Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: MARCH 31, 2021

Investment Performance Review for

Tulare County Employees' Retirement Association

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SEATTLE 206-622-3700
LOS ANGELES 300-297-1777
SAN FRANCISCO 415-362-3484
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Investment Landscape TAB I

Investment Performance Review TAB II

Verus
PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS
2ND QUARTER 2021
Investment Landscape

Recent Verus research

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

Topics of interest

IS THERE ALPHA AVAILABLE FROM EMERGING & DIVERSE MANAGERS?

While discussion on the alpha-generating ability of emerging and diverse managers has been part of institutional conversation for decades, the use of emerging and diverse managers has become a mainstay of industry conferences and in many Board meetings more recently. This paper explores the alpha-generating ability of emerging and diverse firms across asset classes and structures.

LEVERAGE IN PORTFOLIOS

Our latest Topics of Interest paper hopes to shed light on one segment of today's investment challenge, the benefits and risks associated with using leverage. This paper finds that for investors with sufficient capital to leverage market opportunities and allocate to a wide range of asset classes, and with an appropriate Enterprise Risk Tolerance to accept the range of outcomes involved, modest leverage may be responsibly employed to provide greater diversification of risk while maintaining a similar return target.

HOW TO MAKE MANAGER DECISIONS

Manager research decisions are made harder if you use the wrong tools and approaches. In this new paper, we outline the reasons why many investors may be finding these decisions harder than they need to and discuss a different way of thinking that may make the task of manager assessment clearer and more effective.

DEVELOPING AN END-GAME STRATEGY FOR CORPORATE PENSIONS

As a plan sponsor's de-risking strategy ultimately bears fruit and the plan approaches full funding, a new phase of the pension management lifecycle brings with it new challenges. Navigating the later stages of the asset-liability journey requires that plan sponsors establish a clear and well-defined view of the end-state. Doing so requires careful consideration of costs (some knowable, some not), risks, and less tangible company-specific considerations. Once this end-state is defined, investment and contribution strategy can be cohesively aligned to maximize the probability of success. With greater flexibility, the probability of a successful outcome increases.

Annual research

ACTIVE MANAGEMENT ENVIRONMENT

We are pleased to release the Verus 2021 Active Management Environment. The past year has been one of extreme volatility and divergence in many respects, creating interesting opportunities for active managers to show differentiated performance and deliver alpha to clients. We hope the insights from this research will allow for a deeper understanding of active manager behavior and inform selection in the future.

IMPLICATIONS OF RISK TOLERANCE ON ESTABLISHING AN EFFECTIVE INVESTMENT STRATEGY FOR PUBLIC PENSION PLANS

The future health of public pension plans is dependent on many factors and faces many risks, including low prospective returns, unfavorable plan demographics, and stressed plan sponsor financial conditions. This paper will explore these risks and provide a framework for discussion and evaluation designed to ensure a plan's investment program is appropriately aligned with its risk tolerance.

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1st quarter summary

THE ECONOMIC CLIMATE

— Real GDP grew at a -2.4% rate year-over-year in the fourth quarter (+4.3% quarterly annualized rate) as the U.S. economic recovery continued at a brisk pace. ***p. 11***

— The speed of vaccinations in the U.S. has exceeded expectations, reaching more than 3 million doses per day during the first week of April. Approximately 23% of the country have been fully vaccinated, and 37% have received a first dose. ***p. 7***

— The Europe Union has been slower to roll out vaccinations, suggesting member countries may be grappling with the virus for longer periods of time. ***p. 19***

PORTFOLIO IMPACTS

— We believe the U.S. economy is playing catch-up to the markets in the current environment. While it seems increasingly likely that the economy will rapidly come back to life over the next year, this optimism may already be baked into equity prices. ***p. 29***

— U.S. core inflation remained low and stable, at 1.6% year-over-year in March. A jump in gasoline prices, along with base effects from the 2020 recession, pushed up headline inflation to 2.6%. It appears likely that inflation will continue to see a temporary rise in the coming months due to the lower prices of Q2 2020, since inflation is a year-over-year measure. ***p. 13***

THE INVESTMENT CLIMATE

— President Biden announced his $2 trillion Infrastructure Plan. In its initial form, the plan did not have bipartisan support, reportedly due to the lower proportion of the plan that related to traditional infrastructure spending, the size of the plan, and the proposed methods to fund it. Negotiations will commence in late-April, though it remains possible that the bill is modified in order to pass it via the "reconciliation" process, to avoid the need for Republican support. ***p. 11***

— According to FactSet, S&P 500 earnings expectations for 2021 improved by 5.0% during the quarter. Analysts are now forecasting 25.4% earnings growth for 2021—an incredible recovery from the -11.2% earnings drop expected of 2020. ***p. 28***

ASSET ALLOCATION ISSUES

— U.S. equities were a top performer in Q1, returning +6.2%. International equities returned +3.5% (MSCI EAFE Index) and emerging markets returned +2.3% (MSCI Emerging Markets Index), on an unhedged currency basis. ***p. 28***

— Size and value factors both delivered strong relative performance. U.S. value stocks beat growth stocks (Russell 1000 Value +11.3%, Russell 1000 Growth +0.9%), as growth stocks entered a correction in February. Small capitalization stocks continued their rally (Russell 2000 +12.7%, Russell 1000 +5.9%). ***p. 31***

Prospects for a strong economic rebound are compelling, though this good news may already be reflected in asset prices

We believe a neutral risk stance is warranted in the current environment

What drove the market in Q1?

"Biden signs $1.9 trillion Covid relief bill, clearing way for stimulus checks, vaccine aid"

U.S. PERSONAL INCOME GROWTH (YEAR-OVER-YEAR)

Sep	Oct	Nov	Dec	Jan	Feb
6.0%	5.0%	3.2%	3.7%	13.1%	4.3%

Article Source: CNBC, as of March 11th, 2021

"U.S. vaccination campaign gains steam as White House speeds shipments"

AVERAGE DAILY VACCINE DOSE ADMINISTRATIONS (TRAILING SEVEN DAYS)

1/15	1/31	2/14	2/28	3/15	3/31
843,447	1,348,021	1,681,951	1,735,053	2,427,429	2,828,491

Article Source: Reuters, March 31st, 2021

"Bond Traders Gird for More Pain After Biggest Loss Since 1980"

BLOOMBERG BARCLAYS US LONG TREASURY INDEX TOTAL RETURN

Oct	Nov	Dec	Jan	Feb	Mar
-3.01%	+1.20%	-1.18%	-3.61%	-5.57%	-4.99%

Article Source: Bloomberg, March 31st, 2021

"OECD More Than Doubles US Economic Growth Forecast"

U.S. 2021 GDP GROWTH FORECAST (BLOOMBERG MEDIAN ESTIMATE)

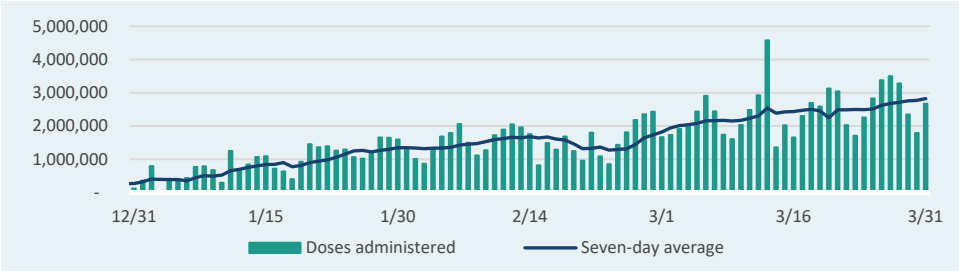
Oct	Nov	Dec	Jan	Feb	Mar
3.8%	3.8%	3.9%	4.1%	4.9%	5.7%

Article Source: Chief Investment Officer, March 17th, 2021

AMERICAN RESCUE PLAN ACT ALLOCATIONS

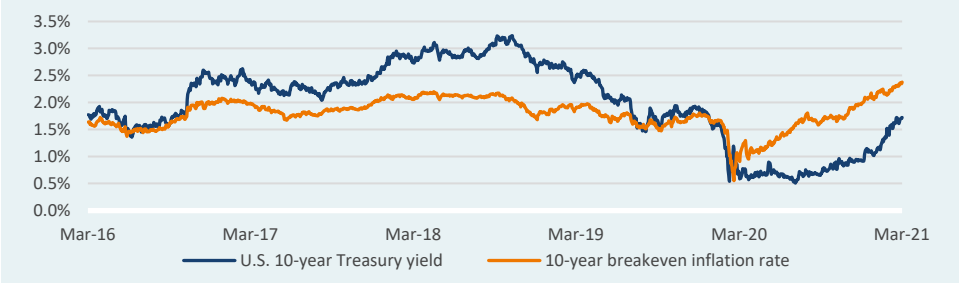
Source: Wall Street Journal, as of 3/11/21

U.S. COVID-19 VACCINATION CAMPAIGN



Source: Bloomberg, as of 3/31/21

INTEREST RATES AND INFLATION EXPECTATIONS



Source: Bloomberg, as of 3/31/21

Economic environment

U.S. economics summary

— Real GDP grew at a -2.4% rate year-over-year in the fourth quarter (+4.3% quarterly annualized rate) as the U.S. economic recovery continued. The Atlanta Fed's GDPNow forecast for 2021 Q1 growth was 6.0% on a quarter-over-quarter annualized basis as of April 9th, suggesting an even more robust pace than the prior quarter.

— The speed of vaccinations in the U.S. has exceeded expectations, reaching 3 million doses per day. Approximately 23% of the country have been fully vaccinated, and 37% have received a first dose.

— President Biden announced his $2 trillion Infrastructure Plan. In its initial form, the bill would spend $400b on expanded care for the elderly and disabled, spend $500b on electric vehicle subsidies and incentives, and spend $100B on national high-speed broadband internet access, with a smaller portion of the spending going towards traditional infrastructure such as power grid, railway, and public transit.

— U.S. core inflation remained low and stable, at 1.6% year-over-year in March. A jump in gasoline prices, along with base effects from the 2020 recession, pushed up headline inflation to 2.6%. It appears likely that inflation will continue to see a temporary rise in the coming months due to the lower prices of Q2 2020, since inflation is a year-over-year measure.

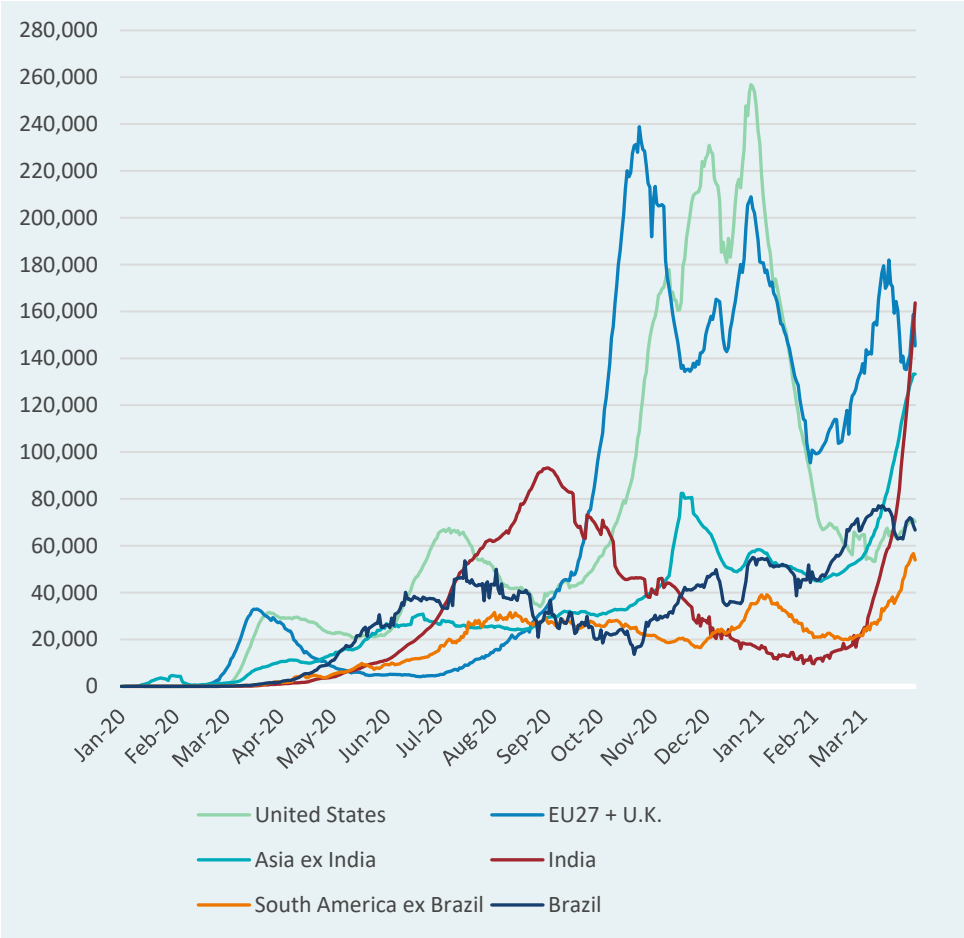
— While the U.S. unemployment rate continues to improve, falling from 6.7% to 6.0% during the quarter, the overall labor participation rate has stagnated. A disconnect seems to exist between the strong economy and weaker labor market.

— Consumer sentiment improved during Q1, along with the economic recovery. Sentiment is now at an average level relative to history.

	Most Recent	**12 Months Prior**
GDP *(YoY)*	(2.4%) *12/31/20*	2.3% *12/31/19*
Inflation *(CPI YoY, Core)*	1.6% *3/31/21*	2.1% *3/31/20*
Expected Inflation *(5yr-5yr forward)*	2.20% *3/31/21*	1.25% *3/31/20*
Fed Funds Target Range	0% – 0.25% *3/31/21*	0% – 0.25% *3/31/20*
10-Year Rate	1.74% *3/31/21*	0.67% *3/31/20*
U-3 Unemployment	6.0% *3/31/21*	4.4% *3/31/20*
U-6 Unemployment	10.7% *3/31/21*	8.8% *3/31/20*

COVID-19 case growth

SEVEN-DAY AVERAGE DAILY CASE GROWTH

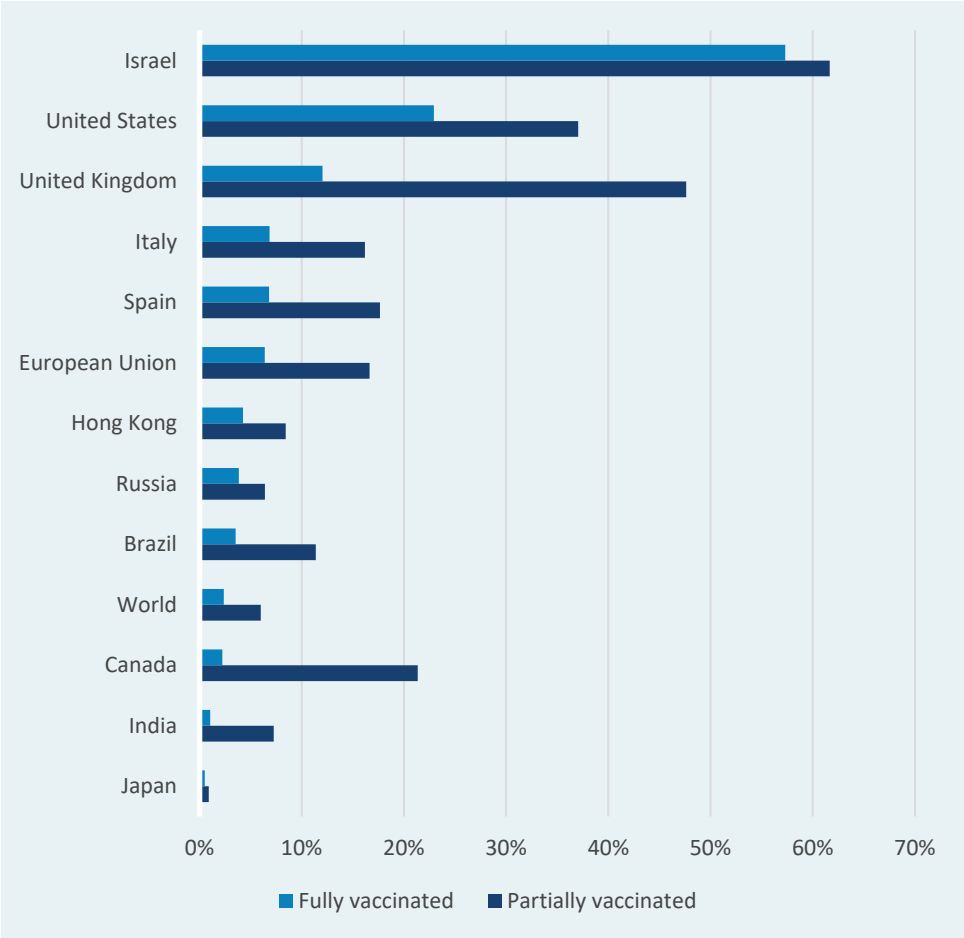


SEVEN-DAY AVERAGE DAILY CASE GROWTH – PER 100,000 RESIDENTS

Source: Bloomberg, as of 4/15/21

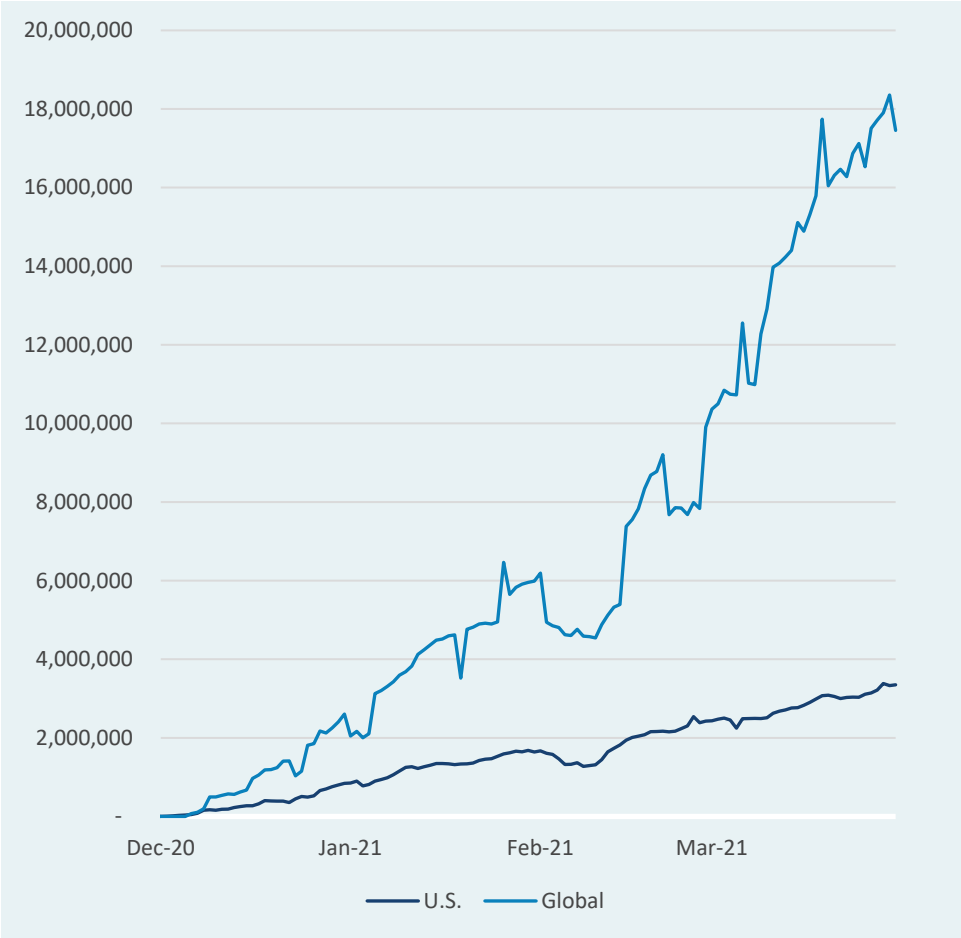
Global vaccination campaign

PERCENTAGE OF PEOPLE WHO ARE…



Source: Our World in Data, as of 4/14/21, or most recent release.

