



# **PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS**



**PERIOD ENDING: JUNE 30, 2016**

Investment Performance Review for

**Imperial County Employees' Retirement System**

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Investment Landscape

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**PERSPECTIVES**  
**THAT DRIVE**  
**ENTERPRISE**  
**SUCCESS**

3<sup>RD</sup> QUARTER 2016  
Investment Landscape



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

## THE ECONOMIC CLIMATE

- The U.K. vote to leave the European Union surprised markets and caused the beginning of a reassessment of associated risks. *p. 17, 30*
- Economic growth has been mixed across the developed markets. BRICS economies exhibited a slight improvement in growth. Brazil and Russia may be rounding the corner from severe recession. *p. 16, 31*
- Inflation around the world continued downward with the U.S. being an exception. *p. 15, 16*

## MARKET PORTFOLIO IMPACTS

- The U.S. dollar rose 0.5% in Q2 on a trade-weighted basis. If we see stabilization of the dollar this may have a positive impact on U.S. earnings. Investors who have unhedged international equity exposure would also benefit. *p. 25, 38*
- The Bloomberg Commodity index exhibited a bounce in Q2 returning 12.8%, but is still down -13.3% over the past year. *p. 36*

## THE INVESTMENT CLIMATE

- Government bond yields have reached all time lows in many developed countries around the globe and a third of government bonds as measured by market value are now characterized by negative yields. *p. 19*
- Following Britain's unexpected vote to leave the E.U., markets saw significant drawdowns. Most equity markets have now recovered losses and some have reached new highs. *p. 17, 25, 30*

## ASSET ALLOCATION ISSUES

- We continue to remain underweight risk and believe that market risks are asymmetrically skewed to the downside. *p. 32, 33*
- U.S. inflation expectations decreased during the quarter although inflation has now begun to rise. Market pricing implies U.S. inflation will decline from the current level and stay lower for longer. *p. 14*

We remain underweight to risk

Further U.S. earnings weakness could cause an adjustment of risk appetite amongst investors

# What drove the market in Q2?

## “LAID-OFF AMERICANS ARE FINALLY RETURNING TO THE LABOR MARKET: WILL THEY FIND JOBS?”

### U.S. Labor Participation Rate

Jan 31st	Feb 29th	Mar 31st	April 30th	May 31st	June 30th
62.70%	62.90%	63.00%	62.80%	62.60%	62.70%

Source: LA Times, April 1<sup>st</sup> 2016

## “OIL PRICES POISED TO HIT SWEET SPOT FOR GLOBAL ECONOMY”

### WTI Crude Oil

Jan 29th	Feb 29th	Mar 31st	April 29th	May 31st	June 30th
\$40.91	\$37.89	\$41.33	\$47.49	\$50.56	\$49.13

Source: WSJ, May 26<sup>th</sup> 2016

## “TREASURY YIELDS PLUMMET TO 3-YEAR LOW AMID GLOBAL BOND RALLY”

### U.S. 10 Year Treasury Yield

Jan 29th	Feb 29th	Mar 31st	April 29th	May 31st	June 30th
1.92%	1.73%	1.77%	1.83%	1.85%	1.47%

Source: WSJ, June 10<sup>th</sup> 2016

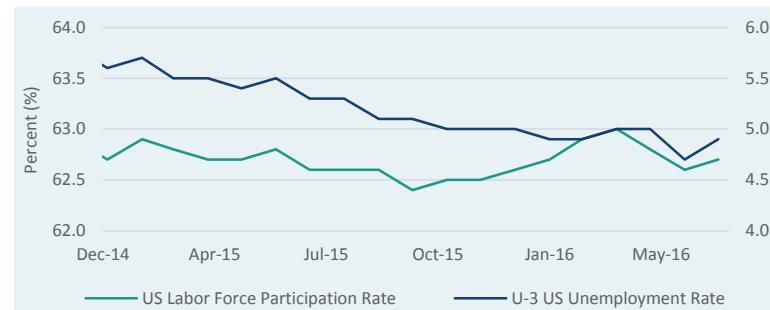
## “BRITISH EU VOTE UNNERVES WORLD LEADERS AND MARKETS”

### VIX

Jan 29th	Feb 29th	Mar 31st	April 29th	May 31st	June 24th
20.20	20.55	13.95	15.70	14.19	25.76

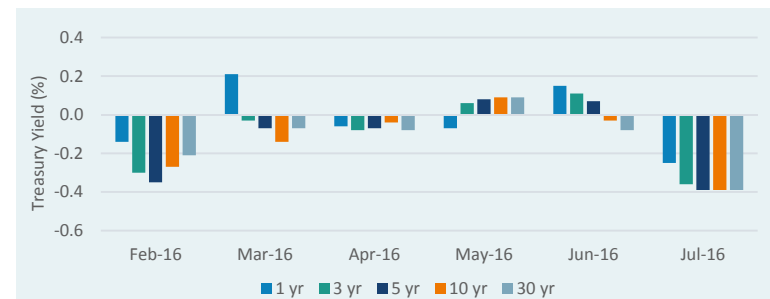
Source: Reuters, June 27<sup>th</sup> 2016

### UNEMPLOYMENT VS PARTICIPATION



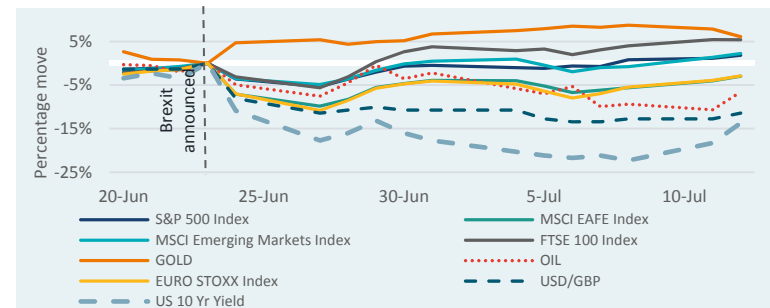
Source: FRED, as of 6/30/16

### U.S. TREASURY MONTHLY YIELD CHANGE



Source: Federal Reserve, as of 6/30/16

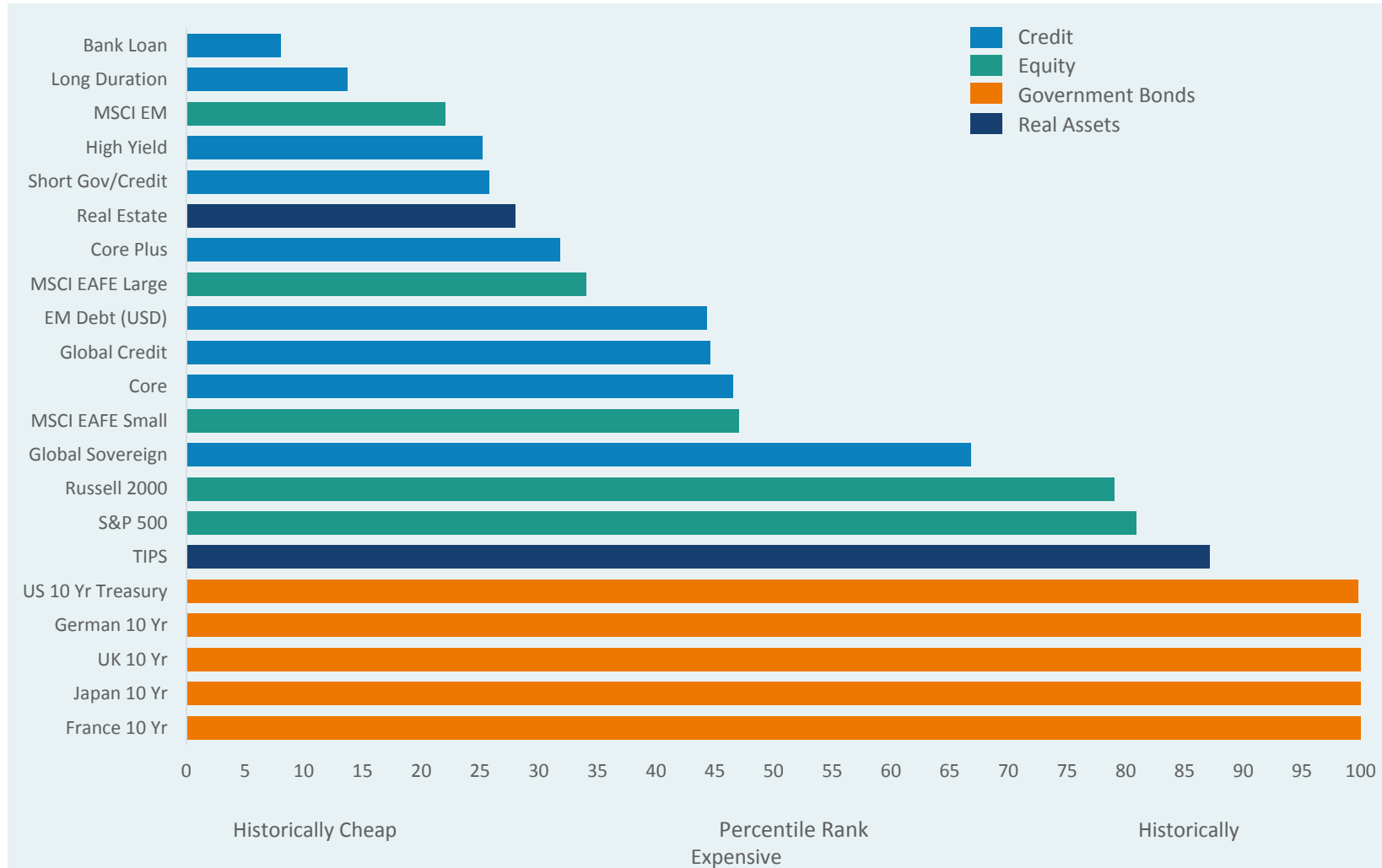
### BREXIT PRICE IMPACT



Source: Bloomberg, as of 7/11/16



# Not everything is expensive



Government bonds are priced exceptionally rich relative to history

Some credit and equity markets are priced near or below historical average levels

*Note: The bars show current value of each asset class relative to itself based on percentile rank as of June 29, 2016. Equity valuations take into account both Shiller P/E and Regular P/E. Credit valuations are based on nominal credit spreads. Government Bonds reflect the current yield on the 10 Year. Bank Loans represent Bank Loan Spread to LIBOR. Real Estate is valued based on the current annual Cap Rate Spread. Treasury Inflation Protected Securities (TIPS) reflect the current 10 year real yield. Historical data varies, ranging from 1962 (10 Yr Treasury) to 2005 (MSCI EM).*

# Economic environment



# U.S. economics summary

- U.S. real GDP grew at a 2.1% pace YoY (and 1.1% QoQ) in Q1, driven by consumption. The Atlanta Fed GDPNow indicator forecasts 2.4% QoQ real GDP growth in Q2, as of July 19<sup>th</sup>. High inventory levels in the U.S., causing little further inventory growth, have been a drag on growth over recent quarters.
- Robust economic expansion would be needed in the second half of the year to reach the Fed's 2.0% YoY expected real GDP growth target.
- U.S. CPI sits at 1.0% YoY while Core CPI (CPI excluding energy and food prices) sits at 2.2% YoY, as of May. The difference between Headline CPI and Core CPI is driven by swings in energy and food prices. If we see a stabilization in these two contributors, then Core inflation should begin to revert towards Headline inflation levels.
- The Fed left interest rates unchanged at the June policy meeting prior to the Brexit vote. Following the U.K.'s surprising decision to leave the E.U., Fed fund futures suggest that the market is no longer pricing in a rate hike this year.
- Nonfarm payrolls added 287,000 jobs in June, beating the consensus estimate of 180,000, according to Econoday. The unemployment rate ticked up 0.2% to 4.9% and the labor force participation rate increased 0.1% to 62.7% as people re-entered the labor force.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	2.1% 3/31/2016	2.9% 3/31/15
Inflation (CPI YoY, Headline)	1.0% 6/30/16	0.1% 6/30/15
Expected Inflation (5yr-5yr forward)	1.5% 6/30/16	2.2% 6/30/15
Fed Funds Rate	0.25% 6/30/16	0.12% 6/30/15
10 Year Rate	1.5% 6/30/16	2.4% 6/30/15
U-3 Unemployment	4.9% 6/30/16	5.3% 6/30/15
U-6 Unemployment	9.6% 6/30/16	10.5% 6/30/15

# U.S. economics – GDP growth

U.S. real GDP grew at a 2.1% pace YoY (and 1.1% QoQ) in Q1, driven by consumption. The Atlanta Fed GDPNow indicator forecasts 2.4% QoQ real GDP growth in Q2, as of July 19<sup>th</sup>. Robust economic growth would be needed in the second half of the year to reach the Fed's 2.0% YoY expected annual growth.

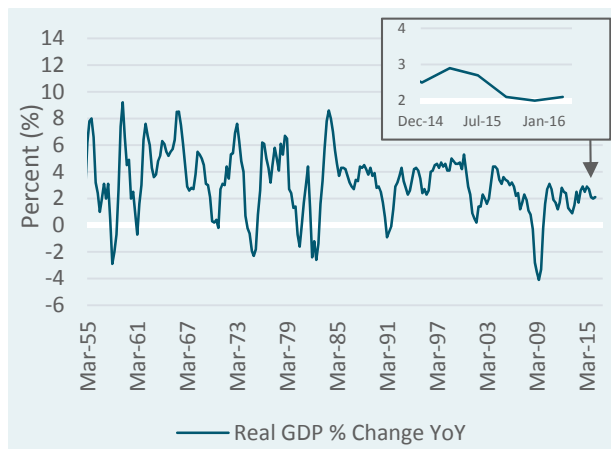
Overbuilt inventories in the U.S. have been a material drag on growth over recent quarters, as demonstrated in the far right chart, and a rebalancing would improve future prospects.

Forecasts for medium-term U.S. GDP growth have fallen to around 2%, and Fed expectations were further revised downward in Q2.

Expectations for economic growth should be naturally lower in this environment due to weak population increases (0.77% growth over the past 5 years relative to the long term average of 1.26%) and anemic productivity gains relative to past decades. (0.52% growth over the past 5 years relative to the long term average of 1.97%) Productivity effects have generally been attributed to lower corporate capital investment.

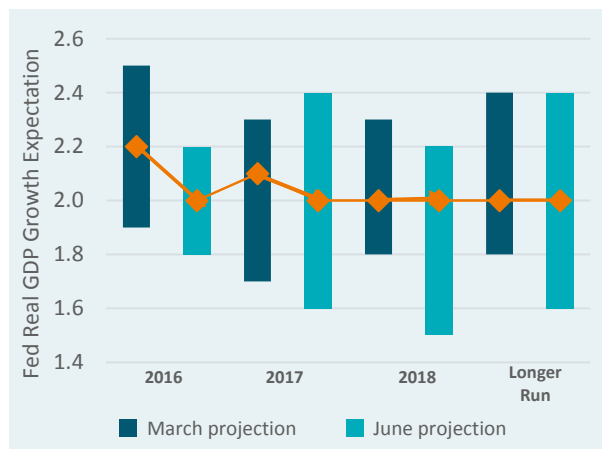
Consumer expenditures remain the sole contributor to real GDP growth

## U.S. REAL GDP GROWTH



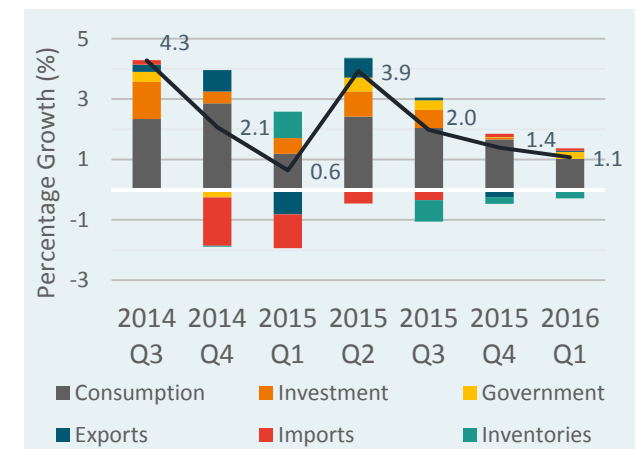
Source: FRED, as of 3/31/16

## CHANGING FED GROWTH EXPECTATIONS



Source: Federal Reserve, as of 6/15/16  
Range of expectations - Fed Board members and presidents

## GDP COMPONENTS

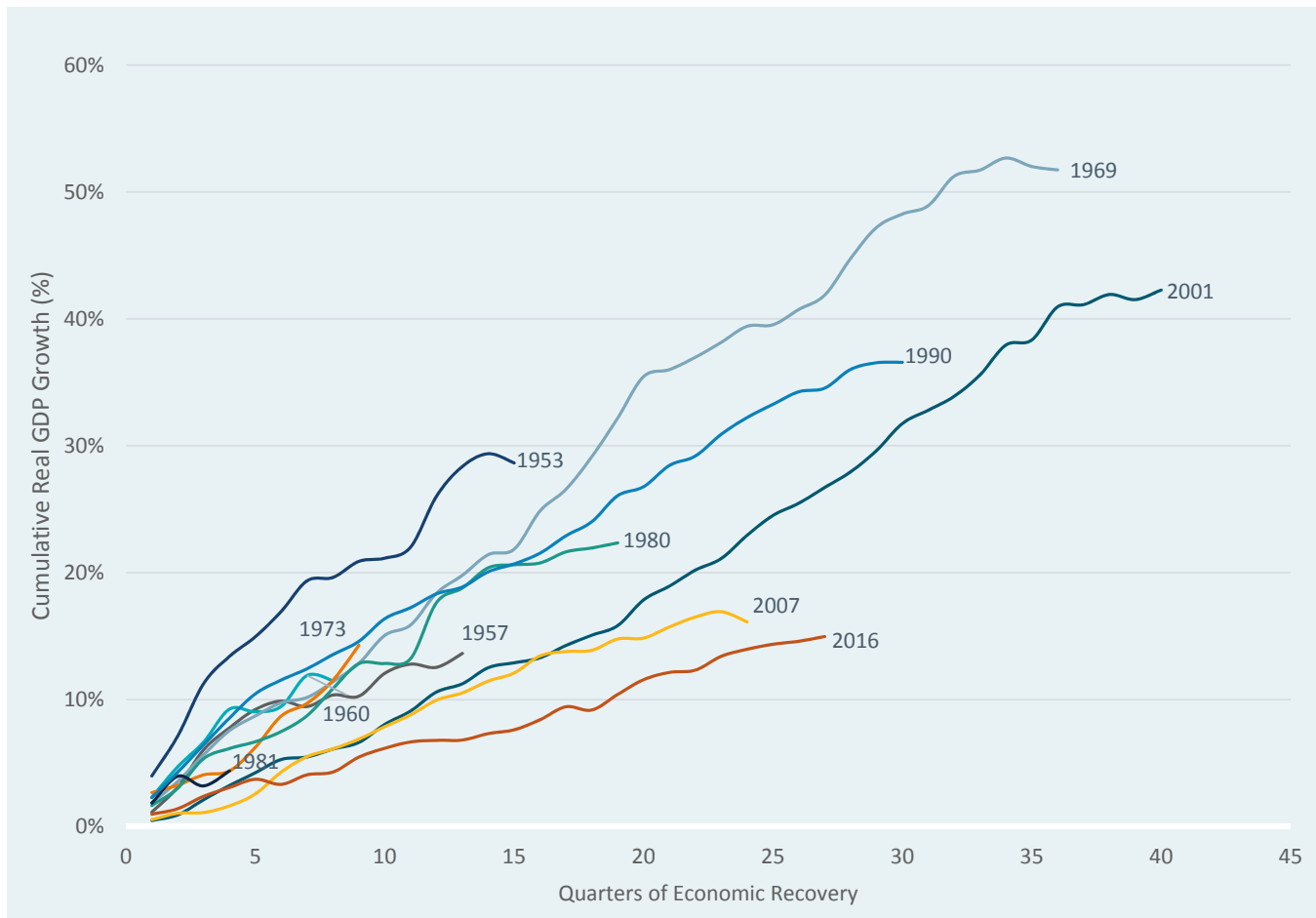


Source: FRED



# U.S. economics – Cyclical comparisons

## REAL ECONOMIC GROWTH - ECONOMIC RECOVERIES DURING THE PAST 60 YEARS



Economic cycles are characterized by a growth “boom” and “bust”

Though long in tenure, this “boom” has been of lesser magnitude than some of the past

Source: Verus, as of Q1 2016

NOTE: X-axis value of “0” represents the beginning of an economic expansion. “Expansion” is defined by the National Bureau of Economic Research (NBER) as a period between an economic trough and peak.

# U.S. economics – Unemployment

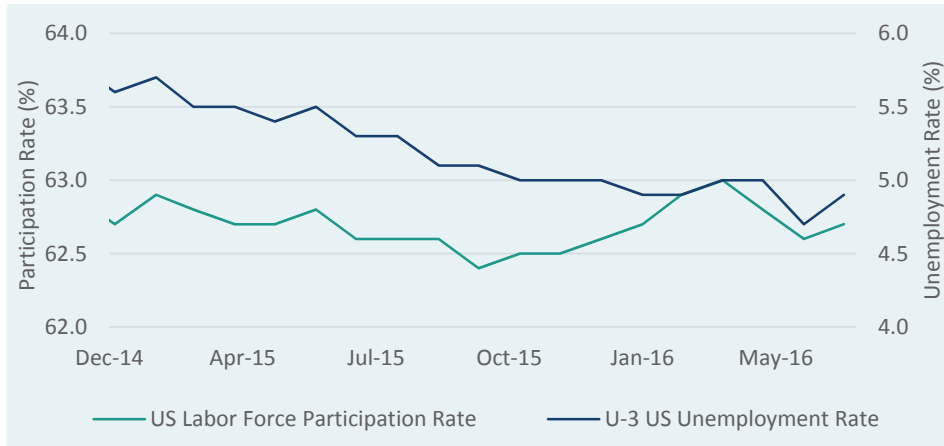
Job growth within the U.S showed signs of slowing during the quarter with nonfarm payrolls increasing only 38,000 in May. June's report subdued fears however, as 287,000 nonfarm payrolls were added vs an expected 180,000. The unemployment rate ticked up to 4.9%, from 4.7% in May corresponding with an increase in the participation rate. Growth in average hourly wages remains steady with a recent print of 2.6% YoY.

As the job market tightens (by the U-3 unemployment definition) we have seen structurally unemployed workers (those that are not looking for work or have given up on their search for work) begin to return to the workforce.

An increasingly tight labor market can have both positive and negative effects. Rising wages are paid from corporate earnings, and in an environment of lower corporate earnings an increase in wage pressure could be unwelcome for shareholders.

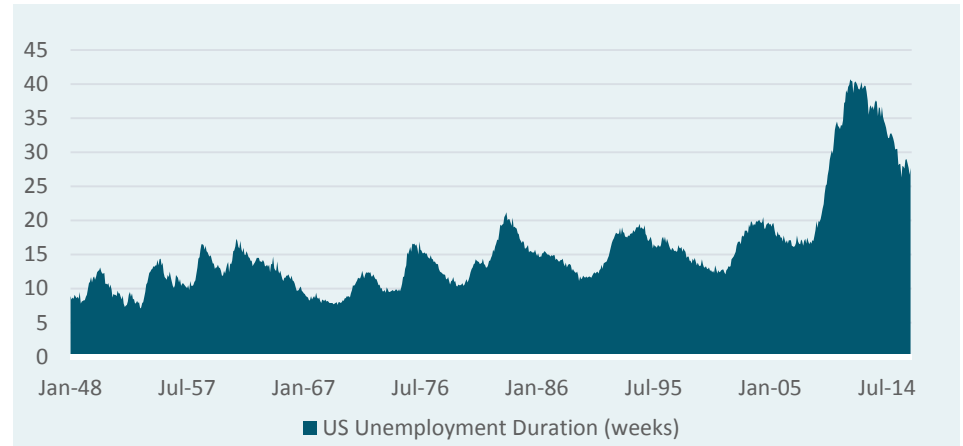
Discouraged workers reentering the workforce increased both unemployment & participation rates

U.S. UNEMPLOYMENT & PARTICIPATION



Source: FRED, as of 6/30/16

UNEMPLOYMENT DURATION



Source: FRED, as of 5/31/16

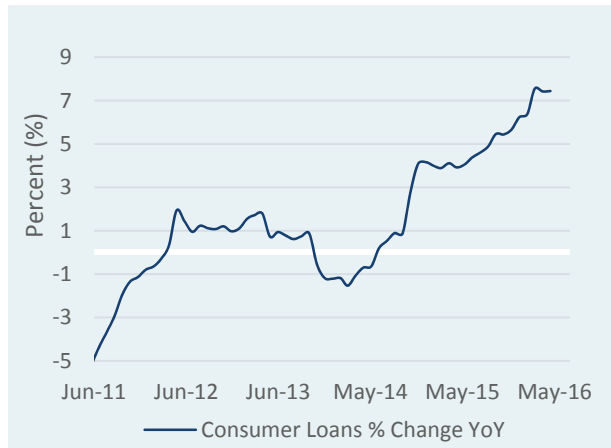
# U.S. economics – The consumer

Consumption continues to be the primary driver of GDP growth, while other contributors remain stagnant. A strong labor market has helped push real wages up. Greater discretionary income, appreciating real estate values, lower debt service burdens (through lower interest rates) and greater job security have created a healthy environment for the consumer and may lead to further spending growth and credit expansion.

Consumer health is still uneven across demographics

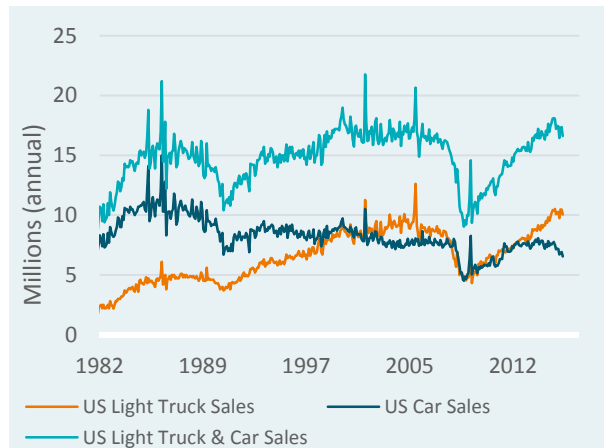
and worker skillset cohorts. Shifts in the U.S. economy have led to mismatches between available workers and job openings as these workers do not have the skills needed for these roles. This contributes to structural unemployment and remains a concern. It has been suggested that recent job gains were 'lopsided' because these jobs may have benefited older and less skilled workers. This may actually be a positive sign that some structurally unemployed workers are successfully moving back into the job market.

**CONSUMER LOAN GROWTH**



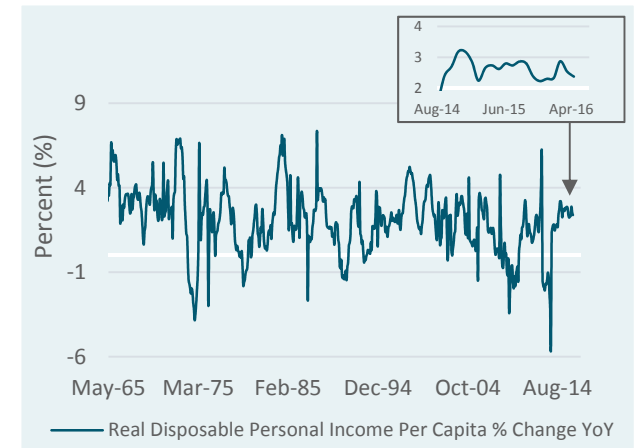
Source: FRED, as of 5/1/16

**AUTO SALES**



Source: FRED, as of 5/31/16

**GROWTH OF DISPOSABLE INCOME**



Source: FRED, as of 5/1/16



# U.S. economics – Sentiment

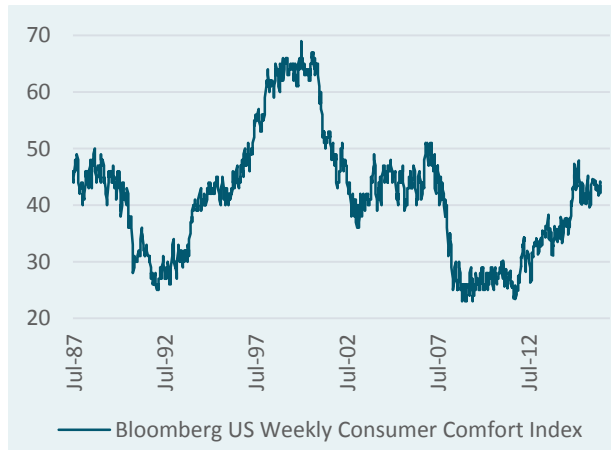
Consumer sentiment has been relatively stable through recent quarters, as indicated by the Bloomberg and University of Michigan surveys. The Citi Economic Surprise index experienced a large positive swing after being in negative territory for the first half of 2016.

It is worth noting that these sentiment indicators suggest consumers have recovered psychologically from the global financial crisis. The University of Michigan survey has moved above its long-term average level – a

point not reached since January 2007. Stronger positive consumer sentiment is of great importance to the future path of the U.S. economy.

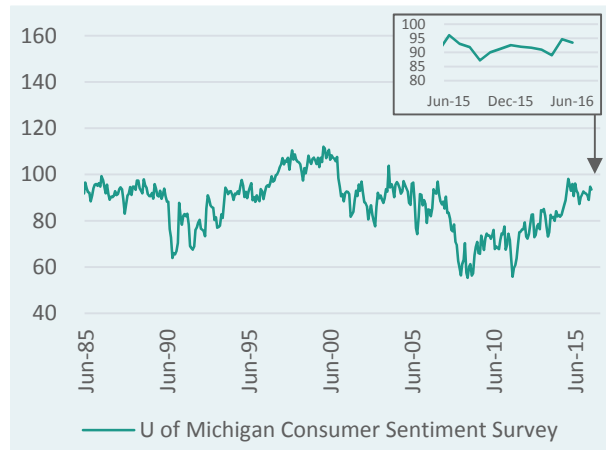
The large positive move in the Citi Economic Surprise index was driven by a strong U.S. jobs number which we discussed in slide 10. This positive news had a notable risk-on effect across markets.

**CONSUMER COMFORT INDEX**



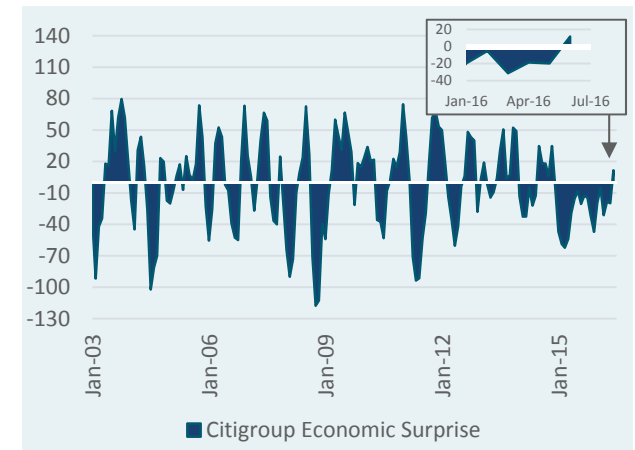
Source: Bloomberg, as of 6/26/16 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 6/30/16 (see Appendix)

**ECONOMIC SURPRISE**



Source: Bloomberg, as of 7/12/16 (see Appendix)

# U.S. economics – Housing

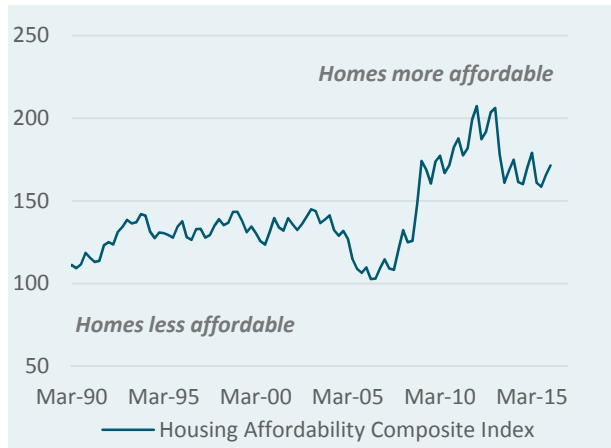
In the first three months of the year, U.S. homeownership moved down to a rate of 63.5%, which is the lowest rate of homeownership since 1967.

Sales of existing homes rose substantially over the second quarter, climbing to a nine-year high. A tightening labor market and low interest rates have fueled growth. If the Fed increases rates and median home prices continue to increase, lower home

affordability could be a headwind for future demand. However, new single-family home sales remain lackluster, potentially because of weaker employment among residential builders and contractors.

Although housing starts seem to be gaining momentum, they still remain below the 30-year average. This limited supply has contributed to positive price pressure.

## HOME AFFORDABILITY



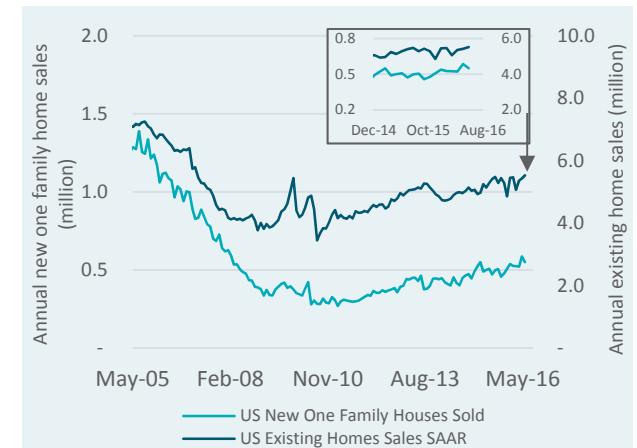
Source: National Association of Realtors, as of 3/31/16

## HOMEOWNERSHIP RATE



Source: FRED, as of 4/1/2016

## NEW & EXISTING HOME SALES



Source: Bloomberg, as of 5/31/16

# U.S. economics – Inflation

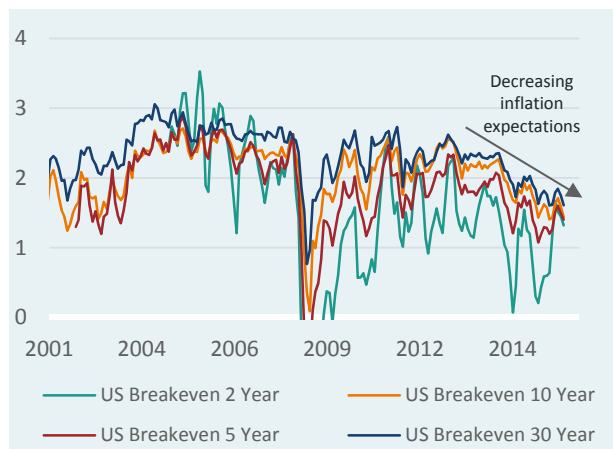
Inflation expectations decreased during the quarter as indicated by the 10yr TIPS Breakeven Rate and the University of Michigan Inflation Expectations Survey.

U.S. CPI rose 1.0% YoY while Core CPI (CPI excluding energy and food prices) sits at 2.2% YoY, as of May. Since differences between CPI and Core CPI are driven by swings in energy and food prices, we can expect CPI and Core CPI to converge once these price effects “roll off” of the CPI calculation.

It is interesting to note that the market is pricing future inflation to be less than the current Core CPI number, which implies investors expect inflation levels to fall from the already below-average level.

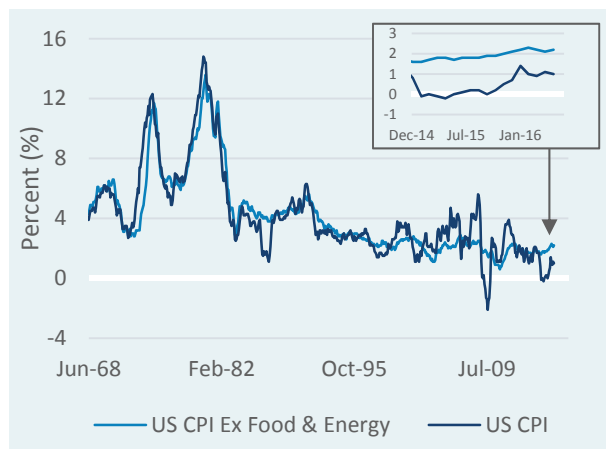
The current environment of very low inflation expectations and cheaper inflation-related assets (priced for inflation to fall further in the future) may offer investors with an underweight to inflation-protecting assets an opportunity to rebalance these assets back to equal-weight.

US TIPS BREAKEVEN INFLATION



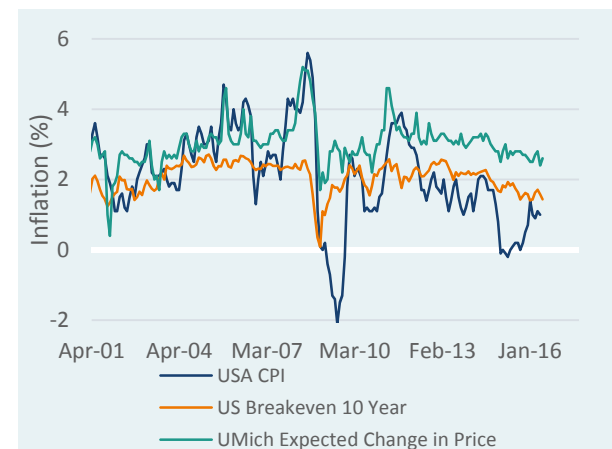
Source: FRED, as of 6/30/16

U.S. CPI (YOY)



Source: FRED, as of 5/31/16

MARKET EXPECTATIONS OF INFLATION



Source: Bloomberg, as of 6/30/16



# International economics summary

- Inflation around the world continued downward, with the U.S. and the Eurozone being an exception. Inflation in the BRICS nations has decreased slightly but remains positive overall at 3.4% YoY.
- The ECB continued aggressive monetary easing. Expanding eligible assets for purchase to include corporate bonds in Europe has further suppressed yields both in sovereign debt and investment grade credit.
- The BOJ maintained existing monetary policy and emphasized their commitment to reach the 2% inflation target despite the disappointing CPI figures printed in the second quarter.
- Western Europe saw inflation rise in June, from just slightly negative to slightly positive. This figure is still far below the ECB's inflation target of just under 2% which could be a catalyst for further more dramatic monetary policy. Some investors are fearful that Brexit could be an additional headwind for inflation going forward.
- Capital continues to flow out of China in record quantities and fixed asset investment growth has decelerated and is below 10% for the first time since year 2000.
- Brazil's annual inflation fell to a new low and the Brazilian economy continues to suffer from political pressures and negative growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.1% 3/31/16	1.0% 6/30/16	4.9% 6/30/16
Western Europe	1.7% 3/31/16	0.1% 6/30/16	8.6% 3/31/16
Japan	0.1% 3/31/16	(0.4%) 5/31/16	3.2% 3/31/16
BRIC Nations	4.9% 3/31/16	4.0% 3/31/16	5.1% 3/31/16
Brazil	(5.4%) 3/31/16	8.8% 6/30/16	11.2% 6/30/16
Russia	(3.7%) 12/31/15	7.5% 6/30/16	5.6% 6/30/16
India	7.9% 3/31/16	5.8% 5/31/16	7.1% 12/31/15
China	6.7% 6/30/16	1.9% 6/30/16	4.0% 3/31/16

# International economics

As inflation continues to show signs of slowing and growth estimates are revised further downwards, the ECB and BOJ maintained aggressive expansionary monetary policy. The ECB expanded their asset purchasing program to include investment grade credit, further suppressing yields.

