



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



PERIOD ENDING: MARCH 31, 2020

Investment Performance Review for

Tulare County Employees' Retirement Association

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Investment Landscape

TAB I

Investment Performance
Review

TAB II

**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

2ND QUARTER 2020
Investment Landscape

Recent Verus research

Visit: <https://www.verusinvestments.com/insights/>

Annual outlooks

ACTIVE MANAGEMENT ENVIRONMENT

Our work on active management addresses some shortfalls of the traditional analysis, which uses the median product to describe the active management universe as a whole. These improvements and insights have allowed us to better understand product behavior and may allow for more informed selection in the future.

Sound thinking

TEN THOUGHTS FOR 2020

A new year begins, and with it comes an opportunity to assess whether the correct areas were focused on in the previous year, and to create new suggested topics of interest for the year ahead. In this piece, our CIO, Ian Toner, will try to help investors prioritize shorter-term actions they might take, while addressing longer-term issues to improve their success.

THE JUDGMENTAL WAITER

In this piece our CIO, Ian Toner, lays out how Verus is approaching the challenge of building customized ESG advice and service to each of our clients, and outlines the significant resource commitment Verus is making during 2020 and beyond to provide that tailored support.

COVID-19

MARKET UPDATE 3/17/20

The first few weeks of March have been almost unprecedented in terms of market volatility and behavior. The combination of health concerns and oil market disruption has led to market moves of a type that we rarely see. Underlying this, there is also a real human concern about our families, and the human effect on people we love as the coronavirus spreads. So what are long term investors to do?

MARKET UPDATE 4/9/20

The COVID-19 crisis has had a sudden impact on the capital markets, which has been made worse by the recent disruption in the oil market. Now is a good time for investors to take stock of the possible intermediate and long-term implications of these disruptions, as well as to try to assess the possible short-term factors which might cause further market disruption.

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1st quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a 2.3% rate year-over-year in the fourth quarter (2.1% quarterly annualized rate). Companies drew down inventories, which detracted 1% from growth. Investors appear to be bracing for an unprecedented slowdown of the economy during the first half of 2020, due to the coronavirus outbreak. Forecasts of Q2 GDP growth have varied between -15% to -35%. **p. 9**
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impact of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s. **p. 10**

PORTFOLIO IMPACTS

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%. **p. 25**
- U.S. core inflation increased 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in future months. Downward pressure could be compounded as households slow spending due to loss of income and a greater propensity to save rather than spend. **p. 11**

THE INVESTMENT CLIMATE

- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of economic impacts of COVID-19. **p. 19**
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% reached in November 2008 during the depths of the global financial crisis. **p. 32**
- Central banks are facing an economic slowdown and need for monetary policy support, but very little room to cut interest rates. This is a risk that has been discussed for years. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown. **p. 19**

ASSET ALLOCATION ISSUES

- Risk markets experienced one of the most sudden corrections on record, amidst extreme volatility. The S&P 500 showed its largest one-day drop since 1987 (March 16 -11.98%) and its largest one-day gain since 2008 (March 24 +9.38%). Implied volatility reached global financial crisis levels, and high yield credit spreads temporarily expanded above 11%. Some of these losses were recovered toward the end of March as the market rebounded. **p. 27**
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure. **p. 36**

An underweight risk stance appears appropriate in today's environment

We remain watchful for investment opportunities

What drove the market in Q1?

“World Health Organization declares the coronavirus outbreak a global pandemic”

GLOBAL CONFIRMED COVID-19 CASES

1/31	2/15	2/29	3/15	3/31	4/15
11,374	69,267	86,351	164,403	857,778	2,077,469

Article Source: CNBC, March 11th, 2020

“Vix Hits Highest Level Since the Financial Crisis as Volatility Soars”

CBOE VIX INDEX

Oct	Nov	Dec	Jan	Feb	Mar
13.22	12.62	13.78	18.84	40.11	53.54

Article Source: Barron's, March 9th, 2020

“Fed announces unlimited QE and sets up several new lending programs”

FEDERAL RESERVE BALANCE SHEET (USD TRILLIONS)

3/4	3/11	3/18	3/25	4/1	4/8
4.3	4.4	4.7	5.3	5.9	6.1

Article Source: MarketWatch, March 23rd, 2020

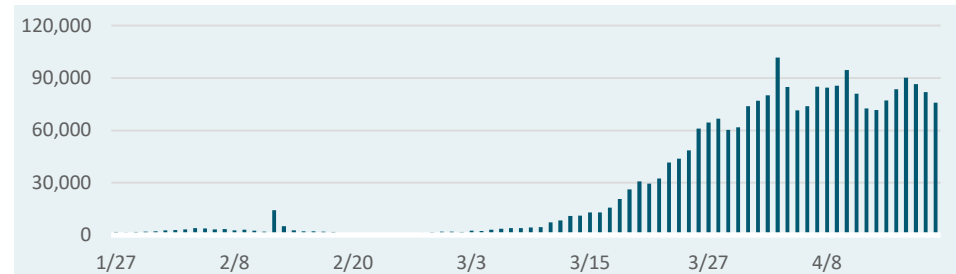
“Coronavirus job losses could total 47 million, unemployment rate may hit 32 percent, Fed estimates”

INITIAL WEEKLY JOBLESS CLAIMS

3/6	3/13	3/20	3/27	4/3	4/10
211,000	282,000	3,307,000	6,867,000	6,615,000	5,245,000

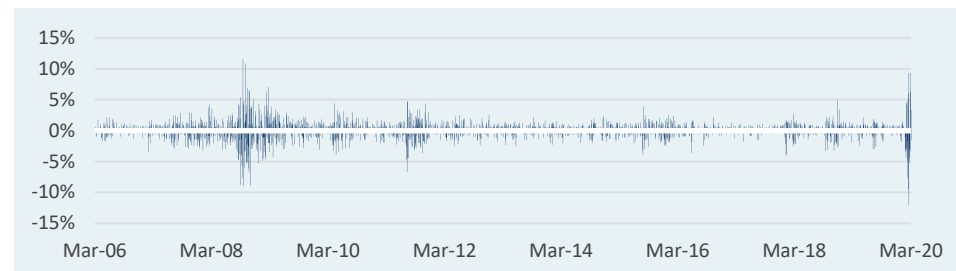
Article Source: NBC News, March 30th, 2020

DAILY NEW COVID-19 CASES (WORLDWIDE)



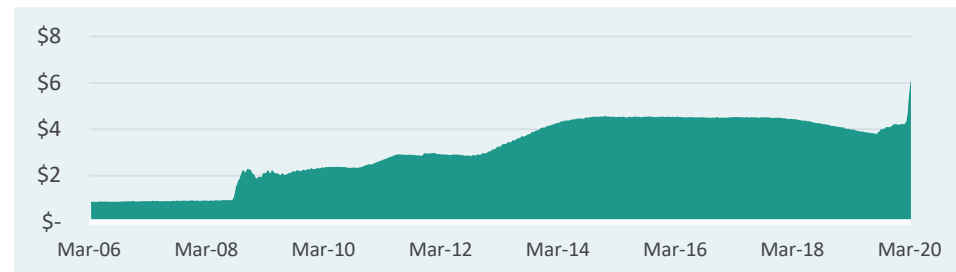
Source: Worldometer, as of 4/19/20

S&P 500 INDEX 1-DAY PERCENTAGE PRICE MOVE



Source: Standard & Poor's, Bloomberg, as of 3/31/20

FEDERAL RESERVE BALANCE SHEET (USD TRILLIONS)



Source: Federal Reserve, as of 4/8/20

Economic environment

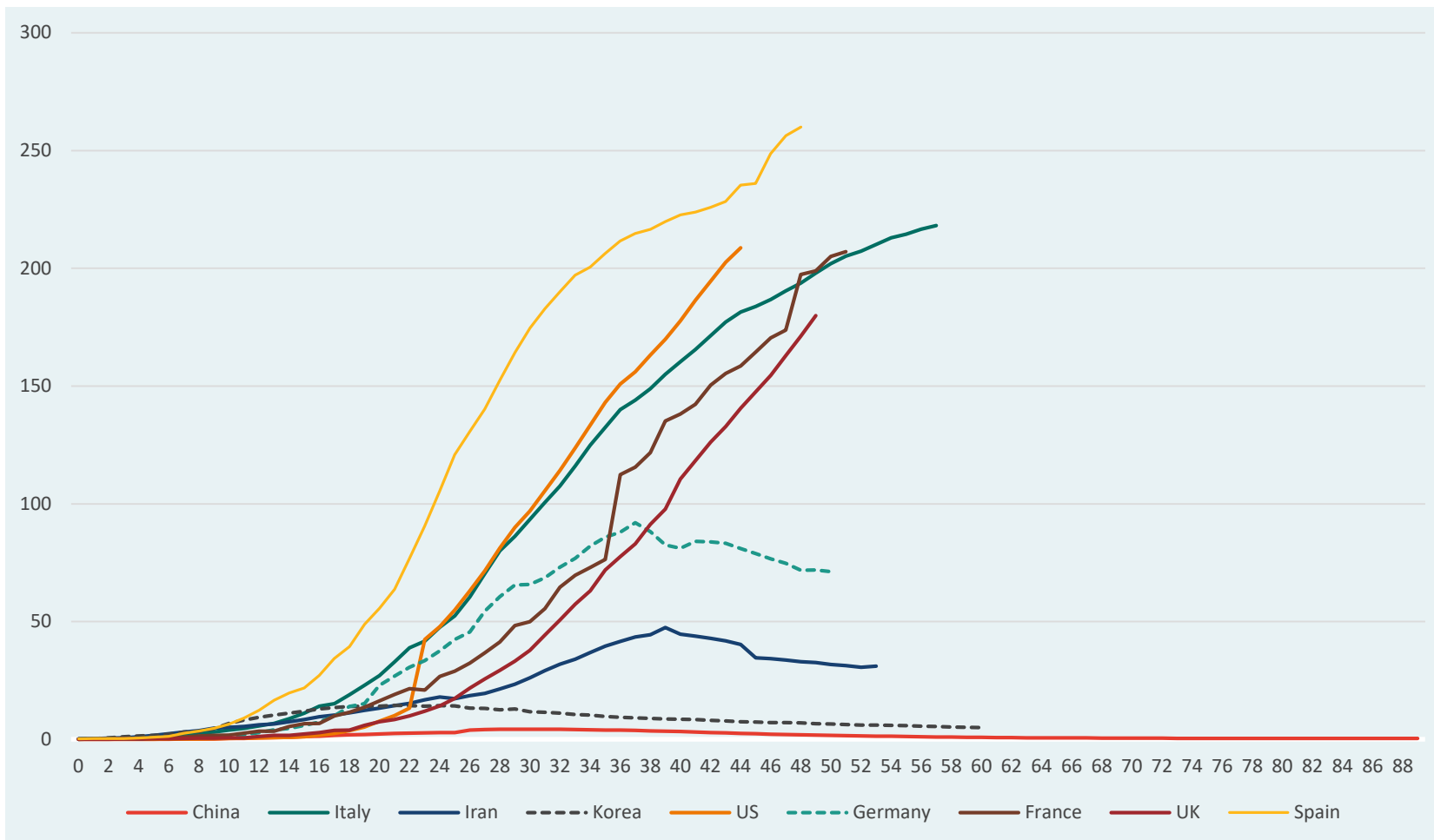
U.S. economics summary

- Real GDP grew at a 2.3% rate year-over-year in the fourth quarter (2.1% quarterly annualized rate). Companies drew down inventories, which detracted -1% from growth. Investors appear to be bracing for an unprecedented slowdown of the economy during the first half of 2020, due to COVID-19. Forecasts of Q2 GDP growth have varied between -15% to -35%.
- The U.S. government quickly crafted and implemented historic stimulus measures to combat the economic impacts of the virus. Support of this magnitude has not been seen since the Great Depression of the 1930s.
- U.S. core inflation rose 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have persistent effects in the coming months. This downward pressure could be compounded as households slow spending due to loss of income and show a greater propensity to save.
- The U.S. labor market exhibited a sharp weakening in March, as unemployment jumped to 4.4%. Some have estimated the true unemployment rate in April to be above 10%.
- March economic data should not be expected to fully reflect the extent of COVID-19. We are watching daily data releases to gain a better understanding of how conditions are evolving.
- The Bloomberg Consumer Comfort Index exhibited its sharpest two week drop since 1985, from 63.0 to 56.3, dipping from a 20-year high of 67.3 that was achieved in January.
- Existing homes sales increased +7.2% in February YoY, and new homes sales were up +14.3%. The 30-year fixed mortgage interest rate has continued to fall, finishing Q1 at 3.33%.

	Most Recent	12 Months Prior
GDP (YoY)	2.3% 12/31/19	2.5% 12/31/18
Inflation (CPI YoY, Core)	2.1% 3/31/20	2.0% 3/31/19
Expected Inflation (5yr-5yr forward)	1.3% 3/31/20	2.4% 3/31/19
Fed Funds Target Range	0% – 0.25% 3/31/20	2.25% – 2.50% 3/31/19
10 Year Rate	0.7% 3/31/20	2.4% 3/31/19
U-3 Unemployment	4.4% 3/31/20	3.8% 3/31/19
U-6 Unemployment	8.7% 3/31/20	7.4% 3/31/19

COVID-19 update

ACTIVE CASES PER 100,000 PEOPLE



The COVID-19 crisis has quickly become a global pandemic

Source: Bloomberg, aggregated official country statistics, x-axis indexed to when the country first reached 100 cases, as of 4/17/20

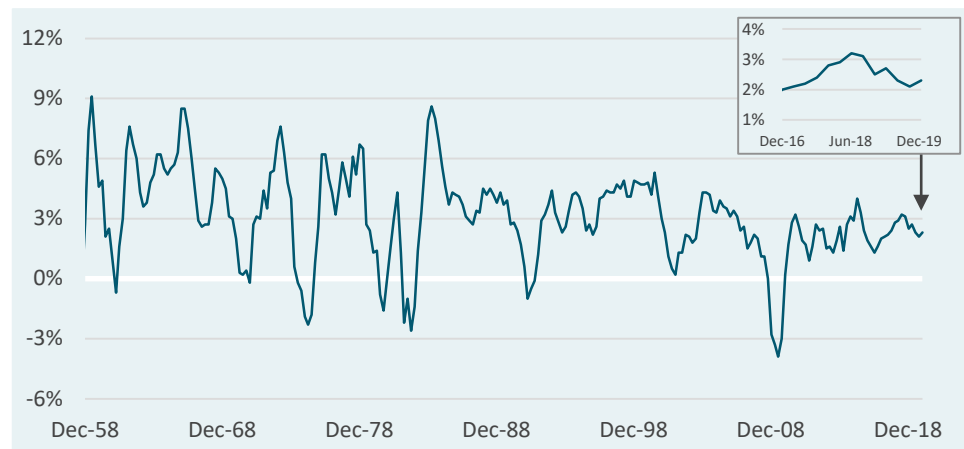
GDP growth

Real GDP grew at a 2.3% rate year-over-year in the fourth quarter (2.1% quarterly annualized rate). Companies drew down inventories, which detracted -1% from growth. Investors are bracing for an unprecedented slowdown of the economy during the first half of 2020 due to the coronavirus. Forecasts of Q2 GDP growth have varied between -15% to -35%.

The United States fiscal and monetary response to COVID-19 is unparalleled. The first response was from the Federal Reserve, swiftly cutting interest rates to zero, though 0% was not far away from levels at the time. The administration then rolled out the Families First

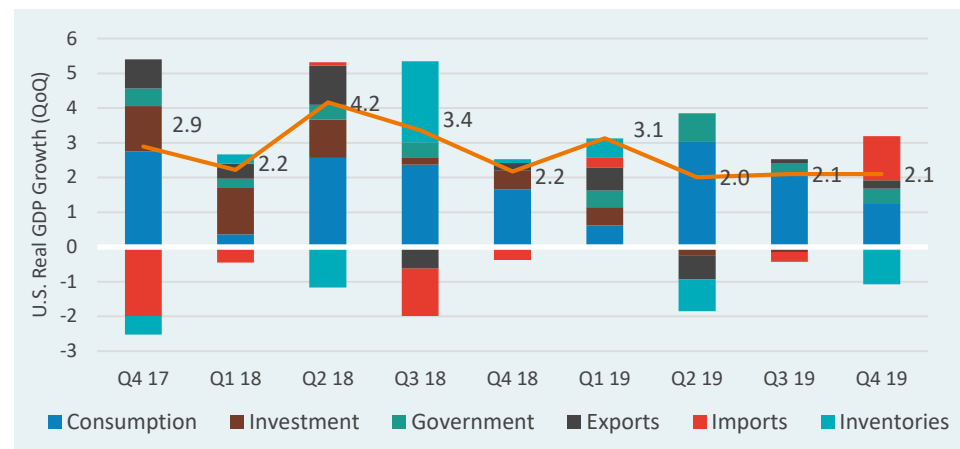
Coronavirus Response Act, which guaranteed sick days to full-time workers, prorated for part-time workers. Next was an expansion of the Family and Medical Leave Act, which provided paid leave for employees of businesses with fewer than 500 staff. For workers requiring more than two weeks of leave, the act covered those employees for up to 14 weeks. The most recent CARES Act was the largest in modern history, at \$2.2 Trillion in size. It included up to \$1,200 payments to every American, a \$600 increase in weekly unemployment benefits, expansion of unemployment to many of those not previously eligible, \$350 Billion in loans to small businesses, \$500 Billion in aid to corporations, and additional funding to individual states and government programs.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 12/31/19

U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 12/31/19

U.S. fiscal response

Families First Coronavirus Response Act:

- 10 sick days to full-time workers, prorated for part-time workers. This legislation applies to most U.S. workers, though some restrictions exist.
- Food support for low-income families increased through programs such as: increased SNAP coverage for jobless and lower-income Americans, emergency food allotments, and guaranteed school lunches.

Family and Medical Leave Act:

- This existing act has been amended to provide paid leave for employees of businesses with fewer than 500 staff in size.
- For workers who still require time off after the first two weeks, this act covers these employees for up to 14 weeks.

\$2.2 Trillion Coronavirus Relief Package

- \$1,200 checks to every American, which begin to be phased out for Americans with more than \$75,000 of income and fully phased out for Americans with more than \$99,000 in income. It was communicated that these non-taxable checks would be issued within weeks.
- Weekly unemployment benefits were increased by \$600 per week for up to 4 months and were made available to many who previously did not qualify, such as freelance workers and furloughed employees.
- \$350 Billion in loans to small businesses.
- Companies with fewer than 500 employees could be eligible for up to \$10 Million in forgivable loans to meet payroll needs.
- \$500 Billion in aid to corporations, \$100 Billion in aid to hospitals, \$150 Billion for state and local governments.
- 60-day delays in home foreclosures. Optional 6-month student loan deferrals.

Inflation

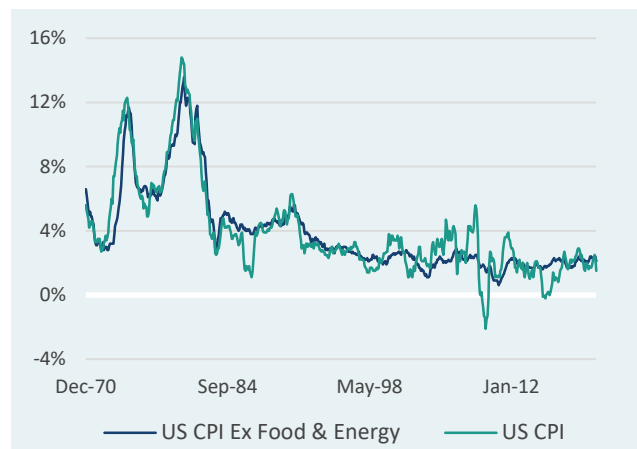
U.S. core inflation increased 2.1% YoY in March. Headline inflation slowed to 1.5%, pushed lower by a sharp decline in energy prices which will likely have continued effects over the coming months. This downward pressure could be compounded as households slow spending due to loss of income and show a greater propensity to save rather than spend.

During the sudden market sell-off in March, the U.S. TIPS inflation breakeven rate fell drastically from 1.7% to a low of 0.5%, ending the month at 0.9%. U.S. TIPS breakevens have historically tended to plummet in times of market turmoil.

We believe these moves may partially reflect the illiquidity of TIPS in volatile environments, rather than falling inflation expectations. This draws into question the usefulness of TIPS breakeven rates as a pure indication of investors' inflation forecasts. Inflation swaps, such as the 5-year Inflation Swap Forward Rate, may offer a cleaner reflection of true inflation expectations.

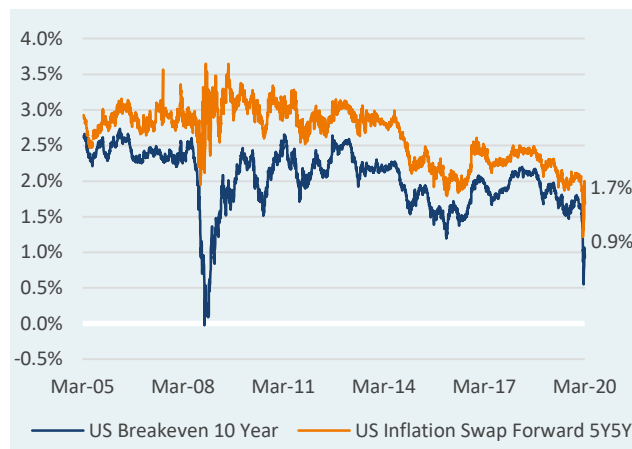
Consumer inflation surveys indicate that expectations were relatively flat, moving from 2.3% in December to 2.2% in March.

U.S. CPI (YOY)



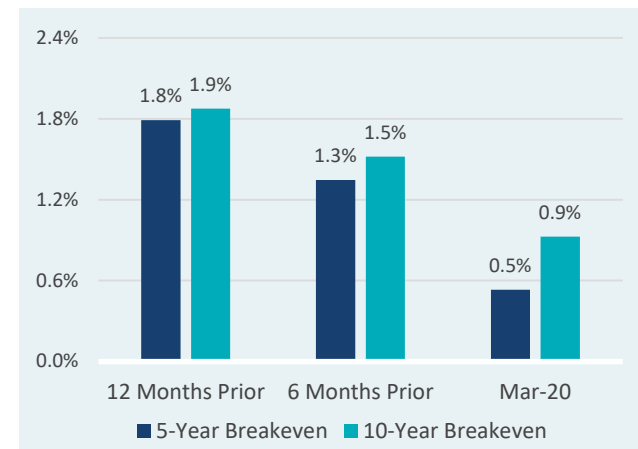
Source: Bloomberg, as of 3/31/20

U.S. INFLATION INDICATORS



Source: FRED, Bloomberg, as of 3/31/20

INFLATION EXPECTATIONS



Source: Bloomberg, as of 3/31/20

Labor market

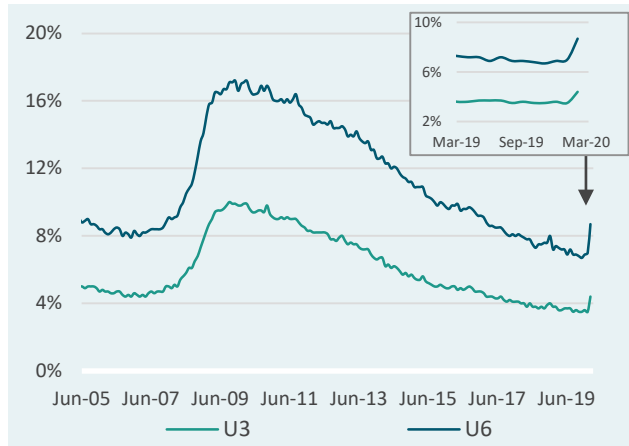
The U.S. labor market exhibited a sharp weakening in March, as unemployment jumped to 4.4%. Some have estimated the true unemployment rate in April to be above 10%.

The total number of Americans applying for unemployment skyrocketed to 6.65 Million at the end of March – a number historically unthinkable. This figure may stay elevated due to shelter-in-place mandates and widespread business closures across the country.

The NFIB Small Business Optimism Index decreased by 8.1 in March to 96.4, which was the largest drop of the series' history. Survey respondents indicated greater uncertainty on the horizon, contracting business conditions, falling sales in the coming six months, and fewer job openings. NFIB stated that "Small business orders are bracing themselves for a significant reduction in consumer spending and future orders." The organization also reported that around half of small businesses indicated that they cannot survive a shutdown of more than two months under current conditions.

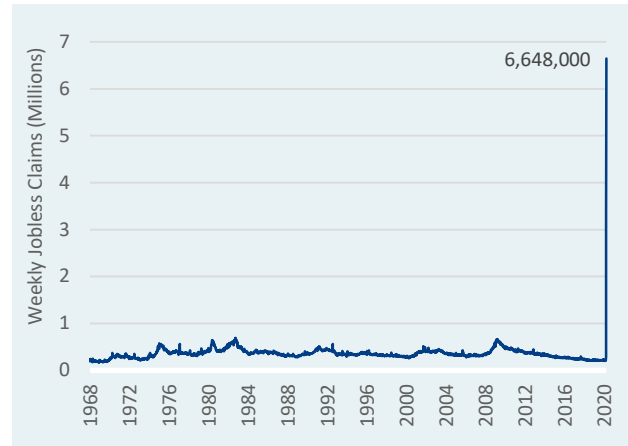
U.S. labor market is experiencing the largest negative shock in modern history

U.S. UNEMPLOYMENT



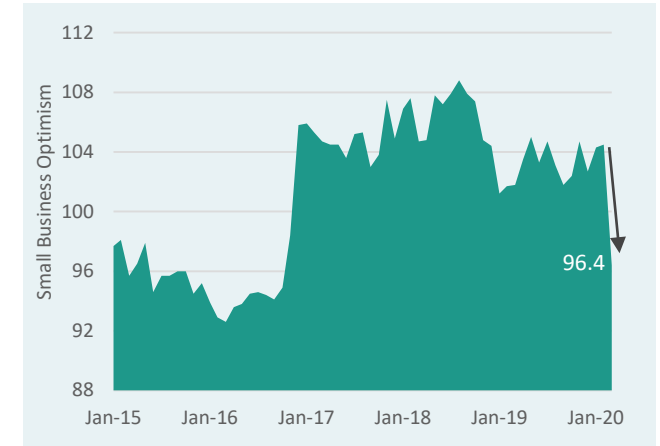
Source: FRED, as of 3/31/20

WEEKLY JOBLESS CLAIMS



Source: FRED, as 3/31/20

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 3/31/20

The consumer

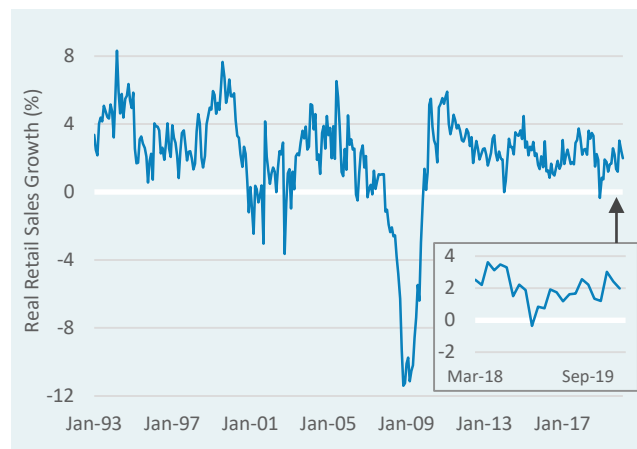
The U.S. consumer has been the greatest support to moderate domestic economic growth of recent years. At the same time, spending and use of credit has been conservative, and household balance sheets have remained robust. The relatively strong position of households at the onset of the crisis may help mitigate some pain of the COVID-19 economic slowdown.

U.S. retail sales declined -8.7% in March from the prior month, the largest ever decline since the series' inception in 1992. Big ticket discretionary purchases are likely to see severe slowdowns due to coronavirus.

Consumers appear to be paring back more elective purchases and allocating more of their income toward staple goods. In March, sales at clothing and home furnishing stores fell -51% and -27% respectively, while food and beverage purchases (+27%) posted a record advance.

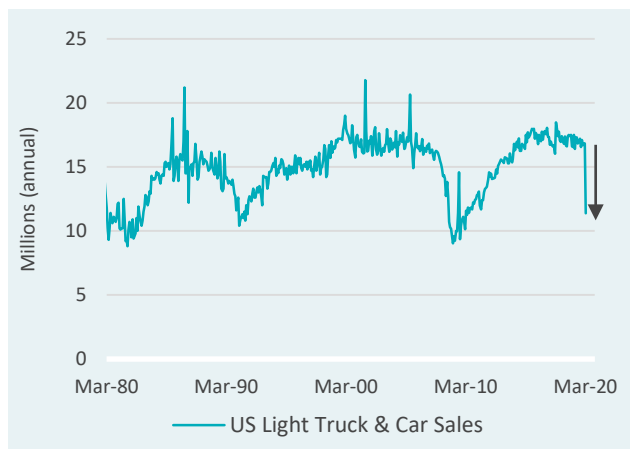
Data from Google suggests that consumers have been travelling far less as of late, and whether that trend continues will be interesting to observe as we move into spring in the United States. Filling station receipts fell around 17% in March, and those revenues are less likely to be “made up” later in the year.

REAL RETAIL SALES GROWTH (YOY)



Source: FRED, as of 2/29/20

U.S. AUTO SALES



Source: Bloomberg, as of 3/31/20

HOUSEHOLD DEBT BURDEN



Source: FRED, as of 12/31/19

Sentiment

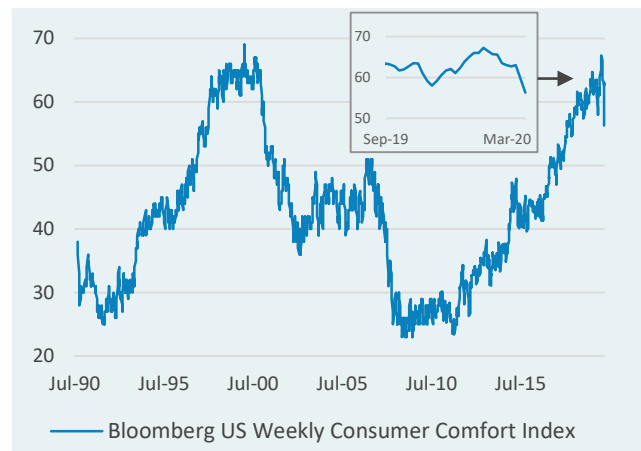
The Bloomberg Consumer Comfort Index exhibited its sharpest two week drop since 1985, falling from 63.0 to 56.3, down from a 20-year high of 67.3 that was achieved in January. Slowing business activity, rising unemployment, and greater uncertainty has led to a broad deterioration in consumer confidence.

Small business owners have been among the hardest hit by the COVID-19 economic disruptions. The NFIB Small Business Optimism Index registered its largest ever single month drop

in March, falling -8.1 points to 96.4. Plummeting expectations for real sales over the next six months drove the decline in the overall index, and it appears Main Street business owners are anticipating and bracing themselves for continued economic disruptions moving forward.

While hiring activity remained relatively healthy in early March, hiring plans showed a significant drop-off in February, a signal of a strong downturn in the coming months.

CONSUMER COMFORT



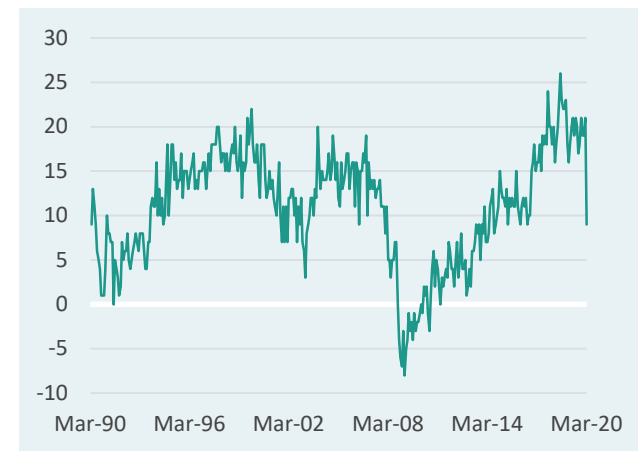
Source: Bloomberg, as of 3/31/20

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 3/31/20

SMALL BUSINESS HIRING PLANS INDEX



Source: NFIB, as of 3/31/20

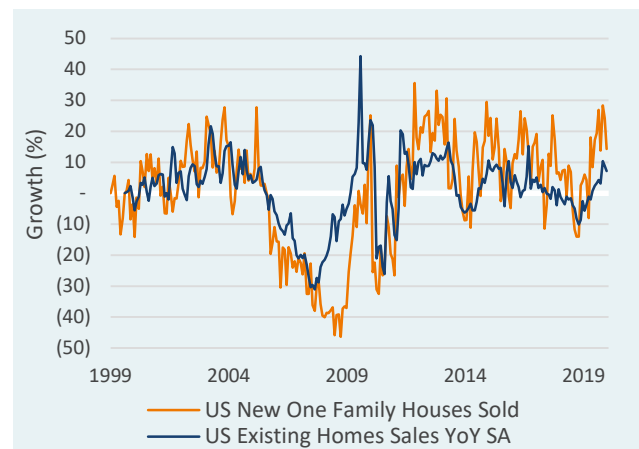
Housing

The housing market exhibited strength to start the year, with February existing homes sales rising 7.2% YoY, and new home sales up 14.3%. The 30-year fixed mortgage interest rate has continued to fall, finishing Q1 at 3.33%. Near record-low interest rates will likely continue to support housing prices and demand, as home affordability improves for Americans.

It is difficult to forecast the effect that COVID-19 will have on the housing market, as there are perhaps two opposing forces at work. The first effect is falling mortgage rates, which should be supportive of home values and purchase activity, assuming U.S. interest rates remain lower as they

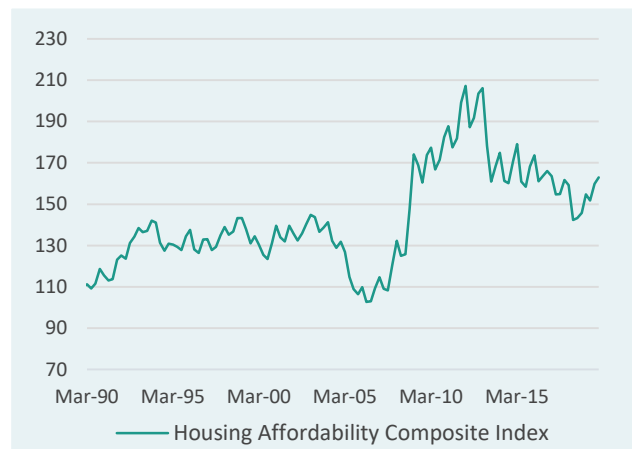
typically do during market strain. The second effect – a slowing U.S. economy – is of course negative on housing values and demand. Millions of job losses have occurred in the first few weeks of the COVID-19 nationwide shutdown, and many Americans will soon struggle to meet mortgage payments. Under the new CARES Act, homeowners with Federally-backed mortgages who have been affected by COVID-19 can request forbearance on mortgage payments for up to 180 days, with an option to extend for an additional 180 days. This intervention will hopefully ease some of the strains and mitigate some downside risk during a time of historically unprecedented spikes in unemployment.

U.S. HOME SALES (YOY)



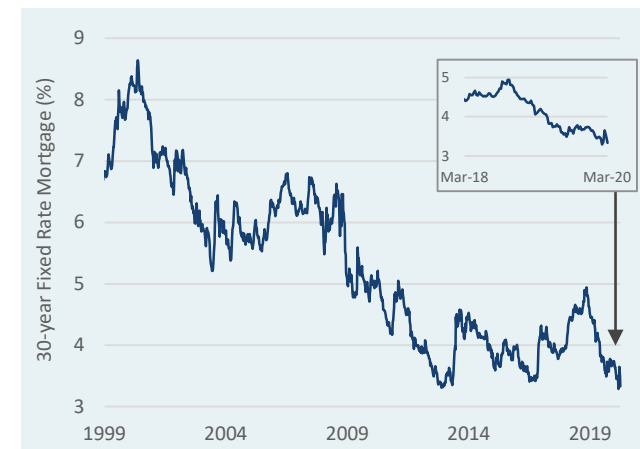
Source: FRED, as of 2/29/20

HOUSING AFFORDABILITY INDEX



Source: Bloomberg, NAHB, as of 12/31/19 (see appendix)

30YR FIXED RATE MORTGAGE



Source: FRED, as of 3/31/20

International economics summary

- Most international developed economies grew at a rate of 0.5% to 2.5% in Q4. The low and stable expansion of recent years has changed suddenly with the onset of COVID-19. Many global economies will enter recession in 2020. On April 14th the IMF revised their 2020 global growth forecast from +3.3% to -3.0%.
- Governments are using monetary and fiscal policies to fill the large hole in spending and lending that the slowdown may cause. These policies vary in their characteristics and aggressiveness.
- Governments with limited ability to implement stimulus policies may face tougher economic fallout. Specifically, European Union member nations that cannot exercise independent actions may see greater difficulties ahead as income gaps cannot be supplemented with fiscal spending.
- The World Trade Organization (WTO) forecast a 13%-32% fall in global trade in 2020 – a larger decrease than witnessed during the global financial crisis. This forecast was paired with the expectation of a 21%-24% rebound in trade throughout 2021.
- While not yet reflected in the most recent economic data, unemployment rates around the world are certain to rise considerably.
- The COVID-19 virus breakout originated in China, and many investors have pointed to China as a test case for how the virus might play out economically. Although the data released by China suggests the outbreak has been defeated, there is increasing evidence that the severity of virus has been underreported – perhaps severely.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	2.3% 12/31/19	1.5% 3/31/20	4.4% 3/31/20
Eurozone	1.0% 12/31/19	0.7% 3/31/20	7.3% 2/29/20
Japan	(0.7%) 12/31/19	0.4% 3/31/20	2.3% 2/29/20
BRICS Nations	5.0% 12/31/19	4.9% 3/31/20	5.0% 12/31/19
Brazil	1.7% 12/31/19	3.3% 3/31/20	11.6% 2/29/20
Russia	2.1% 12/31/19	2.6% 3/31/20	4.6% 2/29/20
India	4.7% 12/31/19	5.9% 3/31/20	8.5% 12/31/17
China	6.0% 12/31/19	4.3% 3/31/20	3.6% 12/31/19

International economics

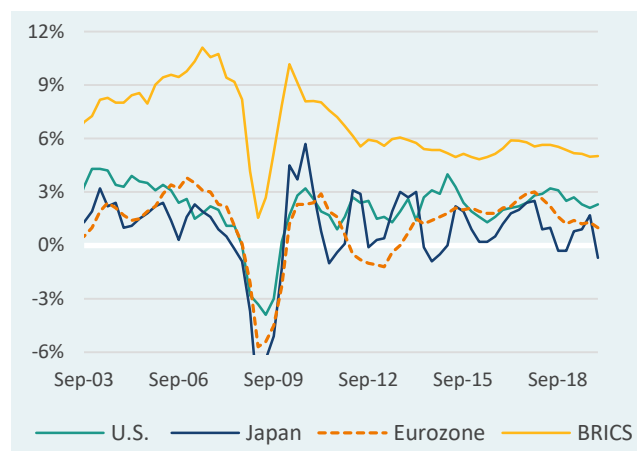
Most international developed economies grew at a rate of 0.5% to 2.5% in Q4. The low and stable expansion of recent years has changed suddenly with the onset of COVID-19. Many global economies will enter recession in 2020. On April 14th the IMF revised their 2020 global growth forecast from +3.3% to -3.0%.

Governments are using monetary and fiscal policies to fill the potentially large hole in spending and lending that the slowdown may cause. These policies vary in their characteristics. For example, the UK government has taken a more aggressive stance, committing to subsidize 80% of the salaries of workers who become unemployed, up to £2,500 per month for a three-month period.

The World Trade Organization (WTO) forecast a 13%-32% fall in global trade in 2020 – a larger decrease than witnessed during the global financial crisis due to broader restrictions on labor and travel that are not involved with a typical recession. This forecast was paired with the expectation of a 21%-24% rebound in trade throughout 2021, though forecasts of the shape and nature of the recovery may be more speculative in nature.

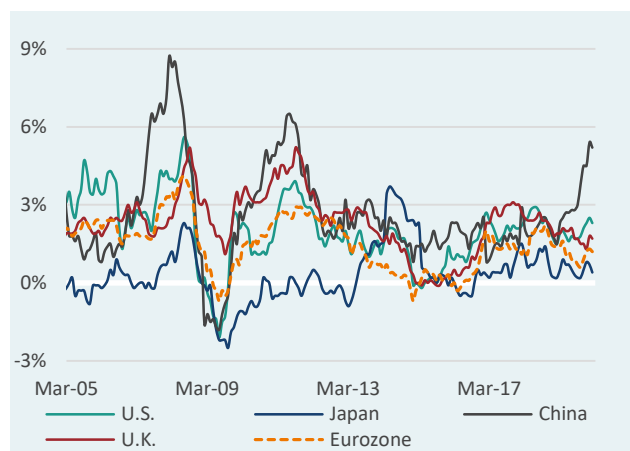
Due to the extremely quick onset of COVID-19 and its economic impacts, many traditional economic metrics do not yet reflect the effects of the virus since these metrics are released with a one-month or greater lag.

REAL GDP GROWTH (YOY)



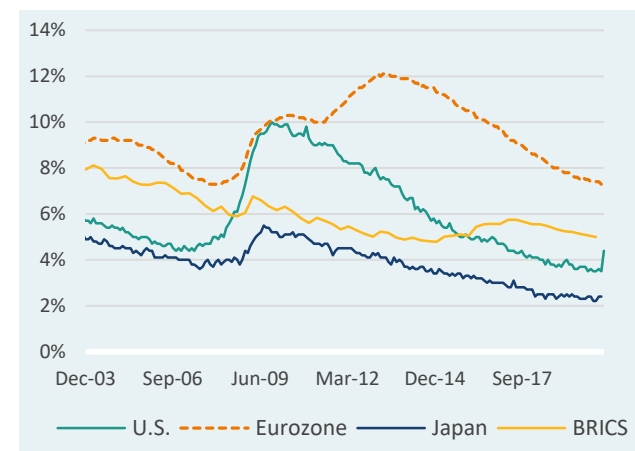
Source: Bloomberg, as of 12/31/19

INFLATION (CPI YOY)



Source: Bloomberg, inflation range of past 5 years, as of 2/29/20

UNEMPLOYMENT RATE



Source: Bloomberg, as of 3/31/20 or most recent release

Fixed income rates & credit

Interest rate environment

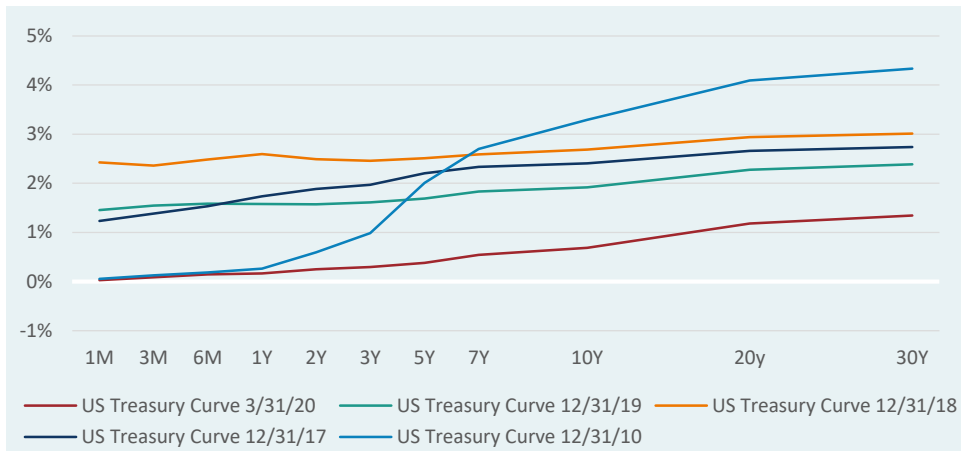
- In mid-March, the Federal Open Market Committee cut interest rates by a full 1.00% to a new range of 0 – 0.25%. This surprise action was taken on a Sunday with the intent to get out ahead of the economic impacts of COVID-19.
- On April 9th, the Federal Reserve announced an additional \$2.3 Trillion program aimed towards providing financing to small businesses and municipalities. The program included \$1M-\$25M sized loans at an interest rate of 2.5%-4.0% with a four-year maturity. This move involved Fed purchases of certain types of low-grade speculative debt, a reversal from comments just weeks earlier that the Federal Reserve would stick to investment-grade debt purchases.
- The European Central Bank (ECB) announced a €750B asset purchase program in March to address effects of the virus. ECB President Christine Lagarde claimed that there are “no limits to our commitment to the euro”. Bond yields of Euro member countries fell on the news.
- Central banks are now facing a unique problem – an immediate economic slowdown and need for monetary policy support, but very little room to cut interest rates to provide that support. This is a risk that has been discussed by investors for years, only now becoming reality. We believe fiscal policies will play a much larger role in addressing the inevitable economic slowdown.
- The Federal Reserve rolled out several liquidity programs which were components of its Global Financial Crisis playbook and are aimed at ensuring the flow of credit to U.S. households and businesses, as well as financial market stability. The New York Fed began offering up to \$500B in overnight liquidity through repurchase agreements and has expanded dollar swap lines to alleviate any possible strains in global U.S. dollar funding markets.

Area	Short Term (3M)	10-Year
United States	0.09%	0.67%
Germany	(0.71%)	(0.47%)
France	(0.50%)	(0.02%)
Spain	(0.23%)	0.67%
Italy	(0.05%)	1.52%
Greece	0.16%	1.63%
U.K.	0.03%	0.36%
Japan	(0.30%)	0.01%
Australia	0.37%	0.76%
China	1.34%	2.58%
Brazil	3.37%	7.77%
Russia	5.47%	6.70%

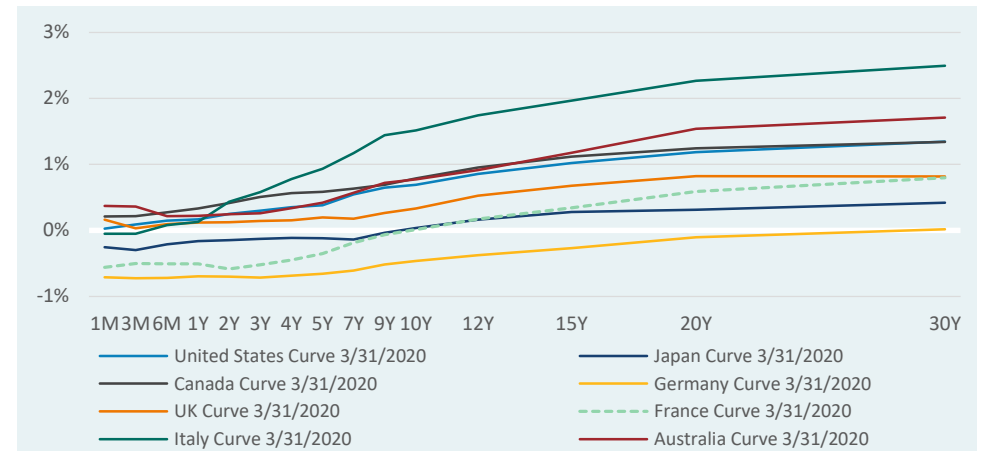
Source: Bloomberg, as of 3/31/20

Yield environment

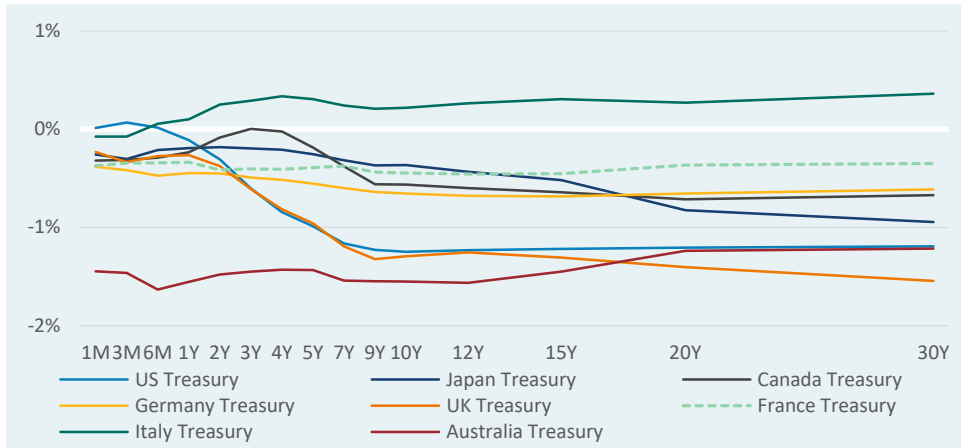
U.S. YIELD CURVE



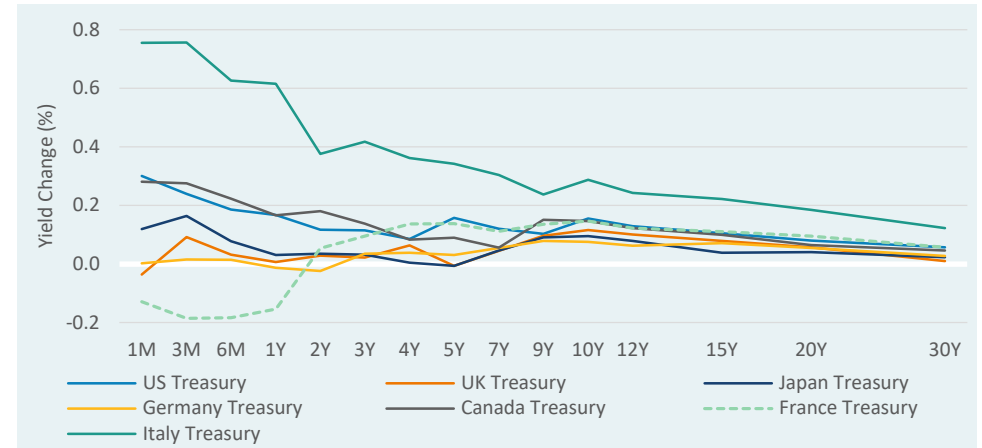
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/20

Credit environment

After a positive start to the year following the completion of phase one of the US-China trade deal, the impacts of the COVID-19 pandemic struck fear into credit markets, causing a broad-based sell-off and liquidity crisis in early March. This volatility prompted decisive Fed action, including but not limited to announcing unlimited QE and the reopening of several financial crisis-era liquidity facilities, which collectively incited a partial recovery in the last week of the quarter and restored a reasonable level of liquidity to credit markets.

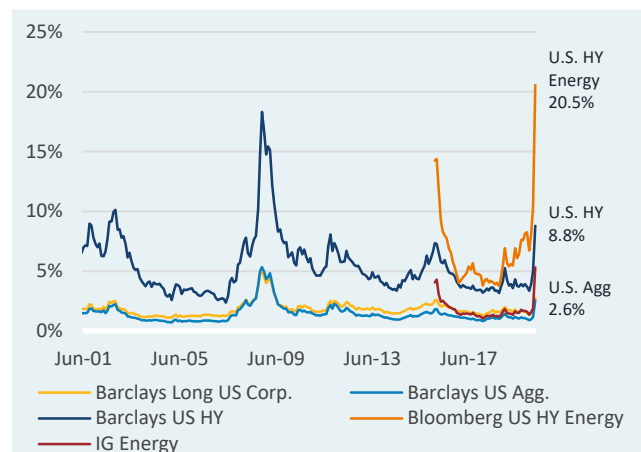
U.S. investment grade credit spreads widened from 93 bps at the end of 2019 to 272 bps at the end of the quarter after reaching highs of 373 bps in March. Similarly, high yield credit spreads spiked from 336 bps to 880 bps over the quarter, after March highs of 1100 bps. High yield ex-

Energy spreads increased from 295 bps to 749 bps over the same period.

The US Aggregate finished the quarter up 3.15%, while investment grade credit fell -3.63% followed by high yield -12.68% and leveraged loans -13.05%. In general, higher quality bonds meaningfully outperformed lower quality.

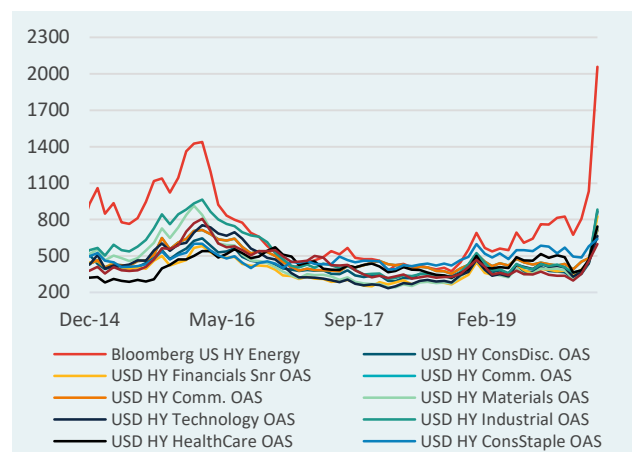
While the energy sector within high yield was the top performer in Q4 2019, the sector was faced with both a supply and demand shock with the Saudi Arabia-Russia production conflict and COVID-19 outbreak, causing it to decline by -38.94% in Q1 2020. The utility and technology sectors held up relatively well, declining -5.1% and -5.3%, respectively.

SPREADS



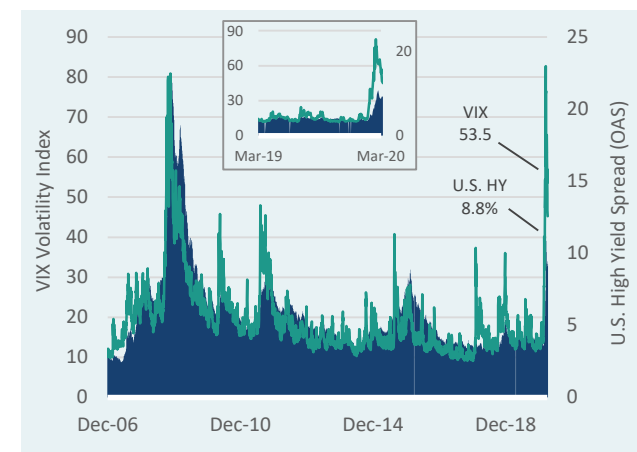
Source: Barclays, Bloomberg, as of 3/31/20

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/20

CREDIT SPREADS MOVING WITH VOLATILITY



Source: CBOE, BofA, as of 3/31/20

Default & issuance

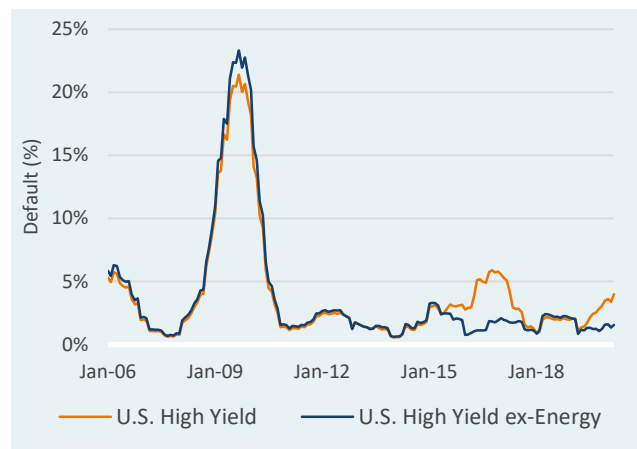
The first quarter saw 13 defaults affecting \$23.5 Billion in bonds and loans. However, one company, Frontier Communications, accounted for \$16.7 Billion of the total. For context, this quarterly amount compares with 43 defaults affecting \$51.5 Billion in bonds and loans for the full year of 2019. While this quarter ranks as the seventh highest in default volume on record, fixed income investors are expecting the worst is yet to come as companies grapple with the COVID-19-induced economic shutdown.

In March, the par-weighted U.S. high-yield default rate rose to a three-year high of 3.4%, up from 2.6% at the end of last year. Loan default rates rose less dramatically, to 1.9% over the trailing 12 months, up from 1.6% at year end.

Energy has driven around 45% of total defaults over the last 12 months, and in Q1 the full year 2020 outlook for the sector worsened dramatically. The trailing 12-month energy default rate in high yield ended the quarter at 9.8% (high yield ex-energy was 2.2%) while the trailing 12-month energy default rate in loans ended at 13.0% (loan ex-energy was 1.8%). In addition to energy, travel and tourism, gaming, leisure, retail, and restaurants appear particularly vulnerable in the current economic environment.

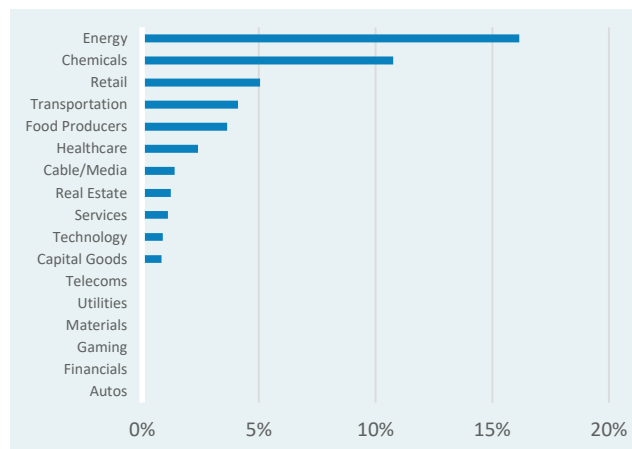
Investment grade bond issuance boomed in Q1 as companies tried to shore up liquidity for the coming recession. This was particularly pronounced in March, which saw a record \$262 Billion in investment grade issuance. Q1 also saw \$73 Billion in high yield volume and loan issuance spike to \$199 Billion.

