

# **PARS: County of Contra Costa**

**Third Quarter 2019**

**Presented by  
Andrew Brown, CFA**

**This presentation has been prepared for the sole use of the intended recipient. While the information contained herein has been obtained from sources believed to be accurate and reliable, any other reproduction or use of this information may necessitate further disclosures in order to ensure that the presentation is accurate, balanced, and conforms to all applicable regulatory requirements.**

# DISCUSSION HIGHLIGHTS

## U.S. Economic and Market Overview

After posting strong returns for the first half of 2019, domestic equity markets offered modest returns in the third quarter. Equity returns were supported by accommodative monetary policy from the Federal Reserve (Fed), with the Fed cutting rates by a quarter-point twice in the quarter. Investors also were somewhat relieved by corporate earnings that, while showing some levels of decline on a year-over-year basis, were still encouraging that the second half of the year would witness positive readings. On the other hand, the third quarter witnessed several developments that may prove challenging to future equity returns. First, while there has been an occasional encouraging sign related to the U.S. and China's trade conflict, both sides seem to be settling into positions that could extend the conflict. Secondly, the U.S. House of Representatives' began a formal impeachment investigation into President Trump. While there could be numerous market outcomes related to these proceedings, some investors seem to be most worried that this could give support to the emergence of a progressive Democratic presidential candidate such as Bernie Sanders, or more likely Senator Elizabeth Warren. In that we are still a little more than one year away from the elections, it is too soon to discount the potential outcome of the 2020 elections. But some investors are beginning to wonder, and possibly worry, about what the impact might be to the market if policies supported by Senator Warren would come to fruition. Third, the on-going drama related to the United Kingdom's Brexit, continues to march toward a potential October 31 deadline. However, there have been many deadlines established previously... Finally, geopolitically significant events such as the protests in Hong Kong, combined with the attacks on two Saudi Arabian oil installations contributed negatively to investor sentiment.

Economic data has slowed this year. Non-Farm payroll additions, while still in positive territory, are not as strong as they were in 2018. Perhaps this is to be expected given the 3.5% unemployment rate. The weakness in the Purchasing Manager Indices was one of the low-lights of the quarter. The ISM Manufacturing indicator offered a September reading of 47.8, and the non-manufacturing ISM slowed to a September reading of 52.6. Readings below the 50-level have been historically been associated with economic slowdowns. Personal Consumption grew 2.3% year-over-year, in August 2019, but was below the average level of the last few years. On top of the August reading for consumption, retail sales figures in September registered a -0.3% (month over month) rate of growth. Given the weakening economic data and the inverted yield curve, the Fed took action and lowered rates twice during the quarter. Easier monetary policy takes time to benefit the economy however, and there is some debate that given the current low level of interest rates, is there much impact to be garnered from these two Fed cuts, or is it more designed to support investor confidence?

## Market Overview/Performance Discussion

### Total Plan

The County of Contra Costa OPEB Plan returned 0.97% net of investment fees in the third quarter, which trailed the County's Plan benchmark target of 1.25%. Investment contribution from the equity managers was disappointing in the quarter, mainly in the large cap segment. Three of the five large cap managers underperformed the benchmark in the quarter, with both large cap growth managers: Harbor Capital Appreciation (-2.1%) and T. Rowe Price Growth (-1.2%) registering performance that was in the bottom quartile of the Morningstar US Fund Large Growth Universe. Performance was also disappointing from the large cap value manager: Dodge & Cox Stock Fund, where the +0.2% return ranked in the 86<sup>th</sup> percentile of the Morningstar US Fund Large Value Universe. The Plan's small cap equity managers, also registered disappointing performance, underperforming both their style benchmarks, and their corresponding peer universes. With the MSCI-EAFE Index (-1.07%), MSCI-Emerging Market Index (-4.25%) and the MSCI-ACWI Index (-0.03%) all registering negative returns, the international/global equity segments did not offer much in the way of positive contribution in the quarter. A modest positive came from the performance of the MFS Global Equity R6 Fund which returned 0.54%. An additional positive was the Plan maintained a slight underweight to the international equity segment. The Plan did benefit from an overweight to REIT equity, which was the strongest contributing sector, with the Wilshire REIT Index up +7.9%. Finally, while we have moved to an underweight allocation to the alternative asset class segment, the performance of all four alternative managers outperformed the benchmark target in the third quarter.

### Domestic Equity

Domestic large cap stocks (Russell 1000 Index) gained a modest 1.42% in the quarter. Large cap growth stocks barely outperformed large cap value stocks (1.49% vs. 1.36%) in the quarter, but what was noteworthy was the September performance where the Russell 1000 Value Index returned 3.57% vs. the Russell 1000 Growth Index return of 0.01%. While it seems that growth stocks have been the market leader for several years now (perhaps due to the performance of growth-related bell-weather such as Microsoft, Apple, and Visa), large cap value has actually outperformed large cap growth over the past year (4% vs. 3.7%). Small cap stocks, as measured by the Russell 2000 Index were in negative territory in the quarter, returning -2.4%. Conventional wisdom would think small cap stocks would be less impacted by the fall-out related to trade war activities. However, some market participants point to the decline in small cap stocks as perhaps being an early indicator of possible future recession risks. For the trailing twelve month period ending September 30, 2019, the Russell 2000 Index was down -8.9%. The leading equity market in the third quarter was once again REITs, up 7.9%, which likely reflect investor's thirst for yield, and for investments that have less of a connection with global trade issues.

## Domestic Equity

- **The Plan's large cap equity segment returned 0.95% in the quarter, which trailed the Russell 1000 Index return of 1.42%.**
  - The iShares Russell 1000 ETF 1.38% in the quarter.
  - The Columbia Contrarian Core Fund returned 1.91% in the quarter, which outperformed the benchmark. The Fund ranked in the 33<sup>rd</sup> percentile of the Morningstar U.S. Fund Large Blend Universe.
  - The Harbor Capital Appreciation Fund returned -2.11% in the quarter, which trailed the Russell 1000 Growth Index's return of 1.49%. The Fund ranked in the 81<sup>st</sup> percentile of the Morningstar U.S. Fund Large Growth Universe.
  - The T. Rowe Price Growth Stock Fund returned -1.15% in the quarter, which trailed the Russell 1000 Growth Index. The Fund ranked in the 72<sup>nd</sup> percentile of the Morningstar U.S. Fund Large Growth Universe.
  - The Dodge and Cox Stock Fund gained 0.21% in the quarter, and lagged the Russell 1000 Value Index's return of 1.36%. The Fund ranked in the 86<sup>th</sup> percentile of the Morningstar U.S. Fund Large Value Universe.
  - The Vanguard Growth and Income Fund registered a 1.52% return in the quarter, which slightly exceeded the Russell 1000 Index. The Fund ranked in the 51<sup>st</sup> percentile of the Morningstar U.S. Fund Large Blend Universe.
- **The mid cap equity segment returned 0.52% in the quarter, which was in-line with the Russell Mid Cap Index return of 0.48%.**
  - The iShares Russell Mid Cap ETF returned 0.43% in the quarter.
- **The small cap equity segment returned -3.36% in the quarter, which lagged the Russell 2000 Index return of -2.4%.**
  - The iShares Russell 2000 ETF returned -2.42% in the third quarter.
  - The Victory RS Small Cap Growth Fund returned -7.29% in the quarter, which trailed the Russell 2000 Growth Index. The fund ranked in the 84<sup>th</sup> percentile of the Morningstar U.S. Fund Small Growth Universe.
  - The Undiscovered Managers Behavioral Value Fund returned -1.31% in the quarter, and underperformed the Russell 2000 Value Index's return of -0.57%. The Fund ranked in the 67<sup>th</sup> percentile of Morningstar's U.S. Fund Small Value Universe.

## Real Estate

REIT equity performance was by far and away the strongest area for the Plan in the third quarter with the Wilshire REIT Index returning 7.9%. Monetary policy remains supportive for REIT equity as the Fed has moved to a dovish tone in its interest rate policy, by implementing two ¼ point rate cuts. Performance for the sector was positive across most industries with triple-net (11.5%), apartment/residential (10.4%), healthcare (11.2%), and data centers (15.3%) showing strong performance. Regional mall (-1%) and Agriculture/Land (0%) were sectors that showed underperformance in the quarter. Currently the Plan has a slight overweight to this asset class, which we expect to benefit from the underlying trends in employment, low interest rates, and consumer confidence. Some counter trends that we are monitoring include slowing growth in the lodging/leisure sector, and a slowdown in the office segment as the decline in demand from co-working firms such as We Work, may potentially impact demand in the upcoming year. Finally, the expected closures of retail stores is always a data point to monitor as on-line shopping grabs a larger percentage of retail expenditures. As we are somewhat late in the economic cycle, the slowdown in economic fundamentals will likely impact certain sectors of the REIT universe.

**The Vanguard REIT ETF returned 7.40% which ranked in the 42<sup>nd</sup> percentile of Morningstar's U.S. Fund Real Estate Universe**

## International/Global Equity

Global stocks ended the volatile third quarter with modest losses. Currency had a meaningful influence on quarterly performance. The developed markets, as represented by the MSCI-EAFE Index returned -1.07%, and emerging markets (MSCI-Emerging Market Index) declined -4.25% in dollar terms. In local currency terms however, the developed markets index returned +1.75%. The strong appreciation of the dollar and corresponding weakness in developed market currencies impacted returns in dollar terms. The on-going trade issues between the U.S. and China weighed on foreign markets. Additionally, concerns surrounding the inverted U.S. yield curve worried some that the U.S. was headed into a recession – which would have negative consequences on international markets. European stocks were under pressure from concerns that British Prime Minister Boris Johnson would take a hardline in efforts to execute the 'Brexit'. The UK economy contracted in the second quarter of 2019. Additionally, concerns from the German Bundesbank that Germany might be headed to a recession, due to a slow down in German trade statistics were worrisome. Eurozone economic growth is a huge concern as the second quarter posted a 0.8% annualized rate of growth

The decline in emerging market stocks certainly reflected the fears from the U.S.- China trade situation, but the declines spread across all geographies: Latin America (-5.6%), emerging Europe (-2.6%), and emerging Asia (-3.4%) all were down in the quarter. Finally, the Middle East and Africa saw Saudi Arabia (-9.5%) and South Africa (-12.6%) post notable declines. Aside from currency issues, geopolitical issues related to the drone strike on two major Saudi Arabian oil installations and elections in Argentina, which saw the populist Fernandez winning the primary election against the business-friendly incumbent, setting up for a win in the general election in October, were impactful.

Purchasing Managers' Index (PMI) data continued to decline globally. Nearly all major markets experienced continued declines in manufacturing business activity. Non-manufacturing services PMI fared modestly better. Eurozone, Japan, as well as other smaller countries' industrial production began declining on a year-over-year basis in late 2018, and continue to decline in 2019. With the weakness, that many attribute to trade related issues, PMI's are indicating further contraction in the manufacturing sector.

- **The Plan's international/global equity segment returned -0.6% in the quarter. This return outperformed the MSCI EAFE Index return of -1.07% but trailed the MSCI ACWI Index return of -0.03%.**
  - The iShares MSCI EAFE Index ETF returned -1.12% in the quarter.
  - The Dodge & Cox International Stock Fund returned -1.66% in the quarter and underperformed the MSCI EAFE Index. The Fund ranked in the 52<sup>nd</sup> percentile of the Foreign Large Value Universe as measured by Morningstar.
  - The MFS International Growth Fund returned -1.17% in the quarter which slightly lagged the MSCI EAFE Index. The Fund ranked in the 48<sup>th</sup> percentile for Foreign Large Growth managers as measured by Morningstar.
  - The iShares MSCI ACWI Index ETF returned 0.03% in the quarter.
  - The American Funds New Perspective Fund recorded a -0.42% return in the quarter, which trailed the MSCI ACWI Index and ranked in the 59<sup>th</sup> percentile within the Morningstar World Large Stock Universe
  - The MFS Global Equity R6 Fund returned 0.54%, which outperformed the benchmark and ranked in the 30<sup>th</sup> percentile of the Morningstar World Large Stock Universe.
  - The Hartford Schroders Emerging Market Equity Fund returned -2.68% during the quarter and outperformed the MSCI Emerging Market benchmark return of -4.25%. The Fund ranked in the 28<sup>th</sup> percentile of the Morningstar Diversified Emerging Market Universe.

### Fixed Income

Interest rates continued to decline in the third quarter, resulting in a 2.3% gain for the Bloomberg Barclays U.S. Aggregate Index, and an impressive 8.5% year-to-date return. U.S. Treasuries gained 2.4% this quarter, while investment-grade corporate bonds returned 3.1%, outperforming equal duration Treasuries by a modest 4 basis points for the quarter and 407 basis points year-to-date. Corporate bond spreads ended the third quarter unchanged at a +122 basis point spread to the treasury curve, despite increased volatility in August and was narrower by 37 basis points since the year began.

Non-investment grade corporates gained 1.3% in the quarter, 18 basis points better than equivalent duration Treasuries, and a solid 11.4% year-to-date, 654 basis points ahead of Treasuries. This robust performance, however, is partially due to the underperformance in last year's fourth quarter when high yield bonds lagged Treasuries by a substantial 680 basis points.

## Fixed Income (Cont.)

Agency mortgage-backed security spreads were unchanged during the quarter, outperforming Treasuries by 4 basis points. The slight outperformance in the third quarter resulted in a year-to-date total return of 5.6%, only 5 basis points behind equal duration Treasuries.

The Fed cut the Fed Funds rate in both July and September by 25 basis points each, to a new target range of 1.75-2.00%. This is the first monetary easing since the 2008 credit crisis and comes on the heels of nine ¼ point hikes between 2015 and 2018. As a result, U.S. Treasury rates experienced a significant decline in the month of August as concerns about slower global economic growth, a prolonged trade war, Brexit worries and apprehension that the Federal Reserve was falling even further behind in aggressively cutting rates drove a rush into safe-haven assets. Fed officials pivoted from interest rate hikes at the beginning of the year, to rate cuts, as market expectations and an inverted yield curve signaled the potential that the U.S. was at risk of falling into recession. The ten-year Treasury yield, which reached a high of nearly 3.25% last November, ended the third quarter at 1.67%.

Soon after the third quarter ended, the Fed announced a limited quantitative easing campaign whereby it will increase purchases of U.S. Treasury bills to \$80 billion per month, from \$20 billion, at least through June 2020. The aim is to stabilize money market rates and to alleviate the NY Fed's need to do overnight and term repos.

The portfolio continues to overweight corporate credit and securitized debt, while underweighting U.S. Treasuries relative to the Bloomberg Barclays U.S. Aggregate Index. We are positioned more heavily in the intermediate part of the curve relative to the long end. Furthermore, the portfolio targets an effective duration modestly below that of the Aggregate Index. During the quarter though, this contributed to the relative underperformance as long maturity bonds rallied.

- **The Plan's fixed income segment returned 2.15% in the quarter, which slightly lagged the Bloomberg Barclays Aggregate Index return of 2.27%.**
  - The separately managed fixed income portfolio returned 2.0% which trailed the benchmark. The portfolio would have ranked approximately in the 68<sup>th</sup> percentile of the Morningstar Intermediate Core Bond Universe.
  - The PIMCO Total Return Bond Fund posted a 2.36% return in the quarter, which ranked in the 20<sup>th</sup> percentile of Morningstar's U.S. Intermediate-Term Core-Plus Bond Universe. The Fund outperformed the Index.
  - The Prudential Total Return Bond Fund returned 2.68% in the quarter. This ranked in the 2<sup>nd</sup> percentile of Morningstar's U.S. Intermediate-Term Core-Plus Bond Universe and outperformed the benchmark.



## Alternative Investments

The Alternatives portion of the Plan returned 1.41% and outperformed the Wilshire Liquid Alternative Index return of 0.42%. All managers generated returns in excess of the benchmark. The leading performance in the space came from the Eaton Vance Global Macro Fund, which gained 2.03%. Positive contributions were posted from exposure to most geographic areas which the fund invested in, with Eastern Europe and Middle East & Africa delivering the bulk of the gains. Long local bond and sovereign credit positions in Ukraine, a long Egyptian Pound position, long positions in Serbian debt, and a long Icelandic local bond holding represented highlights for the quarter. The only region offering losses in the quarter was Latin America, where a long position in the Argentine Peso and a long position in the Brazilian currency the Real, declined in the quarter. At the end of the quarter, the managers foreign currency positioning was net long versus both the U.S. dollar and the Euro. Foreign currency positioning included: long positions in the Ukrainian Hryvnia, long currency holdings in Taiwan, and a long position in the Thai Bhat.

The Blackrock Strategic Income Fund produced a 0.89% return for the third quarter. Positive performance was driven by their duration position (+35 bps), structured credit (+26 bps), absolute return strategy (+17 bps), U.S. high yield (+14 bps), European credit (+10 bps) and U.S. investment grade corporate holdings (+7 bps). The only significant detractor was emerging market debt which decline by -15 basis points. The duration is currently at 3.7 years which is the highest it has been in years, according to the managers. The strategy's duration usually falls within a 0 to 3 years range. The team believes that the Fed is committed to extending the economic expansion, and this would likely lead to a 25 bps cut before the end of the year. The team also favors highly liquid high yield corporate issues as a proxy for the continued economic expansion.

The BlackRock Event Driven Fund posted a 1.54% return for the quarter, resulting in a peer ranking of 23 in the Morningstar Market Neutral category. While hard catalyst situations was the largest contributor (+1.39%) for the quarter, soft catalyst and credit also contributed 5bps and 11bps respectively. The fund has increased their exposure to hard catalyst situations from 82% of long market value in Q2 to 86% given the robust opportunity set in mergers and acquisitions. The remaining 14% is allocated 7% in soft catalyst situations and 7% in credit. Going forward, we should continue to see the majority of exposure and returns coming by way of M&A with opportunities presenting themselves in soft catalyst and credit strategies.

The Western Asset Macro Opportunities Fund returned 0.78%. Duration and curve positioning was the most significant contributor to performance. The effective duration of the Fund was 4.8 years at the end of the quarter. Emerging market debt contributed to performance with Brazil, Mexico and Russia areas that aided performance. Foreign exchange positioning was mainly additive to performance due to long positions in the Russian Ruble and Argentine Peso strengthening relative to the U.S. dollar. Investment-grade credit positions were a slight positive. The portfolio managers are under the belief that with global growth moderating and inflation contained, spread product especially financials/banks should outperform sovereign debt. Additionally, the team sees emerging markets more attractive than developed market debt.

## Alternative Investments (Cont'd)

- The alternative investment segment returned 1.41% in the third quarter, which exceeded the Wilshire Liquid Alternatives Index return of 0.42%.
  - The BlackRock Strategic Income Opportunity Fund returned 0.89%, which exceeded the benchmark, and ranked in the 40<sup>th</sup> percentile of Morningstar's Non-Traditional Bond Universe.
  - The Eaton Vance Global Macro Absolute Return Fund gained 2.03% which ranked in the 6<sup>th</sup> percentile of Morningstar's Non-Traditional Universe
  - The Western Asset Macro Opportunities Fund returned 0.78% in the third quarter and ranked in the 50<sup>th</sup> percentile of Morningstar's Non-Traditional Universe.
  - The BlackRock Event Driven Equity Fund returned 1.54% in the quarter and ranked in the 23<sup>rd</sup> percentile of the Morningstar US Fund Market Neutral Universe

## Asset Allocation/Portfolio Transitions

There were no changes in investment managers in the quarter.

In September the County Board of Supervisors approved a revision to the investment policy for the Plan. The Plan's policy benchmark was revised to reflect an asset allocation target of 56% stocks, 43% fixed income, and 1% cash. Alternatives were removed from the policy benchmark allocation, but alternatives can remain as an allowable investment category. In the month of September, we began to transition the portfolio allocation to reflect the new policy targets. Our allocation as of the end of the quarter was 53.5% stocks, 40% fixed income, 5% alternatives, and 1.5% cash. We effectively have migrated to an underweight equity position in the most recent quarter. Our concerns prompting a reduction to stocks are focused on the global slowdown, issues related to Brexit, the somewhat expensive large cap equity market, and the concerns surrounding the trade tensions between the U.S. and China.

# Manager Watch List

<i>Name of Fund</i>	<i>Date on watch list</i>	<i>Date exiting watch list</i>	<i>Recommendation</i>	<i>Rationale</i>
<i>Columbia Contrarian Core Fund</i>	3Q 2018		Retain on Watch List	Originally, the Annualized return trailed the benchmark return on a 3-year basis, triggering inclusion on the manager watch list. Disappointing annual performance in 2018 will linger for several quarters with respect to the 3-year rolling return. The manager has posted encouraging 2019 performance, outperforming the underlying benchmark every quarter and posting the strongest return of all large cap equity managers in 2019. We will maintain the Watch rating.
<i>Dodge &amp; Cox International</i>	3Q 2018		Retain on Watch List	Underperformance relative to the benchmark. The managers are underperforming the MSCI-EAFE Index, however with respect to their peer universe, they are performing respectably.
<i>MFS International Growth R6</i>	N/A		Not placed on Watch	David Antonelli one of three co-portfolio managers for the Fund has announced that he will retire from the firm in 18 months. The other two co-managers will stay on and maintain their duties. Mr. Antonelli has worked for MFS for 27 years. We interviewed the team on-site in mid-October. We are comfortable that the remaining two members (who have been co-PMs since 2012/2015) will be able to meet our expectations. MFS relies on a centralized research platform, which, while not diluting the importance of the PMs, does offer a key component to the success of the strategy. And there are no changes to the centralized research team. While PM turnover is one factor in a fund being placed on Watch, we are comfortable, after meeting with the team, that they can overcome the pending turnover. We have decided to not place the manager on the watch list.