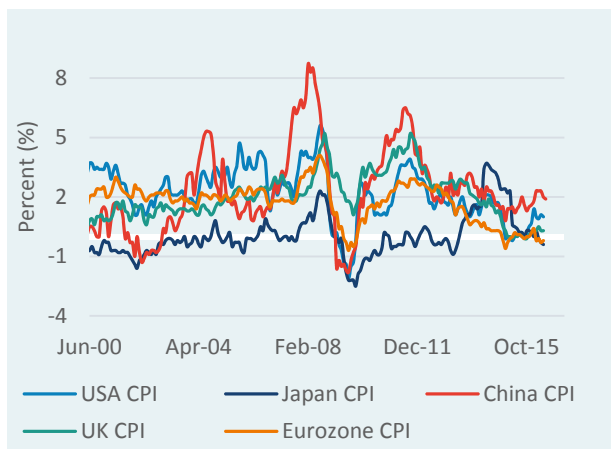
Western Europe has exhibited signs of growth, inflation (rather than deflation), improving manufacturing data, and continuing employment gains. However, with the instability introduced from Brexit, the future outlook is less clear.

China remains a source of uncertainty as capital continues to

flow out of the country. Additionally, fixed asset investment has fallen to a 15 year low. Brazil's annual inflation fell to a new low and the Brazilian economy continues to suffer from lackluster growth and political turmoil.

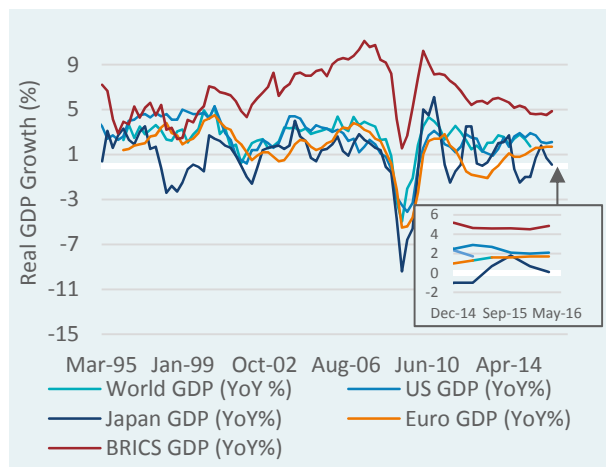
Japan has continued to struggle to generate inflation, though volatile food and energy prices continue to be a headwind to Headline CPI. This has caused Headline CPI to be at the -0.4% YoY level, while CPI Ex Food & Energy is 0.6%. This significant difference makes the failure to achieve inflation more understandable.

## INTERNATIONAL INFLATION



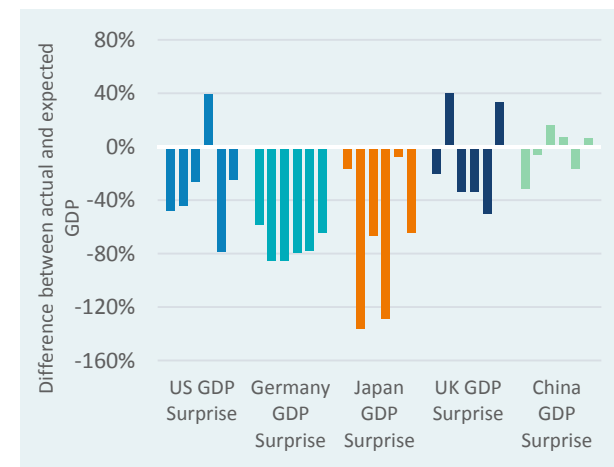
Source: Bloomberg, as of 6/30/16

## REAL GDP GROWTH



Source: Bloomberg, as of 3/31/16

## GDP VS EXPECTATIONS

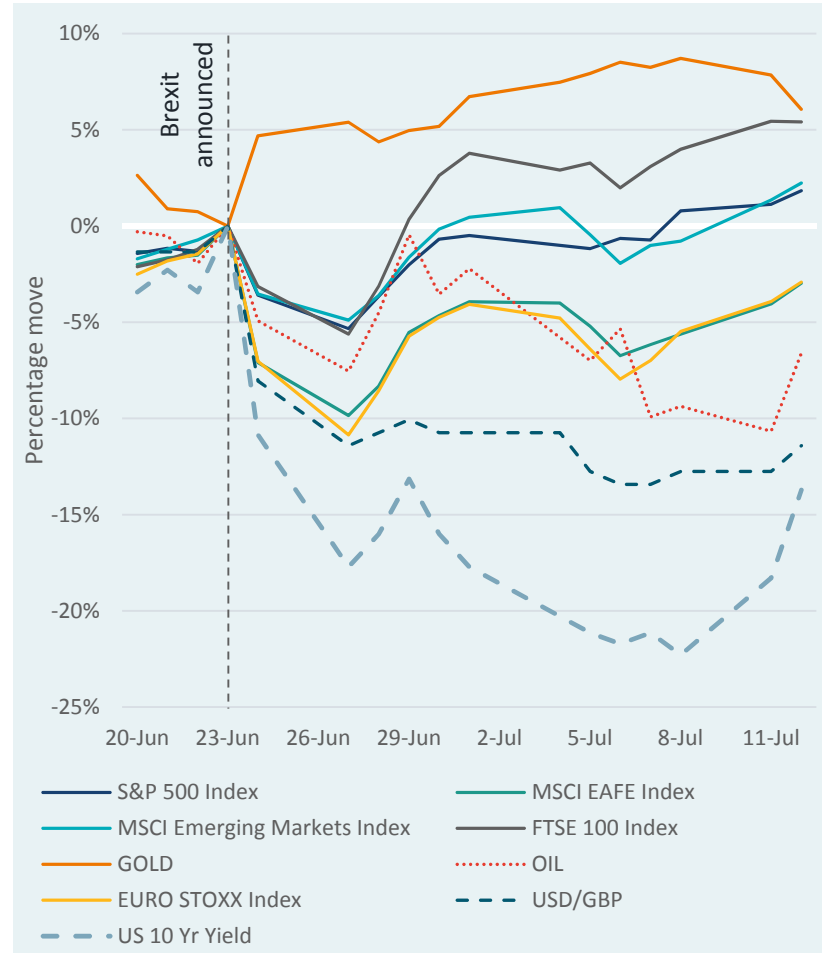


Source: Bloomberg, quarterly Q4 2014 through Q1 2016

# Price reaction following Brexit

Market expectations before the Brexit vote were for a remain vote, and for the markets to react positively to this decision. The actual result was a significant vote for withdrawal. Importantly this vote was not partisan – the heartlands of both major parties voted for leave. There have been immediate and significant impacts including a wholesale change in government. Long term consequences remain to be seen. However, it is interesting to note that most of the predicted bad consequences of a leave vote failed to materialize, with a range of countries already reaching out to create new trade deals, and with companies which had initially threatened they might move from the U.K. backing off those suggestions.

Market reactions were also different than initial expectations. While the pound fell and has remained weak, many other markets have rebounded, and the U.K. has been one of the strongest performers since the vote. As Brexit moves closer, attention is likely to shift to the remaining EU countries. In particular, markets will watch the effect on periphery economies of the removal of U.K. funding and the U.K. voice against centralization.



Markets fell suddenly on the Brexit surprise, but have since recovered losses

Source: Bloomberg, as of 7/11/16

# Fixed income rates & credit



# Interest rate environment

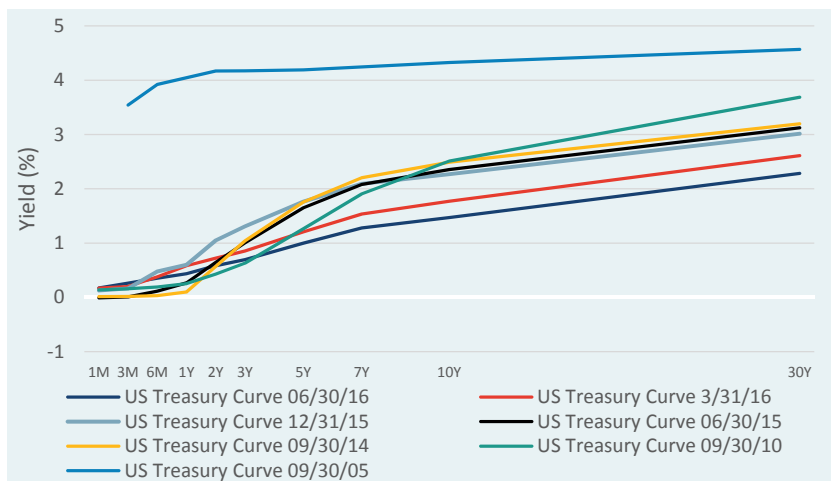
- The U.S. 10 year treasury note traded in a 50 basis point range over the course of the second quarter, touching a record low 1.36% in the first week of July. Risk-off market sentiment following Brexit as well as relatively higher yields compared to European counterparts has substantially increased demand for U.S. bonds.
- Fear following the British referendum encouraged speculation that the ECB and BOJ would further expand existing monetary policy. Investors continue to demand safe haven assets.
- The German and Japanese yield curves both have negative yields out to the 15 year tenor. Additionally, Germany became the second G-7 nation, after Japan, to issue negative yielding instruments, highlighting the willingness of investors to hold high quality instruments with negative yield.
- A third of global government bonds are now trading with a negative yield, accounting for more than \$10 trillion in market value.
- The United States yield curve continues to flatten as economic data stabilizes the fears of rate cuts, pushing the front end higher. Inflation is struggling to gain significant momentum, keeping the back end of the curve relatively low.

Area	Short Term (3M)	10 Year
United States	0.26%	1.47%
Germany	(0.68%)	0.13%
France	(0.57%)	0.18%
Spain	(0.30%)	1.16%
Italy	(0.28%)	1.26%
Greece	3.38%	8.29%
U.K.	0.46%	0.87%
Japan	(0.27%)	(0.22%)
Australia	1.69%	1.98%
China	2.63%	2.86%
Brazil	14.05%	12.06%
Russia	10.21%	8.29%

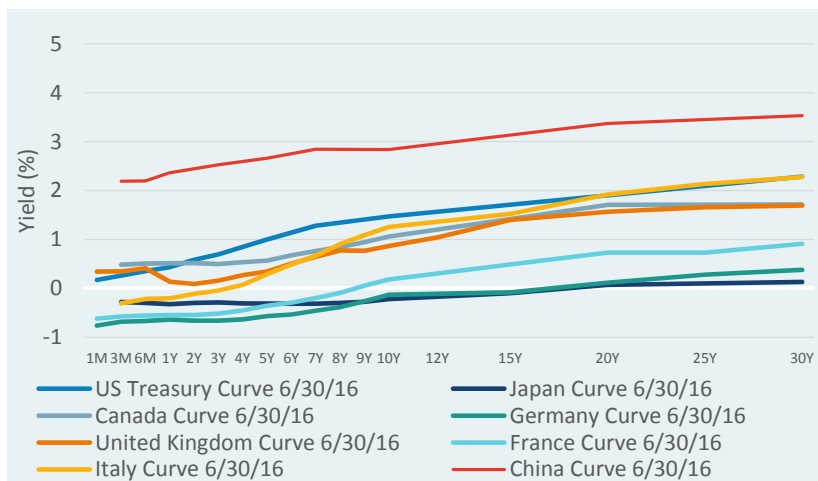
Source: Bloomberg, as of 6/30/16

# Yield environment

U.S. YIELD CURVE

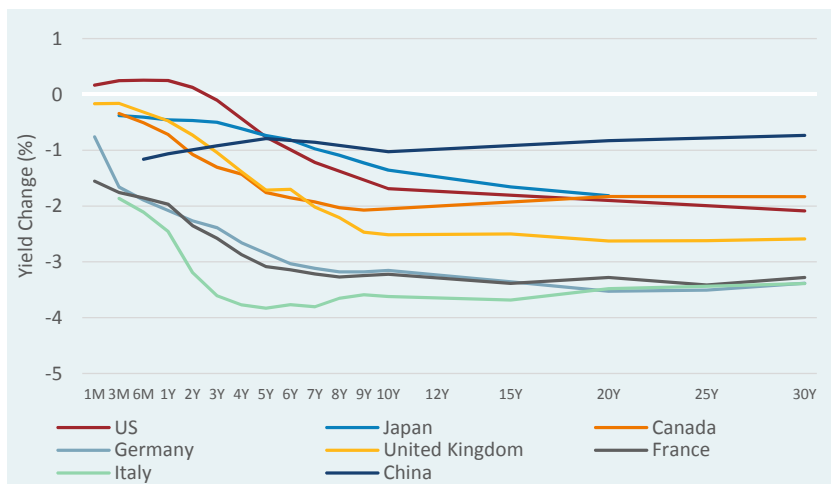


GLOBAL GOVERNMENT YIELD CURVES

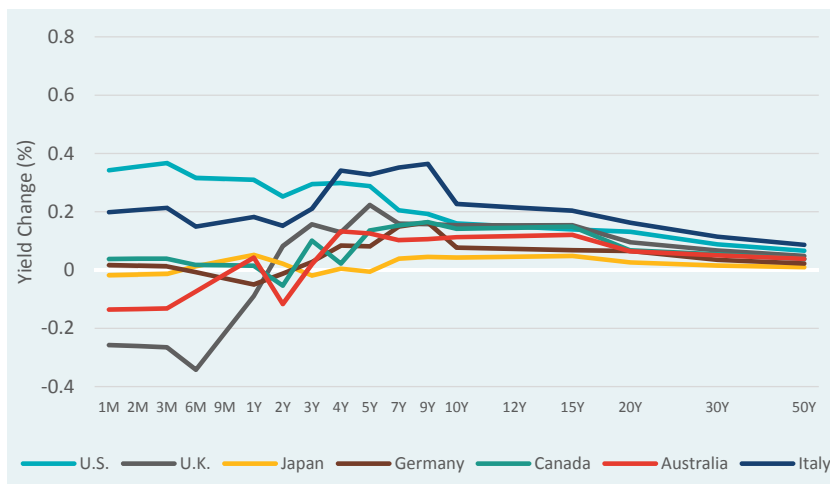


The U.S. yield curve has come down across all major tenors since the end of the fourth quarter

YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/16

# Examining the credit cycle

Forecasting turning points in the credit cycle is extremely challenging. However, after examining current characteristics relative to history, data suggests we may be later in the expansion phase. In examining the fundamentals underlying the current cycle, it seems possible that the economy may continue to muddle along for some time. We must be careful when interpreting recent credit market shifts due to oil price-specific fallout in the energy sector.

We do not see traditional credit cycle risks as particularly apparent today, but new economic influences such as

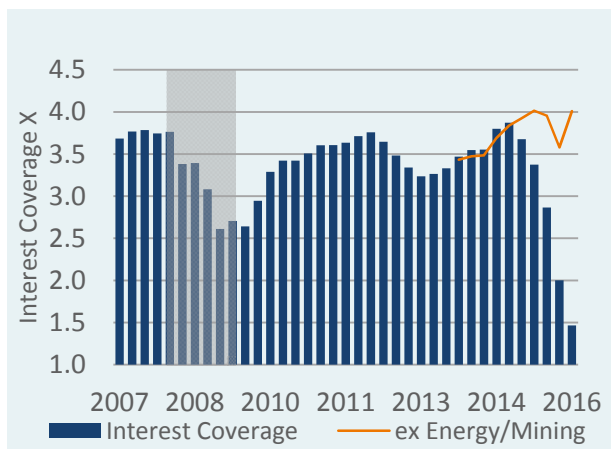
extreme liquidity injections into the markets have led to unique risks. Greater economic leverage has occurred as consumers and businesses exploit record-low interest rates. This environment may be particularly susceptible to a further deceleration in economic growth.

In the current environment we believe it is wise to keep higher on the credit quality spectrum and to maintain liquidity. We will continue to watch the health of the credit markets, as a downturn may present opportunities to pick up attractive yield.

Credit cycle appears to be maturing

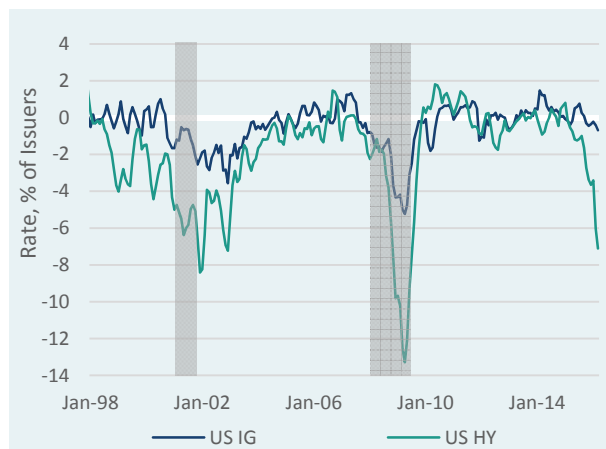
We favor investment grade over higher risk issues

## HIGH YIELD INTEREST COVERAGE



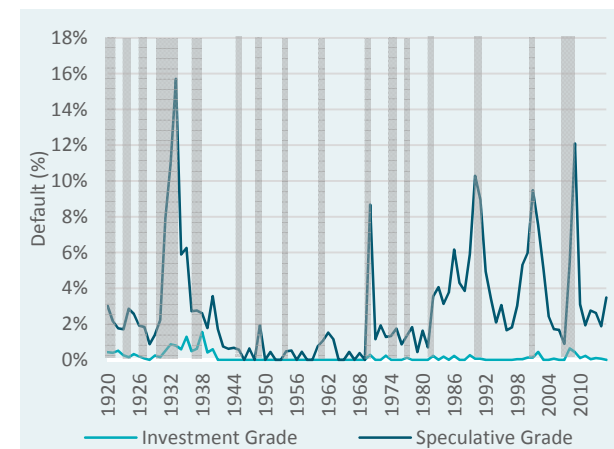
Source: Deutsche Bank, as of 3/31/16  
NOTE: Grey bars represent economic recessions

## CREDIT RATING MIGRATION



Source: BofAML, as of 3/31/16

## ANNUAL DEFAULT RATES



Source: Moody's, as of 2015 year-end

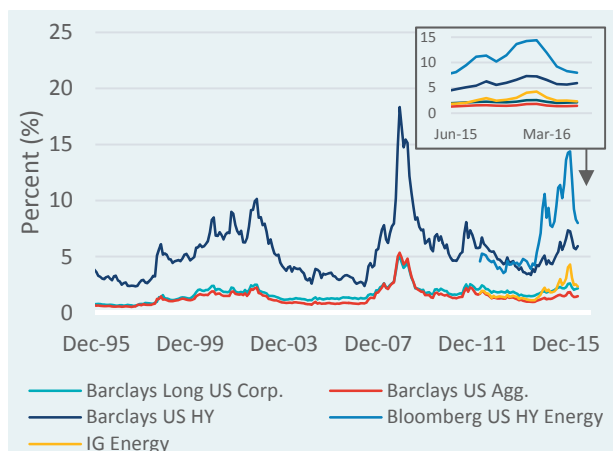
# Credit environment

High yield spreads, and high yield energy spreads in particular, peaked in Q1 but have rallied substantially since that time. High yield spreads have compressed to below 5.5% as of mid-July from a high of 8.9% earlier in the year. High yield energy spreads are now below 8%, from a high of around 15%. The price of oil, along with market risk-on/risk-off sentiment, seems to be guiding the price of riskier credit instruments. We show the oil/high yield relationship below.

Spreads are an important indicator of health across the credit market. Spread levels represent investors' expectations for future borrower defaults and general risk appetite in the markets. Credit market liquidity is also reflected in levels, and since high yield liquidity is very low we should expect additional spread as compensation.

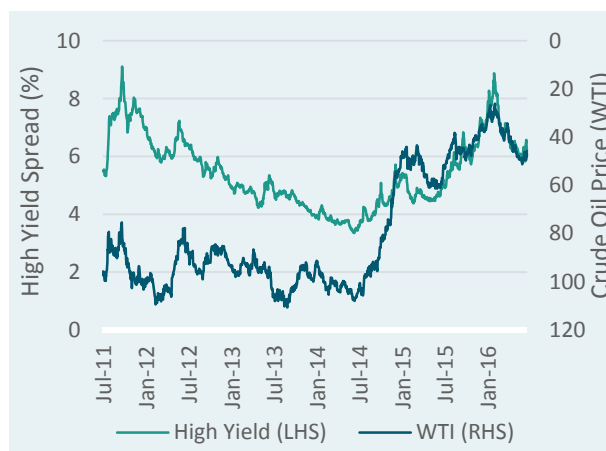
Sensitivity of high yield spreads to oil is much higher in a low oil price environment

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 6/30/16

## HIGH YIELD SPREADS & OIL



Source: Bloomberg, as of 6/30/16

## SPREADS

Market	Credit Spread (6/30/16)	Credit Spread (1 Year Ago)
Long US Corporate	2.0%	1.9%
US Aggregate	1.0%	1.1%
US High Yield	6.3%	5.3%
US High Yield Energy	8.0%	8.1%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/16



# Issuance and default

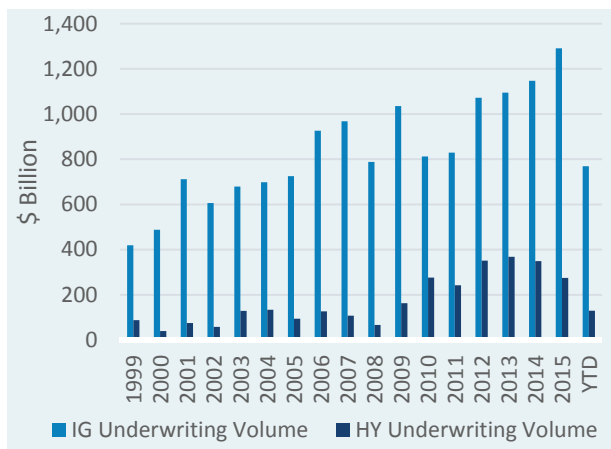
Investment grade debt issuance has trended higher each year since the global financial crisis. The first half of 2016 put the year on track for another record high. Issuance of higher-risk debt seems to have peaked in recent years and is somewhat flat year-to-date.

Lower global GDP growth expectations may put additional pressure on high yield issuance. However, strong flows into the space from investors seeking yield may put a cap on borrowing costs which could allow issuers to more easily restructure balance sheets. Year-

over-year high yield default rates have accelerated, driven by pain in the energy sector. It remains to be seen whether this trend will be halted by the rebound in oil price.

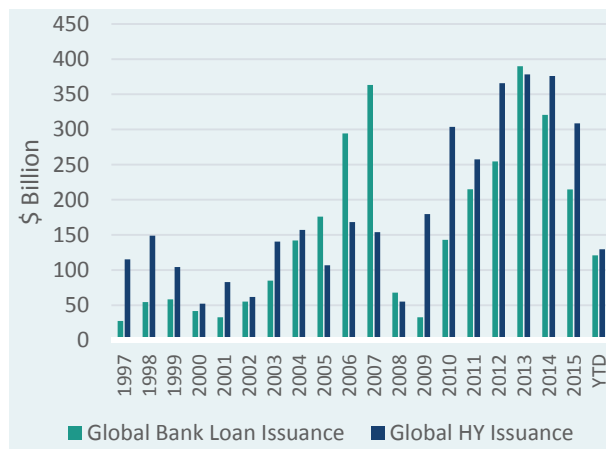
Reduced CLO demand has adversely affected bank loan issuance, which has also tapered off in recent years.

**IG & HIGH YIELD ISSUANCE**



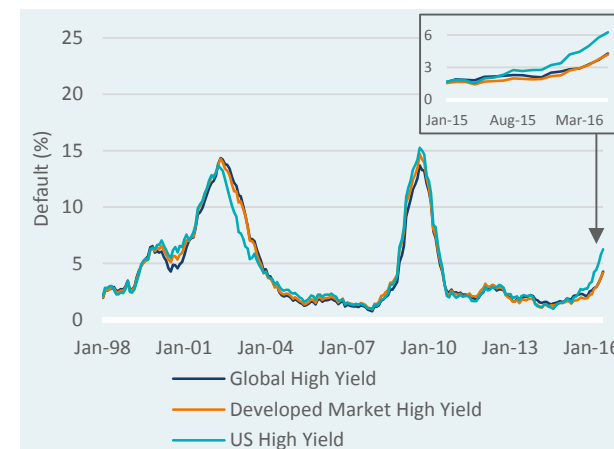
Source: Bloomberg, as of 6/30/16

**BANK LOAN & GLOBAL HY ISSUANCE**



Source: BofA Merrill Lynch Global Research, as of 6/30/16

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



Source: Credit Suisse, BofA, as of 6/30/16

# Equity

# Equity environment

- Equity market risks continue to appear asymmetrical to the downside.
- U.S. equities fell after the Brexit vote. The S&P 500 dropped by over 100 points in the two trading days following the vote, but managed to recoup its losses by month end. Implied volatility spiked while investors digested the Brexit news. The VIX jumped to 25.8, but fell back to 15.6 to close the month.
- Another quarter of negative earnings is forecast for Q2. According to FactSet, the estimated earnings decline for the S&P 500 is -5.3%.
- Financials (-3.2%) were the worst performing sector in the S&P 500, likely affected by lower interest rate expectations. Telecom services (9.3%) and utilities (7.8%) were the best performing sectors in the index.
- Value stocks delivered strong outperformance relative to growth stocks year-to-date. Russell 1000 Value provided a 6.3% return while Russell 1000 Growth provided 1.4%.
- The U.S. dollar rose 0.5% in Q2 on a trade-weighted basis. Stabilization of the dollar (or at least less appreciation) should have a positive impact on domestic equities in future quarters.

	QTD Total Return (unhedged)	QTD Total Return (hedged)	YTD Total Return (unhedged)	YTD Total Return (hedged)	1 Year Total Return (unhedged)	1 Year Total Return (hedged)
US Large Cap (Russell 1000)	2.5%		3.7%		2.9%	
US Small Cap (Russell 2000)	3.8%		2.2%		(6.7%)	
US Large Value (Russell 1000 Value)	4.6%		6.3%		2.9%	
US Large Growth (Russell 1000 Growth)	0.6%		1.4%		3.0%	
International Large (MSCI EAFE)	(1.5%)	(0.7%)	(4.4%)	(6.9%)	(10.2%)	(9.9%)
Eurozone (Euro Stoxx 50)	(5.1%)	(1.1%)	(8.2%)	(8.5%)	(14.1%)	(13.3%)
U.K. (FTSE 100)	(1.8%)	5.9%	(4.0%)	6.4%	(12.3%)	3.8%
Japan (NIKKEI 225)	1.4%	(7.7%)	(3.4%)	(19.0%)	(7.2%)	(24.0%)
Emerging Markets (MSCI Emerging Markets)	0.7%	0.1%	6.4%	2.6%	(12.1%)	(9.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/16

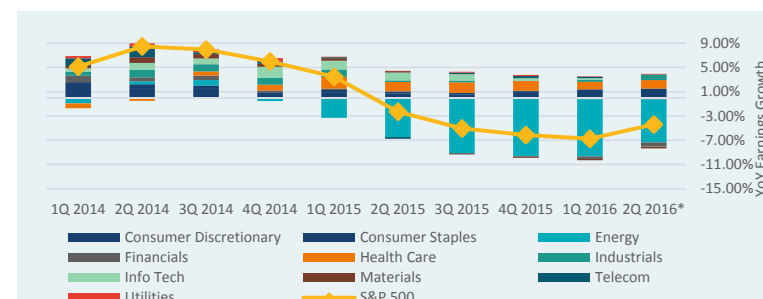
# U.S. earnings recession?

- Corporate earnings typically underpin the value of equities.
- Recent U.S. earnings deterioration can be attributed to the energy sector, though other sectors are also not growing as quickly as in previous quarters.
- A long-term negative relationship can be observed between U.S. dollar appreciation and U.S. corporate earnings.
- We might therefore be careful with the phrase U.S. earnings “recession”, which has cyclical implications. The recent earnings downturn may not, in fact, be cyclical.
- It is important to ask how earnings would react to stability in the U.S. dollar and stability across the energy sector. There may be potential for upside surprise in U.S. earnings over the next year. However, the affects of a stronger dollar will likely be felt for awhile as domestic companies are in a tougher position to compete.

EARNINGS & PRICE LEVEL



EARNINGS RECESSION, OR OIL RECESSION?



EARNINGS TRENDS & USD MOVES



(Top) Source: Standard & Poor's, as of 6/30/16

(Middle) Source: Standard & Poor's, Verus, as of 6/30/16

(Bottom) Source: Standard & Poor's, US Trade Weighted Major Currency, as of 6/30/16

# Domestic equity

U.S equity markets were range-bound throughout Q2 leading up to Brexit. Following the referendum results, the S&P 500 dropped more than 100 points over two trading days before recouping these losses by quarter-end. The Brexit vote prompted more risk-off sentiment and further reinforced dovish commentary from the Fed amid sharp volatility increases.

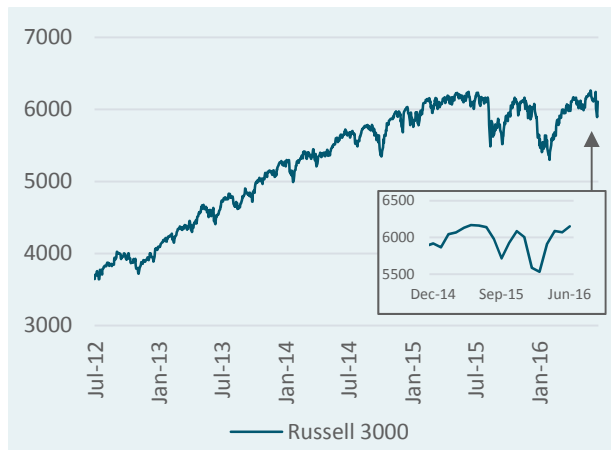
Earnings growth is expected to remain negative for Q2,

which along with flat equity prices has resulted in a rise in valuations. According to Factset, the estimated earnings decline for the S&P 500 is -5.3%. This would mark the fifth consecutive quarter of year-over-year earnings contraction. Stability in the U.S. dollar and the energy sector may provide a solid platform for earnings improvement.

Equity markets shrugged off Brexit

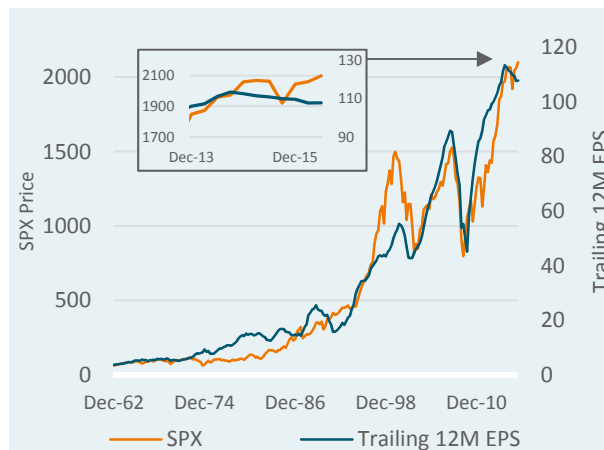
U.S. earnings results will likely dictate the path of equities

## U.S. EQUITIES



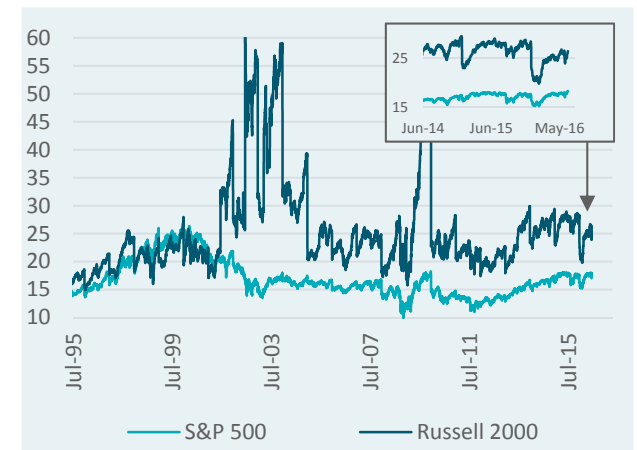
Source: Russell Investments, as of 6/29/16

## S&P 500 EARNINGS



Source: Standard & Poor's, as of 6/30/16

## FORWARD P/E



Source: Standard & Poor's, Russell Investments, as of 6/30/16



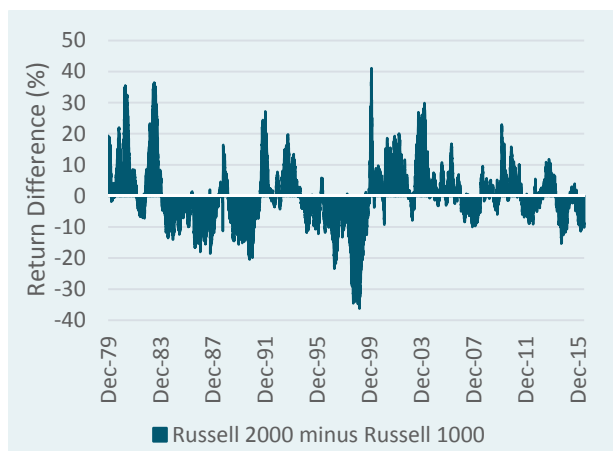
# Domestic equity size and style

Value stocks delivered strong outperformance relative to growth stocks year-to-date. Russell 1000 Value provided a 6.3% return while Russell 1000 Growth provided 1.4%.

Large cap equities outperformed small cap for the first time in four months as the Russell 1000 Index and Russell 2000 Index returned 0.2% and -0.1%, respectively. Besides the current quarter, the Russell

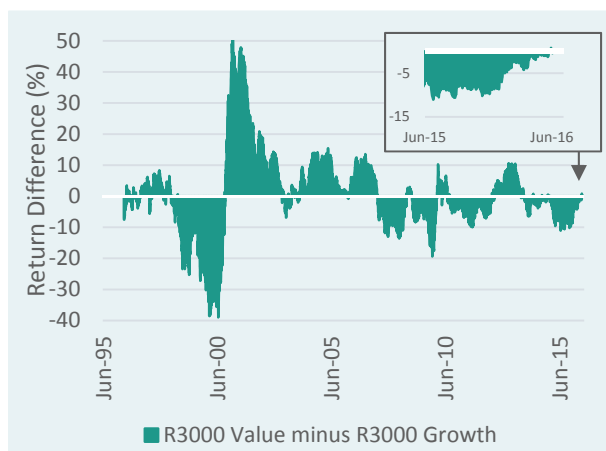
1000 Index has outperformed the Russell 2000 Index on an absolute and risk-adjusted basis in every time period examined over the last 20 years. The relative P/E ratio of small to large cap equities at the end of June was 2.01, well above its long-term average of 1.38, suggesting that despite weak recent performance small cap stocks remain relatively overvalued.

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



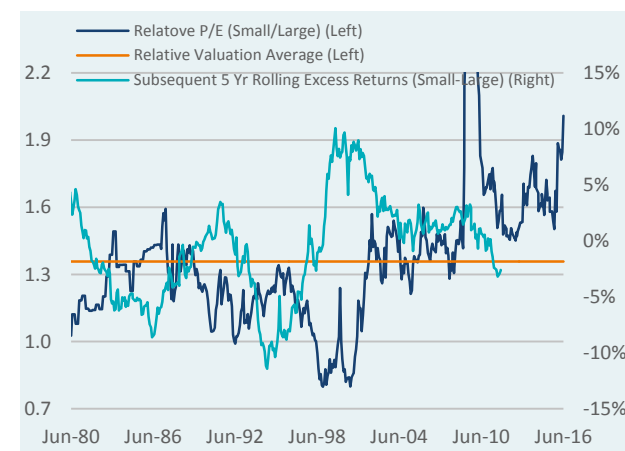
Source: Russell Investments, as of 6/29/16

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 6/29/16

**RELATIVE P/E RATIO (SMALL VS LARGE)**



Source: Russell, Bloomberg, as of 6/30/16

# Death of the value premium?

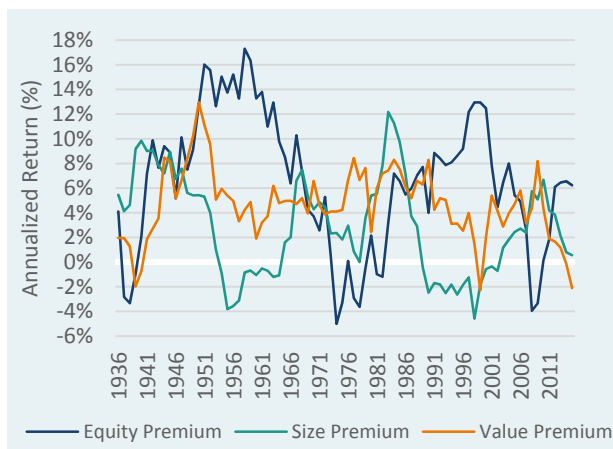
U.S. value equities have underperformed U.S. growth equities over the past 1-, 3-, 5-, 7-, and 10-year periods. Longer-term underperformance in the U.S. occurred two other times in the past 89 years, but value bounced back shortly thereafter. This topic of interest paper may be found on our website [verusinvestments.com](http://verusinvestments.com).

In recent research, we tested the value premium from three angles: First, how dependable has the value premium been through time, and how does this compare to other recognized risk premia? Second, have

unique macro forces contributed to value performance in recent years, and if so do we believe those macro forces affect the long-term efficacy of value? Third, what are the philosophical underpinnings of value and has anything changed?

