



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: MARCH 31, 2017**

Investment Performance Review for

**Imperial County Employees' Retirement System**

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Investment Landscape

TAB I

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Investment Performance  
Review

TAB II



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

2<sup>ND</sup> QUARTER 2017  
Investment Landscape

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# 1<sup>st</sup> quarter summary

## THE ECONOMIC CLIMATE

- Developed economies continued to experience steady, moderate expansion with fourth quarter real GDP growth in the U.S., the Eurozone, and Japan all between 1.5-2.0%. The base effect of lower oil prices led to higher year-over-year headline inflation in many countries. **p. 16**
- During the first quarter, the global economy exhibited a coordinated pick up in economic activity. Data generally exceeded expectations, especially in the U.S. and the Eurozone. **p. 18**

## MARKET PORTFOLIO IMPACTS

- The U.S. Treasury curve flattened in the first quarter. Short-term rates were driven higher by the Fed, while the long end of the curve remained unchanged. Even with Fed tightening, the U.S. may not be in a typical rising rate environment. **p. 22**
- A better outlook for commodity performance, as well as a flattening of the futures curve in some markets increases the attractiveness of commodities as an inflation hedge. **p. 38**

## THE INVESTMENT CLIMATE

- While central banks are still accommodative outside of the U.S., most appear to be in later stages of the easing cycle. Developed central banks appear to be broadly entering a period of policy normalization. **p. 22**
- The market is expecting better earnings growth in U.S. equities. According to FactSet, the estimated Q1 earnings growth for the S&P 500 is 9.2% from the previous year. Higher earnings growth may help justify above average valuations. **p. 29**

## ASSET ALLOCATION ISSUES

- Stabilizing currencies and commodity prices, as well as higher growth outlooks, may benefit emerging market equities. **p. 33**
- With U.S. Treasury yields still at historic lows and the expectation of additional tightening from the Fed, investors may not be adequately compensated for taking duration risk in the current environment. **p.23**

We continue to be neutral towards risk

# What drove the market in Q1?

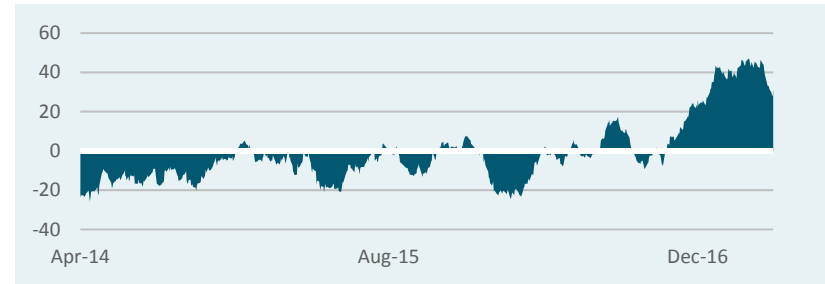
## “The Global Economy Enjoys a Synchronized Upswing”

### CITI GLOBAL ECONOMIC SURPRISE INDEX

Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 31 <sup>st</sup>	Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>
3.1	17.1	27.0	37.0	43.8	38.8

Source: The Economist, March 16<sup>th</sup> 2017

### CITI GLOBAL ECONOMIC SURPRISE INDEX



Source: Bloomberg, 4/13/17

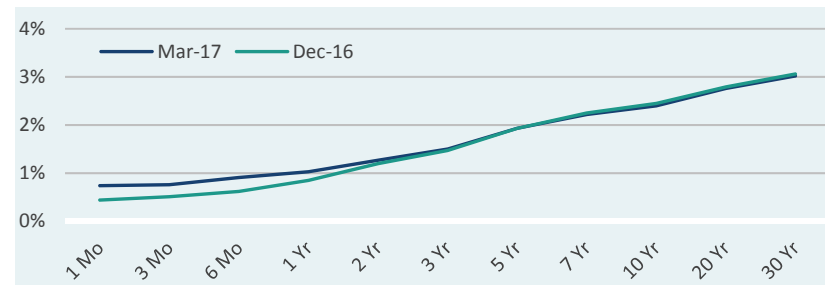
## “Rates Rise, But Yield Curve Keeps Flattening”

### U.S. TREASURY 10-YR MINUS 2-YEAR YIELD SPREAD

Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 31 <sup>st</sup>	Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>
0.98%	1.26%	1.25%	1.26%	1.14%	1.13%

Source: Barron's, March 28<sup>th</sup> 2017

### U.S. TREASURY CURVE



Source: Bloomberg, as of 3/31/17

## “French Political Turmoil Hits Bond Spreads”

### GERMAN-FRENCH 10-YR YIELD SPREAD

Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 31 <sup>st</sup>	Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>
0.30%	0.48%	0.48%	0.60%	0.68%	0.64%

Source: Financial Times, February 6<sup>th</sup> 2017

### GERMAN-FRENCH 10-YR YIELD SPREAD



Source: Bloomberg, as of 4/12/17 – German 10yr yield minus French 10yr yield

## “The Market Conundrum of (Low) Volatility and Uncertainty”

### CBOE VIX (10-YEAR AVERAGE, 20.7)

Oct 31 <sup>st</sup>	Nov 30 <sup>th</sup>	Dec 31 <sup>st</sup>	Jan 31 <sup>st</sup>	Feb 28 <sup>th</sup>	Mar 31 <sup>st</sup>
17.1	13.3	14.0	12.0	12.9	12.4

Source: Bloomberg, January 30<sup>th</sup> 2017

# Economic environment

# U.S. economics summary

- U.S. real GDP grew 2.0% YoY in Q4, up from 1.7% in Q3. Moderate increases in consumer spending continued to be the main driver of the economy.
- Inflation moved higher as headline CPI increased 2.8% YoY in February. Core inflation, however, increased only modestly to 2.2%. Most of the rise was caused by the low base effect from falling oil prices last year.
- The Fed continued tighter monetary policy by raising the target federal funds rate 25 bps to 0.75-1.00% at its March meeting. The FOMC dot plot indicates two more rate hikes in 2017, while the market has only priced in one more increase.
- The March Fed meeting minutes revealed that the central bank

may begin shrinking its balance sheet as early as December, representing a form of monetary tightening. It remains unclear whether the Fed will stop rolling over maturing securities or actively sell in the open market.

- On average, 178,000 jobs were added each month during Q1, and unemployment fell 0.2% to 4.5%. Data continued to indicate a tighter labor market, though wage growth is lackluster. Real hourly earnings fell 0.1% in February from the prior year.
- Soft data (consumer & business sentiment) improved markedly following the U.S. presidential election. We are continuing to monitor the degree to which soft data flows through to actual spending and investment patterns. At this point evidence still is lacking.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	2.0% <i>12/31/16</i>	1.9% <i>12/31/15</i>
Inflation ( <i>CPI YoY, Headline</i> )	2.8% <i>2/28/17</i>	1.0% <i>2/29/16</i>
Expected Inflation ( <i>5yr-5yr forward</i> )	2.2% <i>3/31/17</i>	1.8% <i>3/31/16</i>
Fed Funds Rate	0.75% <i>3/31/17</i>	0.25% <i>3/31/16</i>
10 Year Rate	2.4% <i>3/31/17</i>	1.8% <i>3/31/16</i>
U-3 Unemployment	4.5% <i>3/31/17</i>	5.0% <i>3/31/16</i>
U-6 Unemployment	8.9% <i>3/31/17</i>	9.8% <i>3/31/16</i>



# U.S. economics – GDP growth

Real GDP grew 2.0% YoY in Q4 (2.1% quarterly annualized rate) as slow but positive economic growth continued.

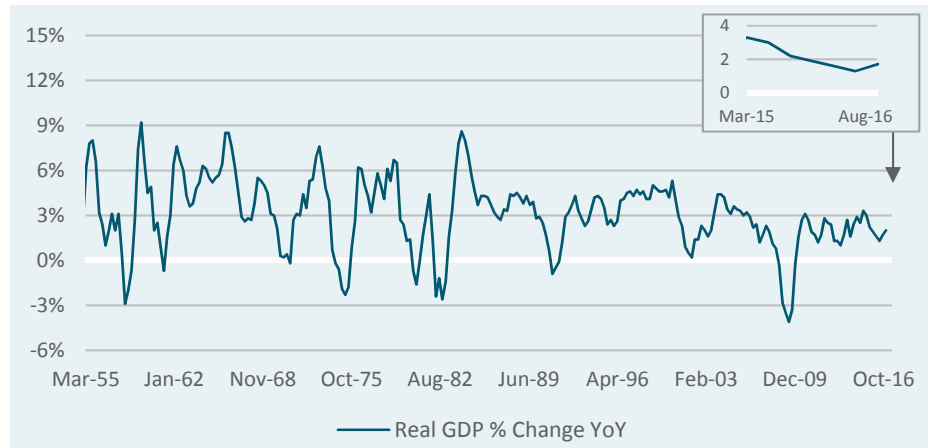
Personal consumption contributed 2.4% to quarterly GDP growth, and was once again the main driver of improvement in the economy. Rising post-election consumer confidence did not immediately flow through to the real economy, but may support increased spending in coming quarters.

Private domestic investment also contributed to growth. A widening trade deficit from both an increase in imports and a decrease in exports was the largest detractor from GDP growth.

The Atlanta Fed GDP Now forecast for Q1 was 0.5% as of April 14<sup>th</sup>. The forecast was revised downward throughout the quarter mainly due to softer personal spending data. Part of this weakness can be attributed to a temporary decline in utilities spending from milder winter weather.

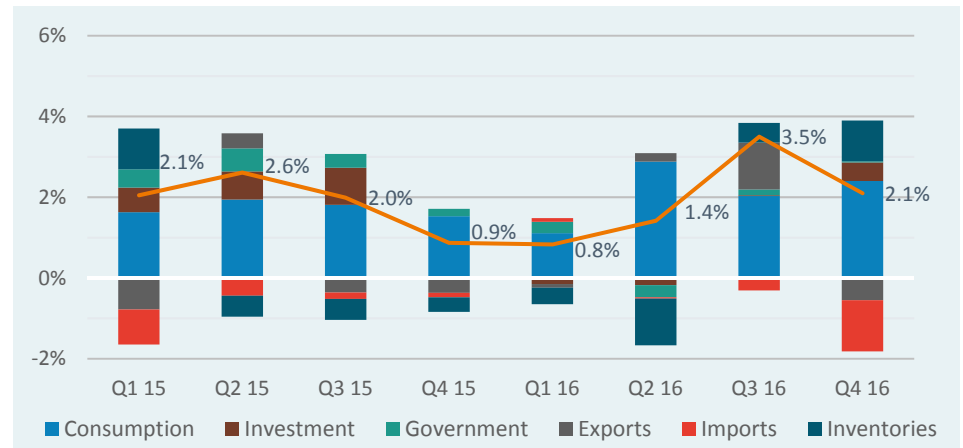
The U.S. economy continued to grow at a moderate pace

## U.S. REAL GDP GROWTH



Source: FRED, as of 12/31/16

## U.S. GDP COMPONENTS



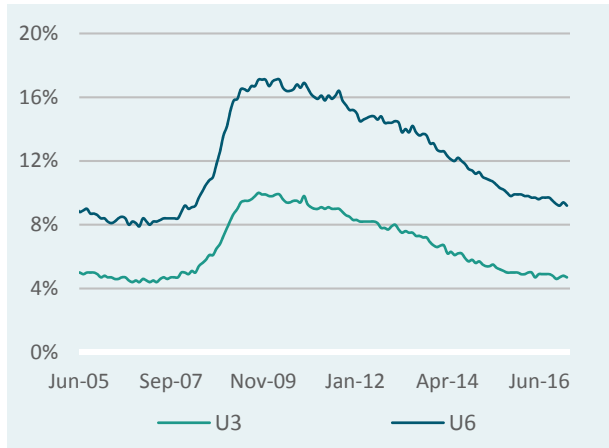
Source: BEA, annualized quarterly rate, as of 12/31/16

# U.S. economics – Labor market

Moderate additions to payrolls and higher employment indicate a tighter labor market. Job gains averaged 178,000 per month in the first quarter, slightly below the expansion average of 199,000. The headline unemployment rate fell to a nearly decade low of 4.5%. The broader U-6 unemployment rate, which includes discouraged workers who want a job but have given up looking, and part-time workers who would like to be full-time, fell to a cyclical low of 8.9%. The participation rate rose to 63.0%, an increase of 0.3%.

The number of job openings in the economy is relatively high, likely due to a lack of supply. Companies are having a difficult time finding qualified workers to fill open positions. While most employment data suggests a tight labor market, wage growth has been unusually muted throughout this cycle. As the U.S. economic expansion ages, we would expect companies to raise wages in order to attract and retain workers. However, real average hourly earnings fell 0.1% in February YoY.

**U.S. UNEMPLOYMENT**



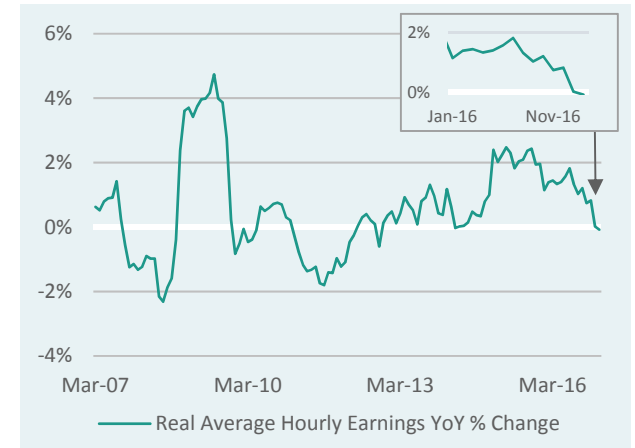
Source: FRED, as of 2/28/17

**JOB OPENINGS**



Source: FRED, as of 2/28/17

**REAL AVERAGE HOURLY EARNINGS**



Source: FRED, as of 2/28/17

# A closer look at participation

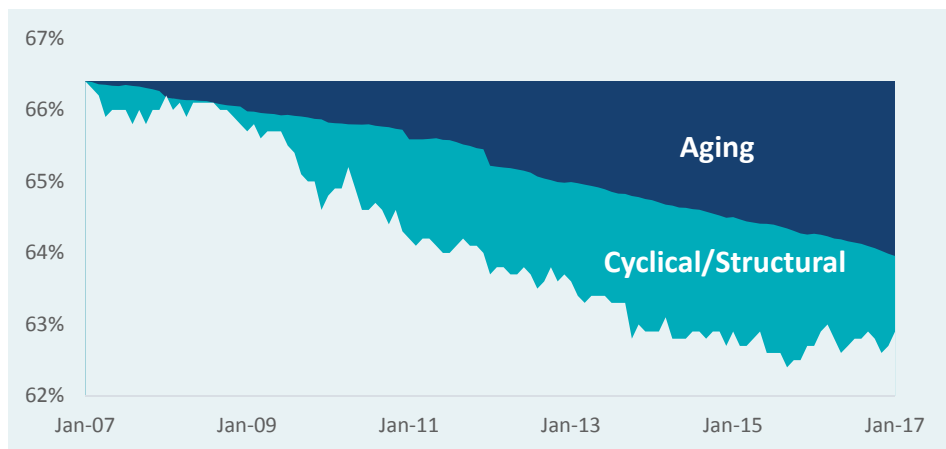
The labor force participation rate has fallen significantly following the financial crisis. While most of the drop can be attributed to an aging population, one-third is a result of structural issues, and possibly some remaining cyclical factors. Stripping out the aging effect by looking at the core working age group shows a drop of 1.9% in participation over the past 10 years.

Unlike cyclical factors that move with the economic cycle, structural issues in the labor market may be more or less permanent. This is important because fewer workers participating in the economy will result in slower growth,

all else equal. Workers reentering the economy, however, could provide some protection against rapid wage price inflation, and therefore mitigate the risk that rapid wage inflation disrupts economic growth.

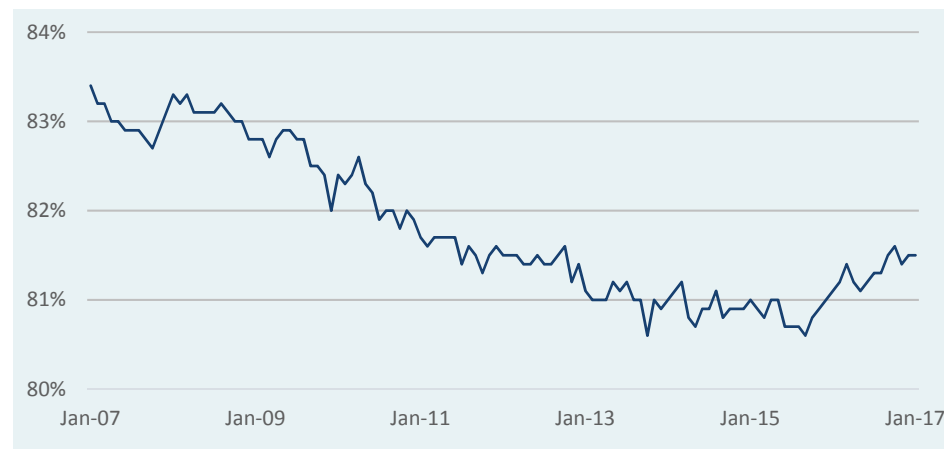
Structural issues that may explain lower participation include an increased number of unqualified workers due to a lack of requisite skills and education and those with criminal felony convictions. There may also be fewer incentives for people outside of the workforce to return because of slow wage growth and a greater reliance on permanent federal disability.

**U.S. LABOR FORCE PARTICIPATION**



Source: BLS, Verus, as of 1/31/17

**CORE AGE GROUP (25-54) PARTICIPATION**



Source: BLS, as of 1/31/17

# U.S. economics – The consumer

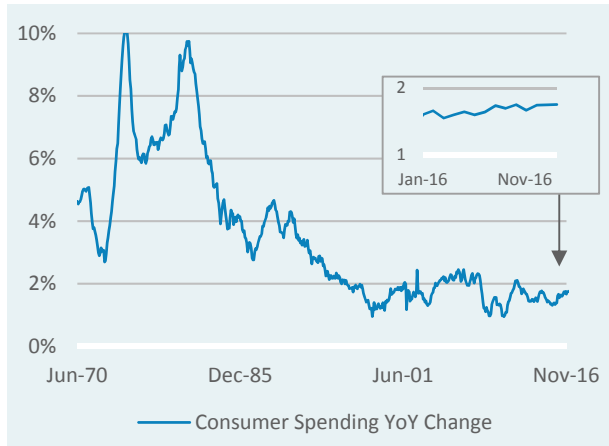
Higher interest rates are expected to be a headwind for U.S. consumers, but other fundamentals reflect a positive overall environment. Much of the economic growth in the current cycle has been attributed to moderate, steady increases in consumer spending. In February, consumer spending grew 1.7% from the previous year. While positive spending growth has been consistent, there has yet to be a material flow through effect from the jump in confidence following the U.S. election in November.

An increase in financial assets during the current recovery has led to large gains in household net worth. The wealth effect, in which consumers increase spending habits based on a higher level of perceived wealth could have a positive impact on economic growth.

Although the consumer has led the economic expansion, credit has not been used as much as in previous cycles. Consumer credit growth has been moderate and household balance sheets remain relatively healthy.

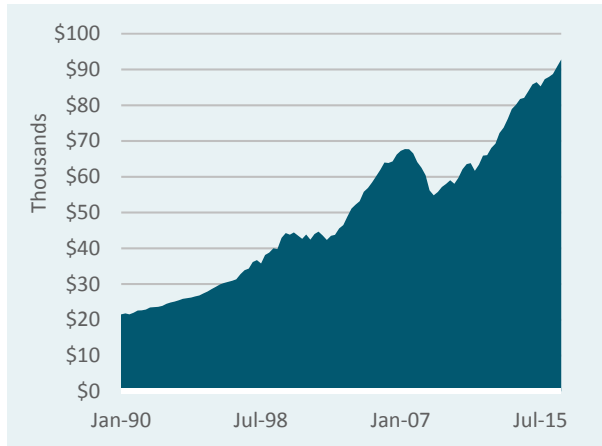
Steady increases in consumer spending has driven recent growth

**CONSUMER SPENDING**



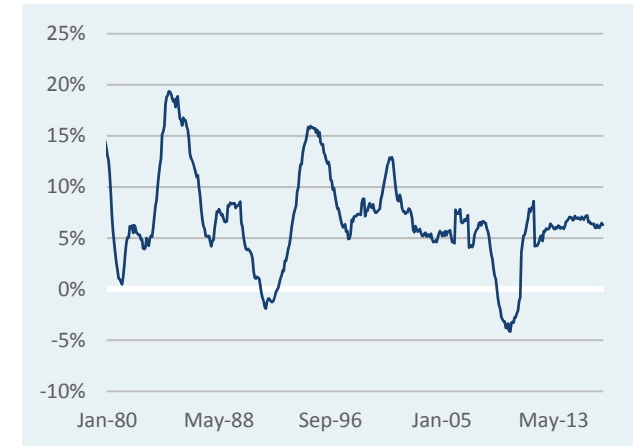
Source: Bloomberg, as of 2/28/17

**HOUSEHOLD NET WORTH**



Source: FRED, as of 1/31/17

**CONSUMER CREDIT GROWTH**



Source: FRED, as of 1/31/17

# U.S. economics – Sentiment

Consumer sentiment fell slightly over the quarter, but the overall level remains high. The University of Michigan Consumer Sentiment Index was 96.9 at the end of March, compared to the long-term average of 85.6. Consumers cited three key components for the greater optimism: higher incomes, favorable job prospects, and low inflation expectations. Consumer sentiment and hard data do not always align as sentiment builds and falls more slowly through time.

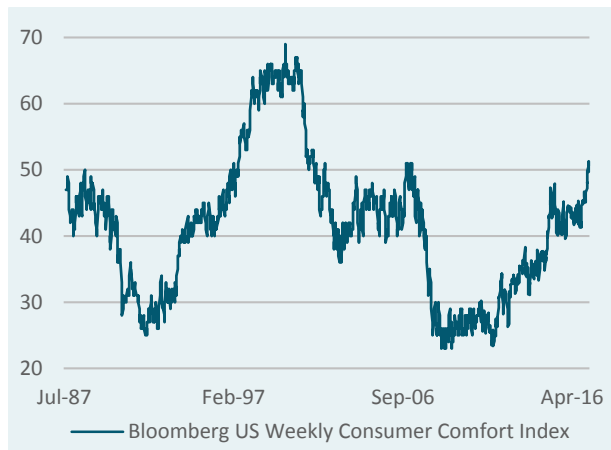
The University of Michigan survey also identified a disconnect in consumer sentiment across political party

affiliations. Democrats expect an immediate recession, while Republicans expect robust economic growth. The index of consumer expectations was 50.5 points higher for Republicans than Democrats. Continued political uncertainty could weigh on sentiment in the coming months.

U.S. economic data has exceeded expectations - a trend that started prior to the election. The Citi Economic Surprise Index was 48 at quarter-end, its highest level in more than three years. However, much of the uptick in this indicator has been driven by “soft” data that has yet to flow through to the real economy.

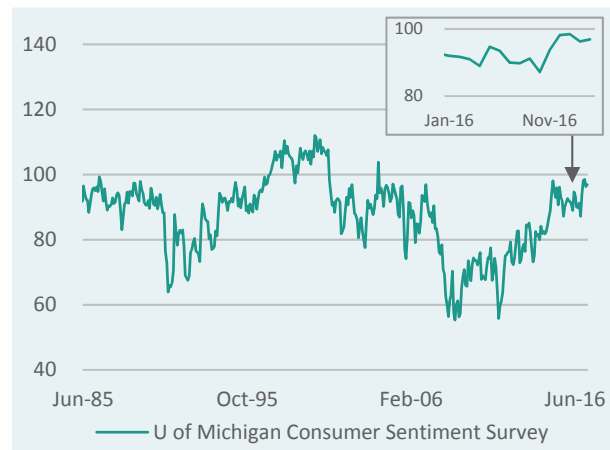
Overall, consumers remain optimistic about the economy

**CONSUMER COMFORT INDEX**



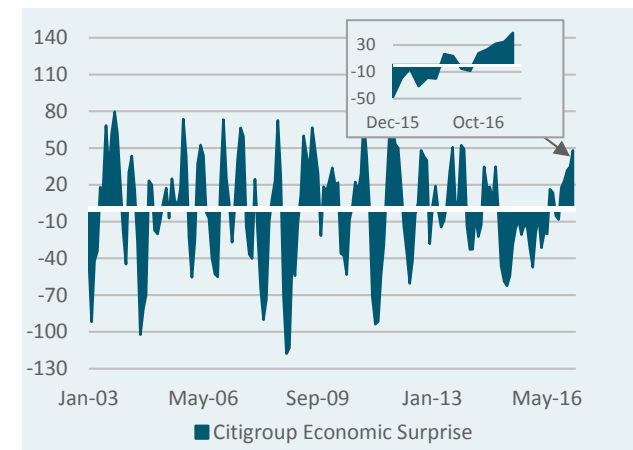
Source: Bloomberg, as of 3/19/17 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 3/31/17 (see Appendix)

**U.S. ECONOMIC SURPRISE**



Source: Bloomberg, as of 3/31/17 (see Appendix)

# U.S. economics – Housing

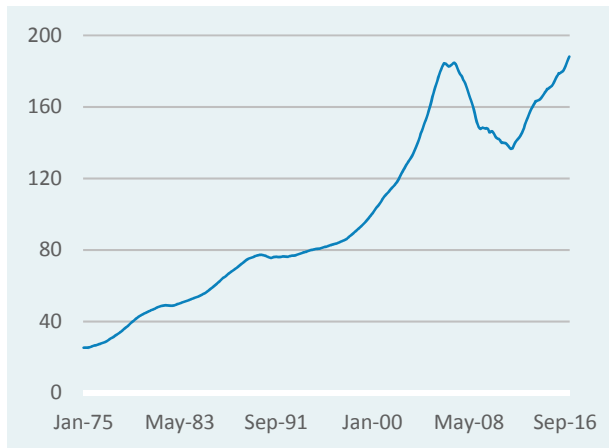
Despite higher mortgage rates since November, home prices in the U.S. have moved upward. Over the 12 months ending in January, the Case-Shiller National Home Price Index rose 5.8%. This price gauge has rallied 37.7% since bottoming in January of 2012 and is now slightly higher than the previous peak.

While increases in interest rates may act as a headwind, the housing market is supported by strong demand for single-family homes and historically low supply,

in addition to an overall financially healthy consumer base. At the current rate of sales it would take only 5.4 months to completely sell the entire supply of homes.

Housing starts and building permits have been steadily trending upwards with homebuilders ramping up construction to meet outsized market demand. New homes coming on line may put downward pressure on prices.

**CASE-SHILLER HOME PRICE INDEX**



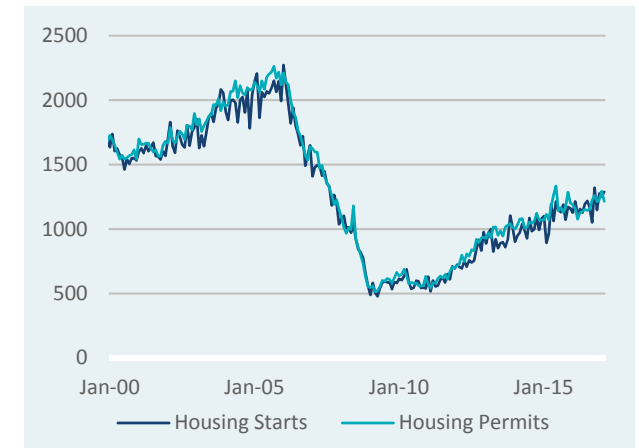
Source: FRED, as of 1/31/17

**MONTHLY SUPPLY OF HOMES**



Source: FRED, as of 2/28/17

**HOUSING STARTS AND PERMITS**



Source: FRED, as of 2/28/17

# U.S. economics – Inflation

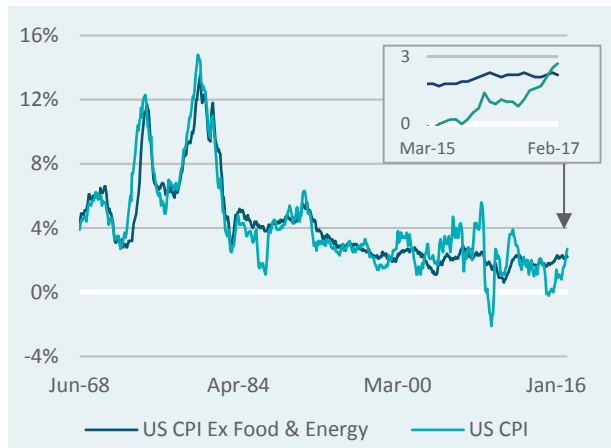
Headline CPI rose 2.8% in February from the previous year, its highest rate in five years. Much of this jump in inflation can be attributed to the base effect of low oil prices one year ago. The energy component of the CPI basket increased 15.6%. Core inflation remained unchanged at 2.2%.

After rising considerably following the presidential election, market inflation expectations were mostly unchanged during the first quarter. The 10-year TIPS

breakeven inflation rate finished the period at 2.0%. The market continues to discount low levels of future inflation relative to history. In comparison, consumers are expecting 2.5% annualized inflation over the next 5-10 years, according to the University of Michigan survey.

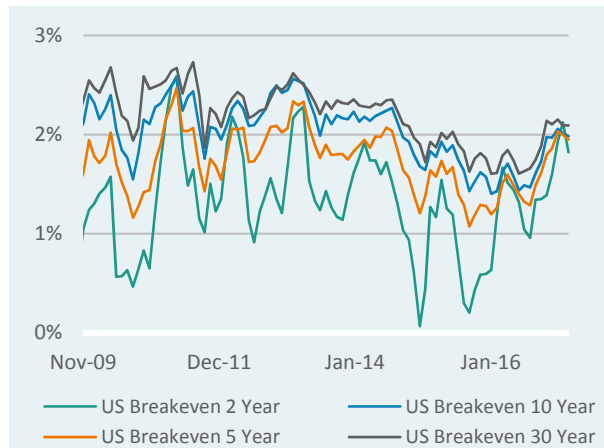
Our view remains that the market may be underpricing expected inflation at a time when inflation risks are skewed to the upside.

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



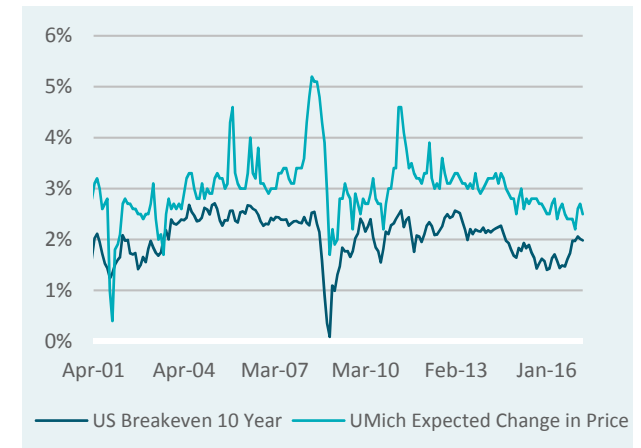
Source: FRED, as of 2/28/17

**U.S. TIPS BREAKEVEN RATES**



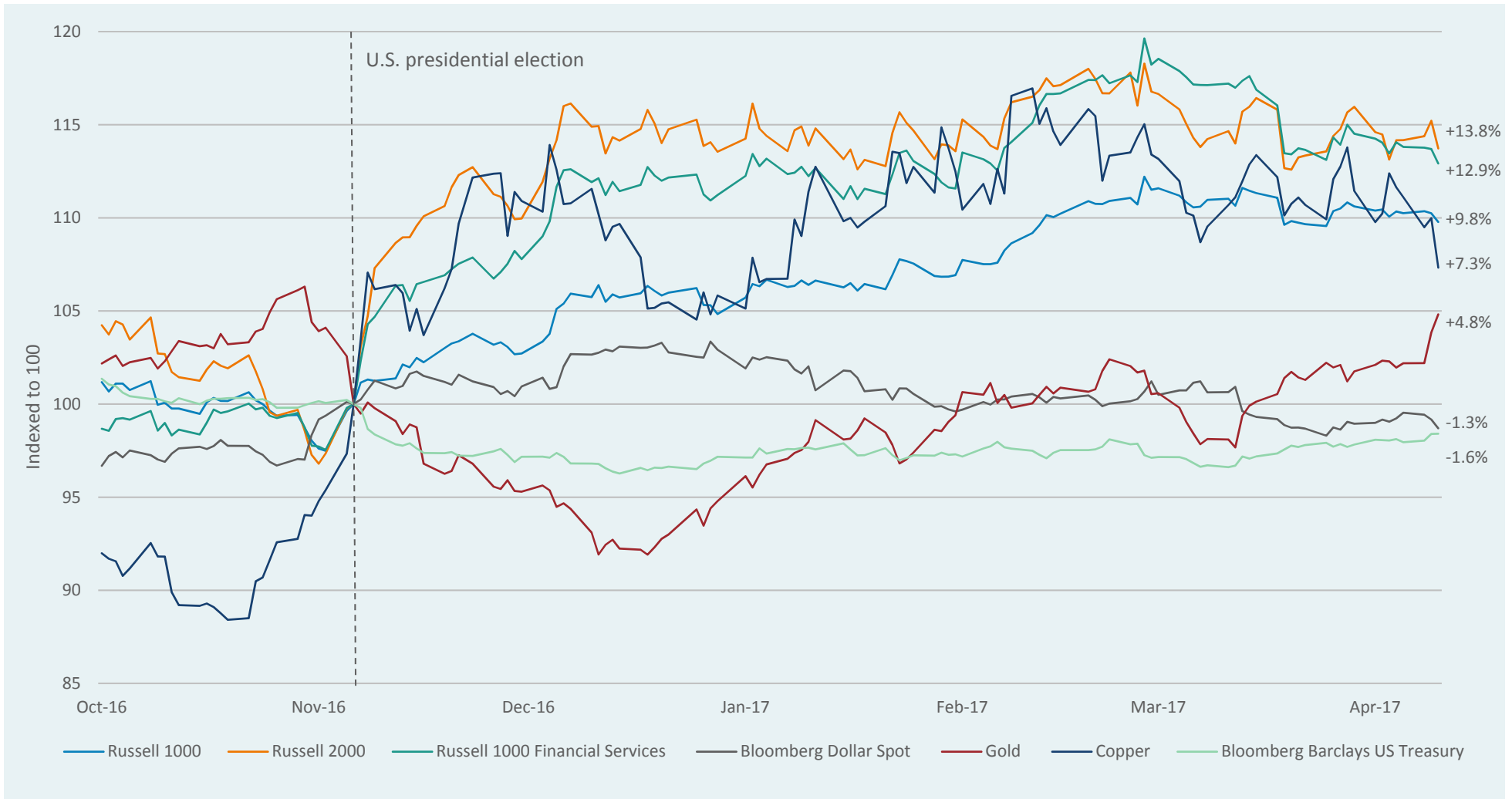
Source: FRED, as of 3/31/17

**INFLATION EXPECTATIONS**



Source: Bloomberg, as of 3/31/17

# Post-election price movements



Source: Bloomberg, 10/3/16-4/10/17



# An update on political policies

POLICY AREA	
<b>Taxes</b>	<ul style="list-style-type: none"><li>— Much of the optimism surrounding Trump’s victory in November was based on his promise to cut taxes for individuals and businesses.</li><li>— President Trump has stated that he wants to find a solution to repealing and replacing the Affordable Healthcare Act (ACA) prior to working on tax reforms. No further details have been released.</li><li>— The tentative deadline for the tax plan was originally set for August by Treasury Secretary Mnuchin, but it appears this may be pushed back further, and the actual timing remains unknown.</li></ul>
<b>Trade</b>	<ul style="list-style-type: none"><li>— In one of his first acts as president, Donald Trump delivered on a campaign promise and removed the U.S. from the Trans Pacific Partnership (TPP) in an effort to move away from multilateral trade agreements.</li><li>— After making many other “America first” trade policy promises, including withdrawing from NAFTA and implementing a border adjustment tax (BAT), the new administration appears to have softened its stance.</li><li>— Rather than a complete overhaul of U.S. trade policy, it may be more likely that President Trump makes smaller tweaks, such as renegotiating and stepping up enforcement of existing trade deals.</li></ul>
<b>Deregulation</b>	<ul style="list-style-type: none"><li>— President Trump signed an executive order to reduce the regulatory burden on businesses by requiring federal regulators to kill two existing regulations for every new rule introduced.</li><li>— In perhaps the biggest blow to the administration thus far, House Republican leaders pulled legislation to repeal parts of the ACA before a single vote was cast, exposing a divided Republican Congress.</li><li>— House Republicans announced a plan to introduce legislation that would overhaul Dodd Frank, although opposition from Senate Democrats is expected to be strong.</li></ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"><li>— Infrastructure is another area in which President Trump has not provided much in terms of additional details after promising a \$1 trillion dollar spending initiative through private tax breaks during his campaign.</li><li>— With the current focus on healthcare, and the lack of progress on tax reform, it is possible that the new administration may push back the timeline for introducing its infrastructure plan.</li></ul>

# International economics summary

- Developed countries once again experienced moderate positive growth in the fourth quarter, in line with the trend of recent years. Real GDP in the U.S., Europe, and Japan grew between 1.5-2.0%.
- The low base effect of the drop in energy prices that occurred in Q1 2016 helped boost inflation across the globe. With energy prices stabilizing over recent months, it is possible the jump in inflation is only transitory.
- Developed world unemployment rates declined over the quarter. In the Euro Area, the unemployment rate fell to a nearly eight year low of 9.5%, although this is still well above its pre-crisis level of 7.3%.
- The economic recovery in Europe has also picked up in terms of higher growth and inflation. Much of this recovery can be attributed to the core countries, rather than

the periphery. However, significant tail risks remain including the French election, ECB tapering, and Brexit negotiations.

