



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2017**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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# 2<sup>nd</sup> quarter summary

## THE ECONOMIC CLIMATE

- Developed and emerging economies have exhibited coordinated positive growth for the first time in this recovery. Absolute growth remains subdued relative to history.
- Economic releases have begun to miss expectations in the U.S. and U.K. after much upside surprise. The Eurozone continued to deliver positive surprises, but by a smaller margin. Heightened expectations help to explain some of the recent data disappointment.
- Despite a healthy economy and longer than average expansion there is little indication of overheating in the U.S. This suggests the current expansion may have more room to run.

## MARKET PORTFOLIO IMPACTS

- Treasury yields fell slightly over the quarter.
- Credit spreads are tight, implying limited upside performance potential. U.S. credit markets have stabilized from recent defaults in the energy and metals/mining sectors.

## THE INVESTMENT CLIMATE

- Central banks communicated a more hawkish tone across developed markets. The Fed announced plans for balance sheet reduction, the ECB is expected to reduce easing starting next year, and Mark Carney of the BOE indicated he is receptive to tightening under the right conditions. Central bank governors have shown less concern over the recent decline in inflation than in the past.
- U.S. equities are expected to deliver robust earnings growth in Q2 of 6.8% YoY. Energy sector earnings have provided much of this improvement after a challenging period a year ago.

## ASSET ALLOCATION ISSUES

- Earnings growth beat expectations in recent quarters leading to a broad fall in equity price-to-earnings multiples, causing equities to become more attractive.
- Realized and implied market volatility is at historic lows across assets classes. This could be a sign of market complacency.

We maintain a neutral to slightly overweight risk stance

# U.S. economics summary

- U.S. real GDP grew 2.1% YoY in Q1, on par with the level of economic expansion in recent quarters. Consumer spending and business investment were the primary drivers of growth.
- Headline inflation decelerated from 2.4% in February to 1.6% in June. The slowdown was partially influenced by the effect of lower oil prices falling out of the year-over-year calculation, but the fall in price level was not solely due to energy. Lower telecom prices helped lead to a drop in core CPI, which fell from 2.0% to 1.7%.
- For a third consecutive quarter, the Fed raised the target federal funds rate by 25 bps. FOMC members looked past the recent soft patch in inflation and cited improving overall economic conditions.
- The Fed also released details on its balance sheet normalization plan, although timing remains unclear. Once the program begins, \$6 billion in Treasuries and \$4 billion in mortgage-backed securities will roll off the balance sheet each month. These amounts will increase every three months until a total cap of \$50 billion per month is reached.
- The economy added 194,000 jobs per month in the second quarter, on average. This marks the best quarter for job growth since the second quarter of 2010. Many of these jobs have been created in lower paying sectors such as leisure and hospitality, which may be helping to keep overall wage growth subdued.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	2.1% <i>3/31/17</i>	1.6% <i>3/31/16</i>
Inflation ( <i>CPI YoY, Headline</i> )	1.6% <i>6/30/17</i>	0.9% <i>6/30/16</i>
Expected Inflation ( <i>5yr-5yr forward</i> )	1.8% <i>6/30/17</i>	1.5% <i>6/30/16</i>
Fed Funds Rate	1.25% <i>6/30/17</i>	0.50% <i>6/30/16</i>
10 Year Rate	2.3% <i>6/30/17</i>	1.5% <i>6/30/16</i>
U-3 Unemployment	4.4% <i>6/30/17</i>	4.9% <i>6/30/16</i>
U-6 Unemployment	8.6% <i>6/30/17</i>	9.6% <i>6/30/16</i>

# International economics summary

- Developed and emerging economies have exhibited coordinated positive growth momentum from low absolute growth rates relative to history. A continuation of this trend may be self reinforcing, lifting weak and strong economies alike.
- Economic releases have missed expectations in the U.S. and U.K. after extended upside surprise. The Eurozone has delivered positive surprise, but by a smaller margin.
- Oil further contributed to commodity underperformance due to oversupply, disagreements within OPEC regarding production cuts, and concerns over the magnitude of U.S. production.
- Developed world inflation remained within a normal range, though slightly below levels targeted by central banks.
- In May, Emmanuel Macron defeated Marine Le Pen in the French presidential election, calming fears over populist politics gaining an increased foothold in Europe.
- On June 8th, the U.K. held a snap election in which the Conservative party surprised polls and gave up their majority in Parliament, potentially weakening their position in the upcoming Brexit negotiations.
- On June 27th, ECB President Mario Draghi surprised markets with comments perceived as hawkish compared to previous comments. In the following two days the Euro appreciated 2.3% against the U.S. dollar and developed global rates moved upward - German bunds in particular.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.1% <i>3/31/17</i>	1.6% <i>6/30/17</i>	4.4% <i>6/30/17</i>
Western Europe	1.8% <i>3/31/17</i>	1.3% <i>6/30/17</i>	8.1% <i>3/31/17</i>
Japan	1.3% <i>3/31/17</i>	0.4% <i>5/31/17</i>	3.1% <i>5/31/17</i>
BRICS Nations	5.4% <i>3/31/17</i>	2.3% <i>3/31/17</i>	5.6% <i>12/31/16</i>
Brazil	(0.4%) <i>3/31/17</i>	3.0% <i>6/30/17</i>	13.5% <i>6/30/17</i>
Russia	0.5% <i>3/31/17</i>	4.4% <i>6/30/17</i>	5.5% <i>3/31/17</i>
India	6.1% <i>3/31/17</i>	2.2% <i>5/31/17</i>	8.4% <i>12/31/16</i>
China	6.9% <i>3/31/17</i>	1.5% <i>5/31/17</i>	4.0% <i>12/31/16</i>

# Equity environment

- We maintain a moderate overweight to equities with a preference for emerging markets due to attractive valuations and better growth prospects relative to developed markets.
- Global equity markets delivered another positive quarter, driven by strong earnings growth across regions. Earnings were strongest in Western Europe and emerging markets. These regions outperformed on a relative basis during the quarter.
- According to FactSet, the estimated Q2 earnings growth rate of the S&P 500 is 6.8% YoY. Energy companies are expected to contribute the most to overall growth due to stabilizing oil prices and a low earnings base one year ago.
- Increased uncertainty surrounding the Brexit negotiations following the Conservative party's surprise loss of a majority in Parliament likely helped lead to underperformance in U.K. equities. The FTSE 100 Index returned -4.9% in Q2.
- MSCI approved the inclusion of 222 mainland Chinese companies (China A Shares) into the MSCI Emerging Markets Index. This represents only a small portion of the overall market. Starting in 2018, these domestic shares will represent approximately 0.7% of the index. While initially this decision will have a minimal effect on index performance, it opens the door for additional China A shares to be added. If the entire market was included, it would represent 12.8% of the MSCI index.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	3.1%		9.3%		18.0%	
US Small Cap (Russell 2000)	2.5%		5.0%		24.6%	
US Large Value (Russell 1000 Value)	1.3%		4.7%		4.7%	
US Large Growth (Russell 1000 Growth)	4.7%		14.0%		20.4%	
International Large (MSCI EAFE)	6.1%	3.1%	13.8%	16.1%	20.3%	23.5%
Eurozone (Euro Stoxx 50)	6.5%	3.8%	19.1%	22.5%	26.6%	28.3%
U.K. (FTSE 100)	4.9%	1.2%	10.0%	5.0%	13.6%	17.5%
Japan (NIKKEI 225)	5.1%	6.5%	9.6%	6.6%	19.9%	32.0%
Emerging Markets (MSCI Emerging Markets)	6.3%	6.1%	18.4%	11.6%	23.8%	19.3%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/17

# Domestic equity

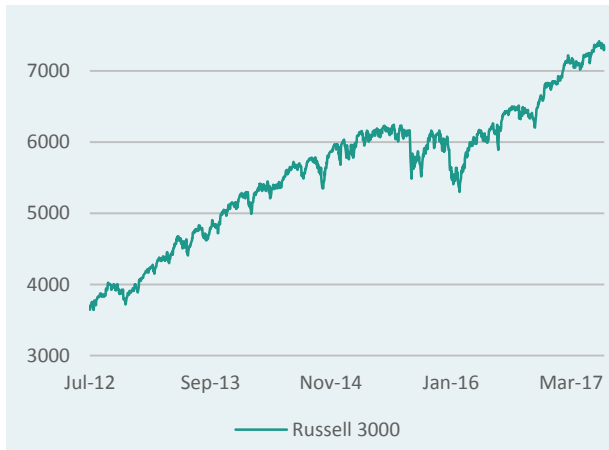
U.S. equities moved higher on robust earnings growth. According to FactSet, the estimated Q2 earnings growth rate of the S&P 500 is 6.8% YoY. Energy companies are expected to contribute the most to overall growth due to a low earnings base one year ago and stabilizing oil prices. The earnings outlook for the rest of the year is strong, and the expected growth rate for the 2017 calendar year is 9.8%. Positive global growth trends could help lift earnings further since a substantial portion of U.S. corporate revenues come from abroad.

All major U.S. banks passed the Fed's stress test in June, citing strong capital levels and ability to lend during a recession. The news drove financials upward as the positive results allowed banks to increase their future dividends and buybacks.

As discussed in recent quarters, we are relatively bullish on U.S. earnings growth in the near term, but investors may be paying for this excess growth upfront through higher valuations. We maintain a neutral weight to U.S. equities.

We maintain a neutral weight to U.S. equities

## U.S. EQUITIES



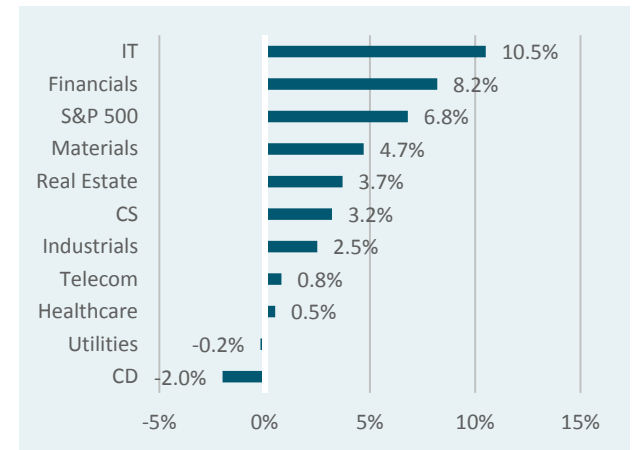
Source: Russell Investments, as of 7/7/17

## S&P 500 EPS GROWTH



Source: Bloomberg, as of 6/30/17

## Q2 FORECAST EPS GROWTH



Source: FactSet, as of 7/14/17 - excludes energy sector

# Domestic equity size and style

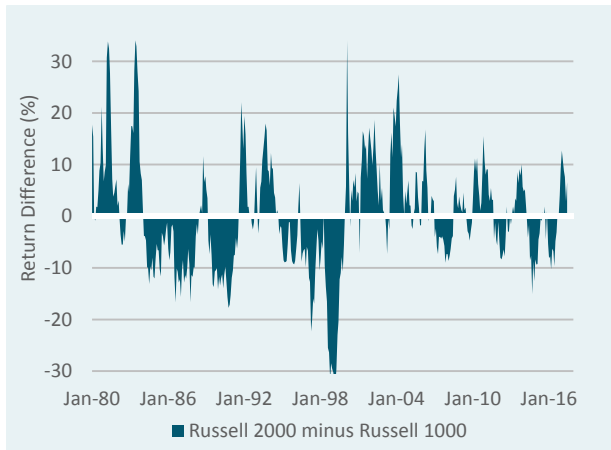
Despite a short selloff in June, strong returns from the tech sector helped lead to positive relative performance of growth over value during the quarter. Much of the gains were concentrated in the well known mega-cap stocks, including Apple, Amazon, and Microsoft. Momentum in growth stocks has continued to perform well so far this year.

In the second quarter, the Russell 1000 Growth Index and the Russell 1000 Value Index returned 4.7% and 1.3%, respectively. Falling oil prices were a headwind to energy

companies, which were the largest detractor from the value index.

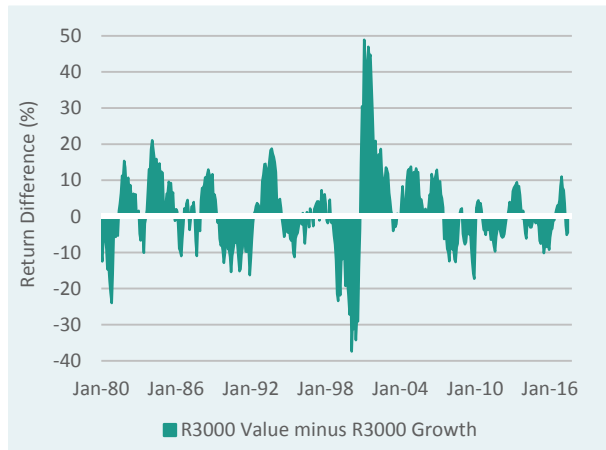
Large cap equities narrowly outperformed small cap equities. Much of the optimism surrounding Trump's pro-small business policies after his victory, including deregulation and tax reform, appears to have faded so far this year. If progress on these measures is made, smaller companies could receive another boost in the second half of 2017.

**SMALL CAP VS LARGE CAP (YOY)**



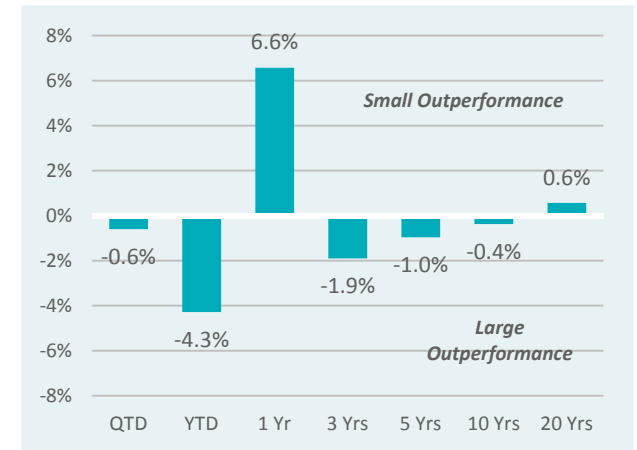
Source: Russell Investments, as of 6/30/17

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 6/30/17

**U.S. LARGE VS. SMALL RELATIVE PERFORMANCE**



Source: Morningstar, as of 6/30/17



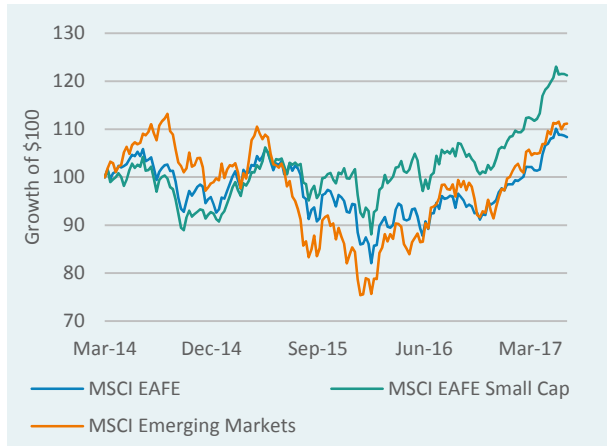
# International equity

International equities outperformed domestic equities over the quarter. The MSCI ACWI ex U.S. returned 5.8% on an unhedged basis while the S&P 500 returned 3.1%.

The U.S. dollar has steadily depreciated in value year-to-date against major currencies, down around 7%. This currency movement has added volatility to investors with unhedged currency exposure, with the MSCI EAFE Index returning 13.8% unhedged vs. 16.1% hedged, and the MSCI Emerging Markets Index returning 18.4% unhedged vs. 11.6% hedged.

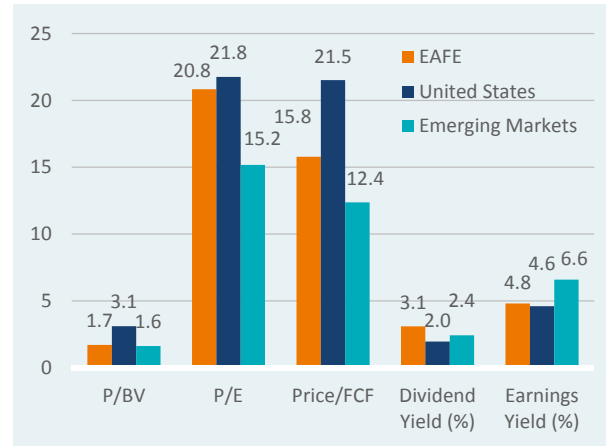
International equities are trading at lower multiples than domestic equities, based on various metrics. Valuations and earnings growth both play an important role in equity return outcomes and risk. Higher equity valuations imply greater optimism surrounding growth expectations, and greater optimism presents investors with more downside risk as the possibility of disappointment rises. Because of lower valuation levels, international markets may possess greater upside potential through either valuation expansion or positive earnings growth surprise. However, due to apparent tail risks in these markets we maintain a neutral weight in portfolios.

## GLOBAL EQUITY PERFORMANCE



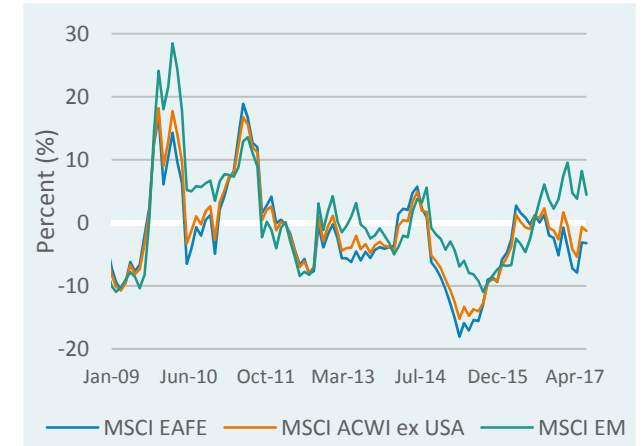
Source: Bloomberg, as of 6/30/17

## VALUATIONS



Source: Bloomberg, MSCI, as of 6/30/17 - 3 month average

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 6/30/17

# Emerging market equity

We maintain an overweight to emerging markets due to attractive valuations and better growth prospects relative to developed markets.

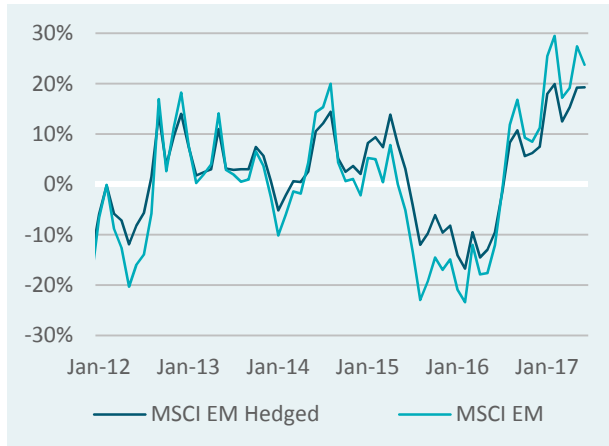
Emerging market equities continue to outperform developed markets, delivering 4.8% in Q2 and 17.1% year-to-date. Currency movement has been additive. Emerging market equity earnings are now expected to grow 22% YoY in 2017, which is a material increase from the 13% YoY increase expected at the beginning of 2017.

Interestingly, valuations have come down slightly despite very strong equity returns, as earnings rise faster than price.

If economic growth turns upward across the globe, we would expect major exporting economies to experience a significant tailwind. Emerging markets in particular tend to provide high exposure to global growth. Stabilizing commodities in this type of environment would likely provide an additional tailwind.

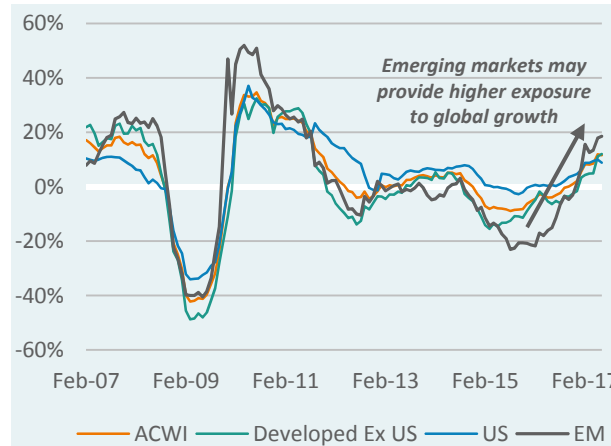
Accelerating global growth should have a positive effect on EM economies

12-MONTH ROLLING PERFORMANCE



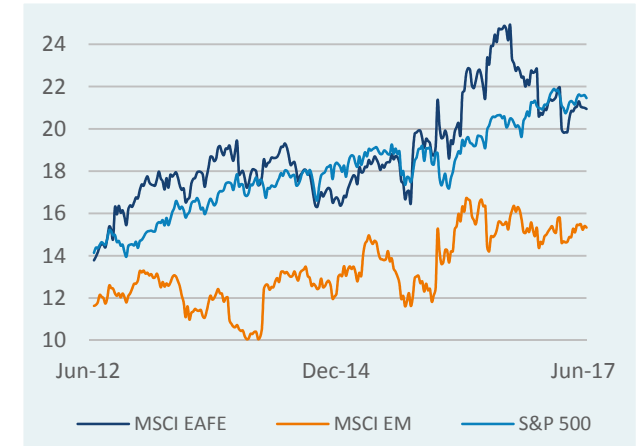
Source: MPI, as of 6/30/17

EM EARNINGS GROWTH (YOY)



Source: Bloomberg, as of 6/30/17

TRAILING P/E RATIOS



Source: Bloomberg as of 6/30/17

# Interest rate environment

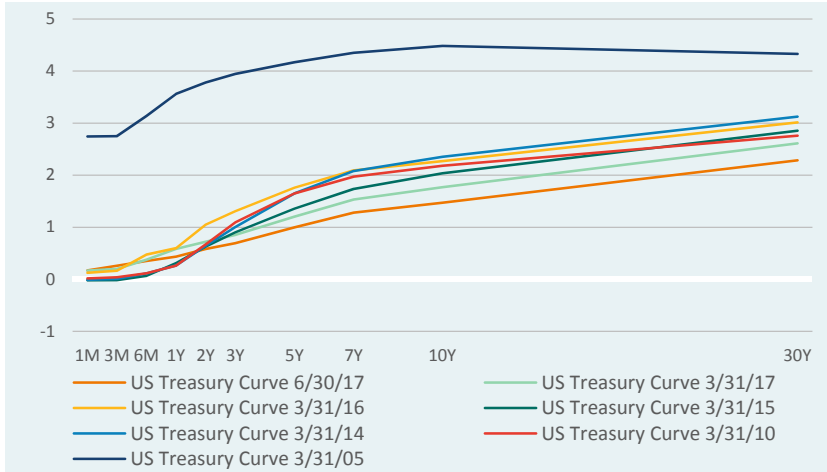
- On June 14th, the Federal Reserve raised the federal funds rate by 25 bps to a target range of 1.00% - 1.25%.
- The Fed's own forecast indicates one more rate hike this year, and three more hikes in each of the next two years. Rates are expected to normalize at 3% at the end of 2019. We believe the probability that the Fed undershoots its target is significant, given persistent low inflation and a high degree of risk if policy is tightened too quickly.
- The Fed announced plans to begin reducing their balance sheet sometime this year. The initial plan is to runoff \$6 billion of Treasuries and \$4 billion of mortgage-backed securities per month. This will be scaled up commensurately every 3 months to \$50 billion per month.
- Markets expect the ECB to reduce monetary easing gradually throughout 2018, with a tapering plan announcement this fall.
- In May, the Bank of Japan raised its economic forecasts. The central bank implemented a "yield curve control" policy at its September meeting along with a mandate to keep the 10-year yield at 0%. The BoJ plans to maintain an easy stance until inflation hits its 2% target.
- Credit spreads remain broadly tight. Spread levels have historically been a strong predictor of credit performance relative to Treasuries, which at current levels implies muted future performance.
- We favor emerging market debt due to higher yields relative to other bond markets.

Area	Short Term (3M)	10 Year
United States	1.01%	2.30%
Germany	(0.82%)	0.47%
France	(0.60%)	0.82%
Spain	(0.44%)	1.54%
Italy	(0.38%)	2.16%
Greece	2.43%	5.42%
U.K.	0.17%	1.26%
Japan	(0.10%)	0.09%
Australia	1.63%	2.73%
China	2.63%	3.57%
Brazil	9.41%	10.54%
Russia	8.16%	7.90%

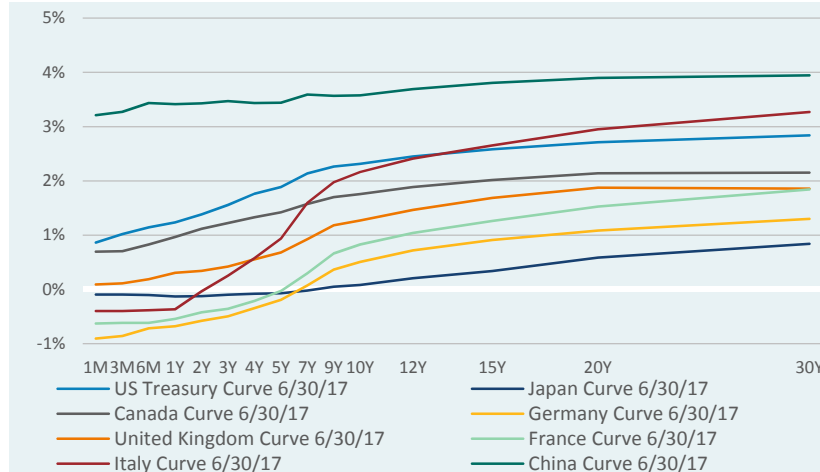
Source: Bloomberg, as of 6/30/17

# Yield environment

**U.S. YIELD CURVE**

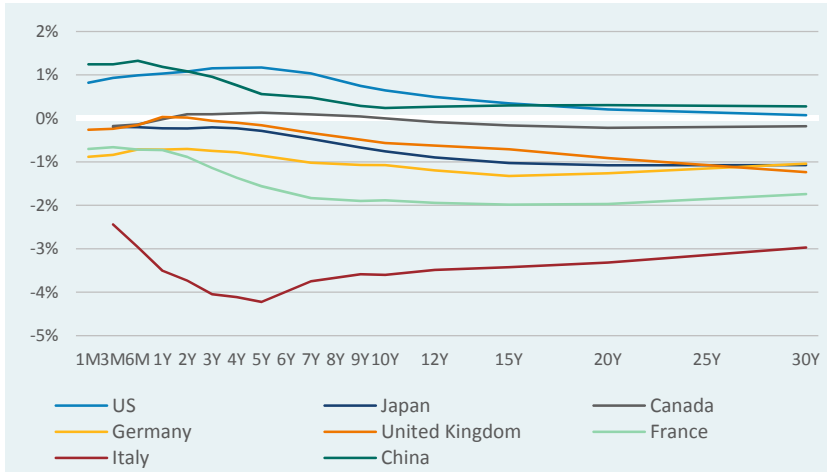


**GLOBAL GOVERNMENT YIELD CURVES**

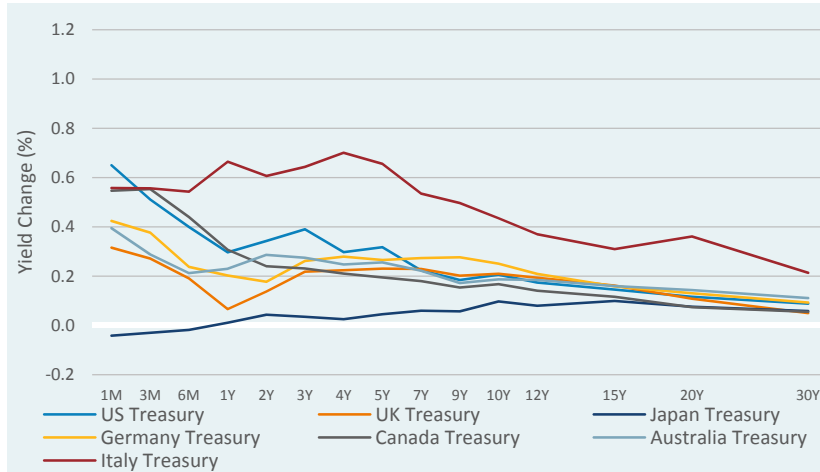


Across developed markets, U.S. Treasuries offer higher yields

**YIELD CURVE CHANGES OVER LAST FIVE YEARS**



**IMPLIED CHANGES OVER NEXT YEAR**



Source: Bloomberg, as of 6/30/17

# Currency

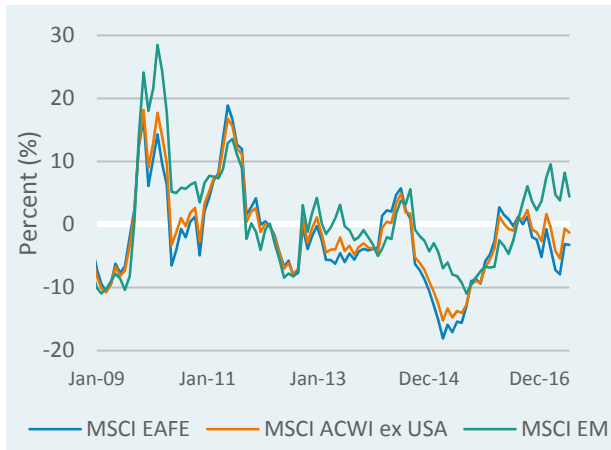
The U.S. dollar has steadily depreciated in value year-to-date against major currencies, down approximately 7% through quarter-end. Global central bank hawkishness, relative interest rate expectations, and improving international growth have likely guided the U.S. dollar lower.

Emerging market currencies exhibited further strength in Q2 and have appreciated 4.8% year-to-date according to

the JP Morgan Emerging Market Currency Index.

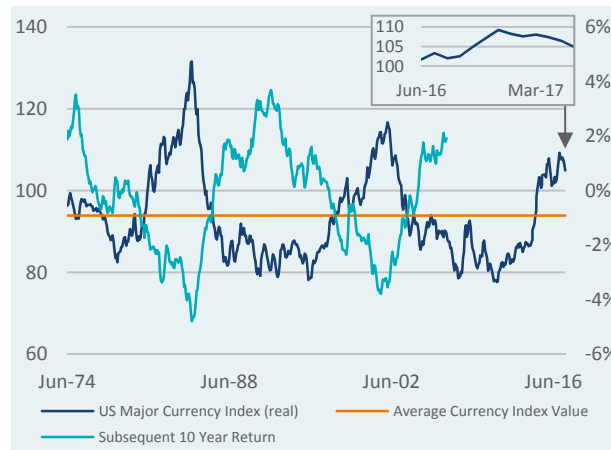
Currency movement has recently had a positive impact on the performance of unhedged foreign asset exposure. Dollar weakness has also acted as a tailwind for corporate earnings for those U.S. companies with revenues in foreign currency.

**EFFECT OF CURRENCY (1YR ROLLING)**



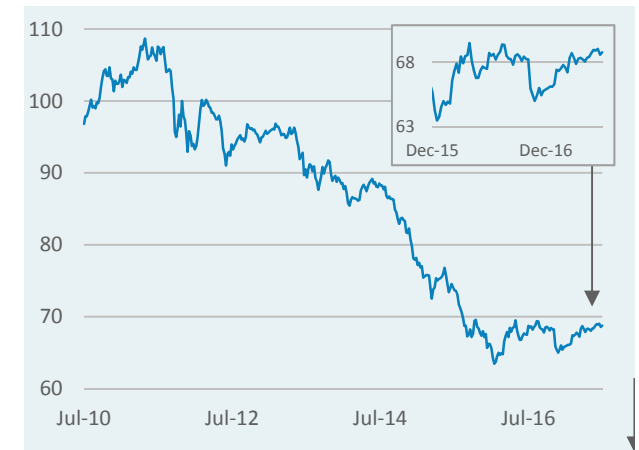
Source: MPI, as of 6/30/17

**U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Federal Reserve, as of 6/30/17

**JPM EM CURRENCY INDEX**



Source: Bloomberg, as of 6/30/17

- The Total Fund, net of manager fees, returned 2.6% in the second quarter of 2017 and ranked 71<sup>st</sup> among other public plans greater than \$1 billion (median of 2.8%). It lagged the policy index return of 2.8%. The Total Fund w/o Overlay was 2.6% for the quarter. The Total Fund one year return of 12.6% matched the policy index, and ranked in 50<sup>th</sup> percentile of its peer universe. The three-year return of 5.5% (33<sup>rd</sup> percentile) was above median among large public plans (5.1%).
- Second quarter results were enhanced by the following factors:
  1. Baillie Gifford gained 8.7%, beating the MSCI ACWI ex U.S. (6.0%) and ranking in the 37<sup>th</sup> percentile of its peers. Stock selection within the financial sector and an underweight to energy both contributed to relative performance.
  2. Western TRU ranked in the 1<sup>st</sup> percentile of Core Fixed Income managers, gaining 3.2% versus the Bloomberg Barclays Aggregate (1.4%). Risk assets did well this quarter, and macro strategies were strong contributors to performance. A positive US duration also contributed to performance as longer-term interest rates declined.
- Second quarter results were hindered by the following factors:
  1. Franklin Templeton lost 1.0%, trailing the Bloomberg Barclays Aggregate return of 2.6% and ranking in the bottom of its peer group. Currency positions were the main detractor from relative performance. Within currencies, an underweight position to the Euro was the main contributor to underperformance.
  2. Parametric Core gained 3.4% while the MSCI Emerging Markets Index gained 6.4%. The manager ranked in the 90<sup>th</sup> percentile of its peer group. For the second quarter, an underweight to China and Korea detracted from performance versus the index.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank*	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund **</b>	<b>2.6</b>	<b>71</b>	<b>7.6</b>	<b>37</b>	<b>12.6</b>	<b>50</b>	<b>6.5</b>	<b>36</b>	<b>5.5</b>	<b>33</b>	<b>9.4</b>	<b>22</b>	<b>4.6</b>	<b>63</b>
<i>Policy Index<sup>1</sup></i>	2.8	49	7.3	51	12.6	51	6.6	31	5.3	40	9.2	24	5.5	20
<i>Allocation Index</i>	2.8	53	7.2	58	12.2	62	6.5	37	5.2	44	9.1	28	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	2.8		7.3		12.6		6.1		5.1		8.7		4.7	
<b>Total Fund ex Overlay</b>	<b>2.6</b>	<b>73</b>	<b>7.5</b>	<b>39</b>	<b>12.7</b>	<b>48</b>	<b>6.4</b>	<b>40</b>	<b>5.4</b>	<b>38</b>	<b>9.3</b>	<b>23</b>	<b>4.5</b>	<b>64</b>
<i>Policy Index<sup>1</sup></i>	2.8	49	7.3	51	12.6	51	6.6	31	5.3	40	9.2	24	5.5	20
<i>Allocation Index</i>	2.8	53	7.2	58	12.2	62	6.5	37	5.2	44	9.1	28	--	--
<i>InvestorForce Public DB &gt; \$1B Net Median</i>	2.8		7.3		12.6		6.1		5.1		8.7		4.7	
<b>Public Equity</b>	<b>4.3</b>	<b>38</b>	<b>11.7</b>	<b>35</b>	<b>18.6</b>	<b>66</b>	<b>7.7</b>	<b>50</b>	<b>6.1</b>	<b>52</b>	<b>12.0</b>	<b>48</b>	<b>4.3</b>	<b>72</b>
<i>Blended Public Equity Index<sup>2</sup></i>	4.4	36	11.4	39	20.0	32	7.8	46	6.0	53	12.0	47	5.3	37
<i>InvestorForce All DB Total Eq Net Median</i>	4.1		10.9		19.0		7.6		6.1		12.0		4.9	
<b>US Equity</b>	<b>2.9</b>	<b>59</b>	<b>8.9</b>	<b>43</b>	<b>18.3</b>	<b>60</b>	<b>9.1</b>	<b>52</b>	<b>8.5</b>	<b>51</b>	<b>14.1</b>	<b>50</b>	<b>6.1</b>	<b>87</b>
<i>Blended US Equity Index<sup>2</sup></i>	3.0	43	8.9	40	18.8	40	9.6	40	8.8	39	14.4	33	7.2	27
<i>Russell 3000</i>	3.0	43	8.9	40	18.5	52	10.0	26	9.1	25	14.6	23	7.3	26
<i>InvestorForce All DB US Eq Net Median</i>	2.9		8.7		18.5		9.2		8.5		14.1		6.8	
<b>Large Cap Equity</b>	<b>3.0</b>	<b>50</b>	<b>11.0</b>	<b>32</b>	<b>19.4</b>	<b>36</b>	<b>10.7</b>	<b>12</b>	<b>9.9</b>	<b>17</b>	<b>14.9</b>	<b>25</b>	<b>6.5</b>	<b>62</b>
<i>Russell 1000</i>	3.1	48	9.3	45	18.0	49	10.2	19	9.3	27	14.7	27	7.3	43
<i>eA US Large Cap Equity Net Median</i>	3.0		8.7		17.8		8.2		7.8		13.7		7.0	
<i>BlackRock Russell 1000***</i>	3.1	47	--	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	3.1	47	9.3	44	18.0	40	10.2	18	9.3	22	14.7	18	7.3	37
<i>eA US Large Cap Core Equity Net Median</i>	2.9		8.8		16.9		8.3		8.0		13.5		7.0	

\* Total Fund and asset class aggregates are ranked in InvestorForce universes. Managers are ranked in eVest (eA) manager universes.

\*\* Includes Parametric Minneapolis manager funded in August 2013.

\*\*\*Funded January 2017.

1. Effective 2/1/17, Policy Index is 23% Russell 3000/19% MSCI ACWI ex US IMI/ 12% BBgBarc Aggregate/ 2% BBgBarc TIPS/ 6% BBgBarc BA Intermediate HY / 3% BBgBarc Multi-verse/ 7% NCREIF NFI ODCE/ 7% Russell 3000 + 3% 8% (60% Russell 3000/40% BBgBarc Aggregate)/ 6% Labor +4%/ 7% (34% Bloomberg Roll Select Commodity/ 33% S&P Global Large-MidCap Commodity and Resources/ 33% S&P Global Infrastructure)

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
DE Shaw	2.7	62	9.7	37	19.4	25	11.5	7	10.9	5	15.6	8	--	--
<i>Russell 1000</i>	3.1	47	9.3	44	18.0	39	10.2	18	9.3	22	14.7	19	7.3	37
<i>eA US Large Cap Core Equity Net Median</i>	2.9		8.8		16.7		8.3		8.1		13.5		7.0	
<b>Small Cap Equity</b>	<b>1.8</b>	<b>59</b>	<b>4.1</b>	<b>53</b>	<b>21.8</b>	<b>58</b>	<b>5.7</b>	<b>69</b>	<b>4.7</b>	<b>82</b>	<b>12.3</b>	<b>77</b>	<b>4.9</b>	<b>93</b>
<i>Russell 2000</i>	2.5	49	5.0	47	24.6	35	7.8	52	7.4	50	13.7	55	6.9	56
<i>eA US Small Cap Equity Net Median</i>	2.4		4.8		22.6		7.9		7.3		14.0		7.1	
QMA US Small Cap*	1.8	58	4.1	59	--	--	--	--	--	--	--	--	--	--
<i>Russell 2000</i>	2.5	48	5.0	45	24.6	29	7.8	52	7.4	58	13.7	61	6.9	58
<i>eA US Small Cap Core Equity Net Median</i>	2.3		4.8		21.7		8.1		7.9		14.1		7.2	
<b>International Equity</b>	<b>6.2</b>	<b>56</b>	<b>15.5</b>	<b>55</b>	<b>18.3</b>	<b>84</b>	<b>5.0</b>	<b>35</b>	<b>1.8</b>	<b>45</b>	<b>8.0</b>	<b>52</b>	<b>0.5</b>	<b>74</b>
<i>MSCI ACWI ex US IMI<sup>2</sup></i>	6.1	62	14.6	78	21.0	48	4.8	41	1.6	51	7.9	53	1.7	39
<i>MSCI EAFE Gross</i>	6.4	48	14.2	87	20.8	50	4.4	50	1.6	51	9.2	22	1.5	47
<i>InvestorForce All DB ex-US Eq Net Median</i>	6.3		15.7		20.8		4.4		1.6		8.0		1.3	
<b>Developed Markets</b>	<b>6.6</b>	<b>41</b>	<b>15.7</b>	<b>30</b>	<b>18.5</b>	<b>69</b>	<b>5.1</b>	<b>39</b>	<b>2.2</b>	<b>47</b>	<b>8.6</b>	<b>52</b>	<b>0.8</b>	<b>73</b>
<i>MSCI ACWI ex USA Gross</i>	6.0	57	14.5	51	21.0	41	4.5	50	1.3	67	7.7	75	1.6	41
<i>InvestorForce All DB Dev Mkt ex-US Eq Net Median</i>	6.3		14.5		20.0		4.4		1.9		8.6		1.2	
Baillie Gifford	8.7	37	19.6	32	20.4	32	6.9	43	4.3	44	10.5	33	--	--
<i>MSCI ACWI ex US<sup>2</sup></i>	6.0	93	14.5	91	21.0	31	4.5	67	1.3	83	9.1	62	--	--
<i>MSCI ACWI ex US Growth<sup>2</sup></i>	7.7	62	17.7	61	17.8	61	5.3	59	2.9	68	9.6	55	--	--
<i>eA ACWI ex-US Growth Equity Net Median</i>	8.3		18.5		19.2		6.5		4.0		9.8		3.8	
BlackRock EAFE Index	6.3	65	14.1	61	20.7	42	4.3	56	1.5	72	--	--	--	--
<i>MSCI EAFE</i>	6.1	70	13.8	67	20.3	46	3.9	61	1.1	79	8.7	74	1.0	74
<i>MSCI EAFE Gross</i>	6.4	62	14.2	60	20.8	42	4.4	49	1.6	68	9.2	63	1.5	60
<i>eA EAFE Core Equity Net Median</i>	6.7		14.8		20.0		4.4		2.3		9.9		2.0	

\* Funded August 2016.

2. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
FIAM Equity	7.7	67	16.3	67	17.3	65	5.8	73	3.5	76	9.6	85	--	--
<i>MSCI ACWI ex US Small Cap Gross</i>	6.4	84	15.8	71	20.8	37	7.0	58	3.7	74	10.4	76	3.3	85
<i>eA ACWI ex-US Small Cap Equity Net Median</i>	8.3		18.0		18.3		7.4		4.7		12.6		5.1	
Mondrian	4.2	87	12.6	65	15.7	84	3.8	78	0.2	80	7.0	91	1.3	60
<i>MSCI ACWI ex USA Value Gross</i>	4.3	86	11.4	81	24.3	43	3.6	79	-0.4	88	6.9	92	0.9	81
<i>MSCI ACWI ex USA Gross</i>	6.0	46	14.5	37	21.0	59	4.5	76	1.3	65	7.7	87	1.6	42
<i>eA ACWI ex-US Value Equity Net Median</i>	5.8		13.8		23.5		5.5		2.1		9.3		1.4	
<b>Emerging Markets</b>	<b>3.4</b>	<b>86</b>	<b>14.0</b>	<b>94</b>	<b>16.9</b>	<b>88</b>	<b>4.0</b>	<b>70</b>	<b>-0.9</b>	<b>88</b>	<b>3.4</b>	<b>73</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets Gross</i>	6.4	32	18.6	47	24.2	25	4.7	58	1.4	44	4.3	39	2.2	33
<i>InvestorForce All DB Emg Mkt Eq Net Median</i>	5.8		18.4		21.0		5.2		1.0		4.0		1.6	
Parametric Core	3.4	90	14.0	93	16.9	80	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	6.4	51	18.6	60	24.2	40	4.7	60	1.4	58	4.3	69	2.2	57
<i>eA Emg Mkts Equity Net Median</i>	6.4		19.3		22.8		5.2		1.7		5.2		2.5	
<b>Fixed Income</b>	<b>1.4</b>	<b>59</b>	<b>3.9</b>	<b>34</b>	<b>7.2</b>	<b>5</b>	<b>4.8</b>	<b>26</b>	<b>3.5</b>	<b>28</b>	<b>4.5</b>	<b>19</b>	<b>5.5</b>	<b>43</b>
<i>Blended Fixed Income Index<sup>2</sup></i>	1.9	33	3.2	47	2.2	49	4.0	39	2.7	47	2.5	75	4.7	66
<i>InvestorForce All DB Total Fix Inc Net Median</i>	1.6		3.1		2.2		3.5		2.6		3.0		5.3	
<b>US Fixed Income</b>	<b>1.9</b>	<b>29</b>	<b>3.8</b>	<b>28</b>	<b>6.5</b>	<b>4</b>	<b>5.0</b>	<b>24</b>	<b>3.8</b>	<b>26</b>	<b>4.3</b>	<b>25</b>	<b>5.5</b>	<b>37</b>
<i>Blended US Fixed Index<sup>2</sup></i>	1.8	31	3.0	44	3.0	26	4.1	35	3.2	36	2.7	61	5.0	50
<i>InvestorForce All DB US Fix Inc Net Median</i>	1.5		2.7		1.0		3.4		2.8		3.1		4.9	
<b>Core Fixed</b>	<b>1.6</b>	<b>--</b>	<b>3.0</b>	<b>--</b>	<b>3.0</b>	<b>--</b>	<b>3.9</b>	<b>--</b>	<b>3.1</b>	<b>--</b>	<b>3.2</b>	<b>--</b>	<b>4.8</b>	<b>--</b>
<i>BBgBarc US Aggregate TR</i>	1.4	--	2.3	--	-0.3	--	2.8	--	2.5	--	2.2	--	4.5	--
BlackRock Intermediate Govt*	0.7	97	--	--	--	--	--	--	--	--	--	--	--	--
FIAM Bond	1.3	78	2.5	38	1.0	21	3.5	15	3.0	19	2.9	25	5.0	35
Western TRU	3.2	1	5.4	1	9.0	1	--	--	--	--	--	--	--	--
<i>3-Month Libor Total Return USD</i>	0.3	99	0.6	99	1.0	20	0.8	99	0.6	99	0.5	99	1.0	99
<i>BBgBarc US Aggregate TR</i>	1.4	66	2.3	67	-0.3	72	2.8	66	2.5	60	2.2	74	4.5	77
<i>eA US Core Fixed Inc Net Median</i>	1.5		2.4		0.2		3.0		2.6		2.5		4.8	

\* Funded January 2017.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Opportunistic Credit</b>	<b>2.5</b>	<b>--</b>	<b>6.1</b>	<b>--</b>	<b>15.1</b>	<b>--</b>	<b>7.6</b>	<b>--</b>	<b>5.7</b>	<b>--</b>	<b>9.6</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc BA Intermediate HY	2.5	--	4.3	--	9.2	--	6.4	--	4.8	--	4.7	--	--	--
Angelo Gordon Opportunistic*	4.2	--	8.6	--	16.5	--	7.8	--	4.5	--	--	--	--	--
Angelo Gordon STAR*	6.1	--	10.9	--	17.6	--	8.6	--	8.7	--	--	--	--	--
BBgBarc US Aggregate TR	1.4	--	2.3	--	-0.3	--	2.8	--	2.5	--	2.2	--	4.5	--
Beach Point Select	1.9	50	4.4	50	13.8	16	8.9	1	--	--	--	--	--	--
BBgBarc BA Intermediate HY <sup>2</sup>	2.5	8	4.3	61	9.2	78	6.4	28	4.8	21	4.7	92	--	--
eA US High Yield Fixed Inc Net Median	1.9		4.4		11.4		5.7		3.8		6.3		6.9	
Brigade Capital	1.8	61	5.7	4	16.1	3	6.8	19	3.3	69	6.2	59	--	--
BBgBarc BA Intermediate HY <sup>2</sup>	2.5	8	4.3	61	9.2	78	6.4	28	4.8	21	4.7	92	--	--
50% Barclays HY/ 50% Bank Loan <sup>2</sup>	1.5	84	3.4	83	10.1	70	5.6	55	4.0	43	5.9	68	--	--
eA US High Yield Fixed Inc Net Median	1.9		4.4		11.4		5.7		3.8		6.3		6.9	
<b>Private Credit</b>	<b>2.5</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc BA Intermediate HY	2.5	--	4.3	--	9.2	--	6.4	--	4.8	--	4.7	--	--	--
TCP Direct Lending VIII <sup>* **</sup>	2.6	4	4.6	45	--	--	--	--	--	--	--	--	--	--
BBgBarc BA Intermediate HY	2.5	8	4.3	61	9.2	78	6.4	28	4.8	21	4.7	92	--	--
eA US High Yield Fixed Inc Net Median	1.9		4.4		11.4		5.7		3.8		6.3		6.9	
White Oak Yield <sup>***</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc BA Intermediate HY	2.5	8	4.3	61	9.2	78	6.4	28	4.8	21	4.7	92	--	--
eA US High Yield Fixed Inc Net Median	1.9		4.4		11.4		5.7		3.8		6.3		6.9	
<b>Global Fixed Income</b>	<b>-1.0</b>	<b>99</b>	<b>4.2</b>	<b>72</b>	<b>10.9</b>	<b>14</b>	<b>3.5</b>	<b>71</b>	<b>1.5</b>	<b>53</b>	<b>4.8</b>	<b>16</b>	<b>--</b>	<b>--</b>
BBgBarc Multiverse TR	2.6	33	4.6	58	-1.4	99	3.5	69	-0.2	83	1.1	84	3.8	99
InvestorForce All DB Gbl Fix Inc Net Median	2.2		5.4		6.0		4.0		1.5		3.4		5.2	
Franklin Templeton	-1.0	99	4.2	65	10.9	19	3.5	65	1.5	57	4.8	32	--	--
BBgBarc Multiverse TR	2.6	40	4.6	57	-1.4	91	3.5	64	-0.2	76	1.1	83	3.8	81
eA All Global Fixed Inc Net Median	2.3		4.9		4.5		4.1		2.1		3.7		5.0	

\* Preliminary return as of 06/30/2017.

\*\* Funded September 2016.

\*\*\* Funded June 2017.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Risk Parity</b>	1.5	--	6.0	--	4.1	--	4.9	--	2.8	--	5.8	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	2.4	--	6.2	--	10.7	--	7.3	--	6.6	--	9.6	--	6.5	--
AQR GRP, 10% Volatility	1.5	--	6.1	--	5.9	--	2.5	--	0.2	--	4.2	--	--	--
PanAgora	1.6	--	5.8	--	2.5	--	7.1	--	--	--	--	--	--	--
60/40 Russell 3000/BBgBarc US Aggregate	2.4	--	6.2	--	10.7	--	7.3	--	6.6	--	9.6	--	6.5	--
60/40 MSCI World/BBgBarc Global Aggregate	2.8	--	6.9	--	10.4	--	5.8	--	4.6	--	8.2	--	--	--
<b>Alternatives</b>	1.8	--	6.2	--	17.1	--	7.8	--	7.8	--	7.2	--	--	--
Alternatives Allocation Index <sup>2</sup>	2.2	--	6.2	--	13.6	--	6.3	--	3.8	--	6.7	--	--	--
Blended Alternatives Index	2.2	--	6.4	--	14.0	--	6.6	--	4.7	--	8.7	--	--	--
<b>Private Equity **</b>	4.1	33	11.3	4	29.1	1	15.6	5	19.0	1	15.2	13	--	--
Russell 3000 +3%	3.1	44	9.8	8	21.5	2	13.0	11	12.1	22	17.6	3	10.3	11
InvestorForce All DB Private Eq Net Median	2.7		5.4		10.5		7.8		8.9		10.9		7.4	
<b>Hedge Fund/Absolute Return</b>	-0.6	91	0.7	85	4.5	81	5.7	7	7.1	3	6.3	16	--	--
Libor 1 month +4%	1.3	32	2.4	51	4.8	77	4.6	11	4.4	11	4.3	61	--	--
InvestorForce All DB Hedge Funds Net Median	0.8		2.4		7.3		1.0		1.6		4.8		2.3	
AQR DELTA XN	-1.2	79	0.2	80	4.3	65	6.0	32	7.3	29	6.4	48	--	--
Libor 1 month +4%	1.3	45	2.4	62	4.8	62	4.6	40	4.4	48	4.3	66	--	--
eV Alt All Multi-Strategy Median	1.0		3.2		7.3		3.3		4.1		6.0		5.1	
Standard Life GARS	0.8	56	1.4	73	3.7	69	--	--	--	--	--	--	--	--
Libor 1 month +4%	1.3	45	2.4	62	4.8	62	4.6	40	4.4	48	4.3	66	--	--
eV Alt All Multi-Strategy Median	1.0		3.2		7.3		3.3		4.1		6.0		5.1	
<b>Inflation Hedge</b>	0.5	--	3.0	--	5.9	--	--	--	--	--	--	--	--	--
Blended Inflation Pool Index <sup>2</sup>	0.6	--	2.6	--	4.2	--	--	--	--	--	--	--	--	--

\*\* Returns are one-quarter lag.

2. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	Rank	YTD (%)	Rank	Fiscal YTD (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Real Estate</b>	1.8	31	4.3	8	8.2	16	9.6	30	11.7	4	11.7	4	5.0	17
<i>NCREIF ODCE</i>	1.7	36	3.5	41	7.9	22	9.8	23	11.3	9	11.8	4	5.7	4
<i>InvestorForce All DB Real Estate Pub Net Median</i>	1.5		3.0		6.2		8.4		9.7		10.2		4.2	
Invesco	1.8	--	4.3	--	8.2	--	9.4	--	11.6	--	11.7	--	5.0	--
<i>NCREIF ODCE</i>	1.7	--	3.5	--	7.9	--	9.8	--	11.3	--	11.8	--	5.7	--
Invesco US Val IV	1.6	--	4.3	--	9.1	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	1.7	--	3.5	--	7.9	--	9.8	--	11.3	--	11.8	--	5.7	--
<i>NCREIF CEVA 1Q Lag - NET</i>	1.4	--	4.2	--	9.2	--	12.8	--	14.6	--	--	--	--	--
<b>Private Real Asset **</b>	-3.1	--	2.9	--	2.9	--	19.2	--	--	--	--	--	--	--
<i>Blended Real Asset Index</i>	-0.2	--	2.6	--	5.0	--	5.7	--	5.2	--	--	--	--	--
<b>Liquid Pool</b>	0.2	--	3.3	--	--	--	--	--	--	--	--	--	--	--
<i>Blended Real Asset Index <sup>2</sup></i>	-0.2	--	2.6	--	5.0	--	5.7	--	5.2	--	--	--	--	--
SSgA Custom Real Asset ***	0.2	--	3.3	--	--	--	--	--	--	--	--	--	--	--
<i>Blended Real Asset Index <sup>2</sup></i>	-0.2	--	2.6	--	5.0	--	5.7	--	5.2	--	--	--	--	--
<b>TIPS</b>	-0.6	--	0.5	--	1.1	--	1.6	--	0.4	--	-0.1	--	--	--
<i>BBgBarc US TIPS TR</i>	-0.4	--	0.9	--	-0.6	--	1.8	--	0.6	--	0.3	--	4.3	--
Brown Brothers Harriman	-0.6	86	0.5	84	1.1	18	1.6	57	0.4	49	-0.1	94	--	--
<i>BBgBarc US TIPS TR</i>	-0.4	41	0.9	46	-0.6	60	1.8	35	0.6	23	0.3	37	4.3	61
<i>eA TIPS / Infl Indexed Fixed Inc Net Median</i>	-0.4		0.8		-0.6		1.6		0.4		0.2		4.3	
<b>Cash</b>	0.2	--	0.4	--	0.8	--	1.1	--	1.0	--	0.7	--	0.8	--
91 Day T-Bills	0.2	--	0.4	--	0.5	--	0.4	--	0.2	--	0.2	--	0.4	--
General Account	0.3	--	0.6	--	1.0	--	1.6	--	1.3	--	0.8	--	1.1	--
Treasury & LAIF	0.3	--	0.6	--	0.5	--	0.8	--	0.9	--	0.8	--	0.7	--
91 Day T-Bills	0.2	--	0.4	--	0.5	--	0.4	--	0.2	--	0.2	--	0.4	--

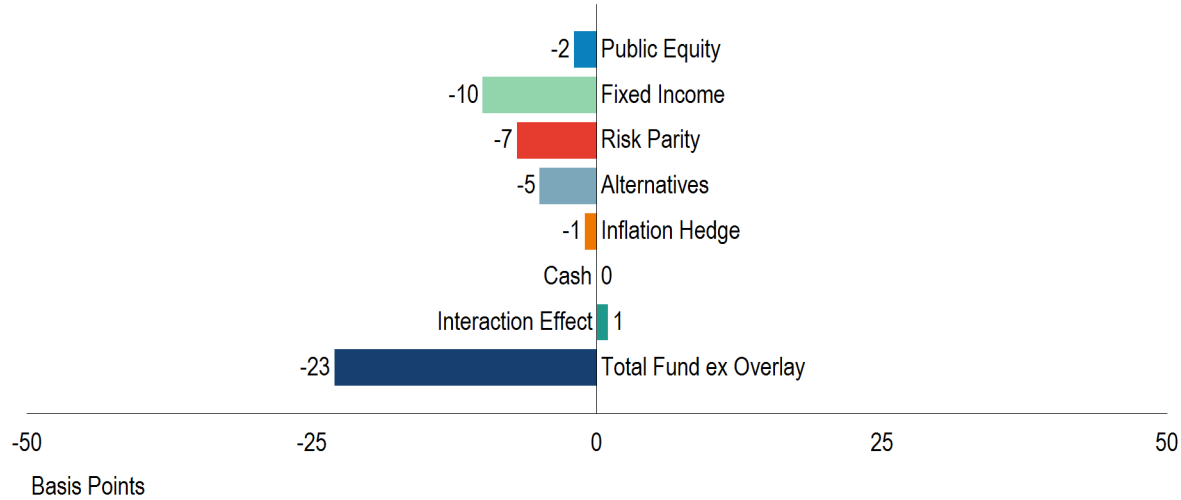
\*\* Returns are one-quarter lag.

\*\*\* Funded October 2016.

2. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: June 30, 2017

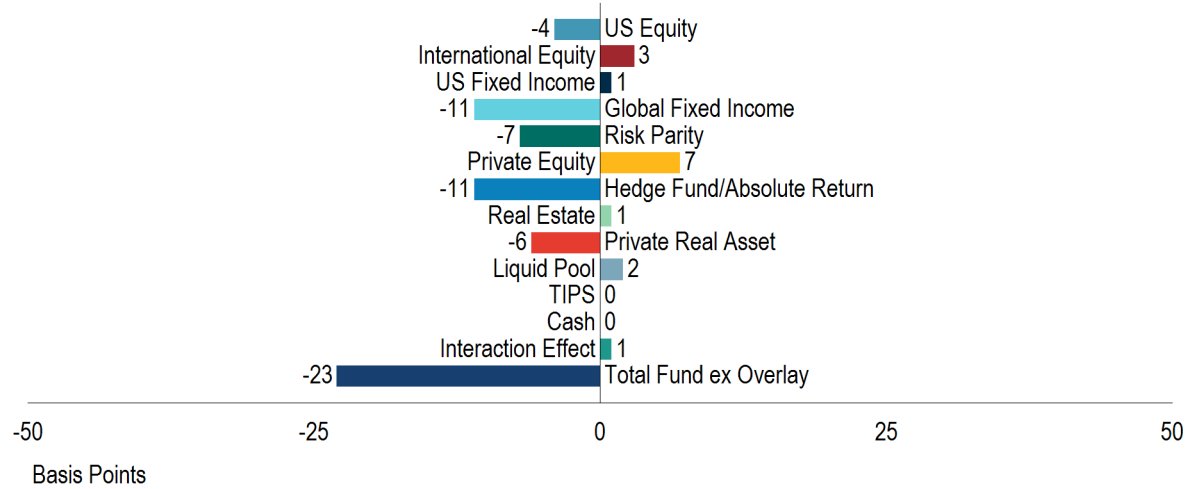


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
Public Equity	4.33%	4.39%	-0.05%	-0.02%	0.03%	0.00%	0.01%
Fixed Income	1.42%	1.92%	-0.50%	-0.10%	0.02%	0.01%	-0.07%
Risk Parity	1.54%	2.39%	-0.85%	-0.07%	0.00%	0.00%	-0.06%
Alternatives	1.82%	2.24%	-0.41%	-0.05%	0.00%	0.00%	-0.05%
Inflation Hedge	0.52%	0.59%	-0.07%	-0.01%	0.03%	0.00%	0.02%
Cash	0.24%	0.22%	0.02%	0.00%	-0.08%	0.00%	-0.08%
<b>Total</b>	<b>2.58%</b>	<b>2.81%</b>	<b>-0.23%</b>	<b>-0.25%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>-0.23%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution

Period Ending: June 30, 2017

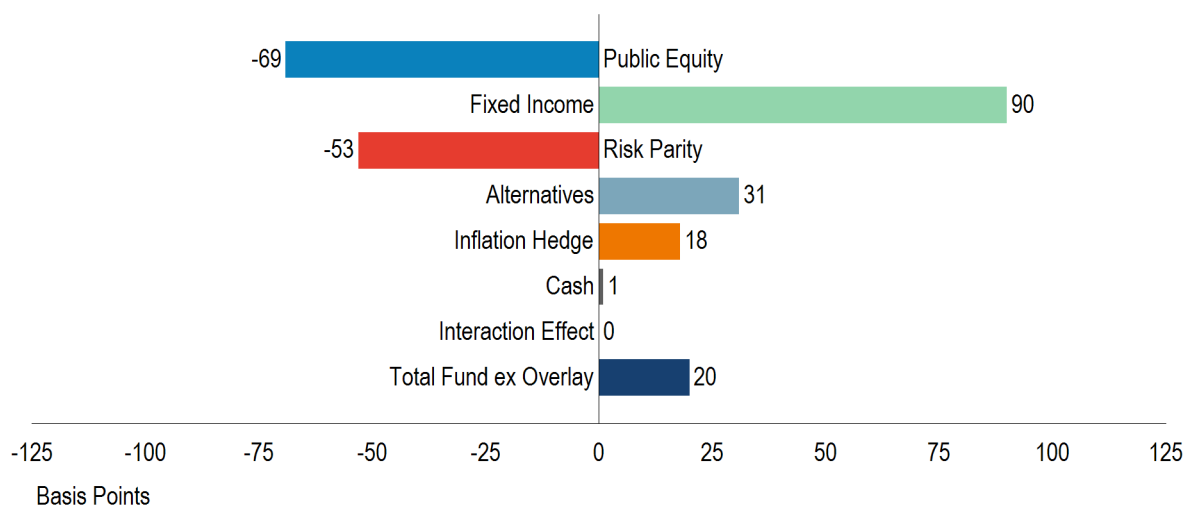


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
US Equity	2.86%	3.02%	-0.15%	-0.04%	0.00%	0.00%	-0.04%
International Equity	6.20%	6.05%	0.15%	0.03%	0.01%	-0.01%	0.04%
US Fixed Income	1.85%	1.80%	0.06%	0.01%	0.02%	0.00%	0.03%
Global Fixed Income	-0.98%	2.64%	-3.62%	-0.11%	0.00%	0.01%	-0.10%
Risk Parity	1.54%	2.39%	-0.85%	-0.07%	0.00%	0.00%	-0.06%
Private Equity	4.08%	3.06%	1.03%	0.07%	0.00%	-0.01%	0.06%
Hedge Fund/Absolute Return	-0.58%	1.29%	-1.87%	-0.11%	0.00%	0.00%	-0.11%
Real Estate	1.81%	1.70%	0.11%	0.01%	0.00%	0.00%	0.01%
Private Real Asset	-3.14%	-0.25%	-2.90%	-0.06%	0.02%	0.02%	-0.02%
Liquid Pool	0.18%	-0.25%	0.43%	0.02%	0.00%	0.00%	0.03%
TIPS	-0.62%	-0.40%	-0.21%	0.00%	0.01%	0.00%	0.00%
Cash	0.24%	0.22%	0.02%	0.00%	-0.08%	0.00%	-0.08%
<b>Total</b>	<b>2.58%</b>	<b>2.81%</b>	<b>-0.23%</b>	<b>-0.24%</b>	<b>0.00%</b>	<b>0.01%</b>	<b>-0.23%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution (Fiscal YTD)

Period Ending: June 30, 2017



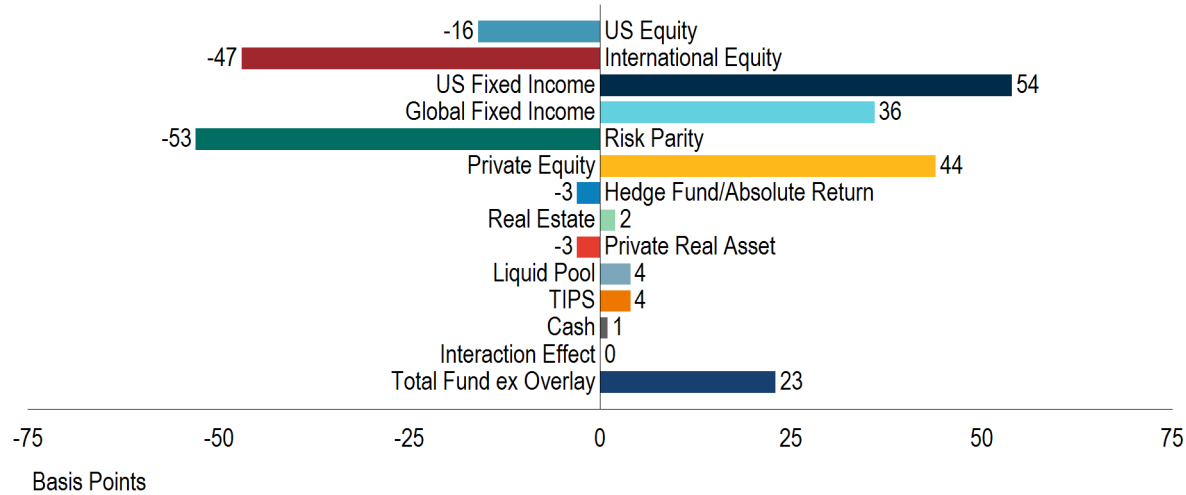
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	18.55%	20.01%	-1.46%	-0.69%	0.00%	0.00%	-0.69%
Fixed Income	7.23%	2.25%	4.98%	0.90%	0.00%	0.00%	0.90%
Risk Parity	4.07%	10.69%	-6.61%	-0.53%	0.00%	0.00%	-0.53%
Alternatives	17.05%	14.05%	3.01%	0.31%	0.00%	0.00%	0.31%
Inflation Hedge	5.93%	4.23%	1.69%	0.18%	0.00%	0.00%	0.18%
Cash	0.81%	0.54%	0.28%	0.01%	0.00%	0.00%	0.01%
<b>Total</b>	<b>12.91%</b>	<b>12.71%</b>	<b>0.20%</b>	<b>0.20%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.20%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.