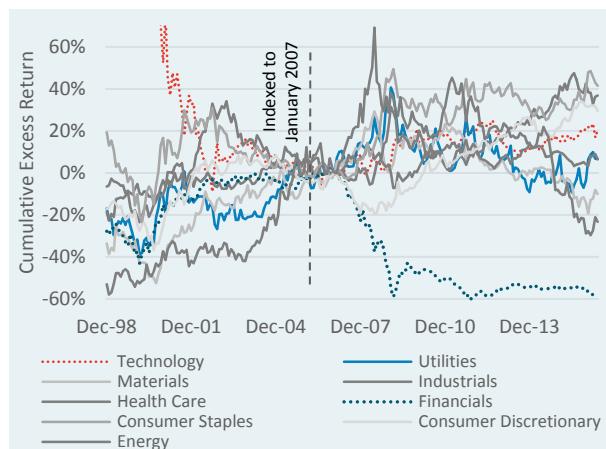
The results of these tests suggest value investors should stay on course. For those investors comfortable with more tactical timing decisions, now may be a good time to begin tilting towards a value allocation.

## 20YR ROLLING PERFORMANCE



Source: Kenneth French's Data Library, as of 12/31/15

## FINANCIAL SECTOR PERFORMANCE\*



Source: Standard & Poor's, as of 5/31/16

\*Sector returns net of market return (S&P 500 TR)

## FINANCIAL SECTOR EXPLANATORY POWER



Source: Standard & Poor's, 2015 year-end, annual data since 1974

# International equity

The U.K.'s unexpected decision to leave the European Union in its June 23rd referendum caused a wave of volatility throughout the global financial markets. Brexit resulted in \$3 trillion in global equity market losses in two days as investors reacted to the surprise; however, most markets recouped these losses by the end of the quarter.

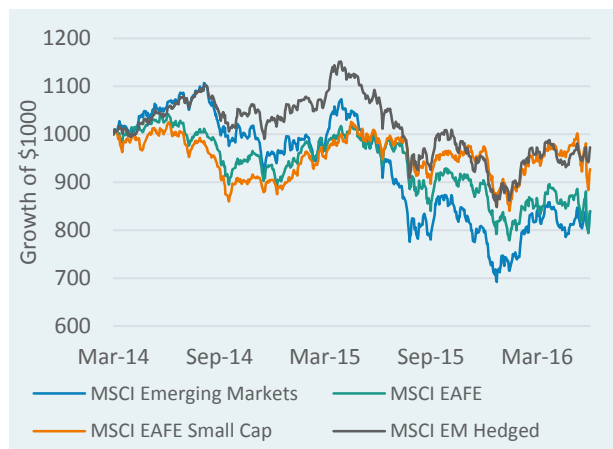
European banks also felt pain following Brexit, illuminating concerns of a disruption to the European

financial sector. The Euro Stoxx 600 Bank Index is yet to recover, trading over 10% below pre-Brexit levels.

International developed markets (MSCI EAFE, -1.5%) underperformed emerging markets (MSCI EM, 0.7%) in the second quarter. Comparatively the S&P 500 returned 2.5% during the quarter.

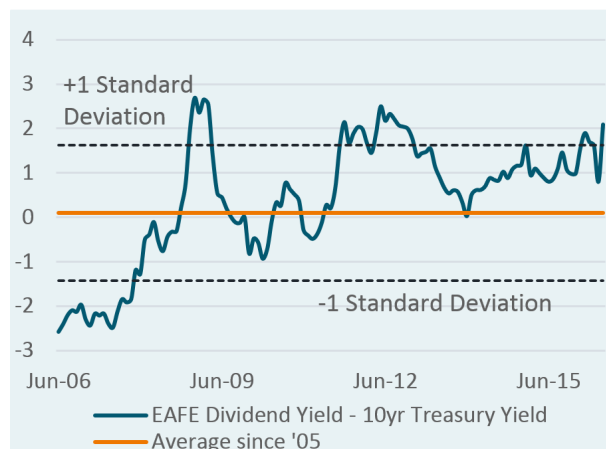
Currency movement continues to have severe impacts on unhedged international equity exposure.

## GLOBAL EQUITY PERFORMANCE



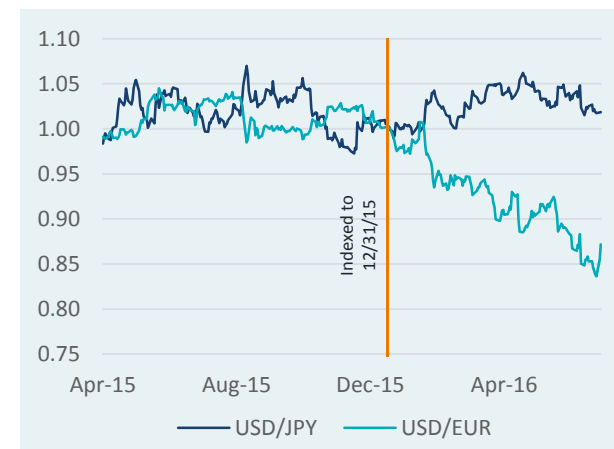
Source: MSCI, as of 6/30/16

## EQUITY YIELD LESS BOND YIELD



Source: MSCI, as of 6/30/16

## USD/EUR, USD/YEN



Source: MSCI, as of 7/12/16

# Emerging market equity

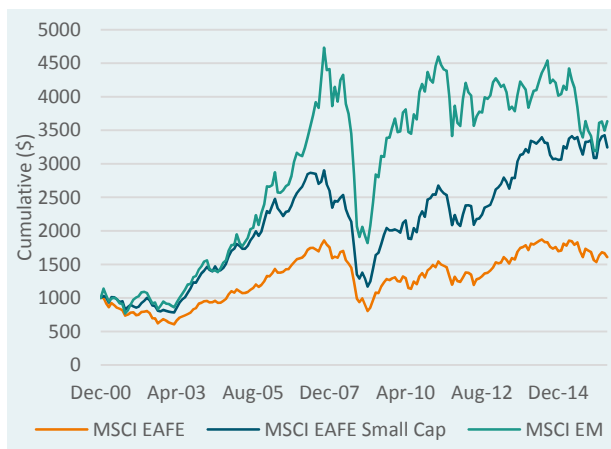
Higher commodity prices provided a tailwind for emerging market equities, which outperformed international developed markets during the quarter. Latin America was the best performing region driven by strong returns in Brazil and Peru equity markets. The hope of political reform in Brazil due to the impending impeachment of president Dilma Rousseff has provided a boost to Brazilian equities.

MSCI denied the inclusion of China's domestic A Shares in its global benchmarks for a third straight year. The

index provider said that although China has made positive steps in opening up its markets, significant obstacles to free fund movement remain.

Expectations of further accommodative central bank policies following Brexit and continued low yields in developed markets should help emerging market fund flows as higher yielding investment options remain limited. Furthermore, expectations for a more gradual pace of Fed rate hikes should help keep borrowing costs lower in emerging markets.

## LONG TERM PERFORMANCE



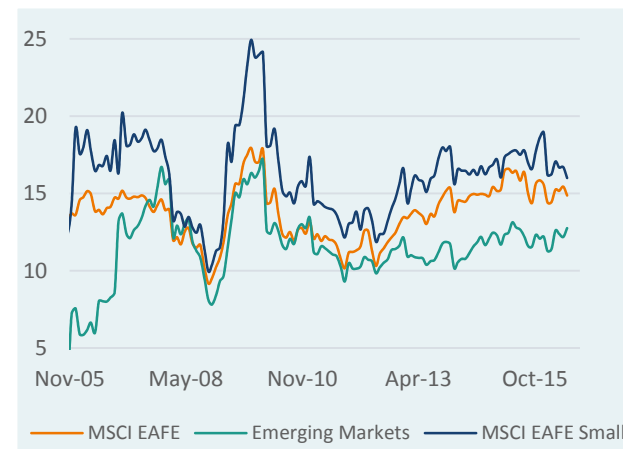
Source: MSCI, as of 6/30/16

## ROLLING 3 YEAR RETURN



Source: MSCI, as of 6/30/16

## FORWARD P/E



Source: MSCI, as of 6/30/16

# Equity valuations

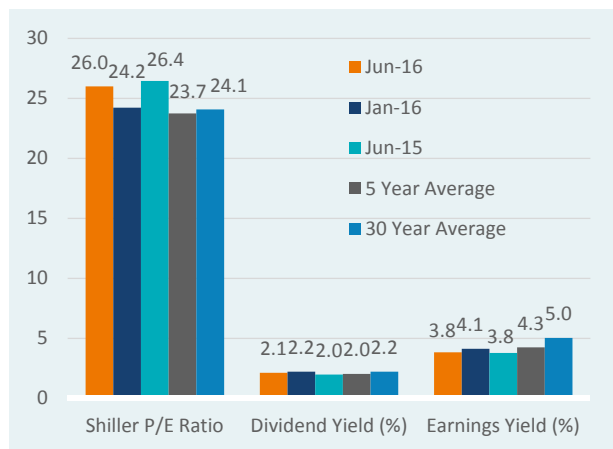
Domestic equity valuations remain above average. Large cap U.S. equity trailing P/E is modestly above the long-term average (18.8 vs. 16.4 over 62 years), while small cap U.S. equities are substantially above the long-term average (33.3 vs. 26.3 over 38 years).

International developed market valuations (MSCI EAFE) in aggregate remain roughly normal relative to history on a trailing P/E basis, but very cheap (9<sup>th</sup> percentile) on a Shiller P/E basis. Emerging market equities (MSCI EM)

are cheap, but as we have discussed recently this may be due to widely acknowledged fundamental problems. An active management approach is recommended.

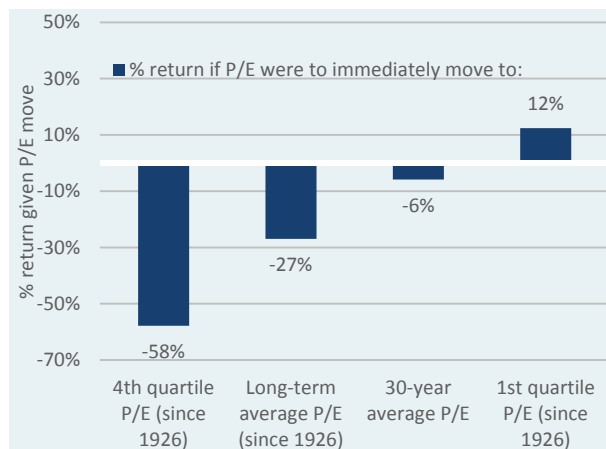
In the current low interest rate environment we should likely expect equity valuations to be above the long-term average. As yields across asset classes fall, the price investors are willing (or forced) to pay for risk assets is higher. This causes complications in understanding whether equities are truly overvalued.

## US LARGE CAP (S&P 500) VALUATION SNAPSHOT



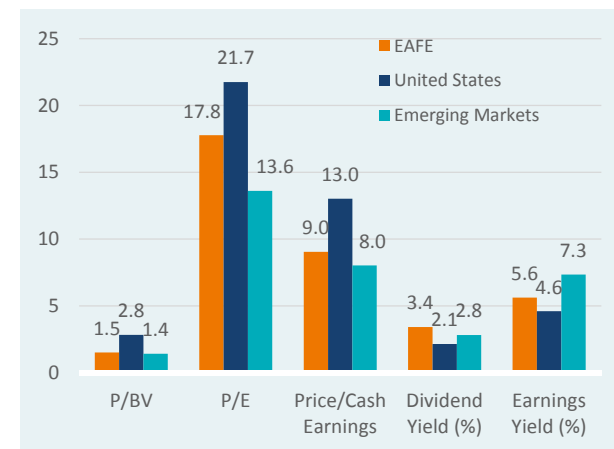
Source: Yale/Shiller, as of 6/30/16

## RETURNS IF P/E MOVED TO HISTORIC LEVEL



Source: Yale/Shiller, Verus

## MSCI VALUATION METRICS (3 MONTH AVERAGE)



Source: MSCI, as of 6/30/16



# Equity volatility

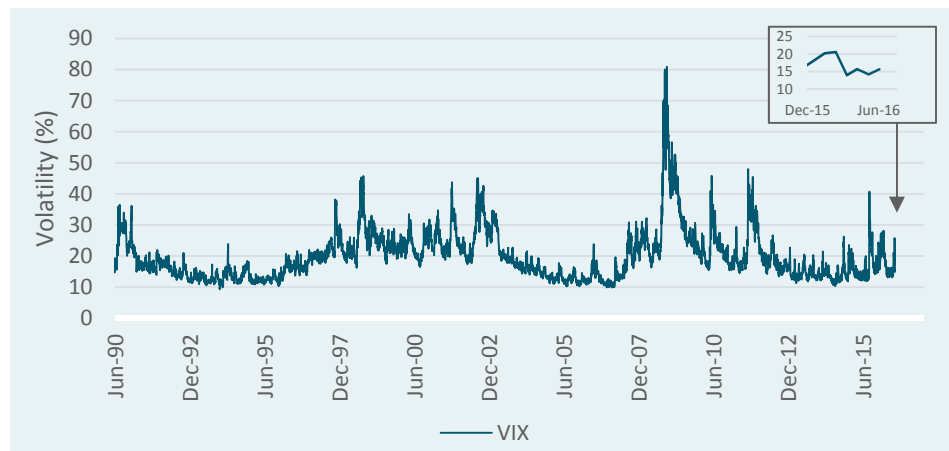
Despite muted volatility levels for much of the second quarter, the end of June brought significant turmoil, particularly in European stock markets. In the weeks leading up to the Brexit referendum, poll results were extremely close and the outcome was unpredictable. This gave investors concern, not only for the implications it would have for the U.K. and Europe, but also for peripheral countries.

Implied volatility spiked while investors digested the

Brexit news. The VIX jumped to 25.8, but fell back to 15.6 to close the month. With quantity and timing of Federal Reserve rate hikes in question, the instability catalyzed by Brexit helped reduce the possibility of a rate hike, calming domestic investors.

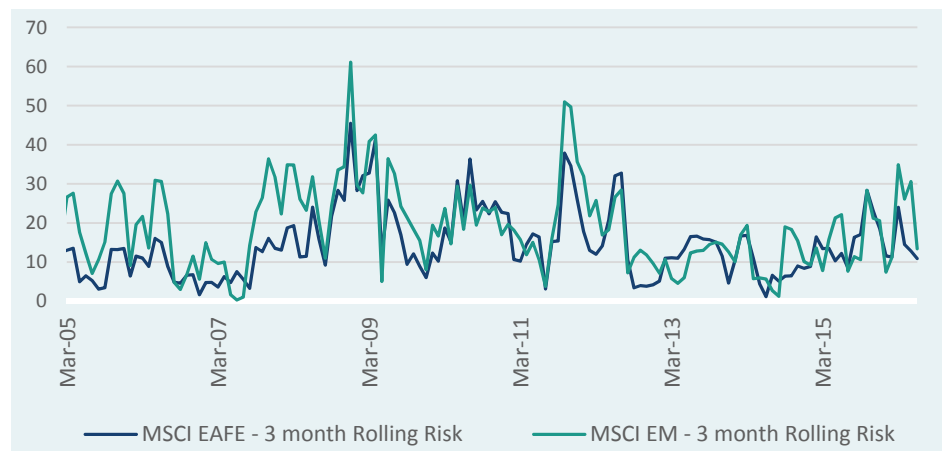
Markets may experience higher than normal levels of volatility as political uncertainty remains high both internationally and within the U.S.

## U.S. EQUITY VOLATILITY



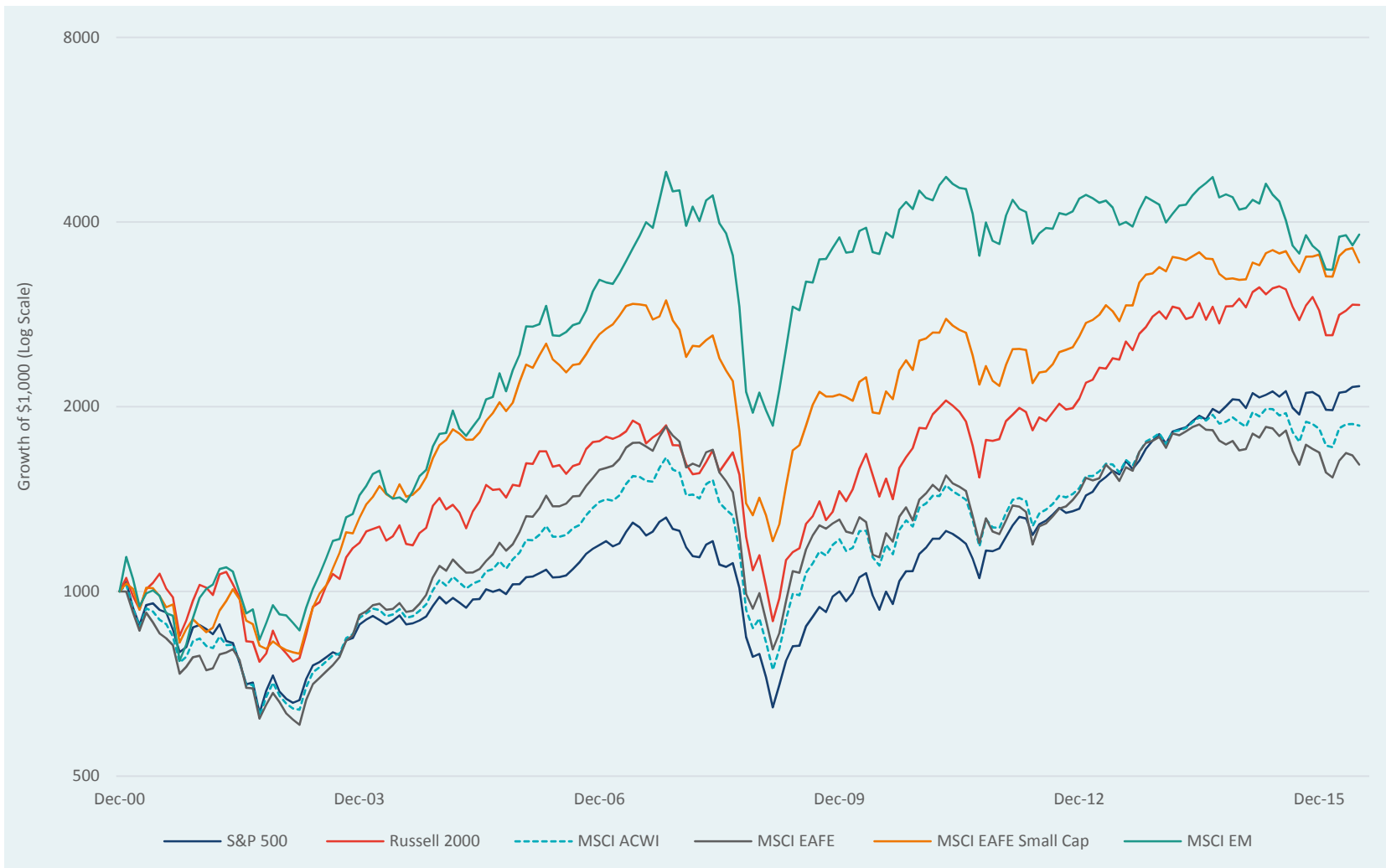
Source: CBOE, as of 6/30/16

## INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 6/30/16

# Long-term equity performance



U.S. equities have remained flat for nearly two years

Intl. developed and emerging market equities are down materially over the same period

Source: MPI, as of 6/30/16

# Other assets

# Other asset volatility

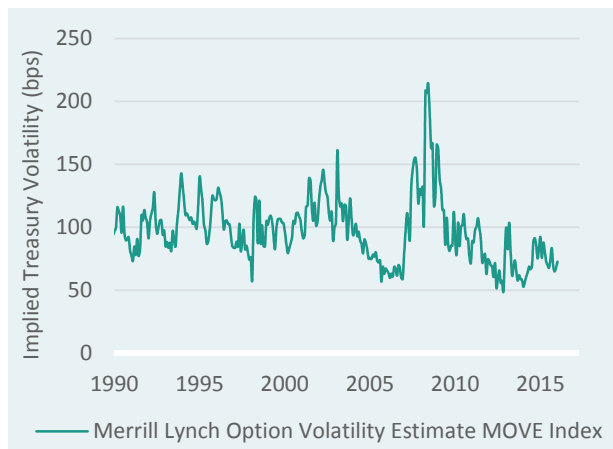
Volatility was relatively low throughout most of the quarter. However, speculation leading up to the June Brexit vote and the surprising outcome generated higher market volatility, especially in the currency markets. Demand for safe haven assets helped strengthen the yen and dollar against the pound and caused a spike in gold prices.

Oil volatility rose slightly during the quarter as prices continued higher. U.S. oil production and inventories have declined steadily over recent weeks, but overall

inventory levels remain very high. Rig counts have recently increased, suggesting production may be coming back on line.

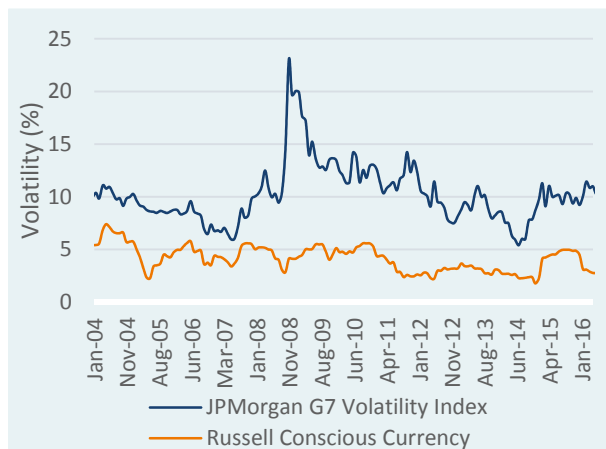
Fixed income implied volatility rose during the quarter but remains below average. Brexit caused sovereign yields to plunge due to demand for safety and increased expectations of accommodative monetary policies. Market expectations of a more gradual pace of interest rate hikes has helped keep short term fixed income risk low.

## FIXED INCOME VOLATILITY



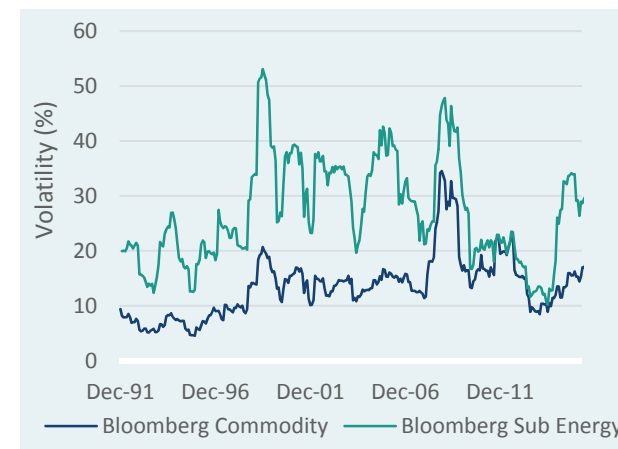
Source: Merrill Lynch, as of 6/30/16 (see Appendix)

## FX VOLATILITY



Source: JP Morgan, Russell Investments, as of 6/30/16

## COMMODITY VOLATILITY



Source: Bloomberg, as of 6/30/16

# Hedge funds

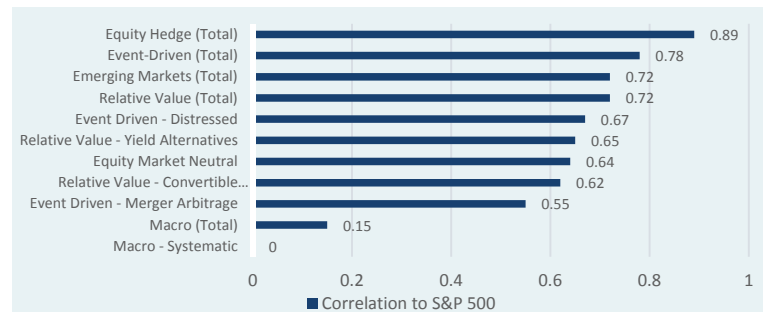
Hedge fund performance has been underwhelming, which has led to much debate regarding the continued role of these strategies in portfolios.

The demise of hedge funds may be exaggerated. Four problems often persist:

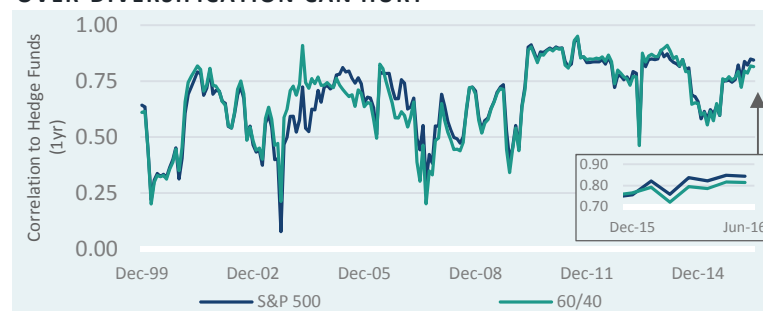
- **What ARE hedge funds?** – Hedge fund strategies typically involve trading public market assets in a proprietary manner. This means that when underlying public markets are performing poorly hedge funds should be expected to perform less well.
- **Misaligned expectations** – Hedge funds can generally be thought of to *diversify* the portfolio or *enhance returns*.
- **Improper attribution** – Investors should understand what types of hedge funds they hold, and what these hedge funds should be expected to deliver. Evaluate performance accordingly, and over a longer horizon.
- **Over-diversification** – Overly diversified/complicated hedge fund portfolios should be expected to take on more “market-like” performance profiles.

An appropriately designed hedge fund exposure can be a useful component of an investment portfolio, but investors should be careful to ensure that they know why they have the exposures that they do.

## DIVERSIFICATION VALUE VARIES DRASTICALLY BY STRATEGY



## OVER-DIVERSIFICATION CAN HURT



## YOU GET (RETURN) WHAT YOU GIVE (RISK)



(Top) Source: MPI, HFRI FoF Composite Index, 3-year correlation, as of 6/30/16

(Middle) Source: MPI, 60/40 portfolio (S&P 500/BC Agg), as of 6/30/2016

(Bottom) Source: MPI, HFRI FoF, Composite Index, as of 6/30/16

# Currency

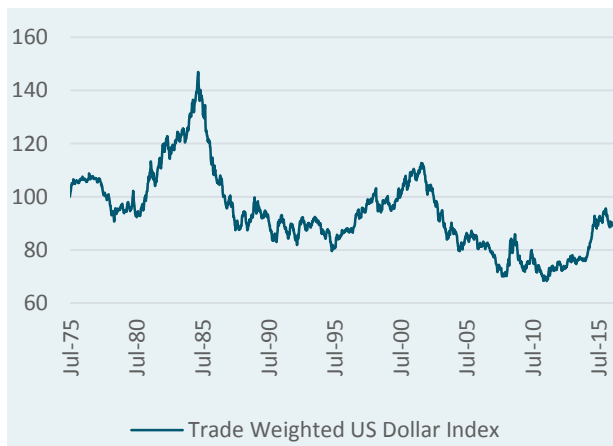
The U.S. dollar rose 0.5% in Q2 on a trade-weighted basis. Stabilization of the dollar should have a positive impact on corporate earnings in future quarters.

While U.S. investors have been harshly penalized in recent years for holding unhedged international equity exposure, these effects have moderated on a one-year basis. Though forecasting currency movements in an incredibly complex and difficult task, differences in interest rates and currency exchange prices indicate that U.S. investors might expect a positive return from

foreign currency exposure over the longer-term (interest rate parity). As discussed in recent quarters U.S. dollar moves can be somewhat arbitrarily driven by central bank actions which impact interest rates and exchange rate movement.

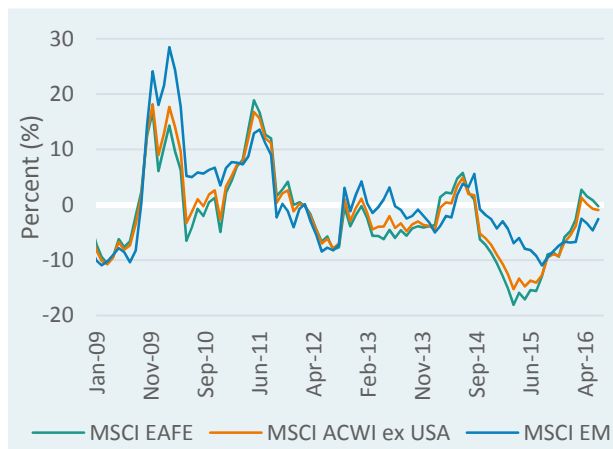
Currency indices are available which provide more accurate representations of true currency market investment. One such index, the Russell Conscious Currency Index, showed sharply positive currency returns in recent months.

**LONG-TERM TRADE WEIGHTED USD**



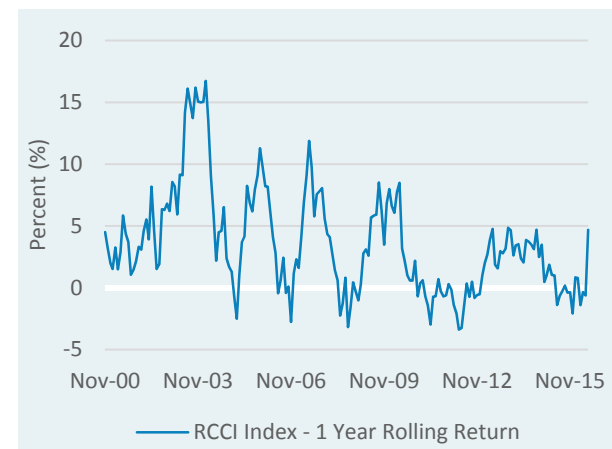
Source: FRED, as of 7/01/16

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



Source: MSCI, as of 6/30/16

**CURRENCY MARKET BEHAVIOR**

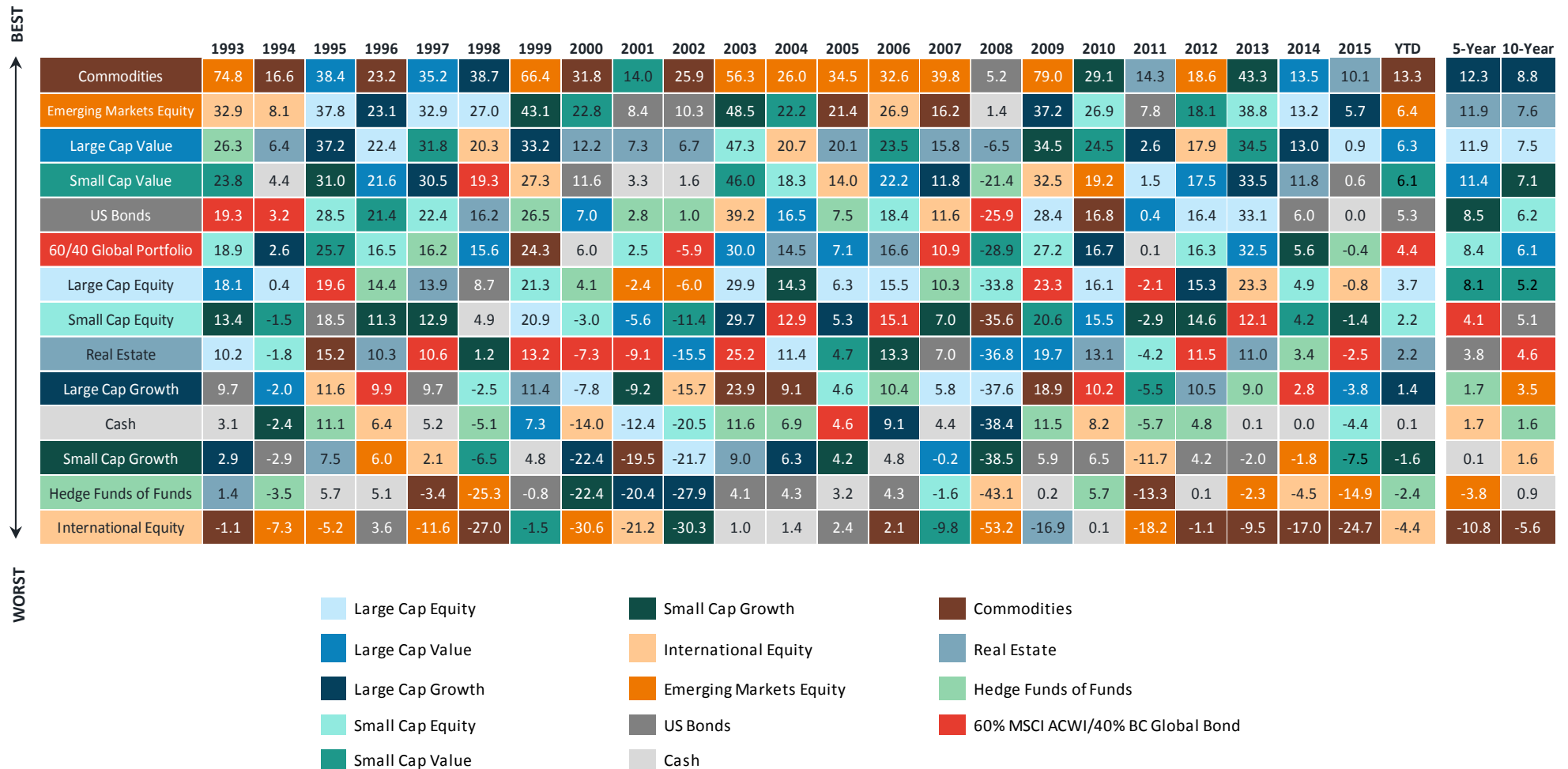


Source: Russell Investments, as of 6/30/16



# Appendix

# Periodic table of returns – June 2016



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, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property performance data as of 3/31/16.

