





PERIOD ENDING: MARCH 31, 2018

Investment Performance Review for

Tulare County Employees' Retirement Association

Table of Contents



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Investment Landscape

TAB I

Investment Performance Review TAB II



Table of Contents



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Economic environment	(
Fixed income rates & credit	20
Equity	27
Other assets	39
Appendix	42

1st quarter summary

THE ECONOMIC CLIMATE

- The U.S. economy is expected to grow at around 2.2% in Q1. Economists expect a slightly quicker rate of growth throughout the year. We believe that this *middle-of-the-road* expansion – characterized as not too fast and not too slow – may allow the U.S. economy to continue expanding for longer than expected. p. 8
- The U.S. has enacted a 25% tariff on steel and a 10% tariff on aluminum, which went into effect on March 23rd. The U.S. also engaged with China over allegations of asymmetrical trade policies and intellectual property theft. p. 18, 19

PORTFOLIO IMPACTS

- Global economic growth has improved low inflation, strong employment, and accommodative foreign central bank policies have been supportive of equity prices. In the U.S., monetary tightening has yet to have a major impact on equities. *p.* 17
- Concerns over increasing trade protectionism weighed on financial markets. The tariffs placed on steel and aluminum are not likely to have a material impact on asset prices, but escalating tensions and retaliatory measures could have a negative impact on global growth. p. 18, 19

THE INVESTMENT CLIMATE

- Excitement and optimism over tax cuts helped lead equities higher to begin the year. However, markets stumbled in February – falling roughly 10%. Equities recovered much of the losses throughout the quarter, but then fell back to their lows at the end of March. p. 29
- 2018 is expected to be a banner year for U.S. corporate profits. Earnings for the calendar year are forecast to grow 17.3%, with 7.3% revenue growth. These 2018 expectations may already be priced in. p. 29
- February's market correction appeared isolated to the equity markets. "Risk-off" selling that often accompanies market drawdowns was not apparent – credit spreads, U.S. Treasuries, and gold, reacted minimally. p. 28

ASSET ALLOCATION ISSUES

- Upward price momentum in equities has diminished following the February market correction. Investor sentiment is less positive, but the global economic and earnings backdrop remains intact. We believe a neutral or mild risk overweight is warranted in this environment. p. 32
- Equity volatility spiked in February, ending the period of extreme calm that investors experienced since the beginning of 2017. The VIX Index averaged 20.7 during the last two months of the quarter. p. 35, 36

Changing
market
dynamics
suggest a
neutral or mild
risk overweight
may be
warranted

What drove the market in Q1?

"Record high increase in S&P 500 EPS estimates for Q1 2018"

CHANGE IN EPS ESTIMATE DURING THE QUARTER (NET)

Q4 16	Q1 17	Q2 17	Q3 17	Q4 17	Q1 18		
-2%	-4%	-2%	-4%	0%	+7%		
Article Source: FactSet, March 29 th , 2018							

"U.S. stocks sell off on concerns about trade"

U.S. TRADE DEFICIT BY COUNTRY (\$ BILLIONS)

China	Japan	Germany	Italy	S. Korea	India		
-375	-69	-64	-32	-23	-23		
Article Source: WSJ, March 23 rd , 2018							

"Volatility index spikes by largest-ever [one day] amount"

VIX Index (Average)

Oct	Nov	Dec	Jan	Feb	Mar		
10.1	10.5	10.2	11.1	22.5	19.0		
Article Source: Bloomberg, February 5 th , 2018							

"U.S. Treasury yields rise to a new 4-year high as inflation concerns

U.S. 10-Year Treasury Yield

Oct	Nov	Dec	Jan	Feb	Mar
2.38%	2.41%	2.41%	2.71%	2.86%	2.74%

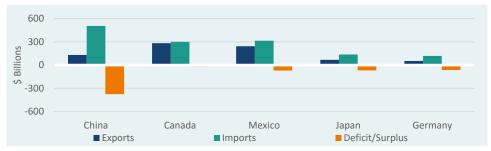
Article Source: USA Today, February 12th, 2018

S&P 500 PRICE INDEX AND Q1 EPS ESTIMATES (INDEXED TO 100)



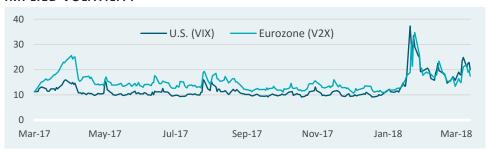
Source: Bloomberg, as of 3/29/18

U.S. TRADE DEFICIT BY COUNTRY



Source: U.S. Census Bureau, 2017

IMPLIED VOLATILITY



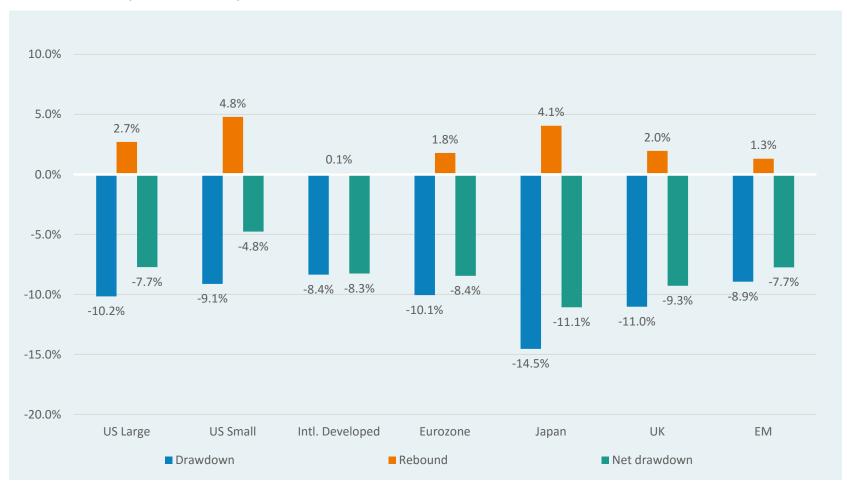
Source: Bloomberg, as of 3/29/18



drag on"

The return of volatility

PEAK TO TROUGH (LOCAL RETURNS)



Timeframe includes the February drawdown and subsequent "bottom" of each market, then recovery through 3/31/18



Economic environment



U.S. economics summary

- Economic growth remained near expansion highs in the fourth quarter. U.S. real GDP growth was 2.6% from the previous year.
 Consumer spending and investment pushed the economy ahead, while falling exports were a drag on growth.
- The U.S. enacted a 25% tariff on steel and 10% tariff on aluminum, which went into effect March 23rd.
 The U.S. has engaged with China over allegations of asymmetrical trade policies and intellectual property theft, creating concerns over the risks of a trade war.
- Additions to U.S. payrolls averaged 202,000 per month in the first quarter, above the expansion average.
- In recent years, the U.S. has seen discouraged and part-time workers drawn back to full-time employment. This effect can be

- quantified by the shrinking difference between U-6 and U-3 unemployment figures. The difference between these two measures fell to 3.9%, matching expansion lows.
- Core CPI inflation moved from 1.8% to 2.1% YoY during the quarter, the highest rate in more than a year. Prices jumped in March primarily due to the low base effect from an unexpected drop in wireless telecom prices one year ago.
- The Fed raised interest rates on March 21st to 1.50-1.75%.
 Comments made during the March meeting suggest the FOMC expects continued moderate economic activity, spending, and business investment. Unsurprisingly, the Committee stated that the U.S. inflation rate is expected to stabilize at the 2% target over the near-term.

	Most Recent	12 Months Prior
GDP (YoY)	2.6% 12/31/17	1.8% 12/31/16
Inflation (CPI YoY, Core)	2.1% 3/31/18	2.0% 3/31/17
Expected Inflation (5yr-5yr forward)	2.2% 3/31/18	2.2% 3/31/17
Fed Funds Target Range	1.50 – 1.75% 3/31/18	0.75 – 1.00% 3/31/17
10 Year Rate	2.8% 3/31/18	2.4% 3/31/17
U-3 Unemployment	4.1 % 3/31/18	4.5% 3/31/17
U-6 Unemployment	8.0% 3/31/18	8.8% 3/31/17



GDP growth

Economic growth accelerated further in the fourth quarter of 2017. Real GDP increased 2.6% from the previous year (2.9% annualized quarterly rate), driven by consumer spending. The pace of growth was faster than the expansion average of 2.2%. Consumer spending contributed 2.8% to the quarterly growth rate, partly due to a strong holiday retail season. Corporate capex spending slowed in Q4, but was still the second largest contributor to the overall growth rate at 1.3%. As discussed last quarter, changes to the tax code could reinforce the current positive trend in fixed business investment.

The economy is expected to experience slower but still moderate growth in the first quarter – the consensus estimate is 2.2%, according to Bloomberg. First quarter growth has underwhelmed the past few years, which may occur again this year. However, expectations for 2018 calendar growth remain robust at 2.8%.

The economy experienced above-trend growth in 2017

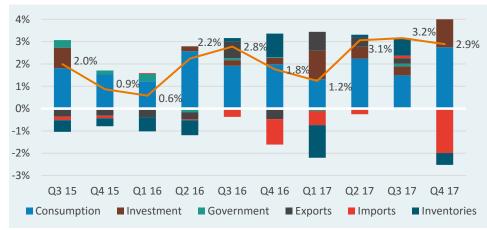
While we continue to see mild pressures building, such as firming inflation, rising interest rates, and tightening in the labor market, there do not appear to be clear signs of economic overheating.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 12/31/17

U.S. GDP COMPONENTS



Source: BEA, annualized quarterly rate, as of 12/31/17



Inflation

Core CPI inflation moved from 1.8% to 2.1% YoY during the quarter, the highest rate in more than a year. Prices jumped in March primarily due to the low base effect from an unexpected drop in wireless telecom prices one year ago.

Market inflation expectations have recovered a bit since the deflation scare in 2015 that coincided with an energy driven slump in inflation figures. The 10-year TIPS breakeven inflation rate moved marginally from 2.0% to 2.1%. Investors expect inflation to stay relatively muted over the longer-term – recent mild rises in inflation may not be indicative of a trend.

While inflation does not actually appear to be bubbling up in most global economies, it is interesting to note that investors are generally expecting higher inflation.

Sentiment has transitioned from fear of deflation to fear of inflation, which has broad implications for the markets – central bank confidence in raising rates, and pricing across the fixed income markets, to name a few.

Fears of rising inflation emerged during the quarter

U.S. CPI (YOY)



U.S. TIPS BREAKEVEN RATES



Source: Bloomberg, as of 3/31/18

INFLATION EXPECTATIONS



Source: Bloomberg, as of 3/31/18



Source: FRED, as of 3/31/18

Labor market

Conditions in the U.S. labor market tightened slightly in Q1. Unemployment kept steady at 4.1%, while the unemployment rate that includes discouraged and part time workers fell to 8.0% from 8.2%. In Q1, 202,000 jobs were created per month - slightly stronger than the expansion average.

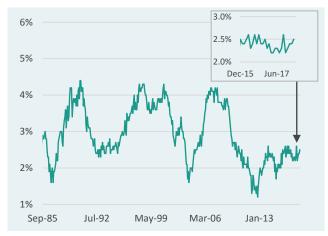
As we have discussed in recent years, continued labor market slack, not captured in the popular U-3 unemployment figure, has contributed to slower wage gains. Another key contributor to modest wage gains has been weak improvements in business productivity.

The degree to which U.S. businesses are able to become more efficient has an impact on U.S. employee wages through time. Efficiency is also referred to as *productivity*. As businesses realize productivity gains they are able to pass on some of these gains to employees in the form of higher wages, since output per employee has increased. If businesses are not becoming more productive, this makes it difficult to sustainably raise employee pay. In the current economic expansion, businesses have realized minimal productivity growth, which is likely a contributor to tepid wage growth.

UNEMPLOYMENT RATE



AVERAGE HOURLY EARNINGS (YOY)



U.S. PRODUCTIVITY GROWTH



Source: Bloomberg, as 2/28/18

Source: FRED, as of 12/31/17



Source: FRED, as of 3/31/18

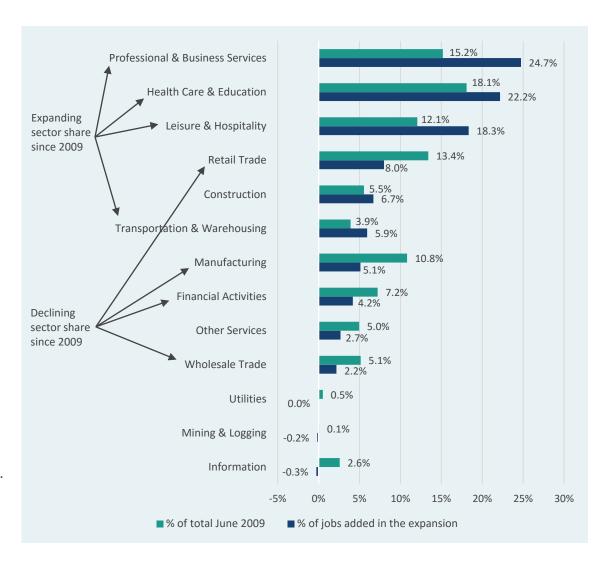
Job creation since the financial crisis

Since the end of the global financial crisis, the U.S. has added more than 17 million workers to the labor force and the unemployment rate has fallen from 9.9% to 4.1%. During this time the composition of the workforce has changed.

Three broad sectors have experienced outsized gains in employment compared to their sizes in June of 2009: Professional and Business Services, Health Care & Education, and Leisure & Hospitality.

Disproportionate gains in the last two sectors have led some to question the quality of jobs that are being added because they are typically low paid positions. On average, Leisure & Hospitality jobs receive \$15.74 per hour, compared to the national average of \$26.75. The changing sector composition is likely one of many structural factors (i.e. globalization and automation) limiting wage growth in the current cycle.

This exercise also created a useful lens to view recent employment trends in terms of the cyclicality of each sector. Manufacturing and construction have historically been the most cyclical sectors and are both growing above trend over the past year, indicating a recent pickup in hiring. This data confirms acceleration in manufacturing surveys, such as PMIs.



Source: FRED, as of 2/28/18



Wages

Muted wage growth has been heavily scrutinized during the expansion due to its historically strong relationship with the unemployment rate. Although wage growth has accelerated over the past few years, we have yet to experience a material rise in wages that would be consistent with a tight labor market. The broad unemployment rate (U-6, 8.0%) implies wage growth of around 4.5% versus actual wage growth of 3.3% based on a historical regression analysis. Much like our view on overall inflation, we believe cyclical forces may place modest upward pressures on wages, but at a gradual pace.

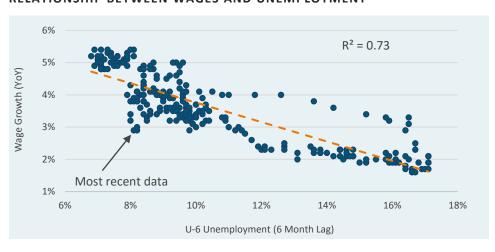
An interesting development during the quarter was a shift in the market narrative surrounding wage growth. In January, a positive surprise in average hourly earnings (mainly caused by a fall in aggregate hours worked during the month) sparked concerns that a faster rate of growth might result in quicker-than-expected monetary tightening. The surprise coincided with a material increase in Treasury yields, although many factors likely influenced these moves. Earlier in the expansion, many market participants voiced concerns that low wage growth was a potential indicator of economic weakness.

WAGE GROWTH (YOY)



Source: Bloomberg, Atlanta Fed, as of 3/31/18 (see appendix)

RELATIONSHIP BETWEEN WAGES AND UNEMPLOYMENT



Source: Bloomberg, Atlanta Fed, Verus, as of 3/31/18



The consumer

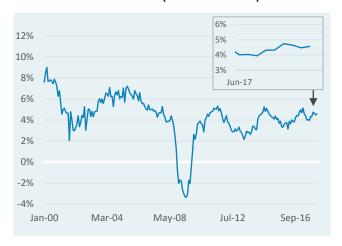
The U.S. continues to be in a *middle-of-the-road* expansion – characterized as not too fast and not too slow. Moderate improvements in wages and employment, conservative spending and borrowing trends, and rising wealth, indicate a sustainable environment going forward for the American consumer.

Current U.S. spending trends appear in-line, or a bit more conservative, than previous economic expansions. Behavior may be partly explained by a more timid pace of employee

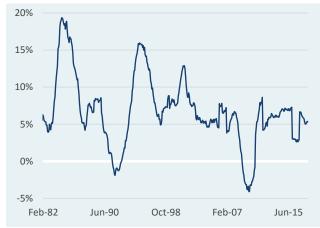
wage growth, as well as not-too-distant memories of hardships experienced during the U.S. housing bubble.

If interest rates continue to rise, this will likely act as a headwind to consumer spending as it becomes more expensive to borrow. Historically, spending patterns tend to ebb and flow through the economic cycle largely through the use of credit (i.e. credit cards, auto loans, home loans).

CONSUMER SPENDING (YOY GROWTH)

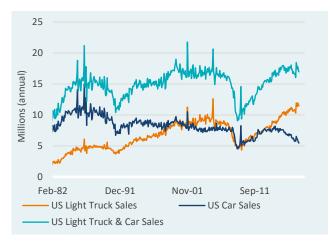


CONSUMER CREDIT GROWTH (YOY)



Source: FRED, as of 1/31/18

AUTO SALES



Source: Bloomberg, as of 2/28/18



Source: Bloomberg, as of 2/28/18

Sentiment

Consumer and business sentiment surveys further improved over the quarter and are now at or above levels of the latest 2001-2007 U.S. economic cycle. The University of Michigan Consumer Sentiment Index now sits at 101.4, which places it in the 91st percentile relative to its own history, since 1978. Consumers' perception of current economic conditions (employment and wage prospects) are at their highest level since the late 1990s. The Bloomberg Consumer Comfort Index has risen to levels last seen in 2001.

The NFIB Small Business Optimism Index was 107.4 at the end of the quarter – near a record high, although there was a significant drop in businesses' expectations for the economy. The net number of firms that expect the economy to improve fell from 43% to 32% in March, but this figure was still near historical highs.

Consumers and small businesses have a positive outlook on the U.S. economy

CONSUMER COMFORT INDEX



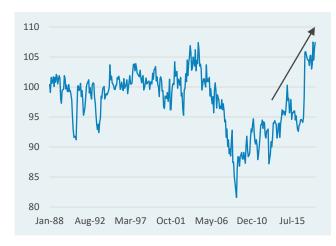
Source: Bloomberg, as of 3/25/18 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 3/31/18 (see Appendix)

NFIB SMALL BUSINESS OPTIMISM INDEX



Source: NFIB, as of 2/28/18 (see Appendix)



Housing

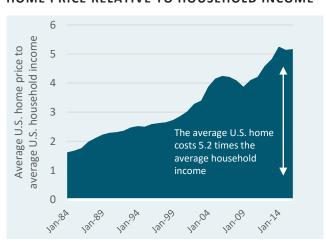
U.S. home prices rose 6.2% YoY, as of January, according to the Case-Shiller National Home Price Index.

Following the U.S. 2008 housing crisis, a combination of lower home prices and ultra-low interest rates made home ownership very affordable. These conditions eventually helped to bring back demand for homes and supported a rise in prices. Today, the price of an American home has returned to, and surpassed, pre-crisis levels. The average U.S. home costs more than 5 times the average household income, which has made purchasing a home increasingly difficult.

This affordability problem could be compounded further if interest rates rise and push mortgage interest rates upward.

Rising home prices have lopsided effects on consumers. Higher prices add to the wealth of existing homeowners and land owners initially, but also lead to higher property taxes. For prospective homeowners, higher prices translate to a larger required down payment, greater mortgage payments, higher property taxes, and therefore a greater overall drag on standard of living.

HOME PRICE RELATIVE TO HOUSEHOLD INCOME



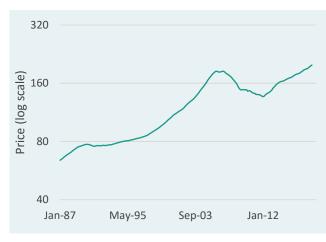
Source: FRED, 2016 census data

HOUSING AFFORDABILITY



Source: National Association of Realtors, as of 12/31/17

U.S. HOME PRICE INDEX



Source: Case-Shiller National Home Price Index, as of 2/28/18



International economics summary

- International economic growth was strong across countries in the fourth quarter, but a combination of recent economic data coming in below expectations and trade concerns created risks to the synchronized global growth narrative.
- The U.S. implemented 25% and 10% tariffs on steel and aluminum imports, respectively. When the tariffs were initially announced the White House pushed for all countries to be subject to them. However, many countries, such as Canada and Mexico, were given exemptions to allow for ongoing negotiations.
- In April, concerns over trade shifted to escalating tensions between the U.S. and China.
- The Eurozone experienced abovetrend growth in the fourth quarter at 2.7% YoY, driven by contributions from household spending and fixed capital investment.

- Economic data out of the Eurozone consistently missed expectations in the first quarter. Industrial production was particularly disappointing – the year-over-year rate fell from 5.2% in December to 2.9% in February.
- Global PMIs remained above 50, indicating expansion in the manufacturing sector, although several countries experienced a decline. The Eurozone PMI fell from 60.8 to 56.6 during the quarter.
- The populist Five Star Movement performed better than expected in the Italian general election in March, winning the most seats of any party. However, no party won a majority in Parliament, resulting in the need to form a coalition government. Increasing support for populist governments (i.e. Hungary and Poland) across Europe remains a risk to investors.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.5%	2.4%	4.1%
	12/31/17	3/31/18	3/31/18
Western	2.5 % 12/31/17	1.3%	7.4%
Europe		3/31/18	12/31/17
Japan	2.0%	1.5%	2.5%
	12/31/17	2/28/18	2/28/18
BRICS	6.2%	2.6%	5.6%
Nations	12/31/17	3/31/18	12/31/17
Brazil	2.1% 12/31/17	2.7 % <i>3/31/18</i>	12.4% 3/31/18
Russia	0.9%	2.4%	5.0%
	12/31/17	3/31/18	2/28/18
India	7.2 % 12/31/17	4.4% 2/28/18	8.8% 12/31/17
China	6.8%	2.1%	3.9%
	12/31/17	3/31/18	12/31/17



International economics

International economic growth continued its upward trend, particularly in emerging countries, where a weaker dollar, higher commodity prices, and stronger external demand has been supportive. Additionally, inflation in emerging economies decelerated to 3.0% in 2017, allowing central banks to cut interest rates. Collectively, the BRICS countries grew by 6.2% in the fourth quarter, the fastest pace since 2012.

The narrative on international developed economies did not materially change during the quarter – growth accelerated,

inflation remained low, and central banks provided support, but contemplated exit strategies. While inflation is starting to show modest signs of life in the U.S., the Eurozone and Japan are still experiencing inflation well below 2%. In February, year-over-year core CPI growth was 1.0% in both economies.

The European Central Bank continues to express plans to end asset purchases in September and begin raising interest rates sometime next year. The pace of interest rate hikes will likely be heavily dependent on inflation and market reaction to tightening.

Economic growth improved, especially in emerging markets

REAL GDP GROWTH (YOY)



INFLATION (CPI)



Source: Bloomberg, as of 2/28/18

UNEMPLOYMENT



Source: Bloomberg, as of 1/31/18 or most recent release



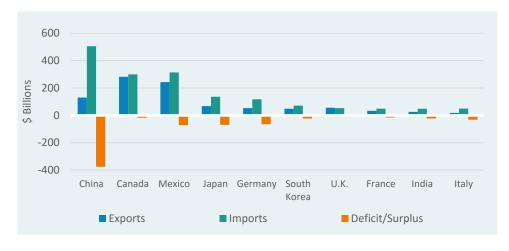
Source: Bloomberg, as of 12/31/17

International trade

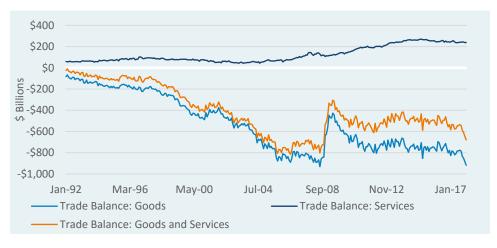
The U.S. has enacted a 25% tariff on steel and 10% tariff on aluminum, which went into effect March 23rd, though many U.S. trade partners have been exempted. The U.S. is engaged with China over the significant U.S.-China trade deficit, allegations of China's asymmetrical trade barriers, and the long-term issue of theft of U.S. intellectual property by Chinese companies. The actions of the U.S. administration have stoked fears of a global trade war. While it is broadly agreed that tariffs have a net negative impact on global growth, many hold the view that the U.S. should address these long-running trade issues with China. The motivations and strategy behind the U.S. administration's actions are not yet fully known, but it should not be assumed that the outcome of this process will be negative for the U.S. or the global economy.

Steel and aluminum represent a small portion of total U.S. imports. On a standalone basis, the economic impact of these tariffs will likely be small. The risk of escalation seems to be the market's primary concern. China-U.S. trade amounts to approximately \$650 Billion annually.

U.S. TRADE BALANCE



U.S. TRADE - GOODS & SERVICES (ANNUALIZED)

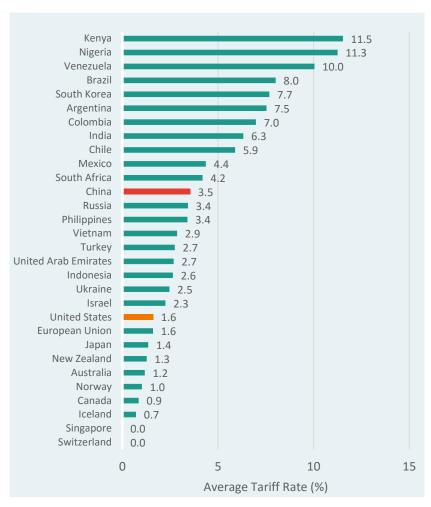


Source: U.S. Census Bureau, 2017 Source: FRED

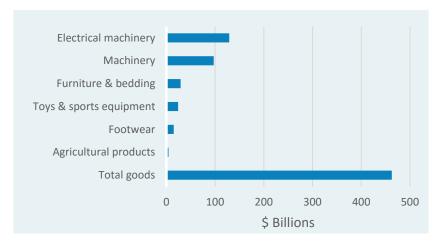


International trade

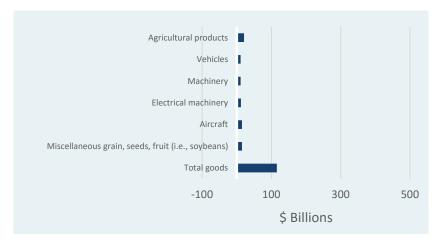
GLOBAL TARIFFS



CHINA EXPORTS TO U.S.



U.S. EXPORTS TO CHINA



Source: World Trade Organization, 2016



Fixed income rates & credit



Interest rate environment

- The Fed raised interest rates by 25 bps to a target range of 1.50%
 1.75% in March, as expected. In his first public comments since taking over as Fed chairman, Jerome Powell's views appeared to support a continuation of gradual monetary tightening.
- According to the Fed dot plot, officials are expecting two additional rate hikes this year, on par with market pricing.
- Long-term Treasury yields rose at the beginning of the year, likely influenced by increasing growth and inflation expectations. The 10year yield peaked at 2.95% in late February, up 55 bps from year-end. Yields failed to hold these levels, however, and finished the quarter at 2.74%.
- Short-term borrowing costs continued to rise during the quarter, especially in debt tied to Libor. The 3-month USD Libor rate

- moved steadily higher from 1.7% to 2.3%. Much of this increase was likely mechanical due to record high Treasury bill issuance and repatriation of foreign profits.
- Sovereign yields in developed Europe also ticked up in January, coinciding with yield increases in U.S. Treasuries, but came back down in the last two months of the quarter. German 10-year yields peaked at a two year high of 0.77% in early February before finishing the quarter at 0.50%.
- Developed international central banks remain accommodative compared to the Fed, but they have increasingly hinted towards policy normalization. The ECB is likely next in line to begin monetary tightening by ending asset purchases and raising rates sometime next year. The BOJ has yet to provide any details on ending its stimulus program, but officials have noted internal discussions have begun.

Area	Short Term (3M)	10 Year
United States	1.70%	2.74%
Germany	(0.75%)	0.50%
France	(0.58%)	0.72%
Spain	(0.50%)	1.16%
Italy	(0.43%)	1.79%
Greece	1.31%	4.32%
U.K.	0.49%	1.35%
Japan	(0.17%)	0.04%
Australia	2.03%	2.60%
China	3.12%	3.77%
Brazil	6.31%	9.50%
Russia	6.01%	7.16%

Source: Bloomberg, as of 3/31/18



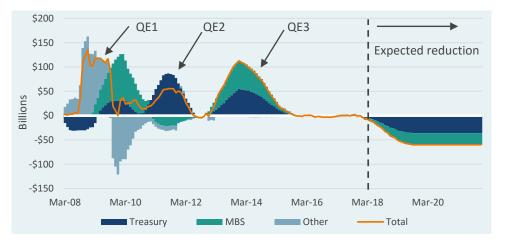
Fed tightening

In Jerome Powell's first meeting as chairman, the Fed hiked interest rates by 25 bps to a target range of 1.50% - 1.75%, as expected. The Fed's forecast for future hikes shifted up slightly based on the dot plot, but Powell's messaging appeared to be similar to the precedent set by Yellen – slow and gradual rate increases coinciding with firming inflation that will eventually reach the 2% target. Markets priced in 25 bps of additional tightening for 2018 during the quarter, and pricing is now on par with Fed expectations of two more rate rises this year. The balance sheet reduction has gone as planned, but we are likely too early in the process to gain insight into its market impact.

