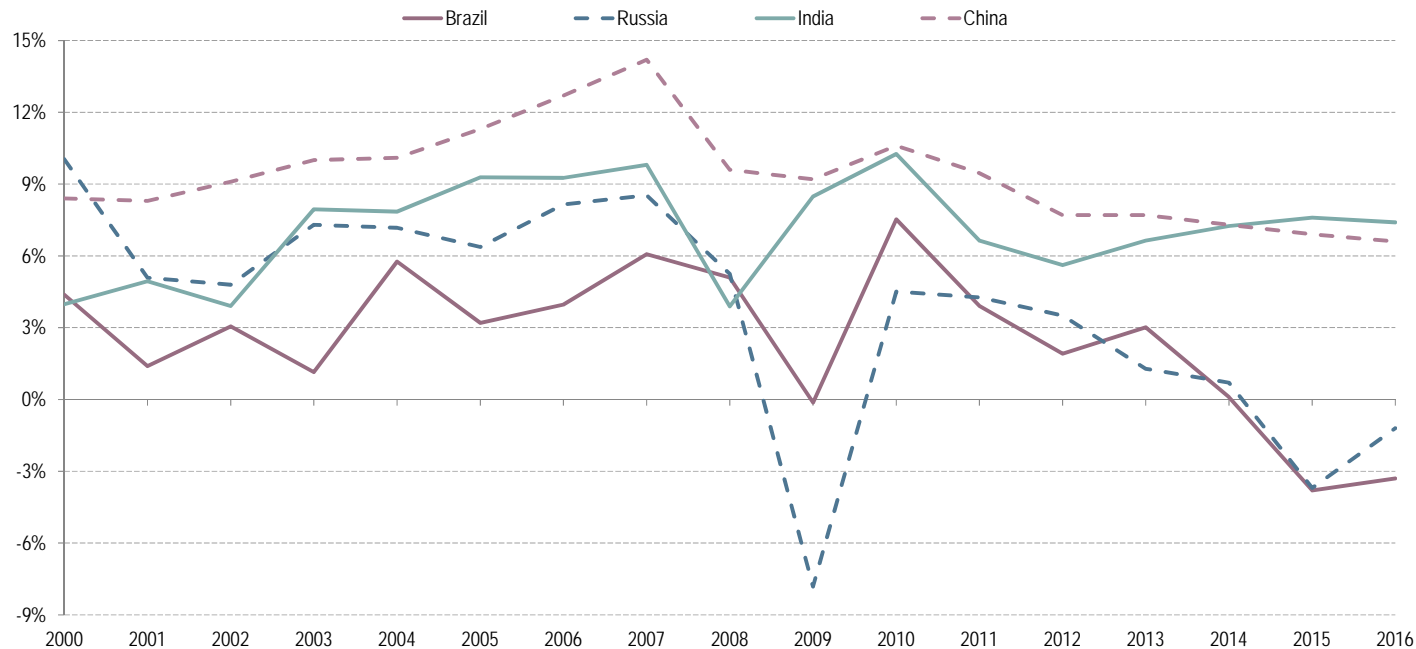
<sup>2</sup> MIT, Observatory for Economic Complexity. Represents 2014 data.

## 10-Year Government Bond Yields<sup>1</sup>



- Given major central banks' efforts to stimulate growth, close to one-third (approximately \$12 trillion) of all government debt has a negative yield.
- This, along with the expectation that the Fed will not increase interest rates in the short term, makes U.S. government debt relatively attractive.

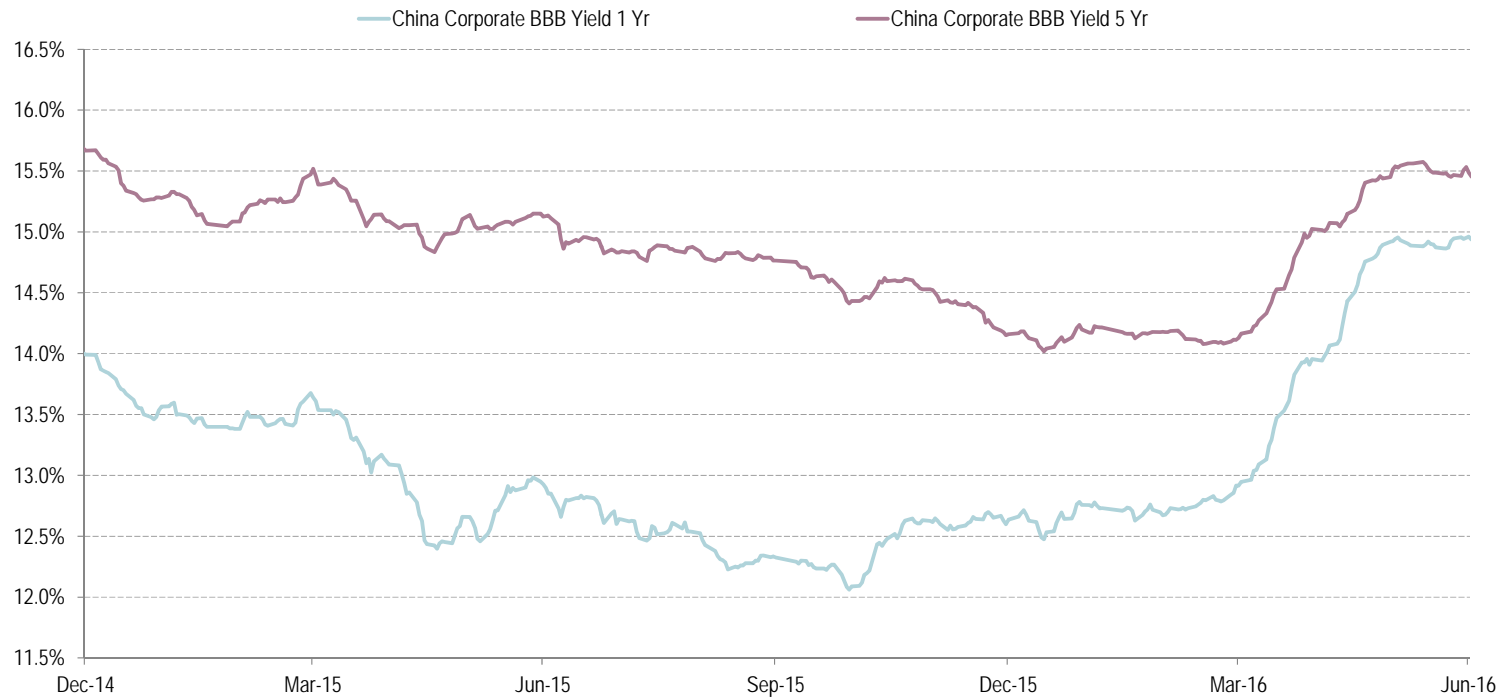
<sup>1</sup> Source: Bloomberg. Data is as of June 30, 2016.

Emerging Market GDP<sup>1</sup>

- Growth in emerging economies remains uneven and has trended downward since 2010.
- China's economy has slowed as they transition from a growth model based on investment to one of consumption, while India remains a bright spot.
- Brazil and Russia remain in recession as the decline in commodity prices has weighed heavily on their economies.

<sup>1</sup> Source: IMF. World Economic Outlook. April 2016 edition with available updates from July 2016. GDP data after 2015 are IMF estimates.

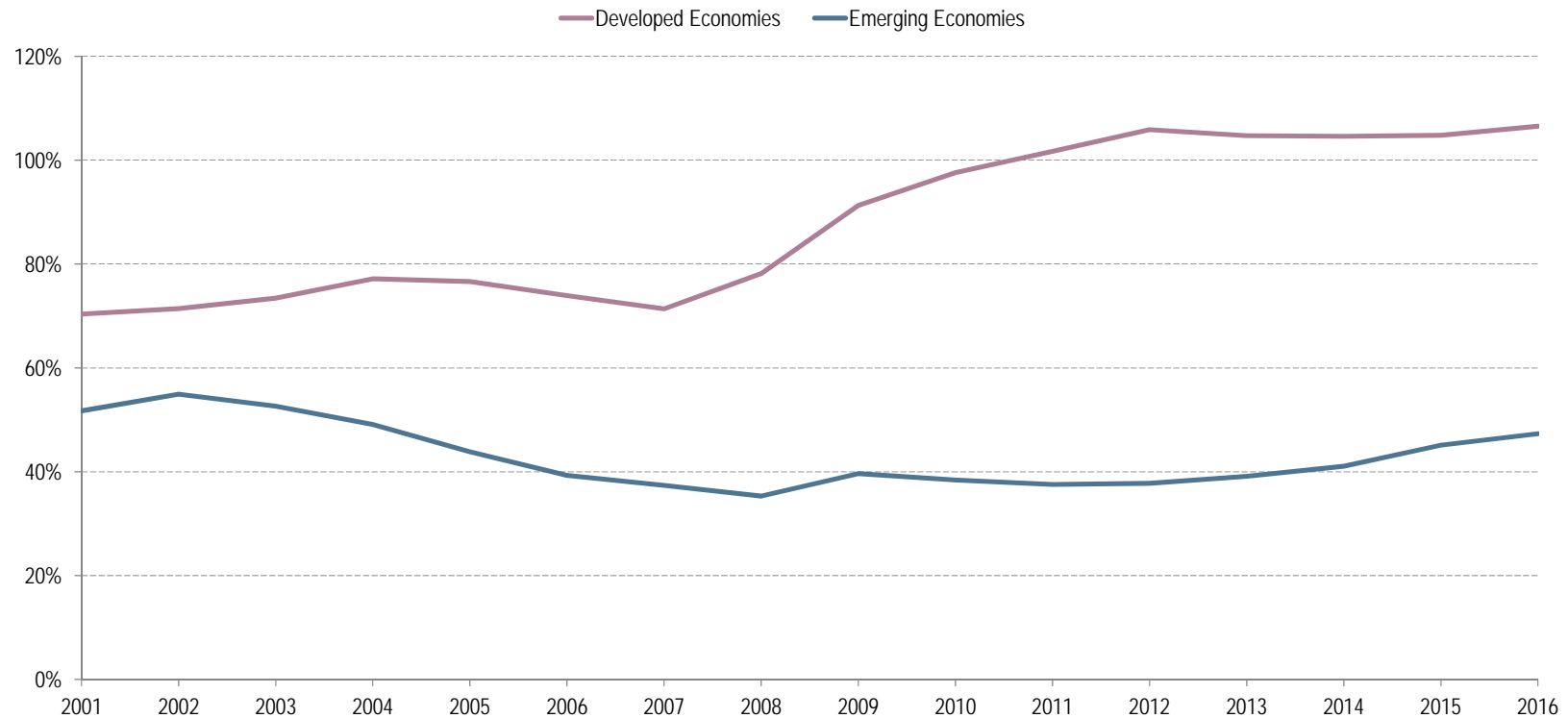
## China Yields<sup>1</sup>



- Although the focus has recently shifted to the European Union, the slowing economy in China remains a key issue.
- Driven by recent defaults at state-owned enterprises, China corporate debt yields have increased.
- Higher borrowing costs could weigh on companies' profit margins and their ability to service their debt.

<sup>1</sup> Source: Bloomberg. Data is as of June 30, 2016.

## Government Debt as a % of GDP<sup>1</sup>



- Emerging markets have lagged U.S. markets, a trend that has shown signs of reversing as emerging markets have led returns in 2016.
- The long-term growth thesis remains in place for emerging markets. Lower debt levels, improving demographics, and opportunities for improving productivity should help bolster emerging economies' growth.

<sup>1</sup> Source: IMF, World Economic Outlook, April 2016.

## Summary

**Four primary concerns face the global economy: 1) declining growth in China, along with uncertain fiscal and monetary policies; 2) continued economic sluggishness in Europe and risks related to the U.K.'s exit from the European Union; 3) weakening economic activity in the U.S.; 4) divergent growth in emerging economies.**

- Given China's size and contribution to global growth, a slowing of its economy could have a meaningful impact, particularly on countries that depend on its trade. Another unexpected devaluation of the yuan could prove very disruptive to capital markets, weigh on domestic demand, and hurt countries with competing exports.
- The recent decision of the U.K. to leave the European Union further weighs on the fragile recovery in Europe. Going forward, the U.K.'s negotiation of trade deals will be a key issue with a wide range of potential outcomes. Uncertainty related to the outcome of negotiations should weigh on foreign investment and consumption. Any additional moves to leave the European Union or the Eurozone could be disruptive to markets and growth.
- Slowing growth globally and the eventual increase of interest rates could weigh on economic activity in the U.S. Corporate profits remain vulnerable after a period where companies increased margins by cost cutting. The dollar strengthened recently after the "Brexit" vote. Continued dollar strength should particularly weigh on multinational companies and domestic exporters.
- Growth in emerging market economies will likely remain uneven, with commodity export-dependent economies particularly hurt by a sustained slowdown in global growth and prices. Capital could also be attracted away from emerging markets when the U.S. Federal Reserve further increases interest rates. Despite varied headwinds, there are bright spots within emerging markets, including India, where their growth has surpassed China's.

