

PARS: County of Contra Costa

First Quarter 2019

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DISCUSSION HIGHLIGHTS

U.S. Economic and Market Overview

In the first quarter of 2019, U.S. stocks mostly recovered from 2018's end-of-year downdraft, despite meaningful downgrades to corporate earnings growth and a growing disconnect between equity market prices and fundamentals. The first quarter rally seems to indicate that market returns continue to be driven by sentiment and the Fed's intervention (in the form of monetary stimulus) rather than fundamentals. In the current environment, equity markets are seemingly anticipating an economic soft landing versus the hard landing anticipated by bond and currency markets.

The Russell 1000 Index delivered a total return of 14.0% in the first quarter, making it the best performing quarter since the third quarter of 2009. Despite this result, analysts dialed back corporate earnings estimates during the quarter largely due to fears of a synchronized global economic slowdown and continued uncertainty regarding ongoing trade negotiations between the U.S. and China. Estimated earnings of S&P 500 companies fell by 7.2% for first quarter from year-end 2018, representing larger declines than averages from the prior 5-, 10-, and 15-year periods. What does this mean for investors? Strong corporate earnings form the backbone of durable, healthy market advances. Without the support of earnings, stock market rallies can fade over time. As such, weakening corporate earnings could be a harbinger of future trouble for equity markets. Although earnings estimates for the first quarter were dismal, equity markets rallied nonetheless due to valuation expansion and lower market volatility. The Price to Earnings (P/E) ratio for the S&P 500 Index grew from 13.5 in late December 2018 to over 16.5 by the end of the first quarter. While this most recent P/E level is not necessarily high by historical measures, the increase of three points is notable in that this type of rise is typically reserved for markets that are recovering from recessions, not from a growth scare in an overvalued market.

The renewed optimism for economic growth coursing through global equity markets did not carry over into the bond market however, where yields on longer-term issues continued to decline reflecting a lower growth, and lower inflation outlook. Since peaking in early November 2018 at 3.22%, the yield on the bellwether 10-year Treasury Note fell 81 basis points (0.81%) to end the first quarter at 2.41%.

In a potentially prescient signal for the economy and equity market, longer-term yields fell so far that the Treasury yield curve (10-year minus one-month maturities) inverted briefly at the end of the quarter for the first time since 2007. Bond markets were unusually volatile towards the end of the first quarter as the Fed signaled a dovish pause in both tightening and balance sheet tapering. It also suggested that it might even return to cutting rates for the first time since the depths of the great recession if first quarter economic growth repeats the lackluster results of the fourth quarter of 2018. Investors digested the news that the U.S. Treasury yield curve had inverted for the first time in a decade with reactions ranging from a shrug to a shudder, depending on their view as to whether or not inversion invariably leads to recession. Inversion is a strong signal that has often, but not always, led to recession.

Dismissing the bond market's skeptical outlook, the equity market's more sanguine view also implied that lingering and unresolved geopolitical issues are likely to see a positive outcome in the near future. Not surprisingly, escalation of U.S./China trade tensions was avoided and expectations of a forthcoming resolution have increased. Meanwhile, Brexit has seen little progress save for buying a little more time for the UK Parliament to agree on a deal to leave the European Union. Given the current status of the stalemate, a disorderly 'no deal' Brexit cannot be ruled out.

Event risk aside, there is no doubt that global growth is slowing. What is debatable is the effectiveness of the varying policy responses from both a fiscal and monetary perspective. The European Central Bank and Peoples Bank of China have joined the dovish central bank chorus. China has also deployed fiscal stimulus measures, including tax cuts, in an effort to reaccelerate growth. The early read from March data is showing signs of green shoots, but more time will be needed to determine if the current expansionary cycle will get a second wind. Until then, the divergent views between stock and bond investors are likely to go unreconciled.

Market Overview/Performance Discussion

Total Plan

The County of Contra Costa OPEB Plan returned 8.65% net of investment fees in the first quarter, which exceeded the County's Plan benchmark target of 8.36%. Performance was supported by numerous managers who registered strong relative performance in the quarter, that ranked in the top quartile of their respective peer universes. Highlighted areas of strength included small cap equity, global equity, REIT equity, international equity and domestic fixed income. With respect to asset allocation decisions, a slight overweight to stocks, and an underweight to bonds aided performance in the quarter, as equity returns rebounded strongly from a weak fourth quarter. Throughout the quarter, an increase to the REIT allocation was also beneficial to performance as REITs were the second strongest performing segment of the Plan. There were two blemishes in the quarter. One was the overweight to value vs. growth in both the large cap and small cap equity segments. The relative outperformance for value in the fourth quarter did not carry over to the most recent quarter. The other disappointment was the alternative segment, which underperformed relative to the benchmark. However, this underperformance was due to one specific manager, the AQR Equity Market Neutral Fund, that delivered disappointing (negative) performance in the quarter. At the end of the quarter, we removed this manager from the investment portfolio. The other three managers in the alternative space posted respectable numbers for quarter.

Domestic Equity

Domestic equities rebounded strongly in the first quarter, driven by Fed dovishness, relief regarding the end of the government shut-down, and optimism for the U.S./China trade deal. Even as domestic companies' earnings estimates for 2019 were being reduced throughout the quarter, investors' decisions were more influenced by the Fed's accommodative monetary policy. U.S. stocks across all market capitalization ranges were up double digits with large cap modestly underperforming both mid cap and small cap equities. Growth rebounded with the Russell 1000 Growth Index outperforming the Russell 1000 Value Index (16.1% vs. 11.9%). In the small cap category, Growth also led Value by a similar margin (17.1% vs. 11.9%). The allocation stance in the Plan has favored value over growth over the last one year, due mainly to the 'stretched' valuations, in our opinion, of growth stocks relative to value stocks. With the exception of the fourth quarter of last year, this positioning has not been beneficial to performance in the Plan. This tactical allocation is currently under review.

The more economically cyclical sectors such as technology (+20%), industrials (+17%), energy (+16%) and consumer discretionary (+16%), were the leading areas of first quarter performance for the large cap segment. Conversely, defensive areas such as health care (+7%), utilities (+11%) and staples (+12%) lagged. Health care was impacted by several companies suffering high profile failures with respect to new drug adoption. The real story though for health care in the quarter was fear that potentially the 2020 elections might see the Democrats attempt to enact significant reforms in the health care sector. Insurers such as Anthem, Cigna, and United Health saw steady declines in their stock prices throughout the quarter.

Monetary policy remains supportive for U.S. stocks, and that more than anything was the main driver for the equity market in the first quarter. It is no coincidence that when Fed Chairman Jay Powell took the stage at the American Economic Association's annual meeting in Atlanta on January 4th, flanked by Janet Yellen and Ben Bernanke (pair of doves), and indicated that the Federal Reserve would be 'patient' with respect to the path of future rate hikes, the market took off. And the Fed can afford to be patient, as earnings revisions have continued to be reduced and worrisome inflationary readings are nowhere to be found.

- **The Plan's large cap equity segment returned 13.55% in the quarter, which trailed the Russell 1000 Index return of 14.0%.**
 - The iShares Russell 1000 ETF 13.98% in the quarter.
 - The Columbia Contrarian Core Fund returned 14.22% in the quarter, which outperformed the benchmark. The Fund ranked in the 17th percentile of the Morningstar Large Cap Blend Universe.
 - The Harbor Capital Appreciation Fund returned 17.59% in the quarter, which beat the Russell 1000 Growth Index's return of 16.10%. The Fund ranked in the 18th percentile of the Morningstar Large Cap Growth Universe.
 - The T. Rowe Price Growth Stock Fund returned 15.92% in the quarter, which slightly trailed the Russell 1000 Growth Index. The Fund ranked in the 46th percentile of the Morningstar Large Cap Growth Universe.
 - The Dodge and Cox Stock Fund gained 10.29% in the quarter, but lagged the Russell 1000 Value Index's return of 11.93%. The Fund ranked in the 79th percentile of the Morningstar Large Cap Value Universe.
 - The Vanguard Growth and Income Fund registered a 13.32% return in the quarter, and trailed the Russell 1000 Index. The Fund ranked in the 49th percentile of the Morningstar Large Cap Blend Universe.
- **The mid cap equity segment returned 16.47% in the quarter, which was in-line with the Russell Mid Cap Index return of 16.54%.**
 - The iShares Russell Mid Cap ETF returned 16.48% in the first quarter.
- **The small cap equity segment returned 15.31% in the quarter, which exceeded the Russell 2000 Index return of 14.58%.**
 - The iShares Russell 2000 ETF returned 14.56% in the first quarter.
 - The T. Rowe Price New Horizons Fund returned 20.78% in the quarter, and outperformed the Russell 2000 Growth Index return of 17.14%. The Fund ranked in the 18th percentile of Morningstar's Small Cap Growth Universe. We sold out of the investment on February 19, 2019.
 - The Victory RS Small Cap Growth Fund returned 22.84% in the first quarter, which outperformed the Russell 2000 Growth Index. The Plan initiated a position in this manager on February 19, 2019. For the full quarter period, the fund ranked in the 8th percentile of the Morningstar Small Cap Growth Universe.
 - The Undiscovered Managers Behavioral Value Fund returned 13.99% in the quarter, and outperformed the Russell 2000 Value Index's return of 11.93%. The Fund ranked in the 16th percentile of Morningstar's Small Cap Value Universe.

Real Estate

In the face of supportive economic fundamentals U.S. REIT returns posted attractive returns in the first quarter. Real estate equities were the second strongest performing asset class segment within the Plan, trailing only mid cap equity in the quarter, as the Dow Jones Wilshire REIT Index gained 16.02%. Returns were broad based with every significant category within the REIT universe posting double digit gains. Leading sectors included residential (+17%), hotel (+16%), and industrial (+20%). Even the laggard industries (relative to the benchmark) generated reasonable absolute returns: retail (+14%), health care (+12%) and self-storage (+10%). Aside from economic fundamentals supporting REIT investments, the belief that the Federal Reserve may potentially be on the sidelines with respect to hiking interest rates also supported optimism for the asset class. When looking at technical factors, supply and demand appears to be supportive. Within commercial real estate, demand appears to be strong, while supply is reasonable, which should lead to a steady increase in rental prices. While for several quarters, the heightened risk of e-commerce has worried REIT investors from the standpoint of the negative impact to shopping centers and regional malls, two sectors that have benefitted within REITs include data warehouses and industrial REITs. The need for distribution centers in certain logistically important areas, has supported growth for industrial REITs. A final consideration that many analysts point to are strong cash flow and solid balance sheets that many REITs maintain – giving investors confidence in the strength of the underlying companies.

The Vanguard REIT ETF returned 17.29% which ranked in the 16th percentile.

International/Global Equity

International markets were higher for the quarter but trailed U.S. returns. Tariff issues, slowing economic data, Brexit concerns, and a modest shift in monetary policy bias from central banks were the themes that impacted international equity markets in the quarter. European stocks gained in the face of slowing growth throughout the Eurozone. Purchasing Manager Index readings began to show signs of weakness in mid-2018, and soon after deterioration in Eurozone GDP growth was noticeable. In reaction to this, the ECB president Mario Draghi shifted to a more dovish stance early this year and has stated a readiness to add more stimulus should conditions warrant. This support was viewed positively across the Eurozone, but probably was most noticeably felt in Italy, where Italian stocks soared +14.6% in the quarter. Other Eurozone markets also showed strength with Switzerland (+13.1%), France (+10.7%) and Denmark (+13.2%) also generated nice gains.

The Japanese market was up less than 7%, after suffering a difficult fourth quarter, and in this respect only marginally participated in the global stock market rally of the first quarter. Being an island nation, the economy is much more sensitive to global trade. Manufacturing showed weakness in the form of a decline in machine orders. Economists highlighted the persistent low inflationary reading out of Japan, with core inflation rising 0.7% in February. In January, the Bank of Japan lowered its 2019 core inflationary forecast.

Representing nearly 30% of the emerging market index, China has a meaningful impact on asset class performance. Tariffs and high overall debt levels in China have contributed to a slowdown in the economy. Chinese stocks (+17.7%) rallied on the back of significant fiscal stimulus measures that the government has executed over the last few months, in an effort to reaccelerate growth. The early read from March data is showing signs of green shoots, but more time will be needed to determine if the current expansionary cycle will get a second wind. Additionally, Chinese shares have also gained due to the belief by many investors that the U.S. and China will avert a trade war. China was ‘the’ emerging market story for the first quarter, however Russia (+12.2%) deserves at least an asterisk with respect to performance. Crude oil prices rose throughout the quarter as sanctions against Iran and Venezuela, coupled with OPEC related supply cuts, spurred prices higher.

- **The Plan’s international/global equity segment returned 11.64% in the quarter. This return outperformed the MSCI EAFE Index return of 9.98% but lagged the MSCI ACWI Index return of 12.18%.**
 - The iShares MSCI EAFE Index ETF returned 9.96% in the quarter.
 - The Dodge & Cox International Stock Fund returned 9.78% in the quarter and underperformed the MSCI EAFE Index. The Fund ranked in the 24th percentile of the Foreign Large Blend Universe as measured by Morningstar.
 - The MFS International Fund returned 12.61% in the quarter and outperformed the MSCI EAFE Index. The Fund ranked in the 53rd percentile for foreign large cap growth managers as measured by Morningstar.
 - The iShares MSCI ACWI Index ETF returned 12.24% in the quarter.
 - The American Funds New Perspective Fund recorded a 13.99% return in the first quarter, which outperformed the MSCI ACWI Index and ranked in the 25th percentile within the Morningstar World Stock Universe
 - The MFS Global Equity R6 Fund returned 14.69%, which outperformed the benchmark and ranked in the 19th percentile of the Morningstar World Stock Universe.
 - The Hartford Schrodgers Emerging Market Equity Fund returned 10.51% during the quarter and outperformed the MSCI Emerging Market benchmark return of 9.92%. The Fund ranked in the 44th percentile of the Morningstar Emerging Market Universe.

Fixed Income

Last year’s fourth quarter meltdown among risk assets was followed by a swift reversal in the new year as those same assets gained as much or more during the first quarter as they lost during the prior quarter. The swiftness of the reversal was such that most of the gains came in January, sparked by comments from Fed Chairman Powell that Fed policy going forward would be flexible, and that they were in no hurry to raise interest rates. Prior to that, investors were fearful the Fed was on a pre-determined path to continue tightening policy until ultimately causing a recession. In October Chairman Powell said, “We’re a long way from neutral...” when the fed funds rate was already at 2% to 2¼% and the Fed was projecting at least three more rate hikes. In addition, the Chairman made a comment in December that left the impression the Fed would continue to shrink its balance sheet without regard for the impact on the economy or the financial markets. So, on January 4th Chairman Powell took the opportunity to reassure markets that the Fed was not on a rigid, predetermined tightening path, but would be flexible with all its policy tools, including the balance sheet.

Fixed Income (Cont.)

Investors liked what they heard and subsequently drove bond prices sharply higher. The Bloomberg Barclays Aggregate Bond Index gained 2.9% for the first quarter, as U.S. Treasuries gained 2.1%. Although the ten-year Treasury yield had already declined from its early November high of nearly 3½% to 2.7% at year-end, it continued to fall and ended the first quarter at 2.4%. Investment-grade corporate bonds returned 5.1%, while non-investment grade bonds advanced 7.3%. At quarter-end, investment-grade bond spreads were +127, tighter by 32 basis points since the beginning of the year.

After nine rate hikes beginning in December 2015, rates were left unchanged at the most recent FOMC meeting in March, in a range of 2¼% to 2½%. Following that meeting Chairman Powell said, “The federal funds rate is now in the broad range of estimates of neutral,” meaning the Fed is near the end of its tightening campaign, and therefore expects no more rate hikes this year and only one in 2020. Up until the March FOMC meeting, the Fed’s official forecast called for two more rate hikes in 2019 and a continued \$600 billion annual reduction in the Fed’s securities portfolio. Investors disagreed, however, fearing that the Fed tightening was too aggressive and would therefore result in a recession. While the Fed continued to raise short term interest rates, long term interest rates declined, resulting in a flatter yield curve and finally a brief inversion. Since inverted yield curves have a track record of predicting recessions, the news received a lot of attention. But now that the Fed has taken any rate hikes off the table for the remainder of this year, the curve has returned to a slight positive slope. If the curve does invert at some point, keep in mind that the average time between inversion and recession is 311 days, so there will be plenty of time to prepare.

Although first quarter corporate earnings are expected to be slightly below last year’s, both business and consumer confidence remain high, inflation remains low, and job growth continues to be very healthy. In fact, the most recent payroll release for March was the 102nd straight month of positive payroll growth, more than double the second longest streak which ended in June 1990 at 48 straight months without a loss of jobs. However, the good news is already reflected in corporate spreads, which are now at 117 basis points. This level is well below average and much closer to the recent five year low of 90 basis points than the high of 221 basis points, making us more likely to reduce corporate exposure going forward.

- **The Plan’s fixed income segment returned 3.31% in the quarter, which outperformed the Bloomberg Barclays Aggregate Index return of 2.94%.**
 - The separately managed fixed income portfolio returned 3.28% which exceeded the benchmark. The portfolio would have ranked approximately in the 44th percentile of the Morningstar Intermediate Term Bond Universe.
 - The PIMCO Total Return Bond Fund posted a 2.78% return in the quarter, which ranked in the 74th percentile of Morningstar’s Intermediate-Term Bond Universe. The Fund lagged the Index.
 - The Prudential Total Return Bond Fund returned 4.02% in the quarter. This ranked in the 10th percentile of Morningstar’s Intermediate-Term Bond Universe and outperformed the benchmark.

Alternative Investments

The Alternatives portion of the Plan returned 0.89% and underperformed the Wilshire Liquid Alternative Index return of 3.21%. The lag with respect to the benchmark was mainly due to the performance of the AQR Equity Market Neutral Fund (-2.14%). The manager has been on the Plan's watch list for the past two quarters, for performance related issues. We eliminated the manager in March. The AQR organization is widely regarded as a market leader in quantitative-based alternative investing. Based on assets under management, they might be the market leader in alternative investing. In our due diligence on the firm during the "watch list" period, and before the manager was placed on 'watch', our belief in the quality and the consistency of their work was never questioned. The manager's focus on investing in high quality companies at reasonable/cheap valuations, is noble. Further, the manager's process never deviated from their stated methodology. The decision to eliminate the manager from the Plan was a difficult one, but ultimately it was based on a lack of confidence as to "when" investment performance might turnaround; but this is one of the dynamics of assets in 'non-correlated' investment vehicles.

The Eaton Vance Global Macro Fund returned 2.01% in the quarter. Long currency positions in Egypt, Iceland, and Sri Lanka added to returns. The top contributing position was exposure to a New Zealand inflation linked bond. Modest detractors for the quarter included long Turkish sovereign credit and long Argentine sovereign credit exposure. The Blackrock Strategic Income Fund gained 2.49%. Most of the gains in the quarter came in January. Emerging market debt, long positions in investment grade fixed income, and select high yield issues added value in the quarter.

A new manager added at the end of the quarter was the Blackrock Event Driven Equity Fund. This is an absolute return event driven strategy, primarily investing in companies that have announced, or that BlackRock expects to undergo, a material change. The team employs a fundamentally-driven investment process focused on identifying investments that have a sufficiently defined catalyst path. Investments span a broad spectrum of both hard and soft catalysts including: announced mergers and acquisitions, spin-offs, financial/strategic restructuring, management changes, synergistic acquisitions, collaborative activism, as well as other transformative events. Roughly 70% of the portfolio will be in hard catalyst ideas with the remaining 30% invested in soft catalyst ideas. The strategy is managed by Mark McKenna and supported by three portfolio managers who have all worked for and been trained by Mr. McKenna at prior firms. The senior investment team has worked with each other for over a decade resulting in a highly collaborative work environment in which they evaluate each situation holistically, based on their specific backgrounds and focuses. Additionally, the senior investment team is supported by two generalist research analysts. The portfolio will generally have between 30 to 60 trade ideas at any one time, and a portfolio of roughly 70 names.

Alternative Investments (Cont'd)

An additional new manager was added in February: the Western Asset Macro Opportunities Fund. Headed by Western Asset's long-time CIO, Ken Leech, the fund is an absolute return oriented (benchmark agnostic) fund focusing on relative-value opportunities from the top down in global interest rates and global credit (focused on U.S., Europe and Asia) using diversified investment strategies in highly liquid derivative securities and cash bonds. The strategy may invest in cash bonds, futures, options and other derivatives, and single-name credit default swaps. Historically, duration exposure has ranged from +10 to -4.1 years. Absolute returns will be driven primarily by the investment team's ability to correctly identify long term macro themes across global rate / credit markets and position the fund accordingly, although it should be noted the funds will typically have a net long credit bias. Ken Leech and Co-portfolio manager Prashant Chandran (Head of Derivatives) are supported by two dedicated investment professionals, with the majority of the trade ideas harvested from the Global Investment Strategy Committee (top down) and sector teams (bottom up), which draw on nearly all of Western Asset's 125 investment professionals. We initiated our position in late February. For the quarter the manager returned a strong 4.73% return, most of the gains were generated in January when the Fund was up 4.4%. Performance in March was up 0.68%. For the entirety of the quarter, emerging market debt and investment grade credit were the leading components for performance.

