PARS: County of Contra Costa

Fourth Quarter 2018

Presented by
Andrew Brown, CFA

HIGHMARK®
CAPITAL MANAGEMENT

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

DISCUSSION HIGHLIGHTS

U.S. Economic and Market Overview

In contrast to 2017's ultra-low volatility market environment, the pendulum swung in the other direction entering 2018 from a steady freight train of returns into a roller coaster. Only a few weeks into 2018, escalating concerns over rising inflation expectations disrupted the tranquility investors enjoyed throughout the prior year. Leading up to the first equity market correction in late January 2018, the S&P 500 Index had not experienced a drop of more the 1% for a record 112 trading days.

Worries about inflation faded through the second and third quarters as domestic business and consumer optimism soared. The domestic equity market rallied over the summer on a fragile foundation of sanguine expectations that government policy (both trade and monetary) would not interfere with the economic mojo set in motion by a massive corporate and personal tax cut.

Early in the fourth quarter major cracks started to appear in this foundation as investor confidence was shaken by recently appointed Federal Reserve ("Fed") Chairman Jay Powell when he declared during an interview that interest rates were "a long way from neutral." The hawkish tone did not sit well with investors and the equity market slide began.

Fearing the world's largest central bank no longer had the stock market's back, the S&P 500 Index would mark an all-time high close of 2930 on September 20th and, over the course of the quarter, fall to within a hair of an official bear market (a decline of 20% from a peak) before rallying after Christmas. The ups and downs throughout the year netted a -4.4% annual return for the index including dividends – the benchmark's first calendar year loss since 2008. In a traditional flight to safety trade, Treasury bonds rallied and credit spreads widened.

Chairman Powell, perhaps recognizing the gravity of his comments and the potential for financial market volatility to spill over into the real economy, attempted to backtrack in a speech to the Economic Club of New York, saying that "[interest rates] remain just below the broad range of estimates of the level that would be neutral for the economy."

Increasing monetary policy uncertainty was only one punch in the combination that investors endured in the final quarter of the year. The cloud of a trade war also weighed heavily on sentiment with daily headlines creating large market swings in both directions. Of course, one of the very last statements market participants wanted to see following what appeared to be a productive G20 summit in early December was a provocative President Trump tweet "…I am a Tariff Man." Yet that is exactly what occurred, keeping the equity market on its heels leading up to the Federal Open Market Committee's (FOMC) final meeting of the year.

Confronted with an equity market approaching bear market territory, the Fed pressed on with its fourth Fed Funds rate increase of the year and its ninth since moving off the zero bound in December 2015. Further compounding investor concerns, the Fed continued to forecast the need for future hikes – a policy path the market clearly felt was missing signs that the global economy was softening. Despite Chairman Powell's attempts to qualify that these projections were subject to "data dependence" and "highly uncertain," it did not stop market anxiety from deepening. In an unusual move, the President broke with protocol and openly criticized the Fed Chairman by declaring that monetary policy was the "only problem" with the economy.

Amid swirling policy uncertainty, global financial markets enter 2019 with a growing wall of worry that has the potential to keep volatility elevated for the foreseeable future. The good news is that policy is controllable and correctable. The big question for the New Year is how quickly a course correction can be taken before more permanent damage is done.

Market overview/Performance Discussion

Total Plan

The County of Contra Costa OPEB Plan returned -7.40% net of investment fees in the fourth quarter, which lagged the Plan Benchmark return of -7.04%. What can you say when the best performing equity segment for the quarter came from REITs, which declined only by -6.15%? It was a difficult quarter to say the least. The majority of the Plan's equity segments outperformed their benchmark targets, however for the fourth quarter, this merely translated into losing less than the benchmark. There is little solace or exuberance when the Plan's small cap stocks decline -19.89% compared to the Russell 2000 Index return of -20.2%. Alternatives outperformed their Plan target, but still posted a negative return of -1.11% for the quarter. One positive sign to note, in the month of December when equity markets were significantly down, all three of the alternative managers posted a positive return. One of the expectations from the alternative segment is that in times of significant turbulence, alternatives might provide 'crisis alpha'. Rarely do we highlight one month of returns, as it does not lend itself to drawing any type of a trend, but it was a welcome sign after the last few quarters. Fixed income was the highest returning segment for the quarter, returning 1.38% relative to the Bloomberg Barclays US Aggregate Index target of 1.64%. Both the internally managed core fixed income portfolio, and our outside fixed income money managers (Pimco, and Prudential) maintained and overweight allocation to corporate bonds, which were under pressure during this risk off period.

Domestic Equity

The market as measured by the S&P 500 delivered the second largest decline since the fourth quarter of 2008 falling -13.5%. Most US economic data remained solid for the quarter. Domestic Purchasing Managers' Index (PMI) Data was comfortably above the neutral 50 mark. Initial Jobless Claims held steady. The change in Average Hourly Earnings was noteworthy, accelerating from 2.8% to 3.2%. There were some areas of weakness though. Housing continued to soften, retail sales slowed, and credit conditions tightened modestly. Overall, the economic backdrop was supportive. Rather than focusing on the positive elements of the economy, investors instead focused on the Fed's continued tightening bias, the US/China trade conflict, and the government shutdown as chief concerns that might impact future growth and put an end to the bull market. The market succumbed to these concerns and brushed up against bear market territory with a decline of nearly 20% from September's peak.

The fundamental data for the market decline was evidenced by the reduced S&P 500 2019 earnings growth expectations. In October of 2018, analysts expected 2019 S&P 500 earnings to grow about 9.5%. Steady revisions lower over the last three months have reduced expected 2019 earnings growth to the low-6% range as of the end of January. Compared to the reduced earnings estimates, the market overshot to the downside. As a result, the market decline served up cheaper valuations. The S&P 500 price-to-earnings multiple (P/E) sits at 15.4x, right at its long-term average. Highlighting the divergence in asset classes, the P/E of small cap value (as measured by the Russell 2000 Value index) is now 20% below the medium and is near its 10-year low!

From an asset class style perspective, value finally outperformed growth after seven consecutive quarters of growth outperformance. Small cap stocks (Russell 2000 Index) led the decline falling over -20%. The sectors that outperformed were utilities up 1.4% and consumer staples down only -5.2%. Energy and information technology declined the most at -17.3% and -23.8% respectively. In short, the market sold risk and bought safety during the quarter.

Our equity market outlook remains unchanged. In our view, recent market turbulence reflects more of a market event than an economic event; in other words, a correction without a recession. We have been more conservative than consensus views regarding domestic economic growth, earnings power, and potential market returns largely because equity markets were underappreciating the trade conflict, tightening monetary policy, and increased political uncertainty. Positive returns are possible going forward but potential headwinds from higher rates and slower growth will dampen the upside potential.

- **The Plan's large cap equity segment returned -14.11% in the quarter, which trailed the Russell 1000 Index return of -13.82%.**
  - The iShares Russell 1000 ETF -13.82% in the quarter.
  - The Columbia Contrarian Core Fund returned -14.78% in the quarter, which lagged the benchmark. The Fund ranked in the 77th percentile of the Morningstar Large Cap Blend Universe.
  - The Harbor Capital Appreciation Fund returned -16.39% in the quarter, which lagged the Russell 1000 Growth Index's return of -15.89%. The Fund ranked in the 69th percentile of the Morningstar Large Cap Growth Universe.
  - The T. Rowe Price Growth Stock Fund returned -14.1% in the quarter, which exceeded the Russell 1000 Growth Index. The Fund ranked in the 25th percentile of the Morningstar Large Cap Growth Universe.
  - The Dodge and Cox Stock Fund returned -13.57% in the quarter which trailed the Russell 1000 Value Index's return of -11.72%. The Fund ranked in the 64th percentile of the Morningstar Large Cap Value Universe.
  - The Vanguard Growth and Income Fund registered a -14.22% return in the quarter, which lagged the Russell 1000 Index. The Fund ranked in the 65th percentile of the Morningstar Large Cap Blend Universe.

- **The mid cap equity segment returned -15.11% in the quarter, which slightly exceeded the Russell Mid Cap Index return of -15.37%.**
  - The iShares Russell Mid Cap ETF returned -15.33% in the fourth quarter.

- **The small cap equity segment returned -19.89% in the quarter, which slightly exceeded the Russell 2000 Index return of -20.20%.**
  - The iShares Russell 2000 ETF returned -20.21% in the fourth quarter.
  - The T. Rowe Price New Horizons Fund returned -17.01% in the quarter, and outperformed the Russell 2000 Growth Index return of -21.65%. The Fund ranked in the 47th percentile of Morningstar's Small Cap Growth Universe.
  - The Undiscovered Managers Behavioral Value Fund returned -20.42% in the quarter, and lagged the Russell 2000 Value Index's return of -18.67%. The Fund ranked in the 68th percentile of Morningstar's Small Cap Value Universe.

Real Estate

With the Dow Jones Wilshire REIT Index returning -6.93% for the quarter, REITs had the dubious distinction of being the strongest returning equity segment within the Plan for the fourth quarter. Only two sub-industries within the index registered positive returns in the quarter: healthcare (+3.34%) and self-storage (+2.09%). Large declining sub-industries included lodging and leisure (-20%), data centers (-13.31%), office (-11.97%), and shopping centers (-9.30%). A -6.93% return is far from providing immunity to the Plan in a volatile quarter, but the relative outperformance likely stems from both the 'hard asset" nature of REITs and strong cash flow dynamics of the sector. Employment data, gains in corporate earnings, and GDP growth, all have been supportive to REIT fundamentals.

The Vanguard REIT ETF returned -6.46% which ranked in the 34th percentile.

International/Global Equity

International equity markets were also lower for the quarter. Developed international markets declined slightly less than the Russell 1000, with the MSCI-EAFE Index returning -12.54%, and emerging markets performed relatively better, declining "only" -7.47%. The end of quantitative easing in Europe was a factor for the declines. But the dominant theme for international weakness was the China trade conflict. China had already begun slowing with expected GDP growth for the fourth quarter decelerating to 6.4%, and for 2020, expectations were calling for a decline to 6% growth. Concerned about the slowdown, China announced a number of fiscal and monetary policy stimulus measures, including tax cuts and a mandate for banks to lend to small businesses.

As the world's second largest economy and a major source of global demand, China's slowdown is by no means isolated to its economy. Ripple effects are being felt throughout the global economy. During a European Central Bank (ECB) press conference announcing the end of Quantitative Easing (QE) in Europe, President Mario Draghi warned "…the balance of risks is moving to the downside owing to the persistence of uncertainties related to geopolitical factors, the threat of protectionism, vulnerabilities in emerging markets and financial market volatility remain prominent." (In case you missed it, he basically said "trade war" four separate ways.) The ECB's plan to gently slow growth by ending QE turned into a hard brake with the trade war being added to the mix.

Currently, the U.S. is applying tariffs on $253 billion of Chinese- made goods, or roughly half of total imports from China. Trump and Xi at the G20 summit in December yielded a cease-fire allowing additional time for negotiation. The tariffs on an additional $257 billion of Chinese imports the administration planned to raise were delayed by 60 days. The truce will end March 1 when the final round of tariffs will go into effect if a deal is not reached. The ongoing trade dispute between the world's two largest economies has remained the focal point of global financial markets. Timing of the tariff implementations have coincided almost perfectly with the deterioration in the Purchasing Manger Indices (PMI's) data over the past six months with the most recent December reading for China now in contraction territory. Optimism for a deal has increased as the slowdown has brought both parties to the negotiating table.

In the international developed markets, all major markets were lower with Japan (-16.91%), Germany (-13.78%), and France (-13.56%) representing the largest declines. The outperformers were Switzerland and Spain, both lower by slightly less than -8%. Emerging markets fared similarly, with the more trade sensitive markets suffering the most with declines in Mexico (-15.38%), Taiwan (-13.09%), Korea (-12.70%), and China (-11.64%). A regime change in Brazil brought out-sized gains for the quarter (+10.77%), and Indonesia rebounded with the prospect of stimulus (+3.94%).

- **The Plan's international/global equity segment returned -12.28% in the quarter. This return outperformed the MSCI EAFE Index -12.54% and the MSCI ACWI Index return of -12.75%.**
  - The iShares MSCI EAFE Index ETF returned -12.59% in the quarter.
  - The Dodge & Cox International Stock Fund returned -12.39% in the quarter and slightly outperformed the MSCI EAFE Index. The Fund ranked in the 43rd percentile of the Foreign Large Blend Universe as measured by Morningstar.
  - The MFS International Fund returned -11.74% in the quarter and outperformed the MSCI EAFE Index. The Fund ranked in the 19th percentile for foreign large cap growth managers as measured by Morningstar.
  - The iShares MSCI ACWI Index ETF returned -12.73% in the quarter.
  - The American Funds New Perspective Fund recorded a -13.15% return in the quarter, which underperformed the MSCI ACWI Index and ranked in the 50th percentile within the Morningstar World Stock Universe
  - The MFS Global Equity R6 Fund returned -13.30%, which underperformed the benchmark and ranked in the 53rd percentile of the Morningstar World Stock Universe.
  - The Hartford Schroders Emerging Market Equity Fund returned -8.85% during the quarter and underperformed the MSCI Emerging Market benchmark return of -7.47%. The Fund ranked in the 74th percentile of the Morningstar Emerging Market Universe.
  - ***The DFA Large Cap International Fund returned -13.29% in the quarter. We initiated a position in this new manager in the last week of the quarter.***

Fixed Income

As expected, the Federal Reserve raised the funds rate once again in December, to a range of 2¼% to 2½%, the ninth quarter-point increase since the Fed began tightening three years ago. However, by the time of the FOMC meeting in mid-December, treasury yields had fallen more than 40 basis points from their peak as slower global growth and persistently low inflation led investors to believe that the Fed was nearing the end of their tightening campaign. The Fed's insistence on continuing to raise rates contributed to growing fears that the Fed was about to make a mistake by tightening too much and causing a recession. The result was a nearly 20% decline in the S&P 500, and a furious Treasury bond rally that took the ten-year Treasury yield from 3¼% to 2½% during the fourth quarter. Although it was a difficult year for investors as most asset classes experienced negative returns, the Bloomberg Barclays U.S. Aggregate Index gained 1.6% for the quarter, and a barely positive 0.01% return for the year.

Fixed Income (Cont.)

U.S. Treasury securities were one of the few asset classes with positive returns this year, gaining 2.6% for the quarter and 0.9% for the year, despite four hikes in the fed funds rate. Investment-grade corporate bonds, on the other hand, were quite volatile during the year, underperforming comparable duration Treasuries in three of the four quarters, resulting in the worst relative annual performance since 2011, when fears of a break-up of the euro zone drove Greek bond yields above 20%. Lower quality bonds outperformed for much of the year, but that quickly reversed during the fourth quarter as lower quality issues significantly underperformed. High yield bonds, for example, finished the third quarter +327 basis points ahead of similar duration Treasuries, but finished the year –358 basis points behind, a massive shift of nearly –700 basis points in only three months. High yield bonds, for example, finished the third quarter +327 basis points ahead of similar duration Treasuries, but finished the year –358 basis points behind, a massive shift of nearly –700 basis points in only three months.

While there was no European debt crisis this year, clearly something caused investors to suddenly avoid risk in the fourth quarter. It seems unlikely that the concern is due to the current state of the economy, as unemployment is near the lowest in 50 years, consumer and business confidence is high, while corporate earnings are expected to be nearly 20% higher for the year. The sudden risk aversion is more likely a result of rising rates combined with much higher debt levels. Investment-grade corporate debt has grown from $2.3 trillion to $6.4 trillion in the last ten years, while total corporate debt is at an all-time high of 46% of GDP. In addition, U.S. Treasury debt has exploded from $5.8 trillion in 2008 to $15.8 trillion today, equating to 76% of GDP this year, and an expected 100% of GDP in a little over ten years, as the debt continues to grow. Projected federal budget deficits of $1 trillion are adding significantly to the demand for funds, while the fed continues to reduce their securities portfolio at a $600 billion annual pace. A highly levered economy is more sensitive to both slower growth and higher rates since elevated debt levels result in an ever growing proportion of income going to debt service. Investors are therefore understandably nervous over the Fed's plans for tighter monetary policy and/or any signs of slower growth.

This sudden aversion to risk was the primary reason the Plan's fixed income portfolio underperformed this quarter. The portfolio was overweight corporate bonds during a quarter in which investment-grade corporates lagged Treasuries by -308 basis points, the worst performance since the third quarter of 2011. At the end of the third quarter, year-to-date investment-grade corporate bond returns were nearly the same as Treasuries, but the severe underperformance during the fourth quarter caused corporate bonds to finish the year –315 basis points behind Treasuries. Usually such sudden and dramatic underperformance is a result of some event or crisis, or the onset of a recession, but there was nothing particularly alarming to point to this time. The Plan's duration was shorter than the benchmark, which was a positive for the first three quarters of the year, however the aversion to risk during the fourth quarter drove Treasury yields about 40 basis points lower, causing a slight underperformance. Somewhat offsetting the negative impact of a shorter duration was the focus on the intermediate part of the curve where rates declined even more than for longer maturities.

- **The Plan's fixed income segment returned 1.38% in the quarter, which trailed the Bloomberg Barclays Aggregate Index return of 1.64%.**
  - The separately managed fixed income portfolio returned 1.38% which lagged the benchmark. The portfolio would have ranked approximately in the 32nd percentile of the Morningstar Intermediate Term Bond Universe.
  - The PIMCO Total Return Bond Fund posted a 1.39% return in the quarter, which placed it in the 32nd percentile of Morningstar's Intermediate-Term Bond Universe. The Fund underperformed the Index.
  - The Prudential Total Return Bond Fund returned 1.36% in the quarter. This ranked in the 33rd percentile of Morningstar's Intermediate-Term Bond Universe and underperformed the benchmark.

Alternative Investments

The Alternatives portion of the Plan returned -1.11% and outperformed the Wilshire Liquid Alternative Index return of -3.72%. According to the managers of The Eaton Vance Global Macro Fund, the team completed their worst year in 20 years (-0.9% for the quarter, -3.29% calendar year return). Argentinian investments hurt the Fund twice in the year. A long position in the Argentine Peso was negatively impacted in May when the IMF began to lend support to the economy (offering austerity measures), this led to locals pulling their local savings – which led to the currency falling over 30%. In the fourth quarter, political fall-out led to another decline in the currency. In the fourth quarter, long currency positions in Iceland also saw weakness when the country enacted restrictions on foreign inflows into the currently, but maintained no restrictions on outflows – which led to the currency being suppressed. On a more positive note, long Japanese Yen positions and long positions in Turkish credit aided returns in the quarter. The AQR Market Neutral Fund (-1.79%) declined in the quarter, however in the month of December the Fund returned +3.67%. Normally we do not highlight a one-month return period, but in that December saw the Russell 1000 decline -9.11%, the theoretical hedge that this Fund offers was welcomed. The manager's tilt toward high quality stocks (long positions) added to performance. The negative performance during the quarter was driven largely by sentiment factors and momentum. The Blackrock Strategic Income Fund returned -0.52%, the manager's update was not available at the time of this report.