# Capital Markets Outlook

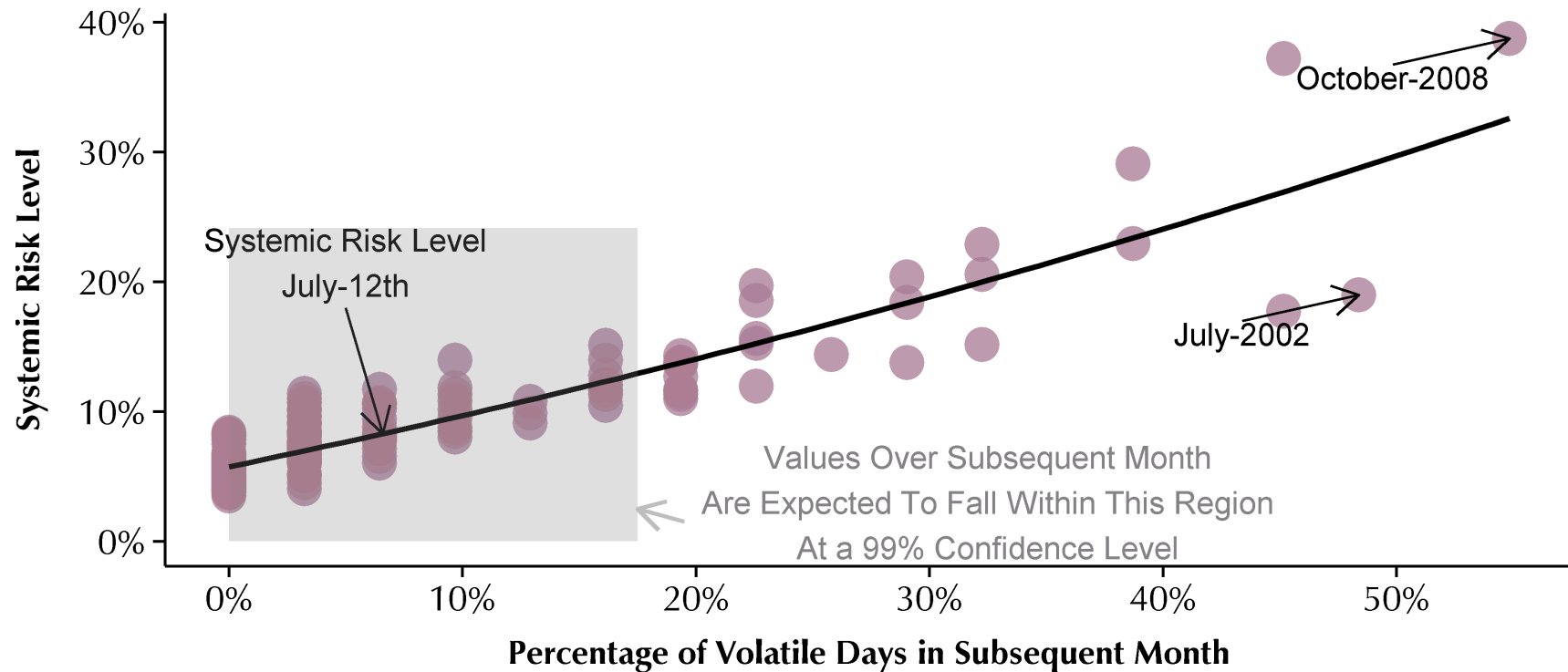


## Capital Markets Outlook<sup>1</sup>

- Investors are faced with four primary issues in the near-term: 1) historically low bond yields, 2) the potential for a transition into a rising rate environment, 3) the potential for deteriorating corporate earnings, and 4) the possibility of much lower energy prices for a sustained period.
  - The price of the U.S. stock market relative to ten-year average earnings has trended up after the financial crisis, and remains above its historical average (28.8x versus 21.8x).
    - Valuations of small cap domestic stocks have spiked into a historically expensive range relative to large cap stocks after trending towards the historical average last year.
  - Developed international and emerging market stocks are trading at lower valuations than U.S. stocks.
    - Sovereign debt issues and weak economic growth in Europe, and a cyclical slowdown in emerging economies, are weighing down valuations.
  - Risk across markets measured by our Systemic Risk metric has reacted negatively to the recent increase of uncertainty within markets.
    - The recent 'Brexit' vote, along with other political upheaval and monetary policy changes by central banks, will continue to have a meaningful impact.
  - At the end of June, spreads for high yield corporate and investment grade bonds (5.9% and 1.6%, respectively) are slightly above their long-term averages.
  - At 1.5%, the yield on the ten-year Treasury remained far below its post-WWII average of 5.6%.
  - Crude Oil prices have partially rebounded from a steep decline, which has had wide ranging effects across several markets.

<sup>1</sup> Sources: Thomson Reuters, U.S. Treasury, and Standard & Poor's. Data is as of June 30, 2016.

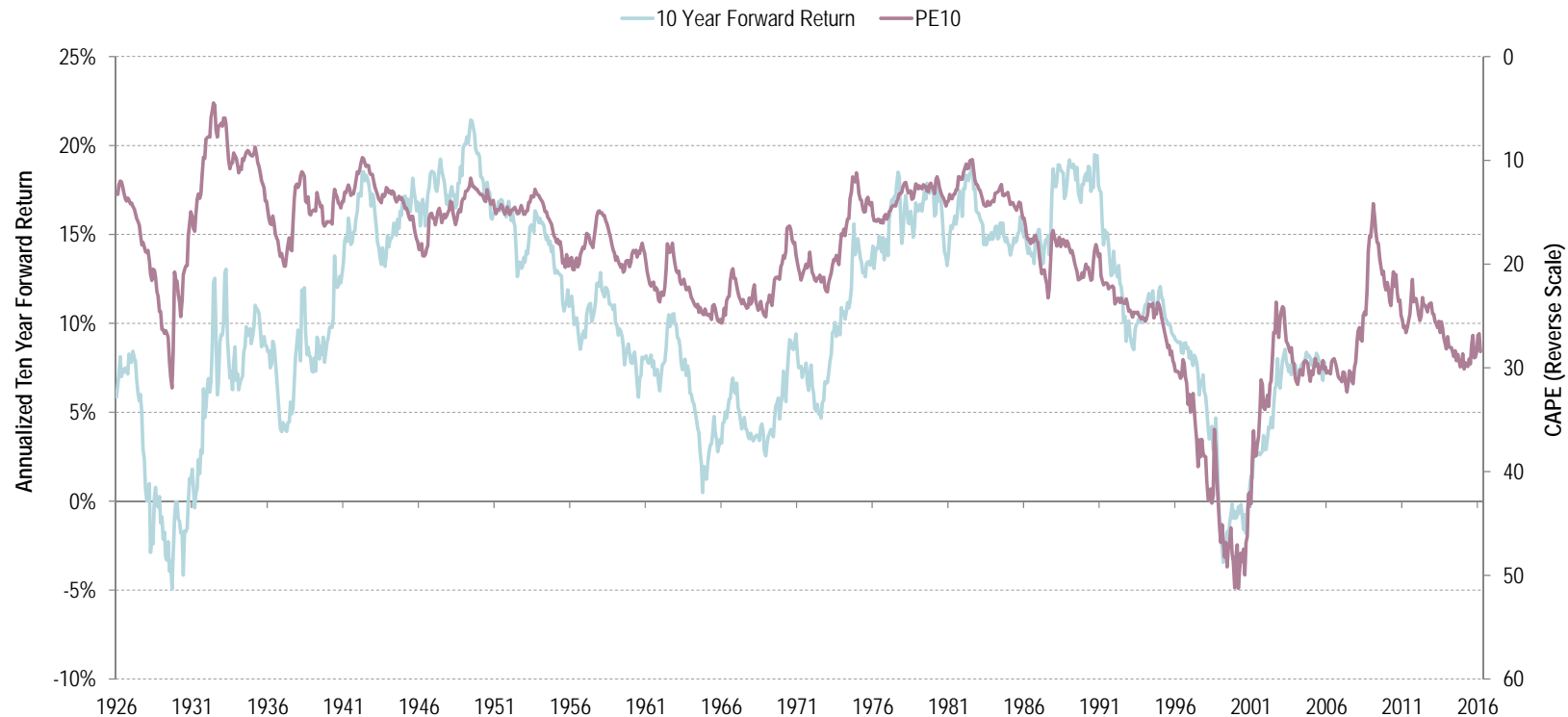
### Systemic Risk and Volatile Market Days<sup>1</sup>



- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.
- After a volatile start to the year, our Systemic Risk measure has returned to reasonable levels. While the number of volatile days can differ, this indicates that the next month should be in the lowest 20%.

<sup>1</sup> Source: Meketa Investment Group, as of July 12, 2016. Volatile days are defined as the top 10 percent of realized turbulence which is a multivariate distance between asset returns.

## The U.S. Cyclically Adjusted P/E<sup>1</sup> and Long-Term Equity Returns



- One of the most powerful predictors of long-term equity returns has been the Cyclically Adjusted Price to Earnings Ratio (CAPE).
- This fundamentally driven measure is highly correlated with future returns, which are shown in the chart above using the CAPE metric on a reverse scale.

<sup>1</sup> Source: PE data are from Robert Shiller's website from 1926 - 1946; S&P and Thomson Reuters 1946 – present. S&P 500 equity returns are from Morningstar Direct for the entire period. Data is from May 31, 1926 to June 30, 2016.

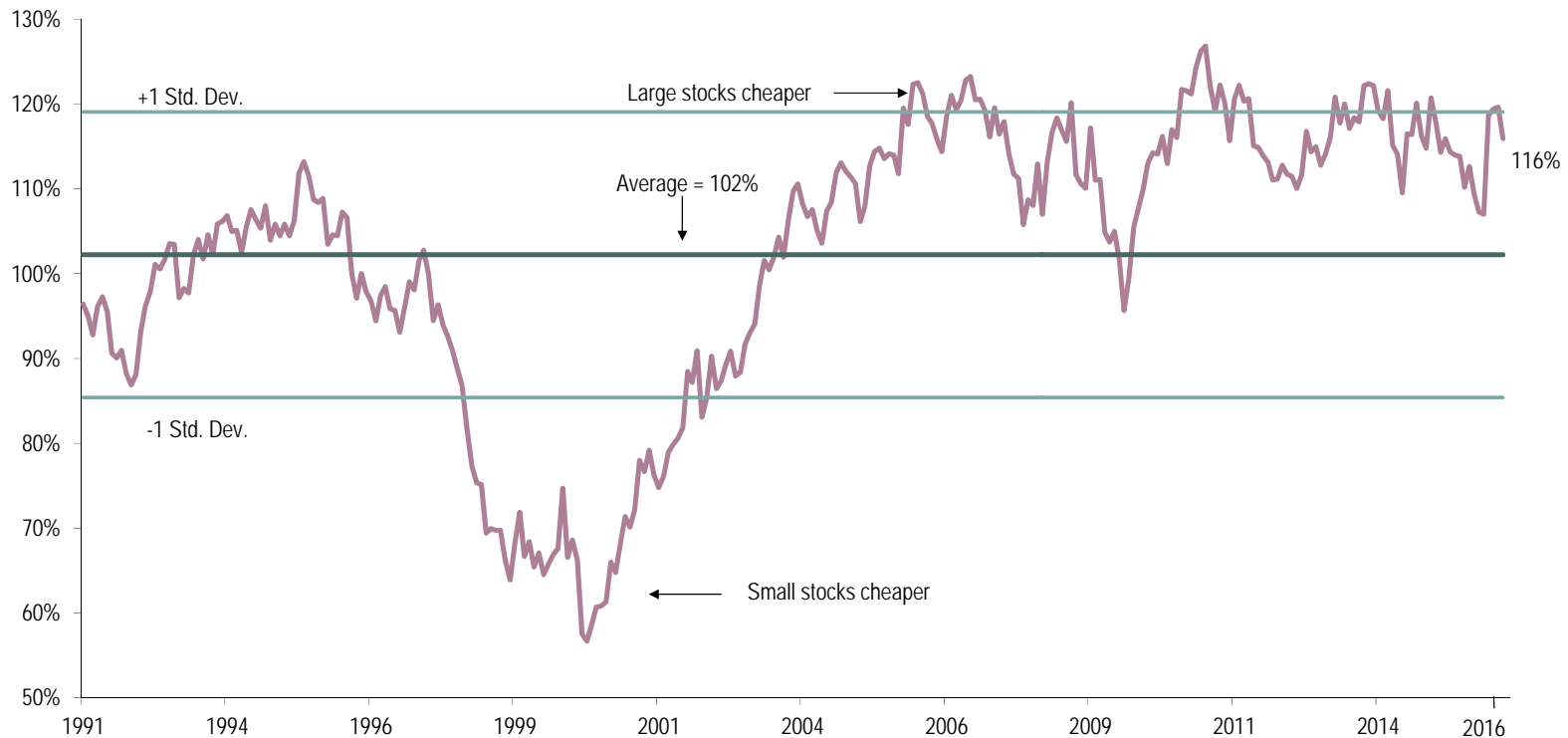
## U.S. Equity Cyclically Adjusted P/E<sup>1</sup>



- The cyclically adjusted P/E ratio for the S&P 500 finished June at 28.8x, above its post-WWII average of 21.8x.
- Due to the recent pullback in equity markets, this metric has fallen slightly below the positive standard deviation threshold. Historically, a P/E ratio at this level has led to roughly average future returns over a 10 year horizon.

<sup>1</sup> Source: Standard & Poor's. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is from January 31, 1946 to June 30, 2016.

## Small Cap P/E vs. Large Cap P/E<sup>1</sup>



- The P/E ratio of small cap stocks (Russell 2000) relative to large cap stocks (Russell 1000) recently spiked after trending toward its long term average over last year.
- This relative valuation metric has remained largely range bound since 2010 and remains below the one positive standard deviation threshold.

<sup>1</sup> Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings. Data is as of June 30, 2016.

Growth P/E vs. Value P/E<sup>1</sup>

- The P/E ratio of growth stocks (Russell 3000 Growth) relative to value stocks (Russell 3000 Value) finished June at 135%, well above its level in 2009 but still below its long-term average.
- Of note, the long-term average was sharply influenced by the technology bubble of the late 1990s.

<sup>1</sup> Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings. Data is as of June 30, 2016.

## Developed International Equity Cyclically Adjusted P/E<sup>1</sup>



- Valuations for the MSCI EAFE (ex-Japan) remain more than one standard deviation cheaper than their historical average.
- Sovereign debt concerns and the slow pace of economic growth in Europe likely account for the low valuation levels.

<sup>1</sup> Source: MSCI and Thomson Reuters. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 30, 2016.

## Emerging Market Equity Cyclically Adjusted P/E<sup>1</sup>



- Emerging market equities (MSCI Emerging Markets) are priced more than one standard deviation below their (brief) historical average.
- By this metric, emerging market equities are trading at a much lower valuation than U.S. equities, and at a slightly lower valuation than non-U.S. developed market equities.

<sup>1</sup> Source: MSCI and Thomson Reuters. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of June 30, 2016.