- On March 29<sup>th</sup>, the British Prime Minister, Theresa May, filed the official papers to withdraw the U.K. from the European Union. Article 50 of the Treaty of Lisbon outlines a two year timeframe for negotiations to take place.
- As many expected, Emmanuel Macron and Marine Le Pen were the top two vote getters in the first round of the French election. Macron and Le Pen will have a runoff vote on May 7<sup>th</sup>, where Macron is heavily favored, according to the most recent polls. Equity markets reacted positively to the results and the euro strengthened.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.0% 12/31/16	2.7% 2/28/17	4.5% 3/31/17
Western Europe	1.8% 12/31/16	1.5% 3/31/17	8.6% 12/31/16
Japan	1.6% 12/31/16	0.3% 2/28/17	2.8% 2/28/17
BRIC Nations	5.2% 12/31/16	3.1% 12/31/16	5.5% 12/31/16
Brazil	(2.5%) 12/31/16	4.6% 3/31/17	12.9% 3/31/17
Russia	0.3% 12/31/16	4.3% 3/31/17	5.4% 12/31/16
India	7.0% 12/31/16	3.7% 2/28/17	7.1% 12/31/15
China	6.8% 12/31/16	0.8% 2/28/17	4.0% 12/30/16

# International economics

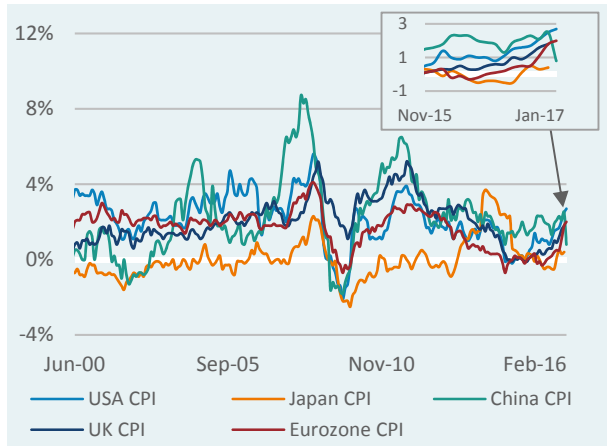
A coordinated uptick in global economic sentiment occurred in recent quarters, and data continued to exceed expectations in Q1. Outside of the U.S., central banks remain relatively accommodative, and developed economies have experienced moderate growth and higher inflation. Real year-over-year GDP growth in the Euro Area and Japan came in at 1.8% and 1.6%, respectively.

In the Eurozone, headline CPI in February reached 2.0% YoY for the first time in the recovery. However, core

inflation, which excludes food and energy prices, only rose 0.7%, well below the ECB's target of 2.0%. A weaker British pound helped boost U.K. headline inflation to 2.3% in February, the highest rate in more than three years.

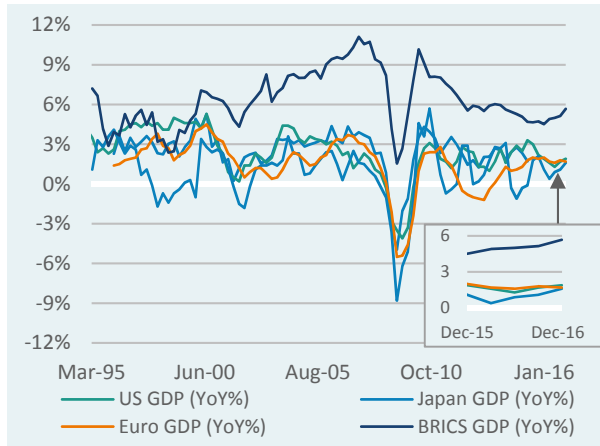
Real GDP growth in the BRICS countries, the five major emerging economies, was 5.2% in the fourth quarter. Once again, India and China were the main drivers of growth. Russia experienced positive growth for the first time in seven quarters, while Brazil remained in a recession.

## INTERNATIONAL INFLATION



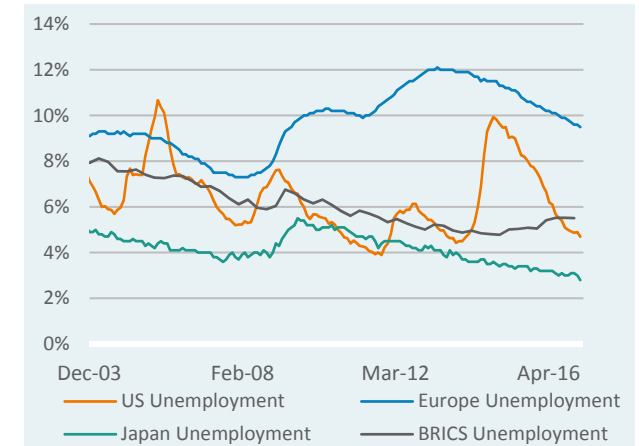
Source: Bloomberg, as of 2/28/17

## REAL GDP GROWTH



Source: Bloomberg, as of 12/31/16

## GLOBAL UNEMPLOYMENT



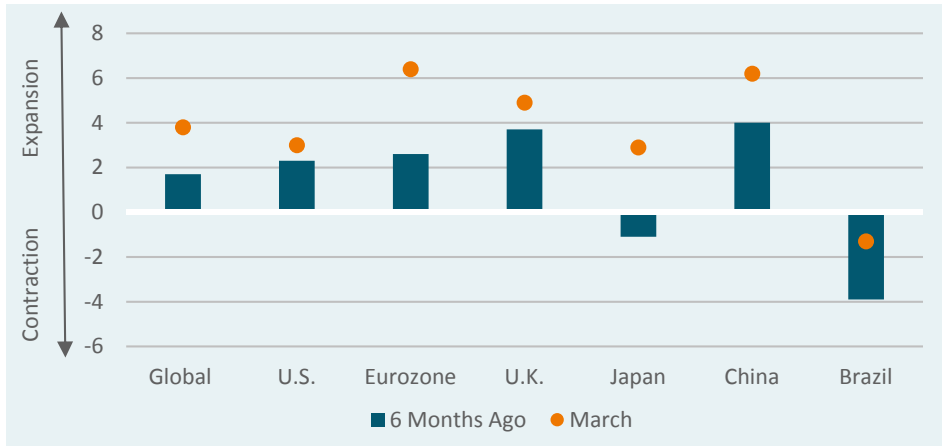
Source: Bloomberg, as of 2/28/17 or most recent release

# Global economic pickup

There has been a general pick up in global economic conditions over the past six months, a trend that started prior to the U.S. presidential election. Purchasing managers' indexes (PMI), which are derived from monthly surveys of private companies, have increased across nearly all major economies. The global composite PMI increased from 51.7 in September to 53.8 in March. Readings above 50 indicate economic expansion and have historically held some explanatory power of future economic growth.

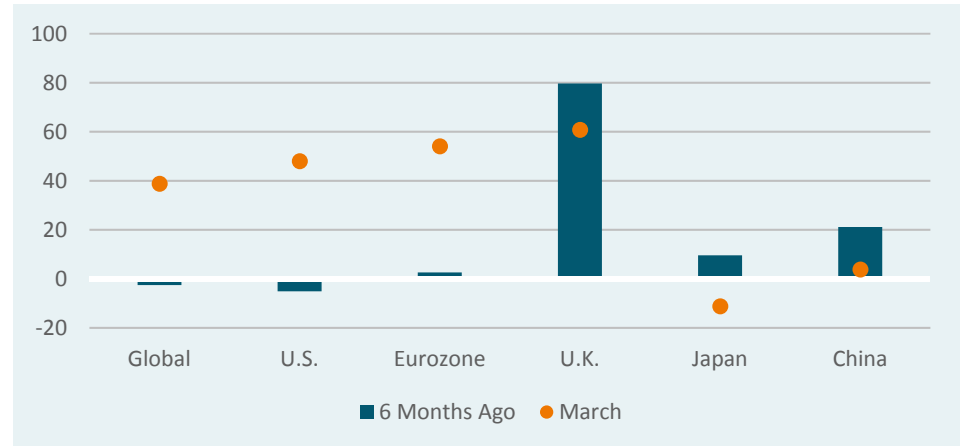
Global economic data has also been coming in above expectations, as indicated by the Citi Economic Surprise Index (CESI). The Global CESI increased to 38.8 in March from -2.6 six months earlier. However, much of this move has been driven by "soft" data, such as sentiment and confidence indicators, which have not always flowed through to the real economy. If higher sentiment and confidence does lead to increased spending and production, it will be a boost to economic growth.

## PURCHASING MANAGERS' INDEXES



Source: Bloomberg, as of 3/31/17

## CITI ECONOMIC SURPRISE INDEXES



Source: Bloomberg, as of 3/31/17

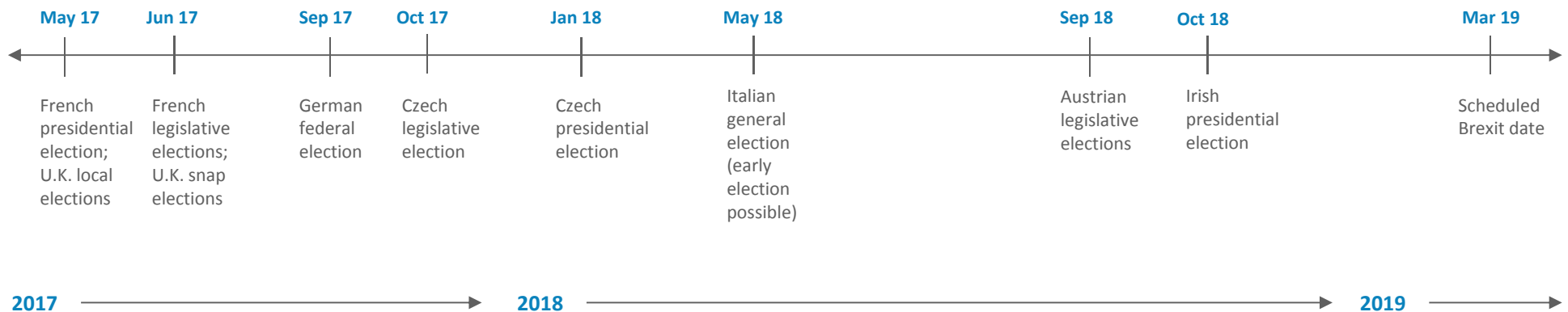
# The European election cascade

Following the U.K.'s decision last June to leave the European Union, the rise in populism in Europe and corresponding political risks to the currency bloc have been heavily scrutinized. While the upcoming French presidential election has dominated the headlines, several other important elections coming up will help shape the future of Europe.

The presidential election in France may pose the largest political risk to the region. Far-right, euroskeptic candidate, Marine Le Pen, has gained popularity running on the platform to remove France from the European Union and the use of the euro. Le Pen and centrist

candidate, Emmanuel Macron, were the top two vote getters in the first round of the election and will go head to head on May 7<sup>th</sup>. Macron is favored in the polls and market fears of a Frexit have subsided.

However, the threat of populism in Europe remains. Other elections, such as the German federal election in September and the Italian general election in early 2018 at the latest, will also be important as populist parties have gained popularity in countries across Europe. Additional risks loom in periphery countries like the Czech Republic, as debates heat up regarding EU membership referendums.



# Fixed income rates & credit

# Interest rate environment

- U.S. Treasuries have an attractive yield relative to other developed sovereign bonds, but remain historically expensive.
- Despite broad agreement that the U.S. has entered an environment of rising interest rates, the broad yield curve rose very little over the past year. However, the short end of the curve has increased in line with Federal Reserve rate rises. Inflation has historically had a significant impact on the yield curve, which indicates investors should keep an eye on inflation trends.
- In March, the Federal Reserve announced a change to the federal funds target rate from 0.50-0.75% to 0.75-1.00%. The move resulted in the U.S. Treasury curve flattening moderately as short-term interest rates increased and long-term rates remained materially unchanged. The Fed has indicated two additional rate hikes are expected to occur this year.
- Developed sovereign yields are expected to rise only modestly over the next year, with very little movement expected in longer dated bonds. Central banks of most developed economies are nearing the end of the monetary easing cycle or have begun to pull back, as in the case of the U.S. Federal Reserve.
- Many emerging market governments continue with monetary easing, suggesting these economies may be in an earlier stage of the economic cycle.

Area	Short Term (3M)	10 Year
United States	0.75%	2.39%
Germany	(0.92%)	0.33%
France	(0.57%)	0.97%
Spain	(0.39%)	1.65%
Italy	(0.34%)	2.31%
Greece	2.39%	6.90%
U.K.	0.13%	1.14%
Japan	(0.20%)	0.07%
Australia	1.59%	2.70%
China	2.93%	3.28%
Brazil	10.91%	10.06%
Russia	9.50%	7.87%

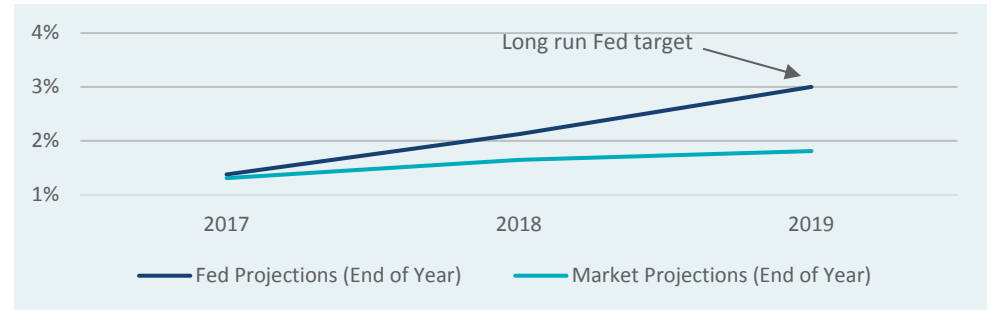
Source: Bloomberg, as of 3/31/17

# Monetary tightening

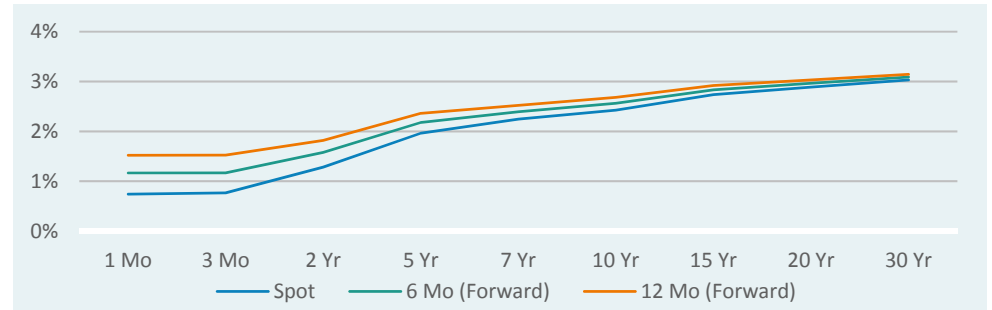
- The Federal Reserve hiked interest rates for the second time in March, raising the federal funds target to 0.75-1.00%. Given the increased pace of tightening and more hawkish tone from the Fed, there has been much discussion regarding the effects of a rising rate environment in the U.S.
- While the Fed expects short-term rates to normalize to 3% by 2019, the market is pricing in movement to only 1.8%. The market also does not expect much change in the long-end of the curve with the 10-year Treasury yield priced to rise only 26 bps over the next year. We believe that the market view of the path of interest rates is reasonable, and that there is a greater likelihood of surprisingly slow, rather than surprisingly fast, rate rises.
- Another unknown aspect of monetary policy relates to the Fed's \$4.5 trillion balance sheet. In the most recent meeting minutes it was noted that an unwinding of the balance sheet may begin at the end of the year. It remains unclear whether the Fed will simply stop reinvesting securities or actively sell in the market. A sale would be the more aggressive option, but either action would equate to monetary tightening, which may slow the expected pace of federal fund rate hikes.

Source: Bloomberg, FRED, as of 3/31/17

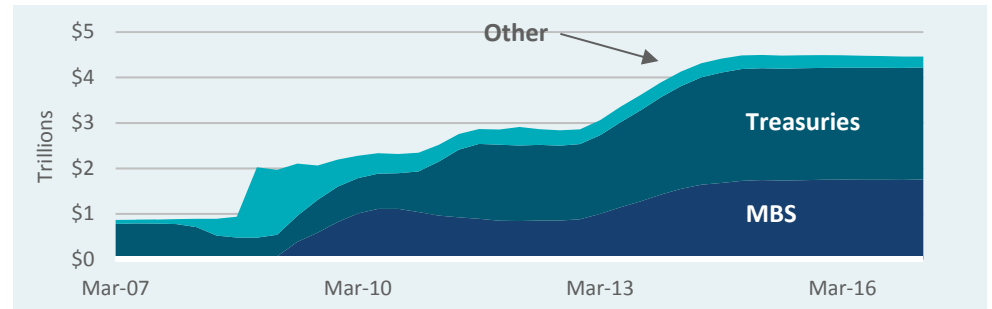
**FED FUNDS PROJECTED RATE**



**U.S. TREASURY FORWARD YIELD CURVE**



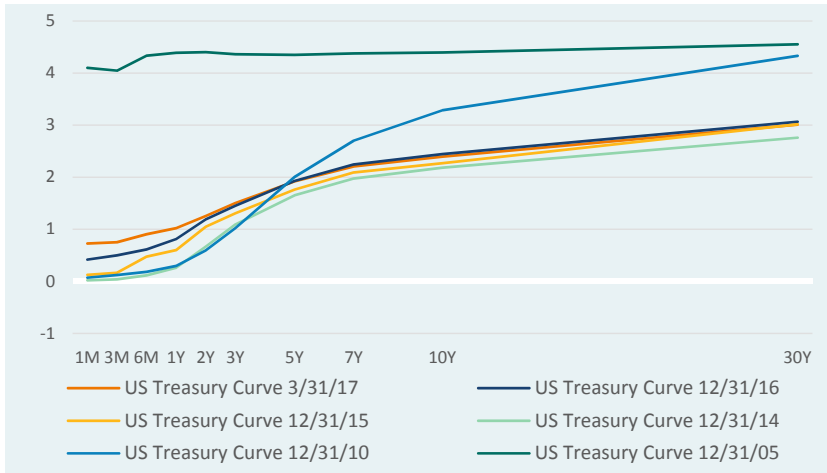
**FEDERAL RESERVE BALANCE SHEET**



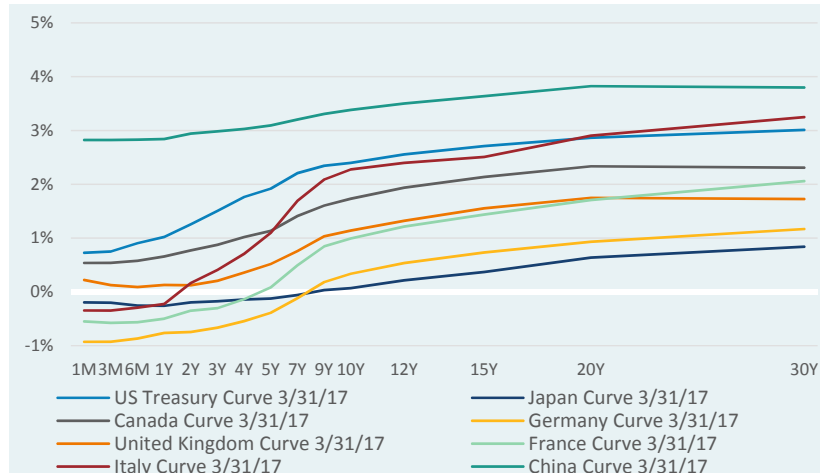


# Yield environment

U.S. YIELD CURVE

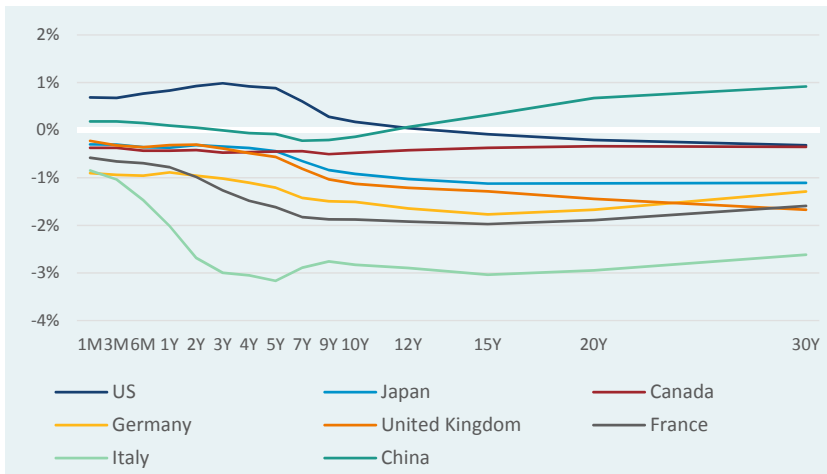


GLOBAL GOVERNMENT YIELD CURVES

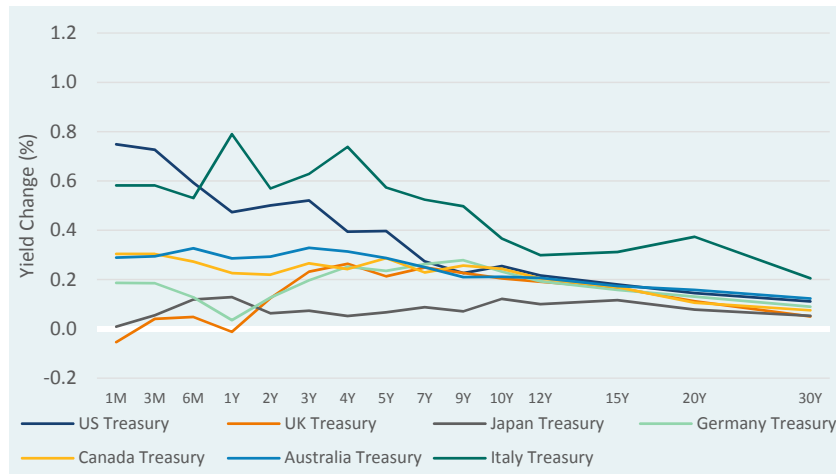


Global investors continue to prefer U.S. Treasuries due to higher relative yields

YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/17

# Credit environment

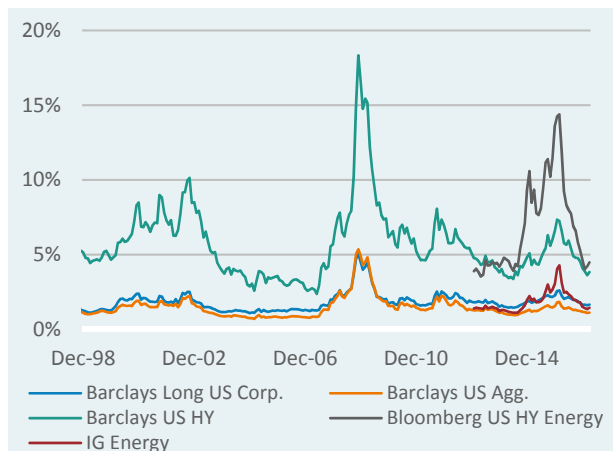
U.S. high yield option-adjusted spreads compressed slightly during the first quarter to 3.9% and the asset class generated a 2.7% return (BBgBarc U.S. Corp. High Yield Index). High yield spreads are now tighter than those of bank loans on a duration neutral basis, despite being of generally lower credit quality and higher in the capital structure. Bank loans may provide a better risk-return tradeoff in the current environment.

Upbeat consumer sentiment, stronger labor markets, and a generally brighter picture for the U.S. economy all bode well for credit markets. Although spreads have tightened

to levels consistent with a mid-to-later stage economic cycle, no overheating or obvious threats to the credit markets seem apparent.

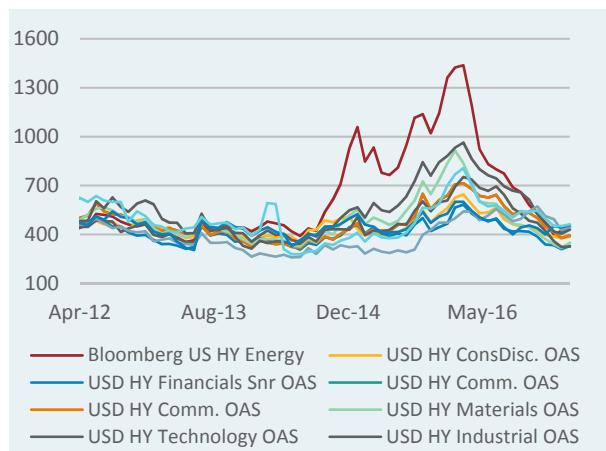
The Federal Reserve voted to increase interest rates by 0.25% in March. The speed of rate rises has underwhelmed the market for some time, and the market is expecting this slow pace to continue. Investors may be well served by limiting duration risk, though the probability of a sharp bond selloff (quickly rising rates) seems low.

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 3/31/17

## HIGH YIELD SECTOR SPREADS



Source: Bloomberg, as of 3/31/17

## SPREADS

Market	Credit Spread (3/31/17)	Credit Spread (1 Year Ago)
Long US Corporate	1.5%	2.1%
US Aggregate	0.9%	1.1%
US High Yield	4.1%	7.0%
US High Yield Energy	4.5%	11.9%
US Bank Loans	3.8%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/17

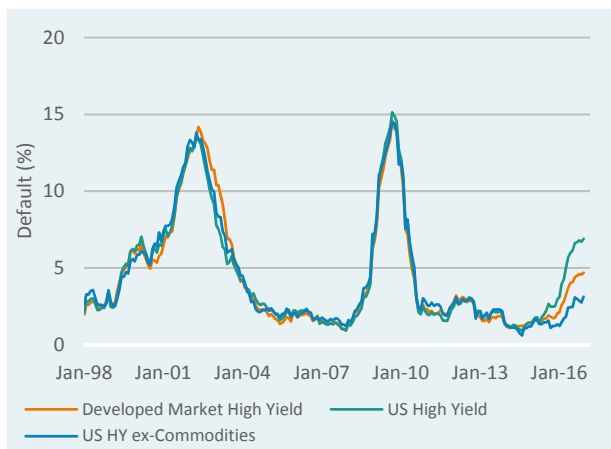
# Issuance and default

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

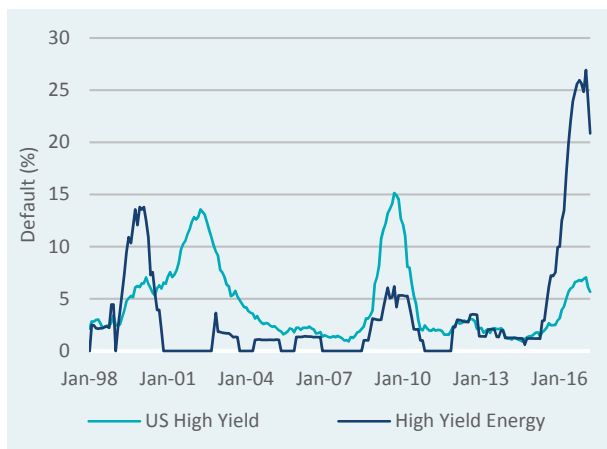
Global high yield and bank loan issuance has continued at a similar pace to what was seen last year. Lower spread levels lessen the borrowing costs for these issuers. The direction of interest rates will likely impact issuance trends in the near future.

The effect of commodity related defaults should subside

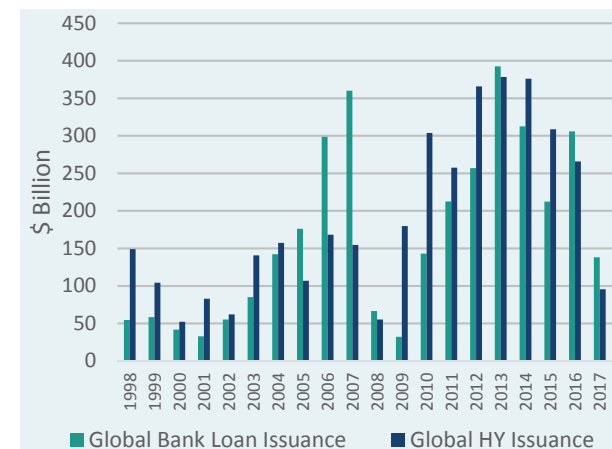
HY DEFAULT TRENDS (ROLLING 1 YEAR)



ENERGY DEFAULT TRENDS



GLOBAL ISSUANCE



Source: BofA Merrill Lynch, as of 3/31/17

Source: BofA Merrill Lynch, as of 3/31/17

Source: Bloomberg, BofA Merrill Lynch, as of 3/31/17

# Equity

# Equity environment

— The U.S. economic environment has shifted in a materially more positive direction, post-election. This move was reflected in an upward adjustment to equity prices. We are relatively bullish on U.S. earnings growth in the near term, but remain concerned that investors are paying for this excess growth upfront through higher valuations. We maintain a neutral weight to U.S. equities.

— According to FactSet, the estimated Q1 2017 earnings growth rate of the S&P 500 was 9.2% YoY. The estimate was revised downward from 12.5% on December 31st due to negative EPS guidance in the Materials and Consumer Discretionary sectors.

— Growth equities outperformed value equities in Q1. The Russell

1000 Growth Index and Russell 1000 Value Index returned 8.9% and 3.3%, respectively.

— The U.S. dollar fell 3.6% in Q1 on a trade-weighted basis, which has affected the returns of portfolios with unhedged currency exposure.

— As discussed recently in our *Sound Thinking* research piece, investors should be mindful of their biases in portfolio construction. One particularly prevalent bias is the tendency for investors to hold greater exposure to the markets where they reside (home country bias). As with any portfolio tilt, investors should understand why they hold it, have a solid basis for the exposure, and understand the tracking error the position introduces to the portfolio.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	6.0%		6.0%		17.4%	
US Small Cap (Russell 2000)	2.5%		2.5%		26.2%	
US Large Value (Russell 1000 Value)	3.3%		3.3%		19.2%	
US Large Growth (Russell 1000 Growth)	8.9%		8.9%		15.8%	
International Large (MSCI EAFE)	7.2%	5.0%	7.2%	5.0%	11.7%	18.9%
Eurozone (Euro Stoxx 50)	8.3%	7.2%	8.3%	7.2%	12.9%	21.7%
U.K. (FTSE 100)	4.9%	3.8%	4.9%	3.8%	7.3%	23.3%
Japan (NIKKEI 225)	4.3%	0.1%	4.3%	0.1%	15.8%	14.7%
Emerging Markets (MSCI Emerging Markets)	11.4%	7.3%	11.4%	7.3%	17.2%	12.5%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/17

# Domestic equity

The U.S. economic environment has shifted in a materially more positive direction, post-election, as reflected by rising in equity prices. We are relatively bullish on U.S. earnings growth in the near term but remain concerned that investors are paying for this excess growth upfront through higher valuations. We maintain a neutral weight to U.S. equities.

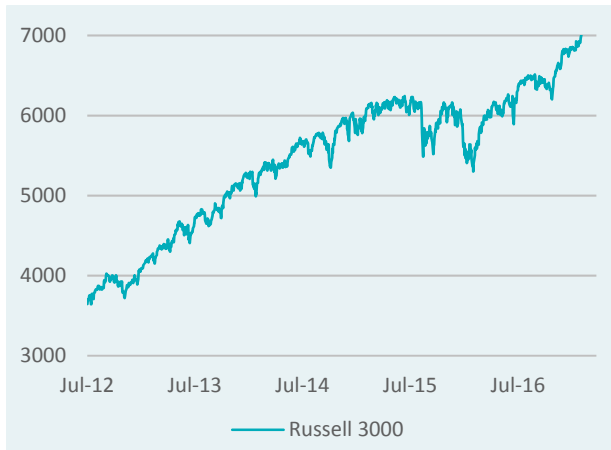
Higher equity prices and earnings expectations have been influenced by corporate tax cuts and deregulation

proposed by the new administration. There have been no further details released on timing of tax cuts, and lofty expectations may leave room for disappointment.

According to FactSet, Q1 2017 S&P 500 earnings are expected to grow 9.2% YoY. The estimate was revised downward from 12.5% on December 31<sup>st</sup> due to negative EPS guidance in the Materials and Consumer Discretionary sectors.