The Fed has intentionally tightened slowly, and markets have been able to digest the 150 bps of rate increases thus far. This is consistent with the beginning of past Fed tightening cycles where economic fundamentals were strong. As we move further down this path, additional increases in discount rates will have an increasing impact on the economy and risk assets. However, we believe the Fed will continue to be patient, barring a material change in the inflation environment.

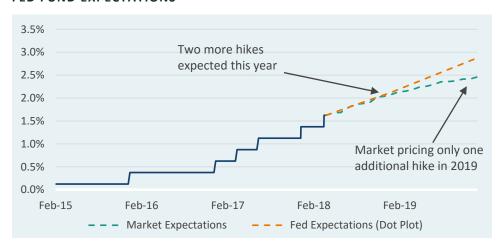
Fed tightening has gone as expected

FED BALANCE SHEET FLOW (12-MONTH CHANGE)



Source: Federal Reserve, as of 3/31/18

FED FUND EXPECTATIONS



Source: Bloomberg, Federal Reserve as of 3/31/18



The history of monetary tightening

The difficulty of assessing the potential effect of monetary tightening lies in the fact that there are relatively few historical observations to analyze. Since 1959, the Fed has only tightened policy nine times, including the current period which began in December of 2015. There are also unique circumstances in each period, such as the balance sheet reduction coinciding with interest rate increases in this cycle. We looked at three variables: GDP growth, equity earnings growth, and equity performance to get a better understanding of how Fed tightening has historically impacted the economy and financial markets.

As one might expect, GDP growth has been stronger during Fed tightening than in the 12 months following. The same relationship has occurred with equity earnings. This is most likely because the Fed is reacting to underlying economic data rather than driving it. When the economy heats up, the Fed hikes interest rates to avoid overheating, and then stops when things turn over. Equity returns reveal a much more interesting, but muddier picture. On average, equity returns have been higher in the 12 months after tightening than during, although in three of the eight previous periods, equities have experienced a 10% correction.

REAL GDP GROWTH



S&P 500 EARNINGS GROWTH



S&P 500 PERFORMANCE

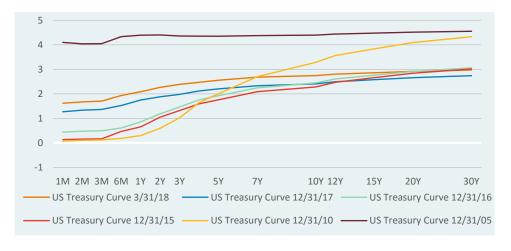


Source: Bloomberg, Verus, analysis started in 1959, all growth calculations are annualized using monthly (earnings/equity performance) or quarterly (GDP) data

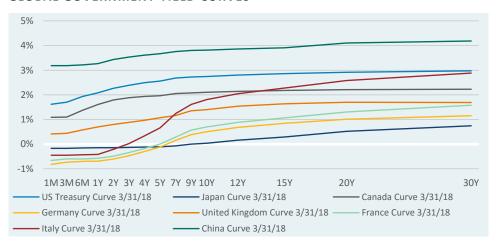


Yield environment

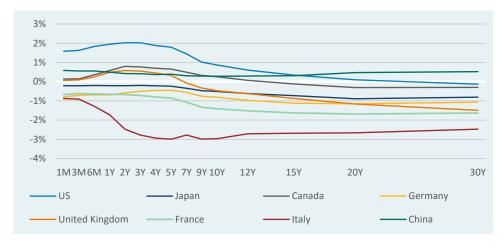
U.S. YIELD CURVE



GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/18



Credit environment

Credit spreads in both leveraged loans and high yield have continued to be tight, sitting well below their historic averages. Leveraged loan prices were relatively immune to equity volatility in February. Loans have outperformed high yield year-to-date with an absolute return of 1.6%, driven by strong issuance and demand. LIBOR has steadily risen since 2016, surpassing the LIBOR floors that exist in senior loans, causing them to be fully floating-rate instruments.

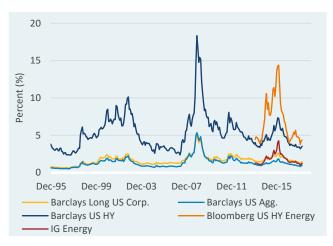
U.S. high yield option-adjusted spreads widened slightly in the

first quarter to 3.5%, with the asset class generating a -0.9% total return for the quarter. Tight credit spreads in both high yield and loans have been driven by strong corporate fundamentals, manageable debt maturities and general macroeconomic improvement. Credit spreads have historically been a good indicator of future performance relative to Treasuries.

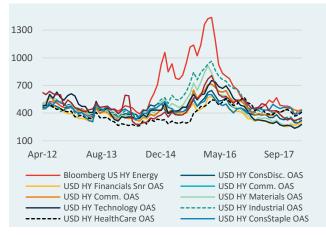
Credit spreads are tight across the capital structure

Based on low interest rates and tight spreads, we recommend an underweight to U.S. investment and high yield credit.

SPREADS



HIGH YIELD SECTOR SPREADS (BPS)



Market	Credit Spread (3/31/18)	Credit Spread (1 Year Ago)
Long US Corporate	1.5%	1.1%
US Aggregate	1.0%	1.1%
US High Yield	3.5%	3.8%
US Bank Loans	3.5%	3.8%

Source: Barclays, Bloomberg, as of 3/31/18

Source: Bloomberg, as of 3/31/18

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/18



Issuance and default

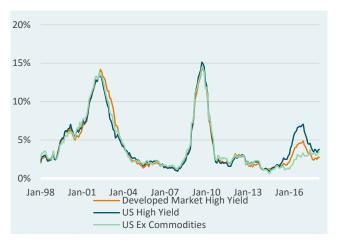
Default activity remains low and stable in the U.S. and international credit markets. The par-weighted U.S. default rate remains below its long-term average of 3.0-3.5% and is currently at 2.4%. In the first quarter, 27% of total defaults have been in the retail sector, followed by energy and broadcasting.

Issuance in bonds and loans both increased in 2017. New issue spreads continue to compress with strong demand supported by significant retail and institutional inflows into the both high yield and senior loan asset class, as well as CLO formation.

Default volume remains below long-term averages

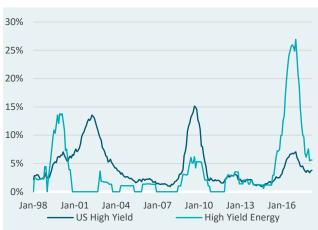
Senior loan and high yield markets are recovering from a wave of defaults that were generated from energy and metals/mining sectors in 2015-2016. Recovery rates for high yield bonds have vastly improved since year-end 2016.

HY DEFAULT TRENDS (ROLLING 1 YEAR)



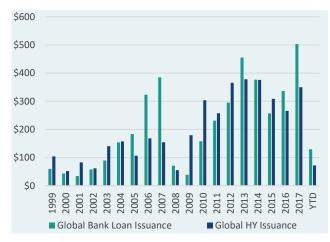
Source: BofA Merrill Lynch, as of 3/31/18

ENERGY DEFAULT TRENDS



Source: BofA Merrill Lynch, as of 3/31/18

GLOBAL ISSUANCE (BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 3/31/18



Equity

Equity environment

- We maintain an overweight position to equities primarily due to enthusiasm for emerging markets. Though the February market correction dampened investor excitement, it is helpful to remind ourselves that 10% equity drawdowns are fairly common.
- Upward price momentum in equities has diminished following the February market correction.
 Investor sentiment is less positive, but the global economic and earnings backdrop remains intact.
- 2018 is expected to be a banner year for U.S. corporate profits.
 Earnings for the year are forecast to grow 17.3%, with revenue growth of 7.3% according to Factset a rare and impressive year for U.S. businesses. A continuation of this trend would be supportive of equity performance.

- Equity valuations (price-toearnings multiples) fell to more attractive levels in Q1 due to the combination of lower equity prices and strong earnings growth.
- Equity volatility has remained extremely low since the beginning of 2017. However, the equity drawdown and volatility spike in February appears to have ended this period of calm. Investors might expect a more normal volatility environment going forward.
- Currency movement has contributed to volatility and great return disparity for investors with unhedged investments in international assets. A hedging program could allow investors to reduce or eliminate uncompensated currency risk.

		QTD TOTAL	L RETURN	YTD TOTAL	. RETURN	1 YEAR		
		(unhedged)	(hedged)	(unhedged)	(hedged)	(unhedged)	(hedged)	
	US Large Cap (Russell 1000)	(2.0	%)	(2.0	%)	12.4	1%	
	US Small Cap (Russell 2000)	(1.1%)		(1.1%)		10.5%		
	US Large Value (Russell 1000 Value)	(4.0	(4.0%)		(4.0%)		5.6%	
	US Large Growth (Russell 1000 Growth)	(0.1%)		(0.1%)		19.3%		
	International Large (MSCI EAFE)	(1.6%)	(3.8%)	(1.6%)	(3.8%)	14.4%	7.1%	
	Eurozone (Euro Stoxx 50)	(0.5%)	(3.2%)	(0.5%)	(3.2%)	18.0%	0.3%	
	U.K. (FTSE 100)	(3.8%)	(6.9%)	(3.8%)	(6.9%)	11.9%	1.2%	
	Japan (NIKKEI 225)	0.6%	(5.3%)	0.6%	(5.3%)	20.9%	15.2%	
	Emerging Markets (MSCI Emerging Markets)	1.2%	0.4%	1.2%	0.4%	23.1%	20.4%	

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/18



Domestic equity

U.S. equities delivered a loss in Q1 (Russell 1000 -2.0%) - a change of pace from steady and strong gains in 2017. Equity indexes around the world fell between 8-12% in early February as the recent bull run was interrupted. Since the selloff, most markets have been rangebound but relatively flat overall. Volatility seems to have returned to the markets as sizable day-to-day swings have been the norm.

While large price movements tend to naturally cause

investor fear, it is not apparent that the attractive macro picture has changed – i.e. positive economic growth, very strong earnings gains, and healthy sentiment. Equity prices typically follow growth and corporate profit trends over the medium and long-term term, which likely provides some support against larger downside equity movement.

Fundamentals appear unchanged despite falling prices

However, the February selloff has dampened recent positive upward price momentum. Momentum is now more neutral as market prices flatten out.

U.S. EQUITIES



Source: Russell Investments, as of 3/31/18

EARNINGS GROWTH



Source: S&P 500, as of 3/31/18

S&P 500 PRICE & EARNINGS



Source: Bloomberg, as of 3/31/18



Domestic equity size & style

Large cap equities (Russell 1000 -2.0%) lagged small cap equities (Russell 2000 -1.1%) during the quarter. Value stocks delivered exceptionally poor performance in Q1 (Russell 1000 Value -4.0% vs. Russell 1000 Growth -0.1%), dragged down by the energy and materials sectors, which are heavily tilted towards value. Despite a sell-off in mega-cap tech stocks in March due mainly to company-specific issues, such as a data breach at Facebook and President Trump targeting Amazon over its relationship with the U.S. Postal Service, tech was still the best performing sector in the first quarter.

Traditional style factors – small cap and value in particular – have hit a rough patch since the 2008-2009 global financial crisis. It may be helpful to remember that these periods do occur. In fact, there are multiple points in history where the equity small-cap and value premiums delivered negative returns over more than a 10 year period.

In U.S. equities, value has continued to underperform in recent years, while momentum delivered outperformance alongside the bull market rally.

SMALL CAP VS LARGE CAP (YOY)



VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/18

BLOOMBERG FACTOR PERFORMANCE



Source: Bloomberg, as of 3/31/18



Source: FTSE, as of 3/31/18

Hard times for value investing

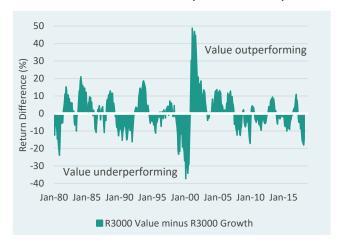
Value equities have underperformed growth equities over the past 10 years. This has occurred only two other times since the 1920's - both periods were followed by a rapid bounce-back in value performance. Is a turning point is on the horizon?

Value stocks are concentrated in the financial sector, and growth stocks are concentrated in the technology sector. The global financial crisis led to extreme underperformance of financial stocks, which hurt value. At the same time, technology stocks have fared exceptionally well. These two effects compounded value's underperformance.

The current price difference between value and growth stocks is near the historical average, which is notably different from the most recent bout of value underperformance – the 2001 tech bubble. At that time, growth stocks were anomalously expensive relative to value stocks, which helped explain how value stocks roared back to life after the tech bubble burst.

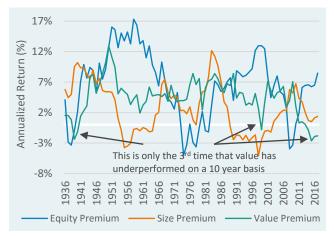
We do not yet see a catalyst for a value comeback. Prices are fairly normal, and the economic environment is positive (growth often performs well during later stages of economic expansions). We recommend that value investors stay the course. Timing factors over the short term is and will always be difficult.

U.S. VALUE PERFORMANCE (1YR ROLLING)



Source: FTSE, as 3/31/18

U.S. VALUE PERFORMANCE (10YR ROLLING)



Source: Fama French Library, as of 2/28/18

VALUE VS GROWTH - P/E MULTIPLES



Source: FTSE Russell, Bloomberg, as of 3/31/18



International developed equity

Unhedged International equities were in line with U.S. equities during Q1, delivering slightly negative performance. The MSCI EAFE Index returned -1.5%. Positive currency returns masked underperformance of local developed market equities. On a hedged basis, the MSCI EAFE Index posted a -3.8% return. Looking forward, accelerating corporate earnings, and more attractive valuations following the February fall in equity prices, may be supportive for another positive year in 2018. Forward one year earnings growth is expected to be around 15%.

Along with the U.S., most developed markets also experienced an approximate 10% drawdown in February, but were not as quick to recover. Most regional benchmarks finished the quarter still 7-10% below recent peaks.

Trailing P/E ratios for the EAFE Index have moved to below average, providing a possible value opportunity. However, downside risks to these markets, including political issues and reliance on central bank support may be a justification for low valuations.

EQUITY PERFORMANCE (3-YEAR ROLLING)



Source: Bloomberg, as of 3/31/18

EARNINGS GROWTH (YOY)



Source: MSCI, as of 3/31/18 – YoY growth in forward earnings

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/18



Emerging market equity

We maintain an overweight to emerging market equities. Emerging market equities have exhibited more modest valuations relative to developed markets such as the U.S., while these economies in aggregate continue to outpace developed economies by a wide margin. Furthermore, emerging market currencies remain depressed relative to history. Cheaper valuations, much stronger economic growth, and a currency tailwind may bode well for future performance.

Emerging economies have led the way over the past year in terms of economic growth, earnings, and equity performance. Emerging market equities have delivered positive performance year-to-date despite the February sell-off (MSCI Emerging Markets +1.2%) while developed markets were in negative territory to end the first quarter.

Coordinated global growth has helped propel emerging market equities forward

EQUITY PERFORMANCE (3YR ROLLING)



ECONOMIC MOMENTUM



Source: Bloomberg, as of 12/31/18

BRIC VALUATIONS



Source: MSCI, as of 3/31/18



Source: Standard & Poor's, MSCI, as of 3/31/18

Equity valuations

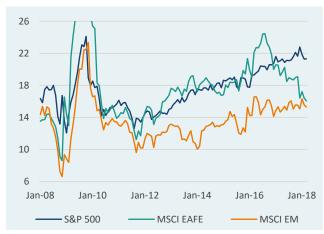
Equity valuations fell over the quarter due to both a decrease in price and an increase in earnings. International developed equities experienced the biggest contraction in valuations and the trailing P/E ratio (16.5) is now below the median multiple since 1995 (20.0). Price-to-earnings multiples also came down in the U.S., although they remain above average. The trailing 12-month P/E ratio for the S&P 500 Index was 21.3 at the end of March, compared to the 30-year median value of 18.3. After strong price gains over the past year, emerging market equity valuation metrics are near their long-term averages.

Although most equity markets experienced a 10% correction during the quarter, momentum in earnings growth remained strong. A continuation of this trend may result in further normalization of valuations without a significant drop in equity prices.

FORWARD P/E RATIOS

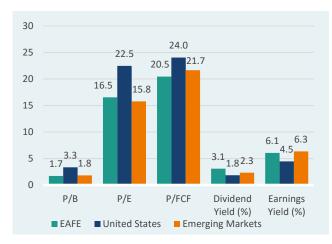


TRAILING P/E RATIOS



Source: Bloomberg, as of 3/31/18

VALUATION METRICS



Source: Bloomberg, as of 3/31/18 - trailing P/E



Source: MSCI, as of 3/31/2018

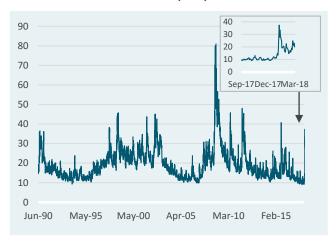
Equity volatility

Volatility in U.S. equities spiked in February and stayed elevated. The VIX Index of implied volatility on the S&P 500 Index registered its largest one-day increase on February 5th, jumping from 17.3 to 37.3. The well-documented period of low volatility that markets experienced in 2017 was broken rather suddenly. Volatility remained high with the VIX averaging 20.7 in the last two month of the quarter, compared to 11.0 during the previous 12 months. The increase in volatility was a U.S. focused event, rather than a global phenomenon – volatility was relatively benign in international developed and emerging markets.

One of the likely drivers of the spike in volatility that occurred in February was the unwinding of the "short vol" trade. The low volatility environment that began in 2016 created an opportunity to profit from selling volatility in the futures market, which is similar to selling insurance. Speculators selling volatility receive a premium for taking on risk from those looking to hedge, and are able to capture this premium when volatility remains low. When volatility increases, however, losses can be catastrophic. An index tracking this strategy lost 96% of its value during one day of trading, which likely reinforced the increase in volatility.

Equity volatility spiked in February and remained at heightened levels

U.S. IMPLIED VOLATILITY (VIX)



REALIZED 1-YEAR ROLLING VOLATILITY



Source: Bloomberg, as of 3/31/18

S&P INVERSE VIX FUTURES INDEX

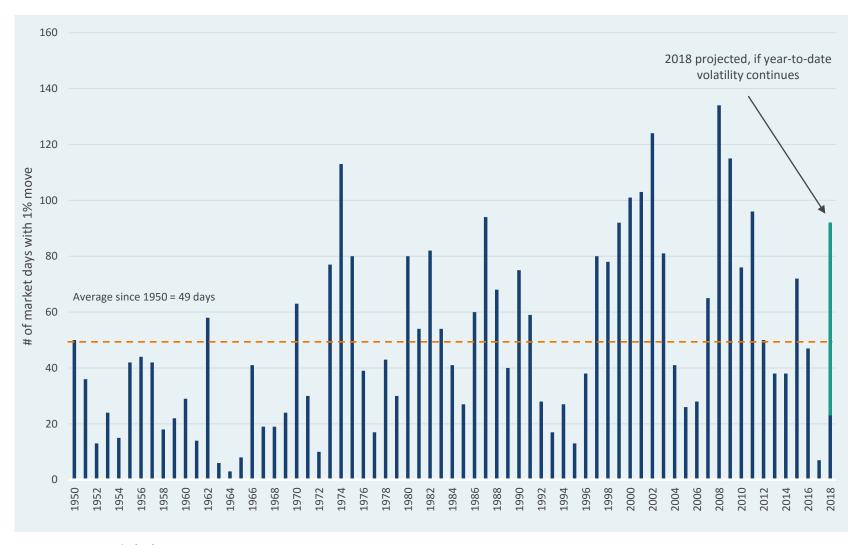


Source: Bloomberg, as of 3/31/18



Source: CBOE, as of 3/31/18

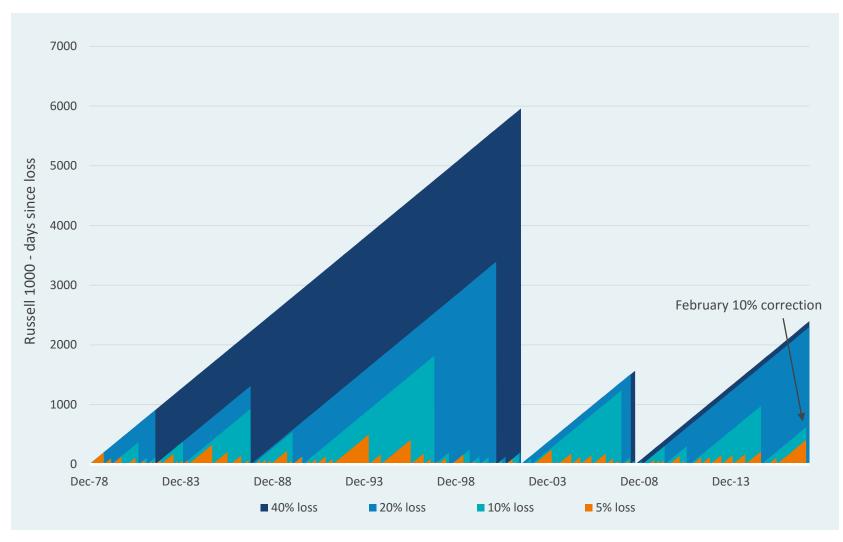
Equity volatility



Source: S&P 500, as of 3/31/18



Expect the unexpected

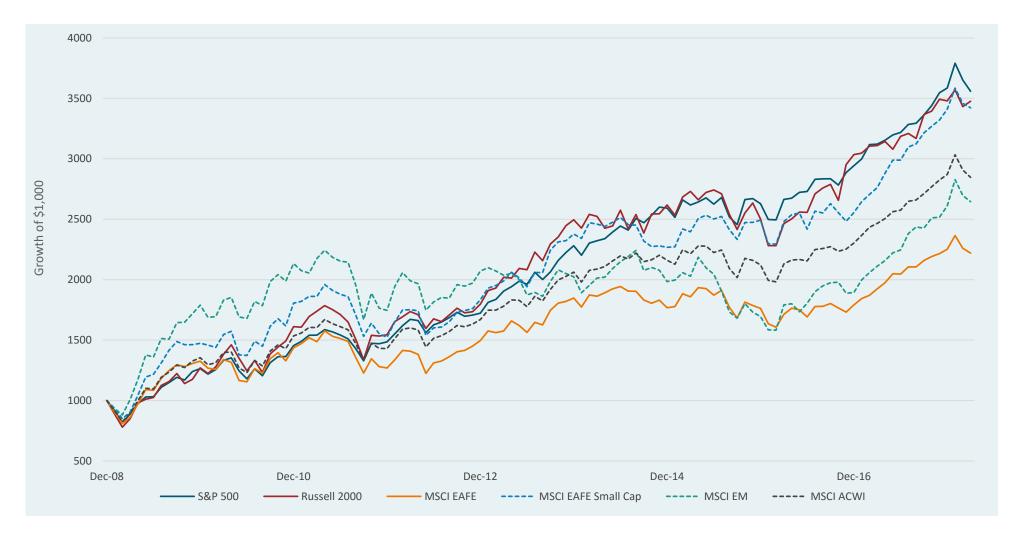


Equities experienced a 10% correction for the first time in more than two years

Source: FTSE Russell, Bloomberg, as of 4/11/18



Long-term equity performance



Source: MPI, as of 3/31/18



Other assets



Opportunity in MLPs

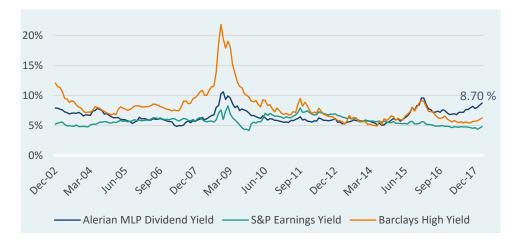
MLP valuations look attractive across a number of historical metrics, including enterprise value-to-EBITDA and price-to-distributable cash flow. We believe there is opportunity to allocate to MLPs for a short to medium holding period (2-4 years).

MLP yields have steadily climbed since mid-2016 on the back of a sell-off in the sector and recovery in distributions following the energy price collapse. Balance sheets across the industry are in better shape today than

before the oil crisis. Debt-to-cash flow levels have improved since peaking at 6.4x in 2015. Furthermore, the U.S. is expected to surpass Russia in 2018 to be the largest oil producer in the world, which is important because midstream companies grow through volume increases rather than commodity price appreciation.

A decision to invest in MLPs, however, is one that should be considered carefully, and after detailed analysis, as it remains a specialist asset class.

MLP YIELDS



Source: Bloomberg, as of 12/31/17

MLP SPREADS VS HIGH YIELD AND TREASURY RATES



Source: Bloomberg, as of 12/31/17



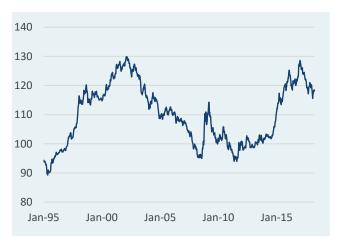
Currency

The U.S. dollar declined further to begin the quarter, but recovered slightly over the past two months. The broad U.S. trade weighted index fell 1.9% in the first quarter. This index was down 8.5% since peaking at the end of 2016.

Dollar depreciation has occurred despite widening shortterm interest rate differentials between the U.S. and the rest of the developed world. Typically, higher interest rate differentials result in currency appreciation as investors take advantage of the yield, at least in the short-term. Based on purchasing power parity (PPP), the dollar is overvalued against the currencies with the biggest weights in international equity benchmarks: the euro, yen, and pound.

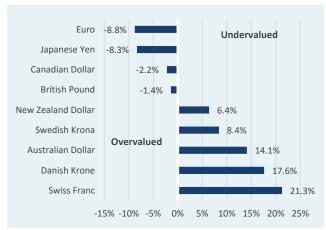
Unhedged foreign currency exposure added to equity returns over the past year, especially in developed markets. Although currency exposure has been positive lately, it has historically tended to experience large swings that add volatility to portfolios.

U.S. DOLLAR TRADE WEIGHTED INDEX



Source: Federal Reserve, as of 3/28/18

CURRENCY VALUATIONS VS USD (PPP)



Source: OECD, as of 3/31/2018 (see appendix)

EFFECT OF CURRENCY (1-YR ROLLING)



Source: MSCI, as of 3/31/18



Appendix

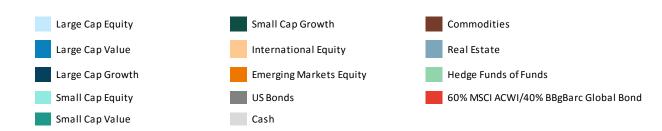


Periodic table of returns

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	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	YTD	5-Year	10-Year
Small Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	2.3	15.5	11.3
Emerging Markets Equity	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.4	13.2	11.0
Large Cap Growth	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	1.4	12.9	9.8
Hedge Funds of Funds	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	0.9	11.5	9.6
Cash	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	0.4	10.8	8.6
60/40 Global Portfolio	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	0.0	10.2	7.8
Real Estate	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	0.0	10.0	6.1
Small Cap Equity	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-0.1	6.5	4.7
Commodities	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-0.4	6.2	3.6
Large Cap Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-0.7	5.0	3.0
US Bonds	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	5.1	-1.5	3.5	2.7
International Equity	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-1.5	1.8	1.6
Small Cap Value	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-2.6	0.3	0.3
Large Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-2.8	-8.3	-7.7



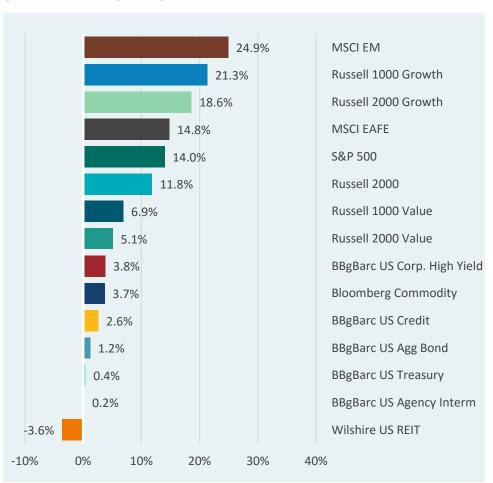


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/17.