DAILY VACCINE DOSE ADMINISTRATIONS (7-DAY TRAILING AVERAGE)



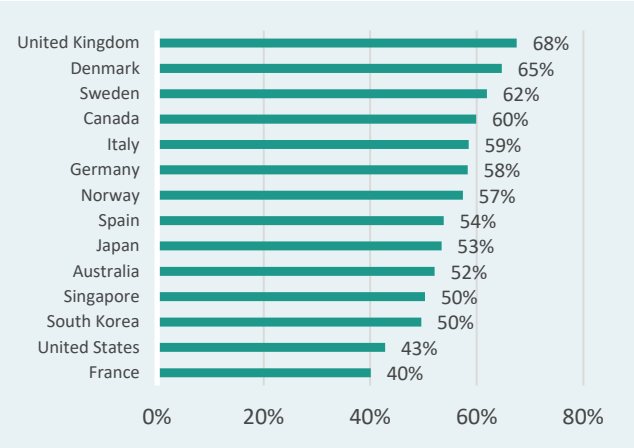
Source: Bloomberg, as of 4/15/21

Vaccine hesitancy

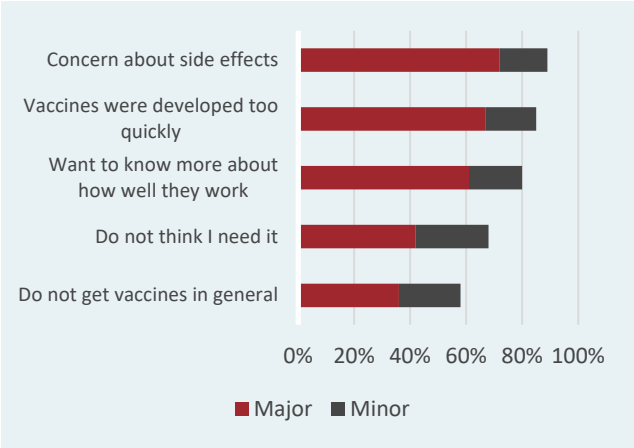
Toward quarter-end, concerns over the development of blood clots in a very small percentage of recipients of the AstraZeneca/Oxford and Johnson & Johnson vaccines led policymakers in many countries to suspend administrations pending further investigation.

Though today these side effects appear quite rare, these developments will likely result in further delays in the push toward herd immunity over the short-term. If suspensions are lifted in the intermediate term, the vaccines in question are likely to face public relations issues which could further hamper vaccination efforts. This dynamic is currently playing out in Europe with regard to the AstraZeneca vaccine—most of the Western part of the continent is taking a more cautious approach, while the Eastern segment has largely dismissed any clot-related concerns. Over the longer term, we believe that expanded vaccine production capacity, sufficiently diversified vaccine portfolios, and the coming online of new vaccines will reduce significantly the risk that idiosyncratic vaccine concerns create problems for the global vaccination campaign.

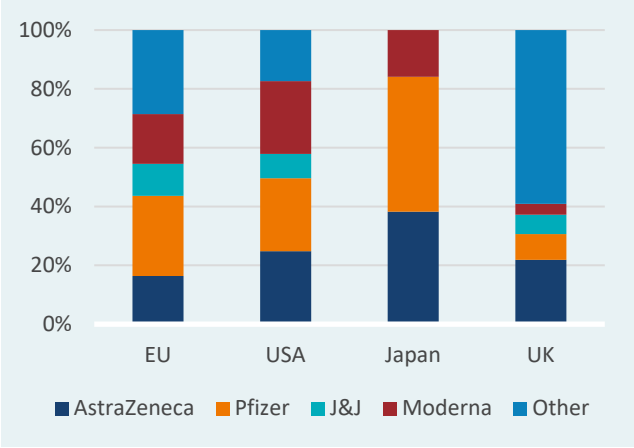
VACCINE WILLINGNESS



AMONG U.S. ADULTS ELECTING NOT TO BE VACCINATED, THE PERCENTAGE WHO SAY EACH OF THE FOLLOWING IS A MAJOR/MINOR REASON



VACCINE PORTFOLIO COMPOSITION ESTIMATE



Source: Our World in Data, Pew Research, Duke Global Health Innovation Centre, as of 3/31/21, or most recent release. The bars in the "Vaccine Willingness" chart indicate the percentage of people who agree with the following statement: "If a COVID-19 vaccine were made available to me this week, I would definitely get it."

GDP growth

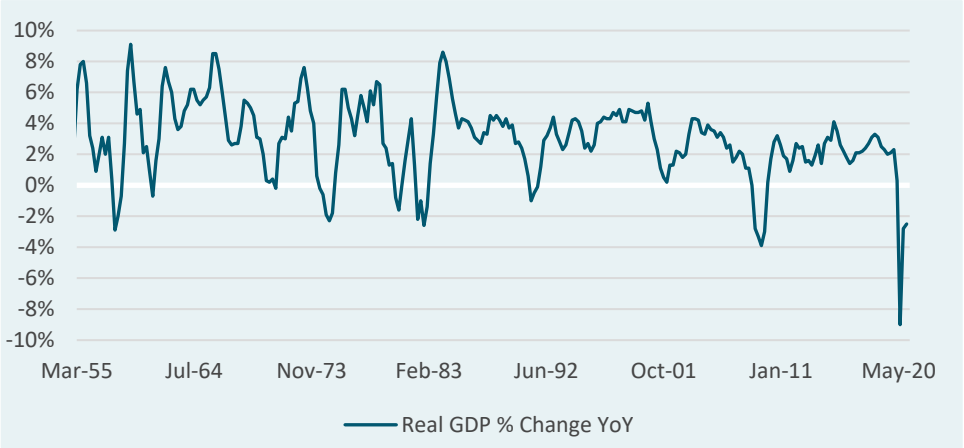
Real GDP grew at a -2.4% rate year-over-year in the fourth quarter (+4.3% quarterly annualized rate) as the U.S. economic recovery continued. The Atlanta Fed's GDPNow forecast for 2021 Q1 growth was 6.0% on a quarter-over-quarter annualized basis as of April 9th, suggesting an even quicker pace than the prior quarter.

President Biden announced his $2 trillion Infrastructure Plan. In its initial form, the bill would spend $400b on care for the elderly and disabled, $500b on electric vehicle subsidies and incentives, and $100b on national high-speed broadband internet access, with a smaller portion of spending going towards traditional infrastructure such as power grid, railway, and transit.

The plan as originally proposed did not have bipartisan support, reportedly due to the lower proportion of the plan dedicated to traditional infrastructure spending, its size, and its funding methods. Negotiations will commence in late-April, though it remains possible that the bill is modified in order to pass it via the "reconciliation" process, to avoid the need for Republican support.

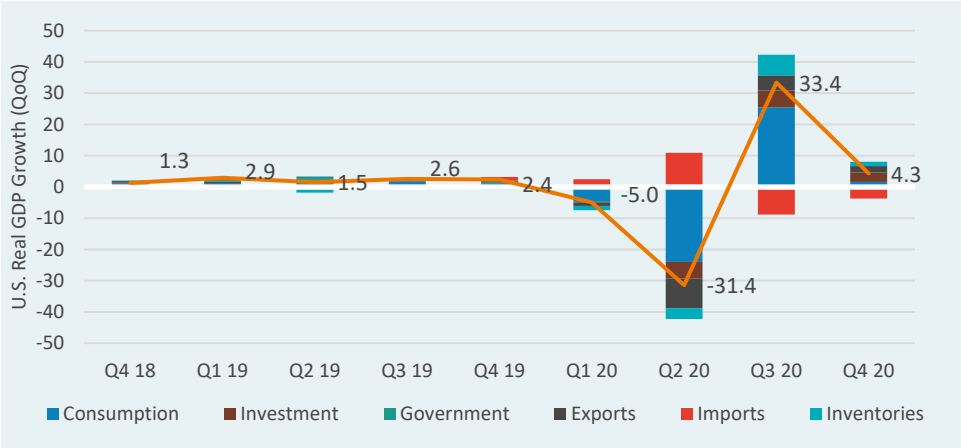
Large government stimulus programs are typically implemented during earlier stages of a recession, with the intent to fill a gap in demand and offset initial weakness. The current stimulus plans are very large and are being implemented at a time when the economy is well on the way to recovery. This creates risks of economic overheating, excesses, and inflation.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 12/31/20

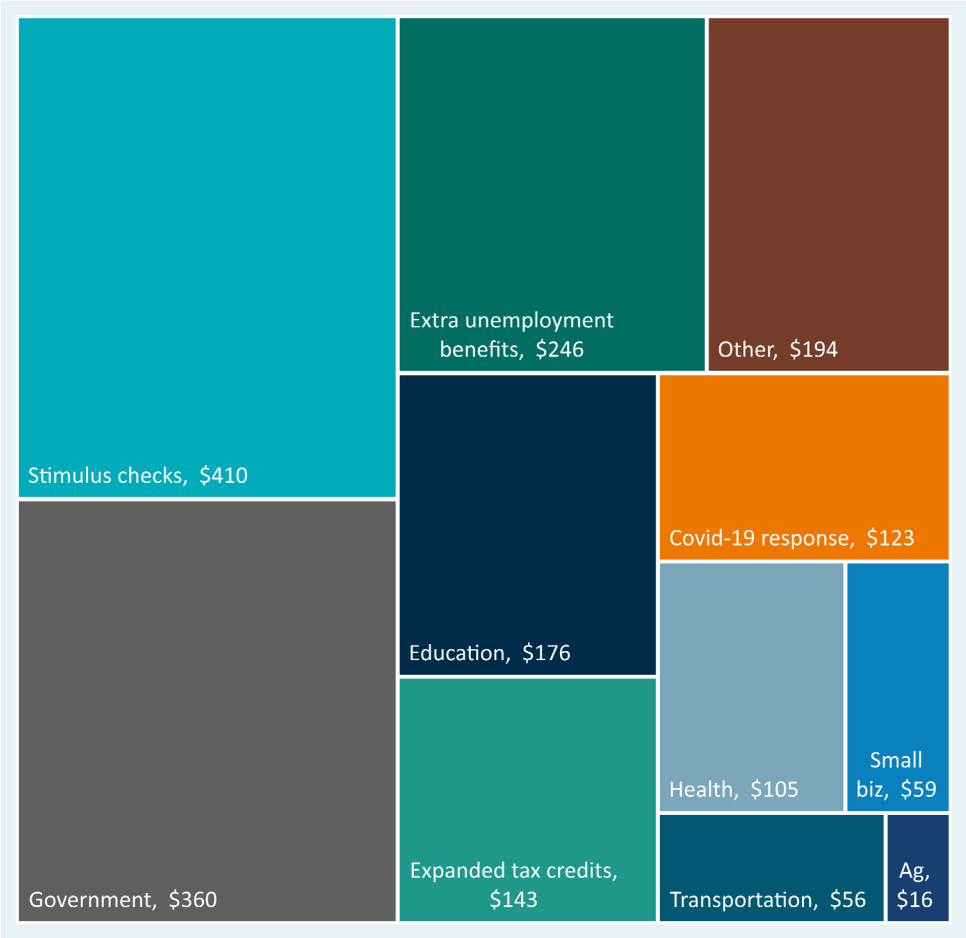
U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 12/31/20

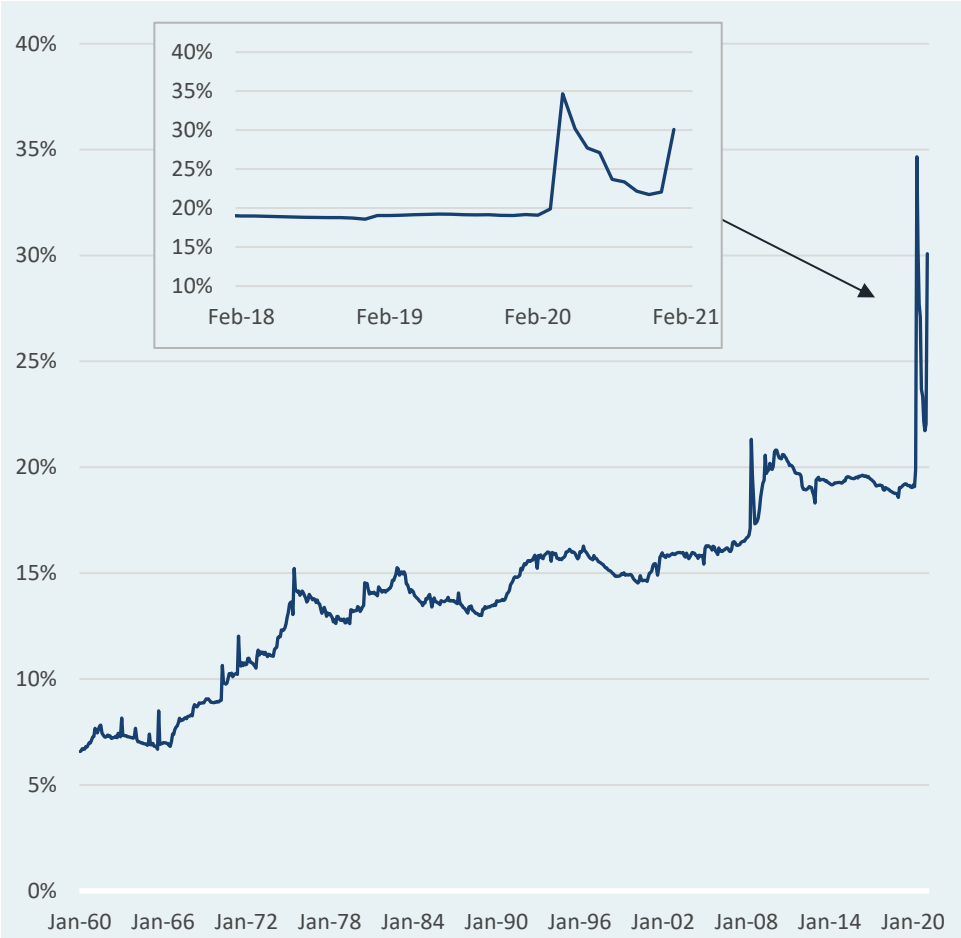
American Rescue Plan Act of 2021

STIMULUS BILL ALLOCATIONS (BILLIONS)



Source: Wall Street Journal, as of 3/13/21

GOVT. TRANSFER PAYMENTS AS A % OF DISPOSABLE PERSONAL INCOME



Source: BEA, as of 2/28/21

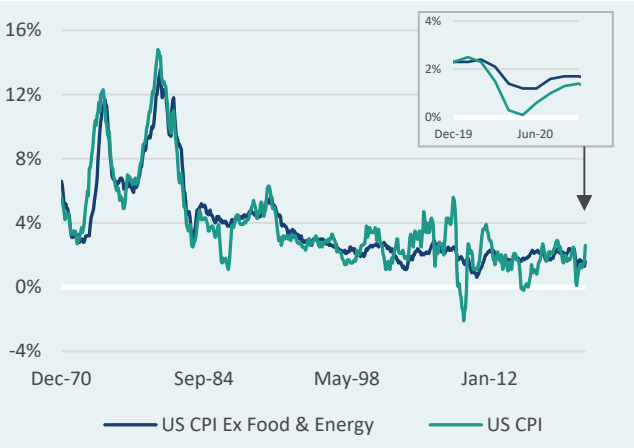
Inflation

U.S. core inflation remained low and stable, at 1.6% year-over-year in March. A jump in gasoline prices, along with base effects from the 2020 recession, pushed up headline inflation to 2.6%. It appears likely that inflation may jump temporarily in the coming months due to the lower prices of spring 2020, which will flow through to inflation, since inflation is a year-over-year measure.

The 10-year TIPS breakeven inflation rate continued higher during the quarter to nearly 2.4% from 2.0%. Most inflation indicators have risen, though we believe that government purchases of TIPS may be artificially pushing up the breakeven rate.

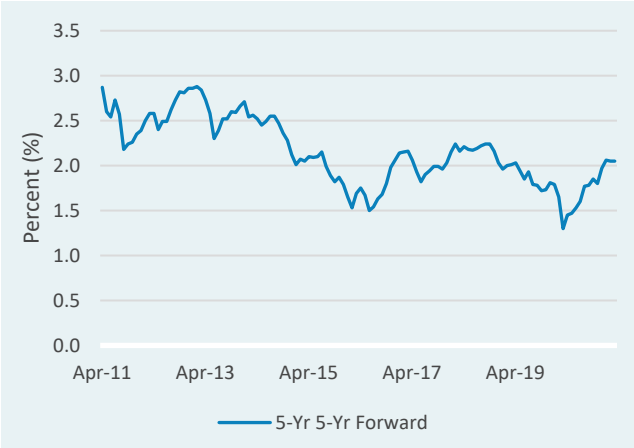
Investor fears persist around potential inflation. Following the response of central banks to the Global Financial Crisis, and very little inflationary effects resulting from that monetary experiment, it is reasonable to have doubts around whether ultra low interest rates and easy money are highly inflationary. Some have argued that most money "printed" after 2008-2009 ended up on bank balance sheets, rather than in the real economy, which resulted in muted inflationary effects. In the current environment, much easy money is arriving in the form of checks delivered straight to households. This new form of stimulus, along with broader government spending, may suggest possible rising inflation, though we believe the probability of this remains low.