# Asset Allocation

## Period Ending September 30, 2019

Asset Allocation	6/30/2019 Market Value	6/30/2019 % of Total	9/30/2019 Market Value	9/30/2019 % of Total	Target Allocation
<b>Large Cap Equities</b>					
Columbia Contrarian Core Inst3	9,262,257	3.0%	9,324,664	3.0%	--
iShares Russell 1000 ETF	20,313,587	6.6%	23,960,808	7.7%	--
Vanguard Growth & Income Adm	10,809,008	3.5%	9,369,321	3.0%	--
Dodge & Cox Stock Fund	7,730,627	2.5%	7,945,384	2.6%	--
Harbor Capital Appreciation Retirement	3,859,270	1.3%	3,778,001	1.2%	--
T. Rowe Price Growth Stock Fund	3,856,833	1.3%	3,812,540	1.2%	--
<b>Total Large Cap Equities</b>	<b>\$ 55,831,583</b>	<b>18.1%</b>	<b>\$ 58,190,719</b>	<b>18.7%</b>	<b>19.0%</b>
		<i>Range</i>		<i>Range</i>	<i>13-32%</i>
<b>Mid Cap Equities</b>					
iShares Russell Mid-Cap ETF	17,028,841	5.5%	17,053,224	5.5%	--
<b>Total Mid Cap Equities</b>	<b>\$ 17,028,841</b>	<b>5.5%</b>	<b>\$ 17,053,224</b>	<b>5.5%</b>	<b>6.0%</b>
		<i>Range</i>		<i>Range</i>	<i>2-10%</i>
<b>Small Cap Equities</b>					
iShares Russell 2000 ETF	12,429,893	4.0%	12,314,536	4.0%	--
Undiscovered Managers Behavioral Val R6	6,002,064	2.0%	6,257,824	2.0%	--
Victory RS Small Cap Growth R6	6,234,679	2.0%	6,097,132	2.0%	--
<b>Total Small Cap Equities</b>	<b>\$ 24,666,636</b>	<b>8.0%</b>	<b>\$ 24,669,491</b>	<b>7.9%</b>	<b>9.0%</b>
		<i>Range</i>		<i>Range</i>	<i>4-12%</i>
<b>International Equities</b>					
DFA Large Cap International I	4,497,581	1.5%	4,798,325	1.5%	--
iShares MSCI EAFE ETF	13,627,012	4.4%	11,917,519	3.8%	--
Dodge & Cox International Stock Fund	4,604,094	1.5%	4,852,772	1.6%	--
MFS® International Growth R6	4,584,410	1.5%	4,712,302	1.5%	--
Hartford Schroders Emerging Mkts Eq Y	6,074,085	2.0%	3,993,421	1.3%	--
<b>Total International Equities</b>	<b>33,387,182</b>	<b>10.8%</b>	<b>\$ 30,274,338</b>	<b>9.7%</b>	<b>10.0%</b>
		<i>Range</i>		<i>Range</i>	<i>4-16%</i>
<b>Global Equities</b>					
MSCI iShares ACWI Index ETF	12,097,727	3.9%	10,980,048	3.5%	--
American Funds New Perspective R6	4,539,507	1.5%	4,662,061	1.5%	--
MFS Global Equity FD CL R5 #4818	4,593,025	1.5%	4,670,500	1.5%	--
<b>Total Global Equities</b>	<b>\$ 21,230,259</b>	<b>6.9%</b>	<b>\$ 20,312,609</b>	<b>6.5%</b>	<b>8.0%</b>
		<i>Range</i>		<i>Range</i>	<i>4-12%</i>

# Asset Allocation

## Period Ending September 30, 2019

Asset Allocation	6/30/2019 Market Value	6/30/2019 % of Total	9/30/2019 Market Value	9/30/2019 % of Total	Target Allocation
<b>Real Estate</b>					
Vanguard Real Estate ETF	13,863,038	4.5%	15,797,762	5.1%	
	<b>\$ 13,863,038</b>	<b>4.5%</b>	<b>\$ 15,797,762</b>	<b>5.1%</b>	<b>4.0%</b>
		<i>Range</i>		<i>Range</i>	<i>0-8%</i>
<b>Fixed Income</b>					
Core Fixed Income Holdings	79,363,165	25.8%	86,568,212	27.8%	--
PIMCO Total Return Instl Fund	16,165,340	5.3%	18,852,721	6.1%	--
Prudential Total Return Bond Q	16,171,243	5.3%	18,886,670	6.1%	--
<b>Total Fixed Income</b>	<b>\$ 111,699,748</b>	<b>36.3%</b>	<b>\$ 124,307,604</b>	<b>40.0%</b>	<b>43.0%</b>
		<i>Range</i>		<i>Range</i>	<i>30-50%</i>
<b>Alternatives</b>					
BlackRock Event Driven Equity Instl	4,514,787	1.5%	4,688,205	1.5%	--
BlackRock Strategic Income Opps K	3,045,055	1.0%	3,917,401	1.3%	--
Eaton Vance Glb Macr Absolt Retrn R6	3,804,027	1.2%	3,902,460	1.3%	--
Western Asset Macro Opportunities IS	4,601,208	1.5%	3,125,540	1.0%	--
<b>Total Alternatives</b>	<b>\$ 15,965,077</b>	<b>5.2%</b>	<b>\$ 15,633,605</b>	<b>5.0%</b>	<b>0.0%</b>
		<i>Range</i>		<i>Range</i>	<i>0-10%</i>
<b>Cash</b>					
Money Market	14,087,047	4.6%	4,635,731	1.5%	--
<b>Total Cash</b>	<b>\$ 14,087,047</b>	<b>4.6%</b>	<b>\$ 4,635,731</b>	<b>1.5%</b>	<b>1.0%</b>
		<i>Range</i>		<i>Range</i>	<i>0-5%</i>
<b>TOTAL</b>	<b>\$ 307,759,412</b>	<b>100.0%</b>	<b>\$ 310,875,084</b>	<b>100.0%</b>	<b>100.0%</b>

## Investment Summary

### Period Ending September 30, 2019

Investment Summary	Third Quarter 2019	Year to Date 2019
<b>Beginning Value</b>	<b>308,513,961.45</b>	<b>\$ 260,226,787.74</b>
Net Contributions/Withdrawals	-48,355.64	15,910,069.09
Fees Deducted	-49,253.52	-146,746.53
Income Received	1,547,089.24	5,006,762.73
Market Appreciation	1,666,191.60	30,500,068.75
Net Change in Accrued Income	-169,028.21	-36,336.86
<b>Ending Market Value*</b>	<b>\$ 311,460,604.92</b>	<b>\$ 311,460,604.92 *</b>

Investment Summary	Third Quarter 2018	Year to Date 2018
<b>Beginning Value</b>	<b>269,670,257.66</b>	<b>\$ 254,664,786.12</b>
Net Contributions/Withdrawals	-109,484.73	15,840,653.74
Fees Deducted	-48,396.64	-145,010.02
Income Received	1,443,879.28	3,848,578.56
Market Appreciation	4,761,005.50	1,473,025.06
Net Change in Accrued Income	140,831.83	176,059.44
<b>Ending Market Value*</b>	<b>\$ 275,858,092.90</b>	<b>\$ 275,858,092.90 *</b>

\*Ending Market Value differs from total market value on the previous page due to differences in reporting methodology. The above ending market value is reported as of trade date and includes accruals. The Asset Allocation total market value is reported as of settlement date.

# Investment Strategy

## As of September 30, 2019

### Tactical Asset Allocation

Asset Class	% Portfolio Weighting			Rationale
	Target	Current Portfolio	Over/Under Weighting	
Cash	1.0%	1.5%	+0.5%	
Fixed Income	38.0%	40.0%	+2.0%	<ul style="list-style-type: none"> <li>We anticipate the Federal Reserve will cut rates between 1-2 times between now and the end of 2020, although market participants are beginning to discount further cuts from the Fed. The trillions of dollars of global sovereign debt trading at negative yields will likely keep a bid in the fixed income markets. Inflation expectations seem to be anchored at 2%.</li> </ul>
Alternatives	10.0%	5.0%	-5.0%	<ul style="list-style-type: none"> <li>We maintain an allocation to alternatives, reflecting our desire to be underweight to equities. As well, it is difficult to be overweight fixed income markets after the Barclays Aggregate Index is up 10% over the past twelve months.</li> </ul>
Real Estate (REITS)	4.0%	5.0%	+1.0%	<ul style="list-style-type: none"> <li>With the Fed likely poised to reverse their interest rate hiking policy, we see support for REIT equity. REIT fundamentals will likely be aided by positive unemployment trends, consumer spending, and GDP growth. Valuations are not cheap when compared to fixed income, and other equity categories, hence the small overweight to REITs. REITs have historically performed well in late-cycle periods.</li> </ul>
Global Equity	7.0%	6.5%	-0.5%	<ul style="list-style-type: none"> <li>A variety of global economic readings are indicating a deceleration in global growth. Lingering uncertainty or outright escalation of countervailing tariffs in the China/US trade war, and/or a "hard" Brexit could serve to further slow global growth and possibly cause a recession. Global Purchasing manager (PMI) readings declined further in the quarter, but this downturn can be mainly attributed to trade war uncertainties.</li> </ul>
International (Developed)	9.0%	8.5%	-0.5%	<ul style="list-style-type: none"> <li>Global trade represents a larger percentage of GDP for many international nations, than it does for the U.S. As such, uncertainties with global trade that arise from renewing NAFTA, trade skirmishes with China, and threats of applying tariffs on European auto manufacturers, create an overhang on international equities. Global Purchasing Manager surveys declined over the quarter, which is a developing concern. Global central banks are offering policy supportive of maintaining interest rates at low levels. The MSCI-EAFE Index trades at roughly a forward PE level of 14X, which compels us to maintain a weighting near the policy index.</li> </ul>
International (Emerging)	0.0%	1.25%	+1.25%	<ul style="list-style-type: none"> <li>Risks involving the trade war getting worse, and the dollar potentially strengthening, are two unfavorable trends impacting growth and EPS. Earnings revisions have been negative. Current valuations at 11.5X next year's earnings offer a modest positive.</li> </ul>
Total Domestic Equity	31.0%	32.25%	+1.25%	
Large Cap	17.0%	18.75%	+1.75%	<ul style="list-style-type: none"> <li>We assume a 17X PE ratio for large cap equity, which is slightly overvalued versus historical valuation levels. We estimate earnings for 2020 will show a mid-single digit growth rate. The risks from being 'late' in the cycle temper our enthusiasm to large cap equities.</li> </ul>
Mid Cap	6.0%	5.5%	-0.50%	<ul style="list-style-type: none"> <li>Mid-Cap valuations are currently at a 17X PE ratio. We maintain a slight underweight allocation.</li> </ul>
Small Cap	8.0%	8.0%	-	<ul style="list-style-type: none"> <li>High teens earnings growth and a higher exposure to the U.S. economy (less international exposure) are two attractive attributes for small cap equity. Valuations are more reasonable after small cap equities have sold off by -9% over the previous 12 months. Higher beta and higher levels of leverage compel us to maintain an underweight.</li> </ul>

## Selected Period Performance

### PARS/COUNTY OF CONTRA COSTA PRHCP

Account 6746038001

Period Ending: 9/30/2019

	3 Months	Year to Date (9 Months)	1 Year	3 Years	5 Years	Inception to Date (104 Months)
Cash Equivalents	.52	1.67	2.20	1.40	.89	.52
<i>Lipper Money Market Funds Index</i>	.49	1.59	2.11	1.31	.80	.46
Fixed Income ex Funds	2.00	8.63	10.13	3.14	3.56	3.85
Total Fixed Income	2.15	8.91	10.42	3.37	3.67	3.97
<i>BBG Barclays US Aggregate Bd Index</i>	2.27	8.52	10.30	2.92	3.38	3.54
Total Equities	.30	18.22	1.35	10.16	7.80	8.92
Large Cap Funds	.95	19.02	2.23	12.94	10.27	11.44
<i>Russell 1000 Index</i>	1.42	20.53	3.87	13.19	10.62	12.37
Mid Cap Funds	.52	21.67	3.29	10.57	8.61	9.78
<i>Russell Midcap Index</i>	.48	21.93	3.19	10.69	9.10	11.24
Small Cap Funds	-3.36	14.98	-7.90	9.33	8.84	10.69
<i>Russell 2000 Index</i>	-2.40	14.18	-8.89	8.23	8.19	9.52
International Equities	-.60	15.01	.89	8.16	4.53	5.15
<i>MSCI AC World Index</i>	-.03	16.20	1.38	9.71	6.65	7.44
<i>MSCI EAFE Index</i>	-1.07	12.80	-1.34	6.48	3.27	4.23
<i>MSCI EM Free Index</i>	-4.25	5.89	-2.02	5.97	2.33	1.21
REIT Funds	7.53	28.15	20.27	7.41	9.94	9.85
<i>Wilshire REIT Index</i>	7.88	27.21	18.39	7.21	10.17	10.35
Alternatives	1.41	5.29	4.13	-.48	.78	
<i>Dynamic Alternatives Index</i>	.42	5.03	1.13	1.85	1.06	.14
Total Managed Portfolio	.99	13.32	4.96	6.50	5.52	6.13
Total Account Net of Fees	.97	13.27	4.89	6.42	5.43	6.02
<i>Contra Costa Policy Benchmark</i>	1.25	13.29	5.31	6.69	5.84	6.59

Inception Date: 02/01/2011

\* Benchmark from February 1, 2011 to June 30, 2013: 18% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 8% MSCI ACWI Index, 10% MSCI EAFE Index, 45% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 1% Citigroup 3 Month T-Bill Index. From July 1, 2013 to June 30, 2015: 17% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 7% MSCI AC World US Index, 9% MSCI EAFE Index, 38% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 10% HFRI FOF Market Defensive Index, 1% Citigroup 3 Month T-Bill Index. From July 1, 2015: 17% Russell 1000 Index, 6% Russell Midcap Index, 8% Russell 2000 Index, 7% MSCI AC World Index, 9% MSCI EAFE Index, 38% Barclays Aggregate Index, 4% DJ Wilshire REIT Index, 10% Wilshire Liquid Alternative Index, 1% Citigroup 3 Month T-Bill Index \*\* Dynamic Alternatives Index represents the HFRI FOF Market Defensive Index from 07/01/2013 until 06/30/2015, and then the Wilshire Liquid Alternatives Index from 07/01/2015 forwards. Returns are gross-of-fees unless otherwise noted. Returns for periods over one year are annualized. The information presented has been obtained from sources believed to be accurate and reliable. Past performance is not indicative of future returns. Securities are not FDIC insured, have no bank guarantee, and may lose value.



# COUNTY OF CONTRA COSTA

For Period Ending September 30, 2019

LARGE CAP EQUITY FUNDS											
Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
Columbia Contrarian Core Inst3	(7/13)	1.91	33	21.86	17	3.85	41	11.34	63	9.77	40
T. Rowe Price Growth Stock I		-1.15	72	18.99	71	2.21	47	16.47	26	13.15	21
Harbor Capital Appreciation Retirement		-2.11	81	18.62	75	-0.82	77	16.34	28	12.74	27
Dodge & Cox Stock	(10/14)	0.21	86	13.38	87	-2.00	83	11.34	13	8.10	32
Vanguard Growth & Income Adm	(12/16)	1.52	51	19.28	58	2.32	63	12.67	40	10.52	21
iShares Russell 1000 ETF	(3/15)	1.38	57	20.42	34	3.76	44	13.04	28	10.49	23
<b>Russell 1000 TR USD</b>		<b>1.42</b>	<b>--</b>	<b>20.53</b>	<b>--</b>	<b>3.87</b>	<b>--</b>	<b>13.19</b>	<b>--</b>	<b>10.62</b>	<b>--</b>
MID CAP EQUITY FUNDS											
iShares Russell Mid-Cap ETF	(3/15)	0.43	44	21.75	17	3.08	24	10.54	24	8.94	18
<b>Russell Mid Cap TR USD</b>		<b>0.48</b>	<b>--</b>	<b>21.93</b>	<b>--</b>	<b>3.19</b>	<b>--</b>	<b>10.69</b>	<b>--</b>	<b>9.10</b>	<b>--</b>
SMALL CAP EQUITY FUNDS											
Undiscovered Managers Behavioral Val R6	(9/16)	-1.31	67	14.96	28	-8.51	45	6.20	27	7.66	14
<b>Russell 2000 Value TR USD</b>		<b>-0.57</b>	<b>--</b>	<b>12.82</b>	<b>--</b>	<b>-8.24</b>	<b>--</b>	<b>6.54</b>	<b>--</b>	<b>7.17</b>	<b>--</b>
Victory RS Small Cap Growth R6	(2/19)	-7.29	84	21.96	23	-6.42	45	16.10	15	11.94	19
<b>Russell 2000 Growth TR USD</b>		<b>-4.17</b>	<b>--</b>	<b>15.34</b>	<b>--</b>	<b>-9.63</b>	<b>--</b>	<b>9.79</b>	<b>--</b>	<b>9.08</b>	<b>--</b>
iShares Russell 2000 ETF	(3/15)	-2.42	76	14.10	54	-8.96	61	8.21	35	8.20	29
INTERNATIONAL EQUITY FUNDS											
Dodge & Cox International Stock		-1.66	52	11.00	19	-2.75	26	5.26	28	0.64	69
MFS International Growth R6		-1.17	48	16.76	52	3.06	26	10.07	11	7.35	12
MFS Global Equity R6	(3/15)	0.54	30	21.71	10	6.99	14	10.75	29	8.40	21
iShares MSCI EAFE ETF	(3/15)	-1.12	44	12.80	35	-1.40	40	6.42	25	3.21	38
iShares MSCI ACWI ETF	(3/15)	0.03	48	16.31	49	1.51	51	10.02	34	6.90	42
American Funds New Perspective R6	(3/15)	-0.42	59	18.45	27	2.88	36	12.38	14	9.72	11
DFA Large Cap International I	(12/18)	-0.99	36	12.98	30	-2.04	50	6.45	23	3.13	44
<b>MSCI EAFE NR USD</b>		<b>-1.07</b>	<b>--</b>	<b>12.80</b>	<b>--</b>	<b>-1.34</b>	<b>--</b>	<b>6.48</b>	<b>--</b>	<b>3.27</b>	<b>--</b>
<b>MSCI ACWI NR USD</b>		<b>-0.03</b>	<b>--</b>	<b>16.20</b>	<b>--</b>	<b>1.38</b>	<b>--</b>	<b>9.71</b>	<b>--</b>	<b>6.65</b>	<b>--</b>
Hartford Schroders Emerging Mkts Eq F	(11/12)	-2.68	28	9.88	31	0.23	45	7.55	17	3.81	14
<b>MSCI EM Free Index</b>		<b>-4.25</b>	<b>--</b>	<b>5.89</b>	<b>--</b>	<b>-2.02</b>	<b>--</b>	<b>5.97</b>	<b>--</b>	<b>2.33</b>	<b>--</b>

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

For Period Ending September 30, 2019

REIT EQUITY FUNDS											
Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
Vanguard Real Estate ETF	(6/17)	7.40	42	28.13	35	19.85	29	7.06	52	9.93	39
<b>Wilshire REIT Index</b>		<b>7.88</b>	--	<b>27.21</b>	--	<b>18.39</b>	--	<b>7.21</b>	--	<b>10.17</b>	--
BOND FUNDS											
Core Fixed Income Portfolio		2.00	68	8.63	35	10.13	38	3.14	16	3.56	10
PIMCO Total Return Instl		2.36	20	8.58	62	10.08	31	3.56	24	3.58	33
PGIM Total Return Bond R6	(5/16)	2.68	2	10.74	3	12.25	1	4.43	5	4.66	3
<b>BBgBarc US Agg Bond TR USD</b>		<b>2.27</b>	--	<b>8.52</b>	--	<b>10.30</b>	--	<b>2.92</b>	--	<b>3.38</b>	--
ALTERNATIVE FUNDS											
BlackRock Event Driven Equity Instl	(3/19)	1.54	23	5.78	13	7.20	3	6.77	1	5.53	--
BlackRock Strategic Income Opps K	(7/13)	0.89	40	6.10	40	5.55	24	3.89	31	2.88	36
Eaton Vance Glb Macr Absolt Retrn R6	(7/13)	2.03	6	6.53	32	5.59	24	2.56	66	2.88	36
Western Asset Macro Opportunities IS	(2/19)	0.78	50	10.23	5	12.59	1	5.85	5	5.20	2
<b>Dynamic Alternatives Index</b>		<b>0.42</b>	--	<b>5.03</b>	--	<b>1.13</b>	--	<b>1.85</b>	--	<b>1.06</b>	--