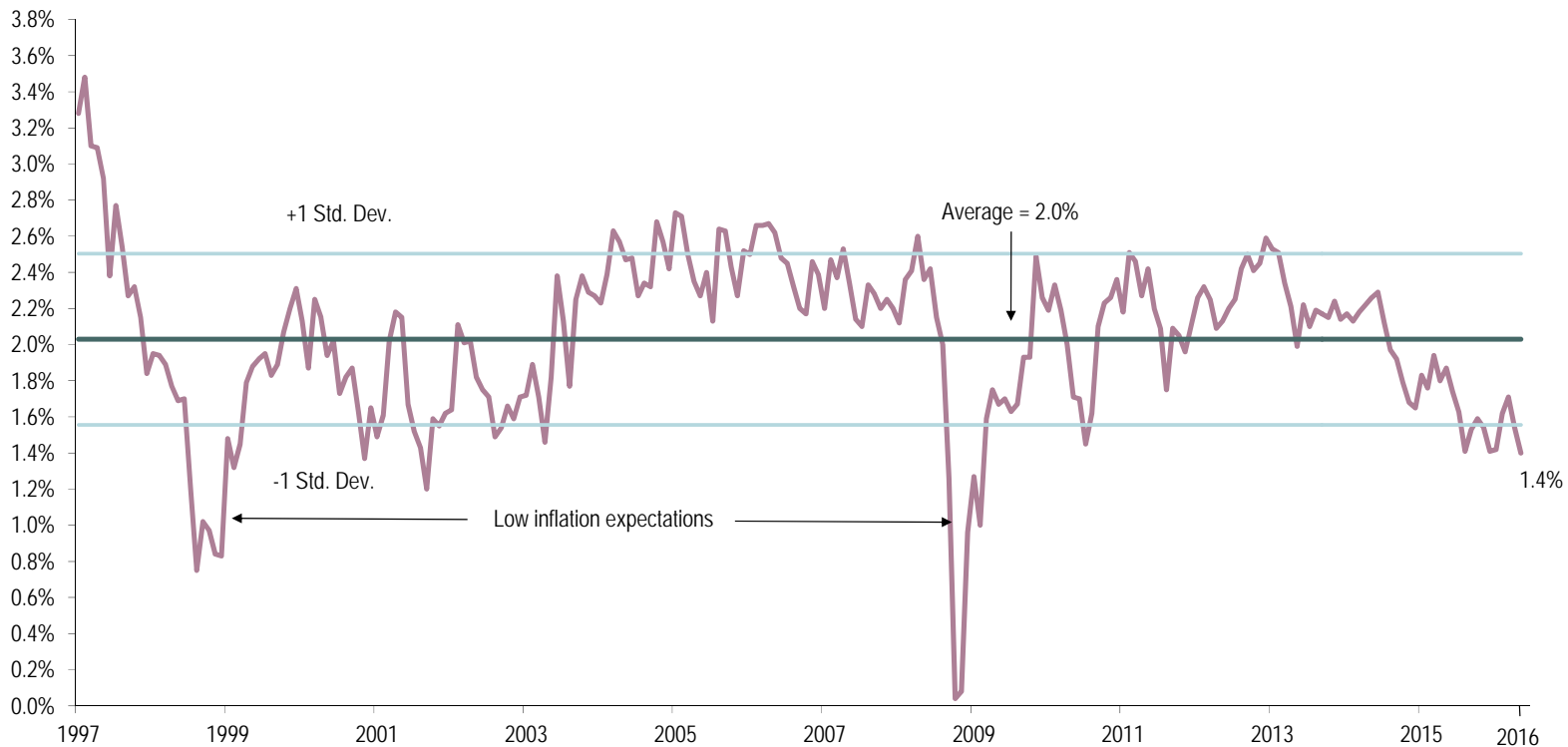
## Ten-Year Treasury Yields<sup>1</sup>



- Ten-year Treasury yields finished June at 1.5%, well below both their post-WWII average and the levels of one year ago.
- Markets have begun to focus on the path of central bank interest rates; at the beginning of the year, the FOMC began the first rising rate environment since 2006, but the guidance remains relatively dovish and long term market expectations remain subdued.

<sup>1</sup> Source: U.S. Treasury. Data is as of June 30, 2016.

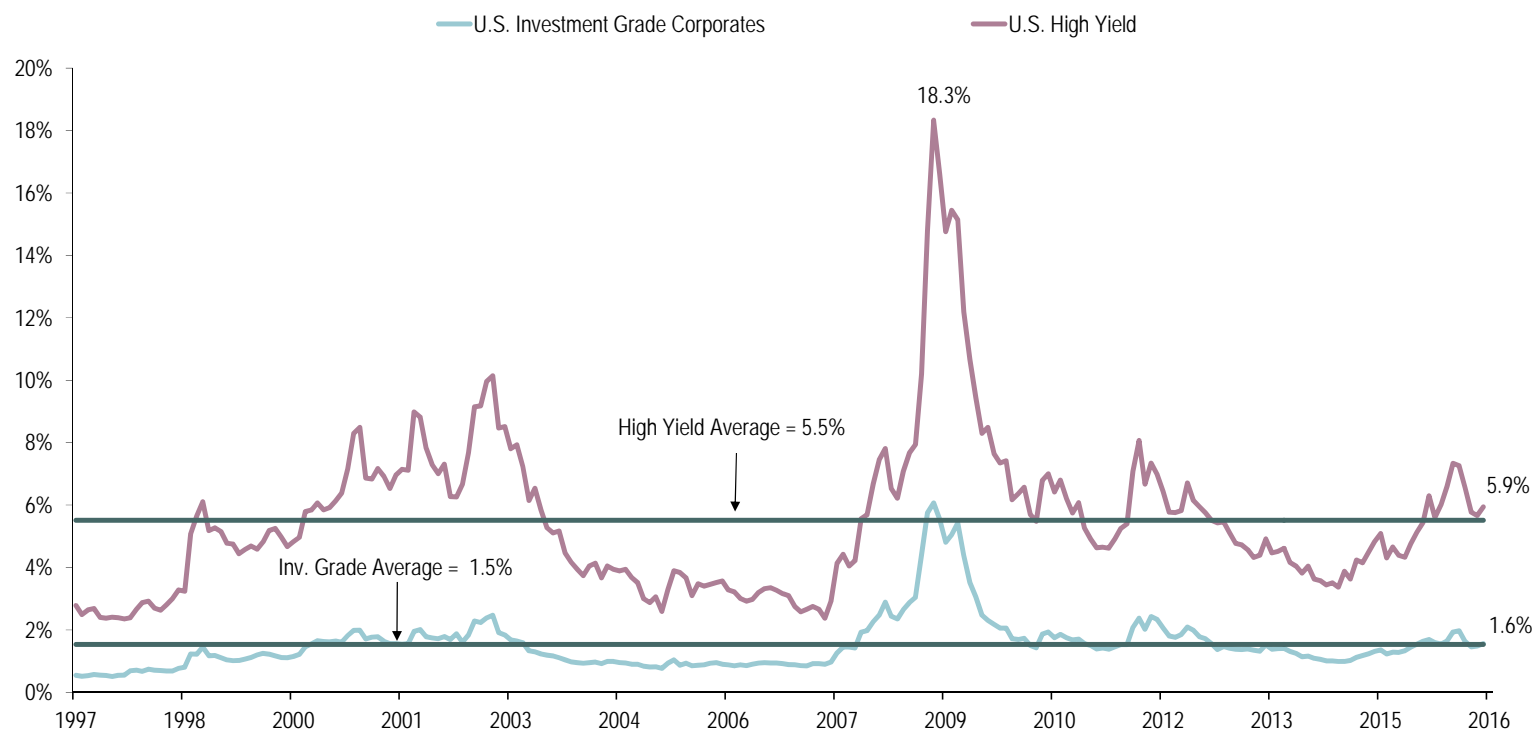
## Ten-Year Breakeven Inflation<sup>1</sup>



- Breakeven (or expected) inflation, the difference between the nominal yield on a ten-year Treasury and the real yield on a ten-year TIPS, has fallen well below its long-term average.
- Sharp falls in commodity prices have put pressure on inflation. The most recent Year over Year (YoY) inflation rate was 1.0%, and deflation from commodities (especially energy) has been a major headwind.

<sup>1</sup> Source: U.S. Treasury and Federal Reserve. Data is as of June 30, 2016 for TIPS and Treasuries. Inflation is measured by the Consumer Price Index (CPI-U NSA) for which the most recent data point is from May 31, 2016.

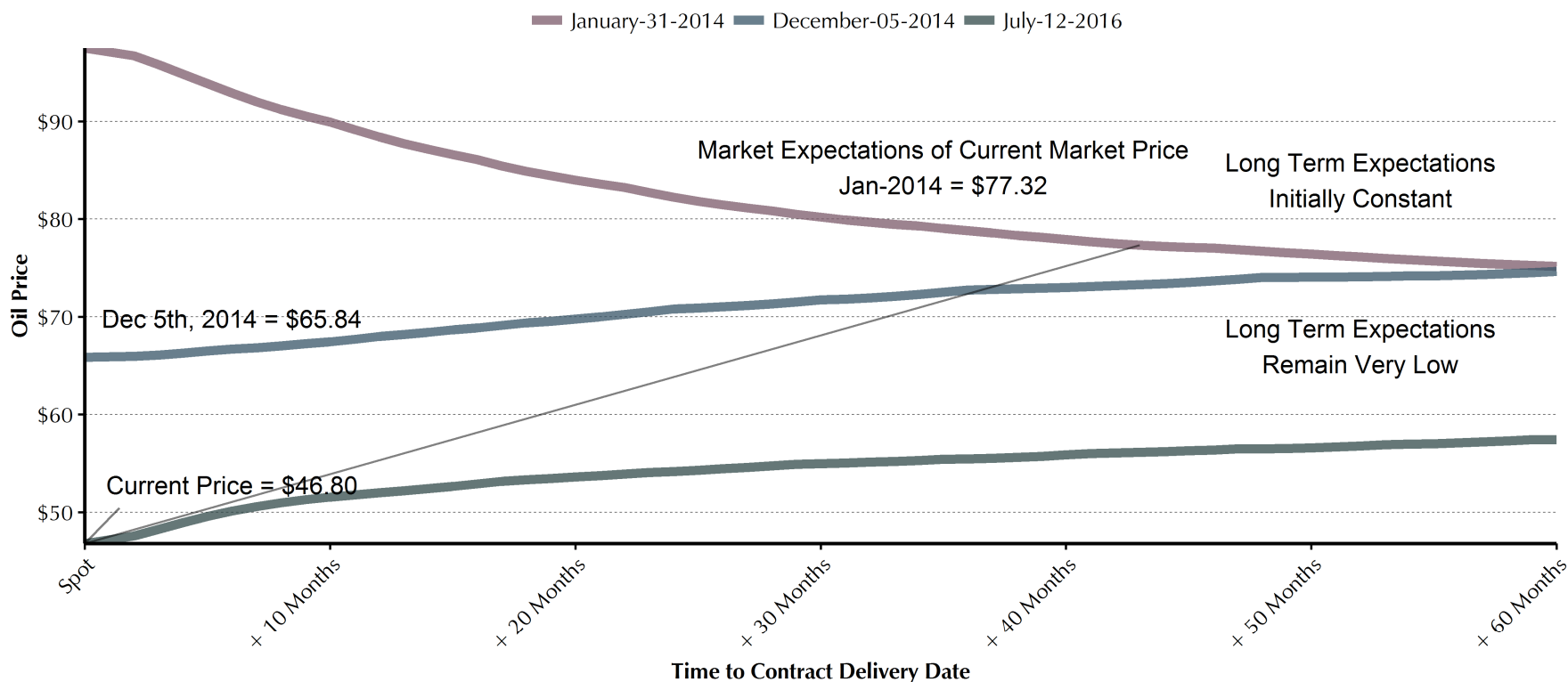
## Credit Spreads<sup>1</sup>



- Credit spreads (versus U.S. Treasury bonds) for both high yield and investment grade corporate bonds finished June slightly above or at their respective historical averages.
- The recent jump in market risk caused a widening in spreads, especially within high yield— which was affected by market uncertainty driven largely by the energy sector and political uncertainties surrounding ‘Brexit’.

<sup>1</sup> Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays U.S. Corporate Investment Grade index. Data is as of June 30, 2016.