Investors may be paying for higher earnings growth through elevated valuations

## U.S. EQUITIES



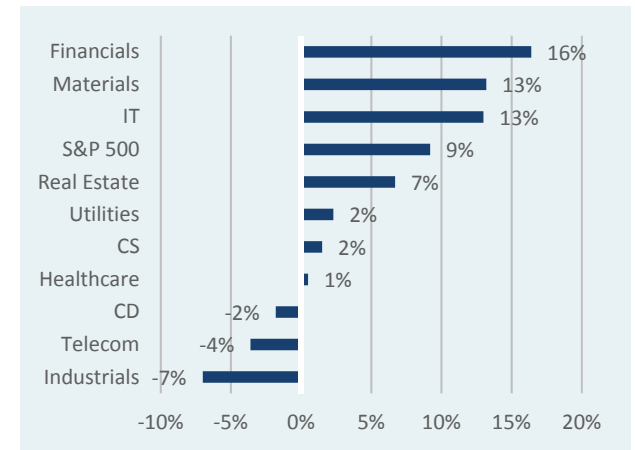
Source: Russell Investments, as of 4/3/17

## S&P 500 EPS GROWTH



Source: Bloomberg, as of 12/31/16

## Q1 FORECAST EPS GROWTH



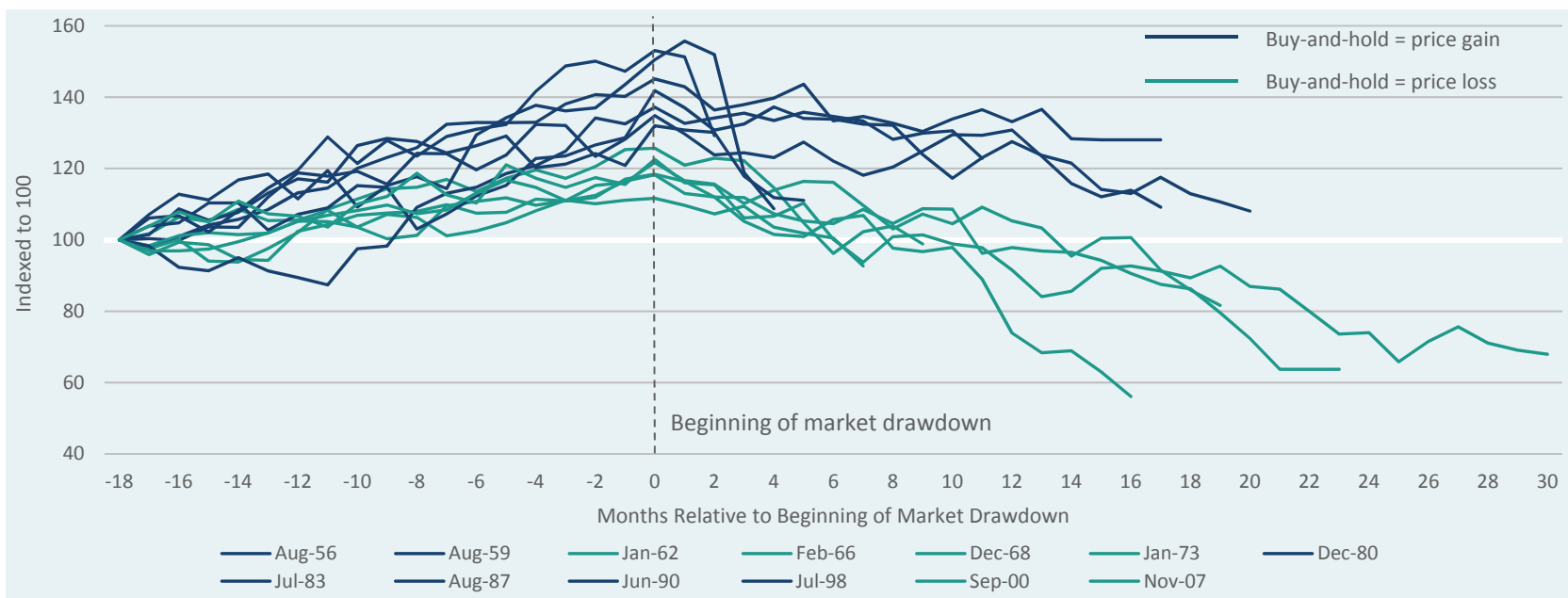
Source: FactSet, as of 4/14/17

# Equity market corrections

With above average U.S. equity valuations and a bull market that has lasted nearly nine years, there has been speculation that a market correction is approaching. While we remain concerned about valuations we do not believe that equities are necessarily in the final stages of the cycle, nor that market corrections are predictable. It is important to remember that equity drawdowns are normal, and should be viewed in the proper context.

The chart below shows the cumulative price movement of the S&P 500 during equity market corrections of at least 10%, starting from 18 months prior to the drawdown. In many instances, late cycle equity gains were enough to offset the entire drawdown, outside of major financial collapses. Market timing can be especially dangerous in these instances if an investor gets out of the market too early.

Equity market corrections are normal and should be viewed in the proper context



Source: Bloomberg

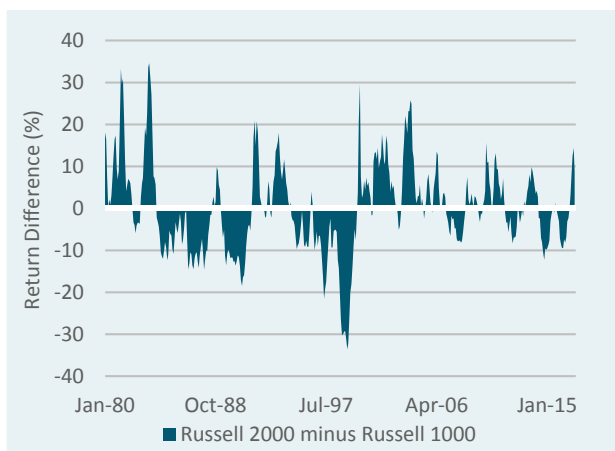
# Domestic equity size and style

Growth equities outperformed value equities during the quarter. The Russell 1000 Growth Index and Russell 1000 Value Index returned 8.9% and 3.3%, respectively. Financial sector performance had a significant effect on the value premium, affected by uncertainty around the direction of interest rates and deregulation proposals.

U.S. large cap equities outperformed small cap during the quarter, though small caps have delivered strong

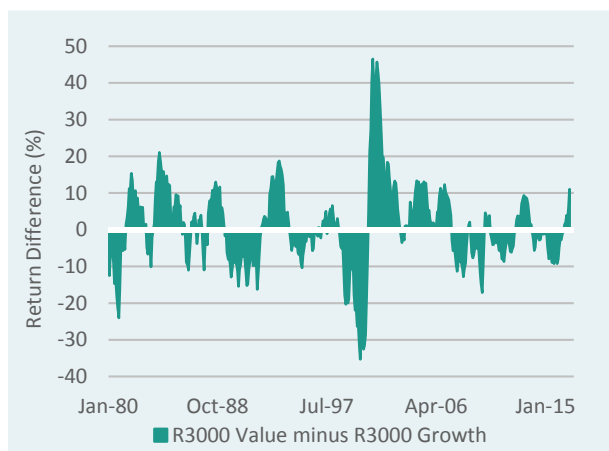
year-over-year outperformance. Small cap equity valuations remain considerably elevated relative to large cap equities which will likely act as a headwind to future performance. However, if President Trump's deregulation proposals are seen through, this should benefit smaller American companies. Further U.S. dollar appreciation would also benefit smaller companies on a relative basis due to less international currency exposure.

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



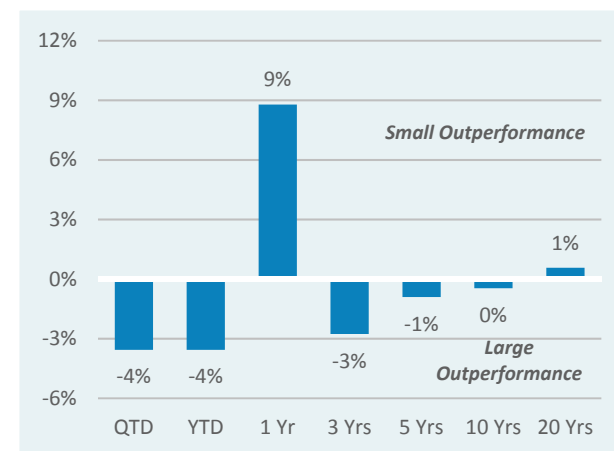
Source: Russell Investments, as of 3/31/17

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 3/31/17

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



Source: Morningstar, as of 3/31/17



# International equity

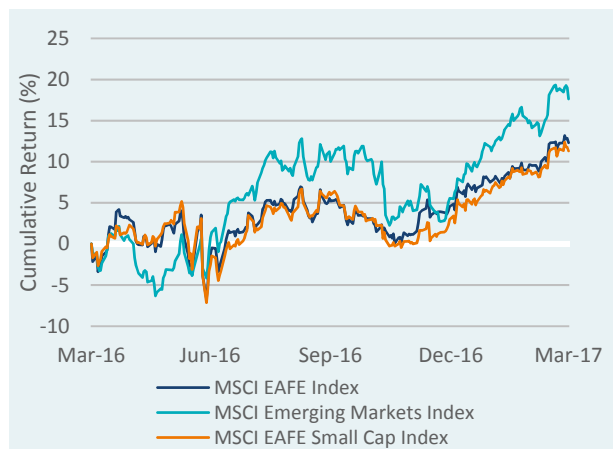
International equity markets outperformed domestic equities over the quarter. The MSCI ACWI ex U.S. returned 7.9% on an unhedged basis while the S&P 500 returned 6.1%.

International and emerging markets continue to trade at lower valuation levels than domestic markets, based on a variety of metrics. Despite our positive outlook for earnings growth in the U.S., the upside for domestic equities appears limited due to the optimism already baked into the price. International markets likely possess greater upside potential through either valuation

expansion or earnings growth surprise, simply due to current valuation levels. However, tail risks are also apparent in these markets. We believe a neutral weight is appropriate.

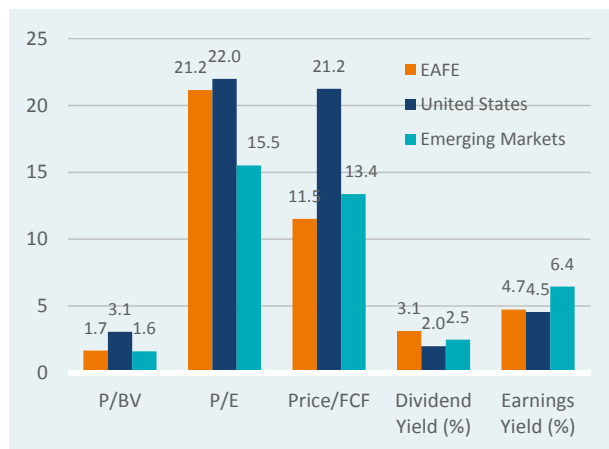
The U.S. dollar fell 3.6% in Q1 on a trade-weighted basis, and continued to contribute volatility to portfolios with unhedged currency exposure. Emerging market currencies exhibited further recovery during the quarter (MSCI EM 11.4% unhedged return vs. 7.3% hedged return) while the yen appreciated (4.3% NIKKEI 225 unhedged return vs. 0.1% hedged).

## GLOBAL EQUITY PERFORMANCE



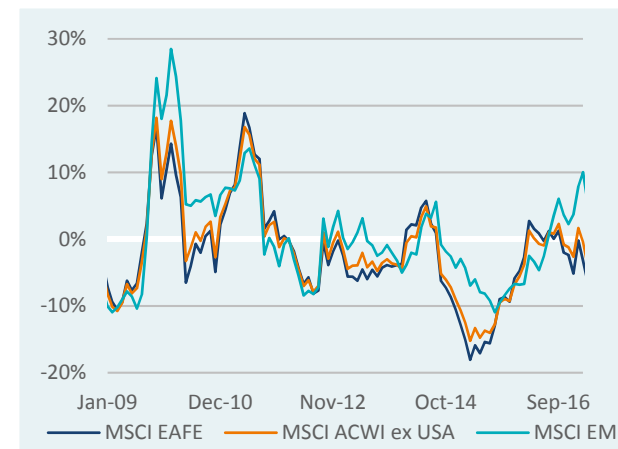
Source: Bloomberg, as of 3/31/17

## VALUATIONS



Source: Bloomberg, MSCI, as of 3/31/17 - 3 month average

## EFFECT OF CURRENCY (1 YEAR ROLLING)



Source: MSCI, as of 3/31/17

# Emerging market equity

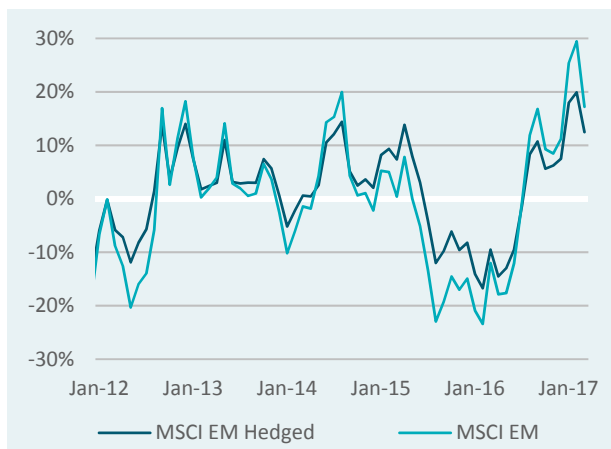
Emerging market equities extended their positive run in the first quarter, as the unhedged MSCI Emerging Markets index returned 11.4% (7.3% hedged). Performance was bolstered by strong global growth and stable commodity prices which have correlated highly with emerging market equities in the past. Steady demand from developed markets encouraged manufacturing in emerging economies as seen by increases in aggregate purchasing managers' indices (PMI).

Valuations increased moderately over the past three years but remain at attractive levels relative to EAFE and U.S. equities. Earnings growth estimates were highest in the Technology and Financial sectors, concentrated mainly in Korea and China.

Fundamentals are improving in emerging economies

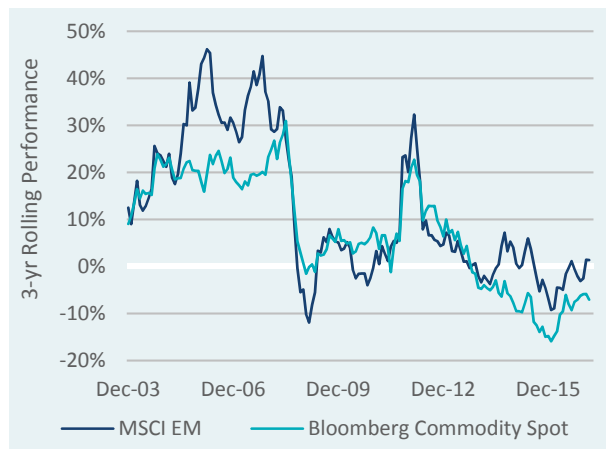
Positive long-term growth expectations are not without potential disruptions. We remain particularly watchful of U.S. trade policies and upcoming elections in France, Germany, and Turkey.

12-MONTH ROLLING PERFORMANCE



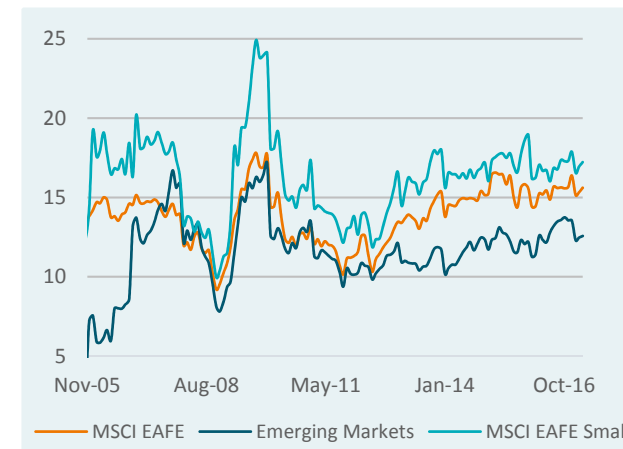
Source: MPI, as of 3/31/17

COMMODITY PRICES & EM PERFORMANCE



Source: Bloomberg, as of 3/31/17

FORWARD P/E RATIOS



Source: Bloomberg as of 3/31/17

# Equity valuations

The outlook for corporate earnings growth improved in Q1 which contributed to mildly lower forward P/E multiples. Overall, valuations remain elevated, consistent with mid-to-later stages of the economic cycle and an environment of low interest rates and moderate inflation. As the global economy transitions towards higher rates and inflation, valuations may shift to a lower, more normal level.

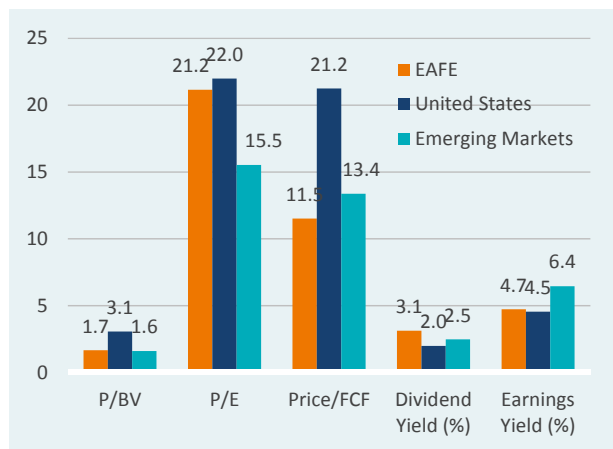
The S&P 500 sits at a forward P/E of 18.3, above the 20-

year average of 16.9, but within a single standard deviation of the average. The valuation of domestic equities is richer than international equities and emerging markets, as measured by trailing P/E and price-to-free cash flow ratios.

Further positive earnings and earnings expectations surprises would of course bode well for valuation levels as investors are properly compensated for above-average equity prices.

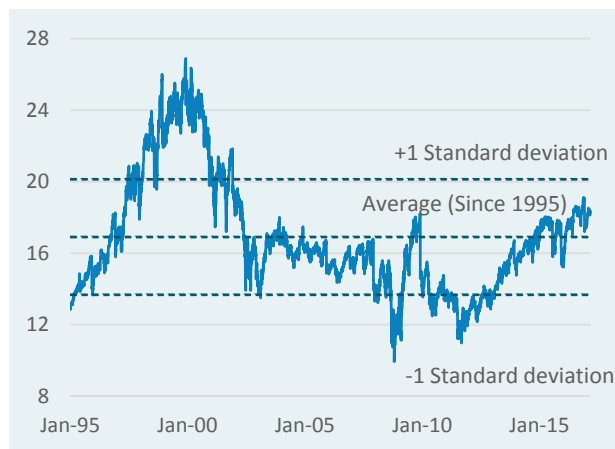
Valuations are above average, but not unusual

## MSCI VALUATION METRICS (3 MONTH AVERAGE)



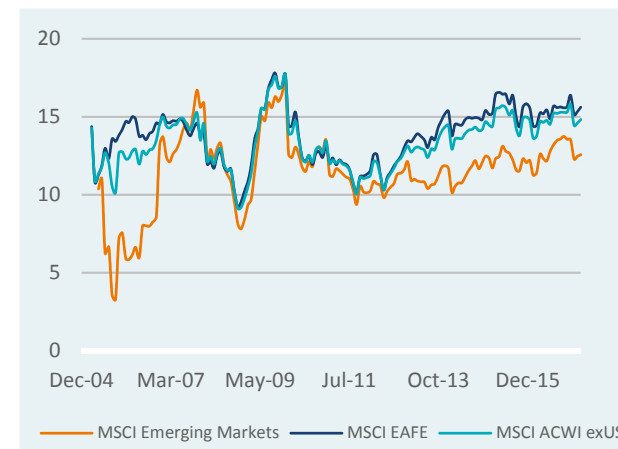
Source: Bloomberg, as of 3/31/17

## S&P 500 FORWARD P/E



Source: Bloomberg, as of 3/31/17

## INTERNATIONAL FORWARD P/E RATIOS



Source: Bloomberg, as of 3/31/17

# Equity volatility

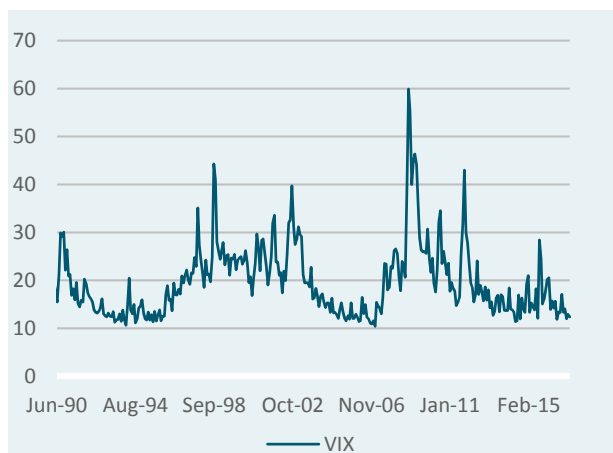
Equity volatility was considerably low in the first quarter. Realized volatility of the S&P 500 was 6.7%, the lowest mark since the beginning of this business cycle. Implied volatility, as indicated by the VIX, is also below average, despite greater political uncertainty. However, it is important to remember that volatility can return quickly. Other measures of equity risk, such as option skews, show that investors are paying a premium for large downside risk protection. Traditional measures of

volatility may be understating equity market risk.

International and emerging equities followed in a similar trend with below average realized volatility. Currency continued to play an important role in unhedged international equity exposure. Over the last ten years, unhedged currency exposure increased the annualized standard deviation of the MSCI EAFE and EM indices by 4% and 6%, respectively.

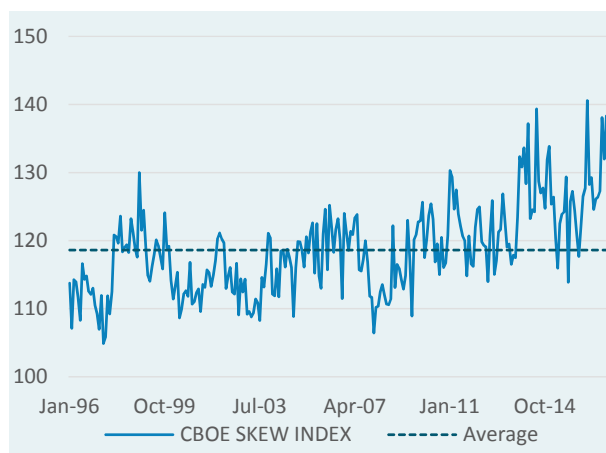
Equity volatility is low, but can return quickly

**U.S. IMPLIED VOLATILITY**



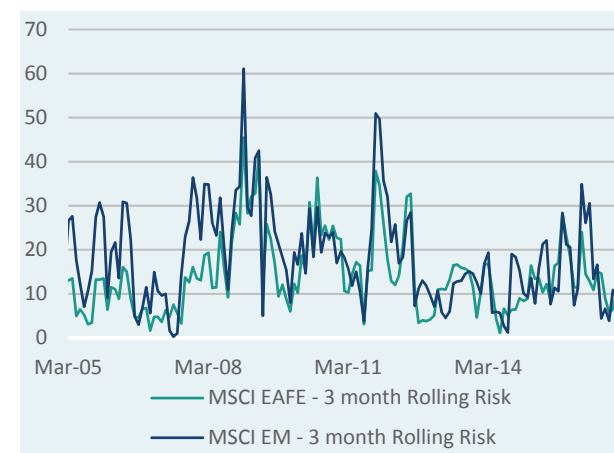
Source: CBOE, as of 3/31/17

**U.S. VOLATILITY SKEW**



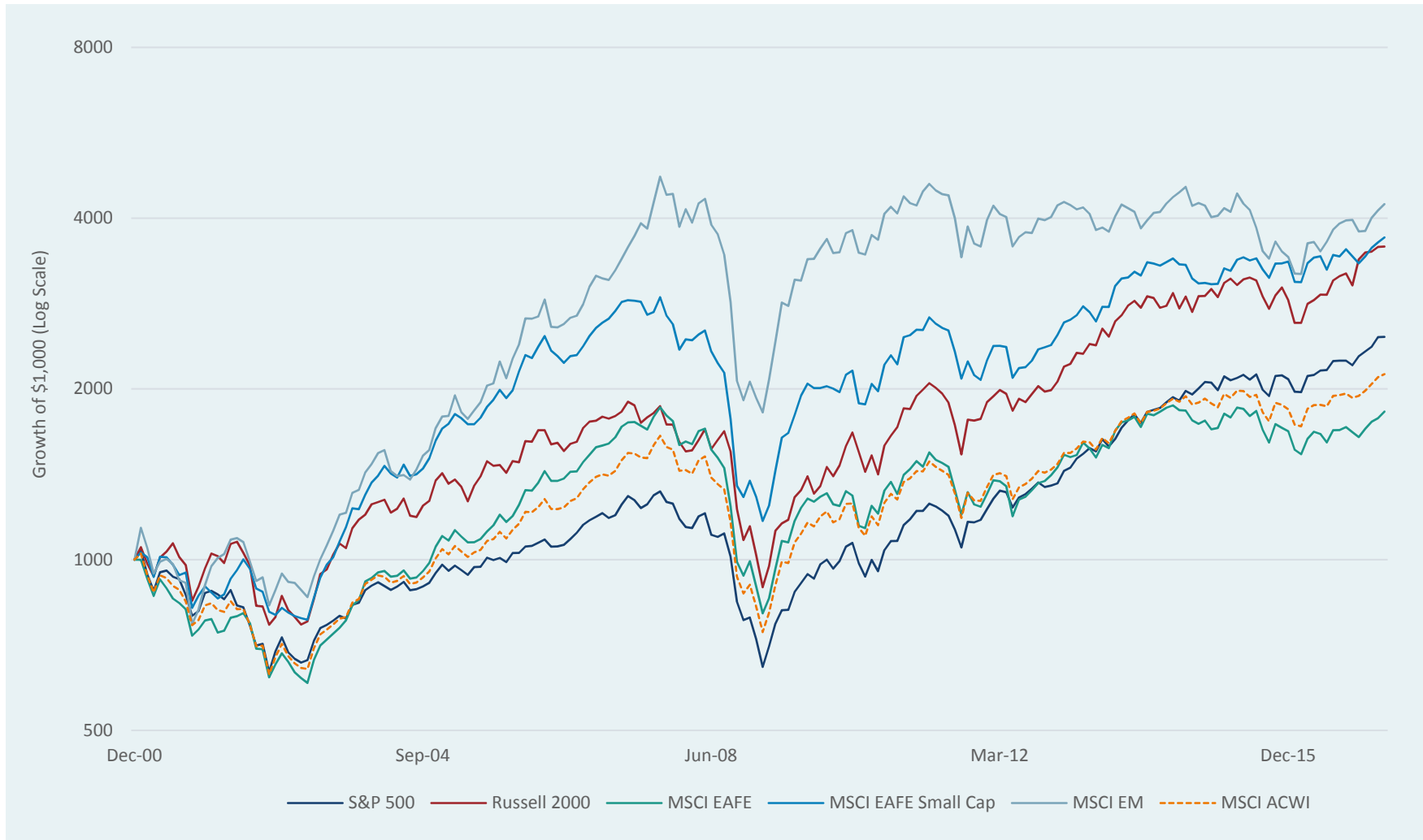
Source: CBOE, as of 3/31/17

**INTERNATIONAL EQUITY VOLATILITY**



Source: MSCI, as of 3/31/17

# Long-term equity performance



Source: MPI, as of 3/31/17

# Other assets

# Commodities

Commodity performance has been lackluster over the past decade, delivering negative returns through the global financial crisis and the recent oil crisis. Much of this performance has been caused not by price movement, but by the shape of commodity futures curves. An upward sloping curve creates a drag for investors as a higher price is paid to enter each futures contract, and a downward sloping curve creates positive carry for investors as prices paid for futures contracts are lower. This premium/discount is a major determinant of commodity performance, and is known as “roll yield”. Roll yield can be negatively affected by

commodity crises as current contract prices drop further than distant prices and the curve becomes steeper.

As commodity prices moderate, futures curves have flattened and negative roll yield has begun to dissipate. Oil in particular significantly impacts overall roll yield due to its larger weight in commodities indices. Oil has exhibited a flatter curve shape recently. We are continuing to monitor these effects since a neutral or positive roll return would help to materially improve commodity returns.

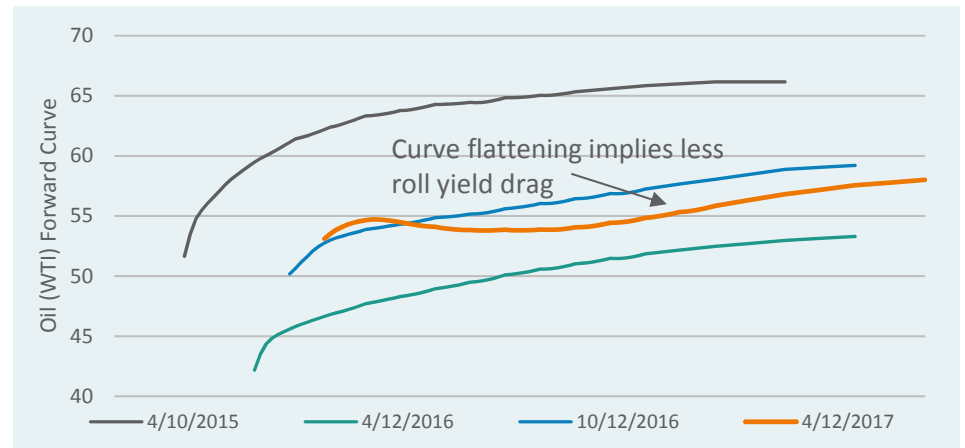
The drag from negative roll yield is abating, improving the outlook for commodities performance

## ROLL RETURN



Source: Standard & Poor's, Goldman Sachs, as of 3/31/17

## CURVE SHAPE



Source: Bloomberg, as of 4/12/17

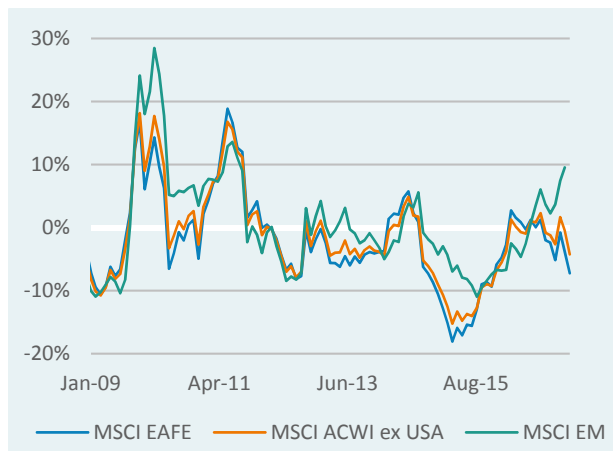
# Currency

In the first quarter, the U.S. dollar reversed part of its gains following the presidential election in November. On a trade weighted basis, the dollar was down 3.6% against a basket of major currencies. Currency movement has been an important influence in unhedged foreign asset exposure. Over the past year, U.S. dollar strength has eroded positive equity returns in developed markets, while dollar weakness against emerging markets has added to returns.

Emerging market currencies rallied in the first quarter following a sharp decline to end last year. The JPM Emerging Market Currency Index was up 2.5%.

While long-term movements in the U.S. are often driven by broad mean reversion to fair value based on purchasing power parity, shorter term moves are still likely to be heavily influenced by developments in foreign trade policy, where much uncertainty remains.

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



Source: MPI, as of 3/31/17

**LONG-TERM TRADE WEIGHTED DOLLAR**



Source: FRED, as of 4/7/17

**JPM EM CURRENCY INDEX**



Source: Bloomberg, as of 3/31/17



# Appendix

# Periodic table of returns – March 2017

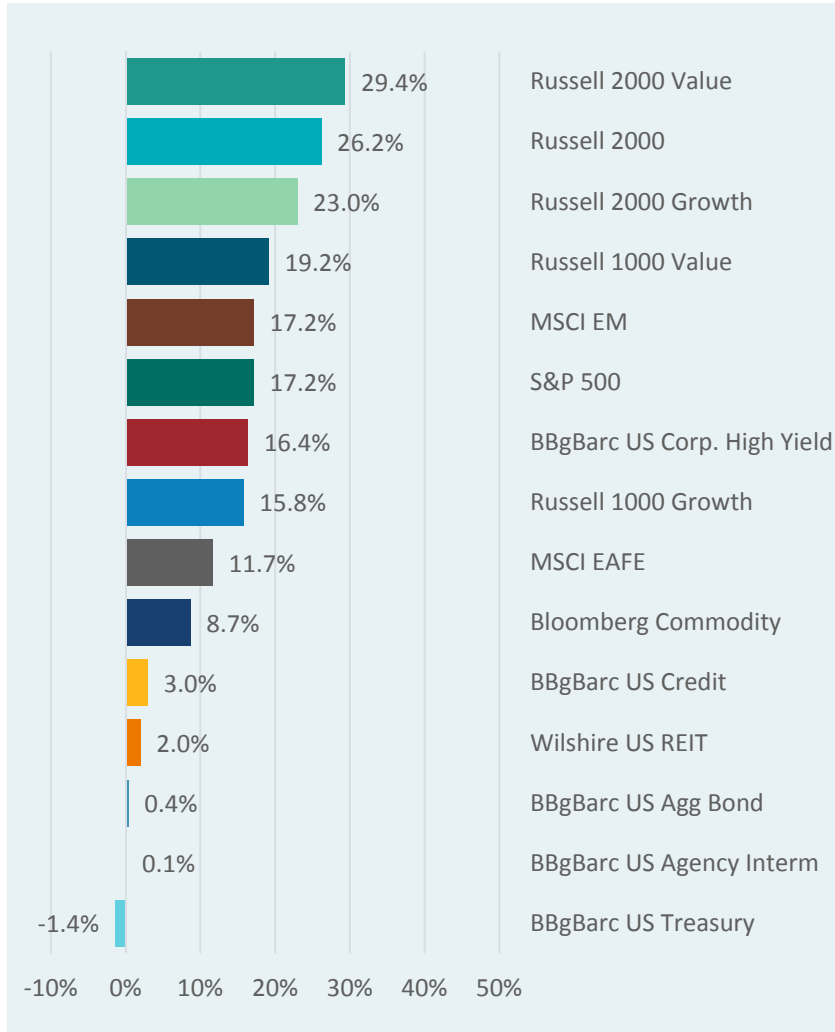
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	5-Year	10-Year
Emerging Markets Equity	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	11.4	13.3	9.1
Large Cap Growth	8.1	37.8	23.1	32.9	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	8.9	13.3	8.1
International Equity	6.4	37.2	22.4	31.8	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	7.2	13.1	7.6
Large Cap Equity	4.4	31.0	21.6	30.5	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	6.0	12.5	7.1
Small Cap Growth	3.2	28.5	21.4	22.4	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	5.3	12.4	6.7
60/40 Global Portfolio	2.6	25.7	16.5	16.2	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	4.8	12.1	6.1
Large Cap Value	0.4	19.6	14.4	13.9	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	3.3	10.7	5.9
Small Cap Equity	-1.5	18.5	11.3	12.9	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	2.5	5.8	4.3
Hedge Funds of Funds	-1.8	15.2	10.3	10.6	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	2.0	5.2	4.0
Real Estate	-2.0	11.6	9.9	9.7	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	1.6	3.1	2.7
US Bonds	-2.4	11.1	6.4	5.2	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	0.8	2.3	1.2
Cash	-2.9	7.5	6.0	2.1	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	0.1	0.8	1.1
Small Cap Value	-3.5	5.7	5.1	-3.4	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	-0.1	0.1	0.5
Commodities	-7.3	-5.2	3.6	-11.6	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	-2.3	-9.5	-6.2