•The alternative investment segment returned -1.11% in the fourth quarter, which exceeded the Wilshire Liquid Alternatives Index return of -3.72%.

- The AQR Market Neutral Fund returned -1.79%, which ranked in the 64th percentile of Morningstar's Market Neutral Universe. The fund exceeded the benchmark.
- The BlackRock Strategic Income Opportunity Fund returned -0.52%, which exceed the benchmark, and ranked in the 30th percentile of Morningstar's Non-Traditional Bond Universe.
- The Eaton Vance Global Macro Absolute Return Fund declined -0.90% which ranked in the 37th percentile of Morningstar's Non-Traditional Universe

Asset Allocation/Portfolio Transitions

During the quarter we added the DFA Large Cap International Fund as a new manager within international equities. This Fund replaced the Nationwide Bailard Fund, which was eliminated in the third quarter.

Small cap equities were reduced by -1.0%, and the global equity position was reduced by -0.5%. We added +0.5% to the REIT position, and we increased large cap domestic by +0.25% and domestic fixed income by +0.25%. Cash also was increased by +0.5%.

Manager Watch List

Name of Fund	Date on watch list	Date exiting watch list	Recommendation	Rationale
Columbia Contrarian Core Fund	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
Dodge & Cox International	3Q 2018		Retain on Watch List	Three-year return is now ahead of the benchmark target, as well, the fund ranks in the 40th percentile over the previous 3-year period. The calendar year peer ranking is in the 81st percentile leads us to maintain the manager on watch list for the quarter.
AQR Equity Market Neutral I	3Q 2018		Retain on Watch List	Unusual tracking error to the benchmark

Asset Allocation
Period Ending December 31, 2018

Asset Allocation	9/30/2018 Market Value	9/30/2018 % of Total	12/31/2018 Market Value	12/31/2018 % of Total	Target Allocation
Large Cap Equities					
Columbia Contrarian Core Inst3	8,276,291	3.0%	7,792,539	3.0%	--
iShares Russell 1000 ETF	18,494,126	6.7%	17,296,307	6.7%	--
Vanguard Growth & Income Adm	8,978,634	3.3%	9,111,140	3.5%	--
Dodge & Cox Stock Fund	8,230,822	3.0%	7,812,908	3.0%	--
Harbor Capital Appreciation Retirement	2,785,457	1.0%	2,606,511	1.0%	--
T. Rowe Price Growth Stock Fund	2,772,223	1.0%	2,604,296	1.0%	--
Total Large Cap Equities	**$ 49,537,552**	**18.0%**	**$ 47,223,700**	**18.2%**	**17.0%**
		Range		*Range*	*13-32%*
Mid Cap Equities					
iShares Russell Mid-Cap ETF	15,038,541	5.5%	14,579,242	5.6%	--
Total Mid Cap Equities	**$ 15,038,541**	**5.5%**	**$ 14,579,242**	**5.6%**	**6.0%**
		Range		*Range*	*2-10%*
Small Cap Equities					
iShares Russell 2000 ETF	15,025,221	5.5%	13,267,214	5.1%	--
Undiscovered Managers Behavioral Val R6	8,209,000	3.0%	6,457,264	2.5%	
T. Rowe Price New Horizons Fund	4,160,613	1.5%	3,913,613	1.5%	--
Total Small Cap Equities	**$ 27,394,834**	**10.0%**	**$ 23,638,091**	**9.1%**	**8.0%**
		Range		*Range*	*4-12%*
International Equities					
DFA Large Cap International I	--	--	3,888,931	1.5%	--
iShares MSCI EAFE ETF	16,376,479	6.0%	11,822,010	4.6%	--
Dodge & Cox International Stock Fund	4,114,992	1.5%	3,877,351	1.5%	--
MFS® International Growth R6	4,154,962	1.5%	3,880,226	1.5%	--
Hartford Schroders Emerging Mkts Eq Y	4,211,127	1.5%	3,844,259	1.5%	--
Total International Equities	**28,857,561**	**10.5%**	**$ 27,312,777**	**10.5%**	**9.0%**
		Range		*Range*	*4-16%*
Global Equities					
MSCI iShares ACWI Index ETF	12,365,033	4.5%	10,564,265	4.1%	
American Funds New Perspective R6	4,137,563	1.5%	3,900,791	1.5%	
MFS Global Equity FD CL R5 #4818	4,122,262	1.5%	3,896,959	1.5%	
Total Global Equities	**$ 20,624,857**	**7.5%**	**$ 18,362,015**	**7.1%**	**7.0%**
		Range		*Range*	*4-12%*

Asset Allocation
Period Ending December 31, 2018

Asset Allocation		9/30/2018 Market Value	9/30/2018 % of Total		12/31/2018 Market Value	12/31/2018 % of Total	Target Allocation
Real Estate							
Vanguard REIT ETF		7,608,931	2.8%		8,544,081	3.3%	
	$	**7,608,931**	**2.8%**	**$**	**8,544,081**	**3.3%**	**4.0%**
			Range			*Range*	*0-8%*
Fixed Income							
Core Fixed Income Holdings		72,882,528	26.5%		68,245,056	26.3%	--
PIMCO Total Return Instl Fund		11,804,866	4.3%		11,689,017	4.5%	--
Prudential Total Return Bond Q		11,779,177	4.3%		11,634,035	4.5%	--
Total Fixed Income	**$**	**96,466,571**	**35.1%**	**$**	**91,568,107**	**35.3%**	**38.0%**
			Range			*Range*	*30-50%*
Alternatives							
BlackRock Strategic Income Opps K		4,152,727	1.5%		6,426,137	2.5%	--
Eaton Vance Glbl Macro Abs Ret I		9,657,764	3.5%		6,410,095	2.5%	--
AQR Equity Market Neutral I		5,602,874	2.0%		5,166,588	2.0%	--
Total Alternatives	**$**	**19,413,365**	**7.1%**	**$**	**18,002,820**	**6.9%**	**10.0%**
			Range			*Range*	*5-20%*
Cash							
Money Market		10,185,042	3.7%		10,374,096	4.0%	--
Total Cash	**$**	**10,185,042**	**3.7%**	**$**	**10,374,096**	**4.0%**	**1.0%**
			Range			*Range*	*0-5%*
TOTAL	**$**	**275,127,254**	**100.0%**	**$**	**259,604,930**	**100.0%**	**100.0%**

Investment Summary
Period Ending December 31, 2018

Investment Summary	Fourth Quarter 2018	Year to Date 2018
Beginning Value	**275,858,092.90**	**$ 254,664,786.12**
Net Contributions/Withdrawals	4,992,580.98	20,833,234.72
Fees Deducted	-48,392.18	-193,402.20
Income Received	5,833,237.10	9,681,815.66
Market Appreciation	-26,299,750.76	-24,826,725.70
Net Change in Accrued Income	-108,980.30	67,079.14
Ending Market Value*	**$ 260,226,787.74**	**$ 260,226,787.74** *

Investment Summary	Fourth Quarter 2017	Year to Date 2017
Beginning Value	**$ 242,319,209.06**	**$ 206,343,794.94**
Net Contributions/Withdrawals	5,008,886.29	20,352,188.04
Fees Deducted	-47,932.44	-187,946.90
Income Received	4,459,903.12	7,663,145.17
Market Appreciation	2,815,653.67	20,386,797.05
Net Change in Accrued Income	109,066.42	106,807.82
Ending Market Value*	**$ 254,664,786.12**	**$ 254,664,786.12** *

*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 December 31, 2018

Tactical Asset Allocation

Asset Class	% Portfolio Weighting			Rationale
	Target	Current Portfolio	Over/Under Weighting	
Cash	1.0%	4.0%	+3.0%	▪ Current cash yields are becoming competitive with shorter term fixed income maturities, as well as recent alternative segment returns have been disappointing.
Fixed Income	38.0%	35.50%	-2.5%	▪ We expect the Fed to move cautiously in 2019 as economic data appears to be softening. We have reduced our base case assumption for 2019 to 1-2 hikes, with the potential for an undershoot if signs of slowing growth accelerate. We believe Fed Funds will peak for the cycle by the end of 2020. Inflation should modestly accelerate as the impact of fiscal stimulus increases aggregate demand and excess capacity is depleted. Our year-end 10-year Treasury forecast calls for a range between 2.75% - 3.25% for 2019.
Alternatives	10.0%	7.0%	-3.0%	▪ We maintain our underweight to alternatives. While we seek the promise of risk-adjusted returns from alternatives, investment returns over the last several quarters have been disappointing.
Real Estate (REITS)	4.0%	3.25%	-0.75%	▪ Rising vacancy rates for regional malls and shopping centers, rising interest rate pressures on the sector and declining sales trends for a variety of sectors create a negative backdrop for REITs. However, we began to close our underweight to REITs last quarter due to our forecast of the Federal Reserve increasing the Fed Funds rate only 1-2 times in 2019.
Global Equity	7.0%	7.0%	-	▪ The U.S. economy is on solid footing relative to the rest of the world. Economies outside of the U.S. are slowing due in large part to the uncertainties caused by global trade issues. Valuations remain attractive overseas, and if a trade deal is executed, global markets would likely rally. Additionally, global central banks have provided some indication that they may continue 'easy' monetary policies – which would be supportive for global equities.
International (Developed)	9.0%	9.0%	-	▪ Visibility into developed international earnings has become murkier over the past three months. Europe and Japan are economically more sensitive to trade than the U.S., thus slowing trade/global demand is likely to impact those markets more significantly relative to the U.S. Our equal weight allocation is based on positive relative valuations and the belief that a trade deal will be executed in the near future.
International (Emerging)	0.0%	1.5%	+1.5%	▪ Attractive valuation offset by increasingly cloudy macro backdrop and deteriorating sentiment. China trade concerns have weighed on by sentiment, and growth within the region.
Total Domestic Equity	31.0%	32.75%	+1.75%	
Large Cap	17.0%	18.25%	+1.25%	▪ We have lowered our earnings estimates for the S&P500 for 2019, now forecasting a range of between $168-$172/share. Which equates to stocks trading at a reasonable 15.5X level. We maintain the modest overweight based on reasonable valuation.
Mid Cap	6.0%	5.5%	-0.50%	▪ We maintain our slight underweight to mid cap equities, preferring to be overweight small cap and large cap.
Small Cap	8.0%	9.0%	+1.0%	▪ We maintain an overweight to small cap stocks on the basis of further narrowing in valuation spread relative to domestic large cap. Small caps have better earnings growth, attractive relative valuations and some insulation from the impact of a stronger dollar.

Selected Period Performance

PARS/COUNTY OF CONTRA COSTA PRHCP

Account 6746038001

Period Ending: 12/31/2018

	3 Months	Year to Date (1 Year)	3 Years	5 Years	Inception to Date (94 Months)
Cash Equivalents	.53	1.72	.92	.56	.36
FTSE 3 Month T-Bill Index	*.57*	*1.86*	*.99*	*.61*	*.41*
Fixed Income ex Funds	1.38	.14	2.41	2.54	3.14
Total Fixed Income	1.38	.07	2.55	2.59	3.23
BBG Barclays US Aggregate Bd Index	*1.64*	*.01*	*2.06*	*2.52*	*2.81*
Total Equities	-14.28	-9.19	6.69	4.82	7.50
Large Cap Funds	-14.11	-5.43	8.78	7.67	10.14
Russell 1000 Index	*-13.82*	*-4.78*	*9.09*	*8.21*	*10.97*
Mid Cap Funds	-15.11	-8.95	6.96	5.15	8.04
Russell Midcap Index	*-15.37*	*-9.06*	*7.04*	*6.26*	*9.59*
Small Cap Funds	-19.89	-10.13	7.99	5.59	9.81
Russell 2000 Index	*-20.20*	*-11.01*	*7.36*	*4.41*	*8.63*
International Equities	-12.28	-12.29	5.15	1.68	3.80
MSCI AC World Index	*-12.75*	*-9.42*	*6.60*	*4.26*	*6.14*
MSCI EAFE Index	*-12.54*	*-13.79*	*2.87*	*.53*	*3.06*
MSCI EM Free Index	*-7.47*	*-14.58*	*9.25*	*1.65*	*.59*
REIT Funds	-6.15	-6.14	1.83	7.40	7.42
Wilshire REIT Index	*-6.93*	*-4.84*	*2.06*	*7.87*	*8.05*
Alternatives	-1.11	-7.43	-1.73	.03	
Dynamic Alternatives Index	*-3.72*	*-4.24*	*.96*	*.75*	*-.46*
Total Managed Portfolio	-7.38	-5.50	4.21	3.47	5.06
Total Account Net of Fees	-7.40	-5.57	4.12	3.37	4.95
County of Contra Costa	*-7.04*	*-4.44*	*4.54*	*4.02*	*5.56*

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 December 31, 2018

Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
LARGE CAP EQUITY FUNDS											
Columbia Contrarian Core Inst3	(7/13)	-14.78	77	-8.81	82	-8.81	82	6.53	78	7.15	47
T. Rowe Price Growth Stock I		-14.10	25	-0.89	37	-0.89	37	10.45	28	10.22	19
Harbor Capital Appreciation Retirement		-16.39	69	-0.96	37	-0.96	37	10.24	32	10.33	17
Dodge & Cox Stock	(10/14)	-13.57	64	-7.07	31	-7.07	31	10.07	7	7.06	16
Vanguard Growth & Income Adm	(12/16)	-14.22	65	-4.61	31	-4.61	31	8.91	28	8.52	9
iShares Russell 1000 ETF	(3/15)	-13.84	56	-4.91	37	-4.91	37	8.95	26	8.08	23
Russell 1000 TR USD		**-13.82**	**--**	**-4.78**	**--**	**-4.78**	**--**	**9.09**	**--**	**8.21**	**--**
MID CAP EQUITY FUNDS											
iShares Russell Mid-Cap ETF	(3/15)	-15.33	36	-9.13	30	-9.13	30	6.89	43	6.10	16
Russell Mid Cap TR USD		**-15.37**	**--**	**-9.06**	**--**	**-9.06**	**--**	**7.04**	**--**	**6.26**	**--**
SMALL CAP EQUITY FUNDS											
Undiscovered Managers Behavioral Val R6	(9/16)	-20.42	68	-15.20	49	-15.20	49	5.21	47	4.99	6
Russell 2000 Value TR USD		**-18.67**	**--**	**-12.86**	**--**	**-12.86**	**--**	**7.37**	**--**	**3.61**	**--**
T. Rowe Price New Horizons I		-17.01	47	4.17	4	4.17	4	13.98	2	10.43	2
Russell 2000 Growth TR USD		**-21.65**	**--**	**-9.31**	**--**	**-9.31**	**--**	**7.24**	**--**	**5.13**	**--**
iShares Russell 2000 ETF	(3/15)	-20.21	66	-11.02	36	-11.02	36	7.38	27	4.45	27
INTERNATIONAL EQUITY FUNDS											
Dodge & Cox International Stock		-12.39	43	-17.98	81	-17.98	81	3.24	40	-0.48	43
MFS International Growth R6		-11.74	19	-8.79	9	-8.79	9	7.52	4	3.46	12
MFS Global Equity R6	(3/15)	-13.30	53	-10.76	62	-10.76	62	5.95	46	4.08	45
iShares MSCI EAFE ETF	(3/15)	-12.59	47	-13.83	37	-13.83	37	2.82	50	0.45	40
iShares MSCI ACWI ETF	(3/15)	-12.73	44	-9.15	45	-9.15	45	6.93	28	4.54	34
American Funds New Perspective R6	(3/15)	-13.15	50	-5.56	18	-5.56	18	7.66	19	6.42	11
DFA Large Cap International I	(12/18)	-13.29	66	-14.14	44	-14.14	44	3.55	32	0.44	41
MSCI EAFE NR USD		**-12.54**	**--**	**-13.79**	**--**	**-13.79**	**--**	**2.87**	**--**	**0.53**	**--**
MSCI ACWI NR USD		**-12.75**	**--**	**-9.42**	**--**	**-9.42**	**--**	**6.60**	**--**	**4.26**	**--**
Hartford Schroders Emerging Mkts Eq Y	(11/12)	-8.85	74	-15.42	45	-15.42	45	9.67	17	1.90	20
MSCI EM Free Index		**-7.47**	**--**	**-14.58**	**--**	**-14.58**	**--**	**9.25**	**--**	**1.65**	**--**

Data Source: Morningstar, SEI Investments

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

COUNTY OF CONTRA COSTA

For Period Ending December 31, 2018

Fund Name	Inception	3-Month Return	Rank	YTD Return	Rank	1-Year Return	Rank	3-Year Return	Rank	5-Year Return	Rank
REIT EQUITY FUNDS											
Vanguard Real Estate ETF	(6/17)	-6.46	34	-5.95	58	-5.95	58	2.32	46	7.40	44
Wilshire REIT Index		**-6.93**	**--**	**-4.84**	**--**	**-4.84**	**--**	**2.06**	**--**	**7.87**	**--**
BOND FUNDS											
Core Fixed Income Portfolio		1.38	32	.14	24	.14	24	2.41	34	2.54	33
PIMCO Total Return Instl		1.39	32	-0.26	39	-0.26	39	2.47	32	2.56	31
PGIM Total Return Bond R6	(5/16)	1.36	33	-0.63	57	-0.63	57	3.59	5	3.59	3
BBgBarc US Agg Bond TR USD		**1.64**	**--**	**0.01**	**--**	**0.01**	**--**	**2.06**	**--**	**2.52**	**--**
ALTERNATIVE FUNDS											
AQR Equity Market Neutral I	(2/16)	-1.79	64	-11.73	95	-11.73	95	-0.37	73	--	--
BlackRock Strategic Income Opps K		-0.52	30	-0.47	46	-0.47	46	2.69	53	2.32	31
Eaton Vance Glbl Macr Absolute Return I	(7/13)	-0.90	37	-3.29	81	-3.29	81	1.60	77	2.09	37
Idx: Dynamic Alternatives		**-3.72**	**--**	**-4.24**	**--**	**-4.24**	**--**	**0.96**	**--**	**0.75**	**--**

