



## AGENDA

### RETIREMENT BOARD MEETING

SPECIAL MEETING  
November 22, 2016  
9:00 a.m.

Retirement Board Conference Room  
The Willows Office Park  
1355 Willow Way, Suite 221  
Concord, California

THE RETIREMENT BOARD MAY DISCUSS AND TAKE ACTION ON THE FOLLOWING:

1. Pledge of Allegiance.
2. Accept comments from the public.
3. Review of total portfolio performance for period ending September 30, 2016.
4. Presentation on proposed structure of the CCCERA investment office.
5. Review of 2015 and 2016 CCCERA budget vs. actual expenditure reports.
6. Consider and take possible action to rescind the:
  - a. Policy regarding Emerging Investment Manager
  - b. Policy on Economically Targeted Investments
  - c. Policy on Tobacco Divestment
7. Consider and take possible action on Board meeting schedule for 2017.
8. Miscellaneous
  - a. Staff Report
  - b. Outside Professionals' Report
  - c. Trustees' Comments

The Retirement Board will provide reasonable accommodations for persons with disabilities planning to attend Board meetings who contact the Retirement Office at least 24 hours before a meeting.



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: SEPTEMBER 30, 2016**

Investment Performance Review for

**Contra Costa County Employees' Retirement Association**

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Investment Landscape **TAB I**

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Investment Performance  
Review **TAB II**

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Risk Dashboard **TAB III**



**PERSPECTIVES**  
THAT DRIVE  
ENTERPRISE  
SUCCESS

4<sup>TH</sup> QUARTER 2016  
Investment Landscape

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Appendix 41

# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- The U.S. labor market continues to improve but at a slower pace. Real wage growth has risen but not as quickly as other periods of similar labor market tightness. Consumer expenditures remain the primary positive contributor to GDP growth. *p. 8, 9*
- U.S. inflation has risen steadily with Core CPI at 2.3% YoY as of August. Energy and gasoline prices continue to weigh on the Headline CPI figure of 1.1% YoY. *p. 13*
- The presidential election approaches. There has historically been a weak relationship between election outcomes and market performance. This election appears to have unique characteristics and may cause more unpredictable effects. *p. 18*

## MARKET PORTFOLIO IMPACTS

- Central bank discussions indicate we may be nearing fiscal expansion as a next form of policy accommodation. As fiscal policies are typically less analyzed and less understood by investors, markets may be more prone to surprise in this environment. *p. 20*

## THE INVESTMENT CLIMATE

- U.S. corporate earnings are expected to decline by -2.1%, which would be the sixth consecutive quarter of YoY decline. Almost all of this decline is attributable to energy sector weakness. *p. 30*
- Low inflation and low bond yields may help to explain higher than usual equity valuations. However, this does not negate the fact that higher equity valuations historically have materially reduced subsequent returns. *p. 35*

## ASSET ALLOCATION ISSUES

- We continue to remain underweight risk and believe that downside market potential outweighs upside market potential. *p. 29*
- Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average on a relative basis and upside potential seems attractive. Investors may consider moving to an overweight in emerging market equities, though risks should be carefully considered. *p. 33*

We remain underweight to risk

Investors should be watchful of corporate earnings, and U.S. inflation trends

# What drove the market in Q3?

**“FED STANDS PAT, BUT SAYS CASE FOR RATE INCREASE HAS STRENGTHENED”**

## December Rate Hike Expectations

Apr 29th	May 31st	June 30th	July 29th	Aug 31st	Sep 30th
41%	42%	9%	31%	45%	51%

Source: WSJ, September 22<sup>nd</sup> 2016

**“U.S. GOVERNMENT BONDS RALLY AS CENTRAL BANKS CALM INVESTORS”**

## 10-Year Treasury Yield

Aug 26th	Sep 2nd	Sep 9th	Sep 16th	Sep 23rd	Sep 30 <sup>th</sup>
1.63%	1.60%	1.67%	1.69%	1.62%	1.59%

Source: WSJ, September 22<sup>nd</sup> 2016

**“ELECTION UNCERTAINTY WEIGHS ON MARKETS”**

## U.S. Presidential Election Polls

March 31st		June 30th		September 30th	
Trump	Clinton	Trump	Clinton	Trump	Clinton
39.1%	49.7%	39.8%	44.6%	44.4%	47.5%

Source: CNBC, September 27<sup>th</sup> 2016

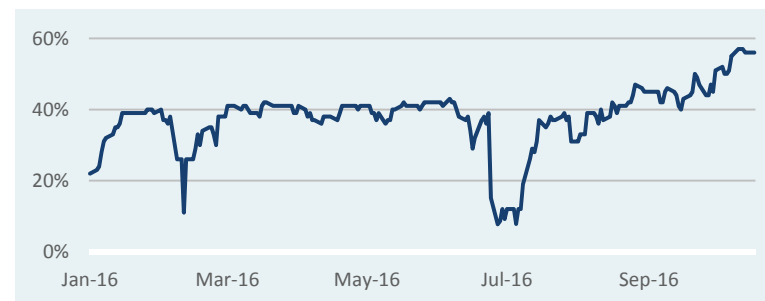
**“POUND STERLING FALLS BELOW \$1.31 HITTING NEW 31-YEAR LOW”**

## GBP/USD

Apr 29th	May 31st	June 30th	July 29th	Aug 31st	Sep 30th
\$1.46	\$1.45	\$1.32	\$1.33	\$1.31	\$1.30

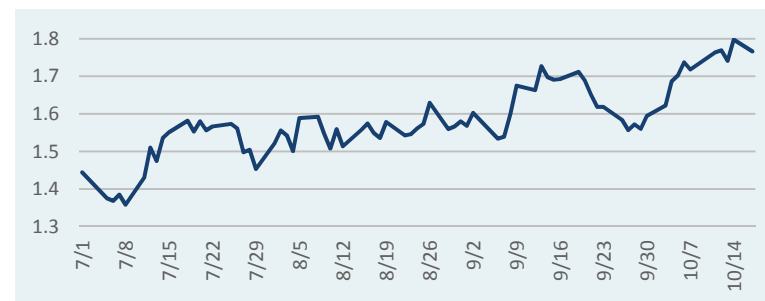
Source: The Independent, July 5<sup>th</sup> 2016

## DECEMBER RATE HIKE EXPECTATIONS



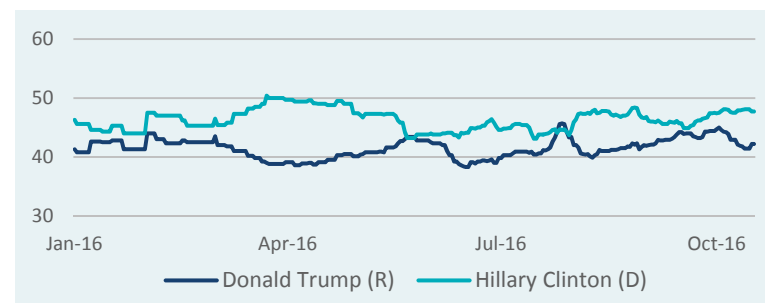
Source: Bloomberg, as of 10/17/16

## U.S. 10-YEAR TREASURY YIELD



Source: Federal Reserve, as of 10/17/16

## U.S. PRESIDENTIAL ELECTION POLLS



Source: Bloomberg, Real Clear Politics, as of 10/17/16

# Economic environment



# U.S. economics summary

- U.S. real GDP grew 1.4% YoY in Q2, up from 0.8% in Q1. This positive growth reflects contributions from greater consumer expenditures, exports, and non-residential fixed investments. These were partially offset by a decrease in private inventory investment.
- Headline inflation (CPI) rose 1.1% as of August YoY while core CPI rose 2.3%. Lower energy prices, and gasoline in particular (-17.8%), have weighed heavily on the headline inflation figure. Medical care services (+4.9%) and shelter (+3.4%) contributed to higher prices.
- If the U.S. economy continues to move closer to full employment and higher inflation, the market has expected the Fed to want to push harder for rate

“normalization”. However, the fear of disrupting financial markets and raising rates too early, too quickly, remains.

- Over the last few quarters we have continued to see the slow and steady return to the workforce of discouraged workers. This may help explain why productivity growth and wage inflation are lower than might be expected at this level of unemployment.
- Additions to nonfarm payrolls averaged slightly under 200,000 in the third quarter as the overall labor market continued to show strength. The unemployment rate increased slightly to 5.0% as more people entered the labor force.

	Most Recent	12 Months Prior
GDP ( <i>annual YoY</i> )	1.4% 6/30/16	3.9% 6/30/15
Inflation ( <i>CPI YoY, Headline</i> )	1.1% 8/31/16	0.2% 8/31/15
Expected Inflation ( <i>5yr-5yr forward</i> )	1.8% 9/30/16	1.8% 9/30/15
Fed Funds Rate	0.25% 9/30/16	0.12% 9/30/15
10 Year Rate	1.6% 9/30/16	2.0% 9/30/15
U-3 Unemployment	5.0% 9/30/16	5.1% 9/30/15
U-6 Unemployment	9.7% 9/30/16	10.0% 9/30/15

# U.S. economics – GDP growth

U.S. real GDP grew 1.4% YoY in the second quarter, up from 0.8% in the first quarter. This positive growth reflects contributions from personal consumption expenditures, exports, and non-residential fixed investment. These were partially offset by a decrease in private inventory investment.

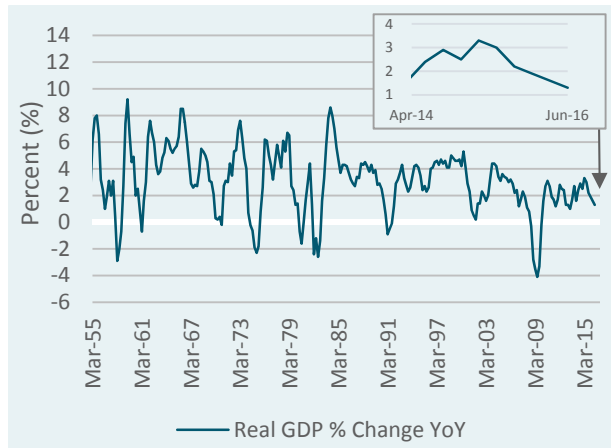
Domestic exports of goods and services grew 1.8% YoY in the second quarter while imports grew 0.2%. A stronger U.S. dollar and weaker demand from China have likely detracted somewhat from export growth.

The manufacturing sector continues to show weakness as durable goods orders have declined during three of the past four months. Additionally, shipments of manufactured durable goods also fell in August, down -0.4%.

The IMF cut U.S. growth expectations to 1.6% for 2016, down from 2.6% in 2015 and down 0.6% from three months prior. Lower business investment has been a primary headwind to growth, with investment decreasing for three consecutive quarters.

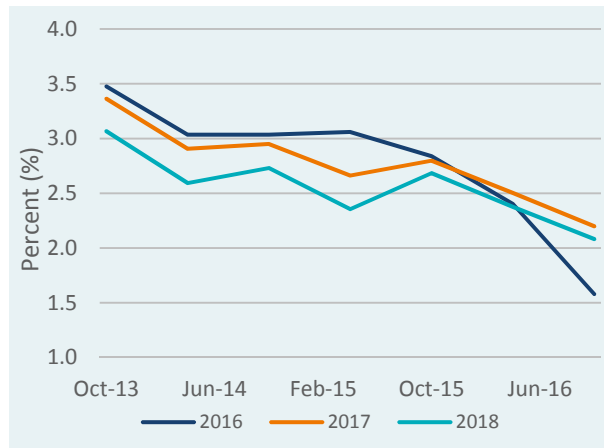
**Consumer spending continues to drive growth**

**U.S. REAL GDP GROWTH**



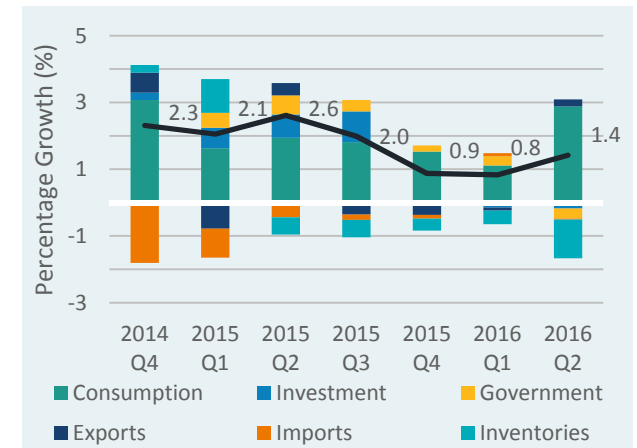
Source: FRED, as of 6/30/16

**IMF U.S. GROWTH EXPECTATIONS**



Source: IMF, as of 10/4/16

**U.S. GDP COMPONENTS**



Source: FRED

# U.S. economics – Unemployment

U.S. unemployment has fluctuated between 4.7% and 5.0% over the past year, and currently sits at a rate of 5.0%. The back-and-forth pull between unemployment rate and participation rate continues as workers rejoin the workforce (higher participation) which then adds to the employment candidate pool (higher unemployment).

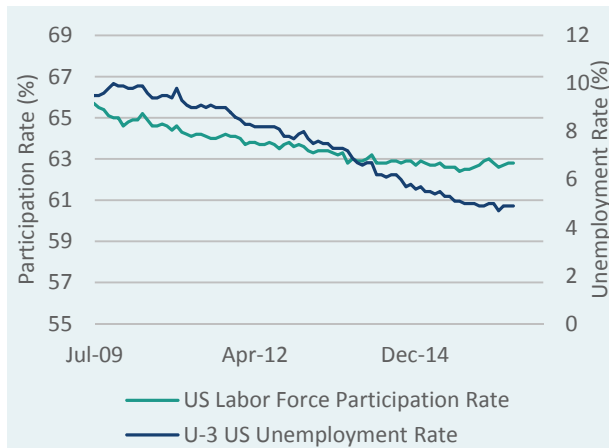
Average length of unemployment has trended downward to 27.6 weeks in August relative to 28.3

weeks one year prior. This is still substantially higher than the long-term median of 14 weeks (since 1948).

In August 151,000 nonfarm jobs were added, below the trailing 12 month average of 204,000.

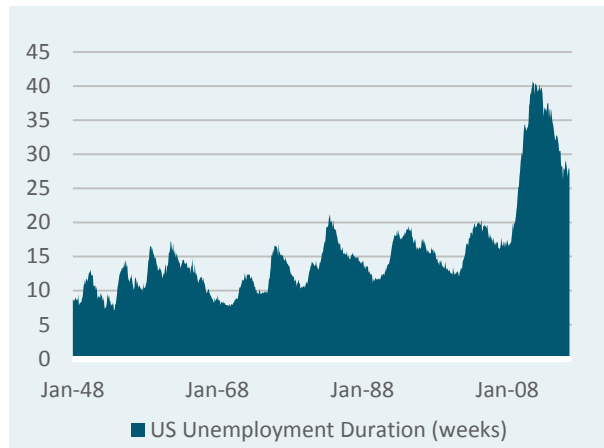
Over the past year, real average hourly earnings have risen by 1.3%. Positive upward pressure in average hourly earnings may help sustain economic growth and may also add to inflation pressures.

**U.S. UNEMPLOYMENT & PARTICIPATION**



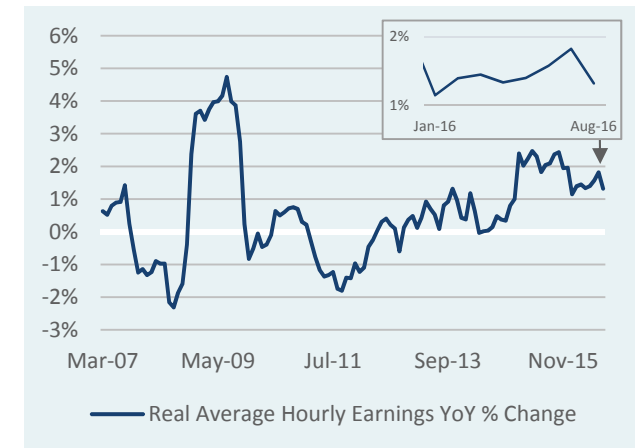
Source: FRED, as of 8/31/16

**UNEMPLOYMENT DURATION**



Source: FRED, as of 8/31/16

**REAL AVERAGE HOURLY EARNINGS**



Source: FRED, as of 8/31/16

# U.S. economics – The consumer

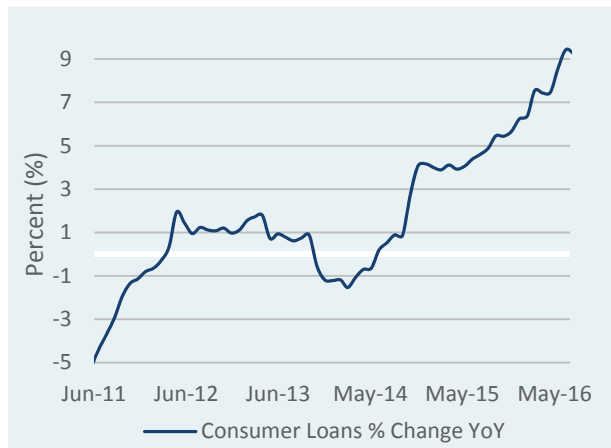
While corporates and governments seem to be at a later stage in terms of their credit cycles, consumer credit expansion has not been as pronounced. A healthy deleveraging has occurred across households since the global financial crisis, with credit expansion only picking up in recent years. It may make sense that the U.S. consumer has been a major contributor to economic growth.

Relatively strong gains in spending have been accompanied by modest increases in real wages and disposable income. Consumer lending growth accelerated

during the quarter, in part due to low borrowing costs and higher consumer confidence. Consumer loans at commercial banks rose 8.8% year-over-year in August. While this growth rate is higher than what we have seen during the current economic expansion, it is within a normal range with regard to historical experience.

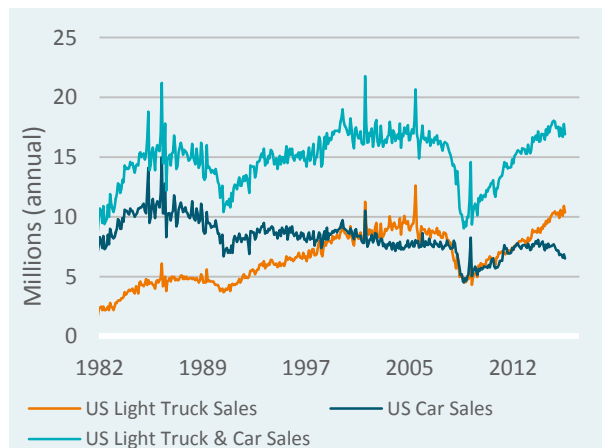
Auto sales have also been robust this year, a good indicator of consumer strength, though sales growth has flattened somewhat and automakers have increased per-vehicle incentive spending to all time highs.

**CONSUMER LOAN GROWTH**



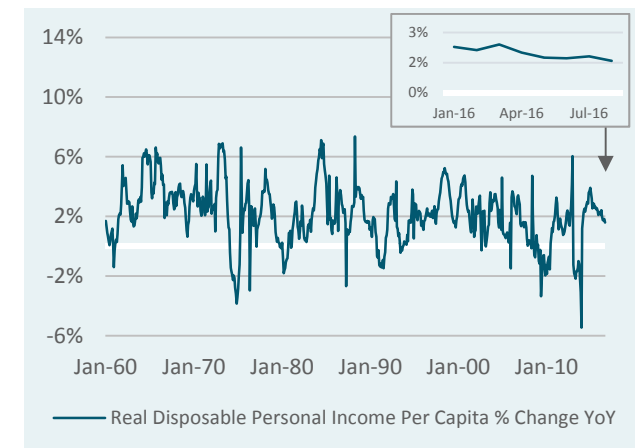
Source: FRED, as of 8/31/16

**AUTO SALES**



Source: FRED, as of 8/31/16

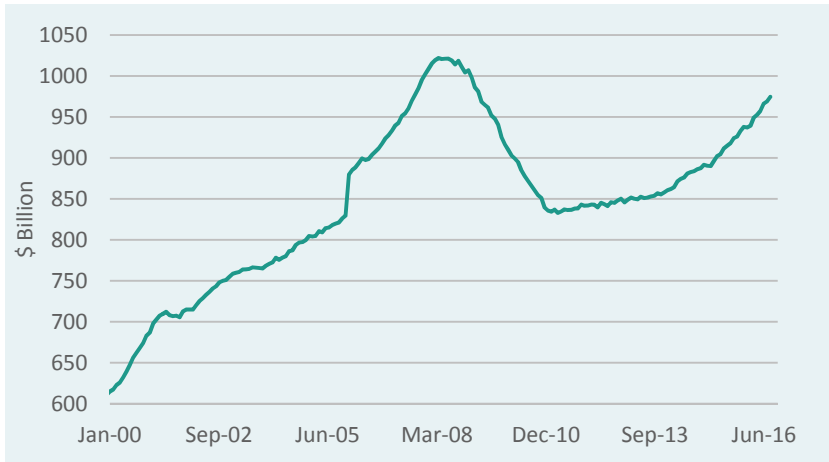
**GROWTH OF DISPOSABLE INCOME**



Source: FRED, as of 8/31/16

# U.S. economics – The consumer

US REVOLVING OUTSTANDING CONSUMER CREDIT



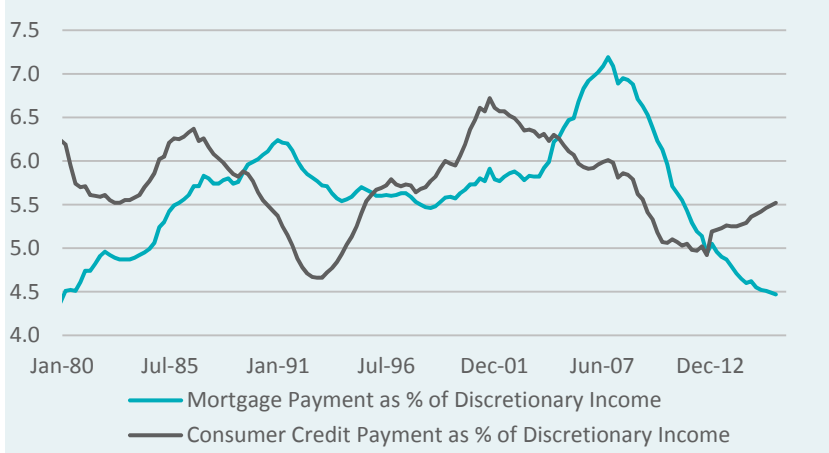
US HOUSEHOLD DEBT AS % OF DISPOSABLE INCOME



Consumer credit expansion has not been as robust as previous recoveries

Debt service ratios remain low

HOUSEHOLD DEBT SERVICE RATIO %



HOUSING STARTS



Source: FRED, as of 8/31/16

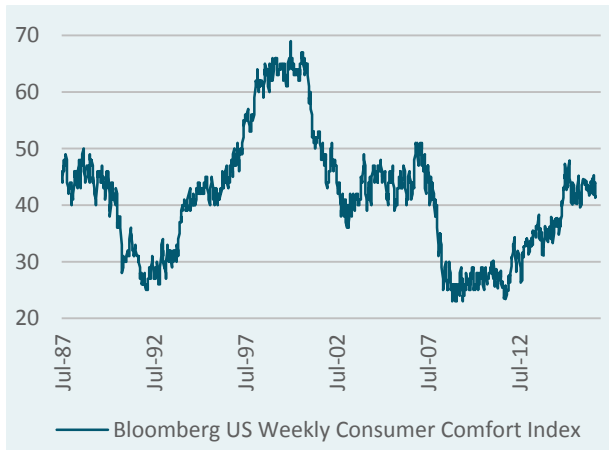
# U.S. economics – Sentiment

Consumer sentiment weakened slightly over the quarter. The University of Michigan Sentiment Index ended the quarter lower. Those surveyed indicated that current conditions worsened while expectations for future conditions brightened. The Bloomberg Consumer Comfort Index also declined, falling to its lowest level since mid-December.

zero for 18 consecutive months. However, following July the indicator slipped back into slightly negative territory.

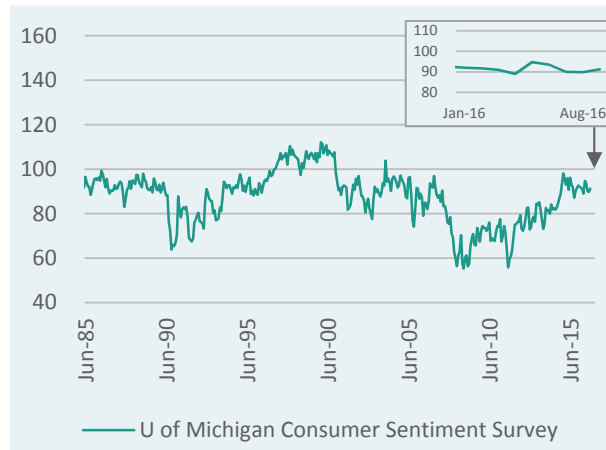
The Citigroup Economic Surprise Index unexpectedly jumped into positive territory in July after staying below

**CONSUMER COMFORT INDEX**



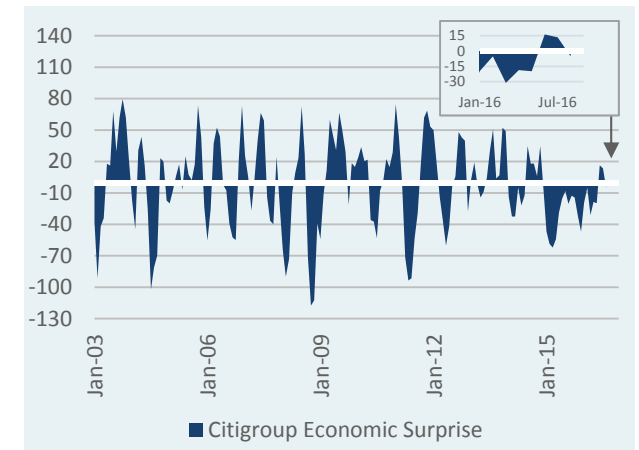
Source: Bloomberg, as of 9/25/16 (see Appendix)

**CONSUMER SENTIMENT**



Source: University of Michigan, as of 9/30/16 (see Appendix)

**ECONOMIC SURPRISE**



Source: Bloomberg, as of 9/30/16 (see Appendix)

# U.S. economics – Housing

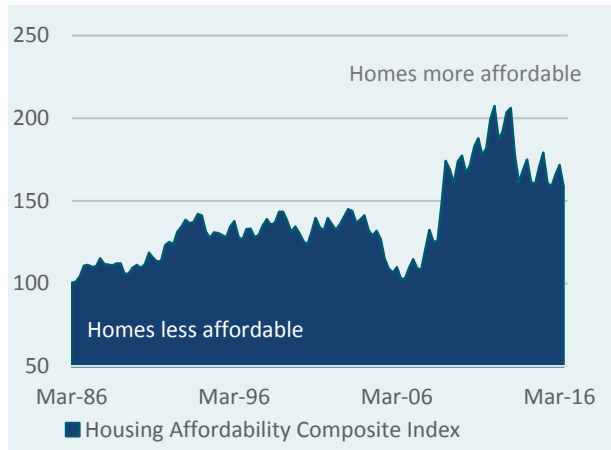
U.S. housing inventories are near historic lows across single and multifamily markets. Limited supply may help to put upward pressure on new construction activity, which has been below average.

Vacancy rates are near all-time lows in the rental space while homeownership rates continue to fall. Demand for rental properties has increased and multifamily housing starts continue to ramp up; however, multifamily homes are thought to contribute

substantially less to economic growth than that of single-family homes. This may factor into future economic growth.

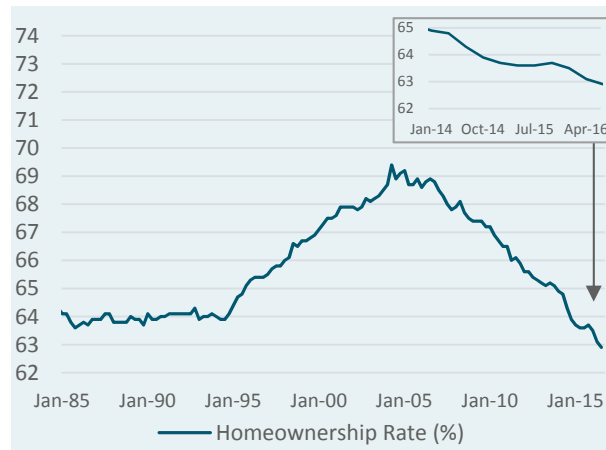
Lower mortgage rates and moderate wage growth have helped to suppress household debt burdens through greater discretionary income. These forces have contributed to a stronger consumer which may bolster future home purchase and ownership trends, especially as home affordability remains high.

## HOME AFFORDABILITY



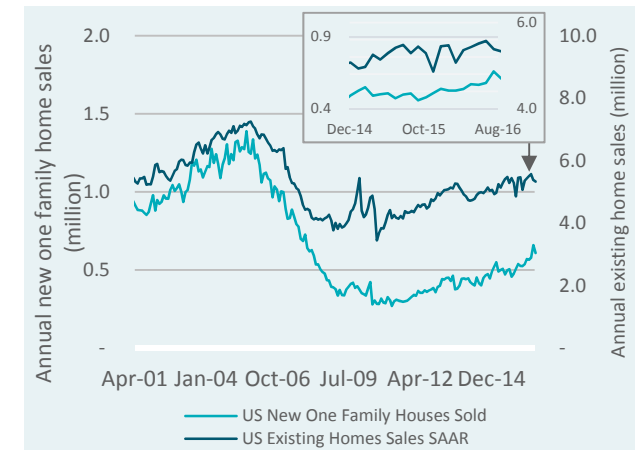
Source: National Association of Realtors, as of 6/30/16

## HOMEOWNERSHIP RATE



Source: FRED, as of 7/1/2016

## NEW & EXISTING HOME SALES



Source: Bloomberg, as of 8/31/16

# U.S. economics – Inflation

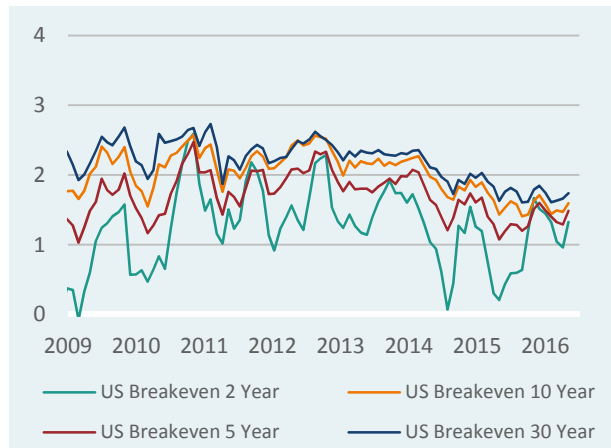
Inflation expectations were mixed during the quarter. The University of Michigan Inflation Expectations Survey reflected lower expected inflation, while the U.S. 10yr TIPS Breakeven indicated higher expectations.

Headline inflation rose 1.1% YoY while core inflation rose 2.3% YoY. Energy and gasoline continue to weigh on prices, while medical care services and shelter (housing costs) put upward pressure on overall prices.

Inflation surveys and inflation-sensitive instruments are inherently different and we might therefore expect discrepancies across these indicators.

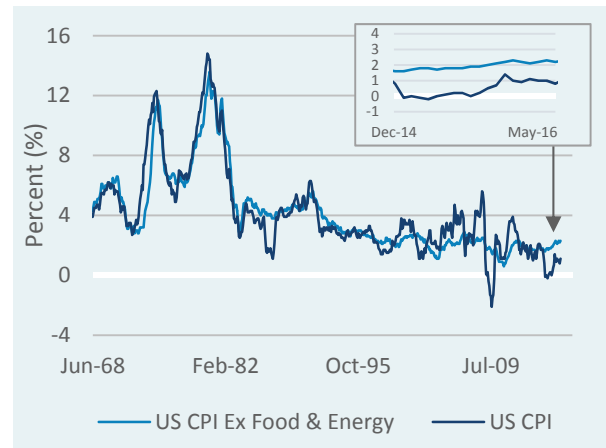
Public fear of inflation remains very low, and the Federal Reserve is hesitant to raise rates. We believe investors should be watchful of inflation trends. An inflation overshoot remains a potential danger, given less worry over inflation and less ability and/or willingness of the Fed to raise rates.

**U.S. TIPS BREAKEVEN INFLATION**



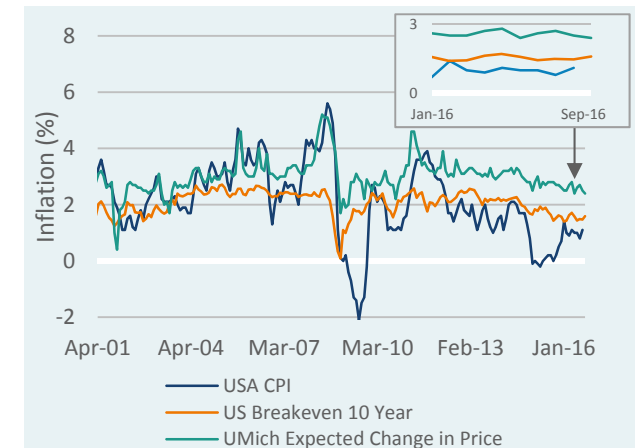
Source: FRED, as of 8/31/16

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



Source: FRED, as of 7/31/16

**MARKET EXPECTATIONS OF INFLATION**

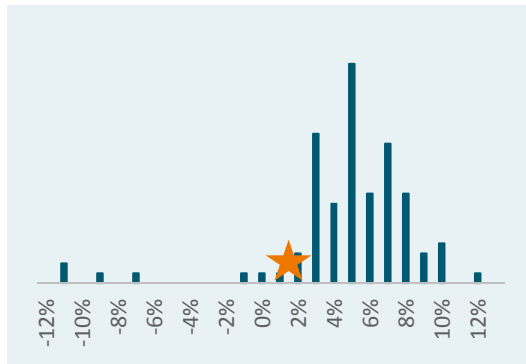


Source: Bloomberg, as of 9/30/16

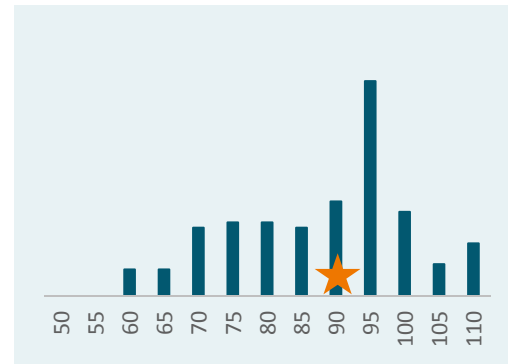


# Where are we now?

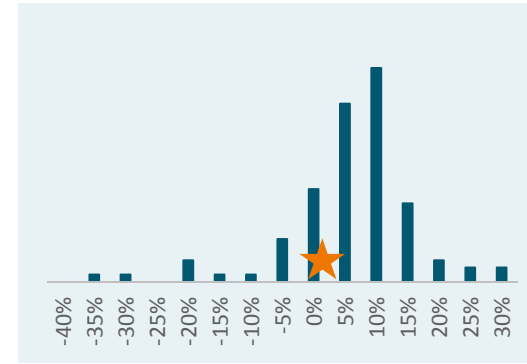
RETAIL SALES, YOY (SINCE 1993)



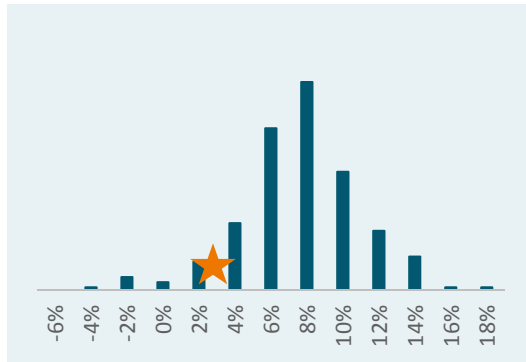
U OF MICH. CONFIDENCE (SINCE 1978)



DURABLE GOODS ORDERS, YOY (SINCE 1992)



PERSONAL INCOME, YOY (1948)



PERSONAL CONSUMPTION, YOY (SINCE 1947)



CITI SURPRISE INDEX (SINCE 2003)



While these metrics clearly do not fall at the top end of their historical distribution, they are not outside normal ranges

Source: Bloomberg, as of 9/30/16

# International economics summary

- Developed economies continued to experience slow growth and low inflation. While inflation ticked up slightly in the Eurozone to 0.4%, it remains materially under the ECB’s target of “below, but close to, 2%”.
- The ECB left monetary policy unchanged at its September meeting, and cut economic growth expectations for the next three years.
- The BOJ shook up its monetary policy after completing a “comprehensive assessment of its current easing programs”. The central bank stated it will intentionally overshoot its inflation target of 2% and introduced a 0% target for the 10-year yield.
- Britain elected new prime minister Theresa May, who will be responsible for implementing Brexit. Increased uncertainty surrounding the timing and nature of the political change will continue. The potential impact of this uncertainty led to the first rate cut by the BOE since 2009.
- The IMF once again downgraded global growth forecasts for 2016 and 2017, this time to just above 3%. It now warns against economic stagnation and states that countries have found themselves in the position of relying on monetary and fiscal policy to lift growth prospects, and that this may be unsustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.4% <i>6/30/16</i>	1.1% <i>8/31/16</i>	5.0% <i>9/30/16</i>
Western Europe	1.8% <i>6/30/16</i>	0.4% <i>9/30/16</i>	8.5% <i>6/30/16</i>
Japan	0.8% <i>6/30/16</i>	(0.5%) <i>8/31/16</i>	3.2% <i>6/30/16</i>
BRIC Nations	5.1% <i>6/30/16</i>	3.8% <i>6/30/16</i>	5.5% <i>6/30/16</i>
Brazil	(3.8%) <i>6/30/16</i>	9.0% <i>8/31/16</i>	11.7% <i>9/30/16</i>
Russia	(0.6%) <i>6/30/16</i>	6.9% <i>8/31/16</i>	5.6% <i>6/30/16</i>
India	7.1% <i>6/30/16</i>	5.1% <i>8/31/16</i>	7.1% <i>12/31/15</i>
China	6.7% <i>6/30/16</i>	1.3% <i>8/31/16</i>	4.1% <i>6/30/16</i>

# International economics

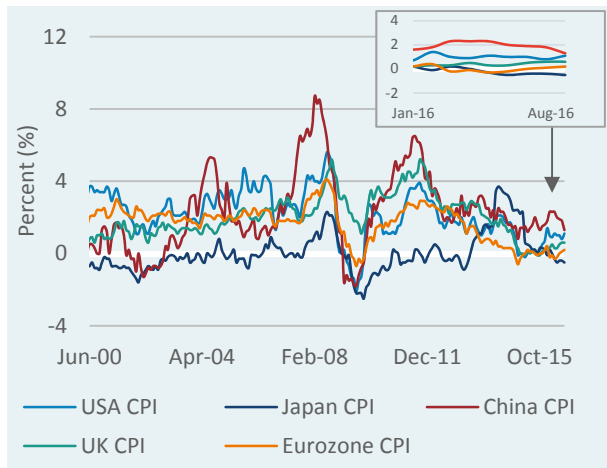
Further downward revisions and lackluster growth in Europe and Japan have encouraged central banks to maintain stimulus measures. Japan implemented a policy initiative which will target a 0% yield for the 10-year government bond. Japan continues to struggle with deflation as headline CPI fell to -0.5% YoY in August.

While economic data released in the U.K. post-Brexit has significantly beaten expectations, uncertainty remains regarding the specific details of the country's exit from the European Union. In its latest report, the BOE lowered the

2017 growth forecast to 0.8% from 2.3%. The central bank also expects inflation to hit 2.4% in 2018 and 2019, citing the fall of the pound sterling.

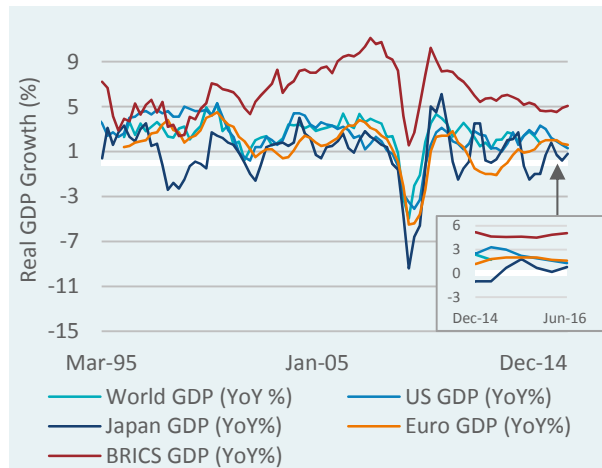
Emerging market economic growth picked up slightly at 4.6% YoY in the second quarter. After a drop off in growth following the global financial crisis, the outlook for emerging economies has improved. With slow growth expectations for developed markets, an opportunity may exist in both emerging market equities and fixed income.

## INTERNATIONAL INFLATION



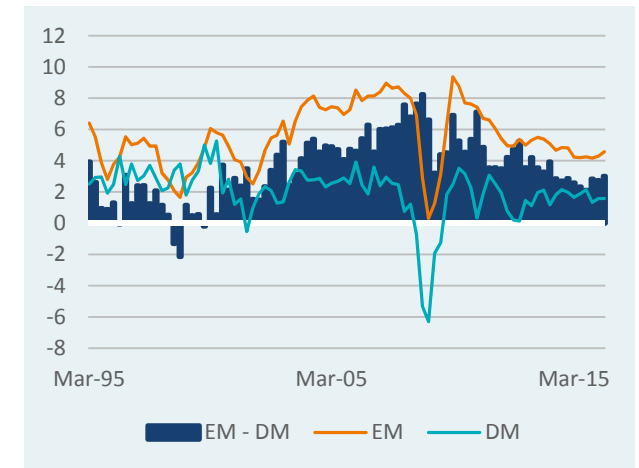
Source: Bloomberg, as of 8/31/16

## REAL GDP GROWTH



Source: Bloomberg, as of 6/30/16

## EM VS. DM REAL GDP GROWTH



Source: Bloomberg, as of 6/30/16

# Post-Brexit

There have been significant changes in U.K. and European political behavior following the Brexit vote. Rear guard actions in both Parliament and the courts in the U.K. have begun to attempt to slow or stop the implementation of Brexit. The Prime Minister has said that Article 50 will be triggered in March 2017.

One of the key elements of the discussion has been debate over whether Brexit should be a 'hard' Brexit (full withdrawal from the Single Market) or a 'soft' Brexit (with continuing participation in the Single Market for a fee, and with continuing free movement of people). Pro-Brexit

campaigners point out that this issue was extensively discussed during the campaign, while Remainers claim that the U.K. population was ill-informed during the run-up to the vote, although their hand is weakened by the fact that their predictions of economic chaos were a Brexit vote to win have so far failed to materialize.

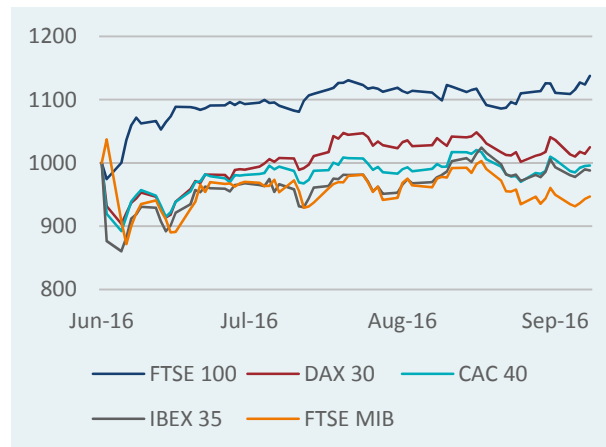
The remaining EU members remain unsure how to proceed, with hard-line negotiators appointed by the EU but strong financial interests in many countries in close ongoing trading links with the U.K.

**GBP/USD**



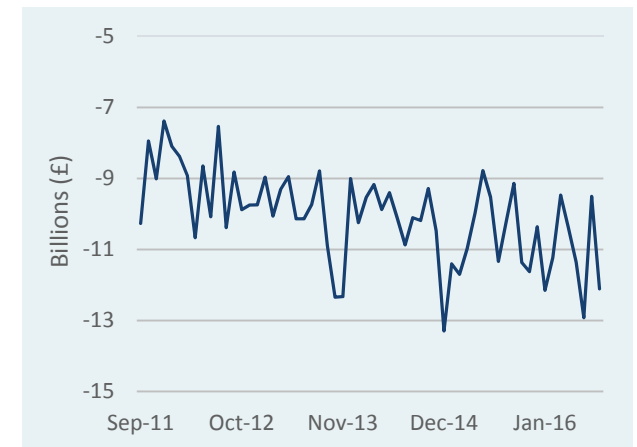
Source: FRED, as of 10/19/16

**EUROPEAN EQUITY MOVEMENT**



Source: Bloomberg, 6/23-9/30/16 – shown in local currency terms

**U.K. BALANCE OF TRADE**



Source: Bloomberg, as of 9/30/16

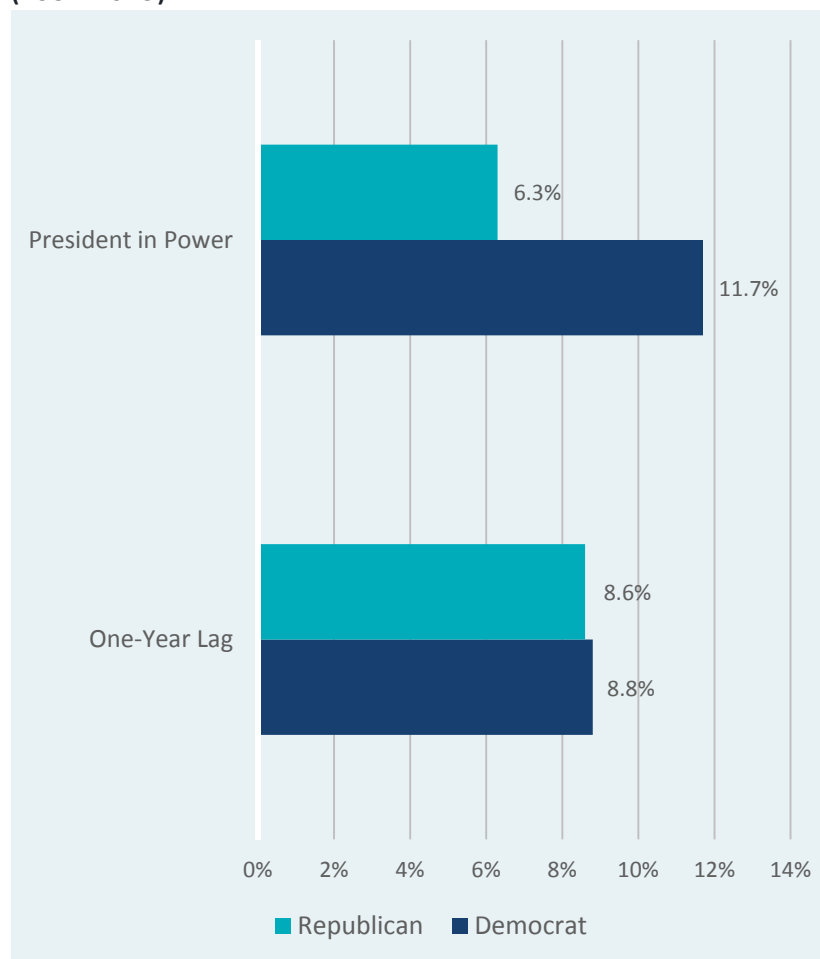
# U.S. presidential election

Correlation between election results and long-term market performance has generally been weak, and the outcome depends on how the data is sliced. The S&P 500 has experienced greater price appreciation with a Democrat in power, but the results are less clear when a one-year policy lag is introduced; research results depend on how the relationship is defined.

It appears that a Clinton win would most likely result in little change from the current macroeconomic policy. However, strong congressional pressure would be likely on trade issues, and there would be continuing challenges to the long term sustainability of the Affordable Care Act. Both candidates have supported increased spending on infrastructure, which would provide support for the materials and construction sectors.

A Trump win might bring greater uncertainty because his economic policy plans are less known/understood. Trump's impact may also be felt more quickly through his use of executive orders to reshape the regulatory environment, and some policies enacted by Obama may be undone, through the same means.

**AVERAGE CALENDAR YEAR S&P 500 PRICE RETURN  
(1951-2015)**



The relationship between election results and market performance is weak

*Note: Top chart = annualized return during time in office, Lower chart = annualized return during time in office but with 1-year lag*

# Fixed income rates & credit

# Interest rate environment

- The U.S. Treasury curve continued to flatten, influenced by increased expectations of an interest rate hike by the end of the year.
- Global interest rates remain near all time lows, although volatility picked up. Continued easing by central banks in addition to low inflation and expectations for slowing growth contribute to an environment of secularly low yields.
- When thinking about bond yields today, it may be useful not only to consider nominal yields, which are at historic lows, but also *real* yields, which paint a much more reasonable picture. Current levels of inflation and future expectations may help put things into context. Furthermore, investors may see markets drive yields higher if inflation expectations were to rise.
- Negative yielding sovereign and corporate debt was \$11.6 trillion at quarter end, mostly from Japan and the Eurozone. We remain concerned about Japanese and European rates as negative yields and low liquidity detract from the attractiveness of these assets.
- Yields on Japanese Treasuries increased sharply in late July after the BOJ chose to keep stimulus measures on hold. The 10-year JGB yield briefly traded around 0% before falling back into negative territory at the end of September.
- European sovereign bonds sold off during the beginning of September over concerns that central banks may begin cutting back on monetary easing measures.

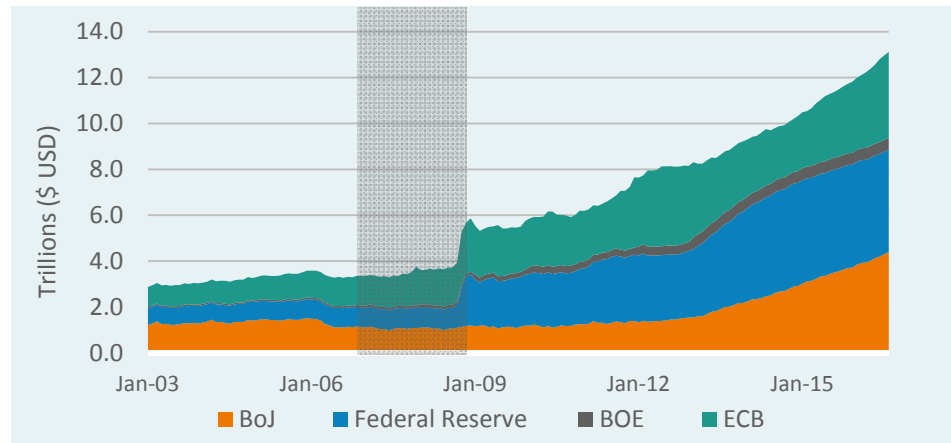
Area	Short Term (3M)	10 Year
United States	0.27%	1.59%
Germany	(0.76%)	(0.12%)
France	(0.67%)	0.19%
Spain	(0.60%)	0.88%
Italy	(0.39%)	1.19%
Greece	3.34%	8.28%
U.K.	0.32%	0.75%
Japan	(0.33%)	(0.09%)
Australia	1.75%	1.91%
China	2.23%	2.74%
Brazil	13.73%	11.60%
Russia	9.80%	8.17%

Source: Bloomberg, as of 9/30/16

# Unwinding QE

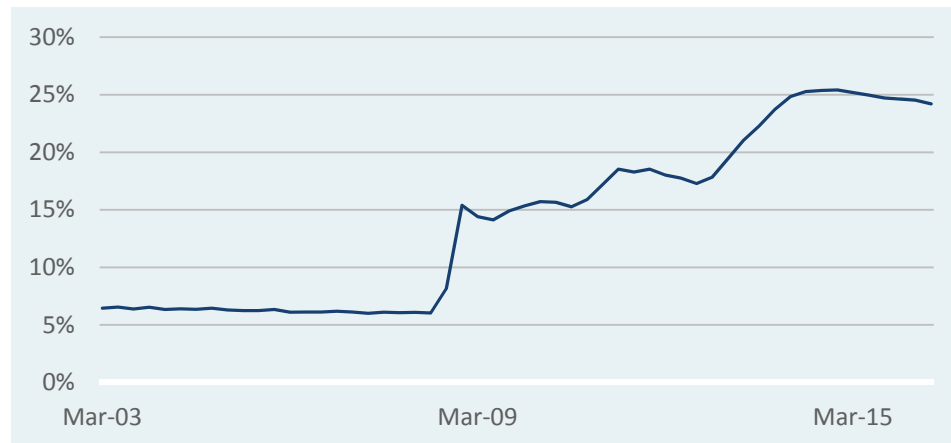
- It appears that we may be nearing the end stage of monetary policy expansion, with over \$7 trillion added to central bank balance sheets. The way in which central banks choose to unwind asset purchases, or how they manage them, could have a significant impact on financial markets.
- Balance sheets may be slowly trimmed through gradual asset sales, or by allowing existing bonds to mature. Shrinking the balance sheet in this manner naturally has a tightening effect, which places downward pressure on asset prices.
- Balance sheet sizes may also be maintained for some time or possibly indefinitely. Were the velocity of money to begin to pick up this balance sheet expansion might lead to inflationary pressure.
- Balance sheets might also be monetized by writing off assets, allowing governments to “walk away” from their debt. With few historical comparisons, forecasting the effects of such write offs is exceptionally difficult. In addition to inflation concerns, this strategy could undermine the independence of central banks and public confidence in them.

**CENTRAL BANKS BALANCE SHEETS**



Source: FRED, Federal Reserve, BOE, ECB, Verus, as of 8/1/16

**FEDERAL RESERVE ASSETS TO GDP**

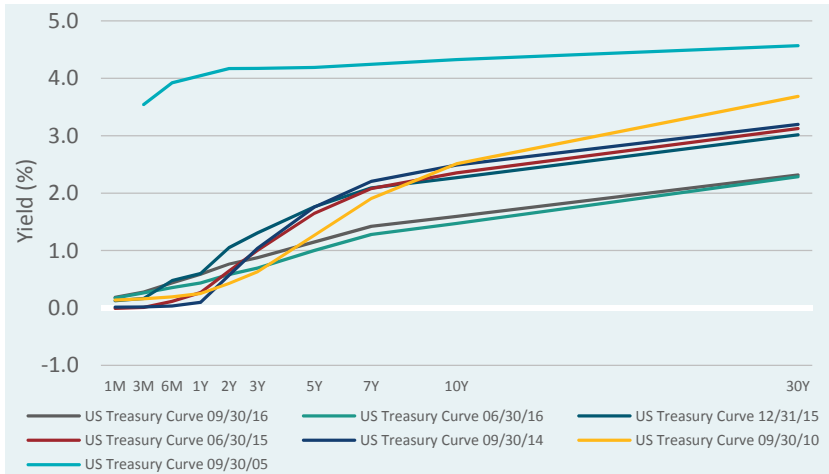


Source: FRED, as of 6/30/16

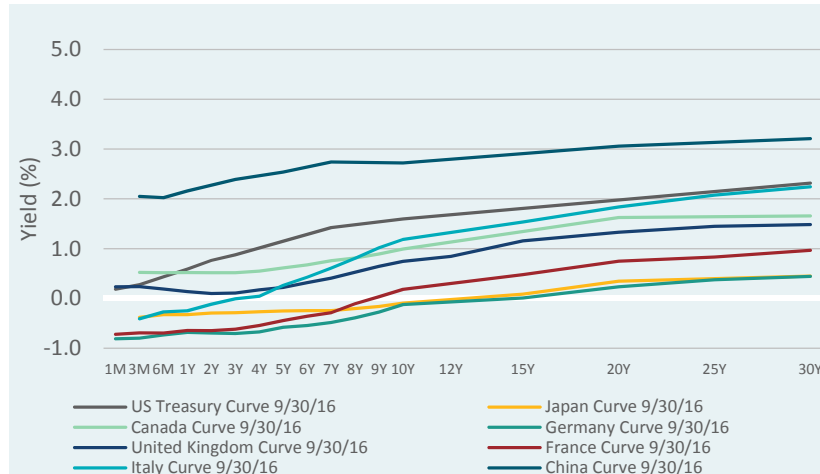


# Yield environment

U.S. YIELD CURVE

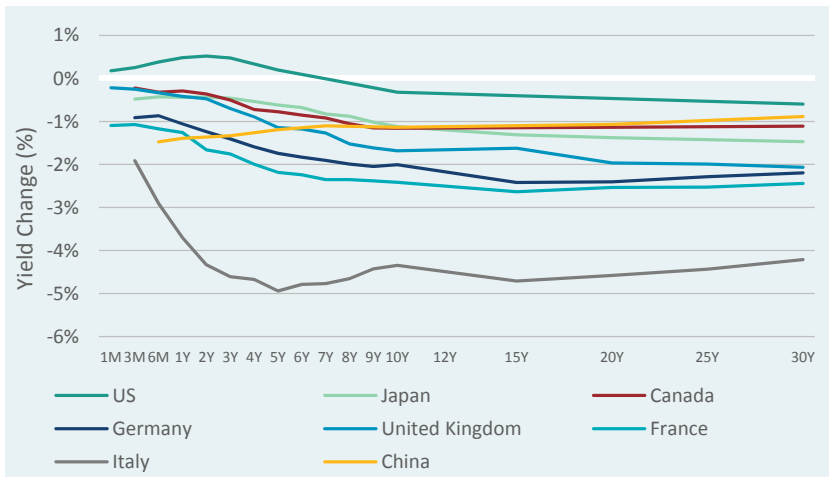


GLOBAL GOVERNMENT YIELD CURVES

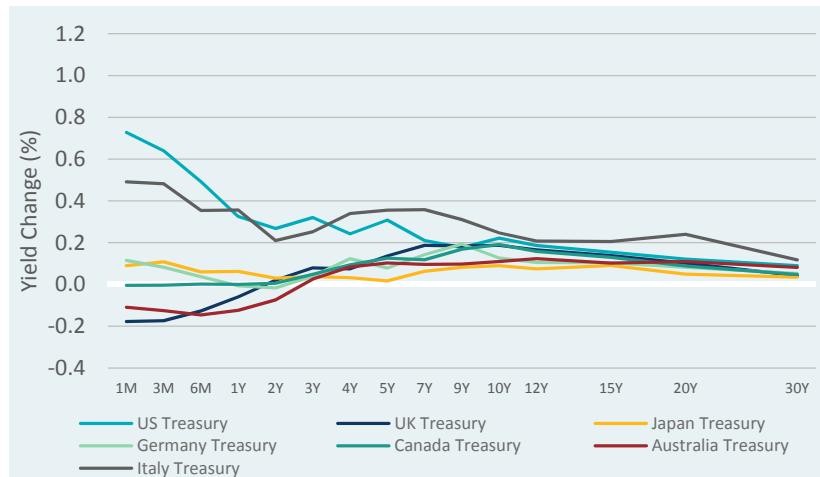


Global investors continue to prefer U.S. Treasuries due to higher relative yields

YIELD CURVE CHANGES OVER LAST FIVE YEARS

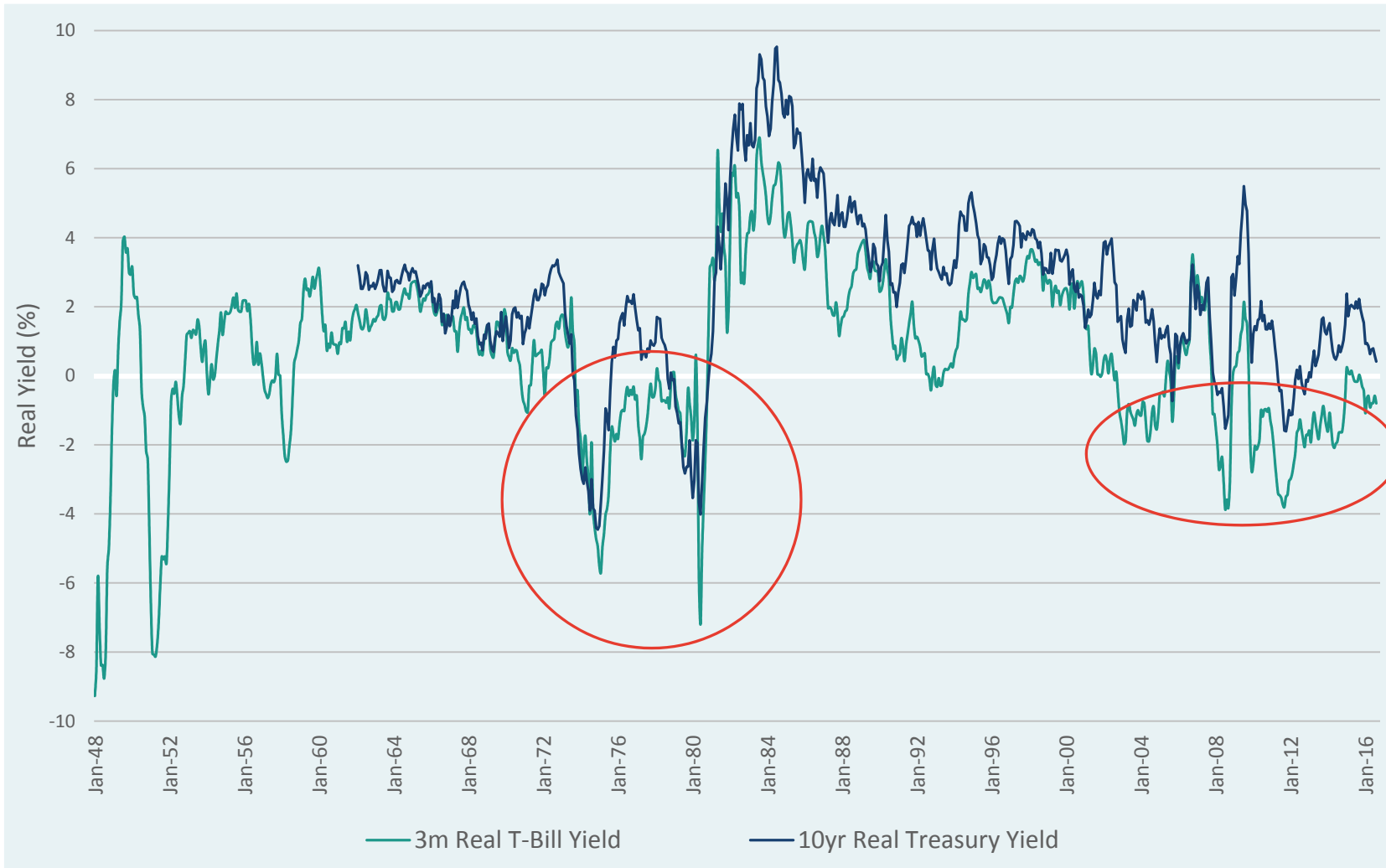


IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/16

# Yield environment



Negative real yields are not a new phenomenon

Yield levels should be viewed in context of the inflation environment

Source: Verus, as of 8/31/16

# Credit environment

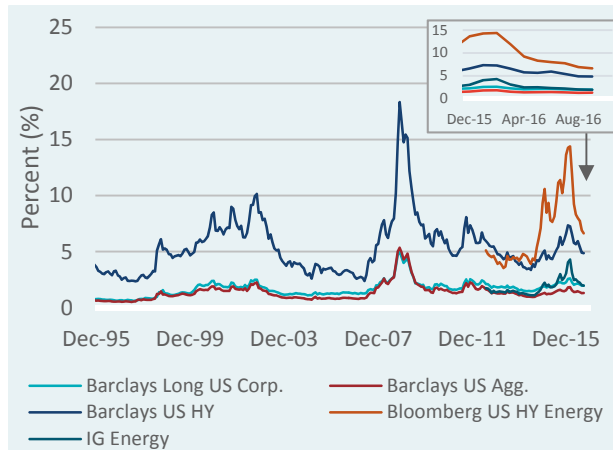
High yield returns across all sectors - energy and metals and mining in particular - have been strong since the trough in Q1. As evidence of this performance, high yield spreads have compressed to below 5.1% as of September from a high of 8.9% earlier in the year.

U.S. credit markets have broadly normalized following increased volatility in Q1. While below the long-term trend, U.S. GDP growth has remained positive, which has been a tailwind to credit markets in general. In addition, foreign demand for U.S. credit issuance has

remained positive as low developed market yields have been supportive of the “carry trade”, where investors buy relatively higher yielding assets.

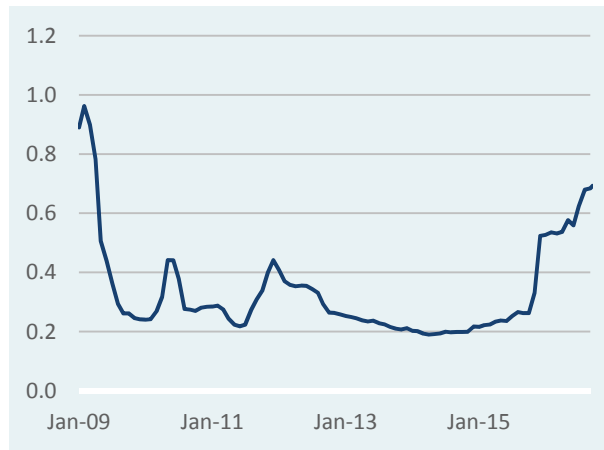
LIBOR rates have increased meaningfully as investors prepared for the pending regulatory changes to money market funds. Prime funds will now report a floating NAV. This change has prompted some investors to redeem their exposures, thereby reducing their demand for commercial paper and LIBOR-based loans causing the rate to increase.

## CREDIT SPREADS



Source: Barclays Capital Indices, Bloomberg, as of 9/30/16

## 3 MONTH LIBOR



Source: Bloomberg, as of 9/30/16

## SPREADS

Market	Credit Spread (9/30/16)	Credit Spread (1 Year Ago)
Long US Corporate	1.8%	2.1%
US Aggregate	0.9%	1.2%
US High Yield	5.1%	6.8%
US High Yield Energy	6.6%	11.4%
US Bank Loans	3.9%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/16

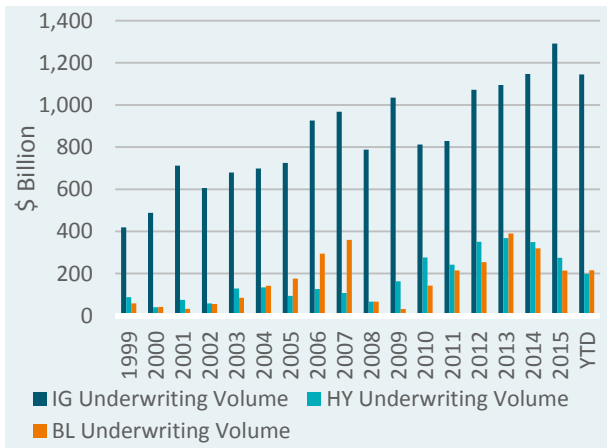
# Issuance and default

Defaults have trended higher in recent months, particularly in the high yield debt space. Default rates have risen well above the trailing 20-year average and are at the highest levels since the global financial crisis; however, much of this activity has been driven specifically by energy issuers. Overall issuance is on track for a year-over-year decline.

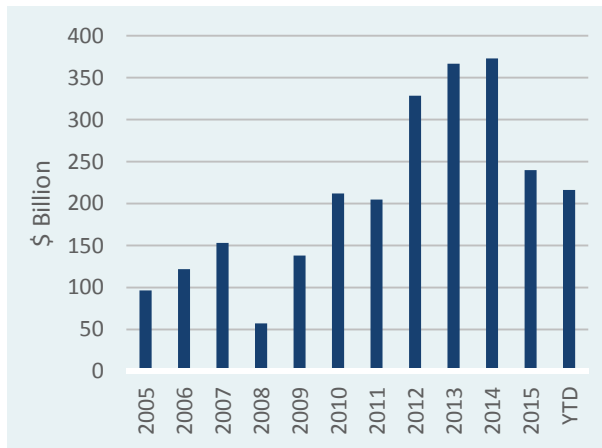
New bond issuance in emerging markets, especially corporates, has continued at a relatively strong pace. Many of these issuers can only borrow in U.S. dollars. As such, eventual rises in U.S. interest rates would increase borrowing costs. Investors' appetites for emerging market debt remains strong based on relative value compared to developed market bonds.

The recent increase in LIBOR rates has been a headwind for bank loan borrowers, as reflected in flattening issuance.

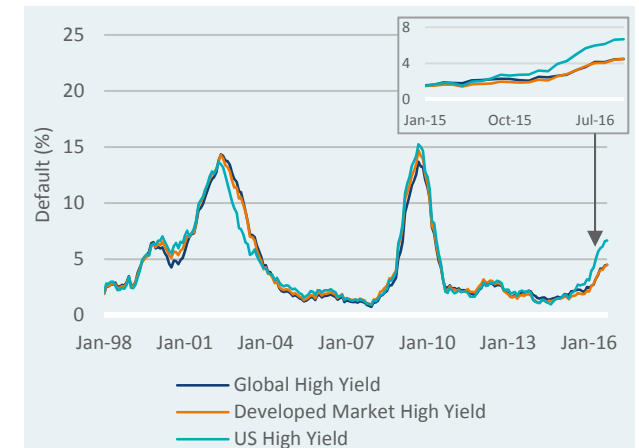
## U.S. DEBT ISSUANCE



## EM DEBT ISSUANCE



## HY DEFAULT TRENDS (ROLLING 1 YEAR)

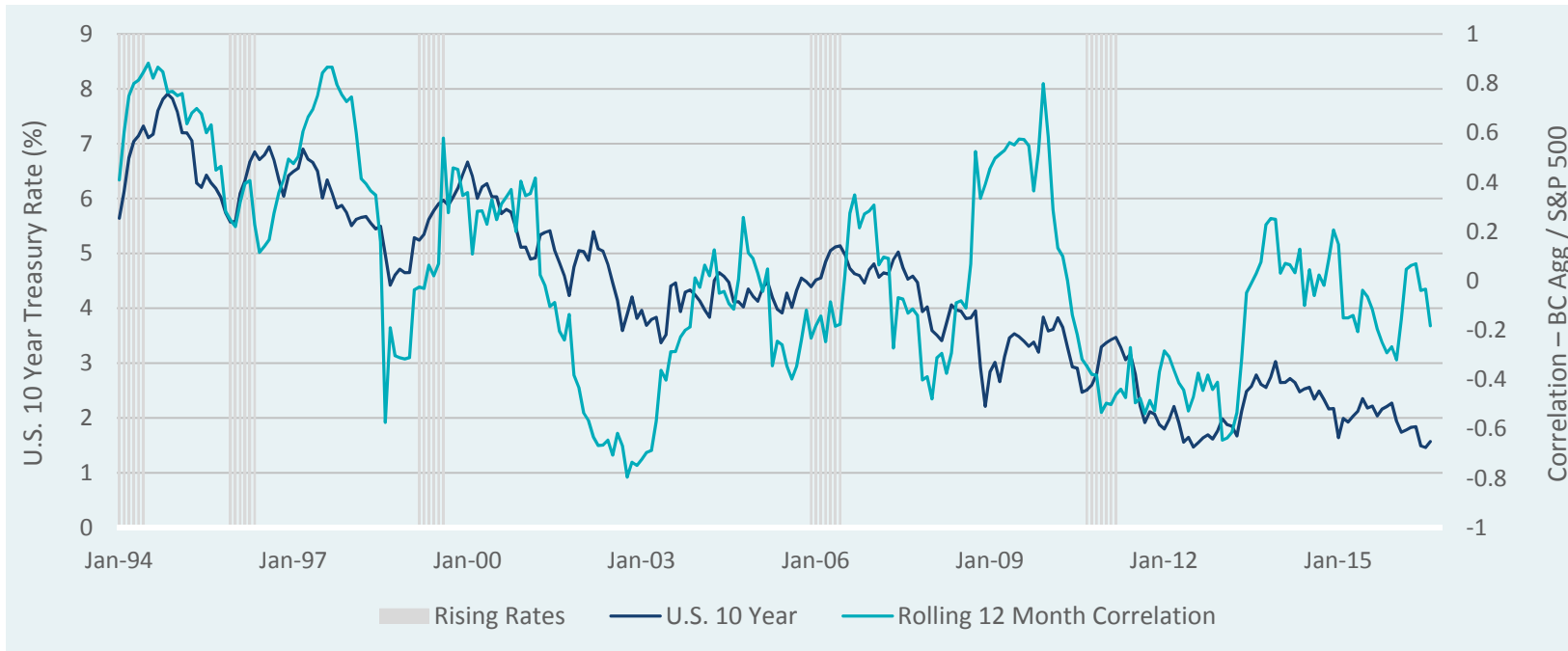


Source: Bloomberg, BofA Merrill Lynch, as of 9/30/16

Source: JP Morgan, as of 9/30/16

Source: Credit Suisse, BofA, as of 9/30/16

# Fixed income – rising yields



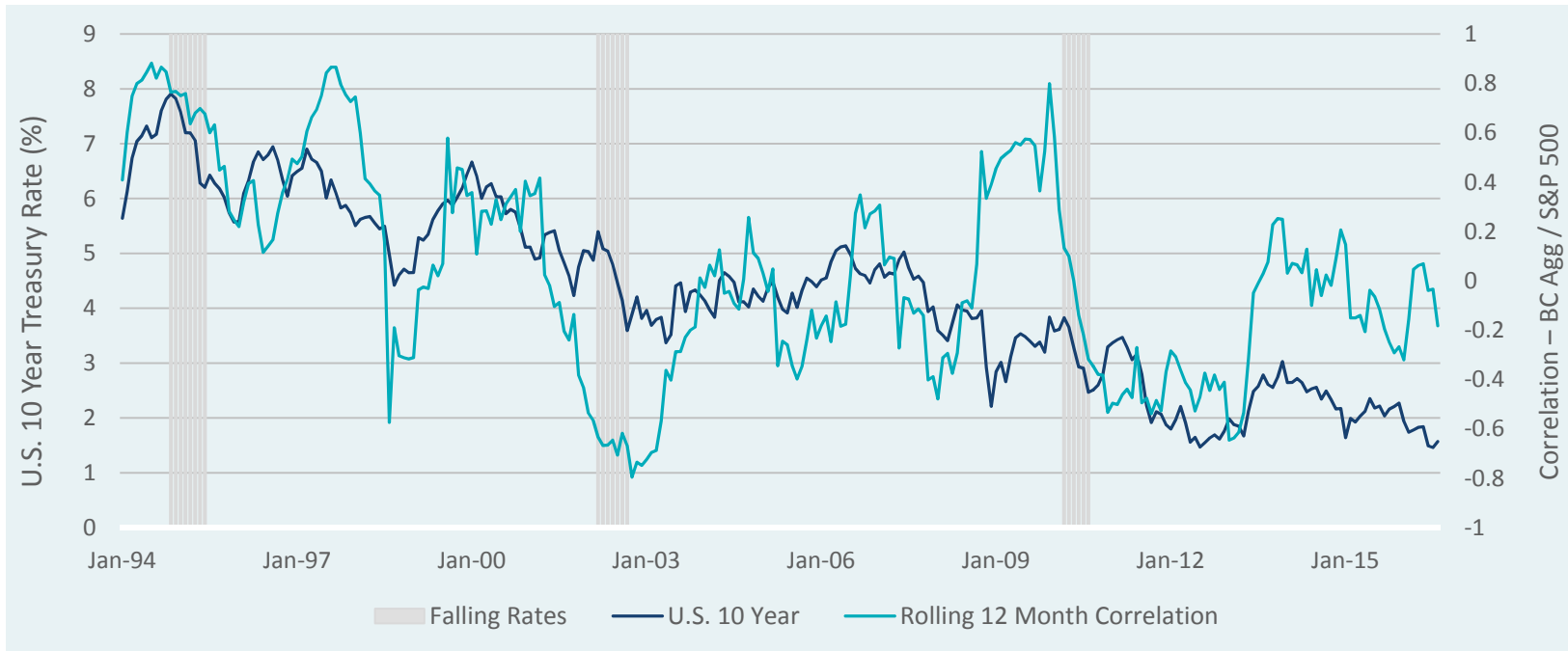
During rising yield environments (6 months of consecutive rising yields) BC Agg and S&P 500 returns have shown very different correlation

We are currently in a negative correlation environment

Date	Months	Yield increase	Average return correlation*
Jan 1994-Jun 1994	6	1.68	0.70
Dec 1995-May 1996	6	1.28	0.30
Mar 1999-Aug 1999	6	0.73	0.11
Dec 2005-June 2006	7	0.75	-0.18
Sep 2010-Mar 2011	7	0.96	-0.44

\*Rolling 12 Month correlation between Barclays US Aggregate and S&P 500. "Rising yield environment" is defined as 6 months of consecutive yield increases  
Source: Bloomberg, MPI, as of 8/31/16

# Fixed income – decreasing yields



Correlations have varied during decreasing yield environments (6 months of falling yields), from -0.66 to 0.71

Diversification benefits have not been clearly linked to the rate environment

Date	Months	Yield decrease	Average return correlation*
Nov 1994-June 1995	8	1.70	0.71
Mar 2002-Sep 2002	7	1.80	-0.66
Mar 2010-Aug 2010	6	1.36	-0.07

\*Rolling 12 Month correlation between Barclays US Aggregate and S&P 500. "Decreasing yield environment" is defined as 6 months of consecutive yield decreases.

Source: Bloomberg, MPI, as of 8/31/16

# Equity

# Equity environment

- Equity market risks continue to appear asymmetrical to the downside - the U.S. equity market in particular.
- U.S. equities rallied to start the quarter as central banks communicated to the markets that further monetary easing would be available if necessary, in response to the Brexit vote. In the final two months of the quarter, the U.S. equity markets stayed relatively flat and volatility was below average.
- A sixth consecutive quarter of year-over-year earnings decline is expected for the S&P. FactSet has forecast a -2.1% earnings decline for Q3.
- Information technology (12.9%) was the best performing sector in the S&P 500 by a large margin on the back of higher earnings expectations. Utilities (-5.9%) and telecom services (-5.6%) were the worst performing sectors in the index.
- The FTSE 100 (hedged) returned 7.1% over the third quarter after concerns over the impact of Brexit somewhat subsided.
- The U.S. dollar fell 0.7% in Q3 on a trade-weighted basis. Recent dollar stabilization may be disrupted if the Fed goes ahead with further rate hikes. As most developed economies remain in easing mode, further U.S. hikes would likely add to dollar strength.

	QTD TOTAL RETURN		YTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	4.0%		7.9%		14.9%	
US Small Cap (Russell 2000)	9.0%		11.5%		15.5%	
US Large Value (Russell 1000 Value)	3.5%		10.0%		16.2%	
US Large Growth (Russell 1000 Growth)	4.6%		6.0%		13.8%	
International Large (MSCI EAFE)	6.4%	6.3%	1.7%	(1.0%)	6.5%	5.3%
Eurozone (Euro Stoxx 50)	6.3%	4.8%	(2.4%)	(4.1%)	0.4%	0.5%
U.K. (FTSE 100)	4.0%	7.1%	0.6%	14.1%	1.5%	18.4%
Japan (NIKKEI 225)	8.2%	5.9%	4.4%	(14.3%)	13.6%	(6.2%)
Emerging Markets (MSCI Emerging Markets)	9.0%	6.3%	16.0%	9.7%	16.8%	10.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/16



# Domestic equity

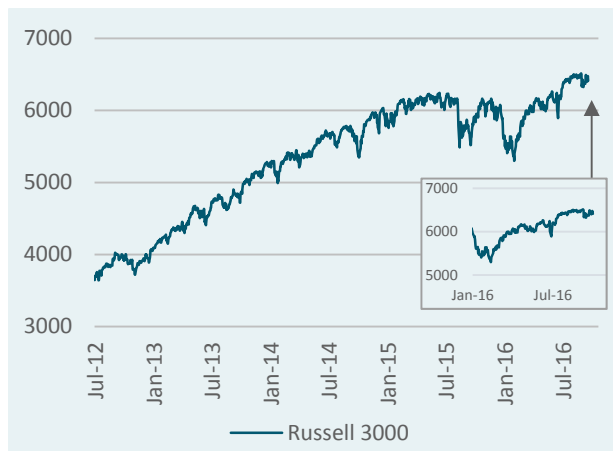
After minimal reaction to Brexit, domestic equities continued higher in July, then delivered two quiet months to finish the quarter. The S&P 500 returned 3.9% in Q3. The market appears to be taking a wait-and-see approach with important oncoming events such as elections and Federal Reserve meetings.