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

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

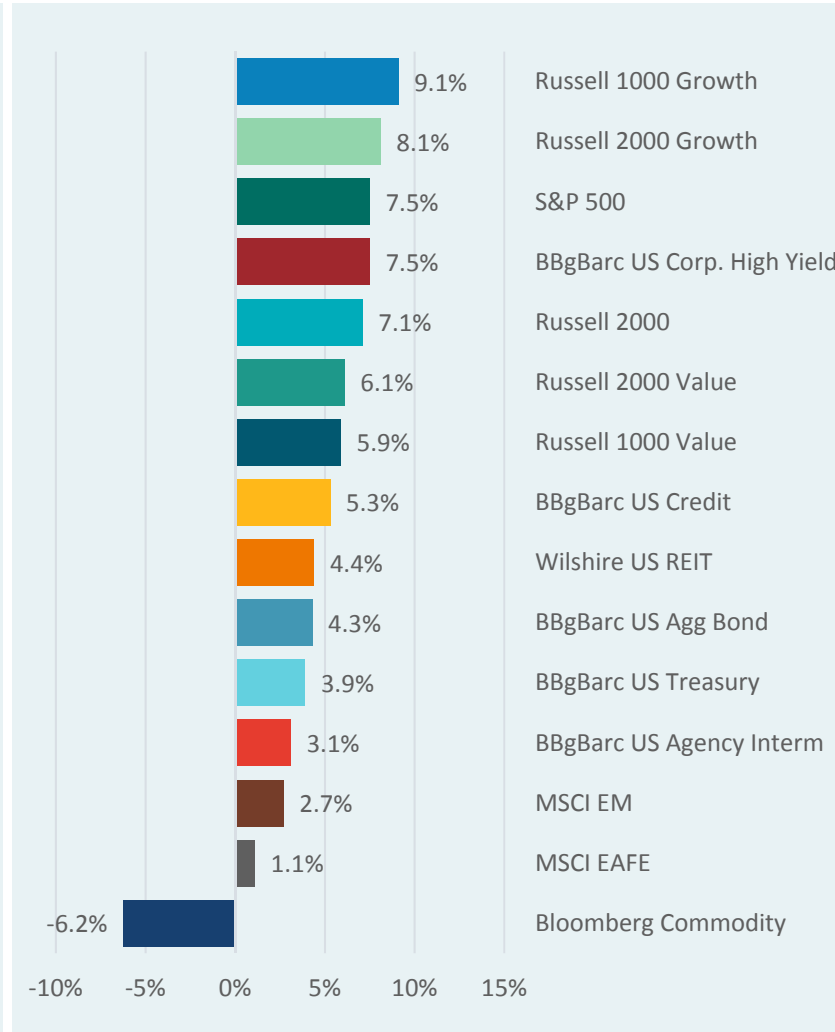
# Major asset class returns

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/17

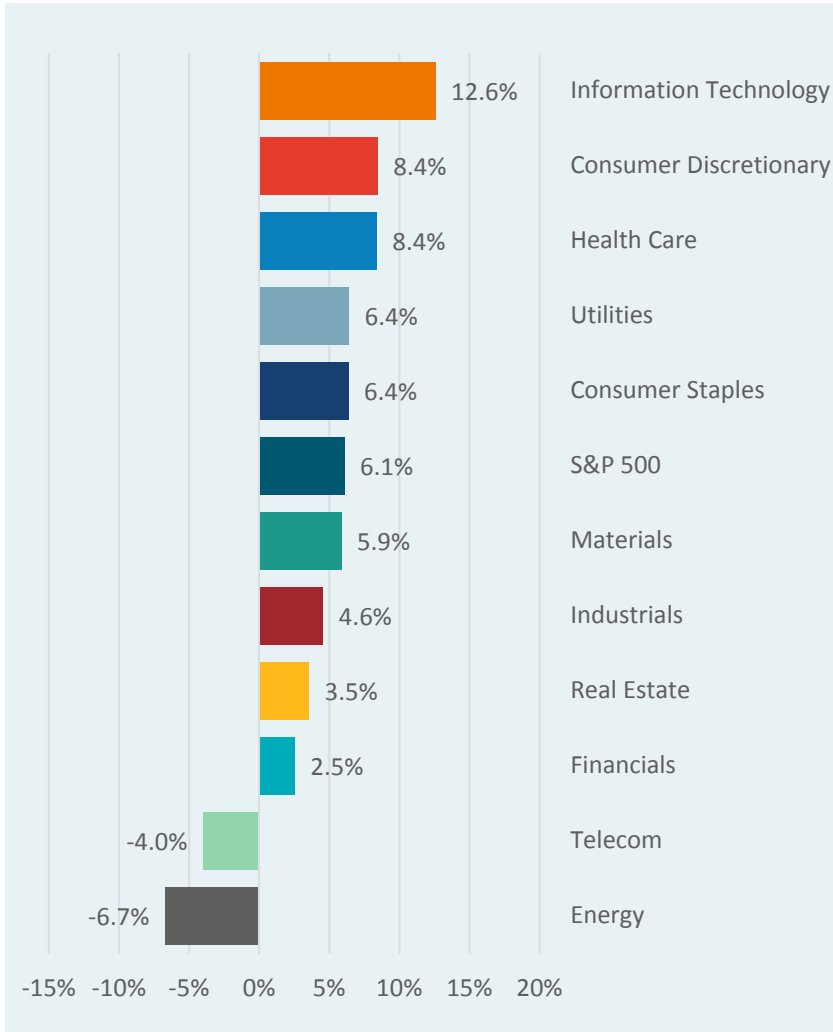
TEN YEARS ENDING MARCH



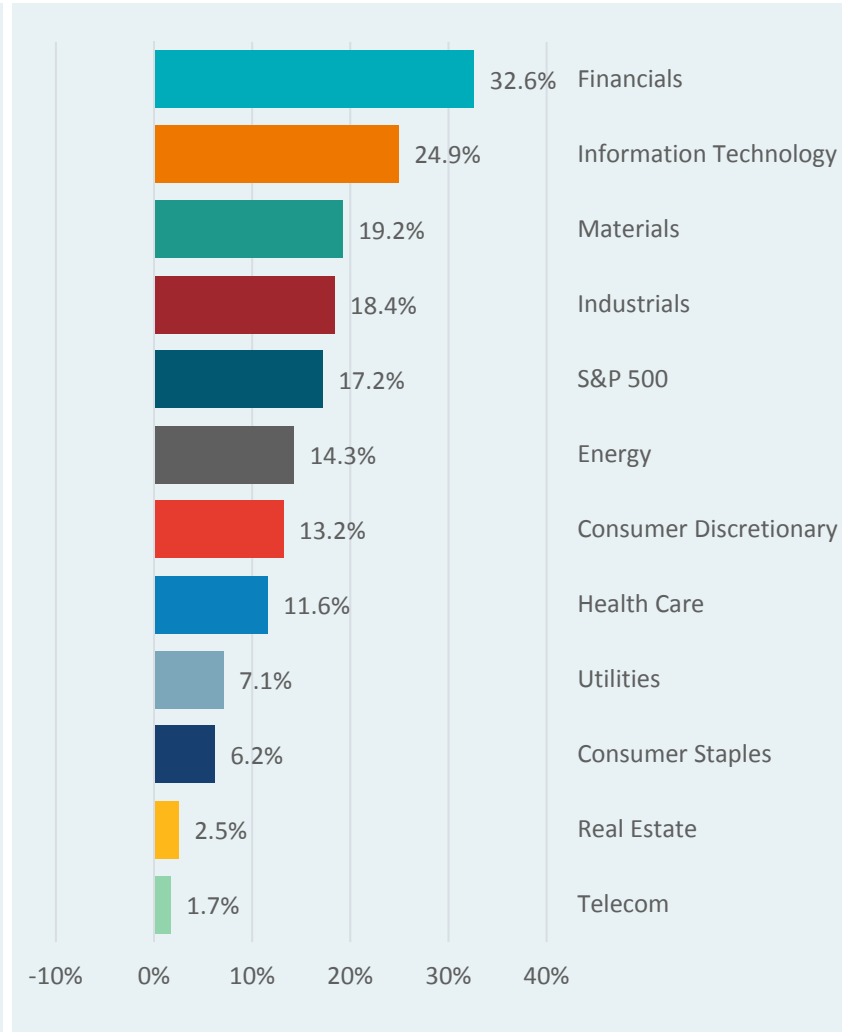
Source: Morningstar, as of 3/31/17

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

1<sup>ST</sup> QUARTER



ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/17

Source: Morningstar, as of 3/31/17

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	0.1	6.1	6.1	17.2	10.4	13.3	7.5
S&P 500 Equal Weighted	0.0	5.4	5.4	17.4	9.6	14.0	8.7
DJ Industrial Average	(0.6)	5.2	5.2	19.9	10.6	12.2	8.1
Russell Top 200	0.2	6.4	6.4	17.6	10.6	13.3	7.5
Russell 1000	0.1	6.0	6.0	17.4	10.0	13.3	7.6
Russell 2000	0.1	2.5	2.5	26.2	7.2	12.4	7.1
Russell 3000	0.1	5.7	5.7	18.1	9.8	13.2	7.5
Russell Mid Cap	(0.2)	5.1	5.1	17.0	8.5	13.1	7.9
<b>Style Index</b>							
Russell 1000 Growth	1.2	8.9	8.9	15.8	11.3	13.3	9.1
Russell 1000 Value	(1.0)	3.3	3.3	19.2	8.7	13.1	5.9
Russell 2000 Growth	1.2	5.3	5.3	23.0	6.7	12.1	8.1
Russell 2000 Value	(0.8)	(0.1)	(0.1)	29.4	7.6	12.5	6.1

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	1.2	6.9	6.9	15.0	5.1	8.4	4.0
MSCI ACWI ex US	2.5	7.9	7.9	13.1	0.6	4.4	1.4
MSCI EAFE	2.8	7.2	7.2	11.7	0.5	5.8	1.1
MSCI EM	2.5	11.4	11.4	17.2	1.2	0.8	2.7
MSCI EAFE Small Cap	2.0	8.0	8.0	11.0	3.6	9.2	3.0
<b>Style Index</b>							
MSCI EAFE Growth	2.7	8.5	8.5	7.4	1.5	6.0	2.0
MSCI EAFE Value	2.8	6.0	6.0	16.0	(0.6)	5.6	0.0
<b>Regional Index</b>							
MSCI UK	1.7	5.0	5.0	7.4	(2.6)	3.5	0.5
MSCI Japan	(0.4)	4.5	4.5	14.4	6.0	6.8	0.6
MSCI Euro	6.2	8.5	8.5	12.8	(1.3)	6.4	(0.2)
MSCI EM Asia	3.3	13.4	13.4	18.0	4.5	4.4	4.7
MSCI EM Latin American	0.6	12.1	12.1	23.3	(4.0)	(6.1)	0.8

Source: Morningstar, as of 3/31/17

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US Treasury US TIPS	(0.1)	1.3	1.3	1.5	2.0	1.0	4.2
BBgBarc US Treasury Bills	0.0	0.1	0.1	0.4	0.2	0.2	0.8
BBgBarc US Agg Bond	(0.1)	0.8	0.8	0.4	2.7	2.3	4.3
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.0	0.3	0.3	0.2	0.7	0.6	2.0
BBgBarc US Treasury Long	(0.6)	1.4	1.4	(5.0)	5.8	4.0	6.7
BBgBarc US Treasury	(0.0)	0.7	0.7	(1.4)	2.1	1.6	3.9
<b>Issuer</b>							
BBgBarc US MBS	0.0	0.5	0.5	0.2	2.7	2.0	4.2
BBgBarc US Corp. High Yield	(0.2)	2.7	2.7	16.4	4.6	6.8	7.5
BBgBarc US Agency Interim	0.0	0.5	0.5	0.1	1.4	1.2	3.1
BBgBarc US Credit	(0.2)	1.3	1.3	3.0	3.5	3.7	5.3

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(2.7)	(2.3)	(2.3)	8.7	(13.9)	(9.5)	(6.2)
Wilshire US REIT	(2.7)	0.0	0.0	2.0	10.2	9.8	4.4
CS Leveraged Loans	0.1	1.2	1.2	9.7	3.7	4.9	4.2
<b>Regional Index</b>							
JPM EMBI Global Div	0.4	3.9	3.9	8.9	6.2	5.8	7.0
JPM GBI-EM Global Div	2.3	6.5	6.5	5.5	(2.7)	(1.6)	4.1
<b>Hedge Funds</b>							
HFRI Composite	0.2	2.3	2.3	8.6	2.8	4.0	3.3
HFRI FOF Composite	0.1	2.0	2.0	5.9	1.7	3.1	1.2
<b>Currency (Spot)</b>							
Euro	0.7	1.4	1.4	(6.1)	(8.1)	(4.3)	(2.2)
Pound	0.5	1.2	1.2	(13.0)	(9.1)	(4.8)	(4.4)
Yen	0.4	4.7	4.7	0.9	(2.6)	(5.9)	0.6

# Definitions

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

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

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

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

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

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

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

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# Imperial County Employees' Retirement System

Investment Performance Review

Period Ending: March 31, 2017



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SEATTLE 206-622-3700

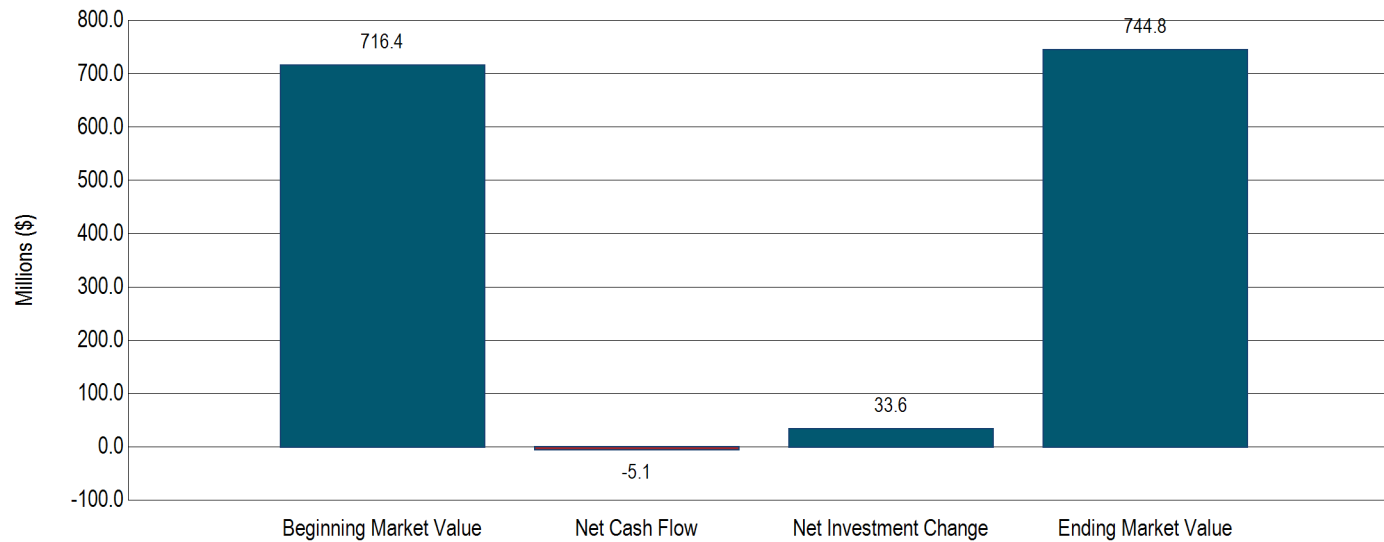
LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Portfolio Reconciliation

	Last Three Months	Fiscal Year-To-Date	One Year
Beginning Market Value	\$716,367,593	\$688,962,382	\$674,845,314
Net Cash Flow	-\$5,149,666	-\$6,069,174	-\$6,171,360
Net Investment Change	\$33,605,781	\$61,930,500	\$76,149,754
Ending Market Value	\$744,823,708	\$744,823,708	\$744,823,708

Change in Market Value  
Last Three Months



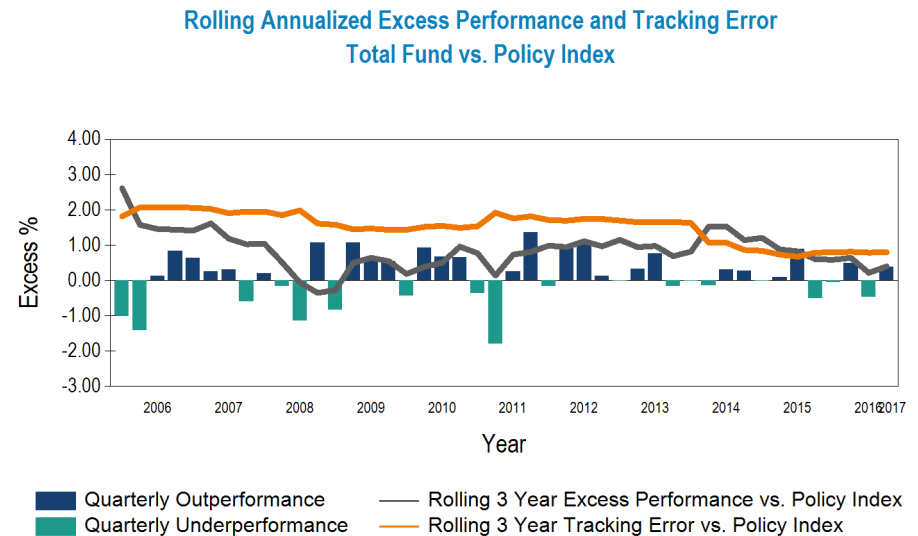
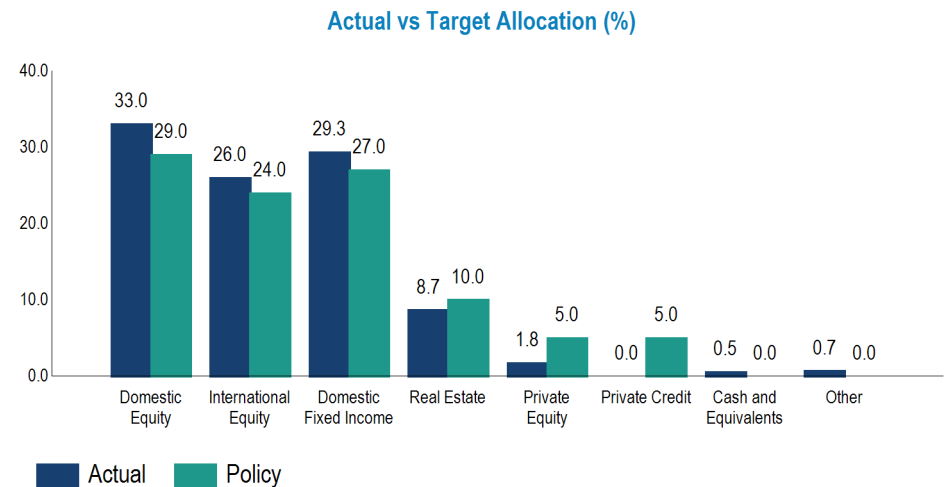
Contributions and withdrawals may include intra-account transfers between managers/funds. Fee transactions are excluded from Portfolio Reconciliation.



# Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2017

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>4.7</b>	<b>9.1</b>	<b>11.4</b>	<b>5.1</b>	<b>7.5</b>	<b>5.8</b>
Total Fund ex Parametric	4.7	9.1	11.4	5.1	7.5	5.7
Policy Index	4.3	8.7	11.1	4.7	6.7	5.1
InvestorForce Public DB Gross Rank	25	46	41	61	56	36
<b>Total Domestic Equity</b>	<b>5.8</b>	<b>15.1</b>	<b>18.1</b>	<b>9.0</b>	<b>12.9</b>	<b>8.1</b>
Russell 3000	5.7	15.0	18.1	9.8	13.2	7.5
eA All US Equity Gross Rank	40	58	51	47	52	52
<b>Total International Equity</b>	<b>9.0</b>	<b>15.2</b>	<b>15.1</b>	<b>1.4</b>	<b>5.0</b>	<b>2.0</b>
MSCI ACWI ex USA Gross	8.0	14.2	13.7	1.0	4.8	1.8
eA ACWI ex-US All Cap Equity Gross Rank	45	39	33	61	82	72
<b>Total Fixed Income</b>	<b>1.2</b>	<b>0.4</b>	<b>3.2</b>	<b>3.3</b>	<b>3.4</b>	<b>5.8</b>
BBgBarc US Aggregate TR	0.8	-1.7	0.4	2.7	2.3	4.3
eA All US Fixed Inc Gross Rank	43	41	34	41	45	25
<b>Total Real Estate</b>	<b>1.7</b>	<b>4.7</b>	<b>6.4</b>	<b>11.8</b>	<b>11.6</b>	<b>5.0</b>
NCREIF Property Index	1.6	5.1	7.3	10.6	10.7	6.7
NCREIF-ODCE	1.8	6.1	8.3	11.8	12.0	5.6
<b>Total Private Equity</b>	<b>1.7</b>	<b>8.9</b>	<b>10.4</b>	<b>15.7</b>	<b>16.5</b>	<b>--</b>
Russell 3000 +3% Lagged	5.0	14.1	16.1	11.7	18.1	--
<b>Total Opportunistic</b>	<b>2.0</b>	<b>5.3</b>	<b>10.9</b>	<b>8.6</b>	<b>17.5</b>	<b>--</b>
Assumption Rate + 1%	2.2	6.7	9.0	9.0	9.0	--

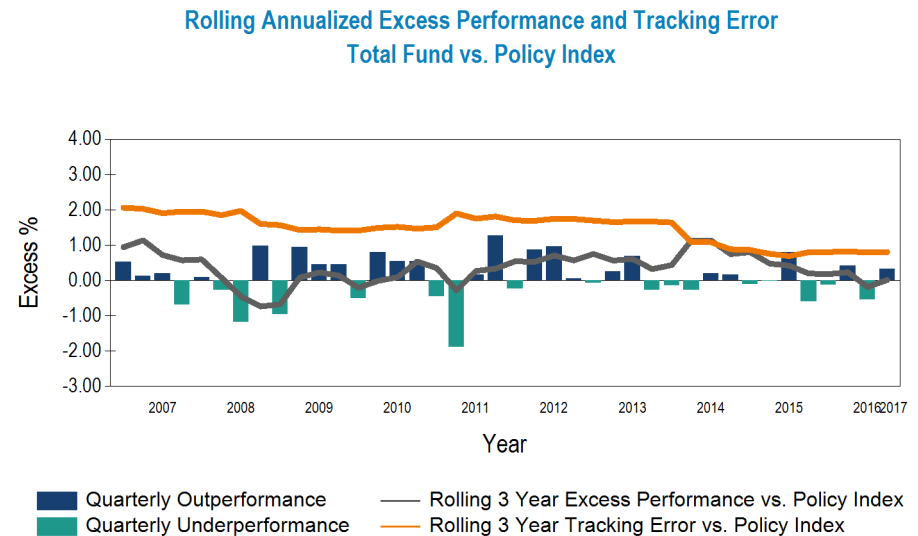
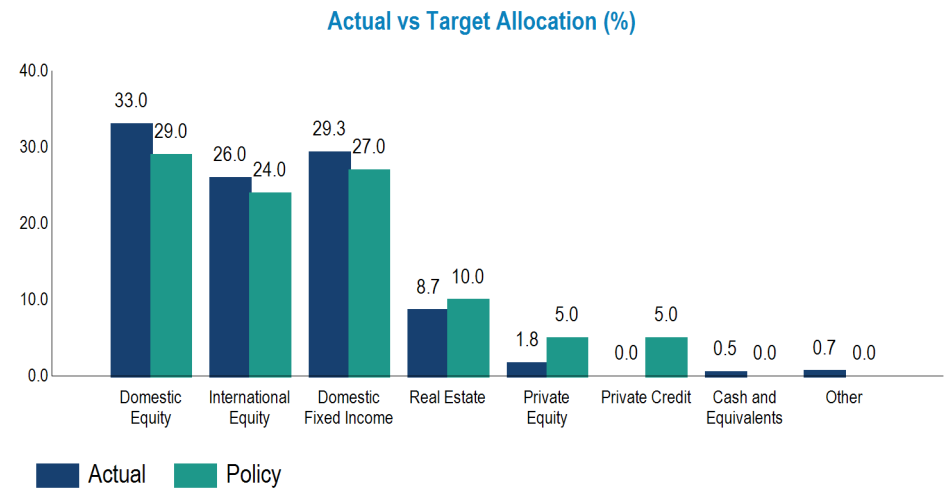


New Policy Index (as of 10/1/2016): 29% Russell 3000, 24% MSCI ACWI Free Ex US, 27% BBgBarc US Aggregate, 5% NCREIF Property, 5% NCREIF Property +2%, 5% Russell 3000 plus 300 bps (Lagged), 5% BBgBarc High Yield +2% (Lagged). Prior Policy Index (7/1/2014 to 9/30/2016): 29% Russell 3000, 25% MSCI ACWI Free Ex US, 30% BBgBarc Aggregate, 6% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 plus 300 bps (Lagged). Prior quarter Private Equity returns and index data are used. All returns are (G) gross of fees. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

# Total Fund Executive Summary (Net of Fees)

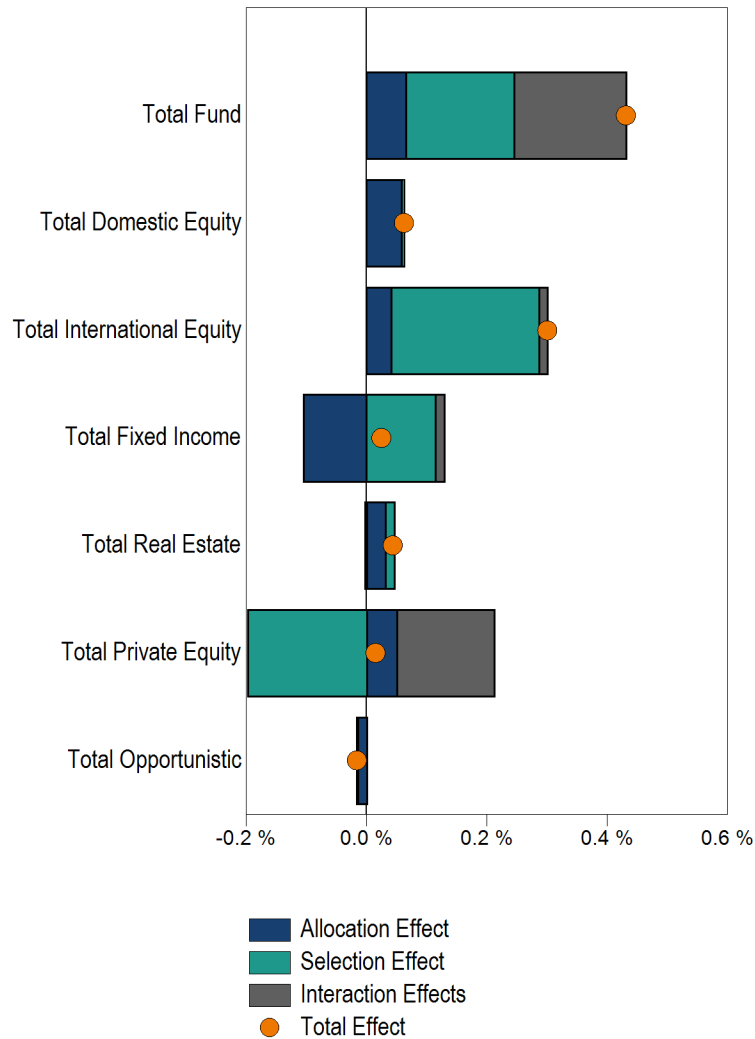
Period Ending: March 31, 2017

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>4.7</b>	<b>8.9</b>	<b>11.1</b>	<b>4.7</b>	<b>7.1</b>	<b>5.4</b>
<i>Total Fund ex Parametric Policy Index</i>	4.7	8.9	11.1	4.7	7.1	5.3
<i>Policy Index</i>	4.3	8.7	11.1	4.7	6.7	5.1
<b>Total Domestic Equity</b>	<b>5.7</b>	<b>15.1</b>	<b>18.1</b>	<b>8.9</b>	<b>12.7</b>	<b>7.8</b>
<i>Russell 3000</i>	5.7	15.0	18.1	9.8	13.2	7.5
<b>Total International Equity</b>	<b>8.9</b>	<b>14.9</b>	<b>14.8</b>	<b>1.0</b>	<b>4.5</b>	<b>1.5</b>
<i>MSCI ACWI ex USA Gross</i>	8.0	14.2	13.7	1.0	4.8	1.8
<b>Total Fixed Income</b>	<b>1.2</b>	<b>0.2</b>	<b>2.9</b>	<b>3.0</b>	<b>3.1</b>	<b>5.5</b>
<i>BBgBarc US Aggregate TR</i>	0.8	-1.7	0.4	2.7	2.3	4.3
<b>Total Real Estate</b>	<b>1.7</b>	<b>4.2</b>	<b>5.7</b>	<b>10.7</b>	<b>10.8</b>	<b>4.3</b>
<i>NCREIF Property Index</i>	1.6	5.1	7.3	10.6	10.7	6.7
<i>NCREIF-ODCE</i>	1.8	6.1	8.3	11.8	12.0	5.6
<b>Total Private Equity</b>	<b>1.7</b>	<b>8.1</b>	<b>9.2</b>	<b>13.4</b>	<b>12.1</b>	<b>--</b>
<i>Russell 3000 +3% Lagged</i>	5.0	14.1	16.1	11.7	18.1	--
<b>Total Opportunistic</b>	<b>2.0</b>	<b>4.3</b>	<b>9.3</b>	<b>6.9</b>	<b>15.6</b>	<b>--</b>
<i>Assumption Rate + 1%</i>	2.2	6.7	9.0	9.0	9.0	--



New Policy Index (as of 10/1/2016): 29% Russell 3000, 24% MSCI ACWI Free Ex US, 27% BBgBarc US Aggregate, 5% NCREIF Property, 5% NCREIF Property +2%, 5% Russell 3000 plus 300 bps (Lagged), 5% BBgBarc High Yield +2% (Lagged). Prior Policy Index (7/1/2014 to 9/30/2016): 29% Russell 3000, 25% MSCI ACWI Free Ex US, 30% BBgBarc Aggregate, 6% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 plus 300 bps (Lagged). Prior quarter Private Equity returns and index data are used. All returns are (N) net of fees. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Attribution Effects



Performance Attribution

	Quarter	YTD
Wtd. Actual Return	4.74%	4.74%
Wtd. Index Return *	4.31%	4.31%
<b>Excess Return</b>	<b>0.43%</b>	<b>0.43%</b>
Selection Effect	0.18%	0.18%
Allocation Effect	0.07%	0.07%
Interaction Effect	0.18%	0.18%

\*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	5.8%	5.7%	0.0%	0.0%	0.1%	0.0%	0.1%
Total International Equity	9.0%	8.0%	1.0%	0.2%	0.0%	0.0%	0.3%
Total Fixed Income	1.2%	0.8%	0.4%	0.1%	-0.1%	0.0%	0.0%
Total Real Estate	1.7%	1.6%	0.1%	0.0%	0.0%	0.0%	0.0%
Total Private Equity	1.7%	3.6%	-1.9%	-0.2%	0.1%	0.2%	0.0%
Total Opportunistic	2.0%	2.2%	-0.2%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>4.7%</b>	<b>4.3%</b>	<b>0.4%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.4%</b>

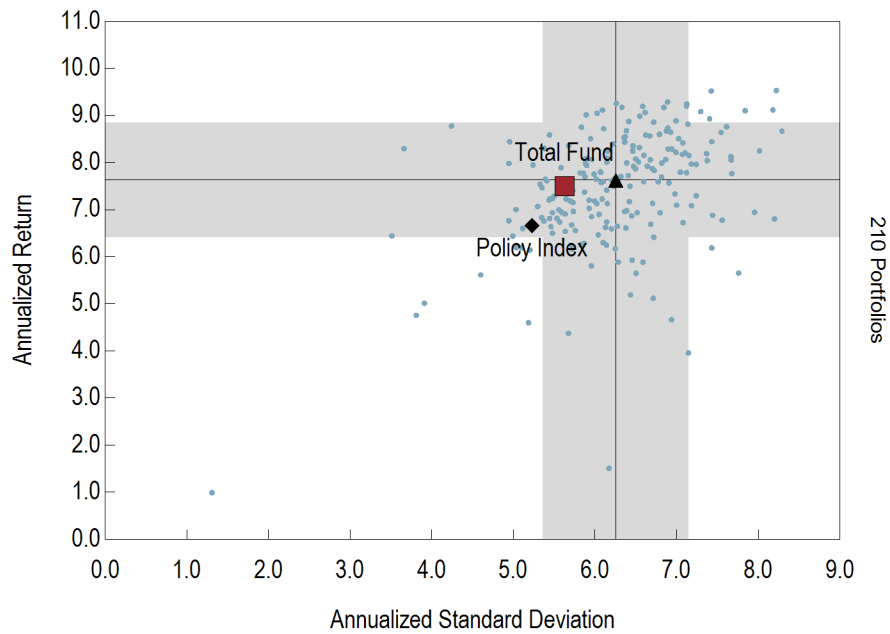
Weighted returns shown in attribution analysis may differ from actual returns.