U.S. CPI (YOY)



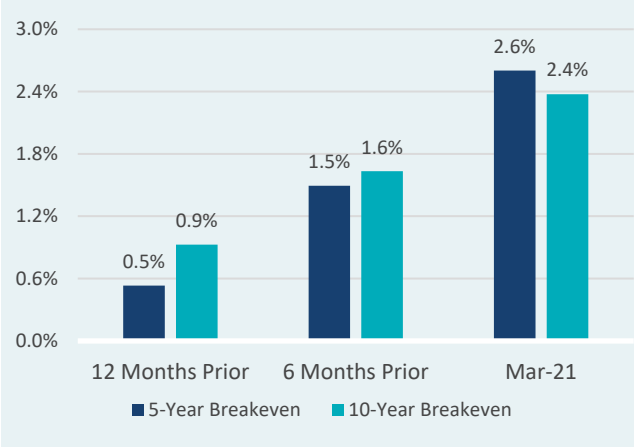
Source: Bloomberg, as of 3/31/21

MARKET INFLATION EXPECTATIONS



Source: FRED, as of 3/31/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 3/31/21

Labor market

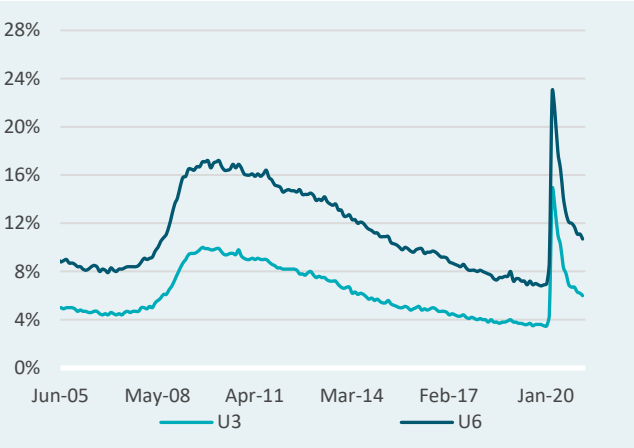
Unemployment fell from 6.7% in December to 6.0% in March. However, the overall labor force participation rate paints a less optimistic picture. At 61.5% participation in March, this metric has not budged since June of 2020.

The U.S. labor force showed a strong rebound during the fall of 2020, but more recently appears to have stalled. Approximately 2% of the total U.S. workforce remains out of a job and is not seeking work, relative to pre-COVID levels. This effect is illustrated in the labor participation rate, which is a broad measure of employment—defined as the percentage of the country's population that is currently employed, among all eligible workers. The participation rate fell from 63.3% immediately before the pandemic, to 60.2% in April, then back to 61.7% in August. The labor market remains weak despite an impressive economic comeback.

The most recent NFIB Small Business Optimism report explained "Main Street is doing better as state and local restrictions are eased, but finding qualified labor is a critical issue for small businesses nationwide… Small business owners are competing with the pandemic and increased unemployment benefits that are keeping some workers out of the labor force."

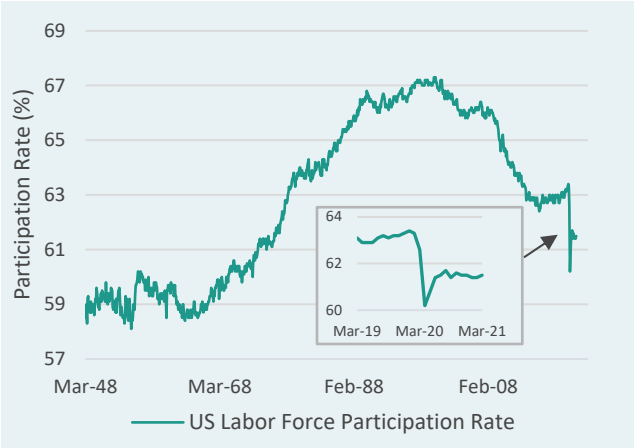
A large portion of the U.S. labor force remains neither employed nor seeking work

U.S. UNEMPLOYMENT



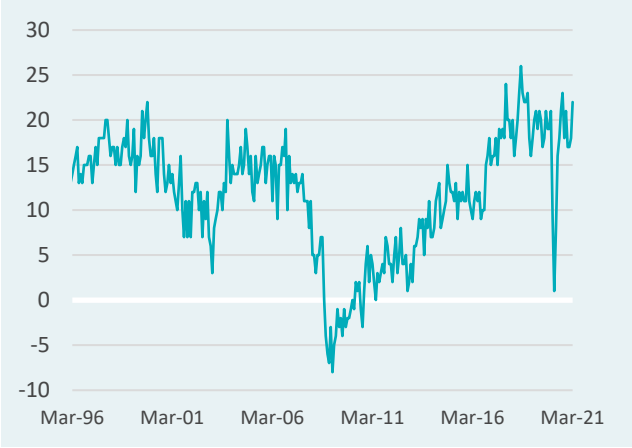
Source: FRED, as of 3/31/21

LABOR PARTICIPATION RATE



Source: FRED, as of 3/31/21

NFIB SMALL BUSINESS HIRING PLANS INDEX



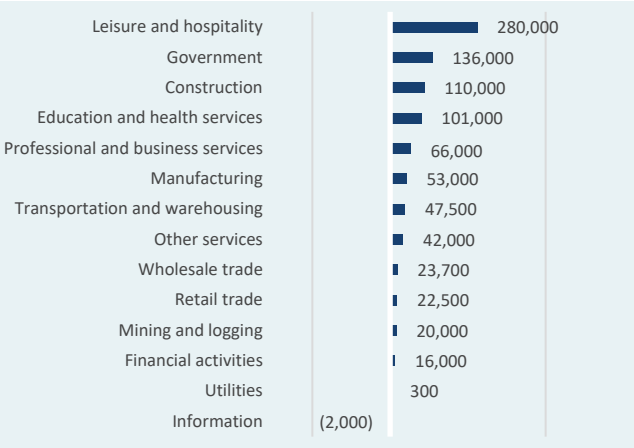
Source: NFIB, as of 3/31/21

Employment conditions

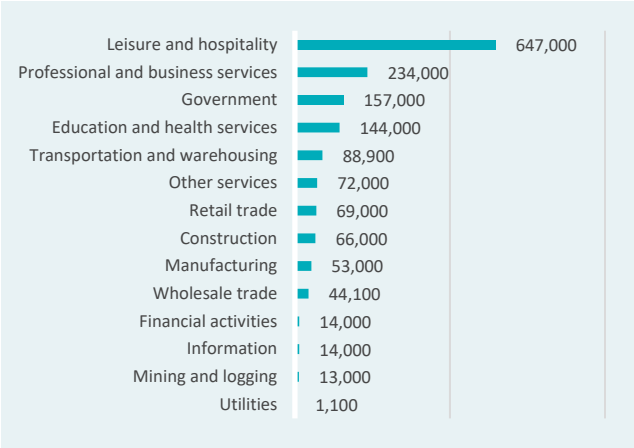
Hiring activity picked up considerably in the first quarter of 2021, supported by strong progress on the vaccination campaign and the concurrent relaxation of social distancing controls. While the broad unemployment rate dipped from 6.7% to 6.0%, that number probably overstates the magnitude of the labor market recovery thus far. Labor force participation dropped from 63.4% in January of 2020 to 60.2% in April, and as of the end of the first quarter, that number had recovered to just 61.5%. As a result, while unemployment has improved, there remain roughly nine million U.S. citizens who have yet to regain employment.

The primary concern of the Federal Reserve remains limiting the potential scarring of the labor market as a result of the shutdowns over the last year, and the Fed's accommodation, paired with continued progress on the vaccination campaign should lay the foundation for a continued recovery in the labor market over the next several quarters. There remains much wood to chop.

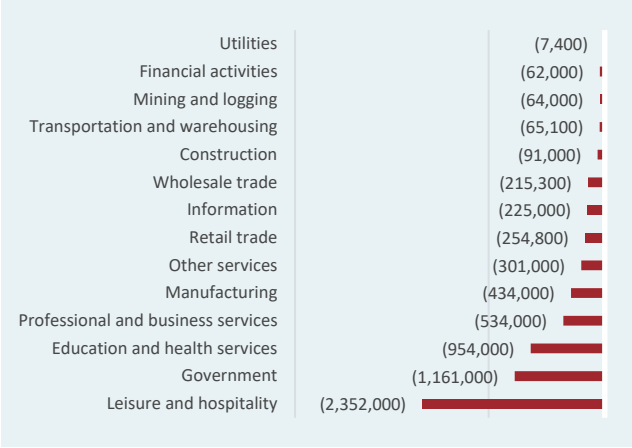
NON-FARM PAYROLLS – ONE-MONTH CHANGE



NON-FARM PAYROLLS – THREE-MONTH CHANGE



NON-FARM PAYROLLS – ONE-YEAR CHANGE



Source: BLS, as of 3/31/21

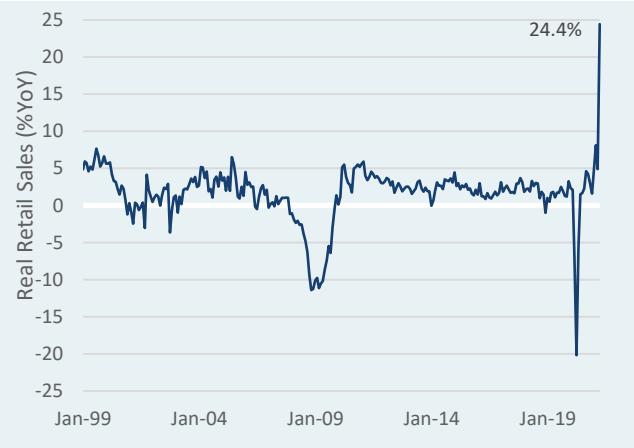
The consumer

U.S. retail sales rocketed higher in the first quarter, accelerating to a 9.8% month-over-month pace in March (this rate was an astounding 24.4% on a year-over-year basis, though this metric is more difficult to interpret since it calculates growth from a starting point of March 2020—the depths of the recession). As expected, vast government stimulus is translating to red hot consumer spending.

According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans began returning to their daily routines through late spring and summer, as activity began moving back towards normalcy. Then, as COVID-19 cases began to surge, many types of activities dipped once again. It now appears that activity such as retail, recreation, and grocery shopping are moving back to normal levels. At the same time, public transit usage and travel to workplaces remains depressed.

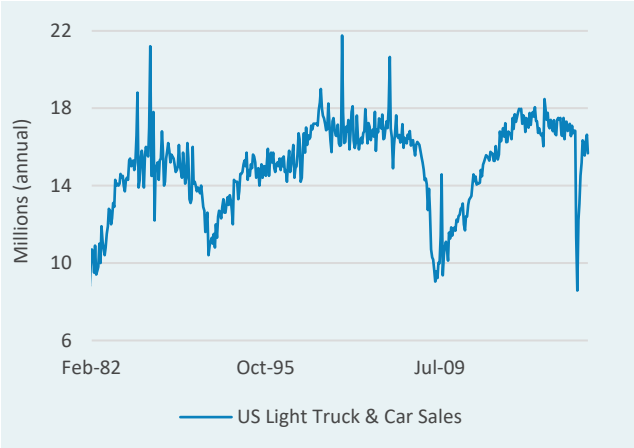
In last quarter's landscape we discussed concerns around the difficulty in determining what portion of the economic bounceback may have been due to unprecedented government stimulus, rather than a "natural" recovery of jobs and the financial health of Americans. We remain cautious, as certain aspects of the economy remain very weak, such as the labor market trends outlined earlier in this document.

REAL RETAIL SALES GROWTH (YOY)



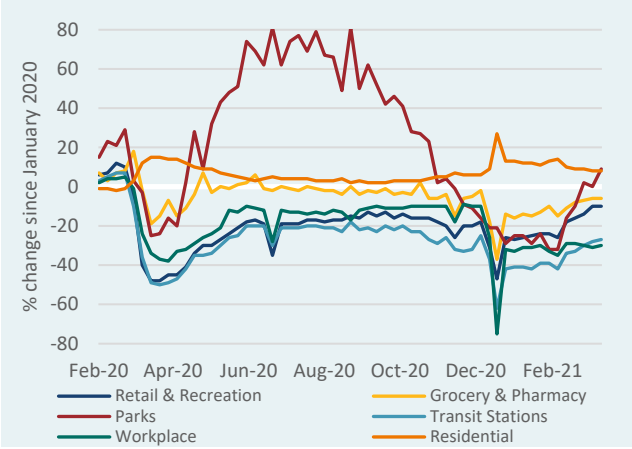
Source: FRED, as of 3/31/21

AUTO SALES



Source: Federal Reserve, as of 2/28/21

GOOGLE U.S. ACTIVITY TRACKER



Source: Google anonymized U.S. citizen mobility, as of 3/31/21

Sentiment

Consumer sentiment has seen only mild improvement, despite the stronger-than-expected pace of economic recovery.

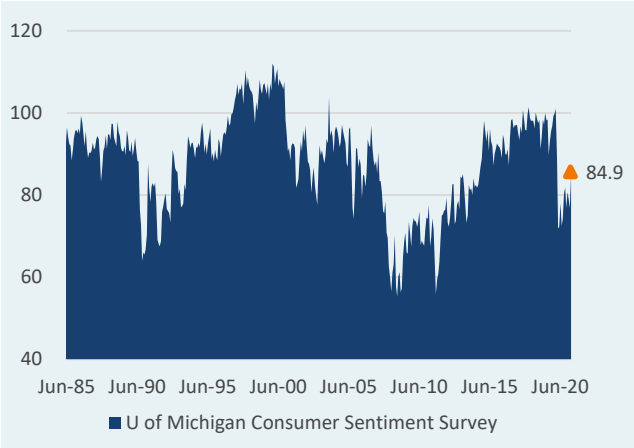
The Bloomberg Consumer Comfort Index attempts to gauge Americans' views on the economy, their personal financial situation, and buying conditions. The index rose from 44.6 to 50.0 during the quarter. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. The index jumped from 80.7 to 84.9 in Q1, directionally in line with the continued economic recovery.

The NFIB Small Business Optimism Index returned to an average reading in Q4 and remains materially weaker than pre-pandemic levels. Participants in the survey expressed uncertainty around business conditions, and extreme difficulties in finding qualified workers due to attractive unemployment benefits. A surprising 42% of small business owners reported job openings that could not be filled, which was a record-high figure.

CONSUMER COMFORT

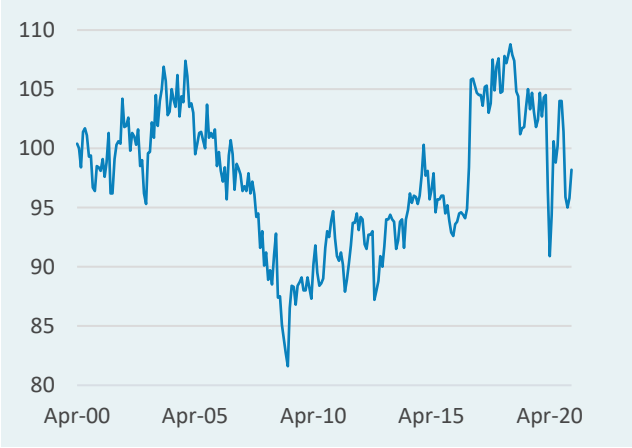
Source: Bloomberg, Langer, as of 3/28/21

CONSUMER SENTIMENT



Source: University of Michigan, as of 3/31/21

SMALL BUSINESS OPTIMISM



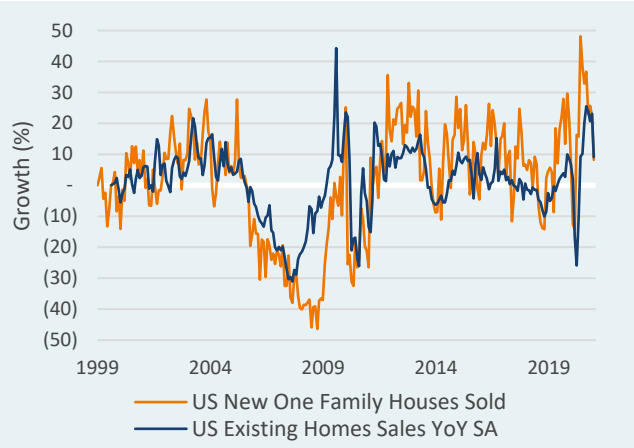
Source: NFIB, as of 3/31/21

Housing

Sales of existing homes continued at a near-record pace through fall of 2020 and the beginning of 2021, before decelerating to 9.1% year-over-year in February. Sales of new homes followed a similar directional trend, though new homes have shown an even stronger growth rate consistently over the past decade. The impressive number of sales were achieved despite there being an extremely slim inventory of homes available on the market.

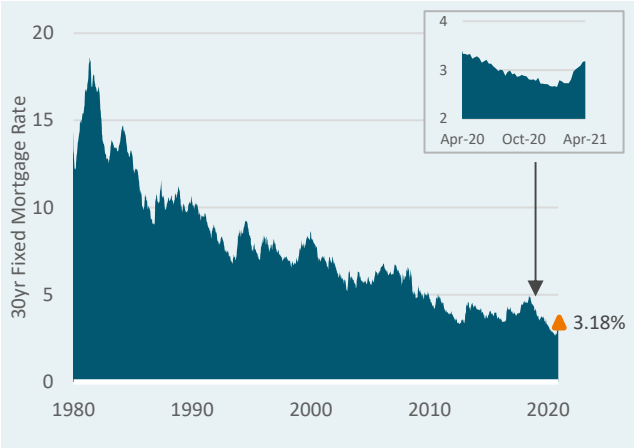
It has been surprising to witness a housing boom coincide with a sharp and deep global recession, although the dynamics that led to this environment are fairly simple to understand with hindsight. Record-low interest rates, record-low inventory of homes, and a desire of Americans for more space during the work-from-home environment, have lifted the cost of homes significantly. Some of these influences appear to be easing. Rising interest rates since the beginning of the year have contributed to higher mortgage rates, as the 30-year fixed average mortgage rate has risen from 2.65% to 3.18%. And the nationwide inventory of homes has improved to 4.8 months worth of supply. A further easing of conditions may help to cool down an extremely hot market.

U.S. HOME SALES (YOY)



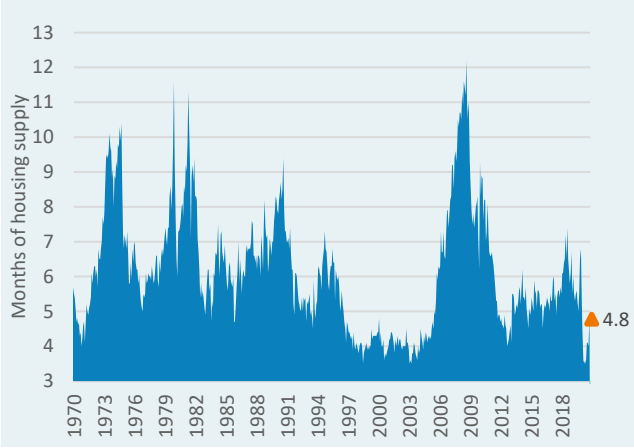
Source: FRED, as of 2/28/21

30-YEAR FIXED MORTGAGE RATE (AVERAGE)



Source: FRED, as of 3/31/21

HOUSING INVENTORY



Source: FRED, as of 2/28/21

International economics summary

— Economic growth continued to recover during the fourth quarter, though was still negative on a year-over-year basis in many countries. Growth expectations have risen as successful vaccine rollouts suggest that the world may get back to normal more quickly than originally assumed.

— Europe may unfortunately be excluded from this optimism, as a renewed wave of COVID-19 has once again led to lockdowns and restrictions. The Europe Union has been slower to rollout vaccinations, suggesting member countries may be grappling with the virus for longer periods of time.

— Unemployment was stable in the Eurozone and Japan, and fell modestly in the United States. As we described in prior quarters, governments have taken very different approaches to supporting workers, which makes labor market comparisons difficult.