HY DEFAULT RATE (ROLLING 1-YEAR)



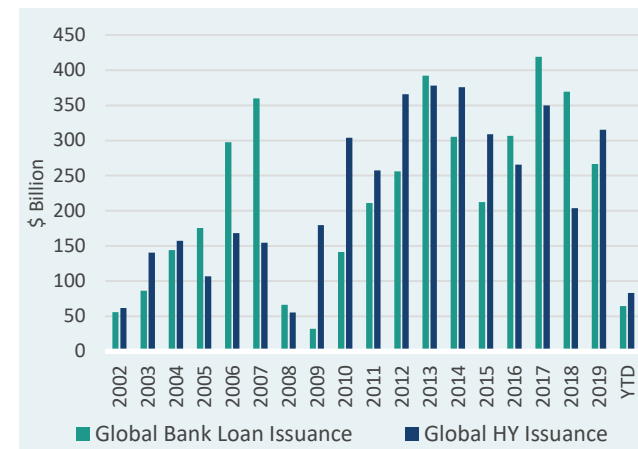
Source: BofA Merrill Lynch, as of 3/31/20

U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 3/31/20 – par weighted

GLOBAL ISSUANCE (\$ BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 3/31/20

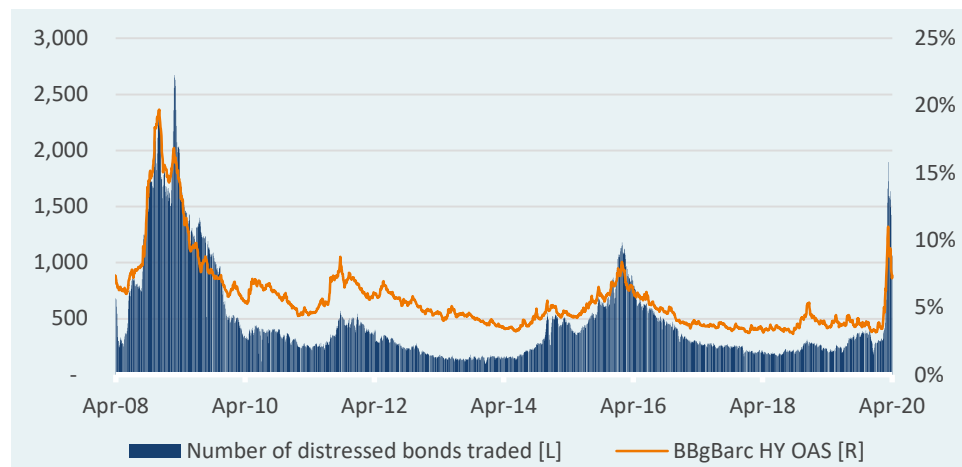
High yield – what happened?

The considerable economic fallout from the COVID-19 pandemic and collapsing oil prices broadly impacted credit markets. Credit spreads topped 1,000 basis points for the first time since the global financial crisis and the number of distressed bonds soared from 218 at the beginning of the year to a peak of 1,896. Higher defaults typically follow slowing growth and credit spread widening. J.P. Morgan's estimates of credit defaults increased from a 3% rate to an 8% rate for the near-term.

Approximately half of the investment grade bond market now sits within the BBB rated segment, which is the lowest

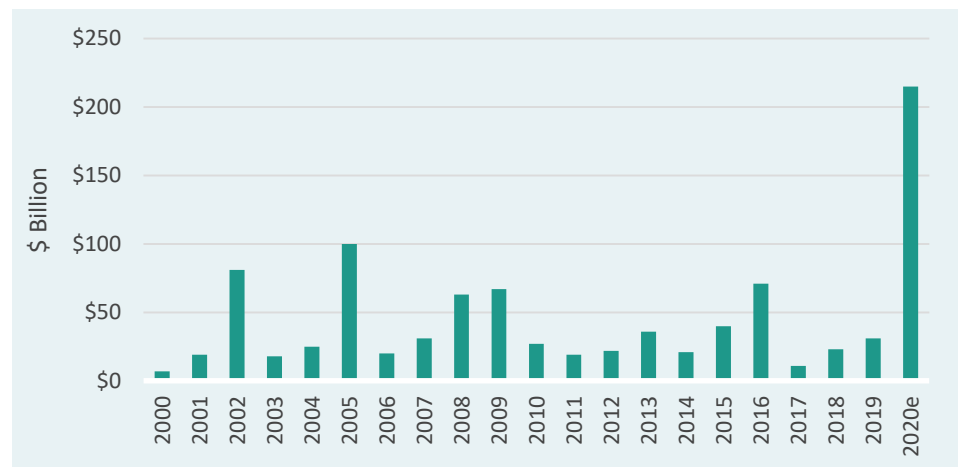
rung on the investment grade scale. Some market participants now expect more than \$200 Billion to fall from the investment grade to the high yield space. Because the BBB sector alone totals more the twice the size of the entire high yield market, downgrades and subsequent forced selling are likely to add pressure to that already stressed market segment throughout the rest of the year. These dislocations have already impacted strategies across the space as investors redeem capital, resulting in suspensions and even closures.

VOLUME AND SPREADS



Source: J.P. Morgan, Bloomberg, as of 4/16/20

FALLEN ANGELS



Equity

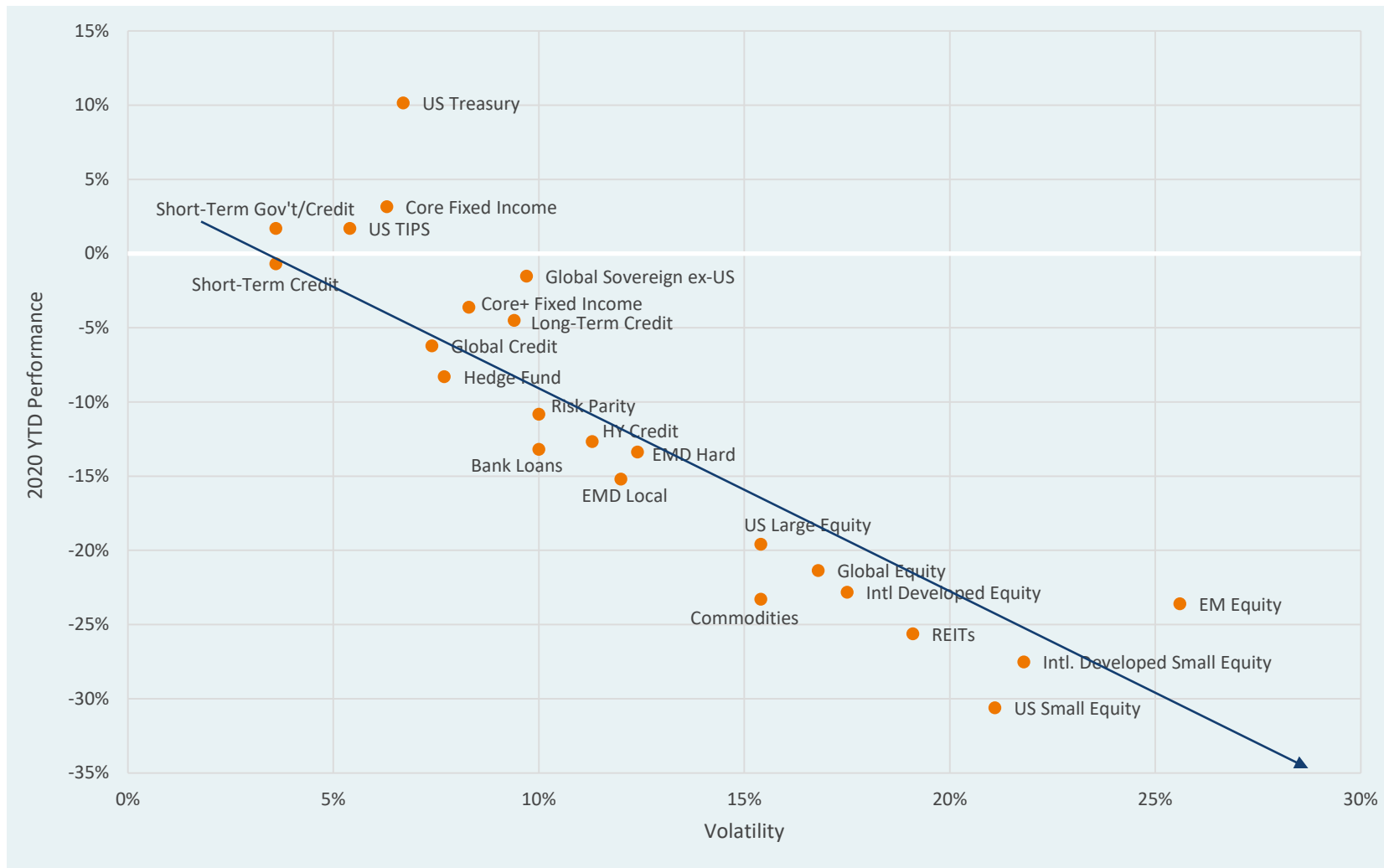
Equity environment

- U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.
- The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall is largely unknown with few reliable estimates.
- Implied volatility spiked in March to a record daily close of 82.7%, surpassing the high of 80.9% in November 2008 during the depths of the global financial crisis.
- In March, a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces sharply falling demand and potentially significant oversupply due to oil producers' decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.
- The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in large losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies positively impacted the dollar.
- Value stocks severely underperformed growth stocks during the first quarter (Russell 1000 Value -26.7%, Russell 1000 Growth -14.1%). Small cap stocks underperformed large cap stocks by a similar magnitude (Russell 2000 -30.6%, Russell 1000 -20.2%). Value and size factors continue to experience an extended period of relative underperformance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	(19.6%)		(7.0%)	
US Small Cap (Russell 2000)	(30.6%)		(24.0%)	
US Large Value (Russell 1000 Value)	(26.7%)		(17.2%)	
US Large Growth (Russell 1000 Growth)	(14.1%)		(0.9%)	
International Large (MSCI EAFE)	(22.8%)	(19.9%)	(14.4%)	(10.3%)
Eurozone (Euro Stoxx 50)	(27.0%)	(24.8%)	(16.6%)	(12.0%)
U.K. (FTSE 100)	(28.8%)	(23.0%)	(22.0%)	(16.4%)
Japan (NIKKEI 225)	(18.6%)	(18.8%)	(6.7%)	(6.8%)
Emerging Markets (MSCI Emerging Markets)	(23.6%)	(18.5%)	(17.7%)	(12.7%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/20

Q1 performance



Riskier assets performed the worst in Q1...

...and this relationship was fairly consistent across most asset classes

Source: Verus, as of 3/31/20 – Volatility is based on our forward looking 10-year Capital Market Assumptions

Domestic equity

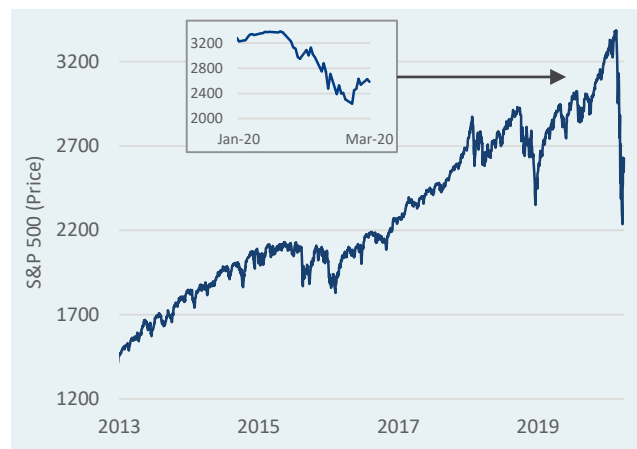
U.S. equities experienced an unusually sudden and significant sell-off in March as investors grew fearful of the health and economic impacts of COVID-19 spread. During Q1 the S&P 500 fell -19.6%, international developed equities (MSCI EAFE) fell -22.8% and emerging markets (MSCI EM) fell -23.6%.

At the same time that COVID-19 was spreading throughout the U.S., a squabble between OPEC+ members led to a historic drop in energy prices. The energy sector faces a perfect storm – sharply falling demand due to a global economic slowdown, and potentially significant oversupply due to oil producers' decision to ramp up production in an oil war. The energy sector experienced a loss of -50.5% in Q1.

The greatest influence on equity performance in 2020 will perhaps be the path of corporate earnings. The degree to which corporate earnings will fall throughout the year is largely unknown with few reliable estimates.

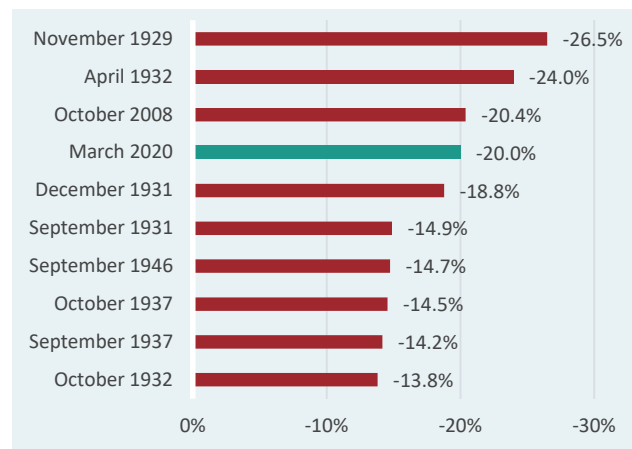
We continue to believe an underweight to international developed equities is appropriate. The economic pain that European Union member countries face may be significant, and membership to the EU inherently limits the ability of these countries to enact certain changes to address weakening economies. The U.S. market may continue to perform relatively well throughout the economic recovery.

S&P 500



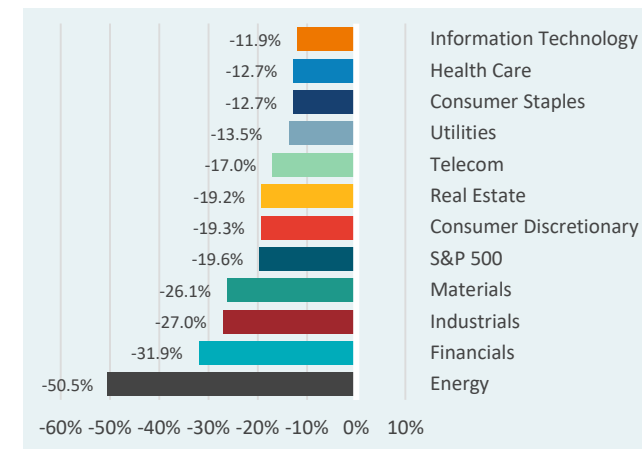
Source: Standard & Poor's, as of 3/31/20

WORST S&P 500 MAX MONTHLY DRAWDOWNS



Source: Standard & Poor's, as of 3/31/20

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/20

Domestic equity size & style

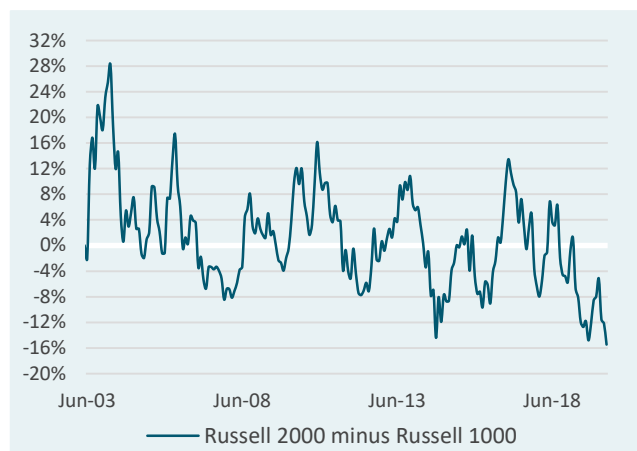
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Once again, the impact of sector performance on the value premium in Q1 was notable – specifically energy and financial sectors (-50.5% and -31.9%, respectively) which tend to be value-tilted. Energy prices saw a historic drop fueled by OPEC+ infighting and likely the intent of the cartel to push out U.S. energy producers. Financial stocks delivered losses as

falling interest rates hurt profitability. Information Technology (-11.9%), a sector that tends to contain more growth stocks, was the best performer.

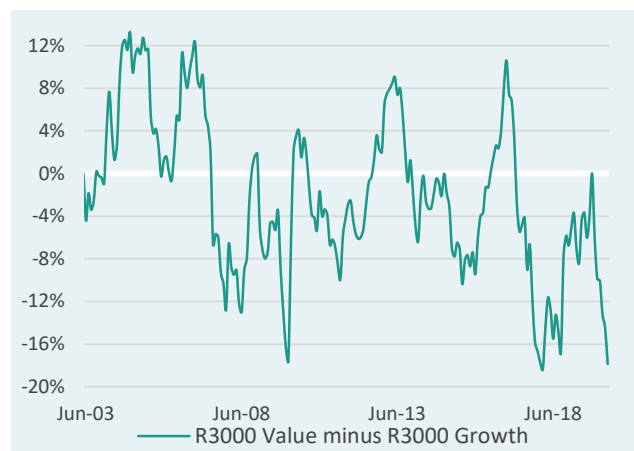
We believe that it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Market events of the past month seem to support this belief. While value in particular continues to be historically cheap, price itself does not translate to short-term outperformance – a catalyst for a turnaround should also be clearly identified and understood. We remain watchful and believe that consistent long-term exposure to these style factors is an ideal implementation approach for most investors, most of the time.

SMALL CAP VS LARGE CAP (YOY)



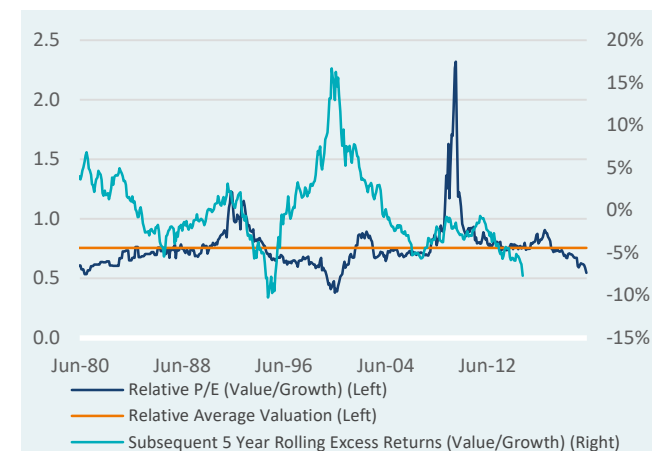
Source: FTSE, as of 3/31/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/20

VALUE HISTORICALLY CHEAP



Source: Russell, Bloomberg, as of 3/31/20

International developed equity

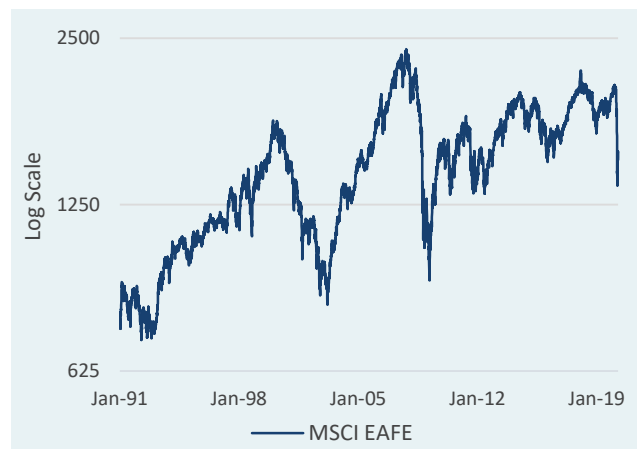
Equity markets around the world sold off broadly in the first quarter, down between -16% to -29%. Japanese equities were among the best performing (MSCI Japan -17%) while the U.K. was one of the worst performing (MSCI U.K. -29%).

As the global transactional currency, demand for U.S. dollars tends to ramp up when markets become stressed and companies abroad require dollars to pay down dollar-denominated liabilities. In the first quarter, the U.S. dollar gained +2.3% against the Euro and +6.4% against the British pound, resulting in losses for U.S. investors in European

equities with unhedged currency exposure. In mid-March, the Federal Reserve expanded its dollar swap liquidity lines and opened a FIMA repo facility which will allow foreign monetary authorities to enter repurchase agreements with the Fed. Both measures worked to help improve U.S. dollar liquidity abroad, and as a result, slow the pace of appreciation of the U.S. dollar relative to international pairs.

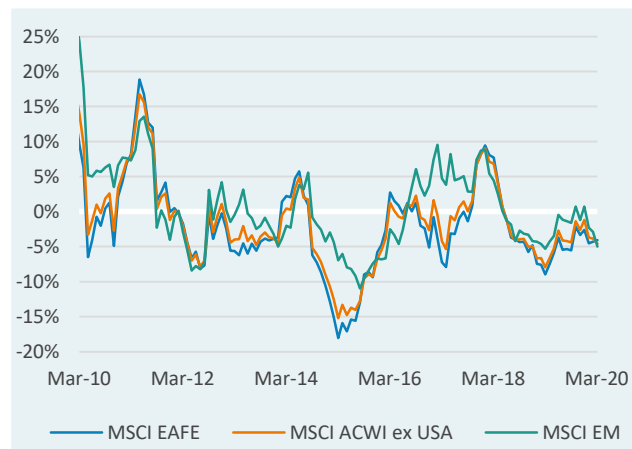
Cross-currency basis, which measure the additional premia investors must pay to swap one currency for another over a term, narrowed in March, signaling that the Fed's efforts to ease dollar funding strains have proved effective thus far.

INTERNATIONAL DEVELOPED EQUITIES



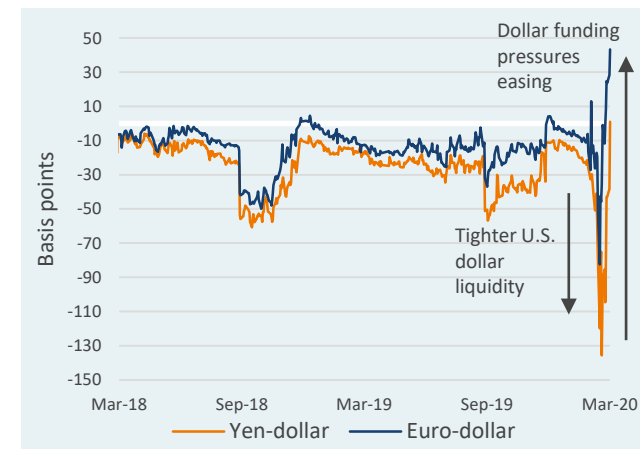
Source: MSCI, as of 3/31/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/20

3M/3M CROSS CURRENCY BASIS SWAPS



Source: Bloomberg, as of 3/31/20

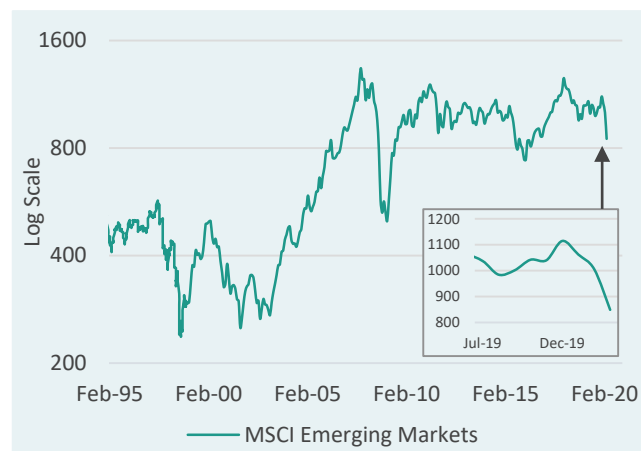
Emerging market equity

Emerging market equities (MSCI EM -23.6%) underperformed both U.S. (S&P 500 -19.6%) and international developed equities (MSCI EAFE -22.8%) over the quarter. Within the complex, Latin American equities (MSCI EM Latin American -45.6%) dramatically underperformed Asian equities (MSCI EM Asia -18.1%), which were propped up by remarkably resilient Chinese equity markets. Currency exposure also played a big role in the outperformance of EM Latin America over EM Asia, as the U.S. dollar strengthened significantly against the Brazilian real, and the Mexican peso, and was little changed against the Chinese renminbi.

Inflation remains low in emerging economies and may face downward pressure in the coming months as energy prices have fallen. Central banks may have more room to maneuver relative to developed economies with regard to monetary policy, as interest rates are closer to average levels.

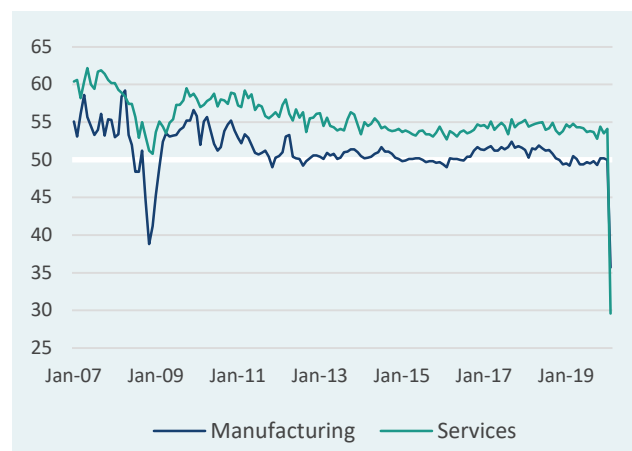
Countries viewed as having poor health infrastructure as well as economic dependence on oil prices fared the worst. Mexico's sovereign debt rating was downgraded by several rating agencies, and Moody's downgraded South Africa's sovereign debt rating below investment-grade.

EMERGING MARKET EQUITY



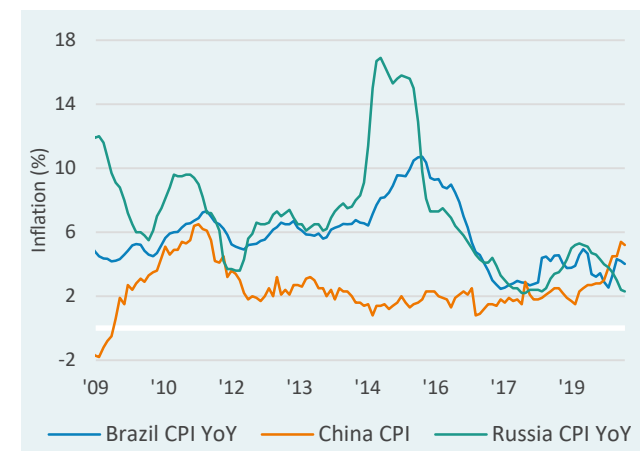
Source: MSCI, as of 3/31/20

CHINA PURCHASING MANAGERS' INDICES



Source: China Federation of Logistics and Purchasing, as of 2/29/20

INFLATION (CPI YOY)



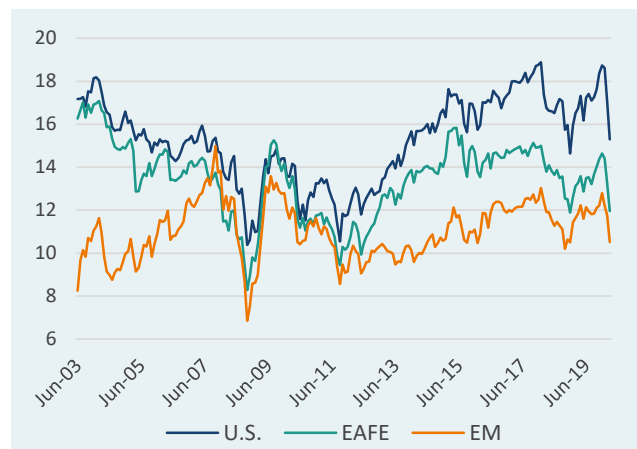
Source: Bloomberg, as of 2/29/20

Equity valuations

Throughout the significant Q1 market sell-off, losses across global markets have been fairly similar. This has resulted in U.S. equities retaining their status as the most expensive market, though we believe this may be justified as governments with limited ability to implement stimulus policies could face tougher economic fallout. Specifically, European Union member nations that cannot exercise independent actions may see greater difficulties ahead as income gaps cannot be supplemented with government spending.

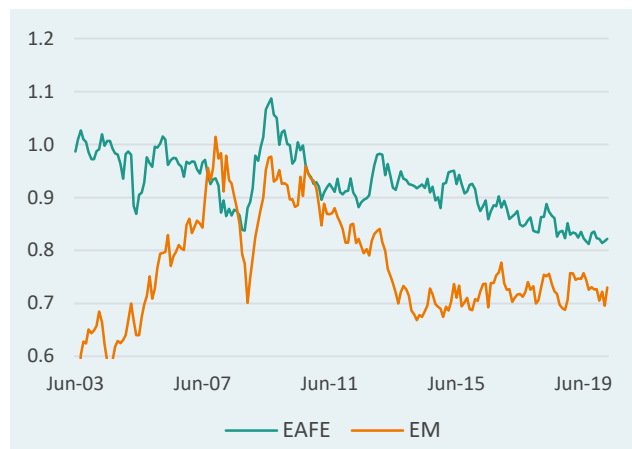
In 2005, Thomas Friedman put forth the notion that “The World is Flat”, and that the 21st century will be characterized by globalization, with historical and geographical divisions becoming less relevant. In Friedman’s world, companies produce their goods where it is cheapest to do so, often in emerging and developing economies with fewer labor protections. Supply chains are built within profit maximization frameworks often with little regard for the risks associated with having a supply chain concentrated in one or a few countries. Looking ahead, it will be interesting to follow whether Friedman’s world becomes slightly bumpier.

FORWARD P/E RATIOS



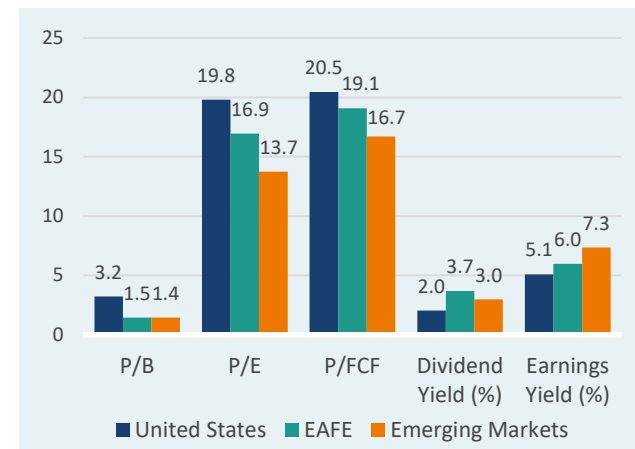
Source: MSCI, 12m forward P/E, as of 3/31/20

FORWARD P/E RATIOS (RELATIVE TO THE U.S.)



Source: MSCI, 12m forward P/E, as of 3/31/20

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 3/31/20 - trailing P/E

Equity volatility

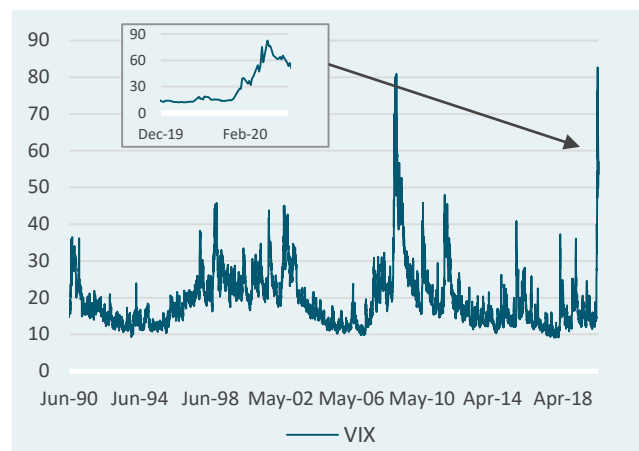
Risk markets experienced one of the most sudden corrections on record, amidst extreme volatility. The S&P 500 showed its largest one-day drop since 1987 (March 16 -11.9%) and its largest one-day gain since 2008 (March 24 +9.4%). The transition from a very low- to a very high-volatility environment likely caught many investors off guard.

Implied volatility (CBOE VIX Index) spiked in March to a record daily close of 82.7, surpassing the high of 80.9 on November 20th, 2008 during the depths of the global financial crisis. Such extreme levels of market volatility can

create difficulties for investors in managing portfolios. Processes such as portfolio rebalancing that are often systematic can become complex and subjective when equities are exhibiting nearly double-digit daily moves.

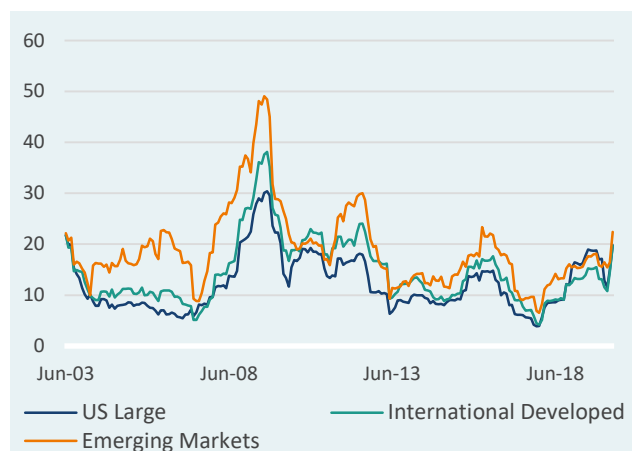
The S&P 500 Price Index closed at 2237 on March 23rd, -33.9% below February 19th peaks. Since then, U.S. equities have staged a remarkable rebound in the foreground of a historically bleak economic background. Debate over whether the rebound is justified has continued as economic uncertainty remains at unprecedented levels.

U.S. IMPLIED VOLATILITY (VIX)



Source: CBOE, as of 3/31/20

ROLLING 1-YEAR REALIZED VOLATILITY



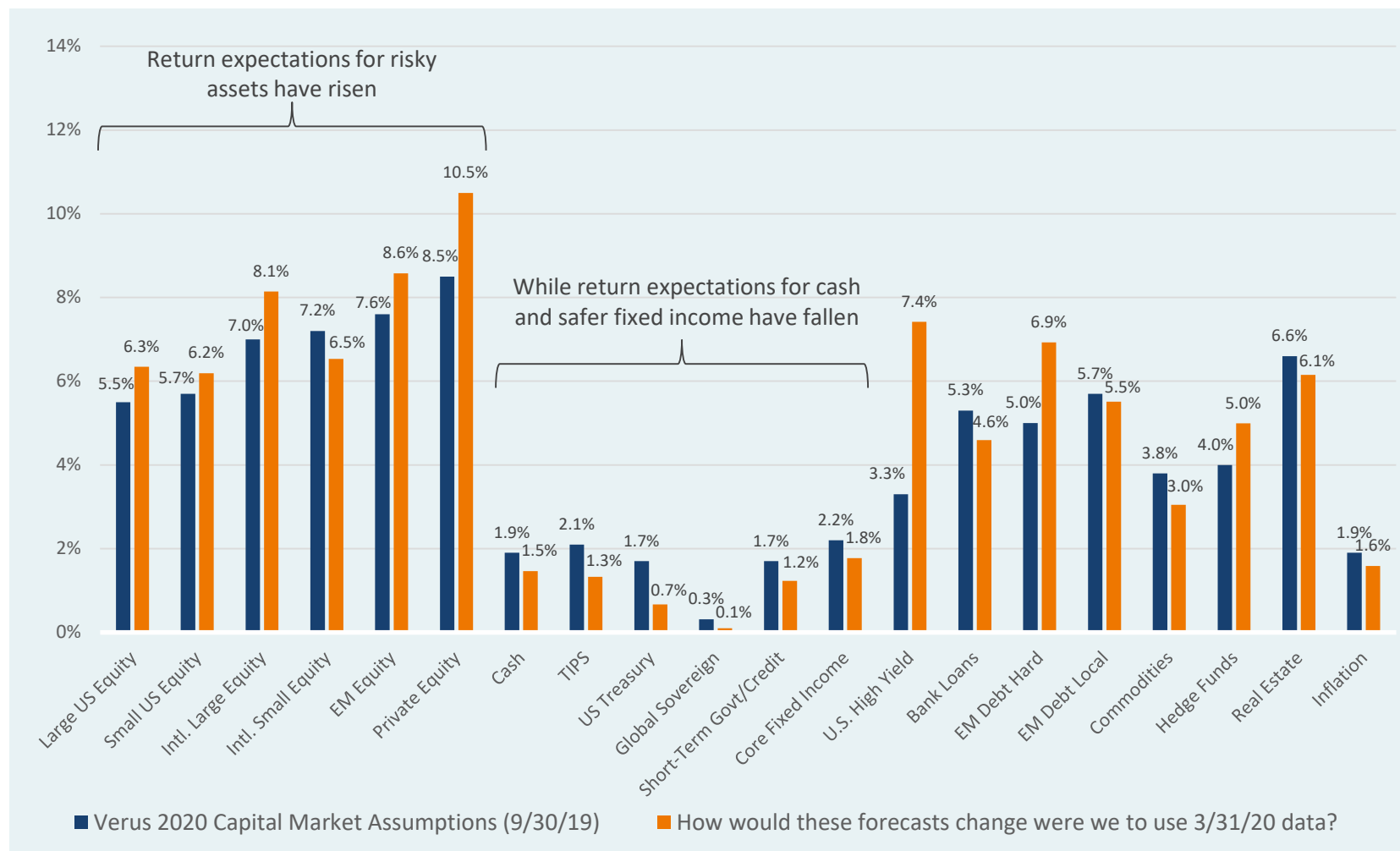
Source: Standard & Poor's, MSCI, Bloomberg, as of 3/31/20

MAX DRAWDOWN FROM PRIOR PEAKS



Source: Standard & Poor's, Bloomberg, as of 3/31/20

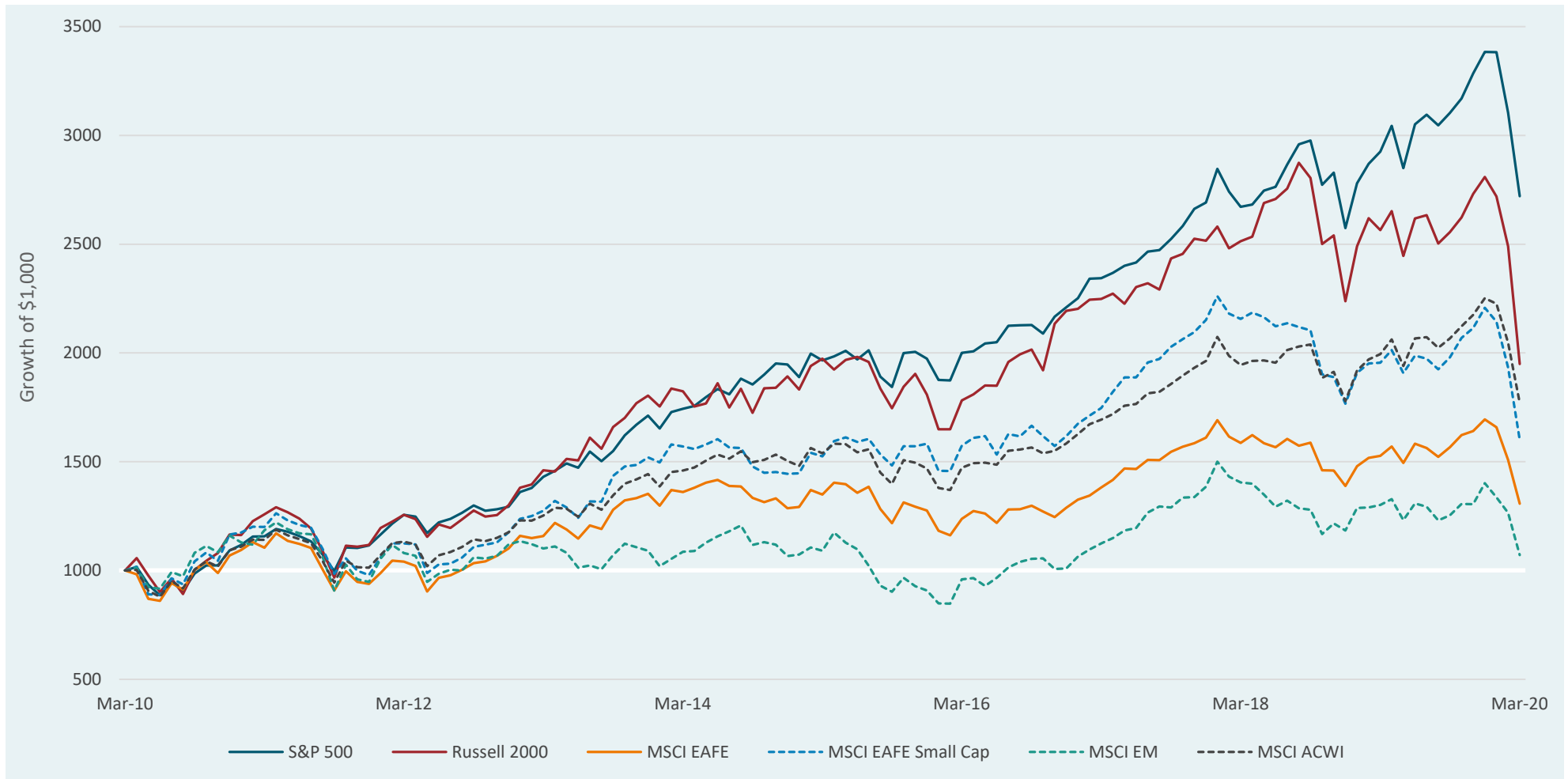
How have return expectations changed?



The overall portfolio's expected return may have risen or fallen during Q1, depending on the asset allocation & risk level

Source: Verus

Long-term equity performance



Source: Morningstar, as of 3/31/20

Other assets

Currency

The U.S. dollar appreciated significantly in the first quarter, rising 7.1% on a trade-weighted basis, resulting in losses for investors with unhedged currency exposure. As is often the case during higher risk market environments, demand for safe-haven currencies contributed to the rising dollar.

Historically speaking, environments where the U.S. dollar was much more expensive than average tended to be followed by an eventual mean-reversion. However, this mean-reversion effect is not a sure bet, and it can take years (or perhaps decades) to occur. As recent years have shown,

leaving currency exposure unhedged tends to result in uncompensated volatility, and occasional (or frequent) large and sharp losses or gains.

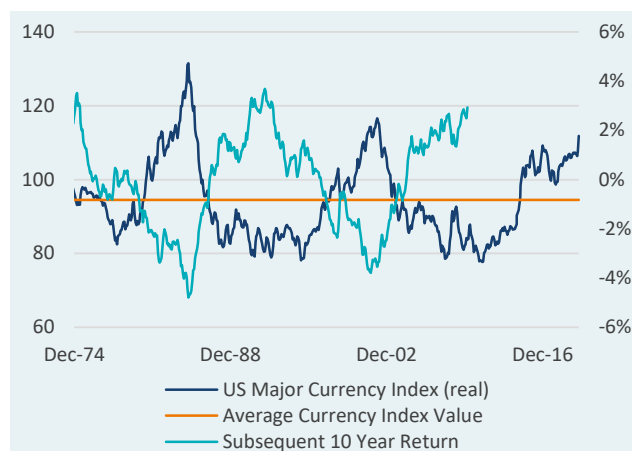
The MSCI Currency Factor Mix Index, constructed as a combination of individual Currency Factor indices (carry, value, momentum) advanced 1.2% in Q1. The momentum factor (+8.7%) posted strong gains as appreciating currencies continued to strengthen while the carry factor (-7.2%) lagged as the exchange rate adjustments implied by local interest rate differentials occurred faster than expected.

BLOOMBERG DOLLAR SPOT INDEX



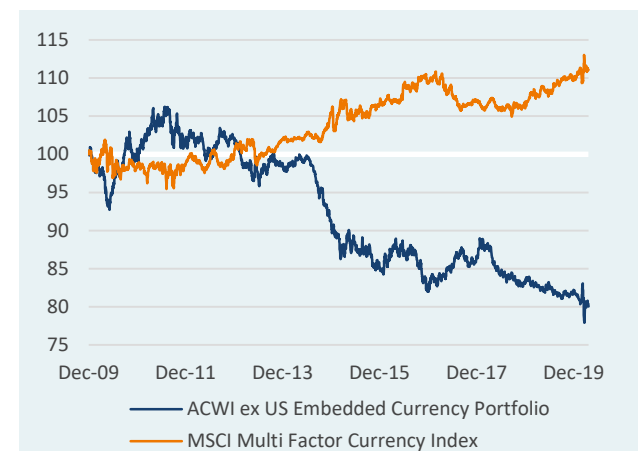
Source: Bloomberg, as of 3/31/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, Verus, as of 3/31/20

EMBEDDED CURRENCY VS CURRENCY BETA



Source: MSCI, Bloomberg, as of 3/31/20

Oil crisis

In mid-March, the price of oil experienced a sudden drop as Russia refused to join the OPEC recommended production cuts. In retribution, Saudi Arabia signaled that they would increase production drastically in April upon expiration of the OPEC pact. These events led to a 30% one-day drop in price, and historically volatile trading.

Russia's actions are likely linked to increased U.S. sanctions on its energy producers, which have negatively impacted the economy. Sanctions have prevented Russia from completing the Nord Stream 2 gas pipeline in the Baltic Sea, a project that \$11 Billion had previously been invested in, which would

carry Russian Gas directly to Germany and would circumvent the Ukraine. Sanctions were also levied against Russia's Rosneft for allegedly supporting the Nicolas Maduro regime in Venezuela. It is estimated that 70% of oil production in Venezuela was going through Rosneft.

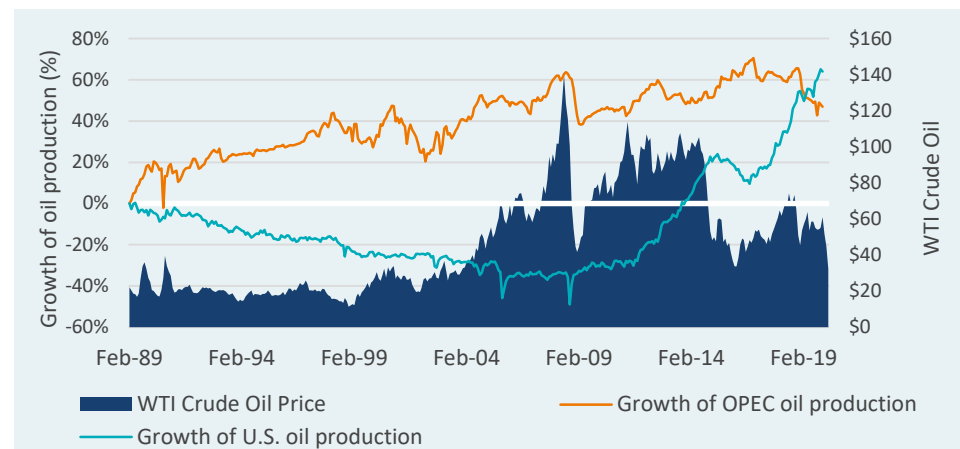
A similar dynamic occurred during the oil crash of 2014 as OPEC let oil plummet, arguably with the intent to put U.S. oil producers out of business. American oil production has been ramped up drastically over the last decade, at a time when OPEC producers were working to minimize their own production in order to balance global supply.

WTI OIL PRICE



Source: FRED, as of 3/31/20

GLOBAL OIL PRODUCER CONFLICT



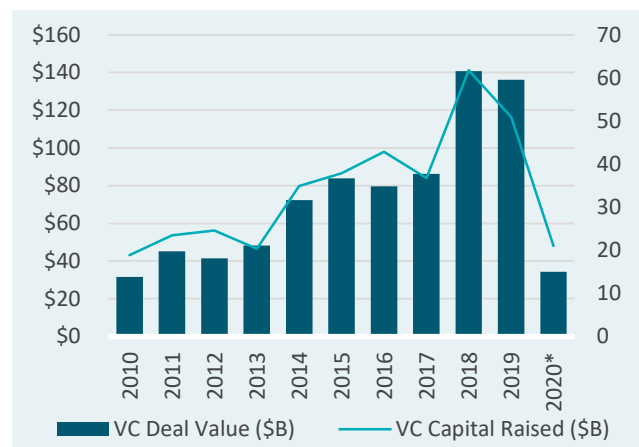
Source: Bloomberg, U.S. Energy Information Administration, as of 3/31/20

Private markets

Deals plateaued in buyouts and venture; multiples are steady; buyout fundraising has slowed

- Before the impending market dislocation, venture capital fundraising was on pace to eclipse 2019, while total deal volume and number of deals had plateaued. \$21 Billion of venture capital was raised in the U.S. in Q1 2020, constituting 40% of capital raised in 2019. Deal value and number of deals in the quarter represented 25% and 19% of 2019's totals, respectively.
- Buyout activity continued to decrease in Q1 2020 from 2019. Through the first quarter, buyouts dollar value and number of transactions amounted to 18% and 19% of 2019 levels, respectively. The size of the average buyout, \$135.6M, has decreased from 2019, \$145.2M. Similarly, fundraising has also slowed. Only 46 buyout funds representing \$45 Billion closed in Q1 2020, down from 249 funds representing \$315 Billion in 2019.
- Pricing multiples on completed buyout deals remained in line with 2019's. Median EV/EBITDA is 12.9x (up slightly from 12.7x in 2019) with debt multiples unchanged at 5.9x. Debt as a percentage of transaction value hovers around 45%.

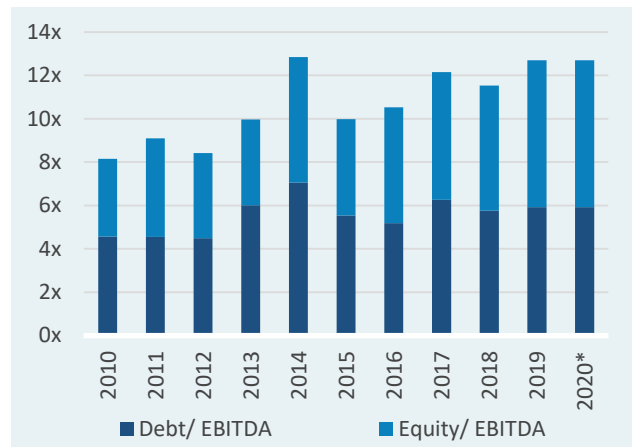
VENTURE DEAL VOLUME & FUNDRAISING



*2020 figures through 3/31/20

Source: PitchBook

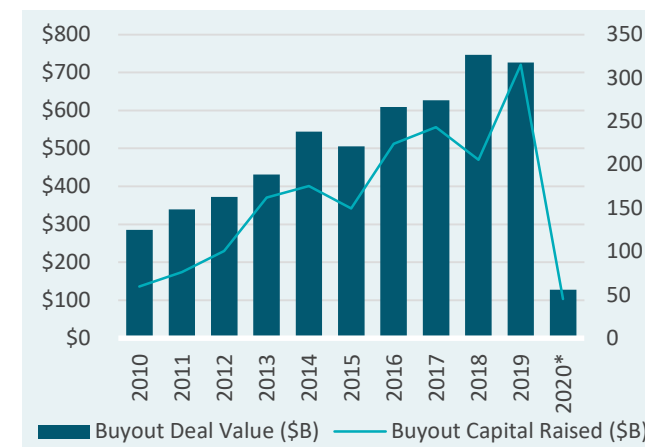
TRANSACTION MULTIPLES



*2020 figures through 3/31/20

Source: PitchBook

BUYOUTS DEAL VOLUME & CAPITAL RAISED



*2020 figures through 3/31/20

Source: PitchBook

Appendix

Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
US Bonds	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	3.1	10.4	13.0
Cash	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	0.4	7.5	10.4
Real Estate	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	0.0	6.2	10.1
Hedge Funds of Funds	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	-6.0	3.4	8.9
60/40 Global Portfolio	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	-13.3	3.0	7.7
Large Cap Growth	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	-14.1	1.9	6.9
Large Cap Equity	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	-20.2	1.7	4.8
International Equity	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-22.8	1.1	4.7
Commodities	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-23.3	0.6	3.9
Emerging Markets Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-23.6	-0.2	2.7
Small Cap Growth	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-25.8	-0.4	2.1
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-26.7	-0.6	0.7
Small Cap Equity	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-30.6	-2.4	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-35.7	-7.8	-6.7

Large Cap Equity

Large Cap Value

Large Cap Growth

Small Cap Equity

Small Cap Value

Small Cap Growth

International Equity

Emerging Markets Equity

US Bonds

Cash

Commodities

Real Estate

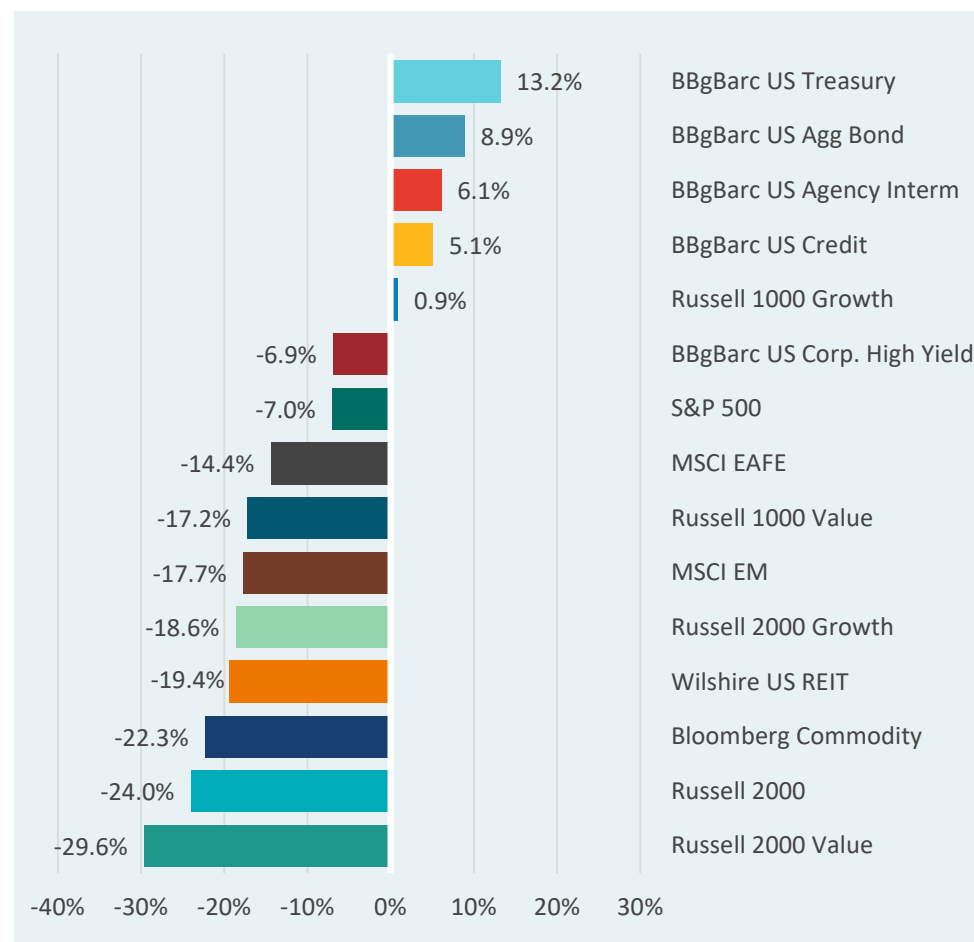
Hedge Funds of Funds

60% MSCI ACWI/40% BBgBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/19.