With higher equity prices and lower overall earnings, valuations have expanded. The forward earnings multiple for the S&P 500 was 18.5 at quarter end,

relative to its 25-year average of 16.6 (in the 81<sup>st</sup> percentile). Year-over-year earnings growth is expected to be negative for the sixth consecutive quarter, heavily influenced by the energy sector and lower oil prices. As the effects of monetary stimulus on U.S. financial markets wanes, earnings will play an important role for future equity returns.

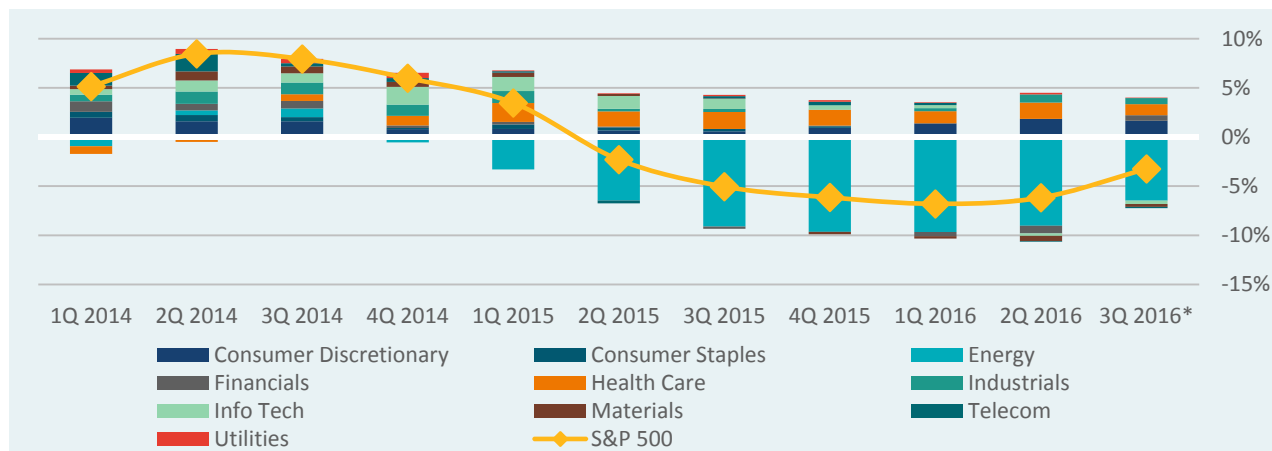
U.S. earnings results will likely dictate the path of equities

## U.S. EQUITIES



Source: Russell Investments, as of 9/26/16

## SECTOR IMPACT ON S&P 500 EARNINGS GROWTH



Source: Bloomberg, as of 9/30/16

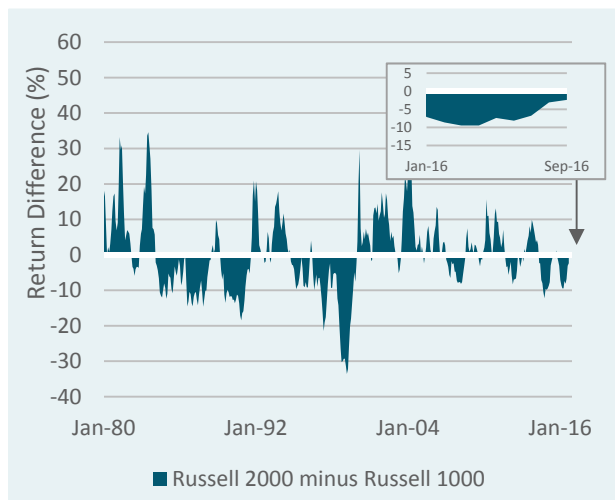
# Domestic equity size and style

Growth stocks outperformed value during the third quarter as the Russell 1000 Growth Index and Russell 1000 Value Index returned 4.6% and 3.5%, respectively. However, value has outperformed growth by 4.0% year-to-date.

3.5% year-to-date, reversing a recent trend of large cap outperformance. The relative P/E ratio of small to large cap equities at the end of September was 2.07 - well above its long-term average of 1.39 - suggesting that small cap stocks may be relatively overvalued.

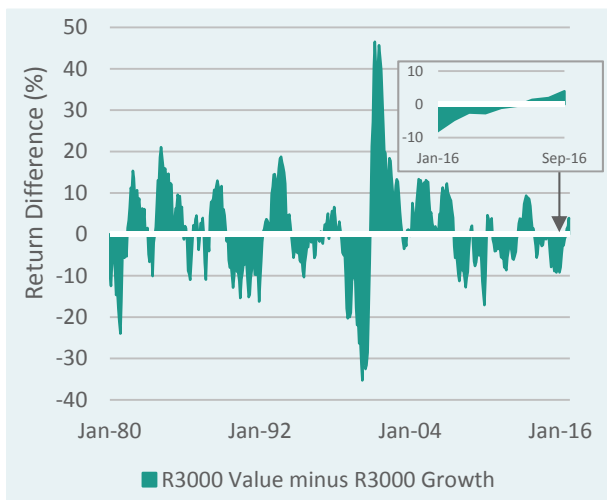
In the third quarter, the Russell 2000 Index returned 9.0% and the Russell 1000 Index returned 4.0%. Small cap equities have also beaten large cap equities by

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



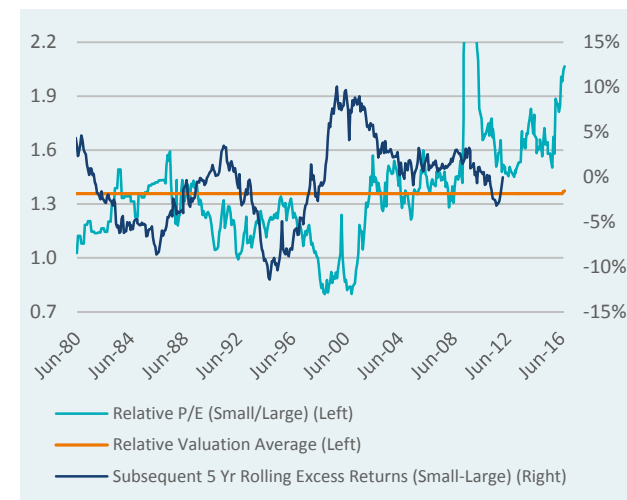
Source: Russell Investments, as of 9/30/16

**VALUE VS GROWTH (YOY)**



Source: Russell Investments, as of 9/30/16

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



Source: Russell, Bloomberg, as of 9/30/16

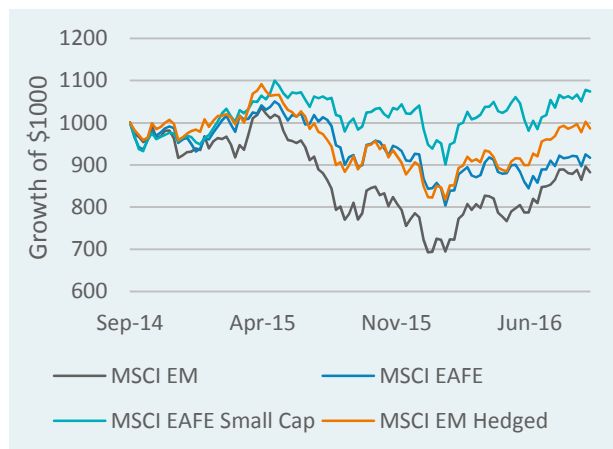
# International equity

Central banks remained accommodative in Q3, helping to generate a rally in international equities. Low and negative yields in Japan and the Eurozone helped maintain the relative attractiveness of equities in these markets.

On a hedged basis, international developed equities outperformed domestic equities with the MSCI EAFE returning 6.3%, and the S&P 500 returning only 3.9% during the quarter.

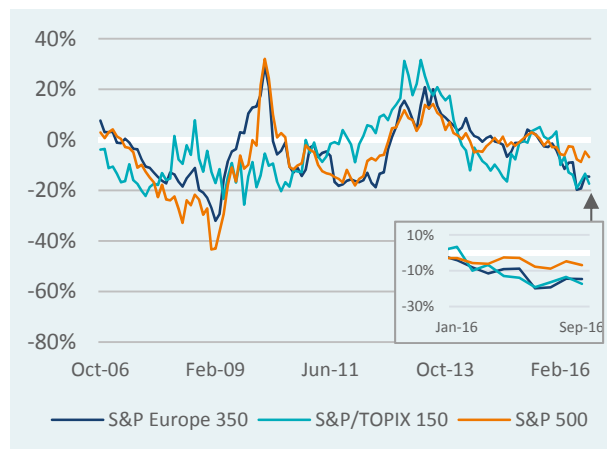
Financial stocks continue to lag, though the third quarter saw more healthy returns. Banks in Japan and the Eurozone were given a boost when the BOJ and ECB chose not to increase stimulus measures. Significant headwinds remain, however, as negative interest rates continue to hurt bank profitability.

**GLOBAL EQUITY PERFORMANCE**



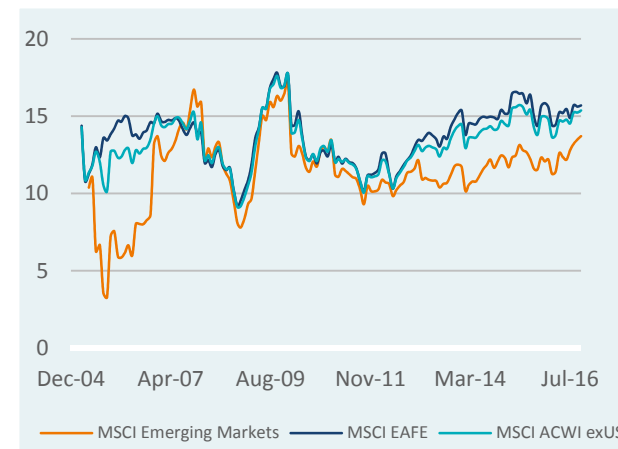
Source: Bloomberg, as of 9/30/16

**12-MONTH ROLLING RELATIVE FINANCIAL SECTOR RETURNS**



Source: MPI, as of 9/30/16, in local currency terms

**INTERNATIONAL FORWARD P/E RATIOS**



Source: MSCI, as of 9/30/16

# Emerging market equity

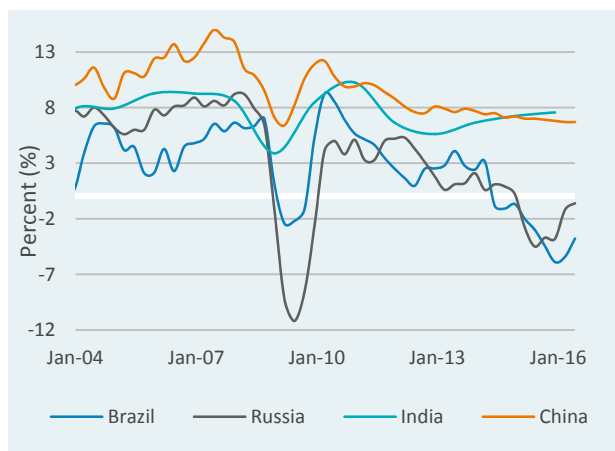
Emerging market equities experienced a rebound during Q3, returning 6.3% on a hedged basis and 9% unhedged. Emerging market earnings per share growth turned positive in 2016, reversing a 5-year downward trend. Valuations remain below average and materially more attractive than those of developed markets.

Moderating commodity prices, continued developed central bank accommodation, less U.S. dollar strengthening, and stability in China, have helped to bolster investor risk appetites and the emerging market

outlook, fueling fund flows into these markets.

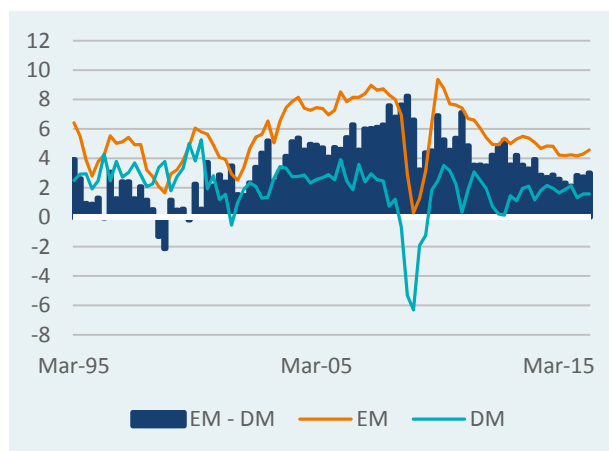
Many emerging market economies experienced a rough readjustment period following the commodity supercycle reversal and saw severe currency depreciation. However, many economies such as Russia have allowed currency devaluation to work as an effective economic shock absorber to mitigate current account problems which these economies often experience during commodity (export) price choppiness.

**ECONOMIC GROWTH (REAL GDP YOY)**



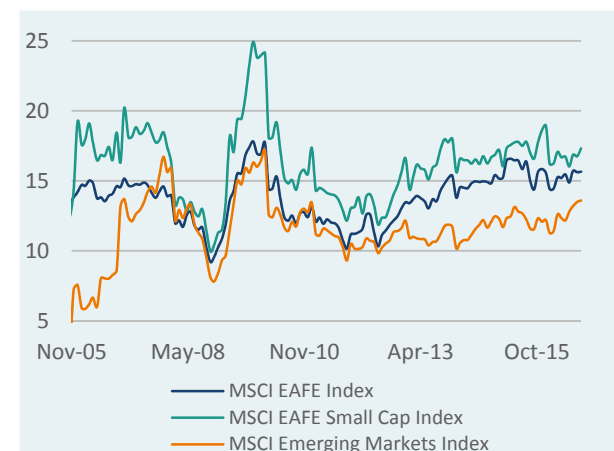
Source: Bloomberg, as of 6/30/16

**EM VS. DM REAL GDP GROWTH**



Source: Bloomberg, as of 6/30/16

**FORWARD P/E**



Source: MSCI, as of 9/30/16

# Equity valuations

Domestic large cap equity valuations remain above average. The forward earnings multiple for the S&P 500 was 18.5 at quarter end, relative to its 25-year average of 16.6. This places the forward P/E in the 81<sup>st</sup> percentile of the past 25 years.

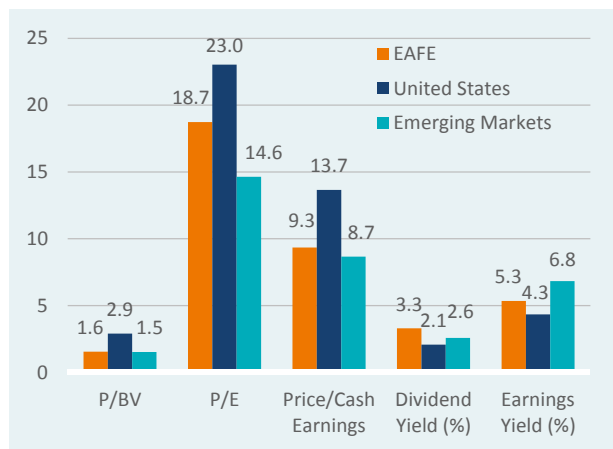
Large cap equity valuations are also slightly above average based on the Shiller P/E ratio.

Small cap equity valuations are above long-term

averages, suggesting that small caps are currently overvalued. The forward P/E ratio for the Russell 2000 as of September 30<sup>th</sup> was 28.1, compared to the long-term average of 25.3.

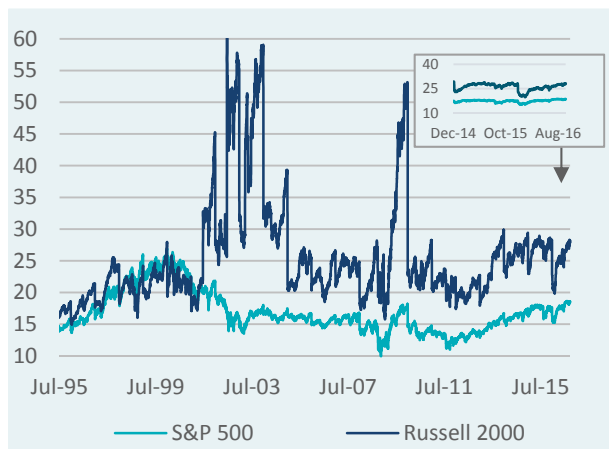
Historically, low interest rate and low inflationary environments have coincided with above-average valuations (see slide 35). This makes it difficult to tell whether equities are truly overvalued or if current valuations simply reflect the economic environment.

## MSCI VALUATION METRICS (3 MONTH AVERAGE)



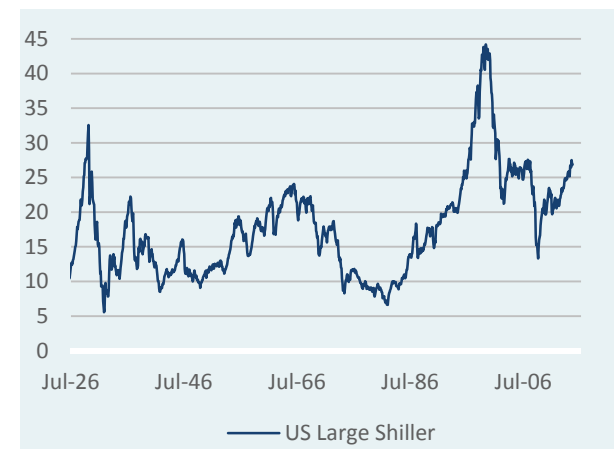
Source: MSCI, as of 9/30/16

## FORWARD P/E



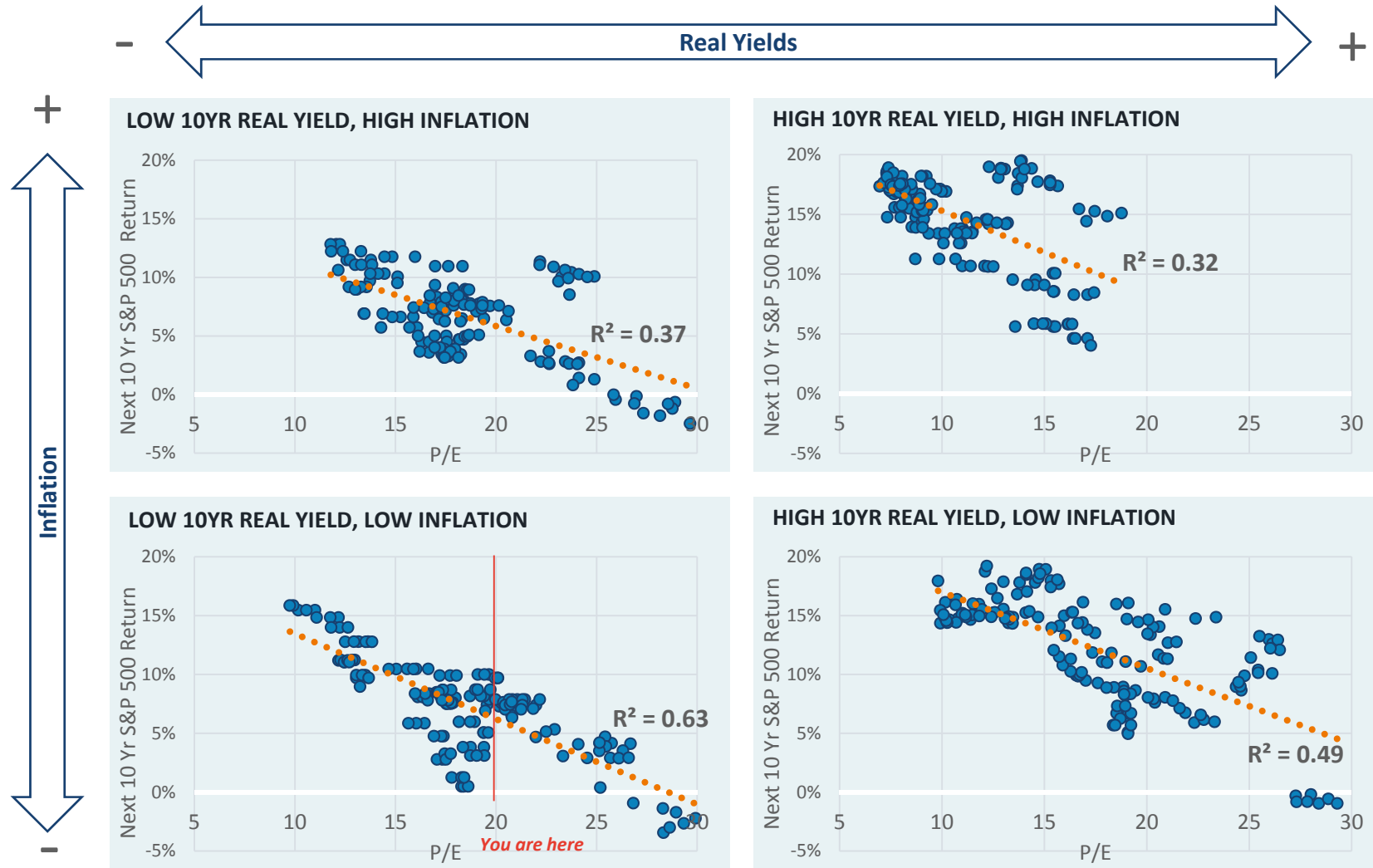
Source: Yale/Shiller, Verus as of 9/30/16

## S&P 500 SHILLER P/E RATIO



Source: Yale/Shiller, as of 9/30/16

# Putting valuations into context



P/E tends to be higher during low yield, low inflation environments

Just because environment may justify higher P/E, higher valuations still bode poorly for future returns

Using data since 1954, sorted the economic environment into the above 4 market environments: low 10yr Treasury real yield & high inflation, high 10yr Treasury real yield & high inflation, low 10yr Treasury real yield & low inflation, and high 10yr real yield & low inflation. Within each quadrant, plotted each point-in-time P/E level for the S&P 500 (the x-axis) and the subsequent 10 year equity return (y-axis).

# Equity volatility

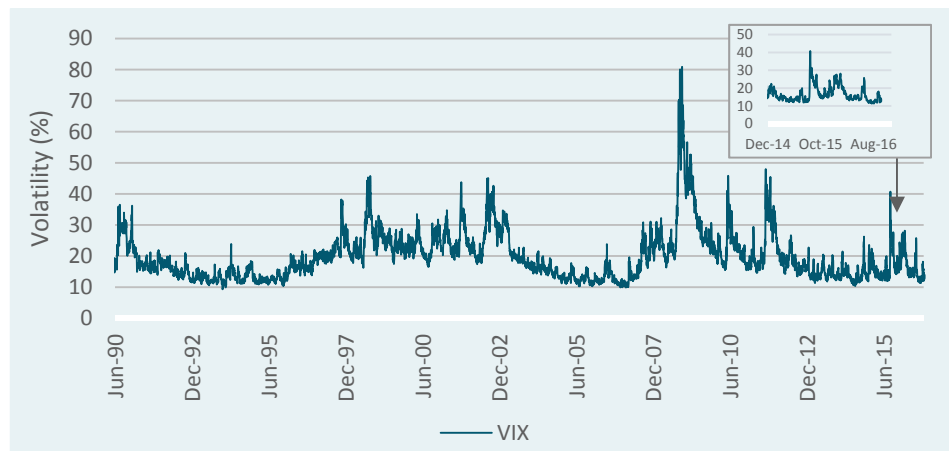
Following a substantial spike in volatility during the Brexit vote announcement, equity volatility fell and remained subdued. The VIX index has averaged around a level of 20 during the past 25 years. More recently investors have seen VIX levels below this average which is typical during equity bull markets.

Volatility expectations, as indicated by VIX, continue to be low, though we might expect rising levels given

political uncertainty leading up to the U.S. presidential election.

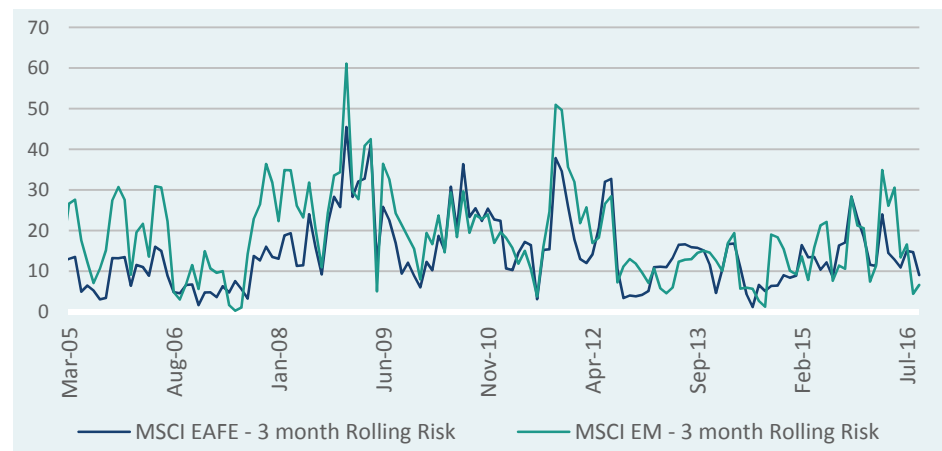
International equity market volatility has remained in a normal range, following choppiness during news surrounding and following the Brexit referendum. Unhedged currency exposure has also added to variation in investors' experienced equity returns – and much more so in recent years.

## U.S. EQUITY VOLATILITY



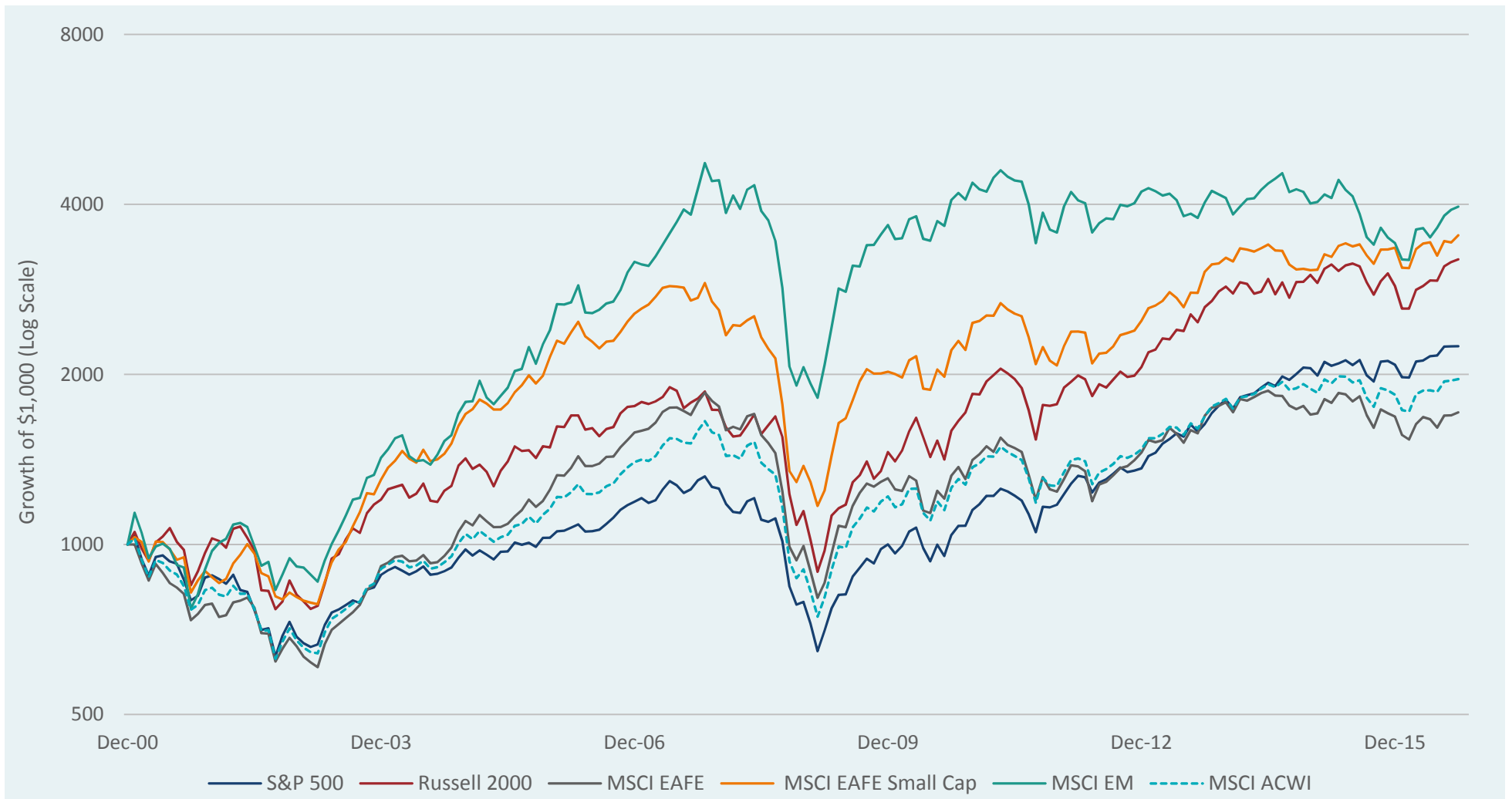
Source: CBOE, as of 9/22/16

## INTERNATIONAL EQUITY VOLATILITY



Source: MSCI, as of 9/30/16

# Long-term equity performance



Source: MPI, as of 9/30/16



# Other assets

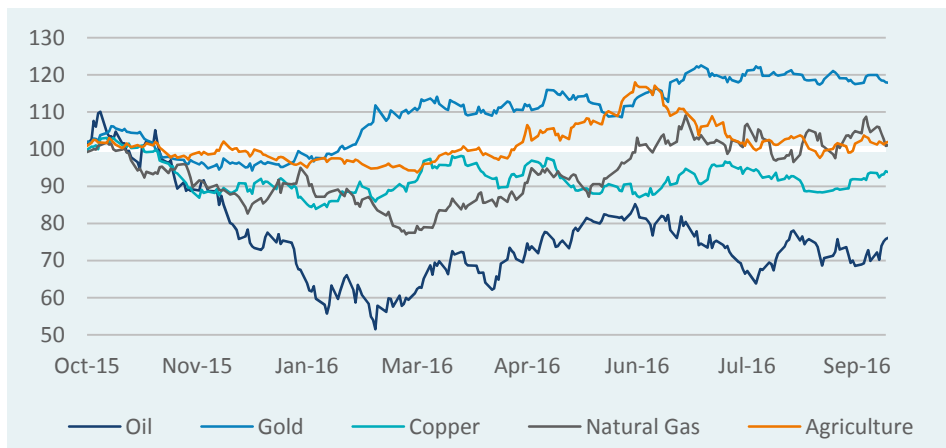
# Commodities

Commodity prices, and oil in particular, continue to fill the news headlines. Though short-term price movements are not particularly relevant to portfolio decision-making, effects of the commodity supercycle reversal are important.

Declining profits in the energy sector have pushed U.S. equity earnings into negative territory for the past 1.5 years. Many commodity exporting nations have

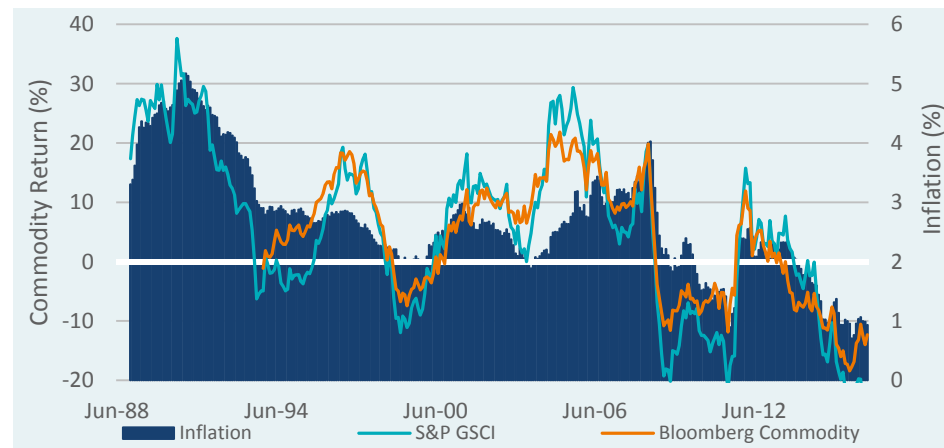
realized extreme currency devaluation which has harshly impacted the unhedged returns of foreign investors. Here at home energy-related debt defaults are accelerating and fueling worries that a prolonged energy slump could have a serious fallout effects for the U.S. energy sector. OPEC members and non-members alike continue discussions regarding production cut strategies and agreements, though it is debatable whether these agreements will be upheld.

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 9/30/16

## INFLATION BETA



Source: Standard & Poor's, Bloomberg, as of 9/30/16

# Currency

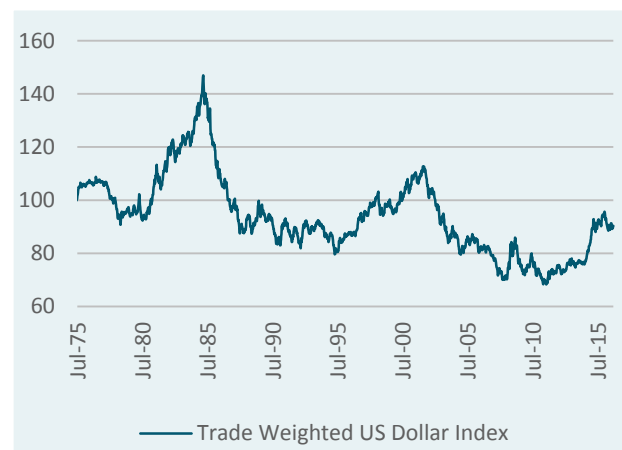
The U.S. dollar, weighted by major trading partners, fell 0.7% in the third quarter, benefitting investors with unhedged equity exposure. The pound sterling has had the opposite effect for U.S. investors, as new multi-decade lows were reached during the quarter, following a significant market flash crash (but recovery).

After a recent period of appreciation, the dollar has stabilized so far this year. Moderation of the USD would have a positive impact on earnings of U.S. companies with significant international exposure.

However, with the Fed expected to continue increasing interest rates while other central banks are still in easing mode, there may be upward pressure on the dollar as interest rate differentials increase.

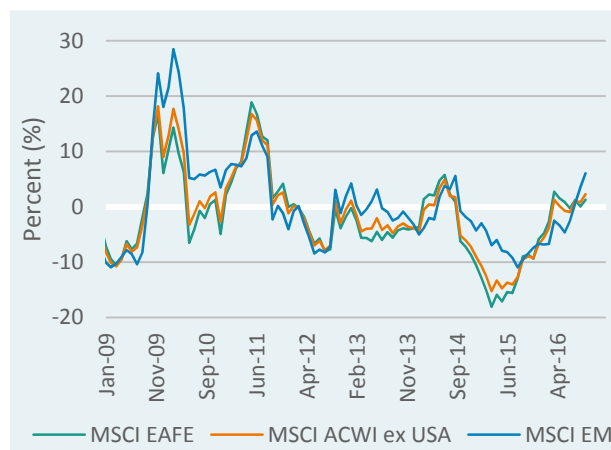
The pound sterling fell to a 31-year low against the U.S. dollar, influenced by uncertainty surrounding the details of the U.K.'s exit from the European Union. Theresa May announced that she would invoke Article 50 by March 2017.

**LONG-TERM TRADE WEIGHTED USD**



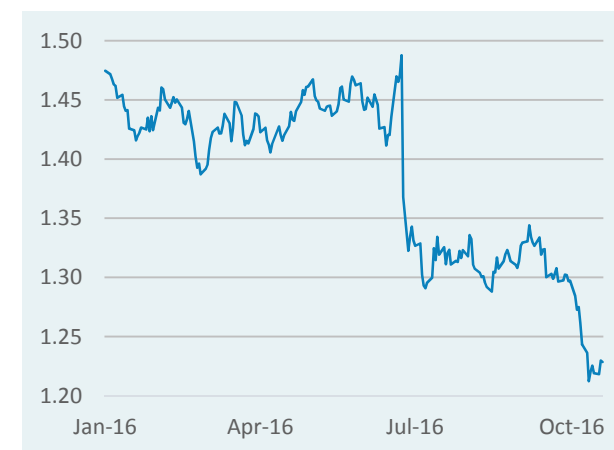
Source: FRED, as of 9/30/16

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



Source: MSCI, as of 9/30/16

**GBP/USD**



Source: FRED, as of 10/19/16

# Appendix

# Periodic table of returns – September 2016

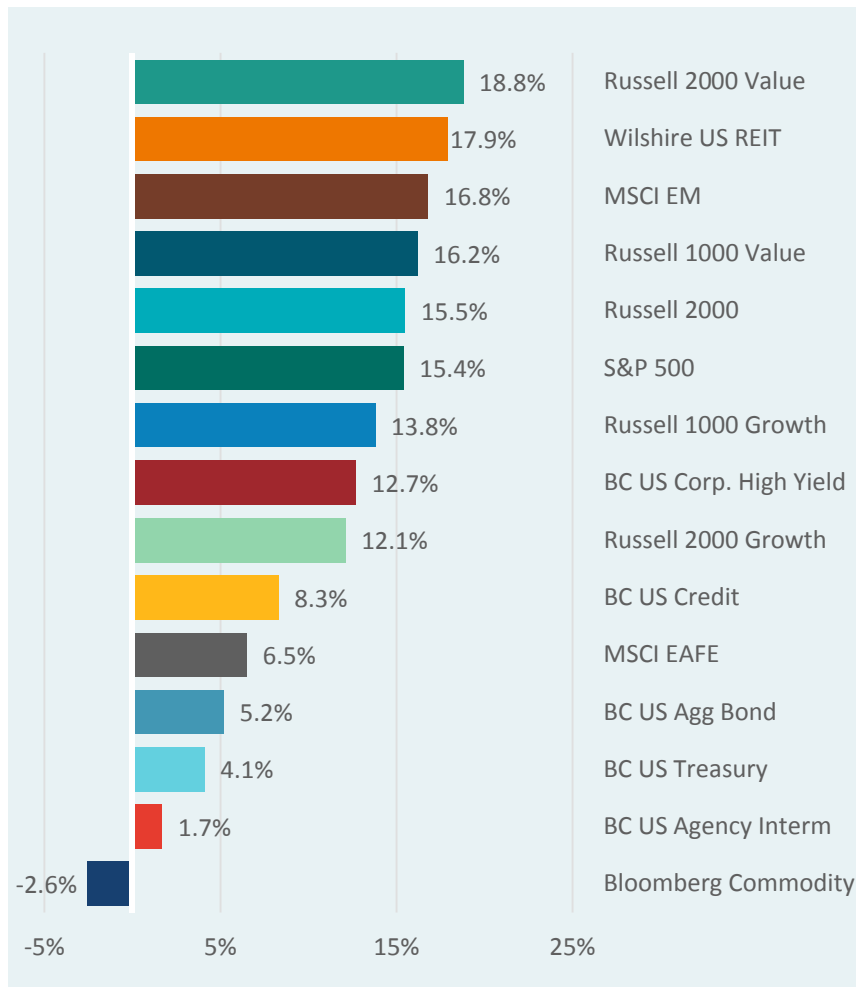
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	YTD	5-Year	10-Year
Small Cap Value	74.8	16.6	38.4	23.2	35.2	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	10.1	16.0	16.6	8.8
Emerging Markets Equity	32.9	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	15.5	16.4	8.3
Small Cap Equity	26.3	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	11.5	16.2	7.4
Large Cap Value	23.8	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	10.0	16.1	7.4
Large Cap Equity	19.3	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	8.9	15.8	7.1
60/40 Global Portfolio	18.9	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	8.0	15.4	5.9
Small Cap Growth	18.1	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	7.9	11.5	5.8
US Bonds	13.4	-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	7.5	7.4	4.8
Large Cap Growth	10.2	-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	6.0	7.2	4.6
Commodities	9.7	-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	5.8	3.2	3.9
Real Estate	3.1	-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	4.3	3.1	1.8
International Equity	2.9	-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	1.7	3.0	1.8
Cash	1.4	-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	0.2	0.1	0.8
Hedge Funds of Funds	-1.1	-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	-0.1	-9.4	-5.3

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

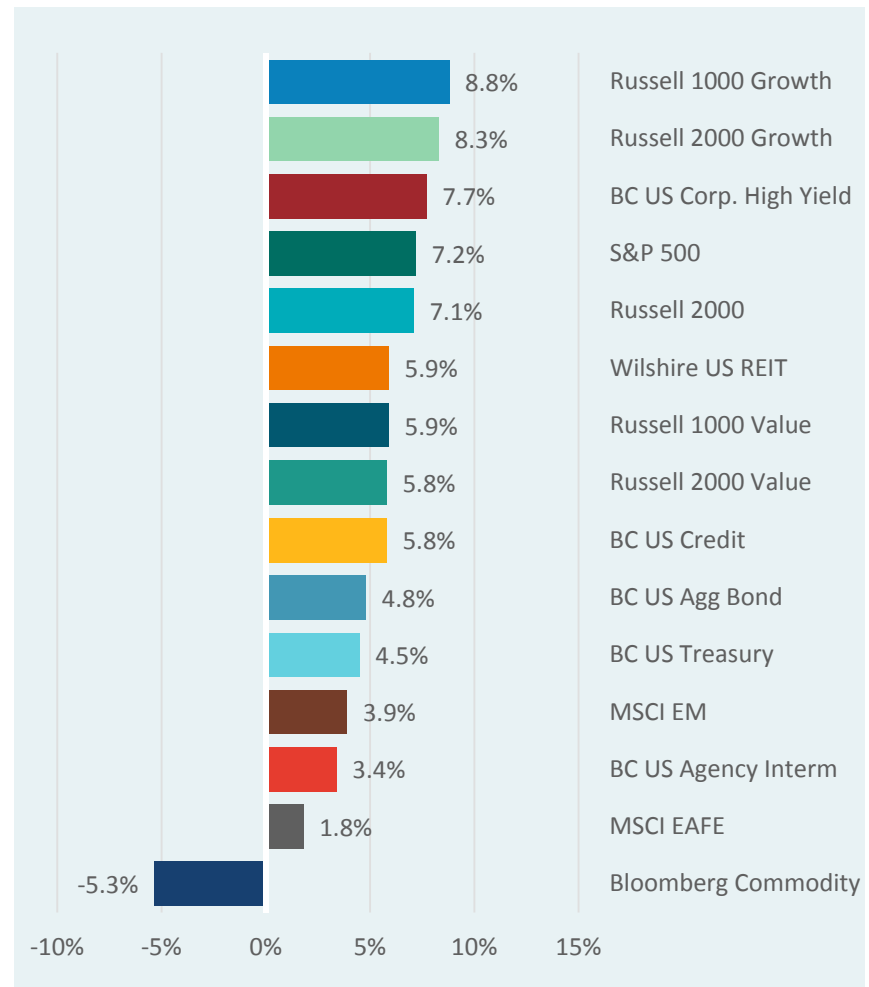
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BC Agg, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BC Global Bond. NCREIF Property performance data as of 6/30/16.

# Major asset class returns

ONE YEAR ENDING SEPTEMBER



TEN YEARS ENDING SEPTEMBER

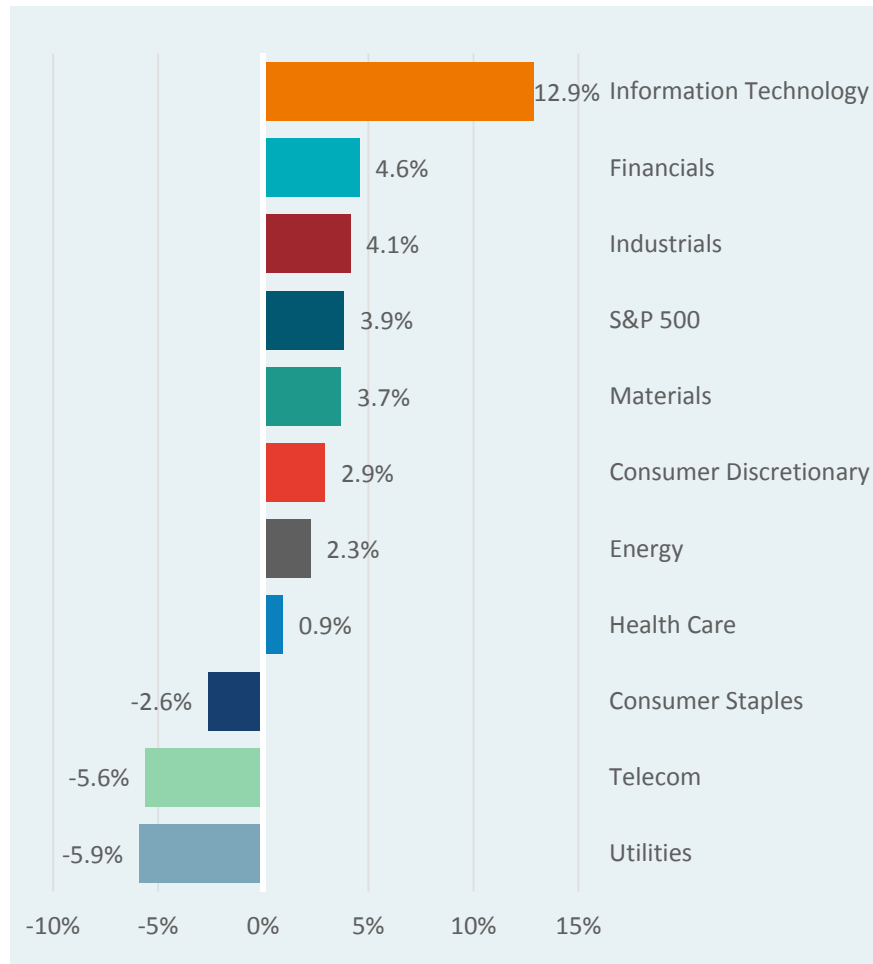


Source: Morningstar, as of 9/30/16

Source: Morningstar, as of 9/30/16

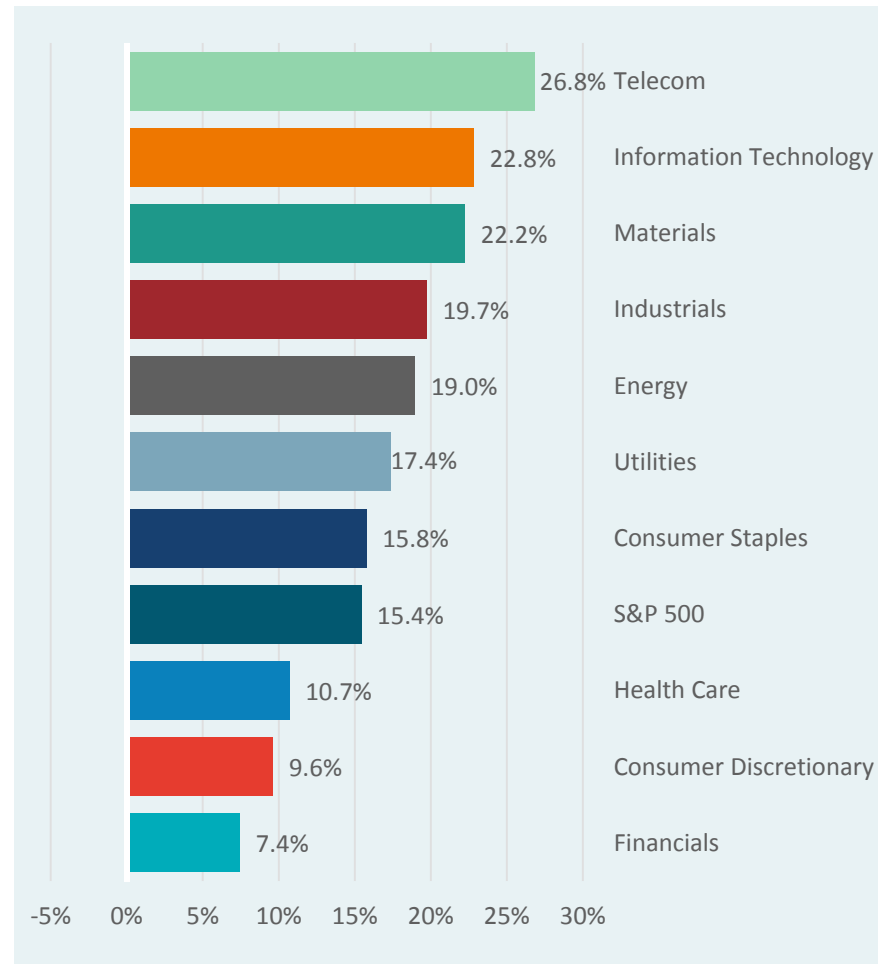
# S&P 500 and S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/16

ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 6/30/16

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	0.0	3.9	7.8	15.4	11.2	16.4	7.2
S&P 500 Equal Weighted	0.1	4.5	10.6	16.1	10.8	17.4	8.8
DJ Industrial Average	(0.4)	2.8	7.2	15.5	9.2	13.8	7.4
Russell Top 200	0.0	3.8	7.0	15.2	11.3	16.3	7.0
Russell 1000	0.1	4.0	7.9	14.9	10.8	16.4	7.4
Russell 2000	1.1	9.0	11.5	15.5	6.7	15.8	7.1
Russell 3000	0.2	4.4	8.2	15.0	10.4	16.4	7.4
Russell Mid Cap	0.2	4.5	10.3	14.2	9.7	16.7	8.3
<b>Style Index</b>							
Russell 1000 Growth	0.4	4.6	6.0	13.8	11.8	16.6	8.8
Russell 1000 Value	(0.2)	3.5	10.0	16.2	9.7	16.2	5.9
Russell 2000 Growth	1.4	9.2	7.5	12.1	6.6	16.1	8.3
Russell 2000 Value	0.8	8.9	15.5	18.8	6.8	15.4	5.8

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	0.6	5.3	6.6	12.0	5.2	10.6	4.3
MSCI ACWI ex US	1.2	6.9	5.8	9.3	0.2	6.0	2.2
MSCI EAFE	1.2	6.4	1.7	6.5	0.5	7.4	1.8
MSCI EM	1.3	9.0	16.0	16.8	(0.6)	3.0	3.9
MSCI EAFE Small Cap	3.0	8.6	5.2	12.3	5.1	11.1	4.4
<b>Style Index</b>							
MSCI EAFE Growth	1.5	5.0	2.6	9.5	2.4	8.7	3.1
MSCI EAFE Value	1.0	8.0	0.8	3.5	(1.5)	6.0	0.4
<b>Regional Index</b>							
MSCI UK	1.0	4.0	0.8	1.5	(1.8)	6.0	1.4
MSCI Japan	1.6	8.6	2.5	12.1	3.3	7.4	1.0
MSCI Euro	0.7	7.3	(0.6)	2.8	(0.9)	7.3	0.2
MSCI EM Asia	1.3	10.5	13.0	16.9	3.5	6.3	5.6
MSCI EM Latin American	(0.8)	5.4	32.2	28.6	(7.9)	(3.9)	2.4

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BC US Treasury US TIPS	0.5	1.0	7.3	6.6	2.4	1.9	4.5
BC US Treasury Bills	0.0	0.1	0.3	0.3	0.2	0.1	1.0
BC US Agg Bond	(0.1)	0.5	5.8	5.2	4.0	3.1	4.8
<b>Duration</b>							
BC US Treasury 1-3 Yr	0.1	(0.1)	1.3	0.9	0.9	0.7	2.3
BC US Treasury Long	(1.6)	(0.4)	14.7	13.1	11.2	5.5	8.1
BC US Treasury	(0.1)	(0.3)	5.1	4.1	3.4	2.2	4.5
<b>Issuer</b>							
BC US MBS	0.3	0.6	3.7	3.6	3.6	2.6	4.7
BC US Corp. High Yield	0.7	5.6	15.1	12.7	5.3	8.3	7.7
BC US Agency Interm	0.2	(0.0)	2.3	1.7	1.8	1.4	3.4
BC US Credit	(0.3)	1.2	8.9	8.3	5.4	4.8	5.8

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	3.1	(3.9)	8.9	(2.6)	(12.3)	(9.4)	(5.3)
Wilshire US REIT	(2.1)	(1.2)	9.7	17.9	14.3	15.8	5.9
<b>Regional Index</b>							
JPM EMBI Global Div	0.4	4.0	14.8	16.2	8.2	7.8	7.7
JPM GBI-EM Global Div	2.0	2.7	17.1	17.1	(2.6)	0.1	5.5
<b>Currency (Spot)</b>							
Euro	0.9	1.2	3.5	0.7	(6.0)	(3.5)	(1.2)
Pound	(0.8)	(2.8)	(11.9)	(14.2)	(7.1)	(3.6)	(3.6)
Yen	2.1	1.3	18.8	18.3	(1.0)	(5.3)	1.5

Source: Morningstar, as of 9/30/16



# Definitions

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

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

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

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

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# Executive Summary

**To:** Contra Costa County Employees' Retirement Association

**From:** Verus

**Date:** November 22, 2016

**Re:** Quarterly Review – Period Ending September 30, 2016

- 
- The CCCERA Total Fund returned 3.7% (gross) for the third quarter, slightly below the 3.8% return of the median public fund, and above the 1.2% return of CPI +4% and the 3.4% return of the policy index. On a year-to-date and one-year trailing basis, CCCERA's Total Fund performance exceeds CPI +4%, is slightly below the universe median, and trails the policy index. Longer term performance is strong, with Total Fund performance ranking in the top decile over trailing three, five, and ten year periods.
  - CCCERA's domestic equities returned 5.5% for the quarter, ahead of the 4.4% return of the Russell 3000 Index, ranking in the 43<sup>rd</sup> percentile of all cap domestic equity portfolios.
  - CCCERA's international equities returned 4.9% for the quarter, trailing the 6.5% return of the MSCI EAFE index and the 7.0% return of the MSCI ACWI ex-US index, ranking in the 85<sup>th</sup> percentile of MSCI ACWI ex-US portfolios.
  - CCCERA's global equities returned 7.0% for the quarter, above the 5.3% return of the MSCI ACWI while ranking in the 23<sup>rd</sup> percentile of global equity portfolios.
  - CCCERA's domestic fixed income, excluding the Allianz high yield portfolio, returned 1.3% for the quarter, outpacing both the 1.0% return of the Barclays U.S. Universal and the 0.5% return of the Barclays US Aggregate while ranking in the 9<sup>th</sup> percentile of domestic core fixed income portfolios.
  - The Allianz high yield portfolio returned 5.4% for the quarter, slightly trailing the 5.5% return of the ML High Yield index while ranking in the 27<sup>th</sup> percentile of domestic high yield fixed income portfolios.
  - CCCERA's global fixed income returned 1.7% for the quarter, ahead of the 0.8% return of the Barclays Global Aggregate Index, ranking in the 62<sup>nd</sup> percentile of global fixed income portfolios.
  - CCCERA's inflation hedging investments returned 3.7% for the quarter, ahead of the 1.2% return of the CPI+4% benchmark.
  - CCCERA's real estate returned 1.4% for the quarter, outperforming the 0.9% return of the Real Estate Benchmark.
  - The total equity allocation stood at 46.6% at the end of the third quarter, in line with the current target of 46.6%. Total global fixed income stood at 22.7%, slightly below the 23.6% target. High yield fixed income stood at 5.1% and inflation hedging assets stood at 5.2%, both slightly above their respective 5.0% targets. Real estate stood at 10.4%, below the target of 12.5%. Alternative investments stood at 7.8%, above the target 6.0%. Opportunistic stood at 0.5%, below the target of 0.8%. Cash stood at 1.7%, above the target of 0.5%.

# Contra Costa County Employees' Retirement Association

Investment Performance Review

Period Ending: September 30, 2016



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[VERUSINVESTMENTS.COM](http://VERUSINVESTMENTS.COM)

SEATTLE 206-622-3700

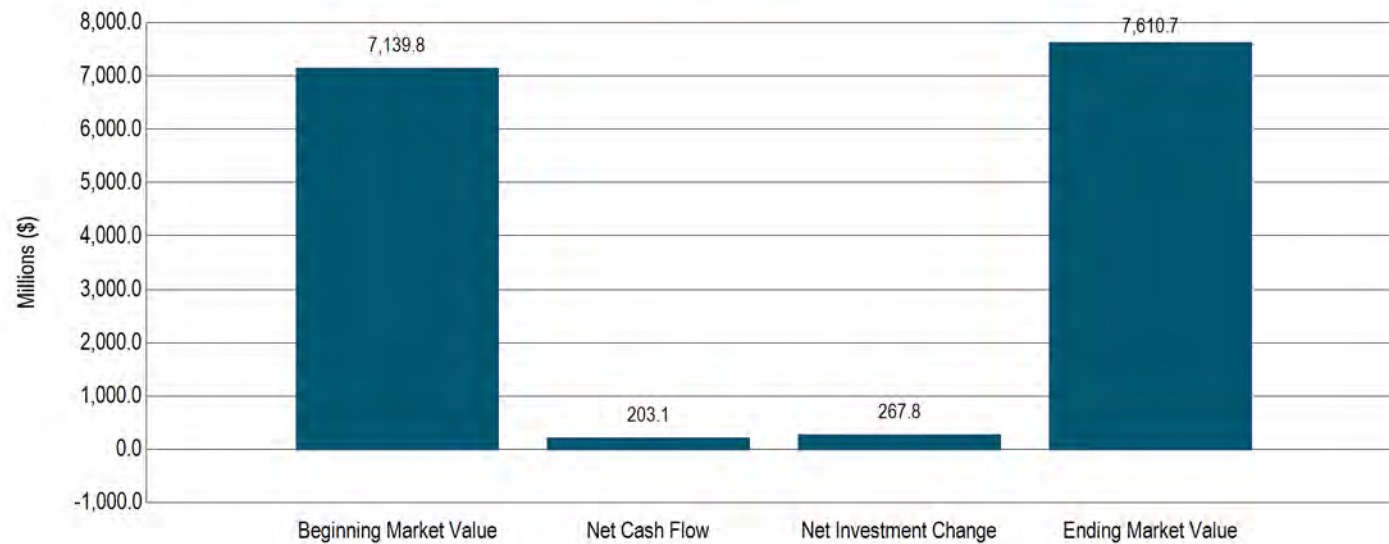
LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

**Portfolio Reconciliation**

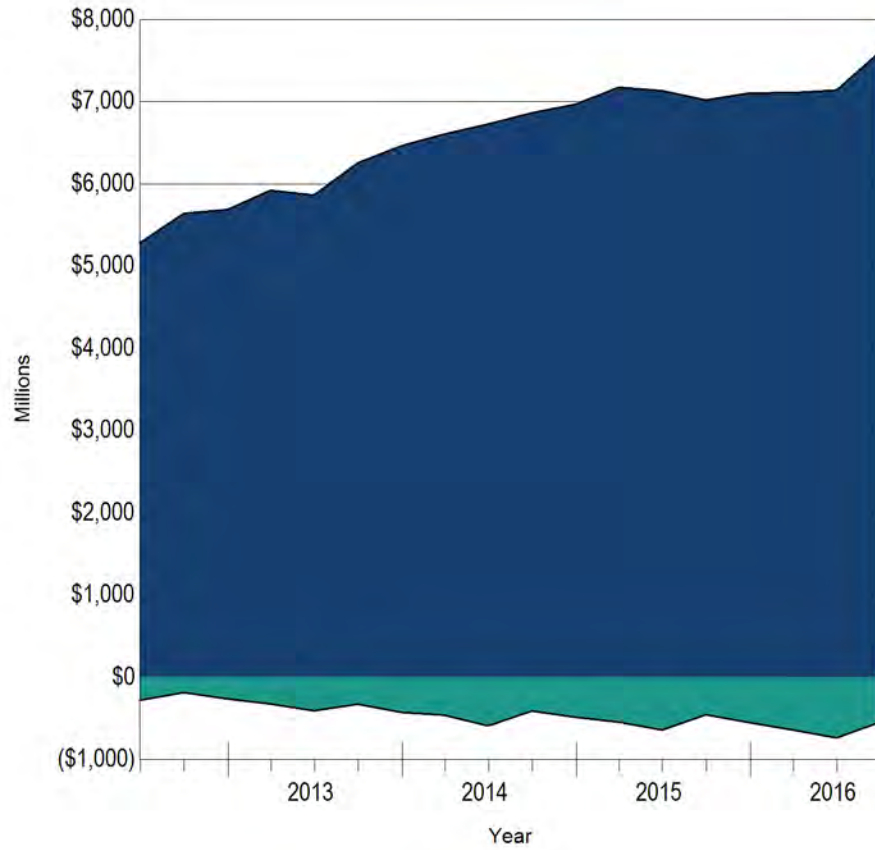
	Last Three Months	Year-To-Date
Beginning Market Value	\$7,139,804,873	\$7,104,853,428
Net Cash Flow	\$203,149,869	\$34,705,066
Net Investment Change	\$267,751,760	\$471,148,007
Ending Market Value	\$7,610,706,502	\$7,610,706,502

**Change in Market Value  
Last Three Months**



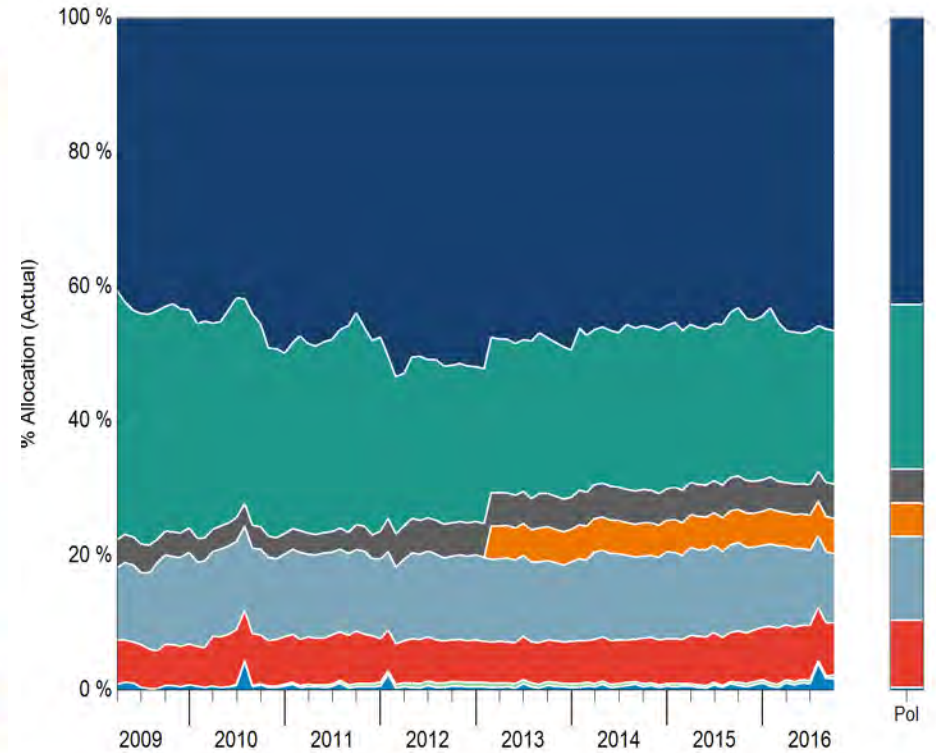
Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History  
 Cumulative Cash Flows



Market Value Net Cash Flow

Asset Allocation History

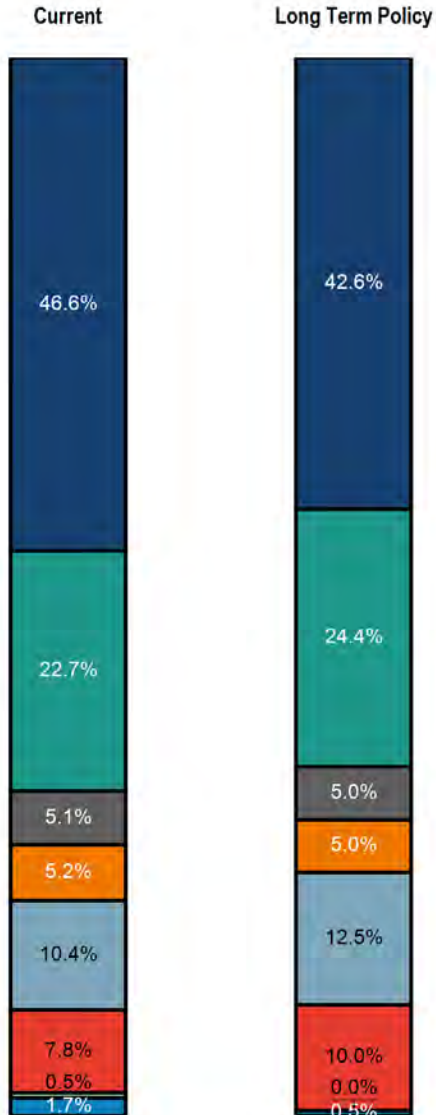


Global Equity Global Fixed Income High Yield Fixed Income Inflation Hedge/Real Assets Real Estate Alternative Investments Opportunistic Cash

Total Fund

Asset Allocation vs. Long Term Target Policy

Period Ending: September 30, 2016



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference	Long Term Target Range	Within IPS Range?
Global Equity	\$3,545,129,150	46.6%	42.6%	\$302,968,180	40.0% - 55.0%	Yes
Global Fixed Income	\$1,729,337,880	22.7%	24.4%	-\$127,674,506	20.0% - 30.0%	Yes
High Yield Fixed Income	\$387,668,528	5.1%	5.0%	\$7,133,203	2.0% - 9.0%	Yes
Inflation Hedge/Real Assets	\$398,160,469	5.2%	5.0%	\$17,625,144	0.0% - 10.0%	Yes
Real Estate	\$789,662,366	10.4%	12.5%	-\$161,675,947	10.0% - 16.0%	Yes
Alternative Investments	\$595,092,854	7.8%	10.0%	-\$165,977,796	5.0% - 12.0%	Yes
Opportunistic	\$36,461,764	0.5%	0.0%	\$36,461,764	0.0% - 5.0%	Yes
Cash	\$129,193,489	1.7%	0.5%	\$91,139,957	0.0% - 1.0%	No
<b>Total</b>	<b>\$7,610,706,502</b>	<b>100.0%</b>	<b>100.0%</b>			

Allocation vs. Current Targets

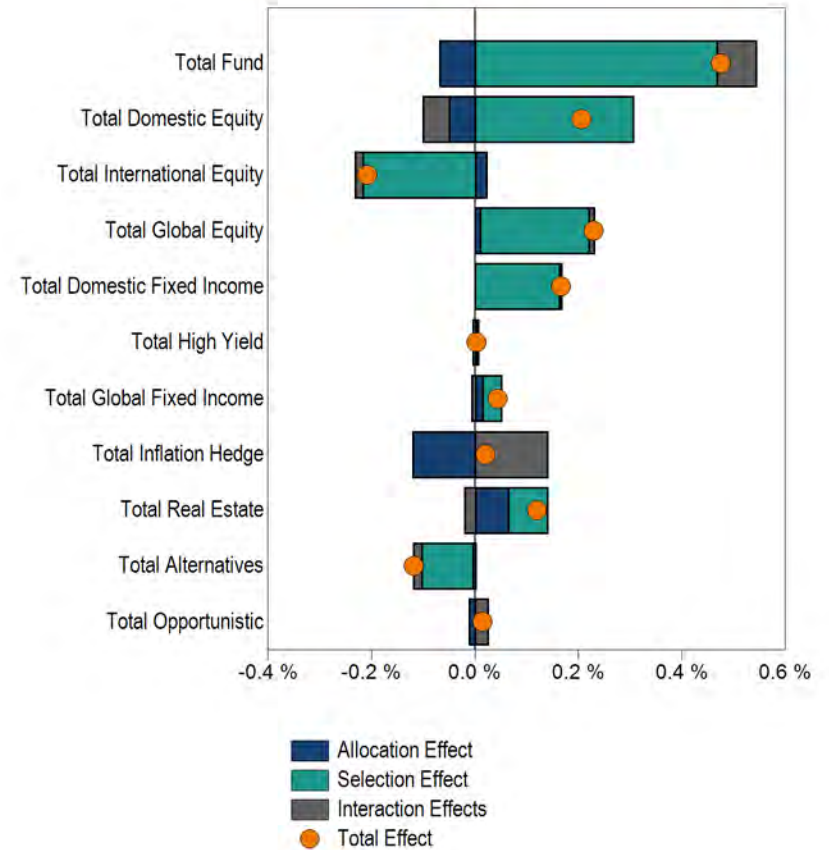
	Current Balance	Current Allocation	Current Target	Difference
Global Equity	\$3,545,129,150	46.6%	46.6%	-\$1,460,080
Global Fixed Income	\$1,729,337,880	22.7%	23.6%	-\$66,788,854
High Yield Fixed Income	\$387,668,528	5.1%	5.0%	\$7,133,203
Inflation Hedge/Real Assets	\$398,160,469	5.2%	5.0%	\$17,625,144
Real Estate	\$789,662,366	10.4%	12.5%	-\$161,675,947
Alternative Investments	\$595,092,854	7.8%	6.0%	\$138,450,464
Opportunistic	\$36,461,764	0.5%	0.8%	-\$24,423,888
Cash	\$129,193,489	1.7%	0.5%	\$91,139,957
<b>Total</b>	<b>\$7,610,706,502</b>	<b>100.0%</b>	<b>100.0%</b>	

# Total Fund Executive Summary (Gross of Fees)

Period Ending: September 30, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>3.7</b>	<b>6.9</b>	<b>9.6</b>	<b>7.7</b>	<b>10.9</b>	<b>6.5</b>
Policy Index	3.4	8.3	11.2	7.6	10.8	--
CPI + 4%	1.2	5.1	5.5	5.1	5.3	5.8
InvestorForce Public DB > \$1B Gross Rank	53	52	57	1	5	7
<b>Total Domestic Equity</b>	<b>5.5</b>	<b>7.8</b>	<b>12.9</b>	<b>10.1</b>	<b>17.1</b>	<b>8.0</b>
Russell 3000	4.4	8.2	15.0	10.4	16.4	7.4
eA US All Cap Equity Gross Rank	43	43	47	31	26	47
<b>Total International Equity</b>	<b>4.9</b>	<b>4.8</b>	<b>9.5</b>	<b>3.5</b>	<b>8.5</b>	<b>1.9</b>
MSCI ACWI ex USA Gross	7.0	6.3	9.8	0.6	6.5	2.6
MSCI EAFE Gross	6.5	2.2	7.1	0.9	7.9	2.3
eA All ACWI ex-US Equity Gross Rank	85	55	57	36	61	96
<b>Total Global Equity</b>	<b>7.0</b>	<b>8.9</b>	<b>15.6</b>	<b>7.7</b>	<b>11.2</b>	<b>--</b>
MSCI ACWI	5.3	6.6	12.0	5.2	10.6	--
eA All Global Equity Gross Rank	23	29	21	33	71	--
<b>Total Domestic Fixed Income</b>	<b>1.3</b>	<b>6.3</b>	<b>6.4</b>	<b>5.4</b>	<b>5.7</b>	<b>6.1</b>
Barclays U.S. Universal	1.0	6.7	6.1	4.3	3.6	5.0
Barclays Aggregate	0.5	5.8	5.2	4.0	3.1	4.8
eA US Core Fixed Inc Gross Rank	9	39	19	5	3	8
<b>Total High Yield</b>	<b>5.4</b>	<b>12.1</b>	<b>10.3</b>	<b>4.1</b>	<b>7.7</b>	<b>7.8</b>
BofA ML High Yield Master II	5.5	15.3	12.8	5.3	8.2	7.6
eA US High Yield Fixed Inc Gross Rank	27	47	52	77	66	39
<b>Total Global Fixed Income</b>	<b>1.7</b>	<b>9.4</b>	<b>8.5</b>	<b>2.2</b>	<b>1.9</b>	<b>3.8</b>
Barclays Global Aggregate	0.8	9.9	8.8	2.1	1.7	4.3
eA All Global Fixed Inc Gross Rank	62	44	49	69	80	92

Attribution Effects  
3 Months Ending September 30, 2016



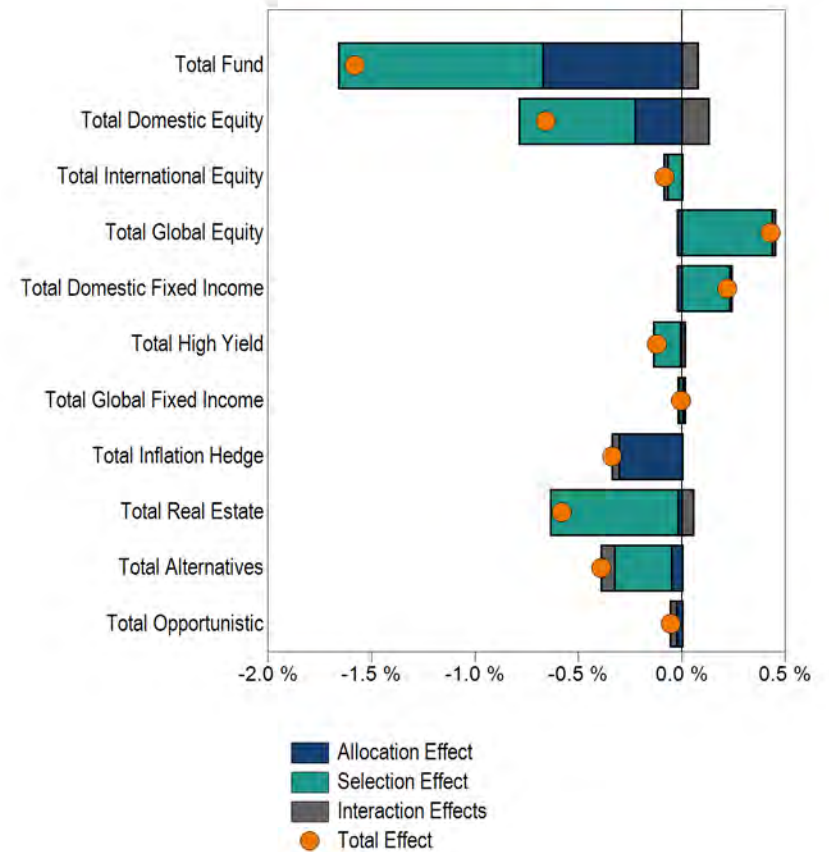
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

# Total Fund Executive Summary (Gross of Fees)

Period Ending: September 30, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Inflation Hedge</b>	<b>3.7</b>	<b>5.3</b>	<b>4.9</b>	<b>0.1</b>	<b>--</b>	<b>--</b>
CPI + 4%	1.2	5.1	5.5	5.1	--	--
<b>Total Real Estate</b>	<b>1.4</b>	<b>4.8</b>	<b>8.7</b>	<b>13.4</b>	<b>15.1</b>	<b>5.5</b>
Real Estate Benchmark	0.9	8.2	13.2	12.0	12.5	7.7
NCREIF-ODCE	2.1	6.5	10.1	12.4	12.4	6.0
NCREIF Property Index	1.8	6.1	9.2	11.3	11.2	7.2
<b>Total Alternatives</b>	<b>2.0</b>	<b>4.6</b>	<b>4.9</b>	<b>13.0</b>	<b>11.0</b>	<b>11.5</b>
S&P 500 Index +4% (Lagged)	3.5	14.4	8.1	16.1	16.5	11.7
<b>Total Opportunistic</b>	<b>6.4</b>	<b>6.2</b>	<b>0.9</b>	<b>1.1</b>	<b>4.7</b>	<b>--</b>
CPI + 4%	1.2	5.1	5.5	5.1	5.3	--

Attribution Effects  
1 Year Ending September 30, 2016



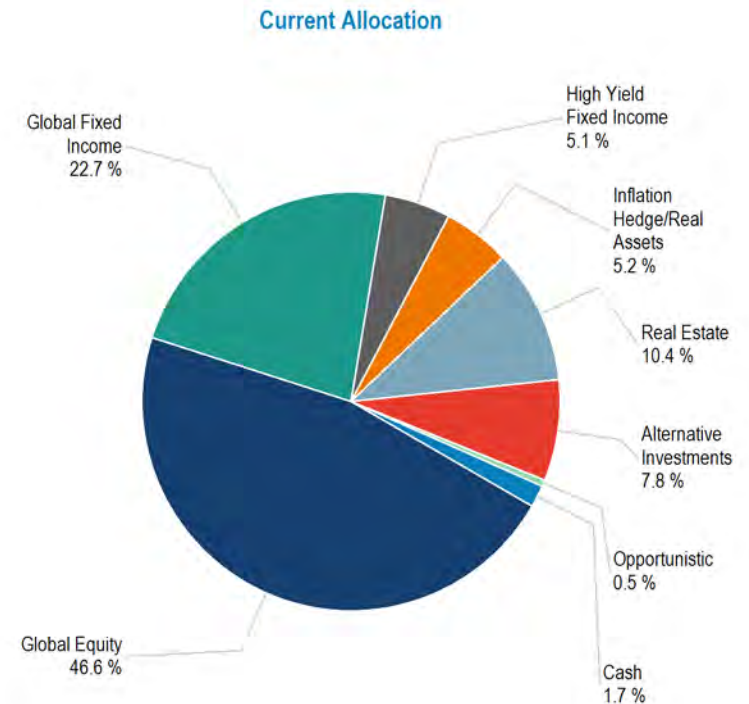
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.