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

## For Period Ending December 31, 2018

### LARGE CAP EQUITY FUNDS

Fund Name	Inception	2018 Return	Rank	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
Columbia Contrarian Core Inst3	(7/13)	-8.81	82	21.89	28	8.77	73	3.25	7	13.14	27	36.04	15	18.68	--
T. Rowe Price Growth Stock I		-0.89	37	33.84	15	1.58	63	10.93	--	8.83	--	39.20	--	18.92	--
Harbor Capital Appreciation Retirement		-0.96	37	36.68	5	-1.04	--	10.99	--	9.93	--	37.66	--	15.69	--
Dodge & Cox Stock	(10/14)	-7.07	31	18.33	24	21.28	6	-4.49	62	10.40	54	40.55	2	22.01	2
Vanguard Growth & Income Adm	(12/16)	-4.61	31	20.80	54	12.12	24	2.03	16	14.16	13	32.74	37	17.05	19
iShares Russell 1000 ETF	(3/15)	-4.91	37	21.53	37	11.91	27	0.82	30	13.08	28	32.93	35	16.27	29
<b>Russell 1000 TR USD</b>		<b>-4.78</b>	<b>--</b>	<b>21.69</b>	<b>--</b>	<b>12.05</b>	<b>--</b>	<b>0.92</b>	<b>--</b>	<b>13.24</b>	<b>--</b>	<b>33.11</b>	<b>--</b>	<b>16.42</b>	<b>--</b>

### MID CAP EQUITY FUNDS

iShares Russell Mid-Cap ETF	(3/15)	-9.13	30	18.32	27	13.58	61	-2.57	30	13.03	8	34.50	46	17.13	43
<b>Russell Mid Cap TR USD</b>		<b>-9.06</b>	<b>--</b>	<b>18.52</b>	<b>--</b>	<b>13.80</b>	<b>--</b>	<b>-2.44</b>	<b>--</b>	<b>13.22</b>	<b>--</b>	<b>34.76</b>	<b>--</b>	<b>17.28</b>	<b>--</b>

### SMALL CAP EQUITY FUNDS

Undiscovered Managers Behavioral Val R6	(9/16)	-15.20	49	13.53	11	20.97	80	3.52	1	5.83	25	37.72	--	23.55	--
<b>Russell 2000 Value TR USD</b>		<b>-12.86</b>	<b>--</b>	<b>7.84</b>	<b>--</b>	<b>31.74</b>	<b>--</b>	<b>-7.47</b>	<b>--</b>	<b>4.22</b>	<b>--</b>	<b>34.52</b>	<b>--</b>	<b>18.05</b>	<b>--</b>
T. Rowe Price New Horizons I		4.17	4	31.67	9	7.95	69	4.54	--	6.10	--	49.11	--	16.20	--
<b>Russell 2000 Growth TR USD</b>		<b>-9.31</b>	<b>--</b>	<b>22.17</b>	<b>--</b>	<b>11.32</b>	<b>--</b>	<b>-1.38</b>	<b>--</b>	<b>5.60</b>	<b>--</b>	<b>43.30</b>	<b>--</b>	<b>14.59</b>	<b>--</b>
iShares Russell 2000 ETF	(3/15)	-11.02	36	14.66	24	21.36	43	-4.33	44	4.94	44	38.85	35	16.39	34

### INTERNATIONAL EQUITY FUNDS

Dodge & Cox International Stock		-17.98	81	23.94	72	8.26	2	-11.35	98	0.08	9	26.31	8	21.03	16
DFA Large Cap International I	(12/18)	-14.14	44	25.37	48	3.16	23	-2.86	72	-5.24	49	20.69	39	17.75	58
MFS International Growth R6		-8.79	9	32.58	31	2.79	6	0.40	52	-5.01	57	13.94	78	19.77	29
MFS Global Equity R6	(3/15)	-9.51	62	24.04	41	7.43	27	-1.34	48	4.08	33	27.93	34	23.14	--
iShares MSCI EAFE ETF	(3/15)	-13.83	37	24.94	58	0.96	47	-0.90	46	-5.04	46	22.62	18	17.22	66
<b>iShares MSCI ACWI ETF</b>	(3/15)	<b>-9.15</b>	<b>45</b>	<b>24.35</b>	<b>39</b>	<b>8.22</b>	<b>21</b>	<b>-2.39</b>	<b>62</b>	<b>4.64</b>	<b>28</b>	<b>22.91</b>	<b>63</b>	<b>15.99</b>	<b>51</b>
American Funds New Perspective R6	(3/15)	-5.56	18	29.30	16	2.19	77	5.63	6	3.56	40	27.23	38	21.19	14
<b>MSCI EAFE NR USD</b>		<b>-13.79</b>	<b>--</b>	<b>25.03</b>	<b>--</b>	<b>1.00</b>	<b>--</b>	<b>-0.81</b>	<b>--</b>	<b>-4.90</b>	<b>--</b>	<b>22.78</b>	<b>--</b>	<b>17.32</b>	<b>--</b>
<b>MSCI ACWI NR USD</b>		<b>-9.42</b>	<b>--</b>	<b>23.97</b>	<b>--</b>	<b>7.86</b>	<b>--</b>	<b>-2.36</b>	<b>--</b>	<b>4.16</b>	<b>--</b>	<b>22.80</b>	<b>--</b>	<b>16.13</b>	<b>--</b>
Hartford Schroders Emerging Mkts Eq Y	(11/12)	-15.42	45	41.10	18	10.53	--	-12.68	--	-4.61	--	-2.28	--	21.73	--
<b>MSCI EM PR USD</b>		<b>-16.64</b>	<b>--</b>	<b>34.35</b>	<b>--</b>	<b>8.58</b>	<b>--</b>	<b>-16.96</b>	<b>--</b>	<b>-4.63</b>	<b>--</b>	<b>-4.98</b>	<b>--</b>	<b>15.15</b>	<b>--</b>

Data Source: Morningstar, SEI Investments

Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

# COUNTY OF CONTRA COSTA

## For Period Ending December 31, 2018

REIT EQUITY FUNDS															
Fund Name	Inception	2018 Return	Rank	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
Vanguard Real Estate ETF	(6/17)	-5.95	58	4.95	57	8.53	17	2.37	65	30.29	33	2.42	27	17.67	30
<b>Wilshire US REIT TR USD</b>		<b>-4.84</b>	<b>--</b>	<b>4.18</b>	<b>--</b>	<b>7.24</b>	<b>--</b>	<b>4.23</b>	<b>--</b>	<b>31.78</b>	<b>--</b>	<b>1.86</b>	<b>--</b>	<b>17.59</b>	<b>--</b>
BOND FUNDS															
Core Fixed Income Portfolio		.14	24	3.49	59	3.63	37	0.78	14	4.74	70	-1.40	41	5.42	69
PIMCO Total Return Instl		-0.26	39	5.13	10	2.60	63	0.73	15	4.69	71	-1.92	60	10.36	12
PGIM Total Return Bond R6	(5/16)	-0.63	57	6.71	2	4.83	13	0.09	44	7.25	5	-0.91	28	9.96	14
<b>BBgBarc US Agg Bond TR USD</b>		<b>0.01</b>	<b>--</b>	<b>3.54</b>	<b>--</b>	<b>2.65</b>	<b>--</b>	<b>0.55</b>	<b>--</b>	<b>5.97</b>	<b>--</b>	<b>-2.02</b>	<b>--</b>	<b>4.21</b>	<b>--</b>
ALTERNATIVE FUNDS															
BlackRock Strategic Income Opps K	(7/13)	-0.47	46	4.97	37	3.65	--	-0.30	--	3.89	--	3.28	--	9.92	--
AQR Equity Market Neutral I	(2/16)	-11.73	95	5.84	24	5.85	18	17.60	1	--	--	--	--	--	--
Eaton Vance Gbl Macr Absolute Return I	(7/13)	-3.29	81	4.29	47	4.00	61	2.63	7	3.03	18	-0.24	58	4.11	79
<b>Dynamic Alternatives Index</b>		<b>-4.24</b>	<b>--</b>	<b>5.07</b>	<b>--</b>	<b>2.29</b>	<b>--</b>	<b>-5.19</b>	<b>--</b>	<b>6.39</b>	<b>--</b>	<b>0.54</b>	<b>--</b>	<b>-1.67</b>	<b>--</b>

Data Source: Morningstar, SEI Investments

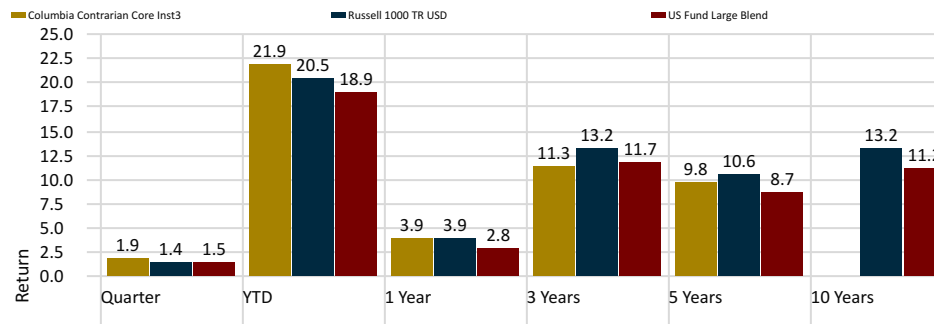
Returns less than one year are not annualized. Past performance is not indicative of future returns. The information presented has been obtained from sources believed accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

### Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★
Inception Date	11/8/2012
Expense Ratio	0.63
Fund Size (Mil)	9,897.46
Portfolio Date	9/30/2019
Manager Name	Guy W. Pope

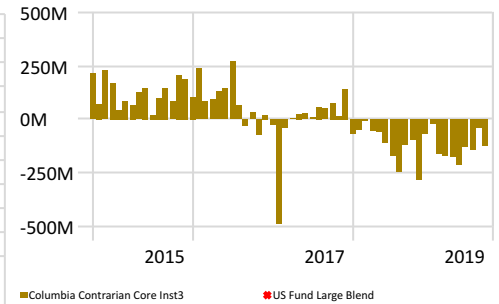
### Returns

As of Date: 9/30/2019 Calculation Benchmark: Russell 1000 TR USD

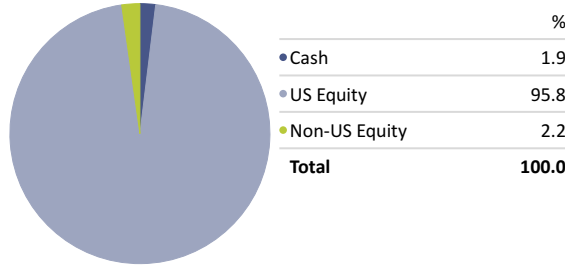


### Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019

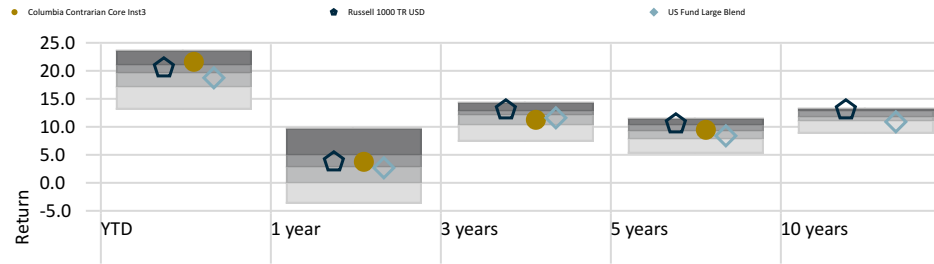


### Asset Allocation



### Performance Relative to Peer Group

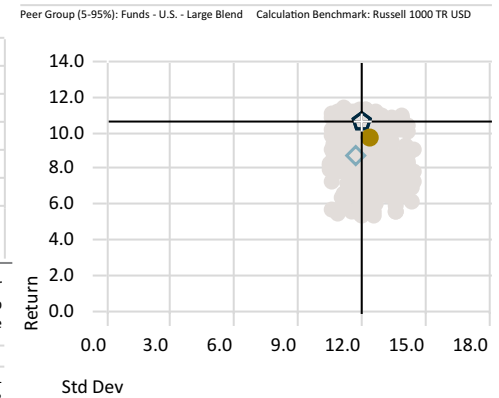
Peer Group (5-95%): Funds - U.S. - Large Blend



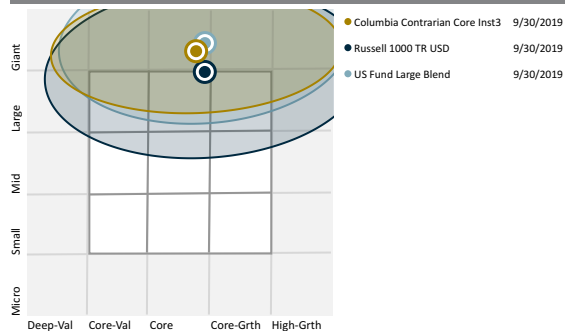
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Columbia Contrarian Core Inst3	21.86	1	3.85	2	11.34	3	9.77	2		
Russell 1000 TR USD	20.53	2	3.87	2	13.19	1	10.62	1	13.23	1
US Fund Large Blend	18.95	3	2.84	3	11.74	3	8.70	3	11.20	3

### Risk-Reward

Time Period: 10/1/2014 to 9/30/2019



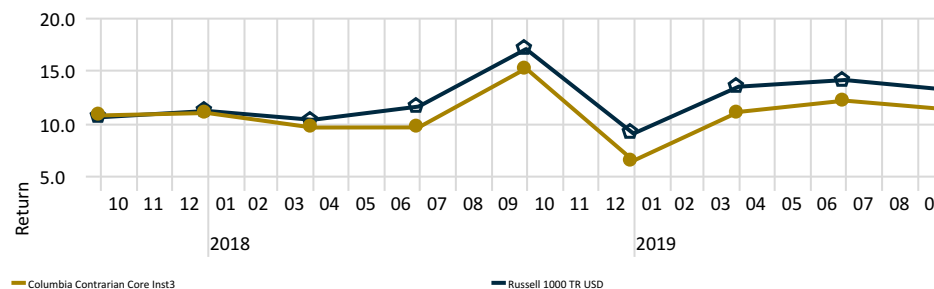
### Holdings-Based Style Map



### Rolling Returns

Time Period: 10/1/2014 to 9/30/2019

Peer Group (5-95%): Funds - U.S. - Large Blend Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 1000 TR USD



### Columbia Contrarian Core Inst3 - Risk

Time Period: 10/1/2014 to 9/30/2019

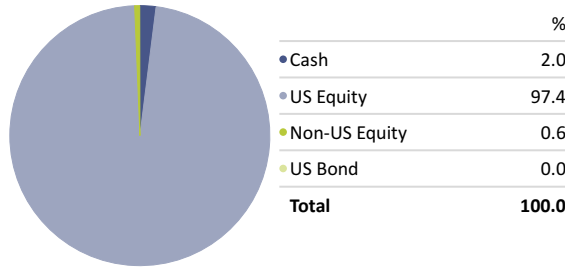
Calculation Benchmark: Russell 1000 TR USD

	Inv	Bmk1
Return	9.77	10.62
Std Dev	12.32	12.02
Downside Deviation	1.67	0.00
Alpha	-0.85	0.00
Beta	1.01	1.00
R2	97.18	100.00
Sharpe Ratio (arith)	0.71	0.80
Tracking Error	2.07	0.00

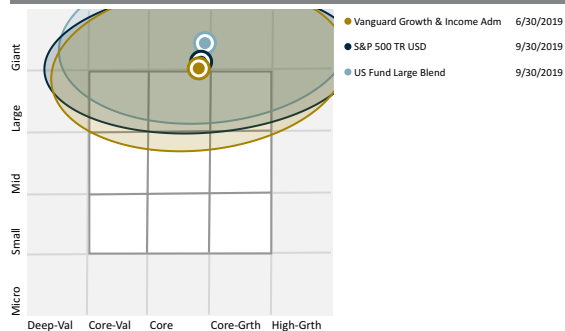
## Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★★
Inception Date	5/14/2001
Expense Ratio	0.23
Fund Size (Mil)	11,271.60
Portfolio Date	6/30/2019
Manager Name	Multiple

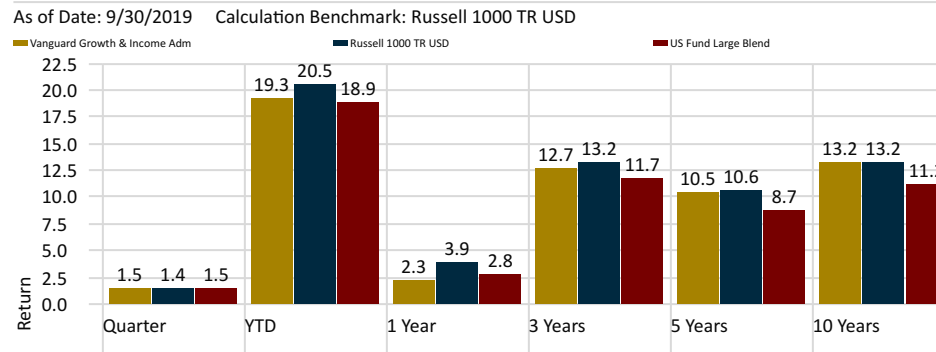
## Asset Allocation



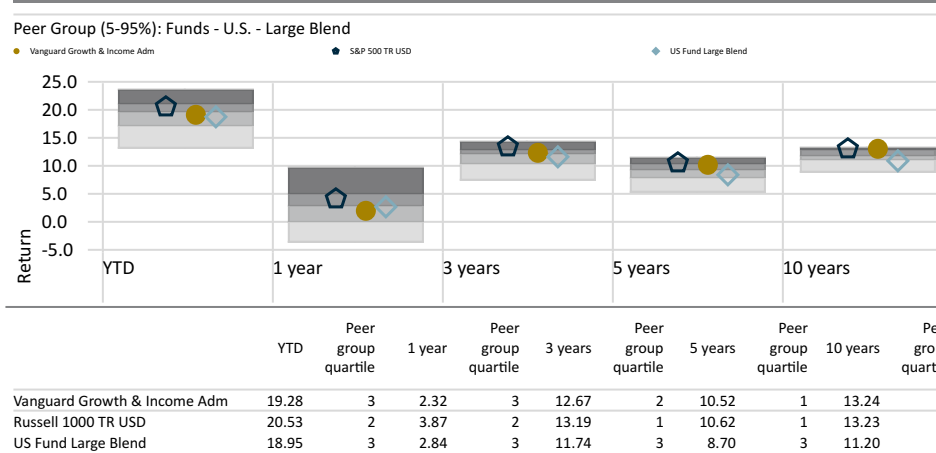
## Holdings-Based Style Map



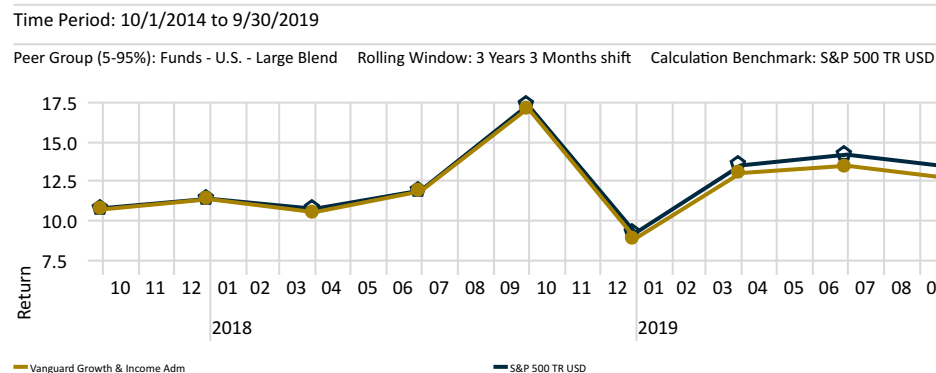
## Returns



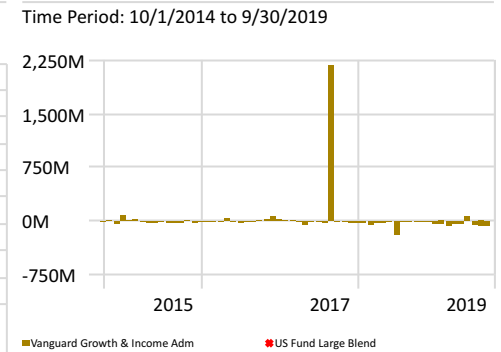
## Performance Relative to Peer Group



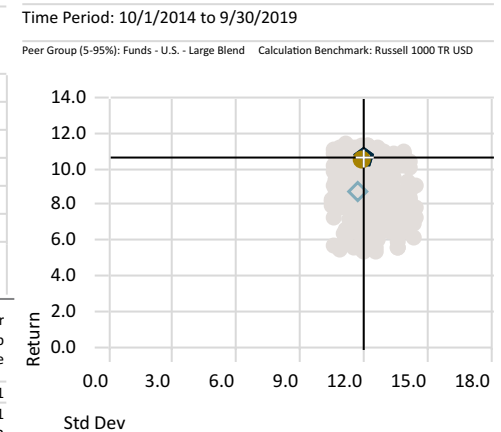
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## Vanguard Growth & Income Adm - Risk