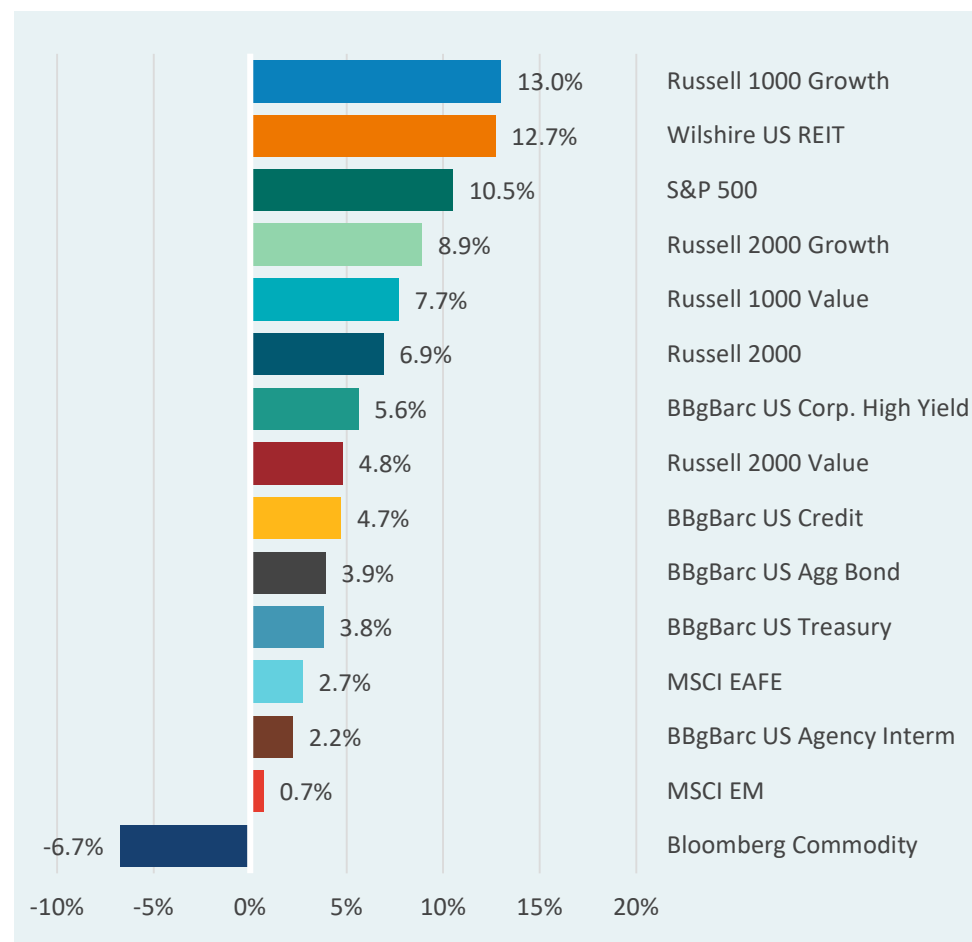
Major asset class returns

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/20

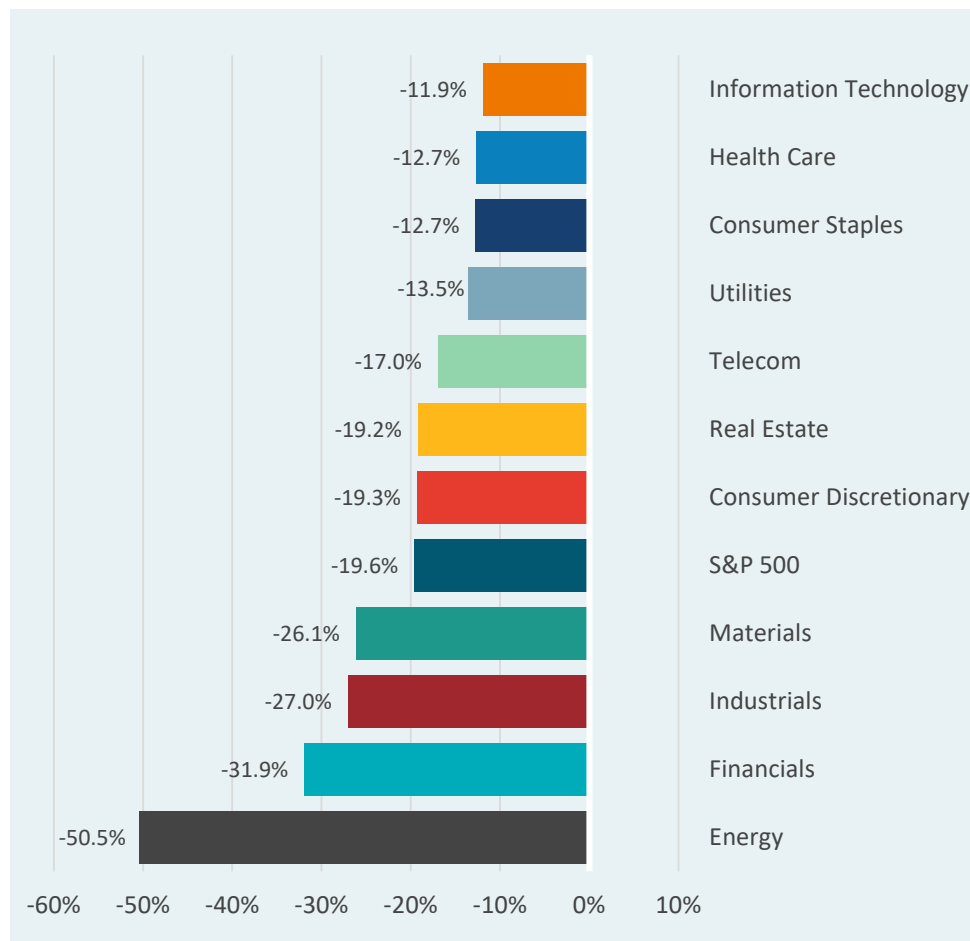
TEN YEARS ENDING MARCH



Source: Morningstar, as of 3/31/20

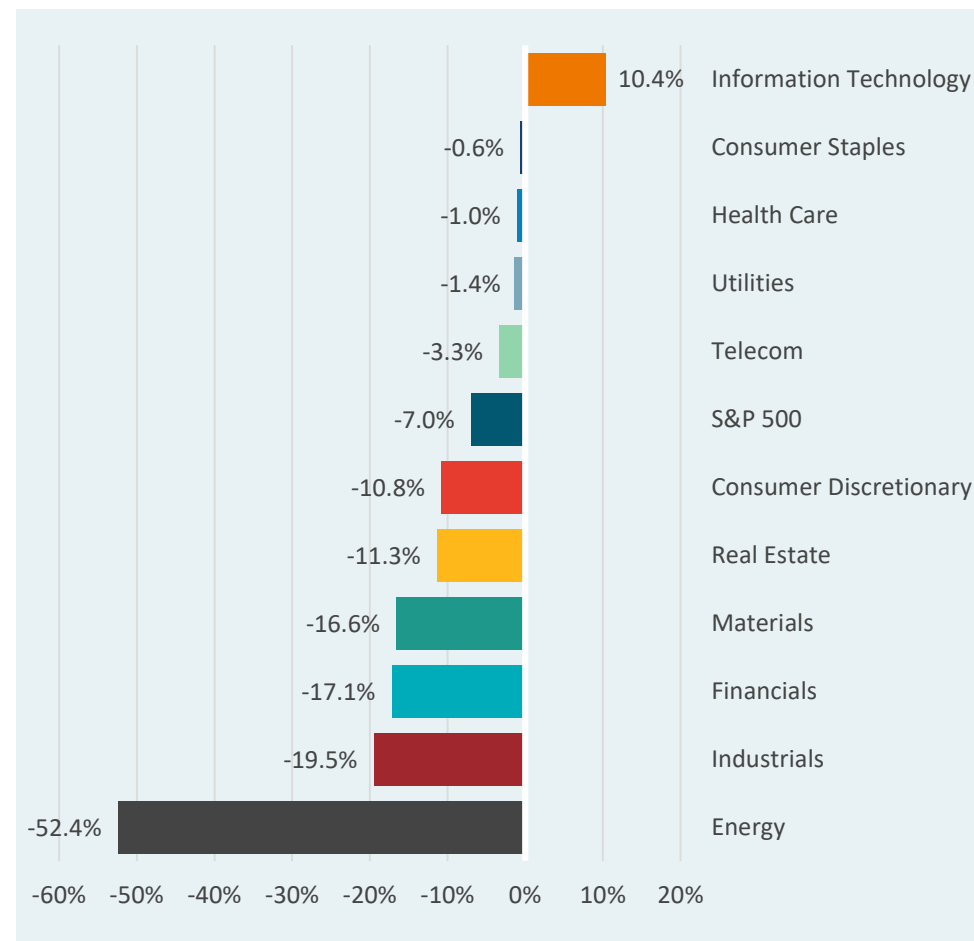
S&P 500 sector returns

Q1 2020



Source: Morningstar, as of 3/31/20

ONE YEAR ENDING MARCH

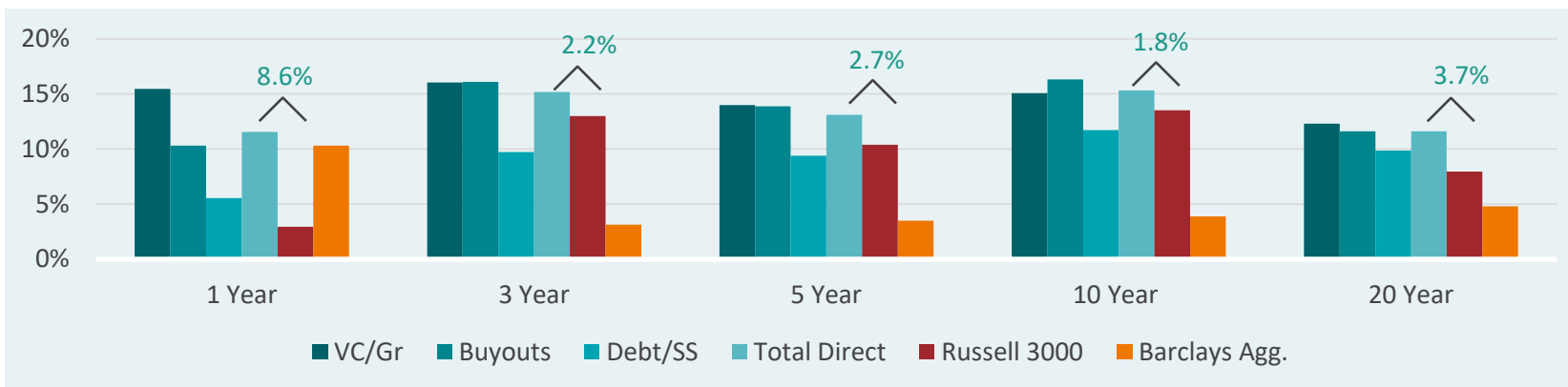


Source: Morningstar, as of 3/31/20

Private equity vs. public performance

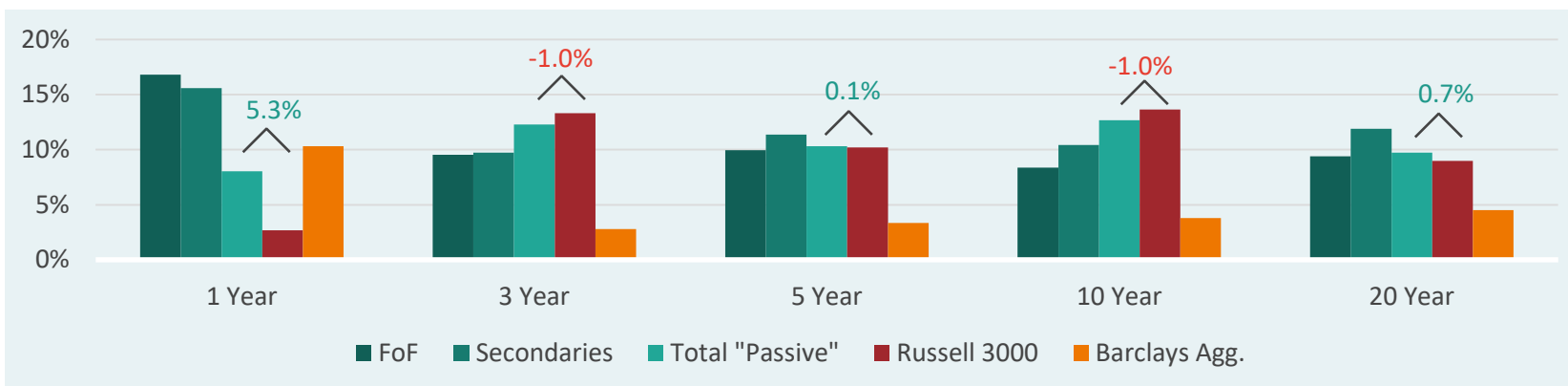
As of 9/30/2019

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equities across all time periods

"PASSIVE" STRATEGIES



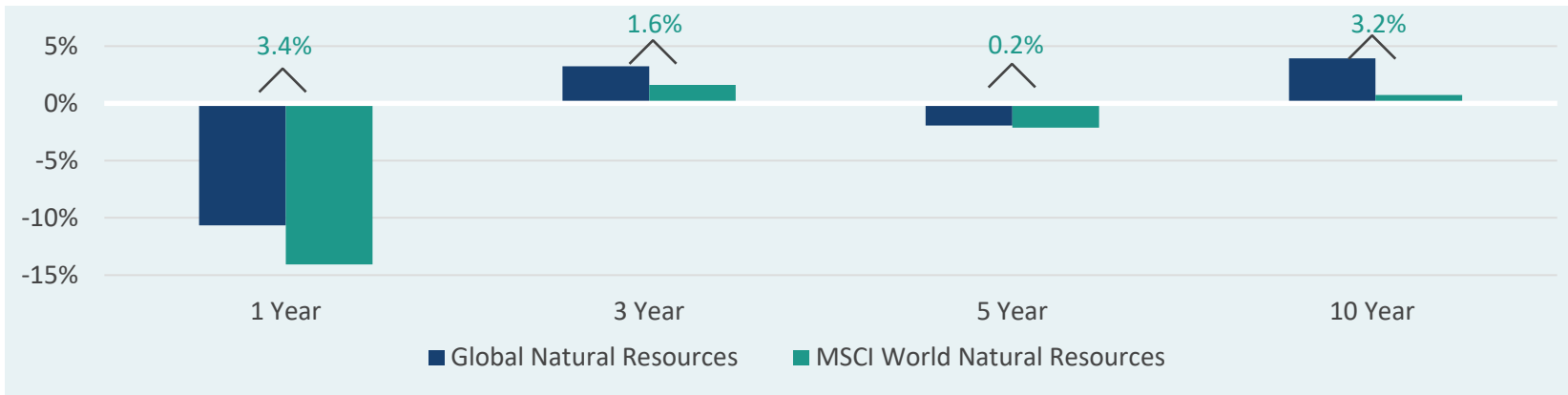
"Passive" strategies outperformed comparable public equities on a 1-, 5-, and 20-year basis, and underperformed on a 3- and 10-year basis

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of September 30, 2019. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

Private equity vs. liquid real assets performance

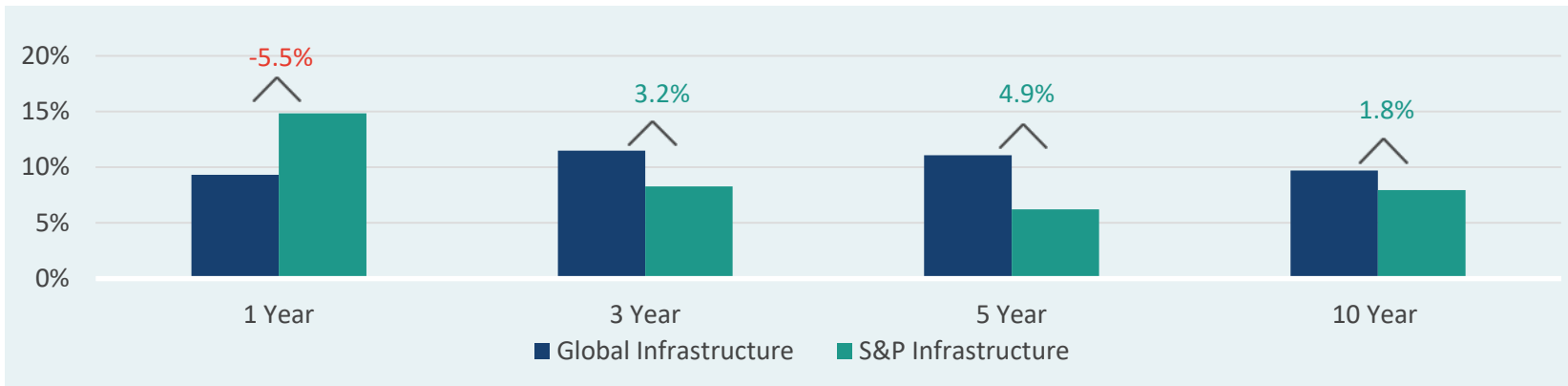
As of 9/30/2019

GLOBAL NATURAL RESOURCES FUNDS



N.R. funds outperformed the MSCI World Natural Resources benchmark across all time periods

GLOBAL INFRASTRUCTURE FUNDS



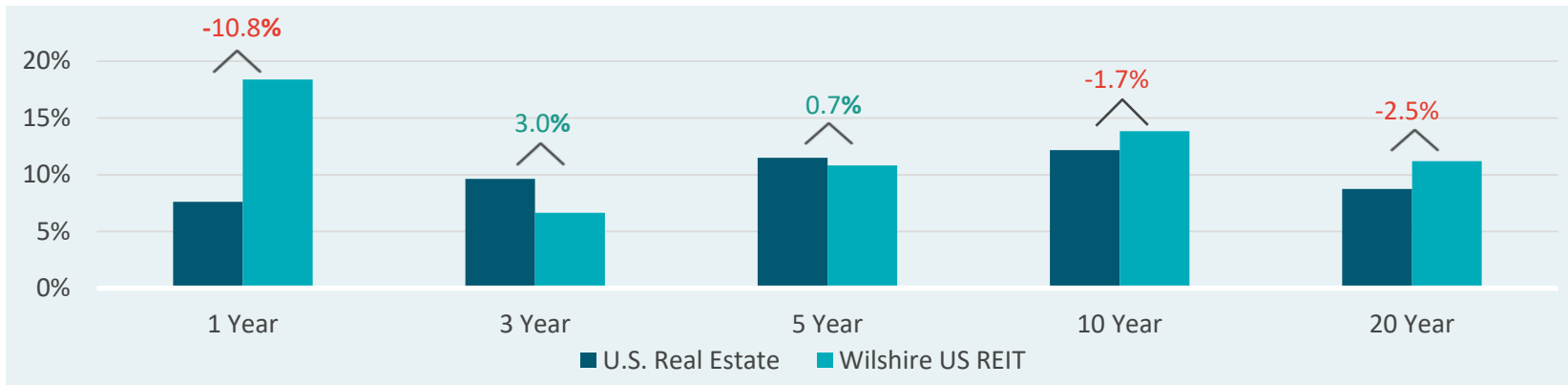
Infra. funds outperformed the S&P Infra. across all periods, except on a 1-year basis

Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

Private vs. liquid & core real estate performance

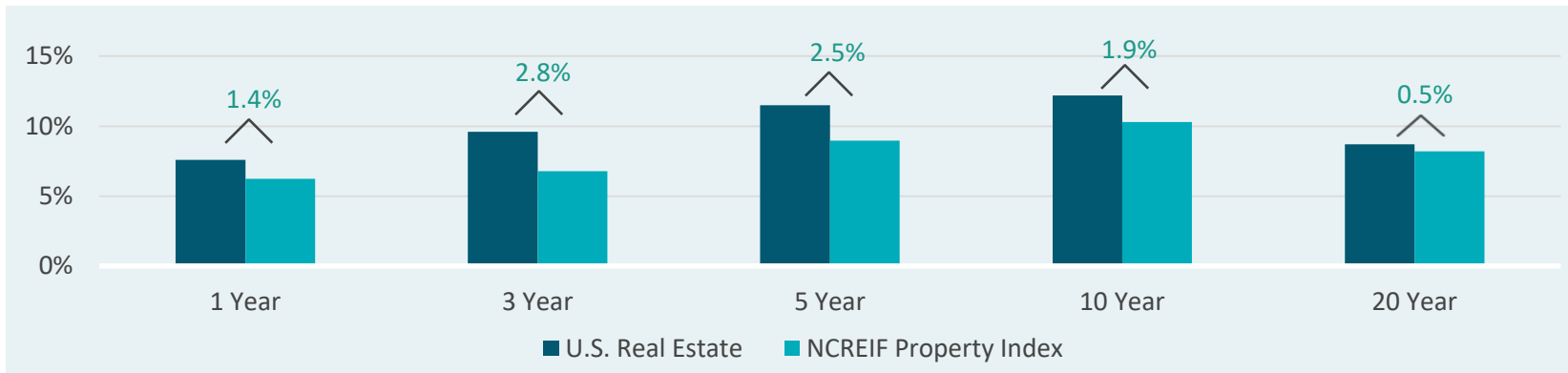
As of 9/30/2019

U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index on a 1-, 10-, and 20-year basis, but not over 3- and 5-years

U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. Funds outperformed the NCREIF Property Index over all time periods

Sources: Thomson Reuters C|A PME: Global and U.S. Real Estate universes as of September 30, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(12.4)	(19.6)	(19.6)	(7.0)	5.1	6.7	10.5
S&P 500 Equal Weighted	(18.0)	(26.7)	(26.7)	(17.6)	(0.4)	2.8	9.2
DJ Industrial Average	(13.6)	(22.7)	(22.7)	(13.4)	4.4	6.9	10.0
Russell Top 200	(11.0)	(17.7)	(17.7)	(4.1)	6.7	7.9	11.0
Russell 1000	(13.2)	(20.2)	(20.2)	(8.0)	4.6	6.2	10.4
Russell 2000	(21.7)	(30.6)	(30.6)	(24.0)	(4.6)	(0.2)	6.9
Russell 3000	(13.8)	(20.9)	(20.9)	(9.1)	4.0	5.8	10.1
Russell Mid Cap	(19.5)	(27.1)	(27.1)	(18.3)	(0.8)	1.8	8.8
Style Index							
Russell 1000 Growth	(9.8)	(14.1)	(14.1)	0.9	11.3	10.4	13.0
Russell 1000 Value	(17.1)	(26.7)	(26.7)	(17.2)	(2.2)	1.9	7.7
Russell 2000 Growth	(19.1)	(25.8)	(25.8)	(18.6)	0.1	1.7	8.9
Russell 2000 Value	(24.7)	(35.7)	(35.7)	(29.6)	(9.5)	(2.4)	4.8

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	(13.5)	(21.4)	(21.4)	(11.3)	1.5	2.8	5.9
MSCI ACWI ex US	(14.5)	(23.4)	(23.4)	(15.6)	(2.0)	(0.6)	2.1
MSCI EAFE	(13.3)	(22.8)	(22.8)	(14.4)	(1.8)	(0.6)	2.7
MSCI EM	(15.4)	(23.6)	(23.6)	(17.7)	(1.6)	(0.4)	0.7
MSCI EAFE Small Cap	(17.2)	(27.5)	(27.5)	(18.1)	(2.9)	1.0	4.8
Style Index							
MSCI EAFE Growth	(9.2)	(17.5)	(17.5)	(5.8)	3.0	2.5	4.7
MSCI EAFE Value	(17.7)	(28.2)	(28.2)	(22.8)	(6.7)	(3.8)	0.6
Regional Index							
MSCI UK	(16.0)	(28.8)	(28.8)	(23.0)	(4.9)	(3.3)	1.6
MSCI Japan	(7.1)	(16.8)	(16.8)	(6.7)	1.0	1.8	3.8
MSCI Euro	(17.2)	(27.0)	(27.0)	(18.3)	(4.4)	(2.3)	1.1
MSCI EM Asia	(11.7)	(18.1)	(18.1)	(12.1)	1.3	1.4	3.5
MSCI EM Latin American	(34.5)	(45.6)	(45.6)	(40.8)	(13.0)	(5.9)	(6.7)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(1.8)	1.7	1.7	6.8	3.5	2.7	3.5
BBgBarc US Treasury Bills	0.3	0.6	0.6	2.4	1.8	1.2	0.7
BBgBarc US Agg Bond	(0.6)	3.1	3.1	8.9	4.8	3.4	3.9
Duration							
BBgBarc US Treasury 1-3 Yr	1.3	2.8	2.8	5.4	2.7	1.8	1.4
BBgBarc US Treasury Long	6.1	20.9	20.9	32.6	13.4	7.3	9.0
BBgBarc US Treasury	2.9	8.2	8.2	13.2	5.8	3.6	3.8
Issuer							
BBgBarc US MBS	1.1	2.8	2.8	7.0	4.0	2.9	3.3
BBgBarc US Corp. High Yield	(11.5)	(12.7)	(12.7)	(6.9)	0.8	2.8	5.6
BBgBarc US Agency Interm	0.9	2.9	2.9	6.1	3.2	2.3	2.2
BBgBarc US Credit	(6.6)	(3.1)	(3.1)	5.1	4.2	3.3	4.7

OTHER

Index							
Bloomberg Commodity	(12.8)	(23.3)	(23.3)	(22.3)	(8.6)	(7.8)	(6.7)
Wilshire US REIT	(20.0)	(25.6)	(25.6)	(19.4)	(2.5)	5.7	12.7
CS Leveraged Loans	(12.5)	(13.2)	(13.2)	(9.5)	(0.7)	4.6	5.0
Alerian MLP	(48.1)	(58.1)	(58.1)	(61.9)	(29.9)	(21.1)	(4.7)
Regional Index							
JPM EMBI Global Div	(13.8)	(13.4)	(13.4)	(6.8)	0.4	2.8	4.9
JPM GBI-EM Global Div	(11.1)	(15.2)	(15.2)	(6.5)	(0.8)	0.3	0.5
Hedge Funds							
HFRI Composite	(5.9)	(8.3)	(8.3)	(4.0)	0.7	1.3	2.9
HFRI FOF Composite	(4.9)	(6.0)	(6.0)	(2.6)	1.0	0.6	2.1
Currency (Spot)							
Euro	(0.1)	(2.3)	(2.3)	(2.3)	0.9	0.4	(2.1)
Pound	(2.9)	(6.4)	(6.4)	(4.8)	(0.3)	(3.5)	(2.0)
Yen	(0.1)	0.7	0.7	2.5	1.1	2.1	(1.4)

Source: Morningstar, HFR, as of 3/31/20

Definitions

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

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

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

NAHB Housing Market Index - the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula $(\text{Good-Poor} + 100)/2$ to the present and future sales series and $(\text{High/Very High-Low/Very Low} + 100)/2$ to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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Tulare County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2020



[VERUSINVESTMENTS.COM](https://www.verusinvestments.com)

SEATTLE 206-622-3700

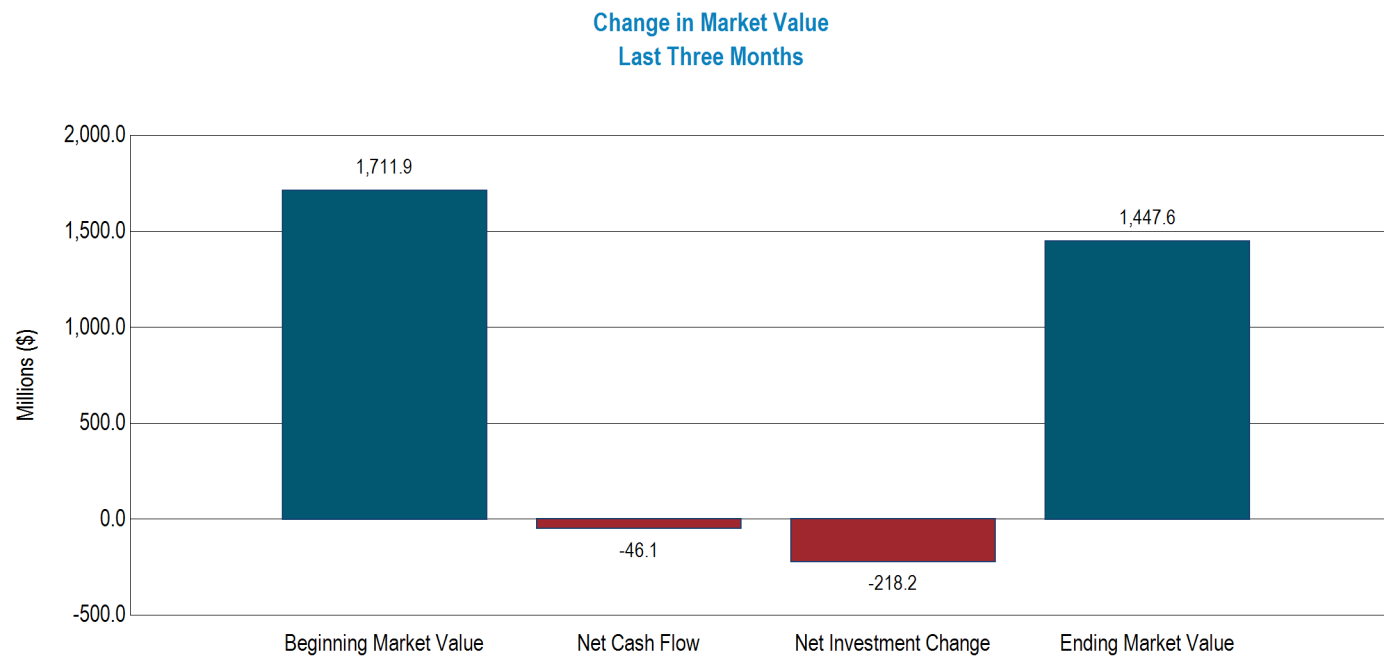
LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Total Fund Portfolio Reconciliation

Period Ending: March 31, 2020

	Fiscal Year-To-Date
Beginning Market Value	\$1,634,058,305
Net Cash Flow	-\$53,216,159
Net Investment Change	-\$133,242,014
Ending Market Value	\$1,447,600,132

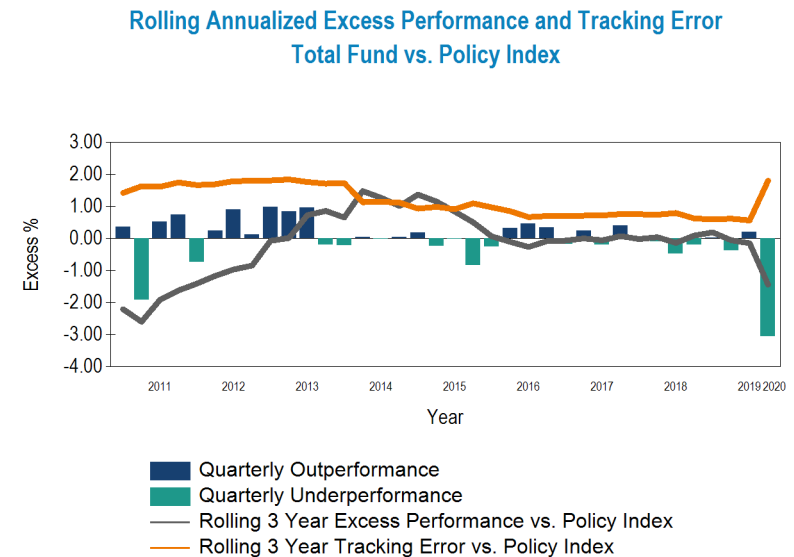
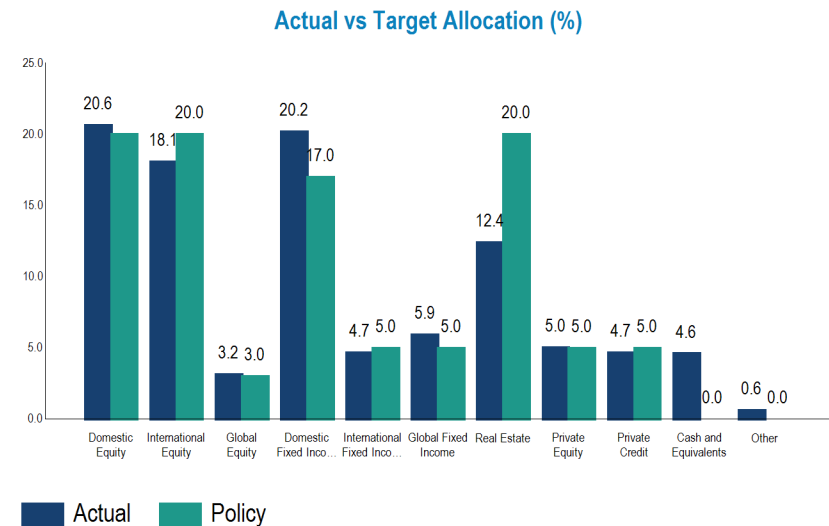


Contributions and withdrawals may include intra-account transfers between managers/funds.

Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund	-12.6	-7.9	-5.1	2.7	3.3	5.8	5.2	4.8
Policy Index	-9.5	-4.6	-1.6	4.1	4.1	6.2	5.8	5.3
InvMetrics Public DB Gross Rank	35	48	50	54	62	74	77	66
Total Fund x Parametric	-11.7	-7.2	-4.3	2.9	3.4	--	--	--
Policy Index	-9.5	-4.6	-1.6	4.1	4.1	--	--	--
InvMetrics Public DB Gross Rank	22	32	33	45	57	--	--	--
Total Domestic Equity	-22.1	-14.6	-10.8	3.7	5.4	10.2	7.8	6.0
Russell 3000	-20.9	-12.7	-9.1	4.0	5.8	10.1	7.5	4.9
InvMetrics Public DB US Eq Gross Rank	47	39	37	21	28	20	16	16
Total International Equity	-22.5	-17.8	-14.4	-1.3	0.1	2.2	2.8	1.9
MSCI ACWI ex USA Gross	-23.3	-17.8	-15.1	-1.5	-0.2	2.5	3.9	2.9
InvMetrics Public DB ex-US Eq Gross Rank	27	42	29	28	35	83	85	92
Total Global Equity	-24.9	-17.8	-17.1	-0.9	1.9	--	--	--
MSCI ACWI Gross	-21.3	-14.0	-10.8	2.0	3.4	--	--	--
InvMetrics Public DB Gbl Eq Gross Rank	88	83	90	78	62	--	--	--
Total Fixed Income	-4.8	-2.4	0.4	2.0	2.2	3.9	4.4	5.1
BBgBarc US Aggregate TR	3.1	5.7	8.9	4.8	3.4	3.9	4.4	5.1
InvMetrics Public DB US Fix Inc Gross Rank	93	94	92	88	82	35	58	60
Total Domestic Fixed Income	-0.2	2.4	5.6	4.0	3.3	--	--	--
BBgBarc US Aggregate TR	3.1	5.7	8.9	4.8	3.4	--	--	--
Total Global Fixed Income	-6.2	-8.0	-6.3	-1.3	0.6	--	--	--
JPM GBI Global TR USD	3.1	3.7	7.4	4.6	3.2	--	--	--

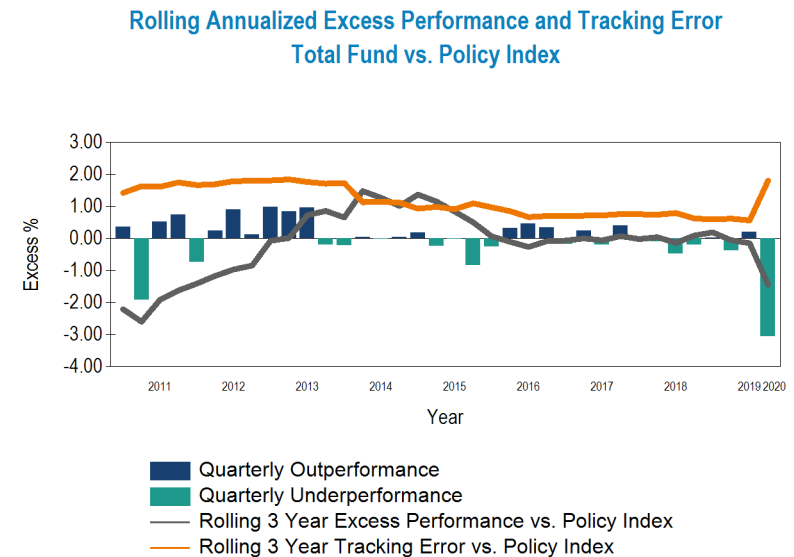
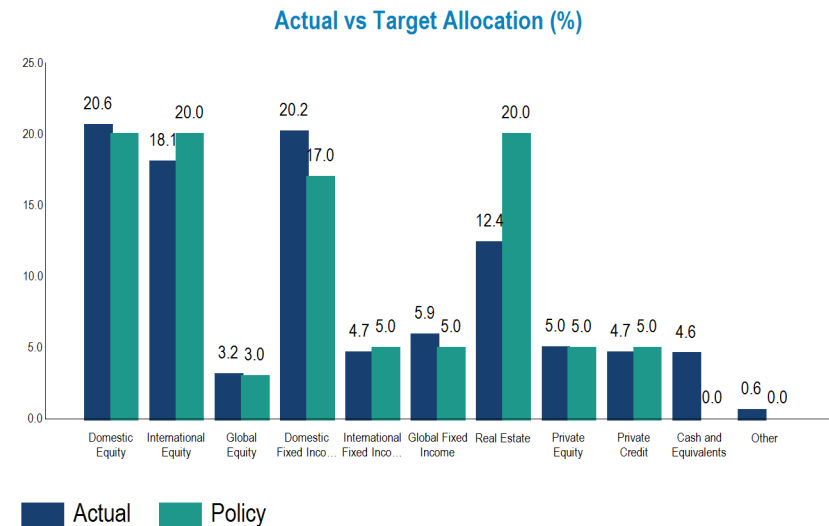


New Policy Index as of 10/1/2019: 20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2020

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Emerging Markets Fixed Income	-19.2	-15.0	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	-14.3	-10.9	--	--	--	--	--	--
Total Real Assets	1.4	3.5	4.4	4.7	4.9	--	--	--
Real Assets Composite Benchmark	-7.7	-5.1	-4.5	1.3	2.5	--	--	--
Total Real Estate	1.4	4.3	5.8	6.6	8.2	9.9	7.2	8.3
NCREIF-ODCE	1.0	3.8	4.9	6.8	8.5	11.4	7.5	8.1
NCREIF Property Index	0.7	3.7	5.3	6.4	7.6	10.2	8.1	8.6
Total Private Equity	0.4	6.8	11.2	15.0	11.3	13.9	--	--
Total Private Credit	3.6	8.3	12.2	9.9	--	--	--	--
Total Opportunistic	0.2	1.2	-3.4	7.1	6.7	--	--	--

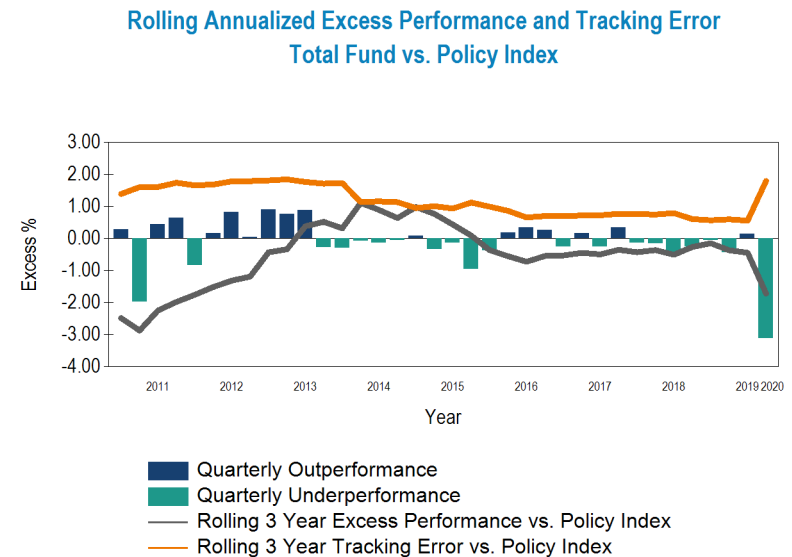
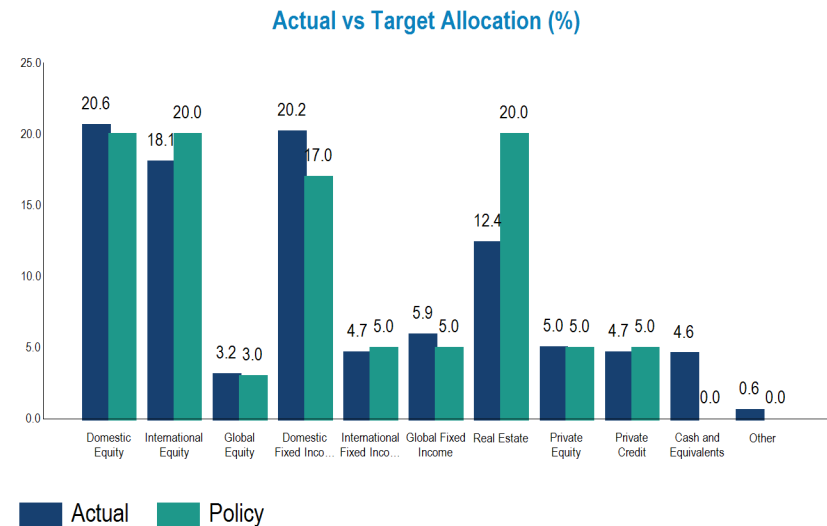


New Policy Index as of 10/1/2019: 20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund	-12.6	-8.1	-5.3	2.4	2.9	5.4	4.8	4.4
Policy Index	-9.5	-4.6	-1.6	4.1	4.1	6.2	5.8	5.3
Total Fund x Parametric	-11.8	-7.4	-4.6	2.6	3.0	--	--	--
Policy Index	-9.5	-4.6	-1.6	4.1	4.1	--	--	--
Total Domestic Equity	-22.2	-14.8	-11.1	3.3	5.0	9.8	7.4	5.6
Russell 3000	-20.9	-12.7	-9.1	4.0	5.8	10.1	7.5	4.9
Total International Equity	-22.6	-18.1	-14.7	-1.6	-0.2	1.8	2.5	1.6
MSCI ACWI ex USA Gross	-23.3	-17.8	-15.1	-1.5	-0.2	2.5	3.9	2.9
Total Global Equity	-25.0	-18.3	-17.7	-1.7	1.0	--	--	--
MSCI ACWI Gross	-21.3	-14.0	-10.8	2.0	3.4	--	--	--
Total Fixed Income	-4.9	-2.6	0.1	1.7	1.8	3.6	4.2	4.8
BBgBarc US Aggregate TR	3.1	5.7	8.9	4.8	3.4	3.9	4.4	5.1
Total Domestic Fixed Income	-0.3	2.2	5.3	3.7	3.0	--	--	--
BBgBarc US Aggregate TR	3.1	5.7	8.9	4.8	3.4	--	--	--
Total Global Fixed Income	-6.3	-8.3	-6.7	-1.8	0.1	--	--	--
JPM GBI Global TR USD	3.1	3.7	7.4	4.6	3.2	--	--	--
Total Emerging Markets Fixed Income	-19.3	-15.2	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	-14.3	-10.9	--	--	--	--	--	--
Total Real Assets	1.4	3.5	4.4	4.7	4.6	--	--	--
Real Assets Composite Benchmark	-7.7	-5.1	-4.5	1.3	2.5	--	--	--
Total Real Estate	1.4	4.3	5.8	6.6	7.8	9.6	6.6	7.5
NCREIF-ODCE	1.0	3.8	4.9	6.8	8.5	11.4	7.5	8.1
NCREIF Property Index	0.7	3.7	5.3	6.4	7.6	10.2	8.1	8.6

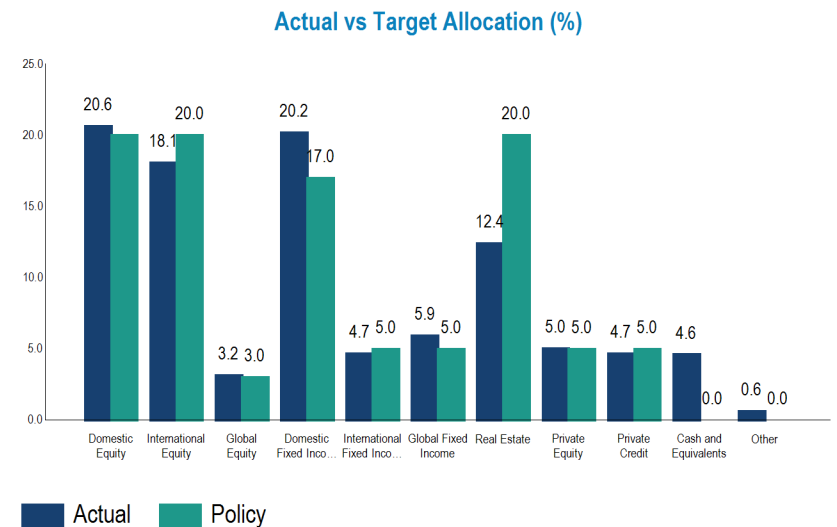


New Policy Index as of 10/1/2019: 20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

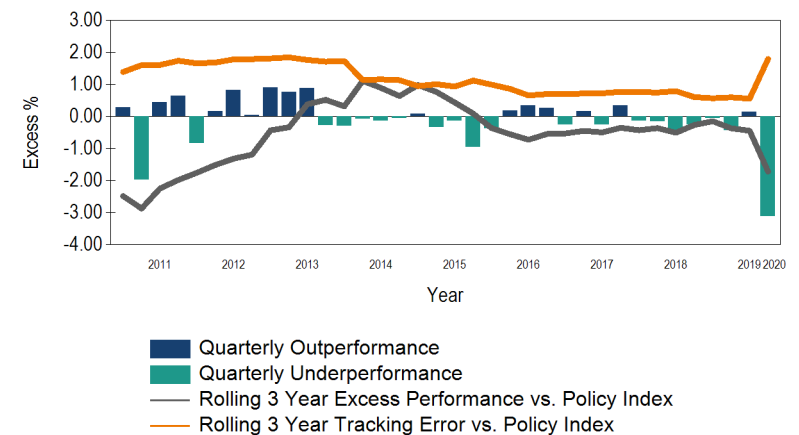
Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2020

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Private Equity	0.4	6.8	11.2	15.0	10.7	13.5	--	--
Total Private Credit	3.6	8.3	12.2	9.9	--	--	--	--
Total Opportunistic	0.2	1.2	-3.4	7.1	6.0	--	--	--



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

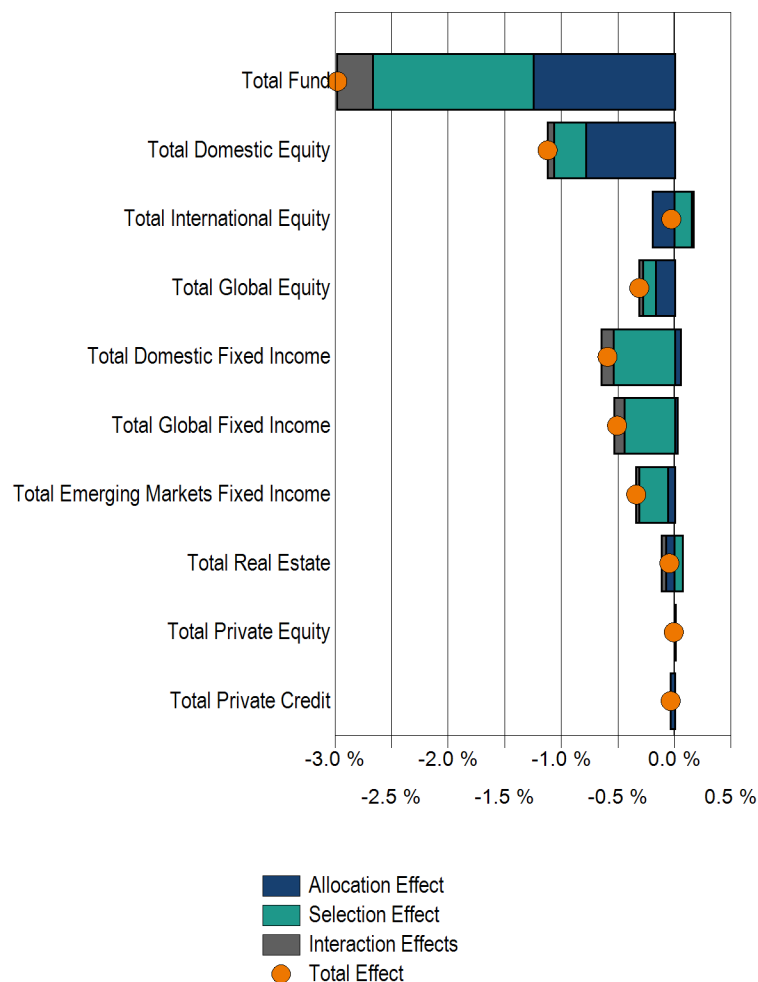


New Policy Index as of 10/1/2019: 20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund Attribution

Period Ending: March 31, 2020

Attribution Effects
3 Months Ending March 31, 2020



Performance Attribution

Last 3 Mo.

Wtd. Actual Return	-12.5%
Wtd. Index Return *	-9.5%
Excess Return	-3.0%
Selection Effect	-1.4%
Allocation Effect	-1.3%
Interaction Effect	-0.3%

*Calculated from policy benchmark returns and policy weightings of each component of the policy benchmark.

Attribution Summary
3 Months Ending March 31, 2020

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	-22.2%	-20.9%	-1.3%	-0.3%	-0.8%	-0.1%	-1.1%
Total International Equity	-22.6%	-23.3%	0.7%	0.2%	-0.2%	0.0%	0.0%
Total Global Equity	-25.0%	-21.3%	-3.8%	-0.1%	-0.2%	0.0%	-0.3%
Total Domestic Fixed Income	-0.3%	3.1%	-3.4%	-0.5%	0.1%	-0.1%	-0.6%
Total Global Fixed Income	-6.3%	3.1%	-9.4%	-0.4%	0.0%	-0.1%	-0.5%
Total Emerging Markets Fixed Income	-19.3%	-14.3%	-5.1%	-0.3%	-0.1%	0.0%	-0.3%
Total Real Estate	1.4%	1.0%	0.4%	0.1%	-0.1%	0.0%	0.0%
Total Private Equity	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Private Credit	3.6%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-12.5%	-9.5%	-3.0%	-1.4%	-1.3%	-0.3%	-3.0%

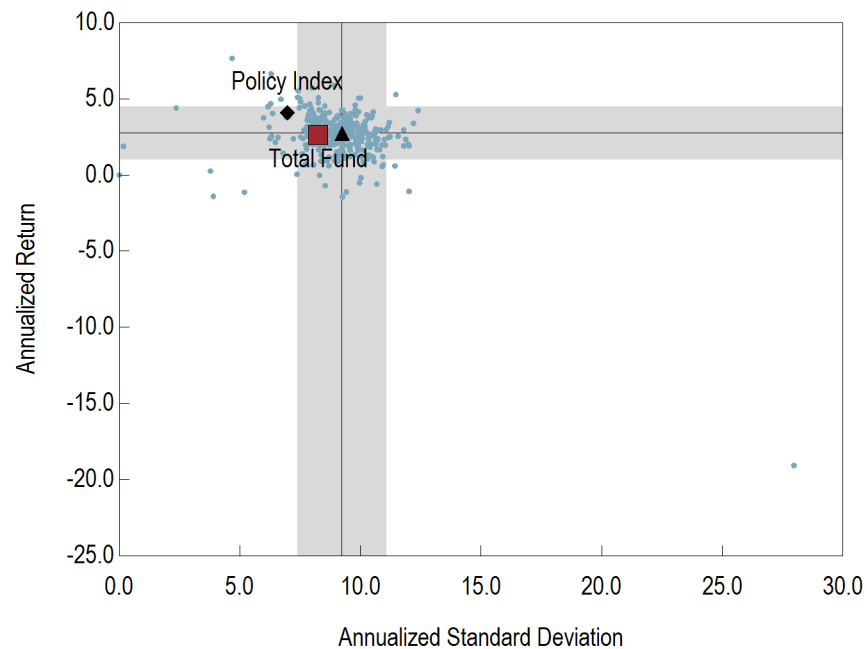
Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

Total Fund Risk Analysis - 3 Years (Gross of Fees)

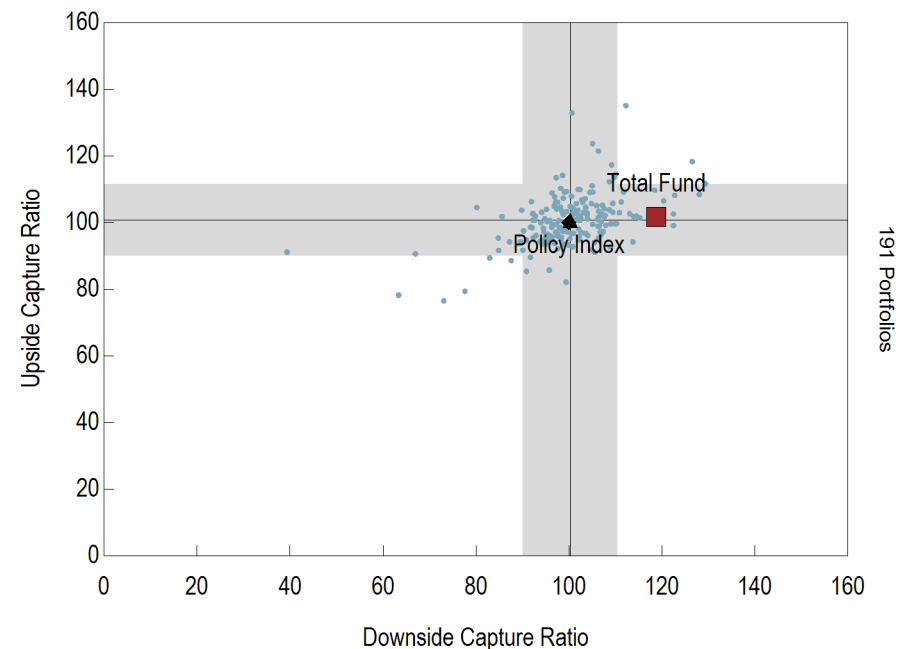
Period Ending: March 31, 2020

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	2.65%	8.26%	-2.13%	1.17	1.74%	0.98	0.11	-0.83	101.72%	118.75%

Risk vs. Return



Up Markets vs. Down Markets



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

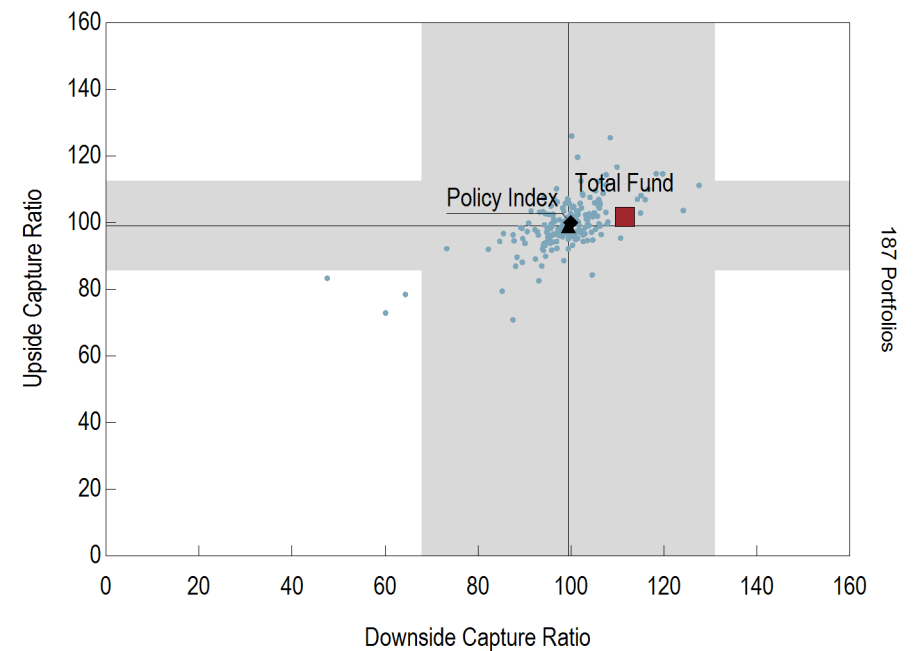
Period Ending: March 31, 2020

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	3.26%	7.64%	-1.31%	1.10	1.41%	0.97	0.28	-0.63	101.65%	111.56%

Risk vs. Return



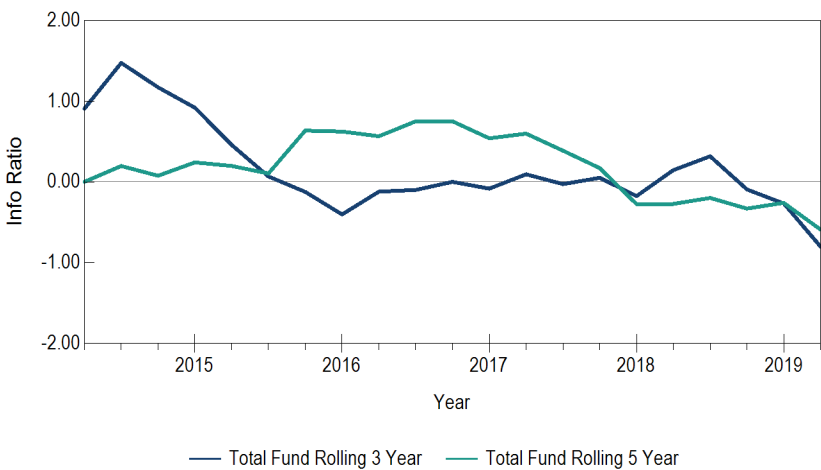
Up Markets vs. Down Markets



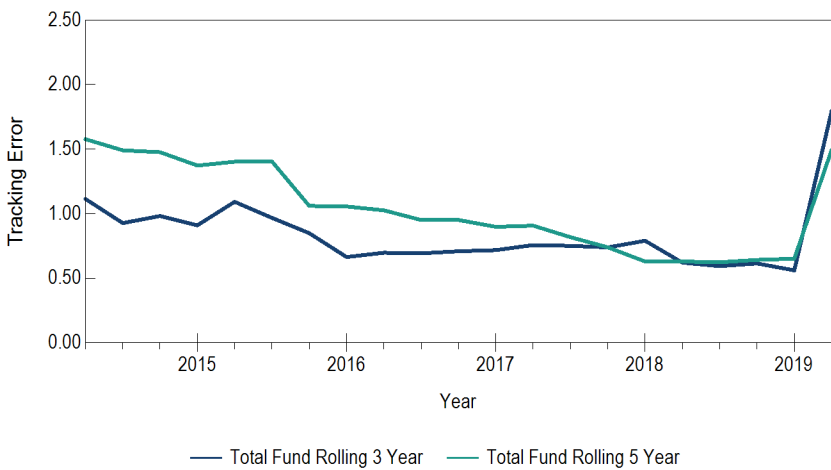
Total Fund
Rolling Risk Statistics (Gross of Fees)

Period Ending: March 31, 2020

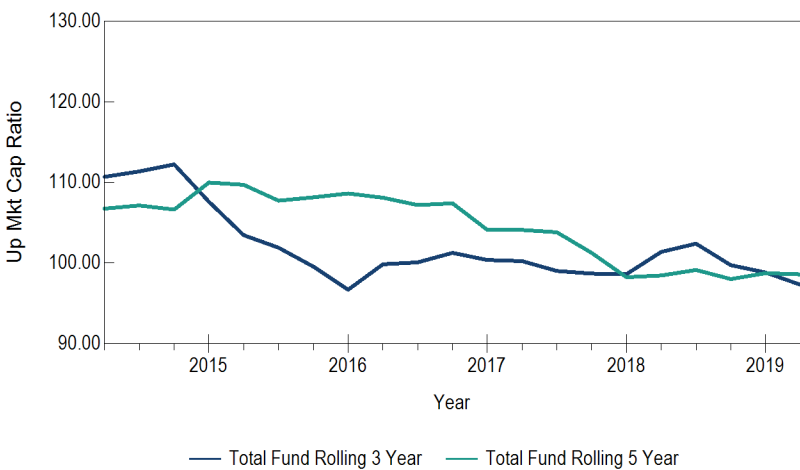
Rolling Information Ratio



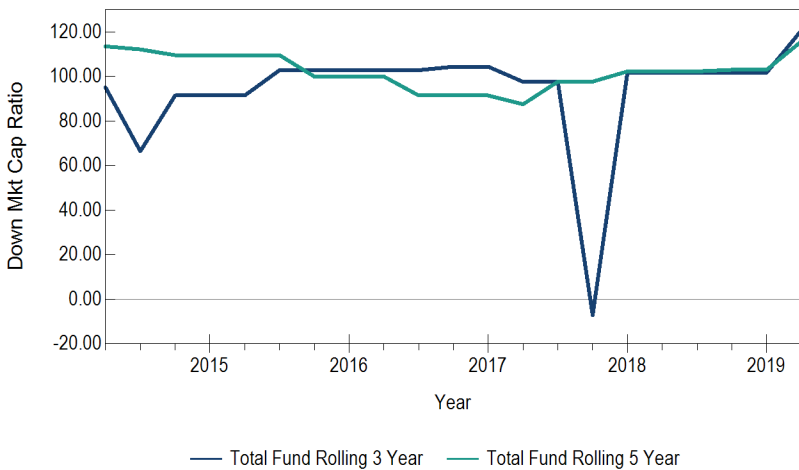
Rolling Tracking Error



Rolling Up Market Capture Ratio (%)



Rolling Down Market Capture Ratio (%)



Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fund	1,454,296,447	100.0	-12.6	-7.9	-5.1	2.7	3.3	5.8	15.7	-2.6	14.3	7.6	-1.2
Policy Index			-9.5	-4.6	-1.6	4.1	4.1	6.2	16.1	-2.4	14.0	8.0	-1.1
InvMetrics Public DB Gross Rank			35	48	50	54	62	74	85	15	71	53	80
Total Fund x Parametric	1,448,997,151	99.6	-11.7	-7.2	-4.3	2.9	3.4	--	15.4	-2.6	14.2	7.6	-1.1
Policy Index			-9.5	-4.6	-1.6	4.1	4.1	--	16.1	-2.4	14.0	8.0	-1.1
InvMetrics Public DB Gross Rank			22	32	33	45	57	--	89	15	72	53	80
Total Domestic Equity	298,736,169	20.5	-22.1	-14.6	-10.8	3.7	5.4	10.2	30.3	-5.0	22.3	11.5	1.6
Russell 3000			-20.9	-12.7	-9.1	4.0	5.8	10.1	31.0	-5.2	21.1	12.7	0.5
InvMetrics Public DB US Eq Gross Rank			47	39	37	21	28	20	40	29	16	77	10
SSGA S&P 500 Flagship Fund	59,635,480	4.1	-19.6	-10.8	-7.0	5.1	6.8	--	31.5	-4.4	21.9	12.0	1.5
S&P 500			-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
eV US Large Cap Core Equity Gross Rank			47	39	42	35	28	--	33	40	52	31	40
QMA Large Cap Core	53,797,215	3.7	-22.4	-14.5	-11.5	2.7	5.3	10.4	29.0	-6.5	22.5	12.5	2.1
S&P 500			-19.6	-10.8	-7.0	5.1	6.7	10.5	31.5	-4.4	21.8	12.0	1.4
eV US Large Cap Core Equity Gross Rank			79	78	77	71	61	41	58	70	42	25	31
Ivy Large Cap Growth	68,818,908	4.7	-12.8	-3.6	3.1	13.9	11.0	--	37.3	3.2	30.2	2.1	7.6
Russell 1000 Growth			-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7
eV US Large Cap Growth Equity Gross Rank			32	25	14	20	24	--	26	15	42	72	26
Boston Partners Large Cap Value	49,415,492	3.4	-28.8	-21.6	-19.2	-2.2	1.4	7.9	24.3	-8.6	20.1	14.7	-3.9
Russell 1000 Value			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8
eV US Large Cap Value Equity Gross Rank			75	74	73	67	71	56	77	55	22	54	65
SSGA Russell Small Cap Completeness Index	21,246,302	1.5	-27.9	-22.9	-20.4	-1.8	1.1	--	27.8	-9.2	18.2	16.5	-3.5
Russell Small Cap Completeness			-27.9	-22.8	-20.4	-1.7	1.2	--	28.0	-9.2	18.3	16.6	-3.4
eV US Small Cap Core Equity Gross Rank			31	33	29	27	41	--	29	37	23	84	68
William Blair SMID Cap Growth	26,962,511	1.9	-20.1	-15.5	-10.0	7.8	7.8	12.7	32.2	-0.9	30.4	8.2	6.1
Russell 2500 Growth			-23.2	-17.8	-14.4	3.4	3.6	10.1	32.7	-7.5	24.5	9.7	-0.2
eV US Mid Cap Growth Equity Gross Rank			63	70	65	44	28	17	77	29	16	22	7
Lee Munder Small Value	18,860,260	1.3	-33.6	-27.4	-25.6	-8.3	-0.6	5.8	27.5	-14.7	8.6	28.4	0.4
Russell 2000 Value			-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5
eV US Small Cap Value Equity Gross Rank			38	31	33	47	27	64	22	56	68	38	9

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Titan Advisors funded 2/1/2016. RREEF liquidated 3/15/2018. Fidelity International Growth liquidated to fund SGA Global Growth in 2Q18. SSGA TIPS liquidated in 12/28/18. Shenkman High Yield liquidated 3/11/2019. PGIM EMD funded 8/26/19. Gresham Commodity and Wellington Commodity liquidated 9/27/19. American Realty funded 12/20/2019. Titan and Aetos liquidated 1Q 2020. Titan holdback value of \$2,262,647 and Aetos holdback value of \$4,433,668 included in total fund market value.

Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total International Equity	261,632,857	18.0	-22.5	-17.8	-14.4	-1.3	0.1	2.2	23.2	-14.3	26.9	6.2	-5.9
MSCI ACWI ex USA Gross			-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
InvMetrics Public DB ex-US Eq Gross Rank			27	42	29	28	35	83	44	43	80	13	85
SSGA MSCI ACWI Ex US Index Fund	86,264,996	5.9	-23.2	-17.8	-15.3	-1.7	-0.4	2.3	21.9	-14.0	27.6	4.8	-5.5
MSCI ACWI ex USA Gross			-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
eV All EAFE Equity Gross Rank			44	50	51	50	60	90	63	42	49	17	96
PIMCO RAE Fundamental Global Ex US Fund	75,789,485	5.2	-29.8	-25.4	-24.1	-6.3	-2.5	--	16.7	-14.7	26.7	13.5	-10.9
MSCI ACWI ex USA Value Gross			-28.5	-24.6	-23.2	-5.9	-2.9	--	16.5	-13.4	23.3	9.6	-9.6
eV All EAFE Equity Gross Rank			91	96	95	93	91	--	95	47	53	1	99
SGA Global Growth	99,578,376	6.8	-15.2	-11.0	-4.5	--	--	--	31.1	--	--	--	--
MSCI ACWI ex USA Growth Gross			-18.2	-11.0	-6.9	--	--	--	27.8	--	--	--	--
eV ACWI ex-US Core Equity Gross Rank			1	5	2	--	--	--	9	--	--	--	--
Total Global Equity	45,633,327	3.1	-24.9	-17.8	-17.1	-0.9	1.9	--	25.2	-15.3	33.7	16.1	-11.5
MSCI ACWI Gross			-21.3	-14.0	-10.8	2.0	3.4	--	27.3	-8.9	24.6	8.5	-1.8
InvMetrics Public DB Gbl Eq Gross Rank			88	83	90	78	62	--	44	94	1	2	99
Skellig DST Water Fund	45,633,327	3.1	-24.9	-17.8	-17.1	-0.9	1.9	--	25.2	-15.3	33.7	16.1	-11.5
MSCI ACWI Gross			-21.3	-14.0	-10.8	2.0	3.4	--	27.3	-8.9	24.6	8.5	-1.8
eV Global All Cap Equity Gross Rank			78	74	81	73	66	--	63	91	9	6	96
Total Fixed Income	445,980,472	30.7	-4.8	-2.4	0.4	2.0	2.2	3.9	8.4	0.5	4.3	5.5	-0.8
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
InvMetrics Public DB US Fix Inc Gross Rank			93	94	92	88	82	35	36	51	50	37	77
Total Domestic Fixed Income	292,116,591	20.1	-0.2	2.4	5.6	4.0	3.3	--	9.3	0.1	4.4	5.1	-0.3
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	--	8.7	0.0	3.5	2.6	0.6
BlackRock Fixed Income	108,930,983	7.5	1.9	4.6	7.9	4.7	3.4	4.2	9.0	0.4	3.9	3.1	1.1
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
eV All US Fixed Inc Gross Rank			21	16	17	21	30	46	45	54	54	53	39
Doubleline Core Plus	89,429,570	6.1	-2.9	-0.8	2.3	2.8	--	--	8.6	0.0	4.2	4.8	--
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
eV US Core Plus Fixed Inc Gross Rank			82	87	87	92	--	--	93	33	86	52	--
MackKay Shields Core Plus	93,756,038	6.4	0.0	3.1	6.3	4.3	--	--	10.0	-0.6	5.0	5.1	--
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
eV US Core Plus Fixed Inc Gross Rank			44	39	43	47	--	--	53	67	52	46	--

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Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Global Fixed Income	86,013,306	5.9	-6.2	-8.0	-6.3	-1.3	0.6	--	1.3	2.4	3.0	7.1	-3.4
<i>JPM GBI Global TR USD</i>			3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Franklin Templeton Global Bond Plus	86,013,306	5.9	-6.2	-8.0	-6.3	-1.3	0.5	--	1.3	2.4	3.0	6.8	-3.5
<i>JPM GBI Global TR USD</i>			3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
<i>eV Global Government Fixed Inc Gross Rank</i>			97	99	99	99	97	--	99	10	87	8	58
Total Emerging Markets Fixed Income	67,850,575	4.7	-19.2	-15.0	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI Global Div/50% JPM GBI EM Global Div</i>			-14.3	-10.9	--	--	--	--	--	--	--	--	--
PGIM Emerging Markets Debt	67,850,575	4.7	-19.2	--	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI Global Div/50% JPM GBI EM Global Div</i>			-14.3	--	--	--	--	--	--	--	--	--	--
<i>eV Emg Mkts Fixed Inc - Blended Currency Gross Rank</i>			91	--	--	--	--	--	--	--	--	--	--
Total Real Assets	179,431,329	12.3	1.4	3.5	4.4	4.7	4.9	--	6.0	1.6	5.0	10.4	0.4
<i>Real Assets Composite Benchmark</i>			-7.7	-5.1	-4.5	1.3	2.5	--	6.9	0.5	5.2	9.4	-0.7
Total Real Estate	179,431,329	12.3	1.4	4.3	5.8	6.6	8.2	9.9	5.2	8.8	4.3	9.0	16.0
<i>NCREIF-ODCE</i>			1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
<i>NCREIF Property Index</i>			0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
RREEF America II	168,535,044	11.6	1.4	4.3	5.9	6.5	8.2	11.9	5.3	8.6	4.4	9.3	16.7
<i>NCREIF-ODCE</i>			1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
<i>NCREIF Property Index</i>			0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
American Realty	10,890,947	0.7	0.3	--	--	--	--	--	--	--	--	--	--
<i>NCREIF-ODCE</i>			1.0	--	--	--	--	--	--	--	--	--	--
<i>NCREIF Property Index</i>			0.7	--	--	--	--	--	--	--	--	--	--

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Titan Advisors funded 2/1/2016. RREEF liquidated 3/15/2018. Fidelity International Growth liquidated to fund SGA Global Growth in 2Q18. SSGA TIPS liquidated in 12/28/18. Shenkman High Yield liquidated 3/11/2019. PGIM EMD funded 8/26/19. Gresham Commodity and Wellington Commodity liquidated 9/27/19. American Realty funded 12/20/2019. Titan and Aetos liquidated 1Q 2020. Titan holdback value of \$2,262,647 and Aetos holdback value of \$4,433,668 included in total fund market value.

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fund	1,454,296,447	100.0	-12.6	-8.1	-5.3	2.4	2.9	5.4	15.4	-2.9	13.9	7.1	-1.6
Policy Index			-9.5	-4.6	-1.6	4.1	4.1	6.2	16.1	-2.4	14.0	8.0	-1.1
Total Fund x Parametric	1,448,997,151	99.6	-11.8	-7.4	-4.6	2.6	3.0	--	15.1	-2.9	13.8	7.0	-1.6
Policy Index			-9.5	-4.6	-1.6	4.1	4.1	--	16.1	-2.4	14.0	8.0	-1.1
Total Domestic Equity	298,736,169	20.5	-22.2	-14.8	-11.1	3.3	5.0	9.8	29.8	-5.4	21.9	11.1	1.2
Russell 3000			-20.9	-12.7	-9.1	4.0	5.8	10.1	31.0	-5.2	21.1	12.7	0.5
SSGA S&P 500 Flagship Fund	59,635,480	4.1	-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
S&P 500			-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
QMA Large Cap Core	53,797,215	3.7	-22.5	-14.7	-11.8	2.4	4.9	10.1	28.6	-6.8	22.1	12.1	1.8
S&P 500			-19.6	-10.8	-7.0	5.1	6.7	10.5	31.5	-4.4	21.8	12.0	1.4
Ivy Large Cap Growth	68,818,908	4.7	-12.9	-4.0	2.6	13.3	10.4	--	36.6	2.7	29.5	1.6	7.1
Russell 1000 Growth			-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7
Boston Partners Large Cap Value	49,415,492	3.4	-28.9	-21.9	-19.6	-2.7	0.9	7.5	23.8	-9.0	19.6	14.2	-4.4
Russell 1000 Value			-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8
SSGA Russell Small Cap Completeness Index	21,246,302	1.5	-27.9	-22.9	-20.5	-1.8	1.1	--	27.8	-9.2	18.1	16.5	-3.5
Russell Small Cap Completeness			-27.9	-22.8	-20.4	-1.7	1.2	--	28.0	-9.2	18.3	16.6	-3.4
William Blair SMID Cap Growth	26,962,511	1.9	-20.2	-16.1	-10.7	6.9	6.8	11.7	31.1	-1.7	29.3	7.2	5.2
Russell 2500 Growth			-23.2	-17.8	-14.4	3.4	3.6	10.1	32.7	-7.5	24.5	9.7	-0.2
Lee Munder Small Value	18,860,260	1.3	-33.8	-27.9	-26.3	-9.1	-1.5	4.8	26.3	-15.5	7.7	27.3	-0.5
Russell 2000 Value			-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5
Total International Equity	261,632,857	18.0	-22.6	-18.1	-14.7	-1.6	-0.2	1.8	22.7	-14.5	26.5	5.9	-6.2
MSCI ACWI ex USA Gross			-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
SSGA MSCI ACWI Ex US Index Fund	86,264,996	5.9	-23.2	-17.9	-15.3	-1.7	-0.4	2.2	21.8	-14.0	27.5	4.7	-5.5
MSCI ACWI ex USA Gross			-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
PIMCO RAE Fundamental Global Ex US Fund	75,789,485	5.2	-29.9	-25.7	-24.5	-6.8	-3.0	--	16.1	-15.1	26.0	13.0	-11.4
MSCI ACWI ex USA Value Gross			-28.5	-24.6	-23.2	-5.9	-2.9	--	16.5	-13.4	23.3	9.6	-9.6
SGA Global Growth	99,578,376	6.8	-15.3	-11.3	-4.9	--	--	--	30.5	--	--	--	--
MSCI ACWI ex USA Growth Gross			-18.2	-11.0	-6.9	--	--	--	27.8	--	--	--	--
Total Global Equity	45,633,327	3.1	-25.0	-18.3	-17.7	-1.7	1.0	--	24.2	-15.9	32.6	15.1	-12.3
MSCI ACWI Gross			-21.3	-14.0	-10.8	2.0	3.4	--	27.3	-8.9	24.6	8.5	-1.8
Skellig DST Water Fund	45,633,327	3.1	-25.0	-18.3	-17.7	-1.7	1.0	--	24.2	-15.9	32.6	15.1	-12.3
MSCI ACWI Gross			-21.3	-14.0	-10.8	2.0	3.4	--	27.3	-8.9	24.6	8.5	-1.8

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2020

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fixed Income	445,980,472	30.7	-4.9	-2.6	0.1	1.7	1.8	3.6	8.1	0.1	3.9	5.1	-1.1
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
Total Domestic Fixed Income	292,116,591	20.1	-0.3	2.2	5.3	3.7	3.0	--	9.0	-0.2	4.1	4.8	-0.5
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	--	8.7	0.0	3.5	2.6	0.6
BlackRock Fixed Income	108,930,983	7.5	1.8	4.4	7.6	4.4	3.2	4.0	8.7	0.1	3.6	2.9	0.8
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
Doubleline Core Plus	89,429,570	6.1	-3.0	-1.0	2.0	2.5	--	--	8.3	-0.3	3.9	4.6	--
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
MacKay Shields Core Plus	93,756,038	6.4	-0.1	2.8	5.9	3.9	--	--	9.6	-1.0	4.5	4.7	--
BBgBarc US Aggregate TR			3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
Total Global Fixed Income	86,013,306	5.9	-6.3	-8.3	-6.7	-1.8	0.1	--	0.9	1.9	2.4	6.4	-3.9
JPM GBI Global TR USD			3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Franklin Templeton Global Bond Plus	86,013,306	5.9	-6.3	-8.3	-6.7	-1.8	0.0	--	0.9	1.9	2.4	6.1	-4.1
JPM GBI Global TR USD			3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Total Emerging Markets Fixed Income	67,850,575	4.7	-19.3	-15.2	--	--	--	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			-14.3	-10.9	--	--	--	--	--	--	--	--	--
PGIM Emerging Markets Debt	67,850,575	4.7	-19.3	--	--	--	--	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			-14.3	--	--	--	--	--	--	--	--	--	--
Total Real Assets	179,431,329	12.3	1.4	3.5	4.4	4.7	4.6	--	6.0	1.6	5.0	9.5	-0.4
Real Assets Composite Benchmark			-7.7	-5.1	-4.5	1.3	2.5	--	6.9	0.5	5.2	9.4	-0.7
Total Real Estate	179,431,329	12.3	1.4	4.3	5.8	6.6	7.8	9.6	5.2	8.8	4.3	8.0	15.1
NCREIF-ODCE			1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index			0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
RREEF America II	168,535,044	11.6	1.4	4.3	5.9	6.5	7.8	11.4	5.3	8.6	4.4	8.2	15.7
NCREIF-ODCE			1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index			0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
American Realty	10,890,947	0.7	0.3	--	--	--	--	--	--	--	--	--	--
NCREIF-ODCE			1.0	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index			0.7	--	--	--	--	--	--	--	--	--	--

Total Fund

Performance Analysis - 5 Years (Gross of Fees)

Period Ending: March 31, 2020

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
SSGA S&P 500 Flagship Fund	6.77%	13.66%	0.04%	1.00	0.04%	1.00	0.41	1.01	100.31%	100.00%
QMA Large Cap Core	5.27%	14.74%	-1.96%	1.07	1.87%	0.99	0.28	-0.78	101.39%	107.08%
Ivy Large Cap Growth	10.96%	13.72%	1.04%	0.96	3.07%	0.95	0.72	0.20	98.27%	96.10%
Boston Partners Large Cap Value	1.37%	15.81%	-0.63%	1.05	2.88%	0.97	0.02	-0.19	103.84%	103.58%
SSGA Russell Small Cap Completeness Index	1.14%	17.71%	-0.05%	1.00	0.09%	1.00	0.00	-0.63	99.65%	100.03%
William Blair SMID Cap Growth	7.75%	15.70%	4.66%	0.85	4.51%	0.95	0.42	0.91	90.63%	83.46%
Lee Munder Small Value	-0.63%	18.97%	1.65%	0.94	3.10%	0.98	-0.09	0.58	93.50%	94.39%
SSGA MSCI ACWI Ex US Index Fund	-0.36%	14.48%	-0.20%	1.00	0.09%	1.00	-0.10	-2.07	99.06%	100.24%
PIMCO RAE Fundamental Global Ex US Fund	-2.50%	16.49%	0.47%	1.02	2.53%	0.98	-0.22	0.17	103.49%	100.00%
BlackRock Fixed Income	3.44%	3.08%	0.17%	0.97	0.62%	0.96	0.75	0.14	101.74%	100.19%
Franklin Templeton Global Bond Plus	0.52%	6.58%	1.63%	-0.35	9.41%	0.08	-0.09	-0.28	-23.70%	-73.26%
RREEF America II	8.15%	3.80%	3.95%	0.50	3.81%	0.23	1.85	-0.08	44.62%	--
TA Associates Realty	2.91%	9.32%	-2.38%	0.69	9.10%	0.06	0.19	-0.52	40.33%	--

IRR Analysis as of IRR date												
Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 3/31/2020 ³	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ⁵	IRR Date
Private Equity												
2004	Pantheon USA Fund VI	\$1,835,471	\$15,000,000	\$14,175,000	95%	\$825,000	\$20,165,924	\$2,717,493	142.3%	155.2%	6.9%	12/31/19
2005	BlackRock Private Capital II ⁶	\$3,265,413	\$15,000,000	\$15,000,000	100%	\$0	\$21,829,974	\$3,976,408	145.5%	167.3%	7.2%	09/30/19
2011	Stepstone Secondary Opportunities Fund II ⁷	\$12,226,799	\$27,500,000	\$27,500,000	100%	\$0	\$24,014,712	\$13,137,352	87.3%	131.8%	12.0%	09/30/19
2016	Ocean Avenue Fund III	\$22,574,086	\$20,000,000	\$17,400,000	87%	\$2,600,000	\$3,400,000	\$21,667,413	19.5%	149.3%	29.9%	12/31/19
2016	Pathway Private Equity Fund Investors 8	\$19,630,542	\$20,000,000	\$13,778,407	69%	\$6,221,593	\$1,006,360	\$18,789,582	7.3%	149.8%	18.5%	09/30/19
2017	Pathway Private Equity Fund Investors 9 ⁴	\$10,578,054	\$20,000,000	\$9,383,597	47%	\$10,616,403	\$75,744	\$0	0.8%	113.5%	N/A	N/A
2019	Ocean Avenue Fund IV ⁴	\$2,264,923	\$20,000,000	\$2,400,000	12%	\$17,600,000	\$0	\$0	0.0%	94.4%	N/A	N/A
2020	Pathway Private Equity Fund Investors 10 ⁴	\$286,052	\$10,000,000	\$286,052	3%	\$9,713,948	\$0	\$0	0.0%	100.0%	N/A	N/A
Private Credit												
2016	TPG Diversified Credit	\$67,730,944	\$80,000,000	\$57,744,135	72%	\$22,255,865	\$1,519,264	\$62,193,992	2.6%	119.9%	10.0%	12/31/19
Private Real Estate												
2007	TA Associates VIII	\$5,338	\$30,000,000	\$30,000,000	100%	\$0	\$29,781,404	\$17,480	99.3%	99.3%	-0.1%	12/31/19
Opportunistic												
2010	KKR Mezzanine Partners	\$3,586,789	\$15,000,000	\$13,520,350	90%	\$1,479,650	\$17,819,791	\$3,586,789	131.8%	158.3%	7.5%	03/31/20
2011	PIMCO Bravo	\$162,016	\$15,000,000	\$15,000,000	100%	\$0	\$27,147,672	\$148,451	181.0%	182.1%	22.1%	09/30/19

Total Private Markets	\$144,146,427	\$287,500,000	\$216,187,541	75%	\$71,312,459	\$146,760,845	\$126,234,960	67.9%	134.6%
% of Portfolio (Market Value)	9.9%								

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

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

³Last known market value + capital calls - distributions

⁴IRR currently unavailable for these funds.

⁵Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

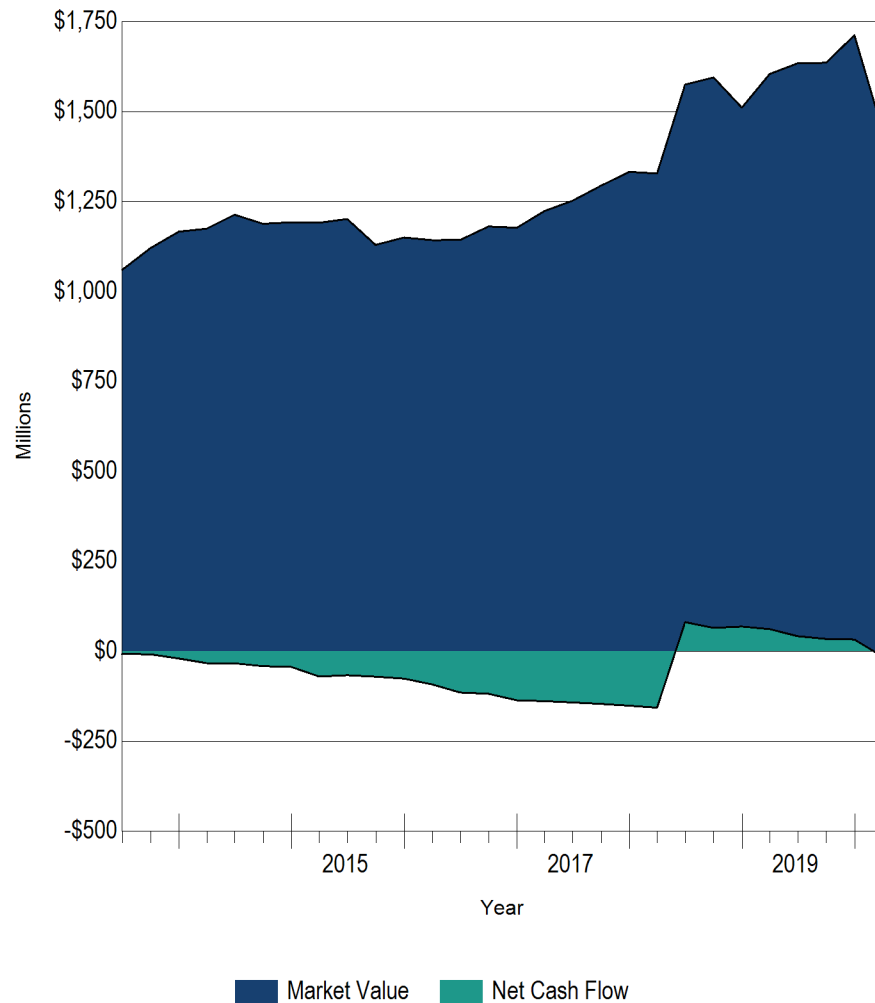
⁶BlackRock: Total capital called is \$15,519,967 which includes recycled distributions.

⁷StepStone: \$8,782,174 in recallable distributions

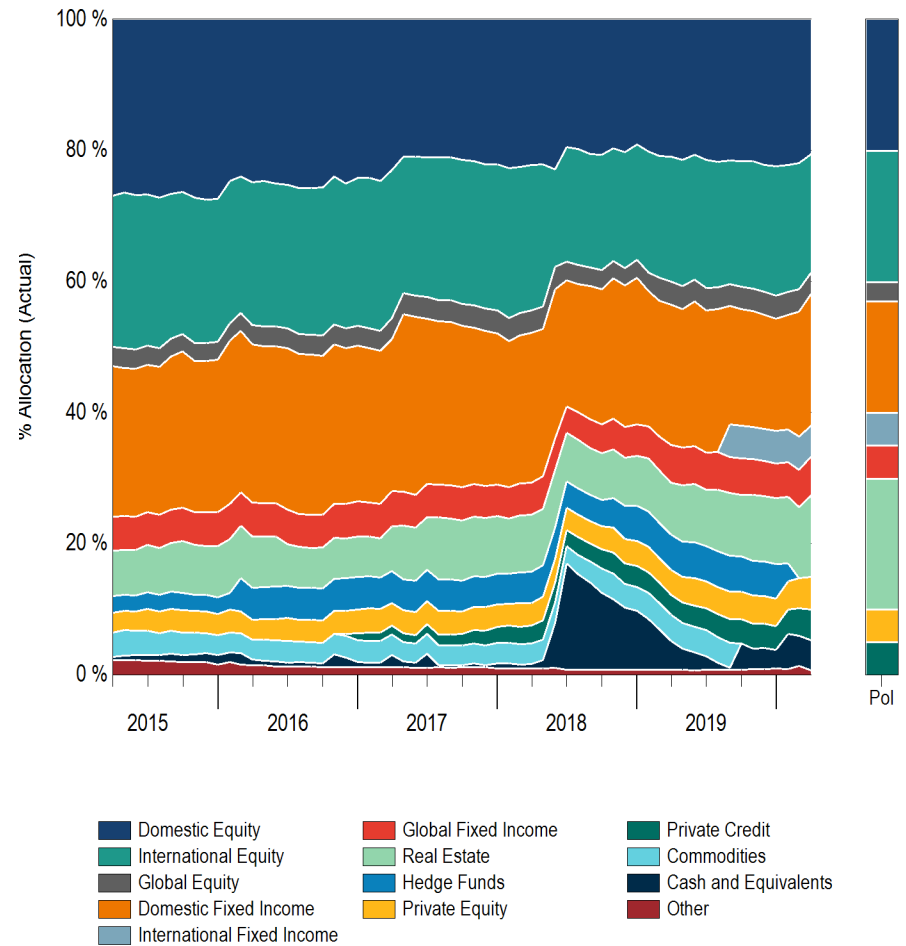
Total Fund Asset Allocation History

Period Ending: March 31, 2020

Market Value History



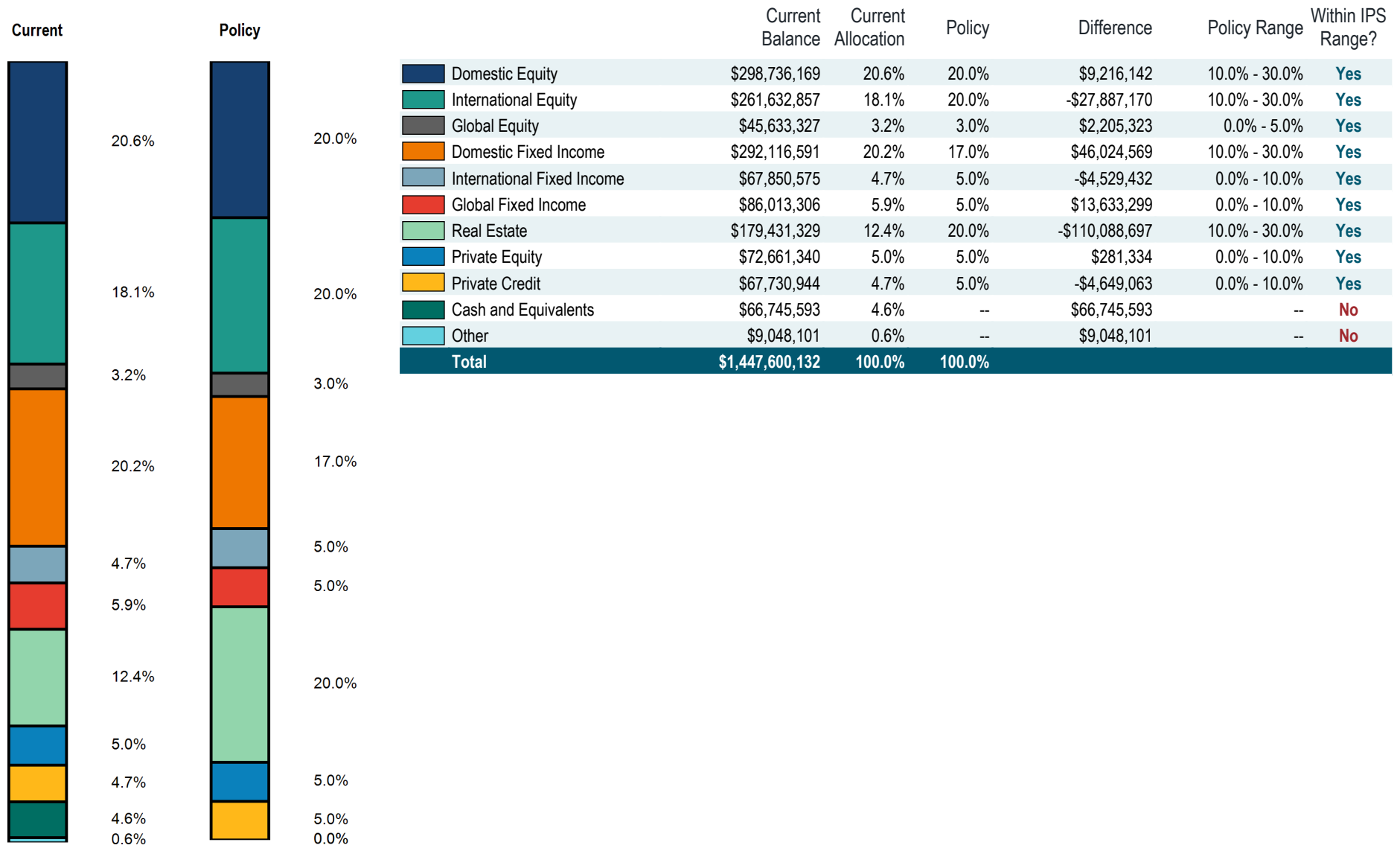
Asset Allocation History



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

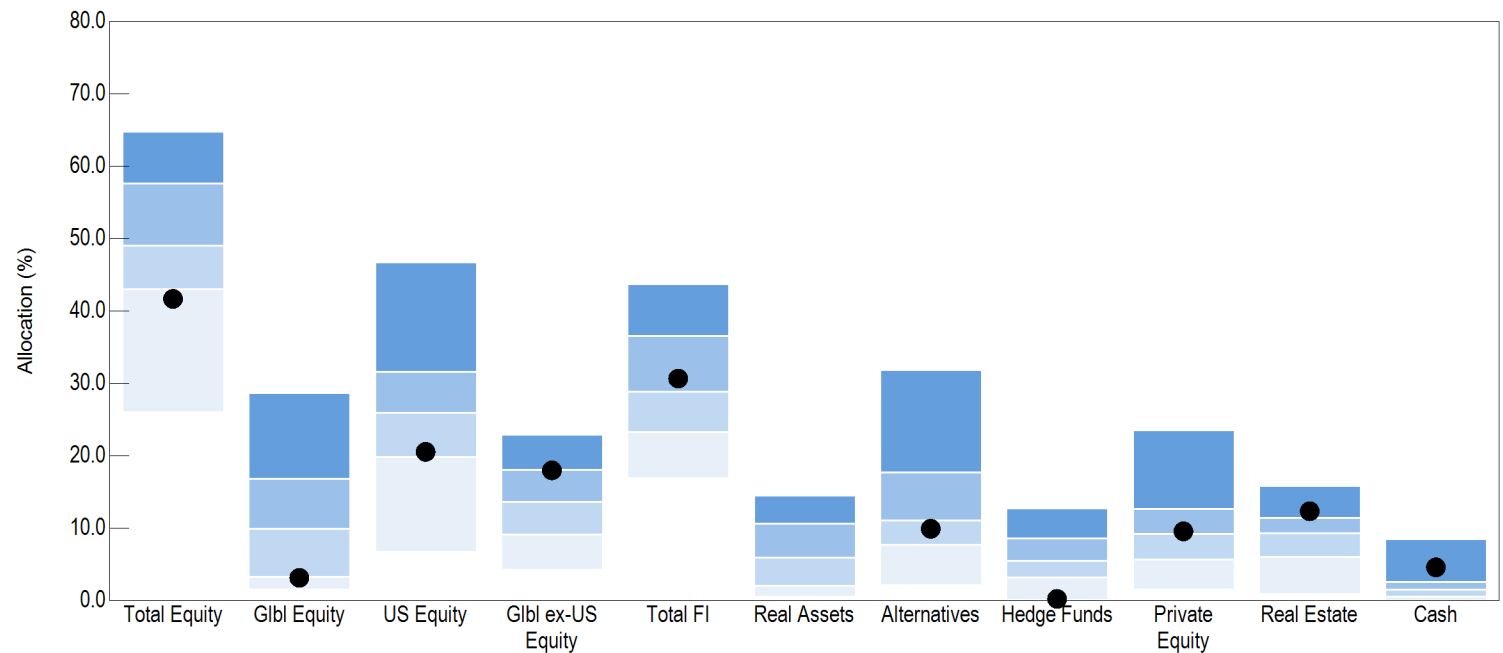
Total Fund Asset Allocation vs. Policy

Period Ending: March 31, 2020



Total Fund market value doesn't include holdback balance of \$6,696,315.

Total Plan Allocation vs. InvMetrics Public DB Gross
As of March 31, 2020



Allocation (Rank)

5th Percentile	64.8	28.6	46.7	22.9	43.7	14.5	31.9	12.7	23.5	15.9	8.5	--
25th Percentile	57.7	16.9	31.7	18.1	36.6	10.7	17.8	8.7	12.8	11.5	2.7	--
Median	49.1	10.0	26.0	13.7	28.9	6.0	11.1	5.5	9.3	9.3	1.6	--
75th Percentile	43.1	3.4	19.9	9.2	23.4	2.1	7.8	3.2	5.8	6.1	0.7	--
95th Percentile	26.1	1.6	6.8	4.3	17.0	0.6	2.2	0.2	1.6	0.9	0.1	--
# of Portfolios	251	95	169	212	250	76	169	86	116	179	232	--
● Total Fund	41.7 (79)	3.1 (81)	20.5 (74)	18.0 (26)	30.7 (44)	--	--	9.9 (61)	0.2 (95)	9.6 (47)	12.3 (15)	4.6 (14) --

Investment Fund Fee Analysis

Period Ending: March 31, 2020

Account	Fee Schedule	Market Value As of 3/31/2020	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
American Realty	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	\$10,890,947	0.8%	\$135,691	1.25%
BlackRock Alternative Advisors	120,000 Annually	\$3,265,413	0.2%	\$120,000	3.67%
BlackRock Fixed Income	0.25% of First 100.0 Mil, 0.25% of Next 100.0 Mil	\$108,930,983	7.5%	\$272,327	0.25%
Boston Partners Large Cap Value	0.45% of First 50.0 Mil, 0.35% of Next 50.0 Mil, 0.30% Thereafter	\$49,415,492	3.4%	\$222,370	0.45%
Doubleline Core Plus	0.28% of First 100.0 Mil, 0.25% Thereafter	\$89,429,570	6.2%	\$250,403	0.28%
Franklin Templeton Global Bond Plus	0.62% of First 50.0 Mil, 0.51% of Next 50.0 Mil, 0.45% Thereafter	\$86,013,306	5.9%	\$493,668	0.57%
Ivy Large Cap Growth	0.60% of First 25.0 Mil, 0.50% of Next 25.0 Mil, 0.40% Thereafter	\$68,818,908	4.8%	\$350,276	0.51%
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	0.38% of Assets	\$3,586,789	0.2%	\$13,450	0.38%
Lee Munder Small Value	0.70% of Assets	\$18,860,260	1.3%	\$132,022	0.70%
MacKay Shields Core Plus	0.40% of Assets	\$93,756,038	6.5%	\$375,024	0.40%
Mellon Capital Cash Account	No Fee	\$66,745,593	4.6%	--	--
Ocean Avenue Fund III	0.85% of Assets	\$22,574,086	1.6%	\$191,880	0.85%
Ocean Avenue Fund IV	1.25% of Assets	\$2,264,923	0.2%	\$28,312	1.25%
Pantheon Ventures	0.47% of Assets	\$1,835,471	0.1%	\$8,700	0.47%
Parametric	Asset Based Fee: 0.0375% (Quarterly) Retainer Fee: \$4,500 (Quarterly) Minimum Expense: \$50,000 (Annual)	\$5,299,296	0.4%	--	--
Pathway Private Equity Fund Investors 10	0.58% of Assets	\$286,052	0.0%	\$1,659	0.58%
Pathway Private Equity Fund Investors 8	0.61% of Assets	\$19,630,542	1.4%	\$119,746	0.61%
Pathway Private Equity Fund Investors 9	0.58% of Assets	\$10,578,054	0.7%	\$61,353	0.58%
PGIM Emerging Markets Debt	0.55% of First 75.0 Mil, 0.45% of Next 100.0 Mil, 0.35% Thereafter	\$67,850,575	4.7%	\$373,178	0.55%
PIMCO Bravo	1.60% of Assets	\$162,016	0.0%	\$10,369	6.40%

Fees shown for Pathway are estimated effective average fees over 15-year fund lifespan.

Investment Fund Fee Analysis

Period Ending: March 31, 2020

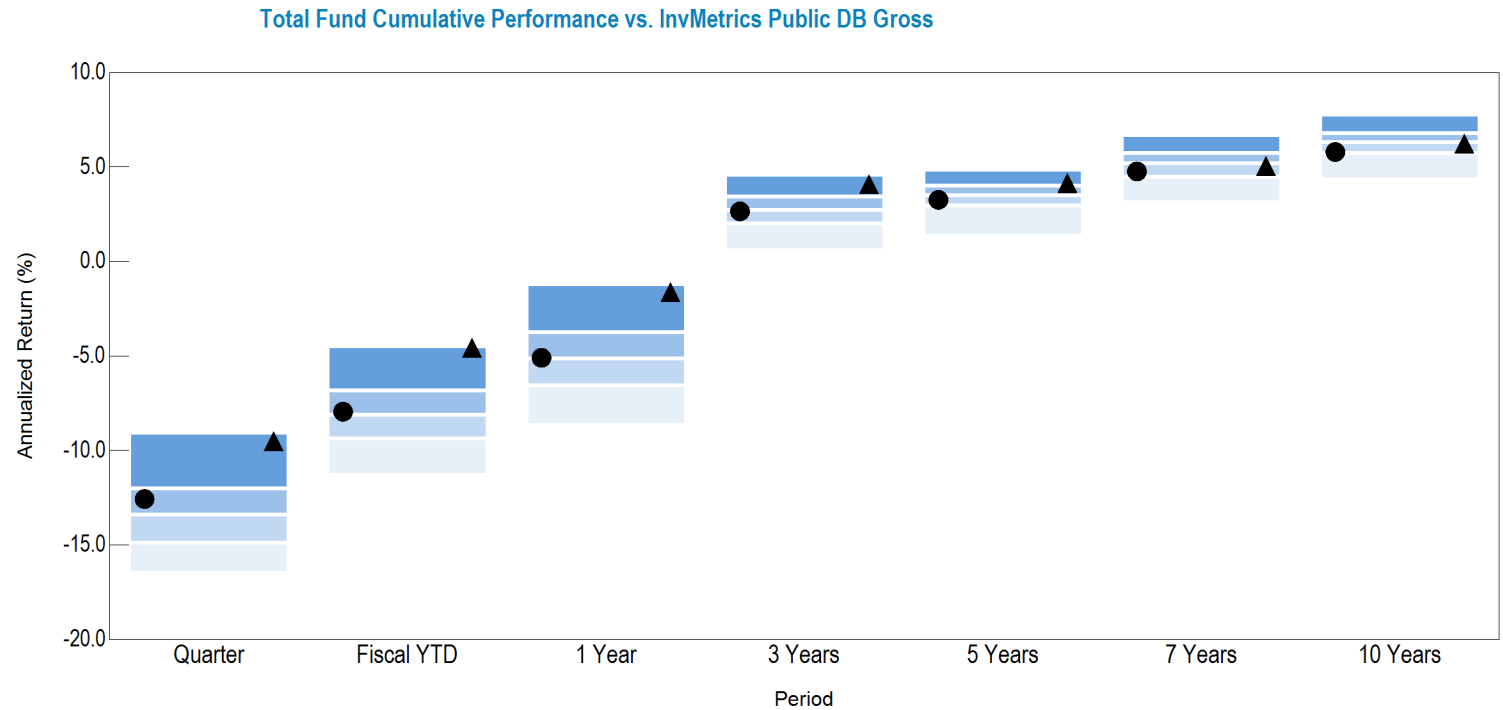
Account	Fee Schedule	Market Value As of 3/31/2020	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
PIMCO RAE Fundamental Global Ex US Fund	0.78% of First 25.0 Mil, 0.43% of Next 75.0 Mil, 0.38% Thereafter	\$75,789,485	5.2%	\$413,395	0.55%
QMA Large Cap Core	0.35% of First 50.0 Mil, 0.30% of Next 50.0 Mil, 0.25% Thereafter	\$53,797,215	3.7%	\$186,392	0.35%
RREEF America II	0.95% of Assets	\$168,535,044	11.6%	\$1,601,083	0.95%
SGA Global Growth	0.45% of Assets	\$99,578,376	6.9%	\$448,103	0.45%
Skellig DST Water Fund	0.77% of Assets	\$45,633,327	3.2%	\$349,095	0.76%
SSGA MSCI ACWI Ex US Index Fund	0.08% of First 25.0 Mil, 0.07% of Next 25.0 Mil, 0.06% Thereafter	\$86,264,996	6.0%	\$59,259	0.07%
SSGA Russell Small Cap Completeness Index	0.05% of First 25.0 Mil, 0.05% of Next 25.0 Mil, 0.04% Thereafter	\$21,246,302	1.5%	\$10,623	0.05%
SSGA S&P 500 Flagship Fund	0.03% of Assets	\$59,635,480	4.1%	\$17,891	0.03%
Stepstone Secondary Opportunities Fund II	343,750 Annually	\$12,226,799	0.8%	\$343,750	2.81%
TA Associates Realty	0.60% of Assets	\$5,338	0.0%	\$32	0.60%
TPG Diversified Credit	No Fee	\$67,730,944	4.7%	--	--
William Blair SMID Cap Growth	0.95% of First 10.0 Mil, 0.80% of Next 20.0 Mil, 0.75% of Next 20.0 Mil, 0.70% of Next 50.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$26,962,511	1.9%	\$230,700	0.86%
Investment Management Fee		\$1,447,600,132	100.0%	\$6,820,750	0.47%

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

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: March 31, 2020



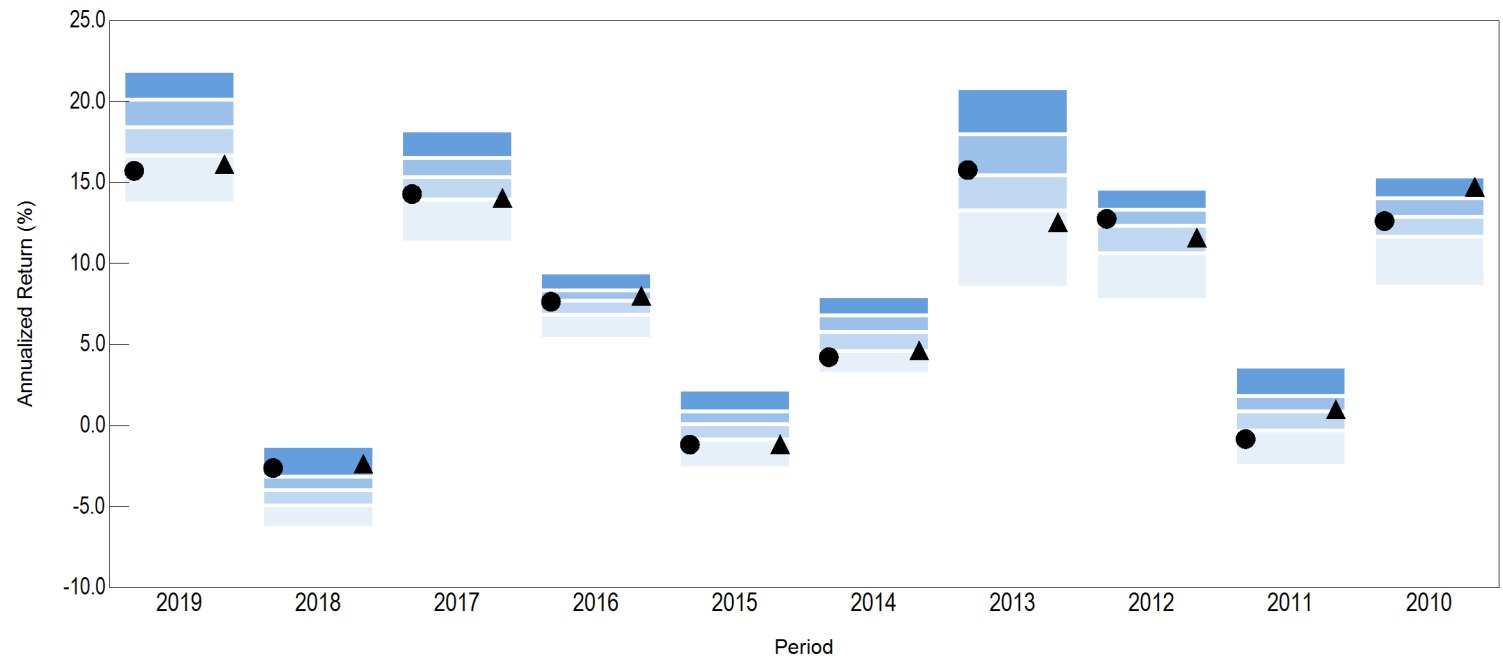
	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-9.1	(35)	-4.5	(48)	-1.2	(50)	4.6	(54)	4.8	(62)	6.7	(69)	7.8	(74)
25th Percentile	-12.0	(7)	-6.8	(6)	-3.7	(8)	3.5	(11)	4.0	(22)	5.8	(60)	6.8	(52)
Median	-13.4		-8.1		-5.1		2.8		3.5		5.2		6.3	
75th Percentile	-14.9		-9.3		-6.5		2.0		3.0		4.5		5.8	
95th Percentile	-16.5		-11.3		-8.6		0.6		1.4		3.2		4.4	
# of Portfolios	338		337		336		326		316		299		277	
● Total Fund	-12.6	(35)	-7.9	(48)	-5.1	(50)	2.7	(54)	3.3	(62)	4.8	(69)	5.8	(74)
▲ Policy Index	-9.5	(7)	-4.6	(6)	-1.6	(8)	4.1	(11)	4.1	(22)	5.0	(60)	6.2	(52)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: March 31, 2020

Total Fund Consecutive Periods vs. InvMetrics Public DB Gross



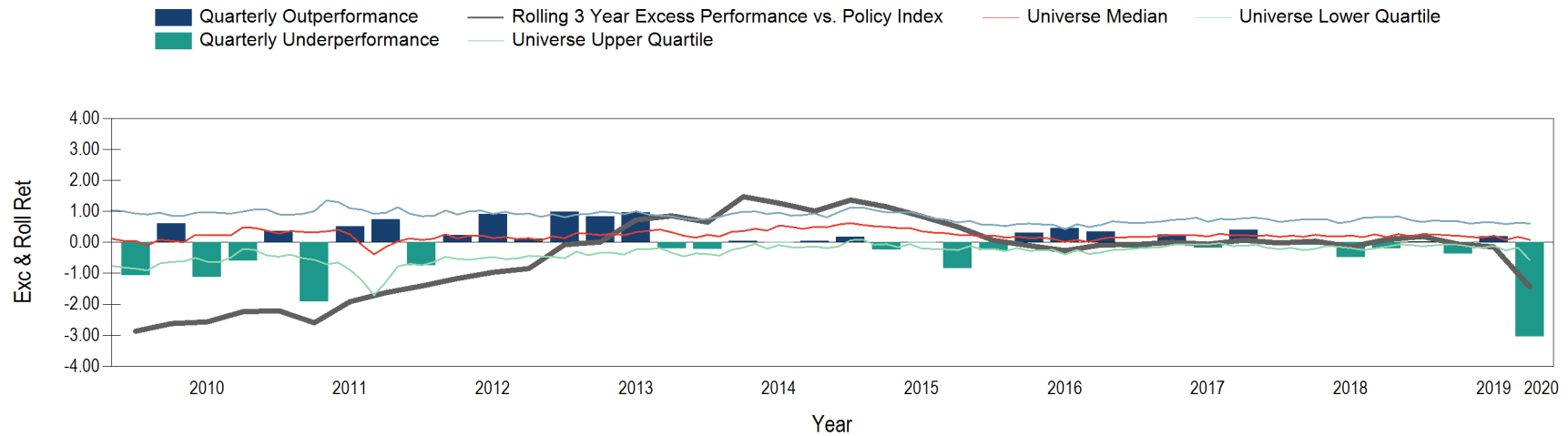
	Return (Rank)									
5th Percentile	21.9	-1.3	18.2	9.4	2.2	8.0	20.8	14.6	3.6	15.4
25th Percentile	20.1	-3.1	16.5	8.4	0.9	6.8	18.0	13.4	1.9	14.0
Median	18.4	-4.0	15.3	7.7	0.1	5.8	15.5	12.4	0.9	12.9
75th Percentile	16.7	-4.9	14.0	6.9	-0.9	4.6	13.3	10.7	-0.3	11.7
95th Percentile	13.7	-6.3	11.3	5.3	-2.6	3.2	8.5	7.8	-2.5	8.6
# of Portfolios	330	319	304	305	316	248	231	236	206	188
● Total Fund	15.7 (85)	-2.6 (15)	14.3 (71)	7.6 (53)	-1.2 (80)	4.2 (83)	15.8 (49)	12.8 (43)	-0.8 (86)	12.6 (57)
▲ Policy Index	16.1 (82)	-2.4 (12)	14.0 (74)	8.0 (40)	-1.1 (80)	4.6 (75)	12.6 (80)	11.6 (67)	1.0 (46)	14.7 (13)

Total Fund

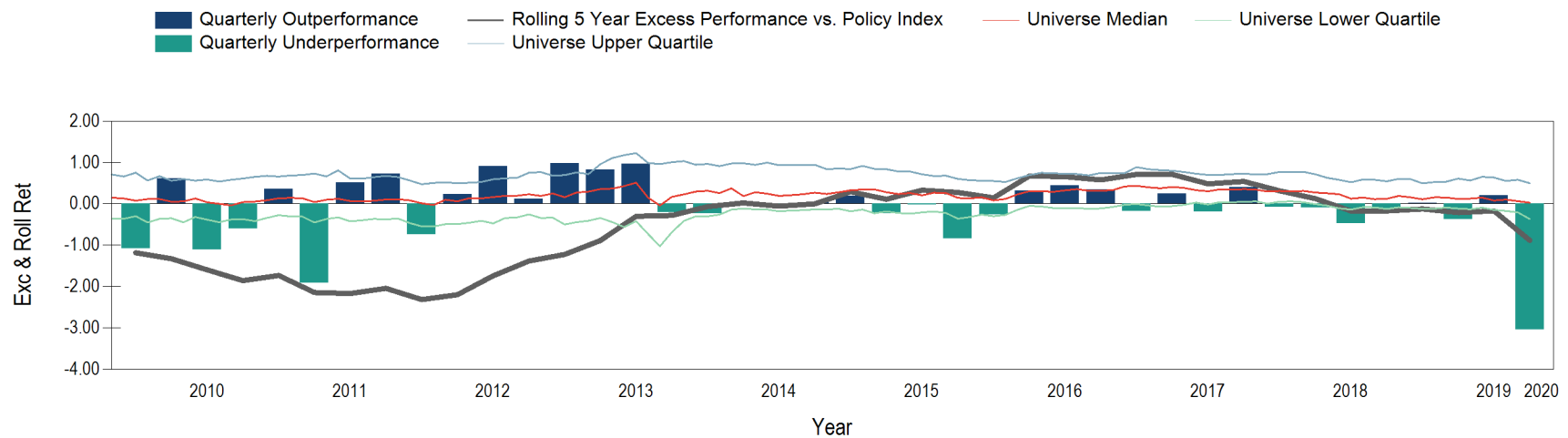
Rolling Return Analysis (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



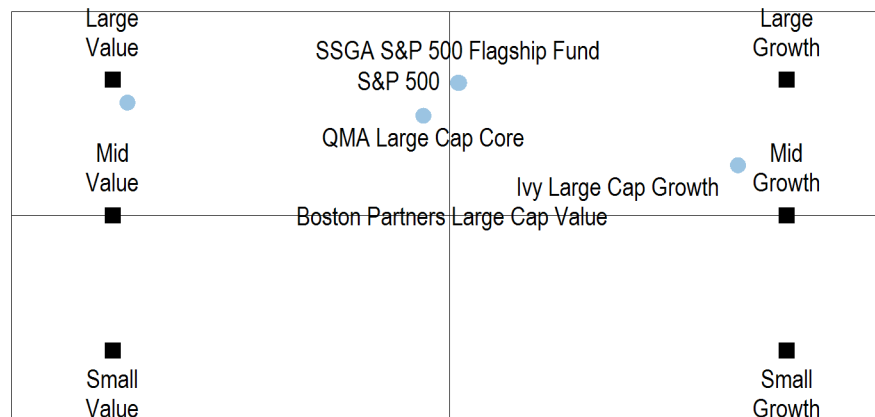
Total Domestic Equity

Asset Class Overview (Gross of Fees)

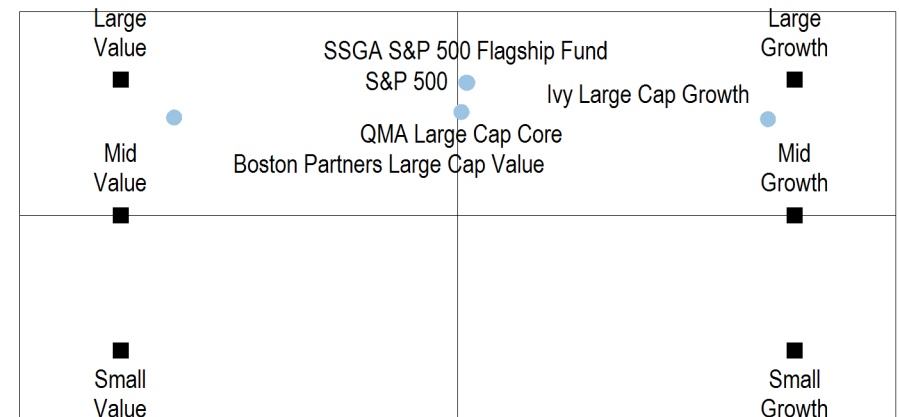
Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Domestic Equity	298,736,169	-22.1	-14.6	-10.8	3.7	5.4	10.2	30.3	-5.0	22.3	11.5	1.6
<i>Russell 3000</i>		-20.9	-12.7	-9.1	4.0	5.8	10.1	31.0	-5.2	21.1	12.7	0.5
<i>InvMetrics Public DB US Eq Gross Rank</i>		47	39	37	21	28	20	40	29	16	77	10
SSGA S&P 500 Flagship Fund	59,635,480	-19.6	-10.8	-7.0	5.1	6.8	--	31.5	-4.4	21.9	12.0	1.5
S&P 500		-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
<i>eV US Large Cap Core Equity Gross Rank</i>		47	39	42	35	28	--	33	40	52	31	40
QMA Large Cap Core	53,797,215	-22.4	-14.5	-11.5	2.7	5.3	10.4	29.0	-6.5	22.5	12.5	2.1
S&P 500		-19.6	-10.8	-7.0	5.1	6.7	10.5	31.5	-4.4	21.8	12.0	1.4
<i>eV US Large Cap Core Equity Gross Rank</i>		79	78	77	71	61	41	58	70	42	25	31
Ivy Large Cap Growth	68,818,908	-12.8	-3.6	3.1	13.9	11.0	--	37.3	3.2	30.2	2.1	7.6
<i>Russell 1000 Growth</i>		-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7
<i>eV US Large Cap Growth Equity Gross Rank</i>		32	25	14	20	24	--	26	15	42	72	26
Boston Partners Large Cap Value	49,415,492	-28.8	-21.6	-19.2	-2.2	1.4	7.9	24.3	-8.6	20.1	14.7	-3.9
<i>Russell 1000 Value</i>		-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8
<i>eV US Large Cap Value Equity Gross Rank</i>		75	74	73	67	71	56	77	55	22	54	65

