



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2017**

Investment Performance Review for

**Contra Costa County Employees' Retirement Association**

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Investment Landscape

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Investment Performance  
Review

TAB II



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

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

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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. [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?

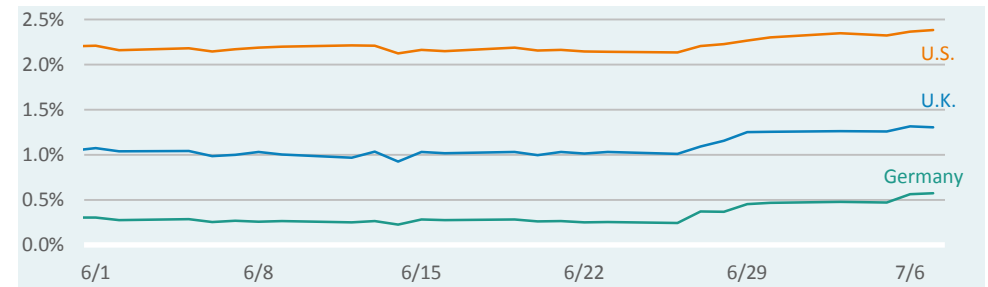
## “Bonds Continue Decline as Central Banks Signal Waning Stimulus”

### 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

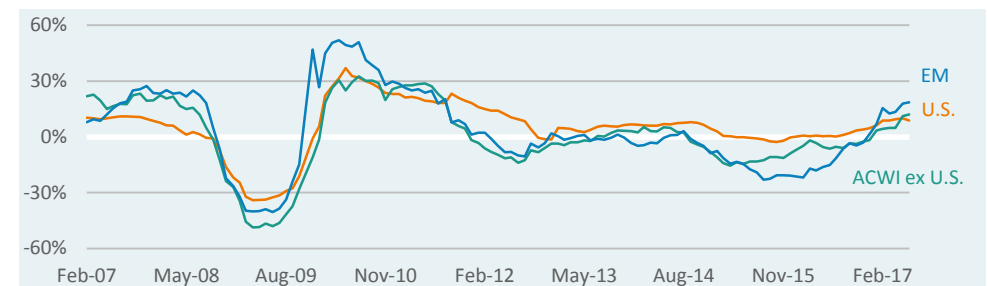
## “Investors Look to Global Growth for Earnings Power”

### 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

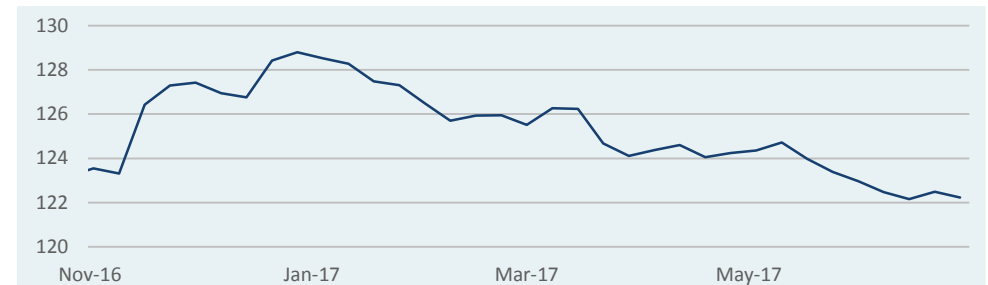
## “Dollar Has Worst Week in Over a Year Amid Political Uncertainty”

### 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.

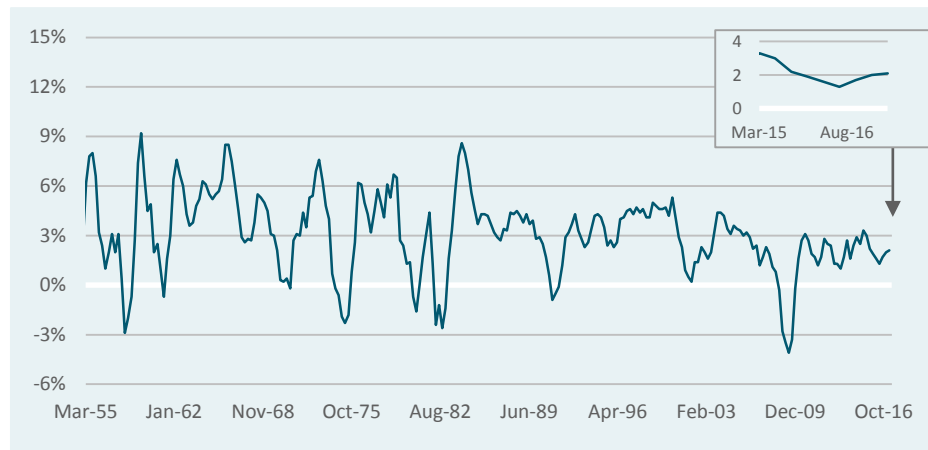
Personal consumption cooled in the first quarter, but was still a positive contributor to GDP. A temporary decline in utilities spending from milder winter weather across the country contributed to the softer growth.

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.

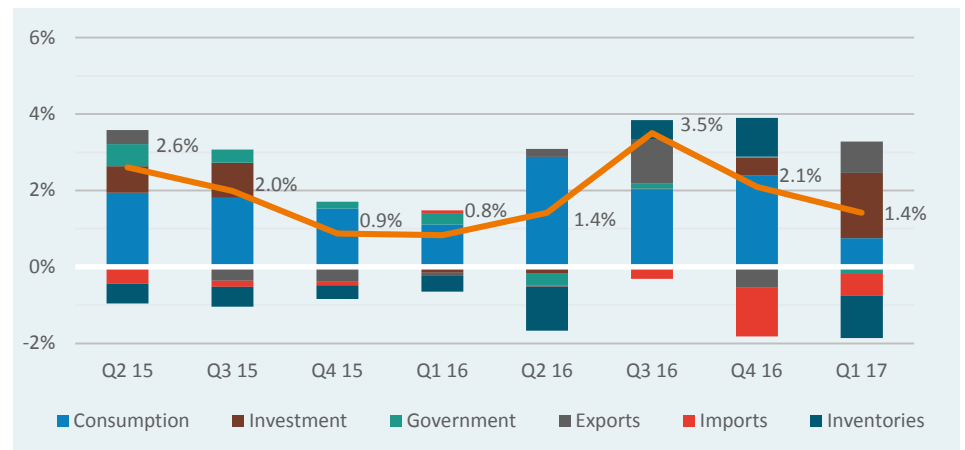
The trend of steady, moderate growth was sustained in Q1

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

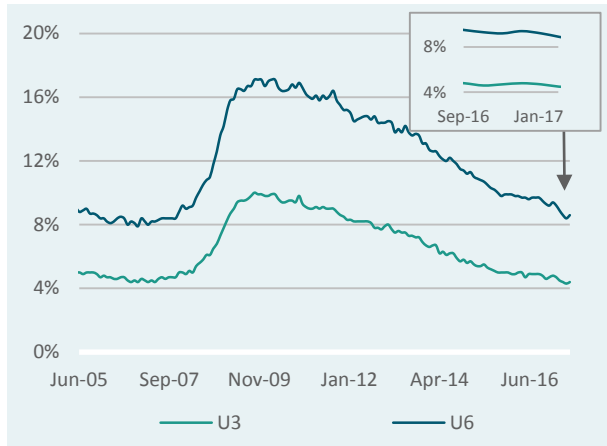
# U.S. economics – Labor market

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.

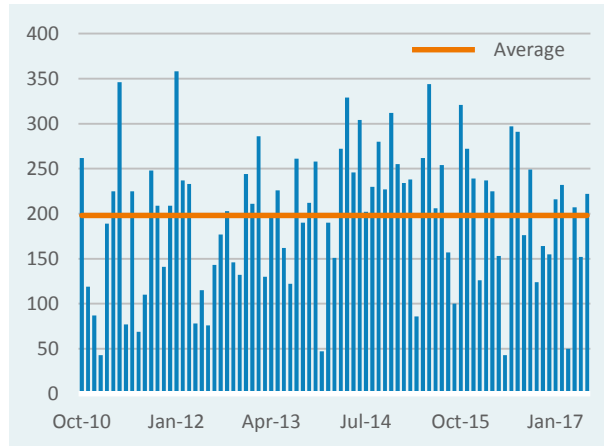
Job growth has been strong, while wages have seen less improvement

**U.S. UNEMPLOYMENT**



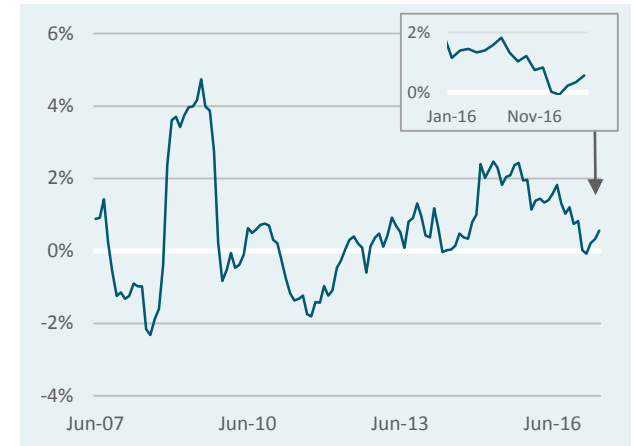
Source: FRED, as of 6/30/17

**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

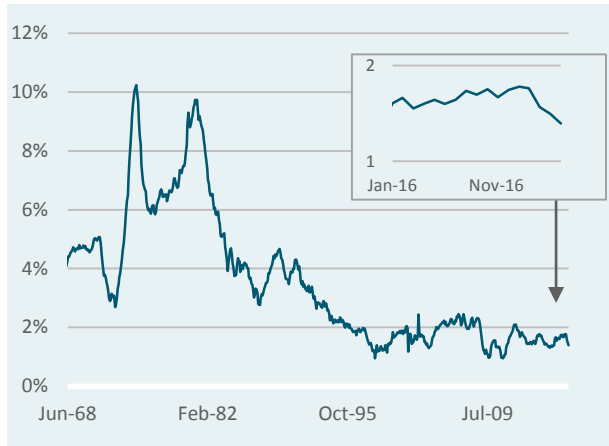
Consumer spending growth has slowed slightly this year, but is within a normal range. The move was partially due to a temporary decline in utilities expenditures. Despite the recent cooling, the fundamental picture for consumers is still positive. Low inflation, low unemployment, and moderate wage gains 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.

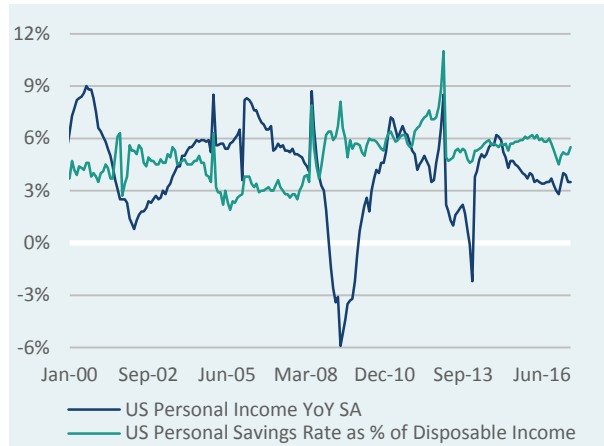
Consumer spending has cooled, but is still an important contributor to growth

**CONSUMER SPENDING (YOY GROWTH)**



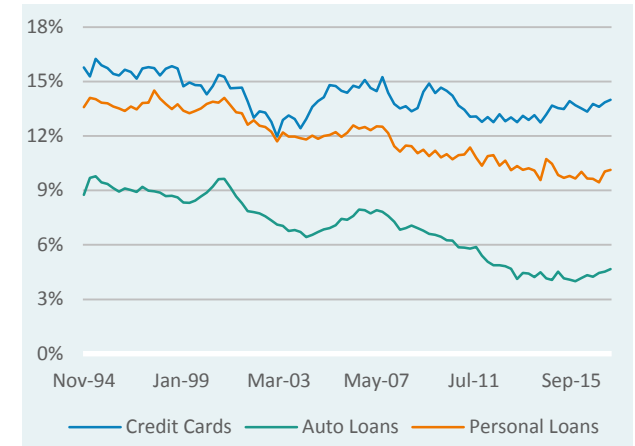
Source: Bloomberg, as of 5/31/17

**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.

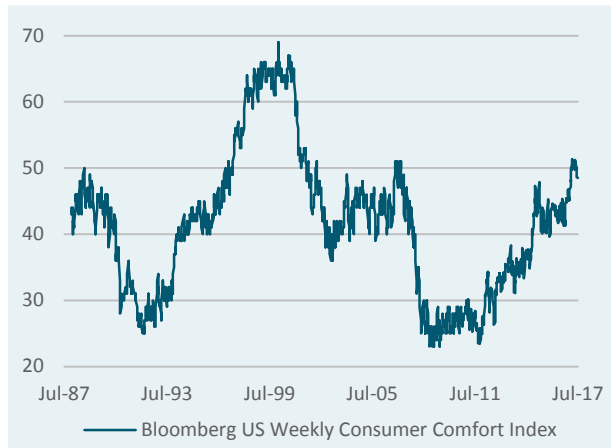
Weakened confidence was fueled by uncertainty surrounding fiscal policies, as reported by the University of Michigan Sentiment Survey. Consumers expect a low likelihood of successful policy implementation. Progress

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.

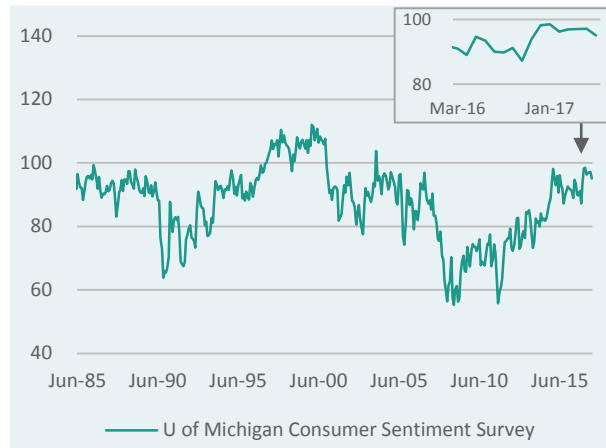
Consumer sentiment has faded since the post-election peak

**CONSUMER COMFORT INDEX**



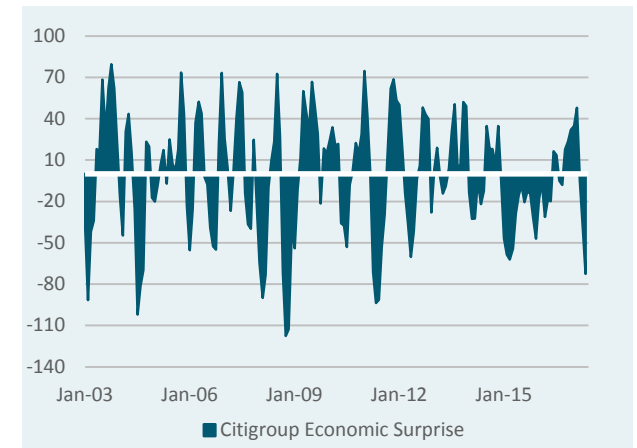
Source: Bloomberg, as of 7/2/17 (see Appendix)

**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

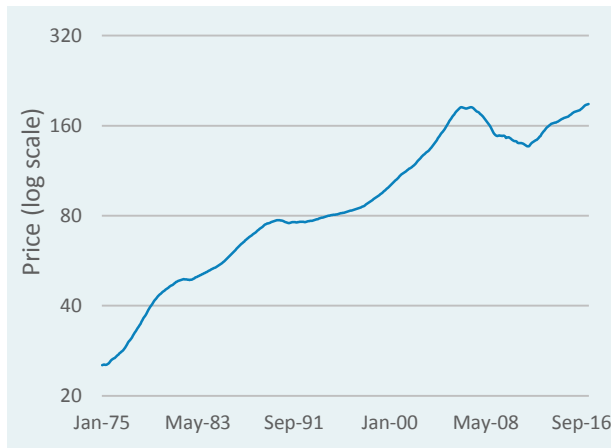
Single family home prices increased at a steady rate amid strong demand and low supply. Over the past 12 months, the Case-Shiller National Home Price Index rose 5.5%. Seattle, Portland, and Dallas reported the highest yearly growth among the top 20 metropolitan areas.

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**



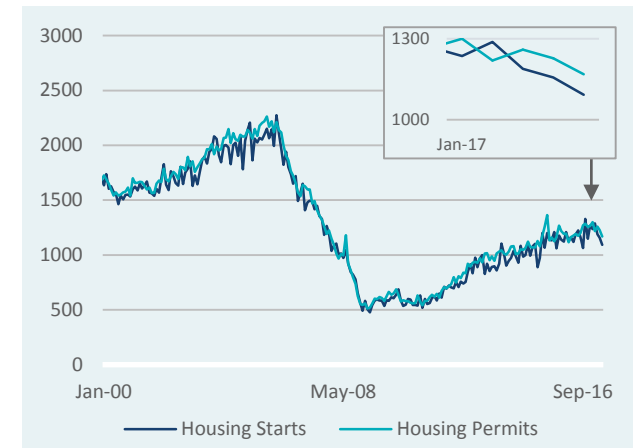
Source: FRED, as of 4/30/17

**30-YEAR MORTGAGE RATE**



Source: FRED, as of 7/6/17

**HOUSING STARTS AND PERMITS**



Source: FRED, as of 5/31/17

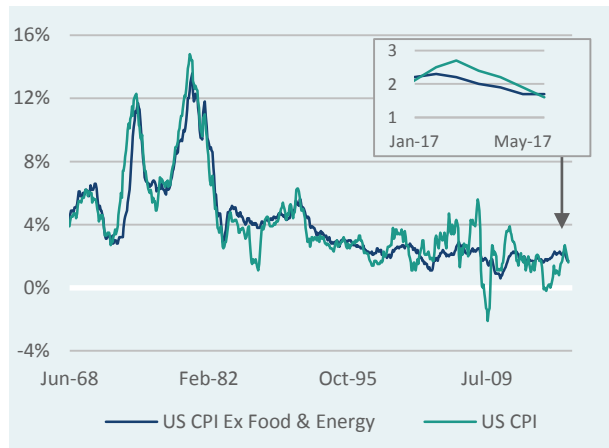
# U.S. economics – Inflation

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.

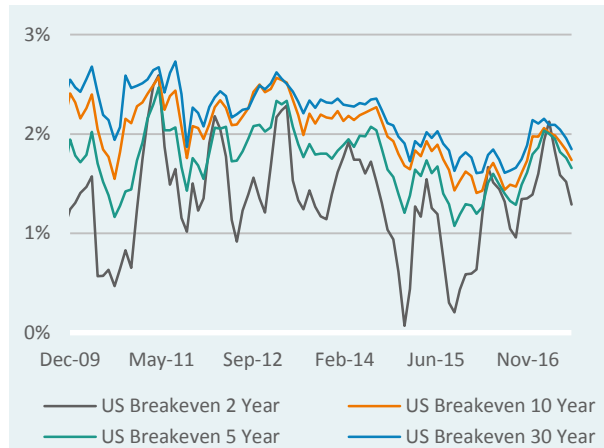
**Inflation decelerated in the second quarter**

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



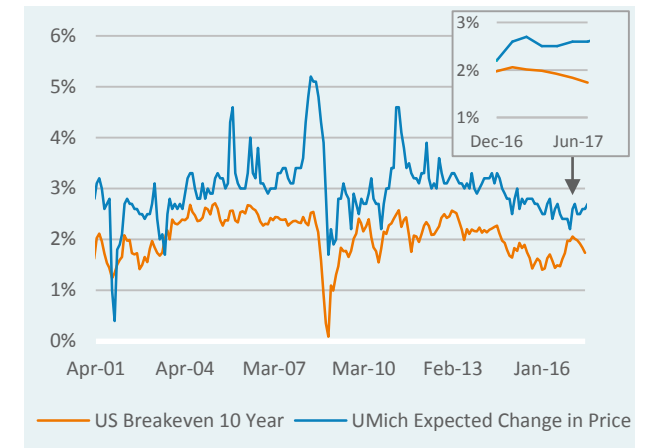
Source: FRED, as of 6/30/17

**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% 3/31/17	1.6% 6/30/17	4.4% 6/30/17
Western Europe	1.8% 3/31/17	1.3% 6/30/17	8.1% 3/31/17
Japan	1.3% 3/31/17	0.4% 5/31/17	3.1% 5/31/17
BRICS Nations	5.4% 3/31/17	2.3% 3/31/17	5.6% 12/31/16
Brazil	(0.4%) 3/31/17	3.0% 6/30/17	13.5% 6/30/17
Russia	0.5% 3/31/17	4.4% 6/30/17	5.5% 3/31/17
India	6.1% 3/31/17	2.2% 5/31/17	8.4% 12/31/16
China	6.9% 3/31/17	1.5% 5/31/17	4.0% 12/31/16

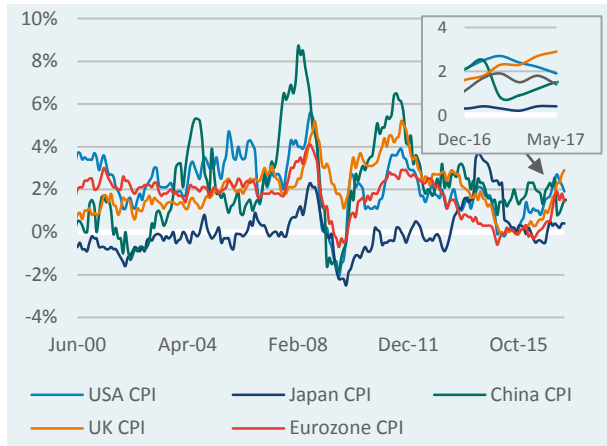
# International economics

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.

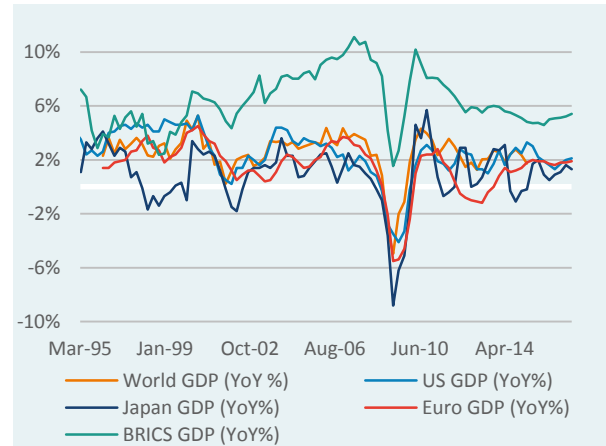
Employment has improved markedly across the globe, recovering to pre-crisis levels in most economies. Europe remains the exception in terms of aggregate employment, with labor markets displaying disparate levels of health from one country to the next. Core countries such as Germany and France have experienced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

## INTERNATIONAL INFLATION



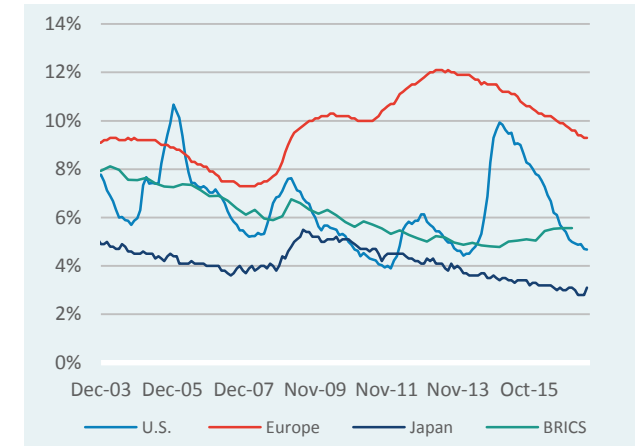
Source: Bloomberg, as of 5/31/17

## REAL GDP GROWTH



Source: Bloomberg, as of 3/31/17

## GLOBAL UNEMPLOYMENT



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

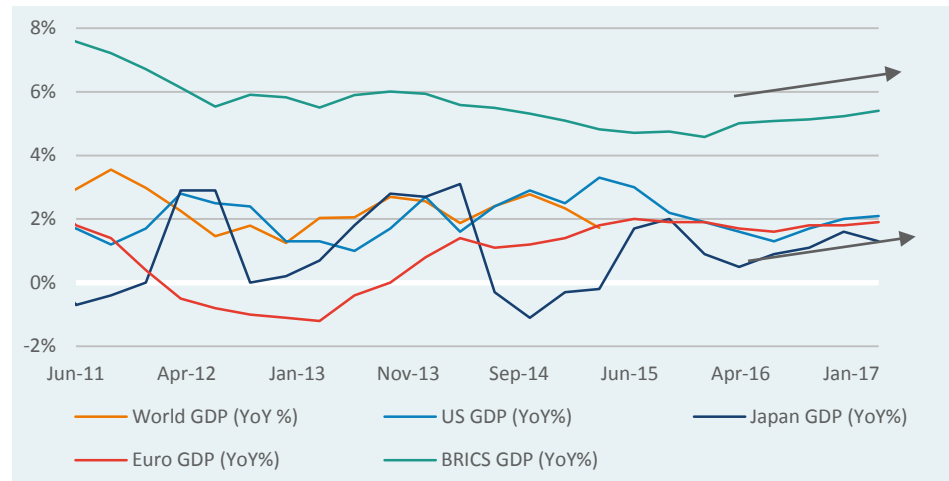


# Synchronized global growth

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.

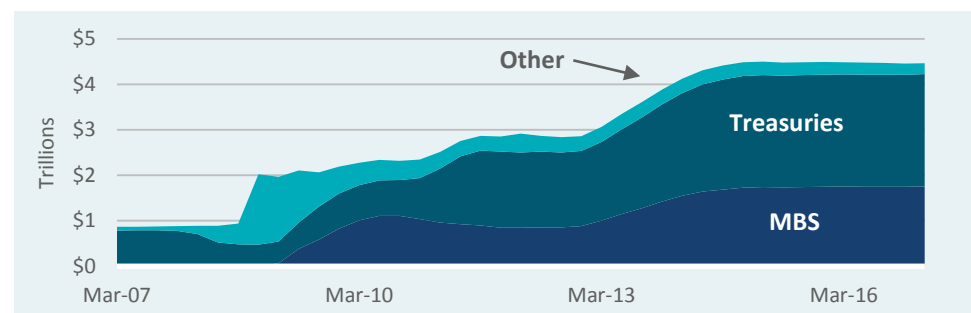
Area	Short Term (3M)	10 Year
United States	1.01%	2.30%
Germany	(0.82%)	0.47%
France	(0.60%)	0.82%
Spain	(0.44%)	1.54%
Italy	(0.38%)	2.16%
Greece	2.43%	5.42%
U.K.	0.17%	1.26%
Japan	(0.10%)	0.09%
Australia	1.63%	2.73%
China	2.63%	3.57%
Brazil	9.41%	10.54%
Russia	8.16%	7.90%

Source: Bloomberg, as of 6/30/17

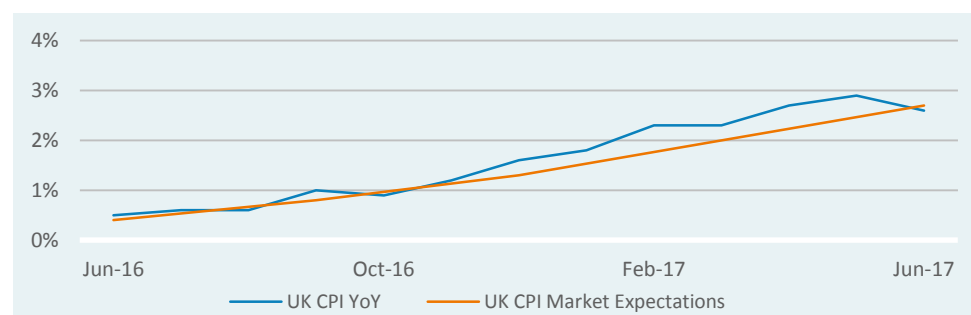
# Central bank confidence

- 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.

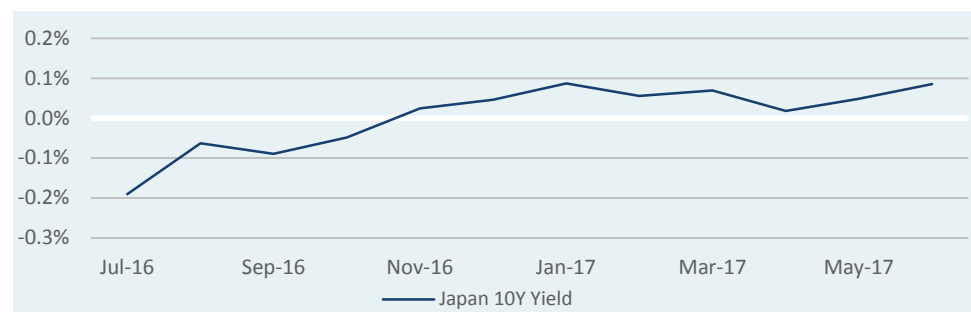
**FEDERAL RESERVE BALANCE SHEET**



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

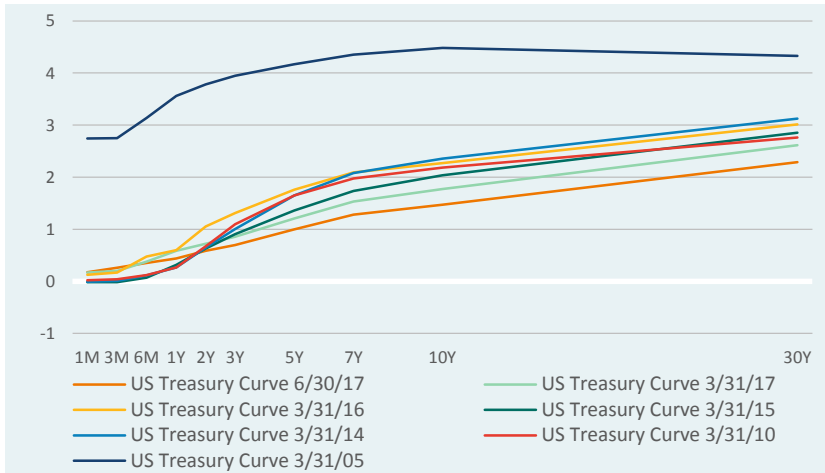


**JAPAN 10Y YIELD**

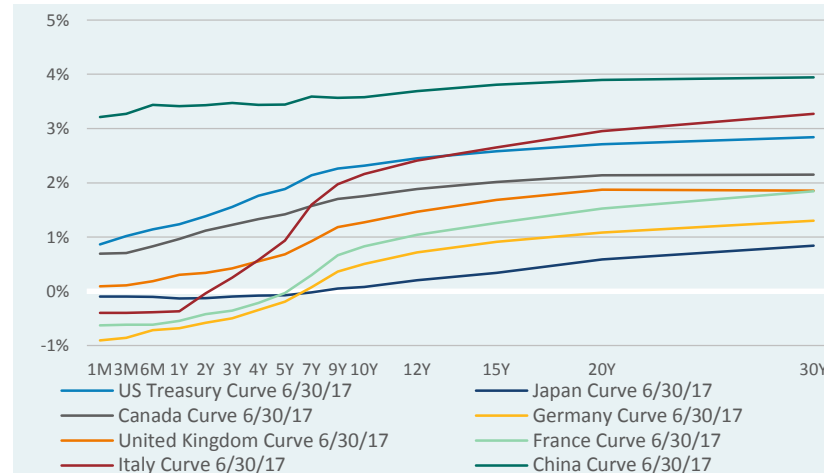


# Yield environment

U.S. YIELD CURVE

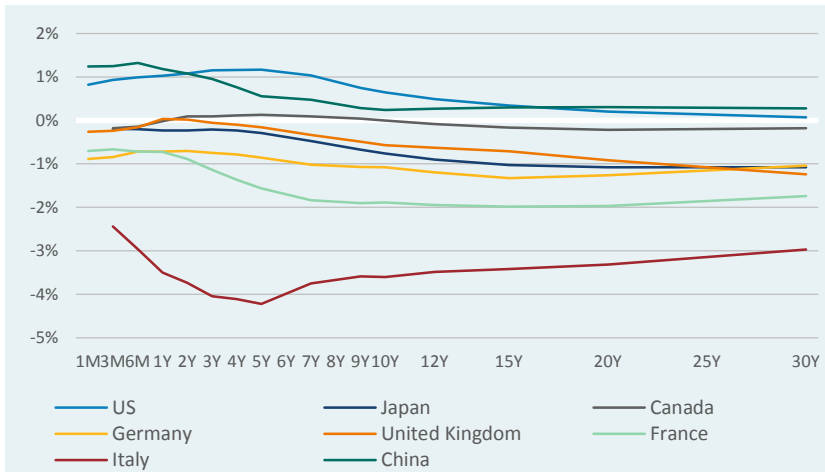


GLOBAL GOVERNMENT YIELD CURVES

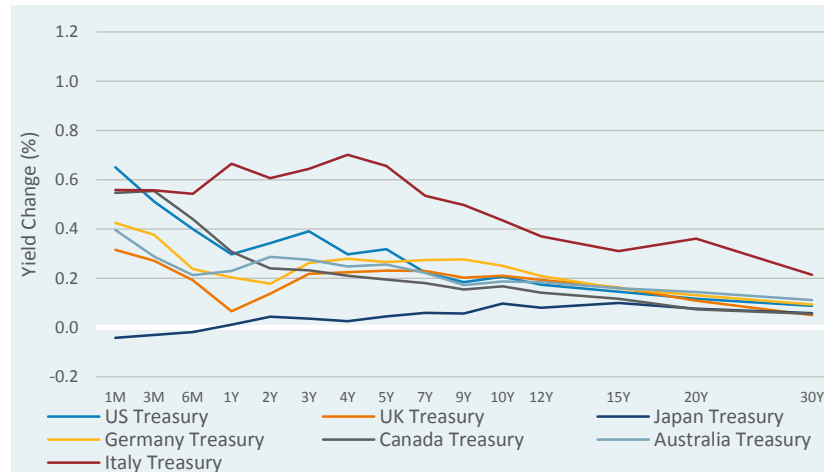


Across developed markets, U.S. Treasuries offer higher yields

YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/17

# Credit environment

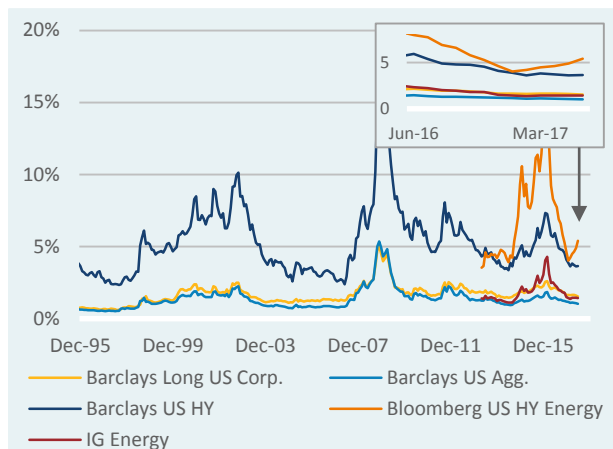
U.S. high yield option-adjusted spreads compressed in the second quarter to 3.6%, and the asset class generated a 2.2% total return (BBgBarc U.S. Corp. High Yield Index). High yield spreads are tighter than those of bank loans on a duration neutral basis.

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.

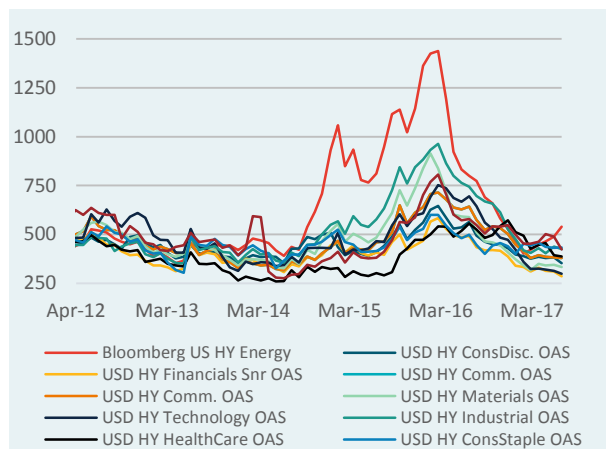
High yield energy spreads widened over the quarter to 5.4% - a very moderate rise relative to what was witnessed following the 2014 commodity drawdown. This lesser magnitude can be partly attributed to better credit ratings of companies in the index today. Additionally, innovation and technological gains 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

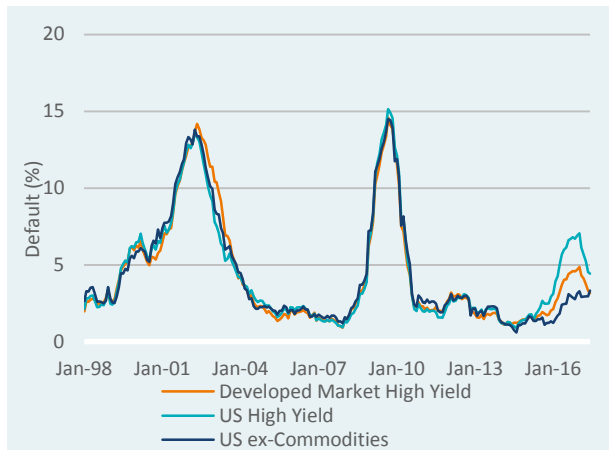
# Issuance and default

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.

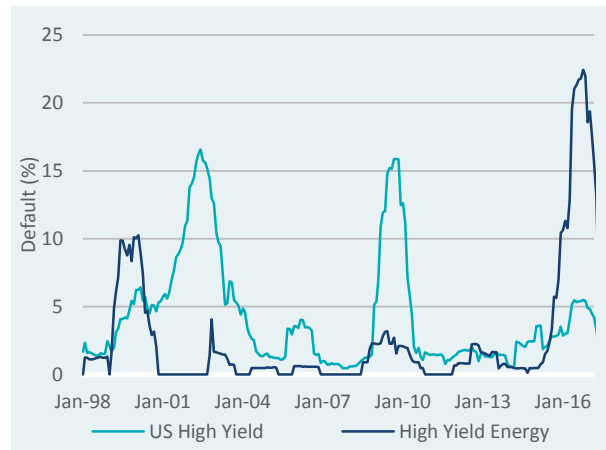
The effects of commodity related defaults are subsiding

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



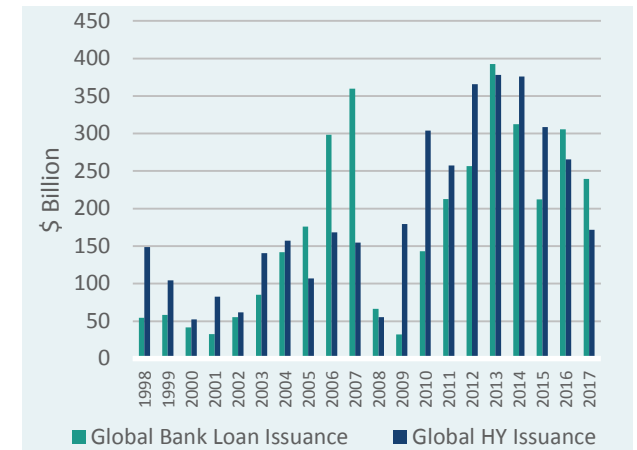
Source: BofA Merrill Lynch, as of 6/30/17

**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

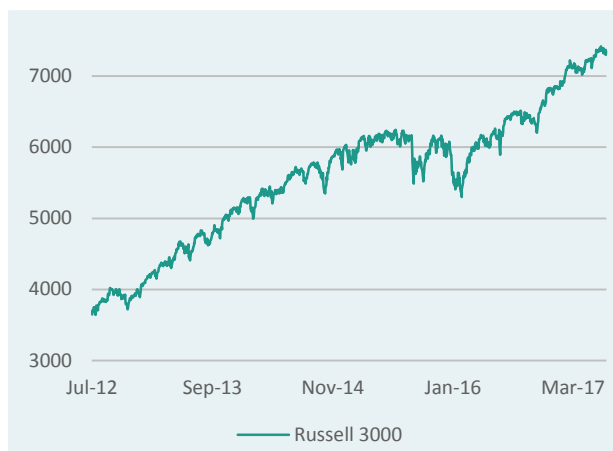
U.S. equities moved higher on robust earnings growth. According to FactSet, the estimated Q2 earnings growth rate of the S&P 500 is 6.8% YoY. Energy companies are expected to contribute the most to overall growth due to a low earnings base one year ago and stabilizing oil prices. The earnings outlook 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



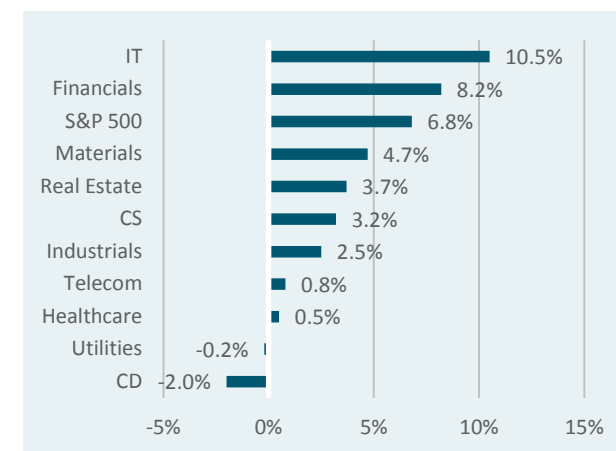
Source: Russell Investments, as of 7/7/17

## S&P 500 EPS GROWTH



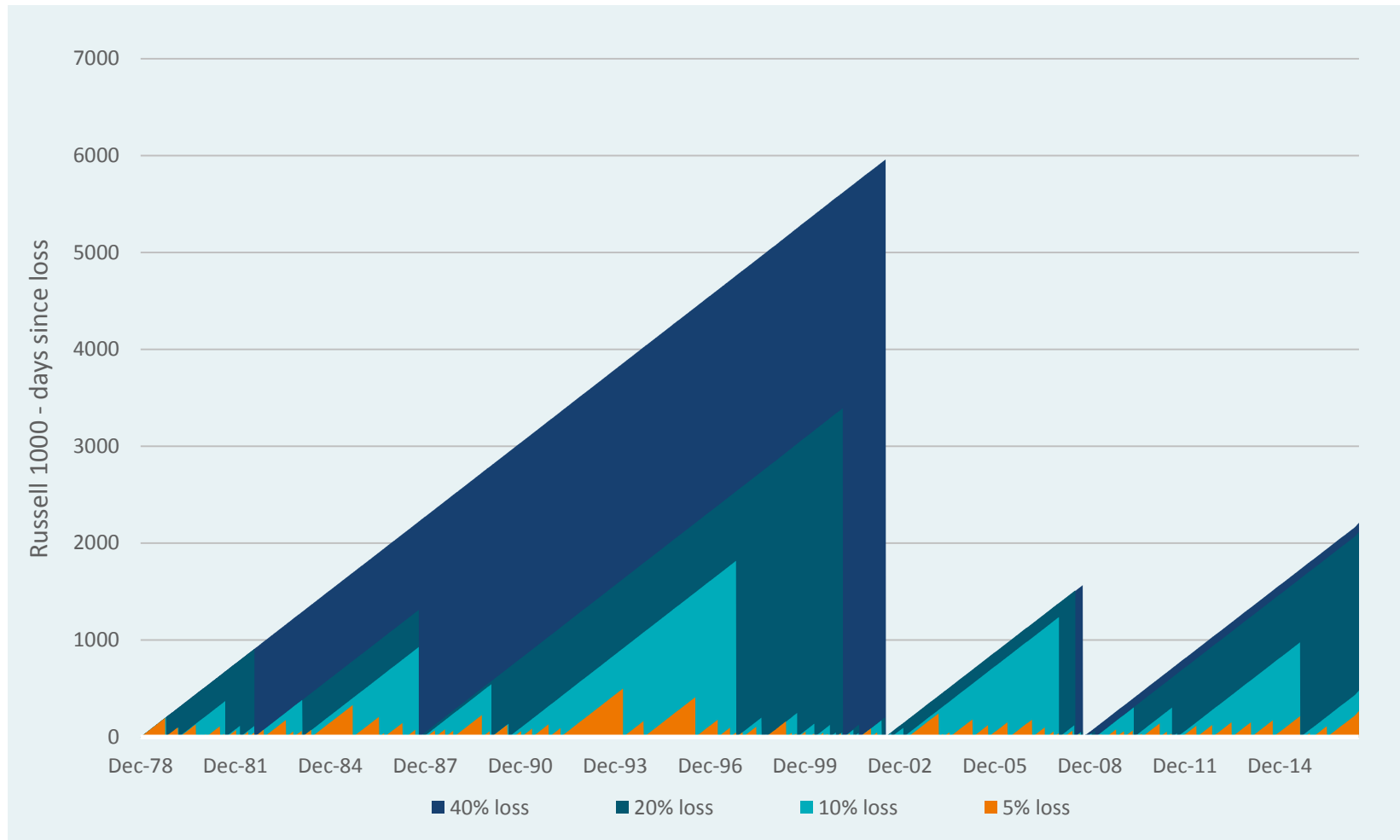
Source: Bloomberg, as of 6/30/17

## 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

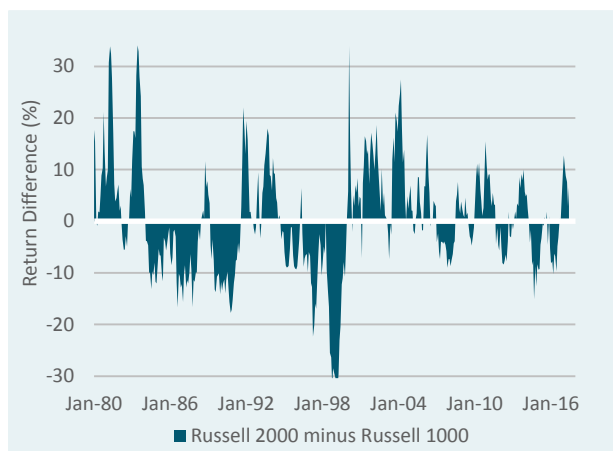
Despite a short selloff in June, strong returns from the tech sector helped lead to positive relative performance of growth over value during the quarter. Much of the gains were concentrated in the well known mega-cap stocks, including Apple, Amazon, and Microsoft. Momentum in growth stocks has continued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

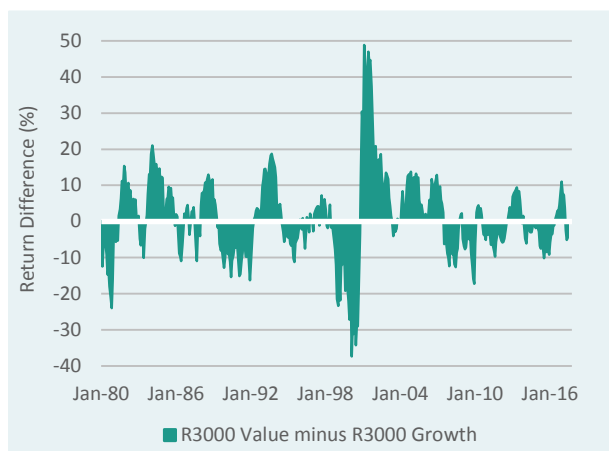
Large cap equities narrowly outperformed small cap equities. Much of the optimism surrounding Trump's pro-small business policies after his victory, including deregulation and tax reform, appears to have faded so far this year. If progress on these measures is made, smaller companies could receive another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

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



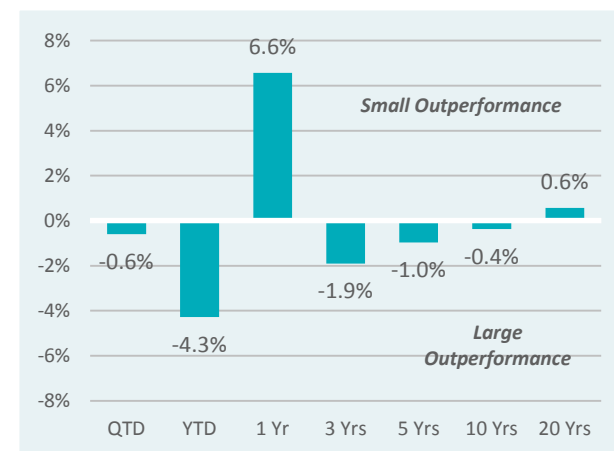
Source: Russell Investments, as of 6/30/17

**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

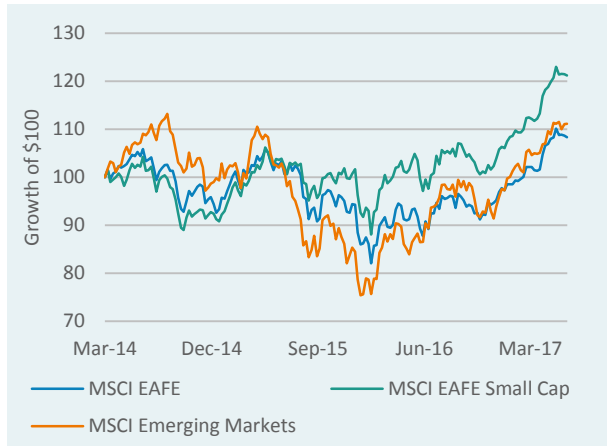
# International equity

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.

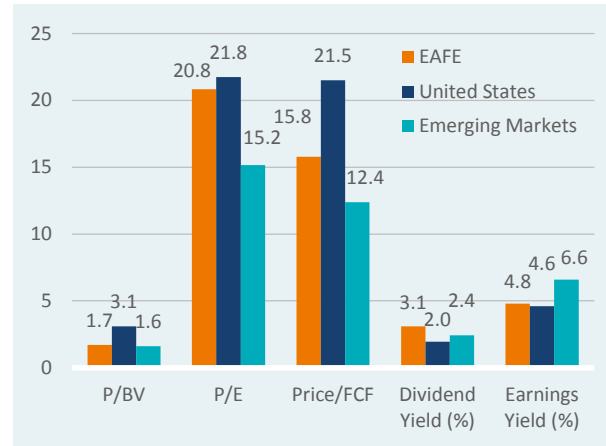
International equities are trading at lower multiples than domestic equities, based on various metrics. Valuations and earnings growth both play an important role in equity return outcomes and risk. Higher equity valuations imply greater optimism surrounding growth expectations, and greater optimism 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



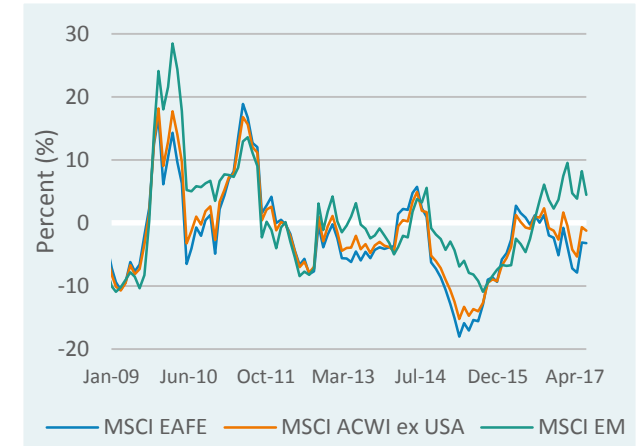
Source: Bloomberg, as of 6/30/17

## 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.

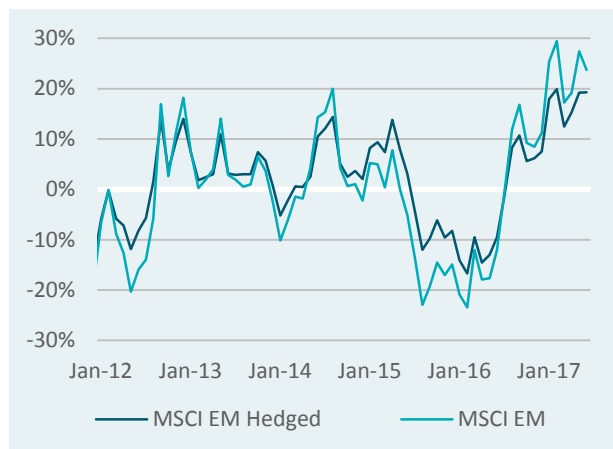
Emerging market equities continue to outperform developed markets, delivering 4.8% in Q2 and 17.1% year-to-date. Currency movement has been additive. Emerging market equity earnings are now expected to grow 22% YoY in 2017, which is a material increase from the 13% YoY increase expected at the beginning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

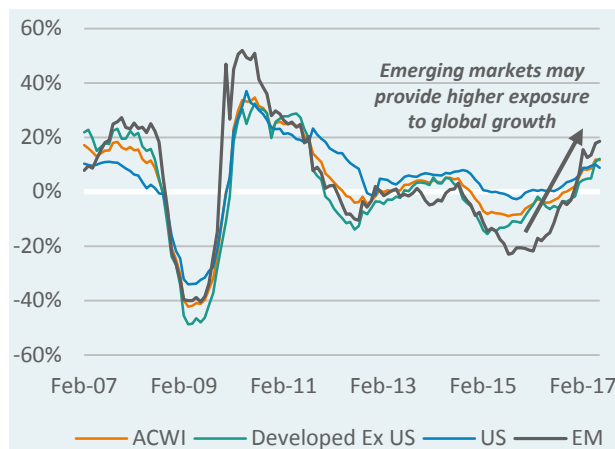
Accelerating global growth should have a positive effect on EM economies

12-MONTH ROLLING PERFORMANCE



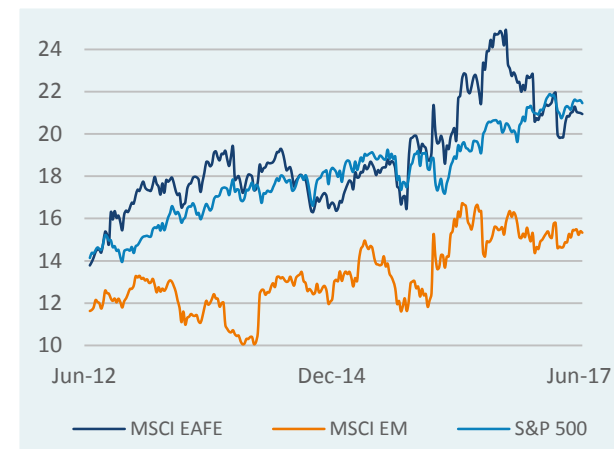
Source: MPI, as of 6/30/17

EM EARNINGS GROWTH (YOY)



Source: Bloomberg, as of 6/30/17

TRAILING P/E RATIOS



Source: Bloomberg as of 6/30/17

# Equity valuations

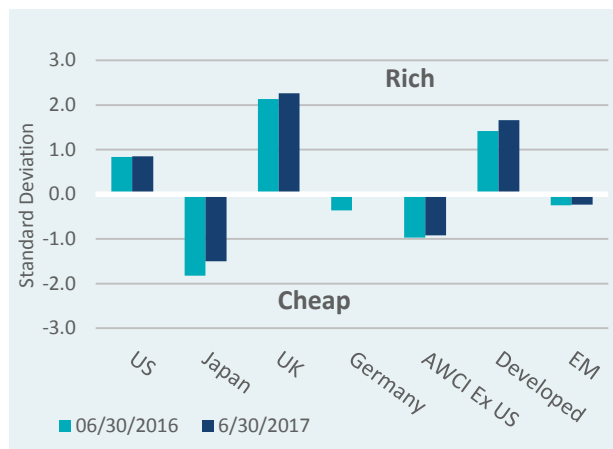
Strong global earnings in the first quarter and an increase in expected earnings growth throughout the rest of the year led to lower valuation multiples, especially in international developed markets. A pick up in earnings growth could help normalize P/E ratios.