Time Period: 10/1/2014 to 9/30/2019

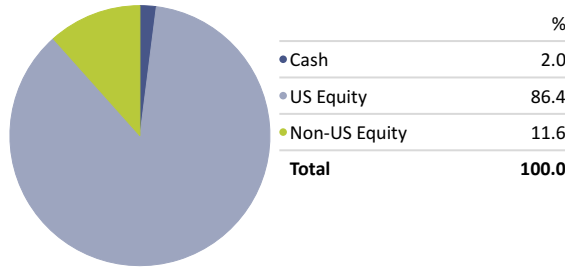
Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	10.52	10.84
Std Dev	11.89	11.93
Downside Deviation	0.70	0.00
Alpha	-0.23	0.00
Beta	0.99	1.00
R2	99.32	100.00
Sharpe Ratio (arith)	0.80	0.82
Tracking Error	0.98	0.00

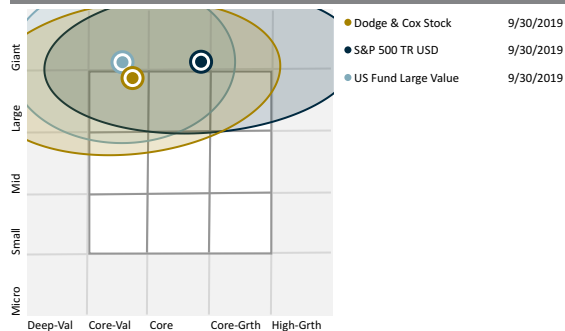
### Key Information

Morningstar Category	US Fund Large Value
Morningstar Rating Overall	★★★★
Inception Date	1/4/1965
Expense Ratio	0.52
Fund Size (Mil)	69,398.18
Portfolio Date	9/30/2019
Manager Name	Multiple

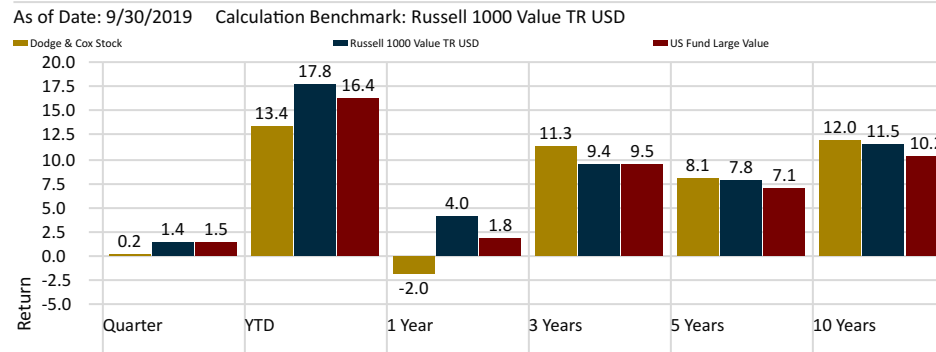
### Asset Allocation



### Holdings-Based Style Map



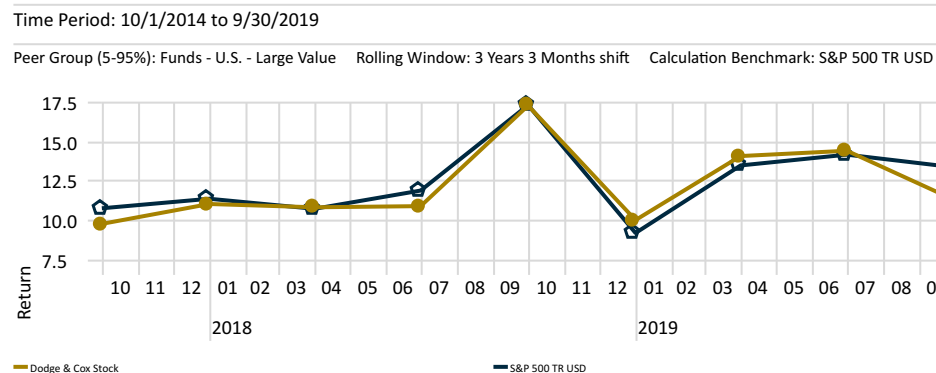
### Returns



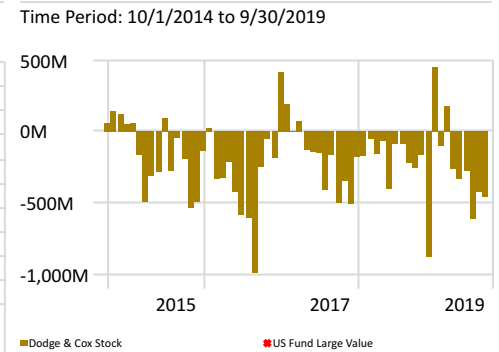
### Performance Relative to Peer Group



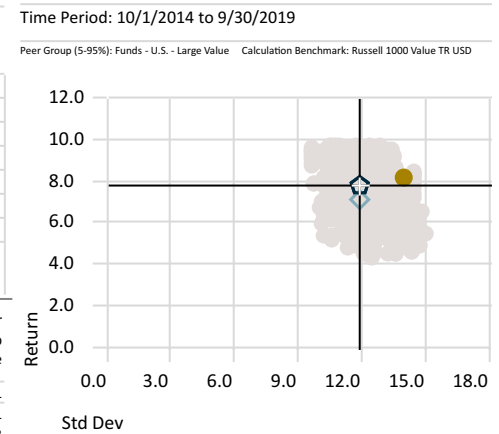
### Rolling Returns



### Monthly Estimated Fund-Level Net Flow



### Risk-Reward



### Dodge & Cox Stock - Risk

Time Period: 10/1/2014 to 9/30/2019

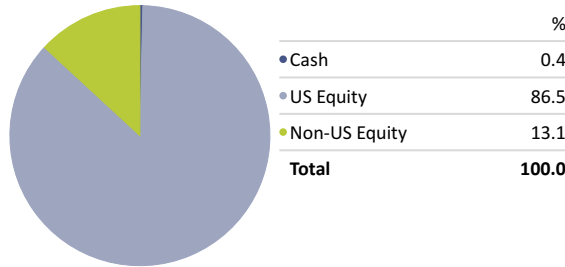
Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	8.10	10.84
Std Dev	13.94	11.93
Downside Deviation	3.79	0.00
Alpha	-3.14	0.00
Beta	1.09	1.00
R2	86.53	100.00
Sharpe Ratio (arith)	0.51	0.82
Tracking Error	5.23	0.00

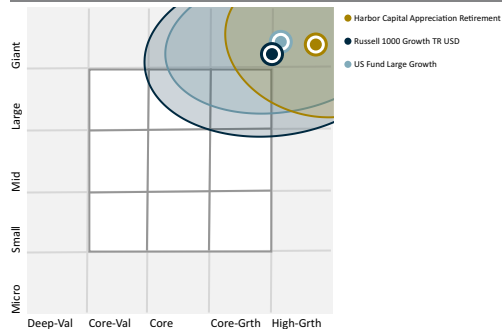
## Key Information

Morningstar Category	US Fund Large Growth
Morningstar Rating Overall	★★★★
Inception Date	3/1/2016
Expense Ratio	0.58
Fund Size (Mil)	29,807.12
Portfolio Date	9/30/2019
Manager Name	Multiple

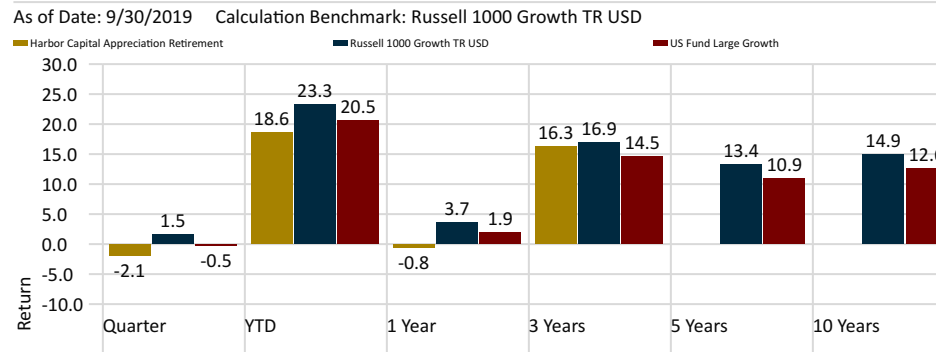
## Asset Allocation



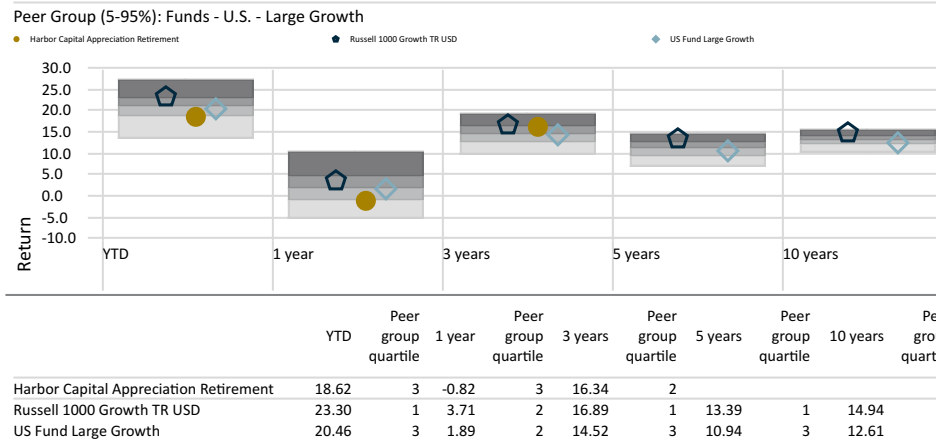
## Holdings-Based Style Map



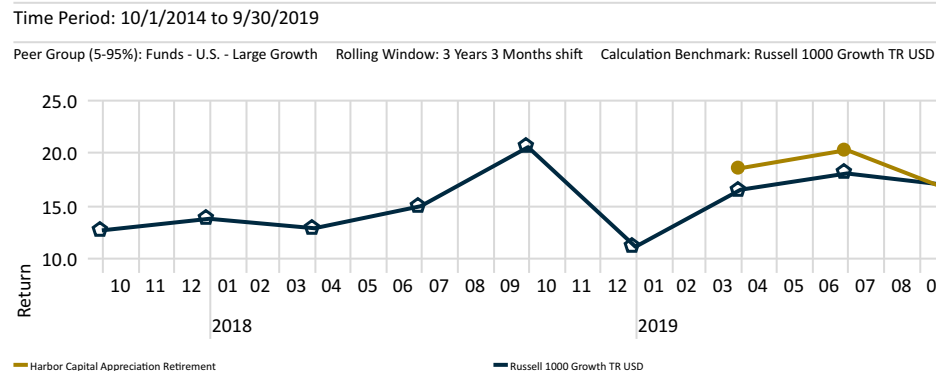
## Returns



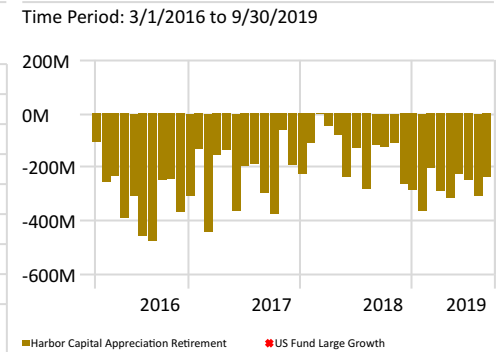
## Performance Relative to Peer Group



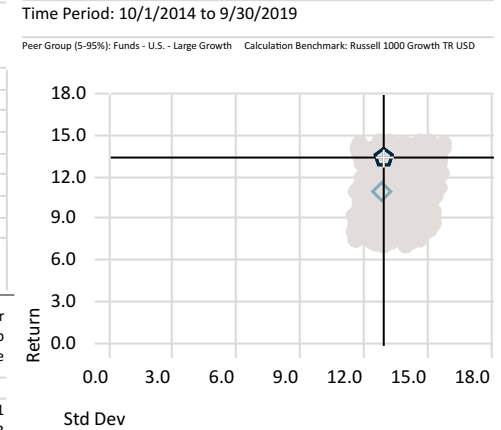
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## Harbor Capital Appreciation Retirement - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: Russell 1000 Growth TR USD

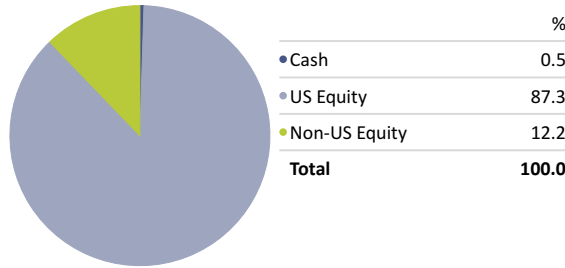
	Inv	Bmk1
Return		13.39
Std Dev		12.88
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.96
Tracking Error		0.00



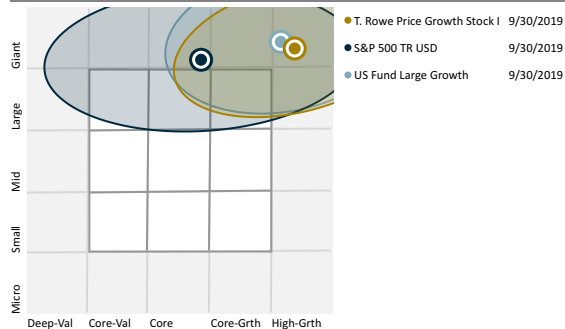
## Key Information

Morningstar Category	US Fund Large Growth
Morningstar Rating Overall	★★★★
Inception Date	8/28/2015
Expense Ratio	0.52
Fund Size (Mil)	54,204.67
Portfolio Date	9/30/2019
Manager Name	Joseph B. Fath

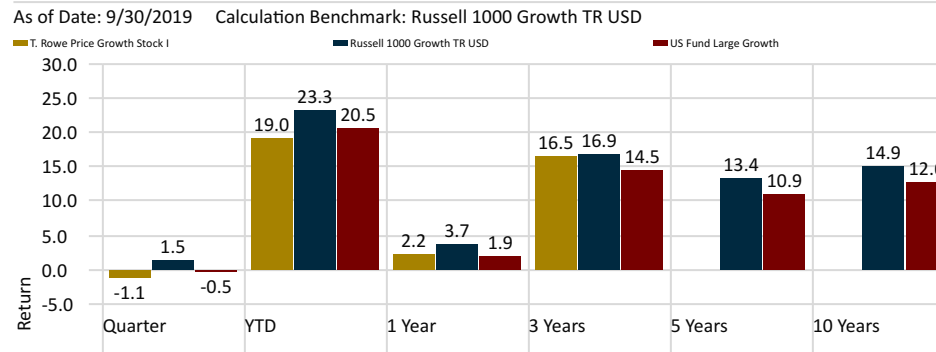
## Asset Allocation



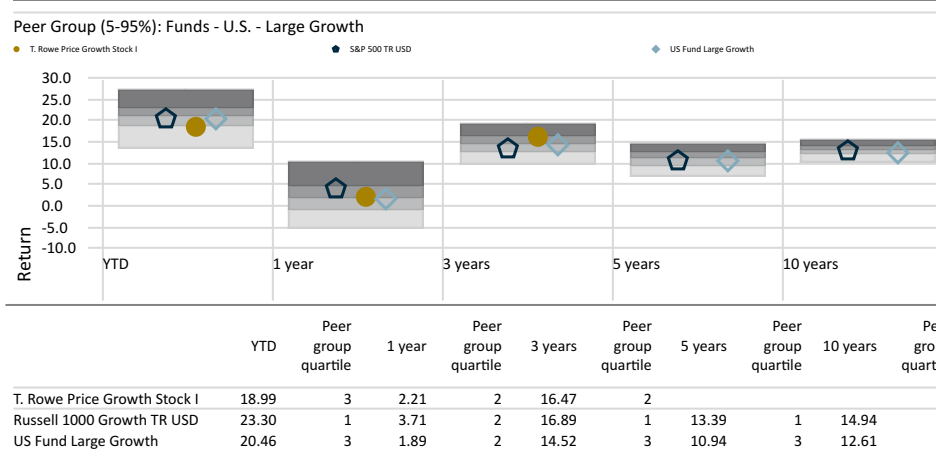
## Holdings-Based Style Map



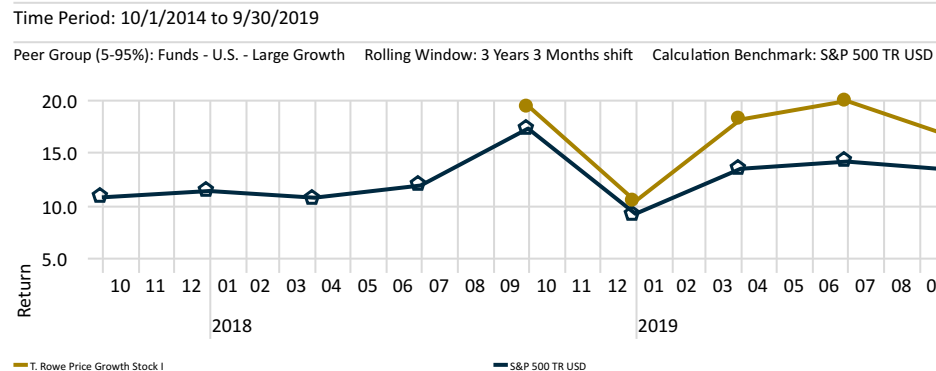
## Returns



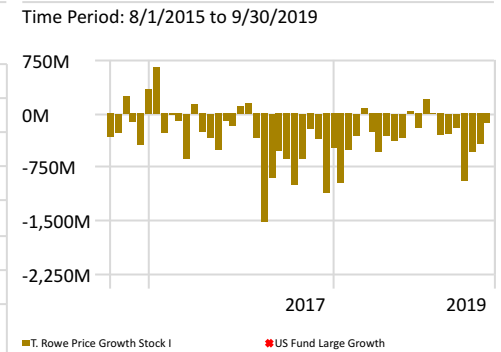
## Performance Relative to Peer Group



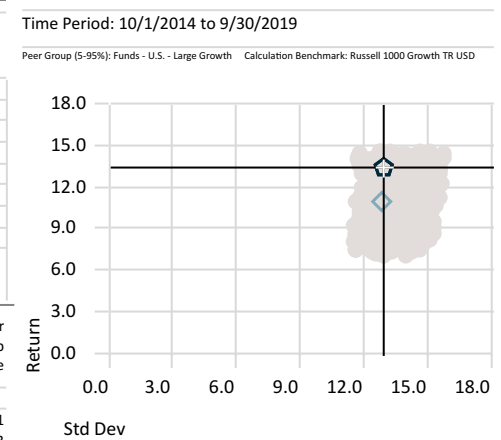
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## T. Rowe Price Growth Stock I - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: S&P 500 TR USD

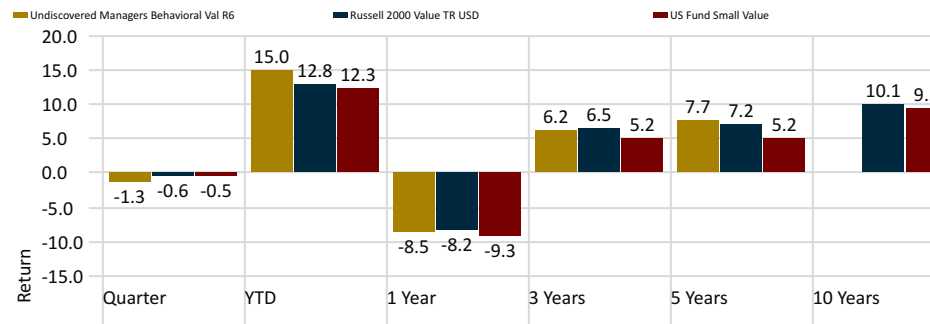
	Inv	Bmk1
Return		10.84
Std Dev		11.93
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.82
Tracking Error		0.00

## Key Information

Morningstar Category	US Fund Small Value
Morningstar Rating Overall	★★★★
Inception Date	4/30/2013
Expense Ratio	0.87
Fund Size (Mil)	5,305.00
Portfolio Date	8/31/2019
Manager Name	Multiple