### Oil Price Futures Curves<sup>1</sup>

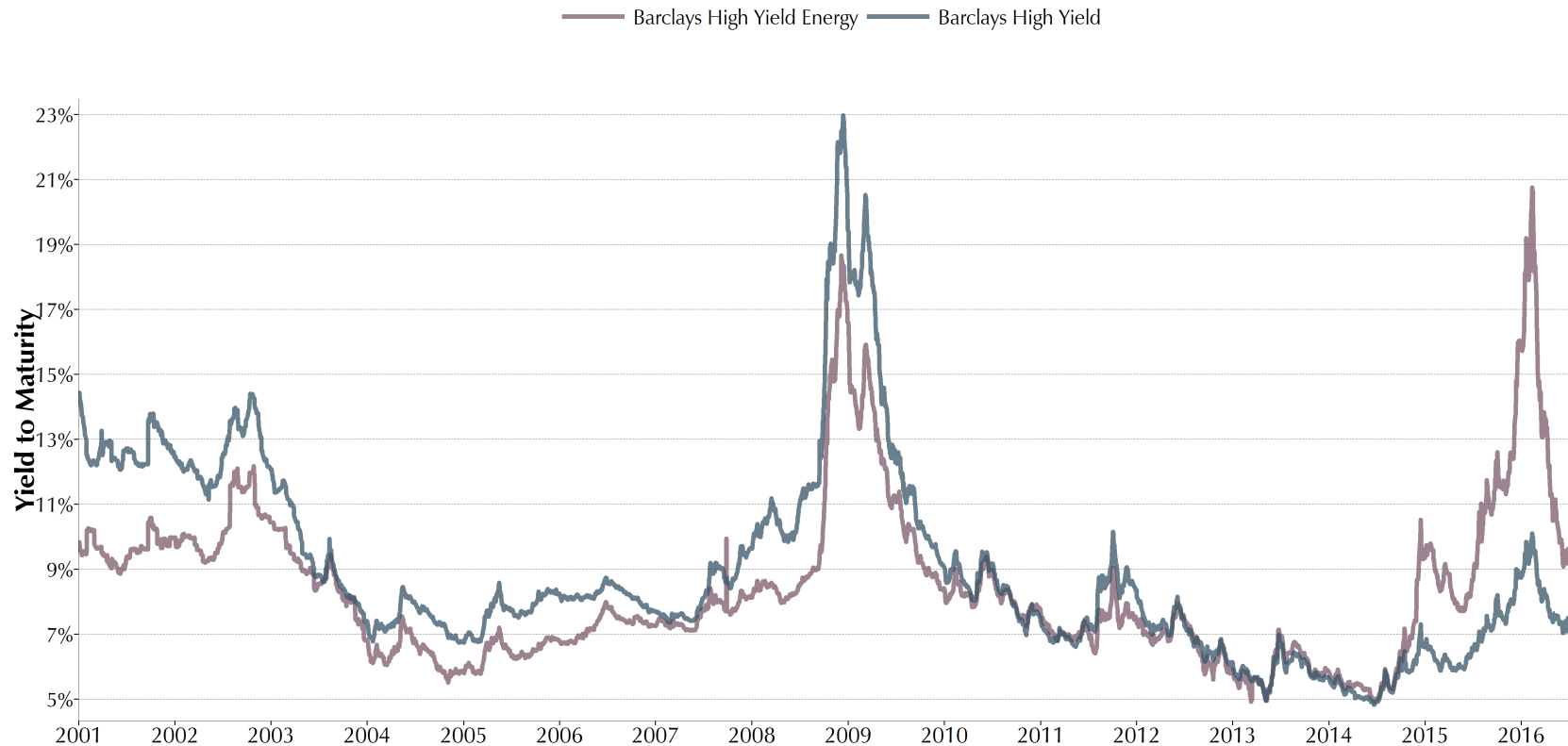


- The chart above shows the WTI Crude Oil futures prices as of January and December of 2014 and July of this year. This highlights how large the price fall has been, especially relative to expectations and history.
- Looking further out on the curve we can see that initially, long-term price expectations remained the same. As the oil price has continued to fall, long-term expectations have settled at a lower price.

<sup>1</sup> Source: WTI Crude Oil Futures Price via Bloomberg. Data is as of July 12, 2016.



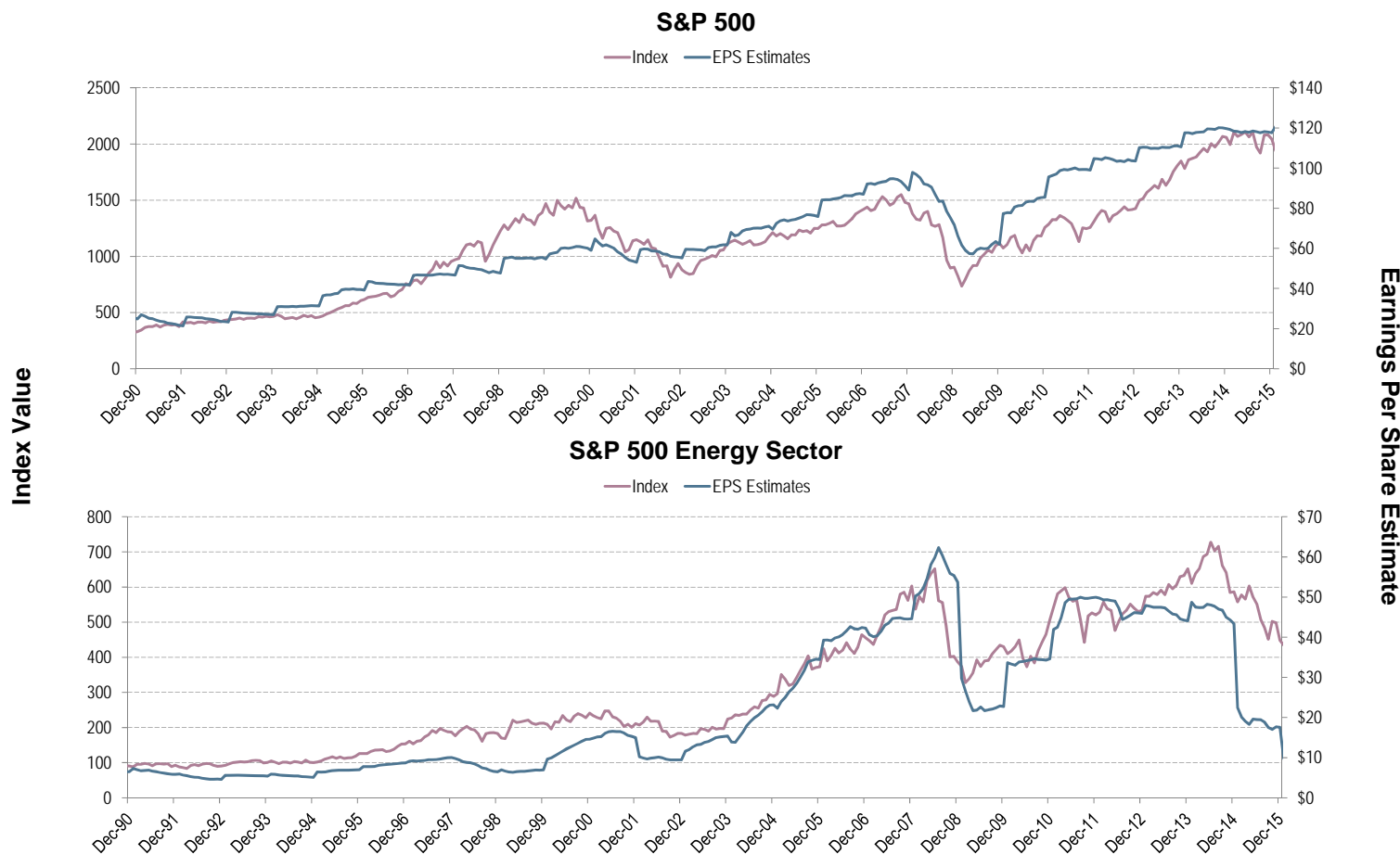
## U.S. High Yield Sectors<sup>1</sup>



- The oil price decline has been a major contributing factor to the recent widening of spreads within U.S. High Yield. As the chart shows, spreads have come back in but the energy sector remains risky.
- The energy sector represents roughly 15% of the index, and as illustrated above, most widening of spreads has come from the energy sector which has now surpassed levels seen during the Financial Crisis of 2008.

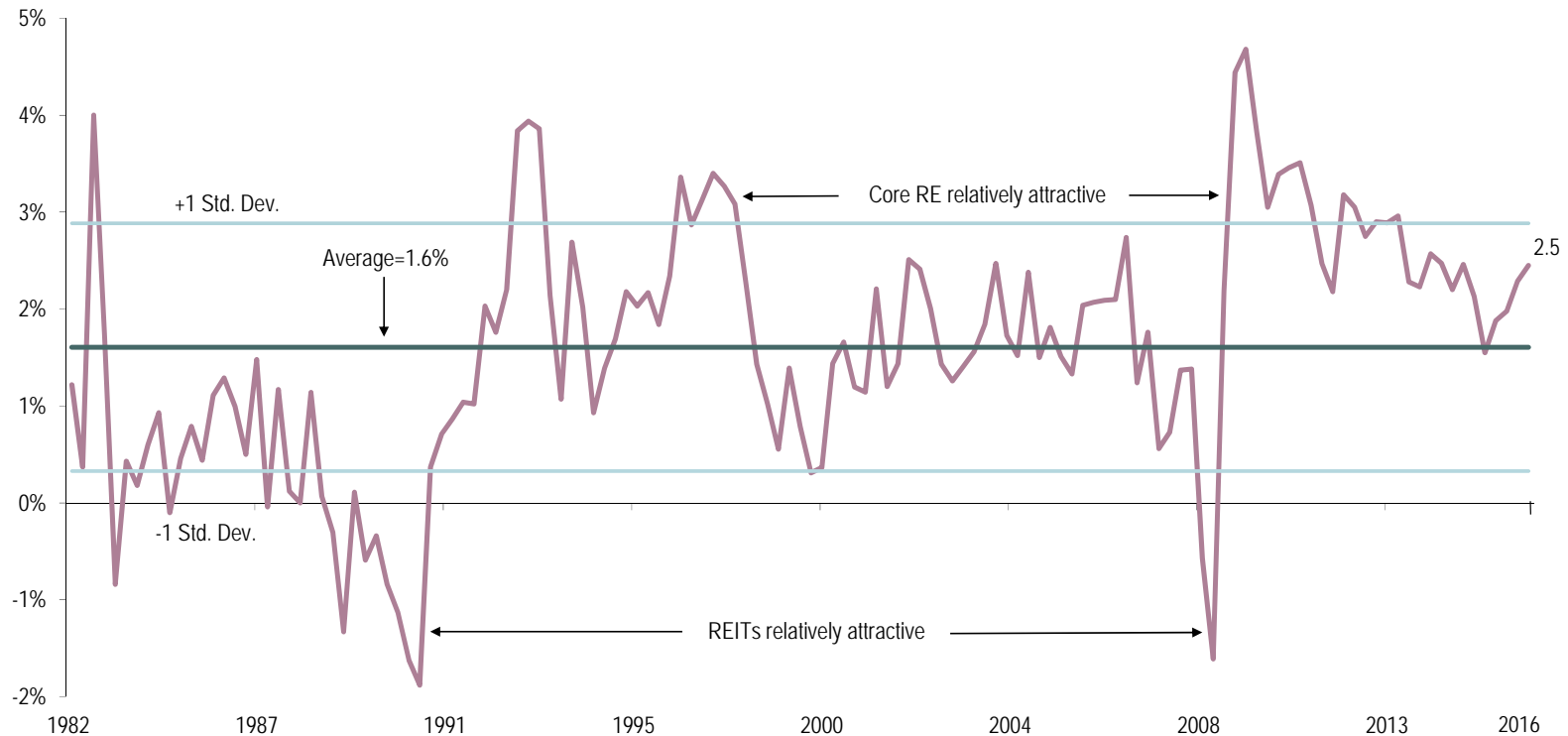
<sup>1</sup> Source: Barclays and Thompson Reuters. Data is as of July 12, 2016.

## U.S. Corporate Earnings<sup>1</sup>



- The oil price decline has also had a major effect on U.S. earnings expectations. Although the rout in the energy sector continues to be severe, aggregating all sectors, estimates have recently fallen only slightly.

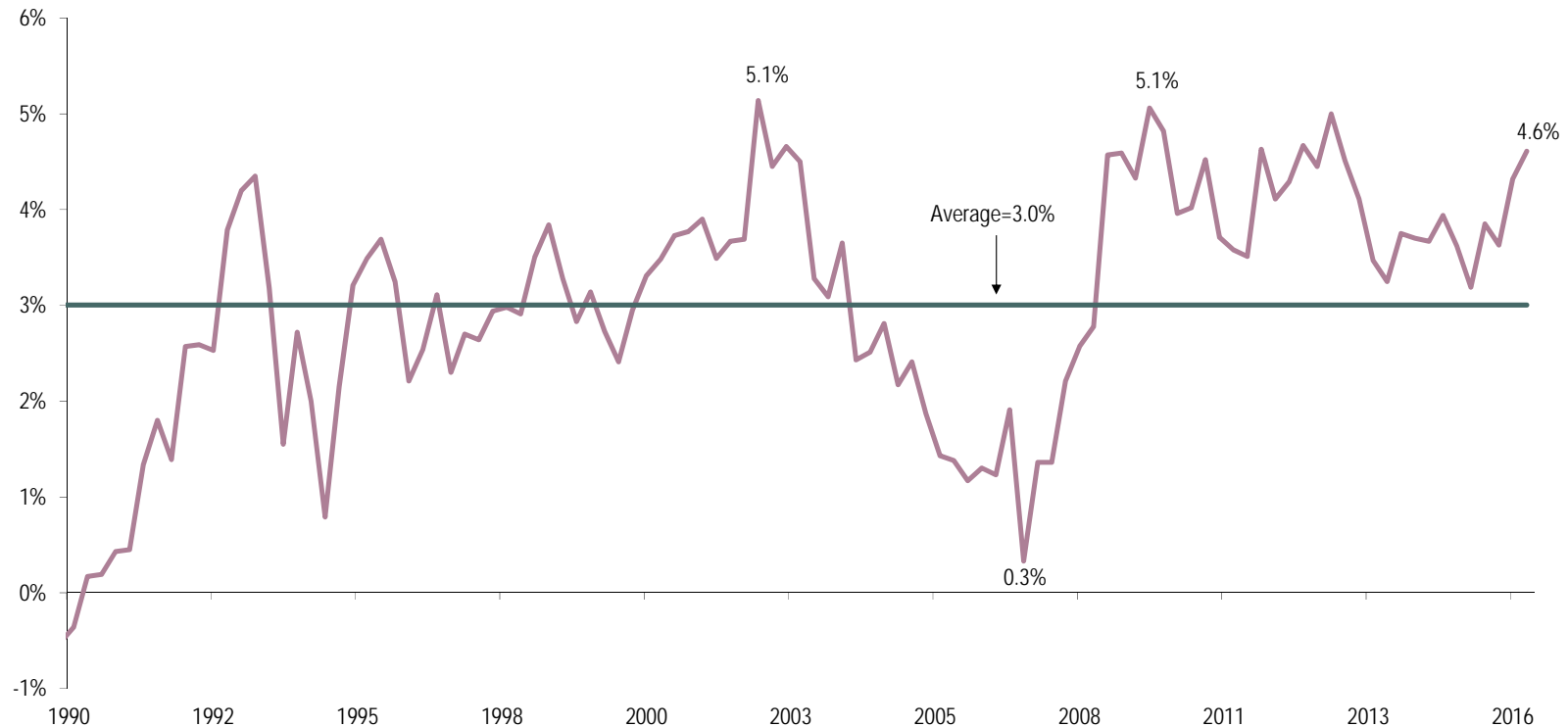
<sup>1</sup> Source: Bloomberg. Earnings Per Share Estimates are the average current quarter estimates of market analyst. Data is as of June 30, 2016.