# Total Fund Executive Summary (Net of Fees)

Period Ending: September 30, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Fund</b>	<b>3.6</b>	<b>6.5</b>	<b>9.0</b>	<b>7.0</b>	<b>10.2</b>	<b>5.9</b>
<i>Policy Index</i>	3.4	8.3	11.2	7.6	10.8	--
<i>CPI + 4%</i>	1.2	5.1	5.5	5.1	5.3	5.8
<b>Total Domestic Equity</b>	<b>5.4</b>	<b>7.5</b>	<b>12.4</b>	<b>9.7</b>	<b>16.7</b>	<b>7.6</b>
<i>Russell 3000</i>	4.4	8.2	15.0	10.4	16.4	7.4
<b>Total International Equity</b>	<b>4.8</b>	<b>4.5</b>	<b>9.0</b>	<b>3.1</b>	<b>8.1</b>	<b>1.5</b>
<i>MSCI ACWI ex USA Gross</i>	7.0	6.3	9.8	0.6	6.5	2.6
<i>MSCI EAFE Gross</i>	6.5	2.2	7.1	0.9	7.9	2.3
<b>Total Global Equity</b>	<b>6.9</b>	<b>8.4</b>	<b>14.9</b>	<b>7.0</b>	<b>10.6</b>	<b>--</b>
<i>MSCI ACWI</i>	5.3	6.6	12.0	5.2	10.6	--
<b>Total Domestic Fixed Income</b>	<b>1.2</b>	<b>6.0</b>	<b>6.0</b>	<b>5.0</b>	<b>5.3</b>	<b>5.6</b>
<i>Barclays U.S. Universal</i>	1.0	6.7	6.1	4.3	3.6	5.0
<i>Barclays Aggregate</i>	0.5	5.8	5.2	4.0	3.1	4.8
<b>Total High Yield</b>	<b>5.3</b>	<b>11.7</b>	<b>9.9</b>	<b>3.7</b>	<b>7.3</b>	<b>7.6</b>
<i>BofA ML High Yield Master II</i>	5.5	15.3	12.8	5.3	8.2	7.6
<b>Total Global Fixed Income</b>	<b>1.6</b>	<b>9.2</b>	<b>8.2</b>	<b>1.9</b>	<b>1.6</b>	<b>3.5</b>
<i>Barclays Global Aggregate</i>	0.8	9.9	8.8	2.1	1.7	4.3
<b>Total Inflation Hedge</b>	<b>3.5</b>	<b>4.5</b>	<b>4.0</b>	<b>-0.8</b>	<b>--</b>	<b>--</b>
<i>CPI + 4%</i>	1.2	5.1	5.5	5.1	--	--

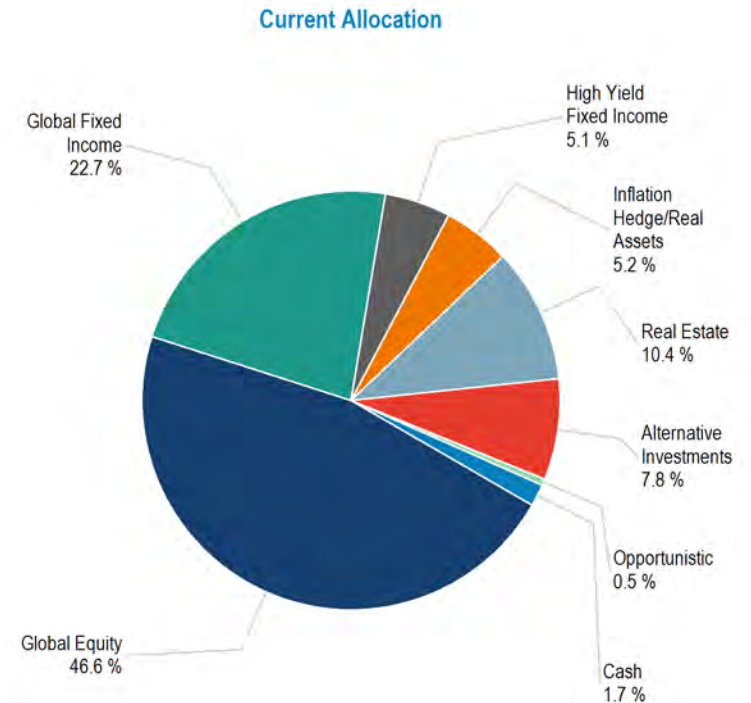


*Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.*

Total Fund  
Executive Summary (Net of Fees)

Period Ending: September 30, 2016

	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
<b>Total Real Estate</b>	<b>1.2</b>	<b>4.1</b>	<b>7.8</b>	<b>12.1</b>	<b>13.8</b>	<b>4.4</b>
Real Estate Benchmark	0.9	8.2	13.2	12.0	12.5	7.7
NCREIF-ODCE	2.1	6.5	10.1	12.4	12.4	6.0
NCREIF Property Index	1.8	6.1	9.2	11.3	11.2	7.2
<b>Total Alternatives</b>	<b>1.7</b>	<b>4.2</b>	<b>4.2</b>	<b>11.5</b>	<b>9.2</b>	<b>9.1</b>
S&P 500 Index +4% (Lagged)	3.5	14.4	8.1	16.1	16.5	11.7
<b>Total Opportunistic</b>	<b>6.0</b>	<b>5.7</b>	<b>0.3</b>	<b>0.9</b>	<b>4.5</b>	<b>--</b>
CPI + 4%	1.2	5.1	5.5	5.1	5.3	--



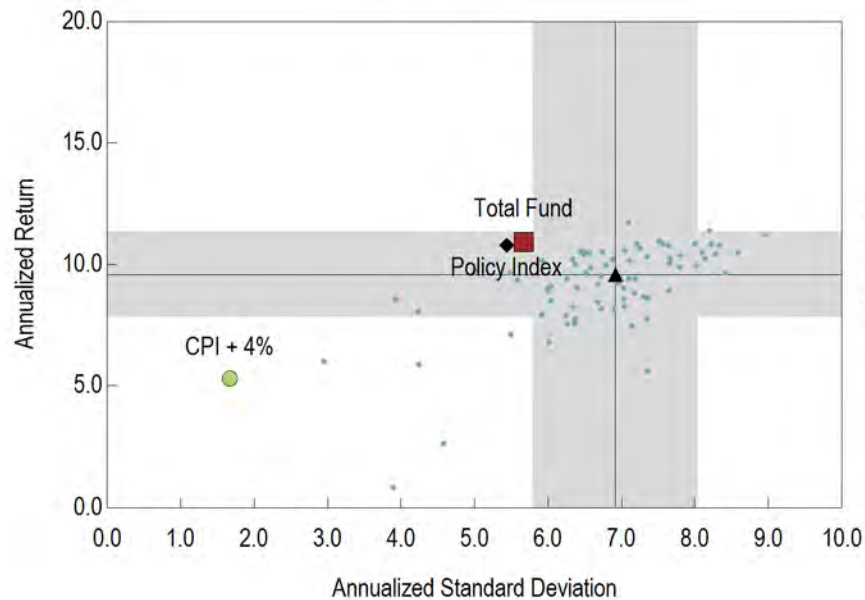
Policy Index (as of 4/1/2012): 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills. Real Estate Benchmark: 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

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

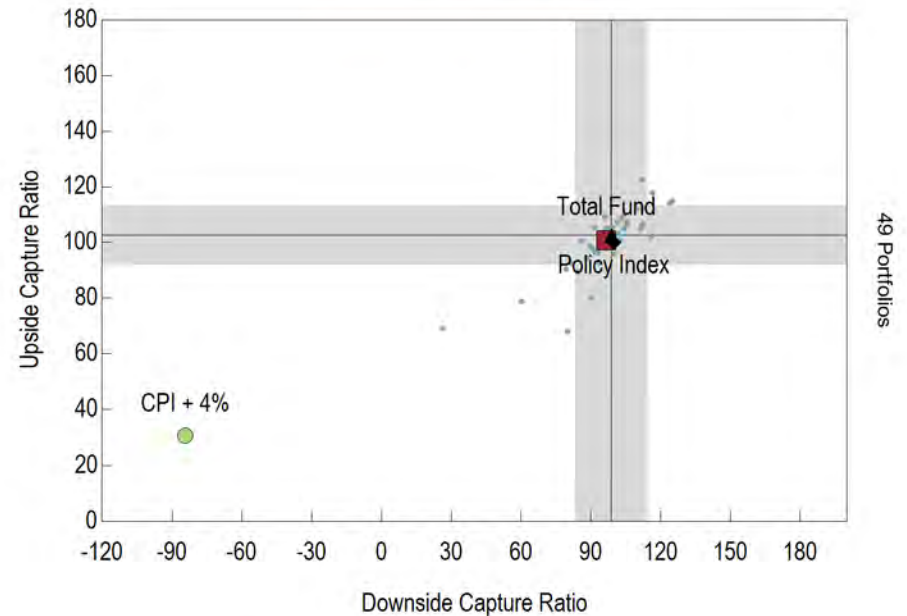
Period Ending: September 30, 2016

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	10.90%	0.12%	5.67%	-0.09%	1.02	1.17%	0.96	1.91	0.10	100.80%	96.59%

Risk vs. Return



Up Markets vs. Down Markets



- Total Fund
- ◆ Policy Index
- CPI + 4%
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

- Total Fund
- ◆ Policy Index
- CPI + 4%
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Public DB > \$1B Gross

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fund</b>	<b>7,610,706,502</b>	<b>100.0</b>	<b>3.7</b>	<b>6.9</b>	<b>9.6</b>	<b>7.7</b>	<b>10.9</b>	<b>6.5</b>	<b>2.7</b>	<b>8.4</b>	<b>16.4</b>	<b>14.3</b>	<b>2.7</b>
<i>Policy Index</i>			3.4	8.3	11.2	7.6	10.8	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			1.2	5.1	5.5	5.1	5.3	5.8	4.8	4.8	5.6	5.8	7.1
<i>InvestorForce Public DB &gt; \$1B Gross Rank</i>			53	52	57	1	5	7	5	6	33	13	9
<b>Total Domestic Equity</b>	<b>1,740,964,976</b>	<b>22.9</b>	<b>5.5</b>	<b>7.8</b>	<b>12.9</b>	<b>10.1</b>	<b>17.1</b>	<b>8.0</b>	<b>1.1</b>	<b>11.4</b>	<b>36.2</b>	<b>18.2</b>	<b>1.1</b>
<i>Russell 3000</i>			4.4	8.2	15.0	10.4	16.4	7.4	0.5	12.6	33.6	16.4	1.0
<i>eA US All Cap Equity Gross Rank</i>			43	43	47	31	26	47	36	36	41	24	34
<i>Intech Large Cap Core</i>	290,780,759	3.8	1.4	6.5	12.5	12.1	16.8	--	3.8	14.7	32.7	15.3	3.6
<i>S&amp;P 500</i>			3.9	7.8	15.4	11.2	16.4	--	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			87	50	54	12	27	--	16	31	54	54	25
<i>PIMCO Stocks+ Absolute Return</i>	333,527,240	4.4	4.8	10.0	18.4	10.8	17.0	7.5	-1.2	13.6	31.4	20.6	2.3
<i>S&amp;P 500</i>			3.9	7.8	15.4	11.2	16.4	7.2	1.4	13.7	32.4	16.0	2.1
<i>eA US Large Cap Core Equity Gross Rank</i>			29	9	6	41	22	54	73	45	68	4	36
<i>Jackson Square Partners</i>	326,298,051	4.3	7.4	-0.4	8.5	10.2	16.3	9.0	6.1	13.9	35.4	16.9	8.9
<i>Russell 1000 Growth</i>			4.6	6.0	13.8	11.8	16.6	8.8	5.7	13.0	33.5	15.3	2.6
<i>eA US Large Cap Growth Equity Gross Rank</i>			18	95	79	64	46	43	37	31	40	37	3
<i>Robeco Boston Partners</i>	318,268,874	4.2	4.6	6.2	11.3	8.2	16.8	7.7	-3.9	12.0	37.4	21.6	0.9
<i>Russell 1000 Value</i>			3.5	10.0	16.2	9.7	16.2	5.9	-3.8	13.5	32.5	17.5	0.4
<i>eA US Large Cap Value Equity Gross Rank</i>			39	71	69	68	22	26	65	55	24	5	46
<i>Emerald Advisers</i>	242,298,604	3.2	10.2	5.8	4.8	7.9	19.3	9.7	4.1	7.3	50.3	18.5	-0.6
<i>Russell 2000 Growth</i>			9.2	7.5	12.1	6.6	16.1	8.3	-1.4	5.6	43.3	14.6	-2.9
<i>eA US Small Cap Growth Equity Gross Rank</i>			28	65	85	32	11	37	19	21	27	22	42
<i>Ceredex</i>	229,791,449	3.0	5.9	21.8	21.3	9.7	--	--	-4.4	3.3	36.5	19.0	--
<i>Russell 2000 Value</i>			8.9	15.5	18.8	6.8	--	--	-7.5	4.2	34.5	18.1	--
<i>eA US Small Cap Value Equity Gross Rank</i>			82	6	13	16	--	--	52	74	66	38	--
<b>Total International Equity</b>	<b>837,210,111</b>	<b>11.0</b>	<b>4.9</b>	<b>4.8</b>	<b>9.5</b>	<b>3.5</b>	<b>8.5</b>	<b>1.9</b>	<b>-1.2</b>	<b>0.3</b>	<b>17.8</b>	<b>18.5</b>	<b>-11.5</b>
<i>MSCI ACWI ex USA Gross</i>			7.0	6.3	9.8	0.6	6.5	2.6	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			6.5	2.2	7.1	0.9	7.9	2.3	-0.4	-4.5	23.3	17.9	-11.7
<i>eA All ACWI ex-US Equity Gross Rank</i>			85	55	57	36	61	96	61	17	69	63	43
<i>Pyrford</i>	416,695,850	5.5	3.5	6.7	10.8	--	--	--	-2.9	--	--	--	--
<i>MSCI ACWI ex USA Value</i>			7.8	5.5	7.0	--	--	--	-10.1	--	--	--	--
<i>eA ACWI ex-US Value Equity Gross Rank</i>			94	43	43	--	--	--	59	--	--	--	--
<i>William Blair</i>	419,979,055	5.5	6.4	2.6	7.7	3.1	9.8	--	0.5	-1.2	20.9	24.3	-13.2
<i>MSCI ACWI ex USA Growth</i>			6.1	6.2	11.5	2.2	7.4	--	-1.3	-2.6	15.5	16.7	-14.2
<i>eA ACWI ex-US Growth Equity Gross Rank</i>			65	76	81	57	51	--	69	37	44	6	55

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
International Equity Transition	535,207	0.0											
<b>Total Global Equity</b>	<b>966,954,063</b>	<b>12.7</b>	<b>7.0</b>	<b>8.9</b>	<b>15.6</b>	<b>7.7</b>	<b>11.2</b>	<b>--</b>	<b>2.2</b>	<b>5.2</b>	<b>23.7</b>	<b>11.1</b>	<b>-5.6</b>
MSCI ACWI			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	-7.3
eA All Global Equity Gross Rank			23	29	21	33	71	--	31	44	64	90	40
Artisan Partners	340,366,101	4.5	11.0	11.7	20.5	10.4	--	--	9.2	3.9	26.1	--	--
MSCI ACWI			5.3	6.6	12.0	5.2	--	--	-2.4	4.2	22.8	--	--
eA All Global Equity Gross Rank			4	14	9	10	--	--	4	56	51	--	--
First Eagle	324,823,862	4.3	4.4	11.5	16.9	7.2	10.6	--	0.2	4.5	17.9	13.9	--
MSCI ACWI			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	--
eA All Global Equity Gross Rank			64	14	15	40	78	--	49	51	80	78	--
Intech Global Low Vol	23,958,644	0.3	-0.3	9.4	14.3	9.8	--	--	4.1	11.2	24.2	--	--
MSCI ACWI			5.3	6.6	12.0	5.2	--	--	-2.4	4.2	22.8	--	--
eA All Global Equity Gross Rank			98	26	30	13	--	--	18	14	62	--	--
JP Morgan Global Opportunities	277,805,457	3.7	6.1	2.8	8.8	4.9	11.8	--	-2.9	6.7	26.9	19.2	-9.0
MSCI ACWI			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	-7.3
eA All Global Equity Gross Rank			36	85	78	74	62	--	75	30	46	32	63
<b>Total Domestic Fixed Income</b>	<b>1,484,588,324</b>	<b>19.5</b>	<b>1.3</b>	<b>6.3</b>	<b>6.4</b>	<b>5.4</b>	<b>5.7</b>	<b>6.1</b>	<b>1.7</b>	<b>7.3</b>	<b>1.3</b>	<b>9.7</b>	<b>7.2</b>
Barclays U.S. Universal			1.0	6.7	6.1	4.3	3.6	5.0	0.4	5.6	-1.3	5.5	7.4
Barclays Aggregate			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			9	39	19	5	3	8	8	8	2	5	71
AFL-CIO	245,403,667	3.2	0.7	5.4	4.8	4.6	3.6	5.2	1.6	6.6	-1.9	4.7	8.3
Barclays Aggregate			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			52	84	88	36	63	67	15	25	78	80	23
Goldman Sachs Core Plus	328,836,838	4.3	1.0	6.1	5.6	4.5	4.3	--	0.8	6.0	-0.4	7.9	7.6
Barclays Aggregate			0.5	5.8	5.2	4.0	3.1	--	0.6	6.0	-2.0	4.2	7.8
eA US Core Plus Fixed Inc Gross Rank			83	85	89	64	76	--	36	47	49	59	43
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	333,047,536	4.4	1.4	7.5	6.9	4.9	4.7	--	0.0	6.7	-0.6	8.6	8.2
Barclays Aggregate			0.5	5.8	5.2	4.0	3.1	--	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			6	7	8	17	9	--	94	18	18	8	27
PIMCO Fixed Income	442,289,365	5.8	0.9	6.0	6.0	4.2	4.2	5.9	0.5	6.3	-1.6	8.5	5.0
Barclays Aggregate			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
eA US Core Fixed Inc Gross Rank			28	62	33	67	23	14	75	34	61	8	97

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: September 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total High Yield</b>	<b>387,668,528</b>	<b>5.1</b>	<b>5.4</b>	<b>12.1</b>	<b>10.3</b>	<b>4.1</b>	<b>7.7</b>	<b>7.8</b>	<b>-3.5</b>	<b>1.2</b>	<b>8.8</b>	<b>14.1</b>	<b>6.4</b>
<i>BofA ML High Yield Master II</i>			5.5	15.3	12.8	5.3	8.2	7.6	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			27	47	52	77	66	39	68	83	28	73	19
Allianz Global Investors	387,668,528	5.1	5.4	12.1	10.3	4.1	7.7	7.8	-3.5	1.2	8.8	14.1	6.4
<i>BofA ML High Yield Master II</i>			5.5	15.3	12.8	5.3	8.2	7.6	-4.6	2.5	7.4	15.6	4.4
<i>eA US High Yield Fixed Inc Gross Rank</i>			27	47	52	77	66	39	68	83	28	73	21
<b>Total Global Fixed Income</b>	<b>244,749,556</b>	<b>3.2</b>	<b>1.7</b>	<b>9.4</b>	<b>8.5</b>	<b>2.2</b>	<b>1.9</b>	<b>3.8</b>	<b>-3.0</b>	<b>0.4</b>	<b>-3.5</b>	<b>6.7</b>	<b>5.6</b>
<i>Barclays Global Aggregate</i>			0.8	9.9	8.8	2.1	1.7	4.3	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			62	44	49	69	80	92	59	77	83	68	40
Lazard	244,749,556	3.2	1.7	9.4	8.5	2.2	1.9	--	-3.0	0.4	-3.5	6.7	5.6
<i>Barclays Global Aggregate</i>			0.8	9.9	8.8	2.1	1.7	--	-3.2	0.6	-2.6	4.3	5.6
<i>eA All Global Fixed Inc Gross Rank</i>			61	44	49	69	80	--	59	77	83	68	40
<b>Total Inflation Hedge</b>	<b>398,160,469</b>	<b>5.2</b>	<b>3.7</b>	<b>5.3</b>	<b>4.9</b>	<b>0.1</b>	<b>--</b>	<b>--</b>	<b>-4.9</b>	<b>-0.6</b>	<b>1.3</b>	<b>--</b>	<b>--</b>
<i>CPI + 4%</i>			1.2	5.1	5.5	5.1	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	128,756,259	1.7	4.1	14.4	14.6	2.8	--	--	-8.0	1.7	--	--	--
<i>CPI + 4%</i>			1.2	5.1	5.5	5.1	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	188,115,660	2.5	3.9	0.0	-2.0	-2.3	--	--	-4.9	-2.5	--	--	--
<i>CPI + 4%</i>			1.2	5.1	5.5	5.1	--	--	4.8	4.8	--	--	--
<b>Total Real Estate</b>	<b>789,662,366</b>	<b>10.4</b>	<b>1.4</b>	<b>4.8</b>	<b>8.7</b>	<b>13.4</b>	<b>15.1</b>	<b>5.5</b>	<b>13.5</b>	<b>20.6</b>	<b>10.5</b>	<b>16.7</b>	<b>10.4</b>
<i>Real Estate Benchmark</i>			0.9	8.2	13.2	12.0	12.5	7.7	8.2	18.8	7.1	13.6	13.6
<i>NCREIF-ODCE</i>			2.1	6.5	10.1	12.4	12.4	6.0	15.0	12.5	13.9	10.9	16.0
<i>NCREIF Property Index</i>			1.8	6.1	9.2	11.3	11.2	7.2	13.3	11.8	11.0	10.5	14.3
Adelante	96,424,083	1.3	-0.9	6.9	13.3	14.5	16.0	5.5	5.1	33.4	3.6	17.7	9.2
<i>Wilshire REIT</i>			-1.2	9.7	17.9	14.3	15.8	5.9	4.2	31.8	1.9	17.6	9.2
INVESCO International REIT	58,911,920	0.8	3.6	7.8	7.8	2.5	10.6	--	-2.9	2.8	5.4	42.3	-16.5
<i>FTSE EPRA/NAREIT Developed ex-USA</i>			4.3	10.4	11.7	3.2	10.4	--	-3.2	3.2	6.1	38.6	-15.3

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Fund</b>	<b>7,610,706,502</b>	<b>100.0</b>	<b>3.6</b>	<b>6.5</b>	<b>9.0</b>	<b>7.0</b>	<b>10.2</b>	<b>5.9</b>	<b>2.1</b>	<b>7.7</b>	<b>15.6</b>	<b>13.6</b>	<b>2.1</b>
<i>Policy Index</i>			3.4	8.3	11.2	7.6	10.8	--	0.6	9.0	15.6	14.6	2.8
<i>CPI + 4%</i>			1.2	5.1	5.5	5.1	5.3	5.8	4.8	4.8	5.6	5.8	7.1
<b>Total Domestic Equity</b>	<b>1,740,964,976</b>	<b>22.9</b>	<b>5.4</b>	<b>7.5</b>	<b>12.4</b>	<b>9.7</b>	<b>16.7</b>	<b>7.6</b>	<b>0.6</b>	<b>11.0</b>	<b>35.7</b>	<b>17.8</b>	<b>0.8</b>
<i>Russell 3000</i>			4.4	8.2	15.0	10.4	16.4	7.4	0.5	12.6	33.6	16.4	1.0
Intech Large Cap Core	290,780,759	3.8	1.2	6.1	12.0	11.6	16.4	--	3.3	14.2	32.2	14.8	3.3
<i>S&amp;P 500</i>			3.9	7.8	15.4	11.2	16.4	--	1.4	13.7	32.4	16.0	2.1
PIMCO Stocks+ Absolute Return	333,527,240	4.4	4.8	9.9	18.3	10.6	16.7	7.2	-1.4	13.2	31.0	20.3	2.0
<i>S&amp;P 500</i>			3.9	7.8	15.4	11.2	16.4	7.2	1.4	13.7	32.4	16.0	2.1
Jackson Square Partners	326,298,051	4.3	7.2	-0.7	8.0	9.7	15.9	8.6	5.6	13.4	35.0	16.4	8.4
<i>Russell 1000 Growth</i>			4.6	6.0	13.8	11.8	16.6	8.8	5.7	13.0	33.5	15.3	2.6
Robeco Boston Partners	318,268,874	4.2	4.5	6.0	11.0	7.9	16.5	7.4	-4.2	11.6	37.0	21.2	0.6
<i>Russell 1000 Value</i>			3.5	10.0	16.2	9.7	16.2	5.9	-3.8	13.5	32.5	17.5	0.4
Emerald Advisers	242,298,604	3.2	10.0	5.4	4.2	7.2	18.6	9.0	3.5	6.6	49.4	17.8	-1.2
<i>Russell 2000 Growth</i>			9.2	7.5	12.1	6.6	16.1	8.3	-1.4	5.6	43.3	14.6	-2.9
Ceredex	229,791,449	3.0	5.7	21.3	20.6	9.1	--	--	-5.0	2.7	35.8	18.6	--
<i>Russell 2000 Value</i>			8.9	15.5	18.8	6.8	--	--	-7.5	4.2	34.5	18.1	--
<b>Total International Equity</b>	<b>837,210,111</b>	<b>11.0</b>	<b>4.8</b>	<b>4.5</b>	<b>9.0</b>	<b>3.1</b>	<b>8.1</b>	<b>1.5</b>	<b>-1.6</b>	<b>0.0</b>	<b>17.4</b>	<b>17.9</b>	<b>-12.0</b>
<i>MSCI ACWI ex USA Gross</i>			7.0	6.3	9.8	0.6	6.5	2.6	-5.3	-3.4	15.8	17.4	-13.3
<i>MSCI EAFE Gross</i>			6.5	2.2	7.1	0.9	7.9	2.3	-0.4	-4.5	23.3	17.9	-11.7
Pyrford	416,695,850	5.5	3.4	6.4	10.3	--	--	--	-3.3	--	--	--	--
<i>MSCI ACWI ex USA Value</i>			7.8	5.5	7.0	--	--	--	-10.1	--	--	--	--
William Blair	419,979,055	5.5	6.3	2.3	7.3	2.6	9.3	--	0.0	-1.7	20.4	23.7	-13.7
<i>MSCI ACWI ex USA Growth</i>			6.1	6.2	11.5	2.2	7.4	--	-1.3	-2.6	15.5	16.7	-14.2
International Equity Transition	535,207	0.0											
<b>Total Global Equity</b>	<b>966,954,063</b>	<b>12.7</b>	<b>6.9</b>	<b>8.4</b>	<b>14.9</b>	<b>7.0</b>	<b>10.6</b>	<b>--</b>	<b>1.6</b>	<b>4.5</b>	<b>22.9</b>	<b>10.6</b>	<b>-6.1</b>
<i>MSCI ACWI</i>			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	-7.3
Artisan Partners	340,366,101	4.5	10.8	11.1	19.6	9.6	--	--	8.4	3.1	25.2	--	--
<i>MSCI ACWI</i>			5.3	6.6	12.0	5.2	--	--	-2.4	4.2	22.8	--	--
First Eagle	324,823,862	4.3	4.2	10.9	16.0	6.4	9.8	--	-0.6	3.7	17.1	13.1	--
<i>MSCI ACWI</i>			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	--
Intech Global Low Vol	23,958,644	0.3	-0.3	9.2	14.0	9.5	--	--	3.9	10.8	23.8	--	--
<i>MSCI ACWI</i>			5.3	6.6	12.0	5.2	--	--	-2.4	4.2	22.8	--	--
JP Morgan Global Opportunities	277,805,457	3.7	6.0	2.5	8.4	4.5	11.3	--	-3.3	6.2	26.4	18.7	-9.4
<i>MSCI ACWI</i>			5.3	6.6	12.0	5.2	10.6	--	-2.4	4.2	22.8	16.1	-7.3

Individual closed end funds are not shown in performance summary.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2016

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2015	2014	2013	2012	2011
<b>Total Domestic Fixed Income</b>	<b>1,484,588,324</b>	<b>19.5</b>	<b>1.2</b>	<b>6.0</b>	<b>6.0</b>	<b>5.0</b>	<b>5.3</b>	<b>5.6</b>	<b>1.4</b>	<b>6.7</b>	<b>0.9</b>	<b>9.2</b>	<b>6.8</b>
<i>Barclays U.S. Universal</i>			1.0	6.7	6.1	4.3	3.6	5.0	0.4	5.6	-1.3	5.5	7.4
<i>Barclays Aggregate</i>			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
AFL-CIO	245,403,667	3.2	0.5	5.1	4.4	4.1	3.1	4.7	1.1	6.1	-2.4	4.3	7.9
<i>Barclays Aggregate</i>			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
Goldman Sachs Core Plus	328,836,838	4.3	0.9	6.0	5.5	4.3	4.1	--	0.6	5.8	-0.6	7.7	7.3
<i>Barclays Aggregate</i>			0.5	5.8	5.2	4.0	3.1	--	0.6	6.0	-2.0	4.2	7.8
GSAM Workout Portfolio	4,078	0.0											
Lord Abbett	333,047,536	4.4	1.3	7.3	6.7	4.7	4.5	--	-0.2	6.5	-0.8	8.4	8.0
<i>Barclays Aggregate</i>			0.5	5.8	5.2	4.0	3.1	--	0.6	6.0	-2.0	4.2	7.8
PIMCO Fixed Income	442,289,365	5.8	0.8	5.8	5.7	3.9	3.9	5.6	0.3	6.0	-1.9	8.2	4.7
<i>Barclays Aggregate</i>			0.5	5.8	5.2	4.0	3.1	4.8	0.6	6.0	-2.0	4.2	7.8
<b>Total High Yield</b>	<b>387,668,528</b>	<b>5.1</b>	<b>5.3</b>	<b>11.7</b>	<b>9.9</b>	<b>3.7</b>	<b>7.3</b>	<b>7.6</b>	<b>-3.9</b>	<b>0.8</b>	<b>8.4</b>	<b>13.7</b>	<b>6.4</b>
<i>BofA ML High Yield Master II</i>			5.5	15.3	12.8	5.3	8.2	7.6	-4.6	2.5	7.4	15.6	4.4
Allianz Global Investors	387,668,528	5.1	5.3	11.7	9.9	3.7	7.3	7.3	-3.9	0.8	8.4	13.6	6.0
<i>BofA ML High Yield Master II</i>			5.5	15.3	12.8	5.3	8.2	7.6	-4.6	2.5	7.4	15.6	4.4
<b>Total Global Fixed Income</b>	<b>244,749,556</b>	<b>3.2</b>	<b>1.6</b>	<b>9.2</b>	<b>8.2</b>	<b>1.9</b>	<b>1.6</b>	<b>3.5</b>	<b>-3.3</b>	<b>0.1</b>	<b>-3.8</b>	<b>6.4</b>	<b>5.3</b>
<i>Barclays Global Aggregate</i>			0.8	9.9	8.8	2.1	1.7	4.3	-3.2	0.6	-2.6	4.3	5.6
Lazard	244,749,556	3.2	1.6	9.2	8.2	1.9	1.6	--	-3.3	0.1	-3.8	6.4	5.3
<i>Barclays Global Aggregate</i>			0.8	9.9	8.8	2.1	1.7	--	-3.2	0.6	-2.6	4.3	5.6
<b>Total Inflation Hedge</b>	<b>398,160,469</b>	<b>5.2</b>	<b>3.5</b>	<b>4.5</b>	<b>4.0</b>	<b>-0.8</b>	<b>--</b>	<b>--</b>	<b>-5.8</b>	<b>-1.5</b>	<b>0.3</b>	<b>--</b>	<b>--</b>
CPI + 4%			1.2	5.1	5.5	5.1	--	--	4.8	4.8	5.6	--	--
PIMCO All Asset Fund	128,756,259	1.7	3.9	13.7	13.6	1.9	--	--	-8.8	0.8	--	--	--
CPI + 4%			1.2	5.1	5.5	5.1	--	--	4.8	4.8	--	--	--
Wellington Real Total Return	188,115,660	2.5	3.8	-0.4	-2.5	-2.8	--	--	-5.4	-3.1	--	--	--
CPI + 4%			1.2	5.1	5.5	5.1	--	--	4.8	4.8	--	--	--
<b>Total Real Estate</b>	<b>789,662,366</b>	<b>10.4</b>	<b>1.2</b>	<b>4.1</b>	<b>7.8</b>	<b>12.1</b>	<b>13.8</b>	<b>4.4</b>	<b>12.4</b>	<b>19.1</b>	<b>8.9</b>	<b>15.7</b>	<b>9.4</b>
Real Estate Benchmark			0.9	8.2	13.2	12.0	12.5	7.7	8.2	18.8	7.1	13.6	13.6
NCREIF-ODCE			2.1	6.5	10.1	12.4	12.4	6.0	15.0	12.5	13.9	10.9	16.0
NCREIF Property Index			1.8	6.1	9.2	11.3	11.2	7.2	13.3	11.8	11.0	10.5	14.3
Adelante	96,424,083	1.3	-1.0	6.6	12.8	14.0	15.4	5.0	4.6	32.7	3.0	17.2	8.6
Wilshire REIT			-1.2	9.7	17.9	14.3	15.8	5.9	4.2	31.8	1.9	17.6	9.2
INVESCO International REIT	58,911,920	0.8	3.4	7.3	7.1	1.8	9.9	--	-3.5	2.2	4.7	41.3	-17.0
FTSE EPRA/NAREIT Developed ex-USA			4.3	10.4	11.7	3.2	10.4	--	-3.2	3.2	6.1	38.6	-15.3

Individual closed end funds are not shown in performance summary.



Total Fund  
Closed End Funds - Investment Summary

Period Ending: September 30, 2016

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/16 <sup>3</sup>	Total Commitment	% Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions <sup>4</sup>	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Fixed Income</b>												
07/01/2006	Torchlight II	\$45,721,637	\$128,000,000	100%	\$128,000,000	\$0	\$3,875,799	\$158,211,379	\$0	1.24	1.59	09/30/2016
12/12/2008	Torchlight III	\$10,575,367	\$75,000,000	100%	\$75,000,000	\$0	\$587,812	\$99,100,375	\$0	1.32	1.46	09/30/2016
08/01/2012	Torchlight IV	\$62,592,665	\$60,000,000	100%	\$60,000,000	\$0	\$905,184	\$36,123,640	\$0	0.60	1.65	09/30/2016
03/12/2015	Torchlight V	\$16,117,171	\$75,000,000	20%	\$14,999,912	\$3,749,912	\$0	\$0	\$60,000,088	0.00	1.07	09/30/2016
<b>Total Fixed Income</b>		<b>\$135,006,840</b>										
% of Portfolio (Market Value)		1.8%										
<b>Inflation Hedge</b>												
11/27/2013	Aether Real Assets III	\$14,906,385	\$25,000,000	55%	\$13,813,212	\$1,883,865	\$125,387	\$250,999	\$11,427,975	0.02	1.10	06/30/2016
11/27/2013	Aether Real Assets III Surplus	\$35,677,651	\$50,000,000	66%	\$33,219,816	\$4,663,272	\$420	\$225,604	\$16,957,296	0.01	1.08	06/30/2016
03/16/2016	Aether Real Assets IV	\$4,343,085	\$50,000,000	10%	\$4,756,067	\$4,256,067	\$0	\$0	\$45,243,933	0.00	0.91	06/30/2016
06/28/2013	Commonfund	\$26,361,429	\$50,000,000	57%	\$28,375,000	\$1,250,000	\$0	\$0	\$21,625,000	0.00	0.93	06/30/2016
<b>Total Inflation Hedge</b>		<b>\$81,288,550</b>										
% of Portfolio (Market Value)		1.1%										
<b>Opportunistic</b>												
02/18/2010	Oaktree PIF 2009 <sup>3</sup>	\$17,578,149	\$40,000,000	87%	\$34,800,000	\$0	\$0	\$28,118,579	\$6,308,960	0.81	1.31	09/30/2016
09/24/2015	Angelo Gordon Energy Credit Opp.	\$16,020,066	\$75,000,000	20%	\$15,000,000	\$0	\$0	\$0	\$60,000,000	0.00	1.07	06/30/2016
12/08/2015	Wastewater Opportunity Fund	\$2,988,326	\$25,000,000	15%	\$3,824,981	\$1,804,183	\$0	\$0	\$21,299,790	0.00	0.78	09/30/2016
<b>Total Opportunistic</b>		<b>\$36,586,541</b>										
% of Portfolio (Market Value)		0.5%										

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

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

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

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

Total Fund  
Closed End Funds - Investment Summary

Period Ending: September 30, 2016

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/16 <sup>3</sup>	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions <sup>7</sup>	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Real Estate</b>												
01/23/2012	Angelo Gordon Realty Fund VIII	\$53,098,179	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$61,552,397	\$12,334,302	0.82	1.52	06/30/2016
12/08/2014	Angelo Gordon Realty Fund IX	\$25,404,743	\$65,000,000	35%	\$22,750,000	\$11,212,500	\$0	\$0	\$42,250,000	0.00	1.12	06/30/2016
06/23/2005	DLJ RECP III	\$33,109,491	\$75,000,000	95%	\$70,968,662	\$0	\$9,456,191	\$67,876,642	\$4,031,338	0.96	1.42	06/30/2016
02/11/2008	DLJ RECP IV	\$81,371,515	\$100,000,000	91%	\$90,943,569	\$3,089,475	\$3,910,190	\$56,595,635	\$9,056,431	0.62	1.52	06/30/2016
07/01/2014	DLJ RECP V	\$40,493,957	\$75,000,000	67%	\$50,552,862	\$0	\$0	\$21,472,837	\$41,185,826	0.42	1.23	06/30/2016
06/17/1998	Hearthstone II <sup>4</sup>	\$9,137	\$25,000,000	80%	\$19,925,048	\$0	\$0	\$19,952,734	\$2,527,686	1.00	1.00	06/30/2016
02/01/2005	Invesco Real Estate I	\$122,614	\$50,000,000	92%	\$46,241,947	\$0	\$1,893,086	\$50,000,907	\$3,758,053	1.08	1.08	09/30/2016
11/26/2007	Invesco Real Estate II	\$8,578,900	\$85,000,000	92%	\$78,202,813	\$0	\$5,100,000	\$92,422,650	\$6,797,187	1.18	1.29	09/30/2016
06/30/2013	Invesco Real Estate III	\$20,913,763	\$35,000,000	88%	\$30,685,961	\$0	\$0	\$22,527,850	\$4,314,039	0.73	1.42	09/30/2016
06/30/2014	Invesco Real Estate IV	\$11,618,071	\$35,000,000	29%	\$10,088,760	\$1,601,034	\$0	\$13,317,018	\$24,911,240	1.32	2.47	09/30/2016
07/16/2013	LaSalle Income & Growth VI	\$70,417,238	\$75,000,000	95%	\$71,428,571	\$0	\$10,668,957	\$29,149,110	\$3,571,429	0.41	1.39	09/30/2016
03/30/2007	Long Wharf Fund III	\$8,977,892	\$75,000,000	89%	\$66,940,230	\$0	\$2,997,640	\$80,722,264	\$8,059,770	1.21	1.34	09/30/2016
07/03/2013	Long Wharf Fund IV	\$24,652,427	\$25,000,000	100%	\$25,000,000	\$0	\$591,833	\$7,062,537	\$0	0.28	1.27	09/30/2016
09/30/2016	Long Wharf Fund V	\$11,569,441	\$50,000,000	23%	\$11,653,147	\$11,653,147	\$0	\$0	\$38,346,853	0.00	0.99	09/30/2016
12/31/2011	Oaktree REOF V	\$23,265,021	\$50,000,000	100%	\$50,000,000	\$0	\$3,000,000	\$57,500,000	\$25,750,000	1.15	1.62	09/30/2016
09/30/2013	Oaktree REOF VI <sup>5</sup>	\$76,491,604	\$80,000,000	100%	\$80,000,000	\$0	\$9,200,000	\$33,200,000	\$0	0.42	1.37	09/30/2016
04/01/2015	Oaktree REOF VII	\$0	\$65,000,000	0%	\$0	\$0	\$0	\$0	\$65,000,000	-	-	-
11/10/2013	Paulson Real Estate Fund II	\$21,554,656	\$20,000,000	77%	\$15,307,123	\$0	\$0	\$0	\$4,692,877	0.00	1.41	06/30/2016
01/25/2012	Siguler Guff DREOF	\$58,942,245	\$75,000,000	93%	\$69,375,000	\$750,000	\$4,727,416	\$45,407,153	\$5,625,000	0.65	1.50	06/30/2016
08/31/2013	Siguler Guff DREOF II	\$51,706,069	\$70,000,000	72%	\$50,400,000	\$3,850,000	\$2,098,066	\$2,779,189	\$19,600,000	0.06	1.08	06/30/2016
01/27/2016	Siguler Guff DREOF II Co-Inv	\$12,029,401	\$25,000,000	51%	\$12,625,362	\$2,625,000	\$0	\$0	\$12,374,638	0.00	0.95	06/30/2016
<b>Total Closed End Real Estate</b>		<b>\$634,326,363</b>	<b>\$1,235,000,000</b>	<b>77%</b>	<b>\$948,490,911</b>	<b>\$34,781,156</b>	<b>\$53,643,378</b>	<b>\$661,538,924</b>	<b>\$334,186,668</b>	<b>0.35</b>	<b>1.02</b>	
<b>% of Portfolio (Market Value)</b>		<b>8.3%</b>										

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

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

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

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

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

<sup>6</sup>Fund paid out it's final distribution during the quarter

<sup>7</sup>Total distributions may include recallable distributions

Total Fund  
Closed End Funds - Investment Summary

Period Ending: September 30, 2016

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 9/30/16 <sup>3</sup>	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) <sup>1</sup>	Tot. Value/Paid-In (TVPI) <sup>2</sup>	Latest Valuation
<b>Private Equity &amp; Venture Capital</b>												
03/18/1996	Adams Street Partners	\$121,106,446	\$210,000,000	72%	\$151,366,125	\$4,181,500	\$5,709,846	\$84,104,449	\$58,633,875	0.56	1.36	06/30/2016
01/16/2009	Adams Street Partners II	\$15,438,061	\$30,000,000	95%	\$28,365,000	\$0	\$0	\$29,629,996	\$1,635,000	1.04	1.59	06/30/2016
09/21/2012	Adams Street Partners - Fund 5	\$16,706,760	\$40,000,000	61%	\$24,508,000	\$0	\$761,410	\$7,474,771	\$15,492,000	0.30	0.99	06/30/2016
01/18/1996	Adams Street Partners - BPF	\$4,965,435	\$59,565,614	97%	\$57,517,409	\$0	\$204,025	\$98,918,838	\$2,048,205	1.72	1.81	06/30/2016
06/14/2004	Bay Area Equity Fund	\$4,119,335	\$10,000,000	100%	\$10,000,000	\$0	\$0	\$35,310,439	\$0	3.53	3.94	06/30/2016
12/07/2009	Bay Area Equity Fund II	\$9,461,683	\$10,000,000	100%	\$10,000,000	\$63,000	\$0	\$1,015,352	\$0	0.10	1.05	06/30/2016
11/26/2003	EIF US Power Fund I	\$804,386	\$30,000,000	100%	\$30,000,000	\$0	\$0	\$64,168,646	\$0	2.14	2.17	06/30/2016
08/16/2005	EIF US Power Fund II	\$42,779,248	\$50,000,000	100%	\$50,000,000	\$0	\$0	\$43,145,140	\$0	0.86	1.72	06/30/2016
05/30/2007	EIF US Power Fund III	\$59,896,483	\$65,000,000	93%	\$60,390,715	\$0	\$1,197,098	\$29,138,303	\$5,196,860	0.48	1.47	06/30/2016
11/28/2011	EIF US Power Fund IV	\$41,511,680	\$50,000,000	94%	\$46,882,483	\$0	\$296,279	\$17,192,209	\$15,196,801	0.37	1.25	06/30/2016
05/24/2011	Pathway 6	\$29,958,677	\$40,000,000	72%	\$28,717,662	\$1,005,498	\$452,964	\$3,949,277	\$11,282,338	0.14	1.18	06/30/2016
02/07/2013	Pathway 7	\$32,520,379	\$70,000,000	50%	\$34,732,769	\$4,058,457	\$483,771	\$2,241,392	\$35,267,231	0.06	1.00	06/30/2016
11/23/2015	Pathway 8	\$9,386,049	\$50,000,000	19%	\$9,595,729	\$3,627,846	\$53,779	\$53,779	\$40,404,271	0.01	0.98	06/30/2016
11/09/1998	Pathway	\$37,108,858	\$125,000,000	97%	\$121,646,074	\$174,240	\$3,424,435	\$140,818,424	\$3,353,926	1.16	1.46	06/30/2016
12/26/2008	Pathway 2008	\$23,426,849	\$30,000,000	82%	\$24,649,705	\$0	\$944,198	\$9,660,689	\$5,350,295	0.39	1.34	06/30/2016
01/31/2008	Carpenter Bancfund	\$28,175,398	\$30,000,000	97%	\$29,020,926	\$0	\$0	\$17,137,847	\$979,074	0.59	1.56	06/30/2016
02/15/2004	Nogales	\$78,436	\$15,000,000	99%	\$14,805,103	\$0	\$235,027	\$12,314,799	\$111,251	0.83	0.84	06/30/2016
11/30/2007	Paladin III	\$25,348,180	\$25,000,000	98%	\$24,384,152	\$0	\$0	\$14,504,615	\$1,059,071	0.59	1.63	06/30/2016
06/11/2014	Ocean Avenue Fund II	\$17,465,829	\$30,000,000	60%	\$18,000,000	\$0	\$0	\$589,938	\$12,000,000	0.03	1.00	09/30/2016
04/15/2016	Ocean Avenue Fund III	\$4,718,177	\$50,000,000	10%	\$5,000,000	\$0	\$0	\$0	\$45,000,000	0.00	0.94	09/30/2016
06/03/2014	Siguler Guff CCCERA Opportunities	\$70,116,503	\$200,000,000	32%	\$64,392,500	\$3,000,000	\$0	\$4,589,491	\$135,607,500	0.07	1.16	06/30/2016
<b>Total Private Equity and Venture Capital</b>		<b>\$595,092,854</b>	<b>\$1,219,565,614</b>	<b>69%</b>	<b>\$843,974,352</b>	<b>\$16,110,541</b>	<b>\$13,762,830</b>	<b>\$615,958,393</b>	<b>\$388,617,698</b>	<b>0.73</b>	<b>1.43</b>	
% of Portfolio (Market Value)		7.8%										

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

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

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

Total Fund  
Closed End Funds - IRR Summary

Period Ending: September 30, 2016

Fixed Income	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Torchlight II	07/01/2006	-0.1%	0.2%	-1.4%	-1.2%	09/30/2016
Torchlight III	12/12/2008	18.0%	18.1%	13.7%	13.8%	09/30/2016
Torchlight IV	08/01/2012	11.2%	12.1%	9.0%	10.3%	09/30/2016
Torchlight V	03/12/2015	24.7%	24.1%	9.0%	9.6%	09/30/2016
Inflation Hedge	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Aether Real Assets III <sup>4</sup>	11/27/2013	15.0%	15.0%	8.3%	8.3%	06/30/2016
Aether Real Assets III Surplus <sup>4</sup>	11/27/2013	12.0%	12.0%	8.8%	8.8%	06/30/2016
Aether Real Assets IV <sup>1</sup>	01/01/2016	-	-	-	-	-
CommonFund <sup>4</sup>	06/28/2013	-2.1%	-	-5.1%	-5.2%	06/30/2016
Wastewater Opportunity Fund <sup>1</sup>	12/08/2015	-7.7%	-8.2%	-63.5%	-65.3%	09/30/2016
Opportunistic	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Oaktree PIF	02/18/2010	7.0%	-	6.8%	-	09/30/2016
Angelo Gordon Energy Cred Opp. <sup>1</sup>	09/24/2015	-	-	-	-	-
Real Estate	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Angelo Gordon VIII	01/23/2012	21.9%	23.0%	17.5%	18.8%	06/30/2016
Angelo Gordon IX <sup>1</sup>	12/08/2014	-	-	-	-	-
DLJ RECP III	06/23/2005	2.0%	-	-	-	06/30/2016
DLJ RECP IV	02/11/2008	6.0%	-	-	3.0%	06/30/2016
DLJ RECP V <sup>1</sup>	07/01/2014	-	-	-	-	-
Hearthstone II	06/17/1998	-	30.1%	-	30.1%	06/30/2016
Invesco Fund I	02/01/2005	2.6%	2.6%	1.6%	1.6%	06/30/2016
Invesco Fund II	11/26/2007	8.4%	7.5%	6.9%	6.7%	06/30/2016
Invesco Fund III	06/30/2013	21.8%	23.2%	20.4%	17.0%	06/30/2016
Invesco Fund IV	06/30/2014	32.4%	32.4%	22.8%	22.2%	06/30/2016
LaSalle Income & Growth	07/16/2013	18.3%	18.3%	14.9%	15.0%	09/30/2016
Long Wharf III	03/30/2007	9.7%	9.6%	7.6%	7.4%	09/30/2016
Long Wharf IV	07/03/2013	20.6%	21.0%	14.3%	14.4%	09/30/2016
Long Wharf V <sup>1</sup>	09/30/2016	12.5%	-	-1.2%	-	09/30/2016
Oaktree REOF V	12/31/2011	17.6%	-	13.0%	-	09/30/2016
Oaktree REOF VI	09/30/2013	17.9%	-	12.0%	-	09/30/2016
Oaktree REOF VII <sup>1</sup>	04/01/2015	-	-	-	-	-
Paulson <sup>1</sup>	11/10/2013	-	-	-	-	-
Siguler Guff I	01/25/2012	15.4%	16.5%	13.2%	14.4%	06/30/2016
Siguler Guff II	08/31/2013	8.6%	7.4%	5.9%	5.2%	06/30/2016
Siguler Guff DREOF II Co-Inv <sup>1</sup>	01/27/2016	-	-	-	-	-

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

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

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

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

Total Fund  
Closed End Funds - IRR Summary

Period Ending: September 30, 2016

Private Equity & Venture Capital	Inception	Fund Level (G)	CCCERA (G)	Fund Level (N)	CCCERA (N)	IRR Date
Adams Street Partners	03/18/1996	-	11.7%	-	8.7%	03/31/2016
Adams Street Partners II	01/16/2009	-	18.7%	-	16.0%	03/31/2016
Adams Street Partners - Fund 5	09/21/2012	-	2.3%	-	-1.6%	12/31/2015
Adams Street Partners - BPF	01/18/1996	-	14.3%	-	11.6%	03/31/2016
Bay Area Equity Fund I	06/14/2004	31.9%	32.4%	24.0%	24.4%	09/30/2015
Bay Area Equity Fund II	12/07/2009	12.0%	11.3%	5.1%	4.9%	09/30/2015
Energy Investor Fund	11/26/2003	33.6%	34.7%	28.6%	28.4%	06/30/2016
Energy Investor Fund II	08/16/2005	8.4%	7.9%	5.7%	5.2%	06/30/2016
Energy Investor Fund III	05/30/2007	8.3%	8.3%	5.7%	5.7%	06/30/2016
Energy Investor Fund IV	11/28/2011	18.4%	18.9%	11.8%	11.5%	06/30/2016
Pathway 6	05/24/2011	13.2%	13.2%	9.0%	9.0%	06/30/2016
Benchmark <sup>4</sup>		8.3%	-	-	-	06/30/2016
Pathway 7 <sup>1</sup>	02/07/2013	5.9%	5.9%	0.1%	0.1%	06/30/2016
Pathway 8 <sup>1</sup>	11/06/2015	-	-	-	-	-
Pathway Private Equity Fund	11/09/1998	10.1%	10.1%	8.3%	8.3%	06/30/2016
Benchmark <sup>3</sup>		8.3%	-	-	-	06/30/2016
Pathway Private Equity Fund 2008	12/26/2008	12.6%	12.6%	9.3%	9.3%	06/30/2016
Benchmark <sup>5</sup>		9.2%	-	-	-	06/30/2016
Carpenter Bancfund	01/31/2008	9.5%	9.4%	8.1%	8.0%	06/30/2016
Nogales	02/15/2004	-	-4.5%	-8.6%	-8.8%	03/31/2015
Paladin III	11/30/2007	16.5%	-	8.0%	7.9%	06/30/2016
Ocean Avenue II	06/11/2014	-	-	1.7%	-	06/30/2016
Ocean Avenue III	04/15/2016	-	-	-	-	03/31/2016
Siguler Guff CCCERA Opportunities	06/03/2014	-	26.7%	-	19.3%	06/30/2016

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

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

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

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

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

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

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

Period Ending: September 30, 2016

	3 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	11.63%	0.47%	8.20%	1.96%	0.87	4.06%	0.77	1.41	0.12	95.25%	58.84%
PIMCO Stocks+ Absolute Return	10.61%	-0.55%	10.09%	-2.63%	1.19	2.61%	0.96	1.04	-0.21	108.32%	158.51%
Jackson Square Partners	9.72%	-2.10%	11.42%	-5.68%	1.30	5.12%	0.84	0.84	-0.41	88.88%	136.22%
Robeco Boston Partners	7.90%	-1.81%	9.33%	-1.61%	0.98	2.78%	0.91	0.84	-0.65	82.37%	93.29%
Emerald Advisers	7.20%	0.61%	14.31%	1.05%	0.93	6.31%	0.81	0.50	0.10	97.50%	90.70%
Ceredex	9.11%	2.34%	12.72%	2.95%	0.91	5.42%	0.83	0.71	0.43	108.35%	84.26%
William Blair	2.63%	0.40%	10.02%	0.45%	0.98	2.74%	0.93	0.25	0.15	102.40%	96.96%
Artisan Partners	9.57%	4.40%	10.12%	4.27%	1.03	4.60%	0.79	0.94	0.96	142.43%	79.67%
First Eagle	6.35%	1.18%	7.12%	2.48%	0.75	3.48%	0.86	0.88	0.34	105.74%	84.70%
Intech Global Low Vol	9.47%	4.30%	6.08%	7.43%	0.39	7.30%	0.33	1.54	0.59	119.04%	39.79%
JP Morgan Global Opportunities	4.47%	-0.70%	10.16%	-1.27%	1.11	2.98%	0.92	0.43	-0.24	90.46%	97.66%
AFL-CIO	4.12%	0.09%	2.46%	0.55%	0.89	0.55%	0.97	1.64	0.17	97.41%	74.64%
Goldman Sachs Core Plus	4.34%	0.32%	2.62%	1.18%	0.79	1.62%	0.67	1.62	0.20	92.99%	23.17%
Lord Abbett	4.71%	0.69%	2.84%	0.89%	0.95	1.18%	0.83	1.63	0.58	106.68%	55.03%
PIMCO Fixed Income	3.95%	-0.08%	2.59%	0.21%	0.93	0.58%	0.95	1.49	-0.13	95.01%	81.80%
Allianz Global Investors	3.74%	-1.54%	6.02%	-0.96%	0.89	1.31%	0.97	0.61	-1.18	80.62%	99.25%
Lazard	1.92%	-0.21%	4.79%	-0.04%	0.92	1.33%	0.93	0.38	-0.16	87.57%	87.62%
PIMCO All Asset Fund	1.92%	-3.14%	7.91%	-11.27%	2.60	7.10%	0.31	0.23	-0.44	55.02%	771.76%
Wellington Real Total Return	-2.80%	-7.87%	7.91%	-13.03%	2.02	7.34%	0.19	-0.37	-1.07	-20.94%	1,307.20%
Adelante	13.96%	-0.38%	12.45%	0.63%	0.93	2.10%	0.98	1.11	-0.18	91.68%	84.28%
INVESCO International REIT	1.79%	-1.42%	7.74%	-1.10%	0.90	1.55%	0.97	0.22	-0.91	78.27%	95.60%

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

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

Period Ending: September 30, 2016

	5 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Intech Large Cap Core	16.37%	-0.01%	9.35%	1.74%	0.89	3.35%	0.88	1.74	0.00	93.58%	63.19%
PIMCO Stocks+ Absolute Return	16.74%	0.36%	11.13%	-1.49%	1.11	2.27%	0.97	1.50	0.16	108.36%	129.98%
Jackson Square Partners	15.87%	-0.73%	12.94%	-4.20%	1.21	4.29%	0.92	1.22	-0.17	98.97%	121.74%
Robeco Boston Partners	16.46%	0.31%	11.62%	-0.93%	1.08	3.31%	0.92	1.41	0.09	103.88%	107.12%
Emerald Advisers	18.64%	2.49%	17.53%	0.69%	1.11	6.58%	0.87	1.06	0.38	119.63%	103.91%
William Blair	9.33%	1.88%	11.42%	1.89%	1.00	2.53%	0.95	0.81	0.74	109.75%	88.07%
First Eagle	9.76%	-0.87%	7.54%	2.09%	0.72	3.52%	0.92	1.28	-0.25	84.42%	79.03%
JP Morgan Global Opportunities	11.27%	0.64%	11.16%	-0.29%	1.09	2.60%	0.95	1.00	0.25	102.27%	91.13%
AFL-CIO	3.10%	0.02%	2.66%	0.12%	0.97	0.53%	0.96	1.14	0.04	98.18%	91.10%
Goldman Sachs Core Plus	4.09%	1.01%	2.74%	1.36%	0.89	1.39%	0.75	1.46	0.73	114.60%	54.33%
Lord Abbett	4.52%	1.44%	2.95%	1.50%	0.98	1.30%	0.80	1.51	1.11	130.35%	68.13%
PIMCO Fixed Income	3.93%	0.85%	3.00%	0.76%	1.03	1.15%	0.85	1.29	0.73	120.81%	92.46%
Allianz Global Investors	7.28%	-0.96%	5.74%	-0.37%	0.93	1.21%	0.96	1.26	-0.79	87.55%	94.55%
Lazard	1.61%	-0.12%	4.72%	-0.10%	0.98	1.26%	0.93	0.33	-0.10	95.58%	98.03%
Adelante	15.44%	-0.37%	11.86%	0.88%	0.92	2.07%	0.98	1.30	-0.18	89.98%	78.70%
INVECO International REIT	9.87%	-0.56%	11.12%	-0.50%	0.99	1.79%	0.97	0.88	-0.31	94.63%	99.00%

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

# Total Fund Investment Fund Fee Analysis

Period Ending: September 30, 2016

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Intech Large Cap Core	Global Equity	0.50% of First \$100.0 Mil, 0.45% of Next \$100.0 Mil, 0.35% of Next \$100.0 Mil, 0.30% of Next \$200.0 Mil, 0.25% Thereafter	\$290,780,759	\$1,262,733	0.43%
PIMCO Stocks+ Absolute Return	Global Equity	0.15% of Assets	\$333,527,240	\$500,291	0.15%
Jackson Square Partners	Global Equity	0.50% of First \$100.0 Mil, 0.40% of Next \$150.0 Mil, 0.35% Thereafter	\$326,298,051	\$1,367,043	0.42%
Robeco Boston Partners	Global Equity	0.50% of First \$25.0 Mil, 0.30% Thereafter	\$318,268,874	\$1,004,807	0.32%
Emerald Advisers	Global Equity	0.75% of First \$10.0 Mil, 0.60% Thereafter	\$242,298,604	\$1,468,792	0.61%
Ceredex	Global Equity	0.85% of First \$10.0 Mil, 0.68% of Next \$40.0 Mil, 0.51% Thereafter	\$229,791,449	\$1,273,936	0.55%
Pyrford	Global Equity	0.70% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.35% Thereafter	\$416,695,850	\$1,708,435	0.41%
William Blair	Global Equity	0.80% of First \$20.0 Mil, 0.60% of Next \$30.0 Mil, 0.50% of Next \$50.0 Mil, 0.45% of Next \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.30% Thereafter	\$419,979,055	\$1,674,937	0.40%
Artisan Partners	Global Equity	0.75% of Assets	\$340,366,101	\$2,552,746	0.75%
First Eagle	Global Equity	0.75% of Assets	\$324,823,862	\$2,436,179	0.75%
Intech Global Low Vol	Global Equity	0.25% of First \$100.0 Mil, 0.21% of Next \$100.0 Mil, 0.18% of Next \$100.0 Mil, 0.16% of Next \$200.0 Mil, 0.14% Thereafter	\$23,958,644	\$58,699	0.25%
JP Morgan Global Opportunities	Global Equity	0.50% of First \$100.0 Mil, 0.40% Thereafter	\$277,805,457	\$1,211,222	0.44%
AFL-CIO	Global Fixed Income	0.43% of Assets	\$245,403,667	\$1,055,236	0.43%

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



Total Fund  
Investment Fund Fee Analysis

Period Ending: September 30, 2016

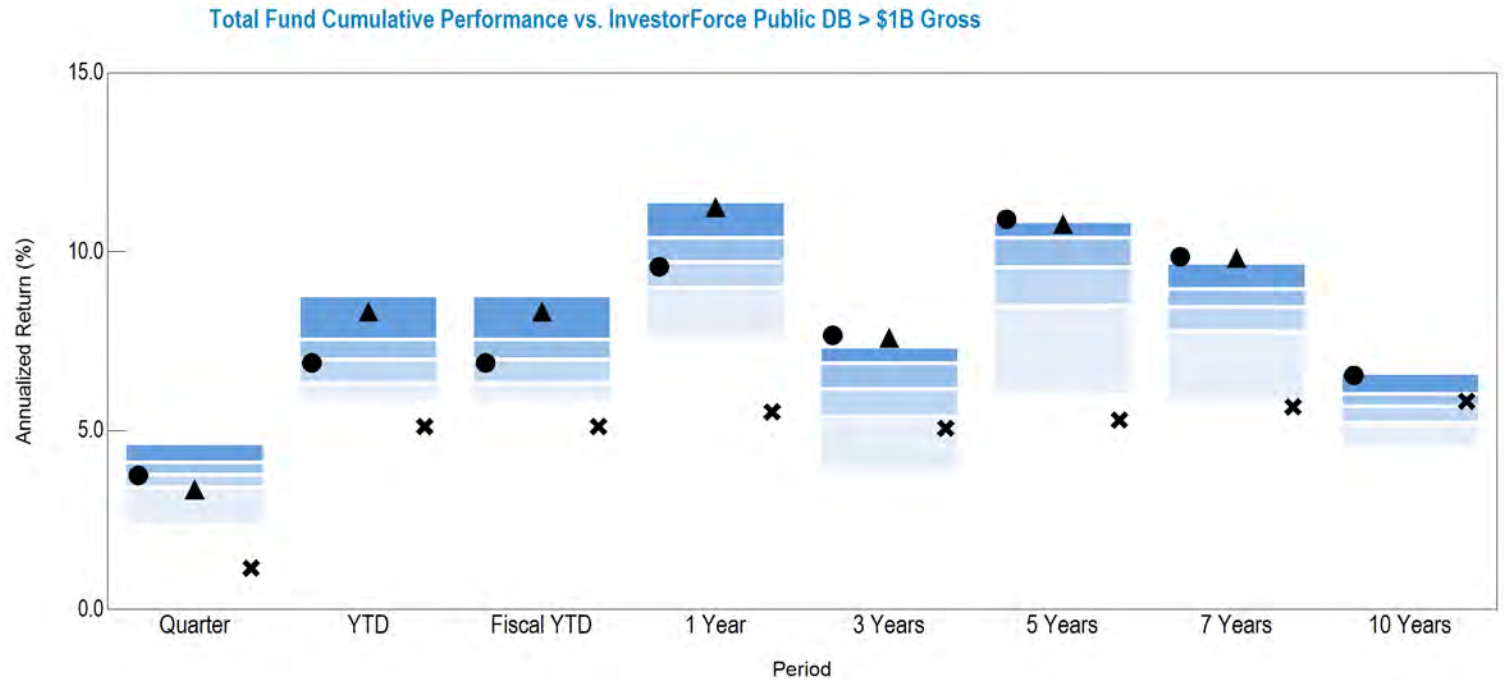
Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Goldman Sachs Core Plus	Global Fixed Income	0.18% of First \$500.0 Mil, 0.16% Thereafter	\$328,836,838	\$575,464	0.18%
GSAM Workout Portfolio	Global Fixed Income		\$4,078		
Lord Abbett	Global Fixed Income	0.20% of First \$250.0 Mil, 0.15% of Next \$250.0 Mil, 0.13% Thereafter	\$333,047,536	\$624,571	0.19%
PIMCO Fixed Income	Global Fixed Income	0.25% of First \$600.0 Mil, 0.15% Thereafter	\$442,289,365	\$1,105,723	0.25%
Allianz Global Investors	High Yield Fixed Income	0.50% of First \$50.0 Mil, 0.40% of Next \$50.0 Mil, 0.35% Thereafter	\$387,668,528	\$1,456,840	0.38%
Lazard	Global Fixed Income	0.40% of First \$25.0 Mil, 0.30% of Next \$25.0 Mil, 0.25% Thereafter	\$244,749,556	\$661,874	0.27%
PIMCO All Asset Fund	Inflation Hedge/Real Assets	0.88% of Assets	\$128,756,259	\$1,133,055	0.88%
Wellington Real Total Return	Inflation Hedge/Real Assets	0.55% of Assets	\$188,115,660	\$1,034,636	0.55%

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

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: September 30, 2016

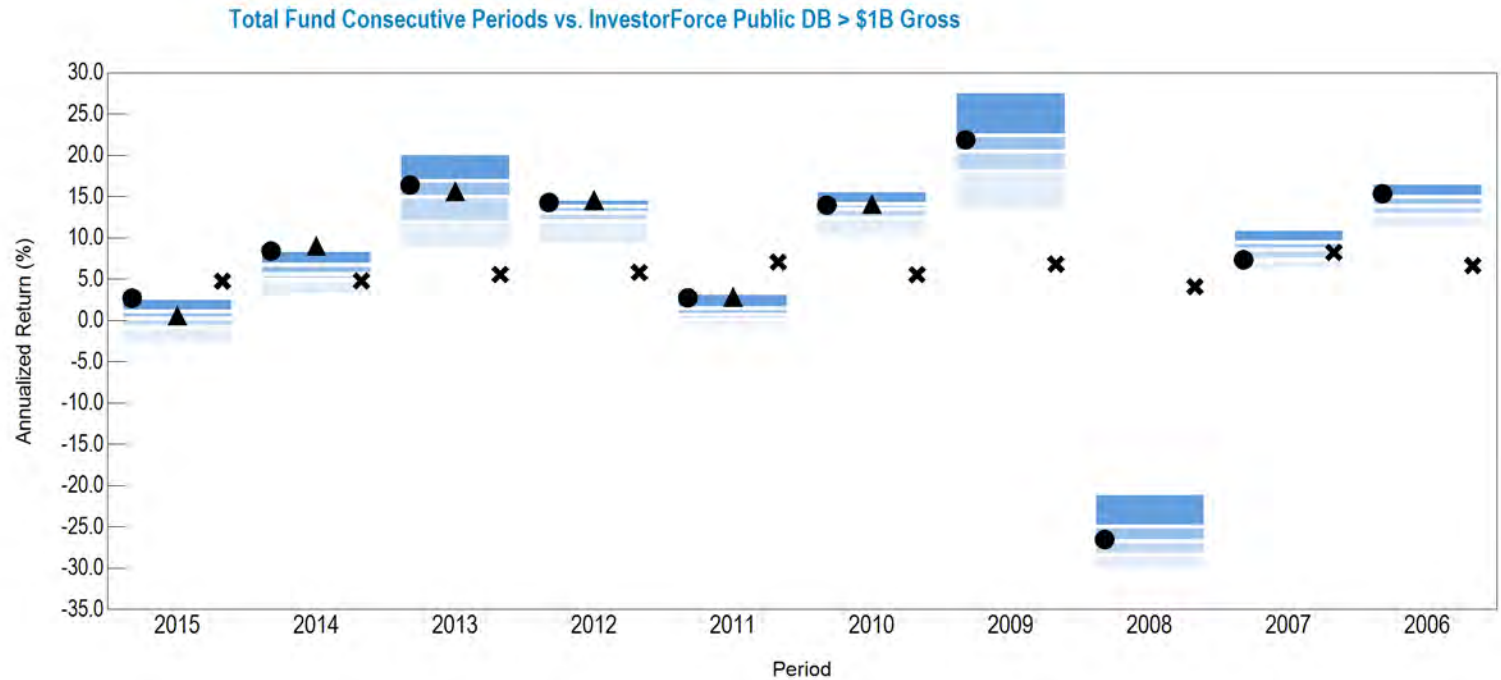


	Return (Rank)													
	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years						
5th Percentile	4.6	8.8	8.8	11.4	7.3	10.9	9.7	6.6						
25th Percentile	4.1	7.6	7.6	10.4	6.9	10.4	9.0	6.0						
Median	3.8	7.0	7.0	9.7	6.2	9.6	8.5	5.7						
75th Percentile	3.4	6.3	6.3	9.0	5.4	8.5	7.8	5.2						
95th Percentile	2.4	5.8	5.8	7.6	3.8	6.0	5.8	4.5						
# of Portfolios	105	94	94	94	84	82	73	69						
● Total Fund	3.7 (53)	6.9 (52)	6.9 (52)	9.6 (57)	7.7 (1)	10.9 (5)	9.9 (2)	6.5 (7)						
▲ Policy Index	3.4 (79)	8.3 (8)	8.3 (8)	11.2 (6)	7.6 (2)	10.8 (12)	9.8 (2)	-- (-)						
✕ CPI + 4%	1.2 (99)	5.1 (98)	5.1 (98)	5.5 (99)	5.1 (82)	5.3 (98)	5.7 (96)	5.8 (43)						

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: September 30, 2016



	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>5th Percentile</b>	2.7	8.5	20.2	14.7	3.3	15.7	27.7	-21.0	11.0	16.6
<b>25th Percentile</b>	1.1	6.8	17.0	13.9	1.6	14.2	22.5	-24.9	9.5	15.0
<b>Median</b>	0.3	5.7	15.0	13.0	0.8	13.5	20.5	-26.7	8.6	13.9
<b>75th Percentile</b>	-0.7	4.9	12.0	12.1	0.1	12.5	18.1	-28.3	7.4	12.9
<b>95th Percentile</b>	-2.8	3.1	8.7	9.2	-0.9	10.2	13.4	-30.2	6.2	11.2
<b># of Portfolios</b>	98	79	67	74	68	66	66	65	64	64
<b>● Total Fund</b>	2.7 (5)	8.4 (6)	16.4 (33)	14.3 (13)	2.7 (9)	14.0 (29)	21.9 (34)	-26.5 (48)	7.3 (78)	15.4 (19)
<b>▲ Policy Index</b>	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)	14.1 (27)	-- (--)	-- (--)	-- (--)	-- (--)
<b>✕ CPI + 4%</b>	4.8 (1)	4.8 (80)	5.6 (99)	5.8 (99)	7.1 (1)	5.6 (99)	6.8 (99)	4.1 (1)	8.2 (53)	6.6 (99)

## Domestic Equity Managers

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# Intech Large Cap Core Manager Portfolio Overview

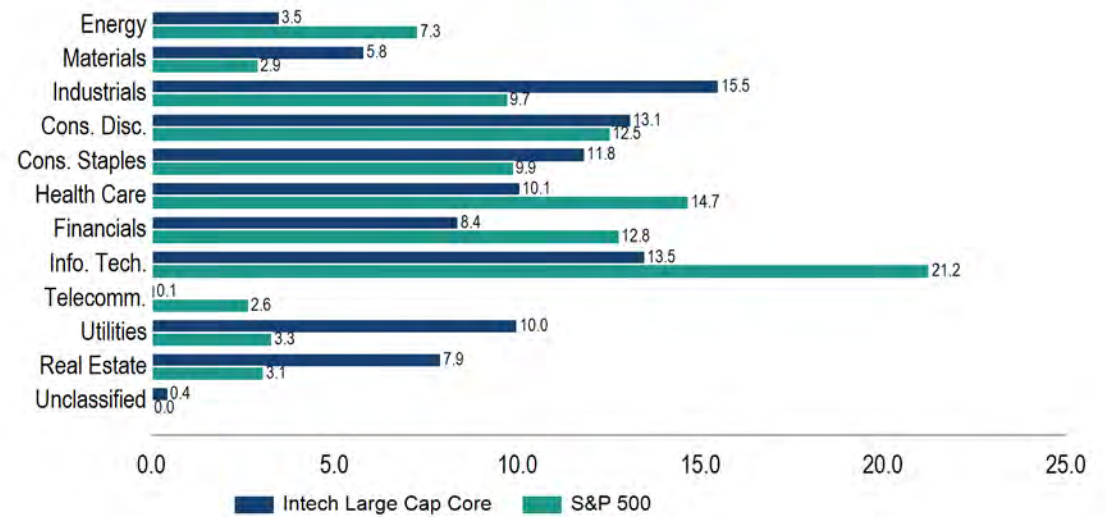
Period Ending: September 30, 2016

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

## Characteristics

	Portfolio	S&P 500
Number of Holdings	295	505
Weighted Avg. Market Cap. (\$B)	32.67	134.71
Median Market Cap. (\$B)	17.53	18.90
Price To Earnings	26.29	22.71
Price To Book	5.33	4.51
Price To Sales	3.21	3.06
Return on Equity (%)	19.47	18.79
Yield (%)	1.88	2.11
Beta	0.87	1.00

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



## Largest Holdings

	End Weight	Return
CONSTELLATION BRANDS 'A'	1.61	0.91
NORTHROP GRUMMAN	1.51	-3.34
LOCKHEED MARTIN	1.45	-2.74
NVIDIA	1.27	46.02
FISERV	1.26	-8.52
O REILLY AUTOMOTIVE	1.18	3.32
EDWARDS LIFESCIENCES	1.03	20.89
RAYTHEON 'B'	0.99	0.68
DR PEPPER SNAPPLE GROUP	0.97	-4.95
TYSON FOODS 'A'	0.96	12.02

## Top Contributors

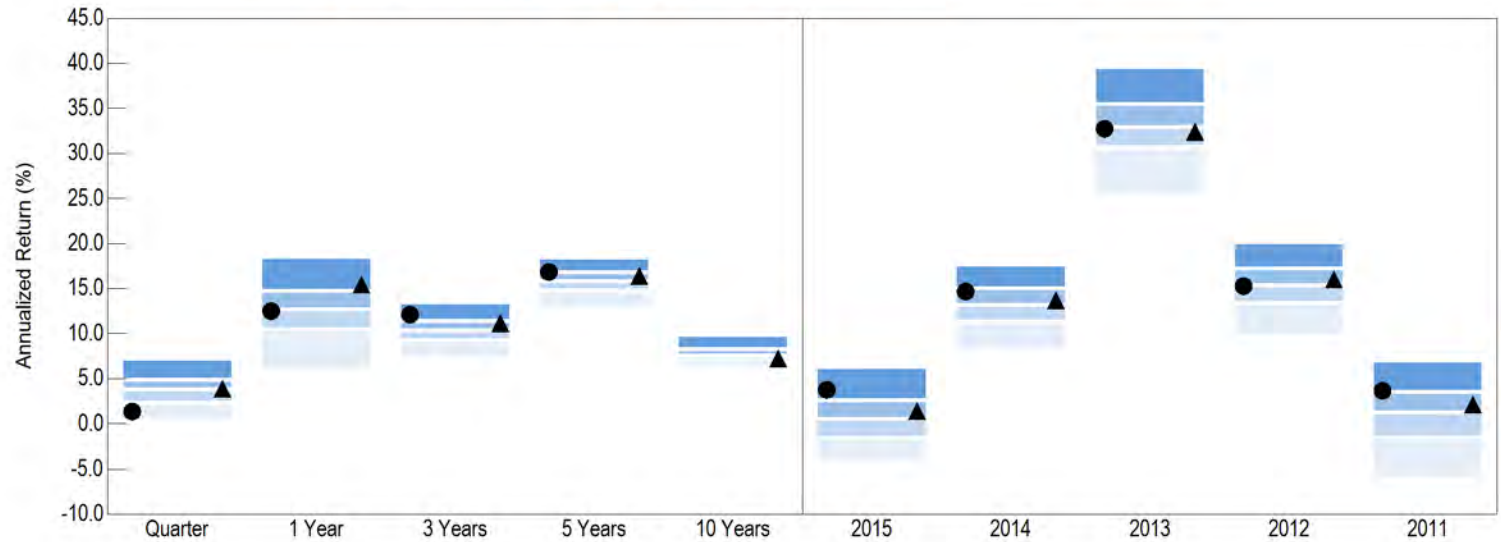
	Avg Wgt	Return	Contribution
NVIDIA	1.03	46.02	0.47
EDWARDS LIFESCIENCES	0.93	20.89	0.20
TYSON FOODS 'A'	1.05	12.02	0.13
ACTIVISION BLIZZARD	1.07	11.78	0.13
GOODYEAR TIRE & RUB.	0.41	26.18	0.11
APPLE	0.57	18.89	0.11
ELECTRONIC ARTS	0.79	12.72	0.10
AVAGO TECHNOLOGIES	0.85	11.34	0.10
GENERAL DYNAMICS	0.77	11.43	0.09
CINTAS	0.55	14.75	0.08

## Bottom Contributors

	Avg Wgt	Return	Contribution
KROGER	0.91	-19.03	-0.17
FISERV	1.34	-8.52	-0.11
CAMPBELL SOUP	0.64	-17.40	-0.11
PUBLIC STORAGE	0.87	-11.98	-0.10
CLOROX	0.96	-9.01	-0.09
TRACTOR SUPPLY	0.29	-25.93	-0.07
EXTRA SPACE STRG.	0.51	-13.31	-0.07
CVS HEALTH	0.90	-6.64	-0.06
EQUINIX	0.88	-6.64	-0.06
KIMBERLY-CLARK	0.77	-7.58	-0.06

Unclassified sector allocation includes cash allocations.