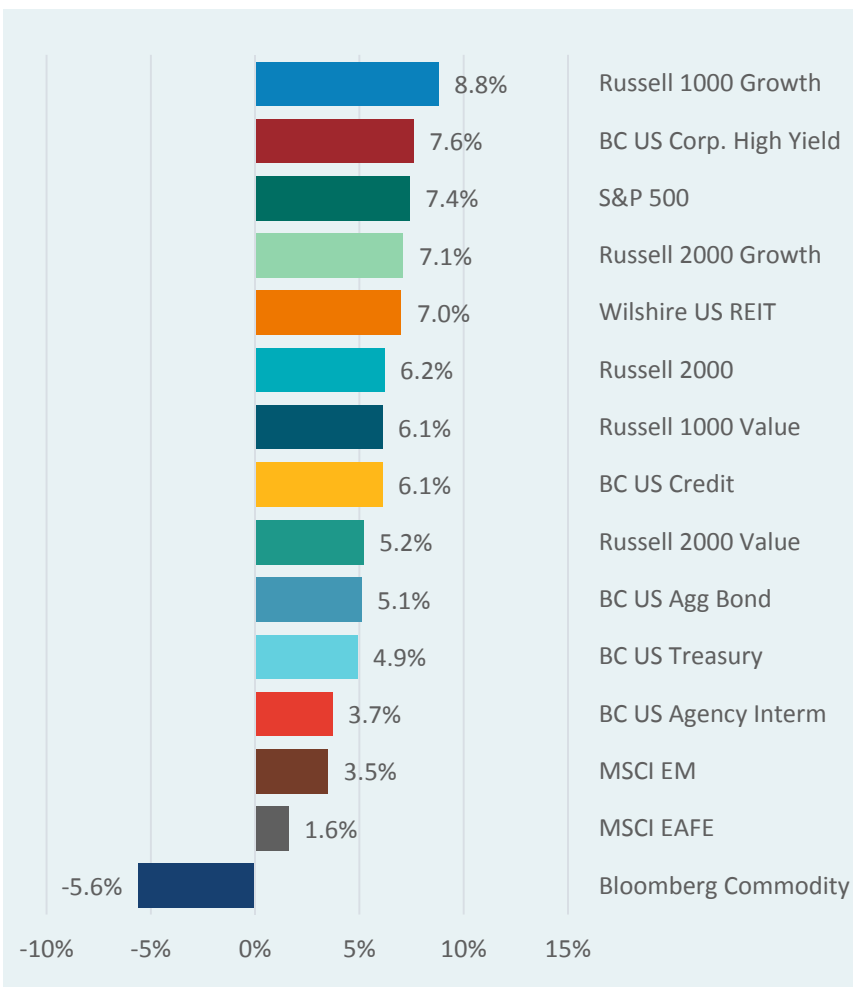
# Major asset class returns

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/16

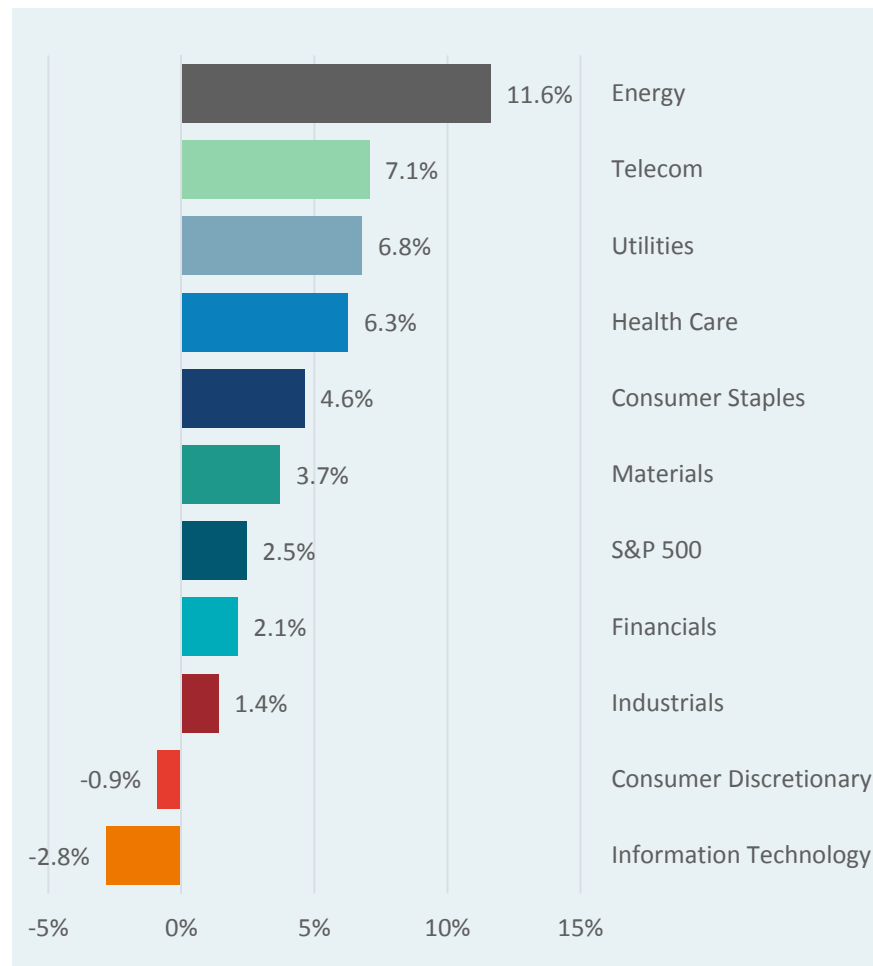
TEN YEARS ENDING JUNE



Source: Morningstar, as of 6/30/16

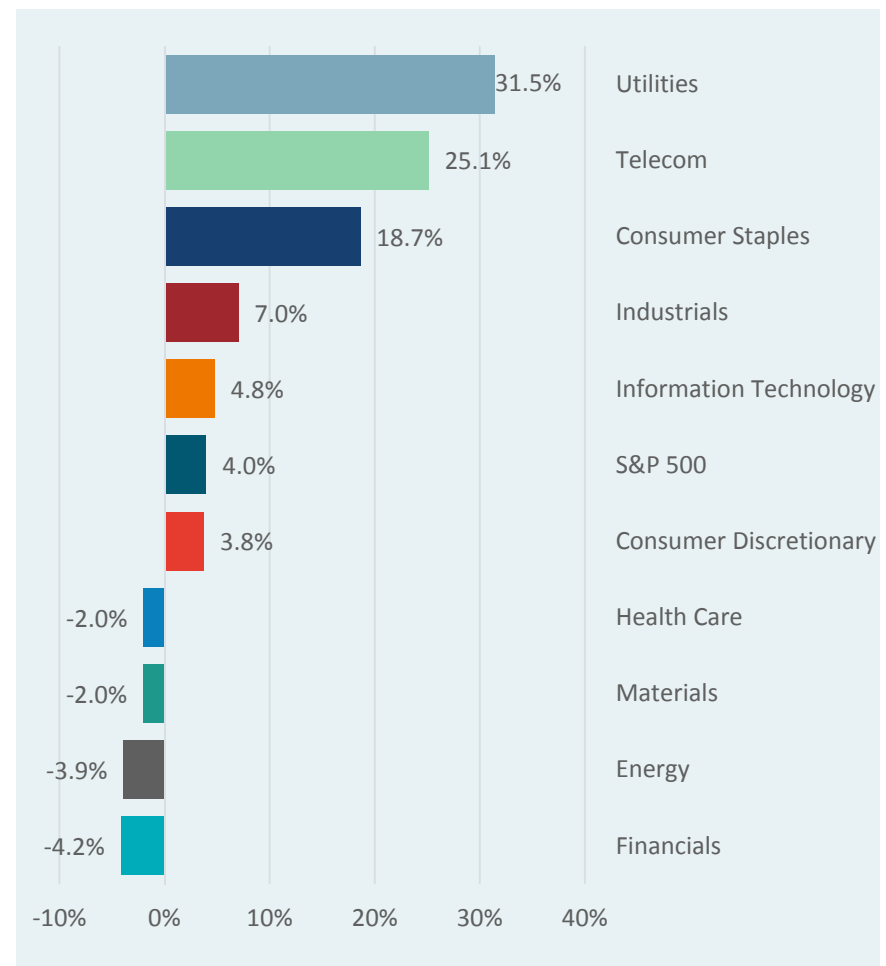
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/16

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/16

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	0.3	2.5	3.8	4.0	11.7	12.1	7.4
S&P 500 Equal Weighted	(0.1)	2.7	5.8	2.7	11.6	11.9	8.7
DJ Industrial Average	0.9	2.1	4.3	4.5	9.0	10.4	7.7
Russell Top 200	0.1	2.3	3.0	4.0	11.8	12.3	7.3
Russell 1000	0.2	2.5	3.7	2.9	11.5	11.9	7.5
Russell 2000	(0.1)	3.8	2.2	(6.7)	7.1	8.4	6.2
Russell 3000	0.2	2.6	3.6	2.1	11.1	11.6	7.4
Russell Mid Cap	0.5	3.2	5.5	0.6	10.8	10.9	8.1
<b>Style Index</b>							
Russell 1000 Growth	(0.4)	0.6	1.4	3.0	13.1	12.3	8.8
Russell 1000 Value	0.9	4.6	6.3	2.9	9.9	11.4	6.1
Russell 2000 Growth	(0.5)	3.2	(1.6)	(10.8)	7.7	8.5	7.1
Russell 2000 Value	0.3	4.3	6.1	(2.6)	6.4	8.1	5.2

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI EAFE	(3.4)	(1.5)	(4.4)	(10.2)	2.1	1.7	1.6
MSCI AC World ex US	(1.5)	(0.6)	(1.0)	(10.2)	1.2	0.1	1.9
MSCI EM	4.0	0.7	6.4	(12.1)	(1.6)	(3.8)	3.5
MSCI EAFE Small Cap	(5.3)	(2.6)	(3.2)	(3.7)	7.3	4.8	3.6
<b>Style Index</b>							
MSCI EAFE Growth	(1.8)	(0.1)	(2.2)	(4.8)	4.2	3.2	2.9
MSCI EAFE Value	(5.0)	(2.8)	(6.6)	(15.4)	(0.1)	0.1	0.2
<b>Regional Index</b>							
MSCI UK	(3.6)	(0.7)	(3.1)	(12.1)	0.7	1.7	1.4
MSCI Japan	(2.5)	1.0	(5.6)	(8.9)	2.7	4.2	0.1
MSCI Euro	(6.3)	(5.0)	(7.4)	(12.8)	1.7	(1.0)	0.1
MSCI EM Asia	2.8	0.3	2.2	(12.2)	1.8	(0.6)	5.3
MSCI EM Latin American	11.4	5.3	25.5	(7.6)	(8.3)	(10.1)	2.3

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	2.1	1.7	6.2	4.4	2.3	2.6	4.7
BC US Treasury Bills	0.1	0.1	0.2	0.3	0.1	0.1	1.1
BC US Agg Bond	1.8	2.2	5.3	6.0	4.1	3.8	5.1
<b>Duration</b>							
BC US Treasury 1-3 Yr	0.6	0.5	1.4	1.3	1.0	0.8	2.5
BC US Treasury Long	6.1	6.4	15.1	19.3	10.5	10.3	8.8
BC US Treasury	2.2	2.1	5.4	6.2	3.5	3.5	4.9
<b>Issuer</b>							
BC US MBS	0.8	1.1	3.1	4.3	3.8	3.0	5.0
BC US Corp. High Yield	0.9	5.5	9.1	1.6	4.2	5.8	7.6
BC US Agency Interm	0.8	0.7	2.3	2.5	2.0	1.8	3.7
BC US Credit	2.3	3.5	7.5	7.6	5.3	5.2	6.1

## OTHER

<b>Index</b>							
Bloomberg Commodity	4.1	12.8	13.3	(13.3)	(10.6)	(10.8)	(5.6)
Wilshire US REIT	6.5	5.6	11.1	22.8	13.6	12.5	7.0
<b>Regional Index</b>							
JPM EMBI Global Div	3.4	5.0	10.3	9.8	7.2	6.5	8.0
JPM GBI-EM Global Div	5.9	2.7	14.0	2.0	(3.6)	(2.2)	5.7

Source: Morningstar, as of 6/30/16

# 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.langerresearch.com](http://www.langerresearch.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.

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# Imperial County Employees' Retirement System

Investment Performance Review

Period Ending: June 30, 2016



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SEATTLE 206-622-3700

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SAN FRANCISCO 415-362-3484

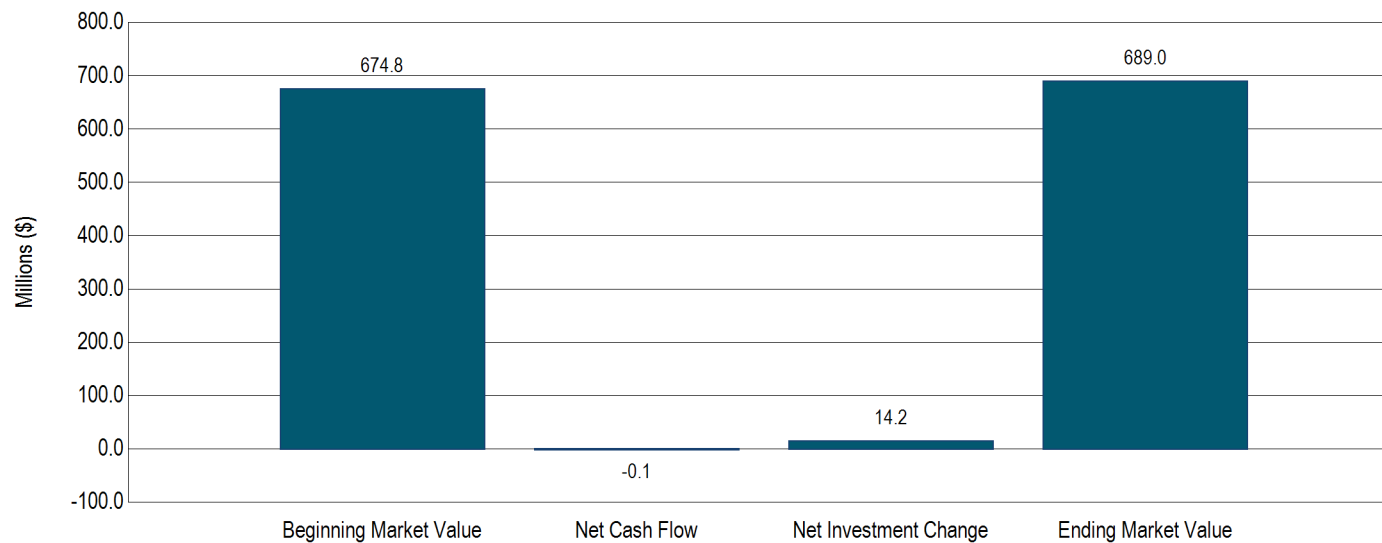
Total Fund  
Portfolio Reconciliation

Period Ending: June 30, 2016

Portfolio Reconciliation

	Last Three Months	Fiscal Year-To-Date	One Year
Beginning Market Value	\$674,845,314	\$691,058,257	\$691,058,257
Net Cash Flow	-\$102,186	-\$5,147,427	-\$5,147,427
Net Investment Change	\$14,219,255	\$3,051,552	\$3,051,552
Ending Market Value	\$688,962,382	\$688,962,382	\$688,962,382

Change in Market Value  
Last Three Months

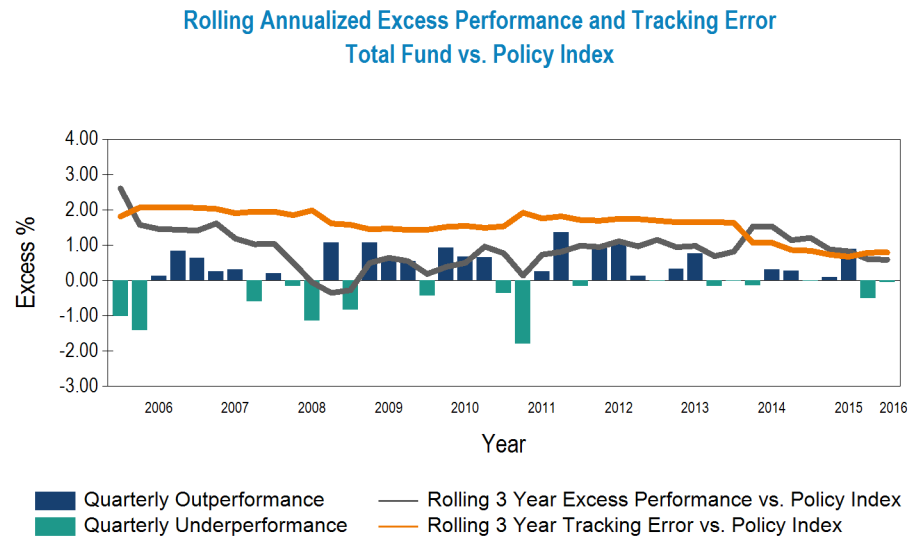
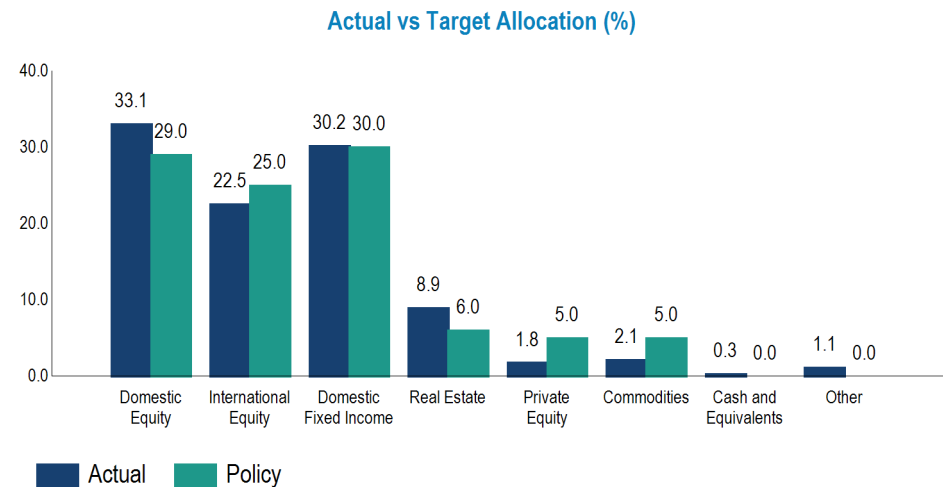


Contributions and withdrawals may include intra-account transfers between managers/funds. Fee transactions are excluded from Portfolio Reconciliation.

# Total Fund Executive Summary (Gross of Fees)

Period Ending: June 30, 2016

	QTD	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>2.1</b>	<b>3.4</b>	<b>0.6</b>	<b>0.6</b>	<b>6.2</b>	<b>6.1</b>	<b>6.0</b>
<i>Total Fund ex Clifton</i>	2.1	3.4	0.6	0.6	6.3	6.1	6.0
<i>Policy Index</i>	2.2	4.0	0.2	0.2	5.6	5.5	5.4
<i>InvestorForce Public DB Gross Rank</i>	29	36	54	54	56	64	28
<b>Total Domestic Equity</b>	<b>2.6</b>	<b>3.7</b>	<b>1.6</b>	<b>1.6</b>	<b>10.5</b>	<b>11.3</b>	<b>7.7</b>
<i>Russell 3000</i>	2.6	3.6	2.1	2.1	11.1	11.6	7.4
<i>eA All US Equity Gross Rank</i>	43	37	30	30	44	38	53
<b>Total International Equity</b>	<b>0.0</b>	<b>-0.9</b>	<b>-8.7</b>	<b>-8.7</b>	<b>1.9</b>	<b>0.2</b>	<b>2.9</b>
<i>MSCI ACWI ex USA Gross</i>	-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3
<i>eA ACWI ex-US All Cap Equity Gross Rank</i>	32	40	62	62	82	91	75
<b>Total Fixed Income</b>	<b>2.8</b>	<b>6.0</b>	<b>5.4</b>	<b>5.4</b>	<b>4.3</b>	<b>4.3</b>	<b>6.4</b>
<i>Barclays Aggregate</i>	2.2	5.3	6.0	6.0	4.1	3.8	5.1
<i>eA All US Fixed Inc Gross Rank</i>	32	30	37	37	40	45	23
<b>Total Real Estate</b>	<b>1.6</b>	<b>4.0</b>	<b>11.8</b>	<b>11.8</b>	<b>13.4</b>	<b>12.3</b>	<b>--</b>
<i>NCREIF Property Index</i>	2.0	4.3	10.6	10.6	11.6	11.5	--
<i>NCREIF-ODCE</i>	2.1	4.4	11.8	11.8	13.0	12.7	--
<b>Total Private Equity</b>	<b>1.4</b>	<b>4.9</b>	<b>12.9</b>	<b>12.9</b>	<b>18.9</b>	<b>14.7</b>	<b>--</b>
<i>Russell 3000 +3% Lagged</i>	1.7	8.9	2.7	2.7	14.4	14.3	--
<b>Total Commodities</b>	<b>11.8</b>	<b>12.4</b>	<b>-14.7</b>	<b>-14.7</b>	<b>-10.7</b>	<b>-10.9</b>	<b>--</b>
<i>Bloomberg Commodity Index TR USD</i>	12.8	13.3	-13.3	-13.3	-10.6	-10.8	--
<b>Total Opportunistic</b>	<b>5.3</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>13.1</b>	<b>17.0</b>	<b>--</b>
<i>Assumption Rate + 1%</i>	2.2	4.4	9.0	9.0	9.0	9.0	--

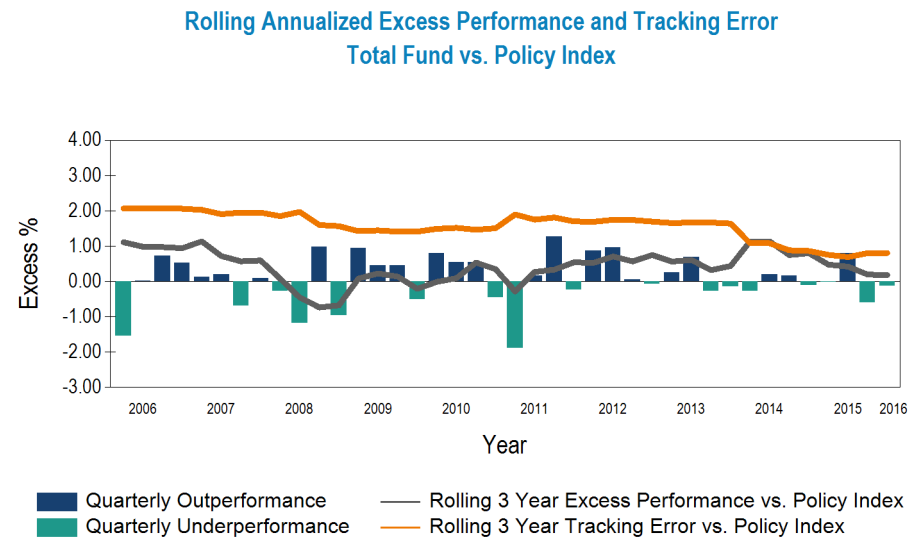
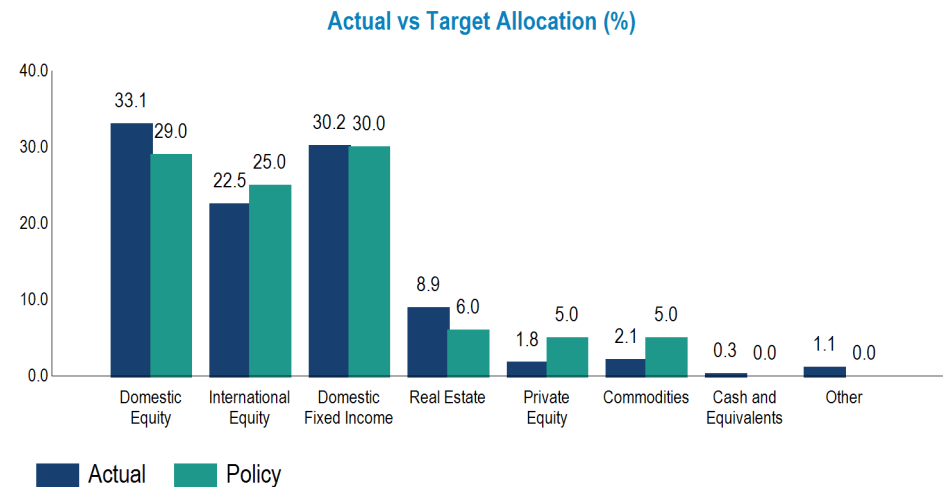


Policy Index (as of 7/1/2014): 29% Russell 3000, 25% MSCI ACWI Free Ex US, 30% BC Aggregate, 6% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 plus 300 bps (Lagged). Prior Policy Index (7/1/2010 to 6/30/2014): 24% S&P 500, 10% R2500, 21% MSCI ACWI Free Ex US, 30% BC Aggregate, 5% NCREIF Property, 5% Bloomberg Commodity Index, 5% CPI+ 5%. Prior quarter Private Equity returns and index data are used. All returns are (G) gross of fees.

# Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2016

	QTD	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>2.1</b>	<b>3.3</b>	<b>0.3</b>	<b>0.3</b>	<b>5.8</b>	<b>5.7</b>	<b>5.6</b>
<i>Total Fund ex Clifton</i>	2.1	3.3	0.3	0.3	5.9	5.7	5.6
<i>Policy Index</i>	2.2	4.0	0.2	0.2	5.6	5.5	5.4
<b>Total Domestic Equity</b>	<b>2.6</b>	<b>3.7</b>	<b>1.5</b>	<b>1.5</b>	<b>10.3</b>	<b>11.1</b>	<b>7.4</b>
<i>Russell 3000</i>	2.6	3.6	2.1	2.1	11.1	11.6	7.4
<b>Total International Equity</b>	<b>-0.1</b>	<b>-1.0</b>	<b>-9.0</b>	<b>-9.0</b>	<b>1.4</b>	<b>-0.3</b>	<b>2.4</b>
<i>MSCI ACWI ex USA Gross</i>	-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3
<b>Total Fixed Income</b>	<b>2.7</b>	<b>5.8</b>	<b>5.1</b>	<b>5.1</b>	<b>4.0</b>	<b>4.0</b>	<b>6.1</b>
<i>Barclays Aggregate</i>	2.2	5.3	6.0	6.0	4.1	3.8	5.1
<b>Total Real Estate</b>	<b>1.4</b>	<b>3.5</b>	<b>10.7</b>	<b>10.7</b>	<b>12.3</b>	<b>11.5</b>	<b>--</b>
<i>NCREIF Property Index</i>	2.0	4.3	10.6	10.6	11.6	11.5	--
<i>NCREIF-ODCE</i>	2.1	4.4	11.8	11.8	13.0	12.7	--
<b>Total Private Equity</b>	<b>1.0</b>	<b>4.1</b>	<b>11.0</b>	<b>11.0</b>	<b>15.6</b>	<b>4.1</b>	<b>--</b>
<i>Russell 3000 +3% Lagged</i>	1.7	8.9	2.7	2.7	14.4	14.3	--
<b>Total Commodities</b>	<b>11.6</b>	<b>12.0</b>	<b>-15.2</b>	<b>-15.2</b>	<b>-11.2</b>	<b>-11.3</b>	<b>--</b>
<i>Bloomberg Commodity Index TR USD</i>	12.8	13.3	-13.3	-13.3	-10.6	-10.8	--
<b>Total Opportunistic</b>	<b>4.8</b>	<b>2.8</b>	<b>2.0</b>	<b>2.0</b>	<b>11.2</b>	<b>15.1</b>	<b>--</b>
<i>Assumption Rate + 1%</i>	2.2	4.4	9.0	9.0	9.0	9.0	--



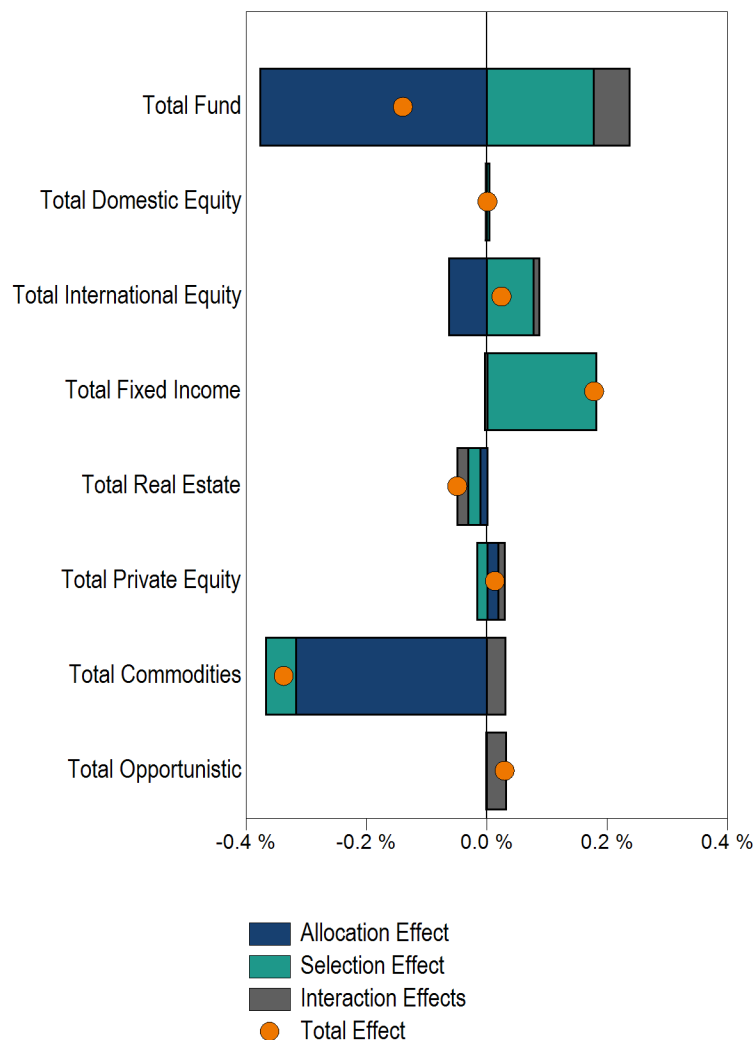
Policy Index (as of 7/1/2014): 29% Russell 3000, 25% MSCI ACWI Free Ex US, 30% BC Aggregate, 6% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 plus 300 bps (Lagged). Prior Policy Index (7/1/2010 to 6/30/2014): 24% S&P 500, 10% R2500, 21% MSCI ACWI Free Ex US, 30% BC Aggregate, 5% NCREIF Property, 5% Bloomberg Commodity Index, 5% CPI+ 5%. Prior quarter Private Equity returns and index data are used. All returns are (N) net of fees.

# Total Fund

## Attribution Analysis - Asset Class Level (Gross of Fees)

Period Ending: June 30, 2016

### Attribution Effects



### Performance Attribution

	Quarter	YTD
Wtd. Actual Return	2.17%	3.47%
Wtd. Index Return *	2.20%	4.00%
<b>Excess Return</b>	<b>-0.03%</b>	<b>-0.53%</b>
Selection Effect	0.17%	-0.19%
Allocation Effect	-0.25%	-0.54%
Interaction Effect	0.06%	0.20%

\*Calculated from benchmark returns and weightings of each component.

### Attribution Summary Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	2.6%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Total International Equity	0.0%	-0.4%	0.4%	0.1%	0.0%	0.0%	0.1%
Total Fixed Income	2.8%	2.2%	0.6%	0.2%	0.0%	0.0%	0.2%
Total Real Estate	1.6%	2.0%	-0.4%	0.0%	0.0%	0.0%	0.0%
Total Private Equity	1.4%	1.7%	-0.3%	0.0%	0.0%	0.0%	0.0%
Total Commodities	11.8%	12.8%	-1.0%	0.0%	-0.3%	0.0%	-0.3%
Total Opportunistic	5.3%	2.2%	3.1%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>2.2%</b>	<b>2.2%</b>	<b>0.0%</b>	<b>0.2%</b>	<b>-0.3%</b>	<b>0.1%</b>	<b>0.0%</b>

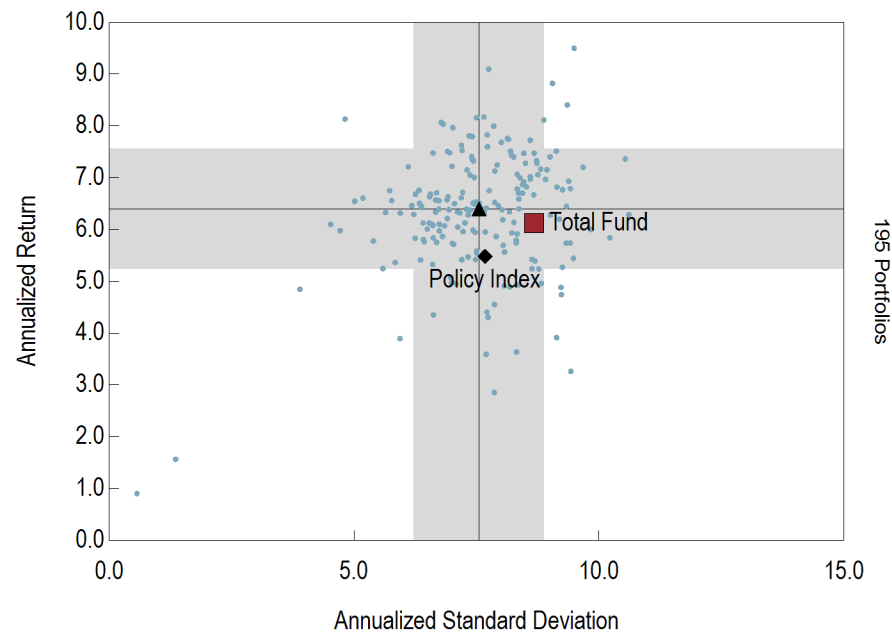
Weighted returns shown in attribution analysis may differ from actual returns.

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

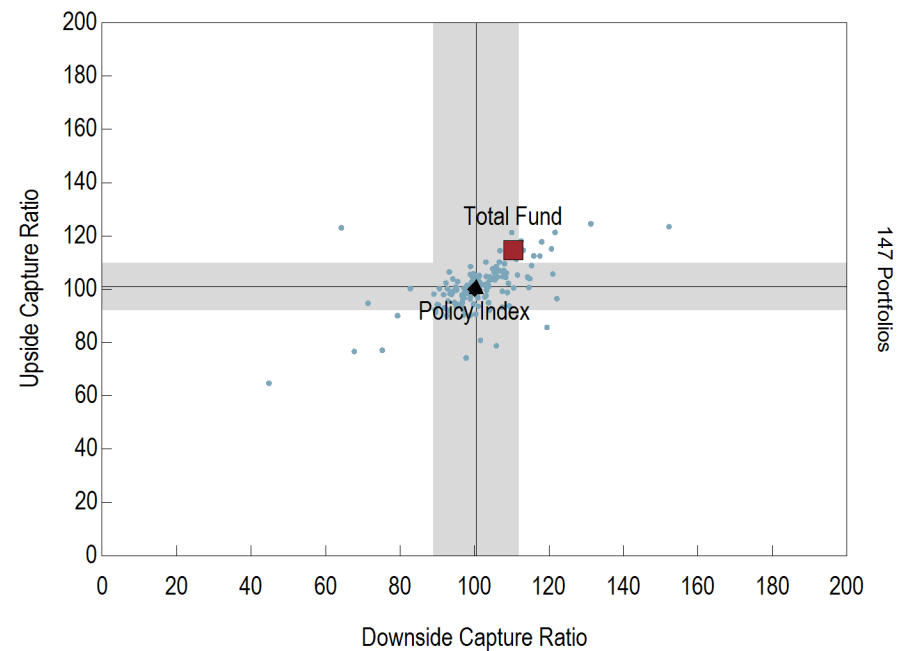
Period Ending: June 30, 2016

	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	6.12%	0.64%	8.68%	-0.04%	1.12	1.34%	0.99	0.70	0.48	114.69%	110.36%

Risk vs. Return



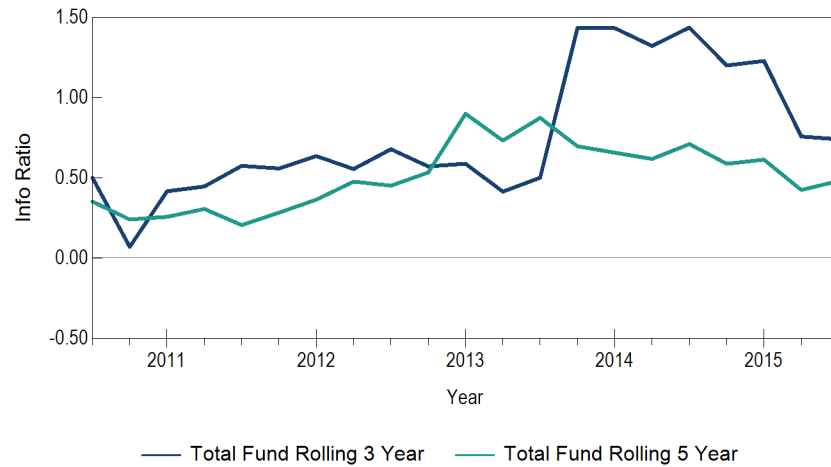
Up Markets vs. Down Markets



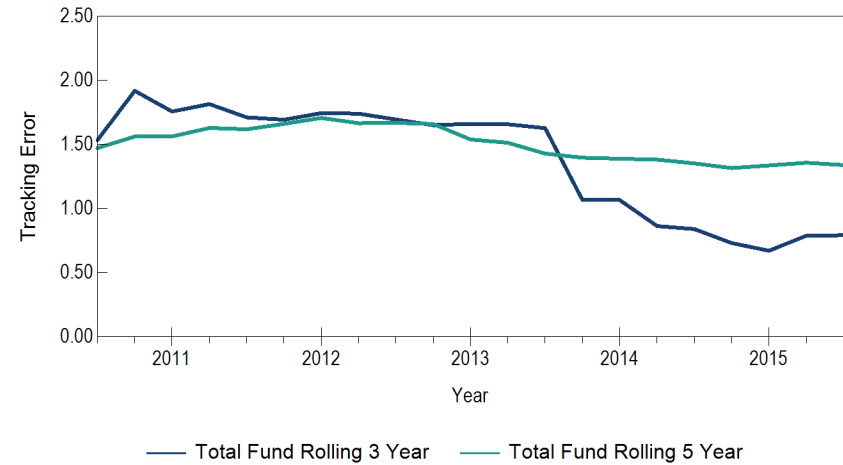
# Total Fund Rolling Risk Statistics (Gross of Fees)

Period Ending: June 30, 2016

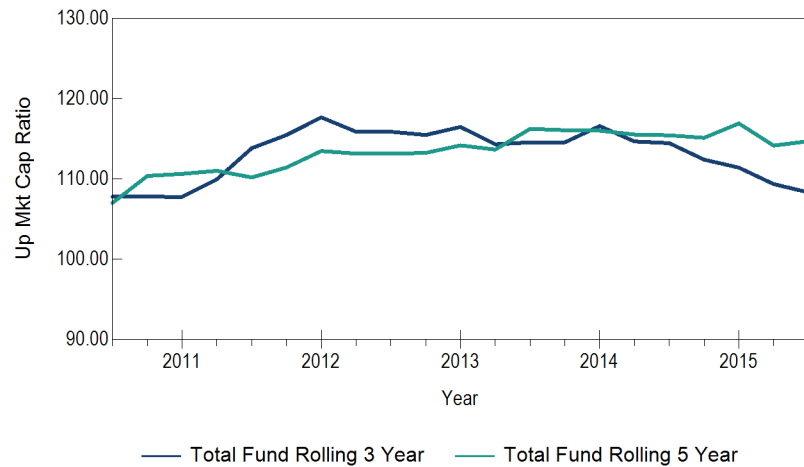
Rolling Information Ratio



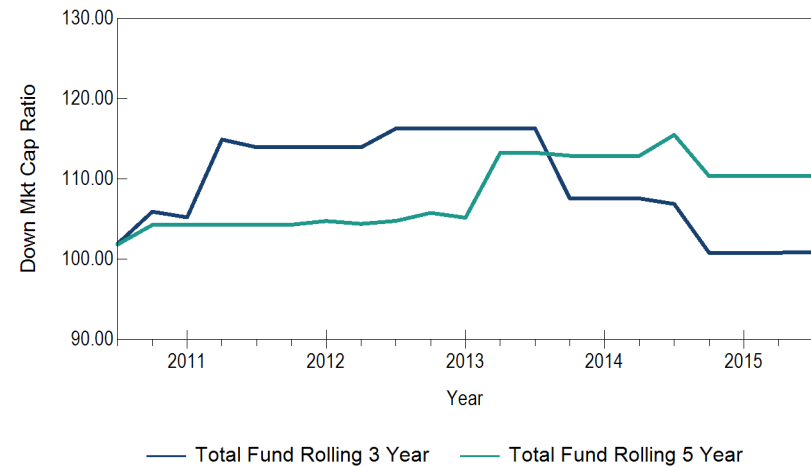
Rolling Tracking Error



Rolling Up Market Capture Ratio (%)



Rolling Down Market Capture Ratio (%)





# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011	Return	Since
<b>Total Fund</b>	<b>688,962,382</b>	<b>100.0</b>	<b>2.1</b>	<b>3.4</b>	<b>0.6</b>	<b>0.6</b>	<b>6.2</b>	<b>6.1</b>	<b>6.0</b>	<b>0.0</b>	<b>4.8</b>	<b>14.8</b>	<b>14.6</b>	<b>-1.1</b>	<b>9.2</b>	<b>Mar-89</b>
Policy Index			2.2	4.0	0.2	0.2	5.6	5.5	5.4	-1.2	4.9	13.5	11.2	0.4	--	Mar-89
InvestorForce Public DB Gross Rank			29	36	54	54	56	64	28	53	74	59	6	89	2	Mar-89
<b>Total Fund ex Clifton</b>			<b>2.1</b>	<b>3.4</b>	<b>0.6</b>	<b>0.6</b>	<b>6.3</b>	<b>6.1</b>	<b>6.0</b>	<b>0.0</b>	<b>4.9</b>	<b>14.7</b>	<b>14.2</b>	<b>-1.0</b>	<b>9.2</b>	<b>Mar-89</b>
Policy Index			2.2	4.0	0.2	0.2	5.6	5.5	5.4	-1.2	4.9	13.5	11.2	0.4	--	Mar-89
InvestorForce Public DB Gross Rank			29	36	54	54	55	66	33	53	72	59	11	88	2	Mar-89
<b>Total Domestic Equity</b>	<b>227,744,985</b>	<b>33.1</b>	<b>2.6</b>	<b>3.7</b>	<b>1.6</b>	<b>1.6</b>	<b>10.5</b>	<b>11.3</b>	<b>7.7</b>	<b>0.3</b>	<b>10.2</b>	<b>33.9</b>	<b>17.1</b>	<b>0.9</b>	<b>--</b>	
Russell 3000			2.6	3.6	2.1	2.1	11.1	11.6	7.4	0.5	12.6	33.6	16.4	1.0	--	
eA All US Equity Gross Rank			43	37	30	30	44	38	53	42	51	62	37	40	--	
BlackRock Russell 3000	227,744,985	33.1	2.6	3.7	--	--	--	--	--	--	--	--	--	--	2.4	Dec-15
Russell 3000			2.6	3.6	--	--	--	--	--	--	--	--	--	--	1.5	Dec-15
eA US All Cap Core Equity Gross Rank			35	26	--	--	--	--	--	--	--	--	--	--	44	Dec-15
<b>Total International Equity</b>	<b>155,227,975</b>	<b>22.5</b>	<b>0.0</b>	<b>-0.9</b>	<b>-8.7</b>	<b>-8.7</b>	<b>1.9</b>	<b>0.2</b>	<b>2.9</b>	<b>-3.5</b>	<b>-4.4</b>	<b>14.0</b>	<b>19.3</b>	<b>-15.6</b>	<b>--</b>	
MSCI ACWI ex USA Gross			-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3	-5.3	-3.4	15.8	17.4	-13.3	--	
eA ACWI ex-US All Cap Equity Gross Rank			32	40	62	62	82	91	75	77	70	92	54	84	--	
BlackRock International Equity	113,767,374	16.5	-1.2	-4.1	-9.8	-9.8	2.4	2.0	1.9	-0.5	-4.7	23.2	17.8	-11.8	6.7	Jul-03
MSCI EAFE Gross			-1.2	-4.0	-9.7	-9.7	2.5	2.1	2.1	-0.4	-4.5	23.3	17.9	-11.7	6.8	Jul-03
eA All EAFE Equity Gross Rank			43	61	66	66	76	76	82	67	64	61	74	48	73	Jul-03
DFA Emerging Markets Value	18,522,839	2.7	1.4	10.6	-11.2	-11.2	-2.0	-5.2	--	-18.3	-3.9	-3.2	20.1	-25.2	2.3	Jan-07
MSCI Emerging Markets Gross			0.8	6.6	-11.7	-11.7	-1.2	-3.4	--	-14.6	-1.8	-2.3	18.6	-18.2	1.8	Jan-07
eA Emg Mkts Equity Gross Rank			61	15	70	70	88	98	--	92	84	84	56	92	65	Jan-07
Vontobel Global Emerging Markets	22,937,763	3.3	5.1	7.8	-1.4	-1.4	--	--	--	-7.8	--	--	--	--	-1.7	Sep-14
MSCI Emerging Markets Gross			0.8	6.6	-11.7	-11.7	--	--	--	-14.6	--	--	--	--	-7.7	Sep-14
eA Emg Mkts Equity Gross Rank			6	34	5	5	--	--	--	18	--	--	--	--	9	Sep-14
<b>Total Fixed Income</b>	<b>207,825,169</b>	<b>30.2</b>	<b>2.8</b>	<b>6.0</b>	<b>5.4</b>	<b>5.4</b>	<b>4.3</b>	<b>4.3</b>	<b>6.4</b>	<b>-0.3</b>	<b>5.9</b>	<b>-1.7</b>	<b>9.6</b>	<b>6.8</b>	<b>--</b>	
Barclays Aggregate			2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8	--	
eA All US Fixed Inc Gross Rank			32	30	37	37	40	45	23	74	34	78	28	45	--	
Bradford & Marzec Fixed	104,714,068	15.2	3.1	6.2	6.8	6.8	5.4	5.1	6.8	1.2	7.0	-0.4	8.8	7.4	6.9	Dec-92
Barclays Aggregate			2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8	5.8	Dec-92
eA US Core Plus Fixed Inc Gross Rank			28	29	7	7	8	30	19	15	16	52	45	51	34	Dec-92
MackKay Shields Core Plus Opportunities	87,769,772	12.7	2.7	5.7	4.1	4.1	--	--	--	--	--	--	--	--	1.8	Mar-15
Barclays Aggregate			2.2	5.3	6.0	6.0	--	--	--	--	--	--	--	--	3.5	Mar-15
eA US Core Plus Fixed Inc Gross Rank			58	53	83	83	--	--	--	--	--	--	--	--	89	Mar-15

Since Inception ranking is from the beginning of the first complete month. Templeton Foreign Equity liquidated 10/27/2015. TimesSquare, BlackRock Russell 1000 and T. Rowe liquidated 12/10/2015. BlackRock Russell 3000 funded on 12/10/2015.

# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011	Return	Since
BlackRock US TIPS	15,341,329	2.2	1.7	6.3	4.4	4.4	2.4	2.7	--	-1.2	3.6	-8.5	7.1	13.7	4.8	Apr-07
Barclays US TIPS			1.7	6.2	4.4	4.4	2.3	2.6	--	-1.4	3.6	-8.6	7.0	13.6	4.6	Apr-07
eA TIPS / Infl Indexed Fixed Inc Gross Rank			39	43	31	31	36	45	--	43	45	62	59	37	70	Apr-07
<b>Total Real Estate</b>	<b>61,584,144</b>	<b>8.9</b>	<b>1.6</b>	<b>4.0</b>	<b>11.8</b>	<b>11.8</b>	<b>13.4</b>	<b>12.3</b>	<b>--</b>	<b>16.1</b>	<b>13.0</b>	<b>12.6</b>	<b>10.6</b>	<b>14.9</b>	<b>--</b>	
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3	--	
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0	--	
ASB Real Estate	30,459,360	4.4	1.3	2.9	11.6	11.6	14.0	--	--	17.3	13.5	13.7	--	--	13.5	Dec-12
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	--	--	13.3	11.8	11.0	--	--	11.6	Dec-12
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	--	--	15.0	12.5	13.9	--	--	13.1	Dec-12
Clarion Lion	29,734,245	4.3	2.0	5.3	12.5	12.5	13.5	13.1	--	15.7	13.2	12.8	10.9	18.7	4.6	Dec-06
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3	6.9	Dec-06
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0	5.7	Dec-06
1221 State St. Corp	1,390,539	0.2	0.0	0.0	0.0	0.0	0.0	-2.5	--	0.0	0.0	0.0	0.1	-9.0	-0.5	Sep-08
<b>Total Commodities</b>	<b>14,620,851</b>	<b>2.1</b>	<b>11.8</b>	<b>12.4</b>	<b>-14.7</b>	<b>-14.7</b>	<b>-10.7</b>	<b>-10.9</b>	<b>--</b>	<b>-25.1</b>	<b>-16.3</b>	<b>-9.3</b>	<b>-0.9</b>	<b>-13.2</b>	<b>-5.1</b>	<b>Oct-09</b>
Bloomberg Commodity Index TR USD			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3	-5.1	Oct-09
BlackRock Commodities	4,628,966	0.7	12.6	13.1	-13.4	-13.4	-10.6	-10.8	--	-24.7	-17.0	-9.4	-0.9	-13.2	-5.3	Oct-09
Bloomberg Commodity Index TR USD			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3	-5.1	Oct-09
Gresham MTAP Commodity Builder	9,991,885	1.5	11.4	12.0	-15.3	-15.3	--	--	--	-25.3	-16.1	--	--	--	-12.8	Aug-13
Bloomberg Commodity Index TR USD			12.8	13.3	-13.3	-13.3	--	--	--	-24.7	-17.0	--	--	--	-12.6	Aug-13
<b>Total Cash</b>	<b>2,001,429</b>	<b>0.3</b>														
Cash Account	2,001,429	0.3	0.0	0.0	0.0	0.0	0.0	0.1	--	0.0	0.0	0.0	0.4	0.2	--	
91 Day T-Bills			0.1	0.1	0.2	0.2	0.1	0.1	--	0.0	0.0	0.0	0.1	0.0	--	

Since Inception ranking is from the beginning of the first complete month. Templeton Foreign Equity liquidated 10/27/2015. TimesSquare, BlackRock Russell 1000 and T. Rowe liquidated 12/10/2015. BlackRock Russell 3000 funded on 12/10/2015.

# Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011	Return	Since
<b>Total Fund</b>	<b>688,962,382</b>	<b>100.0</b>	<b>2.1</b>	<b>3.3</b>	<b>0.3</b>	<b>0.3</b>	<b>5.8</b>	<b>5.7</b>	<b>5.6</b>	<b>-0.4</b>	<b>4.4</b>	<b>14.5</b>	<b>14.2</b>	<b>-1.5</b>	<b>8.8</b>	<b>Mar-89</b>
Policy Index			2.2	4.0	0.2	0.2	5.6	5.5	5.4	-1.2	4.9	13.5	11.2	0.4	--	Mar-89
Total Fund ex Clifton			2.1	3.3	0.3	0.3	5.9	5.7	5.6	-0.4	4.4	14.4	13.8	-1.4	8.8	Mar-89
Policy Index			2.2	4.0	0.2	0.2	5.6	5.5	5.4	-1.2	4.9	13.5	11.2	0.4	--	Mar-89
<b>Total Domestic Equity</b>	<b>227,744,985</b>	<b>33.1</b>	<b>2.6</b>	<b>3.7</b>	<b>1.5</b>	<b>1.5</b>	<b>10.3</b>	<b>11.1</b>	<b>7.4</b>	<b>0.1</b>	<b>10.0</b>	<b>33.6</b>	<b>16.9</b>	<b>0.7</b>	<b>--</b>	
Russell 3000			2.6	3.6	2.1	2.1	11.1	11.6	7.4	0.5	12.6	33.6	16.4	1.0	--	
BlackRock Russell 3000	227,744,985	33.1	2.6	3.7	--	--	--	--	--	--	--	--	--	--	2.4	Dec-15
Russell 3000			2.6	3.6	--	--	--	--	--	--	--	--	--	--	1.5	Dec-15
<b>Total International Equity</b>	<b>155,227,975</b>	<b>22.5</b>	<b>-0.1</b>	<b>-1.0</b>	<b>-9.0</b>	<b>-9.0</b>	<b>1.4</b>	<b>-0.3</b>	<b>2.4</b>	<b>-4.0</b>	<b>-4.9</b>	<b>13.4</b>	<b>18.6</b>	<b>-16.1</b>	<b>--</b>	
MSCI ACWI ex USA Gross			-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3	-5.3	-3.4	15.8	17.4	-13.3	--	
BlackRock International Equity	113,767,374	16.5	-1.3	-4.2	-9.9	-9.9	2.2	1.9	1.8	-0.6	-4.8	22.9	17.6	-11.9	6.6	Jul-03
MSCI EAFE Gross			-1.2	-4.0	-9.7	-9.7	2.5	2.1	2.1	-0.4	-4.5	23.3	17.9	-11.7	6.8	Jul-03
DFA Emerging Markets Value	18,522,839	2.7	1.3	10.3	-11.7	-11.7	-2.5	-5.7	--	-18.8	-4.4	-3.8	19.4	-25.6	1.7	Jan-07
MSCI Emerging Markets Gross			0.8	6.6	-11.7	-11.7	-1.2	-3.4	--	-14.6	-1.8	-2.3	18.6	-18.2	1.8	Jan-07
Vontobel Global Emerging Markets	22,937,763	3.3	4.9	7.3	-2.3	-2.3	--	--	--	-8.6	--	--	--	--	-2.6	Sep-14
MSCI Emerging Markets Gross			0.8	6.6	-11.7	-11.7	--	--	--	-14.6	--	--	--	--	-7.7	Sep-14
<b>Total Fixed Income</b>	<b>207,825,169</b>	<b>30.2</b>	<b>2.7</b>	<b>5.8</b>	<b>5.1</b>	<b>5.1</b>	<b>4.0</b>	<b>4.0</b>	<b>6.1</b>	<b>-0.6</b>	<b>5.6</b>	<b>-2.0</b>	<b>9.3</b>	<b>6.5</b>	<b>--</b>	
Barclays Aggregate			2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8	--	
Bradford & Marzec Fixed	104,714,068	15.2	3.0	6.0	6.5	6.5	5.2	4.8	6.5	0.9	6.7	-0.8	8.5	7.1	6.6	Dec-92
Barclays Aggregate			2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8	5.8	Dec-92
MacKay Shields Core Plus Opportunities	87,769,772	12.7	2.6	5.5	3.7	3.7	--	--	--	--	--	--	--	--	1.5	Mar-15
Barclays Aggregate			2.2	5.3	6.0	6.0	--	--	--	--	--	--	--	--	3.5	Mar-15
BlackRock US TIPS	15,341,329	2.2	1.7	6.2	4.4	4.4	2.4	2.7	--	-1.3	3.6	-8.6	7.0	13.6	4.7	Apr-07
Barclays US TIPS			1.7	6.2	4.4	4.4	2.3	2.6	--	-1.4	3.6	-8.6	7.0	13.6	4.6	Apr-07
<b>Total Real Estate</b>	<b>61,584,144</b>	<b>8.9</b>	<b>1.4</b>	<b>3.5</b>	<b>10.7</b>	<b>10.7</b>	<b>12.3</b>	<b>11.5</b>	<b>--</b>	<b>15.0</b>	<b>11.6</b>	<b>12.1</b>	<b>10.3</b>	<b>14.2</b>	<b>--</b>	
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3	--	
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0	--	
ASB Real Estate	30,459,360	4.4	1.1	2.5	10.6	10.6	13.0	--	--	16.2	12.5	12.5	--	--	12.4	Dec-12
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	--	--	13.3	11.8	11.0	--	--	11.6	Dec-12
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	--	--	15.0	12.5	13.9	--	--	13.1	Dec-12
Clarion Lion	29,734,245	4.3	1.7	4.8	11.3	11.3	12.4	12.0	--	14.6	12.2	11.8	9.9	17.8	3.6	Dec-06
NCREIF Property Index			2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3	6.9	Dec-06
NCREIF-ODCE			2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0	5.7	Dec-06
1221 State St. Corp	1,390,539	0.2	0.0	0.0	0.0	0.0	0.0	-2.5	--	0.0	0.0	0.0	0.1	-9.0	-0.5	Sep-08

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011	Return	Since
<b>Total Commodities</b>	<b>14,620,851</b>	<b>2.1</b>	<b>11.6</b>	<b>12.0</b>	<b>-15.2</b>	<b>-15.2</b>	<b>-11.2</b>	<b>-11.3</b>	<b>--</b>	<b>-25.6</b>	<b>-16.9</b>	<b>-9.5</b>	<b>-1.2</b>	<b>-13.5</b>	<b>-5.5</b>	<b>Oct-09</b>
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3	-5.1	Oct-09
<b>BlackRock Commodities</b>	<b>4,628,966</b>	<b>0.7</b>	<b>12.5</b>	<b>13.0</b>	<b>-13.7</b>	<b>-13.7</b>	<b>-10.8</b>	<b>-11.1</b>	<b>--</b>	<b>-24.9</b>	<b>-17.2</b>	<b>-9.7</b>	<b>-1.2</b>	<b>-13.5</b>	<b>-5.5</b>	<b>Oct-09</b>
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3	-5.1	Oct-09
<b>Gresham MTAP Commodity Builder</b>	<b>9,991,885</b>	<b>1.5</b>	<b>11.2</b>	<b>11.6</b>	<b>-15.9</b>	<b>-15.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-25.9</b>	<b>-16.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-13.4</b>	<b>Aug-13</b>
<i>Bloomberg Commodity Index TR USD</i>			12.8	13.3	-13.3	-13.3	--	--	--	-24.7	-17.0	--	--	--	-12.6	Aug-13
<b>Total Cash</b>	<b>2,001,429</b>	<b>0.3</b>														
<b>Cash Account</b>	<b>2,001,429</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>--</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.4</b>	<b>0.2</b>	<b>--</b>	
<i>91 Day T-Bills</i>			0.1	0.1	0.2	0.2	0.1	0.1	--	0.0	0.0	0.0	0.1	0.0	--	

Investment Manager  
Performance Analysis - 3 & 5 Years (Net of Fees)

Period Ending: June 30, 2016

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
BlackRock International Equity	2.24%	-0.28%	11.86%	-0.28%	1.00	0.04%	1.00	0.18	-6.73	98.15%	101.13%
DFA Emerging Markets Value	-2.51%	-1.30%	14.99%	-1.15%	1.13	3.23%	0.97	-0.17	-0.40	105.25%	115.44%
Bradford & Marzec Fixed	5.16%	1.09%	2.99%	0.94%	1.04	1.01%	0.89	1.70	1.08	114.17%	48.10%
BlackRock US TIPS	2.35%	0.04%	4.31%	0.02%	1.01	0.12%	1.00	0.53	0.34	101.62%	101.30%
ASB Real Estate	12.97%	1.37%	2.73%	-1.83%	1.28	2.52%	0.16	4.72	0.54	113.33%	--
Clarion Lion	12.44%	0.84%	1.68%	0.62%	1.02	1.44%	0.26	7.36	0.58	108.14%	--
BlackRock Commodities	-10.85%	-0.29%	17.09%	-0.35%	0.99	0.15%	1.00	-0.64	-1.94	97.21%	100.43%

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
BlackRock International Equity	1.87%	-0.28%	14.79%	-0.28%	1.00	0.04%	1.00	0.12	-6.72	98.29%	100.78%
DFA Emerging Markets Value	-5.74%	-2.30%	19.95%	-1.81%	1.14	3.50%	0.98	-0.29	-0.66	105.50%	112.59%
Bradford & Marzec Fixed	4.76%	0.99%	3.21%	1.68%	0.82	2.14%	0.59	1.46	0.47	118.33%	79.56%
BlackRock US TIPS	2.65%	0.02%	5.44%	0.00%	1.01	0.10%	1.00	0.48	0.18	101.05%	101.03%
Clarion Lion	12.03%	0.52%	1.66%	-3.02%	1.31	1.36%	0.34	7.22	0.38	105.58%	--
BlackRock Commodities	-11.06%	-0.24%	15.34%	-0.29%	1.00	0.13%	1.00	-0.73	-1.90	97.30%	100.33%

# Private Equity Non Marketable Securities Overview

Period Ending: June 30, 2016

Vintage	Manager & Fund Name	Estimated 6/30 Market Value <sup>3</sup>	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI) <sup>1</sup>	Tot. Value/ Paid-In (TVPI) <sup>2</sup>	Net IRR Since Inception <sup>5</sup>	IRR Date	
2011	HarbourVest IX-Buyout	\$5,463,479	\$10,000,000	\$5,575,000	56%	\$4,425,000	\$1,276,189	\$5,213,479	22.9%	120.9%	14.0%	3/31/16	
2011	HarbourVest IX-Credit	\$1,004,292	\$2,000,000	\$1,140,000	57%	\$860,000	\$352,074	\$974,292	30.9%	119.0%	13.9%	3/31/16	
2008	HarbourVest Int'l VI <sup>6</sup>	\$2,545,347	\$3,712,930	\$2,849,644	77%	\$863,286	\$832,771	\$2,591,974	29.2%	118.5%	15.2%	3/31/16	
2011	HarbourVest IX-Venture	\$3,448,137	\$4,000,000	\$2,880,000	72%	\$1,120,000	\$546,460	\$3,342,943	19.0%	138.7%	19.5%	3/31/16	
2010	KKR Mezzanine <sup>7</sup>	\$4,364,880	\$10,000,000	\$10,000,000	100%	\$0	\$9,720,361	\$5,144,302	97.2%	140.9%	8.0%	3/31/16	
2011	PIMCO BRAVO <sup>4</sup>	\$2,078,504	\$10,000,000	\$10,000,000	100%	\$0	\$17,011,557	\$2,078,504	170.1%	190.9%	22.4%	6/30/16	
Total Alternative Illiquids		\$18,904,640	\$39,712,930	\$32,444,644	82%	\$7,268,286	\$29,739,412	\$19,345,495	59.6%	151.3%			
% of Portfolio (Market Value)		2.7%											
								Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense <sup>8</sup>	
								HarbourVest IX-Buyout	\$24,878	\$0	\$0	\$1,128	\$26,006
								HarbourVest IX-Credit	\$4,969	\$0	\$0	\$1,054	\$6,023
								HarbourVest Int'l VI	\$7,663	\$0	\$0	\$358	\$8,020
								HarbourVest IX-Venture	\$9,969	\$0	\$0	\$314	\$10,283
								KKR Mezzanine	\$18,833	\$0	\$0	\$0	\$18,833
								PIMCO BRAVO	\$8,002	\$1,765	\$1,532	\$2,042	\$13,341
									\$74,314	\$1,765	\$1,532	\$4,896	\$82,506

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

<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>Last known market value + capital calls - distributions (All HarbourVest funds are as of 3/31/2016)

<sup>4</sup>Investment period ended, no further capital to be called.

<sup>5</sup>Gross IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest.

<sup>6</sup>Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

<sup>7</sup>HarbourVest International Private Equity Partners VI-Partnership Fund L.P. values are originally presented in euros and are calculated to dollars using OANDA™.

<sup>8</sup>KKR: Total capital called is \$11,446,285, which includes recycled distributions. Unused capital commitment is \$1,327,002 after including distribution proceeds available for reinvestment

<sup>9</sup>All HarbourVest fees and expenses are for 1Q 2016

Total Fund  
Financial Reconciliation (Last Three Months)

Period Ending: June 30, 2016

Manager	Beginning Market Value	Contributions	Disbursements	Fees <sup>2</sup>	Net Cash Flow	Investment Income	Capital Gain/ Loss	Total Gains/Earnings/ Losses	Ending Market Value
Blackrock Russell 3000 Index	\$221,885,482	\$0	\$0	\$0	\$0	\$0	\$5,859,502	\$5,859,502	\$227,744,985
DFA Emerging Markets	\$18,288,199	\$0	\$0	\$0	\$0	\$150,267	\$84,373	\$234,640	\$18,522,839
Vontobel Global Emerging Markets	\$21,868,767	\$0	\$0	\$0	\$0	\$115,526	\$953,470	\$1,068,996	\$22,937,763
Blackrock International Equity	\$115,193,742	\$0	\$0	\$0	\$0	\$0	(\$1,426,368)	(\$1,426,368)	\$113,767,374
Bradford & Marzec, Inc.	\$93,360,986	\$8,300,000	\$0	\$0	\$8,300,000	\$842,267	\$2,210,815	\$3,053,082	\$104,714,068
MacKay Shields Core Plus Opp.	\$85,546,068	\$0	\$0	\$0	\$0	\$0	\$2,223,705	\$2,223,705	\$87,769,772
Blackrock US TIPS	\$15,080,491	\$0	\$0	\$0	\$0	\$0	\$260,839	\$260,839	\$15,341,329
Clarion Lion Properties	\$29,232,043	\$212,865	(\$293,234)	(\$78,099)	(\$158,468)	\$0	\$660,670	\$660,670	\$29,734,245
ICERS State Street Real Estate	\$1,421,144	\$33,248	(\$63,860)	\$0	(\$30,612)	\$7	(\$0)	\$7	\$1,390,539
ASB Allegiance Real Estate	\$30,059,217	\$0	\$0	(\$69,111)	(\$69,111)	\$244,177	\$225,077	\$469,254	\$30,459,360
PIMCO BRAVO	\$2,410,362	\$0	(\$557,039)	(\$13,341)	(\$570,380)	\$0	\$238,522	\$238,522	\$2,078,504
KKR Mezzanine I	\$5,144,302	\$213,398	(\$1,083,547)	(\$18,833)	(\$888,982)	\$0	\$109,560	\$109,560	\$4,364,880
Blackrock Global Commodity	\$4,111,285	\$0	\$0	\$0	\$0	\$0	\$517,681	\$517,681	\$4,628,966
Gresham TAP Commodity Builder	\$8,982,524	\$0	\$0	(\$18,354)	(\$18,354)	\$0	\$1,027,715	\$1,027,715	\$9,991,885
HarbourVest International VI <sup>1</sup>	\$2,444,882	\$153,752	(\$84,965)	(\$7,663)	\$61,125	\$15	\$85,952	\$85,967	\$2,591,974
HarbourVest Buyout IX <sup>1</sup>	\$4,942,871	\$400,000	(\$178,239)	(\$24,878)	\$196,883	\$17	\$73,708	\$73,725	\$5,213,479
HarbourVest Credit Opportunities IX <sup>1</sup>	\$865,949	\$130,000	(\$34,151)	(\$4,969)	\$90,880	\$2,205	\$15,258	\$17,463	\$974,292
HarbourVest Venture IX <sup>1</sup>	\$3,339,973	\$100,000	(\$76,574)	(\$9,969)	\$13,457	\$3	(\$10,490)	(\$10,487)	\$3,342,943
Cash	\$9,275,270	\$224,267	(\$7,498,108)	\$0	(\$7,273,841)	\$0	\$0	\$0	\$2,001,429
The Clifton Group	\$1,391,756	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,391,756
<b>Totals</b>	<b>\$674,845,314</b>	<b>\$9,767,531</b>	<b>(\$9,869,717)</b>	<b>(\$245,217)</b>	<b>(\$347,402)</b>	<b>\$1,354,483</b>	<b>\$13,109,989</b>	<b>\$14,464,471</b>	<b>\$688,962,382</b>

<sup>1</sup>1Q 2016 data

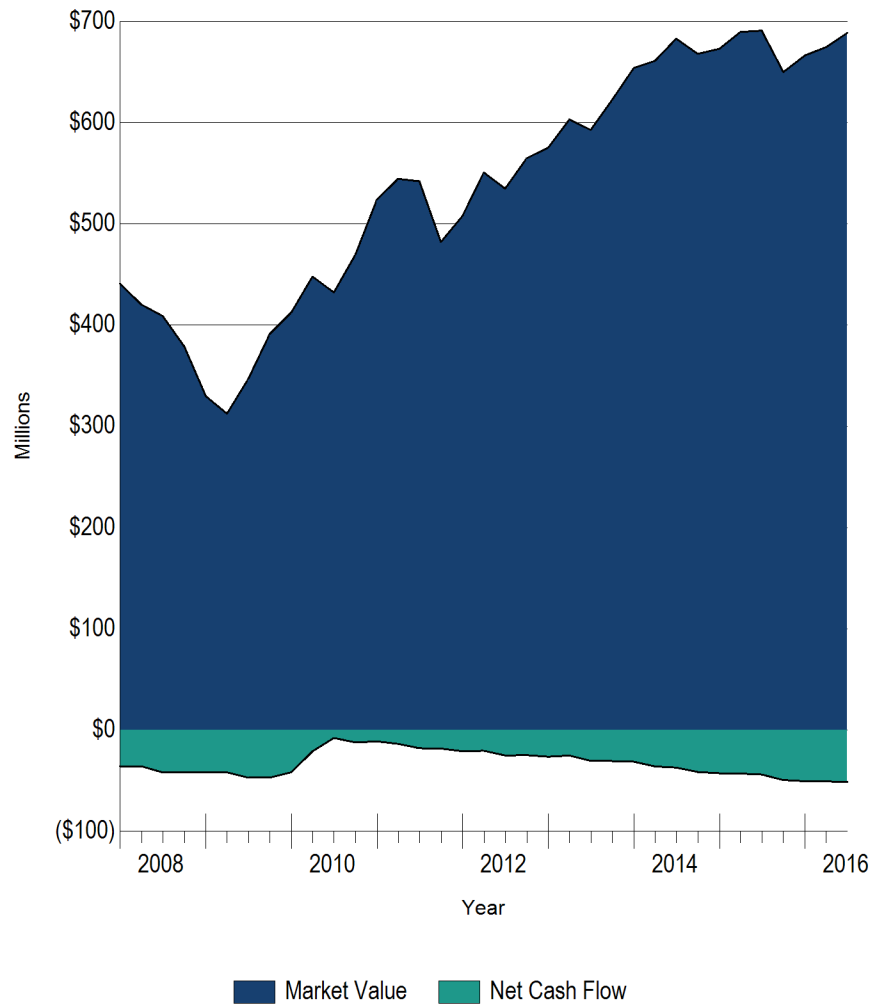
<sup>2</sup>Fee transactions not included in the Portfolio Reconciliation page at beginning of report



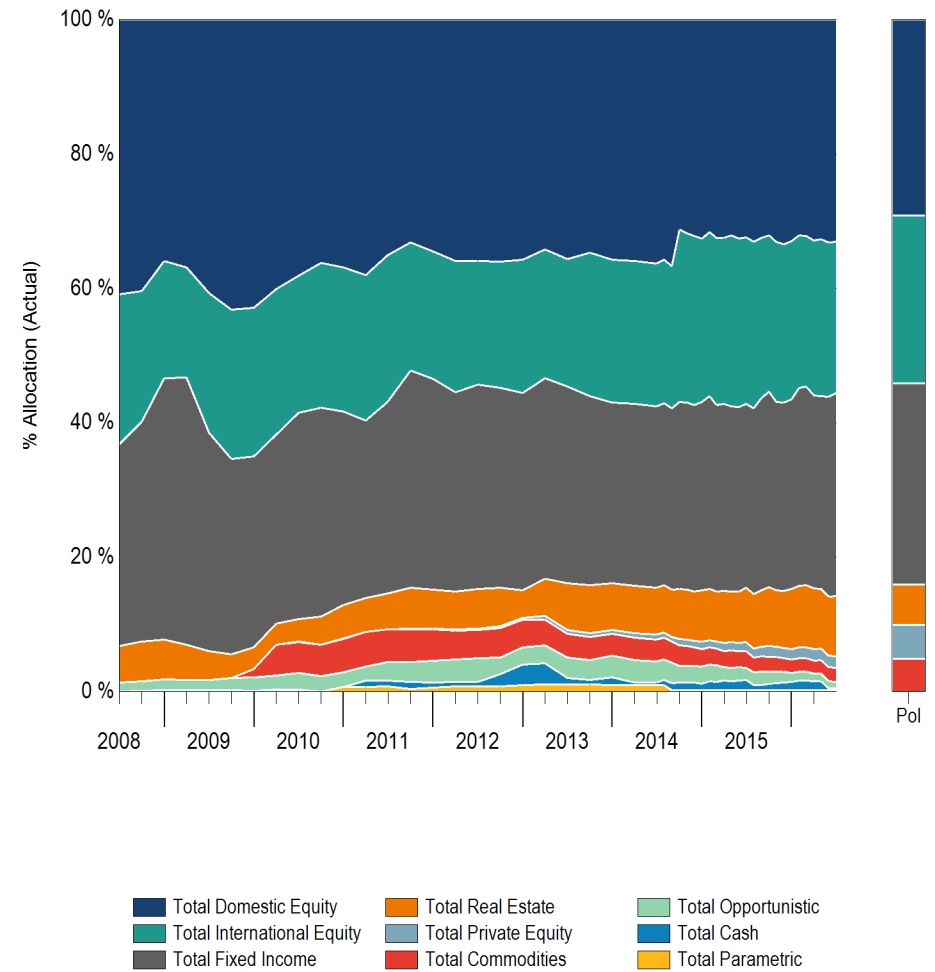
# Total Fund Asset Allocation History

Period Ending: June 30, 2016

Market Value History

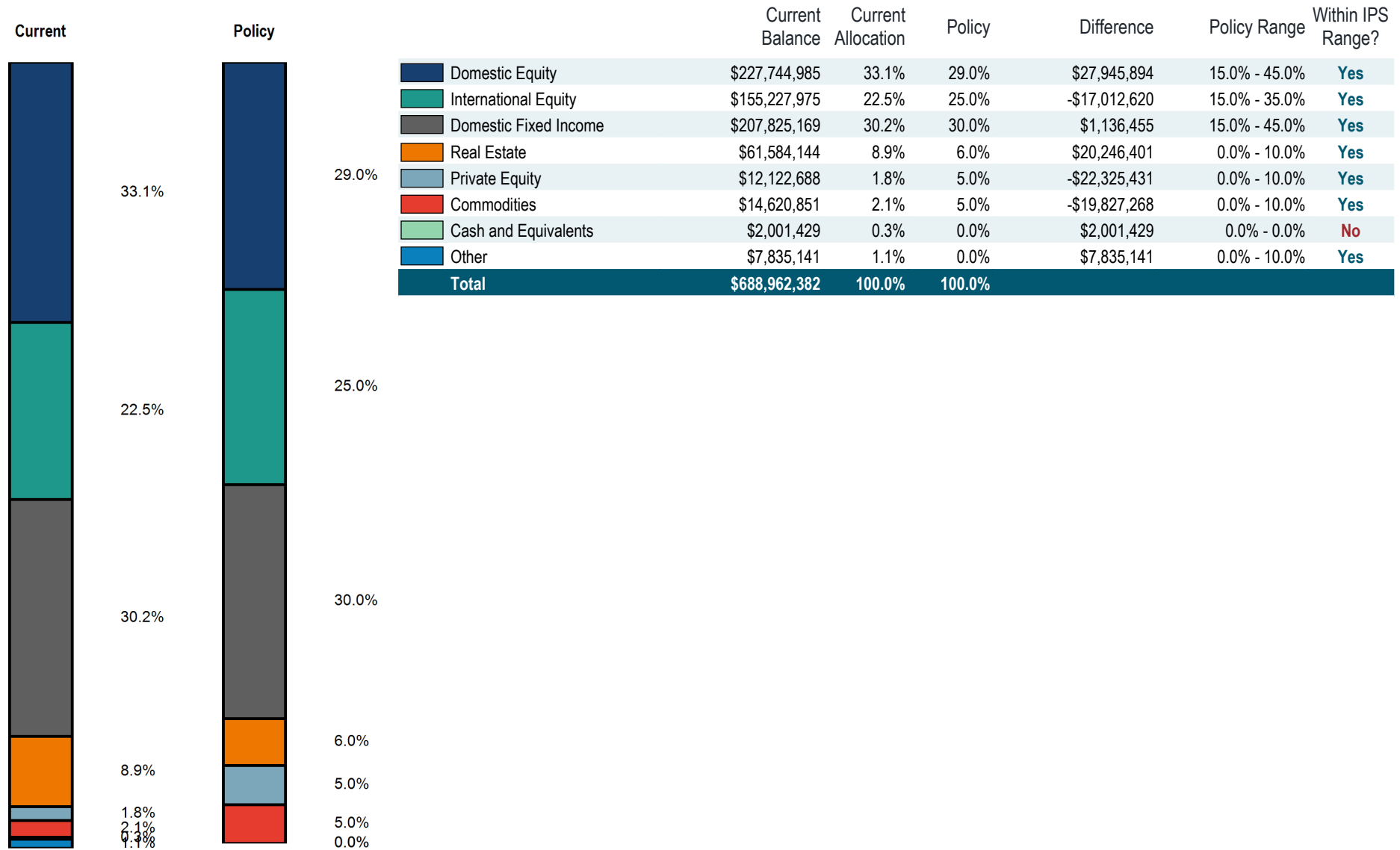


Asset Allocation History



# Total Fund Asset Allocation vs. Policy

Period Ending: June 30, 2016



# Total Fund Manager Report Card

Period Ending: June 30, 2016

**Objective 1: Exceed passive benchmark on a net-of-fee basis**

**Objective 2: Exceed median manager return in comparable universe on a gross-of-fee basis**

Asset Class / Manager	Benchmark	3-Year					5-Year				
		Manager Return	Benchmark Return	Meets Expectations	Universe Ranking	Meets Expectations	Manager Return	Benchmark Return	Meets Expectations	Universe Ranking	Meets Expectations
<u>Domestic Equity</u>											
BlackRock	Russell 3000 Index										
<u>International Equity</u>											
BlackRock	MSCI EAFE Index	2.2%	2.5%	No			1.9%	2.1%	No		
Dimensional Fund Advisors	MSCI Emerging Markets Index + 150 basis points	-2.5%	0.3%	No	88	No	-5.7%	-1.9%	No	98	No
Vontobel	MSCI Emerging Markets Index + 150 basis points										
<u>Fixed Income</u>											
Bradford & Marzec	Barclays Credit Aggregate Bond Index + 50 basis points	5.2%	4.6%	Yes	8	Yes	4.8%	4.3%	Yes	30	Yes
MacKay Shields	Barclays Credit Aggregate Bond Index + 50 basis points										
BlackRock	Barclays Credit US TIPS Index	2.4%	2.3%	Yes			2.7%	2.6%	Yes		
<u>Alternatives</u>											
Clarion	NCREIF Property Index	12.4%	11.6%	Yes			12.0%	11.5%	Yes		
ASB Allegiance	NCREIF Property Index	13.0%	11.6%	Yes							
BlackRock	Bloomberg Commodity Index	-10.8%	-10.6%	No			-11.1%	-10.8%	No		
Gresham TAP	Bloomberg Commodity Index + 100 basis points										
PIMCO	Actuarial Assumption Rate + 100 basis points										
KKR	Actuarial Assumption Rate + 100 basis points										
HarbourVest Partners	Russell 3000 + 250 basis points										

Asset Class / Manager	Benchmark	10-Year					15-Year				
		Manager Return	Benchmark Return	Meets Expectations	Universe Ranking	Meets Expectations	Manager Return	Benchmark Return	Meets Expectations	Universe Ranking	Meets Expectations
<u>Domestic Equity</u>											
BlackRock	Russell 3000 Index										
<u>International Equity</u>											
BlackRock	MSCI EAFE Index	1.8%	2.1%	No							
Dimensional Fund Advisors	MSCI Emerging Markets Index + 150 basis points										
Vontobel	MSCI Emerging Markets Index + 150 basis points										
<u>Fixed Income</u>											
Bradford & Marzec	Barclays Credit Aggregate Bond Index + 50 basis points	6.5%	5.6%	Yes	19	Yes	6.0%	5.6%	Yes		
MacKay Shields	Barclays Credit Aggregate Bond Index + 50 basis points										
BlackRock	Barclays Credit US TIPS Index										
<u>Alternatives</u>											
Clarion	NCREIF Property Index										
ASB Allegiance	NCREIF Property Index										
BlackRock	Bloomberg Commodity Index										
Gresham TAP	Bloomberg Commodity Index + 100 basis points										
PIMCO	Actuarial Assumption Rate + 100 basis points										
KKR	Actuarial Assumption Rate + 100 basis points										
HarbourVest Partners	Russell 3000 + 250 basis points										

# Total Fund Investment Fee Analysis

Period Ending: June 30, 2016

Account	Fee Schedule	Market Value As of 6/30/2016	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
1221 State St. Corp	No Fee	\$1,390,539	0.2%	--	--
ASB Real Estate	1.25% of First \$5.0 Mil, 1.00% of Next \$10.0 Mil, 0.75% Thereafter	\$30,459,360	4.4%	\$278,445	0.91%
BlackRock Commodities	0.30% of Assets	\$4,628,966	0.7%	\$13,887	0.30%
BlackRock International Equity	0.15% of First \$50.0 Mil, 0.10% of Next \$50.0 Mil	\$113,767,374	16.5%	\$125,000	0.11%
BlackRock Russell 3000	0.03% of Assets	\$227,744,985	33.1%	\$68,323	0.03%
BlackRock US TIPS	0.07% of Assets	\$15,341,329	2.2%	\$10,739	0.07%
Bradford & Marzec Fixed	0.29% of First \$100.0 Mil, 0.25% of Next \$100.0 Mil	\$104,714,068	15.2%	\$296,785	0.28%
Cash Account	No Fee	\$2,001,429	0.3%	--	--
Clarion Lion	1.25% of First \$10.0 Mil, 1.00% of Next \$15.0 Mil, 0.85% Thereafter	\$29,734,245	4.3%	\$315,241	1.06%
DFA Emerging Markets Value	0.56% of Assets	\$18,522,839	2.7%	\$103,728	0.56%
Gresham MTAP Commodity Builder	0.75% of Assets	\$9,991,885	1.5%	\$74,939	0.75%
Harbourvest Buyout IX	\$100,000 Annually	\$5,213,479	0.8%	\$100,000	1.92%
Harbourvest Credit Ops IX	\$20,000 Annually	\$974,292	0.1%	\$20,000	2.05%
Harbourvest International PE VI	\$35,000 Annually	\$2,591,974	0.4%	\$35,000	1.35%
Harbourvest Venture IX	\$40,000 Annually	\$3,342,943	0.5%	\$40,000	1.20%
KKR Mezzanine Partners	\$150,000 Annually	\$4,364,880	0.6%	\$150,000	3.44%
MacKay Shields Core Plus Opportunities	0.35% of Assets	\$87,769,772	12.7%	\$307,194	0.35%
Parametric	0.20% of First \$25.0 Mil, 0.10% of Next \$50.0 Mil, 0.05% Thereafter Retainer Fee: \$1,500 (Monthly) Minimum Expense: \$12,500 (Quarterly)	\$1,391,756	0.2%	--	--
PIMCO BRAVO	1.90% of Assets	\$2,078,504	0.3%	\$39,492	1.90%
Verus Advisory Fee	\$175,000 Annually				
Vontobel Global Emerging Markets	0.95% of First \$150.0 Mil, 0.85% Thereafter	\$22,937,763	3.3%	\$217,909	0.95%
<b>Investment Management Fee</b>		<b>\$688,962,382</b>	<b>100.0%</b>	<b>\$2,196,682</b>	<b>0.32%</b>

\*HarbourVest, KKR and PIMCO BRAVO fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund.