— Despite heightened discussions about inflation risk, inflation remains muted and stable around the world, though the rebound in energy prices from record-low levels last year is having a lifting impact. This influence, driven by base effects, will most likely persist for the next few months.

— The gap between the manufacturing and services sectors of the economy narrowed toward the end of the quarter, as the beaten-down services sector showed signs of life across Europe. Extended periods of service sector activity expansion will likely depend on manageable levels of case growth and relaxed social distancing controls.

— Vaccine campaigns across mainland Europe as well as Japan have materially lagged those of the U.S. and the U.K., and the indefinite suspension of the AstraZeneca vaccine in many countries is likely to widen the gap in the short-term.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(2.4%) *12/31/20*	2.6% *3/31/21*	6.0% *3/31/21*
Eurozone	(4.9%) 12/31/20	1.3% *3/31/21*	8.3% *2/28/21*
Japan	(1.4%) *12/31/20*	(0.2%) *3/31/21*	2.8% *2/28/21*
BRICS Nations	1.6% *12/31/20*	1.4% *3/31/21*	5.7% *12/31/20*
Brazil	(4.1%) *12/31/20*	6.1% *3/31/21*	14.2% *1/31/21*
Russia	(3.0%) *12/31/20*	5.8% *3/31/21*	5.4% *3/31/21*
India	0.4% *12/31/20*	5.5% *3/31/21*	6.5% *3/31/21*
China	18.3% *3/31/21*	0.4% *3/31/21*	4.2% *12/31/20*

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy

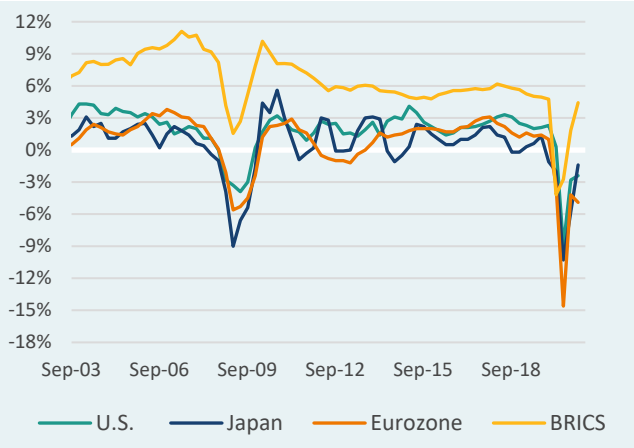
International economics

Economic growth continued to recover during the fourth quarter, though still negative on a year-over-year basis in many countries. Growth expectations have risen as successful vaccine rollouts suggest that the world may move back to normal more quickly than originally expected, although the speed of vaccine distribution has differed wildly. As of quarter-end, the U.S. and United Kingdom lead in vaccine rollouts, while the European Union and Japan lag behind. Europe is seeing a renewed wave of COVID-19, which has once again led to lockdowns and restrictions.

Despite heightened discussions about inflation risk, inflation around the world remains muted and stable, though the rebound in energy prices from record-low levels last year is having a lifting impact. This influence, driven by base effects, will most likely persist for the next few months.

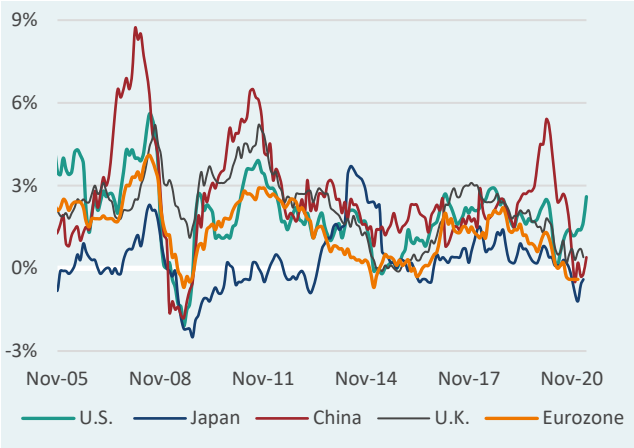
Unemployment was stable in the Eurozone and Japan, and fell modestly in the United States. As we have described in prior quarters, governments have taken very different approaches to supporting workers, which has made global labor market comparisons difficult.

REAL GDP GROWTH (YOY)



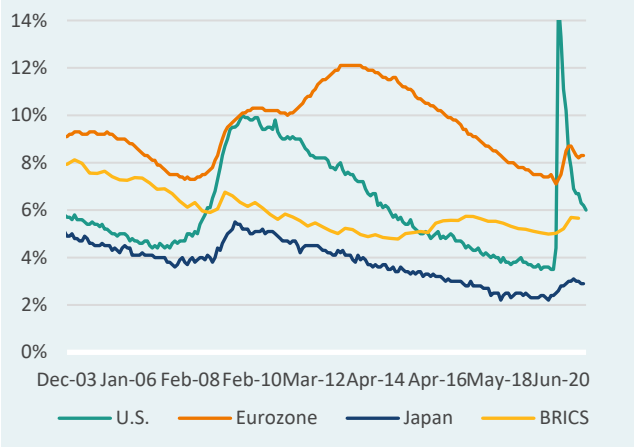
Source: Bloomberg, as of 12/31/20

INFLATION (CPI YOY)



Source: Bloomberg, as of 3/31/21 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 3/31/21 – or most recent release

Fixed income rates & credit

Interest rate environment

— Ten-year U.S. Treasury yields moved sharply higher, rising from 0.91% to 1.74%. Higher interest rates and tighter financial conditions create concerns for currently above-average risk asset prices, and for the economic recovery more broadly.

— Bond yields around the world rose in tandem with the United States, though the yield of shorter-dated bonds and cash remained anchored near zero. Rising bond yields at longer tenors and relatively steady movement in short tenor yields resulted in yield curve steepening in many countries.

— The spike in global interest rates tested the standing policies at a number of major central banks. The Reserve Bank of Australia was forced to step in to defend its 3-year bond yield target, the Bank of Japan widened the target band for its 10-year bond yield, and the ECB tweaked its asset purchase program to allow for more flexible purchases.

— The Federal Reserve maintained an accommodative tone and signaled it will continue to provide support until substantial progress has been made in the labor market and the pandemic is clearly in the rear-view mirror. On balance, the Fed remains of the view that any pickup in inflation over the next few months is likely to be transitory.

— Breakeven inflation rates surged as reflation bets continued to mount. The five-year breakeven inflation rate closed the quarter at 2.6%, its highest level since 2008.

— Credit spreads compressed to near decade-tights as demand for higher-yielding bonds remained high, and concerns over a wave of pandemic-driven defaults abated.

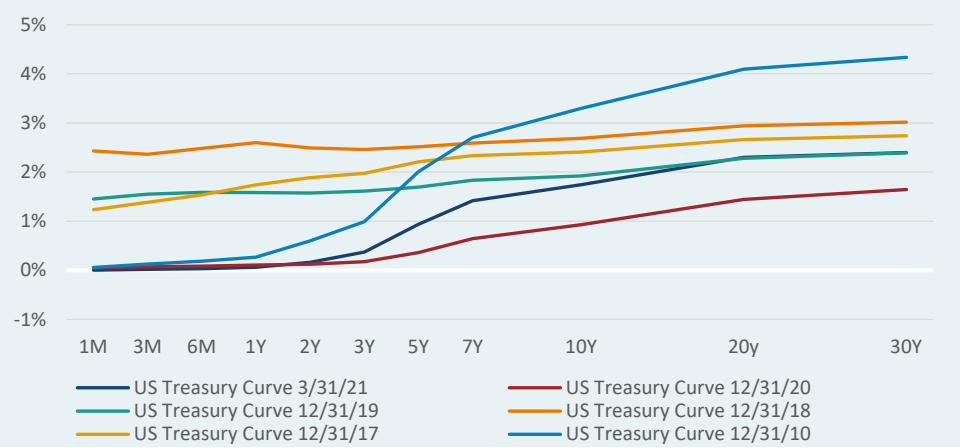
— Long-duration Treasuries posted their worst quarter since Q1 of 1980. The Bloomberg Barclays U.S. Long Treasury Index delivered a total return of -13.5%.

Area	Short Term (3M)	10-Year
United States	0.02%	1.74%
Germany	(0.67%)	(0.29%)
France	(0.62%)	(0.05%)
Spain	(0.56%)	0.34%
Italy	(0.54%)	0.67%
Greece	(0.24%)	0.86%
U.K.	(0.01%)	0.85%
Japan	(0.11%)	0.09%
Australia	0.00%	1.79%
China	2.28%	3.19%
Brazil	3.32%	9.28%
Russia	4.70%	7.00%

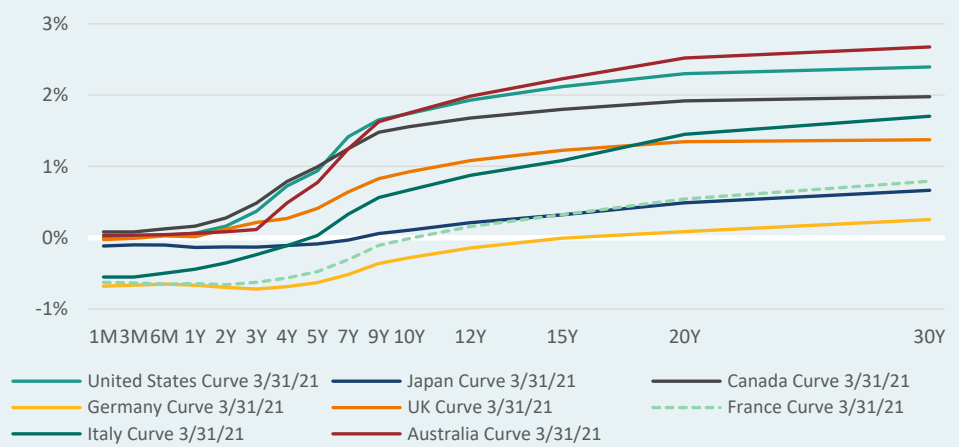
Source: Bloomberg, as of 3/31/21

Yield environment

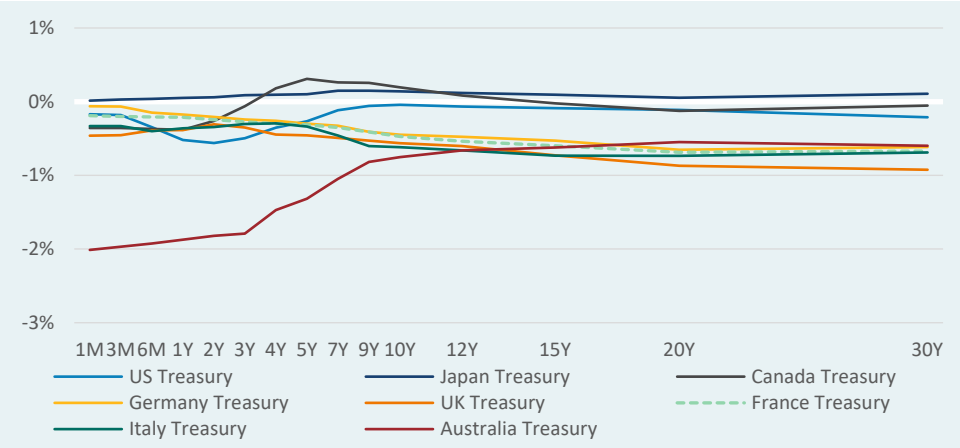
U.S. YIELD CURVE



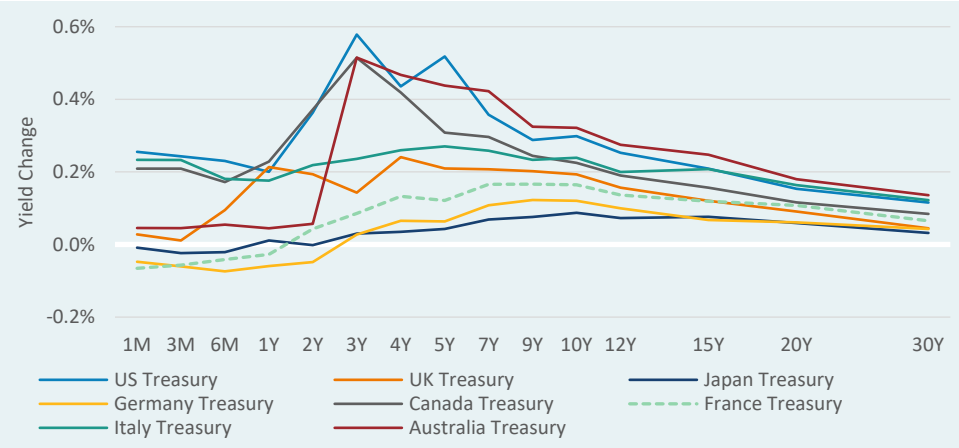
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/21

Yield increases have tested central banks

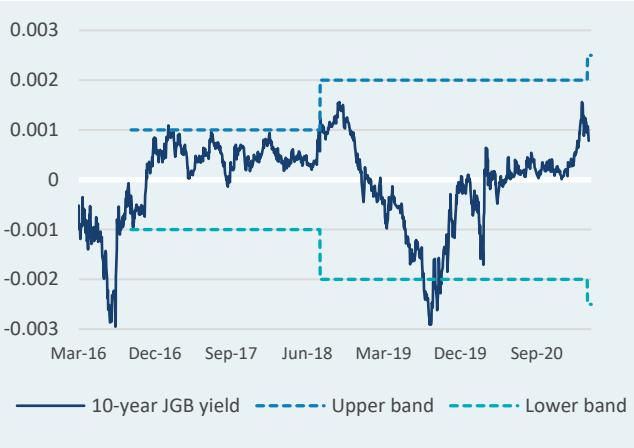
Bank of Japan: Clarified that 10-year yields can move within 25 basis points of the 0.00% target; tweaked guidance around buying ¥6 trillion in equity ETFs to make its purchases more "flexible and nimble".

Reserve Bank of Australia: Purchased A$7 billion of bonds in a matter of days, A$5 billion more than the scheduled amount, in order to defend its 0.10% target for its three-year bond yield.

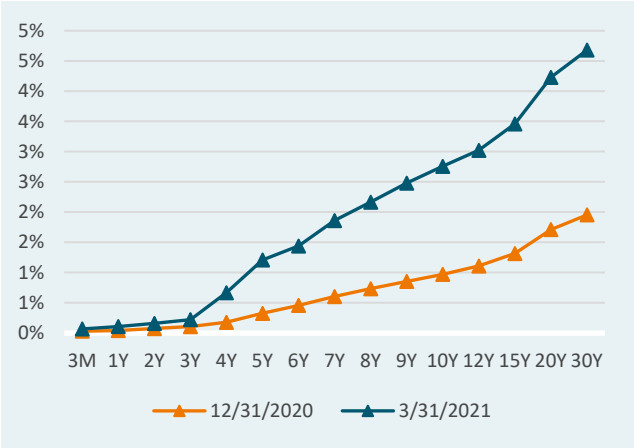
European Central Bank: Elected not to expand the size of its Pandemic Emergency Purchase Programme (PEPP), but elected to frontload bond purchases to increase short-term accommodation.

Federal Reserve: Fed officials have largely avoided comment and have been sticking to the script that financial conditions remain loose, and that higher long rates are indicative of an improving economic outlook. As a result, some have surmised that the ambiguity around the Fed's reaction function may result in elevated levels of bond market volatility in the near-term.

BANK OF JAPAN 10-YEAR YIELD TARGET BAND



AUD AUSTRALIAN YIELD CURVE



VALUE OF GLOBAL NEGATIVE YIELDING DEBT

Source: Bloomberg, as of 3/31/21

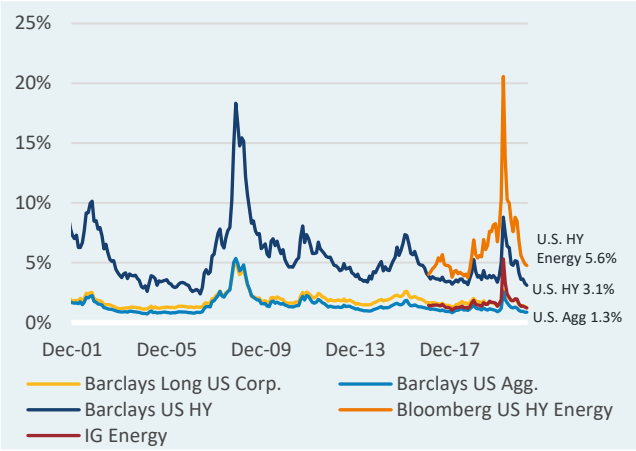
Credit environment

During the first quarter, credit market performance largely reflected the movements of the US Treasury curve, which steepened significantly as 10-year yields rose 82 basis points while 2-year yields remained anchored near zero. Investment grade credit, with an effective duration of 8.5, returned -4.65% over the quarter while high yield, with an effective duration of 3.9, return +0.85%. Bank Loans outperformed, returning +2.0% over the quarter.

Credit spreads continued to tighten during the quarter, as the vaccine rollout, which accelerated faster than expected, led to higher growth expectations for 2021. High yield spreads tightened 51 basis points, to 308 basis points, while investment grade tightened a more modest 6 basis points to end the quarter at 90 basis points.

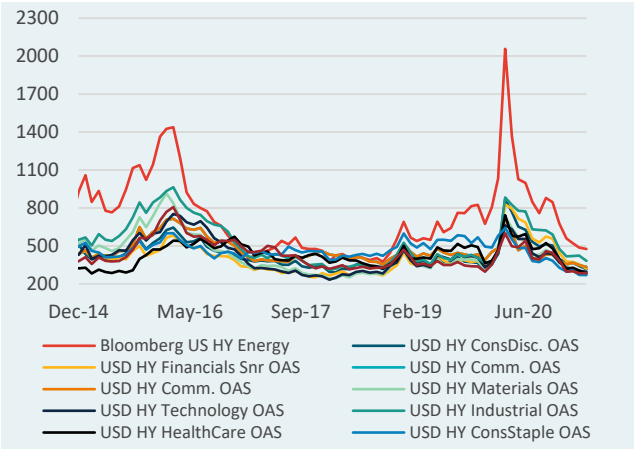
Spreads in higher quality investment grade assets have continued to compress over the past year. Notably, the BBB/A spread is now at an all-time low of 40 basis points, down from a high of 163 basis points experienced in Q1 2020. Similarly, the BB/BBB spread is now 155 basis points, down from recent high of 512 basis points established in March of 2020 and below the ten-year average of 215 basis points.