Data Source: Morningstar, SEI Investments

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

COUNTY OF CONTRA COSTA

For Period Ending December 31, 2018

Fund Name	Inception	2018 Return	Rank	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
LARGE CAP EQUITY FUNDS															
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

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

COUNTY OF CONTRA COSTA

For Period Ending December 31, 2018

Fund Name	Inception	2018 Return	Rank	2017 Return	Rank	2016 Return	Rank	2015 Return	Rank	2014 Return	Rank	2013 Return	Rank	2012 Return	Rank
REIT EQUITY FUNDS															
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 Glbl 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

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

HIGHMARK® CAPITAL MANAGEMENT

BlackRock Strategic Income Opps K

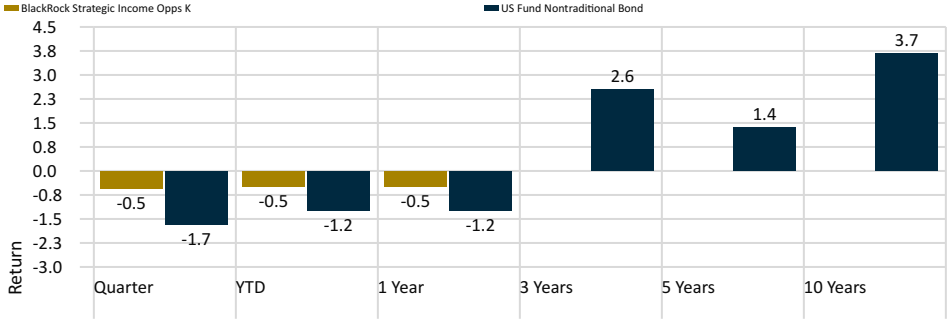
BSIKX

Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	
Inception Date	3/28/2016
Expense Ratio	0.82
Fund Size (Mil)	33,935.90
Portfolio Date	6/30/2018
Manager Name	Multiple

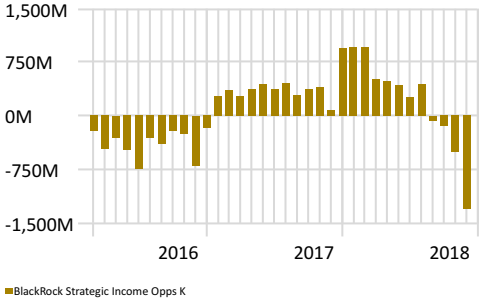
Returns

As of Date: 12/31/2018 Calculation Benchmark: US Fund Nontraditional Bond



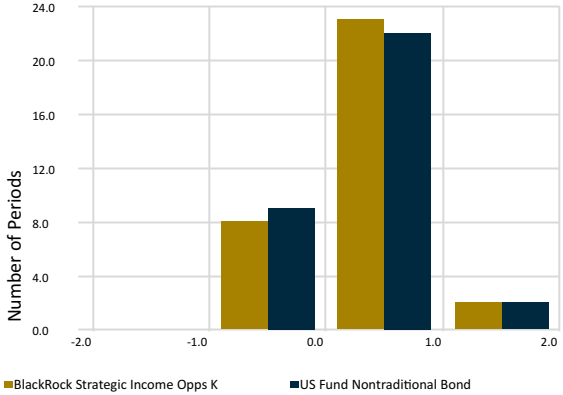
Monthly Estimated Fund-Level Net Flow

Time Period: 3/1/2016 to 12/31/2018



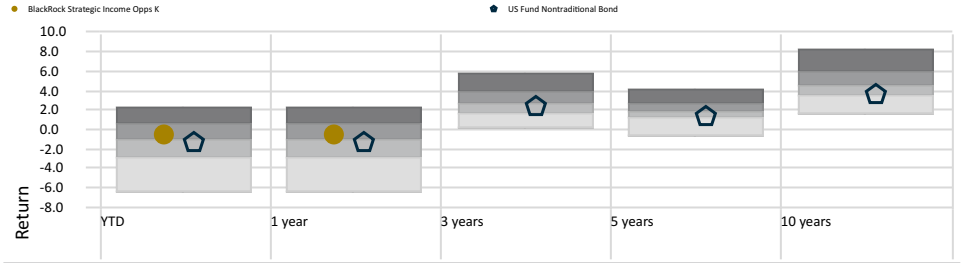
Return Distribution - BlackRock Strategic Income Opps K

Time Period: Since Inception to 12/31/2018



Performance Relative to Peer Group

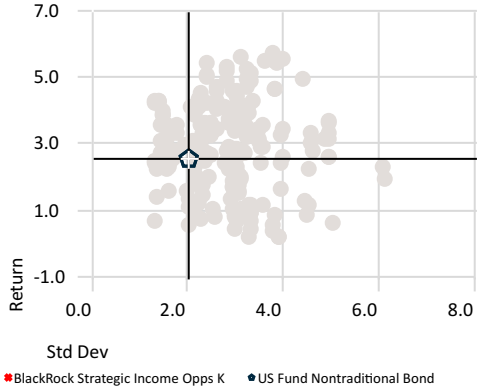
Peer Group (5-95%): Open End Funds - U.S. - Nontraditional Bond



	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
BlackRock Strategic Income Opps K	-0.47	2	-0.47	2						
US Fund Nontraditional Bond	-1.21	3	-1.21	3	2.55	3	1.40	3	3.67	3

Risk-Reward

Time Period: 1/1/2016 to 12/31/2018



Correlation Matrix

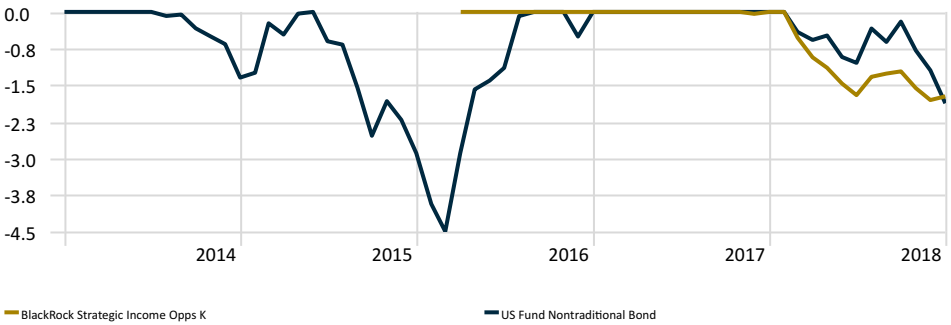
Time Period: 4/1/2016 to 12/31/2018

		1	2	3
1	BlackRock Strategic Income Opps K	1.00		
2	BBgBarc US Agg Bond TR USD	0.13	1.00	
3	S&P 500 TR (1989)	0.51	-0.17	1.00

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

Drawdown

Time Period: 1/1/2014 to 12/31/2018



BlackRock Strategic Income Opps K - Risk

Time Period: Since Inception to 12/31/2018

Calculation Benchmark: US Fund Nontraditional Bond

	Inv	Bmk1	+/- Bmk1
Return	3.15	2.79	0.36
Std Dev	1.50	1.70	-0.19
Downside Deviation	0.66	0.00	0.66
Alpha	0.80	0.00	0.80
Beta	0.72	1.00	-0.28
R2	65.44	100.00	-34.56
Sharpe Ratio (arith)	1.31	0.95	0.36
Tracking Error	1.09	0.00	1.09

Source: Morningstar Direct, as of December 31, 2018. 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.

HIGHMARK® CAPITAL MANAGEMENT

DFA Large Cap International I

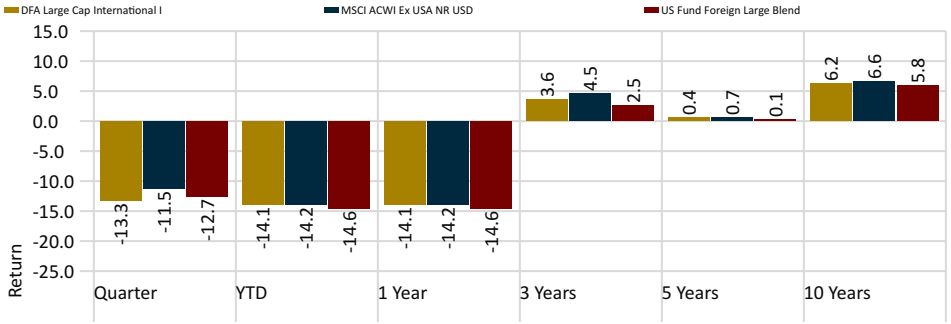
DFALX

Key Information

Morningstar Category	US Fund Foreign Large Blend
Morningstar Rating Overall	★★★
Inception Date	7/17/1991
Expense Ratio	0.24
Fund Size (Mil)	4,787.26
Portfolio Date	11/30/2018
Manager Name	Multiple

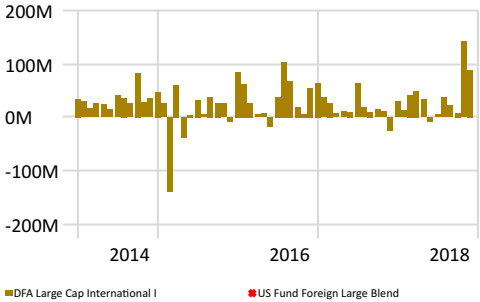
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI ACWI Ex USA NR USD

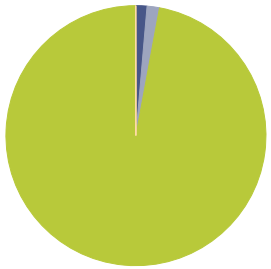


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



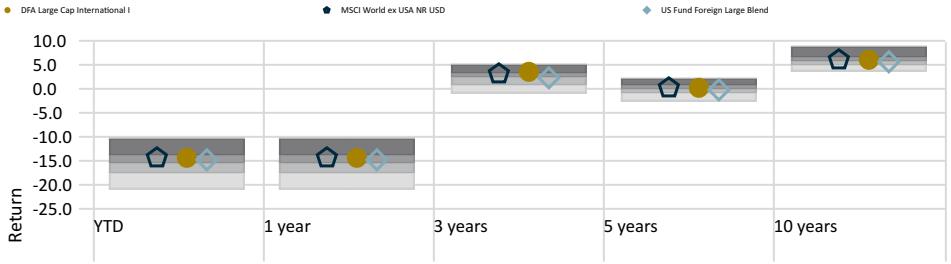
Asset Allocation



	%
Cash	1.4
US Equity	1.5
Non-US Equity	97.1
Other	0.0
Total	**100.0**

Performance Relative to Peer Group

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

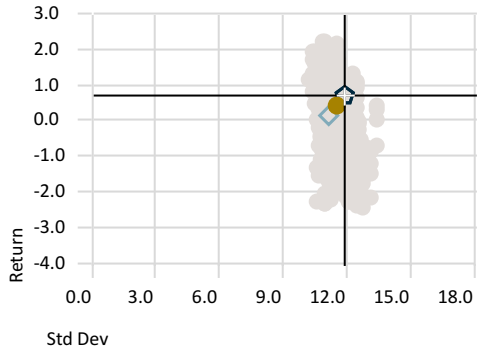


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
DFA Large Cap International I	-14.14	2	-14.14	2	3.55	1	0.44	2	6.16	2
MSCI ACWI Ex USA NR USD	-14.20	2	-14.20	2	4.48	1	0.68	1	6.57	1
US Fund Foreign Large Blend	-14.59	2	-14.59	2	2.55	2	0.12	2	5.84	2

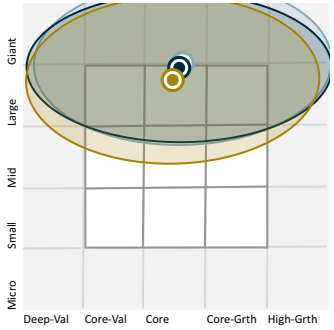
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Foreign Large Blend Calculation Benchmark: MSCI ACWI Ex USA NR USD



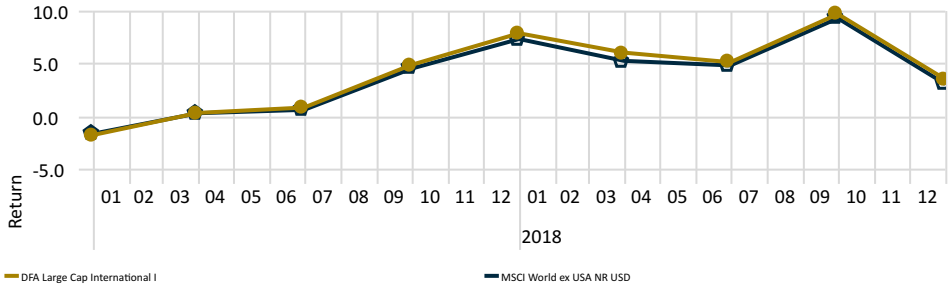
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



DFA Large Cap International I - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI World ex USA NR USD

	Inv	Bmk1
Return	0.44	0.34
Std Dev	11.48	11.66
Downside Deviation	1.26	0.00
Alpha	0.09	0.00
Beta	0.97	1.00
R2	97.72	100.00
Sharpe Ratio (arith)	-0.02	-0.03
Tracking Error	1.76	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Dodge & Cox International Stock

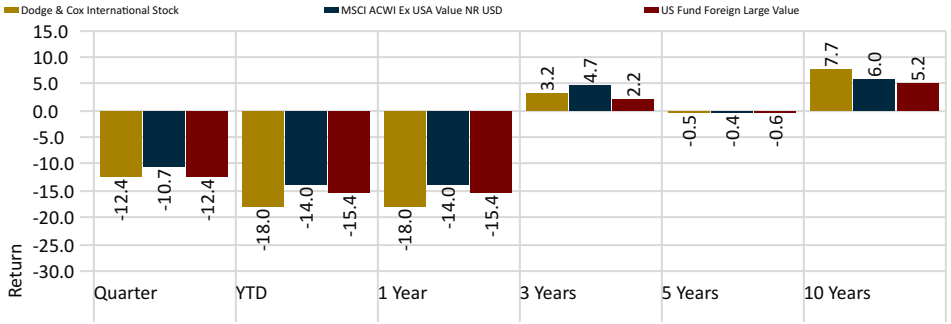
DODFX

Key Information

Morningstar Category	US Fund Foreign Large Value
Morningstar Rating Overall	★★★★
Inception Date	5/1/2001
Expense Ratio	0.63
Fund Size (Mil)	48,107.51
Portfolio Date	12/31/2018
Manager Name	Multiple

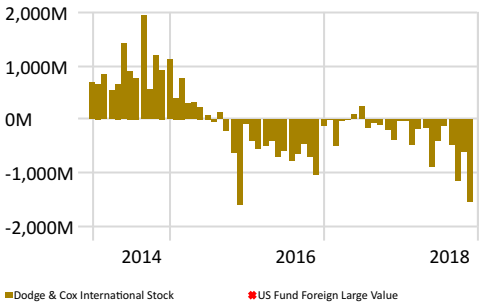
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI ACWI Ex USA Value NR USD

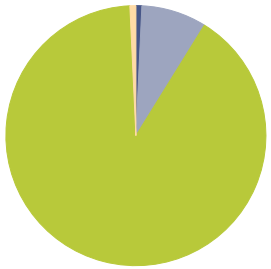


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



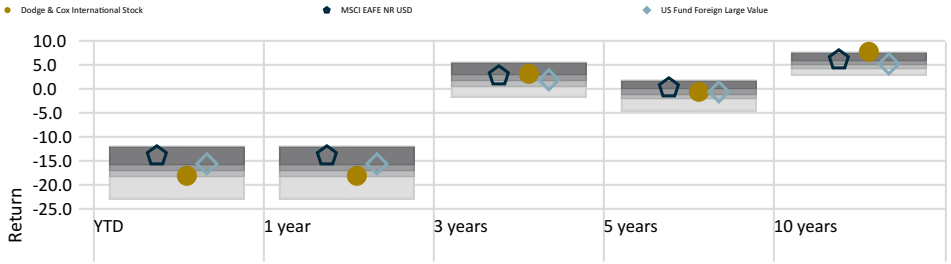
Asset Allocation



	%
Cash	0.7
US Equity	8.1
Non-US Equity	90.4
Other	0.7
Total	**100.0**

Performance Relative to Peer Group

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

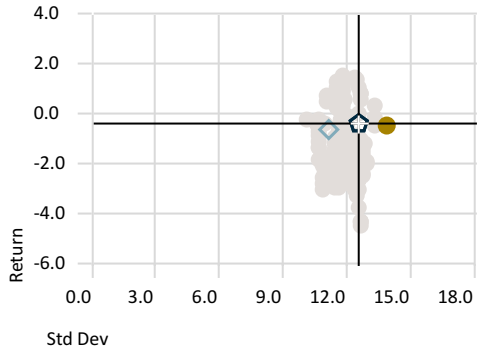


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Dodge & Cox International Stock	-17.98	3	-17.98	3	3.24	1	-0.48	2	7.72	1
MSCI ACWI Ex USA Value NR USD	-13.97	1	-13.97	1	4.75	1	-0.38	2	5.95	1
US Fund Foreign Large Value	-15.38	1	-15.38	1	2.20	2	-0.63	2	5.19	2

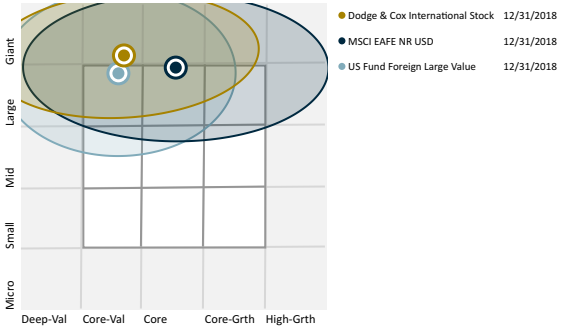
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Foreign Large Value Calculation Benchmark: MSCI ACWI Ex USA Value NR USD



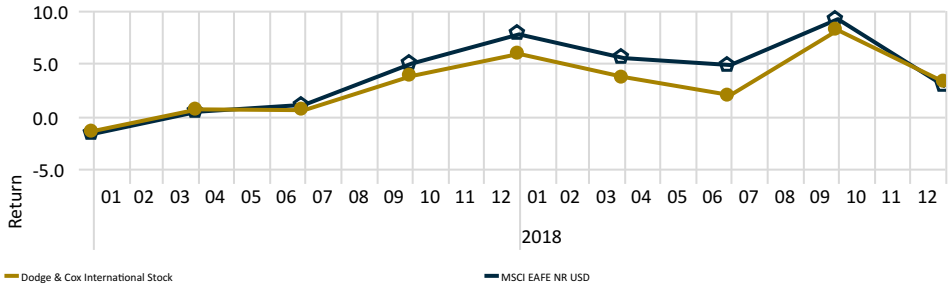
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