\*HarbourVest International Private Equity VI fees are based on committed Euros, actual US Dollar amount will fluctuate based on exchange rates.

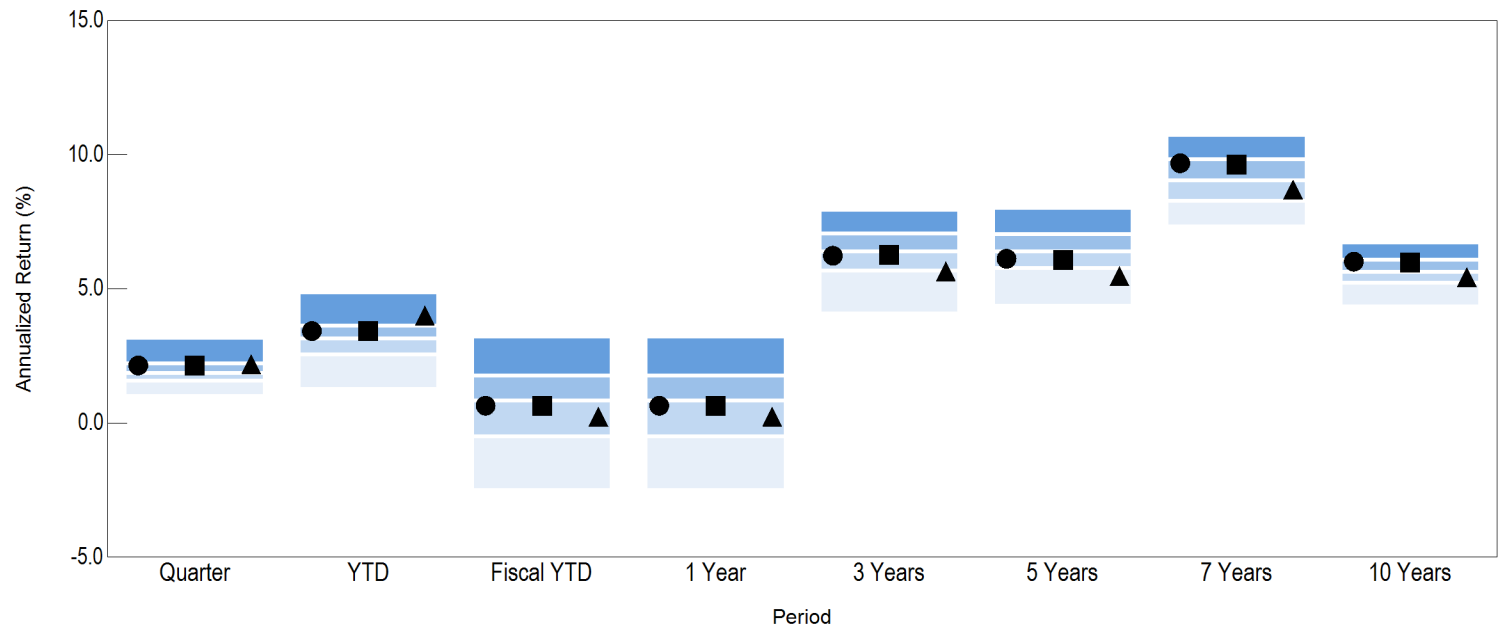
\*Verus advisory fee shown for disclosure purposes only and is not included in total investment management fee calculations.

# Total Fund

## Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: June 30, 2016

Total Fund Cumulative Performance vs. InvestorForce Public DB Gross

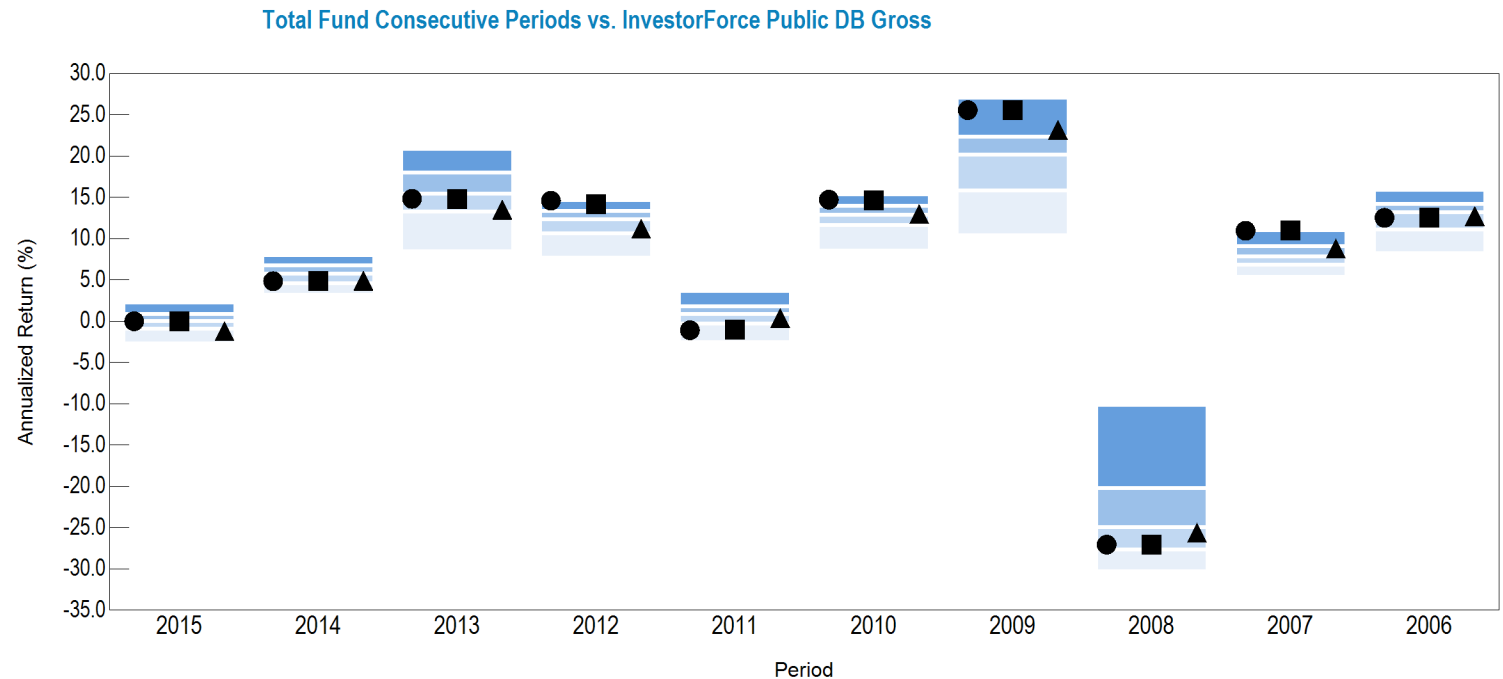


	Return (Rank)							
5th Percentile	3.2	4.8	3.2	3.2	7.9	8.0	10.7	6.7
25th Percentile	2.2	3.6	1.8	1.8	7.1	7.1	9.8	6.1
Median	1.9	3.2	0.8	0.8	6.4	6.4	9.1	5.6
75th Percentile	1.6	2.6	-0.5	-0.5	5.7	5.8	8.3	5.2
95th Percentile	1.0	1.3	-2.5	-2.5	4.1	4.4	7.3	4.4
# of Portfolios	249	245	245	245	215	195	172	159
● Total Fund	2.1 (29)	3.4 (36)	0.6 (54)	0.6 (54)	6.2 (56)	6.1 (64)	9.7 (31)	6.0 (28)
■ Total Fund ex Clifton	2.1 (29)	3.4 (36)	0.6 (54)	0.6 (54)	6.3 (55)	6.1 (66)	9.6 (33)	6.0 (33)
▲ Policy Index	2.2 (28)	4.0 (19)	0.2 (64)	0.2 (64)	5.6 (77)	5.5 (83)	8.7 (59)	5.4 (66)

# Total Fund

## Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: June 30, 2016



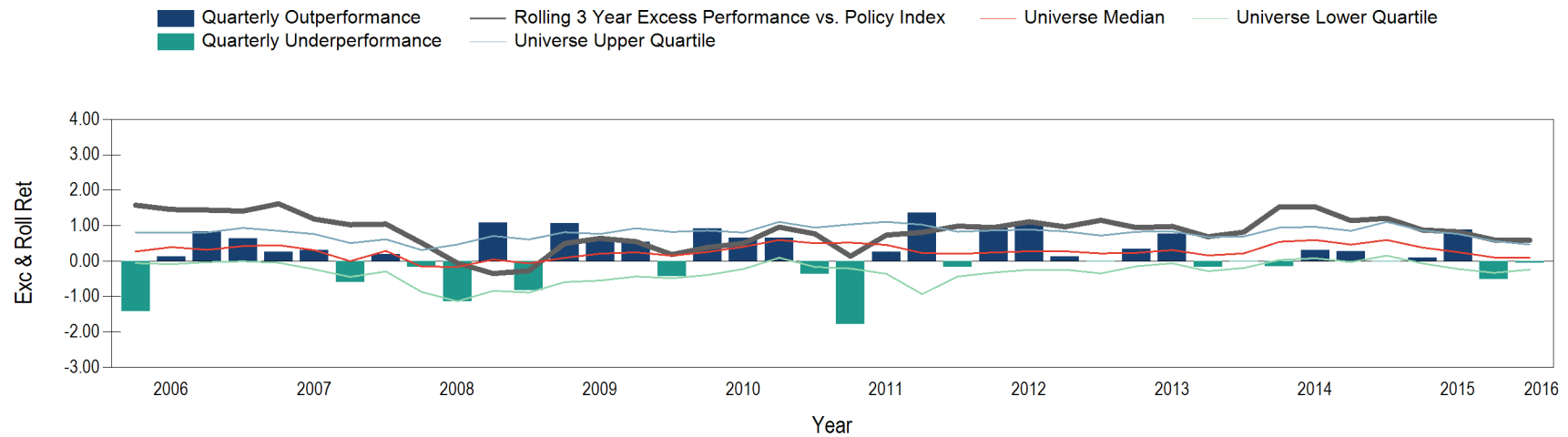
	Return (Rank)									
5th Percentile	2.2	8.0	20.8	14.6	3.6	15.4	27.0	-10.1	11.0	15.9
25th Percentile	0.9	6.8	18.0	13.4	1.9	14.0	22.4	-20.1	9.1	14.2
Median	0.1	5.8	15.5	12.4	0.9	12.9	20.2	-24.9	7.9	13.2
75th Percentile	-0.9	4.6	13.3	10.7	-0.3	11.7	15.9	-27.6	6.9	11.2
95th Percentile	-2.6	3.2	8.5	7.8	-2.5	8.6	10.5	-30.3	5.4	8.3
# of Portfolios	316	248	231	236	206	188	184	181	177	171
● Total Fund	0.0 (53)	4.8 (74)	14.8 (59)	14.6 (6)	-1.1 (89)	14.7 (13)	25.6 (11)	-27.1 (68)	10.9 (6)	12.5 (59)
■ Total Fund ex Clifton	0.0 (53)	4.9 (72)	14.7 (59)	14.2 (11)	-1.0 (88)	14.7 (15)	25.6 (11)	-27.1 (68)	10.9 (6)	12.5 (59)
▲ Policy Index	-1.2 (81)	4.9 (72)	13.5 (74)	11.2 (72)	0.4 (63)	13.0 (49)	23.2 (23)	-25.6 (58)	8.8 (31)	12.7 (57)

# Total Fund

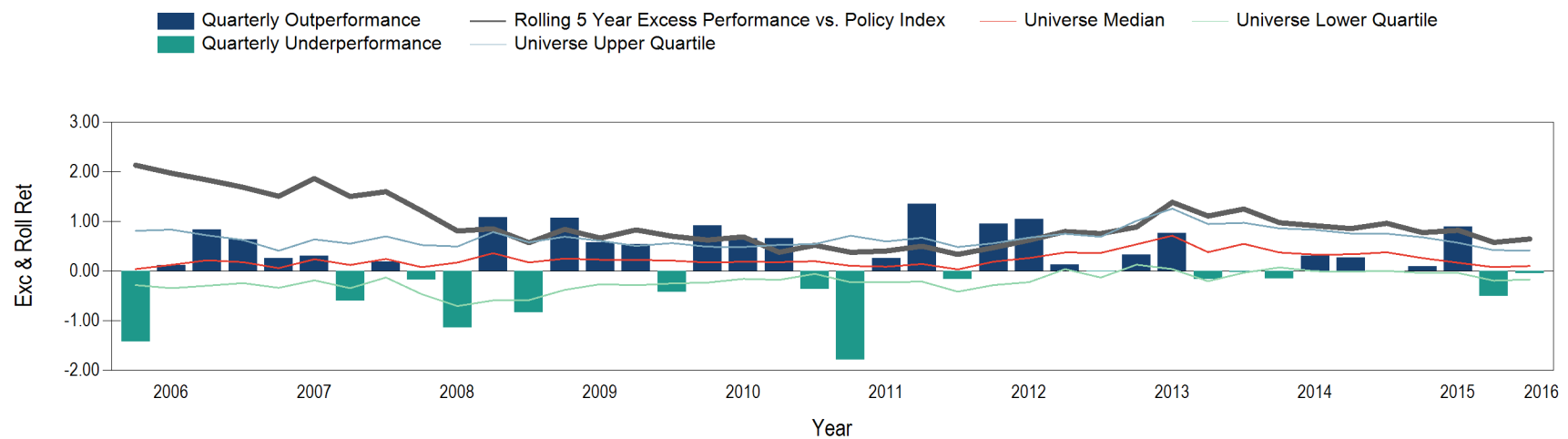
## Rolling Return Analysis (Gross of Fees)

Period Ending: June 30, 2016

### Rolling 3 Year Annualized Excess Performance



### Rolling 5 Year Annualized Excess Performance



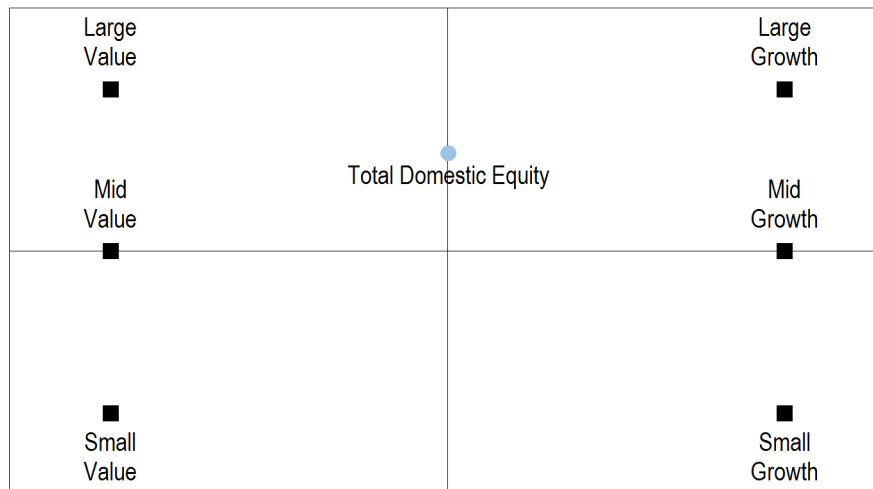
# Total Domestic Equity

## Asset Class Overview (Gross of Fees)

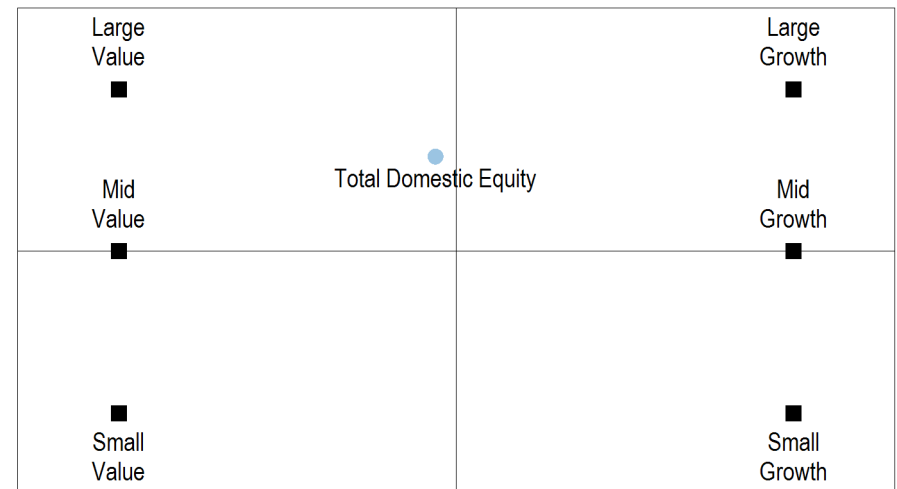
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Domestic Equity</b>	<b>227,744,985</b>	<b>2.6</b>	<b>3.7</b>	<b>1.6</b>	<b>1.6</b>	<b>10.5</b>	<b>11.3</b>	<b>7.7</b>	<b>0.3</b>	<b>10.2</b>	<b>33.9</b>	<b>17.1</b>	<b>0.9</b>
<i>Russell 3000</i>		2.6	3.6	2.1	2.1	11.1	11.6	7.4	0.5	12.6	33.6	16.4	1.0
<i>eA All US Equity Gross Rank</i>		43	37	30	30	44	38	53	42	51	62	37	40
<b>BlackRock Russell 3000</b>	<b>227,744,985</b>	<b>2.6</b>	<b>3.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 3000</i>		2.6	3.6	--	--	--	--	--	--	--	--	--	--
<i>eA US All Cap Core Equity Gross Rank</i>		35	26	--	--	--	--	--	--	--	--	--	--

U.S. Effective Style Map  
3 Years Ending June 30, 2016



U.S. Effective Style Map  
5 Years Ending June 30, 2016





Total Domestic Equity  
Asset Class Overview (Net of Fees)

Period Ending: June 30, 2016

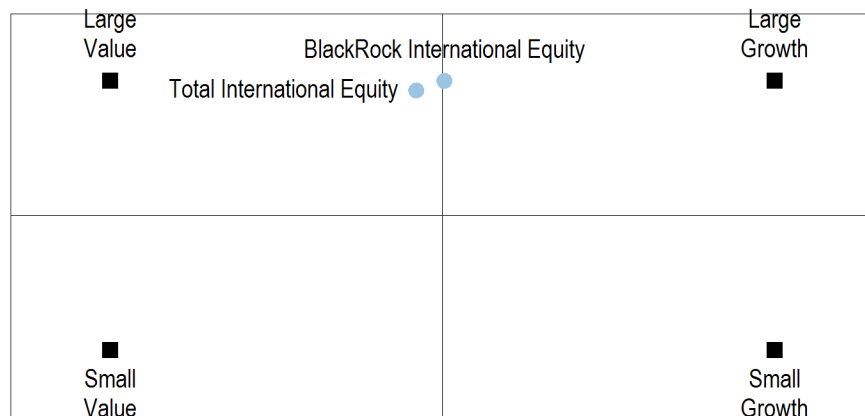
	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Domestic Equity</b>	<b>227,744,985</b>	<b>2.6</b>	<b>3.7</b>	<b>1.5</b>	<b>1.5</b>	<b>10.3</b>	<b>11.1</b>	<b>7.4</b>	<b>0.1</b>	<b>10.0</b>	<b>33.6</b>	<b>16.9</b>	<b>0.7</b>
<i>Russell 3000</i>		2.6	3.6	2.1	2.1	11.1	11.6	7.4	0.5	12.6	33.6	16.4	1.0
BlackRock Russell 3000	227,744,985	2.6	3.7	--	--	--	--	--	--	--	--	--	--
<i>Russell 3000</i>		2.6	3.6	2.1	2.1	11.1	11.6	7.4	0.5	12.6	33.6	16.4	1.0

# Total International Equity Asset Class Overview (Gross of Fees)

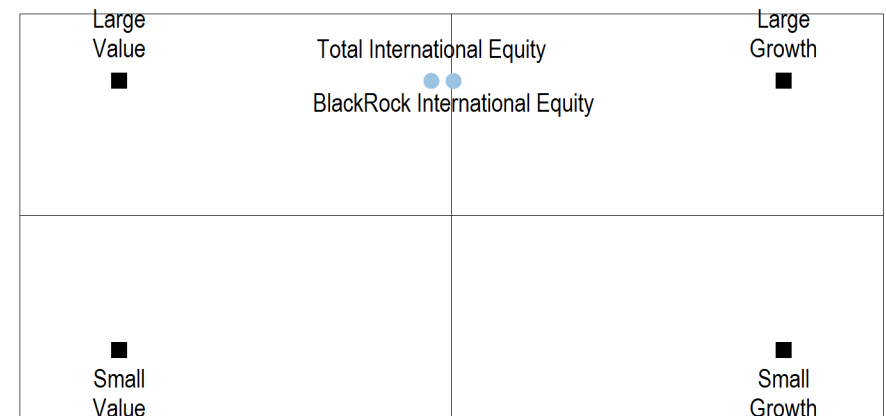
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total International Equity</b>	<b>155,227,975</b>	<b>0.0</b>	<b>-0.9</b>	<b>-8.7</b>	<b>-8.7</b>	<b>1.9</b>	<b>0.2</b>	<b>2.9</b>	<b>-3.5</b>	<b>-4.4</b>	<b>14.0</b>	<b>19.3</b>	<b>-15.6</b>
MSCI ACWI ex USA Gross		-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3	-5.3	-3.4	15.8	17.4	-13.3
eA ACWI ex-US All Cap Equity Gross Rank		32	40	62	62	82	91	75	77	70	92	54	84
<b>BlackRock International Equity</b>	<b>113,767,374</b>	<b>-1.2</b>	<b>-4.1</b>	<b>-9.8</b>	<b>-9.8</b>	<b>2.4</b>	<b>2.0</b>	<b>1.9</b>	<b>-0.5</b>	<b>-4.7</b>	<b>23.2</b>	<b>17.8</b>	<b>-11.8</b>
MSCI EAFE Gross		-1.2	-4.0	-9.7	-9.7	2.5	2.1	2.1	-0.4	-4.5	23.3	17.9	-11.7
eA All EAFE Equity Gross Rank		43	61	66	66	76	76	82	67	64	61	74	48
<b>DFA Emerging Markets Value</b>	<b>18,522,839</b>	<b>1.4</b>	<b>10.6</b>	<b>-11.2</b>	<b>-11.2</b>	<b>-2.0</b>	<b>-5.2</b>	<b>--</b>	<b>-18.3</b>	<b>-3.9</b>	<b>-3.2</b>	<b>20.1</b>	<b>-25.2</b>
MSCI Emerging Markets Gross		0.8	6.6	-11.7	-11.7	-1.2	-3.4	--	-14.6	-1.8	-2.3	18.6	-18.2
eA Emg Mkts Equity Gross Rank		61	15	70	70	88	98	--	92	84	84	56	92
<b>Vontobel Global Emerging Markets</b>	<b>22,937,763</b>	<b>5.1</b>	<b>7.8</b>	<b>-1.4</b>	<b>-1.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-7.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
MSCI Emerging Markets Gross		0.8	6.6	-11.7	-11.7	--	--	--	-14.6	--	--	--	--
eA Emg Mkts Equity Gross Rank		6	34	5	5	--	--	--	18	--	--	--	--

EAFE Effective Style Map  
3 Years Ending June 30, 2016



EAFE Effective Style Map  
5 Years Ending June 30, 2016



# Total International Equity Asset Class Overview (Net of Fees)

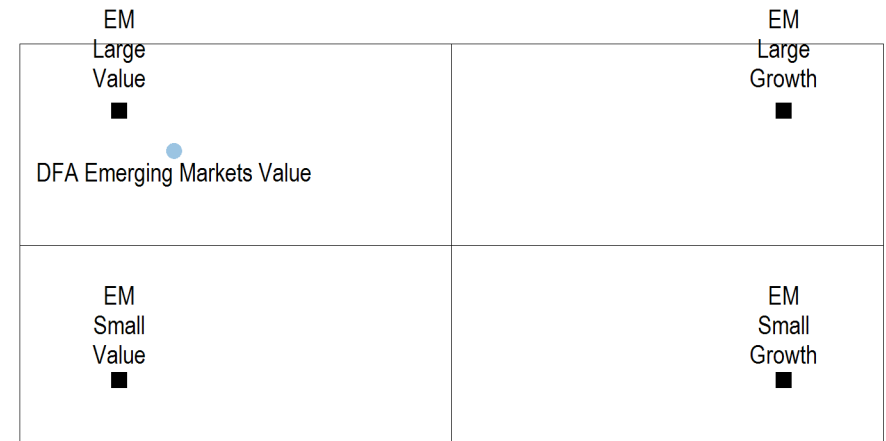
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total International Equity</b>	<b>155,227,975</b>	<b>-0.1</b>	<b>-1.0</b>	<b>-9.0</b>	<b>-9.0</b>	<b>1.4</b>	<b>-0.3</b>	<b>2.4</b>	<b>-4.0</b>	<b>-4.9</b>	<b>13.4</b>	<b>18.6</b>	<b>-16.1</b>
MSCI ACWI ex USA Gross		-0.4	-0.7	-9.8	-9.8	1.6	0.6	2.3	-5.3	-3.4	15.8	17.4	-13.3
BlackRock International Equity	113,767,374	-1.3	-4.2	-9.9	-9.9	2.2	1.9	1.8	-0.6	-4.8	22.9	17.6	-11.9
MSCI EAFE Gross		-1.2	-4.0	-9.7	-9.7	2.5	2.1	2.1	-0.4	-4.5	23.3	17.9	-11.7
DFA Emerging Markets Value	18,522,839	1.3	10.3	-11.7	-11.7	-2.5	-5.7	--	-18.8	-4.4	-3.8	19.4	-25.6
MSCI Emerging Markets Gross		0.8	6.6	-11.7	-11.7	-1.2	-3.4	--	-14.6	-1.8	-2.3	18.6	-18.2
Vontobel Global Emerging Markets	22,937,763	4.9	7.3	-2.3	-2.3	--	--	--	-8.6	--	--	--	--
MSCI Emerging Markets Gross		0.8	6.6	-11.7	-11.7	--	--	--	-14.6	--	--	--	--

EM Effective Style Map  
3 Years Ending June 30, 2016

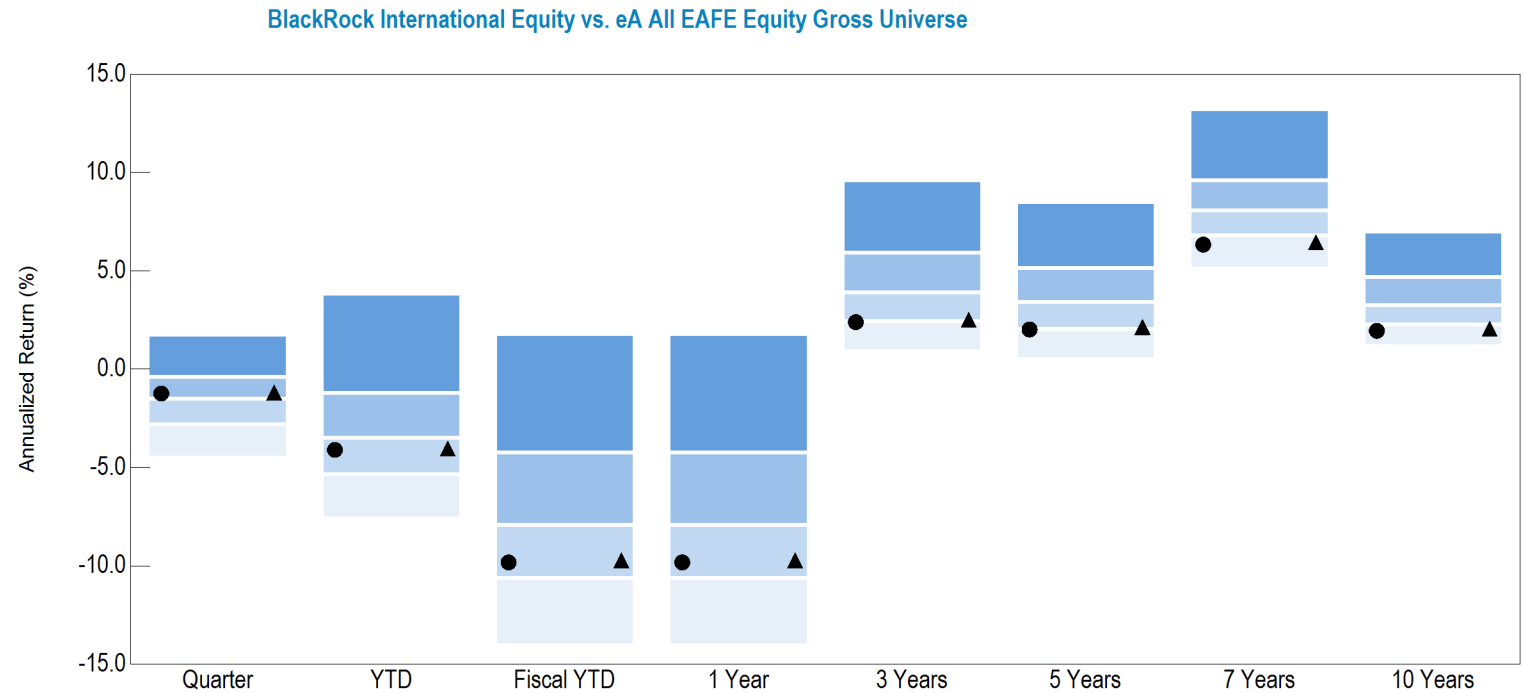


EM Effective Style Map  
5 Years Ending June 30, 2016



# BlackRock International Equity Cumulative Performance Comparison (Gross of Fees)

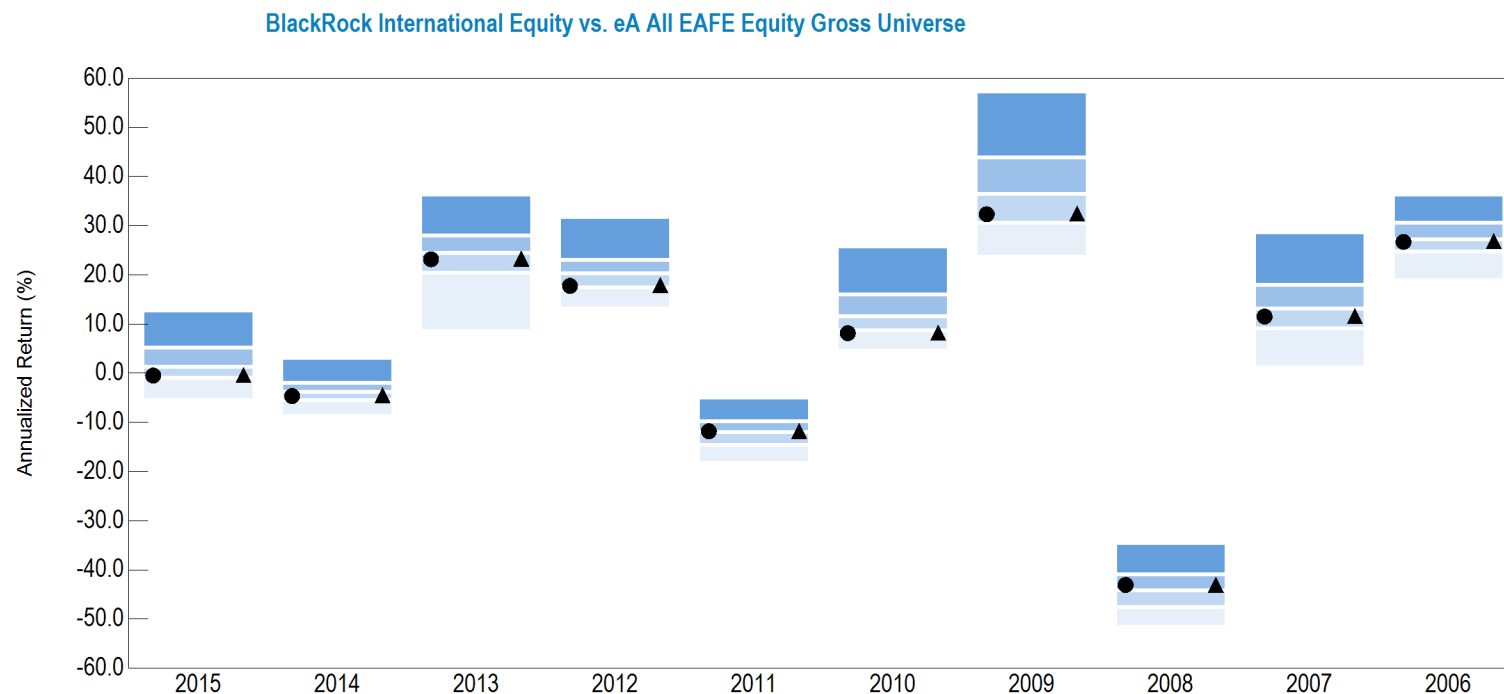
Period Ending: June 30, 2016



	Return (Rank)							
5th Percentile	1.7	3.8	1.8	1.8	9.6	8.5	13.2	7.0
25th Percentile	-0.4	-1.2	-4.2	-4.2	5.9	5.2	9.6	4.7
Median	-1.5	-3.5	-7.9	-7.9	3.9	3.4	8.1	3.3
75th Percentile	-2.8	-5.3	-10.6	-10.6	2.4	2.1	6.8	2.3
95th Percentile	-4.5	-7.6	-14.0	-14.0	0.9	0.5	5.1	1.2
# of Portfolios	337	337	337	337	322	298	278	219
● BlackRock International Equity	-1.2 (43)	-4.1 (61)	-9.8 (66)	-9.8 (66)	2.4 (76)	2.0 (76)	6.3 (84)	1.9 (82)
▲ MSCI EAFE Gross	-1.2 (42)	-4.0 (59)	-9.7 (65)	-9.7 (65)	2.5 (74)	2.1 (73)	6.4 (82)	2.1 (81)

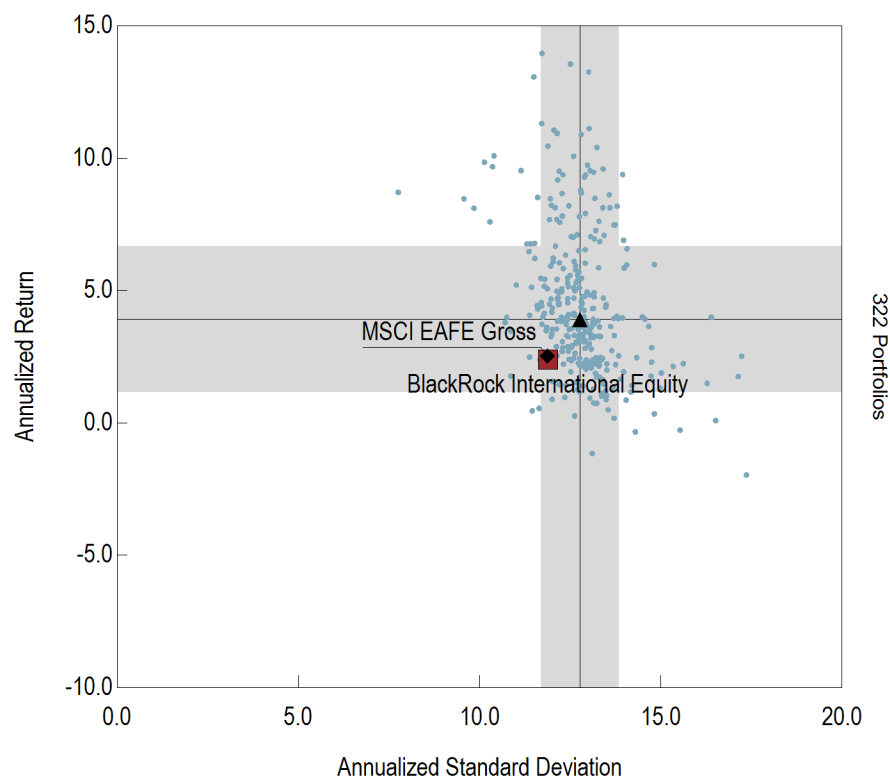
# BlackRock International Equity Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016



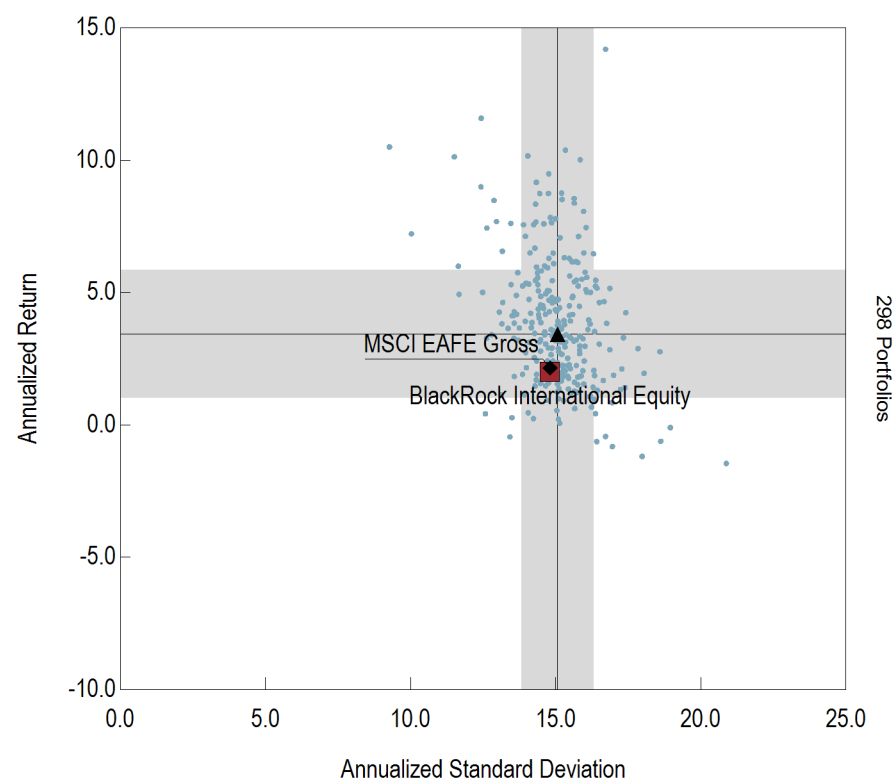
	Return (Rank)									
5th Percentile	12.6	3.0	36.3	31.7	-5.1	25.7	57.3	-34.5	28.5	36.2
25th Percentile	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0	-40.8	18.0	30.7
Median	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5	-44.1	13.2	27.3
75th Percentile	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7	-47.5	9.1	24.8
95th Percentile	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7	-51.5	1.2	18.9
# of Portfolios	325	314	284	263	278	352	455	477	466	434
● BlackRock International Equity	-0.5 (67)	-4.7 (64)	23.2 (61)	17.8 (74)	-11.8 (48)	8.1 (79)	32.3 (68)	-43.1 (41)	11.5 (60)	26.7 (57)
▲ MSCI EAFE Gross	-0.4 (66)	-4.5 (60)	23.3 (60)	17.9 (72)	-11.7 (47)	8.2 (78)	32.5 (67)	-43.1 (41)	11.6 (59)	26.9 (55)