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

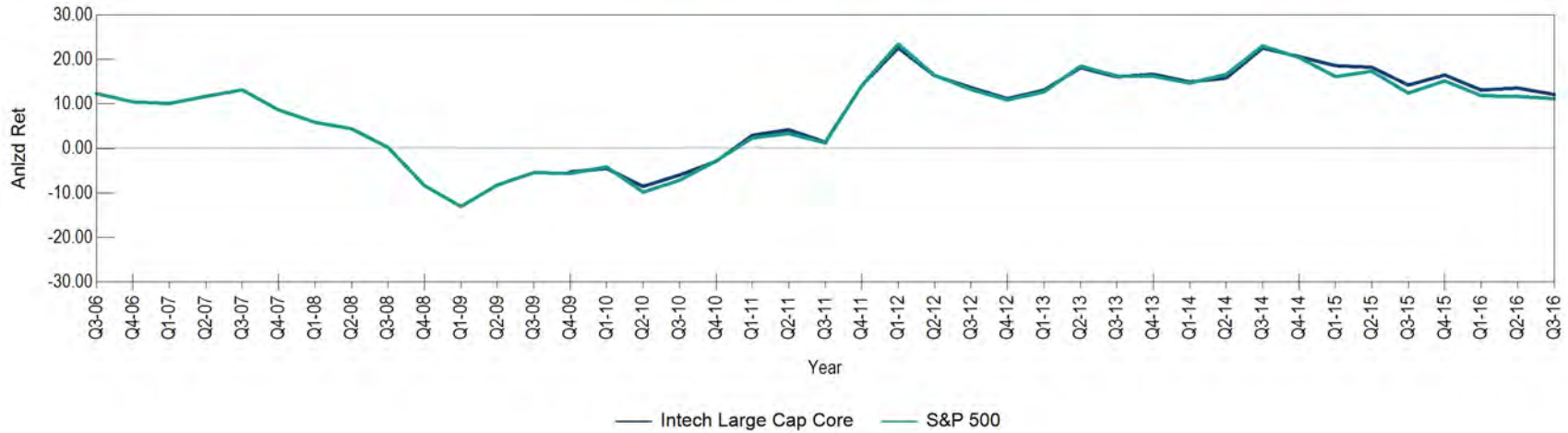


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	7.2	18.5	13.4	18.4	9.8	6.3	17.7	39.6	20.1	7.0
<b>25th Percentile</b>	4.9	14.8	11.5	16.9	8.3	2.7	15.1	35.5	17.2	3.6
<b>Median</b>	3.8	12.7	10.4	15.9	7.6	0.6	13.3	32.9	15.4	1.3
<b>75th Percentile</b>	2.3	10.5	9.4	14.9	7.1	-1.6	11.4	30.8	13.4	-1.5
<b>95th Percentile</b>	0.3	5.9	7.3	12.8	6.2	-4.1	8.2	25.4	9.8	-5.9
<b># of Portfolios</b>	263	262	256	235	193	267	267	261	254	259
<b>● Intech Large Cap Core</b>	1.4 (87)	12.5 (54)	12.1 (12)	16.8 (27)	-- (--)	3.8 (16)	14.7 (31)	32.7 (54)	15.3 (54)	3.6 (25)
<b>▲ S&amp;P 500</b>	3.9 (49)	15.4 (17)	11.2 (31)	16.4 (37)	7.2 (69)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

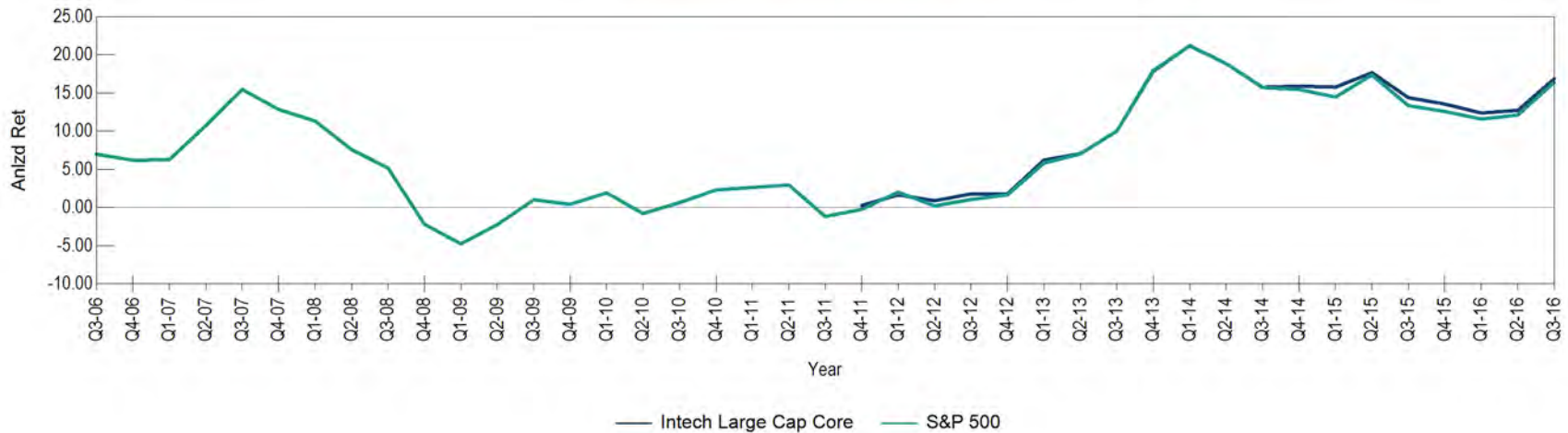
Intech Large Cap Core  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

Rolling 3 Year Annualized Return (%)



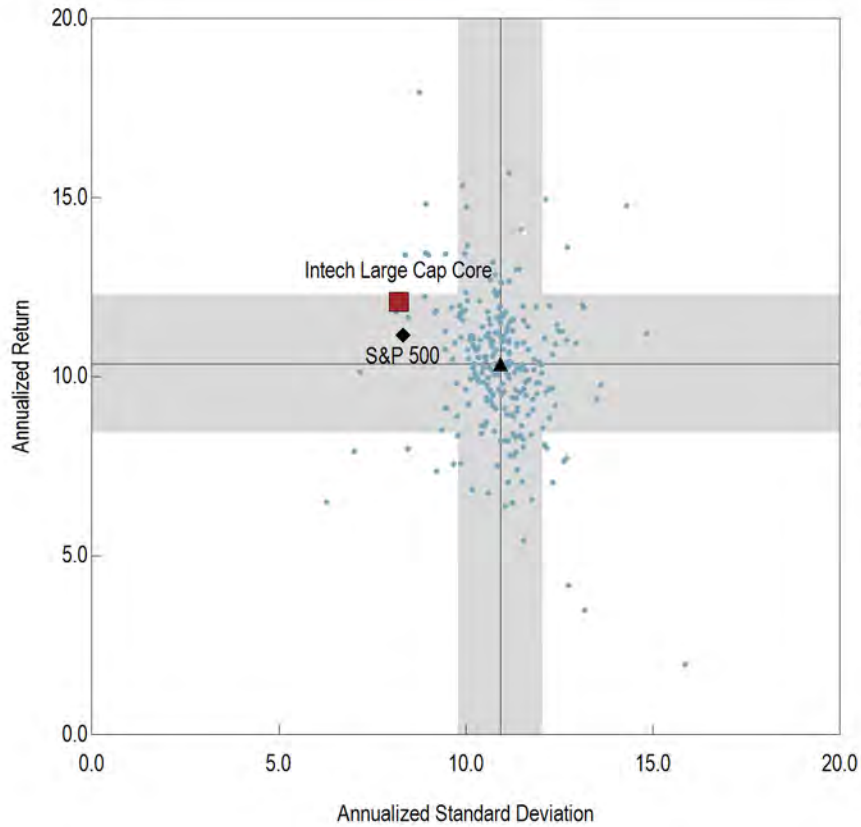
Rolling 5 Year Annualized Return (%)



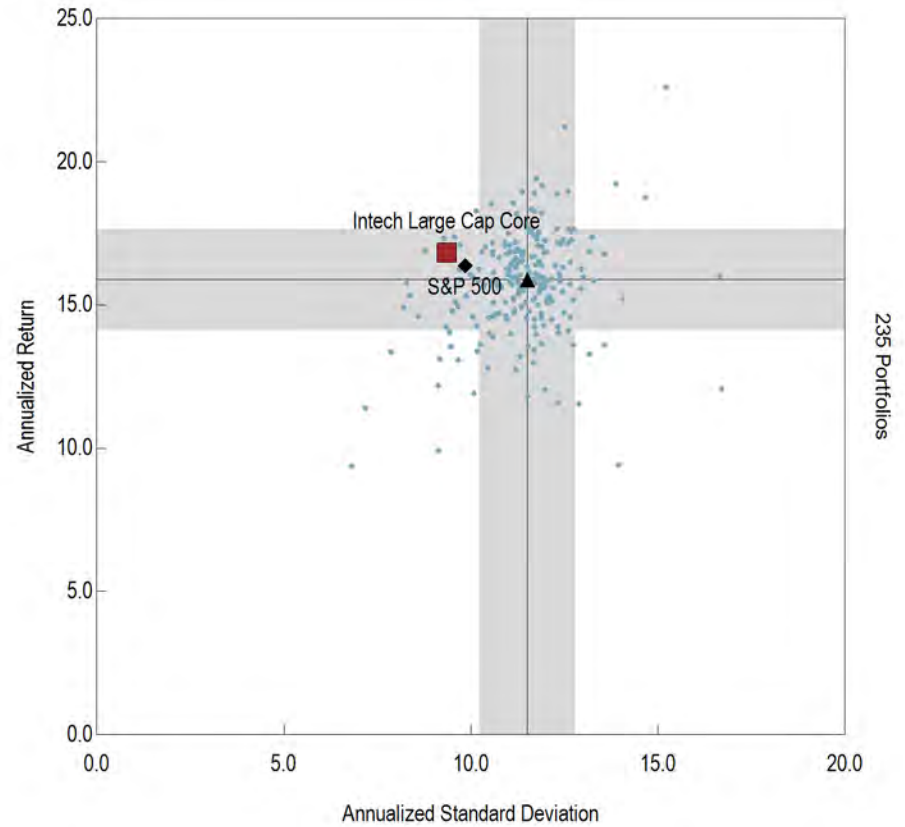
Intech Large Cap Core  
 Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	12.1%	8.2%	1.5
S&P 500	11.2%	8.3%	1.3
eA US Large Cap Core Equity Gross Median	10.4%	10.9%	0.9

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Large Cap Core	16.8%	9.3%	1.8
S&P 500	16.4%	9.8%	1.7
eA US Large Cap Core Equity Gross Median	15.9%	11.5%	1.4

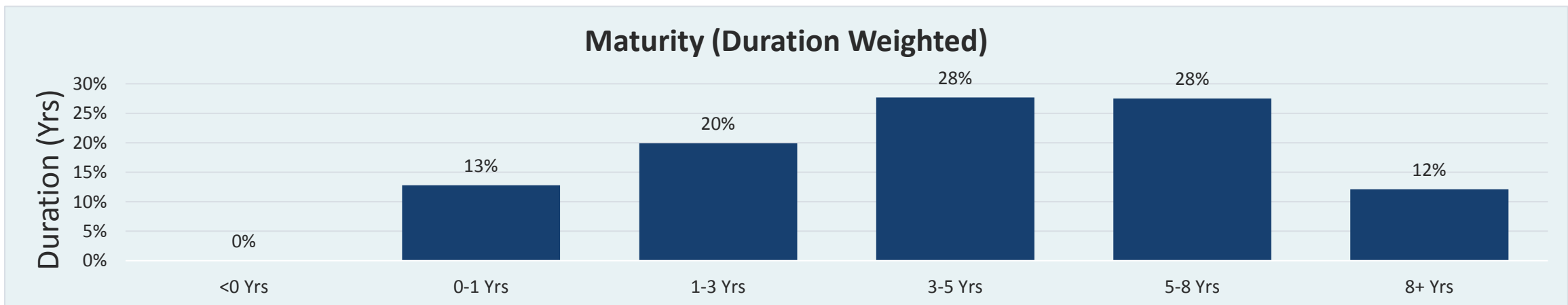
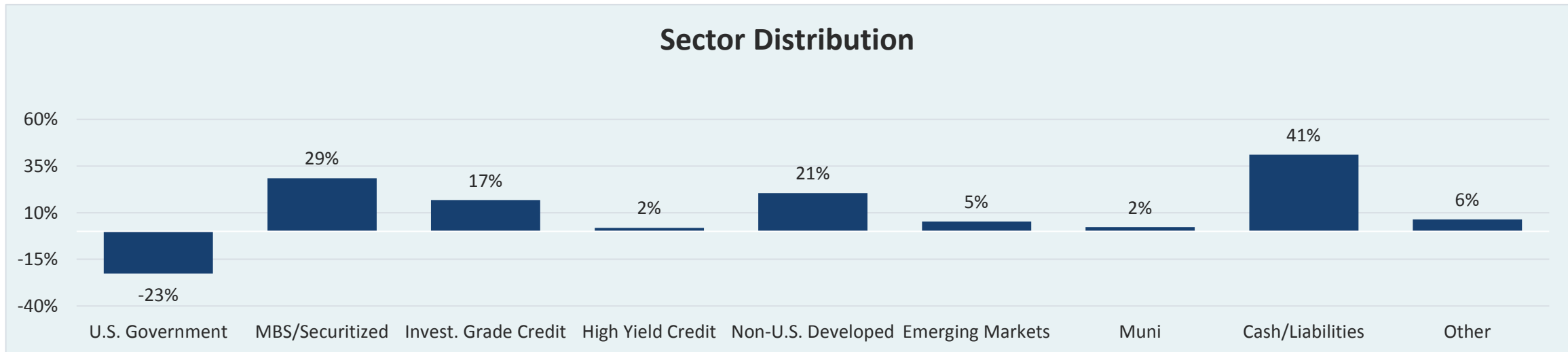
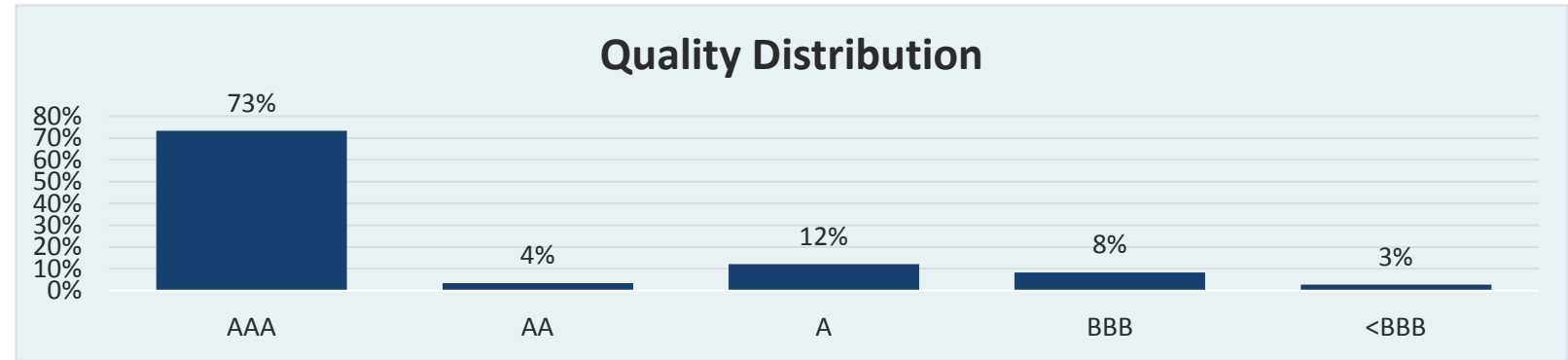


# PIMCO Stocks+ Absolute Return Manager Portfolio Overview

Period Ending: September 30, 2016

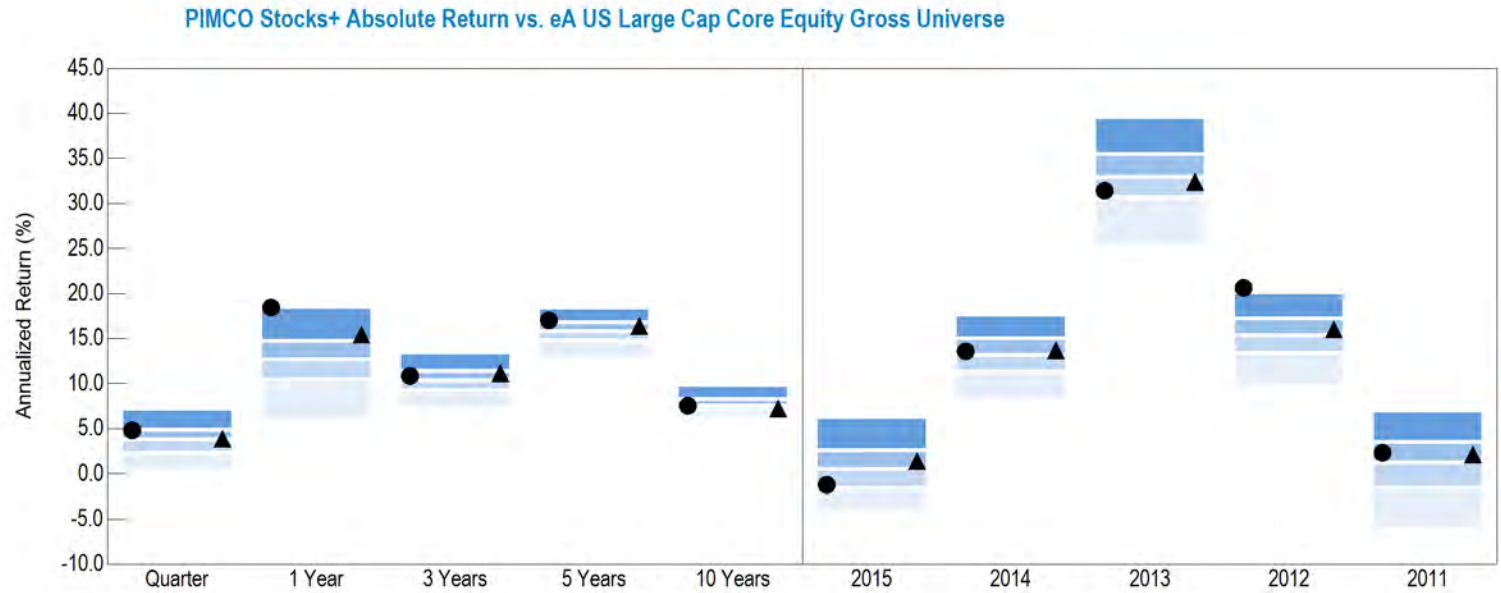
Domestic equity large cap core portfolio with high correlation exposure to a broad universe seeking enhanced returns. Primary personnel include Mohsen Fahmi and Scott Mather.

	<b>PIMCO Stocks+</b>
Effective Duration	0.22
Futures Adjusted Duration	0.14
Yield to Maturity	2.43
Average Quality	AA-



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

Period Ending: September 30, 2016

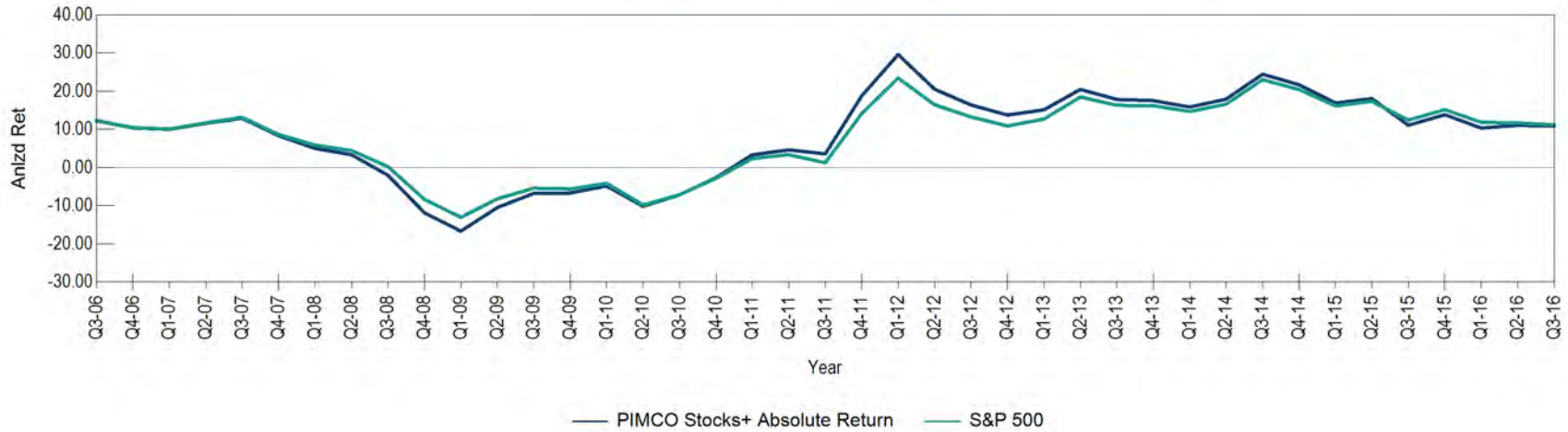


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	7.2	18.5	13.4	18.4	9.8	6.3	17.7	39.6	20.1	7.0
25th Percentile	4.9	14.8	11.5	16.9	8.3	2.7	15.1	35.5	17.2	3.6
Median	3.8	12.7	10.4	15.9	7.6	0.6	13.3	32.9	15.4	1.3
75th Percentile	2.3	10.5	9.4	14.9	7.1	-1.6	11.4	30.8	13.4	-1.5
95th Percentile	0.3	5.9	7.3	12.8	6.2	-4.1	8.2	25.4	9.8	-5.9
# of Portfolios	263	262	256	235	193	267	267	261	254	259
● PIMCO Stocks+ Absolute Return	4.8 (29)	18.4 (6)	10.8 (41)	17.0 (22)	7.5 (54)	-1.2 (73)	13.6 (45)	31.4 (68)	20.6 (4)	2.3 (36)
▲ S&P 500	3.9 (49)	15.4 (17)	11.2 (31)	16.4 (37)	7.2 (69)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)

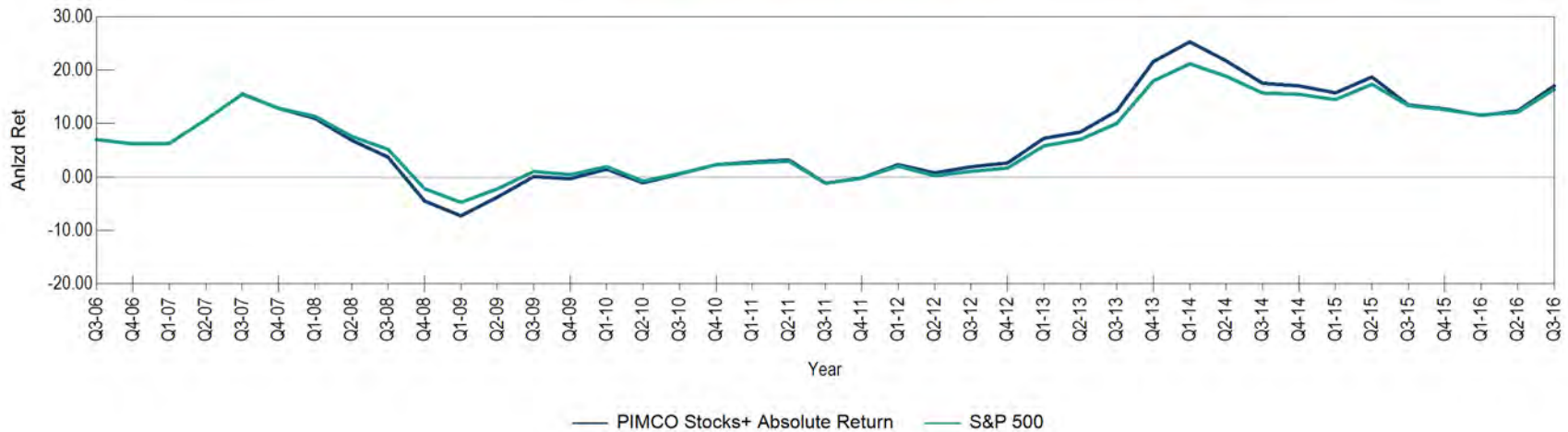
PIMCO Stocks+ Absolute Return  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

Rolling 3 Year Annualized Return (%)



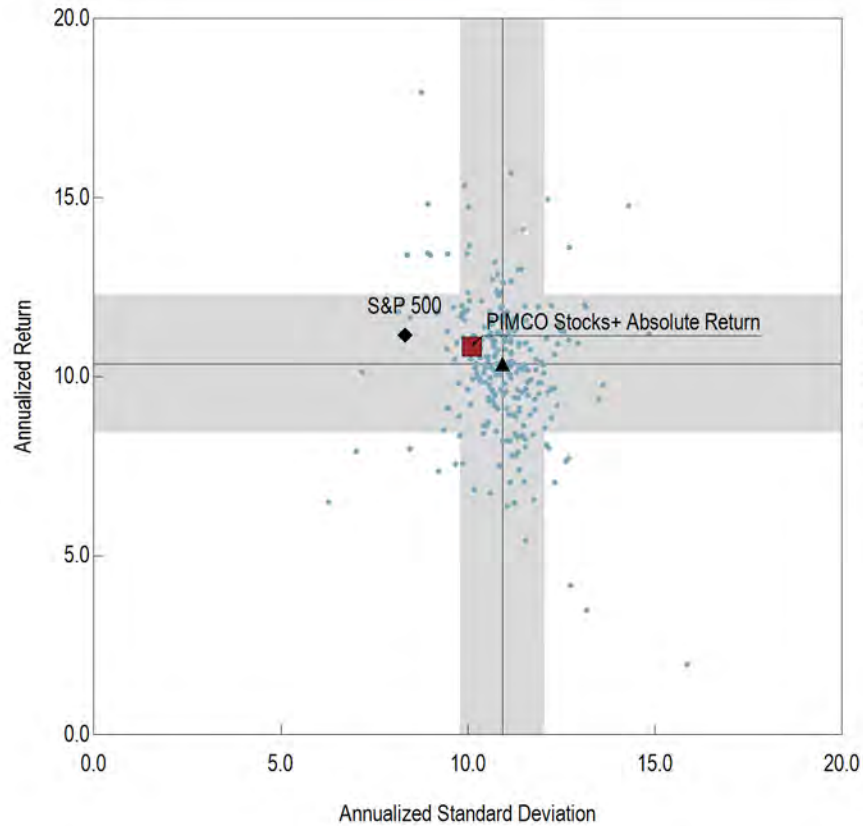
Rolling 5 Year Annualized Return (%)



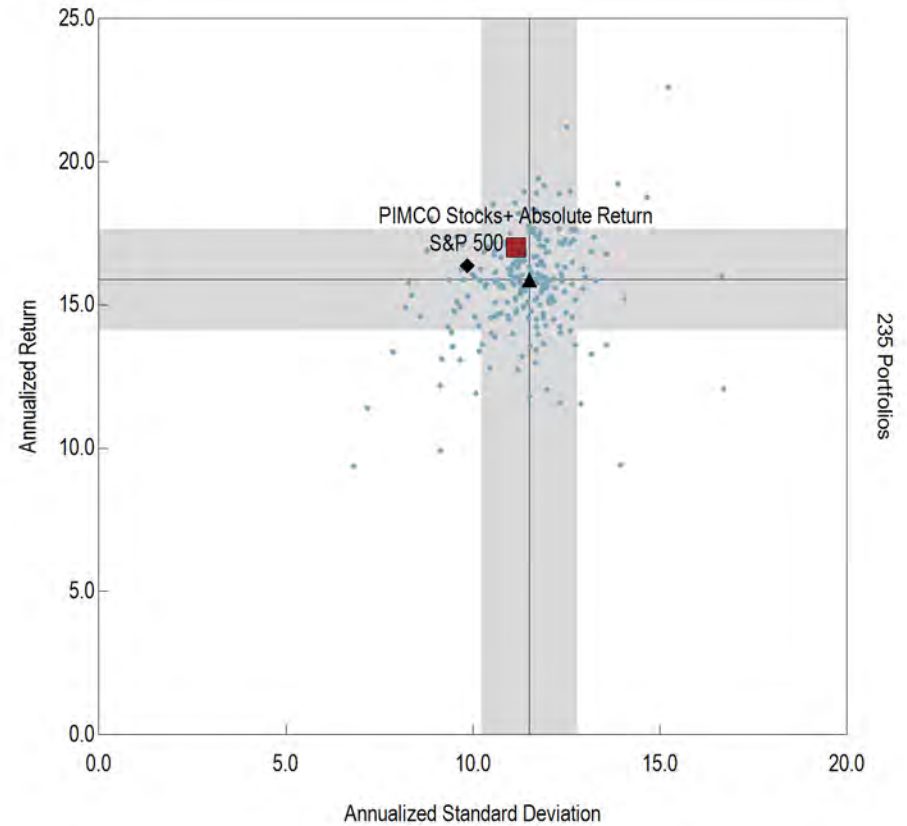
PIMCO Stocks+ Absolute Return  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	10.8%	10.1%	1.1
S&P 500	11.2%	8.3%	1.3
eA US Large Cap Core Equity Gross Median	10.4%	10.9%	0.9

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Stocks+ Absolute Return	17.0%	11.2%	1.5
S&P 500	16.4%	9.8%	1.7
eA US Large Cap Core Equity Gross Median	15.9%	11.5%	1.4

# Jackson Square Partners Manager Portfolio Overview

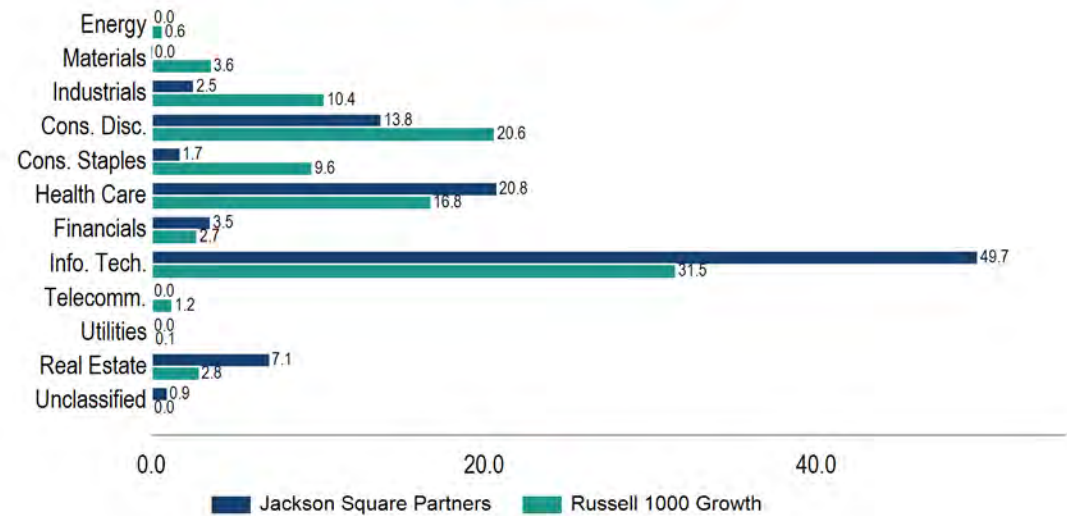
Period Ending: September 30, 2016

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

## Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	32	599
Weighted Avg. Market Cap. (\$B)	97.74	135.66
Median Market Cap. (\$B)	32.10	8.86
Price To Earnings	33.23	26.31
Price To Book	6.67	6.76
Price To Sales	6.60	3.99
Return on Equity (%)	21.50	24.49
Yield (%)	0.94	1.53
Beta	1.30	1.00

## Sector Allocation (%) vs Russell 1000 Growth



## Largest Holdings

	End Weight	Return
VISA 'A'	5.86	11.69
PAYPAL HOLDINGS	5.44	12.22
QUALCOMM	5.19	28.95
CELGENE	4.96	5.98
MICROSOFT	4.83	13.27
CROWN CASTLE INTL.	4.77	-6.22
ALLERGAN	4.47	-0.34
MASTERCARD	4.45	15.82
FACEBOOK CLASS A	4.21	12.24
EBAY	4.20	40.54

## Top Contributors

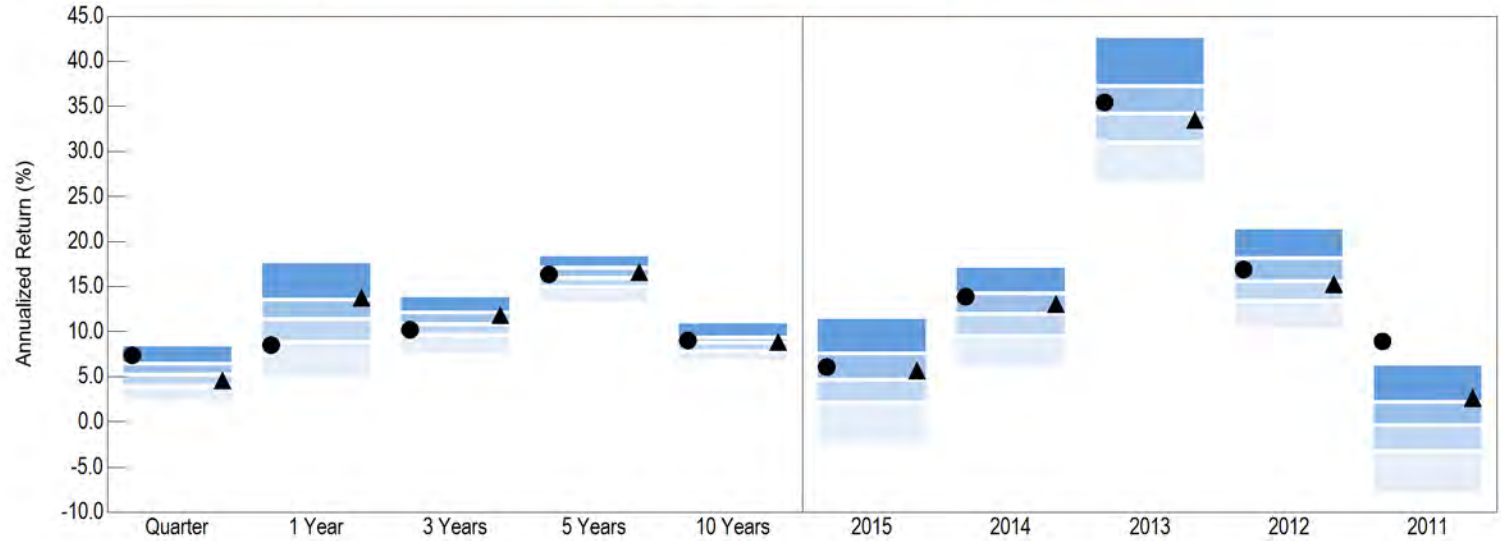
	Avg Wgt	Return	Contribution
EBAY	3.65	40.54	1.48
QUALCOMM	5.03	28.95	1.45
BIOGEN	3.86	29.45	1.14
MASTERCARD	4.28	15.82	0.68
VISA 'A'	5.76	11.69	0.67
MICROSOFT	4.71	13.27	0.63
PAYPAL HOLDINGS	4.83	12.22	0.59
ELECTRONIC ARTS	4.53	12.72	0.58
ALPHABET 'A'	3.73	14.29	0.53
FACEBOOK CLASS A	4.07	12.24	0.50

## Bottom Contributors

	Avg Wgt	Return	Contribution
LIBERTY INTACT.QVC GROUP 'A'	4.40	-21.13	-0.93
NOVO NORDISK 'B' ADR 1:1	2.52	-21.91	-0.55
CROWN CASTLE INTL.	5.04	-6.22	-0.31
EQUINIX	2.68	-6.64	-0.18
WALGREENS BOOTS ALLIANCE	4.18	-2.74	-0.11
DENTSPLY INTL.	2.37	-4.08	-0.10
TRIPADVISOR 'A'	3.00	-1.74	-0.05
INTUIT	2.20	-1.18	-0.03
ALLERGAN	4.75	-0.34	-0.02
LIBERTY GLOBAL LILAC CLASS C	0.10	-13.67	-0.01

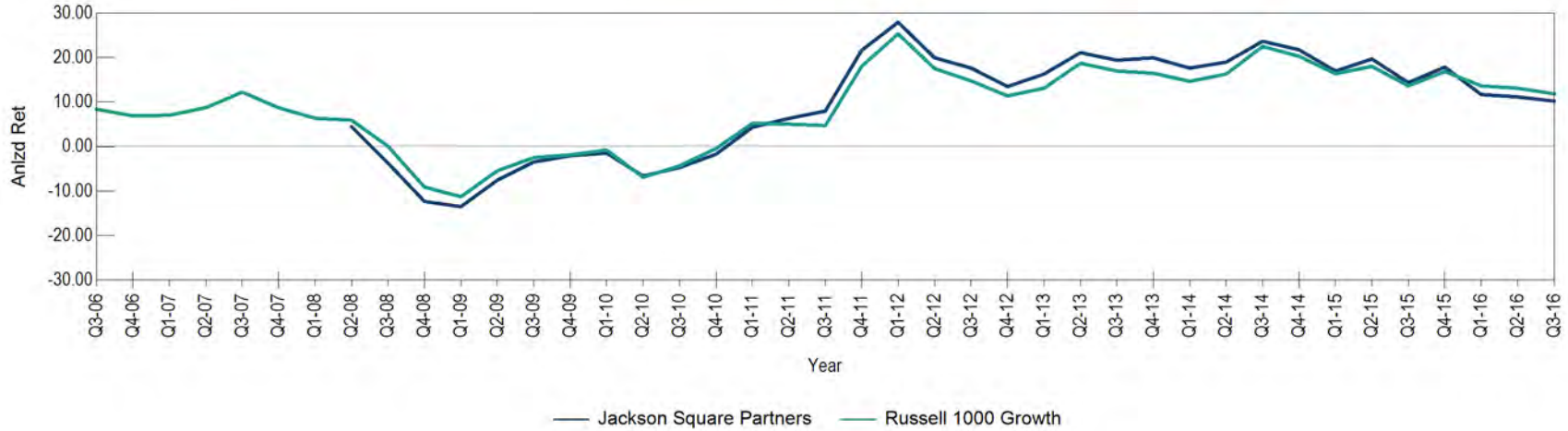
Unclassified sector allocation includes cash allocations.

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

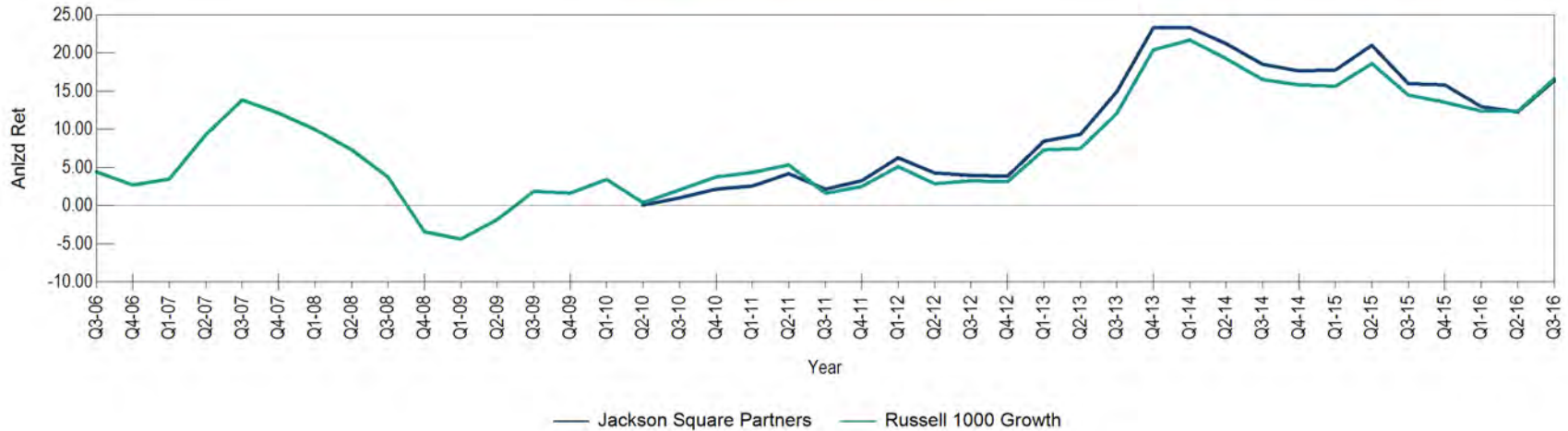


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	8.6	17.8	14.0	18.5	11.1	11.6	17.3	42.8	21.6	6.4
25th Percentile	6.5	13.6	12.2	17.2	9.4	7.6	14.3	37.3	18.2	2.2
Median	5.3	11.5	10.9	16.0	8.9	4.7	12.0	34.3	15.7	-0.3
75th Percentile	4.0	8.9	9.7	15.0	7.8	2.1	9.5	31.0	13.4	-3.2
95th Percentile	2.1	4.9	7.4	13.3	6.7	-2.4	5.8	26.6	10.2	-8.0
# of Portfolios	260	260	256	240	204	270	291	274	274	294
● Jackson Square Partners	7.4 (18)	8.5 (79)	10.2 (64)	16.3 (46)	9.0 (43)	6.1 (37)	13.9 (31)	35.4 (40)	16.9 (37)	8.9 (3)
▲ Russell 1000 Growth	4.6 (63)	13.8 (23)	11.8 (33)	16.6 (39)	8.8 (51)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)

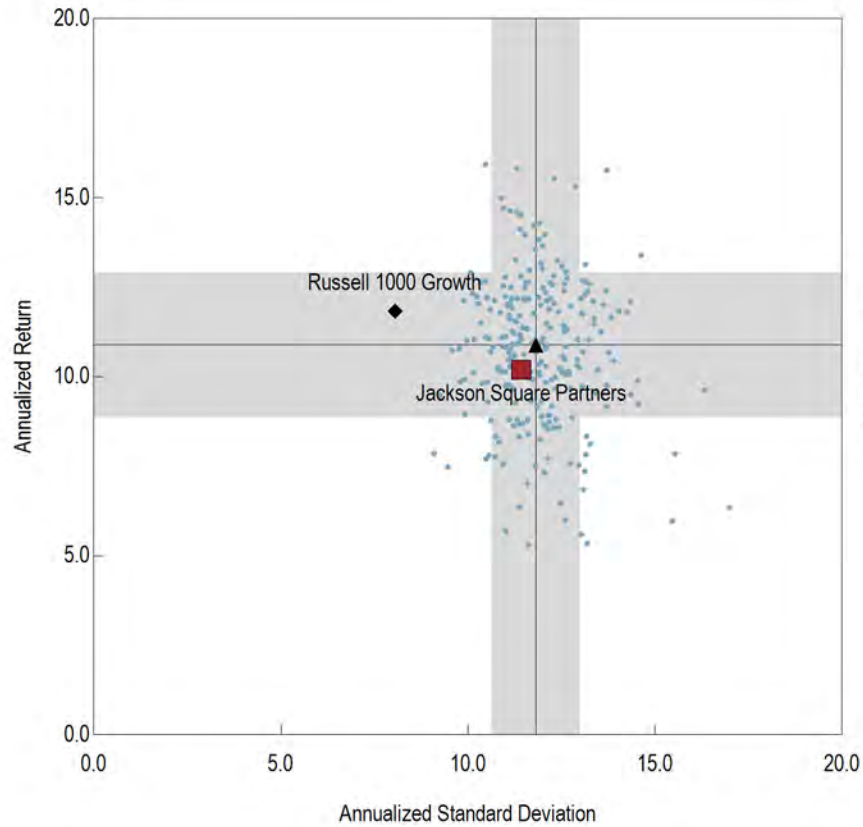
Rolling 3 Year Annualized Return (%)



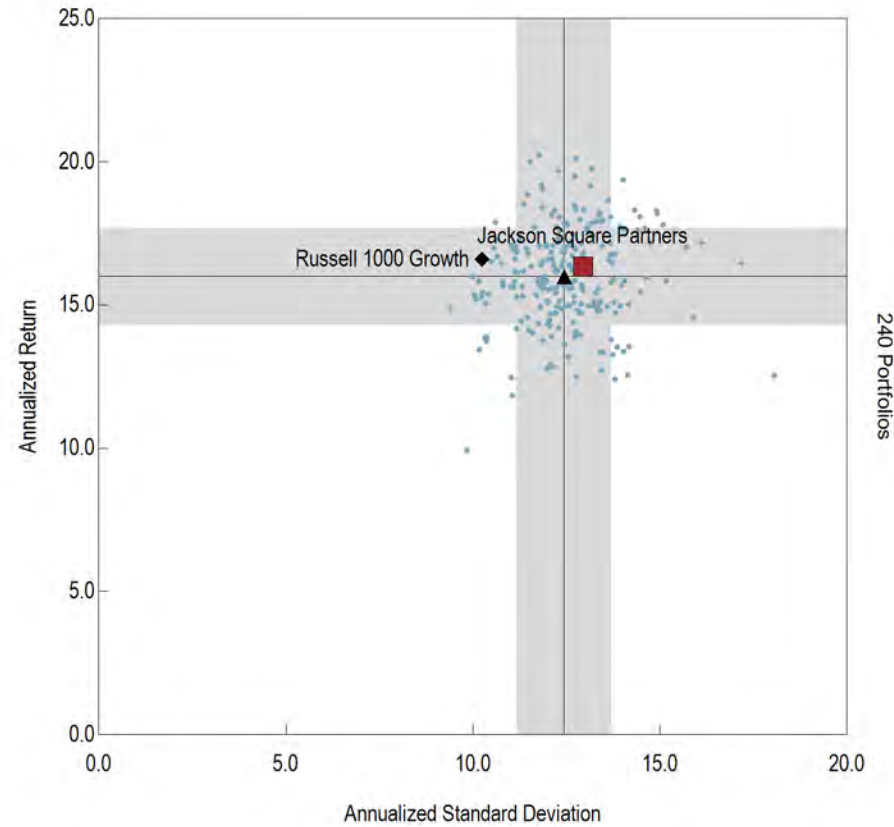
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	10.2%	11.4%	0.9
Russell 1000 Growth	11.8%	8.1%	1.5
eA US Large Cap Growth Equity Gross Median	10.9%	11.8%	0.9

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	16.3%	12.9%	1.3
Russell 1000 Growth	16.6%	10.3%	1.6
eA US Large Cap Growth Equity Gross Median	16.0%	12.4%	1.3



# Robeco Boston Partners Manager Portfolio Overview

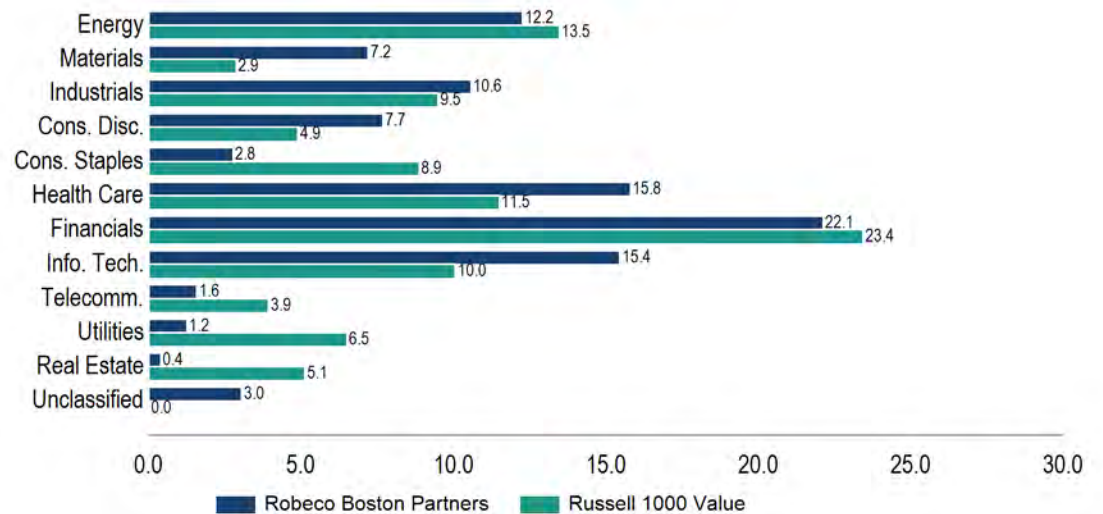
Period Ending: September 30, 2016

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

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	91	687
Weighted Avg. Market Cap. (\$B)	99.08	106.99
Median Market Cap. (\$B)	28.07	7.52
Price To Earnings	16.49	19.32
Price To Book	3.37	2.40
Price To Sales	2.25	2.57
Return on Equity (%)	16.20	12.00
Yield (%)	2.00	2.57
Beta	0.98	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	4.50	-1.96
JP MORGAN CHASE & CO.	4.27	8.00
BERKSHIRE HATHAWAY 'B'	3.56	-0.22
MERCK & COMPANY	2.69	9.14
BANK OF AMERICA	2.69	18.48
CHEVRON	2.55	-0.79
DISCOVER FINANCIAL SVS.	2.05	6.09
RAYTHEON 'B'	2.00	0.68
GENERAL DYNAMICS	1.89	11.43
MCKESSON	1.84	-10.52

## Top Contributors

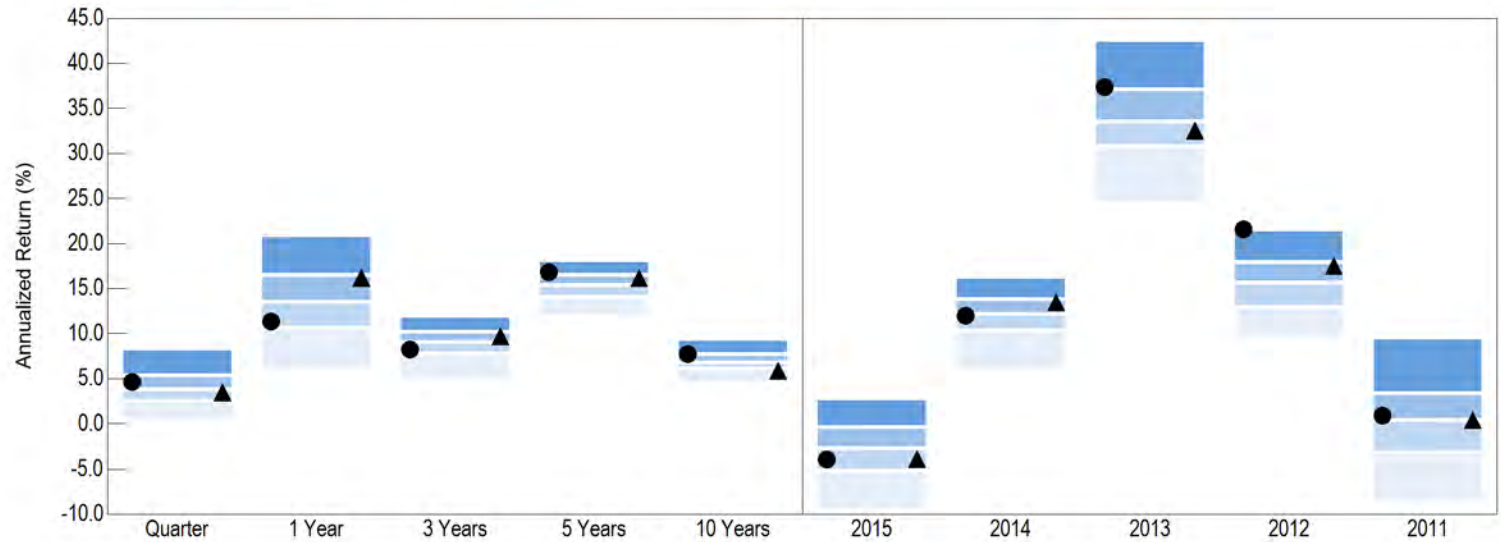
	Avg Wgt	Return	Contribution
EBAY	1.23	40.54	0.50
BANK OF AMERICA	2.45	18.48	0.45
JP MORGAN CHASE & CO.	4.25	8.00	0.34
EOG RES.	1.69	16.16	0.27
HEWLETT PACKARD ENTER.	1.10	24.52	0.27
MERCK & COMPANY	2.60	9.14	0.24
ALPHABET 'A'	1.54	14.29	0.22
GENERAL DYNAMICS	1.79	11.43	0.21
CITIGROUP	1.67	11.82	0.20
FLEXTRONICS INTL.	1.17	15.42	0.18

## Bottom Contributors

	Avg Wgt	Return	Contribution
MCKESSON	2.12	-10.52	-0.22
VERIZON COMMUNICATIONS	2.18	-5.98	-0.13
BARRICK GOLD (NYS)	0.71	-16.91	-0.12
JOHNSON & JOHNSON	4.73	-1.96	-0.09
EXPRESS SCRIPTS HOLDING	1.30	-6.95	-0.09
LIBERTY GLOBAL LILAC CLASS C	0.53	-13.67	-0.07
SANOFI ADR 2:1	0.76	-8.75	-0.07
GILEAD SCIENCES	1.41	-4.58	-0.06
OCCIDENTAL PTL.	2.31	-2.54	-0.06
ACE	1.65	-3.34	-0.06

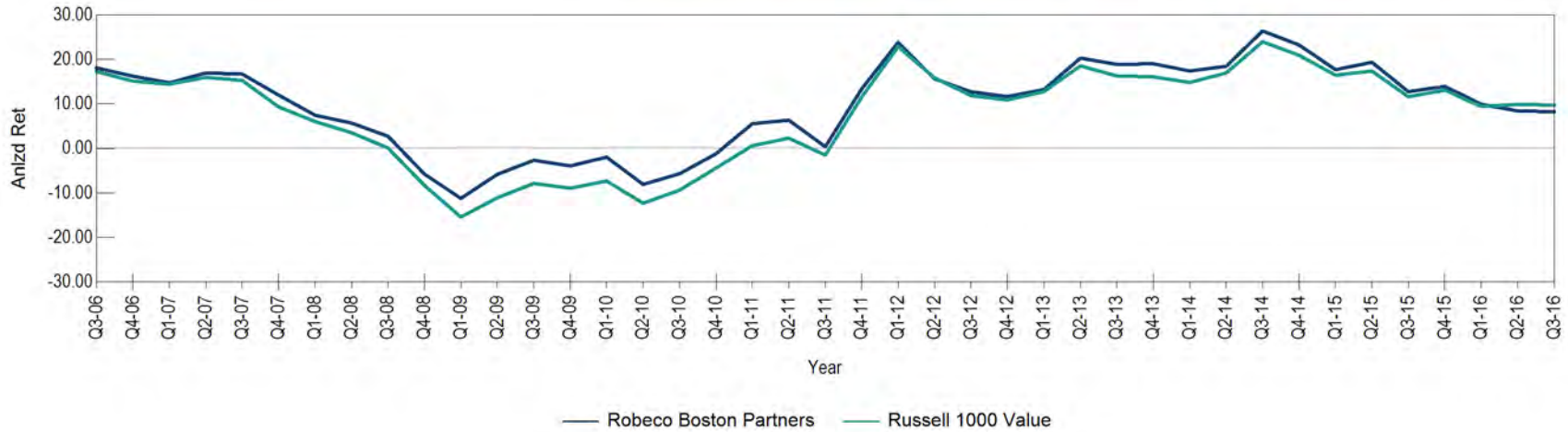
Unclassified sector allocation includes cash allocations.

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

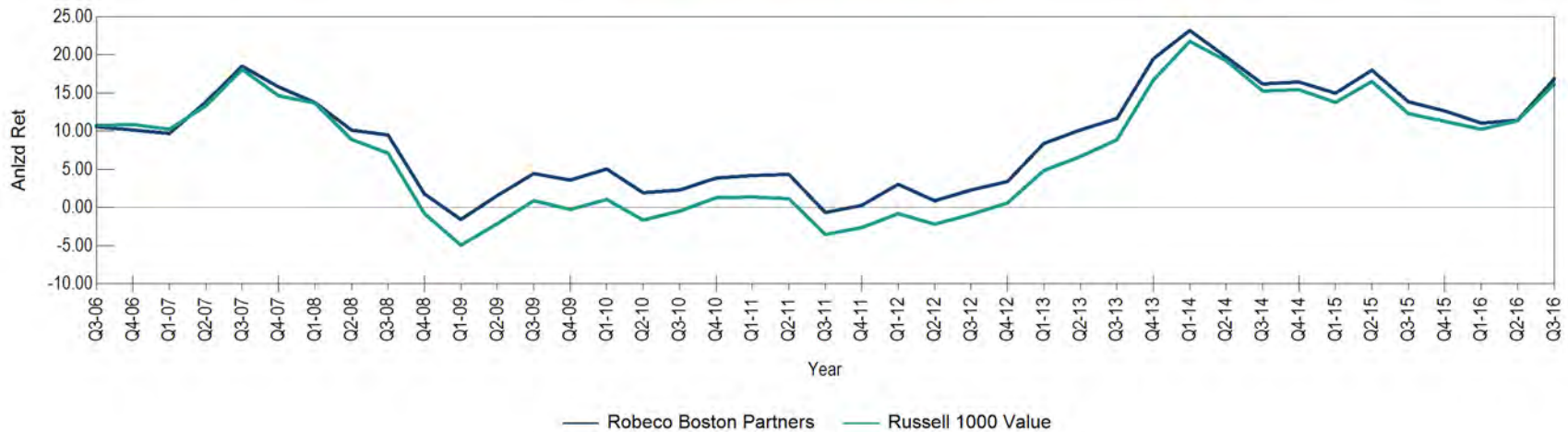


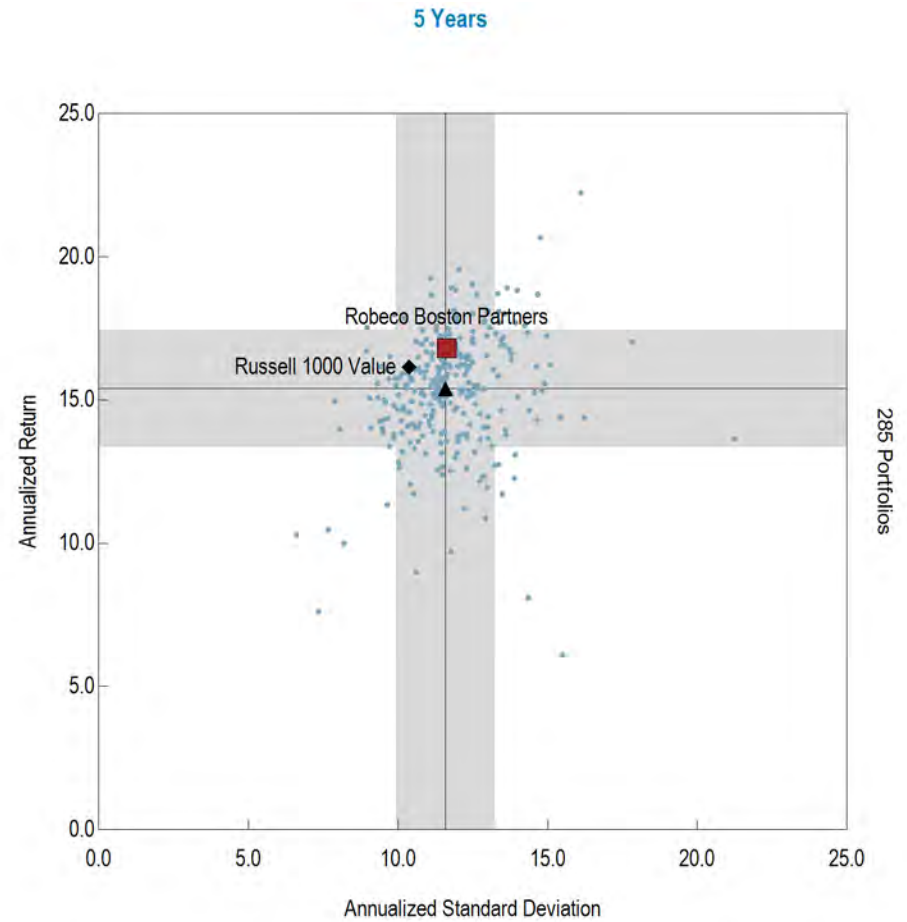
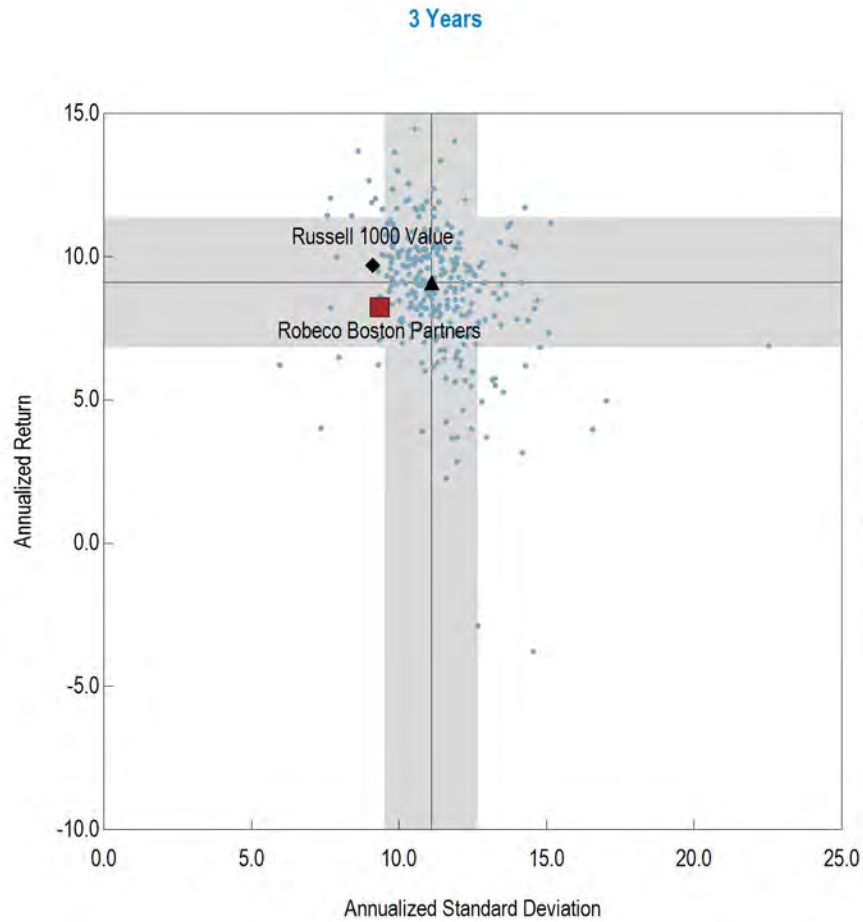
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	8.3	20.9	11.9	18.1	9.4	2.8	16.3	42.5	21.5	9.5
<b>25th Percentile</b>	5.4	16.6	10.2	16.6	7.7	-0.4	13.9	37.2	18.0	3.4
<b>Median</b>	3.8	13.6	9.1	15.4	6.8	-2.6	12.2	33.6	15.7	0.5
<b>75th Percentile</b>	2.6	10.6	7.8	14.1	6.2	-5.1	10.4	30.8	13.0	-3.1
<b>95th Percentile</b>	0.5	6.0	4.9	12.0	4.5	-9.4	5.9	24.6	9.6	-8.6
<b># of Portfolios</b>	311	311	303	285	240	312	307	310	303	310
<b>● Robeco Boston Partners</b>	4.6 (39)	11.3 (69)	8.2 (68)	16.8 (22)	7.7 (26)	-3.9 (65)	12.0 (55)	37.4 (24)	21.6 (5)	0.9 (46)
<b>▲ Russell 1000 Value</b>	3.5 (58)	16.2 (29)	9.7 (38)	16.2 (35)	5.9 (83)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	0.4 (51)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Robeco Boston Partners	8.2%	9.3%	0.9	Robeco Boston Partners	16.8%	11.6%	1.4
Russell 1000 Value	9.7%	9.1%	1.1	Russell 1000 Value	16.2%	10.4%	1.5
eA US Large Cap Value Equity Gross Median	9.1%	11.1%	0.8	eA US Large Cap Value Equity Gross Median	15.4%	11.6%	1.3

# Emerald Advisers Manager Portfolio Overview

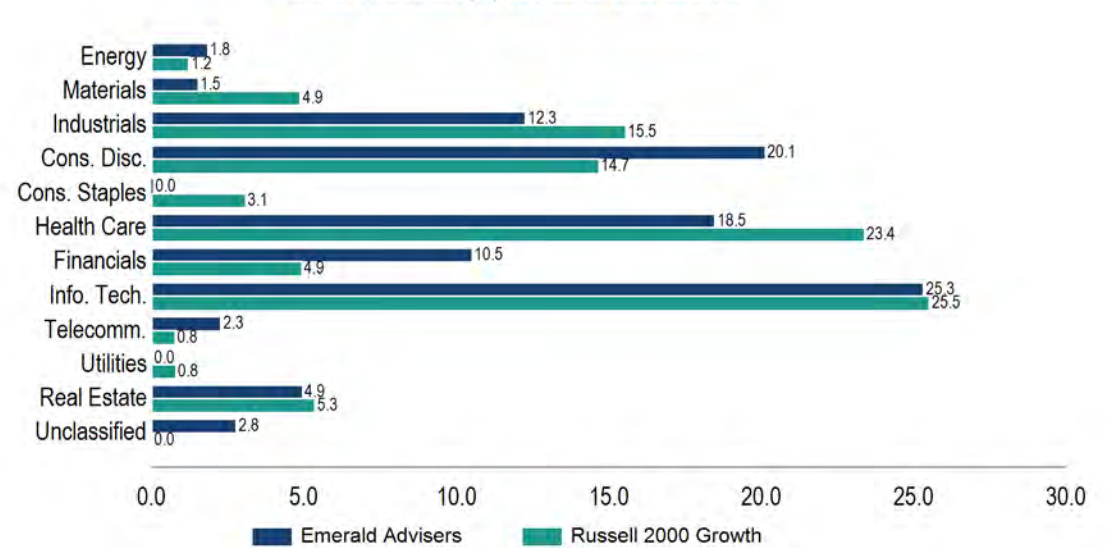
Period Ending: September 30, 2016

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

## Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	121	1,154
Weighted Avg. Market Cap. (\$B)	2.14	1.98
Median Market Cap. (\$B)	1.42	0.84
Price To Earnings	26.56	28.66
Price To Book	4.94	4.74
Price To Sales	3.81	3.18
Return on Equity (%)	15.65	14.80
Yield (%)	0.44	0.63
Beta	0.93	1.00

## Sector Allocation (%) vs Russell 2000 Growth



## Largest Holdings

	End Weight	Return
VEEVA SYSTEMS CL.A	2.59	20.98
8X8	1.82	5.61
BURLINGTON STORES	1.69	21.45
VONAGE HOLDINGS	1.69	8.36
MICROSEMI	1.65	28.46
LENDINGTREE	1.63	9.71
BANK OF THE OZARKS	1.60	2.75
OPUS BANK	1.56	5.30
QTS REALTY TRUST CL.A	1.52	-4.95
MICROSTRATEGY	1.50	-4.33

## Top Contributors

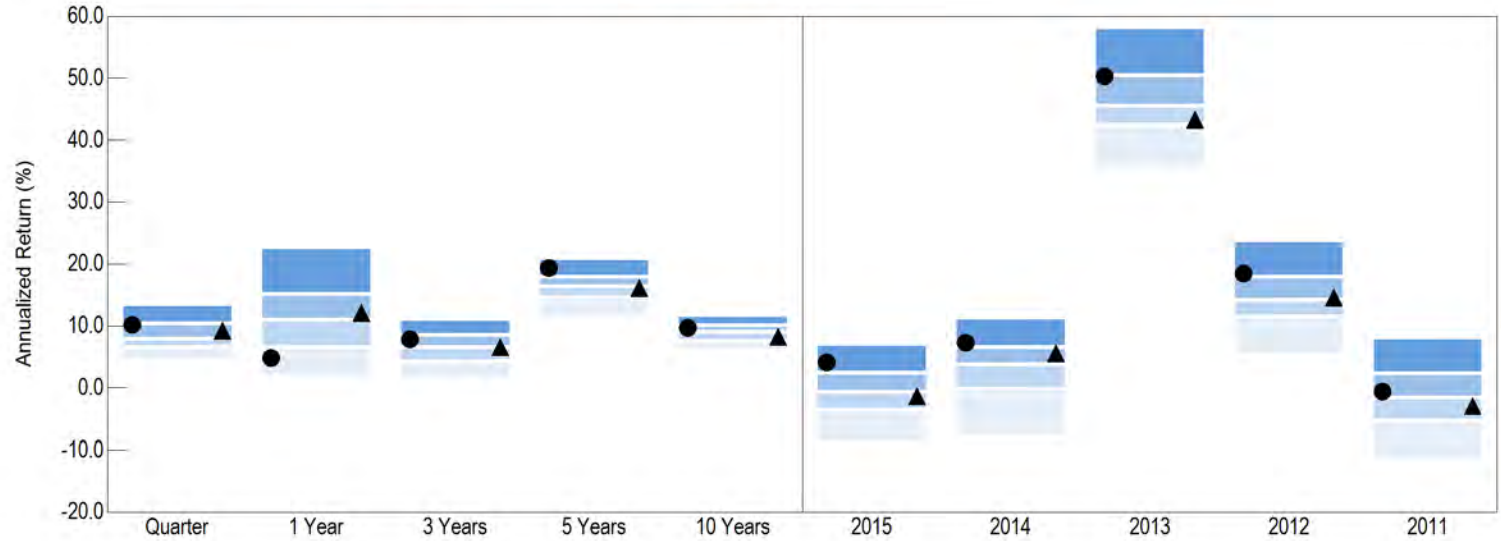
	Avg Wgt	Return	Contribution
SAREPTA THERAPEUTICS	0.35	222.02	0.77
CEPHEID	0.87	71.35	0.62
VEEVA SYSTEMS CL.A	2.41	20.98	0.51
CAVIUM	0.91	50.78	0.46
TREX	1.46	30.72	0.45
LUMENTUM HOLDINGS	0.60	72.60	0.44
GIGAMON	0.91	46.56	0.42
MICROSEMI	1.38	28.46	0.39
BLUEBIRD BIO	0.68	56.57	0.39
BURLINGTON STORES	1.60	21.45	0.34

## Bottom Contributors

	Avg Wgt	Return	Contribution
FIVE BELOW	1.59	-13.19	-0.21
CHUY'S HOLDINGS	1.00	-19.27	-0.19
DAVE & BUSTER'S ENTM.	1.07	-16.26	-0.17
GREATBATCH	0.57	-29.87	-0.17
CYRUSONE	1.22	-13.86	-0.17
TILE SHOP HOLDINGS	0.76	-16.75	-0.13
VIRTU FINANCIAL CL.A	0.74	-15.64	-0.12
TUTOR PERINI	1.28	-8.83	-0.11
MODEL N	0.58	-16.78	-0.10
KATE SPADE & COMPANY	0.52	-16.89	-0.09

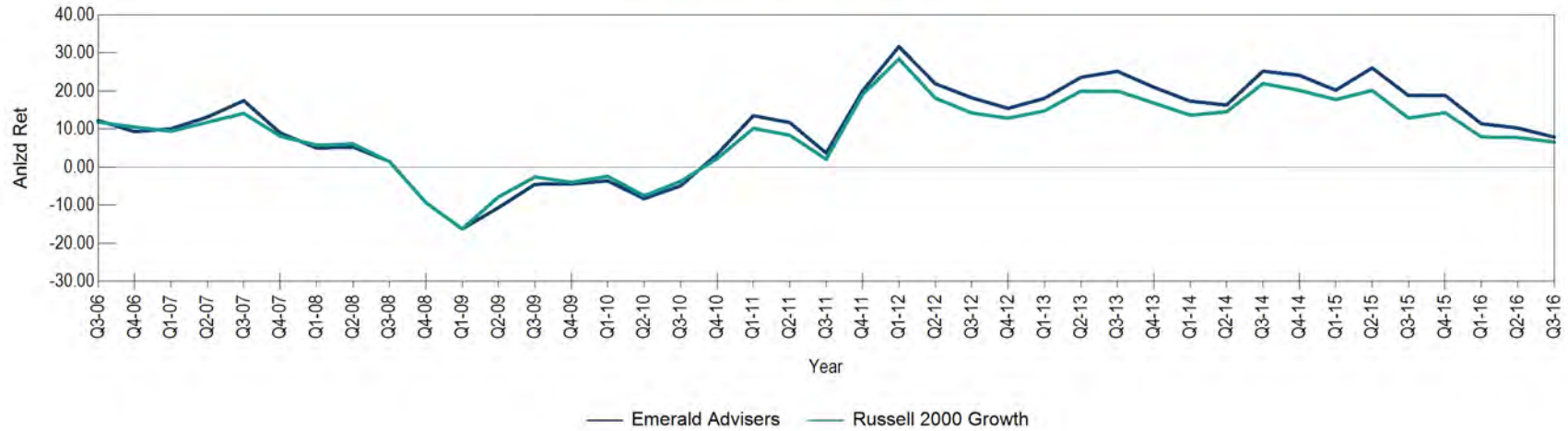
Unclassified sector allocation includes cash allocations.

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

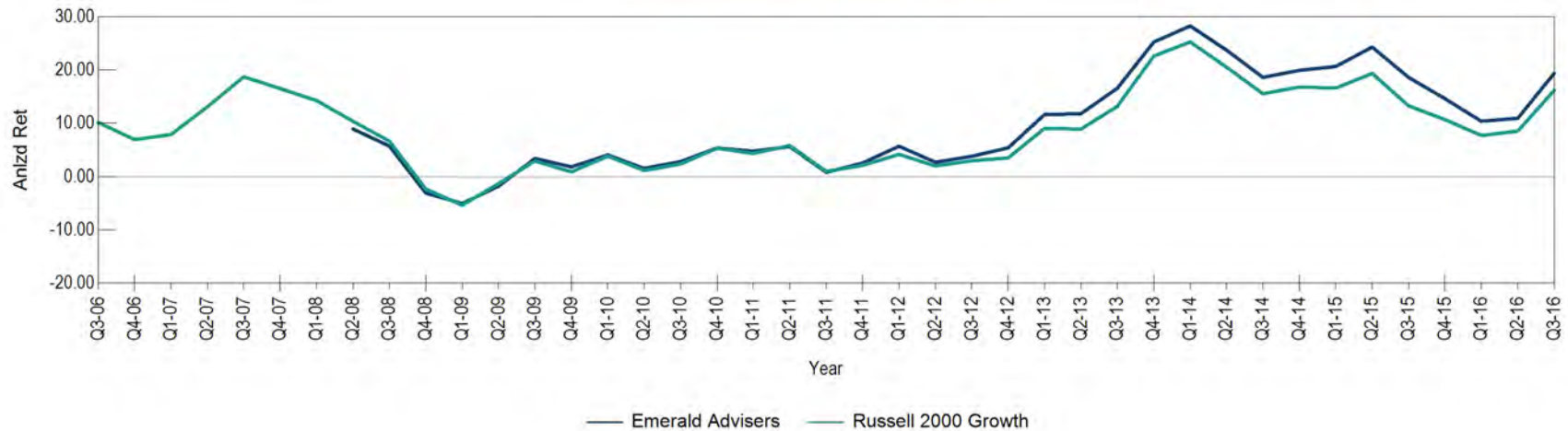


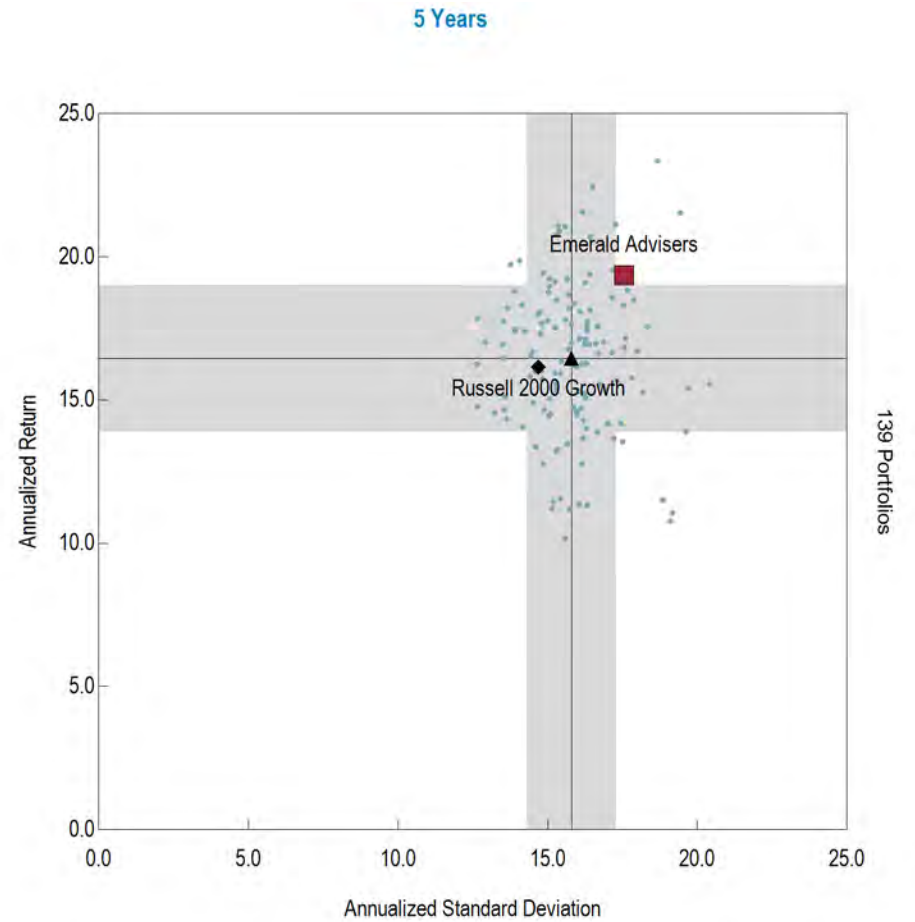
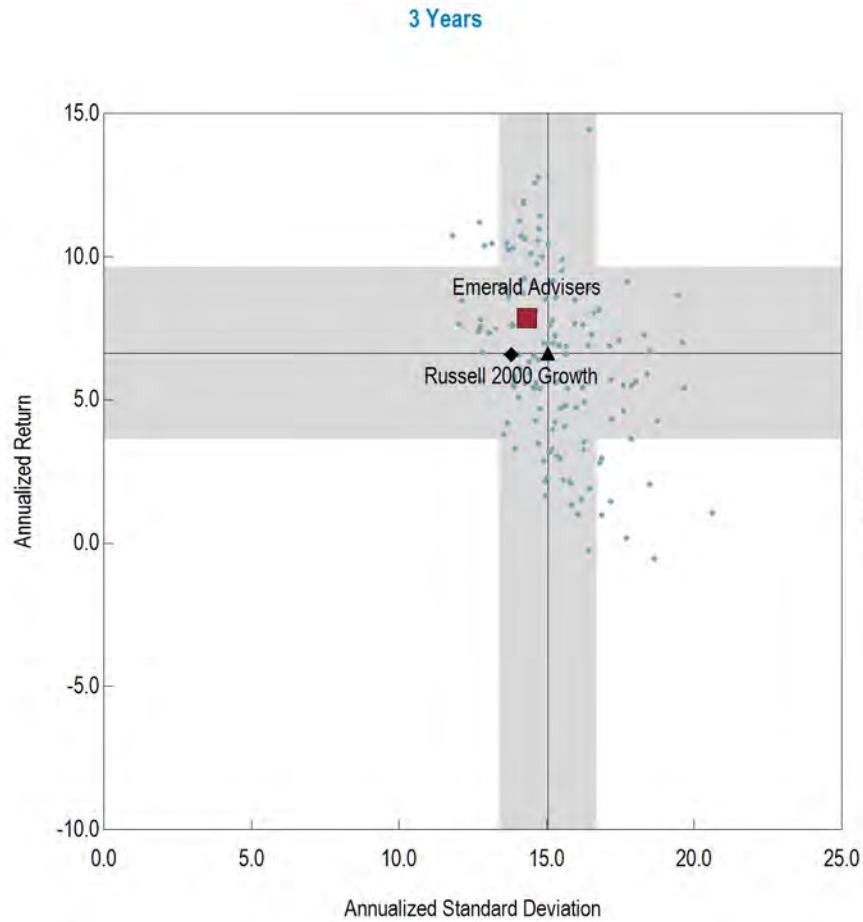
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	13.5	22.6	11.1	20.9	11.7	7.1	11.3	58.2	23.8	8.1
25th Percentile	10.5	15.2	8.6	18.0	10.1	2.5	6.7	50.6	18.0	2.4
Median	8.0	11.1	6.6	16.5	9.1	-0.6	3.9	45.6	14.3	-1.5
75th Percentile	6.6	6.7	4.4	14.7	7.6	-3.5	-0.1	42.6	11.6	-5.2
95th Percentile	4.4	1.9	1.5	11.4	6.0	-8.7	-7.6	35.6	5.4	-11.5
# of Portfolios	152	152	146	139	115	154	161	160	162	166
● Emerald Advisers	10.2 (28)	4.8 (85)	7.9 (32)	19.3 (11)	9.7 (37)	4.1 (19)	7.3 (21)	50.3 (27)	18.5 (22)	-0.6 (42)
▲ Russell 2000 Growth	9.2 (38)	12.1 (43)	6.6 (52)	16.1 (56)	8.3 (61)	-1.4 (59)	5.6 (32)	43.3 (70)	14.6 (48)	-2.9 (60)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years			5 Years			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Emerald Advisers	7.9%	14.3%	0.5	Emerald Advisers	19.3%	17.6%	1.1
Russell 2000 Growth	6.6%	13.8%	0.5	Russell 2000 Growth	16.1%	14.7%	1.1
eA US Small Cap Growth Equity Gross Median	6.6%	15.0%	0.4	eA US Small Cap Growth Equity Gross Median	16.5%	15.8%	1.0



# Ceredex Manager Portfolio Overview

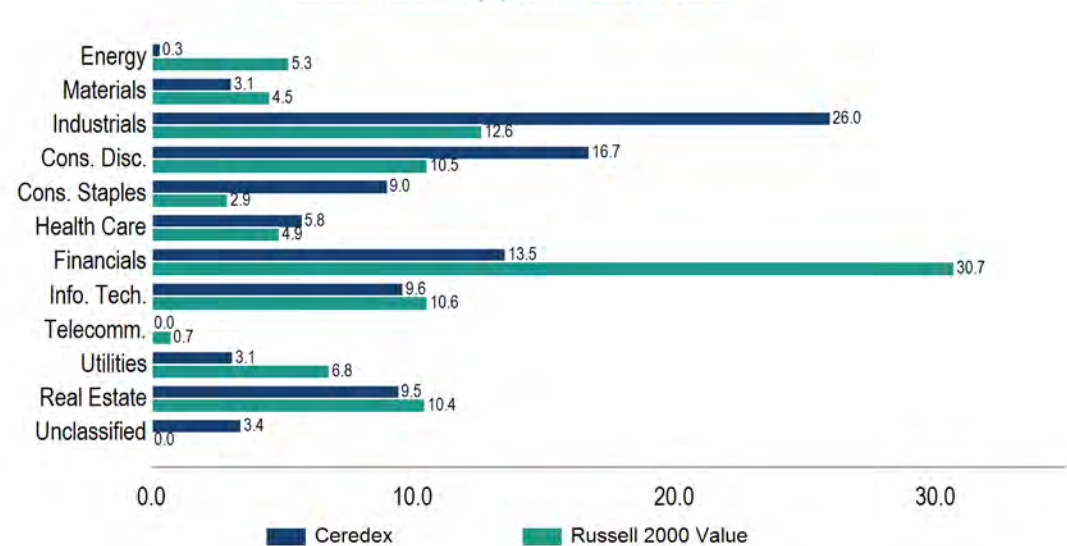
Period Ending: September 30, 2016

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

## Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	86	1,338
Weighted Avg. Market Cap. (\$B)	2.37	1.71
Median Market Cap. (\$B)	1.90	0.61
Price To Earnings	28.03	17.86
Price To Book	3.72	1.64
Price To Sales	1.87	2.25
Return on Equity (%)	14.31	7.05
Yield (%)	2.20	1.89
Beta	0.91	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
FAIR ISAAC	5.28	10.26
ENERGIZER HOLDINGS	3.68	-2.48
B & G FOODS	3.07	2.90
HILL-ROM HOLDINGS	3.05	23.21
AMC ENTERTAINMENT HDG. CL.A	2.81	13.34
MEDICAL PROPS.TRUST	2.79	-1.27
HANOVER INSURANCE GROUP	2.47	-10.33
PLANTRONICS	2.47	18.45
THOR INDUSTRIES	2.47	30.83
MUELLER WATER PRODUCTS	2.21	10.17

## Top Contributors

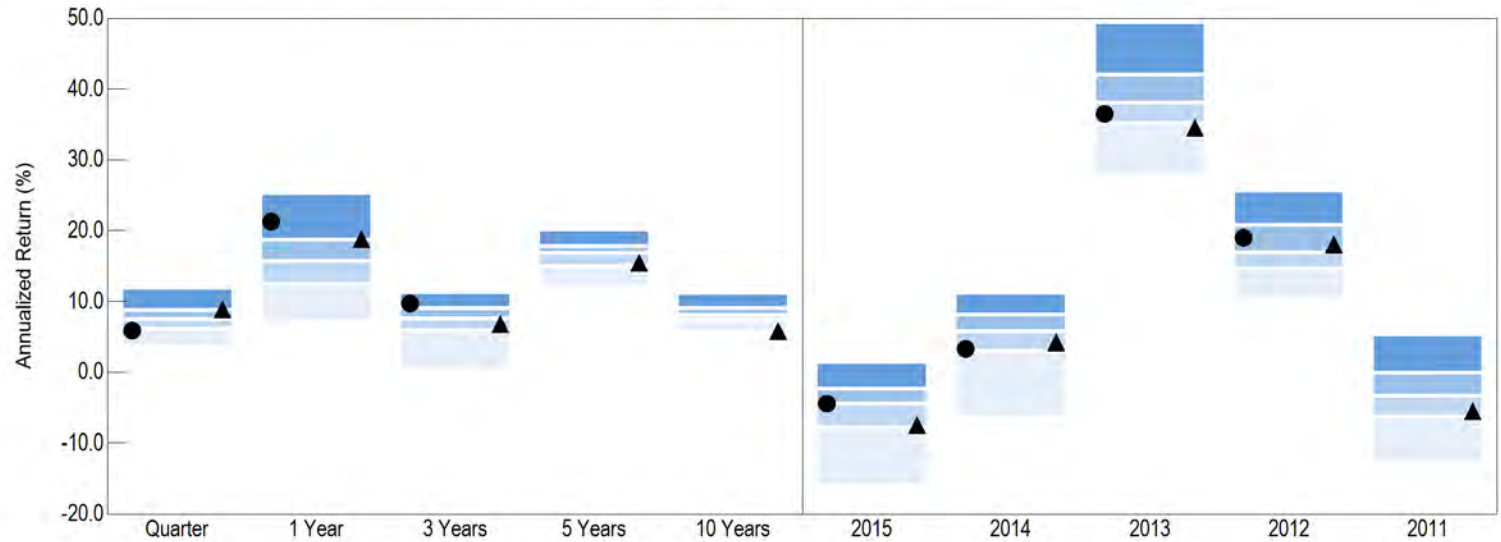
	Avg Wgt	Return	Contribution
THOR INDUSTRIES	2.15	30.83	0.66
HILL-ROM HOLDINGS	2.74	23.21	0.63
FAIR ISAAC	5.05	10.26	0.52
PHIBRO ANIMAL HLTH.CL.A	1.06	46.22	0.49
PLANTRONICS	2.32	18.45	0.43
AMC ENTERTAINMENT HDG. CL.A	2.68	13.34	0.36
EMCOR GROUP	1.64	21.22	0.35
EVERCORE PARTNERS 'A'	1.81	17.27	0.31
PAPA JOHNS INTL.	1.92	16.26	0.31
AAR	0.73	34.61	0.25

## Bottom Contributors

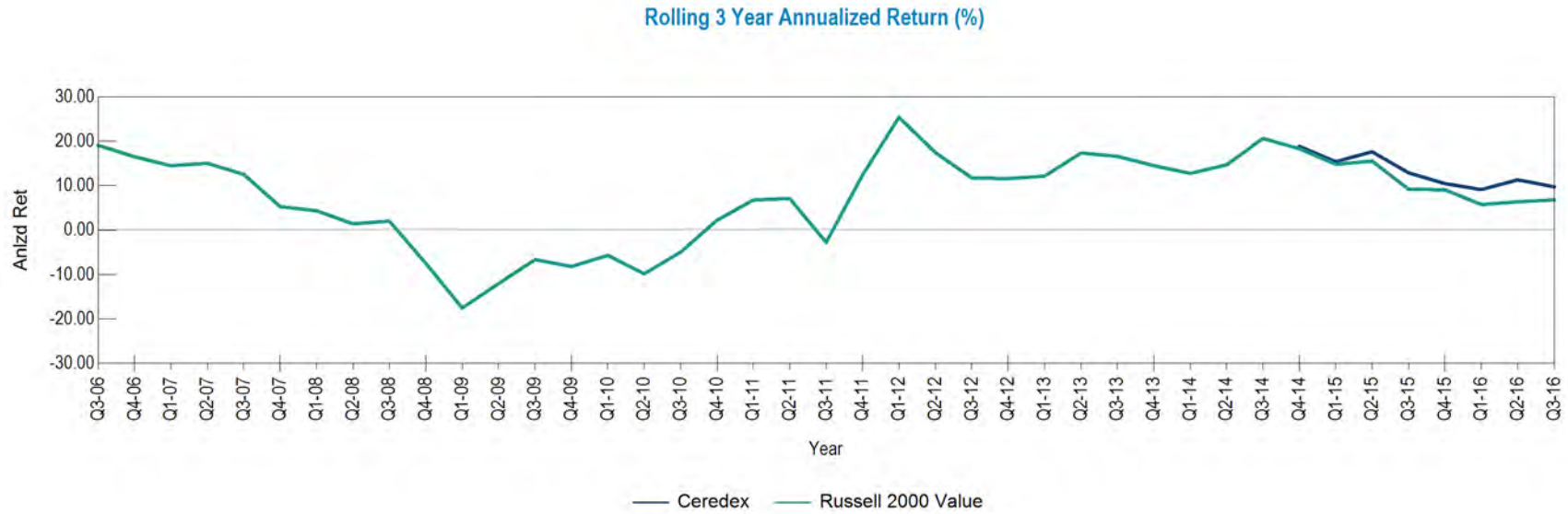
	Avg Wgt	Return	Contribution
HSN	2.32	-17.99	-0.42
HANOVER INSURANCE GROUP	2.72	-10.33	-0.28
MDC PARTNERS 'A' (NAS)	0.40	-40.49	-0.16
PRIMERICA	2.21	-7.05	-0.16
BADGER METER	1.33	-7.91	-0.11
ENERGIZER HOLDINGS	3.82	-2.48	-0.09
COVANTA HOLDING	1.84	-4.91	-0.09
CAL.WATER SER.	1.17	-7.64	-0.09
HERMAN MILLER	2.23	-3.86	-0.09
ALLETE	1.18	-6.97	-0.08

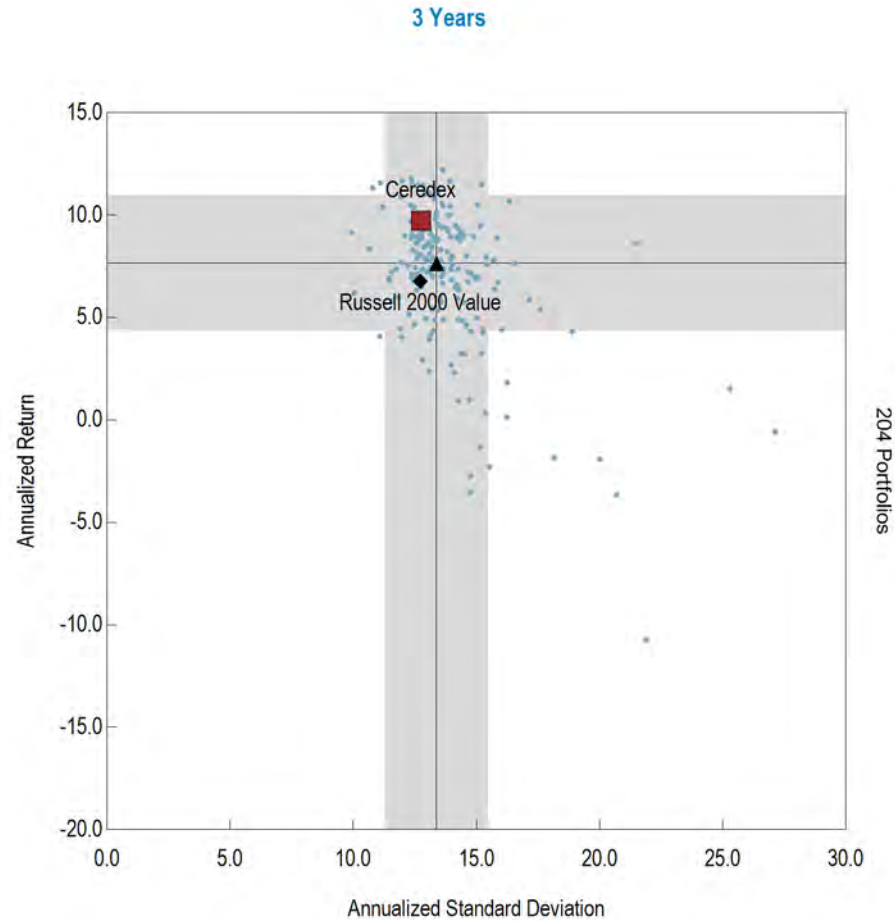
Unclassified sector allocation includes cash allocations.