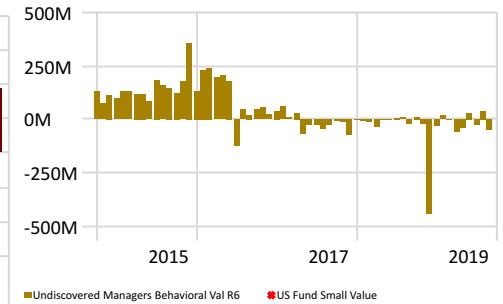
## Returns

As of Date: 9/30/2019 Calculation Benchmark: Russell 2000 Value TR USD

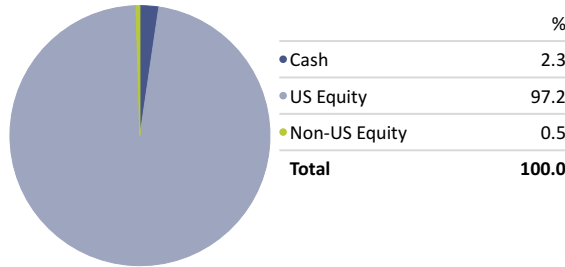


## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019

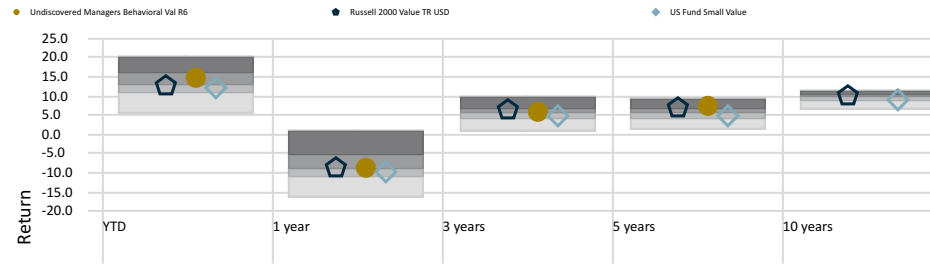


## Asset Allocation



## Performance Relative to Peer Group

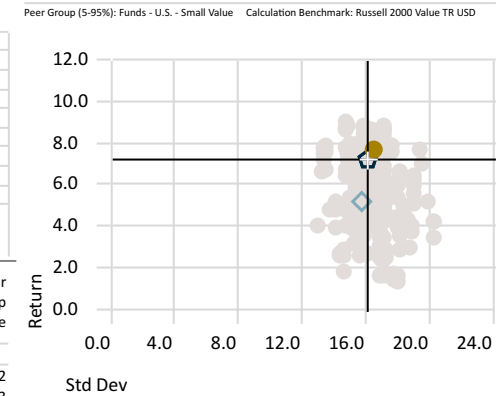
Peer Group (5-95%): Funds - U.S. - Small Value



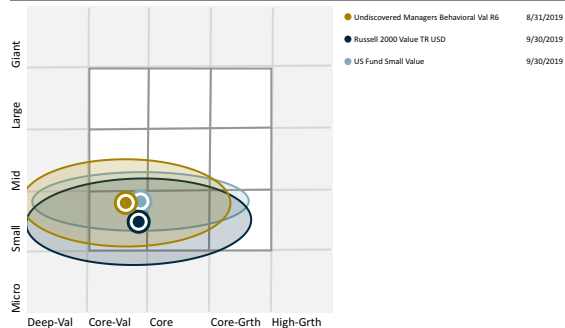
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Undiscovered Managers Behavioral Val R6	14.96	2	-8.51	2	6.20	2	7.66	1		
Russell 2000 Value TR USD	12.82	3	-8.24	2	6.54	1	7.17	1	10.06	2
US Fund Small Value	12.26	3	-9.29	3	5.15	3	5.20	3	9.49	3

## Risk-Reward

Time Period: 10/1/2014 to 9/30/2019



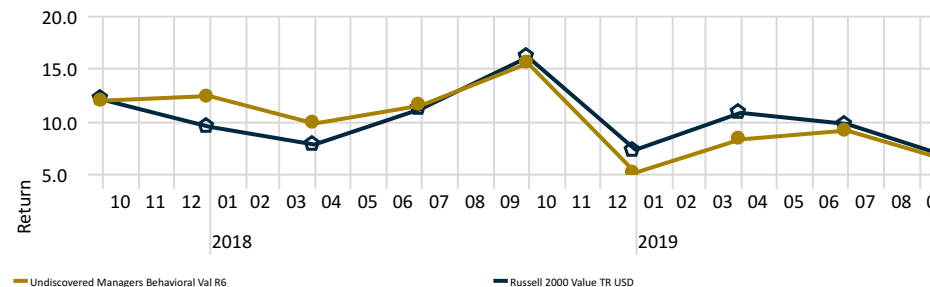
## Holdings-Based Style Map



## Rolling Returns

Time Period: 10/1/2014 to 9/30/2019

Peer Group (5-95%): Funds - U.S. - Small Value Rolling Window: 3 Years 3 Months shift Calculation Benchmark: Russell 2000 Value TR USD



## Undiscovered Managers Behavioral Val R6 - Risk

Time Period: 10/1/2014 to 9/30/2019

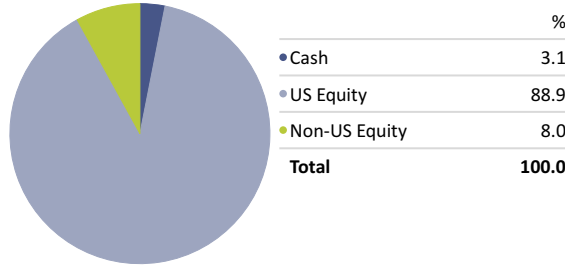
Calculation Benchmark: Russell 2000 Value TR USD

	Inv	Bmk1
Return	7.66	7.17
Std Dev	16.49	16.08
Downside Deviation	4.09	0.00
Alpha	0.76	0.00
Beta	0.97	1.00
R2	89.30	100.00
Sharpe Ratio (arith)	0.40	0.38
Tracking Error	5.43	0.00

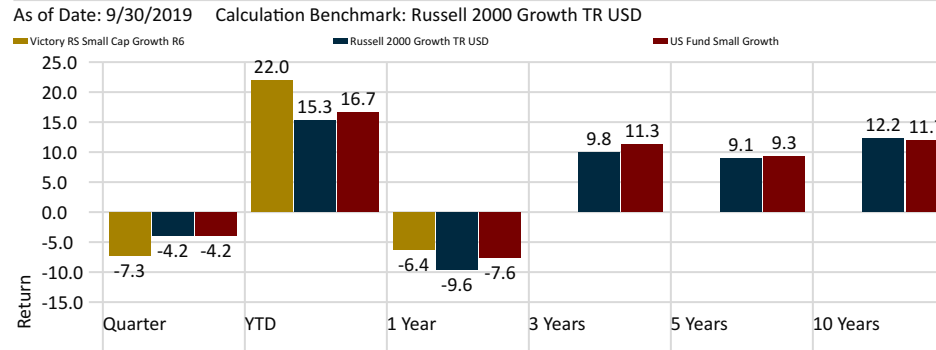
## Key Information

Morningstar Category	US Fund Small Growth
Morningstar Rating Overall	
Inception Date	7/12/2017
Expense Ratio	1.06
Fund Size (Mil)	2,096.22
Portfolio Date	9/30/2019
Manager Name	Multiple

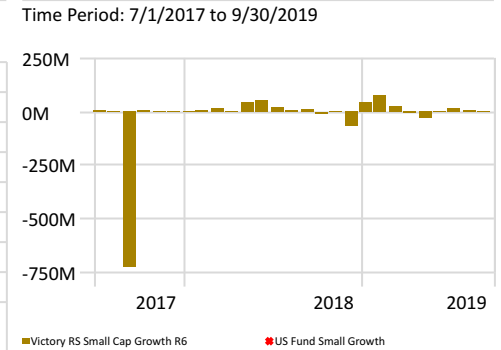
## Asset Allocation



## Returns



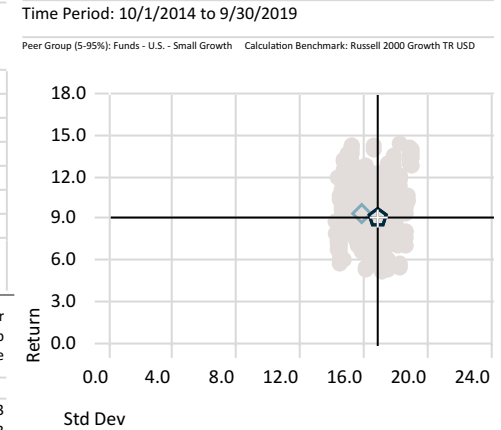
## Monthly Estimated Fund-Level Net Flow



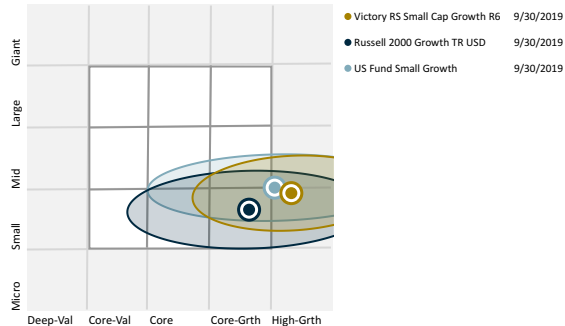
## Performance Relative to Peer Group



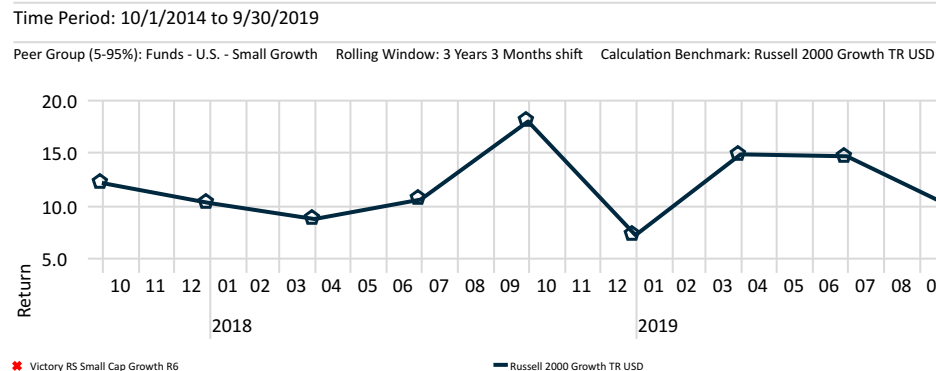
## Risk-Reward



## Holdings-Based Style Map



## Rolling Returns



## Victory RS Small Cap Growth R6 - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: Russell 2000 Growth TR USD

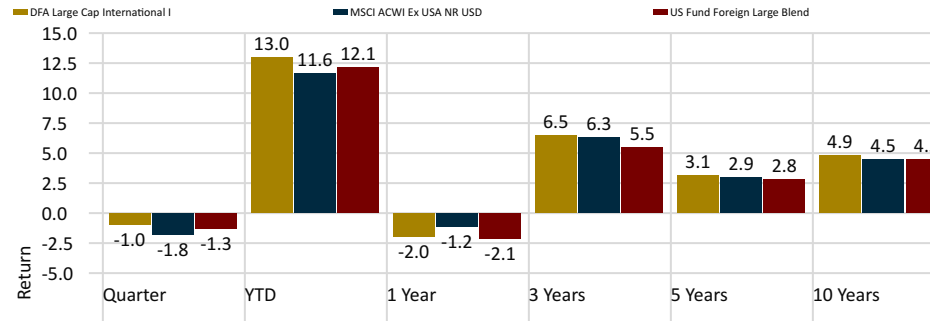
	Inv	Bmk1
Return		9.08
Std Dev		16.91
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.48
Tracking Error		0.00

## Key Information

Morningstar Category	US Fund Foreign Large Blend
Morningstar Rating Overall	★★★
Inception Date	7/17/1991
Expense Ratio	0.23
Fund Size (Mil)	5,349.69
Portfolio Date	8/31/2019
Manager Name	Multiple

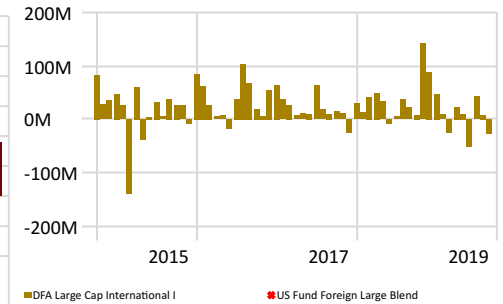
## Returns

As of Date: 9/30/2019 Calculation Benchmark: MSCI ACWI Ex USA NR USD

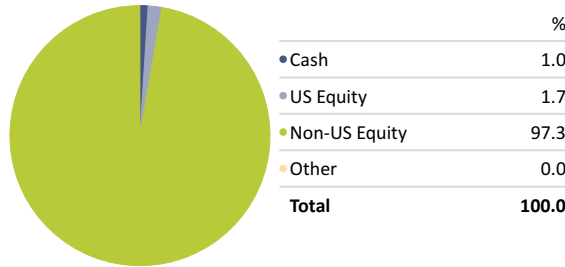


## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019

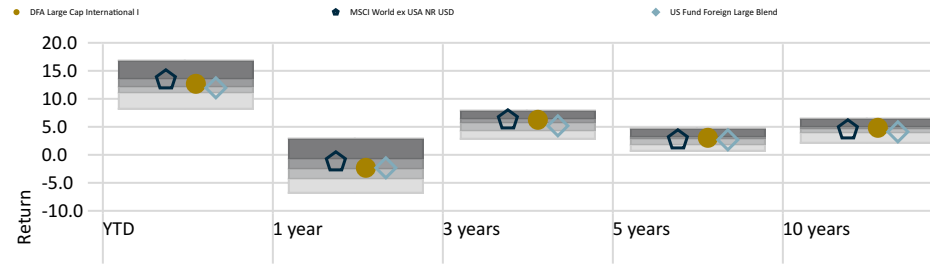


## Asset Allocation



## Performance Relative to Peer Group

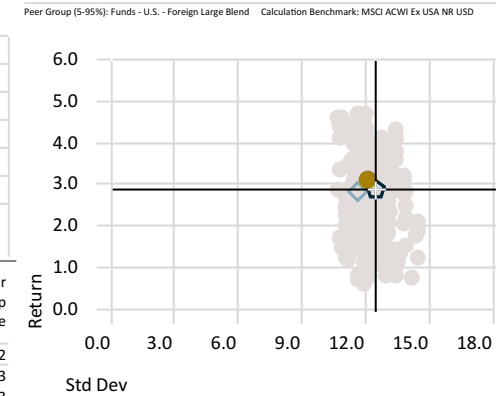
Peer Group (5-95%): Funds - U.S. - Foreign Large Blend



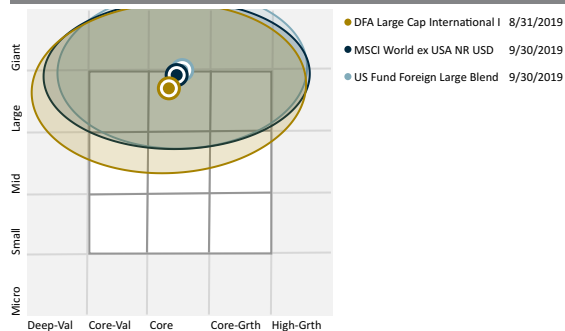
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
DFA Large Cap International I	12.98	2	-2.04	2	6.45	1	3.13	2	4.86	2
MSCI ACWI Ex USA NR USD	11.56	3	-1.23	2	6.33	1	2.90	2	4.45	3
US Fund Foreign Large Blend	12.07	3	-2.14	2	5.47	3	2.85	2	4.48	3

## Risk-Reward

Time Period: 10/1/2014 to 9/30/2019



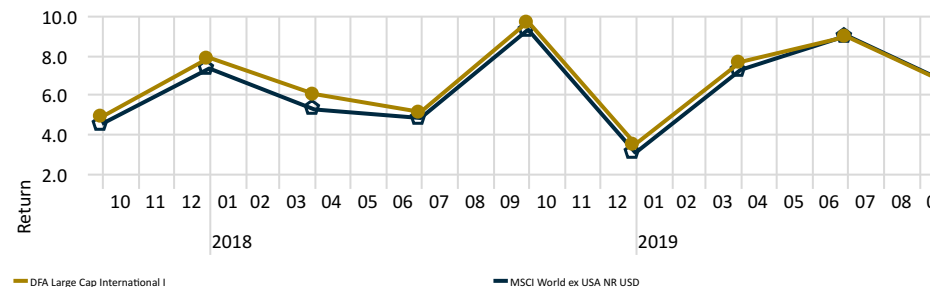
## Holdings-Based Style Map



## Rolling Returns

Time Period: 10/1/2014 to 9/30/2019

Peer Group (5-95%): Funds - U.S. - Foreign Large Blend Rolling Window: 3 Years 3 Months shift Calculation Benchmark: MSCI World ex USA NR USD



## DFA Large Cap International I - Risk

Time Period: 10/1/2014 to 9/30/2019

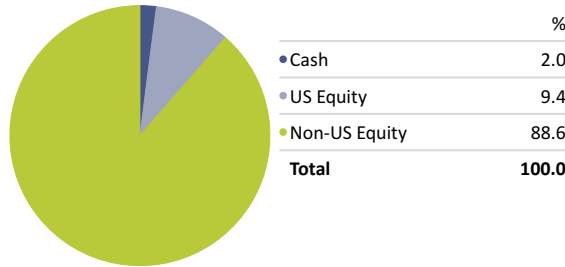
Calculation Benchmark: MSCI World ex USA NR USD

	Inv	Bmk1
Return	3.13	3.06
Std Dev	12.07	12.17
Downside Deviation	1.34	0.00
Alpha	0.11	0.00
Beta	0.98	1.00
R2	97.72	100.00
Sharpe Ratio (arith)	0.17	0.17
Tracking Error	1.84	0.00

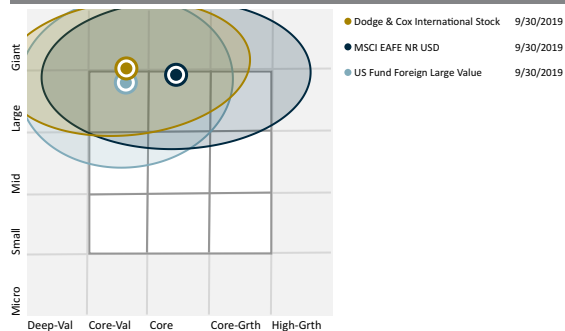
## Key Information

Morningstar Category	US Fund Foreign Large Value
Morningstar Rating Overall	★★★
Inception Date	5/1/2001
Expense Ratio	0.63
Fund Size (Mil)	47,225.36
Portfolio Date	9/30/2019
Manager Name	Multiple

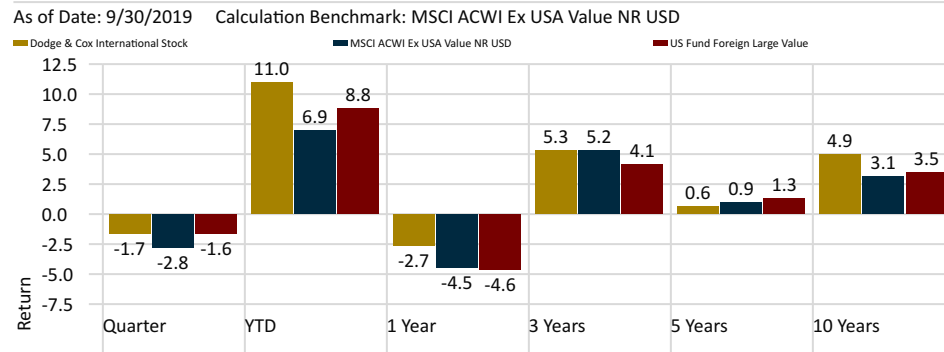
## Asset Allocation



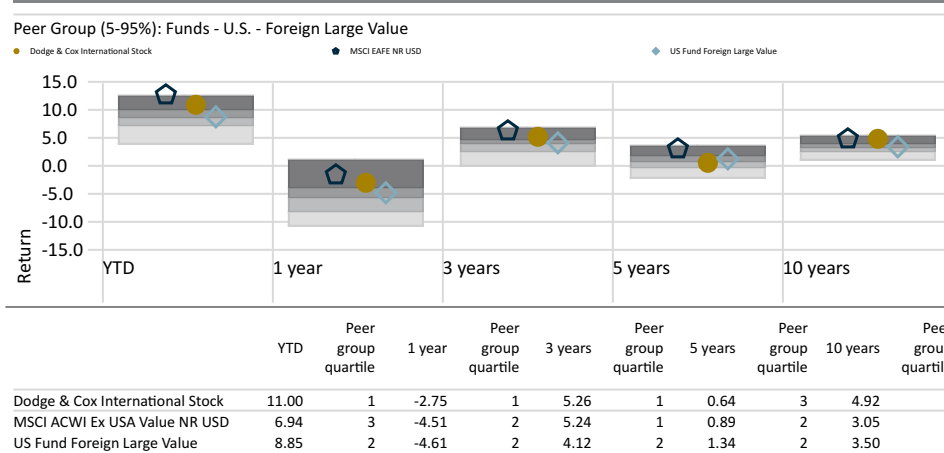
## Holdings-Based Style Map



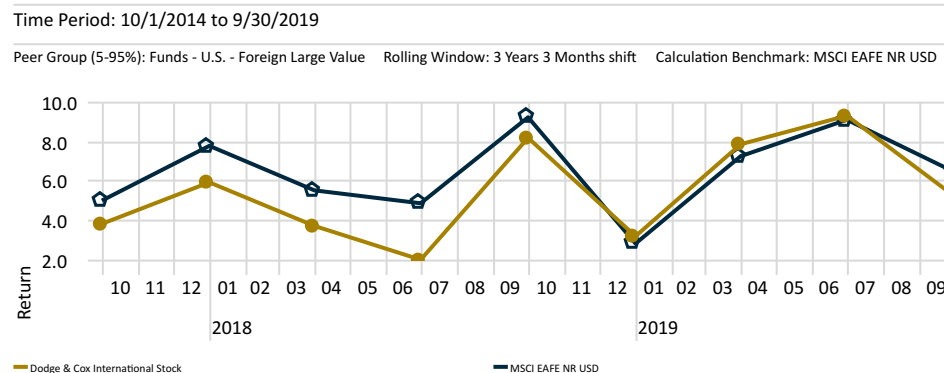
## Returns



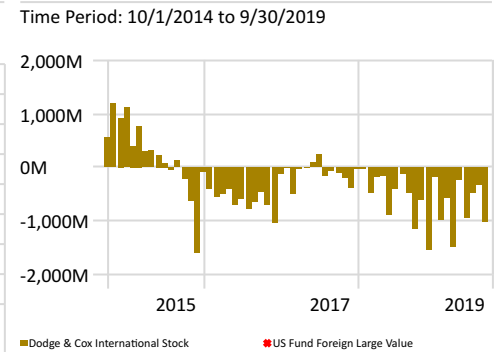
## Performance Relative to Peer Group



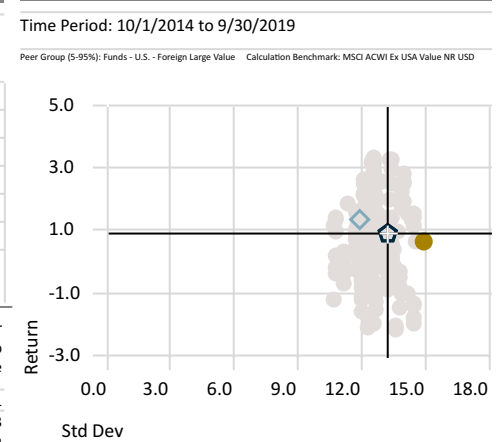
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## Dodge & Cox International Stock - Risk