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.

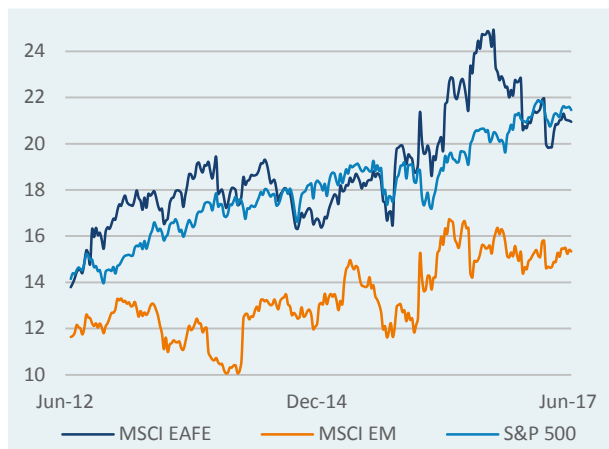
Valuations are elevated, but relative opportunities exist

RELATIVE PE TO ACWI



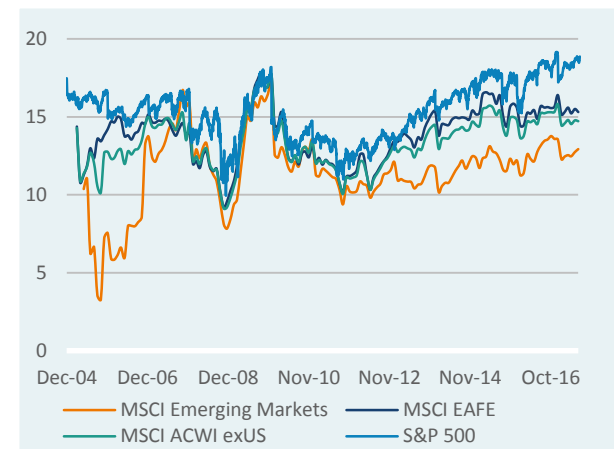
Source: Bloomberg, as of 6/30/17

TRAILING P/E RATIOS



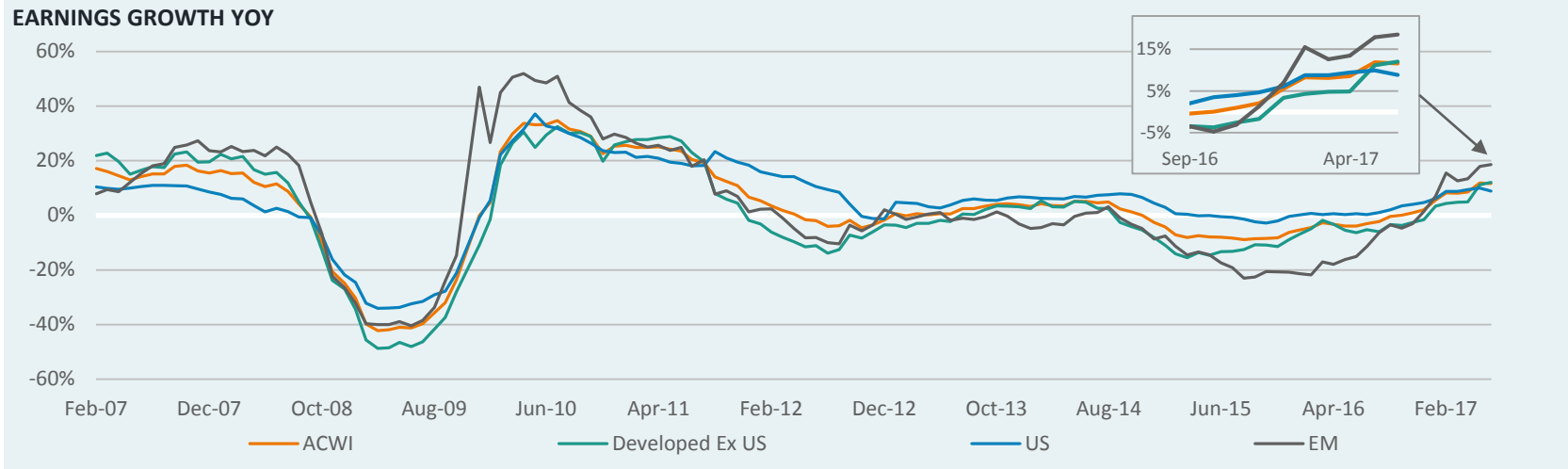
Source: Bloomberg, as of 6/30/17

INTERNATIONAL FORWARD P/E RATIOS

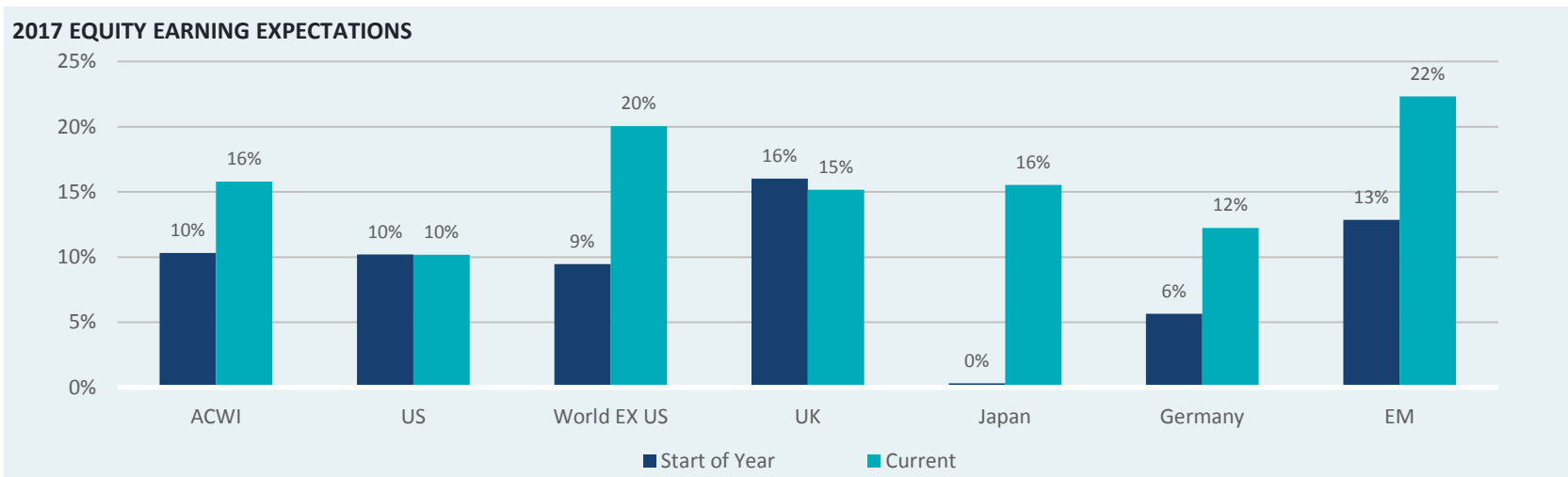


Source: Bloomberg, as of 6/30/17

# Global earnings growth



Earnings & earnings expectations have risen considerably across global markets



Source: MSCI, as of 6/30/17



# Equity volatility

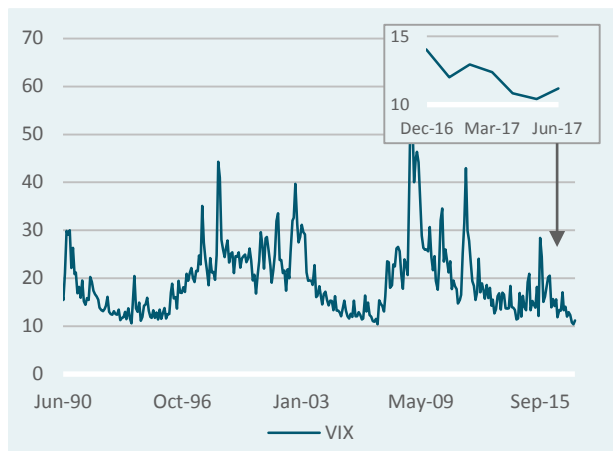
Both realized and implied volatility remains low relative to history across global equity markets. Although there have been a few spikes in implied volatility, including immediately after the first round of the French presidential election and the British general election, these have been short lived. 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.

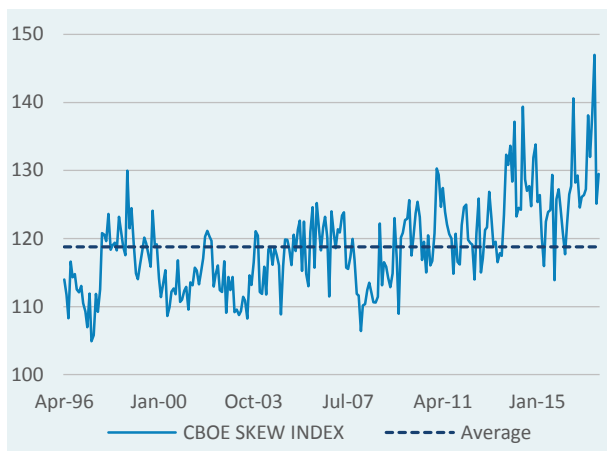
Equity volatility is well below average, but within a range consistent with past bull markets

**U.S. IMPLIED VOLATILITY**



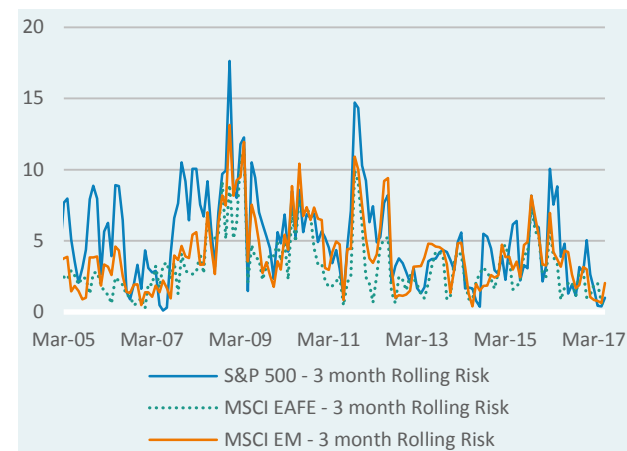
Source: CBOE, as of 6/30/17

**U.S. VOLATILITY SKEW**



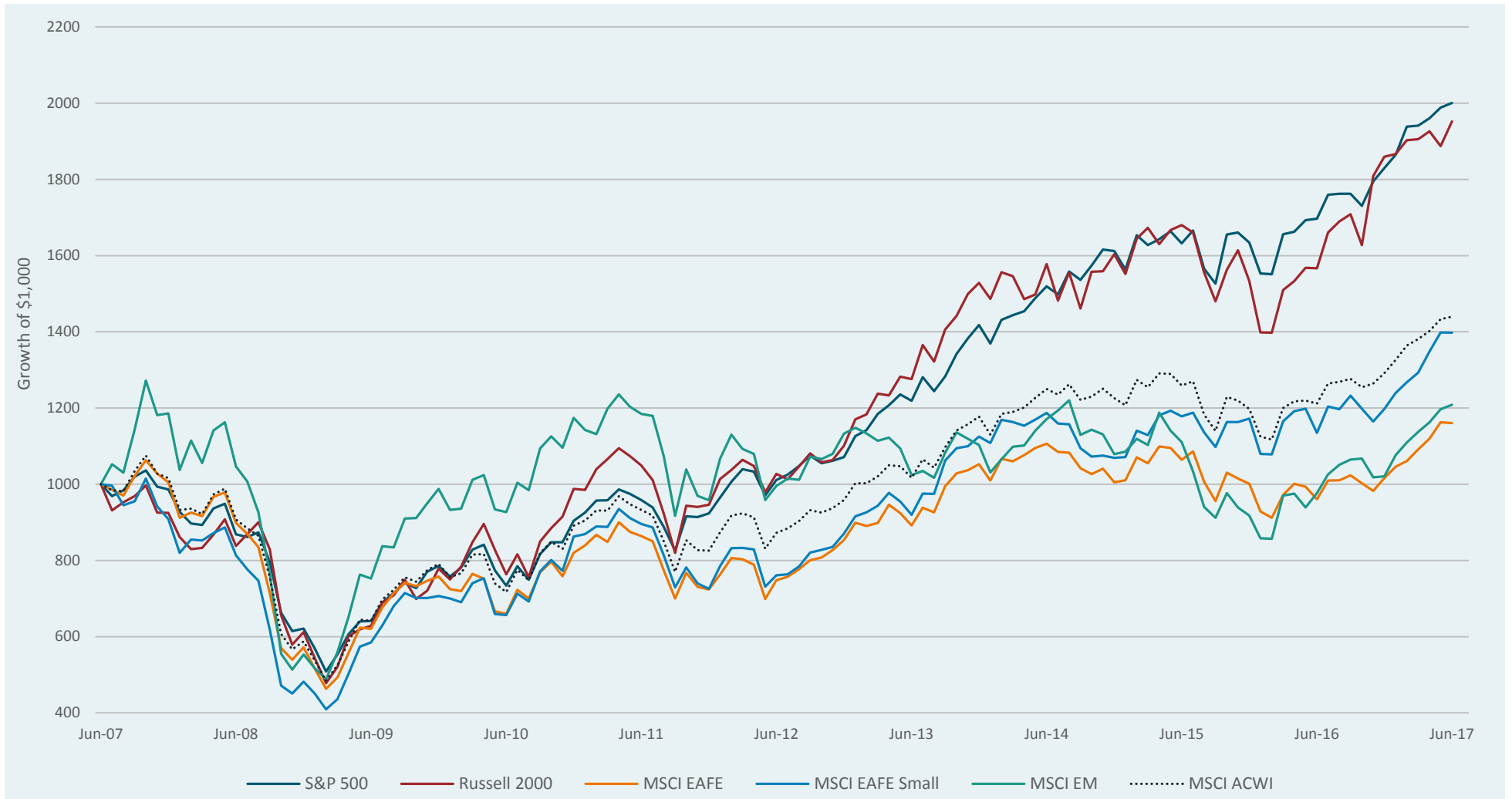
Source: CBOE, as of 6/30/17

**INTERNATIONAL EQUITY VOLATILITY**



Source: MSCI, as of 6/30/17

# Long-term equity performance



Source: MPI, as of 6/30/17

# Other assets

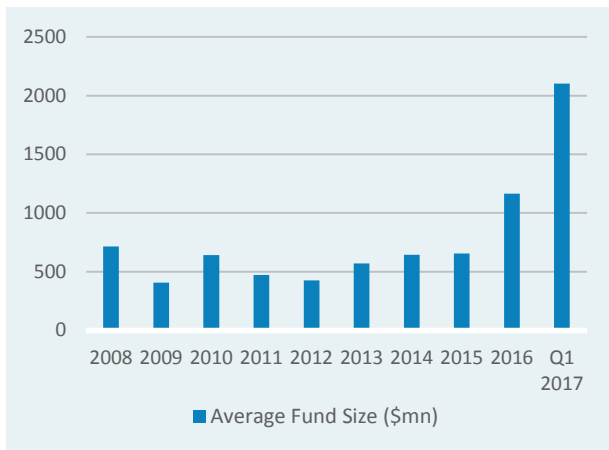
# Infrastructure

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.

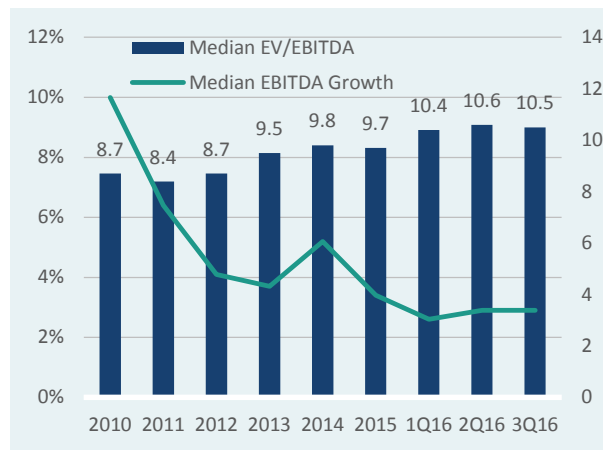
We are favorable towards value-add relative to core infrastructure as the risk/reward appears more attractive today. Interest rate sensitivity is generally lower in value-add infrastructure and pricing levels, though elevated, are below comparable core valuations. Within value-add we focus on sector 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

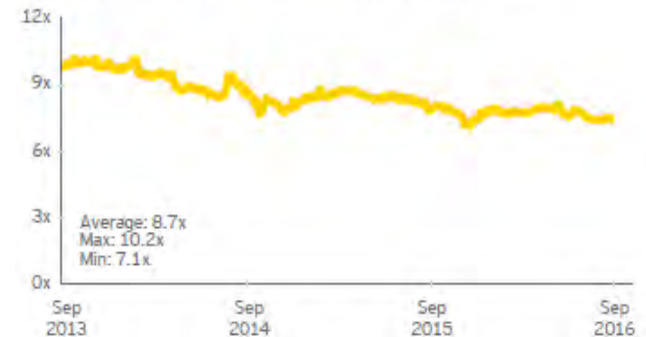
## LISTED INFRASTRUCTURE VALUATIONS/GROWTH



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

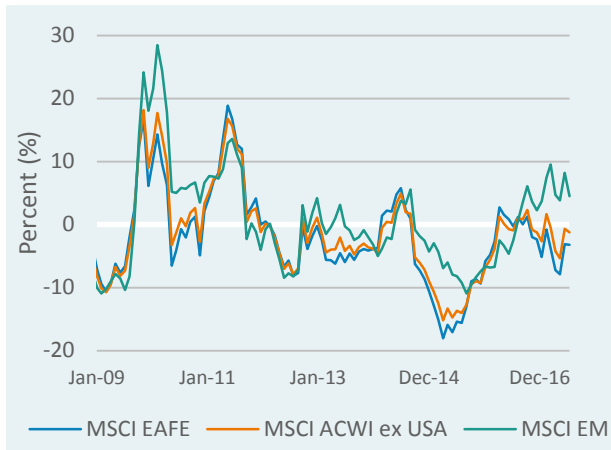
The U.S. dollar has steadily depreciated in value year-to-date against major currencies, down approximately 7% through quarter-end. Global central bank hawkishness, relative interest rate expectations, and improving international growth have likely guided the U.S. dollar lower.

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.

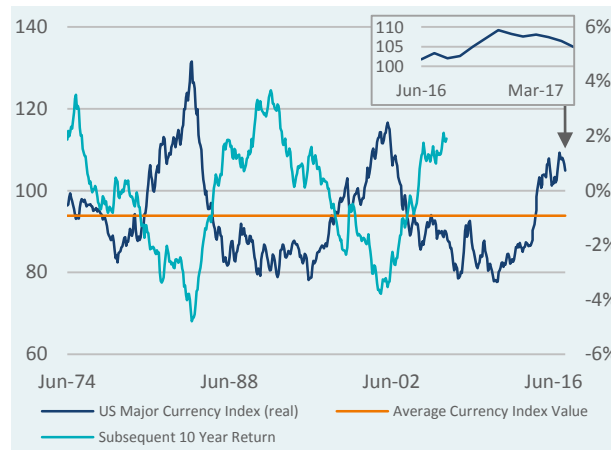
Currency movement has recently had a positive impact on the performance of unhedged foreign asset exposure. Dollar weakness has also acted as a tailwind for corporate earnings for those U.S. companies with revenues in foreign currency.

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



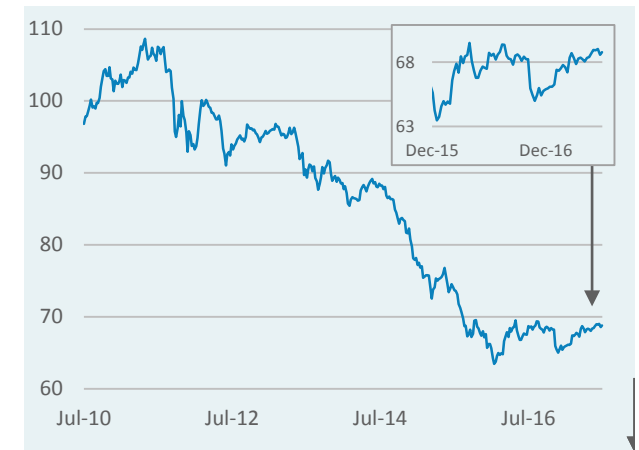
Source: MPI, as of 6/30/17

**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

WORST

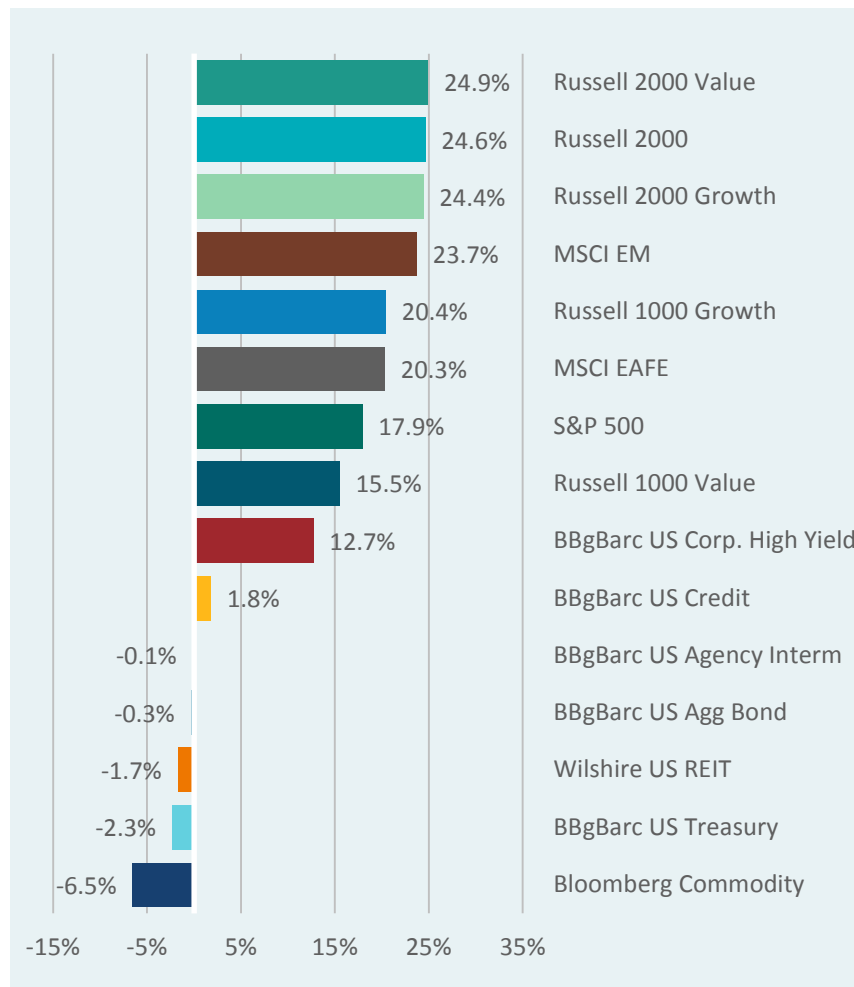
BEST

- Large Cap Equity
- Small Cap Growth
- Commodities
- Large Cap Value
- International Equity
- Real Estate
- Emerging Markets Equity
- Hedge Funds of Funds
- US Bonds
- 60% MSCI ACWI/40% BBgBarc Global Bond
- Cash

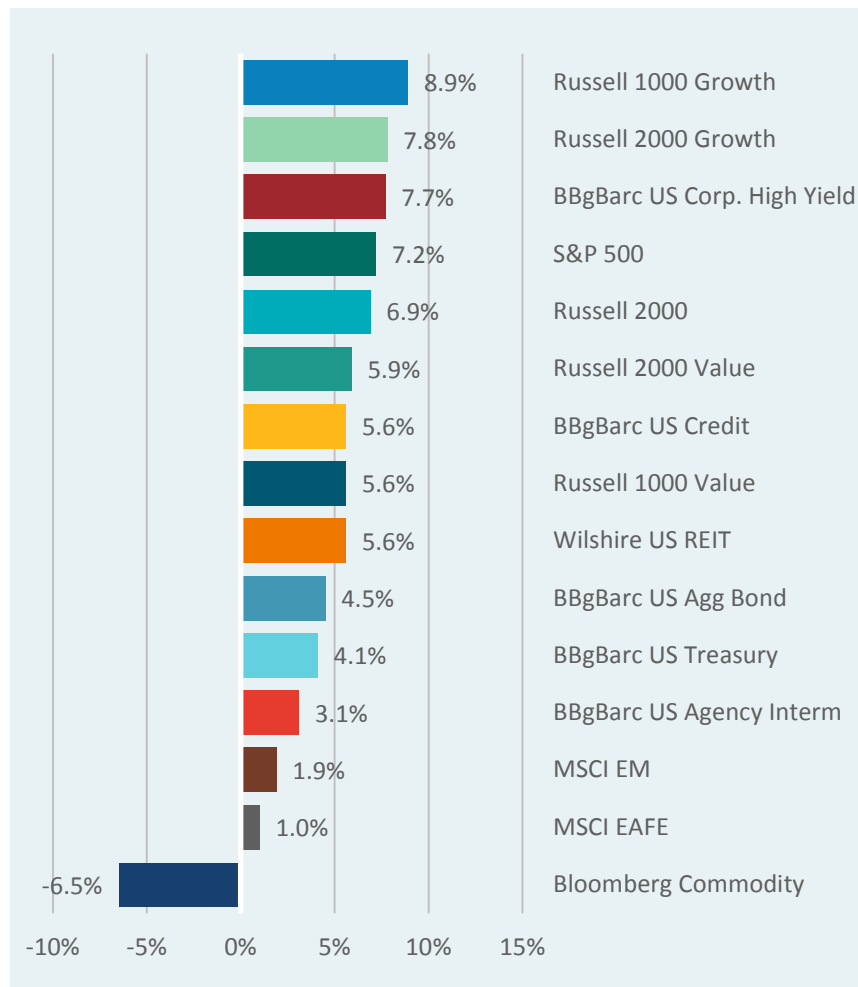
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 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



TEN YEARS ENDING JUNE



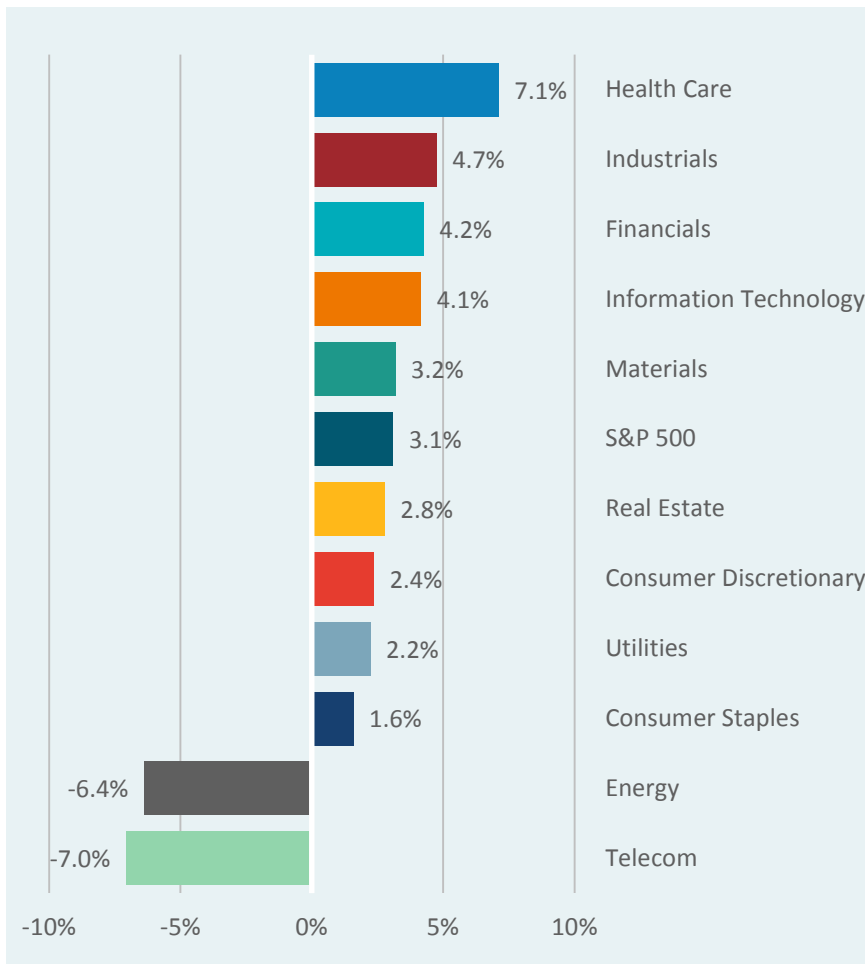
Source: Morningstar, as of 6/30/17

Source: Morningstar, as of 6/30/17



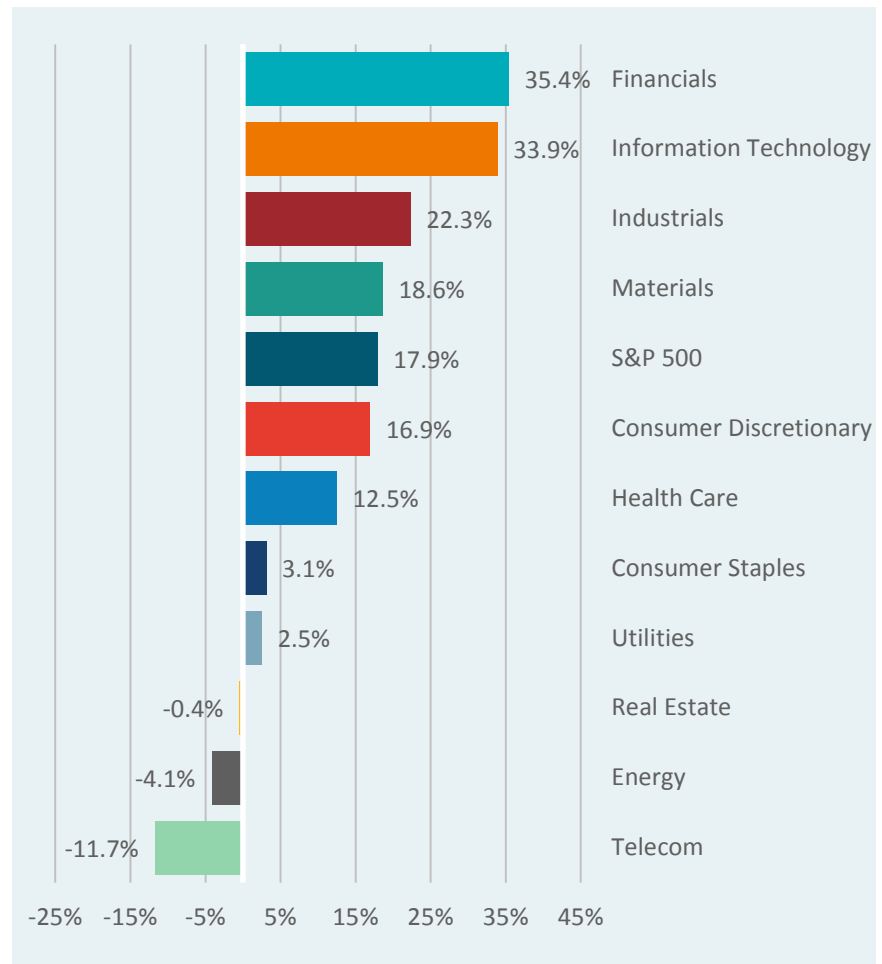
# S&P 500 sector returns

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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# Contra Costa County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2017



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SEATTLE 206-622-3700

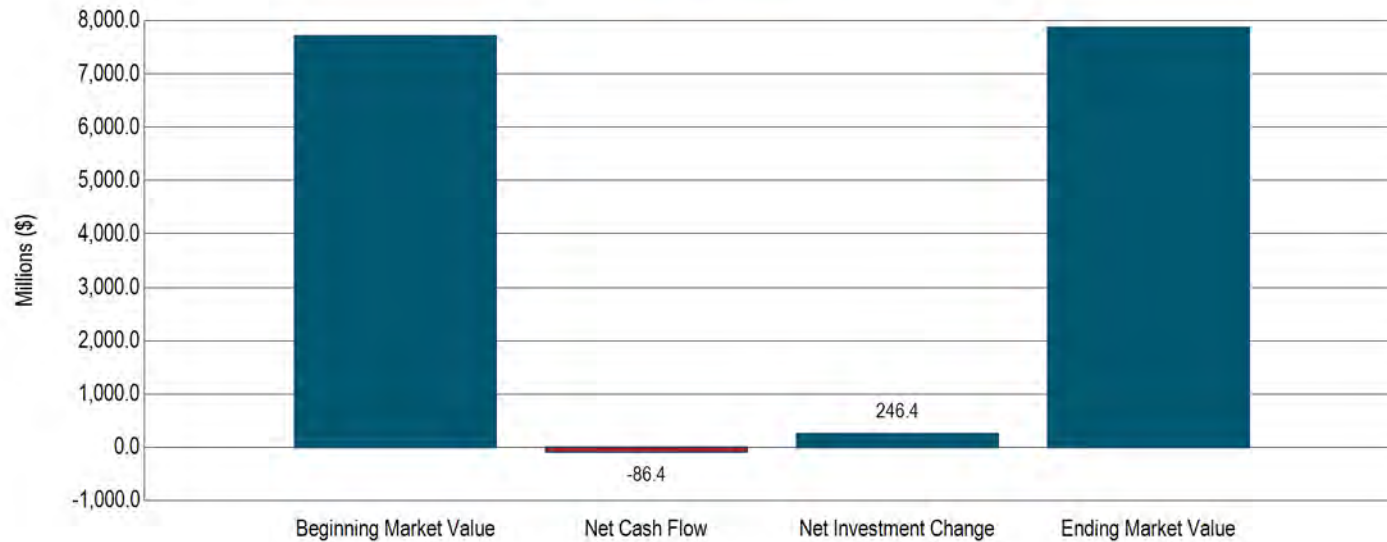
LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

**Portfolio Reconciliation**

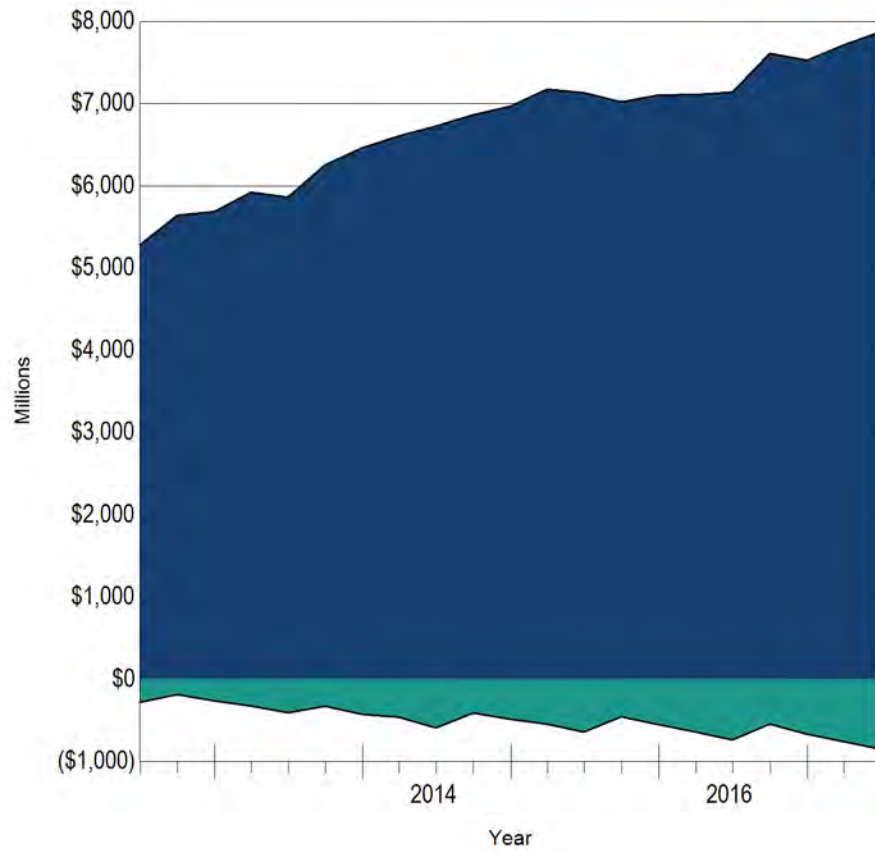
	Last Three Months	Year-To-Date
Beginning Market Value	\$7,712,495,433	\$7,526,951,623
Net Cash Flow	-\$86,396,099	-\$170,661,212
Net Investment Change	\$246,395,837	\$516,204,760
Ending Market Value	\$7,872,495,171	\$7,872,495,171

**Change in Market Value  
Last Three Months**



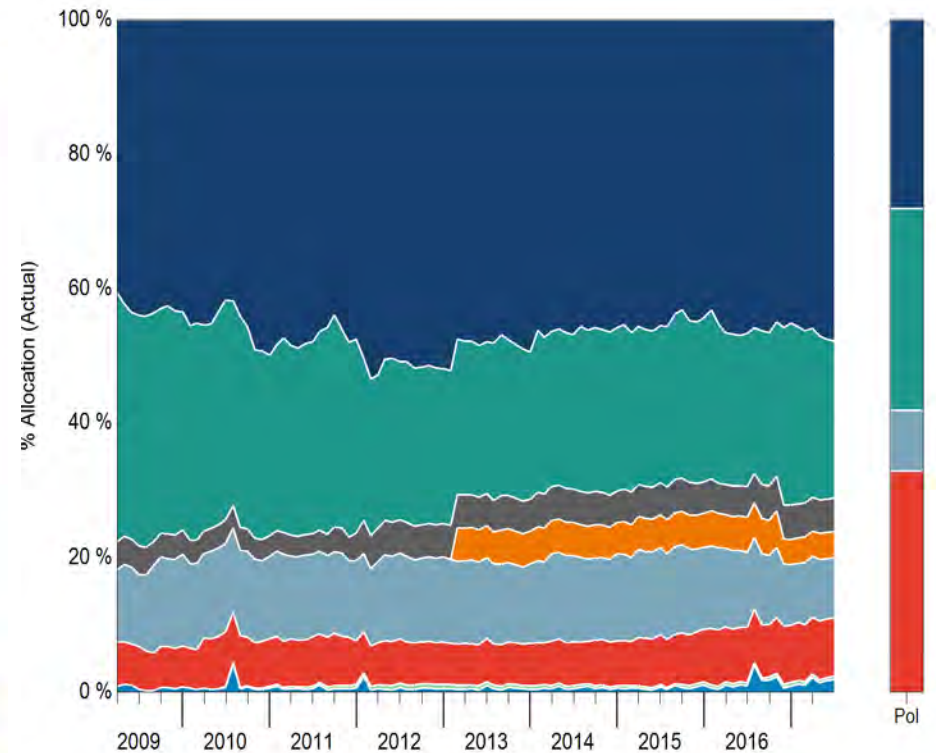
Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History  
 Cumulative Cash Flows



Market Value Net Cash Flow

Asset Allocation History



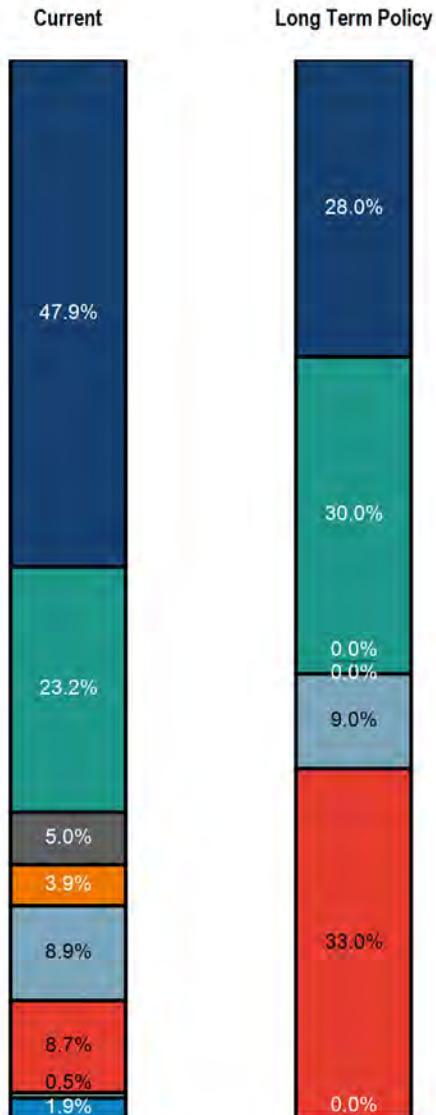
Global Equity Global Fixed Income High Yield Fixed Income Inflation Hedge/Real Assets Real Estate Alternative Investments Opportunistic Cash

Policy reflects FFP 4-Yr allocations approved in May 2017.

# Total Fund

## Asset Allocation vs. Long Term Target Policy

Period Ending: June 30, 2017



### Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference
Global Equity	\$3,768,584,362	47.9%	28.0%	\$1,564,285,714
Global Fixed Income	\$1,827,058,862	23.2%	30.0%	-\$534,689,689
High Yield Fixed Income	\$393,330,017	5.0%	0.0%	\$393,330,017
Inflation Hedge/Real Assets	\$306,330,497	3.9%	0.0%	\$306,330,497
Real Estate	\$703,574,384	8.9%	9.0%	-\$4,950,181
Alternative Investments	\$686,707,108	8.7%	33.0%	-\$1,911,216,298
Opportunistic	\$39,522,409	0.5%	0.0%	\$39,522,409
Cash	\$147,387,532	1.9%	0.0%	\$147,387,532
<b>Total</b>	<b>\$7,872,495,171</b>	<b>100.0%</b>	<b>100.0%</b>	

### Allocation vs. Current Targets

	Current Balance	Current Allocation	Current Target	Difference
Global Equity	\$3,768,584,362	47.9%	44.4%	\$273,196,506
Global Fixed Income	\$1,827,058,862	23.2%	27.4%	-\$330,004,815
High Yield Fixed Income	\$393,330,017	5.0%	5.0%	-\$294,742
Inflation Hedge/Real Assets	\$306,330,497	3.9%	3.9%	-\$696,815
Real Estate	\$703,574,384	8.9%	9.2%	-\$20,695,171
Alternative Investments	\$686,707,108	8.7%	8.2%	\$41,162,504
Opportunistic	\$39,522,409	0.5%	0.5%	\$159,933
Cash	\$147,387,532	1.9%	1.4%	\$37,172,599
<b>Total</b>	<b>\$7,872,495,171</b>	<b>100.0%</b>	<b>100.0%</b>	

Long Term Targets reflect FFP 4-Yr allocations approved in May 2017.

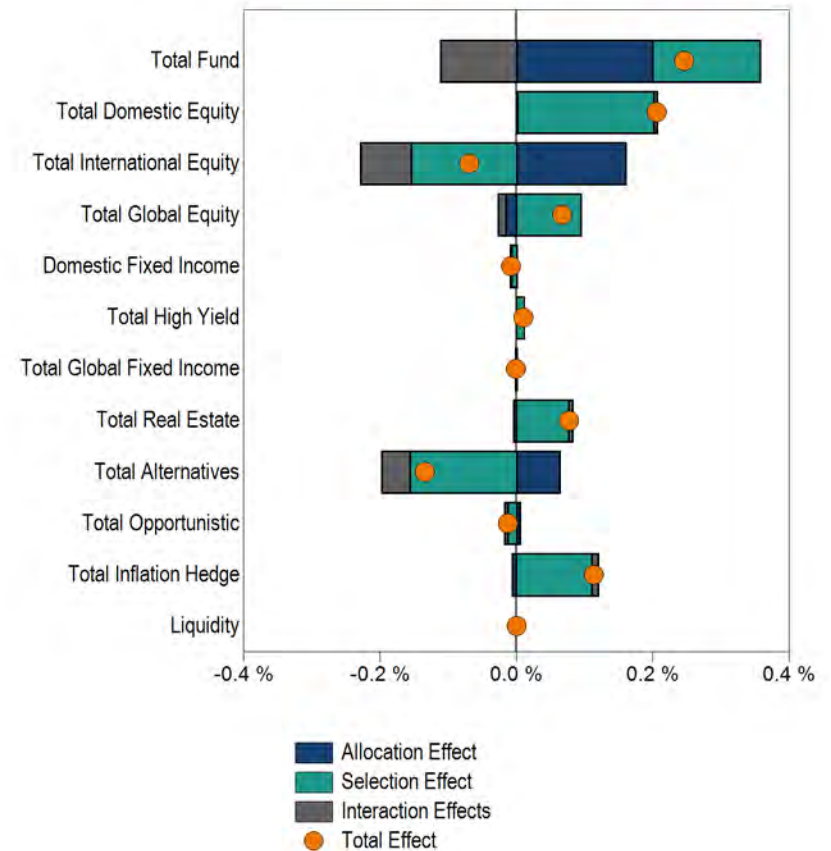
Current Targets reflect Phase 2a Targets approved in March 2017.

# Total Fund Executive Summary (Gross of Fees)

Period Ending: June 30, 2017

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>3.2</b>	<b>6.9</b>	<b>11.5</b>	<b>6.3</b>	<b>9.8</b>	<b>6.1</b>
Policy Index	2.9	6.8	10.9	6.0	9.4	--
InvestorForce Public DB > \$1B Gross Rank	47	78	81	18	30	11
<b>Total Fund ex Overlay &amp; Cash</b>	<b>3.2</b>	<b>7.0</b>	<b>11.5</b>	<b>6.3</b>	<b>9.8</b>	<b>6.1</b>
Policy Index	2.9	6.8	10.9	6.0	9.4	--
InvestorForce Public DB > \$1B Gross Rank	46	78	80	18	29	11
<b>Growth</b>	<b>4.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Total Domestic Equity</b>	<b>3.9</b>	<b>9.6</b>	<b>19.7</b>	<b>9.3</b>	<b>15.1</b>	<b>7.9</b>
Russell 3000	3.0	8.9	18.5	9.1	14.6	7.3
InvestorForce Public DB US Eq Gross Rank	7	15	25	25	9	12
<b>Total International Equity</b>	<b>4.6</b>	<b>11.4</b>	<b>12.8</b>	<b>1.8</b>	<b>8.5</b>	<b>0.4</b>
MSCI ACWI ex USA Gross	6.0	14.5	21.0	1.3	7.7	1.6
MSCI EAFE Gross	6.4	14.2	20.8	1.6	9.2	1.5
InvestorForce Public DB ex-US Eq Gross Rank	97	98	99	60	52	83
<b>International Equity</b>	<b>6.1</b>	<b>13.6</b>	<b>15.1</b>	<b>2.5</b>	<b>8.9</b>	<b>0.6</b>
MSCI ACWI ex USA Gross	6.0	14.5	21.0	1.3	7.7	1.6
InvestorForce Public DB ex-US Eq Gross Rank	67	93	97	43	37	81
<b>Emerging Markets Equity</b>	<b>0.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets	6.3	--	--	--	--	--
InvestorForce Public DB Emg Mkt Eq Gross Rank	99	--	--	--	--	--
<b>Total Global Equity</b>	<b>5.1</b>	<b>13.5</b>	<b>20.1</b>	<b>7.5</b>	<b>12.0</b>	<b>--</b>
MSCI ACWI	4.3	11.5	18.8	4.8	10.5	--
InvestorForce Public DB Total Eq Gross Rank	12	4	19	29	55	--

Attribution Effects  
3 Months Ending June 30, 2017



Policy Index (12/1/2016 -present): 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.7% BofA High Yield Master II +2%, 5.1% BofA High Yield Master II, 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%, 1.6% 90-day T-Bills.

Policy Index (4/1/2012-11/30/16): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% BofA High Yield Master II, 4% BBgBarc Global Aggregate, 5.4% Wilshire REIT, 6.75% NCREIF Property Index, 1.35% FTSE/EPRA NAREIT Developed exUS, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

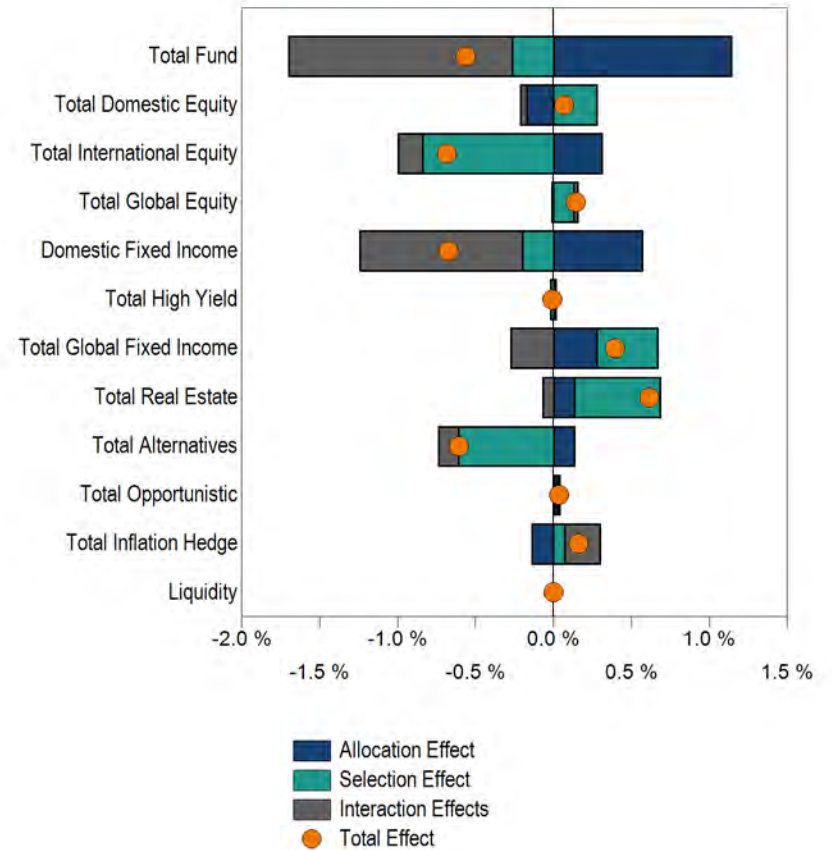


# Total Fund Executive Summary (Gross of Fees)

Period Ending: June 30, 2017

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Domestic Fixed Income	2.2	4.4	1.9	3.6	4.5	--
<i>BofA ML High Yield Master II +2%</i>	2.6	5.9	15.0	6.6	9.0	--
Total High Yield	2.3	4.5	12.4	3.6	6.4	7.7
<i>BofA ML High Yield Master II</i>	2.1	4.9	12.8	4.5	6.9	7.5
<i>eA US High Yield Fixed Inc Gross Rank</i>	34	56	36	75	67	34
Total Real Estate	2.5	4.9	7.2	10.6	12.3	5.1
<i>Real Estate Benchmark</i>	1.7	3.3	2.8	8.6	9.9	6.8
<i>NCREIF-ODCE</i>	1.7	3.5	7.9	11.3	11.8	5.2
<i>NCREIF Property Index</i>	1.8	3.3	7.0	10.2	10.5	6.4
Total Alternatives	5.0	6.5	13.2	11.7	12.7	10.6
<i>S&amp;P 500 Index +4% (Lagged)</i>	7.1	12.3	21.8	14.7	17.8	11.8
Total Opportunistic	3.6	11.8	23.3	2.6	7.3	--
<i>CPI + 4%</i>	1.5	3.5	5.7	4.9	5.4	--
<b>Risk Diversifying</b>	<b>3.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Risk Diversifying Fixed Income	1.4	2.4	0.0	2.8	2.5	4.8
<i>eA US Core Fixed Inc Gross Rank</i>	74	72	65	50	68	68
Total Inflation Hedge	4.5	5.3	11.5	0.5	--	--
<i>CPI + 4%</i>	1.5	3.5	5.7	4.9	--	--
<b>Liquidity</b>	<b>0.6</b>	<b>1.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>	0.3	0.7	--	--	--	--
<i>eA US Short Duration Fixed Inc Gross Rank</i>	43	51	--	--	--	--
<b>Total Cash</b>	<b>0.2</b>	<b>0.4</b>	<b>1.1</b>	<b>0.5</b>	<b>2.8</b>	<b>--</b>
<i>91 Day T-Bills</i>	0.2	0.4	0.5	0.2	0.2	--

Attribution Effects  
1 Year Ending June 30, 2017



Policy Index (12/1/2016 -present): 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.7% BofA High Yield Master II +2%, 5.1% BofA High Yield Master II, 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%, 1.6% 90-day T-Bills.