- **The alternative investment segment returned 0.89% in the first quarter, which trailed the Wilshire Liquid Alternatives Index return of 3.21%.**
 - The BlackRock Strategic Income Opportunity Fund returned 2.49%, which lagged the benchmark, and ranked in the 55th percentile of Morningstar's Non-Traditional Bond Universe.
 - The Eaton Vance Global Macro Absolute Return Fund gained 2.01% which ranked in the 73rd percentile of Morningstar's Non-Traditional Universe
 - The Western Asset Macro Opportunities Fund returned 4.73% in the first quarter and ranked in the 13th percentile of Morningstar's Non-Traditional Universe. We began investment in this fund on February 28, 2019.
 - The BlackRock Event Driven Equity Fund returned 2.25% in the quarter. We initiated our first investment in the manager at the end of the quarter, March 29, 2019.
 - The AQR Market Neutral Fund returned -2.14%, which ranked in the 78th percentile of Morningstar's Market Neutral Universe. The fund lagged the benchmark. We exited from this investment on March 29th, 2019.

Asset Allocation/Portfolio Transitions

In the quarter we made several changes at the manager level. First, within alternatives we eliminated the AQR Equity Market Neutral Fund. This fund had been on the watch list for several quarters. The decision to exit the fund was due to performance. We added two new managers to the alternative segment: the BlackRock Event Driven Equity Fund and the Western Asset Macro Opportunities Fund.

In the month of February, we made a change within the small cap growth sector, replacing the T. Rowe Price New Horizons Fund with the Victory RS Small Cap Growth Fund. There was an announced change within the investment management structure within the T. Rowe Fund, as long-time manager Henry Ellenbogen announced he was leaving the Fund to pursue other interests. Due to his departure, we chose to eliminate the Fund from the Plan, and invest in the Victory RS Small Cap Growth Fund. It was not a difficult decision, but it was a painful one. The New Horizons Fund has been a staple within the investment structure of our PARS portfolios since day 1, which spans more than a decade. The Fund, simply put, has generated both the strongest absolute return, as well as the strongest relative return to a benchmark, of any of our investment managers – hence the “pain” part of the decision. However, the new management team, is not the management team that generated all of the wonderful performance numbers, and from that standpoint, we felt compelled to make the change, and feel comfortable with the Victory RS Fund as a replacement offering.

With respect to asset allocation targets, we reduced small cap equity by -1.25%, and increased the REIT investment allocation by +1.25%.

The alternative allocation was increased by +0.5%, due to the addition of the new BlackRock Event Driven Equity Fund.

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	Annualized return trails the benchmark or median return trails on a 3-year basis for more than three consecutive quarters
<i>Dodge & Cox International</i>	3Q 2018		Retain on Watch List	Underperformance relative to the benchmark
<i>AQR Equity Market Neutral I</i>	3Q 2018	1Q 2019	Eliminated from Portfolio	Manager performance

Asset Allocation

Period Ending March 31, 2019

Asset Allocation	12/31/2018 Market Value	12/31/2018 % of Total	3/31/2019 Market Value	3/31/2019 % of Total	Target Allocation
Large Cap Equities					
Columbia Contrarian Core Inst3	7,792,539	3.0%	8,900,668	3.1%	--
iShares Russell 1000 ETF	17,296,307	6.7%	19,470,573	6.8%	--
Vanguard Growth & Income Adm	9,111,140	3.5%	10,324,355	3.6%	--
Dodge & Cox Stock Fund	7,812,908	3.0%	8,945,452	3.1%	--
Harbor Capital Appreciation Retirement	2,606,511	1.0%	3,064,923	1.1%	--
T. Rowe Price Growth Stock Fund	2,604,296	1.0%	3,018,978	1.1%	--
Total Large Cap Equities	\$ 47,223,700	18.2%	\$ 53,724,950	18.7%	17.0%
		<i>Range</i>		<i>Range</i>	<i>13-32%</i>
Mid Cap Equities					
iShares Russell Mid-Cap ETF	14,579,242	5.6%	15,917,678	5.5%	--
Total Mid Cap Equities	\$ 14,579,242	5.6%	\$ 15,917,678	5.5%	6.0%
		<i>Range</i>		<i>Range</i>	<i>2-10%</i>
Small Cap Equities					
iShares Russell 2000 ETF	13,267,214	5.1%	11,274,619	3.9%	--
Undiscovered Managers Behavioral Val R6	6,457,264	2.5%	6,870,058	2.4%	--
Victory RS Small Cap Growth R6	--	--	4,349,504	1.5%	--
T. Rowe Price New Horizons Fund	3,913,613	1.5%	--	--	--
Total Small Cap Equities	\$ 23,638,091	9.1%	\$ 22,494,181	7.8%	8.0%
		<i>Range</i>		<i>Range</i>	<i>4-12%</i>
International Equities					
DFA Large Cap International I	3,888,931	1.5%	4,296,760	1.5%	--
iShares MSCI EAFE ETF	11,822,010	4.6%	13,044,838	4.5%	--
Dodge & Cox International Stock Fund	3,877,351	1.5%	4,256,577	1.5%	--
MFS® International Growth R6	3,880,226	1.5%	4,369,352	1.5%	--
Hartford Schrodgers Emerging Mkts Eq Y	3,844,259	1.5%	4,248,335	1.5%	--
Total International Equities	27,312,777	10.5%	\$ 30,215,862	10.5%	9.0%
		<i>Range</i>		<i>Range</i>	<i>4-16%</i>
Global Equities					
MSCI iShares ACWI Index ETF	10,564,265	4.1%	11,542,629	4.0%	--
American Funds New Perspective R6	3,900,791	1.5%	4,350,023	1.5%	--
MFS Global Equity FD CL R5 #4818	3,896,959	1.5%	4,351,600	1.5%	--
Total Global Equities	\$ 18,362,015	7.1%	\$ 20,244,253	7.0%	7.0%
		<i>Range</i>		<i>Range</i>	<i>4-12%</i>

Asset Allocation

Period Ending March 31, 2019

Asset Allocation	12/31/2018 Market Value	12/31/2018 % of Total	3/31/2019 Market Value	3/31/2019 % of Total	Target Allocation
Real Estate					
Vanguard Real Estate ETF	8,544,081	3.3%	13,030,938	4.5%	
	\$ 8,544,081	3.3%	\$ 13,030,938	4.5%	4.0%
		<i>Range</i>		<i>Range</i>	<i>0-8%</i>
Fixed Income					
Core Fixed Income Holdings	68,245,056	26.3%	77,018,273	26.8%	--
PIMCO Total Return Instl Fund	11,689,017	4.5%	13,590,414	4.7%	--
Prudential Total Return Bond Q	11,634,035	4.5%	13,609,025	4.7%	--
Total Fixed Income	\$ 91,568,107	35.3%	\$ 104,217,712	36.3%	38.0%
		<i>Range</i>		<i>Range</i>	<i>30-50%</i>
Alternatives					
BlackRock Strategic Income Opps K	6,426,137	2.5%	5,769,632	2.0%	--
Eaton Vance Gbl Macro Abs Ret I	6,410,095	2.5%	7,146,722	2.5%	--
BlackRock Event Driven Equity Instl	--	--	4,298,590	1.5%	--
Western Asset Macro Opportunities IS	--	--	4,299,740	1.5%	--
AQR Equity Market Neutral I	5,166,588	2.0%	--	--	--
Total Alternatives	\$ 18,002,820	6.9%	\$ 21,514,684	7.5%	10.0%
		<i>Range</i>		<i>Range</i>	<i>5-20%</i>
Cash					
Money Market	10,374,096	4.0%	5,955,500	2.1%	--
Total Cash	\$ 10,374,096	4.0%	\$ 5,955,500	2.1%	1.0%
		<i>Range</i>		<i>Range</i>	<i>0-5%</i>
TOTAL	\$ 259,604,930	100.0%	\$ 287,315,757	100.0%	100.0%

Investment Summary

Period Ending March 31, 2019

Investment Summary	First Quarter 2019	Year to Date 2019
Beginning Value	260,226,787.74	\$ 260,226,787.74
Net Contributions/Withdrawals	4,952,506.76	4,952,506.76
Fees Deducted	-48,517.74	-48,517.74
Income Received	1,515,768.86	1,515,768.86
Market Appreciation	21,291,069.13	21,291,069.13
Net Change in Accrued Income	46,314.78	46,314.78
Ending Market Value*	\$ 287,983,929.53	\$ 287,983,929.53 *

Investment Summary	First Quarter 2018	Year to Date 2018
Beginning Value	\$ 254,664,786.12	\$ 254,664,786.12
Net Contributions/Withdrawals	4,937,285.25	4,937,285.25
Fees Deducted	-48,303.65	-48,303.65
Income Received	1,039,762.11	1,039,762.11
Market Appreciation	-3,601,344.87	-3,601,344.87
Net Change in Accrued Income	-76,501.69	-76,501.69
Ending Market Value*	\$ 256,915,683.27	\$ 256,915,683.27 *

*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 March 31, 2019

Tactical Asset Allocation

Asset Class	% Portfolio Weighting			Rationale
	Target	Current Portfolio	Over/Under Weighting	
Cash	1.0%	2.25%	+1.25%	<ul style="list-style-type: none"> We maintain a slight overweight, despite the increase to the alternative segment.
Fixed Income	38.0%	36.25%	-1.75%	<ul style="list-style-type: none"> We have revised our Fed Funds forecast for interest rate hikes in 2019. Our forecast calls for the Fed hiking between 0-1 times in 2019. We expect the Fed to move cautiously in 2019 as economic data appears to be softening. We see the Fed Funds hiking cycle peaking in 2020 at a 3% level. Inflation should moderately accelerate as the impact of fiscal stimulus increases aggregate demand, but will likely not exceed 2.2%, using Core PCE as the primary inflation reading.
Alternatives	10.0%	7.5%	-2.5%	<ul style="list-style-type: none"> The alternative allocation was modestly increased in the first quarter, however we maintain our underweight. Cash returns and fixed income returns appear more appealing in an environment where the Fed may be pausing with respect to the interest rate hiking cycle. In the quarter there was some turnover with respect to the managers in the alternative segment.
Real Estate (REITS)	4.0%	4.5%	+0.5%	<ul style="list-style-type: none"> With the Fed likely curtailing 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. The statements from the Federal Reserve over the course of the quarter, indicating that they would be on the sidelines for 2019, compelled us to move to an overweight in the REIT segment this quarter. 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.
Global Equity	7.0%	7.0%	-	<ul style="list-style-type: none"> A variety of global economic readings are indicating a deceleration in global growth. Linger 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. While we expect resolutions to emerge before the worst outcomes are realized, we remain cautious (neutral) due to the difficulty in handicapping politically charged confrontations.
International (Developed)	9.0%	9.0%	-	<ul style="list-style-type: none"> 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, creates an overhang on international equities. Global Purchasing Manager data shows pockets of strength, but noticeable declines in certain regions: Eurozone, Germany, and Spain. Global central banks are offering commentary supportive of maintaining interest rates at low levels. The MSCI-EAFE Index trades at roughly a forward PE level of 13X, which compels us to maintain an equal weighting vs. the policy index.
International (Emerging)	0.0%	1.5%	+1.5%	<ul style="list-style-type: none"> The economic slowdown in China, due to trade related issues, has been met by stimulus measures by the Chinese central bank. This should bear fruit for the Chinese economy for the remainder of the year. Reasonable PE valuations of 11.5X next year's earnings support maintaining a position within emerging market equities. Global Purchasing Managers' Index readings in March have shown improvement in some of the more significant regions within emerging markets: China Korea, Taiwan, and Russia. Mexico was the only noticeable decliner.
Total Domestic Equity	31.0%	32.0%	+1.0%	
Large Cap	17.0%	18.75%	+1.75%	<ul style="list-style-type: none"> Earnings estimates have been revised lower for the S&P500. We are using an estimate of \$168-\$172/share for calendar year 2019, which places the current PE multiple at 17X; in-line with the multiple over the last several years.
Mid Cap	6.0%	5.5%	-0.50%	<ul style="list-style-type: none"> Valuations are a bit stretched in mid cap. Mid cap and small cap contain a higher percentage of non-earning companies
Small Cap	8.0%	7.75%	-0.25%	<ul style="list-style-type: none"> We moved to a slight underweight allocation in small cap in the quarter. While fundamentals appear fine, we used this as a source of funds for an increase in our REIT investment.

Selected Period Performance
PARS/COUNTY OF CONTRA COSTA PRHCP
Account 6746038001
Period Ending: 3/31/2019

	Year to Date (3 Months)	1 Year	3 Years	5 Years	Inception to Date (98 Months)
Cash Equivalents	.56	1.98	1.08	.67	.42
<i>FTSE 3 Month T-Bill Index</i>	.60	2.11	1.17	.72	.47
Fixed Income ex Funds	3.28	4.80	2.43	2.88	3.45
Total Fixed Income	3.31	4.68	2.65	2.94	3.54
<i>BBG Barclays US Aggregate Bd Index</i>	2.94	4.48	2.03	2.74	3.09
Total Equities	13.88	4.27	11.50	7.28	8.99
Large Cap Funds	13.55	8.08	13.74	10.23	11.54
<i>Russell 1000 Index</i>	14.00	9.30	13.52	10.63	12.40
Mid Cap Funds	16.47	6.57	11.73	8.10	9.82
<i>Russell Midcap Index</i>	16.54	6.47	11.82	8.81	11.35
Small Cap Funds	15.31	3.47	13.59	8.17	11.42
<i>Russell 2000 Index</i>	14.58	2.05	12.92	7.05	10.17
International Equities	11.64	-1.80	9.42	3.75	5.09
<i>MSCI AC World Index</i>	12.18	2.60	10.67	6.45	7.45
<i>MSCI EAFE Index</i>	9.98	-3.71	7.27	2.33	4.17
<i>MSCI EM Free Index</i>	9.92	-7.41	10.68	3.68	1.74
REIT Funds	17.41	20.56	5.98	8.94	9.31
<i>Wilshire REIT Index</i>	16.02	19.34	5.45	9.00	9.77
Alternatives	.89	-5.60	-1.56	.60	
<i>Dynamic Alternatives Index</i>	3.21	-.18	2.09	1.65	-.06
Total Managed Portfolio	8.67	3.72	6.75	4.99	5.98
Total Account Net of Fees	8.65	3.65	6.67	4.90	5.86
<i>Contra Costa Policy Benchmark</i>	8.36	4.84	6.87	5.34	6.42

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 March 31, 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)	14.22	17	14.22	17	6.76	60	11.13	71	9.81	39
T. Rowe Price Growth Stock I		15.92	46	15.92	46	10.62	53	18.16	19	13.81	16
Harbor Capital Appreciation Retirement		17.59	18	17.59	18	11.60	43	18.57	16	13.99	14
Dodge & Cox Stock	(10/14)	10.29	79	10.29	79	4.31	52	14.10	4	8.65	21
Vanguard Growth & Income Adm	(12/16)	13.32	49	13.32	49	8.84	36	13.03	34	10.88	10
iShares Russell 1000 ETF	(3/15)	13.98	23	13.98	23	9.18	30	13.38	21	10.50	22
Russell 1000 TR USD		14.00	--	14.00	--	9.30	--	13.52	--	10.63	--
MID CAP EQUITY FUNDS											
iShares Russell Mid-Cap ETF	(3/15)	16.48	12	16.48	12	6.38	17	11.65	27	8.65	14
Russell Mid Cap TR USD		16.54	--	16.54	--	6.47	--	11.82	--	8.81	--
SMALL CAP EQUITY FUNDS											
Undiscovered Managers Behavioral Val Rf	(9/16)	13.99	16	13.99	16	-0.18	23	8.35	48	7.29	4
Russell 2000 Value TR USD		11.93	--	11.93	--	0.17	--	10.86	--	5.59	--
Victory RS Small Cap Growth R6	(2/19)	22.84	8	22.84	8	6.14	59	20.54	17	10.85	17
T. Rowe Price New Horizons I	Sold (2/19)	20.78	18	20.78	18	18.40	5	23.06	3	14.29	1
Russell 2000 Growth TR USD		17.14	--	17.14	--	3.85	--	14.87	--	8.41	--
iShares Russell 2000 ETF	(3/15)	14.56	31	14.56	31	2.01	31	12.92	13	7.09	25
INTERNATIONAL EQUITY FUNDS											
Dodge & Cox International Stock		9.78	24	9.78	24	-8.00	64	7.87	20	0.85	45
MFS International Growth R6		12.61	53	12.61	53	3.94	5	11.28	9	6.15	11
MFS Global Equity R6	(3/15)	14.69	19	14.69	19	5.89	17	10.64	36	7.13	28
iShares MSCI EAFE ETF	(3/15)	9.96	58	9.96	58	-3.59	26	7.21	37	2.25	45
iShares MSCI ACWI ETF	(3/15)	12.24	47	12.24	47	3.00	42	10.97	30	6.74	36
American Funds New Perspective R6	(3/15)	13.99	25	13.99	25	5.34	22	13.37	14	9.18	11
DFA Large Cap International I	(12/18)	10.49	32	10.49	32	-4.19	36	7.69	21	2.28	43
MSCI EAFE NR USD		9.98	--	9.98	--	-3.71	--	7.27	--	2.33	--
MSCI ACWI NR USD		12.18	--	12.18	--	2.60	--	10.67	--	6.45	--
Hartford Schrodgers Emerging Mkts Eq Y	(11/12)	10.51	44	10.51	44	-8.83	49	12.27	14	4.51	15
MSCI EM Free Index		9.92	--	9.92	--	-7.41	--	10.68	--	3.68	--

Data Source: Morningstar, SEI Investments

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COUNTY OF CONTRA COSTA

For Period Ending March 31, 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)	17.29	16	17.29	16	20.06	16	5.74	48	8.79	41
Wilshire REIT Index		16.02	--	16.02	--	19.34	--	5.45	--	9.00	--
BOND FUNDS											
Core Fixed Income Portfolio		3.28	44	3.28	44	4.80	11	2.43	45	2.88	27
PIMCO Total Return Instl		2.78	74	2.78	74	3.83	62	2.80	27	2.85	29
PGIM Total Return Bond R6	(5/16)	4.02	10	4.02	10	4.78	12	3.85	6	3.92	3
BBgBarc US Agg Bond TR USD		2.94	--	2.94	--	4.48	--	2.03	--	2.74	--
ALTERNATIVE FUNDS											
BlackRock Event Driven Equity Instl	(3/19)	2.25	28	2.25	28	7.98	5	5.41	5	5.34	--
BlackRock Strategic Income Opps K	(7/13)	2.49	55	2.49	55	1.67	57	3.73	48	2.49	38
Eaton Vance Gbl Macr Absolute Return I	(7/13)	2.01	73	2.01	73	-1.76	88	2.21	75	2.48	38
Western Asset Macro Opportunities IS	(2/19)	4.73	13	4.73	13	-0.34	79	6.11	14	4.82	3
AQR Equity Market Neutral I	Sold (3/19)	-2.14	78	-2.14	78	-13.55	96	-1.74	75	--	--
Dynamic Alternatives Index		3.21	--	3.21	--	-0.18	--	2.09	--	1.65	--

Data Source: Morningstar, SEI Investments

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COUNTY OF CONTRA COSTA

For Period Ending December 31, 2018

LARGE CAP EQUITY FUNDS															
Fund Name	Inception	2018 Return	2018 Rank	2017 Return	2017 Rank	2016 Return	2016 Rank	2015 Return	2015 Rank	2014 Return	2014 Rank	2013 Return	2013 Rank	2012 Return	2012 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
Russell 1000 TR USD		-4.78	--	21.69	--	12.05	--	0.92	--	13.24	--	33.11	--	16.42	--
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
Russell Mid Cap TR USD		-9.06	--	18.52	--	13.80	--	-2.44	--	13.22	--	34.76	--	17.28	--
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	--
Russell 2000 Value TR USD		-12.86	--	7.84	--	31.74	--	-7.47	--	4.22	--	34.52	--	18.05	--
T. Rowe Price New Horizons I		4.17	4	31.67	9	7.95	69	4.54	--	6.10	--	49.11	--	16.20	--
Russell 2000 Growth TR USD		-9.31	--	22.17	--	11.32	--	-1.38	--	5.60	--	43.30	--	14.59	--
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
iShares MSCI ACWI ETF	(3/15)	-9.15	45	24.35	39	8.22	21	-2.39	62	4.64	28	22.91	63	15.99	51
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
MSCI EAFE NR USD		-13.79	--	25.03	--	1.00	--	-0.81	--	-4.90	--	22.78	--	17.32	--
MSCI ACWI NR USD		-9.42	--	23.97	--	7.86	--	-2.36	--	4.16	--	22.80	--	16.13	--
Hartford Schroders Emerging Mkts Eq Y	(11/12)	-15.42	45	41.10	18	10.53	--	-12.68	--	-4.61	--	-2.28	--	21.73	--
MSCI EM PR USD		-16.64	--	34.35	--	8.58	--	-16.96	--	-4.63	--	-4.98	--	15.15	--

Data Source: Morningstar, SEI Investments

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COUNTY OF CONTRA COSTA

For Period Ending December 31, 2018

REIT EQUITY FUNDS															
Fund Name	Inception	2018 Return	2018 Rank	2017 Return	2017 Rank	2016 Return	2016 Rank	2015 Return	2015 Rank	2014 Return	2014 Rank	2013 Return	2013 Rank	2012 Return	2012 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
Wilshire US REIT TR USD		-4.84	--	4.18	--	7.24	--	4.23	--	31.78	--	1.86	--	17.59	--
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
BBgBarc US Agg Bond TR USD		0.01	--	3.54	--	2.65	--	0.55	--	5.97	--	-2.02	--	4.21	--
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
Dynamic Alternatives Index		-4.24	--	5.07	--	2.29	--	-5.19	--	6.39	--	0.54	--	-1.67	--