Time Period: 10/1/2014 to 9/30/2019

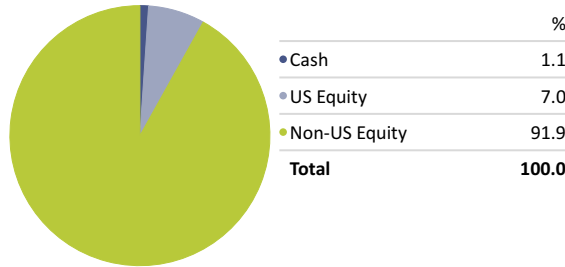
Calculation Benchmark: MSCI EAFE NR USD

	Inv	Bmk1
Return	0.64	3.27
Std Dev	14.93	12.24
Downside Deviation	3.99	0.00
Alpha	-2.66	0.00
Beta	1.15	1.00
R2	88.67	100.00
Sharpe Ratio (arith)	-0.03	0.18
Tracking Error	5.35	0.00

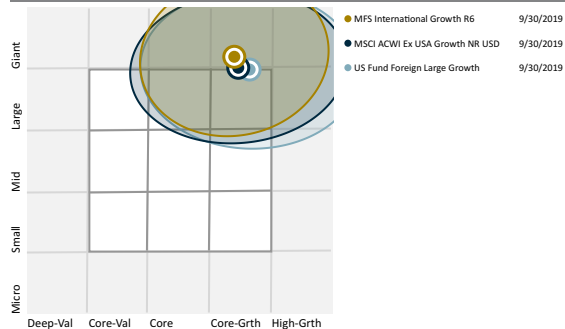
## Key Information

Morningstar Category	US Fund Foreign Large Growth
Morningstar Rating Overall	★★★★
Inception Date	5/1/2006
Expense Ratio	0.77
Fund Size (Mil)	9,974.65
Portfolio Date	9/30/2019
Manager Name	Multiple

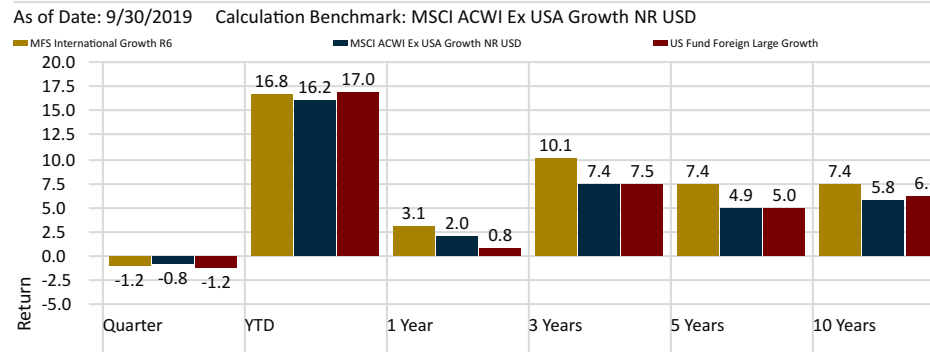
## Asset Allocation



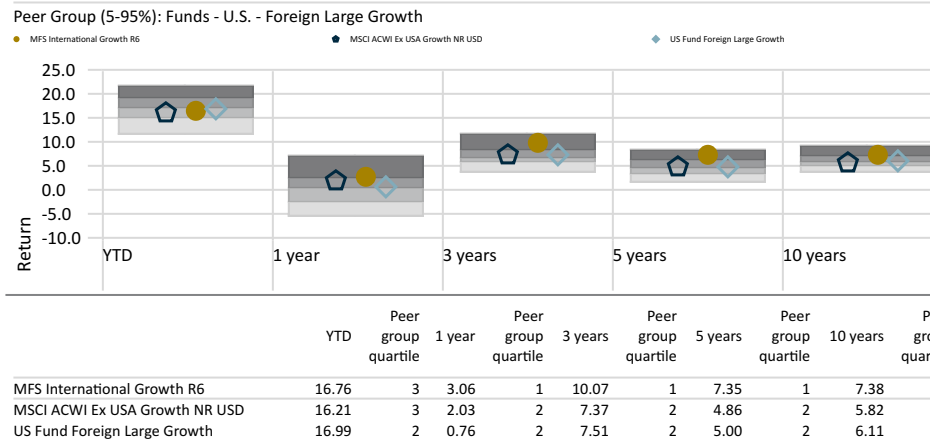
## Holdings-Based Style Map



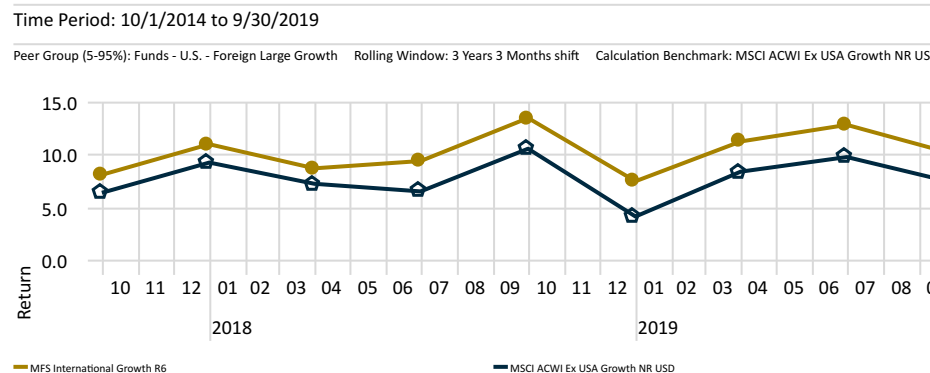
## Returns



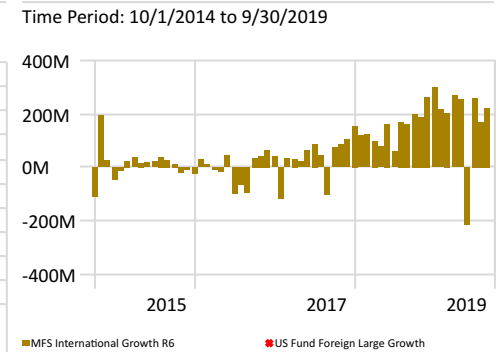
## Performance Relative to Peer Group



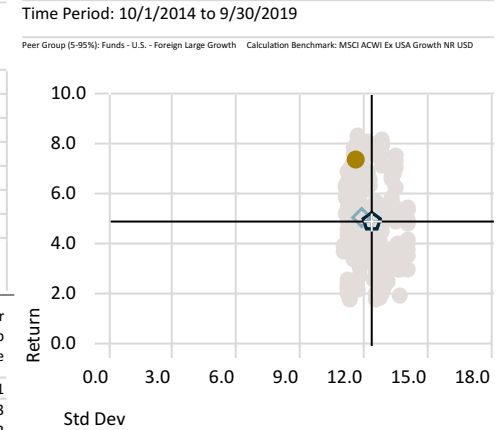
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## MFS International Growth R6 - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD

	Inv	Bmk1
Return	7.35	4.86
Std Dev	11.65	12.32
Downside Deviation	1.68	0.00
Alpha	2.64	0.00
Beta	0.92	1.00
R2	94.60	100.00
Sharpe Ratio (arith)	0.54	0.31
Tracking Error	2.88	0.00

## Key Information

Morningstar Category US Fund Diversified Emerging Mkts

Morningstar Rating Overall

Inception Date 10/24/2016

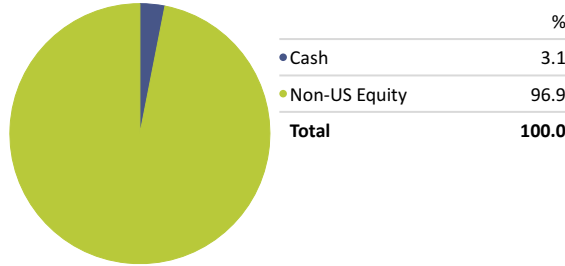
Expense Ratio 1.15

Fund Size (Mil) 3,588.18

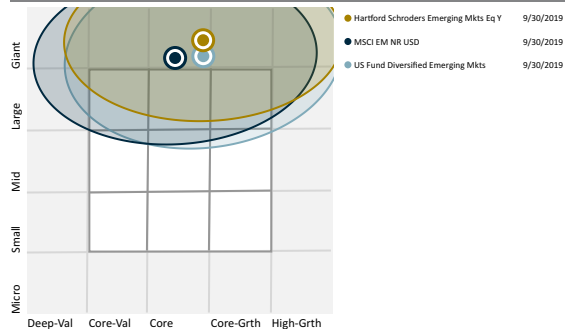
Portfolio Date 9/30/2019

Manager Name Multiple

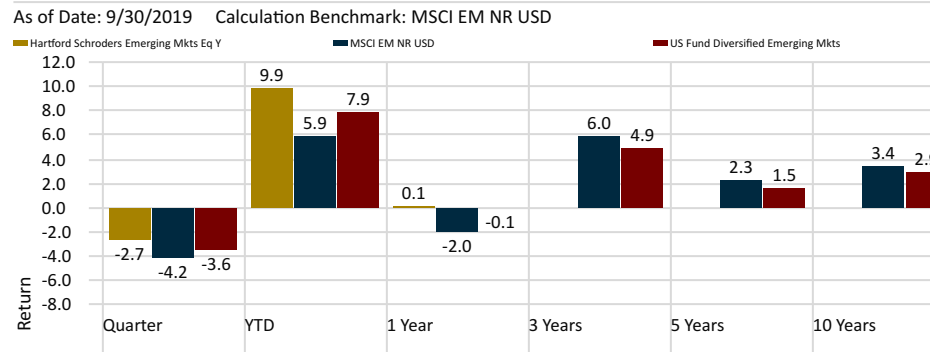
## Asset Allocation



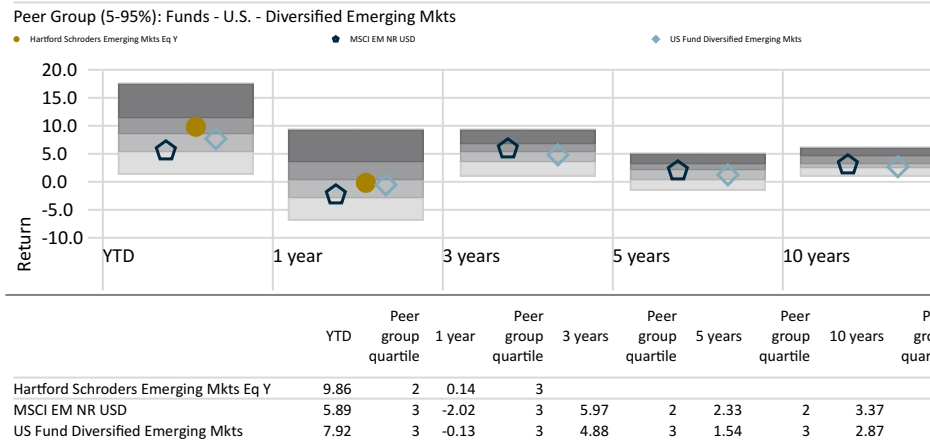
## Holdings-Based Style Map



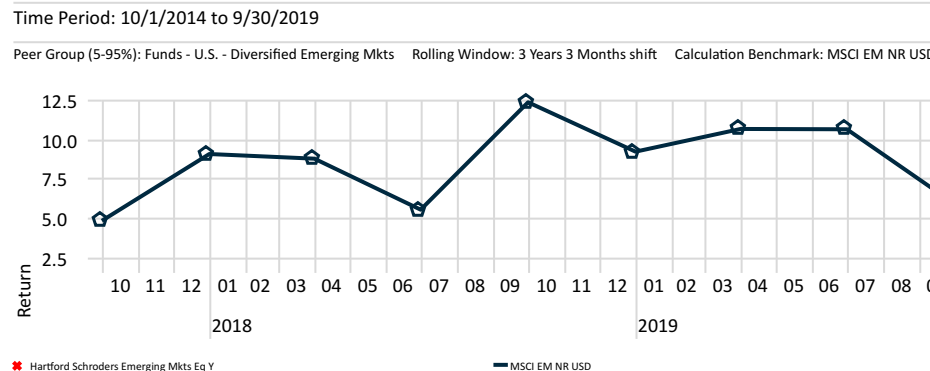
## Returns



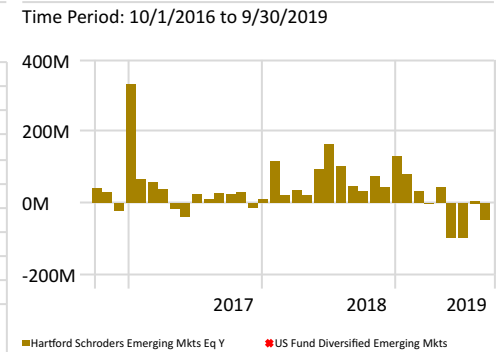
## Performance Relative to Peer Group



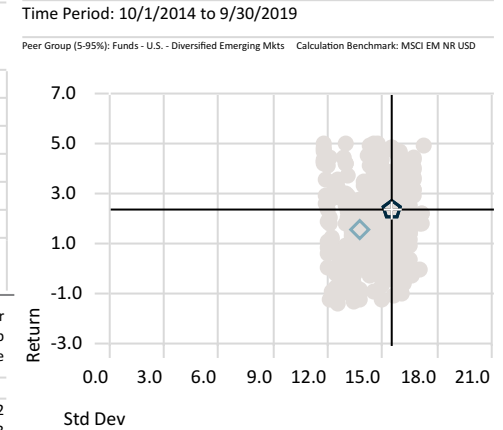
## Rolling Returns



## Monthly Estimated Fund-Level Net Flow



## Risk-Reward



## Hartford Schroders Emerging Mkts Eq Y - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: MSCI EM NR USD

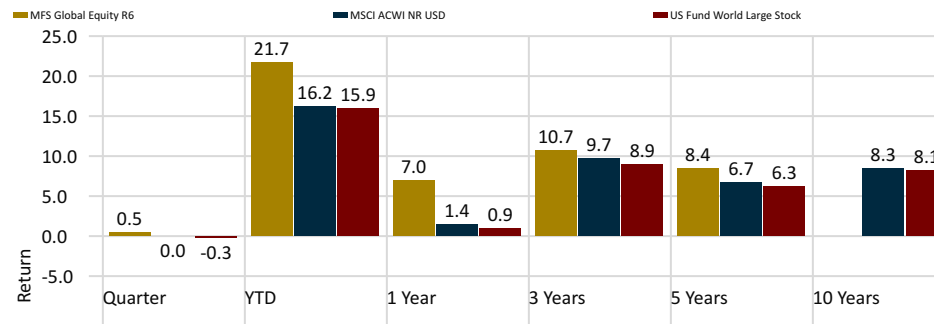
	Inv	Bmk1
Return		2.33
Std Dev		15.55
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.08
Tracking Error		0.00

## Key Information

Morningstar Category	US Fund World Large Stock
Morningstar Rating Overall	★★★★
Inception Date	6/1/2012
Expense Ratio	0.81
Fund Size (Mil)	2,971.48
Portfolio Date	9/30/2019
Manager Name	Multiple

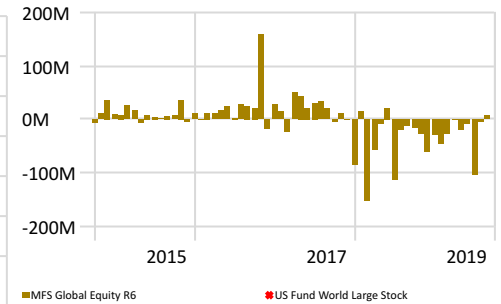
## Returns

As of Date: 9/30/2019 Calculation Benchmark: MSCI ACWI NR USD

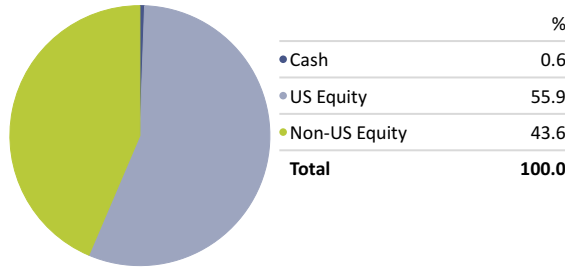


## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019

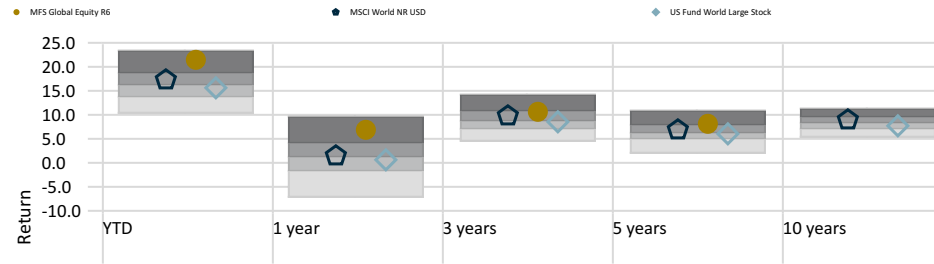


## Asset Allocation



## Performance Relative to Peer Group

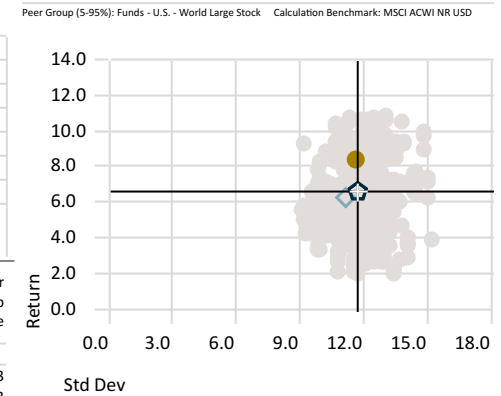
Peer Group (5-95%): Funds - U.S. - World Large Stock



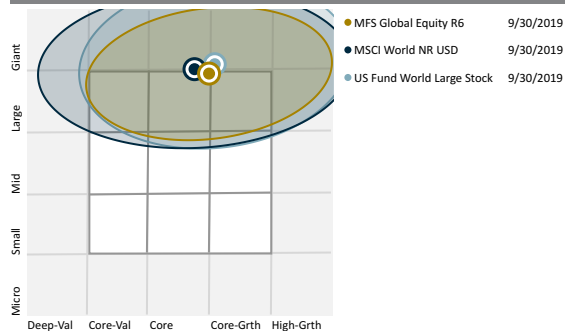
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
MFS Global Equity R6	21.71	1	6.99	1	10.75	2	8.40	1		
MSCI ACWI NR USD	16.20	2	1.38	2	9.71	2	6.65	2	8.35	3
US Fund World Large Stock	15.87	3	0.90	3	8.92	2	6.28	3	8.10	3