Dodge & Cox International Stock - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI EAFE NR USD

	Inv	Bmk1
Return	-0.48	0.53
Std Dev	13.90	11.78
Downside Deviation	3.66	0.00
Alpha	-0.80	0.00
Beta	1.10	1.00
R2	86.82	100.00
Sharpe Ratio (arith)	-0.08	-0.01
Tracking Error	5.19	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Dodge & Cox Stock

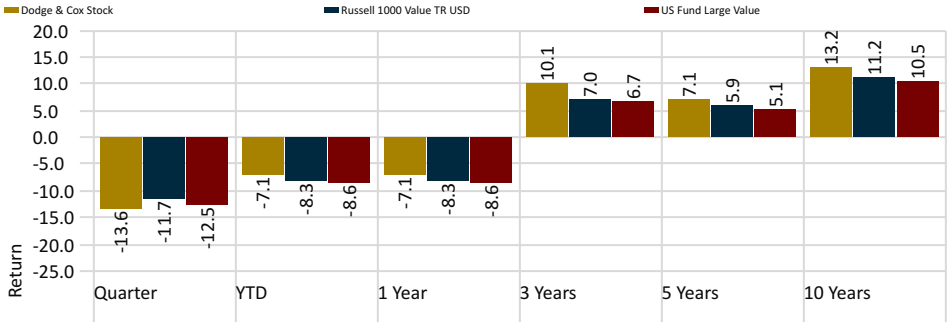
DODGX

Key Information

Morningstar Category	US Fund Large Value
Morningstar Rating Overall	★★★★
Inception Date	1/4/1965
Expense Ratio	0.52
Fund Size (Mil)	63,004.69
Portfolio Date	12/31/2018
Manager Name	Multiple

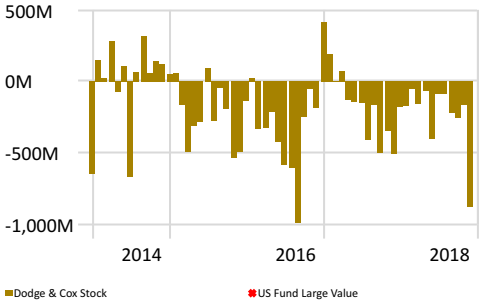
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 1000 Value TR USD

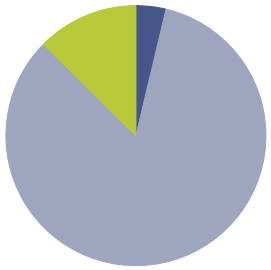


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



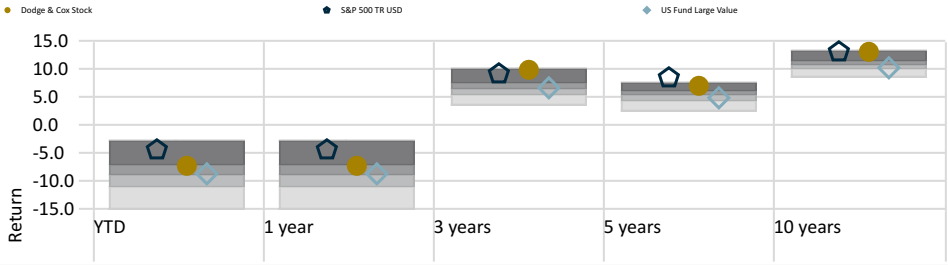
Asset Allocation



	%
Cash	3.7
US Equity	83.7
Non-US Equity	12.6
Total	**100.0**

Performance Relative to Peer Group

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

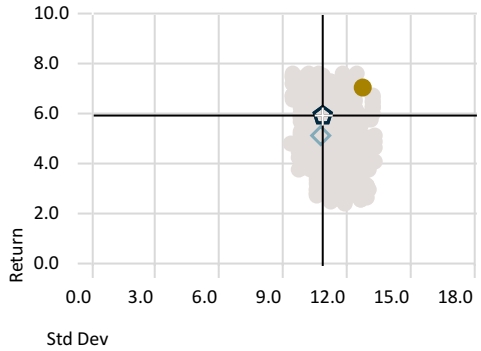


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Dodge & Cox Stock	-7.07	2	-7.07	2	10.07	1	7.06	1	13.17	1
Russell 1000 Value TR USD	-8.27	2	-8.27	2	6.95	2	5.95	2	11.18	2
US Fund Large Value	-8.60	2	-8.60	2	6.73	2	5.13	3	10.45	3

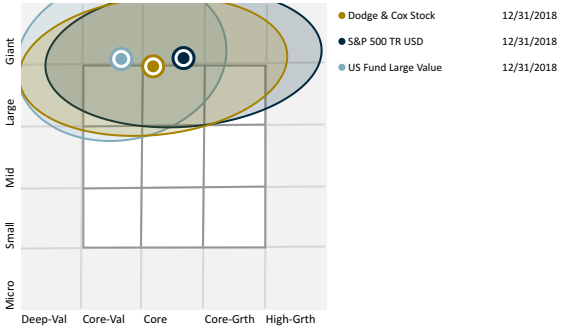
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Large Value Calculation Benchmark: Russell 1000 Value TR USD



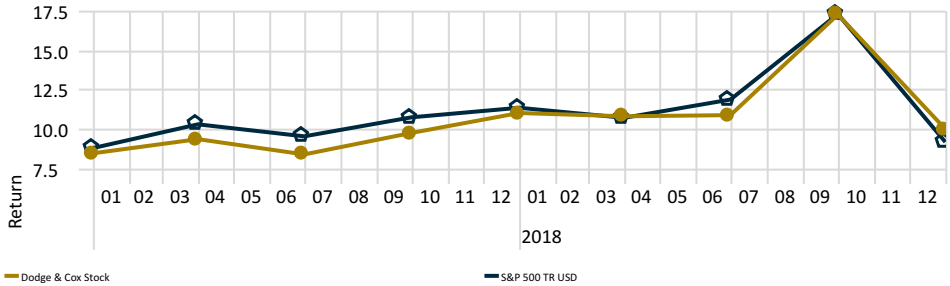
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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: 1/1/2014 to 12/31/2018

Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	7.06	8.49
Std Dev	12.71	10.94
Downside Deviation	3.26	0.00
Alpha	-1.75	0.00
Beta	1.08	1.00
R2	85.93	100.00
Sharpe Ratio (arith)	0.50	0.71
Tracking Error	4.85	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Eaton Vance Glbl Macr Absolute Return I

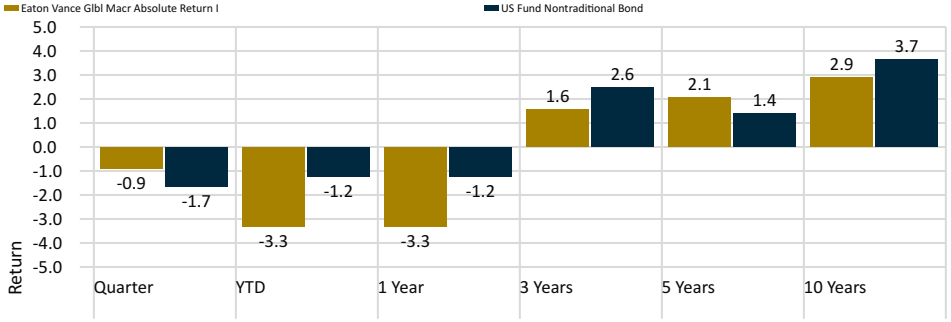
EIGMX

Key Information

Morningstar Category	US Fund Nontraditional Bond
Morningstar Rating Overall	★★
Inception Date	6/27/2007
Expense Ratio	0.74
Fund Size (Mil)	4,214.47
Portfolio Date	7/31/2018
Manager Name	Multiple

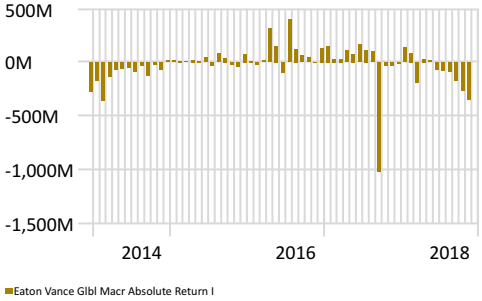
Returns

As of Date: 12/31/2018 Calculation Benchmark: US Fund Nontraditional Bond



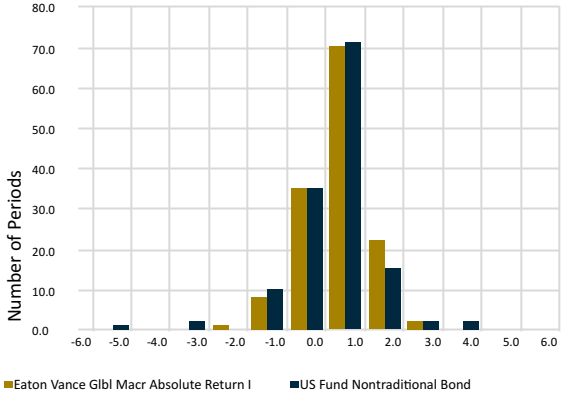
Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



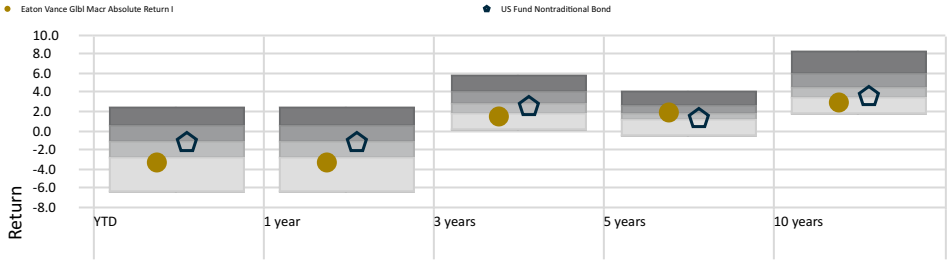
Return Distribution - Eaton Vance Glbl Macr Absolute Re

Time Period: Since Inception to 12/31/2018



Performance Relative to Peer Group

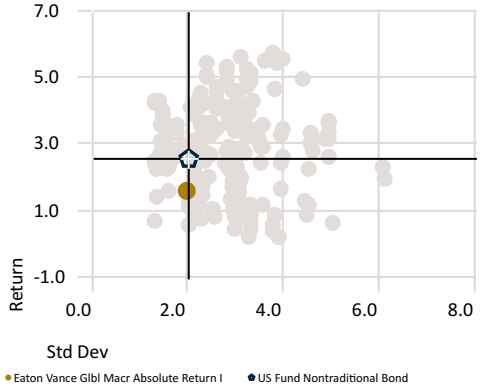
Peer Group (5-95%): Open End Funds - U.S. - Nontraditional Bond



	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Eaton Vance Glbl Macr Absolute Return I	-3.29	4	-3.29	4	1.60	4	2.09	2	2.94	4
US Fund Nontraditional Bond	-1.21	3	-1.21	3	2.55	3	1.40	3	3.67	3

Risk-Reward

Time Period: 1/1/2016 to 12/31/2018



Correlation Matrix

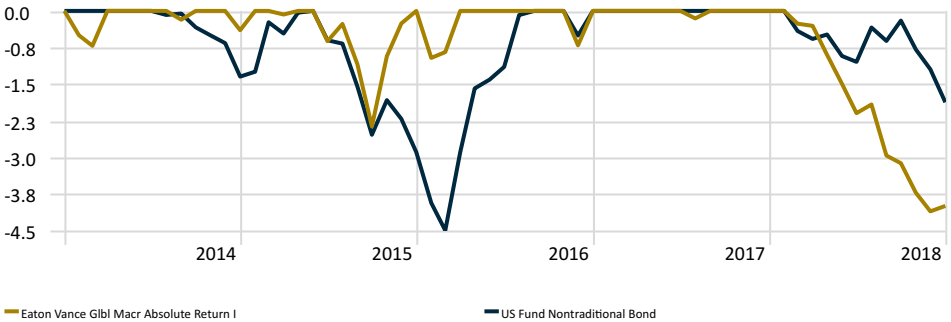
Time Period: 7/1/2007 to 12/31/2018

		1	2	3
1	Eaton Vance Glbl Macr Absolute Return I	1.00		
2	BBgBarc US Agg Bond TR USD	0.25	1.00	
3	S&P 500 TR (1989)	0.36	0.01	1.00

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

Drawdown

Time Period: 1/1/2014 to 12/31/2018



Eaton Vance Glbl Macr Absolute Return I - Risk

Time Period: Since Inception to 12/31/2018

Calculation Benchmark: US Fund Nontraditional Bond

	Inv	Bmk1	+/- Bmk1
Return	3.25	1.75	1.50
Std Dev	2.65	3.70	-1.06
Downside Deviation	1.62	0.00	1.62
Alpha	2.13	0.00	2.13
Beta	0.40	1.00	-0.60
R2	31.81	100.00	-68.19
Sharpe Ratio (arith)	0.98	0.30	0.68
Tracking Error	3.16	0.00	3.16

Source: Morningstar Direct, as of December 31, 2018. 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.

Harbor Capital Appreciation Instl

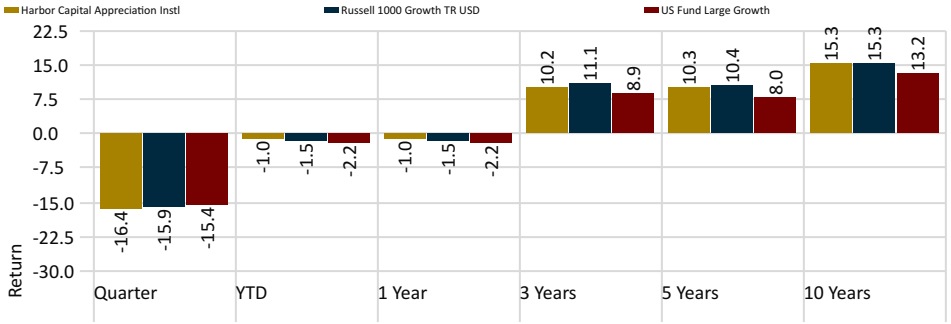
HACAX

Key Information

Morningstar Category	US Fund Large Growth
Morningstar Rating Overall	★★★★
Inception Date	12/29/1987
Expense Ratio	0.66
Fund Size (Mil)	28,266.56
Portfolio Date	9/30/2018
Manager Name	Multiple

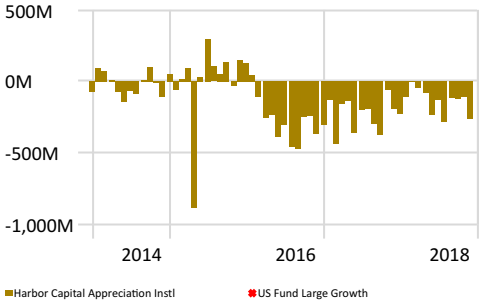
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

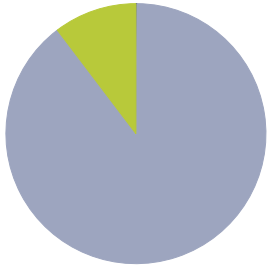


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



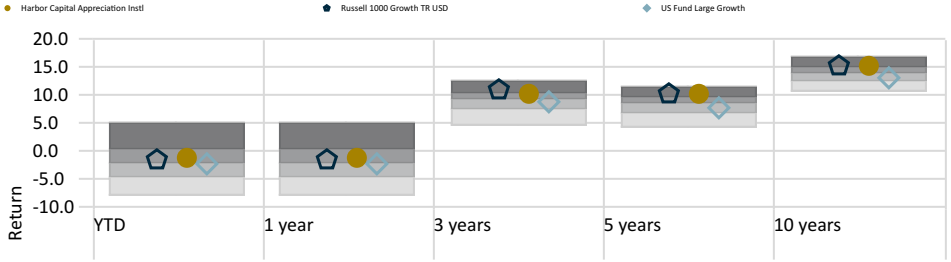
Asset Allocation



	%
Cash	0.1
US Equity	89.5
Non-US Equity	10.3
Total	**100.0**

Performance Relative to Peer Group

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

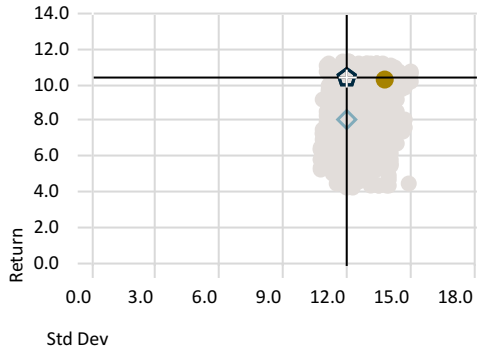


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Harbor Capital Appreciation Instl	-1.03	2	-1.03	2	10.18	2	10.29	1	15.27	1
Russell 1000 Growth TR USD	-1.51	2	-1.51	2	11.15	1	10.40	1	15.29	1
US Fund Large Growth	-2.18	3	-2.18	3	8.87	3	8.03	3	13.19	3

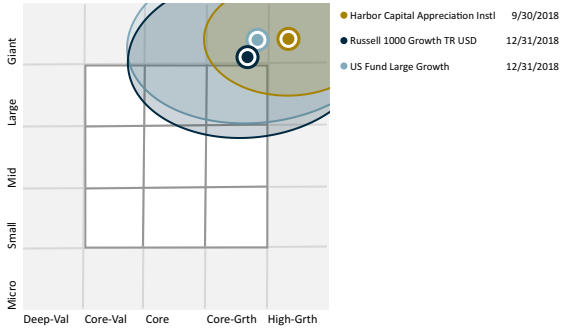
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Large Growth Calculation Benchmark: Russell 1000 Growth TR USD



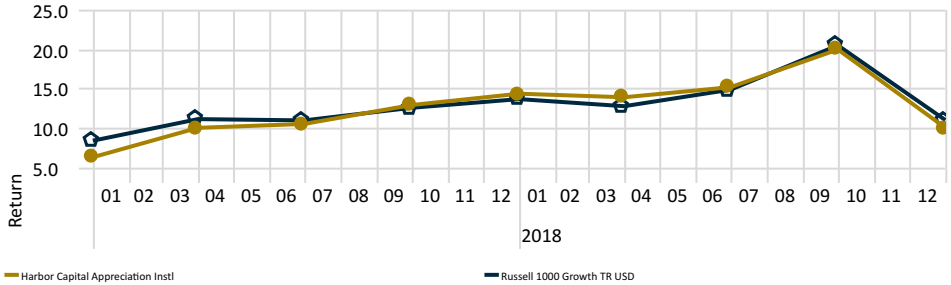
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