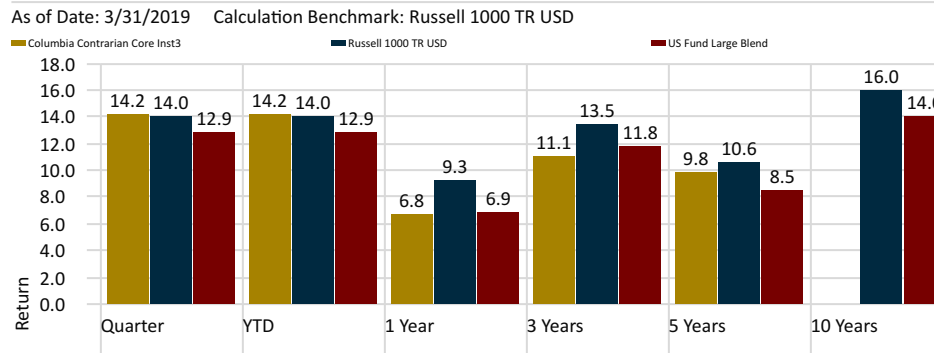
Data Source: Morningstar, SEI Investments

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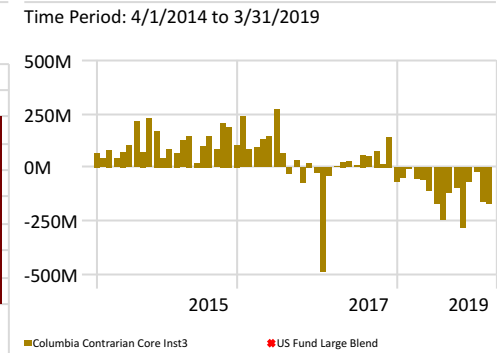
Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★
Inception Date	11/8/2012
Expense Ratio	0.63
Fund Size (Mil)	10,158.49
Portfolio Date	3/31/2019
Manager Name	Guy W. Pope

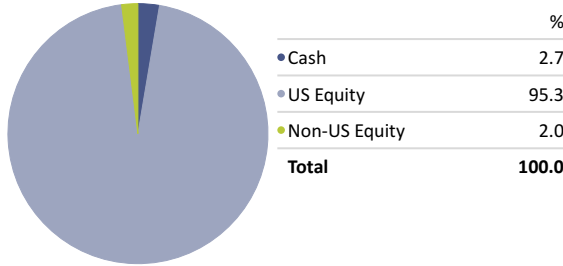
Returns



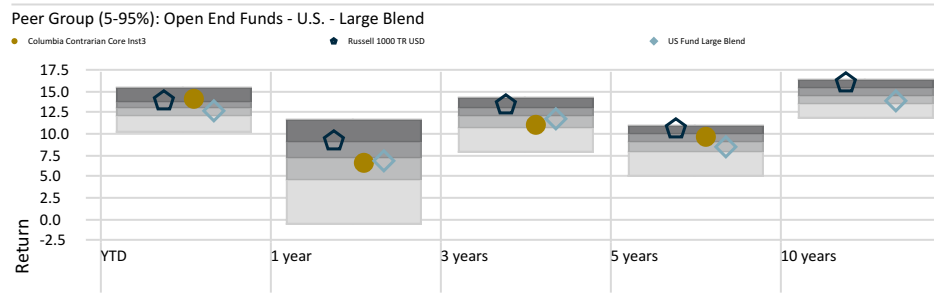
Monthly Estimated Fund-Level Net Flow



Asset Allocation

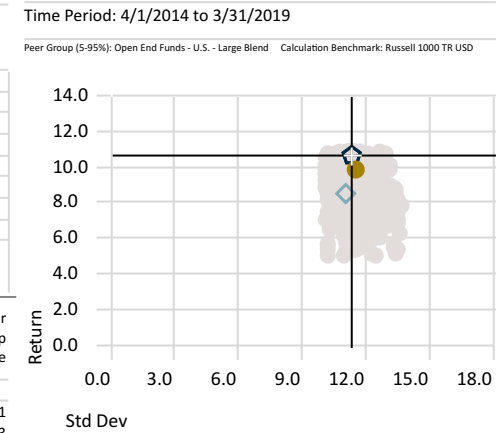


Performance Relative to Peer Group

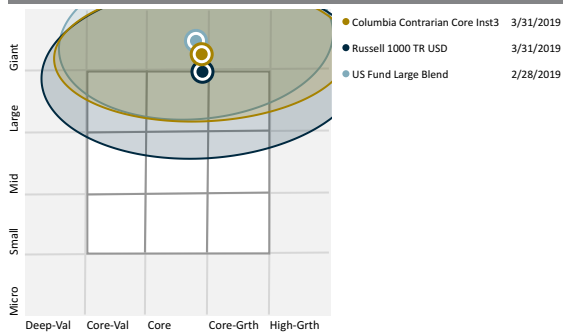


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Columbia Contrarian Core Inst3	14.22	1	6.76	3	11.13	3	9.81	2		
Russell 1000 TR USD	14.00	1	9.30	1	13.52	1	10.63	1	16.05	1
US Fund Large Blend	12.91	3	6.91	3	11.85	3	8.53	3	13.98	3

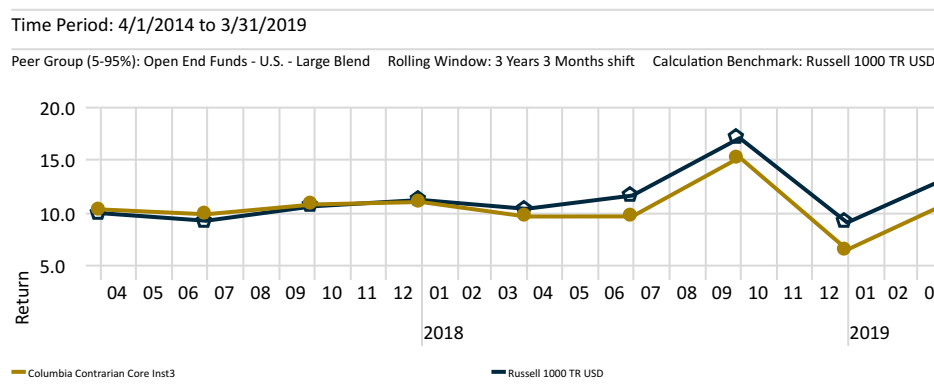
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Columbia Contrarian Core Inst3 - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: Russell 1000 TR USD

	Inv	Bmk1
Return	9.81	10.63
Std Dev	11.52	11.31
Downside Deviation	1.69	0.00
Alpha	-0.75	0.00
Beta	1.00	1.00
R2	96.66	100.00
Sharpe Ratio (arith)	0.78	0.87
Tracking Error	2.11	0.00

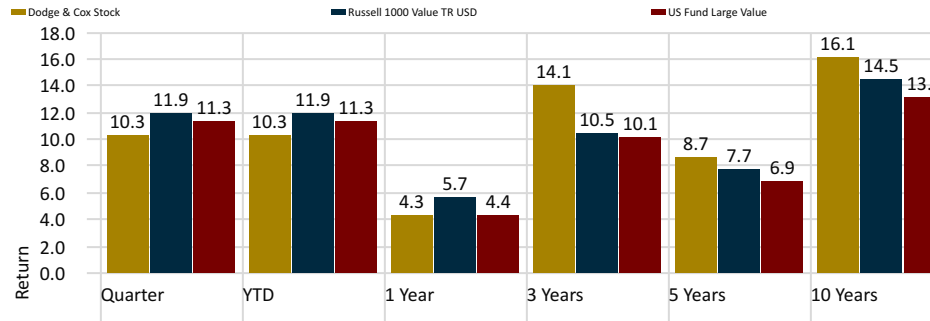
Source: Morningstar Direct, as of March 31, 2019 Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

Key Information

Morningstar Category: US Fund Large Value
 Morningstar Rating Overall: ★★★★★
 Inception Date: 1/4/1965
 Expense Ratio: 0.52
 Fund Size (Mil): 69,858.99
 Portfolio Date: 12/31/2018
 Manager Name: Multiple

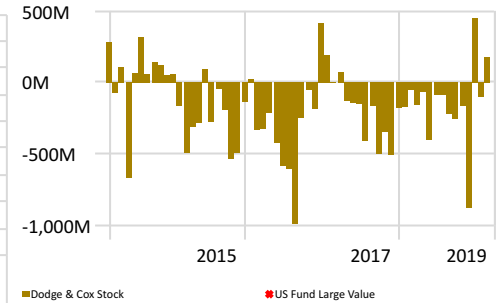
Returns

As of Date: 3/31/2019 Calculation Benchmark: Russell 1000 Value TR USD

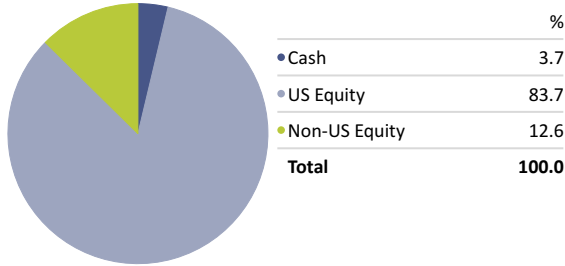


Monthly Estimated Fund-Level Net Flow

Time Period: 4/1/2014 to 3/31/2019

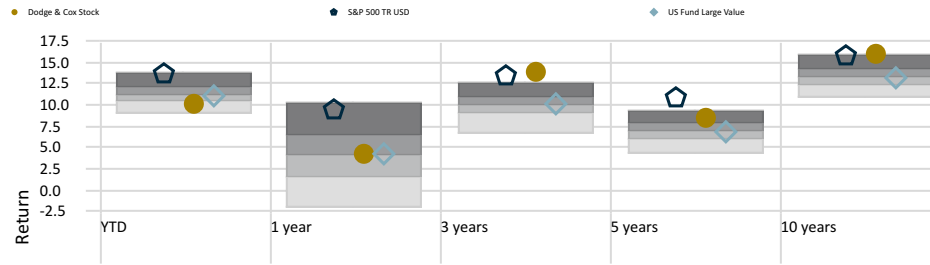


Asset Allocation



Performance Relative to Peer Group

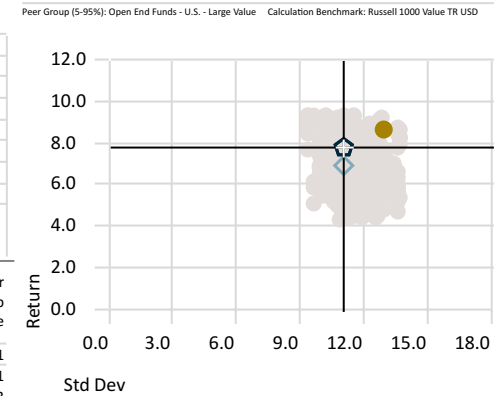
Peer Group (5-95%): Open End Funds - U.S. - Large Value



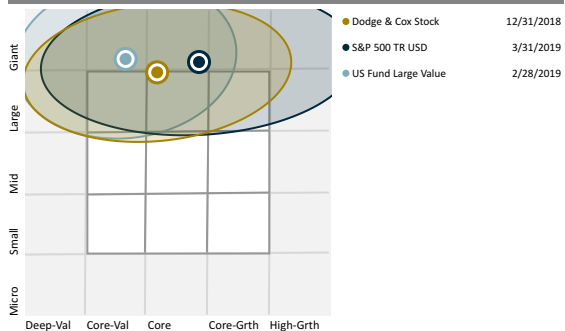
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Dodge & Cox Stock	10.29	4	4.31	2	14.10	1	8.65	1	16.14	1
Russell 1000 Value TR USD	11.93	2	5.67	2	10.45	2	7.72	2	14.52	1
US Fund Large Value	11.29	2	4.36	2	10.14	2	6.92	2	13.17	3

Risk-Reward

Time Period: 4/1/2014 to 3/31/2019



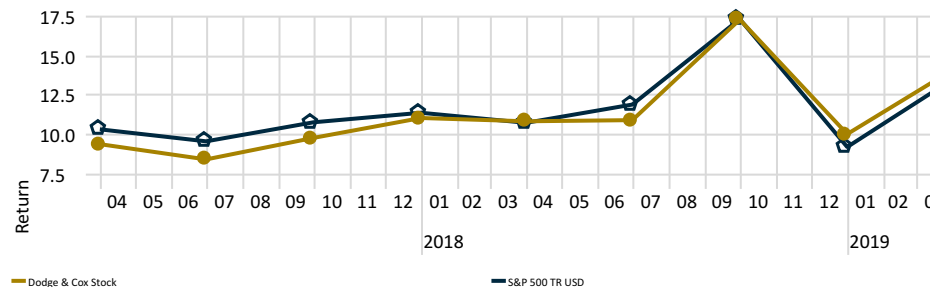
Holdings-Based Style Map



Rolling Returns

Time Period: 4/1/2014 to 3/31/2019

Peer Group (5-95%): Open End Funds - U.S. - Large Value Rolling Window: 3 Years 3 Months shift Calculation Benchmark: S&P 500 TR USD



Dodge & Cox Stock - Risk

Time Period: 4/1/2014 to 3/31/2019

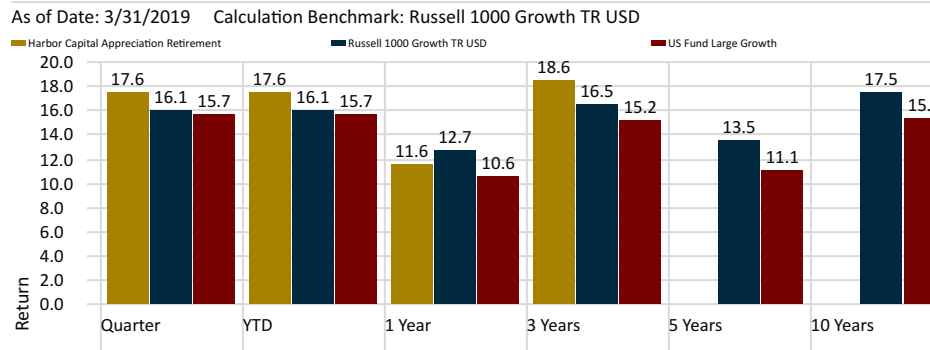
Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	8.65	10.91
Std Dev	12.96	11.19
Downside Deviation	3.46	0.00
Alpha	-2.61	0.00
Beta	1.07	1.00
R2	85.76	100.00
Sharpe Ratio (arith)	0.61	0.90
Tracking Error	4.96	0.00

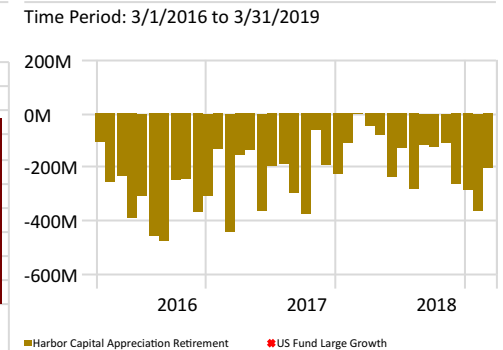
Key Information

Morningstar Category: US Fund Large Growth
 Morningstar Rating Overall: ★★★★★
 Inception Date: 3/1/2016
 Expense Ratio: 0.58
 Fund Size (Mil): 31,000.12
 Portfolio Date: 12/31/2018
 Manager Name: Multiple

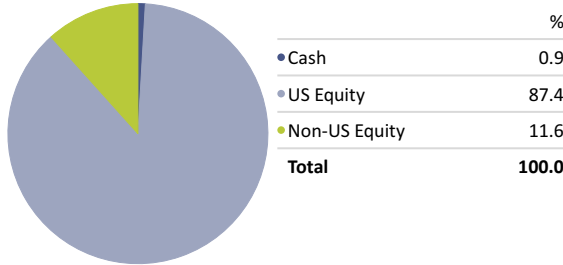
Returns



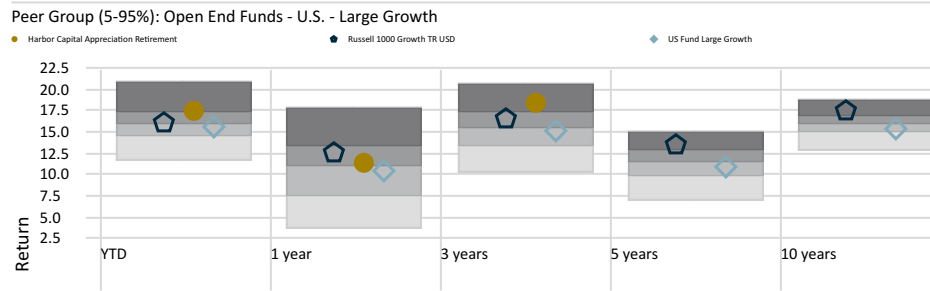
Monthly Estimated Fund-Level Net Flow



Asset Allocation

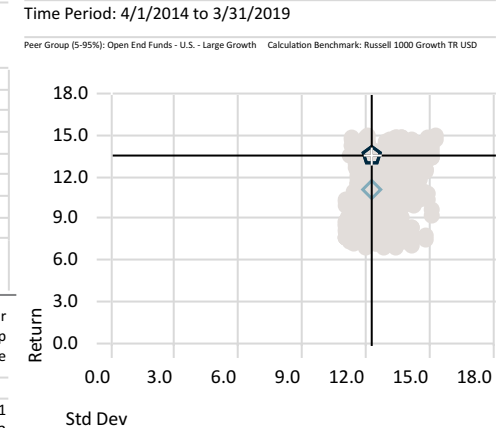


Performance Relative to Peer Group

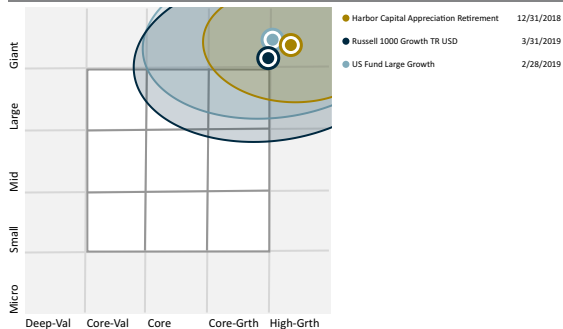


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Harbor Capital Appreciation Retirement	17.59	1	11.60	2	18.57	1	-	-	-	-
Russell 1000 Growth TR USD	16.10	2	12.75	2	16.53	2	13.50	1	17.52	1
US Fund Large Growth	15.66	3	10.62	3	15.24	3	11.10	3	15.39	3

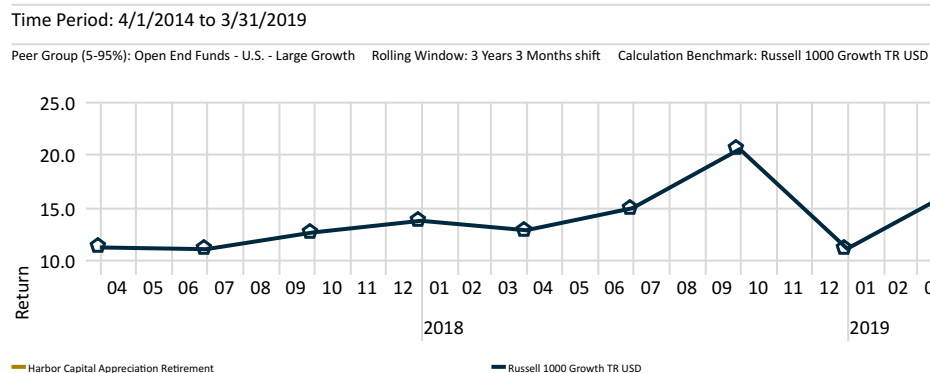
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Harbor Capital Appreciation Retirement - Risk

Time Period: 4/1/2014 to 3/31/2019

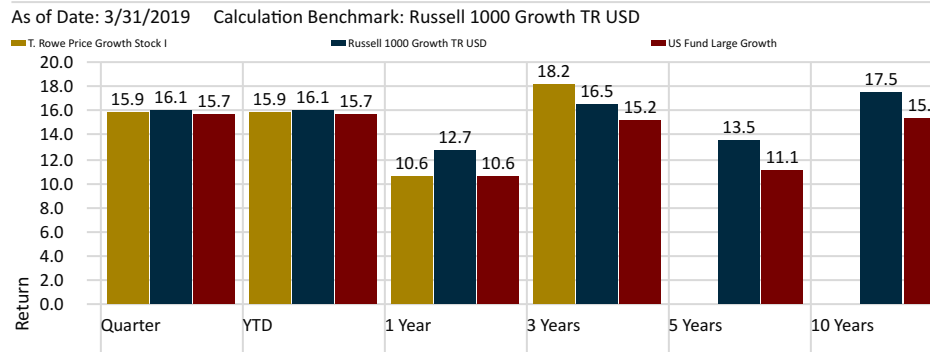
Calculation Benchmark: Russell 1000 Growth TR USD

	Inv	Bmk1
Return	13.50	13.50
Std Dev	12.28	12.28
Downside Deviation	0.00	0.00
Alpha	0.00	0.00
Beta	1.00	1.00
R2	100.00	100.00
Sharpe Ratio (arith)	1.03	1.03
Tracking Error	0.00	0.00