Core Real Estate vs. REITs<sup>1</sup>

- At the end of June, the spread between core real estate cap rates and REIT yields was 2.5%, reaching above the long term historical average level.
- REITs were yielding 3.7%, well below the 10.1% level of early 2009.

<sup>1</sup> Sources: Thomson Reuters and NCREIF. Core Real Estate is proxied by the transaction-based cap rate for the NCREIF NPI index and REITs are proxied by the yield for the NAREIT Equity index. NPI transactional capitalization rates are calculated on a quarterly basis and lagged in their release. Data is as of June 30, 2016 for the NCREIF NPI and June 30, 2016 for the NAREIT Equity index.

## Core Real Estate Spread vs. Ten-Year Treasury<sup>1</sup>

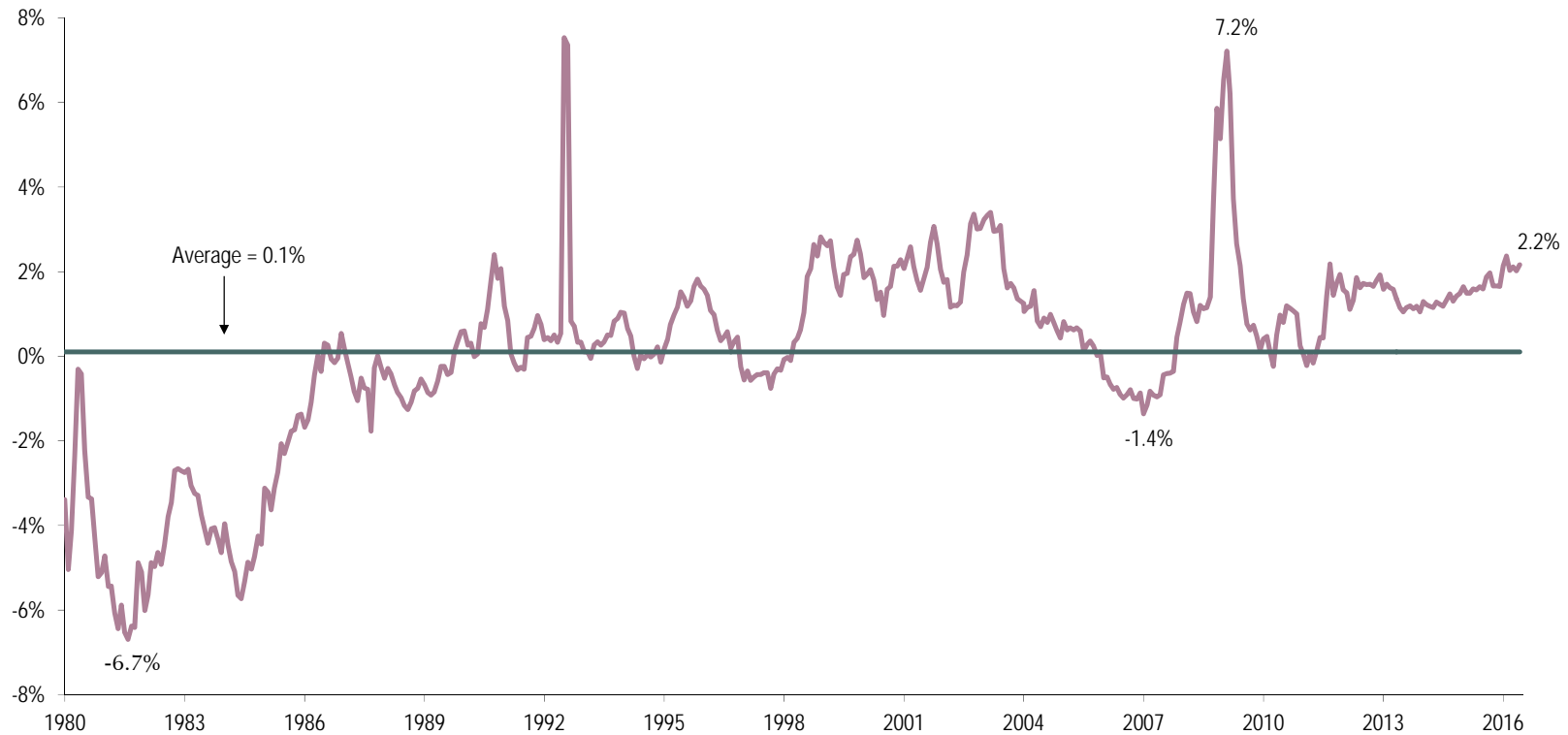


- At 4.6%, the difference between the 6.1% cap rate for core real estate and the 1.5% yield for the ten-year Treasury has begun to widen after trending towards its historical average since 2012.
- Still, the absolute level of core real estate cap rates is near a historical low.

<sup>1</sup> Source: NCREIF, U.S. Treasury. NPI transactional capitalization rates are calculated on a quarterly basis. Data is as of June 30, 2016 for the NCREIF NPI and June 30, 2016 for the ten-year Treasury.



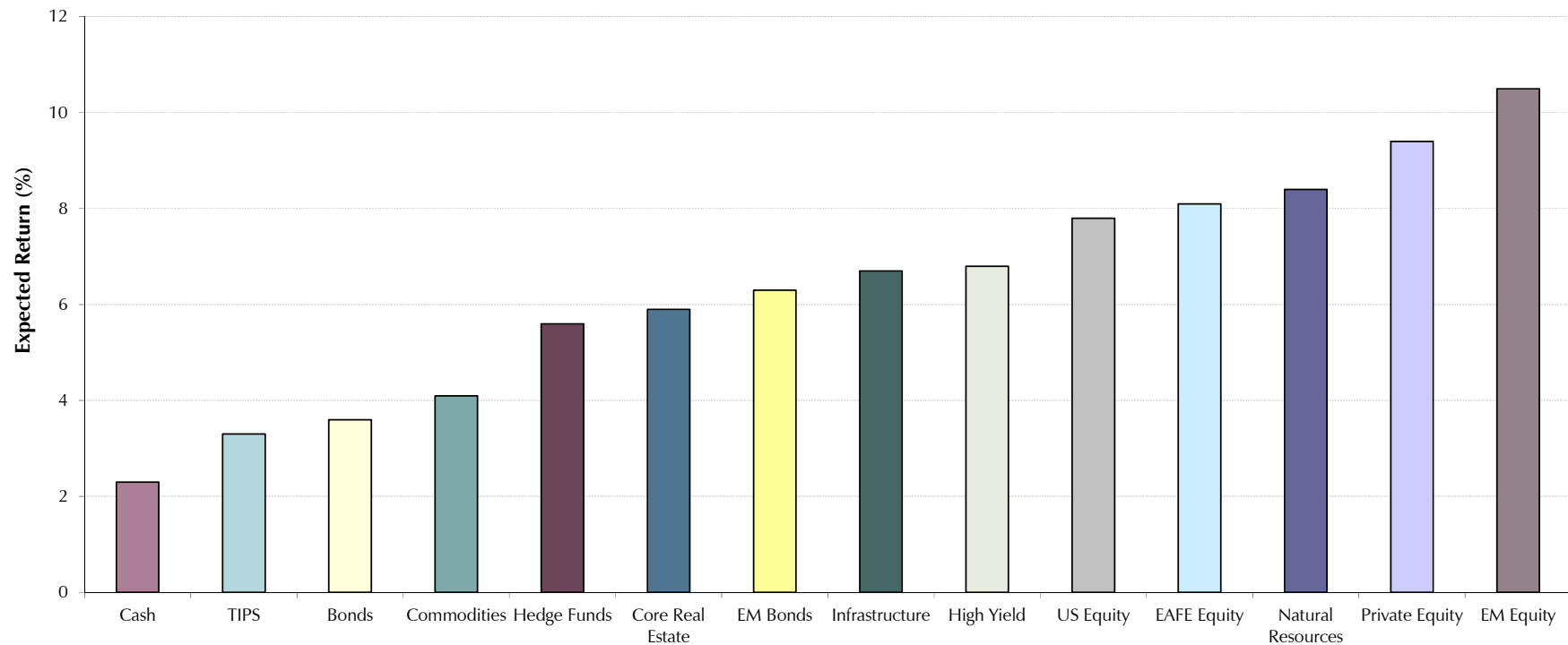
## REITs Dividend Yield Spread vs. Ten-Year Treasury<sup>1</sup>



- REIT yield spreads were 2.2% at the end of June. This spread gradually increased last year despite strong REIT performance.
- As with core real estate, the absolute level of REIT dividend yields is near a historical low.

<sup>1</sup> Source: NAREIT, U.S. Treasury. REITs are proxied by the yield for the NAREIT Equity index. Data is as of June 30, 2016.

## Long-Term Outlook<sup>1</sup>



- Based on Meketa Investment Group's long-term expectations, only a handful of asset classes are priced to produce returns above 8% per year. All of these asset classes incorporate a high degree of volatility.

<sup>1</sup> Twenty-year expected returns based upon Meketa Investment Group's 2016 Annual Asset Study.

### Total Return Comparison of Barclays U.S. Aggregate Minus Barclays U.S. TIPS<sup>1</sup>

		Changes In Rates (bps)				
		-100	-50	0	50	100
Inflation Rate Scenarios	4.0%	-5.74%	-3.96%	-2.33%	-0.85%	0.48%
	3.0%	-4.74%	-2.96%	-1.33%	0.15%	1.48%
	2.0%	-3.74%	-1.96%	-0.33%	1.15%	2.48%
	1.0%	-2.74%	-0.96%	0.68%	2.15%	3.48%
	0.0%	-1.74%	0.04%	1.68%	3.15%	4.48%

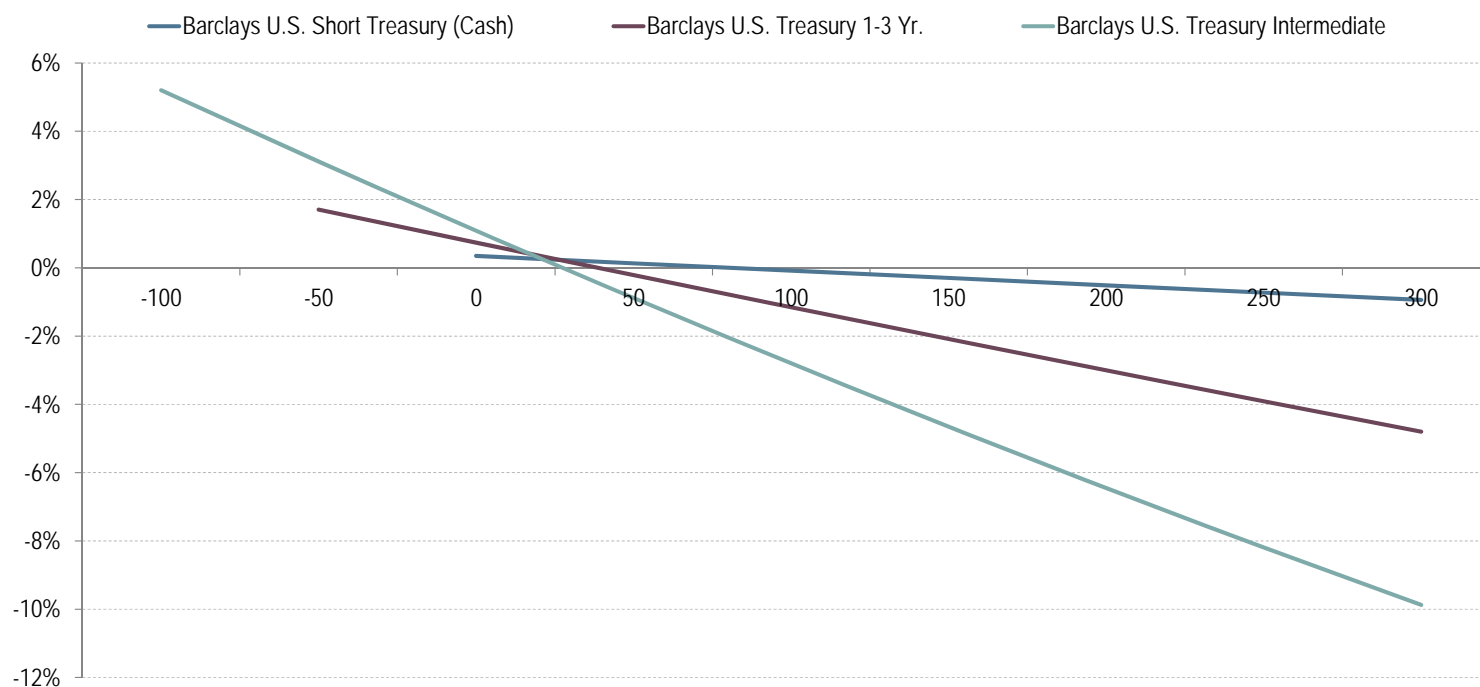
#### Total Return Scenario: 100 bps Rate Increase and 2% Inflation

Total Return Over Longer Holding Periods	1 Year	3 Year	5 Year	7 Year	10 Year
Barclays U.S. Aggregate	-3.56%	0.59%	1.44%	1.81%	2.08%
Barclays U.S. Treasury U.S. TIPS	-6.04%	0.06%	1.33%	1.88%	2.29%

<sup>1</sup> Data is as of June 30, 2016 via Barclays, Bloomberg, and Thomson Reuters. Scenario assumes that the rate increase happens over one year.