Harbor Capital Appreciation Instl - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: Russell 1000 Growth TR USD

	Inv	Bmk1
Return	10.29	10.40
Std Dev	13.75	11.96
Downside Deviation	3.61	0.00
Alpha	-0.72	0.00
Beta	1.08	1.00
R2	89.02	100.00
Sharpe Ratio (arith)	0.70	0.81
Tracking Error	4.67	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Hartford Schroders Emerging Mkts Eq Y

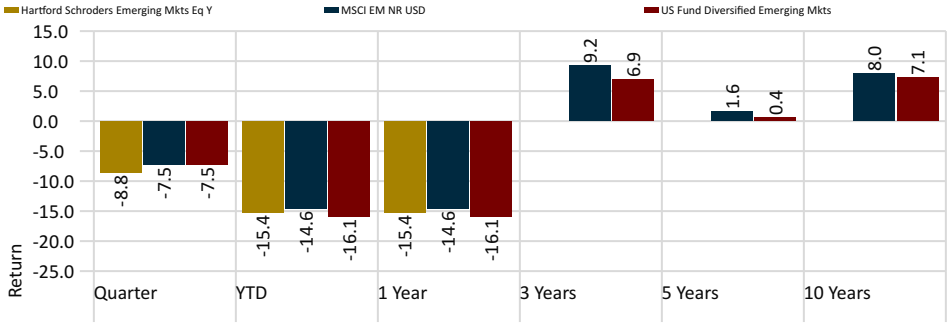
HHHYX

Key Information

Morningstar Category	US Fund Diversified Emerging Mkts
Morningstar Rating Overall	
Inception Date	10/24/2016
Expense Ratio	1.11
Fund Size (Mil)	3,268.41
Portfolio Date	11/30/2018
Manager Name	Multiple

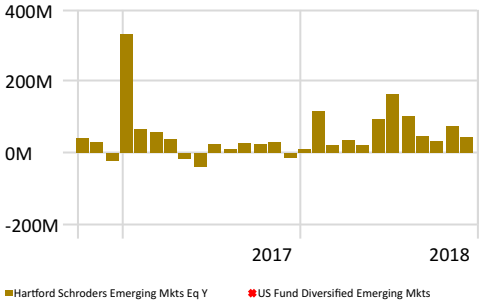
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI EM NR USD

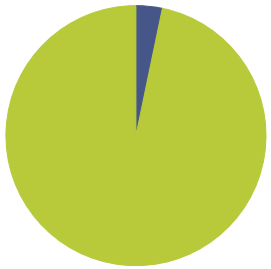


Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2016 to 12/31/2018



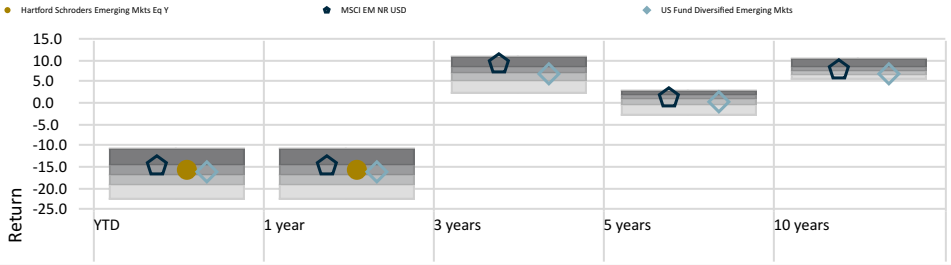
Asset Allocation



	%
Cash	3.3
Non-US Equity	96.7
Total	**100.0**

Performance Relative to Peer Group

Peer Group (5-95%): Open End Funds - U.S. - Diversified Emerging Mkts

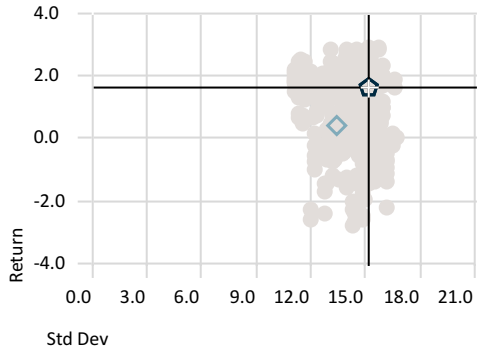


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Hartford Schroders Emerging Mkts Eq Y	-15.42	2	-15.42	2						
MSCI EM NR USD	-14.58	2	-14.58	2	9.25	1	1.65	2	8.02	2
US Fund Diversified Emerging Mkts	-16.14	2	-16.14	2	6.88	2	0.43	3	7.08	3

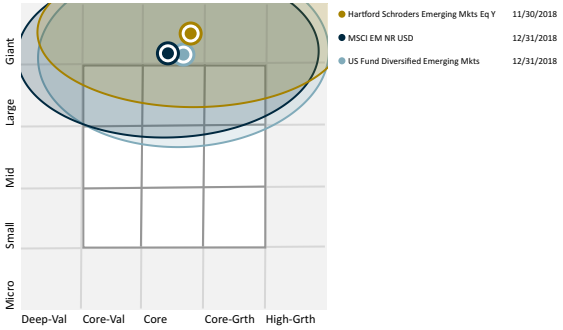
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Diversified Emerging Mkts Calculation Benchmark: MSCI EM NR USD



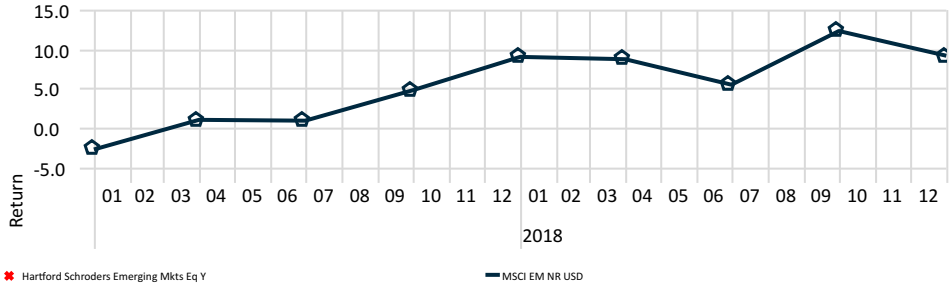
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Diversified Emerging Mkts Rolling Window: 3 Years 3 Months shift Calculation Benchmark: MSCI EM NR USD



Hartford Schroders Emerging Mkts Eq Y - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI EM NR USD

	Inv	Bmk1
Return		1.65
Std Dev		15.19
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.06
Tracking Error		0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

MFS International Growth I

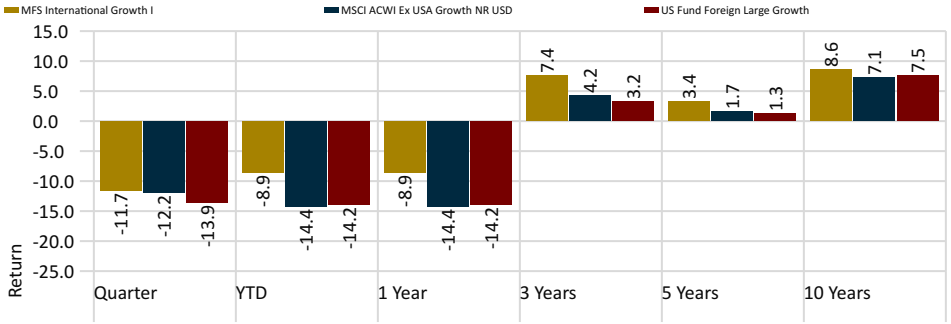
MQGIX

Key Information

Morningstar Category	US Fund Foreign Large Growth
Morningstar Rating Overall	★★★★
Inception Date	1/2/1997
Expense Ratio	0.90
Fund Size (Mil)	7,103.75
Portfolio Date	11/30/2018
Manager Name	Multiple

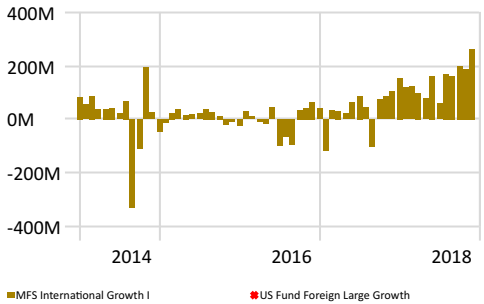
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD

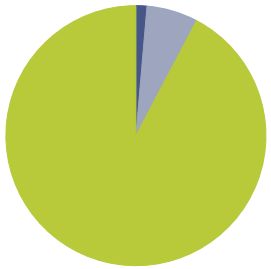


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



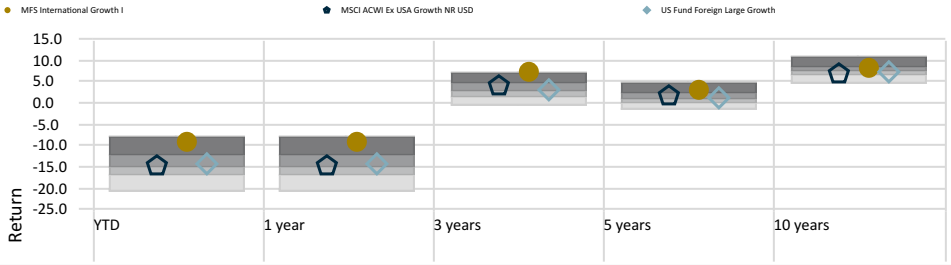
Asset Allocation



	%
Cash	1.4
US Equity	6.4
Non-US Equity	92.3
Total	**100.0**

Performance Relative to Peer Group

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

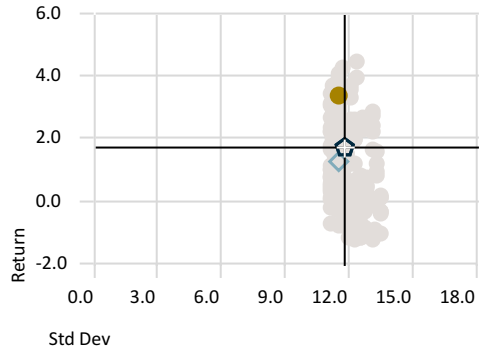


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
MFS International Growth I	-8.86	1	-8.86	1	7.41	1	3.35	1	8.62	1
MSCI ACWI Ex USA Growth NR USD	-14.43	2	-14.43	2	4.19	2	1.69	2	7.15	3
US Fund Foreign Large Growth	-14.17	2	-14.17	2	3.15	2	1.28	2	7.50	2

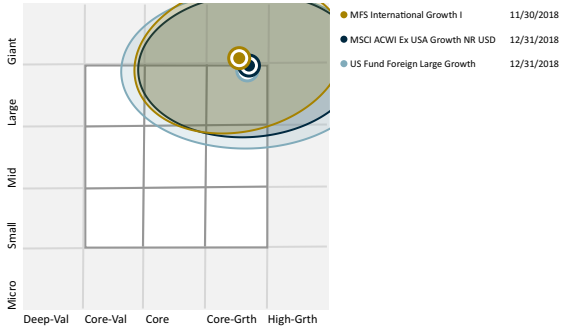
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

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



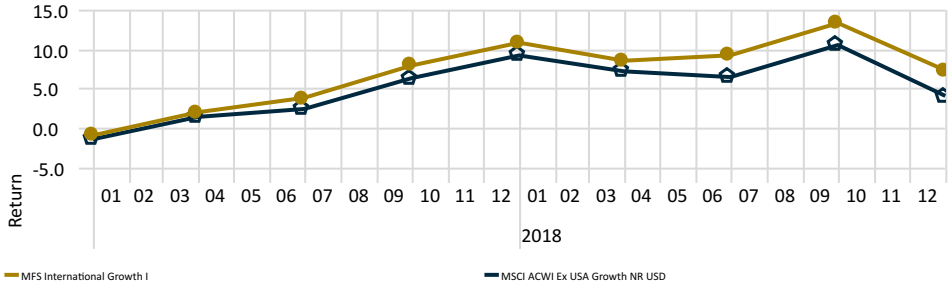
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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 I - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI ACWI Ex USA Growth NR USD

	Inv	Bmk1
Return	3.35	1.69
Std Dev	11.49	11.79
Downside Deviation	1.67	0.00
Alpha	1.69	0.00
Beta	0.94	1.00
R2	94.22	100.00
Sharpe Ratio (arith)	0.23	0.09
Tracking Error	2.84	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

MFS Global Equity R6

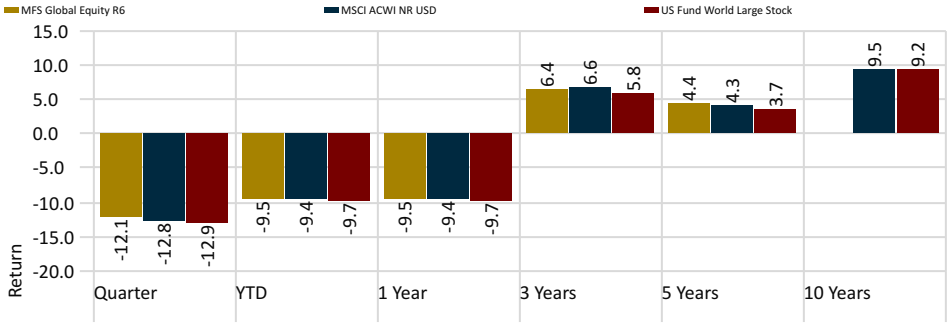
MWEMX

Key Information

Morningstar Category	US Fund World Large Stock
Morningstar Rating Overall	★★★
Inception Date	6/1/2012
Expense Ratio	0.83
Fund Size (Mil)	2,682.67
Portfolio Date	11/30/2018
Manager Name	Multiple

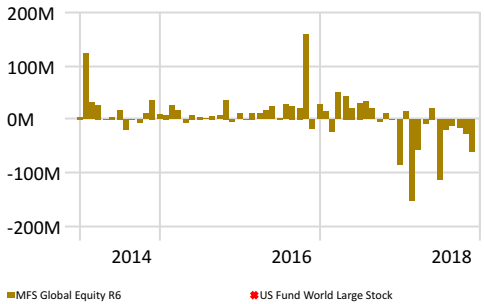
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI ACWI NR USD

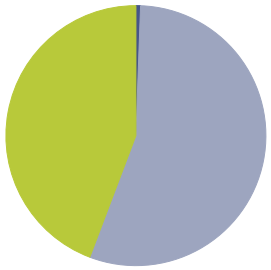


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



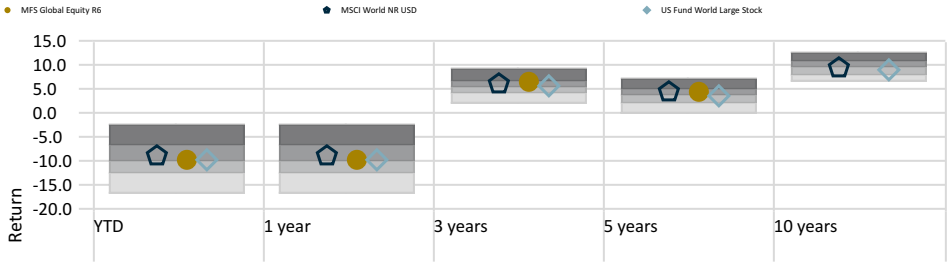
Asset Allocation



	%
Cash	0.6
US Equity	55.2
Non-US Equity	44.2
Total	**100.0**

Performance Relative to Peer Group

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

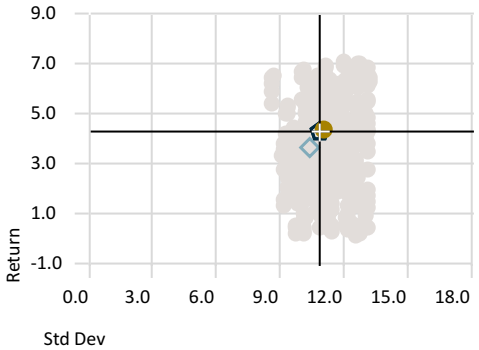


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
MFS Global Equity R6	-9.51	2	-9.51	2	6.44	2	4.36	2		
MSCI ACWI NR USD	-9.42	2	-9.42	2	6.60	2	4.26	2	9.46	2
US Fund World Large Stock	-9.70	2	-9.70	2	5.85	2	3.65	3	9.23	3

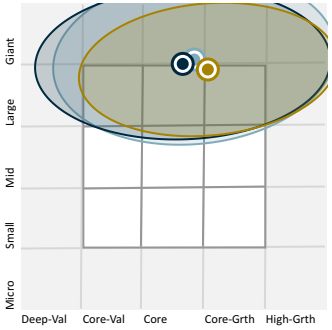
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - World Large Stock Calculation Benchmark: MSCI ACWI NR USD



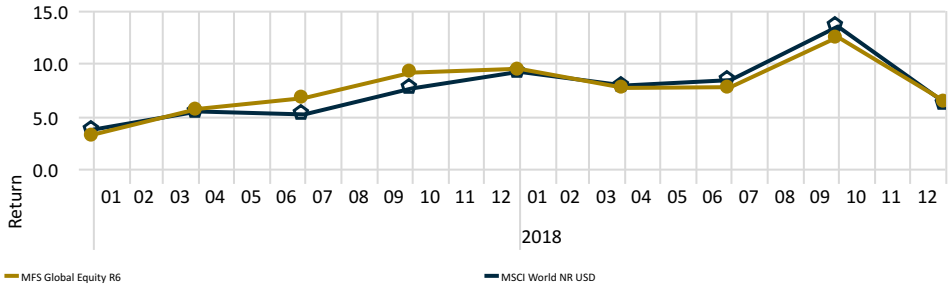
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



MFS Global Equity R6 - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI World NR USD

	Inv	Bmk1
Return	4.36	4.56
Std Dev	11.07	10.77
Downside Deviation	1.76	0.00
Alpha	-0.15	0.00
Beta	1.00	1.00
R2	94.45	100.00
Sharpe Ratio (arith)	0.33	0.36
Tracking Error	2.61	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