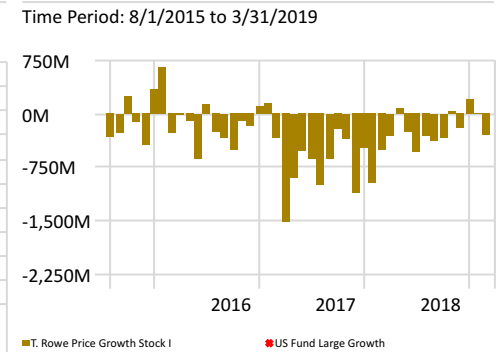
Key Information

Morningstar Category	US Fund Large Growth
Morningstar Rating Overall	★★★★
Inception Date	8/28/2015
Expense Ratio	0.52
Fund Size (Mil)	55,779.68
Portfolio Date	12/31/2018
Manager Name	Joseph B. Fath

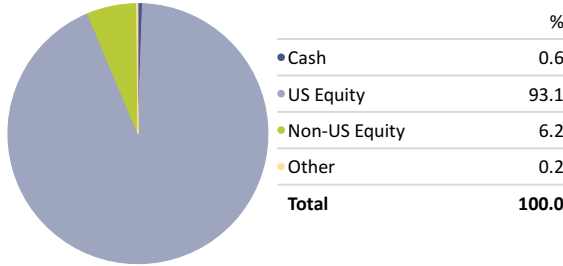
Returns



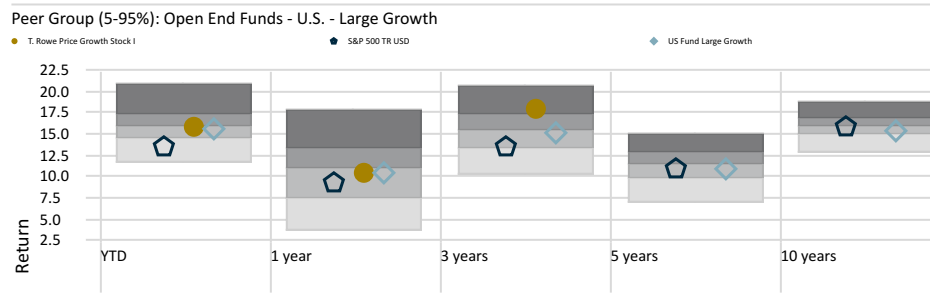
Monthly Estimated Fund-Level Net Flow



Asset Allocation

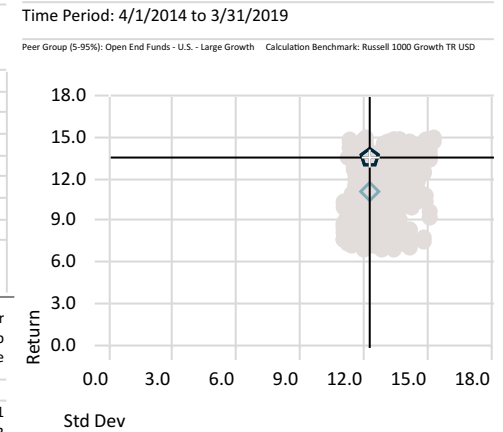


Performance Relative to Peer Group

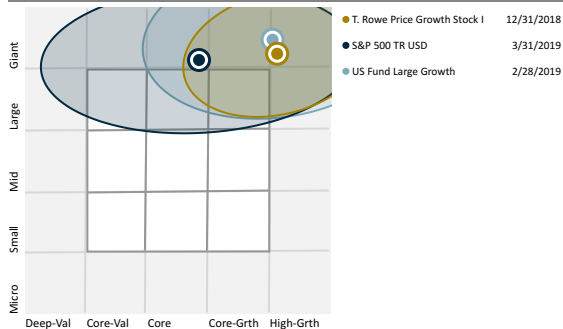


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
T. Rowe Price Growth Stock I	15.92	3	10.62	3	18.16	1				
Russell 1000 Growth TR USD	16.10	2	12.75	2	16.53	2	13.50	1	17.52	1
US Fund Large Growth	15.66	3	10.62	3	15.24	3	11.10	3	15.39	3

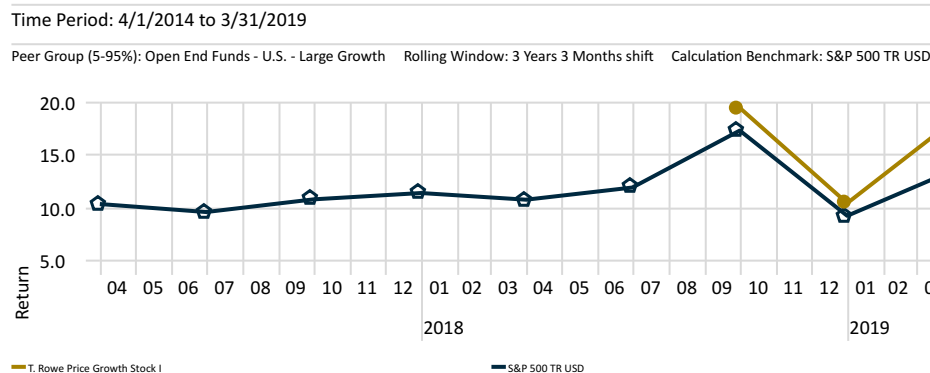
Risk-Reward



Holdings-Based Style Map



Rolling Returns



T. Rowe Price Growth Stock I - Risk

Time Period: 4/1/2014 to 3/31/2019

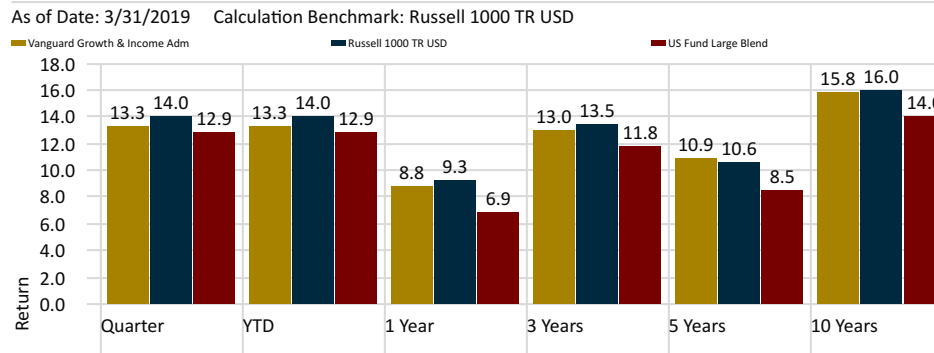
Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return		10.91
Std Dev		11.19
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.90
Tracking Error		0.00

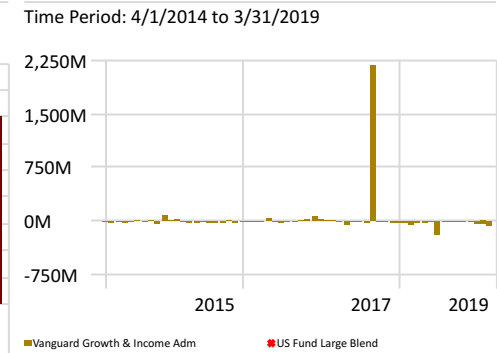
Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★★
Inception Date	5/14/2001
Expense Ratio	0.23
Fund Size (Mil)	10,901.03
Portfolio Date	12/31/2018
Manager Name	Multiple

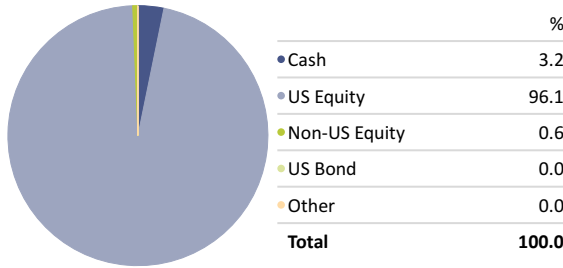
Returns



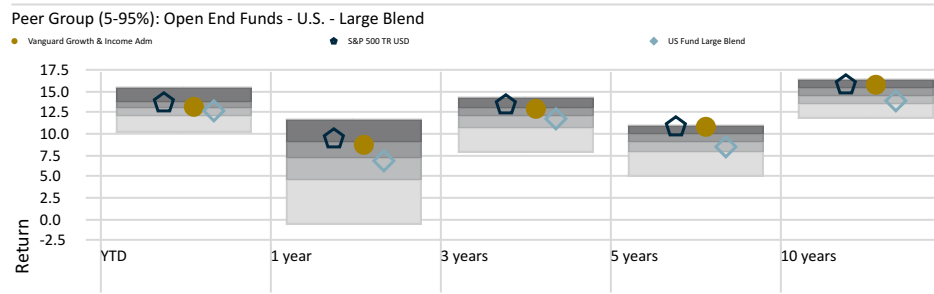
Monthly Estimated Fund-Level Net Flow



Asset Allocation

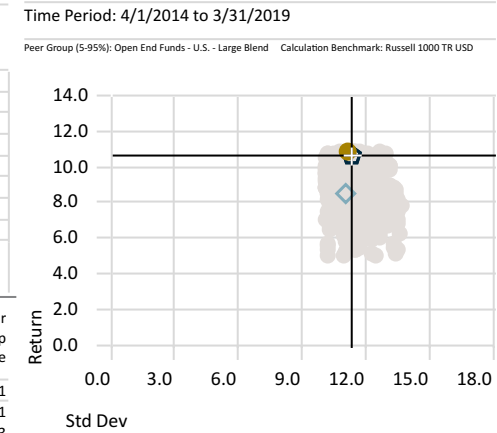


Performance Relative to Peer Group

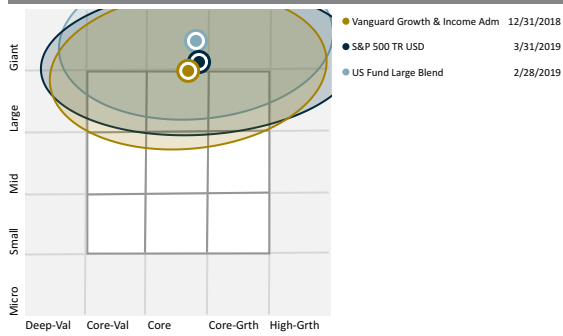


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Vanguard Growth & Income Adm	13.32	2	8.84	2	13.03	2	10.88	1	15.82	1
Russell 1000 TR USD	14.00	1	9.30	1	13.52	1	10.63	1	16.05	1
US Fund Large Blend	12.91	3	6.91	3	11.85	3	8.53	3	13.98	3

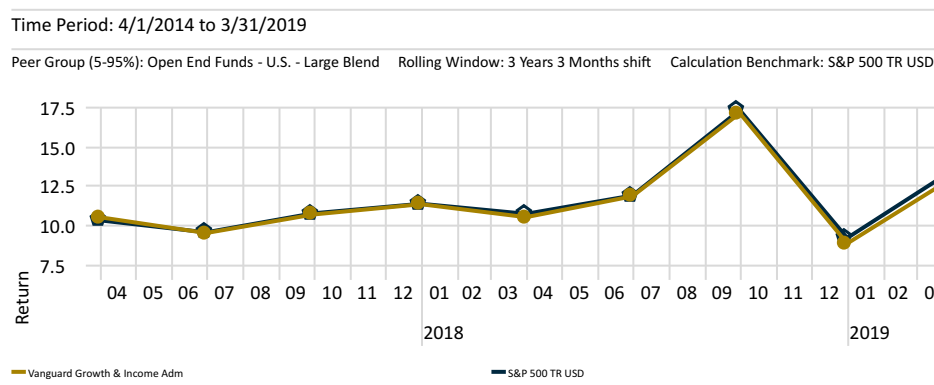
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Vanguard Growth & Income Adm - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	10.88	10.91
Std Dev	11.12	11.19
Downside Deviation	0.68	0.00
Alpha	0.07	0.00
Beta	0.99	1.00
R2	99.22	100.00
Sharpe Ratio (arith)	0.91	0.90
Tracking Error	0.99	0.00

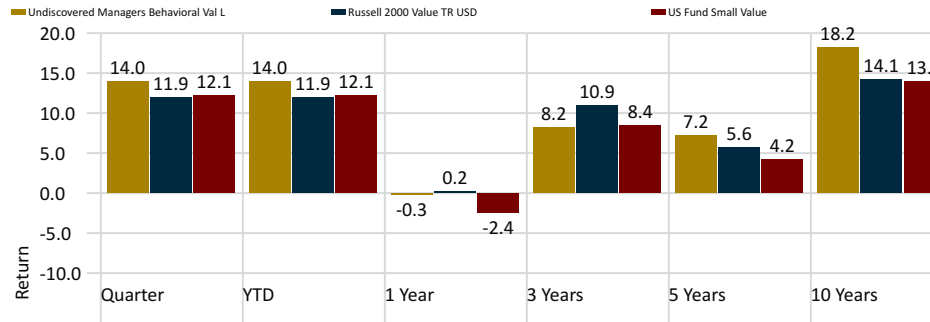
Source: Morningstar Direct, as of March 31, 2019 Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

Key Information

Morningstar Category: US Fund Small Value
 Morningstar Rating Overall: ★★★★★
 Inception Date: 12/28/1998
 Expense Ratio: 0.97
 Fund Size (Mil): 5,524.83
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

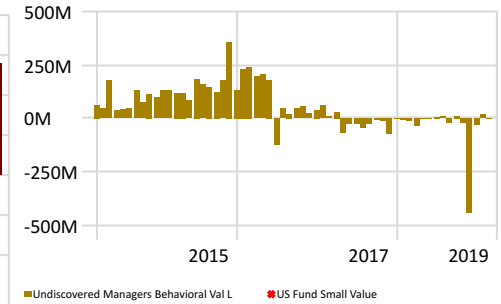
Returns

As of Date: 3/31/2019 Calculation Benchmark: Russell 2000 Value TR USD

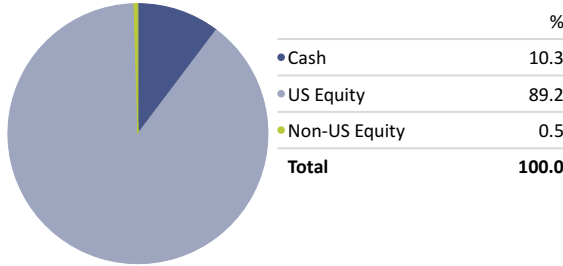


Monthly Estimated Fund-Level Net Flow

Time Period: 4/1/2014 to 3/31/2019

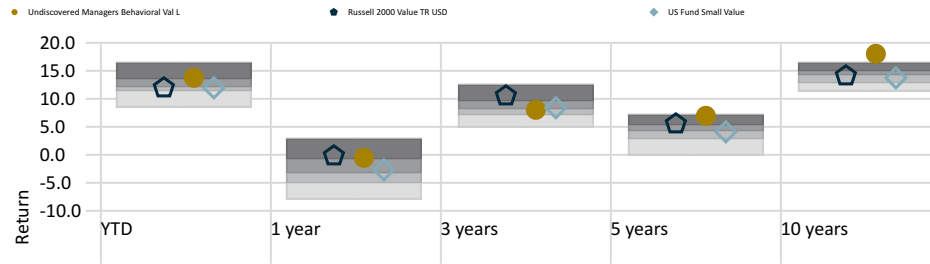


Asset Allocation



Performance Relative to Peer Group

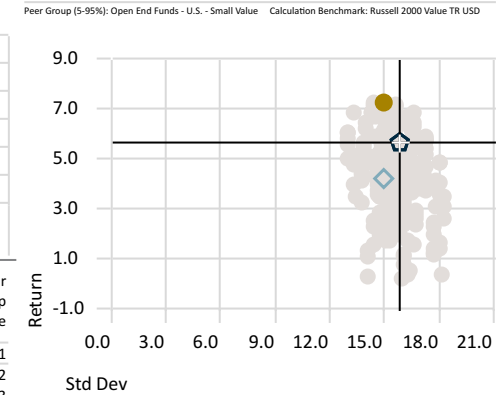
Peer Group (5-95%): Open End Funds - U.S. - Small Value



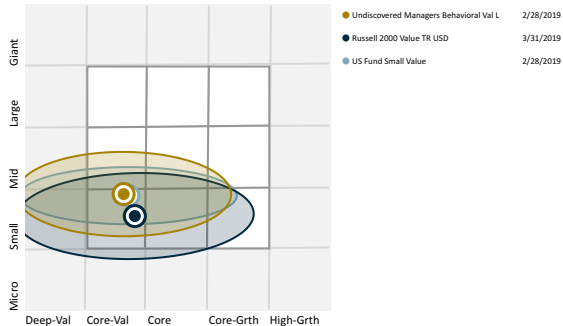
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Undiscovered Managers Behavioral Val L	13.95	1	-0.27	1	8.25	2	7.19	1	18.25	1
Russell 2000 Value TR USD	11.93	3	0.17	1	10.86	1	5.59	1	14.12	2
US Fund Small Value	12.10	3	-2.45	2	8.39	2	4.22	3	13.84	3

Risk-Reward

Time Period: 4/1/2014 to 3/31/2019



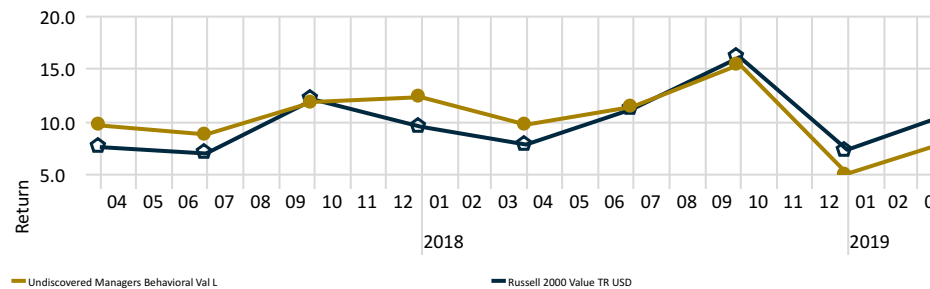
Holdings-Based Style Map



Rolling Returns

Time Period: 4/1/2014 to 3/31/2019

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



Undiscovered Managers Behavioral Val L - Risk

Time Period: 4/1/2014 to 3/31/2019

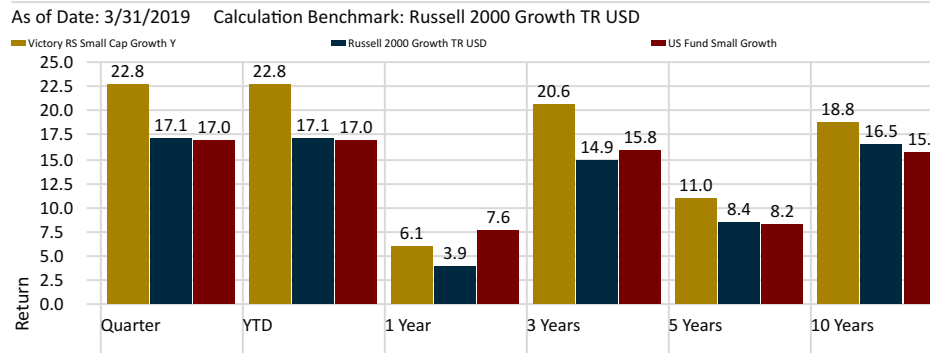
Calculation Benchmark: Russell 2000 Value TR USD

	Inv	Bmk1
Return	7.19	5.59
Std Dev	15.01	15.81
Downside Deviation	3.96	0.00
Alpha	2.04	0.00
Beta	0.89	1.00
R2	87.95	100.00
Sharpe Ratio (arith)	0.43	0.30
Tracking Error	5.50	0.00

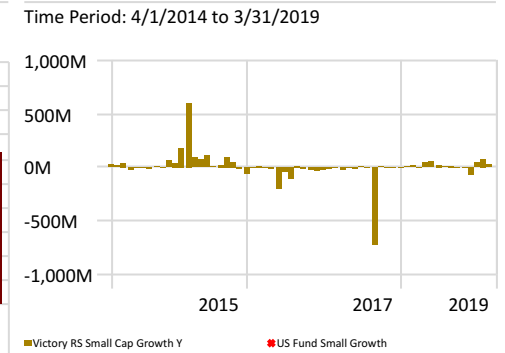
Key Information

Morningstar Category	US Fund Small Growth
Morningstar Rating Overall	★★★★
Inception Date	5/1/2007
Expense Ratio	1.14
Fund Size (Mil)	2,126.48
Portfolio Date	3/31/2019
Manager Name	Multiple