SPREADS



Source: Barclays, Bloomberg, as of 3/31/21

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/21

	Credit Spread (OAS)	
Market	**3/31/21**	**3/31/20**
Long U.S. Corp	1.3%	2.8%
U.S. Inv Grade Corp	0.9%	2.7%
U.S. High Yield	3.1%	8.8%
U.S. Bank Loans*	4.3%	8.3%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/21

**Discount margin (4-year life)*

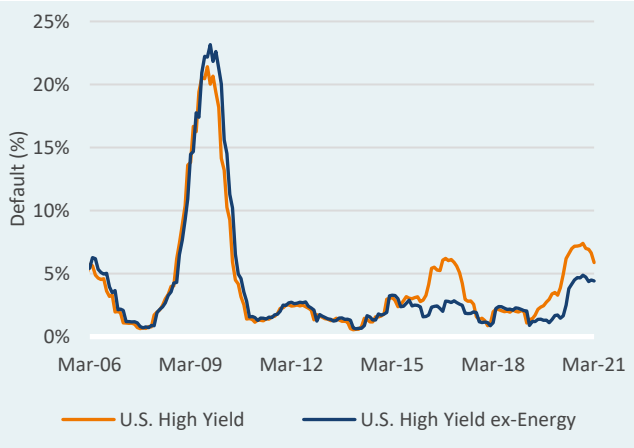
Default & issuance

Default activity was modest over the quarter, with 5 companies totaling $3.2 billion defaulting on bonds and loans. The par-weighted U.S. high yield default rate retreated 139 basis points from recent highs to end the quarter at 5.4%. Similarly, the loan par-weighted default rate ended the quarter at an eleven-month low of 3.3%, down 61 basis points year-to-date.

Given the market perception of upside rate risk throughout the remainder of 2021, high yield bond issuers continued to come to market at a blistering pace. Gross issuance for the quarter set a new quarterly record of $158.6 billion, outpacing the previous record set in Q2 2020 of $145.5 billion. Quarterly issuance remains significantly elevated relative to the ten-year average of $79.9 billion. Notably, $44.8 billion was issued to take-out leverage loans in Q1, which was roughly 60% of the previous annual record of $78.5 billion set in 2012. $154.6 billion in leverage loans were issued during the quarter, an amount eclipsing the previous record of $139.5 in Q1 2017.

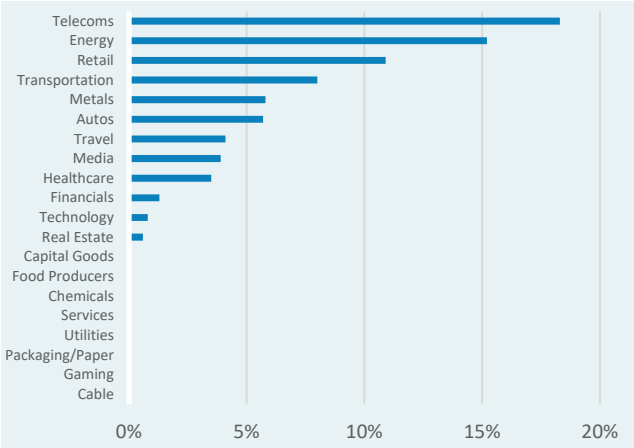
Investment grade issuance for the quarter totaled $423 billion, which remains elevated from the 4-year average first quarter issuance of $375, but lower than $480 billion issued in Q1 2020 when supply surged due to COVID funding.

HY DEFAULT RATE (ROLLING 1-YEAR)



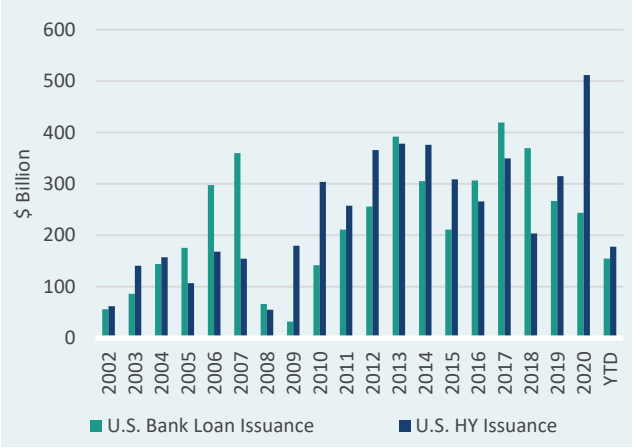
Source: BofA Merrill Lynch, as of 3/31/21

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



Source: BofA Merrill Lynch, as of 3/31/21 – par weighted

U.S. ISSUANCE ($ BILLIONS)



Source: BofA Merrill Lynch, as of 3/31/21

Equity

Equity environment

— U.S. equities were a top performer in Q1, delivering +6.2%. International equities delivered +3.5% (MSCI EAFE Index) and emerging markets delivered +2.3% (MSCI Emerging Markets Index), on an unhedged currency basis. Trailing one-year returns hit extremely high levels, reflecting low base effects (markets bottomed out during March of 2020), and a recovery from those depressed levels year-over-year.

— We believe the U.S. economy is playing catch-up to the markets in the current environment. While it seems increasingly likely that the economy will rapidly recover over the next year, this optimism may already be baked into equity prices. It is reasonable to be enthusiastic about U.S. economic prospects while also being cautions about lofty equity valuations.

— According to FactSet, S&P 500 earnings expectations for 2021 improved by 5.0% during the quarter. Analysts are now forecasting 25.4% earnings growth for 2021—an incredible recovery from the -11.2% earnings drop expected of 2020.

— The Cboe VIX Index has slowly been falling back towards the longer-term average of 19. The index fluctuated in the low 20s during Q1, falling below 19 briefly in late March.

— The U.S. dollar stabilized in the first quarter, paring some of the losses accrued in the final three quarters of last year. Rising relative yields helped the dollar to appreciate materially relative to the euro, yen, and a broad basket of emerging market currencies.

— A rotation towards value stocks persisted during the quarter, as beaten-down sectors delivered outsized performance. Energy, financials, industrials, and materials were the strongest performers.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	6.2%		56.4%	
US Small Cap (Russell 2000)	12.7%		94.8%	
US Large Value (Russell 1000 Value)	11.3%		56.1%	
US Large Growth (Russell 1000 Growth)	0.9%		62.7%	
International Large (MSCI EAFE)	3.5%	7.6%	44.6%	37.7%
Eurozone (Euro Stoxx 50)	6.3%	10.6%	53.7%	45.3%
U.K. (FTSE 100)	5.9%	5.0%	35.6%	22.5%
Japan (NIKKEI 225)	(0.2%)	7.0%	52.6%	57.4%
Emerging Markets (MSCI Emerging Markets)	2.3%	3.7%	58.4%	52.2%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/21

Domestic equity

U.S. equities moved higher in Q1, returning +6.2%. According to FactSet, S&P 500 earnings expectations for 2021 improved by 5.0% during the quarter. Analysts are now forecasting 25.4% earnings growth for 2021—an incredible recovery from the -11.2% earnings drop expected of 2020.

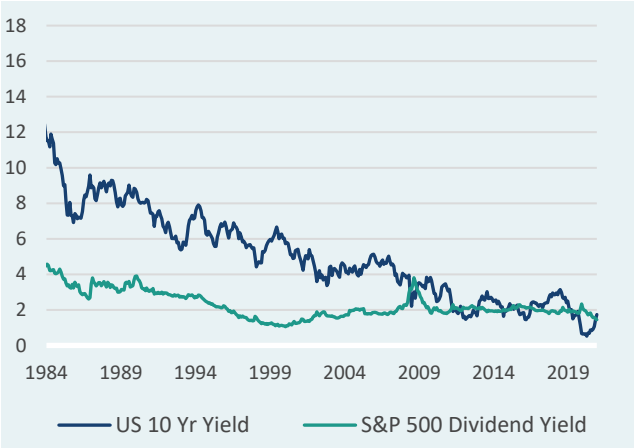
Equities continued upward and valuations have followed. The U.S. market has been a top performer but has also remained one of the most expensive markets. On the other hand, successful COVID-19 vaccinate rollouts, rosy earnings expectations, and the potential for an impressive economic reopening may be supportive of high prices. This reopening appears to be fueling a rotation towards traditional cyclical sectors, such as energy, financials, and industrials.

As markets move higher, it appears to us that the economy may be playing catch-up to the markets. While it seems increasingly likely that the economy will rapidly recover during the next year, this optimism may already be reflected in equity prices. In other words, it is reasonable to be enthusiastic about U.S. economic prospects while also being cautions about higher equity valuations.

S&P 500 INDEX

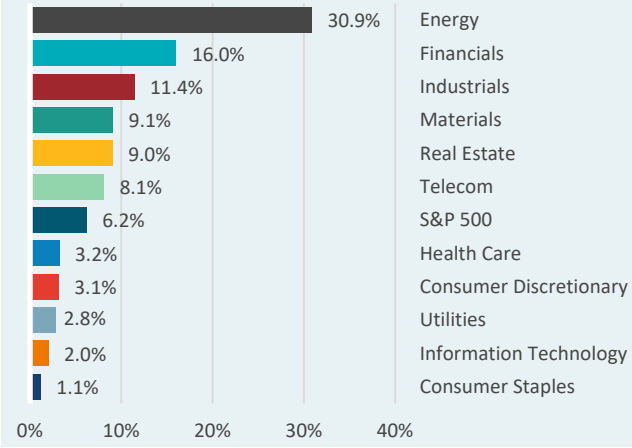
Source: Standard & Poor's, as of 3/31/21

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 3/31/21

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/21

Retail market speculation

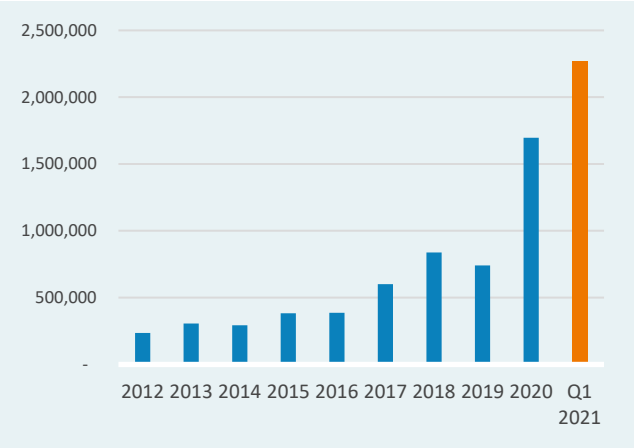
In recent years, trading has become free on certain platforms, making day trading a more attractive proposition. Retail's portion of total market trading has increased from 10% in 2010 to 23% in 2020, according to Bloomberg Intelligence.

Some trading platforms have attracted users by designing the trading process to be entertaining, similar to a video game. Discussion sites such as Reddit have also become popular places to talk about trades in a social setting.

Lockdowns due to COVID-19 have prevented many Americans from pursuing their usual hobbies, leading to boredom. Stock trading may have become an entertaining outlet for otherwise non-traders. And government stimulus checks may have provided idle cash to fuel this new hobby.

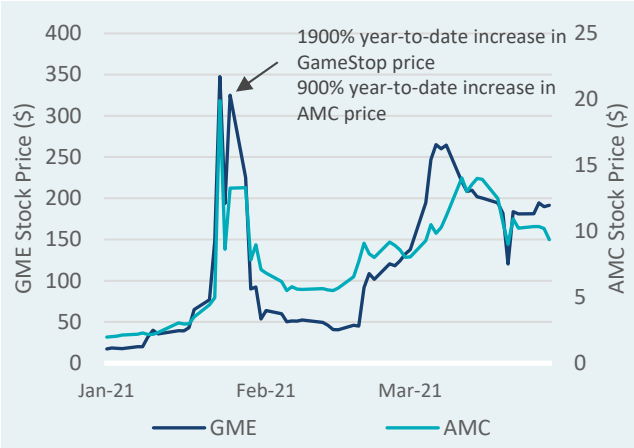
This environment appears to have contributed to intense speculation in stocks such as GME and AMC. In these instances, retail traders aimed to force a "short squeeze" on these heavily-shorted stocks.

SCHWAB - ORGANIC CHANGE IN ACTIVE BROKERAGE ACCOUNTS*



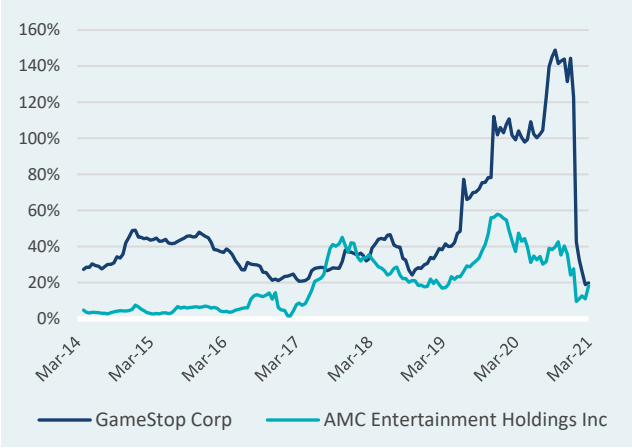
Source: Bloomberg, as of 4/15/21.

GAMESTOP & AMC THEATERS STOCK PRICES



Source: Bloomberg, as of 3/31/21

SHORT INTEREST AS A PERCENTAGE OF FLOAT



Source: Bloomberg, as of 3/31/21

**Excludes 15.6 million brokerage accounts which Schwab added in 2020 as a result of its acquisition of TD Ameritrade and its acquisition of the assets of USAA's Investment Management Company.*

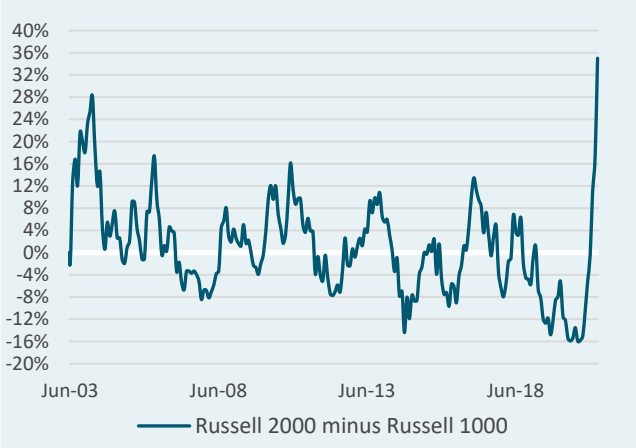
Domestic equity size & style

Factor performance surged during the quarter, as small capitalization and value stocks delivered strong relative returns. U.S. value stocks beat growth stocks by a wide margin (Russell 1000 Value +11.3%, Russell 1000 Growth +0.9%), as growth entered a correction in February and value marched higher. Small cap stocks continued their surprisingly strong rally, outperforming growth (Russell 2000 +12.7%, Russell 1000 +5.9%).

A rotation towards value occurred as beaten-down sectors such as energy, financials, and materials delivered outsized performance—sectors which tend to possess a heavier concentration of value stocks. Companies which benefited from the pandemic due to a shift in household habits may see a further reversal of that windfall as households begin to go back to normal life. Additionally, value stocks typically exhibit strength during economic recoveries. These dynamics of growth and value may suggest further value factor strength, though factor trends are noisy and extremely difficult to predict.

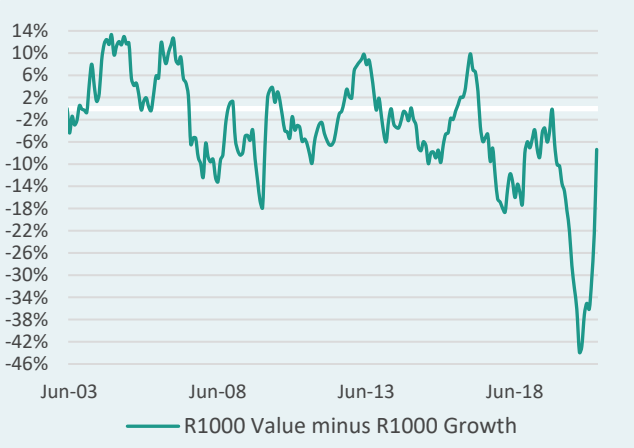
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



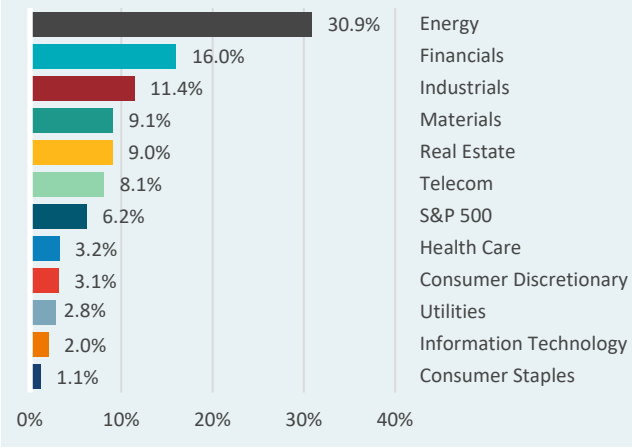
Source: FTSE, as of 3/31/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/21

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/21

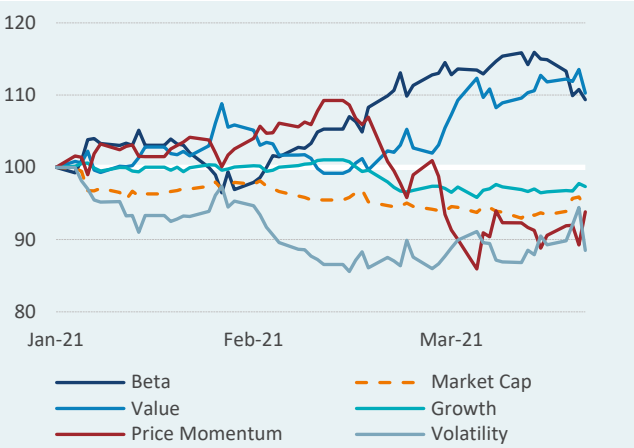
Factor portfolios in 2021

Factor performance trends that started with positive COVID vaccine news in late 2020 continued into 2021 Q1. Investors kept favoring the value factor; they also bought stocks with higher betas and higher volatility (long/short, sector neutral, S&P 500 Index quintiles). This was a significant change from pre-vaccine pandemic behavior when investors had bid up the low volatility, growth, and price momentum factors.

From a longer-term perspective, the latest rotation did not come close to reversing the trend of positive results accruing to the momentum and low volatility factors.

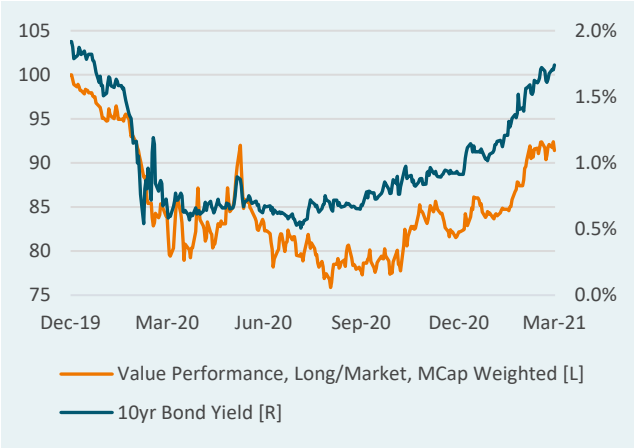
Value stocks, which were largely beaten down during the pandemic, remain an ongoing beneficiary of the economic recovery rooted in both positive medical news and ongoing government stimulus programs. Higher interest rates and a steepening yield curve, which are related to the recovery trade, also help certain cheap financial stocks. In contrast, certain growth stocks are hurt by higher rates as future profits are further discounted. The recent market activity is reflected within the momentum factor itself as investors sold growth and low volatility stocks to keep buying stocks with higher exposure to value and other factors.