\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution (Fiscal YTD )

Period Ending: June 30, 2017



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
US Equity	18.25%	18.81%	-0.56%	-0.16%	0.00%	0.00%	-0.16%
International Equity	18.34%	20.97%	-2.63%	-0.47%	0.00%	0.00%	-0.47%
US Fixed Income	6.51%	2.96%	3.55%	0.54%	0.00%	0.00%	0.54%
Global Fixed Income	10.86%	-1.38%	12.24%	0.36%	0.00%	0.00%	0.36%
Risk Parity	4.07%	10.69%	-6.61%	-0.53%	0.00%	0.00%	-0.53%
Private Equity	29.14%	21.51%	7.63%	0.44%	0.00%	0.00%	0.44%
Hedge Fund/Absolute Return	4.47%	4.79%	-0.32%	-0.03%	0.00%	0.00%	-0.03%
Real Estate	8.23%	7.87%	0.36%	0.02%	0.00%	0.00%	0.02%
Private Real Asset	2.89%	4.98%	-2.10%	-0.03%	0.00%	0.00%	-0.03%
Liquid Pool	--	--	--	0.04%	0.00%	0.00%	0.04%
TIPS	1.09%	-0.63%	1.71%	0.04%	0.00%	0.00%	0.04%
Cash	0.81%	0.54%	0.28%	0.01%	0.00%	0.00%	0.01%
<b>Total</b>	<b>12.99%</b>	<b>12.76%</b>	<b>0.23%</b>	<b>0.23%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.23%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

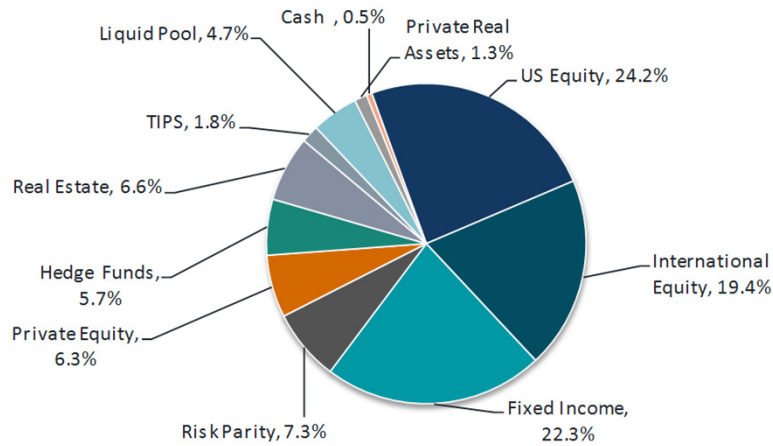


# Total Fund

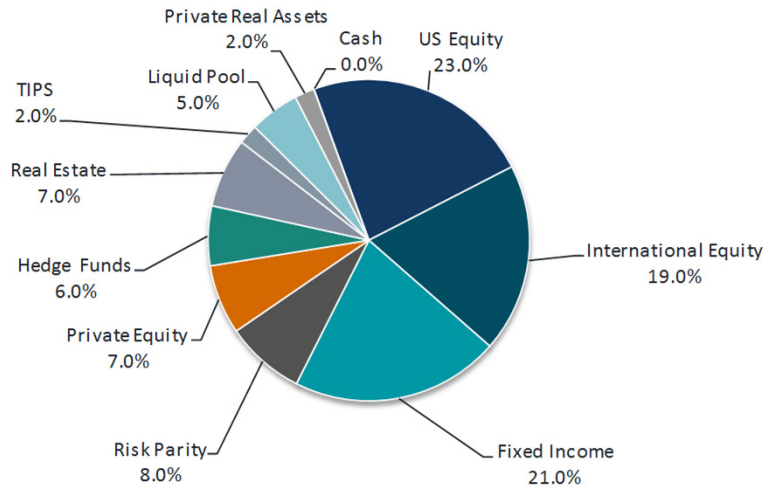
## Asset Allocation Analysis

Period Ending: June 30, 2017

Current w/Overlay



Target

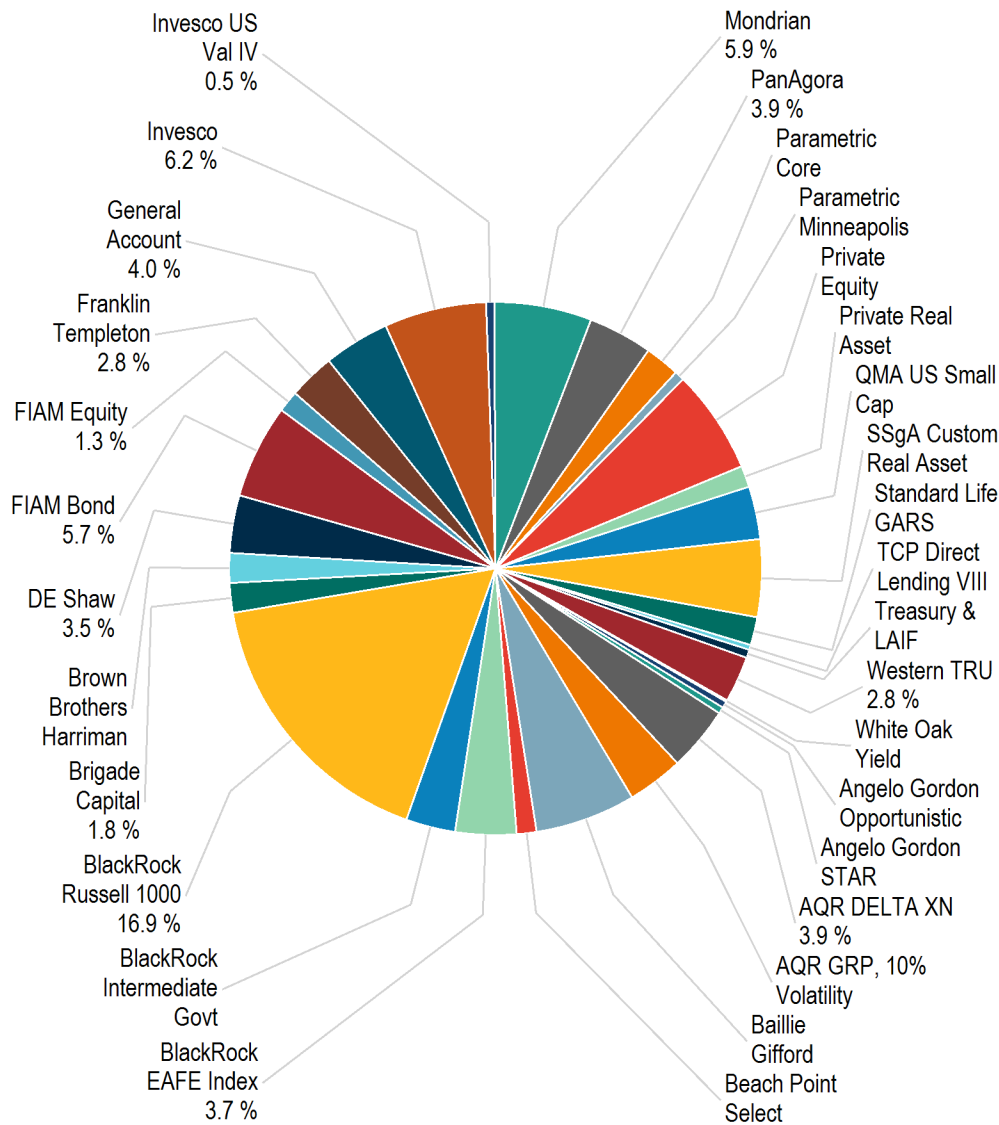


ASSET ALLOCATION	MARKET VALUE		
	W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	971,804,094	24.2%	23.6%
International Equity	780,640,722	19.4%	19.1%
Fixed Income	895,044,558	22.3%	18.5%
Risk Parity	291,757,142	7.3%	7.3%
Private Equity	253,994,925	6.3%	6.3%
Hedge Funds	227,288,007	5.7%	5.7%
Real Estate	267,102,447	6.6%	6.6%
TIPS	70,919,206	1.8%	1.8%
Liquid Pool	190,503,104	4.7%	4.7%
Private Real Assets	51,254,052	1.3%	1.3%
Cash	22,036,060	0.5%	5.2%
<b>TOTAL</b>	<b>4,022,344,317</b>	<b>100.0%</b>	<b>100.0%</b>

ASSET ALLOCATION	W/OVERLAY	TARGET	DIFF
US Equity	24.2%	23.0%	1.2%
International Equity	19.4%	19.0%	0.4%
Fixed Income	22.3%	21.0%	1.3%
Risk Parity	7.3%	8.0%	-0.7%
Private Equity	6.3%	7.0%	-0.7%
Hedge Funds	5.7%	6.0%	-0.3%
Real Estate	6.6%	7.0%	-0.4%
TIPS	1.8%	2.0%	-0.2%
Liquid Pool	4.7%	5.0%	-0.3%
Private Real Assets	1.3%	2.0%	-0.7%
Cash	0.5%	0.0%	0.5%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

# Total Fund Manager Allocation Analysis

Period Ending: June 30, 2017



	Actual	Actual
Angelo Gordon Opportunistic	\$14,407,000	0%
Angelo Gordon STAR	\$16,809,000	0%
AQR DELTA XN	\$156,969,306	4%
AQR GRP, 10% Volatility	\$136,211,099	3%
Baillie Gifford	\$245,816,349	6%
Beach Point Select	\$46,602,732	1%
BlackRock EAFE Index	\$150,227,780	4%
BlackRock Intermediate Govt	\$121,382,020	3%
BlackRock Russell 1000	\$679,283,748	17%
Brigade Capital	\$74,070,354	2%
Brown Brothers Harriman	\$70,919,206	2%
DE Shaw	\$141,927,651	4%
FIAM Bond	\$229,685,998	6%
FIAM Equity	\$51,752,296	1%
Franklin Templeton	\$110,863,931	3%
General Account	\$162,117,600	4%
Invesco	\$248,118,958	6%
Invesco US Val IV	\$18,983,489	0%
Mondrian	\$235,989,894	6%
PanAgora	\$155,546,043	4%
Parametric Core	\$85,232,814	2%
Parametric Minneapolis Overlay	\$24,701,377	1%
Private Equity	\$253,994,925	6%
Private Real Asset	\$51,254,052	1%
QMA US Small Cap	\$129,484,536	3%
SSgA Custom Real Asset	\$190,503,104	5%
Standard Life GARS	\$70,318,701	2%
TCP Direct Lending VIII	\$11,550,895	0%
Transition 3	\$1,823	0%
Treasury & LAIF	\$20,726,585	1%
Western TRU	\$114,008,666	3%
White Oak Yield	\$2,882,386	0%
<b>Total</b>	<b>\$4,022,344,317</b>	<b>100%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	5.5%	33	6.3%	62	0.8	36	0.2	35	1.1%	57
Policy Index	5.3%	40	6.8%	82	0.7	49	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	5.1%	--	6.1%	--	0.7	--	-0.1	--	1.1%	--

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	9.4%	22	6.1%	70	1.5	35	0.1	44	1.0%	32
Policy Index	9.2%	24	6.4%	80	1.4	47	--	--	0.0%	1
InvestorForce Public DB > \$1B Net Median	8.7%	--	5.7%	--	1.4	--	0.1	--	1.1%	--

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	1.0%	0.4%	2.0	1.9	0.4%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%
General Account	1.3%	0.6%	2.0	1.9	0.6%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%
Treasury & LAIF	0.9%	0.5%	1.2	1.2	0.5%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%

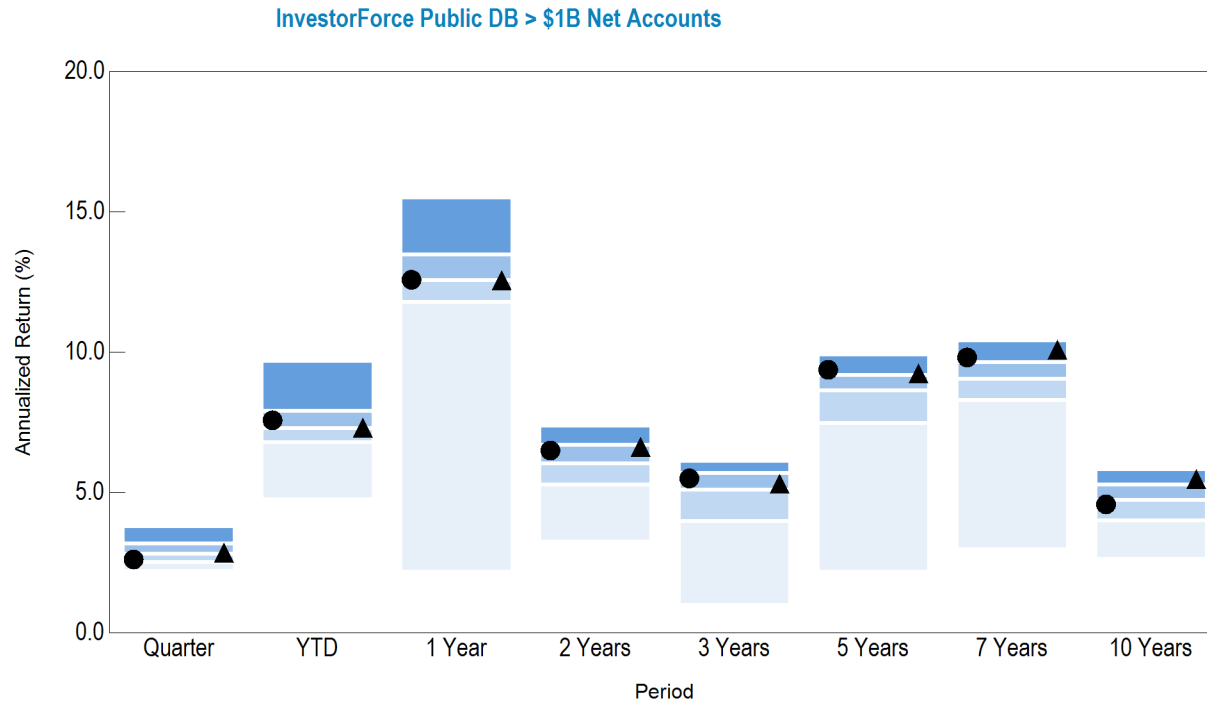
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Cash	0.7%	0.3%	1.9	1.9	0.3%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%
General Account	0.8%	0.5%	1.4	1.5	0.5%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%
Treasury & LAIF	0.8%	0.4%	1.5	1.5	0.4%
91 Day T-Bills	0.2%	0.1%	0.0	--	0.0%

Total Fund  
Peer Universe Comparison

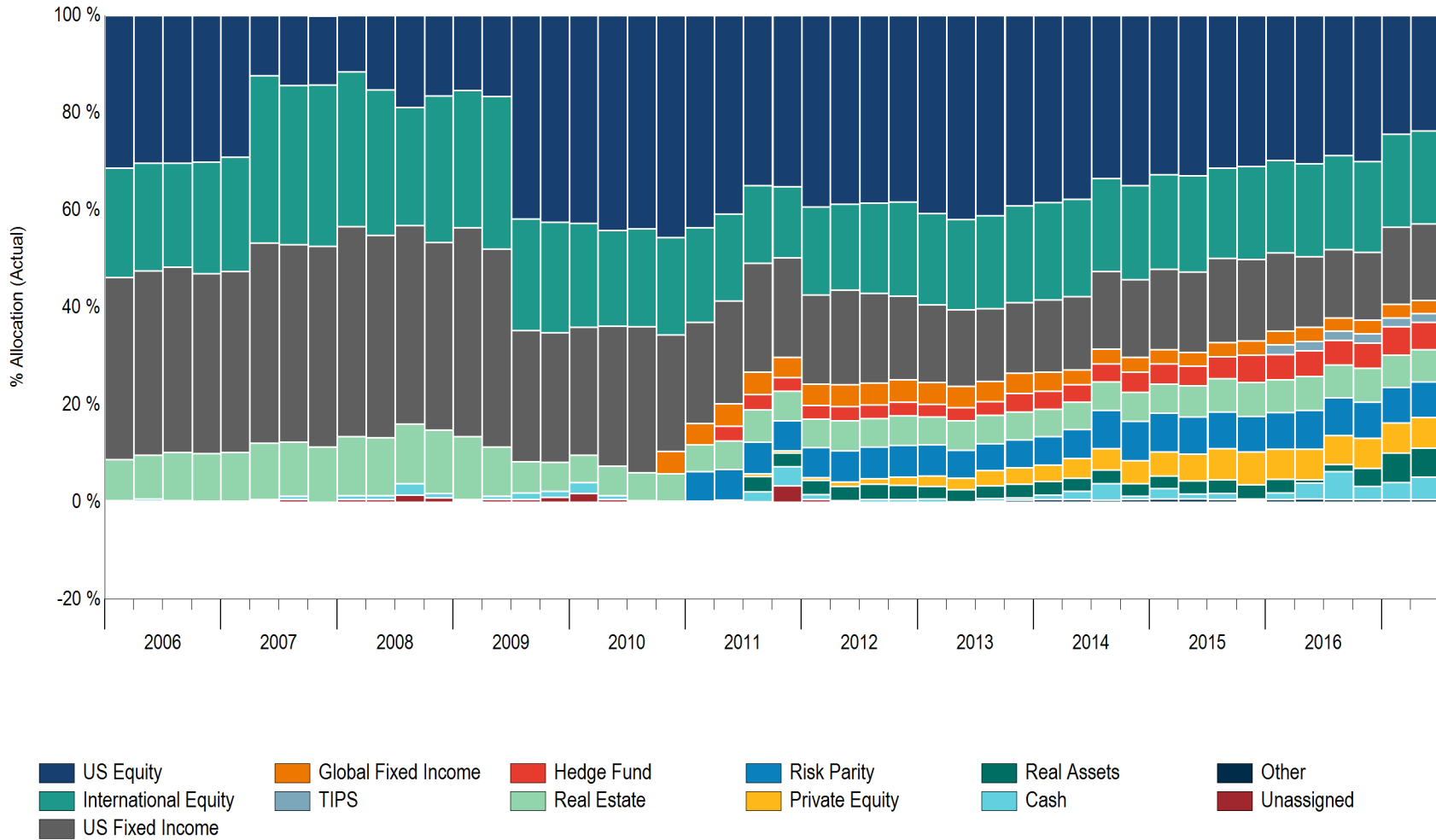
Period Ending: June 30, 2017

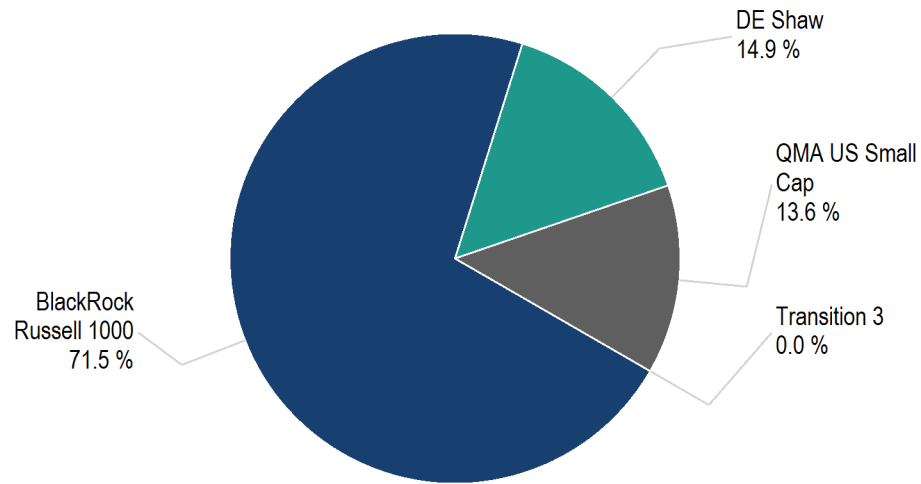


	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	3.8	9.7	15.5	7.4	6.1	9.9	10.4	5.8
25th Percentile	3.2	7.9	13.5	6.7	5.7	9.2	9.7	5.3
Median	2.8	7.3	12.6	6.1	5.1	8.7	9.1	4.7
75th Percentile	2.5	6.8	11.8	5.3	4.0	7.5	8.3	4.0
95th Percentile	2.2	4.8	2.2	3.3	1.0	2.2	3.0	2.7
# of Portfolios	46	46	46	46	46	46	45	42
● Total Fund	2.6 (71)	7.6 (37)	12.6 (50)	6.5 (36)	5.5 (33)	9.4 (22)	9.8 (22)	4.6 (63)
▲ Policy Index	2.8 (49)	7.3 (51)	12.6 (51)	6.6 (31)	5.3 (40)	9.2 (24)	10.1 (16)	5.5 (20)

Total Fund  
Asset Allocation History

Period Ending: June 30, 2017





	Actual \$	Actual %	Manager Contribution to Excess Return %
BlackRock Russell 1000	\$679,283,748	71.5%	0.0%
DE Shaw	\$141,927,651	14.9%	-0.1%
QMA US Small Cap	\$129,484,536	13.6%	-0.1%
Transition Account	\$1,823	0.0%	0.0%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$950,697,757</b>	<b>100.0%</b>	<b>-0.2%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.5%	10.6%	0.8	-0.4	0.8%
Blended US Equity Index	8.8%	10.8%	0.8	--	0.0%
Russell 3000	9.1%	10.6%	0.8	0.4	0.9%



Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	9.9%	10.5%	0.9	0.6	1.2%
Russell 1000	9.3%	10.4%	0.9	--	0.0%
DE Shaw	10.9%	10.9%	1.0	0.8	2.1%
Russell 1000	9.3%	10.4%	0.9	--	0.0%
Small Cap Equity	4.7%	14.5%	0.3	-0.9	3.0%
Russell 2000	7.4%	15.4%	0.5	--	0.0%

**Statistics Summary**

**5 Years**

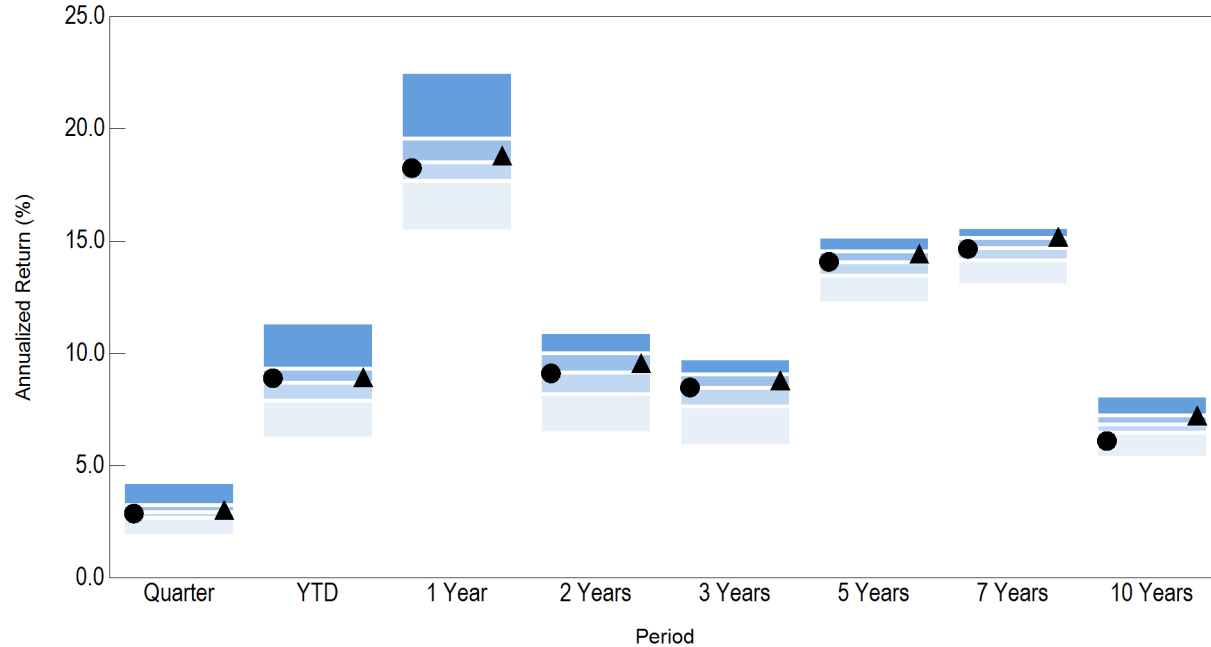
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	14.1%	9.8%	1.4	-0.4	0.8%
Blended US Equity Index	14.4%	10.0%	1.4	--	0.0%
Russell 3000	14.6%	9.8%	1.5	0.2	0.8%

**Statistics Summary**

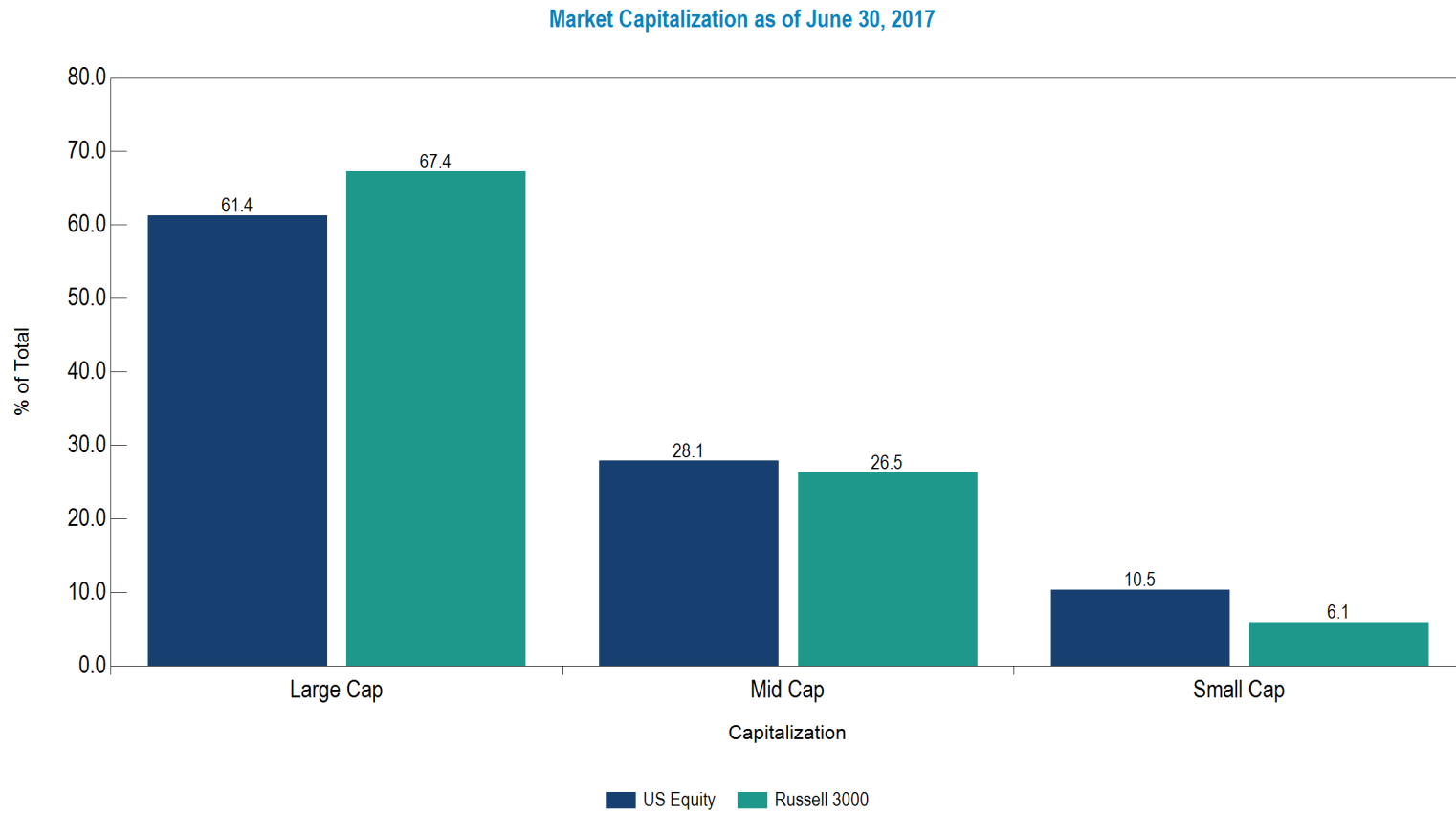
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	14.9%	9.6%	1.5	0.2	1.1%
Russell 1000	14.7%	9.6%	1.5	--	0.0%
DE Shaw	15.6%	9.9%	1.6	0.5	2.0%
Russell 1000	14.7%	9.6%	1.5	--	0.0%
Small Cap Equity	12.3%	13.4%	0.9	-0.5	2.8%
Russell 2000	13.7%	13.9%	1.0	--	0.0%

InvestorForce All DB US Eq Net Accounts



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	4.3	11.4	22.5	10.9	9.8	15.2	15.6	8.1
25th Percentile	3.3	9.3	19.6	10.0	9.1	14.6	15.2	7.3
Median	2.9	8.7	18.5	9.2	8.5	14.1	14.7	6.8
75th Percentile	2.7	7.9	17.7	8.2	7.6	13.5	14.2	6.5
95th Percentile	1.9	6.2	15.4	6.4	5.9	12.3	13.0	5.4
# of Portfolios	591	588	580	569	558	486	403	322
● US Equity	2.9 (59)	8.9 (43)	18.3 (60)	9.1 (52)	8.5 (51)	14.1 (50)	14.7 (53)	6.1 (87)
▲ Blended US Equity Index	3.0 (43)	8.9 (40)	18.8 (40)	9.6 (40)	8.8 (39)	14.4 (33)	15.2 (23)	7.2 (27)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,561	3,000
Weighted Avg. Market Cap. (\$B)	118.8	128.5
Median Market Cap. (\$B)	2.9	1.6
Price To Earnings	24.6	24.7
Price To Book	4.9	4.2
Price To Sales	3.5	3.5
Return on Equity (%)	20.0	16.7
Yield (%)	1.9	1.9
Beta (holdings; domestic)	1.1	1.0

Top Holdings

APPLE	3.2%
JOHNSON & JOHNSON	1.6%
MICROSOFT	1.6%
ALPHABET 'C'	1.2%
AMAZON.COM	1.2%
JP MORGAN CHASE & CO.	1.1%
FACEBOOK CLASS A	1.1%
EXXON MOBIL	1.0%
ALPHABET 'A'	1.0%
AT&T	1.0%

Best Performers

	Return %
PUMA BIOTECHNOLOGY (PBYI)	134.9%
ANGIE'S LIST (ANGI)	124.4%
WEIGHTWATCHERS INTL.	114.6%
GLYCOMIMETICS (GLYC)	105.5%
VIRNETX HOLDING	97.8%
NUVECTRA ORD SHS (NVTR)	94.4%
LOXO ONCOLOGY	90.6%
WAYFAIR CL.A	89.9%
PTC THERAPEUTICS (PTCT)	86.3%
MAUI LAND & PINEAPPLE	72.8%

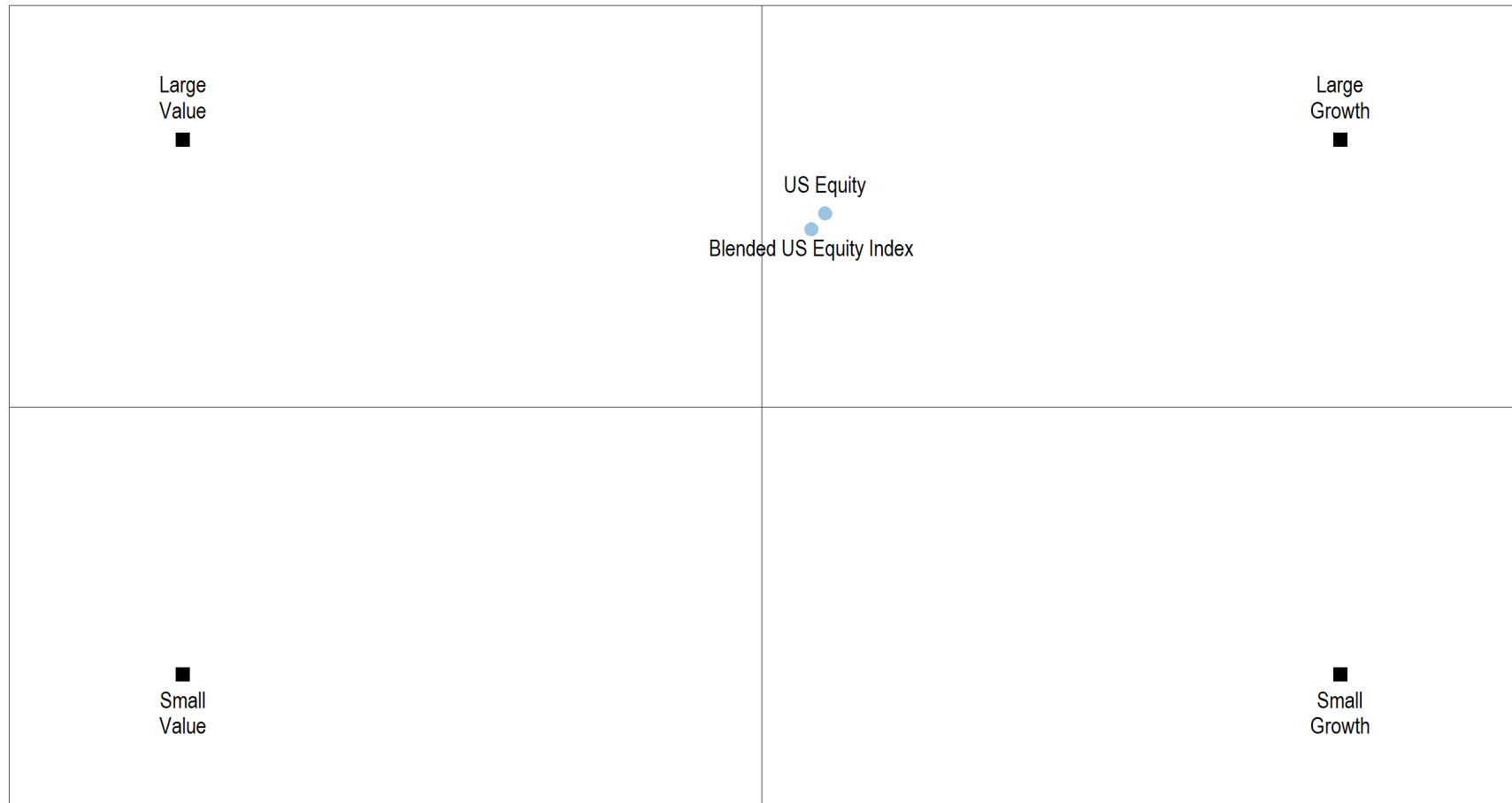
Worst Performers

	Return %
FIRST NBC BANK HOLDING (FNBCQ)	-99.3%
CIBER (CBRIQ)	-83.5%
VINCE HOLDING (VNCE)	-69.6%
NEWLINK GENETICS	-69.5%
COBALT INTL.ENERGY	-69.1%
WESTMORELAND COAL (WLB)	-66.5%
ONCOMED PHARMACEUTICALS	-63.8%
ARDELYX (ARDX)	-59.7%
FORTERRA ORD	-57.8%
EGALET	-53.5%

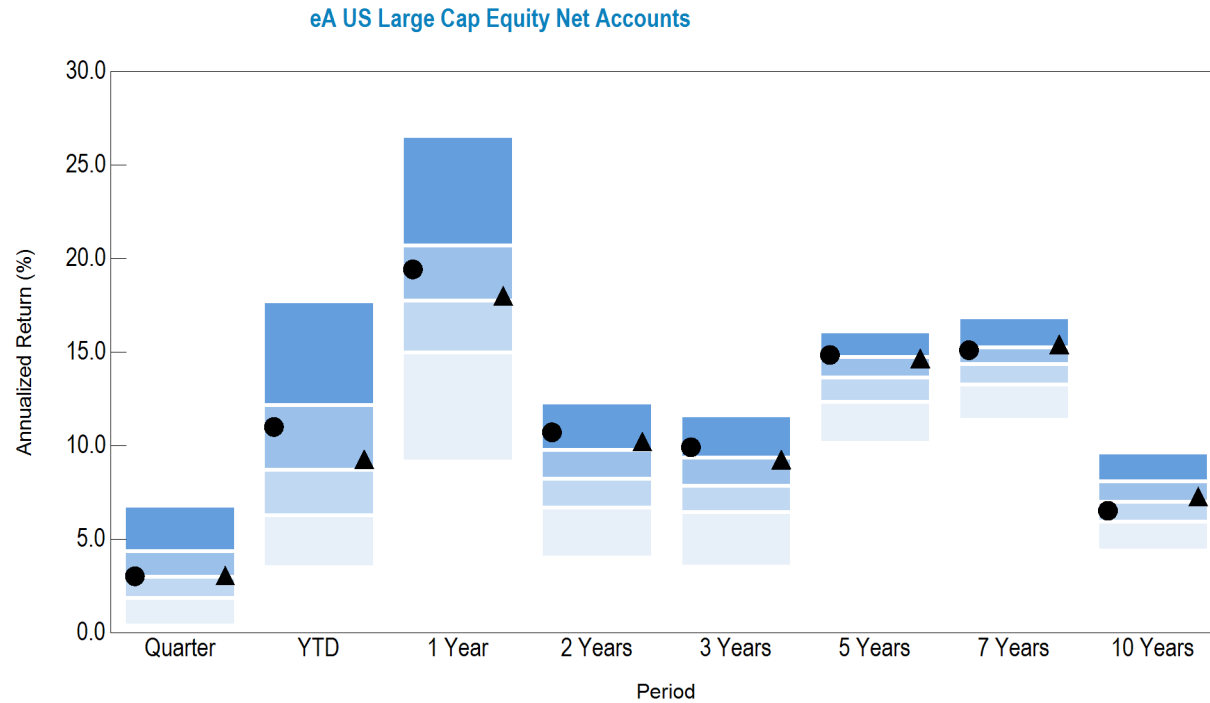
US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	-8.4%	-7.7%	5.7%	6.1%			
Materials	0.0%	0.0%	0.0%	0.0%	1.7%	2.6%	3.8%	3.4%			
Industrials	-0.1%	-0.1%	0.0%	0.0%	3.2%	4.2%	11.3%	10.7%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	3.1%	3.0%	12.7%	12.7%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	1.1%	1.2%	7.7%	8.3%			
Health Care	0.0%	0.0%	0.0%	0.0%	7.5%	7.4%	13.5%	13.4%			
Financials	0.0%	0.0%	0.0%	0.0%	3.9%	3.8%	14.7%	15.0%			
Information Technology	-0.2%	-0.2%	0.0%	0.0%	3.4%	4.3%	21.7%	21.2%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-6.8%	-6.6%	2.2%	2.2%			
Utilities	0.0%	0.0%	0.0%	0.0%	2.6%	2.2%	2.9%	3.2%			
Real Estate	0.0%	0.0%	0.0%	0.0%	2.6%	2.3%	3.7%	4.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	3.1%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.2%</b>	<b>=</b>	<b>-0.3%</b>	<b>+</b>	<b>0.1%</b>	<b>+</b>	<b>0.0%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>100.0%</b>	<b>100.0%</b>

U.S. Effective Style Map







	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	6.8	17.7	26.6	12.3	11.6	16.1	16.9	9.6
25th Percentile	4.4	12.2	20.7	9.8	9.4	14.8	15.3	8.1
Median	3.0	8.7	17.8	8.2	7.9	13.7	14.4	7.0
75th Percentile	1.9	6.3	15.0	6.7	6.5	12.4	13.3	6.0
95th Percentile	0.4	3.5	9.2	4.1	3.5	10.2	11.4	4.4
# of Portfolios	576	575	573	561	546	500	452	391
● Large Cap Equity	3.0 (51)	11.0 (32)	19.4 (36)	10.7 (13)	9.9 (17)	14.9 (25)	15.1 (29)	6.5 (62)
▲ Russell 1000	3.1 (49)	9.3 (46)	18.0 (49)	10.2 (19)	9.3 (28)	14.7 (27)	15.4 (21)	7.3 (43)

Large Cap Equity  
Equity Only Summary Statistics

Period Ending: June 30, 2017

Characteristics

	Portfolio	Russell 1000
Number of Holdings	2,470	990
Weighted Avg. Market Cap. (\$B)	137.4	139.0
Median Market Cap. (\$B)	3.4	8.9
Price To Earnings	24.7	24.8
Price To Book	5.1	4.5
Price To Sales	3.6	3.5
Return on Equity (%)	20.4	18.0
Yield (%)	1.9	1.9
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	3.8%
JOHNSON & JOHNSON	1.9%
MICROSOFT	1.8%
ALPHABET 'C'	1.4%
AMAZON.COM	1.4%
JP MORGAN CHASE & CO.	1.3%
FACEBOOK CLASS A	1.2%
EXXON MOBIL	1.2%
ALPHABET 'A'	1.2%
AT&T	1.2%

Best Performers

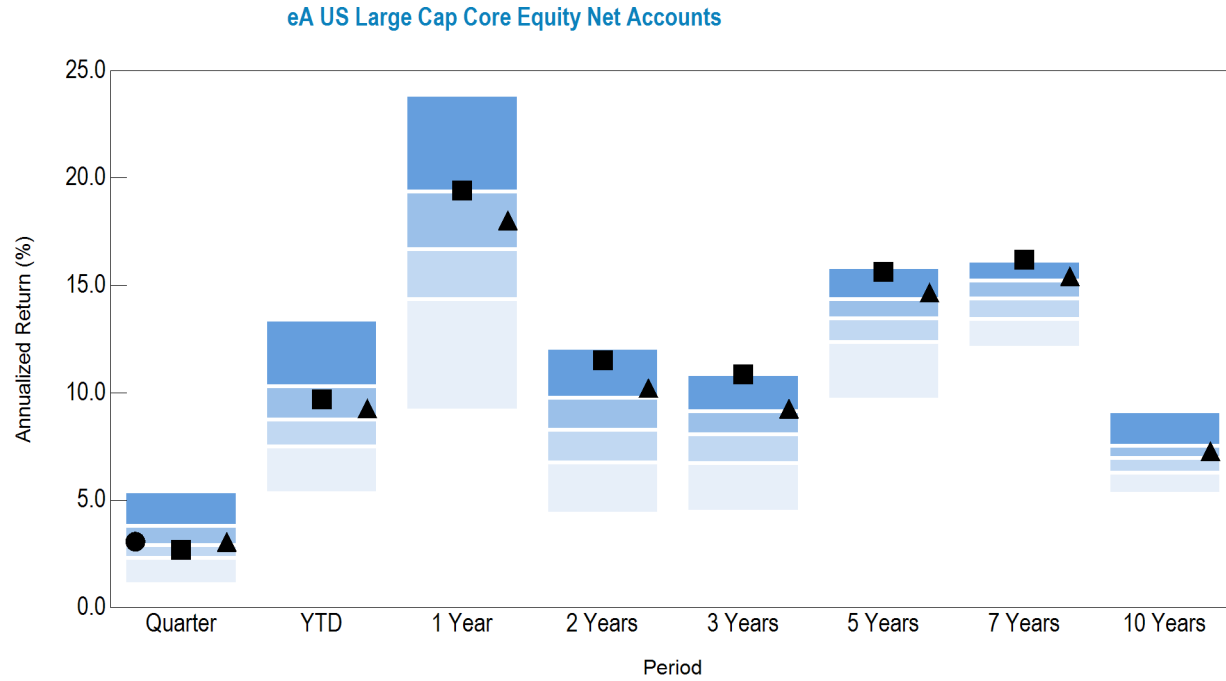
	Return %
PUMA BIOTECHNOLOGY (PBYI)	134.9%
ANGIE'S LIST (ANGI)	124.4%
WEIGHTWATCHERS INTL.	114.6%
GLYCOMIMETICS (GLYC)	105.5%
VIRNETX HOLDING	97.8%
NUVECTRA ORD SHS	94.4%
LOXO ONCOLOGY	90.6%
WAYFAIR CL.A	89.9%
PTC THERAPEUTICS (PTCT)	86.3%
MAUI LAND & PINEAPPLE	72.8%

Worst Performers

	Return %
FIRST NBC BANK HOLDING (FNBCQ)	-99.3%
CIBER (CBRIQ)	-83.5%
VINCE HOLDING (VNCE)	-69.6%
NEWLINK GENETICS	-69.5%
COBALT INTL.ENERGY	-69.1%
WESTMORELAND COAL (WLB)	-66.5%
ONCOMED PHARMACEUTICALS	-63.8%
ARDELYX	-59.7%
FORTERRA ORD (FRTA)	-57.8%
EGALET (EGLT)	-53.5%

Large Cap Equity Performance Attribution vs. Russell 1000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	-0.1%	0.0%	0.0%	-8.1%	-7.1%	6.1%	6.3%			
Materials	0.0%	0.0%	0.0%	0.0%	1.8%	2.9%	3.6%	3.2%			
Industrials	0.0%	0.0%	0.0%	0.0%	4.2%	4.4%	10.8%	10.4%			
Consumer Discretionary	0.1%	0.1%	0.0%	0.0%	3.6%	3.0%	12.7%	12.8%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	1.3%	1.4%	8.4%	8.7%			
Health Care	0.1%	0.1%	0.0%	0.0%	7.7%	7.2%	13.4%	13.4%			
Financials	0.0%	0.0%	0.0%	0.0%	4.2%	4.1%	14.0%	14.7%			
Information Technology	-0.1%	-0.1%	0.0%	0.0%	3.7%	4.3%	22.2%	21.5%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	-7.0%	-7.1%	2.4%	2.3%			
Utilities	0.0%	0.0%	0.0%	0.0%	2.8%	2.2%	2.9%	3.1%			
Real Estate	0.0%	0.0%	0.0%	0.0%	2.6%	2.3%	3.4%	3.7%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.0%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	3.1%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-0.1%</b>	<b>=</b>	<b>-0.1%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>3.0%</b>	<b>3.1%</b>	<b>100.0%</b>	<b>100.0%</b>



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	5.4	13.4	23.9	12.1	10.9	15.8	16.1	9.1
25th Percentile	3.8	10.3	19.4	9.8	9.2	14.4	15.2	7.6
Median	2.9	8.8	16.7	8.3	8.1	13.5	14.4	7.0
75th Percentile	2.3	7.5	14.4	6.8	6.7	12.4	13.5	6.3
95th Percentile	1.1	5.3	9.2	4.4	4.5	9.7	12.1	5.3
# of Portfolios	177	176	175	172	169	150	132	119
● BlackRock Russell 1000	3.1 (46)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ DE Shaw	2.7 (62)	9.7 (37)	19.4 (25)	11.5 (7)	10.9 (5)	15.6 (8)	16.2 (5)	-- (--)
▲ Russell 1000	3.1 (47)	9.3 (44)	18.0 (39)	10.2 (18)	9.3 (22)	14.7 (19)	15.4 (18)	7.3 (37)

Characteristics

	Portfolio	Russell 1000
Number of Holdings	987	990
Weighted Avg. Market Cap. (\$B)	138.9	139.0
Median Market Cap. (\$B)	8.9	8.9
Price To Earnings	25.4	24.8
Price To Book	5.1	4.5
Price To Sales	3.7	3.5
Return on Equity (%)	19.8	18.0
Yield (%)	1.9	1.9
Beta (holdings; domestic)	1.0	1.0

Top Holdings

APPLE	3.2%
MICROSOFT	2.2%
AMAZON.COM	1.7%
JOHNSON & JOHNSON	1.5%
FACEBOOK CLASS A	1.5%
EXXON MOBIL	1.5%
BERKSHIRE HATHAWAY 'B'	1.4%
JP MORGAN CHASE & CO.	1.4%
ALPHABET 'A'	1.2%
ALPHABET 'C'	1.2%

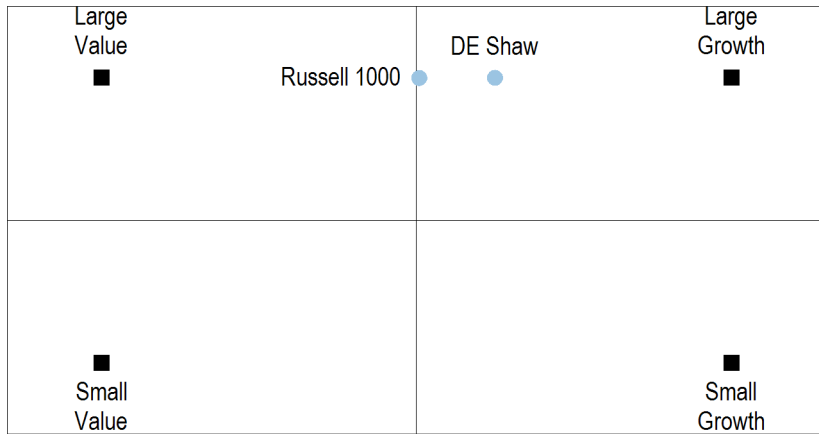
Best Performers

	Return %
WAYFAIR CL.A	89.9%
ALNYLAM PHARMACEUTICALS (ALNY)	55.6%
SUNPOWER (SPWR)	53.1%
FIRST SOLAR	47.2%
ZILLOW GROUP CLASS C	45.6%
YUM CHINA ORD	45.0%
ZILLOW GROUP CLASS A (ZG)	44.5%
WHOLE FOODS MARKET (WFM)	43.0%
IAC/INTERACTIVECORP	40.0%
AKORN	39.3%

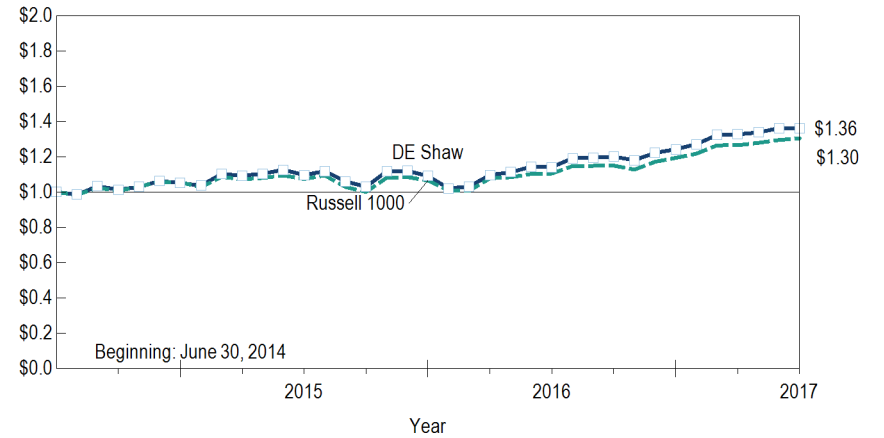
Worst Performers

	Return %
FRONTIER COMMUNICATIONS (FTR)	-44.2%
ENSCO CLASS A (ESV)	-42.3%
WEATHERFORD INTL. (WFT)	-41.8%
WHITING PETROLEUM (WLL)	-41.8%
NOBLE CORPORATION (NE)	-41.5%
NABORS INDUSTRIES	-37.3%
CHICAGO BDG.&IO. (CBI)	-35.5%
DIAMOND OFFS.DRL. (DO)	-35.2%
HERTZ RENTAL CAR HLDG. WNI. (HTZ)	-34.4%
UNITED STATES STEEL	-34.4%

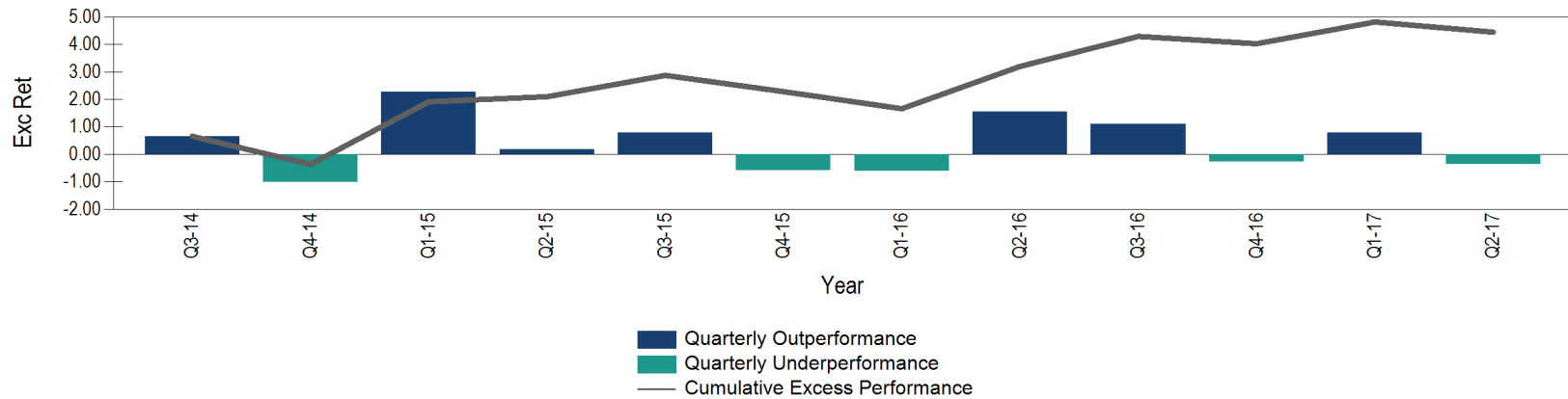
U.S. Effective Style Map

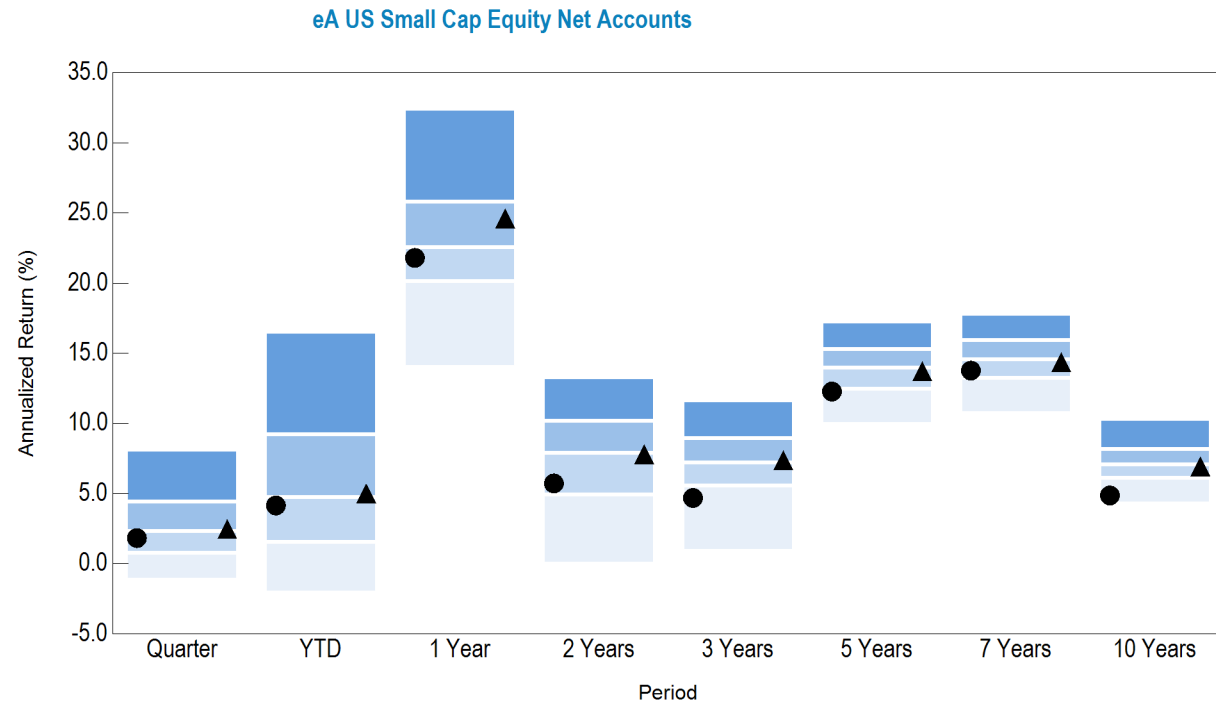


Growth of a Dollar



Quarterly and Cumulative Excess Performance





	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	8.1	16.5	32.4	13.3	11.6	17.2	17.8	10.3
25th Percentile	4.5	9.2	25.8	10.2	9.0	15.3	16.0	8.2
Median	2.4	4.8	22.6	7.9	7.3	14.0	14.6	7.1
75th Percentile	0.8	1.6	20.2	4.9	5.6	12.5	13.3	6.2
95th Percentile	-1.1	-2.0	14.1	0.0	0.9	10.0	10.8	4.3
# of Portfolios	384	380	377	364	352	327	308	258
● Small Cap Equity	1.8 (59)	4.1 (53)	21.8 (58)	5.7 (69)	4.7 (82)	12.3 (77)	13.8 (67)	4.9 (93)
▲ Russell 2000	2.5 (49)	5.0 (47)	24.6 (35)	7.8 (52)	7.4 (50)	13.7 (55)	14.4 (56)	6.9 (56)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	350	2,010
Weighted Avg. Market Cap. (\$B)	2.2	2.0
Median Market Cap. (\$B)	1.2	0.8
Price To Earnings	23.9	23.9
Price To Book	3.7	3.0
Price To Sales	2.5	3.0
Return on Equity (%)	18.1	10.3
Yield (%)	1.5	1.1
Beta (holdings; domestic)	1.3	1.3

Top Holdings

CHEMOURS	1.0%
EXELIXIS	0.9%
GRAND CANYON EDUCATION	0.8%
BRINK'S	0.8%
MASIMO	0.8%
GEO GROUP	0.8%
FAIR ISAAC	0.8%
WINTRUST FINANCIAL	0.7%
BGC PARTNERS CL.A	0.7%
ADVANCED ENERGY INDS.	0.7%

Best Performers

	Return %
LIVEPERSON	60.6%
AXOVANT SCIENCES (AXON)	55.2%
VECTRUS (VEC)	44.6%
BASSETT FRTR.INDS.	41.5%
SUPERNUS PHARMACEUTICALS (SUPN)	37.7%
ATRION	37.6%
GSI GROUP (NOVT)	35.6%
MYRIAD GENETICS (MYGN)	34.6%
ORASURE TECHS. (OSUR)	33.5%
BANKRATE DELAWARE (RATE)	33.2%