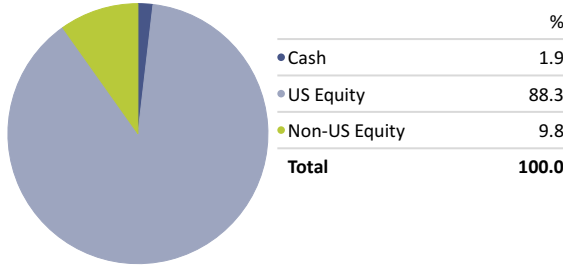
Returns



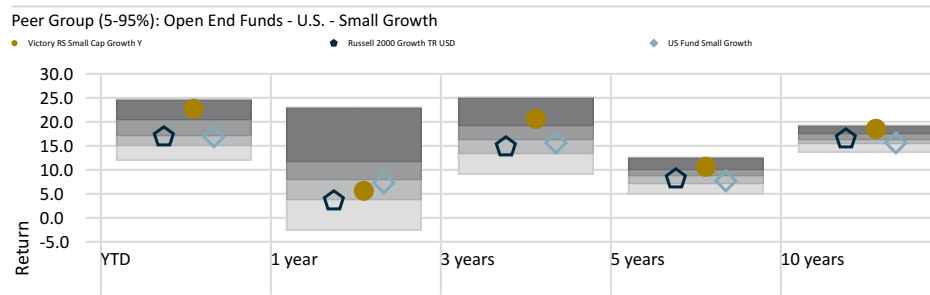
Monthly Estimated Fund-Level Net Flow



Asset Allocation

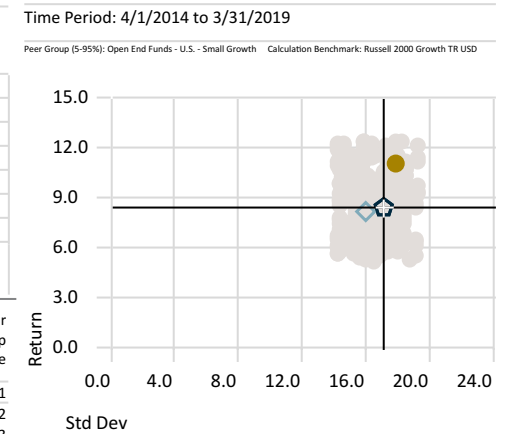


Performance Relative to Peer Group

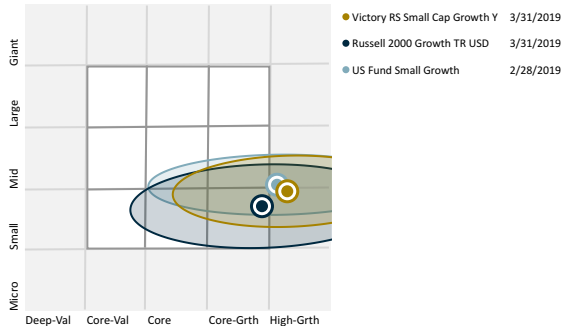


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Victory RS Small Cap Growth Y	22.82	1	6.08	3	20.63	1	11.03	1	18.78	1
Russell 2000 Growth TR USD	17.14	2	3.85	4	14.87	3	8.41	3	16.52	2
US Fund Small Growth	16.97	3	7.56	3	15.84	3	8.18	3	15.65	3

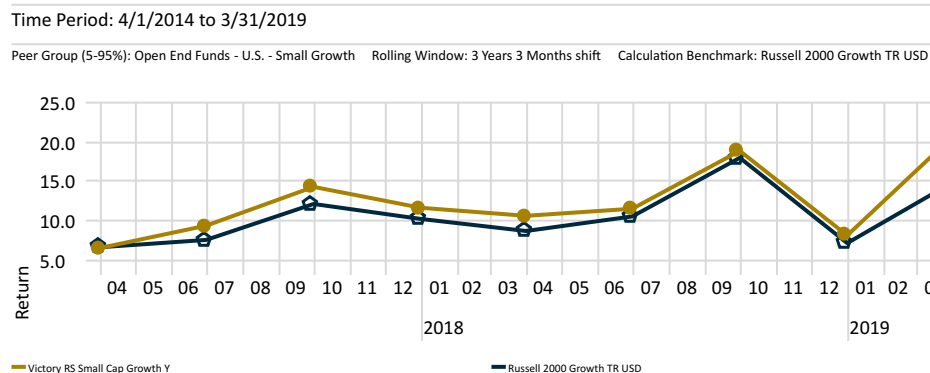
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Victory RS Small Cap Growth Y - Risk

Time Period: 4/1/2014 to 3/31/2019

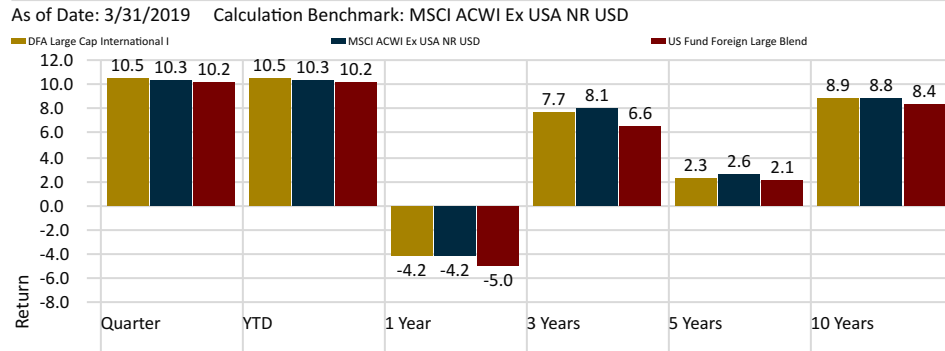
Calculation Benchmark: Russell 2000 Growth TR USD

	Inv	Bmk1
Return	11.03	8.41
Std Dev	17.88	17.05
Downside Deviation	3.09	0.00
Alpha	2.48	0.00
Beta	1.01	1.00
R2	92.55	100.00
Sharpe Ratio (arith)	0.57	0.45
Tracking Error	4.88	0.00

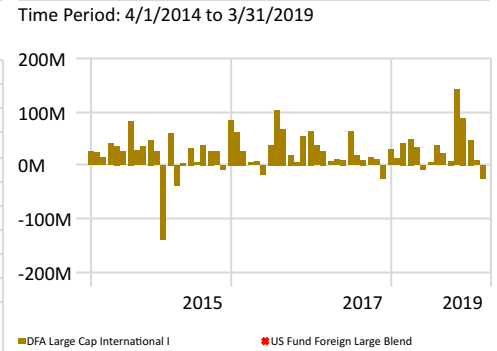
Key Information

Morningstar Category: US Fund Foreign Large Blend
 Morningstar Rating Overall: ★★ ★
 Inception Date: 7/17/1991
 Expense Ratio: 0.23
 Fund Size (Mil): 5,219.27
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

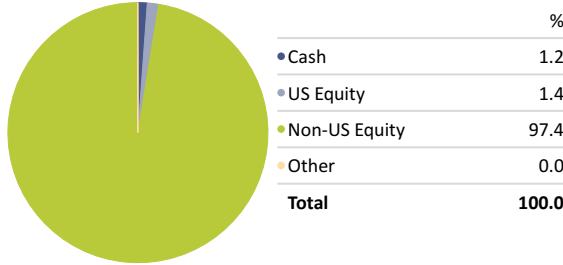
Returns



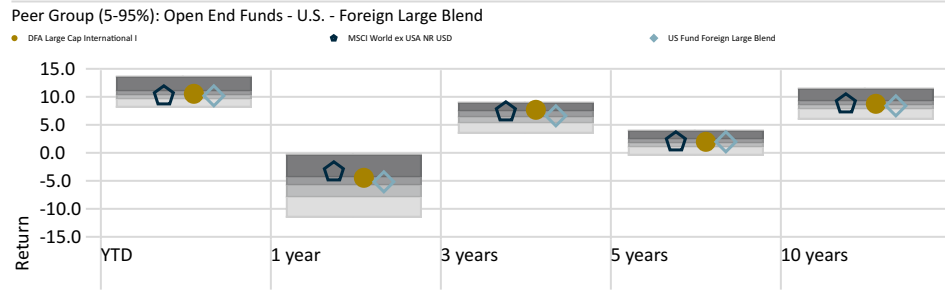
Monthly Estimated Fund-Level Net Flow



Asset Allocation

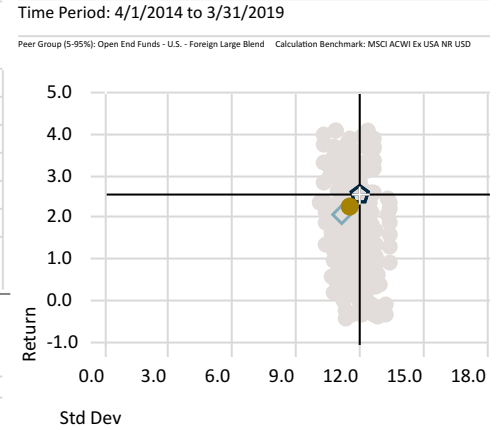


Performance Relative to Peer Group

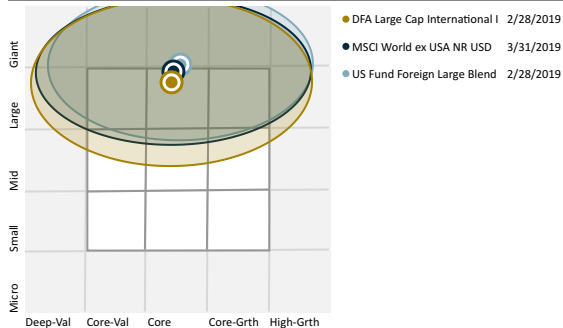


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
DFA Large Cap International I	10.49	2	-4.19	2	7.69	1	2.28	2	8.86	2
MSCI ACWI Ex USA NR USD	10.31	2	-4.22	2	8.09	1	2.57	2	8.85	2
US Fund Foreign Large Blend	10.25	2	-5.03	2	6.63	2	2.07	2	8.42	2

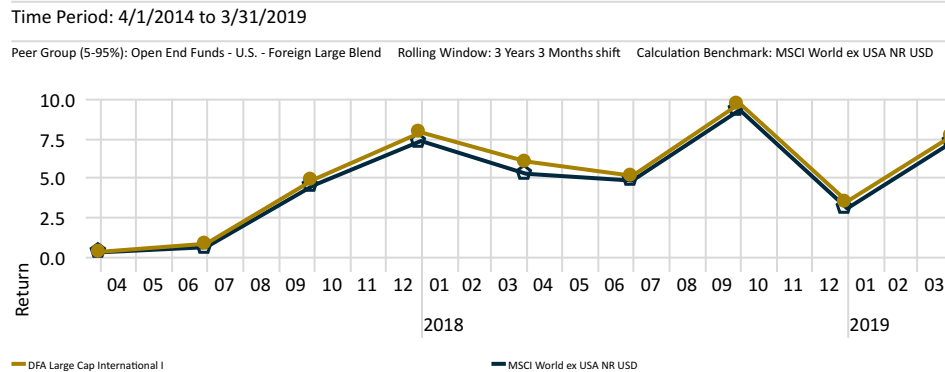
Risk-Reward



Holdings-Based Style Map



Rolling Returns



DFA Large Cap International I - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: MSCI World ex USA NR USD

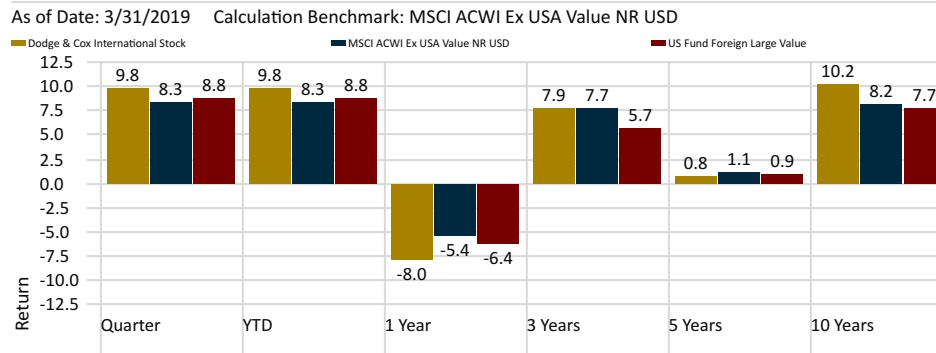
	Inv	Bmk1
Return	2.28	2.20
Std Dev	11.52	11.73
Downside Deviation	1.25	0.00
Alpha	0.12	0.00
Beta	0.97	1.00
R2	97.77	100.00
Sharpe Ratio (arith)	0.13	0.12
Tracking Error	1.75	0.00

Source: Morningstar Direct, as of March 31, 2019 Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

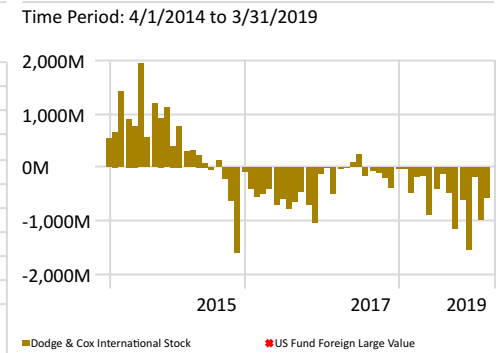
Key Information

Morningstar Category	US Fund Foreign Large Value
Morningstar Rating Overall	★★★★
Inception Date	5/1/2001
Expense Ratio	0.63
Fund Size (Mil)	51,091.89
Portfolio Date	12/31/2018
Manager Name	Multiple

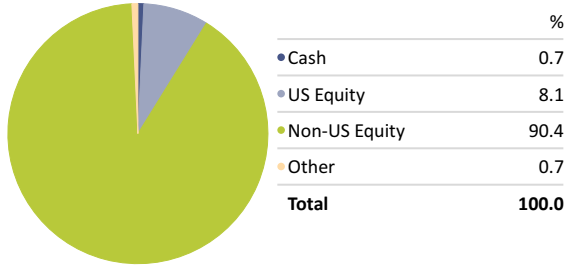
Returns



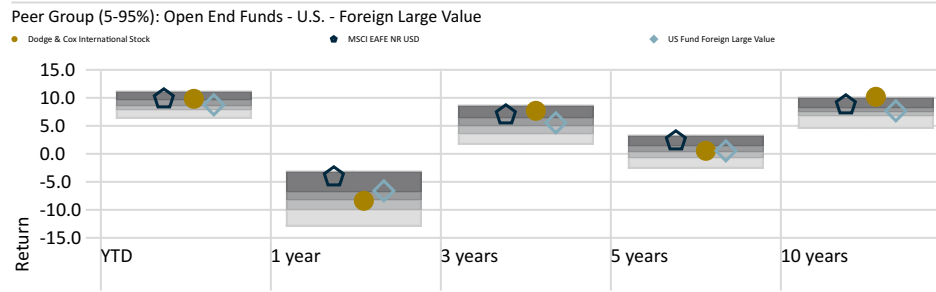
Monthly Estimated Fund-Level Net Flow



Asset Allocation

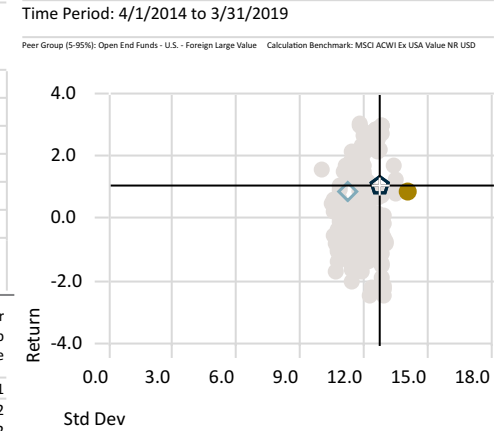


Performance Relative to Peer Group

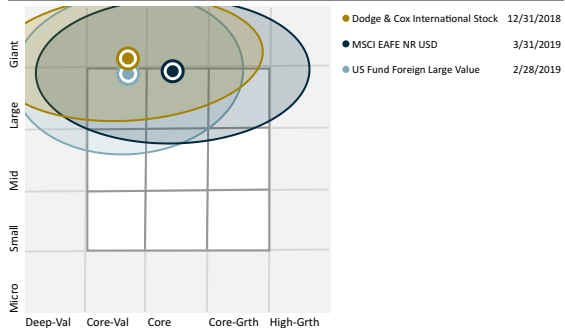


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Dodge & Cox International Stock	9.78	1	-8.00	2	7.87	1	0.85	2	10.25	1
MSCI ACWI Ex USA Value NR USD	8.33	3	-5.39	1	7.73	1	1.08	2	8.19	2
US Fund Foreign Large Value	8.76	2	-6.37	1	5.69	2	0.88	2	7.69	2

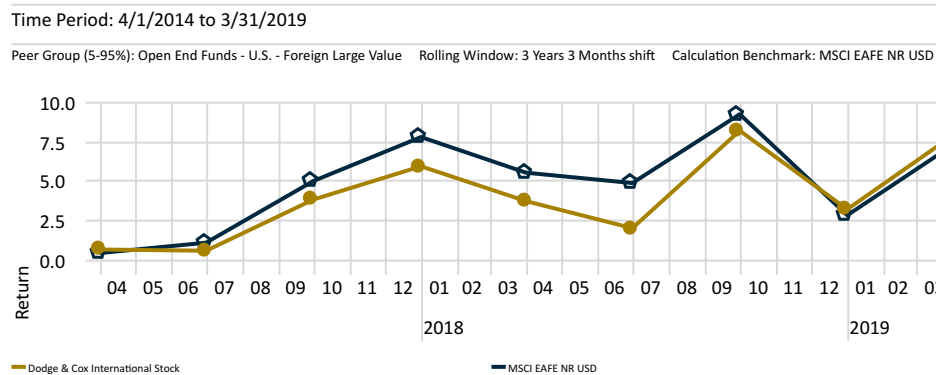
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Dodge & Cox International Stock - Risk

Time Period: 4/1/2014 to 3/31/2019

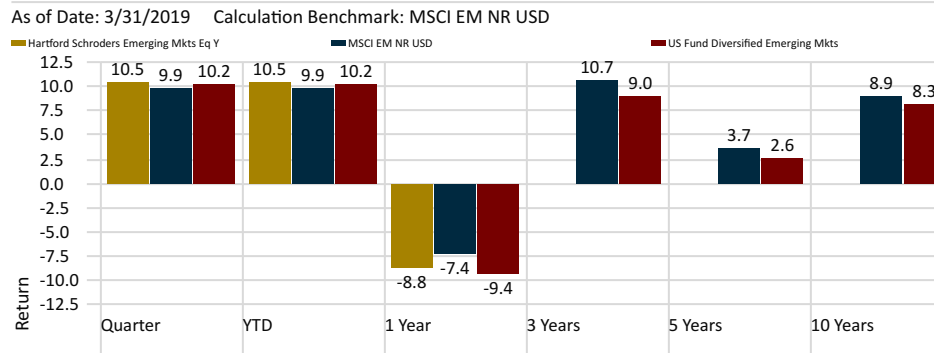
Calculation Benchmark: MSCI EAFE NR USD

	Inv	Bmk1
Return	0.85	2.33
Std Dev	14.03	11.77
Downside Deviation	3.72	0.00
Alpha	-1.42	0.00
Beta	1.11	1.00
R2	87.04	100.00
Sharpe Ratio (arith)	0.00	0.13
Tracking Error	5.22	0.00

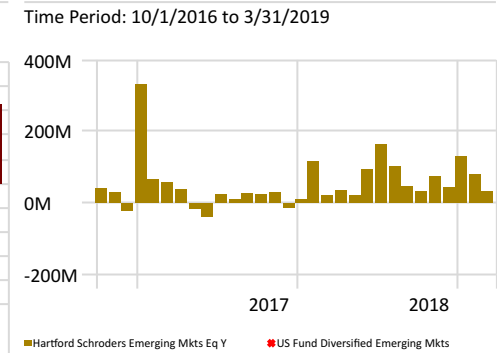
Key Information

Morningstar Category: US Fund Diversified Emerging Mkts
 Morningstar Rating Overall:
 Inception Date: 10/24/2016
 Expense Ratio: 1.15
 Fund Size (Mil): 3,763.40
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

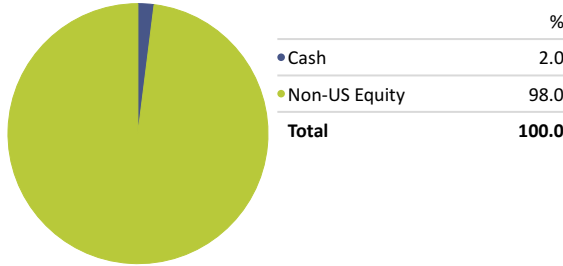
Returns



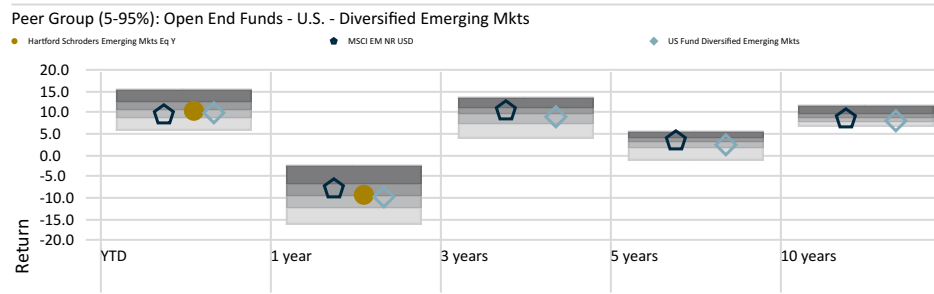
Monthly Estimated Fund-Level Net Flow



Asset Allocation

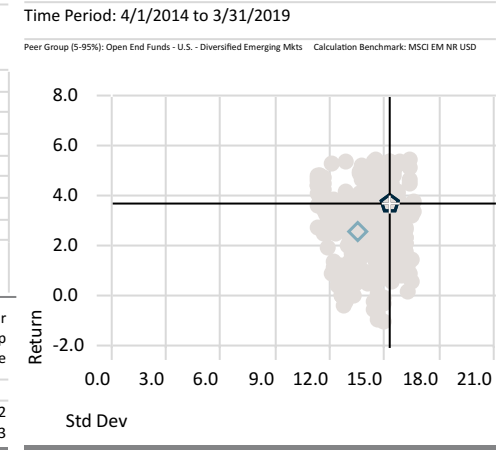


Performance Relative to Peer Group

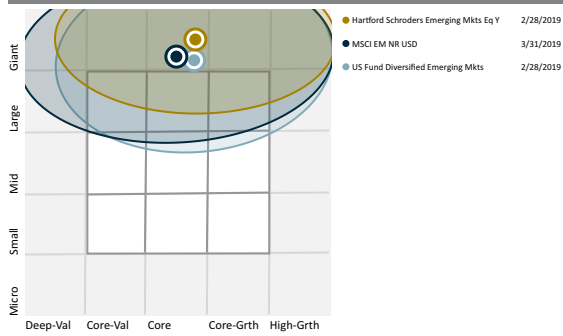


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Hartford Schroders Emerging Mkts Eq Y	10.51	2	-8.83	2						
MSCI EM NR USD	9.91	3	-7.41	2	10.68	2	3.68	2	8.94	2
US Fund Diversified Emerging Mkts	10.22	3	-9.38	2	9.02	3	2.57	3	8.28	3