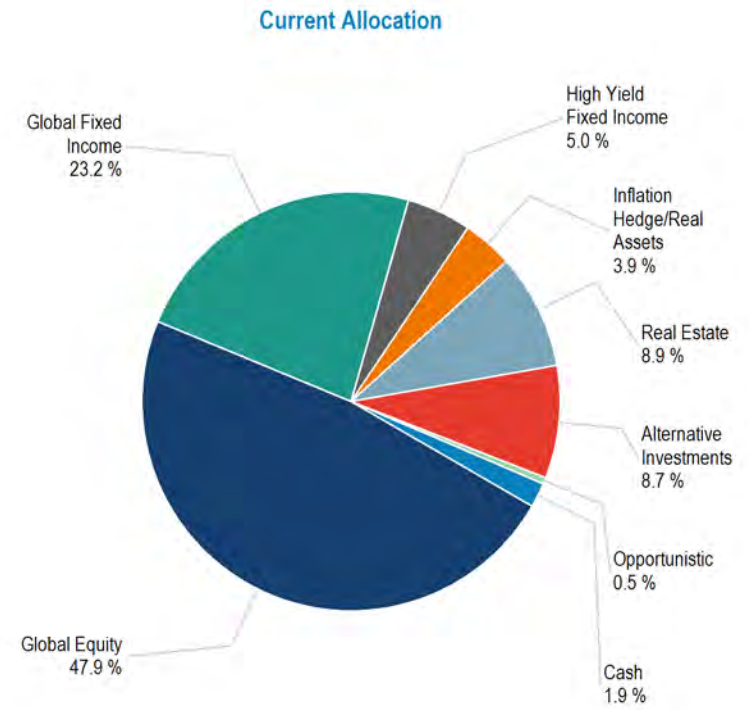
Policy Index (4/1/2012-11/30/16): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% BofA High Yield Master II, 4% BBgBarc Global Aggregate, 5.4% Wilshire REIT, 6.75% NCREIF Property Index, 1.35% FTSE/EPRA NAREIT Developed exUS, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

# Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2017

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>3.1</b>	<b>6.8</b>	<b>11.1</b>	<b>5.8</b>	<b>9.2</b>	<b>5.5</b>
<i>Policy Index</i>	2.9	6.8	10.9	6.0	9.4	--
<b>Total Fund ex Overlay &amp; Cash</b>	<b>3.2</b>	<b>6.8</b>	<b>11.1</b>	<b>5.8</b>	<b>9.2</b>	<b>5.5</b>
<i>Policy Index</i>	2.9	6.8	10.9	6.0	9.4	--
<b>Growth</b>	<b>3.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Total Domestic Equity</b>	<b>3.8</b>	<b>9.4</b>	<b>19.2</b>	<b>8.9</b>	<b>14.7</b>	<b>7.5</b>
<i>Russell 3000</i>	3.0	8.9	18.5	9.1	14.6	7.3
<b>Total International Equity</b>	<b>4.4</b>	<b>11.1</b>	<b>12.3</b>	<b>1.4</b>	<b>8.0</b>	<b>-0.1</b>
<i>MSCI ACWI ex USA Gross</i>	6.0	14.5	21.0	1.3	7.7	1.6
<i>MSCI EAFE Gross</i>	6.4	14.2	20.8	1.6	9.2	1.5
<b>International Equity</b>	<b>6.0</b>	<b>13.4</b>	<b>14.6</b>	<b>2.1</b>	<b>8.5</b>	<b>0.2</b>
<i>MSCI ACWI ex USA Gross</i>	6.0	14.5	21.0	1.3	7.7	1.6
<b>Emerging Markets Equity</b>	<b>0.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets</i>	6.3	--	--	--	--	--
<b>Total Global Equity</b>	<b>4.9</b>	<b>13.1</b>	<b>19.3</b>	<b>6.8</b>	<b>11.3</b>	<b>--</b>
<i>MSCI ACWI</i>	4.3	11.5	18.8	4.8	10.5	--
<b>Domestic Fixed Income</b>	<b>2.2</b>	<b>4.4</b>	<b>1.7</b>	<b>3.3</b>	<b>4.1</b>	<b>--</b>
<i>BofA ML High Yield Master II +2%</i>	2.6	5.9	15.0	6.6	9.0	--
<b>Total High Yield</b>	<b>2.2</b>	<b>4.3</b>	<b>12.0</b>	<b>3.2</b>	<b>6.0</b>	<b>7.5</b>
<i>BofA ML High Yield Master II</i>	2.1	4.9	12.8	4.5	6.9	7.5
<b>Total Real Estate</b>	<b>2.5</b>	<b>4.9</b>	<b>6.9</b>	<b>9.8</b>	<b>11.2</b>	<b>4.0</b>
<i>Real Estate Benchmark</i>	1.7	3.3	2.8	8.6	9.9	6.8
<i>NCREIF-ODCE</i>	1.7	3.5	7.9	11.3	11.8	5.2
<i>NCREIF Property Index</i>	1.8	3.3	7.0	10.2	10.5	6.4



*Policy Index (12/1/2016 -present): 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.7% BofA High Yield Master II +2%, 5.1% BofA High Yield Master II, 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%, 1.6% 90-day T-Bills.*

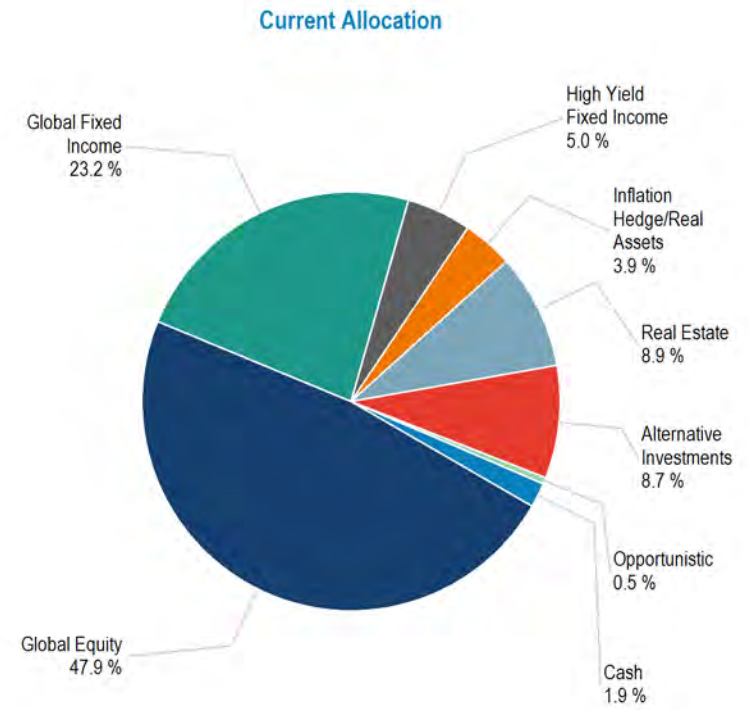
*Policy Index (4/1/2012-11/30/16): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% BofA High Yield Master II, 4% BBgBarc Global Aggregate, 5.4% Wilshire REIT, 6.75% NCREIF Property Index, 1.35% FTSE/EPRA NAREIT Developed exUS, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.*

*Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.*

# Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2017

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Alternatives	5.0	6.5	12.9	10.7	11.2	8.4
S&P 500 Index +4% (Lagged)	7.1	12.3	21.8	14.7	17.8	11.8
Total Opportunistic	3.6	11.8	22.8	2.4	7.2	--
CPI + 4%	1.5	3.5	5.7	4.9	5.4	--
<b>Risk Diversifying</b>	<b>3.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Risk Diversifying Fixed Income	1.3	2.1	-0.4	2.4	2.1	4.4
Total Inflation Hedge	4.5	5.3	11.0	-0.2	--	--
CPI + 4%	1.5	3.5	5.7	4.9	--	--
<b>Liquidity</b>	<b>0.5</b>	<b>1.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Govt/Credit 1-3 Yr. TR	0.3	0.7	--	--	--	--
<b>Total Cash</b>	<b>0.2</b>	<b>0.4</b>	<b>1.1</b>	<b>0.5</b>	<b>2.8</b>	<b>--</b>
91 Day T-Bills	0.2	0.4	0.5	0.2	0.2	--



Policy Index (12/1/2016 -present): 22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.7% BofA High Yield Master II +2%, 5.1% BofA High Yield Master II, 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%, 1.6% 90-day T-Bills.

Policy Index (4/1/2012-11/30/16): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% BofA High Yield Master II, 4% BBgBarc Global Aggregate, 5.4% Wilshire REIT, 6.75% NCREIF Property Index, 1.35% FTSE/EPRA NAREIT Developed exUS, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

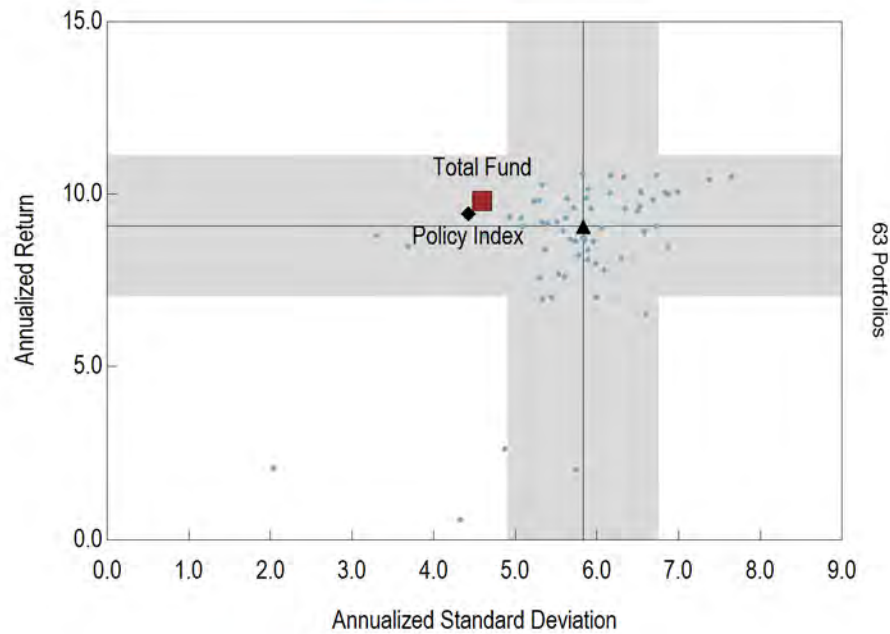
Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund  
Risk Analysis - 5 Years (Gross of Fees)

Period Ending: June 30, 2017

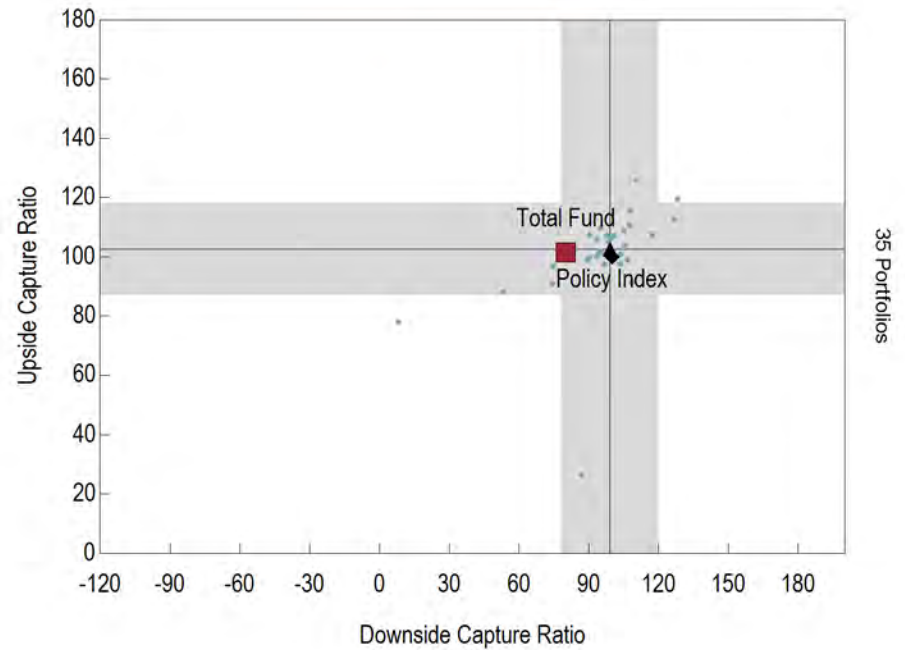
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	9.79%	0.37%	4.60%	0.29%	1.01	1.11%	0.94	2.09	0.33	101.55%	80.15%

Risk vs. Return



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Up Markets vs. Down Markets



- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Fund</b>	<b>7,872,495,171</b>	<b>100.0</b>	<b>3.2</b>	<b>6.9</b>	<b>11.5</b>	<b>6.3</b>	<b>9.8</b>	<b>6.1</b>	<b>7.4</b>	<b>2.7</b>	<b>8.4</b>	<b>16.4</b>	<b>14.3</b>
Policy Index			2.9	6.8	10.9	6.0	9.4	--	8.8	0.6	9.0	15.6	14.6
InvestorForce Public DB > \$1B Gross Rank			47	78	81	18	30	11	74	5	6	33	13
<b>Total Fund ex Overlay &amp; Cash</b>	<b>7,725,107,639</b>	<b>98.1</b>	<b>3.2</b>	<b>7.0</b>	<b>11.5</b>	<b>6.3</b>	<b>9.8</b>	<b>6.1</b>	<b>7.4</b>	<b>2.7</b>	<b>8.4</b>	<b>16.4</b>	<b>14.3</b>
Policy Index			2.9	6.8	10.9	6.0	9.4	--	8.8	0.6	9.0	15.6	14.6
InvestorForce Public DB > \$1B Gross Rank			46	78	80	18	29	11	74	5	6	33	13
<b>Growth</b>	<b>5,733,312,381</b>	<b>72.8</b>	<b>4.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Total Domestic Equity</b>	<b>1,794,749,288</b>	<b>22.8</b>	<b>3.9</b>	<b>9.6</b>	<b>19.7</b>	<b>9.3</b>	<b>15.1</b>	<b>7.9</b>	<b>11.5</b>	<b>1.1</b>	<b>11.4</b>	<b>36.2</b>	<b>18.2</b>
Russell 3000			3.0	8.9	18.5	9.1	14.6	7.3	12.7	0.5	12.6	33.6	16.4
InvestorForce Public DB US Eq Gross Rank			7	15	25	25	9	12	77	21	50	19	3
BlackRock Russell 1000 Index	78,399,446	1.0	--	--	--	--	--	--	--	--	--	--	--
Russell 1000			--	--	--	--	--	--	--	--	--	--	--
eA US Large Cap Equity Gross Rank			--	--	--	--	--	--	--	--	--	--	--
Intech Large Cap Core	308,486,067	3.9	4.9	11.7	14.5	10.3	15.1	7.8	7.7	3.8	14.7	32.7	15.3
S&P 500			3.1	9.3	17.9	9.6	14.6	7.2	12.0	1.4	13.7	32.4	16.0
eA US Large Cap Core Equity Gross Rank			7	12	78	20	27	42	79	16	31	54	54
PIMCO Stocks+ Absolute Return	167,100,864	2.1	3.3	11.0	22.8	10.3	15.4	7.8	16.2	-1.2	13.6	31.4	20.6
S&P 500			3.1	9.3	17.9	9.6	14.6	7.2	12.0	1.4	13.7	32.4	16.0
eA US Large Cap Core Equity Gross Rank			39	19	8	20	18	37	6	73	45	68	4
Jackson Square Partners	357,175,126	4.5	6.7	14.7	18.2	7.8	13.7	8.9	-4.4	6.1	13.9	35.4	16.9
Russell 1000 Growth			4.7	14.0	20.4	11.1	15.3	8.9	7.1	5.7	13.0	33.5	15.3
eA US Large Cap Growth Equity Gross Rank			17	43	74	87	79	50	98	37	31	40	37
Robeco Boston Partners	363,402,568	4.6	2.7	6.9	21.1	7.8	14.8	7.6	15.1	-3.9	12.0	37.4	21.6
Russell 1000 Value			1.3	4.7	15.5	7.4	13.9	5.6	17.3	-3.8	13.5	32.5	17.5
eA US Large Cap Value Equity Gross Rank			28	36	20	44	32	22	50	65	55	24	5
Emerald Advisers	280,919,760	3.6	6.7	11.9	28.2	11.0	17.0	9.6	10.1	4.1	7.3	50.3	18.5
Russell 2000 Growth			4.4	10.0	24.4	7.6	14.0	7.8	11.3	-1.4	5.6	43.3	14.6
eA US Small Cap Growth Equity Gross Rank			26	45	25	22	19	27	54	19	21	27	22
Ceredex	239,265,458	3.0	-2.0	-0.4	12.3	6.9	14.1	--	29.8	-4.4	3.3	36.5	19.0
Russell 2000 Value			0.7	0.5	24.9	7.0	13.4	--	31.7	-7.5	4.2	34.5	18.1
eA US Small Cap Value Equity Gross Rank			96	77	99	67	64	--	32	52	74	66	38

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total International Equity</b>	<b>1,219,377,721</b>	<b>15.5</b>	<b>4.6</b>	<b>11.4</b>	<b>12.8</b>	<b>1.8</b>	<b>8.5</b>	<b>0.4</b>	<b>1.2</b>	<b>-1.2</b>	<b>0.3</b>	<b>17.8</b>	<b>18.5</b>
MSCI ACWI ex USA Gross			6.0	14.5	21.0	1.3	7.7	1.6	5.0	-5.3	-3.4	15.8	17.4
MSCI EAFE Gross			6.4	14.2	20.8	1.6	9.2	1.5	1.5	-0.4	-4.5	23.3	17.9
InvestorForce Public DB ex-US Eq Gross Rank			97	98	99	60	52	83	89	28	5	50	49
<b>International Equity</b>	<b>917,376,712</b>	<b>11.7</b>	<b>6.1</b>	<b>13.6</b>	<b>15.1</b>	<b>2.5</b>	<b>8.9</b>	<b>0.6</b>	<b>1.2</b>	<b>-1.2</b>	<b>0.3</b>	<b>17.8</b>	<b>18.5</b>
MSCI ACWI ex USA Gross			6.0	14.5	21.0	1.3	7.7	1.6	5.0	-5.3	-3.4	15.8	17.4
InvestorForce Public DB ex-US Eq Gross Rank			67	93	97	43	37	81	89	28	5	50	49
Pyrford	452,708,229	5.8	4.9	12.1	12.4	2.1	--	--	3.4	-2.9	--	--	--
MSCI ACWI ex USA Value			4.1	11.0	23.6	-1.0	--	--	8.9	-10.1	--	--	--
eA ACWI ex-US Value Equity Gross Rank			65	80	99	58	--	--	74	59	--	--	--
William Blair	464,668,483	5.9	7.2	15.1	17.8	2.7	9.3	--	-1.4	0.5	-1.2	20.9	24.3
MSCI ACWI ex USA Growth			7.6	17.4	17.4	2.5	8.0	--	0.1	-1.3	-2.6	15.5	16.7
eA ACWI ex-US Growth Equity Gross Rank			75	92	70	73	70	--	55	69	37	44	6
<b>Emerging Markets Equity</b>	<b>302,001,009</b>	<b>3.8</b>	<b>0.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets			6.3	--	--	--	--	--	--	--	--	--	--
InvestorForce Public DB Emg Mkt Eq Gross Rank			99	--	--	--	--	--	--	--	--	--	--
PIMCO RAE Emerging Markets	302,001,009	3.8	0.2	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			6.3	--	--	--	--	--	--	--	--	--	--
eA Emg Mkts Equity Gross Rank			99	--	--	--	--	--	--	--	--	--	--
<b>Total Global Equity</b>	<b>754,457,352</b>	<b>9.6</b>	<b>5.1</b>	<b>13.5</b>	<b>20.1</b>	<b>7.5</b>	<b>12.0</b>	<b>--</b>	<b>7.6</b>	<b>2.2</b>	<b>5.2</b>	<b>23.7</b>	<b>11.1</b>
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	16.1
InvestorForce Public DB Total Eq Gross Rank			12	4	19	29	55	--	74	3	61	91	99
Artisan Partners	384,458,075	4.9	8.6	20.1	26.1	11.1	--	--	5.6	9.2	3.9	26.1	--
MSCI ACWI			4.3	11.5	18.8	4.8	--	--	7.9	-2.4	4.2	22.8	--
eA All Global Equity Gross Rank			6	5	12	5	--	--	61	4	56	51	--
First Eagle	345,080,488	4.4	1.7	7.4	12.3	5.4	9.8	--	11.7	0.2	4.5	17.9	13.9
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	16.1
eA All Global Equity Gross Rank			92	85	78	60	80	--	19	49	51	80	78
Intech Global Low Vol	24,711,724	0.3	2.7	8.0	4.9	7.5	11.5	--	6.5	4.1	11.2	24.2	--
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	--
eA All Global Equity Gross Rank			87	83	91	26	58	--	53	18	14	62	--

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Domestic Fixed Income</b>	<b>140,582,122</b>	<b>1.8</b>	<b>2.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BofA ML High Yield Master II +2%</i>			2.6	--	--	--	--	--	--	--	--	--	--
<b>Total High Yield</b>	<b>393,330,017</b>	<b>5.0</b>	<b>2.3</b>	<b>4.5</b>	<b>12.4</b>	<b>3.6</b>	<b>6.4</b>	<b>7.7</b>	<b>14.3</b>	<b>-3.5</b>	<b>1.2</b>	<b>8.8</b>	<b>14.1</b>
<i>BofA ML High Yield Master II</i>			2.1	4.9	12.8	4.5	6.9	7.5	17.5	-4.6	2.5	7.4	15.6
<i>eA US High Yield Fixed Inc Gross Rank</i>			33	57	36	74	66	33	47	68	83	28	73
Allianz Global Investors	393,330,017	5.0	2.3	4.5	12.4	3.6	6.4	7.7	14.3	-3.5	1.2	8.8	14.1
<i>BofA ML High Yield Master II</i>			2.1	4.9	12.8	4.5	6.9	7.5	17.5	-4.6	2.5	7.4	15.6
<i>eA US High Yield Fixed Inc Gross Rank</i>			33	57	36	74	66	33	47	68	83	28	73
<b>Total Real Estate</b>	<b>703,574,384</b>	<b>8.9</b>	<b>2.5</b>	<b>4.9</b>	<b>7.2</b>	<b>10.6</b>	<b>12.3</b>	<b>5.1</b>	<b>5.5</b>	<b>13.5</b>	<b>20.6</b>	<b>10.5</b>	<b>16.7</b>
<i>Real Estate Benchmark</i>			1.7	3.3	2.8	8.6	9.9	6.8	6.7	8.3	18.8	7.1	13.6
<i>NCREIF-ODCE</i>			1.7	3.5	7.9	11.3	11.8	5.2	8.8	15.0	12.5	13.9	10.9
<i>NCREIF Property Index</i>			1.8	3.3	7.0	10.2	10.5	6.4	8.0	13.3	11.8	11.0	10.5
Adelante	66,538,259	0.8	2.9	3.7	0.1	8.5	9.8	5.1	4.1	5.1	33.4	3.6	17.7
<i>Wilshire REIT</i>			1.8	1.8	-1.7	8.3	9.3	5.6	7.2	4.2	31.8	1.9	17.6
<b>Total Alternatives</b>	<b>686,707,108</b>	<b>8.7</b>	<b>5.0</b>	<b>6.5</b>	<b>13.2</b>	<b>11.7</b>	<b>12.7</b>	<b>10.6</b>	<b>9.0</b>	<b>13.3</b>	<b>17.3</b>	<b>15.0</b>	<b>10.9</b>
<i>S&amp;P 500 Index +4% (Lagged)</i>			7.1	12.3	21.8	14.7	17.8	11.8	20.0	3.4	24.5	24.0	35.3
<b>Total Opportunistic</b>	<b>39,522,409</b>	<b>0.5</b>	<b>3.6</b>	<b>11.8</b>	<b>23.3</b>	<b>2.6</b>	<b>7.3</b>	<b>--</b>	<b>10.1</b>	<b>-12.2</b>	<b>8.7</b>	<b>16.8</b>	<b>13.6</b>
<i>CPI + 4%</i>			1.5	3.5	5.7	4.9	5.4	--	6.2	4.8	4.8	5.6	5.8
<b>Risk Diversifying</b>	<b>544,642,906</b>	<b>6.9</b>	<b>3.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Risk Diversifying Fixed Income</b>	<b>238,312,410</b>	<b>3.0</b>	<b>1.4</b>	<b>2.4</b>	<b>0.0</b>	<b>2.8</b>	<b>2.5</b>	<b>4.8</b>	<b>2.4</b>	<b>1.6</b>	<b>6.6</b>	<b>-1.9</b>	<b>4.6</b>
<i>BBgBarc US Aggregate TR</i>			1.4	2.3	-0.3	2.5	2.2	4.5	2.6	0.6	6.0	-2.0	4.2
<i>eA US Core Fixed Inc Gross Rank</i>			75	72	65	50	68	67	87	15	25	78	82
AFL-CIO	238,312,410	3.0	1.4	2.4	0.0	2.8	2.5	4.9	2.4	1.6	6.6	-1.9	4.7
<i>BBgBarc US Aggregate TR</i>			1.4	2.3	-0.3	2.5	2.2	4.5	2.6	0.6	6.0	-2.0	4.2
<i>eA US Core Fixed Inc Gross Rank</i>			75	72	65	50	68	62	87	15	25	78	80
<b>Total Inflation Hedge</b>	<b>306,330,497</b>	<b>3.9</b>	<b>4.5</b>	<b>5.3</b>	<b>11.5</b>	<b>0.5</b>	<b>--</b>	<b>--</b>	<b>7.4</b>	<b>-4.9</b>	<b>-0.6</b>	<b>1.3</b>	<b>--</b>
<i>CPI + 4%</i>			1.5	3.5	5.7	4.9	--	--	6.2	4.8	4.8	5.6	--
Wellington Real Total Return	186,769,841	2.4	-0.8	-0.2	3.6	-3.9	--	--	-0.1	-4.9	-2.5	--	--
<i>CPI + 4%</i>			1.5	3.5	5.7	4.9	--	--	6.2	4.8	4.8	--	--

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Liquidity</b>	<b>1,447,152,352</b>	<b>18.4</b>	<b>0.6</b>	<b>1.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BBgBarc US Govt/Credit 1-3 Yr. TR			0.3	0.7	--	--	--	--	--	--	--	--	--
eA US Short Duration Fixed Inc Gross Rank			43	51	--	--	--	--	--	--	--	--	--
DFA Short Credit	331,963,392	4.2	0.8	1.5	--	--	--	--	--	--	--	--	--
BBgBarc US Govt/Credit 1-3 Yr. TR			0.3	0.7	--	--	--	--	--	--	--	--	--
eA US Short Duration Fixed Inc Gross Rank			13	15	--	--	--	--	--	--	--	--	--
Insight Short Duration	683,956,060	8.7	0.5	1.0	--	--	--	--	--	--	--	--	--
BBgBarc US Govt/Credit 1-3 Yr. TR			0.3	0.7	--	--	--	--	--	--	--	--	--
eA US Short Duration Fixed Inc Gross Rank			49	55	--	--	--	--	--	--	--	--	--
Sit Short Duration	431,232,900	5.5	0.4	0.7	--	--	--	--	--	--	--	--	--
BBgBarc US Govt 1-3 Yr TR			0.2	0.5	--	--	--	--	--	--	--	--	--
eA US Short Duration Fixed Inc Gross Rank			73	88	--	--	--	--	--	--	--	--	--
<b>Total Cash</b>	<b>130,051,297</b>	<b>1.7</b>	<b>0.2</b>	<b>0.4</b>	<b>1.1</b>	<b>0.5</b>	<b>2.8</b>	<b>--</b>	<b>0.9</b>	<b>0.1</b>	<b>-3.0</b>	<b>8.8</b>	<b>--</b>
91 Day T-Bills			0.2	0.4	0.5	0.2	0.2	--	0.3	0.0	0.0	0.0	--
Cash	130,051,297	1.7	0.2	0.4	1.1	0.5	2.9	3.5	0.9	0.1	1.4	4.5	14.9

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Fund</b>	<b>7,872,495,171</b>	<b>100.0</b>	<b>3.1</b>	<b>6.8</b>	<b>11.1</b>	<b>5.8</b>	<b>9.2</b>	<b>5.5</b>	<b>6.9</b>	<b>2.1</b>	<b>7.7</b>	<b>15.6</b>	<b>13.6</b>
<i>Policy Index</i>			2.9	6.8	10.9	6.0	9.4	--	8.8	0.6	9.0	15.6	14.6
<b>Total Fund ex Overlay &amp; Cash</b>	<b>7,725,107,639</b>	<b>98.1</b>	<b>3.2</b>	<b>6.8</b>	<b>11.1</b>	<b>5.8</b>	<b>9.2</b>	<b>5.5</b>	<b>6.9</b>	<b>2.1</b>	<b>7.7</b>	<b>15.6</b>	<b>13.6</b>
<i>Policy Index</i>			2.9	6.8	10.9	6.0	9.4	--	8.8	0.6	9.0	15.6	14.6
<b>Growth</b>	<b>5,733,312,381</b>	<b>72.8</b>	<b>3.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Total Domestic Equity</b>	<b>1,794,749,288</b>	<b>22.8</b>	<b>3.8</b>	<b>9.4</b>	<b>19.2</b>	<b>8.9</b>	<b>14.7</b>	<b>7.5</b>	<b>11.1</b>	<b>0.6</b>	<b>11.0</b>	<b>35.7</b>	<b>17.8</b>
<i>Russell 3000</i>			3.0	8.9	18.5	9.1	14.6	7.3	12.7	0.5	12.6	33.6	16.4
BlackRock Russell 1000 Index	78,399,446	1.0	--	--	--	--	--	--	--	--	--	--	--
<i>Russell 1000</i>			--	--	--	--	--	--	--	--	--	--	--
Intech Large Cap Core	308,486,067	3.9	4.8	11.5	14.0	9.8	14.6	7.4	7.2	3.3	14.2	32.2	14.8
<i>S&amp;P 500</i>			3.1	9.3	17.9	9.6	14.6	7.2	12.0	1.4	13.7	32.4	16.0
PIMCO Stocks+ Absolute Return	167,100,864	2.1	3.3	10.9	22.6	10.1	15.2	7.6	16.0	-1.4	13.2	31.0	20.3
<i>S&amp;P 500</i>			3.1	9.3	17.9	9.6	14.6	7.2	12.0	1.4	13.7	32.4	16.0
Jackson Square Partners	357,175,126	4.5	6.6	14.5	17.7	7.3	13.2	8.4	-4.8	5.6	13.4	35.0	16.4
<i>Russell 1000 Growth</i>			4.7	14.0	20.4	11.1	15.3	8.9	7.1	5.7	13.0	33.5	15.3
Robeco Boston Partners	363,402,568	4.6	2.6	6.7	20.8	7.5	14.5	7.3	14.7	-4.2	11.6	37.0	21.2
<i>Russell 1000 Value</i>			1.3	4.7	15.5	7.4	13.9	5.6	17.3	-3.8	13.5	32.5	17.5
Emerald Advisers	280,919,760	3.6	6.5	11.6	27.4	10.4	16.3	8.9	9.4	3.5	6.6	49.4	17.8
<i>Russell 2000 Growth</i>			4.4	10.0	24.4	7.6	14.0	7.8	11.3	-1.4	5.6	43.3	14.6
Ceredex	239,265,458	3.0	-2.2	-0.7	11.7	6.3	13.4	--	29.1	-5.0	2.7	35.8	18.6
<i>Russell 2000 Value</i>			0.7	0.5	24.9	7.0	13.4	--	31.7	-7.5	4.2	34.5	18.1
<b>Total International Equity</b>	<b>1,219,377,721</b>	<b>15.5</b>	<b>4.4</b>	<b>11.1</b>	<b>12.3</b>	<b>1.4</b>	<b>8.0</b>	<b>-0.1</b>	<b>0.8</b>	<b>-1.6</b>	<b>0.0</b>	<b>17.4</b>	<b>17.9</b>
<i>MSCI ACWI ex USA Gross</i>			6.0	14.5	21.0	1.3	7.7	1.6	5.0	-5.3	-3.4	15.8	17.4
<i>MSCI EAFE Gross</i>			6.4	14.2	20.8	1.6	9.2	1.5	1.5	-0.4	-4.5	23.3	17.9
<b>International Equity</b>	<b>917,376,712</b>	<b>11.7</b>	<b>6.0</b>	<b>13.4</b>	<b>14.6</b>	<b>2.1</b>	<b>8.5</b>	<b>0.2</b>	<b>0.8</b>	<b>-1.6</b>	<b>0.0</b>	<b>17.4</b>	<b>18.0</b>
<i>MSCI ACWI ex USA Gross</i>			6.0	14.5	21.0	1.3	7.7	1.6	5.0	-5.3	-3.4	15.8	17.4
Pyrford	452,708,229	5.8	4.8	11.9	11.9	1.7	--	--	3.0	-3.3	--	--	--
<i>MSCI ACWI ex USA Value</i>			4.1	11.0	23.6	-1.0	--	--	8.9	-10.1	--	--	--
William Blair	464,668,483	5.9	7.1	14.9	17.3	2.3	8.9	--	-1.8	0.0	-1.7	20.4	23.7
<i>MSCI ACWI ex USA Growth</i>			7.6	17.4	17.4	2.5	8.0	--	0.1	-1.3	-2.6	15.5	16.7
<b>Emerging Markets Equity</b>	<b>302,001,009</b>	<b>3.8</b>	<b>0.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets</i>			6.3	--	--	--	--	--	--	--	--	--	--
PIMCO RAE Emerging Markets	302,001,009	3.8	0.1	--	--	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets</i>			6.3	--	--	--	--	--	--	--	--	--	--

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Global Equity</b>	<b>754,457,352</b>	<b>9.6</b>	<b>4.9</b>	<b>13.1</b>	<b>19.3</b>	<b>6.8</b>	<b>11.3</b>	<b>--</b>	<b>6.9</b>	<b>1.6</b>	<b>4.5</b>	<b>22.9</b>	<b>10.6</b>
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	16.1
Artisan Partners	384,458,075	4.9	8.4	19.7	25.1	10.3	--	--	4.8	8.4	3.1	25.2	--
MSCI ACWI			4.3	11.5	18.8	4.8	--	--	7.9	-2.4	4.2	22.8	--
First Eagle	345,080,488	4.4	1.5	7.0	11.5	4.6	9.0	--	10.9	-0.6	3.7	17.1	13.1
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	16.1
Intech Global Low Vol	24,711,724	0.3	2.6	7.9	4.6	7.2	11.2	--	6.3	3.9	10.8	23.8	--
MSCI ACWI			4.3	11.5	18.8	4.8	10.5	--	7.9	-2.4	4.2	22.8	--
<b>Domestic Fixed Income</b>	<b>140,582,122</b>	<b>1.8</b>	<b>2.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
BofA ML High Yield Master II +2%			2.6	--	--	--	--	--	--	--	--	--	--
<b>Total High Yield</b>	<b>393,330,017</b>	<b>5.0</b>	<b>2.2</b>	<b>4.3</b>	<b>12.0</b>	<b>3.2</b>	<b>6.0</b>	<b>7.5</b>	<b>13.9</b>	<b>-3.9</b>	<b>0.8</b>	<b>8.4</b>	<b>13.7</b>
BofA ML High Yield Master II			2.1	4.9	12.8	4.5	6.9	7.5	17.5	-4.6	2.5	7.4	15.6
Allianz Global Investors	393,330,017	5.0	2.2	4.3	12.0	3.2	6.0	7.3	13.9	-3.9	0.8	8.4	13.6
BofA ML High Yield Master II			2.1	4.9	12.8	4.5	6.9	7.5	17.5	-4.6	2.5	7.4	15.6
<b>Total Real Estate</b>	<b>703,574,384</b>	<b>8.9</b>	<b>2.5</b>	<b>4.9</b>	<b>6.9</b>	<b>9.8</b>	<b>11.2</b>	<b>4.0</b>	<b>4.8</b>	<b>12.4</b>	<b>19.1</b>	<b>8.9</b>	<b>15.7</b>
Real Estate Benchmark			1.7	3.3	2.8	8.6	9.9	6.8	6.7	8.3	18.8	7.1	13.6
NCREIF-ODCE			1.7	3.5	7.9	11.3	11.8	5.2	8.8	15.0	12.5	13.9	10.9
NCREIF Property Index			1.8	3.3	7.0	10.2	10.5	6.4	8.0	13.3	11.8	11.0	10.5
Adelante	66,538,259	0.8	2.8	3.4	-0.4	8.0	9.3	4.6	3.6	4.6	32.7	3.0	17.2
Wilshire REIT			1.8	1.8	-1.7	8.3	9.3	5.6	7.2	4.2	31.8	1.9	17.6
<b>Total Alternatives</b>	<b>686,707,108</b>	<b>8.7</b>	<b>5.0</b>	<b>6.5</b>	<b>12.9</b>	<b>10.7</b>	<b>11.2</b>	<b>8.4</b>	<b>8.6</b>	<b>11.7</b>	<b>15.2</b>	<b>12.7</b>	<b>8.5</b>
S&P 500 Index +4% (Lagged)			7.1	12.3	21.8	14.7	17.8	11.8	20.0	3.4	24.5	24.0	35.3
<b>Total Opportunistic</b>	<b>39,522,409</b>	<b>0.5</b>	<b>3.6</b>	<b>11.8</b>	<b>22.8</b>	<b>2.4</b>	<b>7.2</b>	<b>--</b>	<b>9.5</b>	<b>-12.3</b>	<b>8.7</b>	<b>16.8</b>	<b>13.6</b>
CPI + 4%			1.5	3.5	5.7	4.9	5.4	--	6.2	4.8	4.8	5.6	5.8
<b>Risk Diversifying</b>	<b>544,642,906</b>	<b>6.9</b>	<b>3.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<b>Risk Diversifying Fixed Income</b>	<b>238,312,410</b>	<b>3.0</b>	<b>1.3</b>	<b>2.1</b>	<b>-0.4</b>	<b>2.4</b>	<b>2.1</b>	<b>4.4</b>	<b>1.9</b>	<b>1.1</b>	<b>6.1</b>	<b>-2.4</b>	<b>4.3</b>
BBgBarc US Aggregate TR			1.4	2.3	-0.3	2.5	2.2	4.5	2.6	0.6	6.0	-2.0	4.2
AFL-CIO	238,312,410	3.0	1.3	2.1	-0.4	2.4	2.1	4.5	1.9	1.1	6.1	-2.4	4.3
BBgBarc US Aggregate TR			1.4	2.3	-0.3	2.5	2.2	4.5	2.6	0.6	6.0	-2.0	4.2
<b>Total Inflation Hedge</b>	<b>306,330,497</b>	<b>3.9</b>	<b>4.5</b>	<b>5.3</b>	<b>11.0</b>	<b>-0.2</b>	<b>--</b>	<b>--</b>	<b>6.5</b>	<b>-5.8</b>	<b>-1.5</b>	<b>0.3</b>	<b>--</b>
CPI + 4%			1.5	3.5	5.7	4.9	--	--	6.2	4.8	4.8	5.6	--
Wellington Real Total Return	186,769,841	2.4	-0.8	-0.2	3.3	-4.4	--	--	-0.6	-5.4	-3.1	--	--
CPI + 4%			1.5	3.5	5.7	4.9	--	--	6.2	4.8	4.8	--	--

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2017

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Liquidity</b>	<b>1,447,152,352</b>	<b>18.4</b>	<b>0.5</b>	<b>1.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			<i>0.3</i>	<i>0.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
DFA Short Credit	331,963,392	4.2	0.8	1.5	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			<i>0.3</i>	<i>0.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Insight Short Duration	683,956,060	8.7	0.5	1.0	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			<i>0.3</i>	<i>0.7</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Sit Short Duration	431,232,900	5.5	0.4	0.6	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Govt 1-3 Yr TR</i>			<i>0.2</i>	<i>0.5</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
<b>Total Cash</b>	<b>130,051,297</b>	<b>1.7</b>	<b>0.2</b>	<b>0.4</b>	<b>1.1</b>	<b>0.5</b>	<b>2.8</b>	<b>--</b>	<b>0.9</b>	<b>0.1</b>	<b>-3.0</b>	<b>8.8</b>	<b>--</b>
<i>91 Day T-Bills</i>			<i>0.2</i>	<i>0.4</i>	<i>0.5</i>	<i>0.2</i>	<i>0.2</i>	<i>--</i>	<i>0.3</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>--</i>
Cash	130,051,297	1.7	0.2	0.4	1.1	0.5	2.9	3.1	0.9	0.1	1.4	4.5	14.6

Individual closed end funds are not shown in performance summary table. PIMCO RAE EM funded 2/28/2017. JPM Global liquidated 2/28/2017. BlackRock Russell 1000 funded 4/20/2017. Goldman Sachs has \$54,007 of residual cash. JPM Global has \$207,066 of residual cash. Lazard has \$1,011,978 of residual cash.

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2017

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/17 <sup>3</sup>	Total Commitment	% Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions <sup>4</sup>	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Fixed Income</b>												
7/1/2006	Torchlight II	\$44,180,191	\$128,000,000	100%	\$128,000,000	\$0	\$0	\$158,211,379	\$0	1.24	1.58	6/30/2017
12/12/2008	Torchlight III	\$8,803,646	\$75,000,000	100%	\$75,000,000	\$0	\$2,529,196	\$101,629,571	\$0	1.36	1.47	6/30/2017
8/1/2012	Torchlight IV	\$57,289,465	\$60,000,000	100%	\$60,000,000	\$0	\$9,770,957	\$47,863,509	\$0	0.80	1.75	6/30/2017
3/12/2015	Torchlight V	\$28,104,684	\$75,000,000	35%	\$26,249,912	\$7,500,000	\$654,066	\$0	\$48,750,088	0.00	1.07	3/31/2017
<b>Total Fixed Income</b>		<b>\$138,377,986</b>										
% of Portfolio (Market Value)		1.8%										
<b>Inflation Hedge</b>												
11/27/2013	Aether Real Assets III	\$21,091,512	\$25,000,000	66%	\$16,590,788	\$1,146,915	\$58,382	\$497,736	\$8,897,136	0.03	1.30	3/31/2017
11/27/2013	Aether Real Assets III Surplus	\$52,441,564	\$50,000,000	77%	\$38,402,397	\$3,117,863	\$40,097	\$511,975	\$15,138,852	0.01	1.38	3/31/2017
3/16/2016	Aether Real Assets IV	\$7,132,194	\$50,000,000	16%	\$8,028,122	\$1,926,886	\$26,012	\$96,924	\$41,971,878	0.01	0.90	3/31/2017
6/28/2013	Commonfund	\$38,895,386	\$50,000,000	68%	\$34,000,000	\$1,500,000	\$404,243	\$0	\$16,000,000	0.00	1.14	3/31/2017
<b>Total Inflation Hedge</b>		<b>\$119,560,656</b>										
% of Portfolio (Market Value)		1.5%										
<b>Opportunistic</b>												
2/18/2010	Oaktree PIF 2009	\$14,769,700	\$40,000,000	87%	\$34,800,000	\$0	\$0	\$32,238,579	\$6,308,960	0.93	1.35	6/30/2017
9/24/2015	Angelo Gordon Energy Credit Opp.	\$19,671,686	\$28,125,000	67%	\$18,750,000	\$0	\$0	\$4,639,566	\$9,375,000	0.25	1.30	3/31/2017
12/8/2015	Wastewater Opportunity Fund	\$5,081,023	\$25,000,000	24%	\$6,042,751	\$2,342,541	\$0	\$0	\$18,957,249	0.00	0.84	3/31/2017
<b>Total Opportunistic</b>		<b>\$39,522,409</b>										
% of Portfolio (Market Value)		0.5%										

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

<sup>4</sup>Total distributions may contain recallable capital

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2017

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/17 <sup>3</sup>	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions <sup>6</sup>	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Real Estate</b>												
1/23/2012	Angelo Gordon Realty Fund VIII	\$47,817,372	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$67,752,397	\$12,334,302	0.90	1.53	3/31/2017
12/8/2014	Angelo Gordon Realty Fund IX	\$40,739,656	\$65,000,000	61%	\$39,487,500	\$9,750,000	\$975,000	\$975,000	\$25,512,500	0.02	1.06	3/31/2017
6/23/2005	DLJ RECP III	\$29,890,178	\$75,000,000	95%	\$70,968,662	\$0	\$1,442,397	\$69,319,039	\$4,031,338	0.98	1.40	3/31/2017
2/11/2008	DLJ RECP IV	\$87,682,536	\$100,000,000	91%	\$90,943,569	\$0	\$0	\$56,595,635	\$9,056,431	0.62	1.59	3/31/2017
7/1/2014	DLJ RECP V	\$33,018,684	\$75,000,000	67%	\$50,552,862	\$0	\$0	\$35,722,220	\$43,777,551	0.71	1.36	3/31/2017
6/17/1998	Hearthstone II <sup>4</sup>	-\$12,947	\$25,000,000	80%	\$19,932,386	\$7,338	\$0	\$19,952,734	\$2,520,348	1.00	1.00	3/31/2017
2/1/2005	Invesco Real Estate I	\$91,336	\$50,000,000	92%	\$46,241,947	\$0	\$0	\$50,000,907	\$3,758,053	1.08	1.08	6/30/2017
11/26/2007	Invesco Real Estate II	\$444,291	\$85,000,000	92%	\$78,202,813	\$0	\$0	\$100,620,489	\$6,797,187	1.29	1.29	6/30/2017
6/30/2013	Invesco Real Estate III	\$15,270,579	\$35,000,000	91%	\$32,009,674	\$1,323,713	\$8,093,685	\$30,621,535	\$2,990,326	0.96	1.43	6/30/2017
6/30/2014	Invesco Real Estate IV	\$22,143,585	\$35,000,000	43%	\$15,208,624	\$8,437,012	\$0	\$4,729,246	\$23,645,636	0.31	1.77	6/30/2017
7/16/2013	LaSalle Income & Growth VI	\$41,295,384	\$75,000,000	95%	\$71,428,571	\$0	\$0	\$59,957,237	\$3,571,429	0.84	1.42	3/31/2017
2/28/2017	LaSalle Income & Growth VII	\$42,830,890	\$75,000,000	55%	\$41,448,132	\$2,552,550	\$0	\$0	\$33,551,868	0.00	1.03	3/31/2017
3/30/2007	Long Wharf Fund III	\$1,636,132	\$75,000,000	89%	\$66,940,230	\$0	\$1,884,231	\$86,974,484	\$8,059,770	1.30	1.32	6/30/2017
7/3/2013	Long Wharf Fund IV	\$19,652,800	\$25,000,000	100%	\$25,000,000	\$0	\$2,860,525	\$13,572,697	\$0	0.54	1.33	6/30/2017
9/30/2016	Long Wharf Fund V	\$15,233,874	\$50,000,000	32%	\$16,091,626	\$2,410,602	\$0	\$571,233	\$33,908,374	0.04	0.98	6/30/2017
12/31/2011	Oaktree REOF V	\$14,998,505	\$50,000,000	100%	\$50,000,000	\$0	\$4,500,000	\$67,750,000	\$25,750,000	1.36	1.65	6/30/2017
9/30/2013	Oaktree REOF VI <sup>5</sup>	\$69,370,671	\$80,000,000	100%	\$80,000,000	\$0	\$4,800,000	\$37,600,000	\$18,400,000	0.47	1.34	6/30/2017
4/1/2015	Oaktree REOF VII	\$4,666,057	\$65,000,000	10%	\$6,500,000	\$0	\$0	\$2,564,329	\$61,064,329	0.39	1.11	6/30/2017
11/10/2013	Paulson Real Estate Fund II	\$24,919,340	\$20,000,000	85%	\$17,007,123	\$0	\$0	\$0	\$2,992,877	0.00	1.47	3/31/2017
1/25/2012	Siguler Guff DREOF	\$54,379,604	\$75,000,000	93%	\$69,375,000	\$0	\$9,555,517	\$58,786,671	\$5,625,000	0.85	1.63	3/31/2017
8/31/2013	Siguler Guff DREOF II	\$55,821,903	\$70,000,000	75%	\$52,605,000	\$0	\$1,596,076	\$5,457,512	\$17,395,000	0.10	1.16	3/31/2017
1/27/2016	Siguler Guff DREOF II Co-Inv	\$15,145,698	\$25,000,000	58%	\$14,500,362	\$0	\$0	\$0	\$10,499,638	0.00	1.04	3/31/2017
<b>Total Closed End Real Estate</b>		<b>\$637,036,126</b>	<b>\$1,310,000,000</b>	<b>79%</b>	<b>\$1,029,845,937</b>	<b>\$24,481,216</b>	<b>\$35,707,430</b>	<b>\$769,523,364</b>	<b>\$355,241,956</b>	<b>0.34</b>	<b>0.96</b>	
<b>% of Portfolio (Market Value)</b>		<b>8.2%</b>										

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

<sup>4</sup>No further capital to be called

<sup>5</sup>Actual capital called is \$85,600,000 which includes recallable distributions

<sup>6</sup>Total distributions may include recallable distributions

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2017

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/17 <sup>3</sup>	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Private Equity &amp; Venture Capital</b>												
3/18/1996	Adams Street Partners	\$130,163,346	\$210,000,000	77%	\$162,264,125	\$2,180,000	\$3,485,592	\$96,503,936	\$47,735,875	0.59	1.40	3/31/2017
1/16/2009	Adams Street Partners II	\$13,555,584	\$30,000,000	95%	\$28,365,000	\$0	\$0	\$32,373,237	\$1,635,000	1.14	1.62	3/31/2017
9/21/2012	Adams Street Partners - Fund 5	\$22,383,074	\$40,000,000	73%	\$29,011,900	\$560,000	\$1,335,932	\$8,810,703	\$10,988,100	0.30	1.08	3/31/2017
1/18/1996	Adams Street Partners - BPF	\$3,943,499	\$59,565,614	97%	\$57,517,409	\$0	\$398,481	\$100,234,623	\$2,048,205	1.74	1.81	3/31/2017
4/28/2017	Adams Street Venture Innovation	\$3,412,500	\$75,000,000	5%	\$3,412,500	\$0	\$0	\$0	\$71,587,500	0.00	1.00	--
6/14/2004	Bay Area Equity Fund	\$2,964,997	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$36,331,243	\$0	3.63	3.93	3/31/2017
12/7/2009	Bay Area Equity Fund II	\$8,614,537	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$2,026,313	\$0	0.20	1.06	3/31/2017
11/26/2003	EIF US Power Fund I	\$755,185	\$30,000,000	100%	\$30,000,000	\$0	\$0	\$64,404,030	\$0	2.15	2.17	3/31/2017
8/16/2005	EIF US Power Fund II <sup>5</sup>	\$36,036,623	\$50,000,000	100%	\$50,000,000	\$0	\$652,706	\$47,620,838	\$0	0.95	1.67	3/31/2017
5/30/2007	EIF US Power Fund III <sup>6</sup>	\$46,638,743	\$65,000,000	100%	\$65,000,000	\$0	\$577,778	\$54,108,009	\$0	0.83	1.55	3/31/2017
11/28/2011	EIF US Power Fund IV <sup>4</sup>	\$51,758,693	\$50,000,000	112%	\$55,770,845	\$0	\$0	\$17,817,527	\$6,308,439	0.32	1.25	3/31/2017
11/28/2016	EIF US Power Fund V	\$15,958,872	\$50,000,000	22%	\$11,078,680	\$0	\$2,212,004	\$2,212,004	\$38,921,320	0.20	1.64	3/31/2017
5/24/2011	Pathway 6	\$34,008,345	\$40,000,000	78%	\$31,217,419	\$418,921	\$971,467	\$6,849,686	\$8,782,581	0.22	1.31	3/31/2017
2/7/2013	Pathway 7	\$42,667,097	\$70,000,000	61%	\$42,758,699	\$248,484	\$757,968	\$3,999,601	\$27,241,301	0.09	1.09	3/31/2017
11/23/2015	Pathway 8	\$16,311,216	\$50,000,000	32%	\$16,095,862	\$2,342,743	\$209,311	\$702,894	\$33,904,138	0.04	1.06	3/31/2017
11/9/1998	Pathway	\$30,481,747	\$125,000,000	98%	\$121,930,204	\$0	\$4,501,408	\$151,743,867	\$3,069,796	1.24	1.49	3/31/2017
12/26/2008	Pathway 2008	\$23,560,013	\$30,000,000	88%	\$26,496,767	\$154,272	\$2,219,271	\$14,232,194	\$3,503,233	0.54	1.43	3/31/2017
1/31/2008	Carpenter Bancfund	\$23,961,937	\$30,000,000	97%	\$29,239,890	\$0	\$7,276,280	\$24,414,128	\$979,075	0.83	1.65	3/31/2017
2/15/2004	Nogales	\$45,966	\$15,000,000	99%	\$14,805,103	\$0	\$0	\$12,314,799	\$111,251	0.83	0.83	3/31/2017
11/30/2007	Paladin III	\$25,731,639	\$25,000,000	98%	\$24,560,349	\$176,197	\$0	\$15,604,222	\$1,340,815	0.64	1.68	3/31/2017
6/11/2014	Ocean Avenue Fund II	\$19,657,462	\$30,000,000	65%	\$19,500,000	\$1,500,000	\$600,000	\$2,089,938	\$10,500,000	0.11	1.12	3/31/2017
4/15/2016	Ocean Avenue Fund III	\$9,579,212	\$50,000,000	20%	\$10,000,000	\$0	\$0	\$0	\$40,000,000	0.00	0.96	3/31/2017
6/3/2014	Siguler Guff CCCERA Opportunities	\$115,501,508	\$200,000,000	49%	\$98,502,500	\$14,000,000	\$0	\$5,712,984	\$101,497,500	0.06	1.23	3/31/2017
11/30/2016	Siguler Guff Secondary Opportunities	\$9,015,313	\$50,000,000	17%	\$8,250,000	\$0	\$0	\$4,407,569	\$41,750,000	0.53	1.63	3/31/2017
<b>Total Private Equity and Venture Capital</b>		<b>\$686,707,108</b>	<b>\$1,394,565,614</b>	<b>68%</b>	<b>\$947,527,252</b>	<b>\$21,580,617</b>	<b>\$25,198,198</b>	<b>\$704,514,344</b>	<b>\$451,904,129</b>	<b>0.74</b>	<b>1.47</b>	
<b>% of Portfolio (Market Value)</b>		<b>8.8%</b>										

<sup>1</sup>(DPI) is equal to (capital returned / capital called)

<sup>2</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>3</sup>Latest valuation + capital calls - distributions

<sup>4</sup>EIF IV has \$12,677,767 of recallable distributions

<sup>5</sup>EIF II has \$15,029,557 of recallable distributions

<sup>6</sup>EIF III has \$6,125,861 of recallable distributions

Total Fund  
Closed End Funds - IRR Summary

Period Ending: June 30, 2017

Fixed Income	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Torchlight II	07/01/2006	-	-0.0%	-	-1.3%	06/30/2017
Torchlight III	12/12/2008	-	17.9%	-	13.7%	06/30/2017
Torchlight IV	08/01/2012	-	13.7%	-	11.1%	06/30/2017
Torchlight V	03/12/2015	-	27.2%	-	14.3%	03/31/2017
Inflation Hedge	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Aether Real Assets III <sup>4</sup>	11/27/2013	24.1%	-	20.0%	20.0%	03/31/2017
Aether Real Assets III Surplus <sup>4</sup>	11/27/2013	23.5%	-	21.6%	-	03/31/2017
Aether Real Assets IV <sup>1</sup>	01/01/2016	-	-	-	-	-
CommonFund <sup>2</sup>	06/28/2013	11.3%	-	8.1%	8.2%	03/31/2017
Wastewater Opportunity Fund <sup>1</sup>	12/08/2015	-3.1%	-	-35.1%	-	03/31/2017
Opportunistic	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Oaktree PIF 2009	02/18/2010	7.3%	-	7.1%	-	06/30/2017
Angelo Gordon Energy Cred Opp. <sup>1</sup>	09/24/2015	-	-	-	22.9%	03/31/2017
Real Estate	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Angelo Gordon VIII	01/23/2012	-	-	-	17.0%	03/31/2017
Angelo Gordon IX <sup>1</sup>	12/08/2014	-	-	-	9.7%	03/31/2017
DLJ RECP III	06/23/2005	2.0%	-	-	-	12/31/2016
DLJ RECP IV	02/11/2008	6.0%	-	-	3.0%	12/31/2016
DLJ RECP V <sup>1</sup>	07/01/2014	-	-	-	-	-
Hearthstone II	06/17/1998	-	30.1%	-	30.1%	03/31/2017
Invesco Fund I	02/01/2005	3.2%	-	1.6%	-	12/31/2016
Invesco Fund II	11/26/2007	8.2%	-	6.8%	-	12/31/2016
Invesco Fund III	06/30/2013	21.3%	23.3%	-	17.1%	03/31/2017
Invesco Fund IV	06/30/2014	16.0%	21.6%	-	14.8%	03/31/2017
LaSalle Income & Growth VI	07/16/2013	17.2%	-	14.1%	-	12/31/2016
LaSalle Income & Growth VII	02/28/2017	-	-	-	-	-
Long Wharf III	03/30/2007	9.4%	9.3%	7.3%	7.0%	06/30/2017
Long Wharf IV	07/03/2013	18.7%	18.0%	13.2%	12.3%	06/30/2017
Long Wharf V <sup>1</sup>	09/30/2016	8.0%	1340.0%	-1.9%	3.0%	06/30/2017
Oaktree REOF V	12/31/2011	17.6%	-	13.0%	-	06/30/2017
Oaktree REOF VI	09/30/2013	15.9%	-	10.6%	-	06/30/2017
Oaktree REOF VII <sup>1</sup>	04/01/2015	134.8%	-	37.7%	-	06/30/2017
Paulson <sup>1</sup>	11/10/2013	-	-	-	-	-
Siguler Guff I	01/25/2012	-	19.0%	-	14.0%	03/31/2017
Siguler Guff II	08/31/2013	-	11.4%	-	8.0%	03/31/2017
Siguler Guff DREOF II Co-Inv <sup>1</sup>	01/27/2016	-	7.4	-	5.1	03/31/2017

<sup>1</sup>Manager has yet to report IRR figure due to no capital invested or meaningful distributions.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Manager has reported IRR figures, but does not consider them to be meaningful, due to the age of the fund.