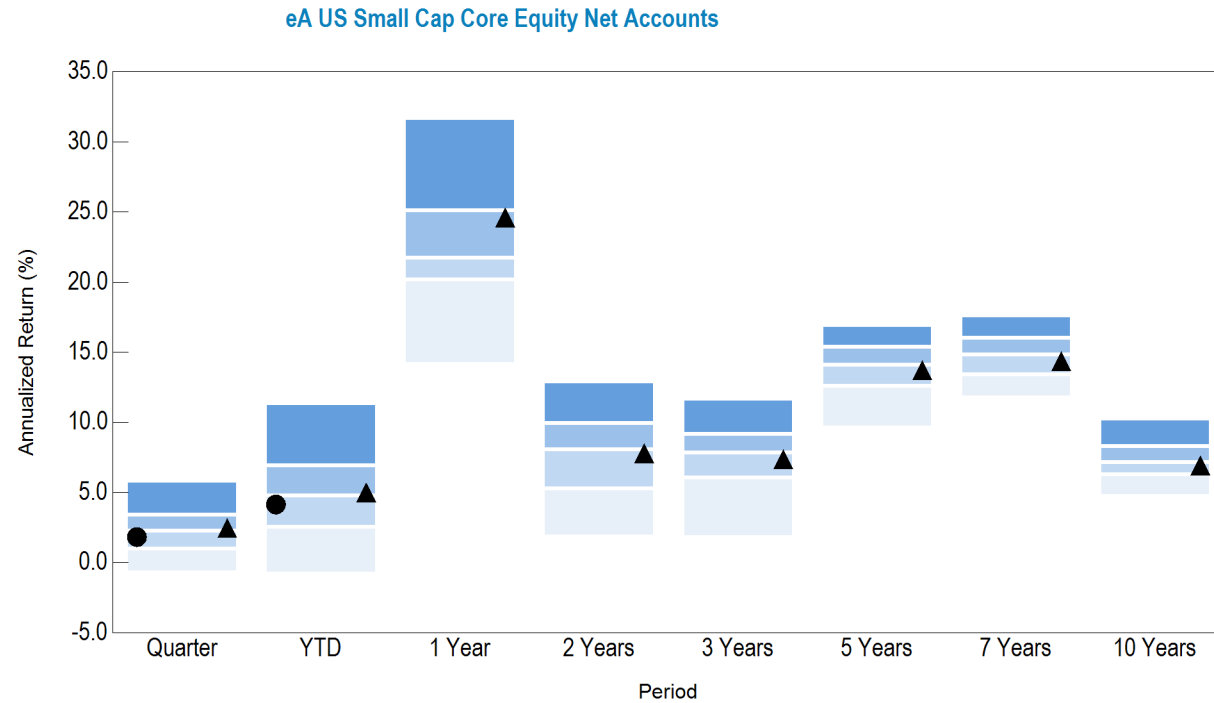
Worst Performers

	Return %
SMART SAND ORD	-45.2%
LIBBEY	-43.9%
MATRIX SERVICE	-43.3%
GENESCO (GCO)	-38.9%
JOUNCE THERAPEUTICS ORD	-36.2%
OVERSEAS SHIPPLDG.GP.'A'	-31.1%
BRIGHTCOVE (BCOV)	-30.3%
CARDTRONICS (CATM)	-29.7%
W&T OFFSHORE	-29.2%
RAIT FINANCIAL TRUST (RAS)	-28.9%



**Small Cap Equity Performance Attribution vs. Russell 2000**

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	0.0%	0.0%	0.0%	-7.5%	-19.3%	2.8%	3.4%			
Materials	0.0%	0.0%	0.0%	0.0%	2.5%	0.2%	5.1%	5.2%			
Industrials	0.0%	0.0%	0.0%	0.0%	3.3%	2.2%	15.1%	14.3%			
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%	2.1%	2.7%	12.4%	12.2%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	9.7%	-4.1%	3.4%	2.9%			
Health Care	0.0%	0.0%	0.0%	0.0%	2.5%	8.9%	13.7%	13.0%			
Financials	0.0%	0.0%	0.0%	0.0%	1.6%	0.9%	19.4%	19.7%			
Information Technology	0.0%	0.0%	0.0%	0.0%	2.4%	3.8%	18.2%	17.5%			
Telecommunication Services	0.0%	0.0%	0.0%	0.0%	6.8%	15.5%	0.2%	0.7%			
Utilities	0.0%	0.0%	0.0%	0.0%	1.3%	2.8%	3.2%	3.7%			
Real Estate	0.0%	0.0%	0.0%	0.0%	2.8%	2.8%	6.3%	7.5%			
Cash	0.0%	0.0%	0.0%	0.0%	0.1%	--	0.2%	0.0%			
<b>Portfolio</b>	<b>0.0%</b>	<b>=</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>+</b>	<b>0.0%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>100.0%</b>	<b>100.0%</b>



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	5.8	11.3	31.7	12.9	11.7	16.9	17.6	10.3
<b>25th Percentile</b>	3.5	6.9	25.2	10.0	9.2	15.4	16.0	8.3
<b>Median</b>	2.3	4.8	21.7	8.1	7.9	14.1	14.9	7.2
<b>75th Percentile</b>	1.0	2.6	20.2	5.3	6.1	12.6	13.4	6.3
<b>95th Percentile</b>	-0.7	-0.8	14.2	1.9	1.8	9.6	11.8	4.8
<b># of Portfolios</b>	105	102	102	102	99	90	83	65
<b>● QMA US Small Cap</b>	1.8 (58)	4.1 (59)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
<b>▲ Russell 2000</b>	2.5 (48)	5.0 (45)	24.6 (29)	7.8 (52)	7.4 (58)	13.7 (61)	14.4 (60)	6.9 (58)

Characteristics

	Portfolio	Russell 2000
Number of Holdings	350	2,010
Weighted Avg. Market Cap. (\$B)	2.2	2.0
Median Market Cap. (\$B)	1.2	0.8
Price To Earnings	23.9	23.9
Price To Book	3.7	3.0
Price To Sales	2.5	3.0
Return on Equity (%)	18.1	10.3
Yield (%)	1.5	1.1
Beta (holdings; domestic)	1.3	1.3

Top Holdings

CHEMOURS	1.0%
EXELIXIS	0.9%
GRAND CANYON EDUCATION	0.8%
BRINK'S	0.8%
MASIMO	0.8%
GEO GROUP	0.8%
FAIR ISAAC	0.8%
WINTRUST FINANCIAL	0.7%
BGC PARTNERS CL.A	0.7%
ADVANCED ENERGY INDS.	0.7%

Best Performers

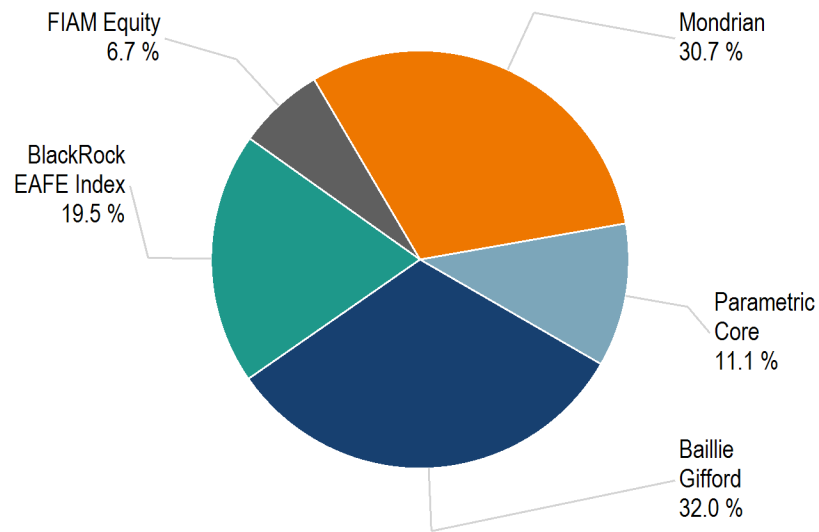
	Return %
LIVEPERSON	60.6%
AXOVANT SCIENCES	55.2%
VECTRUS	44.6%
BASSETT FRTR.INDS. (BSET)	41.5%
SUPERNUS PHARMACEUTICALS (SUPN)	37.7%
ATRION	37.6%
GSI GROUP (NOVT)	35.6%
MYRIAD GENETICS	34.6%
ORASURE TECHS. (OSUR)	33.5%
BANKRATE DELAWARE (RATE)	33.2%

Worst Performers

	Return %
SMART SAND ORD	-45.2%
LIBBEY	-43.9%
MATRIX SERVICE	-43.3%
GENESCO (GCO)	-38.9%
JOUNCE THERAPEUTICS ORD	-36.2%
OVERSEAS SHIPHLDG.GP.'A'	-31.1%
BRIGHTCOVE (BCOV)	-30.3%
CARDTRONICS (CATM)	-29.7%
W&T OFFSHORE	-29.2%
RAIT FINANCIAL TRUST (RAS)	-28.9%

QMA US Small Cap Performance Attribution vs. Russell 2000

	Total Effects	Attribution Effects			Returns		Sector Weights				
		Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	0.3%	0.1%	0.0%	-12.8%	-21.0%	2.8%	3.3%			
Materials	0.1%	0.1%	0.0%	0.0%	1.3%	0.1%	5.1%	5.0%			
Industrials	-0.6%	-0.6%	0.0%	0.0%	-1.7%	2.3%	15.2%	14.3%			
Consumer Discretionary	-0.4%	-0.4%	0.0%	0.0%	-0.2%	2.6%	12.5%	12.4%			
Consumer Staples	0.0%	0.0%	0.0%	0.0%	-3.5%	-4.6%	2.9%	2.9%			
Health Care	-0.4%	-0.4%	0.0%	0.0%	6.0%	8.9%	13.8%	13.1%			
Financials	0.3%	0.3%	0.0%	0.0%	2.5%	0.9%	19.6%	19.3%			
Information Technology	-0.4%	-0.4%	0.0%	0.0%	1.6%	3.7%	18.1%	17.5%			
Telecommunication Services	-0.1%	-0.1%	-0.1%	0.0%	7.1%	15.5%	0.2%	0.7%			
Utilities	-0.1%	-0.1%	0.0%	0.0%	1.3%	2.8%	3.2%	3.7%			
Real Estate	0.0%	0.0%	0.0%	0.0%	2.3%	2.8%	6.4%	7.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.2%	0.0%			
<b>Portfolio</b>	<b>-1.1%</b>	<b>=</b>	<b>-1.2%</b>	<b>+</b>	<b>0.1%</b>	<b>+</b>	<b>0.0%</b>	<b>1.1%</b>	<b>2.3%</b>	<b>100.0%</b>	<b>100.0%</b>



	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$245,816,349	32.0%	0.8%
BlackRock EAFE Index	\$150,227,780	19.5%	0.0%
FIAM Equity	\$51,752,296	6.7%	0.1%
Mondrian	\$235,989,894	30.7%	0.0%
Parametric Core	\$85,232,814	11.1%	-0.3%
Actual vs. Policy Weight Difference			-0.5%
<b>Total</b>	<b>\$769,019,133</b>	<b>100.0%</b>	<b>0.1%</b>

**Statistics Summary**

**3 Years**

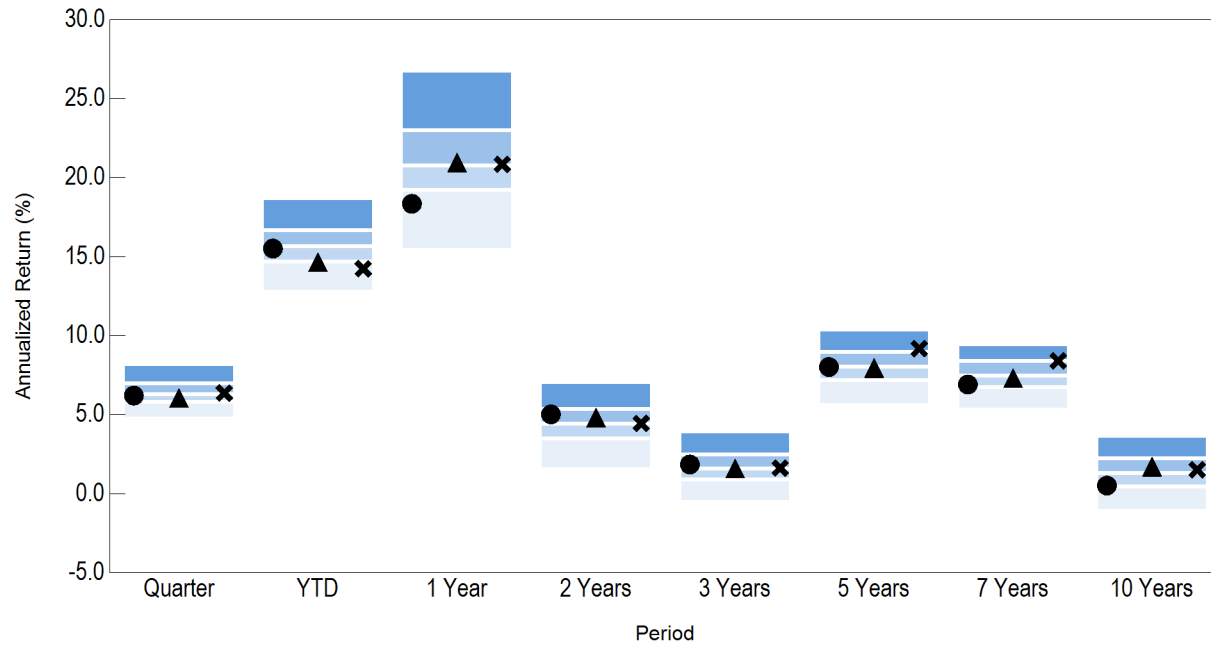
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	1.8%	12.2%	0.1	0.1	1.8%
MSCI ACWI ex US IMI	1.6%	12.4%	0.1	--	0.0%
Developed Markets	2.2%	12.3%	0.2	0.4	2.3%
MSCI ACWI ex USA Gross	1.3%	12.5%	0.1	--	0.0%
Baillie Gifford	4.3%	13.8%	0.3	0.7	4.3%
MSCI ACWI ex US	1.3%	12.5%	0.1	--	0.0%
BlackRock EAFE Index	1.5%	12.5%	0.1	2.5	0.1%
MSCI EAFE	1.1%	12.4%	0.1	--	0.0%
FIAM Equity	3.5%	12.0%	0.3	-0.1	2.7%
MSCI ACWI ex US Small Cap Gross	3.7%	12.3%	0.3	--	0.0%
Mondrian	0.2%	11.7%	0.0	0.1	5.4%
MSCI ACWI ex USA Value Gross	-0.4%	13.3%	-0.1	--	0.0%

Statistics Summary

5 Years

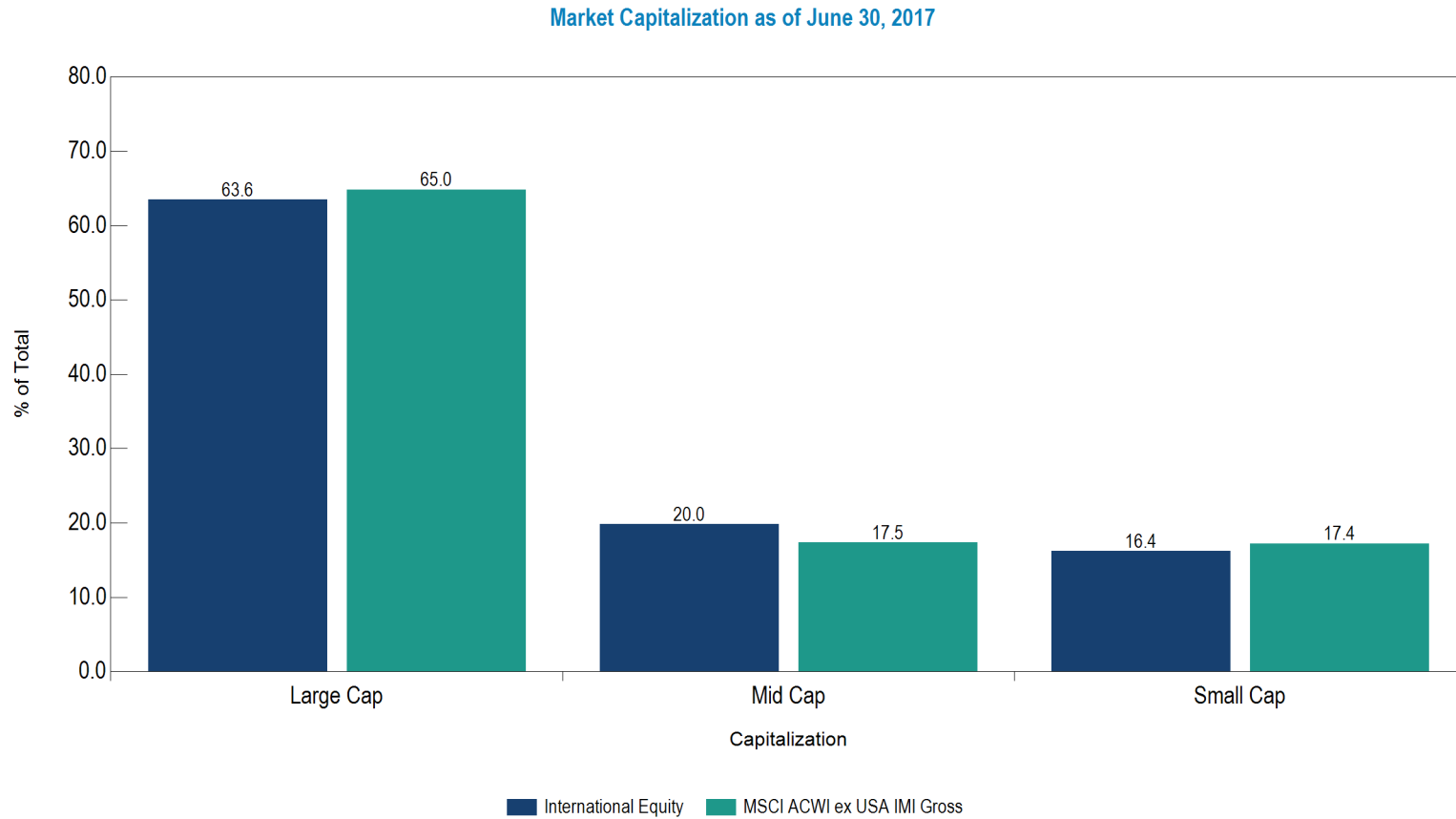
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	8.0%	11.3%	0.7	0.0	1.8%
MSCI ACWI ex US IMI	7.9%	11.5%	0.7	--	0.0%
Developed Markets	8.6%	11.3%	0.7	0.4	2.2%
MSCI ACWI ex USA Gross	7.7%	11.6%	0.7	--	0.0%
FIAM Equity	9.6%	11.1%	0.8	-0.3	2.6%
MSCI ACWI ex US Small Cap Gross	10.4%	11.5%	0.9	--	0.0%
Mondrian	7.0%	11.1%	0.6	0.0	4.7%
MSCI ACWI ex USA Value Gross	6.9%	12.5%	0.5	--	0.0%

InvestorForce All DB ex-US Eq Net Accounts



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	8.2	18.7	26.7	7.0	3.9	10.4	9.4	3.6
25th Percentile	7.0	16.7	23.0	5.4	2.5	9.0	8.4	2.3
Median	6.3	15.7	20.8	4.4	1.6	8.0	7.5	1.3
75th Percentile	5.8	14.7	19.2	3.5	0.9	7.2	6.7	0.5
95th Percentile	4.8	12.8	15.4	1.6	-0.5	5.6	5.3	-1.1
# of Portfolios	398	395	393	382	376	327	276	212
● International Equity	6.2 (56)	15.5 (55)	18.3 (84)	5.0 (35)	1.8 (45)	8.0 (52)	6.9 (71)	0.5 (74)
▲ MSCI ACWI ex US IMI	6.1 (62)	14.6 (78)	21.0 (48)	4.8 (41)	1.6 (51)	7.9 (53)	7.3 (58)	1.7 (39)
✕ MSCI EAFE Gross	6.4 (48)	14.2 (87)	20.8 (50)	4.4 (50)	1.6 (51)	9.2 (22)	8.4 (26)	1.5 (47)





Excludes FIAM Equity Holdings.

See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	2,145	6,195
Weighted Avg. Market Cap. (\$B)	46.9	49.9
Median Market Cap. (\$B)	6.6	1.4
Price To Earnings	22.8	20.9
Price To Book	3.5	2.5
Price To Sales	2.8	2.2
Return on Equity (%)	17.7	14.1
Yield (%)	2.9	2.8
Beta (holdings; global)	1.1	1.0

Top Holdings

NESTLE 'R'	1.4%
UNITED OVERSEAS BANK	1.4%
SANOFI	1.1%
GLAXOSMITHKLINE	1.0%
IBERDROLA	1.0%
NOVARTIS 'R'	0.9%
NASPERS	0.9%
TAIWAN SEMICON.SPN.ADR 1:5	0.9%
HONDA MOTOR	0.9%
ABB LTD N	0.8%

Best Performers

	Return %
INDIABULLS REAL ESTATE (IN:IBR)	129.7%
EVERGRANDE REAL EST.GP.	93.9%
EUROBANK ERGASIAS	81.8%
GRUPO ELEKTRA	79.0%
GEK TERNA HLDG.RLST.CON. (G:ERMI)	76.0%
HELLENIC PETROLEUM (G:HPI)	72.2%
PUBLIC POWER	71.5%
SUNAC CHINA HOLDINGS (K:SCHL)	65.1%
KARDEMIR 'D' (TK:KDM)	56.0%
HARTALEGA HOLDINGS	53.9%

Worst Performers

	Return %
DRYSHIPS (DRYS)	-99.4%
AEGEAN MARINE PTL.NET. (ANW)	-51.3%
SISTEMA JSFC (RS:AFK)	-48.1%
PETROFAC (UKIR:PFC)	-48.0%
RELIANCE COMMUNICATIONS (IN:RCN)	-43.6%
IMAGINATION TECHNOLOGIES (UKIR:IMG)	-40.7%
JBS ON	-38.5%
MATAHARI PUTRA PRIMA (ID:MPP)	-36.7%
GULF INTERNATIONAL SVS.	-33.1%
HARMONY GOLD MNG. (R:HARJ)	-32.5%

Excludes FIAM Equity Holdings.

International Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.2%	0.0%	0.1%	0.0%	-2.0%	-3.0%	4.7%	6.4%			
Materials	0.1%	-0.2%	0.1%	0.2%	0.4%	2.3%	5.8%	8.4%			
Industrials	0.1%	0.0%	0.0%	0.1%	8.4%	7.3%	13.3%	12.9%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.1%	4.0%	5.5%	14.4%	11.9%			
Consumer Staples	0.3%	0.1%	0.1%	0.1%	7.9%	7.6%	12.0%	9.4%			
Health Care	0.3%	0.3%	0.0%	0.1%	9.7%	7.3%	9.0%	7.9%			
Financials	0.1%	0.4%	0.0%	-0.3%	7.8%	6.2%	19.5%	21.6%			
Information Technology	-0.2%	-0.4%	0.1%	0.1%	9.5%	12.3%	9.9%	10.2%			
Telecommunication Services	0.0%	-0.1%	0.0%	0.1%	4.3%	4.3%	4.6%	4.0%			
Utilities	0.1%	0.0%	0.0%	0.1%	8.4%	5.4%	3.5%	3.1%			
Real Estate	-0.1%	-0.1%	0.0%	0.1%	4.9%	6.0%	2.4%	4.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.9%	0.0%			
Unclassified	0.0%	--	0.0%	--	--	6.1%	0.0%	0.0%			
<b>Portfolio</b>	<b>0.7%</b>	<b>=</b>	<b>-0.3%</b>	<b>+</b>	<b>0.3%</b>	<b>+</b>	<b>0.6%</b>	<b>6.7%</b>	<b>6.1%</b>	<b>100.0%</b>	<b>100.0%</b>

Excludes FIAM Equity Holdings.

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	7.2%	19.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	3.9%	4.8%	0.3%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	14.9%	12.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	15.2%	15.2%	2.1%	1.1%	0.0%	0.0%	0.1%	0.0%	0.1%
Finland	15.7%	13.9%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	9.8%	10.3%	4.9%	6.5%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Germany	8.0%	7.3%	6.5%	6.2%	0.0%	0.0%	0.0%	0.0%	0.1%
Greece*	33.4%	34.6%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	17.8%	19.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	12.3%	5.7%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	5.3%	10.0%	1.8%	1.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	0.8%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.4%	8.5%	1.9%	2.3%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Norway	3.2%	3.9%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	13.0%	13.9%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	12.1%	8.8%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	-9.2%	-9.7%	0.9%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	5.4%	8.5%	3.1%	2.2%	-0.1%	0.0%	0.1%	0.0%	-0.1%
Sweden	9.8%	10.6%	3.4%	2.2%	0.0%	0.0%	0.1%	0.0%	0.1%
Switzerland	9.6%	9.7%	7.3%	5.7%	0.0%	0.0%	0.1%	0.0%	0.1%
United Kingdom	4.2%	5.2%	15.1%	12.4%	-0.1%	-0.1%	0.1%	0.0%	-0.1%

Excludes FIAM Equity Holdings.

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

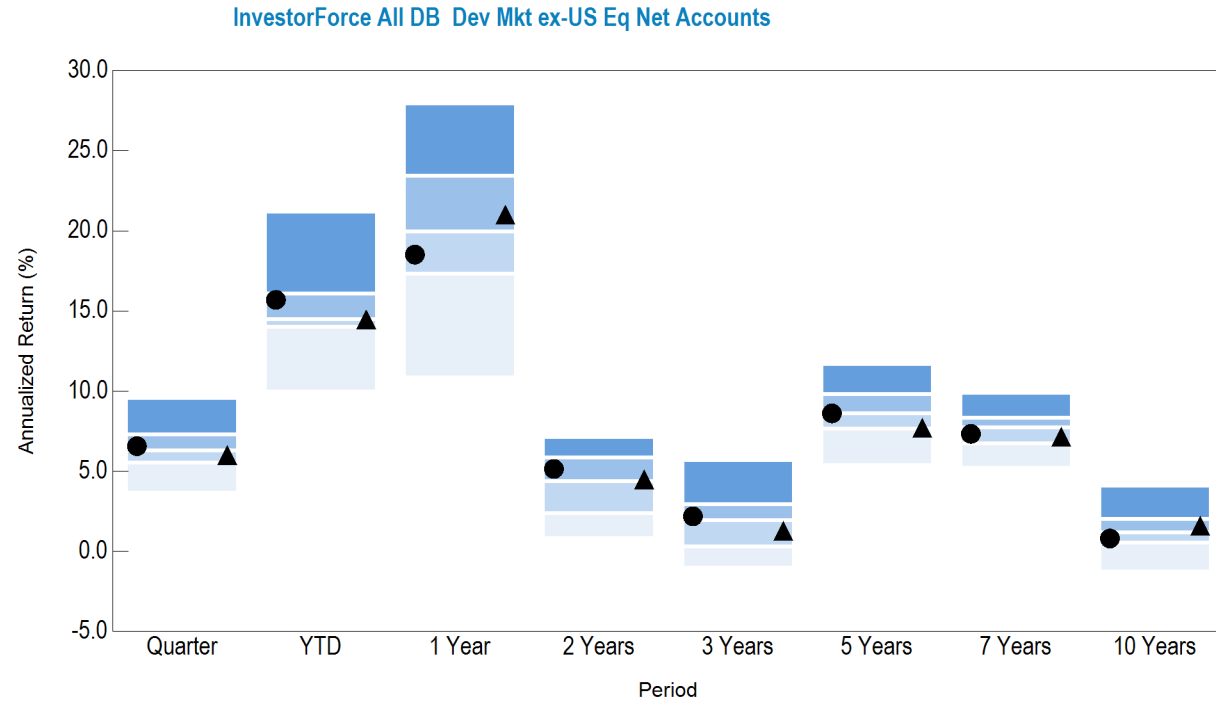
	Returns and Weights				Attribution Effects				Total Effects	
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect		
<b>AsiaPacific</b>										
Australia	2.8%	-1.4%	4.4%	5.2%	0.2%	0.0%	0.0%	0.0%	0.2%	
China*	9.9%	9.6%	2.7%	6.1%	0.0%	-0.2%	0.0%	0.0%	-0.2%	
Hong Kong	7.5%	6.9%	2.2%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
India*	4.8%	3.8%	1.6%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Indonesia*	13.3%	7.2%	4.3%	0.6%	0.0%	0.1%	0.0%	0.2%	0.4%	
Japan	7.4%	5.4%	16.6%	17.1%	0.3%	0.0%	0.0%	0.0%	0.3%	
Korea*	4.5%	9.4%	4.1%	3.6%	-0.2%	0.0%	0.0%	0.0%	-0.2%	
Malaysia*	5.2%	5.6%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	8.1%	11.9%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Pakistan*	-3.8%	6.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	4.7%	6.5%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	3.7%	4.9%	3.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Taiwan*	11.0%	8.0%	2.0%	3.0%	0.1%	0.0%	0.0%	0.0%	0.0%	
Thailand*	1.8%	2.3%	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Americas</b>										
Brazil*	-4.3%	-6.3%	0.7%	1.7%	0.0%	0.1%	0.0%	0.0%	0.1%	
Canada	-0.5%	0.7%	0.3%	6.9%	-0.1%	0.4%	-0.2%	0.1%	0.2%	
Chile*	-2.1%	-1.7%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	1.4%	1.5%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	6.9%	7.5%	1.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	
Peru*	4.8%	7.4%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	14.1%	3.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	

Excludes FIAM Equity Holdings.

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	4.2%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	19.0%	6.2%	0.2%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	-4.2%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	-1.3%	6.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-13.9%	-13.4%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	7.7%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	7.5%	2.7%	1.8%	1.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Turkey*	19.1%	19.5%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	3.0%	1.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	4.7%	0.1%	3.8%	9.9%	0.6%	0.3%	-0.1%	-0.4%	0.4%
Europe	7.1%	7.9%	49.7%	44.5%	-0.3%	-0.1%	0.3%	0.0%	-0.2%
Asia/Pacific	7.0%	5.7%	42.7%	42.8%	0.6%	0.0%	0.0%	0.0%	0.6%
Other	7.9%	3.8%	2.9%	2.8%	0.1%	0.0%	0.0%	0.0%	0.1%
Cash	0.2%	--	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>7.0%</b>	<b>6.1%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.9%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>-0.4%</b>	<b>0.9%</b>
<b>Totals</b>									
Developed	7.0%	6.1%	75.9%	76.6%	0.6%	0.0%	0.1%	0.0%	0.6%
Emerging*	7.3%	5.9%	23.0%	23.4%	0.2%	0.0%	0.1%	0.0%	0.3%
Frontier**	-1.3%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.2%	--	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity Holdings.



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	9.6	21.2	28.0	7.1	5.7	11.7	9.9	4.1
25th Percentile	7.3	16.1	23.5	5.9	2.9	9.8	8.4	2.0
Median	6.3	14.5	20.0	4.4	1.9	8.6	7.8	1.2
75th Percentile	5.6	14.0	17.3	2.4	0.3	7.7	6.7	0.6
95th Percentile	3.7	10.0	10.8	0.8	-1.0	5.4	5.2	-1.3
# of Portfolios	153	153	148	148	139	118	92	62
● Developed Markets	6.6 (41)	15.7 (30)	18.5 (69)	5.1 (39)	2.2 (47)	8.6 (52)	7.3 (60)	0.8 (73)
▲ MSCI ACWI ex USA Gross	6.0 (57)	14.5 (51)	21.0 (41)	4.5 (50)	1.3 (67)	7.7 (75)	7.1 (67)	1.6 (41)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	1,068	1,866
Weighted Avg. Market Cap. (\$B)	50.2	57.8
Median Market Cap. (\$B)	10.7	7.6
Price To Earnings	23.2	21.0
Price To Book	3.7	2.6
Price To Sales	2.8	2.2
Return on Equity (%)	17.9	14.0
Yield (%)	2.9	2.9
Beta (holdings; global)	1.1	1.0

Top Holdings

NESTLE 'R'	1.6%
UNITED OVERSEAS BANK	1.6%
SANOFI	1.2%
GLAXOSMITHKLINE	1.1%
IBERDROLA	1.1%
NOVARTIS 'R'	1.1%
TAIWAN SEMICON.SPN.ADR 1:5	1.0%
HONDA MOTOR	1.0%
ABB LTD N	1.0%
NASPERS	1.0%

Best Performers

	Return %
MINERAL DEPOSITS (A:MDLX)	53.1%
QANTAS AIRWAYS	47.8%
DEUTSCHE LUFTHANSA	44.9%
NINTENDO (J:NNDO)	44.6%
EASYJET	37.6%
IPSEN	37.3%
SHISEIDO (J:SHDO)	35.5%
EULER HERMES GROUP (F:EULE)	35.2%
OMV	34.8%
SCA 'B' (W:SW@G)	34.4%

Worst Performers

	Return %
PETROFAC (UKIR:PFC)	-48.0%
IMAGINATION TECHNOLOGIES (UKIR:IMG)	-40.7%
KEPCO PLANT SER.& ENGR. (KO:KPG)	-30.8%
SAMCHULY BICYCLE (KO:SAB)	-27.2%
AKER SOLUTIONS (N:AKSO)	-25.3%
CHINA BLUE CHEMICAL 'H' (K:CHBC)	-24.2%
HIKMA PHARMACEUTICALS	-22.2%
VOCUS COMMUNICATIONS (A:VOCX)	-20.5%
SANTOS	-19.8%
SUPER RETAIL GROUP (A:SULX)	-19.6%

Excludes FIAM Equity Holdings.



Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	-0.1%	0.2%	0.1%	-2.5%	-2.6%	4.1%	6.8%			
Materials	0.2%	-0.1%	0.2%	0.1%	1.1%	1.7%	4.9%	8.0%			
Industrials	0.3%	0.1%	0.0%	0.2%	8.6%	7.0%	13.8%	11.8%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.1%	4.1%	5.7%	15.0%	11.3%			
Consumer Staples	0.3%	0.1%	0.1%	0.1%	7.9%	7.6%	12.3%	9.9%			
Health Care	0.3%	0.3%	0.0%	0.1%	9.8%	7.2%	9.5%	8.0%			
Financials	0.1%	0.5%	0.0%	-0.3%	7.7%	5.9%	20.0%	23.4%			
Information Technology	-0.3%	-0.5%	0.1%	0.1%	9.4%	13.0%	10.1%	9.9%			
Telecommunication Services	0.0%	-0.2%	0.0%	0.1%	3.6%	4.2%	4.1%	4.5%			
Utilities	0.1%	0.0%	0.0%	0.1%	8.6%	5.4%	3.1%	3.1%			
Real Estate	-0.1%	-0.1%	0.0%	0.1%	4.7%	5.9%	2.1%	3.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	1.0%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>0.8%</b>	<b>=</b>	<b>-0.3%</b>	<b>+</b>	<b>0.5%</b>	<b>+</b>	<b>0.6%</b>	<b>6.8%</b>	<b>6.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Excludes FIAM Equity Holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	7.2%	22.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	3.9%	4.9%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	--	10.9%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	15.2%	15.3%	2.3%	1.1%	0.0%	0.1%	0.1%	0.0%	0.1%
Finland	15.7%	14.3%	0.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	9.8%	9.8%	5.5%	7.0%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Germany	8.0%	6.7%	7.3%	6.5%	0.1%	0.0%	0.1%	0.0%	0.1%
Greece*	--	34.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	19.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	12.3%	3.9%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	5.3%	9.5%	2.0%	1.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	0.7%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.4%	8.1%	2.1%	2.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Norway	3.2%	4.9%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	--	14.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	12.1%	4.1%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	-10.4%	-9.9%	0.2%	0.9%	0.0%	0.1%	0.0%	0.0%	0.1%
Spain	5.4%	8.3%	3.5%	2.3%	-0.1%	0.0%	0.1%	0.0%	0.0%
Sweden	9.8%	10.3%	3.9%	2.0%	0.0%	0.0%	0.1%	0.0%	0.1%
Switzerland	9.6%	9.4%	8.2%	6.1%	0.0%	0.0%	0.1%	0.0%	0.1%
United Kingdom	4.2%	4.7%	16.9%	12.4%	-0.1%	-0.1%	0.2%	0.0%	0.0%

Excludes FIAM Equity Holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

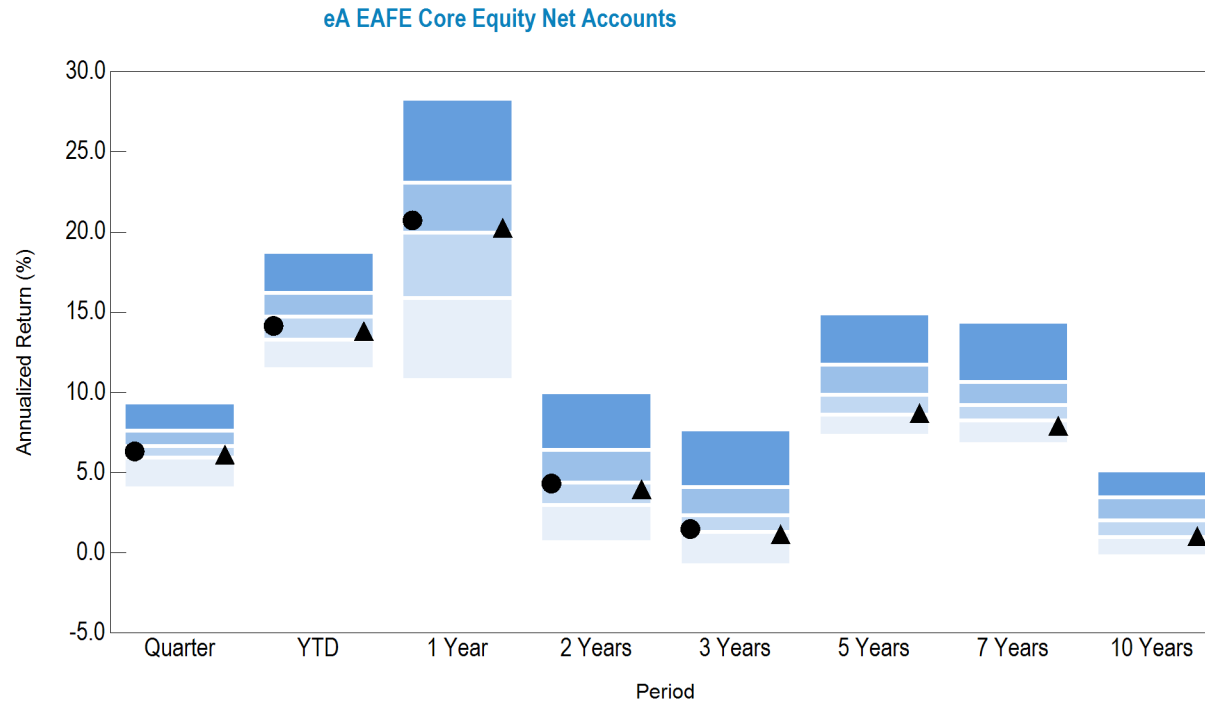
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	2.8%	-1.9%	4.9%	5.3%	0.2%	0.0%	0.0%	0.0%	0.3%
China*	11.5%	10.7%	2.3%	6.3%	0.0%	-0.3%	0.0%	0.0%	-0.3%
Hong Kong	7.4%	7.2%	1.7%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%
India*	5.5%	3.0%	0.9%	2.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Indonesia*	14.2%	8.8%	4.4%	0.6%	0.0%	0.2%	0.0%	0.2%	0.4%
Japan	7.4%	5.1%	18.7%	16.4%	0.4%	0.1%	0.0%	0.1%	0.5%
Korea*	4.1%	9.9%	3.8%	3.5%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Malaysia*	5.3%	5.1%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	8.1%	8.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	1.4%	7.4%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	3.7%	5.2%	3.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	14.6%	9.1%	1.4%	2.9%	0.2%	-0.1%	0.0%	-0.1%	0.0%
Thailand*	5.3%	2.6%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	-1.3%	-6.6%	0.0%	1.8%	0.1%	0.1%	0.1%	-0.1%	0.2%
Canada	-0.5%	0.9%	0.3%	6.9%	-0.1%	0.3%	-0.2%	0.1%	0.2%
Chile*	5.8%	-1.5%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	2.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	5.6%	7.4%	0.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	12.6%	7.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	15.9%	3.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%

Excludes FIAM Equity Holdings.

Developed Markets Performance Attribution vs. MSCI ACWI ex USA Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	6.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	19.0%	6.6%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kazakhstan**	-4.2%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-14.8%	-12.8%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	7.7%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	12.4%	3.6%	1.2%	1.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Turkey*	16.5%	20.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	--	2.1%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	10.6%	0.1%	1.5%	10.0%	1.1%	0.4%	-0.1%	-0.9%	0.5%
Europe	7.2%	7.5%	54.1%	45.3%	-0.2%	-0.1%	0.5%	0.0%	0.2%
Asia/Pacific	7.3%	5.8%	42.0%	41.9%	0.6%	0.0%	0.0%	0.0%	0.6%
Other	13.4%	4.4%	1.4%	2.7%	0.2%	0.0%	0.0%	-0.1%	0.1%
Cash	0.2%	--	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>7.3%</b>	<b>6.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>1.7%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>-1.0%</b>	<b>1.3%</b>
<b>Totals</b>									
Developed	7.0%	5.8%	84.2%	76.4%	0.8%	-0.1%	0.3%	0.1%	1.1%
Emerging*	9.8%	6.4%	14.8%	23.6%	0.8%	-0.3%	0.1%	-0.3%	0.3%
Frontier**	1.3%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.2%	--	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Excludes FIAM Equity Holdings.



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	9.3	18.7	28.3	10.0	7.6	14.9	14.4	5.1
25th Percentile	7.6	16.2	23.1	6.4	4.1	11.8	10.6	3.5
Median	6.7	14.8	20.0	4.4	2.3	9.9	9.2	2.0
75th Percentile	6.0	13.3	15.9	3.0	1.3	8.6	8.2	1.0
95th Percentile	4.0	11.5	10.8	0.7	-0.8	7.3	6.8	-0.2
# of Portfolios	122	120	120	113	107	91	79	57
● BlackRock EAFE Index	6.3 (65)	14.1 (61)	20.7 (42)	4.3 (56)	1.5 (72)	-- (--)	-- (--)	-- (--)
▲ MSCI EAFE	6.1 (70)	13.8 (67)	20.3 (46)	3.9 (61)	1.1 (79)	8.7 (74)	7.9 (80)	1.0 (74)

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	930	927
Weighted Avg. Market Cap. (\$B)	55.7	55.8
Median Market Cap. (\$B)	10.2	10.2
Price To Earnings	22.6	21.0
Price To Book	3.0	2.5
Price To Sales	2.4	2.1
Return on Equity (%)	15.3	13.1
Yield (%)	3.0	3.0
Beta (holdings: global)	1.1	1.1

Top Holdings

NESTLE 'R'	2.0%
NOVARTIS 'R'	1.3%
HSBC HOLDINGS	1.3%
ROCHE HOLDING	1.3%
TOYOTA MOTOR	1.0%
BRITISH AMERICAN TOBACCO	0.9%
ROYAL DUTCH SHELL A	0.9%
TOTAL	0.8%
BP	0.8%
SANOFI	0.8%

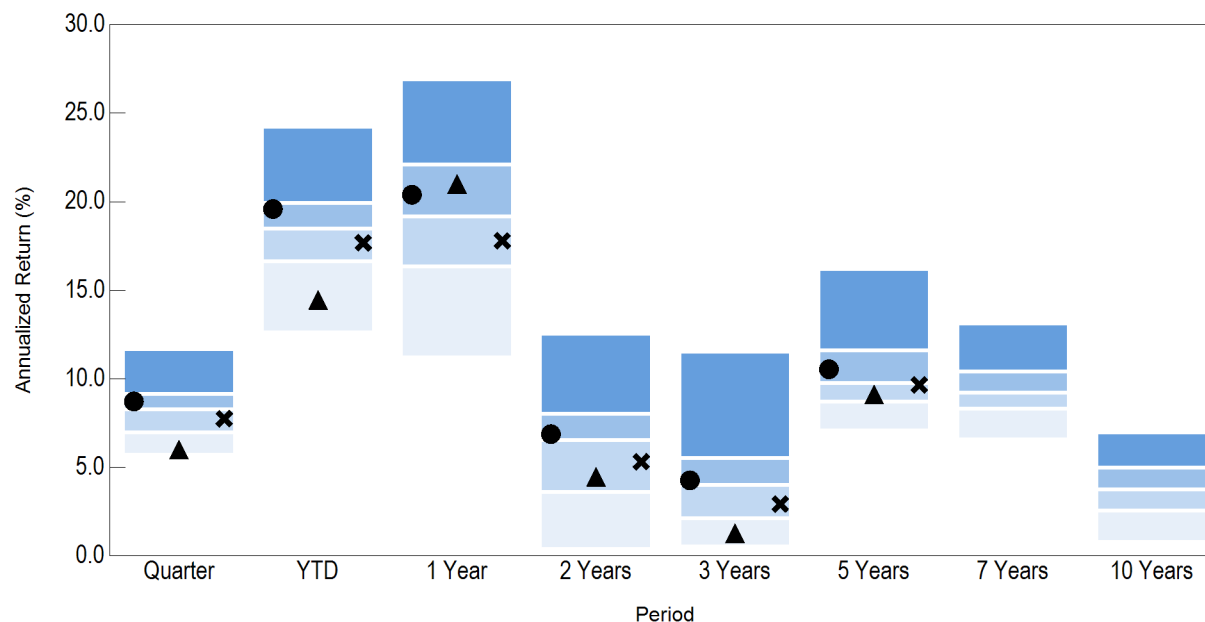
Best Performers

	Return %
QANTAS AIRWAYS	47.8%
DEUTSCHE LUFTHANSA (D:LHA)	44.9%
NINTENDO (J:NNDO)	44.6%
EASYJET	37.6%
IPSEN	37.3%
SHISEIDO (J:SHDO)	35.5%
OMV (O:OMV)	34.8%
SCA 'B' (W:SW@G)	34.4%
EDF (F:EDF)	33.6%
FLIGHT CENTRE TRAVEL GP. (A:FLTXX)	33.3%

Worst Performers

	Return %
PETROFAC	-48.0%
HIKMA PHARMACEUTICALS	-22.2%
VOCUS COMMUNICATIONS (A:VOCX)	-20.5%
SANTOS	-19.8%
SAIPEM	-18.9%
IDEMITSU KOSAN (J:IDKO)	-18.3%
SUMITOMO DAINIPPON PHA. (J:DPPH)	-17.3%
HISAMITSU PHARM.	-16.1%
FORTESCUE METALS GP.	-15.8%
SCHAEFFLER (D:SHA)	-15.6%

eA ACWI ex-US Growth Equity Net Accounts



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	11.7	24.2	26.9	12.5	11.5	16.2	13.1	6.9
25th Percentile	9.2	19.9	22.1	8.0	5.5	11.6	10.4	5.0
Median	8.3	18.5	19.2	6.5	4.0	9.8	9.2	3.8
75th Percentile	7.0	16.6	16.4	3.6	2.1	8.7	8.3	2.6
95th Percentile	5.7	12.6	11.2	0.4	0.6	7.1	6.6	0.8
# of Portfolios	67	67	67	65	59	53	46	36
● Baillie Gifford	8.7 (37)	19.6 (32)	20.4 (32)	6.9 (43)	4.3 (44)	10.5 (33)	-- (--)	-- (--)
▲ MSCI ACWI ex US	6.0 (93)	14.5 (91)	21.0 (31)	4.5 (67)	1.3 (83)	9.1 (62)	-- (--)	-- (--)
✕ MSCI ACWI ex US Growth	7.7 (62)	17.7 (61)	17.8 (61)	5.3 (59)	2.9 (68)	9.6 (55)	-- (--)	-- (--)

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	92	1,866
Weighted Avg. Market Cap. (\$B)	42.2	57.8
Median Market Cap. (\$B)	13.4	7.6
Price To Earnings	28.6	21.0
Price To Book	6.1	2.6
Price To Sales	4.1	2.2
Return on Equity (%)	25.1	14.0
Yield (%)	1.8	2.9
Beta (holdings; global)	1.2	1.0

Top Holdings

TAIWAN SEMICON.SPN.ADR 1:5	2.7%
NASPERS	2.5%
ATLAS COPCO 'B'	2.2%
MS&AD INSURANCE GP.HDG.	2.1%
KAO	2.1%
COCHLEAR	2.1%
METTLER TOLEDO INTL.	2.0%
JAPAN EXCHANGE GROUP	2.0%
HARGREAVES LANSDOWN	2.0%
SAMSUNG ELECTRONICS GDR	1.9%

Best Performers

	Return %
SHISEIDO (J:SHDO)	35.5%
CAPITA (UKIR:CPI)	32.1%
ALIBABA GROUP HLDG.SPN. ADR 1:1 (BABA)	30.7%
SHOIFY 'A' (NYS)	27.6%
JAPAN EXCHANGE GROUP (J:OSEX)	27.3%
JD.COM 'A' ADR 1:2 (JD)	26.1%
HON HAI PREC.GDR (UKIR:HHPD)	25.6%
NOVO NORDISK 'B' (DK:NON)	24.2%
JUPITER FUND MANAGEMENT (UKIR:JUP)	23.1%
METTLER TOLEDO INTL. (MTD)	22.9%

Worst Performers

	Return %
IMAGINATION TECHNOLOGIES (UKIR:IMG)	-40.7%
WOOD GROUP (JOHN) (UKIR:WG.)	-10.5%
PJSC MAGNIT GDR (REG S) (UKIR:MGNT)	-10.4%
MESOBLAST (A:MSBX)	-8.3%
OLYMPUS (J:OLYC)	-5.0%
WEIR GROUP (UKIR:WEIR)	-4.8%
NAVER	-4.2%
DENSO (J:DE@N)	-4.0%
TSINGTAO BREWERY 'H' (K:TSIN)	-3.9%
MAKEMYTRIP (MMYT)	-3.0%



**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.3%	-0.6%	0.5%	0.4%	-10.5%	-2.6%	0.7%	6.8%			
Materials	0.2%	0.1%	0.2%	-0.1%	4.3%	1.7%	3.7%	8.0%			
Industrials	0.4%	0.2%	0.0%	0.2%	9.0%	7.0%	14.4%	11.8%			
Consumer Discretionary	0.6%	0.2%	0.0%	0.5%	7.6%	5.7%	20.7%	11.3%			
Consumer Staples	0.8%	0.3%	0.1%	0.3%	9.7%	7.6%	19.0%	9.9%			
Health Care	0.5%	0.5%	0.0%	-0.1%	11.9%	7.2%	9.2%	8.0%			
Financials	0.5%	1.2%	0.0%	-0.7%	10.6%	5.9%	15.3%	23.4%			
Information Technology	-0.1%	-0.5%	0.5%	-0.1%	8.9%	13.0%	15.0%	9.9%			
Telecommunication Services	0.0%	--	0.1%	--	--	4.2%	0.0%	4.5%			
Utilities	-0.1%	--	0.0%	--	--	5.4%	0.0%	3.1%			
Real Estate	-0.1%	--	0.0%	--	--	5.9%	0.0%	3.2%			
Cash	-0.1%	0.0%	-0.1%	0.0%	0.2%	--	2.0%	0.0%			
<b>Portfolio</b>	<b>2.9%</b>	<b>=</b>	<b>1.5%</b>	<b>+</b>	<b>1.3%</b>	<b>+</b>	<b>0.2%</b>	<b>8.9%</b>	<b>6.0%</b>	<b>100.0%</b>	<b>100.0%</b>

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

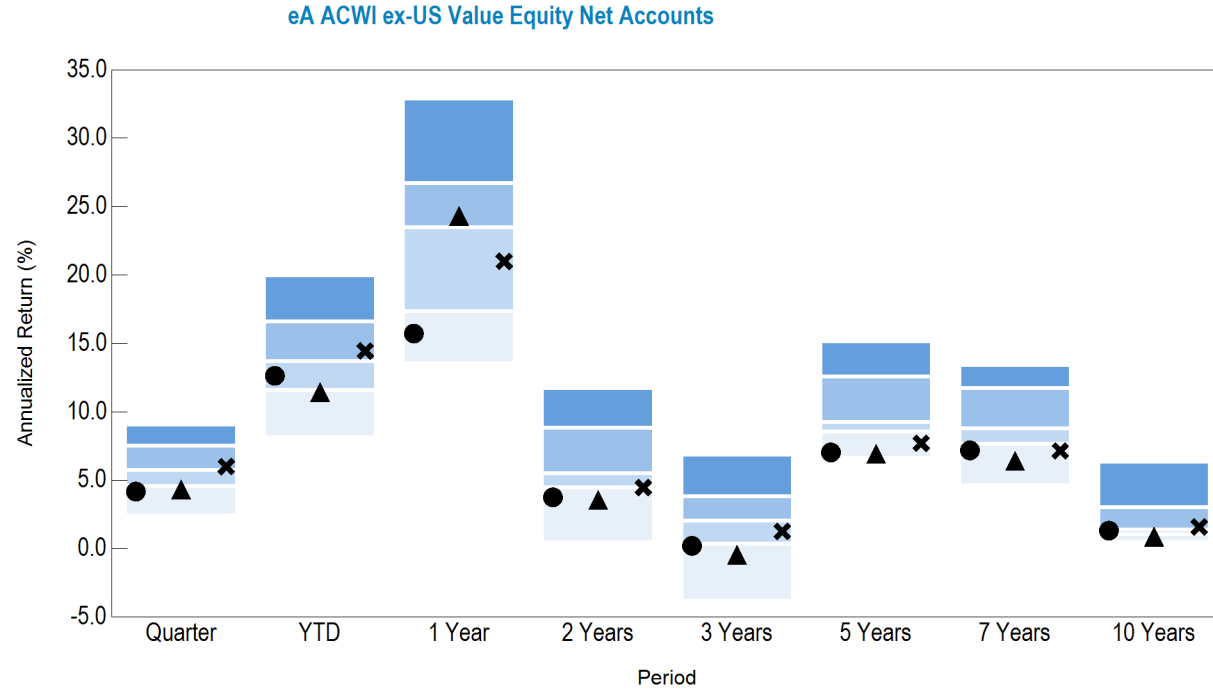
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	22.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Belgium	--	4.8%	0.0%	0.8%	--	0.0%	-0.1%	--	0.0%
Czech Republic*	--	11.0%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	16.8%	15.3%	4.6%	1.1%	0.0%	0.2%	0.3%	0.0%	0.5%
Finland	15.4%	14.3%	1.1%	0.7%	0.0%	0.0%	0.0%	0.0%	0.1%
France	17.8%	9.8%	0.9%	7.0%	0.5%	0.0%	-0.4%	-0.5%	-0.3%
Germany	7.1%	6.8%	4.7%	6.6%	0.0%	0.1%	-0.1%	0.0%	0.0%
Greece*	--	34.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	19.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	3.9%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Italy	--	9.5%	0.0%	1.5%	--	0.0%	-0.1%	--	-0.1%
Netherlands	--	8.1%	0.0%	2.4%	--	0.0%	-0.2%	--	-0.1%
Norway	--	4.8%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Poland*	--	14.2%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	12.7%	4.3%	1.1%	0.1%	0.0%	-0.1%	0.1%	0.1%	0.1%
Russia*	-10.4%	-9.9%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	8.6%	8.0%	2.3%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Sweden	9.6%	10.4%	5.4%	2.0%	0.0%	0.0%	0.2%	0.0%	0.2%
Switzerland	7.3%	9.4%	6.6%	6.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%
United Kingdom	5.0%	4.7%	15.6%	12.4%	0.0%	-0.1%	0.1%	0.0%	0.1%

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	9.3%	-1.8%	6.3%	5.3%	0.6%	-0.1%	0.0%	0.1%	0.6%
China*	11.5%	10.7%	6.9%	6.3%	0.0%	0.0%	0.0%	0.0%	0.1%
Hong Kong	1.3%	7.2%	1.1%	2.4%	-0.1%	0.0%	0.0%	0.1%	-0.1%
India*	6.1%	3.1%	2.3%	2.1%	0.1%	0.0%	0.0%	0.0%	0.1%
Indonesia*	--	8.9%	0.0%	0.6%	--	0.0%	0.0%	--	0.0%
Japan	10.6%	5.1%	18.8%	16.3%	0.9%	0.1%	0.0%	0.1%	1.1%
Korea*	7.9%	9.9%	3.3%	3.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Malaysia*	5.3%	5.1%	0.7%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	8.1%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	1.4%	7.4%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.4%	5.2%	4.8%	0.9%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Taiwan*	14.9%	9.1%	3.8%	2.9%	0.2%	0.1%	0.0%	0.1%	0.3%
Thailand*	--	2.6%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
<b>Americas</b>									
Brazil*	-4.5%	-6.6%	0.0%	1.8%	0.0%	0.1%	0.1%	0.0%	0.2%
Canada	--	0.8%	0.0%	6.9%	--	0.4%	-0.2%	--	0.2%
Chile*	--	-1.5%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Colombia*	--	2.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	5.5%	7.4%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	--	7.2%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
United States	17.1%	3.1%	2.5%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%

**Baillie Gifford Performance Attribution vs. MSCI ACWI ex USA Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	6.3%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	6.7%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Qatar*	--	-12.7%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
South Africa*	12.5%	3.6%	3.5%	1.6%	0.1%	-0.1%	0.1%	0.2%	0.3%
Turkey*	--	20.0%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
United Arab Emirates*	--	2.1%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	14.3%	0.1%	3.1%	10.0%	1.5%	0.3%	-0.1%	-1.0%	0.7%
Europe	8.1%	7.5%	43.0%	45.3%	0.3%	0.1%	-0.2%	0.0%	0.2%
Asia/Pacific	9.3%	5.8%	48.4%	41.9%	1.3%	0.2%	0.1%	0.2%	1.8%
Other	12.5%	4.4%	3.5%	2.7%	0.2%	0.0%	0.0%	0.1%	0.3%
Cash	0.2%	--	2.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Total</b>	<b>8.9%</b>	<b>6.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>3.4%</b>	<b>0.5%</b>	<b>-0.2%</b>	<b>-0.7%</b>	<b>2.9%</b>
<b>Totals</b>									
Developed	8.8%	5.9%	75.7%	76.4%	2.6%	0.0%	-0.4%	0.0%	2.2%
Emerging*	9.9%	6.4%	22.3%	23.6%	0.6%	0.0%	0.2%	0.0%	0.8%
Cash	0.2%	--	2.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	9.1	20.0	32.9	11.7	6.8	15.1	13.4	6.4
25th Percentile	7.6	16.7	26.8	8.9	3.9	12.6	11.8	3.1
Median	5.8	13.8	23.5	5.5	2.1	9.3	8.8	1.4
75th Percentile	4.6	11.6	17.4	4.5	0.4	8.6	7.7	1.1
95th Percentile	2.4	8.1	13.6	0.5	-3.8	6.7	4.7	0.5
# of Portfolios	37	36	35	31	30	26	21	17
● Mondrian	4.2 (87)	12.6 (65)	15.7 (84)	3.8 (78)	0.2 (80)	7.0 (91)	7.2 (88)	1.3 (60)
▲ MSCI ACWI ex USA Value Gross	4.3 (86)	11.4 (81)	24.3 (43)	3.6 (79)	-0.4 (88)	6.9 (92)	6.4 (92)	0.9 (81)
✕ MSCI ACWI ex USA Gross	6.0 (46)	14.5 (37)	21.0 (59)	4.5 (76)	1.3 (65)	7.7 (87)	7.1 (90)	1.6 (42)

Characteristics

	Portfolio	MSCI ACWI ex USA Value Gross
Number of Holdings	150	1,059
Weighted Avg. Market Cap. (\$B)	54.7	55.6
Median Market Cap. (\$B)	17.5	7.2
Price To Earnings	18.4	15.0
Price To Book	2.0	1.6
Price To Sales	1.7	1.6
Return on Equity (%)	12.9	11.0
Yield (%)	3.9	3.8
Beta (holdings: global)	1.0	1.1

Top Holdings

SANOFI	2.8%
IBERDROLA	2.6%
HONDA MOTOR	2.4%
GLAXOSMITHKLINE	2.4%
UNITED OVERSEAS BANK	2.4%
TELIASONERA	2.3%
ABB LTD N	2.3%
TAKEDA PHARMACEUTICAL	2.3%
KIRIN HOLDINGS	2.2%
CANON	2.2%

Best Performers

	Return %
TURKIYE HALK BANKASI	33.2%
EREGLI DEMIR CELIK	32.6%
SAIC MOTOR 'A'	31.4%
TUPRAS TKI.PEL.RFNE. (TK:TUP)	24.7%
BELLE INTERNATIONAL HDG.	21.4%
MEDIATEK (TW:MDT)	20.9%
WH GROUP	20.6%
TKI.GARANTI BKSI.	17.8%
BANK RAKYAT INDONESIA	17.5%
NESTLE 'R'	16.9%

Worst Performers

	Return %
CHINA BLUE CHEMICAL 'H' (K:CHBC)	-24.2%
QATAR ELTY.& WT.	-15.0%
QATAR NATIONAL BANK (QA:QNB)	-14.6%
KOREA ELECTRIC POWER	-14.1%
OAO GAZPROM SPN.ADR 1:2	-11.3%
KANGWON LAND (KO:KWL)	-10.8%
WOOD GROUP (JOHN)	-10.5%
GOLDEN EAGLE RETAIL GP. (K:GERG)	-10.0%
WOOLWORTHS HDG.	-9.8%
CMPH.COCS. RODOVIARIAS ON (BR:CCR)	-9.3%

**Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross**

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	-0.2%	0.1%	0.1%	-1.6%	-1.9%	7.7%	9.9%			
Materials	0.2%	0.3%	0.2%	-0.2%	6.1%	0.5%	2.5%	7.6%			
Industrials	0.2%	0.1%	0.0%	0.1%	7.4%	4.4%	9.2%	10.4%			
Consumer Discretionary	-0.4%	-0.4%	0.0%	0.0%	-1.7%	2.3%	10.3%	9.7%			
Consumer Staples	0.0%	-0.1%	0.2%	-0.1%	3.0%	6.7%	9.0%	1.6%			
Health Care	0.4%	0.0%	0.2%	0.2%	7.9%	8.8%	10.0%	3.3%			
Financials	0.7%	2.1%	-0.1%	-1.3%	9.9%	5.6%	26.4%	38.4%			
Information Technology	0.1%	-0.2%	0.3%	0.1%	9.1%	10.8%	7.5%	4.7%			
Telecommunication Services	0.1%	0.0%	-0.1%	0.2%	3.4%	2.4%	8.8%	5.7%			
Utilities	0.1%	0.0%	0.0%	0.2%	6.7%	5.8%	6.3%	4.3%			
Real Estate	-0.2%	-0.2%	-0.1%	0.1%	2.6%	5.8%	2.0%	4.2%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.4%	0.0%			
<b>Portfolio</b>	<b>1.4%</b>	<b>=</b>	<b>1.5%</b>	<b>+</b>	<b>0.7%</b>	<b>+</b>	<b>-0.8%</b>	<b>5.7%</b>	<b>4.2%</b>	<b>100.0%</b>	<b>100.0%</b>

Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	--	23.3%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
Belgium	--	12.3%	0.0%	0.5%	--	0.0%	0.0%	--	-0.1%
Czech Republic*	--	9.6%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Denmark	3.4%	15.0%	0.9%	0.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Finland	--	14.4%	0.0%	1.0%	--	-0.1%	-0.1%	--	-0.1%
France	8.4%	7.9%	6.0%	7.9%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Germany	6.1%	4.5%	8.2%	6.7%	0.1%	-0.1%	0.1%	0.0%	0.2%
Greece*	--	38.6%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Hungary*	--	20.0%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Ireland	--	4.4%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Italy	2.6%	9.8%	4.0%	2.4%	-0.2%	0.0%	0.1%	-0.1%	-0.2%
Netherlands	-4.0%	11.3%	3.3%	1.4%	-0.2%	0.1%	0.1%	-0.3%	-0.3%
Norway	--	7.0%	0.0%	0.5%	--	0.0%	0.0%	--	0.0%
Poland*	--	16.1%	0.0%	0.3%	--	0.0%	0.0%	--	0.0%
Portugal	--	1.8%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Russia*	-10.3%	-11.3%	0.0%	0.8%	0.0%	0.1%	0.0%	0.0%	0.1%
Spain	2.8%	6.6%	4.5%	3.5%	-0.1%	0.0%	0.1%	0.0%	-0.1%
Sweden	10.0%	10.2%	3.5%	2.2%	0.0%	0.0%	0.1%	0.0%	0.1%
Switzerland	10.0%	8.9%	10.0%	3.4%	0.0%	0.2%	0.3%	0.1%	0.6%
United Kingdom	2.6%	4.8%	18.2%	13.1%	-0.3%	0.0%	0.2%	-0.1%	-0.2%

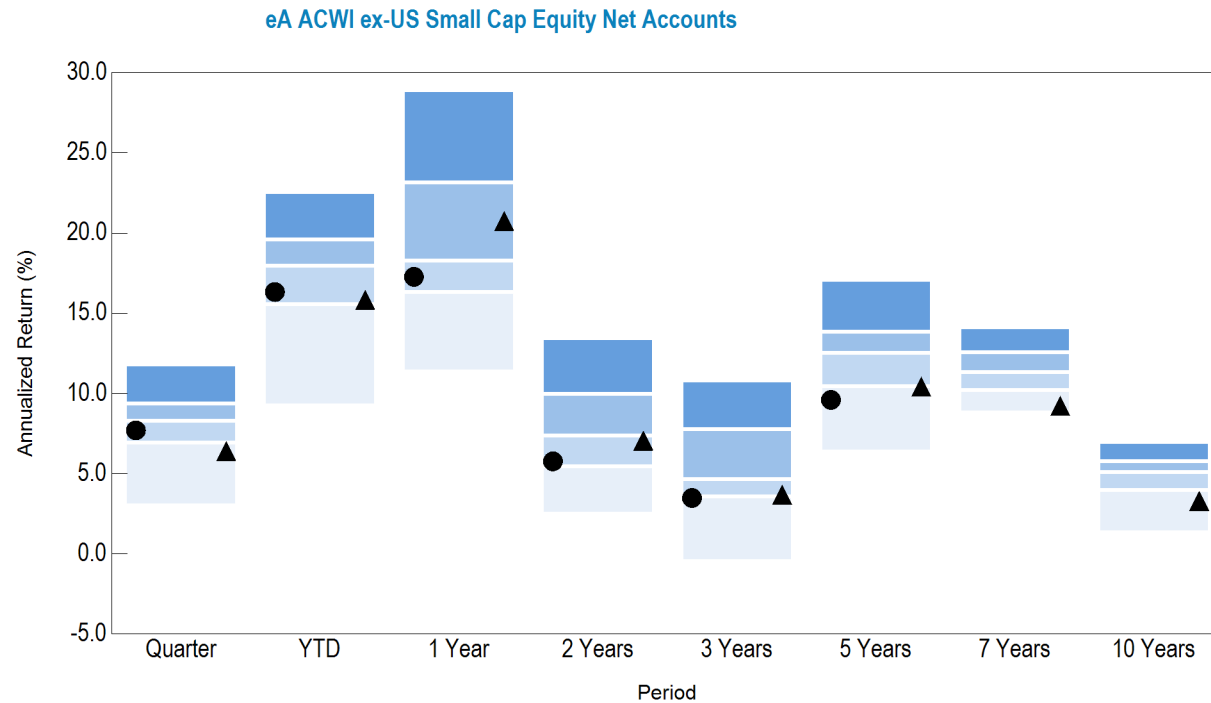


Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>AsiaPacific</b>									
Australia	-7.9%	-4.5%	1.0%	5.4%	-0.2%	0.3%	0.0%	0.1%	0.2%
China*	-1.1%	3.1%	0.0%	6.1%	-0.3%	-0.1%	0.0%	0.3%	-0.1%
Hong Kong	8.8%	4.0%	0.0%	2.4%	0.1%	-0.1%	0.0%	-0.1%	0.0%
India*	2.3%	1.2%	0.4%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Indonesia*	14.2%	8.4%	13.0%	0.6%	0.0%	0.8%	0.0%	0.7%	1.6%
Japan	3.3%	2.7%	14.2%	16.5%	0.1%	0.0%	0.0%	0.0%	0.1%
Korea*	3.3%	7.3%	6.8%	3.4%	-0.1%	0.3%	-0.1%	-0.1%	-0.1%
Malaysia*	9.3%	6.7%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	--	9.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Philippines*	9.8%	6.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	5.2%	8.6%	4.3%	0.9%	0.0%	0.2%	0.1%	-0.1%	0.1%
Taiwan*	7.5%	8.5%	0.2%	2.9%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Thailand*	5.3%	0.2%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Americas</b>									
Brazil*	-1.3%	-10.0%	0.0%	1.8%	0.2%	0.1%	0.1%	-0.2%	0.2%
Canada	-0.5%	-0.2%	1.0%	7.2%	0.0%	0.3%	-0.2%	0.0%	0.1%
Chile*	5.8%	-1.8%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	--	0.7%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Mexico*	7.7%	8.7%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	-0.1%
Peru*	12.6%	7.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%

**Mondrian Performance Attribution vs. MSCI ACWI ex USA Value Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	6.1%	0.0%	0.0%	--	0.0%	0.0%	--	0.0%
Israel	--	6.6%	0.0%	0.4%	--	0.0%	0.0%	--	0.0%
Kazakhstan**	-4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	-14.8%	-11.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	7.7%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-5.2%	-0.6%	0.0%	1.6%	-0.1%	0.1%	0.0%	0.1%	0.0%
Turkey*	16.5%	20.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	--	3.5%	0.0%	0.2%	--	0.0%	0.0%	--	0.0%
<b>Totals</b>									
Americas	-0.2%	-1.1%	1.1%	10.4%	0.0%	0.4%	-0.1%	0.0%	0.3%
Europe	5.1%	6.9%	58.5%	45.0%	-0.8%	-0.1%	0.7%	-0.2%	-0.4%
Asia/Pacific	6.8%	2.9%	40.0%	41.9%	1.7%	0.0%	0.0%	-0.1%	1.5%
Other	-3.9%	2.0%	0.0%	2.7%	-0.2%	0.0%	-0.1%	0.2%	0.0%
Cash	0.2%	--	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>5.7%</b>	<b>4.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.7%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>-0.1%</b>	<b>1.4%</b>
<b>Totals</b>									
Developed	4.5%	4.6%	79.1%	76.7%	-0.5%	0.0%	0.5%	0.0%	0.0%
Emerging*	10.2%	3.2%	20.5%	23.3%	1.7%	-0.1%	-0.1%	-0.2%	1.4%
Frontier**	1.3%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.2%	--	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



	Return (Rank)							
5th Percentile	11.8	22.6	28.9	13.4	10.8	17.0	14.1	6.9
25th Percentile	9.4	19.6	23.2	10.0	7.8	13.9	12.6	5.8
Median	8.3	18.0	18.3	7.4	4.7	12.6	11.3	5.1
75th Percentile	6.9	15.6	16.3	5.5	3.6	10.5	10.2	4.0
95th Percentile	3.0	9.3	11.4	2.5	-0.4	6.4	8.8	1.3
# of Portfolios	45	44	43	39	33	25	18	12
● FIAM Equity	7.7 (67)	16.3 (67)	17.3 (65)	5.8 (73)	3.5 (76)	9.6 (85)	-- (--)	-- (--)
▲ MSCI ACWI ex US Small Cap Gross	6.4 (84)	15.8 (71)	20.8 (37)	7.0 (58)	3.7 (74)	10.4 (76)	9.2 (95)	3.3 (85)

## Characteristics

	Portfolio	MSCI ACWI ex-US Small Cap
No. of Securities	228	4,317
Wgt'd. Avg. Market Cap (000's)	2,854	2,203
Price to Book Ratio	1.9	1.6
Return on Equity	11.8%	11.0%

## Ten Holdings

OBIC CO LTD	1.6
TECHTRONIC INDUSTRIES CO LTD	1.5
FRUTAROM INDS LTD	1.4
JUNGHEINRICH AG NON-VTG PFD	1.4
NIHON PARKERIZING CO LTD	1.3
IWG PLC	1.1
QUEBECOR INC CL B SUB VTG	1.0
MELIA HOTELS INTERNATIONAL SA	1.0
RENEWI PLC	1.0
AAREAL BANK AG	1.0

## Best Performers (Absolute Return %)

MINERAL DEPOSITS LTD	52.7
TCC INTERNATIONAL HLDGS LTD	44.1
AKSA (AKRILIK KIMYA SANAYI)	39.9
EULER HERMES GROUP	34.2
OXFORD INSTRUMENTS GROUP PLC	32.7
OBIC CO LTD	29.2
UDG HEALTHCARE PLC(UK)	28.7
TOWER BERSAMA INFRASTRUCTURE	27.3
OC OERLIKON CORP AG (REGD)	26.6
UNITED INTERNET AG (REG)	26.5

## Worst Performers (Absolute Return %)

KEPCO PLANT SER & ENG CO LTD	(31.0)
TIMAH TBK PT	(26.0)
AKER SOLUTIONS ASA	(25.4)
WESTERN ENERGY SERVICES CORP	(23.9)
MET AIR INVESTMENT LTD	(21.5)
TORRENT PHARMA LTD (DEMAT)	(20.9)
PHOENIX SATELLITE TV HLDGS LTD	(20.5)
TULLOW OIL PLC	(20.0)
COPPER MOUNTAIN MINING CORP	(17.3)
ASALEO CARE LTD	(13.5)

# FIAM Equity

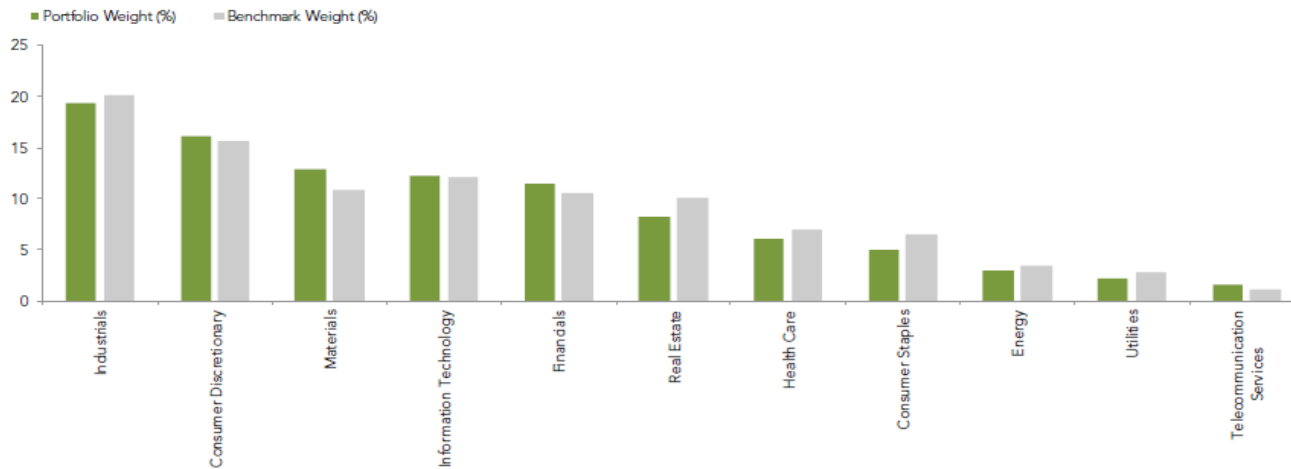
## Regional and Sector Weights

Period Ending: June 30, 2017

### REGIONAL WEIGHTS



### SECTOR WEIGHTS



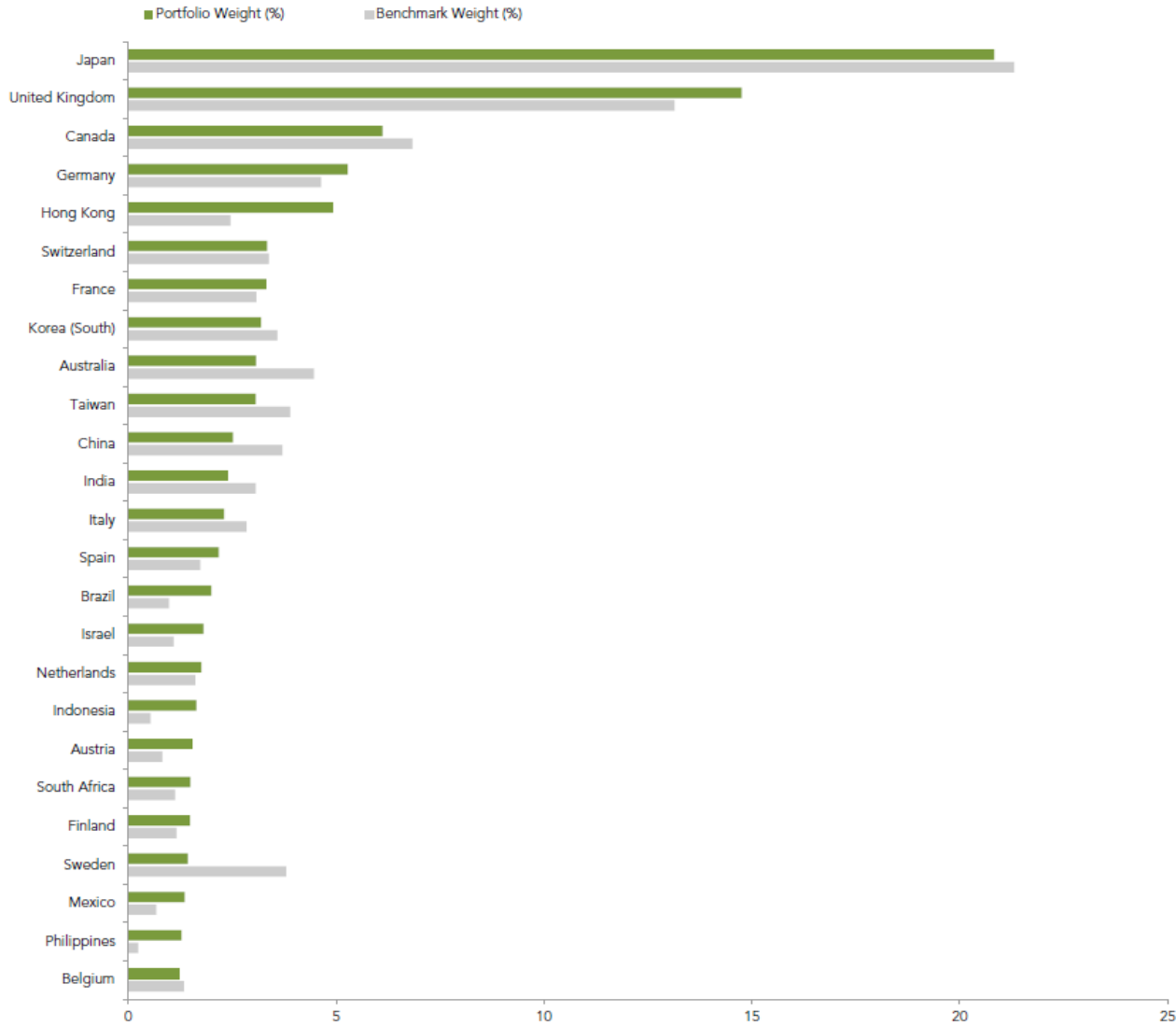
Sector breakdowns are only applied to equities and convertibles and the allocation percentages may not add to 100%.

Benchmark: MSCI AC Wld Sm Cap xUS(N)

# FIAM Equity Country Weights

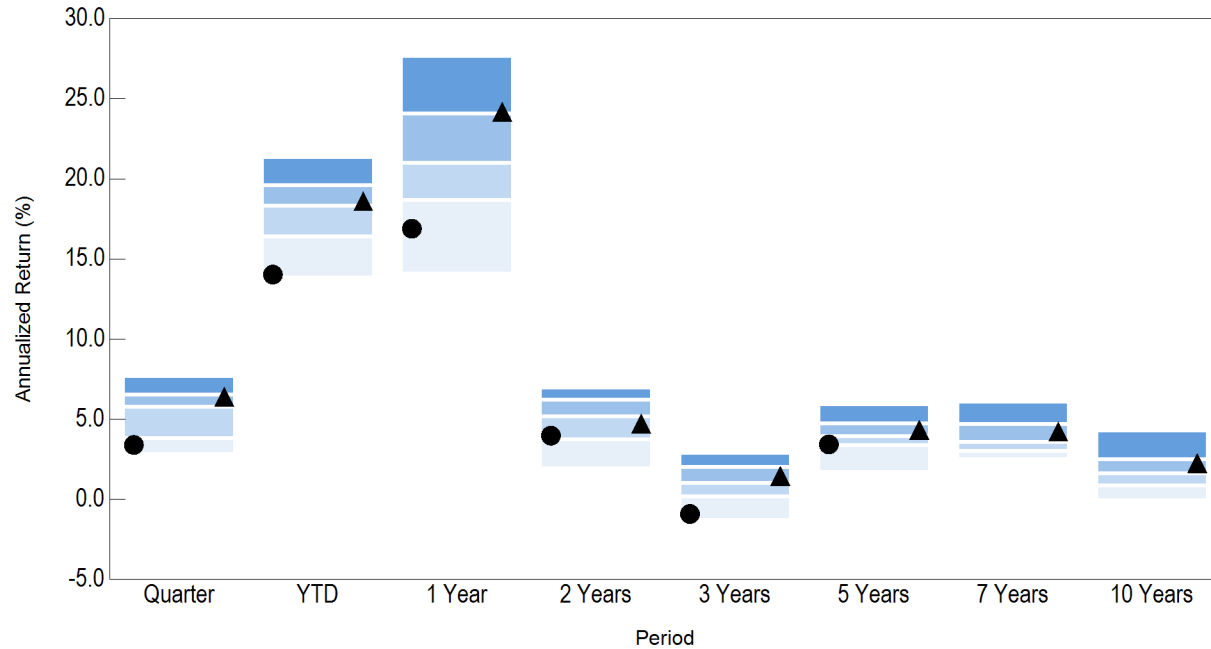
Period Ending: June 30, 2017

## TOP 25 COUNTRY WEIGHTS

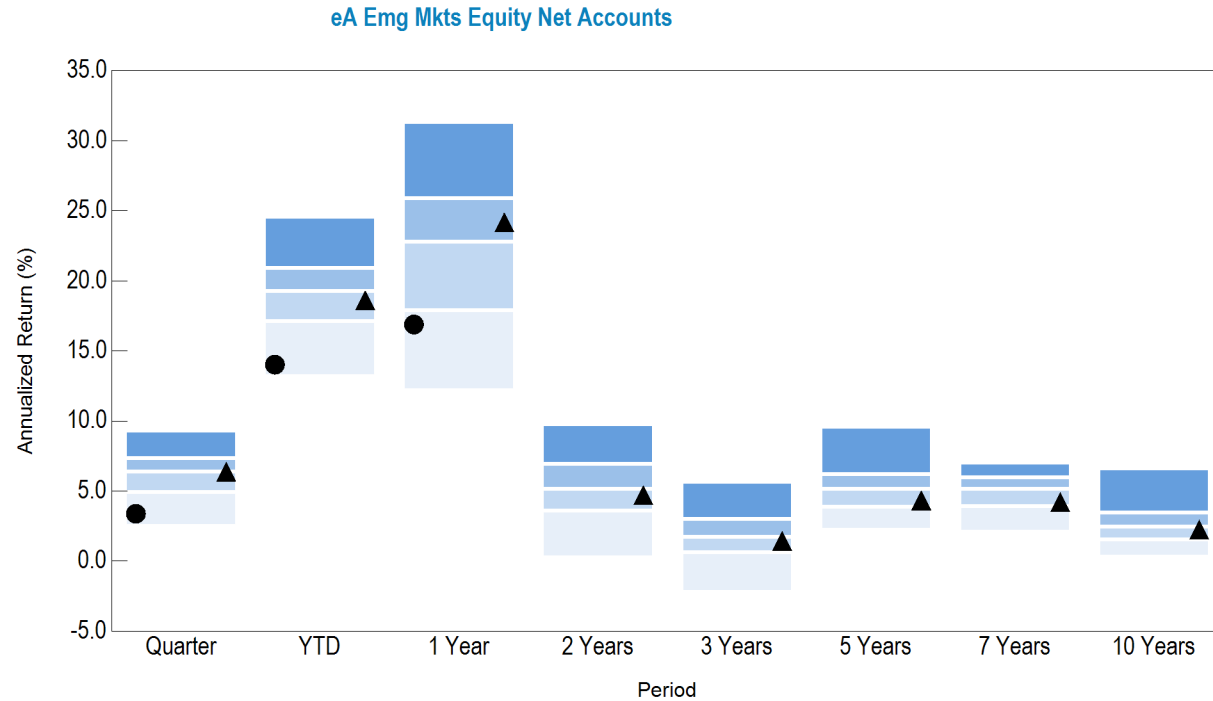


Benchmark: MSCI AC Wld Sm Cap xUS(N)

InvestorForce All DB Emg Mkt Eq Net Accounts



	Return (Rank)									
5th Percentile	7.7	21.4	27.7	6.9	2.9	5.9	6.1	4.3		
25th Percentile	6.6	19.6	24.1	6.2	2.0	4.7	4.7	2.5		
Median	5.8	18.4	21.0	5.2	1.0	4.0	3.6	1.6		
75th Percentile	3.8	16.4	18.7	3.8	0.2	3.4	3.0	0.9		
95th Percentile	2.8	13.8	14.1	2.0	-1.3	1.7	2.5	-0.1		
# of Portfolios	84	84	83	82	79	59	28	14		
● Emerging Markets	3.4 (86)	14.0 (94)	16.9 (88)	4.0 (70)	-0.9 (88)	3.4 (73)	-- (--)	-- (--)		
▲ MSCI Emerging Markets Gross	6.4 (32)	18.6 (47)	24.2 (25)	4.7 (58)	1.4 (44)	4.3 (39)	4.2 (42)	2.2 (33)		



	Return (Rank)															
	Quarter		YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	9.3	24.6	31.3	9.7	5.6	9.6	7.0	6.6								
25th Percentile	7.4	20.9	25.9	7.0	3.0	6.2	6.0	3.5								
Median	6.4	19.3	22.8	5.2	1.7	5.2	5.2	2.5								
75th Percentile	5.0	17.2	17.9	3.6	0.7	3.9	4.0	1.6								
95th Percentile	2.5	13.2	12.2	0.3	-2.2	2.3	2.1	0.3								
# of Portfolios	180	179	179	173	159	130	85	54								
● Parametric Core	3.4	(90)	14.0	(93)	16.9	(80)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Gross	6.4	(51)	18.6	(60)	24.2	(40)	4.7	(60)	1.4	(58)	4.3	(69)	4.2	(67)	2.2	(57)



Characteristics

	Portfolio	MSCI Emerging Markets Gross
Number of Holdings	1,156	845
Weighted Avg. Market Cap. (\$B)	22.1	68.1
Median Market Cap. (\$B)	3.2	5.4
Price To Earnings	19.8	20.5
Price To Book	2.9	2.8
Price To Sales	2.6	2.2
Return on Equity (%)	16.2	16.8
Yield (%)	2.8	2.4
Beta (holdings; global)	0.9	1.0

Top Holdings

AMERICA MOVIL SAB DE CV SPN.ADR 'L' 1:20	1.1%
TAIWAN SEMICON.MNFG.	1.0%
SAMSUNG ELECTRONICS	0.9%
CHINA MOBILE	0.7%
NASPERS	0.7%
TENCENT HOLDINGS	0.7%
GPO FINANCE BANORTE	0.7%
SBERBANK OF RUSSIA	0.7%
SASOL	0.7%
GRUPO TELEVISIA SPN.ADR 1:5	0.6%

Best Performers

	Return %
INDIABULLS REAL ESTATE (IN:IBR)	129.7%
EVERGRANDE REAL EST.GP.	93.9%
EUROBANK ERGASIAS (G:EFG)	81.8%
GRUPO ELEKTRA	79.0%
GEK TERNA HLDG.RLST.CON. (G:ERMI)	76.0%
HELLENIC PETROLEUM	72.2%
PUBLIC POWER	71.5%
SUNAC CHINA HOLDINGS	65.1%
KARDEMIR 'D' (TK:KDM)	56.0%
HARTALEGA HOLDINGS	53.9%

Worst Performers

	Return %
DRYSHIPS (DRYS)	-99.4%
AEGEAN MARINE PTL.NET. (ANW)	-51.3%
SISTEMA JSFC (RS:AFK)	-48.1%
RELIANCE COMMUNICATIONS	-43.6%
JBS ON (BR:JBS)	-38.5%
MATAHARI PUTRA PRIMA	-36.7%
GULF INTERNATIONAL SVS.	-33.1%
HARMONY GOLD MNG.	-32.5%
FUFENG GROUP (K:FUFE)	-32.2%
KEPCO PLANT SER.& ENGR. (KO:KPG)	-30.8%

**Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross**

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	-0.2%	0.2%	-1.7%	-4.6%	9.2%	7.3%			
Materials	-0.3%	0.0%	-0.4%	0.1%	0.2%	-0.4%	12.8%	7.4%			
Industrials	-0.1%	0.0%	-0.1%	0.1%	4.1%	3.6%	9.8%	5.9%			
Consumer Discretionary	-0.2%	-0.2%	0.0%	0.0%	6.7%	8.5%	9.6%	10.4%			
Consumer Staples	-0.2%	-0.1%	0.0%	0.0%	3.9%	5.2%	9.4%	7.0%			
Health Care	-0.1%	0.0%	-0.1%	0.0%	4.6%	4.5%	5.4%	2.4%			
Financials	0.5%	0.2%	0.2%	0.1%	6.1%	4.1%	14.9%	24.2%			
Information Technology	-1.8%	-1.2%	-1.6%	1.0%	11.4%	15.6%	8.3%	24.4%			
Telecommunication Services	-0.2%	0.0%	-0.2%	0.0%	1.2%	2.1%	9.2%	5.7%			
Utilities	-0.2%	0.0%	-0.3%	0.1%	0.9%	-1.5%	6.9%	2.8%			
Real Estate	0.1%	0.0%	0.1%	0.0%	11.4%	11.4%	4.2%	2.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.2%	--	0.2%	0.0%			
Unclassified	0.0%	--	--	--	--	--	0.0%	0.0%			
<b>Portfolio</b>	<b>-2.3%</b>	<b>=</b>	<b>-1.2%</b>	<b>+</b>	<b>-2.6%</b>	<b>+</b>	<b>1.5%</b>	<b>4.0%</b>	<b>6.4%</b>	<b>100.0%</b>	<b>100.0%</b>

Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross

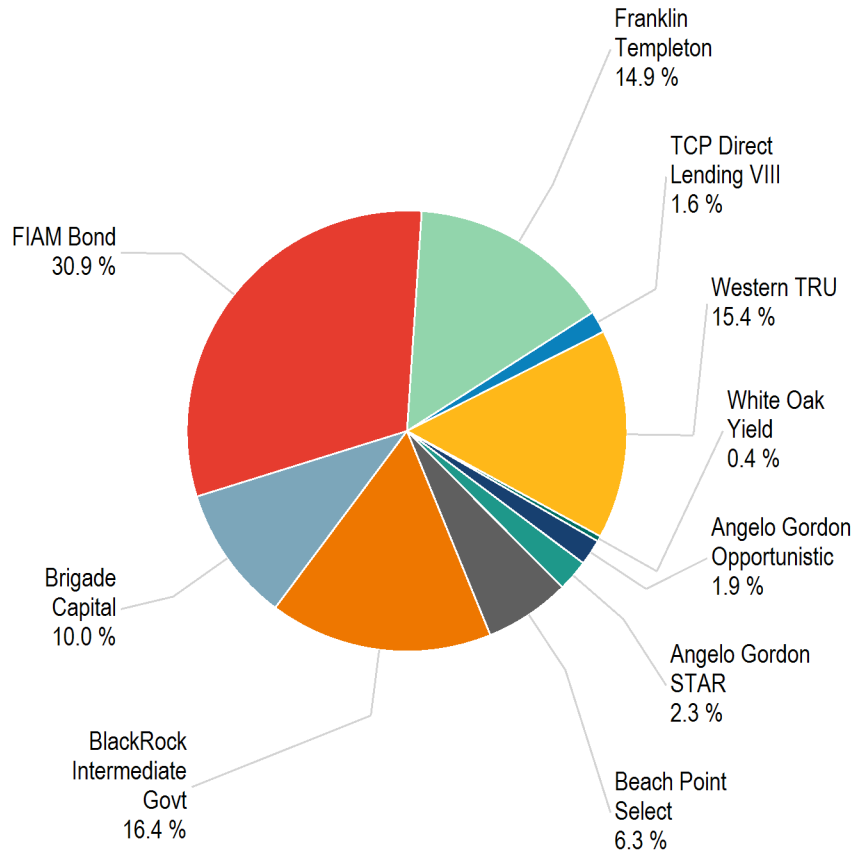
	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Czech Republic*	14.9%	10.9%	0.9%	0.2%	0.0%	0.0%	0.1%	0.0%	0.1%
Greece*	33.4%	34.2%	1.7%	0.3%	0.0%	0.3%	0.1%	0.0%	0.4%
Hungary*	17.8%	19.6%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%
Luxembourg	1.5%	6.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.1%	8.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	13.0%	14.1%	3.6%	1.2%	0.0%	0.0%	0.2%	0.0%	0.1%
Russia*	-8.9%	-9.9%	6.0%	3.8%	0.0%	-0.3%	0.0%	0.0%	-0.3%
United Kingdom	1.5%	4.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>AsiaPacific</b>									
China*	4.6%	10.7%	5.8%	26.8%	-1.6%	-0.9%	0.1%	1.3%	-1.2%
Hong Kong	7.7%	7.2%	6.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%
India*	4.0%	3.0%	6.7%	8.7%	0.1%	0.1%	0.0%	0.0%	0.1%
Indonesia*	3.8%	8.8%	3.4%	2.5%	-0.1%	0.0%	0.0%	0.0%	-0.2%
Korea*	5.9%	9.9%	7.1%	15.0%	-0.6%	-0.5%	0.2%	0.3%	-0.5%
Malaysia*	5.1%	5.1%	3.5%	2.4%	0.0%	-0.1%	0.0%	0.0%	0.0%
Pakistan*	-3.8%	6.4%	1.6%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Philippines*	5.8%	7.4%	3.4%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	2.7%	5.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	5.8%	9.1%	7.7%	12.2%	-0.4%	-0.1%	0.0%	0.1%	-0.4%
Thailand*	1.7%	2.6%	3.4%	2.2%	0.0%	-0.1%	0.0%	0.0%	-0.1%
<b>Americas</b>									
Brazil*	-4.3%	-6.6%	6.5%	7.7%	0.1%	0.1%	0.1%	0.0%	0.3%
Chile*	-2.1%	-1.5%	3.9%	1.2%	0.0%	-0.2%	0.0%	0.0%	-0.2%
Colombia*	1.4%	2.0%	1.7%	0.4%	0.0%	0.0%	-0.1%	0.0%	-0.1%
Mexico*	7.3%	7.4%	7.6%	3.7%	0.1%	-0.1%	0.0%	0.1%	0.0%
Peru*	4.8%	7.4%	1.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	2.3%	3.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%

**Parametric Core Performance Attribution vs. MSCI Emerging Markets Gross**

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	--	6.3%	0.0%	0.1%	--	0.0%	0.0%	--	0.0%
Kuwait**	-1.3%	6.4%	1.7%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Qatar*	-13.9%	-12.8%	1.6%	0.8%	0.0%	-0.2%	0.0%	0.0%	-0.2%
South Africa*	0.2%	3.6%	6.5%	7.0%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Turkey*	19.1%	20.0%	3.8%	1.0%	0.0%	0.3%	0.1%	0.0%	0.3%
United Arab Emirates*	3.0%	2.1%	1.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	1.4%	-1.6%	22.5%	13.5%	0.3%	-0.6%	0.1%	0.2%	-0.1%
Europe	5.9%	-0.4%	13.5%	5.8%	0.2%	-0.6%	0.4%	0.2%	0.3%
Asia/Pacific	4.9%	8.8%	48.9%	71.0%	-3.0%	-0.6%	0.3%	0.9%	-2.3%
Other	3.6%	3.9%	14.8%	9.7%	0.0%	-0.3%	0.1%	0.0%	-0.2%
Cash	0.2%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>4.0%</b>	<b>6.4%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>-2.5%</b>	<b>-2.0%</b>	<b>0.9%</b>	<b>1.4%</b>	<b>-2.3%</b>
<b>Totals</b>									
Developed	6.4%	--	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Emerging*	3.9%	6.4%	90.0%	100.0%	-3.4%	0.0%	0.9%	0.3%	-2.2%
Frontier**	-1.3%	--	1.7%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Cash	0.2%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Fixed Income  
 Manager Allocation Analysis

Period Ending: June 30, 2017



	Actual \$	Actual %	Manager Contribution to Excess Return %
Angelo Gordon Opportunistic	\$14,407,000	1.9%	0.1%
Angelo Gordon STAR	\$16,809,000	2.3%	0.1%
Beach Point Select	\$46,602,732	6.3%	0.0%
BlackRock Intermediate Govt	\$121,382,020	16.4%	0.1%
Brigade Capital	\$74,070,354	10.0%	-0.1%
FIAM Bond	\$229,685,998	30.9%	0.3%
Franklin Templeton	\$110,863,931	14.9%	-0.6%
TCP Direct Lending VIII	\$11,550,895	1.6%	0.0%
Western Asset TRU	\$114,008,666	15.4%	0.4%
White Oak Yield	\$2,882,386	0.4%	0.0%
Actual vs. Policy Weight Difference			-0.9%
<b>Total</b>	<b>\$742,262,982</b>	<b>100.0%</b>	<b>-0.5%</b>

Statistics Summary

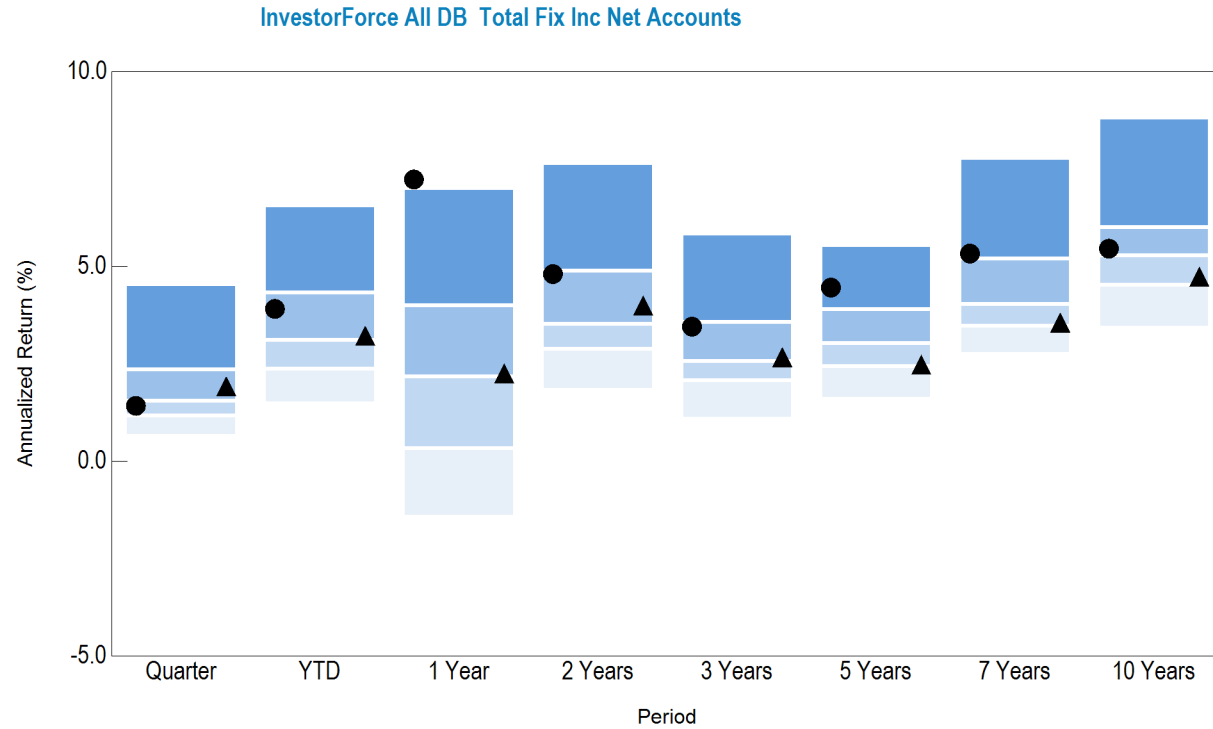
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	3.5%	3.0%	1.1	0.4	2.1%
Blended Fixed Income Index	2.7%	3.1%	0.8	--	0.0%
US Fixed Income	3.8%	2.8%	1.3	0.4	1.5%
Blended US Fixed Index	3.2%	2.9%	1.0	--	0.0%
FIAM Bond	3.0%	3.1%	0.9	0.6	0.9%
BBgBarc US Aggregate TR	2.5%	2.9%	0.8	--	0.0%
Angelo Gordon STAR	8.7%	5.5%	1.5	0.9	6.5%
BBgBarc US Aggregate TR	2.5%	2.9%	0.8	--	0.0%
Brigade Capital	3.3%	7.6%	0.4	-0.3	4.7%
BBgBarc BA Intermediate HY	4.8%	4.9%	0.9	--	0.0%
Global Fixed Income	1.5%	6.5%	0.2	0.2	8.1%
BBgBarc Multiverse TR	-0.2%	5.0%	-0.1	--	0.0%
Franklin Templeton	1.5%	6.5%	0.2	0.2	8.1%
BBgBarc Multiverse TR	-0.2%	5.0%	-0.1	--	0.0%

Statistics Summary

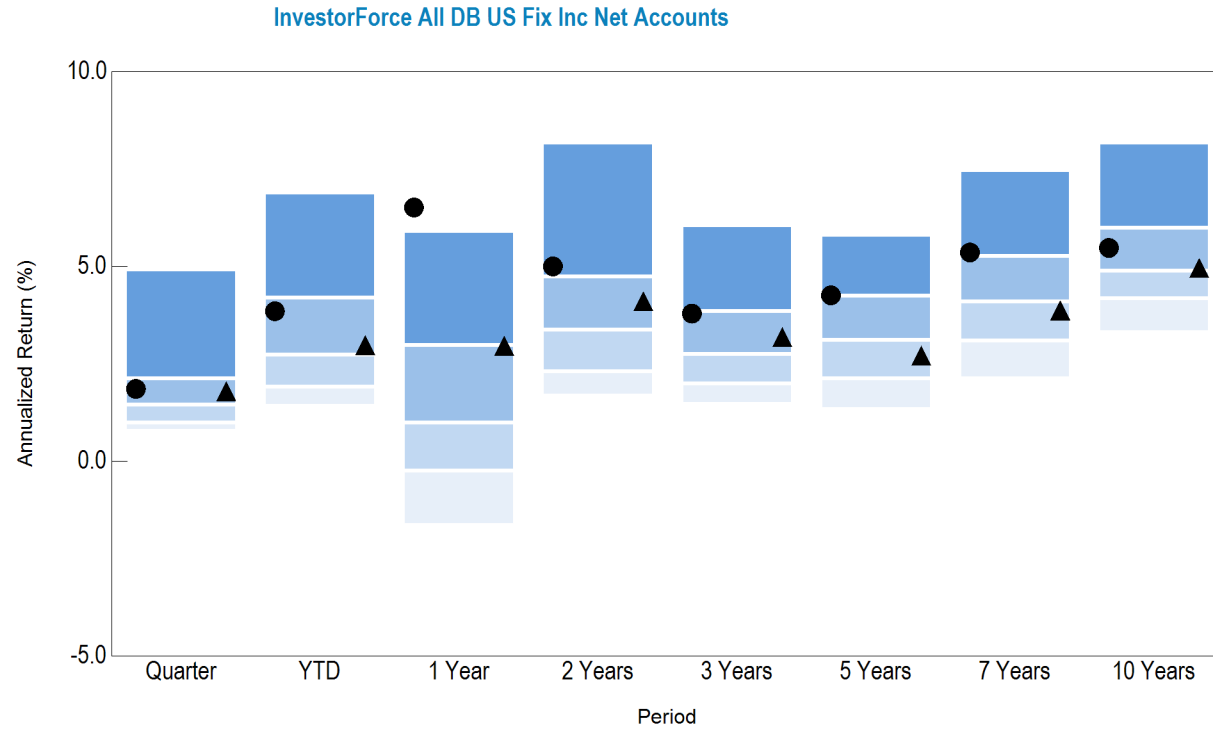
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.5%	3.2%	1.3	1.0	1.9%
Blended Fixed Income Index	2.5%	3.2%	0.7	--	0.0%
US Fixed Income	4.3%	3.0%	1.4	1.2	1.3%
Blended US Fixed Index	2.7%	3.2%	0.8	--	0.0%
FIAM Bond	2.9%	3.1%	0.9	0.9	0.8%
BBgBarc US Aggregate TR	2.2%	2.9%	0.7	--	0.0%
Brigade Capital	6.2%	6.2%	1.0	0.3	4.3%
BBgBarc BA Intermediate HY	4.7%	4.9%	0.9	--	0.0%
Global Fixed Income	4.8%	6.4%	0.7	0.5	7.0%
BBgBarc Multiverse TR	1.1%	4.6%	0.2	--	0.0%
Franklin Templeton	4.8%	6.4%	0.7	0.5	7.0%
BBgBarc Multiverse TR	1.1%	4.6%	0.2	--	0.0%



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.5	6.6	7.0	7.6	5.8	5.5	7.8	8.8
25th Percentile	2.4	4.3	4.0	4.9	3.6	3.9	5.2	6.0
Median	1.6	3.1	2.2	3.5	2.6	3.0	4.0	5.3
75th Percentile	1.2	2.4	0.3	2.9	2.1	2.5	3.5	4.5
95th Percentile	0.7	1.5	-1.4	1.8	1.1	1.6	2.8	3.4
# of Portfolios	288	286	282	276	271	248	201	169
● Fixed Income	1.4 (59)	3.9 (34)	7.2 (5)	4.8 (26)	3.5 (28)	4.5 (19)	5.3 (23)	5.5 (43)
▲ Blended Fixed Income Index	1.9 (33)	3.2 (47)	2.2 (49)	4.0 (39)	2.7 (47)	2.5 (75)	3.6 (73)	4.7 (66)

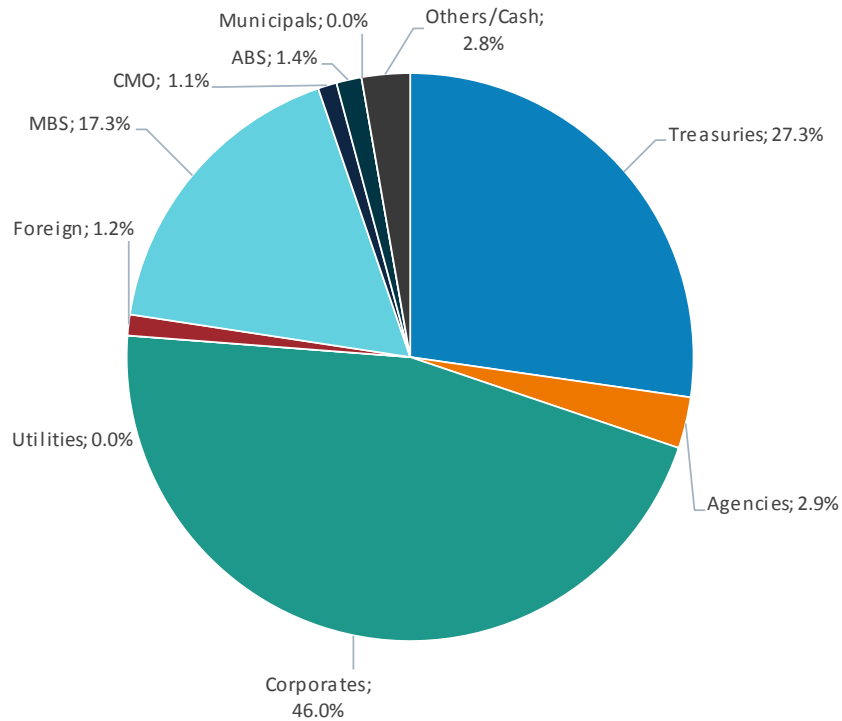




	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.9	6.9	5.9	8.2	6.0	5.8	7.5	8.2
25th Percentile	2.1	4.2	3.0	4.8	3.9	4.3	5.3	6.0
Median	1.5	2.7	1.0	3.4	2.8	3.1	4.1	4.9
75th Percentile	1.0	1.9	-0.2	2.3	2.0	2.1	3.1	4.2
95th Percentile	0.8	1.4	-1.6	1.7	1.5	1.3	2.1	3.3
# of Portfolios	392	390	388	385	379	328	264	194
● US Fixed Income	1.9 (29)	3.8 (28)	6.5 (4)	5.0 (24)	3.8 (26)	4.3 (25)	5.4 (24)	5.5 (37)
▲ Blended US Fixed Index	1.8 (31)	3.0 (44)	3.0 (26)	4.1 (35)	3.2 (36)	2.7 (61)	3.9 (57)	5.0 (50)

US Fixed Income  
Bond Sector Allocation

Period Ending: June 30, 2017



Sector*	Account Weight	BBgBarc Aggregate Weight	Difference
Treasuries	27.3%	36.8%	-9.5%
Agencies	2.9%	7.3%	-4.4%
Corporates	46.0%	25.2%	20.8%
Utilities	0.0%	0.0%	0.0%
Foreign	1.2%	0.0%	1.2%
MBS	17.3%	28.4%	-11.0%
CMO	1.1%	0.0%	1.1%
ABS	1.4%	2.3%	-0.9%
Municipals	0.0%	0.0%	0.0%
Others/Cash	2.8%	0.0%	2.8%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

\* Sector Allocation excludes Opportunistic Credit Managers.

US Fixed Income  
Bond Summary Statistics

Period Ending: June 30, 2017

Portfolio Characteristics*		Portfolio	BBgBarc Aggregate
Total Number of Securities			
Total Market Value	\$	465,076,684	
Current Coupon		2.37	3.14
Yield to Maturity		3.15	2.52
Average Life		8.68	7.98
Duration		4.82	5.85
Quality		AA-	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	n/a
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

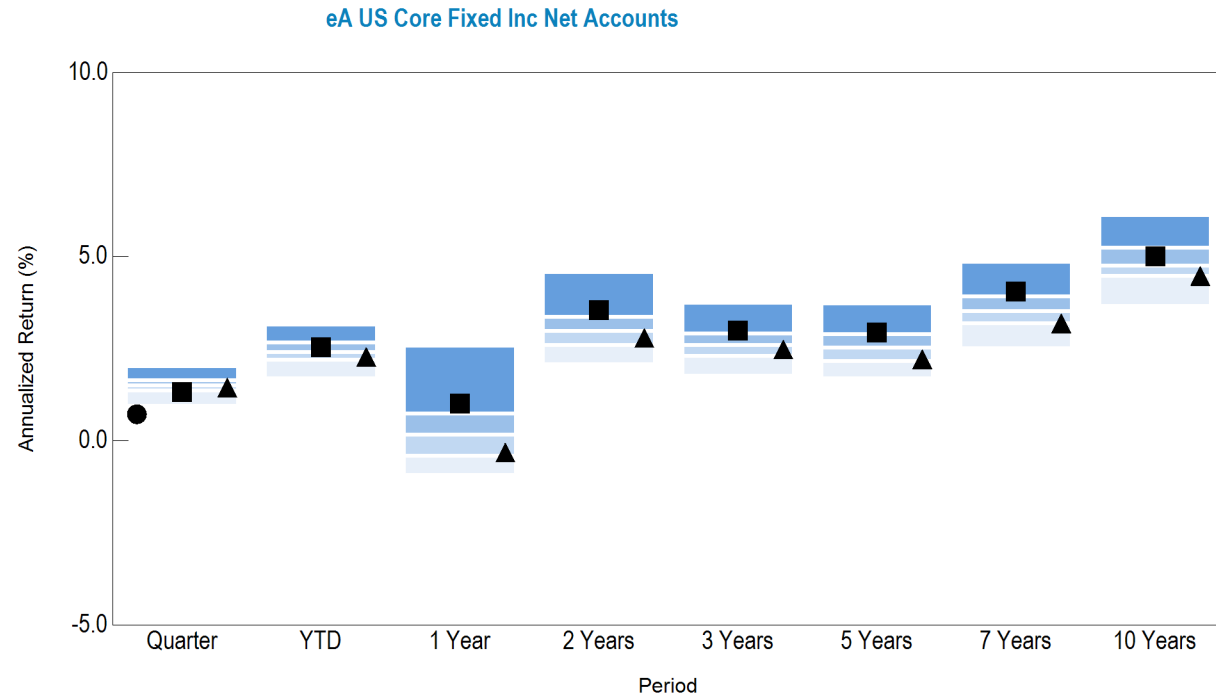
Average Life	
Range	% Held
0.0 - 1.0	n/a
1.0 - 3.0	n/a
3.0 - 5.0	n/a
5.0 - 10.0	n/a
10.0 - 20.0	n/a
20.0+	n/a
Unclassified	n/a

Duration	
Range	% Held
0.0 - 1.0	1.2
1.0 - 3.0	32.8
3.0 - 5.0	28.2
5.0 - 7.0	17.5
7.0 - 10.0	6.9
10.0+	13.4
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	29.3
Aaa (10)	19.1
Aa (9)	1.5
A (8)	33.8
Baa (7)	13.1
Below Baa (6-1)	1.0
Other	2.2

Coupon	
Range	% Held
0.0 - 5.0	91.2
5.0 - 7.0	5.1
7.0 - 9.0	1.1
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	2.6
Unclassified	0.0

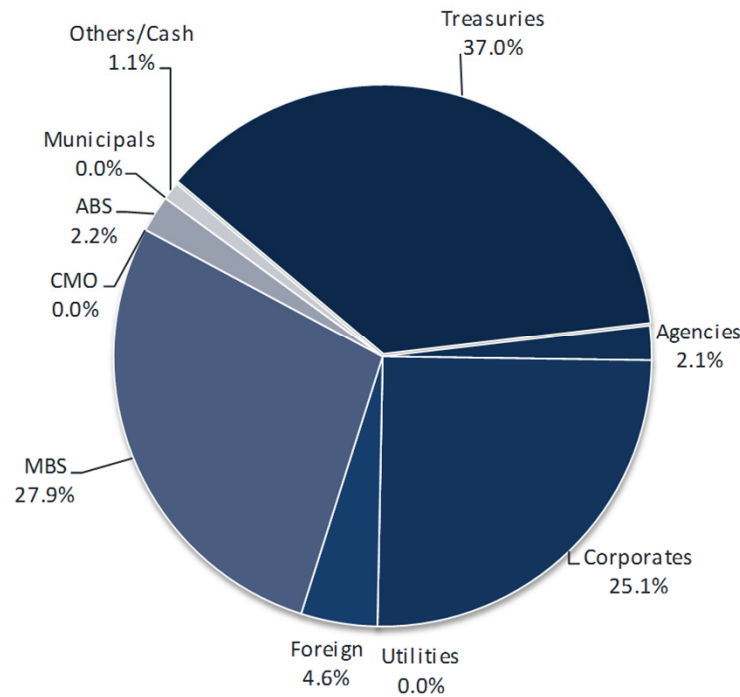
\* Characteristics excludes Opportunistic Credit Managers.



	Return (Rank)															
	Quarter		YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.0	3.2	2.6	4.6	3.7	3.7	4.8	6.1	2.0	3.2	2.6	4.6	3.7	3.7	4.8	6.1
25th Percentile	1.6	2.7	0.8	3.4	2.9	2.9	3.9	5.3	1.6	2.7	0.8	3.4	2.9	2.9	3.9	5.3
Median	1.5	2.4	0.2	3.0	2.6	2.5	3.5	4.8	1.5	2.4	0.2	3.0	2.6	2.5	3.5	4.8
75th Percentile	1.4	2.2	-0.4	2.6	2.3	2.2	3.2	4.5	1.4	2.2	-0.4	2.6	2.3	2.2	3.2	4.5
95th Percentile	1.0	1.7	-0.9	2.1	1.8	1.7	2.5	3.7	1.0	1.7	-0.9	2.1	1.8	1.7	2.5	3.7
# of Portfolios	128	128	128	127	127	126	118	102	128	128	128	127	127	126	118	102
● BlackRock Intermediate Govt	0.7 (97)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	0.7 (97)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
■ FIAM Bond	1.3 (78)	2.5 (38)	1.0 (21)	3.5 (15)	3.0 (19)	2.9 (25)	4.1 (22)	5.0 (35)	1.3 (78)	2.5 (38)	1.0 (21)	3.5 (15)	3.0 (19)	2.9 (25)	4.1 (22)	5.0 (35)
▲ BBgBarc US Aggregate TR	1.4 (66)	2.3 (67)	-0.3 (72)	2.8 (66)	2.5 (60)	2.2 (74)	3.2 (76)	4.5 (77)	1.4 (66)	2.3 (67)	-0.3 (72)	2.8 (66)	2.5 (60)	2.2 (74)	3.2 (76)	4.5 (77)

BlackRock Intermediate Govt Market Duration Pool  
 Bond Sector Allocation

Period Ending: June 30, 2017



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	37.0%	36.8%	0.3%
Agencies	2.1%	7.3%	-5.3%
Corporates	25.1%	25.2%	-0.1%
Utilities	0.0%	0.0%	0.0%
Foreign	4.6%	0.0%	4.6%
MBS	27.9%	28.4%	-0.4%
CMO	0.0%	0.0%	0.0%
ABS	2.2%	2.3%	-0.1%
Municipals	0.0%	0.0%	0.0%
Others/Cash	1.1%	0.0%	1.1%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

# BlackRock Intermediate Govt Market Duration Pool

## Bond Summary Statistics

Period Ending: June 30, 2017

Portfolio Characteristics		Portfolio	BBgBarc Aggregate
Total Number of Securities		7,495	
Total Market Value	\$	121,382,020	
Current Coupon		3.16	3.14
Yield to Maturity		2.53	2.52
Average Life		7.98	7.98
Duration		5.73	5.85
Quality		AA	AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	98.9
5.0 - 7.0	1.1
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 1.0	n/a
1.0 - 3.0	n/a
3.0 - 5.0	n/a
5.0 - 10.0	n/a
10.0 - 20.0	n/a
20.0+	n/a
Unclassified	n/a

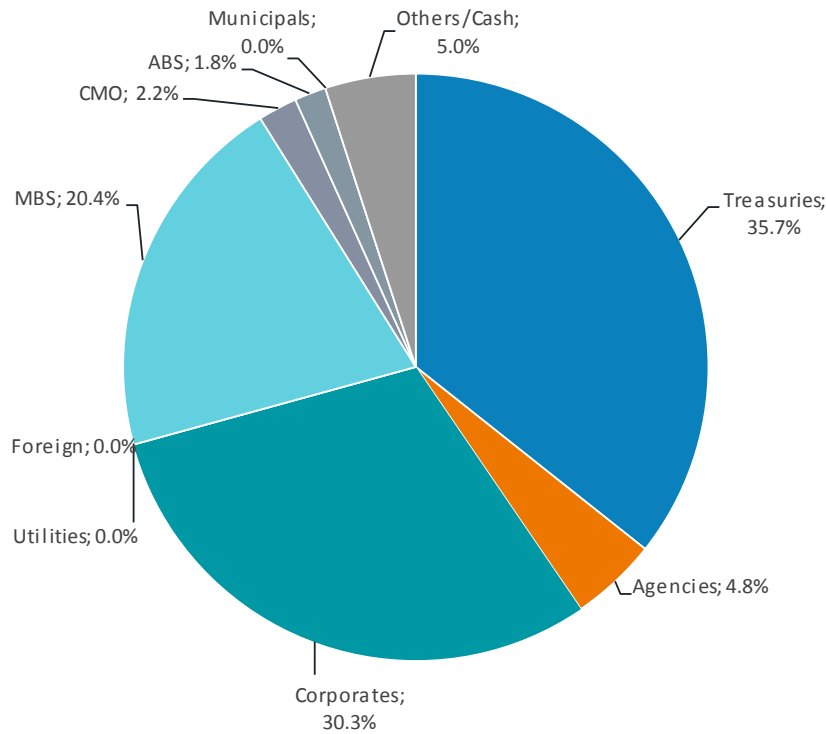
Duration	
Range	% Held
< 1.0	0.0
1.0 - 3.0	12.4
3.0 - 5.0	30.6
5.0 - 7.0	26.2
7.0 - 10.0	14.2
10.0+	16.6
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	0.0
Aaa (10)	72.1
Aa (9)	4.0
A (8)	10.5
Baa (7)	13.4
Below Baa (6-1)	0.0
Other	0.0

Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0

FIAM Bond Market Duration Pool  
Bond Sector Allocation

Period Ending: June 30, 2017



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	35.7%	36.8%	-1.1%
Agencies	4.8%	7.3%	-2.5%
Corporates	30.3%	25.2%	5.1%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	20.4%	28.4%	-8.0%
CMO	2.2%	0.0%	2.2%
ABS	1.8%	2.3%	-0.6%
Municipals	0.0%	0.0%	0.0%
Others/Cash	5.0%	0.0%	5.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

FIAM Bond Market Duration Pool  
Bond Summary Statistics

Period Ending: June 30, 2017

Portfolio Characteristics		Portfolio
Total Number of Securities		858
Total Market Value	\$	229,685,998
Current Coupon		3.13
Yield to Maturity		2.60
Average Life		7.95
Duration		5.64
Quality		AA-

BBgBarc Aggregate
3.14
2.52
7.98
5.85
AA

Yield to Maturity	
Range	% Held
0.0 - 5.0	96.8
5.0 - 7.0	2.4
7.0 - 9.0	0.4
9.0 - 11.0	0.0
11.0 - 13.0	0.1
13.0+	0.4
Unclassified	0.0

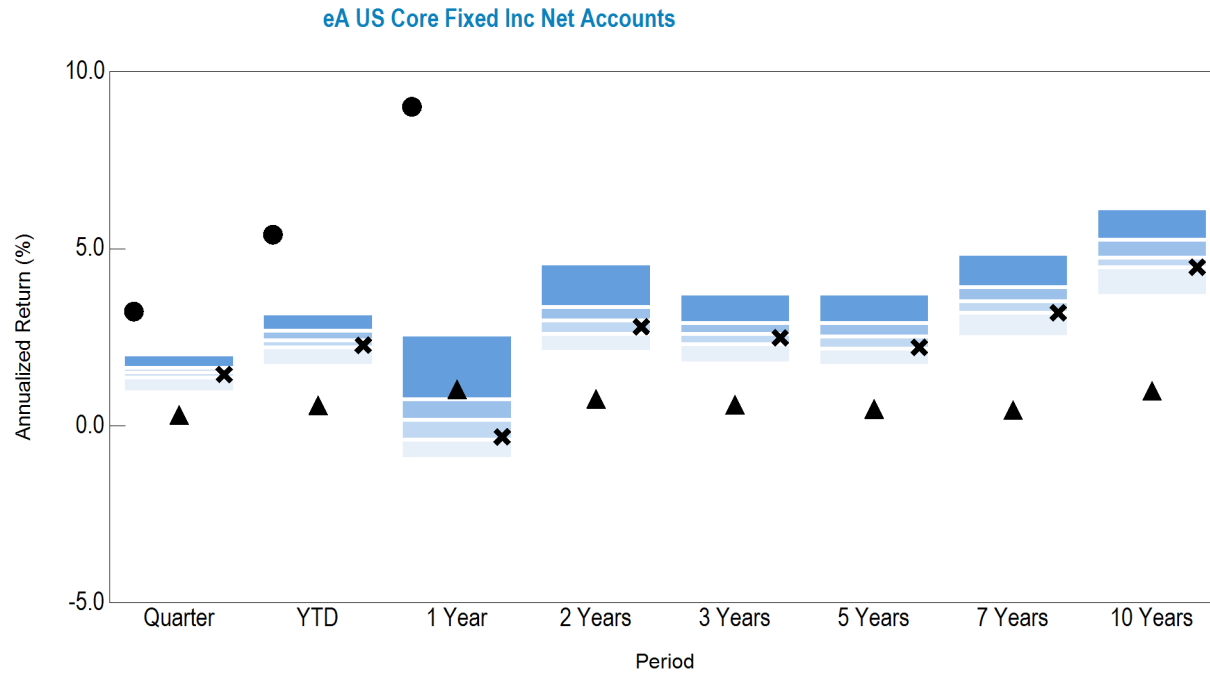
Average Life	
Range	% Held
0.0 - 1.0	2.4
1.0 - 3.0	9.0
3.0 - 5.0	27.6
5.0 - 10.0	41.1
10.0 - 20.0	4.0
20.0+	16.0
Unclassified	0.0

Duration	
Range	% Held
0.0 - 1.0	2.4
1.0 - 3.0	10.2
3.0 - 5.0	40.9
5.0 - 7.0	21.5
7.0 - 10.0	6.5
10.0+	18.5
Unclassified	0.0