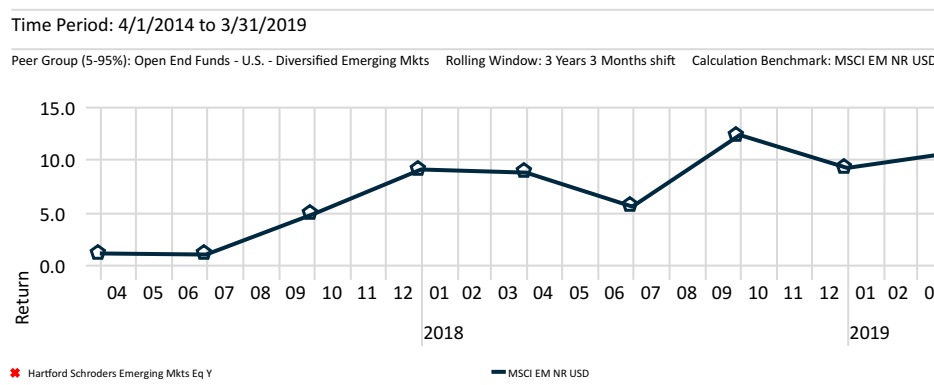
Risk-Reward



Holdings-Based Style Map



Rolling Returns



Hartford Schroders Emerging Mkts Eq Y - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: MSCI EM NR USD

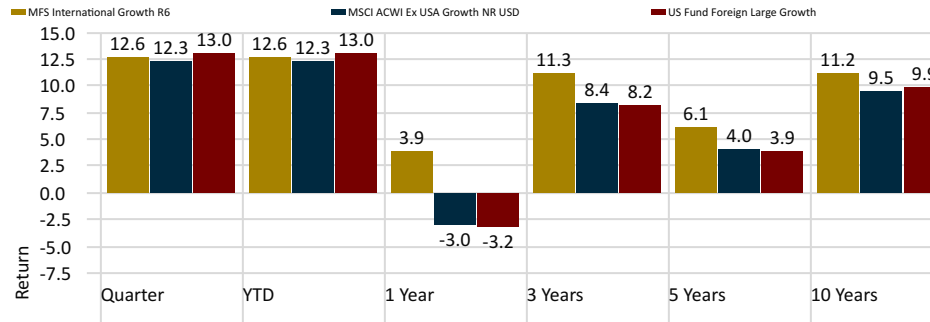
	Inv	Bmk1
Return		3.68
Std Dev		15.25
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.19
Tracking Error		0.00

Key Information

Morningstar Category: US Fund Foreign Large Growth
 Morningstar Rating Overall: ★★★★★
 Inception Date: 5/1/2006
 Expense Ratio: 0.80
 Fund Size (Mil): 8,337.62
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

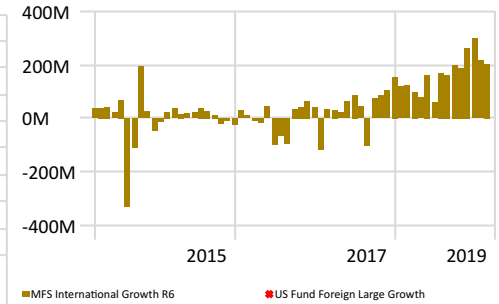
Returns

As of Date: 3/31/2019 Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD

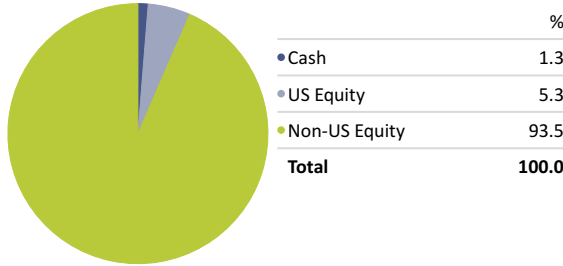


Monthly Estimated Fund-Level Net Flow

Time Period: 4/1/2014 to 3/31/2019

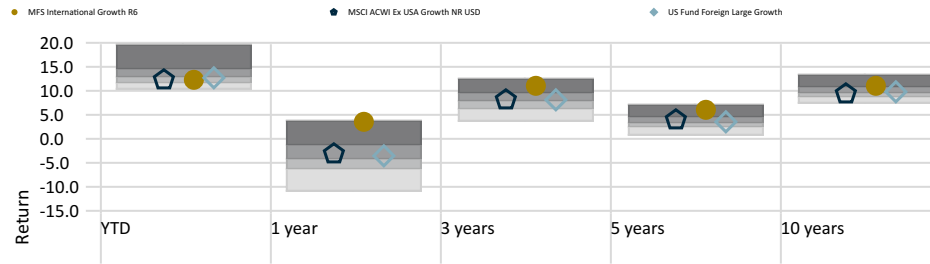


Asset Allocation



Performance Relative to Peer Group

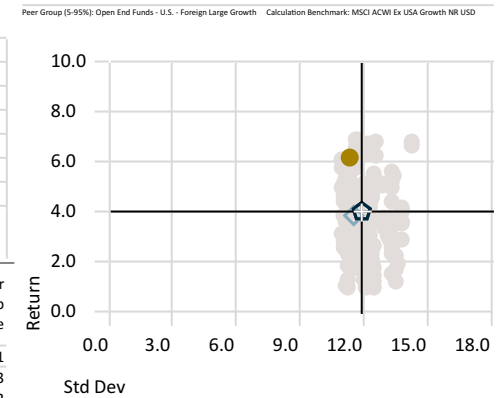
Peer Group (5-95%): Open End Funds - U.S. - Foreign Large Growth



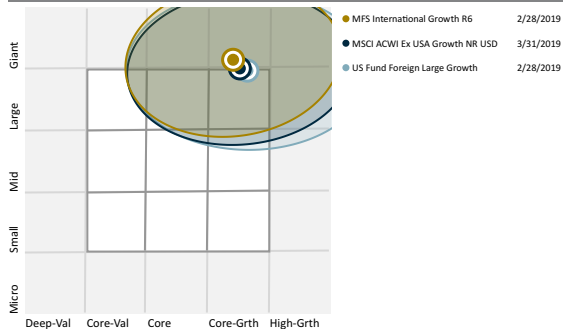
	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
MFS International Growth R6	12.61	3	3.94	1	11.28	1	6.15	1	11.18	1
MSCI ACWI Ex USA Growth NR USD	12.31	3	-3.05	2	8.42	2	4.01	2	9.47	3
US Fund Foreign Large Growth	12.97	2	-3.23	2	8.17	2	3.87	2	9.91	2

Risk-Reward

Time Period: 4/1/2014 to 3/31/2019



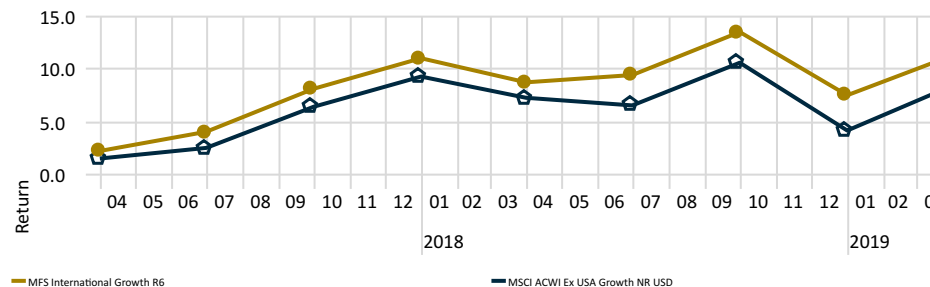
Holdings-Based Style Map



Rolling Returns

Time Period: 4/1/2014 to 3/31/2019

Peer Group (5-95%): Open End Funds - U.S. - Foreign Large Growth Rolling Window: 3 Years 3 Months shift Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD



MFS International Growth R6 - Risk

Time Period: 4/1/2014 to 3/31/2019

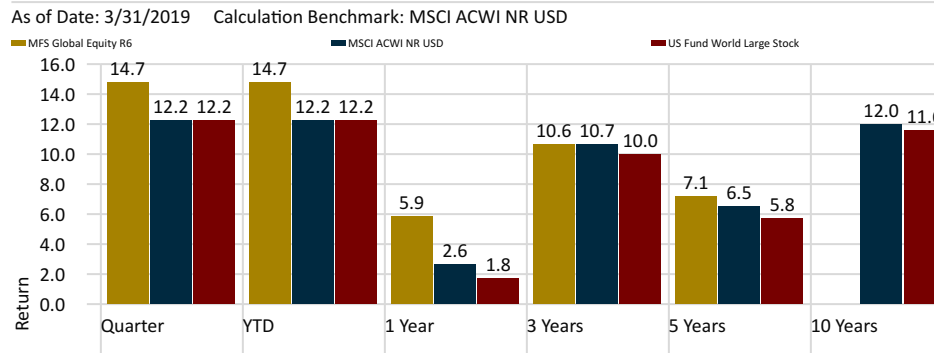
Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD

	Inv	Bmk1
Return	6.15	4.01
Std Dev	11.28	11.89
Downside Deviation	1.70	0.00
Alpha	2.28	0.00
Beta	0.92	1.00
R2	94.11	100.00
Sharpe Ratio (arith)	0.47	0.27
Tracking Error	2.90	0.00

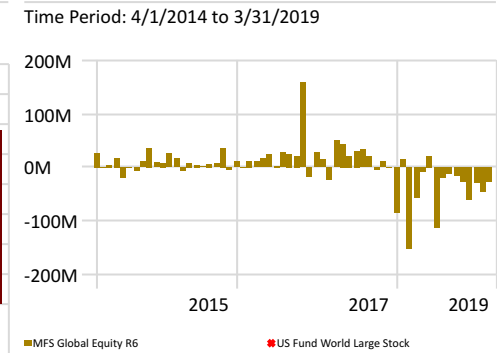
Key Information

Morningstar Category: US Fund World Large Stock
 Morningstar Rating Overall: ★★★★★
 Inception Date: 6/1/2012
 Expense Ratio: 0.81
 Fund Size (Mil): 2,896.33
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

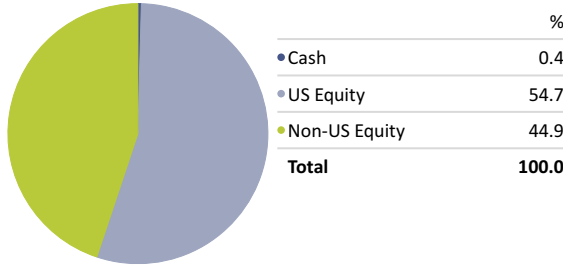
Returns



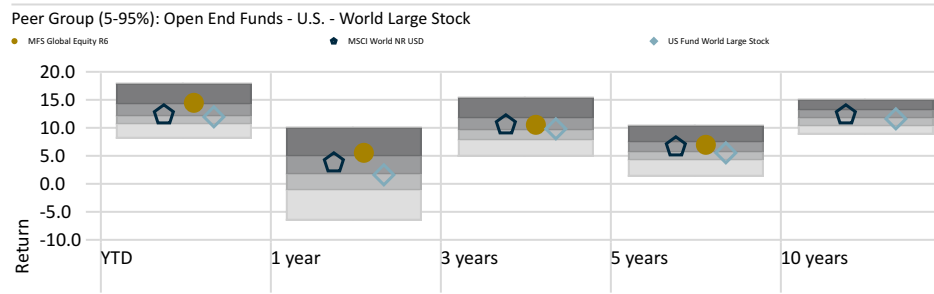
Monthly Estimated Fund-Level Net Flow



Asset Allocation

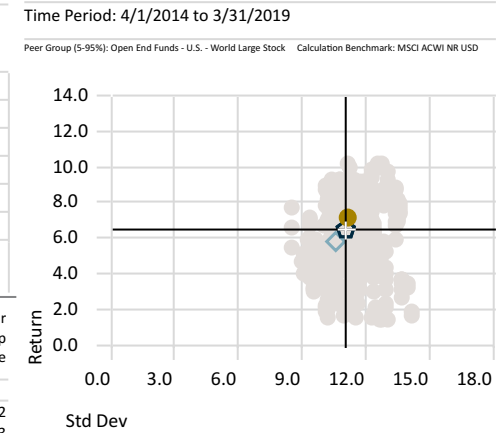


Performance Relative to Peer Group

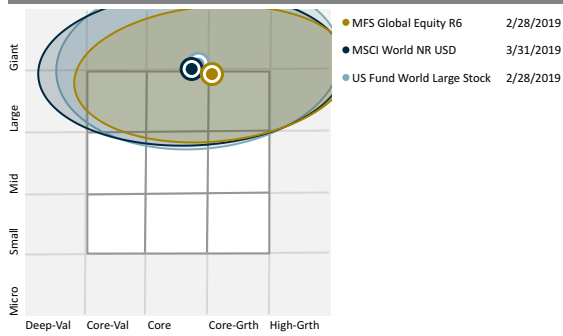


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
MFS Global Equity R6	14.69	1	5.89	1	10.64	2	7.13	2		
MSCI ACWI NR USD	12.18	3	2.60	2	10.67	2	6.45	2	11.98	2
US Fund World Large Stock	12.24	2	1.78	2	9.97	2	5.77	3	11.59	3

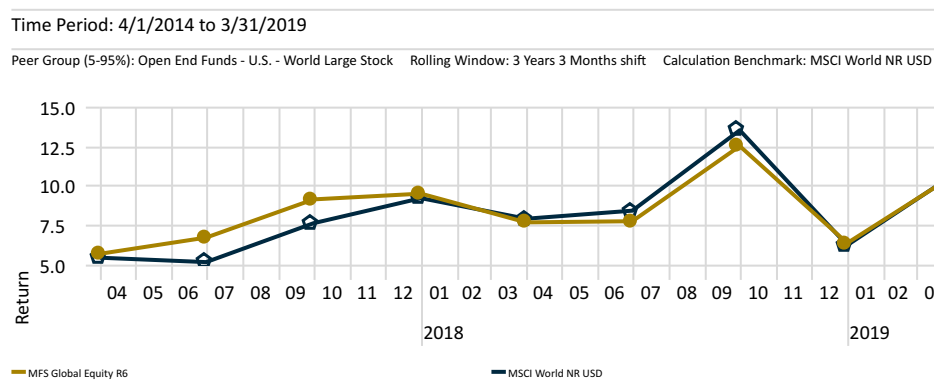
Risk-Reward



Holdings-Based Style Map



Rolling Returns



MFS Global Equity R6 - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: MSCI World NR USD

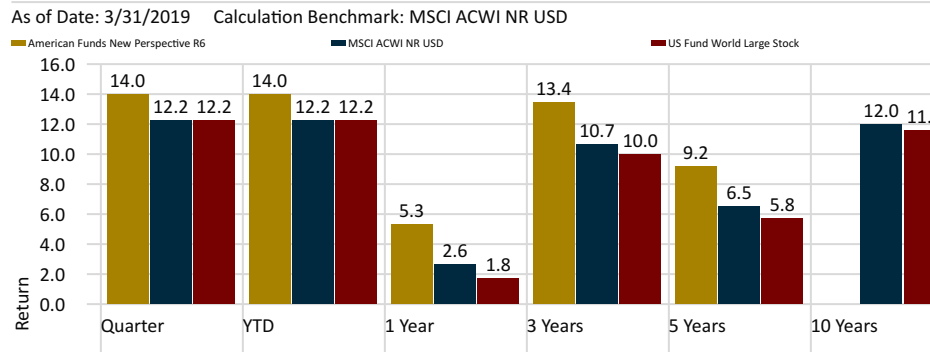
	Inv	Bmk1
Return	7.13	6.78
Std Dev	11.15	10.98
Downside Deviation	1.68	0.00
Alpha	0.43	0.00
Beta	0.99	1.00
R2	94.44	100.00
Sharpe Ratio (arith)	0.57	0.54
Tracking Error	2.63	0.00

Source: Morningstar Direct, as of March 31, 2019 Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

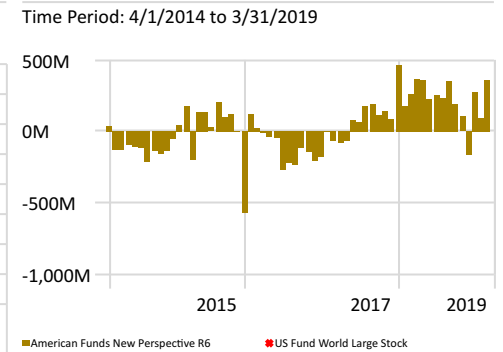
Key Information

Morningstar Category: US Fund World Large Stock
 Morningstar Rating Overall: ★★★★★
 Inception Date: 5/1/2009
 Expense Ratio: 0.45
 Fund Size (Mil): 88,046.06
 Portfolio Date: 3/31/2019
 Manager Name: Multiple

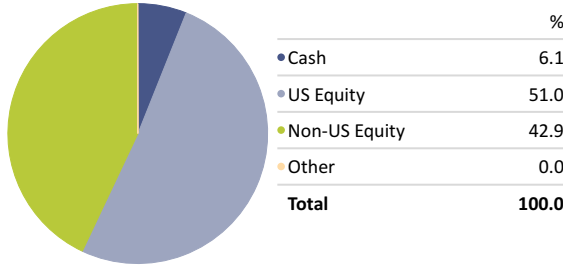
Returns



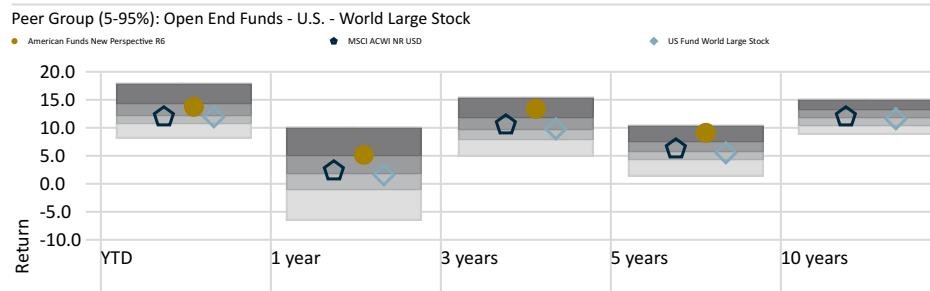
Monthly Estimated Fund-Level Net Flow



Asset Allocation

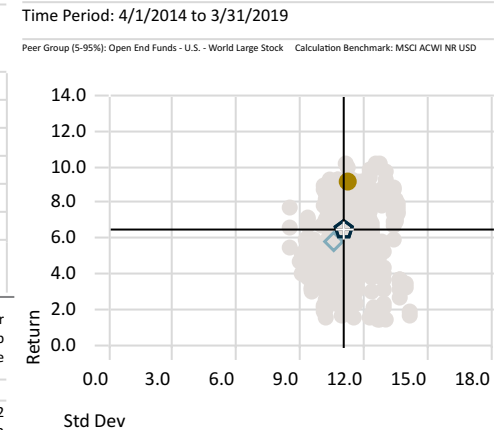


Performance Relative to Peer Group

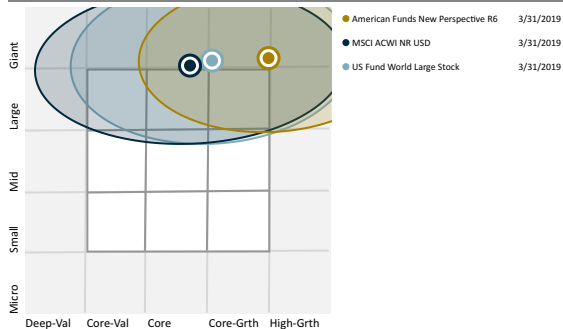


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
American Funds New Perspective R6	13.99	2	5.34	1	13.37	1	9.18	1		
MSCI ACWI NR USD	12.18	3	2.60	2	10.67	2	6.45	2	11.98	2
US Fund World Large Stock	12.24	2	1.78	2	9.97	2	5.77	3	11.59	3