### Total Return Given Changes in Interest Rates (bps)<sup>1</sup>



	Total Return for Given Changes in Interest Rates (bps)									Statistics	
	-100	-50	0	50	100	150	200	250	300	Duration	YTW
Barclays U.S. Short Treasury (Cash)			0.4%	0.2%	0.0%	-0.3%	-0.5%	-0.7%	-0.9%	0.43	0.39%
Barclays U.S. Treasury 1-3 Yr.		1.7%	0.7%	-0.3%	-1.2%	-2.1%	-3.1%	-4.0%	-4.9%	1.93	0.70%
Barclays U.S. Treasury Intermediate	5.1%	3.0%	1.0%	-1.0%	-2.9%	-4.8%	-6.6%	-8.3%	-10.0%	4.03	0.99%
Barclays U.S. Treasury Long	22.5%	11.8%	2.1%	-6.5%	-14.0%	-20.5%	-25.8%	-30.1%	-33.3%	18.29	2.09%

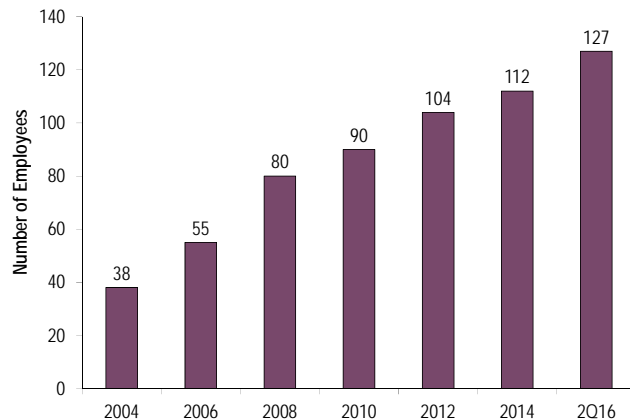
<sup>1</sup> Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Data is as of June 30, 2016 via Barclays and Thomson Reuters.



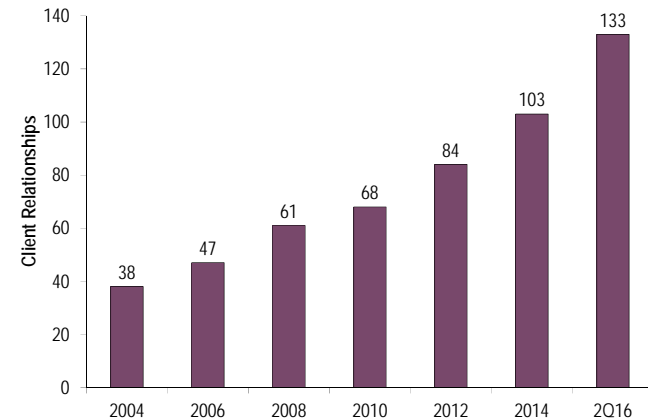
# **Meketa Investment Group Corporate Update**

- Staff of 127, including 78 investment professionals and 27 CFA Charterholders
- 133 clients, with over 200 funds throughout the United States
- Significant investment in staff and resources
- Offices in Boston, Chicago, Miami, Portland (OR), San Diego, and London
- Clients have aggregate assets of over \$830 billion
  - Over \$50 billion in assets committed to alternative investments
    - Private Equity
    - Infrastructure
    - Natural Resources
    - Real Estate
    - Hedge Funds
    - Commodities

**Employee Growth**



**Client Growth**



**Meketa Investment Group is proud to work for 4.9 million American families everyday**



**Asset Classes Followed Intensively by Meketa Investment Group**

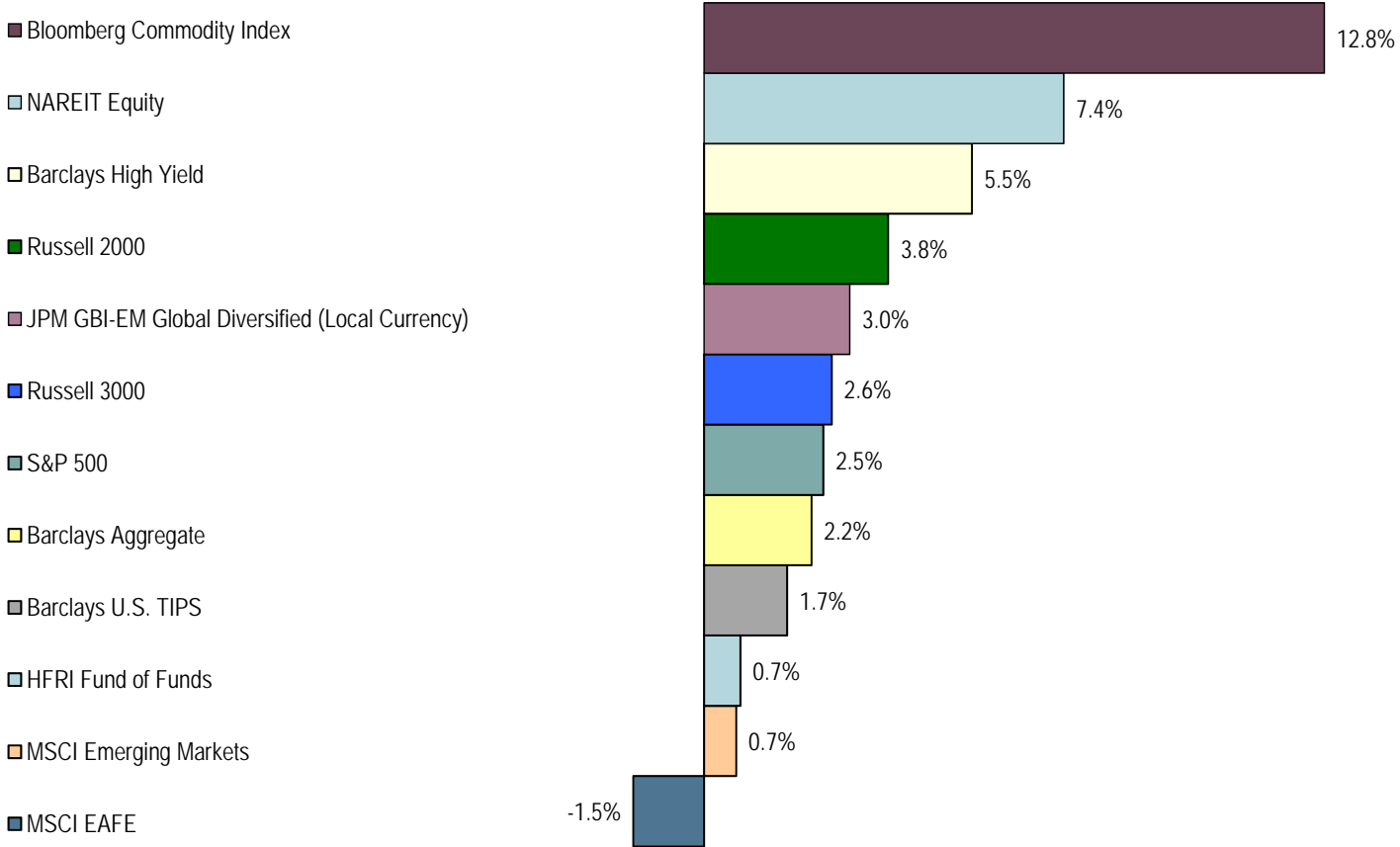
<b>Domestic Equities</b>	<b>International Equities</b>	<b>Private Equity</b>	<b>Real Assets</b>	<b>Fixed Income</b>	<b>Hedge Funds</b>
<ul style="list-style-type: none"> <li>- Passive</li> <li>- Enhanced Index</li> <li>- Large Cap</li> <li>- Midcap</li> <li>- Small Cap</li> <li>- Microcap</li> <li>- 130/30</li> </ul>	<ul style="list-style-type: none"> <li>- Large Cap Developed</li> <li>- Small Cap Developed</li> <li>- Emerging Markets</li> <li>- Frontier Markets</li> </ul>	<ul style="list-style-type: none"> <li>- Buyouts</li> <li>- Venture Capital</li> <li>- Private Debt</li> <li>- Special Situations</li> <li>- Secondaries</li> <li>- Fund of Funds</li> </ul>	<ul style="list-style-type: none"> <li>- Public REITs</li> <li>- Core Real Estate</li> <li>- Value Added Real Estate</li> <li>- Opportunistic Real Estate</li> <li>- Infrastructure</li> <li>- Timber</li> <li>- Natural Resources</li> <li>- Commodities</li> </ul>	<ul style="list-style-type: none"> <li>- Short-Term</li> <li>- Core</li> <li>- Core Plus</li> <li>- TIPS</li> <li>- High Yield</li> <li>- Bank Loans</li> <li>- Distressed</li> <li>- Global</li> <li>- Emerging Markets</li> </ul>	<ul style="list-style-type: none"> <li>- Long/Short Equity</li> <li>- Event Driven</li> <li>- Relative Value</li> <li>- Fixed Income Arbitrage</li> <li>- Multi Strategy</li> <li>- Market Neutral</li> <li>- Global Macro</li> <li>- Fund of Funds</li> <li>- Portable Alpha</li> </ul>

# Appendices



# **The World Markets Second Quarter of 2016**

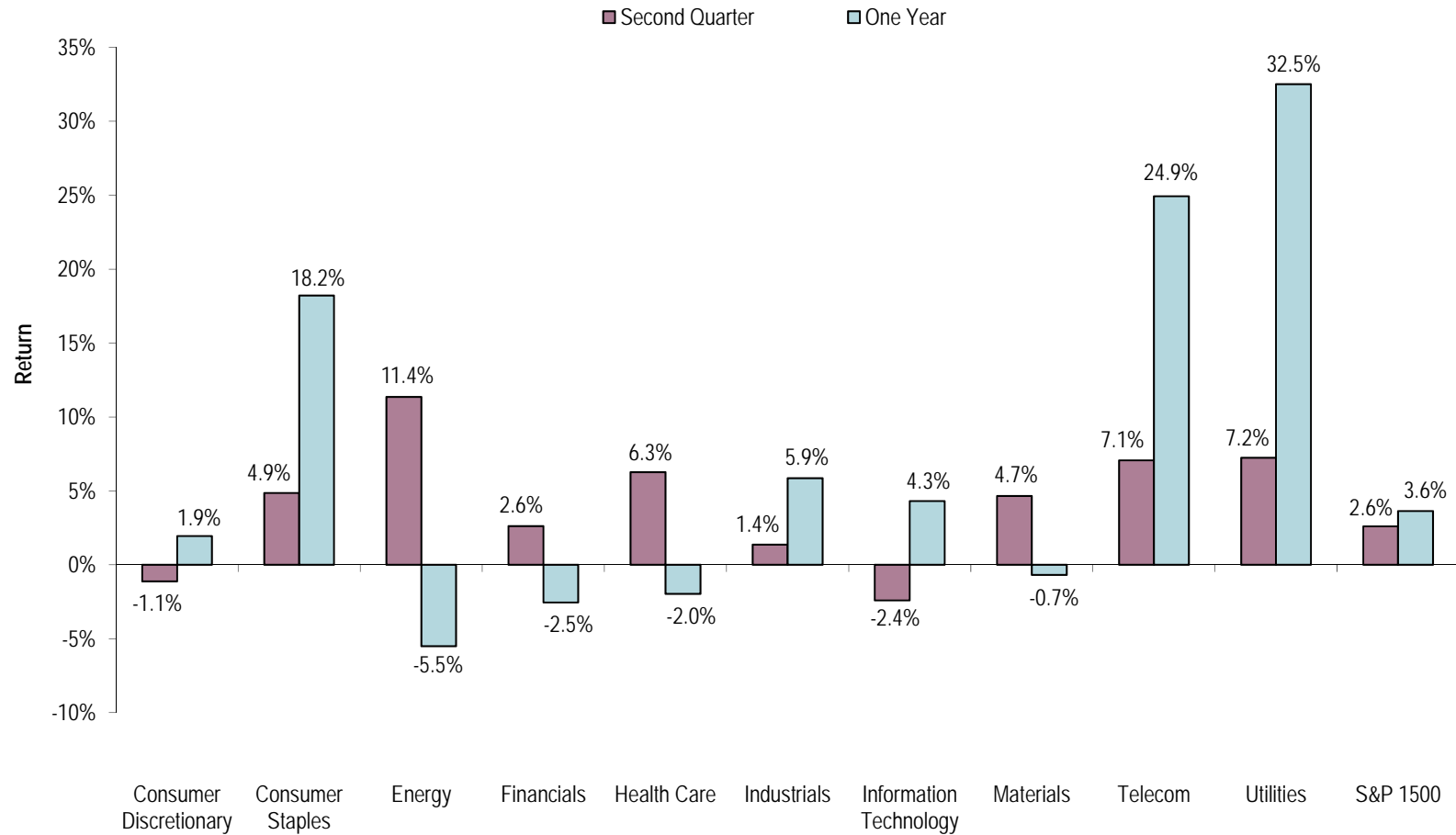
### The World Markets Second Quarter of 2016