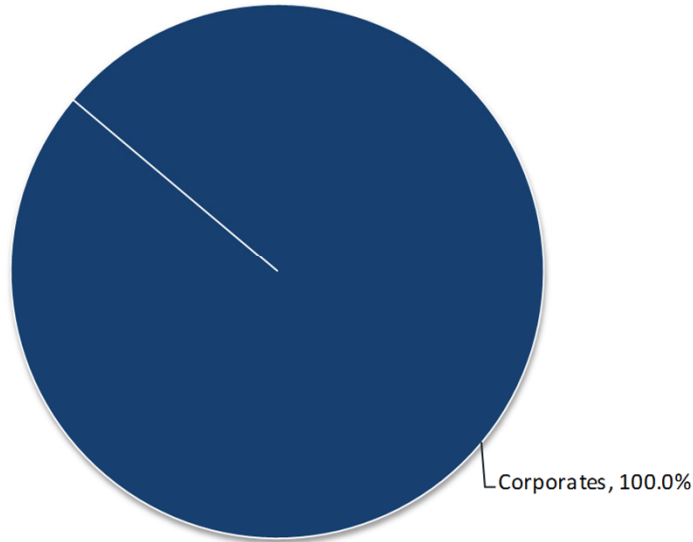
Quality	
Range	% Held
Govt (10)	59.3
Aaa (10)	0.5
Aa (9)	1.0
A (8)	13.3
Baa (7)	19.4
Below Baa (6-1)	2.0
Other	4.5

Coupon	
Range	% Held
0.0 - 5.0	82.2
5.0 - 7.0	10.3
7.0 - 9.0	2.2
9.0 - 11.0	0.1
11.0 - 13.0	0.0
13.0+	5.2
Unclassified	0.0





	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.0	3.2	2.6	4.6	3.7	3.7	4.8	6.1
25th Percentile	1.6	2.7	0.8	3.4	2.9	2.9	3.9	5.3
Median	1.5	2.4	0.2	3.0	2.6	2.5	3.5	4.8
75th Percentile	1.4	2.2	-0.4	2.6	2.3	2.2	3.2	4.5
95th Percentile	1.0	1.7	-0.9	2.1	1.8	1.7	2.5	3.7
# of Portfolios	128	128	128	127	127	126	118	102
● Western TRU	3.2 (1)	5.4 (1)	9.0 (1)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ 3-Month Libor Total Return USD	0.3 (99)	0.6 (99)	1.0 (20)	0.8 (99)	0.6 (99)	0.5 (99)	0.4 (99)	1.0 (99)
✕ BBgBarc US Aggregate TR	1.4 (66)	2.3 (67)	-0.3 (72)	2.8 (66)	2.5 (60)	2.2 (74)	3.2 (76)	4.5 (77)



Sector	Account Weight	BBgBarc Aggregate	
		Weight	Difference
Treasuries	0.0%	36.8%	-36.8%
Agencies	0.0%	7.3%	-7.3%
Corporates	100.0%	25.2%	74.8%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	28.4%	-28.4%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	2.3%	-2.3%
Municipals	0.0%	0.0%	0.0%
Others/Cash	0.0%	0.0%	0.0%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

Portfolio Characteristics		
	Portfolio	
Total Number of Securities		1
Total Market Value	\$	114,008,666
Current Coupon		0.00
Yield to Maturity		4.90
Average Life		10.91
Duration		2.19
Quality		A-

BBgBarc Aggregate
3.14
2.52
7.98
5.85
AA

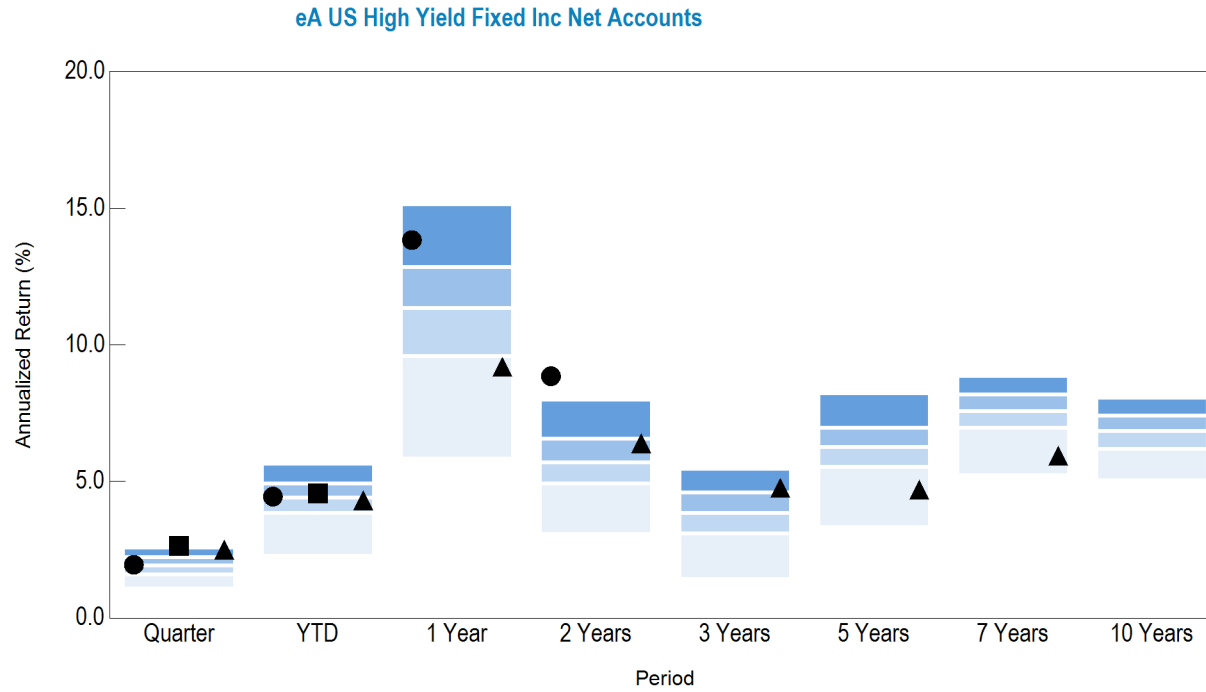
Yield to Maturity	
Range	% Held
0.0 - 5.0	n/a
5.0 - 7.0	n/a
7.0 - 9.0	n/a
9.0 - 11.0	n/a
11.0 - 13.0	n/a
13.0+	n/a
Unclassified	n/a

Average Life	
Range	% Held
0.0 - 1.0	0.0
1.0 - 3.0	0.0
3.0 - 5.0	0.0
5.0 - 10.0	0.0
10.0 - 20.0	100.0
20.0+	0.0
Unclassified	0.0

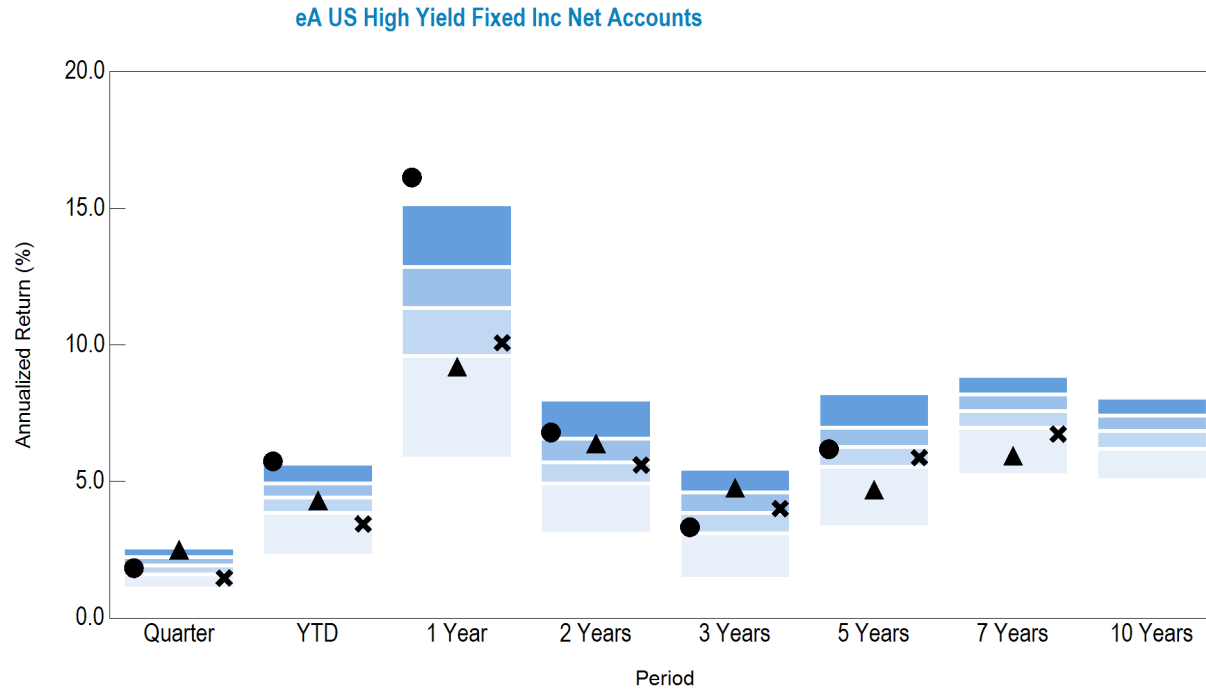
Duration	
Range	% Held
< 1.0	0.0
1.0 - 3.0	100.0
3.0 - 5.0	0.0
5.0 - 7.0	0.0
7.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	0.0
Aaa (10)	0.0
Aa (9)	0.0
A (8)	100.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	0.0

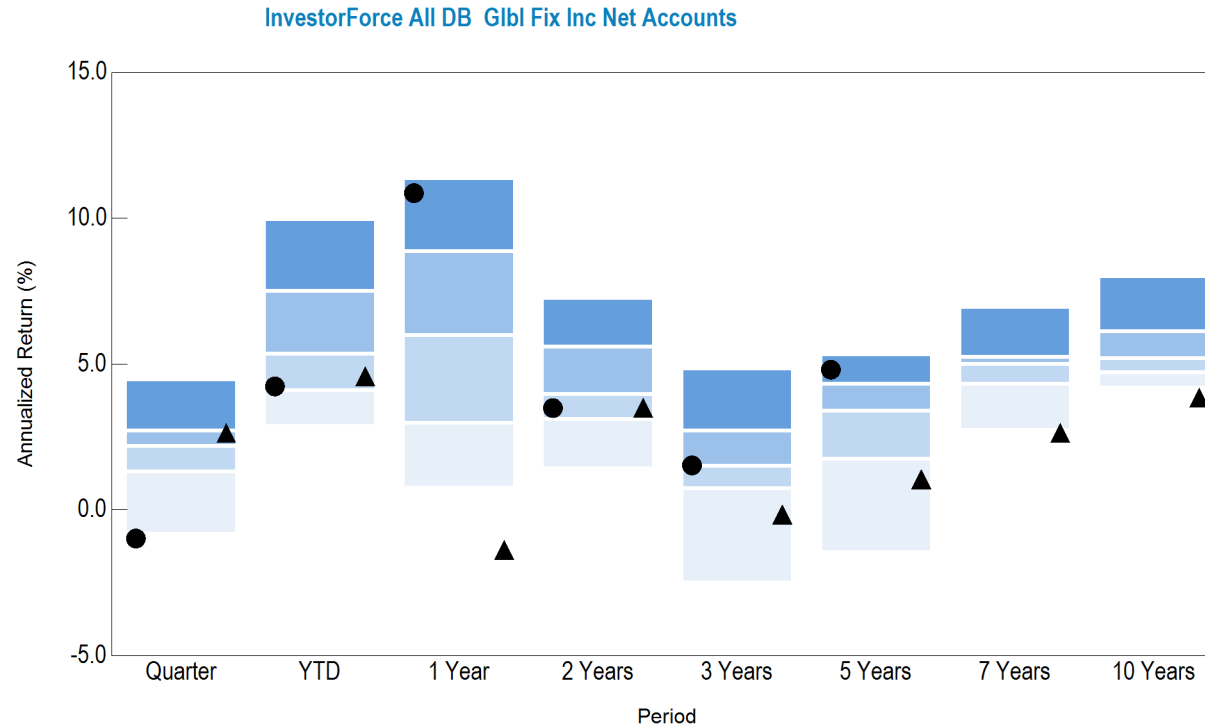
Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 10.0	0.0
10.0+	0.0
Unclassified	0.0



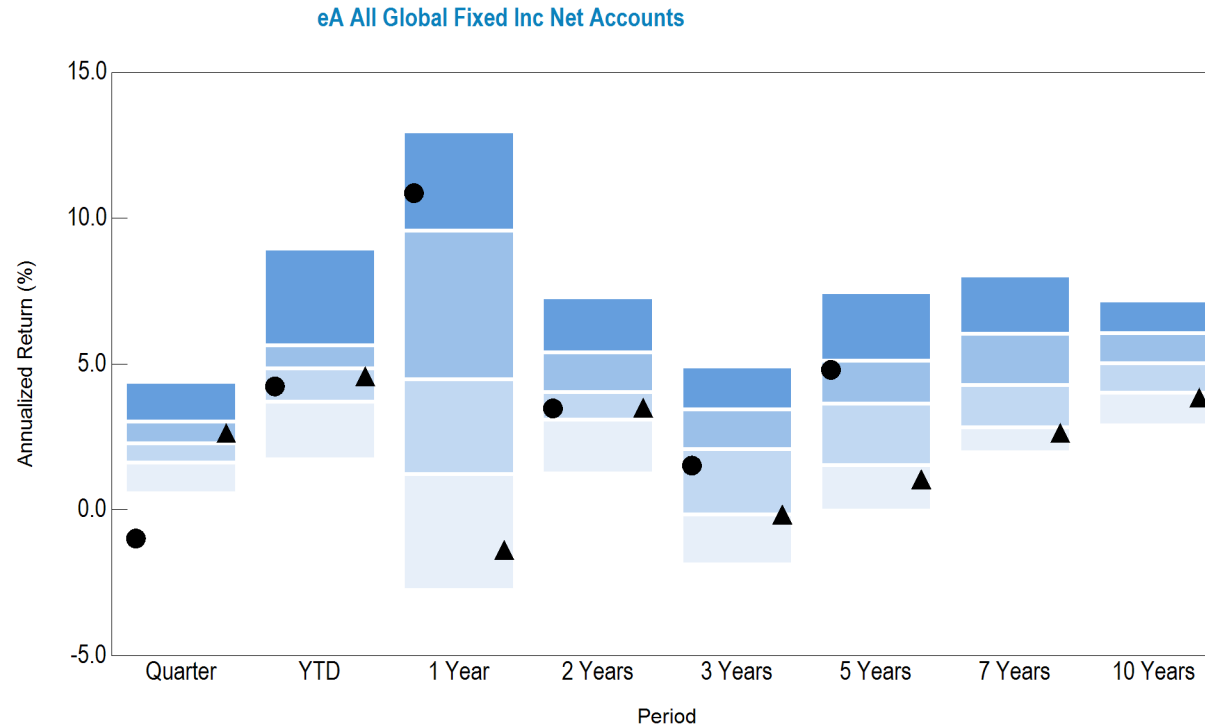
	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	5.6	15.1	8.0	5.4	8.2	8.9	8.1
25th Percentile	2.2	4.9	12.9	6.6	4.6	7.0	8.2	7.4
Median	1.9	4.4	11.4	5.7	3.8	6.3	7.6	6.9
75th Percentile	1.6	3.9	9.6	4.9	3.1	5.6	7.0	6.2
95th Percentile	1.1	2.3	5.9	3.1	1.5	3.3	5.2	5.0
# of Portfolios	118	117	116	114	105	93	77	58
● Beach Point Select	1.9 (50)	4.4 (50)	13.8 (16)	8.9 (1)	-- (--)	-- (--)	-- (--)	-- (--)
■ TCP Direct Lending VIII	2.6 (4)	4.6 (45)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	2.5 (8)	4.3 (61)	9.2 (78)	6.4 (28)	4.8 (21)	4.7 (92)	5.9 (94)	-- (--)



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.6	5.6	15.1	8.0	5.4	8.2	8.9	8.1
25th Percentile	2.2	4.9	12.9	6.6	4.6	7.0	8.2	7.4
Median	1.9	4.4	11.4	5.7	3.8	6.3	7.6	6.9
75th Percentile	1.6	3.9	9.6	4.9	3.1	5.6	7.0	6.2
95th Percentile	1.1	2.3	5.9	3.1	1.5	3.3	5.2	5.0
# of Portfolios	118	117	116	114	105	93	77	58
● Brigade Capital	1.8 (61)	5.7 (4)	16.1 (3)	6.8 (19)	3.3 (69)	6.2 (59)	-- (--)	-- (--)
▲ BBgBarc BA Intermediate HY	2.5 (8)	4.3 (61)	9.2 (78)	6.4 (28)	4.8 (21)	4.7 (92)	5.9 (94)	-- (--)
✕ 50% Barclays HY/ 50% Bank Loan	1.5 (84)	3.4 (83)	10.1 (70)	5.6 (55)	4.0 (43)	5.9 (68)	6.7 (84)	-- (--)



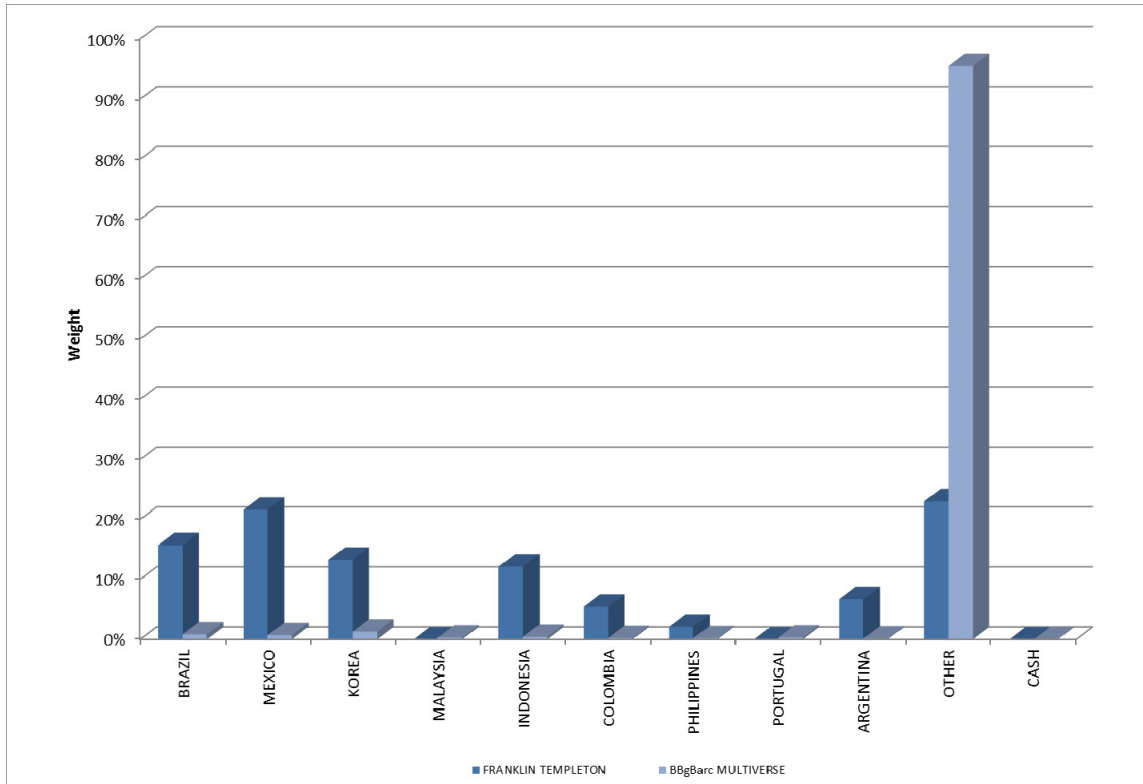
	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.5	10.0	11.4	7.3	4.8	5.3	7.0	8.0
25th Percentile	2.7	7.5	8.9	5.6	2.7	4.3	5.3	6.1
Median	2.2	5.4	6.0	4.0	1.5	3.4	5.0	5.2
75th Percentile	1.3	4.1	3.0	3.1	0.8	1.8	4.3	4.7
95th Percentile	-0.8	2.9	0.8	1.4	-2.5	-1.4	2.8	4.2
# of Portfolios	39	39	38	38	35	27	18	16
● Global Fixed Income	-1.0 (99)	4.2 (72)	10.9 (14)	3.5 (71)	1.5 (53)	4.8 (16)	-- (--)	-- (--)
▲ BBgBarc Multiverse TR	2.6 (33)	4.6 (58)	-1.4 (99)	3.5 (69)	-0.2 (83)	1.1 (84)	2.6 (97)	3.8 (99)



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.4	8.9	13.0	7.3	4.9	7.5	8.0	7.2
25th Percentile	3.0	5.7	9.6	5.4	3.5	5.1	6.0	6.1
Median	2.3	4.9	4.5	4.1	2.1	3.7	4.3	5.0
75th Percentile	1.6	3.7	1.2	3.1	-0.1	1.5	2.8	4.0
95th Percentile	0.6	1.7	-2.7	1.3	-1.9	0.0	2.0	2.9
# of Portfolios	203	203	200	191	179	157	119	87
● Franklin Templeton	-1.0 (99)	4.2 (65)	10.9 (19)	3.5 (65)	1.5 (57)	4.8 (32)	-- (--)	-- (--)
▲ BBgBarc Multiverse TR	2.6 (40)	4.6 (57)	-1.4 (91)	3.5 (64)	-0.2 (76)	1.1 (83)	2.6 (81)	3.8 (81)

Franklin Templeton  
Portfolio Country Weights

Period Ending: June 30, 2017

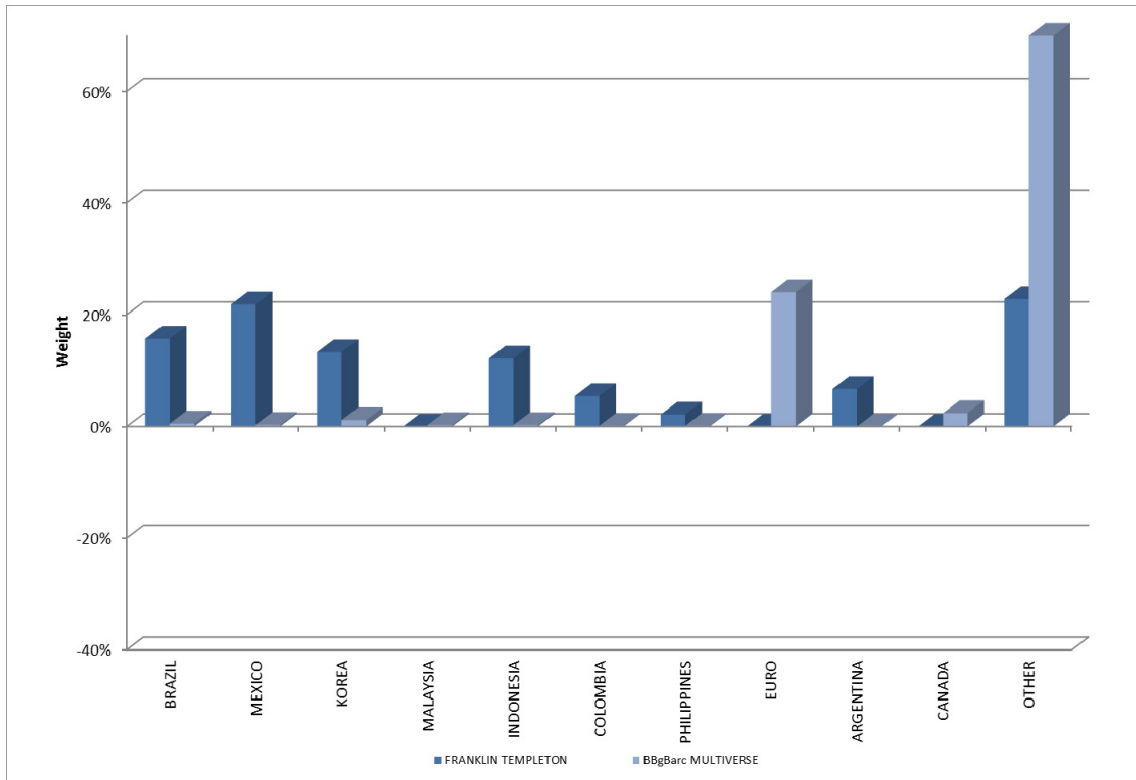


COUNTRY	MARKET VALUE	FRANKLIN TEMPLETON	BBgBarc MULTIVERSE	DIFF
BRAZIL	\$ 17,405	15.7%	0.9%	+14.8%
MEXICO	\$ 23,950	21.6%	0.7%	+20.9%
KOREA	\$ 14,709	13.3%	1.3%	+12.0%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 13,461	12.1%	0.4%	+11.7%
COLOMBIA	\$ 6,022	5.4%	0.2%	+5.2%
PHILIPPINES	\$ 2,359	2.1%	0.2%	+1.9%
PORTUGAL	\$ -	0.0%	0.3%	-0.3%
ARGENTINA	\$ 7,433	6.7%	0.2%	+6.6%
OTHER	\$ 25,524	23.0%	95.5%	-72.5%
CASH	\$ -	0.0%	0.0%	0.0%
	\$ 110,864	100.0%	100.0%	0.0%

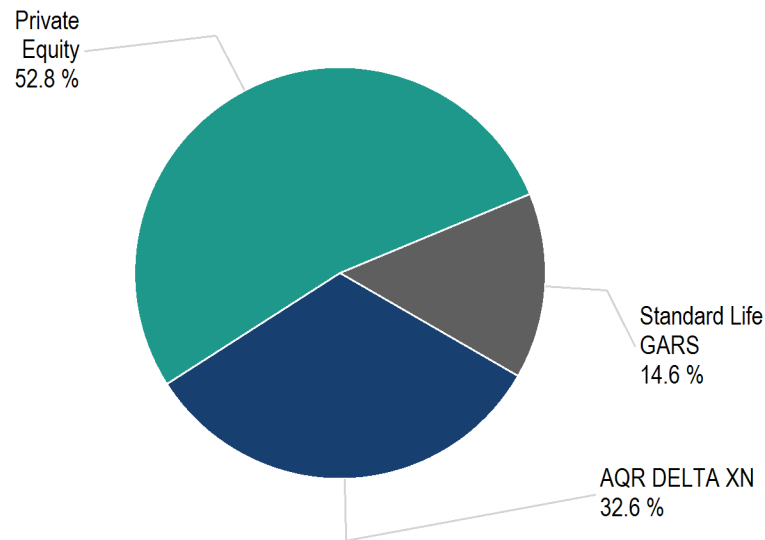


Franklin Templeton  
Portfolio Currency Exposures

Period Ending: June 30, 2017



CURRENCY	MARKET VALUE	FRANKLIN TEMPLETON	BbgBarc MULTIVERSE	DIFF
BRAZIL	\$ 17,406	15.7%	0.5%	+15.2%
MEXICO	\$ 24,213	21.8%	0.3%	+21.6%
KOREA	\$ 14,712	13.3%	1.1%	+12.1%
MALAYSIA	\$ -	0.0%	0.3%	-0.3%
INDONESIA	\$ 13,459	12.1%	0.3%	+11.9%
COLOMBIA	\$ 6,020	5.4%	0.1%	+5.3%
PHILIPPINES	\$ 2,361	2.1%	0.1%	+2.0%
EURO	\$ -	0.0%	24.0%	-24.0%
ARGENTINA	\$ 7,428	6.7%	0.0%	+6.7%
CANADA	\$ -	0.0%	2.4%	-2.4%
OTHER	\$ 25,266	22.8%	70.9%	-48.1%
	\$ 110,864	100.0%	100.0%	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$156,969,306	32.6%	-0.8%
Private Equity	\$253,994,925	52.8%	0.5%
Standard Life GARS	\$70,318,701	14.6%	-0.1%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$481,282,932</b>	<b>100.0%</b>	<b>-0.4%</b>

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.8%	5.4%	1.4	0.6	7.0%
Alternatives Allocation Index	3.8%	5.9%	0.6	--	0.0%
Private Equity	19.0%	10.0%	1.9	0.5	14.2%
Russell 3000 +3%	12.1%	10.4%	1.1	--	0.0%
Hedge Fund/Absolute Return	7.1%	5.0%	1.4	0.5	5.0%
Libor 1 month +4%	4.4%	0.1%	33.8	--	0.0%
AQR DELTA XN	7.3%	5.3%	1.3	0.5	5.4%
Libor 1 month +4%	4.4%	0.1%	33.8	--	0.0%

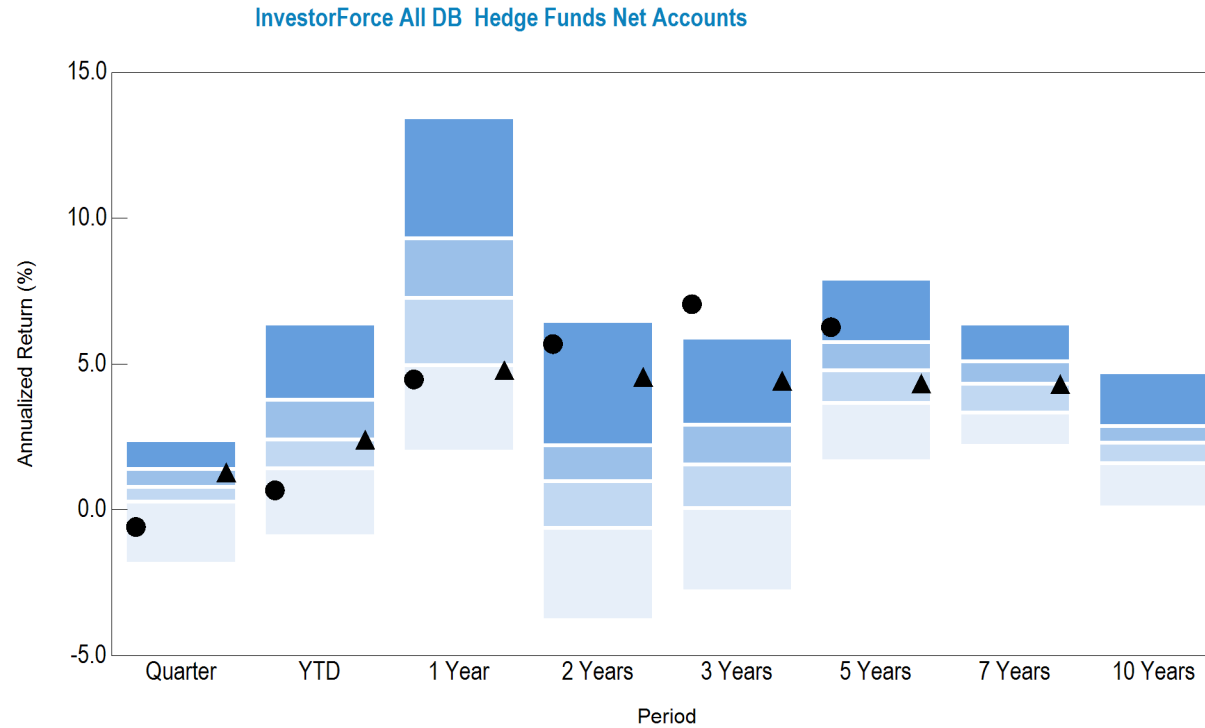
**Statistics Summary**

**5 Years**

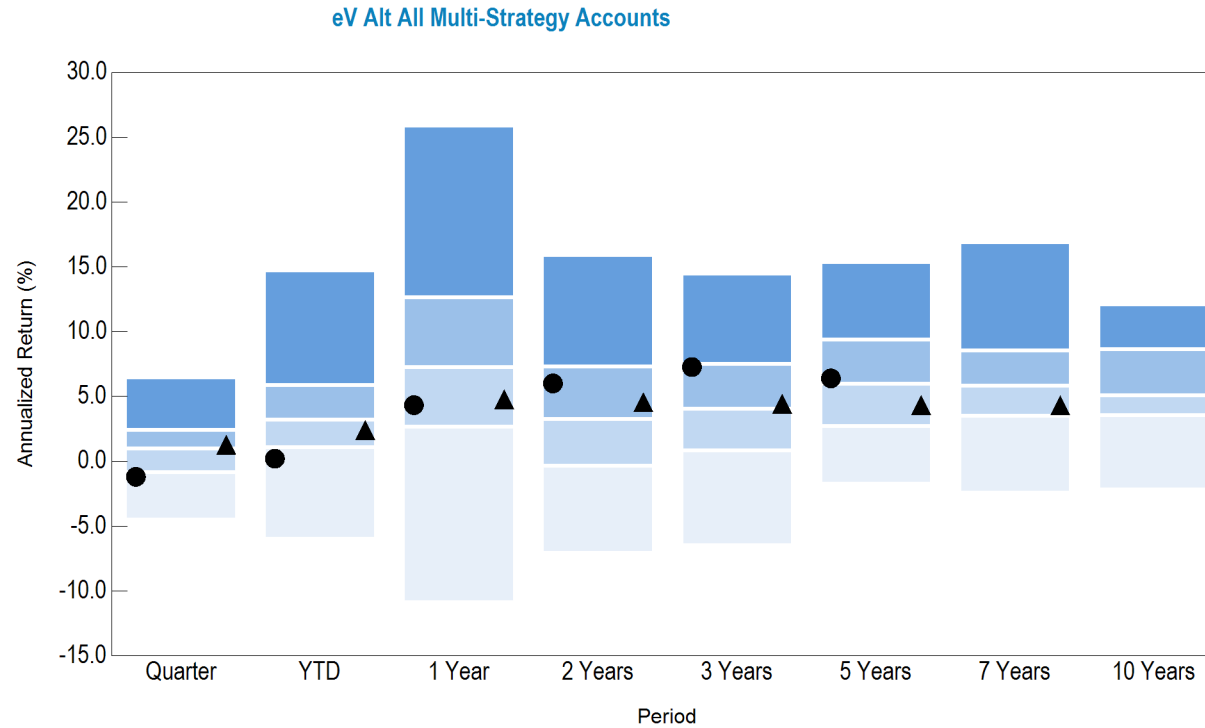
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.2%	5.5%	1.3	0.1	6.2%
Alternatives Allocation Index	6.7%	5.5%	1.2	--	0.0%
Private Equity	15.2%	9.2%	1.6	-0.2	13.0%
Russell 3000 +3%	17.6%	9.6%	1.8	--	0.0%
Hedge Fund/Absolute Return	6.3%	4.9%	1.2	0.4	4.9%
Libor 1 month +4%	4.3%	0.1%	36.5	--	0.0%
AQR DELTA XN	6.4%	5.1%	1.2	0.4	5.1%
Libor 1 month +4%	4.3%	0.1%	36.5	--	0.0%

Hedge Fund/Absolute Return  
Peer Universe Comparison

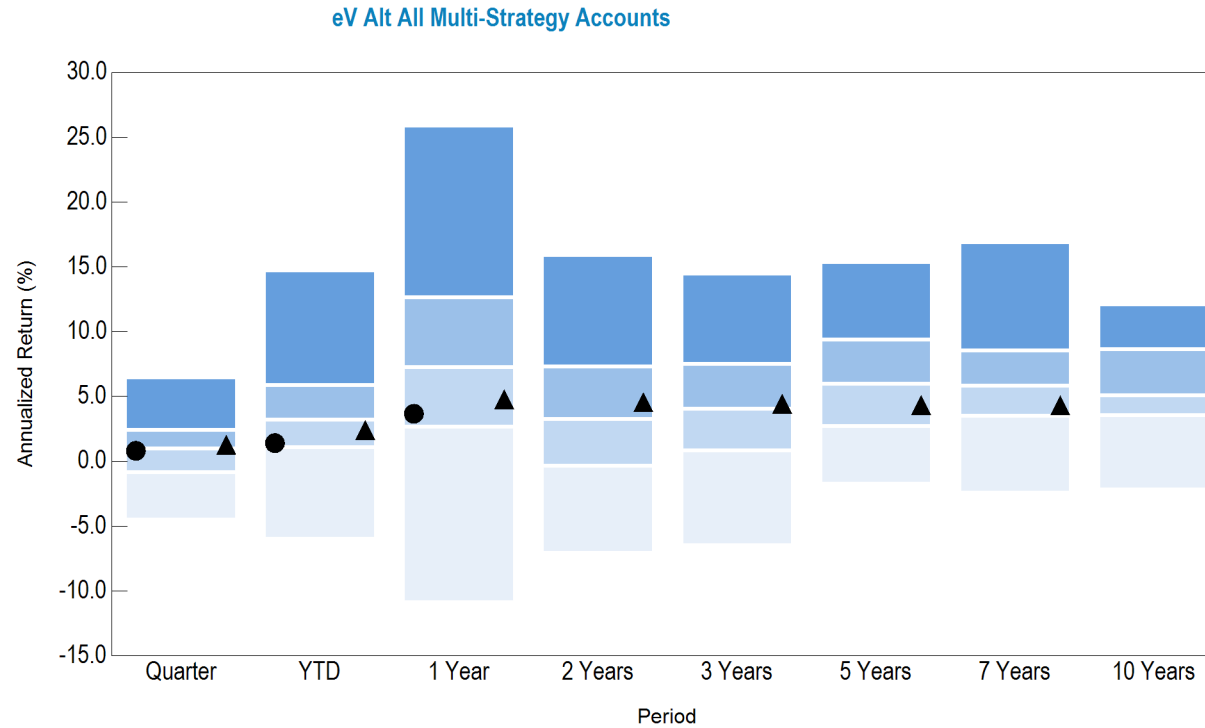
Period Ending: June 30, 2017



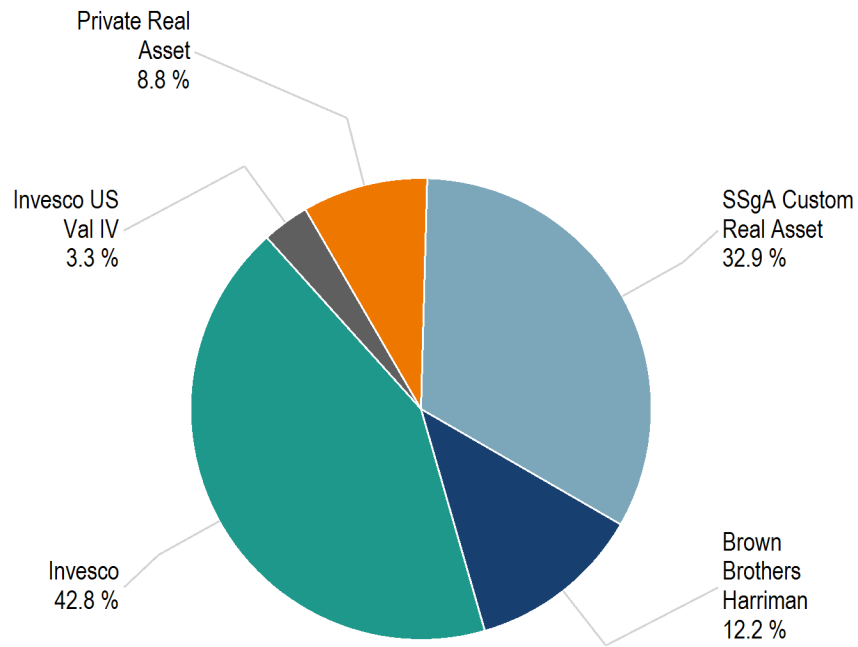
	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	2.4	6.4	13.5	6.5	5.9	7.9	6.4	4.7
25th Percentile	1.4	3.8	9.3	2.2	2.9	5.8	5.1	2.9
Median	0.8	2.4	7.3	1.0	1.6	4.8	4.3	2.3
75th Percentile	0.3	1.4	5.0	-0.6	0.1	3.7	3.3	1.6
95th Percentile	-1.8	-0.9	2.0	-3.8	-2.8	1.7	2.2	0.1
# of Portfolios	213	210	208	204	202	183	130	74
● Hedge Fund/Absolute Return	-0.6 (91)	0.7 (85)	4.5 (81)	5.7 (7)	7.1 (3)	6.3 (16)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.3 (32)	2.4 (51)	4.8 (77)	4.6 (11)	4.4 (11)	4.3 (61)	4.3 (51)	-- (--)



	Return (Rank)							
5th Percentile	6.5	14.7	25.9	15.9	14.5	15.4	16.9	12.1
25th Percentile	2.5	5.9	12.7	7.3	7.6	9.4	8.6	8.7
Median	1.0	3.2	7.3	3.3	4.1	6.0	5.9	5.1
75th Percentile	-0.8	1.1	2.7	-0.3	0.8	2.8	3.5	3.6
95th Percentile	-4.5	-6.0	-10.9	-7.1	-6.4	-1.7	-2.4	-2.2
# of Portfolios	297	295	288	269	246	192	153	93
● AQR DELTA XN	-1.2 (79)	0.2 (80)	4.3 (65)	6.0 (32)	7.3 (29)	6.4 (48)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.3 (45)	2.4 (62)	4.8 (62)	4.6 (40)	4.4 (48)	4.3 (66)	4.3 (66)	-- (--)



	Return (Rank)							
5th Percentile	6.5	14.7	25.9	15.9	14.5	15.4	16.9	12.1
25th Percentile	2.5	5.9	12.7	7.3	7.6	9.4	8.6	8.7
Median	1.0	3.2	7.3	3.3	4.1	6.0	5.9	5.1
75th Percentile	-0.8	1.1	2.7	-0.3	0.8	2.8	3.5	3.6
95th Percentile	-4.5	-6.0	-10.9	-7.1	-6.4	-1.7	-2.4	-2.2
# of Portfolios	297	295	288	269	246	192	153	93
● Standard Life GARS	0.8 (56)	1.4 (73)	3.7 (69)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Libor 1 month +4%	1.3 (45)	2.4 (62)	4.8 (62)	4.6 (40)	4.4 (48)	4.3 (66)	4.3 (66)	-- (--)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Invesco	\$248,118,958	42.8%	0.0%
Invesco US Val IV	\$18,983,489	3.3%	0.0%
Brown Brother Harriman	\$70,919,206	12.2%	0.0%
Private Real Asset	\$51,254,052	8.8%	-0.3%
SSgA Custom Real Asset	\$190,503,104	32.9%	0.1%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$579,778,809</b>	<b>100.0%</b>	<b>-0.1%</b>



**Statistics Summary**

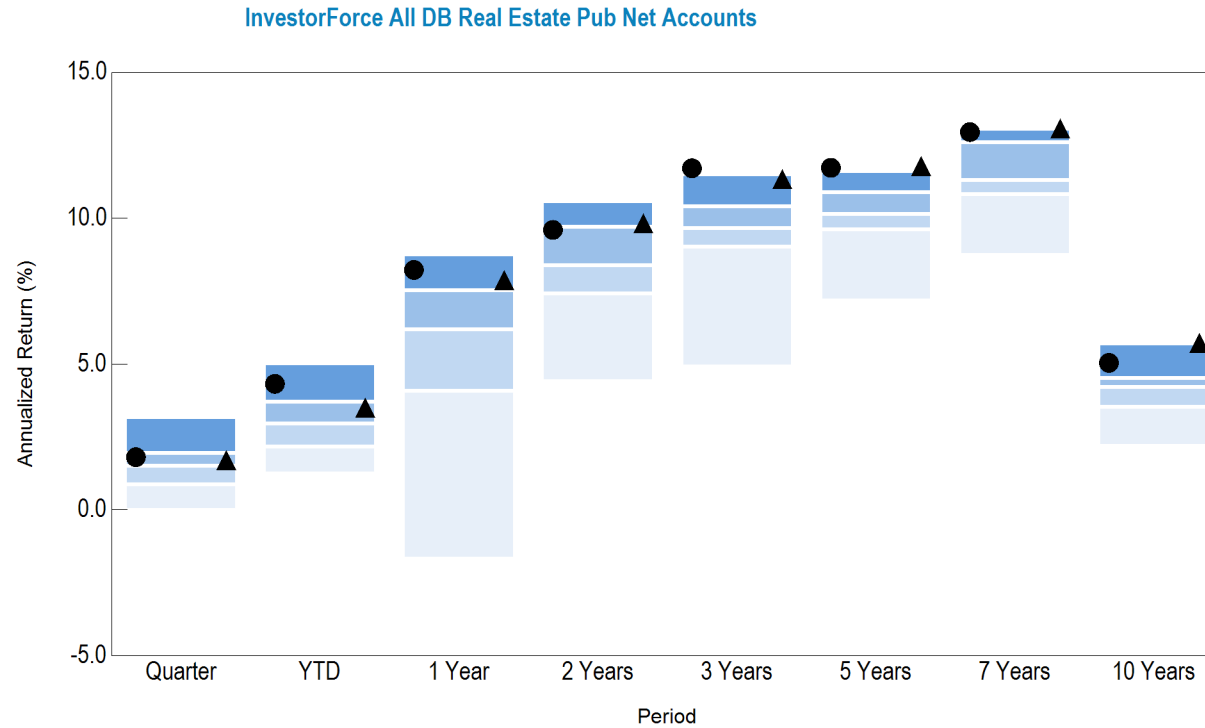
**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Real Estate	11.71%	5.10%	2.25	0.26	1.44%
NCREIF ODCE	11.34%	4.77%	2.33	--	0.00%
Invesco	11.59%	5.06%	2.24	0.16	1.52%
NCREIF ODCE	11.34%	4.77%	2.33	--	0.00%
TIPS	0.37%	2.86%	0.05	-0.17	1.50%
BBgBarc US TIPS TR	0.63%	3.83%	0.10	--	0.00%
Brown Brothers Harriman	0.37%	2.86%	0.05	-0.17	1.50%
BBgBarc US TIPS TR	0.63%	3.83%	0.10	--	0.00%

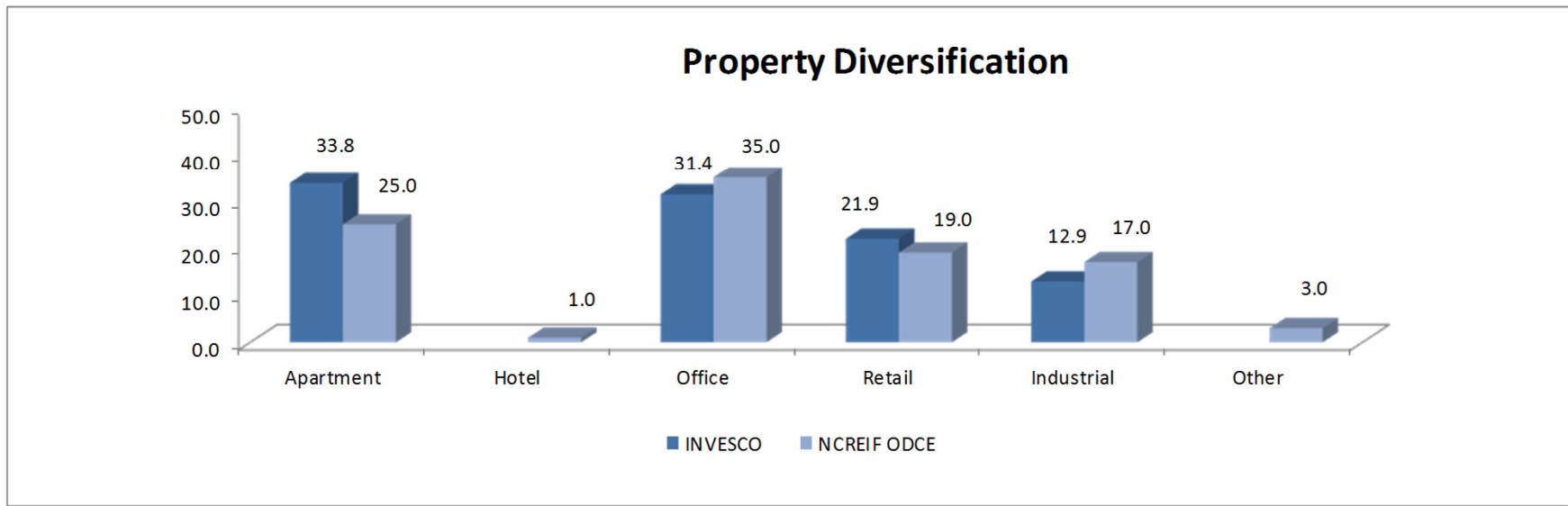
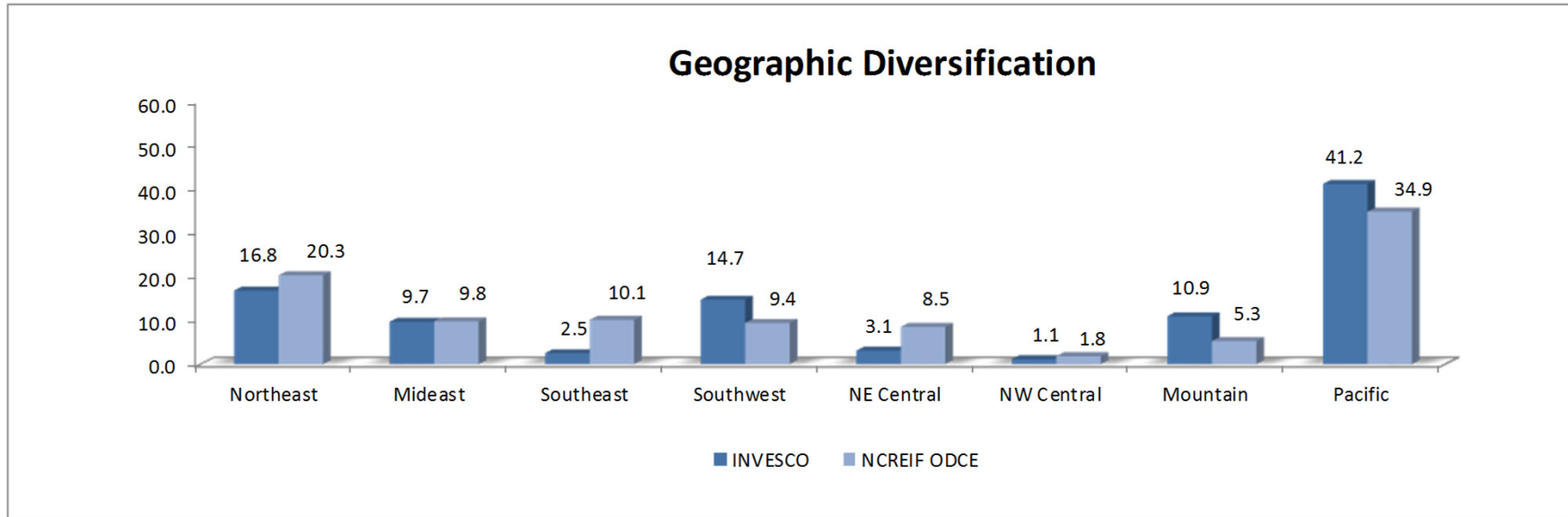
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	11.73%	5.03%	2.30	-0.04	28
NCREIF ODCE	11.78%	4.85%	2.40	--	1
Invesco	11.65%	5.01%	2.29	-0.09	--
NCREIF ODCE	11.78%	4.85%	2.40	--	--
TIPS	-0.09%	3.97%	-0.06	-0.28	--
BBgBarc US TIPS TR	0.27%	4.52%	0.02	--	--
Brown Brothers Harriman	-0.09%	3.97%	-0.06	-0.28	53
BBgBarc US TIPS TR	0.27%	4.52%	0.02	--	1



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.2	5.0	8.8	10.6	11.5	11.6	13.1	5.7
25th Percentile	2.0	3.7	7.6	9.7	10.4	10.9	12.6	4.5
Median	1.5	3.0	6.2	8.4	9.7	10.2	11.3	4.2
75th Percentile	0.9	2.2	4.1	7.4	9.0	9.6	10.8	3.6
95th Percentile	0.0	1.3	-1.7	4.4	4.9	7.2	8.7	2.2
# of Portfolios	71	70	70	69	67	58	53	34
● Real Estate	1.8 (31)	4.3 (8)	8.2 (16)	9.6 (30)	11.7 (4)	11.7 (4)	13.0 (11)	5.0 (17)
▲ NCREIF ODCE	1.7 (36)	3.5 (41)	7.9 (22)	9.8 (23)	11.3 (9)	11.8 (4)	13.1 (4)	5.7 (4)



INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: June 30, 2017

Property Name	MSA	Prior Quarter Carry Value	Current Quarter Carry Value	Net Market Value	Date Added to Fund	Last Valuation Date	SamCERA ownership as of 06/30/2017 2.92%
<b>APARTMENTS</b>							
Stoneridge Apartments	Pleasanton, CA	\$241,100,000	\$234,000,000	\$234,000,000	4Q06	June-17	\$6,837,143
Instrata Pentagon City	Arlington, VA	\$149,000,000	\$151,000,000	\$91,000,000	3Q10	June-17	\$2,658,889
Ladd Tower	Portland, OR	\$137,000,000	\$137,000,000	\$79,739,286	4Q10	June-17	\$2,329,867
Legacy Fountain Plaza	San Jose, CA	\$155,959,280	\$155,962,259	\$155,962,259	1Q11	June-17	\$4,556,992
Instrata Gramercy (fka The Elektra)	New York, NY	\$177,500,000	\$176,900,000	\$104,019,888	1Q11	June-17	\$3,039,311
Instrata Brooklyn Heights (fka 75 Clinton Street)	Brooklyn, NY	\$66,000,000	\$66,400,000	\$66,400,000	1Q12	June-17	\$1,940,112
The Artisan Laguna Beach	Orange County, CA	\$163,000,000	\$164,000,000	\$102,032,072	3Q12	June-17	\$2,981,230
The GoodWynn	Atlanta, GA	\$97,200,000	\$97,500,000	\$97,500,000	4Q12	June-17	\$2,848,809
Instrata Hell's Kitchen	New York, NY	\$194,000,000	\$188,000,000	\$114,380,000	1Q13	June-17	\$3,342,019
Sunset Vine Tower	Los Angeles, CA	\$96,000,000	\$96,300,000	\$96,300,000	2Q13	June-17	\$2,813,747
The Ashton	Dallas, TX	\$124,000,000	\$124,000,000	\$66,436,083	4Q13	June-17	\$1,941,167
The Pointe at Westchester	West Chester, PA	\$58,500,000	\$58,800,000	\$58,800,000	4Q13	June-17	\$1,718,051
206 Bell	Seattle, WA	\$46,200,000	\$48,000,000	\$48,000,000	4Q13	June-17	\$1,402,491
Cadence Union Station	Denver, CO	\$88,100,000	\$90,000,000	\$52,626,846	1Q14	June-17	\$1,537,681
Joseph Arnold Lofts	Seattle, WA	\$70,100,000	\$71,200,000	\$36,726,925	2Q14	June-17	\$1,073,108
Verve	Denver, CO	\$114,000,000	\$113,000,000	\$113,000,000	3Q14	June-17	\$3,301,697
Broadstone Little Italy	San Diego CA	\$118,000,000	\$121,000,000	\$67,442,203	3Q14	June-17	\$1,970,564
33 Tehama	San Francisco, CA	\$215,507,125	\$234,229,935	\$155,637,180	3Q14	June-17	\$4,547,494
The Parker	Portland, OR	\$67,000,000	\$67,000,000	\$34,595,721	1Q15	June-17	\$1,010,837
Legacy West Apartments	Plano, TX	\$93,619,102	\$103,991,140	\$74,389,114	1Q15	June-17	\$2,173,543
Village at Park Place	Irvine, CA	\$118,386,247	\$130,808,885	\$88,981,716	2Q15	June-17	\$2,599,917
Wheaton 121	Wheaton, IL	\$89,300,000	\$81,900,000	\$81,900,000	2Q15	June-17	\$2,393,000
Jefferson Marketplace	Washington, DC	\$149,000,000	\$152,000,000	\$81,245,875	4Q15	June-17	\$2,373,887
Retreat at Park Meadows	Littleton, CO	\$129,000,000	\$132,000,000	\$132,000,000	4Q15	June-17	\$3,856,850
North Water	Chicago, IL	\$257,000,000	\$263,000,000	\$263,000,000	1Q16	June-17	\$7,684,481
2270 Broadway	Oakland, CA	\$20,466,761	\$23,105,355	\$23,105,355	1Q16	June-17	\$675,105
Runway at Playa Vista -Apartments	Playa Vista, CA	\$154,760,000	\$163,770,000	\$100,296,108	1Q16	June-17	\$2,930,508
Clayton Lane Apartments	Denver, CO	\$34,083,028	\$34,788,644	\$34,788,644	1Q16	June-17	\$1,016,474
Biscayne 27	Miami, FL	\$17,738,305	\$36,026,090	\$36,026,090	2Q16	June-17	\$1,052,630
Flats 8300	Washington DC	\$219,000,000	\$228,000,000	\$124,500,000	2Q16	June-17	\$3,637,710
407 1st Ave	New York, NY	\$190,000,000	\$193,500,000	\$193,500,000	4Q16	June-17	\$5,653,791
5250 Park	Miami, FL	\$0	\$8,711,262	\$8,711,262	2Q17	Acq 2Q17	\$254,531
		<b>\$3,850,519,848</b>	<b>\$3,945,893,570</b>	<b>\$3,017,042,627</b>			<b>\$88,153,635</b>
<b>INDUSTRIAL</b>							
Arjons Industrial Park	San Diego CA	\$39,900,000	\$40,900,000	\$40,900,000	2Q04	June-17	\$1,195,039
Gateway Business Park	Dallas TX	\$13,400,000	\$13,500,000	\$13,500,000	2Q04	June-17	\$394,451
Hayward Industrial	Oakland CA	\$178,600,000	\$183,000,000	\$183,000,000	3Q04-3Q07	June-17	\$5,346,996
Lackman Park	Kansas City MO-KS	\$24,900,000	\$25,100,000	\$25,100,000	2Q04	June-17	\$733,386
Crossroads Industrial	Kansas City MO-KS	\$8,400,000	\$8,800,000	\$8,800,000	1Q06	June-17	\$257,123
Oakesdale Commerce Center	Seattle - Belle - Eve WA	\$52,200,000	\$53,100,000	\$53,100,000	1Q06	June-17	\$1,551,505
South Bay Industrial	Los Angeles, CA	\$47,200,000	\$55,800,000	\$55,800,000	4Q06	June-17	\$1,630,396
Steeplechase 95 International Business Park	Capitol Heights, MD	\$96,300,000	\$96,400,000	\$96,400,000	1Q11	June-17	\$2,816,669
Airport Trade Center Portfolio	Dallas, TX	\$121,700,000	\$126,800,000	\$126,800,000	1Q11	June-17	\$3,704,913
IE Logistics	San Bernardino, CA	\$134,800,000	\$132,700,000	\$132,700,000	3Q11	June-17	\$3,877,303
Railhead Drive Industrial	Dallas, TX	\$62,500,000	\$62,500,000	\$62,500,000	4Q11	June-17	\$1,826,160
Empire Gateway aka Chino South Logistics Center	Chino, CA	\$245,000,000	\$257,000,000	\$257,000,000	4Q12	June-17	\$7,509,169
SFO Logistics Center	San Francisco, CA	\$140,000,000	\$140,000,000	\$140,000,000	4Q13	June-17	\$4,090,598
Miami Industrial Portfolio	Various, FL	\$93,864,605	\$114,495,190	\$83,414,659	1Q16	June-17	\$2,437,256
OMP Burbank	Los Angeles, CA	\$70,896,635	\$70,539,525	\$70,539,525	2Q16	June-17	\$2,061,063
Pacific Commons	Freemont, CA	\$121,263,390	\$122,661,267	\$58,198,367	1Q17	June-17	\$1,700,472
		<b>\$1,450,924,630</b>	<b>\$1,503,295,982</b>	<b>\$1,407,752,551</b>			<b>\$41,132,499</b>

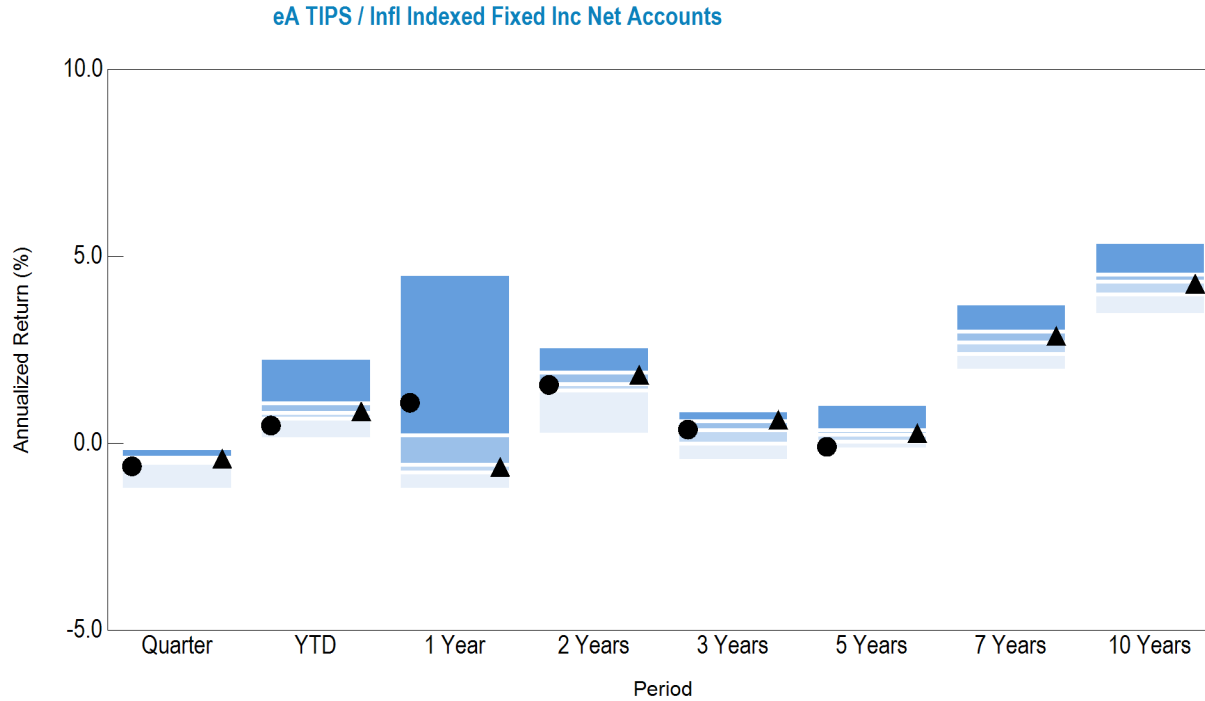
INVESCO Core Real Estate  
Real Estate Valuation Analysis