T. Rowe Price New Horizons I

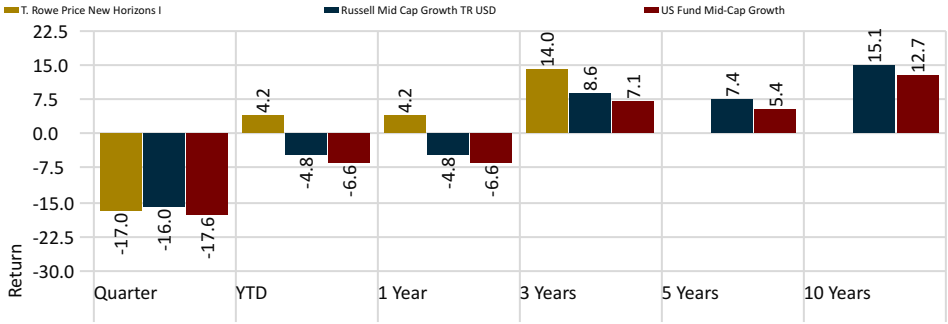
PRJIX

Key Information

Morningstar Category	US Fund Mid-Cap Growth
Morningstar Rating Overall	★★★★★
Inception Date	8/28/2015
Expense Ratio	0.65
Fund Size (Mil)	23,325.03
Portfolio Date	9/30/2018
Manager Name	Henry M. Ellenbogen

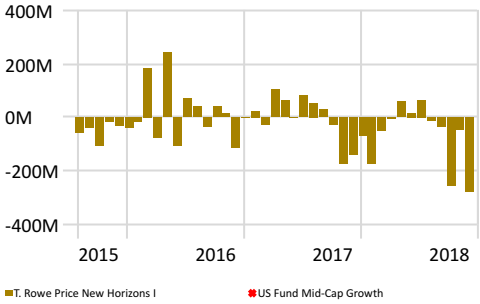
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell Mid Cap Growth TR USD

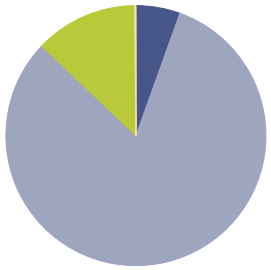


Monthly Estimated Fund-Level Net Flow

Time Period: 8/1/2015 to 12/31/2018



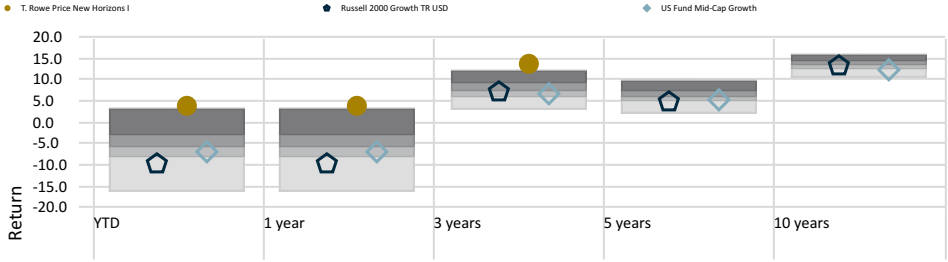
Asset Allocation



	%
Cash	5.5
US Equity	81.6
Non-US Equity	12.7
US Bond	0.1
Other	0.0
Total	**100.0**

Performance Relative to Peer Group

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

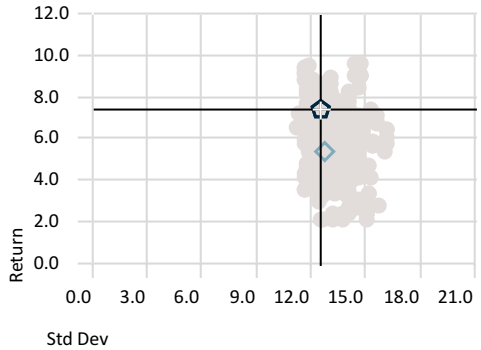


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
T. Rowe Price New Horizons I	4.17	1	4.17	1	13.98	1				
Russell Mid Cap Growth TR USD	-4.75	2	-4.75	2	8.59	2	7.42	1	15.12	1
US Fund Mid-Cap Growth	-6.65	3	-6.65	3	7.11	3	5.38	3	12.74	3

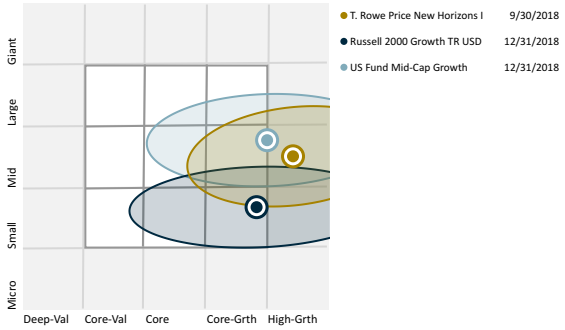
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Mid-Cap Growth Calculation Benchmark: Russell Mid Cap Growth TR USD



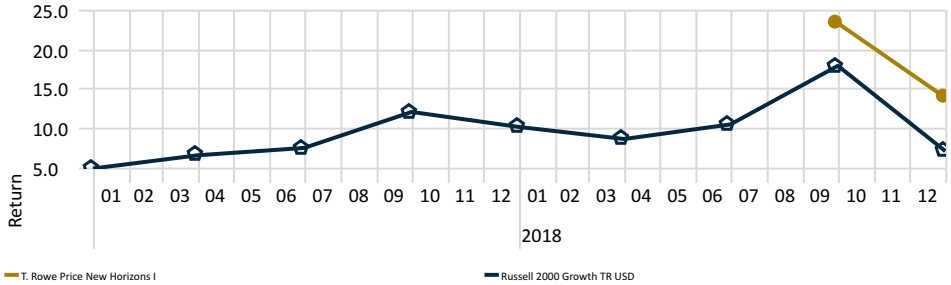
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



T. Rowe Price New Horizons I - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: Russell 2000 Growth TR USD

	Inv	Bmk1
Return		5.13
Std Dev		16.30
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.27
Tracking Error		0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

T. Rowe Price Growth Stock I

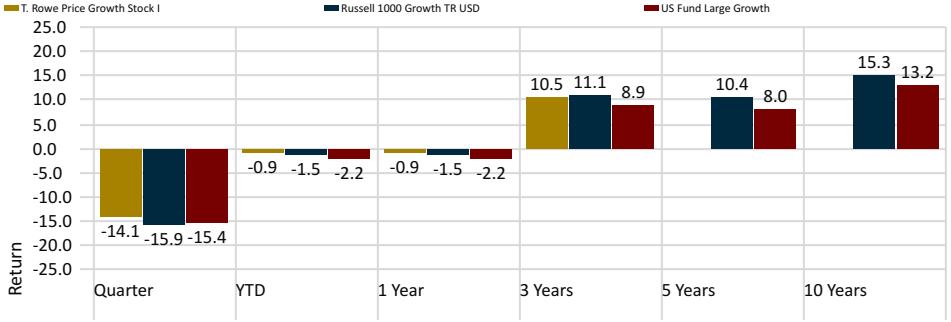
PRUFX

Key Information

Morningstar Category	US Fund Large Growth
Morningstar Rating Overall	★★★★
Inception Date	8/28/2015
Expense Ratio	0.52
Fund Size (Mil)	50,273.64
Portfolio Date	9/30/2018
Manager Name	Joseph B. Fath

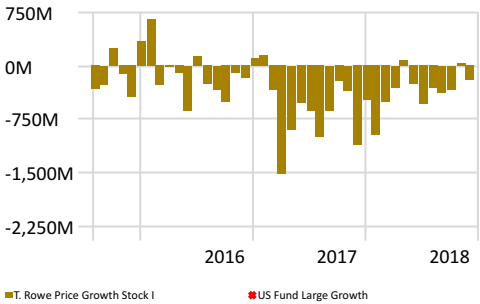
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 1000 Growth TR USD

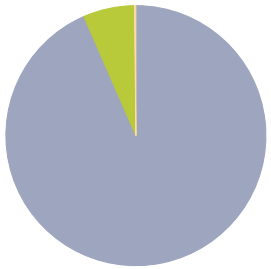


Monthly Estimated Fund-Level Net Flow

Time Period: 8/1/2015 to 12/31/2018



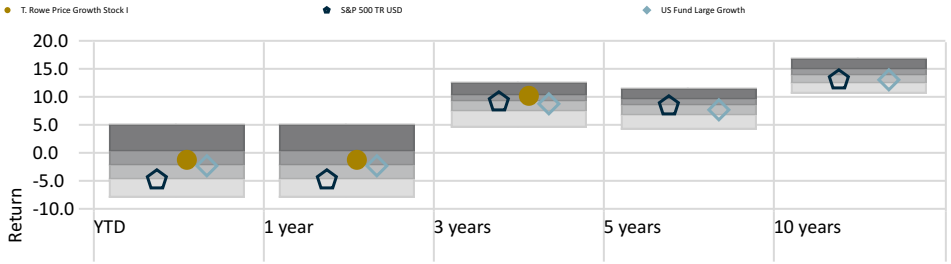
Asset Allocation



	%
Cash	0.0
US Equity	93.4
Non-US Equity	6.4
Other	0.2
Total	**100.0**

Performance Relative to Peer Group

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

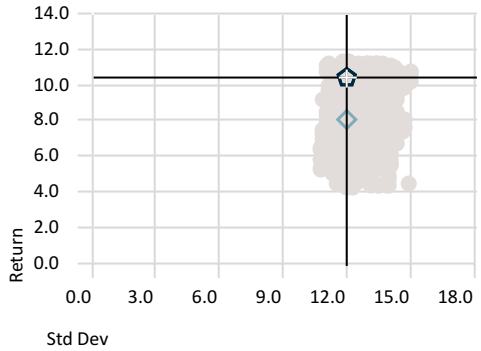


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
T. Rowe Price Growth Stock I	-0.89	2	-0.89	2	10.45	1				
Russell 1000 Growth TR USD	-1.51	2	-1.51	2	11.15	1	10.40	1	15.29	1
US Fund Large Growth	-2.18	3	-2.18	3	8.87	3	8.03	3	13.19	3

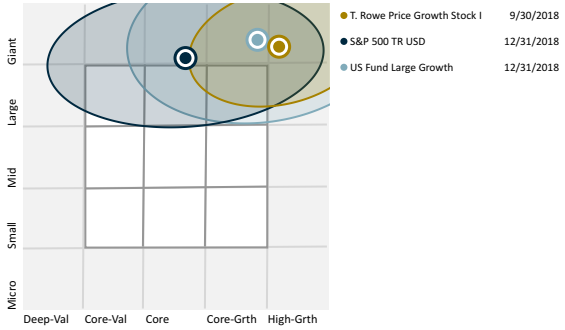
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Large Growth Calculation Benchmark: Russell 1000 Growth TR USD



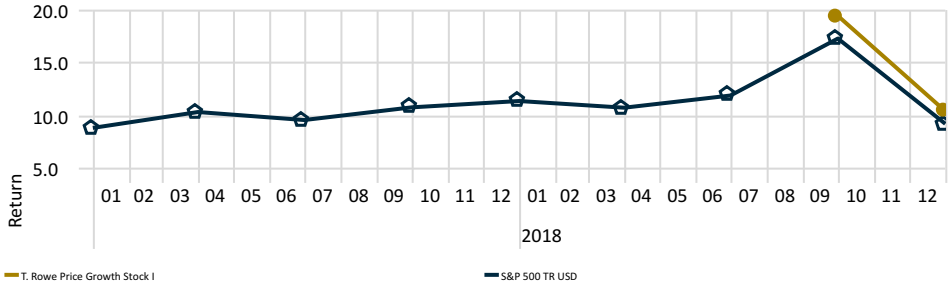
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



T. Rowe Price Growth Stock I - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return		8.49
Std Dev		10.94
Downside Deviation		0.00
Alpha		0.00
Beta		1.00
R2		100.00
Sharpe Ratio (arith)		0.71
Tracking Error		0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

PGIM Total Return Bond R6

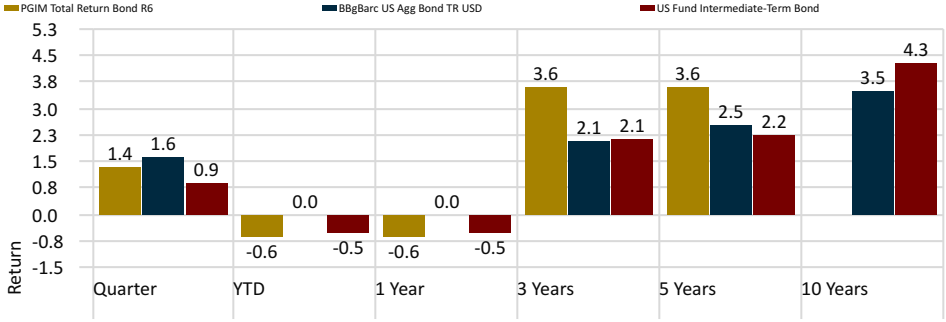
PTRQX

Key Information

Morningstar Category	US Fund Intermediate-Term Bond
Morningstar Rating Overall	★★★★★
Inception Date	12/27/2010
Expense Ratio	0.41
Fund Size (Mil)	36,310.24
Portfolio Date	12/31/2018
Manager Name	Multiple

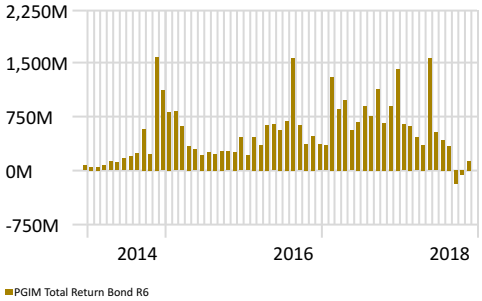
Returns

As of Date: 12/31/2018 Calculation Benchmark: BBgBarc US Agg Bond TR USD



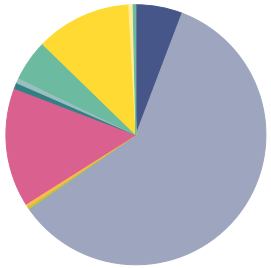
Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



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

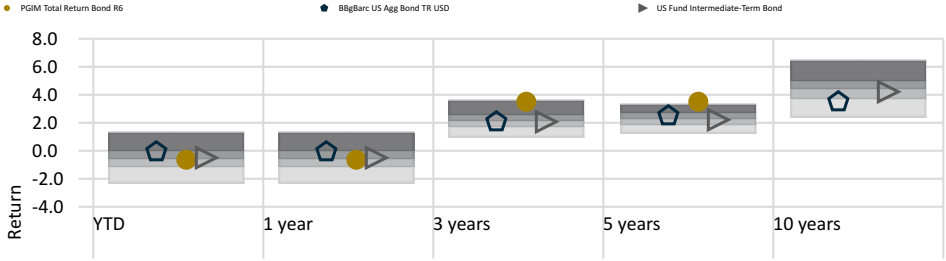
Portfolio Date: 12/31/2018



	%
Government	5.8
Government Related	59.6
Municipal Taxable	0.3
Bank Loan	0.4
Corporate Bond	14.7
Agency Mortgage-Backed	0.7
Non-Agency Residential Mortgage-Backed	0.6
Commercial Mortgage-Backed	5.1
Asset-Backed	11.8
Cash & Equivalents	0.5
Other	0.3
Total	100.0

Performance Relative to Peer Group

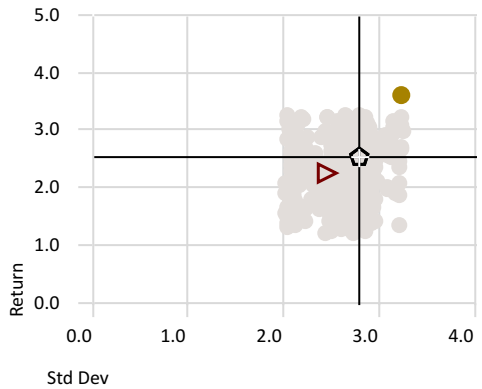
Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond Calculation Benchmark: BBgBarc US Agg Bond TR USD



	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
PGIM Total Return Bond R6	-0.63	3	-0.63	3	3.59	1	3.59	1		
BBgBarc US Agg Bond TR USD	0.01	1	0.01	1	2.06	3	2.52	2	3.48	4
US Fund Intermediate-Term Bond	-0.52	2	-0.52	2	2.14	2	2.24	3	4.29	3

Risk-Reward

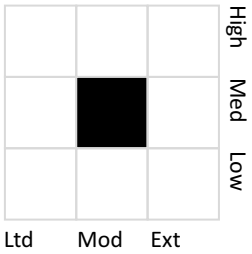
Time Period: 1/1/2014 to 12/31/2018



Morningstar Style Box - PGIM Total Return Bond R6

Portfolio Date: 12/31/2018

Morningstar Fixed Income Style Box™



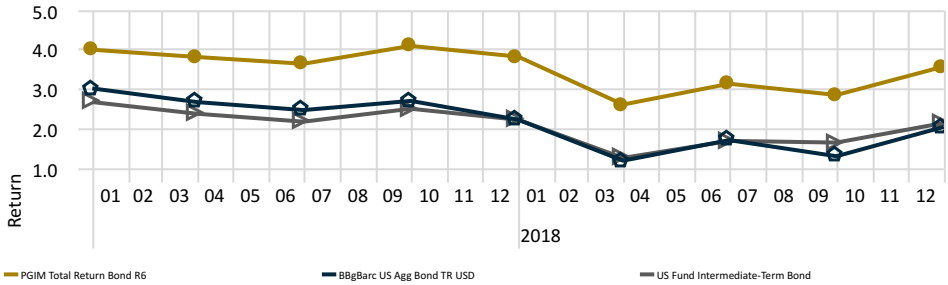
Fixed-Income Stats

Average Eff Duration	6.2
Average Eff Maturity	-
Average Coupon	-
Average Price	-

Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



PGIM Total Return Bond R6 - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Inv	Bmk1
Return	3.59	2.52
Std Dev	3.22	2.79
Downside Deviation	0.58	0.00
Alpha	0.88	0.00
Beta	1.10	1.00
R2	90.32	100.00
Information Ratio (geo)	1.00	
Tracking Error	1.05	0.00

Source: Morningstar Direct, as of December 31, 2018. 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.