## Risk-Reward

Time Period: 10/1/2014 to 9/30/2019



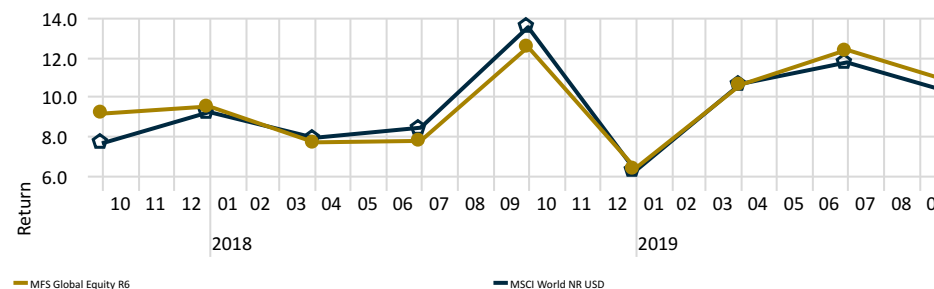
## Holdings-Based Style Map



## Rolling Returns

Time Period: 10/1/2014 to 9/30/2019

Peer Group (5-95%): Funds - U.S. - World Large Stock Rolling Window: 3 Years 3 Months shift Calculation Benchmark: MSCI World NR USD



## MFS Global Equity R6 - Risk

Time Period: 10/1/2014 to 9/30/2019

Calculation Benchmark: MSCI World NR USD

	Inv	Bmk1
Return	8.40	7.18
Std Dev	11.62	11.63
Downside Deviation	1.64	0.00
Alpha	1.32	0.00
Beta	0.97	1.00
R2	94.60	100.00
Sharpe Ratio (arith)	0.63	0.53
Tracking Error	2.72	0.00

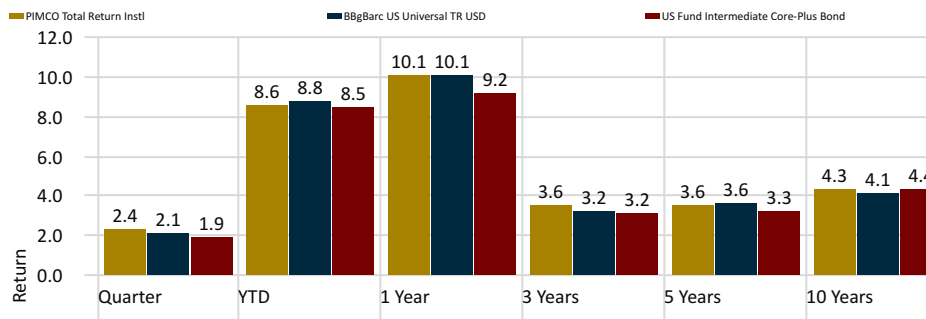


## Key Information

Morningstar Category	US Fund Intermediate Core-Plus Bond
Morningstar Rating Overall	★★★★
Inception Date	5/11/1987
Expense Ratio	0.71
Fund Size (Mil)	68,381.00
Portfolio Date	6/30/2019
Manager Name	Multiple

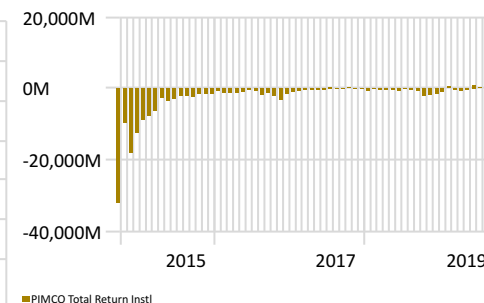
## Returns

As of Date: 9/30/2019 Calculation Benchmark: BBgBarc US Universal TR USD



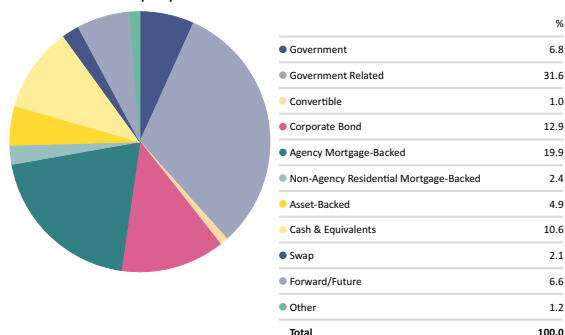
## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019



## PIMCO Total Return Instl - Fixed-Inc Sectors (Morningstar)

Portfolio Date: 6/30/2019



## Performance Relative to Peer Group

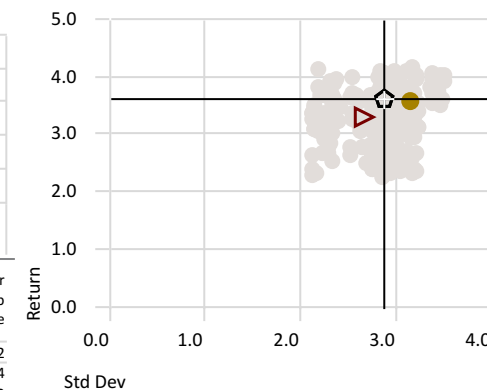
Peer Group (5-95%): Funds - U.S. - Intermediate Core-Plus Bond Calculation Benchmark: BBgBarc US Agg Bond TR USD



	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
PIMCO Total Return Instl	8.58	3	10.08	2	3.56	1	3.58	2	4.32	2
BBgBarc US Agg Bond TR USD	8.52	3	10.30	1	2.92	3	3.38	2	3.75	4
US Fund Intermediate Core-Plus Bond	8.45	3	9.15	3	3.17	2	3.28	3	4.37	2

## Risk-Reward

Time Period: 10/1/2014 to 9/30/2019



## Morningstar Style Box - PIMCO Total Return Instl

Portfolio Date: 6/30/2019

### Morningstar Fixed Income Style Box™ Fixed-Income Stats

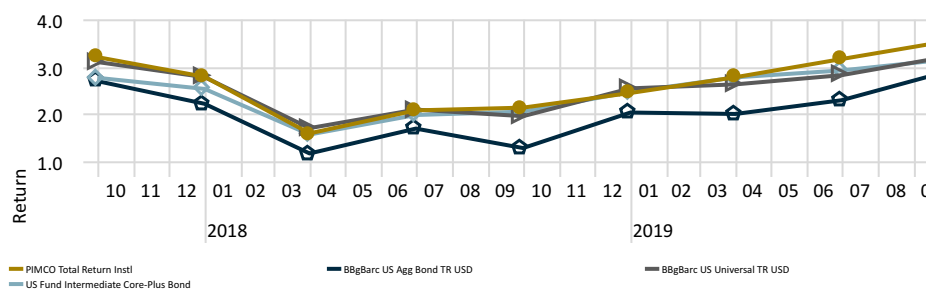
Not Available

Average Eff Duration	5.0
Average Eff Maturity	7.1
Average Coupon	4.3
Average Price	113.4

## Rolling Returns

Time Period: 10/1/2014 to 9/30/2019

Rolling Window: 3 Years 3 Months shift Calculation Benchmark: BBgBarc US Agg Bond TR USD



## PIMCO Total Return Instl - Risk

Time Period: 10/1/2014 to 9/30/2019

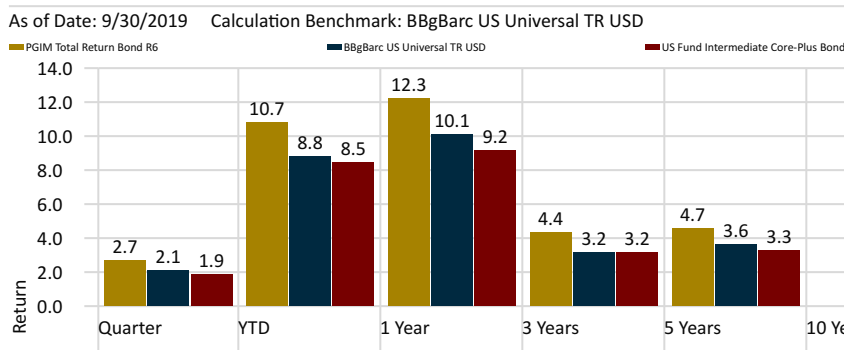
Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Inv	Bmk1
Return	3.58	3.38
Std Dev	3.15	3.08
Downside Deviation	1.05	0.00
Alpha	0.37	0.00
Beta	0.93	1.00
R2	81.63	100.00
Information Ratio (geo)	0.14	
Tracking Error	1.36	0.00

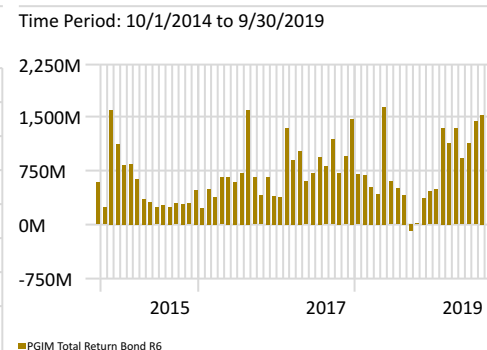
### Key Information

Morningstar Category	US Fund Intermediate Core-Plus Bond
Morningstar Rating Overall	★★★★★
Inception Date	12/27/2010
Expense Ratio	0.39
Fund Size (Mil)	49,272.24
Portfolio Date	9/30/2019
Manager Name	Multiple

### Returns

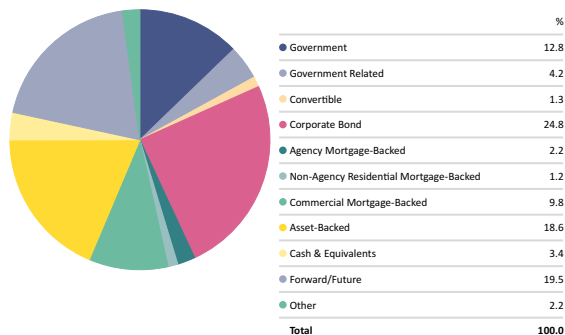


### Monthly Estimated Fund-Level Net Flow

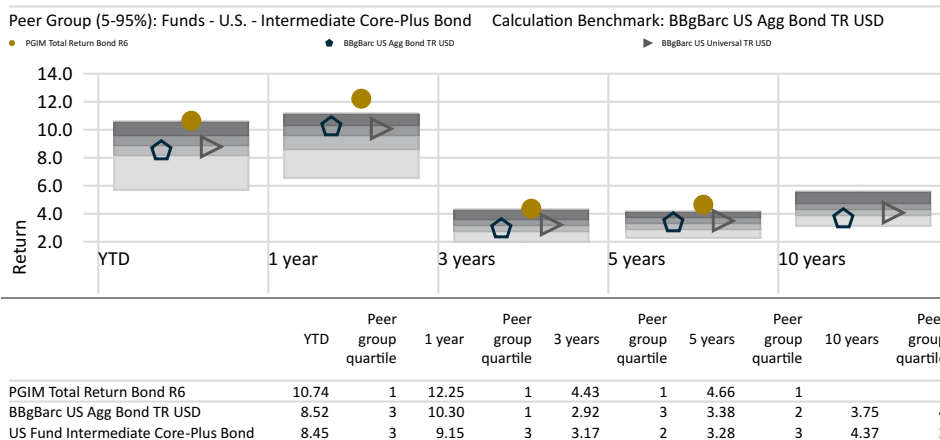


### PGIM Total Return Bond R6 - Fixed-Inc Sectors (Morning

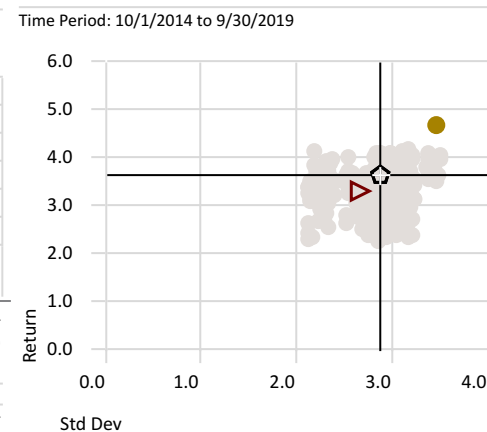
Portfolio Date: 9/30/2019



### Performance Relative to Peer Group

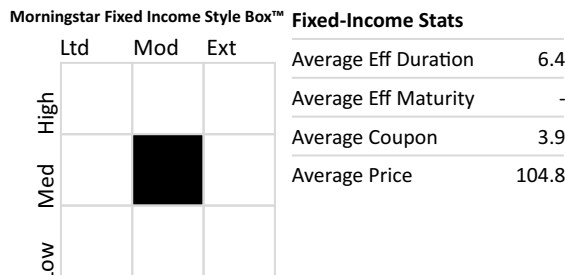


### Risk-Reward



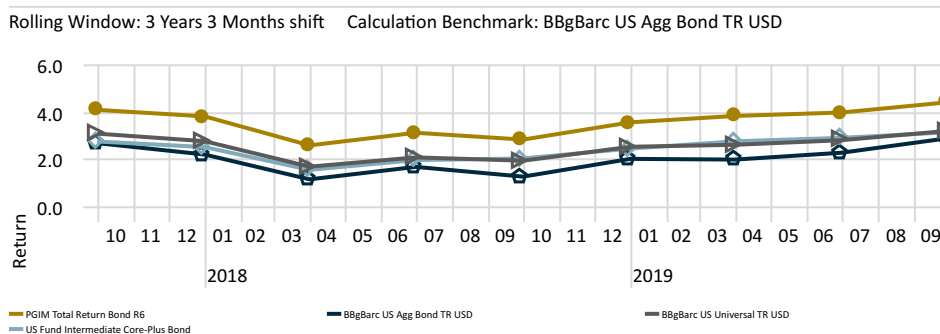
### Morningstar Style Box - PGIM Total Return Bond R6

Portfolio Date: 9/30/2019



### Rolling Returns

Time Period: 10/1/2014 to 9/30/2019



### PGIM Total Return Bond R6 - Risk

Time Period: 10/1/2014 to 9/30/2019

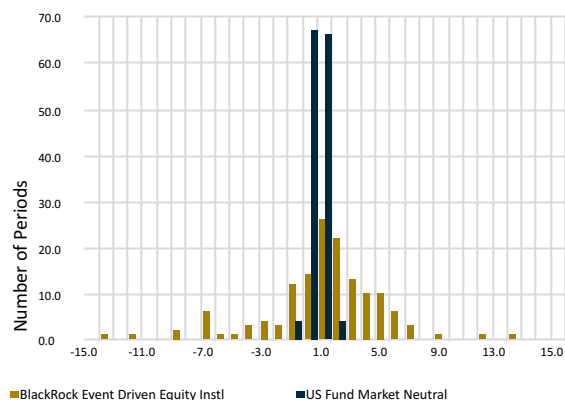
	Inv	Bmk1
Return	4.66	3.38
Std Dev	3.45	3.08
Downside Deviation	0.54	0.00
Alpha	1.07	0.00
Beta	1.08	1.00
R2	91.84	100.00
Information Ratio (geo)	1.23	
Tracking Error	1.01	0.00

## Key Information

Morningstar Category	US Fund Market Neutral
Morningstar Rating Overall	★★★★★
Inception Date	12/19/2007
Expense Ratio	1.63
Fund Size (Mil)	3,563.84
Portfolio Date	9/30/2019
Manager Name	Mark McKenna

## Return Distribution - BlackRock Event Driven Equity Instl

Time Period: Since Inception to 9/30/2019



## Correlation Matrix

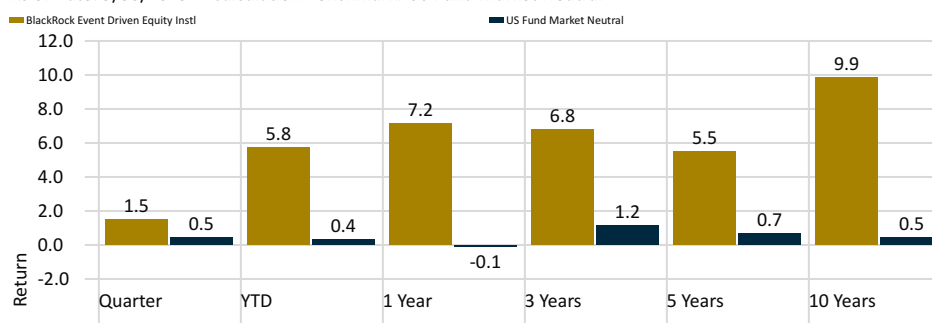
Time Period: 1/1/2008 to 9/30/2019

	1	2	3
1 BlackRock Event Driven Equity Instl	1.00		
2 BBgBarc US Agg Bond TR USD	0.01	1.00	
3 S&P 500 TR (1989)	0.83	0.01	1.00

■ 1.00 to 0.80 ■ 0.80 to 0.60 ■ 0.60 to 0.40 ■ 0.40 to 0.20 ■ 0.20 to 0.00  
 ■ 0.00 to -0.20 ■ -0.20 to -0.40 ■ -0.40 to -0.60 ■ -0.60 to -0.80 ■ -0.80 to -1.00

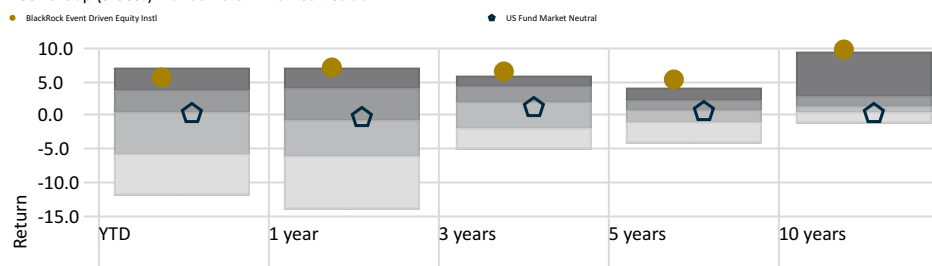
## Returns

As of Date: 9/30/2019 Calculation Benchmark: US Fund Market Neutral



## Performance Relative to Peer Group

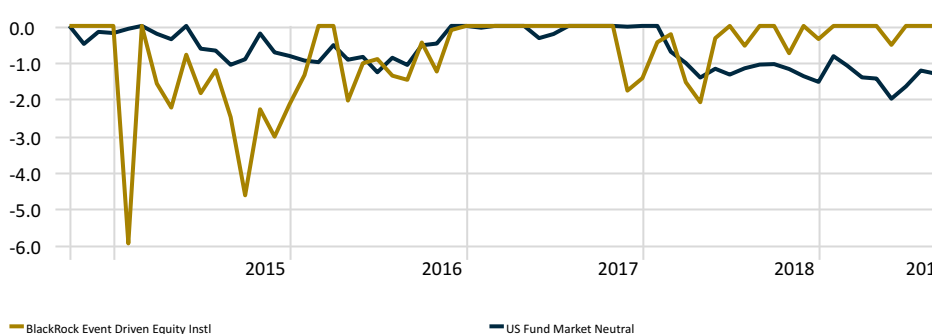
Peer Group (5-95%): Funds - U.S. - Market Neutral



	YTD	Peer group 1 year quartile	Peer group 3 years quartile	Peer group 5 years quartile	Peer group 10 years quartile	Peer group quartile			
BlackRock Event Driven Equity Instl	5.78	1	7.20	1	6.77	1	5.53	1	9.88
US Fund Market Neutral	0.36	3	-0.13	2	1.22	3	0.73	2	0.48

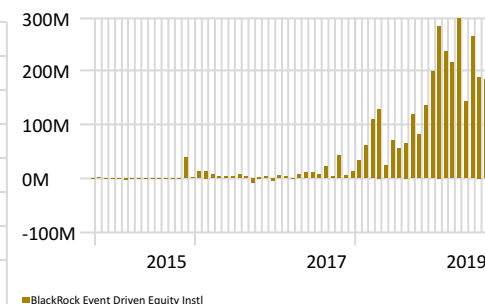
## Drawdown

Time Period: 10/1/2014 to 9/30/2019



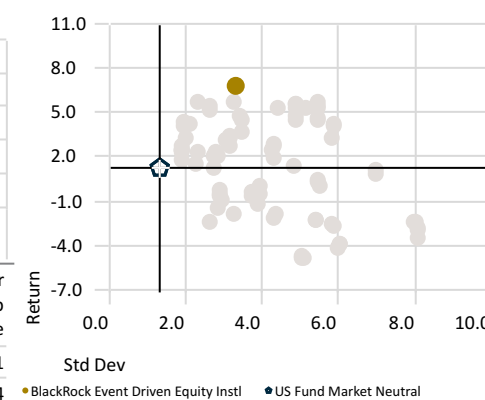
## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019