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

Period Ending: March 31, 2017

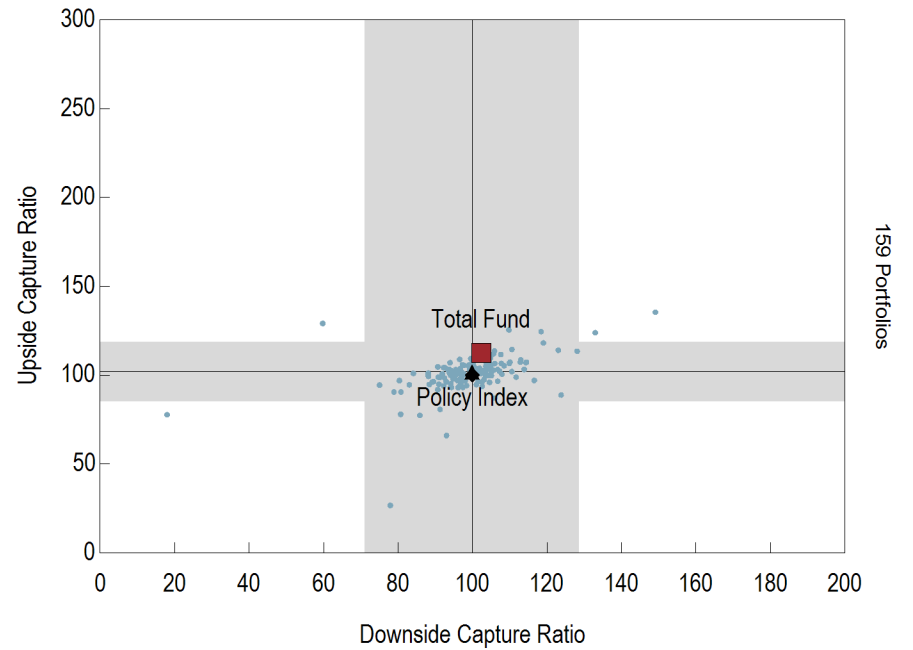
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	7.50%	0.83%	5.62%	0.41%	1.06	0.89%	0.98	1.31	0.93	112.31%	102.30%

Risk vs. Return



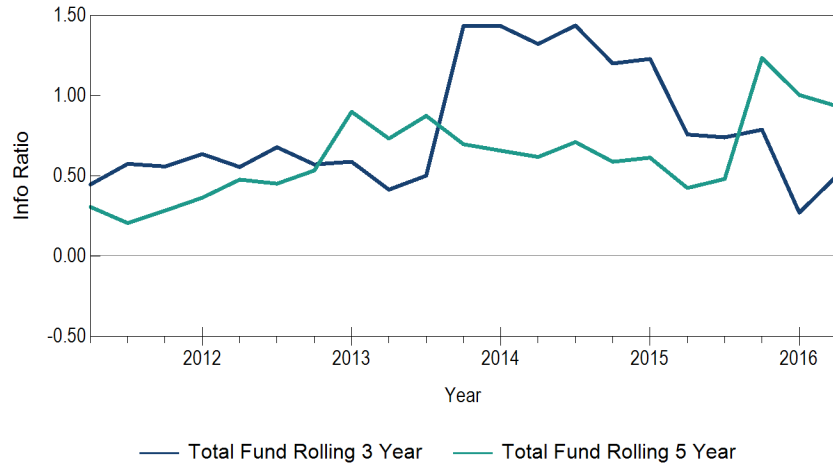
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

Up Markets vs. Down Markets

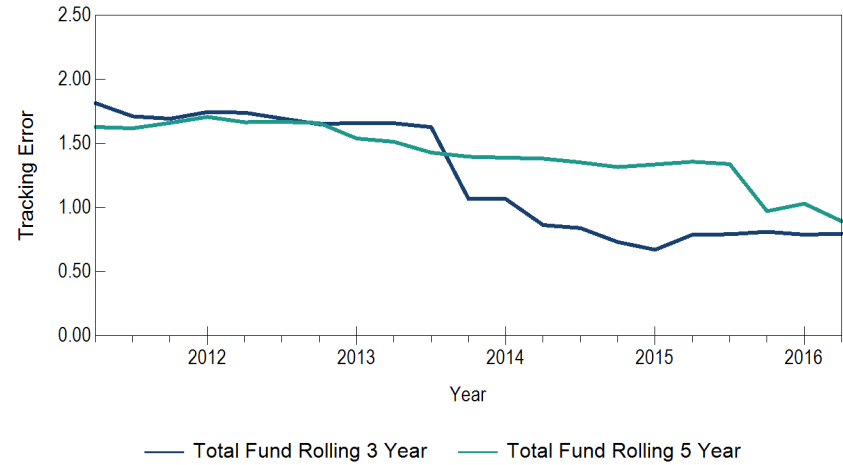


- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

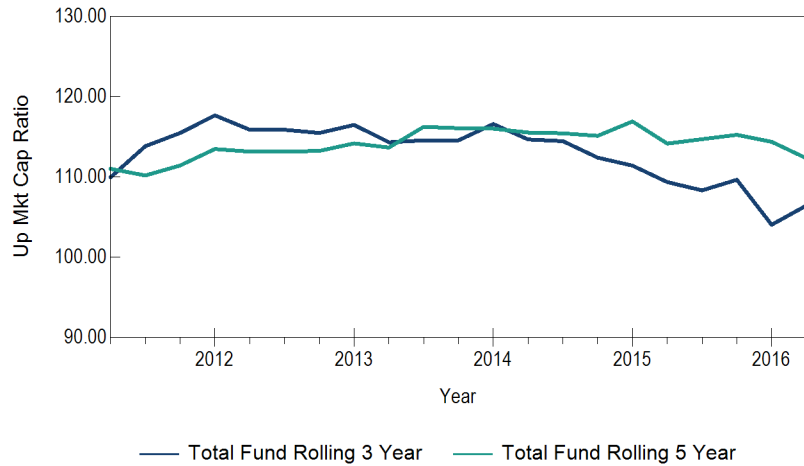
Rolling Information Ratio



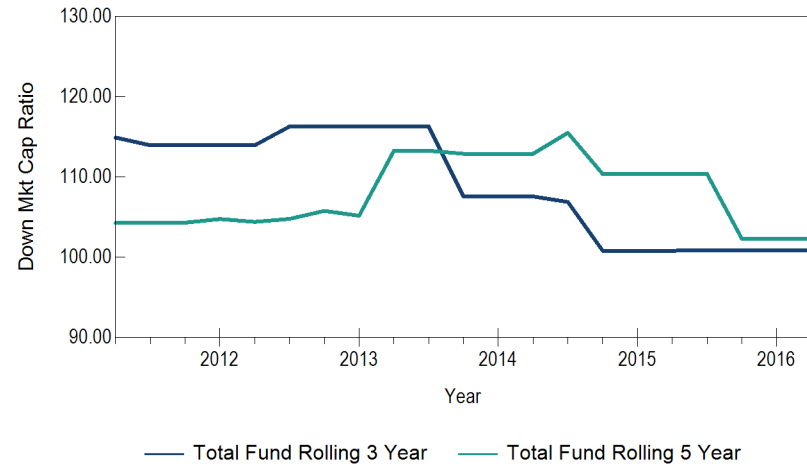
Rolling Tracking Error



Rolling Up Market Capture Ratio (%)



Rolling Down Market Capture Ratio (%)



Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
<b>Total Fund</b>	<b>744,823,708</b>	<b>100.0</b>	<b>4.7</b>	<b>9.1</b>	<b>11.4</b>	<b>5.1</b>	<b>7.5</b>	<b>5.8</b>	<b>7.7</b>	<b>0.0</b>	<b>4.8</b>	<b>14.8</b>	<b>14.6</b>	<b>9.3</b>	<b>Mar-89</b>
Policy Index			4.3	8.7	11.1	4.7	6.7	5.1	8.3	-1.2	4.9	13.5	11.2	--	Mar-89
InvestorForce Public DB Gross Rank			25	46	41	61	56	36	50	53	74	59	6	1	Mar-89
Total Fund ex Parametric			4.7	9.1	11.4	5.1	7.5	5.7	7.7	0.0	4.9	14.7	14.2	9.3	Mar-89
Policy Index			4.3	8.7	11.1	4.7	6.7	5.1	8.3	-1.2	4.9	13.5	11.2	--	Mar-89
InvestorForce Public DB Gross Rank			25	46	40	59	57	38	50	53	72	59	11	1	Mar-89
<b>Total Domestic Equity</b>	<b>246,075,610</b>	<b>33.0</b>	<b>5.8</b>	<b>15.1</b>	<b>18.1</b>	<b>9.0</b>	<b>12.9</b>	<b>8.1</b>	<b>12.9</b>	<b>0.3</b>	<b>10.2</b>	<b>33.9</b>	<b>17.1</b>		
Russell 3000			5.7	15.0	18.1	9.8	13.2	7.5	12.7	0.5	12.6	33.6	16.4		
eA All US Equity Gross Rank			40	58	51	47	52	52	49	42	51	62	37		
BlackRock Russell 3000	246,075,610	33.0	5.8	15.1	18.1	--	--	--	12.9	--	--	--	--	13.1	Dec-15
Russell 3000			5.7	15.0	18.1	--	--	--	12.7	--	--	--	--	12.3	Dec-15
eA US All Cap Core Equity Gross Rank			43	48	37	--	--	--	35	--	--	--	--	56	Dec-15
<b>Total International Equity</b>	<b>193,724,876</b>	<b>26.0</b>	<b>9.0</b>	<b>15.2</b>	<b>15.1</b>	<b>1.4</b>	<b>5.0</b>	<b>2.0</b>	<b>4.7</b>	<b>-3.5</b>	<b>-4.4</b>	<b>14.0</b>	<b>19.3</b>		
MSCI ACWI ex USA Gross			8.0	14.2	13.7	1.0	4.8	1.8	5.0	-5.3	-3.4	15.8	17.4		
eA ACWI ex-US All Cap Equity Gross Rank			45	39	33	61	82	72	32	77	70	92	54		
BlackRock International Equity	134,569,730	18.1	7.4	13.6	12.2	0.9	6.2	1.4	1.5	-0.5	-4.7	23.2	17.8	7.3	Jul-03
MSCI EAFE Gross			7.4	13.6	12.2	1.0	6.3	1.5	1.5	-0.4	-4.5	23.3	17.9	7.4	Jul-03
eA All EAFE Equity Gross Rank			61	46	42	77	76	81	47	67	64	61	74	74	Jul-03
DFA Emerging Markets Value	28,637,952	3.8	14.4	24.6	26.4	2.8	1.7	3.5	20.5	-18.3	-3.9	-3.2	20.1	4.3	Jan-07
MSCI Emerging Markets Gross			11.5	16.7	17.7	1.5	1.2	3.1	11.6	-14.6	-1.8	-2.3	18.6	3.2	Jan-07
eA Emg Mkts Equity Gross Rank			14	5	7	52	75	69	7	92	84	84	56	40	Jan-07
Harding Loevner Emerging Markets	30,517,194	4.1	11.7	--	--	--	--	--	--	--	--	--	--	10.4	Jul-16
MSCI Emerging Markets Gross			11.5	--	--	--	--	--	--	--	--	--	--	11.1	Jul-16
eA Emg Mkts Equity Gross Rank			63	--	--	--	--	--	--	--	--	--	--	14	Jul-16
<b>Total Fixed Income</b>	<b>218,461,190</b>	<b>29.3</b>	<b>1.2</b>	<b>0.4</b>	<b>3.2</b>	<b>3.3</b>	<b>3.4</b>	<b>5.8</b>	<b>5.1</b>	<b>-0.3</b>	<b>5.9</b>	<b>-1.7</b>	<b>9.6</b>		
BBgBarc US Aggregate TR			0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2		
eA All US Fixed Inc Gross Rank			43	41	34	41	45	25	36	74	34	78	28		
Bradford & Marzec Fixed	109,142,764	14.7	1.3	0.3	3.4	4.0	4.0	6.1	5.1	1.2	7.0	-0.4	8.8	6.7	Dec-92
BBgBarc US Aggregate TR			0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2	5.6	Dec-92
eA US Core Plus Fixed Inc Gross Rank			64	64	50	17	36	18	45	15	16	52	45	45	Dec-92
MackKay Shields Core Plus Opportunities	88,053,697	11.8	1.2	0.6	3.3	--	--	--	5.1	--	--	--	--	1.4	Mar-15
BBgBarc US Aggregate TR			0.8	-1.7	0.4	--	--	--	2.6	--	--	--	--	1.4	Mar-15
eA US Core Plus Fixed Inc Gross Rank			72	52	55	--	--	--	46	--	--	--	--	88	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 12/10/2015. Harding Loevner funded 7/5/2016. Parametric liquidated 7/5/2016. Vontobel liquidated 7/13/2016. Gresham MTAP liquidated 8/22/2016. BlackRock Commodities liquidated 9/2/2016.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
BlackRock US TIPS	21,264,728	2.9	1.3	0.0	1.7	2.2	1.1	--	4.8	-1.2	3.6	-8.5	7.1	4.4	Apr-07
BBgBarc US TIPS TR			1.3	-0.2	1.5	2.0	1.0	--	4.7	-1.4	3.6	-8.6	7.0	4.2	Apr-07
eA TIPS / Infl Indexed Fixed Inc Gross Rank			47	58	44	33	45	--	37	43	45	62	59	70	Apr-07
<b>Total Real Estate</b>	<b>64,428,017</b>	<b>8.7</b>	<b>1.7</b>	<b>4.7</b>	<b>6.4</b>	<b>11.8</b>	<b>11.6</b>	<b>5.0</b>	<b>7.1</b>	<b>16.1</b>	<b>13.0</b>	<b>12.6</b>	<b>10.6</b>		
NCREIF Property Index			1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5		
NCREIF-ODCE			1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9		
ASB Real Estate	31,655,884	4.3	1.1	3.7	5.1	11.4	--	--	5.6	17.3	13.5	13.7	--	12.0	Dec-12
NCREIF Property Index			1.6	5.1	7.3	10.6	--	--	8.0	13.3	11.8	11.0	--	10.7	Dec-12
NCREIF-ODCE			1.8	6.1	8.3	11.8	--	--	8.8	15.0	12.5	13.9	--	12.2	Dec-12
Clarion Lion	31,361,652	4.2	2.3	6.0	8.1	12.8	12.3	4.5	9.1	15.7	13.2	12.8	10.9	4.9	Dec-06
NCREIF Property Index			1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5	6.9	Dec-06
NCREIF-ODCE			1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9	5.9	Dec-06
1221 State St. Corp	1,410,480	0.2	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	0.1	-0.5	Sep-08
<b>Total Cash</b>	<b>4,080,454</b>	<b>0.5</b>													
Cash Account	4,080,454	0.5	0.0	0.0	0.0	0.0	0.1	--	0.0	0.0	0.0	0.0	0.4		
91 Day T-Bills			0.1	0.3	0.4	0.2	0.1	--	0.3	0.0	0.0	0.0	0.1		

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. Harding Loevner funded 7/5/2016. Parametric liquidated 7/5/2016. Vontobel liquidated 7/13/2016. Gresham MTAP liquidated 8/22/2016. BlackRock Commodities liquidated 9/2/2016.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
<b>Total Fund</b>	<b>744,823,708</b>	<b>100.0</b>	<b>4.7</b>	<b>8.9</b>	<b>11.1</b>	<b>4.7</b>	<b>7.1</b>	<b>5.4</b>	<b>7.4</b>	<b>-0.4</b>	<b>4.4</b>	<b>14.5</b>	<b>14.2</b>	<b>8.9</b>	<b>Mar-89</b>
Policy Index			4.3	8.7	11.1	4.7	6.7	5.1	8.3	-1.2	4.9	13.5	11.2	--	Mar-89
Total Fund ex Parametric			4.7	8.9	11.1	4.7	7.1	5.3	7.4	-0.4	4.4	14.4	13.8	8.9	Mar-89
Policy Index			4.3	8.7	11.1	4.7	6.7	5.1	8.3	-1.2	4.9	13.5	11.2	--	Mar-89
<b>Total Domestic Equity</b>	<b>246,075,610</b>	<b>33.0</b>	<b>5.7</b>	<b>15.1</b>	<b>18.1</b>	<b>8.9</b>	<b>12.7</b>	<b>7.8</b>	<b>12.8</b>	<b>0.1</b>	<b>10.0</b>	<b>33.6</b>	<b>16.9</b>		
Russell 3000			5.7	15.0	18.1	9.8	13.2	7.5	12.7	0.5	12.6	33.6	16.4		
BlackRock Russell 3000	246,075,610	33.0	5.7	15.1	18.1	--	--	--	12.8	--	--	--	--	13.1	Dec-15
Russell 3000			5.7	15.0	18.1	--	--	--	12.7	--	--	--	--	12.3	Dec-15
<b>Total International Equity</b>	<b>193,724,876</b>	<b>26.0</b>	<b>8.9</b>	<b>14.9</b>	<b>14.8</b>	<b>1.0</b>	<b>4.5</b>	<b>1.5</b>	<b>4.4</b>	<b>-4.0</b>	<b>-4.9</b>	<b>13.4</b>	<b>18.6</b>		
MSCI ACWI ex USA Gross			8.0	14.2	13.7	1.0	4.8	1.8	5.0	-5.3	-3.4	15.8	17.4		
BlackRock International Equity	134,569,730	18.1	7.3	13.5	12.1	0.7	6.1	1.3	1.3	-0.6	-4.8	22.9	17.6	7.2	Jul-03
MSCI EAFE Gross			7.4	13.6	12.2	1.0	6.3	1.5	1.5	-0.4	-4.5	23.3	17.9	7.4	Jul-03
DFA Emerging Markets Value	28,637,952	3.8	14.2	24.1	25.7	2.3	1.1	2.9	19.8	-18.8	-4.4	-3.8	19.4	3.7	Jan-07
MSCI Emerging Markets Gross			11.5	16.7	17.7	1.5	1.2	3.1	11.6	-14.6	-1.8	-2.3	18.6	3.2	Jan-07
Harding Loevner Emerging Markets	30,517,194	4.1	11.5	--	--	--	--	--	--	--	--	--	--	9.6	Jul-16
MSCI Emerging Markets Gross			11.5	--	--	--	--	--	--	--	--	--	--	11.1	Jul-16
<b>Total Fixed Income</b>	<b>218,461,190</b>	<b>29.3</b>	<b>1.2</b>	<b>0.2</b>	<b>2.9</b>	<b>3.0</b>	<b>3.1</b>	<b>5.5</b>	<b>4.8</b>	<b>-0.6</b>	<b>5.6</b>	<b>-2.0</b>	<b>9.3</b>		
BBgBarc US Aggregate TR			0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2		
Bradford & Marzec Fixed	109,142,764	14.7	1.2	0.1	3.1	3.7	3.7	5.8	4.8	0.9	6.7	-0.8	8.5	6.4	Dec-92
BBgBarc US Aggregate TR			0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2	5.6	Dec-92
MacKay Shields Core Plus Opportunities	88,053,697	11.8	1.1	0.3	2.9	--	--	--	4.7	--	--	--	--	1.1	Mar-15
BBgBarc US Aggregate TR			0.8	-1.7	0.4	--	--	--	2.6	--	--	--	--	1.4	Mar-15
BlackRock US TIPS	21,264,728	2.9	1.3	-0.1	1.6	2.1	1.0	--	4.8	-1.3	3.6	-8.6	7.0	4.3	Apr-07
BBgBarc US TIPS TR			1.3	-0.2	1.5	2.0	1.0	--	4.7	-1.4	3.6	-8.6	7.0	4.2	Apr-07
<b>Total Real Estate</b>	<b>64,428,017</b>	<b>8.7</b>	<b>1.7</b>	<b>4.2</b>	<b>5.7</b>	<b>10.7</b>	<b>10.8</b>	<b>4.3</b>	<b>6.1</b>	<b>15.0</b>	<b>11.6</b>	<b>12.1</b>	<b>10.3</b>		
NCREIF Property Index			1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5		
NCREIF-ODCE			1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9		
ASB Real Estate	31,655,884	4.3	1.1	3.2	4.4	10.5	--	--	4.6	16.2	12.5	12.5	--	10.9	Dec-12
NCREIF Property Index			1.6	5.1	7.3	10.6	--	--	8.0	13.3	11.8	11.0	--	10.7	Dec-12
NCREIF-ODCE			1.8	6.1	8.3	11.8	--	--	8.8	15.0	12.5	13.9	--	12.2	Dec-12
Clarion Lion	31,361,652	4.2	2.3	5.5	7.3	11.8	11.3	3.6	8.0	14.6	12.2	11.8	9.9	3.9	Dec-06
NCREIF Property Index			1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5	6.9	Dec-06
NCREIF-ODCE			1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9	5.9	Dec-06
1221 State St. Corp	1,410,480	0.2	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	0.1	-0.5	Sep-08



Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
<b>Total Cash</b>	<b>4,080,454</b>	<b>0.5</b>													
Cash Account	4,080,454	0.5	0.0	0.0	0.0	0.0	0.1	--	0.0	0.0	0.0	0.0	0.4		
91 Day T-Bills			0.1	0.3	0.4	0.2	0.1	--	0.3	0.0	0.0	0.0	0.1		

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

Period Ending: March 31, 2017

3 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
BlackRock International Equity	0.74%	-0.23%	10.83%	-0.23%	1.00	0.05%	1.00	0.05	-4.17	98.55%	101.11%
DFA Emerging Markets Value	2.27%	0.73%	17.62%	0.55%	1.11	3.99%	0.96	0.12	0.18	112.42%	104.18%
Bradford & Marzec Fixed	3.71%	1.03%	3.65%	0.98%	1.02	0.98%	0.93	0.98	1.05	119.88%	89.82%
BlackRock US TIPS	2.10%	0.07%	4.35%	0.05%	1.01	0.12%	1.00	0.45	0.55	102.16%	100.98%
ASB Real Estate	10.46%	-0.12%	3.10%	-6.67%	1.62	2.38%	0.48	3.33	-0.05	98.74%	--
Clarion Lion	11.81%	1.23%	1.93%	0.35%	1.08	1.29%	0.56	6.04	0.95	112.95%	--

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	6.05%	-0.27%	11.26%	-0.26%	1.00	0.05%	1.00	0.53	-5.19	98.42%	101.29%
DFA Emerging Markets Value	1.08%	-0.09%	16.02%	-0.23%	1.12	3.46%	0.96	0.06	-0.03	111.31%	107.66%
Bradford & Marzec Fixed	3.72%	1.38%	3.52%	1.23%	1.07	1.02%	0.92	1.03	1.36	130.66%	82.42%
BlackRock US TIPS	1.01%	0.04%	5.19%	0.03%	1.01	0.10%	1.00	0.17	0.38	101.58%	100.66%
Clarion Lion	11.26%	0.57%	1.80%	-0.60%	1.11	1.39%	0.41	6.20	0.41	106.58%	--

Private Equity  
Non Marketable Securities Overview

Period Ending: March 31, 2017

Vintage	Manager & Fund Name	Estimated 3/31 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	\$5,729,992	\$10,000,000	\$6,025,000	60%	\$3,975,000	\$2,078,975	\$6,347,410	34.5%	129.6%	15.7%	12/31/16		
2011	HarbourVest IX-Credit	\$1,115,802	\$2,000,000	\$1,230,000	62%	\$770,000	\$478,105	\$1,103,047	38.9%	129.6%	13.3%	12/31/16		
2008	HarbourVest Int'l VI <sup>6</sup>	\$2,623,277	\$3,712,930	\$2,425,884	65%	\$1,287,046	\$904,531	\$2,616,693	37.3%	145.4%	15.8%	12/31/16		
2011	HarbourVest IX-Venture	\$3,592,753	\$4,000,000	\$3,300,000	83%	\$700,000	\$915,406	\$3,639,823	27.7%	136.6%	15.3%	12/31/16		
2010	KKR Mezzanine <sup>7</sup>	\$4,159,435	\$10,000,000	\$10,000,000	100%	\$0	\$10,409,943	\$4,159,435	104.1%	145.7%	8.0%	12/31/16		
2011	PIMCO BRAVO <sup>4</sup>	\$832,303	\$10,000,000	\$10,000,000	100%	\$0	\$18,311,350	\$832,303	183.1%	191.4%	22.2%	3/31/16		
<b>Total Alternative Illiquids</b>		<b>\$18,053,562</b>	\$39,712,930	\$32,980,884	83%	\$6,732,046	\$33,098,310	\$18,698,712	56.7%	157.1%				
<b>% of Portfolio (Market Value)</b>		<b>2.4%</b>												
									<b>Management Fee</b>	<b>Admin Fee</b>	<b>Interest Expense</b>	<b>Other Expense</b>	<b>Total Expense<sup>8</sup></b>	
									HarbourVest IX-Buyout	\$24,900	\$0	\$0	\$424	\$25,324
									HarbourVest IX-Credit	\$4,973	\$0	\$0	\$1,174	\$6,147
									HarbourVest Int'l VI	\$7,064	\$0	\$0	\$324	\$7,389
									HarbourVest IX-Venture	\$9,978	\$0	\$0	\$352	\$10,330
									KKR Mezzanine	\$15,577	\$0	\$0	\$0	\$15,577
									PIMCO BRAVO	\$4,692	\$1,035	\$341	\$1,728	\$7,796
										\$67,184	\$1,035	\$341	\$4,002	<b>\$72,563</b>

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

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

<sup>3</sup>Last known market value + capital calls - distributions (MV's as of 12/31/16)

<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 XE™.

<sup>8</sup>KKR: Total capital called is \$11,718,569, which includes recycled distributions. Unused capital commitment is \$1,054,718 after including distribution proceeds available for reinvestment

<sup>8</sup>All fees and expenses are for 4Q 2016

Total Fund  
Financial Reconciliation (Last Three Months)

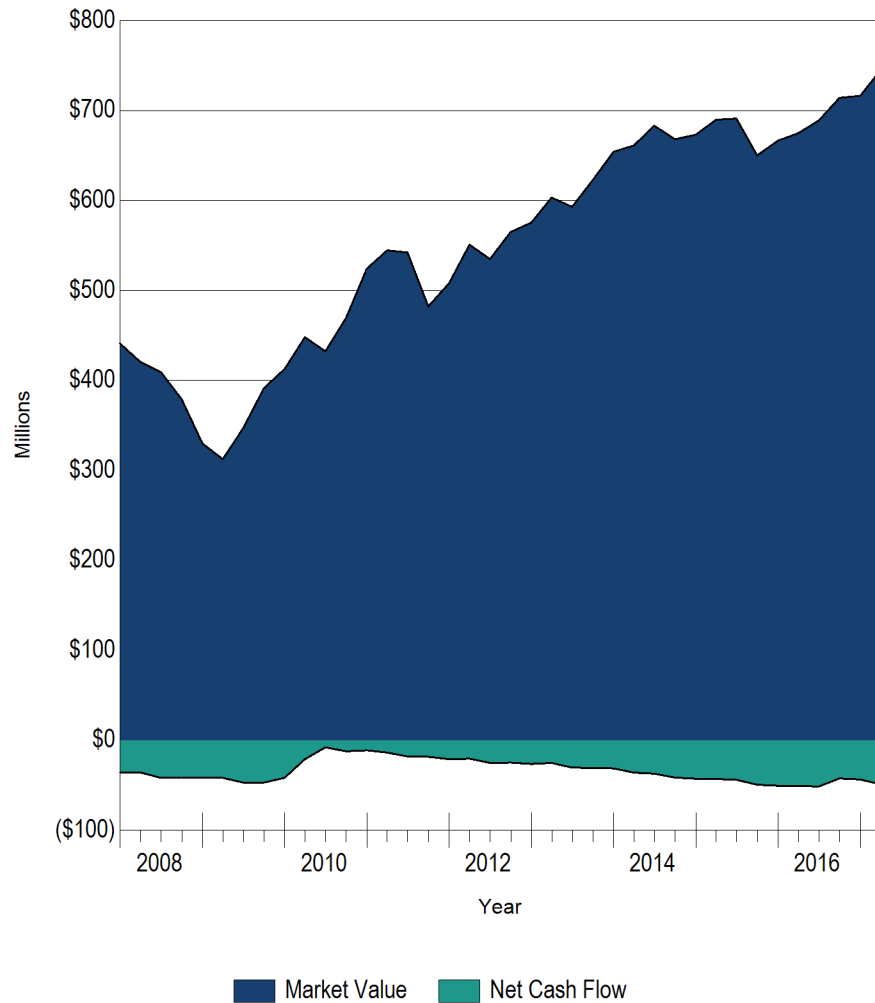
Period Ending: March 31, 2017

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	\$237,467,269	\$0	(\$5,000,000)	\$0	(\$5,000,000)	\$0	\$13,608,341	\$13,608,341	\$246,075,610
DFA Emerging Markets	\$25,077,841	\$0	\$0	\$0	\$0	\$0	\$3,560,111	\$3,560,111	\$28,637,952
Harding Loevner Emerging Markets	\$27,309,340	\$0	\$0	\$0	\$0	\$0	\$3,207,854	\$3,207,854	\$30,517,194
Blackrock International Equity	\$125,326,864	\$0	\$0	\$0	\$0	\$0	\$9,242,866	\$9,242,866	\$134,569,730
Bradford & Marzec, Inc.	\$107,784,008	\$0	\$0	\$0	\$0	\$936,019	\$422,738	\$1,358,757	\$109,142,764
MacKay Shields Core Plus Opp.	\$87,102,536	\$0	\$0	\$0	\$0	\$0	\$951,161	\$951,161	\$88,053,697
Blackrock US TIPS	\$20,984,326	\$0	\$0	\$0	\$0	\$0	\$280,401	\$280,401	\$21,264,728
Clarion Lion Properties	\$30,642,256	\$304,862	(\$311,211)	(\$80,671)	(\$87,020)	\$344,510	\$461,906	\$806,416	\$31,361,652
ICERS State Street Real Estate	\$1,439,869	\$33,292	(\$62,689)	\$0	(\$29,397)	\$8	(\$0)	\$8	\$1,410,480
ASB Allegiance Real Estate	\$31,241,234	\$71,855	\$0	(\$71,855)	\$0	\$273,209	\$141,441	\$414,650	\$31,655,884
PIMCO BRAVO <sup>1</sup>	\$832,303	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$832,303
KKR Mezzanine I <sup>1</sup>	\$4,061,530	\$0	\$0	(\$15,577)	(\$15,577)	\$0	\$113,482	\$113,482	\$4,159,435
HarbourVest International VI <sup>1</sup>	\$2,666,318	\$232,642	(\$231,678)	(\$7,064)	(\$6,101)	(\$12)	(\$36,929)	(\$36,940)	\$2,623,277
HarbourVest Buyout IX <sup>1</sup>	\$6,193,132	\$0	(\$617,418)	(\$24,900)	(\$642,318)	\$533	\$178,645	\$179,178	\$5,729,992
HarbourVest Credit Opportunities IX <sup>1</sup>	\$1,021,291	\$90,000	(\$77,245)	(\$4,973)	\$7,782	\$1,512	\$85,217	\$86,729	\$1,115,802
HarbourVest Venture IX <sup>1</sup>	\$3,602,016	\$120,000	(\$167,070)	(\$9,978)	(\$57,048)	\$11	\$47,774	\$47,785	\$3,592,753
Cash	\$3,615,459	\$542,017	(\$77,023)	\$0	\$464,994	\$0	\$0	\$0	\$4,080,454
<b>Totals</b>	<b>\$716,367,593</b>	<b>\$1,394,668</b>	<b>(\$6,544,334)</b>	<b>(\$215,018)</b>	<b>(\$5,364,684)</b>	<b>\$1,555,790</b>	<b>\$32,265,009</b>	<b>\$33,820,799</b>	<b>\$744,823,708</b>

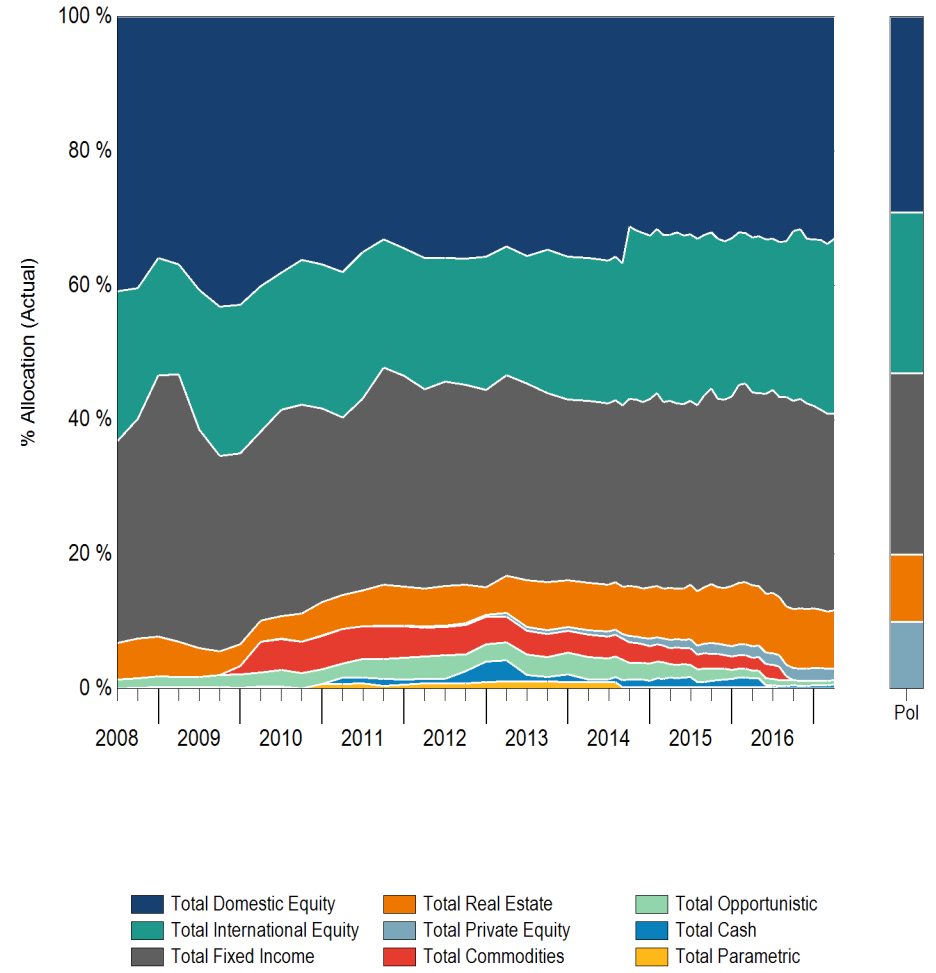
<sup>1</sup>Market value as of 12/31/2016 +/- 1Q calls and distributions

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

Market Value History

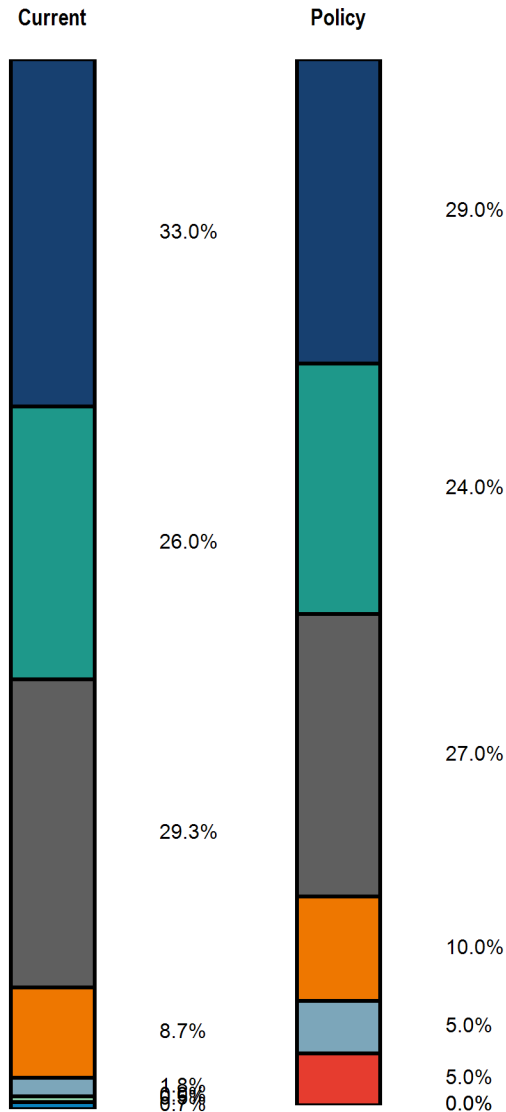


Asset Allocation History



Total Fund  
Asset Allocation vs. Policy

Period Ending: March 31, 2017



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	\$246,075,610	33.0%	29.0%	\$30,076,735	19.0% - 39.0%	Yes
International Equity	\$193,724,876	26.0%	24.0%	\$14,967,186	14.0% - 34.0%	Yes
Domestic Fixed Income	\$218,461,190	29.3%	27.0%	\$17,358,788	17.0% - 40.0%	Yes
Real Estate	\$64,428,017	8.7%	10.0%	-\$10,054,354	5.0% - 15.0%	Yes
Private Equity	\$13,061,824	1.8%	5.0%	-\$24,179,361	0.0% - 10.0%	Yes
Private Credit	--	--	5.0%	-\$37,241,185	0.0% - 10.0%	Yes
Cash and Equivalents	\$4,080,454	0.5%	0.0%	\$4,080,454	0.0% - 0.0%	No
Other	\$4,991,738	0.7%	0.0%	\$4,991,738	0.0% - 10.0%	Yes
<b>Total</b>	<b>\$744,823,708</b>	<b>100.0%</b>	<b>100.0%</b>			

**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
<i>Domestic Equity</i> BlackRock	Russell 3000 Index										
<i>International Equity</i> BlackRock	MSCI EAFE Index	0.7%	1.0%	No			6.1%	6.3%	No		
Dimensional Fund Advisors	MSCI Emerging Markets Index + 150 basis points	2.3%	3.0%	No	52	No	1.1%	2.7%	No	75	No
Harding Loevner	MSCI Emerging Markets Index + 150 basis points										
<i>Fixed Income</i> Bradford & Marzec	Barclays Credit Aggregate Bond Index + 50 basis points	3.7%	3.2%	Yes	17	Yes	3.7%	2.8%	Yes	36	Yes
MacKay Shields	Barclays Credit Aggregate Bond Index + 50 basis points										
BlackRock	Barclays Credit US TIPS Index	2.1%	2.0%	Yes			1.0%	1.0%	No		
<i>Alternatives</i> Clarion	NCREIF Property Index	11.8%	10.6%	Yes			11.3%	10.7%	Yes		
ASB Allegiance	NCREIF Property Index	10.5%	10.6%	No							
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
<i>Domestic Equity</i> BlackRock	Russell 3000 Index										
<i>International Equity</i> BlackRock	MSCI EAFE Index	1.3%	1.5%	No							
Dimensional Fund Advisors	MSCI Emerging Markets Index + 150 basis points	2.9%	4.6%	No	69	No					
Harding Loevner	MSCI Emerging Markets Index + 150 basis points										
<i>Fixed Income</i> Bradford & Marzec	Barclays Credit Aggregate Bond Index + 50 basis points	5.8%	4.8%	Yes	18	Yes	5.7%	5.1%	Yes		
MacKay Shields	Barclays Credit Aggregate Bond Index + 50 basis points										
BlackRock	Barclays Credit US TIPS Index										
<i>Alternatives</i> Clarion	NCREIF Property Index	3.6%	6.7%	No							
ASB Allegiance	NCREIF Property Index										
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: March 31, 2017