HIGHMARK® CAPITAL MANAGEMENT

PIMCO Total Return Instl

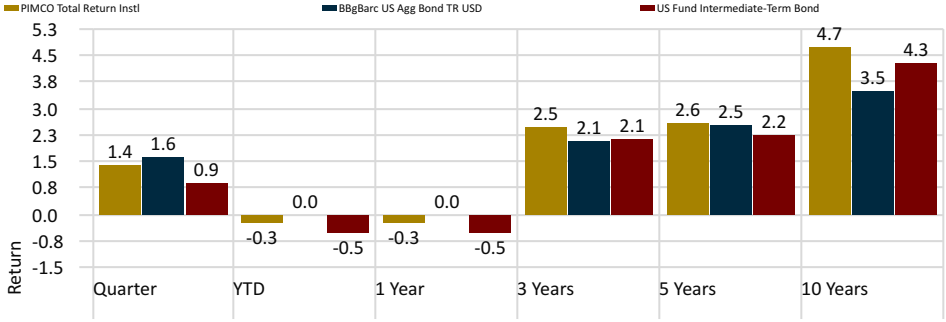
PTTRX

Key Information

Morningstar Category	US Fund Intermediate-Term Bond
Morningstar Rating Overall	★★★★
Inception Date	5/11/1987
Expense Ratio	0.55
Fund Size (Mil)	65,630.90
Portfolio Date	9/30/2018
Manager Name	Multiple

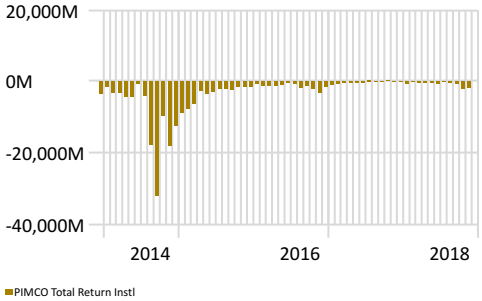
Returns

As of Date: 12/31/2018 Calculation Benchmark: BBgBarc US Agg Bond TR USD



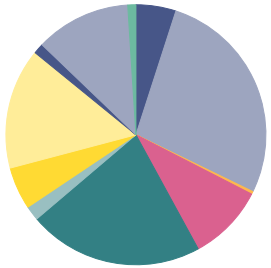
Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



PIMCO Total Return Instl - Fixed-Inc Sectors (Morningsta

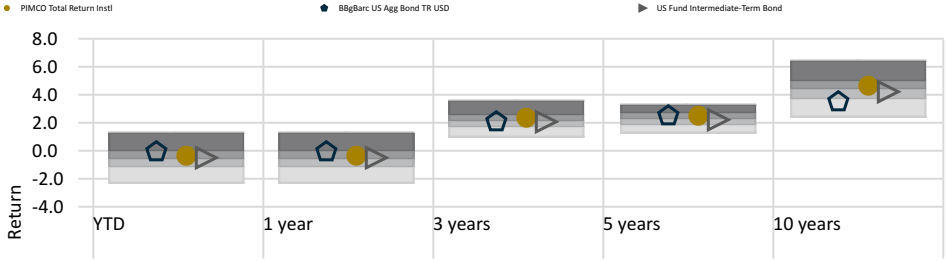
Portfolio Date: 9/30/2018



	%
Government	5.0
Government Related	27.2
Bank Loan	0.3
Corporate Bond	9.5
Agency Mortgage-Backed	21.8
Non-Agency Residential Mortgage-Backed	1.8
Asset-Backed	5.3
Cash & Equivalents	15.0
Swap	1.3
Forward/Future	11.8
Other	1.0
Total	**100.0**

Performance Relative to Peer Group

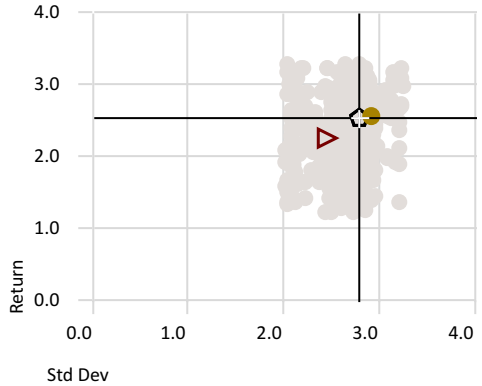
Peer Group (5-95%): Open End Funds - U.S. - Intermediate-Term Bond Calculation Benchmark: BBgBarc US Agg Bond TR USD



	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	-0.26	2	-0.26	2	2.47	2	2.56	2	4.71	2
BBgBarc US Agg Bond TR USD	0.01	1	0.01	1	2.06	3	2.52	2	3.48	4
US Fund Intermediate-Term Bond	-0.52	2	-0.52	2	2.14	2	2.24	3	4.29	3

Risk-Reward

Time Period: 1/1/2014 to 12/31/2018



Morningstar Style Box - PIMCO Total Return Instl

Portfolio Date: 9/30/2018

Morningstar Fixed Income Style Box™

Not Available

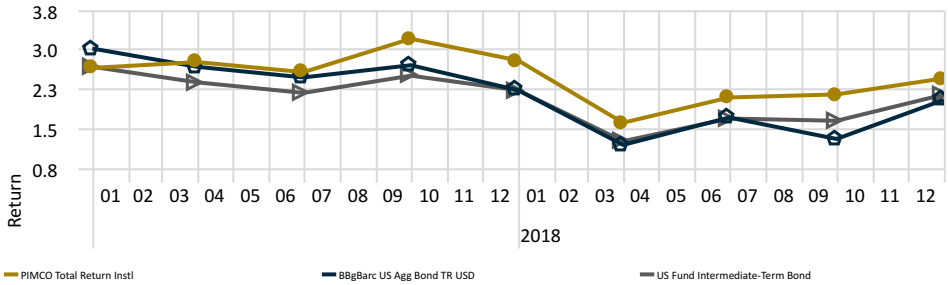
Fixed-Income Stats

Average Eff Duration	4.7
Average Eff Maturity	5.7
Average Coupon	4.1
Average Price	105.4

Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



PIMCO Total Return Instl - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: BBgBarc US Agg Bond TR USD

	Inv	Bmk1
Return	2.56	2.52
Std Dev	2.92	2.79
Downside Deviation	1.06	0.00
Alpha	0.17	0.00
Beta	0.93	1.00
R2	79.06	100.00
Information Ratio (geo)	0.03	
Tracking Error	1.36	0.00

Source: Morningstar Direct, as of December 31, 2018. 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.

HIGHMARK® CAPITAL MANAGEMENT

AQR Equity Market Neutral R6

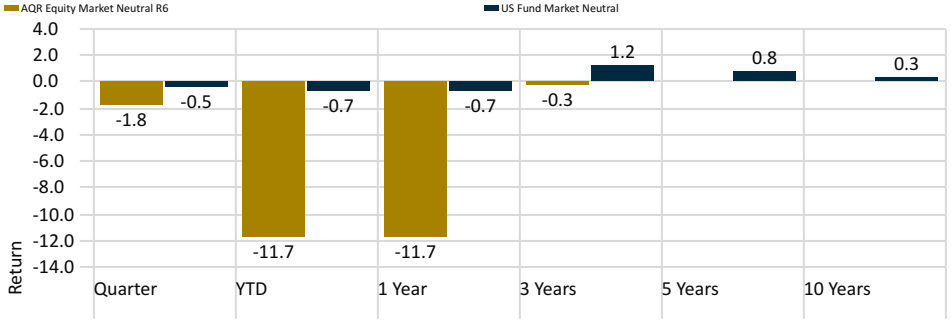
QMNRX

Key Information

Morningstar Category	US Fund Market Neutral
Morningstar Rating Overall	★★
Inception Date	10/7/2014
Expense Ratio	2.11
Fund Size (Mil)	1,113.13
Portfolio Date	9/30/2018
Manager Name	Multiple

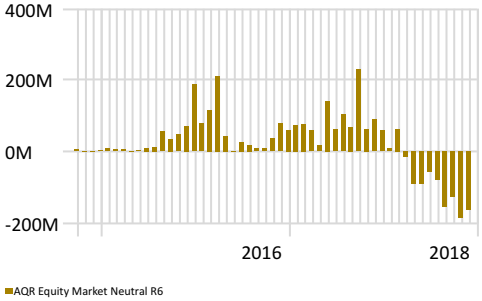
Returns

As of Date: 12/31/2018 Calculation Benchmark: US Fund Market Neutral



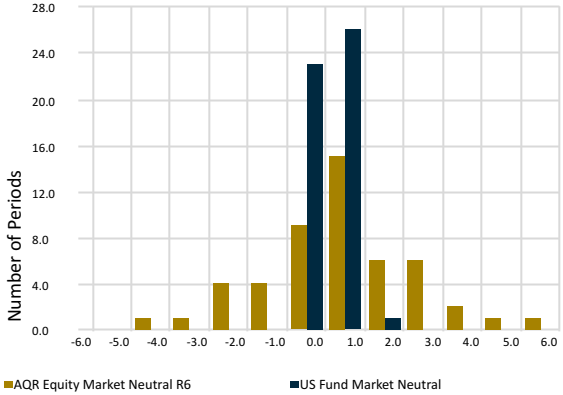
Monthly Estimated Fund-Level Net Flow

Time Period: 10/1/2014 to 12/31/2018



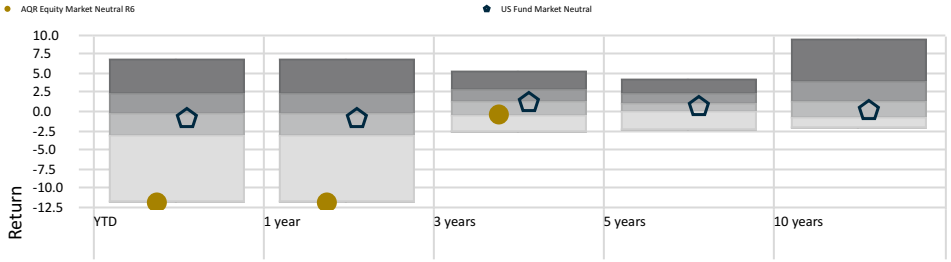
Return Distribution - AQR Equity Market Neutral R6

Time Period: Since Inception to 12/31/2018



Performance Relative to Peer Group

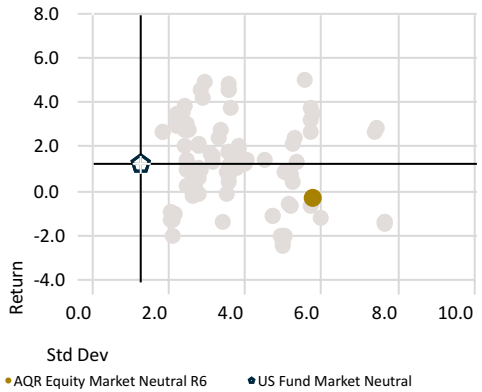
Peer Group (5-95%): Open End Funds - U.S. - Market Neutral



	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
AQR Equity Market Neutral R6	-11.65	4	-11.65	4	-0.33	3				
US Fund Market Neutral	-0.74	3	-0.74	3	1.20	3	0.79	3	0.27	3

Risk-Reward

Time Period: 1/1/2016 to 12/31/2018



Correlation Matrix

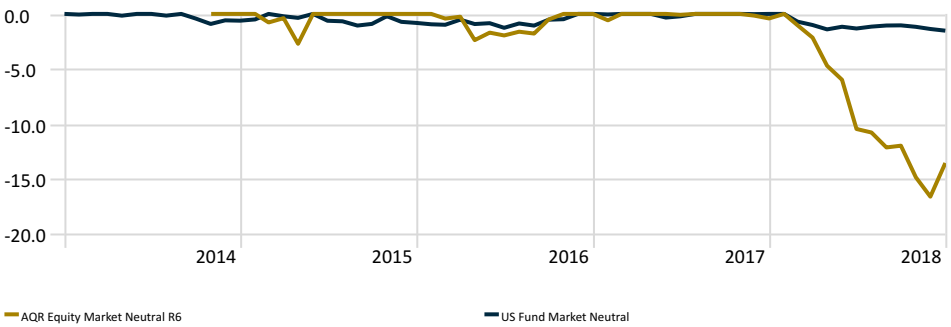
Time Period: 11/1/2014 to 12/31/2018

		1	2	3
1	AQR Equity Market Neutral R6	1.00		
2	BBgBarc US Agg Bond TR USD	0.24	1.00	
3	S&P 500 TR (1989)	-0.11	-0.18	1.00

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

Drawdown

Time Period: 1/1/2014 to 12/31/2018



AQR Equity Market Neutral R6 - Risk

Time Period: Since Inception to 12/31/2018

Calculation Benchmark: US Fund Market Neutral

	Inv	Bmk1	+/- Bmk1
Return	4.89	0.90	3.99
Std Dev	6.67	1.31	5.36
Downside Deviation	3.68	0.00	3.68
Alpha	4.00	0.00	4.00
Beta	1.91	1.00	0.91
R2	14.56	100.00	-85.44
Sharpe Ratio (arith)	0.61	0.07	0.54
Tracking Error	6.38	0.00	6.38

Source: Morningstar Direct, as of December 31, 2018. 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.

HIGHMARK® CAPITAL MANAGEMENT

American Funds New Perspective R6

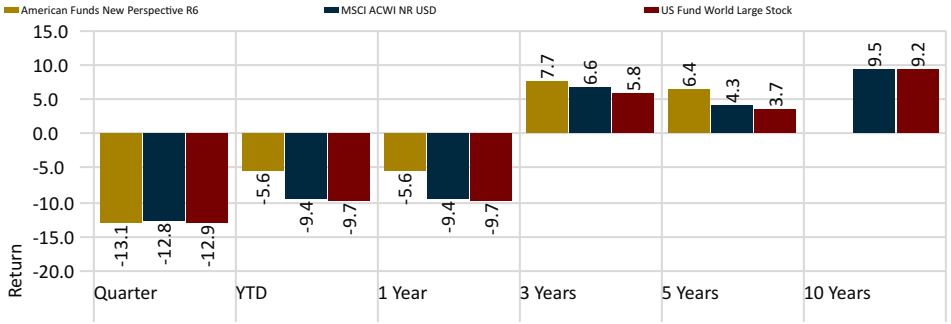
RNPGX

Key Information

Morningstar Category	US Fund World Large Stock
Morningstar Rating Overall	★★★★
Inception Date	5/1/2009
Expense Ratio	0.45
Fund Size (Mil)	78,214.71
Portfolio Date	12/31/2018
Manager Name	Multiple

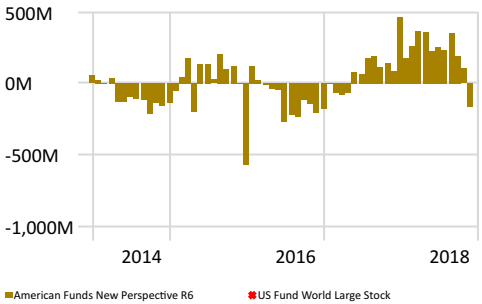
Returns

As of Date: 12/31/2018 Calculation Benchmark: MSCI ACWI NR USD

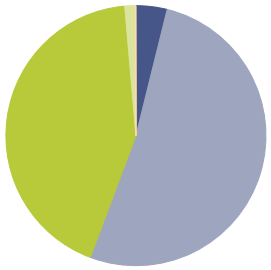


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



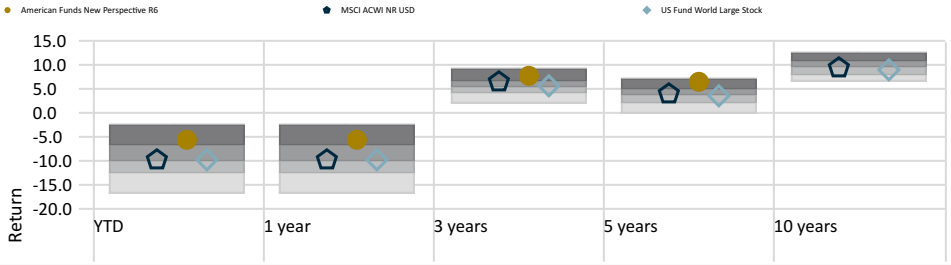
Asset Allocation



	%
Cash	3.9
US Equity	51.8
Non-US Equity	42.9
US Bond	1.3
Other	0.0
Total	**100.0**

Performance Relative to Peer Group

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

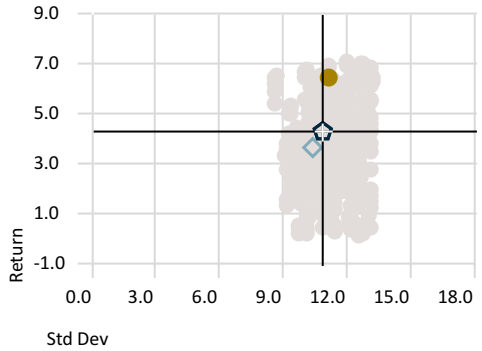


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
American Funds New Perspective R6	-5.56	1	-5.56	1	7.66	1	6.42	1		
MSCI ACWI NR USD	-9.42	2	-9.42	2	6.60	2	4.26	2	9.46	2
US Fund World Large Stock	-9.70	2	-9.70	2	5.85	2	3.65	3	9.23	3

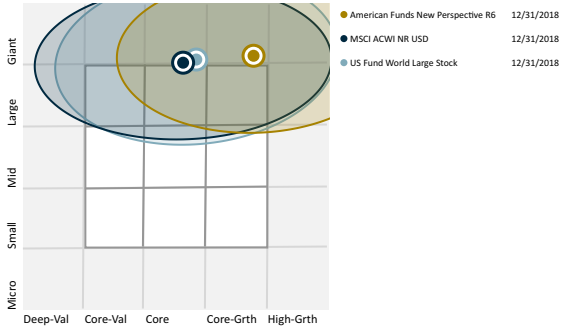
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - World Large Stock Calculation Benchmark: MSCI ACWI NR USD



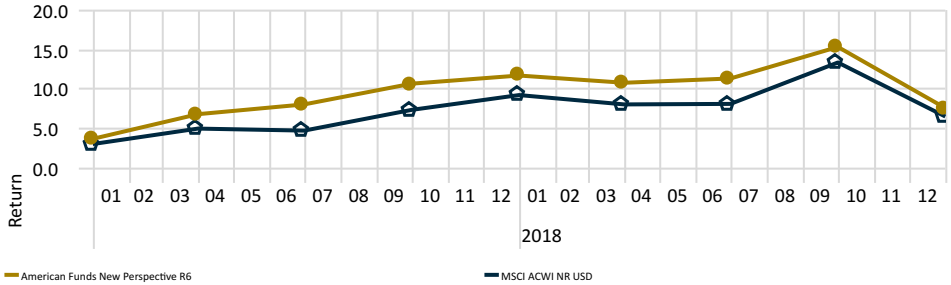
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



American Funds New Perspective R6 - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: MSCI ACWI NR USD

	Inv	Bmk1
Return	6.42	4.26
Std Dev	11.11	10.87
Downside Deviation	1.96	0.00
Alpha	2.17	0.00
Beta	0.98	1.00
R2	91.85	100.00
Sharpe Ratio (arith)	0.52	0.33
Tracking Error	3.19	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Columbia Contrarian Core Inst