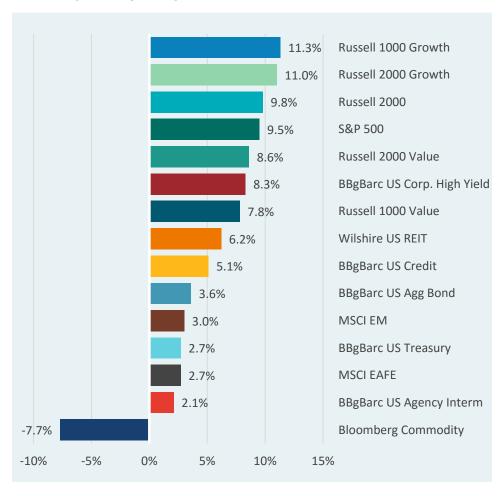


Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH



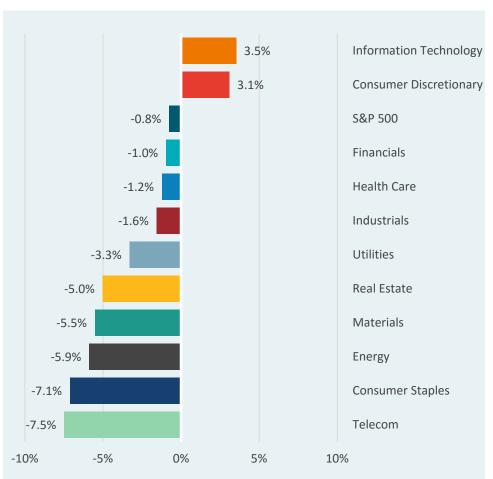
Source: Morningstar, as of 3/31/18

Source: Morningstar, as of 3/31/18

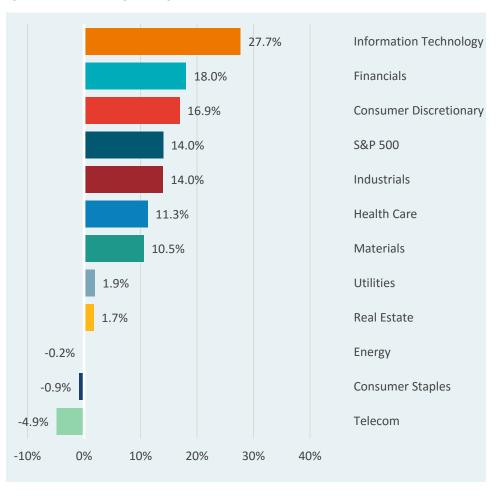


S&P 500 sector returns

1ST QUARTER



ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/18 Source: Morningstar, as of 3/31/18



Detailed index returns

ЛEST		

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(2.5)	(8.0)	(0.8)	14.0	10.8	13.3	9.5
S&P 500 Equal Weighted	(0.9)	(1.0)	(1.0)	11.7	9.1	12.9	11.0
DJ Industrial Average	(3.6)	(2.0)	(2.0)	19.4	13.5	13.3	9.9
Russell Top 200	(3.2)	(8.0)	(0.8)	14.7	11.4	13.6	9.4
Russell 1000	(2.3)	(0.7)	(0.7)	14.0	10.4	13.2	9.6
Russell 2000	1.3	(0.1)	(0.1)	11.8	8.4	11.5	9.8
Russell 3000	(2.0)	(0.6)	(0.6)	13.8	10.2	13.0	9.6
Russell Mid Cap	0.1	(0.5)	(0.5)	12.2	8.0	12.1	10.2
Style Index							
Russell 1000 Growth	(2.7)	1.4	1.4	21.3	12.9	15.5	11.3
Russell 1000 Value	(1.8)	(2.8)	(2.8)	6.9	7.9	10.8	7.8
Russell 2000 Growth	1.3	2.3	2.3	18.6	8.8	12.9	11.0
Russell 2000 Value	1.2	(2.6)	(2.6)	5.1	7.9	10.0	8.6

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	1.1	(8.0)	(8.0)	0.9	1.3	0.0	2.9
BBgBarc US Treasury Bills	0.1	0.3	0.3	1.0	0.5	0.3	0.4
BBgBarc US Agg Bond	0.6	(1.5)	(1.5)	1.2	1.2	1.8	3.6
Duration							
BBgBarc US Treasury 1-3 Yr	0.2	(0.2)	(0.2)	(0.0)	0.4	0.5	1.1
BBgBarc US Treasury Long	3.0	(3.3)	(3.3)	3.5	0.4	3.3	5.8
BBgBarc US Treasury	0.9	(1.2)	(1.2)	0.4	0.4	1.1	2.7
Issuer							
BBgBarc US MBS	0.6	(1.2)	(1.2)	0.8	1.1	1.8	3.5
BBgBarc US Corp. High Yield	(0.6)	(0.9)	(0.9)	3.8	5.2	5.0	8.3
BBgBarc US Agency Interm	0.3	(0.4)	(0.4)	0.2	0.7	0.9	2.1
BBgBarc US Credit	0.3	(2.1)	(2.1)	2.6	2.2	2.8	5.1

INTERNATIONAL EQUITY

IIII EIII WIII CIWIE EQUITI							
Broad Index							
MSCI ACWI	(2.1)	(1.0)	(1.0)	14.8	8.1	9.2	5.6
MSCI ACWI ex US	(1.8)	(1.2)	(1.2)	16.5	6.2	5.9	2.7
MSCI EAFE	(1.8)	(1.5)	(1.5)	14.8	5.6	6.5	2.7
MSCI EM	(1.9)	1.4	1.4	24.9	8.8	5.0	3.0
MSCI EAFE Small Cap	(1.1)	0.2	0.2	23.5	12.3	11.1	6.5
Style Index							
MSCI EAFE Growth	(1.2)	(1.0)	(1.0)	17.5	6.7	7.1	3.4
MSCI EAFE Value	(2.4)	(2.0)	(2.0)	12.2	4.3	5.8	2.0
Regional Index							
MSCI UK	(0.3)	(3.9)	(3.9)	11.9	3.1	3.9	2.3
MSCI Japan	(2.1)	0.8	0.8	19.6	8.4	8.9	4.1
MSCI Euro	(1.2)	(0.4)	(0.4)	16.1	5.7	8.1	0.7
MSCI EM Asia	(1.4)	0.8	0.8	27.0	9.4	8.4	5.2
MSCI EM Latin American	(1.0)	8.0	8.0	19.3	10.1	(1.9)	(8.0)

OTHER							
Index							
Bloomberg Commodity	(0.6)	(0.4)	(0.4)	3.7	(3.2)	(8.3)	(7.7)
Wilshire US REIT	4.1	(7.5)	(7.5)	(3.6)	1.0	6.1	6.2
CS Leveraged Loans	0.3	1.6	1.6	4.6	4.3	4.2	5.4
Regional Index							
JPM EMBI Global Div	0.3	(1.7)	(1.7)	4.3	5.8	4.7	7.0
JPM GBI-EM Global Div	1.0	4.4	4.4	13.0	5.4	(0.7)	3.8
Hedge Funds							
HFRI Composite	(0.7)	0.1	0.1	4.6	2.0	3.9	3.6
HFRI FOF Composite	(0.0)	0.9	0.9	6.2	2.1	3.5	1.6
Currency (Spot)							
Euro	0.8	2.4	2.4	15.0	4.6	(0.9)	(2.5)
Pound	1.8	3.7	3.7	12.2	(1.9)	(1.6)	(3.4)
Yen	0.3	5.9	5.9	4.8	4.1	(2.4)	(0.7)

Source: Morningstar, as of 3/31/18



Definitions

Atlanta Fed Wage Tracker – a measure of the nominal wage growth of individuals. It is constructed using microdata from the Current Population Survey (CPS), and is the median percent change in the hourly wage of individuals observed 12 months apart. (www.frbatlanta.org)

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)

University of Michigan Consumer Sentiment Index - A survey of consumer attitudes concerning both the present situation as well as expectations regarding economic 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)

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)

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

OECD Purchasing Power Parity – the rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs show the ratio of prices in national currencies of the same good or service in different countries. (www.OECD.org)

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Tulare County Employees' Retirement Association

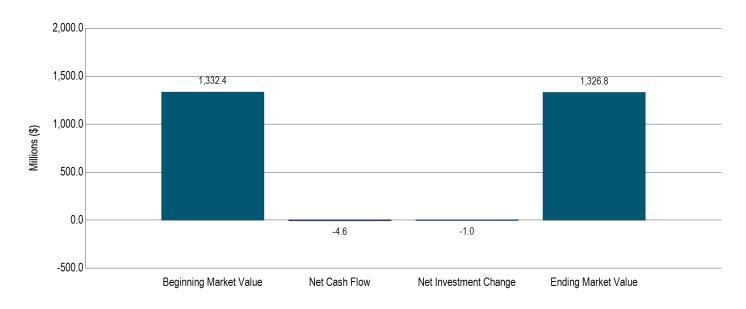
Investment Performance Review Period Ending: March 31, 2018



Fiscal Year-To-Date

Beginning Market Value	\$1,252,296,144
Net Cash Flow	-\$11,552,360
Net Investment Change	\$86,035,043
Ending Market Value	\$1,326,778,827

Change in Market Value Last Three Months



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

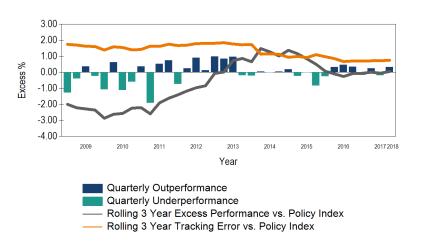


	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund	-0.1	7.0	9.7	6.0	7.0	5.3	7.8	6.8
Policy Index	-0.4	6.6	9.5	6.0	6.5	5.8	8.0	6.4
InvestorForce Public DB Gross Rank	42	53	64	78	72	90	53	21
Total Fund x Clifton	0.0	6.9	9.7	6.0	7.0	-		
Policy Index	-0.4	6.6	9.5	6.0	6.5			
InvestorForce Public DB Gross Rank	41	54	65	78	73			
Total Domestic Equity	0.4	12.5	16.0	10.6	13.8	10.6	11.3	9.3
Russell 3000	-0.6	10.5	13.8	10.2	13.0	9.6	10.4	6.7
InvestorForce Public DB US Eq Gross Rank	18	12	15	20	6	6	16	1
Total International Equity	-0.6	10.4	17.0	7.0	6.9	1.9	8.7	5.1
MSCI ACWI ex USA Gross	-1.1	10.4	17.0	6.7	6.4	3.2	9.7	5.4
InvestorForce Public DB ex- US Eq Gross Rank	67	65	73	69	59	91	86	78
Total Global Equity	-4.2	10.5	16.9	9.7			-	
MSCI ACWI Gross	-0.8	10.5	15.4	8.7				
InvestorForce Public DB Glbl Eq Gross Rank	99	25	25	1				
Total Fixed Income	-0.7	0.6	1.7	2.2	2.2	4.9	4.8	5.4
BBgBarc US Aggregate TR	-1.5	-0.2	1.2	1.2	1.8	3.6	3.9	4.8
InvestorForce Public DB US Fix Inc Gross Rank	24	40	52	41	53	34	39	56
Total Domestic Fixed Income	-1.2	0.4	1.9	2.1	2.2	-	-	
BBgBarc US Aggregate TR	-1.5	-0.2	1.2	1.2	1.8			
Total Global Fixed Income	1.9	1.7	0.6	2.6	2.3			
JPM GBI Global TR USD	2.2	4.9	7.6	3.2	1.3			

Actual vs Target Allocation (%) 25.0 22.9 22.3 22.2 5.0 Global Real Estate Global Equity al Equity Fixed Funds Equity Fixed Equity Credit es Equivalents Income Income

Rolling Annualized Excess Performance and Tracking Error Total Fund vs. Policy Index

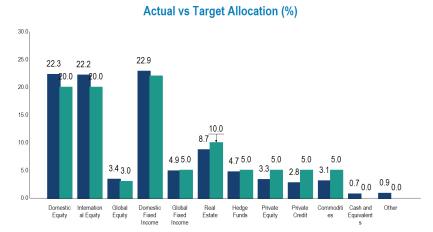
Policy



New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex US, 27% BBgBarc US Aggregate, 3% MSCI ACWI, 10% NCREIF Property, 5% Bloomberg Commodity, 5% CPI +500 bps, 5% Russell 3000 +300 bps, 5% BBgBarc High Yield +2% Lagged. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



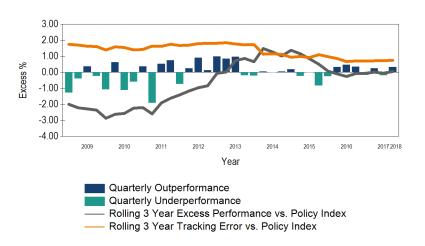
	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Real Assets	1.4	6.8	6.5	5.7				
Real Assets Composite Benchmark	1.0	5.9	6.0	4.8				
Total Real Estate	2.0	5.3	6.5	9.2	10.7	3.6	8.3	8.6
NCREIF Property Index	1.7	5.3	7.1	8.7	10.0	6.1	9.0	
NCREIF-ODCE	2.2	6.3	8.1	10.0	11.4	5.1	8.3	8.9
Total Commodities	-0.4	11.5	7.4	-1.4	-	-	-	
Bloomberg Commodity Index TR USD	-0.4	6.9	3.7	-3.2				
Commodities Broad Basket MStar MF Rank	68	30	25	41				
Total Alternatives	1.7	6.4	6.9	1.9	0.7	1.3		
CPI + 5%	2.5	5.7	7.5	6.9	6.5	6.6		
Total Private Equity	0.5	8.0	11.6	7.8	11.0	9.3		
Russell 3000 + 3%	0.1	12.9	17.2	13.5	16.4	12.9		
Total Private Credit	3.4	6.8	9.0			-		
BBgBarc High Yield +2% (Lagged)	1.0	6.2	9.6					
Total Liquid Alts/HFoF	1.6	4.8	5.4	2.2	4.0			
CPI + 5%	2.5	5.7	7.5	6.9	6.5			
Total Opportunistic	3.4	6.6	7.1	6.3	11.3			



Rolling Annualized Excess Performance and Tracking Error Total Fund vs. Policy Index

Policy

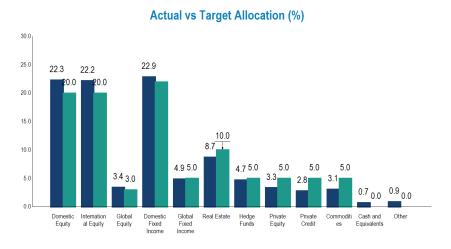
Actual



New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex US, 27% BBgBarc US Aggregate, 3% MSCI ACWI, 10% NCREIF Property, 5% Bloomberg Commodity, 5% CPI +500 bps, 5% Russell 3000 +300 bps, 5% BBgBarc High Yield +2% Lagged. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



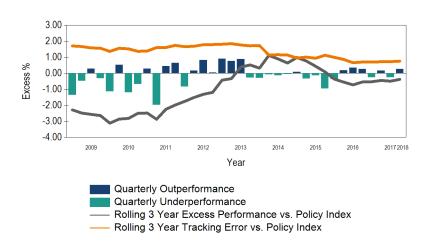
	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund	-0.1	6.7	9.4	5.6	6.6	5.0	7.4	6.4
Policy Index	-0.4	6.6	9.5	6.0	6.5	5.8	8.0	6.4
Total Fund x Clifton	-0.1	6.7	9.3	5.5	6.6			
Policy Index	-0.4	6.6	9.5	6.0	6.5			
Total Domestic Equity	0.3	12.2	15.5	10.2	13.4	10.1	10.9	8.9
Russell 3000	-0.6	10.5	13.8	10.2	13.0	9.6	10.4	6.7
Total International Equity	-0.7	10.1	16.6	6.6	6.6	1.6	8.3	4.8
MSCI ACWI ex USA Gross	-1.1	10.4	17.0	6.7	6.4	3.2	9.7	5.4
Total Global Equity	-4.4	9.8	15.9	8.7			-	
MSCI ACWI Gross	-0.8	10.5	15.4	8.7				
Total Fixed Income	-0.8	0.4	1.4	1.8	1.9	4.6	4.5	5.1
BBgBarc US Aggregate TR	-1.5	-0.2	1.2	1.2	1.8	3.6	3.9	4.8
Total Domestic Fixed Income	-1.3	0.2	1.6	1.8	1.9			
BBgBarc US Aggregate TR	-1.5	-0.2	1.2	1.2	1.8			
Total Global Fixed Income	1.7	1.3	0.0	2.0	1.8		-	
JPM GBI Global TR USD	2.2	4.9	7.6	3.2	1.3			
Total Real Assets	1.4	6.8	6.5	5.1		-	-	
Real Assets Composite Benchmark	1.0	5.9	6.0	4.8				
Total Real Estate	2.0	5.3	6.5	8.6	10.2	3.4	7.4	7.7
NCREIF Property Index	1.7	5.3	7.1	8.7	10.0	6.1	9.0	
NCREIF-ODCE	2.2	6.3	8.1	10.0	11.4	5.1	8.3	8.9
Total Commodities	-0.4	11.5	7.4	-1.8				
Bloomberg Commodity Index TR USD	-0.4	6.9	3.7	-3.2				
Total Alternatives	1.7	6.4	6.9	1.3	0.1	0.9		
CPI + 5%	2.5	5.7	7.5	6.9	6.5	6.6		
Total Private Equity	0.5	8.0	11.6	6.8	10.1	8.8	-	
Russell 3000 + 3%	0.1	12.9	17.2	13.5	16.4	12.9		
Total Private Credit	3.4	6.8	9.0	-			-	
BBgBarc High Yield +2% (Lagged)	1.0	6.2	9.6					
Total Liquid Alts/HFoF	1.6	4.8	5.4	1.7	3.4		-	
CPI + 5%	2.5	5.7	7.5	6.9	6.5			
Total Opportunistic	3.4	6.6	7.1	5.3	10.3			



Rolling Annualized Excess Performance and Tracking Error Total Fund vs. Policy Index

Policy

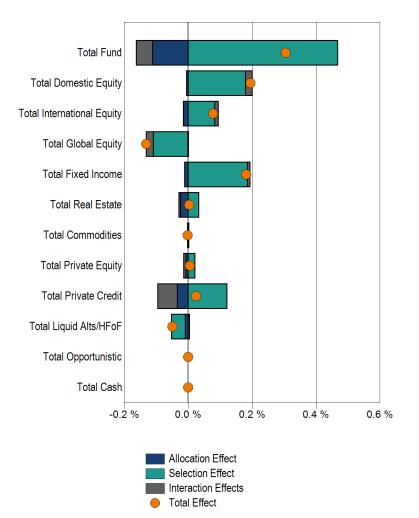
Actual



New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex US, 27% BBgBarc US Aggregate, 3% MSCI ACWI, 10% NCREIF Property, 5% Bloomberg Commodity, 5% CPI +500 bps, 5% Russell 3000 +300 bps, 5% BBgBarc High Yield +2% Lagged. All return periods greater than 1-year are rolling annualized returns.



Attribution Effects 3 Months Ending March 31, 2018



Performance Attribution

	Last 3 Mo.
Wtd. Actual Return	-0.1%
Wtd. Index Return *	-0.4%
Excess Return	0.3%
Selection Effect	0.5%
Allocation Effect	-0.1%
Interaction Effect	0.0%

^{*}Calculated from policy benchmark returns and policy weightings of each compenent of the policy benchmark.

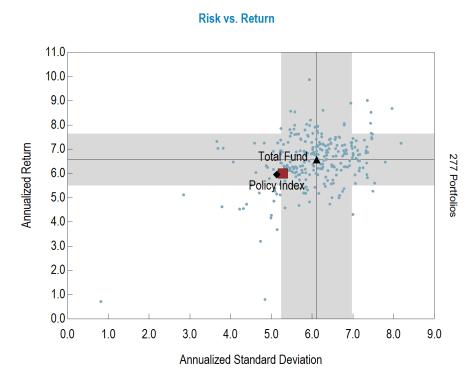
Attribution Summary 3 Months Ending March 31, 2018

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	0.3%	-0.6%	0.9%	0.2%	0.0%	0.0%	0.2%
Total International Equity	-0.7%	-1.1%	0.4%	0.1%	0.0%	0.0%	0.1%
Total Global Equity	-4.4%	-0.8%	-3.6%	-0.1%	0.0%	0.0%	-0.1%
Total Fixed Income	-0.8%	-1.5%	0.7%	0.2%	0.0%	0.0%	0.2%
Total Real Estate	2.0%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%
Total Commodities	-0.4%	-0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Private Equity	0.5%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%
Total Private Credit	3.4%	1.0%	2.4%	0.1%	0.0%	-0.1%	0.0%
Total Liquid Alts/HFoF	1.6%	2.5%	-0.8%	0.0%	0.0%	0.0%	0.0%
Total Opportunistic							
Total Cash							
Total	-0.1%	-0.4%	0.3%	0.5%	-0.1%	0.0%	0.3%

Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.



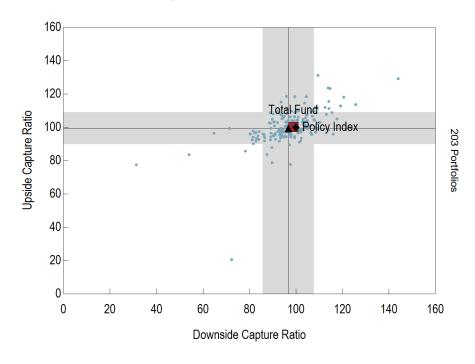
	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	6.00%	5.28%	-0.07%	1.02	0.74%	0.98	1.04	0.06	100.23%	98.86%





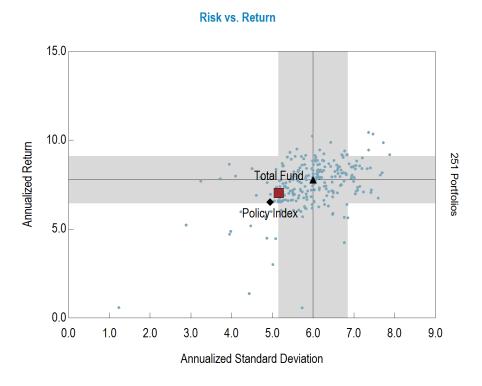
- Policy Index
- Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

Up Markets vs. Down Markets



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

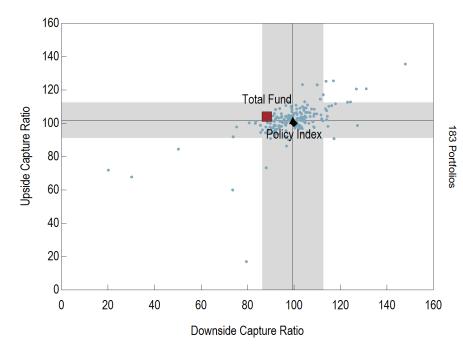
	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	7.04%	5.16%	0.34%	1.03	0.90%	0.97	1.30	0.58	104.10%	88.36%





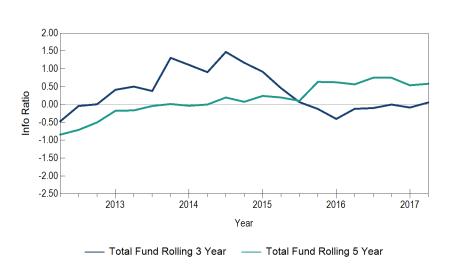
- Policy Index
- Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

Up Markets vs. Down Markets

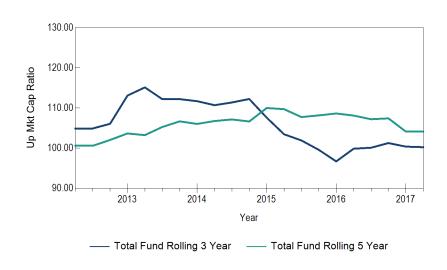


- Total Fund
- Policy Index
- Universe Median
- 68% Confidence Interval
- InvestorForce Public DB Gross

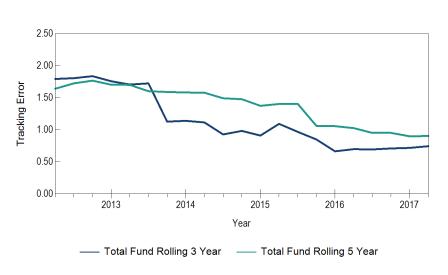
Rolling Information Ratio



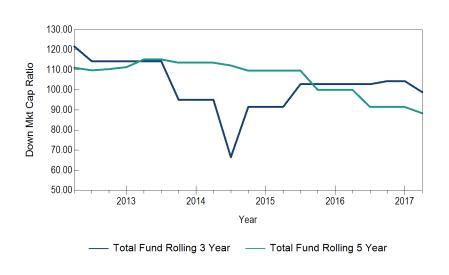
Rolling Up Market Capture Ratio (%)



Rolling Tracking Error



Rolling Down Market Capture Ratio (%)



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fund	1,326,778,827	100.0	-0.1	7.0	9.7	6.0	7.0	5.3	14.3	7.6	-1.2	4.2	15.8
Policy Index			-0.4	6.6	9.5	6.0	6.5	5.8	14.0	8.0	-1.1	4.6	12.6
InvestorForce Public DB Gross Rank			42	53	64	78	72	90	71	53	80	83	49
Total Fund x Clifton	1,319,383,004	99.4	0.0	6.9	9.7	6.0	7.0		14.2	7.6	-1.1	4.1	15.8
Policy Index			-0.4	6.6	9.5	6.0	6.5		14.0	8.0	-1.1	4.6	12.6
InvestorForce Public DB Gross Rank			41	54	65	78	73		72	53	80	87	48
Total Domestic Equity	295,874,859	22.3	0.4	12.5	16.0	10.6	13.8	10.6	22.3	11.5	1.6	12.4	35.9
Russell 3000			-0.6	10.5	13.8	10.2	13.0	9.6	21.1	12.7	0.5	12.6	33.6
InvestorForce Public DB US Eq Gross Rank			18	12	15	20	6	6	16	77	10	17	24
SSGA S&P 500 Flagship Fund	54,595,229	4.1	-0.8	10.6	14.0	10.8	13.4		21.9	12.0	1.5	13.7	32.4
S&P 500			-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
eV US Large Cap Core Equity Gross Rank			58	57	54	28	41		52	31	40	42	58
QMA Large Cap Core	55,141,416	4.2	-1.3	12.1	14.3	10.9	14.2		22.5	12.5	2.1	15.6	34.3
S&P 500			-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
eV US Large Cap Core Equity Gross Rank			73	34	52	28	20		42	25	31	20	37
Ivy Large Cap Growth	58,714,302	4.4	4.3	19.6	24.7	12.4	16.3		30.2	2.1	7.6	12.8	37.3
Russell 1000 Growth			1.4	15.8	21.3	12.9	15.5		30.2	7.1	5.7	13.0	33.5
eV US Large Cap Growth Equity Gross Rank			23	15	26	37	28		42	72	26	40	25
Boston Partners Large Cap Value	53,759,614	4.1	-1.5	10.6	13.6	9.2	12.4	10.4	20.1	14.7	-3.9	11.8	37.0
Russell 1000 Value			-2.8	5.5	6.9	7.9	10.8	7.8	13.7	17.3	-3.8	13.5	32.5
eV US Large Cap Value Equity Gross Rank			32	20	15	39	34	13	22	54	65	58	26
SSGA Russell Small Cap Completeness Index	23,403,649	1.8	0.2	10.3	13.4	8.2			18.2	16.5	-3.5	7.4	
Russell Small Cap Completeness			0.2	10.3	13.5	8.2			18.3	16.6	-3.4	7.4	
eV US Small Cap Core Equity Gross Rank			41	36	32	66			23	84	68	37	
William Blair SMID Cap Growth	27,674,807	2.1	5.6	18.0	26.2	13.6	16.8	14.3	30.4	8.2	6.1	9.8	43.1
Russell 2500 Growth			2.4	15.2	19.9	9.1	13.4	11.2	24.5	9.7	-0.2	7.1	40.7
eV US Mid Cap Growth Equity Gross Rank			17	21	12	5	1	3	16	22	7	33	11
Lee Munder Small Value	22,585,843	1.7	-3.9	2.2	2.8	8.9	10.8		8.6	28.4	0.4	5.1	33.1
Russell 2000 Value			-2.6	4.4	5.1	7.9	10.0		7.8	31.7	-7.5	4.2	34.5
eV US Small Cap Value Equity Gross Rank			89	91	91	44	66		68	38	9	60	85