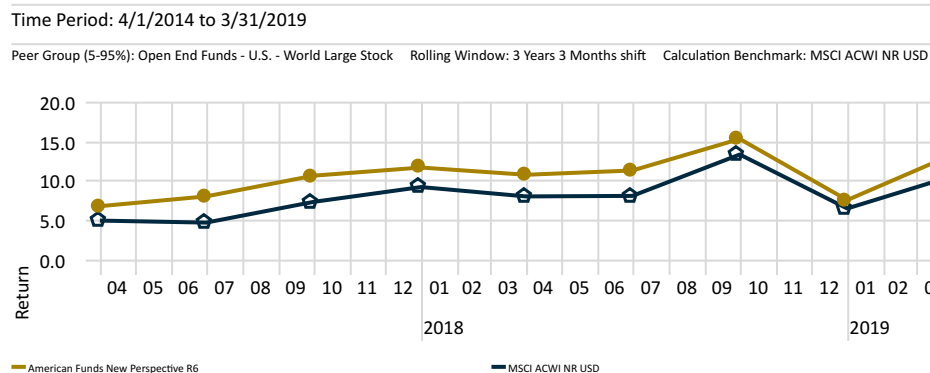
Risk-Reward



Holdings-Based Style Map



Rolling Returns



American Funds New Perspective R6 - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: MSCI ACWI NR USD

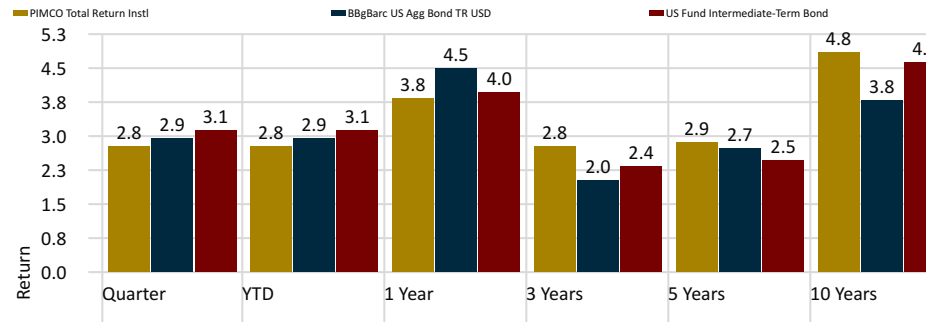
	Inv	Bmk1
Return	9.18	6.45
Std Dev	11.27	11.06
Downside Deviation	1.81	0.00
Alpha	2.69	0.00
Beta	0.98	1.00
R2	92.61	100.00
Sharpe Ratio (arith)	0.74	0.51
Tracking Error	3.07	0.00

Key Information

Morningstar Category US Fund Intermediate-Term Bond
 Morningstar Rating Overall ★★★★★
 Inception Date 5/11/1987
 Expense Ratio 0.55
 Fund Size (Mil) 65,374.03
 Portfolio Date 12/31/2018
 Manager Name Multiple

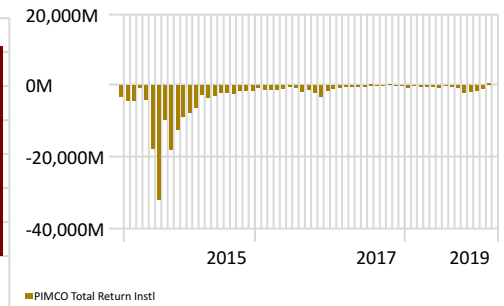
Returns

As of Date: 3/31/2019 Calculation Benchmark: BBgBarc US Agg Bond TR USD



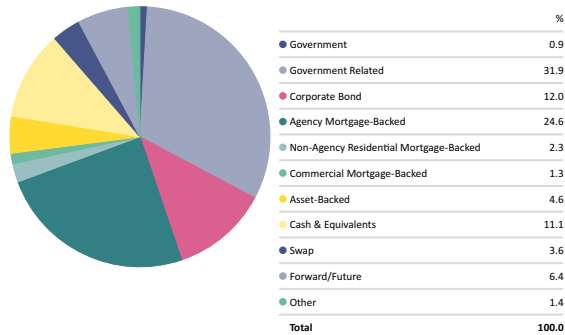
Monthly Estimated Fund-Level Net Flow

Time Period: 4/1/2014 to 3/31/2019



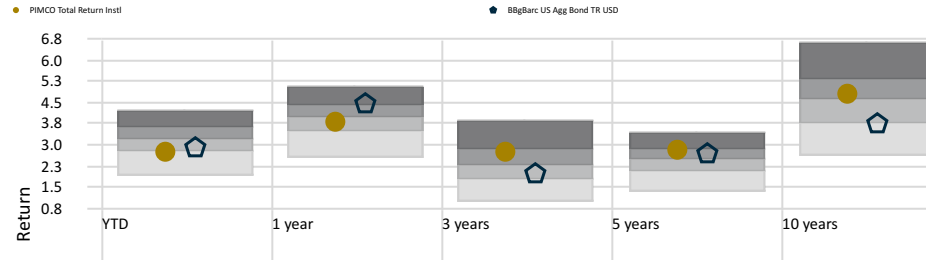
PIMCO Total Return Instl - Fixed-Inc Sectors (Morningsta

Portfolio Date: 12/31/2018



Performance Relative to Peer Group

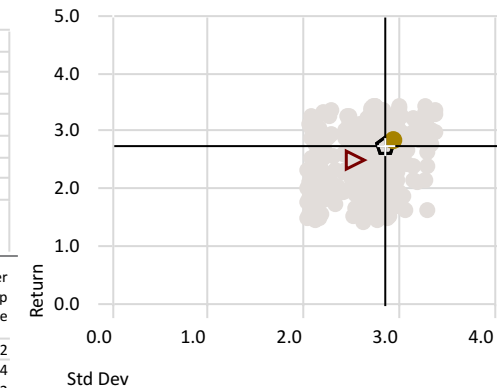
Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond Calculation Benchmark: BBgBarc US Agg Bond TR USD



	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	2.78	4	3.83	3	2.80	2	2.85	2	4.84	2
BBgBarc US Agg Bond TR USD	2.94	3	4.48	1	2.03	3	2.74	2	3.77	4
US Fund Intermediate-Term Bond	3.13	3	3.97	3	2.35	2	2.48	3	4.61	2

Risk-Reward

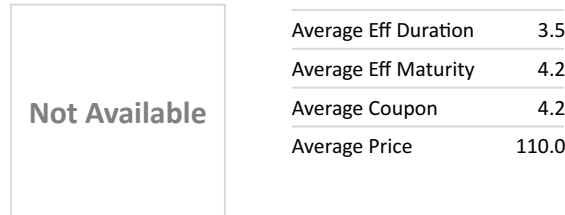
Time Period: 4/1/2014 to 3/31/2019



Morningstar Style Box - PIMCO Total Return Instl

Portfolio Date: 12/31/2018

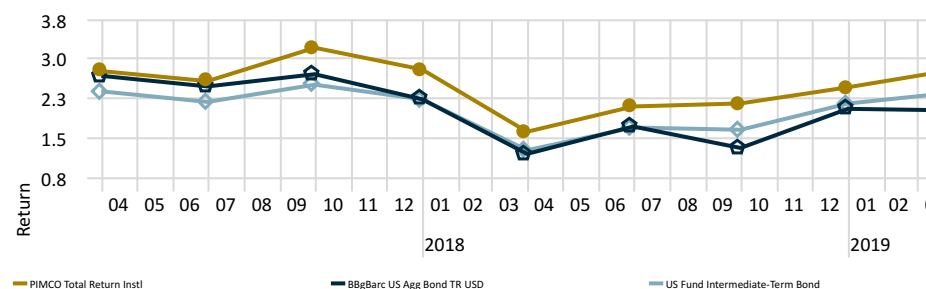
Morningstar Fixed Income Style Box™ Fixed-Income Stats



Rolling Returns

Time Period: 4/1/2014 to 3/31/2019

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



PIMCO Total Return Instl - Risk

Time Period: 4/1/2014 to 3/31/2019

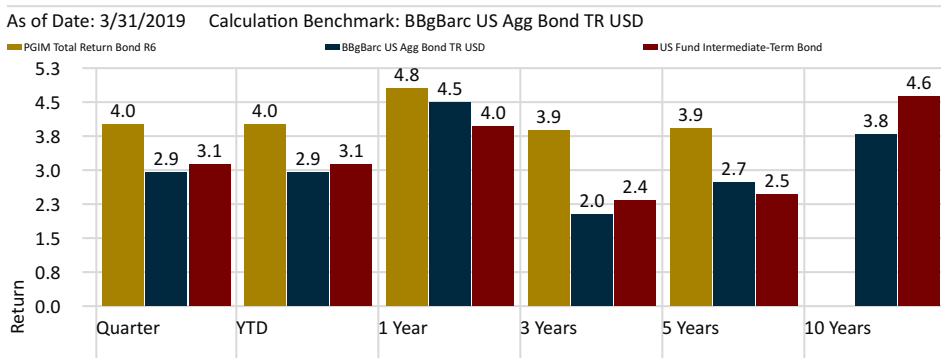
Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Inv	Bmk1
Return	2.85	2.74
Std Dev	2.94	2.86
Downside Deviation	1.06	0.00
Alpha	0.27	0.00
Beta	0.92	1.00
R2	79.15	100.00
Information Ratio (geo)	0.08	
Tracking Error	1.37	0.00

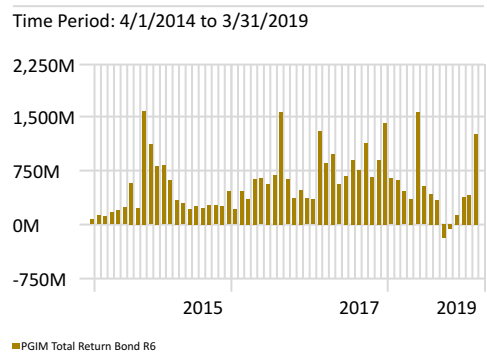
Key Information

Morningstar Category: US Fund Intermediate-Term Bond
 Morningstar Rating Overall: ★★★★★
 Inception Date: 12/27/2010
 Expense Ratio: 0.41
 Fund Size (Mil): 39,868.04
 Portfolio Date: 2/28/2019
 Manager Name: Multiple

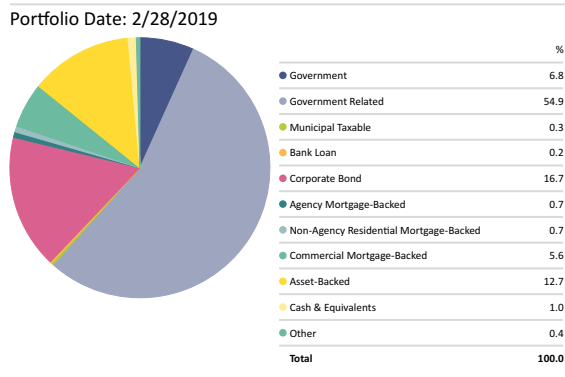
Returns



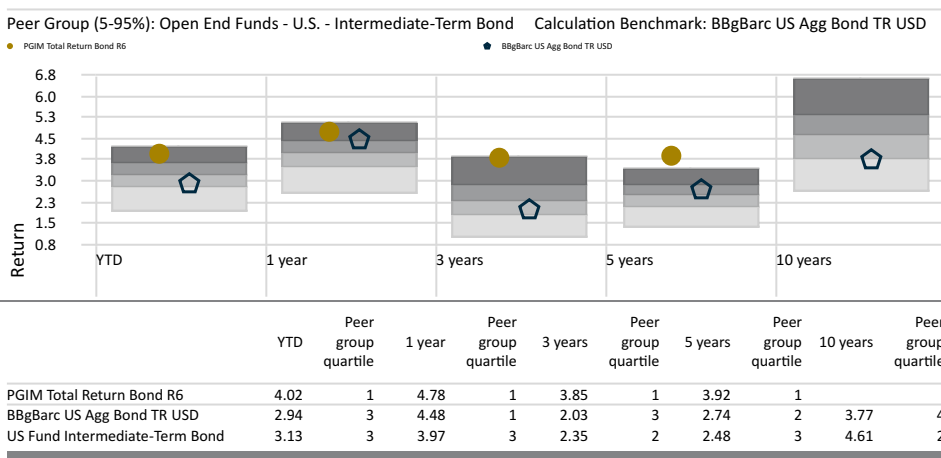
Monthly Estimated Fund-Level Net Flow



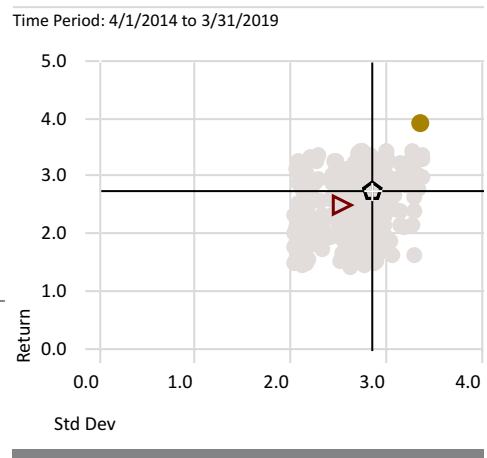
PGIM Total Return Bond R6 - Fixed-Inc Sectors (Morning



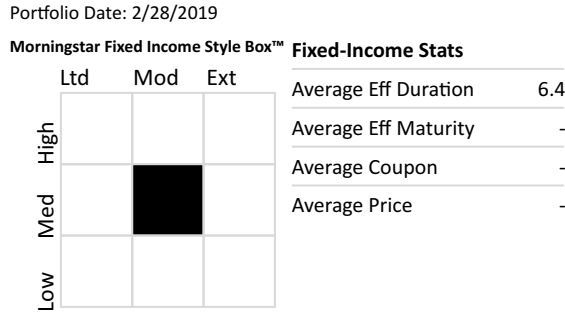
Performance Relative to Peer Group



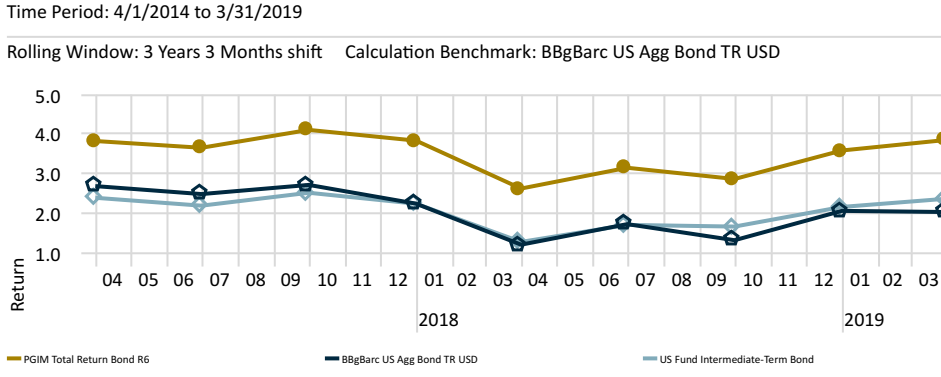
Risk-Reward



Morningstar Style Box - PGIM Total Return Bond R6



Rolling Returns



PGIM Total Return Bond R6 - Risk

Time Period: 4/1/2014 to 3/31/2019

Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Inv	Bmk1
Return	3.92	2.74
Std Dev	3.34	2.86
Downside Deviation	0.58	0.00
Alpha	0.93	0.00
Beta	1.12	1.00
R2	91.30	100.00
Information Ratio (geo)	1.10	
Tracking Error	1.04	0.00

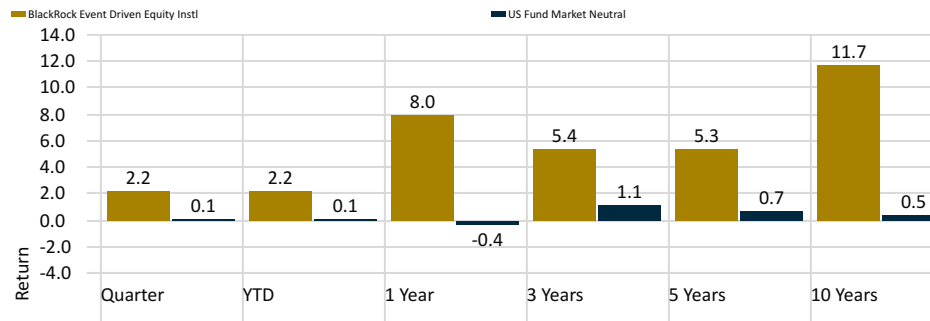
Source: Morningstar Direct, as of March 31, 2019. Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

Key Information

Morningstar Category	US Fund Market Neutral
Morningstar Rating Overall	★★★★★
Inception Date	12/19/2007
Expense Ratio	1.63
Fund Size (Mil)	2,040.10
Portfolio Date	2/28/2019
Manager Name	Mark McKenna

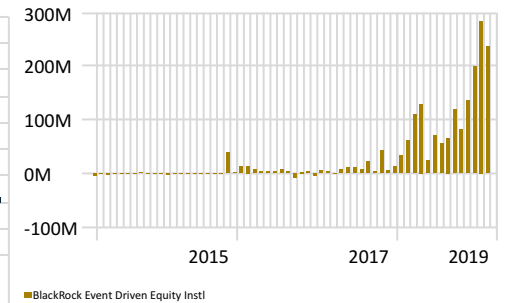
Returns

As of Date: 3/31/2019 Calculation Benchmark: US Fund Market Neutral



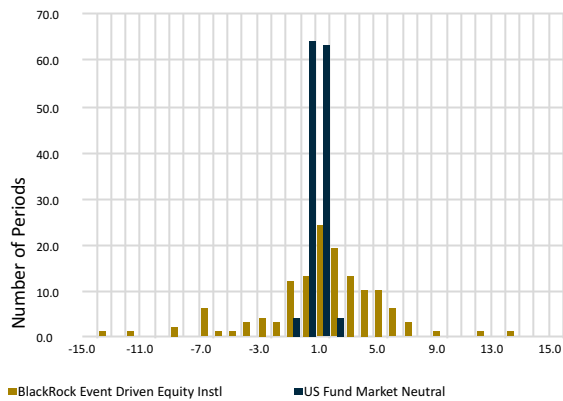
Monthly Estimated Fund-Level Net Flow

Time Period: 4/1/2014 to 3/31/2019



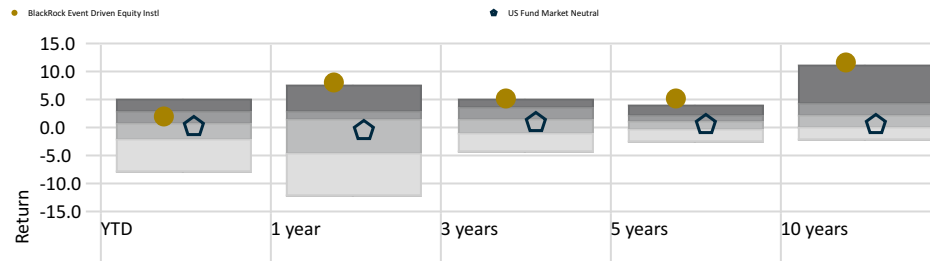
Return Distribution - BlackRock Event Driven Equity Instl

Time Period: Since Inception to 3/31/2019



Performance Relative to Peer Group

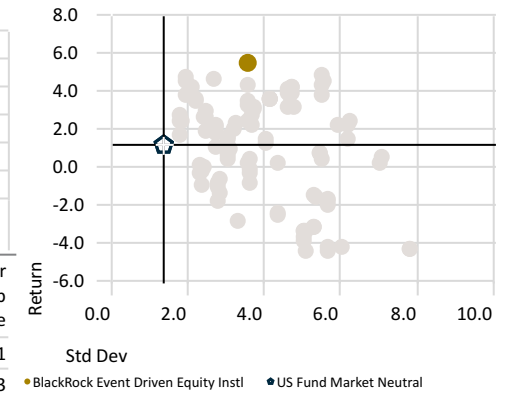
Peer Group (5-95%): Open End Funds - U.S. - Market Neutral



	YTD	Peer group 1 year	Peer group 3 years	Peer group 5 years	Peer group 10 years					
BlackRock Event Driven Equity Instl	2.25	2	7.98	1	5.41	1	5.34	1	11.73	1
US Fund Market Neutral	0.13	3	-0.40	3	1.14	3	0.72	3	0.48	3

Risk-Reward

Time Period: 4/1/2016 to 3/31/2019



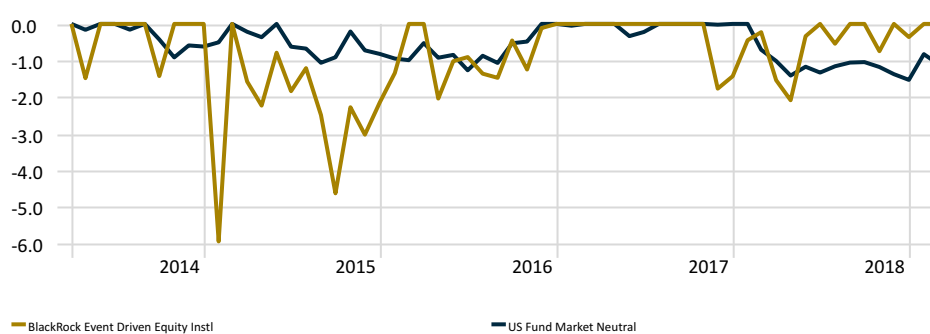
Correlation Matrix

Time Period: 1/1/2008 to 3/31/2019

	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)	0.85	0.03	1.00

Drawdown

Time Period: 4/1/2014 to 3/31/2019



BlackRock Event Driven Equity Instl - Risk

Time Period: Since Inception to 3/31/2019

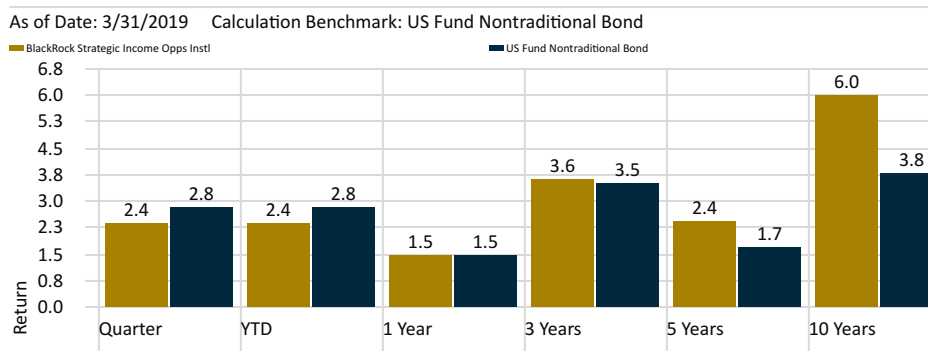
Calculation Benchmark: US Fund Market Neutral