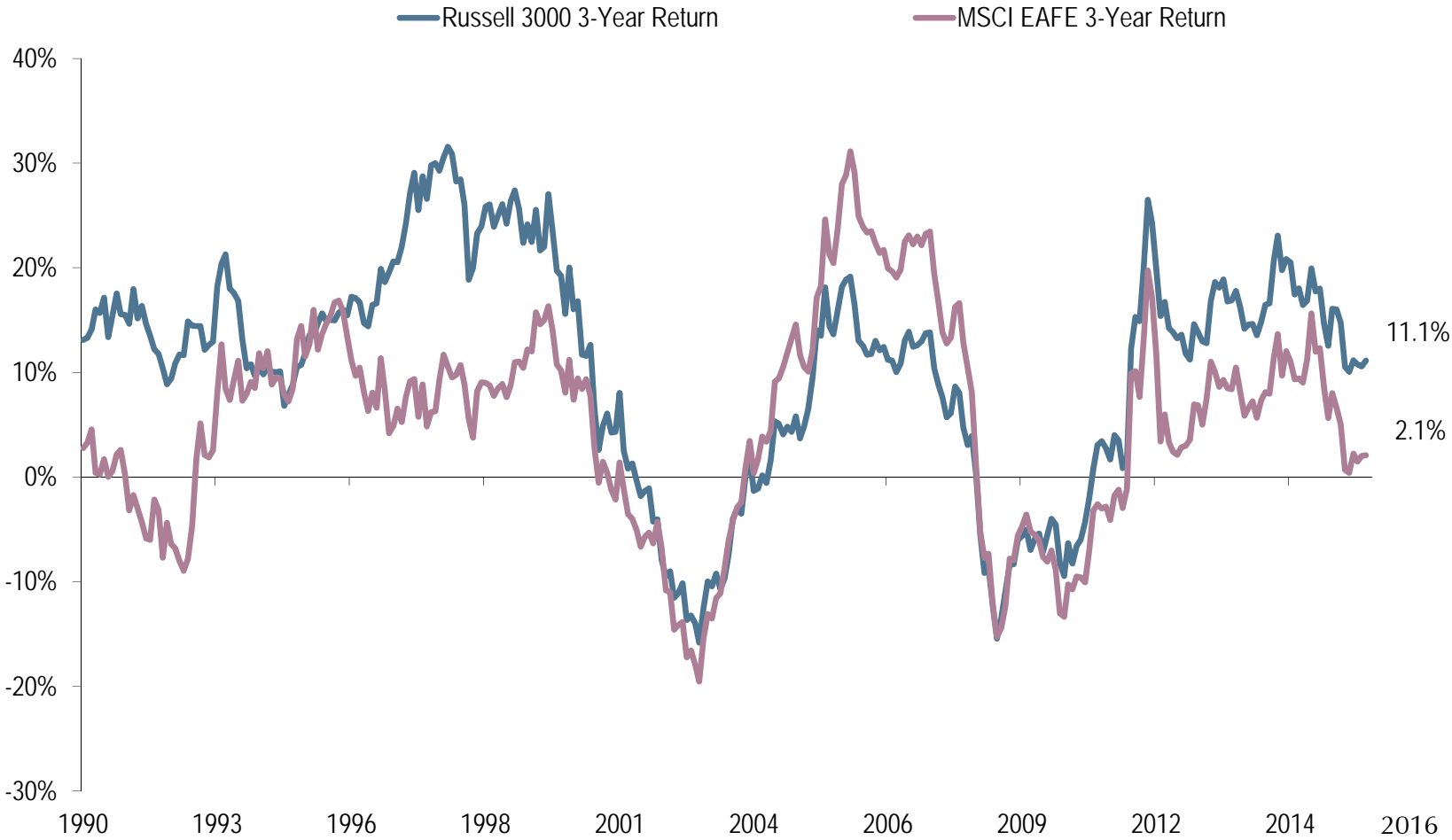
## Index Returns

	2016 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
<b>Domestic Equity</b>					
Russell 3000	2.6	2.1	11.1	11.6	7.4
Russell 1000	2.5	2.9	11.5	11.9	7.5
Russell 1000 Growth	0.6	3.0	13.1	12.3	8.8
Russell 1000 Value	4.6	2.9	9.9	11.4	6.1
Russell MidCap	3.2	0.6	10.8	10.9	8.1
Russell MidCap Growth	1.6	-2.1	10.5	10.0	8.1
Russell MidCap Value	4.8	3.2	11.0	11.7	7.8
Russell 2000	3.8	-6.7	7.1	8.4	6.2
Russell 2000 Growth	3.2	-10.8	7.7	8.5	7.1
Russell 2000 Value	4.3	-2.6	6.4	8.1	5.2
<b>Foreign Equity</b>					
MSCI ACWI (ex. U.S.)	-0.6	-10.2	1.2	0.1	1.9
MSCI EAFE	-1.5	-10.2	2.1	1.7	1.6
MSCI EAFE (local currency)	-0.7	-10.2	5.8	6.2	2.1
MSCI EAFE Small Cap	-2.6	-3.7	7.3	4.8	3.6
MSCI Emerging Markets	0.7	-12.1	-1.6	-3.8	3.3
MSCI Emerging Markets (local currency)	0.7	-7.7	3.7	2.0	5.7
<b>Fixed Income</b>					
Barclays Universal	2.5	5.8	4.2	4.0	5.3
Barclays Aggregate	2.2	6.0	4.1	3.8	5.1
Barclays U.S. TIPS	1.7	4.4	2.3	2.6	4.7
Barclays High Yield	5.5	1.6	4.2	5.8	7.6
JPMorgan GBI-EM Global Diversified (Local Currency)	3.0	2.0	-3.6	-2.2	5.7
<b>Other</b>					
NAREIT Equity	7.4	23.6	13.3	12.5	7.5
Bloomberg Commodity Index	12.8	-13.3	-10.6	-10.8	-5.6
HFRI Fund of Funds	0.7	-5.2	2.0	1.7	1.6

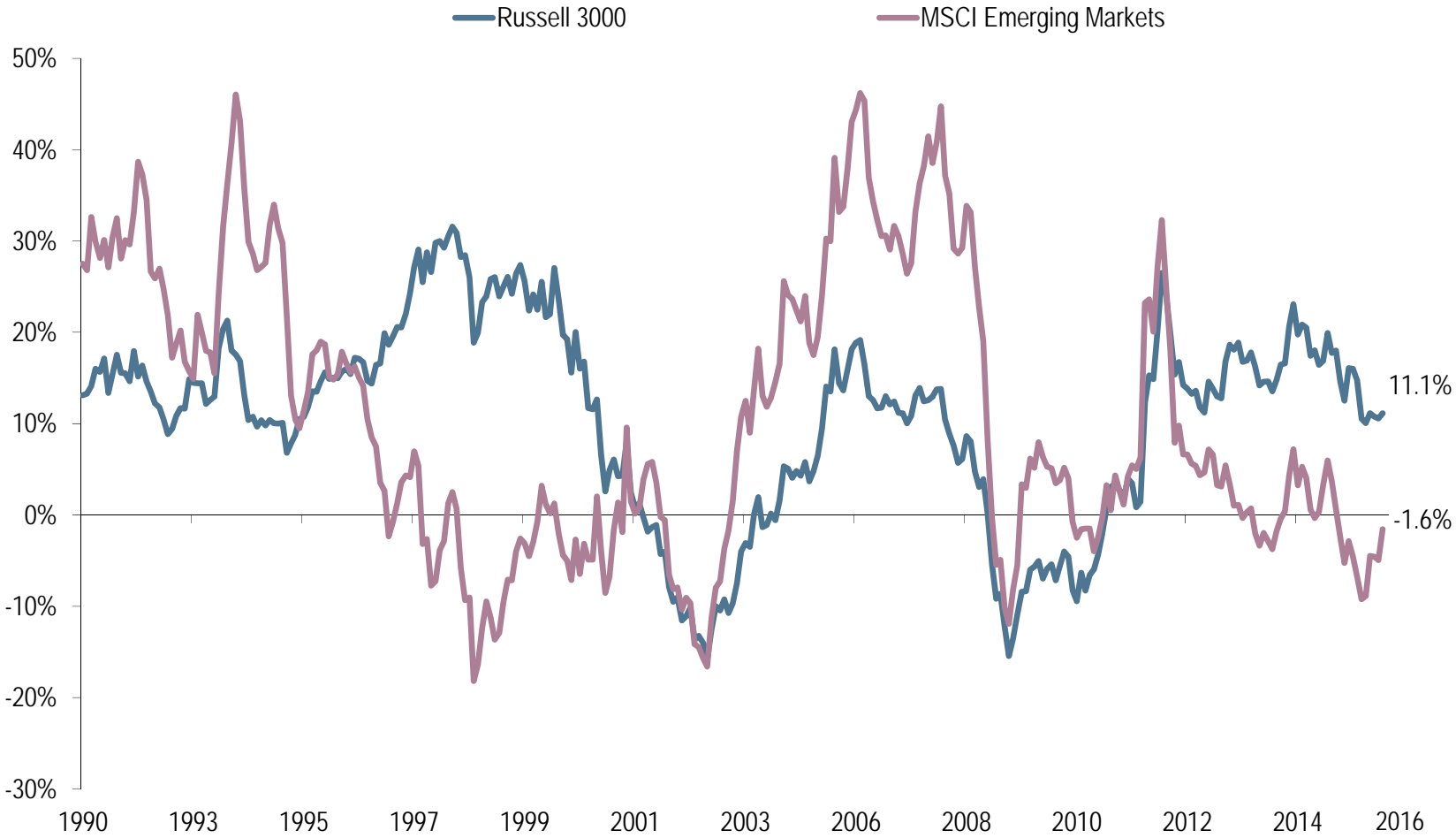
### S&P Sector Returns



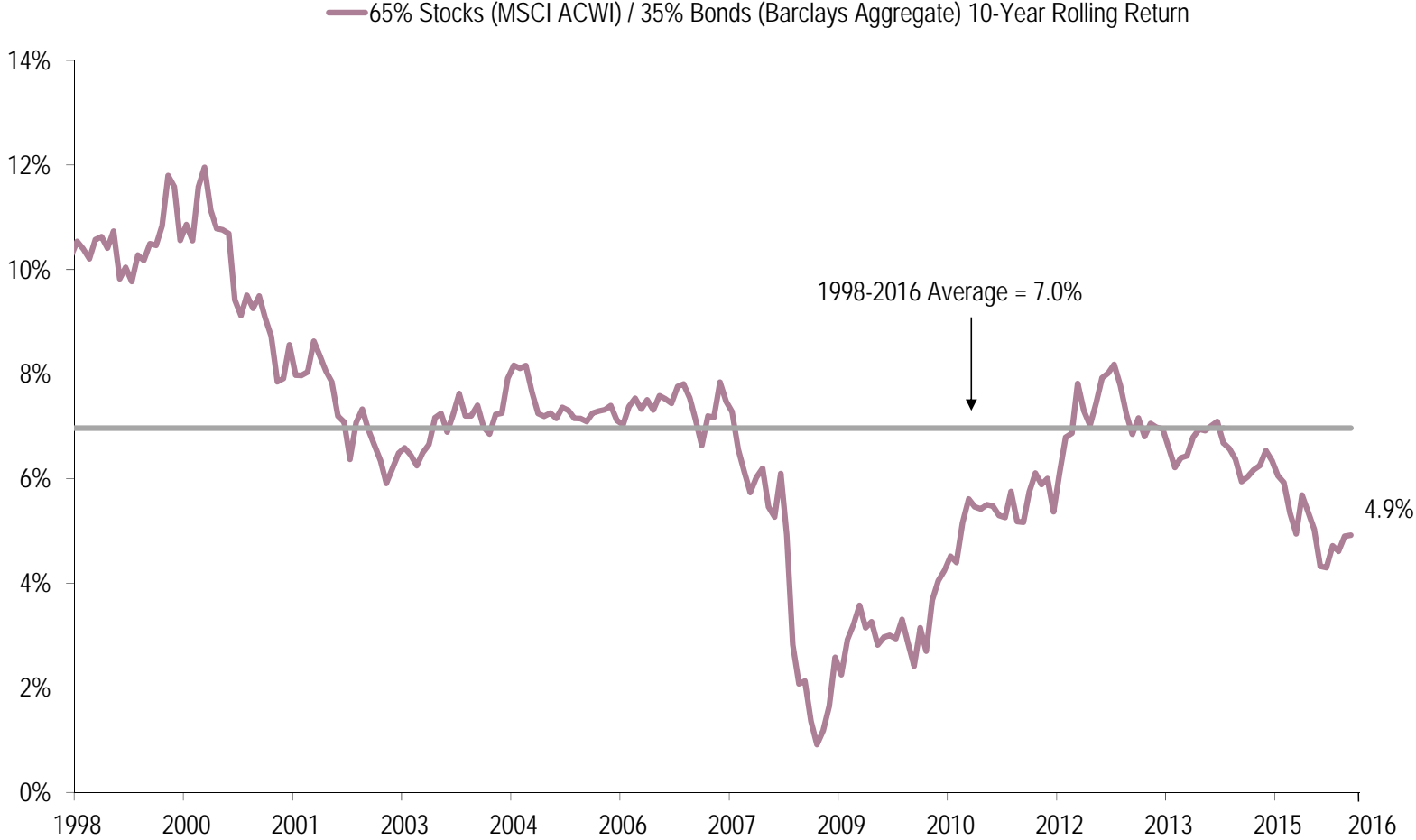
### U.S. and Developed Market Foreign Equity Rolling Three-Year Returns



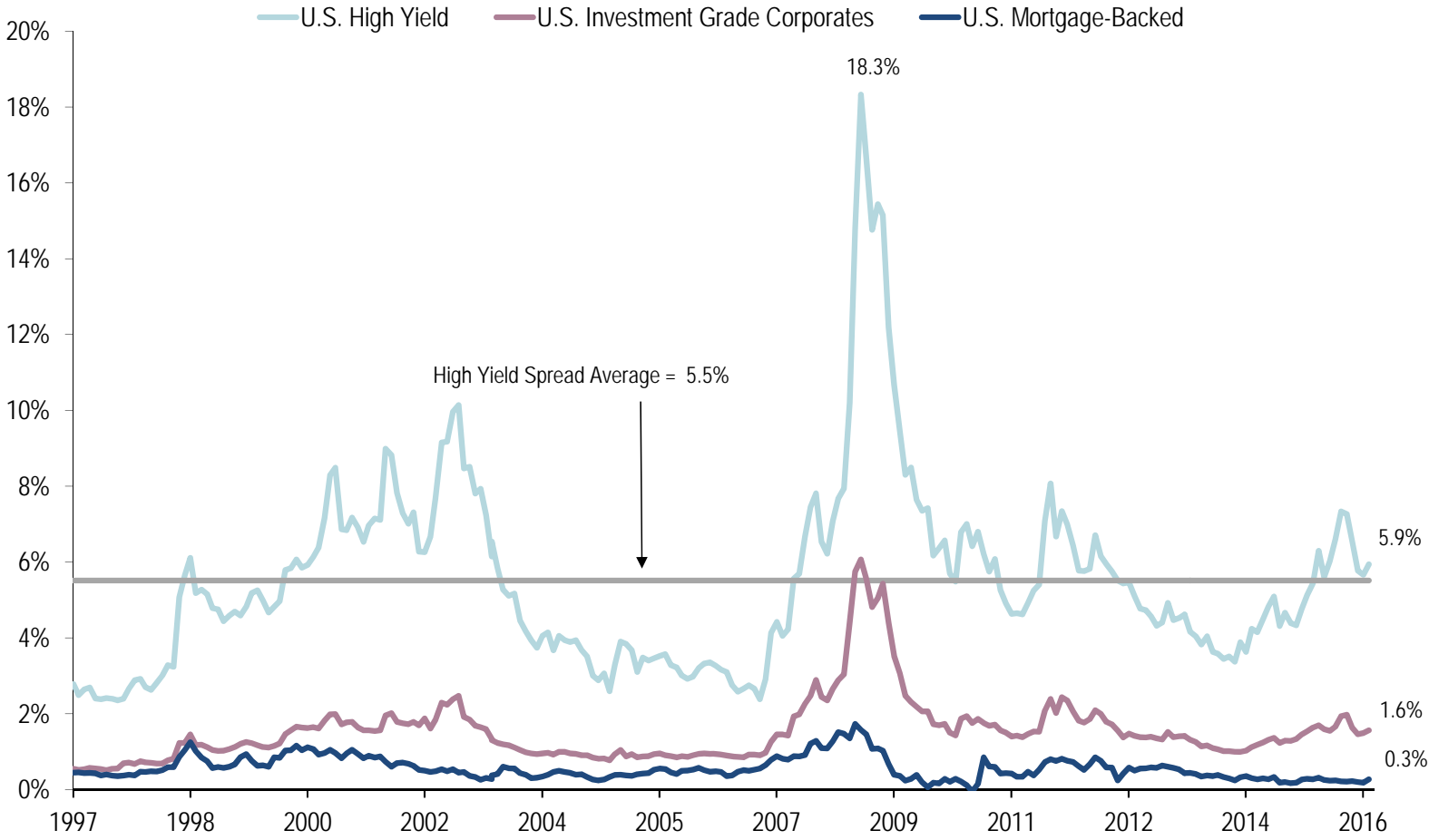
### U.S. and Emerging Market Equity Rolling Three-Year Returns