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2016



- BlackRock International Equity
- ◆ MSCI EAFE Gross
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eA All EAFE Equity Gross

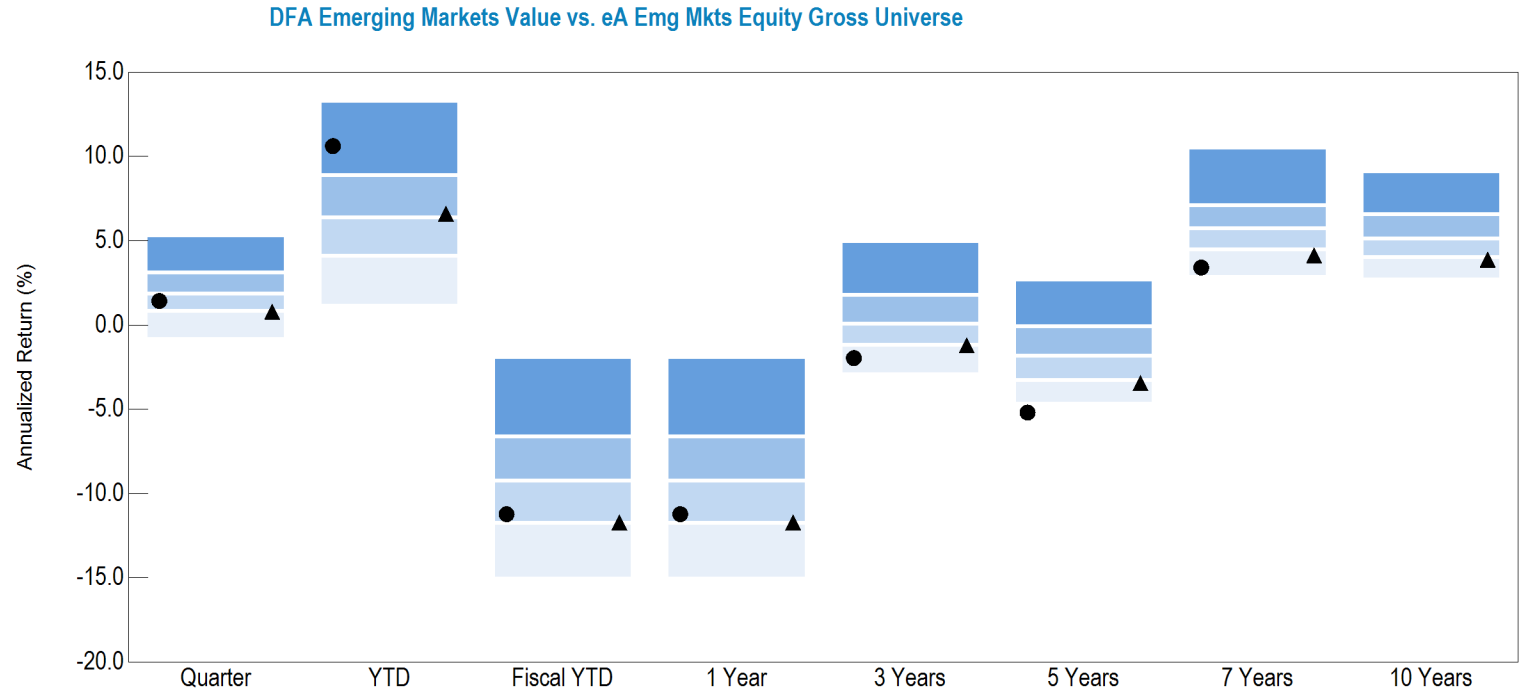
Annualized Return vs. Annualized Standard Deviation  
5 Years Ending June 30, 2016



- BlackRock International Equity
- ◆ MSCI EAFE Gross
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eA All EAFE Equity Gross

# DFA Emerging Markets Value Cumulative Performance Comparison (Gross of Fees)

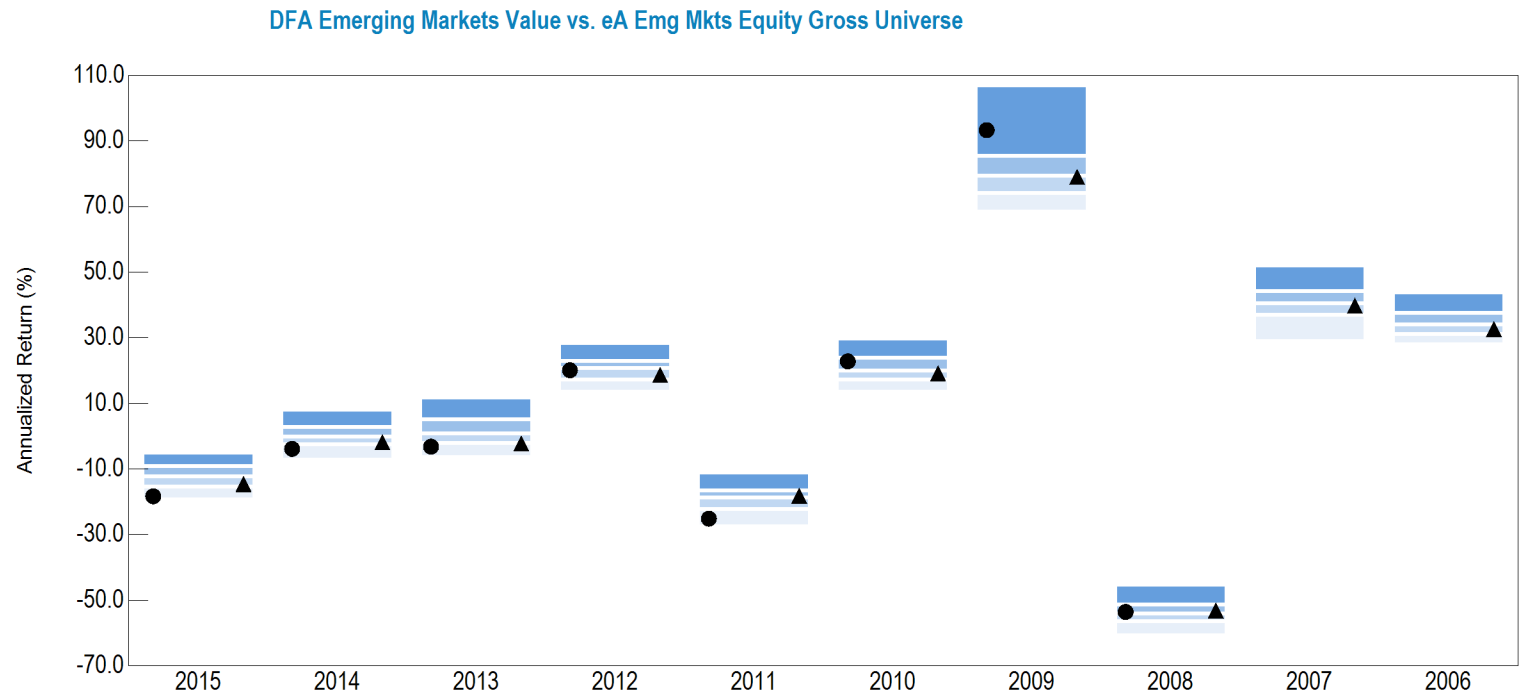
Period Ending: June 30, 2016



	Return (Rank)													
5th Percentile	5.3		13.3		-1.9		-1.9		4.9		2.7		10.5	
25th Percentile	3.1		8.9		-6.6		-6.6		1.8		-0.1		7.1	
Median	1.9		6.4		-9.2		-9.2		0.1		-1.8		5.7	
75th Percentile	0.8		4.1		-11.7		-11.7		-1.2		-3.2		4.5	
95th Percentile	-0.8		1.2		-15.0		-15.0		-2.9		-4.6		2.9	
# of Portfolios	284		284		284		284		260		196		144	
● DFA Emerging Markets Value	1.4	(61)	10.6	(15)	-11.2	(70)	-11.2	(70)	-2.0	(88)	-5.2	(98)	3.4	(93)
▲ MSCI Emerging Markets Gross	0.8	(76)	6.6	(47)	-11.7	(75)	-11.7	(75)	-1.2	(77)	-3.4	(81)	4.1	(79)
													3.9	(80)

# DFA Emerging Markets Value Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016



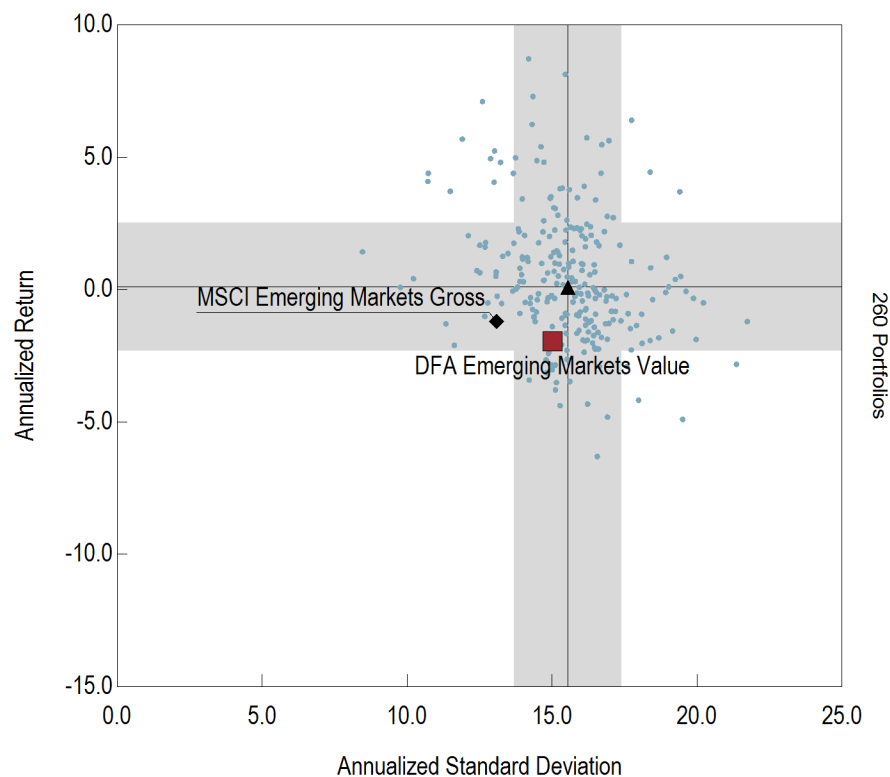
	Return (Rank)									
5th Percentile	-5.0	8.0	11.7	28.4	-11.1	29.6	106.8	-45.4	51.9	43.7
25th Percentile	-9.0	2.9	5.2	23.0	-16.4	23.9	85.5	-51.3	44.3	37.7
Median	-12.2	-0.1	1.0	20.9	-18.6	20.1	79.5	-54.0	40.5	34.2
75th Percentile	-15.3	-2.4	-2.0	17.3	-22.2	17.3	74.3	-56.3	37.1	31.2
95th Percentile	-19.2	-7.0	-6.3	13.7	-27.3	13.7	68.5	-60.7	29.1	28.1
# of Portfolios	273	251	198	155	139	113	113	118	115	108
● DFA Emerging Markets Value	-18.3 (92)	-3.9 (84)	-3.2 (84)	20.1 (56)	-25.2 (92)	22.8 (33)	93.3 (12)	-53.6 (44)	-- (--)	-- (--)
▲ MSCI Emerging Markets Gross	-14.6 (67)	-1.8 (69)	-2.3 (78)	18.6 (68)	-18.2 (45)	19.2 (62)	79.0 (54)	-53.2 (37)	39.8 (58)	32.6 (62)



# DFA Emerging Markets Value Risk vs Return Three & Five Year (Gross of Fees)

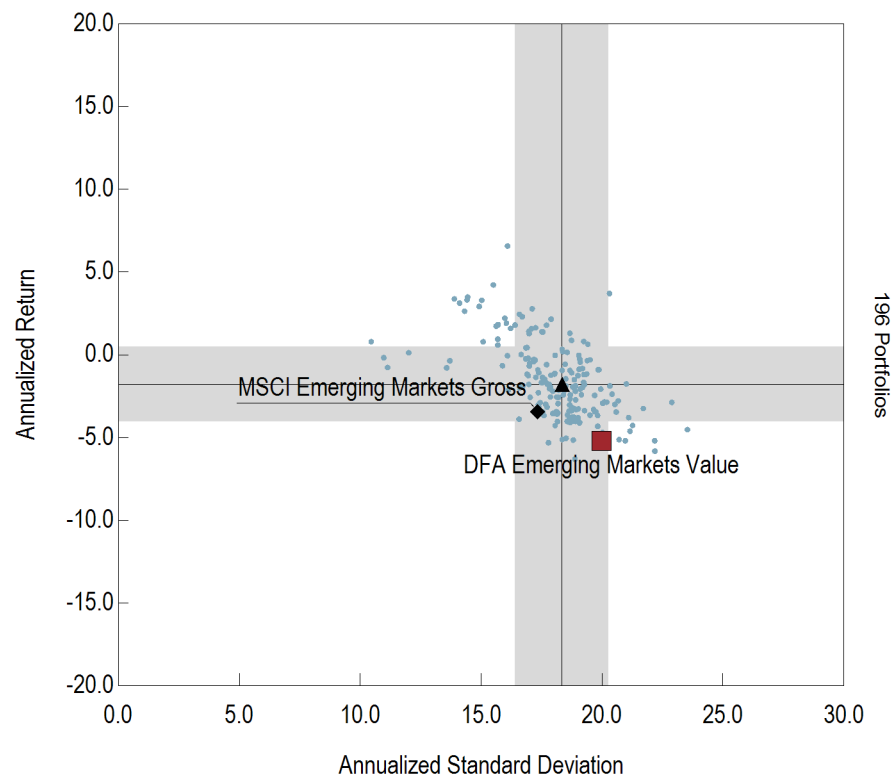
Period Ending: June 30, 2016

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2016



- DFA Emerging Markets Value
- ◆ MSCI Emerging Markets Gross
- ▲ Universe Median
- 68% Confidence Interval
- eA Emg Mkts Equity Gross

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending June 30, 2016

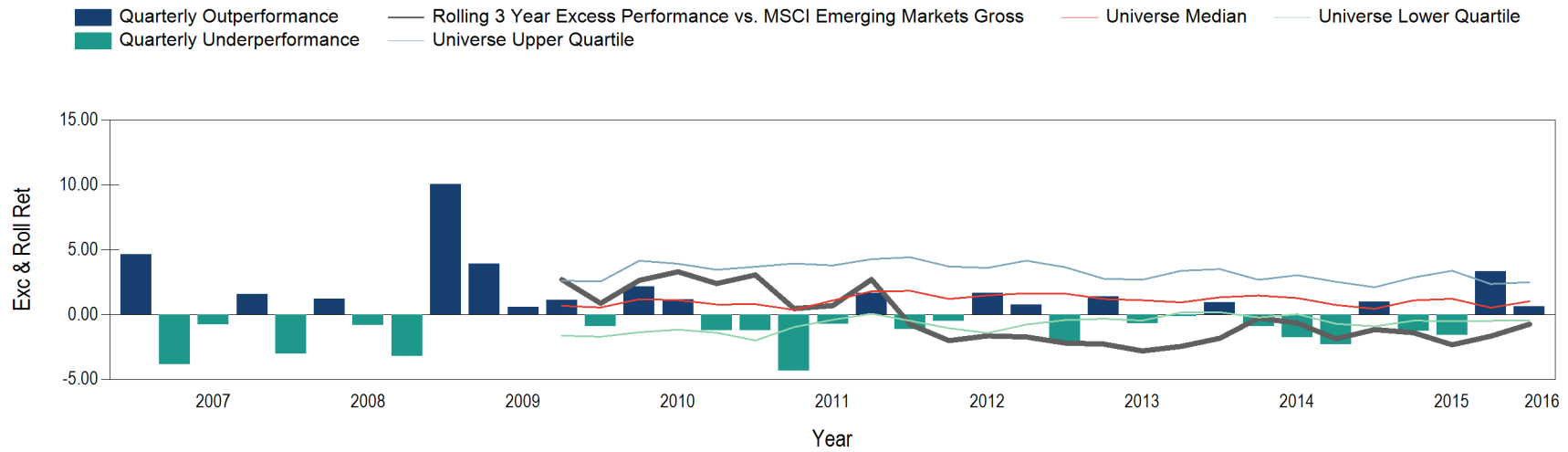


- DFA Emerging Markets Value
- ◆ MSCI Emerging Markets Gross
- ▲ Universe Median
- 68% Confidence Interval
- eA Emg Mkts Equity Gross

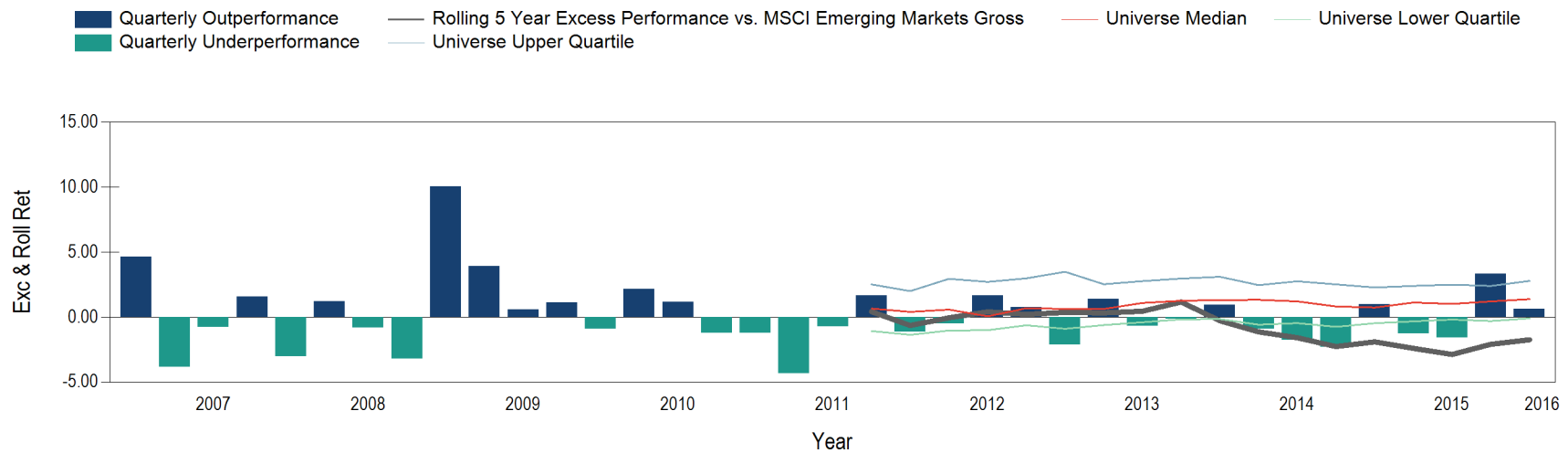
# DFA Emerging Markets Value Rolling Return Analysis (Gross of Fees)

Period Ending: June 30, 2016

## Rolling 3 Year Annualized Excess Performance



## Rolling 5 Year Annualized Excess Performance

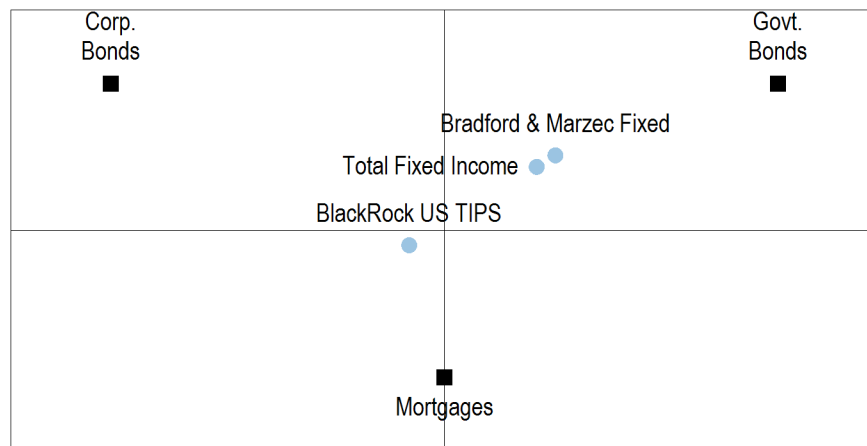


# Total Fixed Income Asset Class Overview (Gross of Fees)

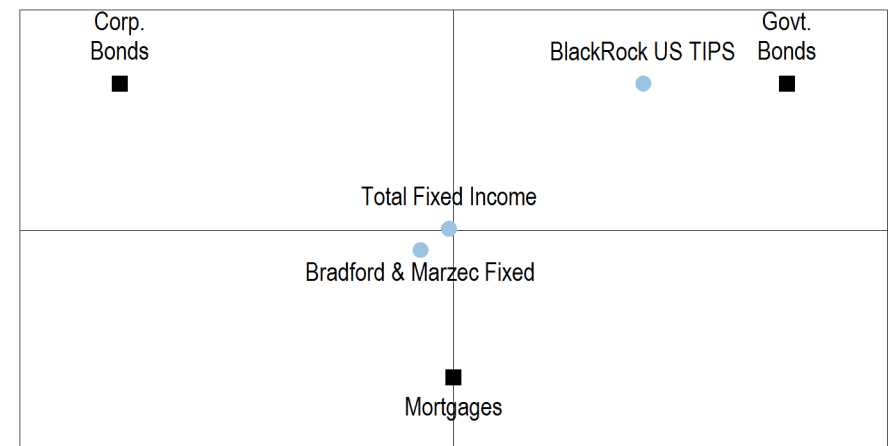
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fixed Income</b>	<b>207,825,169</b>	<b>2.8</b>	<b>6.0</b>	<b>5.4</b>	<b>5.4</b>	<b>4.3</b>	<b>4.3</b>	<b>6.4</b>	<b>-0.3</b>	<b>5.9</b>	<b>-1.7</b>	<b>9.6</b>	<b>6.8</b>
Barclays Aggregate		2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8
eA All US Fixed Inc Gross Rank		32	30	37	37	40	45	23	74	34	78	28	45
Bradford & Marzec Fixed	104,714,068	3.1	6.2	6.8	6.8	5.4	5.1	6.8	1.2	7.0	-0.4	8.8	7.4
Barclays Aggregate		2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8
eA US Core Plus Fixed Inc Gross Rank		28	29	7	7	8	30	19	15	16	52	45	51
MacKay Shields Core Plus Opportunities	87,769,772	2.7	5.7	4.1	4.1	--	--	--	--	--	--	--	--
Barclays Aggregate		2.2	5.3	6.0	6.0	--	--	--	--	--	--	--	--
eA US Core Plus Fixed Inc Gross Rank		58	53	83	83	--	--	--	--	--	--	--	--
BlackRock US TIPS	15,341,329	1.7	6.3	4.4	4.4	2.4	2.7	--	-1.2	3.6	-8.5	7.1	13.7
Barclays US TIPS		1.7	6.2	4.4	4.4	2.3	2.6	--	-1.4	3.6	-8.6	7.0	13.6
eA TIPS / Infl Indexed Fixed Inc Gross Rank		39	43	31	31	36	45	--	43	45	62	59	37

Fixed Income Style Map  
3 Years Ending June 30, 2016



Fixed Income Style Map  
5 Years Ending June 30, 2016



# Total Fixed Income Asset Class Overview (Net of Fees)

Period Ending: June 30, 2016

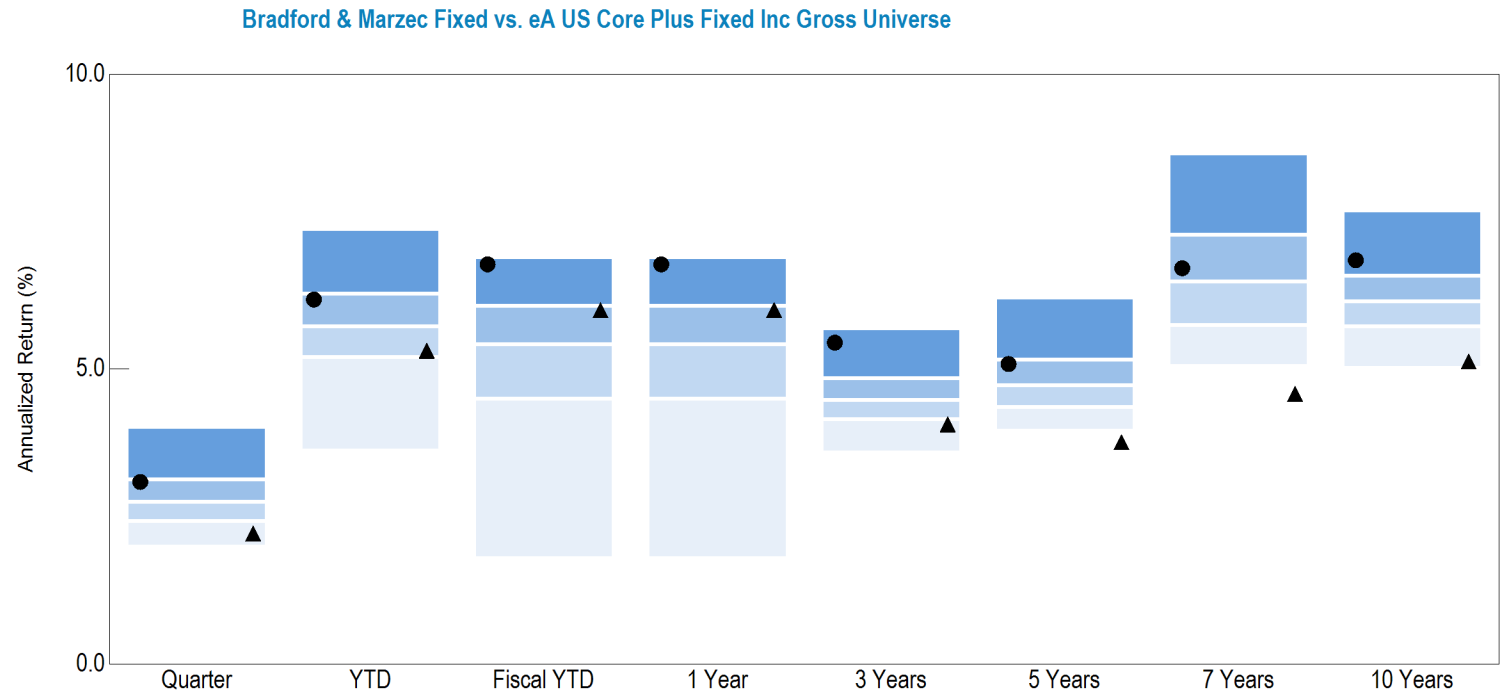
	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fixed Income</b>	<b>207,825,169</b>	<b>2.7</b>	<b>5.8</b>	<b>5.1</b>	<b>5.1</b>	<b>4.0</b>	<b>4.0</b>	<b>6.1</b>	<b>-0.6</b>	<b>5.6</b>	<b>-2.0</b>	<b>9.3</b>	<b>6.5</b>
Barclays Aggregate		2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8
Bradford & Marzec Fixed	104,714,068	3.0	6.0	6.5	6.5	5.2	4.8	6.5	0.9	6.7	-0.8	8.5	7.1
Barclays Aggregate		2.2	5.3	6.0	6.0	4.1	3.8	5.1	0.6	6.0	-2.0	4.2	7.8
Mackay Shields Core Plus Opportunities	87,769,772	2.6	5.5	3.7	3.7	--	--	--	--	--	--	--	--
Barclays Aggregate		2.2	5.3	6.0	6.0	--	--	--	--	--	--	--	--
BlackRock US TIPS	15,341,329	1.7	6.2	4.4	4.4	2.4	2.7	--	-1.3	3.6	-8.6	7.0	13.6
Barclays US TIPS		1.7	6.2	4.4	4.4	2.3	2.6	--	-1.4	3.6	-8.6	7.0	13.6

## Correlation Matrix Last 5 Years

	Total Fixed Income	Bradford & Marzec Fixed	Mackay Shields Core Plus Opportunities	BlackRock US TIPS	Barclays Aggregate
Total Fixed Income	1.00	--	--	--	--
Bradford & Marzec Fixed	0.98	1.00	--	--	--
Mackay Shields Core Plus Opportunities	--	--	--	--	--
BlackRock US TIPS	0.84	0.78	--	1.00	--
Barclays Aggregate	0.77	0.77	--	0.85	1.00

# Bradford & Marzec Fixed Cumulative Performance Comparison (Gross of Fees)

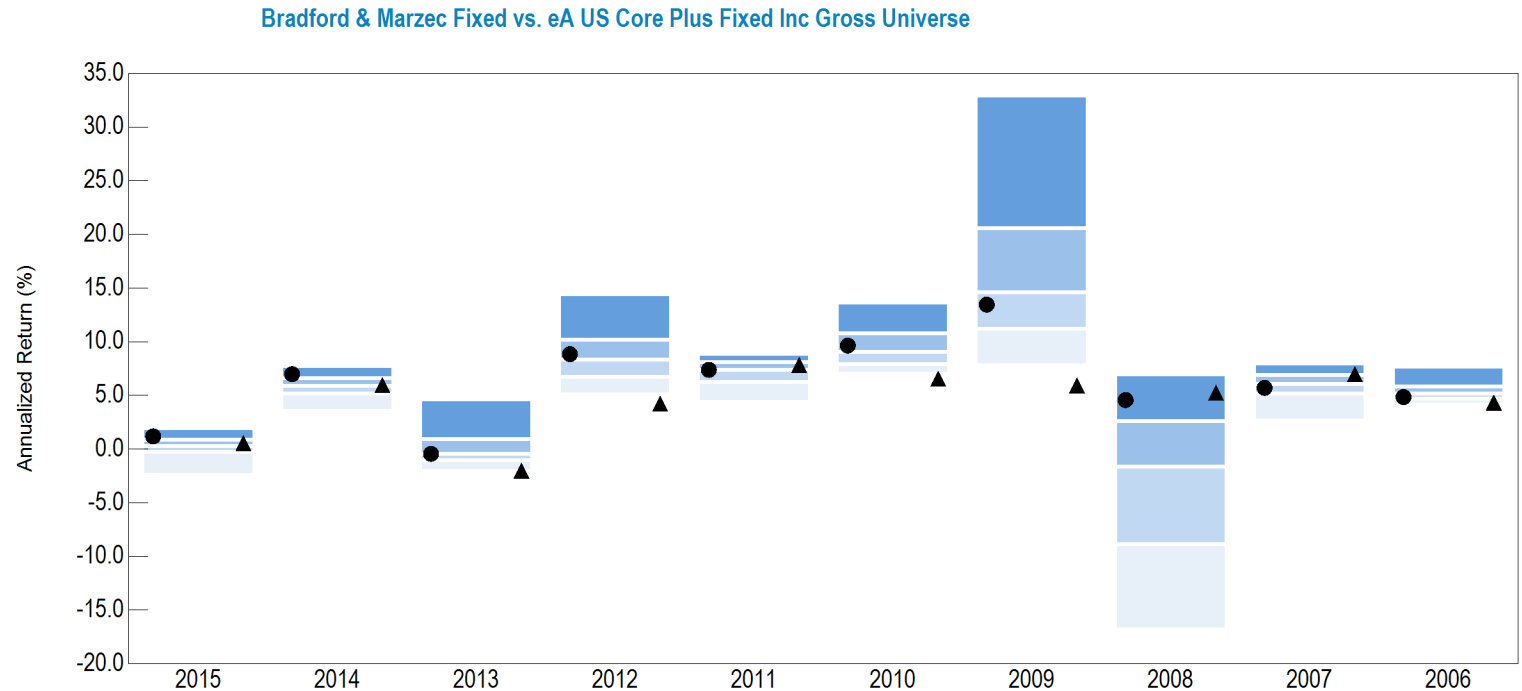
Period Ending: June 30, 2016



	Return (Rank)													
5th Percentile	4.0		7.4		6.9		6.9		5.7		6.2		8.7	
25th Percentile	3.1		6.3		6.1		6.1		4.9		5.2		7.3	
Median	2.8		5.7		5.4		5.4		4.5		4.7		6.5	
75th Percentile	2.4		5.2		4.5		4.5		4.2		4.4		5.8	
95th Percentile	2.0		3.6		1.8		1.8		3.6		4.0		5.1	
# of Portfolios	122		122		122		122		121		116		109	
● Bradford & Marzec Fixed	3.1	(28)	6.2	(29)	6.8	(7)	6.8	(7)	5.4	(8)	5.1	(30)	6.7	(39)
▲ Barclays Aggregate	2.2	(89)	5.3	(69)	6.0	(28)	6.0	(28)	4.1	(79)	3.8	(98)	4.6	(99)
													5.1	(92)

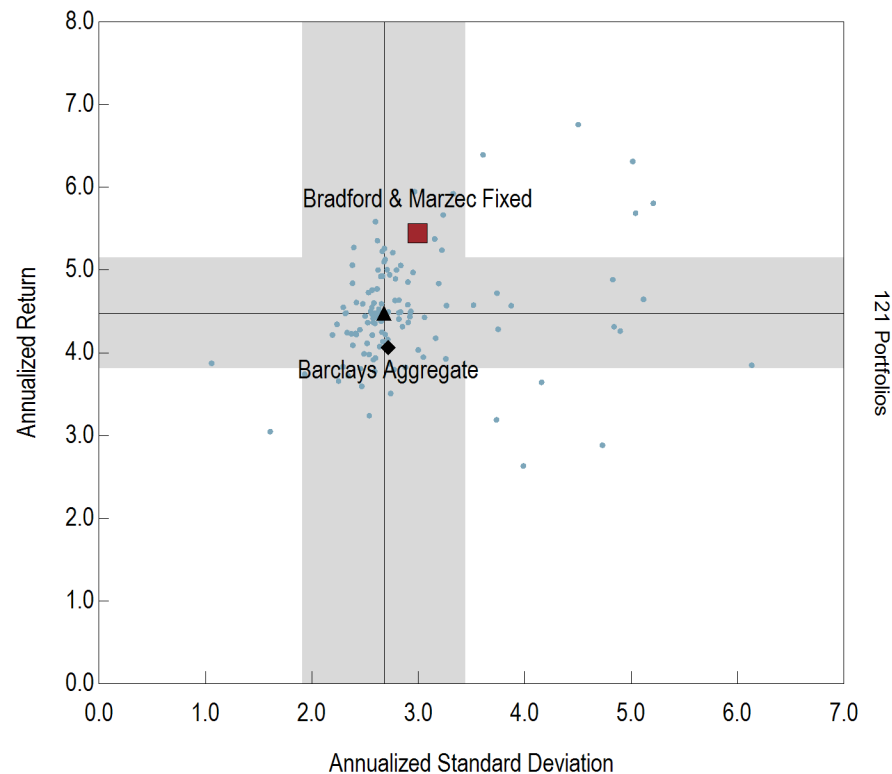
# Bradford & Marzec Fixed Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016

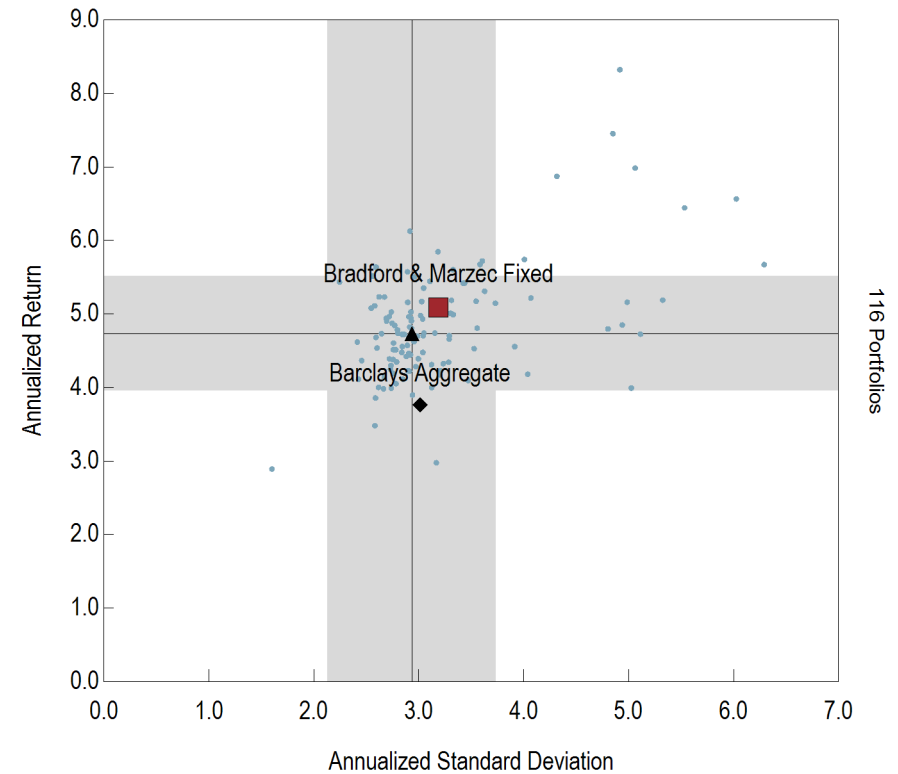


	Return (Rank)									
5th Percentile	1.9	7.7	4.6	14.4	8.8	13.6	32.9	6.9	7.9	7.6
25th Percentile	0.9	6.7	1.0	10.2	8.1	10.8	20.6	2.7	6.9	5.9
Median	0.3	5.9	-0.4	8.3	7.4	9.1	14.6	-1.6	6.1	5.2
75th Percentile	-0.2	5.2	-1.0	6.7	6.3	8.0	11.2	-8.9	5.2	4.7
95th Percentile	-2.4	3.6	-2.0	5.1	4.4	7.0	7.8	-16.8	2.7	4.2
# of Portfolios	115	118	116	124	118	123	128	136	144	146
● Bradford & Marzec Fixed	1.2 (15)	7.0 (16)	-0.4 (52)	8.8 (45)	7.4 (51)	9.6 (40)	13.5 (55)	4.6 (17)	5.7 (66)	4.8 (67)
▲ Barclays Aggregate	0.6 (42)	6.0 (50)	-2.0 (96)	4.2 (97)	7.8 (37)	6.5 (97)	5.9 (99)	5.2 (13)	7.0 (25)	4.3 (90)