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total International Equity	294,632,529	22.2	-0.6	10.4	17.0	7.0	6.9	1.9	26.9	6.2	-5.9	-4.8	18.5
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
InvestorForce Public DB ex-US Eq Gross Rank			67	65	73	69	59	91	80	13	85	83	44
SSGA MSCI ACWI Ex US Index Fund	97,071,275	7.3	-1.1	10.3	16.8	6.5	6.2		27.6	4.8	-5.5	-3.6	15.5
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
eV All EAFE Equity Gross Rank			58	45	54	66	90		49	17	96	49	90
Fidelity International Growth	98,529,344	7.4	-0.2	8.8	16.9	6.5	6.5	3.3	26.3	1.2	-1.5	-5.3	18.5
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
Tulare International Custom			-1.0	9.8	16.8	6.6	6.8	3.3	27.4	3.1	-2.6	-4.0	19.1
eV All EAFE Equity Gross Rank			32	61	54	66	87	82	57	52	77	75	85
PIMCO RAE Fundamental Global Ex US Fund	99,031,910	7.5	-0.4	12.2	17.1	7.9	8.1		26.7	13.5	-10.9	-5.7	24.5
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
eV All EAFE Equity Gross Rank			34	28	51	42	55		53	1	99	79	51
Total Global Equity	45,210,501	3.4	-4.2	10.5	16.9	9.7			33.7	16.1	-11.5		
MSCI ACWI Gross			-0.8	10.5	15.4	8.7			24.6	8.5	-1.8		
InvestorForce Public DB Glbl Eq Gross Rank			99	25	25	1			1	2	99		
Skellig DST Water Fund	45,210,501	3.4	-4.2	10.5	16.9	9.7			33.7	16.1	-11.5		
MSCI ACWI Gross			-0.8	10.5	15.4	8.7			24.6	8.5	-1.8		
eV Global All Cap Equity Gross Rank	_		97	47	40	36			9	6	96		
Total Fixed Income	368,728,967	27.8	-0.7	0.6	1.7	2.2	2.2	4.9	4.3	5.5	-0.8	4.6	-0.9
BBgBarc US Aggregate TR			-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
InvestorForce Public DB US Fix Inc Gross Rank			24	40	52	41	53	34	50	37	77	69	49
Total Domestic Fixed Income													
BlackRock Fixed Income	132,513,324	10.0	-1.5	-0.2	1.4	1.5	2.2	4.1	3.9	3.1	1.1	6.2	-1.5
BBgBarc US Aggregate TR			-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
eV All US Fixed Inc Gross Rank			80	83	63	59	52	51	54	53	39	29	75
Doubleline Core Plus	70,096,543	5.3	-0.9	0.5	2.0				4.2	4.8			
BBgBarc US Aggregate TR			-1.5	-0.2	1.2				3.5	2.6			
eV US Core Plus Fixed Inc Gross Rank			19	61	72				86	52			
MacKay Shields Core Plus	69,511,847	5.2	-1.5	0.3	2.2	-			5.0	5.1			
BBgBarc US Aggregate TR			-1.5	-0.2	1.2				3.5	2.6			
eV US Core Plus Fixed Inc Gross Rank			78	72	61				52	46			



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Shenkman High Yield	20,363,908	1.5	0.0	2.7	5.0	4.4	4.6		7.2	12.3	-2.4	2.5	6.3
ICE BofAML US High Yield TR			-0.9	1.5	3.7	5.2	5.0		7.5	17.5	-4.6	2.5	7.4
eV US High Yield Fixed Inc Gross Rank			24	24	20	72	67		57	65	51	52	81
SSGA TIPS	11,077,950	0.8	-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
BBgBarc US TIPS TR			-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
eV US TIPS / Inflation Fixed Inc Gross Rank			81	62	69	84	80		69	50	63	44	77
Total Global Fixed Income													
Franklin Templeton Global Bond Plus	65,165,394	4.9	1.9	1.7	0.6	2.4	2.3		3.0	6.8	-3.5	2.4	3.0
JPM GBI Global TR USD			2.2	4.9	7.6	3.2	1.3		6.8	1.6	-2.6	0.7	-4.5
eV Global Fixed Inc Unhedged Gross Rank			28	89	99	86	54		96	24	67	50	23
Total Real Assets	156,814,288	11.8	1.4	6.8	6.5	5.7			5.0	10.4	0.4		
Real Assets Composite Benchmark			1.0	5.9	6.0	4.8			5.2	9.4	-0.7		
Total Real Estate	115,620,029	8.7	2.0	5.3	6.5	9.2	10.7	3.6	4.3	9.0	16.0	13.1	11.5
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
RREEF America II	109,911,733	8.3	2.0	5.1	6.5	9.2	11.6	5.1	4.4	9.3	16.7	13.0	15.5
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
TA Associates Realty	5,708,296	0.4	2.2	6.6	7.5	8.2	9.3	2.1	5.2	4.6	16.7	15.1	5.2
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	41,194,259	3.1	-0.4	11.5	7.4	-1.4			7.5	14.5	-26.3		
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Commodities Broad Basket MStar MF Rank			68	30	25	41			16	27	80		
Gresham MTAP Commodity Builder	19,997,450	1.5	-0.1	10.3	7.0	-2.2			5.9	12.3	-25.4	-16.1	
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7	-17.0	
Commodities Broad Basket MStar MF Rank			46	37	28	52			28	53	71	34	
Wellington Commodity	21,196,808	1.6	-0.8	12.7	7.9	-0.8			9.0	15.8	-25.7		
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Commodities Broad Basket MStar MF Rank			84	18	23	28			9	13	73		
Total Liquid Alts/HFoF	62,715,508	4.7	1.6	4.8	5.4	2.2	4.0		5.4	0.3	0.7	5.4	11.0
CPI + 5%			2.5	5.7	7.5	6.9	6.5		7.2	7.2	5.8	5.8	6.6
Aetos Capital	31,610,758	2.4	0.1	2.4	4.1	3.1	4.6	3.7	6.8	2.6	1.2	5.2	11.4
ICE BofAML 90 DAY T-BILLS + 400 bps			1.1	3.2	4.1	3.5	3.6	4.0	3.9	3.3	3.1	3.5	4.1
Titan Advisors	31,104,749	2.3	3.2	7.3	6.8				4.0	0.6			
ICE BofAML 90 DAY T-BILLS + 400 bps			1.1	3.2	4.1				3.9	3.3			



	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fund	1,326,778,827	100.0	-0.1	6.7	9.4	5.6	6.6	5.0	13.9	7.1	-1.6	3.8	15.4
Policy Index			-0.4	6.6	9.5	6.0	6.5	5.8	14.0	8.0	-1.1	4.6	12.6
Total Fund x Clifton	1,319,383,004	99.4	-0.1	6.7	9.3	5.5	6.6		13.8	7.0	-1.6	3.7	15.5
Policy Index			-0.4	6.6	9.5	6.0	6.5		14.0	8.0	-1.1	4.6	12.6
Total Domestic Equity	295,874,859	22.3	0.3	12.2	15.5	10.2	13.4	10.1	21.9	11.1	1.2	12.0	35.3
Russell 3000			-0.6	10.5	13.8	10.2	13.0	9.6	21.1	12.7	0.5	12.6	33.6
SSGA S&P 500 Flagship Fund	54,595,229	4.1	-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
S&P 500			-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
QMA Large Cap Core	55,141,416	4.2	-1.4	11.8	13.9	10.5	13.8		22.1	12.1	1.8	15.2	33.9
S&P 500			-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
Ivy Large Cap Growth	58,714,302	4.4	4.2	19.2	24.0	11.8	15.6		29.5	1.6	7.1	12.3	36.6
Russell 1000 Growth			1.4	15.8	21.3	12.9	15.5		30.2	7.1	5.7	13.0	33.5
Boston Partners Large Cap Value	53,759,614	4.1	-1.6	10.3	13.1	8.7	11.9	10.0	19.6	14.2	-4.4	11.4	36.4
Russell 1000 Value			-2.8	5.5	6.9	7.9	10.8	7.8	13.7	17.3	-3.8	13.5	32.5
SSGA Russell Small Cap Completeness Index	23,403,649	1.8	0.1	10.2	13.4	8.1			18.1	16.5	-3.5	7.3	
Russell Small Cap Completeness			0.2	10.3	13.5	8.2			18.3	16.6	-3.4	7.4	
William Blair SMID Cap Growth	27,674,807	2.1	5.4	17.2	25.1	12.6	15.8	13.3	29.3	7.2	5.2	8.8	42.0
Russell 2500 Growth			2.4	15.2	19.9	9.1	13.4	11.2	24.5	9.7	-0.2	7.1	40.7
Lee Munder Small Value	22,585,843	1.7	-4.1	1.5	1.8	7.9	9.8		7.7	27.3	-0.5	4.1	31.8
Russell 2000 Value			-2.6	4.4	5.1	7.9	10.0		7.8	31.7	-7.5	4.2	34.5
Total International Equity	294,632,529	22.2	-0.7	10.1	16.6	6.6	6.6	1.6	26.5	5.9	-6.2	-5.0	18.3
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
SSGA MSCI ACWI Ex US Index Fund	97,071,275	7.3	-1.1	10.3	16.8	6.4	6.1		27.5	4.7	-5.5	-3.7	15.5
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
Fidelity International Growth	98,529,344	7.4	-0.4	8.4	16.3	6.0	6.0	2.7	25.8	0.7	-1.9	-5.7	17.9
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
Tulare International Custom			-1.0	9.8	16.8	6.6	6.8	3.3	27.4	3.1	-2.6	-4.0	19.1
PIMCO RAE Fundamental Global Ex US Fund	99,031,910	7.5	-0.5	11.8	16.5	7.3	7.6		26.0	13.0	-11.4	-5.9	23.7
MSCI ACWI ex USA Gross			-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
Total Global Equity	45,210,501	3.4	-4.4	9.8	15.9	8.7	-		32.6	15.1	-12.3		
MSCI ACWI Gross			-0.8	10.5	15.4	8.7			24.6	8.5	-1.8		
Skellig DST Water Fund	45,210,501	3.4	-4.4	9.8	15.9	8.7			32.6	15.1	-12.3		
MSCI ACWI Gross			-0.8	10.5	15.4	8.7			24.6	8.5	-1.8		

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fixed Income	368,728,967	27.8	-0.8	0.4	1.4	1.8	1.9	4.6	3.9	5.1	-1.1	4.3	-1.2
BBgBarc US Aggregate TR			-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
Total Domestic Fixed Income													
BlackRock Fixed Income	132,513,324	10.0	-1.5	-0.3	1.1	1.3	2.0	3.9	3.6	2.9	0.8	6.0	-1.8
BBgBarc US Aggregate TR			-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
Doubleline Core Plus	70,096,543	5.3	-1.0	0.3	1.7	-			3.9	4.6			
BBgBarc US Aggregate TR			-1.5	-0.2	1.2				3.5	2.6			
MacKay Shields Core Plus	69,511,847	5.2	-1.6	0.0	1.8	-			4.5	4.7			
BBgBarc US Aggregate TR			-1.5	-0.2	1.2				3.5	2.6			
Shenkman High Yield	20,363,908	1.5	-0.2	2.3	4.5	3.9	4.1		6.7	11.7	-2.9	2.0	5.8
ICE BofAML US High Yield TR			-0.9	1.5	3.7	5.2	5.0		7.5	17.5	-4.6	2.5	7.4
SSGA TIPS	11,077,950	0.8	-0.8	1.3	0.9	1.2	0.0		3.0	4.6	-1.5	3.6	-8.6
BBgBarc US TIPS TR			-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
Total Global Fixed Income													
Franklin Templeton Global Bond Plus	65,165,394	4.9	1.7	1.3	0.0	1.8	1.7		2.4	6.1	-4.1	1.9	2.5
JPM GBI Global TR USD			2.2	4.9	7.6	3.2	1.3		6.8	1.6	-2.6	0.7	-4.5
Total Real Assets	156,814,288	11.8	1.4	6.8	6.5	5.1			5.0	9.5	-0.4		
Real Assets Composite Benchmark			1.0	5.9	6.0	4.8			5.2	9.4	-0.7		
Total Real Estate	115,620,029	8.7	2.0	5.3	6.5	8.6	10.2	3.4	4.3	8.0	15.1	12.5	11.5
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
RREEF America II	109,911,733	8.3	2.0	5.1	6.5	8.6	10.9	4.6	4.4	8.2	15.7	12.0	15.0
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
TA Associates Realty	5,708,296	0.4	2.2	6.6	7.5	7.6	8.7	0.8	5.2	3.7	15.4	14.6	5.1
NCREIF Property Index			1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE			2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2018

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	41,194,259	3.1	-0.4	11.5	7.4	-1.8			7.5	13.6	-26.8		
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Gresham MTAP Commodity Builder	19,997,450	1.5	-0.1	10.3	7.0	-2.7			5.9	11.5	-25.9	-16.8	
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7	-17.0	
Wellington Commodity	21,196,808	1.6	-0.8	12.7	7.9	-1.3			9.0	14.9	-26.3		
Bloomberg Commodity Index TR USD			-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Total Liquid Alts/HFoF	62,715,508	4.7	1.6	4.8	5.4	1.7	3.4		5.4	-0.5	0.0	4.6	9.9
CPI + 5%			2.5	5.7	7.5	6.9	6.5		7.2	7.2	5.8	5.8	6.6
Aetos Capital	31,610,758	2.4	0.1	2.4	4.1	2.6	4.0	3.4	6.8	1.8	0.5	4.5	10.4
ICE BofAML 90 DAY T-BILLS + 400 bps			1.1	3.2	4.1	3.5	3.6	4.0	3.9	3.3	3.1	3.5	4.1
Titan Advisors	31,104,749	2.3	3.2	7.3	6.8				4.0	-0.1			
ICE BofAML 90 DAY T-BILLS + 400 bps			1.1	3.2	4.1				3.9	3.3			

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
SSGA S&P 500 Flagship Fund	13.36%	7.02%	0.07%	1.00	0.03%	1.00	1.86	1.69	100.35%	99.19%
QMA Large Cap Core	14.18%	7.43%	0.38%	1.04	1.46%	0.96	1.87	0.59	108.34%	103.73%
Ivy Large Cap Growth	16.26%	9.33%	-1.74%	1.16	3.46%	0.88	1.71	0.21	106.13%	101.97%
Boston Partners Large Cap Value	12.40%	8.32%	1.58%	1.00	2.93%	0.88	1.45	0.55	110.92%	83.15%
William Blair SMID Cap Growth	16.80%	8.72%	6.12%	0.80	3.84%	0.86	1.89	0.90	114.03%	62.68%
Lee Munder Small Value	10.77%	9.91%	2.68%	0.81	3.47%	0.93	1.06	0.23	94.30%	75.04%
SSGA MSCI ACWI Ex US Index Fund	6.15%	10.60%	-0.21%	1.00	0.06%	1.00	0.55	-3.64	98.74%	101.34%
Fidelity International Growth	6.53%	9.78%	0.82%	0.90	2.53%	0.95	0.64	0.06	93.46%	88.28%
PIMCO RAE Fundamental Global Ex US Fund	8.09%	11.83%	1.40%	1.05	4.04%	0.89	0.66	0.43	101.40%	76.24%
BlackRock Fixed Income	2.25%	3.18%	0.43%	0.99	0.25%	0.99	0.61	1.71	108.42%	93.14%
Shenkman High Yield	4.64%	4.42%	0.66%	0.80	1.52%	0.94	0.98	-0.24	84.59%	76.23%
SSGA TIPS	0.04%	4.93%	-0.01%	1.00	0.03%	1.00	-0.06	-0.31	99.82%	100.07%
Franklin Templeton Global Bond Plus	2.31%	5.07%	2.58%	-0.20	9.13%	0.07	0.39	0.11	13.50%	-37.08%
RREEF America II	11.55%	2.64%	-5.85%	1.52	1.54%	0.75	4.26	80.0	101.41%	
TA Associates Realty	9.28%	3.42%	-7.74%	1.70	2.83%	0.38	2.62	-0.26	91.44%	
Aetos Capital	4.56%	3.03%	-7.62%	3.39	2.98%	0.07	1.40	0.32	129.22%	

							IRR Analysis	as of IRR date				
Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 3/31/2017 ³	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ⁶	IRR Date
Private E	quity											
2005 2004 2011 2010 2016 2016 2011 Private E	BlackRock Private Capital II ⁷ Pantheon USA Fund VI PIMCO Bravo KKR Mezzanine Partners Ocean Avenue Fund III Pathway Private Equity Fund Investors 8 Stepstone Secondary Opportunities Fund III quity - Real Estate TA Associates VIII	\$5,598,584 \$4,305,745 \$447,002 \$3,961,999 \$7,484,869 \$9,753,360 \$17,208,871	\$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$20,000,000 \$20,000,000 \$27,500,000	\$15,000,000 \$14,175,000 \$15,000,000 \$15,000,000 \$7,200,000 \$9,130,364 \$27,500,000	100% 95% 100% 100% 36% 46% 100%	\$0 \$825,000 \$0 \$0 \$12,800,000 \$10,869,636 \$0	\$18,043,281 \$17,910,000 \$26,752,107 \$16,664,585 \$200,000 \$642,256 \$17,773,311	\$6,833,116 \$5,010,745 \$626,683 \$4,070,298 \$5,484,869 \$8,503,169 \$20,230,215	120.3% 126.3% 178.3% 111.1% 2.8% 7.0% 64.6%	157.6% 156.7% 181.3% 137.5% 106.7% 113.9% 127.2%	6.9% 7.3% 22.0% 8.1% 10.6% 20.1% 15.2%	09/30/17 12/31/17 12/31/17 12/31/17 12/31/17 09/30/17 09/30/17
Private C 2016	redit TPG Diversified Credit	\$36,961,339	\$80,000,000	\$35,527,700	44%	\$44,472,300	\$457,144	\$34,128,748	1.3%	105.3%	9.4%	12/31/17
	Total Private Markets % of Portfolio (Market Value)	\$91,430,067	\$237,500,000	\$168,533,064	71%	\$68,966,936	\$122,634,295	\$93,351,565	72.8%	127.0%		

¹(DPI) is equal to (capital returned / capital called)

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

³Last known market value + capital calls - distributions

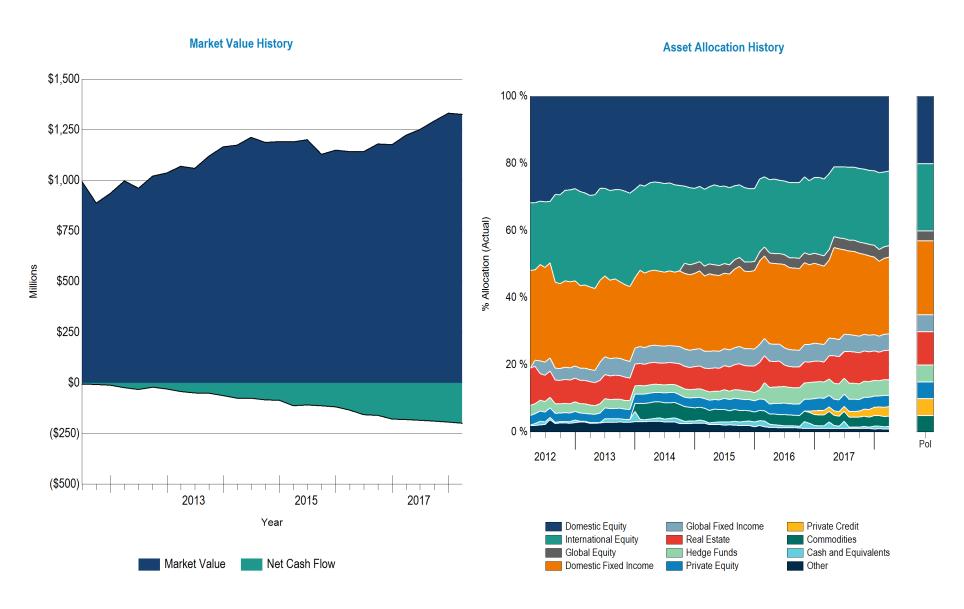
⁴IRR currently unavailable for these funds.

⁵Investment period ended, no further capital to be called.

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

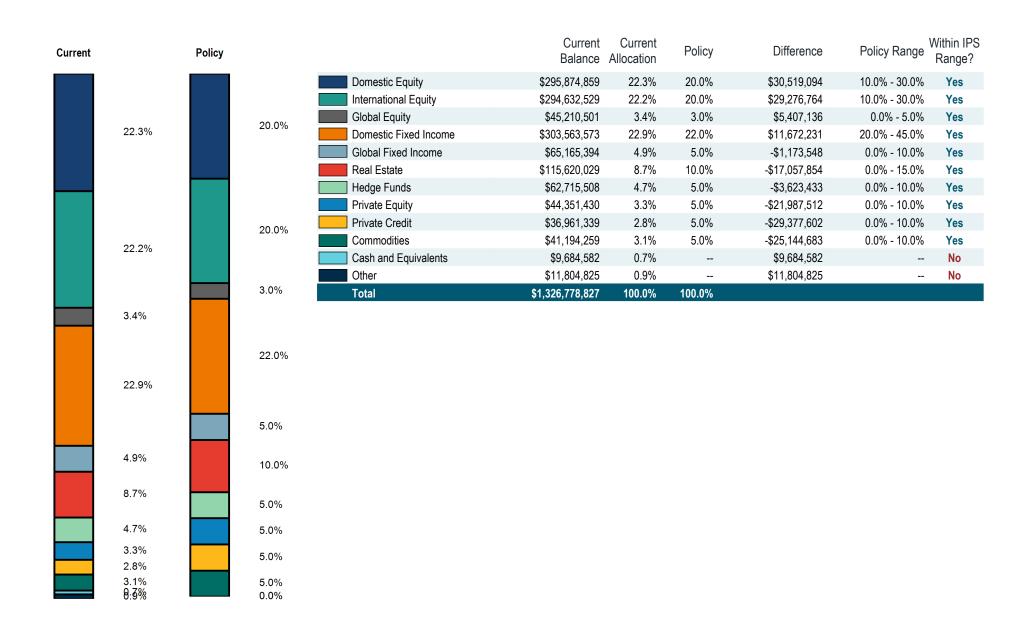
⁷BlackRock: Total capital called is \$15,483,125 which includes recycled distributions.

⁸StepStone: \$8,782,174 in recallable distributions



Net Cash flow history prior to 4Q 2010 is not available due to lack of data from previous consultant.





Account	Fee Schedule	Market Value As of 3/31/2018	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Aetos Capital	0.70% of Assets	\$31,610,758	2.4%	\$221,275	0.70%
BlackRock Alternative Advisors	120,000 Annually	\$5,598,584	0.4%	\$120,000	2.14%
BlackRock Fixed Income	0.25% of First 100.0 Mil, 0.25% of Next 100.0 Mil	\$132,513,324	10.0%	\$331,283	0.25%
Boston Partners Large Cap Value	0.45% of First 50.0 Mil, 0.35% of Next 50.0 Mil, 0.30% Thereafter	\$53,759,614	4.1%	\$238,159	0.44%
Doubleline Core Plus	0.28% of First 100.0 Mil, 0.25% Thereafter	\$70,096,543	5.3%	\$196,270	0.28%
Fidelity International Growth	0.70% of First 25.0 Mil, 0.50% of Next 25.0 Mil, 0.30% Thereafter	\$98,529,344	7.4%	\$445,588	0.45%
Franklin Templeton Global Bond Plus	0.62% of First 50.0 Mil, 0.51% of Next 50.0 Mil, 0.45% Thereafter	\$65,165,394	4.9%	\$387,344	0.59%
Gresham MTAP Commodity Builder	0.75% of Assets	\$19,997,450	1.5%	\$149,981	0.75%
Ivy Large Cap Growth	0.60% of First 25.0 Mil, 0.50% of Next 25.0 Mil, 0.40% Thereafter	\$58,714,302	4.4%	\$309,857	0.53%
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	0.38% of Assets	\$3,961,999	0.3%	\$14,857	0.38%
Lee Munder Small Value	0.90% of First 25.0 Mil, 0.85% of Next 75.0 Mil, 0.30% Thereafter	\$22,585,843	1.7%	\$203,273	0.90%
MacKay Shields Core Plus	0.40% of Assets	\$69,511,847	5.2%	\$278,047	0.40%
Mellon Capital Cash Account	No Fee	\$9,684,582	0.7%		
Ocean Avenue Fund III	0.85% of Assets	\$7,484,869	0.6%	\$63,621	0.85%
Pantheon Ventures	0.47% of Assets	\$4,305,745	0.3%	\$20,409	0.47%
Pathway Private Equity Fund Investors 8	0.45% of Assets	\$9,753,360	0.7%	\$43,890	0.45%
PIMCO Bravo	1.60% of Assets	\$447,002	0.0%	\$28,608	6.40%
PIMCO RAE Fundamental Global Ex US Fund	0.78% of First 25.0 Mil, 0.43% of Next 75.0 Mil, 0.38% Thereafter	\$99,031,910	7.5%	\$513,337	0.52%
QMA Large Cap Core	0.35% of First 50.0 Mil, 0.30% of Next 50.0 Mil, 0.25% Thereafter	\$55,141,416	4.2%	\$190,424	0.35%

*In addition to a management fee, Aetos charges a 10% incentive fee above a hurdle rate of the average three-month Treasury Bill rate in effect during the relevant incentive fee calculation.



Account	Fee Schedule	Market Value As of 3/31/2018	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
RREEF America II	0.95% of Assets	\$109,911,733	8.3%	\$1,044,161	0.95%
Shenkman High Yield	0.50% of Assets	\$20,363,908	1.5%	\$101,820	0.50%
Skellig DST Water Fund	0.85% of Assets	\$45,210,501	3.4%	\$384,289	0.85%
SSGA MSCI ACWI Ex US Index Fund	0.08% of First 25.0 Mil, 0.07% of Next 25.0 Mil, 0.06% Thereafter	\$97,071,275	7.3%	\$65,743	0.07%
SSGA Russell Small Cap Completeness Index	0.05% of First 25.0 Mil, 0.05% of Next 25.0 Mil, 0.04% Thereafter	\$23,403,649	1.8%	\$11,702	0.05%
SSGA S&P 500 Flagship Fund	0.03% of Assets	\$54,595,229	4.1%	\$16,379	0.03%
SSGA TIPS	0.06% of First 50.0 Mil, 0.05% of Next 50.0 Mil, 0.04% Thereafter	\$11,077,950	0.8%	\$6,647	0.06%
Stepstone Secondary Opportunities Fund II	343,750 Annually	\$17,208,871	1.3%	\$343,750	2.00%
TA Associates Realty	0.60% of Assets	\$5,708,296	0.4%	\$34,250	0.60%
The Clifton Group	Asset Based Fee: 0.0375% (Quarterly) Retainer Fee: \$4,500 (Quarterly) Minimum Expense: \$50,000 (Annual)	\$7,395,823	0.6%		
Titan Advisors	.75% on AUM, 10% on performance, 5% hurdle rate.	\$31,104,749	2.3%		
TPG Diversified Credit	No Fee	\$36,961,339	2.8%		
Wellington Commodity	0.75% of Assets	\$21,196,808	1.6%	\$158,976	0.75%
William Blair SMID Cap Growth	0.95% of First 10.0 Mil, 0.80% of Next 20.0 Mil, 0.75% of Next 20.0 Mil, 0.70% of Next 50.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$27,674,807	2.1%	\$236,398	0.85%
Investment Management Fee		\$1,326,778,827	100.0%	\$6,160,340	0.46%

^{*}TPG fee schedule is as follows: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term investor designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions.