Ceredex vs. eA US Small Cap Value Equity Gross Universe



	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	11.9	25.3	11.3	20.1	11.2	1.5	11.2	49.4	25.7	5.3
<b>25th Percentile</b>	8.8	18.8	9.1	17.9	9.1	-2.2	8.2	42.1	20.8	0.0
<b>Median</b>	7.6	15.8	7.7	16.9	8.1	-4.3	5.8	38.1	16.9	-3.3
<b>75th Percentile</b>	6.2	12.5	5.9	15.1	7.4	-7.7	3.1	35.2	14.7	-6.2
<b>95th Percentile</b>	3.7	7.2	0.4	12.1	5.8	-15.8	-6.3	27.8	10.3	-12.6
<b># of Portfolios</b>	210	209	204	194	155	212	206	199	187	177
<b>● Ceredex</b>	5.9 (82)	21.3 (13)	9.7 (16)	-- (--)	-- (--)	-4.4 (52)	3.3 (74)	36.5 (66)	19.0 (38)	-- (--)
<b>▲ Russell 2000 Value</b>	8.9 (25)	18.8 (25)	6.8 (69)	15.4 (71)	5.8 (96)	-7.5 (74)	4.2 (68)	34.5 (78)	18.1 (43)	-5.5 (69)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	9.7%	12.7%	0.8
Russell 2000 Value	6.8%	12.7%	0.5
eA US Small Cap Value Equity Gross Median	7.7%	13.4%	0.6

# International Equity Managers

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# Pyrford Manager Portfolio Overview

Period Ending: September 30, 2016

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

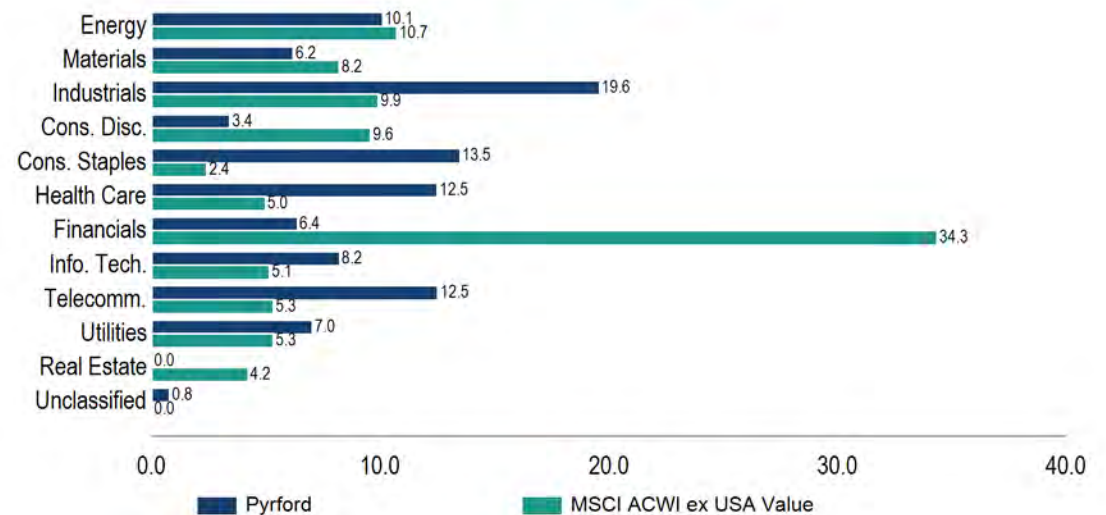
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	74	1,036
Weighted Avg. Market Cap. (\$B)	56.99	46.37
Median Market Cap. (\$B)	18.82	6.59
Price To Earnings	22.17	14.45
Price To Book	3.61	1.38
Price To Sales	2.18	1.50
Return on Equity (%)	16.20	9.19
Yield (%)	3.60	4.00
Beta		1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	92.4%	76.9%
Emerging*	7.6%	23.1%
<b>Top 10 Largest Countries</b>		
Switzerland	14.7%	3.2%
United Kingdom	14.6%	15.9%
Australia	10.4%	5.3%
Japan	9.1%	16.8%
France	7.6%	8.0%
Germany	7.2%	5.8%
Hong Kong	6.7%	2.5%
Netherlands	6.3%	1.1%
Singapore	4.8%	0.9%
Sweden	4.5%	2.0%
<b>Total-Top 10 Largest Countries</b>	<b>86.0%</b>	<b>61.4%</b>

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



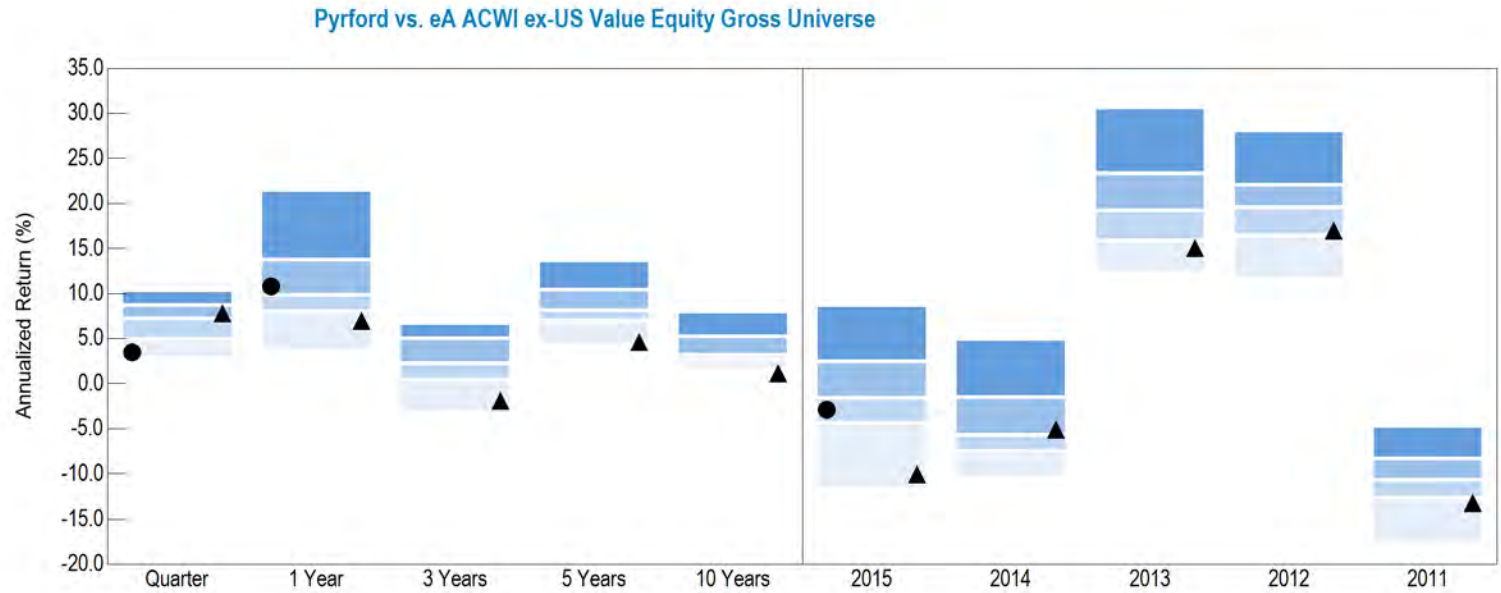
## Top Contributors

	Avg Wgt	Return	Contribution
META FINANCIAL GROUP	3.16	19.19	0.61
ATLAS COPCO 'A'	1.74	17.55	0.31
WOOLWORTHS	1.67	16.11	0.27
SAP	1.23	21.55	0.27
FUCHS PETROLUB PREF.	1.58	16.43	0.26
COMPUTERSHARE	1.34	17.65	0.24
RUBIS	1.10	19.75	0.22
DEUTSCHE POST	1.78	11.73	0.21
ASM PACIFIC TECH.	1.20	16.79	0.20
WOODSIDE PETROLEUM	1.70	11.30	0.19

## Bottom Contributors

	Avg Wgt	Return	Contribution
SANOFI	2.20	-8.68	-0.19
ROCHE HOLDING	3.25	-5.43	-0.18
NIHON KOHDEN	1.26	-13.12	-0.16
AXIATA GROUP	1.56	-9.61	-0.15
NOVARTIS 'R'	3.02	-4.21	-0.13
ROYAL DUTCH SHELL A	1.68	-7.40	-0.12
SCA 'B'	1.75	-6.33	-0.11
MALAYAN BANKING	1.17	-7.84	-0.09
UNITED UTILITIES GROUP	1.44	-5.83	-0.08
VODAFONE GROUP	1.55	-5.35	-0.08

Unclassified sector allocation includes cash allocations.



	Return (Rank)															
5th Percentile	10.4	21.4	6.7	13.6	8.0	8.7	4.9	30.7	28.1	-4.7						
25th Percentile	8.8	13.8	5.1	10.4	5.3	2.5	-1.4	23.4	22.1	-8.2						
Median	7.3	9.9	2.3	8.2	3.2	-1.6	-5.7	19.3	19.6	-10.7						
75th Percentile	5.0	8.0	0.4	7.0	2.7	-4.3	-7.4	15.9	16.5	-12.6						
95th Percentile	2.9	3.6	-3.1	4.4	1.7	-11.6	-10.4	12.4	11.7	-17.7						
# of Portfolios	50	50	44	39	26	45	37	34	32	26						
● Pyrford	3.5 (94)	10.8 (43)	-- (--)	-- (--)	-- (--)	-2.9 (59)	-- (--)	-- (--)	-- (--)	-- (--)						
▲ MSCI ACWI ex USA Value	7.8 (40)	7.0 (87)	-1.9 (94)	4.6 (95)	1.1 (98)	-10.1 (93)	-5.1 (49)	15.0 (83)	17.0 (74)	-13.2 (81)						

# William Blair Manager Portfolio Overview

Period Ending: September 30, 2016

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

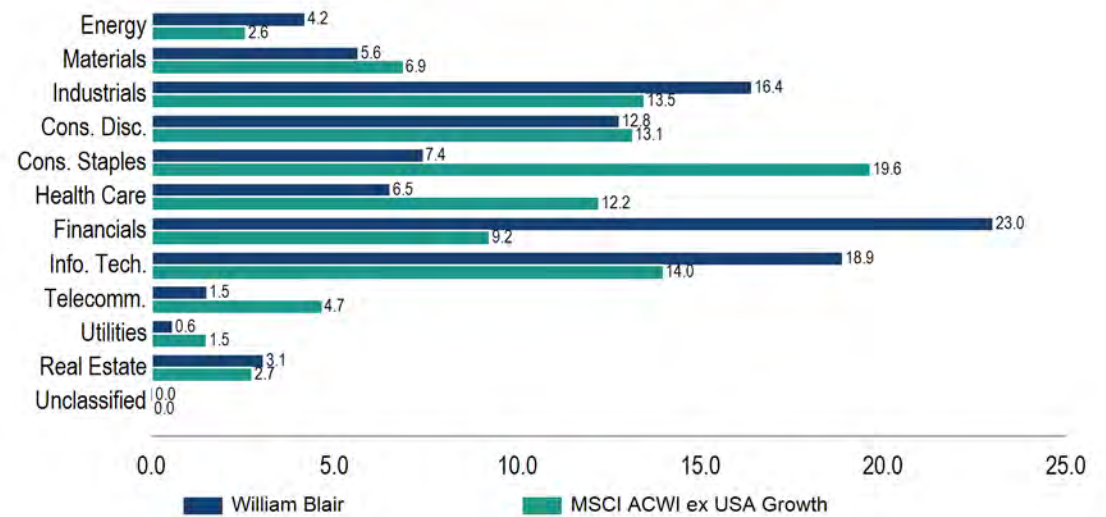
## Characteristics

	Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	216	1,055
Weighted Avg. Market Cap. (\$B)	39.69	55.88
Median Market Cap. (\$B)	8.32	6.95
Price To Earnings	23.47	24.36
Price To Book	4.69	3.91
Price To Sales	3.30	3.16
Return on Equity (%)	21.24	17.72
Yield (%)	2.25	2.10
Beta	0.98	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	81.3%	76.5%
Emerging*	18.7%	23.5%
<b>Top 10 Largest Countries</b>		
Japan	12.9%	16.8%
United Kingdom	12.7%	10.6%
France	12.0%	5.5%
Canada	7.0%	6.6%
Hong Kong	5.7%	2.5%
Germany	4.3%	6.6%
Sweden	4.3%	1.9%
China*	3.9%	6.5%
India*	3.8%	1.9%
Australia	3.7%	5.0%
<b>Total-Top 10 Largest Countries</b>	<b>70.3%</b>	<b>64.0%</b>

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



## Top Contributors

	Avg Wgt	Return	Contribution
SAMSUNG ELECTRONICS	1.79	17.28	0.31
VALEO	0.95	30.90	0.29
NXP SEMICONDUCTORS	0.87	30.21	0.26
TENCENT HOLDINGS	1.19	20.98	0.25
PARTNERS GROUP HOLDING	1.27	18.16	0.23
TAIWAN SEMICON.SPN.ADR 1:5	1.36	16.62	0.23
ORIX	1.23	16.22	0.20
NETEASE ADR 1:25	0.78	25.07	0.19
SAP	0.88	21.55	0.19
LARGAN PRECISION	0.53	34.39	0.18

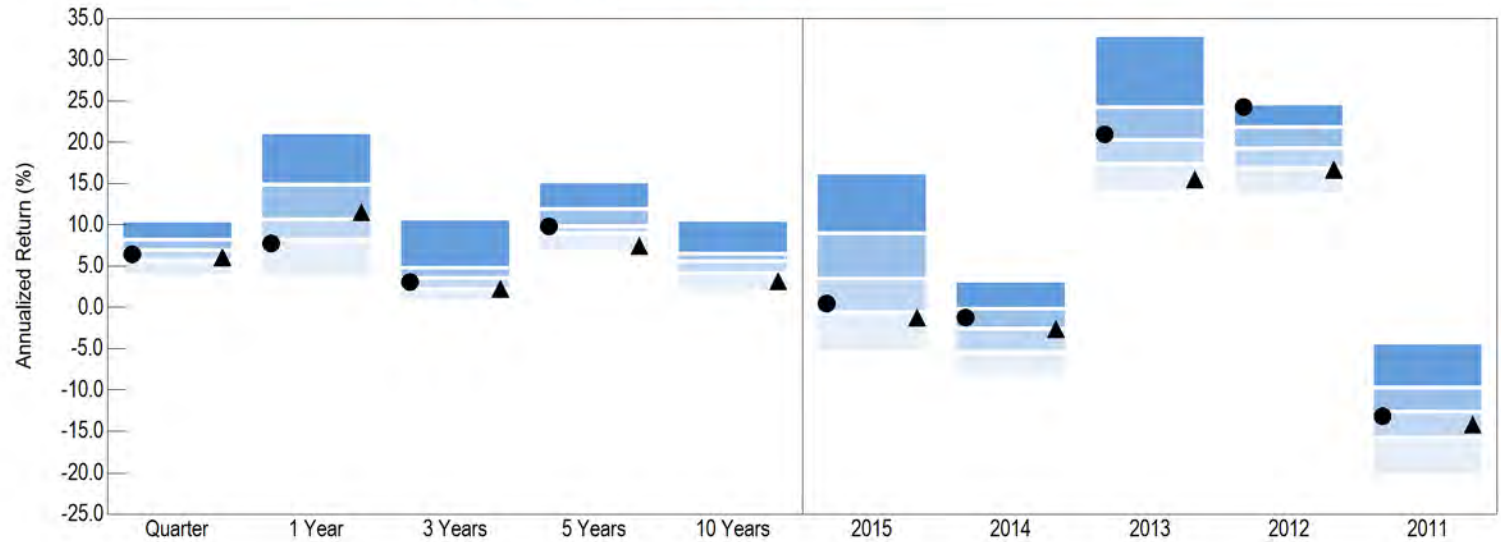
## Bottom Contributors

	Avg Wgt	Return	Contribution
NOVO NORDISK 'B'	0.88	-21.51	-0.19
ROYAL DUTCH SHELL A	1.75	-7.40	-0.13
RECKITT BENCKISER GROUP	1.51	-5.01	-0.08
PANDORA	0.66	-10.74	-0.07
ARCA CONTINENTAL	0.37	-16.08	-0.06
SHIONOGI	0.93	-5.65	-0.05
TEVA PHARM.INDS.ADR 1:1	0.63	-7.81	-0.05
TAISEI	0.62	-7.77	-0.05
DAIWA HOUSE INDUSTRY	0.96	-5.03	-0.05
KAO	1.19	-2.76	-0.03

Unclassified sector allocation includes cash allocations.

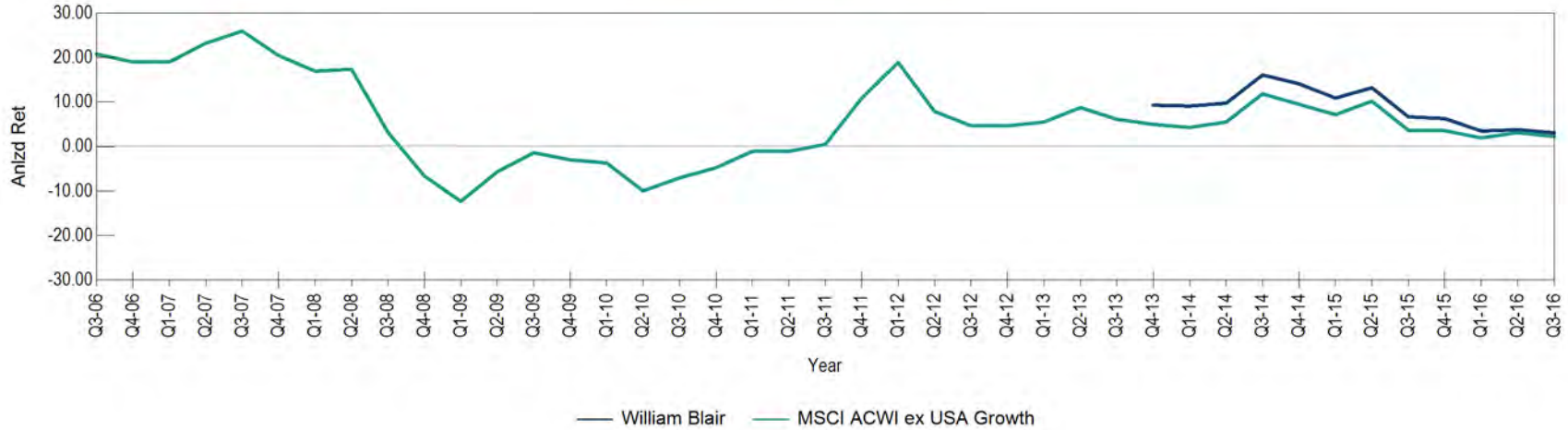


William Blair vs. eA ACWI ex-US Growth Equity Gross Universe

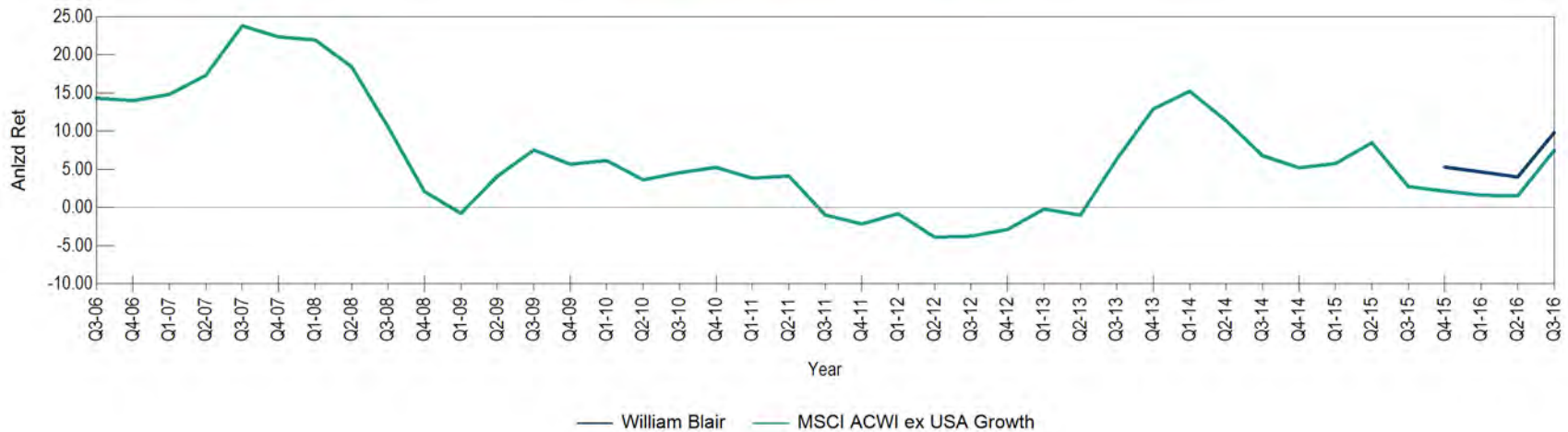


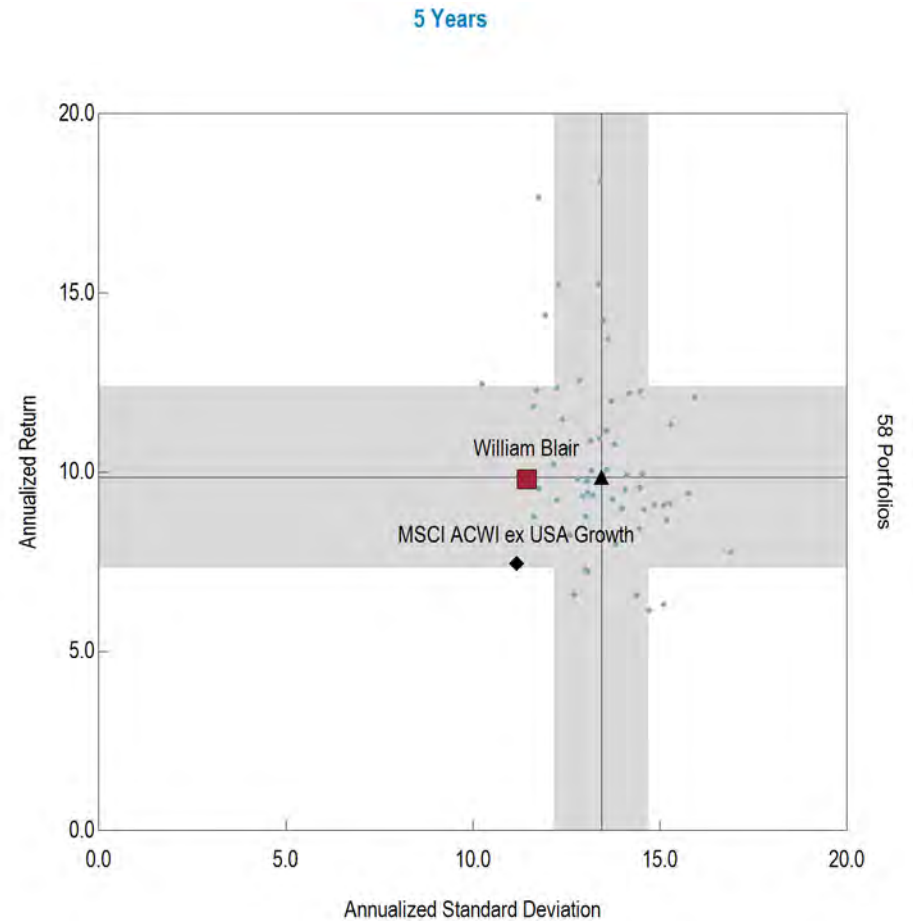
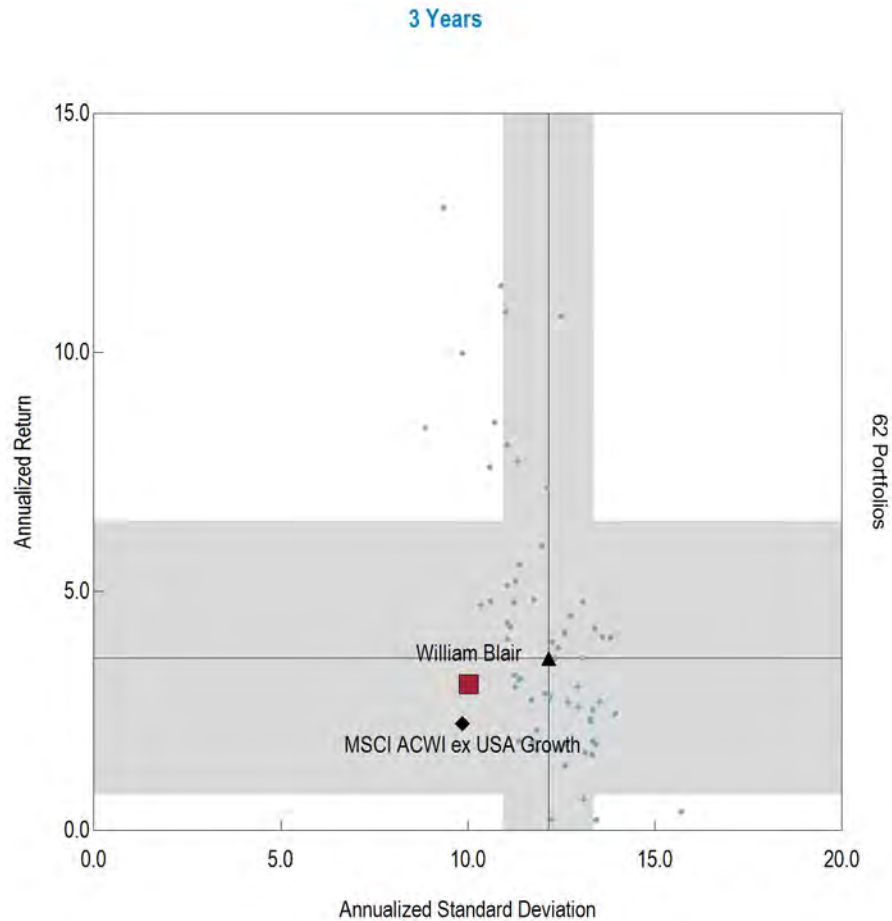
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	10.5	21.2	10.7	15.2	10.6	16.3	3.2	33.0	24.6	-4.3
<b>25th Percentile</b>	8.2	14.9	4.8	11.9	6.6	9.0	-0.1	24.3	21.9	-9.7
<b>Median</b>	7.0	10.7	3.6	9.9	5.6	3.5	-2.5	20.3	19.3	-12.6
<b>75th Percentile</b>	5.8	8.2	2.3	9.0	4.2	-0.5	-5.3	17.5	16.9	-15.7
<b>95th Percentile</b>	3.8	3.7	0.7	6.6	1.8	-5.4	-8.2	14.0	13.7	-20.3
<b># of Portfolios</b>	68	68	62	58	42	70	50	46	51	51
<b>● William Blair</b>	6.4 (65)	7.7 (81)	3.1 (57)	9.8 (51)	-- (--)	0.5 (69)	-1.2 (37)	20.9 (44)	24.3 (6)	-13.2 (55)
<b>▲ MSCI ACWI ex USA Growth</b>	6.1 (70)	11.5 (43)	2.2 (76)	7.4 (91)	3.1 (88)	-1.3 (83)	-2.6 (53)	15.5 (87)	16.7 (78)	-14.2 (62)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	3.1%	10.0%	0.3
MSCI ACWI ex USA Growth	2.2%	9.9%	0.2
eA ACWI ex-US Growth Equity Gross Median	3.6%	12.2%	0.3

	5 Years Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	9.8%	11.4%	0.8
MSCI ACWI ex USA Growth	7.4%	11.2%	0.7
eA ACWI ex-US Growth Equity Gross Median	9.9%	13.4%	0.7

## Global Equity Managers

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# Artisan Partners Manager Portfolio Overview

Period Ending: September 30, 2016

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

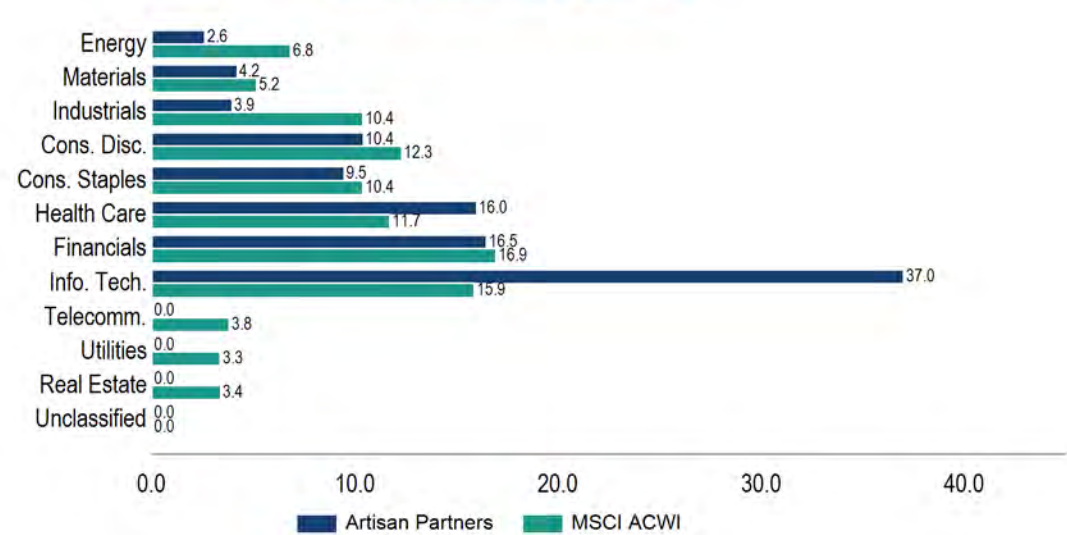
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	45	2,470
Weighted Avg. Market Cap. (\$B)	67.00	91.89
Median Market Cap. (\$B)	20.65	8.48
Price To Earnings	42.35	21.57
Price To Book	7.25	3.32
Price To Sales	7.88	2.66
Return on Equity (%)	14.31	15.56
Yield (%)	0.67	2.53
Beta	1.03	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	95.0%	88.9%
Emerging*	5.0%	11.1%
<b>Top 10 Largest Countries</b>		
United States	58.6%	52.4%
Japan	8.6%	8.0%
United Kingdom	7.1%	6.3%
Hong Kong	6.1%	1.2%
Australia	4.5%	2.4%
Denmark	3.3%	0.6%
France	3.0%	3.2%
Germany	2.1%	3.0%
Taiwan*	1.5%	1.3%
Korea*	1.4%	1.6%
<b>Total-Top 10 Largest Countries</b>	<b>96.1%</b>	<b>80.1%</b>

## Sector Allocation (%) vs MSCI ACWI



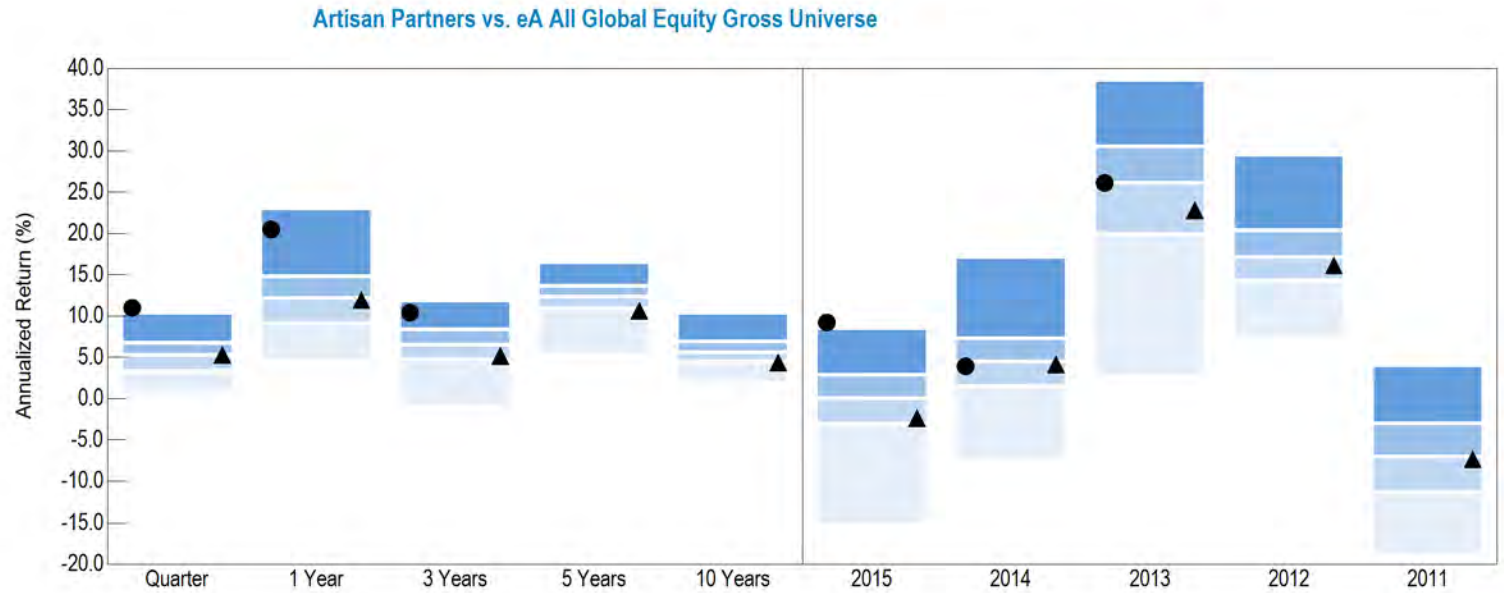
## Top Contributors

	Avg Wgt	Return	Contribution
META FINANCIAL GROUP	10.66	19.19	2.04
NINTENDO	1.50	84.80	1.27
TENCENT HOLDINGS	3.78	20.98	0.79
MCGRAW HILL FINANCIAL	3.78	18.34	0.69
VISA 'A'	5.05	11.69	0.59
ALPHABET 'A'	3.74	14.29	0.53
EUROFINS SCIENTIFIC	2.33	22.61	0.53
MARKIT	3.41	15.18	0.52
FACEBOOK CLASS A	3.84	12.24	0.47
REGENERON PHARMS.	2.71	15.12	0.41

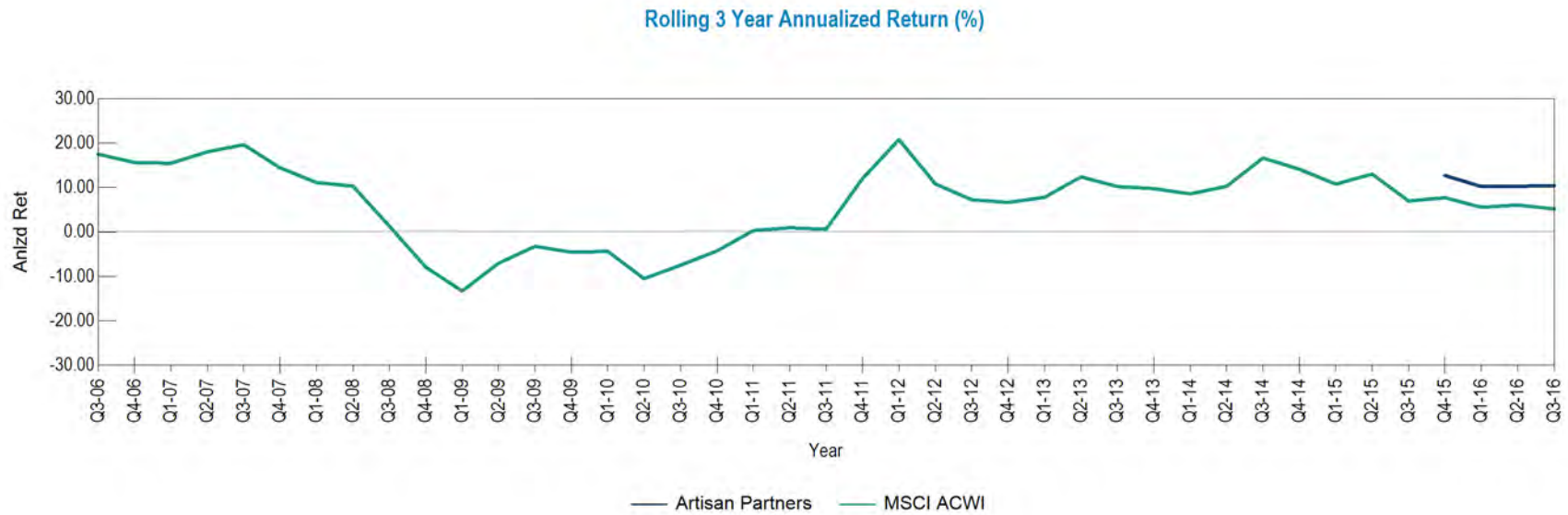
## Bottom Contributors

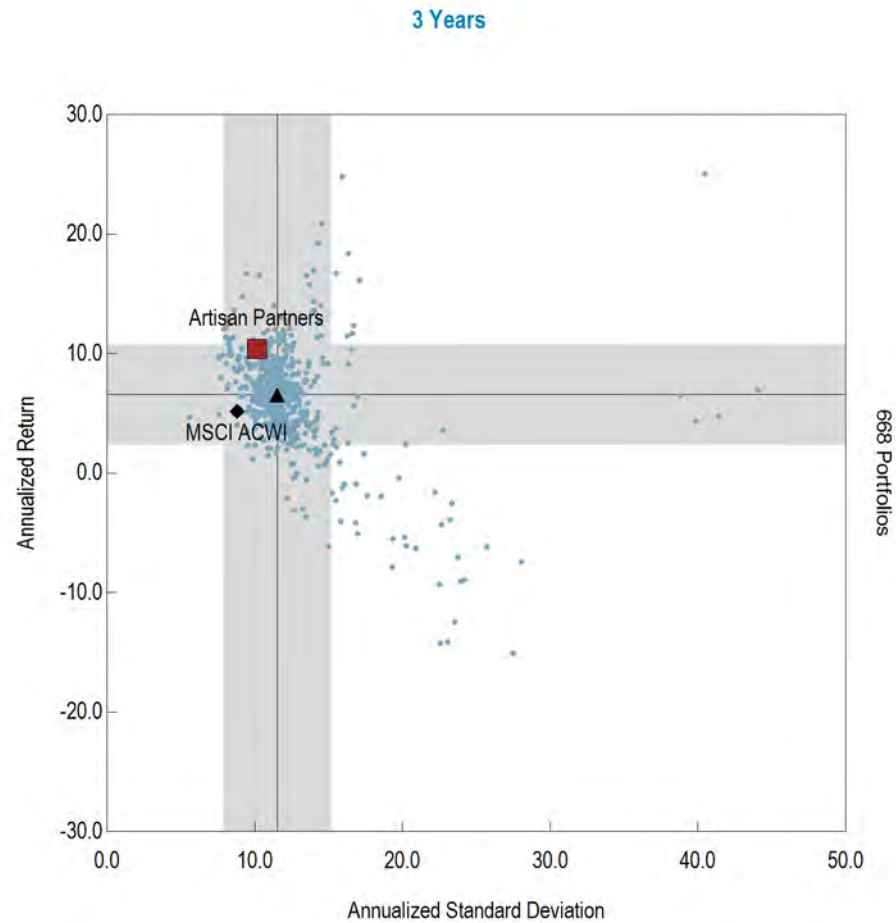
	Avg Wgt	Return	Contribution
GENMAB	3.51	-5.61	-0.20
SALESFORCE.COM	1.55	-10.18	-0.16
ASSOCIATED BRIT.FOODS	1.13	-7.08	-0.08
AMOREPACIFIC	1.39	-5.72	-0.08
ANTHEM	1.75	-4.10	-0.07
STARBUCKS	1.36	-4.88	-0.07
INTERTEK GROUP	1.15	-2.01	-0.02
FOM.ECO.MEXNO.SAB DE CV SPN.ADR 1:10	0.86	-0.49	0.00
NOBLE ENERGY	1.26	-0.06	0.00
SCHLUMBERGER	1.24	0.08	0.00

Unclassified sector allocation includes cash allocations.



	Return (Rank)									
5th Percentile	10.4	23.0	11.9	16.5	10.3	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.8	14.8	8.4	13.7	7.0	3.0	7.4	30.6	20.4	-3.0
Median	5.3	12.2	6.6	12.4	5.6	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.4	9.2	4.8	11.0	4.5	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	0.6	4.6	-0.8	5.4	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	710	709	668	574	312	692	609	552	475	434
● Artisan Partners	11.0 (4)	20.5 (9)	10.4 (10)	-- (--)	-- (--)	9.2 (4)	3.9 (56)	26.1 (51)	-- (--)	-- (--)
▲ MSCI ACWI	5.3 (51)	12.0 (52)	5.2 (70)	10.6 (78)	4.3 (78)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	10.4%	10.1%	1.0
MSCI ACWI	5.2%	8.8%	0.6
eA All Global Equity Gross Median	6.6%	11.5%	0.6



# First Eagle Manager Portfolio Overview

Period Ending: September 30, 2016

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

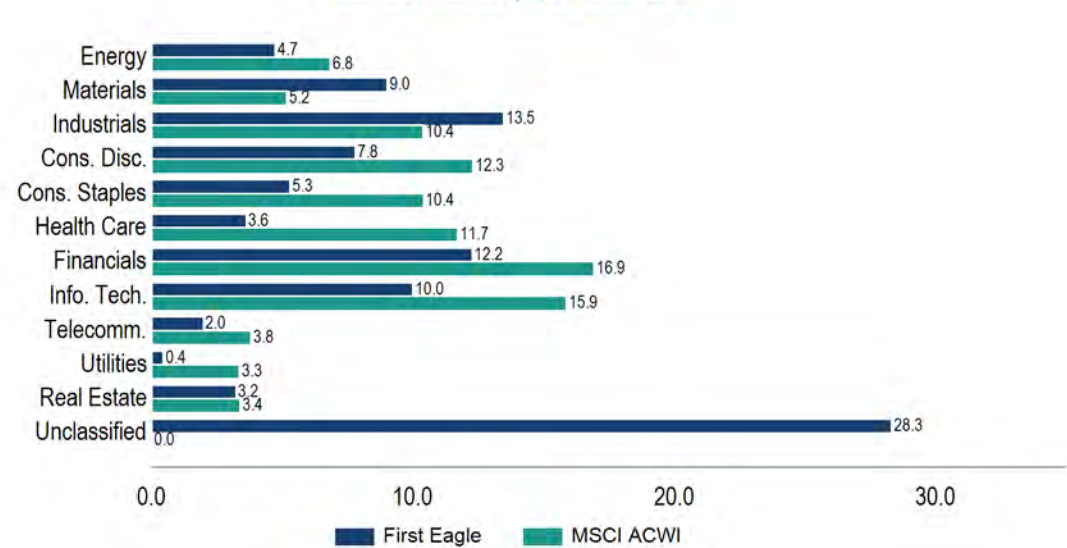
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	188	2,470
Weighted Avg. Market Cap. (\$B)	53.24	91.89
Median Market Cap. (\$B)	15.80	8.48
Price To Earnings	19.85	21.57
Price To Book	3.46	3.32
Price To Sales	2.76	2.66
Return on Equity (%)	14.67	15.56
Yield (%)	1.99	2.53
Beta	0.75	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	78.8%	88.9%
Emerging*	3.6%	11.1%
Cash	17.6%	
<b>Top 10 Largest Countries</b>		
United States	45.3%	52.4%
Cash	17.6%	0.0%
Japan	12.8%	8.0%
France	5.2%	3.2%
Canada	3.8%	3.2%
United Kingdom	3.1%	6.3%
Germany	1.8%	3.0%
Mexico*	1.6%	0.4%
Korea*	1.4%	1.6%
Switzerland	1.3%	3.0%
<b>Total-Top 10 Largest Countries</b>	<b>93.9%</b>	<b>81.1%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

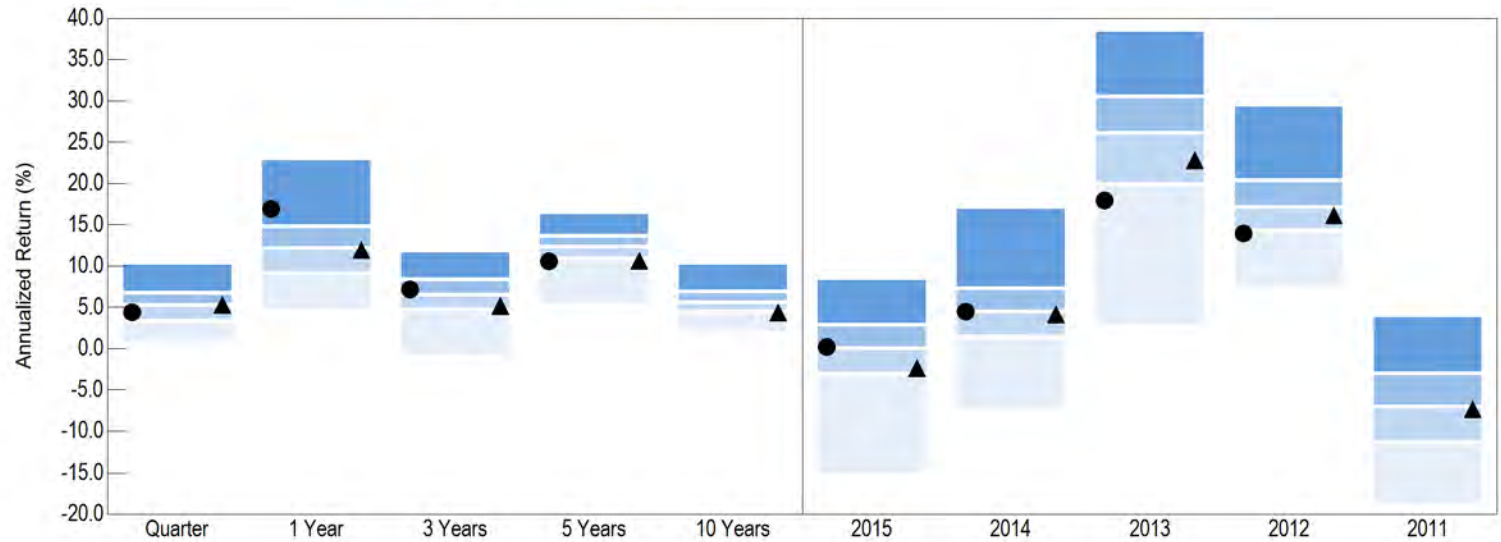
	Avg Wgt	Return	Contribution
HEIDELBERGCEMENT	1.24	25.83	0.32
LINEAR TECHNOLOGY	1.03	28.12	0.29
MICROSOFT	1.74	13.27	0.23
SMC	1.10	17.92	0.20
TERADATA	0.67	23.65	0.16
XILINX	0.81	18.55	0.15
SOMPO JAPAN NPNK.HDG.	0.96	12.78	0.12
SCOTTS MIRACLE-GRO	0.61	19.84	0.12
WEYERHAEUSER	1.42	8.34	0.12
VARIAN MEDICAL SYSTEMS	0.55	21.04	0.12

## Bottom Contributors

	Avg Wgt	Return	Contribution
BARRICK GOLD (NYS)	0.84	-16.91	-0.14
GOLDCORP (NYS)	0.70	-13.53	-0.10
ORACLE	2.21	-3.68	-0.08
SANOFI	0.68	-8.68	-0.06
ORBITAL ATK	0.56	-10.12	-0.06
VISTA OUTDOOR	0.31	-16.49	-0.05
FRANCO-NEVADA	0.48	-7.52	-0.04
KT & G	0.71	-4.23	-0.03
ANTHEM	0.45	-4.10	-0.02
W R BERKLEY	0.72	-2.53	-0.02

Unclassified sector allocation includes cash allocations and Gold allocations (6.5% as of 9/30/2016).

First Eagle vs. eA All Global Equity Gross Universe

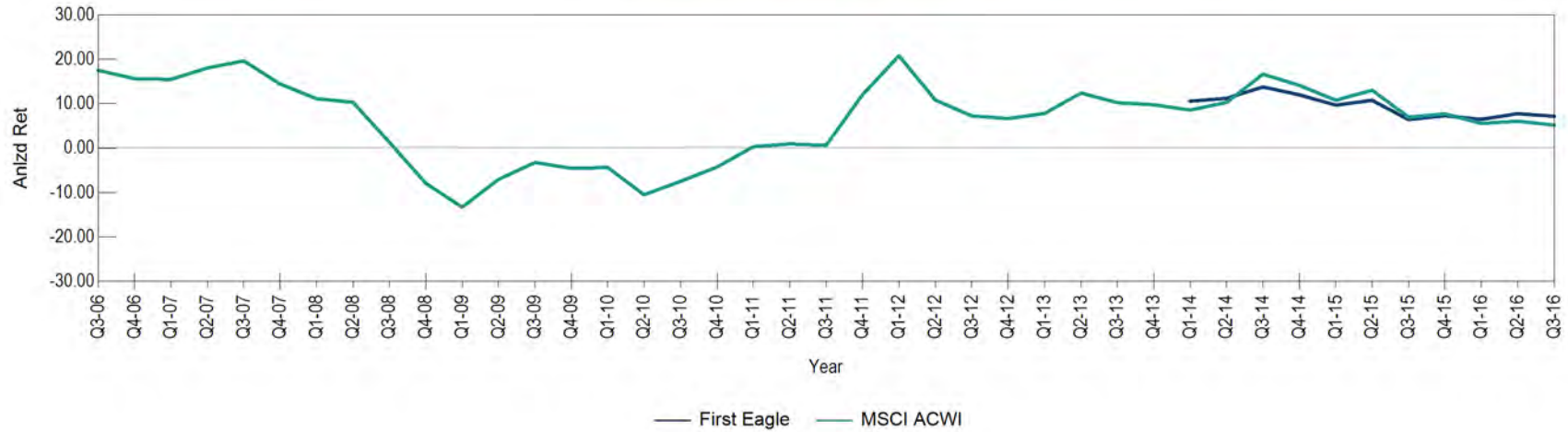


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>Return (Rank)</b>										
5th Percentile	10.4	23.0	11.9	16.5	10.3	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.8	14.8	8.4	13.7	7.0	3.0	7.4	30.6	20.4	-3.0
Median	5.3	12.2	6.6	12.4	5.6	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.4	9.2	4.8	11.0	4.5	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	0.6	4.6	-0.8	5.4	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	710	709	668	574	312	692	609	552	475	434
● First Eagle	4.4 (64)	16.9 (15)	7.2 (40)	10.6 (78)	-- (--)	0.2 (49)	4.5 (51)	17.9 (80)	13.9 (78)	-- (--)
▲ MSCI ACWI	5.3 (51)	12.0 (52)	5.2 (70)	10.6 (78)	4.3 (78)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

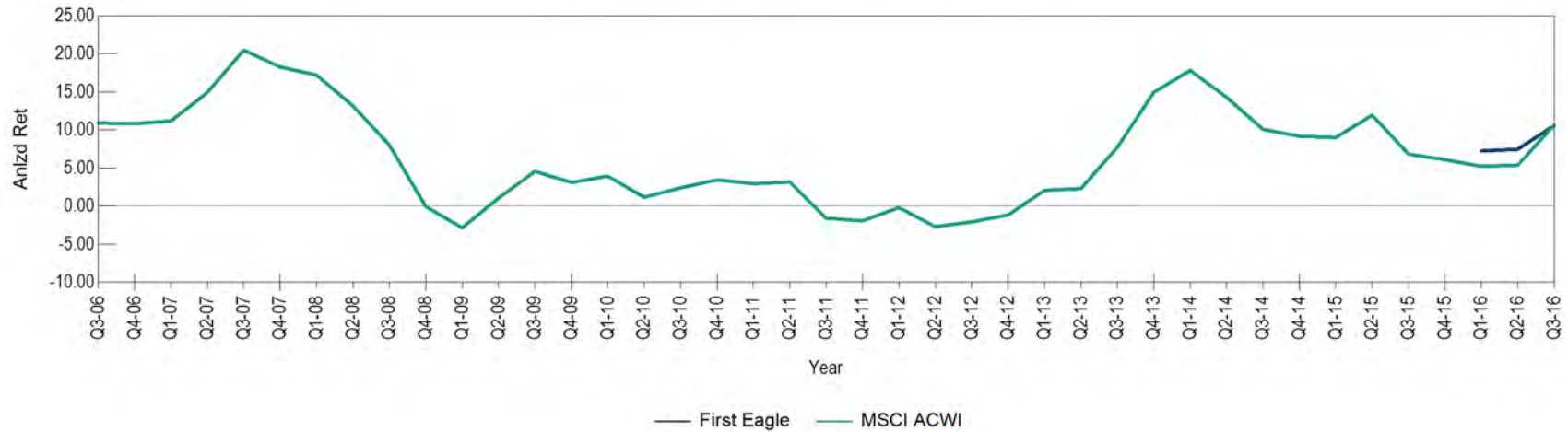
First Eagle  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

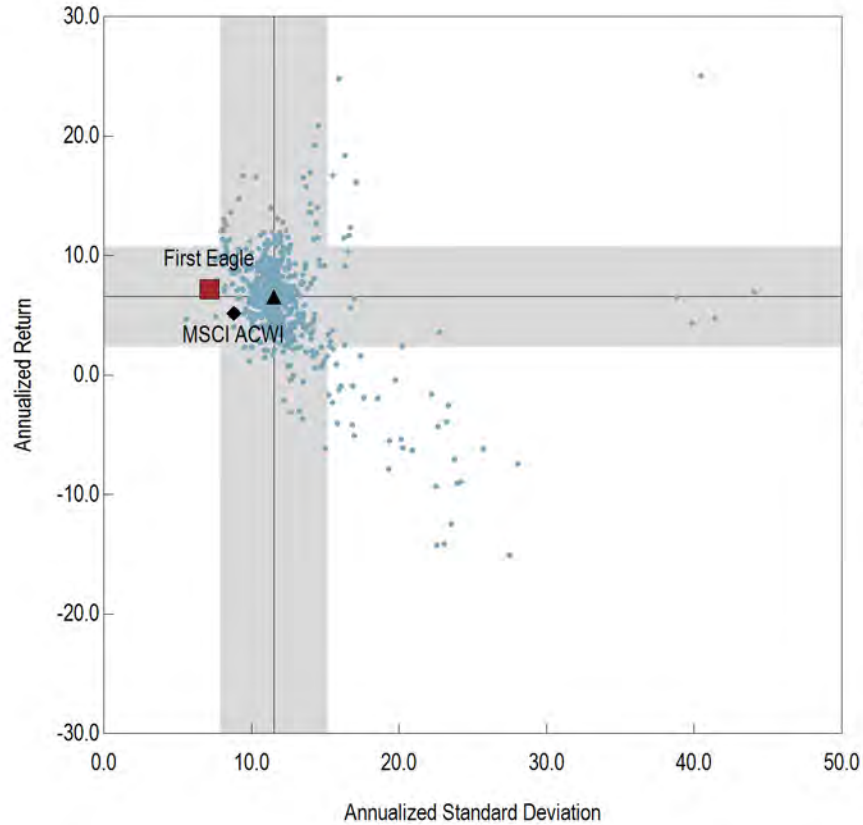
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

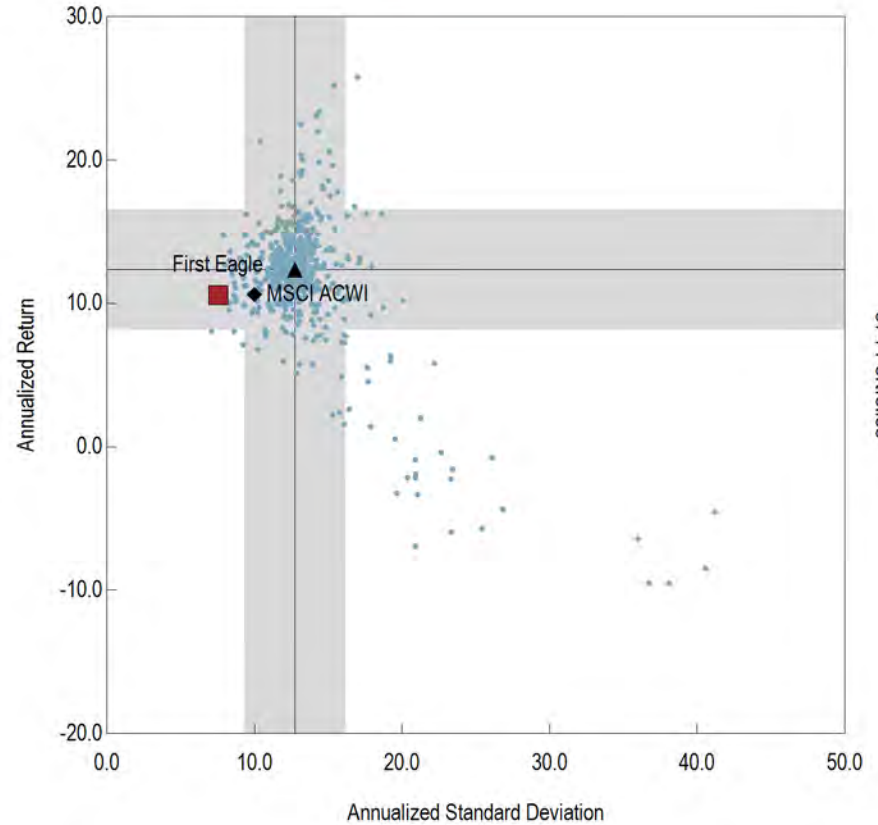


3 Years



668 Portfolios

5 Years



574 Portfolios

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	7.2%	7.1%	1.0
MSCI ACWI	5.2%	8.8%	0.6
eA All Global Equity Gross Median	6.6%	11.5%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	10.6%	7.5%	1.4
MSCI ACWI	10.6%	10.0%	1.1
eA All Global Equity Gross Median	12.4%	12.7%	1.0

# Intech Global Low Vol Manager Portfolio Overview

Period Ending: September 30, 2016

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

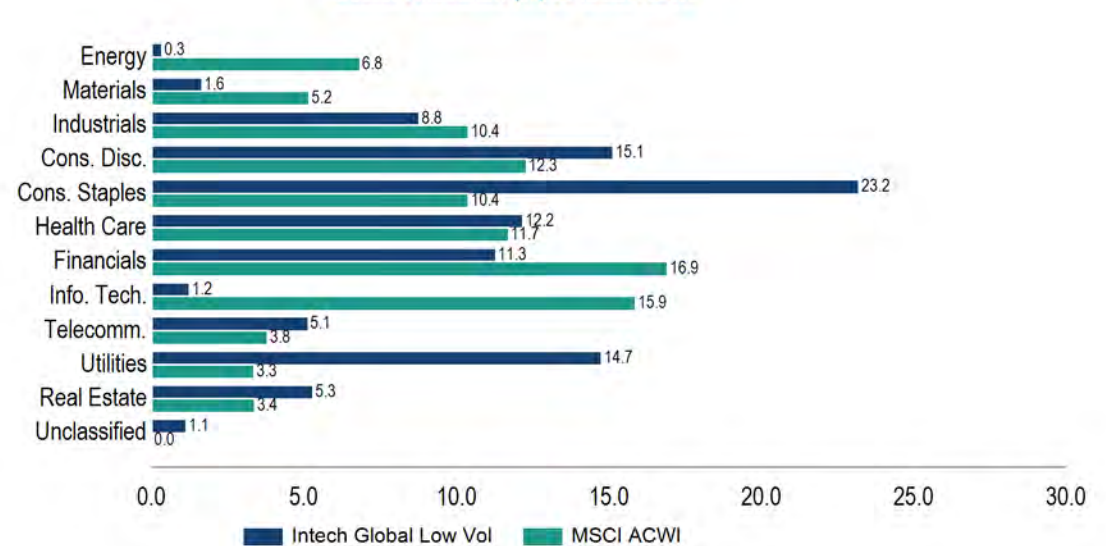
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	356	2,470
Weighted Avg. Market Cap. (\$B)	40.83	91.89
Median Market Cap. (\$B)	11.68	8.48
Price To Earnings	22.78	21.57
Price To Book	4.07	3.32
Price To Sales	3.10	2.66
Return on Equity (%)	16.95	15.56
Yield (%)	2.62	2.53
Beta	0.40	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	98.9%	88.9%
Cash	1.1%	
<b>Top 10 Largest Countries</b>		
United States	57.7%	52.4%
Japan	18.0%	8.0%
Hong Kong	8.0%	1.2%
Canada	3.5%	3.2%
Switzerland	2.4%	3.0%
Israel	2.4%	0.2%
Singapore	1.6%	0.4%
Cash	1.1%	0.0%
Denmark	1.0%	0.6%
United Kingdom	0.9%	6.3%
<b>Total-Top 10 Largest Countries</b>	<b>96.6%</b>	<b>75.3%</b>

## Sector Allocation (%) vs MSCI ACWI



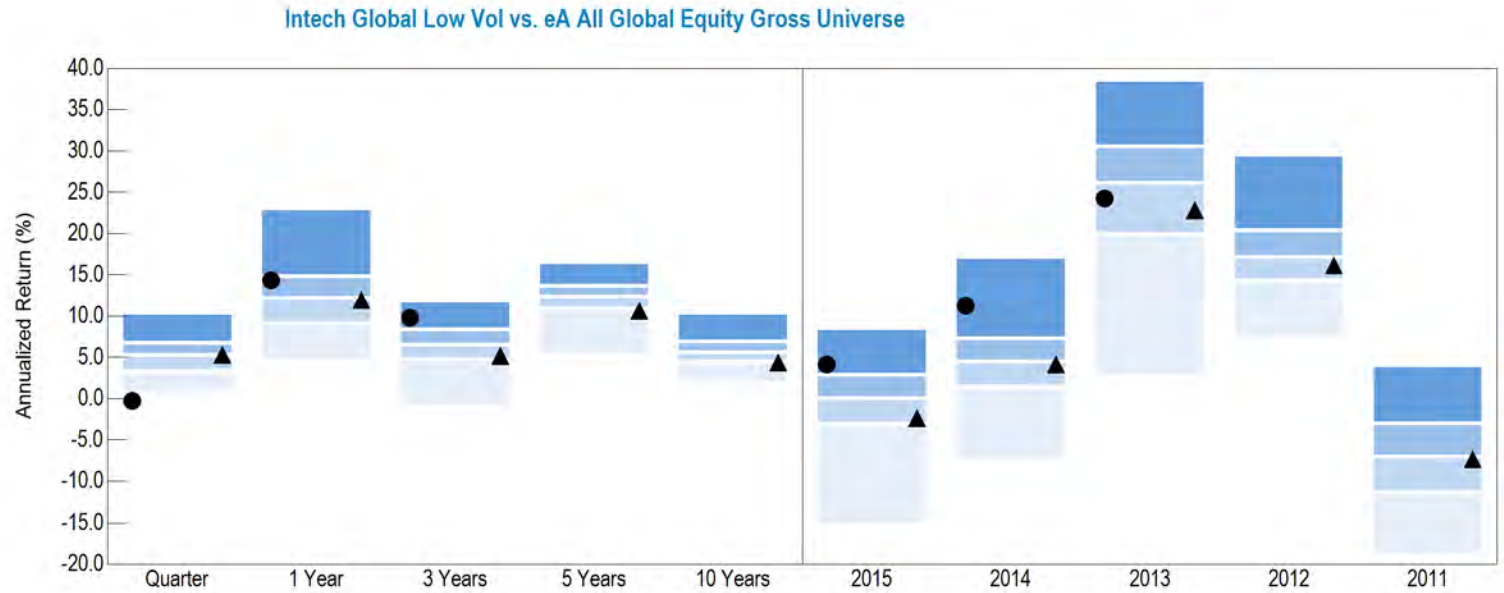
## Top Contributors

	Avg Wgt	Return	Contribution
PROCTER & GAMBLE	2.98	6.83	0.20
FAST RETAILING	0.65	20.37	0.13
FOOT LOCKER	0.55	24.03	0.13
ARCH CAP.GP.	0.98	10.08	0.10
MITSUBISHI TANABE PHARMA	0.46	19.76	0.09
TDC	0.39	20.66	0.08
TAIHEIYO CEMENT	0.34	22.74	0.08
ILLUMINA	0.26	29.41	0.08
FAIRFAX FINL.HDG.	0.83	9.17	0.08
POWER ASSETS HOLDINGS	1.01	7.42	0.08

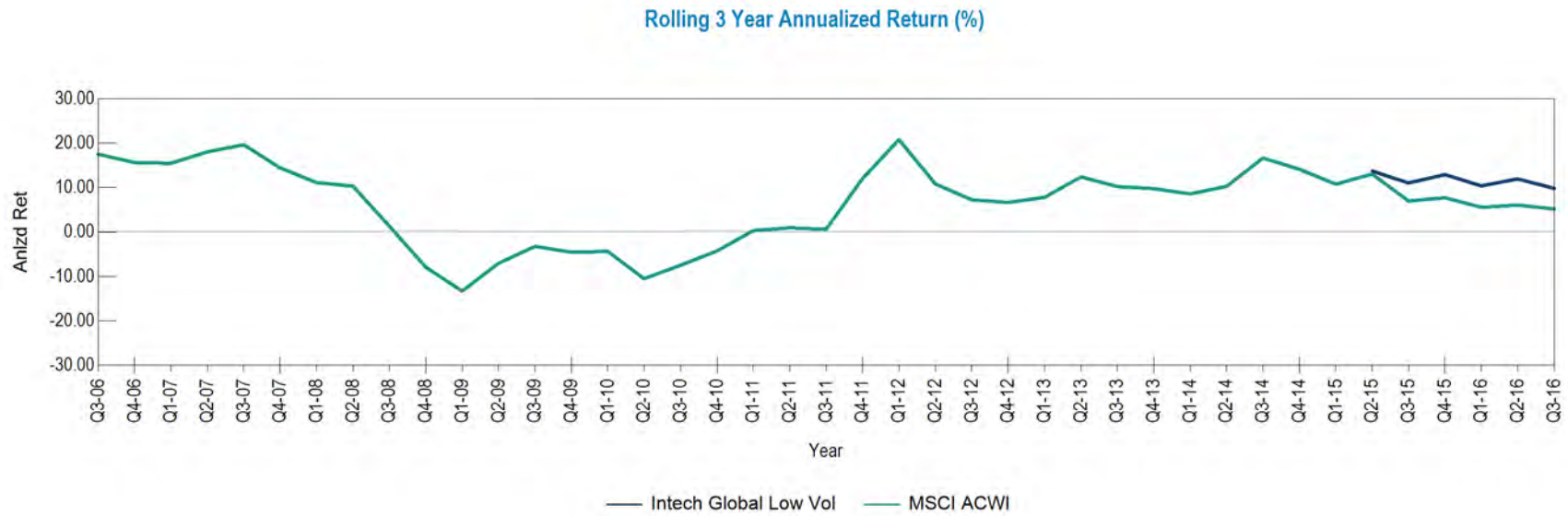
## Bottom Contributors

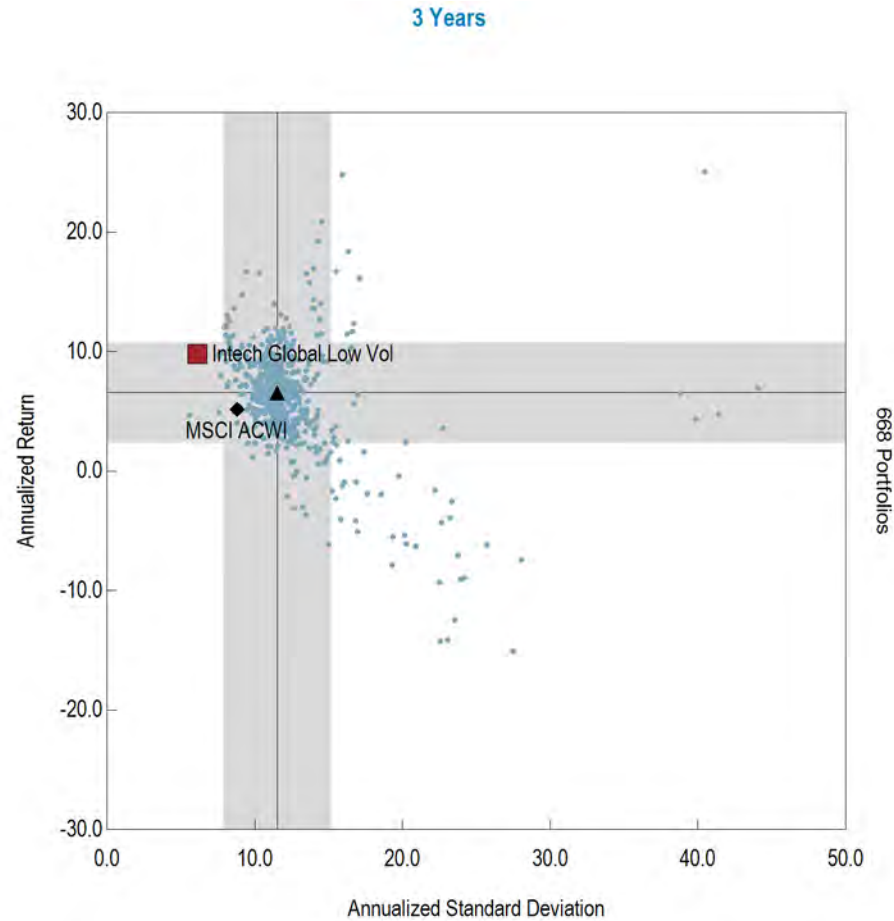
	Avg Wgt	Return	Contribution
GENERAL MILLS	4.01	-9.83	-0.39
DOLLAR GENERAL	0.99	-25.28	-0.25
HERSHEY	1.41	-15.30	-0.22
KIMBERLY-CLARK	2.34	-7.58	-0.18
SOUTHERN	5.25	-3.32	-0.17
CLOROX	1.76	-9.01	-0.16
DOLLAR TREE	0.88	-16.25	-0.14
CONSOLIDATED EDISON	1.54	-5.57	-0.09
KELLOGG	1.80	-4.52	-0.08
AUTOZONE	2.27	-3.21	-0.07

Unclassified sector allocation includes cash allocations.



	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	10.4	23.0	11.9	16.5	10.3	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.8	14.8	8.4	13.7	7.0	3.0	7.4	30.6	20.4	-3.0
Median	5.3	12.2	6.6	12.4	5.6	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.4	9.2	4.8	11.0	4.5	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	0.6	4.6	-0.8	5.4	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	710	709	668	574	312	692	609	552	475	434
● Intech Global Low Vol	-0.3 (98)	14.3 (30)	9.8 (13)	-- (--)	-- (--)	4.1 (18)	11.2 (14)	24.2 (62)	-- (--)	-- (--)
▲ MSCI ACWI	5.3 (51)	12.0 (52)	5.2 (70)	10.6 (78)	4.3 (78)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)





3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Intech Global Low Vol	9.8%	6.1%	1.6
MSCI ACWI	5.2%	8.8%	0.6
eA All Global Equity Gross Median	6.6%	11.5%	0.6



# JP Morgan Global Opportunities Manager Portfolio Overview

Period Ending: September 30, 2016

Global equity diversified portfolio focused on companies with valuations below their intrinsic value. Primary personnel include Jeroen Huysinga, Georgina Perceval-Maxwell, and Gerd Woort-Menker.