	Inv	Bmk1	+/- Bmk1
Return	5.62	0.21	5.42
Std Dev	14.13	1.75	12.38
Downside Deviation	9.51	0.00	9.51
Alpha	7.00	0.00	7.00
Beta	3.32	1.00	2.32
R2	17.24	100.00	-82.76
Sharpe Ratio (arith)	0.36	-0.19	0.55
Tracking Error	13.53	0.00	13.53

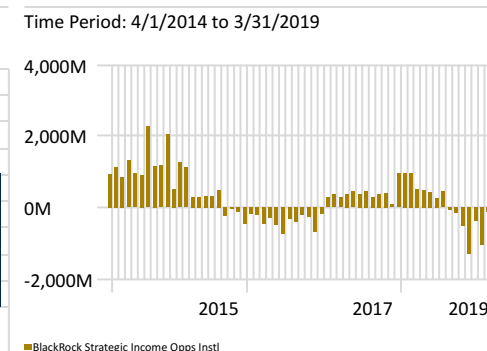
Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★★★
Inception Date	2/5/2008
Expense Ratio	0.82
Fund Size (Mil)	33,140.72
Portfolio Date	6/30/2018
Manager Name	Multiple

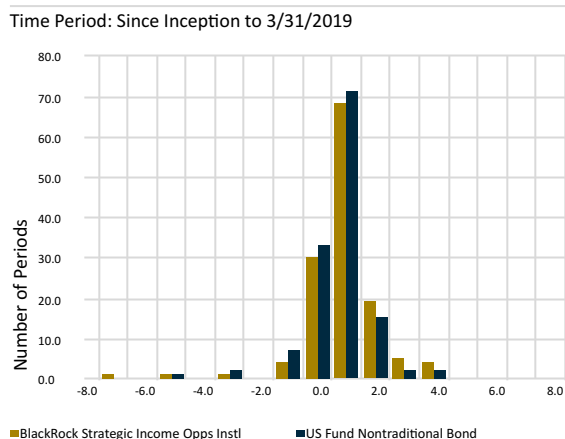
Returns



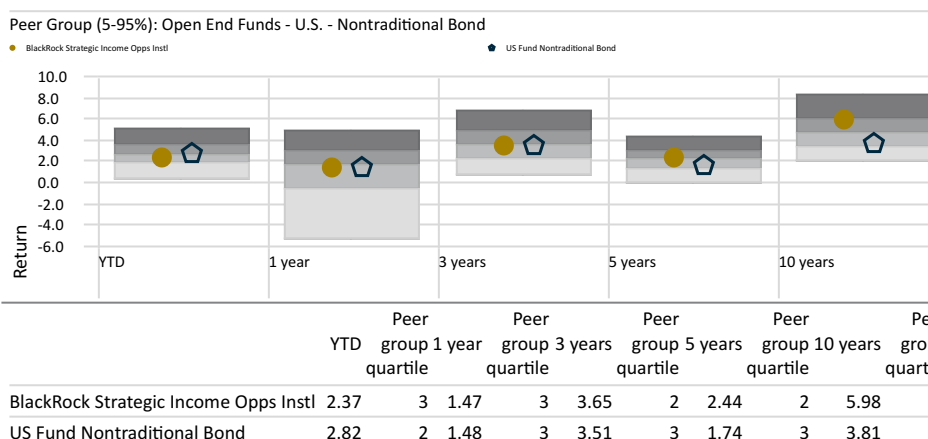
Monthly Estimated Fund-Level Net Flow



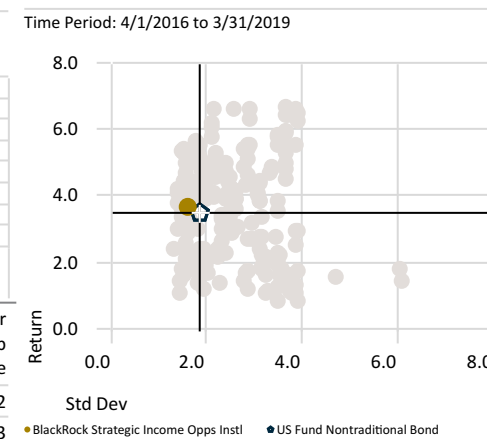
Return Distribution - BlackRock Strategic Income Opps Instl



Performance Relative to Peer Group



Risk-Reward

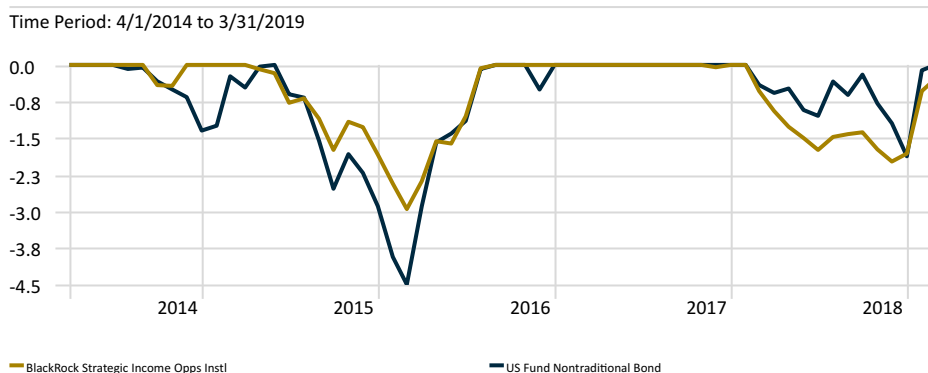


Correlation Matrix

Time Period: 3/1/2008 to 3/31/2019

	1	2	3
1 BlackRock Strategic Income Opps Instl	1.00		
2 BBgBarc US Agg Bond TR USD	0.27	1.00	
3 S&P 500 TR (1989)	0.61	0.05	1.00

Drawdown



BlackRock Strategic Income Opps Instl - Risk

Time Period: Since Inception to 3/31/2019

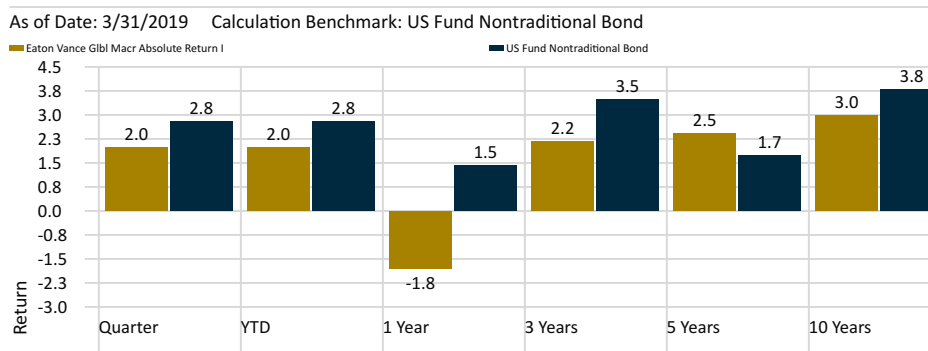
Calculation Benchmark: US Fund Nontraditional Bond

	Inv	Bmk1	+/- Bmk1
Return	4.15	2.32	1.84
Std Dev	4.55	3.71	0.83
Downside Deviation	1.04	0.00	1.04
Alpha	1.56	0.00	1.56
Beta	1.14	1.00	0.14
R2	86.46	100.00	-13.54
Sharpe Ratio (arith)	0.80	0.49	0.31
Tracking Error	1.76	0.00	1.76

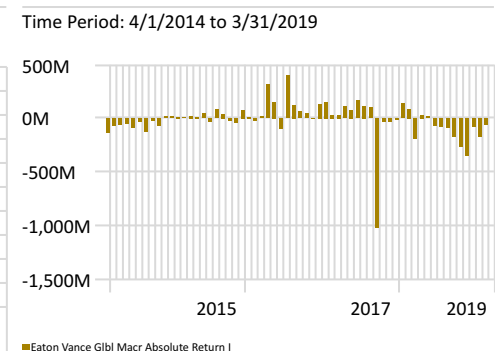
Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★★
Inception Date	6/27/2007
Expense Ratio	0.78
Fund Size (Mil)	3,957.40
Portfolio Date	1/31/2019
Manager Name	Multiple

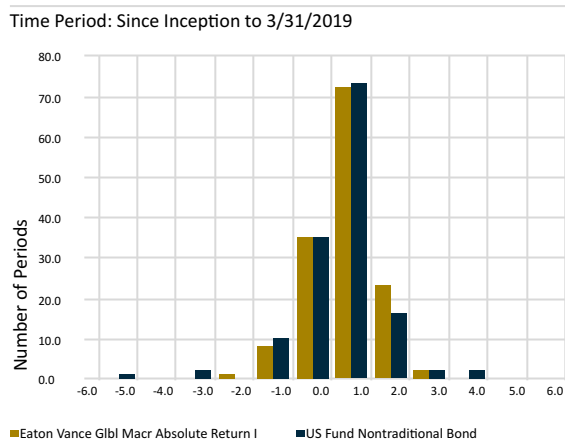
Returns



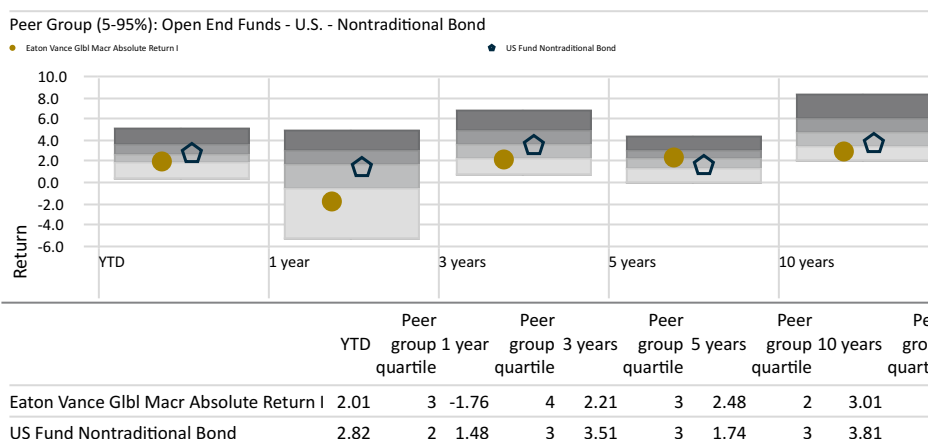
Monthly Estimated Fund-Level Net Flow



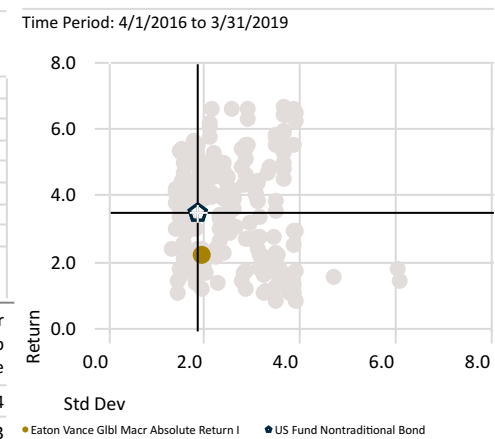
Return Distribution - Eaton Vance Gbl Macr Absolute Return I



Performance Relative to Peer Group



Risk-Reward

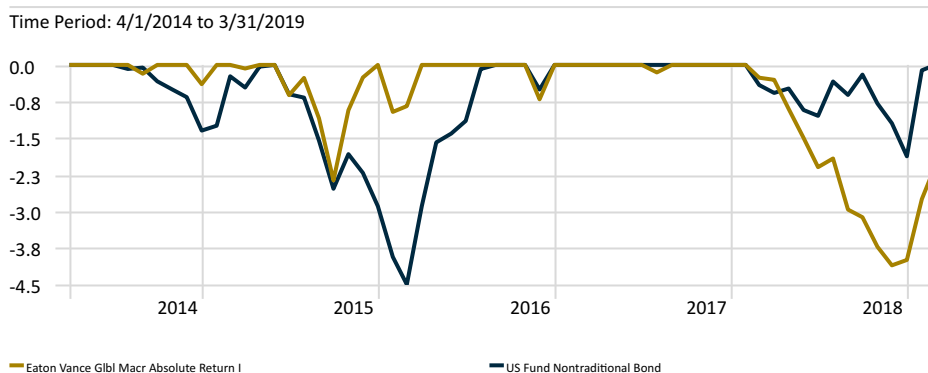


Correlation Matrix

Time Period: 7/1/2007 to 3/31/2019

	1	2	3
1 Eaton Vance Gbl Macr Absolute Return I	1.00		
2 BbgBarc US Agg Bond TR USD	0.25	1.00	
3 S&P 500 TR (1989)	0.37	0.02	1.00

Drawdown



Eaton Vance Gbl Macr Absolute Return I - Risk

Time Period: Since Inception to 3/31/2019

Calculation Benchmark: US Fund Nontraditional Bond

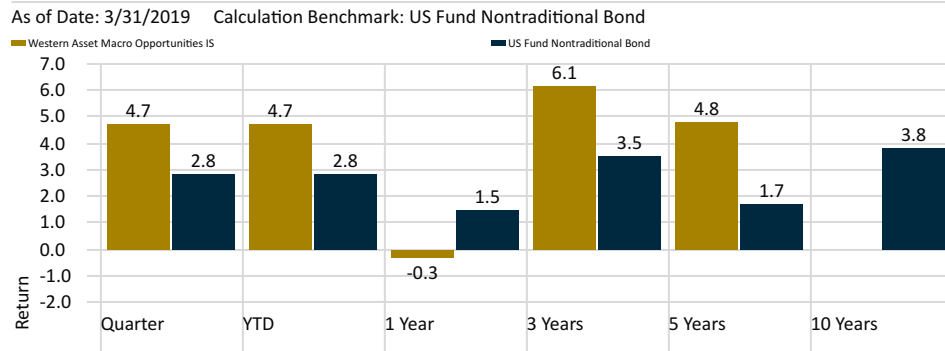
	Inv	Bmk1	+/- Bmk1
Return	3.36	1.95	1.40
Std Dev	2.64	3.70	-1.06
Downside Deviation	1.61	0.00	1.61
Alpha	2.12	0.00	2.12
Beta	0.40	1.00	-0.60
R2	32.31	100.00	-67.69
Sharpe Ratio (arith)	1.01	0.34	0.67
Tracking Error	3.14	0.00	3.14

Source: Morningstar Direct, as of March 31, 2019. Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.

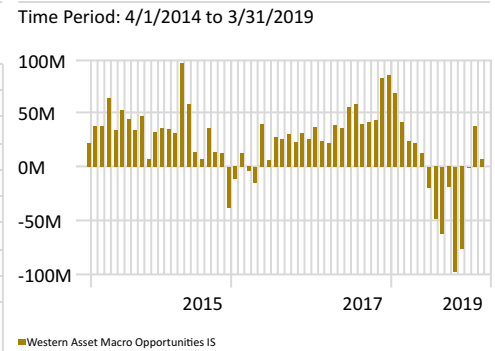
Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★★★★
Inception Date	8/30/2013
Expense Ratio	1.21
Fund Size (Mil)	1,418.74
Portfolio Date	2/28/2019
Manager Name	Multiple

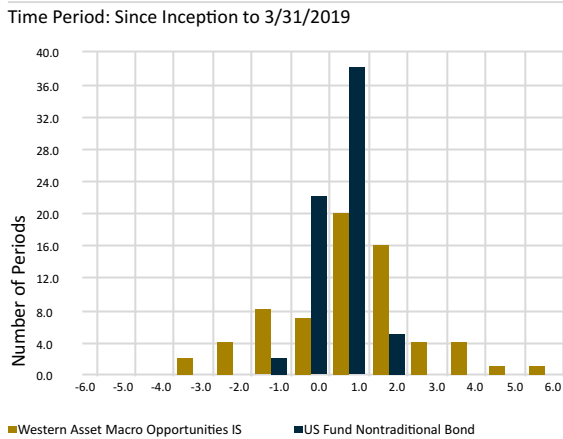
Returns



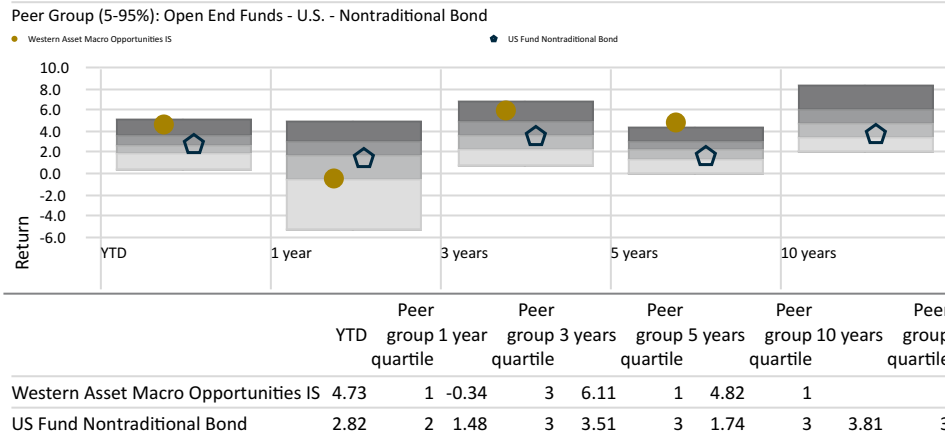
Monthly Estimated Fund-Level Net Flow



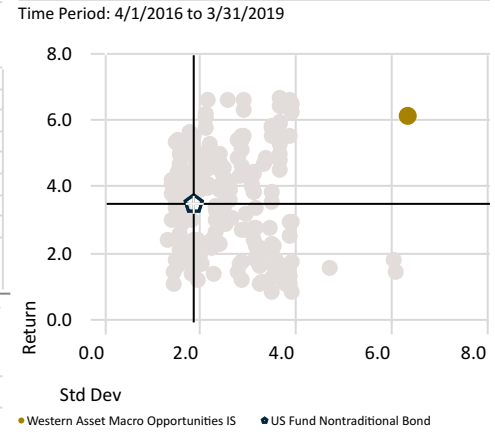
Return Distribution - Western Asset Macro Opportunities IS



Performance Relative to Peer Group



Risk-Reward

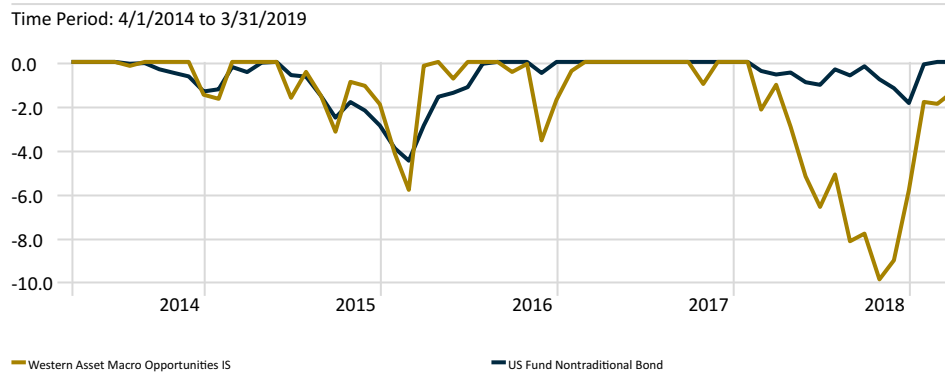


Correlation Matrix

Time Period: 9/1/2013 to 3/31/2019

	1	2	3
1 Western Asset Macro Opportunities IS	1.00		
2 BBgBarc US Agg Bond TR USD	0.33	1.00	
3 S&P 500 TR (1989)	0.38	-0.07	1.00

Drawdown



Western Asset Macro Opportunities IS - Risk

Time Period: Since Inception to 3/31/2019

Calculation Benchmark: US Fund Nontraditional Bond

	Inv	Bmk1	+/- Bmk1
Return	6.36	2.01	4.35
Std Dev	6.13	2.03	4.09
Downside Deviation	2.72	0.00	2.72
Alpha	2.82	0.00	2.82
Beta	2.19	1.00	1.19
R2	52.90	100.00	-47.10
Sharpe Ratio (arith)	0.92	0.63	0.29
Tracking Error	4.87	0.00	4.87

Source: Morningstar Direct, as of March 31, 2019. Information provided herein was obtained from third-party sources deemed reliable. HighMark and its affiliates make no representations or warranties with respect to the timeliness, accuracy, or completeness of the information and bear no liability for any loss arising from its use.