Total Fund Cumulative Performance vs. InvestorForce Public DB Gross

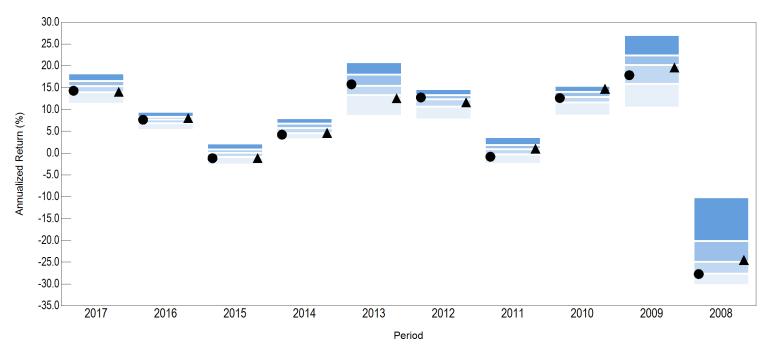


5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
of Portfolios

Total FundPolicy Index

9.3		13.0		8.0		9.2		8.9		7.7	
7.9		11.4		7.2		8.4		8.1		6.8	
7.0		10.2		6.6		7.8		7.5		6.4	
6.3		9.2		6.1		6.9		6.9		5.8	
4.9		7.4		4.8		5.7		5.7		4.9	
293		293		277		251		220		200	
,	(53)	9.7	(64)	6.0	(78)	7.0	(72)	6.8	(78)	5.3	(90)
) 6.6	(68)	9.5	(69)	6.0	(78)	6.5	(88)	6.4	(88)	5.8	(77)
	7.0 6.3 4.9 293	7.9 7.0 6.3 4.9 293	7.9 11.4 7.0 10.2 6.3 9.2 4.9 7.4 293 293 2) 7.0 (53) 9.7	7.9 11.4 7.0 10.2 6.3 9.2 4.9 7.4 293 293 2) 7.0 (53) 9.7 (64)	7.9 11.4 7.2 7.0 10.2 6.6 6.3 9.2 6.1 4.9 7.4 4.8 293 293 277 2) 7.0 (53) 9.7 (64) 6.0	7.9	7.9 11.4 7.2 8.4 7.0 10.2 6.6 7.8 6.3 9.2 6.1 6.9 4.9 7.4 4.8 5.7 293 293 277 251 2) 7.0 (53) 9.7 (64) 6.0 (78) 7.0	7.9 11.4 7.2 8.4 7.0 10.2 6.6 7.8 6.3 9.2 6.1 6.9 4.9 7.4 4.8 5.7 293 293 277 251 2) 7.0 (53) 9.7 (64) 6.0 (78) 7.0 (72)	7.9 11.4 7.2 8.4 8.1 7.0 10.2 6.6 7.8 7.5 6.3 9.2 6.1 6.9 6.9 4.9 7.4 4.8 5.7 5.7 293 293 277 251 220 2) 7.0 (53) 9.7 (64) 6.0 (78) 7.0 (72) 6.8	7.9 11.4 7.2 8.4 8.1 7.0 10.2 6.6 7.8 7.5 6.3 9.2 6.1 6.9 6.9 4.9 7.4 4.8 5.7 5.7 293 293 277 251 220 2) 7.0 (53) 9.7 (64) 6.0 (78) 7.0 (72) 6.8 (78)	7.9 11.4 7.2 8.4 8.1 6.8 7.0 10.2 6.6 7.8 7.5 6.4 6.3 9.2 6.1 6.9 6.9 5.8 4.9 7.4 4.8 5.7 5.7 4.9 293 293 277 251 220 200 2) 7.0 (53) 9.7 (64) 6.0 (78) 7.0 (72) 6.8 (78) 5.3

Total Fund Consecutive Periods vs. InvestorForce Public DB Gross

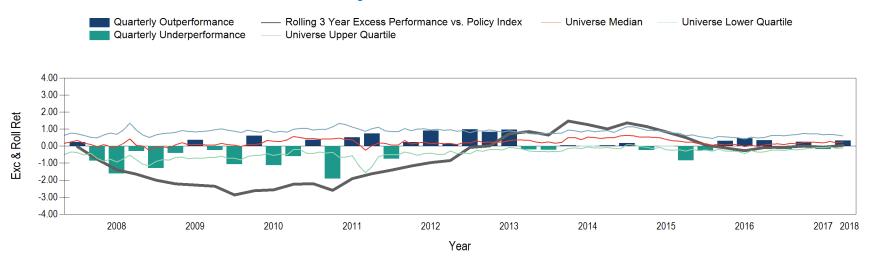


5th Percentile 25th Percentile Median 75th Percentile 95th Percentile # of Portfolios

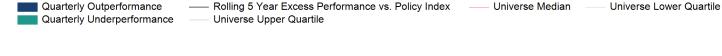
■ Total Fund▲ Policy Index

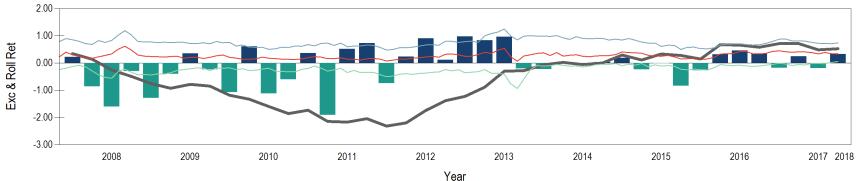
Return	(Rank)																			
18.2		9.4		2.2		8.0		20.8		14.6		3.6		15.4		27.0		-10.1		
16.5		8.4		0.9		6.8		18.0		13.4		1.9		14.0		22.4		-20.1		
15.3		7.7		0.1		5.8		15.5		12.4		0.9		12.9		20.2		-24.9		
14.0		6.9		-0.9		4.6		13.3		10.7		-0.3		11.7		15.9		-27.6		
11.3		5.3		-2.6		3.2		8.5		7.8		-2.5		8.6		10.5		-30.3		
304		305		316		248		231		236		206		188		184		181		
14.3 14.0	(71) (74)	7.6 8.0	(53) (40)	-1.2 -1.1	(80) (80)	4.2 4.6	(83) (75)	15.8 12.6	(49) (80)	12.8 11.6	(43) (67)	-0.8 1.0	(86) (46)	12.6 14.7	(57) (13)	17.8 19.6	(67) (53)	-27.7 -24.5	(77) (46)	

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance





	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Equity	295,874,859	0.4	12.5	16.0	10.6	13.8	10.6	22.3	11.5	1.6	12.4	35.9
Russell 3000		-0.6	10.5	13.8	10.2	13.0	9.6	21.1	12.7	0.5	12.6	33.6
InvestorForce Public DB US Eq Gross Rank		18	12	15	20	6	6	16	77	10	17	24
SSGA S&P 500 Flagship Fund	54,595,229	-0.8	10.6	14.0	10.8	13.4		21.9	12.0	1.5	13.7	32.4
S&P 500		-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
eV US Large Cap Core Equity Gross Rank		58	57	54	28	41		52	31	40	42	58
QMA Large Cap Core	55,141,416	-1.3	12.1	14.3	10.9	14.2		22.5	12.5	2.1	15.6	34.3
S&P 500		-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
eV US Large Cap Core Equity Gross Rank		73	34	52	28	20		42	25	31	20	37
Ivy Large Cap Growth	58,714,302	4.3	19.6	24.7	12.4	16.3		30.2	2.1	7.6	12.8	37.3
Russell 1000 Growth		1.4	15.8	21.3	12.9	15.5		30.2	7.1	5.7	13.0	33.5
eV US Large Cap Growth Equity Gross Rank		23	15	26	37	28		42	72	26	40	25

U.S. Effective Style Map 3 Years

Large
Value
SSGA S&P 500 Flagship Fund
Growth

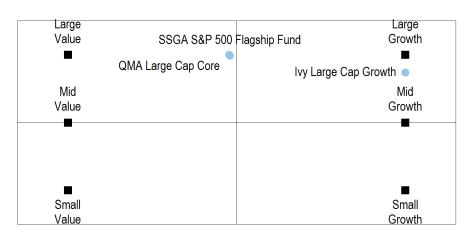
Ivy Large Cap Growth

QMA Large Cap Core

Mid
Value
Growth

Small
Value
Growth

U.S. Effective Style Map 5 Years



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

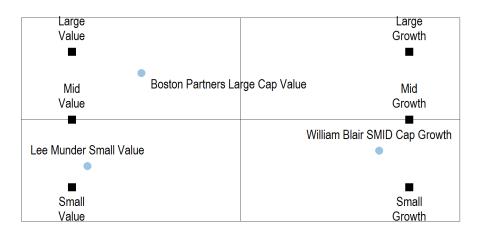


	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Boston Partners Large Cap Value	53,759,614	-1.5	10.6	13.6	9.2	12.4	10.4	20.1	14.7	-3.9	11.8	37.0
Russell 1000 Value		-2.8	5.5	6.9	7.9	10.8	7.8	13.7	17.3	-3.8	13.5	32.5
eV US Large Cap Value Equity Gross Rank		32	20	15	39	34	13	22	54	65	58	26
SSGA Russell Small Cap Completeness Index	23,403,649	0.2	10.3	13.4	8.2			18.2	16.5	-3.5	7.4	
Russell Small Cap Completeness		0.2	10.3	13.5	8.2			18.3	16.6	-3.4	7.4	
eV US Small Cap Core Equity Gross Rank		41	36	32	66			23	84	68	37	
William Blair SMID Cap Growth	27,674,807	5.6	18.0	26.2	13.6	16.8	14.3	30.4	8.2	6.1	9.8	43.1
Russell 2500 Growth		2.4	15.2	19.9	9.1	13.4	11.2	24.5	9.7	-0.2	7.1	40.7
eV US Mid Cap Growth Equity Gross Rank		17	21	12	5	1	3	16	22	7	33	11
Lee Munder Small Value	22,585,843	-3.9	2.2	2.8	8.9	10.8		8.6	28.4	0.4	5.1	33.1
Russell 2000 Value		-2.6	4.4	5.1	7.9	10.0		7.8	31.7	-7.5	4.2	34.5
eV US Small Cap Value Equity Gross Rank		89	91	91	44	66		68	38	9	60	85

U.S. Effective Style Map 3 Years

Large Large Value Growth Boston Partners Large Cap Value Mid Mid Value Growth Lee Munder Small Value William Blair SMID Cap Growth SSGA Russell Small Cap Completeness Index Small Small Value Growth

U.S. Effective Style Map 5 Years



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



	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Domestic Equity	295,874,859	0.3	12.2	15.5	10.2	13.4	10.1	21.9	11.1	1.2	12.0	35.3
Russell 3000		-0.6	10.5	13.8	10.2	13.0	9.6	21.1	12.7	0.5	12.6	33.6
SSGA S&P 500 Flagship Fund	54,595,229	-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
S&P 500		-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
QMA Large Cap Core	55,141,416	-1.4	11.8	13.9	10.5	13.8		22.1	12.1	1.8	15.2	33.9
S&P 500		-0.8	10.6	14.0	10.8	13.3		21.8	12.0	1.4	13.7	32.4
Ivy Large Cap Growth	58,714,302	4.2	19.2	24.0	11.8	15.6		29.5	1.6	7.1	12.3	36.6
Russell 1000 Growth		1.4	15.8	21.3	12.9	15.5		30.2	7.1	5.7	13.0	33.5
Boston Partners Large Cap Value	53,759,614	-1.6	10.3	13.1	8.7	11.9	10.0	19.6	14.2	-4.4	11.4	36.4
Russell 1000 Value		-2.8	5.5	6.9	7.9	10.8	7.8	13.7	17.3	-3.8	13.5	32.5
SSGA Russell Small Cap Completeness Index	23,403,649	0.1	10.2	13.4	8.1			18.1	16.5	-3.5	7.3	
Russell Small Cap Completeness		0.2	10.3	13.5	8.2			18.3	16.6	-3.4	7.4	
William Blair SMID Cap Growth	27,674,807	5.4	17.2	25.1	12.6	15.8	13.3	29.3	7.2	5.2	8.8	42.0
Russell 2500 Growth		2.4	15.2	19.9	9.1	13.4	11.2	24.5	9.7	-0.2	7.1	40.7
Lee Munder Small Value	22,585,843	-4.1	1.5	1.8	7.9	9.8		7.7	27.3	-0.5	4.1	31.8
Russell 2000 Value		-2.6	4.4	5.1	7.9	10.0		7.8	31.7	-7.5	4.2	34.5

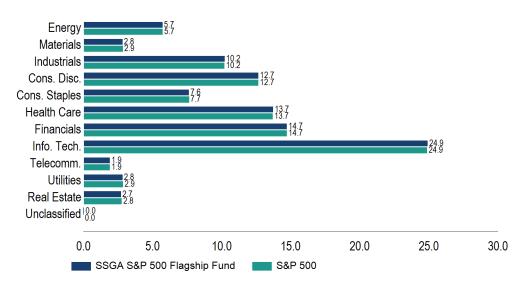
Seca Sep Storing	ON.	A Large (19 Cop	Rosto, Carole Car	Parties Gowe	VIII	ian Bair	SMID CS	SCA PUL	Sell Spa	ON COLOR	Onpleten.	Res Income	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
SSGA S&P 500 Flagship Fund			142	90.4	42	96.3	62	87.6	4	5.8	1	1.7	0	0.0
QMA Large Cap Core	142	59.1			21	51.7	30	56.2	4	4.2	6	5.9	73	5.7
lvy Large Cap Growth	42	27.3	21	25.0			7	8.4	1	1.6	0	0.0	2	0.6
Boston Partners Large Cap Value	62	28.2	30	25.0	7	16.7			2	2.3	0	0.0	7	1.6
William Blair SMID Cap Growth	4	0.2	4	0.4	1	0.6	2	1.4			4	5.3	60	6.7
Lee Munder Small Value	1	0.0	6	0.7	0	0.0	0	0.0	4	5.7			85	4.6
SSGA Russell Small Cap Completeness Index	0	0.0	73	8.4	2	1.4	7	4.5	60	87.4	85	91.1		

Correlation Matrix
3 Months Ending March 31, 2018

NO.	S& SO PERSON CHAI	15/ ₄ 66	Eoston Patholes Lay	Nillen Beir SMI	Sea Ala	Snall Shall Can Corne	ó.		
	Soshio Rina	Are Can Cope	Cap Gongs	CAD VAILE	Celo Grown	Snall Valle	eness Index	500	
SSGA S&P 500 Flagship Fund	1.00								
QMA Large Cap Core	1.00	1.00							
lvy Large Cap Growth	0.98	0.97	1.00						
Boston Partners Large Cap Value	1.00	1.00	0.97	1.00					
William Blair SMID Cap Growth	0.93	0.95	0.83	0.94	1.00				
Lee Munder Small Value	0.78	0.82	0.64	0.80	0.96	1.00			
SSGA Russell Small Cap Completeness Index	0.85	0.88	0.73	0.87	0.99	0.99	1.00		
S&P 500	1.00	1.00	0.98	1.00	0.93	0.78	0.85	1.00	

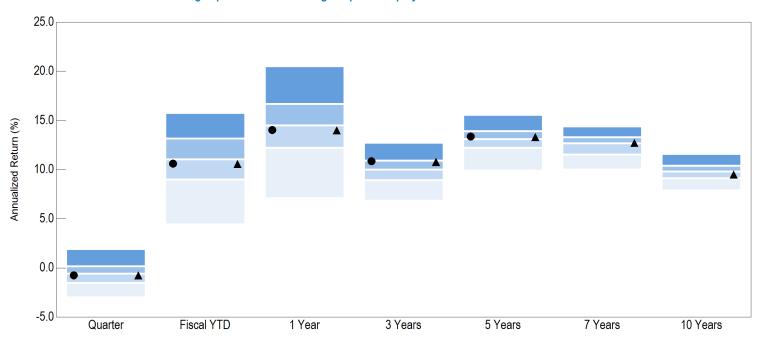
	Portfolio	S&P 500
Number of Holdings	505	505
Weighted Avg. Market Cap. (\$B)	182.87	182.24
Median Market Cap. (\$B)	20.74	20.73
Price To Earnings	26.57	24.22
Price To Book	5.47	4.61
Price To Sales	4.17	4.00
Return on Equity (%)	24.87	21.61
Yield (%)	1.96	1.95
Beta	1.00	1.00

Sector Allocation (%) vs S&P 500



Top Holdings			Top Contributor	rs		Вс	ottom Contribu	tors	
Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution
APPLE	3.79%	AMAZON.COM	2.05	23.76	0.49	FACEBOOK CLASS A	1.84	-9.45	-0.17
MICROSOFT	3.13%	MICROSOFT	2.90	7.19	0.21	EXXON MOBIL	1.56	-9.89	-0.15
AMAZON.COM	2.59%	NETFLIX	0.37	53.86	0.20	WELLS FARGO & CO	1.18	-13.10	-0.15
BERKSHIRE HATHAWAY 'B'	1.70%	INTEL	0.95	13.58	0.13	GENERAL ELECTRIC	0.67	-22.11	-0.15
FACEBOOK CLASS A	1.70%	CISCO SYSTEMS	0.83	12.82	0.11	PROCTER & GAMBLE	1.03	-13.05	-0.13
JP MORGAN CHASE & CO.	1.68%	NVIDIA	0.51	19.76	0.10	JOHNSON & JOHNSON	1.65	-7.70	-0.13
JOHNSON & JOHNSON	1.54%	MASTERCARD	0.61	15.91	0.10	COMCAST 'A'	0.82	-14.35	-0.12
EXXON MOBIL	1.40%	ADOBE SYSTEMS	0.38	23.31	0.09	CHEVRON	1.05	-8.00	-0.08
ALPHABET 'C'	1.40%	BOEING	0.73	11.76	0.09	VERIZON	0.95	-8.62	-0.08
ALPHABET A	1.40%	BOOKING HOLDINGS	0.37	19.72	0.07	COMMUNICATIONS	0.95	-0.02	-0.00
Total	20.31%					CITIGROUP	0.87	-8.91	-0.08
Total	20.31%								

SSGA S&P 500 Flagship Fund vs. eV US Large Cap Core Equity Gross Universe



	Return (Ranl	k)												
5th Percentile	1.9		15.8		20.5		12.7		15.5		14.4		11.6	
25th Percentile	0.2		13.2		16.7		10.9		13.9		13.3		10.4	
Median	-0.6		11.0		14.5		10.0		13.1		12.7		9.8	
75th Percentile	-1.5		9.0		12.2		8.9		12.2		11.5		9.1	
95th Percentile	-3.0		4.4		7.1		6.9		9.9		10.0		7.9	
# of Portfolios	313		313		313		304		284		259		227	
SSGA S&P 500 Flagship FundS&P 500	-0.8 -0.8	(58) (58)	10.6 10.6	(57) (57)	14.0 14.0	(54) (55)	10.8 10.8	(28) (30)	13.4 13.3	(41) (45)	 12.7	() (50)	 9.5	() (63)

SSGA S&P 500 Flagship Fund vs. eV US Large Cap Core Equity Gross Universe

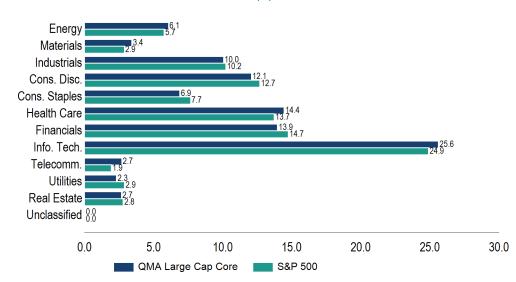


	5th Percentile
	25th Percentile
	Median
	75th Percentile
	95th Percentile
	# of Portfolios
•	SSGA S&P 500 Flagship Fund
▲	S&P 500

Return (Rank)																			
28.2		16.3		6.3		17.7		39.6		20.1		7.0		19.7		39.1		-26.1	
24.3		12.5		2.7		15.1		35.5		17.2		3.6		15.8		31.2		-32.3	
22.1		10.4		0.6		13.3		32.9		15.4		1.3		14.4		26.3		-35.4	
19.8		8.2		-1.6		11.4		30.8		13.4		-1.5		12.3		22.6		-38.1	
14.4		4.3		-4.1		8.2		25.4		9.8		-5.9		9.1		16.1		-42.3	
318		308		267		267		261		254		259		254		280		312	
21.9	(52)	12.0	(31)	1.5	(40)	13.7	(42)	32.4	(58)	16.1	(39)		()		()		()		()
21.8	(53)	12.0	(31)	1.4	(42)	13.7	(42)	32.4	(58)	16.0	(41)	2.1	(40)	15.1	(37)	26.5	(48)	-37.0	(62)

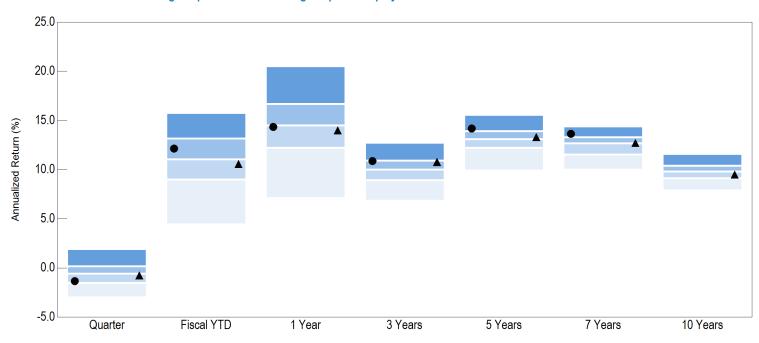
	Portfolio	S&P 500
Number of Holdings	213	505
Weighted Avg. Market Cap. (\$B)	157.55	182.24
Median Market Cap. (\$B)	19.39	20.73
Price To Earnings	26.18	24.22
Price To Book	5.24	4.61
Price To Sales	3.72	4.00
Return on Equity (%)	24.62	21.61
Yield (%)	1.94	1.95
Beta	1.04	1.00

Sector Allocation (%) vs S&P 500



Top Holdings	Т	op Contributo	rs		Bottom Contributors						
Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution		
APPLE	2.78%	AMAZON.COM	0.90	23.76	0.21	FACEBOOK CLASS A	2.12	-9.45	-0.20		
MICROSOFT	2.49%	ADOBE SYSTEMS	0.88	23.31	0.20	COMCAST 'A'	1.24	-14.35	-0.18		
JP MORGAN CHASE & CO.	2.42%	INTEL	1.37	13.58	0.19	EXXON MOBIL	1.74	-9.89	-0.17		
FACEBOOK CLASS A	2.06%	MICROSOFT	2.10	7.19	0.15	WELLS FARGO & CO	1.22	-13.10	-0.16		
ALPHABET 'C'	2.01%	BOEING	1.06	11.76	0.12	DEVON ENERGY	0.64	-23.07	-0.15		
BANK OF AMERICA	1.86%	COGNIZANT TECH.SLTN.'A'	0.85	13.63	0.12	NUTRISYSTEM	0.30	-48.37	-0.15		
VISA 'A'	1.48%	ZOETIS	0.63	16.11	0.10	VERIZON	1.58	-8.62	-0.14		
AMAZON.COM	1.47%	S&P GLOBAL	0.76	13.08	0.10	COMMUNICATIONS	1.50	-0.02	-0.14		
VERIZON COMMUNICATIONS	1.45%	WESTERN DIGITAL	0.56	16.66	0.09	NEWFIELD EXPLORATION	0.54	-22.55	-0.12		
ALPHABET A	1.36%	ANADARKO PETROLEUM	0.67	13.10	0.09	ALTRIA GROUP	1.01	-11.77	-0.12		
Total	19.39%					MCDONALDS	1.33	-8.56	-0.11		
10001	10.0070										

QMA Large Cap Core vs. eV US Large Cap Core Equity Gross Universe



	Return (Rank)									
5th Percentile	1.9	15.8	20.5	1	2.7	15.5	14.4		11.6	
25th Percentile	0.2	13.2	16.7	1	0.9	13.9	13.3		10.4	
Median	-0.6	11.0	14.5	1	0.0	13.1	12.7		9.8	
75th Percentile	-1.5	9.0	12.2		8.9	12.2	11.5		9.1	
95th Percentile	-3.0	4.4	7.1		6.9	9.9	10.0		7.9	
# of Portfolios	313	313	313		304	284	259		227	
QMA Large Cap CoreS&P 500	-1.3 -0.8	(73) 12.1 (58) 10.6	(34) 14.3 (57) 14.0	\ <i>/</i>	0.9 (28 0.8 (30	,	(20) 13.6 (45) 12.7	(15) (50)	 9.5	() (63)

QMA Large Cap Core vs. eV US Large Cap Core Equity Gross Universe



	5th Percentile
	25th Percentile
	Median
	75th Percentile
	95th Percentile
	# of Portfolios
•	QMA Large Cap Core
•	S&P 500

Return (Rai	nk)								
28.2	16.3	6.3	17.7	39.6	20.1	7.0	19.7	39.1	-26.1
24.3	12.5	2.7	15.1	35.5	17.2	3.6	15.8	31.2	-32.3
22.1	10.4	0.6	13.3	32.9	15.4	1.3	14.4	26.3	-35.4
19.8	8.2	-1.6	11.4	30.8	13.4	-1.5	12.3	22.6	-38.1
14.4	4.3	-4.1	8.2	25.4	9.8	-5.9	9.1	16.1	-42.3
318	308	267	267	261	254	259	254	280	312
22.5 (42	,	2.1 (31)	15.6 (20)	34.3 (37)	18.1 (18)	2.4 (34)	14.9 (40)	25.2 (58)	\ <i>\</i>
21.8 (53) 12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)	15.1 (37)	26.5 (48)	-37.0 (62)

Risk vs. Return

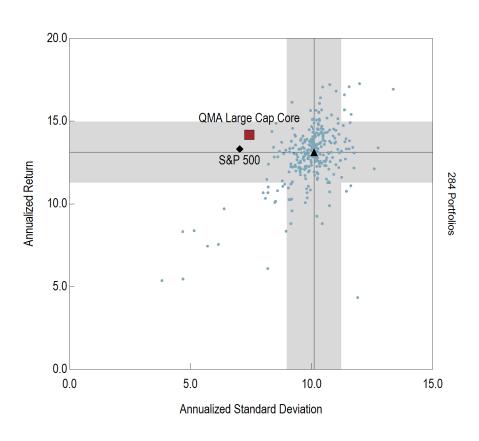
3 Years

35.0 30.0 25.0 Annualized Return 20.0 304 Portfolios 15.0 QMA Large Cap Core 10.0 5.0 0.0 10.0 0.0 5.0 15.0 **Annualized Standard Deviation**

QMA Large Cap Core

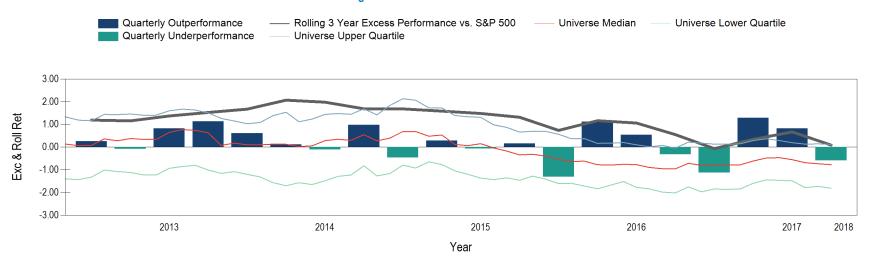
- S&P 500
- Universe Median
- 68% Confidence Interval
- eV US Large Cap Core Equity Gross

Risk vs. Return 5 Years

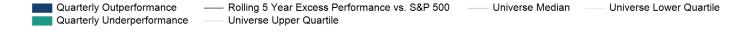


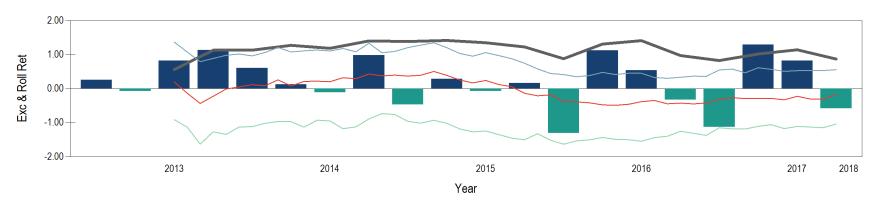
- QMA Large Cap Core
- S&P 500
- Universe Median
- 68% Confidence Interval
- eV US Large Cap Core Equity Gross

Rolling 3 Year Annualized Excess Performance



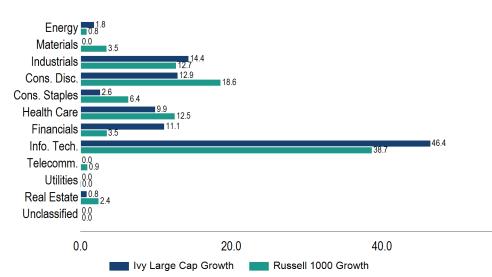
Rolling 5 Year Annualized Excess Performance





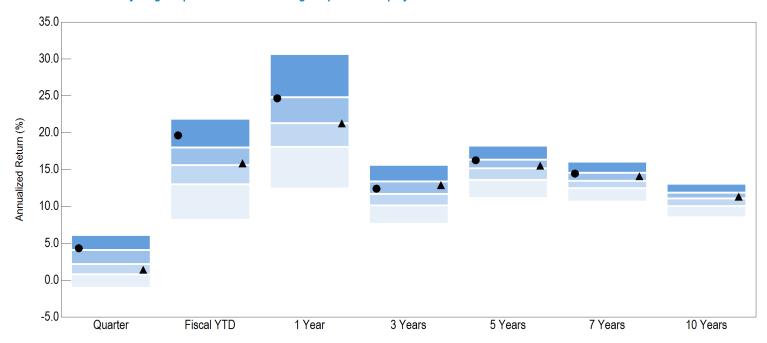
	Portfolio	Russell 1000 Growth
Number of Holdings	45	553
Weighted Avg. Market Cap. (\$B)	204.96	212.03
Median Market Cap. (\$B)	70.40	11.59
Price To Earnings	35.87	27.97
Price To Book	8.11	7.32
Price To Sales	6.86	5.23
Return on Equity (%)	40.14	29.91
Yield (%)	0.99	1.37
Beta	1.08	1.00