Total Fund  
Closed End Funds - IRR Summary

Period Ending: June 30, 2017

Private Equity & Venture Capital	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Adams Street Partners	03/18/1996	-	13.4%	-	10.5%	03/31/2017
Adams Street Partners II	01/16/2009	-	-	18.8%	15.0%	03/31/2017
Adams Street Partners - Fund 5	09/21/2012	-	-	7.6%	4.3%	03/31/2017
Adams Street Partners Venture <sup>1</sup>	04/28/2017	-	-	-	-	-
Adams Street Partners - BPF	01/18/1996	-	14.3%	-	11.6%	03/31/2017
Bay Area Equity Fund I	06/14/2004	26.0%	-	23.4%	-	03/31/2017
Bay Area Equity Fund II	12/07/2009	1.8%	-	1.4%	-	03/31/2017
Energy Investor Fund	11/26/2003	33.6%	34.7%	28.6%	28.4%	03/31/2017
Energy Investor Fund II	08/16/2005	7.7%	7.1%	5.0%	4.4%	03/31/2017
Energy Investor Fund III	05/30/2007	7.3%	7.3%	9.7%	9.7%	03/31/2017
Energy Investor Fund IV	11/28/2011	16.2%	18.0%	10.6%	11.3%	03/31/2017
Pathway 6	05/24/2011	15.1%	15.1%	11.6%	11.6%	03/31/2017
Benchmark <sup>4</sup>		12.9%	-	-	-	03/31/2017
Pathway 7 <sup>1</sup>	02/07/2013	10.1%	10.1%	5.7%	5.7%	03/31/2017
Pathway 8 <sup>1</sup>	11/06/2015	-	-	-	-	-
Pathway Private Equity Fund	11/09/1998	10.2%	10.2%	8.4%	8.4%	03/31/2017
Benchmark <sup>2</sup>		10.3%	-	-	-	03/31/2017
Pathway Private Equity Fund 2008	12/26/2008	14.1%	14.1%	11.0%	11.0%	03/31/2017
Benchmark <sup>5</sup>		12.4%	-	-	-	03/31/2017
Carpenter Bancfund	01/31/2008	-	-	-	10.7%	06/30/2017
Nogales	02/15/2004	-	-4.5%	-8.6%	-8.8%	03/31/2017
Paladin III	11/30/2007	15.7%	-	7.2%	-	03/31/2017
Ocean Avenue II	06/11/2014	-	-	5.6%	-	03/31/2017
Ocean Avenue III	04/15/2016	-	-	-7.1%	-	03/31/2017
Siguler Guff CCCERA Opportunities	06/03/2014	-	28.0%	-	21.0%	03/31/2017
Siguler Guff Secondary Opportunities	11/30/2016	-	80.5%	-	70.9%	03/31/2017

<sup>1</sup>Manager has yet to report IRR figure due to no capital invested or meaningful distributions.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Private iQ global all private equity median pooled return for vintage years 2011-2014, as of March 31, 2015.

<sup>5</sup>Private iQ global all private equity median pooled return for vintage years 1999-2011, as of March 31, 2015.

<sup>6</sup>Private iQ global all private equity median pooled return for vintage years 2008-2014, as of March 31, 2015.



Total Fund  
Performance Analysis - 3 Years (Net of Fees)

Period Ending: June 30, 2017

	3 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	9.85%	0.24%	6.93%	2.25%	0.79	4.46%	0.63	1.39	0.05	92.65%	58.84%
PIMCO Stocks+ Absolute Return	10.10%	0.49%	9.43%	-2.68%	1.33	2.90%	0.97	1.05	0.17	119.34%	158.51%
Jackson Square Partners	7.34%	-3.76%	11.30%	-7.26%	1.32	5.94%	0.77	0.63	-0.63	74.28%	136.22%
Robeco Boston Partners	7.48%	0.12%	8.60%	0.03%	1.01	2.74%	0.90	0.84	0.04	98.68%	93.29%
Emerald Advisers	10.36%	2.72%	14.10%	2.96%	0.97	5.24%	0.86	0.72	0.52	113.23%	90.70%
Ceredex	6.26%	-0.76%	12.35%	1.02%	0.75	7.41%	0.72	0.49	-0.10	79.14%	77.52%
Pyrford	1.70%	2.69%	8.85%	2.32%	0.63	6.49%	0.71	0.16	0.41	65.88%	46.92%
William Blair	2.32%	-0.22%	10.84%	0.07%	0.88	2.63%	0.96	0.19	-0.09	88.88%	91.15%
Artisan Partners	10.27%	5.45%	12.41%	4.27%	1.24	6.65%	0.74	0.81	0.82	157.83%	79.67%
First Eagle	4.63%	-0.19%	7.02%	1.03%	0.75	3.55%	0.84	0.63	-0.05	89.32%	84.70%
Intech Global Low Vol	7.21%	2.39%	6.68%	5.29%	0.40	7.72%	0.26	1.04	0.31	96.62%	39.79%
AFL-CIO	2.35%	-0.13%	3.16%	0.06%	0.92	0.49%	0.98	0.67	-0.26	93.88%	93.41%
Allianz Global Investors	3.19%	-1.29%	5.86%	-0.79%	0.89	1.36%	0.96	0.50	-0.95	82.07%	99.25%
Wellington Real Total Return	-4.38%	-9.33%	7.54%	-14.59%	2.06	7.05%	0.17	-0.61	-1.32	-50.29%	1,307.20%
Adelante	7.98%	-0.32%	11.76%	0.31%	0.92	2.17%	0.97	0.66	-0.15	93.66%	93.11%

Performance Analysis excludes closed end funds and those funds without 3 years of performance.

Total Fund  
Performance Analysis - 5 Years (Net of Fees)

Period Ending: June 30, 2017

5 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	14.63%	0.00%	7.78%	1.31%	0.91	3.46%	0.81	1.86	0.00	94.94%	62.05%
PIMCO Stocks+ Absolute Return	15.18%	0.55%	9.15%	-1.80%	1.16	2.35%	0.95	1.64	0.23	112.11%	151.35%
Jackson Square Partners	13.23%	-2.07%	11.01%	-5.94%	1.25	4.84%	0.84	1.19	-0.43	86.20%	118.35%
Robeco Boston Partners	14.46%	0.52%	8.95%	0.63%	0.99	2.87%	0.90	1.60	0.18	103.07%	93.29%
Emerald Advisers	16.26%	2.28%	14.07%	1.86%	1.03	5.47%	0.85	1.14	0.42	112.69%	90.70%
Ceredex	13.44%	0.06%	11.62%	2.32%	0.83	6.11%	0.75	1.14	0.01	91.40%	77.52%
William Blair	8.88%	0.84%	10.25%	1.39%	0.93	2.52%	0.94	0.85	0.33	100.23%	88.14%
First Eagle	8.98%	-1.56%	6.54%	1.23%	0.73	3.26%	0.86	1.35	-0.48	81.89%	87.20%
Intech Global Low Vol	11.15%	0.61%	7.80%	5.24%	0.56	7.25%	0.35	1.41	0.08	90.94%	45.80%
AFL-CIO	2.07%	-0.14%	3.02%	-0.05%	0.96	0.47%	0.98	0.63	-0.29	93.64%	94.88%
Allianz Global Investors	5.95%	-0.96%	5.07%	-0.23%	0.89	1.19%	0.96	1.14	-0.81	86.06%	94.55%
Adelante	9.31%	-0.04%	10.39%	0.82%	0.91	2.14%	0.97	0.88	-0.02	91.25%	83.13%

Performance Analysis excludes closed end funds and those funds without 5 years of performance.

# Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2017

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
BlackRock Russell 1000 Index	Global Equity	0.03% of Assets	\$78,399,446	\$23,520	0.03%
Intech Large Cap Core	Global Equity	0.50% of First \$100.0 Mil, 0.45% of Next \$100.0 Mil, 0.35% of Next \$100.0 Mil, 0.30% of Next \$200.0 Mil, 0.25% Thereafter	\$308,486,067	\$1,320,458	0.43%
PIMCO Stocks+ Absolute Return	Global Equity	0.15% of Assets	\$167,100,864	\$250,651	0.15%
Jackson Square Partners	Global Equity	0.50% of First \$100.0 Mil, 0.40% of Next \$150.0 Mil, 0.35% Thereafter	\$357,175,126	\$1,475,113	0.41%
Robeco Boston Partners	Global Equity	0.50% of First \$25.0 Mil, 0.30% Thereafter	\$363,402,568	\$1,140,208	0.31%
Emerald Advisers	Global Equity	0.75% of First \$10.0 Mil, 0.60% Thereafter	\$280,919,760	\$1,700,519	0.61%
Ceredex	Global Equity	0.85% of First \$10.0 Mil, 0.68% of Next \$40.0 Mil, 0.51% Thereafter	\$239,265,458	\$1,322,254	0.55%
Pyrford	Global Equity	0.70% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.35% Thereafter	\$452,708,229	\$1,834,479	0.41%
William Blair	Global Equity	0.80% of First \$20.0 Mil, 0.60% of Next \$30.0 Mil, 0.50% of Next \$50.0 Mil, 0.45% of Next \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.30% Thereafter	\$464,668,483	\$1,809,005	0.39%
PIMCO RAE Emerging Markets	Global Equity	0.75% of First \$50.0 Mil, 0.68% of Next \$50.0 Mil, 0.50% of Next \$100.0 Mil, 0.45% Thereafter	\$302,001,009	\$1,671,505	0.55%
Artisan Partners	Global Equity	0.75% of Assets	\$384,458,075	\$2,883,436	0.75%
First Eagle	Global Equity	0.75% of Assets	\$345,080,488	\$2,588,104	0.75%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund  
Investment Fund Fee Analysis

Period Ending: June 30, 2017

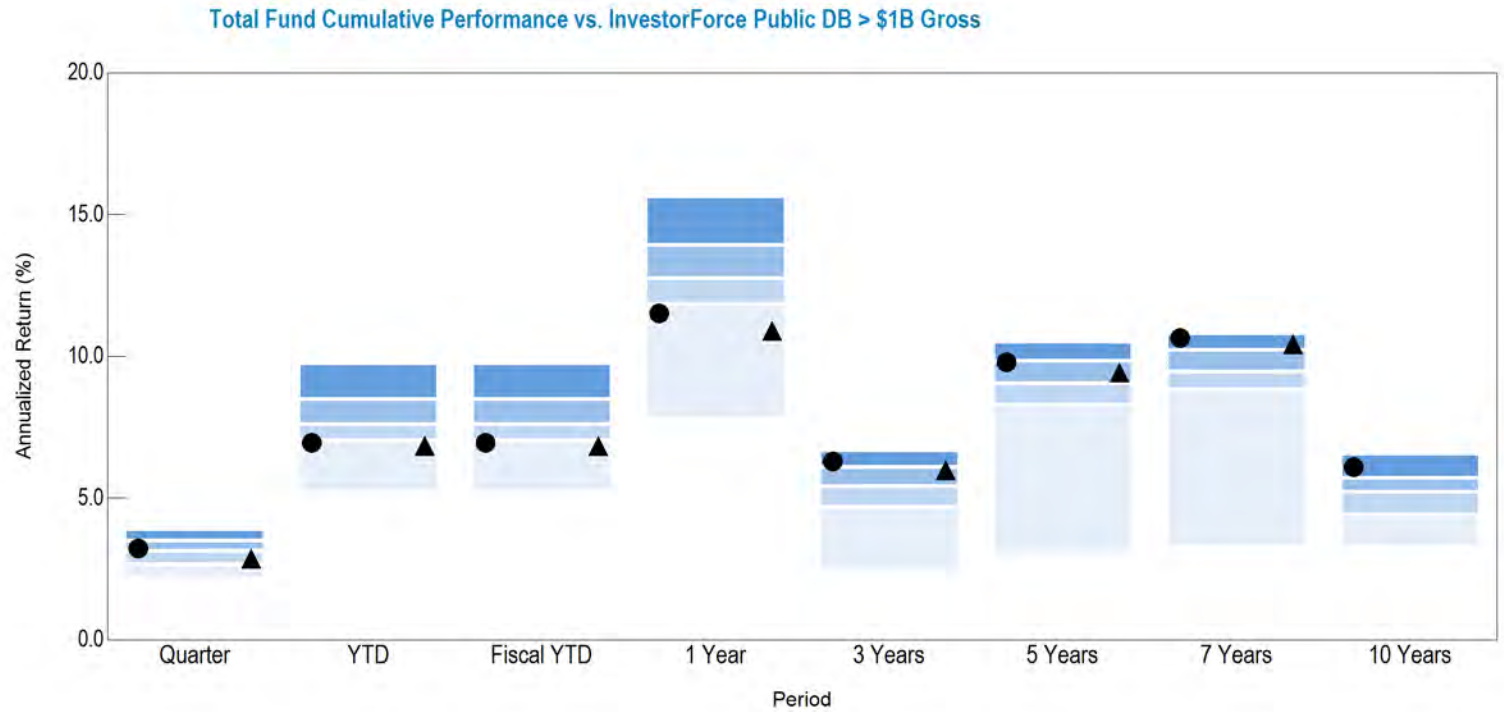
Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Intech Global Low Vol	Global Equity	0.25% of First \$100.0 Mil, 0.21% of Next \$100.0 Mil, 0.18% of Next \$100.0 Mil, 0.16% of Next \$200.0 Mil, 0.14% Thereafter	\$24,711,724	\$60,544	0.25%
Allianz Global Investors	High Yield Fixed Income	0.50% of First \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.35% Thereafter	\$393,330,017	\$1,476,655	0.38%
AFL-CIO	Global Fixed Income	0.43% of Assets	\$238,312,410	\$1,024,743	0.43%
Wellington Real Total Return	Inflation Hedge/Real Assets	0.55% of Assets	\$186,769,841	\$1,027,234	0.55%
DFA Short Credit	Global Fixed Income	0.20% of First \$25.0 Mil, 0.10% Thereafter	\$331,963,392	\$356,963	0.11%
Insight Short Duration	Global Fixed Income	0.06% of First \$500.0 Mil, 0.05% of Next \$500.0 Mil, 0.04% Thereafter	\$683,956,060	\$391,978	0.06%
Sit Short Duration	Global Fixed Income	0.15% of Assets	\$431,232,900	\$646,849	0.15%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: June 30, 2017



	Return (Rank)															
	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	3.9	9.7	3.9	9.7	3.9	9.7	15.6	6.7	10.5	10.8	10.5	10.8	6.6	6.6	6.6	6.6
25th Percentile	3.5	8.5	3.5	8.5	3.5	8.5	13.9	6.1	9.8	10.3	9.8	10.3	5.7	5.7	5.7	5.7
Median	3.1	7.6	3.1	7.6	3.1	7.6	12.8	5.4	9.1	9.5	9.1	9.5	5.2	5.2	5.2	5.2
75th Percentile	2.7	7.1	2.7	7.1	2.7	7.1	11.9	4.7	8.3	8.8	8.3	8.8	4.4	4.4	4.4	4.4
95th Percentile	2.2	5.2	2.2	5.2	2.2	5.2	7.8	2.4	3.0	3.3	3.0	3.3	3.3	3.3	3.3	3.3
# of Portfolios	86	85	86	85	86	85	83	67	63	55	63	55	53	53	53	53
● Total Fund	3.2 (47)	6.9 (78)	3.2 (47)	6.9 (78)	3.2 (47)	6.9 (78)	11.5 (81)	6.3 (18)	9.8 (30)	10.6 (13)	9.8 (30)	10.6 (13)	6.1 (11)	6.1 (11)	6.1 (11)	6.1 (11)
▲ Policy Index	2.9 (66)	6.8 (81)	2.9 (66)	6.8 (81)	2.9 (66)	6.8 (81)	10.9 (90)	6.0 (32)	9.4 (39)	10.4 (23)	9.4 (39)	10.4 (23)	-- (-)	-- (-)	-- (-)	-- (-)

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: June 30, 2017

Total Fund Consecutive Periods vs. InvestorForce Public DB > \$1B Gross



	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>5th Percentile</b>	9.7	2.7	8.5	20.2	14.7	3.3	15.7	27.7	-21.0	11.0
<b>25th Percentile</b>	8.6	1.1	6.8	17.0	13.9	1.6	14.2	22.5	-24.9	9.5
<b>Median</b>	8.0	0.3	5.7	15.0	13.0	0.8	13.5	20.5	-26.7	8.6
<b>75th Percentile</b>	7.4	-0.7	4.9	12.0	12.1	0.1	12.5	18.1	-28.3	7.4
<b>95th Percentile</b>	5.5	-2.8	3.1	8.7	9.2	-0.9	10.2	13.4	-30.2	6.2
<b># of Portfolios</b>	92	98	79	67	74	68	66	66	65	64
<b>● Total Fund</b>	7.4 (74)	2.7 (5)	8.4 (6)	16.4 (33)	14.3 (13)	2.7 (9)	14.0 (29)	21.9 (34)	-26.5 (48)	7.3 (78)
<b>▲ Policy Index</b>	8.8 (17)	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)	14.1 (27)	-- (--)	-- (--)	-- (--)

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

## Domestic Equity Managers

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# Intech Large Cap Core Manager Portfolio Overview

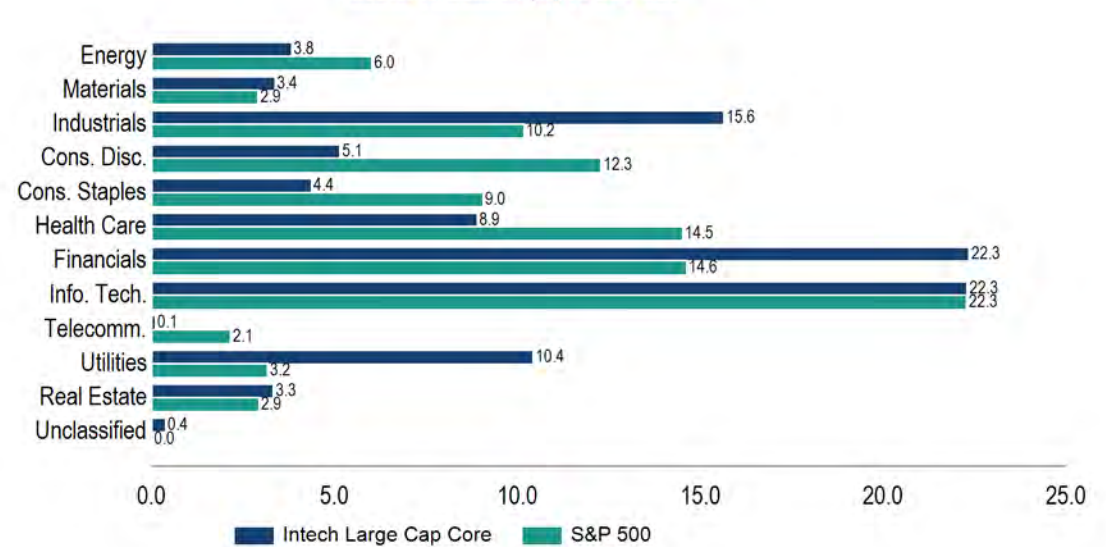
Period Ending: June 30, 2017

Domestic equity large cap core portfolio with high correlation exposure to a broad universe seeking enhanced returns. Primary personnel include Adrian Banner, Vassilios Papanthakos, Joseph Runnels, and Phillip Whitman.

## Characteristics

	Portfolio	S&P 500
Number of Holdings	228	505
Weighted Avg. Market Cap. (\$B)	44.99	154.74
Median Market Cap. (\$B)	23.39	20.58
Price To Earnings	24.63	24.69
Price To Book	4.96	4.59
Price To Sales	3.38	3.35
Return on Equity (%)	19.15	18.97
Yield (%)	1.77	2.00
Beta	0.79	1.00

## Sector Allocation (%) vs S&P 500



## Largest Holdings

	End Weight	Return
NVIDIA	1.95	32.85
NORTHROP GRUMMAN	1.59	8.35
MICRON TECHNOLOGY	1.35	3.32
FISERV	1.27	6.10
APPLIED MATS.	1.24	6.43
GENERAL DYNAMICS	1.20	6.30
APPLE	1.14	0.66
MARSH & MCLENNAN	1.13	6.00
CONSTELLATION BRANDS 'A'	1.12	19.88
RAYTHEON 'B'	1.10	6.97

## Top Contributors

	Avg Wgt	Return	Contribution
NVIDIA	2.17	32.85	0.71
C R BARD	0.78	27.30	0.21
CONSTELLATION BRANDS 'A'	1.05	19.88	0.21
NORTHROP GRUMMAN	1.58	8.35	0.13
CSX	0.71	17.64	0.13
INTUITIVE SURGICAL	0.49	22.04	0.11
PROLOGIS	0.77	13.90	0.11
UNITEDHEALTH GROUP	0.77	13.52	0.10
LAM RESEARCH	0.98	10.49	0.10
COOPER COS.	0.50	19.78	0.10

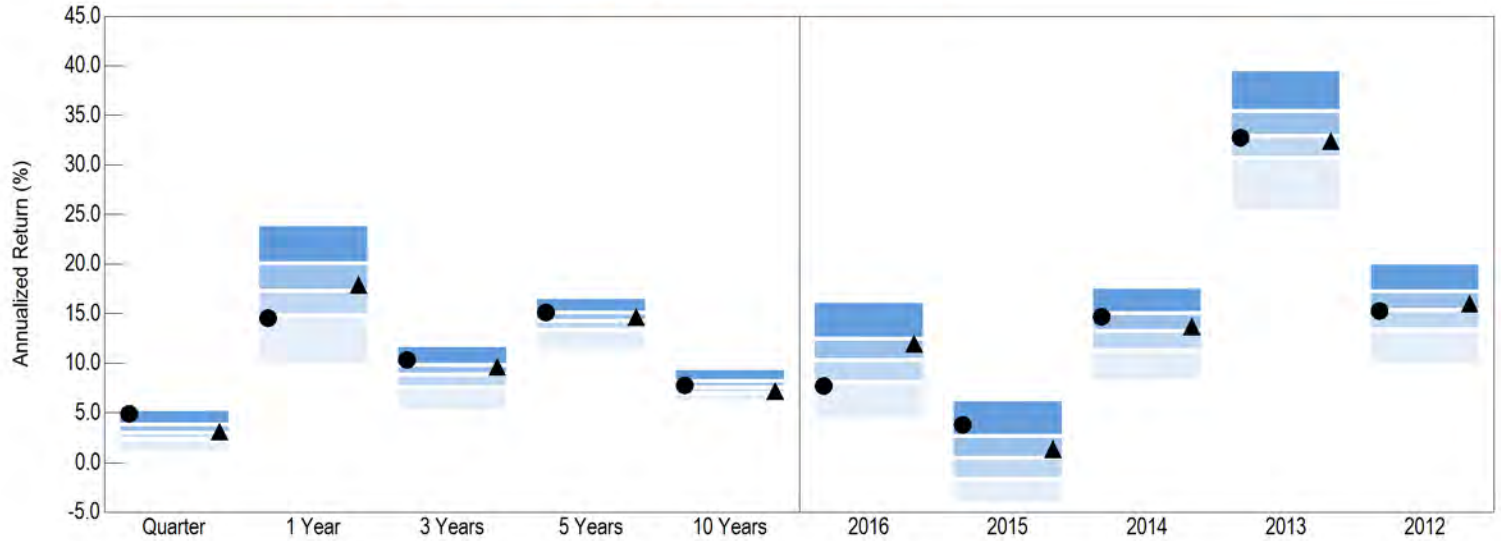
## Bottom Contributors

	Avg Wgt	Return	Contribution
CIMAREX EN.	0.48	-21.27	-0.10
HALLIBURTON	0.64	-12.86	-0.08
O REILLY AUTOMOTIVE	0.40	-18.94	-0.07
SYMANTEC	0.84	-7.69	-0.06
ROSS STORES	0.53	-12.14	-0.06
DEVON ENERGY	0.26	-23.23	-0.06
PIONEER NTRL.RES.	0.40	-14.31	-0.06
NEWFIELD EXPLORATION	0.23	-22.89	-0.05
CONAGRA FOODS	0.44	-10.90	-0.05
UNITED RENTALS	0.45	-9.87	-0.04

Unclassified sector allocation includes cash allocations.



Intech Large Cap Core vs. eA US Large Cap Core Equity Gross Universe

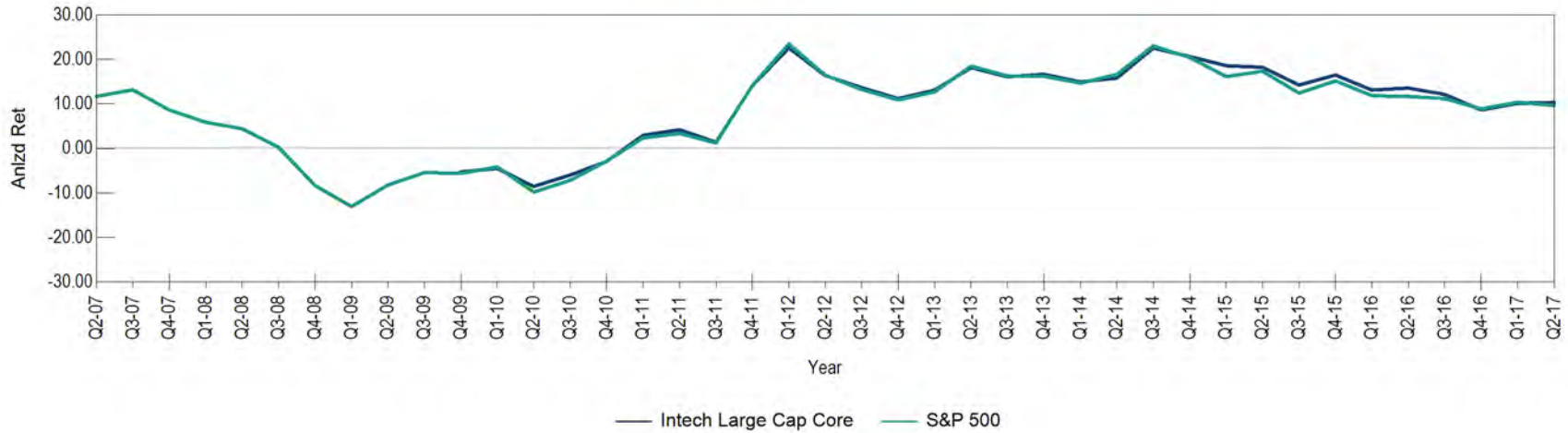


	Return (Rank)										
5th Percentile	5.4	24.0	11.8	16.6	9.5	16.3	6.3	17.7	39.6	20.1	
25th Percentile	3.9	20.1	9.9	15.2	8.2	12.5	2.7	15.1	35.5	17.2	
Median	3.0	17.3	8.9	14.3	7.6	10.4	0.6	13.3	32.9	15.4	
75th Percentile	2.3	14.9	7.6	13.4	7.0	8.2	-1.6	11.4	30.8	13.4	
95th Percentile	1.0	9.9	5.2	11.1	6.1	4.3	-4.1	8.2	25.4	9.8	
# of Portfolios	313	313	305	277	226	308	267	267	261	254	
● Intech Large Cap Core	4.9 (7)	14.5 (78)	10.3 (20)	15.1 (27)	7.8 (42)	7.7 (79)	3.8 (16)	14.7 (31)	32.7 (54)	15.3 (54)	
▲ S&P 500	3.1 (47)	17.9 (46)	9.6 (29)	14.6 (41)	7.2 (67)	12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	

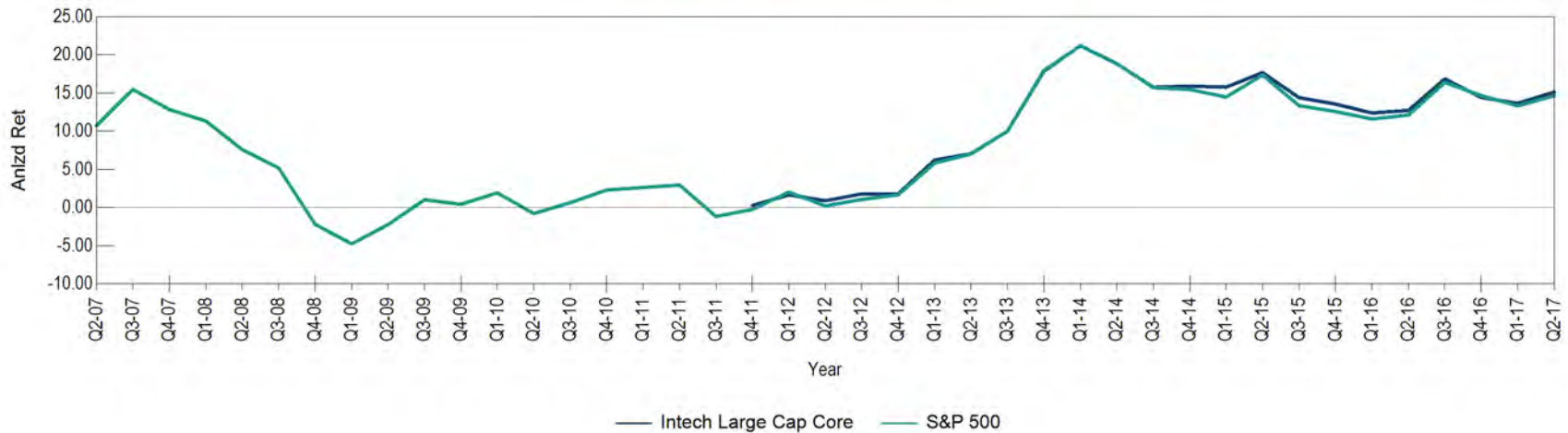
Intech Large Cap Core  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2017

Rolling 3 Year Annualized Return (%)



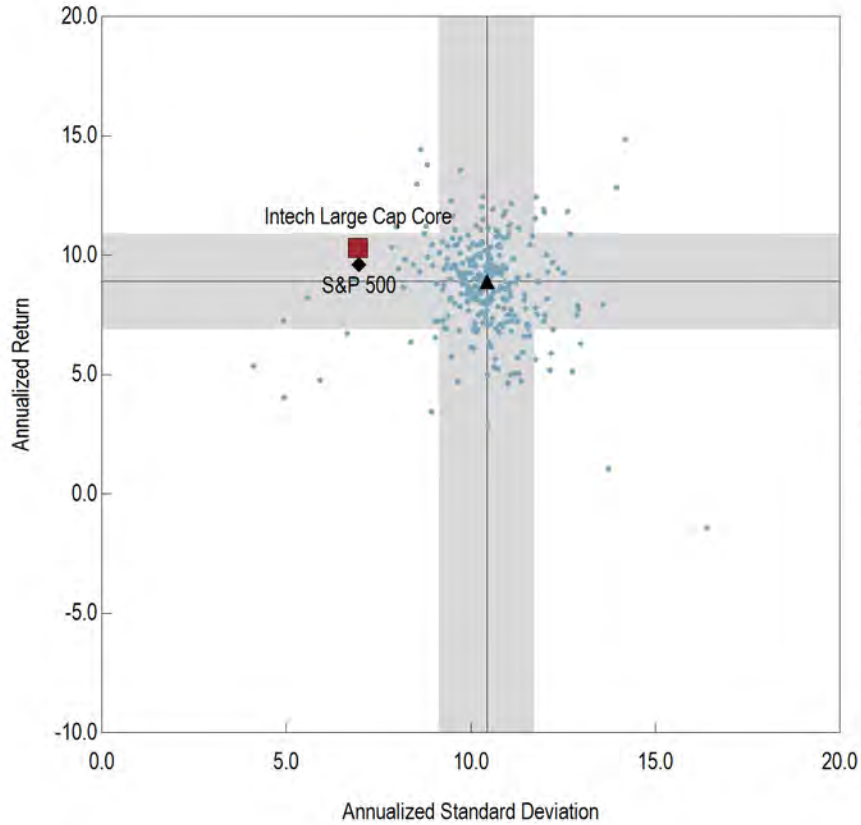
Rolling 5 Year Annualized Return (%)



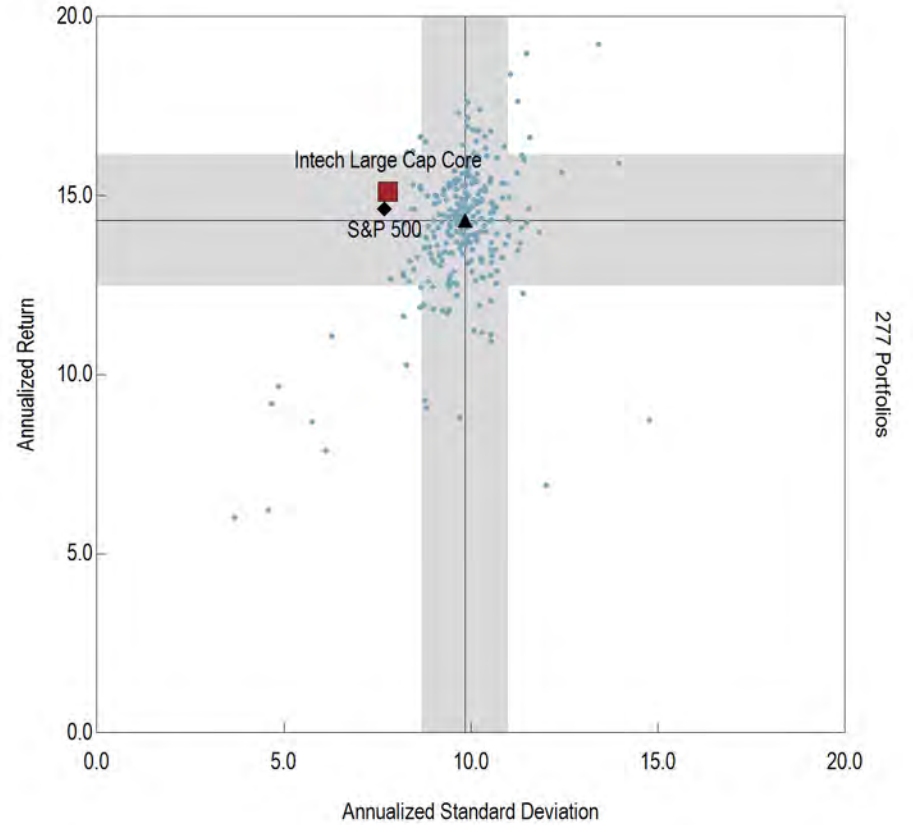
**Intech Large Cap Core**  
**Risk vs. Return 3 & 5 Year (Gross of Fees)**

Period Ending: June 30, 2017

**3 Years**



**5 Years**



**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	10.3%	6.9%	1.5
S&P 500	9.6%	7.0%	1.3
eA US Large Cap Core Equity Gross Median	8.9%	10.4%	0.8

**5 Years**

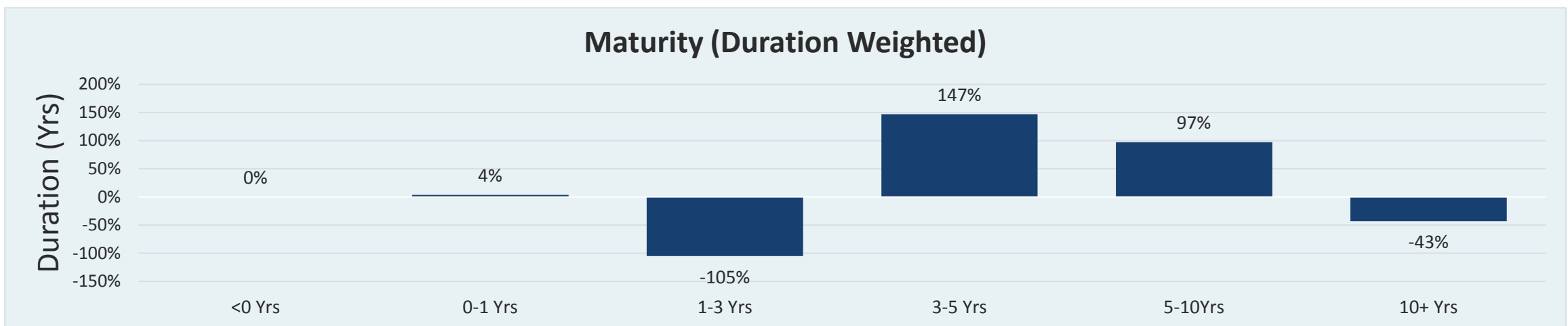
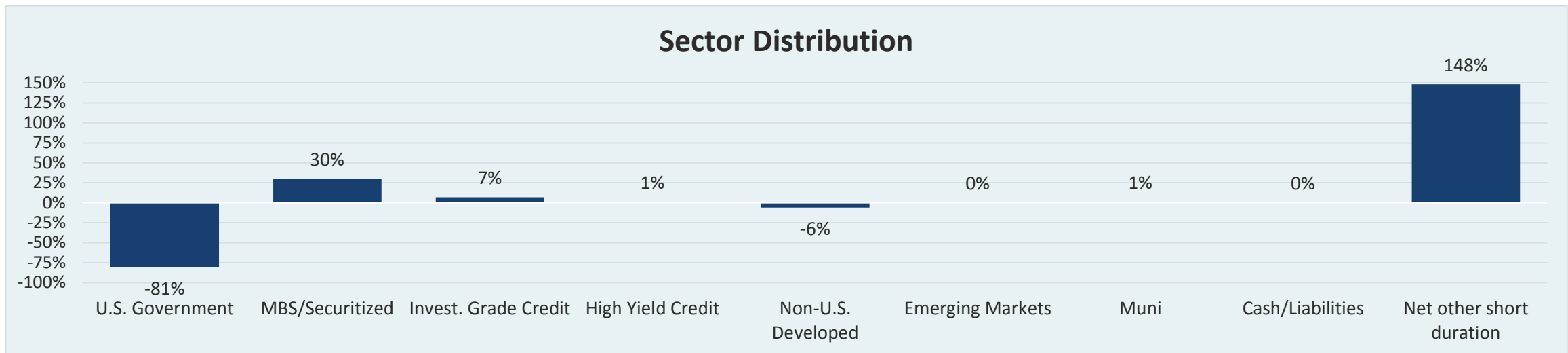
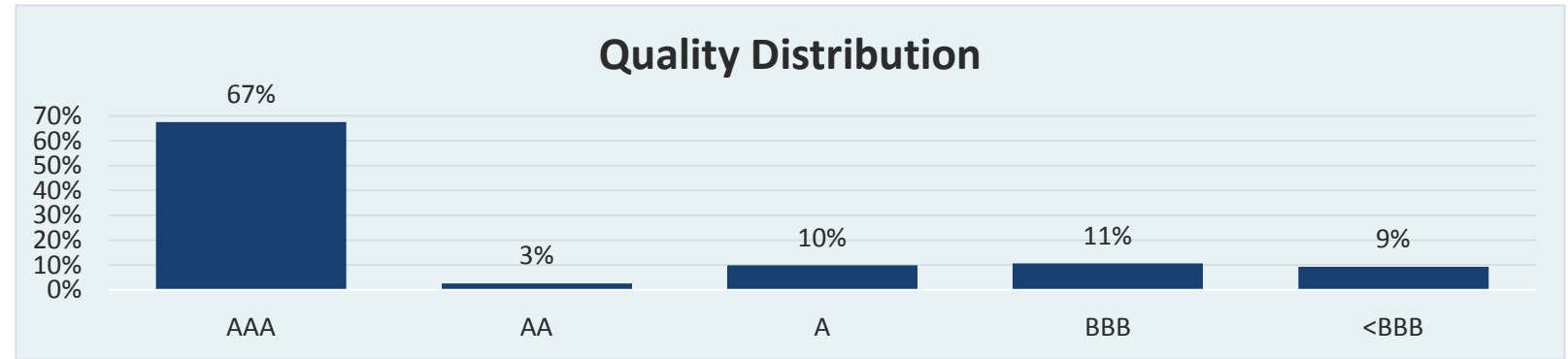
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	15.1%	7.8%	1.9
S&P 500	14.6%	7.7%	1.9
eA US Large Cap Core Equity Gross Median	14.3%	9.8%	1.5

# PIMCO Stocks+ Absolute Return Manager Portfolio Overview

Period Ending: June 30, 2017

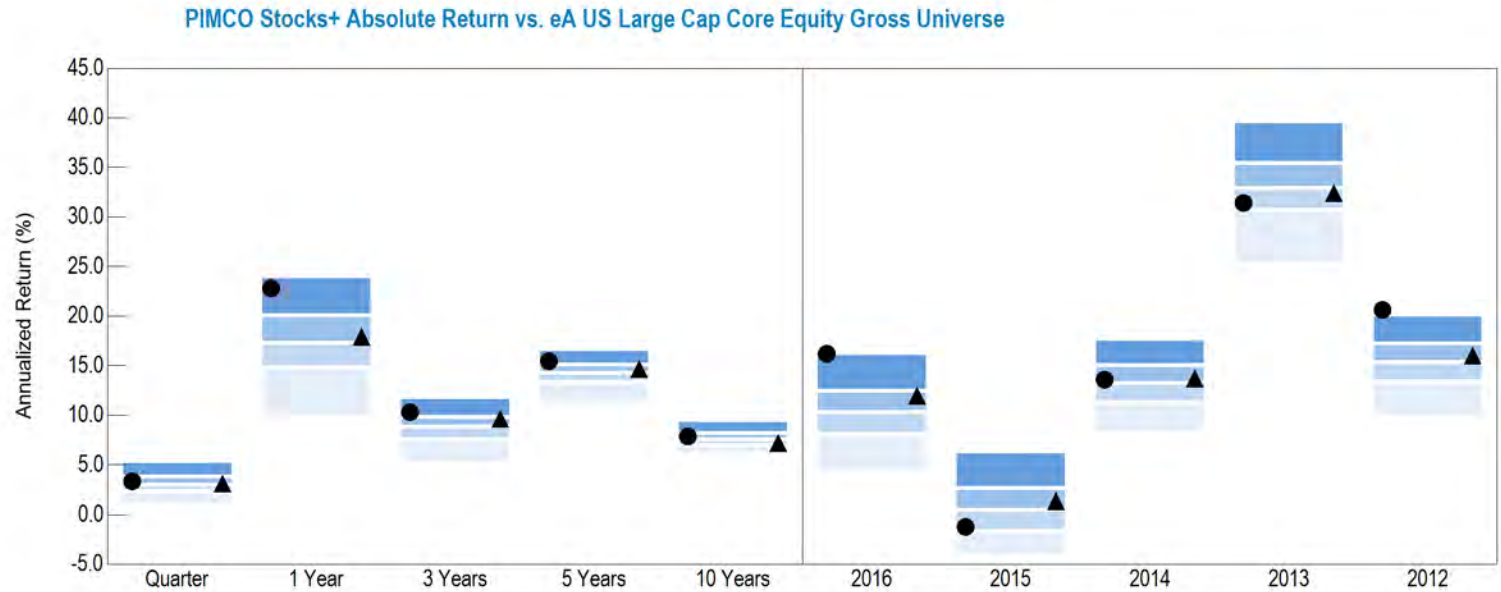
Domestic equity large cap core portfolio with high correlation exposure to a broad universe seeking enhanced returns. Primary personnel include Mohsen Fahmi and Scott Mather.

	<b>PIMCO Stocks+</b>
Effective Duration	0.65
Futures Adjusted Duration	0.48
Yield to Maturity	2.23
Average Quality	AA-



PIMCO Stocks+ Absolute Return  
 Manager Performance Comparisons (Gross of Fees)

Period Ending: June 30, 2017

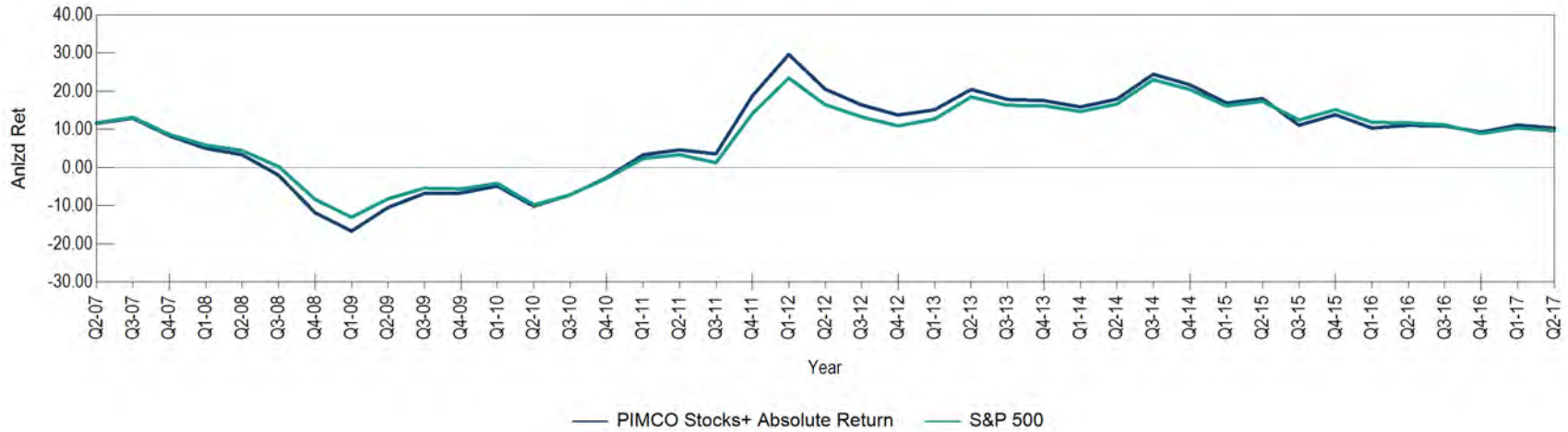


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012
5th Percentile	5.4	24.0	11.8	16.6	9.5	16.3	6.3	17.7	39.6	20.1
25th Percentile	3.9	20.1	9.9	15.2	8.2	12.5	2.7	15.1	35.5	17.2
Median	3.0	17.3	8.9	14.3	7.6	10.4	0.6	13.3	32.9	15.4
75th Percentile	2.3	14.9	7.6	13.4	7.0	8.2	-1.6	11.4	30.8	13.4
95th Percentile	1.0	9.9	5.2	11.1	6.1	4.3	-4.1	8.2	25.4	9.8
# of Portfolios	313	313	305	277	226	308	267	267	261	254
● PIMCO Stocks+ Absolute Return	3.3 (39)	22.8 (8)	10.3 (20)	15.4 (18)	7.8 (37)	16.2 (6)	-1.2 (73)	13.6 (45)	31.4 (68)	20.6 (4)
▲ S&P 500	3.1 (47)	17.9 (46)	9.6 (29)	14.6 (41)	7.2 (67)	12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)

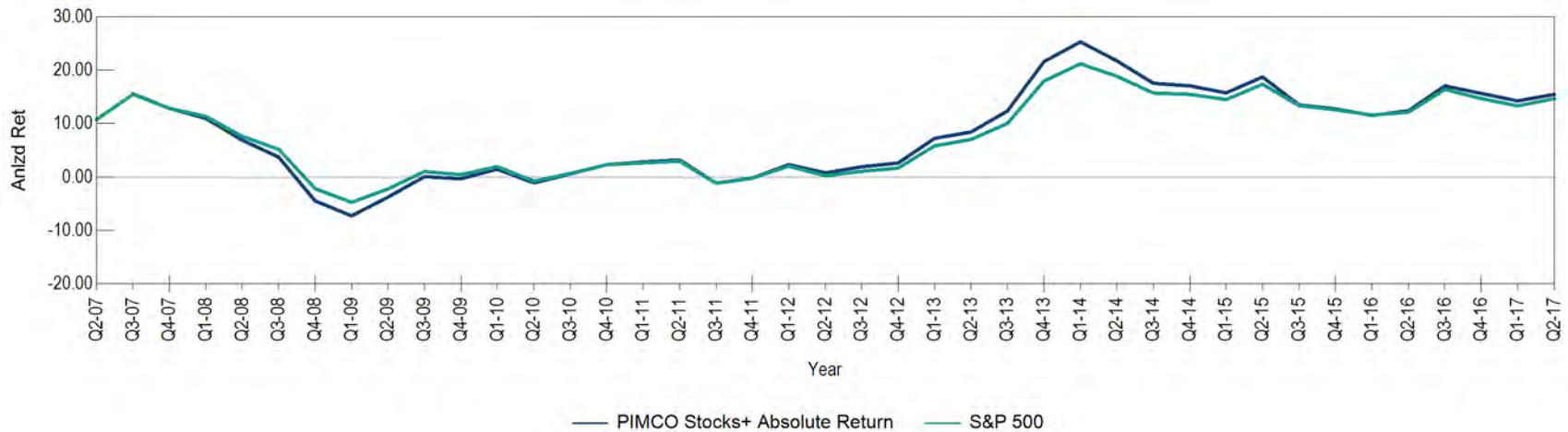
PIMCO Stocks+ Absolute Return  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2017

Rolling 3 Year Annualized Return (%)

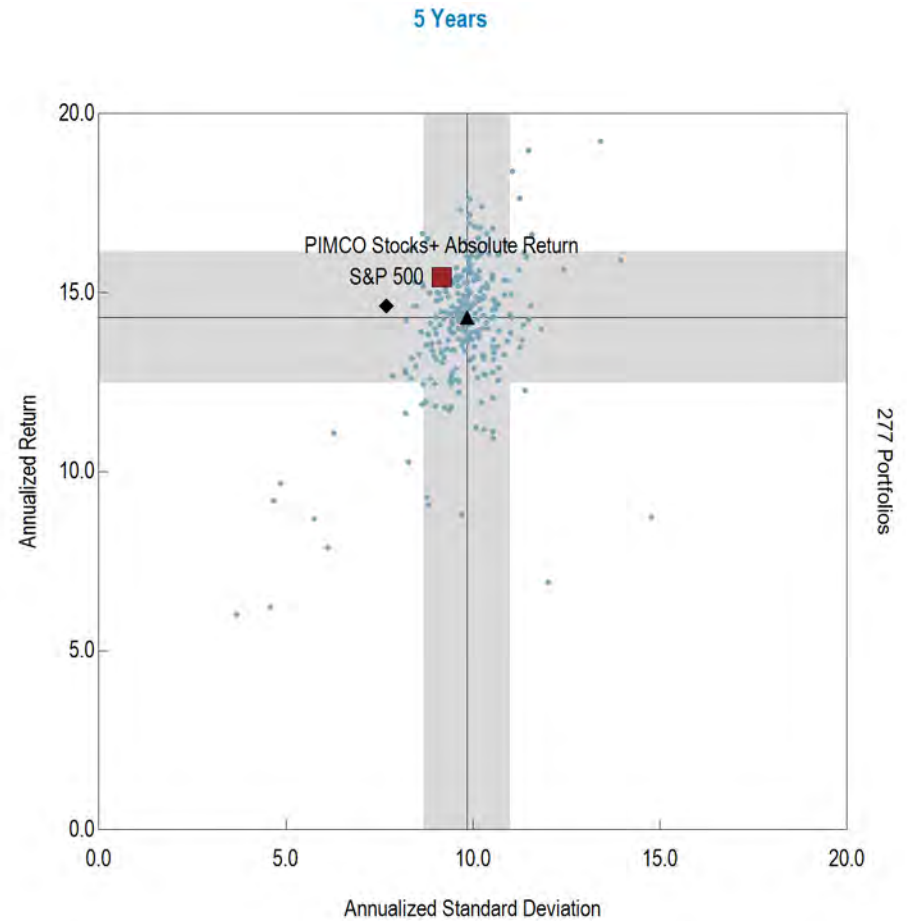
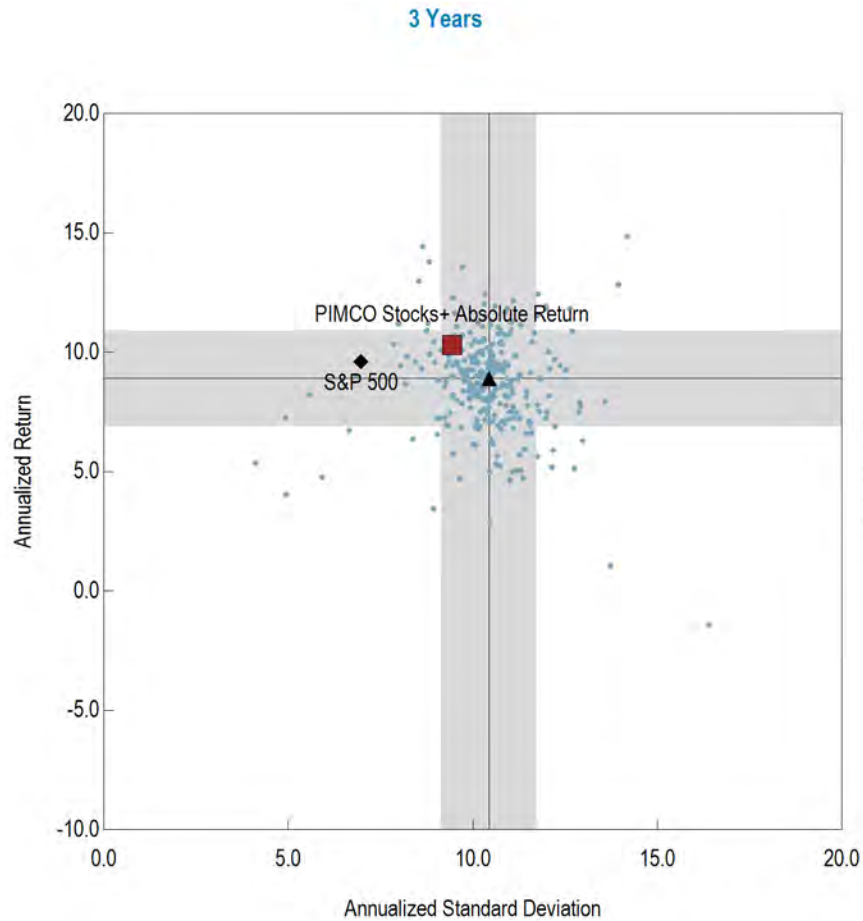


Rolling 5 Year Annualized Return (%)



PIMCO Stocks+ Absolute Return  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2017



	<b>3 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	10.3%	9.4%	1.1
S&P 500	9.6%	7.0%	1.3
eA US Large Cap Core Equity Gross Median	8.9%	10.4%	0.8

	<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	15.4%	9.2%	1.7
S&P 500	14.6%	7.7%	1.9
eA US Large Cap Core Equity Gross Median	14.3%	9.8%	1.5

# Jackson Square Partners Manager Portfolio Overview

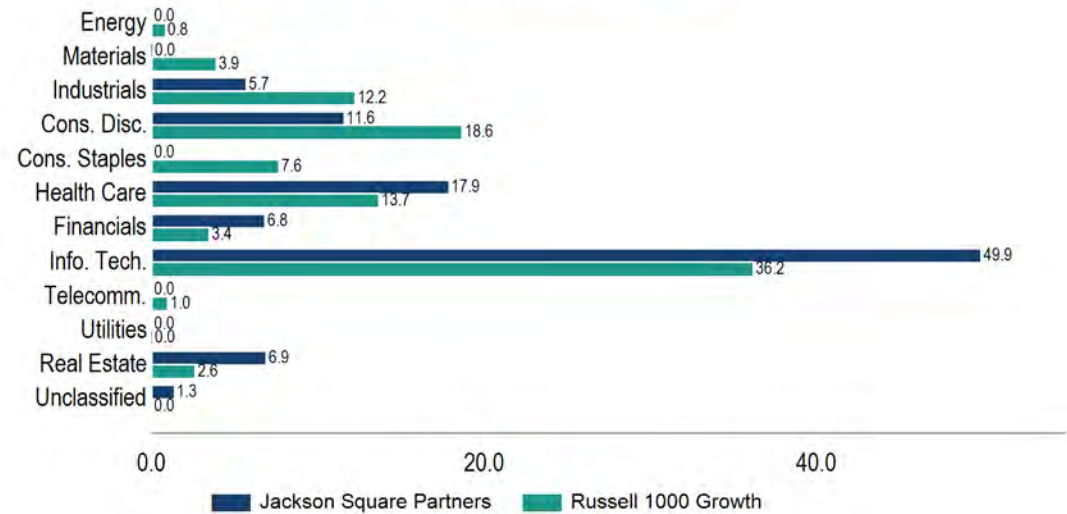
Period Ending: June 30, 2017

Domestic equity large cap growth portfolio concentrated in companies with sustainable long-term growth characteristics. Primary personnel include Jeffrey Van Harte, Christopher Bonavico, Christopher Ericksen, and Daniel Prislin.

## Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	33	557
Weighted Avg. Market Cap. (\$B)	113.27	170.43
Median Market Cap. (\$B)	40.96	10.00
Price To Earnings	34.77	27.97
Price To Book	6.89	6.99
Price To Sales	6.09	4.21
Return on Equity (%)	20.88	26.97
Yield (%)	0.76	1.43
Beta	1.32	1.00

## Sector Allocation (%) vs Russell 1000 Growth



## Largest Holdings

	End Weight	Return
PAYPAL HOLDINGS	6.48	24.76
MICROSOFT	5.87	5.25
VISA 'A'	5.72	5.71
CELGENE	5.66	4.37
MASTERCARD	4.64	8.20
CROWN CASTLE INTL.	4.43	7.06
EBAY	4.24	4.02
LIBERTY INTACT.QVC GROUP 'A'	4.18	22.58
ALPHABET 'A'	4.00	9.66
INTERCONTINENTAL EX.	3.85	10.45

## Top Contributors

	Avg Wgt	Return	Contribution
PAYPAL HOLDINGS	5.98	24.76	1.48
LIBERTY INTACT.QVC GROUP 'A'	3.87	22.58	0.87
ELECTRONIC ARTS	3.88	18.10	0.70
ALPHABET 'A'	4.06	9.66	0.39
INTERCONTINENTAL EX.	3.67	10.45	0.38
MASTERCARD	4.65	8.20	0.38
QUINTILES TRNAT.HDG.	3.25	11.14	0.36
FEDEX	3.07	11.63	0.36
VISA 'A'	5.78	5.71	0.33
CROWN CASTLE INTL.	4.62	7.06	0.33

## Bottom Contributors

	Avg Wgt	Return	Contribution
LIBERTY GLOBAL SR.C	2.50	-11.02	-0.28
TRIPADVISOR 'A'	2.40	-11.49	-0.28
SYMANTEC	3.23	-7.69	-0.25
NIELSEN	2.17	-5.59	-0.12
LIBERTY GLOBAL CL.A	0.66	-10.45	-0.07
QUALCOMM	1.31	-2.74	-0.04
WALGREENS BOOTS	0.57	-5.29	-0.03
ALLIANCE	0.57	-5.29	-0.03
BIOGEN	3.38	-0.75	-0.03
ASML HLDG.ADR 1:1	1.53	-0.90	-0.01
SYNGENTA SPN.ADR 5:1	0.00	5.82	0.00

Unclassified sector allocation includes cash allocations.

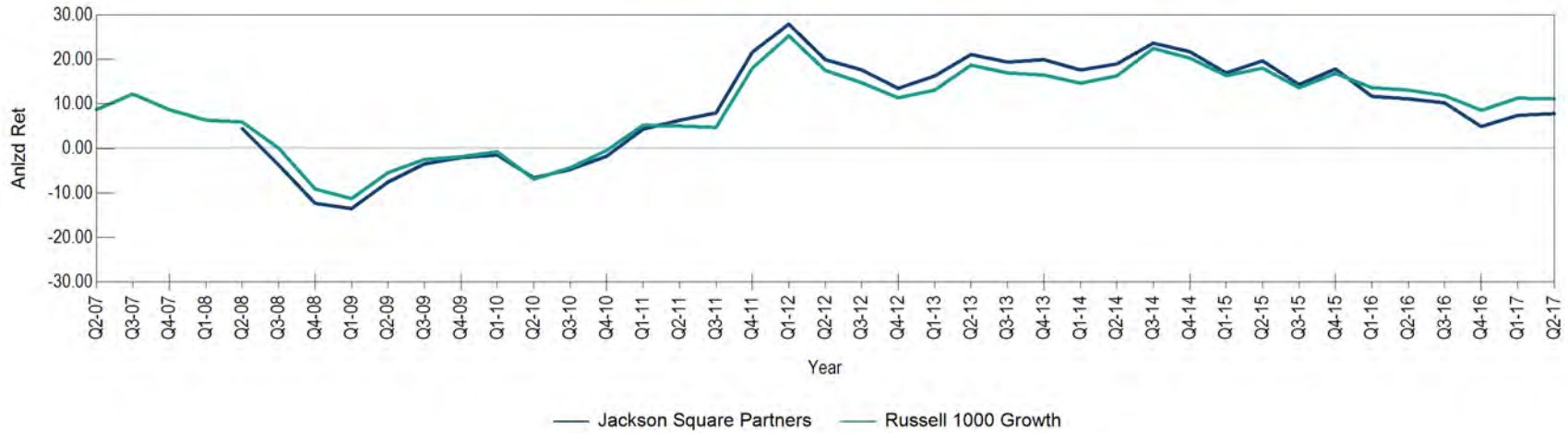


Jackson Square Partners vs. eA US Large Cap Growth Equity Gross Universe

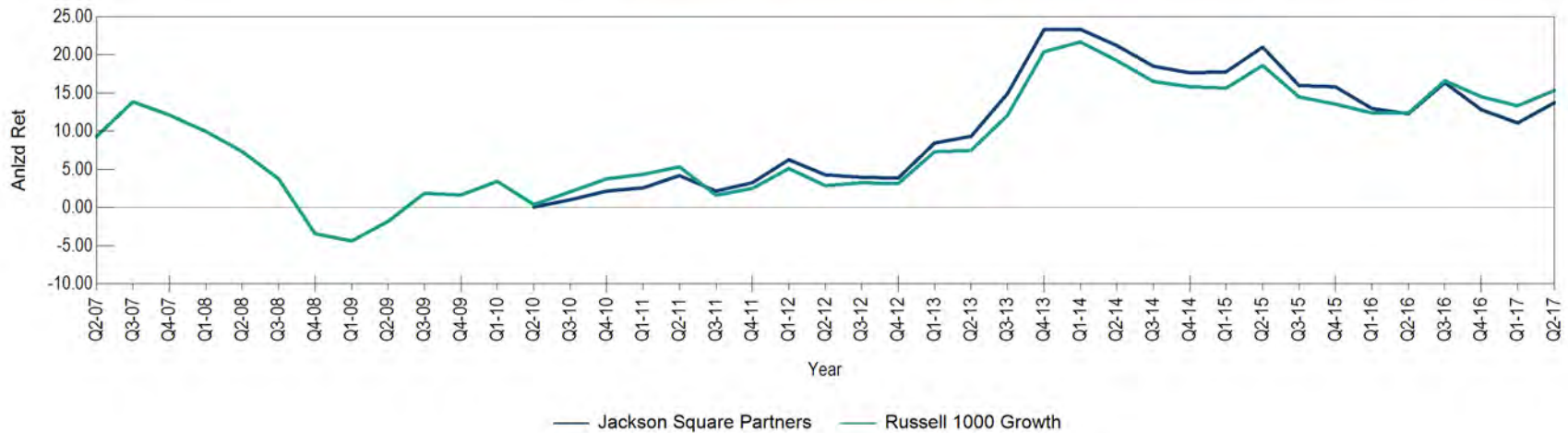


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012	
5th Percentile	8.6	29.4	13.4	17.8	11.1	12.0	11.6	17.3	42.8	21.6	
25th Percentile	6.1	23.2	11.6	16.1	9.5	7.3	7.6	14.3	37.3	18.2	
Median	5.0	20.7	10.3	15.0	8.9	4.6	4.7	12.0	34.3	15.7	
75th Percentile	3.9	18.1	8.9	13.9	7.9	1.8	2.1	9.5	31.0	13.4	
95th Percentile	2.5	14.4	6.8	12.2	6.6	-2.7	-2.4	5.8	26.6	10.2	
# of Portfolios	264	264	259	243	214	282	270	291	274	274	
● Jackson Square Partners	6.7 (17)	18.2 (74)	7.8 (87)	13.7 (79)	8.9 (50)	-4.4 (98)	6.1 (37)	13.9 (31)	35.4 (40)	16.9 (37)	
▲ Russell 1000 Growth	4.7 (59)	20.4 (54)	11.1 (35)	15.3 (43)	8.9 (50)	7.1 (26)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	

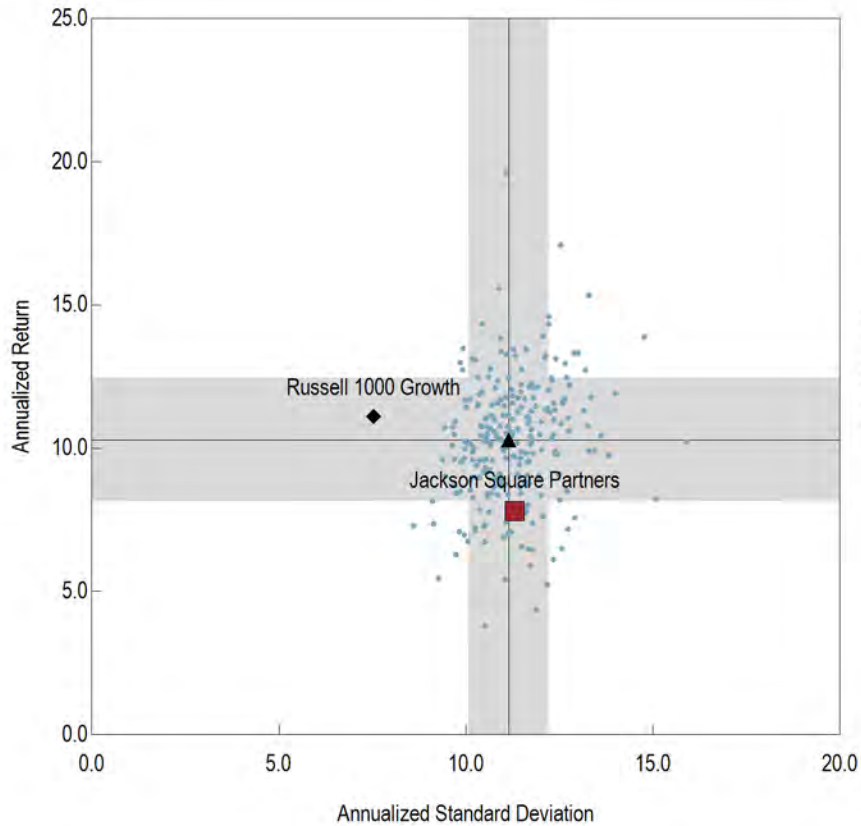
Rolling 3 Year Annualized Return (%)



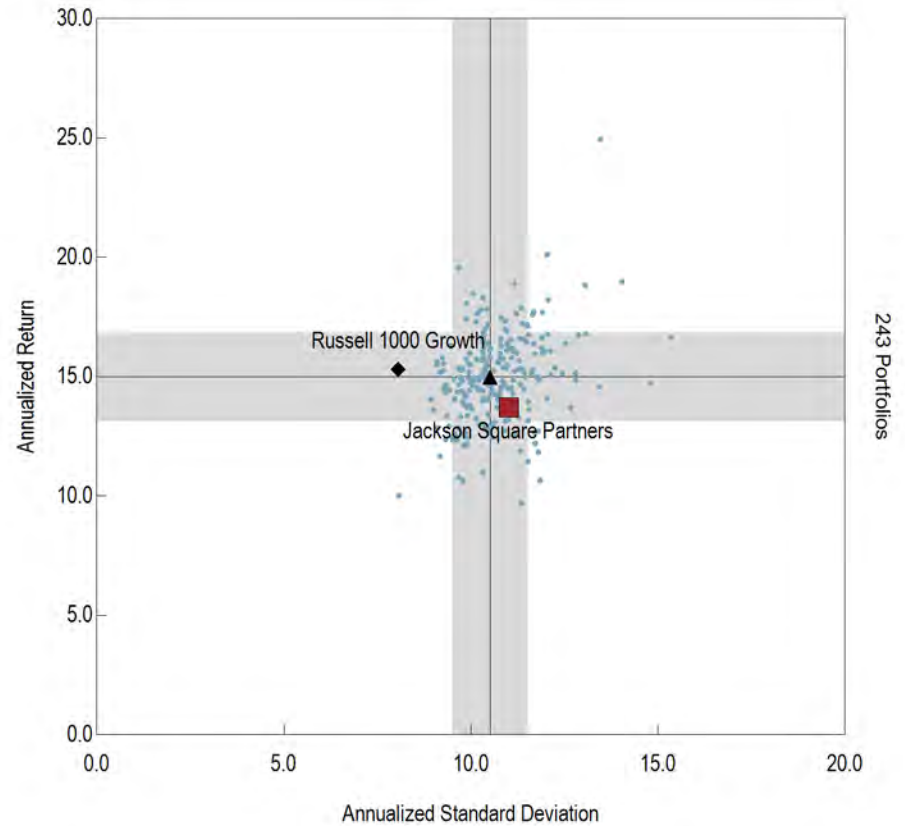
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	7.8%	11.3%	0.7
Russell 1000 Growth	11.1%	7.5%	1.4
eA US Large Cap Growth Equity Gross Median	10.3%	11.1%	0.9

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	13.7%	11.0%	1.2
Russell 1000 Growth	15.3%	8.1%	1.9
eA US Large Cap Growth Equity Gross Median	15.0%	10.5%	1.4

# Robeco Boston Partners Manager Portfolio Overview

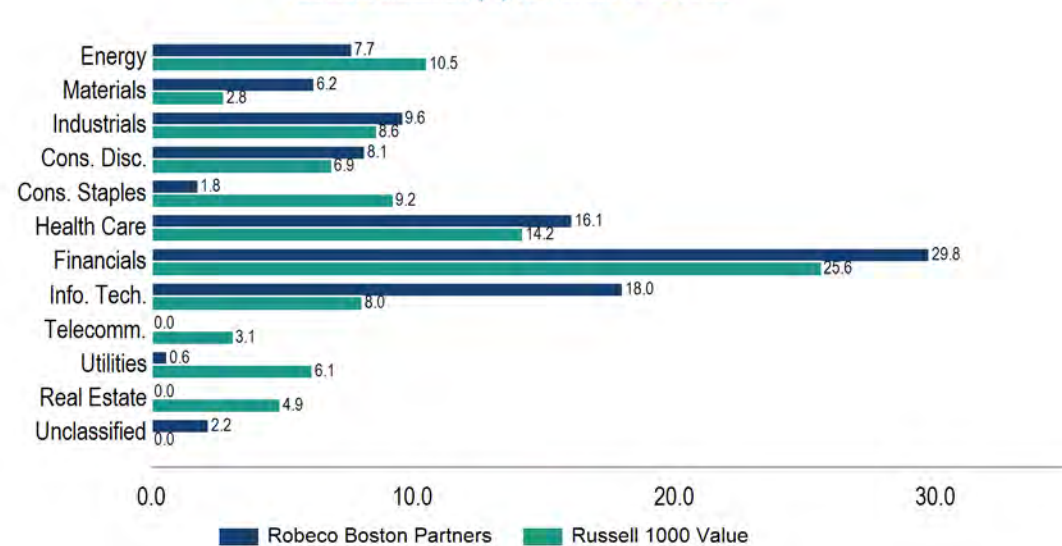
Period Ending: June 30, 2017

Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	89	719
Weighted Avg. Market Cap. (\$B)	141.76	108.85
Median Market Cap. (\$B)	34.81	8.46
Price To Earnings	21.86	20.93
Price To Book	2.86	2.56
Price To Sales	2.41	2.85
Return on Equity (%)	14.85	12.04
Yield (%)	1.92	2.44
Beta	1.01	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
JP MORGAN CHASE & CO.	4.91	4.65
BANK OF AMERICA	4.57	3.18
BERKSHIRE HATHAWAY 'B'	3.65	1.61
CITIGROUP	3.65	12.10
JOHNSON & JOHNSON	3.17	6.91
WELLS FARGO & CO	2.56	0.24
CHEVRON	2.45	-1.83
MERCK & COMPANY	2.43	1.61
APPLE	2.23	0.66
CISCO SYSTEMS	2.18	-6.59

## Top Contributors

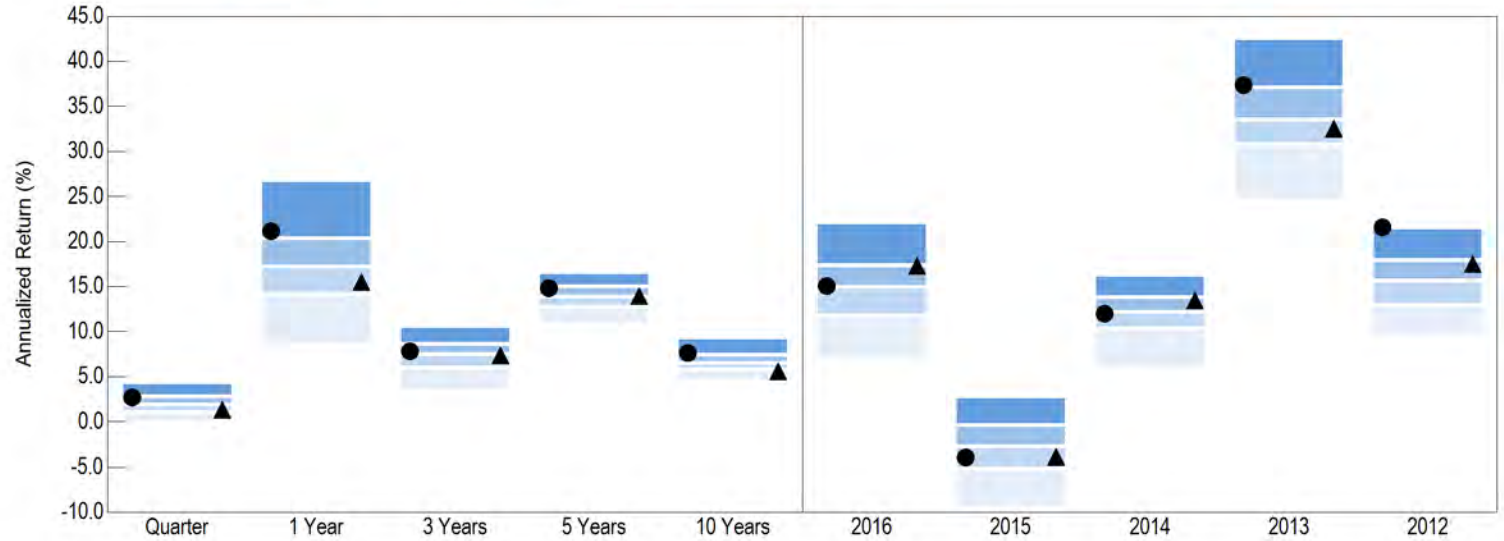
	Avg Wgt	Return	Contribution
CITIGROUP	2.97	12.10	0.36
JOHNSON & JOHNSON	3.21	6.91	0.22
JP MORGAN CHASE & CO.	4.75	4.65	0.22
ORACLE	1.71	12.88	0.22
ALPHABET 'A'	2.11	9.66	0.20
KONINKLIJKE PHILIPS ADR 1:1	1.38	14.29	0.20
ANTHEM	1.23	14.15	0.17
DELTA AIR LINES	0.91	17.42	0.16
CIGNA	1.08	14.27	0.15
BANK OF AMERICA	4.49	3.18	0.14

## Bottom Contributors

	Avg Wgt	Return	Contribution
CISCO SYSTEMS	2.33	-6.59	-0.15
DISCOVER FINANCIAL SVS.	1.66	-8.62	-0.14
MARATHON OIL	0.49	-24.74	-0.12
CONOCOPHILLIPS	0.96	-11.36	-0.11
BARRICK GOLD (NYS)	0.65	-16.07	-0.10
DIAMONDBACK ENERGY	0.63	-14.37	-0.09
SYNCHRONY FINANCIAL	0.63	-12.67	-0.08
HEWLETT PACKARD ENTER.	1.15	-6.20	-0.07
PIONEER NTRL.RES.	0.44	-14.31	-0.06
TEXAS INSTRUMENTS	1.24	-3.91	-0.05

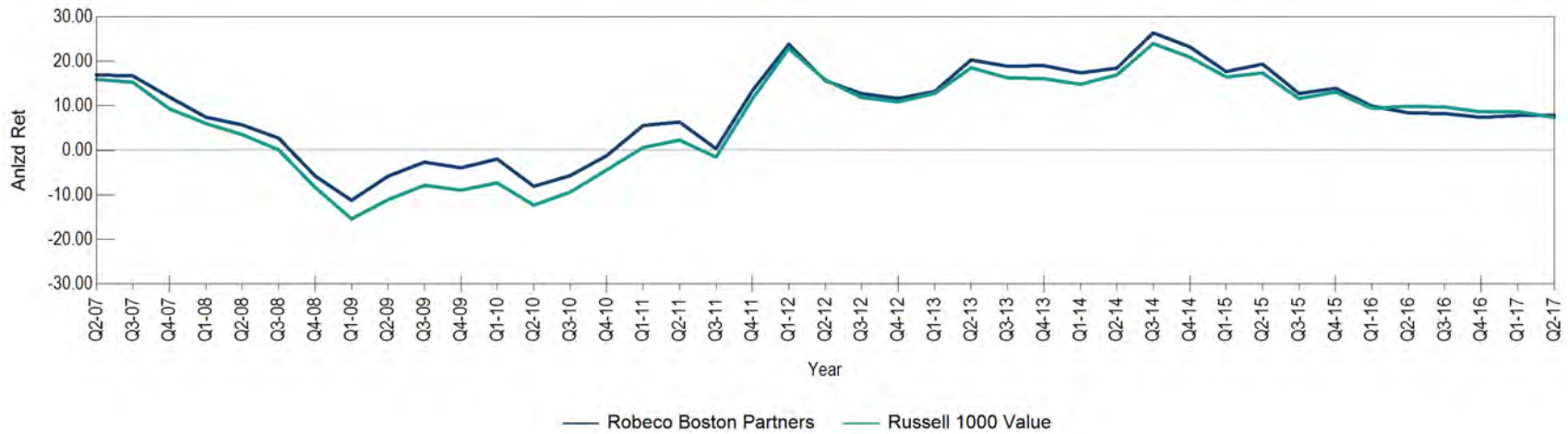
Unclassified sector allocation includes cash allocations.

Robeco Boston Partners vs. eA US Large Cap Value Equity Gross Universe

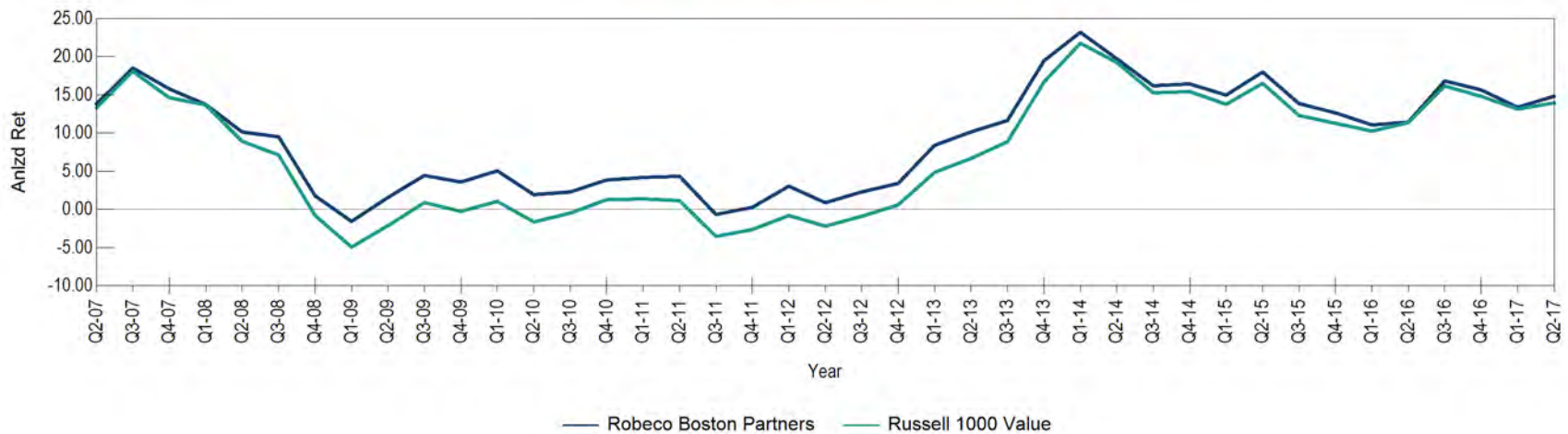


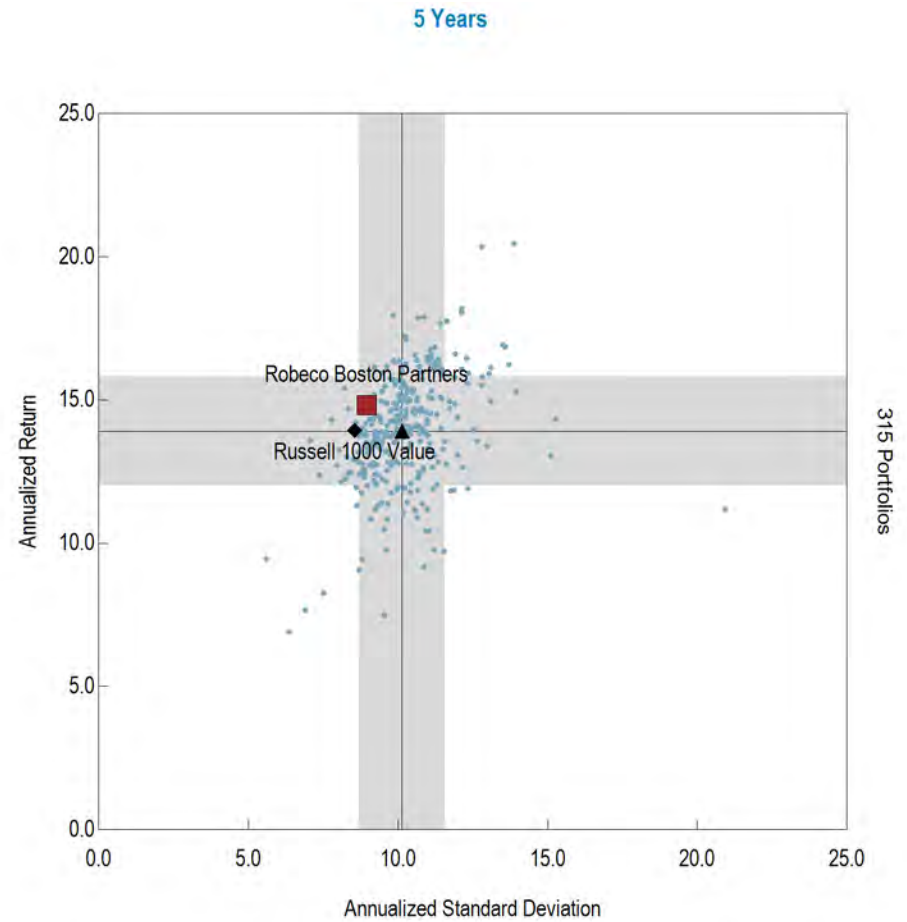
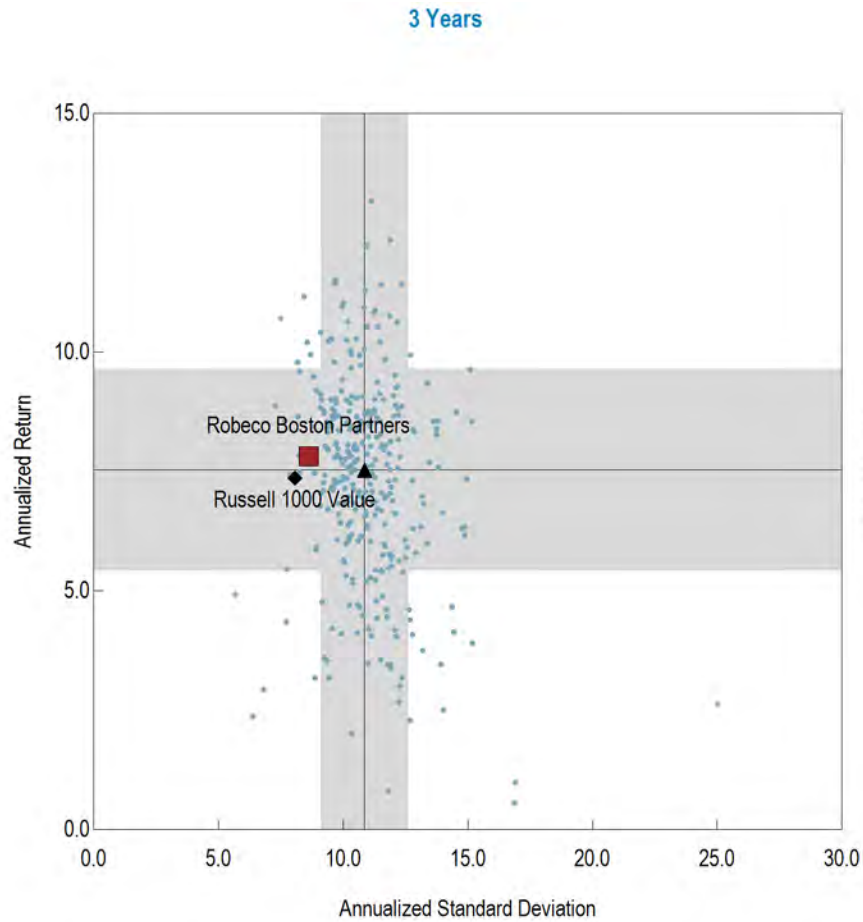
	Return (Rank)										
5th Percentile	4.4	26.8	10.6	16.6	9.3	22.1	2.8	16.3	42.5	21.5	
25th Percentile	2.9	20.4	8.7	15.1	7.5	17.4	-0.4	13.9	37.2	18.0	
Median	2.0	17.3	7.5	13.9	6.5	15.0	-2.6	12.2	33.6	15.7	
75th Percentile	1.2	14.2	6.1	12.8	5.8	11.8	-5.1	10.4	30.8	13.0	
95th Percentile	0.0	8.6	3.5	10.9	4.5	7.0	-9.4	5.9	24.6	9.6	
# of Portfolios	338	337	330	315	260	346	312	307	310	303	
● Robeco Boston Partners	2.7 (28)	21.1 (20)	7.8 (44)	14.8 (32)	7.6 (22)	15.1 (50)	-3.9 (65)	12.0 (55)	37.4 (24)	21.6 (5)	
▲ Russell 1000 Value	1.3 (72)	15.5 (68)	7.4 (54)	13.9 (50)	5.6 (83)	17.3 (26)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>			<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Robeco Boston Partners	7.8%	8.6%	0.9	14.8%	9.0%	1.6
Russell 1000 Value	7.4%	8.1%	0.9	13.9%	8.5%	1.6
eA US Large Cap Value Equity Gross Median	7.5%	10.9%	0.7	13.9%	10.1%	1.4

# Emerald Advisers Manager Portfolio Overview

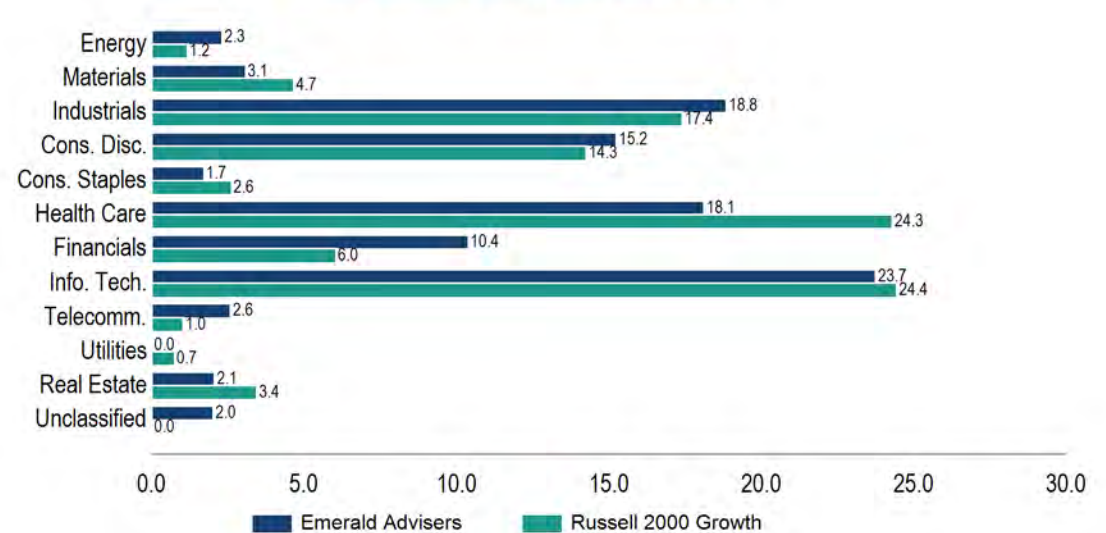
Period Ending: June 30, 2017

Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.

## Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	115	1,171
Weighted Avg. Market Cap. (\$B)	2.34	2.20
Median Market Cap. (\$B)	1.70	0.89
Price To Earnings	32.49	28.74
Price To Book	5.55	5.04
Price To Sales	3.48	3.32
Return on Equity (%)	15.87	15.87
Yield (%)	0.38	0.57
Beta	0.97	1.00

## Sector Allocation (%) vs Russell 2000 Growth



## Largest Holdings

	End Weight	Return
LENDINGTREE	2.37	37.38
INSTALLED BUILDING PRDS.	1.67	0.38
GTT COMMUNICATIONS	1.63	29.98
BANK OF THE OZARKS	1.60	-9.56
TREX	1.59	-2.49
APOGEE ENTERPRISES	1.59	-4.39
DYCOM INDS.	1.57	-3.69
EPAM SYSTEMS	1.56	11.35
8X8	1.47	-4.59
VONAGE HOLDINGS	1.47	3.48

## Top Contributors

	Avg Wgt	Return	Contribution
PUMA BIOTECHNOLOGY	0.75	134.95	1.02
LENDINGTREE	2.11	37.38	0.79
CHEGG	1.12	45.62	0.51
VEEVA SYSTEMS CL.A	2.44	19.56	0.48
GTT COMMUNICATIONS	1.49	29.98	0.45
KRATOS	0.79	52.57	0.41
DEF&SCTY.SLTN.	0.79	52.57	0.41
TAKE TWO INTACT.SFTW.	1.57	23.81	0.37
ALBANY MOLECU.LR.RESH.	0.54	54.67	0.30
OLLIES BARGAIN OUTLET HLDG.	0.98	27.16	0.27
TELADOC	0.63	38.80	0.25

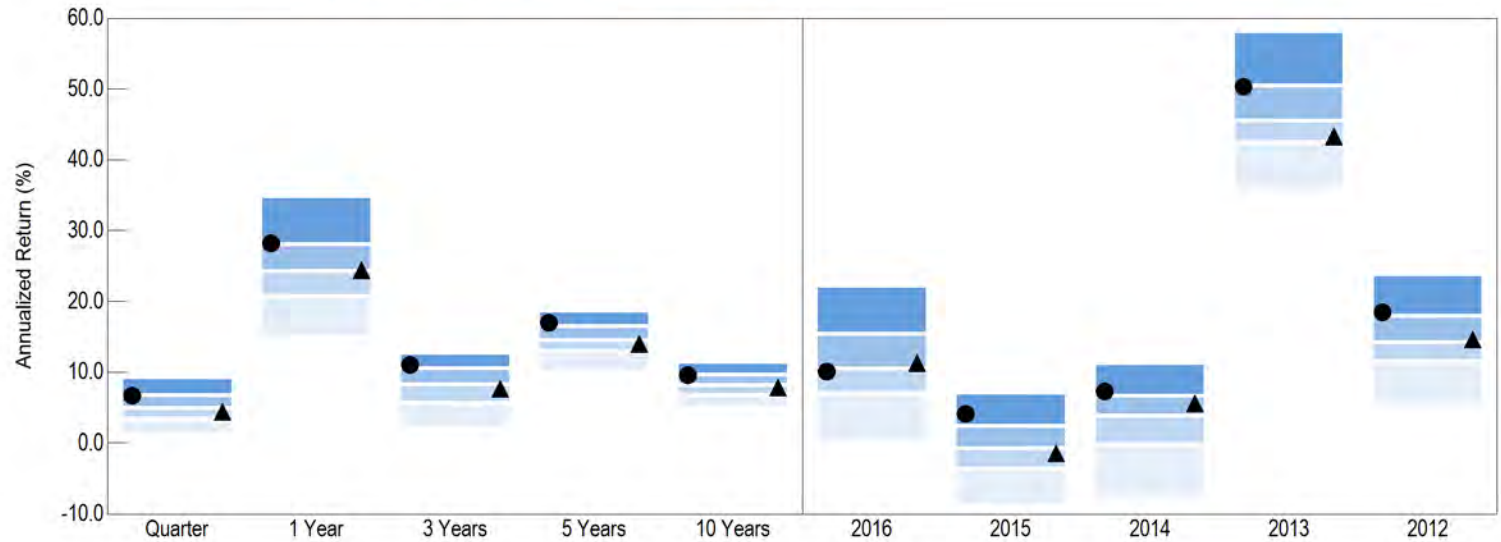
## Bottom Contributors

	Avg Wgt	Return	Contribution
ALDER BIOPHARMACEUTICALS	0.58	-44.95	-0.26
GMS ORD SHS	1.07	-19.81	-0.21
NEXSTAR BCAST.GP.	1.40	-14.34	-0.20
CAVIUM	1.40	-13.30	-0.19
BANK OF THE OZARKS	1.78	-9.56	-0.17
MICROSEMI	1.81	-9.18	-0.17
CALLON PTL.DEL.	0.75	-19.38	-0.15
BOFI HOLDING	1.55	-9.22	-0.14
US SILICA HOLDINGS	0.51	-25.92	-0.13
TUTOR PERINI	1.30	-9.59	-0.12

Unclassified sector allocation includes cash allocations.

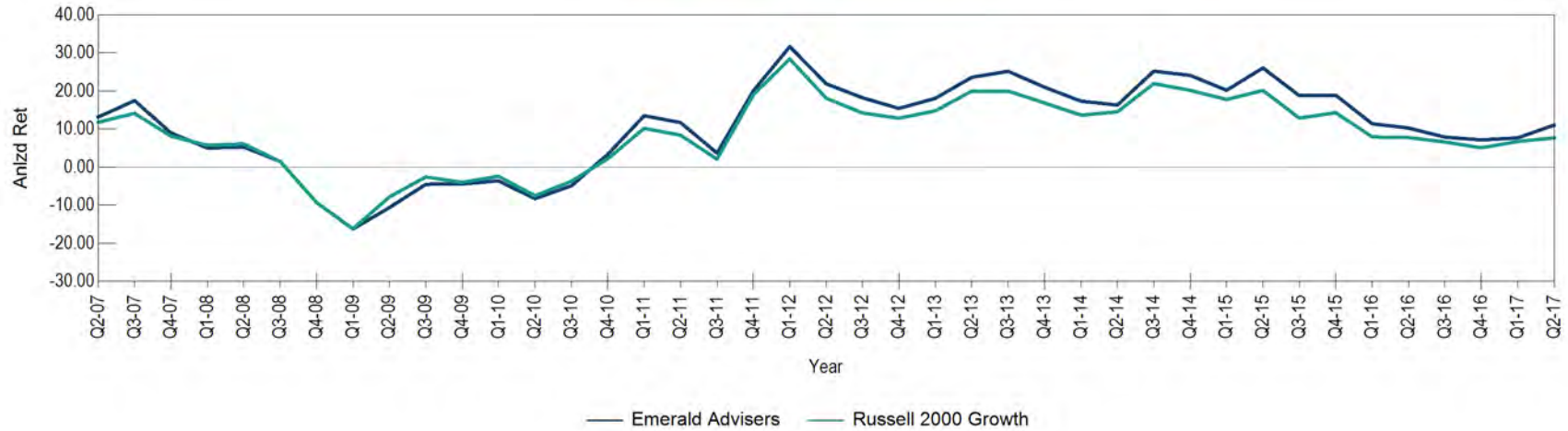


Emerald Advisers vs. eA US Small Cap Growth Equity Gross Universe

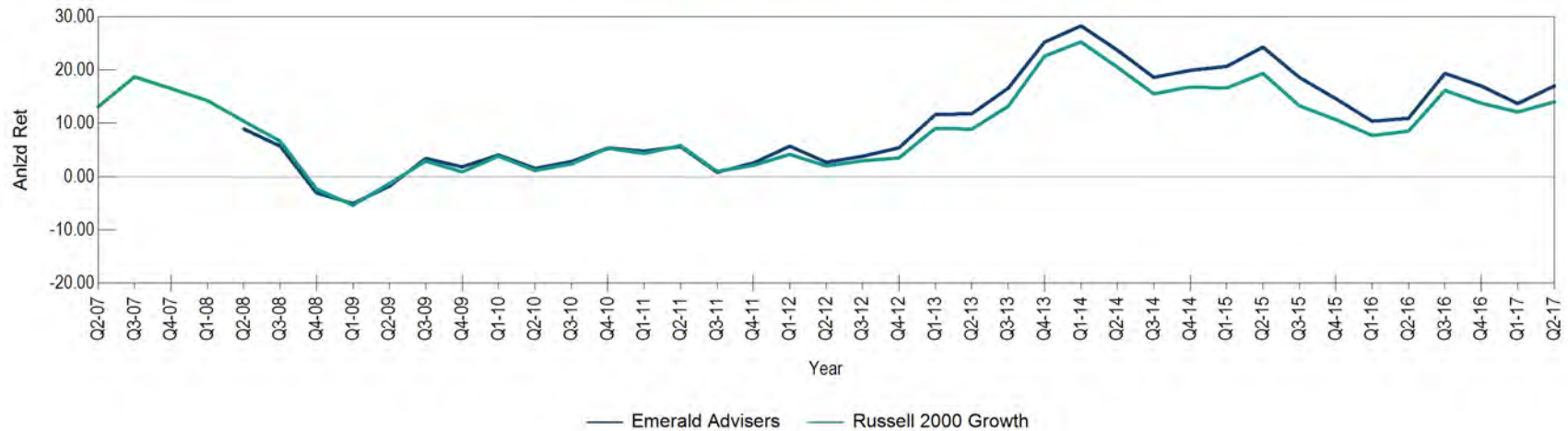


	Return (Rank)									
5th Percentile	9.2	34.8	12.7	18.6	11.4	22.2	7.1	11.3	58.2	23.8
25th Percentile	6.8	28.2	10.6	16.5	9.7	15.5	2.5	6.7	50.6	18.0
Median	5.0	24.3	8.4	14.6	8.3	10.6	-0.6	3.9	45.6	14.3
75th Percentile	3.6	20.8	5.7	13.0	6.8	7.1	-3.5	-0.1	42.6	11.6
95th Percentile	1.1	15.1	2.1	10.1	5.0	0.2	-8.7	-7.6	35.6	5.4
# of Portfolios	169	169	163	155	131	170	154	161	160	162
● Emerald Advisers	6.7 (26)	28.2 (25)	11.0 (22)	17.0 (19)	9.6 (27)	10.1 (54)	4.1 (19)	7.3 (21)	50.3 (27)	18.5 (22)
▲ Russell 2000 Growth	4.4 (60)	24.4 (50)	7.6 (60)	14.0 (63)	7.8 (60)	11.3 (49)	-1.4 (59)	5.6 (32)	43.3 (70)	14.6 (48)

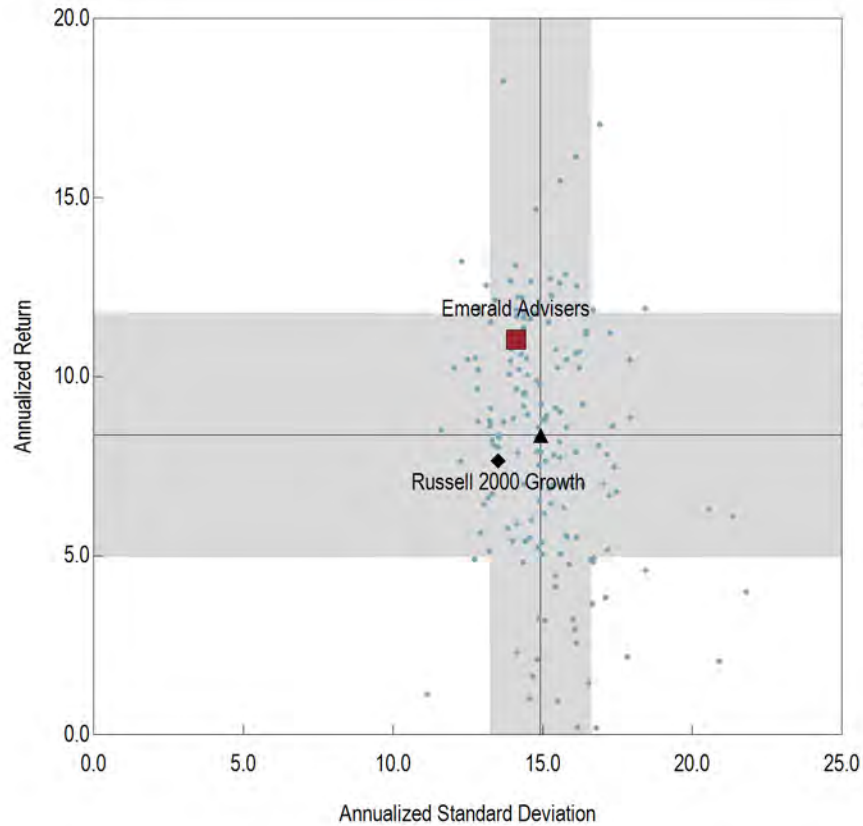
Rolling 3 Year Annualized Return (%)



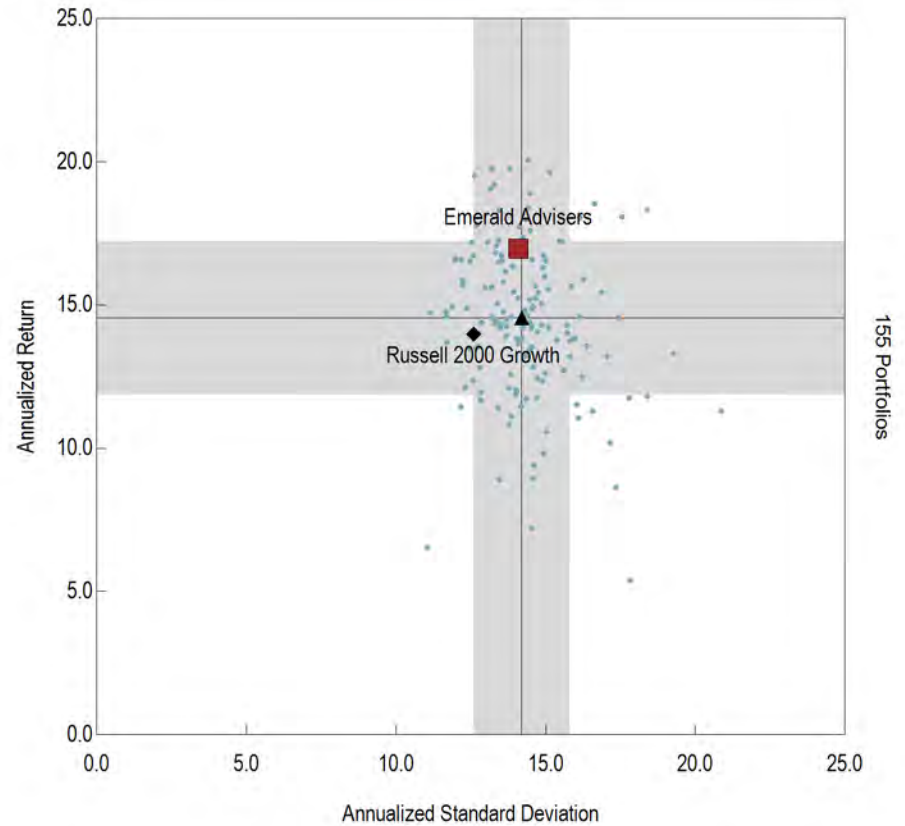
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	11.0%	14.1%	0.8
Russell 2000 Growth	7.6%	13.5%	0.5
eA US Small Cap Growth Equity Gross Median	8.4%	14.9%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	17.0%	14.1%	1.2
Russell 2000 Growth	14.0%	12.6%	1.1
eA US Small Cap Growth Equity Gross Median	14.6%	14.2%	1.0

# Ceredex Manager Portfolio Overview

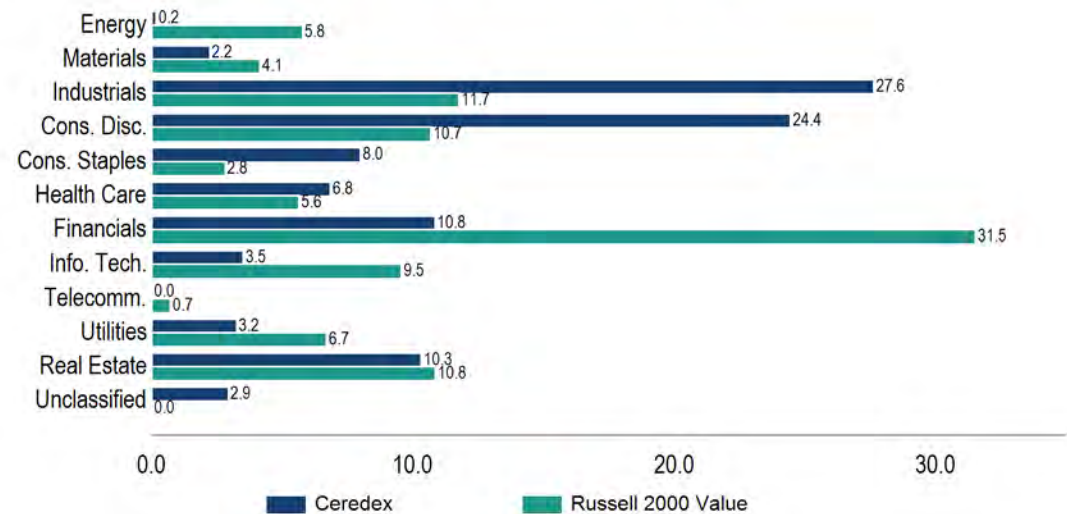
Period Ending: June 30, 2017

Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.

## Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	85	1,399
Weighted Avg. Market Cap. (\$B)	2.04	1.83
Median Market Cap. (\$B)	1.65	0.66
Price To Earnings	25.70	20.07
Price To Book	3.53	1.71
Price To Sales	2.13	2.72
Return on Equity (%)	16.94	7.40
Yield (%)	2.50	1.70
Beta	0.75	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
HILL-ROM HOLDINGS	3.76	13.02
ENERGIZER HOLDINGS	3.22	-13.41
BLOOMIN' BRANDS	3.14	8.00
TANGER FAC.OUTLET CNTRS.	2.86	-19.86
TETRA TECH	2.63	12.24
EVERCORE PARTNERS 'A'	2.56	-9.06
COVANTA HOLDING	2.28	-14.36
EDUCATION REAL.TST.	2.28	-4.21
HERMAN MILLER	2.22	-3.13
SONIC	2.18	4.97

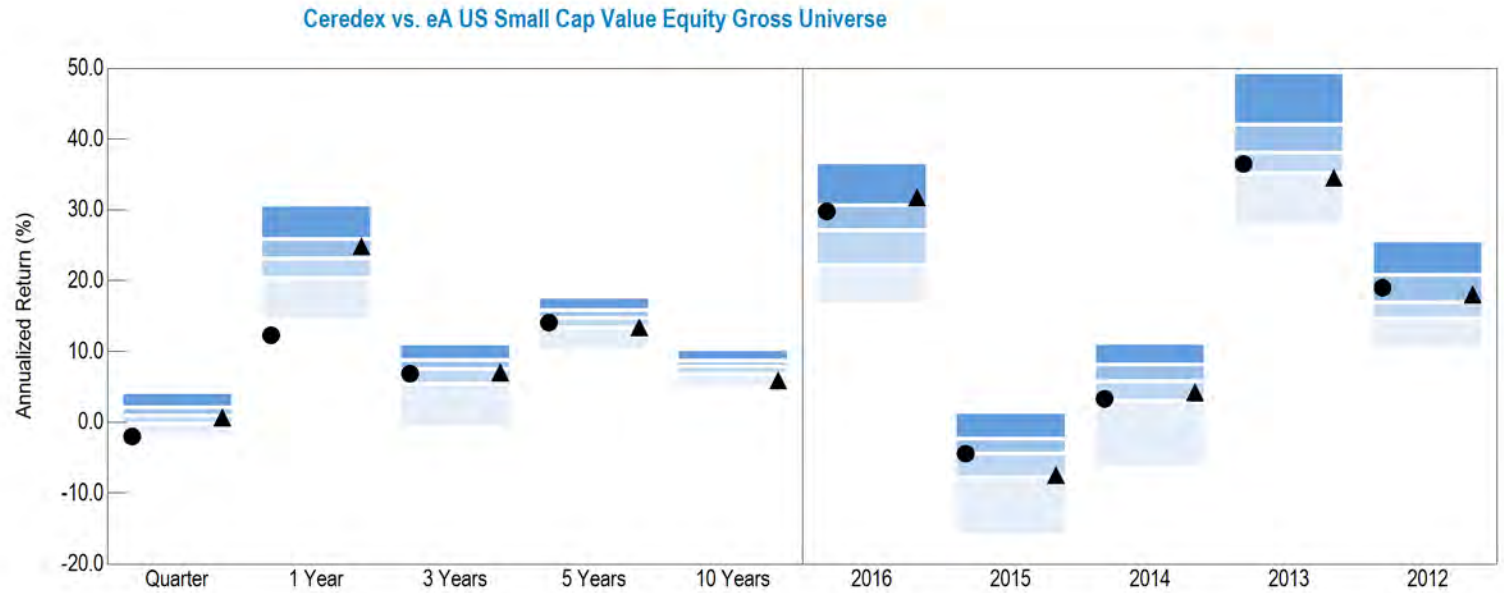
## Top Contributors

	Avg Wgt	Return	Contribution
PHIBRO ANIMAL HLTH.CL.A	1.47	32.23	0.47
HILL-ROM HOLDINGS	3.45	13.02	0.45
FAIR ISAAC	4.84	8.11	0.39
TETRA TECH	2.43	12.24	0.30
FORWARD AIR	1.99	12.34	0.25
BLOOMIN' BRANDS	2.98	8.00	0.24
GUESS	1.36	16.77	0.23
LITHIA MOTORS 'A'	1.97	10.34	0.20
CALAVO GROWERS	0.90	13.94	0.13
MULTI-COLOR	0.84	15.00	0.13

## Bottom Contributors

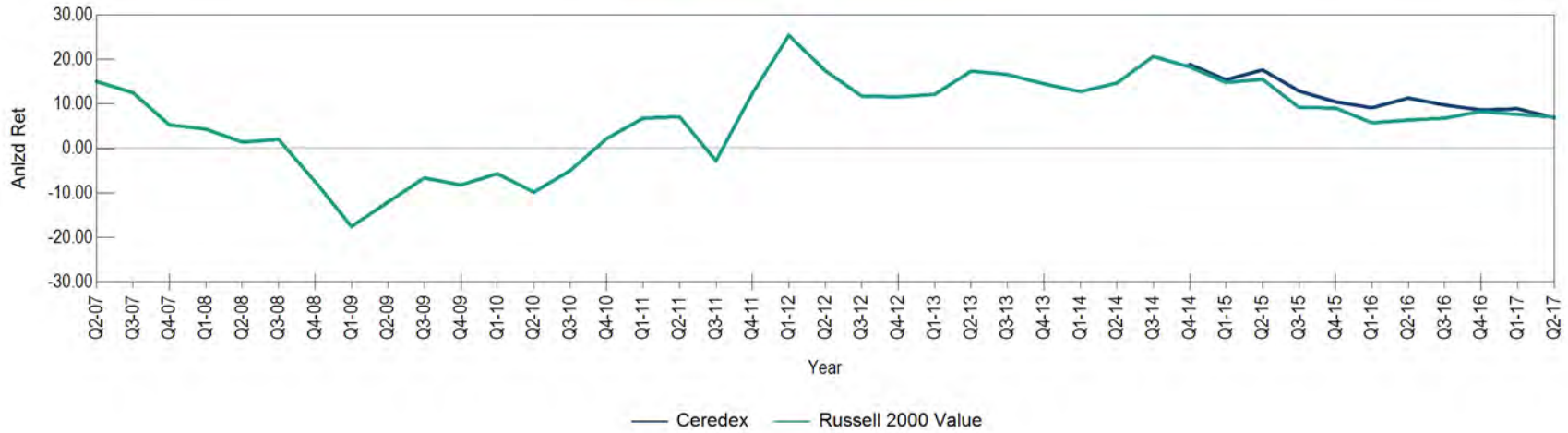
	Avg Wgt	Return	Contribution
AMC ENTERTAINMENT HDG. CL.A	2.41	-27.05	-0.65
ENERGIZER HOLDINGS	3.85	-13.41	-0.52
CHICO'S FAS	1.45	-33.07	-0.48
COVANTA HOLDING	2.44	-14.36	-0.35
HSN	2.37	-13.09	-0.31
KNOLL	1.66	-15.21	-0.25
B & G FOODS	2.37	-10.42	-0.25
DSW 'A'	1.82	-13.43	-0.24
OUTFRONT MEDIA	2.09	-11.52	-0.24
EVERCORE PARTNERS 'A'	2.60	-9.06	-0.24

Unclassified sector allocation includes cash allocations.

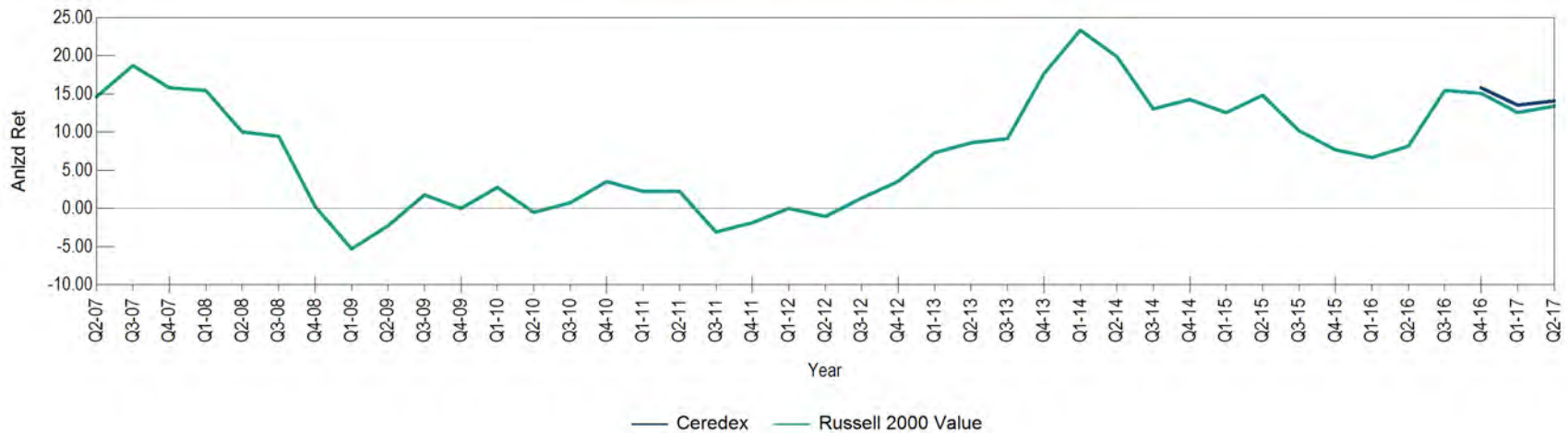


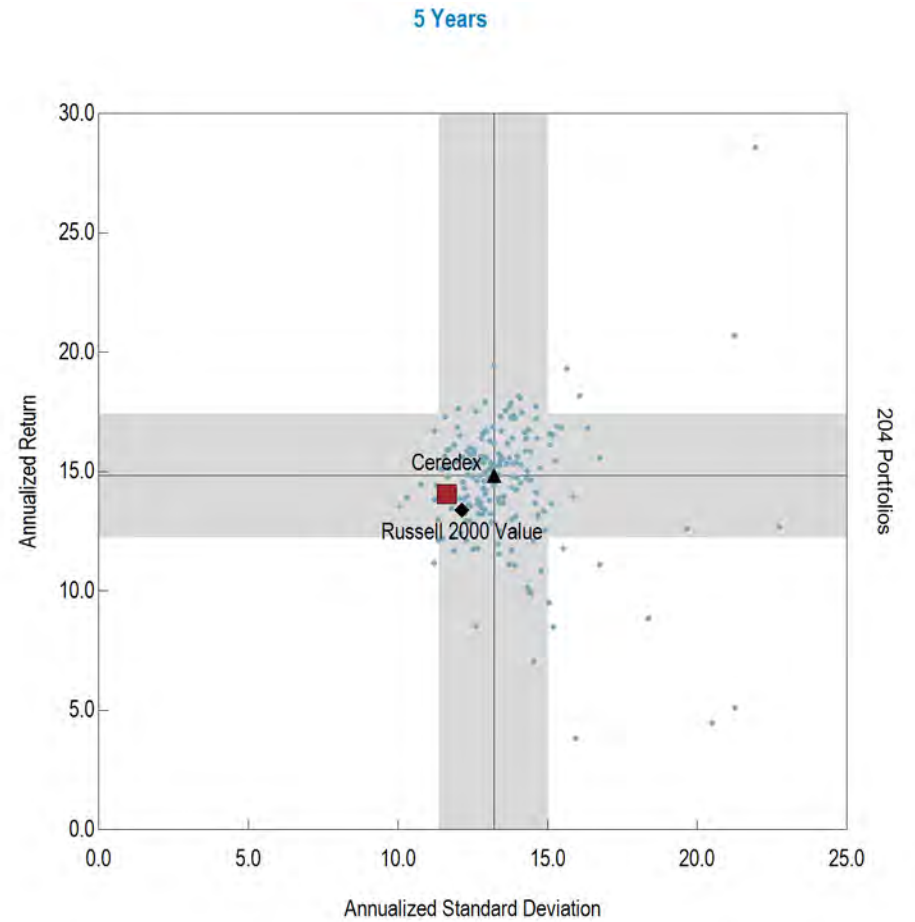
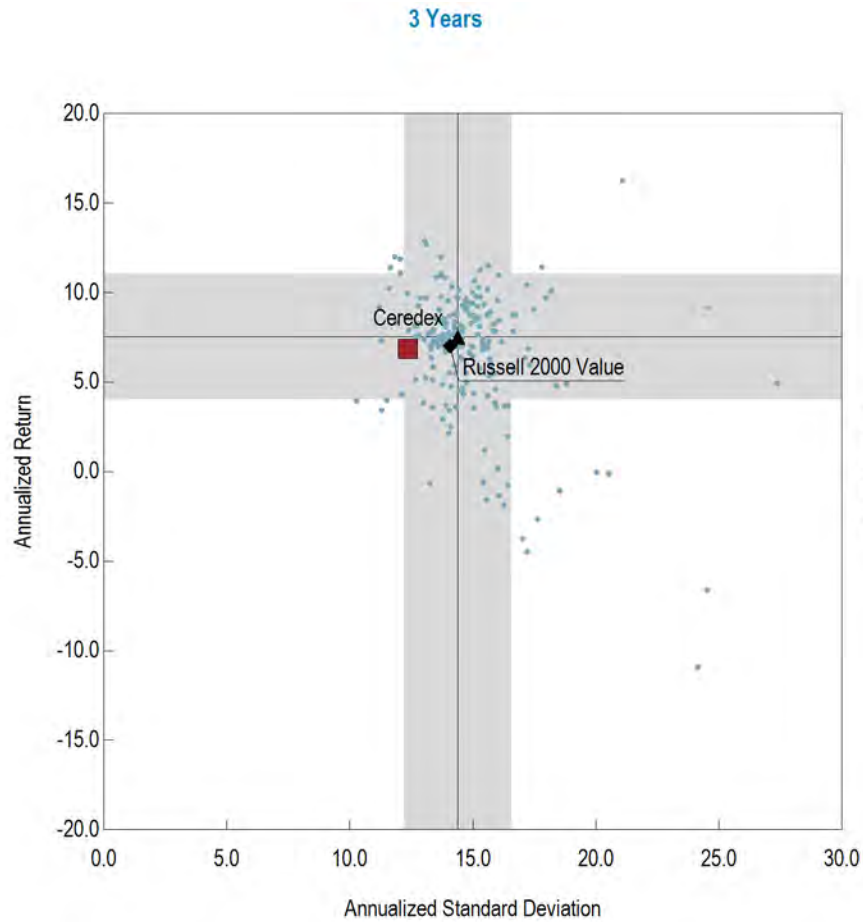
	Return (Rank)									
5th Percentile	4.2	30.7	11.1	17.7	10.3	36.7	1.5	11.2	49.4	25.7
25th Percentile	2.1	26.0	8.9	15.9	8.8	30.7	-2.2	8.2	42.1	20.8
Median	0.9	23.2	7.5	14.8	7.9	27.2	-4.3	5.8	38.1	16.9
75th Percentile	-0.1	20.4	5.5	13.4	6.8	22.2	-7.7	3.1	35.2	14.7
95th Percentile	-1.9	14.4	-0.6	10.2	5.0	16.8	-15.8	-6.3	27.8	10.3
# of Portfolios	222	222	213	204	168	222	212	206	199	187
● Ceredex	-2.0 (96)	12.3 (99)	6.9 (67)	14.1 (64)	-- (--)	29.8 (32)	-4.4 (52)	3.3 (74)	36.5 (66)	19.0 (38)
▲ Russell 2000 Value	0.7 (55)	24.9 (35)	7.0 (63)	13.4 (76)	5.9 (90)	31.7 (17)	-7.5 (74)	4.2 (68)	34.5 (78)	18.1 (43)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	6.9%	12.4%	0.5
Russell 2000 Value	7.0%	14.1%	0.5
eA US Small Cap Value Equity Gross Median	7.5%	14.4%	0.5

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	14.1%	11.6%	1.2
Russell 2000 Value	13.4%	12.1%	1.1
eA US Small Cap Value Equity Gross Median	14.8%	13.2%	1.1

# International Equity Managers

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# Pyrford Manager Portfolio Overview

Period Ending: June 30, 2017

International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.

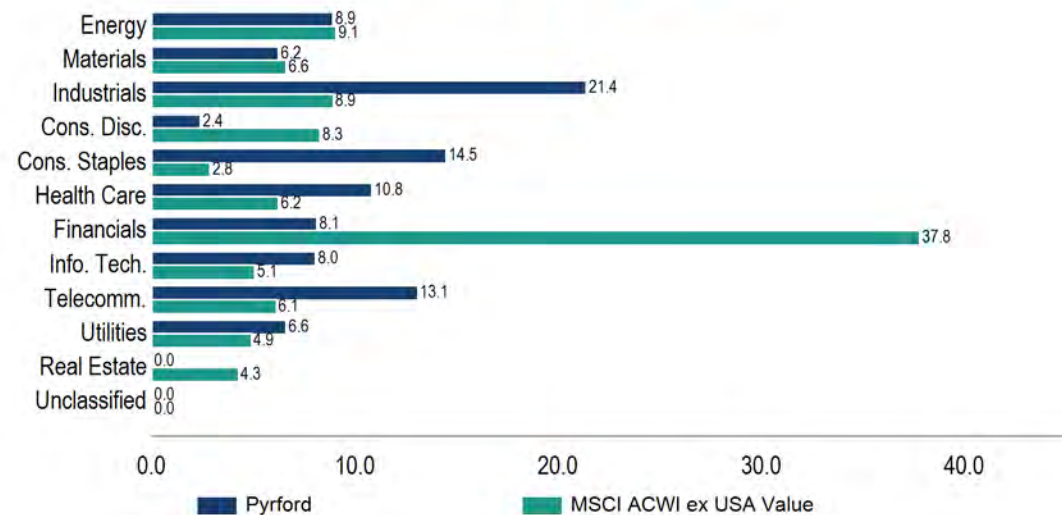
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	72	1,059
Weighted Avg. Market Cap. (\$B)	60.86	55.58
Median Market Cap. (\$B)	20.29	7.23
Price To Earnings	24.21	14.97
Price To Book	3.79	1.56
Price To Sales	2.36	1.60
Return on Equity (%)	20.08	11.03
Yield (%)	3.51	3.81
Beta	0.63	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	93.1%	76.7%
Emerging*	6.9%	23.3%
<b>Top 10 Largest Countries</b>		
United Kingdom	15.0%	13.7%
Switzerland	14.5%	5.4%
Australia	10.5%	4.9%
France	8.5%	7.6%
Japan	8.4%	16.1%
Germany	7.1%	6.3%
Hong Kong	6.8%	2.4%
Netherlands	6.1%	1.2%
Singapore	4.8%	1.0%
Sweden	4.8%	2.0%
<b>Total-Top 10 Largest Countries</b>	<b>86.5%</b>	<b>60.6%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Value



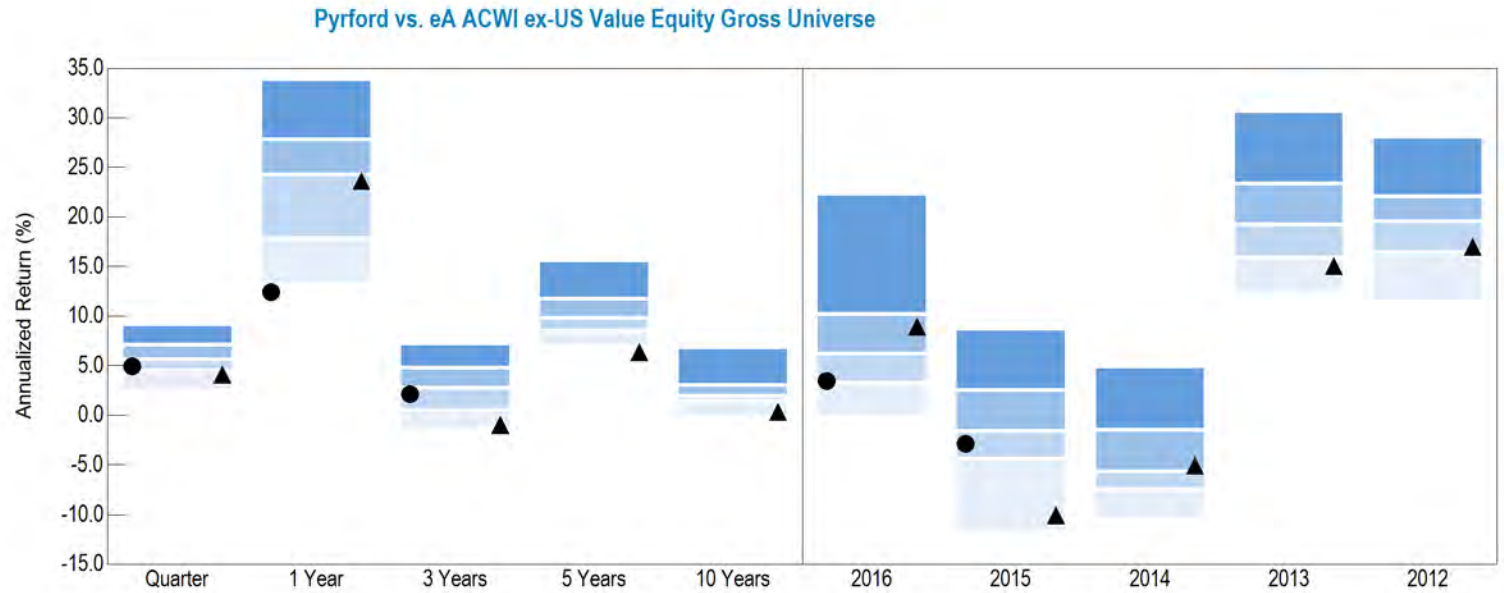
## Top Contributors

	Avg Wgt	Return	Contribution
SCA 'B'	2.03	34.45	0.70
NESTLE 'R'	3.94	16.95	0.67
VTECH HOLDINGS	1.54	32.56	0.50
NOVARTIS 'R'	3.09	12.18	0.38
MEDIATEK	1.47	20.85	0.31
UNILEVER CERTS.	2.46	11.47	0.28
FUCHS PETROLUB PREF.	2.04	13.31	0.27
VODAFONE GROUP	1.92	13.03	0.25
LEGRAND	1.37	17.83	0.24
MALAYAN BANKING	1.41	15.17	0.21

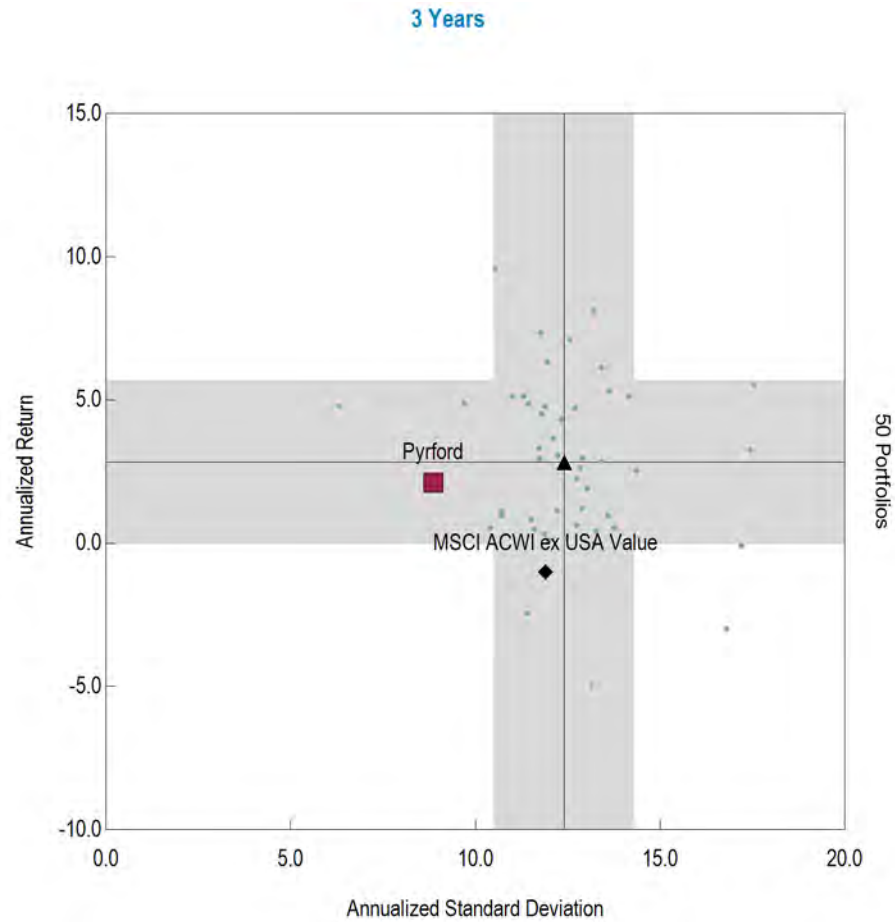
## Bottom Contributors

	Avg Wgt	Return	Contribution
WOODSIDE PETROLEUM	1.89	-6.38	-0.12
UNITED UTILITIES GROUP	1.74	-6.68	-0.12
COMFORTDELGRO	1.67	-6.79	-0.11
QBE INSURANCE GROUP	1.18	-7.88	-0.09
NEWCREST MINING	0.93	-8.98	-0.08
CNOOC	1.30	-5.85	-0.08
WOOLWORTHS	1.87	-3.09	-0.06
ADVANTECH	0.87	-4.44	-0.04
TELSTRA	0.50	-7.22	-0.04
MAGNUM	0.21	-16.27	-0.03

Unclassified sector allocation includes cash allocations.



	Return (Rank)															
	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012						
5th Percentile	9.1	33.9	7.2	15.6	6.8	22.3	8.7	4.9	30.7	28.1						
25th Percentile	7.2	27.9	4.8	11.8	3.1	10.2	2.5	-1.4	23.4	22.1						
Median	5.6	24.3	2.8	9.8	2.0	6.2	-1.6	-5.7	19.3	19.6						
75th Percentile	4.6	17.9	0.6	8.6	1.5	3.3	-4.3	-7.4	15.9	16.5						
95th Percentile	2.6	13.3	-1.4	7.0	-0.1	-0.1	-11.6	-10.4	12.4	11.7						
# of Portfolios	55	55	50	45	28	55	45	37	34	32						
● Pyrford	4.9 (65)	12.4 (99)	2.1 (58)	-- (--)	-- (--)	3.4 (74)	-2.9 (59)	-- (--)	-- (--)	-- (--)						
▲ MSCI ACWI ex USA Value	4.1 (84)	23.6 (57)	-1.0 (95)	6.4 (97)	0.3 (94)	8.9 (35)	-10.1 (93)	-5.1 (49)	15.0 (83)	17.0 (74)						



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	2.1%	8.9%	0.2
MSCI ACWI ex USA Value	-1.0%	11.9%	-0.1
eA ACWI ex-US Value Equity Gross Median	2.8%	12.4%	0.2

# William Blair Manager Portfolio Overview

Period Ending: June 30, 2017

International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Jeffrey Urbina.

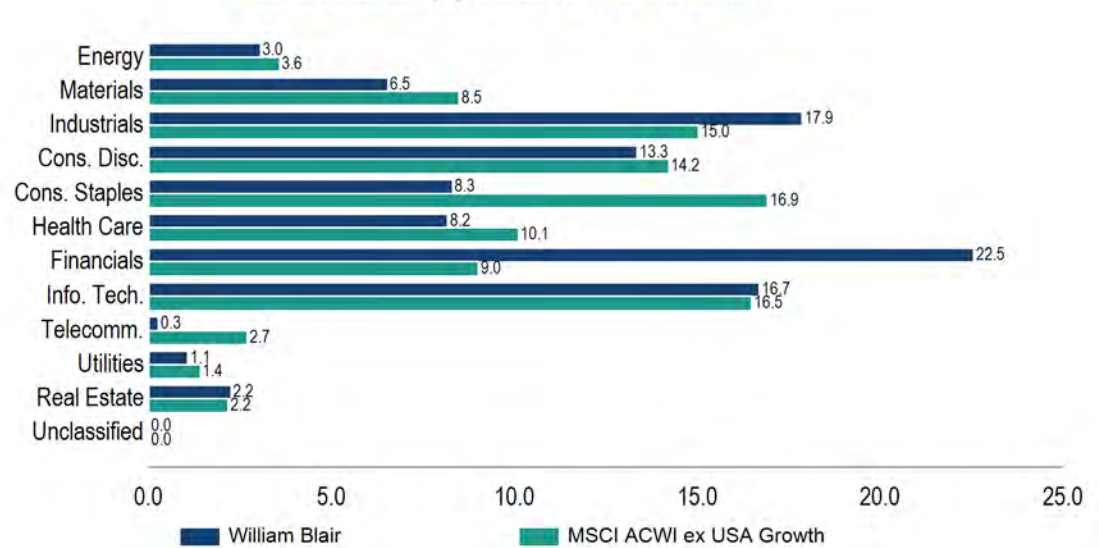
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	220	1,063
Weighted Avg. Market Cap. (\$B)	49.20	59.90
Median Market Cap. (\$B)	7.66	7.84
Price To Earnings	23.77	26.43
Price To Book	4.48	3.90
Price To Sales	3.20	2.98
Return on Equity (%)	22.61	17.69
Yield (%)	2.19	1.94
Beta	0.88	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	80.7%	75.8%
Emerging*	19.3%	24.2%
<b>Top 10 Largest Countries</b>		
Japan	18.1%	16.5%
United Kingdom	15.4%	10.9%
France	11.1%	7.1%
Germany	8.2%	7.0%
China*	5.8%	7.1%
Hong Kong	4.5%	2.5%
India*	4.0%	2.1%
Switzerland	3.9%	6.4%
Canada	3.8%	6.5%
Sweden	2.7%	2.1%
<b>Total-Top 10 Largest Countries</b>	<b>77.5%</b>	<b>68.2%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Growth



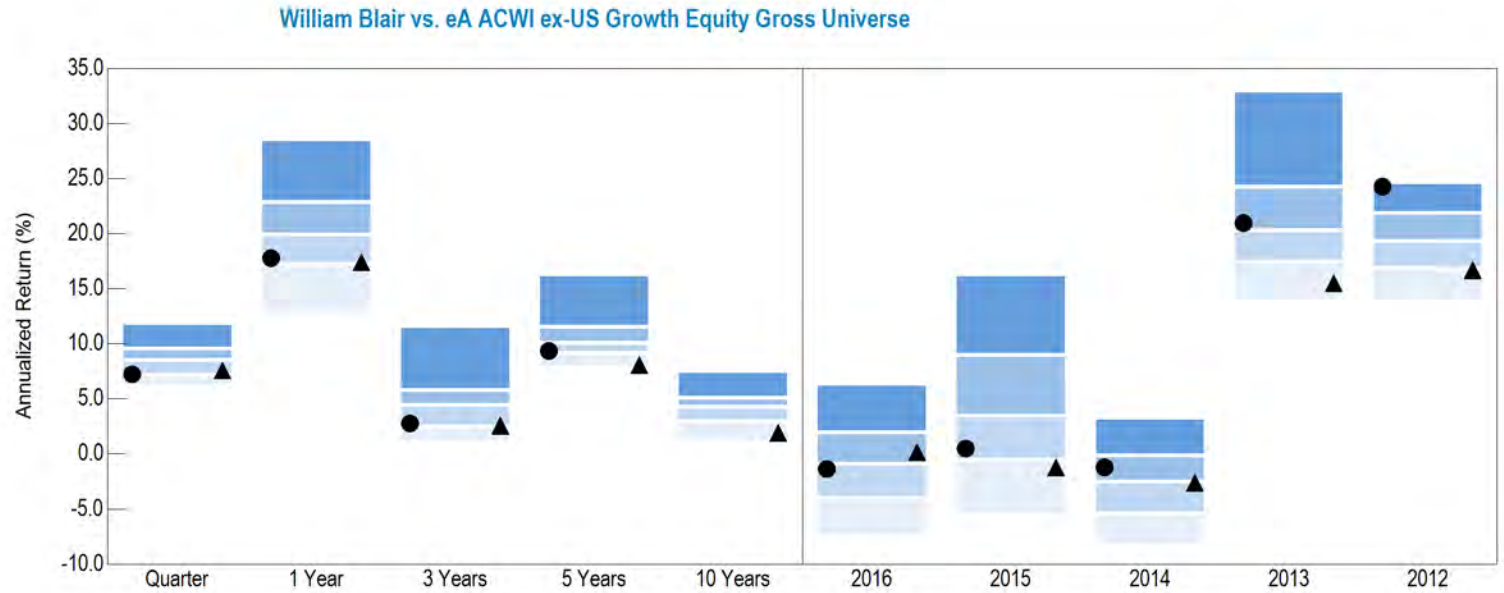
## Top Contributors

	Avg Wgt	Return	Contribution
ALIBABA GROUP HLDG.SPN. ADR 1:1	1.77	30.67	0.54
TENCENT HOLDINGS	1.30	25.04	0.33
PING AN INSURANCE 'H'	1.77	17.75	0.31
TOKYO ELECTRON	1.17	23.69	0.28
SAMSUNG ELECTRONICS	1.92	12.78	0.24
AMADEUS IT HOLDING	1.13	18.36	0.21
KBC GROUP	1.20	15.99	0.19
LONZA GROUP	0.75	25.14	0.19
CHRISTIAN DIOR	0.78	23.36	0.18
BNP PARIBAS	1.41	12.29	0.17

## Bottom Contributors

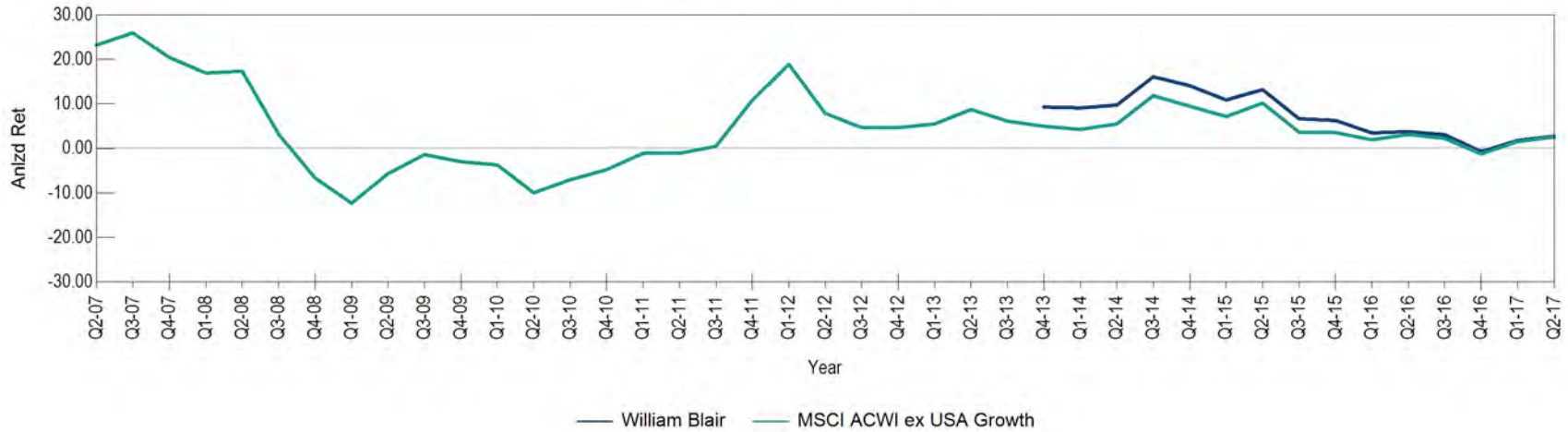
	Avg Wgt	Return	Contribution
PETROLEO BRASILEIRO PN	0.74	-18.19	-0.13
CANADIAN NATURAL RES.	1.06	-11.09	-0.12
ITAU UNIBANCO HOLDING PN	1.35	-6.97	-0.09
TECHNIPFMC ORD	0.51	-17.22	-0.09
FANUC	1.37	-5.89	-0.08
PANDORA	0.49	-14.92	-0.07
FUJI HEAVY INDS.	0.80	-8.04	-0.06
SHIRE	0.90	-5.55	-0.05
SUNCOR ENERGY	1.02	-3.98	-0.04
GLENCORE	0.95	-3.84	-0.04

Unclassified sector allocation includes cash allocations.

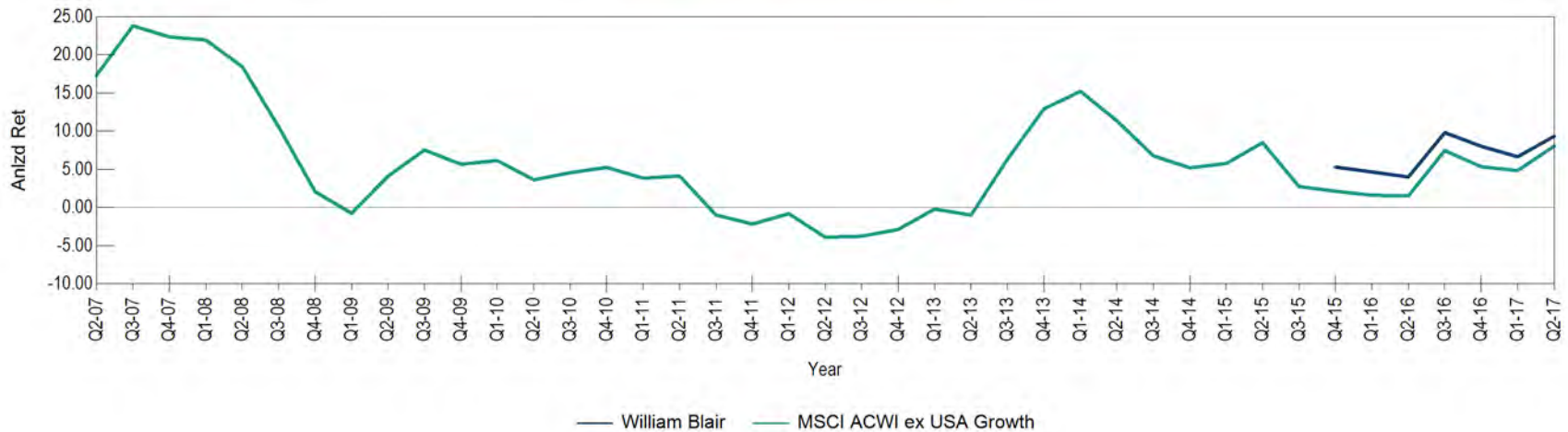


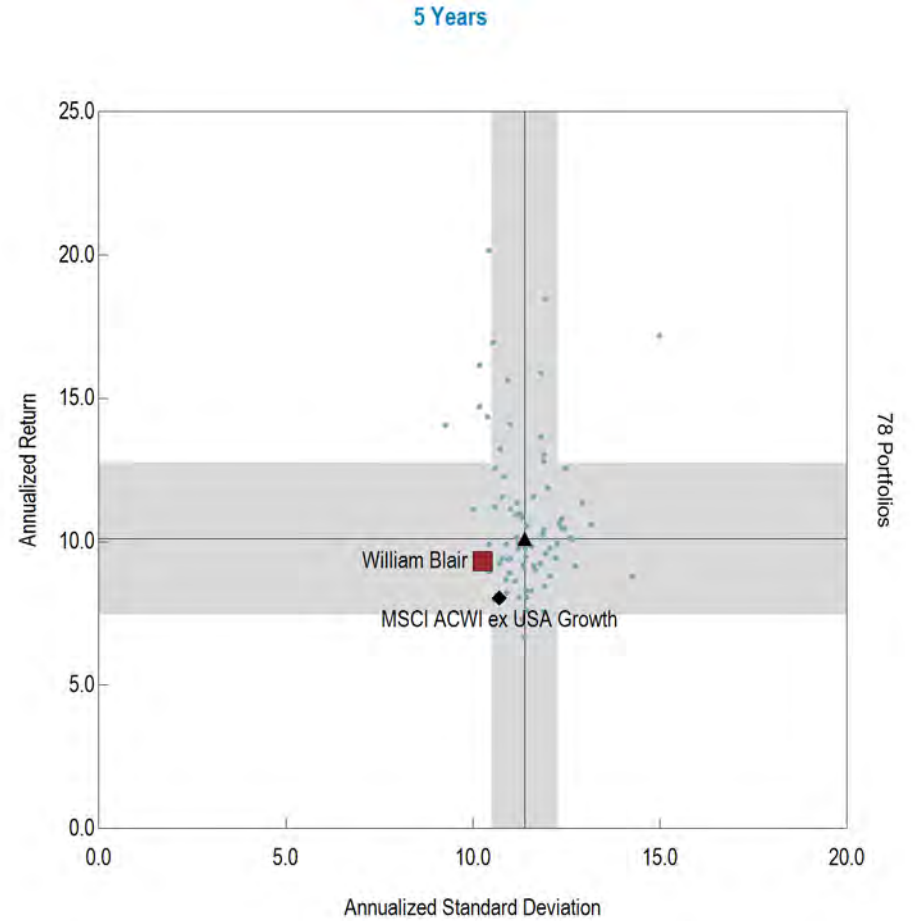
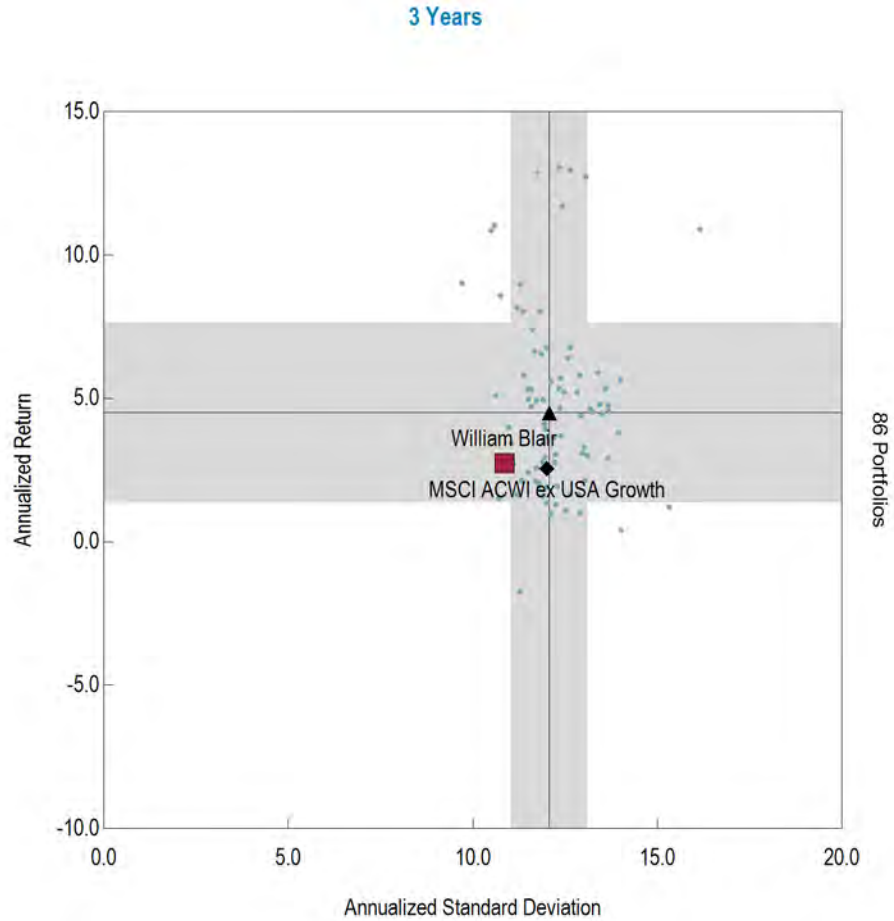
	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012
<b>5th Percentile</b>	11.9	28.5	11.5	16.3	7.5	6.3	16.3	3.2	33.0	24.6
<b>25th Percentile</b>	9.6	22.9	5.8	11.6	5.1	2.0	9.0	-0.1	24.3	21.9
<b>Median</b>	8.5	19.9	4.5	10.1	4.3	-0.9	3.5	-2.5	20.3	19.3
<b>75th Percentile</b>	7.2	17.2	2.5	9.2	3.0	-3.9	-0.5	-5.3	17.5	16.9
<b>95th Percentile</b>	6.2	12.9	1.1	7.9	1.1	-7.4	-5.4	-8.2	14.0	13.7
<b># of Portfolios</b>	93	93	86	78	57	90	70	50	46	51
<b>● William Blair</b>	7.2 (75)	17.8 (70)	2.7 (73)	9.3 (70)	-- (--)	-1.4 (55)	0.5 (69)	-1.2 (37)	20.9 (44)	24.3 (6)
<b>▲ MSCI ACWI ex USA Growth</b>	7.6 (65)	17.4 (72)	2.5 (75)	8.0 (94)	1.9 (89)	0.1 (45)	-1.3 (83)	-2.6 (53)	15.5 (87)	16.7 (78)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years				5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio		Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	2.7%	10.9%	0.2	William Blair	9.3%	10.3%	0.9
MSCI ACWI ex USA Growth	2.5%	12.0%	0.2	MSCI ACWI ex USA Growth	8.0%	10.7%	0.7
eA ACWI ex-US Growth Equity Gross Median	4.5%	12.1%	0.3	eA ACWI ex-US Growth Equity Gross Median	10.1%	11.4%	0.9

# PIMCO RAE Emerging Markets Manager Portfolio Overview

Period Ending: June 30, 2017

The PIMCO RAE Emerging Markets seeks to invest 80% of its assets in investments that are economically tied to emerging market countries. The portfolio is sub-advised by Research Affiliates, LLC.

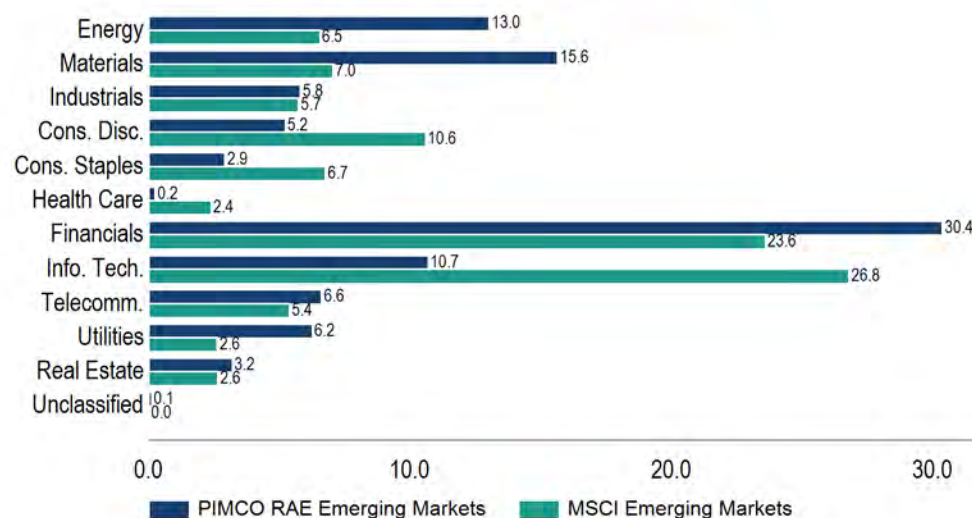
## Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	562	845
Weighted Avg. Market Cap. (\$B)	33.05	68.11
Median Market Cap. (\$B)	3.68	5.38
Price To Earnings	12.41	20.50
Price To Book	1.36	2.83
Price To Sales	1.06	2.20
Return on Equity (%)	10.52	16.79
Yield (%)	3.40	2.41
Beta		1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	8.3%	0.0%
Emerging*	91.7%	100.0%
<b>Top 10 Largest Countries</b>		
Korea*	17.7%	15.7%
Brazil*	15.8%	6.6%
China*	14.9%	28.0%
Russia*	9.4%	3.2%
Taiwan*	8.5%	12.5%
Hong Kong	7.6%	0.0%
India*	6.7%	8.8%
South Africa*	5.4%	6.6%
Poland*	2.8%	1.3%
Turkey*	2.6%	1.2%
<b>Total-Top 10 Largest Countries</b>	<b>91.3%</b>	<b>83.7%</b>

## Sector Allocation (%) vs MSCI Emerging Markets



## Top Contributors

	End Weight	Return	Contribution
SAMSUNG ELECTRONICS	4.06	12.78	0.52
EVERGRANDE REAL EST.GP.	0.42	93.85	0.39
JAIPRAKASH ASSOCIATES	0.54	59.28	0.32
WOORI BANK	0.68	38.72	0.26
NATIONAL BK.OF GREECE	0.47	47.35	0.22
HON HAI PRECN.IND.	0.66	28.24	0.19
ALPHA BANK	0.45	37.11	0.17
HANA FINANCIAL GROUP	0.83	19.70	0.16
GRUPO ELEKTRA	0.20	79.00	0.16
INNOLUX	0.54	26.37	0.14

## Bottom Contributors

	End Weight	Return	Contribution
BANCO DO BRASIL ON	1.35	-23.22	-0.31
PTRO.BRAO.ADR 1:2	1.65	-17.54	-0.29
OAO GAZPROM ADS (LON)	1.96	-10.64	-0.21
SURGUTNEFTEGAZ ADR.(LON) 1:10	1.22	-15.70	-0.19
VALE PN	2.89	-5.44	-0.16
CIA.ENGT.DE MINASGR.ADR 1:1	0.61	-25.05	-0.15
ITAU UNIBANCO BANCO HLDG.ADR 1:1	1.43	-8.34	-0.12
LUKOIL OAO ADR. (LON)	1.64	-6.93	-0.11
CTI.ELETR BRAS-ELETROBRAS SR.B PN	0.39	-23.29	-0.09

Unclassified sector allocation includes cash allocations.



## Global Equity Managers

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# Artisan Partners Manager Portfolio Overview

Period Ending: June 30, 2017

Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.