## Risk-Reward

Time Period: 10/1/2016 to 9/30/2019



## BlackRock Event Driven Equity Instl - Risk

Time Period: Since Inception to 9/30/2019

Calculation Benchmark: US Fund Market Neutral

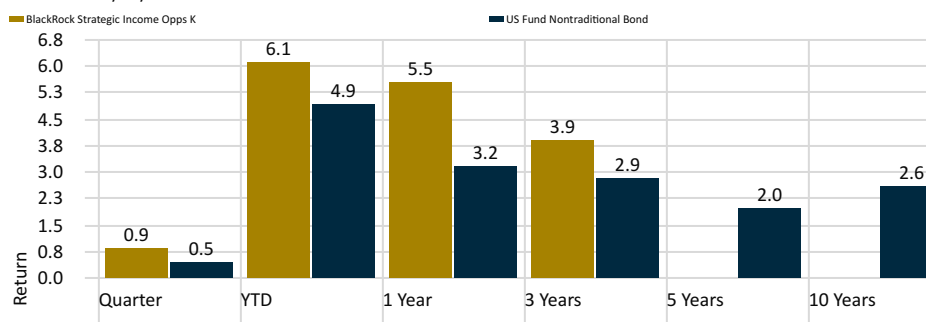
	Inv	Bmk1	+/- Bmk1
Return	5.68	0.22	5.46
Std Dev	13.83	1.73	12.10
Downside Deviation	9.31	0.00	9.31
Alpha	7.13	0.00	7.13
Beta	3.28	1.00	2.28
R2	17.18	100.00	-82.82
Sharpe Ratio (arith)	0.37	-0.23	0.59
Tracking Error	13.24	0.00	13.24

## Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★★★
Inception Date	3/28/2016
Expense Ratio	0.74
Fund Size (Mil)	33,259.84
Portfolio Date	7/31/2019
Manager Name	Multiple

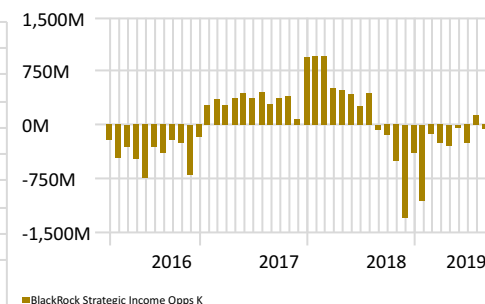
## Returns

As of Date: 9/30/2019 Calculation Benchmark: US Fund Nontraditional Bond



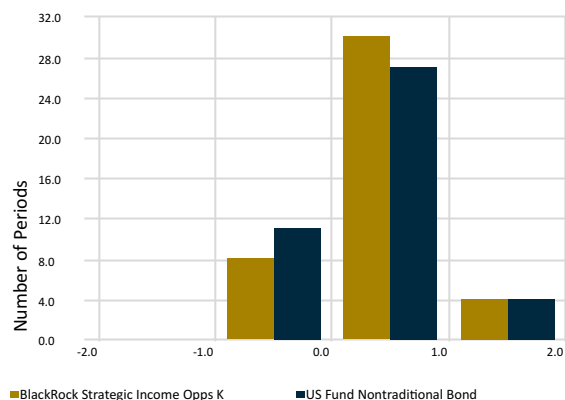
## Monthly Estimated Fund-Level Net Flow

Time Period: 3/1/2016 to 9/30/2019



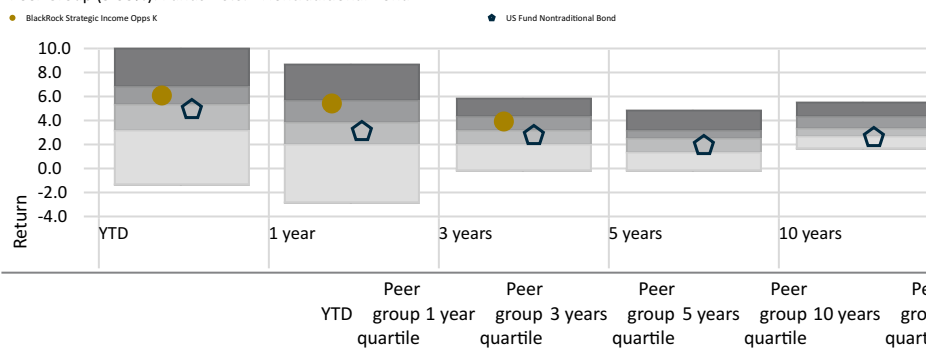
## Return Distribution - BlackRock Strategic Income Opps K

Time Period: Since Inception to 9/30/2019



## Performance Relative to Peer Group

Peer Group (5-95%): Funds - U.S. - Nontraditional Bond



## Correlation Matrix

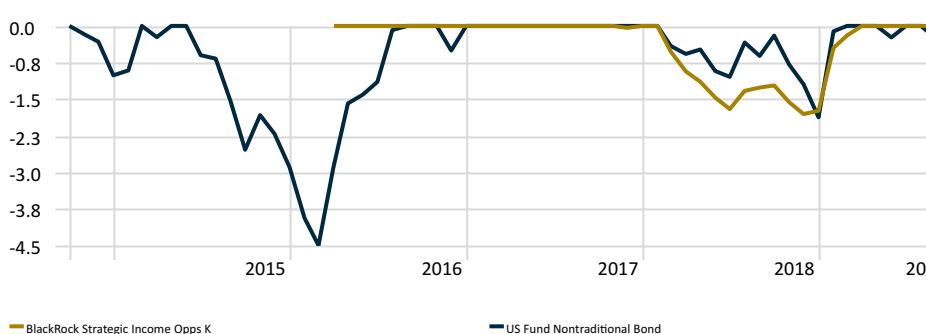
Time Period: 4/1/2016 to 9/30/2019

	1	2	3
1 BlackRock Strategic Income Opps K	1.00		
2 BBgBarc US Agg Bond TR USD	0.27	1.00	
3 S&P 500 TR (1989)	0.59	-0.14	1.00

Legend: 1.00 to 0.80, 0.80 to 0.60, 0.60 to 0.40, 0.40 to 0.20, 0.20 to 0.00, 0.00 to -0.20, -0.20 to -0.40, -0.40 to -0.60, -0.60 to -0.80, -0.80 to -1.00

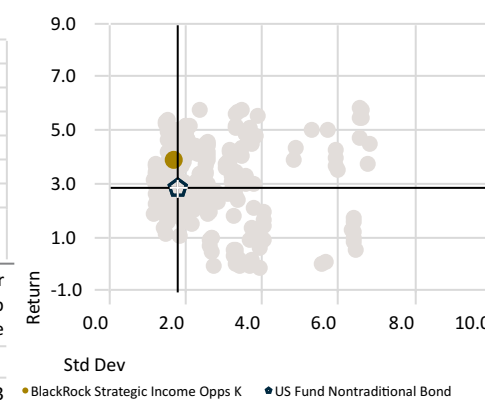
## Drawdown

Time Period: 10/1/2014 to 9/30/2019



## Risk-Reward

Time Period: 10/1/2016 to 9/30/2019



## BlackRock Strategic Income Opps K - Risk

Time Period: Since Inception to 9/30/2019

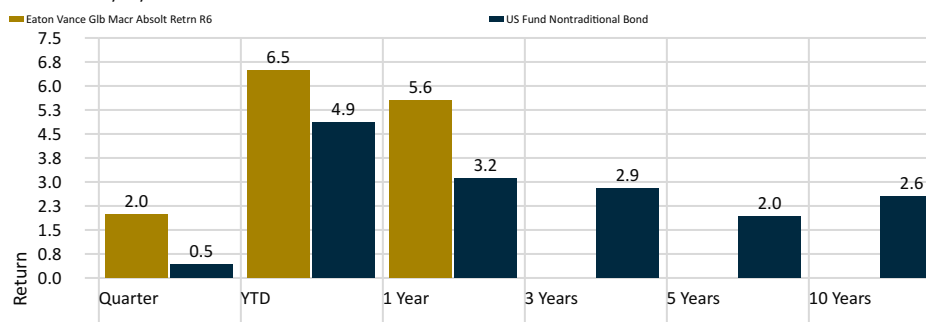
	Inv	Bmk1	+/- Bmk1
Return	4.21	3.60	0.61
Std Dev	1.67	1.84	-0.17
Downside Deviation	0.69	0.00	0.69
Alpha	1.22	0.00	1.22
Beta	0.71	1.00	-0.29
R2	61.67	100.00	-38.33
Sharpe Ratio (arith)	1.67	1.18	0.49
Tracking Error	1.20	0.00	1.20

## Key Information

Morningstar Category US Fund Nontraditional Bond  
Morningstar Rating Overall  
Inception Date 5/31/2017  
Expense Ratio 0.72  
Fund Size (Mil) 3,561.35  
Portfolio Date 7/31/2019  
Manager Name Multiple

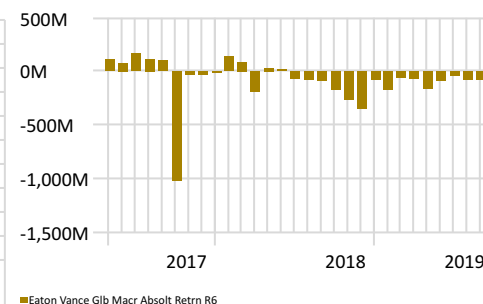
## Returns

As of Date: 9/30/2019 Calculation Benchmark: US Fund Nontraditional Bond



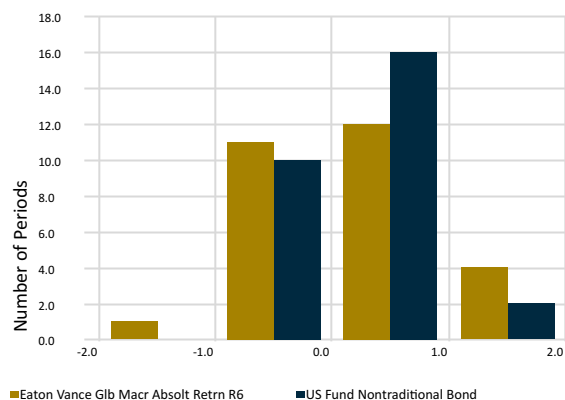
## Monthly Estimated Fund-Level Net Flow

Time Period: 5/1/2017 to 9/30/2019



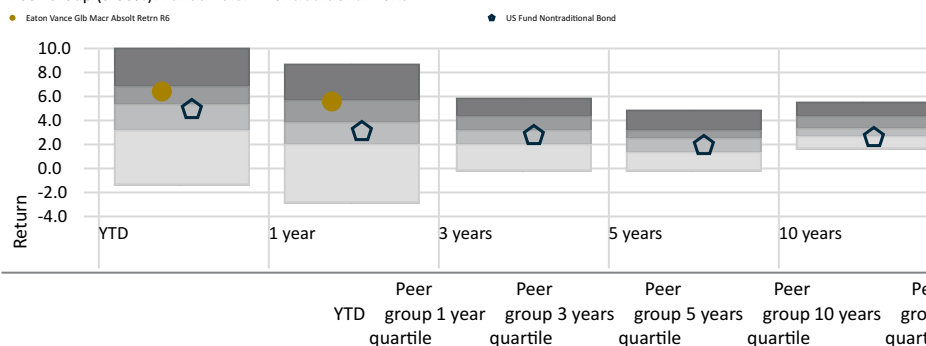
## Return Distribution - Eaton Vance Glb Macr Absolt Retrn R6

Time Period: Since Inception to 9/30/2019



## Performance Relative to Peer Group

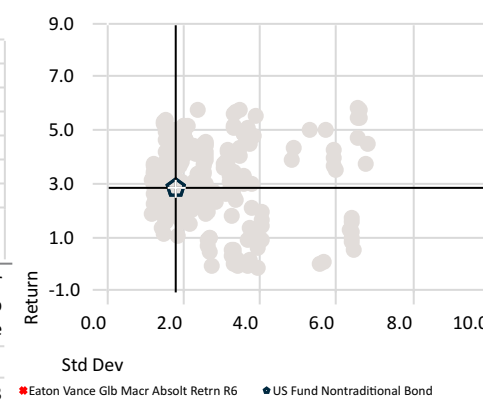
Peer Group (5-95%): Funds - U.S. - Nontraditional Bond



Eaton Vance Glb Macr Absolt Retrn R6	6.53	2	5.59	2						
US Fund Nontraditional Bond	4.92	3	3.17	3	2.86	3	1.99	3	2.61	3

## Risk-Reward

Time Period: 10/1/2016 to 9/30/2019



## Correlation Matrix

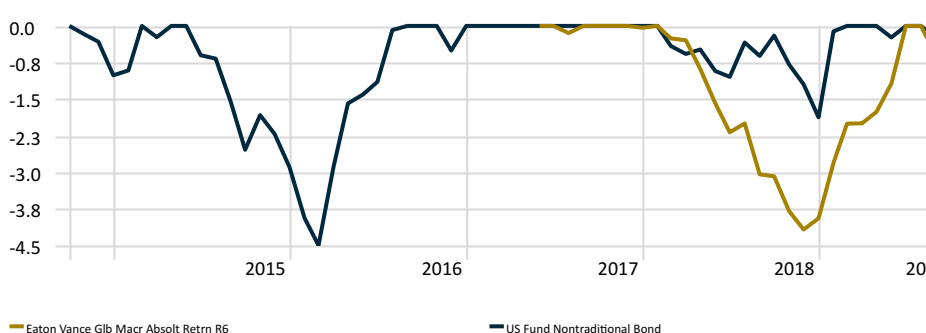
Time Period: 6/1/2017 to 9/30/2019

	1	2	3
1 Eaton Vance Glb Macr Absolt Retrn R6	1.00		
2 BBgBarc US Agg Bond TR USD	0.02	1.00	
3 S&P 500 TR (1989)	0.36	-0.16	1.00

Legend: 1.00 to 0.80, 0.80 to 0.60, 0.60 to 0.40, 0.40 to 0.20, 0.20 to 0.00, 0.00 to -0.20, -0.20 to -0.40, -0.40 to -0.60, -0.60 to -0.80, -0.80 to -1.00

## Drawdown

Time Period: 10/1/2014 to 9/30/2019



## Eaton Vance Glb Macr Absolt Retrn R6 - Risk

Time Period: Since Inception to 9/30/2019

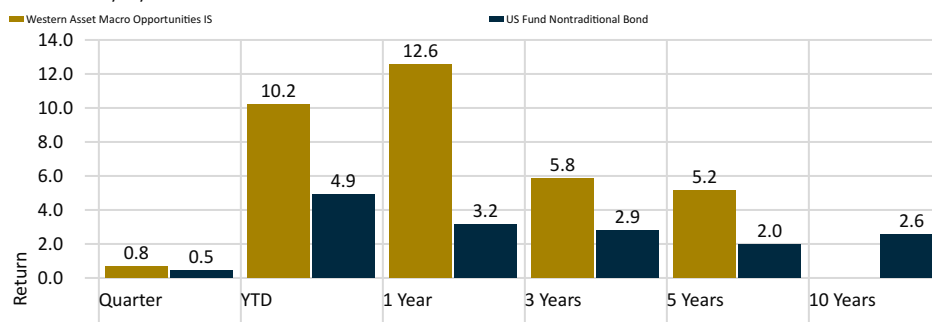
	Inv	Bmk1	+/- Bmk1
Return	2.15	2.32	-0.18
Std Dev	2.36	1.89	0.47
Downside Deviation	1.20	0.00	1.20
Alpha	-0.08	0.00	-0.08
Beta	0.81	1.00	-0.19
R2	42.15	100.00	-57.85
Sharpe Ratio (arith)	0.10	0.22	-0.12
Tracking Error	1.83	0.00	1.83

## Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★★★★
Inception Date	8/30/2013
Expense Ratio	1.21
Fund Size (Mil)	1,625.50
Portfolio Date	8/31/2019
Manager Name	Multiple

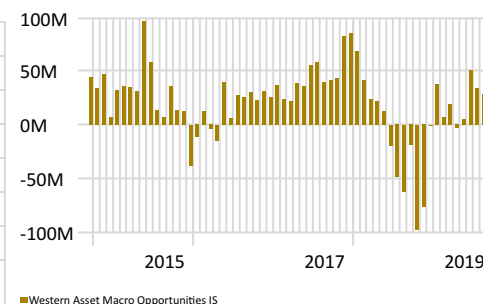
## Returns

As of Date: 9/30/2019 Calculation Benchmark: US Fund Nontraditional Bond



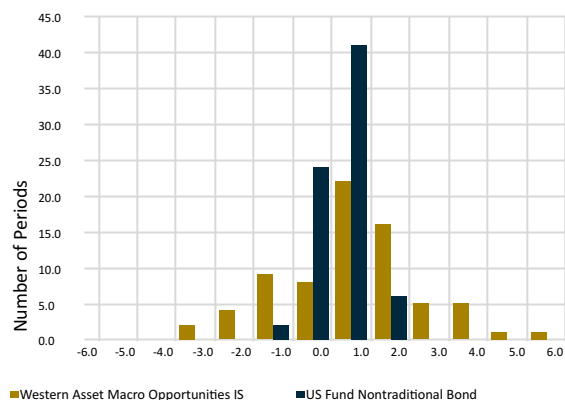
## Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 9/30/2019



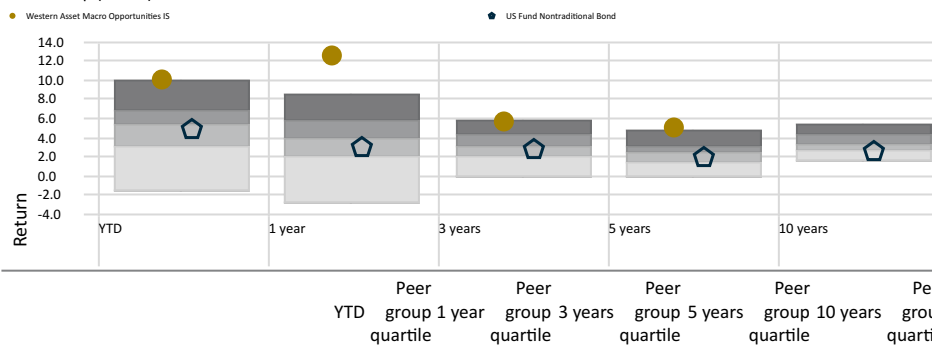
## Return Distribution - Western Asset Macro Opportunities IS

Time Period: Since Inception to 9/30/2019



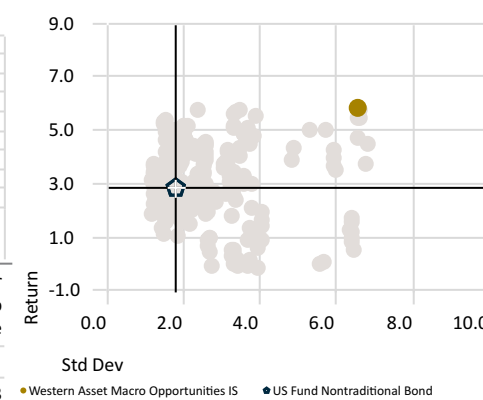
## Performance Relative to Peer Group

Peer Group (5-95%): Funds - U.S. - Nontraditional Bond



## Risk-Reward

Time Period: 10/1/2016 to 9/30/2019



## Correlation Matrix

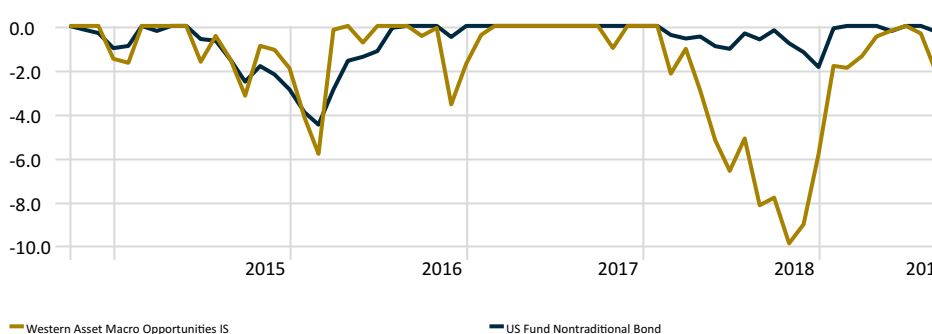
Time Period: 9/1/2013 to 9/30/2019

	1	2	3
1 Western Asset Macro Opportunities IS	1.00		
2 BBgBarc US Agg Bond TR USD	0.24	1.00	
3 S&P 500 TR (1989)	0.40	-0.12	1.00

1.00 to 0.80   0.80 to 0.60   0.60 to 0.40   0.40 to 0.20   0.20 to 0.00  
 0.00 to -0.20   -0.20 to -0.40   -0.40 to -0.60   -0.60 to -0.80   -0.80 to -1.00

## Drawdown

Time Period: 10/1/2014 to 9/30/2019



## Western Asset Macro Opportunities IS - Risk

Time Period: Since Inception to 9/30/2019

	Inv	Bmk1	+/- Bmk1
Return	6.71	2.18	4.53
Std Dev	6.13	2.01	4.12
Downside Deviation	2.70	0.00	2.70
Alpha	2.91	0.00	2.91
Beta	2.21	1.00	1.21
R2	52.33	100.00	-47.67
Sharpe Ratio (arith)	0.96	0.66	0.29
Tracking Error	4.89	0.00	4.89