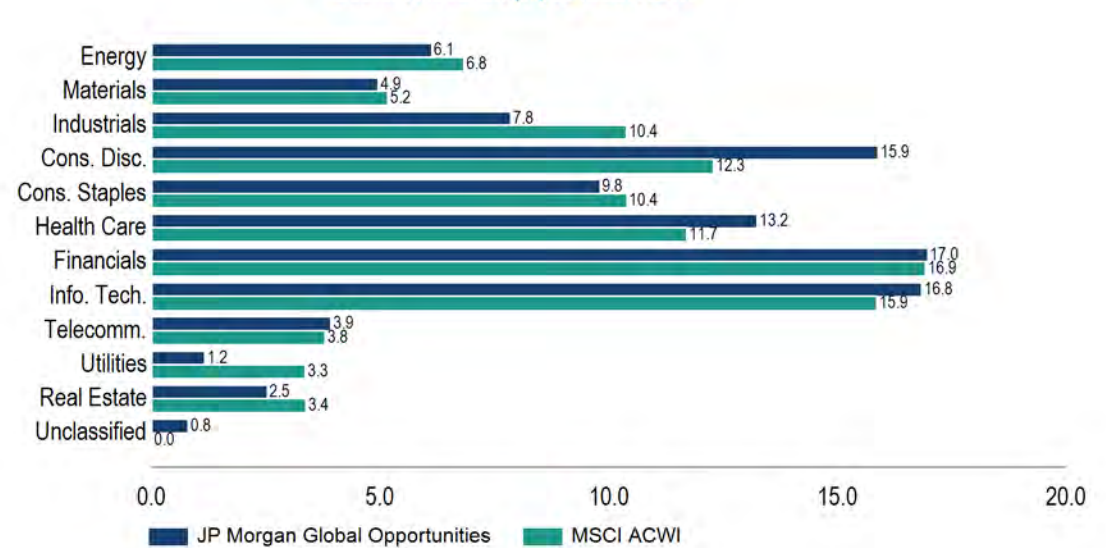
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	104	2,470
Weighted Avg. Market Cap. (\$B)	70.84	91.89
Median Market Cap. (\$B)	41.77	8.48
Price To Earnings	20.72	21.57
Price To Book	3.97	3.32
Price To Sales	2.94	2.66
Return on Equity (%)	17.06	15.56
Yield (%)	1.96	2.53
Beta	1.11	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	94.4%	88.9%
Emerging*	5.6%	11.1%
<b>Top 10 Largest Countries</b>		
United States	47.6%	52.4%
United Kingdom	11.1%	6.3%
Japan	10.0%	8.0%
France	4.8%	3.2%
Germany	3.5%	3.0%
Netherlands	2.9%	1.1%
Switzerland	2.3%	3.0%
Hong Kong	2.2%	1.2%
Sweden	1.9%	0.9%
Italy	1.8%	0.6%
<b>Total-Top 10 Largest Countries</b>	<b>88.0%</b>	<b>79.7%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

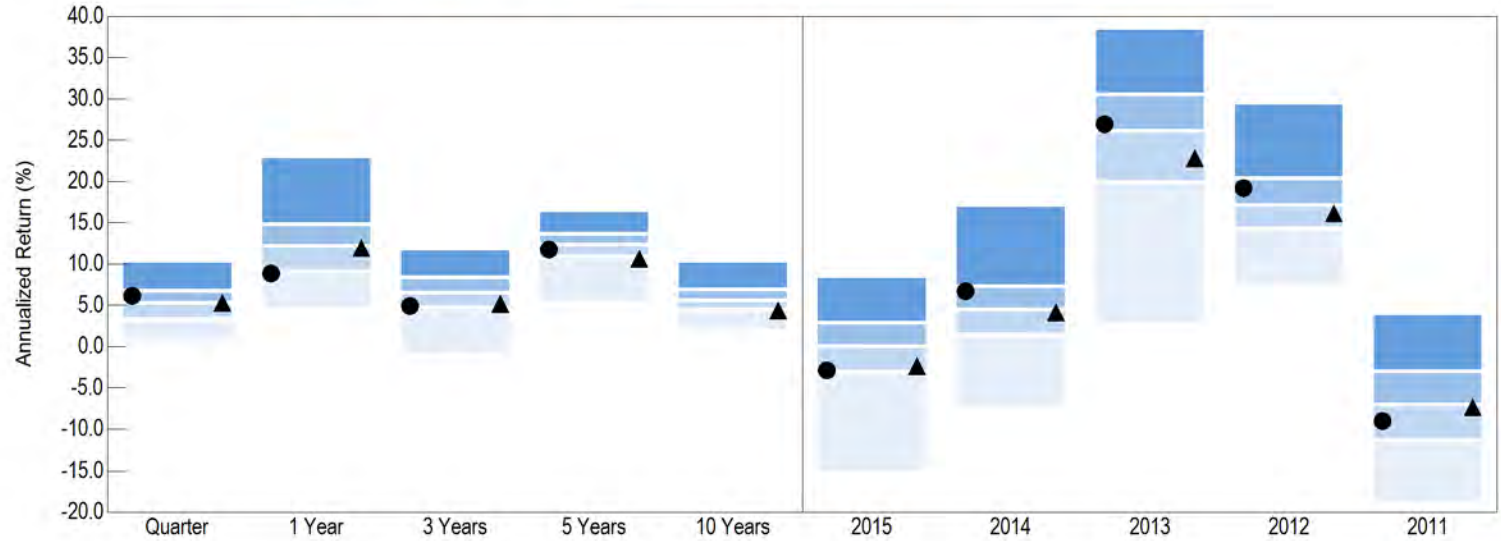
	Avg Wgt	Return	Contribution
ALPHABET 'A'	2.69	14.29	0.38
ARCELORMITTAL	0.97	34.71	0.34
PIONEER NTRL.RES.	1.22	22.80	0.28
MORGAN STANLEY	1.14	24.25	0.28
INFINEON TECHNOLOGIES	1.16	22.89	0.26
SUZUKI MOTOR	1.08	24.17	0.26
CHARTER COMMS.CL.A	1.38	18.08	0.25
NORSK HYDRO	1.29	18.96	0.24
PJSC MAGNIT GDR (REG S)	0.92	26.26	0.24
NXP SEMICONDUCTORS	0.79	30.21	0.24

## Bottom Contributors

	Avg Wgt	Return	Contribution
BRISTOL MYERS SQUIBB	1.00	-26.69	-0.27
MCKESSON	1.72	-10.52	-0.18
LOWE'S COMPANIES	1.98	-8.40	-0.17
MITSUI FUDOSAN	1.61	-6.49	-0.10
ROCHE HOLDING	1.89	-5.43	-0.10
ELECTROLUX 'B'	1.45	-6.90	-0.10
ASSOCIATED BRIT.FOODS	1.40	-7.08	-0.10
TWENTY-FIRST CENTURY	0.92	-9.79	-0.09
FOX CL.A	0.92	-9.79	-0.09
WELLS FARGO & CO	1.56	-5.70	-0.09
VODAFONE GROUP	1.64	-5.35	-0.09

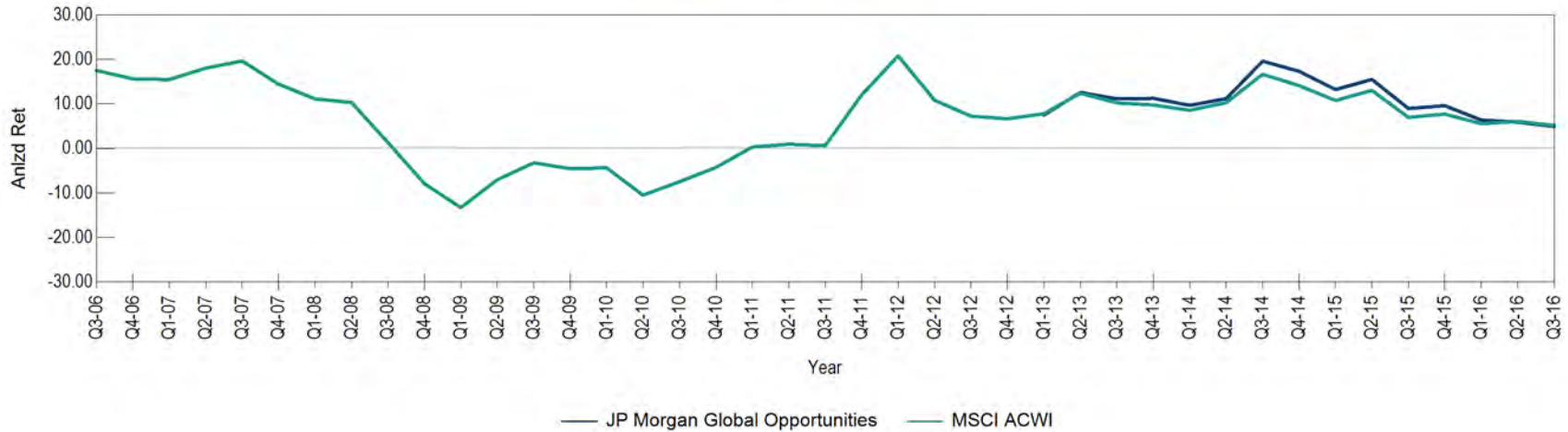
Unclassified sector allocation includes cash allocations.

JP Morgan Global Opportunities vs. eA All Global Equity Gross Universe

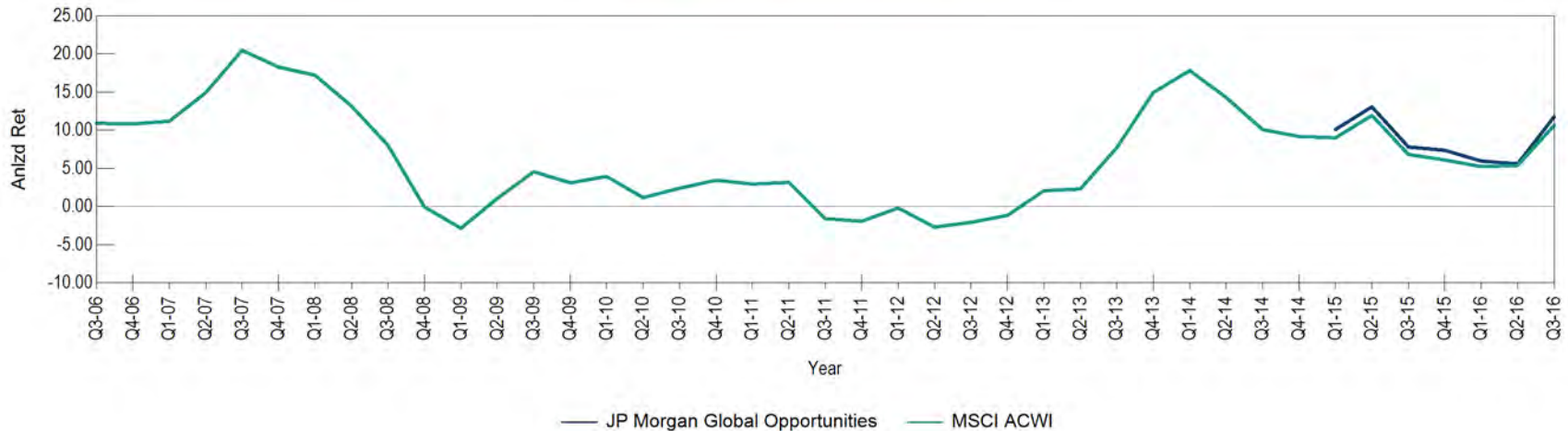


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	10.4	23.0	11.9	16.5	10.3	8.5	17.1	38.6	29.5	4.0
25th Percentile	6.8	14.8	8.4	13.7	7.0	3.0	7.4	30.6	20.4	-3.0
Median	5.3	12.2	6.6	12.4	5.6	0.1	4.6	26.2	17.2	-7.0
75th Percentile	3.4	9.2	4.8	11.0	4.5	-2.9	1.5	20.0	14.4	-11.2
95th Percentile	0.6	4.6	-0.8	5.4	1.9	-15.1	-7.4	2.7	7.4	-18.7
# of Portfolios	710	709	668	574	312	692	609	552	475	434
● JP Morgan Global Opportunities	6.1 (36)	8.8 (78)	4.9 (74)	11.8 (62)	-- (--)	-2.9 (75)	6.7 (30)	26.9 (46)	19.2 (32)	-9.0 (63)
▲ MSCI ACWI	5.3 (51)	12.0 (52)	5.2 (70)	10.6 (78)	4.3 (78)	-2.4 (73)	4.2 (54)	22.8 (66)	16.1 (61)	-7.3 (53)

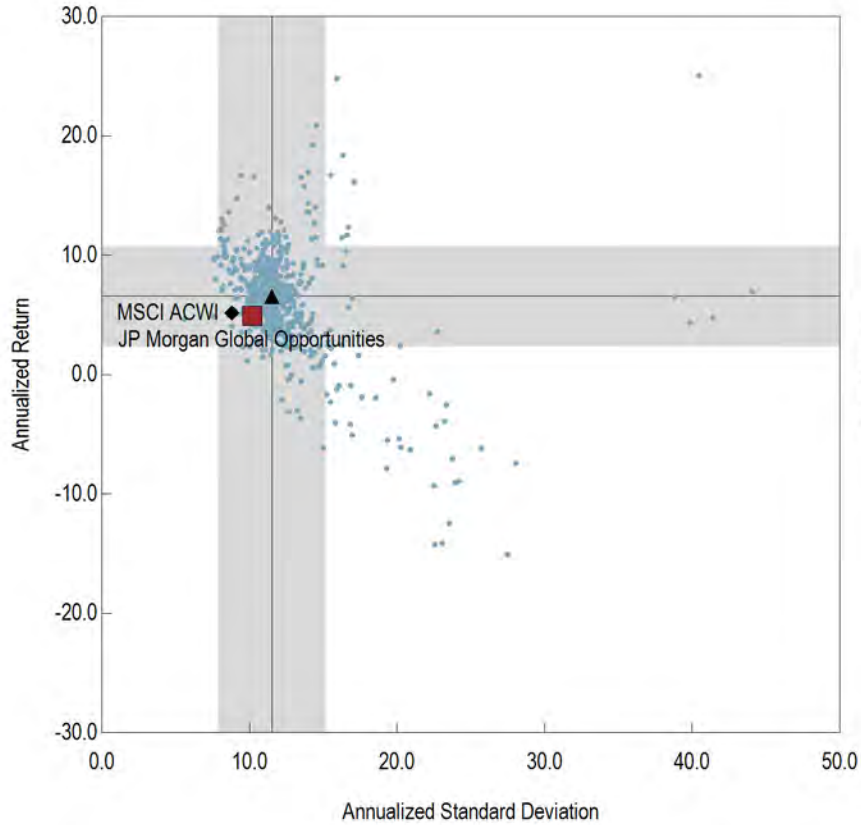
Rolling 3 Year Annualized Return (%)



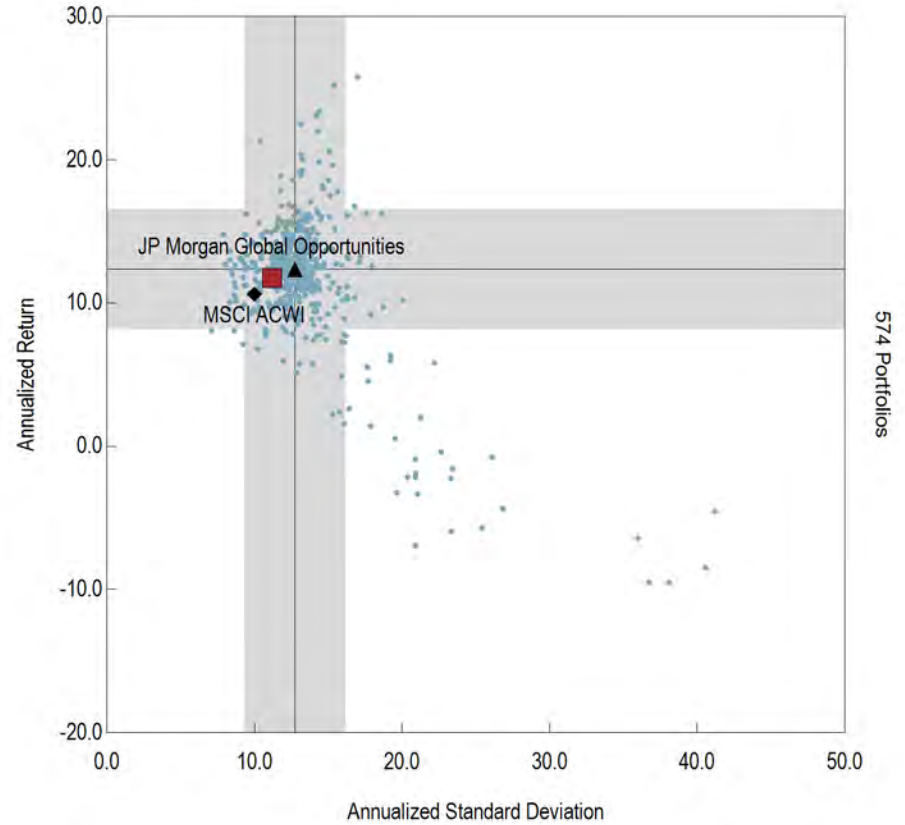
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	4.9%	10.2%	0.5
MSCI ACWI	5.2%	8.8%	0.6
eA All Global Equity Gross Median	6.6%	11.5%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
JP Morgan Global Opportunities	11.8%	11.2%	1.0
MSCI ACWI	10.6%	10.0%	1.1
eA All Global Equity Gross Median	12.4%	12.7%	1.0

## **Domestic Fixed Income Managers**

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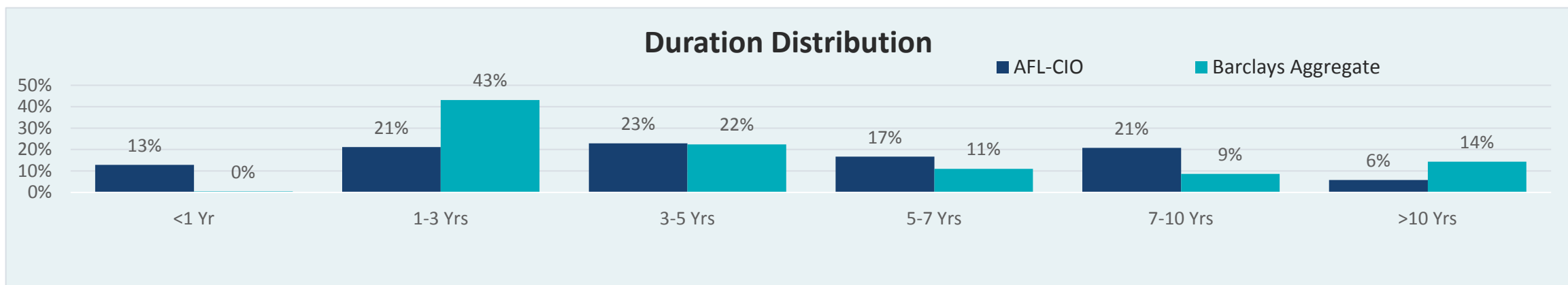
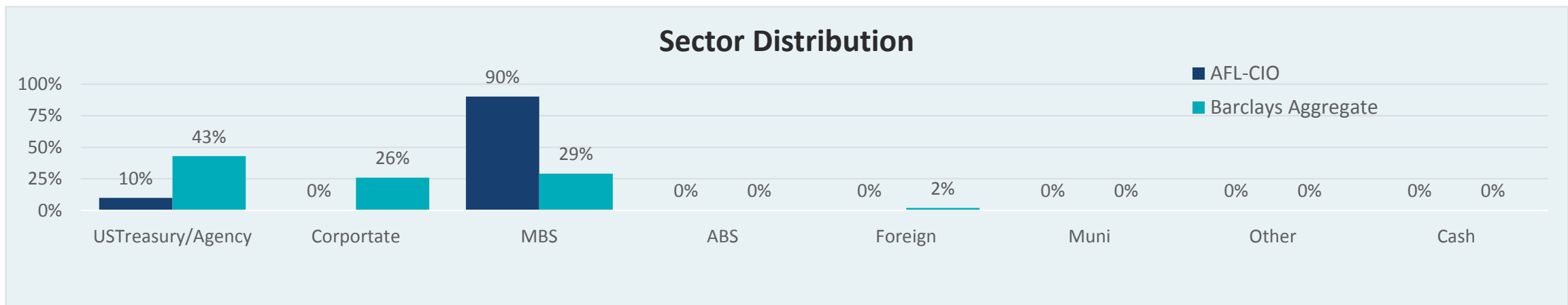
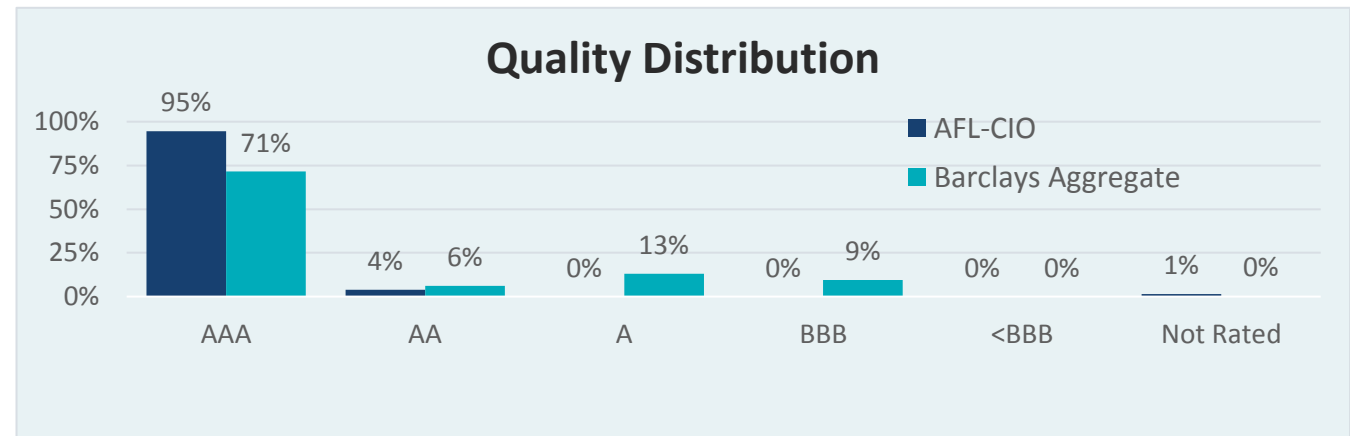
# AFL-CIO

## Manager Portfolio Overview

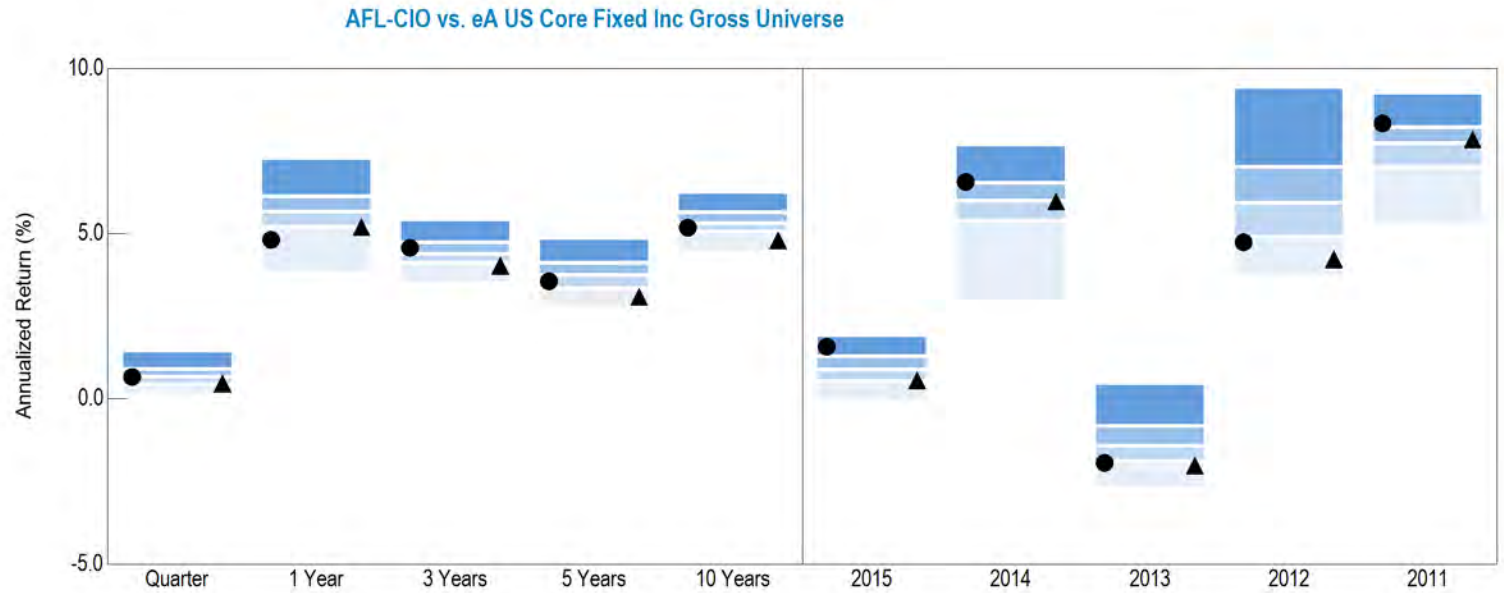
Period Ending: September 30, 2016

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

	AFL-CIO	Barclays Aggregate
Effective Duration	5.27	5.45
Yield to Maturity	3.10	1.91
Average Quality	AAA	AA+
Average Coupon	3.18%	3.19%

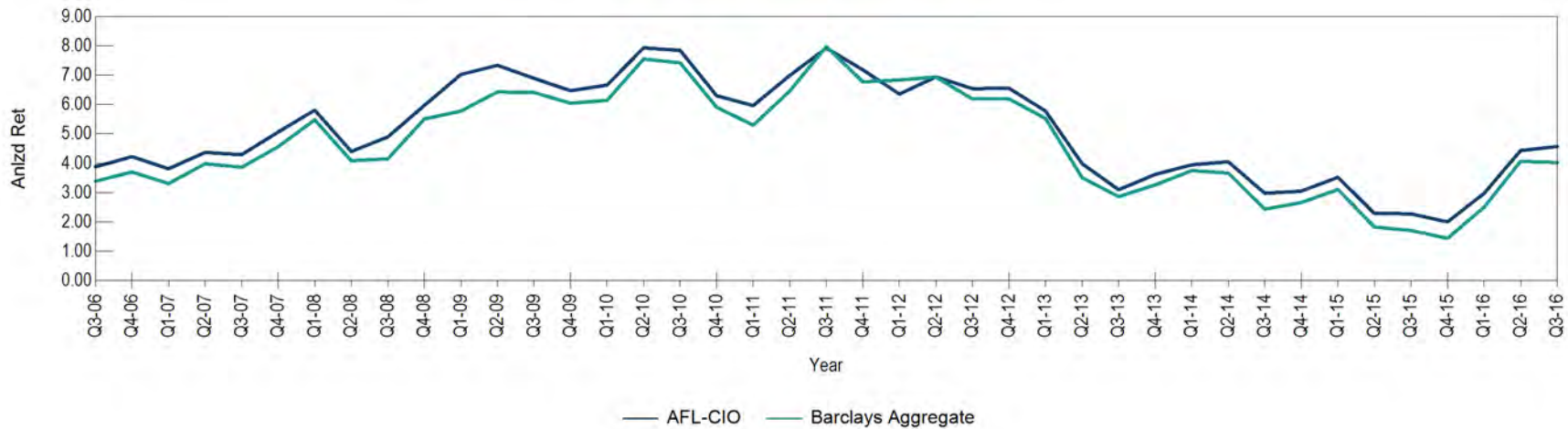


Duration and Quality distributions exclude cash.

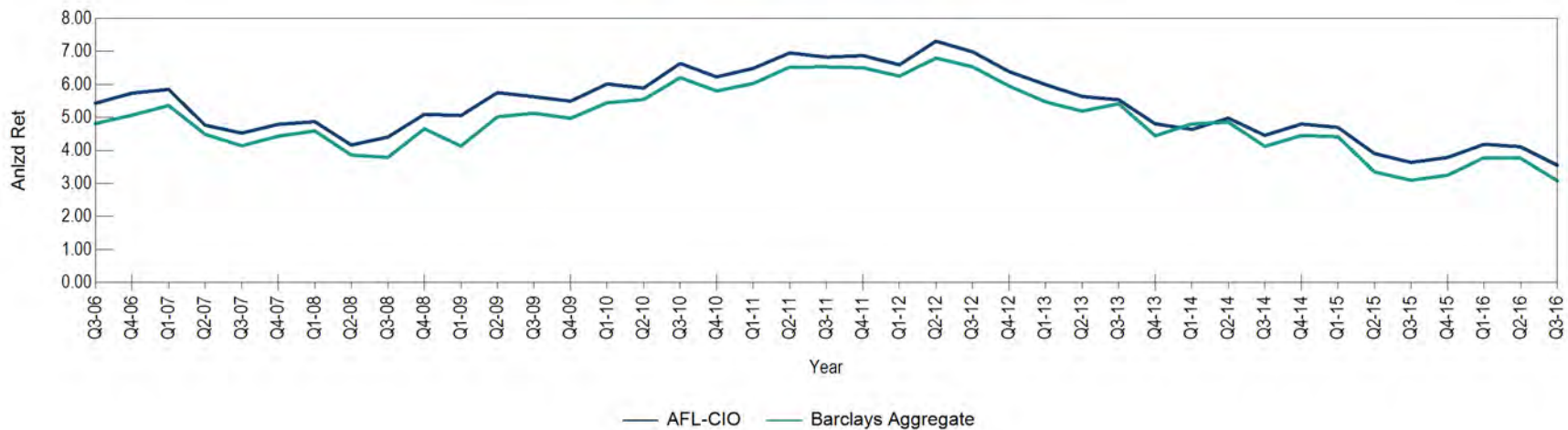


	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	1.4	7.3	5.4	4.9	6.3	1.9	7.7	0.5	9.4	9.2
<b>25th Percentile</b>	0.9	6.1	4.8	4.1	5.7	1.3	6.5	-0.8	7.0	8.2
<b>Median</b>	0.7	5.7	4.4	3.8	5.3	0.9	6.0	-1.4	5.9	7.7
<b>75th Percentile</b>	0.4	5.2	4.1	3.4	5.1	0.5	5.4	-1.9	4.9	7.0
<b>95th Percentile</b>	0.1	3.8	3.5	2.8	4.5	-0.1	2.9	-2.7	3.7	5.3
<b># of Portfolios</b>	192	192	192	190	167	196	213	209	228	213
<b>● AFL-CIO</b>	0.7 (52)	4.8 (88)	4.6 (36)	3.6 (63)	5.2 (67)	1.6 (15)	6.6 (25)	-1.9 (78)	4.7 (80)	8.3 (23)
<b>▲ Barclays Aggregate</b>	0.5 (73)	5.2 (76)	4.0 (81)	3.1 (90)	4.8 (89)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)



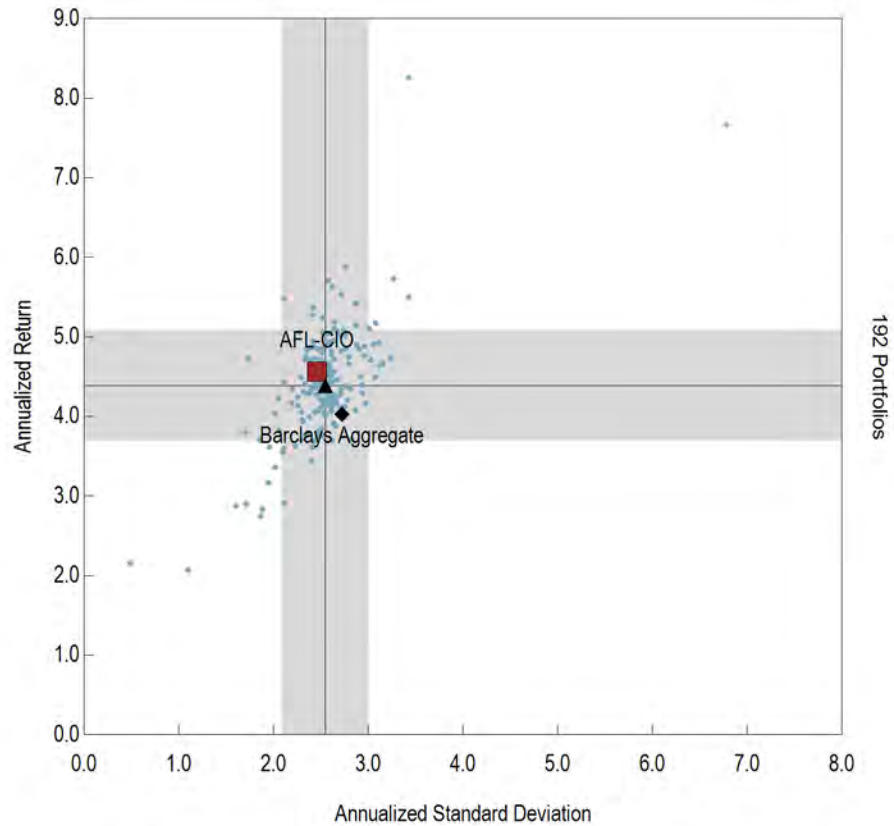


# AFL-CIO

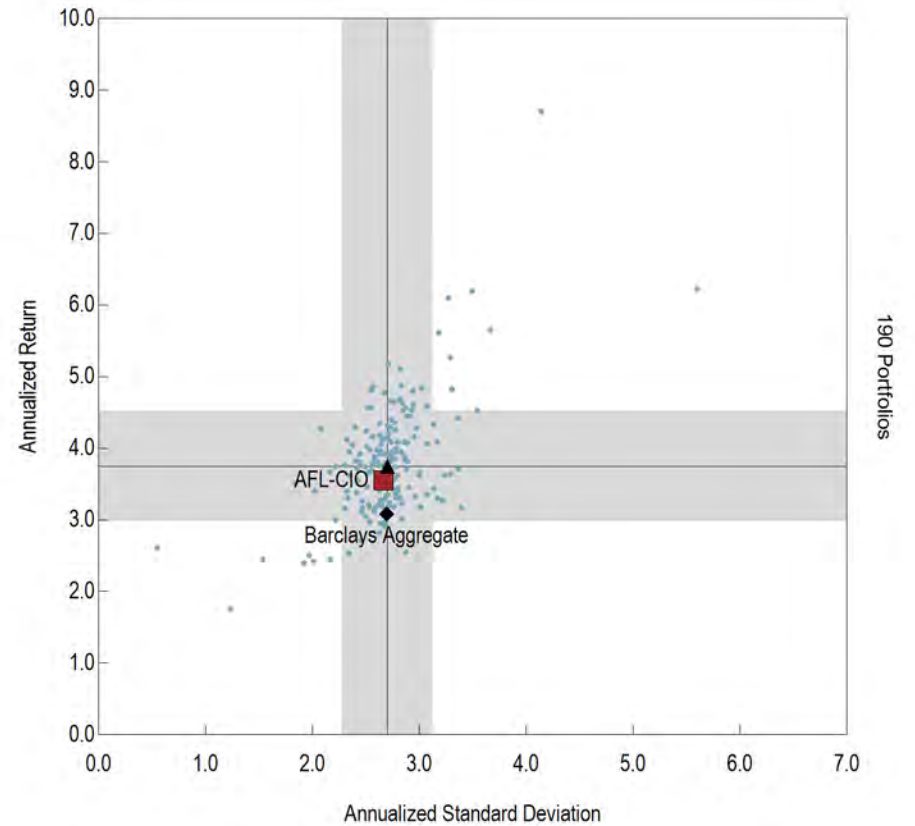
## Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	4.6%	2.5%	1.8
Barclays Aggregate	4.0%	2.7%	1.4
eA US Core Fixed Inc Gross Median	4.4%	2.5%	1.7

5 Years

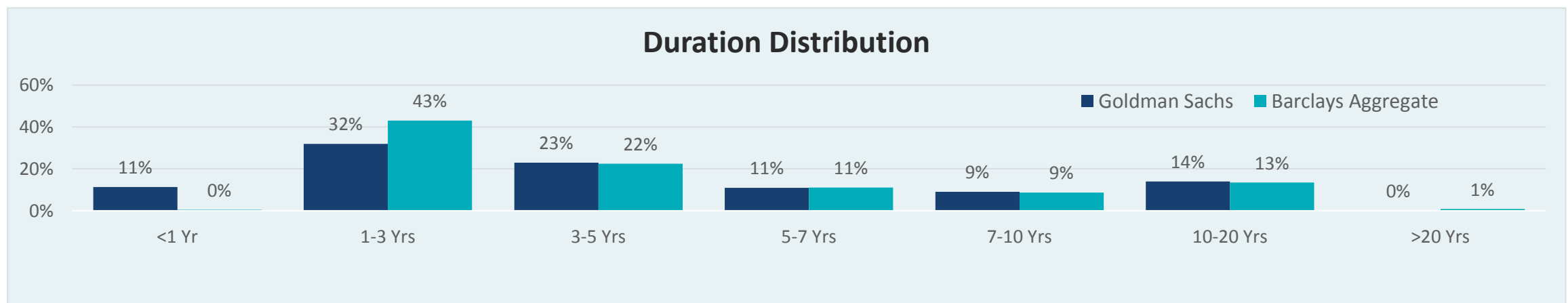
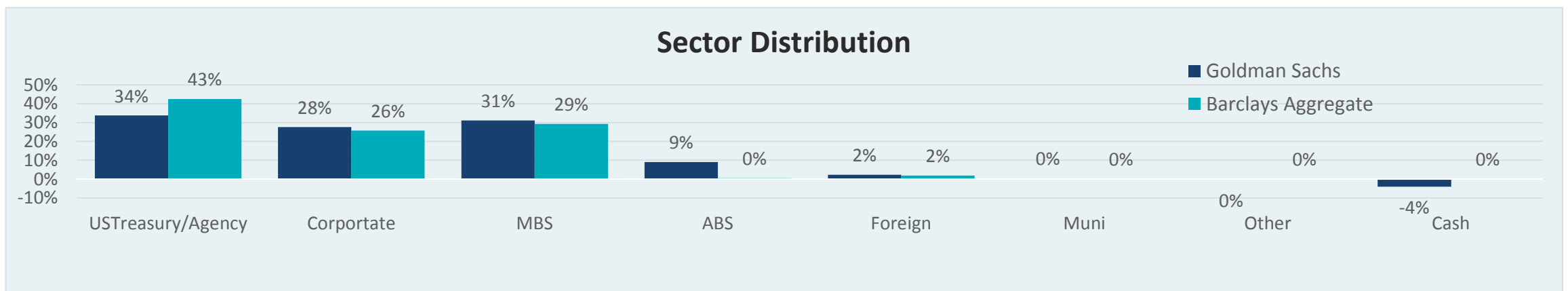
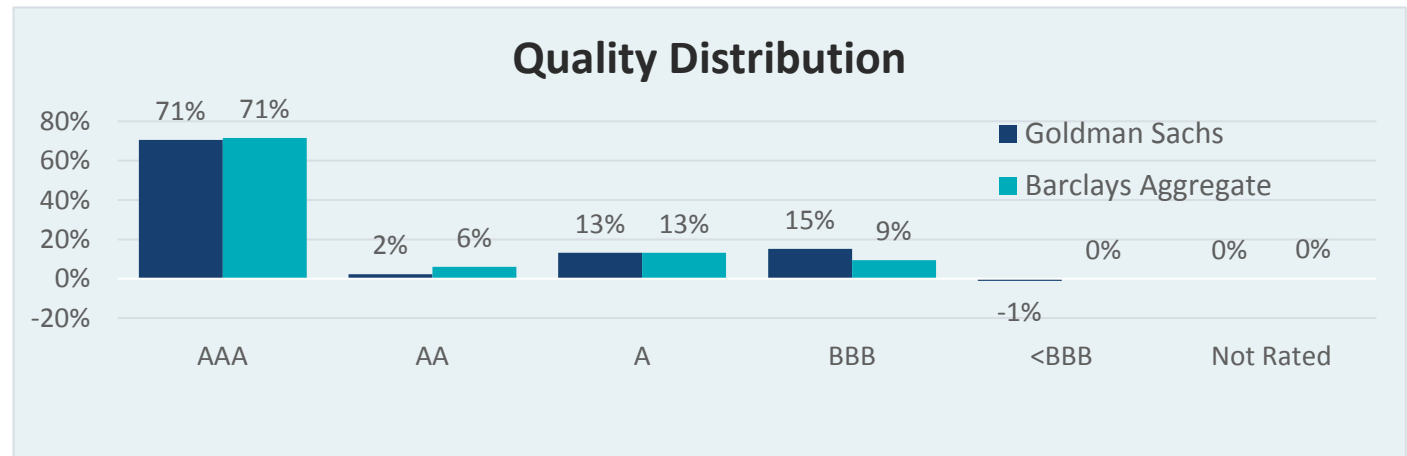
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	3.6%	2.7%	1.3
Barclays Aggregate	3.1%	2.7%	1.1
eA US Core Fixed Inc Gross Median	3.8%	2.7%	1.4

# Goldman Sachs Core Plus Manager Portfolio Overview

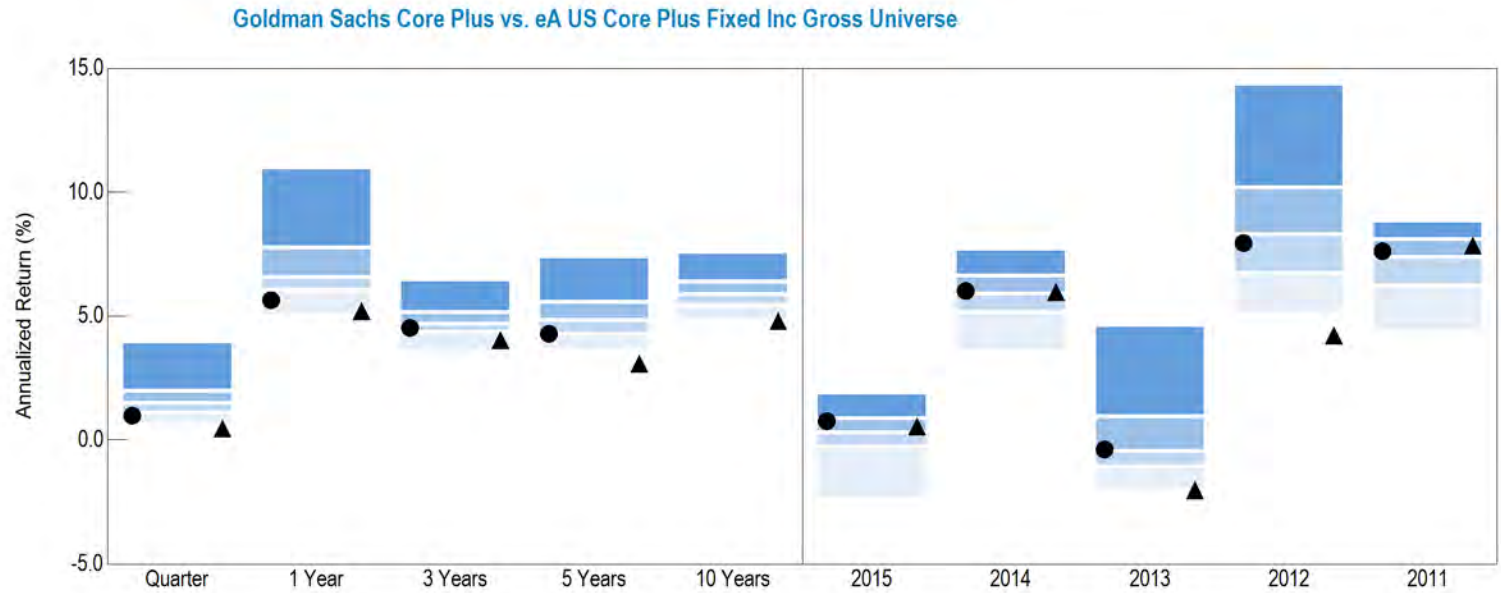
Period Ending: September 30, 2016

Domestic core plus fixed income portfolio with a focus on security selection seeking enhanced returns. Primary personnel include Jonathan Beinler.

	Goldman Sachs	Barclays Aggregate
Option Adjusted Duration	5.30	5.42
Yield to Maturity	2.48	1.91
Average Quality	AA	AA+
Average Coupon	3.37%	3.19%

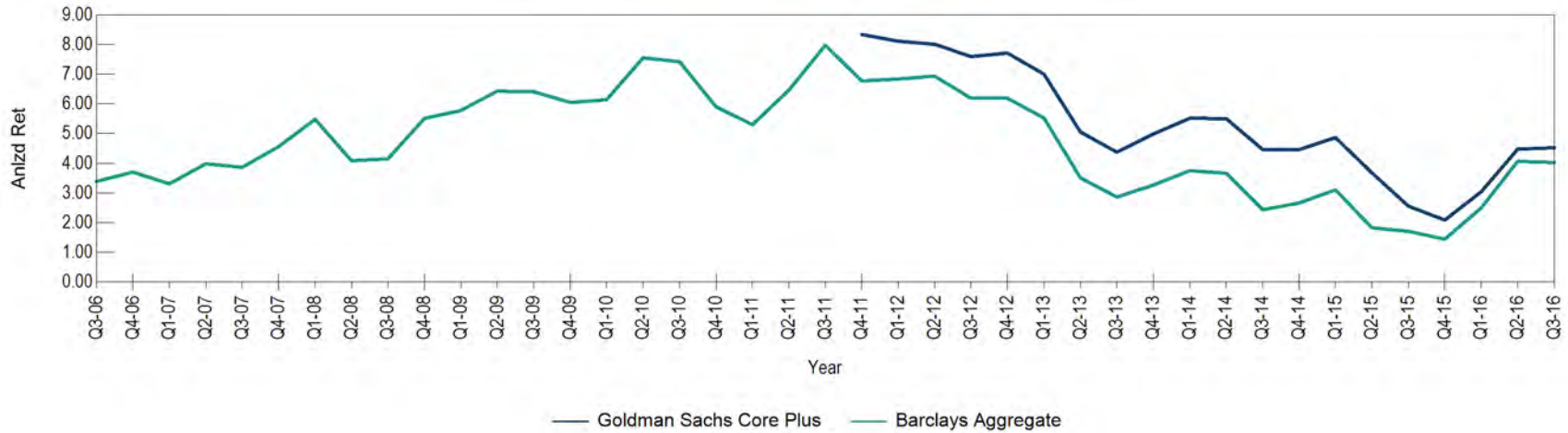


Duration and Quality distributions exclude cash.

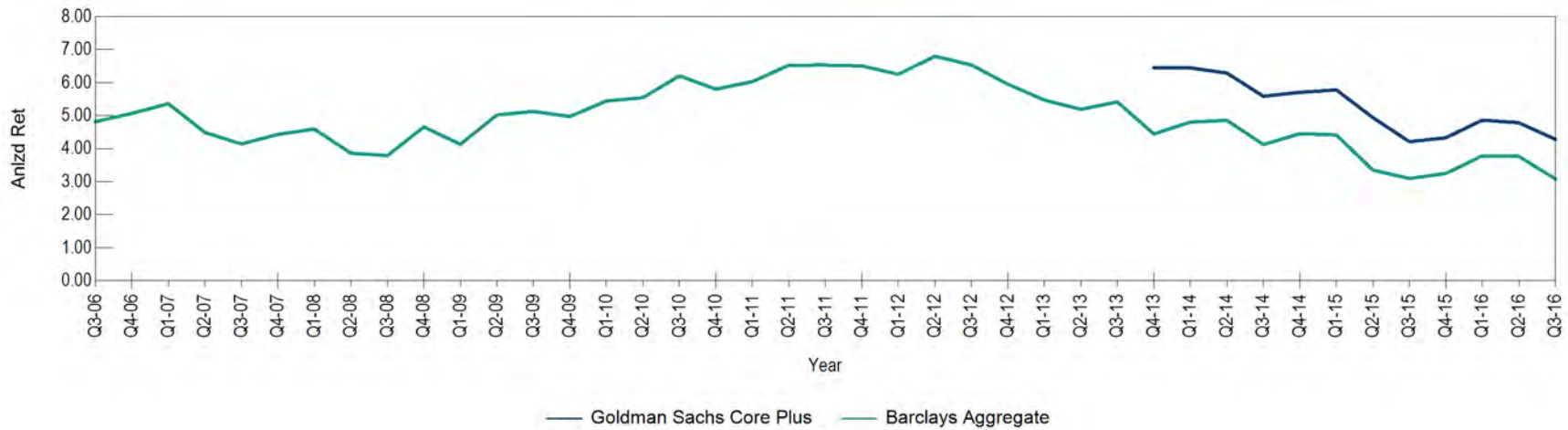


	Return (Rank)										
5th Percentile	4.0	11.0	6.5	7.4	7.6	1.9	7.7	4.6	14.4	8.8	
25th Percentile	2.0	7.8	5.2	5.6	6.4	0.9	6.7	1.0	10.2	8.1	
Median	1.5	6.6	4.7	4.9	5.9	0.3	5.9	-0.4	8.3	7.4	
75th Percentile	1.1	6.1	4.4	4.3	5.5	-0.2	5.2	-1.0	6.7	6.3	
95th Percentile	0.6	5.0	3.5	3.6	4.8	-2.4	3.6	-2.0	5.1	4.4	
# of Portfolios	124	124	122	119	94	115	118	116	124	118	
● Goldman Sachs Core Plus	1.0 (83)	5.6 (89)	4.5 (64)	4.3 (76)	-- (--)	0.8 (36)	6.0 (47)	-0.4 (49)	7.9 (59)	7.6 (43)	
▲ Barclays Aggregate	0.5 (99)	5.2 (94)	4.0 (89)	3.1 (99)	4.8 (96)	0.6 (42)	6.0 (50)	-2.0 (96)	4.2 (97)	7.8 (37)	

Rolling 3 Year Annualized Return (%)

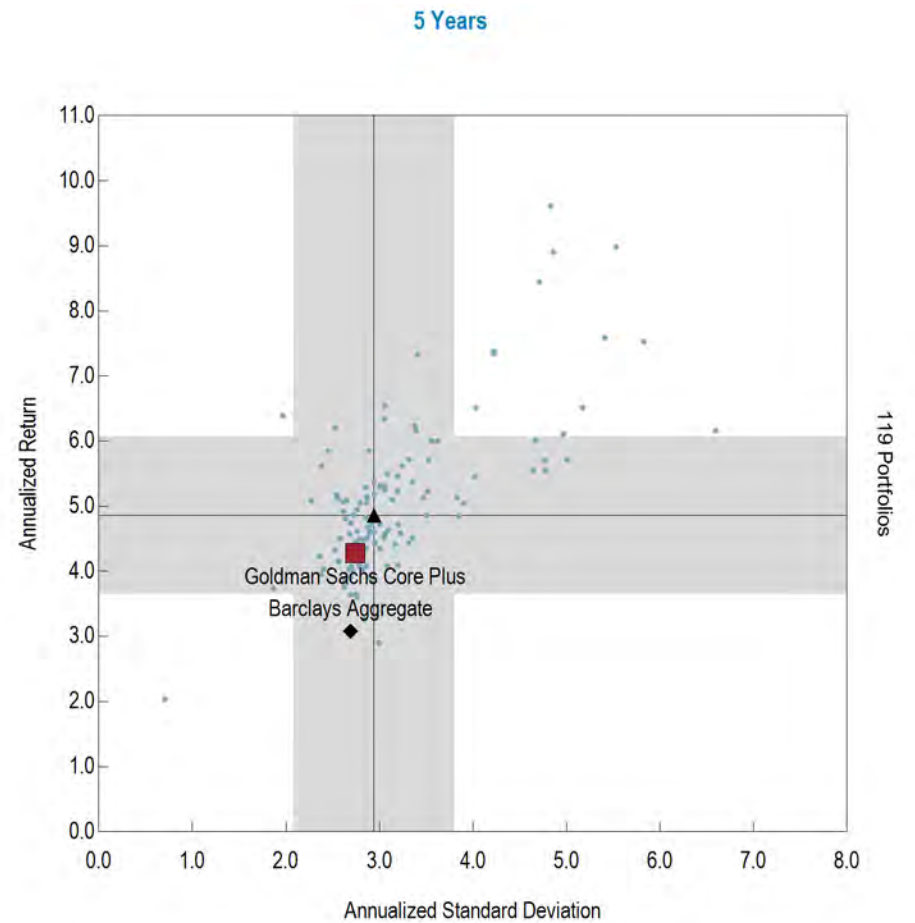
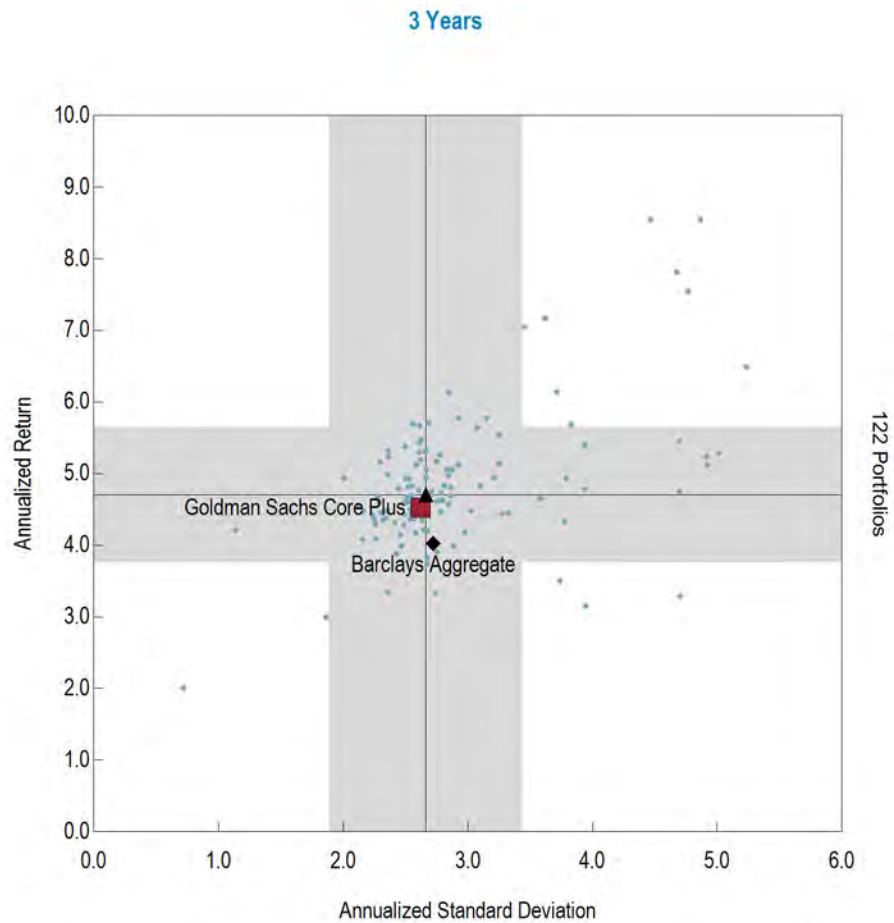


Rolling 5 Year Annualized Return (%)



Goldman Sachs Core Plus  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: September 30, 2016



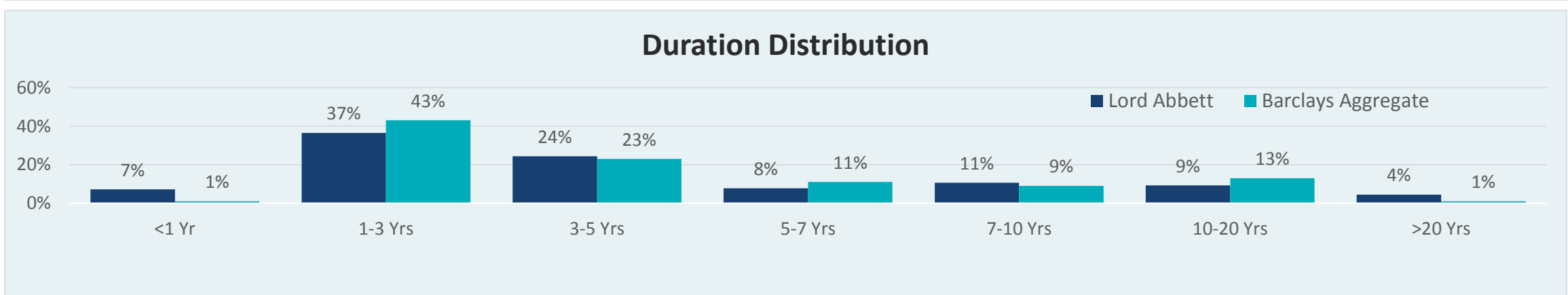
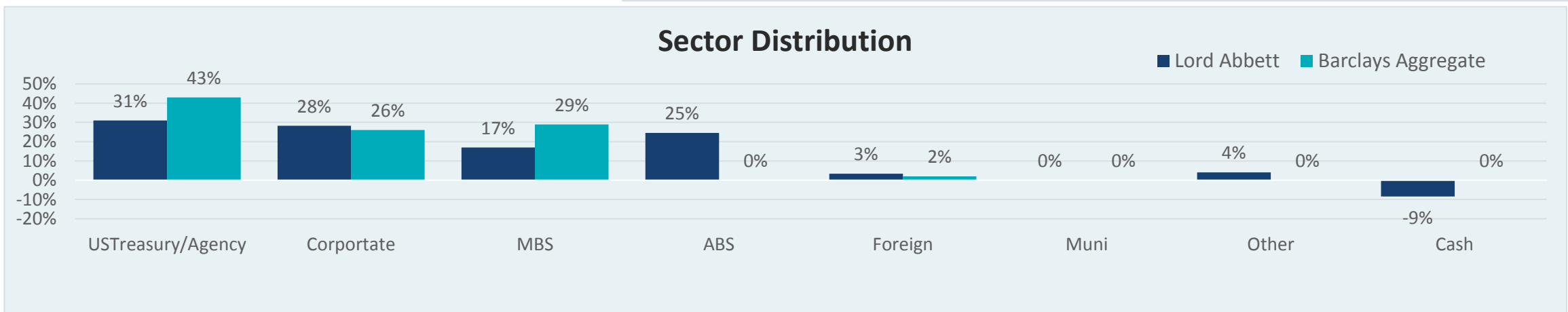
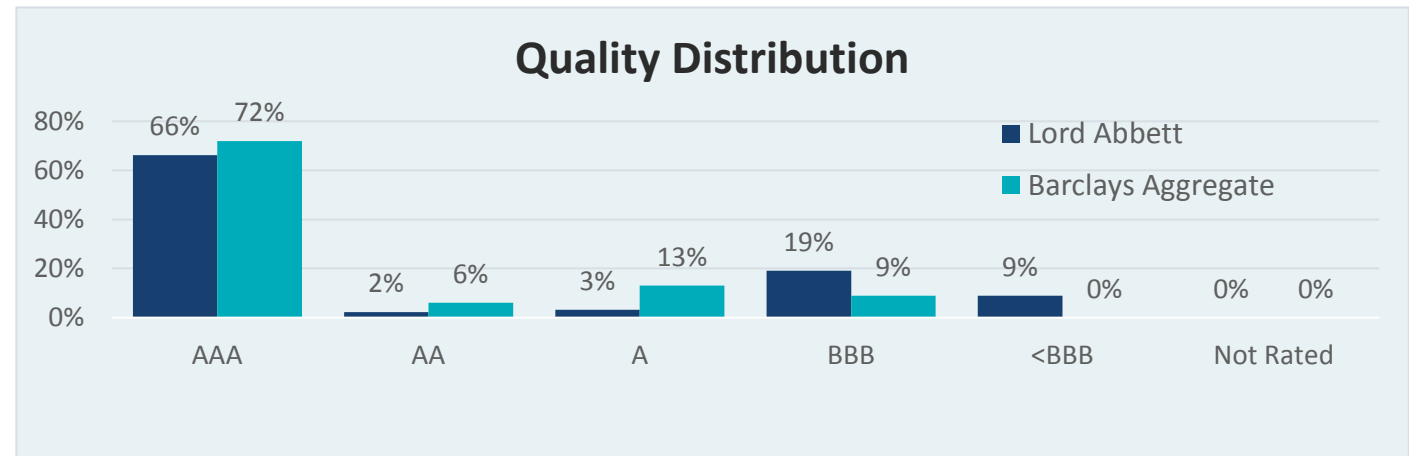
	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	
Goldman Sachs Core Plus	4.5%	2.6%	1.7	Goldman Sachs Core Plus	4.3%	2.7%	1.5
Barclays Aggregate	4.0%	2.7%	1.4	Barclays Aggregate	3.1%	2.7%	1.1
eA US Core Plus Fixed Inc Gross Median	4.7%	2.7%	1.7	eA US Core Plus Fixed Inc Gross Median	4.9%	2.9%	1.6

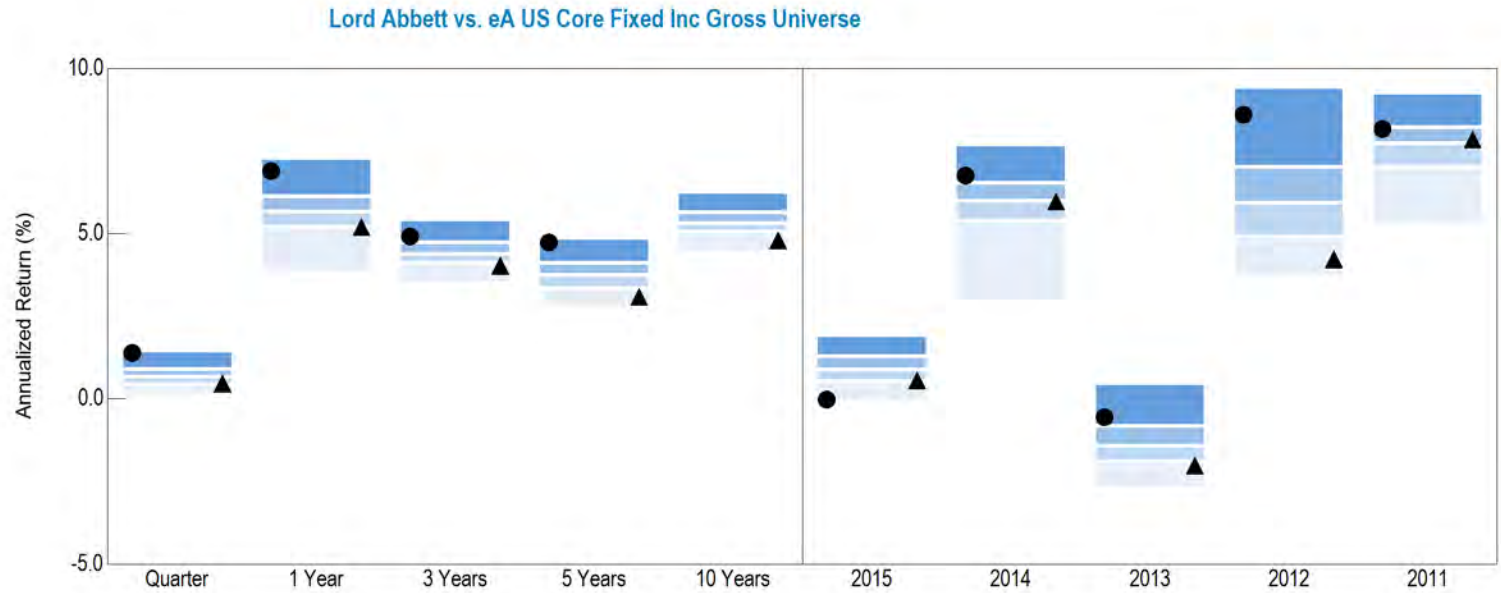
# Lord Abbett Manager Portfolio Overview

Period Ending: September 30, 2016

Domestic core plus fixed income portfolio that is duration-neutral with a focus on sector selection seeking enhanced returns. Primary personnel include Robert Lee and Robert Gerber.

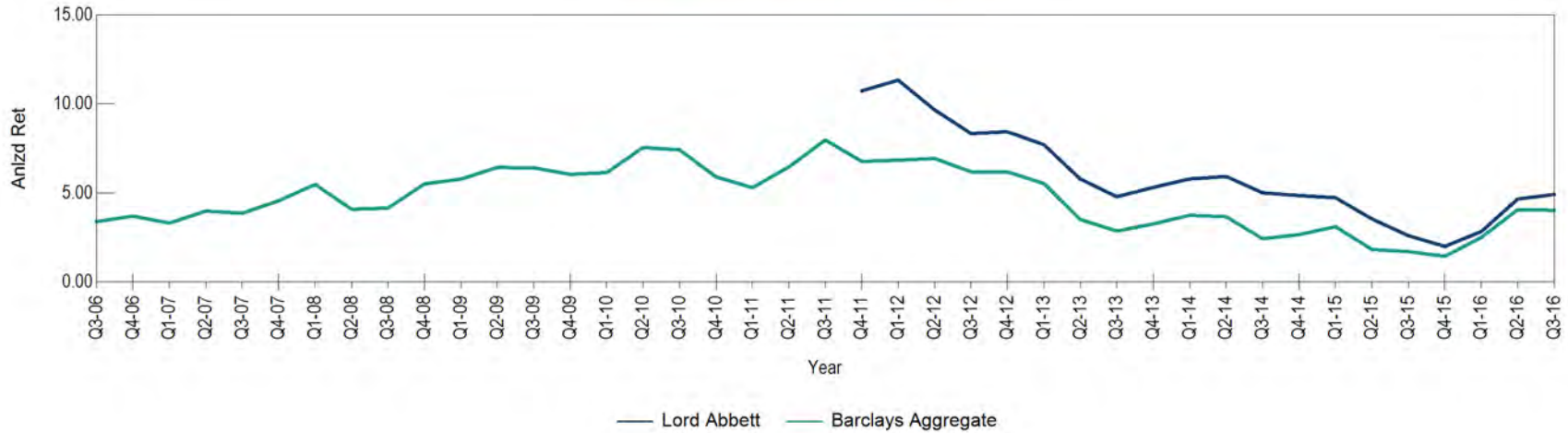
	Lord Abbett	Barclays Aggregate
Effective Duration	5.40	5.45
Yield to Maturity	2.60	1.91
Average Quality	AA	AA+
Average Coupon	3.20%	3.19%



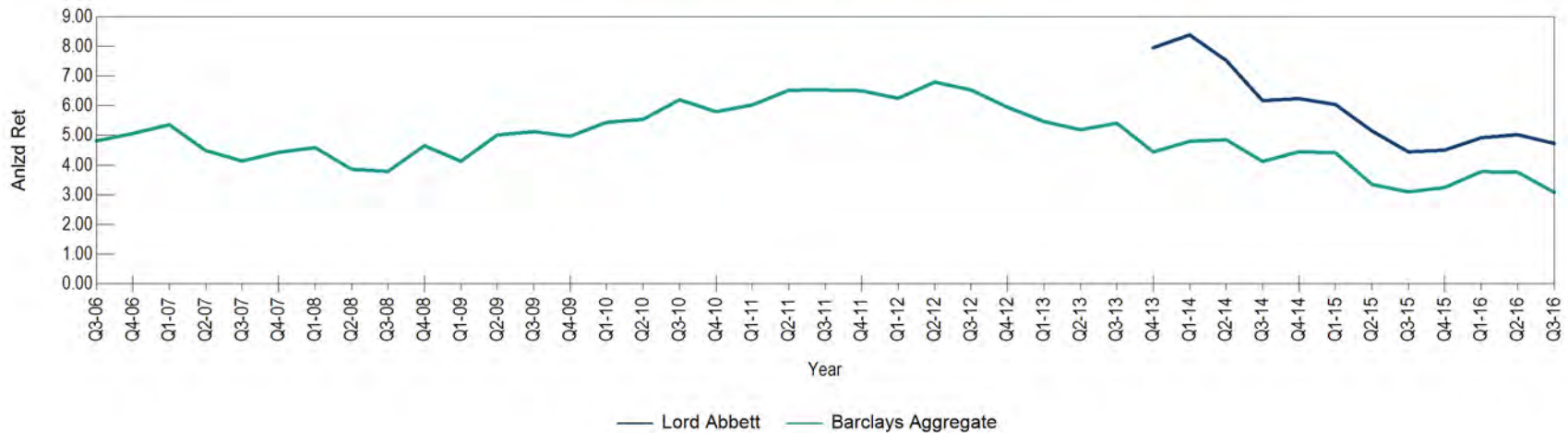


	Return (Rank)											
5th Percentile	1.4	7.3	5.4	4.9	6.3	1.9	7.7	0.5	9.4	9.2		
25th Percentile	0.9	6.1	4.8	4.1	5.7	1.3	6.5	-0.8	7.0	8.2		
Median	0.7	5.7	4.4	3.8	5.3	0.9	6.0	-1.4	5.9	7.7		
75th Percentile	0.4	5.2	4.1	3.4	5.1	0.5	5.4	-1.9	4.9	7.0		
95th Percentile	0.1	3.8	3.5	2.8	4.5	-0.1	2.9	-2.7	3.7	5.3		
# of Portfolios	192	192	192	190	167	196	213	209	228	213		
● Lord Abbett	1.4 (6)	6.9 (8)	4.9 (17)	4.7 (9)	-- (--)	0.0 (94)	6.7 (18)	-0.6 (18)	8.6 (8)	8.2 (27)		
▲ Barclays Aggregate	0.5 (73)	5.2 (76)	4.0 (81)	3.1 (90)	4.8 (89)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)		

Rolling 3 Year Annualized Return (%)

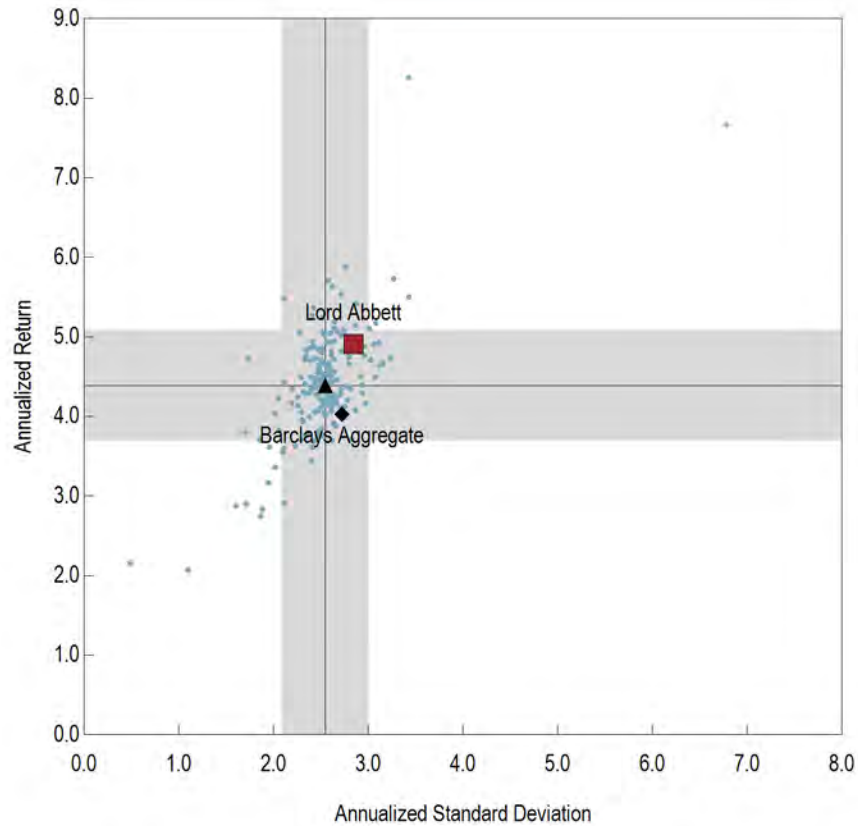


Rolling 5 Year Annualized Return (%)

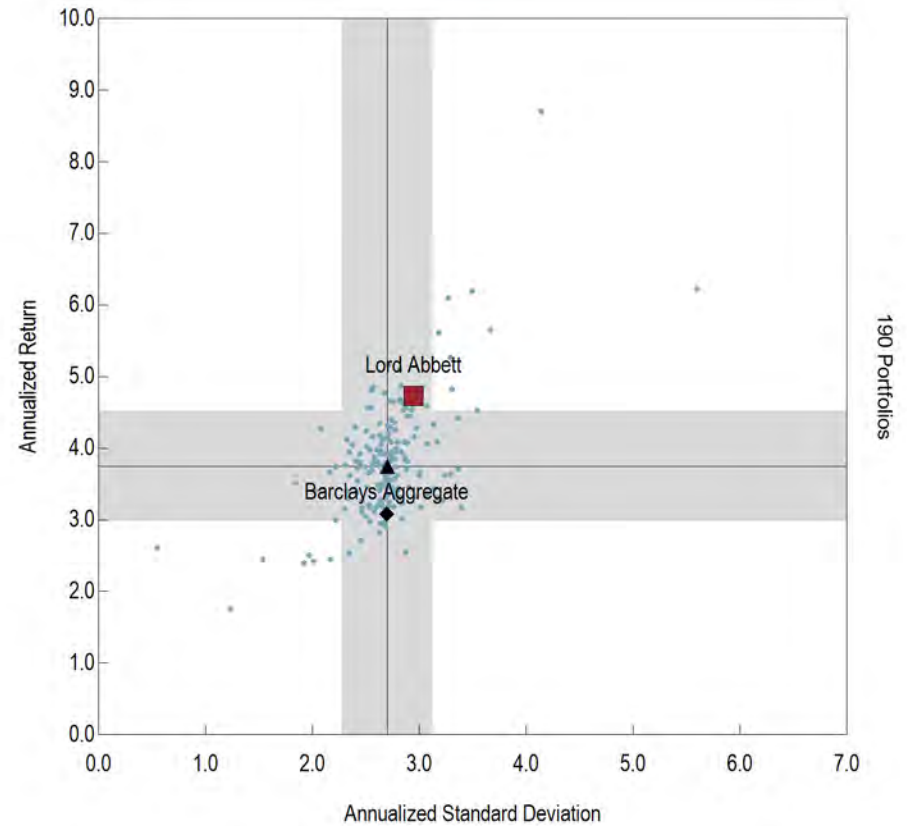




3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lord Abbett	4.9%	2.8%	1.7
Barclays Aggregate	4.0%	2.7%	1.4
eA US Core Fixed Inc Gross Median	4.4%	2.5%	1.7

5 Years

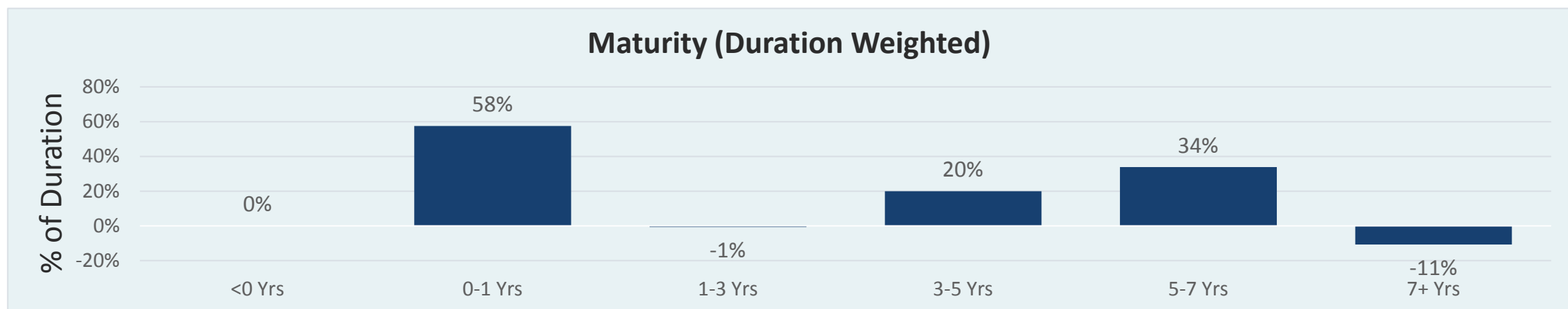
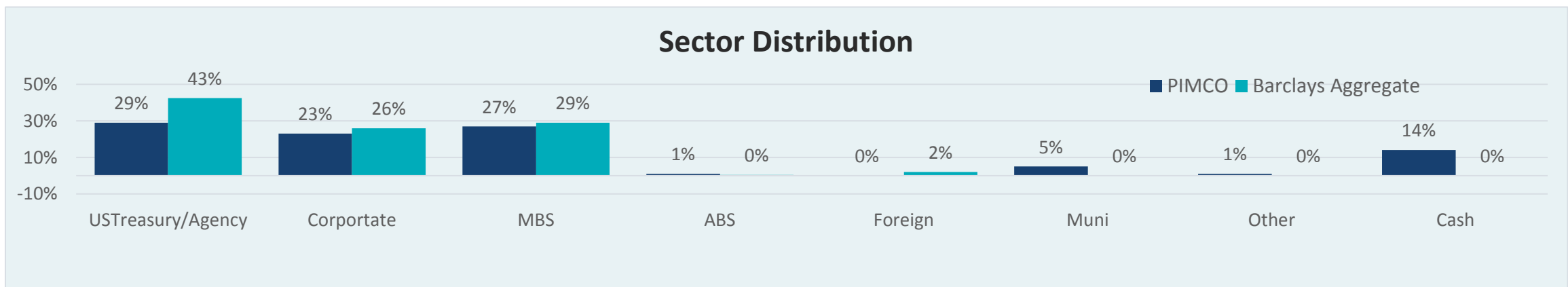
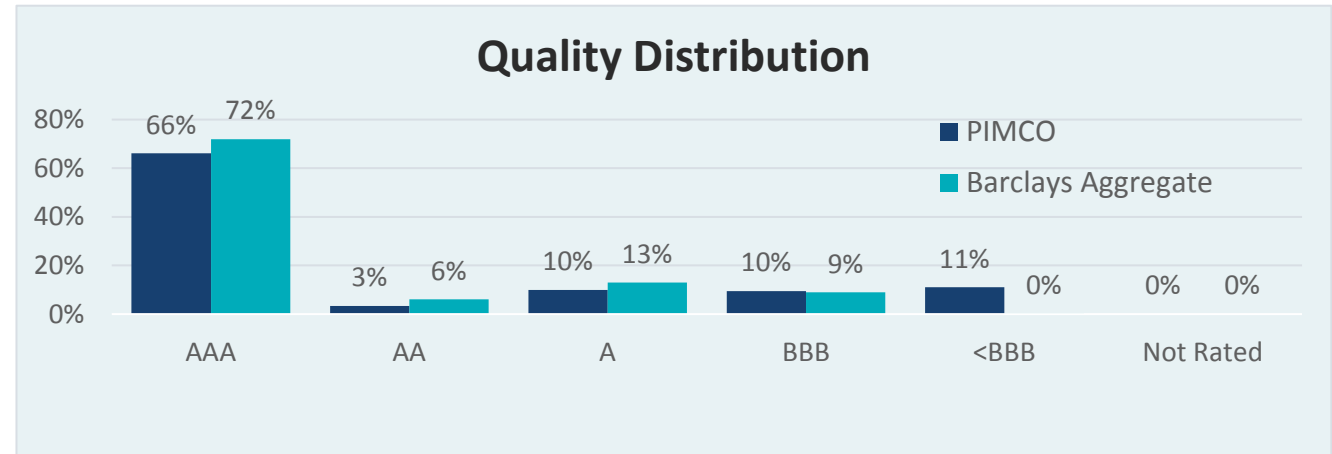
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lord Abbett	4.7%	2.9%	1.6
Barclays Aggregate	3.1%	2.7%	1.1
eA US Core Fixed Inc Gross Median	3.8%	2.7%	1.4

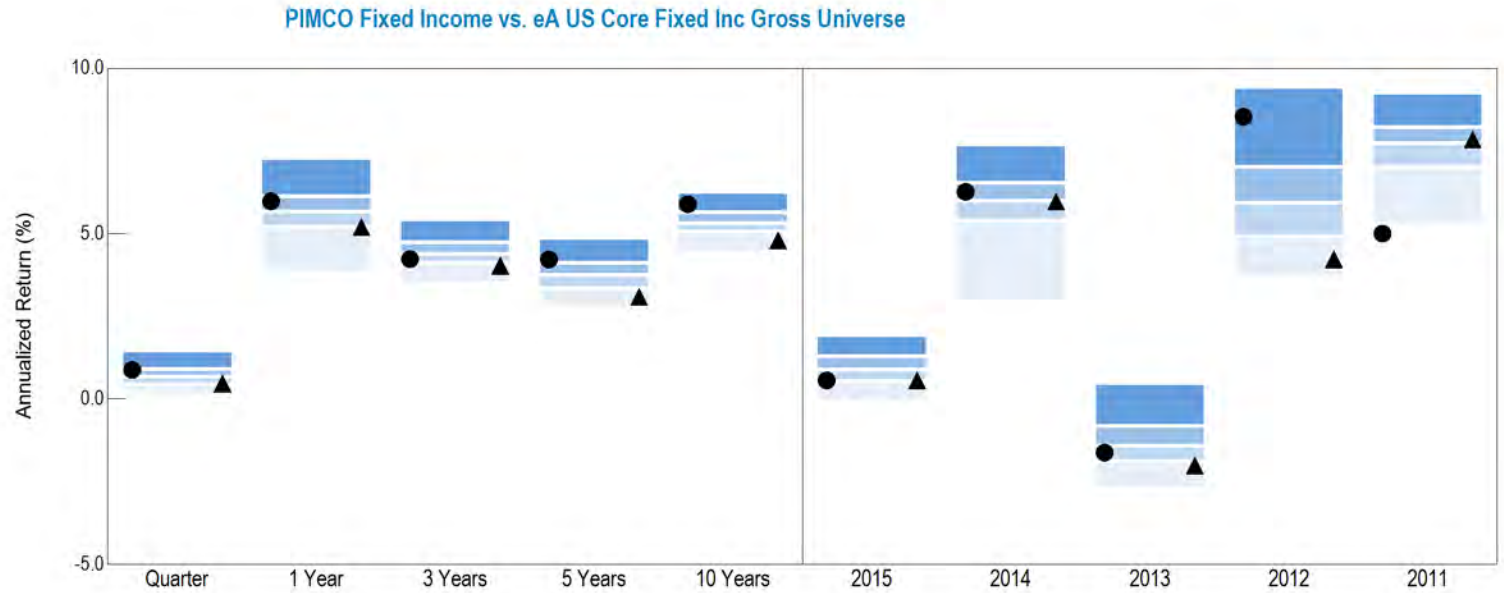
# PIMCO Fixed Income Manager Portfolio Overview

Period Ending: September 30, 2016

Domestic core plus fixed income portfolio seeking enhanced returns through sector and security selection, yield curve structure, and duration decision.