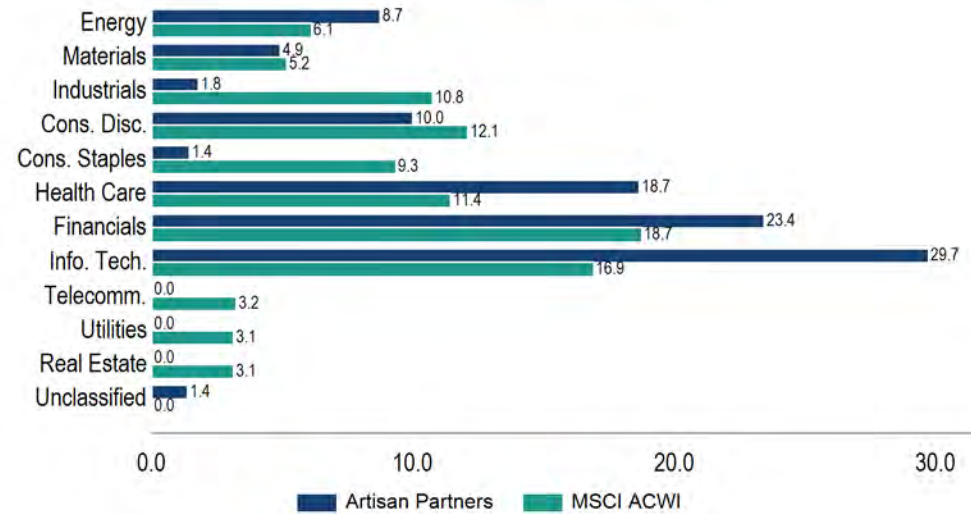
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	34	2,501
Weighted Avg. Market Cap. (\$B)	87.87	104.74
Median Market Cap. (\$B)	35.86	9.35
Price To Earnings	43.13	23.01
Price To Book	4.99	3.49
Price To Sales	5.41	2.87
Return on Equity (%)	13.12	15.98
Yield (%)	0.56	2.40
Beta	1.25	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	96.5%	88.7%
Emerging*	3.5%	11.3%
<b>Top 10 Largest Countries</b>		
United States	84.4%	52.5%
Netherlands	2.9%	1.2%
Ireland	2.5%	0.2%
Germany	2.0%	3.2%
India*	2.0%	1.0%
Canada	1.9%	3.1%
Mexico*	1.4%	0.4%
<b>Total-Top 10 Largest Countries</b>	<b>100.0%</b>	<b>61.5%</b>

## Sector Allocation (%) vs MSCI ACWI



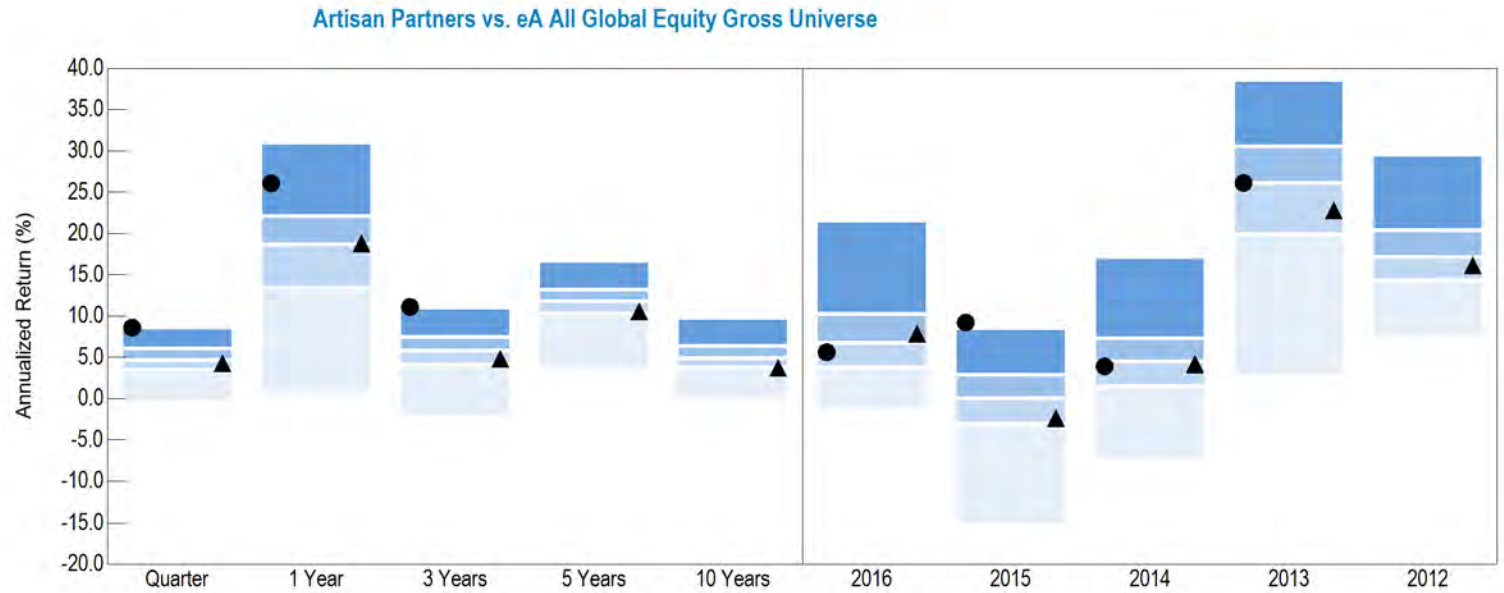
## Top Contributors

	Avg Wgt	Return	Contribution
REGENERON PHARMS.	3.14	26.74	0.84
NINTENDO	1.75	44.64	0.78
SHISEIDO	2.07	35.52	0.73
TENCENT HOLDINGS	2.32	25.04	0.58
EUROFINS SCIENTIFIC	1.76	29.47	0.52
MARKIT	9.66	4.98	0.48
BOSTON SCIENTIFIC	3.89	11.46	0.45
MCGRAW HILL FINANCIAL	3.43	11.99	0.41
ALPHABET 'A'	4.12	9.66	0.40
GENMAB	3.50	10.31	0.36

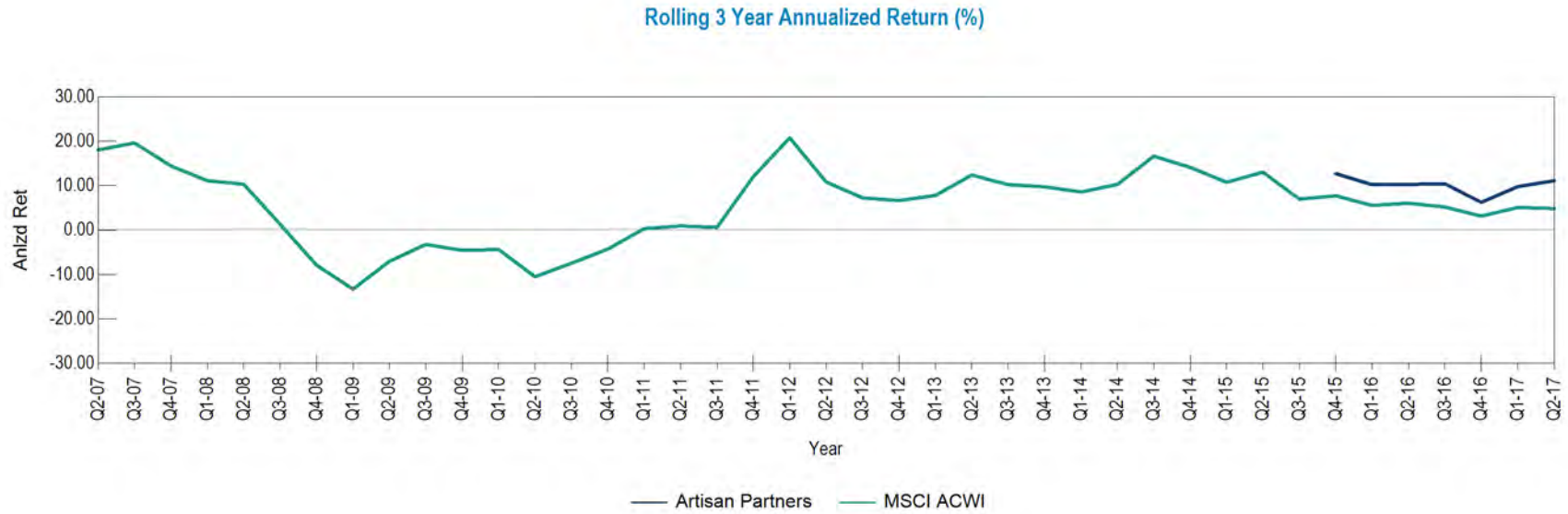
## Bottom Contributors

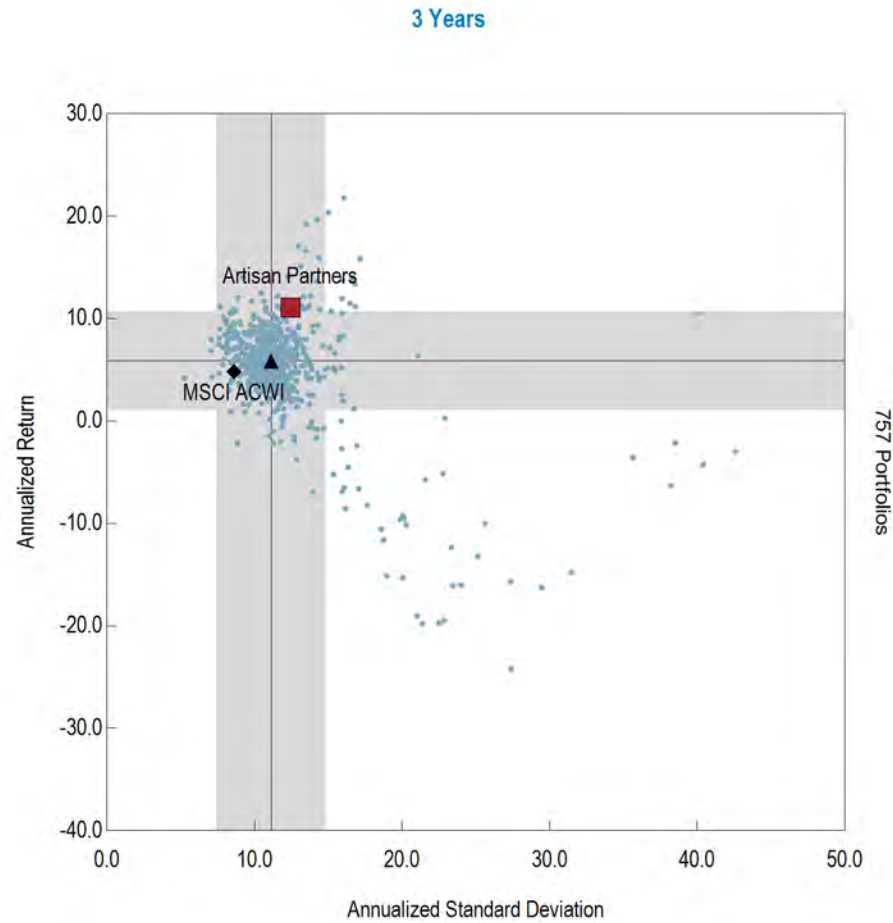
	Avg Wgt	Return	Contribution
NOBLE ENERGY	2.00	-17.32	-0.35
PIONEER NTRL.RES.	2.20	-14.31	-0.31
DEXCOM	1.48	-13.67	-0.20
HELMERICH & PAYNE	0.63	-17.36	-0.11
ASML HLDG.ADR 1:1	2.45	-0.90	-0.02
ASOS	1.60	-1.21	-0.02
AUTO TRADER GROUP	1.49	0.62	0.01
DIRECT LINE IN.GROUP	0.42	6.27	0.03
SANDS CHINA	1.87	1.71	0.03
HONG KONG EXS.& CLEAR.	0.86	3.80	0.03

Unclassified sector allocation includes cash allocations.



	Return (Rank)										
5th Percentile	8.6	31.0	11.0	16.7	9.8	21.5	8.5	17.1	38.6	29.5	
25th Percentile	6.1	22.1	7.5	13.3	6.4	10.3	3.0	7.4	30.6	20.4	
Median	4.7	18.7	5.9	11.9	4.9	6.8	0.1	4.6	26.2	17.2	
75th Percentile	3.6	13.5	4.2	10.4	3.8	3.9	-2.9	1.5	20.0	14.4	
95th Percentile	-0.5	0.5	-2.2	3.5	-0.2	-1.4	-15.1	-7.4	2.7	7.4	
# of Portfolios	834	832	757	678	391	842	692	609	552	475	
● Artisan Partners	8.6 (6)	26.1 (12)	11.1 (5)	-- (--)	-- (--)	5.6 (61)	9.2 (4)	3.9 (56)	26.1 (51)	-- (--)	
▲ MSCI ACWI	4.3 (60)	18.8 (50)	4.8 (68)	10.5 (74)	3.7 (76)	7.9 (42)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	11.1%	12.4%	0.9
MSCI ACWI	4.8%	8.6%	0.5
eA All Global Equity Gross Median	5.9%	11.1%	0.5

# First Eagle Manager Portfolio Overview

Period Ending: June 30, 2017

Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.

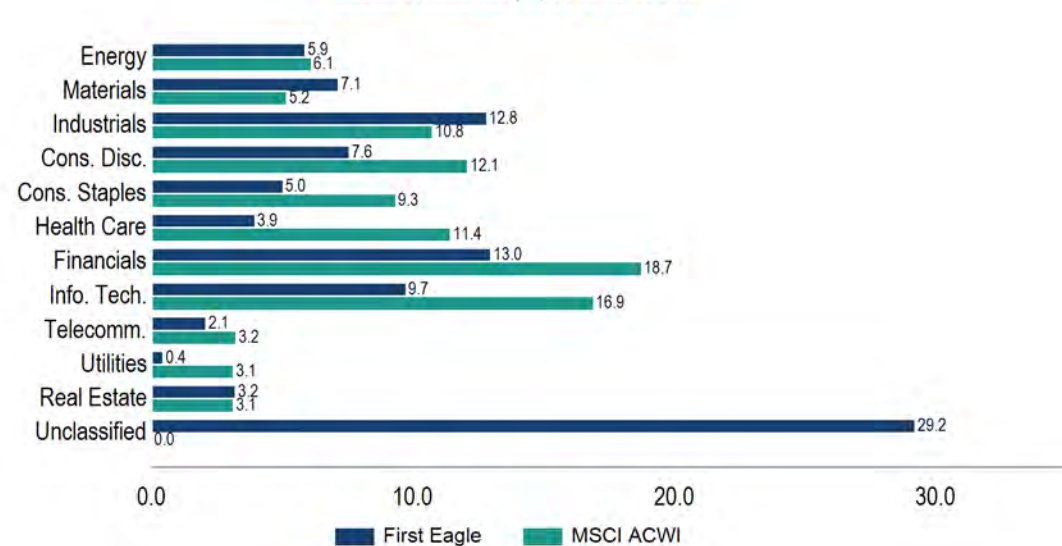
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	170	2,501
Weighted Avg. Market Cap. (\$B)	67.38	104.74
Median Market Cap. (\$B)	18.58	9.35
Price To Earnings	23.72	23.01
Price To Book	3.36	3.49
Price To Sales	3.22	2.87
Return on Equity (%)	16.49	15.98
Yield (%)	2.00	2.40
Beta	0.75	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	77.0%	88.7%
Emerging*	4.1%	11.3%
Cash	18.9%	
<b>Top 10 Largest Countries</b>		
United States	43.6%	52.5%
Cash	18.9%	0.0%
Japan	13.0%	7.8%
France	6.0%	3.5%
Canada	3.4%	3.1%
United Kingdom	3.0%	5.8%
Mexico*	1.5%	0.4%
Germany	1.5%	3.2%
Switzerland	1.4%	2.8%
Korea*	1.4%	1.8%
<b>Total-Top 10 Largest Countries</b>	<b>93.8%</b>	<b>80.8%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

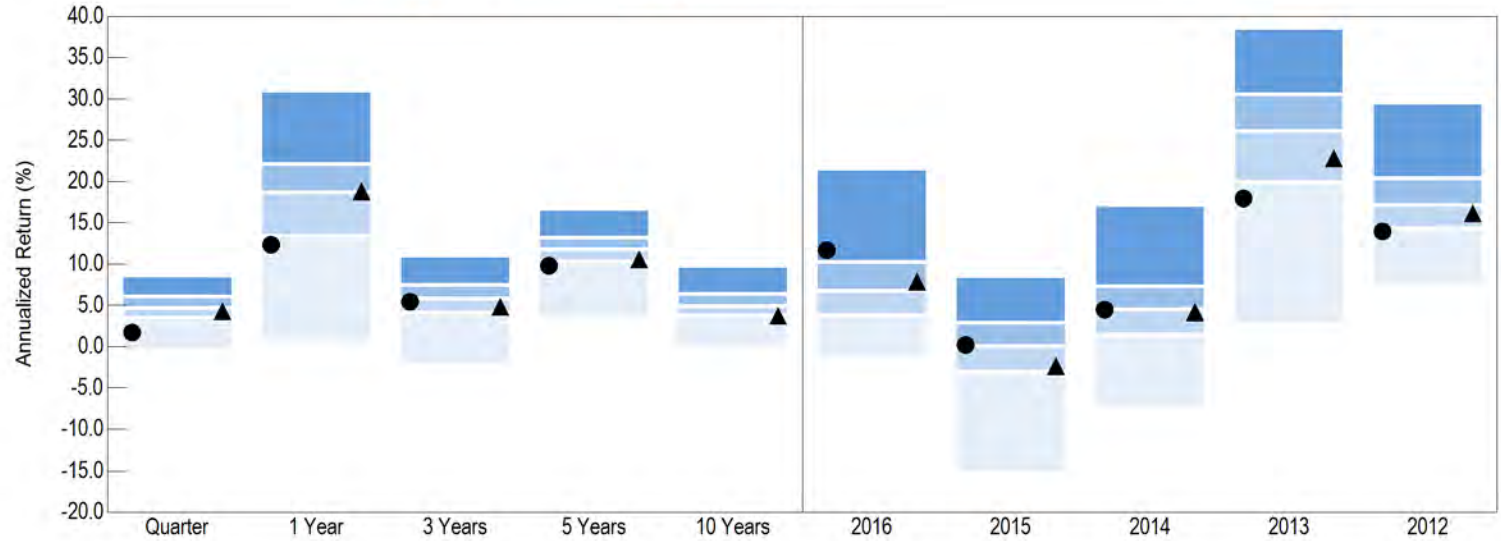
	Avg Wgt	Return	Contribution
ORACLE	2.26	12.88	0.29
NESTLE 'R'	0.89	16.95	0.15
DEERE	0.94	14.08	0.13
DANONE	0.92	12.95	0.12
AMERICAN EXPRESS	1.65	6.92	0.11
KT & G	0.62	17.29	0.11
MICROSOFT	2.02	5.25	0.11
3M	1.11	9.47	0.10
BANK OF NEW YORK MELLON	1.19	8.46	0.10
XILINX	0.86	11.71	0.10

## Bottom Contributors

	Avg Wgt	Return	Contribution
NATIONAL OILWELL VARCO	1.20	-17.71	-0.21
SCHLUMBERGER	1.02	-15.08	-0.15
TECHNIPFMC ORD	0.66	-16.31	-0.11
BARRICK GOLD (NYS)	0.66	-16.07	-0.11
FANUC	1.75	-5.89	-0.10
SYNCHRONY FINANCIAL	0.68	-12.67	-0.09
CENOVUS ENERGY (NYS)	0.24	-34.49	-0.08
NEWCREST MINING	0.85	-8.98	-0.08
CONOCOPHILLIPS	0.61	-11.36	-0.07
LIBERTY GLOBAL SR.C	0.56	-11.02	-0.06

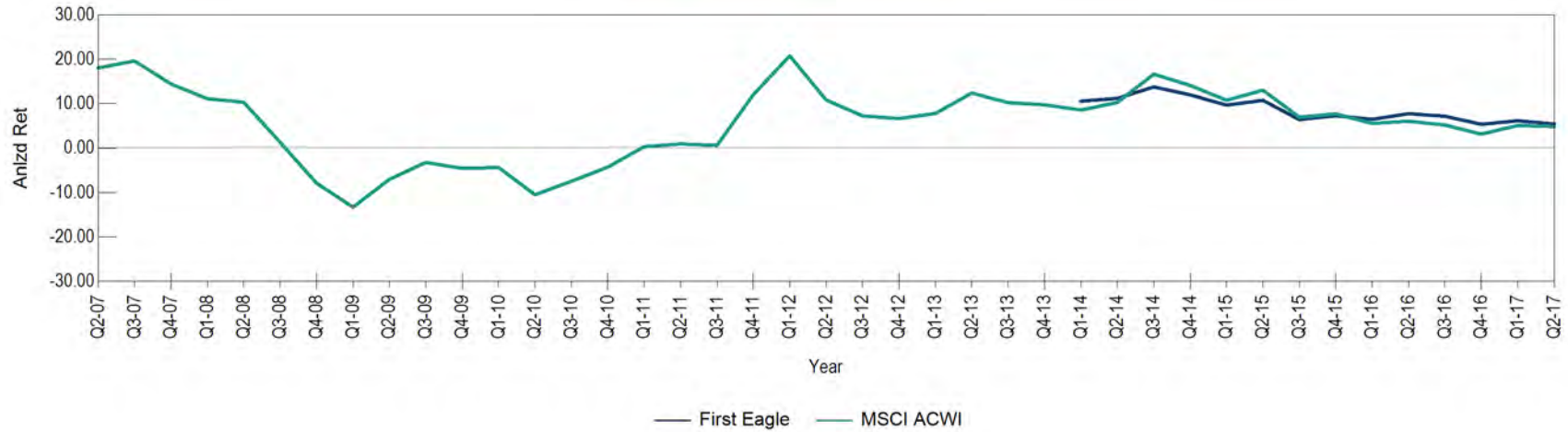
Unclassified sector allocation includes cash allocations and Gold allocations (6.7% as of 6/30/2017).

First Eagle vs. eA All Global Equity Gross Universe

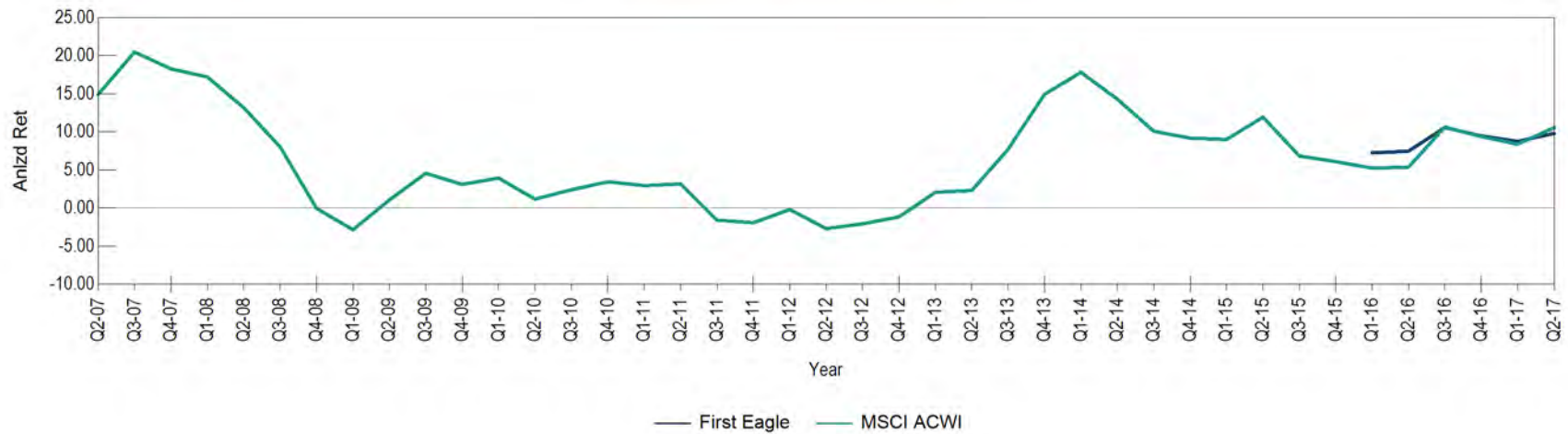


	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012
<b>5th Percentile</b>	8.6	31.0	11.0	16.7	9.8	21.5	8.5	17.1	38.6	29.5
<b>25th Percentile</b>	6.1	22.1	7.5	13.3	6.4	10.3	3.0	7.4	30.6	20.4
<b>Median</b>	4.7	18.7	5.9	11.9	4.9	6.8	0.1	4.6	26.2	17.2
<b>75th Percentile</b>	3.6	13.5	4.2	10.4	3.8	3.9	-2.9	1.5	20.0	14.4
<b>95th Percentile</b>	-0.5	0.5	-2.2	3.5	-0.2	-1.4	-15.1	-7.4	2.7	7.4
<b># of Portfolios</b>	834	832	757	678	391	842	692	609	552	475
● <b>First Eagle</b>	1.7 (92)	12.3 (78)	5.4 (60)	9.8 (80)	-- (--)	11.7 (19)	0.2 (49)	4.5 (51)	17.9 (80)	13.9 (78)
▲ <b>MSCI ACWI</b>	4.3 (60)	18.8 (50)	4.8 (68)	10.5 (74)	3.7 (76)	7.9 (42)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)

Rolling 3 Year Annualized Return (%)

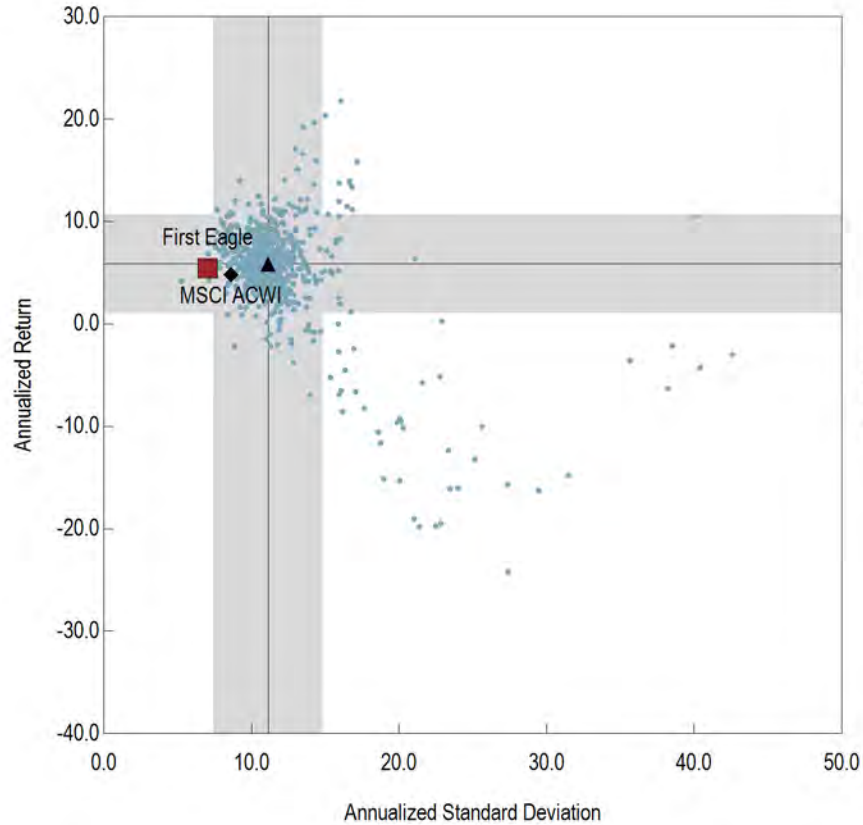


Rolling 5 Year Annualized Return (%)

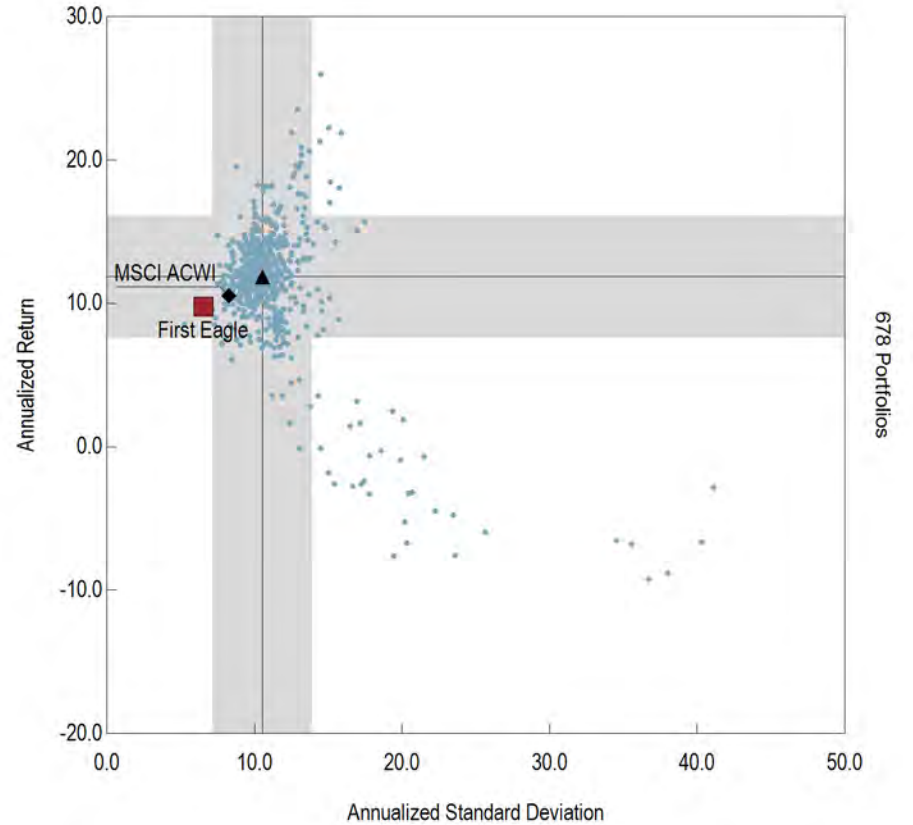




3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	5.4%	7.0%	0.7
MSCI ACWI	4.8%	8.6%	0.5
eA All Global Equity Gross Median	5.9%	11.1%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	9.8%	6.5%	1.5
MSCI ACWI	10.5%	8.3%	1.3
eA All Global Equity Gross Median	11.9%	10.5%	1.1

# Intech Global Low Vol Manager Portfolio Overview

Period Ending: June 30, 2017

Global equity diversified portfolio focused on maintaining volatility at or below the benchmark. Primary personnel include Adrian Banner, Vassilios Papathanakos, and Joseph Runnels.

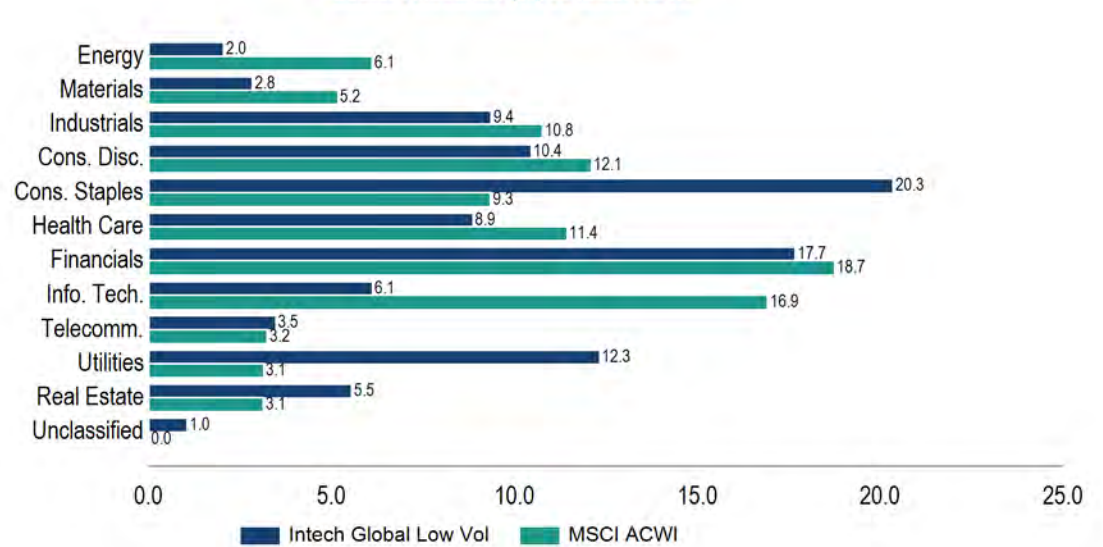
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	466	2,501
Weighted Avg. Market Cap. (\$B)	44.33	104.74
Median Market Cap. (\$B)	13.33	9.35
Price To Earnings	21.99	23.01
Price To Book	3.52	3.49
Price To Sales	3.21	2.87
Return on Equity (%)	16.66	15.98
Yield (%)	2.56	2.40
Beta	0.40	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	99.0%	88.7%
Cash	1.0%	
<b>Top 10 Largest Countries</b>		
United States	59.8%	52.5%
Japan	17.4%	7.8%
Hong Kong	9.1%	1.2%
Canada	3.9%	3.1%
Israel	2.1%	0.2%
Singapore	1.7%	0.4%
Cash	1.0%	0.0%
Germany	1.0%	3.2%
Australia	0.9%	2.4%
New Zealand	0.6%	0.1%
<b>Total-Top 10 Largest Countries</b>	<b>98.0%</b>	<b>70.7%</b>

## Sector Allocation (%) vs MSCI ACWI



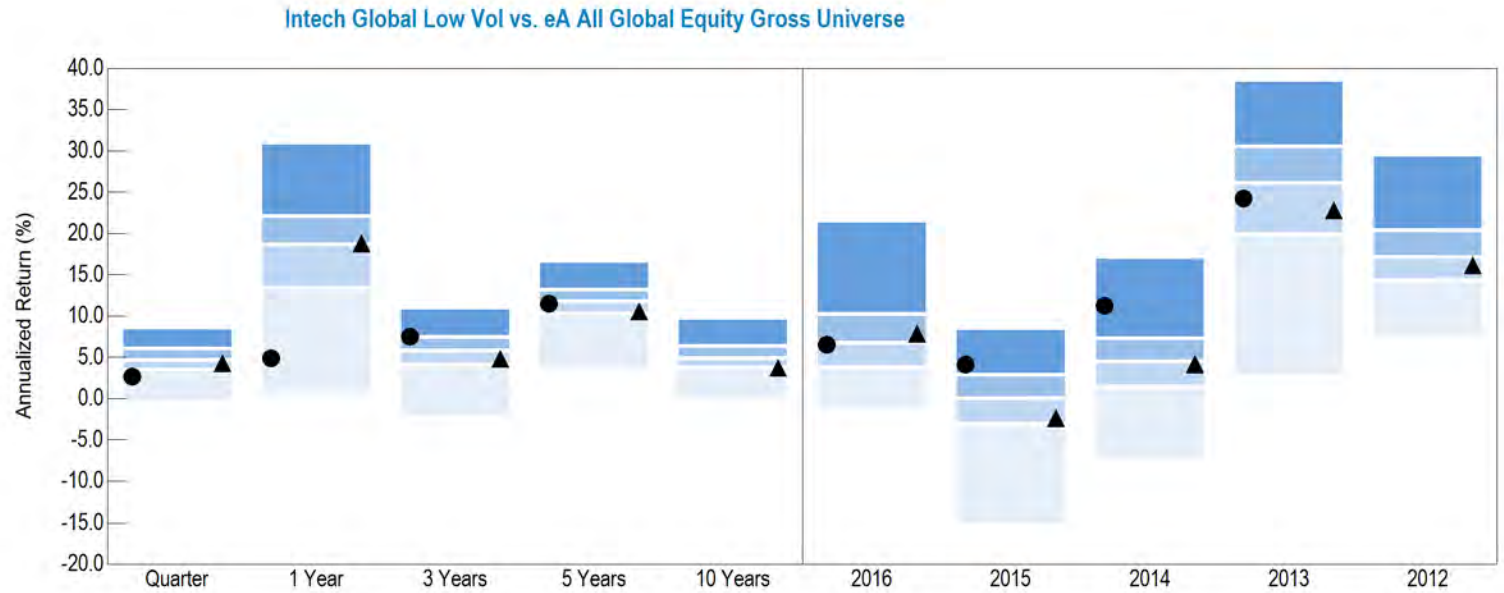
## Top Contributors

	Avg Wgt	Return	Contribution
MCDONALDS	2.03	18.90	0.38
HUMANA	0.98	16.92	0.17
NVIDIA	0.50	32.85	0.16
INTUITIVE SURGICAL	0.68	22.04	0.15
ANNALY CAPITAL MAN.	1.15	11.15	0.13
WAL MART STORES	2.18	5.69	0.12
KONAMI HOLDINGS	0.36	30.97	0.11
TECHTRONIC INDS.	0.63	14.62	0.09
LEUMI LTD.	0.74	12.02	0.09
OBAYASHI	0.34	25.85	0.09

## Bottom Contributors

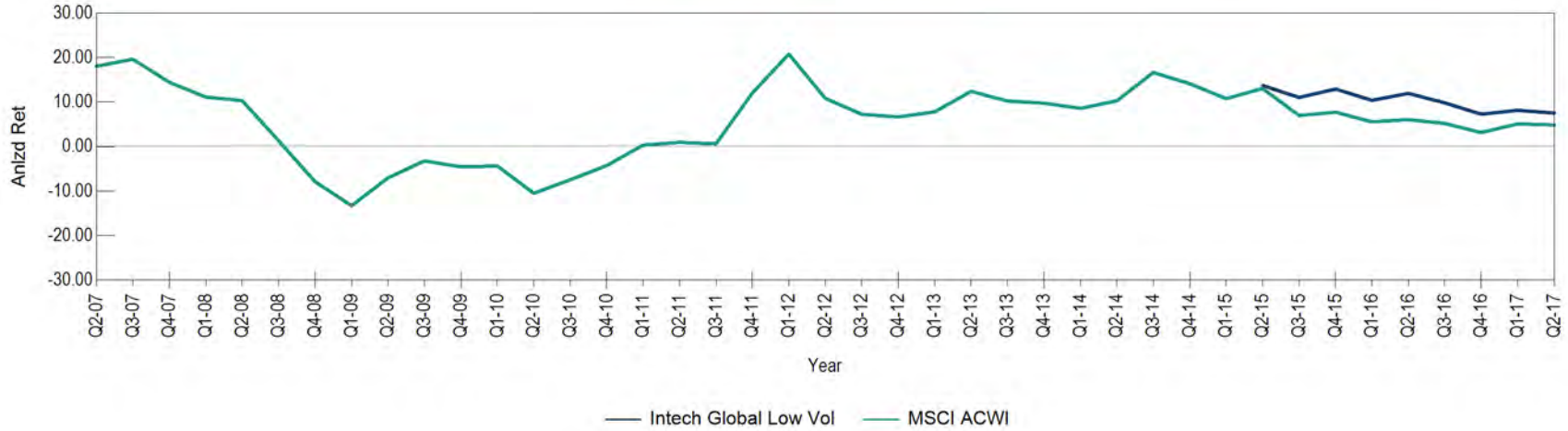
	Avg Wgt	Return	Contribution
AUTOZONE	1.66	-21.10	-0.35
GENERAL MILLS	3.44	-5.34	-0.18
SOUTHERN	4.96	-2.70	-0.13
PROCTER & GAMBLE	3.03	-2.26	-0.07
TECK RESOURCES 'B'	0.31	-20.28	-0.06
NOMURA RLST.MASTER FUND	0.53	-11.79	-0.06
KELLOGG	1.58	-3.64	-0.06
AT&T	0.65	-8.10	-0.05
JAPAN REAL ESTATE INV.	0.83	-6.04	-0.05
CH ROBINSON WWD.	0.47	-10.54	-0.05

Unclassified sector allocation includes cash allocations.

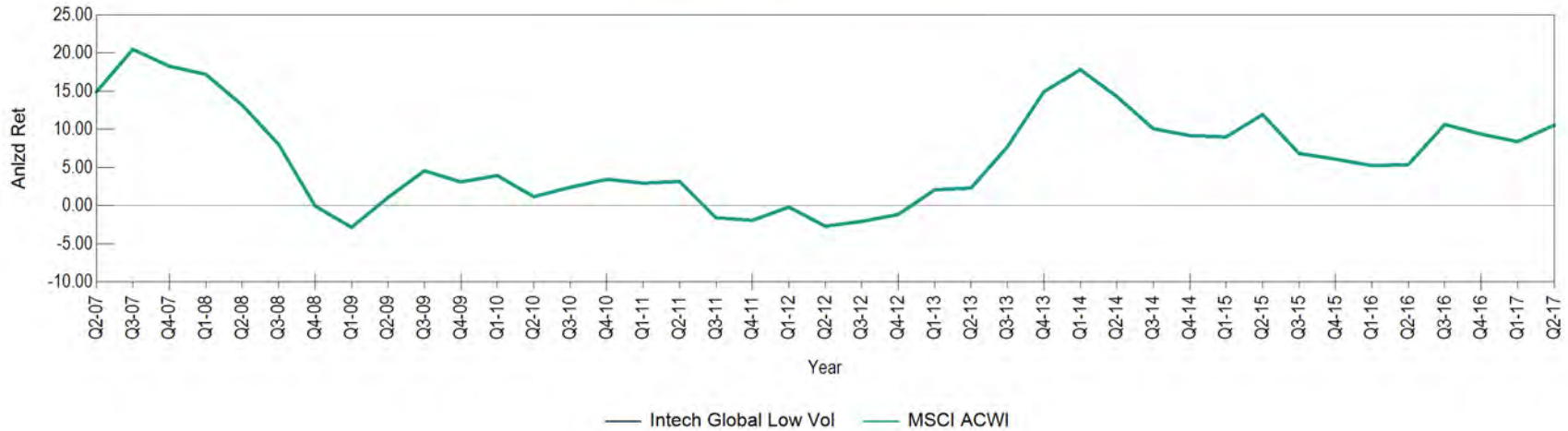


	Return (Rank)										
5th Percentile	8.6	31.0	11.0	16.7	9.8	21.5	8.5	17.1	38.6	29.5	
25th Percentile	6.1	22.1	7.5	13.3	6.4	10.3	3.0	7.4	30.6	20.4	
Median	4.7	18.7	5.9	11.9	4.9	6.8	0.1	4.6	26.2	17.2	
75th Percentile	3.6	13.5	4.2	10.4	3.8	3.9	-2.9	1.5	20.0	14.4	
95th Percentile	-0.5	0.5	-2.2	3.5	-0.2	-1.4	-15.1	-7.4	2.7	7.4	
# of Portfolios	834	832	757	678	391	842	692	609	552	475	
● Intech Global Low Vol	2.7 (87)	4.9 (91)	7.5 (26)	11.5 (58)	-- (--)	6.5 (53)	4.1 (18)	11.2 (14)	24.2 (62)	-- (--)	
▲ MSCI ACWI	4.3 (60)	18.8 (50)	4.8 (68)	10.5 (74)	3.7 (76)	7.9 (42)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	

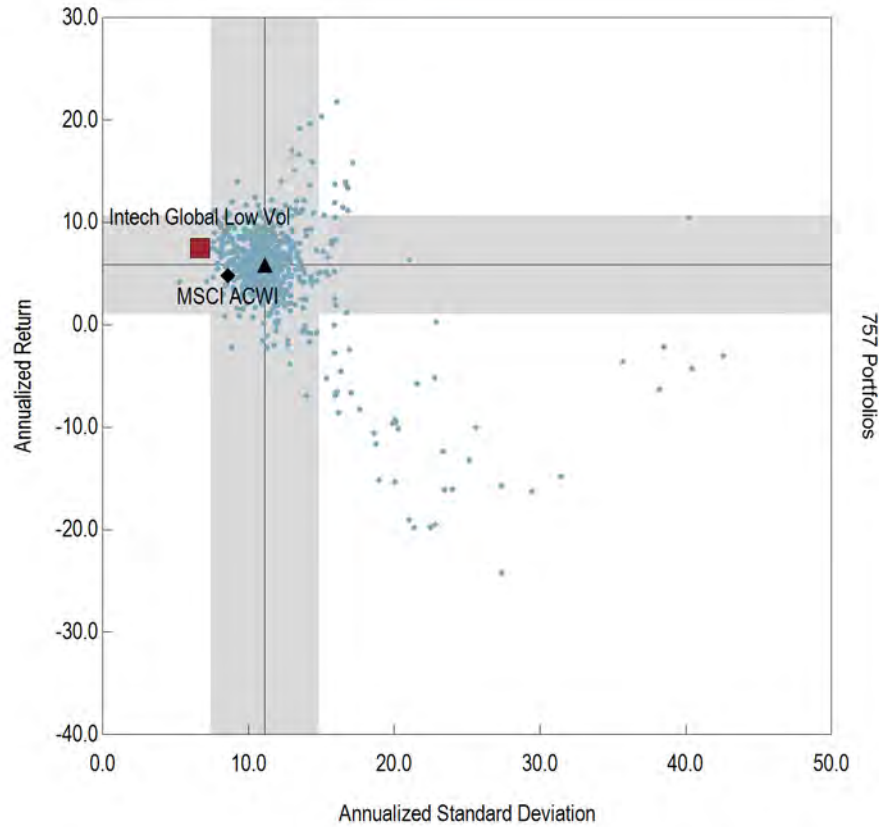
Rolling 3 Year Annualized Return (%)



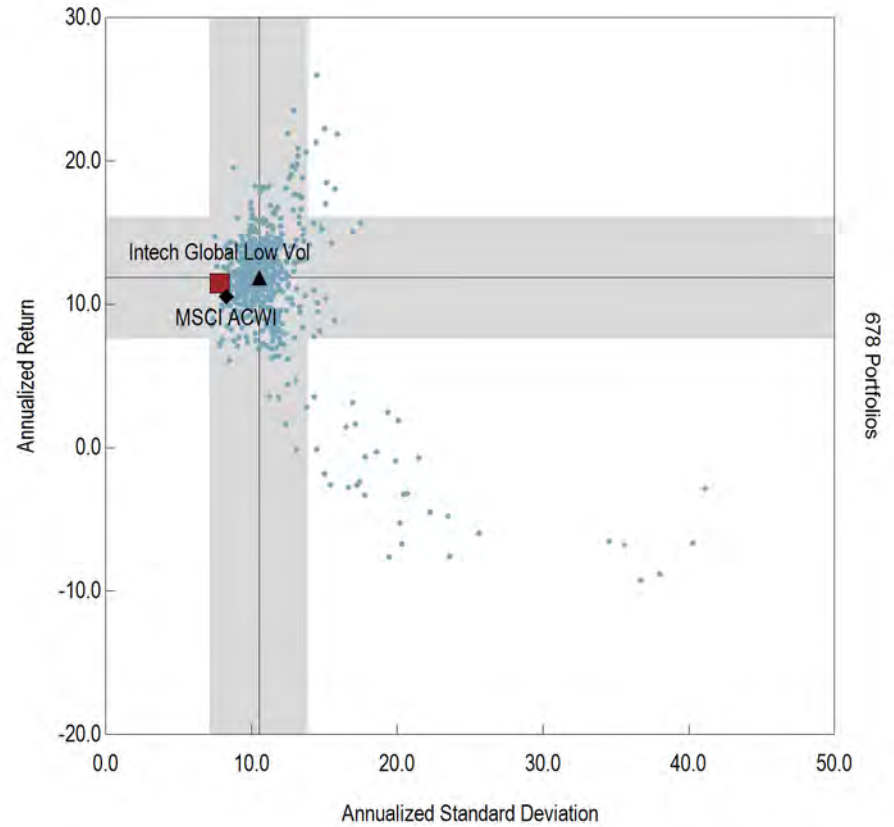
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Global Low Vol	7.5%	6.7%	1.1
MSCI ACWI	4.8%	8.6%	0.5
eA All Global Equity Gross Median	5.9%	11.1%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Global Low Vol	11.5%	7.8%	1.4
MSCI ACWI	10.5%	8.3%	1.3
eA All Global Equity Gross Median	11.9%	10.5%	1.1

## **Domestic Fixed Income Managers**

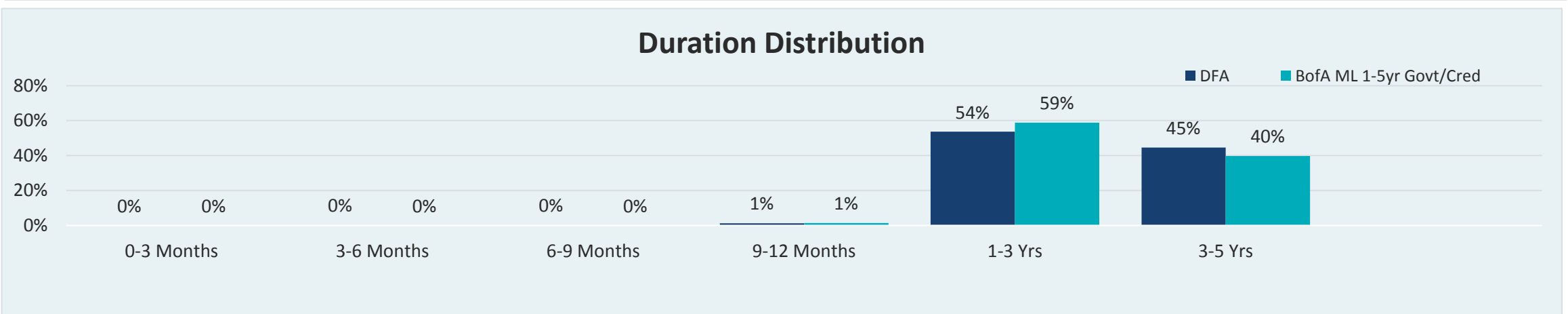
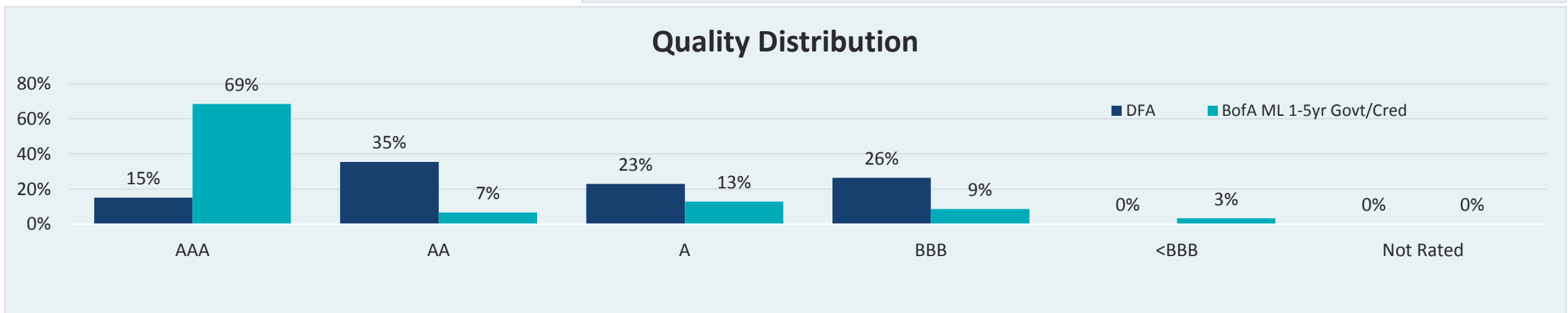
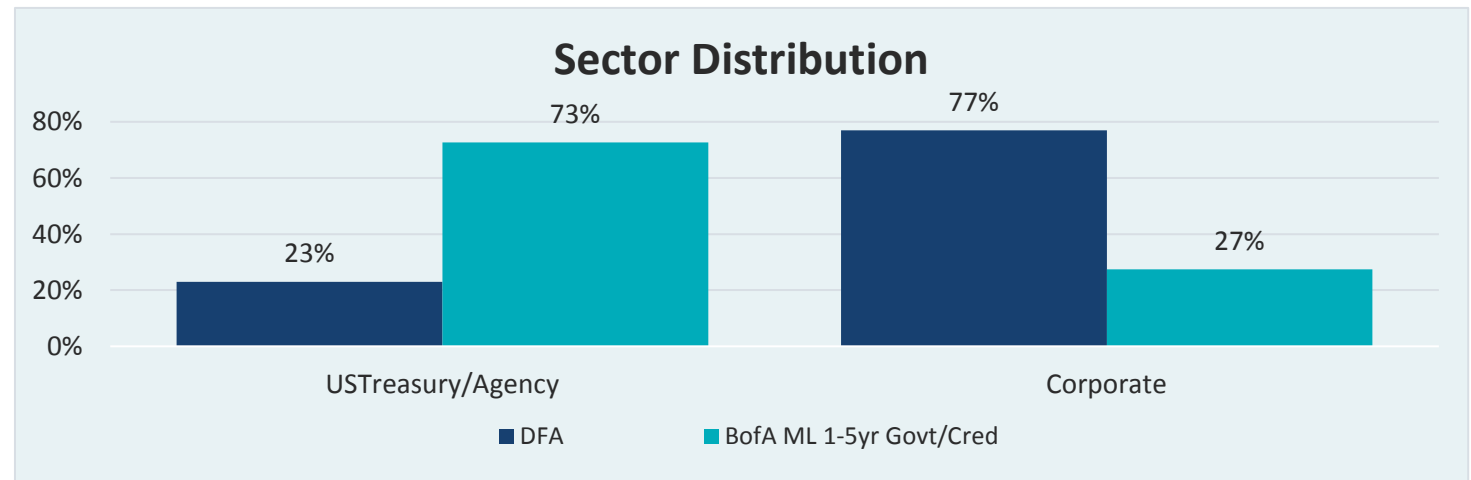
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# DFA Short Credit Manager Portfolio Overview

Period Ending: June 30, 2017

Domestic short term US credit fixed income portfolio that maximizes total return through income and capital appreciation. Primary personnel include Dave Plecha and Joseph Kolerich.

	DFA	BofA ML 1-5yr Gov/Credit
Effective Duration	2.72	2.72
Yield to Maturity	2.88	2.86
Average Quality	A+	Aa1
Average Coupon	2.78%	2.44%

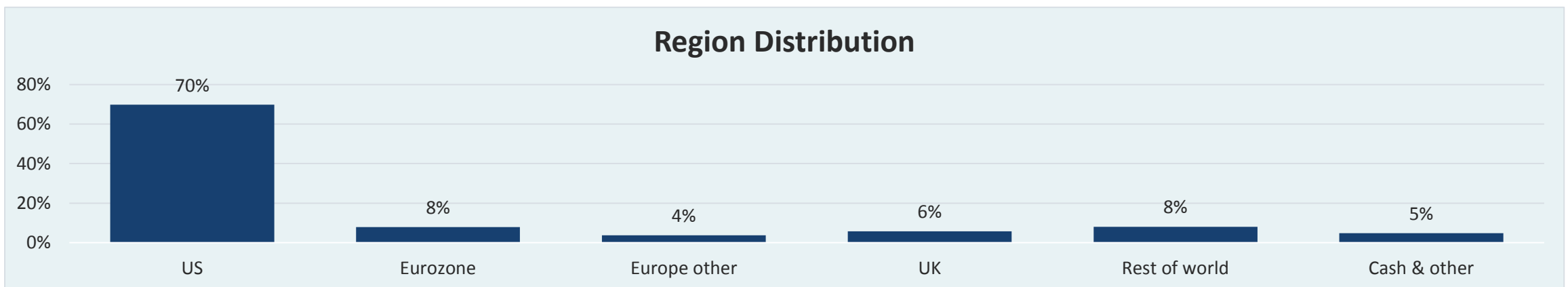
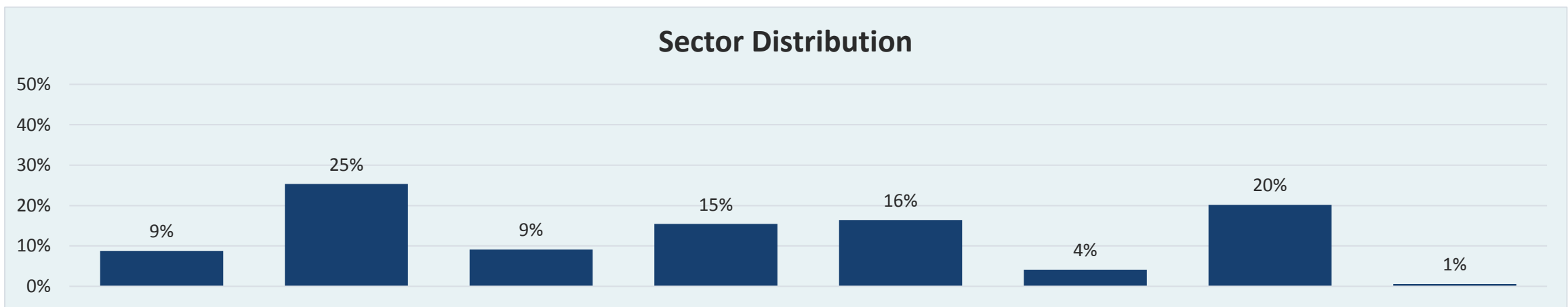
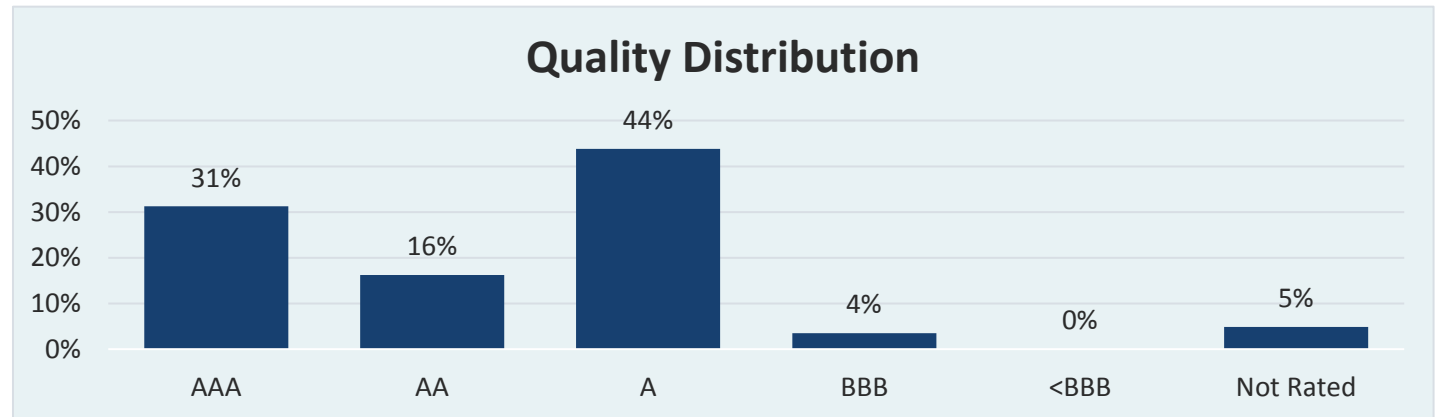


# Insight Short Duration Manager Portfolio Overview

Period Ending: June 30, 2017

High quality, short duration multi-sector fixed income portfolio comprised of Treasuries, Agencies, investment grade corporates, and ABS designed specifically to meet CCCERA's liabilities. Key personnel include Gerard Berrigan and Jesse Fogarty.