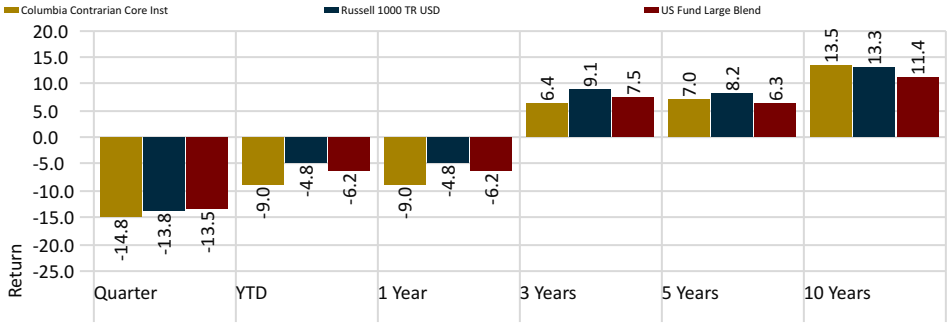
SMGIX

Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★★
Inception Date	12/14/1992
Expense Ratio	0.77
Fund Size (Mil)	9,357.57
Portfolio Date	12/31/2018
Manager Name	Guy W. Pope

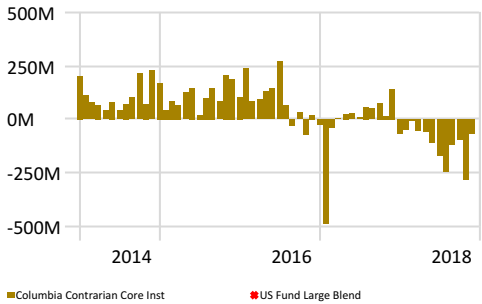
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 1000 TR USD

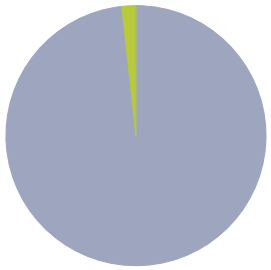


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



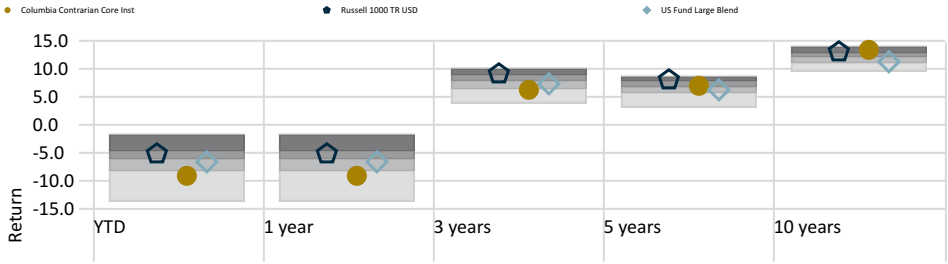
Asset Allocation



	%
Cash	0.0
US Equity	98.3
Non-US Equity	1.7
Total	**100.0**

Performance Relative to Peer Group

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

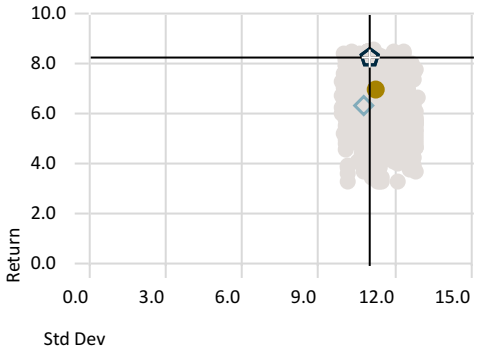


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Columbia Contrarian Core Inst	-8.97	4	-8.97	4	6.37	4	6.96	2	13.55	1
Russell 1000 TR USD	-4.78	2	-4.78	2	9.09	1	8.21	1	13.28	1
US Fund Large Blend	-6.24	3	-6.24	3	7.52	3	6.28	3	11.43	3

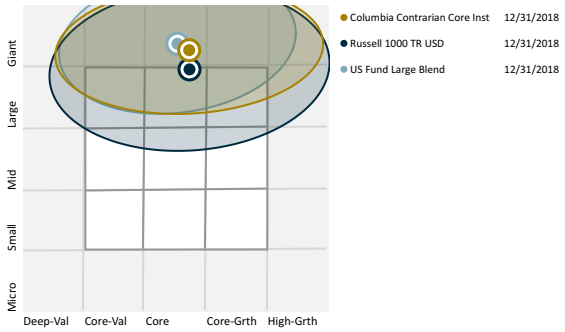
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Large Blend Calculation Benchmark: Russell 1000 TR USD



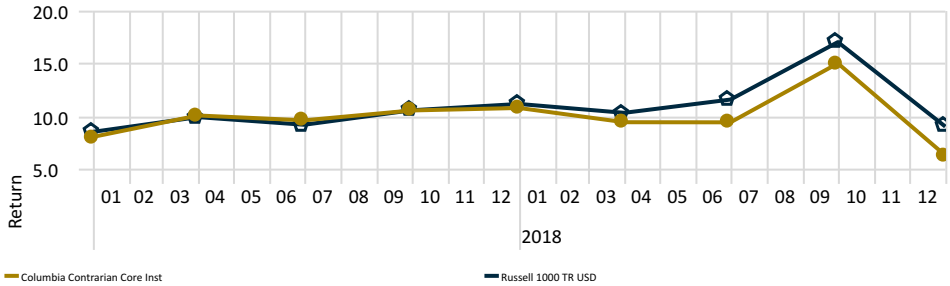
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



Columbia Contrarian Core Inst - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: Russell 1000 TR USD

	Inv	Bmk1
Return	6.96	8.21
Std Dev	11.21	11.01
Downside Deviation	1.75	0.00
Alpha	-1.16	0.00
Beta	1.00	1.00
R2	96.50	100.00
Sharpe Ratio (arith)	0.56	0.68
Tracking Error	2.11	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

Undiscovered Managers Behavioral Val L

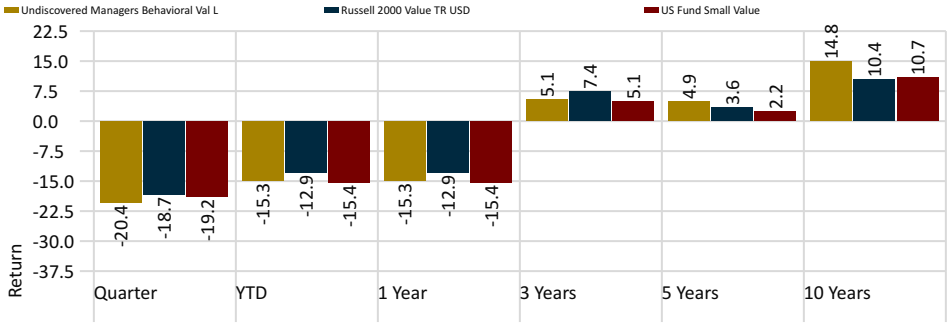
UBVLX

Key Information

Morningstar Category	US Fund Small Value
Morningstar Rating Overall	★★★★★
Inception Date	12/28/1998
Expense Ratio	0.78
Fund Size (Mil)	5,115.40
Portfolio Date	11/30/2018
Manager Name	Multiple

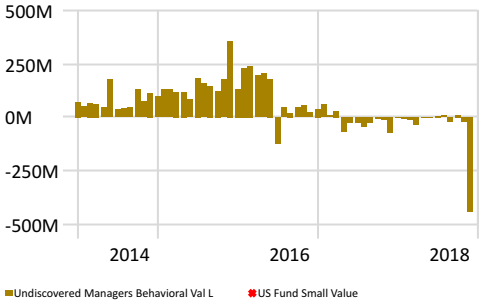
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 2000 Value TR USD

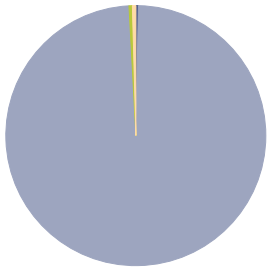


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



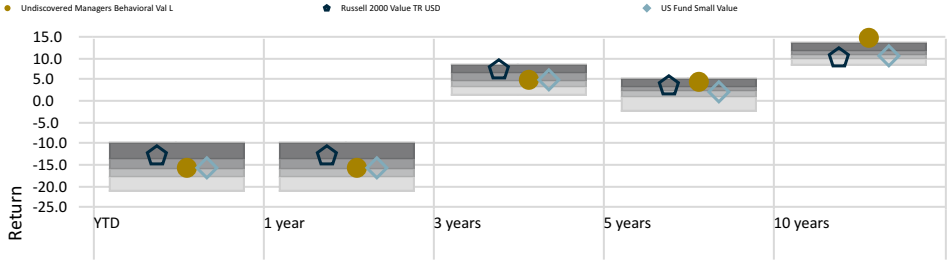
Asset Allocation



	%
Cash	0.3
US Equity	98.8
Non-US Equity	0.4
Other	0.4
Total	**100.0**

Performance Relative to Peer Group

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

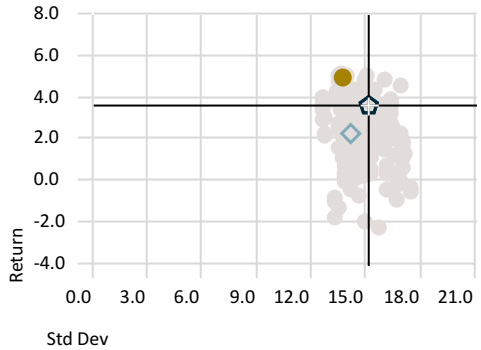


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Undiscovered Managers Behavioral Val L	-15.27	2	-15.27	2	5.11	2	4.89	1	14.79	1
Russell 2000 Value TR USD	-12.86	1	-12.86	1	7.37	1	3.61	1	10.40	3
US Fund Small Value	-15.38	2	-15.38	2	5.10	2	2.20	3	10.66	3

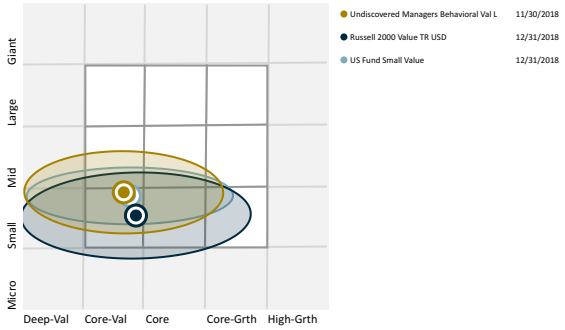
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Small Value Calculation Benchmark: Russell 2000 Value TR USD



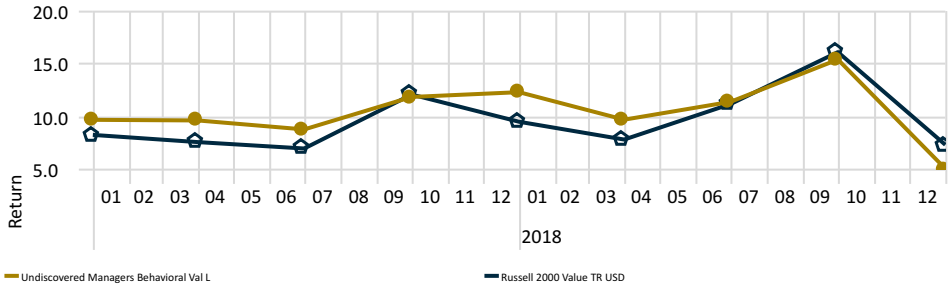
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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: 1/1/2014 to 12/31/2018

Calculation Benchmark: Russell 2000 Value TR USD

	Inv	Bmk1
Return	4.89	3.61
Std Dev	13.76	15.18
Downside Deviation	4.01	0.00
Alpha	1.66	0.00
Beta	0.85	1.00
R2	87.22	100.00
Sharpe Ratio (arith)	0.31	0.19
Tracking Error	5.45	0.00

Source: Morningstar Direct, as of December 31, 2018 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.

HIGHMARK® CAPITAL MANAGEMENT

Vanguard Growth & Income Adm

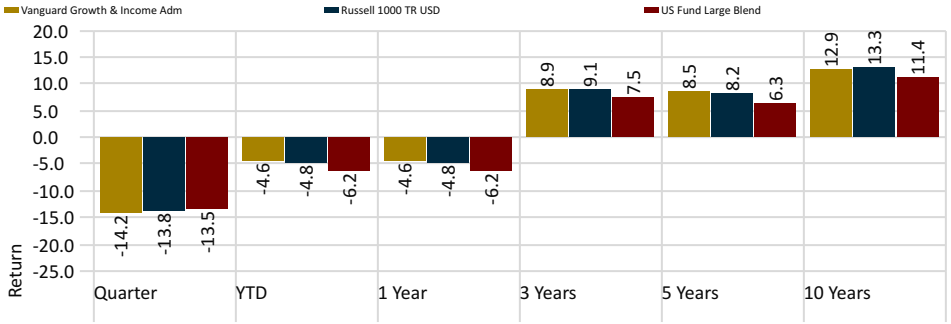
VGIAX

Key Information

Morningstar Category	US Fund Large Blend
Morningstar Rating Overall	★★★★
Inception Date	5/14/2001
Expense Ratio	0.23
Fund Size (Mil)	9,746.98
Portfolio Date	9/30/2018
Manager Name	Multiple

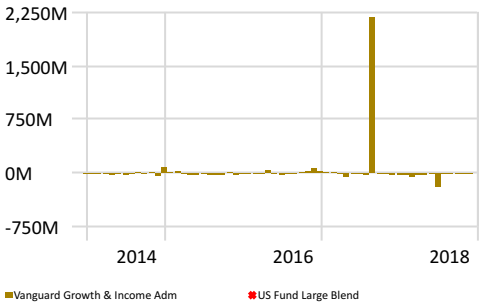
Returns

As of Date: 12/31/2018 Calculation Benchmark: Russell 1000 TR USD

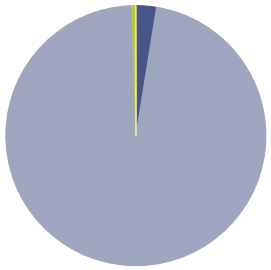


Monthly Estimated Fund-Level Net Flow

Time Period: 1/1/2014 to 12/31/2018



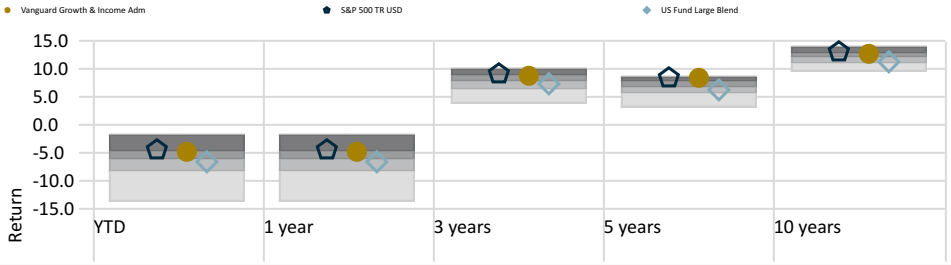
Asset Allocation



	%
Cash	2.5
US Equity	97.0
Non-US Equity	0.5
US Bond	0.0
Other	0.0
Total	**100.0**

Performance Relative to Peer Group

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

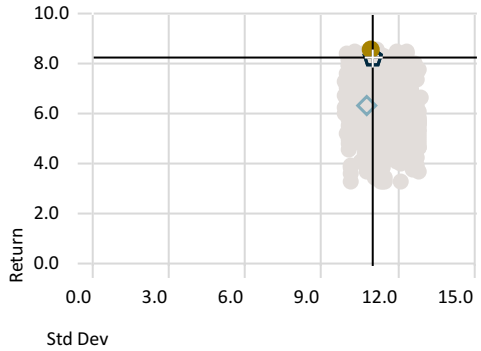


	YTD	Peer group quartile	1 year	Peer group quartile	3 years	Peer group quartile	5 years	Peer group quartile	10 years	Peer group quartile
Vanguard Growth & Income Adm	-4.61	1	-4.61	1	8.91	1	8.52	1	12.92	1
Russell 1000 TR USD	-4.78	2	-4.78	2	9.09	1	8.21	1	13.28	1
US Fund Large Blend	-6.24	3	-6.24	3	7.52	3	6.28	3	11.43	3

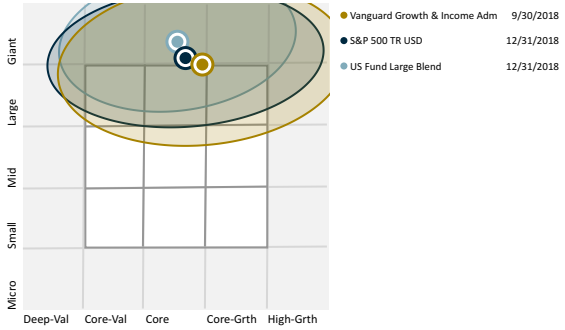
Risk-Reward

Time Period: 1/1/2014 to 12/31/2018

Peer Group (5-95%): Open End Funds - U.S. - Large Blend Calculation Benchmark: Russell 1000 TR USD



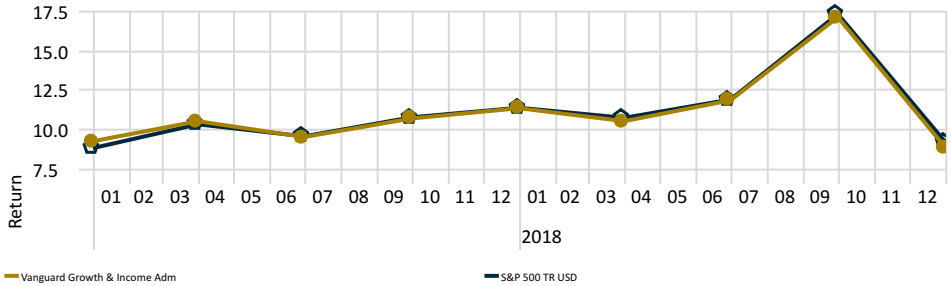
Holdings-Based Style Map



Rolling Returns

Time Period: 1/1/2014 to 12/31/2018

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



Vanguard Growth & Income Adm - Risk

Time Period: 1/1/2014 to 12/31/2018

Calculation Benchmark: S&P 500 TR USD

	Inv	Bmk1
Return	8.52	8.49
Std Dev	10.91	10.94
Downside Deviation	0.66	0.00
Alpha	0.07	0.00
Beta	0.99	1.00
R2	99.22	100.00
Sharpe Ratio (arith)	0.72	0.71
Tracking Error	0.97	0.00

Source: Morningstar Direct, as of December 31, 2018 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.