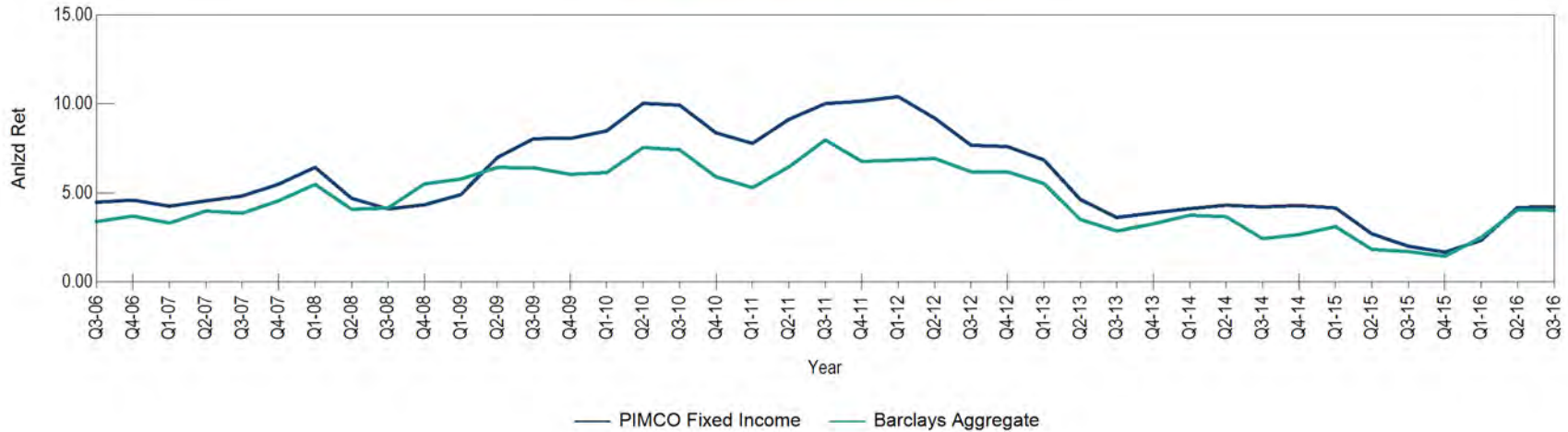
	PIMCO	Barclays Aggregate
Effective Duration	5.29	5.45
Yield to Maturity	2.21	1.91
Average Quality	AA	AA+
Average Coupon	3.15%	3.19%



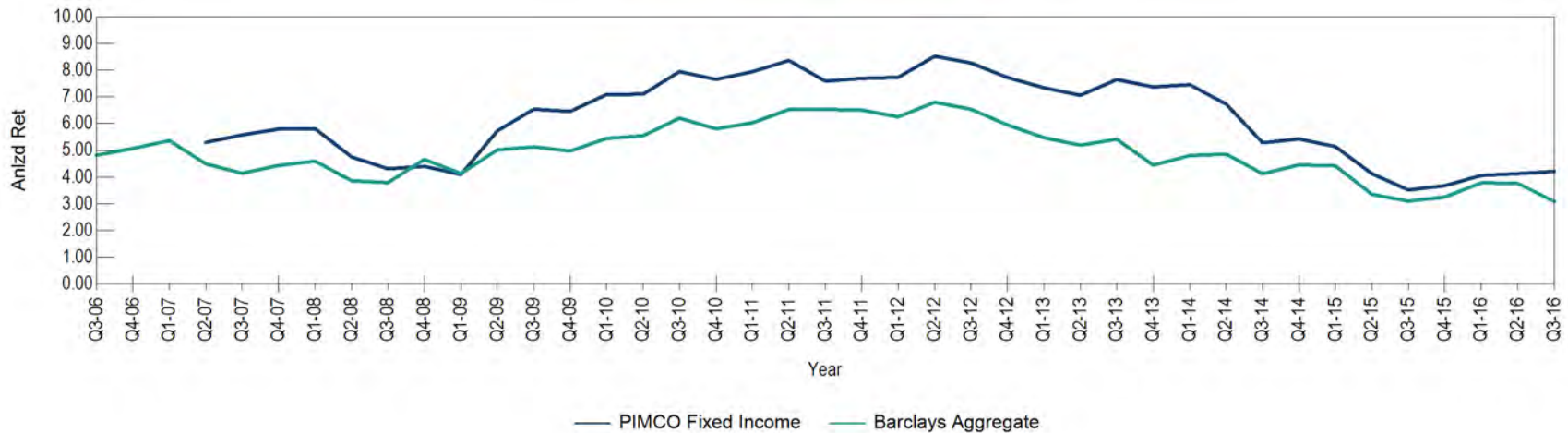


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
5th Percentile	1.4	7.3	5.4	4.9	6.3	1.9	7.7	0.5	9.4	9.2
25th Percentile	0.9	6.1	4.8	4.1	5.7	1.3	6.5	-0.8	7.0	8.2
Median	0.7	5.7	4.4	3.8	5.3	0.9	6.0	-1.4	5.9	7.7
75th Percentile	0.4	5.2	4.1	3.4	5.1	0.5	5.4	-1.9	4.9	7.0
95th Percentile	0.1	3.8	3.5	2.8	4.5	-0.1	2.9	-2.7	3.7	5.3
# of Portfolios	192	192	192	190	167	196	213	209	228	213
● PIMCO Fixed Income	0.9 (28)	6.0 (33)	4.2 (67)	4.2 (23)	5.9 (14)	0.5 (75)	6.3 (34)	-1.6 (61)	8.5 (8)	5.0 (97)
▲ Barclays Aggregate	0.5 (73)	5.2 (76)	4.0 (81)	3.1 (90)	4.8 (89)	0.6 (75)	6.0 (52)	-2.0 (82)	4.2 (90)	7.8 (46)

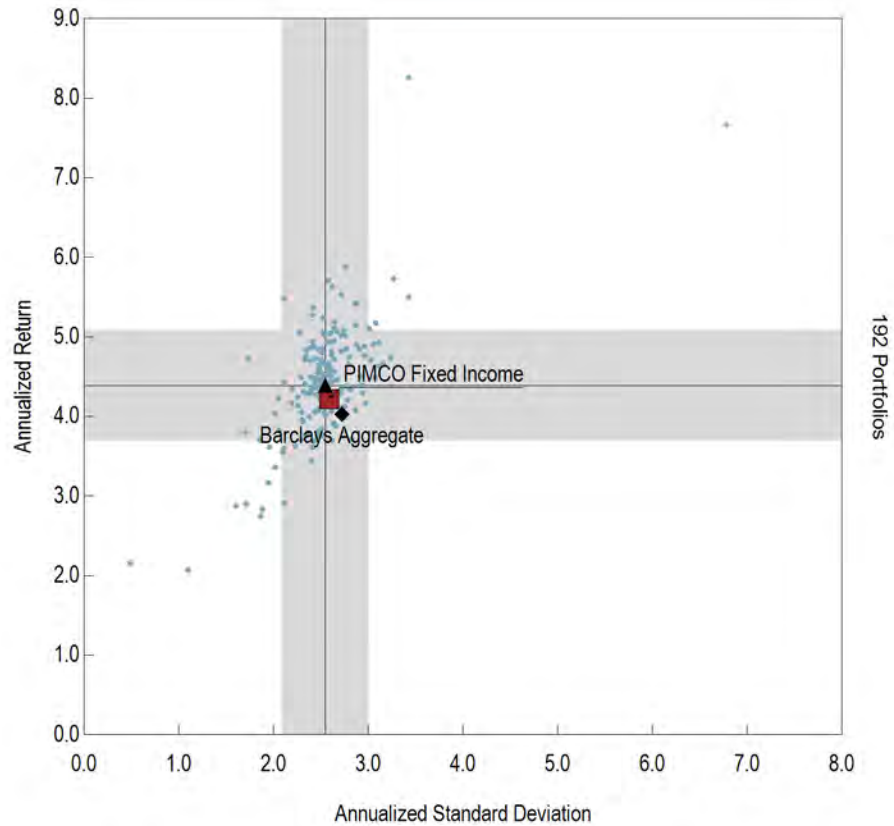
Rolling 3 Year Annualized Return (%)



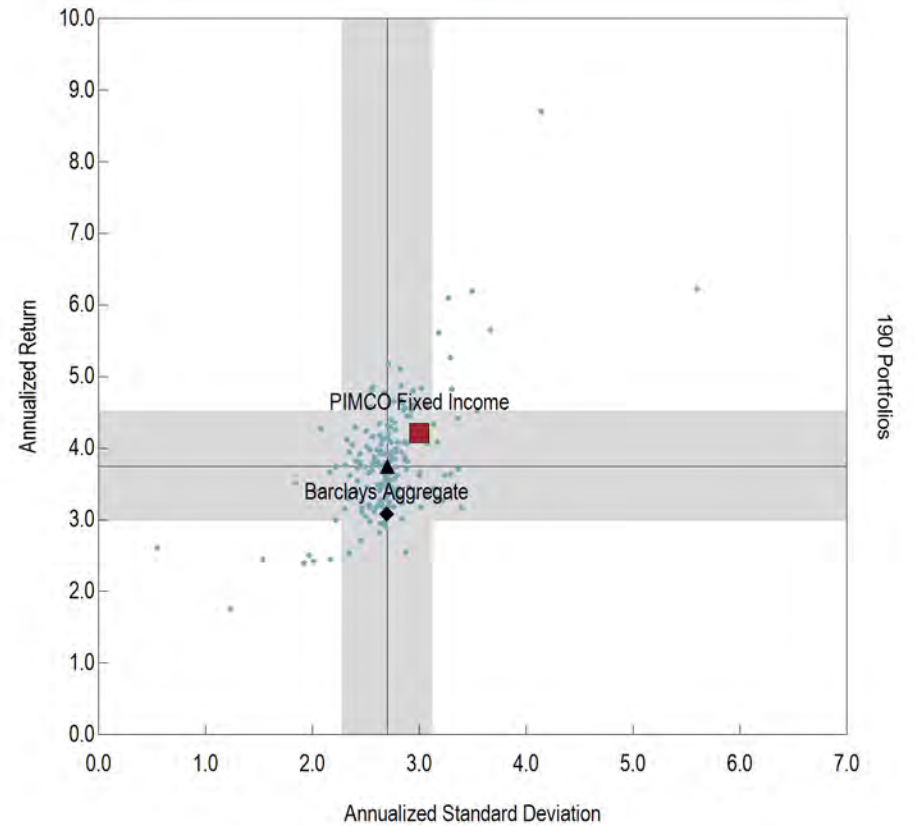
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Fixed Income	4.2%	2.6%	1.6
Barclays Aggregate	4.0%	2.7%	1.4
eA US Core Fixed Inc Gross Median	4.4%	2.5%	1.7

5 Years

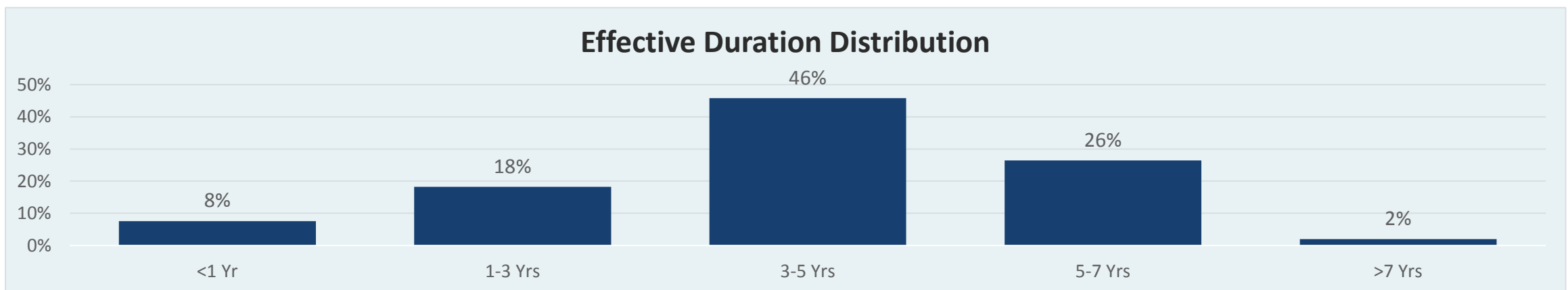
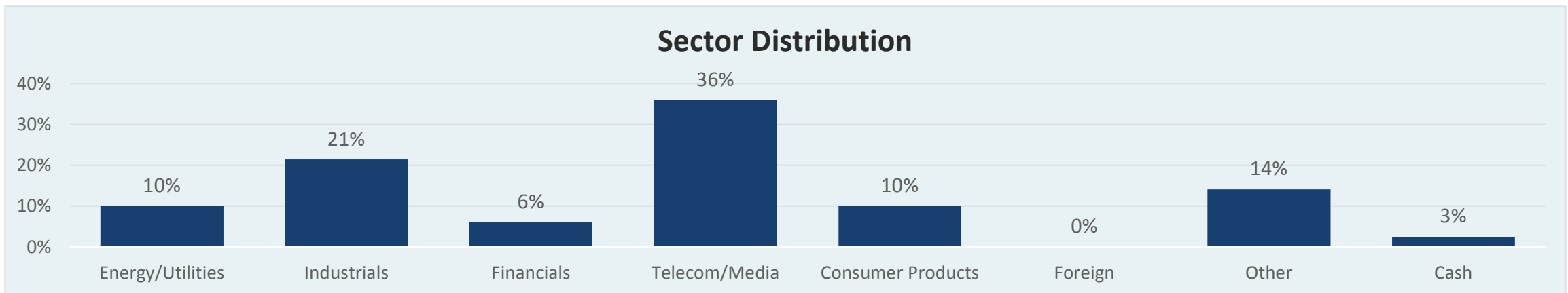
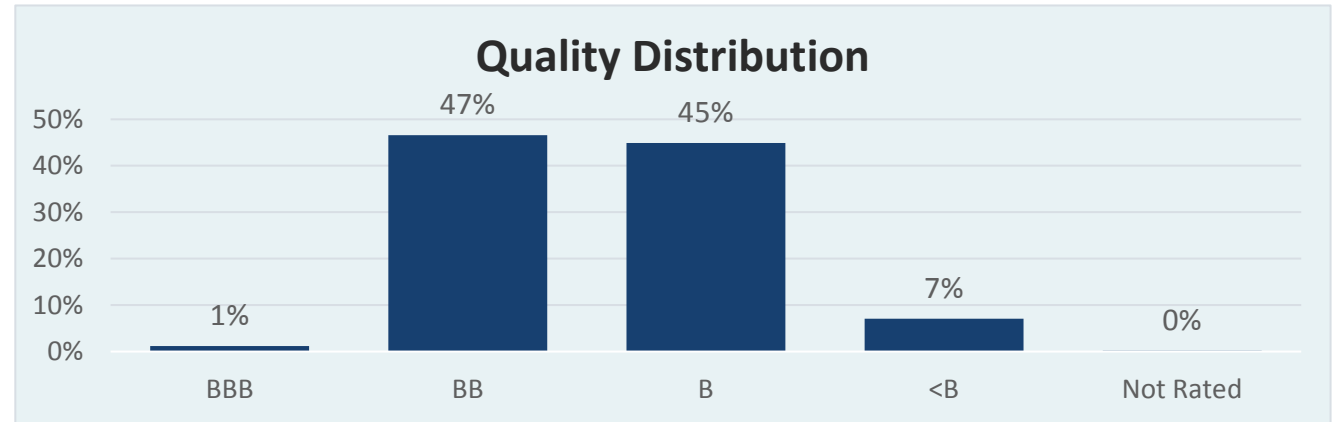
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Fixed Income	4.2%	3.0%	1.4
Barclays Aggregate	3.1%	2.7%	1.1
eA US Core Fixed Inc Gross Median	3.8%	2.7%	1.4

## High Yield Managers

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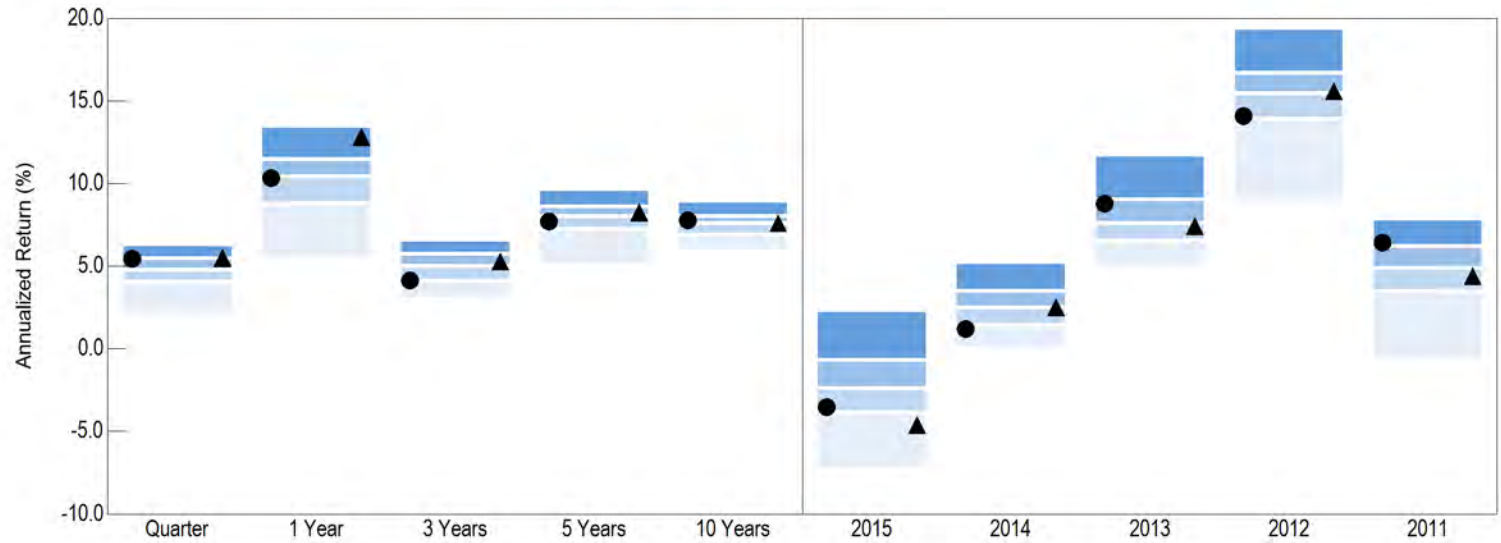
Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	BofA ML HY Master II
Effective Duration	4.0	4.3
Yield to Maturity	6.9	6.6
Average Quality	B1	B1
Average Coupon	6.9%	6.5%



Quality distribution excludes cash.

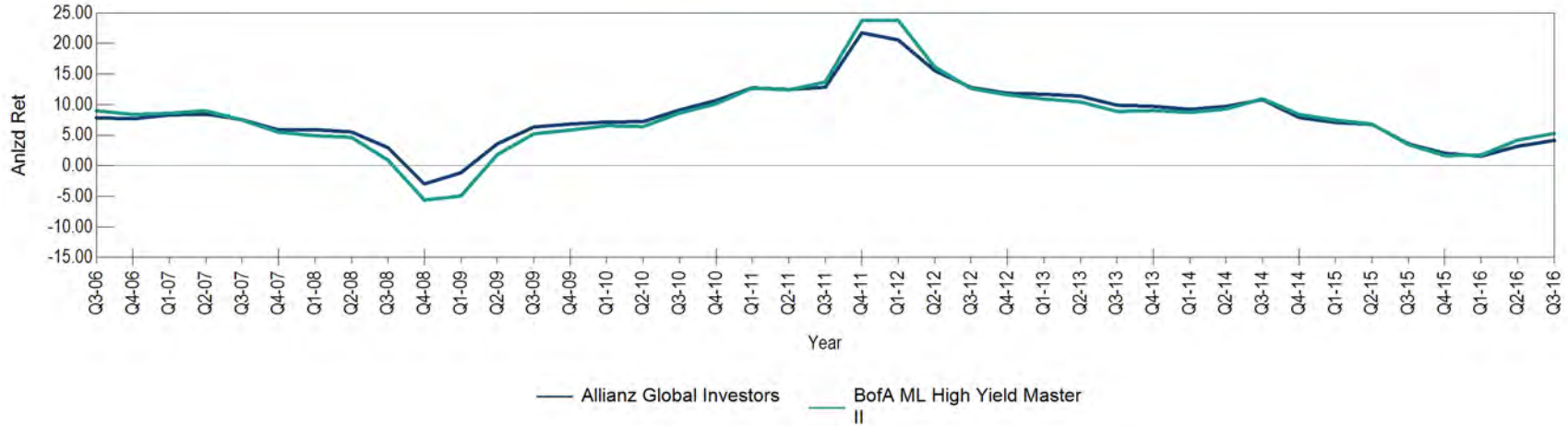
Allianz Global Investors vs. eA US High Yield Fixed Inc Gross Universe



	Quarter	1 Year	3 Years	5 Years	10 Years	2015	2014	2013	2012	2011
<b>5th Percentile</b>	6.3	13.5	6.6	9.6	8.9	2.3	5.2	11.7	19.4	7.9
<b>25th Percentile</b>	5.5	11.5	5.8	8.7	8.1	-0.7	3.5	9.1	16.7	6.2
<b>Median</b>	4.8	10.5	5.0	8.0	7.6	-2.4	2.5	7.6	15.5	4.9
<b>75th Percentile</b>	4.1	8.8	4.2	7.3	6.9	-3.8	1.5	6.6	14.0	3.5
<b>95th Percentile</b>	2.1	5.5	3.0	5.1	5.9	-7.2	0.0	5.0	8.9	-0.7
<b># of Portfolios</b>	145	145	138	125	98	155	141	130	129	117
● Allianz Global Investors	5.4 (27)	10.3 (52)	4.1 (77)	7.7 (66)	7.8 (39)	-3.5 (68)	1.2 (83)	8.8 (28)	14.1 (73)	6.4 (21)
▲ BofA ML High Yield Master II	5.5 (25)	12.8 (8)	5.3 (40)	8.2 (42)	7.6 (51)	-4.6 (83)	2.5 (50)	7.4 (55)	15.6 (47)	4.4 (60)

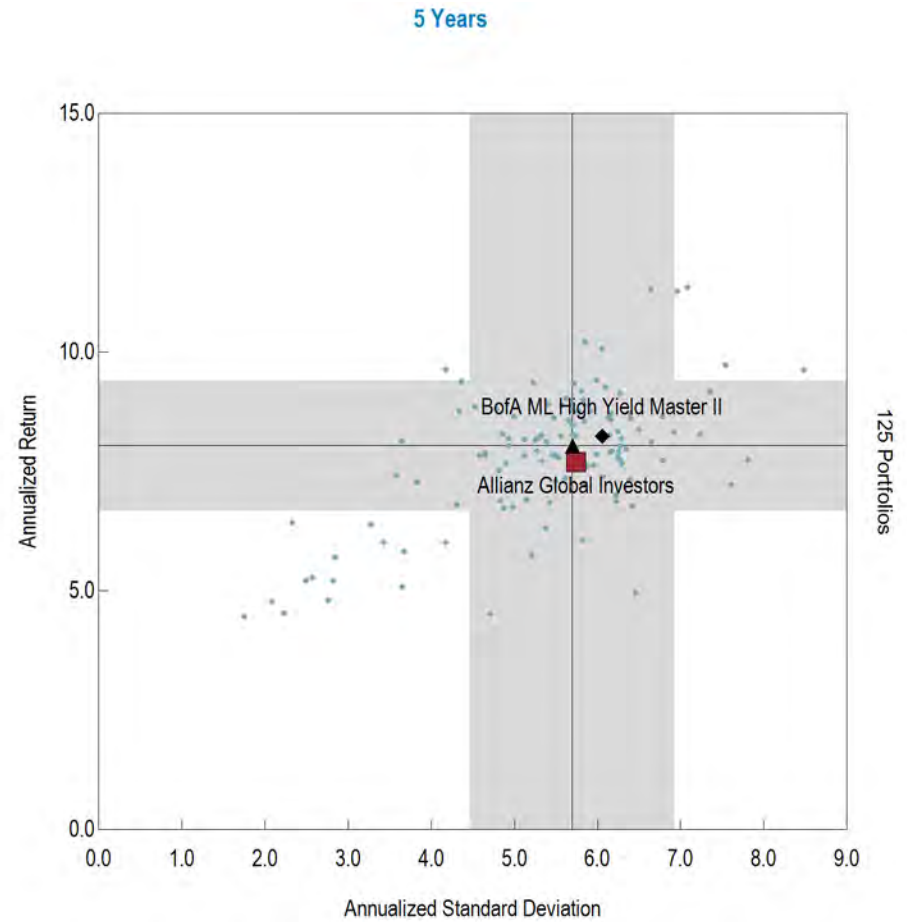
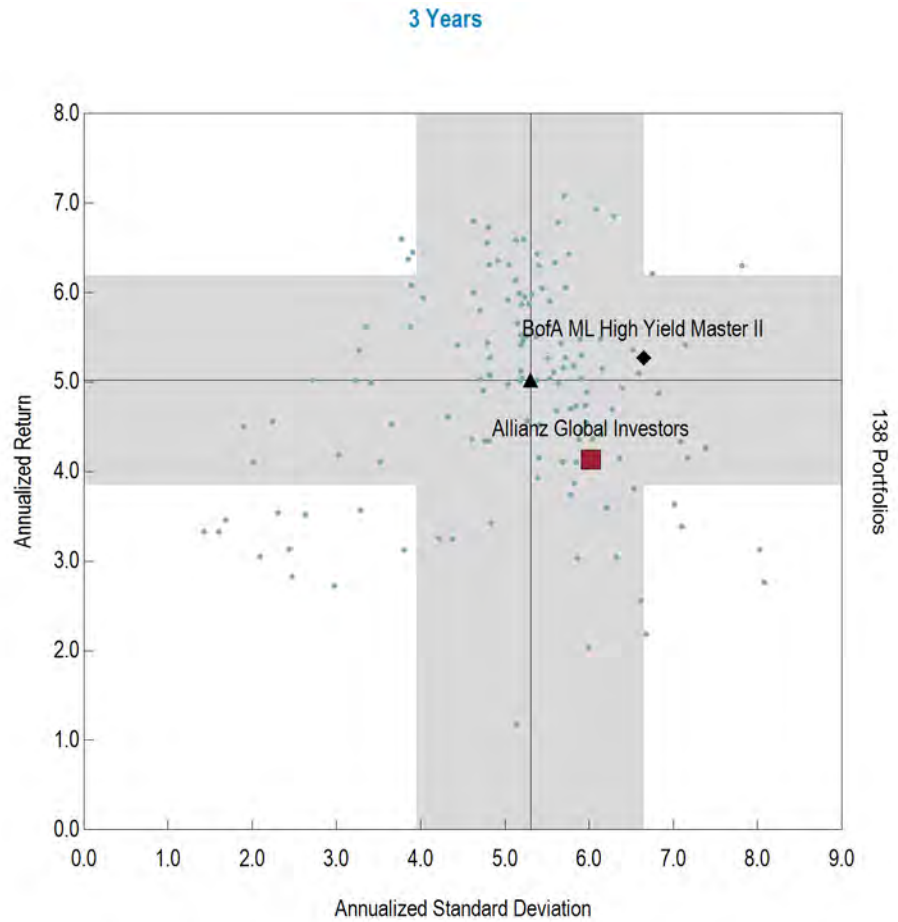


Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	4.1%	6.0%	0.7
BofA ML High Yield Master II	5.3%	6.6%	0.8
eA US High Yield Fixed Inc Gross Median	5.0%	5.3%	1.0

	<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	7.7%	5.7%	1.3
BofA ML High Yield Master II	8.2%	6.1%	1.3
eA US High Yield Fixed Inc Gross Median	8.0%	5.7%	1.5

## **Global Fixed Income Managers**

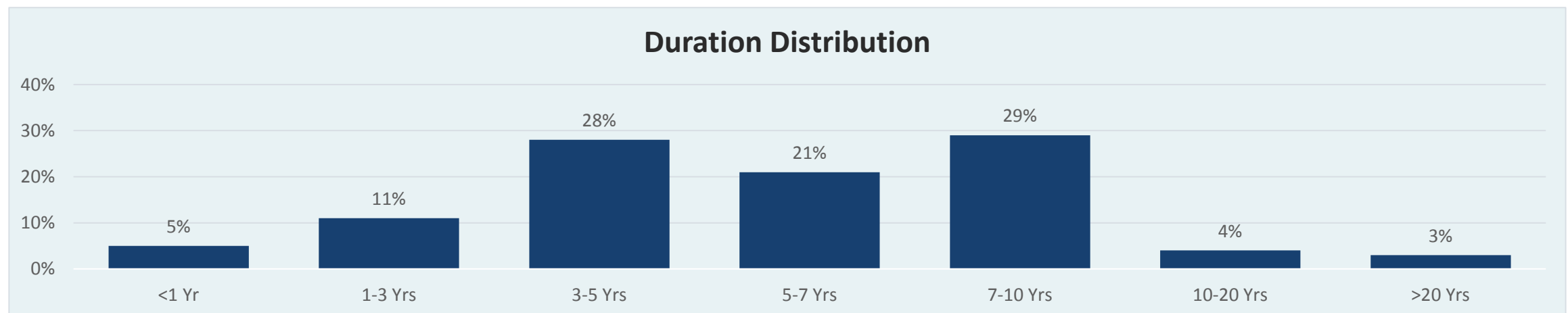
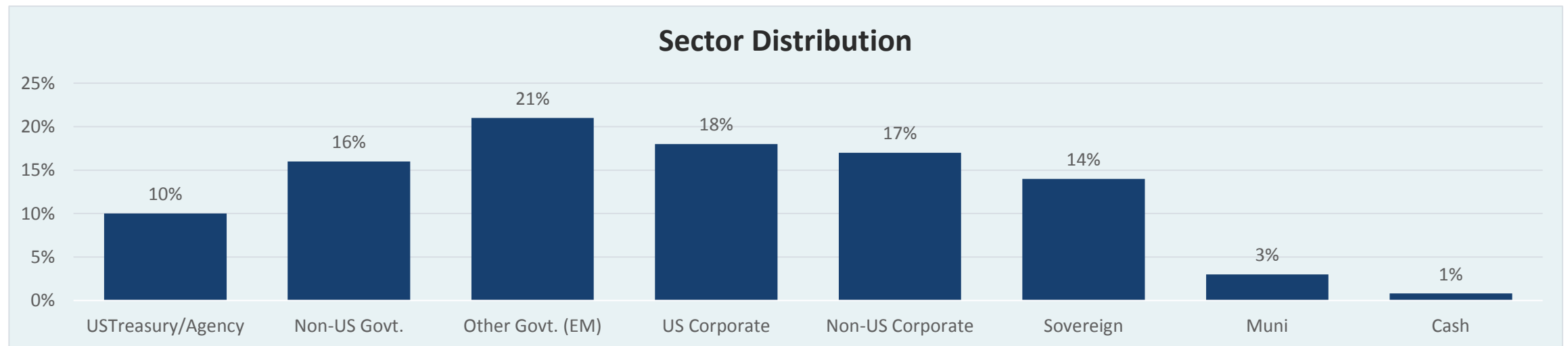
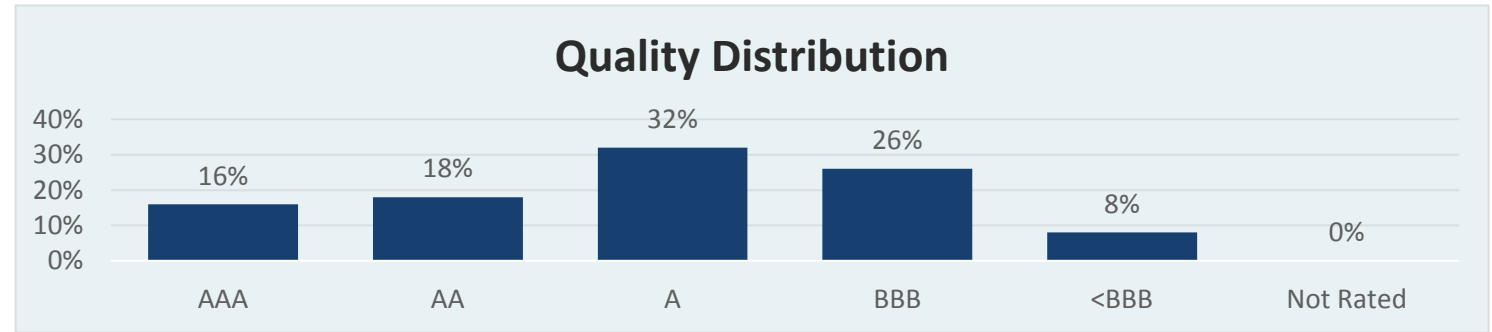
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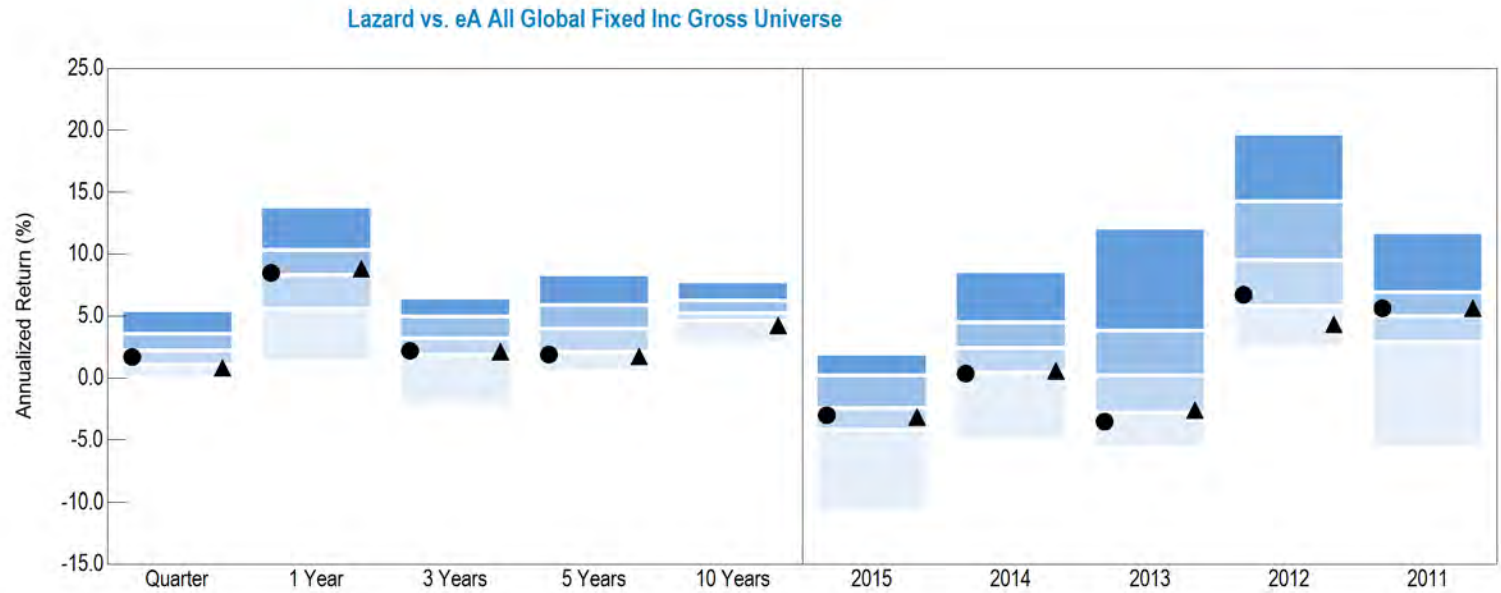
Lazard  
 Manager Portfolio Overview

Period Ending: September 30, 2016

Global core fixed income portfolio with a focus on country selection and currency management. Primary personnel include Yvette Klevan, Benjamin Dietrich, and Jared Daniels.

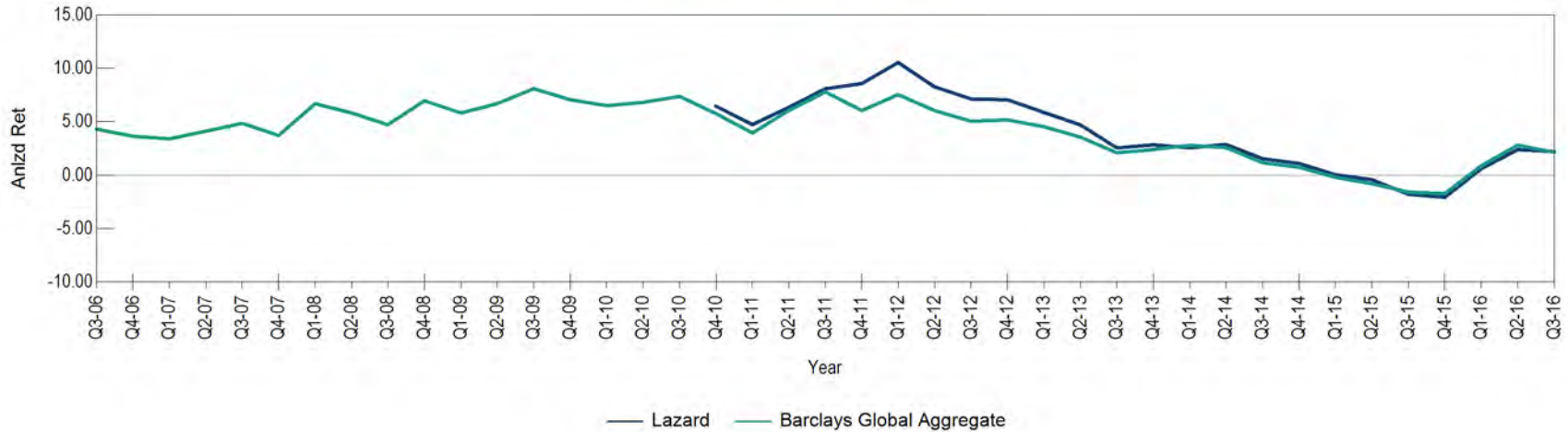
	Lazard
Effective Duration	5.00
Average Maturity	6.4
Average Quality	A-



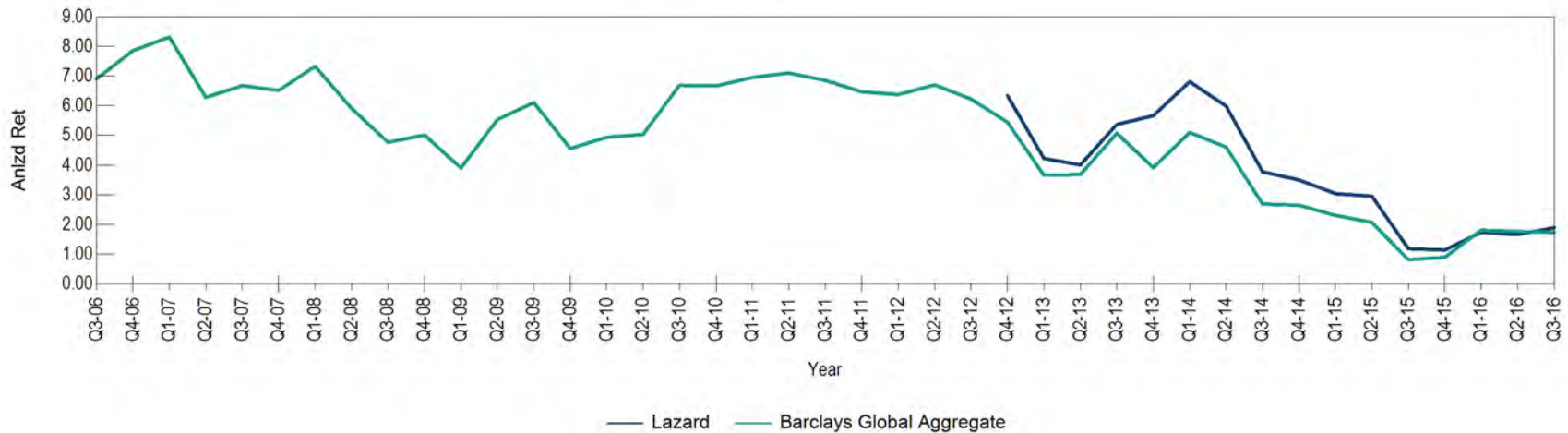


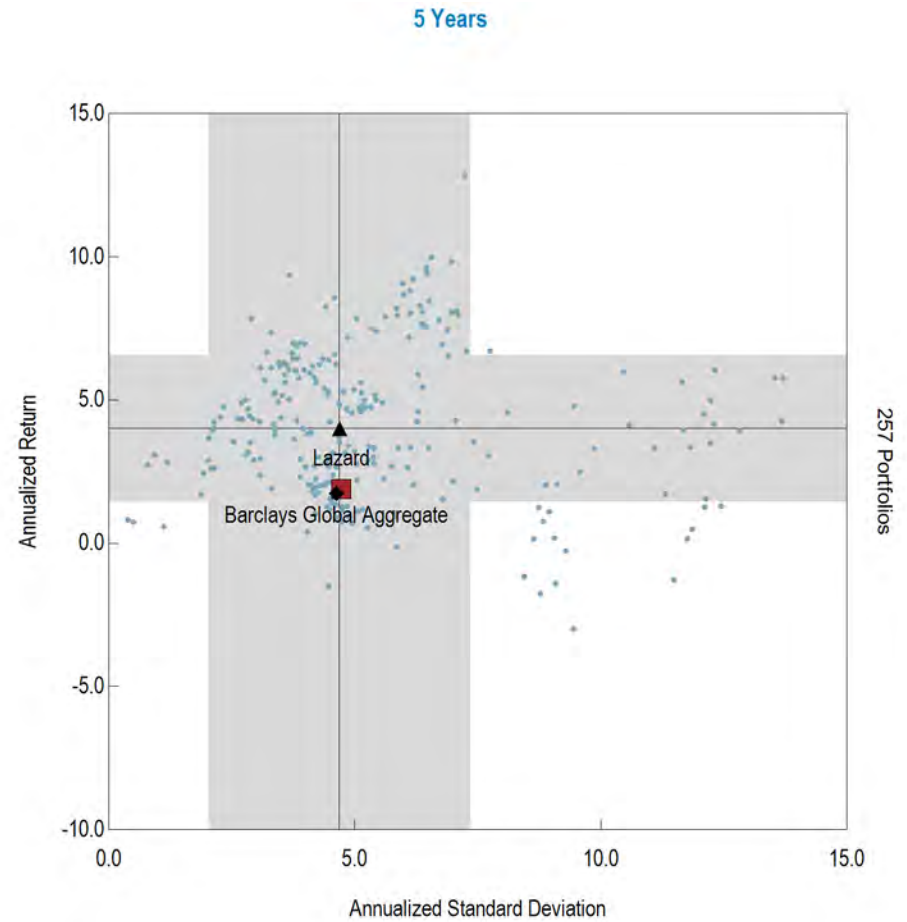
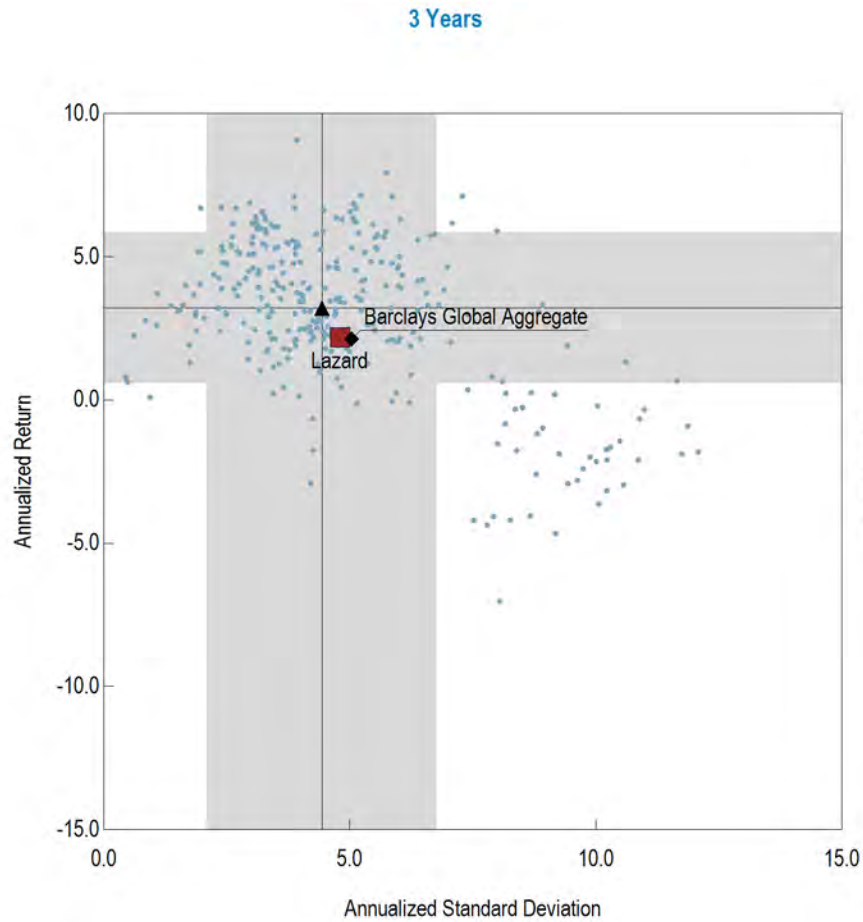
	Return (Rank)										
5th Percentile	5.5	13.8	6.5	8.3	7.8	1.9	8.6	12.1	19.7	11.7	
25th Percentile	3.6	10.4	5.0	5.9	6.3	0.3	4.5	3.9	14.3	6.9	
Median	2.2	8.3	3.2	4.0	5.2	-2.4	2.5	0.2	9.5	5.0	
75th Percentile	1.1	5.6	1.9	2.1	4.7	-4.2	0.5	-2.8	5.9	2.9	
95th Percentile	0.1	1.3	-2.1	0.5	2.8	-10.6	-4.9	-5.6	2.5	-5.5	
# of Portfolios	338	337	314	257	148	332	263	225	197	171	
● Lazard	1.7 (61)	8.5 (49)	2.2 (69)	1.9 (80)	-- (--)	-3.0 (59)	0.4 (77)	-3.5 (83)	6.7 (68)	5.6 (40)	
▲ Barclays Global Aggregate	0.8 (85)	8.8 (44)	2.1 (70)	1.7 (82)	4.3 (85)	-3.2 (61)	0.6 (74)	-2.6 (74)	4.3 (87)	5.6 (39)	

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>			<b>5 Years</b>			
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio		Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Lazard	2.2%	4.8%	0.4	Lazard	1.9%	4.7%	0.4
Barclays Global Aggregate	2.1%	5.0%	0.4	Barclays Global Aggregate	1.7%	4.6%	0.4
eA All Global Fixed Inc Gross Median	3.2%	4.4%	0.7	eA All Global Fixed Inc Gross Median	4.0%	4.7%	0.9

## **Inflation Hedge Managers**

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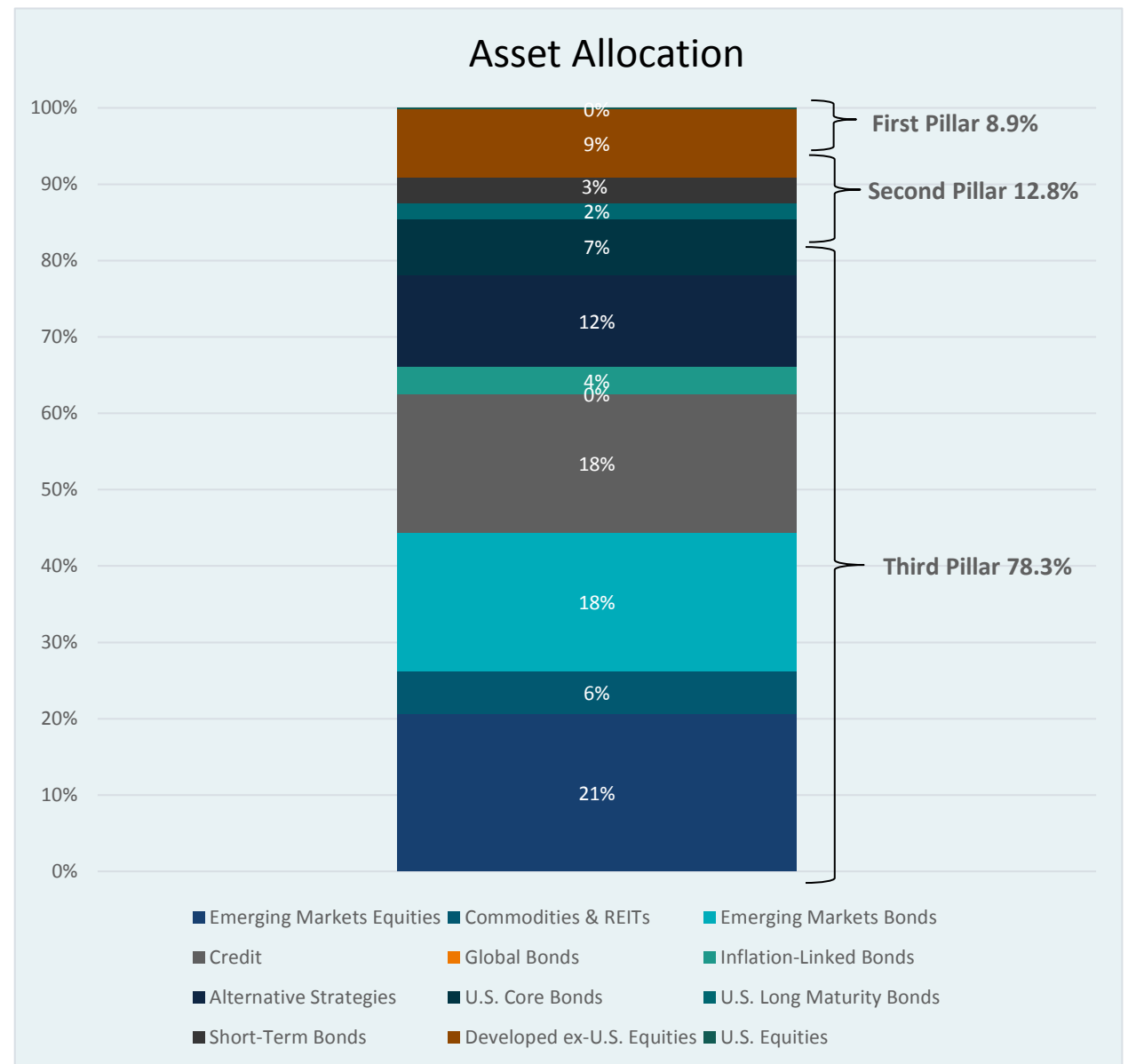


# PIMCO All Asset Manager Portfolio Overview

Period Ending: September 30, 2016

Tactical multi-asset class real return strategy with a primary focus on inflation protection and a secondary focus on enhanced returns

	PIMCO All Asset
Effective Duration	2.25
Sharpe Ratio (10 year)	0.47
Volatility (10 Year)	9.7%
Equity Beta (10 Year)	0.84

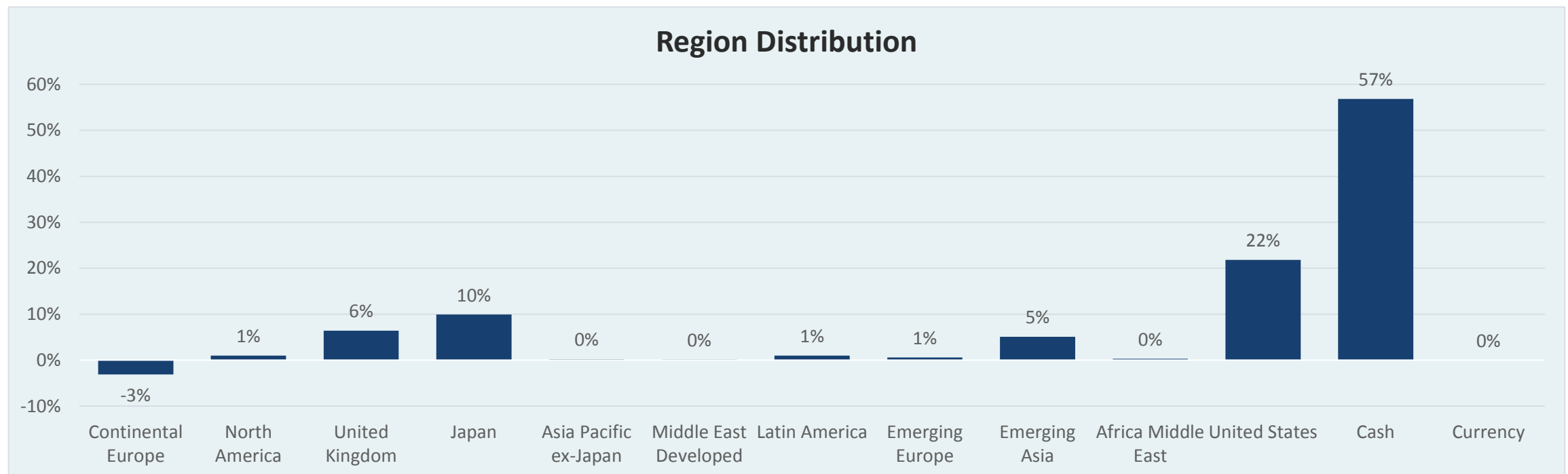
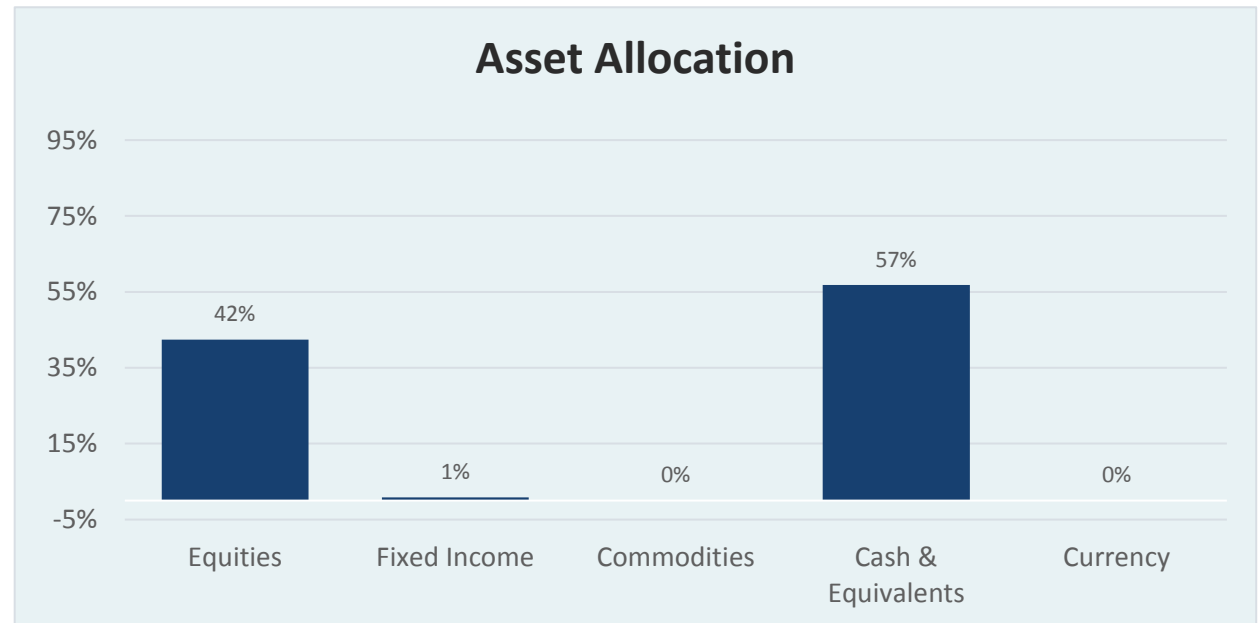


# Wellington Total Return Manager Portfolio Overview

Period Ending: September 30, 2016

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

	Wellington Total Return
Number of Equity Holdings	428
Number of Commodity Holdings	106
Effective Duration (Years)	5.60
Average Quality	D



## Real Estate Managers

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# Adelante Manager Portfolio Overview

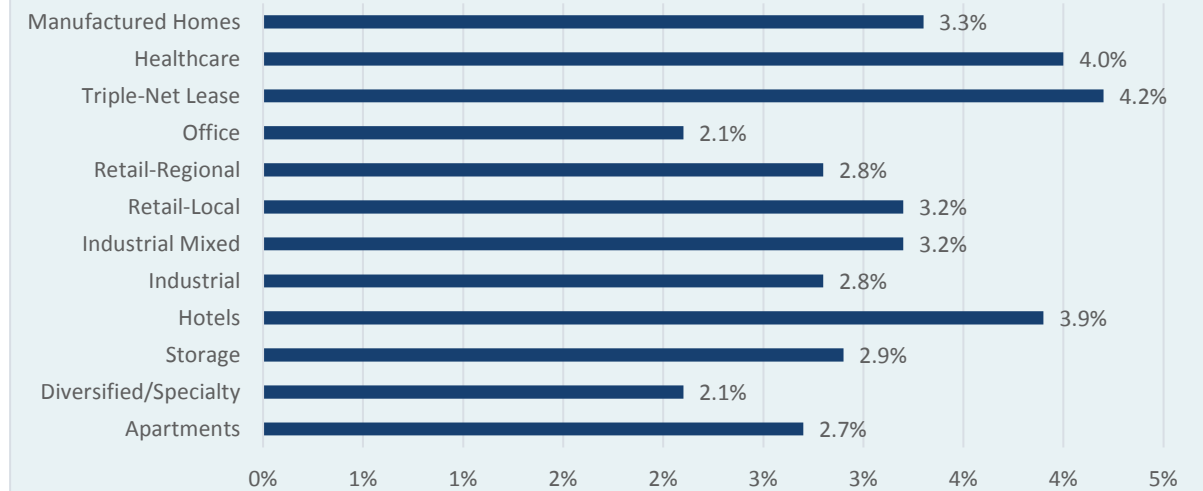
Period Ending: September 30, 2016

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

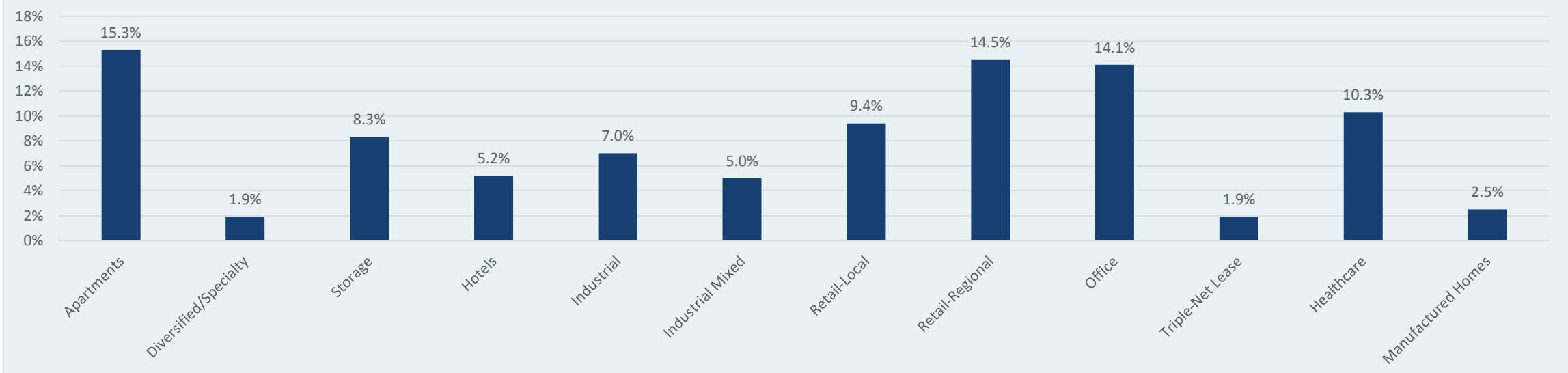
## Top Five Holdings

Company	Property Type	Allocation
Simon Property Group	Retail-Regional	11.8%
Public Storage	Storage	5.9%
Welltower Inc.	Healthcare	5.8%
Boston Properties, Inc	Office	5.5%
Essex Property Trust	Apartments	5.2%

## Dividend Yield by Property Type



## Property Type Allocation



4.6% is allocated to Cash and Cash Equivalents.

# Invesco Global ex-US Real Estate Manager Portfolio Overview

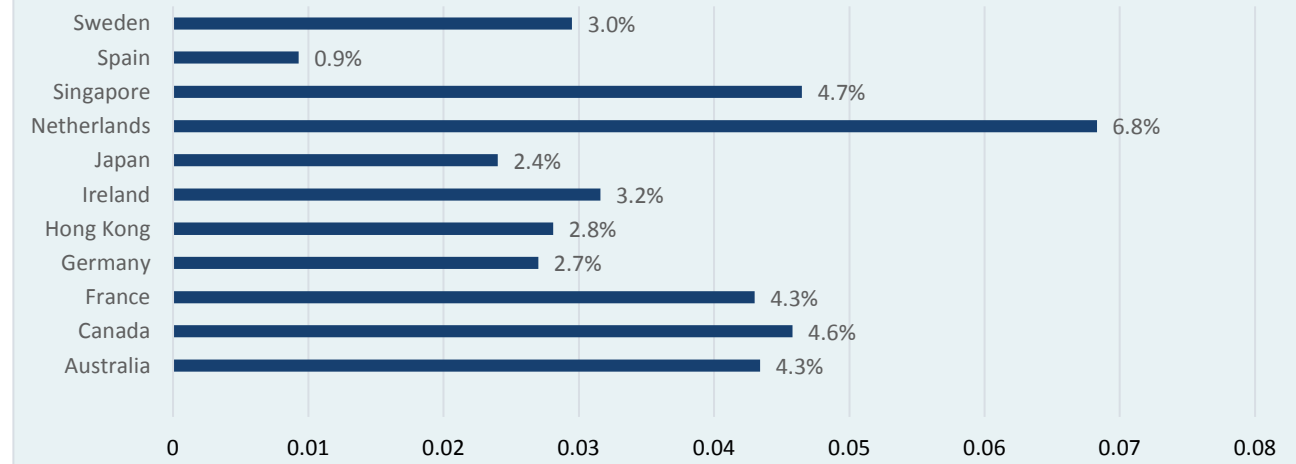
Period Ending: September 30, 2016

Diversified portfolio of non-US REITs with a focus on cash flow and dividends

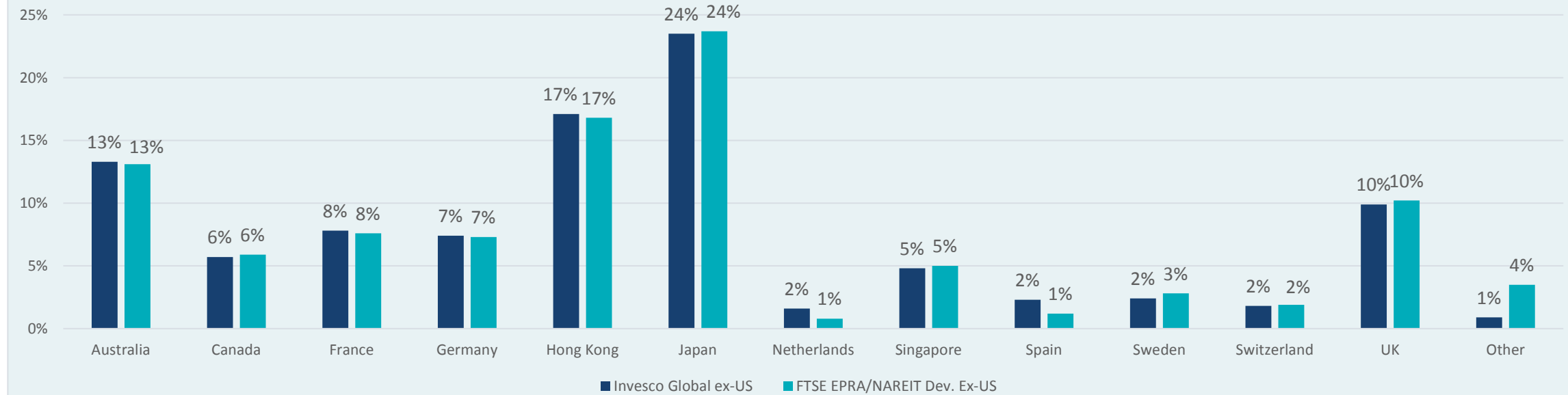
## Top Five Holdings

Holding	Country	Allocation
Mitsubishi Estate	Japan	4.5%
Unibail-Rodamco SE	France	4.5%
Sun Hung Kai Property	Hong Kong	4.3%
Mitsui Fudosan Co.	Japan	4.0%
Vonovia SE	Germany	3.8%

## Dividend Yield by Country



## Country Allocation vs. Benchmark



**Performance Return Calculations**

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

**Data Source**

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

**Illiquid Alternatives**

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

**Manager Line Up**

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
Intech Large Cap Core	11/10/2006	State Street	Long Wharf Fund III	03/30/2007	Long Wharf
PIMCO Stocks+ AR	08/31/2002	State Street	Long Wharf Fund IV	07/03/2013	Long Wharf
Jackson Square Partners	05/01/2005	State Street	Long Wharf Fund V	09/30/2016	Long Wharf
Robeco Boston Partners	06/01/1995	State Street	Hearthstone II	06/17/1998	Hearthstone
Emerald Advisors	04/07/2003	State Street	Invesco Real Estate I	02/01/2005	Invesco
Ceredex	11/06/2011	State Street	Invesco Real Estate II	11/26/2007	Invesco
Pyrford	04/25/2014	State Street	Invesco Real Estate III	06/30/2013	Invesco
William Blair	10/29/2010	William Blair	Invesco Real Estate IV	06/30/2014	Invesco
Artisan Partners	10/01/2012	SEI Trust	Oaktree REOF V	12/31/2011	Oaktree
First Eagle	01/18/2011	State Street	Oaktree REOF VI	09/30/2013	Oaktree
Intech Global Low Vol	05/06/2012	State Street	Oaktree REOF VII	04/01/2015	Oaktree
JP Morgan Global Opportunities	01/31/2010	JP Morgan	Siguler Guff DREOF	01/25/2012	Siguler Guff
AFL-CIO	06/30/1991	AFL-CIO	Siguler Guff DREOF II	08/31/2013	Siguler Guff
Goldman Sachs Core Plus	11/01/2008	State Street	Siguler Guff DREOF II Co-Inv	01/27/2016	Siguler Guff
Lord Abbett	10/22/2008	State Street	Paulson Real Estate Fund II	11/10/2013	State Street
PIMCO Total Return	05/31/2002	State Street	Adams Street Partners	03/18/1996	Adams Street
Torchlight II	09/30/2006	Torchlight	Adams Street Partners II	01/16/2009	Adams Street
Torchlight III	12/31/2008	Torchlight	Adams Street Partners - BFP	01/18/1996	Adams Street
Torchlight IV	07/01/2012	Torchlight	Adams Street Partners - Fund 5	09/21/2012	Adams Street
Torchlight V	07/01/2012	Torchlight	Bay Area Equity Fund	06/14/2004	DBL Investors
Allianz Global Investors	04/25/2000	State Street	Bay Area Equity Fund II	12/07/2009	DBL Investors
Lazard	12/31/2007	State Street	Carpenter Bancfund	01/31/2008	Carpenter Bancfund
PIMCO All Asset Fund	02/26/2013	State Street	EIF US Power Fund I	11/26/2003	Ares Management
Wellington Real Total Return	02/26/2013	State Street	EIF US Power Fund II	08/16/2005	Ares Management
Aether Real Assets III	11/27/2013	Aether	EIF US Power Fund III	05/30/2007	Ares Management
Commonfund	06/28/2013	Commonfund	EIF US Power Fund IV	11/28/2011	Ares Management
Adelante	09/30/2001	State Street	Nogales	02/15/2004	Nogales
Invesco International REIT	06/30/2008	Invesco	Paladin III	11/30/2007	Paladin
Angelo Gordon Realty Fund VIII	01/23/2012	Angelo Gordon	Ocean Avenue Fund II	06/11/2014	Ocean Avenue
Angelo Gordon Realty Fund IX	12/08/2014	Angelo Gordon	Ocean Avenue Fund III	04/15/2016	Ocean Avenue
Angelo Gordon Energy Credit Opp	09/24/2015	Angelo Gordon	Pathway	11/09/1998	Pathway

DLJ RECP II	09/24/1999	DLJ	Pathway 2008	12/26/2008	Pathway
DLJ RECP III	06/23/2005	DLJ	Pathway 6	05/24/2011	Pathway
DLJ RECP IV	02/11/2008	DLJ	Pathway 7	02/07/2013	Pathway
DLJ RECP V	07/01/2014	DLJ	Siguler Guff CCCERA Opps	06/03/2014	Siguler Guff
Wastewater Opp. Fund	12/08/2015	Wastewater	Cash	-	State Street
LaSalle Income & Growth VI	07/16/2013	LaSalle	Aether Real Assets IV	03/16/2016	Aether

**Policy & Custom Index Composition**

Policy Index (4/1/2012-Current) 27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% Barclays U.S. Aggregate, 5% Bank of America High Yield Master II, 4% Barclays Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.

Real Estate Benchmark 40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-USA.

**Other Disclosures**

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

# Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

# Contra Costa County Employees' Retirement Association

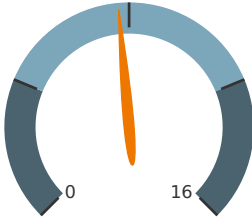
## Portfolio Risk Report

September 30, 2016

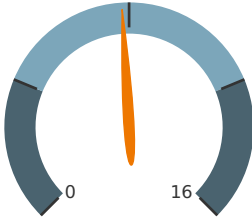
### 1 Portfolio risk



Portfolio: 8.1%



Policy: 7.7%



Average Pension: 7.8%

### 2 Portfolio equity beta



Portfolio: 0.54



Policy: 0.51



Average Pension: 0.53

### 3 Portfolio interest rate risk - Duration



Portfolio: 1.5



Policy: 1.2



Average Pension: 1.8

### 4 Portfolio credit risk - Spread duration



Portfolio: 1.0



Policy: 0.8

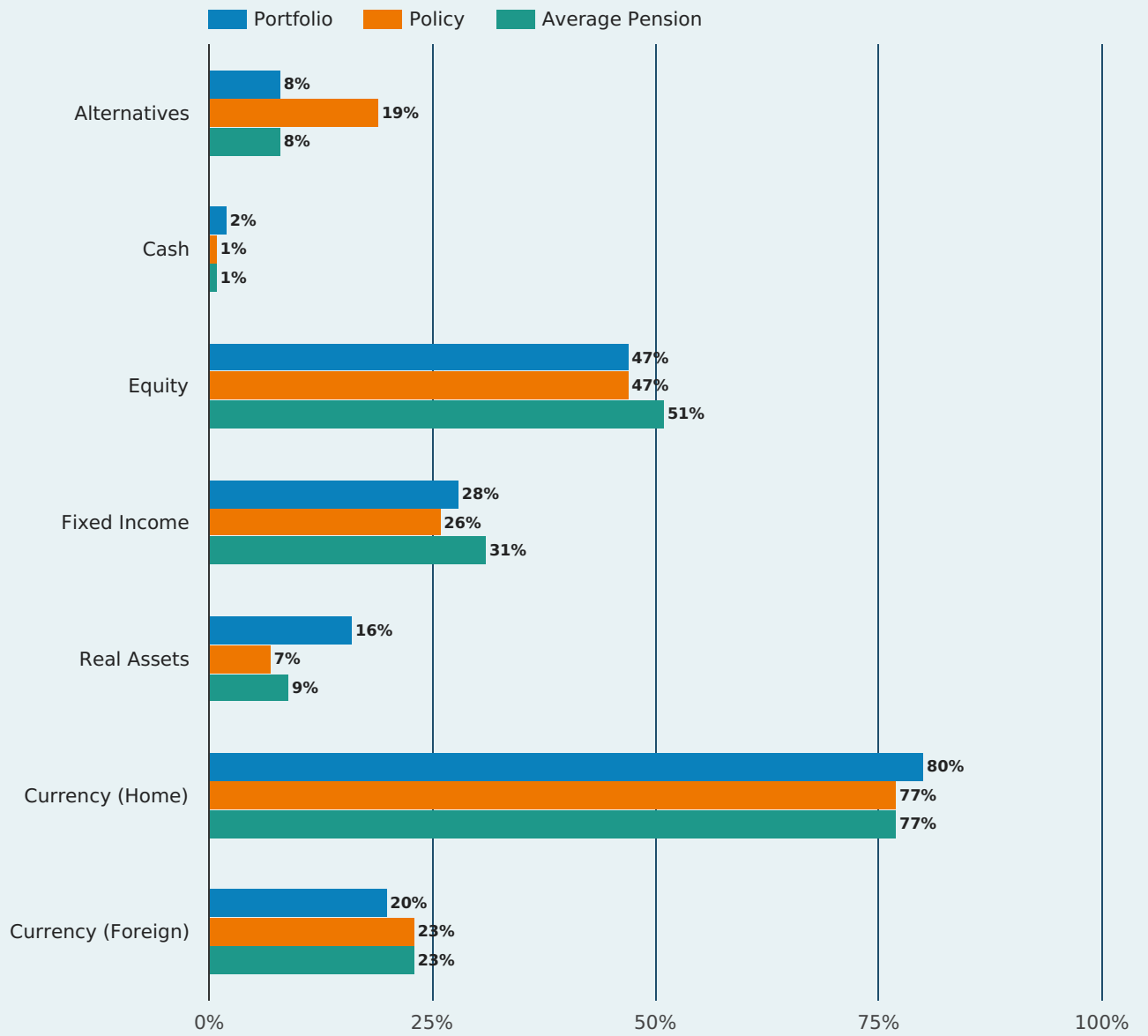


Average Pension: 1.1

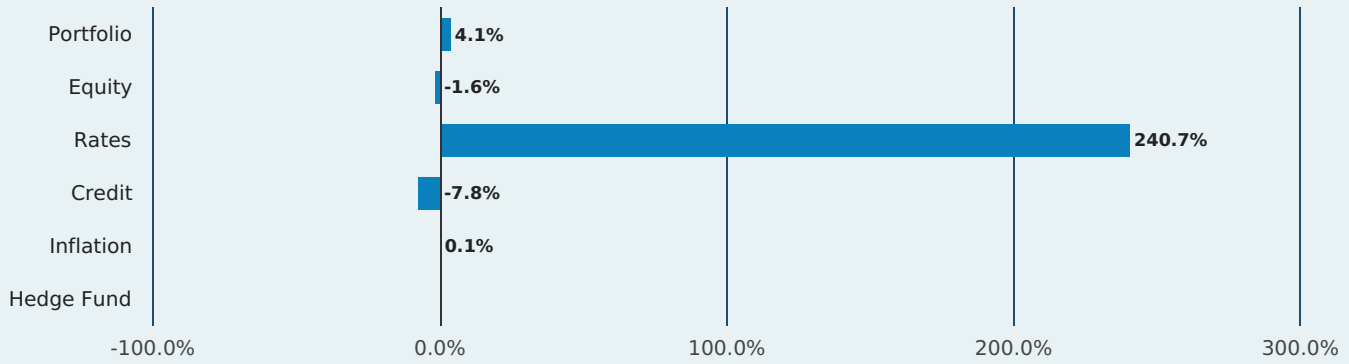
## 5 Exposure allocation by asset class

		Portfolio	Policy	Average Pension
Alternatives	Private Credit	0.0%	17.0%	
	Opportunistic	0.4%		
	Risk Diversifying Strategies	7.8%	2.0%	8.1%
<b>Alternatives Total</b>		<b>8.3%</b>	<b>19.0%</b>	<b>8.1%</b>
Cash	Cash	1.7%	1.0%	1.1%
<b>Cash Total</b>		<b>1.7%</b>	<b>1.0%</b>	<b>1.1%</b>
Equity	Emerging Markets	0.0%	14.0%	3.4%
	Private Equity	0.0%	17.0%	6.0%
	International Large	11.0%	10.0%	
	Global Equity	12.7%		15.1%
	Large Cap US Equity	22.9%	6.0%	26.1%
<b>Equity Total</b>		<b>46.6%</b>	<b>47.0%</b>	<b>50.6%</b>
Fixed Income	Short-term Gov or Credit	0.0%	24.0%	2.4%
	US Treasury	0.0%	2.0%	
	Global Bonds	3.2%		5.8%
	High Yield Fixed	5.1%		
	US Bonds	19.5%		22.5%
<b>Fixed Income Total</b>		<b>27.8%</b>	<b>26.0%</b>	<b>30.7%</b>
Real Assets	Commodites	0.0%		1.0%
	Real Assets	5.3%		1.0%
	Real Estate	10.4%	7.0%	7.4%
<b>Real Assets Total</b>		<b>15.6%</b>	<b>7.0%</b>	<b>9.5%</b>
<b>Total Portfolio</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>

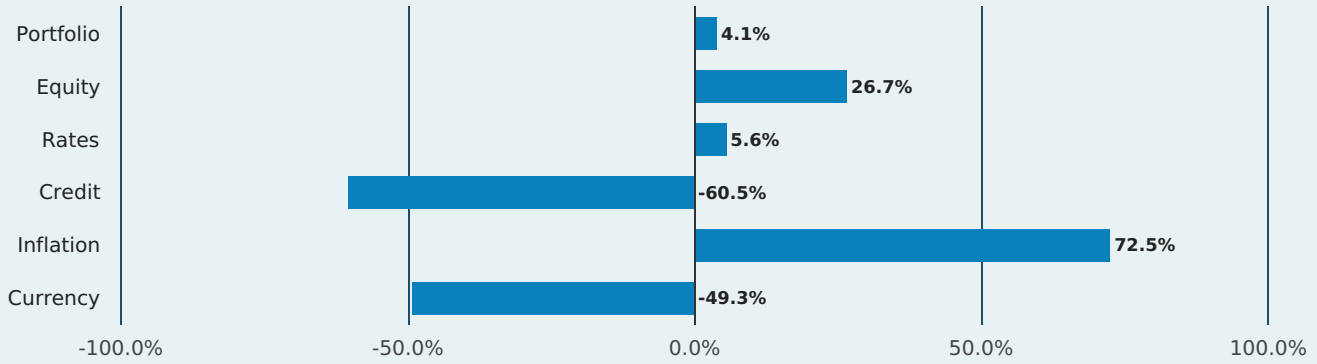
## 6 Exposure allocation



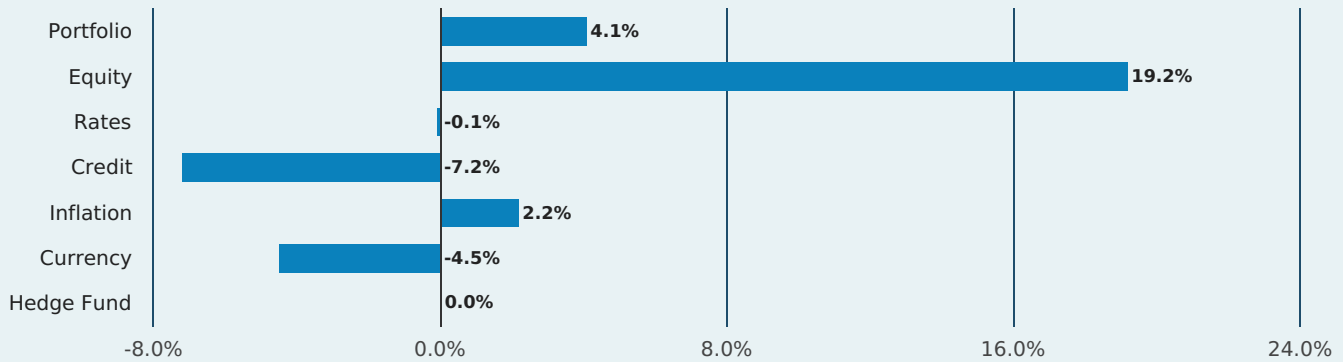
### 7 Relative risk vs target by bucket



### 8 Relative risk vs target by risk factor



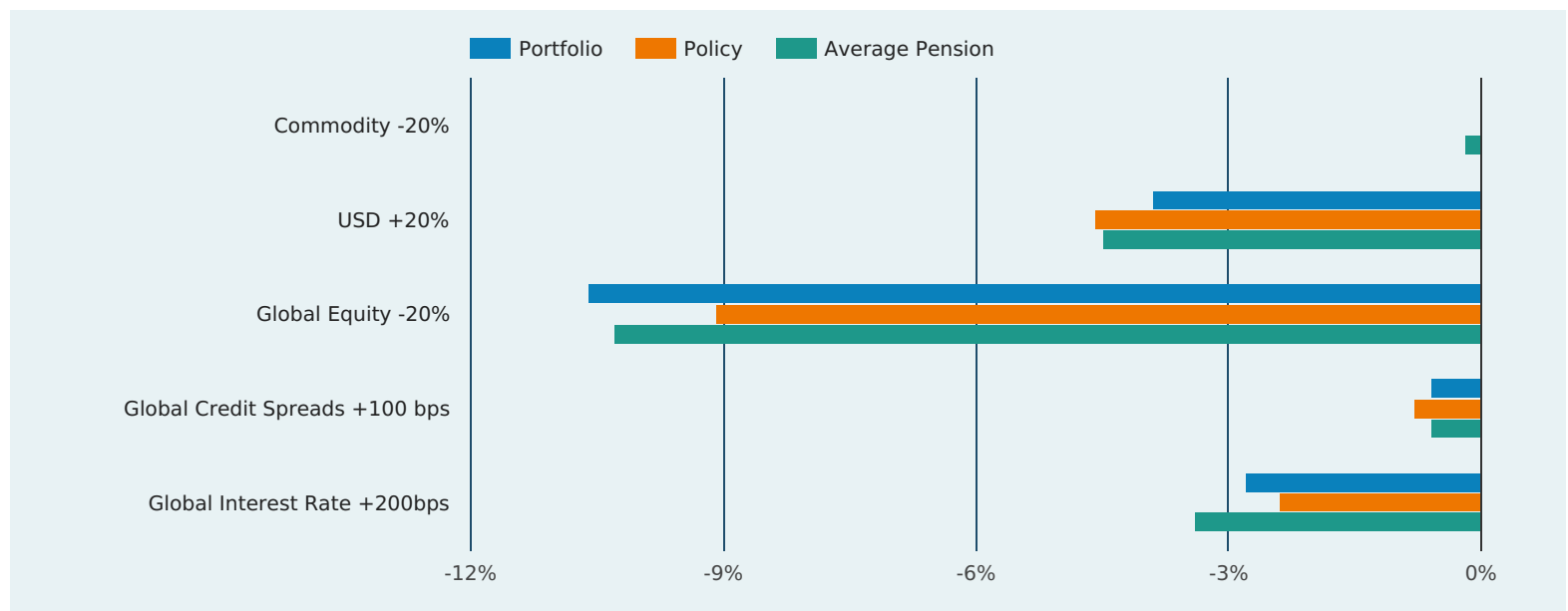
### 9 Risk factor weight relative to target