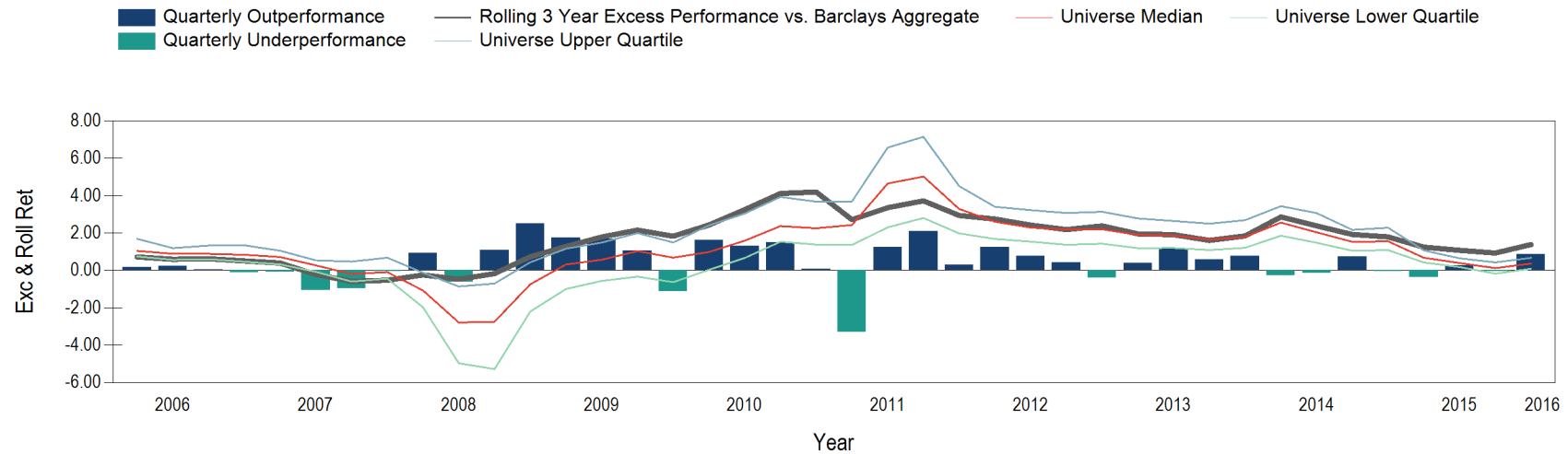
Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2016



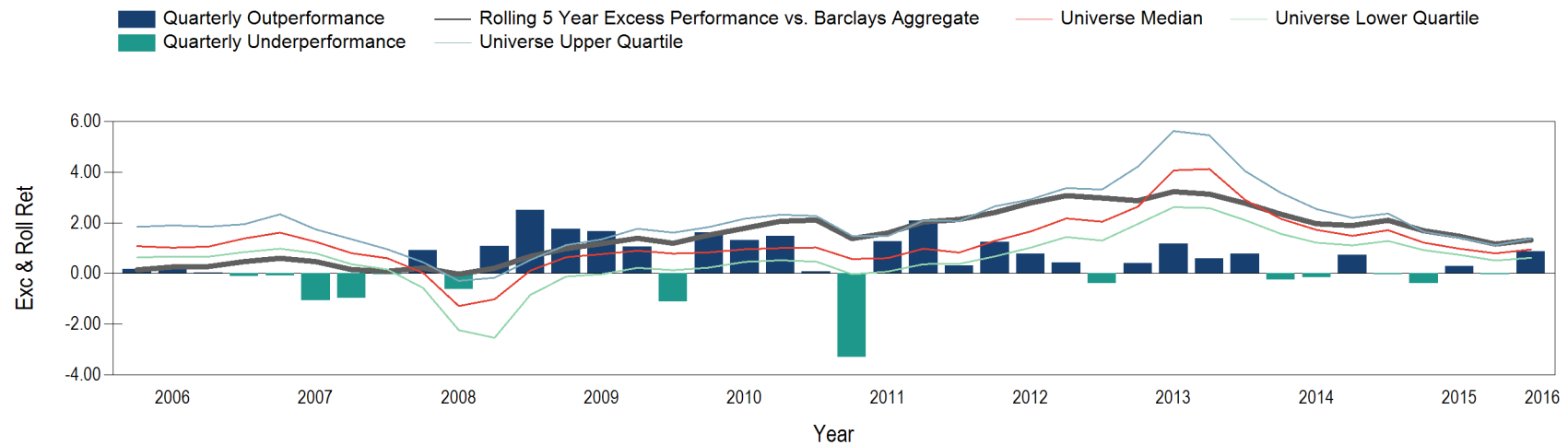
Annualized Return vs. Annualized Standard Deviation  
5 Years Ending June 30, 2016



### Rolling 3 Year Annualized Excess Performance



### Rolling 5 Year Annualized Excess Performance

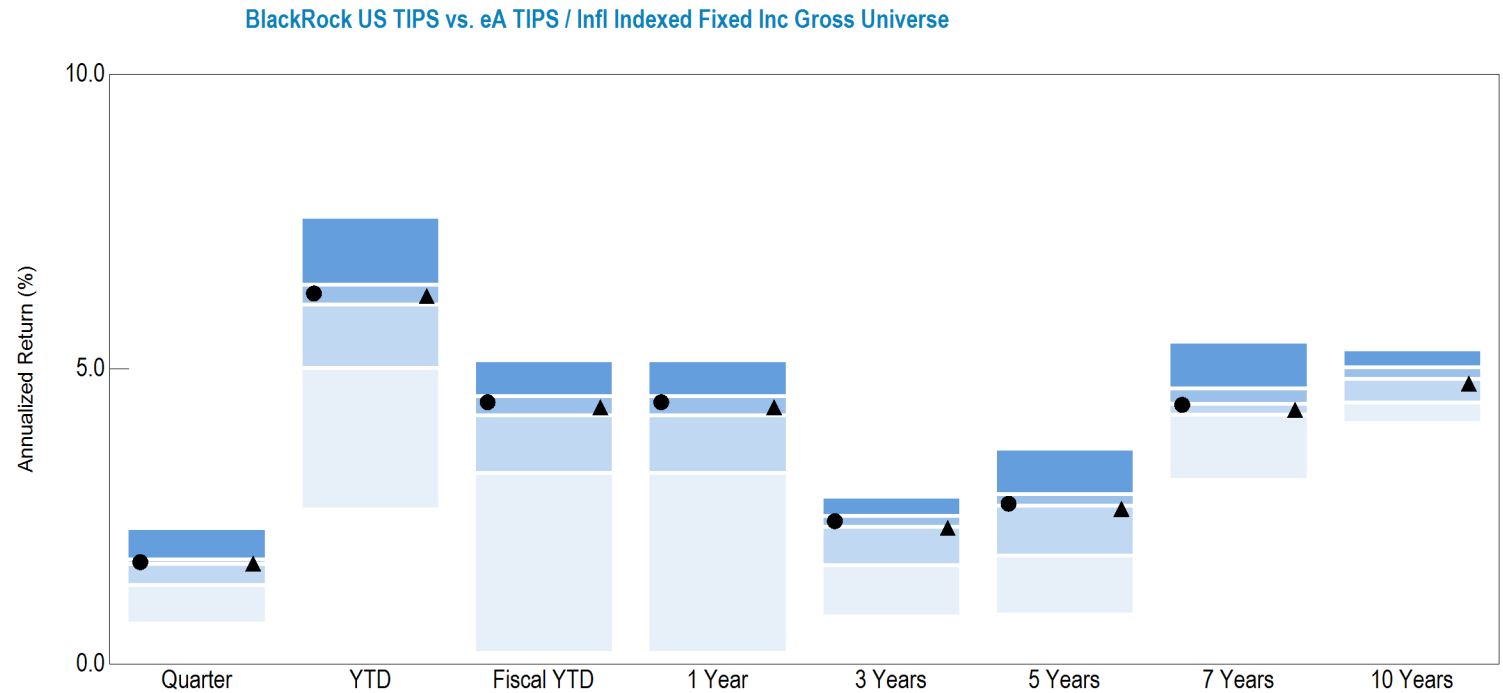




# BlackRock US TIPS

## Cumulative Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016

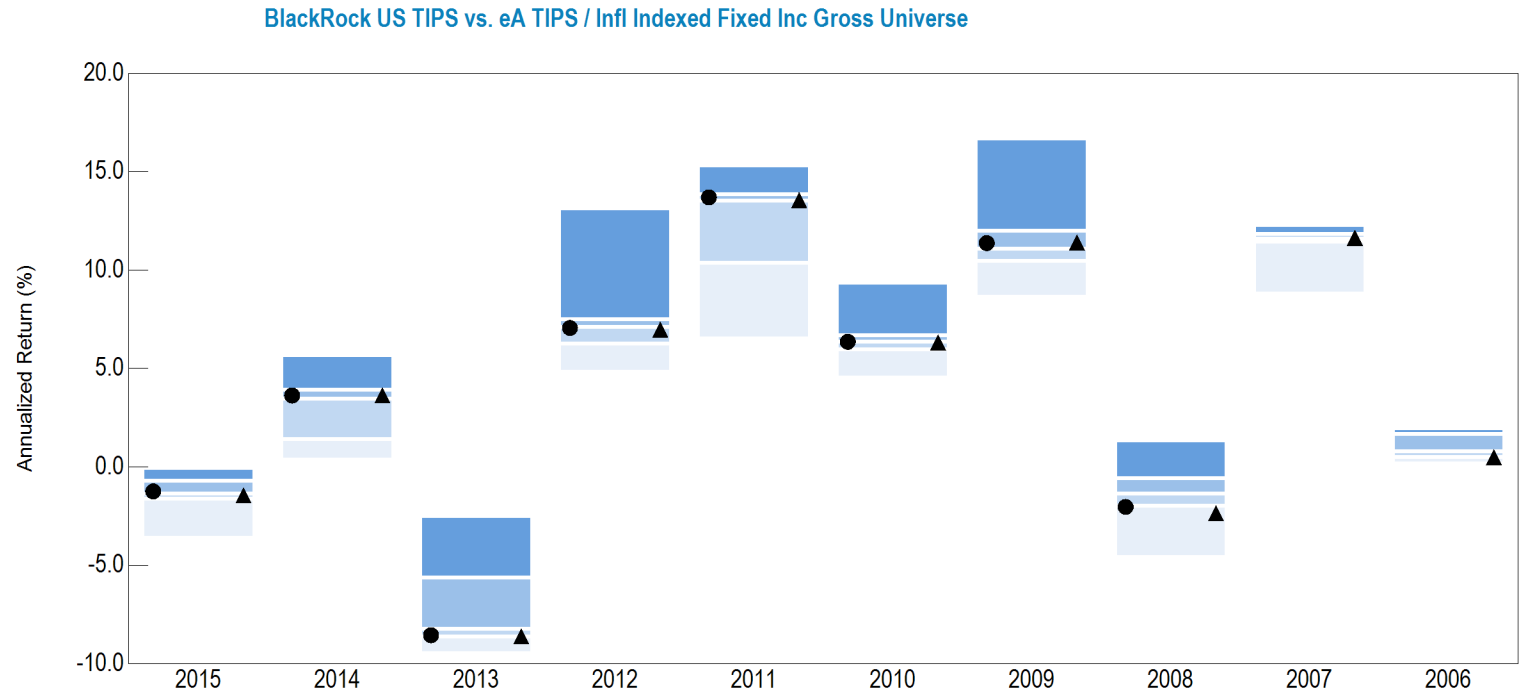


	Return (Rank)													
5th Percentile	2.3		7.6		5.2		5.2		2.8		3.6		5.5	
25th Percentile	1.8		6.4		4.5		4.5		2.5		2.9		4.7	
Median	1.7		6.1		4.2		4.2		2.3		2.7		4.4	
75th Percentile	1.3		5.0		3.3		3.3		1.7		1.8		4.2	
95th Percentile	0.7		2.6		0.2		0.2		0.8		0.8		3.1	
# of Portfolios	37		37		37		37		37		36		32	
● BlackRock US TIPS	1.7	(39)	6.3	(43)	4.4	(31)	4.4	(31)	2.4	(36)	2.7	(45)	4.4	(55)
▲ Barclays US TIPS	1.7	(52)	6.2	(45)	4.4	(41)	4.4	(41)	2.3	(53)	2.6	(58)	4.3	(64)

# BlackRock US TIPS

## Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2016



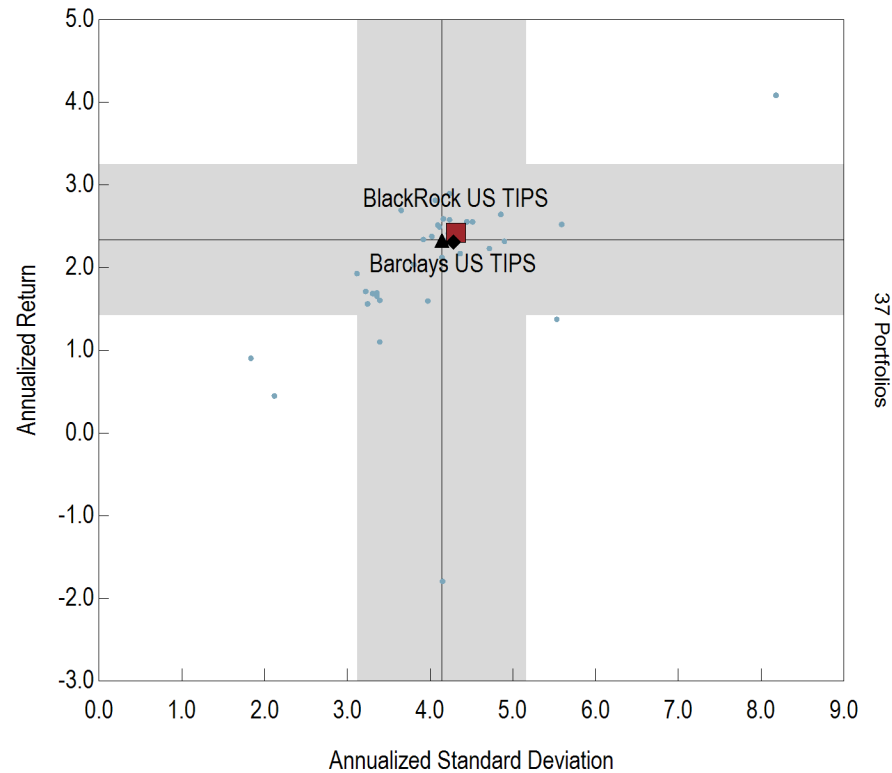
	Return (Rank)									
5th Percentile	-0.1	5.7	-2.5	13.1	15.3	9.4	16.7	1.3	12.3	2.0
25th Percentile	-0.7	4.0	-5.6	7.5	13.9	6.7	12.0	-0.5	11.8	1.7
Median	-1.3	3.5	-8.2	7.1	13.5	6.4	11.1	-1.4	11.6	0.8
75th Percentile	-1.6	1.4	-8.6	6.3	10.4	6.0	10.5	-1.9	11.5	0.5
95th Percentile	-3.6	0.4	-9.4	4.9	6.6	4.6	8.7	-4.6	8.8	0.2
# of Portfolios	44	50	43	43	47	39	37	40	37	35
● BlackRock US TIPS	-1.2 (43)	3.6 (45)	-8.5 (62)	7.1 (59)	13.7 (37)	6.4 (52)	11.4 (36)	-2.0 (78)	-- (--)	-- (--)
▲ Barclays US TIPS	-1.4 (59)	3.6 (44)	-8.6 (76)	7.0 (66)	13.6 (49)	6.3 (57)	11.4 (35)	-2.4 (85)	11.6 (49)	0.5 (80)

# BlackRock US TIPS

## Risk vs Return Three & Five Year (Gross of Fees)

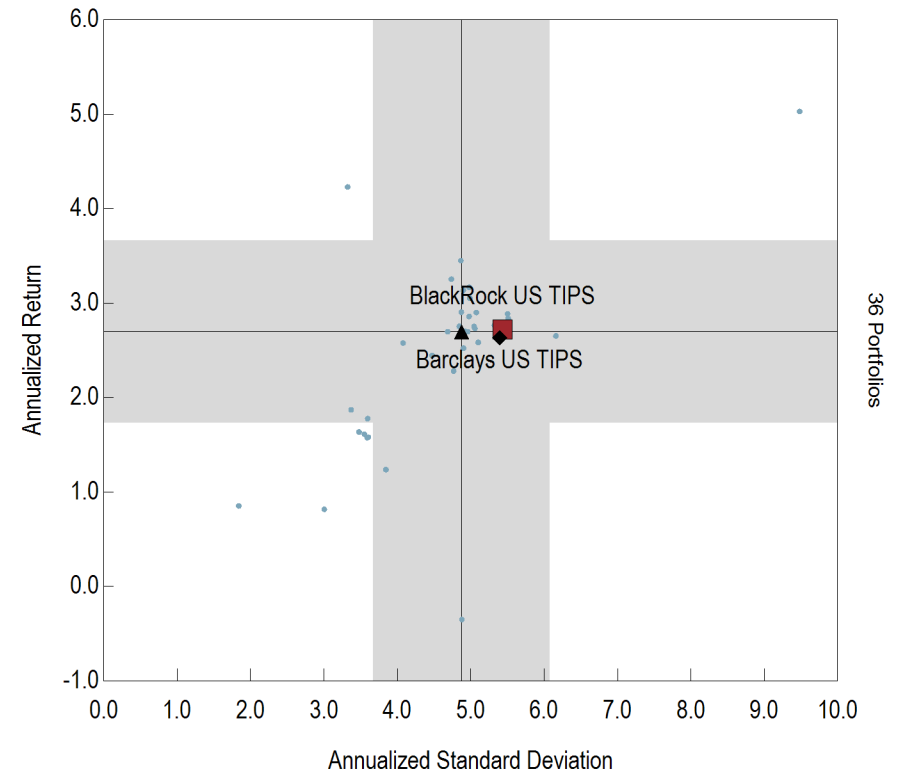
Period Ending: June 30, 2016

Annualized Return vs. Annualized Standard Deviation  
3 Years Ending June 30, 2016



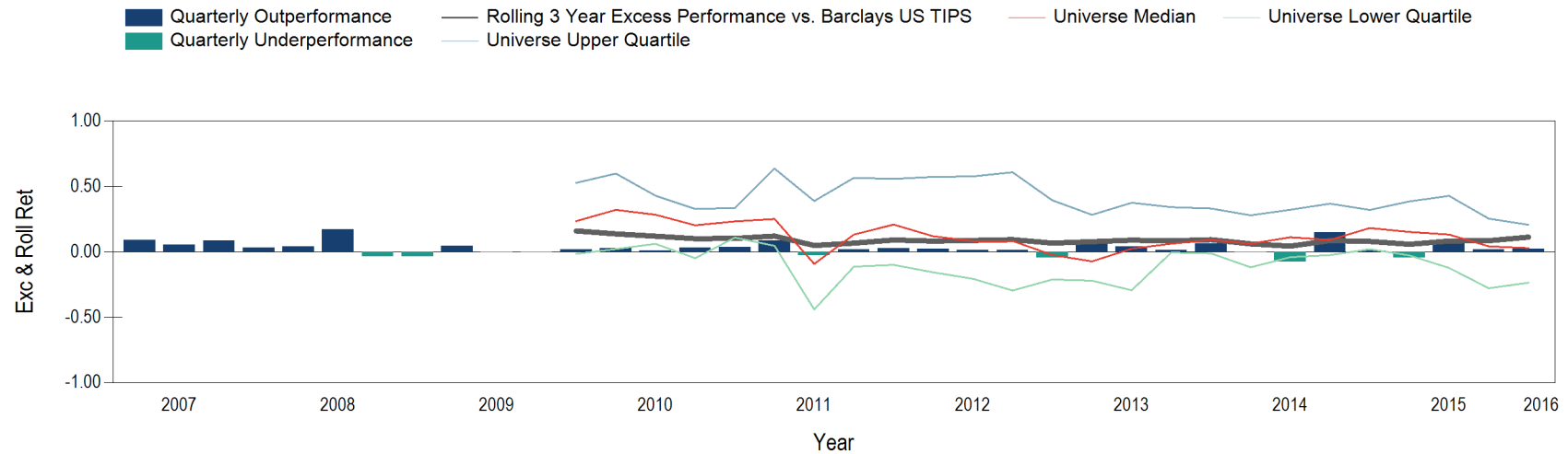
- BlackRock US TIPS
- ◆ Barclays US TIPS
- ▲ Universe Median
- 68% Confidence Interval
- eA TIPS / Infl Indexed Fixed Inc Gross

Annualized Return vs. Annualized Standard Deviation  
5 Years Ending June 30, 2016

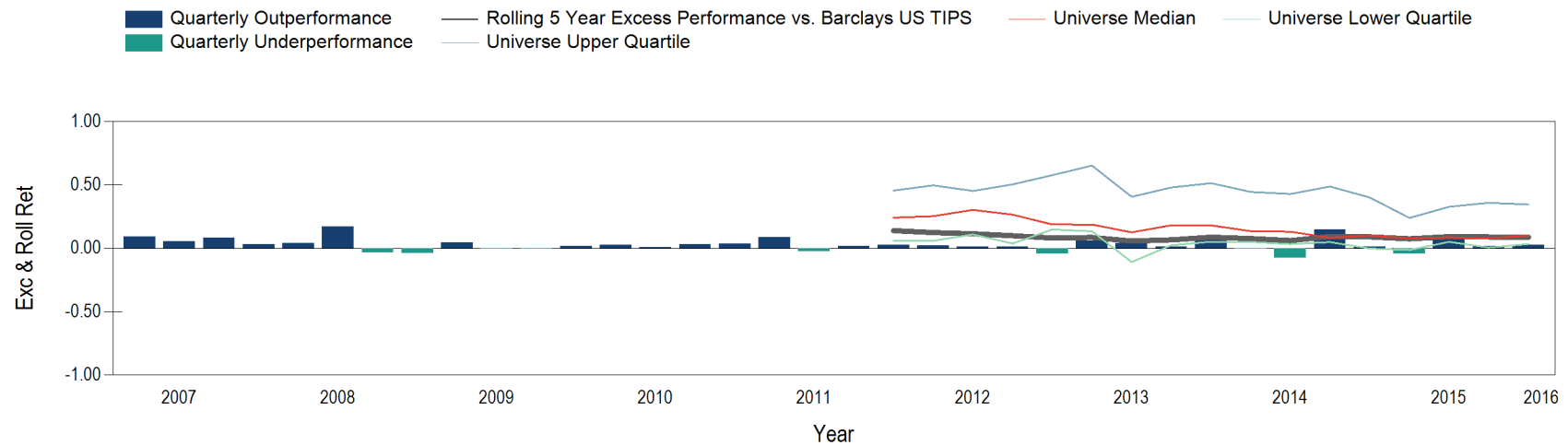


- BlackRock US TIPS
- ◆ Barclays US TIPS
- ▲ Universe Median
- 68% Confidence Interval
- eA TIPS / Infl Indexed Fixed Inc Gross

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance

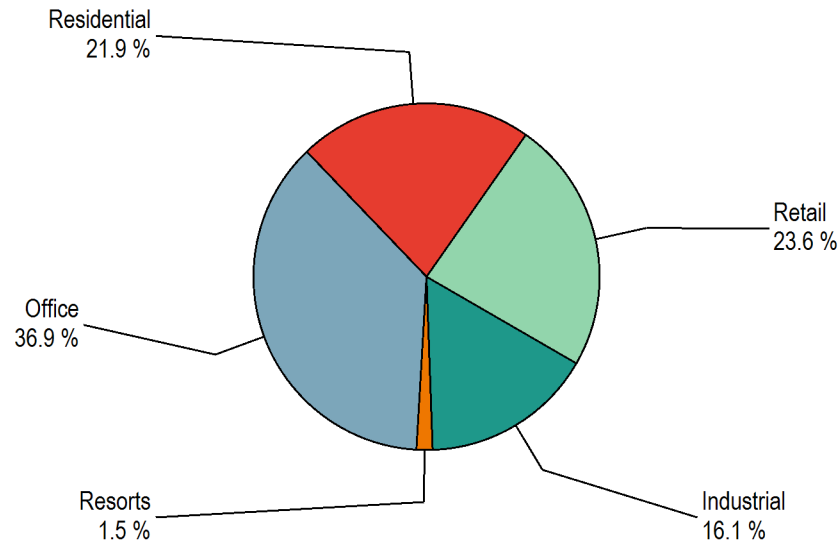


# Total Real Estate Asset Class Overview (Gross of Fees)

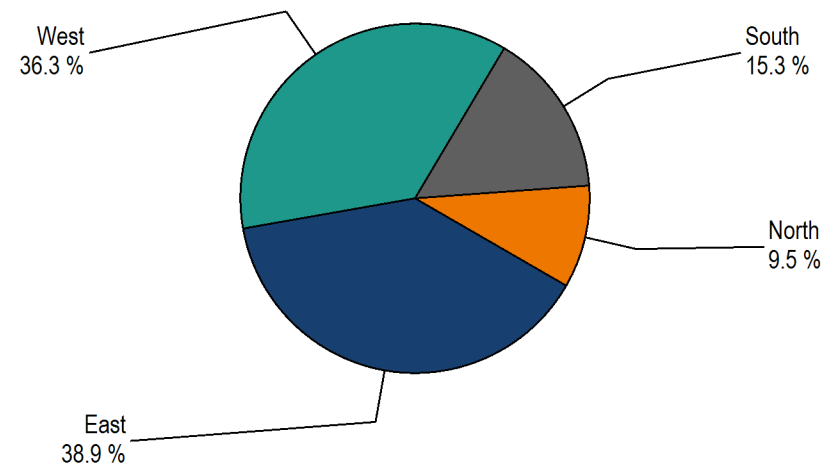
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Real Estate</b>	<b>61,584,144</b>	<b>1.6</b>	<b>4.0</b>	<b>11.8</b>	<b>11.8</b>	<b>13.4</b>	<b>12.3</b>	<b>--</b>	<b>16.1</b>	<b>13.0</b>	<b>12.6</b>	<b>10.6</b>	<b>14.9</b>
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0
ASB Real Estate	30,459,360	1.3	2.9	11.6	11.6	14.0	--	--	17.3	13.5	13.7	--	--
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	--	--	13.3	11.8	11.0	--	--
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	--	--	15.0	12.5	13.9	--	--
Clarion Lion	29,734,245	2.0	5.3	12.5	12.5	13.5	13.1	--	15.7	13.2	12.8	10.9	18.7
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0
1221 State St. Corp	1,390,539	0.0	0.0	0.0	0.0	0.0	-2.5	--	0.0	0.0	0.0	0.1	-9.0

Property Type Allocation  
Allocation as of June 30, 2016



Geographic Diversification  
Allocation as of June 30, 2016

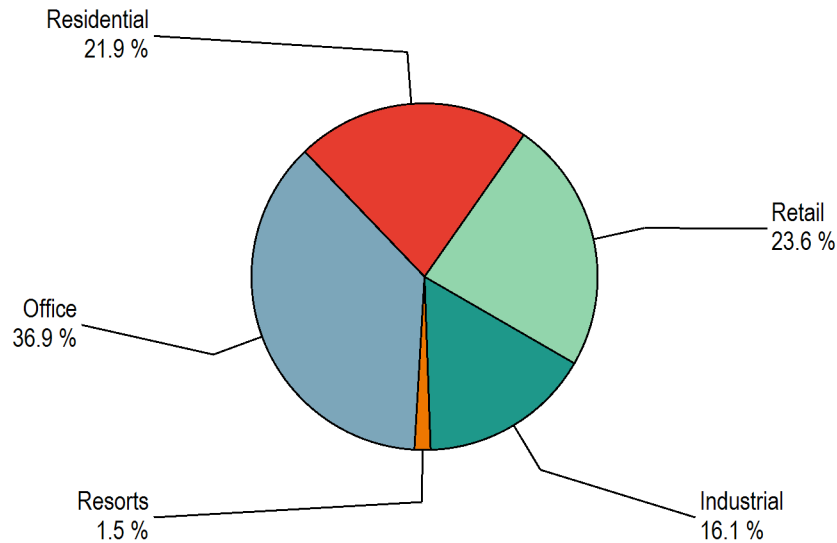


# Total Real Estate Asset Class Overview (Net of Fees)

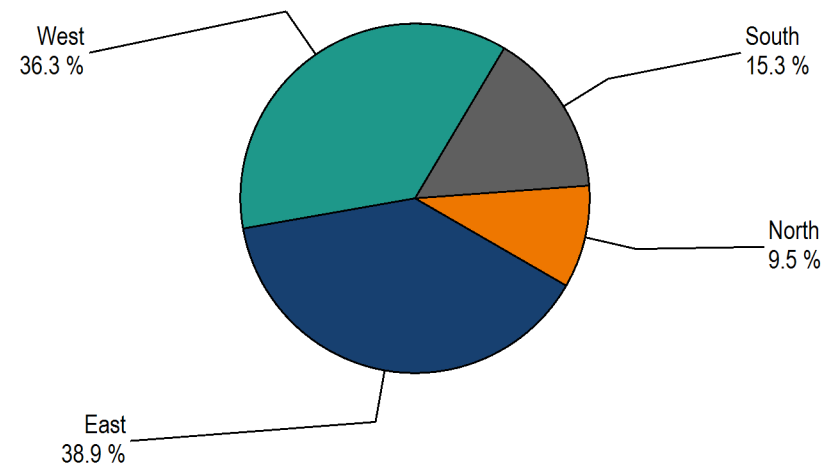
Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Real Estate</b>	<b>61,584,144</b>	<b>1.4</b>	<b>3.5</b>	<b>10.7</b>	<b>10.7</b>	<b>12.3</b>	<b>11.5</b>	<b>--</b>	<b>15.0</b>	<b>11.6</b>	<b>12.1</b>	<b>10.3</b>	<b>14.2</b>
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0
ASB Real Estate	30,459,360	1.1	2.5	10.6	10.6	13.0	--	--	16.2	12.5	12.5	--	--
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	--	--	13.3	11.8	11.0	--	--
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	--	--	15.0	12.5	13.9	--	--
Clarion Lion	29,734,245	1.7	4.8	11.3	11.3	12.4	12.0	--	14.6	12.2	11.8	9.9	17.8
NCREIF Property Index		2.0	4.3	10.6	10.6	11.6	11.5	--	13.3	11.8	11.0	10.5	14.3
NCREIF-ODCE		2.1	4.4	11.8	11.8	13.0	12.7	--	15.0	12.5	13.9	10.9	16.0
1221 State St. Corp	1,390,539	0.0	0.0	0.0	0.0	0.0	-2.5	--	0.0	0.0	0.0	0.1	-9.0

Property Type Allocation  
Allocation as of June 30, 2016



Geographic Diversification  
Allocation as of June 30, 2016

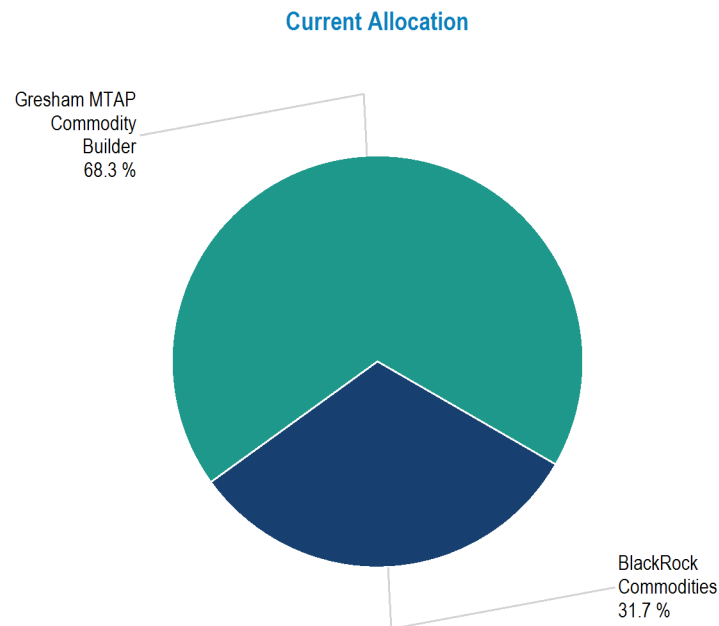


# Total Commodities

## Asset Class Summary (Gross of Fees)

Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Commodities</b>	<b>14,620,851</b>	<b>11.8</b>	<b>12.4</b>	<b>-14.7</b>	<b>-14.7</b>	<b>-10.7</b>	<b>-10.9</b>	<b>--</b>	<b>-25.1</b>	<b>-16.3</b>	<b>-9.3</b>	<b>-0.9</b>	<b>-13.2</b>
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3
BlackRock Commodities	4,628,966	12.6	13.1	-13.4	-13.4	-10.6	-10.8	--	-24.7	-17.0	-9.4	-0.9	-13.2
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3
Gresham MTAP Commodity Builder	9,991,885	11.4	12.0	-15.3	-15.3	--	--	--	-25.3	-16.1	--	--	--
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	--	--	--	-24.7	-17.0	--	--	--

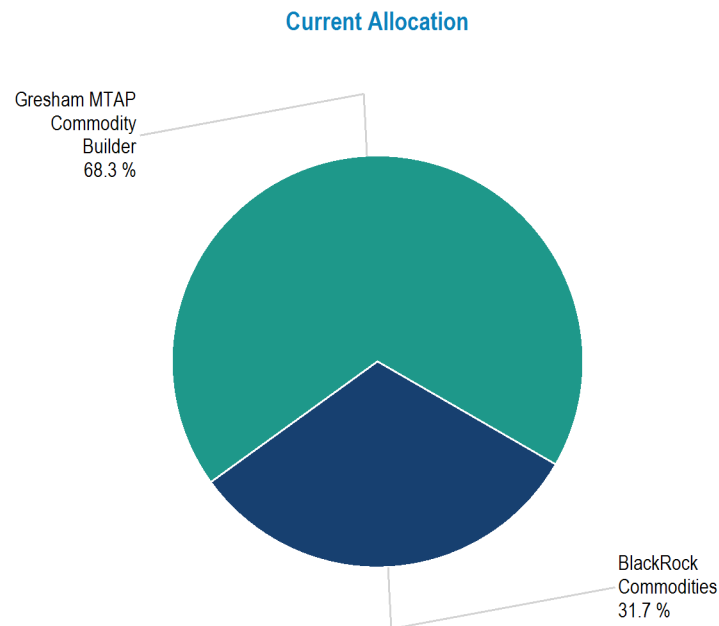


# Total Commodities

## Asset Class Summary (Net of Fees)

Period Ending: June 30, 2016

	Market Value	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Commodities</b>	<b>14,620,851</b>	<b>11.6</b>	<b>12.0</b>	<b>-15.2</b>	<b>-15.2</b>	<b>-11.2</b>	<b>-11.3</b>	<b>--</b>	<b>-25.6</b>	<b>-16.9</b>	<b>-9.5</b>	<b>-1.2</b>	<b>-13.5</b>
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3
BlackRock Commodities	4,628,966	12.5	13.0	-13.7	-13.7	-10.8	-11.1	--	-24.9	-17.2	-9.7	-1.2	-13.5
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	-10.6	-10.8	--	-24.7	-17.0	-9.5	-1.1	-13.3
Gresham MTAP Commodity Builder	9,991,885	11.2	11.6	-15.9	-15.9	--	--	--	-25.9	-16.7	--	--	--
<i>Bloomberg Commodity Index TR USD</i>		12.8	13.3	-13.3	-13.3	--	--	--	-24.7	-17.0	--	--	--





**Performance Return Calculations**

Returns calculated in the performance summary tables are time-weighted rates of return (TWRR). TWRR are calculated from changes in monthly market values, adjusted for weighted cash flows between months. Returns are linked geometrically 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**

Closed end funds including but not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit may lag performance and market value data due to delayed reporting. Verus will show market values for closed end funds as of the most recent reported performance adjusted for capital calls and distributions. Closed end fund managers report performance using an internal rate of return (IRR), which differs from the TWRR calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

**Manager Line Up**

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 3000	12/10/2015	J.P. Morgan	BlackRock Commodities	10/09/2009	J.P. Morgan
BlackRock International Equity	07/03/2003	J.P. Morgan	Grasham MTAP Commodities	08/31/2013	J.P. Morgan
DFA Emerging Markets Value	01/11/2007	J.P. Morgan	Cash	-	J.P. Morgan
Vontobel Global Emerging Markets	09/30/2014	J.P. Morgan	Clifton Group	-	J.P. Morgan
Bradford & Marzec Fixed	12/01/1992	J.P. Morgan	HarbourVest IX-Buyout	2011 <sup>1</sup>	HarbourVest
MacKay Shields Core Plus Ops	03/02/2015	CITCO	HarbourVest IX-Credit	2011 <sup>1</sup>	HarbourVest
BlackRock US TIPS	04/11/2007	J.P. Morgan	HarbourVest International VI	2008 <sup>1</sup>	HarbourVest
ASB Real Estate	12/31/2012	ASB Real Estate	Harbourvest IX-Venture	2011 <sup>1</sup>	HarbourVest
Clarion Lion	12/31/2006	Clarion Lion	KKR Mezzanine	2010 <sup>1</sup>	KKR
1221 State Street Corp	09/30/2008	ICERS/Union Bank	PIMCO BRAVO	2011 <sup>1</sup>	PIMCO

<sup>1</sup>Represents fund vintage year.

**Policy & Custom Index Composition**

Policy Index (7/1/2014-Current)	29% Russell 3000, 25% MSCI ACWI ex-US (Gross), 30% Barclays U.S. Aggregate, 6% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000 plus 300 bps (Lagged).
Policy Index (7/1/2010-6/30/2014)	24% S&P 500 Index, 10% Russell 2500, 21% MSCI ACWI ex-US (Gross), 30% Barclays U.S. Aggregate, 5% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% CPI+ 5%.

# Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Verus receives universe data from InvestorForce, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.