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years



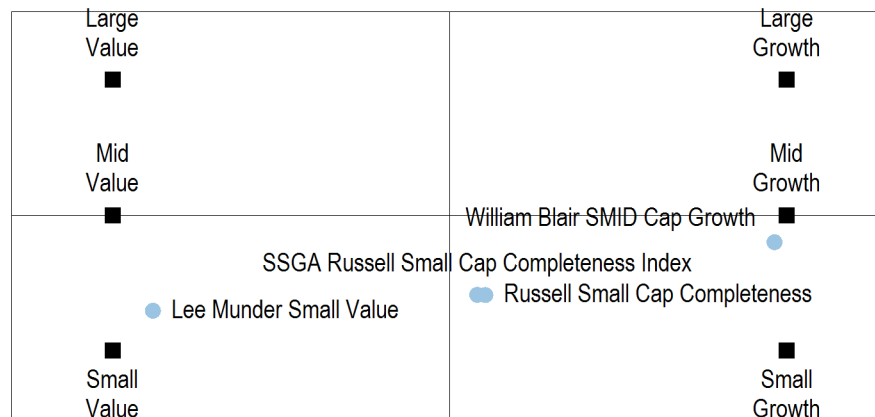
Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Domestic Equity Asset Class Overview (Gross of Fees)

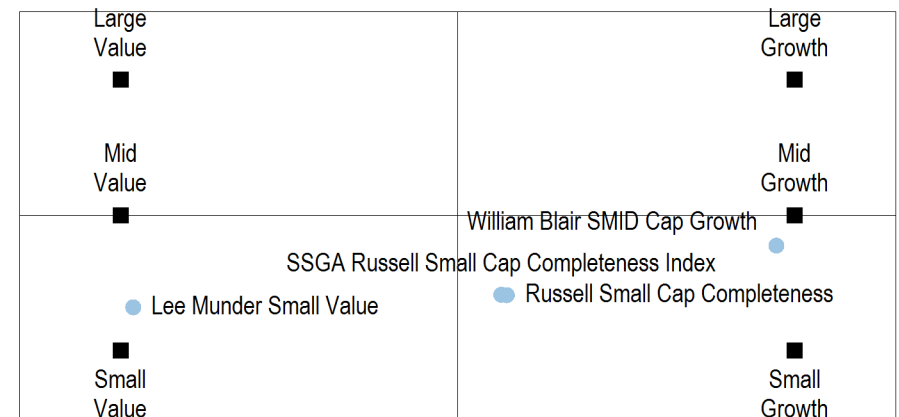
Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
SSGA Russell Small Cap Completeness Index	21,246,302	-27.9	-22.9	-20.4	-1.8	1.1	--	27.8	-9.2	18.2	16.5	-3.5
Russell Small Cap Completeness		-27.9	-22.8	-20.4	-1.7	1.2	--	28.0	-9.2	18.3	16.6	-3.4
eV US Small Cap Core Equity Gross Rank		31	33	29	27	41	--	29	37	23	84	68
William Blair SMID Cap Growth	26,962,511	-20.1	-15.5	-10.0	7.8	7.8	12.7	32.2	-0.9	30.4	8.2	6.1
Russell 2500 Growth		-23.2	-17.8	-14.4	3.4	3.6	10.1	32.7	-7.5	24.5	9.7	-0.2
eV US Mid Cap Growth Equity Gross Rank		63	70	65	44	28	17	77	29	16	22	7
Lee Munder Small Value	18,860,260	-33.6	-27.4	-25.6	-8.3	-0.6	5.8	27.5	-14.7	8.6	28.4	0.4
Russell 2000 Value		-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5
eV US Small Cap Value Equity Gross Rank		38	31	33	47	27	64	22	56	68	38	9

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years



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

Total Domestic Equity
Asset Class Overview (Net of Fees)

Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Domestic Equity	298,736,169	-22.2	-14.8	-11.1	3.3	5.0	9.8	29.8	-5.4	21.9	11.1	1.2
<i>Russell 3000</i>		-20.9	-12.7	-9.1	4.0	5.8	10.1	31.0	-5.2	21.1	12.7	0.5
SSGA S&P 500 Flagship Fund	59,635,480	-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
<i>S&P 500</i>		-19.6	-10.8	-7.0	5.1	6.7	--	31.5	-4.4	21.8	12.0	1.4
QMA Large Cap Core	53,797,215	-22.5	-14.7	-11.8	2.4	4.9	10.1	28.6	-6.8	22.1	12.1	1.8
<i>S&P 500</i>		-19.6	-10.8	-7.0	5.1	6.7	10.5	31.5	-4.4	21.8	12.0	1.4
Ivy Large Cap Growth	68,818,908	-12.9	-4.0	2.6	13.3	10.4	--	36.6	2.7	29.5	1.6	7.1
<i>Russell 1000 Growth</i>		-14.1	-3.6	0.9	11.3	10.4	--	36.4	-1.5	30.2	7.1	5.7
Boston Partners Large Cap Value	49,415,492	-28.9	-21.9	-19.6	-2.7	0.9	7.5	23.8	-9.0	19.6	14.2	-4.4
<i>Russell 1000 Value</i>		-26.7	-20.2	-17.2	-2.2	1.9	7.7	26.5	-8.3	13.7	17.3	-3.8
SSGA Russell Small Cap Completeness Index	21,246,302	-27.9	-22.9	-20.5	-1.8	1.1	--	27.8	-9.2	18.1	16.5	-3.5
<i>Russell Small Cap Completeness</i>		-27.9	-22.8	-20.4	-1.7	1.2	--	28.0	-9.2	18.3	16.6	-3.4
William Blair SMID Cap Growth	26,962,511	-20.2	-16.1	-10.7	6.9	6.8	11.7	31.1	-1.7	29.3	7.2	5.2
<i>Russell 2500 Growth</i>		-23.2	-17.8	-14.4	3.4	3.6	10.1	32.7	-7.5	24.5	9.7	-0.2
Lee Munder Small Value	18,860,260	-33.8	-27.9	-26.3	-9.1	-1.5	4.8	26.3	-15.5	7.7	27.3	-0.5
<i>Russell 2000 Value</i>		-35.7	-30.6	-29.6	-9.5	-2.4	4.8	22.4	-12.9	7.8	31.7	-7.5

Total Domestic Equity
Common Holdings Matrix

Period Ending: March 31, 2020

	SSGA S&P 500 Flagship Fund		QMA Large Cap Core		Ivy Large Cap Growth		Boston Partners Large Cap Value		William Blair SMID Cap Growth		Lee Munder Small Value		SSGA Russell Small Cap Completeness Index	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
SSGA S&P 500 Flagship Fund	--	--	135	89.3	42	97.2	79	87.4	8	13.0	0	0.0	1	0.1
QMA Large Cap Core	135	58.2	--	--	18	56.1	39	54.0	3	4.8	5	4.8	59	3.6
Ivy Large Cap Growth	42	32.3	18	23.7	--	--	8	7.1	0	0.0	0	0.0	1	0.6
Boston Partners Large Cap Value	79	30.8	39	32.6	8	26.1	--	--	0	0.0	0	0.0	10	1.3
William Blair SMID Cap Growth	8	0.4	3	0.6	0	0.0	0	0.0	--	--	3	4.3	52	6.8
Lee Munder Small Value	0	0.0	5	0.6	0	0.0	0	0.0	3	6.7	--	--	86	4.8
SSGA Russell Small Cap Completeness Index	1	0.0	59	9.2	1	1.0	10	3.1	52	77.9	86	95.0	--	--

Total Domestic Equity Correlation Matrix

Period Ending: March 31, 2020

Correlation Matrix 3 Months Ending March 31, 2020

	SSGA S&P 500 Flagship Fund	QMA Large Cap Core	Ivy Large Cap Growth	Boston Partners Large Cap Value	William Blair SMID Cap Growth	SSGA Russell Small Cap Completeness Index	Lee Munder Small Value	S&P 500
SSGA S&P 500 Flagship Fund	1.00	--	--	--	--	--	--	--
QMA Large Cap Core	1.00	1.00	--	--	--	--	--	--
Ivy Large Cap Growth	0.99	0.99	1.00	--	--	--	--	--
Boston Partners Large Cap Value	0.95	0.96	0.91	1.00	--	--	--	--
William Blair SMID Cap Growth	0.96	0.97	0.92	1.00	1.00	--	--	--
Lee Munder Small Value	0.91	0.92	0.86	0.99	0.99	1.00	--	--
SSGA Russell Small Cap Completeness Index	0.94	0.95	0.90	1.00	1.00	1.00	1.00	--
S&P 500	1.00	1.00	1.00	0.95	0.96	0.91	0.94	1.00

SSGA S&P 500 Flagship Fund

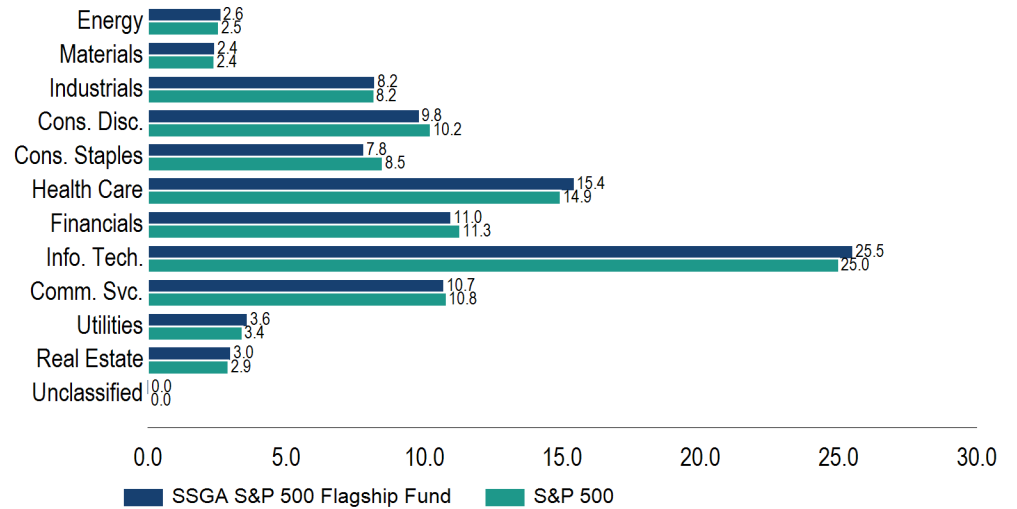
Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	S&P 500
Number of Holdings	506	505
Weighted Avg. Market Cap. (\$B)	264.88	267.10
Median Market Cap. (\$B)	17.58	17.58
Price To Earnings	17.15	17.01
Price To Book	3.72	3.72
Price To Sales	2.72	2.64
Return on Equity (%)	27.33	27.34
Yield (%)	2.34	2.34
Beta	1.00	1.00

Sector Allocation (%) vs S&P 500



*Unclassified includes Cash

Top Holdings Ending Period Weight

	Weight	Symbol
MICROSOFT	5.61%	AMAZON.COM
APPLE	4.96%	NETFLIX
AMAZON.COM	3.79%	NVIDIA
FACEBOOK CLASS A	1.87%	GILEAD SCIENCES
BERKSHIRE HATHAWAY 'B'	1.67%	REGENERON PHARMS.
ALPHABET A	1.63%	ELI LILLY
ALPHABET 'C'	1.62%	VERTEX PHARMS.
JOHNSON & JOHNSON	1.62%	DIGITAL REALTY TST.
JP MORGAN CHASE & CO.	1.32%	NORTONLIFELOCK
VISA 'A'	1.29%	CITRIX SYS.
Total	25.37%	

Top Contributors

Avg Wgt	Return	Contribution
2.88	5.51	0.16
0.53	16.05	0.09
0.54	12.10	0.07
0.31	16.19	0.05
0.11	30.04	0.03
0.41	6.10	0.03
0.21	8.68	0.02
0.09	17.02	0.02
0.05	27.67	0.02
0.05	28.02	0.01

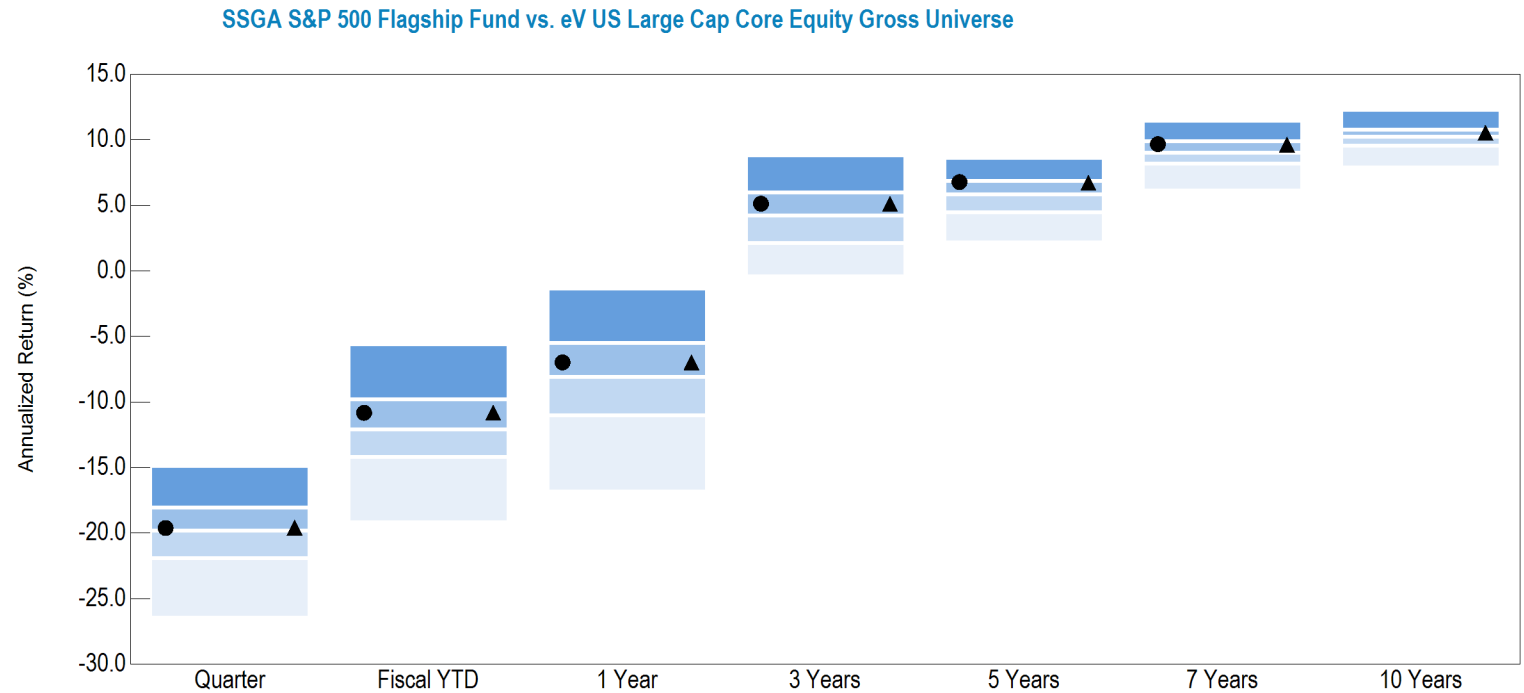
Bottom Contributors

Avg Wgt	Return	Contribution
4.58	-13.20	-0.60
1.63	-35.00	-0.57
1.10	-44.80	-0.49
1.07	-39.32	-0.42
0.77	-46.09	-0.36
0.65	-53.94	-0.35
1.85	-18.73	-0.35
0.85	-39.17	-0.33
0.97	-33.21	-0.32
1.66	-19.28	-0.32

SSGA S&P 500 Flagship Fund

Cumulative Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

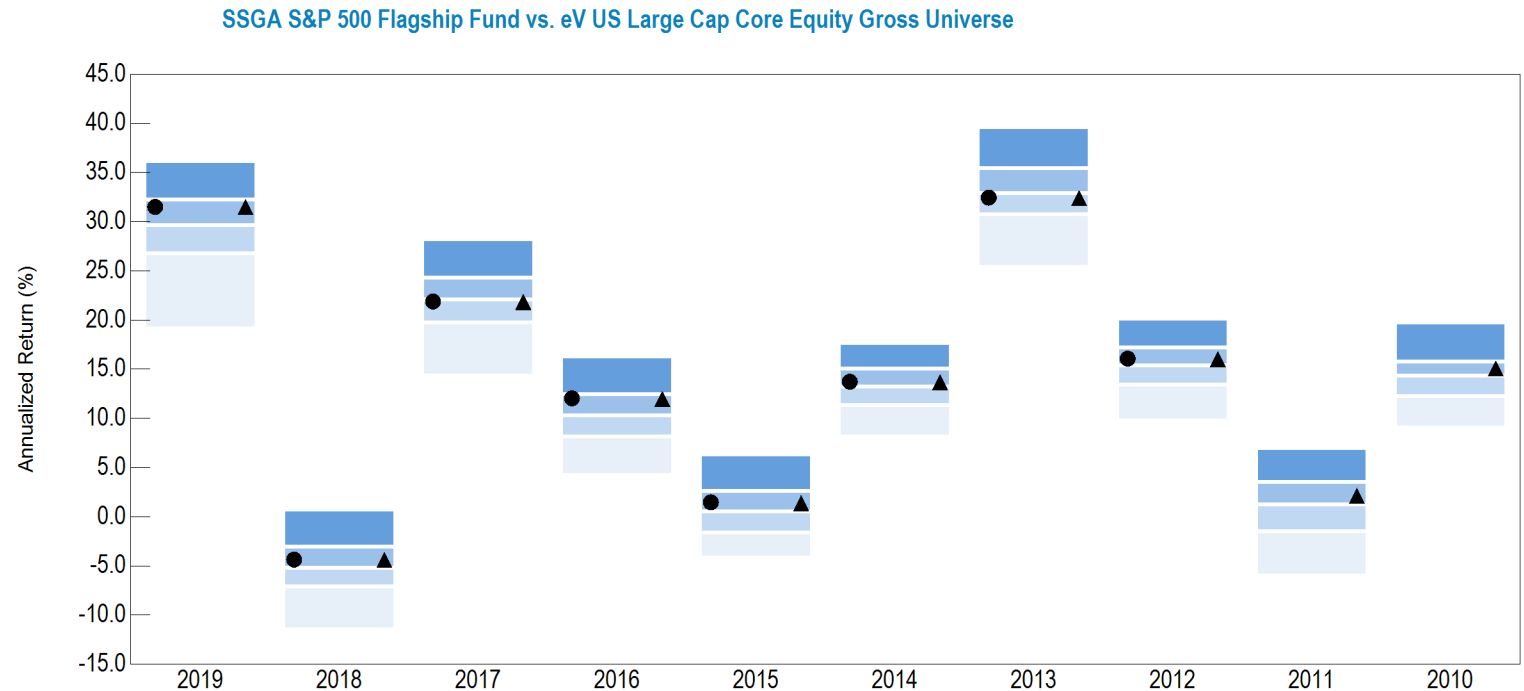


		Return (Rank)													
5th Percentile		-14.9	-5.6	-1.4	8.8	8.6	11.4	12.3							
25th Percentile		-18.0	-9.8	-5.5	6.0	6.9	9.9	10.8							
Median		-19.8	-12.1	-8.1	4.2	5.8	9.0	10.3							
75th Percentile		-21.9	-14.2	-11.0	2.1	4.5	8.2	9.6							
95th Percentile		-26.4	-19.1	-16.8	-0.4	2.2	6.1	7.9							
# of Portfolios		324	324	324	308	289	266	220							
●	SSGA S&P 500 Flagship Fund	-19.6	(47)	-10.8	(39)	-7.0	(42)	5.1	(35)	6.8	(28)	9.7	(32)	--	(--)
▲	S&P 500	-19.6	(47)	-10.8	(39)	-7.0	(42)	5.1	(35)	6.7	(28)	9.6	(33)	10.5	(37)

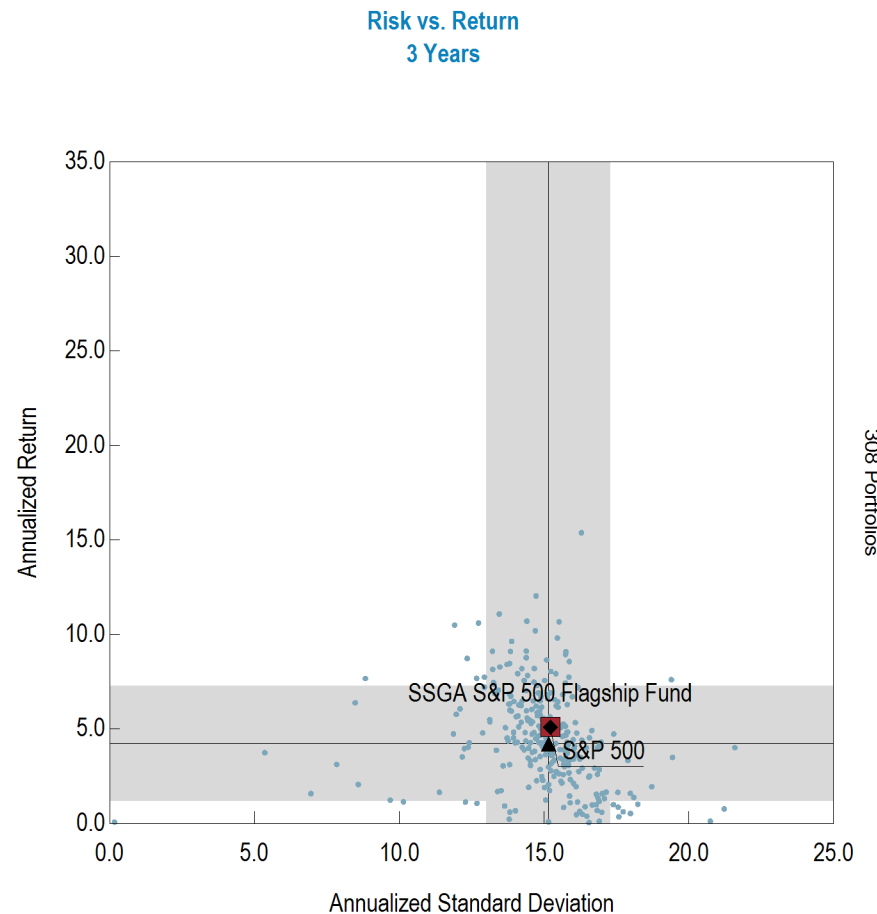
SSGA S&P 500 Flagship Fund

Consecutive Performance Comparison (Gross of Fees)

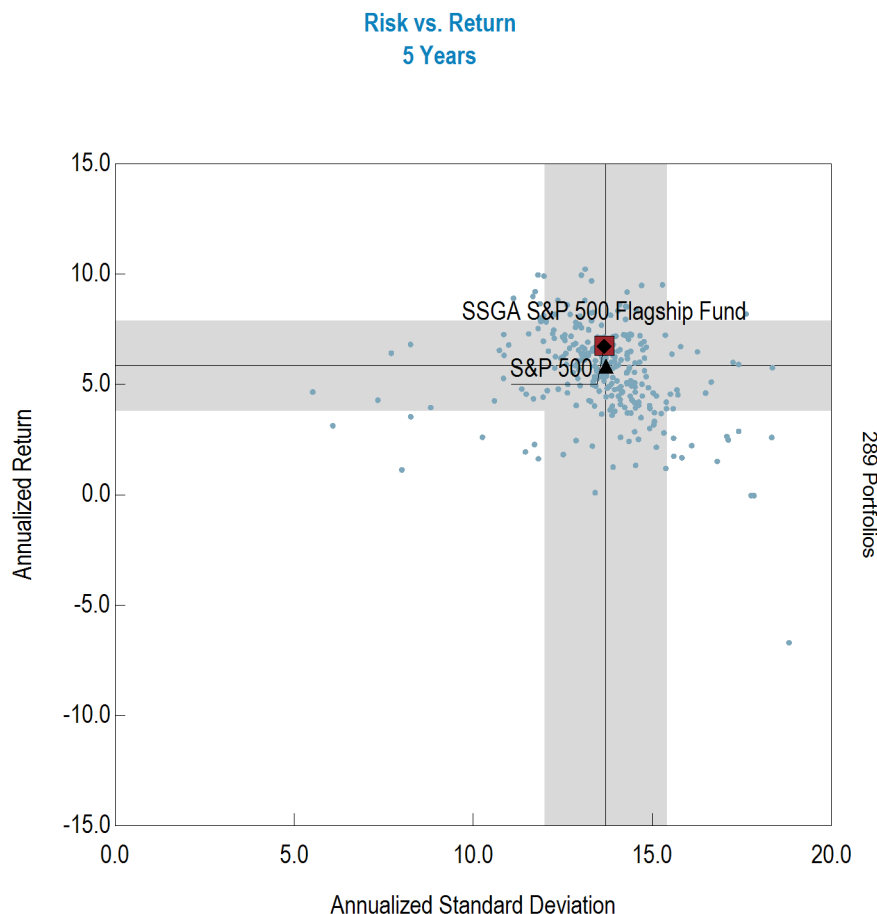
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	36.1	0.7	28.2	16.3	6.3	17.7	39.6	20.1	7.0	19.7
25th Percentile	32.3	-3.0	24.3	12.5	2.7	15.1	35.5	17.2	3.6	15.8
Median	29.7	-5.1	22.1	10.4	0.6	13.3	32.9	15.4	1.3	14.4
75th Percentile	26.8	-7.1	19.8	8.2	-1.6	11.4	30.8	13.4	-1.5	12.3
95th Percentile	19.2	-11.4	14.4	4.3	-4.1	8.2	25.4	9.8	-5.9	9.1
# of Portfolios	318	316	318	308	267	267	261	254	259	254
● SSGA S&P 500 Flagship Fund	31.5 (33)	-4.4 (40)	21.9 (52)	12.0 (31)	1.5 (40)	13.7 (42)	32.4 (58)	16.1 (39)	-- (--)	-- (--)
▲ S&P 500	31.5 (33)	-4.4 (40)	21.8 (53)	12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)	15.1 (37)



- SSGA S&P 500 Flagship Fund
- ◆ S&P 500
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eV US Large Cap Core Equity Gross



- SSGA S&P 500 Flagship Fund
- ◆ S&P 500
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eV US Large Cap Core Equity Gross

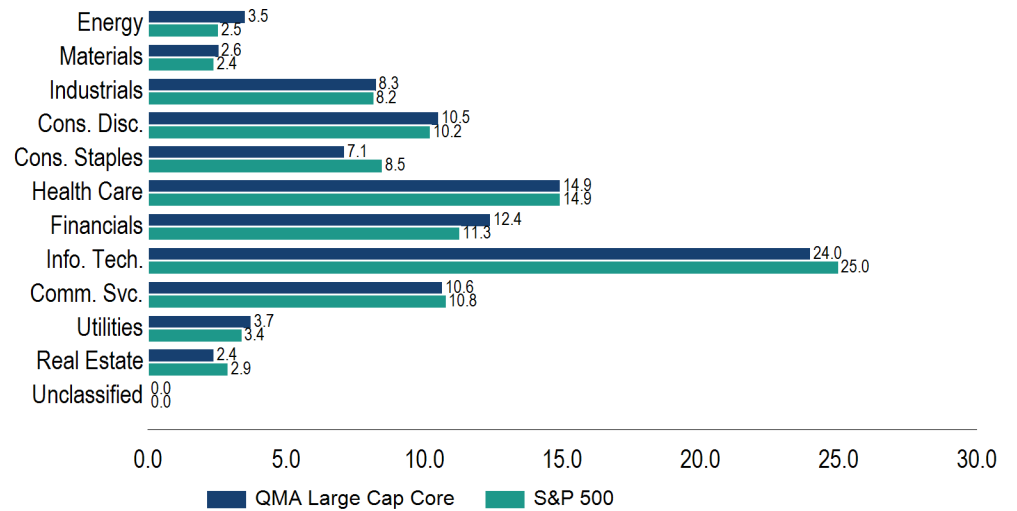
QMA Large Cap Core Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	S&P 500
Number of Holdings	199	505
Weighted Avg. Market Cap. (\$B)	226.79	267.10
Median Market Cap. (\$B)	19.77	17.58
Price To Earnings	13.17	17.01
Price To Book	3.19	3.72
Price To Sales	1.65	2.64
Return on Equity (%)	25.45	27.34
Yield (%)	2.82	2.34
Beta	1.09	1.00

Sector Allocation (%) vs S&P 500



*Unclassified includes Cash

Top Holdings Ending Period Weight

	Weight	Company
APPLE	5.34%	GILEAD SCIENCES
MICROSOFT	5.08%	AMAZON.COM
FACEBOOK CLASS A	2.35%	BIOGEN
AMAZON.COM	1.73%	VERTEX PHARMS.
BANK OF AMERICA	1.69%	CROWN CASTLE INTL.
PROCTER & GAMBLE	1.58%	MICROSOFT
INTEL	1.50%	J M SMUCKER
VISA 'A'	1.49%	PROGRESSIVE OHIO
AT&T	1.42%	KROGER
ALPHABET A	1.41%	EQUINIX REIT
Total	23.63%	

Top Contributors

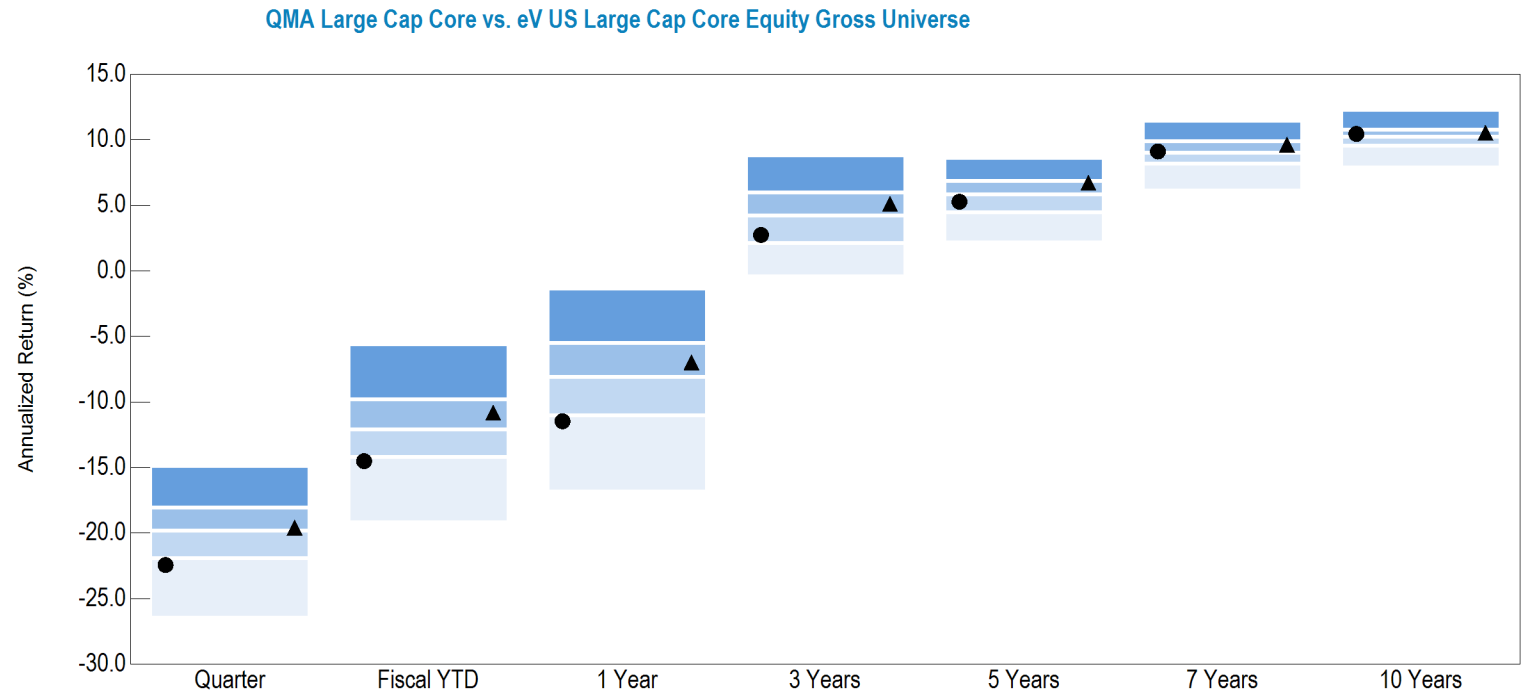
Avg Wgt	Return	Contribution
0.68	16.19	0.11
1.69	5.51	0.09
0.79	6.62	0.05
0.40	8.68	0.03
0.68	2.44	0.02
4.94	0.28	0.01
0.15	7.47	0.01
0.20	5.30	0.01
0.09	4.48	0.00
0.05	7.45	0.00

Bottom Contributors

Avg Wgt	Return	Contribution
5.20	-13.20	-0.69
1.65	-39.32	-0.65
1.20	-46.92	-0.56
2.28	-18.73	-0.43
0.86	-46.09	-0.40
0.71	-50.81	-0.36
0.67	-51.36	-0.35
0.92	-36.71	-0.34
1.39	-24.41	-0.34
0.63	-52.23	-0.33

QMA Large Cap Core Cumulative Performance Comparison (Gross of Fees)

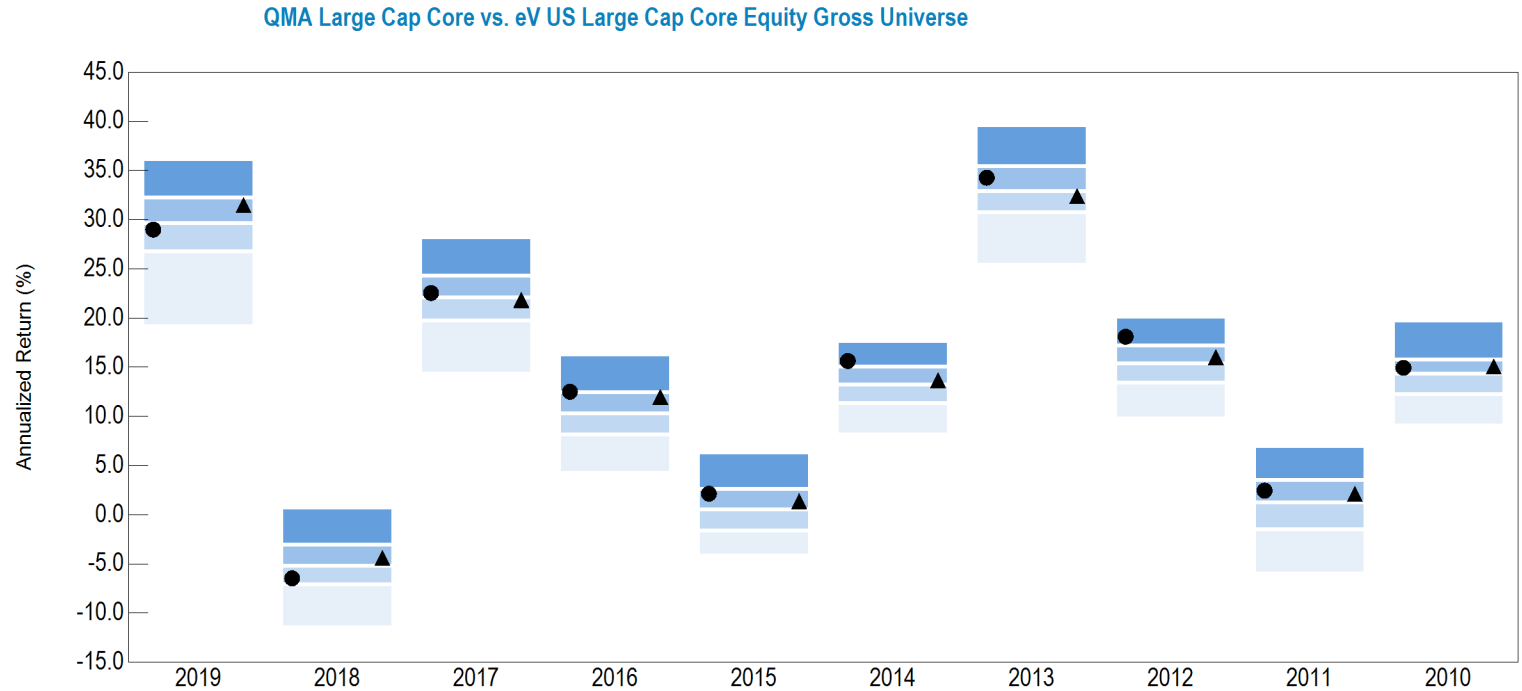
Period Ending: March 31, 2020



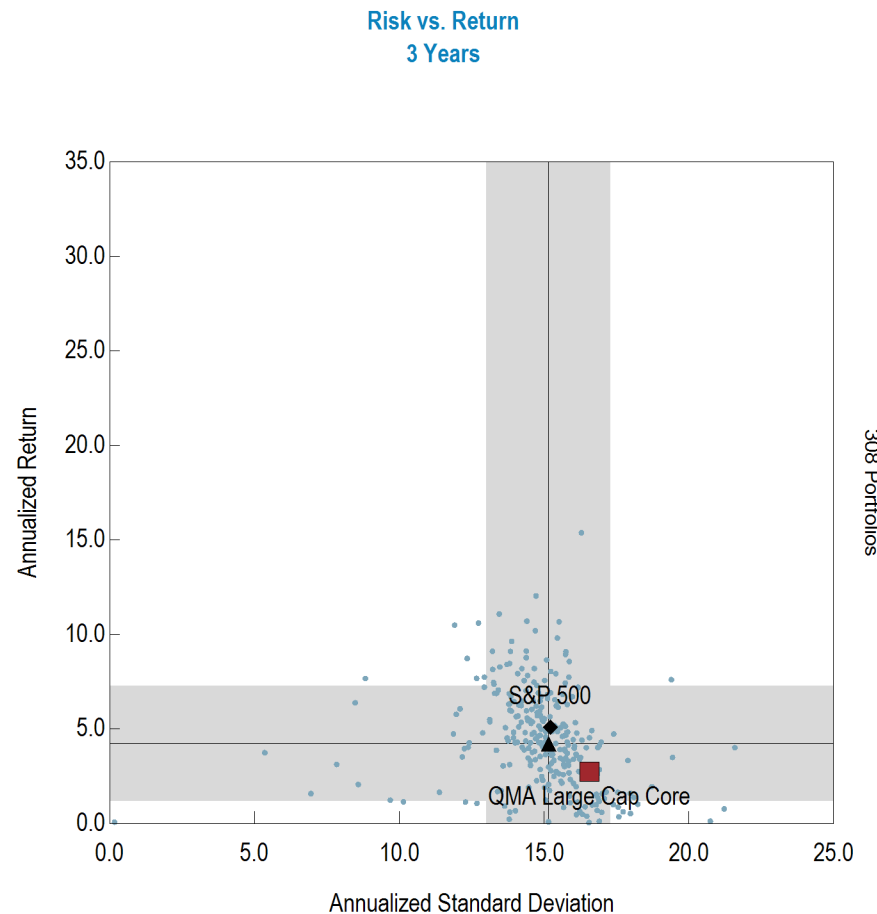
	Return (Rank)													
5th Percentile	-14.9		-5.6		-1.4		8.8		8.6		11.4		12.3	
25th Percentile	-18.0		-9.8		-5.5		6.0		6.9		9.9		10.8	
Median	-19.8		-12.1		-8.1		4.2		5.8		9.0		10.3	
75th Percentile	-21.9		-14.2		-11.0		2.1		4.5		8.2		9.6	
95th Percentile	-26.4		-19.1		-16.8		-0.4		2.2		6.1		7.9	
# of Portfolios	324		324		324		308		289		266		220	
● QMA Large Cap Core	-22.4	(79)	-14.5	(78)	-11.5	(77)	2.7	(71)	5.3	(61)	9.1	(49)	10.4	(41)
▲ S&P 500	-19.6	(47)	-10.8	(39)	-7.0	(42)	5.1	(35)	6.7	(28)	9.6	(33)	10.5	(37)

QMA Large Cap Core
Consecutive Performance Comparison (Gross of Fees)

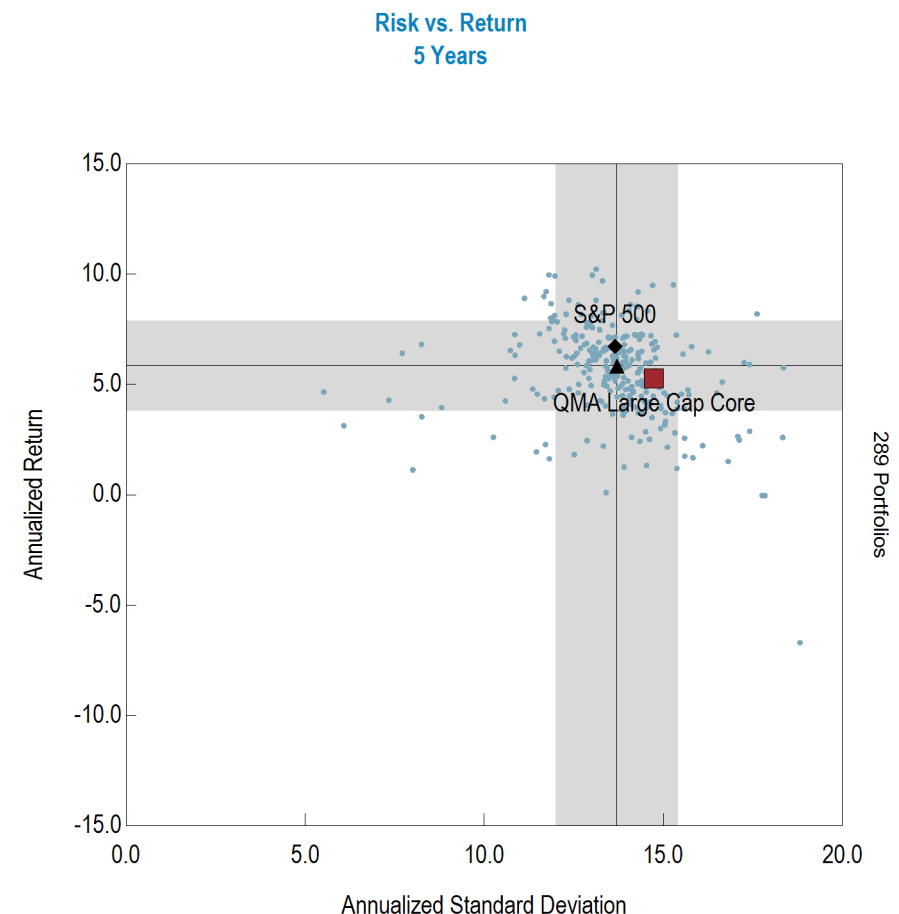
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	36.1	0.7	28.2	16.3	6.3	17.7	39.6	20.1	7.0	19.7
25th Percentile	32.3	-3.0	24.3	12.5	2.7	15.1	35.5	17.2	3.6	15.8
Median	29.7	-5.1	22.1	10.4	0.6	13.3	32.9	15.4	1.3	14.4
75th Percentile	26.8	-7.1	19.8	8.2	-1.6	11.4	30.8	13.4	-1.5	12.3
95th Percentile	19.2	-11.4	14.4	4.3	-4.1	8.2	25.4	9.8	-5.9	9.1
# of Portfolios	318	316	318	308	267	267	261	254	259	254
● QMA Large Cap Core	29.0 (58)	-6.5 (70)	22.5 (42)	12.5 (25)	2.1 (31)	15.6 (20)	34.3 (37)	18.1 (18)	2.4 (34)	14.9 (40)
▲ S&P 500	31.5 (33)	-4.4 (40)	21.8 (53)	12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)	15.1 (37)



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

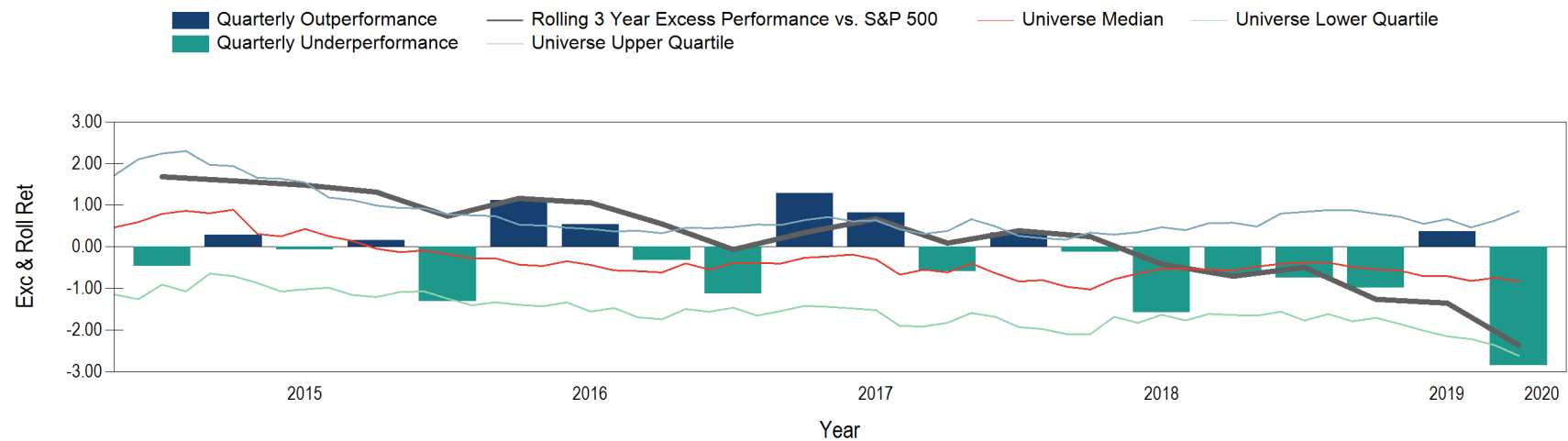


- QMA Large Cap Core
- ◆ S&P 500
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eV US Large Cap Core Equity Gross

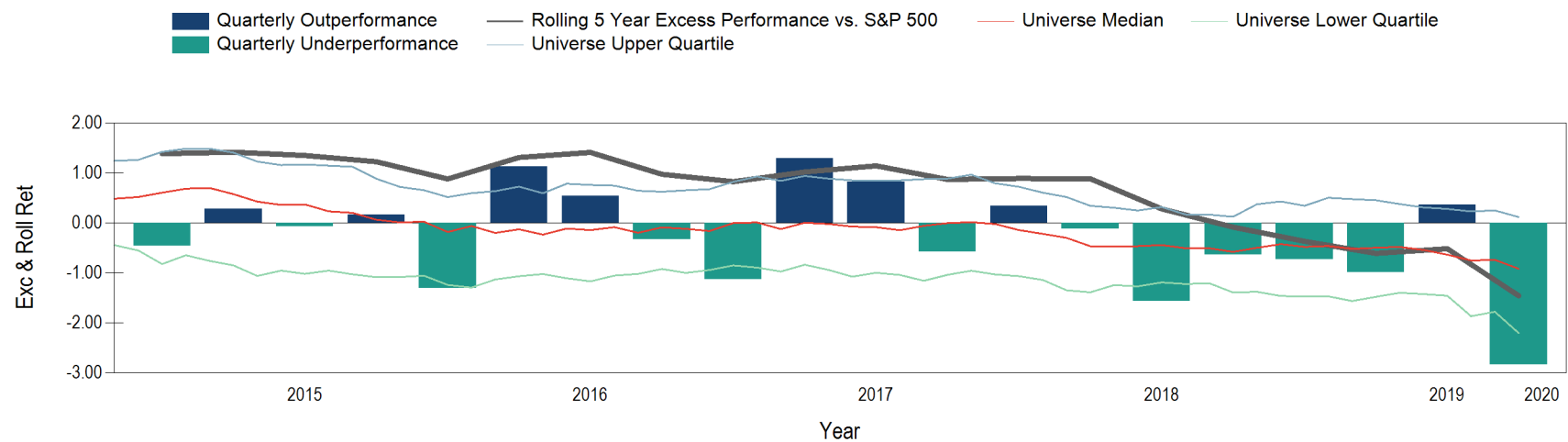
QMA Large Cap Core Rolling Return Analysis (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



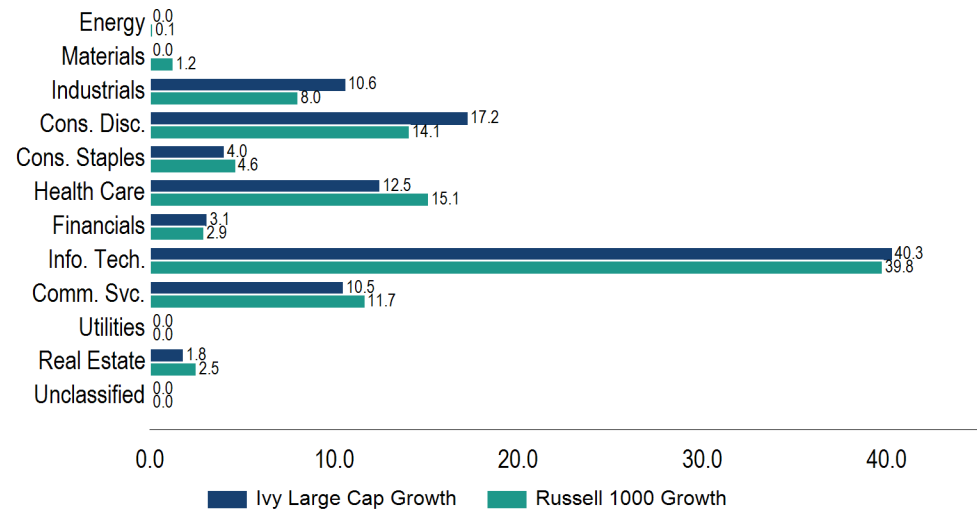
Ivy Large Cap Growth Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	44	532
Weighted Avg. Market Cap. (\$B)	338.07	355.15
Median Market Cap. (\$B)	59.48	9.83
Price To Earnings	25.14	23.75
Price To Book	7.30	6.72
Price To Sales	4.68	3.97
Return on Equity (%)	35.61	35.36
Yield (%)	1.08	1.34
Beta	0.92	1.00

Sector Allocation (%) vs Russell 1000 Growth



*Unclassified includes Cash

Top Holdings Ending Period Weight

	Weight	Company
MICROSOFT	9.97%	NVIDIA
APPLE	6.42%	AMAZON.COM
AMAZON.COM	5.52%	VERTEX PHARMS.
VISA 'A'	4.81%	EQUINIX REIT
ALPHABET A	4.55%	MICROSOFT
COCA COLA	3.48%	COSTAR GP.
CERNER	3.37%	AMERICAN TOWER
MOTOROLA SOLUTIONS	3.36%	VERISIGN
ADOBE (NAS)	2.94%	VERISK ANALYTICS CL.A
FACEBOOK CLASS A	2.80%	ADOBE (NAS)
Total	47.22%	

Top Contributors

Avg Wgt	Return	Contribution
2.26	12.10	0.27
4.51	5.51	0.25
1.52	8.68	0.13
1.37	7.45	0.10
9.30	0.28	0.03
1.22	-1.85	-0.02
0.83	-5.25	-0.04
1.10	-6.53	-0.07
1.43	-6.49	-0.09
2.70	-3.51	-0.09

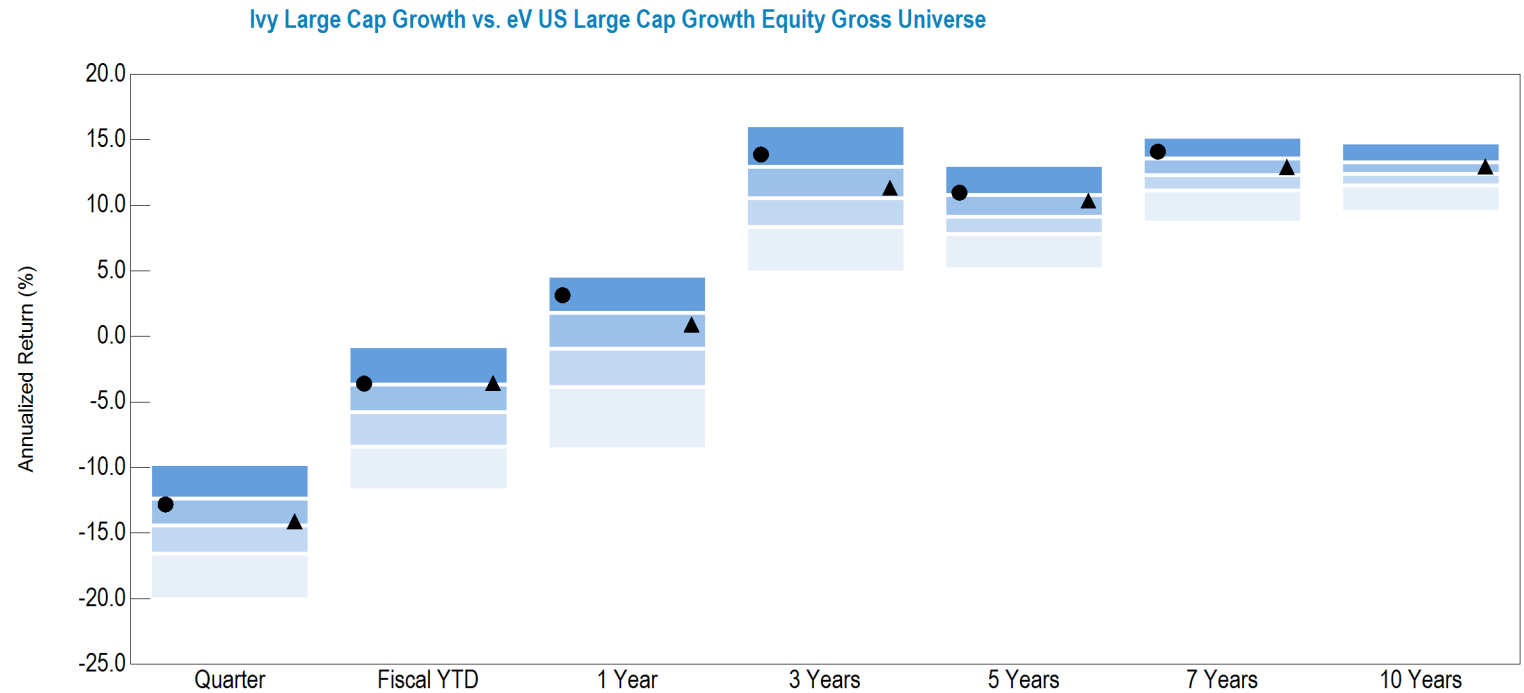
Bottom Contributors

Avg Wgt	Return	Contribution
2.83	-34.49	-0.98
2.27	-39.37	-0.89
1.87	-45.32	-0.85
6.22	-13.20	-0.82
4.83	-14.13	-0.68
4.99	-13.25	-0.66
1.14	-53.94	-0.62
3.06	-19.38	-0.59
3.06	-18.73	-0.57
2.77	-17.14	-0.47

Ivy Large Cap Growth

Cumulative Performance Comparison (Gross of Fees)

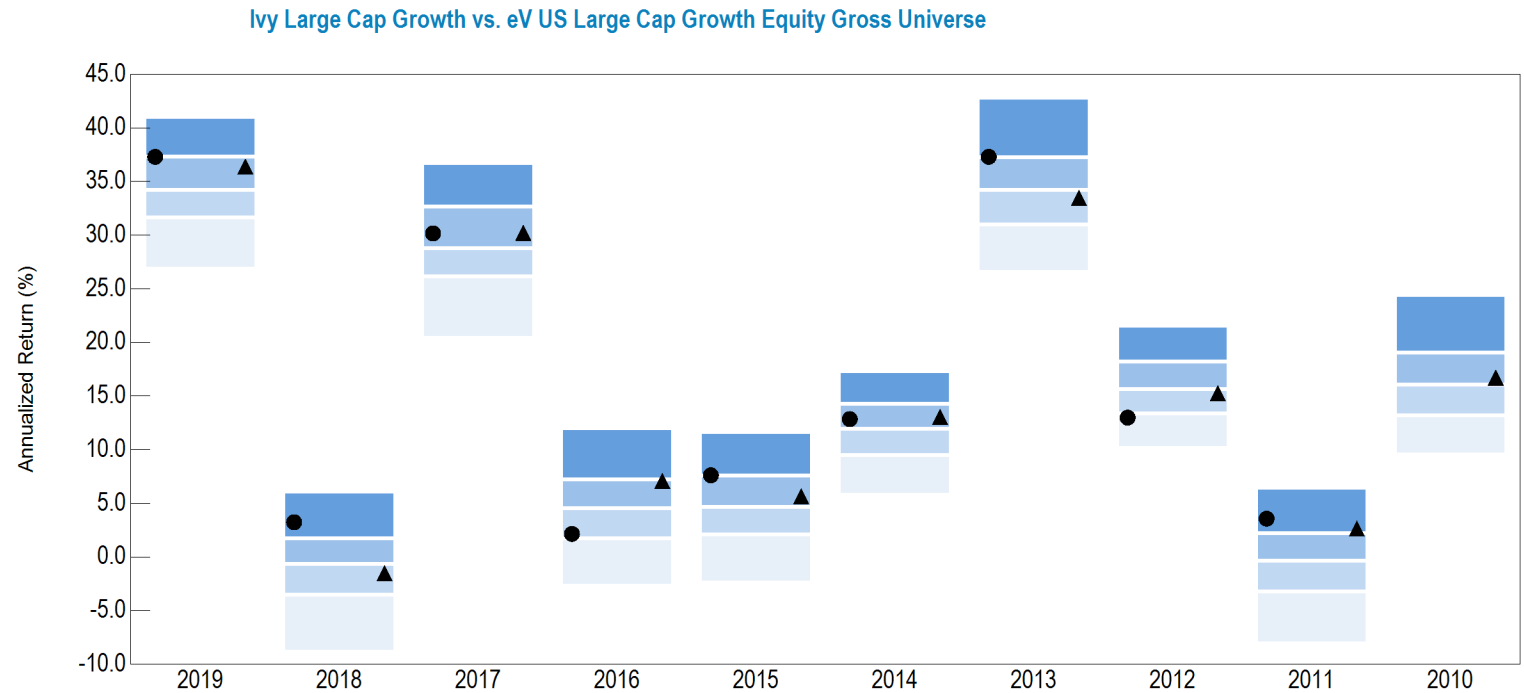
Period Ending: March 31, 2020



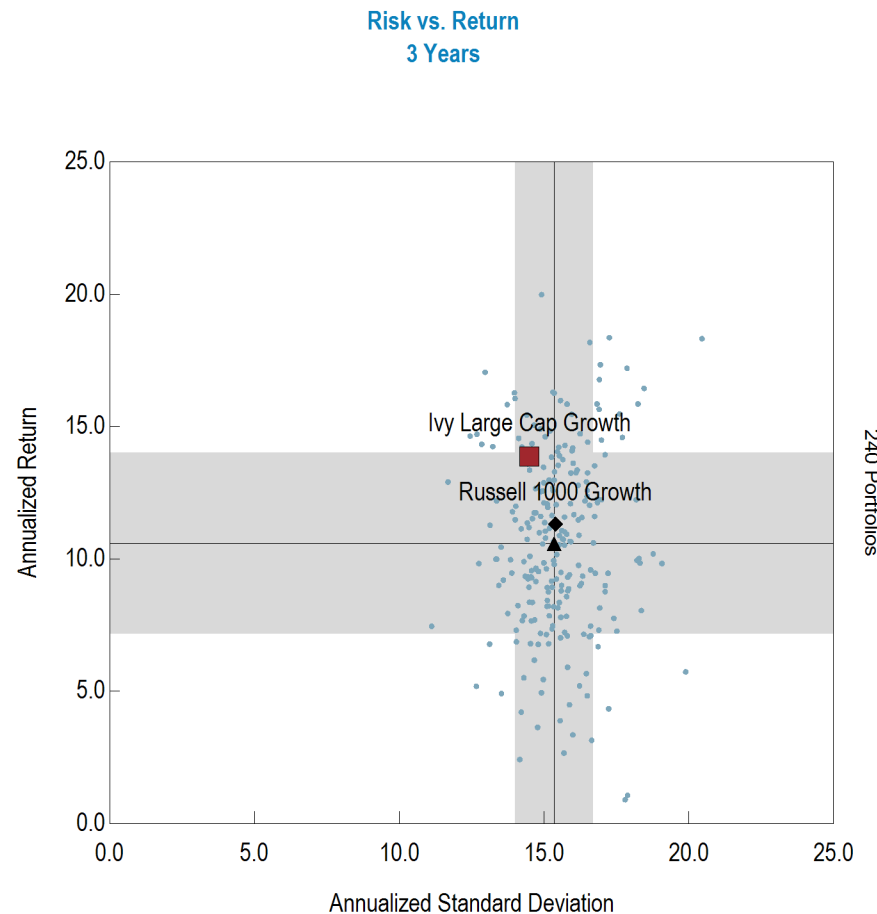
	Return (Rank)													
5th Percentile	-9.8		-0.8		4.6		16.1		13.0		15.2		14.7	
25th Percentile	-12.3		-3.6		1.8		13.0		10.8		13.6		13.3	
Median	-14.4		-5.8		-0.9		10.6		9.2		12.3		12.4	
75th Percentile	-16.5		-8.4		-3.8		8.4		7.8		11.2		11.5	
95th Percentile	-20.0		-11.7		-8.6		4.9		5.2		8.7		9.6	
# of Portfolios	247		247		247		240		234		228		209	
● Ivy Large Cap Growth	-12.8	(32)	-3.6	(25)	3.1	(14)	13.9	(20)	11.0	(24)	14.1	(17)	--	(--)
▲ Russell 1000 Growth	-14.1	(48)	-3.6	(25)	0.9	(34)	11.3	(42)	10.4	(34)	12.9	(35)	13.0	(34)