Q1 2021 PERFORMANCE



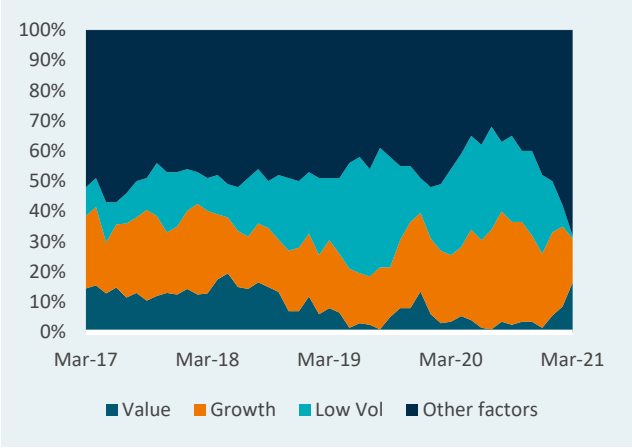
Source: J.P. Morgan, as of 3/27/21

VALUE PERFORMANCE AND RATE MOVEMENT



Source: J.P. Morgan, as of 3/31/21

J.P. MORGAN MOMENTUM BUCKET: LONG-SIDE FACTOR EXPOSURES (S&P 500 INDEX UNIVERSE)



Source: J.P. Morgan, as of 3/31/21

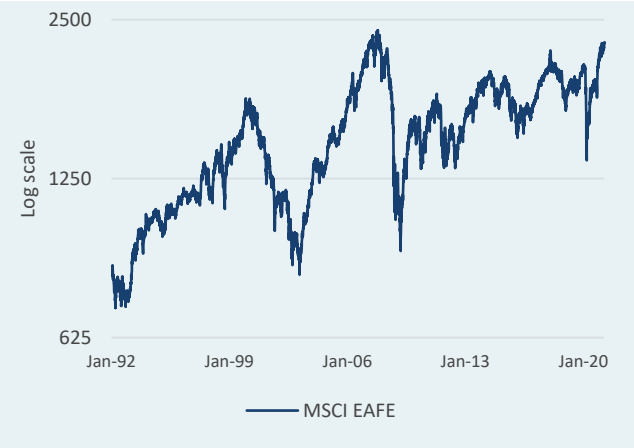
International developed equity

International equities delivered +3.5% (MSCI EAFE Index) during the first quarter on an unhedged currency basis. International developed underperformed the S&P 500 Index (+6.2%) while outperforming the MSCI Emerging Markets Index (+2.3%). The trend towards U.S. dollar weakness has boosted the performance of unhedged international equities, adding +6.8% over the past year, though this trend may have begun to reverse in the first quarter.

International developed equity weakness may be partly attributed to snags in the European COVID-19 vaccination campaign, which has materially lagged the rest of the world. However, European equities (+4.1%) managed to outperform Japanese equities (+1.6%) in U.S. dollar terms, primarily due to currency movements, as the yen (-6.7%) depreciated more sharply relative to the U.S. dollar than the euro (-4.0%) or swiss franc (-6.2%).

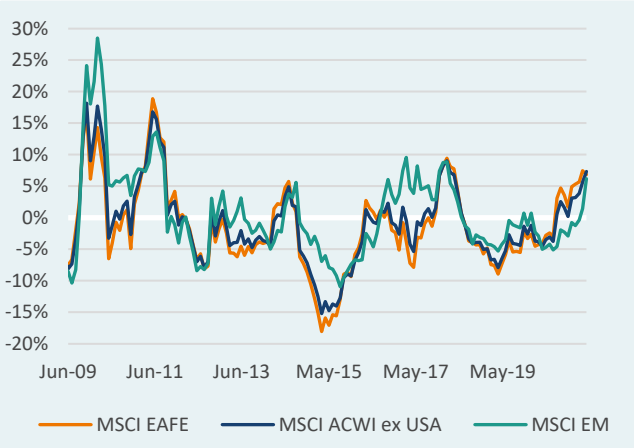
Bets against the Japanese yen rose to multi-year highs amid a backdrop of increasing relative interest rates available in the U.S., and a wave of risk-on sentiment pouring cold water on the appeal of traditional safe-haven assets.

INTERNATIONAL DEVELOPED EQUITIES



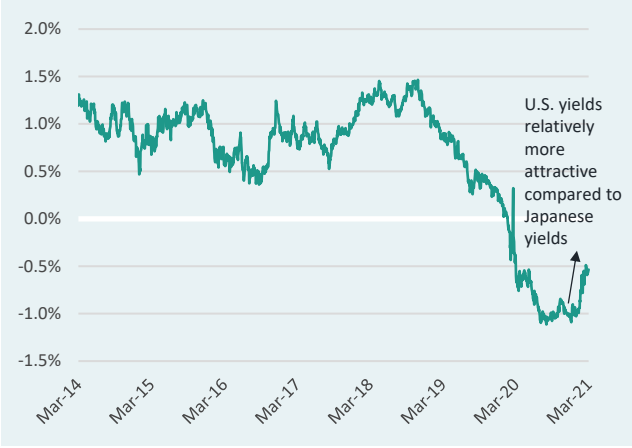
Source: MSCI, as of 3/31/21

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/21

10-YEAR REAL YIELD SPREAD (US MINUS JAPAN)



Source: Bloomberg, as of 3/31/21

Emerging market equity

Emerging market equities (MSCI EM +2.3%) underperformed U.S. (S&P 500 +6.2%) and international developed equities (MSCI EAFE +3.5%) during the quarter. Latin American equities pulled back from strong performance in Q4, underperforming the broader index (MSCI Latin America -5.3%).

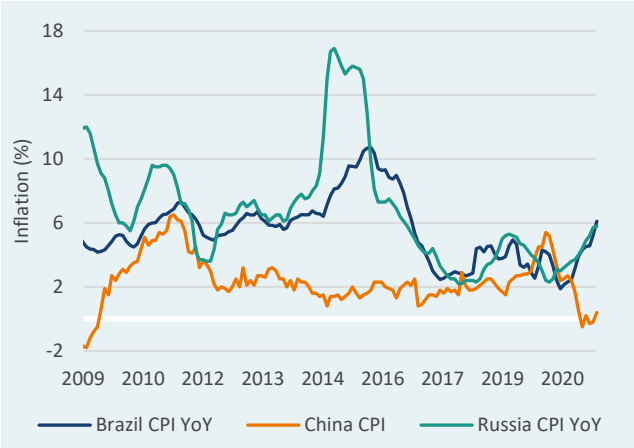
Chinese mainland equities, which account for roughly 36% of the MSCI EM Index, slumped -0.4%, dampening overall index returns. Many analysts attributed the relative weakness in China to tightening liquidity conditions, as the People's Bank of China shifted focus away from promoting economic recovery and toward clamping down on real estate speculation and leverage broadly, in the interest of preventing the buildup of financial excesses.

Central banks from Turkey to Russia to Brazil delivered surprise rate hikes in part to respond to a resurgence in inflation, which weighed on markets. Idiosyncratic political developments further pressured returns in Turkey (-20.4%) and Brazil (-10.0%), while Russian equities held up better (+2.4%) despite a weaker ruble (-2.1%).

EMERGING MARKET EQUITY

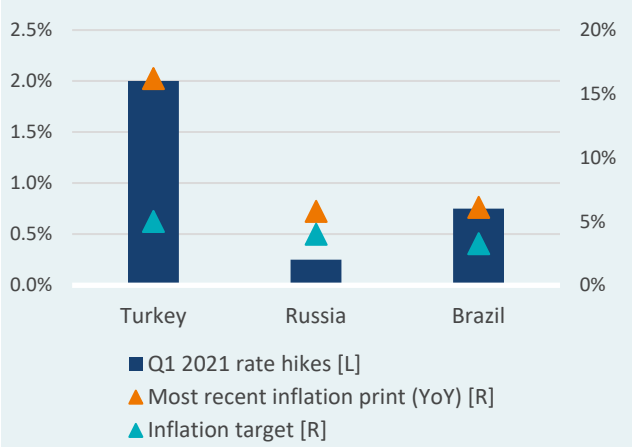
Source: MSCI, as of 3/31/21

INFLATION (YOY)



Source: Bloomberg, as of 3/31/21 or most recent data

SURPRISE CENTRAL BANK RATE HIKES



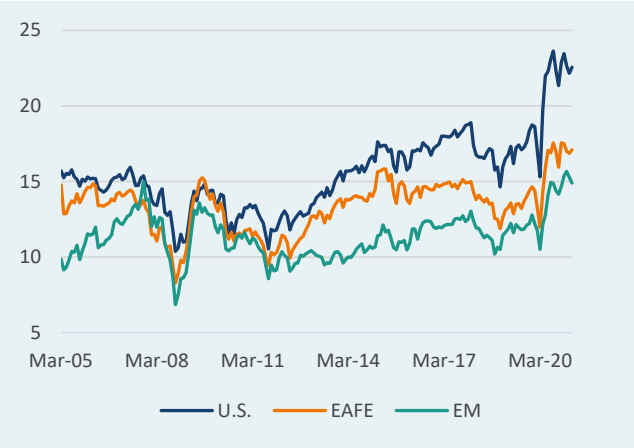
Source: Bloomberg, as of 3/31/21

Equity valuations

Valuations remain at very high levels relative to history. However, prices may be somewhat justified, considering the historically low (though slightly higher over the quarter) level of interest rates, and the fact that earnings are expected to rebound sharply later this year. Additionally, some have projected that aggressive cost-cutting measures and pandemic-driven innovation could result in higher operating leverage within U.S. companies, which would allow them to generate more earnings per dollar of revenue than before the pandemic began, and perhaps more earnings overall if revenues were to return to near pre-pandemic levels.

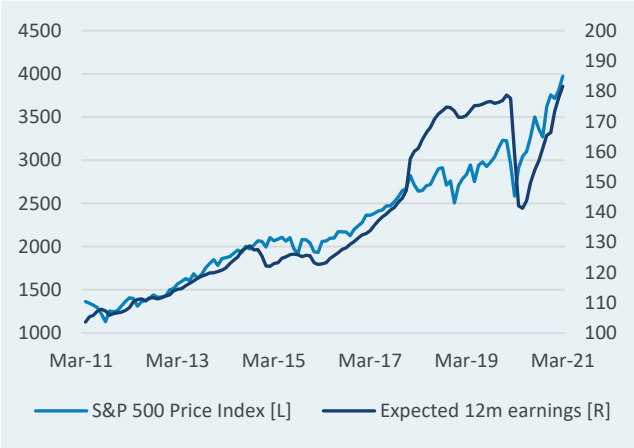
Equity prices proved quite resilient to the significant increase in global interest rates, leaving investors pondering the level at which rising interest rates would materially impact the present value of equities. While this is difficult to gauge, the answer is likely dependent on the sector and duration characteristics of the various global equity benchmarks. Additionally, central bank accommodation remains a crucial support for equity prices. Looking ahead, if central bankers were to adopt a more hawkish tone as the developed world approaches herd immunity, valuations may be challenged.

FORWARD P/E RATIOS



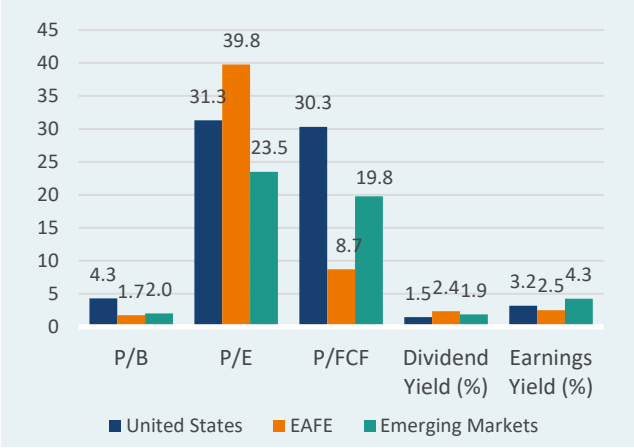
Source: MSCI, 12m forward P/E, as of 3/31/21

S&P 500 PRICE & EARNINGS EXPECTATIONS



Source: Bloomberg, as of 3/31/21

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 3/31/21 - trailing P/E

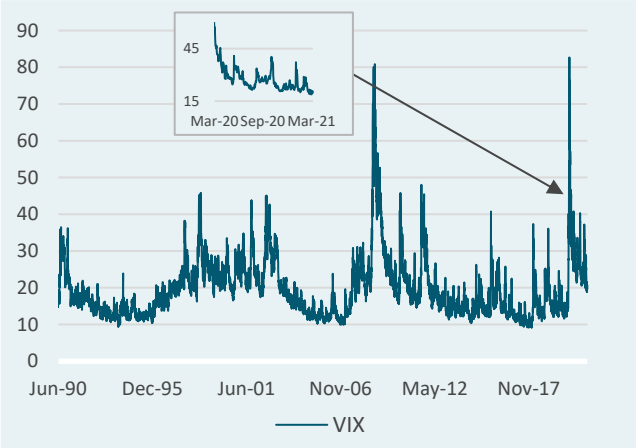
Equity volatility

The Cboe VIX Index has slowly been falling back towards the longer-term average of 19. The index fluctuated in the low 20s during Q1, falling below 19 briefly in late March.

One-year trailing realized volatility began to fade alongside implied volatility in the first quarter of the year, as the tumultuous markets of Q1 2020 fell out of the lookback period. Central bank accommodation has translated to easy global financial conditions, though policy normalization and liquidity tightening in China has likely contributed to recent weakness in Chinese equity markets.

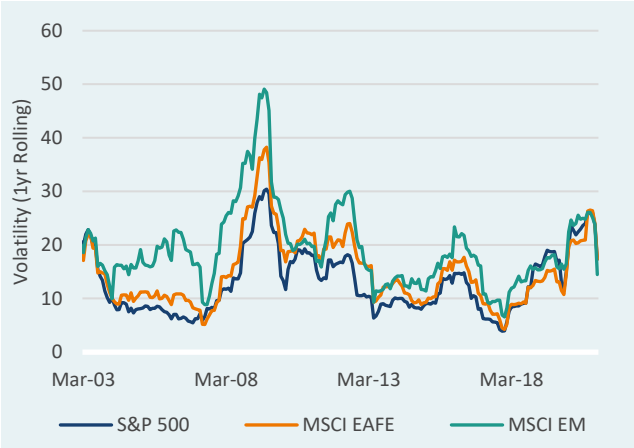
Since seeing recoveries during Q3 and Q4 of last year, respectively, U.S. and international equities have headed higher with relatively low volatility. Idiosyncratic political developments across the emerging markets universe, surprise central bank rate hikes, and the high concentration of tech in Asian EM countries in a period of rising rates, all contributed to a more volatile quarter for the emerging markets complex.

U.S. IMPLIED VOLATILITY (VIX)



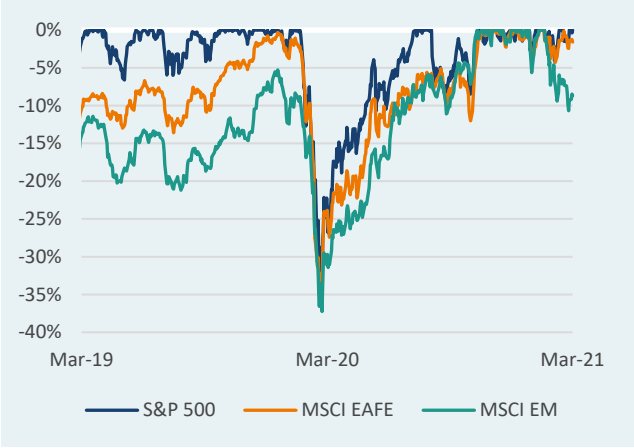
Source: Cboe, as of 3/31/21

REALIZED VOLATILITY



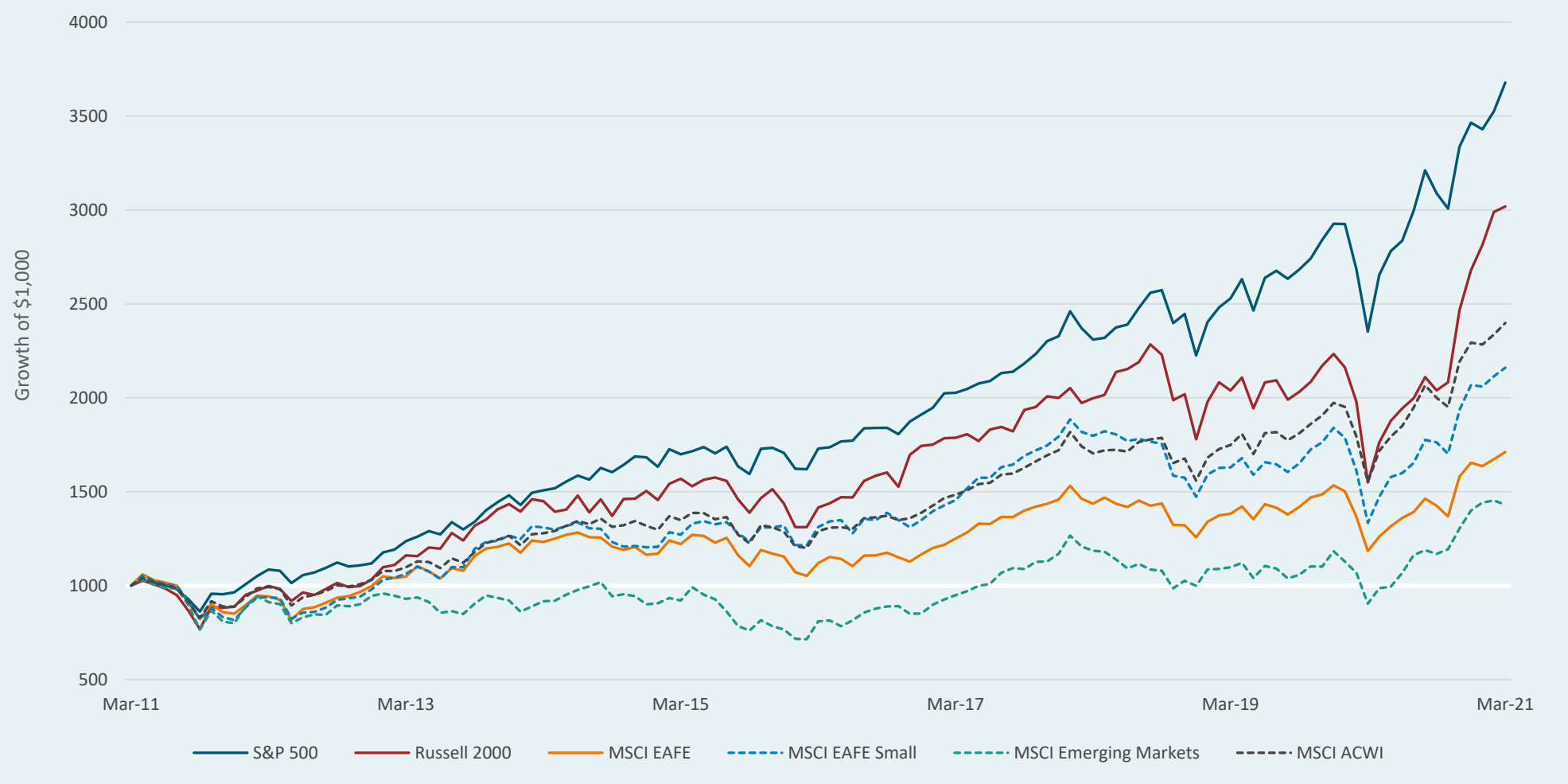
Source: Standard & Poor's, MSCI, as of 3/31/21

MAX DRAWDOWNS FROM PRIOR PEAKS



Source: Standard & Poor's, MSCI, Bloomberg, as of 3/31/21

Long-term equity performance



Source: Morningstar, as of 3/31/21

Other assets

Currency

U.S. dollar weakness had prevailed for most of 2020, but turned around in the first quarter of 2021. The Bloomberg Dollar Spot Index increased 2.8% over the quarter, after slipping -5.4% in 2020. Strength in the dollar was attributed to rising relative yields in the U.S., the relatively effective vaccination campaign, and speculation that a series of fiscal support packages might fuel supernormal growth over the next few years.