Account	Fee Schedule	Market Value As of 3/31/2017	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
1221 State St. Corp	No Fee	\$1,410,480	0.2%	--	--
ASB Real Estate	1.25% of First \$5.0 Mil, 1.00% of Next \$10.0 Mil, 0.75% Thereafter	\$31,655,884	4.3%	\$287,419	0.91%
BlackRock International Equity	0.15% of First \$50.0 Mil, 0.10% of Next \$50.0 Mil	\$134,569,730	18.1%	\$125,000	0.09%
BlackRock Russell 3000	0.03% of Assets	\$246,075,610	33.0%	\$73,823	0.03%
BlackRock US TIPS	0.07% of Assets	\$21,264,728	2.9%	\$14,885	0.07%
Bradford & Marzec Fixed	0.29% of First \$100.0 Mil, 0.25% of Next \$100.0 Mil	\$109,142,764	14.7%	\$307,857	0.28%
Cash Account	No Fee	\$4,080,454	0.5%	--	--
Clarion Lion	1.25% of First \$10.0 Mil, 1.00% of Next \$15.0 Mil, 0.85% Thereafter	\$31,361,652	4.2%	\$329,074	1.05%
DFA Emerging Markets Value	0.56% of Assets	\$28,637,952	3.8%	\$160,373	0.56%
Harbourvest Buyout IX	\$100,000 Annually	\$5,729,992	0.8%	\$100,000	1.75%
Harbourvest Credit Ops IX	\$20,000 Annually	\$1,115,802	0.1%	\$20,000	1.79%
Harbourvest International PE VI	\$35,000 Annually	\$2,623,277	0.4%	\$35,000	1.33%
Harbourvest Venture IX	\$40,000 Annually	\$3,592,753	0.5%	\$40,000	1.11%
Harding Loevner Emerging Markets	1.05% of Assets	\$30,517,194	4.1%	\$320,431	1.05%
KKR Mezzanine Partners	\$150,000 Annually	\$4,159,435	0.6%	\$150,000	3.61%
Mackay Shields Core Plus Opportunities	0.35% of Assets	\$88,053,697	11.8%	\$308,188	0.35%
PIMCO BRAVO	1.90% of Assets	\$832,303	0.1%	\$15,814	1.90%
Verus Advisory Fee	\$175,000 Annually				
<b>Investment Management Fee</b>		<b>\$744,823,708</b>	<b>100.0%</b>	<b>\$2,287,863</b>	<b>0.31%</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)

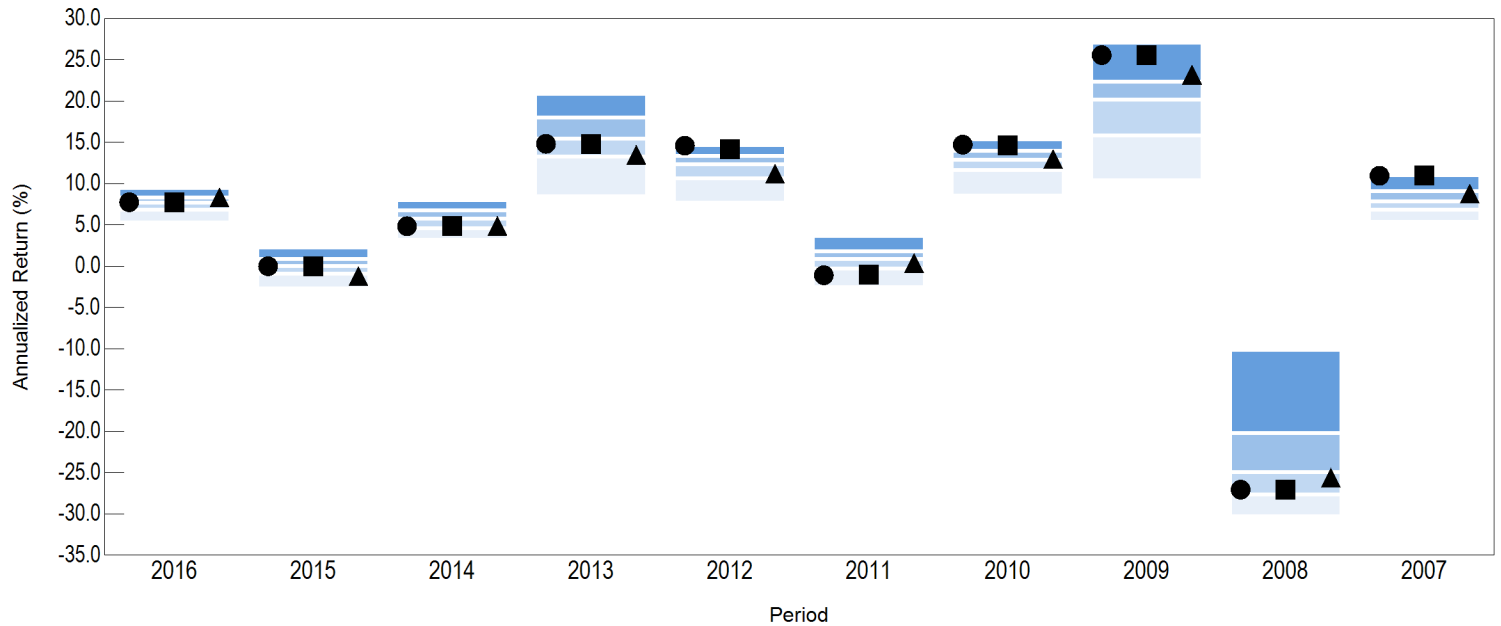
Period Ending: March 31, 2017

Total Fund Cumulative Performance vs. InvestorForce Public DB Gross



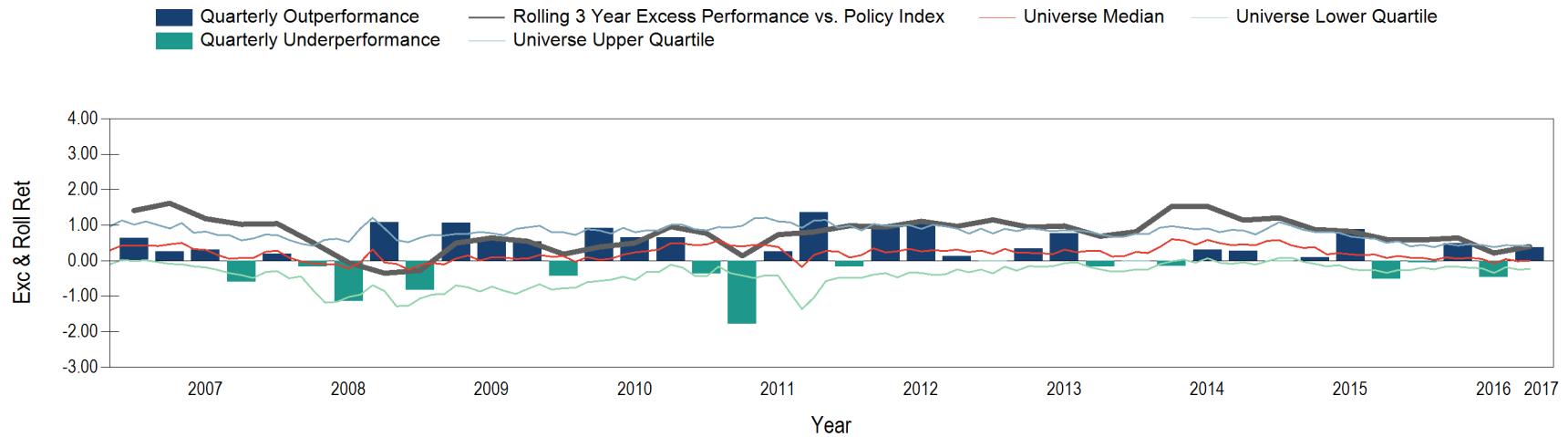
	Return (Rank)							
	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
5th Percentile	5.3	5.3	11.4	13.4	6.6	9.1	9.3	6.6
25th Percentile	4.7	4.7	9.9	12.1	6.1	8.3	8.4	5.9
Median	4.3	4.3	8.9	11.1	5.4	7.6	7.8	5.5
75th Percentile	4.0	4.0	7.9	10.1	4.8	6.8	7.2	4.9
95th Percentile	3.1	3.1	5.8	8.4	3.6	5.6	6.2	4.0
# of Portfolios	257	257	256	249	228	210	181	166
● Total Fund	4.7 (25)	4.7 (25)	9.1 (46)	11.4 (41)	5.1 (61)	7.5 (56)	7.9 (45)	5.8 (36)
■ Total Fund ex Parametric	4.7 (25)	4.7 (25)	9.1 (46)	11.4 (40)	5.1 (59)	7.5 (57)	7.9 (49)	5.7 (38)
▲ Policy Index	4.3 (48)	4.3 (48)	8.7 (58)	11.1 (51)	4.7 (77)	6.7 (81)	7.2 (76)	5.1 (68)

Total Fund Consecutive Periods vs. InvestorForce Public DB Gross

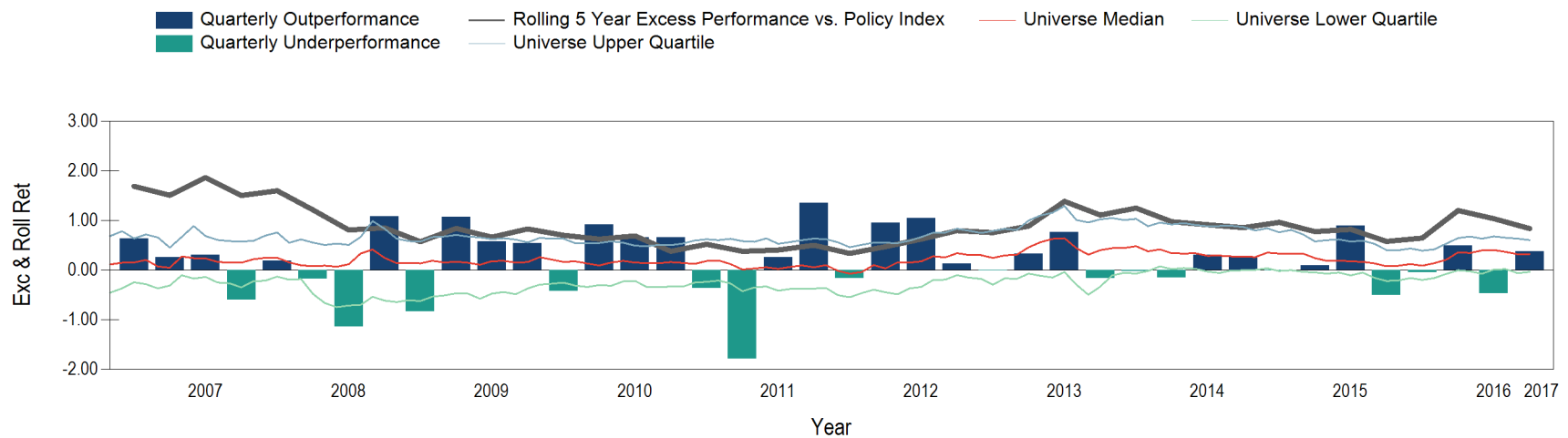


	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>5th Percentile</b>	9.4	2.2	8.0	20.8	14.6	3.6	15.4	27.0	-10.1	11.0
<b>25th Percentile</b>	8.4	0.9	6.8	18.0	13.4	1.9	14.0	22.4	-20.1	9.1
<b>Median</b>	7.7	0.1	5.8	15.5	12.4	0.9	12.9	20.2	-24.9	7.9
<b>75th Percentile</b>	6.9	-0.9	4.6	13.3	10.7	-0.3	11.7	15.9	-27.6	6.9
<b>95th Percentile</b>	5.3	-2.6	3.2	8.5	7.8	-2.5	8.6	10.5	-30.3	5.4
<b># of Portfolios</b>	305	316	248	231	236	206	188	184	181	177
<b>● Total Fund</b>	7.7 (50)	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)
<b>■ Total Fund ex Parametric</b>	7.7 (50)	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)
<b>▲ Policy Index</b>	8.3 (26)	-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)

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance

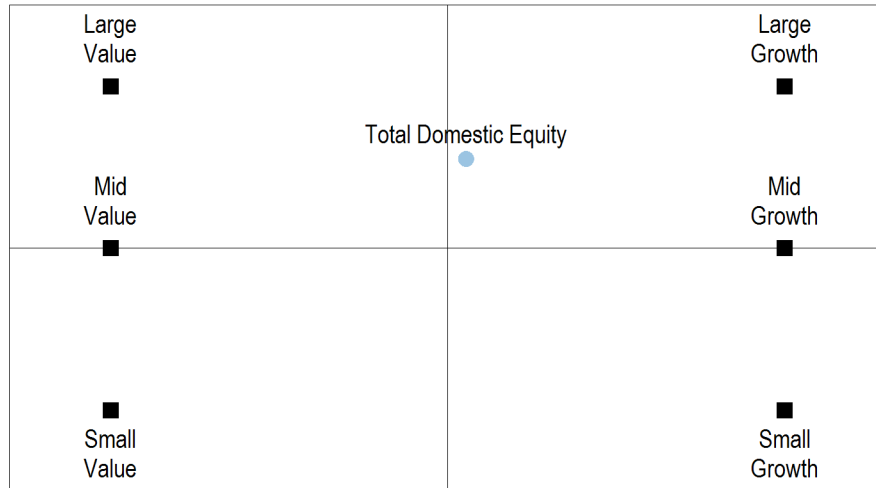


Total Domestic Equity  
Asset Class Overview (Gross of Fees)

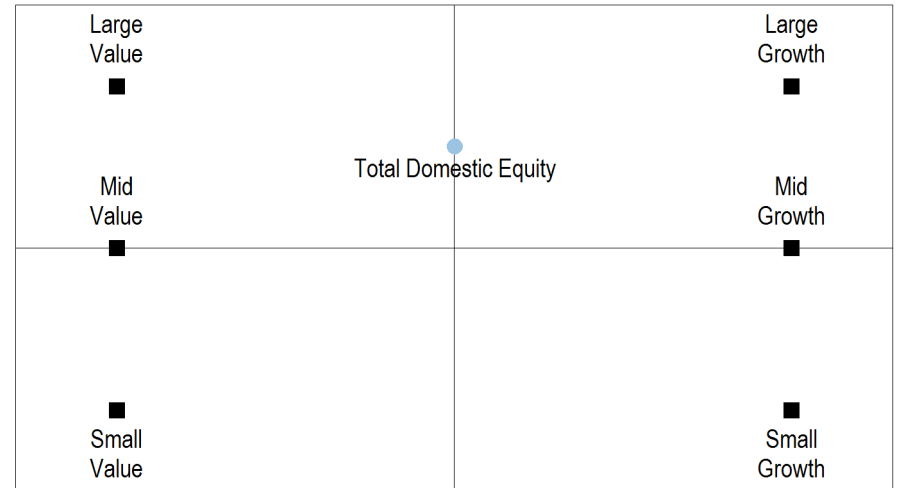
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Domestic Equity</b>	<b>246,075,610</b>	<b>5.8</b>	<b>15.1</b>	<b>18.1</b>	<b>9.0</b>	<b>12.9</b>	<b>8.1</b>	<b>12.9</b>	<b>0.3</b>	<b>10.2</b>	<b>33.9</b>	<b>17.1</b>
<i>Russell 3000</i>		5.7	15.0	18.1	9.8	13.2	7.5	12.7	0.5	12.6	33.6	16.4
<i>eA All US Equity Gross Rank</i>		40	58	51	47	52	52	49	42	51	62	37
<b>BlackRock Russell 3000</b>	<b>246,075,610</b>	<b>5.8</b>	<b>15.1</b>	<b>18.1</b>	--	--	--	<b>12.9</b>	--	--	--	--
<i>Russell 3000</i>		5.7	15.0	18.1	--	--	--	12.7	--	--	--	--
<i>eA US All Cap Core Equity Gross Rank</i>		43	48	37	--	--	--	35	--	--	--	--

U.S. Effective Style Map  
3 Years Ending March 31, 2017



U.S. Effective Style Map  
5 Years Ending March 31, 2017



Total Domestic Equity  
 Asset Class Overview (Net of Fees)

Period Ending: March 31, 2017

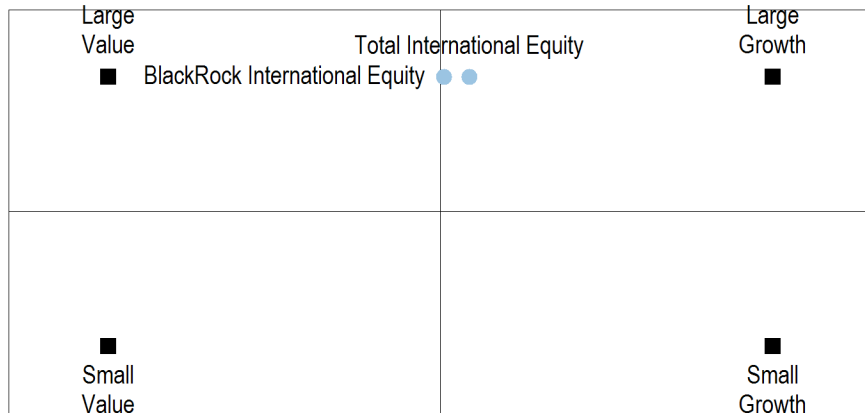
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Domestic Equity</b>	<b>246,075,610</b>	<b>5.7</b>	<b>15.1</b>	<b>18.1</b>	<b>8.9</b>	<b>12.7</b>	<b>7.8</b>	<b>12.8</b>	<b>0.1</b>	<b>10.0</b>	<b>33.6</b>	<b>16.9</b>
<i>Russell 3000</i>		5.7	15.0	18.1	9.8	13.2	7.5	12.7	0.5	12.6	33.6	16.4
BlackRock Russell 3000	246,075,610	5.7	15.1	18.1	--	--	--	12.8	--	--	--	--
<i>Russell 3000</i>		5.7	15.0	18.1	--	--	--	12.7	--	--	--	--

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

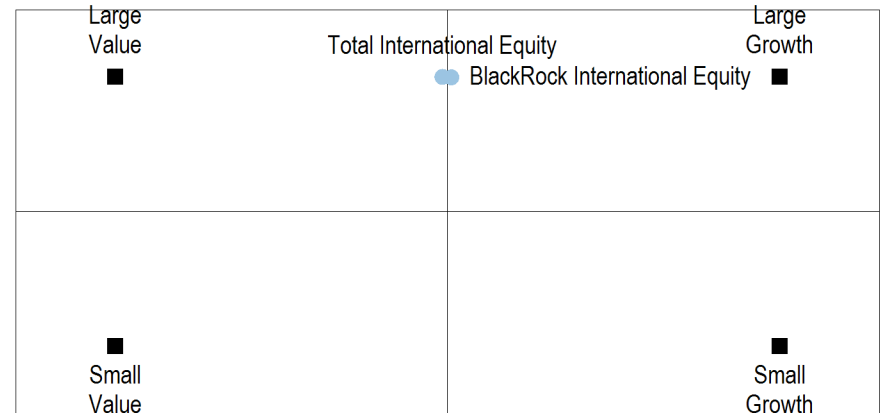
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total International Equity</b>	<b>193,724,876</b>	<b>9.0</b>	<b>15.2</b>	<b>15.1</b>	<b>1.4</b>	<b>5.0</b>	<b>2.0</b>	<b>4.7</b>	<b>-3.5</b>	<b>-4.4</b>	<b>14.0</b>	<b>19.3</b>
MSCI ACWI ex USA Gross		8.0	14.2	13.7	1.0	4.8	1.8	5.0	-5.3	-3.4	15.8	17.4
eA ACWI ex-US All Cap Equity Gross Rank		45	39	33	61	82	72	32	77	70	92	54
BlackRock International Equity	134,569,730	7.4	13.6	12.2	0.9	6.2	1.4	1.5	-0.5	-4.7	23.2	17.8
MSCI EAFE Gross		7.4	13.6	12.2	1.0	6.3	1.5	1.5	-0.4	-4.5	23.3	17.9
eA All EAFE Equity Gross Rank		61	46	42	77	76	81	47	67	64	61	74
DFA Emerging Markets Value	28,637,952	14.4	24.6	26.4	2.8	1.7	3.5	20.5	-18.3	-3.9	-3.2	20.1
MSCI Emerging Markets Gross		11.5	16.7	17.7	1.5	1.2	3.1	11.6	-14.6	-1.8	-2.3	18.6
eA Emg Mkts Equity Gross Rank		14	5	7	52	75	69	7	92	84	84	56
Harding Loevner Emerging Markets	30,517,194	11.7	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets Gross		11.5	--	--	--	--	--	--	--	--	--	--
eA Emg Mkts Equity Gross Rank		63	--	--	--	--	--	--	--	--	--	--

EAFE Effective Style Map  
3 Years Ending March 31, 2017



EAFE Effective Style Map  
5 Years Ending March 31, 2017

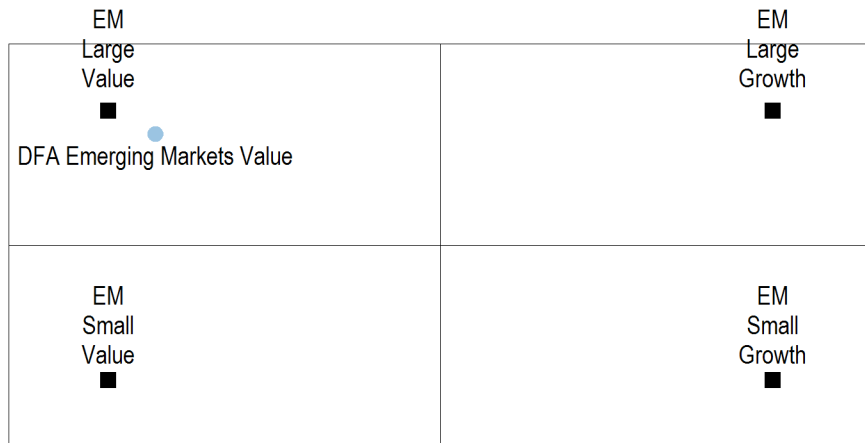


Total International Equity  
Asset Class Overview (Net of Fees)

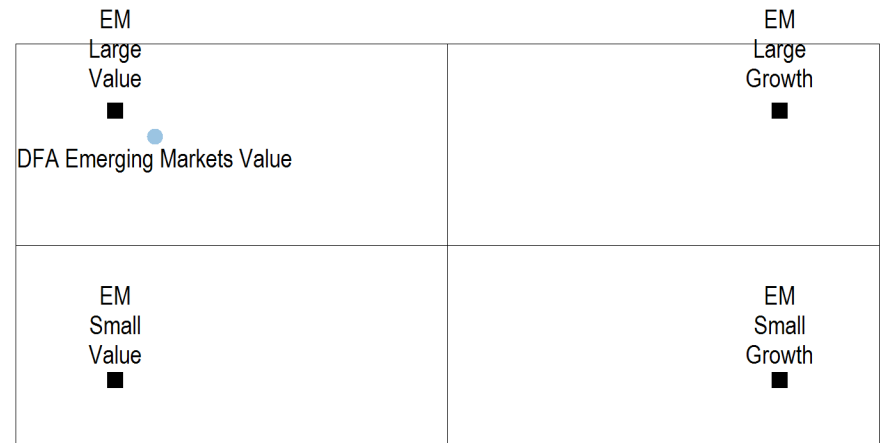
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total International Equity</b>	<b>193,724,876</b>	<b>8.9</b>	<b>14.9</b>	<b>14.8</b>	<b>1.0</b>	<b>4.5</b>	<b>1.5</b>	<b>4.4</b>	<b>-4.0</b>	<b>-4.9</b>	<b>13.4</b>	<b>18.6</b>
<i>MSCI ACWI ex USA Gross</i>		8.0	14.2	13.7	1.0	4.8	1.8	5.0	-5.3	-3.4	15.8	17.4
BlackRock International Equity	134,569,730	7.3	13.5	12.1	0.7	6.1	1.3	1.3	-0.6	-4.8	22.9	17.6
<i>MSCI EAFE Gross</i>		7.4	13.6	12.2	1.0	6.3	1.5	1.5	-0.4	-4.5	23.3	17.9
DFA Emerging Markets Value	28,637,952	14.2	24.1	25.7	2.3	1.1	2.9	19.8	-18.8	-4.4	-3.8	19.4
<i>MSCI Emerging Markets Gross</i>		11.5	16.7	17.7	1.5	1.2	3.1	11.6	-14.6	-1.8	-2.3	18.6
Harding Loevner Emerging Markets	30,517,194	11.5	--	--	--	--	--	--	--	--	--	--
<i>MSCI Emerging Markets Gross</i>		11.5	--	--	--	--	--	--	--	--	--	--

EM Effective Style Map  
3 Years Ending March 31, 2017

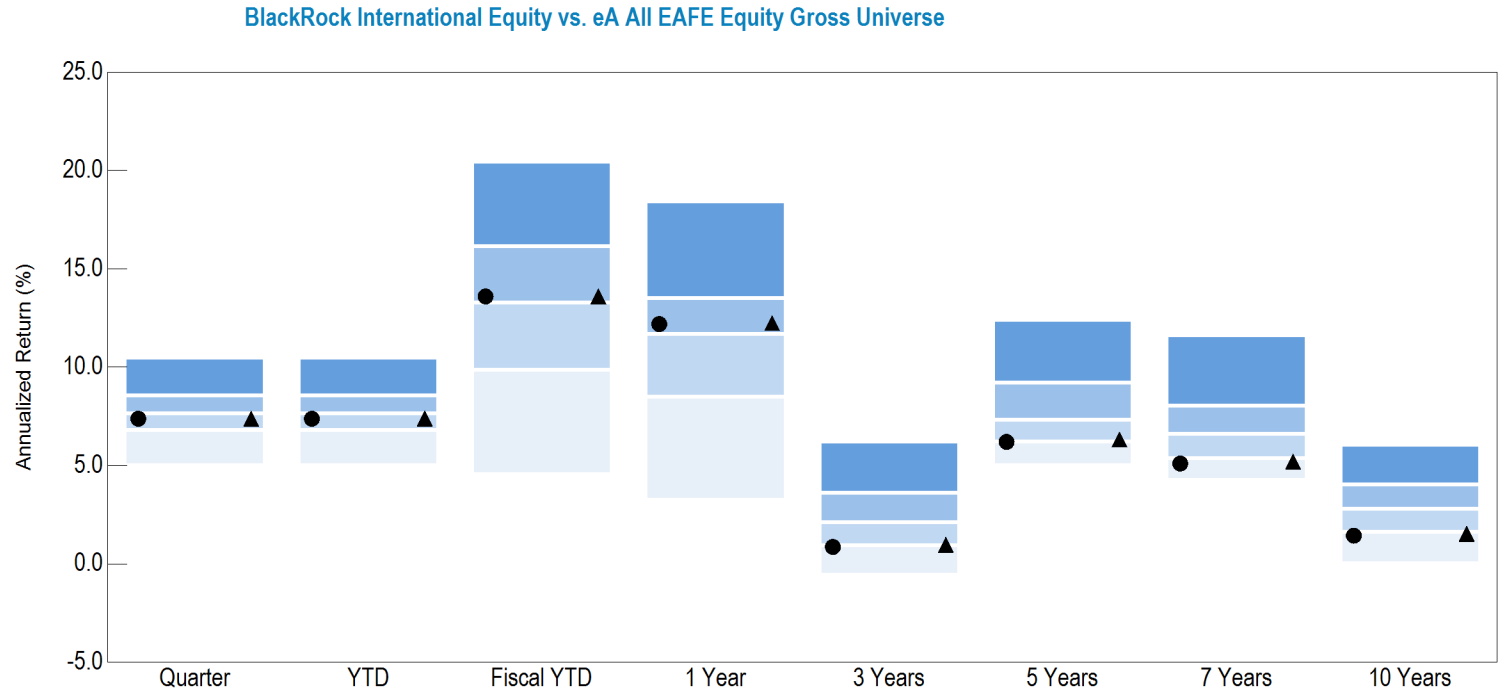


EM Effective Style Map  
5 Years Ending March 31, 2017



BlackRock International Equity  
Cumulative Performance Comparison (Gross of Fees)

Period Ending: March 31, 2017

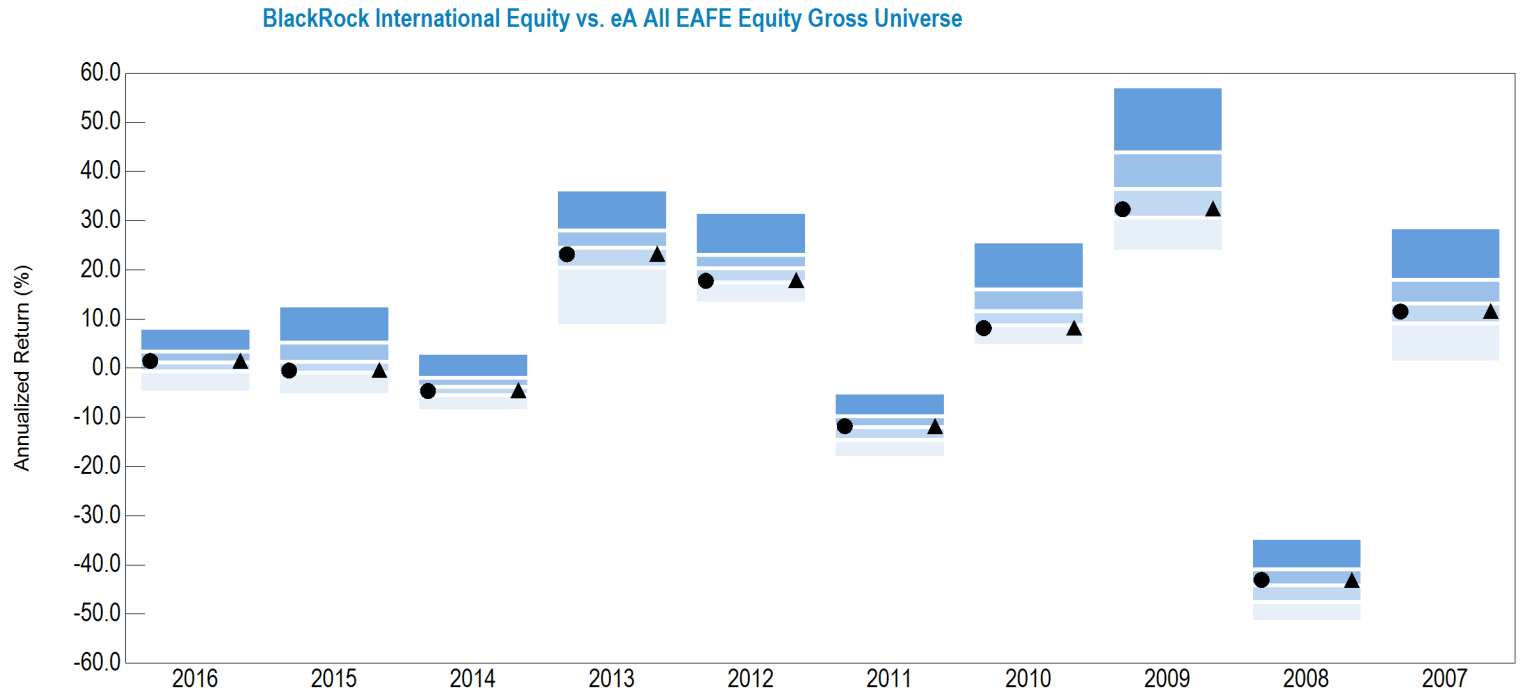


	Return (Rank)							
	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
5th Percentile	10.5	10.5	20.4	18.4	6.2	12.4	11.6	6.1
25th Percentile	8.6	8.6	16.2	13.5	3.6	9.2	8.1	4.1
Median	7.7	7.7	13.3	11.7	2.1	7.4	6.6	2.8
75th Percentile	6.8	6.8	9.9	8.5	0.9	6.2	5.4	1.6
95th Percentile	5.0	5.0	4.6	3.3	-0.5	5.0	4.3	0.1
# of Portfolios	353	353	352	352	329	299	280	229
● BlackRock International Equity	7.4 (61)	7.4 (61)	13.6 (46)	12.2 (42)	0.9 (77)	6.2 (76)	5.1 (85)	1.4 (81)
▲ MSCI EAFE Gross	7.4 (61)	7.4 (61)	13.6 (46)	12.2 (42)	1.0 (75)	6.3 (73)	5.2 (83)	1.5 (79)



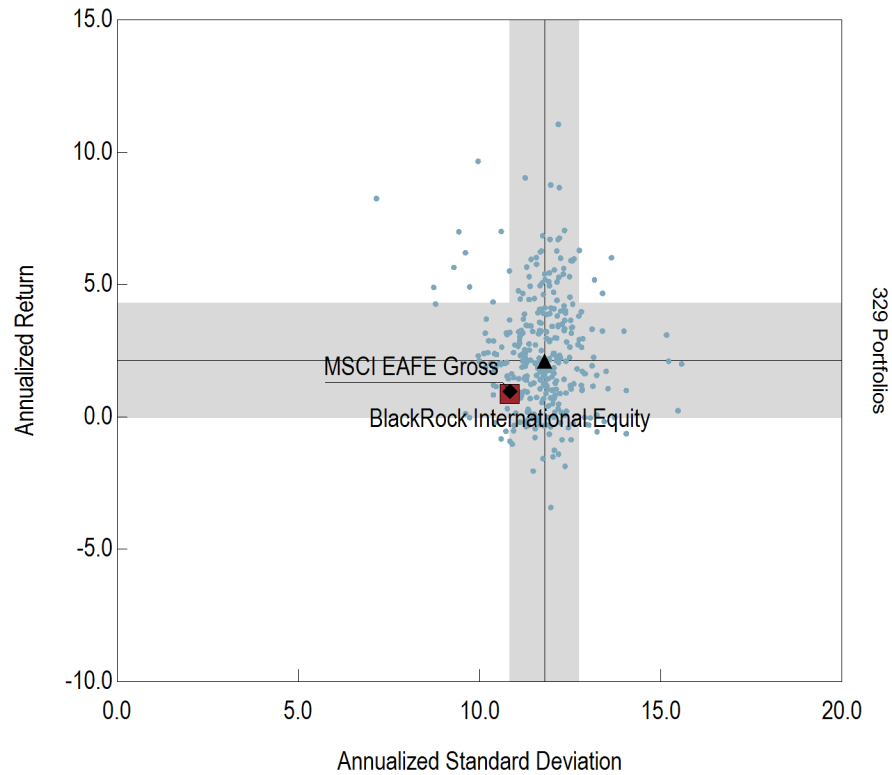
BlackRock International Equity  
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2017