Sector Allocation (%) vs Russell 1000 Growth



Top Holdings			Top Contributors	3			Bottom Contribut	ors	
Ending Period Wei	ght		Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution
MICROSOFT	4.96%	AMAZON.COM	4.30	23.76	1.02	FACEBOOK CLASS A	4.02	-9.45	-0.38
MASTERCARD		ADOBE SYSTEMS	3.54	23.31	0.83	HOME DEPOT	4.63	-5.41	-0.25
AMAZON.COM		MASTERCARD	4.35	15.91	0.69	COMCAST 'A'	1.68	-14.35	-0.24
PAYPAL HOLDINGS		SALESFORCE.COM	3.32	13.76	0.46	STANLEY BLACK &	2.49	-9.36	-0.23
HOME DEPOT		CME GROUP	3.77	11.20	0.42	DECKER			
APPLE		ELECTRONIC ARTS	2.23	15.40	0.34	CATERPILLAR	3.63	-6.04	-0.22
CME GROUP		MICROSOFT	4.68	7.19	0.34	CELGENE	1.34	-14.52	-0.19
ADOBE SYSTEMS		ZOETIS	2.01	16.11	0.32	CITIGROUP	1.68	-8.91	-0.15
VISA 'A'	4.09%	LAM RESEARCH	2.78	10.64	0.30	PARKER-HANNIFIN	0.67	-13.98	-0.09
SALESFORCE.COM		FERRARI	1.81	14.96	0.27	PHILIP MORRIS INTL.	1.49	-4.89	-0.07
Total	44.10%					HALLIBURTON	1.94	-3.57	-0.07

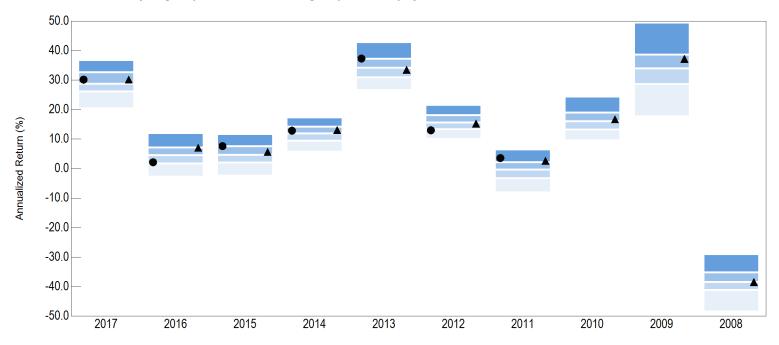
Ivy Large Cap Growth vs. eV US Large Cap Growth Equity Gross Universe



	Return (Ran	k)													
5th Percentile	6.1		21.9		30.7		15.6		18.2		16.1		13.1		
25th Percentile	4.1		18.0		24.8		13.4		16.4		14.6		11.9		
Median	2.2		15.6		21.3		11.7		15.2		13.5		11.1		
75th Percentile	0.8		13.0		18.1		10.2		13.6		12.5		10.1		
95th Percentile	-1.0		8.2		12.5		7.7		11.2		10.7		8.6		
# of Portfolios	253		253		253		249		240		225		216		
 Ivy Large Cap Growth Russell 1000 Growth 	4.3 1.4	(23) (64)	19.6 15.8	(15) (48)	24.7 21.3	(26) (51)	12.4 12.9	(37) (31)	16.3 15.5	(28) (42)	14.5 14.1	(28) (34)	 11.3	() (42)	
Mussell 1000 STOWIII	1.7	(44)	10.0	(40)	21.0	(01)	12.5	(01)	10.0	(74)	17.1	(-1)	11.0	(74)	



Ivy Large Cap Growth vs. eV US Large Cap Growth Equity Gross Universe



5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
of Portfolios

lvy Large Cap Growth Russell 1000 Growth

Return (Rai	nk)								
36.7	12.0	11.6	17.3	42.8	21.6	6.4	24.4	49.5	-29.1
32.7	7.3	7.6	14.3	37.3	18.2	2.2	19.1	38.6	-35.1
28.8	4.6	4.7	12.0	34.3	15.7	-0.3	16.1	34.0	-38.4
26.2	1.8	2.1	9.5	31.0	13.4	-3.2	13.2	28.7	-41.1
20.5	-2.7	-2.4	5.8	26.6	10.2	-8.0	9.6	17.7	-48.4
265	282	270	291	274	274	294	304	350	381
30.2 (42	,	, ,	12.8 (40)	37.3 (25)	13.0 (78)	3.6 (17)	()	()	()
30.2 (42	7.1 (26	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)	16.7 (46)	37.2 (33)	-38.4 (51)

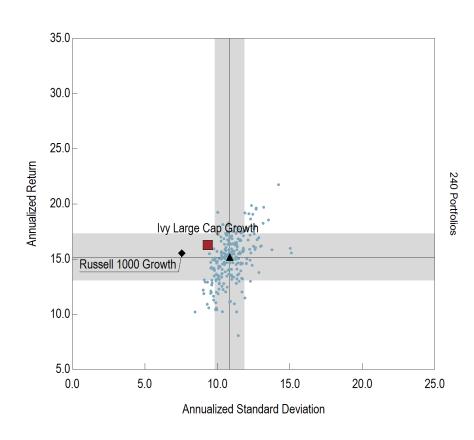
Risk vs. Return

3 Years 35.0 30.0 25.0 Annualized Return 249 Portfolios 20.0 15.0 Russell 1000 Growth 10.0 5.0 0.0 5.0 10.0 15.0 20.0 25.0 Annualized Standard Deviation

Ivy Large Cap Growth

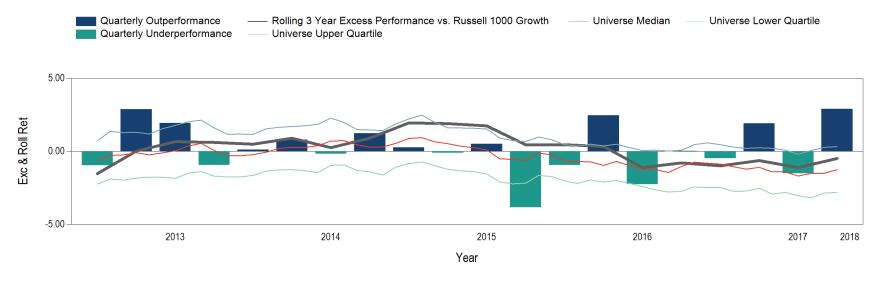
- Russell 1000 Growth
- Universe Median
- 68% Confidence Interval
- eV US Large Cap Growth Equity Gross

Risk vs. Return 5 Years

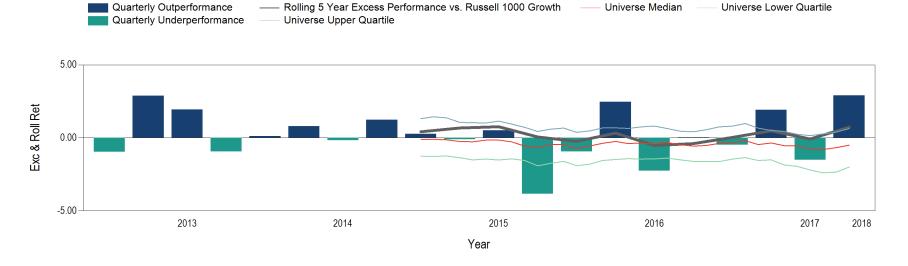


- Ivy Large Cap Growth
- Russell 1000 Growth
- Universe Median
- 68% Confidence Interval
- eV US Large Cap Growth Equity Gross

Rolling 3 Year Annualized Excess Performance

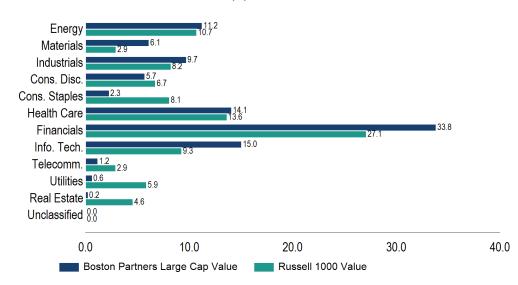


Rolling 5 Year Annualized Excess Performance



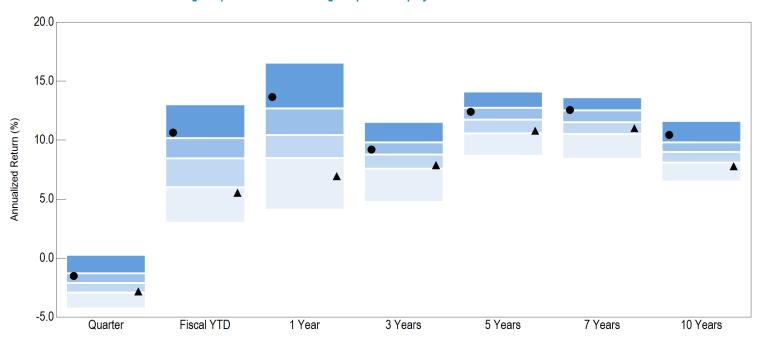
	Portfolio	Russell 1000 Value
Number of Holdings	81	711
Weighted Avg. Market Cap. (\$B)	133.32	113.40
Median Market Cap. (\$B)	35.07	9.02
Price To Earnings	19.91	20.40
Price To Book	2.83	2.52
Price To Sales	2.50	2.95
Return on Equity (%)	17.13	11.45
Yield (%)	2.06	2.45
Beta	1.02	1.00

Sector Allocation (%) vs Russell 1000 Value



Top Holdings			Top Contributo	rs		Bottom Contributors						
Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution			
BANK OF AMERICA	4.71%	CISCO SYSTEMS	2.89	12.82	0.37	WELLS FARGO & CO	2.72	-13.10	-0.36			
BERKSHIRE HATHAWAY 'B'	4.25%	XL GROUP	0.62	57.79	0.36	CITIGROUP	3.63	-8.91	-0.32			
JP MORGAN CHASE & CO.	4.19%	JP MORGAN CHASE & CO.	5.01	3.36	0.17	JOHNSON & JOHNSON	3.00	-7.70	-0.23			
JOHNSON & JOHNSON	3.99%	MARATHON PETROLEUM	1.13	11.58	0.13	CHEVRON	2.88	-8.00	-0.23			
CITIGROUP	3.69%	TE CONNECTIVITY	2.08	5.53	0.12	COMCAST 'A'	1.52	-14.35	-0.22			
CISCO SYSTEMS	3.34%	CONOCOPHILLIPS	1.30	8.61	0.11	CIGNA	1.11	-17.39	-0.19			
WELLS FARGO & CO	2.71%	DXC TECHNOLOGY	1.83	6.12	0.11	ANDEAVOR	1.59	-11.50	-0.18			
CHEVRON	2.70%	BANK OF AMERICA	4.96	1.98	0.10	CVS HEALTH	1.32	-13.66	-0.18			
PFIZER	2.57%	BOOKING HOLDINGS	0.48	19.72	0.10	DOWDUPONT	1.28	-10.07	-0.13			
ROYAL DUTCH SHELL A ADR 1:2	2.11%	REGIONS FINL.NEW	1.13	8.01	0.09	ALLSTATE	1.23	-9.01	-0.11			
Total	34 25%											

Boston Partners Large Cap Value vs. eV US Large Cap Value Equity Gross Universe



	Return (Ran	k)												
5th Percentile	0.3		13.0		16.5		11.5		14.1		13.6		11.6	
25th Percentile	-1.3		10.2		12.7		9.8		12.7		12.5		9.8	
Median	-2.1		8.5		10.4		8.8		11.7		11.5		9.0	
75th Percentile	-2.9		6.0		8.5		7.6		10.6		10.5		8.1	
95th Percentile	-4.3		3.0		4.1		4.8		8.7		8.4		6.5	
# of Portfolios	338		338		338		336		323		300		267	
Boston Partners Large Cap ValueRussell 1000 Value	-1.5 -2.8	(32) (74)	10.6 5.5	(20) (81)	13.6 6.9	(15) (87)	9.2 7.9	(39) (70)	12.4 10.8	(34) (72)	12.6 11.0	(24) (64)	10.4 7.8	(13) (82)



Boston Partners Large Cap Value vs. eV US Large Cap Value Equity Gross Universe



		Keturii (Ka	alik)			
5th Perce	ntile	24.0	22.1	2.8	16.3	
25th Perc	entile	19.8	17.4	-0.4	13.9	
Median		17.2	15.0	-2.6	12.2	
75th Perc	entile	15.1	11.8	-5.1	10.4	
95th Perc	entile	11.2	7.0	-9.4	5.9	
# of Portfo	olios	342	346	312	307	
	Partners Large Cap Value 1000 Value		2) 14.7 (54) 7) 17.3 (26)	-3.9 (65) -3.8 (64)	11.8 (58) 13.5 (33)	

Return (Rai	nk)								
24.0	22.1	2.8	16.3	42.5	21.5	9.5	19.2	42.3	-24.7
19.8	17.4	-0.4	13.9	37.2	18.0	3.4	16.3	29.5	-32.1
17.2	15.0	-2.6	12.2	33.6	15.7	0.5	14.3	24.3	-35.1
15.1	11.8	-5.1	10.4	30.8	13.0	-3.1	12.7	19.6	-37.9
11.2	7.0	-9.4	5.9	24.6	9.6	-8.6	10.1	13.5	-45.3
342	346	312	307	310	303	310	323	360	376
20.1 (22	, ,	-3.9 (65)	11.8 (58)	37.0 (26)	21.5 (6)	1.2 (43	, , ,	26.7 (35	, , ,
13.7 (87) 17.3 (26)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	0.4 (51) 15.5 (35)	19.7 (75) -36.8 (68)

Risk vs. Return

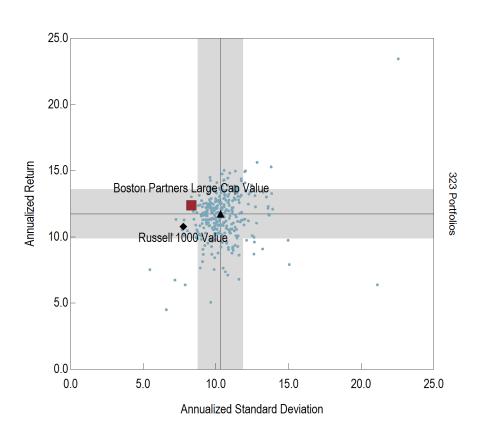
3 Years

20.0 15.0 Annualized Return 336 Portfolios Boston Partners Large Cap Value 10.0 Russell 1000 Value 5.0 0.0 20.0 0.0 5.0 10.0 15.0 25.0 30.0 **Annualized Standard Deviation**



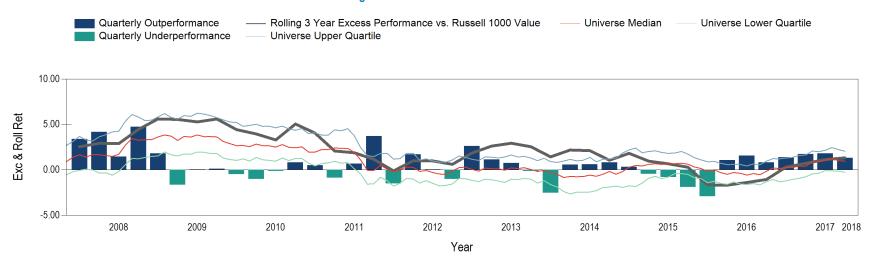
- Russell 1000 Value
- Universe Median
- 68% Confidence Interval
- eV US Large Cap Value Equity Gross



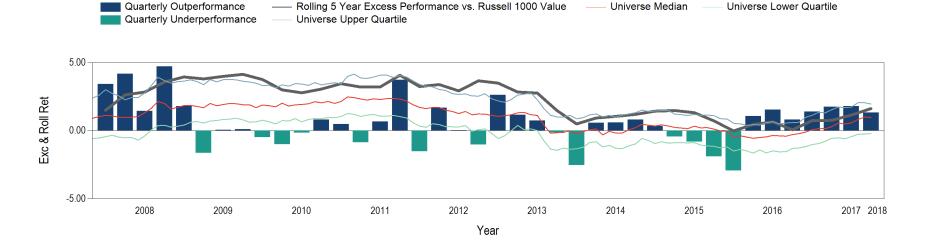


- Boston Partners Large Cap Value
- Russell 1000 Value
- ▲ Universe Median
- 68% Confidence Interval
- eV US Large Cap Value Equity Gross



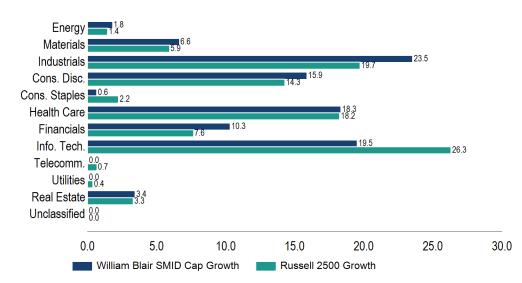


Rolling 5 Year Annualized Excess Performance



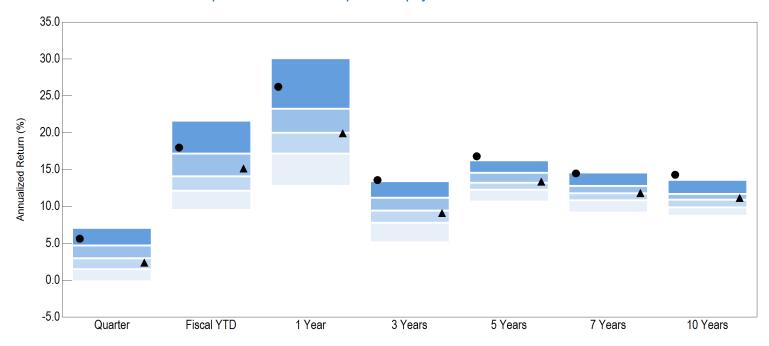
	Portfolio	Russell 2500 Growth
Number of Holdings	70	1,450
Weighted Avg. Market Cap. (\$B)	6.61	5.87
Median Market Cap. (\$B)	5.37	1.31
Price To Earnings	35.68	25.65
Price To Book	6.02	5.93
Price To Sales	5.02	4.02
Return on Equity (%)	20.74	16.03
Yield (%)	0.66	0.69
Beta	0.75	1.00

Sector Allocation (%) vs Russell 2500 Growth



Top Holdings		Top Contributor	rs		Bottom Contributors					
Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution	
COPART	3.77%	ABIOMED	1.59	55.27	0.88	ROGERS	1.94	-26.17	-0.51	
COSTAR GP.	3.25%	COSTAR GP.	2.76	22.13	0.61	COHERENT	1.09	-33.60	-0.36	
BWX TECHNOLOGIES	2.98%	VIRTU FINANCIAL CL.A	0.74	81.79	0.61	MICHAELS COMPANIES	1.60	-18.52	-0.30	
DOMINO'S PIZZA	2.80%	COPART	3.34	17.92	0.60	EXACT SCIS.	0.97	-23.24	-0.23	
WEX	2.19%	DOMINO'S PIZZA	2.35	23.90	0.56	TRACTOR SUPPLY	1.25	-15.35	-0.19	
SIX FLAGS ENTM.	2.18%	2U	1.48	30.26	0.45	TAKE TWO INTACT.SFTW.	1.66	-10.93	-0.18	
BALL	2.11%	VEEVA SYSTEMS CL.A	1.29	32.09	0.42	MIDDLEBY	2.03	-8.27	-0.17	
ADTALEM GLOBAL EDUCATION	2.11%	LIGAND PHARMS.'B'	1.94	20.62	0.40	MAXLINEAR	1.16	-13.89	-0.16	
BOOZ ALLEN HAMILTN.HLDG.	2.07%	DEXCOM	1.21	29.22	0.35	SIX FLAGS ENTM.	2.43	-5.41	-0.13	
TRANSUNION	2.05%	CSRA	0.95	35.91	0.34	MARTIN MRTA.MATS.	2.16	-6.01	-0.13	
Total	25 49%									

William Blair SMID Cap Growth vs. eV US Mid Cap Growth Equity Gross Universe



	Return (Ran	k)													
5th Percentile	7.1		21.6		30.1		13.4		16.3		14.6		13.6		
25th Percentile	4.7		17.2		23.3		11.2		14.6		12.8		11.7		
Median	3.0		14.1		20.0		9.5		13.3		11.8		10.9		
75th Percentile	1.5		12.1		17.2		7.8		12.3		10.9		9.9		
95th Percentile	-0.1		9.6		12.8		5.2		10.7		9.2		8.8		
# of Portfolios	96		96		96		95		92		87		76		
William Blair SMID Cap GrowthRussell 2500 Growth	5.6 2.4	(17) (62)	18.0 15.2	(21) (41)	26.2 19.9	(12) (51)	13.6 9.1	(5) (57)	16.8 13.4	(1) (48)	14.5 11.8	(6) (50)	14.3 11.2	(3) (41)	



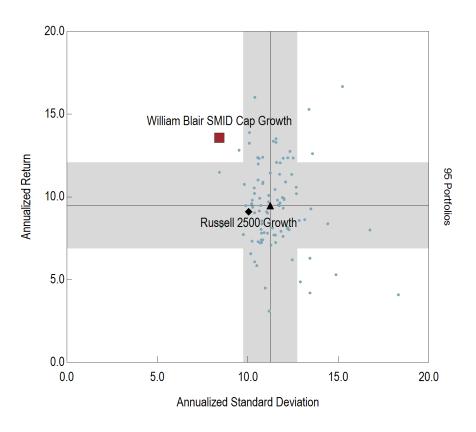
William Blair SMID Cap Growth vs. eV US Mid Cap Growth Equity Gross Universe



	Return (Rank	()								
5th Percentile	34.0	13.9	6.7	14.2	46.0	21.3	6.1	35.3	59.6	-32.0
25th Percentile	28.7	8.0	2.5	10.9	39.2	17.6	1.3	29.8	47.2	-39.3
Median	25.9	5.4	0.0	8.6	36.4	15.4	-2.1	26.7	41.9	-43.2
75th Percentile	23.1	2.6	-2.1	6.1	33.2	12.2	-6.1	22.5	34.9	-45.5
95th Percentile	17.7	-0.5	-6.3	2.6	29.0	6.0	-10.4	18.3	25.7	-49.8
# of Portfolios	97	105	105	117	106	111	122	127	142	158
William Blair SMID Cap GrowthRussell 2500 Growth	30.4 (16) 24.5 (62)	8.2 (22) 9.7 (13)	6.1 (7) -0.2 (55)	9.8 (33) 7.1 (65)	43.1 (11) 40.7 (17)	13.8 (68) 16.1 (44)	0.9 (28) -1.6 (46)	24.4 (65) 28.9 (35)	46.3 (30) 41.7 (51)	-37.4 (19) -41.5 (39)

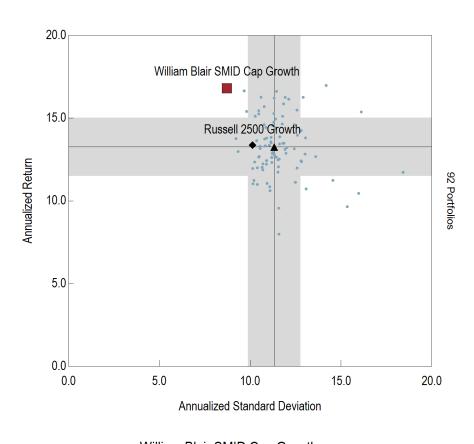


Risk vs. Return 3 Years



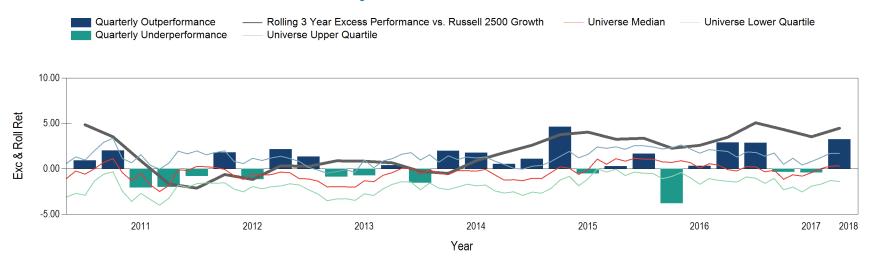
- William Blair SMID Cap Growth
- Russell 2500 Growth
- ▲ Universe Median
- 68% Confidence Interval
- eV US Mid Cap Growth Equity Gross

Risk vs. Return 5 Years

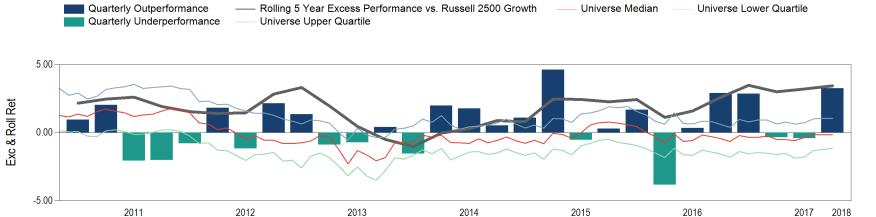


- William Blair SMID Cap Growth
- Russell 2500 Growth
- Universe Median
- 68% Confidence Interval
- eV US Mid Cap Growth Equity Gross

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance

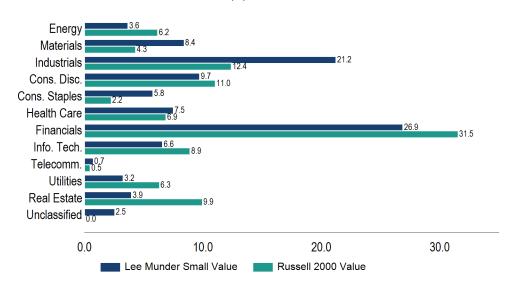


Year



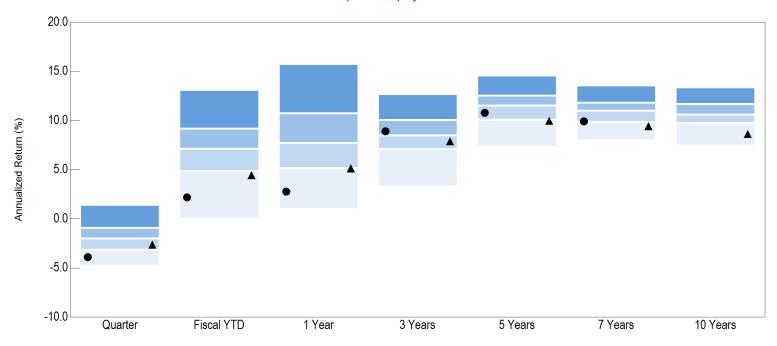
	Portfolio	Russell 2000 Value
Number of Holdings	90	1,398
Weighted Avg. Market Cap. (\$B)	2.98	2.02
Median Market Cap. (\$B)	2.60	0.72
Price To Earnings	16.85	16.01
Price To Book	2.23	1.75
Price To Sales	2.31	2.66
Return on Equity (%)	13.19	6.23
Yield (%)	1.66	1.68
Beta	0.81	1.00

Sector Allocation (%) vs Russell 2000 Value



Top Holdings	T	op Contributor	'S		Bottom Contributors				
Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution
MURPHY USA	2.38%	CSRA	1.30	35.91	0.47	MACOM TECH.SLTN.HDG.	1.80	-48.99	-0.88
STERLING BANCORP	2.28%	VALIDUS HOLDINGS	1.00	44.56	0.44	PATTERSON COMPANIES	1.20	-38.04	-0.46
FNB	2.07%	KORN FERRY	1.50	24.93	0.37	HORIZON GLOBAL	0.90	-41.23	-0.37
MACOM TECH.SLTN.HDG.	2.07%	INTERNATIONAL	1.50	24.55	0.51	HAIN CELESTIAL GP.	1.40	-24.35	-0.34
BLACKSTONE MGE.TST.CL.A	1.97%	NATIONAL GENERAL HDG.	1.40	23.98	0.34	NEXSTAR MEDIA GROUP	1.80	-14.53	-0.26
BANKUNITED	1.97%	ENCOMPASS HEALTH	1.60	16.21	0.26	CL.A			
ENCOMPASS HEALTH	1.97%	BLACKHAWK NETWORK	1.00	25.39	0.25	ENPRO INDS.	1.50	-16.98	-0.25
KORN FERRY INTERNATIONAL	1.97%	HDG.		20.00	0.20	CARRIZO O&G.	1.00	-24.81	-0.25
NATIONAL GENERAL HDG.	1.97%	BANK OF NT BUTTERFIELD	1.00	24.67	0.25	MURPHY USA	2.50	-9.41	-0.23
HANOVER INSURANCE GROUP	1.87%	&.SON	4.40	44.00	0.40	B & G FOODS	0.70	-31.28	-0.22
		ENVISION HEALTHCARE	1.40	11.20	0.16	TREEHOUSE FOODS	0.90	-22.62	-0.20
Total	20.52%	TCF FINANCIAL	1.30	12.02	0.16				
		HANOVER INSURANCE GROUP	1.60	9.59	0.15				