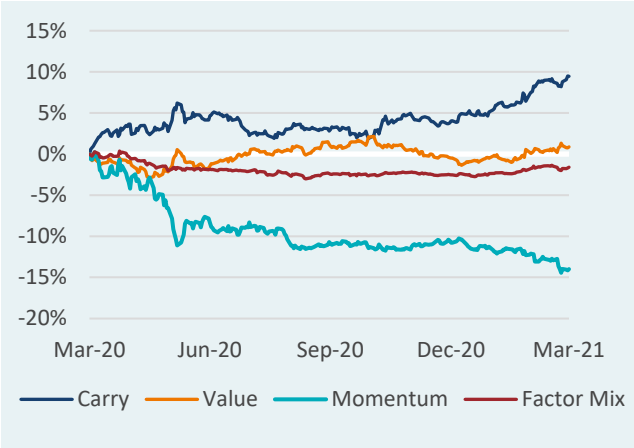
Currency beta returns, or the returns of a long-short portfolio of G10 currencies constructed by investing in three equally-weighted factors (carry, value, momentum), remained negative over the trailing year. Rotations back into the U.S. dollar and out of the euro and yen supported performance for the carry factor while detracting from the performance of the currency momentum factor.

International developed currencies fared poorly, pressured by risk-on sentiment, a lackluster European vaccination effort, and concerns expressed by the European Central Bank about rising global interest rates. The embedded currency portfolio of the MSCI EAFE Index returned -4.1%, as the yen (-6.7%) and euro (-4.0%) weakened relative to the U.S. dollar. Emerging market currencies (-3.1%) softened, driven by declines in the Brazilian real (-7.8%) and Turkish lira (-9.9%).

BLOOMBERG DOLLAR SPOT INDEX

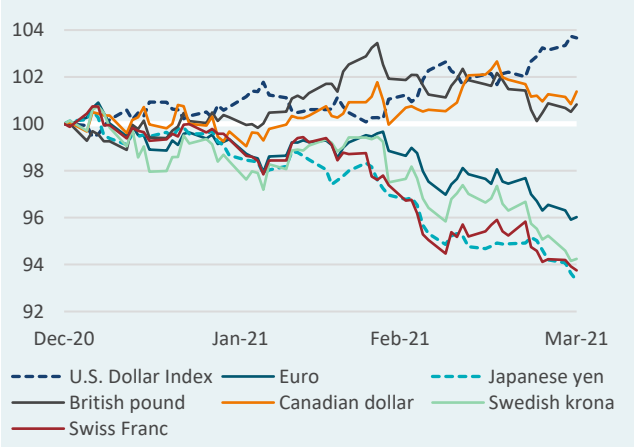
Source: Bloomberg, as of 3/31/21

CURRENCY BETA (ONE-YEAR RETURNS)



Source: MSCI, Bloomberg, as of 3/31/21

U.S. DOLLAR INDEX CONSTITUENTS



Source: Bloomberg, as of 3/31/21

Appendix

Periodic table of returns

BEST ↑ ↓ WORST

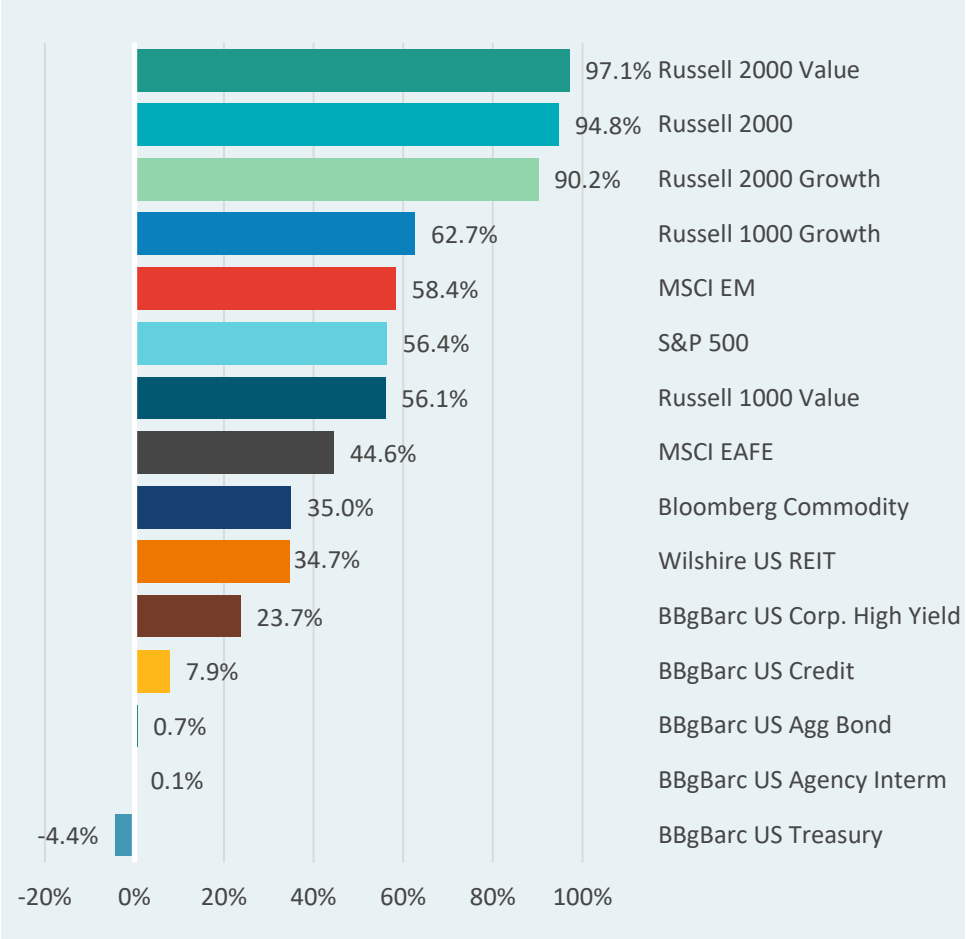
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	5-Year	10-Year
Small Cap Value	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	21.2	21.0	16.6
Small Cap Equity	43.1	22.8	8.4	10.3	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	34.6	12.7	18.6	14.0
Large Cap Value	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	21.0	11.3	16.7	13.0
Commodities	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	20.0	6.9	16.4	11.7
Large Cap Equity	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	18.3	5.9	13.6	11.0
Small Cap Growth	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	14.0	4.9	12.1	10.1
International Equity	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	10.3	3.5	11.7	8.6
Emerging Markets Equity	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	7.8	2.3	9.2	6.6
Hedge Funds of Funds	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	7.5	2.0	8.8	5.5
60/40 Global Portfolio	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	4.6	1.0	5.6	3.7
Large Cap Growth	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	2.8	0.9	5.4	3.4
Cash	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	0.5	0.0	3.1	3.4
Real Estate	-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	0.5	0.0	2.3	0.6
US Bonds	-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	-3.1	-3.4	1.1	-6.3

- 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

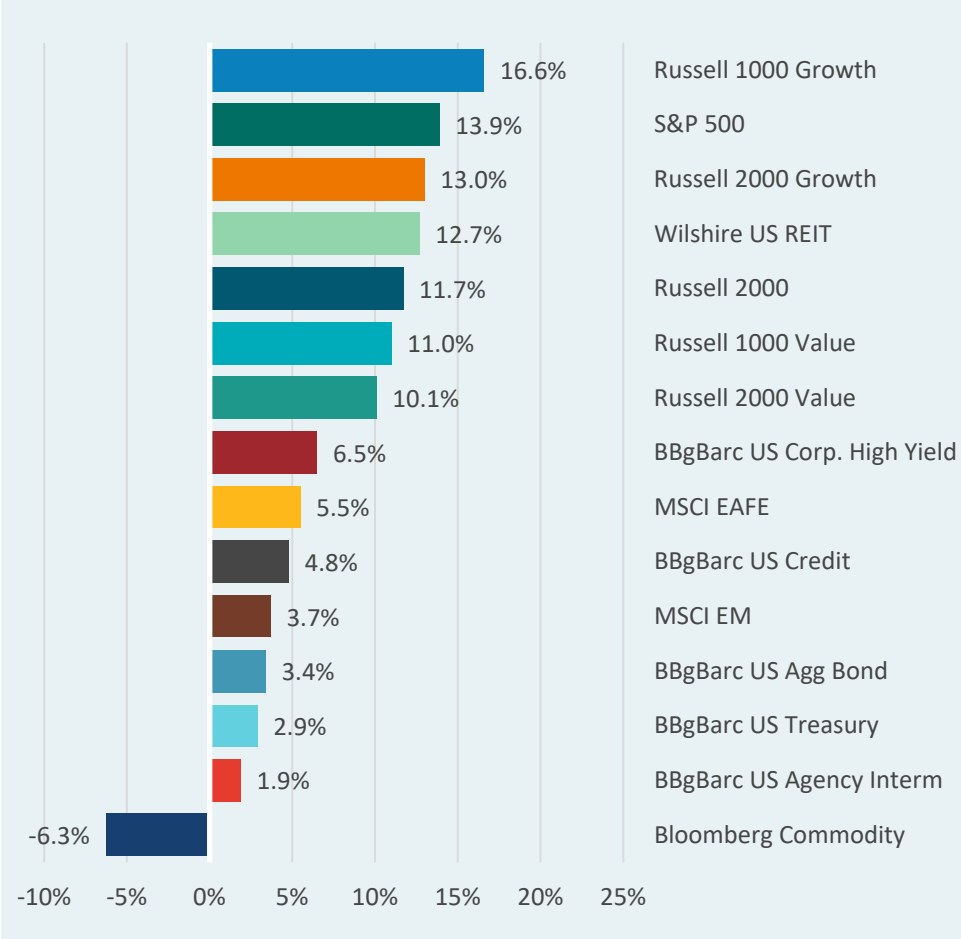
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/20.

Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH



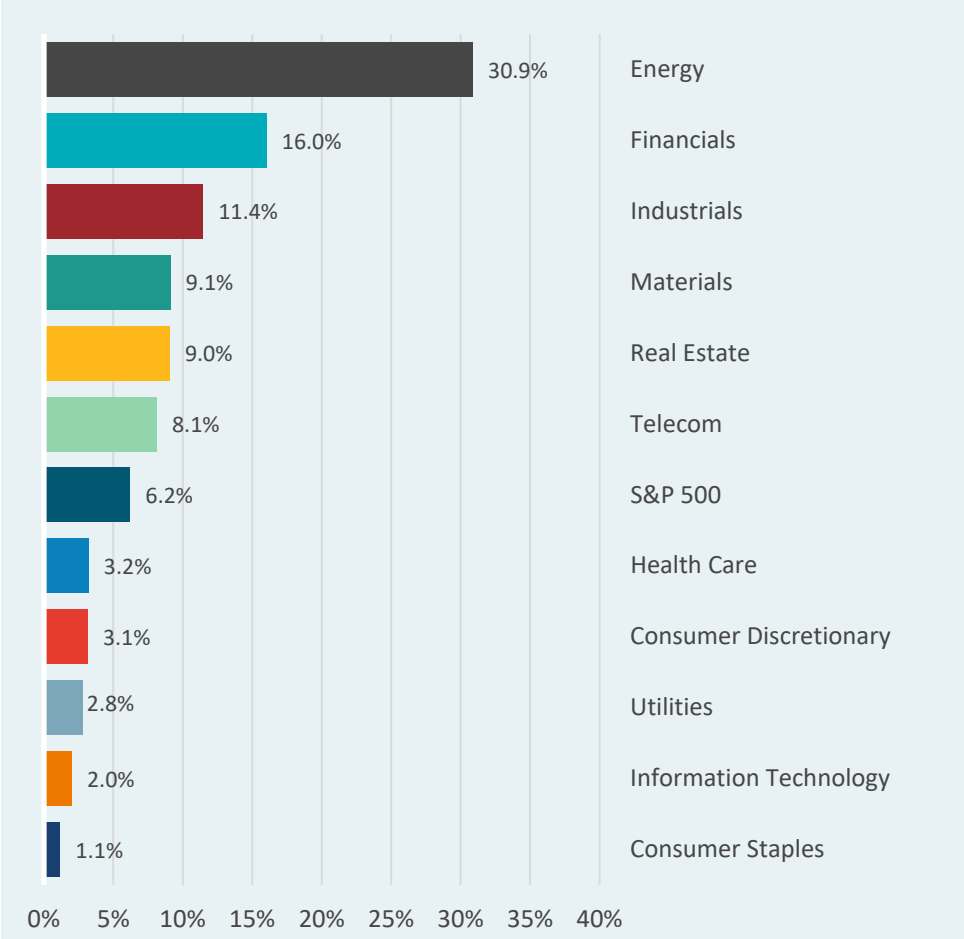
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 3/31/21

Source: Morningstar, as of 3/31/21

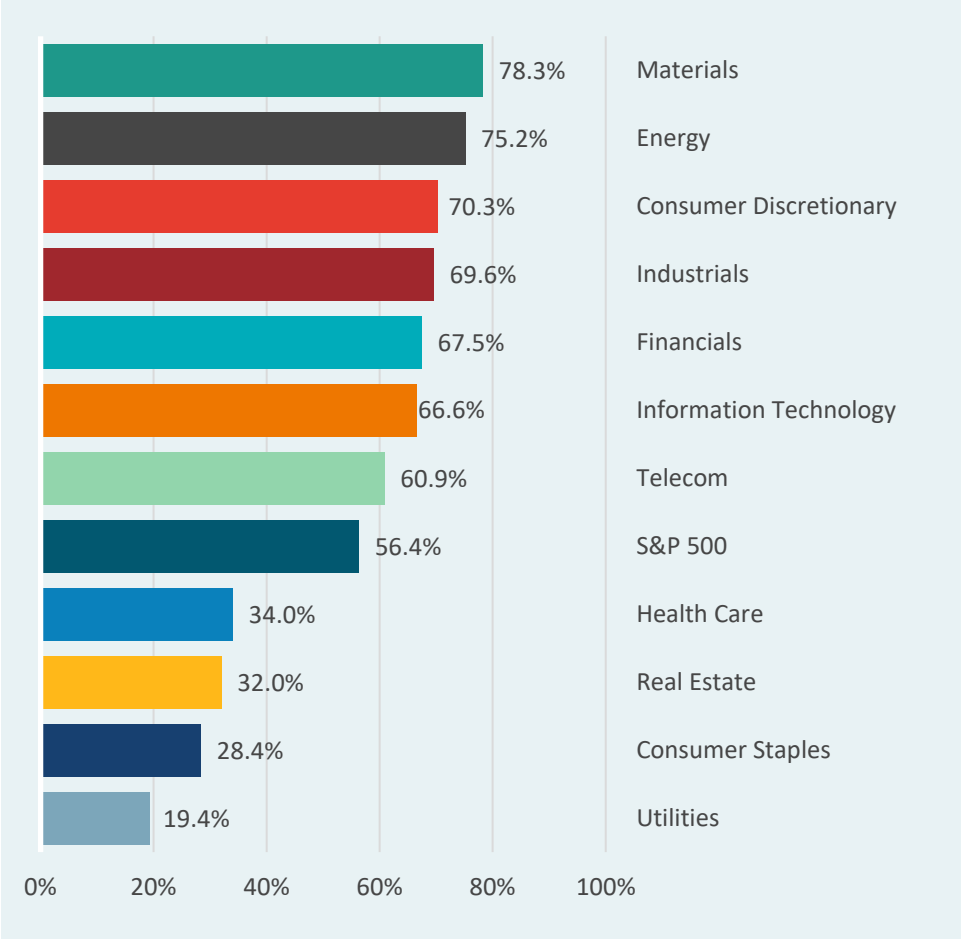
S&P 500 sector returns

Q1 2021



Source: Morningstar, as of 3/31/21

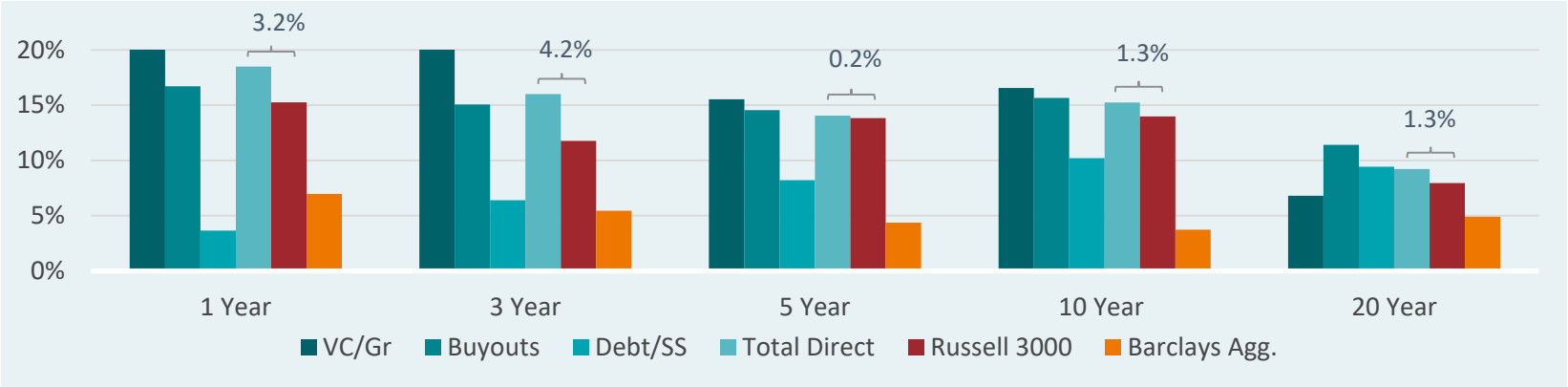
ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/21