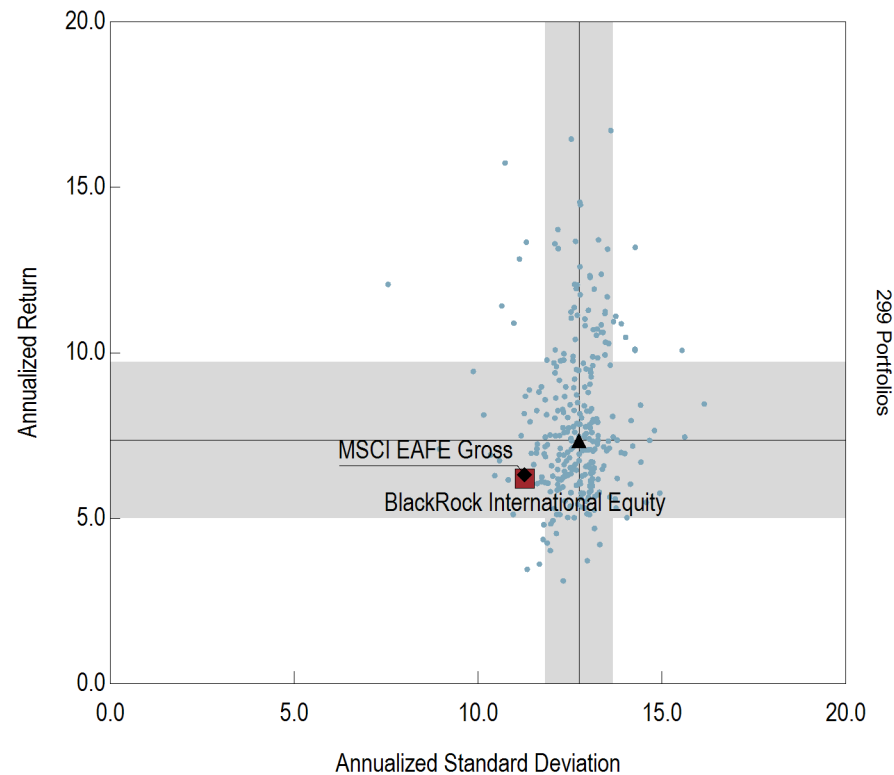
	Return (Rank)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
5th Percentile	8.1	12.6	3.0	36.3	31.7	-5.1	25.7	57.3	-34.5	28.5
25th Percentile	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0	-40.8	18.0
Median	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5	-44.1	13.2
75th Percentile	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7	-47.5	9.1
95th Percentile	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7	-51.5	1.2
# of Portfolios	350	325	314	284	263	278	352	455	477	466
● BlackRock International Equity	1.5 (47)	-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)
▲ MSCI EAFE Gross	1.5 (47)	-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)

Annualized Return vs. Annualized Standard Deviation  
 3 Years Ending March 31, 2017



- 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 March 31, 2017

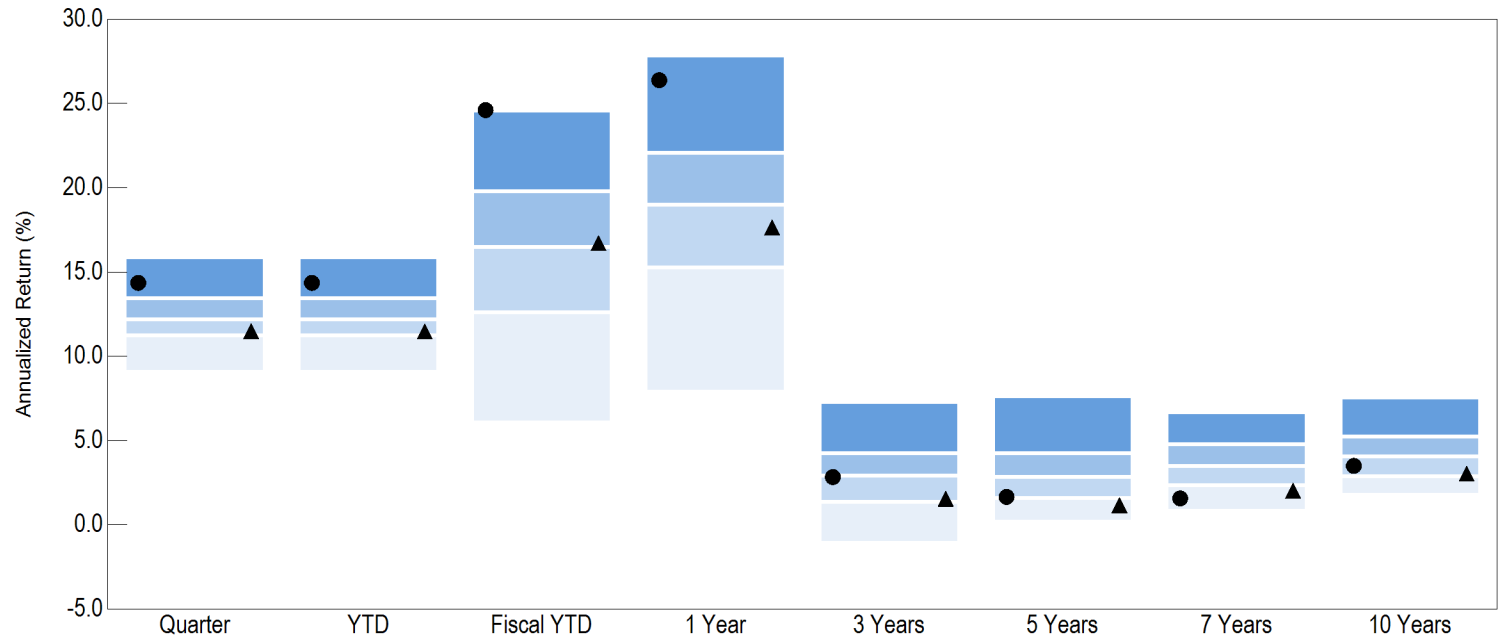


- BlackRock International Equity
- ◆ MSCI EAFE Gross
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eA All EAFE Equity Gross

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

Period Ending: March 31, 2017

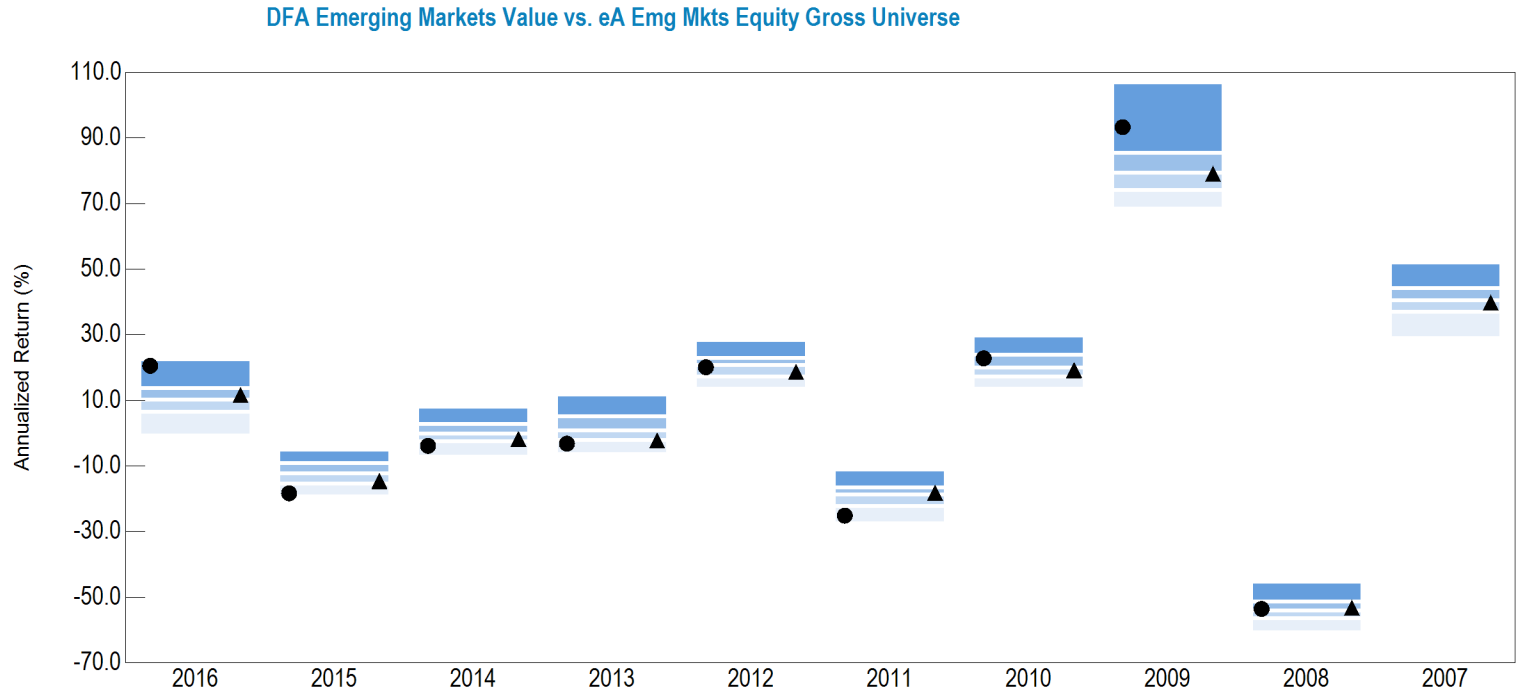
DFA Emerging Markets Value vs. eA Emg Mkts Equity Gross Universe



	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	15.9	(14)	15.9	(14)	24.6	(5)	27.8	(7)	7.3	(52)	7.6	(75)	6.7	(87)
25th Percentile	13.5	(70)	13.5	(70)	19.8	(48)	22.1	(61)	4.3	(73)	4.3	(82)	4.8	(81)
Median	12.2		12.2		16.5		19.0		2.9		2.9		3.5	
75th Percentile	11.3		11.3		12.6		15.3		1.4		1.6		2.4	
95th Percentile	9.1		9.1		6.1		7.9		-1.0		0.2		0.9	
# of Portfolios	337		337		337		337		308		245		174	
● DFA Emerging Markets Value	14.4	(14)	14.4	(14)	24.6	(5)	26.4	(7)	2.8	(52)	1.7	(75)	1.6	(87)
▲ MSCI Emerging Markets Gross	11.5	(70)	11.5	(70)	16.7	(48)	17.7	(61)	1.5	(73)	1.2	(82)	2.0	(81)

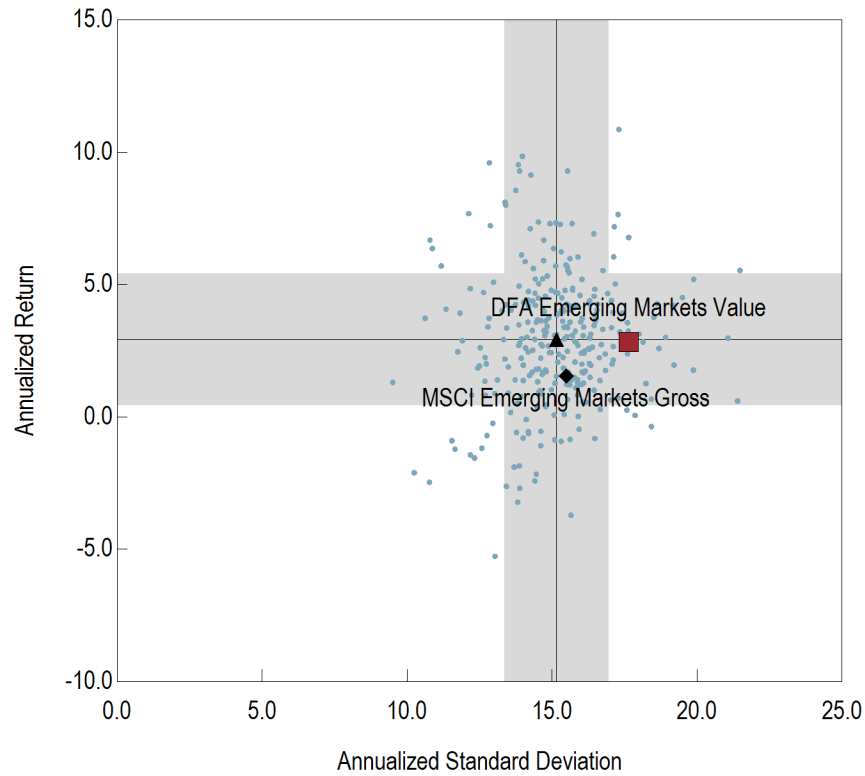
DFA Emerging Markets Value  
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2017



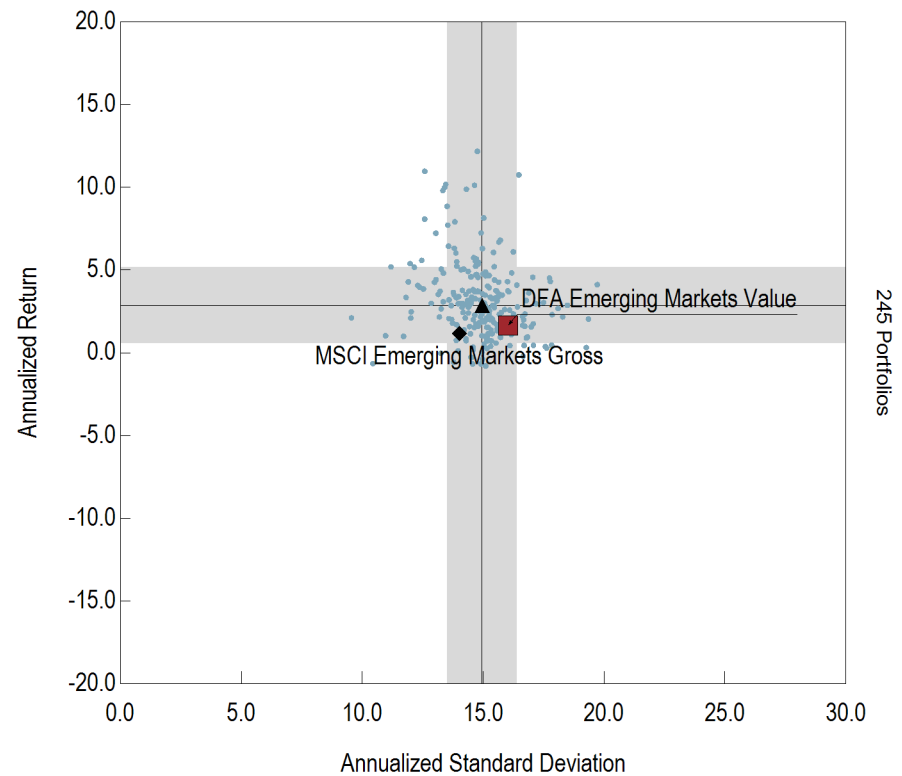
	Return (Rank)									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
5th Percentile	22.4	-5.0	8.0	11.7	28.4	-11.1	29.6	106.8	-45.4	51.9
25th Percentile	13.7	-9.0	2.9	5.2	23.0	-16.4	23.9	85.5	-51.3	44.3
Median	10.4	-12.2	-0.1	1.0	20.9	-18.6	20.1	79.5	-54.0	40.5
75th Percentile	6.6	-15.3	-2.4	-2.0	17.3	-22.2	17.3	74.3	-56.3	37.1
95th Percentile	-0.6	-19.2	-7.0	-6.3	13.7	-27.3	13.7	68.5	-60.7	29.1
# of Portfolios	337	273	251	198	155	139	113	113	118	115
● DFA Emerging Markets Value	20.5 (7)	-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	11.6 (40)	-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)

Annualized Return vs. Annualized Standard Deviation  
 3 Years Ending March 31, 2017



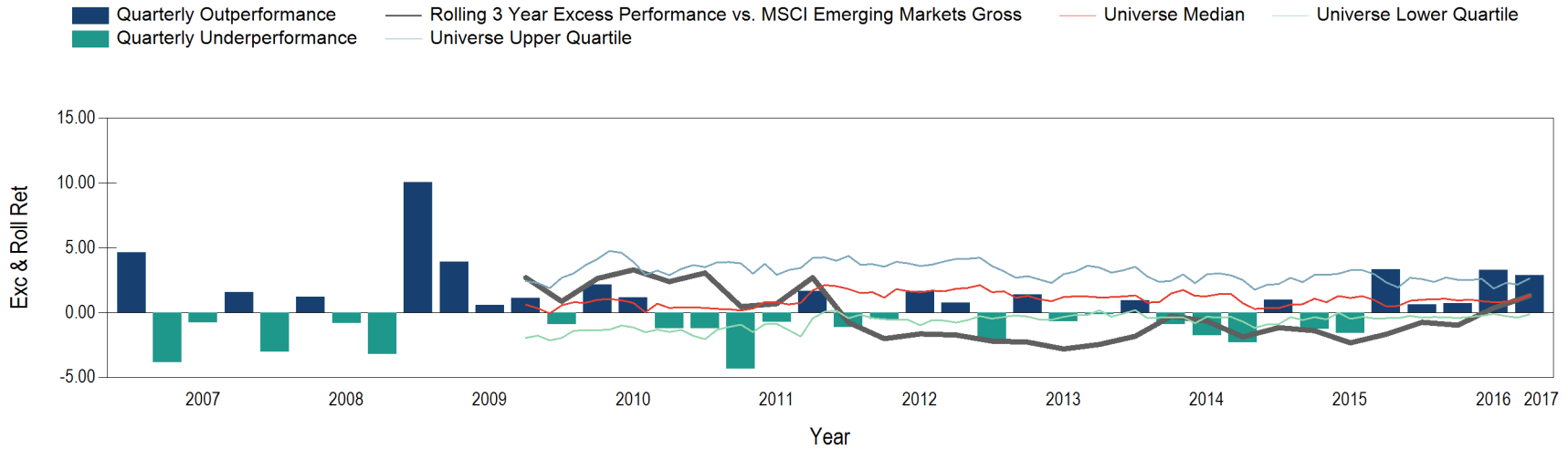
- DFA Emerging Markets Value
- ◆ MSCI Emerging Markets Gross
- ▲ Universe Median
- 68% Confidence Interval
- eA Emg Mkts Equity Gross

Annualized Return vs. Annualized Standard Deviation  
 5 Years Ending March 31, 2017

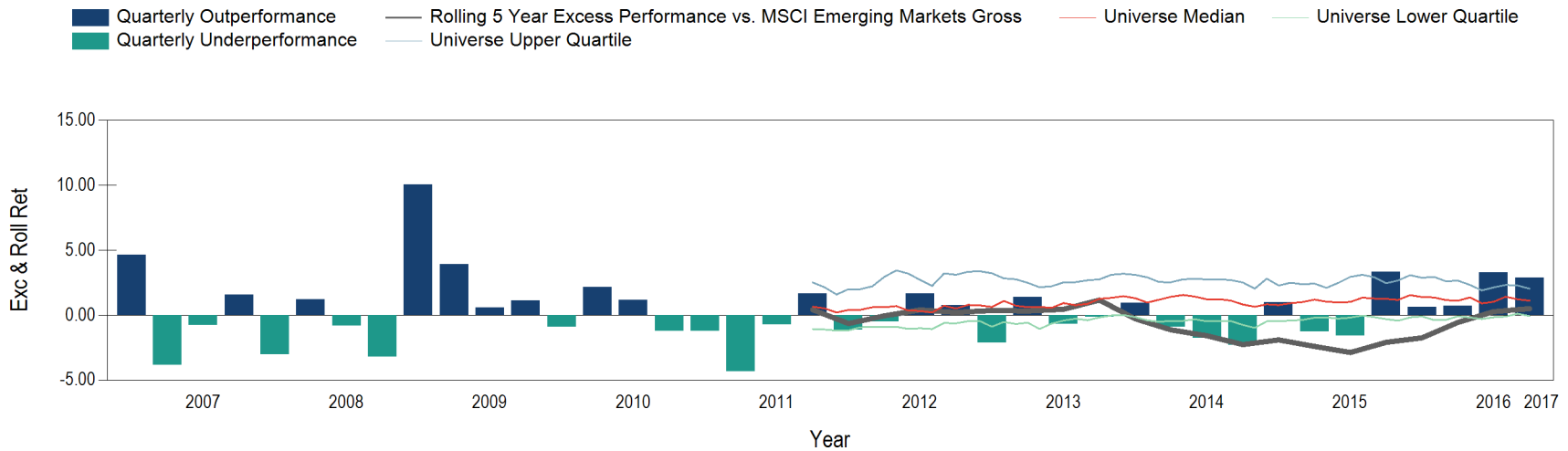


- DFA Emerging Markets Value
- ◆ MSCI Emerging Markets Gross
- ▲ Universe Median
- 68% Confidence Interval
- eA Emg Mkts Equity Gross

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance

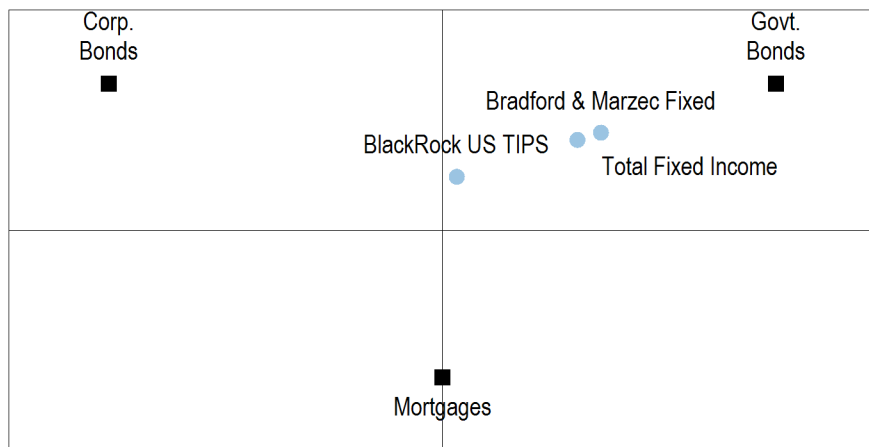


Total Fixed Income  
Asset Class Overview (Gross of Fees)

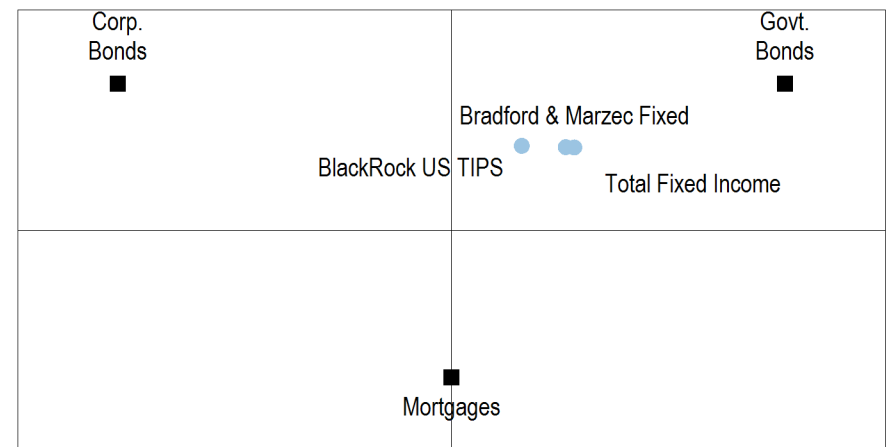
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Fixed Income</b>	<b>218,461,190</b>	<b>1.2</b>	<b>0.4</b>	<b>3.2</b>	<b>3.3</b>	<b>3.4</b>	<b>5.8</b>	<b>5.1</b>	<b>-0.3</b>	<b>5.9</b>	<b>-1.7</b>	<b>9.6</b>
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2
<i>eA All US Fixed Inc Gross Rank</i>		43	41	34	41	45	25	36	74	34	78	28
Bradford & Marzec Fixed	109,142,764	1.3	0.3	3.4	4.0	4.0	6.1	5.1	1.2	7.0	-0.4	8.8
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2
<i>eA US Core Plus Fixed Inc Gross Rank</i>		64	64	50	17	36	18	45	15	16	52	45
Mackay Shields Core Plus Opportunities	88,053,697	1.2	0.6	3.3	--	--	--	5.1	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	--	--	--	2.6	--	--	--	--
<i>eA US Core Plus Fixed Inc Gross Rank</i>		72	52	55	--	--	--	46	--	--	--	--
BlackRock US TIPS	21,264,728	1.3	0.0	1.7	2.2	1.1	--	4.8	-1.2	3.6	-8.5	7.1
<i>BBgBarc US TIPS TR</i>		1.3	-0.2	1.5	2.0	1.0	--	4.7	-1.4	3.6	-8.6	7.0
<i>eA TIPS / Infl Indexed Fixed Inc Gross Rank</i>		47	58	44	33	45	--	37	43	45	62	59

Fixed Income Style Map  
3 Years Ending March 31, 2017



Fixed Income Style Map  
5 Years Ending March 31, 2017



Total Fixed Income  
Asset Class Overview (Net of Fees)

Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Fixed Income</b>	<b>218,461,190</b>	<b>1.2</b>	<b>0.2</b>	<b>2.9</b>	<b>3.0</b>	<b>3.1</b>	<b>5.5</b>	<b>4.8</b>	<b>-0.6</b>	<b>5.6</b>	<b>-2.0</b>	<b>9.3</b>
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2
Bradford & Marzec Fixed	109,142,764	1.2	0.1	3.1	3.7	3.7	5.8	4.8	0.9	6.7	-0.8	8.5
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	2.7	2.3	4.3	2.6	0.6	6.0	-2.0	4.2
Mackay Shields Core Plus Opportunities	88,053,697	1.1	0.3	2.9	--	--	--	4.7	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		0.8	-1.7	0.4	--	--	--	2.6	--	--	--	--
BlackRock US TIPS	21,264,728	1.3	-0.1	1.6	2.1	1.0	--	4.8	-1.3	3.6	-8.6	7.0
<i>BBgBarc US TIPS TR</i>		1.3	-0.2	1.5	2.0	1.0	--	4.7	-1.4	3.6	-8.6	7.0

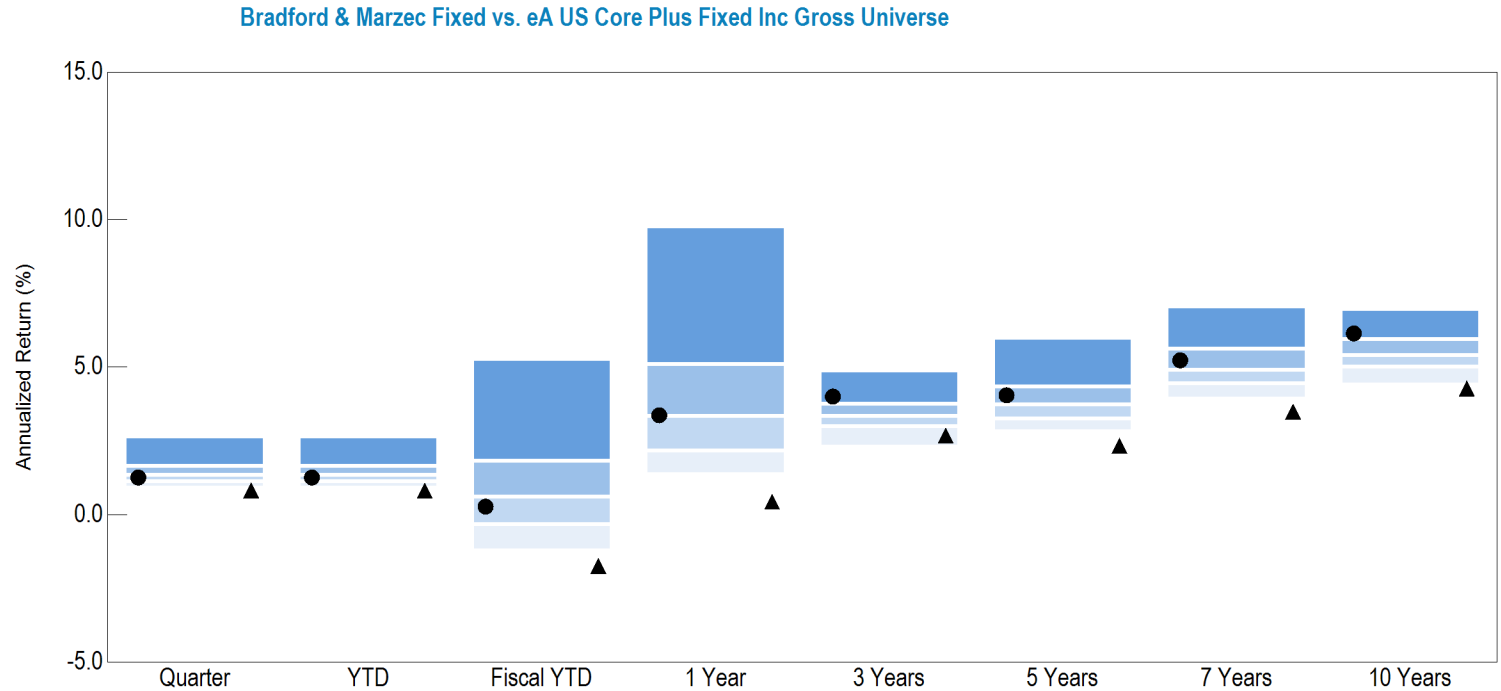
Correlation Matrix  
Last 5 Years

	Total Fixed Income	Bradford & Marzec Fixed	Mackay Shields Core Plus Opportunities	BlackRock US TIPS	BBgBarc US Aggregate TR
Total Fixed Income	1.00	--	--	--	--
Bradford & Marzec Fixed	0.98	1.00	--	--	--
Mackay Shields Core Plus Opportunities	--	--	1.00	--	--
BlackRock US TIPS	0.92	0.86	--	1.00	--
BBgBarc US Aggregate TR	0.93	0.96	--	0.82	1.00



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

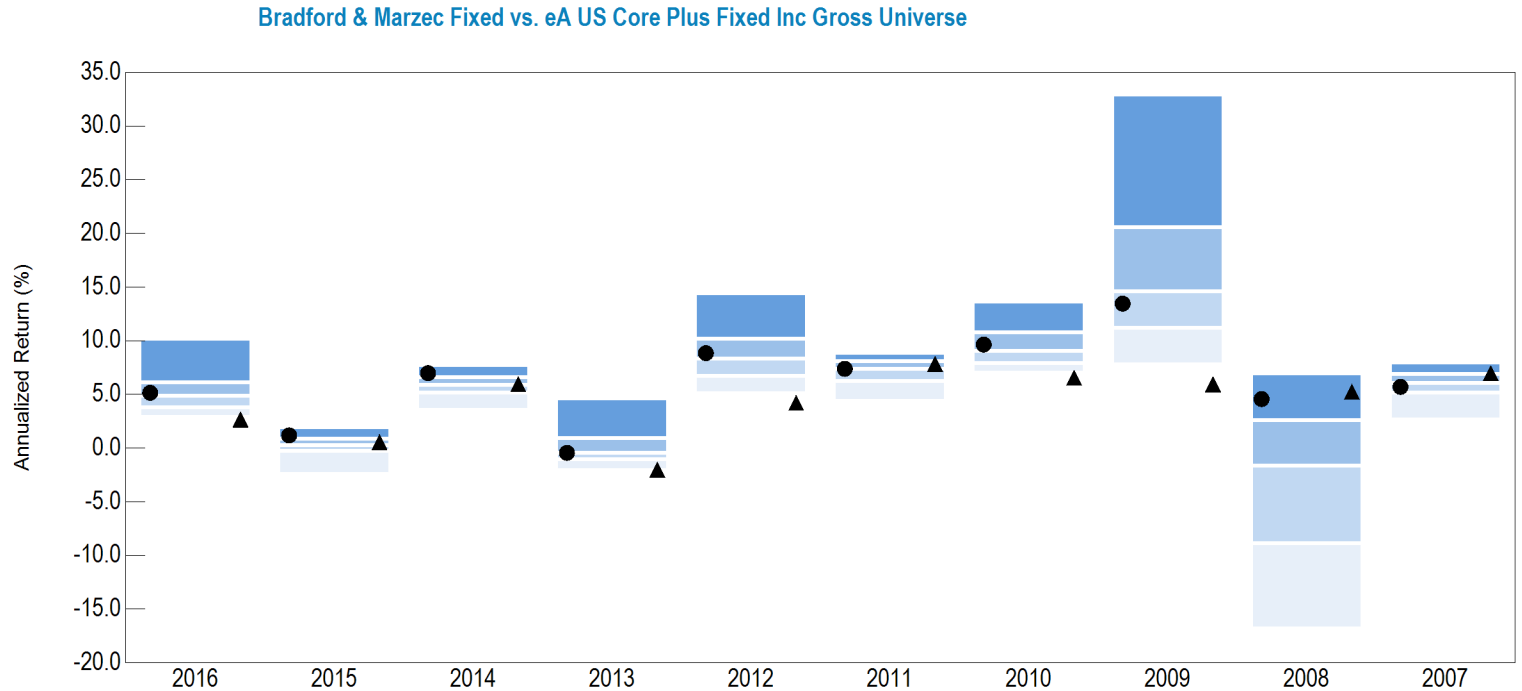
Period Ending: March 31, 2017



	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	2.6	2.6	2.6	2.6	5.3	5.3	9.8	9.8	4.9	4.9	6.0	6.0	7.1	7.1	7.0	7.0
<b>25th Percentile</b>	1.7	1.7	1.7	1.7	1.9	1.9	5.1	5.1	3.8	3.8	4.4	4.4	5.6	5.6	6.0	6.0
<b>Median</b>	1.4	1.4	1.4	1.4	0.6	0.6	3.4	3.4	3.4	3.4	3.7	3.7	4.9	4.9	5.4	5.4
<b>75th Percentile</b>	1.2	1.2	1.2	1.2	-0.3	-0.3	2.2	2.2	3.0	3.0	3.3	3.3	4.5	4.5	5.0	5.0
<b>95th Percentile</b>	0.9	0.9	0.9	0.9	-1.2	-1.2	1.4	1.4	2.3	2.3	2.8	2.8	3.9	3.9	4.4	4.4
<b># of Portfolios</b>	131	131	131	131	131	131	131	131	127	127	125	125	119	119	98	98
● Bradford & Marzec Fixed	1.3	(64)	1.3	(64)	0.3	(64)	3.4	(50)	4.0	(17)	4.0	(36)	5.2	(35)	6.1	(18)
▲ BBgBarc US Aggregate TR	0.8	(99)	0.8	(99)	-1.7	(99)	0.4	(99)	2.7	(90)	2.3	(99)	3.5	(99)	4.3	(99)

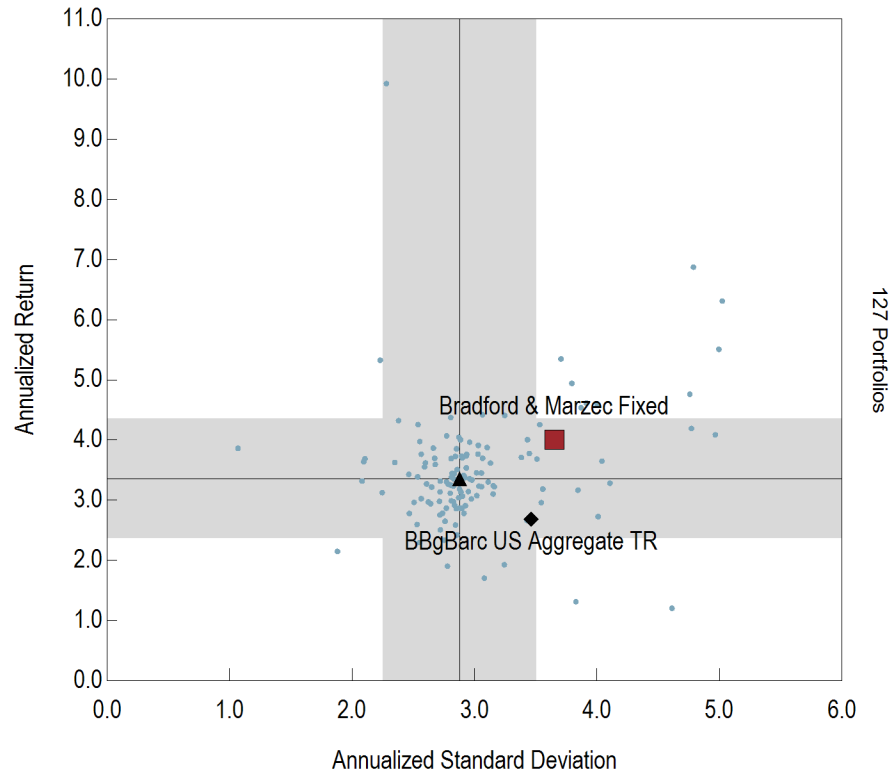
Bradford & Marzec Fixed  
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2017