Ivy Large Cap Growth Consecutive Performance Comparison (Gross of Fees)

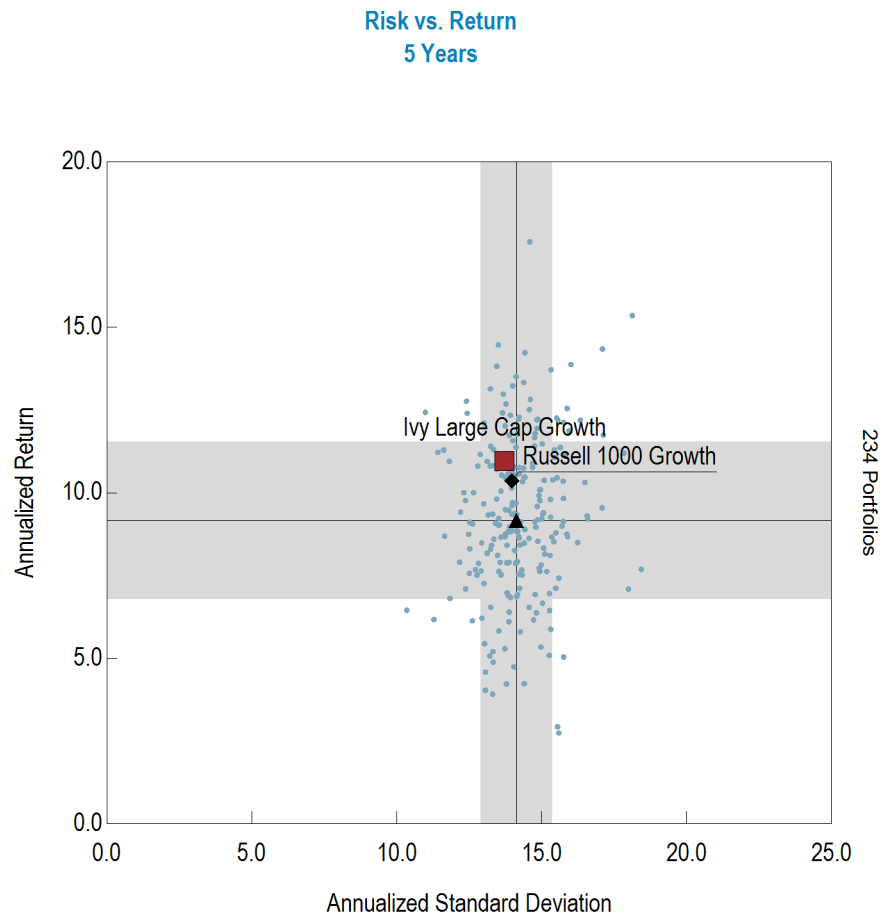
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	41.0	6.1	36.7	12.0	11.6	17.3	42.8	21.6	6.4	24.4
25th Percentile	37.3	1.7	32.7	7.3	7.6	14.3	37.3	18.2	2.2	19.1
Median	34.2	-0.6	28.8	4.6	4.7	12.0	34.3	15.7	-0.3	16.1
75th Percentile	31.7	-3.5	26.2	1.8	2.1	9.5	31.0	13.4	-3.2	13.2
95th Percentile	26.9	-8.8	20.5	-2.7	-2.4	5.8	26.6	10.2	-8.0	9.6
# of Portfolios	253	255	265	282	270	291	274	274	294	304
● Ivy Large Cap Growth	37.3 (26)	3.2 (15)	30.2 (42)	2.1 (72)	7.6 (26)	12.8 (40)	37.3 (25)	13.0 (78)	3.6 (17)	-- (--)
▲ Russell 1000 Growth	36.4 (32)	-1.5 (57)	30.2 (42)	7.1 (26)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)	16.7 (46)



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



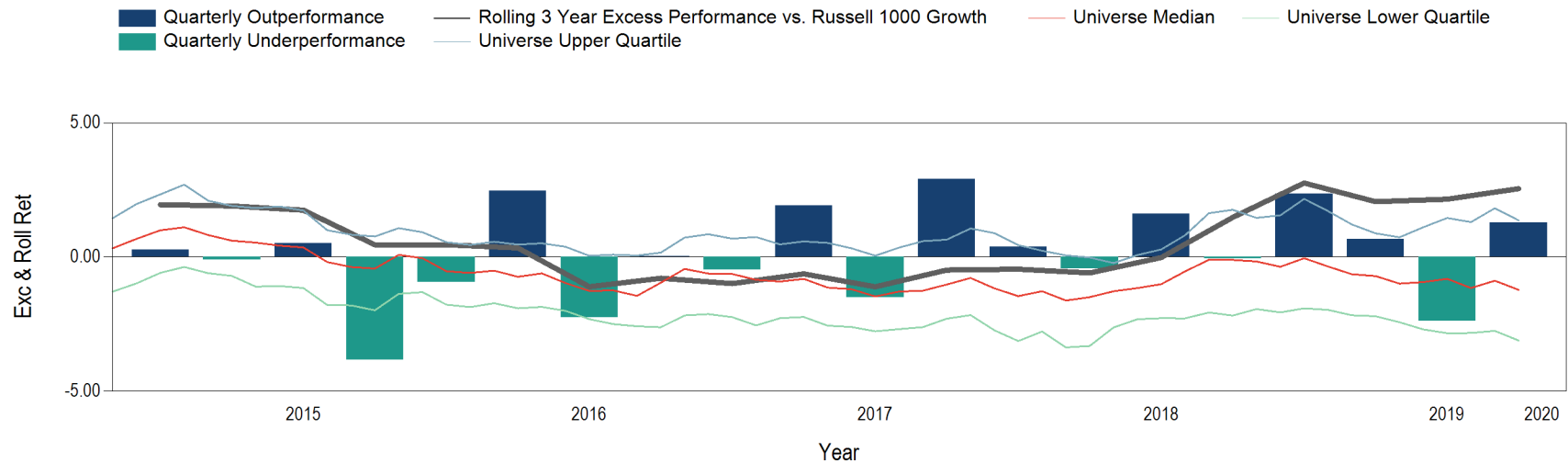
- Ivy Large Cap Growth
- ◆ Russell 1000 Growth
- ▲ Universe Median
- 68% Confidence Interval
- eV US Large Cap Growth Equity Gross

Ivy Large Cap Growth

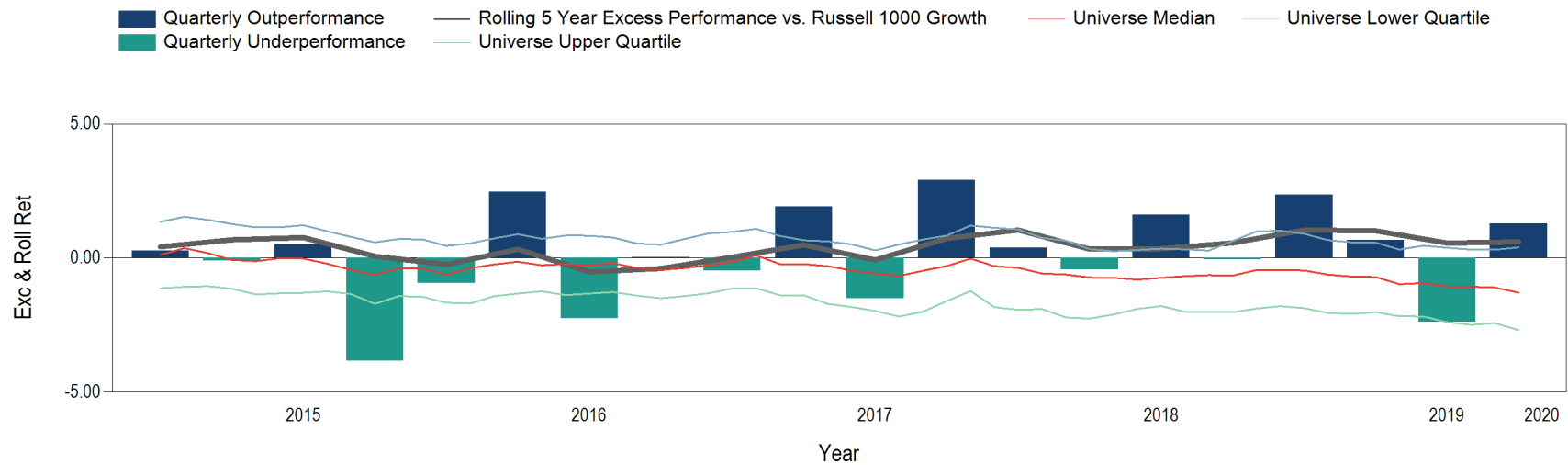
Rolling Return Analysis (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



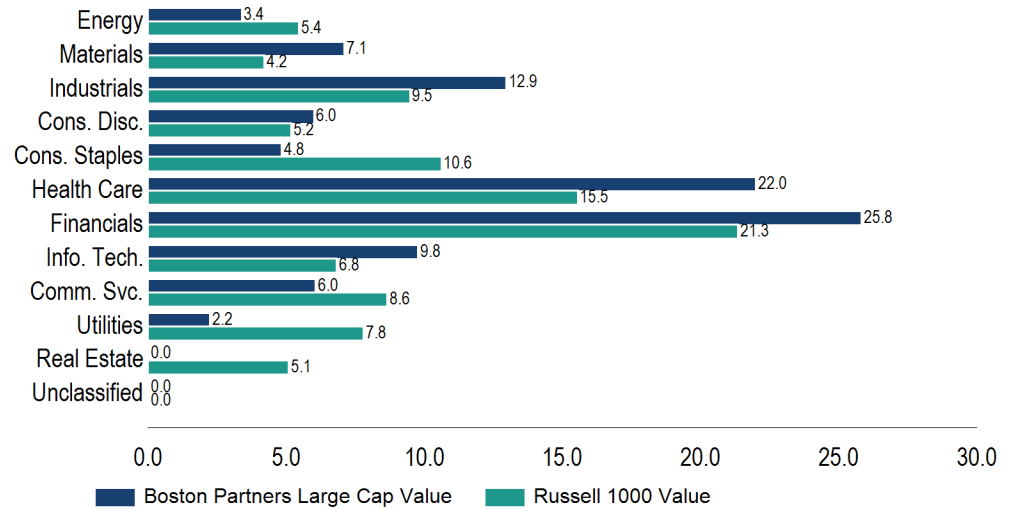
Boston Partners Large Cap Value Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	100	765
Weighted Avg. Market Cap. (\$B)	117.03	98.90
Median Market Cap. (\$B)	22.53	6.29
Price To Earnings	11.32	12.56
Price To Book	2.45	2.17
Price To Sales	1.46	1.86
Return on Equity (%)	21.44	15.02
Yield (%)	2.83	3.48
Beta	1.07	1.00

Sector Allocation (%) vs Russell 1000 Value



*Unclassified includes Cash

Top Holdings Ending Period Weight

BERKSHIRE HATHAWAY 'B'	4.81%	BIOGEN
BANK OF AMERICA	3.57%	NOVO NORDISK 'B' ADR 1:1
JP MORGAN CHASE & CO.	3.23%	MICROSOFT
JOHNSON & JOHNSON	3.19%	BARRICK GOLD (NYS)
CIGNA	2.98%	MCKESSON
PFIZER	2.67%	MONDELEZ INTERNATIONAL
BARRICK GOLD (NYS)	2.66%	CL.A
VERIZON COMMUNICATIONS	2.65%	CH ROBINSON WWD.
PROCTER & GAMBLE	2.50%	AON CLASS A
CHUBB	2.36%	ALTICE USA 'A'
Total	30.61%	ORACLE

Top Contributors

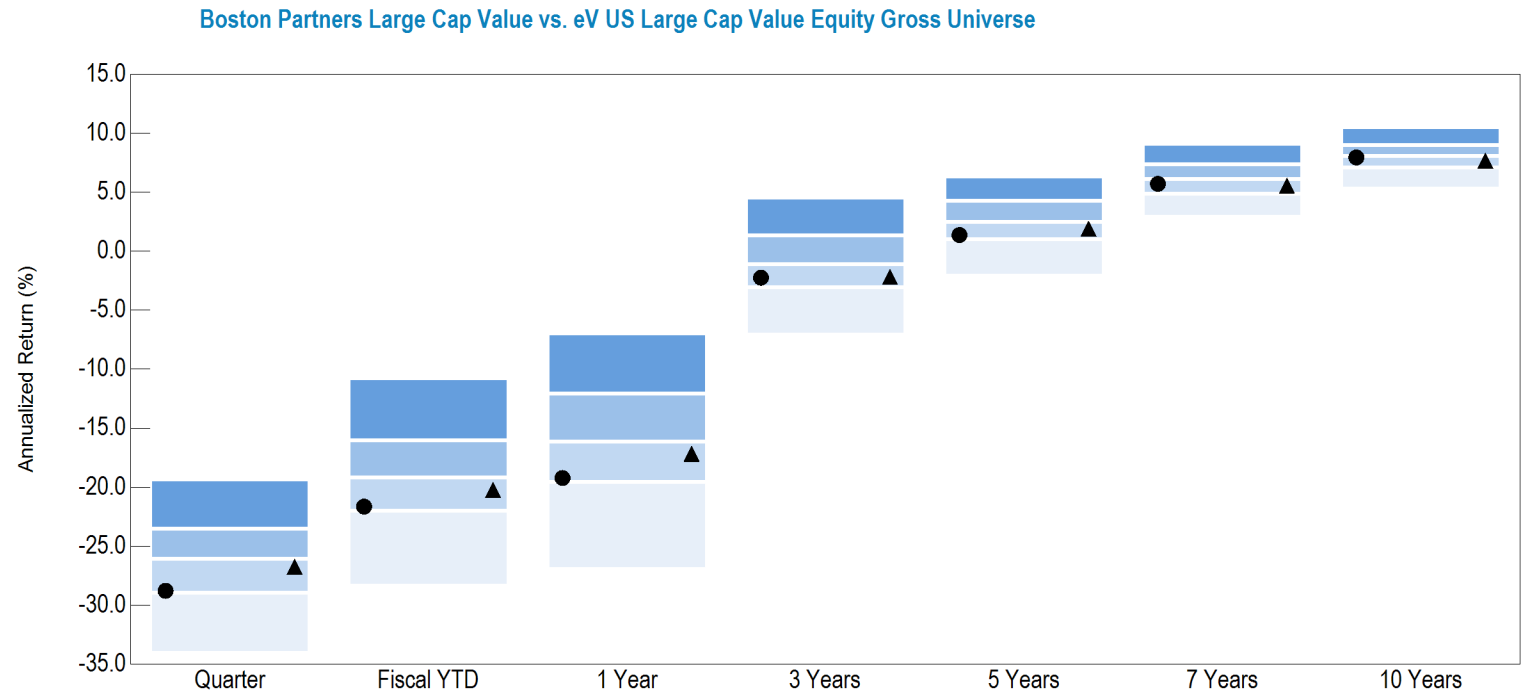
	Avg Wgt	Return	Contribution
BIOGEN	0.88	6.62	0.06
NOVO NORDISK 'B' ADR 1:1	0.39	5.44	0.02
MICROSOFT	0.62	0.28	0.00
BARRICK GOLD (NYS)	1.55	-1.10	-0.02
MCKESSON	1.09	-1.93	-0.02
MONDELEZ INTERNATIONAL	0.76	-8.57	-0.06
CL.A	0.45	-14.69	-0.07
CH ROBINSON WWD.	0.35	-20.61	-0.07
AON CLASS A	0.43	-18.47	-0.08
ALTICE USA 'A'	0.97	-8.37	-0.08

Bottom Contributors

	Avg Wgt	Return	Contribution
BANK OF AMERICA	4.64	-39.32	-1.82
CITIGROUP	2.69	-46.92	-1.26
JP MORGAN CHASE & CO.	3.60	-35.00	-1.26
WELLS FARGO & CO	2.63	-46.09	-1.21
MARATHON PETROLEUM	2.00	-60.39	-1.21
CONOCOPHILLIPS	2.03	-52.30	-1.06
VALERO ENERGY	2.04	-51.00	-1.04
AMERICAN INTL.GP.	1.93	-52.23	-1.01
BERKSHIRE HATHAWAY 'B'	4.65	-19.28	-0.90
RAYTHEON	2.30	-36.71	-0.85
TECHNOLOGIES			

Boston Partners Large Cap Value Cumulative Performance Comparison (Gross of Fees)

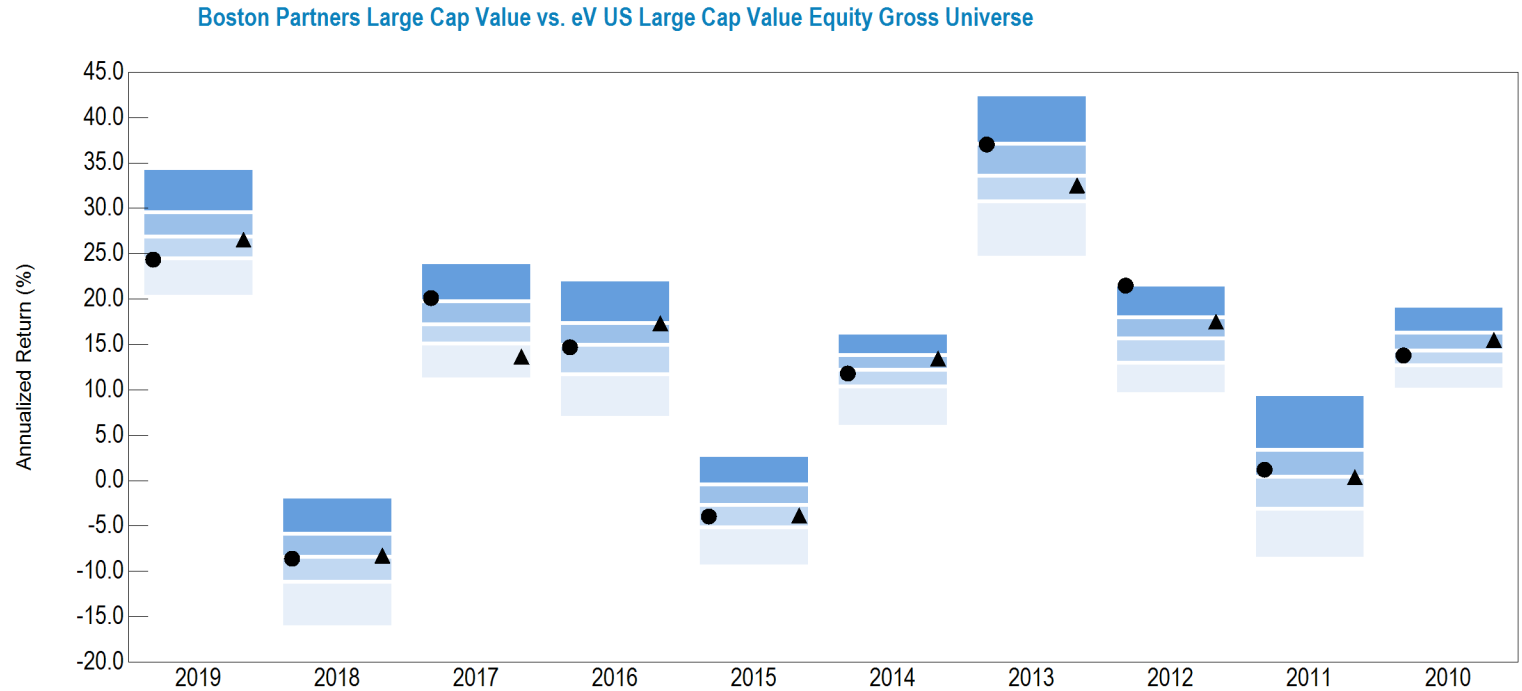
Period Ending: March 31, 2020



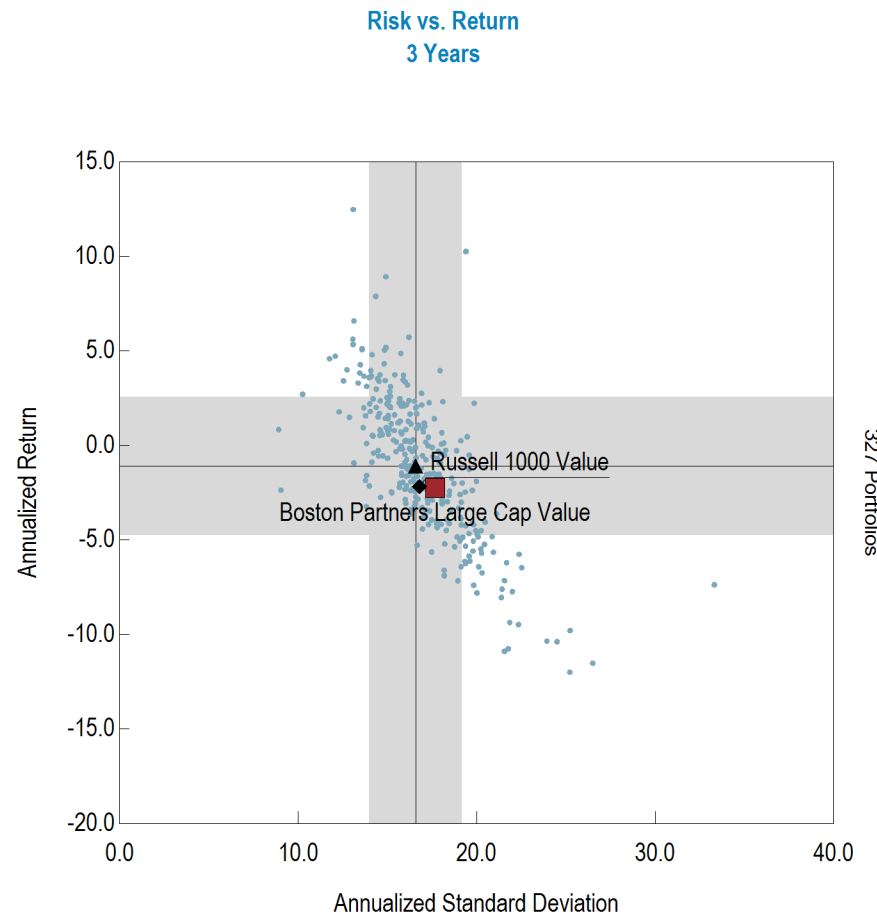
	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-19.4		-10.8		-7.0		4.5		6.3		9.1		10.5	
25th Percentile	-23.5		-16.0		-12.1		1.4		4.3		7.4		9.0	
Median	-26.0		-19.1		-16.1		-1.1		2.5		6.1		8.1	
75th Percentile	-28.9		-22.0		-19.5		-3.0		1.0		4.9		7.1	
95th Percentile	-34.0		-28.3		-26.9		-7.1		-2.1		2.9		5.3	
# of Portfolios	332		332		332		327		316		307		272	
● Boston Partners Large Cap Value	-28.8	(75)	-21.6	(74)	-19.2	(73)	-2.2	(67)	1.4	(71)	5.7	(61)	7.9	(56)
▲ Russell 1000 Value	-26.7	(58)	-20.2	(60)	-17.2	(60)	-2.2	(65)	1.9	(63)	5.6	(65)	7.7	(63)

Boston Partners Large Cap Value Consecutive Performance Comparison (Gross of Fees)

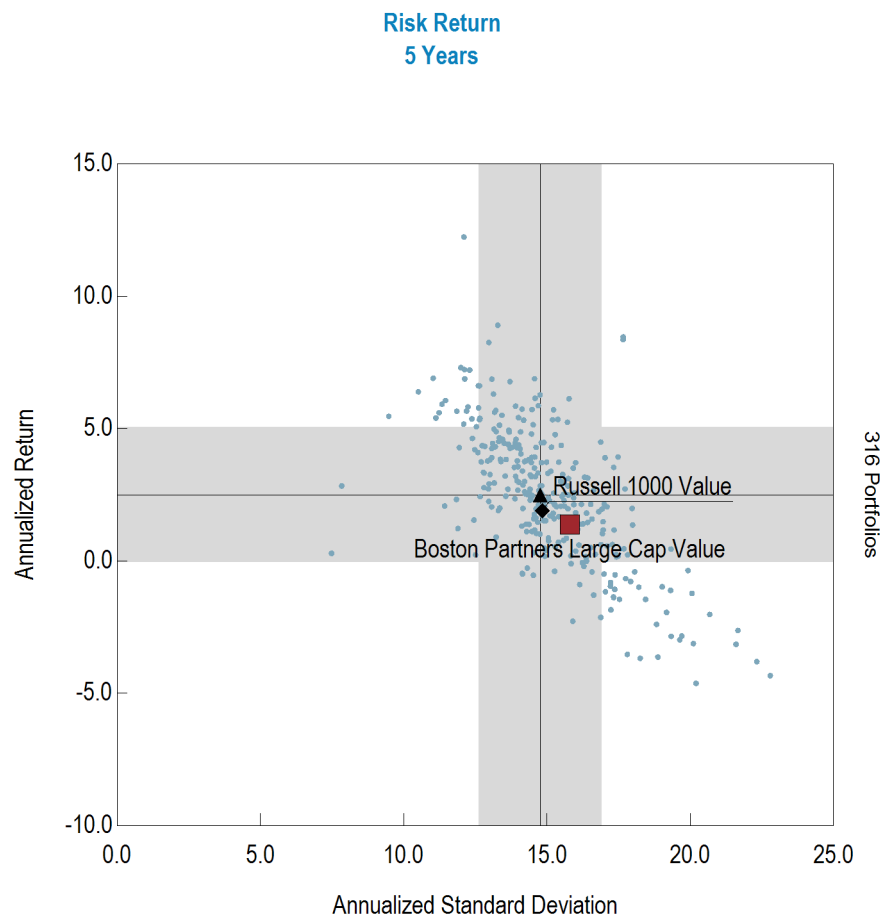
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	34.4	-1.8	24.0	22.1	2.8	16.3	42.5	21.5	9.5	19.2
25th Percentile	29.6	-5.8	19.8	17.4	-0.4	13.9	37.2	18.0	3.4	16.3
Median	26.9	-8.3	17.2	15.0	-2.6	12.2	33.6	15.7	0.5	14.3
75th Percentile	24.5	-11.1	15.1	11.8	-5.1	10.4	30.8	13.0	-3.1	12.7
95th Percentile	20.3	-16.1	11.2	7.0	-9.4	5.9	24.6	9.6	-8.6	10.1
# of Portfolios	331	336	342	346	312	307	310	303	310	323
● Boston Partners Large Cap Value	24.3 (77)	-8.6 (55)	20.1 (22)	14.7 (54)	-3.9 (65)	11.8 (58)	37.0 (26)	21.5 (6)	1.2 (43)	13.8 (61)
▲ Russell 1000 Value	26.5 (54)	-8.3 (50)	13.7 (87)	17.3 (26)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	0.4 (51)	15.5 (35)



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

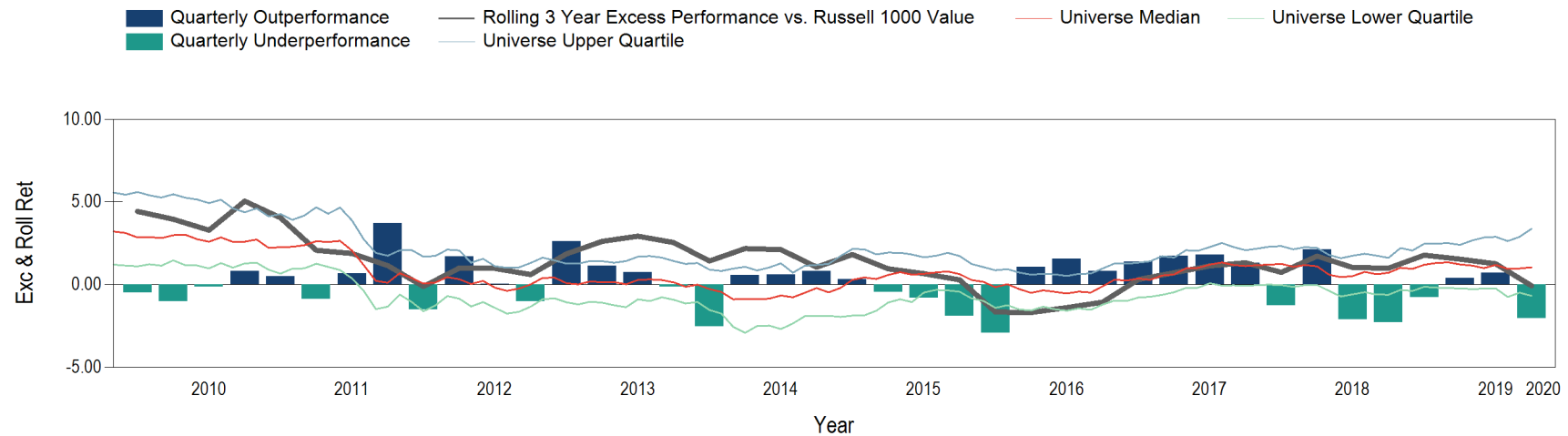


- Boston Partners Large Cap Value
- ◆ Russell 1000 Value
- ▲ Universe Median
- 68% Confidence Interval
- eV US Large Cap Value Equity Gross

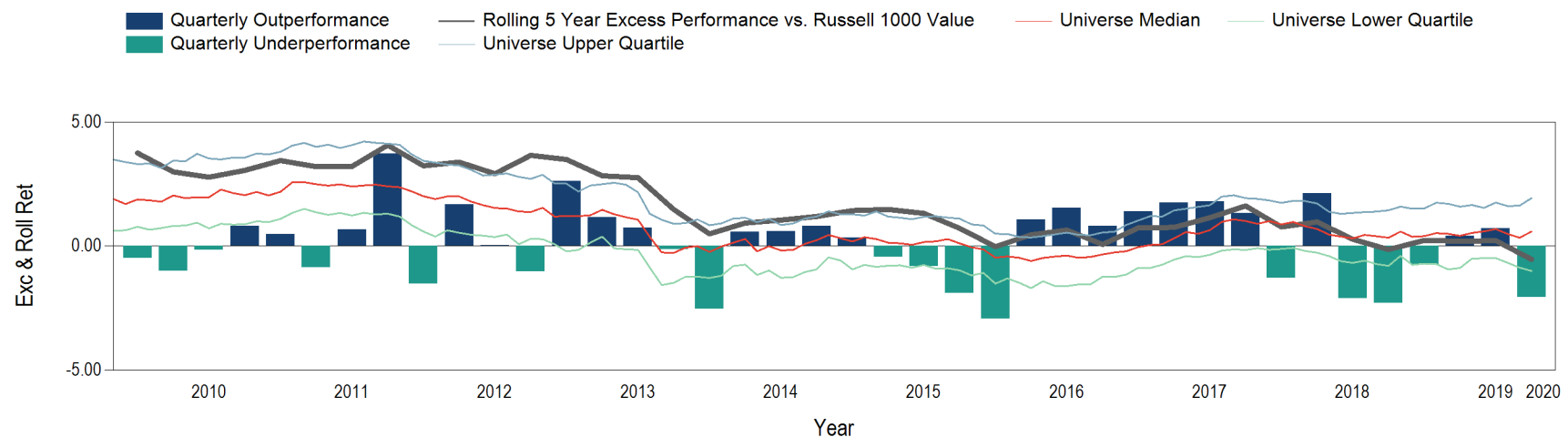
Boston Partners Large Cap Value Rolling Return Analysis (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



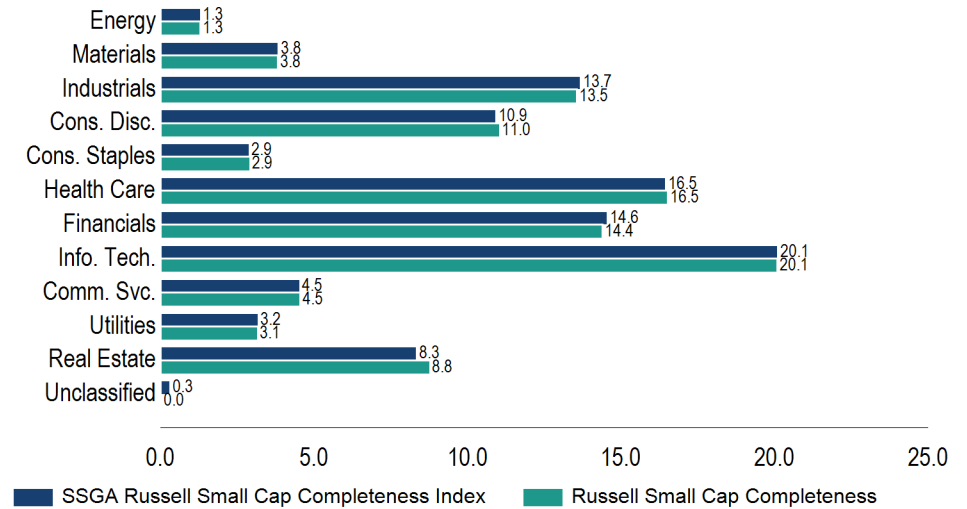
SSGA Russell Small Cap Completeness Index Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell Small Cap Completeness
Number of Holdings	2,435	2,472
Weighted Avg. Market Cap. (\$B)	7.85	7.87
Median Market Cap. (\$B)	0.75	0.73
Price To Earnings	14.43	14.52
Price To Book	2.82	2.86
Price To Sales	1.87	1.89
Return on Equity (%)	4.76	4.57
Yield (%)	1.88	1.87
Beta	1.00	1.00

Sector Allocation (%) vs Russell Small Cap Completeness



*Unclassified includes Cash

Top Holdings Ending Period Weight

TESLA	2.06%	TESLA
UBER TECHNOLOGIES	0.72%	TELADOC HEALTH
DEXCOM	0.66%	DEXCOM
LULULEMON ATHLETICA	0.61%	RINGCENTRAL ORD
WORKDAY CLASS A	0.59%	DOCUSIGN
COSTAR GP.	0.57%	MODERNA
VEEVA SYSTEMS CL.A	0.56%	VEEVA SYSTEMS CL.A
SPLUNK	0.54%	ATLASSIAN 'A'
SQUARE CL.A	0.49%	SPRINT
ATLASSIAN 'A'	0.44%	QIAGEN
Total	7.24%	

Top Contributors

Avg Wgt	Return	Contribution
1.16	25.26	0.29
0.12	85.15	0.10
0.39	23.10	0.09
0.25	25.64	0.06
0.23	24.68	0.06
0.08	53.12	0.04
0.36	11.17	0.04
0.28	14.06	0.04
0.06	65.45	0.04
0.14	23.08	0.03

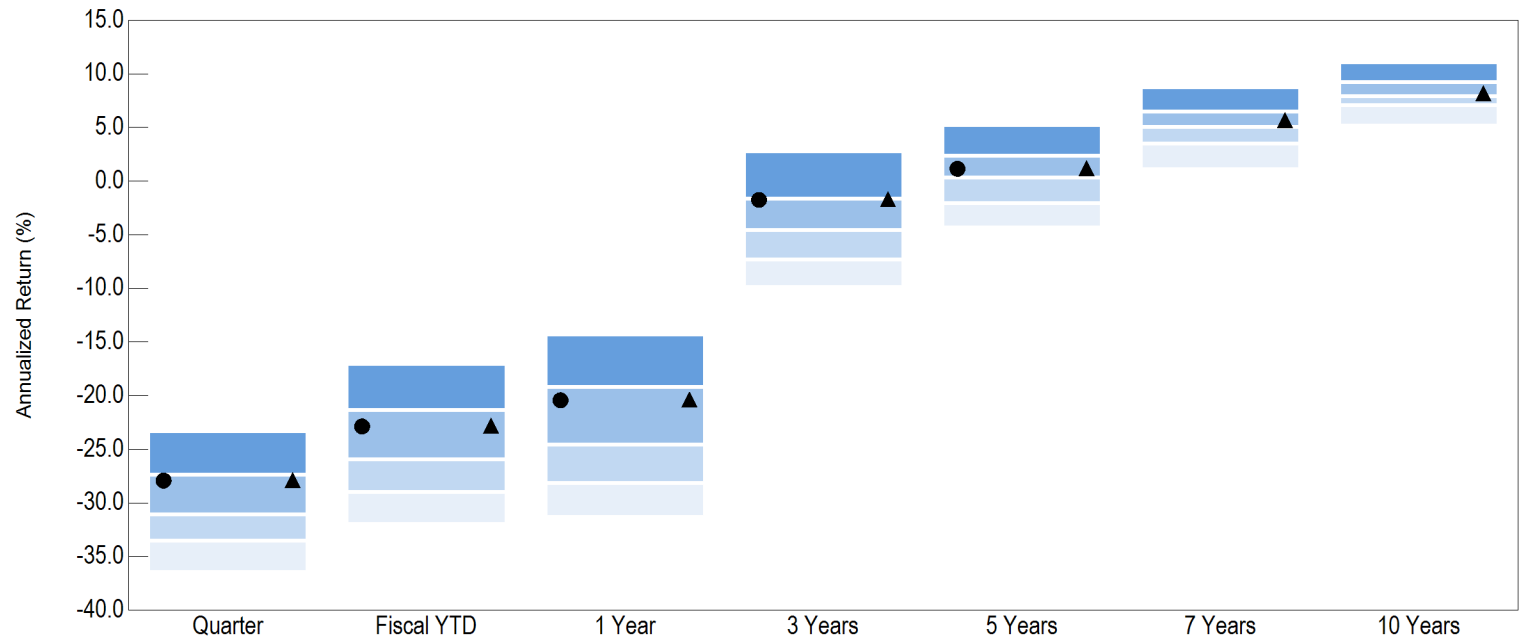
Bottom Contributors

Avg Wgt	Return	Contribution
0.18	-82.66	-0.15
0.43	-29.10	-0.12
0.27	-45.14	-0.12
0.23	-52.50	-0.12
0.26	-43.81	-0.12
0.21	-53.86	-0.11
0.52	-20.81	-0.11
0.32	-33.64	-0.11
0.23	-44.50	-0.10
0.18	-57.72	-0.10

SSGA Russell Small Cap Completeness Index Cumulative Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

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

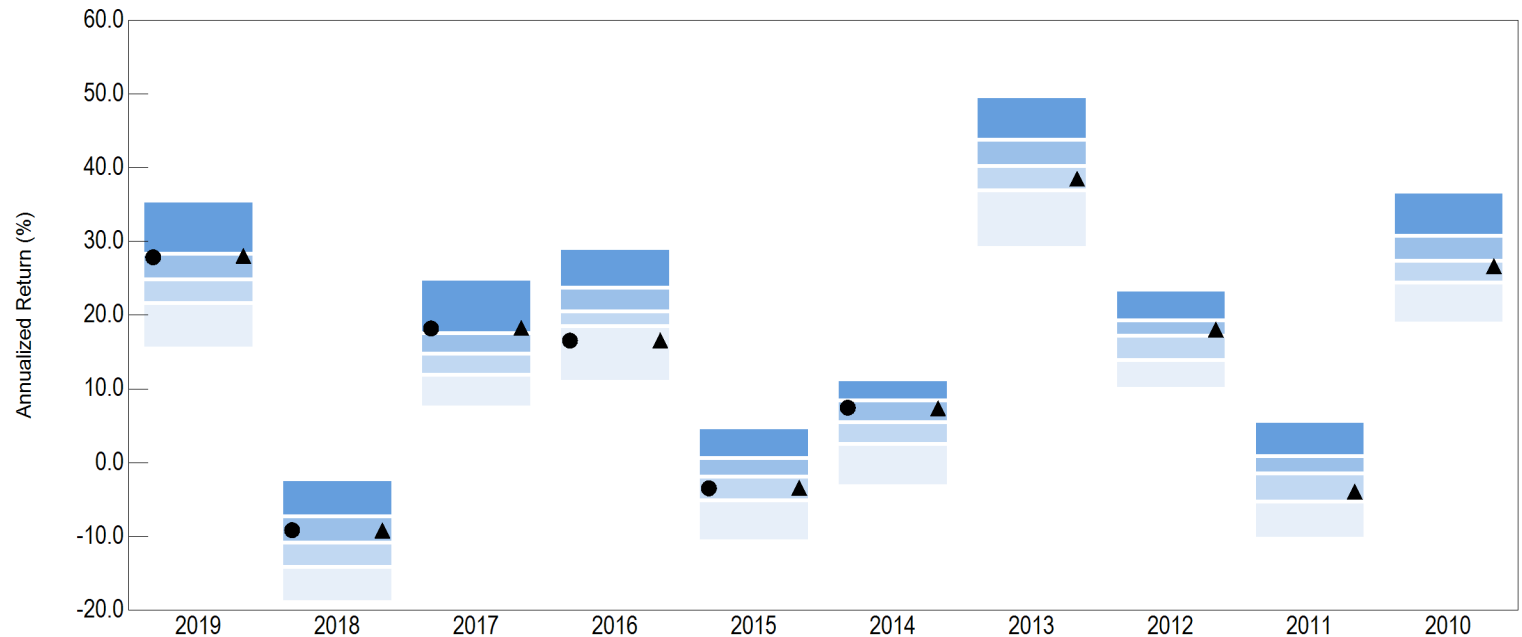


	Return (Rank)													
5th Percentile	-23.3		-17.1		-14.3		2.7		5.2		8.7		11.0	
25th Percentile	-27.3		-21.3		-19.2		-1.6		2.4		6.5		9.3	
Median	-31.0		-25.9		-24.5		-4.5		0.4		5.1		7.9	
75th Percentile	-33.5		-29.0		-28.1		-7.3		-2.0		3.6		7.1	
95th Percentile	-36.4		-31.9		-31.3		-9.8		-4.3		1.1		5.2	
# of Portfolios	158		158		158		153		148		139		118	
● SSGA Russell Small Cap Completeness Index	-27.9	(31)	-22.9	(33)	-20.4	(29)	-1.8	(27)	1.1	(41)	--	(--)	--	(--)
▲ Russell Small Cap Completeness	-27.9	(31)	-22.8	(33)	-20.4	(29)	-1.7	(26)	1.2	(40)	5.7	(40)	8.2	(47)

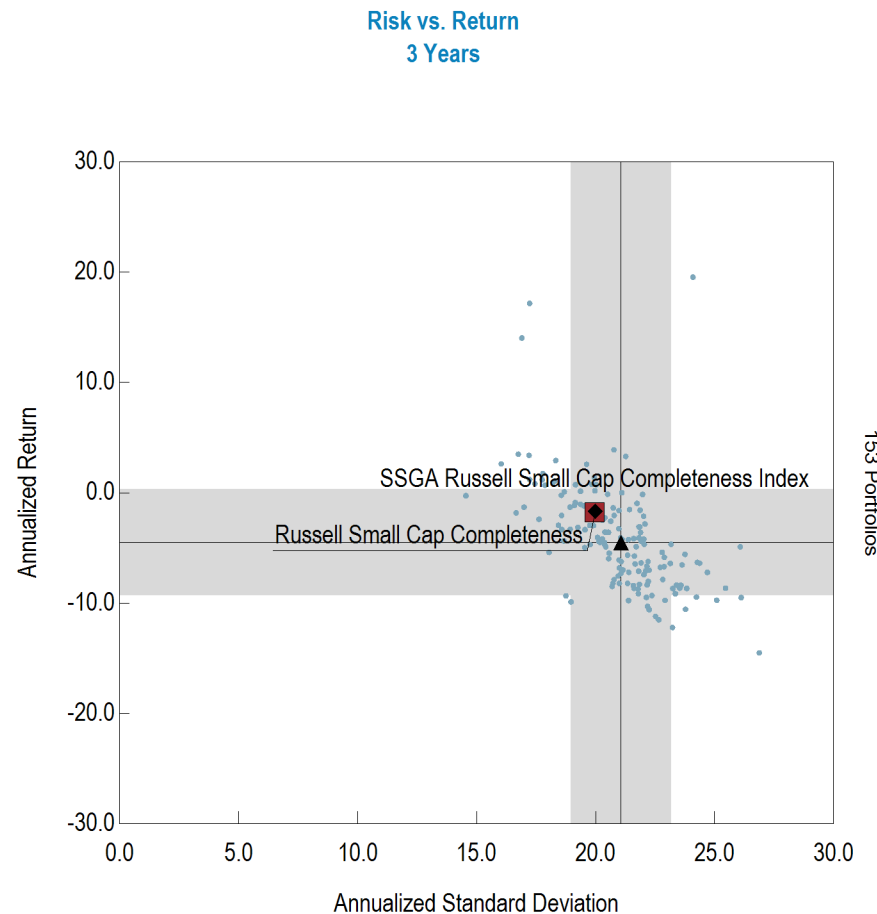
SSGA Russell Small Cap Completeness Index Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

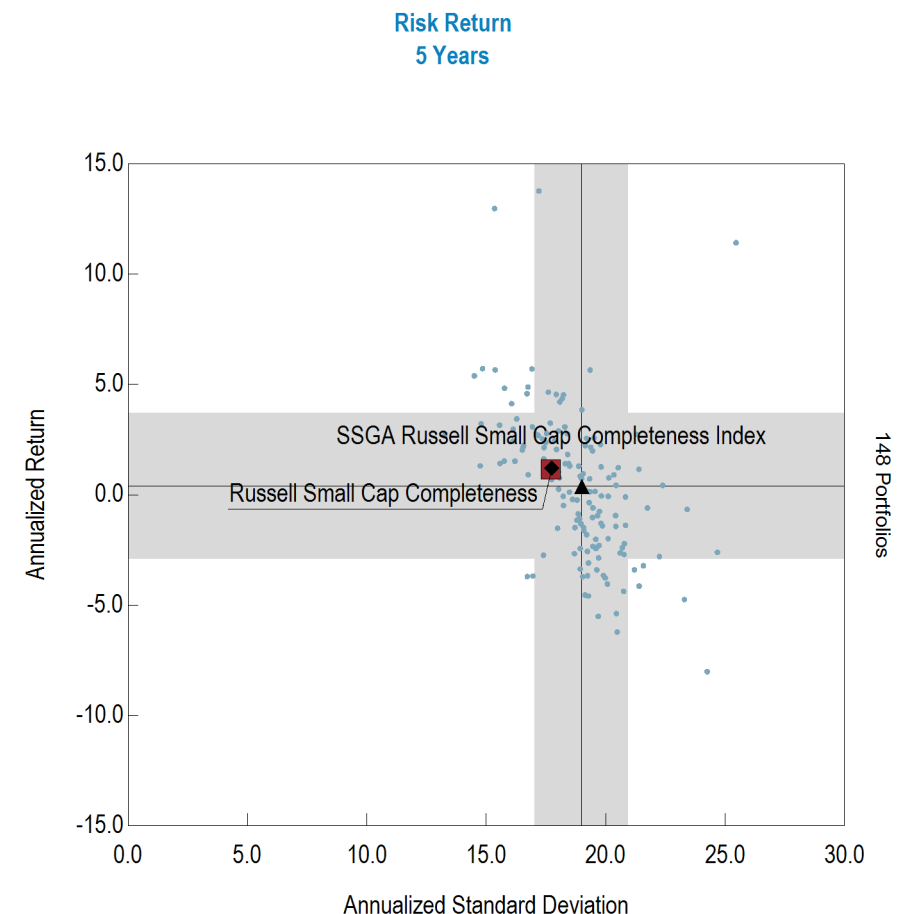
SSGA Russell Small Cap Completeness Index vs. eV US Small Cap Core Equity Gross Universe



	Return (Rank)																			
5th Percentile	35.5	-2.3	24.9	29.1	4.8	11.3	49.7	23.4	5.7	36.7										
25th Percentile	28.4	-7.2	17.6	23.8	0.7	8.5	43.8	19.4	0.9	30.8										
Median	24.9	-10.8	14.9	20.6	-1.8	5.6	40.3	17.2	-1.4	27.4										
75th Percentile	21.7	-14.1	12.0	18.6	-5.1	2.6	36.9	14.0	-5.2	24.5										
95th Percentile	15.5	-18.9	7.5	11.0	-10.6	-3.1	29.1	10.1	-10.3	18.9										
# of Portfolios	165	173	171	168	151	142	133	127	122	125										
● SSGA Russell Small Cap Completeness Index	27.8	(29)	-9.2	(37)	18.2	(23)	16.5	(84)	-3.5	(68)	7.4	(37)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell Small Cap Completeness	28.0	(28)	-9.2	(37)	18.3	(23)	16.6	(84)	-3.4	(68)	7.4	(40)	38.5	(66)	18.0	(39)	-3.9	(72)	26.6	(56)



- SSGA Russell Small Cap Completeness Index
- ◆ Russell Small Cap Completeness
- ▲ Universe Median
- 68% Confidence Interval
- eV US Small Cap Core Equity Gross



- SSGA Russell Small Cap Completeness Index
- ◆ Russell Small Cap Completeness
- ▲ Universe Median
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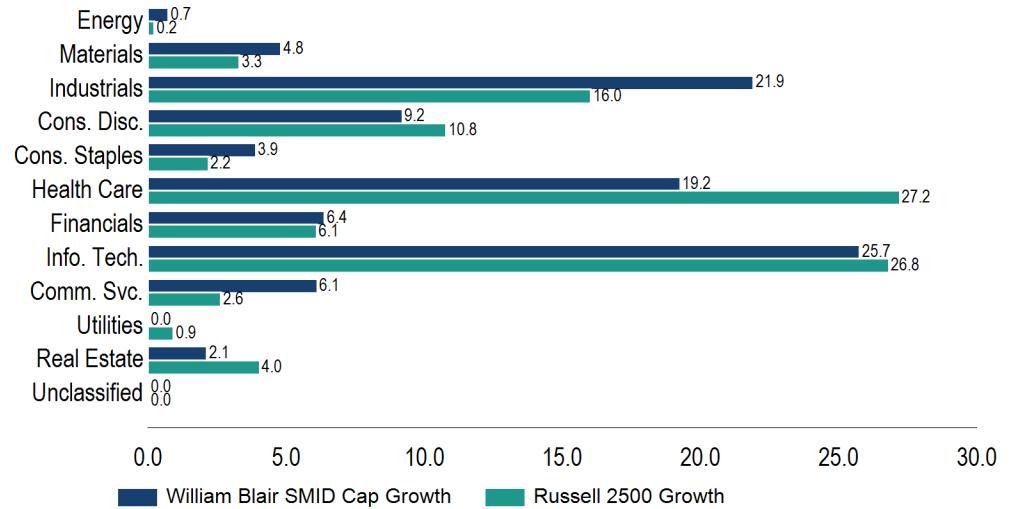
William Blair SMID Cap Growth Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell 2500 Growth
Number of Holdings	67	1,407
Weighted Avg. Market Cap. (\$B)	6.29	5.43
Median Market Cap. (\$B)	4.64	0.88
Price To Earnings	22.74	20.59
Price To Book	4.74	4.23
Price To Sales	2.83	2.77
Return on Equity (%)	15.65	4.79
Yield (%)	0.66	0.90
Beta	0.88	1.00

Sector Allocation (%) vs Russell 2500 Growth



*Unclassified includes Cash

Top Holdings Ending Period Weight

BWX TECHNOLOGIES	3.55%
GRAND CANYON EDUCATION	3.30%
TELEDYNE TECHS.	2.83%
ENCOMPASS HEALTH	2.81%
TREX	2.67%
MARTIN MRTA.MATS.	2.67%
NICE SPN.ADR 1:1	2.25%
PENUMBRA	2.23%
BJAS WHOLESALE CLUB HOLDINGS	2.21%
LIVE NATION ENTM.	2.17%
Total	26.68%

Top Contributors

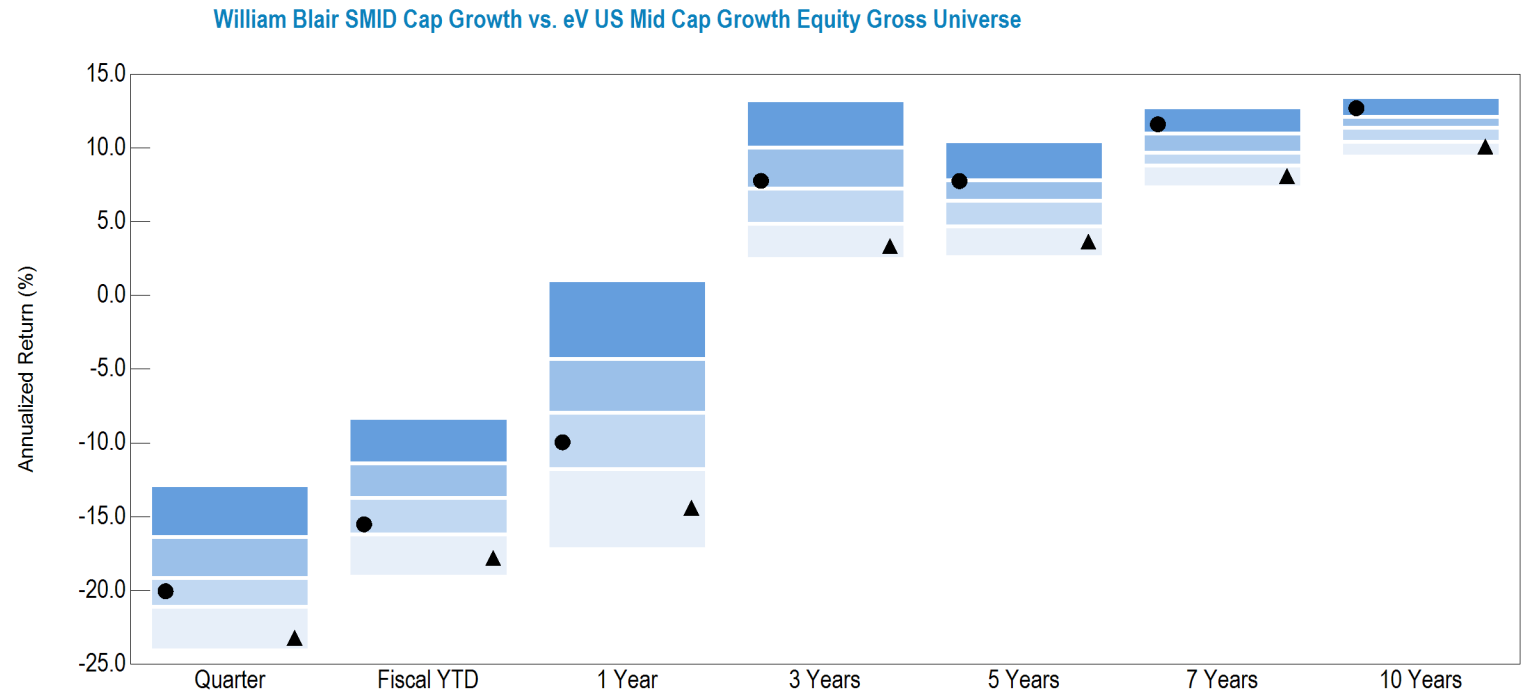
	Avg Wgt	Return	Contribution
VIRTU FINANCIAL CL.A	0.96	31.87	0.31
BJAS WHOLESALE CLUB HOLDINGS	1.66	12.01	0.20
CABLE ONE	1.44	10.59	0.15
IRHYTHM TECHNOLOGIES	0.78	19.47	0.15
ZYNGA 'A'	1.26	11.93	0.15
AMEDISYS	1.40	9.96	0.14
AVALARA	1.22	1.84	0.02
HALOZYME THERAPEUTICS	0.93	1.47	0.01
QUALYS	0.22	4.34	0.01
HEALTHCARE SVS.GP.	1.10	-1.02	-0.01