Period Ending: June 30, 2017

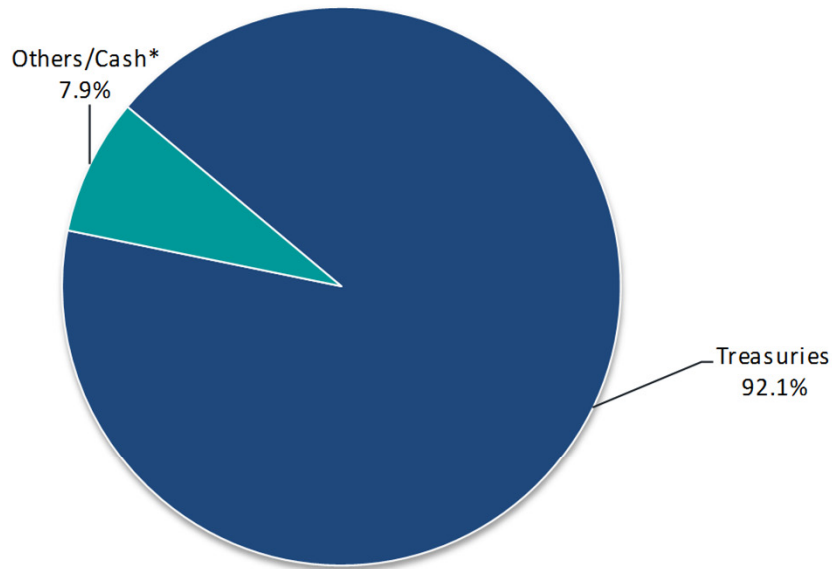
OFFICE							
55 Cambridge Parkway	Boston MA - NH	\$272,000,000	\$285,000,000	\$285,000,000	4Q06	June-17	\$8,327,289
1111 Pennsylvania Avenue	Washington, D.C.	\$313,000,000	\$317,000,000	\$317,000,000	4Q10	June-17	\$9,262,283
1800 Larimer	Denver, CO	\$321,000,000	\$328,000,000	\$328,000,000	1Q11	June-17	\$9,583,687
Hillview Office	San Jose, CA	\$77,900,000	\$78,400,000	\$78,400,000	3Q12	June-17	\$2,290,735
Williams Tower	Houston, TX	\$587,000,000	\$590,000,000	\$405,902,504	1Q13	June-17	\$11,859,886
Westlake Park Place	Westlake Village, CA	\$112,000,000	\$112,000,000	\$112,000,000	4Q13	June-17	\$3,272,478
101 Second	San Francisco, CA	\$390,000,000	\$394,000,000	\$394,000,000	1Q14	June-17	\$11,512,112
Energy Crossing II	Houston, TX	\$108,000,000	\$108,000,000	\$108,000,000	2Q14	June-17	\$3,155,604
1776 Wilson Blvd.	Arlington, VA	\$94,800,000	\$94,600,000	\$94,600,000	3Q14	June-17	\$2,764,076
631 Howard	San Francisco, CA	\$94,400,000	\$94,700,000	\$94,700,000	3Q14	June-17	\$2,766,997
Barton Oaks	Austin, TX	\$85,700,000	\$87,300,000	\$87,300,000	3Q14	June-17	\$2,550,780
Hercules East and South Campus	Los Angeles, CA	\$164,920,672	\$166,413,301	\$166,413,301	3Q14	June-17	\$4,862,357
The Reserve	Playa Vista, CA	\$366,277,678	\$367,470,065	\$367,470,065	1Q15	June-17	\$10,736,945
Fort Point Portfolio	Boston, MA	\$218,719,105	\$223,120,254	\$133,978,449	2Q15	June-17	\$3,914,657
Legacy West Office	Plano, TX	\$56,147,262	\$64,509,497	\$64,509,497	1Q15	June-17	\$1,884,874
Summit IV	Aliso Viejo, CA	\$124,000,000	\$123,000,000	\$84,496,701	2Q15	June-17	\$2,468,872
1101 Westlake	Seattle, WA	\$99,300,000	\$106,000,000	\$106,000,000	3Q15	June-17	\$3,097,167
PearlWest	Boulder, CO	\$122,000,000	\$122,000,000	\$122,000,000	4Q16	June-17	\$3,564,664
		<b>\$3,607,164,717</b>	<b>\$3,661,513,117</b>	<b>\$3,349,770,517</b>			<b>\$97,875,464</b>
RETAIL							
Chandler Pavilion	Phoenix - Mesa AZ	\$23,900,000	\$24,000,000	\$24,000,000	2Q04	June-17	\$701,245
Cityline at Tenley	Washington, D.C.	\$63,000,000	\$63,100,000	\$63,100,000	4Q05	June-17	\$1,843,691
Ridgehaven Shopping Center	Minnetonka, MN	\$42,600,000	\$42,940,000	\$42,940,000	4Q05	June-17	\$1,254,645
The Beacon Retail	San Francisco, CA	\$68,430,751	\$68,496,378	\$68,496,378	1Q06	June-17	\$2,001,365
The Beacon Garage (units)	San Francisco, CA	\$36,069,249	\$36,103,622	\$36,103,622	1Q06	June-17	\$1,054,896
The Beacon Office (210 King)	San Francisco, CA	\$24,800,000	\$25,000,000	\$25,000,000	1Q15	June-17	\$730,464
Hawthorne Plaza	Overland Park, KS	\$54,400,000	\$52,925,000	\$52,925,000	4Q07	June-17	\$1,546,392
The Loop	Boston MA - NH	\$92,800,000	\$92,800,000	\$92,800,000	1Q08	June-17	\$2,711,482
Westbank Market	Austin, TX	\$60,700,000	\$62,000,000	\$62,000,000	3Q10	June-17	\$1,811,551
Lake Pointe Village	Houston, TX	\$79,250,000	\$79,650,000	\$79,650,000	4Q11	June-17	\$2,327,258
Safeway Kapahulu	Hawaii	\$91,600,000	\$91,700,000	\$55,361,438	4Q11	June-17	\$1,617,581
Safeway Burlingame	San Francisco, CA	\$58,600,000	\$58,600,000	\$35,782,259	4Q11	June-17	\$1,045,506
Shamrock Plaza	Oakland, CA	\$39,200,000	\$39,500,000	\$23,220,188	4Q11	June-17	\$678,460
Pavilions Marketplace	West Hollywood, CA	\$67,800,000	\$67,600,000	\$42,822,955	1Q12	June-17	\$1,251,225
130 Prince	New York, NY	\$223,800,000	\$219,700,000	\$219,700,000	2Q12	June-17	\$6,419,317
Safeway Pleasanton	Pleasanton, CA	\$82,000,000	\$82,800,000	\$82,800,000	4Q12	June-17	\$2,419,297
Liberty Wharf	Boston, MA	\$94,600,000	\$94,900,000	\$64,696,785	4Q12	June-17	\$1,890,347
Shops at Legacy	Plano, TX	\$110,690,478	\$110,690,478	\$110,690,478	3Q13	June-17	\$3,234,216
Pasadena Commons	Pasadena, CA	\$58,800,000	\$58,800,000	\$58,800,000	4Q14	June-17	\$1,718,051
Rush Street Retail	Chicago, IL	\$15,800,000	\$16,100,000	\$16,100,000	4Q14	June-17	\$470,419
Legacy West Retail	Plano, TX	\$165,353,014	\$182,331,898	\$118,625,012	1Q15	June-17	\$3,466,052
Legacy West Land	Plano, TX	\$8,549,783	\$917,188	\$917,188	2Q17	June-17	\$26,799
131-137 Spring Street	New York, NY	\$235,905,423	\$236,769,849	\$125,488,020	3Q15	June-17	\$3,666,579
Runway at Playa Vista - Retail	Playa Vista, CA	\$119,780,000	\$121,900,000	\$59,486,215	1Q16	June-17	\$1,738,101
139 Spring	New York, NY	\$125,850,405	\$125,933,200	\$125,933,200	1Q16	June-17	\$3,679,587
Clayton Lane	Denver, CO	\$142,157,558	\$142,041,999	\$95,261,920	1Q16	June-17	\$2,783,416
4th & Colorado	Santa Monica, CA	\$12,880,000	\$13,120,000	\$13,120,000	1Q16	June-17	\$383,347
Shops at Crystals	Las Vegas, NV	\$287,500,000	\$290,000,000	\$152,283,293	2Q16	June-17	\$4,449,498
		<b>\$2,546,716,661</b>	<b>\$2,560,519,612</b>	<b>\$2,008,203,951</b>			<b>\$58,676,824</b>
<b>Portfolio Total</b>		<b>\$11,455,325,856</b>	<b>\$11,671,222,281</b>	<b>\$9,782,769,646</b>			<b>\$285,838,422</b>

TIPS / Inflation Indexed Fixed Income  
Peer Universe Comparison

Period Ending: June 30, 2017



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	-0.1	2.3	4.5	2.6	0.9	1.0	3.7	5.4
25th Percentile	-0.4	1.1	0.2	1.9	0.6	0.4	3.0	4.5
Median	-0.4	0.8	-0.6	1.6	0.4	0.2	2.7	4.3
75th Percentile	-0.5	0.7	-0.8	1.4	0.0	0.0	2.4	4.0
95th Percentile	-1.2	0.1	-1.2	0.2	-0.5	-0.2	2.0	3.4
# of Portfolios	22	22	22	22	20	19	15	11
● Brown Brothers Harriman	-0.6 (86)	0.5 (84)	1.1 (18)	1.6 (57)	0.4 (49)	-0.1 (94)	-- (--)	-- (--)
▲ BBgBarc US TIPS TR	-0.4 (41)	0.9 (46)	-0.6 (60)	1.8 (35)	0.6 (23)	0.3 (37)	2.9 (29)	4.3 (61)



Sector	Account Weight	BBgBarc TIPS	
		Index	Difference
Treasuries	92.1%	100.0%	-7.9%
Agencies	0.0%	0.0%	0.0%
Corporates	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%
Foreign	0.0%	0.0%	0.0%
MBS	0.0%	0.0%	0.0%
CMO	0.0%	0.0%	0.0%
ABS	0.0%	0.0%	0.0%
Municipals	0.0%	0.0%	0.0%
Others/Cash*	7.9%	0.0%	7.9%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

\* May include Derivatives, Futures, Swaps, Credit Default Swaps, Total Return Swaps or Currency Contracts.



Portfolio Characteristics		
		Portfolio
Total Number of Securities		12
Total Market Value	\$	70,919,206
Current Coupon		0.98
Yield to Maturity		0.36
Average Life		
Duration		5.75
Quality		GOV

BBgBarc TIPS	
	38
	N/A
	0.82
	0.36
	5.38
	AAA

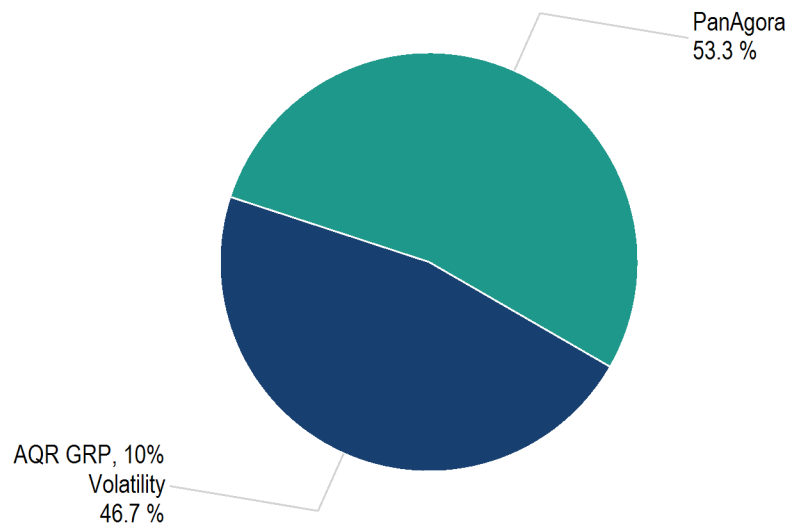
Yield to Maturity	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0

Average Life	
Range	% Held
0.0 - 3.0	10.3
3.0 - 5.0	13.5
5.0 - 10.0	38.3
10.0- 15.0	17.4
15.0+	20.6
Unclassified	0.0

Duration	
Range	% Held
0.0 - 3.0	31.6
3.0 - 5.0	14.5
5.0 - 10.0	35.1
10.0- 15.0	6.1
15.0+	12.8
Unclassified	0.0

Quality	
Range	% Held
Govt (10)	92.1
Aaa (10)	0.0
Aa (9)	0.0
A (8)	0.0
Baa (7)	0.0
Below Baa (6-1)	0.0
Other	7.9

Coupon	
Range	% Held
0.0 - 5.0	100.0
5.0 - 7.0	0.0
7.0 - 9.0	0.0
9.0 - 11.0	0.0
11.0 - 13.0	0.0
13.0+	0.0
Unclassified	0.0



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR GRP, 10% Volatility	\$136,211,099	46.7%	-0.4%
PanAgora	\$155,546,043	53.3%	-0.4%
Actual vs. Policy Weight Difference			0.0%
<b>Total</b>	<b>\$291,757,142</b>	<b>100.0%</b>	<b>-0.8%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	2.8%	8.5%	0.3	-0.6	6.6%
60/40 Russell 3000/BBgBarc US Aggregate	6.6%	6.4%	1.0	--	0.0%
AQR GRP, 10% Volatility	0.2%	8.4%	0.0	-1.0	6.4%
60/40 Russell 3000/BBgBarc US Aggregate	6.6%	6.4%	1.0	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Risk Parity	5.8%	8.8%	0.6	-0.6	6.9%
60/40 Russell 3000/BBgBarc US Aggregate	9.6%	5.9%	1.6	--	0.0%
AQR GRP, 10% Volatility	4.2%	8.8%	0.5	-0.8	6.8%
60/40 Russell 3000/BBgBarc US Aggregate	9.6%	5.9%	1.6	--	0.0%

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>Total Fund</b>	<b>2.7</b>	<b>7.7</b>	<b>12.8</b>	<b>6.8</b>	<b>5.8</b>	<b>9.7</b>	<b>4.9</b>
<i>Policy Index</i>	2.8	7.3	12.6	6.6	5.3	9.2	5.5
<i>Allocation Index</i>	2.8	7.2	12.2	6.5	5.2	9.1	--
<b>Total Fund ex Overlay</b>	<b>2.6</b>	<b>7.6</b>	<b>13.0</b>	<b>6.7</b>	<b>5.7</b>	<b>9.6</b>	<b>4.9</b>
<i>Policy Index</i>	2.8	7.3	12.6	6.6	5.3	9.2	5.5
<i>Allocation Index</i>	2.8	7.2	12.2	6.5	5.2	9.1	--
<b>Public Equity</b>	<b>4.4</b>	<b>11.8</b>	<b>18.9</b>	<b>8.0</b>	<b>6.4</b>	<b>12.3</b>	<b>4.7</b>
<i>Blended Public Equity Index</i>	4.4	11.4	20.0	7.8	6.0	12.0	5.3
<b>US Equity</b>	<b>2.9</b>	<b>9.0</b>	<b>18.6</b>	<b>9.4</b>	<b>8.8</b>	<b>14.4</b>	<b>6.5</b>
<i>Blended US Equity Index</i>	3.0	8.9	18.8	9.6	8.8	14.4	7.2
<i>Russell 3000</i>	3.0	8.9	18.5	10.0	9.1	14.6	7.3
<b>Large Cap Equity</b>	<b>3.0</b>	<b>11.1</b>	<b>19.7</b>	<b>11.0</b>	<b>10.1</b>	<b>15.1</b>	<b>6.8</b>
<i>Russell 1000</i>	3.1	9.3	18.0	10.2	9.3	14.7	7.3
<i>BlackRock Russell 1000</i>	3.1	--	--	--	--	--	--
<i>Russell 1000</i>	3.1	9.3	18.0	10.2	9.3	14.7	7.3
<i>DE Shaw</i>	2.8	10.0	20.2	12.3	11.6	16.3	--
<i>Russell 1000</i>	3.1	9.3	18.0	10.2	9.3	14.7	7.3
<b>Small Cap Equity</b>	<b>1.8</b>	<b>4.3</b>	<b>22.6</b>	<b>6.5</b>	<b>5.4</b>	<b>13.1</b>	<b>5.6</b>
<i>Russell 2000</i>	2.5	5.0	24.6	7.8	7.4	13.7	6.9
<i>QMA US Small Cap</i>	1.8	4.3	--	--	--	--	--
<i>Russell 2000</i>	2.5	5.0	24.6	7.8	7.4	13.7	6.9
<b>International Equity</b>	<b>6.3</b>	<b>15.7</b>	<b>18.8</b>	<b>5.4</b>	<b>2.2</b>	<b>8.4</b>	<b>0.9</b>
<i>MSCI ACWI ex US IMI</i>	6.1	14.6	21.0	4.8	1.6	7.9	1.7
<i>MSCI EAFE Gross</i>	6.4	14.2	20.8	4.4	1.6	9.2	1.5
<b>Developed Markets</b>	<b>6.6</b>	<b>15.9</b>	<b>19.0</b>	<b>5.5</b>	<b>2.5</b>	<b>9.0</b>	<b>1.1</b>
<i>MSCI ACWI ex USA Gross</i>	6.0	14.5	21.0	4.5	1.3	7.7	1.6
<i>Baillie Gifford</i>	8.8	19.8	20.9	7.4	4.7	11.0	--
<i>MSCI ACWI ex US</i>	6.0	14.5	21.0	4.5	1.3	9.1	--
<i>MSCI ACWI ex US Growth</i>	7.7	17.7	17.8	5.3	2.9	9.6	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
BlackRock EAFE Index	6.3	14.2	20.8	4.4	1.5	--	--
<i>MSCI EAFE</i>	6.1	13.8	20.3	3.9	1.1	8.7	1.0
<i>MSCI EAFE Gross</i>	6.4	14.2	20.8	4.4	1.6	9.2	1.5
FIAM Equity	7.9	16.8	18.3	6.7	4.3	10.5	--
<i>MSCI ACWI ex US Small Cap Gross</i>	6.4	15.8	20.8	7.0	3.7	10.4	3.3
Mondrian	4.3	12.8	16.2	4.1	0.5	7.3	1.6
<i>MSCI ACWI ex USA Value Gross</i>	4.3	11.4	24.3	3.6	-0.4	6.9	0.9
<i>MSCI ACWI ex USA Gross</i>	6.0	14.5	21.0	4.5	1.3	7.7	1.6
<b>Emerging Markets</b>	<b>3.4</b>	<b>14.2</b>	<b>17.3</b>	<b>4.4</b>	<b>-0.4</b>	<b>4.0</b>	<b>--</b>
<i>MSCI Emerging Markets Gross</i>	6.4	18.6	24.2	4.7	1.4	4.3	2.2
Parametric Core	3.4	14.2	17.3	--	--	--	--
<i>MSCI Emerging Markets Gross</i>	6.4	18.6	24.2	4.7	1.4	4.3	2.2
<b>Fixed Income</b>	<b>1.5</b>	<b>4.0</b>	<b>7.6</b>	<b>5.2</b>	<b>3.8</b>	<b>4.8</b>	<b>5.7</b>
<i>Blended Fixed Income Index</i>	1.9	3.2	2.2	4.0	2.7	2.5	4.7
<b>US Fixed Income</b>	<b>1.9</b>	<b>4.0</b>	<b>6.9</b>	<b>5.4</b>	<b>4.2</b>	<b>4.6</b>	<b>5.8</b>
<i>Blended US Fixed Index</i>	1.8	3.0	3.0	4.1	3.2	2.7	5.0
<b>Core Fixed</b>	<b>1.7</b>	<b>3.2</b>	<b>3.3</b>	<b>4.1</b>	<b>3.4</b>	<b>3.4</b>	<b>5.0</b>
<i>BBgBarc US Aggregate TR</i>	1.4	2.3	-0.3	2.8	2.5	2.2	4.5
BlackRock Intermediate Govt	0.7	--	--	--	--	--	--
FIAM Bond	1.4	2.6	1.2	3.7	3.1	3.1	5.2
Western TRU	3.5	5.9	9.9	--	--	--	--
<i>3-Month Libor Total Return USD</i>	0.3	0.6	1.0	0.8	0.6	0.5	1.0
<i>BBgBarc US Aggregate TR</i>	1.4	2.3	-0.3	2.8	2.5	2.2	4.5
<b>Opportunistic Credit</b>	<b>2.5</b>	<b>6.1</b>	<b>15.7</b>	<b>8.5</b>	<b>6.5</b>	<b>10.4</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
Angelo Gordon Opportunistic	4.2	8.6	17.2	8.6	5.3	--	--
Angelo Gordon STAR	6.1	10.9	18.7	9.9	10.0	--	--
<i>BBgBarc US Aggregate TR</i>	1.4	2.3	-0.3	2.8	2.5	2.2	4.5

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Beach Point Select	1.9	4.4	14.4	9.7	--	--	--
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
Brigade Capital	1.8	5.7	16.6	7.4	4.0	6.7	--
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
<i>50% Barclays HY/ 50% Bank Loan</i>	1.5	3.4	10.1	5.6	4.0	5.9	--
<b>Private Credit</b>	<b>2.5</b>	<b>4.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
TCP Direct Lending VIII	2.6	4.6	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
White Oak Yield	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	2.5	4.3	9.2	6.4	4.8	4.7	--
<b>Global Fixed Income</b>	<b>-1.0</b>	<b>4.2</b>	<b>10.9</b>	<b>3.5</b>	<b>1.5</b>	<b>4.9</b>	<b>--</b>
<i>BBgBarc Multiverse TR</i>	2.6	4.6	-1.4	3.5	-0.2	1.1	3.8
Franklin Templeton	-1.0	4.2	10.9	3.5	1.5	4.9	--
<i>BBgBarc Multiverse TR</i>	2.6	4.6	-1.4	3.5	-0.2	1.1	3.8
<b>Risk Parity</b>	<b>1.5</b>	<b>6.0</b>	<b>4.1</b>	<b>4.9</b>	<b>2.8</b>	<b>5.9</b>	<b>--</b>
<i>60/40 Russell 3000/BBgBarc US Aggregate</i>	2.4	6.2	10.7	7.3	6.6	9.6	6.5
AQR GRP, 10% Volatility	1.5	6.1	5.9	2.5	0.2	4.3	--
PanAgora	1.6	5.8	2.5	7.1	--	--	--
<i>60/40 Russell 3000/BBgBarc US Aggregate</i>	2.4	6.2	10.7	7.3	6.6	9.6	6.5
<i>60/40 MSCI World/BBgBarc Global Aggregate</i>	2.8	6.9	10.4	5.8	4.6	8.2	--
<b>Alternatives</b>	<b>1.8</b>	<b>6.2</b>	<b>17.1</b>	<b>7.8</b>	<b>7.9</b>	<b>7.3</b>	<b>--</b>
<i>Alternatives Allocation Index</i>	2.2	6.2	13.6	6.3	3.8	6.7	--
<i>Blended Alternatives Index</i>	2.2	6.4	14.0	6.6	4.7	8.7	--
<b>Private Equity</b>	<b>4.1</b>	<b>11.3</b>	<b>29.1</b>	<b>15.6</b>	<b>19.0</b>	<b>15.2</b>	<b>--</b>
<i>Russell 3000 +3%</i>	3.1	9.8	21.5	13.0	12.1	17.6	10.3
<b>Hedge Fund/Absolute Return</b>	<b>-0.6</b>	<b>0.7</b>	<b>4.5</b>	<b>5.7</b>	<b>7.1</b>	<b>6.3</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.3	2.4	4.8	4.6	4.4	4.3	--

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	3 Mo (%)	YTD (%)	Fiscal YTD (%)	2 Yrs (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
<b>AQR DELTA XN</b>	-1.2	0.2	4.3	6.0	7.3	6.4	--
<i>Libor 1 month +4%</i>	1.3	2.4	4.8	4.6	4.4	4.3	--
<b>Standard Life GARS</b>	0.8	1.4	3.7	--	--	--	--
<i>Libor 1 month +4%</i>	1.3	2.4	4.8	4.6	4.4	4.3	--
<b>Inflation Hedge</b>	0.6	3.2	6.2	--	--	--	--
<i>Blended Inflation Pool Index</i>	0.6	2.6	4.2	--	--	--	--
<b>Real Estate</b>	1.9	4.5	8.6	10.0	12.1	12.1	5.5
<i>NCREIF ODCE</i>	1.7	3.5	7.9	9.8	11.3	11.8	5.7
<b>Invesco</b>	1.9	4.5	8.6	9.7	11.9	12.0	5.4
<i>NCREIF ODCE</i>	1.7	3.5	7.9	9.8	11.3	11.8	5.7
<b>Invesco US Val IV</b>	1.8	4.8	10.2	--	--	--	--
<i>NCREIF ODCE</i>	1.7	3.5	7.9	9.8	11.3	11.8	5.7
<i>NCREIF CEVA 1Q Lag - NET</i>	1.4	4.2	9.2	12.8	14.6	--	--
<b>Private Real Asset</b>	-3.1	2.9	2.9	20.6	--	--	--
<i>Blended Real Asset Index</i>	-0.2	2.6	5.0	5.7	5.2	--	--
<b>Liquid Pool</b>	0.2	3.3	--	--	--	--	--
<i>Blended Real Asset Index</i>	-0.2	2.6	5.0	5.7	5.2	--	--
<b>SSgA Custom Real Asset</b>	0.2	3.3	--	--	--	--	--
<i>Blended Real Asset Index</i>	-0.2	2.6	5.0	5.7	5.2	--	--
<b>TIPS</b>	-0.6	0.6	1.2	1.7	0.5	0.1	--
<i>BBgBarc US TIPS TR</i>	-0.4	0.9	-0.6	1.8	0.6	0.3	4.3
<b>Brown Brothers Harriman</b>	-0.6	0.6	1.2	1.7	0.5	0.1	--
<i>BBgBarc US TIPS TR</i>	-0.4	0.9	-0.6	1.8	0.6	0.3	4.3
<b>Cash</b>	0.2	0.4	0.8	1.1	1.0	0.7	0.8
<i>91 Day T-Bills</i>	0.2	0.4	0.5	0.4	0.2	0.2	0.4
<b>General Account</b>	0.3	0.6	1.0	1.6	1.3	0.8	1.1
<b>Treasury &amp; LAIF</b>	0.3	0.6	0.5	0.8	0.9	0.8	0.7
<i>91 Day T-Bills</i>	0.2	0.4	0.5	0.4	0.2	0.2	0.4

## **Angelo, Gordon & Co. – AG STAR Fund**

The STAR Fund will focus on CMBS and non-Agency RMBS priced between 25-75% of par, which AG believes are even today mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, AG will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

## **Angelo, Gordon & Co. – AG Opportunistic Whole Loan Fund**

As bank balance sheets have strengthened since the crisis, Angelo Gordon expects approximately \$40 billion of re-performing loans and non-performing loans will trade hands each year in the near term. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, Angelo Gordon believes it can improve operational efficiency and generate attractive returns. To take advantage of this opportunity, Angelo Gordon established this Opportunistic Whole Loan Fund to make investments primarily in a portfolio of non-performing loans and re-performing, but will also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. Angelo Gordon has been an active participant in the residential and consumer debt market since 2008. The Partnership's investment approach to residential mortgage loans and securities is guided by an analytically based investment process anchored by distressed asset valuation and cash flow modeling. Angelo Gordon's analysis of re-performing and non-performing loans begins with its loan due diligence process. This process will include a review of substantially all of the properties in the pool, as well as a review of the loan files backing the loan pool. In addition, a macro overlay is embedded in the investment process which incorporates general economic trends, along with specific views on interest rates, unemployment, collateral appreciation or depreciation, governmental intervention in creditors' rights and liquidation timelines.

## **AQR Delta**

The AQR DELTA Fund aims to deliver efficient exposure to a well-diversified portfolio of hedge fund strategies, including Convertible Arbitrage, Event Driven, Fixed Income Relative Value, Equity Market Neutral, Long/Short Equity, Dedicated Short Bias, Global Macro, Managed Futures, and Emerging Markets. The Delta Fund's approach is to capture and deliver the "hedge fund risk premiums" that explain much of the returns of each of these strategies by building bottom-up positions in each strategy. AQR's research has demonstrated that many hedge funds use similar strategies to generate returns. These strategies are often well-known, widely understood and share common exposures. AQR's experience and research suggests much of the insight underlying these strategies - as well as a meaningful portion of their returns - can be captured using a dynamic, disciplined investment approach. Just as the equity risk premium can explain a large portion of the returns from equity investing, hedge fund risk premiums can explain the returns from hedge fund investing. Importantly, while compensation for equity risk is dependent on economic growth, hedge fund risk premiums are largely unrelated to economic activity, and thus provide attractive diversification properties.



## **AQR – Risk Parity**

The objective of Global Risk Parity (GRP) is to generate excess returns from a risk diversified portfolio of asset exposures. AQR believes that its approach maximizes the diversification benefit across a broad range of economic environments. For many institutional portfolios, equity risk has historically been the predominant risk and the source of most return expectations since equities offer higher expected returns to compensate for their high risk. Investor preference for and concentration in equities has been driven by their expected return needs, which cannot be satisfied in a well-diversified un-levered portfolio. GRP is a diversified portfolio that can be scaled to similar levels of risk as a portfolio concentrated in equities, but with a higher expected return resulting from diversification across asset class risk. The approach helps do away with the compromise of concentrating in high risk assets to meet high return needs. Consistent with portfolio theory, the GRP strategy is designed to maximize diversification across a broad spectrum of liquid global risk premia to create a portfolio with higher expected risk-adjusted returns. Research shows that risk-adjusted returns across asset classes are similar over the long-term. Since realized risk-adjusted returns across asset classes are similar, AQR expects a portfolio that is diversified equally by risk to perform better. The Global Risk Premium strategy aims to deliver efficient market exposure across four broad asset classes in a risk balanced fashion.

## **Baillie Gifford – ACWI ex US Focus Equities**

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford's basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to under-appreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 80-120 stocks, with country and sector weights +/-6% relative to the index and industry weights +/- 5% relative to the index.

## **Beach Point Select Fund**

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

## **BlackRock – EAFE Index**

The EAFE Index Fund seeks to replicate the return of the MSCI EAFE Index. This index represents the developed equity markets outside of North America: Europe, Austral, Asia and the Far East.

## **BlackRock – Intermediate Government Index**

The Intermediate Government Index Fund seeks to track the results of an index composed of U.S. dollar-denominated government, government related, and investment grade U.S. corporate bonds with maturities between 1 and 10 years.

## **BlackRock – Russell 1000 Index**

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index.

## **Brigade – Opportunistic Credit**

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

## **Brown Brothers Harriman – Inflation Indexed Securities**

BBH manages TIPS using three main types of strategies: Fundamental, Technical and Opportunistic. The Fundamental bucket has two sub-strategies, real yield duration and real yield curve slope vs. nominal yield curve slope. The Technical strategies consist of yield curve roll-down, auction cycle trading, seasonal vs. non-seasonal CPI and security selection/option value analysis. Finally, nominal Treasuries vs. TIPS, sector relative value (i.e., corporate or Agency inflation-linked bonds) and non-Dollar inflation-linked bonds make up the Opportunistic group. Real yield duration is held to +/- 1 year vs. the benchmark and the portfolio has a limited allocation to non-index securities, typically 5-10% with a maximum of 20% (including nominal Treasuries).

## **DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund**

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last 19 years in the course of research conducted for purposes of managing the firm's hedge funds. In addition to its beta one strategies, D.E. Shaw manages substantial assets in its hedge fund strategies. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.

## **Eaton Vance/Parametric – Structured Emerging Markets Core Equity**

Parametric utilizes a structured, rules-based approach, which they believe is capable of generating enhanced returns with lower volatility compared to both traditional active management and passive capitalization weighted indices. The basic idea is to structure the portfolio with more balanced country weights than the market cap weighted indices, and also to capture a rebalancing premium. This provides more diversification and greater exposure to smaller countries than is provided by the market cap weighted indices. The approach is to divide emerging markets countries into three tiers, and to equally weight the countries within each tier. Tier 1 countries are the largest eight countries that dominate the cap weighted index. Each successive tier is comprised of smaller countries, each of which is given a smaller target weighting in the model portfolio. In aggregate, the eight Tier 1 countries are given a much lower weighting than in the capitalization weighted index, but they nevertheless comprise more than 50% of the portfolio. The Core SEM strategy targets excess return of 3% over a market cycle with 2.5%-4.5% tracking error. It is designed to generate a level of volatility 90%-100% of the MSCI EM index. The strategy invests in 44 countries and will typically hold 700-1,000 securities. Turnover is expected to be in the range of 5%-15%.

## **Franklin Templeton Investments – Global Fixed Income**

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begins with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.

## **INVESCO Realty Advisors – INVESCO Core Equity, LLC**

SamCERA is a founding member of INVESCO's open end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

## **INVESCO Realty Advisors – INVESCO US Val IV**

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund IV will look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund IV will provide a nice compliment to the more conservative Invesco Core Fund and offer the potential of enhanced returns to the SamCERA Real Estate portfolio.

## **Mondrian Investment Partners – International Equity**

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers. Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

## **Panagora – Diversified Risk Multi Asset Fund**

The Multi Asset team is headed up by Edward Qian, CIO of the group, and the founder of Panagora's risk parity strategy. A staff of approximately thirteen works in this group on research and portfolio construction, with some people spending more time on the former and some more on the latter. Panagora implements risk parity by distinguishing between three categories of assets: equities, nominal fixed income, and inflation protection. Each of these categories corresponds to a respective economic environment: economic growth, economic contraction and inflation. Panagora's risk allocation targets 40% each from equities and nominal fixed income, and 20% from inflation protection. In addition to applying concept of risk parity between asset classes, Panagora also applies it within each asset class. The 40/40/20 allocation to equities/nominal fixed income/inflation protection is a long term strategic allocation. In 2009 Panagora introduced what they refer to as "Dynamic Risk Allocation" or "DRA," which involves tactically tilting the risk allocations away from the neutral targets in order to enhance returns and reduce risk.

## **Pyramis Global Advisors – Broad Market Duration Commingled Pool**

Pyramis' Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

## **Pyramis Global Advisors – Select International Small Cap**

Pyramis Select International Small Cap is a core strategy. The approach is designed to leverage Pyramis/Fidelity's proprietary resources to add value exclusively via stock selection. To that end the portfolio is constructed to be regionally neutral, with only modest deviations from the benchmark's country and sector weights. The investment process involves three basic stages. The first stage is the security level research conducted by the analysts. The second stage is stock selection from within the pool of names that are highly ranked by the analysts. The third step is portfolio construction and risk management. The essential differentiating feature of this strategy is the breadth of coverage that is made possible by the large staff of analysts. Analysts actively conduct regular fundamental research on, and give a formal rating of 1-5, 1200-1300 international small cap companies. While there is no single firm-wide approach to security research, analysts are expected to establish an upside target for any given stock and assign a formal rating. The decision making structure is quite efficient, with portfolio manager Rob Feldman making all the buy and sell decisions. His role, as he puts it, is to be an intelligent user of the analysts' research. He selects the 1- and 2-rated stocks that he thinks are compelling and additive to his portfolio, and he sells names when they are downgraded by the analysts. There are approximately 200 holdings in the portfolio. Country and sector weights are within 3 percentage points of the benchmark and position sizes are within 2 percentage points of the benchmark. Turnover tends to be in the 60%-80% range.

## **Quantitative Management Associates – QMA Small-Cap Core**

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

## **Standard Life Global Absolute Return Strategy (GARS)**

The Standard Life Global Absolute Return Strategy (GARS) was initially launched in 2005 to help address Standard Life's own pension plan's deficit problem. GARS' primary investment objective is to deliver a positive absolute return over the medium to long term with lower volatility than equities, irrespective of market conditions. It seeks returns through dynamic allocation to investment opportunities in traditional and advanced asset classes, and also separately exploits the team's security selection expertise. In the search for attractive investment positions, the team follows a rigorous research process. This includes a variety of research techniques, including broad global macro-economic, fundamental analysis, quantitative research and valuation modeling. The GARS investment process is designed to capitalize on an array of research and investment techniques and draws together the team's three-year investment insights. The team then rigorously examines and review position proposals to approve a high conviction, short list of positions that work well together. Having a cash benchmark means that GARS has a potentially unrestricted investment universe and all portfolio holdings are at the Portfolio Manager's discretion. The GARS portfolio also routinely uses a variety of conventional derivatives for investment, liquidity, efficiency and hedging purposes. The GARS strategy has experienced significant growth in its asset under management since it becomes available to external investors in 2006.

## **State Street Global Advisors (SSgA) Custom Real Asset**

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Commodity Index, S&P Global Natural Resources Index, and S&P Global Infrastructure Index. The portfolio is used to fund upcoming private real asset mandates.

## **Tennenbaum Capital Partners - TCP Direct Lending Fund VIII**

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners ("TCP"). The Fund is designed to continue TCP's successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP's direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm's prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income.

## **Western Asset Management – Total Return Unconstrained (TRU)**

Western Asset's Total Return Unconstrained strategy (TRU) seeks to provide bond-like risk and return over the long term, but does not have a benchmark. This allows for asset allocation based on value rather than using the construction of a benchmark as baseline positioning. The investment approach is active with very broad latitude on duration (-3 to +8 years) and on asset allocation across all of the eligible sectors in a core plus mandate. The portfolio must have at least 50% of its holdings in investment-grade securities. The flexibility offered by this strategy allows for defensive positioning in rising rate environments and opportunistic deployment of capital when value opportunities arise. It also allows the portfolio managers to emphasize (or deemphasize) either credit or rates when one or the other appears to offer greater (or lesser) value. um non-US exposure.

### **White Oak - White Oak Yield Spectrum Fund**

The White Oak Yield Spectrum Fund's objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.

# Policy Index and Benchmark History

Period Ending: June 30, 2017

Total Plan Policy Index	As of															
	2/1/17	1/1/17	10/1/16	9/1/16	1/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	1/1/09	5/1/07	6/1/00	3/1/99	9/1/98	7/1/96
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	8.0%	8.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	12.0%	10.0%	10.0%	10.0%	10.0%	10.0%	9.3%	11.0%	11.0%	12.9%	27.0%	27.0%	29.0%	25.0%	21.0%	21.0%
BBgBarc BA Intermediate HY	6.0%	6.0%	6.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.8%	4.4%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	9.0%	9.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Real Asset	7.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Libor +4% (HF)	6.0%	5.0%	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	19.0%	19.0%	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	0.0%	0.0%	24.0%	24.0%	24.0%	28.0%	28.0%	28.0%	37.0%	37.0%	40.0%	22.0%	20.0%	20.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	4.0%	6.0%	6.0%	7.0%	7.0%	7.0%	9.0%	9.0%	10.0%	15.0%	15.0%	15.0%
Russell 3000	23.0%	28.0%	28.0%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



# Policy Index and Benchmark History

Period Ending: June 30, 2017

Total Equity Benchmark	As of:										
	2/1/17	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00	3/1/99	9/1/98	1/1/96
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.3%	33.3%	33.3%
Russell 1000	0.0%	0.0%	0.0%	50.0%	48.0%	52.8%	55.2%	61.5%	35.5%	33.3%	33.3%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.4%	0.0%
Russell 2000	0.0%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	54.8%	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:						
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%
Russell 1000 Value	0.0%	0.0%	0.0%	12.5%	12.5%	0.0%	0.0%
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

International Equity Benchmark	As of:		
	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	100.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%

Total Fixed Income Benchmark	As of:										
	2/1/17	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	6/1/00	3/1/99	7/1/96
BBgBarc Aggregate	57.1%	52.6%	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%	100.0%	83.3%	70.0%
BBgBarc BA Intermediate HY	28.6%	31.6%	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	14.3%	15.8%	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%	0.0%	0.0%	0.0%
BBgBarc TIPS	0.0%	0.0%	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	30.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Fixed Income Benchmark	As of:									
	2/1/17	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	7/1/96	
BBgBarc Aggregate	66.7%	62.5%	66.7%	58.8%	56.9%	62.5%	62.5%	73.7%	100.0%	
BBgBarc BA Intermediate HY	33.3%	37.5%	33.3%	29.4%	30.8%	0.0%	0.0%	0.0%	0.0%	
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	0.0%	
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	18.8%	0.0%	0.0%	
BBgBarc TIPS	0.0%	0.0%	0.0%	11.8%	12.3%	17.5%	18.8%	17.2%	0.0%	
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	

Opportunistic Credit Benchmark	As of:	
	1/1/14	12/1/09
BBgBarc BA Intermediate HY	100.0%	0.0%
BBgBarc Credit BAA	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Risk Parity Benchmark	As of:	
	1/1/17	10/1/10
BBgBarc Aggregate	0.0%	40.0%
BBgBarc Global Aggregate	40.0%	0.0%
MSCI World	60.0%	0.0%
Russell 3000	0.0%	60.0%
	<b>100.0%</b>	<b>100.0%</b>

Alternatives Benchmark	As of:				
	2/1/17	4/1/16	1/1/16	1/1/14	1/1/11
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	53.8%	58.3%	41.2%	43.8%	40.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Private Equity Benchmark	As of:
	10/1/10
Russell 3000 +3%	100.0%
	<b>100.0%</b>

Hedge Fund Benchmark	As of:
	10/1/10
Libor +4%	100.0%
	<b>100.0%</b>

Inflation Hedge	As of:		
	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	12.50%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.0%	14.3%
Bloomberg Roll Select Commodity	14.87%	12.1%	21.4%
S&P Global Large-MidCap Commodity and Resource	14.44%	11.8%	14.3%
S&P Global Infrastructure	14.44%	11.8%	0.0%
NCREIF ODCE	43.75%	50.0%	50.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>135.7%</b>

Real Asset Benchmark	As of:	
	10/1/16	1/1/14
Bloomberg Roll Select Commodity	34.00%	0.0%
S&P Global Large-MidCap Commodity and Resource	33.00%	0.0%
S&P Global Infrastructure	33.00%	0.0%
CPI + 5%	0.00%	100.0%
	<b>0.0%</b>	<b>100.0%</b>

Real Estate Benchmark	As of:		
	1/1/09	6/1/00	7/1/96
10 Year Treasury +2%	0.0%	0.0%	100.0%
NCREIF ODCE	100.0%	0.0%	0.0%
NCREIF Property	0.0%	100.0%	0.0%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

## Policy Index and Benchmark History

Period Ending: June 30, 2017

<b>Baillie Gifford Benchmark</b>	<b>As of:</b>	
	<b>1/1/14</b>	<b>5/1/12</b>
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

<b>Baillie Gifford Secondary Benchmark</b>	<b>As of:</b>	
	<b>1/1/14</b>	<b>5/1/12</b>
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

<b>Brigade Secondary Benchmark</b>	<b>As of:</b>	
	<b>8/1/10</b>	
BBgBarc High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	<b>100.0%</b>	

# Fee Schedule

Period Ending: June 30, 2017

## **Baillie Gifford**

First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum

## **BlackRock-EAFE Equity Index Fund**

On All Assets:	0.05% per annum
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## **BlackRock-Russell 1000 Index Fund**

First \$250 million:	0.02% per annum
Thereafter:	0.015% per annum

## **BlackRock-Intermediate Govt Bond Index Fund**

On All Assets:	0.04% per annum
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## **Brown Brothers Harriman**

On All Assets:	0.15% per annum
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## **Clifton Group**

First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	

## **Franklin Templeton Investment**

First \$50 million:	0.45% per annum
Next \$50 million:	0.35% per annum
Thereafter:	0.30% per annum

## **FIAM Bond**

First \$50 million:	0.20% per annum
Next \$50 million:	0.175% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.085% per annum

## **FIAM Equity**

On All Assets:	0.90% per annum
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## **Parametric**

On All Assets:	0.30% per annum
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## **QMA**

First \$50 million:	0.55% per annum
Thereafter:	0.50% per annum

## **Western Asset Management**

On All Assets:	0.25% per annum
Performance Fee:	20.00%

## **Mondrian Investment Partners**

### Assets Below \$190 million

First \$20 million:	1.00% per annum
Thereafter:	0.33% per annum

### Assets Above \$190 million

First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
FIAM Equity	MSCI ACWI ex US Small Cap Gross	✗	✗	✗
Mondrian	MSCI ACWI ex USA Value Gross	✓	✗	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	✗	✗
TCP Direct Lending VIII	BBgBarc BA Intermediate HY	--	--	--
White Oak Yield	BBgBarc BA Intermediate HY	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	✓	✓	✓

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
DE Shaw	Russell 1000	✓	✓	✓
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
FIAM Equity	MSCI ACWI ex US Small Cap Gross	✓	R	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	R	✓
Parametric Core	MSCI Emerging Markets Gross	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
Western TRU	3-Month Libor Total Return USD	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	--	--	--
Brigade Capital	BBgBarc BA Intermediate HY	✓	✓	R
TCP Direct Lending VIII	BBgBarc BA Intermediate HY	--	--	--
White Oak Yield	BBgBarc BA Intermediate HY	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	✓	✓	✓

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

Manager Performance Comparison (Gross of Fees)

Period Ending: June 30, 2017

	Apr	May	Jun	2nd Qtr. 2017	Difference	1st Qtr. 2017	Difference	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference
Verus	1.06%	1.28%	0.70%	3.07%		0.00%		0.00%		0.00%		0.00%	
BlackRock Russell 1000	1.06%	1.28%	0.70%	3.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Russell 1000 Index	1.06%	1.28%	0.70%	3.07%		0.00%		0.00%		0.00%		0.00%	
Verus	0.84%	1.87%	0.06%	2.79%		7.02%		3.76%		5.32%		4.28%	
D.E. Shaw	0.84%	1.87%	0.06%	2.79%	0.00%	7.02%	0.00%	3.76%	0.00%	5.33%	-0.01%	4.29%	-0.01%
Russell 1000 Index	1.06%	1.28%	0.70%	3.07%		6.02%		3.83%		4.03%		2.54%	
Verus	2.31%	-3.03%	2.63%	1.82%		2.46%		10.64%					
QMA US Small Cap (Net)	2.31%	-3.03%	2.63%	1.82%	0.00%	2.46%	0.00%	10.64%	-0.01%				
Russell 2000 Index	1.10%	-2.03%	3.46%	2.46%		2.47%		8.83%					
Verus	3.56%	5.29%	-0.20%	8.83%		10.12%		-7.01%		8.50%		-0.20%	
Baillie Gifford	3.54%	5.29%	-0.20%	8.80%	0.03%	10.07%	0.01%	-7.01%	0.00%	8.55%	-0.05%	-0.21%	0.01%
MSCI ACWI ex US	2.20%	3.35%	0.35%	5.99%		7.98%		-1.20%		7.00%		-0.40%	
MSCI ACWI ex US Growth	2.97%	4.52%	0.11%	7.74%		9.22%		-5.68%		6.11%		0.64%	
Verus	2.62%	3.78%	-0.16%	6.32%		7.38%		-0.66%		6.49%		-1.24%	
BlackRock EAFE Equity	2.62%	3.78%	-0.16%	6.32%	0.00%	7.38%	0.00%	-0.65%	-0.01%	6.49%	0.00%	-1.24%	0.00%
MSCI EAFE (Net)	2.54%	3.67%	-0.18%	6.12%		7.25%		-0.71%		6.43%		-1.46%	
MSCI EAFE (Gross)	2.62%	3.81%	-0.15%	6.37%		7.39%		-0.68%		6.51%		-1.19%	
Verus	3.85%	3.35%	0.54%	7.91%		8.25%		-5.35%		7.00%		-0.16%	
FIAM Equity	3.85%	3.35%	0.54%	7.91%	0.00%	8.25%	0.00%	-5.36%	0.01%	6.99%	0.01%	-0.15%	-0.01%
MSCI ACWI -ex US Small Cap Index	3.04%	2.79%	0.46%	6.40%		8.86%		-3.47%		8.00%		-0.72%	
Verus	1.73%	4.40%	-1.83%	4.26%		8.23%		-1.01%		3.99%		0.49%	
Mondrian	1.74%	4.40%	-1.81%	4.29%	-0.03%	8.23%	0.00%	-0.97%	-0.04%	4.00%	-0.01%	0.50%	-0.01%
MSCI ACWI -ex US Value Index	1.47%	2.21%	0.60%	4.33%		6.82%		3.36%		7.92%		-1.46%	
MSCI ACWI -ex US	2.20%	3.35%	0.35%	5.99%		7.98%		-1.20%		7.00%		-0.40%	
Verus	1.70%	1.48%	0.22%	3.44%		10.39%		-2.58%		5.41%		1.40%	
Parametric Core	1.70%	1.50%	0.24%	3.47%	-0.03%	10.44%	0.00%	-2.54%	-0.04%	5.47%	-0.06%	1.42%	-0.02%
MSCI EM Market Index	2.21%	2.98%	1.07%	6.38%		11.49%		-4.08%		9.15%		0.80%	

Manager Performance Comparison (Gross of Fees)

Period Ending: June 30, 2017

	Apr	May	Jun	2nd Qtr. 2017	Difference	1st Qtr. 2017	Difference	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference
Verus	0.56%	0.41%	-0.24%	0.73%		0.00%		0.00%		0.00%		0.00%	
BlackRock Intermediate Govt	0.56%	0.41%	-0.24%	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BBgBarc US Aggregate Index	0.77%	0.77%	-0.10%	1.45%		0.00%		0.00%		0.00%		0.00%	
Verus	0.80%	0.69%	-0.13%	1.36%		1.24%		-2.66%		1.27%		2.77%	
FIAM Bond	0.80%	0.69%	-0.13%	1.36%	0.00%	1.24%	0.00%	-2.66%	0.00%	1.27%	0.00%	2.77%	0.00%
BBgBarc US Aggregate Index	0.77%	0.77%	-0.10%	1.45%		0.82%		-2.98%		0.46%		2.21%	
Verus	0.85%	0.93%	1.73%	3.54%		2.25%		1.09%		2.67%		2.62%	
Western TRU	0.85%	0.93%	1.73%	3.54%	0.00%	2.25%	0.00%	1.09%	0.00%	2.67%	0.00%	2.62%	-0.01%
3-Month Libor Total Return USD Index	0.10%	0.10%	0.11%	0.31%		0.27%		0.24%		0.21%		0.17%	
BBgBarc US Aggregate Index	0.77%	0.77%	-0.10%	1.45%		0.82%		-2.98%		0.46%		2.21%	
Verus (Net)				4.18%		4.34%		2.54%		5.38%		0.31%	
Angelo Gordon Opportunistic				4.18%	0.00%	4.34%	0.00%	2.54%	0.00%	5.38%	0.00%	0.31%	0.00%
BBgBarc US Aggregate Index				1.45%		0.82%		-2.98%		-0.06%		2.21%	
Verus (Net)				6.13%		4.58%		1.99%		5.17%		2.05%	
Angelo Gordon STAR Fund (Net)				6.13%	0.00%	4.58%	0.00%	1.99%	0.00%	5.17%	0.00%	2.05%	0.00%
BBgBarc US Aggregate Index				1.45%		0.82%		-2.98%		-0.06%		2.21%	
Verus	0.47%	0.75%	0.71%	1.95%		2.45%		3.56%		5.50%		4.23%	
Beach Point Select (Net)	0.47%	0.75%	0.71%	1.95%	0.00%	2.45%	0.00%	3.56%	0.00%	5.25%	0.25%	3.98%	0.26%
BBgBarc BA Intermediate HY	1.27%	0.77%	0.44%	2.50%		1.76%		0.63%		4.04%		3.29%	
Verus	0.34%	0.82%	0.65%	1.83%		3.84%		2.50%		7.15%		8.52%	
Brigade Capital (Net)	0.34%	0.80%	0.62%	1.77%	0.06%	3.77%	0.01%	2.50%	0.00%	7.09%	0.06%	8.48%	0.05%
BBgBarc BA Intermediate HY	1.27%	0.77%	0.44%	2.50%		1.76%		0.63%		4.04%		3.29%	
50% BBgBarc HY/ 50% Bank Loan	0.80%	0.62%	0.04%	1.46%		1.95%		2.00%		4.32%		4.19%	
Verus				2.65%		2.06%		0.17%					
TCP Direct Lending VIII				2.65%	0.00%	2.06%	0.00%	0.17%	0.00%				
BBgBarc BA Intermediate HY				2.50%		1.76%		0.63%					
Verus	-0.35%	-1.24%	0.61%	-0.98%		5.27%		6.49%		-0.13%		1.11%	
Franklin Templeton Investments	-0.35%	-1.24%	0.61%	-0.98%	0.00%	5.27%	0.00%	6.49%	0.00%	-0.13%	0.00%	1.11%	0.00%
BBgBarc Multiverse	1.16%	1.53%	-0.07%	2.64%		1.90%		-6.68%		1.05%		3.00%	



Manager Performance Comparison (Gross of Fees)

Period Ending: June 30, 2017

	Apr	May	Jun	2nd Qtr. 2017	Difference	1st Qtr. 2017	Difference	4th Qtr. 2016	Difference	3rd Qtr. 2016	Difference	2nd Qtr. 2016	Difference
Verus	1.46%	1.37%	-1.35%	1.46%		4.57%		-2.38%		2.23%		5.80%	
AQR GRP, 10% Volatility (Net)	1.46%	1.37%	-1.35%	1.46%	0.00%	4.57%	0.00%	-2.39%	0.00%	2.24%	-0.01%	5.80%	0.00%
60% R3000/ 40% BBgBarc Agg	0.94%	0.92%	0.50%	2.39%		3.76%		1.34%		2.82%		2.47%	
60% MSCI World/ 40% BBgBarc Glb	1.16%	1.50%	0.12%	2.80%		3.98%		0.17%		3.13%		1.62%	
Verus	2.31%	1.44%	-2.10%	1.60%		4.16%		-5.19%		2.20%		7.99%	
PanAgora (Net)	2.31%	1.44%	-2.10%	1.60%	0.00%	4.16%	0.00%	-5.19%	0.00%	2.20%	0.00%	7.99%	0.00%
60% R3000/ 40% BBgBarc Agg	0.94%	0.92%	0.50%	2.39%		3.76%		1.34%		2.82%		2.47%	
60% MSCI World/ 40% BBgBarc Glb	1.16%	1.50%	0.12%	2.80%		3.98%		0.17%		3.13%		1.62%	
Verus	-0.71%	-1.29%	0.81%	-1.19%		1.42%		2.38%		1.69%		-1.39%	
AQR DELTA XN (Net)	-0.71%	-1.29%	0.81%	-1.19%	0.00%	1.43%	0.00%	2.38%	0.00%	1.70%	-0.01%	-1.39%	0.00%
Libor + 4%	0.42%	0.42%	0.43%	1.29%		1.11%		1.17%		1.14%		1.13%	
Verus	0.54%	0.34%	-0.08%	0.81%		0.59%		1.80%		0.42%		-0.85%	
Standard Life GARS (Net)	0.54%	0.34%	-0.08%	0.81%	0.00%	0.59%	0.00%	1.80%	0.00%	0.42%	0.00%	-0.85%	-0.01%
Libor + 4%	0.42%	0.42%	0.43%	1.29%		1.11%		1.17%		1.14%		1.13%	
Verus				1.88%		2.55%		2.19%		1.68%		3.64%	
INVESCO Real Estate				1.88%	0.00%	2.54%	0.00%	2.17%	0.02%	1.68%	0.00%	3.62%	0.02%
NCREIF NFI ODCE Index				1.70%		1.77%		2.11%		2.07%		2.13%	
Verus				1.85%		2.90%		1.31%		3.82%		2.31%	
Invesco US Val IV				1.85%	0.00%	2.90%	0.00%	1.31%	0.00%	3.82%	0.00%	2.31%	0.00%
NCREIF NFI ODCE Index				1.70%		1.77%		2.11%		2.07%		2.13%	
NCREIF CEVA 1Q Lag - NET				1.36%		2.75%		2.54%		2.17%		1.99%	
Verus	0.42%	-0.14%	-0.86%	-0.58%		1.13%		-0.55%		1.24%		0.90%	
Brown Brothers Harriman	0.43%	-0.17%	-0.86%	-0.60%	0.02%	1.13%	0.00%	-0.53%	-0.02%	1.22%	0.02%	0.91%	-0.02%
BBgBarc U.S Tips	0.59%	-0.04%	-0.95%	-0.40%		1.26%		-2.41%		0.97%		1.71%	

**1 MSCI**

**1.1 MSCI US MARKET BREAKPOINTS**

Break Point*	Companies included
Large Cap	1-200
Medium-Large Cap	201-550
Medium Cap	551-750
Medium-Small Cap	751-2500
Small Cap	2501+

\*MSCI only categorizes equities per size into large, mid and small cap. For InvestorForce Report analytics coherence regarding domestic benchmarks the buffer zones of the mid-cap category are used to determine Medium-Large and Medium-Small Cap categories.

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
6/30/2017	15.834	9.267	4.517	2.573	0
3/31/2017	15.834	9.267	4.517	2.573	0
12/31/2016	15.239	9.375	4.416	2.520	0
9/30/2016	15.239	9.375	4.416	2.520	0
6/30/2016	15.358	9.43	4.548	2.591	0
3/31/2016	15.358	9.43	4.548	2.591	0
12/31/2015	16.507	9.968	5.069	2.917	0
9/30/2015	16.507	9.968	5.069	2.917	0
6/30/2015	15.288	9.09	4.506	2.596	0
3/31/2015	15.356	9.083	4.491	2.577	0
12/31/2014	15.356	9.083	4.491	2.577	0

Number in billion USD

InvestorForce Report reflects changes in the MSCI breakpoints once MSCI publishes new breakpoints. For months when no new breakpoints are published always the last breakpoints are applied. Changes usually but always happen around re-balancing of the indexes. Some index reviews do not contain changes to the market-cap breakpoints.

1.2 MSCI DEVELOPED AND EMERGING MARKET BREAKPOINTS

In case of MSCI Indexes to define the Size - Segment Indexes for a market, the following free float - adjusted market capitalization Market Coverage Target Ranges are applied to the Market Investable Equity Universe:

Break Point	Companies included
Large Cap Index	70% ±5%
Standard Index*	85% ±5%
Investable Market Index**	99%+1% or -0.5%

\* Standard Index (Large+Mid)

\*\*Investable Market Index (Large+Mid+Small)

MSCI Country Classification can be found here: <https://www.msci.com/market-classification>

For Emerging Markets, the Global Minimum Size Reference is set at *one-half* the corresponding level of full market capitalization used for the Developed Markets for each size-segment.

As Of	Large Cap DM	Large Cap EM	Medium Cap DM	Medium Cap EM	Small Cap
6/30/2017	14.361	7.180	5.077	2.538	0
3/31/2017	14.361	7.180	5.077	2.538	0
12/31/2016	14.361	7.180	5.077	2.538	0
9/30/2016	14.180	7.090	5.076	2.538	0
6/30/2016	14.180	7.090	5.076	2.538	0
3/31/2016	14.077	7.0385	5.046	2.523	0
12/31/2015	14.077	7.0385	5.046	2.5230	0
9/30/2015	14.883	7.4415	5.359	2.6795	0
6/30/2015	14.883	7.4415	5.359	2.6795	0
3/31/2015	13.368	6.684	4.781	2.3905	0
12/31/2014	13.368	6.684	4.781	2.3905	0

Number in billion USD

InvestorForce Report shows changes in the MSCI breakpoints once MSCI publishes a new one. For months when no new breakpoints are published always the last breakpoint is applied. Changes usually happen around re-balancing of the indexes.

**2 RUSSELL US BREAKPOINTS**

The market capitalization breakpoints that appear in the Market Capitalization Chart are defined by the Russell 3000 Index and change for each period end. Russell calculated the total market capitalization of each security for the end of the period, based on the total shares and price, to determine whether it is large enough for inclusion in one or more of the Russell Breakpoints.

Once the market capitalization for each security is determined, each security is then placed in the appropriate market capitalization breakpoint. A market capitalization breakpoint is determined by the break between the companies below.

Break Point	Companies included
Large Cap	50 Largest US Companies
Medium Large Cap	Next largest 150 US Companies
Medium Cap	Next largest 300 US Companies
Medium Small Cap	Next largest 500 US Companies
Small Cap	All US Companies below 1,000 largest

After the breakpoints are determined by the ranges above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around the new market capitalization breakpoints. If an existing securities market cap falls within this 5%, it will remain in its current index rather than move into a new market capitalization based index.