	Insight
Effective Duration	1.38
Yield to Maturity	1.74
Average Quality	AA-



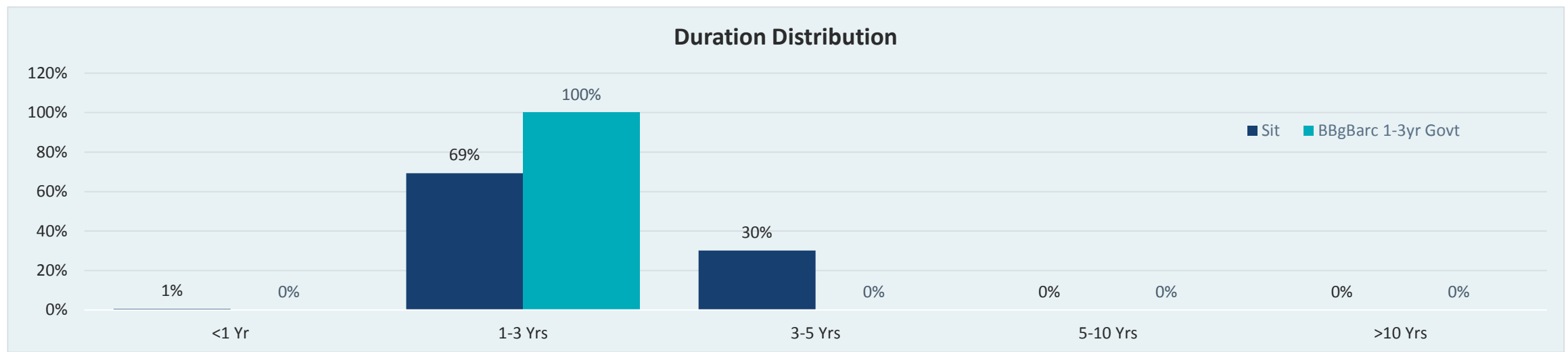
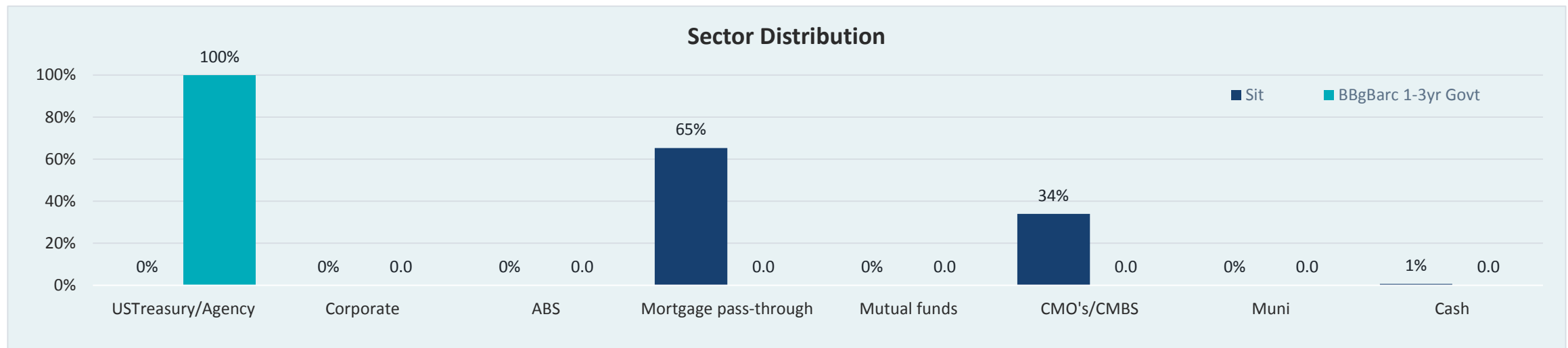


# Sit Short Duration Manager Portfolio Overview

Period Ending: June 30, 2017

Short duration fixed income portfolio with a focus on earning high levels of interest income. Primary personnel include Bryce Doty, Paul Jungquist and Michael Brilley.

	Sit	BBgBarc 1-3yr Govt
<b>Adjusted Duration</b>	<b>2.5</b>	<b>1.9</b>
<b>Average Quality</b>	<b>AAA</b>	<b>AAA</b>
<b>Average Coupon</b>	<b>6.6%</b>	<b>1.6%</b>



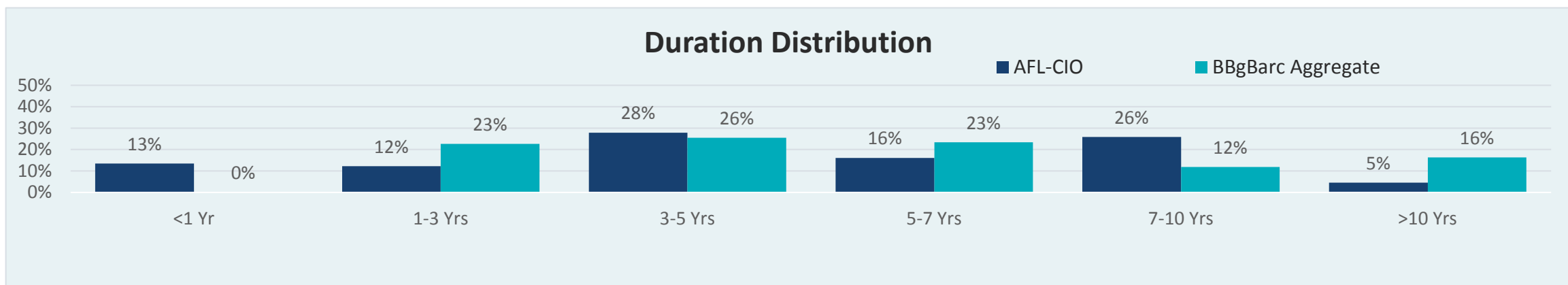
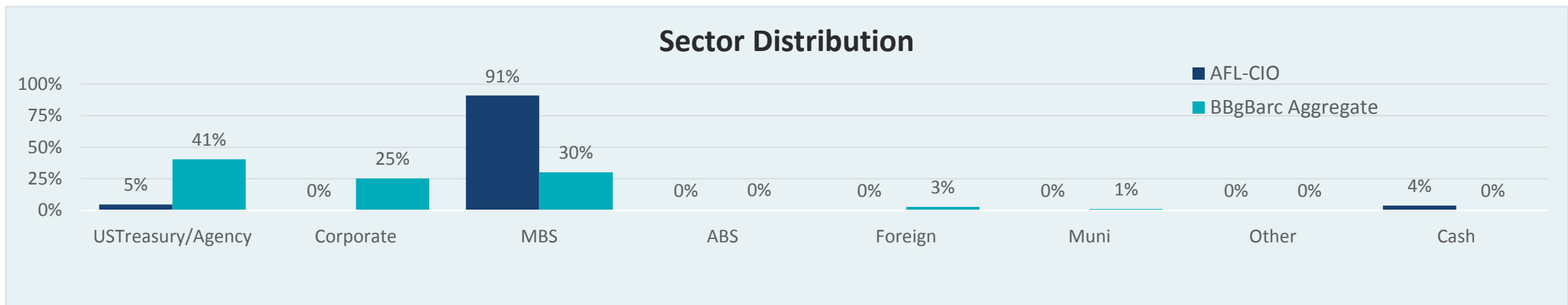
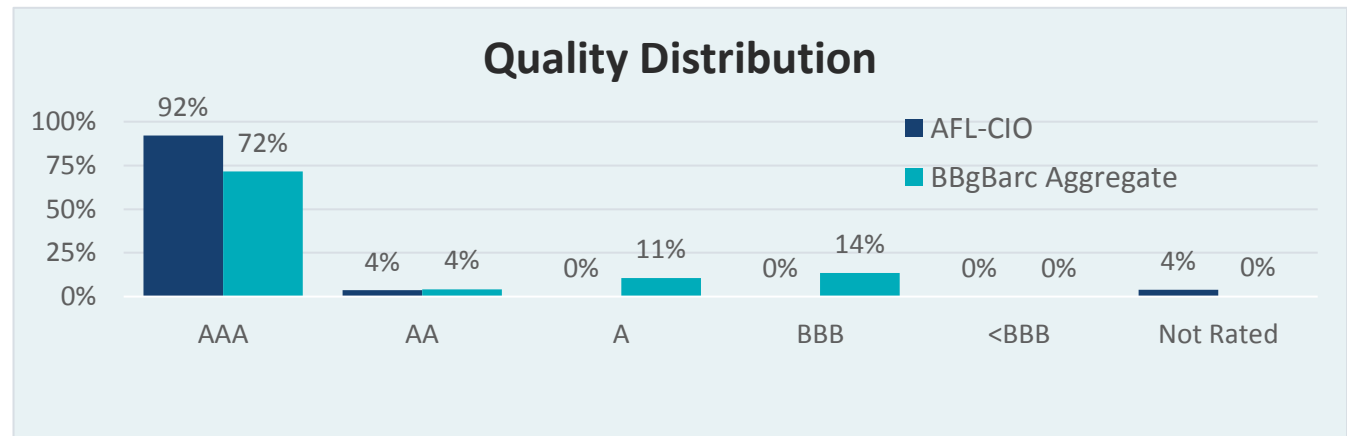
# AFL-CIO

## Manager Portfolio Overview

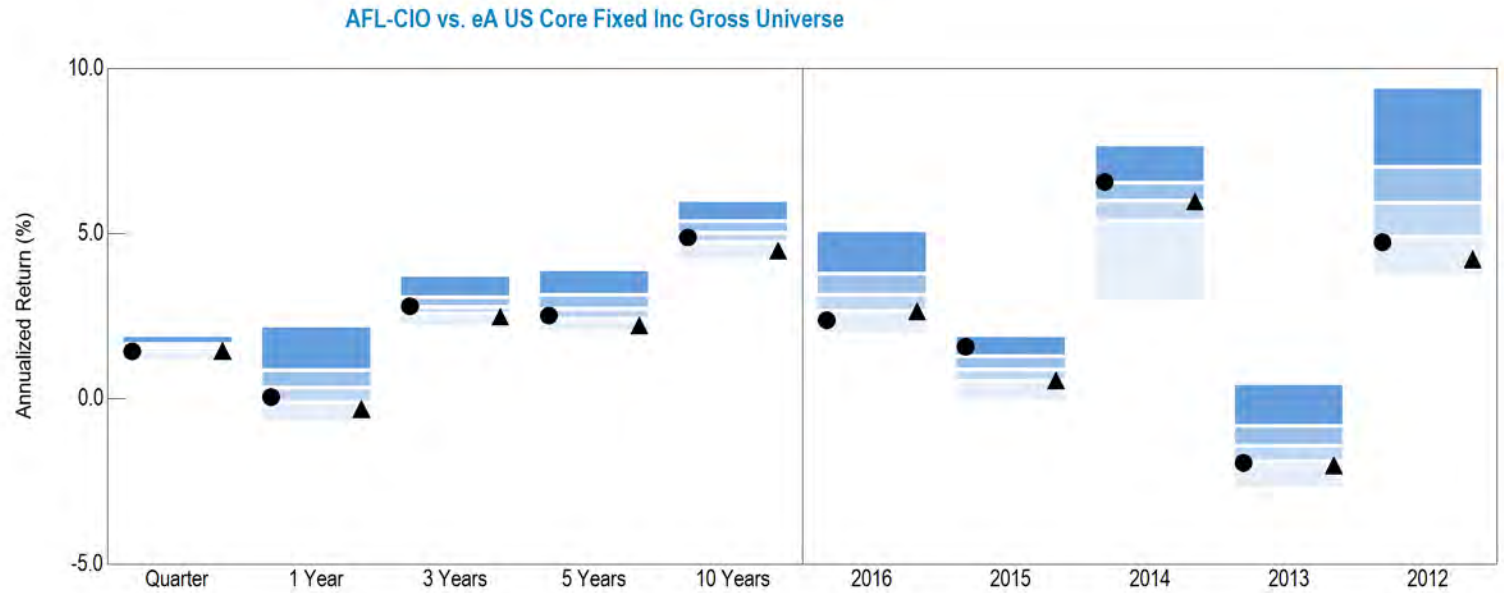
Period Ending: June 30, 2017

Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

	AFL-CIO	BBgBarc Aggregate
Effective Duration	5.42	6.09
Yield to Maturity	3.27	2.50
Average Quality	AAA	AA
Average Coupon	3.29%	3.14%

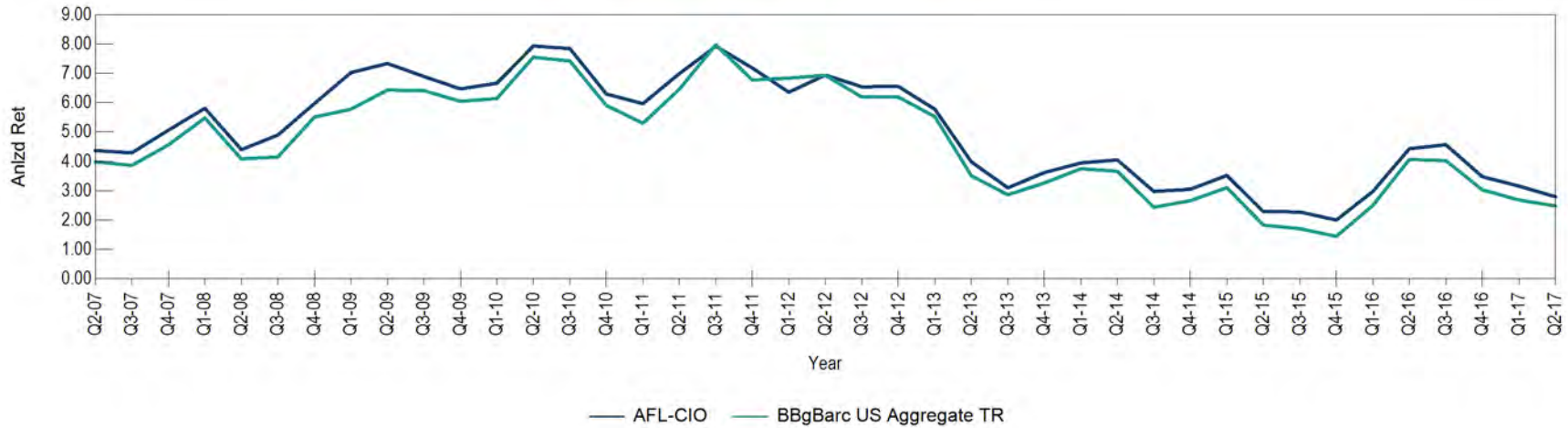


Duration and Quality distributions exclude cash.

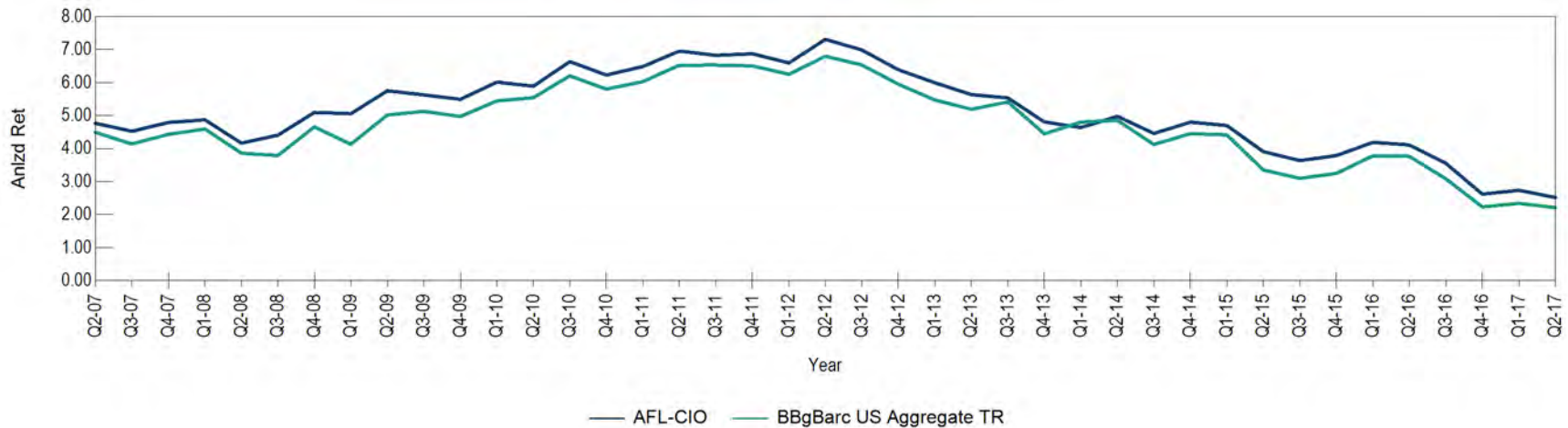


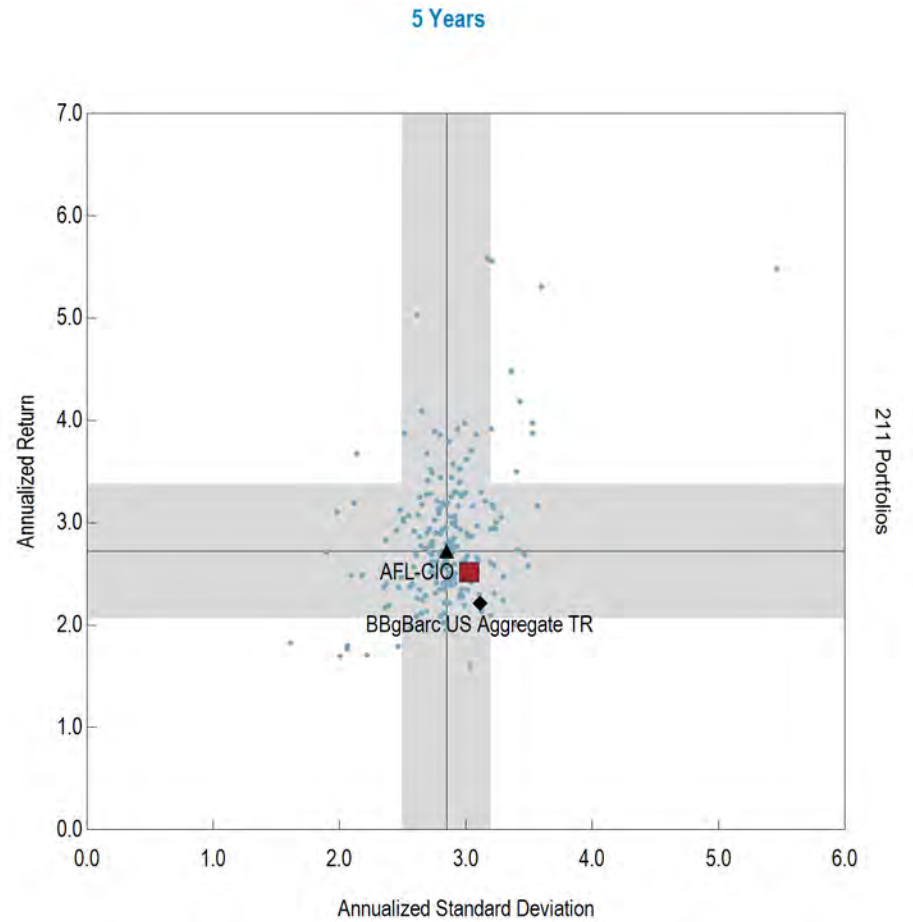
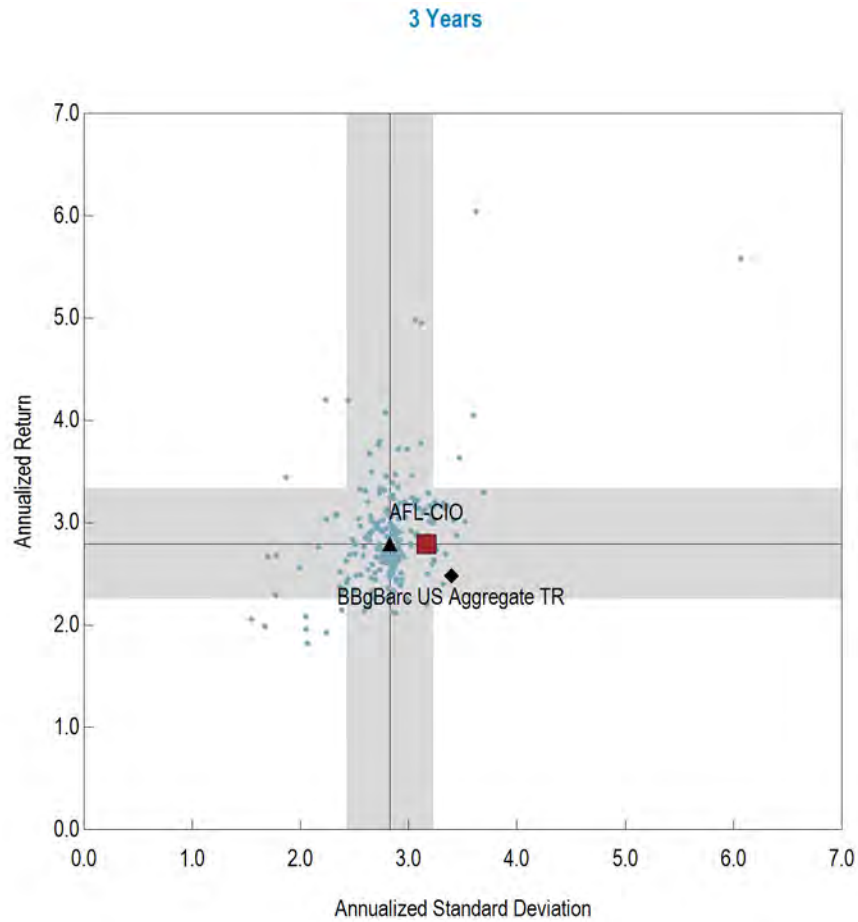
	Return (Rank)									
5th Percentile	1.9	2.2	3.7	3.9	6.0	5.1	1.9	7.7	0.5	9.4
25th Percentile	1.7	0.9	3.1	3.2	5.4	3.8	1.3	6.5	-0.8	7.0
Median	1.6	0.3	2.8	2.7	5.0	3.2	0.9	6.0	-1.4	5.9
75th Percentile	1.4	-0.1	2.6	2.4	4.7	2.7	0.5	5.4	-1.9	4.9
95th Percentile	1.1	-0.7	2.2	2.0	4.2	2.0	-0.1	2.9	-2.7	3.7
# of Portfolios	215	215	214	211	193	223	196	213	209	228
● AFL-CIO	1.4 (75)	0.0 (65)	2.8 (50)	2.5 (68)	4.9 (62)	2.4 (87)	1.6 (15)	6.6 (25)	-1.9 (78)	4.7 (80)
▲ BBgBarc US Aggregate TR	1.4 (73)	-0.3 (86)	2.5 (83)	2.2 (89)	4.5 (90)	2.6 (77)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





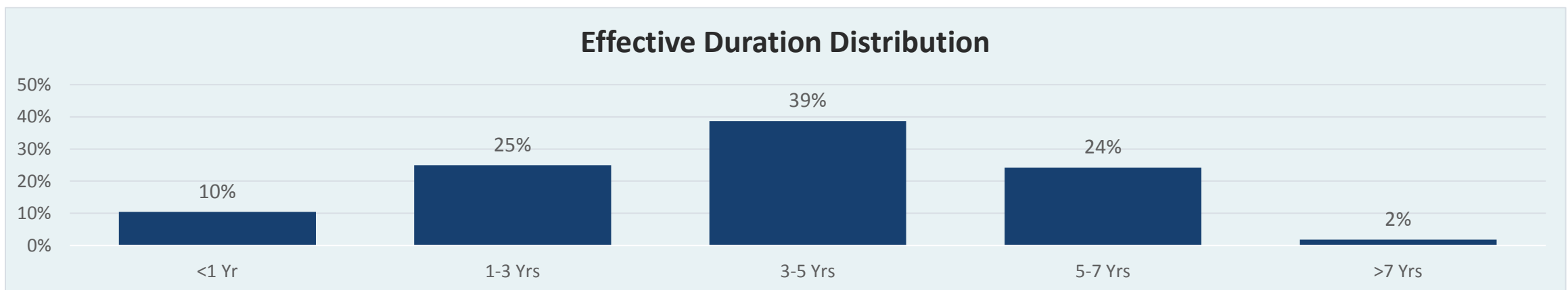
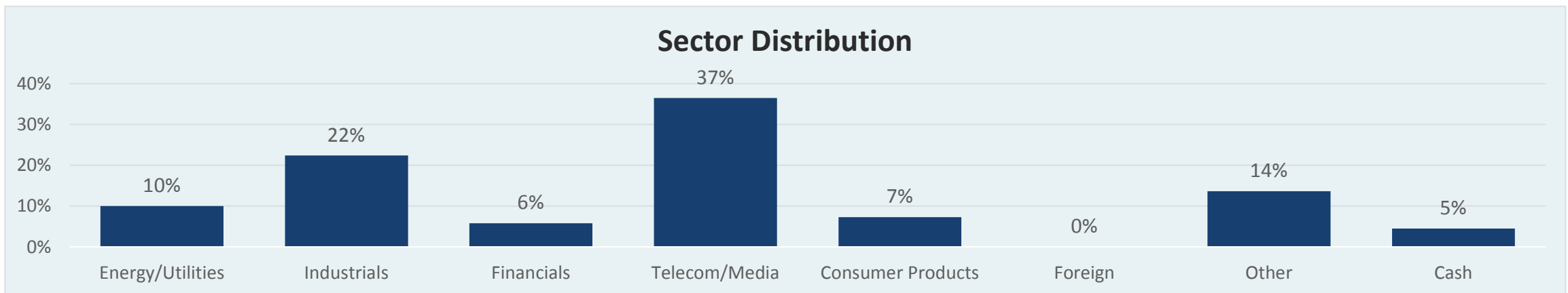
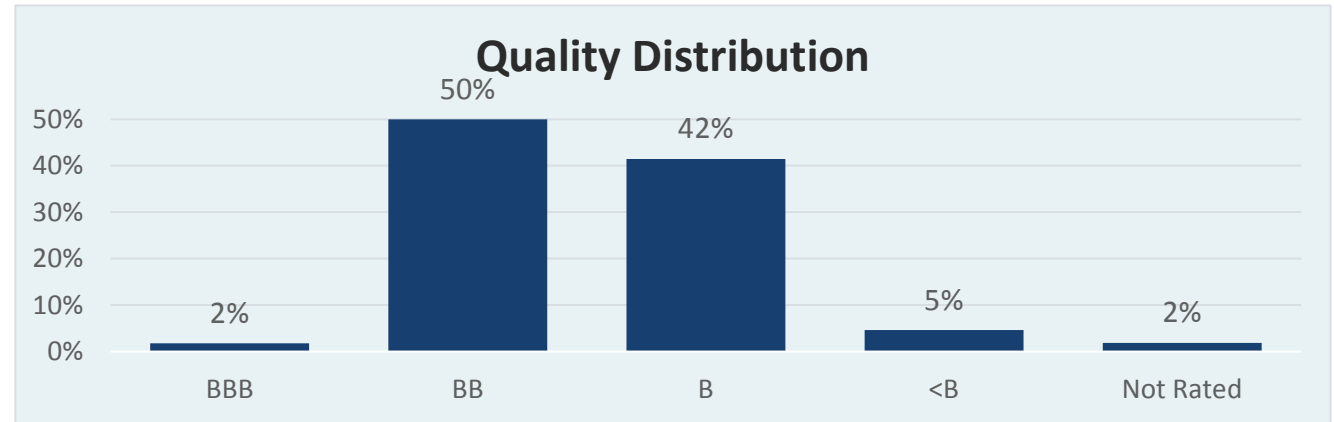
	3 Years			5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
AFL-CIO	2.8%	3.2%	0.8	AFL-CIO	2.5%	3.0%	0.8
BBgBarc US Aggregate TR	2.5%	3.4%	0.7	BBgBarc US Aggregate TR	2.2%	3.1%	0.7
eA US Core Fixed Inc Gross Median	2.8%	2.8%	0.9	eA US Core Fixed Inc Gross Median	2.7%	2.8%	0.9

## High Yield Managers

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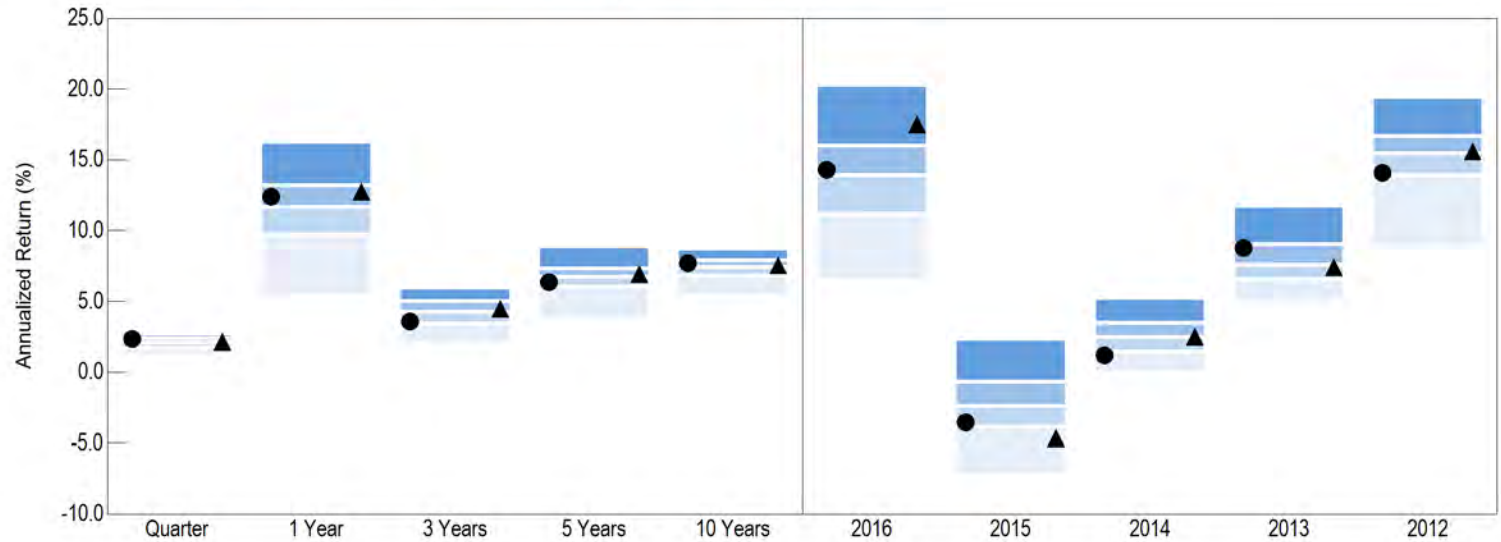
Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	BofA ML HY Master II
Effective Duration	3.7	4.0
Yield to Maturity	5.5	6.1
Average Quality	B1	B1
Average Coupon	6.5%	6.5%



Quality distribution excludes cash.

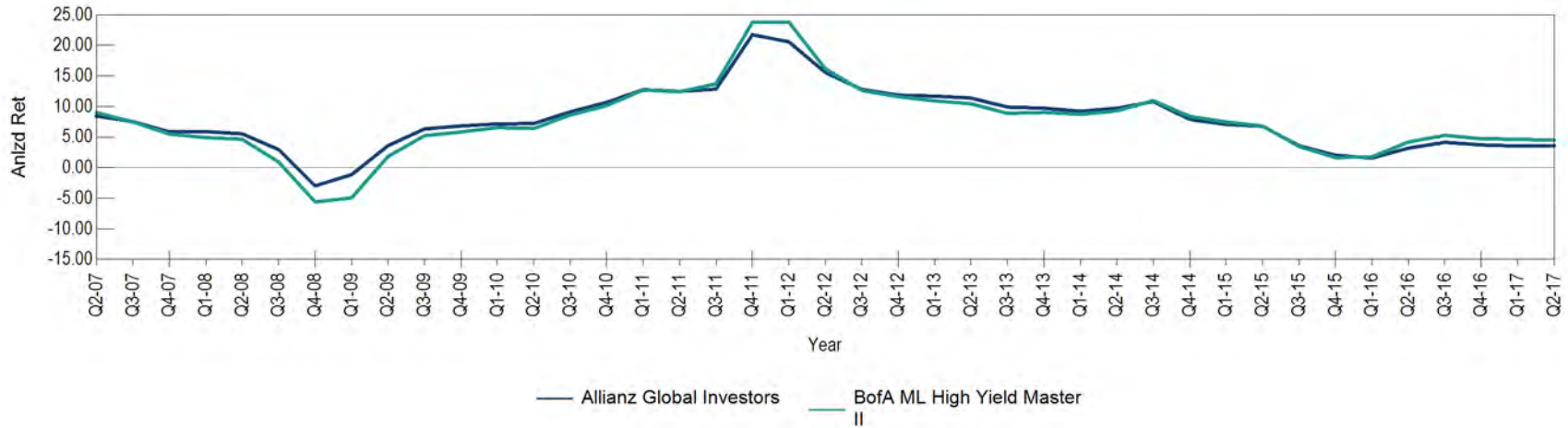
Allianz Global Investors vs. eA US High Yield Fixed Inc Gross Universe



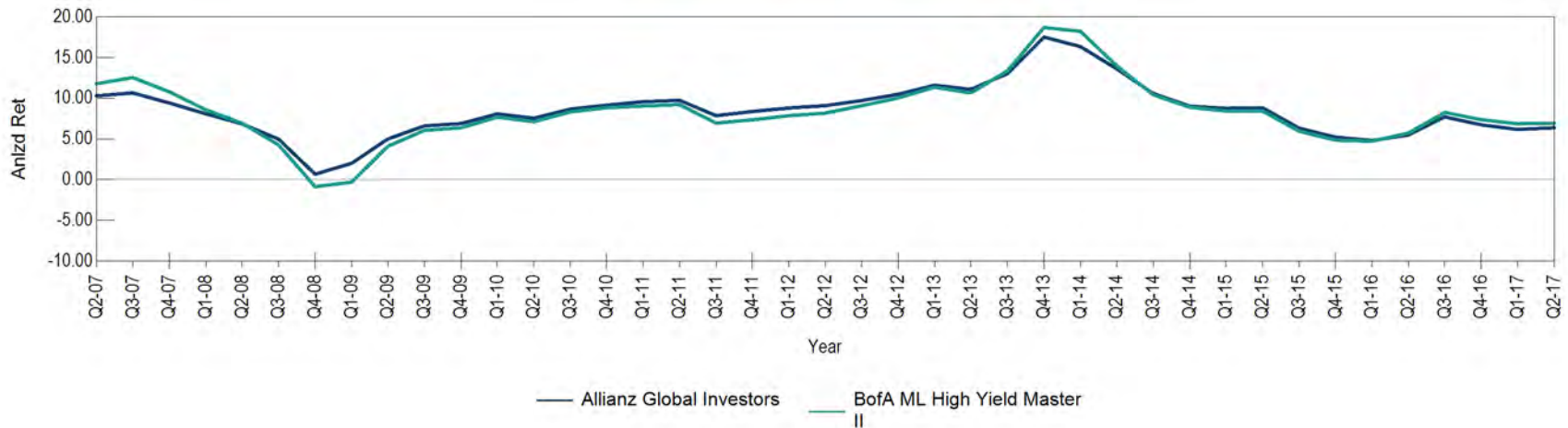
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2016	2015	2014	2013	2012
5th Percentile	2.7	16.3	5.9	8.9	8.7	20.3	2.3	5.2	11.7	19.4
25th Percentile	2.4	13.2	5.0	7.4	7.9	16.0	-0.7	3.5	9.1	16.7
Median	2.1	11.7	4.3	6.8	7.5	14.0	-2.4	2.5	7.6	15.5
75th Percentile	1.7	9.7	3.5	6.1	6.9	11.3	-3.8	1.5	6.6	14.0
95th Percentile	1.2	5.5	2.0	3.8	5.4	6.6	-7.2	0.0	5.0	8.9
# of Portfolios	181	180	171	156	109	183	155	141	130	129
● Allianz Global Investors	2.3 (33)	12.4 (36)	3.6 (74)	6.4 (66)	7.7 (33)	14.3 (47)	-3.5 (68)	1.2 (83)	8.8 (28)	14.1 (73)
▲ BofA ML High Yield Master II	2.1 (47)	12.8 (31)	4.5 (41)	6.9 (41)	7.5 (48)	17.5 (14)	-4.6 (83)	2.5 (50)	7.4 (55)	15.6 (47)



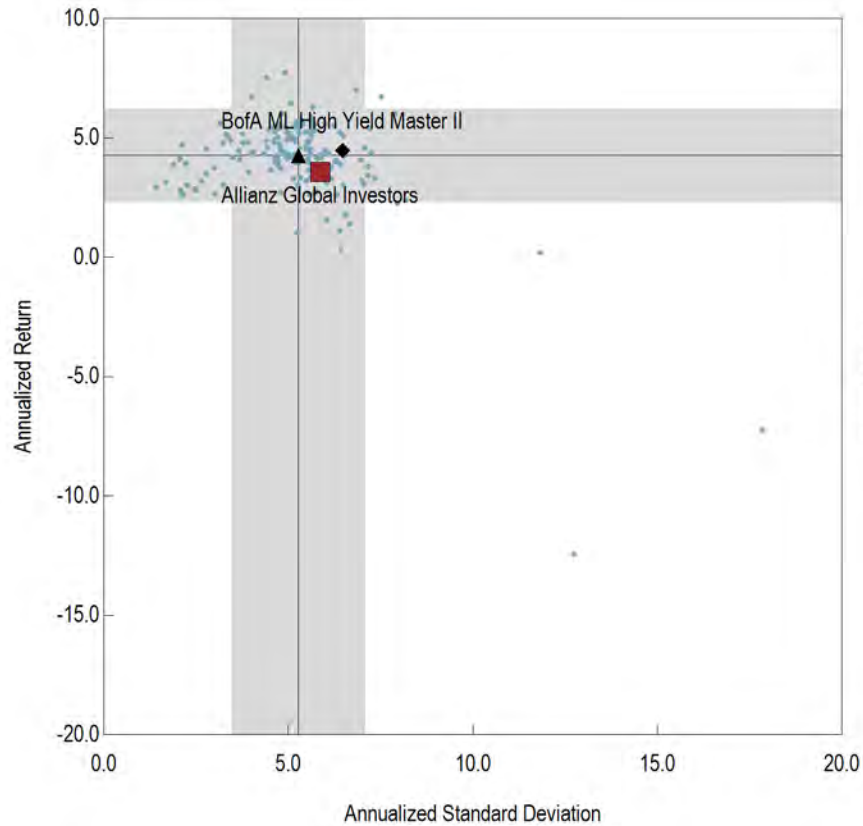
Rolling 3 Year Annualized Return (%)



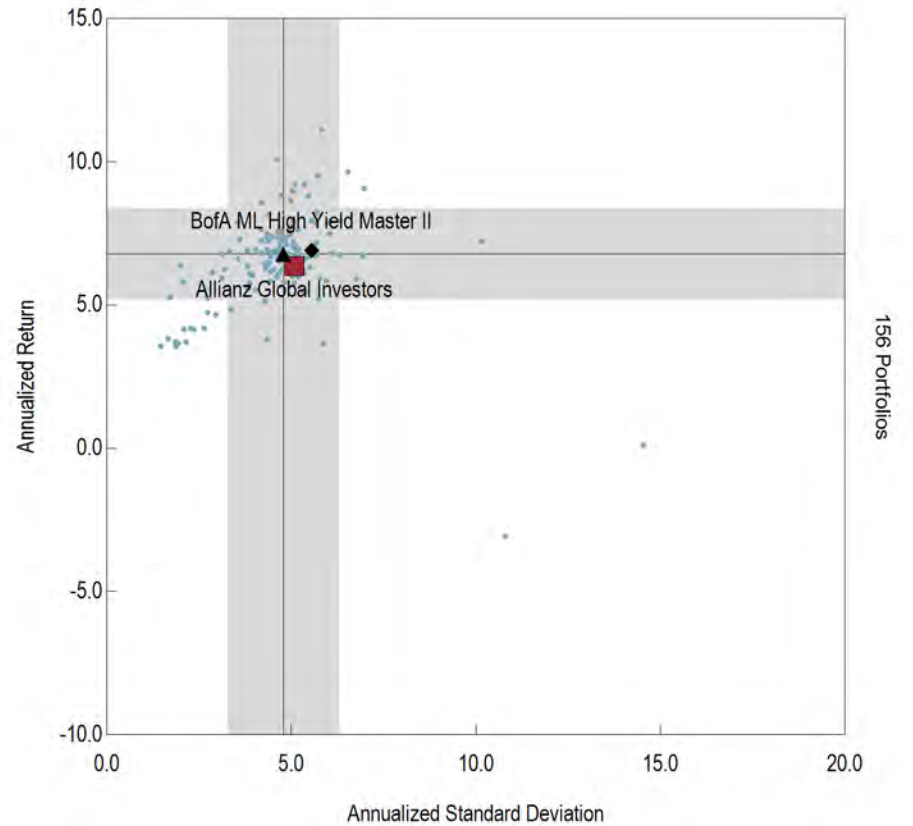
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	3.6%	5.9%	0.6
BofA ML High Yield Master II	4.5%	6.5%	0.7
eA US High Yield Fixed Inc Gross Median	4.3%	5.3%	0.8

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	6.4%	5.1%	1.2
BofA ML High Yield Master II	6.9%	5.5%	1.2
eA US High Yield Fixed Inc Gross Median	6.8%	4.8%	1.4

## **Inflation Hedge Managers**

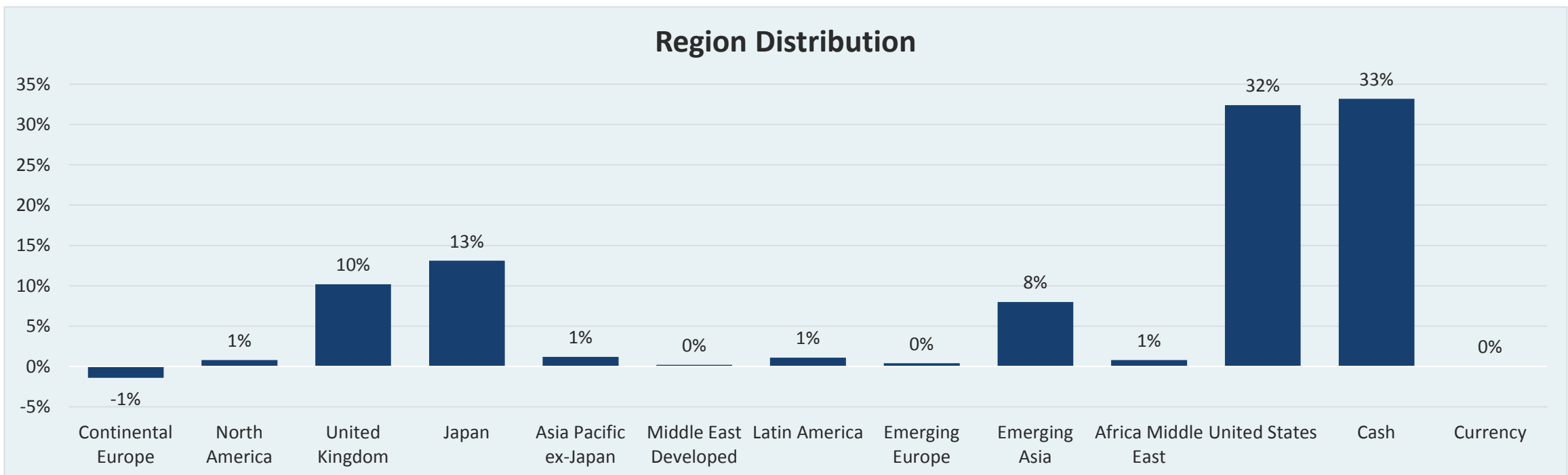
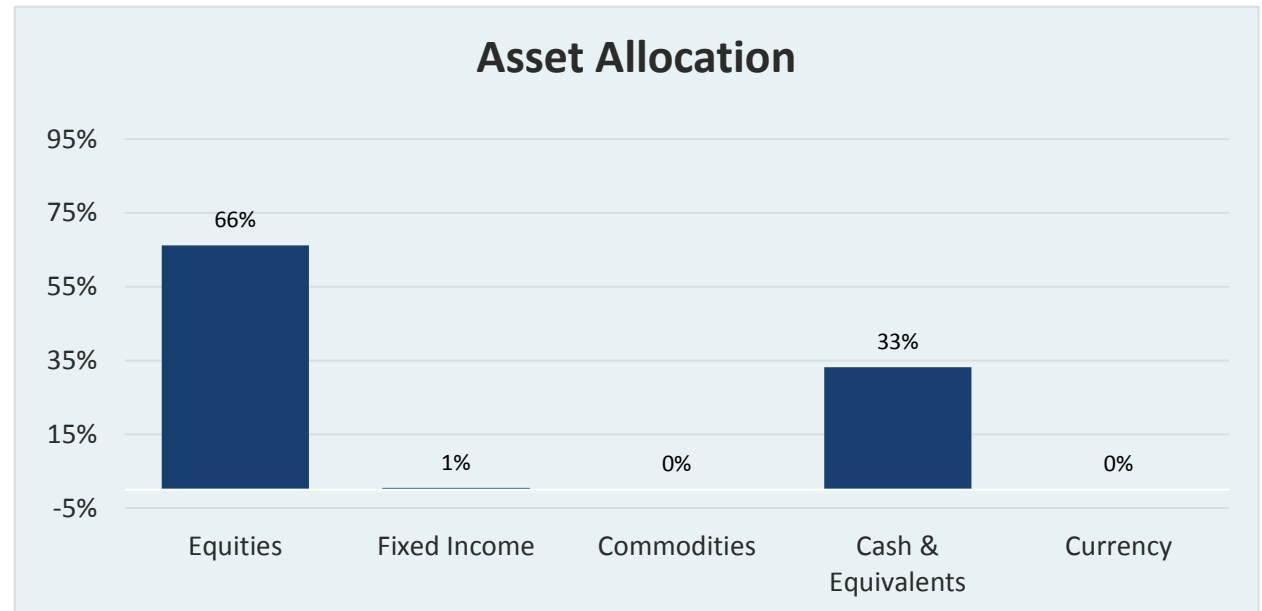
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# Wellington Total Return Manager Portfolio Overview

Period Ending: June 30, 2017

Tactical multi-asset class real return strategy with a focus on managing risk of active strategies used to gain exposure to attractive assets of markets.

	Wellington Total Return
Number of Equity Holdings	913
Number of Commodity Holdings	146
Effective Duration (Years)	4.00
Average Quality	D



## Real Estate Managers

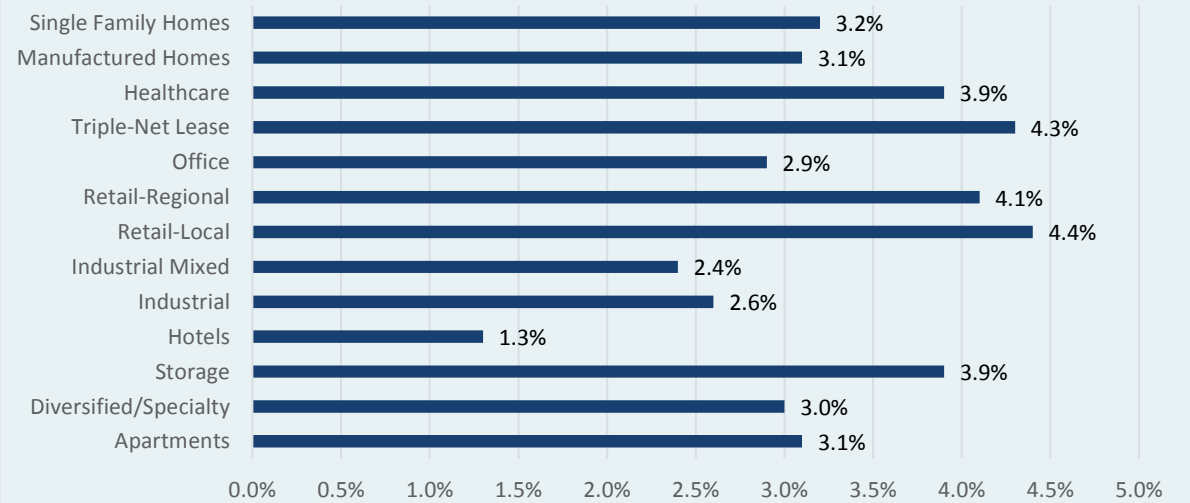
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Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets

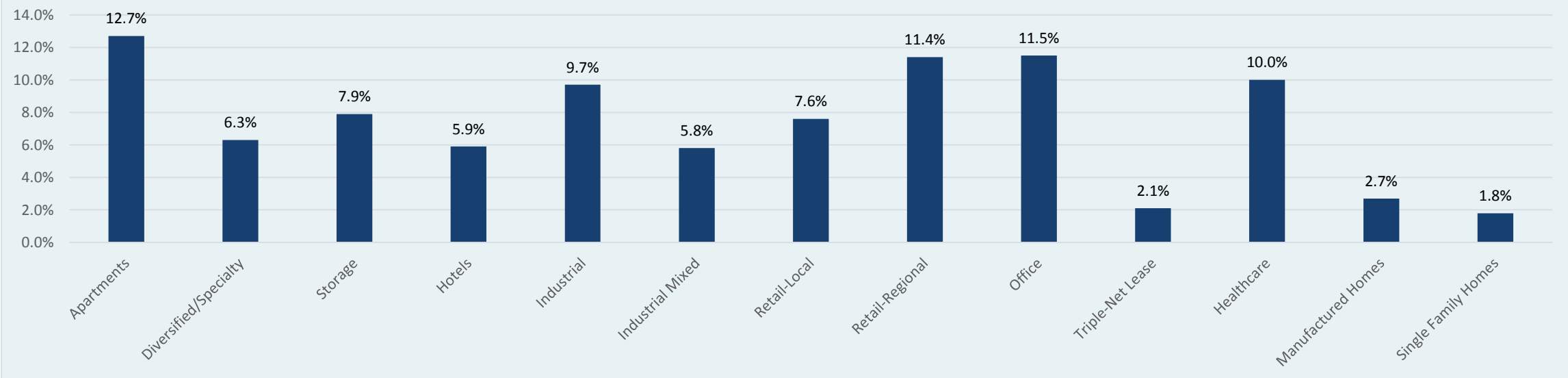
**Top Five Holdings**

Company	Property Type	Allocation
Simon Property Group	Retail-Regional	9.7%
Welltower Inc.	Healthcare	5.9%
Equity Residential	Apartments	5.6%
ProLogis Inc	Industrial	5.3%

**Dividend Yield by Property Type**



**Property Type Allocation**



4.6% is allocated to Cash and Cash Equivalents.

**Performance Return Calculations**

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

**Data Source**

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

**Illiquid Alternatives**

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

**Manager Line Up**

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
Intech Large Cap Core	11/10/2006	State Street	Long Wharf Fund III	3/30/2007	Long Wharf
PIMCO Stocks+ AR	8/31/2002	State Street	Long Wharf Fund IV	7/3/2013	Long Wharf
Jackson Square Partners	5/1/2005	State Street	Long Wharf Fund V	9/30/2016	Long Wharf
Robeco Boston Partners	6/1/1995	State Street	Invesco Real Estate I	2/1/2005	Invesco
Emerald Advisors	4/7/2003	State Street	Invesco Real Estate II	11/26/2007	Invesco
Ceredex	11/6/2011	State Street	Invesco Real Estate III	6/30/2013	Invesco
Pyrford	4/25/2014	State Street	Invesco Real Estate IV	6/30/2014	Invesco
William Blair	10/29/2010	William Blair	Oaktree REOF V	12/31/2011	Oaktree
Artisan Partners	10/1/2012	SEI Trust	Oaktree REOF VI	9/30/2013	Oaktree
First Eagle	1/18/2011	State Street	Oaktree REOF VII	4/1/2015	Oaktree
Intech Global Low Vol	5/6/2012	State Street	Siguler Guff DREOF	1/25/2012	Siguler Guff
PIMCO RAE Emerging Markets	2/28/2017	State Street	Siguler Guff DREOF II	8/31/2013	Siguler Guff
AFL-CIO	6/30/1991	AFL-CIO	Siguler Guff DREOF II Co-Inv	1/27/2016	Siguler Guff
Sit Short Duration	11/2/2016	State Street	Paulson Real Estate Fund II	11/10/2013	State Street
DFA Short Credit	11/21/2016	State Street	Adams Street Partners	3/18/1996	Adams Street
Insight Short Duration	11/18/2016	State Street	Adams Street Partners II	1/16/2009	Adams Street
BlackRock	4/20/2017	BlackRock	Adams Street Partners Venture	4/28/2017	Adams Street
Torchlight II	9/30/2006	Torchlight	Adams Street Partners - BFP	1/18/1996	Adams Street
Torchlight III	12/31/2008	Torchlight	Adams Street Partners - Fund 5	9/21/2012	Adams Street
Torchlight IV	7/1/2012	Torchlight	Bay Area Equity Fund	6/14/2004	DBL Investors
Torchlight V	7/1/2012	Torchlight	Bay Area Equity Fund II	12/7/2009	DBL Investors
Allianz Global Investors	4/25/2000	State Street	Carpenter Bancfund	1/31/2008	Carpenter Bancfund
BlackRock Transition	11/1/2016	State Street	EIF US Power Fund I	11/26/2003	Ares Management
Wellington Real Total Return	2/26/2013	State Street	EIF US Power Fund II	8/16/2005	Ares Management
Aether Real Assets III	11/27/2013	Aether	EIF US Power Fund III	5/30/2007	Ares Management
Commonfund	6/28/2013	Commonfund	EIF US Power Fund IV	11/28/2011	Ares Management
Adelante	9/30/2001	State Street	EIF US Power Fund V	11/28/2016	Ares Management
Cash	-	State Street	Nogales	2/15/2004	Nogales
Angelo Gordon Realty Fund VIII	1/23/2012	Angelo Gordon	Paladin III	11/30/2007	Paladin
Angelo Gordon Realty Fund IX	12/8/2014	Angelo Gordon	Ocean Avenue Fund II	6/11/2014	Ocean Avenue
Angelo Gordon Energy Credit Opp	9/24/2015	Angelo Gordon	Ocean Avenue Fund III	4/15/2016	Ocean Avenue
DLJ RECP II	9/24/1999	DLJ	Pathway	11/9/1998	Pathway

DLJ RECP III	6/23/2005	DLJ	Pathway 2008	12/26/2008	Pathway
DLJ RECP IV	2/11/2008	DLJ	Pathway 6	5/24/2011	Pathway
DLJ RECP V	7/1/2014	DLJ	Pathway 7	2/7/2013	Pathway
Wastewater Opp. Fund	12/8/2015	Wastewater	Siguler Guff CCCERA Opps	6/3/2014	Siguler Guff
LaSalle Income & Growth VI	7/16/2013	LaSalle	Siguler Guff Secondary Opps	11/30/2016	Siguler Guff
LaSalle Income & Growth VII	2/28/2017	LaSalle	Aether Real Assets IV	3/16/2016	Aether
Hearthstone II	6/17/1998	Hearthstone	Parametric Overlay	3/29/2017	State Street

**Policy & Custom Index Composition**

Policy Index (12/1/2016 - present)	22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI +4%, 8.1% S&P 500 +4%, 1.7% BofA High Yield Master II +2%, 5.1% BofA High Yield Master II, 22.4% BBgBarc 1-3 Yr Gov/Credit, 1.6% 90-day T-Bills, 3.2% BBgBarc US Aggregate.
Policy Index (4/1/2012-11/30/2016)	27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% BofA High Yield Master II, 4% BBgBarc Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Real Estate Benchmark (current)	11% Wilshire REIT, 18% NCREIF Property Index, 71% NCREIF ODCE Index.
Real Estate Benchmark (4/1/2012-11/30/2016)	40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-US.

**Other Disclosures**

All data prior to 12/31/2014 was provided by previous consultant.