Bottom Contributors

	Avg Wgt	Return	Contribution
SABRE	1.62	-72.61	-1.17
EURONET WWD.	2.53	-45.60	-1.16
PORTOLA	1.34	-70.14	-0.94
PHARMACEUTICALS	2.69	-32.17	-0.87
MARTIN MRTA.MATS.	2.78	-30.51	-0.85
BURLINGTON STORES	2.44	-33.46	-0.82
LIVE NATION ENTM.	2.20	-36.39	-0.80
BWX TECHNOLOGIES	3.39	-21.25	-0.72
WEX	1.42	-50.09	-0.71
BRINK'S	1.46	-42.49	-0.62

William Blair SMID Cap Growth Cumulative Performance Comparison (Gross of Fees)

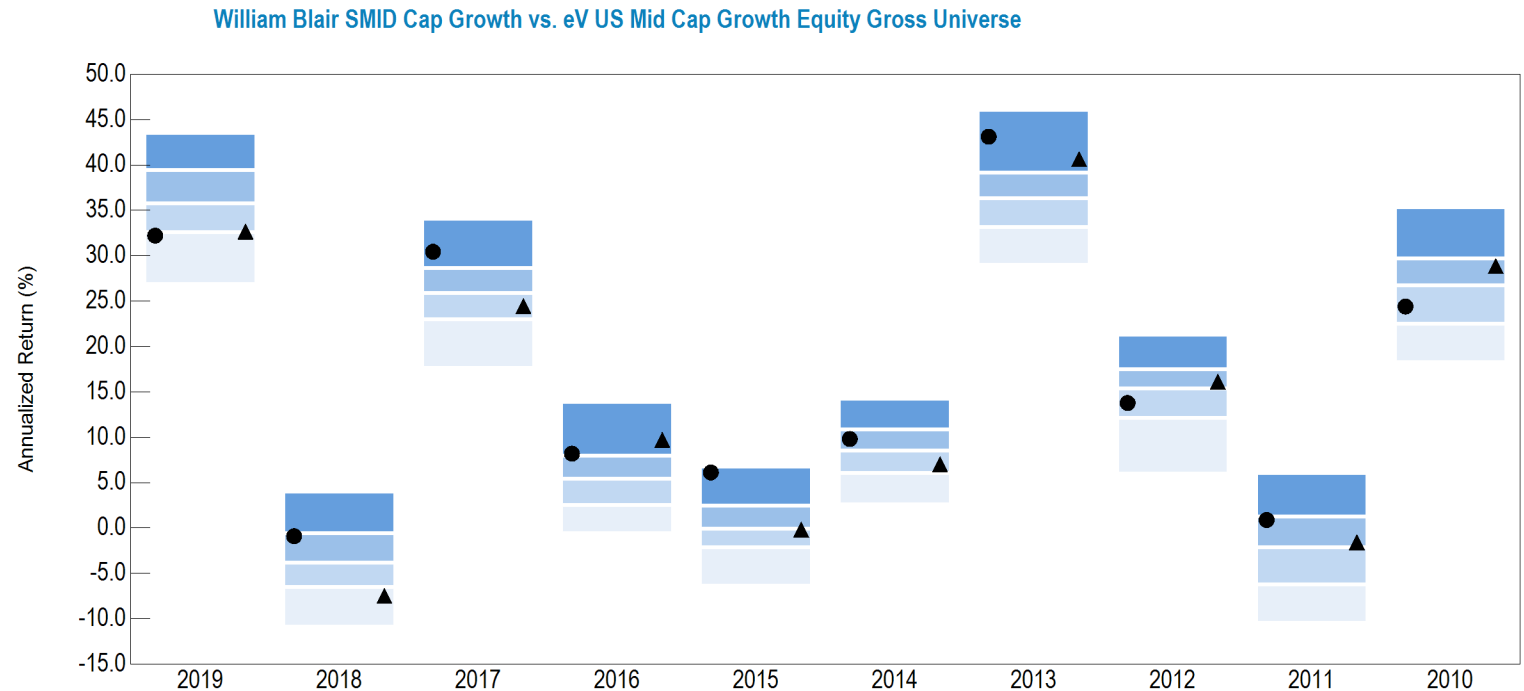
Period Ending: March 31, 2020



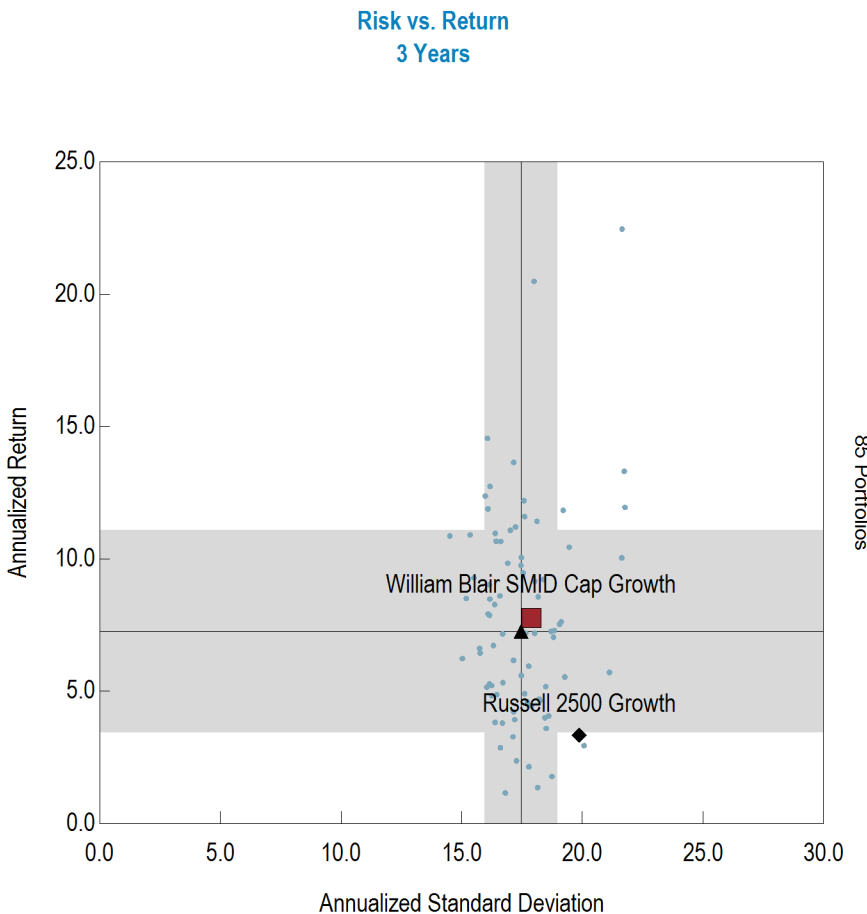
	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-12.9		-8.3		1.0		13.2		10.4		12.7		13.4	
25th Percentile	-16.4		-11.4		-4.3		10.1		7.8		11.0		12.1	
Median	-19.2		-13.7		-7.9		7.3		6.4		9.7		11.4	
75th Percentile	-21.1		-16.2		-11.8		4.9		4.7		8.8		10.4	
95th Percentile	-24.0		-19.1		-17.2		2.5		2.6		7.3		9.4	
# of Portfolios	86		86		86		85		82		79		74	
● William Blair SMID Cap Growth	-20.1	(63)	-15.5	(70)	-10.0	(65)	7.8	(44)	7.8	(28)	11.6	(13)	12.7	(17)
▲ Russell 2500 Growth	-23.2	(93)	-17.8	(88)	-14.4	(89)	3.4	(92)	3.6	(90)	8.1	(86)	10.1	(84)

William Blair SMID Cap Growth Consecutive Performance Comparison (Gross of Fees)

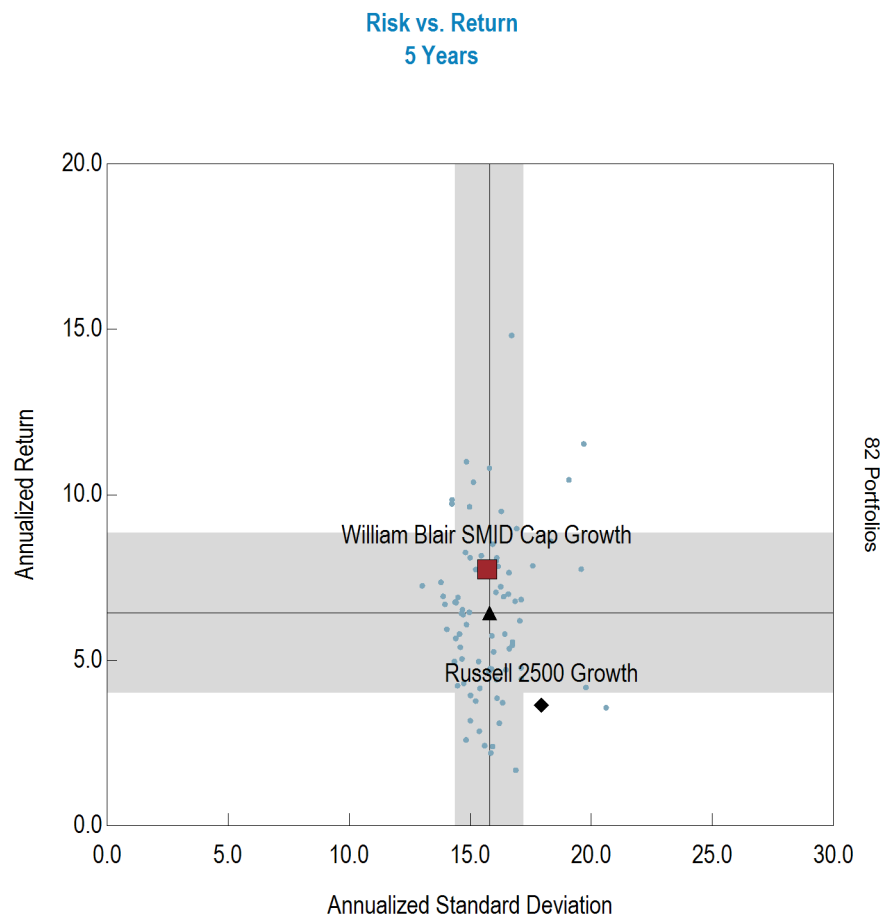
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	43.5	4.0	34.0	13.9	6.7	14.2	46.0	21.3	6.1	35.3
25th Percentile	39.5	-0.5	28.7	8.0	2.5	10.9	39.2	17.6	1.3	29.8
Median	35.8	-3.7	25.9	5.4	0.0	8.6	36.4	15.4	-2.1	26.7
75th Percentile	32.6	-6.5	23.1	2.6	-2.1	6.1	33.2	12.2	-6.1	22.5
95th Percentile	26.9	-10.8	17.7	-0.5	-6.3	2.6	29.0	6.0	-10.4	18.3
# of Portfolios	83	93	97	105	105	117	106	111	122	127
● William Blair SMID Cap Growth	32.2 (77)	-0.9 (29)	30.4 (16)	8.2 (22)	6.1 (7)	9.8 (33)	43.1 (11)	13.8 (68)	0.9 (28)	24.4 (65)
▲ Russell 2500 Growth	32.7 (75)	-7.5 (79)	24.5 (62)	9.7 (13)	-0.2 (55)	7.1 (65)	40.7 (17)	16.1 (44)	-1.6 (46)	28.9 (35)



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

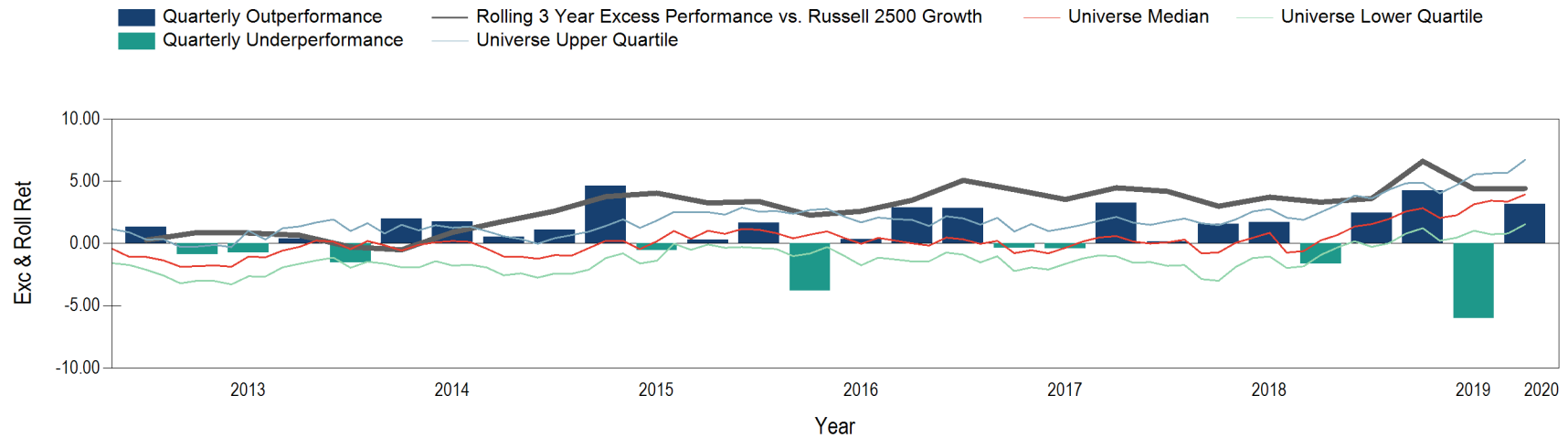


- William Blair SMID Cap Growth
- ◆ Russell 2500 Growth
- ▲ Universe Median
- 68% Confidence Interval
- eV US Mid Cap Growth Equity Gross

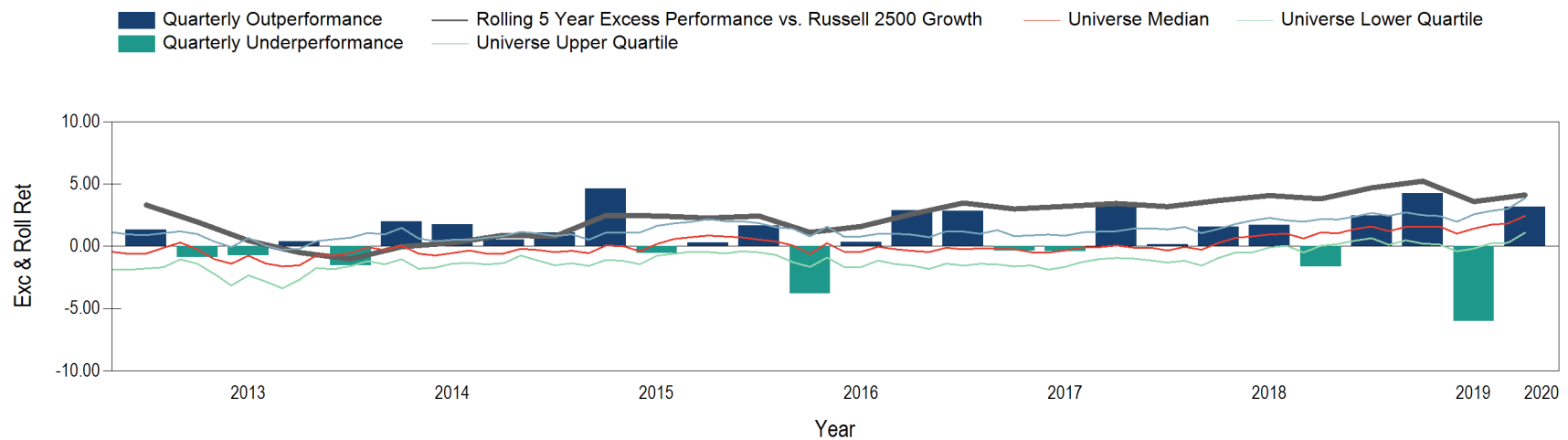
William Blair SMID Cap Growth Rolling Return Analysis (Gross of Fees)

Period Ending: March 31, 2020

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



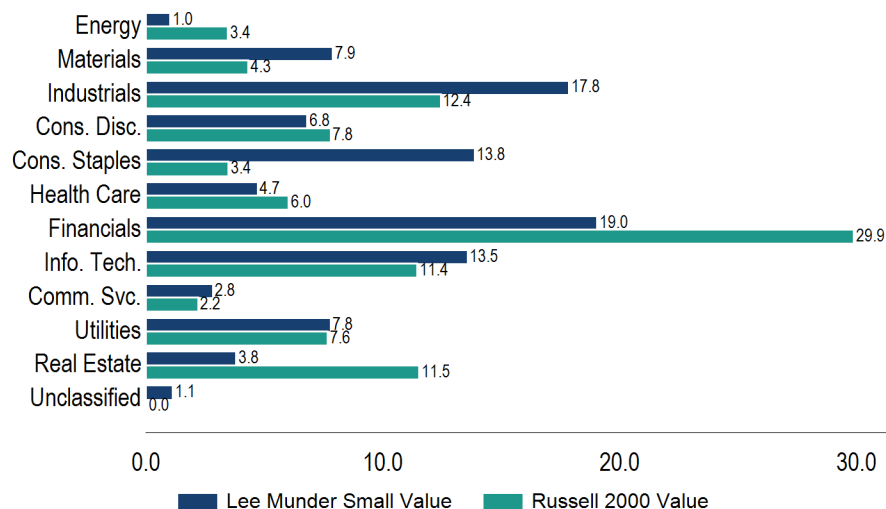
Lee Munder Small Value Manager Portfolio Overview

Period Ending: March 31, 2020

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	90	1,391
Weighted Avg. Market Cap. (\$B)	2.42	1.62
Median Market Cap. (\$B)	1.95	0.42
Price To Earnings	11.99	10.46
Price To Book	1.83	1.64
Price To Sales	1.24	1.11
Return on Equity (%)	8.32	5.52
Yield (%)	2.49	3.17
Beta	0.98	1.00

Sector Allocation (%) vs Russell 2000 Value



*Unclassified includes Cash

Top Holdings Ending Period Weight

TREEHOUSE FOODS	2.82%
DARLING INGREDIENTS	2.62%
MURPHY USA	2.62%
PORTLAND GEN.ELEC.	2.62%
CACI INTERNATIONAL 'A'	2.52%
MANTECH INTL.'A'	2.32%
MACOM TECH.SLTN.HDG.	2.22%
FNB	1.91%
PRESTIGE CONSUMER HEALTHCARE	1.91%
VIAMI SOLUTIONS	1.91%
Total	23.46%

Top Contributors

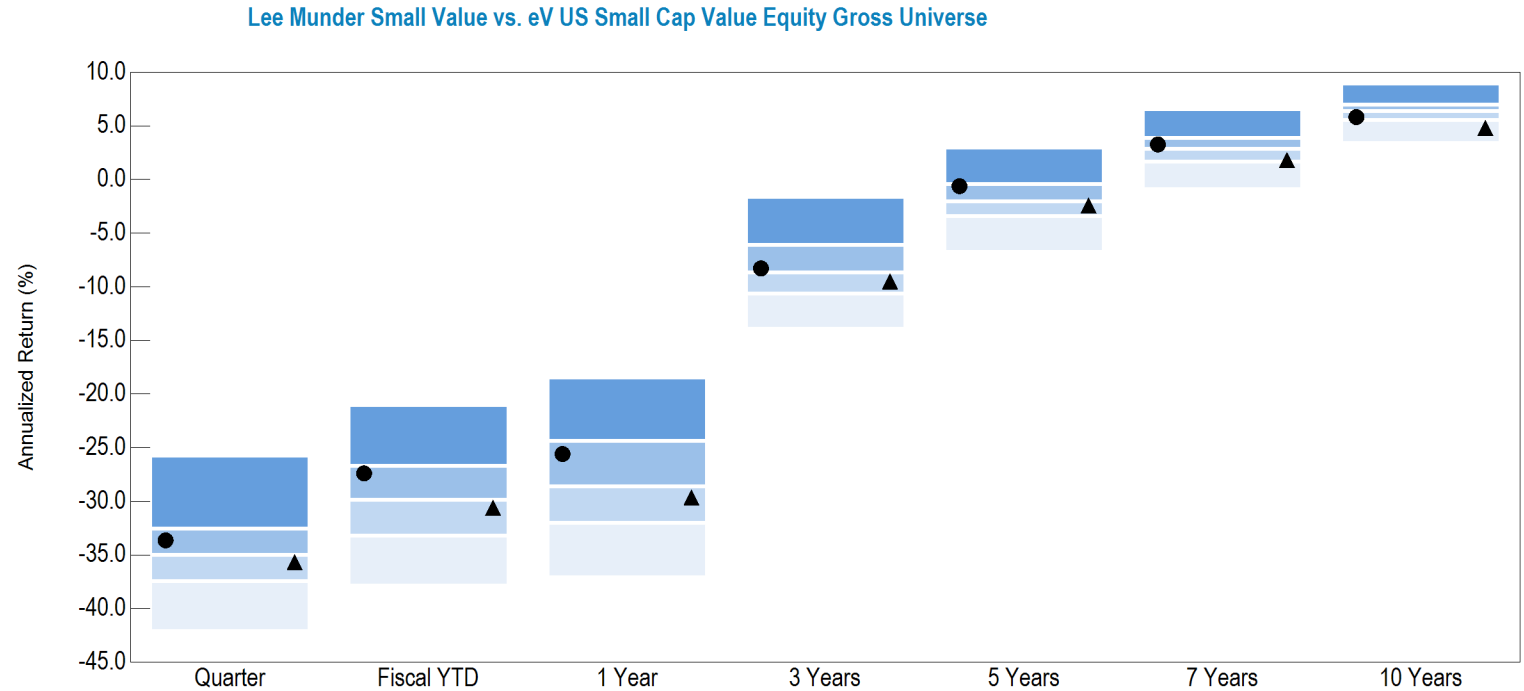
	Avg Wgt	Return	Contribution
COGENT COMMS.HOLDINGS	0.90	25.62	0.23
BJAS WHOLESALE CLUB HOLDINGS	0.70	12.01	0.08
VISTA OUTDOOR	0.30	17.65	0.05
CAL MAINE FOODS	1.00	2.88	0.03
HAIN CELESTIAL GP.	1.40	0.06	0.00
KEMPER	1.00	-3.68	-0.04
LEXINGTON REALTY TRUST	0.70	-5.51	-0.04
SILGAN HOLDINGS	0.80	-6.21	-0.05
GENERAC HOLDINGS	0.70	-7.38	-0.05
SPIRE	0.60	-9.88	-0.06

Bottom Contributors

	Avg Wgt	Return	Contribution
STERLING BANCORP	2.30	-50.25	-1.15
IBERIABANK	1.80	-51.09	-0.92
BLACKSTONE	1.90	-48.38	-0.92
MGE.TST.CL.A	1.00	-88.66	-0.89
CALLON PTL.DEL.	1.80	-48.55	-0.87
BANKUNITED	2.10	-41.29	-0.87
FNB	2.90	-27.90	-0.81
MURPHY USA	2.90	-27.90	-0.81
NEXSTAR MEDIA GROUP	1.50	-50.54	-0.76
CL.A	1.50	-50.54	-0.76
BANK OF NT BUTTERFIELD & SON	1.40	-53.33	-0.75
ENVISTA HOLDINGS	1.50	-49.60	-0.74

Lee Munder Small Value Cumulative Performance Comparison (Gross of Fees)

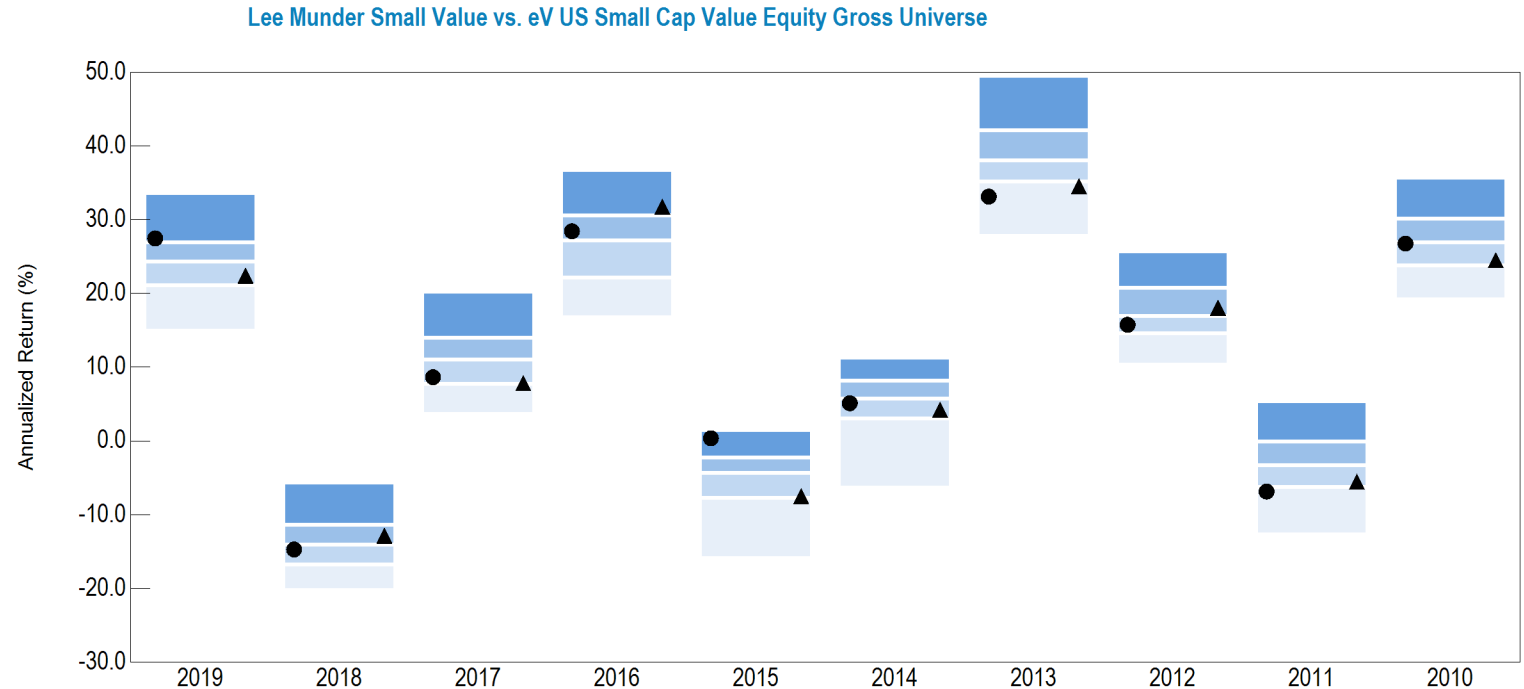
Period Ending: March 31, 2020



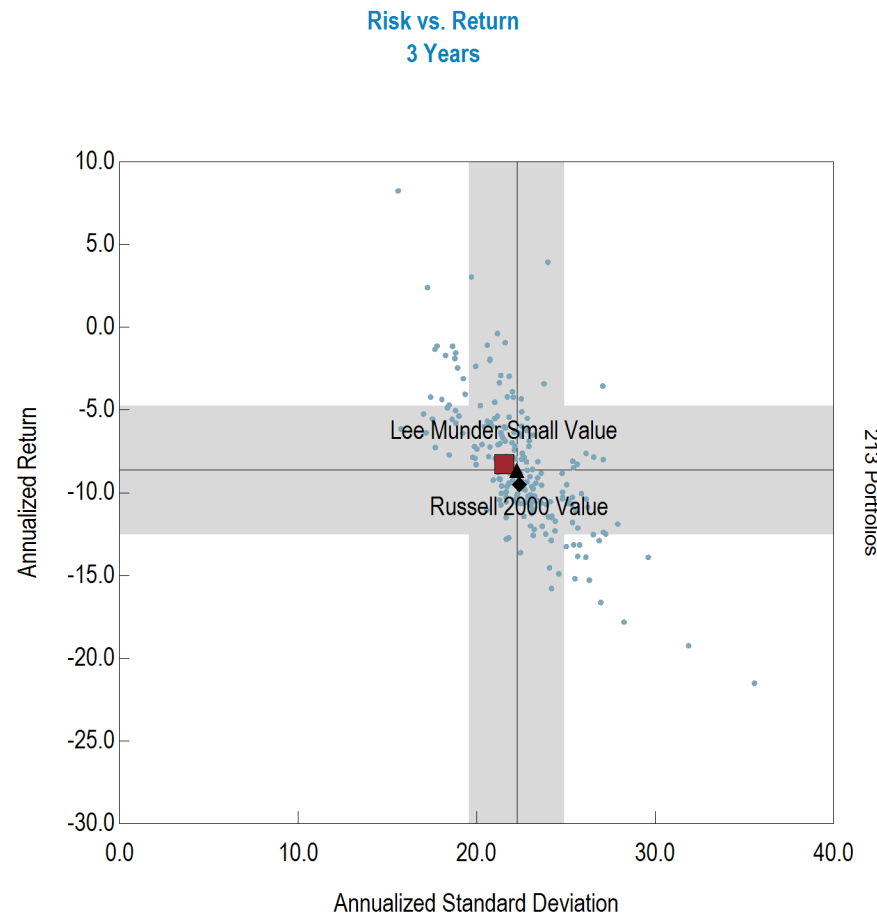
	Return (Rank)													
5th Percentile	-25.7		-21.0		-18.5		-1.6		2.9		6.5		8.9	
25th Percentile	-32.5		-26.7		-24.3		-6.1		-0.4		3.9		7.0	
Median	-35.0		-29.8		-28.6		-8.6		-2.0		2.9		6.4	
75th Percentile	-37.4		-33.1		-32.0		-10.6		-3.4		1.7		5.6	
95th Percentile	-42.0		-37.8		-37.1		-13.9		-6.7		-0.9		3.4	
# of Portfolios	219		219		219		213		205		198		184	
● Lee Munder Small Value	-33.6	(38)	-27.4	(31)	-25.6	(33)	-8.3	(47)	-0.6	(27)	3.3	(39)	5.8	(64)
▲ Russell 2000 Value	-35.7	(58)	-30.6	(55)	-29.6	(61)	-9.5	(60)	-2.4	(62)	1.8	(73)	4.8	(84)

Lee Munder Small Value
Consecutive Performance Comparison (Gross of Fees)

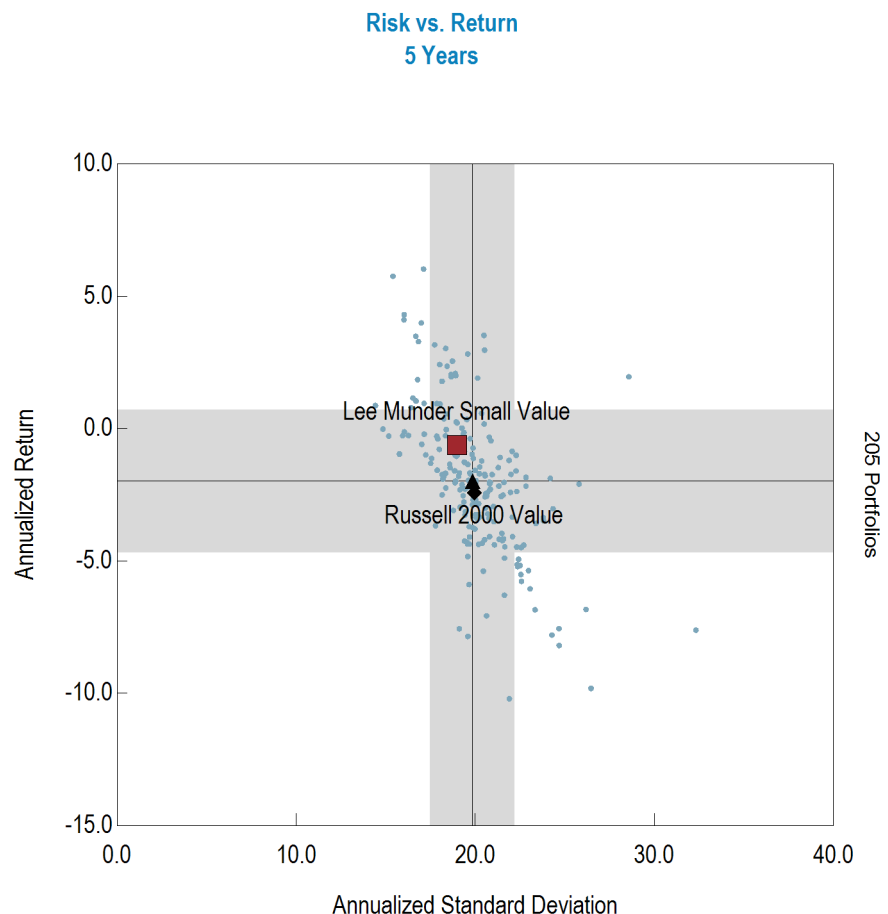
Period Ending: March 31, 2020



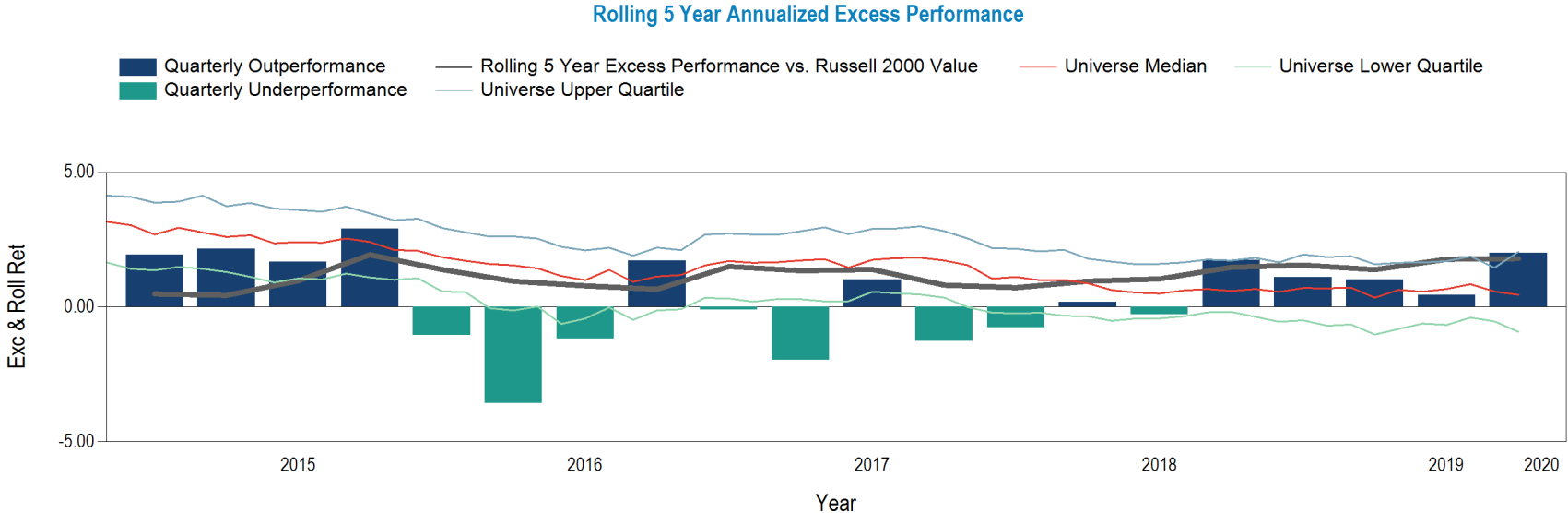
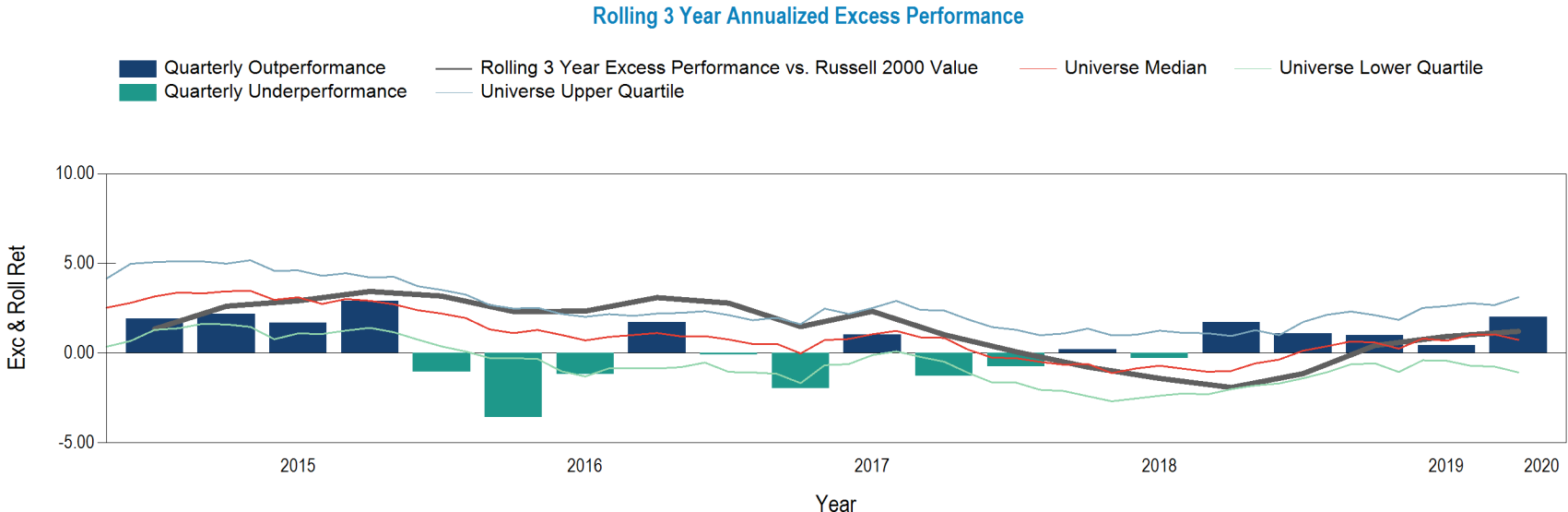
	Return (Rank)									
5th Percentile	33.6	-5.7	20.2	36.7	1.5	11.2	49.4	25.7	5.3	35.6
25th Percentile	27.0	-11.4	14.1	30.7	-2.2	8.2	42.1	20.8	0.0	30.2
Median	24.4	-14.0	11.1	27.2	-4.3	5.8	38.1	16.9	-3.3	26.9
75th Percentile	21.2	-16.7	7.8	22.2	-7.7	3.1	35.2	14.7	-6.2	23.8
95th Percentile	15.0	-20.2	3.7	16.8	-15.8	-6.3	27.8	10.3	-12.6	19.2
# of Portfolios	217	220	224	222	212	206	199	187	177	186
● Lee Munder Small Value	27.5 (22)	-14.7 (56)	8.6 (68)	28.4 (38)	0.4 (9)	5.1 (60)	33.1 (85)	15.7 (61)	-6.9 (79)	26.8 (54)
▲ Russell 2000 Value	22.4 (69)	-12.9 (39)	7.8 (75)	31.7 (17)	-7.5 (74)	4.2 (68)	34.5 (78)	18.1 (43)	-5.5 (69)	24.5 (72)



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



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

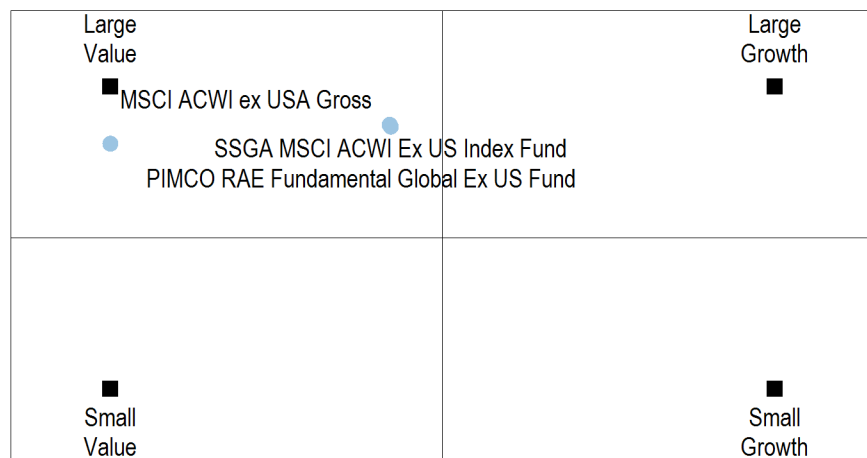


Total International Equity Asset Class Overview (Gross of Fees)

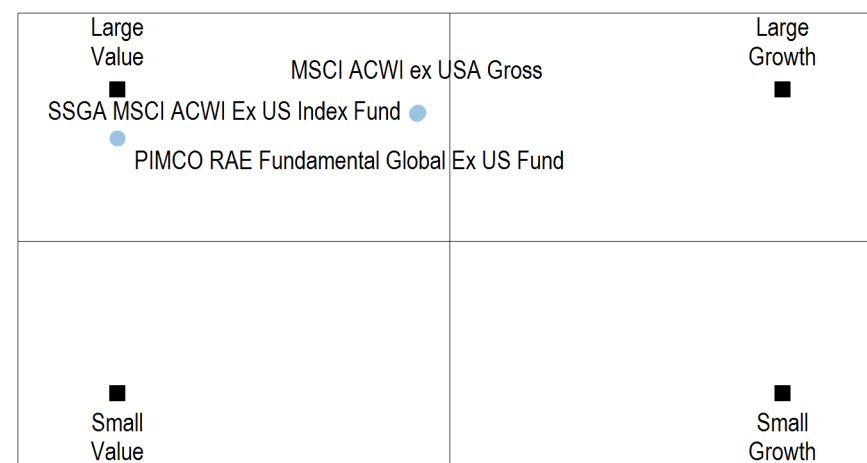
Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total International Equity	261,632,857	-22.5	-17.8	-14.4	-1.3	0.1	2.2	23.2	-14.3	26.9	6.2	-5.9
MSCI ACWI ex USA Gross		-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
InvMetrics Public DB ex-US Eq Gross Rank		27	42	29	28	35	83	44	43	80	13	85
SSGA MSCI ACWI Ex US Index Fund	86,264,996	-23.2	-17.8	-15.3	-1.7	-0.4	2.3	21.9	-14.0	27.6	4.8	-5.5
MSCI ACWI ex USA Gross		-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
eV All EAFE Equity Gross Rank		44	50	51	50	60	90	63	42	49	17	96
PIMCO RAE Fundamental Global Ex US Fund	75,789,485	-29.8	-25.4	-24.1	-6.3	-2.5	--	16.7	-14.7	26.7	13.5	-10.9
MSCI ACWI ex USA Value Gross		-28.5	-24.6	-23.2	-5.9	-2.9	--	16.5	-13.4	23.3	9.6	-9.6
eV All EAFE Equity Gross Rank		91	96	95	93	91	--	95	47	53	1	99
SGA Global Growth	99,578,376	-15.2	-11.0	-4.5	--	--	--	31.1	--	--	--	--
MSCI ACWI ex USA Growth Gross		-18.2	-11.0	-6.9	--	--	--	27.8	--	--	--	--
eV ACWI ex-US Core Equity Gross Rank		1	5	2	--	--	--	9	--	--	--	--

EAFE Effective Style Map
3 Years



EAFE Effective Style Map
5 Years



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

Total International Equity Asset Class Overview (Net of Fees)

Period Ending: March 31, 2020

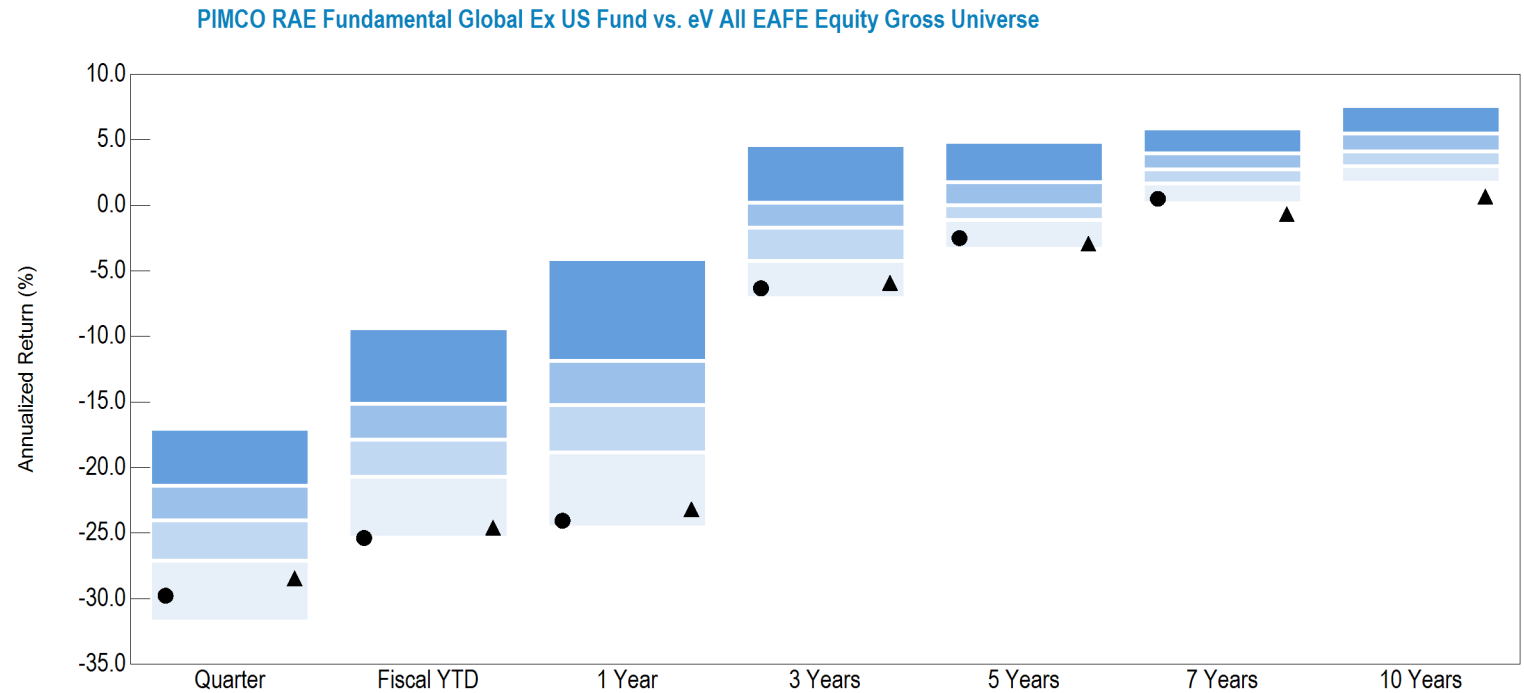
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total International Equity	261,632,857	-22.6	-18.1	-14.7	-1.6	-0.2	1.8	22.7	-14.5	26.5	5.9	-6.2
MSCI ACWI ex USA Gross		-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
SSGA MSCI ACWI Ex US Index Fund	86,264,996	-23.2	-17.9	-15.3	-1.7	-0.4	2.2	21.8	-14.0	27.5	4.7	-5.5
MSCI ACWI ex USA Gross		-23.3	-17.8	-15.1	-1.5	-0.2	2.5	22.1	-13.8	27.8	5.0	-5.3
PIMCO RAE Fundamental Global Ex US Fund	75,789,485	-29.9	-25.7	-24.5	-6.8	-3.0	--	16.1	-15.1	26.0	13.0	-11.4
MSCI ACWI ex USA Value Gross		-28.5	-24.6	-23.2	-5.9	-2.9	--	16.5	-13.4	23.3	9.6	-9.6
SGA Global Growth	99,578,376	-15.3	-11.3	-4.9	--	--	--	30.5	--	--	--	--
MSCI ACWI ex USA Growth Gross		-18.2	-11.0	-6.9	--	--	--	27.8	--	--	--	--

Research Affiliates converted to PIMCO RAE Fundamental Global Ex US Fund on 6/5/15 (performance prior to this date represents previously held Enhanced RAFI Global ex US).

PIMCO RAE Fundamental Global Ex US Fund

Cumulative Performance Comparison (Gross of Fees)

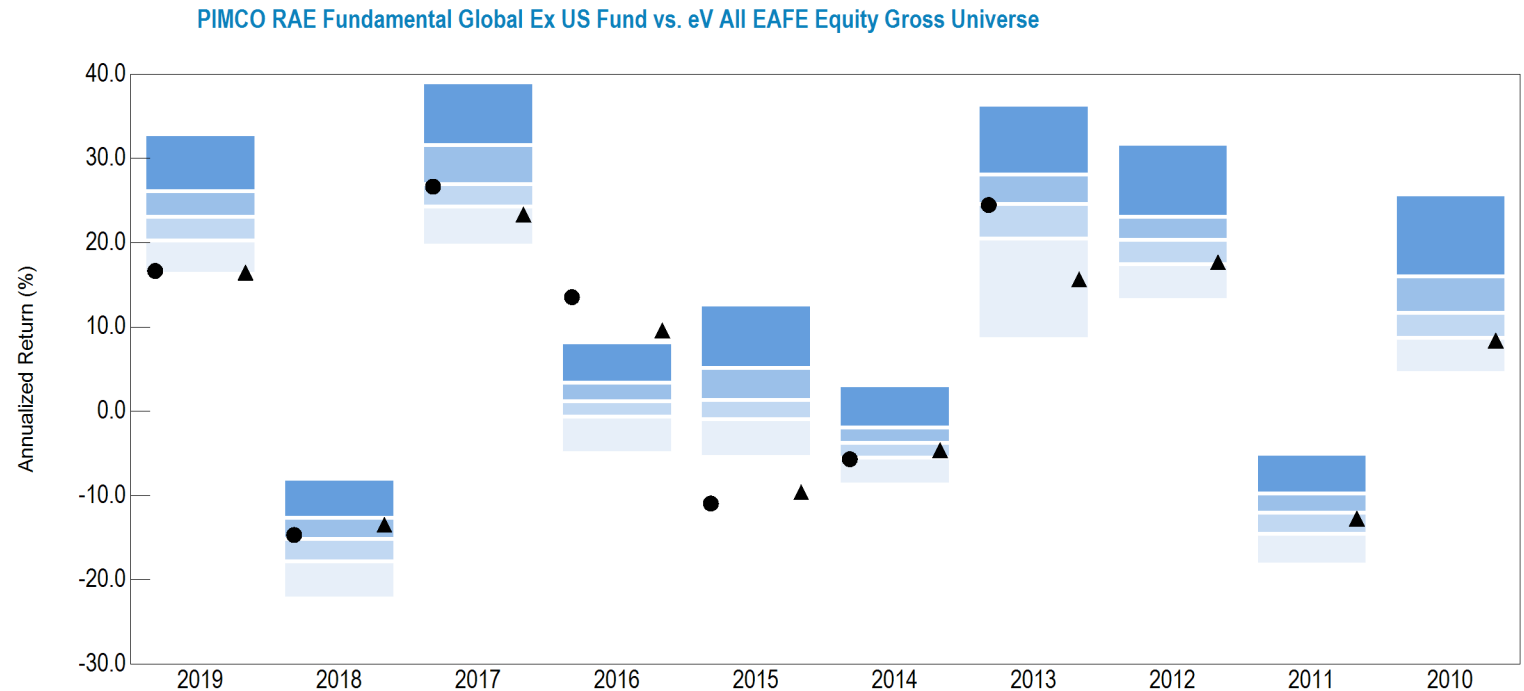
Period Ending: March 31, 2020



	Return (Rank)													
5th Percentile	-17.1		-9.4		-4.1		4.6		4.8		5.9		7.6	
25th Percentile	-21.4		-15.1		-11.8		0.2		1.8		4.0		5.5	
Median	-24.0		-17.8		-15.2		-1.7		0.0		2.8		4.1	
75th Percentile	-27.1		-20.7		-18.8		-4.2		-1.1		1.7		3.0	
95th Percentile	-31.7		-25.3		-24.5		-7.0		-3.3		0.2		1.7	
# of Portfolios	402		401		401		381		338		296		262	
● PIMCO RAE Fundamental Global Ex US Fund	-29.8	(91)	-25.4	(96)	-24.1	(95)	-6.3	(93)	-2.5	(91)	0.5	(92)	--	(--)
▲ MSCI ACWI ex USA Value Gross	-28.5	(84)	-24.6	(94)	-23.2	(93)	-5.9	(90)	-2.9	(94)	-0.7	(99)	0.7	(98)

PIMCO RAE Fundamental Global Ex US Fund
Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

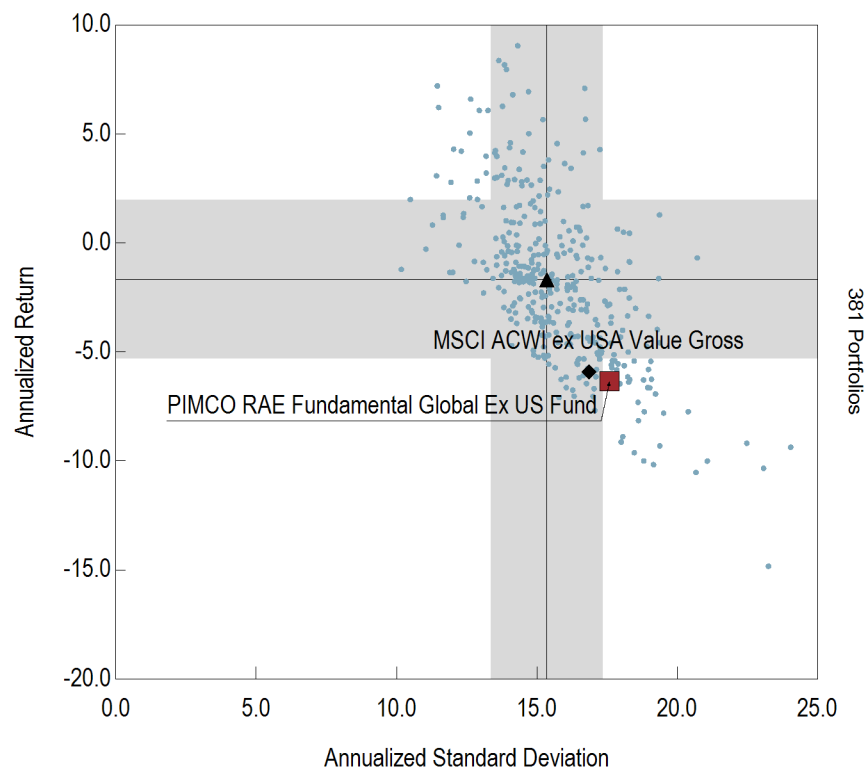


	Return (Rank)																			
5th Percentile	32.9	-8.0	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7										
25th Percentile	26.1	-12.6	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1										
Median	23.2	-15.1	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7										
75th Percentile	20.3	-17.8	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7										
95th Percentile	16.4	-22.2	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6										
# of Portfolios	397	391	370	350	325	314	284	263	278	352										
● PIMCO RAE Fundamental Global Ex US Fund	16.7	(95)	-14.7	(47)	26.7	(53)	13.5	(1)	-10.9	(99)	-5.7	(79)	24.5	(51)	--	(--)	--	(--)		
▲ MSCI ACWI ex USA Value Gross	16.5	(95)	-13.4	(35)	23.3	(84)	9.6	(2)	-9.6	(99)	-4.6	(62)	15.7	(90)	17.7	(74)	-12.7	(56)	8.4	(77)

PIMCO RAE Fundamental Global Ex US Fund Risk vs Return Three & Five Year (Gross of Fees)

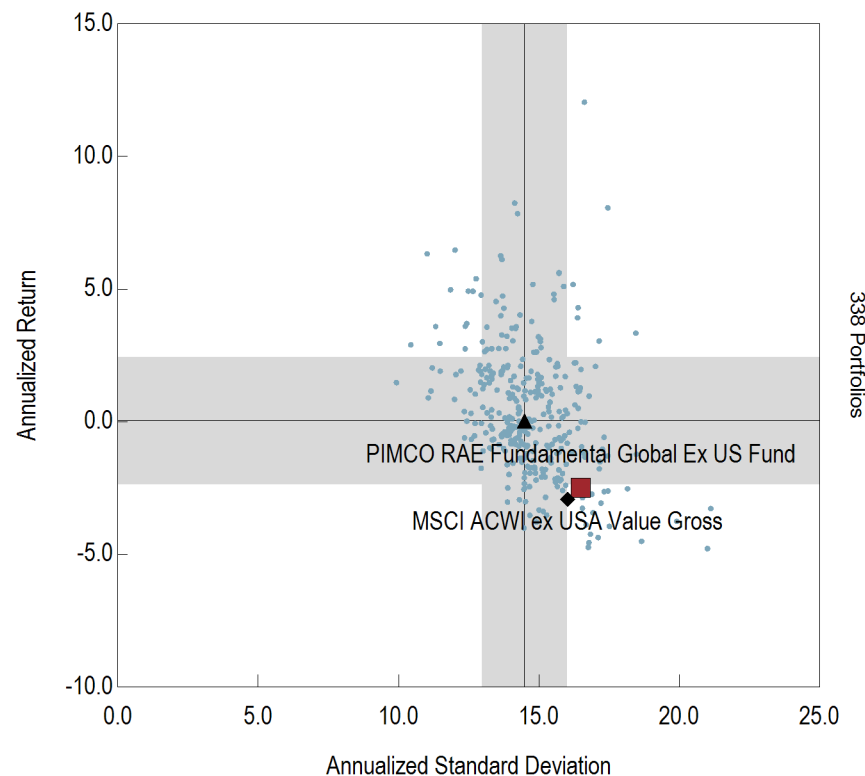
Period Ending: March 31, 2020

Risk vs. Return
3 Years



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

Risk vs. Return
5 Years

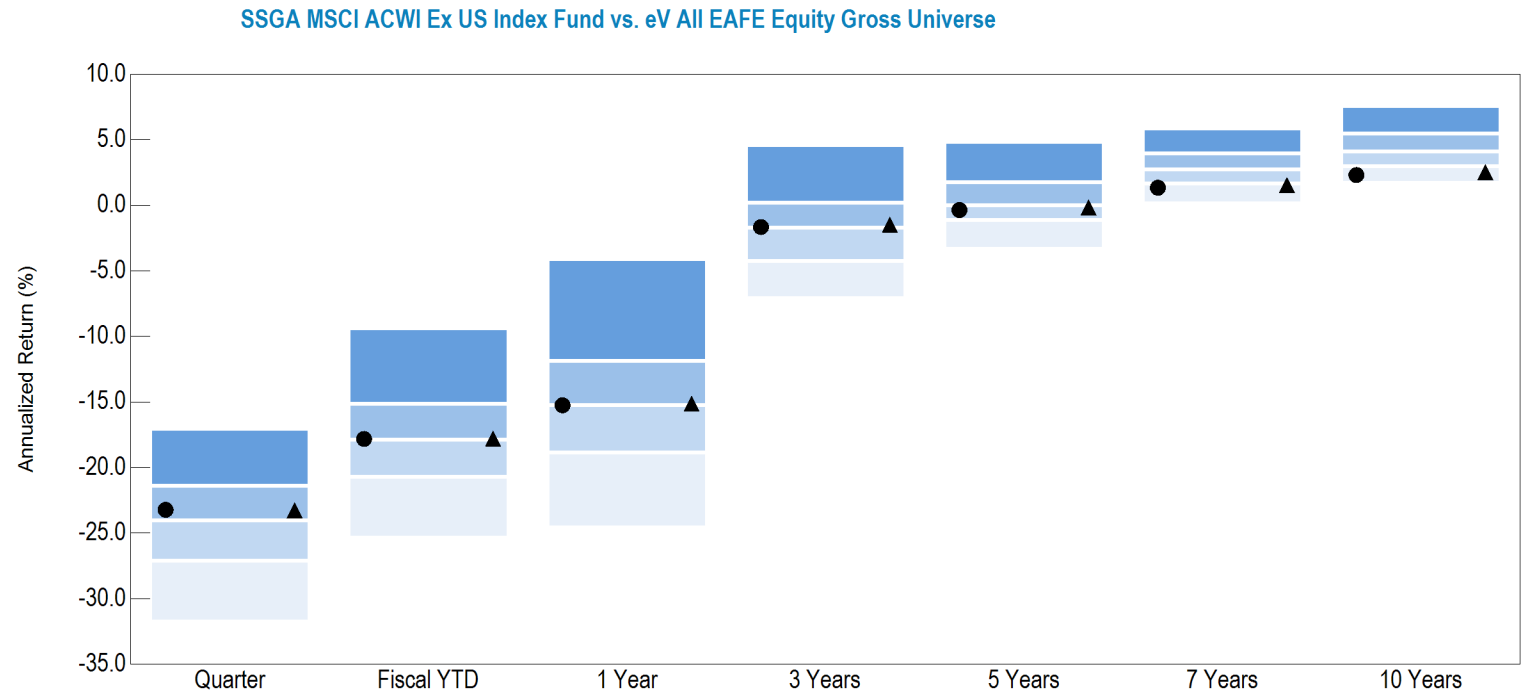


- PIMCO RAE Fundamental Global Ex US Fund
- ◆ MSCI ACWI ex USA Value Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