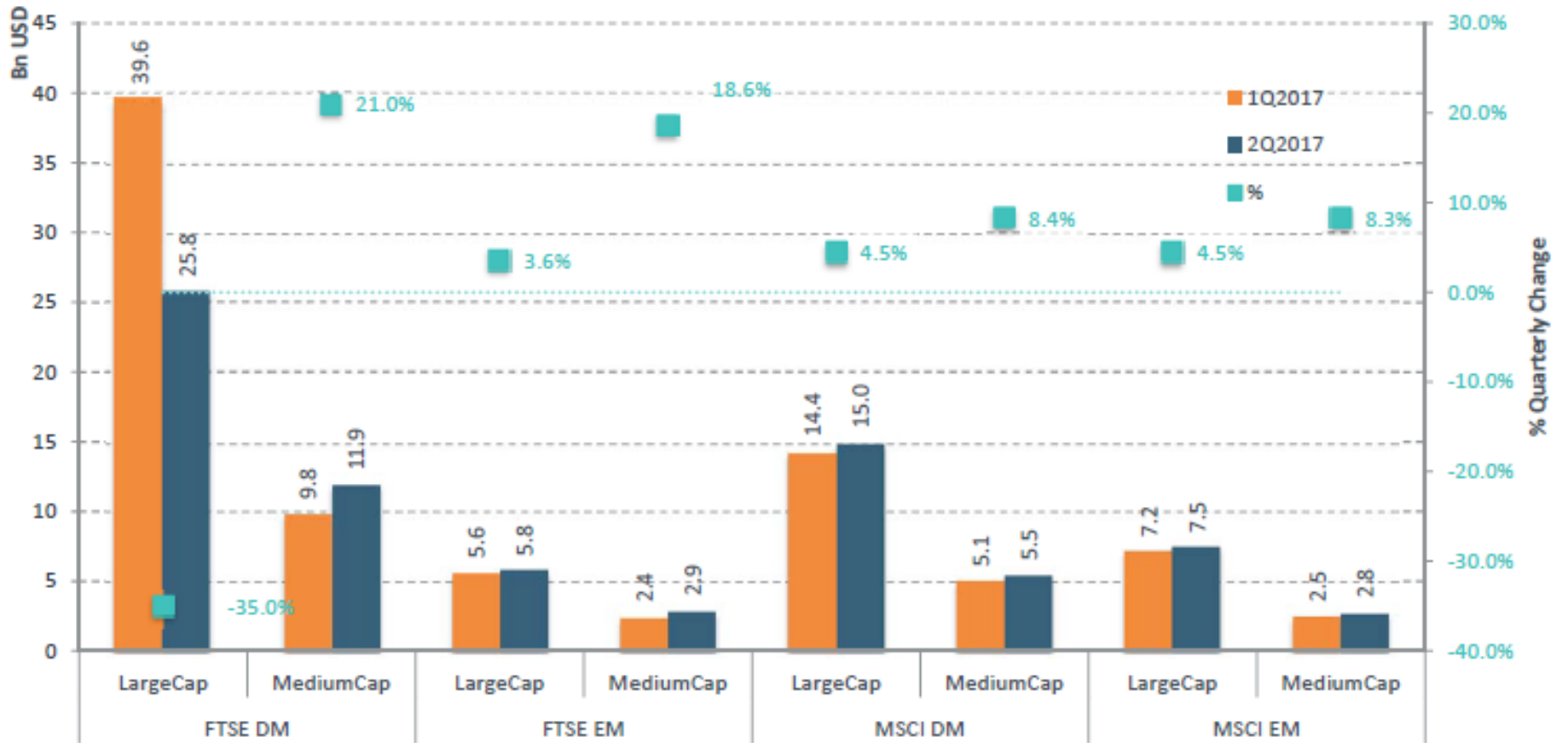
As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
6/30/2017	87.845	25.481	8.204	2.859	0
3/31/2017	89.968	25.293	8.241	2.737	0
12/31/2016	84.960	23.168	7.890	2.702	0
9/30/2016	78.745	23.385	7.394	2.533	0
6/30/2016	77.349	22.250	7.1432	2.444	0
3/31/2016	83.360	22.414	7.435	2.395	0
12/31/2015	90.075	24.308	8.141	2.936	0
9/30/2015	88.944	23.139	7.993	2.946	0
6/30/2015	92.87	25.07	8.797	3.352	0
3/31/2015	93.082	25.494	8.794	3.384	0

As Of	Large Cap	Medium Large Cap	Medium Cap	Medium Small Cap	Small Cap
12/31/2014	89.92	25.19	8.51	3.29	0
9/30/2014	84.51	24.44	7.97	3.04	0
6/30/2014	80.39	23.62	8.07	3.24	0
3/31/2014	76.77	23.15	7.83	3.06	0
12/31/2013	77.11	22.27	7.65	3.03	0
9/30/2013	72.4	19.93	7.15	2.71	0
6/30/2013	68.47	19.36	6.48	2.46	0
3/31/2013	64.31	18.64	6.39	2.39	0
12/31/2012	58.45	16.8	5.75	2.13	0
9/30/2012	57.06	16.48	5.49	2.08	0
6/30/2012	55.65	16.13	5.14	1.99	0
3/31/2012	57.58	16.43	5.55	2.13	0
12/31/2011	51.97	14.66	4.93	1.93	0
9/30/2011	45.35	13.88	4.38	1.66	0
6/30/2011	54.25	15.95	5.66	2.16	0
3/31/2011	52.22	15.69	5.7	2.16	0
12/31/2010	49.54	14.8	5.16	2.04	0
9/30/2010	42.83	13.13	4.64	1.8	0
6/30/2010	39.95	11.58	4.1	1.59	0
3/31/2010	42.43	12.61	4.3	1.68	0

Numbers are billions USD

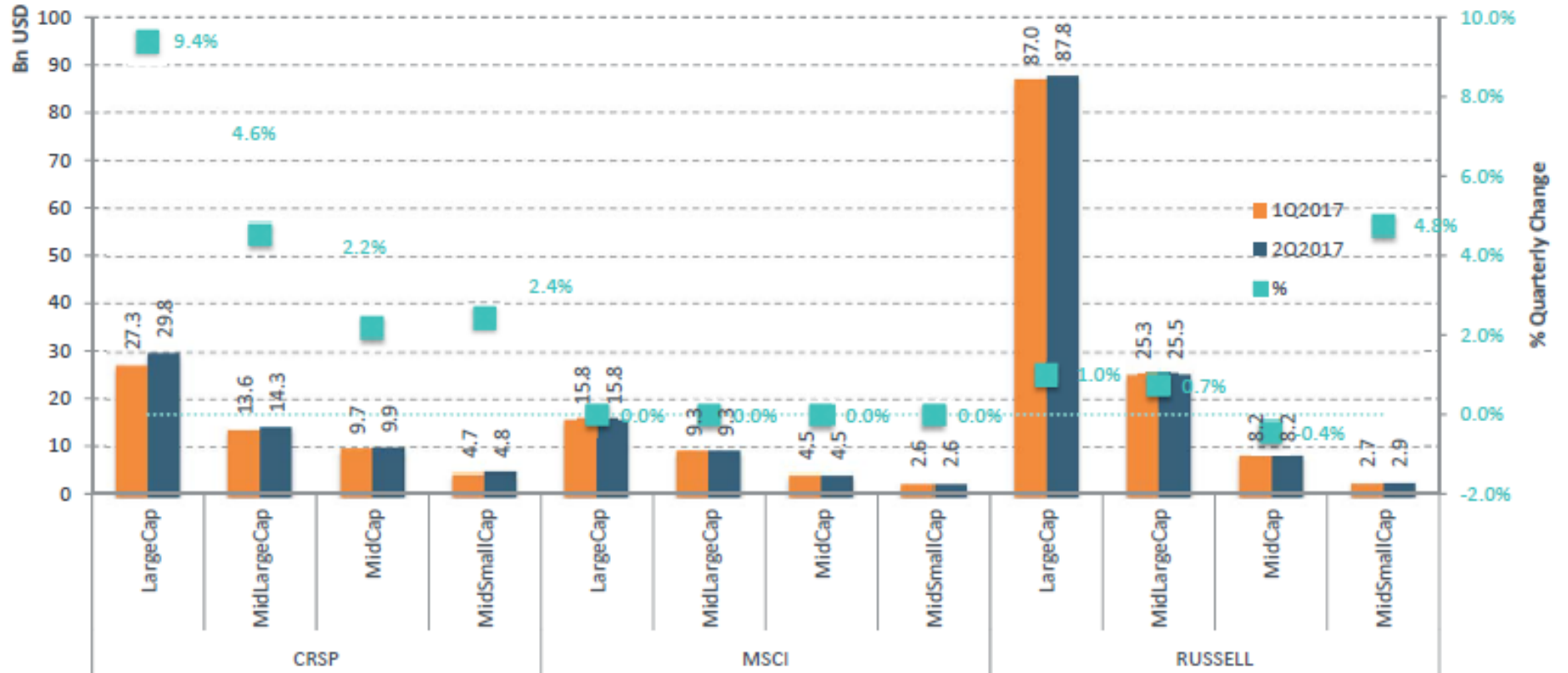
**BREAKPOINT TRENDS**

**2Q2017 DEVELOPED AND EMERGING MARKET BREAKPOINT CHANGES**



MSCI is releasing market capitalization breakpoints less frequently than FTSE, hence the market capitalization breakpoints are longer in effect, showing as no change.

### 2Q2017 US MARKET BREAKPOINT CHANGES



MSCI is releasing market capitalization breakpoints less frequently than others, hence the market capitalization breakpoints are longer in effect. This could result in no change.



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

3<sup>RD</sup> QUARTER 2017  
Investment Landscape



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Appendix 36

# 2<sup>nd</sup> quarter summary

## THE ECONOMIC CLIMATE

- Developed and emerging economies have exhibited coordinated positive growth for the first time in this recovery. Absolute growth remains subdued relative to history. [p. 15](#)
- Economic releases have begun to miss expectations in the U.S. and U.K. after much upside surprise. The Eurozone continued to deliver positive surprises, but by a smaller margin. Heightened expectations help to explain some of the recent data disappointment. [p. 10](#)
- Despite a healthy economy and longer than average expansion there is little indication of overheating in the U.S. This suggests the current expansion may have more room to run. [p. 7](#)

## MARKET PORTFOLIO IMPACTS

- Treasury yields fell slightly over the quarter. [p. 19](#)
- Credit spreads are tight, implying limited upside performance potential. U.S. credit markets have stabilized from recent defaults in the energy and metals/mining sectors. [p. 20](#)

## THE INVESTMENT CLIMATE

- Central banks communicated a more hawkish tone across developed markets. The Fed announced plans for balance sheet reduction, the ECB is expected to reduce easing starting next year, and Mark Carney of the BOE indicated he is receptive to tightening under the right conditions. Central bank governors have shown less concern over the recent decline in inflation than in the past. [p. 18](#)
- U.S. equities are expected to deliver robust earnings growth in Q2 of 6.8% YoY. Energy sector earnings have provided much of this improvement after a challenging period a year ago. [p. 30](#)

## ASSET ALLOCATION ISSUES

- Earnings growth beat expectations in recent quarters leading to a broad fall in equity price-to-earnings multiples, causing equities to become more attractive. [p. 29](#)
- Realized and implied market volatility is at historic lows across assets classes. This could be a sign of market complacency. [p. 31](#)

We maintain a neutral to slightly overweight risk stance

# What drove the market in Q2?

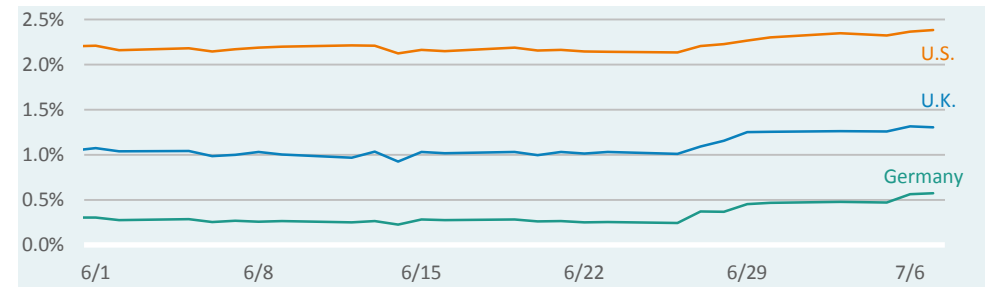
## “Bonds Continue Decline as Central Banks Signal Waning Stimulus”

### 10-YEAR GOVERNMENT YIELDS (%)

U.S.		U.K.		Germany	
Jun 1 <sup>st</sup>	Jul 7 <sup>th</sup>	Jun 1 <sup>st</sup>	Jul 7 <sup>th</sup>	Jun 1 <sup>st</sup>	Jul 7 <sup>th</sup>
2.21	2.38	1.07	1.31	0.30	0.57

Article Source: New York Times, June 30<sup>th</sup> 2017

### DEVELOPED 10-YEAR YIELDS



Source: Bloomberg, 7/7/17

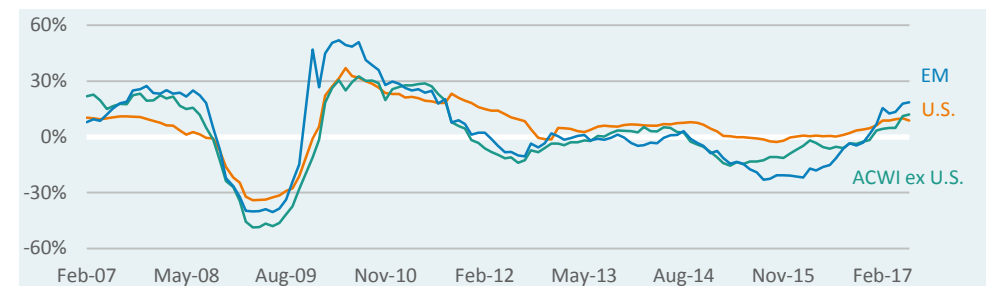
## “Investors Look to Global Growth for Earnings Power”

### EQUITY EARNINGS GROWTH BY REGION (YOY)

ACWI ex U.S.	U.S.	Emerging Markets
12.0%	8.8%	18.5%

Article Source: Reuters, April 7<sup>th</sup> 2017

### EARNINGS GROWTH (YOY)



Source: Bloomberg, as of 6/30/17

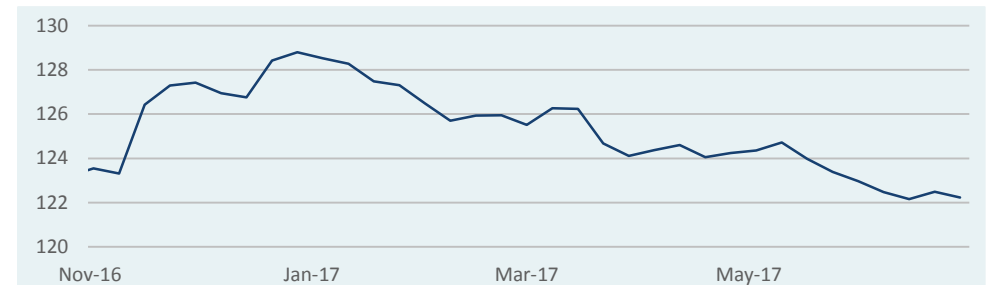
## “Dollar Has Worst Week in Over a Year Amid Political Uncertainty”

### USD TRADE WEIGHTED INDEX

Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>	Apr 30 <sup>th</sup>	May 31 <sup>st</sup>	Jun 30 <sup>th</sup>
127	126	124	124	123	122

Article Source: Reuters, May 19<sup>th</sup> 2017

### USD TRADE WEIGHTED INDEX



Source: FRED, as of 6/28/17

## “Tumbling U.S. Inflation Expectations Challenge the Fed”

### 10-YEAR BREAKEVEN INFLATION RATE (%)

Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>	Apr 30 <sup>th</sup>	May 31 <sup>st</sup>	Jun 30 <sup>th</sup>
2.1	2.0	2.0	1.9	1.8	1.7

Article Source: Financial Times, June 15<sup>th</sup> 2017

# Economic environment

# U.S. economics summary

- U.S. real GDP grew 2.1% YoY in Q1, on par with the level of economic expansion in recent quarters. Consumer spending and business investment were the primary drivers of growth.
- Headline inflation decelerated from 2.4% in February to 1.6% in June. The slowdown was partially influenced by the effect of lower oil prices falling out of the year-over-year calculation, but the fall in price level was not solely due to energy. Lower telecom prices helped lead to a drop in core CPI, which fell from 2.0% to 1.7%.
- For a third consecutive quarter, the Fed raised the target federal funds rate by 25 bps. FOMC members looked past the recent soft patch in inflation and cited improving overall economic conditions.
- The Fed also released details on its balance sheet normalization plan, although timing remains unclear. Once the program begins, \$6 billion in Treasuries and \$4 billion in mortgage-backed securities will roll off the balance sheet each month. These amounts will increase every three months until a total cap of \$50 billion per month is reached.
- The economy added 194,000 jobs per month in the second quarter, on average. This marks the best quarter for job growth since the second quarter of 2010. Many of these jobs have been created in lower paying sectors such as leisure and hospitality, which may be helping to keep overall wage growth subdued.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	2.1% 3/31/17	1.6% 3/31/16
Inflation ( <i>CPI YoY, Headline</i> )	1.6% 6/30/17	0.9% 6/30/16
Expected Inflation ( <i>5yr-5yr forward</i> )	1.8% 6/30/17	1.5% 6/30/16
Fed Funds Rate	1.25% 6/30/17	0.50% 6/30/16
10 Year Rate	2.3% 6/30/17	1.5% 6/30/16
U-3 Unemployment	4.4% 6/30/17	4.9% 6/30/16
U-6 Unemployment	8.6% 6/30/17	9.6% 6/30/16

# U.S. economics – GDP growth

Real GDP grew 2.1% YoY in Q1 (1.4% quarterly annualized rate), slightly below expectations. First quarter growth has disappointed over the past few years, and investors seemed to overlook this release as second quarter growth forecasts were revised upward.

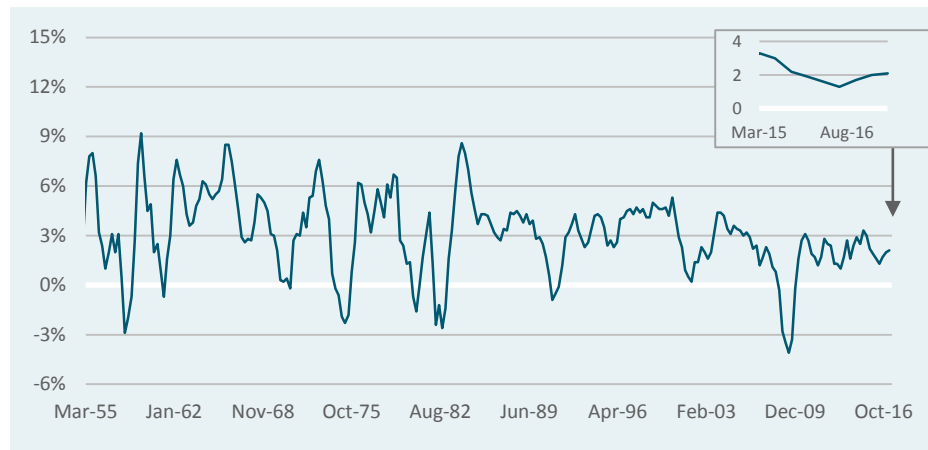
Personal consumption cooled in the first quarter, but was still a positive contributor to GDP. A temporary decline in utilities spending from milder winter weather across the country contributed to the softer growth.

Business investment increased the most in more than three years, and was the largest contributor to growth, suggestive of a rise in business confidence as companies put cash to work. Slower accumulation of private inventories was the largest detractor from GDP.

Economists are forecasting moderate economic growth throughout the rest of the year. Fundamentals for consumers and businesses remain strong even as the Fed is gradually tightening monetary policy.

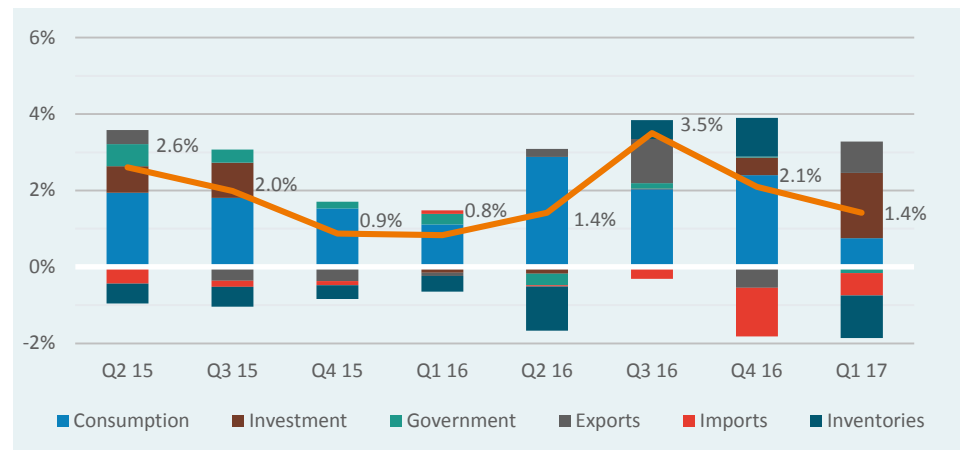
The trend of steady, moderate growth was sustained in Q1

U.S. REAL GDP GROWTH (YOY)



Source: FRED, as of 3/31/17

U.S. GDP COMPONENTS



Source: BEA, annualized quarterly rate, as of 3/31/17

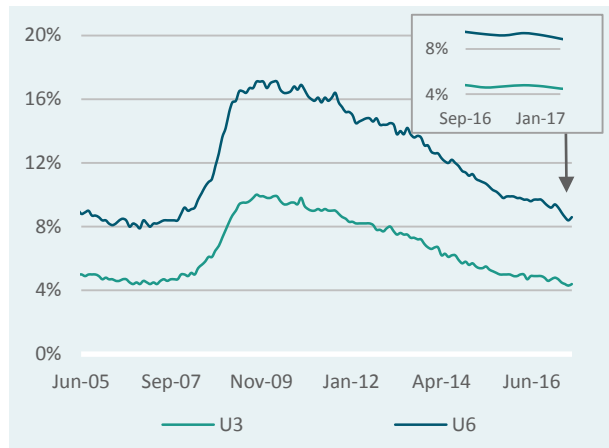
# U.S. economics – Labor market

Although low unemployment suggests a tight labor market, the economy still added jobs at a solid pace. Payrolls added an average of 194,000 jobs per month during the second quarter, compared to the expansion average of 198,000. The headline unemployment rate dropped 0.1% to 4.4%, and the broader U-6 unemployment rate fell 0.3% to 8.6%. The U-6 rate, which includes discouraged workers, has come down materially since the beginning of the year as people have reentered the labor force and been able to find work.

Despite low unemployment and other indicators of a tight labor market, workers have yet to experience strong wage gains. Average hourly earnings rose 2.5% on a nominal basis from the previous year and 0.6% on a real basis. Historically, wage growth has been higher during similar times of low unemployment. Mild wage growth is likely tied to the inflow of previously discouraged, less skilled, and less productive workers into the workforce. As these workers begin to participate in the economy they may provide continuing support for expansion.

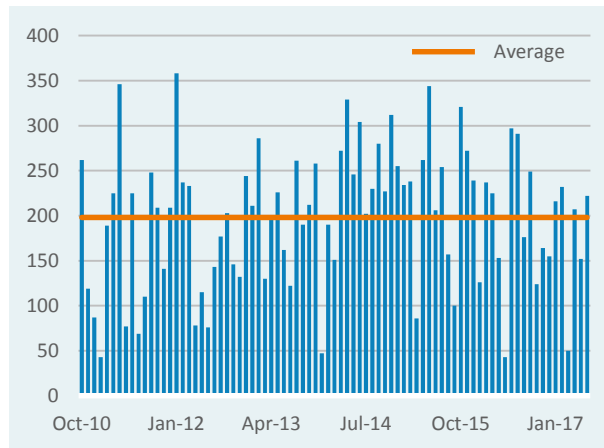
Job growth has been strong, while wages have seen less improvement

**U.S. UNEMPLOYMENT**



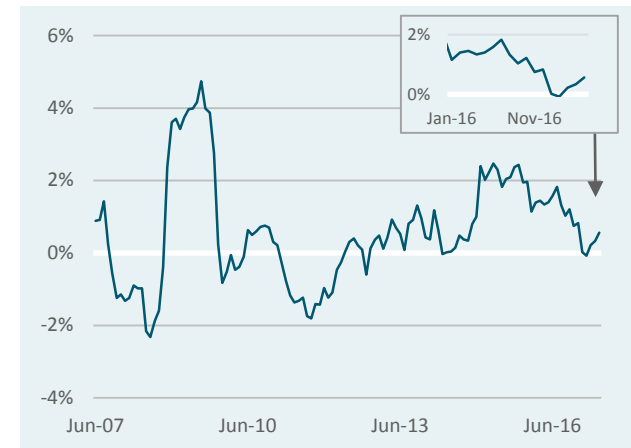
Source: FRED, as of 6/30/17

**CHANGE IN NONFARM PAYROLLS (THOUSANDS)**



Source: FRED, as of 6/30/17

**REAL AVERAGE HOURLY EARNINGS (YOY)**



Source: FRED, as of 5/31/17

# U.S. economics – The consumer

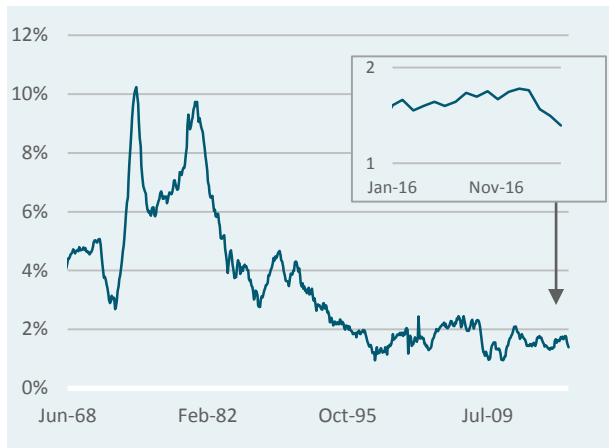
Consumer spending growth has slowed slightly this year, but is within a normal range. The move was partially due to a temporary decline in utilities expenditures. Despite the recent cooling, the fundamental picture for consumers is still positive. Low inflation, low unemployment, and moderate wage gains should provide a backdrop for further spending growth even though it appears less likely that the post-election jump in consumer sentiment will translate into a large increase in spending.

In addition, households have experienced a significant deleveraging over the past few years, and consumers have used credit sparingly in this cycle relative to history. Healthy balance sheets and a low interest burden should also support moderate spending in the future.

A potential risk to the consumer is that borrowing costs such as credit card, auto and student loan interest rates, are expected to rise along with Fed monetary tightening. This will act as a headwind to income and spending, but at this point these borrowing rates have only experienced a slight increase.

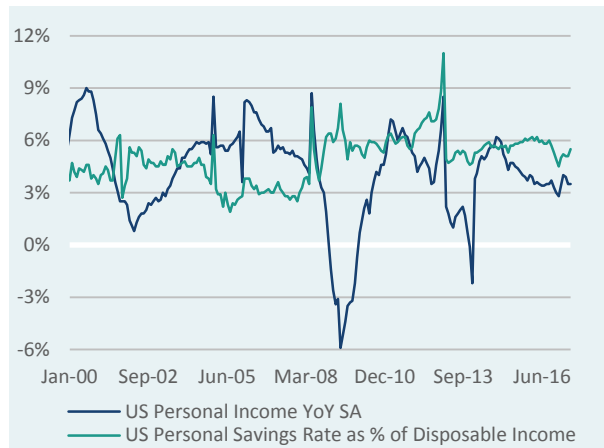
Consumer spending has cooled, but is still an important contributor to growth

**CONSUMER SPENDING (YOY GROWTH)**



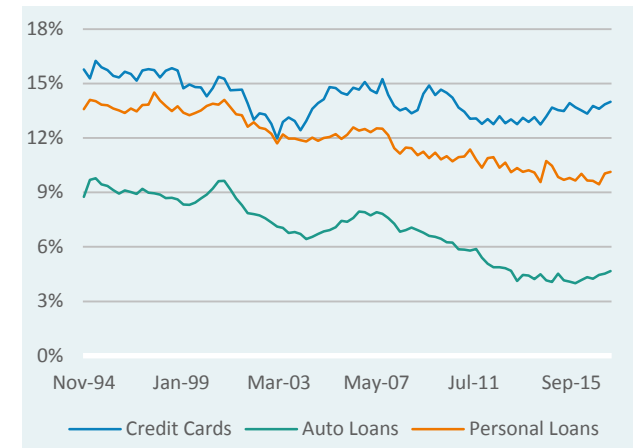
Source: Bloomberg, as of 5/31/17

**SAVINGS & INCOME (YOY)**



Source: FRED, as of 5/31/17

**CONSUMER INTEREST RATES**



Source: FRED, as of 5/31/17



# U.S. economics – Sentiment

Consumer sentiment indicators have trended downward from post-election highs, but remain elevated from a historical perspective. The University of Michigan Consumer Sentiment Index, which tracks both consumers' perception of current conditions and expectations of future conditions, fell from 96.9 to 95.1 during the quarter, its lowest level since the election.

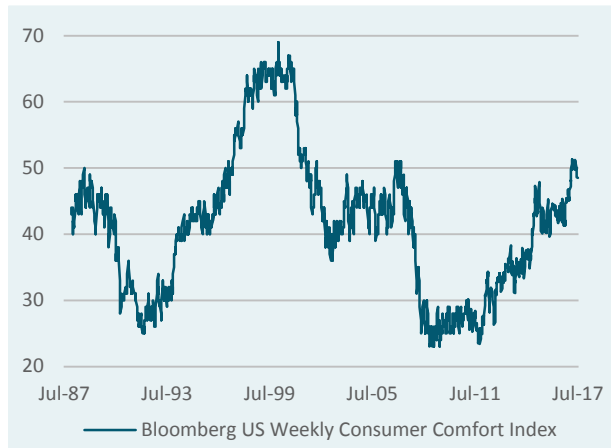
Weakened confidence was fueled by uncertainty surrounding fiscal policies, as reported by the University of Michigan Sentiment Survey. Consumers expect a low likelihood of successful policy implementation. Progress

from the Trump administration on these policies could lead to a positive surprise.

In aggregate, U.S. economic data came in below expectations during the quarter as the Citi Economic Surprise Index fell from 48 to -73. Although the drop is somewhat concerning, this indicator tends to be mean-reverting in nature and some of the decline should be expected. A positive (negative) reading of the Economic Surprise Index suggests that economic releases have on balance been beating (missing) consensus.

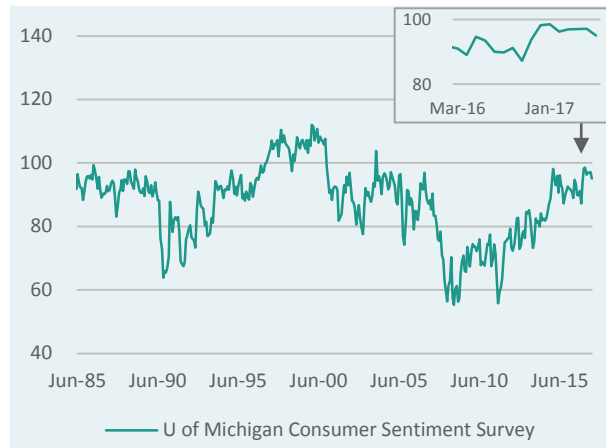
Consumer sentiment has faded since the post-election peak

**CONSUMER COMFORT INDEX**



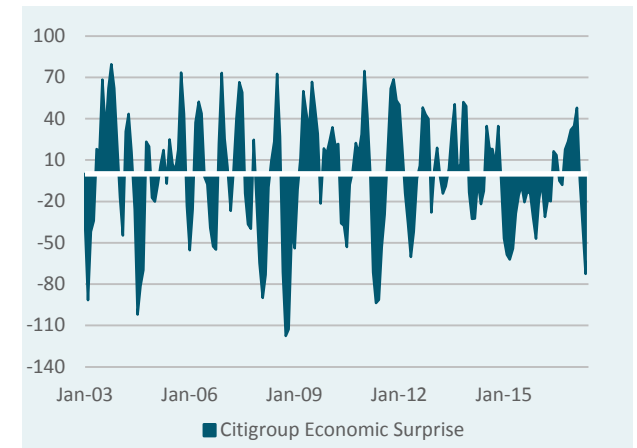
Source: Bloomberg, as of 7/2/17 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 6/30/17 (see Appendix)

**U.S. ECONOMIC SURPRISE**



Source: Bloomberg, as of 6/30/17 (see Appendix for details)

# U.S. economics – Housing

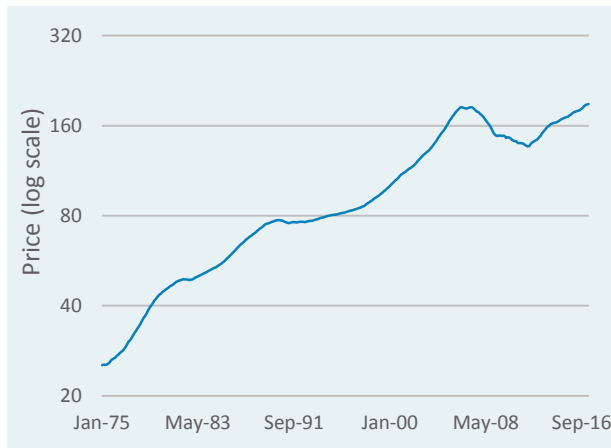
Single family home prices increased at a steady rate amid strong demand and low supply. Over the past 12 months, the Case-Shiller National Home Price Index rose 5.5%. Seattle, Portland, and Dallas reported the highest yearly growth among the top 20 metropolitan areas.

Tighter mortgage lending standards by banks have led to a higher quality pool of borrowers than in the previous real estate cycle. In addition to tighter lending standards, household deleveraging and lower interest rates have

been important drivers of lower delinquency and default rates. Mortgage rates spiked following the election, but have since come down slightly.

Housing starts and permits declined throughout the quarter, indicating a slowing of construction activity that could weigh on economic growth. The market is already constrained by low supply, and if new construction were to decline further, it may add upward pressure to housing prices.

**CASE-SHILLER HOME PRICE INDEX**



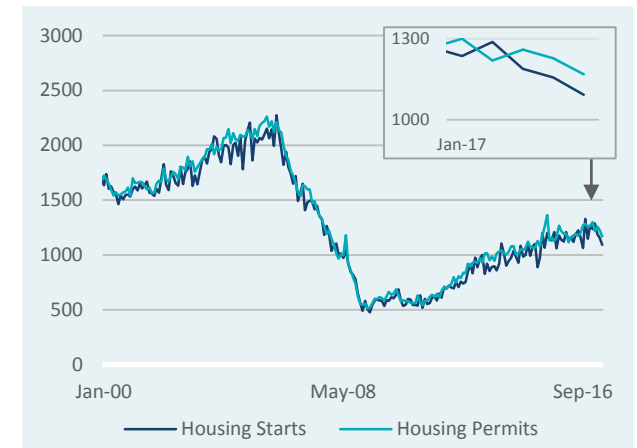
Source: FRED, as of 4/30/17

**30-YEAR MORTGAGE RATE**



Source: FRED, as of 7/6/17

**HOUSING STARTS AND PERMITS**



Source: FRED, as of 5/31/17

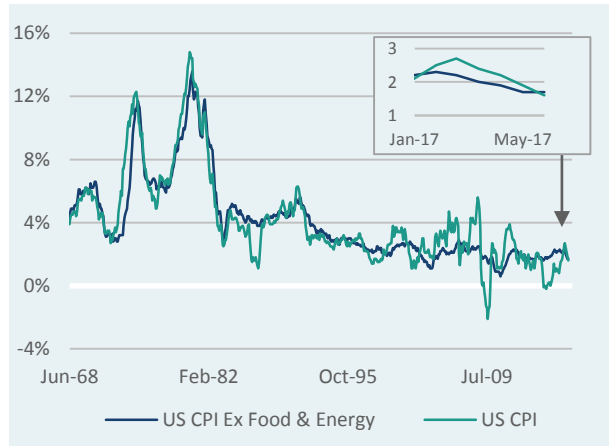
# U.S. economics – Inflation

Inflation decelerated during the quarter, falling back below the Fed's target of 2%. Headline CPI fell 0.8% to 1.6% and core CPI (ex food and energy) declined 0.3% to 1.7%. Much of the decline in the headline number was due to lower energy prices, though weakness in telecommunication, apparel, and health care prices also contributed to lower inflation. In her testimony to the Senate, Janet Yellen acknowledged the recent weakness in inflation as a concern, but said she still believes price levels will move gradually higher to reach the Fed's target. Further softness in inflation could give the Fed pause when considering additional tightening.

Lower realized inflation, which missed estimates for three consecutive months, helped lead the market to reprice inflation expectations. The 10-year TIPS breakeven inflation rate fell from 2.0% in March to 1.7% in June. Market-based inflation expectations are low compared to history, and participants may simply be naively projecting the current low inflation environment into the future. Late stage cyclical conditions including moderate economic expansion and a tightening labor market could place gradual pressure on inflation.

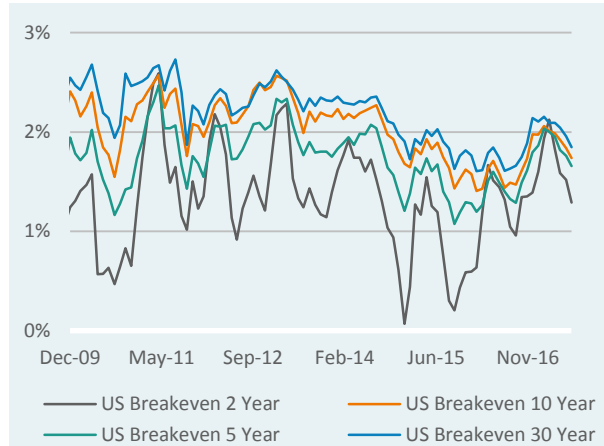
**Inflation decelerated in the second quarter**

**U.S. CPI (YOY)**



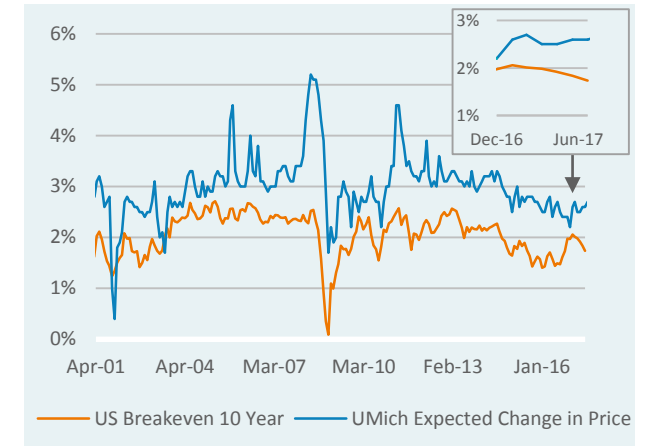
Source: FRED, as of 6/30/17

**U.S. TIPS BREAKEVEN RATES**



Source: FRED, as of 6/30/17

**INFLATION EXPECTATIONS**



Source: Bloomberg, as of 6/30/17

# International economics summary

- Developed and emerging economies have exhibited coordinated positive growth momentum from low absolute growth rates relative to history. A continuation of this trend may be self reinforcing, lifting weak and strong economies alike.
- Economic releases have missed expectations in the U.S. and U.K. after extended upside surprise. The Eurozone has delivered positive surprise, but by a smaller margin.
- Oil further contributed to commodity underperformance due to oversupply, disagreements within OPEC regarding production cuts, and concerns over the magnitude of U.S. production.
- Developed world inflation remained within a normal range, though slightly below levels targeted by central banks.
- In May, Emmanuel Macron defeated Marine Le Pen in the French presidential election, calming fears over populist politics gaining an increased foothold in Europe.
- On June 8th, the U.K. held a snap election in which the Conservative party surprised polls and gave up their majority in Parliament, potentially weakening their position in the upcoming Brexit negotiations.
- On June 27th, ECB President Mario Draghi surprised markets with comments perceived as hawkish compared to previous comments. In the following two days the Euro appreciated 2.3% against the U.S. dollar and developed global rates moved upward - German bunds in particular.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.1% <i>3/31/17</i>	1.6% <i>6/30/17</i>	4.4% <i>6/30/17</i>
Western Europe	1.8% <i>3/31/17</i>	1.3% <i>6/30/17</i>	8.1% <i>3/31/17</i>
Japan	1.3% <i>3/31/17</i>	0.4% <i>5/31/17</i>	3.1% <i>5/31/17</i>
BRICS Nations	5.4% <i>3/31/17</i>	2.3% <i>3/31/17</i>	5.6% <i>12/31/16</i>
Brazil	(0.4%) <i>3/31/17</i>	3.0% <i>6/30/17</i>	13.5% <i>6/30/17</i>
Russia	0.5% <i>3/31/17</i>	4.4% <i>6/30/17</i>	5.5% <i>3/31/17</i>
India	6.1% <i>3/31/17</i>	2.2% <i>5/31/17</i>	8.4% <i>12/31/16</i>
China	6.9% <i>3/31/17</i>	1.5% <i>5/31/17</i>	4.0% <i>12/31/16</i>

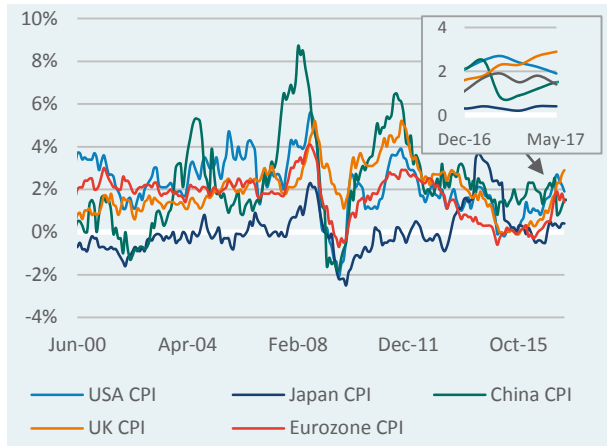
# International economics

Eurozone CPI was 1.3% YoY in June, arguably within the bounds of the European Central Bank mandate “...to maintain inflation rates below, but close to, 2% over the medium term.” Inflation below 2% likely implies a more dovish central bank stance.

Japan CPI remained low at 0.4% YoY in May. Bank of Japan Governor Haruhiko Kuroda explained in June that “...there is still a long way to go until the price stability target of 2 percent is achieved.” The Bank of Japan maintains its aggressive stimulus policy which separates the bank from those of other developed economies.

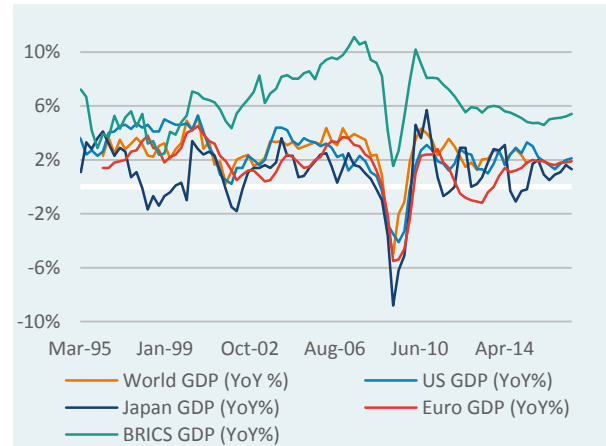
Employment has improved markedly across the globe, recovering to pre-crisis levels in most economies. Europe remains the exception in terms of aggregate employment, with labor markets displaying disparate levels of health from one country to the next. Core countries such as Germany and France have experienced a much greater fall in unemployment than periphery countries such as Spain and Italy.

## INTERNATIONAL INFLATION



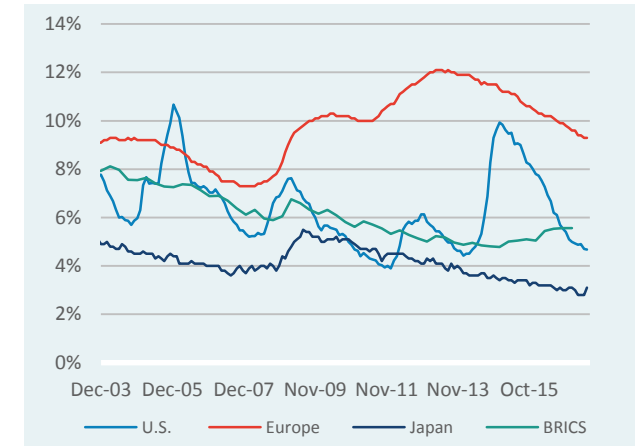
Source: Bloomberg, as of 5/31/17

## REAL GDP GROWTH



Source: Bloomberg, as of 3/31/17

## GLOBAL UNEMPLOYMENT



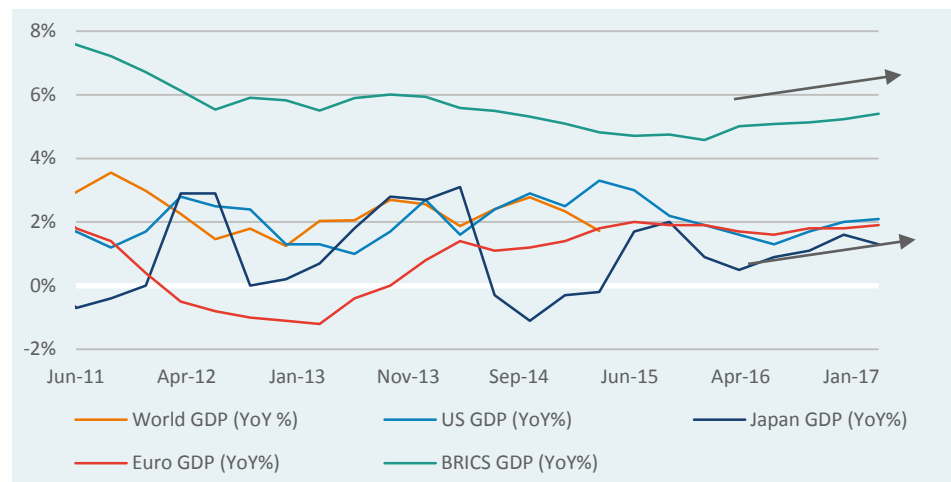
Source: Bloomberg, as of 5/31/17 or most recent release

# Synchronized global growth

Developed and emerging economies have begun to accelerate. A confluence of low inflation, higher employment (but weak wage pressure), improving consumer/business sentiment, and relatively accommodative central bank policy may lead to a unified global expansion. We expect that this trend would deliver outsized gains to open, export-focused economies. Emerging markets may be noteworthy beneficiaries within this environment, as these economies tend to be highly exposed to global growth trends.

The U.S. economy is arguably further along in its economic cycle than other economies; however, it is important to note that American corporations derive a significant portion of sales from overseas. S&P 500 foreign sales make up more than one third of total index revenue. U.S. corporations could participate substantially in global growth despite a more mild domestic expansion scenario.

## REAL GDP GROWTH



Source: Bloomberg, as of 3/31/17

## GLOBAL PMI

	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17
<b>Manufacturing</b>												
Global	51	51	51	52	52	53	53	53	53	53	53	53
Developed	52	51	52	53	53	54	54	54	54	54	54	54
US	52	49	52	52	54	55	56	58	57	55	55	58
Eurozone	52	52	53	54	54	55	55	55	56	57	57	57
Japan	49	50	50	51	51	52	53	53	52	53	53	52
EM	50	50	50	51	51	51	51	51	52	51	51	51
<b>Services</b>												
Global	52	52	52	53	53	53	54	53	54	54	54	54
Developed	51	52	52	54	54	54	55	54	54	54	54	55
US	55	52	57	55	56	57	57	58	55	58	57	57
Eurozone	53	53	52	53	54	54	54	56	56	56	56	55
Japan	50	50	48	51	52	52	52	51	53	52	53	53
EM	53	53	52	53	54	54	54	56	56	56	56	55

Source: Bloomberg, as of 6/30/17 – (blue stronger / orange weaker)

# Fixed income rates & credit

# Interest rate environment

- On June 14th, the Federal Reserve raised the federal funds rate by 25 bps to a target range of 1.00% - 1.25%.
- The Fed's own forecast indicates one more rate hike this year, and three more hikes in each of the next two years. Rates are expected to normalize at 3% at the end of 2019. We believe the probability that the Fed undershoots its target is significant, given persistent low inflation and a high degree of risk if policy is tightened too quickly.
- The Fed announced plans to begin reducing their balance sheet sometime this year. The initial plan is to runoff \$6 billion of Treasuries and \$4 billion of mortgage-backed securities per month. This will be scaled up commensurately every 3 months to \$50 billion per month.
- Markets expect the ECB to reduce monetary easing gradually throughout 2018, with a tapering plan announcement this fall.
- In May, the Bank of Japan raised its economic forecasts. The central bank implemented a "yield curve control" policy at its September meeting along with a mandate to keep the 10-year yield at 0%. The BoJ plans to maintain an easy stance until inflation hits its 2% target.
- Credit spreads remain broadly tight. Spread levels have historically been a strong predictor of credit performance relative to Treasuries, which at current levels implies muted future performance.
- We favor emerging market debt due to higher yields relative to other bond markets.

Area	Short Term (3M)	10 Year
United States	1.01%	2.30%
Germany	(0.82%)	0.47%
France	(0.60%)	0.82%
Spain	(0.44%)	1.54%
Italy	(0.38%)	2.16%
Greece	2.43%	5.42%
U.K.	0.17%	1.26%
Japan	(0.10%)	0.09%
Australia	1.63%	2.73%
China	2.63%	3.57%
Brazil	9.41%	10.54%
Russia	8.16%	7.90%

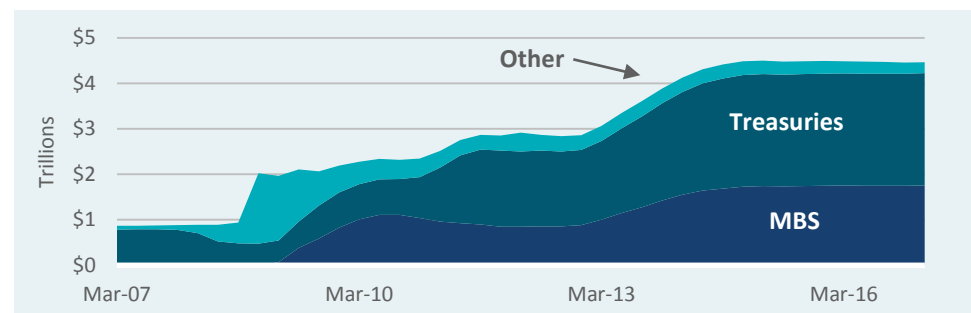
Source: Bloomberg, as of 6/30/17



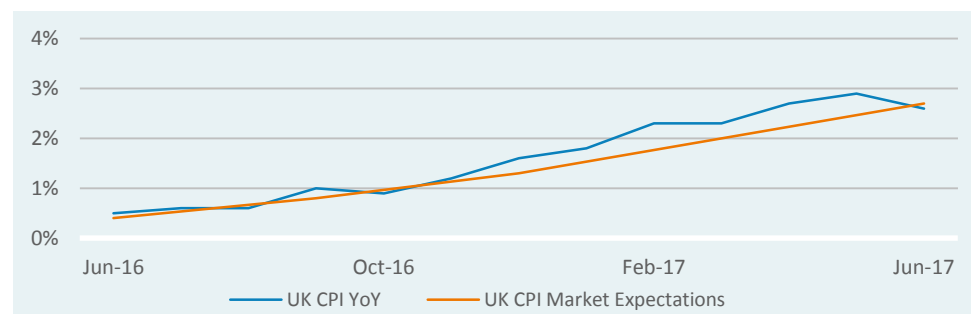
# Central bank confidence

- The U.S. Federal Reserve announced plans to begin reducing its balance sheet, which is expected to begin later this year. The initial plan is to runoff \$6 billion of Treasuries and \$4 billion of mortgage-backed securities per month. This will be scaled up commensurately every three months to a total of \$50 billion per month. Considering the Fed balance sheet has grown to \$4.5 trillion in size, it would take nearly seven years of uninterrupted runoff to fully unwind the balance sheet to the pre-crisis level. Central banks are likely aiming to build up more dry powder in order to address future economic downturns.
- Markets expect the ECB to announce a gradual tapering plan to its asset purchase program in the fall that will most likely begin sometime in 2018. More policy timing clues are anticipated from the ECB at the September 7<sup>th</sup> meeting.
- In the U.K., the argument for a rate hike is building after higher than expected inflation in May. This has likely contributed to recent British Pound appreciation. Mark Carney seems more receptive to rate hikes but has stated that business investment would need to grow to offset weaker consumer spending in order for him to push for a hike.
- The Bank of Japan announced that it would buy unlimited quantities of government bonds to keep yields from rising too far – recently this seems to be defined as 0.1% yield on the 10-year government bond. The bank plans to stick to policy until inflation hits the 2% target.

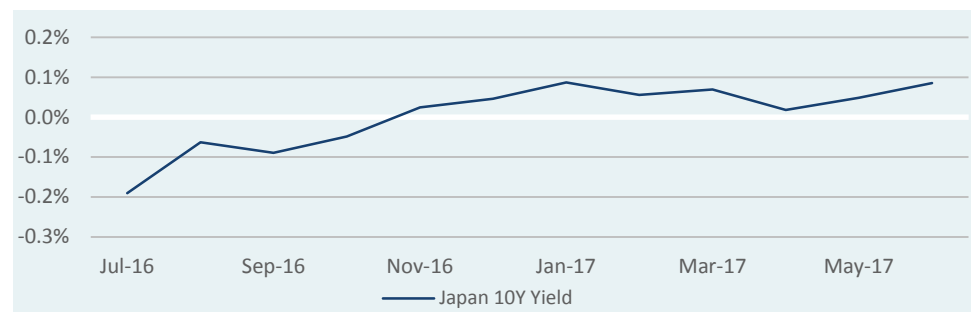
**FEDERAL RESERVE BALANCE SHEET**



**U.K. CPI YOY VS MARKET EXPECTATIONS**

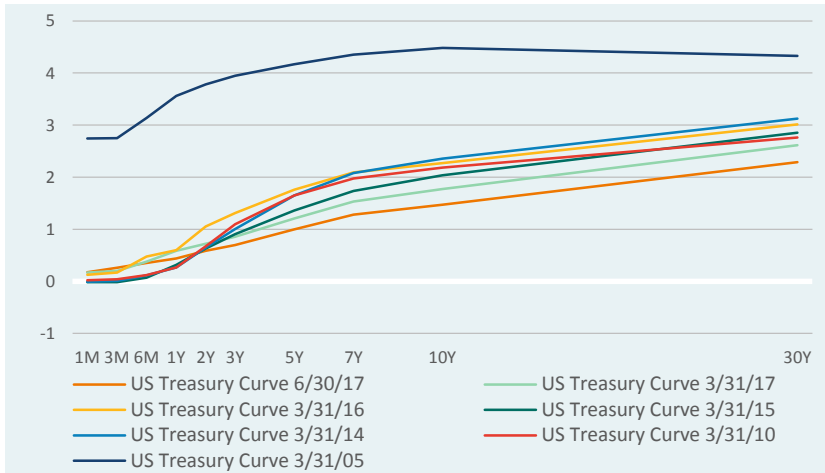


**JAPAN 10Y YIELD**

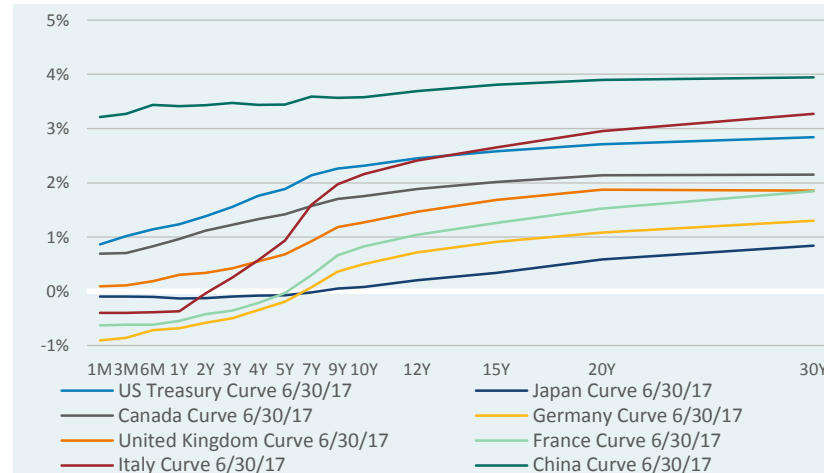


# Yield environment

U.S. YIELD CURVE

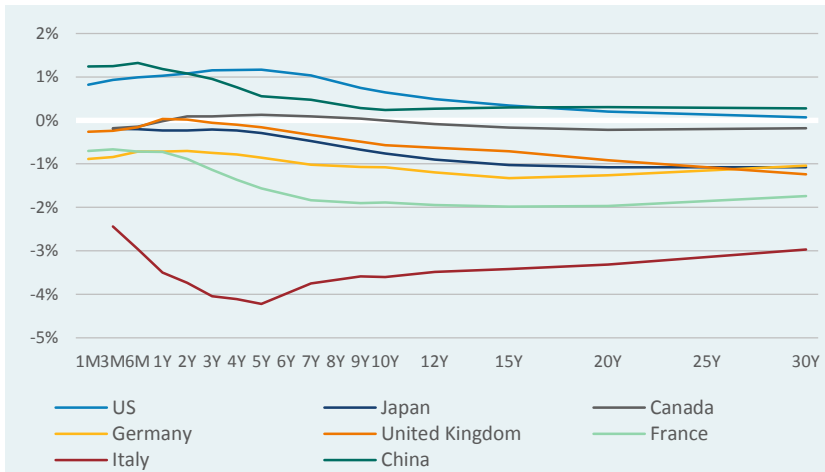


GLOBAL GOVERNMENT YIELD CURVES

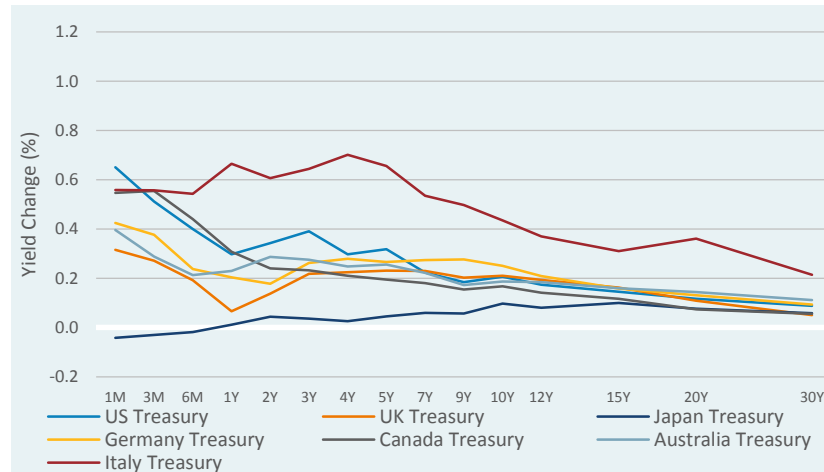


Across developed markets, U.S. Treasuries offer higher yields

YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/17

# Credit environment

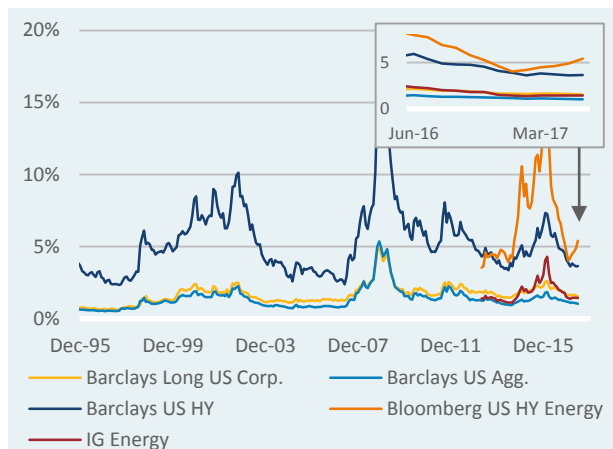
U.S. high yield option-adjusted spreads compressed in the second quarter to 3.6%, and the asset class generated a 2.2% total return (BBgBarc U.S. Corp. High Yield Index). High yield spreads are tighter than those of bank loans on a duration neutral basis.

The U.S. labor market remained strong, which helped the Fed to justify a rate increase of 0.25% in June. Investors continued to favor credit. A combination of tighter credit spreads and additional carry (greater yield) over Treasuries led credit to broadly outperform Treasuries in Q2. Spreads are near historic lows, though these levels

have been witnessed in later stages of previous credit cycles. Credit spreads have historically been a good indicator of future performance relative to Treasuries.

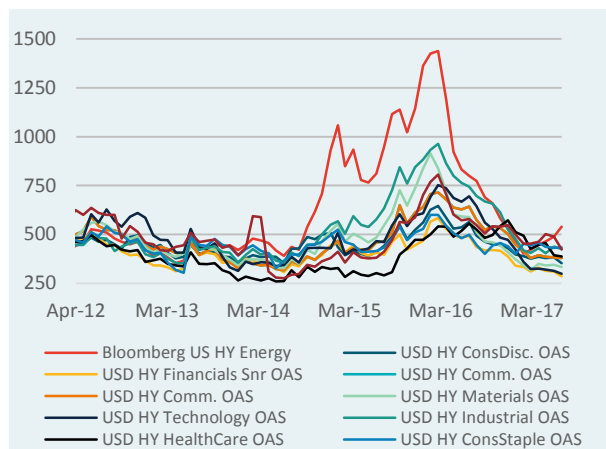
High yield energy spreads widened over the quarter to 5.4% - a very moderate rise relative to what was witnessed following the 2014 commodity drawdown. This lesser magnitude can be partly attributed to better credit ratings of companies in the index today. Additionally, innovation and technological gains have helped lower costs, which allows businesses to stay profitable at lower price levels.

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 6/30/17

## HIGH YIELD SECTOR SPREADS



Source: Bloomberg, as of 6/30/17

## SPREADS

Market	Credit Spread (6/30/17)	Credit Spread (1 Year Ago)
Long US Corporate	1.6%	2.2%
US Aggregate	1.1%	1.6%
US High Yield	3.6%	5.9%
US High Yield Energy	5.4%	8.0%
US Bank Loans	3.7%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/17

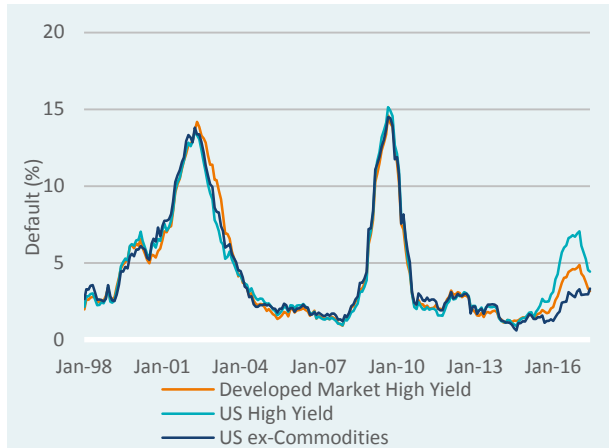
# Issuance and default

Both U.S. senior loan and high yield markets are stabilizing with the majority of par defaults last year coming from energy and metals/mining sectors. Rolling default rates should fall as commodity prices recover and commodity price-induced credit problems have a lesser impact on the credit universe. Active management may offer value to investors in the high yield space.

Global high yield and bank loan issuance has grown at a faster pace than what was seen last year. Lower spread levels have resulted in more attractive borrowing costs for these issuers. The direction of interest rates will likely impact future debt issuance levels.