Lee Munder Small Value vs. eV US Small Cap Value Equity Gross Universe



	Return (Ran	k)												
5th Percentile	1.4		13.1		15.7		12.7		14.6		13.5		13.4	
25th Percentile	-0.9		9.2		10.7		10.1		12.5		11.8		11.7	
Median	-2.0		7.1		7.7		8.5		11.5		11.0		10.6	
75th Percentile	-3.1		4.8		5.2		7.1		10.1		9.9		9.7	
95th Percentile	-4.8		0.0		1.0		3.3		7.3		8.0		7.5	
# of Portfolios	224		224		224		213		206		197		177	
Lee Munder Small ValueRussell 2000 Value	-3.9 -2.6	(89) (64)	2.2 4.4	(91) (80)	2.8 5.1	(91) (76)	8.9 7.9	(44) (65)	10.8 10.0	(66) (77)	9.9 9.4	(75) (81)	 8.6	() (89)



Lee Munder Small Value vs. eV US Small Cap Value Equity Gross Universe



5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
of Portfolios

Lee Munder Small Value

Russell 2000 Value

Return	(Rank)																			
20.2		36.7		1.5		11.2		49.4		25.7		5.3		35.6		64.2		-23.8		
14.1		30.7		-2.2		8.2		42.1		20.8		0.0		30.2		42.1		-28.7		
11.1		27.2		-4.3		5.8		38.1		16.9		-3.3		26.9		32.0		-32.3		
7.8		22.2		-7.7		3.1		35.2		14.7		-6.2		23.8		25.5		-36.3		
3.7		16.8		-15.8		-6.3		27.8		10.3		-12.6		19.2		16.1		-43.3		
224		222		212		206		199		187		177		186		197		221		
8.6 7.8	(68) (75)	28.4 31.7	(38) (17)	0.4 -7.5	(9) (74)	5.1 4.2	(60) (68)	33.1 34.5	(85) (78)	15.7 18.1	(61) (43)	-6.9 -5.5	(79) (69)	26.8 24.5	(54) (72)	20.6	() (85)	 -28.9	() (27)	



Risk vs. Return

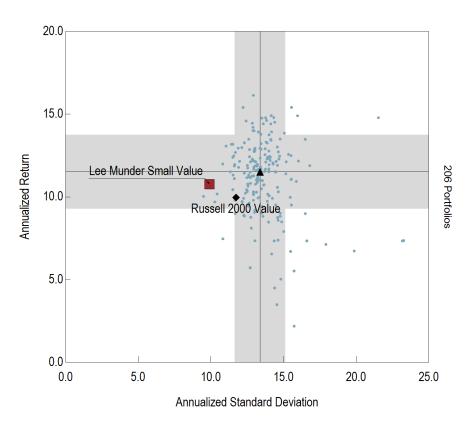
3 Years

20.0 15.0 Lee Munder Small Value 10.0 Annualized Return 213 Portfolios 5.0 0.0 -5.0 -10.0 15.0 0.0 5.0 10.0 20.0 25.0 30.0 **Annualized Standard Deviation**

Lee Munder Small Value

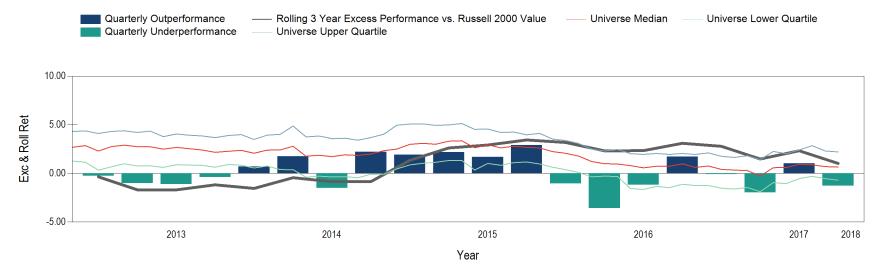
- Russell 2000 Value
- ▲ Universe Median
- 68% Confidence Interval
- eV US Small Cap Value Equity Gross

Risk vs. Return 5 Years

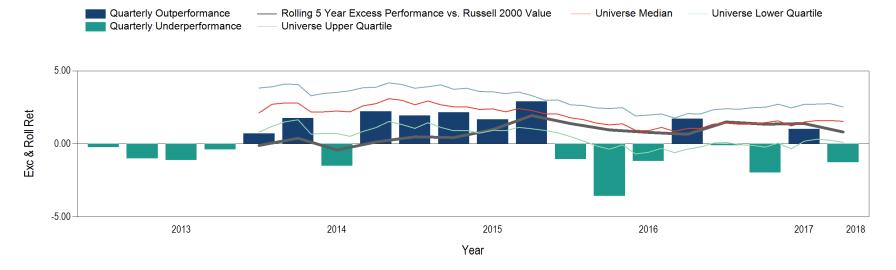


- Lee Munder Small Value
- Russell 2000 Value
- Universe Median
- 68% Confidence Interval
- eV US Small Cap Value Equity Gross

Rolling 3 Year Annualized Excess Performance

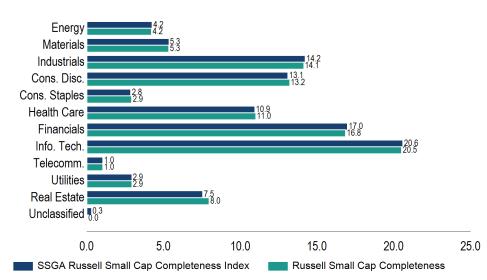


Rolling 5 Year Annualized Excess Performance



	Portfolio	Russell Small Cap Completeness
Number of Holdings	2,443	2,453
Weighted Avg. Market Cap. (\$B)	6.85	6.83
Median Market Cap. (\$B)	1.17	1.17
Price To Earnings	21.48	21.44
Price To Book	4.40	3.50
Price To Sales	3.90	3.59
Return on Equity (%)	11.31	10.69
Yield (%)	1.43	1.16
Beta	1.00	1.00

Sector Allocation (%) vs Russell Small Cap Completeness



Top Holdings			Top Contributors			Bottom Contributors				
	Ending Period Weight			Avg Wgt	Return	Contribution		Avg Wgt	Return	Contribution
NXI	SEMICONDUCTORS	0.84%	NEKTAR THERAPEUTICS	0.18	77.93	0.14	TESLA	0.87	-14.52	-0.13
TES		0.75%	SERVICENOW	0.45	26.89	0.12	COLONY NORTHSTAR CL.A	0.13	-49.79	-0.06
	RVICENOW	0.59%	BIOVERATIV	0.12	94.14	0.11	UNIVERSAL DISPLAY	0.15	-41.47	-0.06
	S VEGAS SANDS	0.55%	ABIOMED	0.16	55.27	0.09	EXELIXIS	0.18	-27.14	-0.05
	RLDPAY A	0.50%	SQUARE CL.A	0.17	41.91	0.07	NVR	0.24	-20.19	-0.05
	TTER	0.42%	TWITTER	0.33	20.82	0.07	COHERENT	0.14	-33.60	-0.05
	OBILE US	0.39%	WORKDAY CLASS A	0.28	24.94	0.07	MACQUARIE	0.10	-40.33	-0.04
	ETCOR TECHNOLOGIES	0.38%	PALO ALTO NETWORKS	0.27	25.24	0.07	INFRASTRUCTURE	0.10	- 1 0.00	-0.04
	AMERITRADE HOLDING	0.37%	JUNO THERAPEUTICS	0.06	89.83	0.06	ADIENT	0.15	-23.80	-0.04
	RKDAY CLASS A	0.37%	GRUBHUB	0.13	41.32	0.05	THOR INDUSTRIES	0.15	-23.34	-0.04
Tot		5.16%					DELL TECHNOLOGIES	0.35	-9.93	-0.03

SSGA Russell Small Cap Completeness Index vs. eV US Small Cap Core Equity Gross Universe



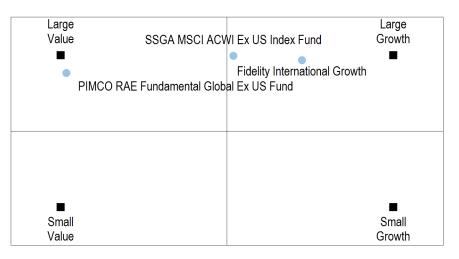
	Return (Rar	ık)												
5th Percentile	3.3		15.0		18.5		12.9		15.9		14.5		14.0	
25th Percentile	1.0		11.5		14.1		10.7		13.7		13.0		12.2	
Median	-0.2		9.3		12.0		9.2		12.7		11.8		11.1	
75th Percentile	-1.4		7.5		9.3		7.6		11.2		10.4		10.0	
95th Percentile	-3.4		4.6		6.0		4.6		8.3		8.3		8.5	
# of Portfolios	167		167		167		164		158		150		123	
 SSGA Russell Small Cap Completeness Inde Russell Small Cap Completeness 	0.2 0.2	(41) (41)	10.3 10.3	(36) (36)	13.4 13.5	(32) (32)	8.2 8.2	(66) (65)	 11.9	() (63)	 11.1	() (66)	10.3	() (68)

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total International Equity	294,632,529	-0.6	10.4	17.0	7.0	6.9	1.9	26.9	6.2	-5.9	-4.8	18.5
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
InvestorForce Public DB ex-US Eq Gross Rank		67	65	73	69	59	91	80	13	85	83	44
SSGA MSCI ACWI Ex US Index Fund	97,071,275	-1.1	10.3	16.8	6.5	6.2		27.6	4.8	-5.5	-3.6	15.5
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
eV All EAFE Equity Gross Rank		58	45	54	66	90		49	17	96	49	90
Fidelity International Growth	98,529,344	-0.2	8.8	16.9	6.5	6.5	3.3	26.3	1.2	-1.5	-5.3	18.5
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
eV All EAFE Equity Gross Rank		32	61	54	66	87	82	57	52	77	75	85
PIMCO RAE Fundamental Global Ex US Fund	99,031,910	-0.4	12.2	17.1	7.9	8.1		26.7	13.5	-10.9	-5.7	24.5
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
eV All EAFE Equity Gross Rank		34	28	51	42	55		53	1	99	79	51

EAFE Effective Style Map 3 Years



EAFE Effective Style Map 5 Years

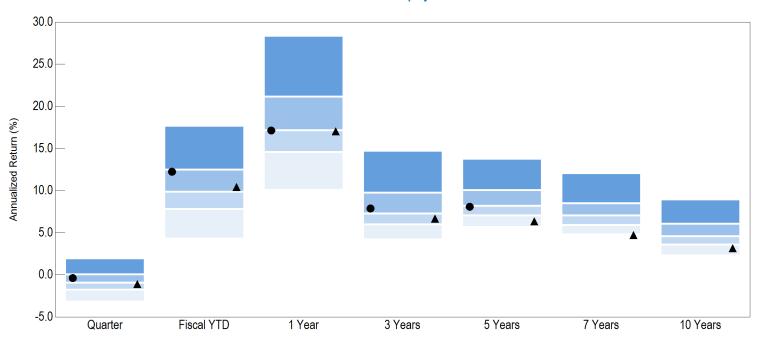


Research Affiliates converted to PIMCO RAE Fundamental Global Ex US Fund on 6/5/15 (performance prior to this date represents previously held Enhanced RAFI Global ex US). Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total International Equity	294,632,529	-0.7	10.1	16.6	6.6	6.6	1.6	26.5	5.9	-6.2	-5.0	18.3
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
SSGA MSCI ACWI Ex US Index Fund	97,071,275	-1.1	10.3	16.8	6.4	6.1		27.5	4.7	-5.5	-3.7	15.5
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8
Fidelity International Growth	98,529,344	-0.4	8.4	16.3	6.0	6.0	2.7	25.8	0.7	-1.9	-5.7	17.9
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4	3.2	27.8	5.0	-5.3	-3.4	15.8
PIMCO RAE Fundamental Global Ex US Fund	99,031,910	-0.5	11.8	16.5	7.3	7.6		26.0	13.0	-11.4	-5.9	23.7
MSCI ACWI ex USA Gross		-1.1	10.4	17.0	6.7	6.4		27.8	5.0	-5.3	-3.4	15.8

PIMCO RAE Fundamental Global Ex US Fund vs. eV All EAFE Equity Gross Universe



	Return (Rank))												
5th Percentile	1.9	•	17.7		28.3		14.7		13.8		12.0		9.0	
25th Percentile	0.1	,	12.5		21.2		9.8		10.1		8.5		6.1	
Median	-0.9		9.9		17.2		7.3		8.2		7.1		4.6	
75th Percentile	-1.7		7.8		14.6		6.0		7.1		6.0		3.6	
95th Percentile	-3.1		4.4		10.1		4.2		5.7		4.8		2.3	
# of Portfolios	379		379		379		353		320		293		259	
 PIMCO RAE Fundamental Global Ex US Fund MSCI ACWI ex USA Gross 	-0.4 -1.1	()	12.2 10.4	(28) (44)	17.1 17.0	(51) (52)	7.9 6.7	(42) (63)	8.1 6.4	(55) (88)	 4.7	() (96)	3.2	() (84)

PIMCO RAE Fundamental Global Ex US Fund vs. eV All EAFE Equity Gross Universe



	Return (Rank)								
5th Percentile	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7	57.3	-34.5
25th Percentile	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0	-40.8
Median	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5	-44.1
75th Percentile	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7	-47.5
95th Percentile	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7	-51.5
# of Portfolios	370	350	325	314	284	263	278	352	455	477
 PIMCO RAE Fundamental Global Ex US Fu MSCI ACWI ex USA Gross 	nd 26.7 (53) 27.8 (48)	13.5 (1) 5.0 (16)	-10.9 (99) -5.3 (95)	-5.7 (79) -3.4 (47)	24.5 (51) 15.8 (90)	() 17.4 (77)	() -13.3 (62)	() 11.6 (52)	() 42.1 (30)	() -45.2 (59)

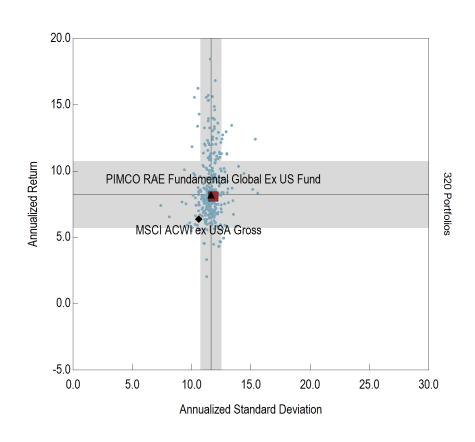
Risk vs. Return

3 Years 40.0 30.0 Annualized Return 353 Portfolios 20.0 10.0 PIMCO RAE Fundamental Global Ex US Fund MSCI ACWI ex USA Gross 0.0 0.0 5.0 15.0 10.0 20.0 Annualized Standard Deviation

PIMCO RAE Fundamental Global Ex US Fund

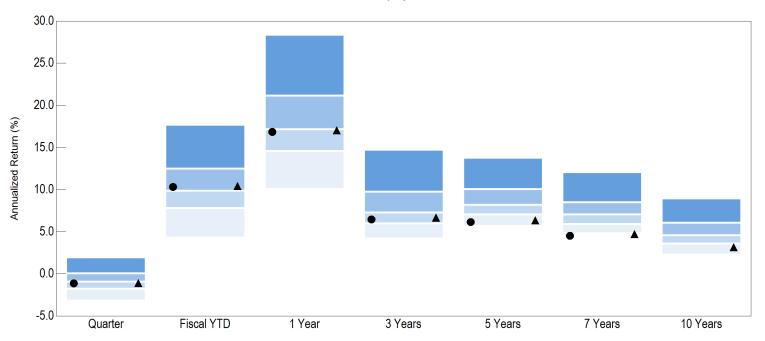
- MSCI ACWI ex USA Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross





- PIMCO RAE Fundamental Global Ex US Fund
- MSCI ACWI ex USA Gross
- Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

SSGA MSCI ACWI Ex US Index Fund vs. eV All EAFE Equity Gross Universe



	Return (Rank	()												
5th Percentile	1.9		17.7		28.3		14.7		13.8		12.0		9.0	
25th Percentile	0.1		12.5		21.2		9.8		10.1		8.5		6.1	
Median	-0.9		9.9		17.2		7.3		8.2		7.1		4.6	
75th Percentile	-1.7		7.8		14.6		6.0		7.1		6.0		3.6	
95th Percentile	-3.1		4.4		10.1		4.2		5.7		4.8		2.3	
# of Portfolios	379		379		379		353		320		293		259	
 SSGA MSCI ACWI Ex US Index Fund MSCI ACWI ex USA Gross 	-1.1 -1.1	(58) (57)	10.3 10.4	(45) (44)	16.8 17.0	(54) (52)	6.5 6.7	(66) (63)	6.2 6.4	(90) (88)	4.5 4.7	(98) (96)	3.2	() (84)

SSGA MSCI ACWI Ex US Index Fund vs. eV All EAFE Equity Gross Universe



	Return (Rank)									
5th Percentile	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7	57.3	-34.5
25th Percentile	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0	-40.8
Median	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5	-44.1
75th Percentile	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7	-47.5
95th Percentile	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7	-51.5
# of Portfolios	370	350	325	314	284	263	278	352	455	477
 SSGA MSCI ACWI Ex US Index Fund MSCI ACWI ex USA Gross 	27.6 (49) 27.8 (48)	4.8 (17) 5.0 (16)	-5.5 (96) -5.3 (95)	-3.6 (49) -3.4 (47)	15.5 (90) 15.8 (90)	17.1 (81) 17.4 (77)	-13.5 (64) -13.3 (62)	11.2 (55) 11.6 (52)	() 42.1 (30)	() -45.2 (59)



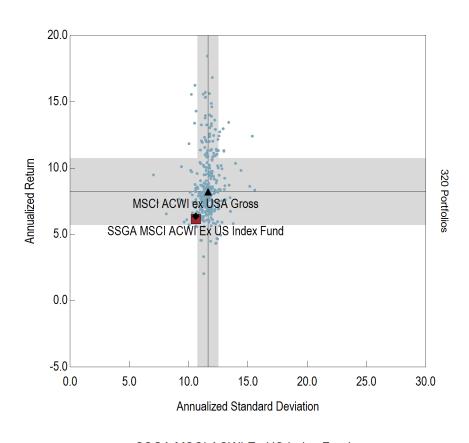
Risk vs. Return

3 Years 40.0 30.0 Annualized Return 353 Portfolios 20.0 10.0 MSCI ACWI ex USA Gross SSGA MSCI ACWI Ex US Index Fund 0.0 0.0 5.0 10.0 15.0 20.0 Annualized Standard Deviation



- MSCI ACWI ex USA Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

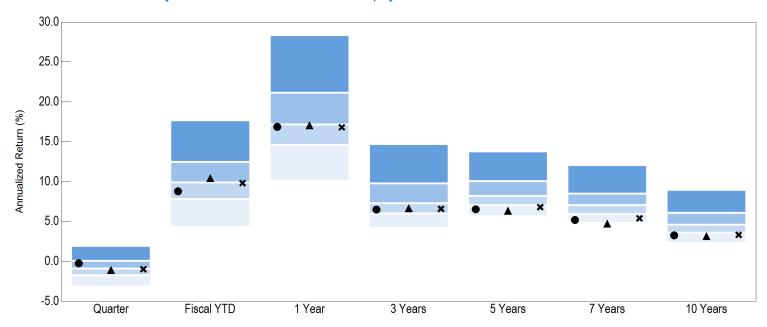




- SSGA MSCI ACWI Ex US Index Fund
- MSCI ACWI ex USA Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

Daturn (Dank)

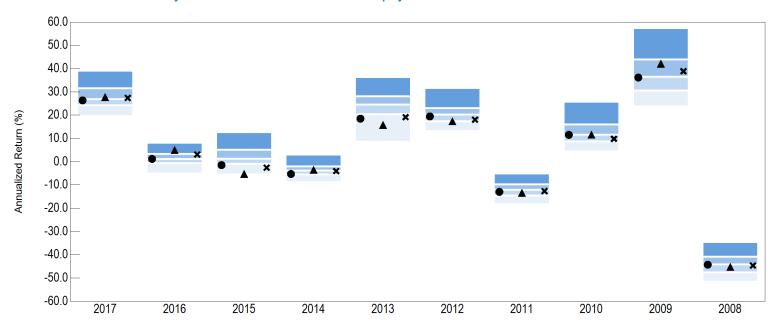
Fidelity International Growth vs. eV All EAFE Equity Gross Universe



	Return (Rank)										
5th Percentile	1.9	17.7	28	3.3	14.7	13.8		12.0		9.0	
25th Percentile	0.1	12.5	2	1.2	9.8	10.1		8.5		6.1	
Median	-0.9	9.9	17	7.2	7.3	8.2		7.1		4.6	
75th Percentile	-1.7	7.8	14	4.6	6.0	7.1		6.0		3.6	
95th Percentile	-3.1	4.4	10	0.1	4.2	5.7		4.8		2.3	
# of Portfolios	379	379	3	79	353	320		293		259	
Fidelity International Growth	-0.2 (32)	,	\ /	6.9 (54)	6.5	(66) 6.5	(/	5.2	(90)	3.3	(82)
MSCI ACWI ex USA Gross	-1.1 (57) 10.4	` '	7.0 (52)	6.7	(63) 6.4	\ /	4.7	(96)	3.2	(84)
× Tulare International Custom	-1.0 (54) 9.8	(51) 16	6.8 (55)	6.6	(65) 6.8	(80)	5.4	(89)	3.3	(82)



Fidelity International Growth vs. eV All EAFE Equity Gross Universe



	Return (Ran	k)								
5th Percentile	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7	57.3	-34.5
25th Percentile	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0	-40.8
Median	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5	-44.1
75th Percentile	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7	-47.5
95th Percentile	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7	-51.5
# of Portfolios	370	350	325	314	284	263	278	352	455	477
Fidelity International Growth	26.3 (57)	1.2 (52)	-1.5 (77)	-5.3 (75)	18.5 (85)	19.4 (59)	-13.0 (59)	11.5 (53)	36.1 (51) -44.3 (52)
▲ MSCI ACWI ex USA Gross	27.8 (48)	5.0 (16)	-5.3 (95)	-3.4 (47)	15.8 (90)	17.4 (77	-13.3 (62)	11.6 (52)	42.1 (30) -45.2 (59)
➤ Tulare International Custom	27.4 (50)	3.1 (29)	-2.6 (83)	-4.0 (55)	19.1 (83)	18.1 (70)	-12.6 (56)	9.8 (67)	38.9 (40) -44.6 (56)



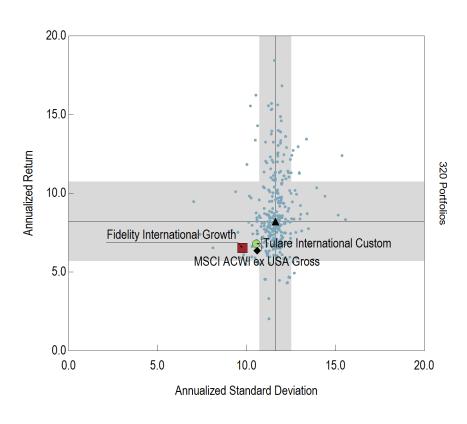
Risk vs. Return

3 Years 40.0 30.0 Annualized Return 353 Portfolios 20.0 10.0 **Tulare International Custom** MSCI ACWI ex USA Gross Fidelity International Growth 0.0 0.0 5.0 10.0 15.0 20.0 **Annualized Standard Deviation**

Fidelity International Growth

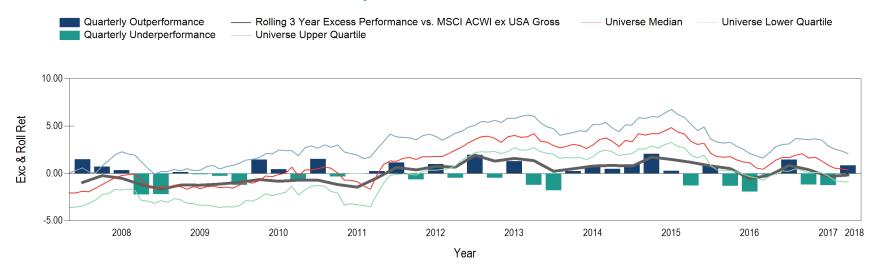
- MSCI ACWI ex USA Gross
- Tulare International Custom
- Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross



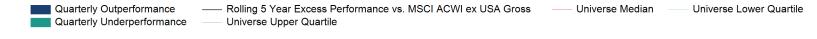


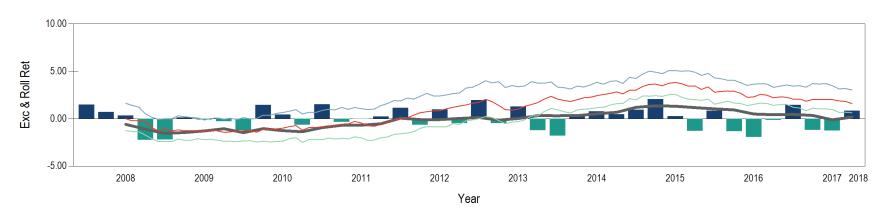
- Fidelity International Growth
- MSCI ACWI ex USA Gross
- Tulare International Custom
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



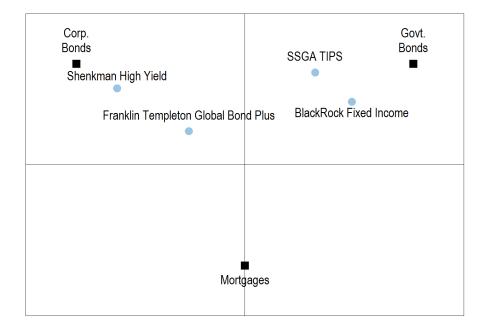


	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fixed Income	368,728,967	-0.7	0.6	1.7	2.2	2.2	4.9	4.3	5.5	-0.8	4.6	-0.9
BBgBarc US Aggregate TR		-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
InvestorForce Public DB US Fix Inc Gross Rank		24	40	52	41	53	34	50	37	77	69	49
Total Domestic Fixed Income												
BlackRock Fixed Income	132,513,324	-1.5	-0.2	1.4	1.5	2.2	4.1	3.9	3.1	1.1	6.2	-1.5
BBgBarc US Aggregate TR		-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
eV All US Fixed Inc Gross Rank		80	83	63	59	52	51	54	53	39	29	75
Doubleline Core Plus	70,096,543	-0.9	0.5	2.0				4.2	4.8			
BBgBarc US Aggregate TR		-1.5	-0.2	1.2				3.5	2.6			
eV US Core Plus Fixed Inc Gross Rank		19	61	72				86	52			
MacKay Shields Core Plus	69,511,847	-1.5	0.3	2.2				5.0	5.1	-		
BBgBarc US Aggregate TR		-1.5	-0.2	1.2				3.5	2.6			
eV US Core Plus Fixed Inc Gross Rank		78	72	61				52	46			
Shenkman High Yield	20,363,908	0.0	2.7	5.0	4.4	4.6		7.2	12.3	-2.4	2.5	6.3
ICE BofAML US High Yield TR		-0.9	1.5	3.7	5.2	5.0		7.5	17.5	-4.6	2.5	7.4
eV US High Yield Fixed Inc Gross Rank		24	24	20	72	67		57	65	51	52	81
SSGA TIPS	11,077,950	-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
BBgBarc US TIPS TR		-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
eV US TIPS / Inflation Fixed Inc Gross Rank		81	62	69	84	80		69	50	63	44	77
Total Global Fixed Income												
Franklin Templeton Global Bond Plus	65,165,394	1.9	1.7	0.6	2.4	2.3		3.0	6.8	-3.5	2.4	3.0
JPM GBI Global TR USD		2.2	4.9	7.6	3.2	1.3		6.8	1.6	-2.6	0.7	-4.5
eV Global Fixed Inc Unhedged Gross Rank		28	89	99	86	54		96	24	67	50	23

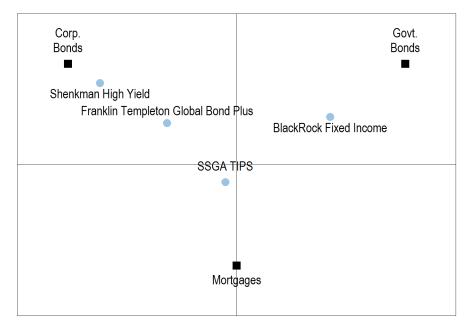
Vertas Transition Account used to liquidated PIMCO Core Plus on 11/15/15, remaining balance is residual cash. MacKay Shields and Doubleline funded 12/1/15. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.