SSGA MSCI ACWI Ex US Index Fund

Cumulative Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020

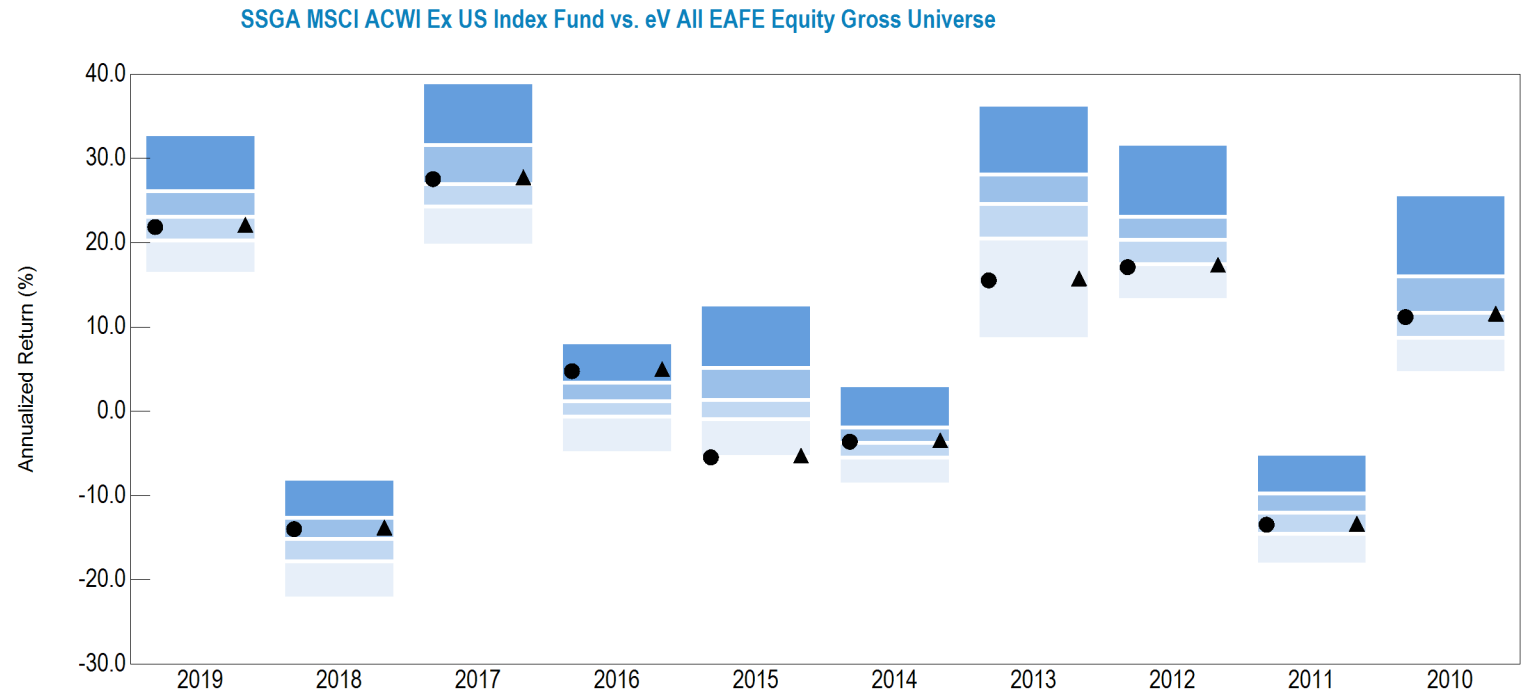


	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-17.1	(402)	-9.4	(401)	-4.1	(401)	4.6	(381)	4.8	(338)	5.9	(296)	7.6	(262)
25th Percentile	-21.4	(350)	-15.1	(350)	-11.8	(350)	0.2	(350)	1.8	(350)	4.0	(350)	5.5	(350)
Median	-24.0	(300)	-17.8	(300)	-15.2	(300)	-1.7	(300)	0.0	(300)	2.8	(300)	4.1	(300)
75th Percentile	-27.1	(250)	-20.7	(250)	-18.8	(250)	-4.2	(250)	-1.1	(250)	1.7	(250)	3.0	(250)
95th Percentile	-31.7	(200)	-25.3	(200)	-24.5	(200)	-7.0	(200)	-3.3	(200)	0.2	(200)	1.7	(200)
# of Portfolios	402		401		401		381		338		296		262	
● SSGA MSCI ACWI Ex US Index Fund	-23.2	(44)	-17.8	(50)	-15.3	(51)	-1.7	(50)	-0.4	(60)	1.3	(81)	2.3	(90)
▲ MSCI ACWI ex USA Gross	-23.3	(45)	-17.8	(49)	-15.1	(50)	-1.5	(45)	-0.2	(54)	1.5	(78)	2.5	(87)

SSGA MSCI ACWI Ex US Index Fund

Consecutive Performance Comparison (Gross of Fees)

Period Ending: March 31, 2020



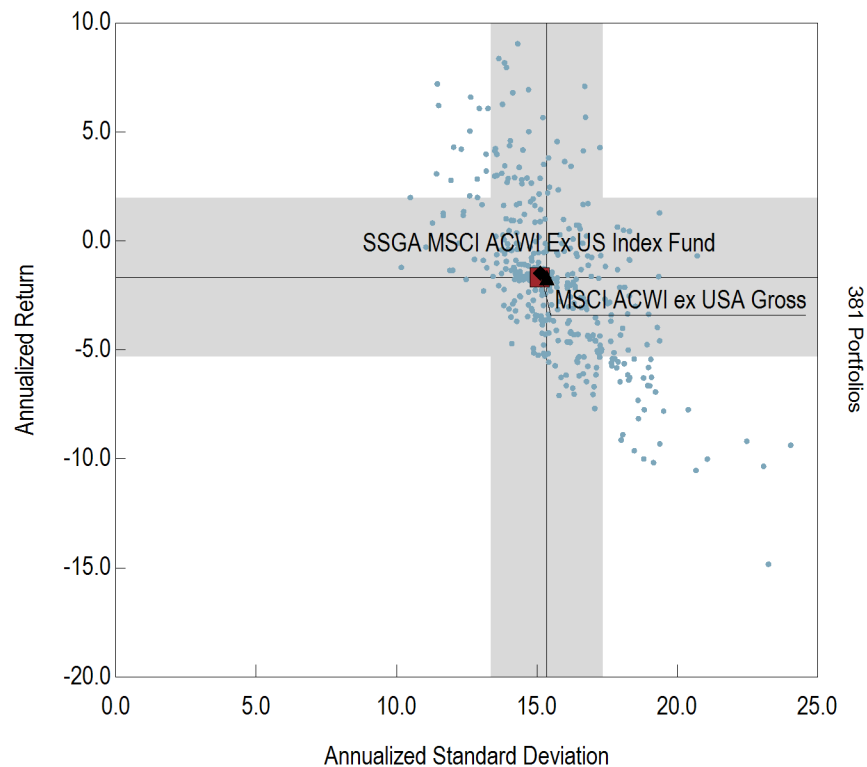
	Return (Rank)									
5th Percentile	32.9	-8.0	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7
25th Percentile	26.1	-12.6	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1
Median	23.2	-15.1	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7
75th Percentile	20.3	-17.8	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7
95th Percentile	16.4	-22.2	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6
# of Portfolios	397	391	370	350	325	314	284	263	278	352
● SSGA MSCI ACWI Ex US Index Fund	21.9 (63)	-14.0 (42)	27.6 (49)	4.8 (17)	-5.5 (96)	-3.6 (49)	15.5 (90)	17.1 (81)	-13.5 (64)	11.2 (55)
▲ MSCI ACWI ex USA Gross	22.1 (60)	-13.8 (40)	27.8 (48)	5.0 (16)	-5.3 (95)	-3.4 (47)	15.8 (90)	17.4 (77)	-13.3 (62)	11.6 (52)

SSGA MSCI ACWI Ex US Index Fund

Risk vs Return Three & Five Year (Gross of Fees)

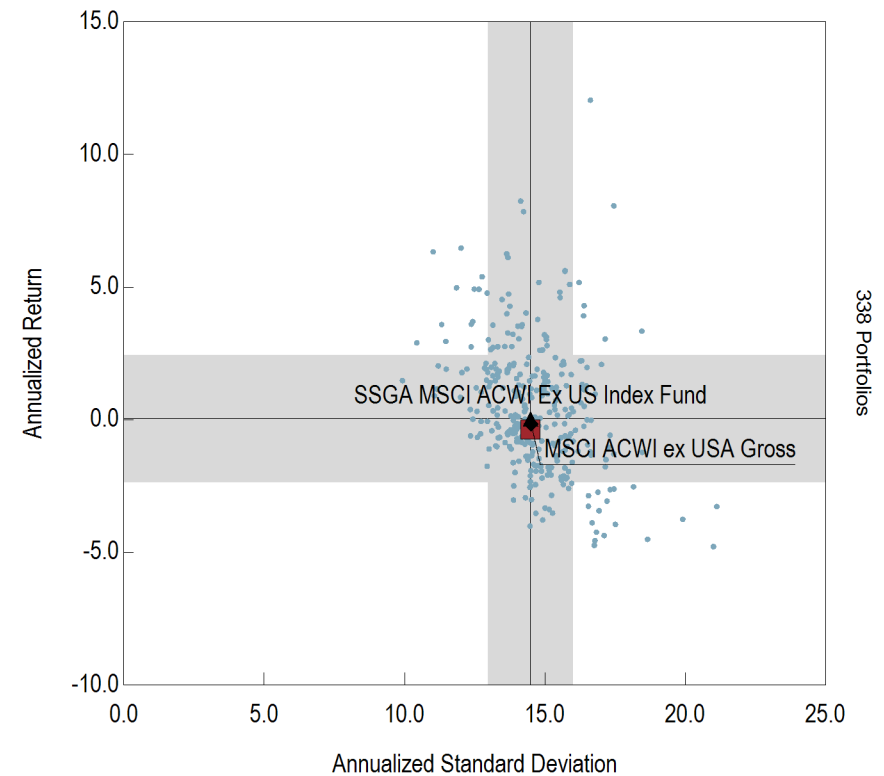
Period Ending: March 31, 2020

Risk vs. Return
3 Years



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

Risk vs. Return
5 Years



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

Total Fixed Income

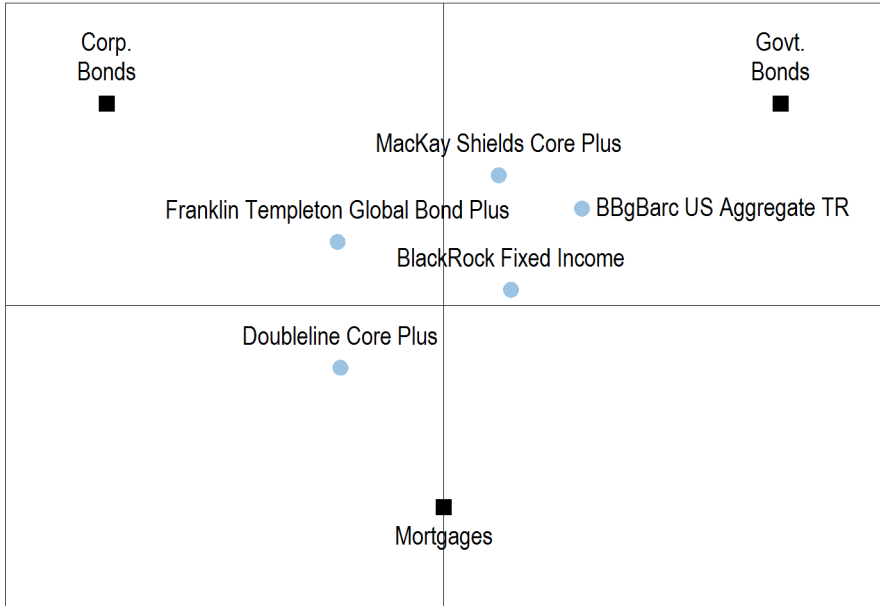
Asset Class Overview (Gross of Fees)

Period Ending: March 31, 2020

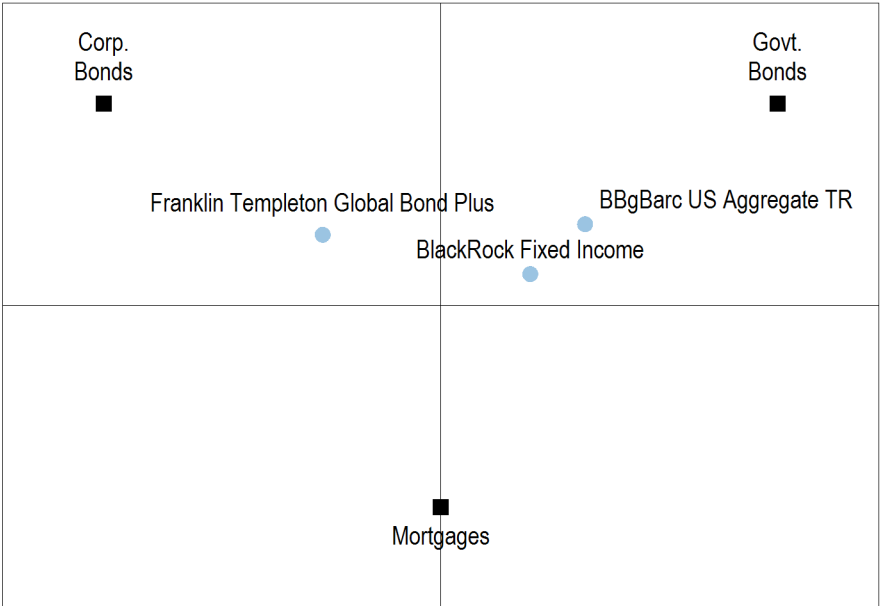
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fixed Income	445,980,472	-4.8	-2.4	0.4	2.0	2.2	3.9	8.4	0.5	4.3	5.5	-0.8
BBgBarc US Aggregate TR		3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
InvMetrics Public DB US Fix Inc Gross Rank		93	94	92	88	82	35	36	51	50	37	77
Total Domestic Fixed Income	292,116,591	-0.2	2.4	5.6	4.0	3.3	--	9.3	0.1	4.4	5.1	-0.3
BBgBarc US Aggregate TR		3.1	5.7	8.9	4.8	3.4	--	8.7	0.0	3.5	2.6	0.6
BlackRock Fixed Income	108,930,983	1.9	4.6	7.9	4.7	3.4	4.2	9.0	0.4	3.9	3.1	1.1
BBgBarc US Aggregate TR		3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
eV All US Fixed Inc Gross Rank		21	16	17	21	30	46	45	54	54	53	39
Doubleline Core Plus	89,429,570	-2.9	-0.8	2.3	2.8	--	--	8.6	0.0	4.2	4.8	--
BBgBarc US Aggregate TR		3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
eV US Core Plus Fixed Inc Gross Rank		82	87	87	92	--	--	93	33	86	52	--
MacKay Shields Core Plus	93,756,038	0.0	3.1	6.3	4.3	--	--	10.0	-0.6	5.0	5.1	--
BBgBarc US Aggregate TR		3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
eV US Core Plus Fixed Inc Gross Rank		44	39	43	47	--	--	53	67	52	46	--
Total Global Fixed Income	86,013,306	-6.2	-8.0	-6.3	-1.3	0.6	--	1.3	2.4	3.0	7.1	-3.4
JPM GBI Global TR USD		3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Franklin Templeton Global Bond Plus	86,013,306	-6.2	-8.0	-6.3	-1.3	0.5	--	1.3	2.4	3.0	6.8	-3.5
JPM GBI Global TR USD		3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
eV Global Government Fixed Inc Gross Rank		97	99	99	99	97	--	99	10	87	8	58
Total Emerging Markets Fixed Income	67,850,575	-19.2	-15.0	--	--	--	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div		-14.3	-10.9	--	--	--	--	--	--	--	--	--
PGIM Emerging Markets Debt	67,850,575	-19.2	--	--	--	--	--	--	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div		-14.3	--	--	--	--	--	--	--	--	--	--
eV Emg Mkts Fixed Inc - Blended Currency Gross Rank		91	--	--	--	--	--	--	--	--	--	--

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. SSGA TIPS liquidated in 12/28/18. Shenkman HY liquidated 3/11/19. PGIM EMD funded 8/26/19.

Fixed Income Style Map
3 Years



Fixed Income Style Map
5 Years



Total Fixed Income Asset Class Overview (Net of Fees)

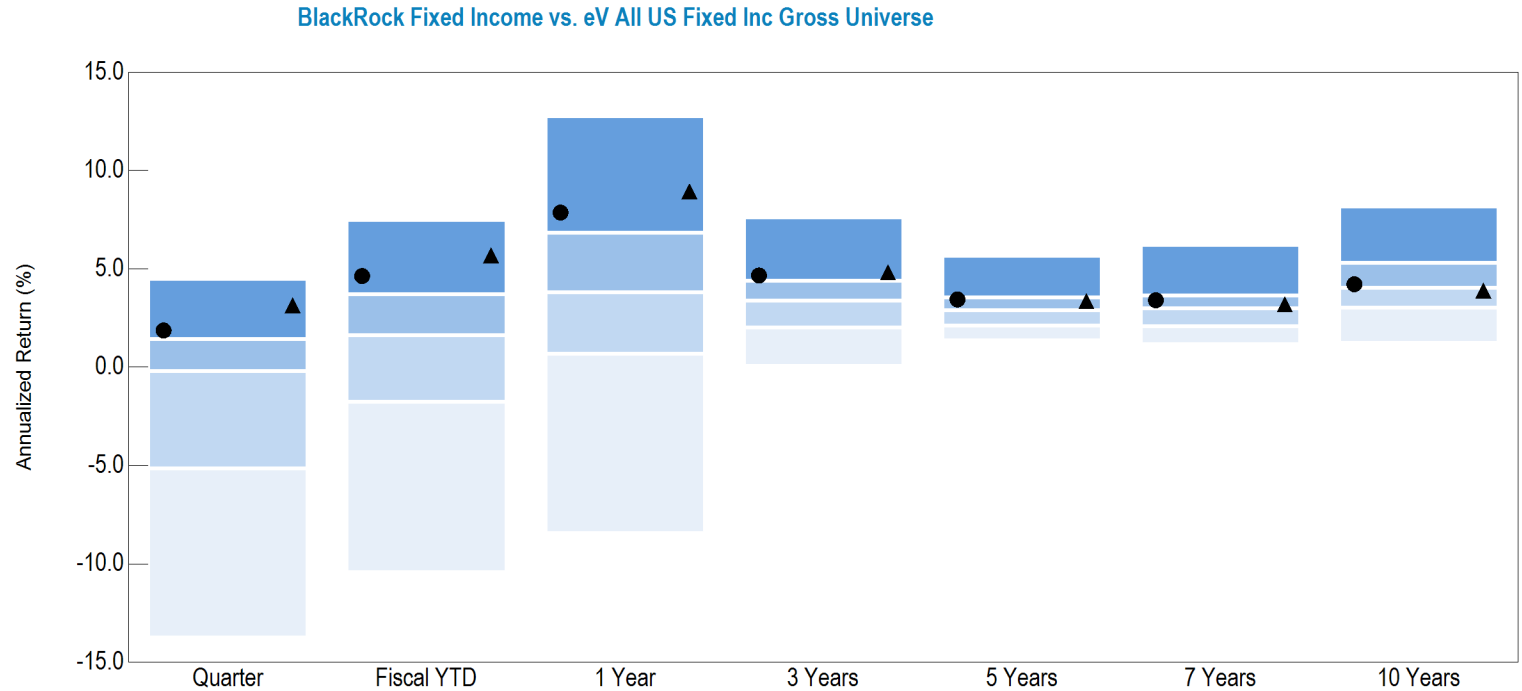
Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Fixed Income	445,980,472	-4.9	-2.6	0.1	1.7	1.8	3.6	8.1	0.1	3.9	5.1	-1.1
<i>BBgBarc US Aggregate TR</i>		3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
Total Domestic Fixed Income	292,116,591	-0.3	2.2	5.3	3.7	3.0	--	9.0	-0.2	4.1	4.8	-0.5
<i>BBgBarc US Aggregate TR</i>		3.1	5.7	8.9	4.8	3.4	--	8.7	0.0	3.5	2.6	0.6
BlackRock Fixed Income	108,930,983	1.8	4.4	7.6	4.4	3.2	4.0	8.7	0.1	3.6	2.9	0.8
<i>BBgBarc US Aggregate TR</i>		3.1	5.7	8.9	4.8	3.4	3.9	8.7	0.0	3.5	2.6	0.6
Doubleline Core Plus	89,429,570	-3.0	-1.0	2.0	2.5	--	--	8.3	-0.3	3.9	4.6	--
<i>BBgBarc US Aggregate TR</i>		3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
MacKay Shields Core Plus	93,756,038	-0.1	2.8	5.9	3.9	--	--	9.6	-1.0	4.5	4.7	--
<i>BBgBarc US Aggregate TR</i>		3.1	5.7	8.9	4.8	--	--	8.7	0.0	3.5	2.6	--
Total Global Fixed Income	86,013,306	-6.3	-8.3	-6.7	-1.8	0.1	--	0.9	1.9	2.4	6.4	-3.9
<i>JPM GBI Global TR USD</i>		3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Franklin Templeton Global Bond Plus	86,013,306	-6.3	-8.3	-6.7	-1.8	0.0	--	0.9	1.9	2.4	6.1	-4.1
<i>JPM GBI Global TR USD</i>		3.1	3.7	7.4	4.6	3.2	--	6.0	-0.7	6.8	1.6	-2.6
Total Emerging Markets Fixed Income	67,850,575	-19.3	-15.2	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI Global Div/50% JPM GBI EM Global Div</i>		-14.3	-10.9	--	--	--	--	--	--	--	--	--
PGIM Emerging Markets Debt	67,850,575	-19.3	--	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI Global Div/50% JPM GBI EM Global Div</i>		-14.3	--	--	--	--	--	--	--	--	--	--

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. SSGA TIPS liquidated in 12/28/18. Shenkman HY liquidated 3/11/19. PGIM EMD funded 8/26/19.

BlackRock Fixed Income Cumulative Performance Comparison (Gross of Fees)

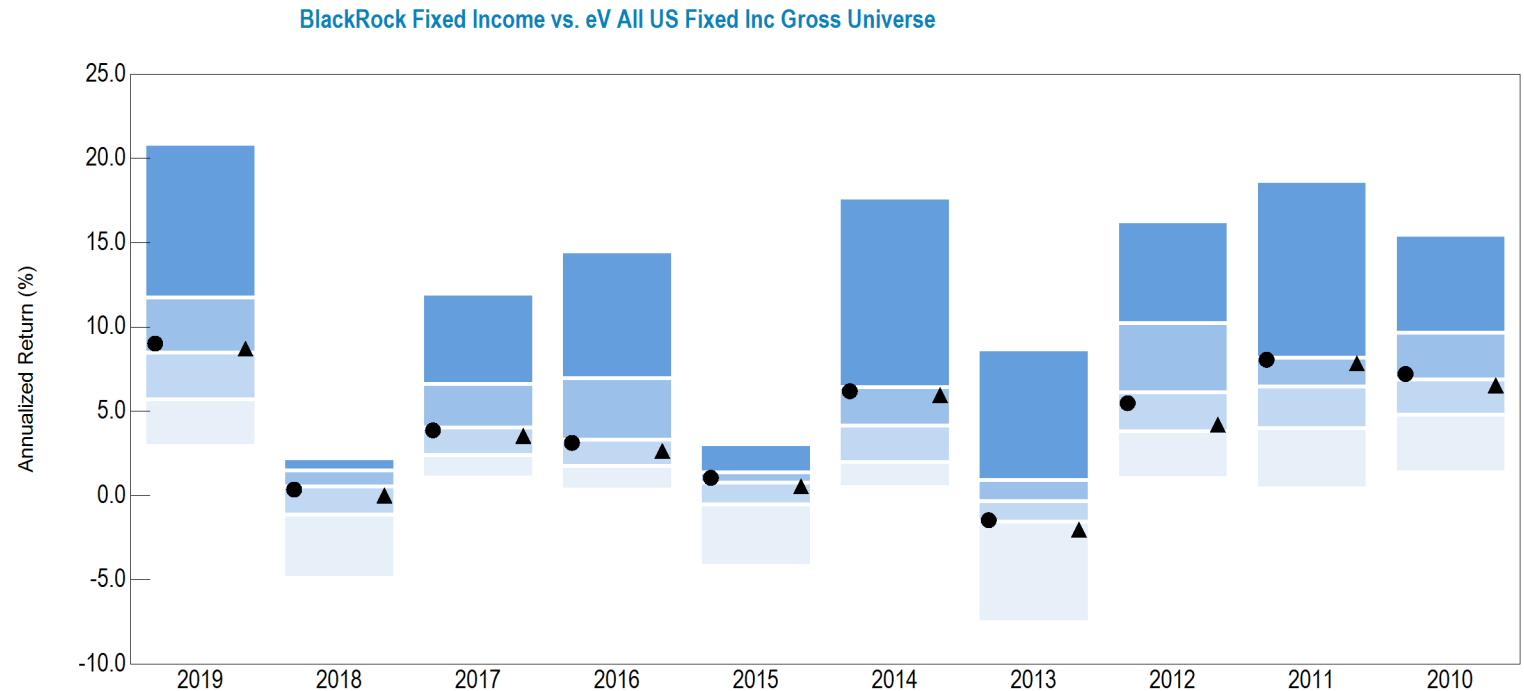
Period Ending: March 31, 2020



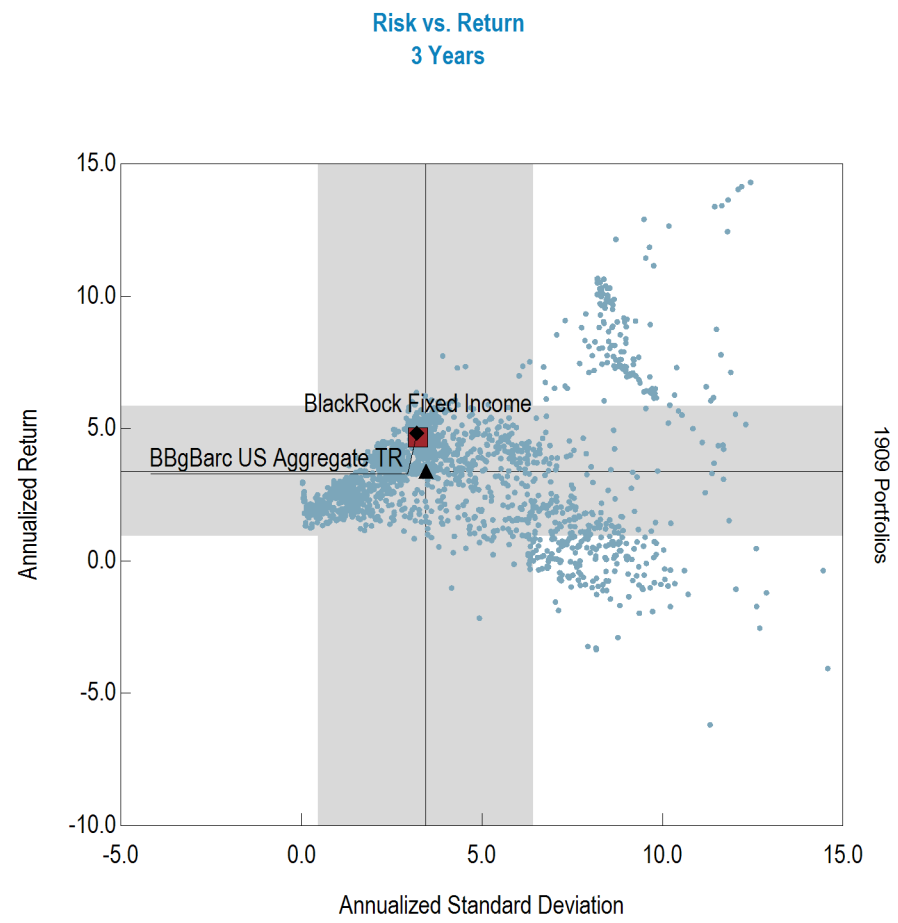
	Return (Rank)													
	Quarter		Fiscal YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	4.5		7.5		12.8		7.6		5.6		6.2		8.2	
25th Percentile	1.5		3.7		6.9		4.4		3.6		3.7		5.3	
Median	-0.2		1.6		3.8		3.4		2.9		3.0		4.1	
75th Percentile	-5.1		-1.7		0.7		2.0		2.1		2.1		3.0	
95th Percentile	-13.7		-10.4		-8.4		0.1		1.4		1.2		1.3	
# of Portfolios	1,980		1,980		1,980		1,909		1,817		1,711		1,503	
● BlackRock Fixed Income	1.9	(21)	4.6	(16)	7.9	(17)	4.7	(21)	3.4	(30)	3.4	(35)	4.2	(46)
▲ BBgBarc US Aggregate TR	3.1	(10)	5.7	(10)	8.9	(12)	4.8	(18)	3.4	(33)	3.2	(45)	3.9	(55)

BlackRock Fixed Income Consecutive Performance Comparison (Gross of Fees)

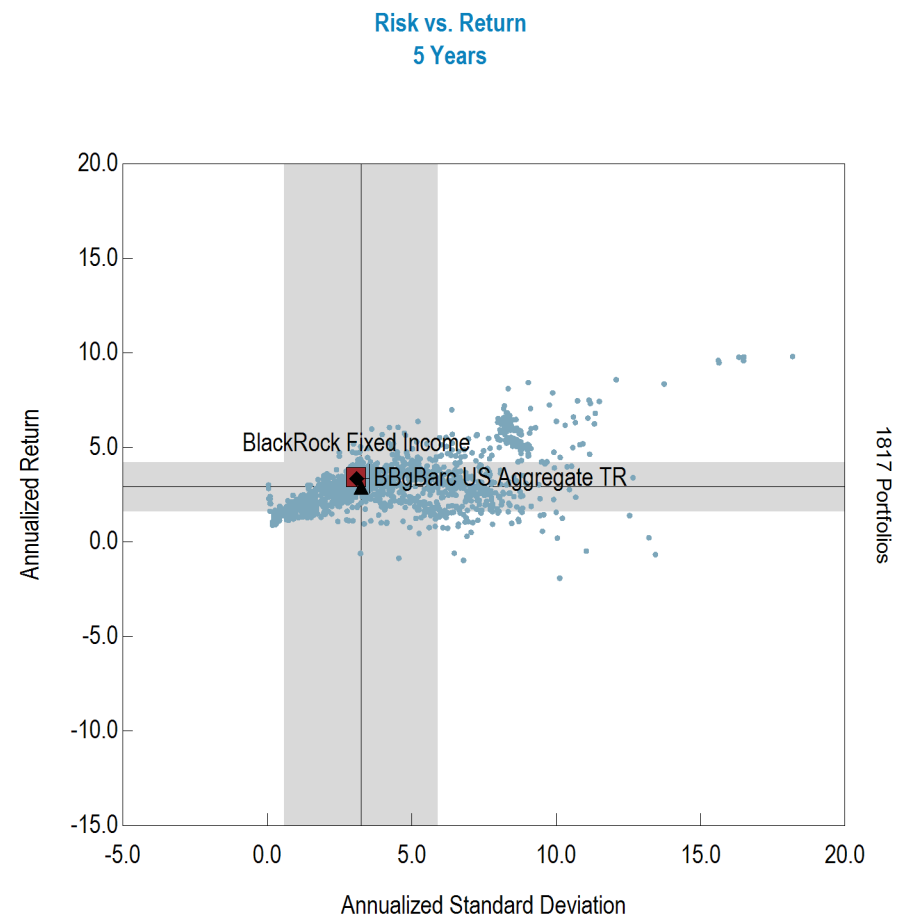
Period Ending: March 31, 2020



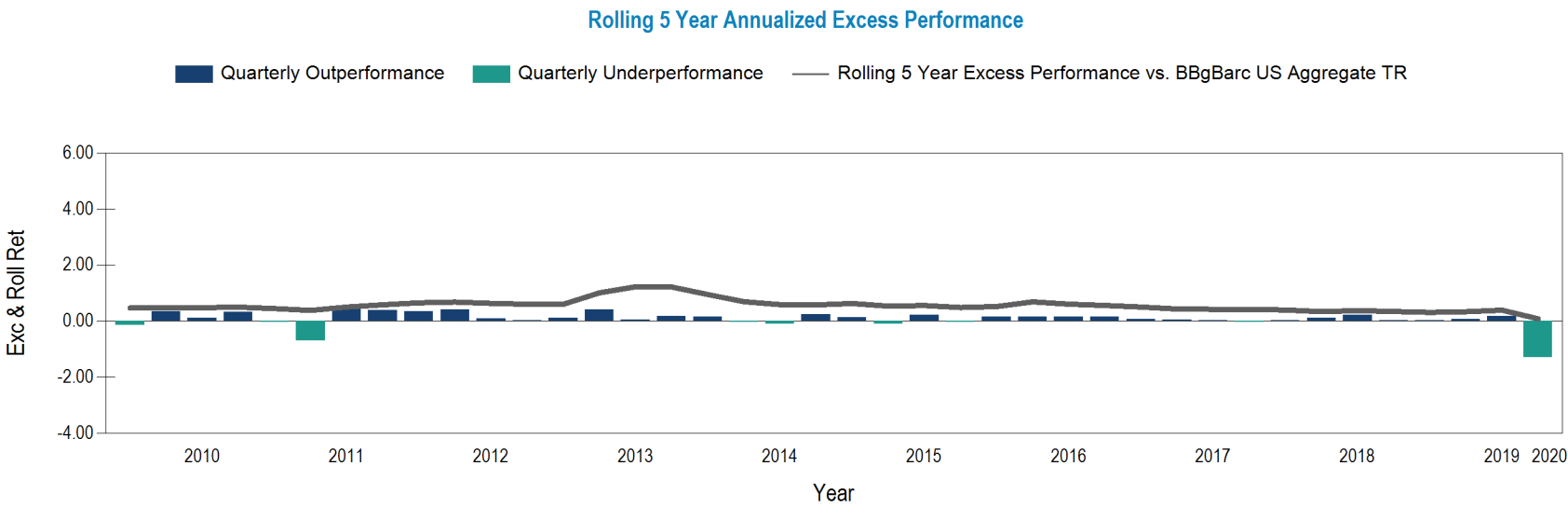
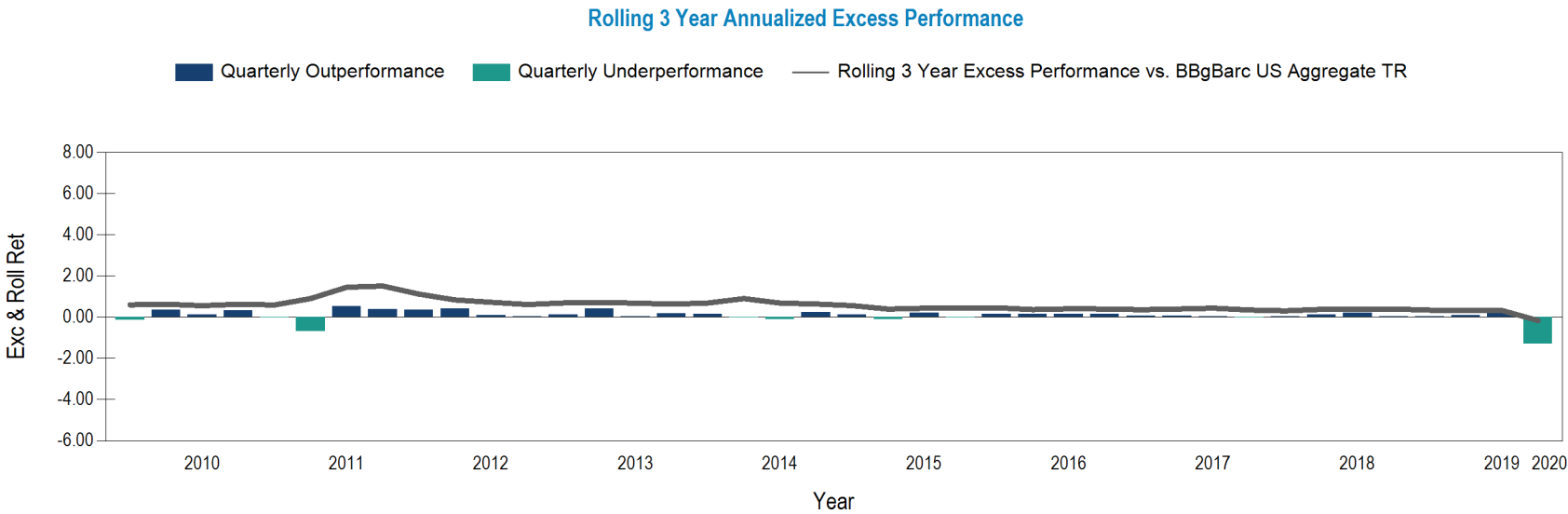
	Return (Rank)									
5th Percentile	20.8	2.2	12.0	14.5	3.0	17.7	8.7	16.2	18.6	15.5
25th Percentile	11.8	1.5	6.6	7.0	1.4	6.4	0.9	10.2	8.2	9.7
Median	8.5	0.6	4.1	3.3	0.8	4.2	-0.3	6.1	6.5	6.9
75th Percentile	5.7	-1.1	2.4	1.8	-0.5	2.0	-1.5	3.8	4.0	4.8
95th Percentile	2.9	-4.9	1.1	0.4	-4.1	0.5	-7.5	1.1	0.4	1.4
# of Portfolios	1,981	1,899	1,843	1,722	1,394	1,364	1,281	1,241	1,211	1,157
● BlackRock Fixed Income	9.0 (45)	0.4 (54)	3.9 (54)	3.1 (53)	1.1 (39)	6.2 (29)	-1.5 (75)	5.5 (56)	8.1 (28)	7.2 (45)
▲ BBgBarc US Aggregate TR	8.7 (48)	0.0 (61)	3.5 (59)	2.6 (60)	0.6 (59)	6.0 (33)	-2.0 (83)	4.2 (70)	7.8 (32)	6.5 (57)



- BlackRock Fixed Income
- ◆ BBgBarc US Aggregate TR
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eV All US Fixed Inc Gross

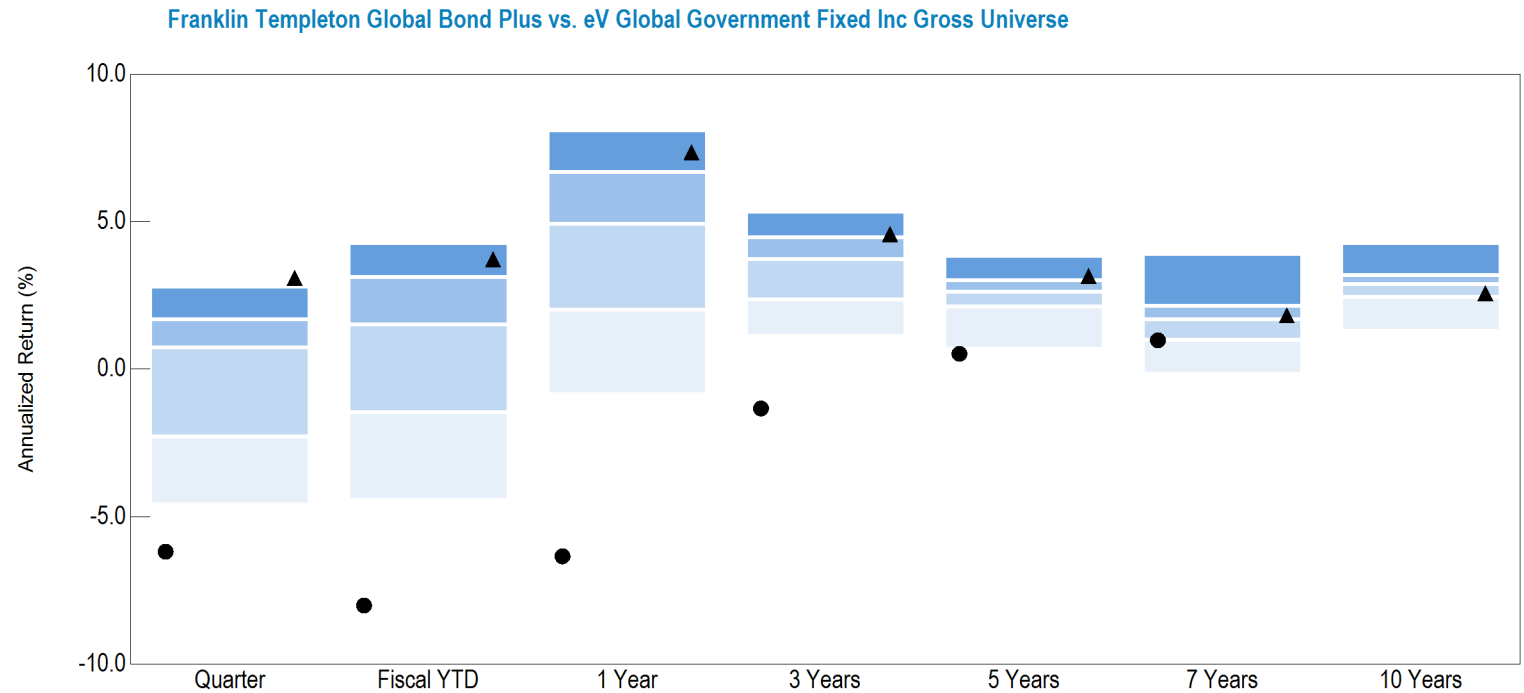


- BlackRock Fixed Income
- ◆ BBgBarc US Aggregate TR
- ▲ Universe Median
- ▣ 68% Confidence Interval
- eV All US Fixed Inc Gross



Franklin Templeton Global Bond Plus Cumulative Performance Comparison (Gross of Fees)

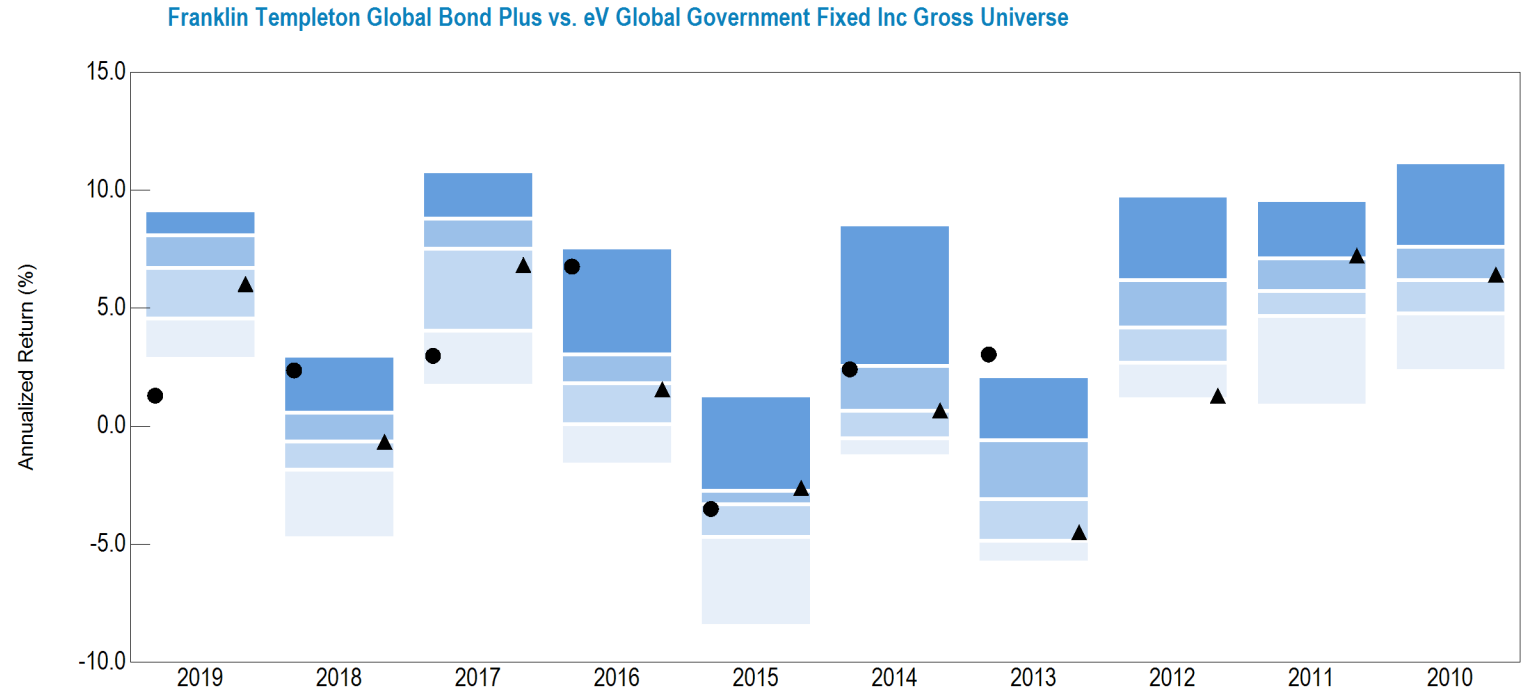
Period Ending: March 31, 2020



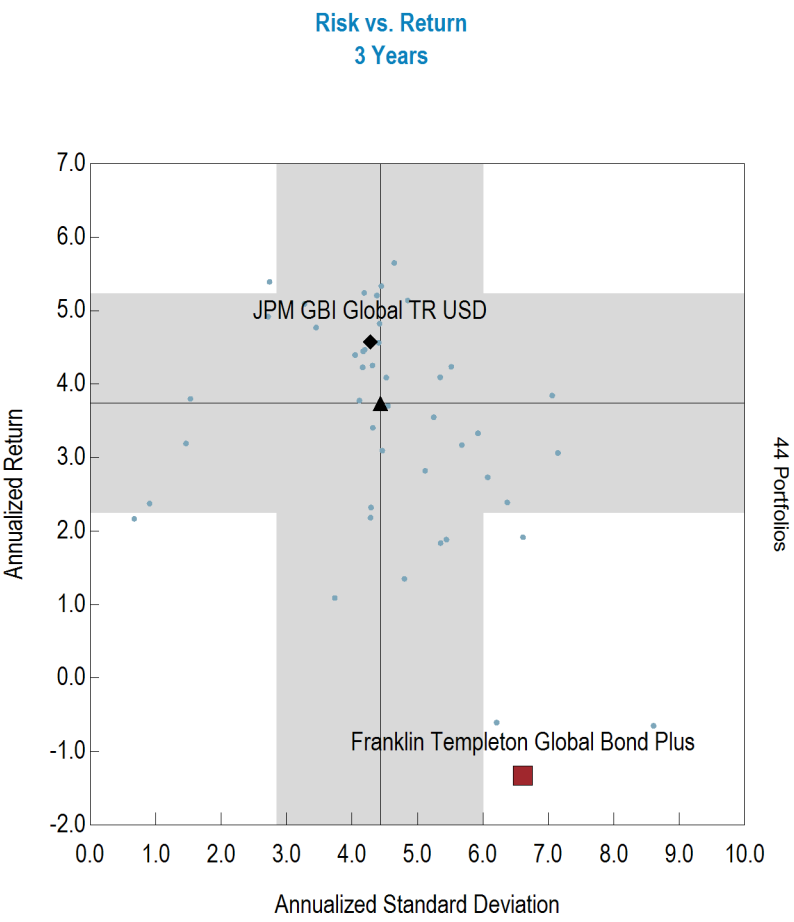
	Return (Rank)													
5th Percentile	2.8		4.3		8.1		5.3		3.8		3.9		4.3	
25th Percentile	1.7		3.1		6.7		4.5		3.0		2.2		3.2	
Median	0.8		1.5		4.9		3.7		2.6		1.7		2.9	
75th Percentile	-2.3		-1.4		2.0		2.4		2.1		1.0		2.5	
95th Percentile	-4.6		-4.4		-0.8		1.1		0.7		-0.1		1.3	
# of Portfolios	44		44		44		44		42		39		32	
● Franklin Templeton Global Bond Plus	-6.2	(97)	-8.0	(99)	-6.3	(99)	-1.3	(99)	0.5	(97)	1.0	(76)	--	(--)
▲ JPM GBI Global TR USD	3.1	(2)	3.7	(7)	7.4	(12)	4.6	(24)	3.2	(24)	1.8	(41)	2.6	(69)

Franklin Templeton Global Bond Plus Consecutive Performance Comparison (Gross of Fees)

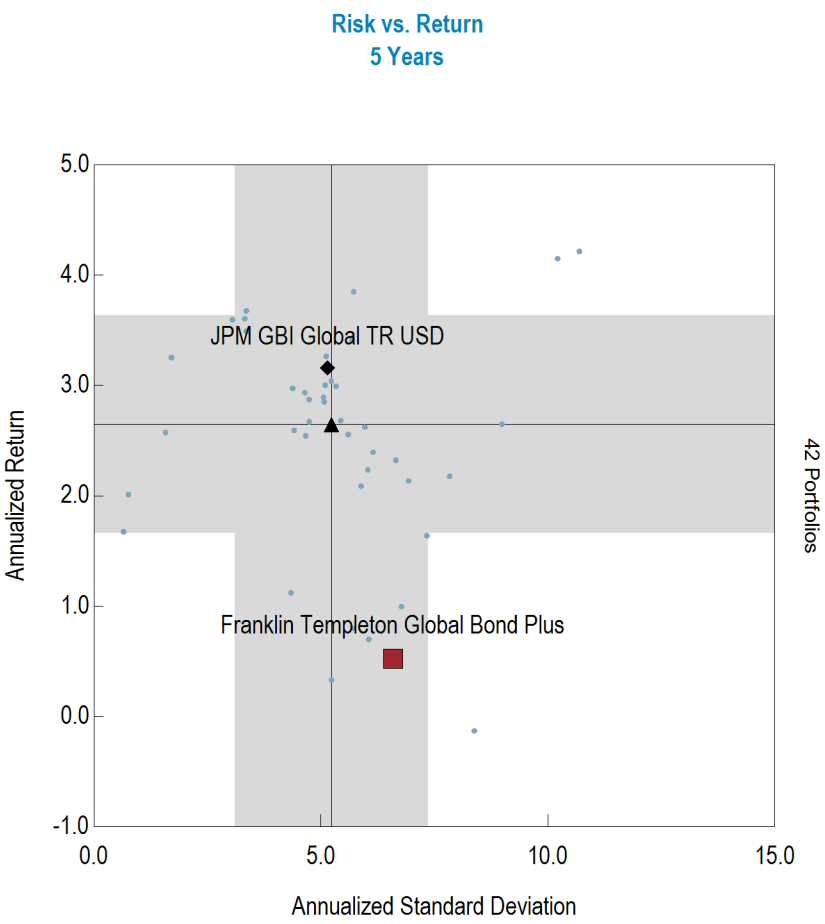
Period Ending: March 31, 2020



	Return (Rank)									
5th Percentile	9.1	3.0	10.8	7.6	1.3	8.5	2.1	9.8	9.6	11.2
25th Percentile	8.1	0.6	8.8	3.0	-2.7	2.6	-0.6	6.2	7.1	7.6
Median	6.7	-0.6	7.5	1.8	-3.3	0.7	-3.1	4.2	5.7	6.2
75th Percentile	4.6	-1.8	4.1	0.1	-4.7	-0.5	-4.8	2.7	4.7	4.8
95th Percentile	2.9	-4.7	1.7	-1.6	-8.5	-1.3	-5.8	1.2	0.9	2.3
# of Portfolios	42	42	43	46	36	32	33	35	33	30
● Franklin Templeton Global Bond Plus	1.3 (99)	2.4 (10)	3.0 (87)	6.8 (8)	-3.5 (58)	2.4 (31)	3.0 (3)	-- (--)	-- (--)	-- (--)
▲ JPM GBI Global TR USD	6.0 (67)	-0.7 (51)	6.8 (57)	1.6 (58)	-2.6 (23)	0.7 (51)	-4.5 (71)	1.3 (94)	7.2 (23)	6.4 (49)



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



- Franklin Templeton Global Bond Plus
- ◆ JPM GBI Global TR USD
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- eV Global Government Fixed Inc Gross

Total Real Estate Asset Class Overview (Gross of Fees)

Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Real Estate	179,431,329	1.4	4.3	5.8	6.6	8.2	9.9	5.2	8.8	4.3	9.0	16.0
NCREIF-ODCE		1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index		0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
RREEF America II	168,535,044	1.4	4.3	5.9	6.5	8.2	11.9	5.3	8.6	4.4	9.3	16.7
NCREIF-ODCE		1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index		0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
American Realty	10,890,947	0.3	--	--	--	--	--	--	--	--	--	--
NCREIF-ODCE		1.0	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index		0.7	--	--	--	--	--	--	--	--	--	--

Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. RREEF liquidated in 1Q 2018. Americam Realty funded 4Q 2019.

Total Real Estate Asset Class Overview (Net of Fees)

Period Ending: March 31, 2020

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2019	2018	2017	2016	2015
Total Real Estate	179,431,329	1.4	4.3	5.8	6.6	7.8	9.6	5.2	8.8	4.3	8.0	15.1
NCREIF-ODCE		1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index		0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
RREEF America II	168,535,044	1.4	4.3	5.9	6.5	7.8	11.4	5.3	8.6	4.4	8.2	15.7
NCREIF-ODCE		1.0	3.8	4.9	6.8	8.5	11.4	5.3	8.3	7.6	8.8	15.0
NCREIF Property Index		0.7	3.7	5.3	6.4	7.6	10.2	6.4	6.7	7.0	8.0	13.3
American Realty	10,890,947	0.3	--	--	--	--	--	--	--	--	--	--
NCREIF-ODCE		1.0	--	--	--	--	--	--	--	--	--	--
NCREIF Property Index		0.7	--	--	--	--	--	--	--	--	--	--

RREEF liquidated in 1Q 2018. American Realty funded 4Q 2019.

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are linked geometrically and annualized for periods longer than one year.

Data Source

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

Illiquid Alternatives

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

Manager Line Up

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
SSGA S&P 500 Flagship Fund	7/27/2011	SSGA	PGIM Emerging Markets Debt	8/26/2019	BNY
QMA Large Cap Core	12/1/2008	BNY	RREEF America II	3/1/2003	Deutsche
Waddell & Reed	6/4/2010	BNY	TA Associates Realty	6/1/2007	TA Realty
Robeco Boston Partners	2/1/1999	BNY	BlackRock Private Capital II	7/13/2005	BlackRock
William Blair Mid Cap Grw	12/1/2006	BNY	Pantheon USA Fund VI	7/26/2005	Pantheon
Lee Munder Small Value	8/26/2009	BNY	PIMCO BRAVO	1/14/2011	PIMCO
SSGA Russell Sm Cap Idx	5/17/2013	SSGA	KKR Mezzanine Partners	7/8/2011	KKR
PIMCO RAE	8/14/2012	PIMCO	Stepstone Secondary Opps II	5/10/2013	Stepstone
SSGA MSCI ACWI ex US	1/1/2010	SSGA	Ocean Avenue Fund III	5/27/2016	Ocean Ave
SGA Global Growth	6/4/2018	SGA	Ocean Avenue Fund IV	9/16/2019	Ocean Ave
Skellig DST Water Fund	10/28/2014	KBI	Pathway Fund 8	4/12/2016	Pathway
BlackRock Fixed Income	12/1/1995	BNY	Pathway Fund 9	5/31/2018	Pathway
Doubleline Core Plus	12/1/2015	BNY	Pathway Fund 10	3/31/2020	Pathway
MacKay Shields Core Plus	12/1/2015	MacKay	TPG Diversified Credit	11/21/2016	TPG
Franklin Templeton Global	4/3/2012	BNY	American Realty	12/20/2019	American Realty

Policy & Custom Index Composition

Policy Index: 20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns.

Other Disclosures

Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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