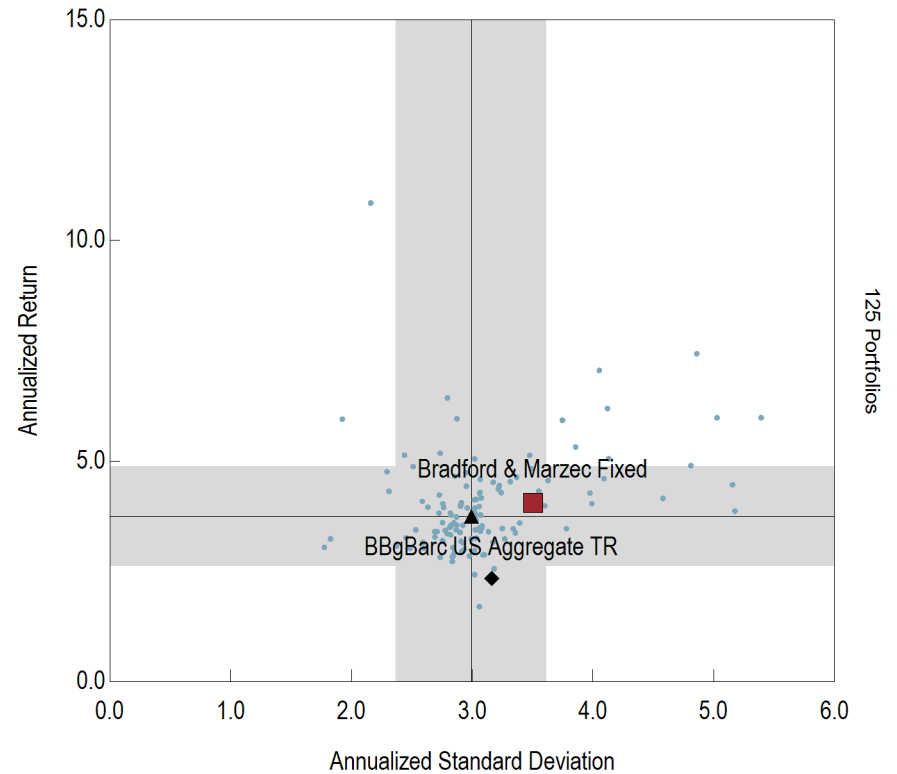
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Return (Rank)</b>										
5th Percentile	10.1	1.9	7.7	4.6	14.4	8.8	13.6	32.9	6.9	7.9
25th Percentile	6.1	0.9	6.7	1.0	10.2	8.1	10.8	20.6	2.7	6.9
Median	4.9	0.3	5.9	-0.4	8.3	7.4	9.1	14.6	-1.6	6.1
75th Percentile	3.9	-0.2	5.2	-1.0	6.7	6.3	8.0	11.2	-8.9	5.2
95th Percentile	2.9	-2.4	3.6	-2.0	5.1	4.4	7.0	7.8	-16.8	2.7
# of Portfolios	134	115	118	116	124	118	123	128	136	144
● Bradford & Marzec Fixed	5.1 (45)	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)
▲ BBgBarc US Aggregate TR	2.6 (97)	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)

Annualized Return vs. Annualized Standard Deviation  
 3 Years Ending March 31, 2017



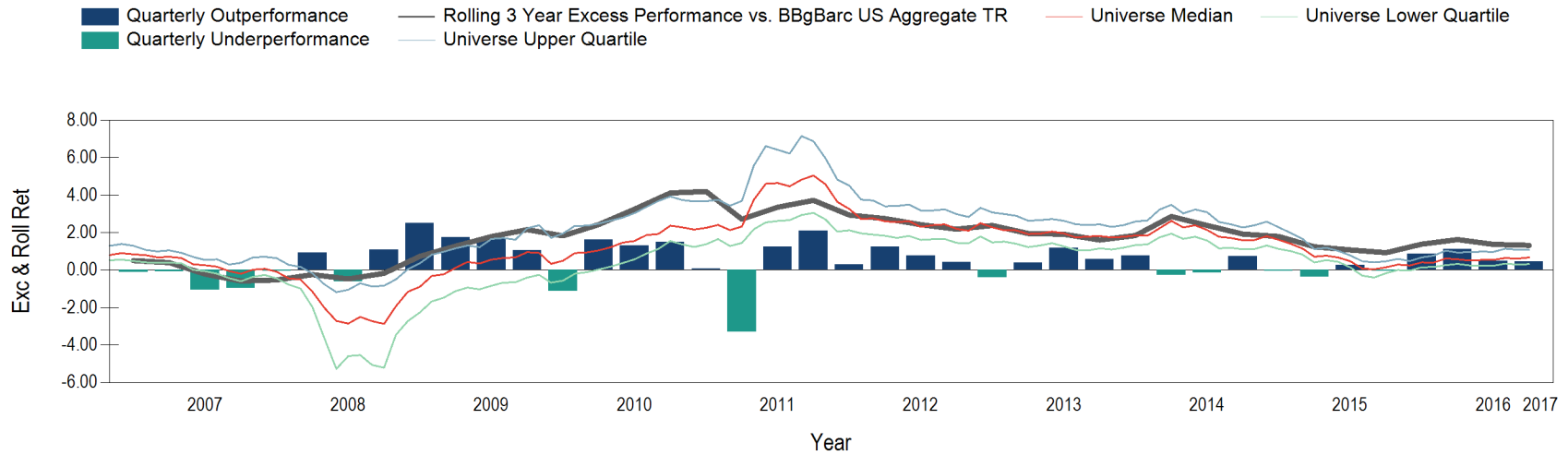
- Bradford & Marzec Fixed
- ◆ BBgBarc US Aggregate TR
- ▲ Universe Median
- 68% Confidence Interval
- eA US Core Plus Fixed Inc Gross

Annualized Return vs. Annualized Standard Deviation  
 5 Years Ending March 31, 2017

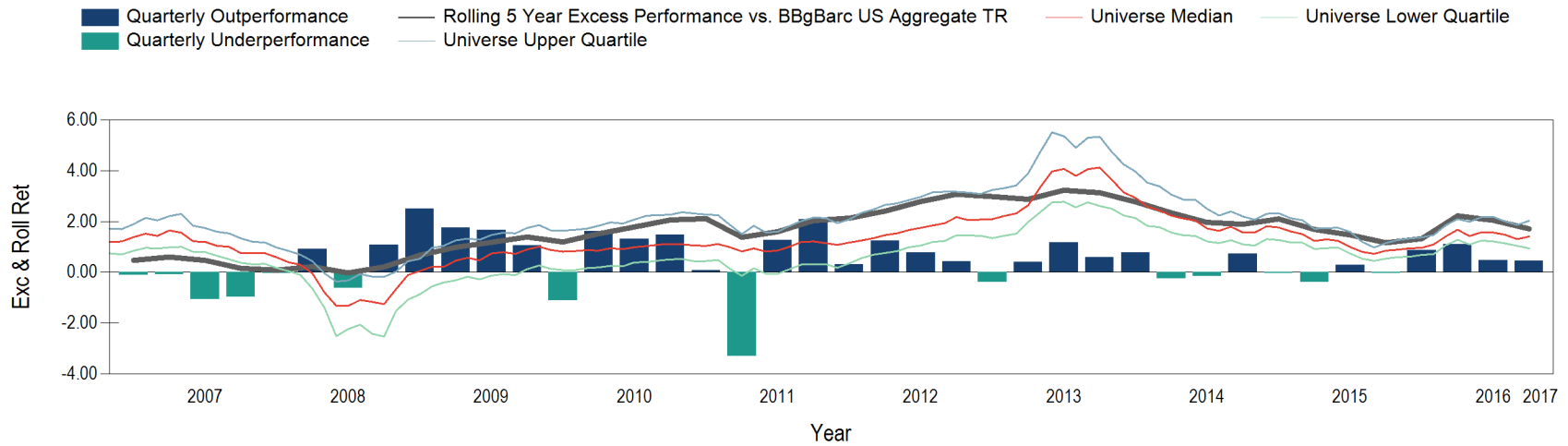


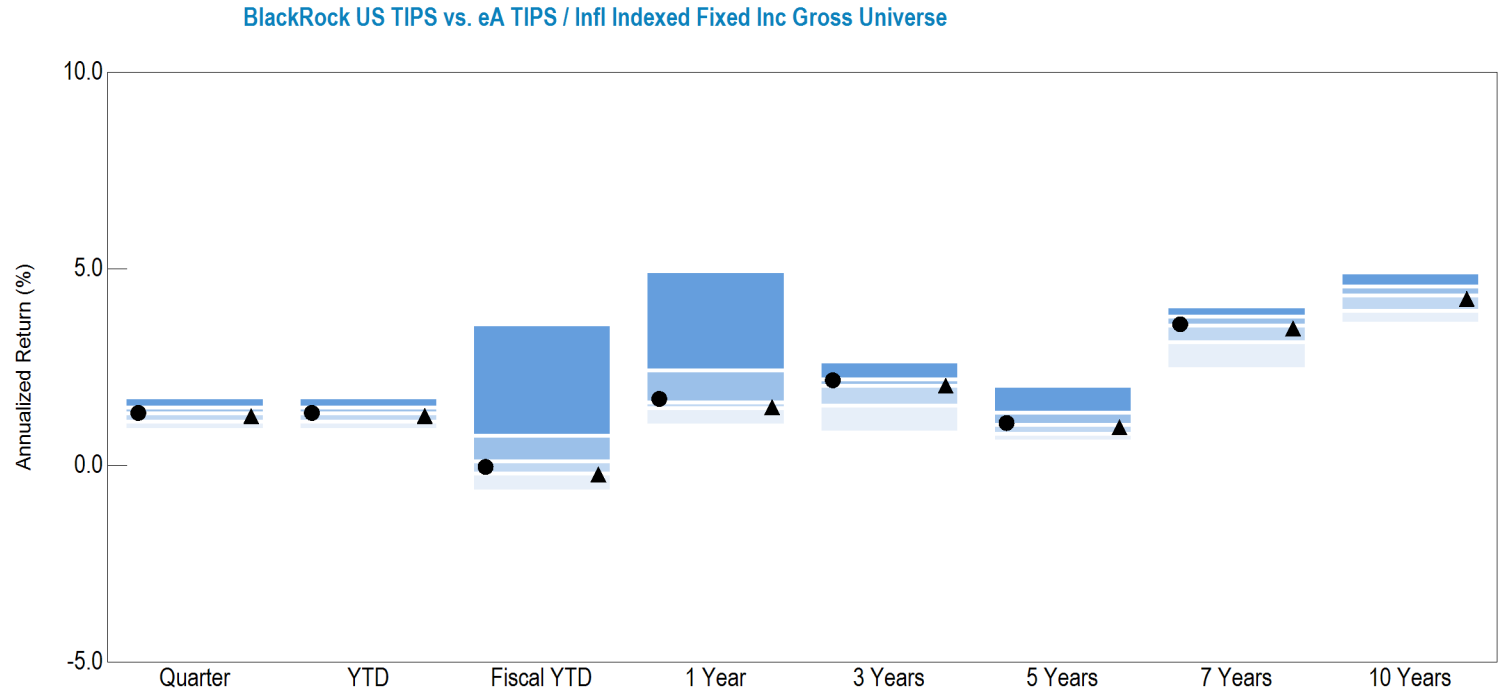
- Bradford & Marzec Fixed
- ◆ BBgBarc US Aggregate TR
- ▲ Universe Median
- 68% Confidence Interval
- eA US Core Plus Fixed Inc Gross

Rolling 3 Year Annualized Excess Performance

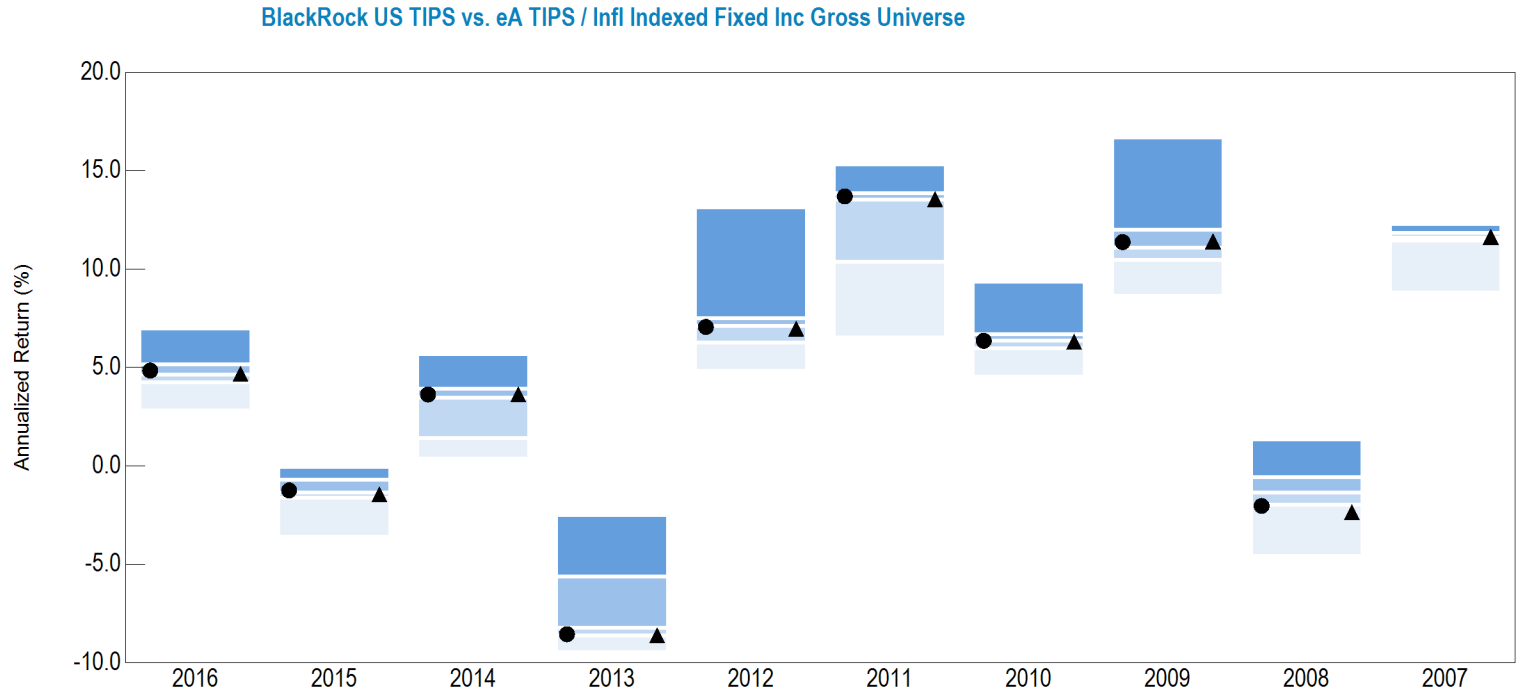


Rolling 5 Year Annualized Excess Performance



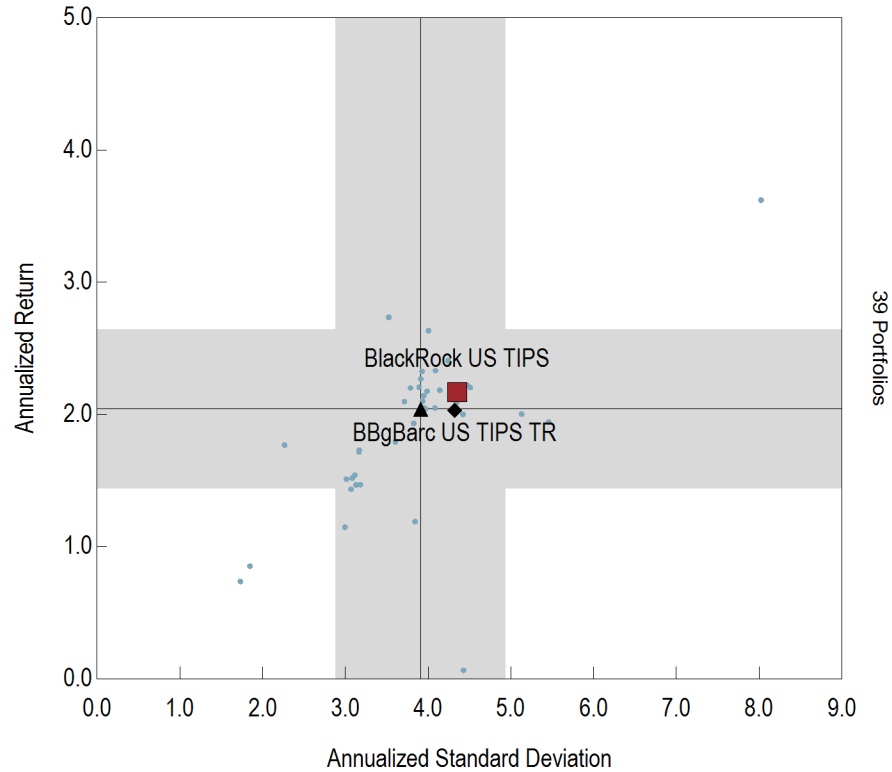


	Quarter		YTD		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>Return (Rank)</b>																
5th Percentile	1.7	1.7	1.7	1.7	3.6	3.6	4.9	4.9	2.6	2.6	2.0	2.0	4.0	4.0	4.9	4.9
25th Percentile	1.5	1.5	1.5	1.5	0.8	0.8	2.4	2.4	2.2	2.2	1.4	1.4	3.8	3.8	4.6	4.6
Median	1.3	1.3	1.3	1.3	0.1	0.1	1.6	1.6	2.0	2.0	1.0	1.0	3.6	3.6	4.3	4.3
75th Percentile	1.1	1.1	1.1	1.1	-0.2	-0.2	1.5	1.5	1.5	1.5	0.8	0.8	3.1	3.1	3.9	3.9
95th Percentile	0.9	0.9	0.9	0.9	-0.7	-0.7	1.0	1.0	0.8	0.8	0.6	0.6	2.5	2.5	3.6	3.6
# of Portfolios	39	39	39	39	39	39	39	39	39	39	38	38	34	34	27	27
● BlackRock US TIPS	1.3	(47)	1.3	(47)	0.0	(58)	1.7	(44)	2.2	(33)	1.1	(45)	3.6	(45)	--	(--)
▲ BBgBarc US TIPS TR	1.3	(65)	1.3	(65)	-0.2	(78)	1.5	(73)	2.0	(51)	1.0	(67)	3.5	(68)	4.2	(68)



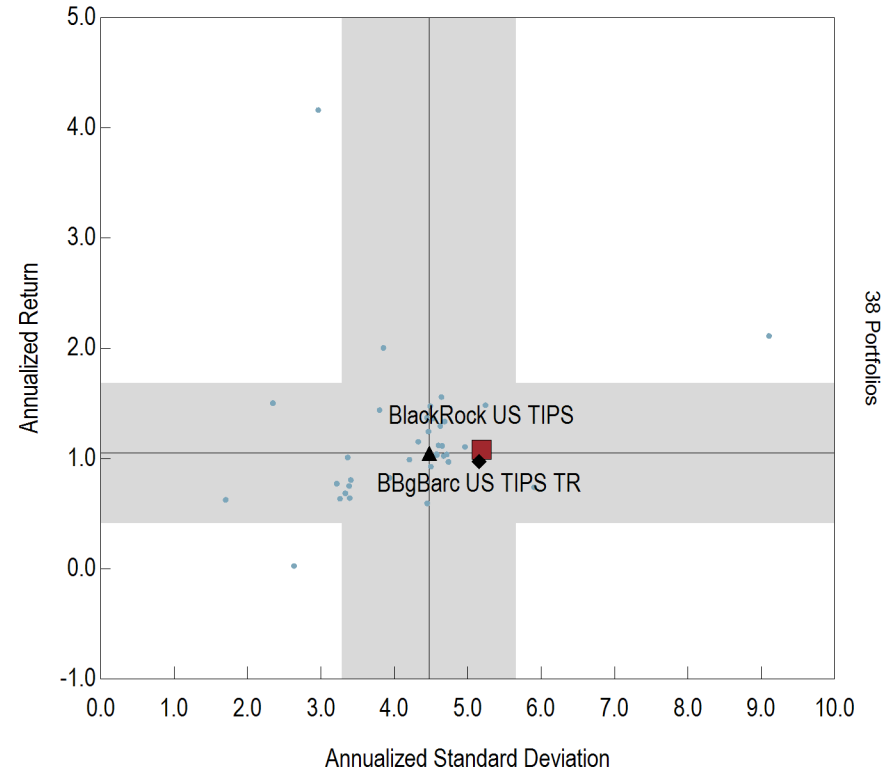
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Return (Rank)</b>										
5th Percentile	7.0	-0.1	5.7	-2.5	13.1	15.3	9.4	16.7	1.3	12.3
25th Percentile	5.2	-0.7	4.0	-5.6	7.5	13.9	6.7	12.0	-0.5	11.8
Median	4.7	-1.3	3.5	-8.2	7.1	13.5	6.4	11.1	-1.4	11.6
75th Percentile	4.3	-1.6	1.4	-8.6	6.3	10.4	6.0	10.5	-1.9	11.5
95th Percentile	2.8	-3.6	0.4	-9.4	4.9	6.6	4.6	8.7	-4.6	8.8
# of Portfolios	42	44	50	43	43	47	39	37	40	37
● BlackRock US TIPS	4.8 (37)	-1.2 (43)	3.6 (45)	-8.5 (62)	7.1 (59)	13.7 (37)	6.4 (52)	11.4 (36)	-2.0 (78)	-- (--)
▲ BBgBarc US TIPS TR	4.7 (47)	-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)

Annualized Return vs. Annualized Standard Deviation  
 3 Years Ending March 31, 2017



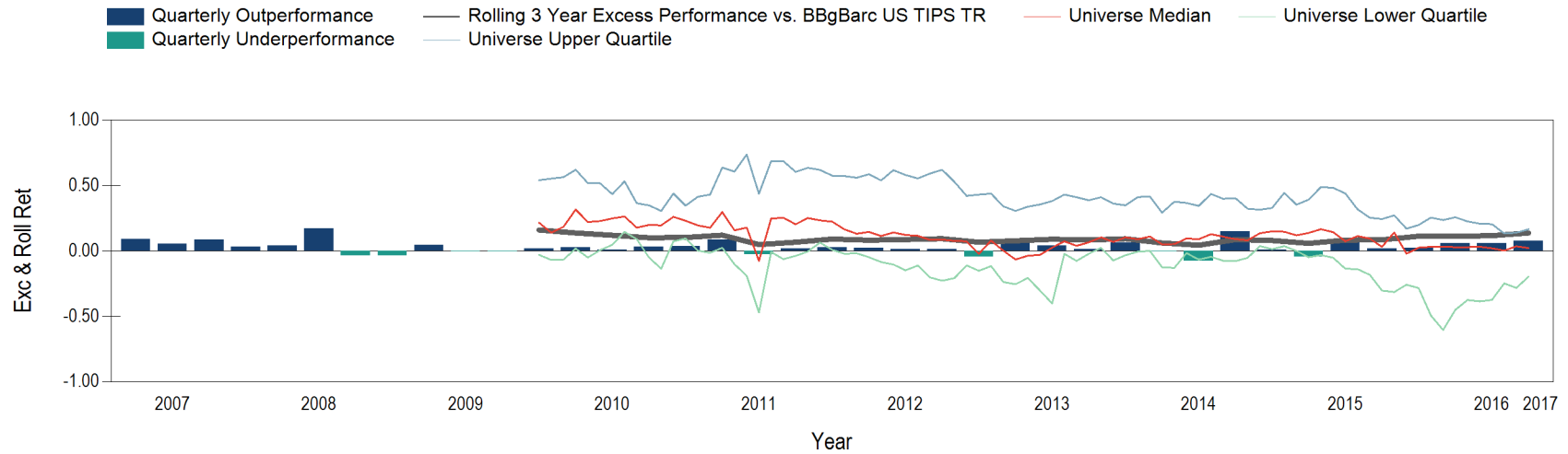
- BlackRock US TIPS
- ◆ BBgBarc US TIPS TR
- ▲ Universe Median
- 68% Confidence Interval
- eA TIPS / Infl Indexed Fixed Inc Gross

Annualized Return vs. Annualized Standard Deviation  
 5 Years Ending March 31, 2017

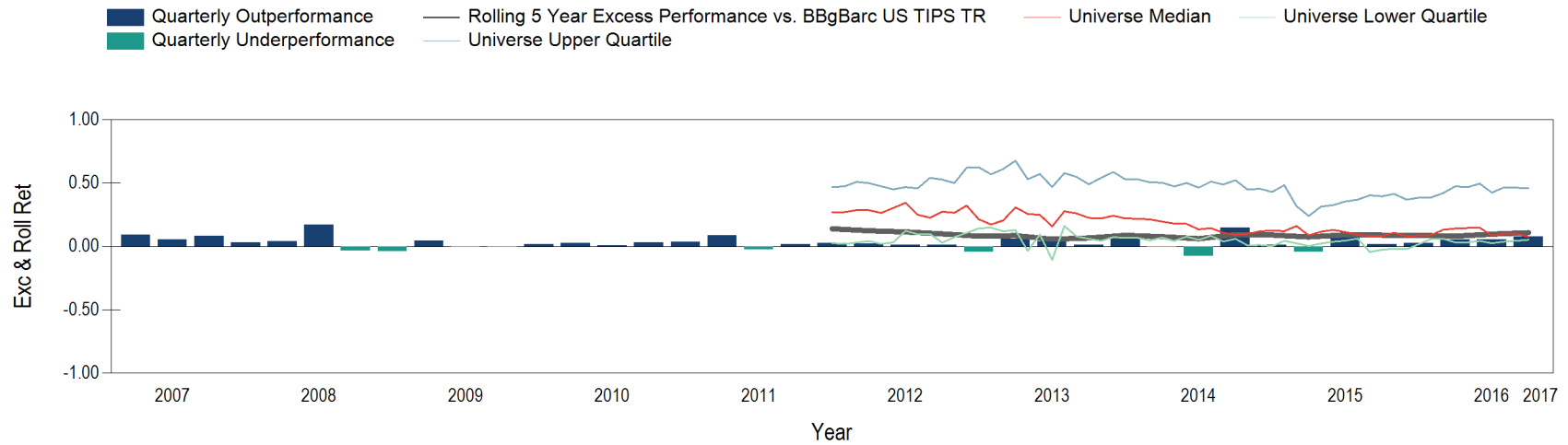


- BlackRock US TIPS
- ◆ BBgBarc US TIPS TR
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Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



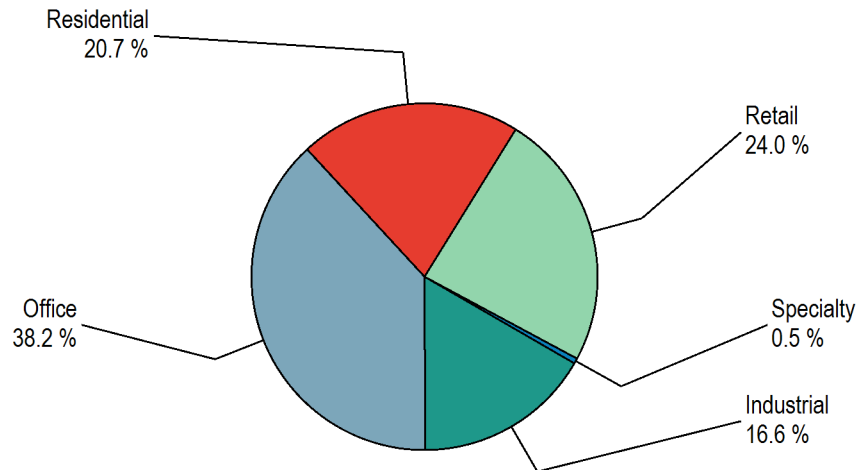


Total Real Estate  
Asset Class Overview (Gross of Fees)

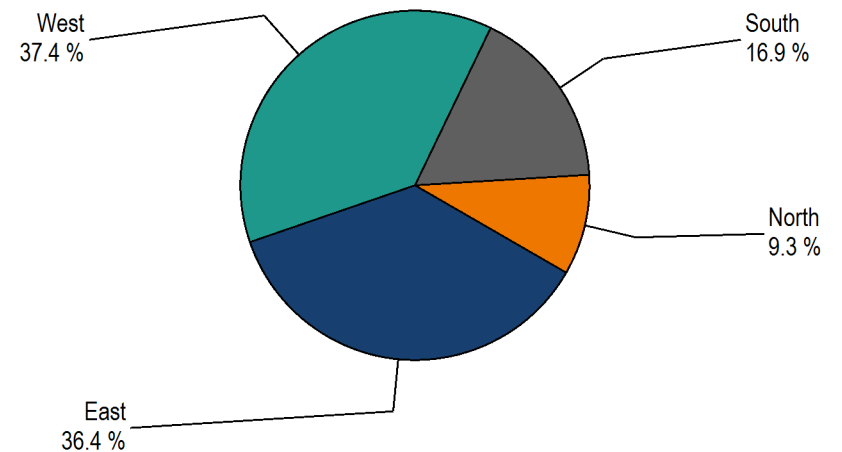
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Real Estate</b>	<b>64,428,017</b>	<b>1.7</b>	<b>4.7</b>	<b>6.4</b>	<b>11.8</b>	<b>11.6</b>	<b>5.0</b>	<b>7.1</b>	<b>16.1</b>	<b>13.0</b>	<b>12.6</b>	<b>10.6</b>
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
ASB Real Estate	31,655,884	1.1	3.7	5.1	11.4	--	--	5.6	17.3	13.5	13.7	--
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	--	--	8.0	13.3	11.8	11.0	--
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	--	--	8.8	15.0	12.5	13.9	--
Clarion Lion	31,361,652	2.3	6.0	8.1	12.8	12.3	4.5	9.1	15.7	13.2	12.8	10.9
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
1221 State St. Corp	1,410,480	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	0.1

Property Type Allocation  
Allocation as of March 31, 2017



Geographic Diversification  
Allocation as of March 31, 2017

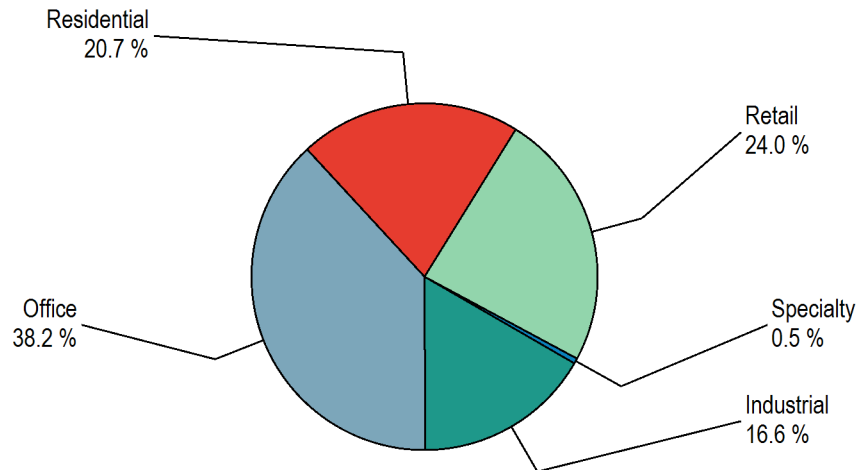


Total Real Estate  
Asset Class Overview (Net of Fees)

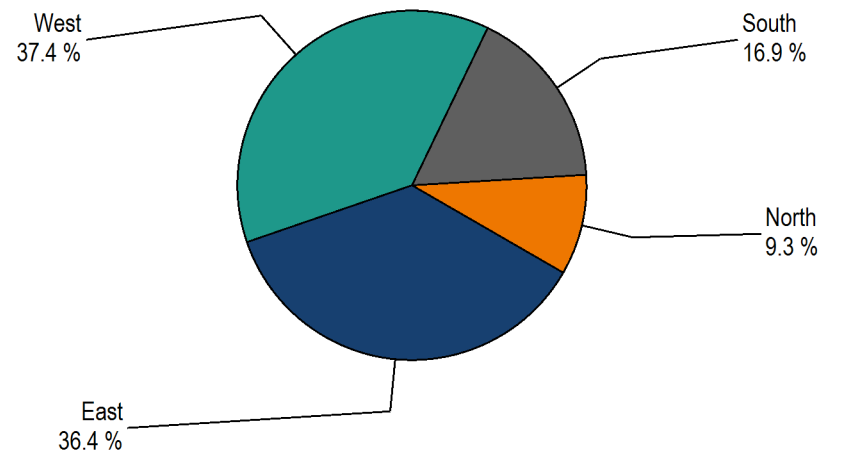
Period Ending: March 31, 2017

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
<b>Total Real Estate</b>	<b>64,428,017</b>	<b>1.7</b>	<b>4.2</b>	<b>5.7</b>	<b>10.7</b>	<b>10.8</b>	<b>4.3</b>	<b>6.1</b>	<b>15.0</b>	<b>11.6</b>	<b>12.1</b>	<b>10.3</b>
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
ASB Real Estate	31,655,884	1.1	3.2	4.4	10.5	--	--	4.6	16.2	12.5	12.5	--
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	--	--	8.0	13.3	11.8	11.0	--
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	--	--	8.8	15.0	12.5	13.9	--
Clarion Lion	31,361,652	2.3	5.5	7.3	11.8	11.3	3.6	8.0	14.6	12.2	11.8	9.9
<i>NCREIF Property Index</i>		1.6	5.1	7.3	10.6	10.7	6.7	8.0	13.3	11.8	11.0	10.5
<i>NCREIF-ODCE</i>		1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
1221 State St. Corp	1,410,480	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	0.1

Property Type Allocation  
Allocation as of March 31, 2017



Geographic Diversification  
Allocation as of March 31, 2017



**Performance Return Calculations**

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

**Data Source**

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

**Illiquid Alternatives**

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

**Manager Line Up**

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 3000	12/10/2015	J.P. Morgan	1221 State Street Corp	09/30/2008	ICERS/Union Bank
BlackRock International Equity	07/03/2003	J.P. Morgan	Cash	-	J.P. Morgan
DFA Emerging Markets Value	01/11/2007	J.P. Morgan	HarbourVest IX-Buyout	2011 <sup>1</sup>	HarbourVest
Harding Loevner	07/05/2016	Harding Loevner	HarbourVest IX-Credit	2011 <sup>1</sup>	HarbourVest
Bradford & Marzec Fixed	12/01/1992	J.P. Morgan	HarbourVest International VI	2008 <sup>1</sup>	HarbourVest
MackKay Shields Core Plus Ops	03/02/2015	CITCO	Harbourvest IX-Venture	2011 <sup>1</sup>	HarbourVest
BlackRock US TIPS	04/11/2007	J.P. Morgan	KKR Mezzanine	2010 <sup>1</sup>	KKR
ASB Real Estate	12/31/2012	ASB Real Estate	PIMCO BRAVO	2011 <sup>1</sup>	PIMCO
Clarion Lion	12/31/2006	Clarion Lion			

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

**Policy & Custom Index Composition**

Policy Index (10/1/2016-Current)	29% Russell 3000, 24% MSCI ACWI Free Ex US, 27% BBgBarc Aggregate, 5% NCREIF Property, 5% NCREIF Property +2%, 5% Russell 3000 plus 300 bps (Lagged), 5% BBgBarc High Yield +2% lagged.
Policy Index (7/1/2014-9/30/2016)	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).

# 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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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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