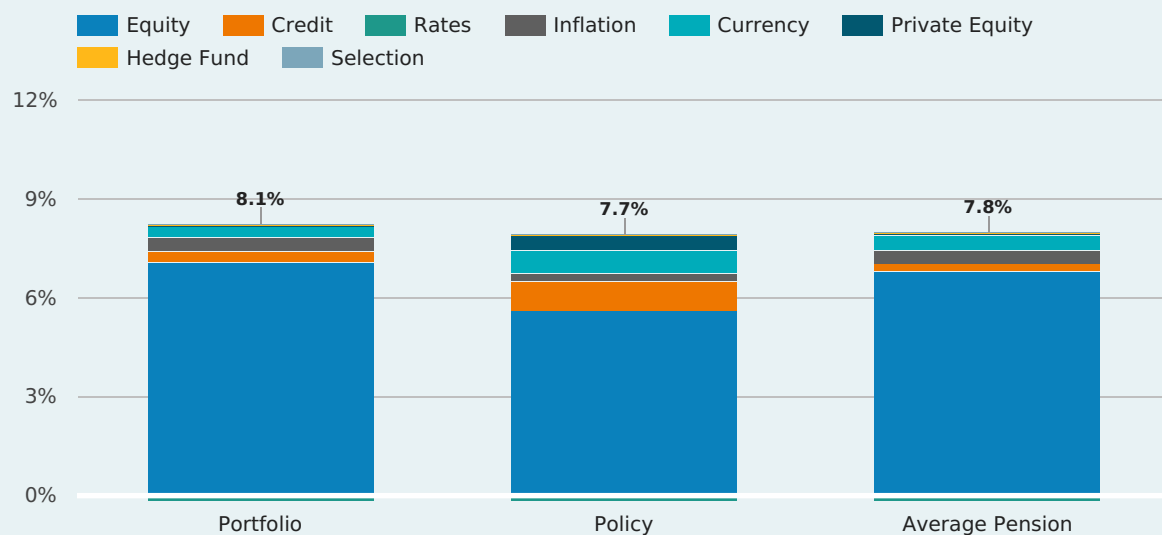
## 10 Tail risk - Scenario analysis



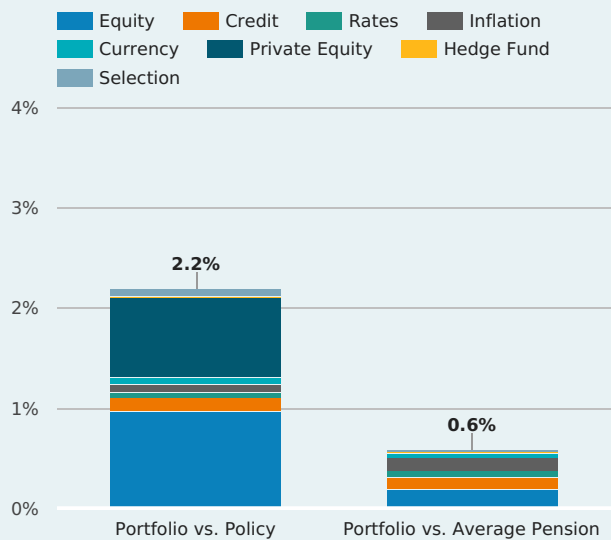
## 11 Tail risk - Stress tests



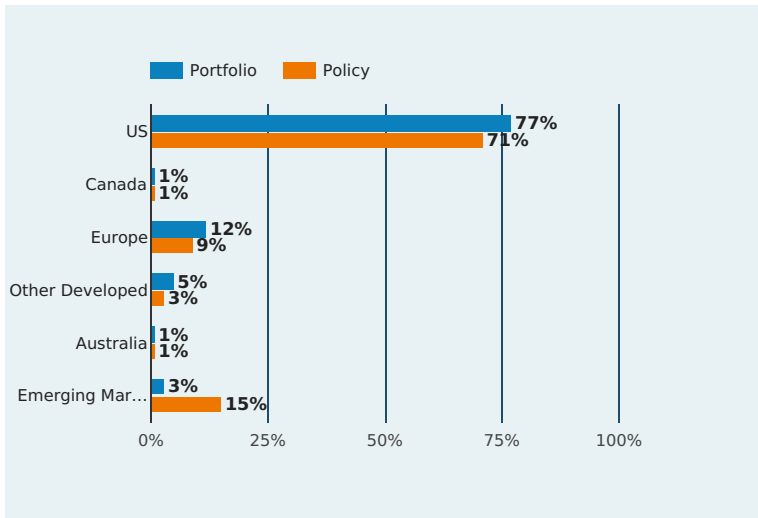
## 12 Risk contribution by risk factor



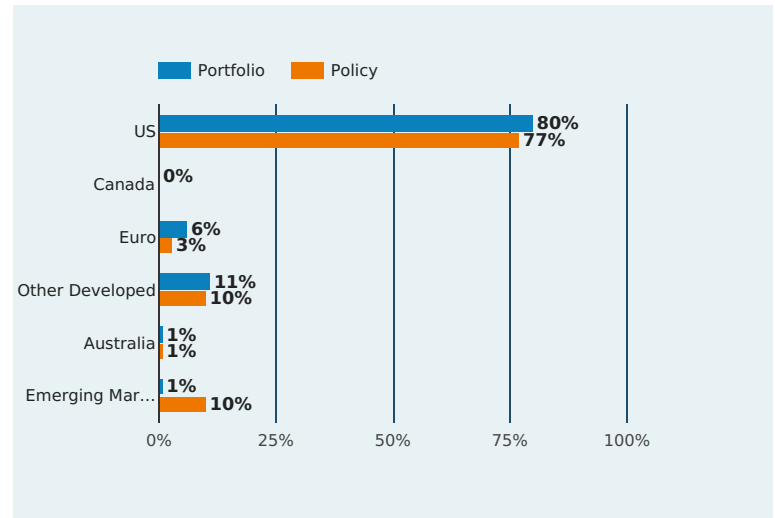
## 13 Active risk contribution by risk factor



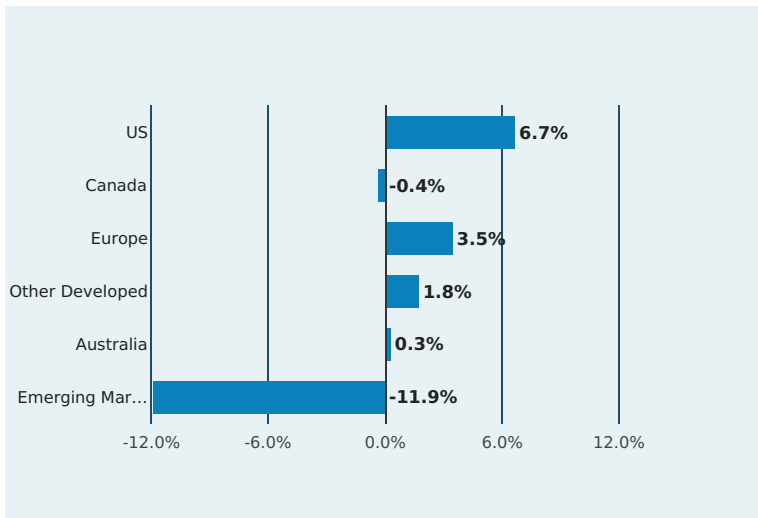
## 14 Geographic exposure



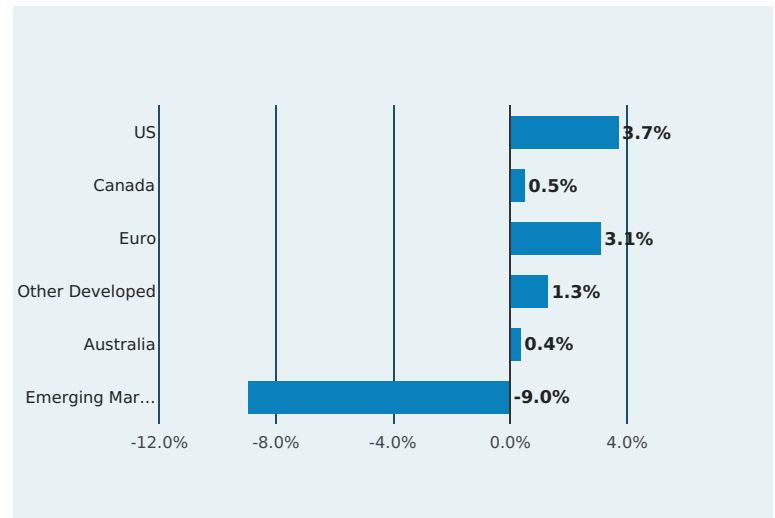
## 15 Currency exposure



## 16 Net geographic exposure



## 17 Net currency exposure

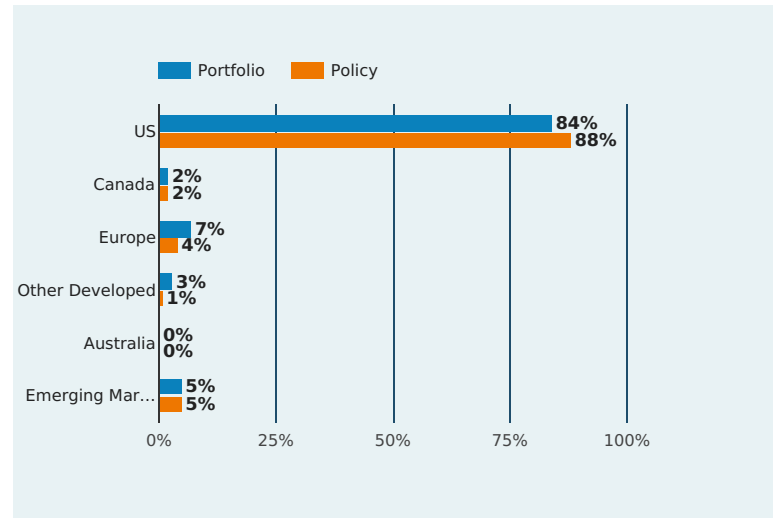




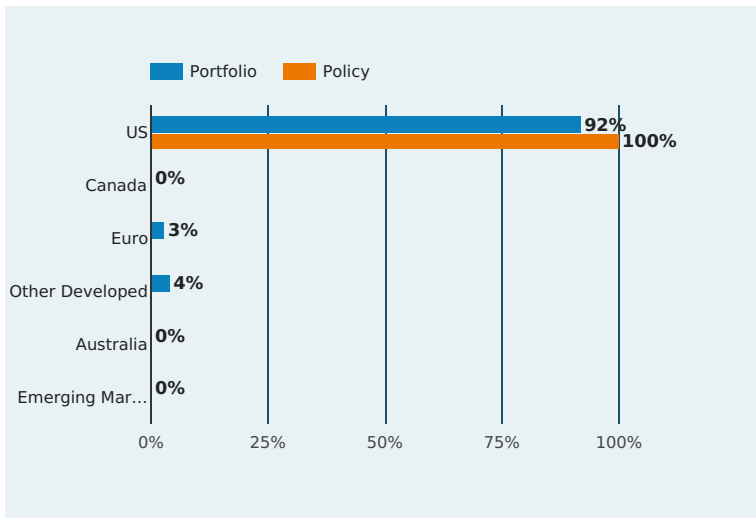
## 18 Interest rate bucket

	Portfolio	Policy	Difference
Duration	5.7	2.3	3.5
Yield to Maturity	2.3%	1.2%	1.1%
Wt. Avg. Rating	Aa1 / Aa2	Aa1 / Aa2	

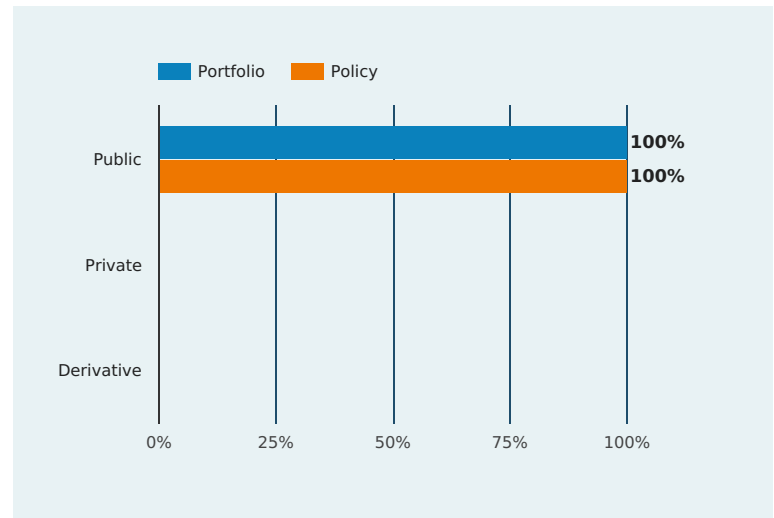
## 19 Rates bucket - Geographic exposure



## 20 Rates bucket - Currency exposure



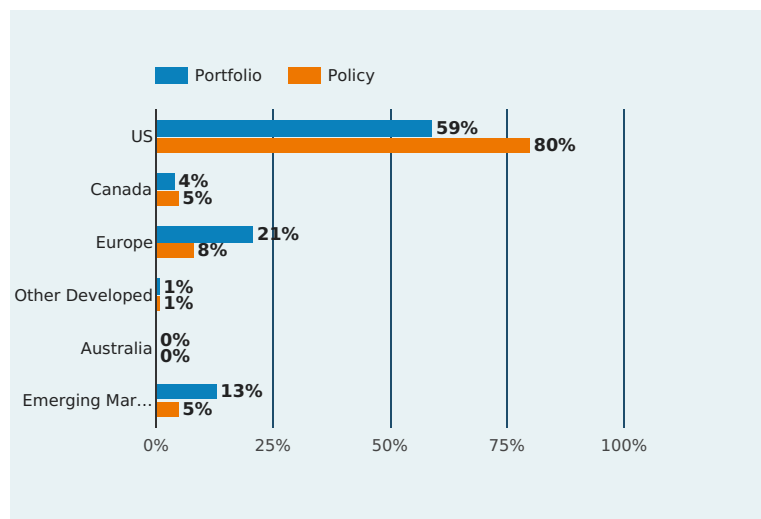
## 21 Rates bucket - Security type



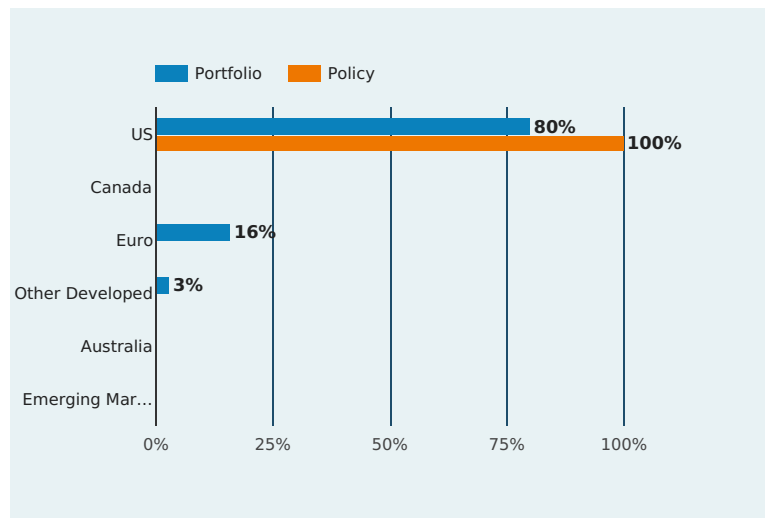
## 22 Credit bucket

	Portfolio	Policy	Difference
Duration	3.7	3.7	-0.0
Coupon Yield	6.4%	6.6%	-0.2%
Yield to Maturity	6.1%	6.5%	-0.4%
Wt. Avg. Rating	B1	B1 / B2	

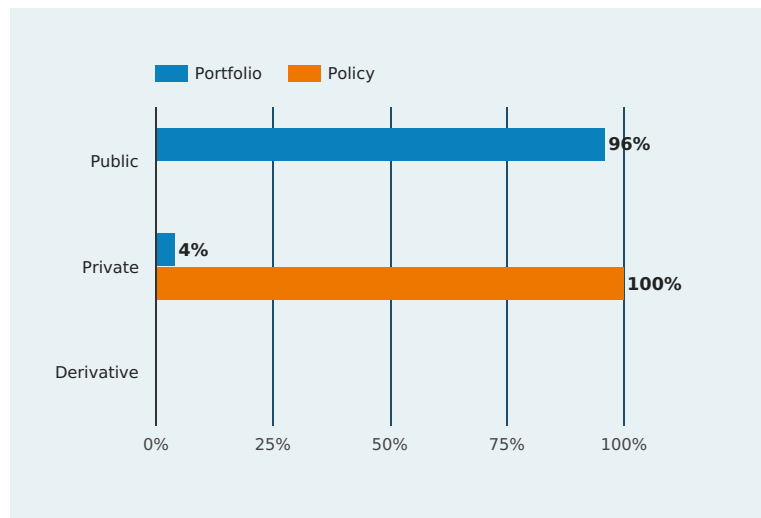
## 23 Credit bucket - Geographic exposure



## 24 Credit bucket - Currency exposure



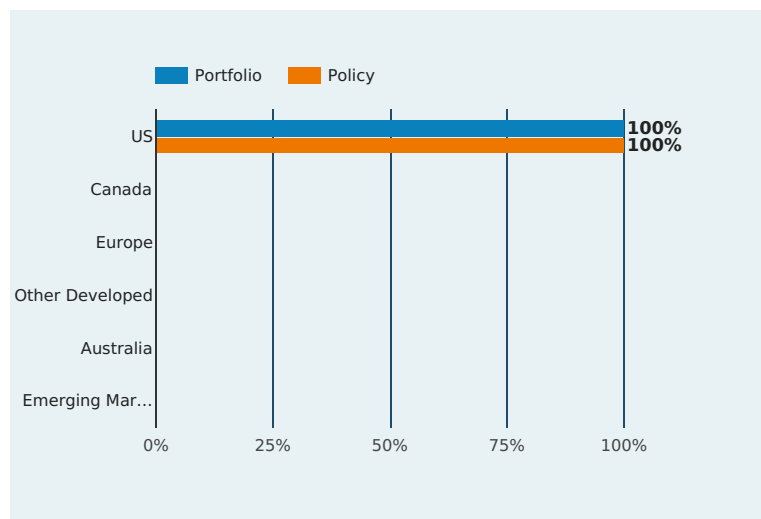
## 25 Credit bucket - Security type



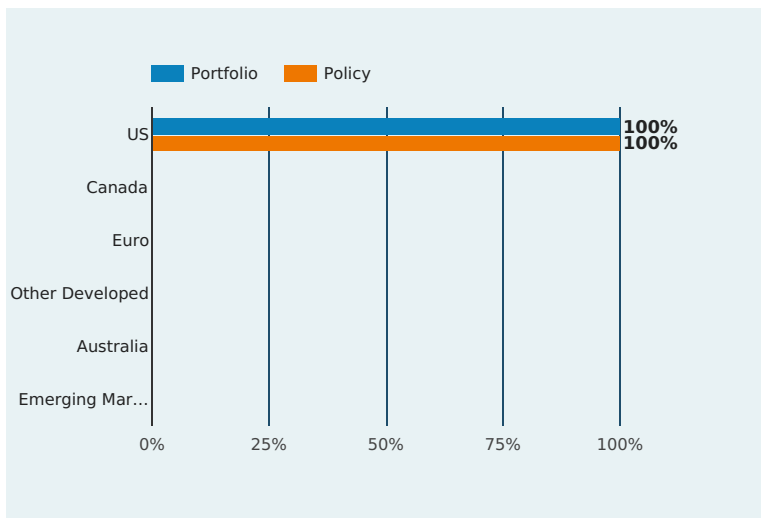
## 26 Inflation bucket

	Portfolio	Policy	Difference
Real Estate Allocation	10.4%	7.0%	3.4%
Other Real Assets	5.3%		

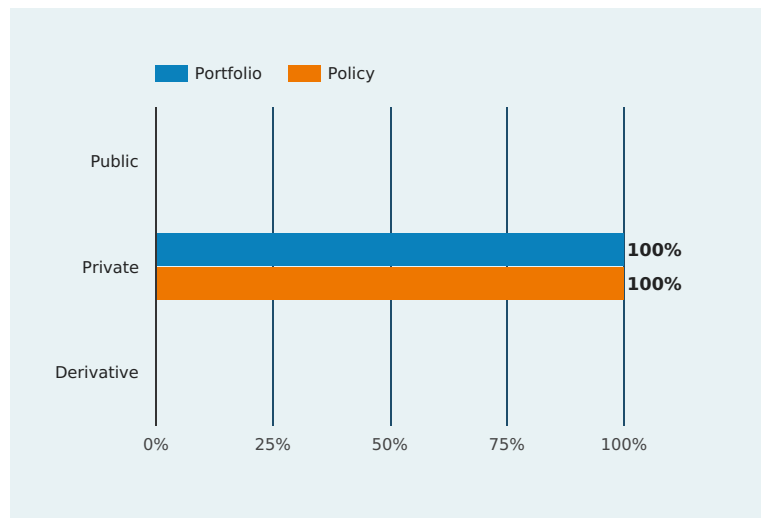
## 27 Inflation bucket - Geographic exposure



## 28 Inflation bucket - Currency exposure



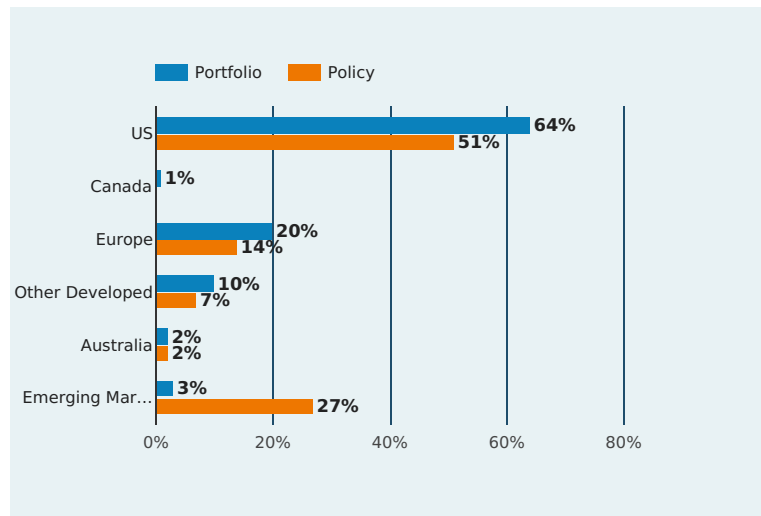
## 29 Inflation bucket - Security type



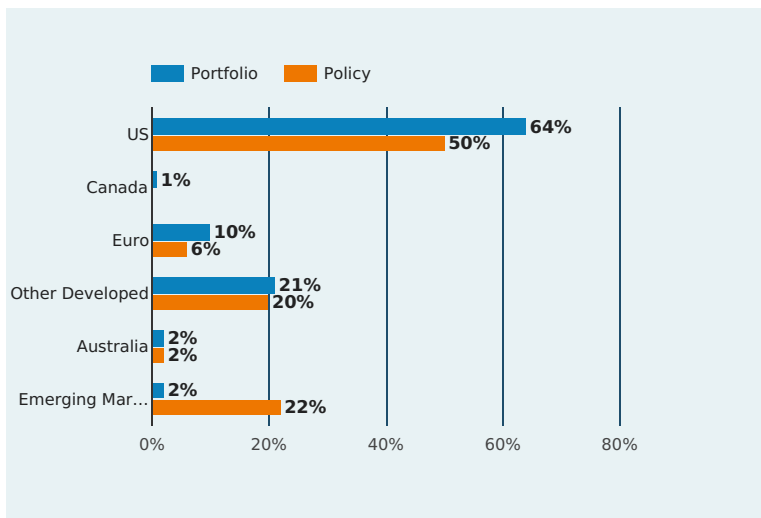
### 30 Equity bucket

	Portfolio	Policy	Difference
Beta	1.0	0.9	0.1
Dividend Yield	2.5%	2.7%	-0.2%
PE Ratio	21.5	27.8	-6.3

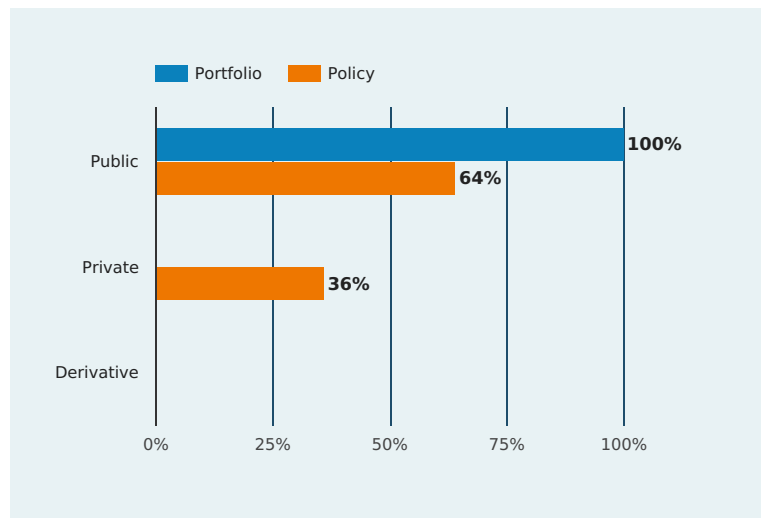
### 31 Equity bucket - Geographic exposure



### 32 Equity bucket - Currency exposure



### 33 Equity bucket - Security type



### 34 Market value summary per BarraOne

Bucket	Asset Class	Account Name	Account	Market Value (millions)
Cash	Cash	Unallocated Cash	CCCERAPen075	129.2
		Transition	CCCERAPen077	0.0
		Treasurer's Fixed	CCCERAPen076	0.0
Cash Total				129.2
Credit	High Yield Bonds	Allianz Global Investors	CCCERAPen023	387.7
	Opportunistic Credit	Angelo Gordon Energy Credit Opportunities	CCCERAPen074	16.0
Credit Total				403.7
Equity	EAFE Equity	William Blair	CCCERAPen008	420.0
		Pyrford	CCCERAPen007	416.7
		International Equity Transition	CCCERAPen009	0.5
	Global Equity	Artisan Partners	CCCERAPen010	340.4
		First Eagle	CCCERAPen011	324.8
		JP Morgan Global Opportunities	CCCERAPen013	277.8
		Intech Global Low Vol	CCCERAPen012	24.0
	Private Equity	Oaktree PIF 2009	CCCERAPen073	17.6
	US Equity	PIMCO Stocks+ Absolute Return	CCCERAPen002	333.5
		Jackson Square Partners	CCCERAPen003	326.3
		Robeco Boston Partners	CCCERAPen004	318.3
		Intech Large Cap Core	CCCERAPen001	290.8
		Emerald Advisers	CCCERAPen005	242.3
		Ceredex	CCCERAPen006	229.8
Equity Total				3,562.7
Hedge Fund	Hedge Fund	Adams Street Partners	CCCERAPen052	121.1
		Siguler Guff CCCERA Opportunities Fund	CCCERAPen072	70.1
		Energy Investor Fund III	CCCERAPen060	59.9
		Energy Investor Fund II	CCCERAPen059	42.8

Energy Investor Fund IV	CCCERAPeno61	41.5
Pathway Private Equity Fund	CCCERAPeno65	37.1
Pathway 7	CCCERAPeno63	32.5
Pathway 6	CCCERAPeno62	30.0
Carpenter Bancfund	CCCERAPeno67	28.2
Paladin III	CCCERAPeno69	25.4
Pathway Private Equity Fund 2008	CCCERAPeno66	23.4
Ocean Avenue Fund II	CCCERAPeno70	17.9
Adams Street Partners Fund 5	CCCERAPeno54	16.7
Adams Street Partners II	CCCERAPeno53	15.4
Bay Area Equity Fund II	CCCERAPeno57	9.5
Pathway 8	CCCERAPeno64	9.4
Brinson - Venture Capital	CCCERAPeno55	5.0
Ocean Avenue Fund III	CCCERAPeno71	4.9
Bay Area Equity Fund I	CCCERAPeno56	4.1
Energy Investor Fund	CCCERAPeno58	0.8
Nogales	CCCERAPeno68	0.3

Hedge Fund Total		595.9
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Inflation	Real Assets	Wellington Real Total Return	CCCERAPeno26	188.1
		PIMCO All Asset Fund	CCCERAPeno25	128.6
		Aether Real Assets III	CCCERAPeno27	50.6
		Commonfund	CCCERAPeno29	26.4
		Aether Real Assets IV	CCCERAPeno28	4.3
		Wastewater Opportunity Fund LLC	CCCERAPeno30	3.0
	Real Estate	Adelante	CCCERAPeno31	96.4
		DLJ Real Estate IV	CCCERAPeno35	81.4
		Oaktree REOF VI	CCCERAPeno47	76.5

LaSalle Income & Growth Fund VI	CCCERAPeno43	70.4
Siguler Guff Distressed RE Opportunities	CCCERAPeno49	58.9
INVESCO International REIT	CCCERAPeno38	58.9
Angelo Gordon & Co. Realty Fund VIII	CCCERAPeno32	53.1
Siguler Guff Distressed RE Opportunities II	CCCERAPeno50	51.7
DLJ Real Estate V	CCCERAPeno36	40.5
DLJ Real Estate III	CCCERAPeno34	33.3
Angelo Gordon & Co. Realty Fund IX	CCCERAPeno33	25.4
Long Wharf Fund IV	CCCERAPeno45	24.7
Oaktree REOF V	CCCERAPeno46	23.3
Paulson Real Estate II	CCCERAPeno48	21.6
INVESCO Real Estate III	CCCERAPeno41	20.9
Siguler Guff Distressed RE Opportunities II Co-Inv	CCCERAPeno51	12.0
INVESCO Real Estate IV	CCCERAPeno42	11.6
Long Wharf Fund V	CCCERAPeno78	11.6
Long Wharf Fund III	CCCERAPeno44	9.0
INVESCO Real Estate II	CCCERAPeno40	8.6
INVESCO Real Estate I	CCCERAPeno39	0.1
Hearthstone Advisors II	CCCERAPeno37	0.0

Inflation Total 1,191.0

Rates	Global Bonds	Lazard	CCCERAPeno24	244.8
	US Bonds	PIMCO Fixed Income	CCCERAPeno17	442.3
		Lord Abbett	CCCERAPeno16	333.1
		Goldman Sachs Core Plus	CCCERAPeno14	328.8
		AFL-CIO	CCCERAPeno22	245.4
		Torchlight IV	CCCERAPeno20	62.6
		Torchlight II	CCCERAPeno18	45.7

Torchlight V	CCCERAPeno21	15.1
Torchlight III	CCCERAPeno19	10.6
GSAM Workout Portfolio	CCCERAPeno15	0.0

Rates Total 1,728.3

**Total Portfolio (millions) 7,610.8**



## Chart Definitions

- 1 Portfolio risk**

Total risk comparison of portfolio, Policy, and Avg. Pension. Policy is composed of 1% Cash, 14% MSCI EM, 10% MSCI EAFE, 6% S&P500, 17% Private Equity, 24% Barclays Capital 1-3 Yr Gov/Credit, 2% Barclays Capital U.S. Treasury: 7-10 Year, 7% NCREIF NPI, 17% Barclays Capital U.S. Corporate High Yield, and 2% HFRI FOF Index. Average pension is based on median allocation of DB Plans > \$1 Billion, which is composed of 1.1% Cash, 26.1% US Equity, 15.1% Global ex-US Equity, 3.4% EM Equity, 6% Private Equity, 22.5% US Fixed Income, 4.3% Global Fixed Income, 1.5% Global ex-US Fixed Income, 2.4% EM Fixed Income, 8.1% Hedge Fund, 1.05% Commodity, 1.05% Forestry, and 7.4% Real Estate.
- 2 Portfolio equity beta**

Equity risk presented by equity beta to market. Equity beta is a measure describing the sensitivity of portfolio returns with returns of the equity market (MSCI ACWI).
- 3 Portfolio interest rate risk - Duration**

Interest rate risk presented by duration and dollar movement of portfolios. Duration of a financial asset that consists of fixed cash flows is the weighted average of the times until those fixed cash flows are received (measured in years). It also measures the percentage change in price for a given change in yields (the price sensitivity to yield). DVo1 \$ (dollar duration) is the change in price in dollars of a financial instrument resulting from a one basis point change in yield.
- 4 Portfolio credit risk - Spread duration**

Credit risk presented by spread duration and dollar movement of portfolios. Spread duration measures the percentage change in price for a one percentage point change in spreads.
- 5 Exposure allocation by asset class**

Exposure allocation among various asset classes.
- 6 Exposure allocation**

Exposure allocation among major risk buckets (rates, credit, equity, inflation, currency) and net currency exposure (domestic vs. foreign). Full Cash collateral is assumed for all derivatives.
- 7 Relative risk vs target by bucket**

Comparative riskiness of Portfolio vs. Policy on total portfolio and risk bucket levels: For example, equity bucket relative risk compares the riskiness of the Portfolio equity bucket vs the Policy equity bucket.
- 8 Relative risk vs target by risk factor**

Comparative riskiness of Portfolio vs. Policy on a total portfolio level and major risk factor levels.
- 9 Risk factor weight relative to target**

Contribution by factor to total relative risk of the Portfolio vs the Policy: For example, Equity is equity risk contribution to Portfolio minus equity risk contribution to the Policy, divided by total risk of the Policy. The factor overweights are additive to the total relative risk at the top line.
- 10 Tail risk - Scenario analysis**

Tail risk is a form of risk measurement that considers the possibility that a market will experience losses greater than what the normal distribution would suggest. This graph shows the expected performance under various historical scenarios (described in the appendix at the end of this report). For each historical scenario, the current market value is recalculated to determine return under identical market conditions, assuming an instantaneous shock.
- 11 Tail risk - Stress tests**

This display shows expected performance when individual risk factors are subjected to instantaneous shocks. Directly affected assets are revalued at factor level
- 12 Risk contribution by risk factor**

Risk contribution by risk factor. Volatility measures the price variation of a portfolio or financial instrument over time.
- 13 Active risk contribution by risk factor**

Active risk in terms of annual tracking error: Tracking Error (TE) measures how closely a portfolio follows its benchmark. It is the standard deviation of the difference between the portfolio and benchmark returns.
- 14 Geographic exposure**

Geographic exposures are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
- 15 Currency exposure**

Currency portfolio allocation. Currency exposures from both the underlying securities and the purchasing currency of the futures contract are included.
- 16 Net geographic exposure**

Difference between portfolio and policy allocation among major geographic areas.
- 17 Net currency exposure**

Difference between portfolio and policy allocation among major currencies.
- 18 Interest rate bucket**

Coupon yield (nominal yield) of a fixed income security is a fixed percentage of the par value that does not vary with the market price of the security. Yield to Maturity (YTM) is the interest rate of return earned by an investor who buys a fixed-interest security today at the market price and holds it until maturity. Ratings indicate credit quality of a security and the issuer's ability to make payments of interest and principal.
- 19 Rates bucket - Geographic exposure**

Geographic exposures specific to the Rates bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
- 20 Rates bucket - Currency exposure**

Currency allocation of interest rate instruments.

21	<b>Rates bucket - Security type</b> Allocation of interest rate instruments among different security types.
22	<b>Credit bucket</b> Various characteristics of credit instruments.
23	<b>Credit bucket - Geographic exposure</b> Geographic exposures specific to the Credit bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
24	<b>Credit bucket - Currency exposure</b> Currency allocation of credit instruments.
25	<b>Credit bucket - Security type</b> Allocation of credit instruments among different security types.
26	<b>Inflation bucket</b> Composition of inflation hedging instruments in portfolio and benchmark. Notional duration of real rates instruments is also included.
27	<b>Inflation bucket - Geographic exposure</b> Geographic exposures specific to the Inflation bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
28	<b>Inflation bucket - Currency exposure</b> Currency allocation of inflation instruments.
29	<b>Inflation bucket - Security type</b> Allocation of inflation instruments among different security types.
30	<b>Equity bucket</b> P/E ratio is a valuation ratio of a company's current share price compared to its per-share earnings. Beta measures sensitivity to Global Equities.
31	<b>Equity bucket - Geographic exposure</b> Geographic exposures specific to the Equity bucket are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.
32	<b>Equity bucket - Currency exposure</b> Currency allocation of equity assets.
33	<b>Equity bucket - Security type</b> Allocation of equity assets among different security types.
34	<b>Market value summary per BarraOne</b> Summary of market value of Portfolio holdings by bucket as reported through BarraOne. Some differences may exist due to timing, pricing sources and availability of information on new investments.

## Tail Risk Scenario Definitions

1	<b>2009-2010 July-January</b> (7/1/2009 - 12/31/2009) As global economic woes persisted, many countries were saddled with widening budget deficits, rising borrowing costs, slowing growth, higher unemployment, and higher inflation, which made monetary stimulus difficult. Dubai World sought to delay its huge debt repayments, shocking the global market, while the financial distress in Greece and Ireland began to emerge in late 2009.
2	<b>2007-2009 Subprime Meltdown</b> (1/10/2007 - 2/27/2009) The burst of the housing bubble in mid-2007 marked the beginning of the years-long subprime mortgage crisis, rooted from the easy credit, low interest rates, and loose regulatory environment in the early 2000s, which made low quality (subprime) mortgaging extremely easy. The contagious meltdown quickly led to plunging asset prices in the financial markets, rising bankruptcies, delinquencies, and foreclosures, and central bank monetary rescues and fiscal interventions by governments around the globe.
3	<b>2007-2008 Oil Price Rise</b> (1/18/2007 - 6/27/2008) Oil prices spiked from around \$60/bbl in 2007 to a record high of \$145/bbl on 3 July 2008.
4	<b>2001 Dot-com Slowdown</b> (3/10/2001 - 10/9/2002) Upon the burst of the tech bubble in 2000, more and more internet companies went out of business as the stock market plummeted further.
5	<b>1997-1999 Oil Price Decline</b> (1/8/1997 - 2/16/1999) The combined effect of OPEC overproduction and lower oil demand due to the Asia economic crisis sent oil prices into a downward spiral.
6	<b>1994 US Rate Hike</b> (1/31/1994 - 12/13/1994) In combating inflation, the U.S. Federal Reserve raised its interest rate from 3.25% in February to 5.5% in November 1994.
7	<b>1992-1993 European Currency Crisis</b> (9/1/1992 - 8/13/1993) Upon Germany's reunification, the German mark appreciated rapidly, which destabilized exchange rates between European countries under the European Monetary System. It led to a series of European currency devaluations, interest rate increases, and the widening range of exchange rates in 1992.
8	<b>1989-1990 Nikkei Stock Price Correction</b> (12/29/1989 - 3/30/1990) After hitting the Nikkei stock index's all-time high on December 29, 1989, the Japan financial market crashed and plunged to a low in March 1990.

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9 **1987 Market Crash (Oct 14 to Oct 19)**

(10/14/1987 - 10/19/1987) The U.S. stock market began to topple on October 14, 1987 after reaching a record high. It was triggered by reports of a larger trade deficit and the elimination of the tax benefits of financing mergers. The aggravating selling pressure in October 19, from confused and fearful investors, and the failing portfolio insurers' models led to a substantial global market sell-off.

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10 **1972-1974 Oil Crisis (Dec to Sep)**

(12/1/1972 - 9/30/1974) Many developed countries suffered in this energy crisis as OPEC members placed an oil embargo on the U.S. and Israel's allies during the Yom Kippur War in October 1973, which sent global oil prices soaring.

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## ***MEMORANDUM***

**Date:** November 22, 2016  
**To:** CCCERA Board of Retirement  
**From:** Timothy Price, Chief Investment Officer  
**Subject:** Guidance to Board on Structure of CCCERA Investment Office

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### ***Overview***

Over the past year, CCCERA Investment Staff have worked to lay the foundations necessary to implement the new FFP portfolio construction process. That work has encompassed the philosophical discussion of our off site last Autumn, the initial asset allocation work conducted earlier this year, the drafting and adoption of the newly restated Investment Policy Statement and the current construction of internal investment procedures. As we begin to implement the new program, we have now reached the point where a reexamination of structure and size of the CCCERA investment team is in order.

There is a common saying in the investment business that any successful organization should be evaluated according to the three P's: Philosophy, Process and People. If you want to achieve good performance, these three factors are the main prerequisites. At this point, CCCERA has tackled quite a few of the P's, as noted below.

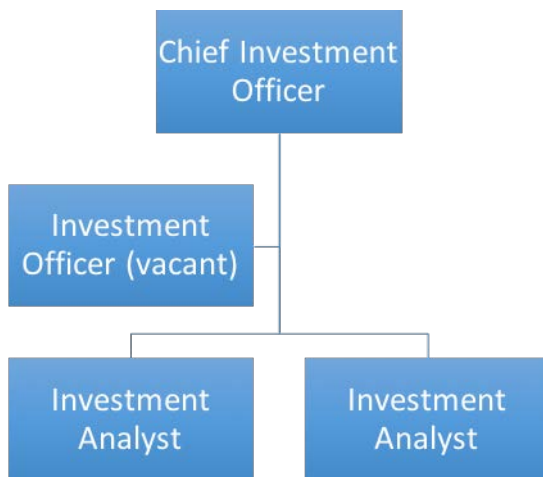
Philosophy: Functionally Focused Portfolio (FFP)  
Process: Investment Policy, Processes and Investment Resolutions  
People: External Consultants, External Tools and Data Sources

The Board has already addressed Philosophy, Process, and a large portion of the People question. It's now time to turn our attention to the staffing of CCCERA's Investment Department. This brief memo outlines proposed enhancements to the Investment Department that I believe will put CCCERA in a position to implement and maintain the Board's desired investment path.

This memo is informational in nature and intended to provide general guidance to the Board about my current thoughts on staffing. We will formally ask for approval of the new positions in the 2017 Budget to be presented in December 2016.

### ***Current Structure***

The CCCERA Investment Staff structure currently has four approved positions, three of which are filled. In addition to the CIO, there is an Investment Officer position (currently vacant) and two Investment Analyst positions. Given the modest size of the team, every staff member operates as a generalist with differentiated areas of interest and expertise.



Given the size of our staff, we have historically relied a great deal on the general investment consultant to assist with manager searches and portfolio monitoring. All implementation has been conducted via external investment managers.

With the current staff, we have been able to:

- Maintain our collaborative approach to investment decision-making with the CCCERA Board
- Expand our private equity, real estate and real asset mandates
- Articulate a new investment portfolio construction philosophy and craft supporting policies
- Expand internal capabilities for manager research, manager monitoring and risk oversight

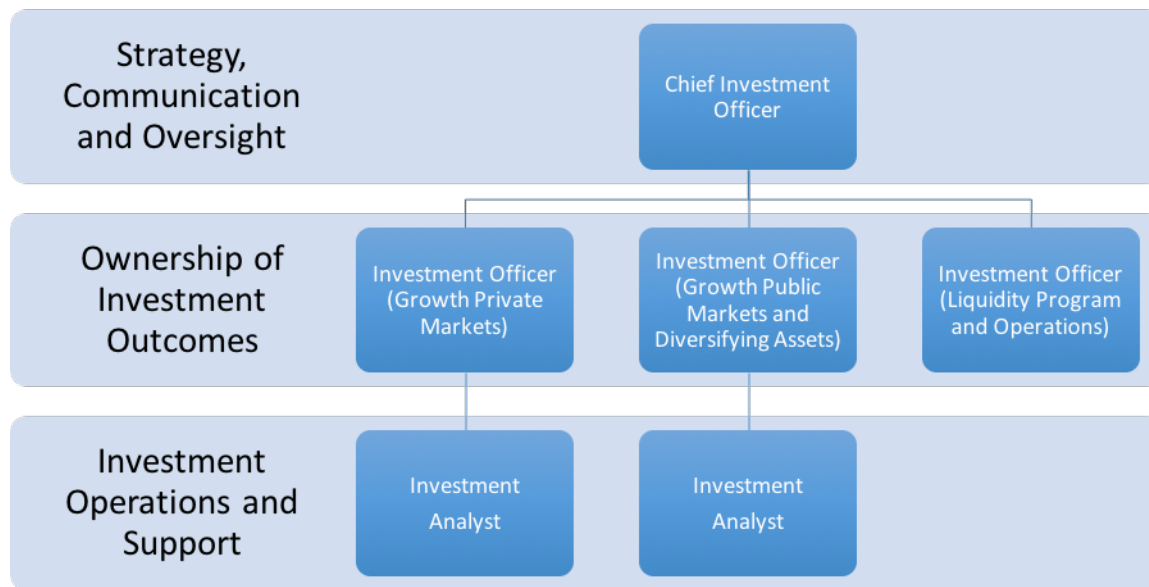
A solid groundwork has been laid with a small but dedicated team. To effectively implement and manage the investment program prospectively, I am now recommending some enhancements to the current structure.

## ***Proposed Structure***

The CCCERA Investment Program has achieved strong long-term results. As tempting as it is to not change a successful plan, we all recognize that a changing investment landscape demands a dynamic response. In order to maintain and improve our investment program as we build out the new FFP structure, we now need to invest in more staff and external resources. This need stems from the need for more ownership of the different aspects of the program as well as the need for succession planning. I believe it is necessary to not only construct an investment program tailored to CCCERA’s evolving needs, but also to ensure that the program will continue under future iterations of CCCERA Staff and Board.

At this time, I’m proposing the addition of two additional investment officer positions to push more ownership of each aspect of the investment program (liquidity, growth and diversification). My goal is to create owners of programmatic investment outcomes who still understand how their role serves the overall program.

The proposed structure is included below:



The role of the general consultant will remain largely the same, though more manager search work will likely be conducted at the staff and specialty consultant than has occurred over the past several years. The bigger change that this increase in investment staff will allow is the degree of oversight of the three new sub-portfolios. Recall that each sub-portfolio will have different goals, which lead to different measures of success and risk. Staff will be building out reporting packages that I believe will provide the Board with more granular data and is intended to be a supplement to the comprehensive quarterly investment report provided by the general investment consultant.

Additionally, the increased staffing will allow us to partner more closely with external asset managers on vetting ideas, assessing market risks and generally moving us closer to capturing the market opportunities available to us over time.



## **MEMORANDUM**

Date: November 22, 2016

To: CCCERA Board of Retirement

From: Henry Gudino, Accounting Manager

Subject: Review of 2015 and 2016 CCCERA budget vs. actual expenditure reports

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### ***BACKGROUND***

Enclosed please find a budget versus actual expenditures update report for two periods. The first period update report is a mid-year status for the 2016 fiscal year from January 1 through June 30, 2016 (pages 1-5). The 2016 budget has been adjusted to a mid-year 50% amount for comparison to the actuals. The second period update report is for the 2015 prior year ending December 31, 2015 (pages 6-10). The updates are divided into Total CCCERA expenditures, followed by Total Administrative and Total Non-Administrative sections.

Administrative expenditures include Executive, Administration, Accounting, Information Technology, Benefits, and Member Services departments. Non-Administrative expenditures include Investments, Legal, and Disaster Recovery.

For the mid-year status ending June 30, 2016; total CCCERA expenditures amounted to \$4,987,342 of which \$4,083,949 was Administrative and \$903,393 was Non-Administrative. The Administrative expenditures when compared to the 2016 mid-year budget of \$4,630,786 resulted in a favorable under budget variance of \$546,837 or 12% of budget.

For prior year 2015, total CCCERA expenditures totaled \$9,961,099 of which \$8,115,438 were Administrative and \$1,845,661 were Non-Administrative. The 2015 Administrative expenditures when compared to the 2015 budget of \$9,078,013 result in a favorable under budget variance of \$962,575 or 11% of budget.

Section 31580.2 of the California Government Code limits administrative expenditures to 0.21% of the current Actuarial Accrued Liability (AAL). As of December 31, 2015, the AAL is \$8,448,624,096 which results in a limit of approximately \$17.7 million. The 2015 Administrative expenditures of \$8.1 million are 0.10% of the AAL and well under the limit amount.



**Contra Costa County Employees' Retirement Association**  
**June 2016 Budget vs Actual Expenditures (Mid-Year)**  
includes Administrative and Non-Administrative Information

	2016 Mid-Year Budget	June 2016 Actuals	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Salaries and Benefits</b>				
<b>Administrative</b>				
Salaries	\$ 2,057,978	\$ 1,837,712	\$ 220,266	11%
Benefits	1,313,867	1,261,970	51,897	4%
<b>Total Administrative</b>	<b>3,371,845</b>	<b>3,099,682</b>	<b>272,163</b>	<b>8%</b>
<b>Non-Administrative</b>				
Salaries	440,635	333,544	107,091	24%
Benefits	247,920	244,154	3,766	2%
<b>Total Non-Administrative</b>	<b>688,555</b>	<b>577,698</b>	<b>110,857</b>	<b>16%</b>
<b>Total Salaries and Benefits</b>	<b>4,060,400</b>	<b>3,677,380</b>	<b>383,020</b>	<b>9%</b>
<b>Operation Expenditures</b>				
Benefit statement	37,500	0	37,500	100%
Board/staff memberships	6,350	10,600	(4,250)	(67%)
<b>Board Education</b>				
Registrations	13,250	9,860	3,390	26%
Hotel	19,000	18,099	901	5%
Travel-airfare, mileage	22,500	12,321	10,179	45%
Meals, tips, phones, tolls	11,250	2,010	9,240	82%
<b>Total Board Education</b>	<b>66,000</b>	<b>42,290</b>	<b>23,710</b>	<b>36%</b>
Books and periodicals	2,200	3,593	(1,393)	(63%)
DOIT	7,500	20,255	(12,755)	(170%)
Equipment contract leases	16,000	23,446	(7,446)	(47%)
Equipment/furniture purchases	14,500	1,409	13,091	90%
Maintenance service contracts	9,000	1,945	7,055	78%
<b>Office Expenditures</b>				
CPAS Maintenance Support	27,500	0	27,500	100%
Postage	43,350	35,566	7,784	18%
Service and Software Contracts	183,500	151,679	31,821	17%
Computer Consulting	127,800	679	127,121	99%
Recruitment	2,000	18,785	(16,785)	(839%)
Supplies	28,250	31,611	(3,361)	(12%)
<b>Total Office Expenditures</b>	<b>412,400</b>	<b>238,320</b>	<b>174,080</b>	<b>42%</b>
Office rent payments	200,000	204,695	(4,695)	(2%)
<b>Professional Services</b>				
External Auditor	37,500	58,840	(21,340)	(57%)
Attorney-disabilities	60,000	48,228	11,772	20%
Board election	25,350	0	25,350	100%
Medical advisor-disabilities	45,000	23,045	21,955	49%
Consultants-non investment	67,500	35,185	32,315	48%
Outside legal fees-non investment	0	171,302	(171,302)	(100%)
Hearings/doctors-disabilities	18,750	45,755	(27,005)	(144%)
Retiree death checks	750	0	750	100%
Investment Counsel	37,500	24,043	13,457	36%
<b>Total Professional Services</b>	<b>292,350</b>	<b>406,398</b>	<b>(114,048)</b>	<b>(39%)</b>
Property/ liability insurance	23,658	47,837	(24,179)	(102%)

**Contra Costa County Employees' Retirement Association  
June 2016 Budget vs Actual Expenditures (Mid-Year)  
includes Administrative and Non-Administrative Information**

	2016 Mid-Year Budget	June 2016 Actuals	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Staff Education</b>				
Registrations	26,500	11,291	15,209	57%
Training	31,000	0	31,000	100%
Hotel	29,975	23,270	6,705	22%
Travel-airfare, mileage	29,050	17,430	11,620	40%
Meals, tips, phones, tolls	7,950	3,126	4,824	61%
Tuition/Books reimbursement	5,050	4,051	999	20%
<b>Total Staff Education</b>	129,525	59,168	70,357	54%
Telephone Services	30,909	38,621	(7,712)	(25%)
Trustee Fiduciary insurance	72,500	69,950	2,550	4%
Website hosting	3,475	4,400	(925)	(27%)
Written communication	58,250	22,074	36,176	62%
<b>Total Operation Expenditures</b>	<b>1,382,117</b>	<b>1,195,001</b>	<b>187,116</b>	<b>14%</b>
Depreciation	136,474	114,961	21,513	16%
<b>Total Expenditures</b>	<b>\$ 5,578,991</b>	<b>\$ 4,987,342</b>	<b>\$ 591,649</b>	<b>11%</b>

**CCCERA Administrative  
June 2016 Budget vs Actual Expenditures (Mid-Year)**

	<b>2016 Mid-Year Budget</b>	<b>June 2016 Actuals</b>	<b>\$ favorable (unfavorable)</b>	<b>% favorable (unfavorable)</b>
<b><i>Salaries and Benefits</i></b>				
<b>Retirement Board</b>				
Meetings-compensation	\$ 11,250	\$ 7,500	\$ 3,750	33%
FICA/ related	1,417	574	843	59%
<b>Total Retirement Board</b>	<b>12,667</b>	<b>8,074</b>	<b>4,593</b>	<b>36%</b>
<b>Executive &amp; Support staff</b>				
Salaries	298,753	199,227	99,526	33%
Benefits	147,117	74,586	72,531	49%
<b>Total Executive &amp; Support</b>	<b>445,870</b>	<b>273,813</b>	<b>172,057</b>	<b>39%</b>
<b>Accounting Division</b>				
Salaries	368,178	431,155	(62,977)	(17%)
Benefits	198,773	164,316	34,457	17%
<b>Total Accounting</b>	<b>566,951</b>	<b>595,471</b>	<b>(28,520)</b>	<b>(5%)</b>
<b>Administration Division</b>				
Salaries	361,667	354,547	7,120	2%
Benefits	224,790	273,223	(48,433)	(22%)
<b>Total Administration</b>	<b>586,457</b>	<b>627,770</b>	<b>(41,313)</b>	<b>(7%)</b>
<b>Information Technology Division</b>				
Salaries	221,368	219,225	2,143	1%
Benefits	151,638	179,596	(27,958)	(18%)
<b>Total Information Technology</b>	<b>373,006</b>	<b>398,821</b>	<b>(25,815)</b>	<b>(7%)</b>
<b>Benefits Division</b>				
Salaries	414,303	351,921	62,382	15%
Benefits	279,735	304,443	(24,708)	(9%)
<b>Total Benefits</b>	<b>694,038</b>	<b>656,364</b>	<b>37,674</b>	<b>5%</b>
<b>Member Services Division</b>				
Salaries	382,459	274,137	108,322	28%
Benefits	228,863	186,210	42,653	19%
<b>Total Member Services</b>	<b>611,322</b>	<b>460,347</b>	<b>150,975</b>	<b>25%</b>
Staff retiree-health care allocation	81,534	79,022	2,512	3%
OPEB Retiree Health	0	0	0	0%
<b>Total Salaries and Benefits</b>	<b>3,371,845</b>	<b>3,099,682</b>	<b>272,163</b>	<b>8%</b>
<b><i>Operation Expenditures</i></b>				
Benefit statement	37,500	0	37,500	100%
Board/staff memberships	3,600	725	2,875	80%
<b>Board Education</b>				
Registrations	11,500	4,720	6,780	59%
Hotel	9,000	11,849	(2,849)	(32%)
Travel-airfare, mileage	8,500	8,990	(490)	(6%)
Meals, tips, phones, tolls	5,250	1,237	4,013	76%
<b>Total Board Education</b>	<b>34,250</b>	<b>26,796</b>	<b>7,454</b>	<b>22%</b>
Books and periodicals	1,100	404	696	63%
DOIT	7,500	20,255	(12,755)	(170%)
Equipment contract leases	16,000	23,446	(7,446)	(47%)
Equipment/furniture purchases	14,000	1,378	12,622	90%
Maintenance service contracts	9,000	1,945	7,055	78%

**CCCERA Administrative  
June 2016 Budget vs Actual Expenditures (Mid-Year)**

	<b>2016 Mid-Year Budget</b>	<b>June 2016 Actuals</b>	<b>\$ favorable (unfavorable)</b>	<b>% favorable (unfavorable)</b>
<b>Office Expenditures</b>				
CPAS Maintenance Support	27,500	0	27,500	100%
Postage	43,350	35,483	7,867	18%
Service and Software Contracts	105,000	103,518	1,482	1%
Computer Consulting	72,500	679	71,821	99%
Recruitment	1,250	16,445	(15,195)	(1,216%)
Supplies	27,000	31,462	(4,462)	(17%)
<b>Total Office Expenditures</b>	<b>276,600</b>	<b>187,587</b>	<b>89,013</b>	<b>32%</b>
<b>Office rent payments</b>	<b>200,000</b>	<b>204,695</b>	<b>(4,695)</b>	<b>(2%)</b>
<b>Professional Services</b>				
External Auditor	37,500	58,840	(21,340)	(57%)
Attorney-disabilities	60,000	48,228	11,772	20%
Board election	25,350	0	25,350	100%
Medical advisor-disabilities	45,000	23,045	21,955	49%
Consultants-non investment	67,500	23,851	43,649	65%
Hearings/doctors-disabilities	18,750	45,755	(27,005)	(144%)
Retiree death checks	750	0	750	100%
<b>Total Professional Services</b>	<b>254,850</b>	<b>199,719</b>	<b>55,131</b>	<b>22%</b>
<b>Property/liability insurance</b>	<b>23,658</b>	<b>47,837</b>	<b>(24,179)</b>	<b>(102%)</b>
<b>Staff Education</b>				
Registrations	21,000	8,610	12,390	59%
Training	31,000	0	31,000	100%
Hotel	9,975	6,092	3,883	39%
Travel-airfare, mileage	11,550	5,063	6,487	56%
Meals, tips, phones, tolls	2,950	984	1,966	67%
Tuition/Books reimbursement	2,800	3,182	(382)	(14%)
<b>Total Staff Education</b>	<b>79,275</b>	<b>23,931</b>	<b>55,344</b>	<b>70%</b>
<b>Telephone Services</b>	<b>30,909</b>	<b>37,181</b>	<b>(6,272)</b>	<b>(20%)</b>
<b>Trustee Fiduciary insurance</b>	<b>72,500</b>	<b>69,950</b>	<b>2,550</b>	<b>4%</b>
<b>Web Site hosting</b>	<b>3,475</b>	<b>4,400</b>	<b>(925)</b>	<b>(27%)</b>
<b>Written communication</b>	<b>58,250</b>	<b>22,074</b>	<b>36,176</b>	<b>62%</b>
<b>Total Operation Expenditures</b>	<b>1,122,467</b>	<b>872,323</b>	<b>250,144</b>	<b>22%</b>
<b>Depreciation</b>	<b>136,474</b>	<b>111,944</b>	<b>24,530</b>	<b>18%</b>
<b>Total Admin Expenditures</b>	<b>\$ 4,630,786</b>	<b>\$ 4,083,949</b>	<b>\$ 546,837</b>	<b>12%</b>

**CCCERA Non-Administrative  
June 2016 Budget vs Actual Expenditures (Mid-Year)**

	2016 Mid-Year Budget	June 2016 Actuals	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Salaries and Benefits</b>				
Investments Division				
Salaries	\$ 288,993	\$ 218,706	\$ 70,287	24%
Benefits	168,224	177,795	(9,571)	(6%)
<b>Total Investments</b>	<b>457,217</b>	<b>396,501</b>	<b>60,716</b>	<b>13%</b>
Legal Division				
Salaries	151,642	114,838	36,804	24%
Benefits	79,696	66,359	13,337	17%
<b>Total Legal</b>	<b>231,338</b>	<b>181,197</b>	<b>50,141</b>	<b>22%</b>
<b>Total Salaries and Benefits</b>	<b>688,555</b>	<b>577,698</b>	<b>110,857</b>	<b>16%</b>
<b>Operation Expenditures</b>				
Board/staff memberships	2,750	9,875	(7,125)	(259%)
Board and Staff Education				
Board Education				
Registrations	1,750	5,140	(3,390)	(194%)
Hotel	10,000	6,250	3,750	38%
Travel-airfare, mileage	14,000	3,331	10,669	76%
Meals, tips, phones, tolls	6,000	773	5,227	87%
<b>Total Board Education</b>	<b>31,750</b>	<b>15,494</b>	<b>16,256</b>	<b>51%</b>
Staff Education				
Registrations	5,500	2,681	2,819	51%
Hotel	20,000	17,178	2,822	14%
Travel-airfare, mileage	17,500	12,367	5,133	29%
Meals, tips, phones, tolls	5,000	2,142	2,858	57%
Tuition/Books reimbursement	2,250	869	1,381	61%
<b>Total Staff Education</b>	<b>50,250</b>	<b>35,237</b>	<b>15,013</b>	<b>30%</b>
<b>Total Board and Staff Education</b>	<b>82,000</b>	<b>50,731</b>	<b>31,269</b>	<b>38%</b>
Books and periodicals	1,100	3,189	(2,089)	(190%)
Equipment/furniture purchases	500	31	469	94%
Office Expenditures				
Postage	0	83	(83)	(100%)
Service and Software Contracts DR	78,500	48,161	30,339	39%
Computer Consulting DR	55,300	0	55,300	100%
Recruitment	750	2,340	(1,590)	(212%)
Supplies	1,250	149	1,101	88%
<b>Total Office Expenditures</b>	<b>135,800</b>	<b>50,733</b>	<b>85,067</b>	<b>63%</b>
Professional Services				
Investment Counsel	37,500	24,043	13,457	36%
Consultants-non investment	0	11,334	(11,334)	(100%)
Outside legal fees-non investment	0	171,302	(171,302)	(100%)
<b>Total Professional Services</b>	<b>37,500</b>	<b>206,679</b>	<b>(169,179)</b>	<b>(451%)</b>
Telephone Services	0	1,440	(1,440)	(100%)
<b>Total Operation Expenditures</b>	<b>259,650</b>	<b>322,678</b>	<b>(63,028)</b>	<b>(24%)</b>
Depreciation	0	3,017	(3,017)	(100%)
<b>Total Non-Admin Expenditures</b>	<b>\$ 948,205</b>	<b>\$ 903,393</b>	<b>\$ 44,812</b>	<b>5%</b>

**Contra Costa County Employees' Retirement Association**  
**2015 Total Budget vs Actual Expenditures Report**  
(includes Administrative and Non-Administrative Information)

	2015 Budget	2015 Actual	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Salaries and Benefits</b>				
<b>Administrative</b>				
Salaries	\$ 3,916,576	\$ 3,524,021	\$ 392,555	10%
Benefits	2,696,812	2,528,755	168,057	6%
<b>Total Administrative</b>	<b>6,613,388</b>	<b>6,052,776</b>	<b>560,612</b>	<b>8%</b>
<b>Non-Administrative</b>				
Salaries	752,469	732,774	19,695	3%
Benefits	431,090	436,497	(5,407)	(1%)
<b>Total Non-Administrative</b>	<b>1,183,559</b>	<b>1,169,271</b>	<b>14,288</b>	<b>1%</b>
<b>Total Salaries and Benefits</b>	<b>7,796,947</b>	<b>7,222,047</b>	<b>574,900</b>	<b>7%</b>
<b>Operation Expenditures</b>				
Benefit statement	75,000	69,855	5,145	7%
Board/staff memberships	5,755	27,141	(21,386)	(372%)
<b>Board Education</b>				
Registrations	35,000	37,266	(2,266)	(6%)
Hotel	55,000	32,746	22,254	40%
Travel-airfare, mileage	56,000	27,519	28,481	51%
Meals, tips, phones, tolls	27,000	3,675	23,325	86%
<b>Total Board Education</b>	<b>173,000</b>	<b>101,206</b>	<b>71,794</b>	<b>41%</b>
Books and periodicals	5,850	8,337	(2,487)	(43%)
DOIT	57,000	40,311	16,689	29%
Equipment contract leases	55,240	37,965	17,275	31%
Equipment/furniture purchases	34,080	12,553	21,527	63%
Maintenance service contracts	20,000	4,298	15,702	79%
<b>Office Expenditures</b>				
Maintenance Support-CPAS/ MV	70,000	18,043	51,957	74%
Postage	73,120	81,169	(8,049)	(11%)
Service and Software Contracts	451,230	340,887	110,343	24%
Computer Consulting	138,000	29,140	108,860	79%
Recruitment	1,380	17,700	(16,320)	(1,183%)
Supplies	64,880	67,167	(2,287)	(4%)
<b>Total Office Expenditures</b>	<b>798,610</b>	<b>554,106</b>	<b>244,504</b>	<b>31%</b>
Office rent payments	400,000	382,159	17,841	4%
<b>Professional Services</b>				
External Auditor	60,000	65,081	(5,081)	(8%)
Attorney-disabilities	130,000	73,496	56,504	43%
Medical advisor-disabilities	90,000	64,110	25,890	29%
Consultants-non investment	145,000	156,559	(11,559)	(8%)
Outside legal fees-non investment	0	333,082	(333,082)	(100%)
Hearings/doctors-disabilities	33,000	28,259	4,741	14%
Retiree death checks	1,400	1,400	0	0%
Investment Counsel	90,000	75,563	14,437	16%
<b>Total Professional Services</b>	<b>549,400</b>	<b>797,550</b>	<b>(248,150)</b>	<b>(45%)</b>
Property/ liability insurance	25,000	45,501	(20,501)	(82%)

**Contra Costa County Employees' Retirement Association  
2015 Total Budget vs Actual Expenditures Report  
(includes Administrative and Non-Administrative Information)**

	2015 Budget	2015 Actual	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Staff Education</b>				
<b>Registrations</b>	34,253	51,862	(17,609)	(51%)
<b>Training</b>	67,000	55,464	11,536	17%
<b>Hotel</b>	31,200	44,876	(13,676)	(44%)
<b>Travel-airfare, mileage</b>	37,730	50,028	(12,298)	(33%)
<b>Meals, tips, phones, tolls</b>	14,800	6,829	7,971	54%
<b>Tuition/Books reimbursement</b>	4,500	797	3,703	82%
<b>Total Staff Education</b>	189,483	209,856	(20,373)	(11%)
<b>Telephone Services</b>	49,800	51,744	(1,944)	(4%)
<b>Trustee Fiduciary insurance</b>	145,000	139,917	5,083	4%
<b>Website hosting</b>	420	1,100	(680)	(162%)
<b>Written communication</b>	101,300	31,176	70,124	69%
<b><i>Total Operation Expenditures</i></b>	<b>2,684,938</b>	<b>2,514,775</b>	<b>170,163</b>	<b>6%</b>
<b>Depreciation</b>	243,982	224,277	19,705	8%
<b><i>Total Expenditures</i></b>	<b>\$ 10,725,867</b>	<b>\$ 9,961,099</b>	<b>\$ 764,768</b>	<b>7%</b>

**CCCERA Administrative  
2015 Budget vs Actual Expenditures**

	2015 Budget	2015 Actuals	\$ favorable (unfavorable)	% favorable (unfavorable)
<b>Salaries and Benefits</b>				
Retirement Board				
Meetings-compensation	\$ 25,000	\$ 18,400	\$ 6,600	26%
FICA/ related	4,200	2,789	1,411	34%
<b>Total Retirement Board</b>	29,200	21,189	8,011	27%
Executive & Support staff				
Salaries	422,531	507,151	(84,620)	(20%)
Benefits	228,266	200,473	27,793	12%
<b>Total Executive &amp; Support staff</b>	650,797	707,624	(56,827)	(9%)
Accounting Division				
Salaries	741,292	731,645	9,647	1%
Benefits	502,005	365,300	136,705	27%
<b>Total Accounting</b>	1,243,297	1,096,945	146,352	12%
Administration Division				
Salaries	825,331	624,614	200,717	24%
Benefits	549,748	441,039	108,709	20%
<b>Total Administration</b>	1,375,079	1,065,653	309,426	23%
Information Technology Division				
Salaries	426,206	357,111	69,095	16%
Benefits	284,192	224,195	59,997	21%
<b>Total Information Technology</b>	710,398	581,306	129,092	18%
Benefit & Member Services Divisions				
Salaries	1,476,216	1,285,100	191,116	13%
Benefits	996,401	882,319	114,082	11%
<b>Total Benefit &amp; Member Services</b>	2,472,617	2,167,419	305,198	12%
Staff Retiree-health care allocation	132,000	162,906	(30,906)	(23%)
OPEB Retiree Health	0	249,734	(249,734)	(100%)
<b>Total Salaries and Benefits</b>	<b>6,613,388</b>	<b>6,052,776</b>	<b>560,612</b>	<b>8%</b>
<b>Operation Expenditures</b>				
Benefit statement	75,000	69,855	5,145	7%
Board/staff memberships	3,400	19,998	(16,598)	(488%)
Board Education				
Registrations	30,000	18,385	11,615	39%
Hotel	25,000	18,833	6,167	25%
Travel-airfare, mileage	20,000	16,367	3,633	18%
Meals, tips, phones, tolls	12,000	2,256	9,744	81%
<b>Total Board Education</b>	87,000	55,841	31,159	36%
Books and periodicals	1,650	2,669	(1,019)	(62%)
DOIT	57,000	40,311	16,689	29%
Equipment contract leases	55,240	37,965	17,275	31%
Equipment/furniture purchases	33,080	10,869	22,211	67%
Maintenance service contracts	20,000	4,298	15,702	79%
Office Expenditures				
Maintenance Support-CPAS/ MV	70,000	18,043	51,957	74%
Postage	73,000	80,442	(7,442)	(10%)
Service and Software Contracts	229,710	241,467	(11,757)	(5%)
Computer Consulting	123,000	29,140	93,860	76%



**CCCERA Administrative  
2015 Budget vs Actual Expenditures**

	<b>2015 Budget</b>	<b>2015 Actuals</b>	<b>\$ favorable (unfavorable)</b>	<b>% favorable (unfavorable)</b>
Recruitment	1,300	17,700	(16,400)	(1,262%)
Supplies	59,050	66,907	(7,857)	(13%)
<b>Total Office Expenditures</b>	<b>556,060</b>	<b>453,699</b>	<b>102,361</b>	<b>18%</b>
Office rent payments	400,000	382,159	17,841	4%
<b>Professional Services</b>				
External Auditor	60,000	65,081	(5,081)	(8%)
Attorney-disabilities	130,000	73,496	56,504	43%
Medical advisor-disabilities	90,000	64,110	25,890	29%
Consultants-non investment	145,000	130,310	14,690	10%
Hearings/doctors-disabilities	33,000	28,259	4,741	14%
Retiree death checks	1,400	1,400	0	0%
<b>Total Professional Services</b>	<b>459,400</b>	<b>362,656</b>	<b>96,744</b>	<b>21%</b>
Property/liability insurance	25,000	45,501	(20,501)	(82%)
<b>Staff Education</b>				
Registrations	31,113	42,943	(11,830)	(38%)
Training	67,000	55,464	11,536	17%
Hotel	19,100	21,536	(2,436)	(13%)
Travel-airfare, mileage	24,330	13,813	10,517	43%
Meals, tips, phones, tolls	9,300	3,623	5,677	61%
Tuition/Books reimbursement	2,250	0	2,250	100%
<b>Total Staff Education</b>	<b>153,093</b>	<b>137,379</b>	<b>15,714</b>	<b>10%</b>
Telephone Services	48,000	48,946	(946)	(2%)
Trustee Fiduciary insurance	145,000	139,917	5,083	4%
Web Site hosting	420	1,100	(680)	(162%)
Written communication	101,300	31,176	70,124	69%
<b>Total Operation Expenditures</b>	<b>2,220,643</b>	<b>1,844,339</b>	<b>376,304</b>	<b>17%</b>
Depreciation	243,982	218,323	25,659	11%
<b>Total Admin Expenditures</b>	<b>\$ 9,078,013</b>	<b>\$ 8,115,438</b>	<b>\$ 962,575</b>	<b>11%</b>

**CCCERA Non-Administrative  
2015 Budget vs Actual Expenditures**

	<b>2015 Budget</b>	<b>2015 Actuals</b>	<b>\$ favorable (unfavorable)</b>	<b>% favorable (unfavorable)</b>
<b>Salaries and Benefits</b>				
<b>Investments Division</b>				
Salaries	\$ 493,392	\$ 530,649	\$ (37,257)	(8%)
Benefits	284,877	335,312	(50,435)	(18%)
<b>Total Investments</b>	<b>778,269</b>	<b>865,961</b>	<b>(87,692)</b>	<b>(11%)</b>
<b>Legal Division</b>				
Salaries	259,077	202,125	56,952	22%
Benefits	146,213	101,185	45,028	31%
<b>Total Legal</b>	<b>405,290</b>	<b>303,310</b>	<b>101,980</b>	<b>25%</b>
<b>Total Salaries and Benefits</b>	<b>1,183,559</b>	<b>1,169,271</b>	<b>14,288</b>	<b>1%</b>
<b>Operation Expenditures</b>				
Board/staff memberships	2,355	7,143	(4,788)	(203%)
<b>Board and Staff Education</b>				
<b>Board Education</b>				
Registrations	5,000	18,881	(13,881)	(278%)
Hotel	30,000	13,913	16,087	54%
Travel-airfare, mileage	36,000	11,152	24,848	69%
Meals, tips, phones, tolls	15,000	1,419	13,581	91%
<b>Total Board Education</b>	<b>86,000</b>	<b>45,365</b>	<b>40,635</b>	<b>47%</b>
<b>Staff Education</b>				
Registrations	3,140	8,919	(5,779)	(184%)
Hotel	12,100	23,340	(11,240)	(93%)
Travel-airfare, mileage	13,400	36,215	(22,815)	(170%)
Meals, tips, phones, tolls	5,500	3,206	2,294	42%
Tuition/Books reimbursement	2,250	797	1,453	65%
<b>Total Staff Education</b>	<b>36,390</b>	<b>72,477</b>	<b>(36,087)</b>	<b>(99%)</b>
<b>Total Board and Staff Education</b>	<b>122,390</b>	<b>117,842</b>	<b>4,548</b>	<b>4%</b>
Books and periodicals	4,200	5,668	(1,468)	(35%)
Equipment & furniture purchases	1,000	1,684	(684)	(68%)
<b>Office Expenditures</b>				
Postage	120	727	(607)	(506%)
Service and Software Contracts DR	221,520	99,420	122,100	55%
Computer Consulting DR	15,000	0	15,000	100%
Recruitment	80	0	80	100%
Supplies	5,830	260	5,570	96%
<b>Total Office Expenditures</b>	<b>242,550</b>	<b>100,407</b>	<b>142,143</b>	<b>59%</b>
<b>Professional Services</b>				
Investment Counsel	90,000	75,563	14,437	16%
Consultants-non investment	0	26,249	(26,249)	(100%)
Outside legal fees-non investment	0	333,082	(333,082)	(100%)
<b>Total Professional Services</b>	<b>90,000</b>	<b>434,894</b>	<b>(344,894)</b>	<b>(383%)</b>
Telephone Services	1,800	2,798	(998)	(55%)
<b>Total Operation Expenditures</b>	<b>464,295</b>	<b>670,436</b>	<b>(206,141)</b>	<b>(44%)</b>
Depreciation	0	5,954	(5,954)	(100%)
<b>Total Non-Admin Expenditures</b>	<b>\$ 1,647,854</b>	<b>\$ 1,845,661</b>	<b>\$ (197,807)</b>	<b>(12%)</b>



## ***MEMORANDUM***

**Date:** November 22, 2016

**To:** CCCERA Board of Retirement

**From:** Gail Strohl, Chief Executive Officer

**Subject:** Legacy Policies Related to Investment Program

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### ***Background***

In 1995 and 2000, the Board adopted policies concerning certain investment and divestment policies concerning: emerging managers, economically targeted investments, and tobacco divestment. Please note that the tobacco divestment policy was retired in 2007 when it was incorporated into the prior version of the Investment Policy Statement. These policies are outlined below:

#### **Emerging Managers**

Adopted 10/10/95

In considering potential investment managers, it is the policy of the Board not to exclude managers from consideration based on ethnic background or gender, and not to arbitrarily exclude an emerging firm if, in the opinion of the Board, that firm has equal or superior capabilities to other candidates.

#### **Economically Targeted Investments**

Adopted 9/12/95

It shall be the policy of the Board that an Economically Targeted Investment (ETI) can be considered if and only if it has return and risk characteristics attractive in comparison to other alternatives.

#### **Tobacco Divestment**

Adopted 3/7/00

All Domestic Equity and Domestic Fixed Income portfolios, unless exempted by the Board, shall not hold securities in any corporation that derives 15% or more of its revenue from tobacco products. All other Investment Managers are encouraged

to avoid investments in companies that derive 15% or more of their revenues from tobacco products.

On August 10, 2016, the Board reviewed a draft restatement of the investment policy statement (IPS), including a discussion of these three policies and whether the new IPS should include them. The Board provided direction not to include these policies in the new IPS. On September 28, 2016, the Board adopted the restatement IPS, which did not include these policies.

From the investment perspective, as previously discussed with the Board, the Board investment consultant and CCCERA's internal investment staff believe that these three policies have had a modest impact on the portfolio and the elimination of these policies would have minimal impact on CCCERA's investments. Tobacco issuances comprise approximately 1.8% of the S&P 500 Index and approximately 0.4% of the broad US debt market.

***Recommendation***

Consider and take possible action to:

- a. rescind the Emerging Manager Policy
- b. rescind the Economically Targeted Investments Policy
- c. rescind the Tobacco Divestment Policy (as included in the prior version of the Investment Policy Statement)

# CCCERA Board Meetings 2017

January						
Su	Mo	Tu	We	Th	Fr	Sa
1	H	3	4	5	6	7
8	9	10	B	12	13	14
15	H	17	18	19	20	21
22	23	24	B	26	27	28
29	30	31				

2 - New Year's Day Observed  
16 - Martin Luther King Jr. Day

February						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	B	9	10	11
12	13	14	15	16	17	18
19	H	21	B	23	24	25
26	27	28				

20 - Presidents' Day

March						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	C
C	C	C	B	9	10	11
12	13	14	15	16	17	18
19	20	21	B	23	24	25
26	27	28	29	30	31	

April						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	B	13	14	15
16	17	18	19	20	21	22
23	24	25	B	27	28	29
30						

May						
Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	B	11	12	13
14	15	S	S	S	S	20
21	22	23	B	25	26	27
28	H	30	31			

29 - Memorial Day

June						
Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	B	8	9	10
11	12	13	14	15	16	17
18	19	20	B	22	23	24
25	26	27	28	29	30	

July						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	H	5	6	7	8
9	10	11	B	13	14	15
16	17	18	19	20	21	22
23	24	25	B	27	28	29
30	31					

4 - Independence Day

August						
Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7		B	10	11	12
13	14	15	16	17	18	19
20	21	22	B	24	25	26
27	28	29	30	31		

September						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	H	5	6	7	8	9
10	11	12	B	14	15	16
17	18	19	20	21	22	23
24	25	26	B	28	29	30

4 - Labor Day

October						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	B	12	13	14
15	16	17	18	19	20	21
22	23	24	B	26	27	28
29	30	31				

November						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	B	9	H	11
12	13	S	S	S	S	18
19	20	B	22	H	H	25
26	27	28	29	30		

10 - Veterans Day  
23 and 24 - Thanksgiving

December						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	B	14	15	16
17	18	19	20	21	22	23
24	H	26	27	28	29	30
31						

25 - Christmas Day Observed

**B** Board Meeting

**S** SACRS

**C** CALAPRS