### Rolling Ten-Year Returns: 65% Stocks and 35% Bonds



### Credit Spreads vs. U.S. Treasury Bonds

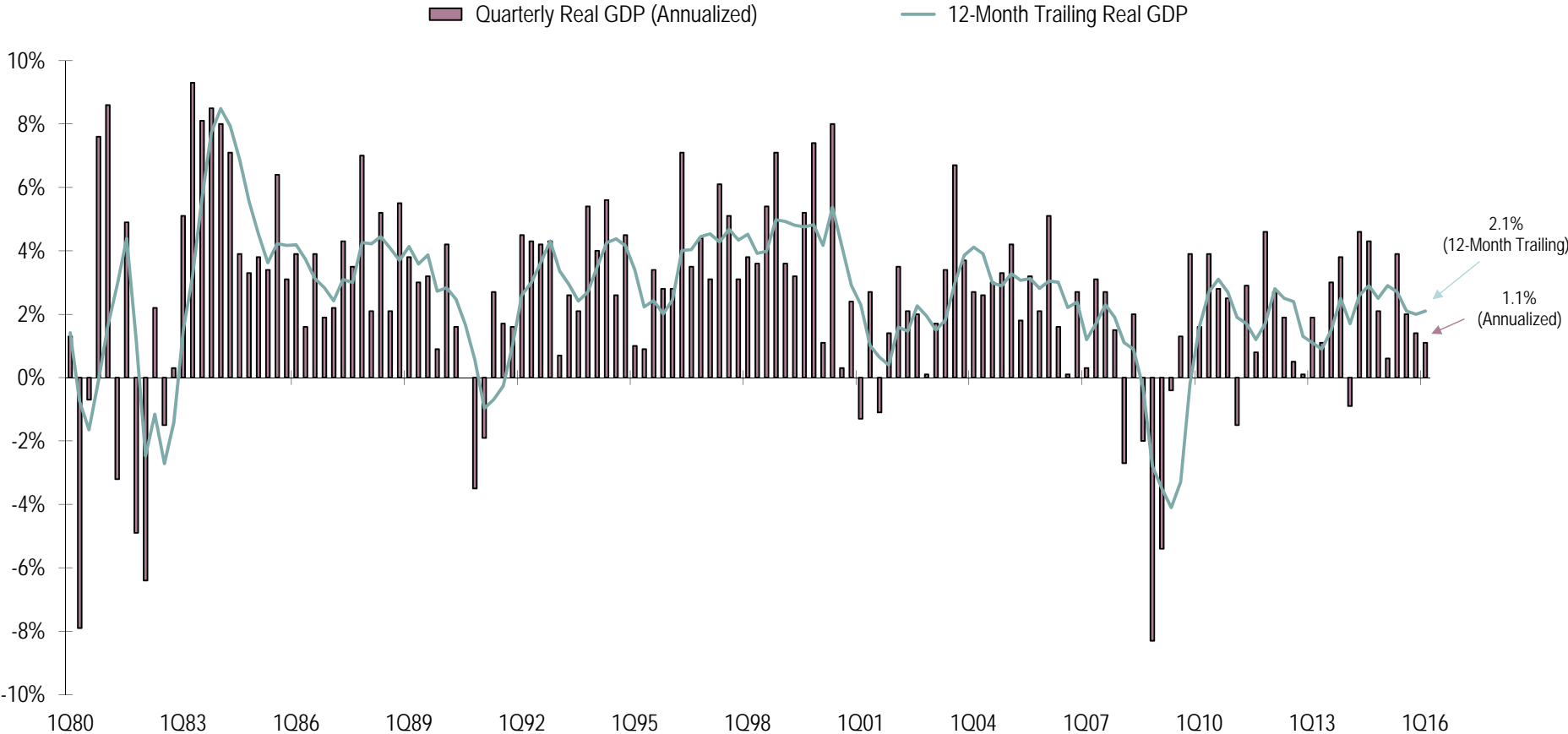


<sup>1</sup> The median high yield spread was 5.1% from 1997-2016.





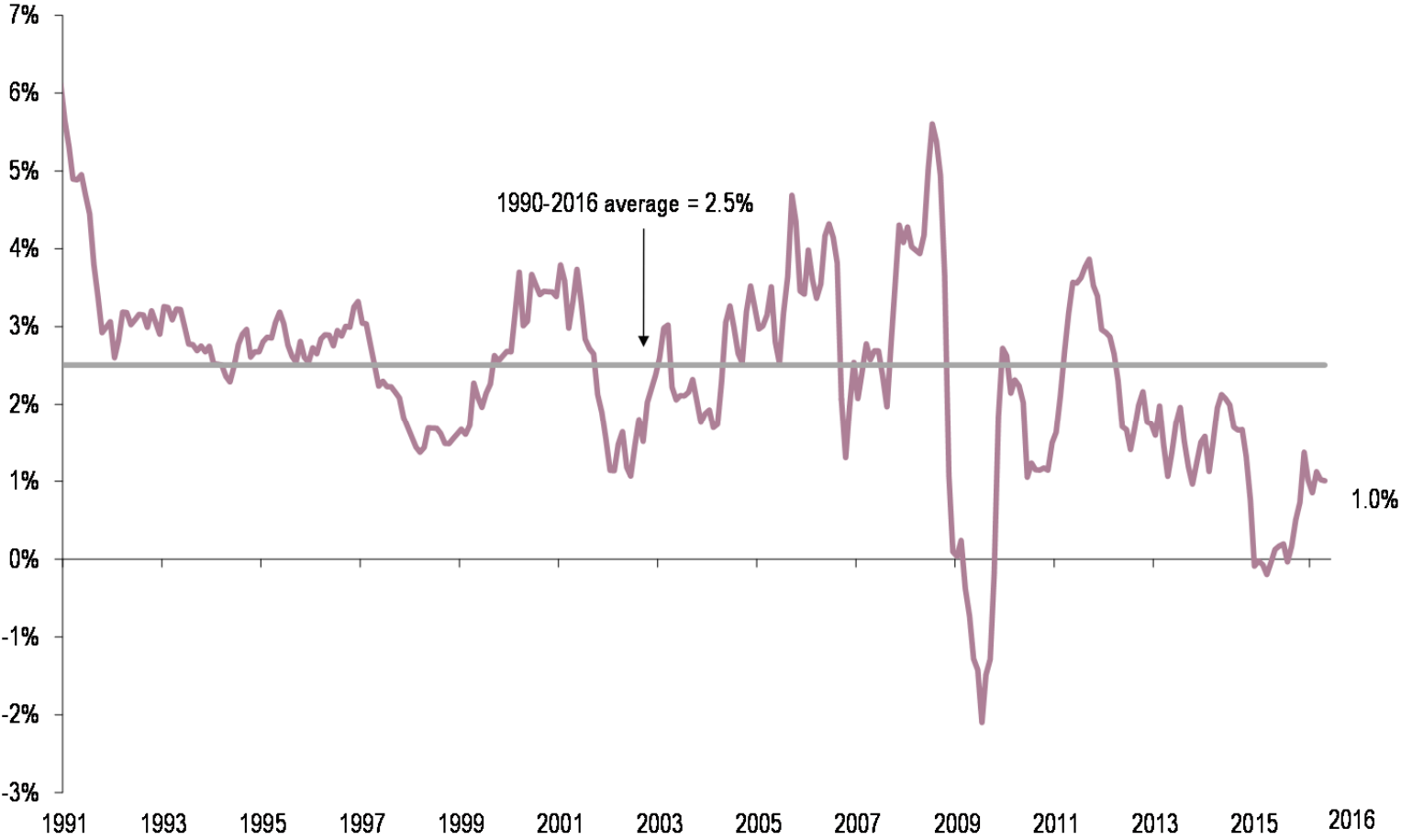
### U.S. Real Gross Domestic Product (GDP) Growth<sup>1</sup>



<sup>1</sup> Second quarter 2016 GDP data is not yet available. Data is as of the first quarter.



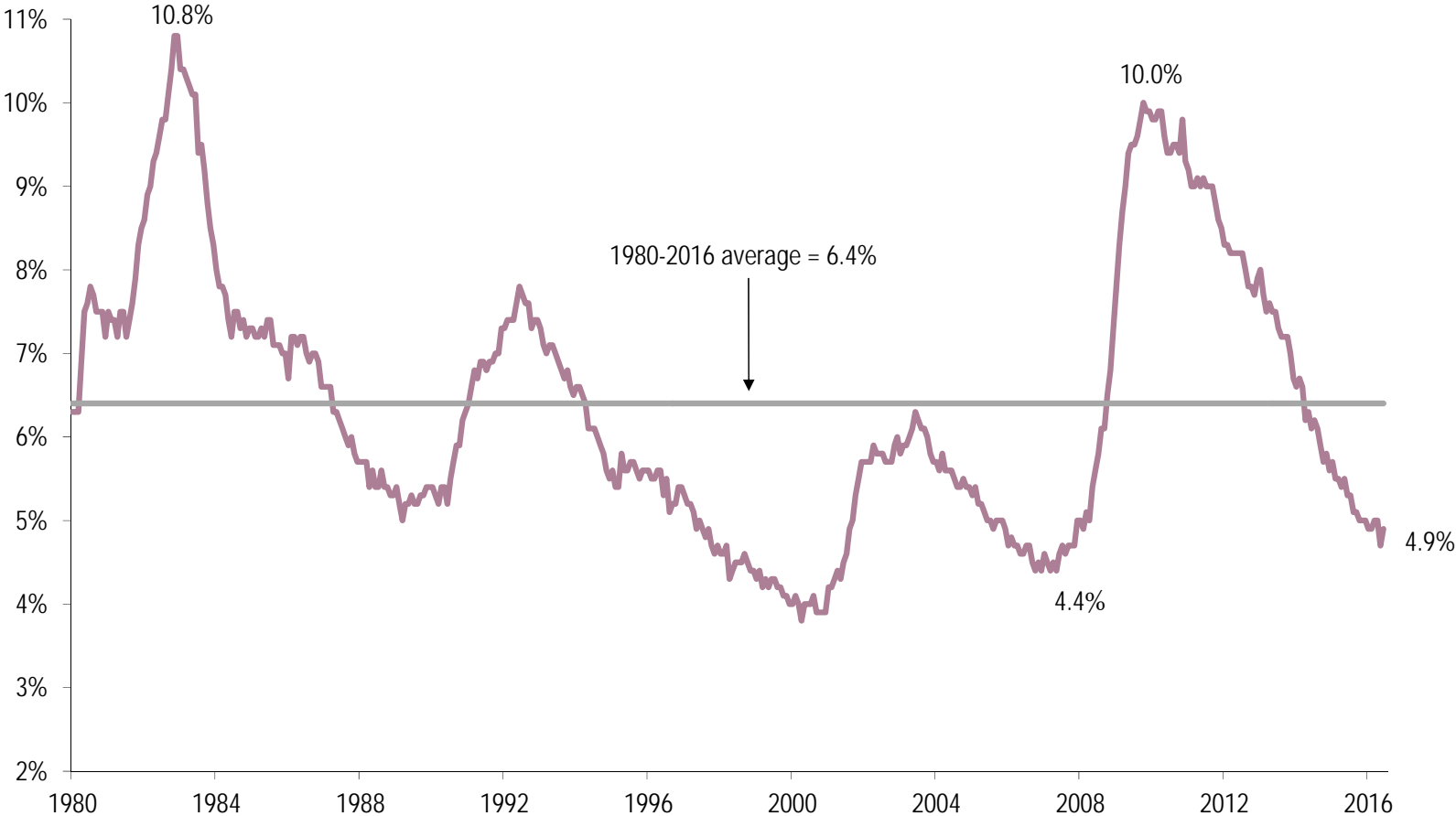
### U.S. Inflation (CPI) Trailing Twelve Months<sup>1</sup>



<sup>1</sup> Data is non-seasonally adjusted CPI, which may be volatile in the short-term.



### U.S. Unemployment<sup>1</sup>



<sup>1</sup> Data is as of June 30, 2016.



## **Glossary and Notes As of June 30, 2016**

**Credit Risk:** Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

**Duration:** Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

**Information Ratio:** This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

**Market Capitalization:** For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

**Market Weighted:** Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

**Maturity:** The date on which a loan, bond, mortgage or other debt/security becomes due and is to be paid off.

**Prepayment Risk:** The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

**Price-Book Value (P/B) Ratio:** The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

**Price-Earnings (P/E) Ratio:** A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit

above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

**Quality Rating:** The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

**Sharpe Ratio:** A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

**Standard Deviation:** A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

**STIF Account:** Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

**Style:** The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

**Yield to Maturity:** The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.  
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.