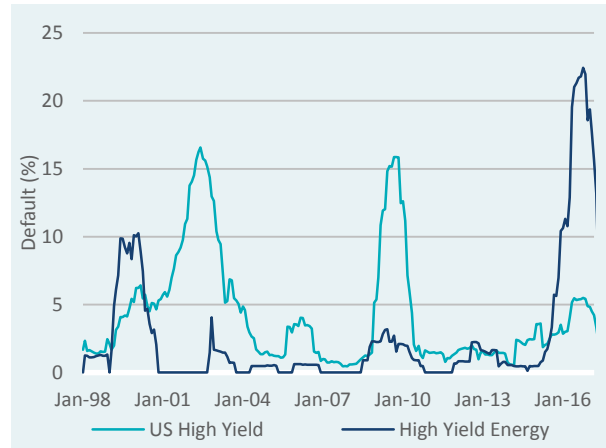
The effects of commodity related defaults are subsiding

**HY DEFAULT TRENDS (ROLLING 1 YEAR)**



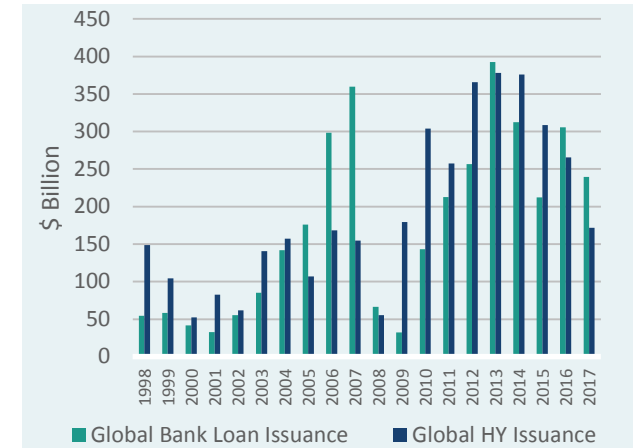
Source: BofA Merrill Lynch, as of 6/30/17

**ENERGY DEFAULT TRENDS**



Source: BofA Merrill Lynch, as of 6/30/17

**GLOBAL ISSUANCE**



Source: Bloomberg, BofA Merrill Lynch, as of 6/30/17

# Equity

# Equity environment

- We maintain a moderate overweight to equities with a preference for emerging markets due to attractive valuations and better growth prospects relative to developed markets.
- Global equity markets delivered another positive quarter, driven by strong earnings growth across regions. Earnings were strongest in Western Europe and emerging markets. These regions outperformed on a relative basis during the quarter.
- According to FactSet, the estimated Q2 earnings growth rate of the S&P 500 is 6.8% YoY. Energy companies are expected to contribute the most to overall growth due to stabilizing oil prices and a low earnings base one year ago.
- Increased uncertainty surrounding the Brexit negotiations following the Conservative party's surprise loss of a majority in Parliament likely helped lead to underperformance in U.K. equities. The FTSE 100 Index returned -4.9% in Q2.
- MSCI approved the inclusion of 222 mainland Chinese companies (China A Shares) into the MSCI Emerging Markets Index. This represents only a small portion of the overall market. Starting in 2018, these domestic shares will represent approximately 0.7% of the index. While initially this decision will have a minimal effect on index performance, it opens the door for additional China A shares to be added. If the entire market was included, it would represent 12.8% of the MSCI index.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	3.1%		9.3%		18.0%	
US Small Cap (Russell 2000)	2.5%		5.0%		24.6%	
US Large Value (Russell 1000 Value)	1.3%		4.7%		4.7%	
US Large Growth (Russell 1000 Growth)	4.7%		14.0%		20.4%	
International Large (MSCI EAFE)	6.1%	3.1%	13.8%	16.1%	20.3%	23.5%
Eurozone (Euro Stoxx 50)	6.5%	3.8%	19.1%	22.5%	26.6%	28.3%
U.K. (FTSE 100)	4.9%	1.2%	10.0%	5.0%	13.6%	17.5%
Japan (NIKKEI 225)	5.1%	6.5%	9.6%	6.6%	19.9%	32.0%
Emerging Markets (MSCI Emerging Markets)	6.3%	6.1%	18.4%	11.6%	23.8%	19.3%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/17

# Domestic equity

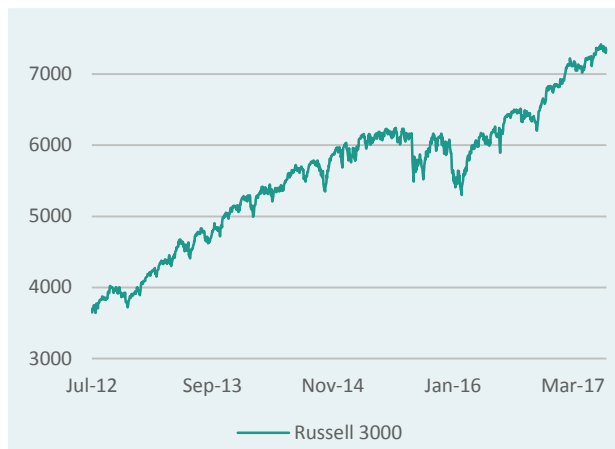
U.S. equities moved higher on robust earnings growth. According to FactSet, the estimated Q2 earnings growth rate of the S&P 500 is 6.8% YoY. Energy companies are expected to contribute the most to overall growth due to a low earnings base one year ago and stabilizing oil prices. The earnings outlook for the rest of the year is strong, and the expected growth rate for the 2017 calendar year is 9.8%. Positive global growth trends could help lift earnings further since a substantial portion of U.S. corporate revenues come from abroad.

All major U.S. banks passed the Fed's stress test in June, citing strong capital levels and ability to lend during a recession. The news drove financials upward as the positive results allowed banks to increase their future dividends and buybacks.

As discussed in recent quarters, we are relatively bullish on U.S. earnings growth in the near term, but investors may be paying for this excess growth upfront through higher valuations. We maintain a neutral weight to U.S. equities.

We maintain a neutral weight to U.S. equities

## U.S. EQUITIES



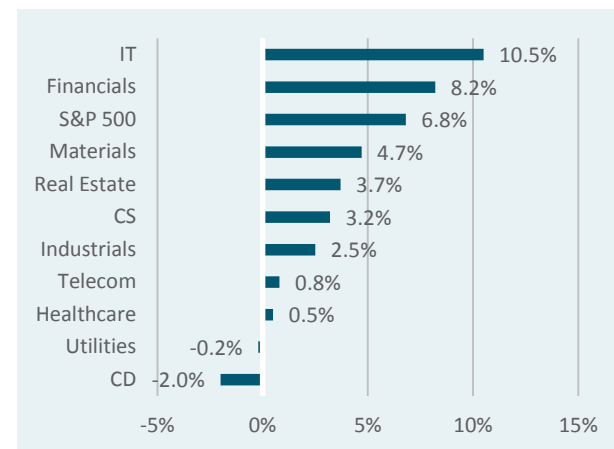
Source: Russell Investments, as of 7/7/17

## S&P 500 EPS GROWTH



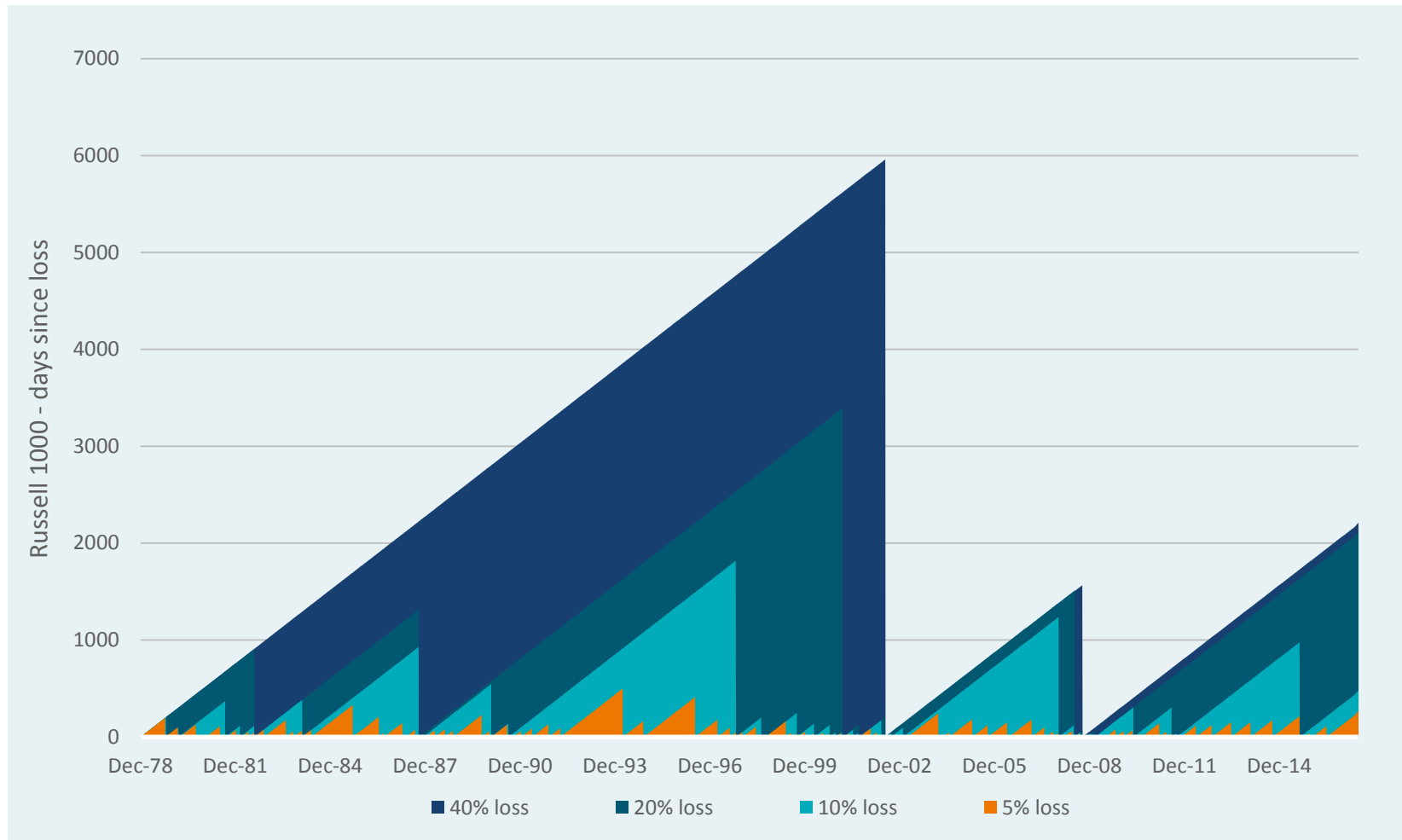
Source: Bloomberg, as of 6/30/17

## Q2 FORECAST EPS GROWTH



Source: FactSet, as of 7/14/17 - excludes energy sector

# Expect surprises



Market surprises are normal and in most cases should not affect long-term portfolio planning

Source: Bloomberg



# Domestic equity size and style

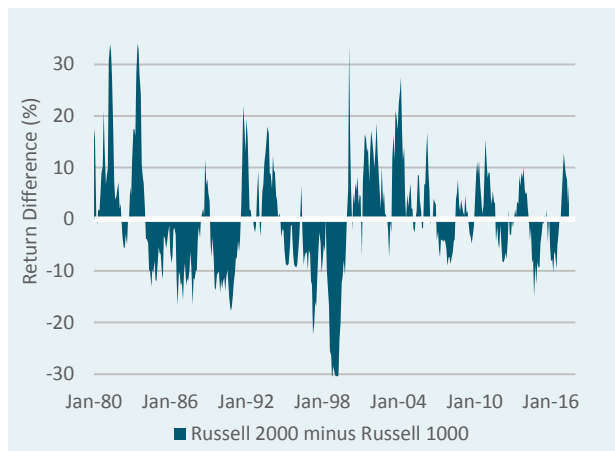
Despite a short selloff in June, strong returns from the tech sector helped lead to positive relative performance of growth over value during the quarter. Much of the gains were concentrated in the well known mega-cap stocks, including Apple, Amazon, and Microsoft. Momentum in growth stocks has continued to perform well so far this year.

In the second quarter, the Russell 1000 Growth Index and the Russell 1000 Value Index returned 4.7% and 1.3%, respectively. Falling oil prices were a headwind to energy

companies, which were the largest detractor from the value index.

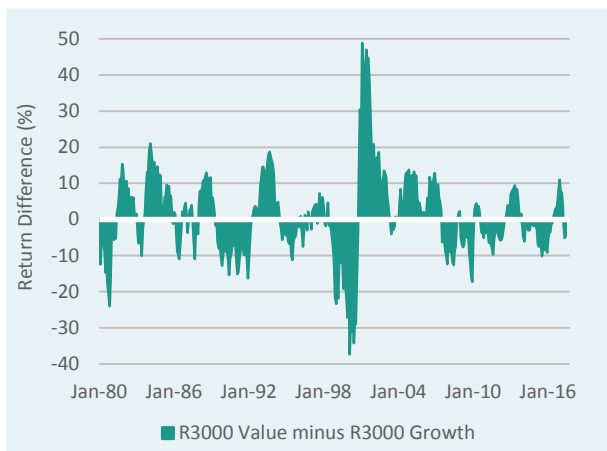
Large cap equities narrowly outperformed small cap equities. Much of the optimism surrounding Trump's pro-small business policies after his victory, including deregulation and tax reform, appears to have faded so far this year. If progress on these measures is made, smaller companies could receive another boost in the second half of 2017.

**SMALL CAP VS LARGE CAP (YOY)**



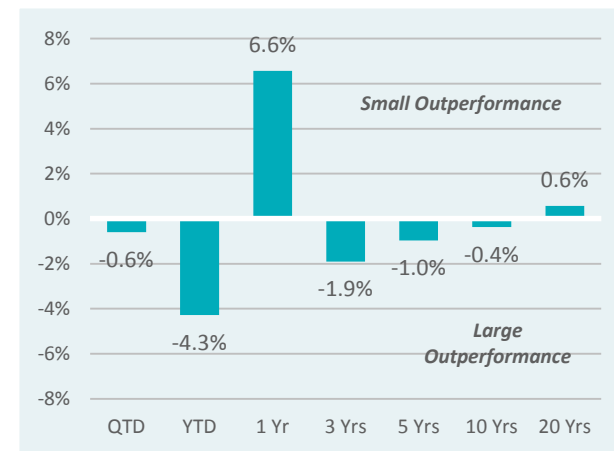
Source: Russell Investments, as of 6/30/17

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 6/30/17

**U.S. LARGE VS. SMALL RELATIVE PERFORMANCE**



Source: Morningstar, as of 6/30/17

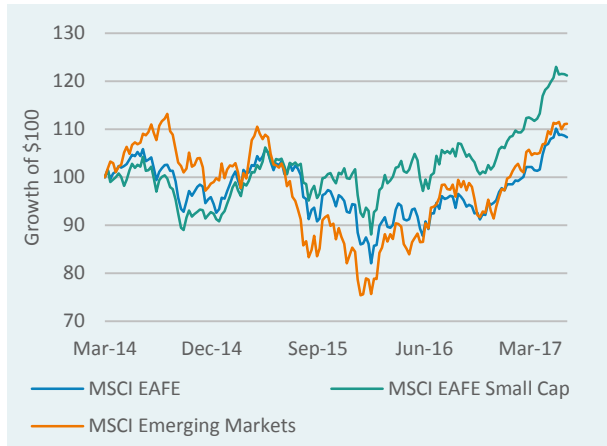
# International equity

International equities outperformed domestic equities over the quarter. The MSCI ACWI ex U.S. returned 5.8% on an unhedged basis while the S&P 500 returned 3.1%.

The U.S. dollar has steadily depreciated in value year-to-date against major currencies, down around 7%. This currency movement has added volatility to investors with unhedged currency exposure, with the MSCI EAFE Index returning 13.8% unhedged vs. 16.1% hedged, and the MSCI Emerging Markets Index returning 18.4% unhedged vs. 11.6% hedged.

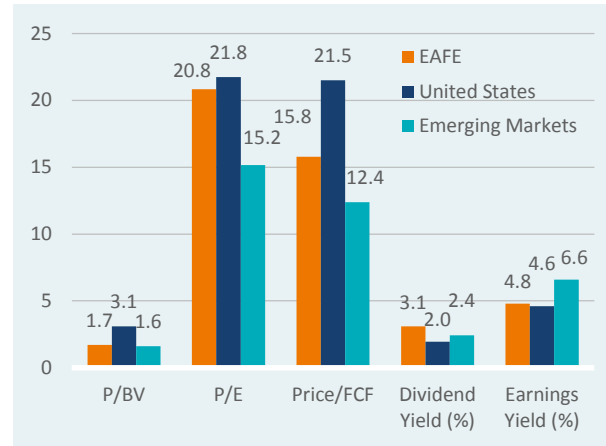
International equities are trading at lower multiples than domestic equities, based on various metrics. Valuations and earnings growth both play an important role in equity return outcomes and risk. Higher equity valuations imply greater optimism surrounding growth expectations, and greater optimism presents investors with more downside risk as the possibility of disappointment rises. Because of lower valuation levels, international markets may possess greater upside potential through either valuation expansion or positive earnings growth surprise. However, due to apparent tail risks in these markets we maintain a neutral weight in portfolios.

## GLOBAL EQUITY PERFORMANCE



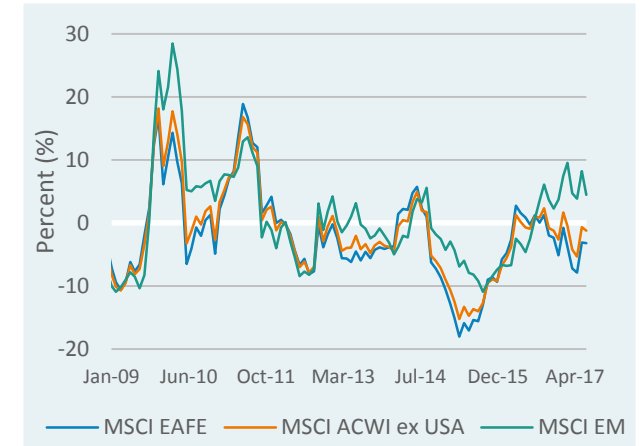
Source: Bloomberg, as of 6/30/17

## VALUATIONS



Source: Bloomberg, MSCI, as of 6/30/17 - 3 month average

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 6/30/17

# Emerging market equity

We maintain an overweight to emerging markets due to attractive valuations and better growth prospects relative to developed markets.

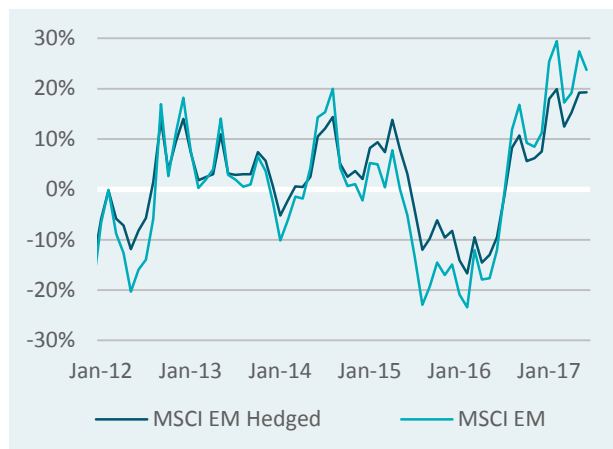
Emerging market equities continue to outperform developed markets, delivering 4.8% in Q2 and 17.1% year-to-date. Currency movement has been additive. Emerging market equity earnings are now expected to grow 22% YoY in 2017, which is a material increase from the 13% YoY increase expected at the beginning of 2017.

Interestingly, valuations have come down slightly despite very strong equity returns, as earnings rise faster than price.

If economic growth turns upward across the globe, we would expect major exporting economies to experience a significant tailwind. Emerging markets in particular tend to provide high exposure to global growth. Stabilizing commodities in this type of environment would likely provide an additional tailwind.

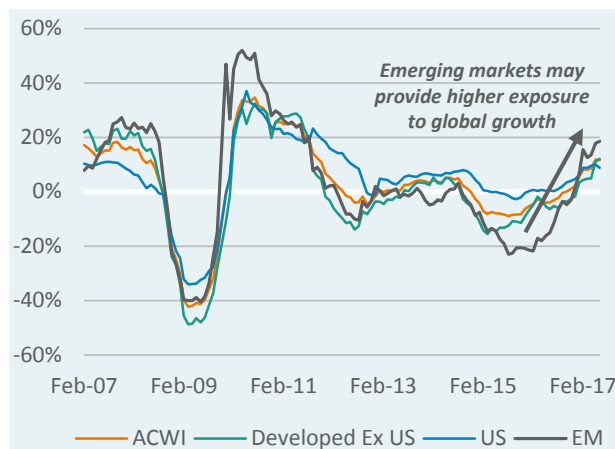
Accelerating global growth should have a positive effect on EM economies

## 12-MONTH ROLLING PERFORMANCE



Source: MPI, as of 6/30/17

## EM EARNINGS GROWTH (YOY)



Source: Bloomberg, as of 6/30/17

## TRAILING P/E RATIOS



Source: Bloomberg as of 6/30/17

# Equity valuations

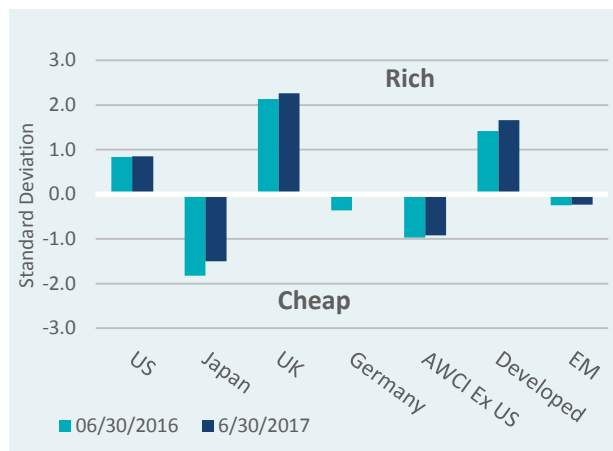
Strong global earnings in the first quarter and an increase in expected earnings growth throughout the rest of the year led to lower valuation multiples, especially in international developed markets. A pick up in earnings growth could help normalize P/E ratios.

Despite the recent strong earnings growth, valuation measures remain elevated relative to history. The trailing P/E for the S&P 500 was 21.5 at the end of June, above the 30-year average of 19.2. Higher P/E ratios imply lower future returns, but valuations can stay elevated for long periods of time, and changes are unpredictable.

Looking at the historical differences between regional P/E ratios and the global P/E ratio (ACWI) shows that Japan and emerging markets are the cheapest, while the U.K. and U.S. are the richest. Emerging markets are attractive on a variety of valuation measures. Strong global economic and earnings growth could give these cheaper markets more upside potential than richer markets such as the U.S.

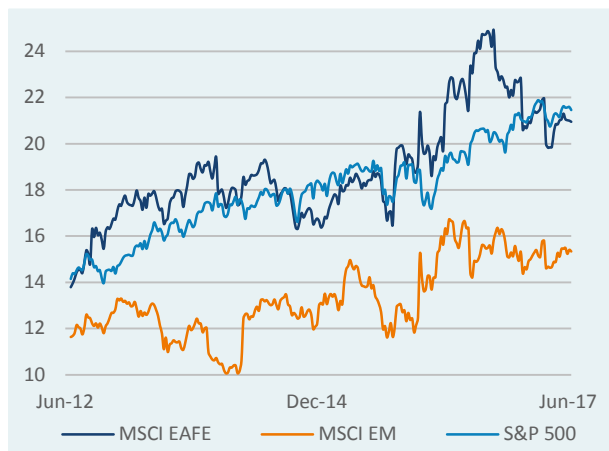
Valuations are elevated, but relative opportunities exist

RELATIVE PE TO ACWI



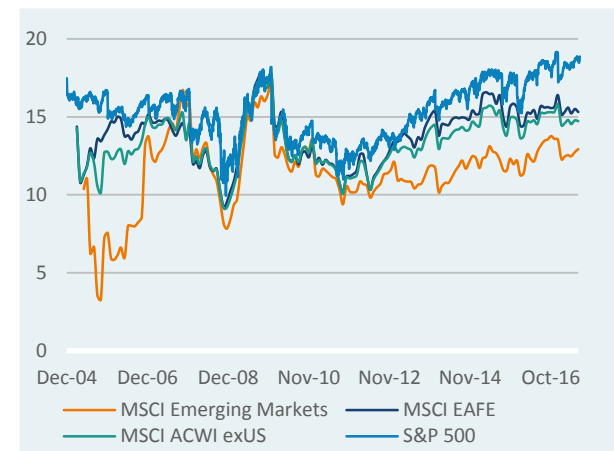
Source: Bloomberg, as of 6/30/17

TRAILING P/E RATIOS



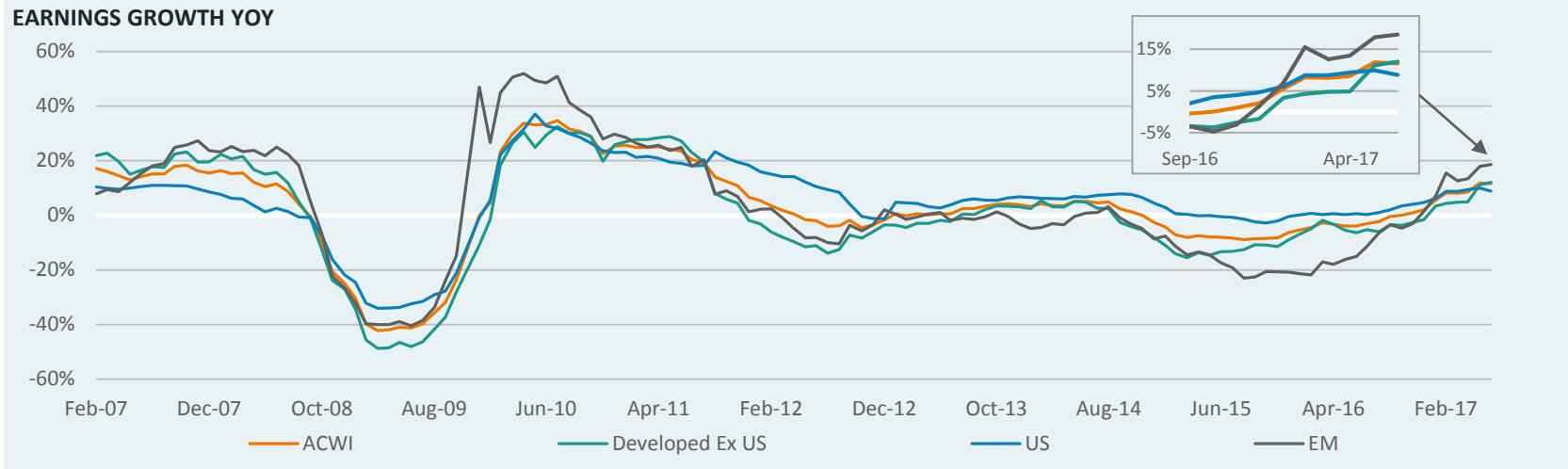
Source: Bloomberg, as of 6/30/17

INTERNATIONAL FORWARD P/E RATIOS

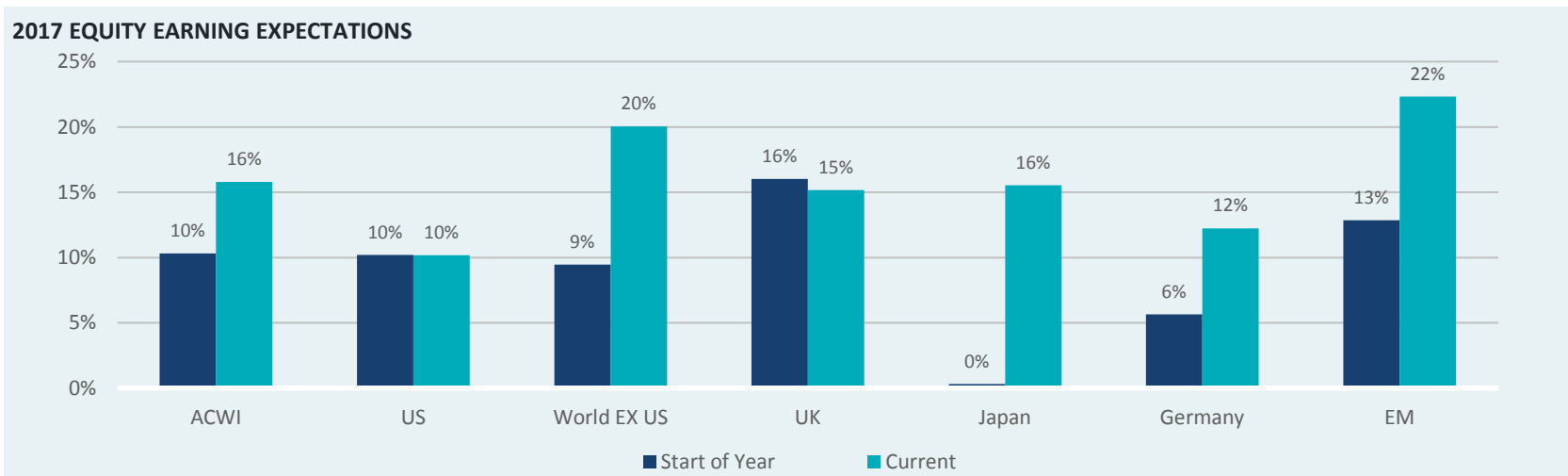


Source: Bloomberg, as of 6/30/17

# Global earnings growth



Earnings & earnings expectations have risen considerably across global markets



Source: MSCI, as of 6/30/17

# Equity volatility

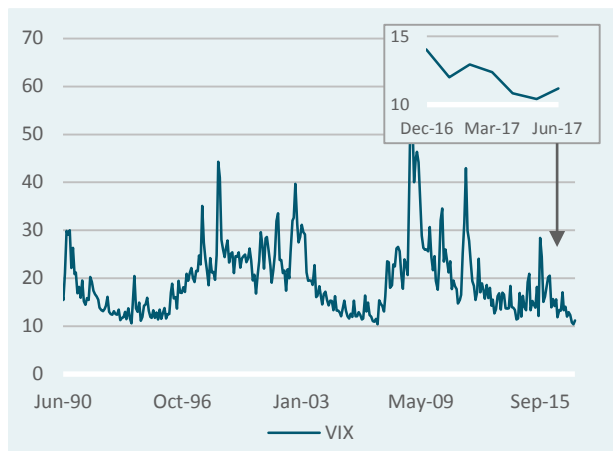
Both realized and implied volatility remains low relative to history across global equity markets. Although there have been a few spikes in implied volatility, including immediately after the first round of the French presidential election and the British general election, these have been short lived. For example, during the recent sell off in U.S. tech companies, the VIX jumped to 15, but fell back down within hours. While low equity market risk has been persistent, volatility can return quickly in an often unpredictable manner. For this reason,

judging portfolio volatility based on the current environment may understate the actual risks.

The CBOE Skew Index, which looks at the steepness of the volatility curve is above its historical average, indicates investors are paying a premium for large downside protection.

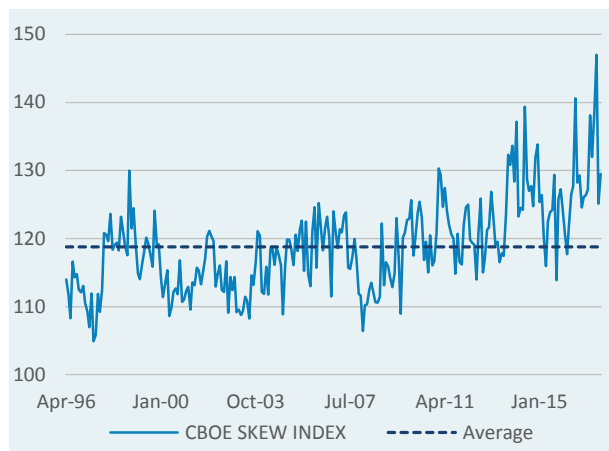
Equity volatility is well below average, but within a range consistent with past bull markets

**U.S. IMPLIED VOLATILITY**



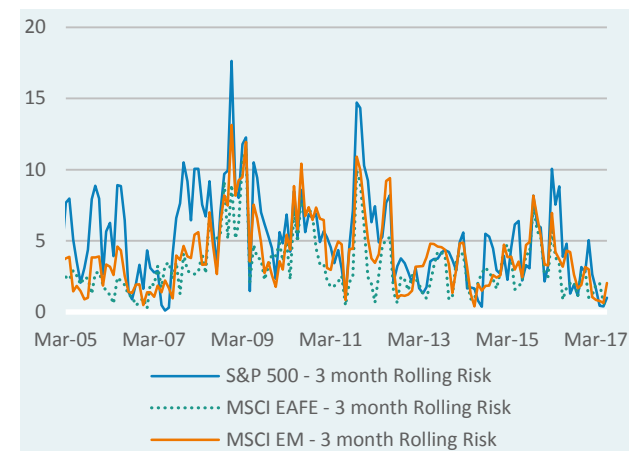
Source: CBOE, as of 6/30/17

**U.S. VOLATILITY SKEW**



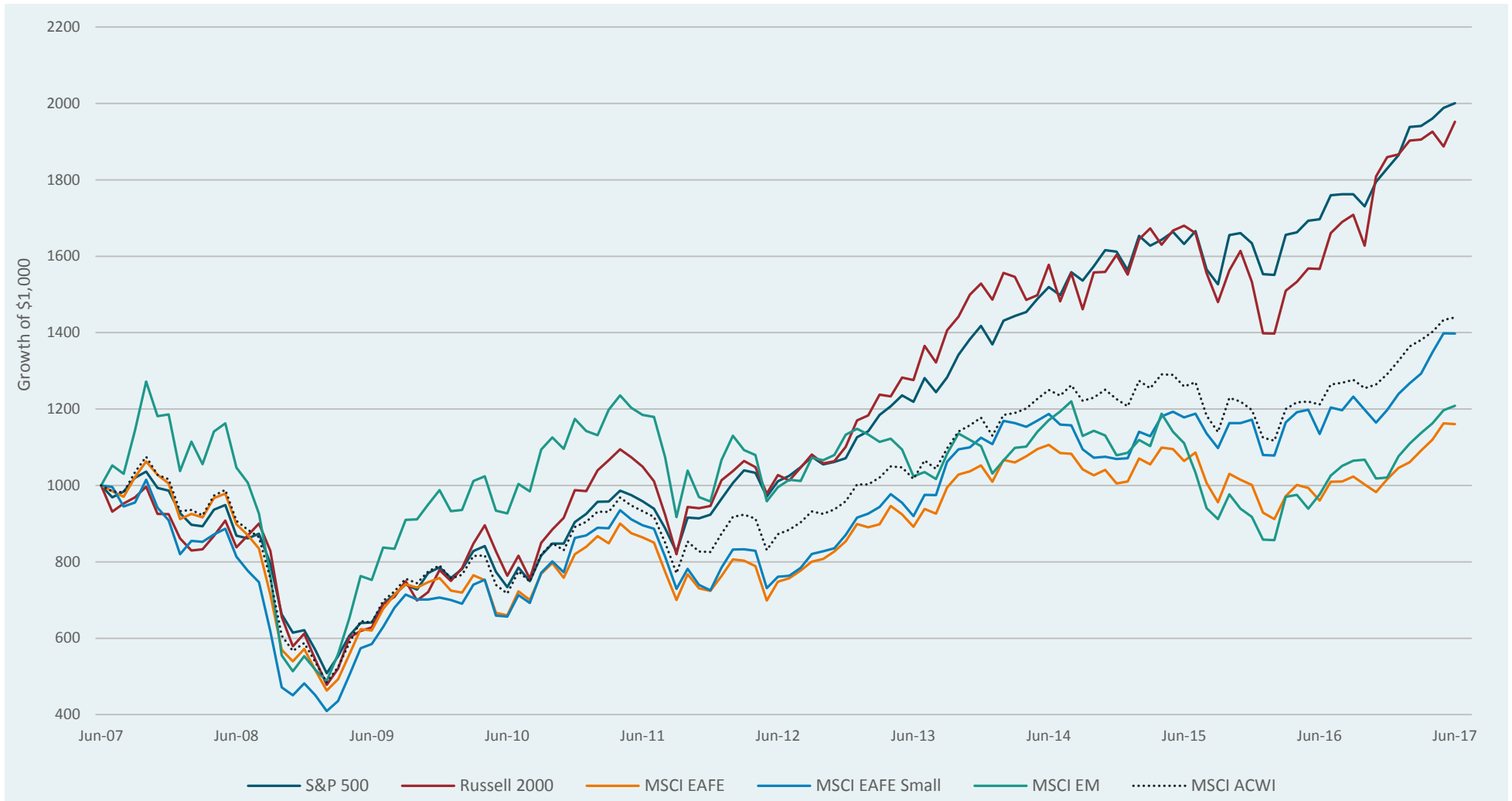
Source: CBOE, as of 6/30/17

**INTERNATIONAL EQUITY VOLATILITY**



Source: MSCI, as of 6/30/17

# Long-term equity performance



Source: MPI, as of 6/30/17

# Other assets



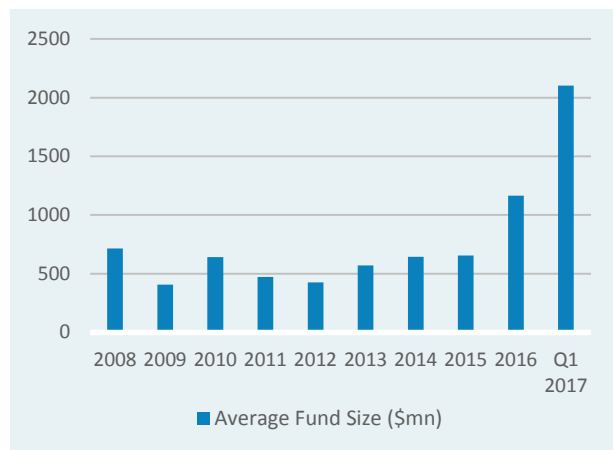
# Infrastructure

Global infrastructure performed strongly in the second quarter, with S&P Global Infrastructure Index up 14.4% for the year through June. Transaction multiples in several infrastructure sectors seemed to have peaked over the last year, impacted by rising interest; however, falling Treasury yields during the quarter sent yield-oriented investments higher in value.

Demand remains quite strong for infrastructure assets with institutional investors allocating to commingled funds and an influx of Asian buyers seeking higher yielding investments both in the U.S. and Europe.

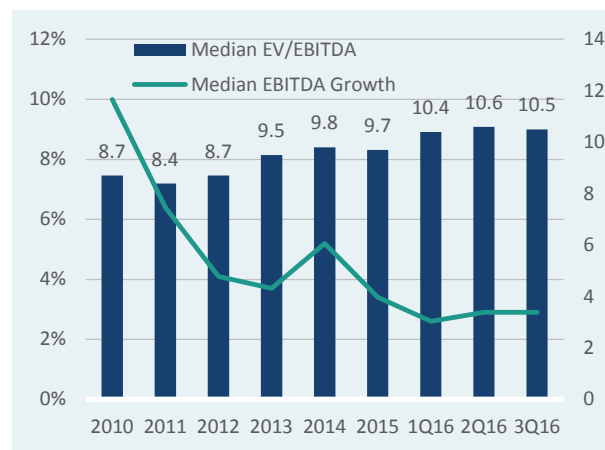
We are favorable towards value-add relative to core infrastructure as the risk/reward appears more attractive today. Interest rate sensitivity is generally lower in value-add infrastructure and pricing levels, though elevated, are below comparable core valuations. Within value-add we focus on sector specialists or teams with a track record of successful project development. As an example, in the utility/energy sectors there could be some interesting opportunities in merchant power generation where low natural gas prices and an influx of renewables have put downward pressure on spot power prices.

## INFRASTRUCTURE AVERAGE FUND SIZE



Source: Preqin

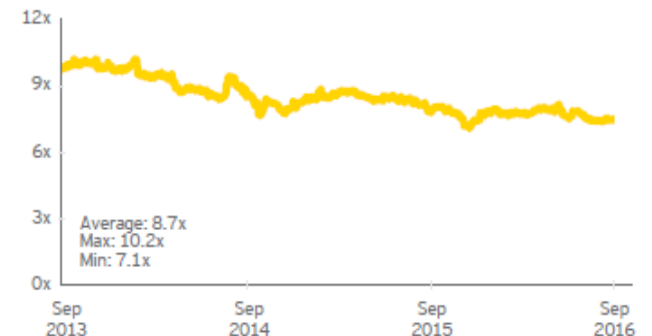
## LISTED INFRASTRUCTURE VALUATIONS/GROWTH



Source: Capital IQ

## VALUATIONS IN MERCHANT POWER

Average enterprise value/earnings before interest, taxes, depreciation and amortization (EV/EBITDA) trading multiples for select IPPs (on FY2 consensus EBITDA estimates, 2013-Q3 2016)



Source: E&Y

# Currency

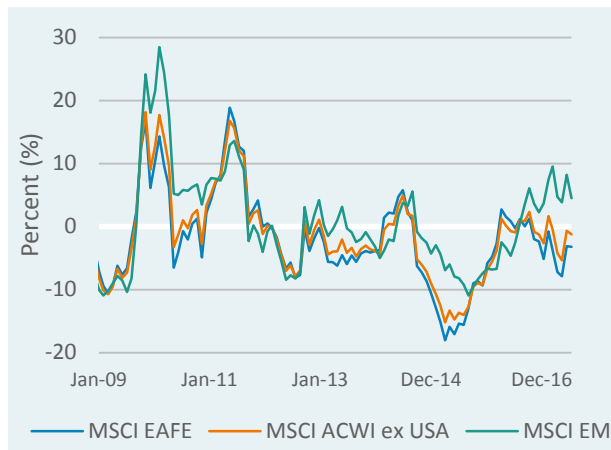
The U.S. dollar has steadily depreciated in value year-to-date against major currencies, down approximately 7% through quarter-end. Global central bank hawkishness, relative interest rate expectations, and improving international growth have likely guided the U.S. dollar lower.

Emerging market currencies exhibited further strength in Q2 and have appreciated 4.8% year-to-date according to

the JP Morgan Emerging Market Currency Index.

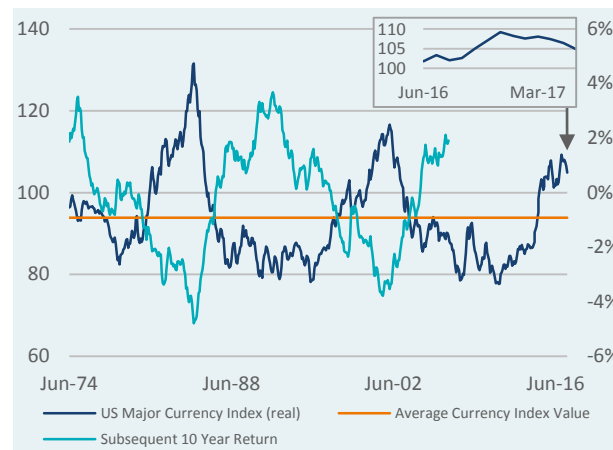
Currency movement has recently had a positive impact on the performance of unhedged foreign asset exposure. Dollar weakness has also acted as a tailwind for corporate earnings for those U.S. companies with revenues in foreign currency.

**EFFECT OF CURRENCY (1YR ROLLING)**



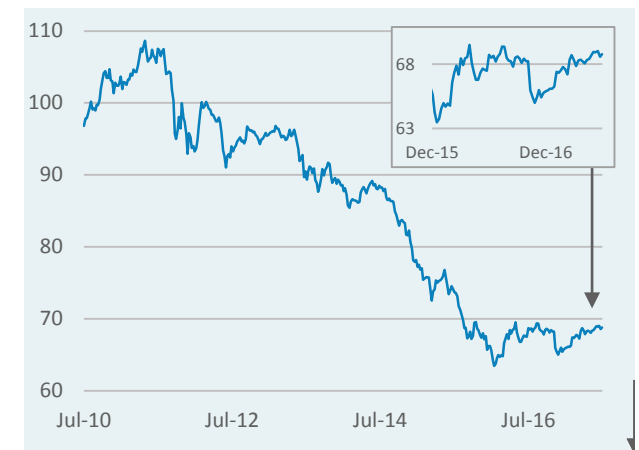
Source: MPI, as of 6/30/17

**U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Federal Reserve, as of 6/30/17

**JPM EM CURRENCY INDEX**



Source: Bloomberg, as of 6/30/17

# Appendix

# Periodic table of returns

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	5-Year	10-Year
Emerging Markets Equity	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	18.4	15.3	8.9
Large Cap Growth	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	14.0	14.7	7.8
International Equity	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	13.8	14.0	7.3
Small Cap Growth	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	10.0	13.9	6.9
Large Cap Equity	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	9.3	13.7	6.7
60/40 Global Portfolio	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	8.6	13.4	5.9
Small Cap Equity	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	5.0	10.7	5.6
Large Cap Value	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	4.7	8.7	4.5
Hedge Funds of Funds	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	3.7	6.7	4.0
US Bonds	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	2.3	4.9	3.0
Real Estate	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	1.6	4.0	1.9
Small Cap Value	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	0.5	2.2	1.0
Cash	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	0.4	0.2	0.4
Commodities	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	-5.3	-9.2	-6.5

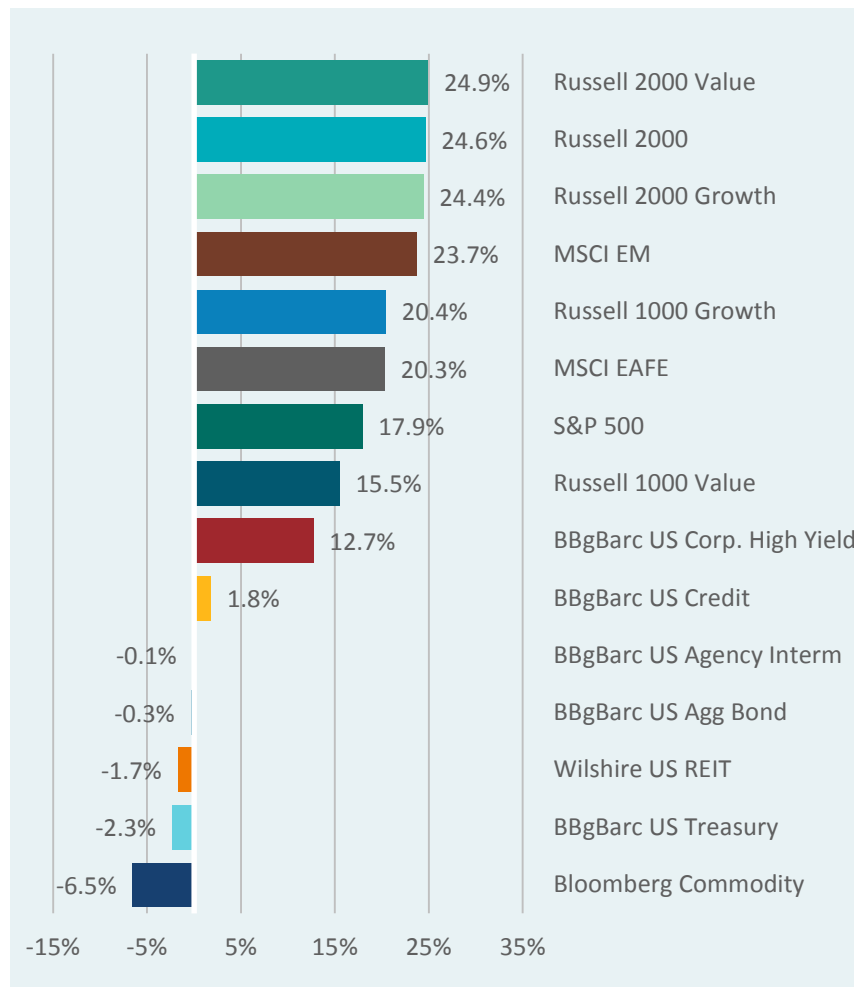
BEST  
↑  
WORST

<span style="display:inline-block; width:15px; height:15px; background-color:#ADD8E6; border:1px solid black;"></span> Large Cap Equity	<span style="display:inline-block; width:15px; height:15px; background-color:#006400; border:1px solid black;"></span> Small Cap Growth	<span style="display:inline-block; width:15px; height:15px; background-color:#8B4513; border:1px solid black;"></span> Commodities
<span style="display:inline-block; width:15px; height:15px; background-color:#008080; border:1px solid black;"></span> Large Cap Value	<span style="display:inline-block; width:15px; height:15px; background-color:#FFD700; border:1px solid black;"></span> International Equity	<span style="display:inline-block; width:15px; height:15px; background-color:#A9A9A9; border:1px solid black;"></span> Real Estate
<span style="display:inline-block; width:15px; height:15px; background-color:#191970; border:1px solid black;"></span> Large Cap Growth	<span style="display:inline-block; width:15px; height:15px; background-color:#FF8C00; border:1px solid black;"></span> Emerging Markets Equity	<span style="display:inline-block; width:15px; height:15px; background-color:#90EE90; border:1px solid black;"></span> Hedge Funds of Funds
<span style="display:inline-block; width:15px; height:15px; background-color:#7FFFD4; border:1px solid black;"></span> Small Cap Equity	<span style="display:inline-block; width:15px; height:15px; background-color:#696969; border:1px solid black;"></span> US Bonds	<span style="display:inline-block; width:15px; height:15px; background-color:#FF0000; border:1px solid black;"></span> 60% MSCI ACWI/40% BBgBarc Global Bond
<span style="display:inline-block; width:15px; height:15px; background-color:#008000; border:1px solid black;"></span> Small Cap Value	<span style="display:inline-block; width:15px; height:15px; background-color:#D3D3D3; border:1px solid black;"></span> Cash	

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/17.

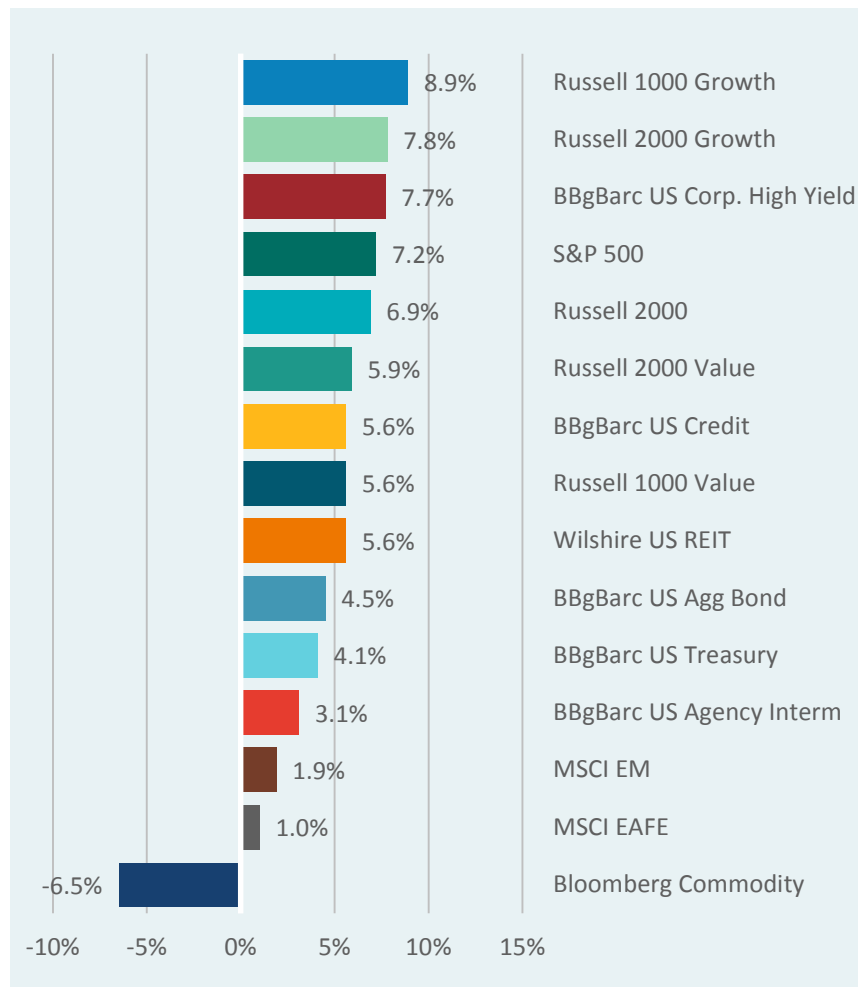
# Major asset class returns

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/17

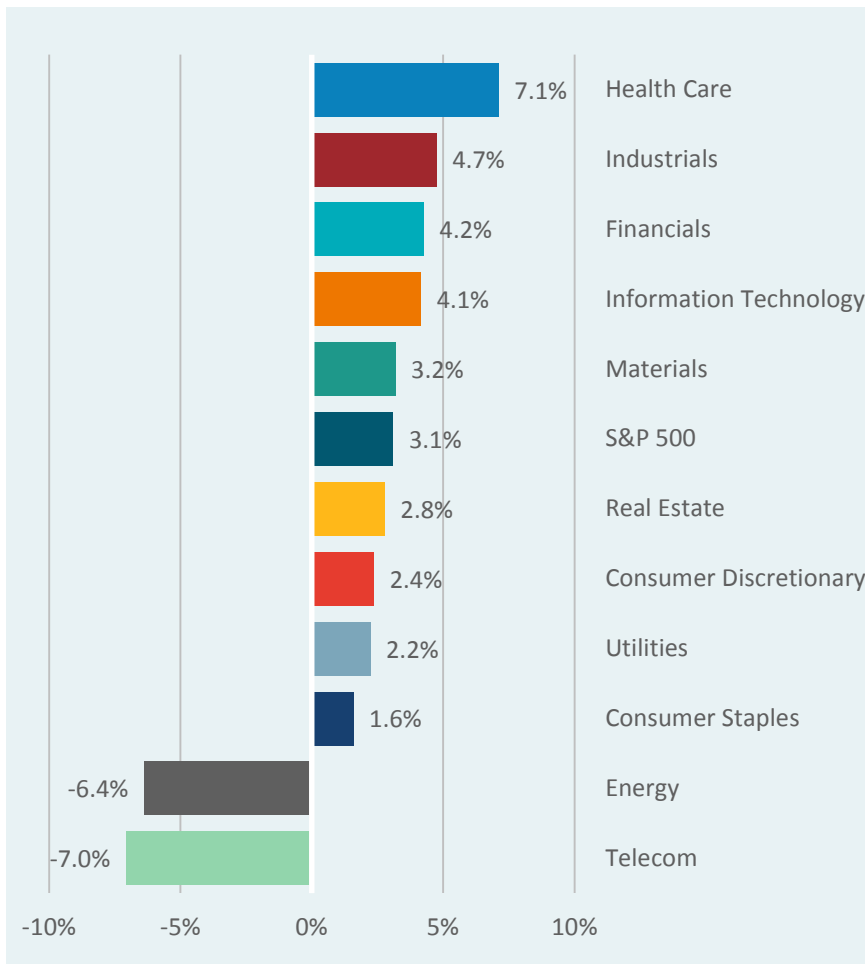
TEN YEARS ENDING JUNE



Source: Morningstar, as of 6/30/17

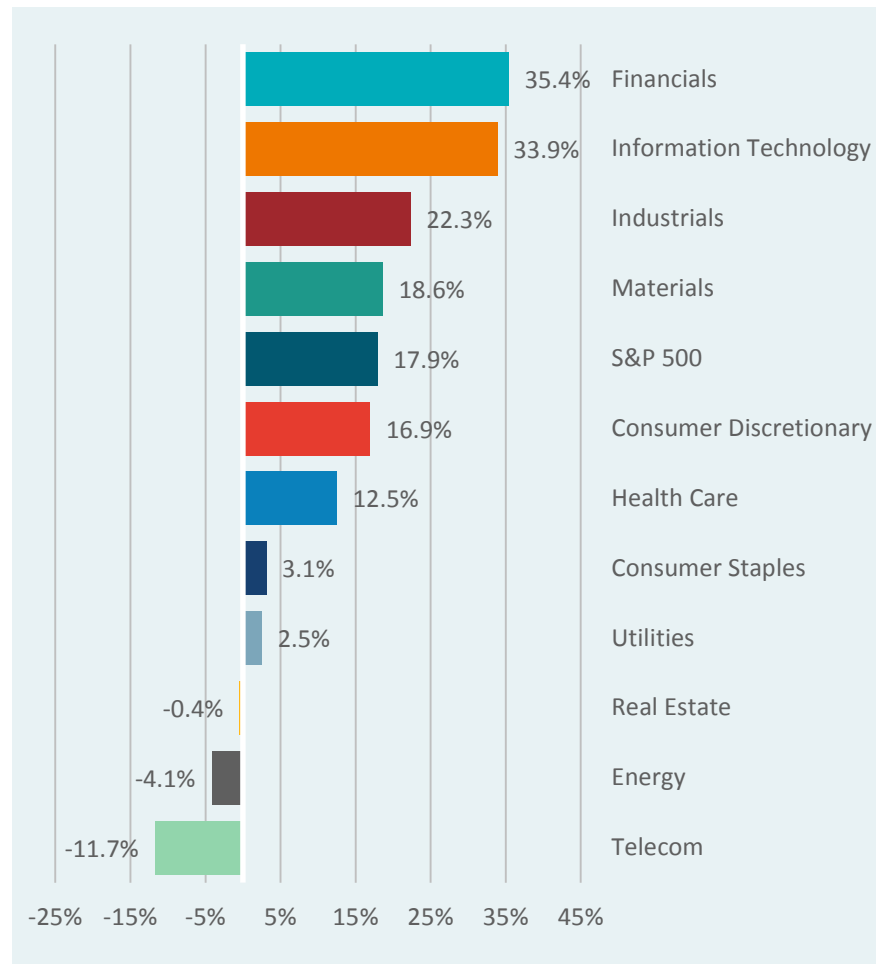
# S&P 500 sector returns

2<sup>ND</sup> QUARTER



Source: Morningstar, as of 6/30/17

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/17

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	0.6	3.1	9.3	17.9	9.6	14.6	7.2
S&P 500 Equal Weighted	1.2	2.5	8.1	17.3	8.5	15.5	8.3
DJ Industrial Average	1.7	4.0	9.3	22.1	11.0	13.5	7.6
Russell Top 200	0.6	3.2	9.8	18.6	9.9	14.6	7.2
Russell 1000	0.7	3.1	9.3	18.0	9.3	14.7	7.3
Russell 2000	3.5	2.5	5.0	24.6	7.4	13.7	6.9
Russell 3000	0.9	3.0	8.9	18.5	9.1	14.6	7.3
Russell Mid Cap	1.0	2.7	8.0	16.5	7.7	14.7	7.7
<b>Style Index</b>							
Russell 1000 Growth	(0.3)	4.7	14.0	20.4	11.1	15.3	8.9
Russell 1000 Value	1.6	1.3	4.7	15.5	7.4	13.9	5.6
Russell 2000 Growth	3.4	4.4	10.0	24.4	7.6	14.0	7.8
Russell 2000 Value	3.5	0.7	0.5	24.9	7.0	13.4	5.9

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	0.5	4.3	11.5	18.8	4.8	10.5	3.7
MSCI ACWI ex US	0.3	5.8	14.1	20.5	0.8	7.2	1.1
MSCI EAFE	(0.2)	6.1	13.8	20.3	1.1	8.7	1.0
MSCI EM	1.0	6.3	18.4	23.7	1.1	4.0	1.9
MSCI EAFE Small Cap	(0.0)	8.1	16.7	23.2	5.6	12.9	3.4
<b>Style Index</b>							
MSCI EAFE Growth	(0.7)	7.5	16.7	15.7	2.8	9.2	2.1
MSCI EAFE Value	0.3	4.8	11.1	25.0	(0.6)	8.1	(0.1)
<b>Regional Index</b>							
MSCI UK	(1.9)	4.7	10.0	13.3	(3.0)	5.3	0.2
MSCI Japan	1.1	5.2	9.9	19.2	5.5	9.6	1.2
MSCI Euro	(1.2)	7.5	16.6	27.7	0.1	10.4	(0.5)
MSCI EM Asia	1.7	8.6	23.2	27.9	5.0	7.7	3.8
MSCI EM Latin American	0.7	(1.7)	10.1	15.0	(6.6)	(3.8)	(1.1)

Source: Morningstar, as of 6/30/17

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US Treasury US TIPS	(0.9)	(0.4)	0.9	(0.6)	0.6	0.3	4.3
BBgBarc US Treasury Bills	0.1	0.2	0.3	0.5	0.3	0.2	0.7
BBgBarc US Agg Bond	(0.1)	1.4	2.3	(0.3)	2.5	2.2	4.5
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	(0.1)	0.2	0.5	(0.1)	0.7	0.6	2.0
BBgBarc US Treasury Long	0.4	4.0	5.4	(7.2)	5.6	2.8	7.3
BBgBarc US Treasury	(0.2)	1.2	1.9	(2.3)	2.0	1.3	4.1
<b>Issuer</b>							
BBgBarc US MBS	(0.4)	0.9	1.3	(0.1)	2.2	2.0	4.3
BBgBarc US Corp. High Yield	0.1	2.2	4.9	12.7	4.5	6.9	7.7
BBgBarc US Agency Interm	(0.1)	0.5	1.0	(0.1)	1.4	1.1	3.1
BBgBarc US Credit	0.3	2.4	3.7	1.8	3.4	3.7	5.6

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(0.2)	(3.0)	(5.3)	(6.5)	(14.8)	(9.2)	(6.5)
Wilshire US REIT	2.4	1.8	1.8	(1.7)	8.3	9.3	5.6
CS Leveraged Loans	(0.1)	0.8	2.0	7.5	3.5	4.8	4.2
<b>Regional Index</b>							
JPM EMBI Global Div	(0.1)	2.2	6.2	6.0	5.4	5.7	7.4
JPM GBI-EM Global Div	0.5	3.6	10.4	6.4	(2.8)	(0.7)	4.0
<b>Hedge Funds</b>							
HFRI Composite	(0.6)	0.2	2.6	5.8	1.3	3.7	0.8
HFRI FOF Composite	0.4	1.1	3.7	8.0	2.6	4.9	3.0
<b>Currency (Spot)</b>							
Euro	1.4	6.6	8.1	2.7	(5.9)	(2.1)	(1.7)
Pound	0.6	3.9	5.1	(2.8)	(8.8)	(3.7)	(4.3)
Yen	(1.6)	(0.8)	3.8	(8.7)	(3.4)	(6.6)	0.9

# Definitions

**Bloomberg US Weekly Consumer Comfort Index** - tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. ([www.lanqerresearch.com](http://www.lanqerresearch.com))

**University of Michigan Consumer Sentiment Index** - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic conditions conducted by the University of Michigan. For the preliminary release approximately three hundred consumers are surveyed while five hundred are interviewed for the final figure. The level of consumer sentiment is related to the strength of consumer spending. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Citi Economic Surprise Index** - objective and quantitative measures of economic news. Defined as weighted historical standard deviations of data surprises (actual releases vs Bloomberg survey median). A positive reading of the Economic Surprise Index suggests that economic releases have on balance been beating consensus. The indices are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot FX impacts of 1 standard deviation data surprises. The indices also employ a time decay function to replicate the limited memory of markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**Merrill Lynch Option Volatility Estimate (MOVE) Index** - a yield curve weighted index comprised of a weighted set of 1-month Treasury options, including 2.5.10 and 30 year tenor contracts. This index is an indicator of the expected (implied) future volatility in the rate markets. ([www.Bloomberg.com](http://www.Bloomberg.com))

**OECD Consumer Confidence Index** - based on households' plans for major purchases and their economic situation, both currently and their expectations for the immediate future. Opinions compared to a "normal" state are collected and the difference between positive and negative answers provides a qualitative index on economic conditions. (<https://data.oecd.org/>)

**OECD Business Confidence Index** - based on enterprises' assessment of production, orders and stocks, as well as its current position and expectations for the immediate future. Opinions compared to a "normal" state are collected and the difference between positive and negative answers provides a qualitative index on economic conditions. (<https://data.oecd.org/>)

**NFIB Small Business Outlook** - Small Business Economic Trends (SBET) is a monthly assessment of the U.S. small-business economy and its near-term prospects. Its data are collected through mail surveys to random samples of the National Federation of Independent Business (NFIB) membership. The survey contains three broad question types: recent performance, near-term forecasts, and demographics. The topics addressed include: outlook, sales, earnings, employment, employee compensation, investment, inventories, credit conditions, and single most important problem. (<http://www.nfib-sbet.org/about/>)

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# Glossary

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**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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