Fixed Income Style Map 3 Years

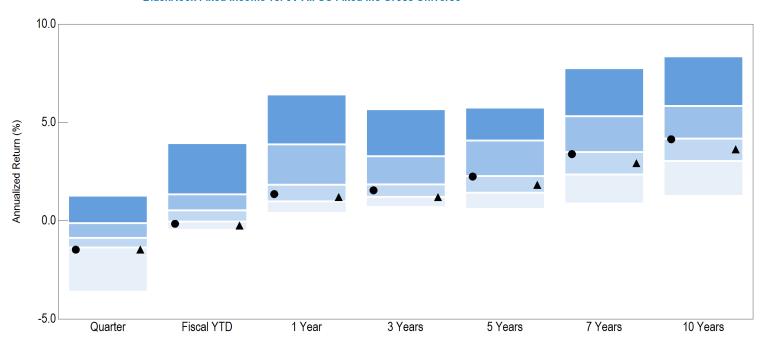


Fixed Income Style Map 5 Years



	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Fixed Income	368,728,967	-0.8	0.4	1.4	1.8	1.9	4.6	3.9	5.1	-1.1	4.3	-1.2
BBgBarc US Aggregate TR		-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
Total Domestic Fixed Income												
BlackRock Fixed Income	132,513,324	-1.5	-0.3	1.1	1.3	2.0	3.9	3.6	2.9	0.8	6.0	-1.8
BBgBarc US Aggregate TR		-1.5	-0.2	1.2	1.2	1.8	3.6	3.5	2.6	0.6	6.0	-2.0
Doubleline Core Plus	70,096,543	-1.0	0.3	1.7				3.9	4.6			
BBgBarc US Aggregate TR		-1.5	-0.2	1.2				3.5	2.6			
MacKay Shields Core Plus	69,511,847	-1.6	0.0	1.8				4.5	4.7			
BBgBarc US Aggregate TR		-1.5	-0.2	1.2				3.5	2.6			
Shenkman High Yield	20,363,908	-0.2	2.3	4.5	3.9	4.1		6.7	11.7	-2.9	2.0	5.8
ICE BofAML US High Yield TR		-0.9	1.5	3.7	5.2	5.0		7.5	17.5	-4.6	2.5	7.4
SSGA TIPS	11,077,950	-0.8	1.3	0.9	1.2	0.0		3.0	4.6	-1.5	3.6	-8.6
BBgBarc US TIPS TR		-0.8	1.3	0.9	1.3	0.0		3.0	4.7	-1.4	3.6	-8.6
Total Global Fixed Income												
Franklin Templeton Global Bond Plus	65,165,394	1.7	1.3	0.0	1.8	1.7		2.4	6.1	-4.1	1.9	2.5
JPM GBI Global TR USD		2.2	4.9	7.6	3.2	1.3		6.8	1.6	-2.6	0.7	-4.5

BlackRock Fixed Income vs. eV All US Fixed Inc Gross Universe



	Return (Ran	ık)													
5th Percentile	1.3		3.9		6.4		5.7		5.7		7.8		8.4		
25th Percentile	-0.1		1.4		3.9		3.3		4.1		5.3		5.8		
Median	-0.9		0.5		1.8		1.9		2.3		3.5		4.2		
75th Percentile	-1.4		0.0		1.0		1.2		1.4		2.4		3.0		
95th Percentile	-3.6		-0.5		0.4		0.7		0.6		0.9		1.3		
# of Portfolios	1,857		1,857		1,856		1,811		1,722		1,619		1,348		
BlackRock Fixed IncomeBBgBarc US Aggregate TR	-1.5 -1.5	(80) (80)	-0.2 -0.2	(83) (87)	1.4 1.2	(63) (69)	1.5 1.2	(59) (76)	2.2 1.8	(52) (64)	3.4 2.9	(52) (62)	4.1 3.6	(51) (62)	



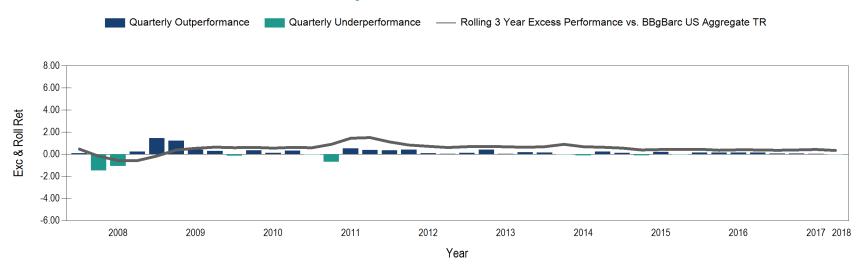
BlackRock Fixed Income vs. eV All US Fixed Inc Gross Universe



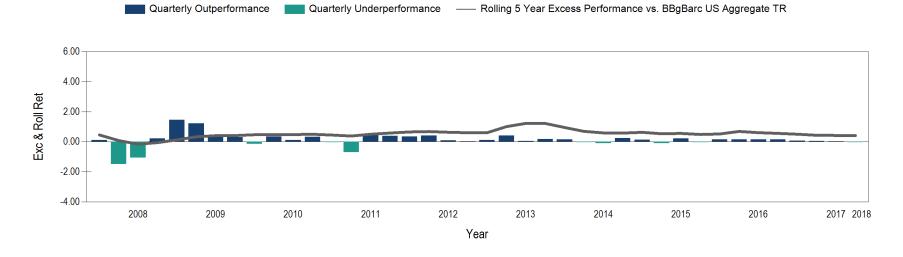
	Return	(Rank)																	
5th Percentile	12.0		14.5		3.0		17.7		8.7		16.2		18.6		15.5		47.9		9.4	
25th Percentile	6.6		7.0		1.4		6.4		0.9		10.2		8.2		9.7		16.3		5.4	
Median	4.1		3.3		8.0		4.2		-0.3		6.1		6.5		6.9		9.3		2.4	
75th Percentile	2.4		1.8		-0.5		2.0		-1.5		3.8		4.0		4.8		5.7		-4.3	
95th Percentile	1.1		0.4		-4.1		0.5		-7.5		1.1		0.4		1.4		1.2		-25.4	
# of Portfolios	1,843		1,722		1,394		1,364		1,281		1,241		1,211		1,157		1,287		1,380	
BlackRock Fixed Income	3.9	(54)	3.1	(53)	1.1	(39)	6.2	(29)	-1.5	(75)	5.5	(56)	8.1	(28)	7.2	(45)	9.4	(50)	2.9	(48)
BBgBarc US Aggregate TR	3.5	(59)	2.6	(60)	0.6	(59)	6.0	(33)	-2.0	(83)	4.2	(70)	7.8	(32)	6.5	(57)	5.9	(73)	5.2	(27)

Risk vs. Return Risk vs. Return 3 Years 5 Years 15.0 20.0 15.0 10.0 10.0 Annualized Return Annualized Return 5.0 1811 Portfolios 1722 Portfolios 5.0 BlackRock Fixed Income BlackRock Fixed Income BBgBarc US Aggregate TR 0.0 BBgBarc US Aggregate TR 0.0 -5.0 -5.0 -10.0 -10.0 -15.0 15.0 10.0 -10.0 -5.0 0.0 5.0 10.0 20.0 -10.0 -5.0 0.0 5.0 15.0 20.0 25.0 Annualized Standard Deviation Annualized Standard Deviation BlackRock Fixed Income BlackRock Fixed Income BBgBarc US Aggregate TR BBgBarc US Aggregate TR Universe Median Universe Median 68% Confidence Interval 68% Confidence Interval eV All US Fixed Inc Gross eV All US Fixed Inc Gross

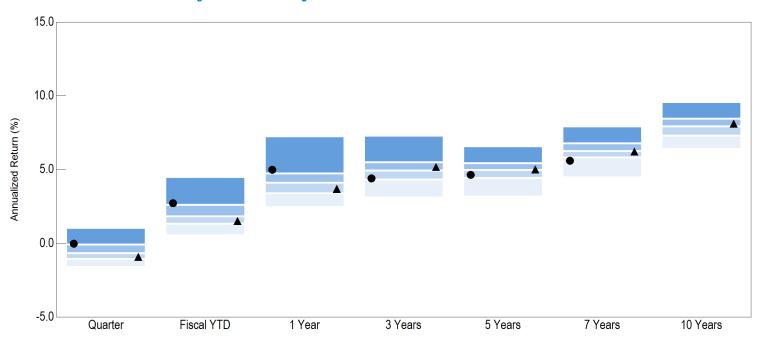
Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



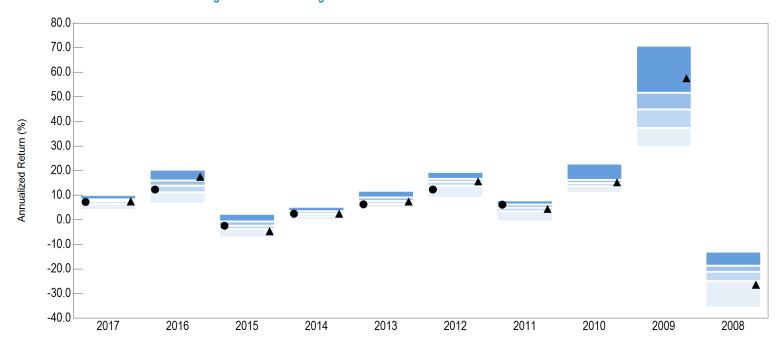
Shenkman High Yield vs. eV US High Yield Fixed Inc Gross Universe



	Return (Rank	()												
5th Percentile	1.0		4.5		7.2		7.3		6.6		7.9		9.6	
25th Percentile	-0.1		2.6		4.7		5.5		5.4		6.8		8.5	
Median	-0.7		1.8		4.1		4.9		5.0		6.3		7.9	
75th Percentile	-1.0		1.3		3.4		4.3		4.4		5.8		7.3	
95th Percentile	-1.6		0.6		2.5		3.1		3.2		4.5		6.4	
# of Portfolios	198		198		198		194		172		150		121	
Shenkman High YieldICE BofAML US High Yield TR	0.0 -0.9	(24) (65)	2.7 1.5	(24) (71)	5.0 3.7	(20) (68)	4.4 5.2	(72) (41)	4.6 5.0	(67) (48)	5.6 6.2	(82) (55)	 8.1	() (42)



Shenkman High Yield vs. eV US High Yield Fixed Inc Gross Universe

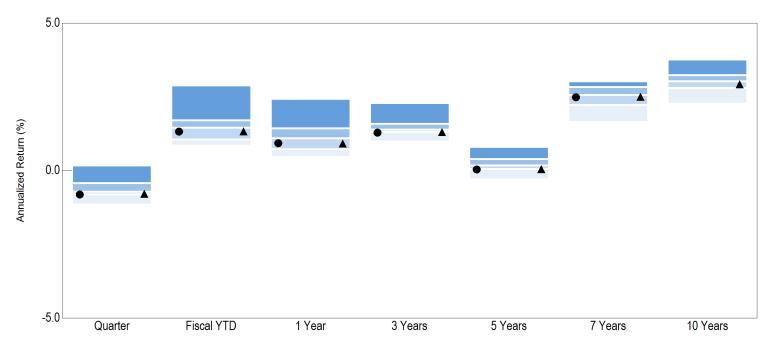


	Return (Rank)								
5th Percentile	10.0	20.3	2.3	5.2	11.7	19.4	7.9	22.8	70.8	-13.1
25th Percentile	8.3	16.0	-0.7	3.5	9.1	16.7	6.2	16.3	51.8	-18.6
Median	7.5	14.0	-2.4	2.5	7.6	15.5	4.9	14.9	45.0	-21.2
75th Percentile	6.5	11.3	-3.8	1.5	6.6	14.0	3.5	13.6	37.4	-24.9
95th Percentile	4.0	6.6	-7.2	0.0	5.0	8.9	-0.7	10.9	29.6	-35.7
# of Portfolios	198	183	155	141	130	129	117	106	123	131
Shenkman High YieldICE BofAML US High Yield TR	7.2 (57) 7.5 (53)	12.3 (65) 17.5 (14)	-2.4 (51) -4.6 (83)	2.5 (52) 2.5 (51)	6.3 (81) 7.4 (55)	12.3 (89) 15.6 (47)	6.1 (27) 4.4 (60)	() 15.2 (42)	() 57.5 (16)	() -26.4 (82)



Risk vs. Return Risk vs. Return 3 Years 5 Years 10.0 15.0 ICE BofAML US High Yield TR 5.0 10.0 Annualized Return Annualized Return Shenkman High Yield 172 Portfolios 194 Portfolios ICE BofAML US High Yield TR 0.0 5.0 Shenkman High Yield -5.0 0.0 0.0 0.0 5.0 10.0 15.0 -5.0 5.0 10.0 15.0 Annualized Standard Deviation Annualized Standard Deviation Shenkman High Yield Shenkman High Yield ICE BofAML US High Yield TR ICE BofAML US High Yield TR Universe Median Universe Median 68% Confidence Interval 68% Confidence Interval eV US High Yield Fixed Inc Gross eV US High Yield Fixed Inc Gross

SSGA TIPS vs. eV US TIPS / Inflation Fixed Inc Gross Universe

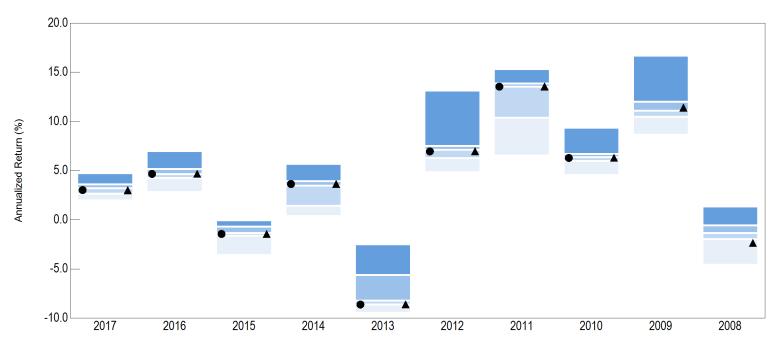


	5th Percentile 25th Percentile Median 75th Percentile 95th Percentile
	# of Portfolios
•	SSGA TIPS

SSGA TIPSBBgBarc US TIPS TR

Return (Rar	ık)												
0.2	,	2.9		2.4		2.3		0.8		3.0		3.8	
-0.4		1.7		1.4		1.6		0.4		2.8		3.2	
-0.7		1.5		1.1		1.4		0.2		2.6		3.0	
-0.8		1.1		0.7		1.3		0.1		2.2		2.8	
-1.2		0.9		0.5		1.0		-0.3		1.7		2.3	
40		40		40		40		40		37		34	
-0.8	(81)	1.3	(62)	0.9	(69)	1.3	(84)	0.0	(80)	2.5	(67)		()
-0.8	(71)	1.3	(61)	0.9	(70)	1.3	(81)	0.0	(77)	2.5	(66)	2.9	(68)

SSGA TIPS vs. eV US TIPS / Inflation Fixed Inc Gross Universe

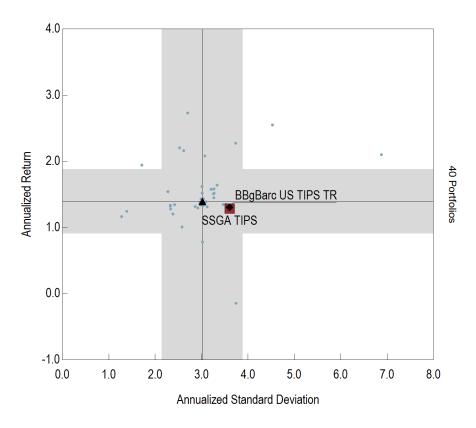


	5th Percentile 25th Percentile Median 75th Percentile 95th Percentile
	# of Portfolios
•	SSGA TIPS

SSGA TIPSBBgBarc US TIPS TR

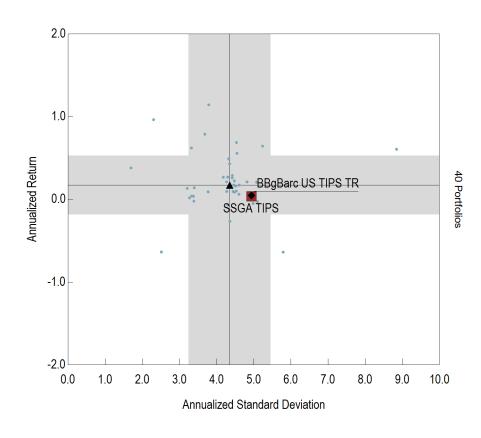
Return (Ran	ık)								
4.7	7.0	-0.1	5.7	-2.5	13.1	15.3	9.4	16.7	1.3
3.6	5.2	-0.7	4.0	-5.6	7.5	13.9	6.7	12.0	-0.5
3.2	4.7	-1.3	3.5	-8.2	7.1	13.5	6.4	11.1	-1.4
2.7	4.3	-1.6	1.4	-8.6	6.3	10.4	6.0	10.5	-1.9
2.0	2.8	-3.6	0.4	-9.4	4.9	6.6	4.6	8.7	-4.6
38	42	44	50	43	43	47	39	37	40
3.0 (69)	4.7 (50	-1.4 (63)	3.6 (44)	-8.6 (77)	6.9 (67)	13.5 (51)	6.3 (62)	()	()
3.0 (71)	4.7 (47) -1.4 (59)	3.6 (44)	-8.6 (76)	7.0 (66)	13.6 (49)	6.3 (57)	11.4 (35)	-2.4 (85)

Risk vs. Return 3 Years



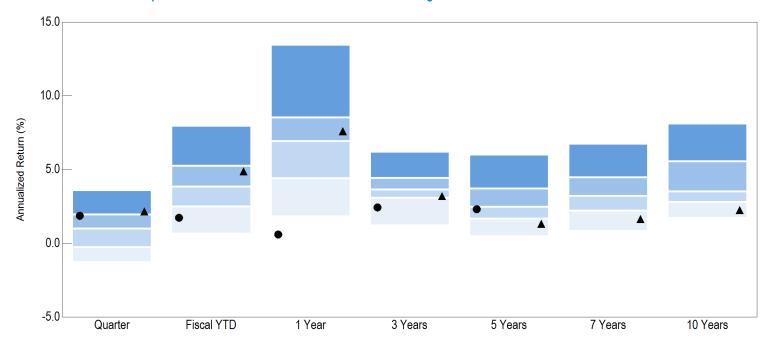
- SSGA TIPS
- BBgBarc US TIPS TR
- ▲ Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Gross

Risk vs. Return 5 Years



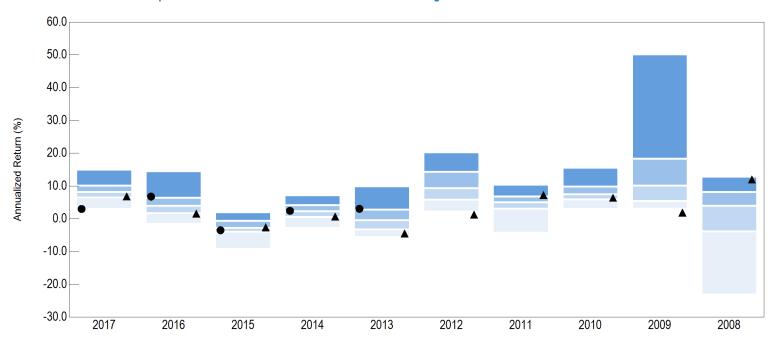
- SSGA TIPS
- BBgBarc US TIPS TR
- ▲ Universe Median
- 68% Confidence Interval
- eV US TIPS / Inflation Fixed Inc Gross

Franklin Templeton Global Bond Plus vs. eV Global Fixed Inc Unhedged Gross Universe



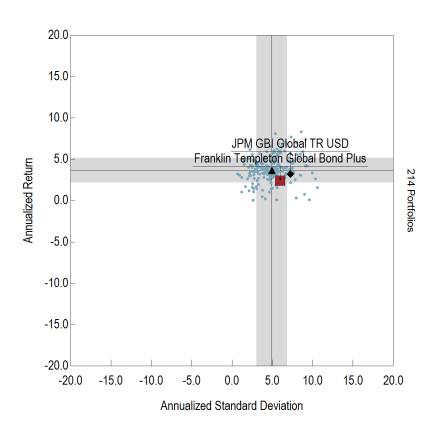
	Return (Ran	k)												
5th Percentile	3.6		8.0		13.4		6.2		6.0		6.7		8.1	
25th Percentile	2.0		5.3		8.6		4.5		3.7		4.5		5.6	
Median	1.0		3.9		6.9		3.7		2.5		3.2		3.5	
75th Percentile	-0.2		2.5		4.4		3.1		1.7		2.2		2.8	
95th Percentile	-1.3		0.7		1.8		1.2		0.5		8.0		1.7	
# of Portfolios	229		227		227		214		190		154		111	
Franklin Templeton Global Bond PlusJPM GBI Global TR USD	1.9 2.2	(28) (21)	1.7 4.9	(89) (29)	0.6 7.6	(99) (37)	2.4 3.2	(86) (71)	2.3 1.3	(54) (88)	 1.6	() (90)	2.3	() (92)

Franklin Templeton Global Bond Plus vs. eV Global Fixed Inc Unhedged Gross Universe



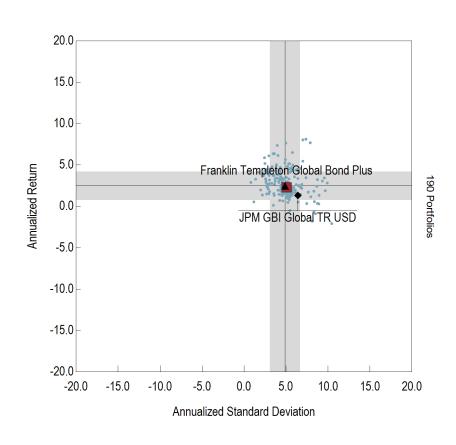
	Return (Rank	()								
5th Percentile	15.0	14.5	2.0	7.1	9.8	20.2	10.4	15.5	50.1	12.8
25th Percentile	10.1	6.5	-0.6	4.2	2.8	14.3	6.9	9.9	18.4	8.2
Median	8.2	4.0	-2.7	2.3	-0.4	9.4	5.0	7.5	10.1	4.0
75th Percentile	6.5	1.8	-4.0	0.6	-3.2	5.9	3.2	6.0	5.4	-3.8
95th Percentile	3.0	-1.5	-9.2	-2.7	-5.6	2.2	-4.2	3.0	3.2	-23.0
# of Portfolios	231	221	189	159	142	118	108	76	72	73
Franklin Templeton Global Bond PlusJPM GBI Global TR USD	3.0 (96) 6.8 (72)	6.8 (24) 1.6 (79)	-3.5 (67) -2.6 (48)	2.4 (50) 0.7 (75)	3.0 (23) -4.5 (89)	() 1.3 (98)	() 7.2 (19)	() 6.4 (72)	() 1.9 (99)	() 12.0 (7)

Risk vs. Return 3 Years



- Franklin Templeton Global Bond Plus
- JPM GBI Global TR USD
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Fixed Inc Unhedged Gross

Risk vs. Return 5 Years



- Franklin Templeton Global Bond Plus
- JPM GBI Global TR USD
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Fixed Inc Unhedged Gross

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Real Estate	115,620,029	2.0	5.3	6.5	9.2	10.7	3.6	4.3	9.0	16.0	13.1	11.5
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
RREEF America II	109,911,733	2.0	5.1	6.5	9.2	11.6	5.1	4.4	9.3	16.7	13.0	15.5
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
TA Associates Realty	5,708,296	2.2	6.6	7.5	8.2	9.3	2.1	5.2	4.6	16.7	15.1	5.2
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. RREEF liquidated in 1Q 2018.

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Real Estate	115,620,029	2.0	5.3	6.5	8.6	10.2	3.4	4.3	8.0	15.1	12.5	11.5
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
RREEF America II	109,911,733	2.0	5.1	6.5	8.6	10.9	4.6	4.4	8.2	15.7	12.0	15.0
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
TA Associates Realty	5,708,296	2.2	6.6	7.5	7.6	8.7	8.0	5.2	3.7	15.4	14.6	5.1
NCREIF Property Index		1.7	5.3	7.1	8.7	10.0	6.1	7.0	8.0	13.3	11.8	11.0
NCREIF-ODCE		2.2	6.3	8.1	10.0	11.4	5.1	7.6	8.8	15.0	12.5	13.9

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	41,194,259	-0.4	11.5	7.4	-1.4			7.5	14.5	-26.3		
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Commodities Broad Basket MStar MF Rank		68	30	25	41			16	27	80		
Gresham MTAP Commodity Builder	19,997,450	-0.1	10.3	7.0	-2.2			5.9	12.3	-25.4	-16.1	
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7	-17.0	
Commodities Broad Basket MStar MF Rank		46	37	28	52			28	53	71	34	
Wellington Commodity	21,196,808	-0.8	12.7	7.9	-0.8			9.0	15.8	-25.7		
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Commodities Broad Basket MStar MF Rank		84	18	23	28			9	13	73		

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



	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Commodities	41,194,259	-0.4	11.5	7.4	-1.8			7.5	13.6	-26.8		
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		
Gresham MTAP Commodity Builder	19,997,450	-0.1	10.3	7.0	-2.7			5.9	11.5	-25.9	-16.8	
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7	-17.0	
Wellington Commodity	21,196,808	-0.8	12.7	7.9	-1.3			9.0	14.9	-26.3		
Bloomberg Commodity Index TR USD		-0.4	6.9	3.7	-3.2			1.7	11.8	-24.7		

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Liquid Alts/HFoF	62,715,508	1.6	4.8	5.4	2.2	4.0		5.4	0.3	0.7	5.4	11.0
CPI + 5%		2.5	5.7	7.5	6.9	6.5		7.2	7.2	5.8	5.8	6.6
Aetos Capital	31,610,758	0.1	2.4	4.1	3.1	4.6	3.7	6.8	2.6	1.2	5.2	11.4
ICE BofAML 90 DAY T-BILLS + 400 bps		1.1	3.2	4.1	3.5	3.6	4.0	3.9	3.3	3.1	3.5	4.1
Titan Advisors	31,104,749	3.2	7.3	6.8				4.0	0.6			
ICE BofAML 90 DAY T-BILLS + 400 bps		1.1	3.2	4.1				3.9	3.3			

UBP liquidated 12/31/2015. Titan Advisors funded 2/1/2016. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2017	2016	2015	2014	2013
Total Liquid Alts/HFoF	62,715,508	1.6	4.8	5.4	1.7	3.4		5.4	-0.5	0.0	4.6	9.9
CPI + 5%		2.5	5.7	7.5	6.9	6.5		7.2	7.2	5.8	5.8	6.6
Aetos Capital	31,610,758	0.1	2.4	4.1	2.6	4.0	3.4	6.8	1.8	0.5	4.5	10.4
ICE BofAML 90 DAY T-BILLS + 400 bps		1.1	3.2	4.1	3.5	3.6	4.0	3.9	3.3	3.1	3.5	4.1
Titan Advisors	31,104,749	3.2	7.3	6.8				4.0	-0.1			
ICE BofAML 90 DAY T-BILLS + 400 bps		1.1	3.2	4.1				3.9	3.3			

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly 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

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

Manager Line Up					
<u>Manager</u>	Fund Incepted	Data Source	<u>Manager</u>	Fund Incepted	Data Source
SSGA S&P 500 Flagship Fund	7/27/2011	SSGA	Franklin Templeton Global	4/3/2012	BNY
QMA Large Cap Core	12/1/2008	BNY	RREEF America II	3/1/2003	Deutsche
Waddell & Reed	6/4/2010	BNY	TA Associates Realty	6/1/2007	TA Realty
Robeco Boston Partners	2/1/1999	BNY	Gresham MTAP Commodity	12/31/2013	Gresham
William Blair Mid Cap Grw	12/1/2006	BNY	Wellington Commodity	1/3/2014	Wellington
Lee Munder Small Value	8/26/2009	BNY	Aetos Capital	6/1/2005	Aetos
SSGA Russell Sm Cap Idx	5/17/2013	SSGA	BlackRock Private Capital II	7/13/2005	BlackRock
PIMCO RAE	8/14/2012	PIMCO	Pantheon USA Fund VI	7/26/2005	Pantheon
SSGA MSCI ACWI ex US	1/1/2010	SSGA	PIMCO BRAVO	1/14/2011	PIMCO
Pryamis Intl Growth	12/1/2003	BNY	KKR Mezzanine Partners	7/8/2011	KKR
Skellig DST Water Fund	10/28/2014	KBI	Stepstone Secondary Opps II	5/10/2013	Stepstone
BlackRock Fixed Income	12/1/1995	BNY	Titan Advisors	2/1/2016	Titan
Doubleline Core Plus	12/1/2015	BNY	Ocean Avenue	5/27/2016	Ocean Ave
MacKay Shields Core Plus	12/1/2015	MacKay	Pathway	4/12/2016	Pathway
Shenkman High Yield	9/1/2010	SSGA	TPG Diversified Credit	11/21/2016	TPG
SSGA TIPS	9/1/2009	SSGA			

Policy & Custom Index Composition

Policy Index:

20% Russell 3000, 20% MSCI ACWI ex US, 27% BBgBarc US Aggregate, 3% MSCI ACWI, 10% NCREIF Property, 5% Bloomberg Commodity, 5% CPI +500 bps, 5% Russell 3000 +300 bps, 5% BBgBarc High Yield +2% Lagged.

Other Disclosures



Glossary

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

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

Beachmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager. **Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios. Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

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

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

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

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

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

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

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

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

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

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

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

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

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

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