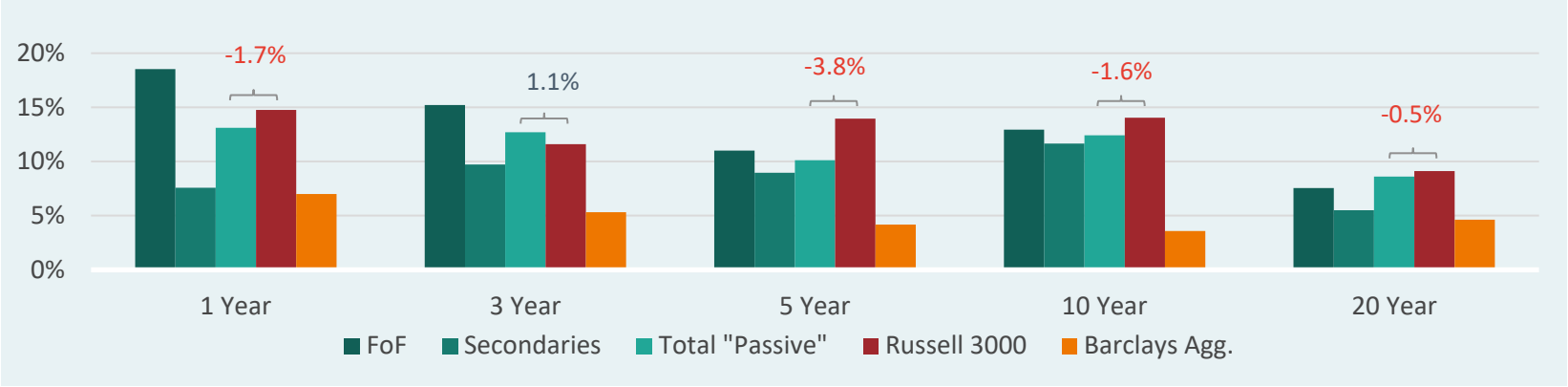
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

"PASSIVE" STRATEGIES

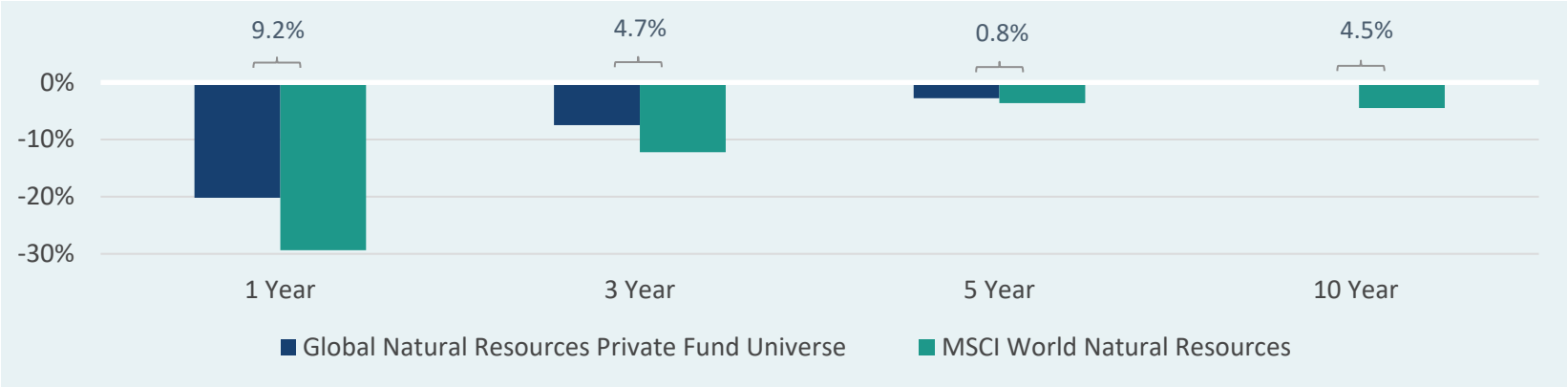


"Passive" strategies underperformed comparable public equities across all time periods, aside from the 3-year basis.

Sources: Refinitiv Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of September 30, 2020. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

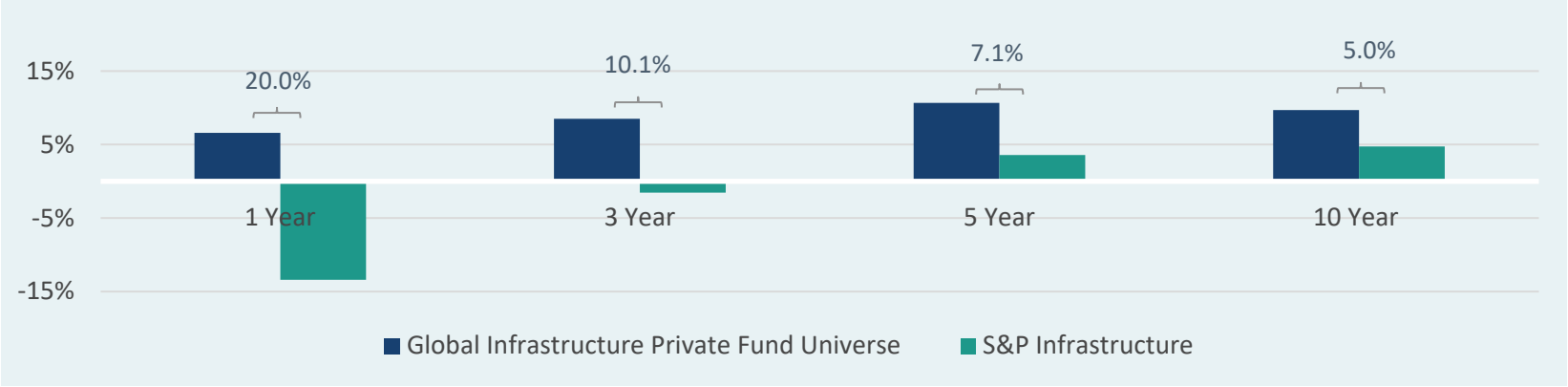
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

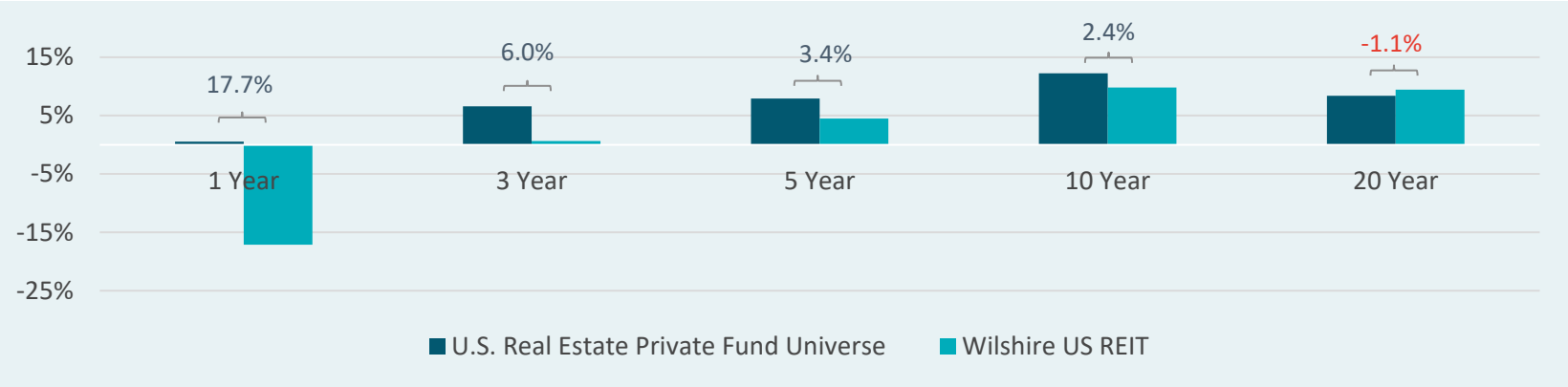


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Refinitiv 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, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

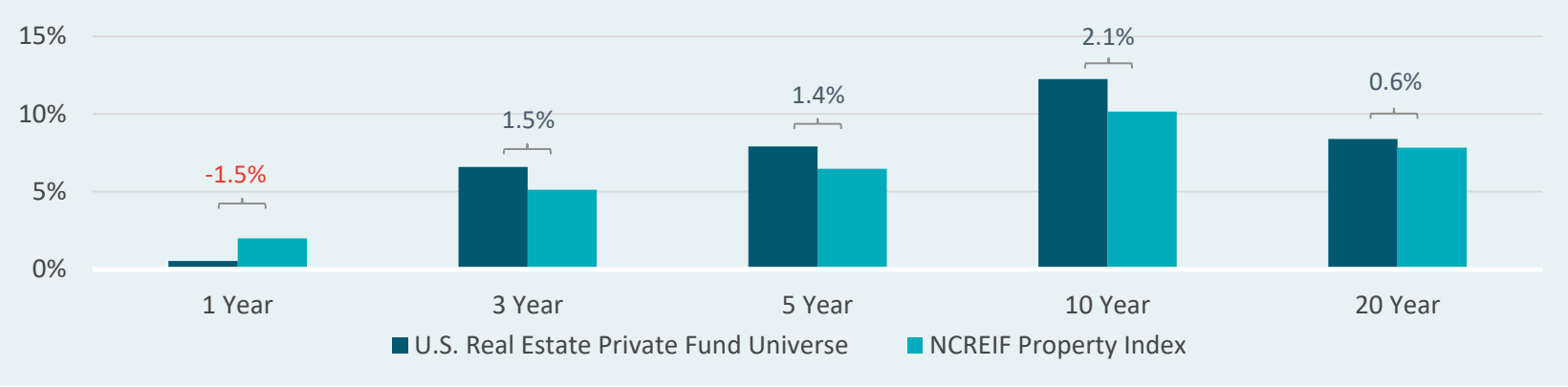
Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index across all time periods, aside on a 20-year basis.

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



U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods, aside on a 1-year basis.

Sources: Refinitiv C|A PME: Global and U.S. Real Estate universes as of September 30, 2020. 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	4.4	6.2	6.2	56.4	16.8	16.3	13.9
S&P 500 Equal Weighted	6.0	11.5	11.5	71.6	14.9	14.7	13.1
DJ Industrial Average	6.8	8.3	8.3	53.8	13.6	16.0	13.1
Russell Top 200	4.2	5.1	5.1	56.3	18.3	17.4	14.6
Russell 1000	3.8	5.9	5.9	60.6	17.3	16.7	14.0
Russell 2000	1.0	12.7	12.7	94.8	14.8	16.4	11.7
Russell 3000	3.6	6.3	6.3	62.5	17.1	16.6	13.8
Russell Mid Cap	2.7	8.1	8.1	73.6	14.7	14.7	12.5
Style Index							
Russell 1000 Growth	1.7	0.9	0.9	62.7	22.8	21.0	16.6
Russell 1000 Value	5.9	11.3	11.3	56.1	11.0	11.7	11.0
Russell 2000 Growth	(3.1)	4.9	4.9	90.2	17.2	18.6	13.0
Russell 2000 Value	5.2	21.2	21.2	97.1	11.6	13.6	10.1

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	2.7	4.6	4.6	54.6	12.1	13.2	9.1
MSCI ACWI ex US	1.3	3.5	3.5	49.4	6.5	9.8	4.9
MSCI EAFE	2.3	3.5	3.5	44.6	6.0	8.8	5.5
MSCI EM	(1.5)	2.3	2.3	58.4	6.5	12.1	3.7
MSCI EAFE Small Cap	2.2	4.5	4.5	62.0	6.3	10.5	8.0
Style Index							
MSCI EAFE Growth	1.2	(0.6)	(0.6)	42.6	9.8	10.8	7.2
MSCI EAFE Value	3.4	7.4	7.4	45.7	1.8	6.6	3.7
Regional Index							
MSCI UK	2.8	6.2	6.2	33.5	0.9	4.3	3.3
MSCI Japan	1.1	1.6	1.6	39.7	6.3	10.5	7.2
MSCI Europe	3.1	4.1	4.1	44.9	5.6	8.2	5.1
MSCI EM Asia	(3.0)	2.2	2.2	60.1	9.5	14.5	6.6
MSCI EM Latin American	4.6	(5.3)	(5.3)	50.1	(6.1)	4.0	(4.1)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	(0.2)	(1.5)	(1.5)	7.5	5.7	3.9	3.4
BBgBarc US Treasury Bills	0.0	0.0	0.0	0.1	1.5	1.2	0.7
BBgBarc US Agg Bond	(1.2)	(3.4)	(3.4)	0.7	4.7	3.1	3.4
BBgBarc US Universal	(1.2)	(3.1)	(3.1)	3.0	4.9	3.6	3.8
Duration							
BBgBarc US Treasury 1-3 Yr	(0.0)	(0.1)	(0.1)	0.3	2.8	1.7	1.3
BBgBarc US Treasury Long	(5.0)	(13.5)	(13.5)	(15.8)	5.9	3.1	6.3
BBgBarc US Treasury	(1.5)	(4.3)	(4.3)	(4.4)	4.1	2.2	2.9
Issuer							
BBgBarc US MBS	(0.5)	(1.1)	(1.1)	(0.1)	3.7	2.4	2.8
BBgBarc US Corp. High Yield	0.1	0.9	0.9	23.7	6.8	8.1	6.5
BBgBarc US Agency Interm	(0.4)	(1.0)	(1.0)	0.1	3.2	2.0	1.9
BBgBarc US Credit	(1.6)	(4.5)	(4.5)	7.9	5.9	4.7	4.8

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(2.1)	6.9	6.9	35.0	(0.2)	2.3	(6.3)
Wilshire US REIT	4.8	8.8	8.8	34.7	9.0	5.7	12.7
CS Leveraged Loans	0.1	2.0	2.0	20.8	4.1	4.6	5.0
Alerian MLP	6.9	22.0	22.0	99.1	(4.0)	(2.1)	(0.7)
Regional Index							
JPM EMBI Global Div	(1.0)	(4.5)	(4.5)	16.0	4.0	5.1	5.6
JPM GBI-EM Global Div	(3.1)	(6.7)	(6.7)	13.0	(0.8)	3.1	0.5
Hedge Funds							
HFRI Composite	1.0	6.1	6.1	34.0	7.7	7.5	4.6
HFRI FOF Composite	0.4	2.0	2.0	23.9	5.4	5.6	3.4
Currency (Spot)							
Euro	(3.2)	(3.9)	(3.9)	7.1	(1.5)	0.6	(1.9)
Pound Sterling	(1.3)	0.9	0.9	11.3	(0.6)	(0.8)	(1.5)
Yen	(3.6)	(6.6)	(6.6)	(2.3)	(1.3)	0.3	(2.8)

Source: Morningstar, HFRI, as of 3/31/21

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 induces 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 "(Good-Poor + 100)/2" to the present and future sales series and "(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

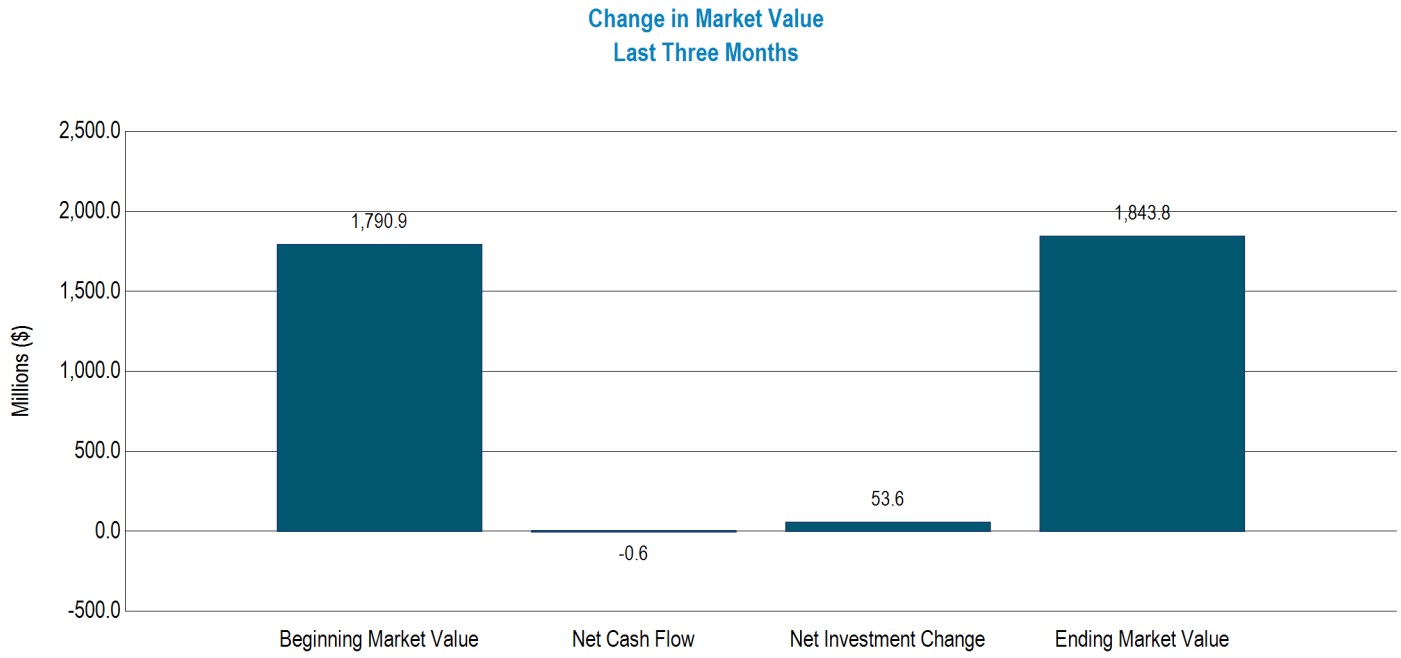
Period Ending: March 31, 2021

Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

	Fiscal Year-To-Date
Beginning Market Value	$1,591,855,813
Net Cash Flow	-$20,872,918
Net Investment Change	$272,829,465
Ending Market Value	$1,843,812,359



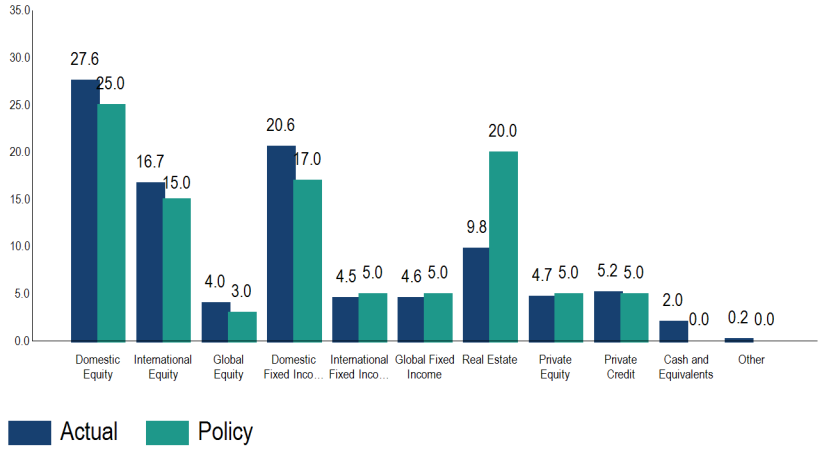
Contributions and withdrawals may include intra-account transfers between managers/funds.

Total Fund
Executive Summary (Net of Fees)

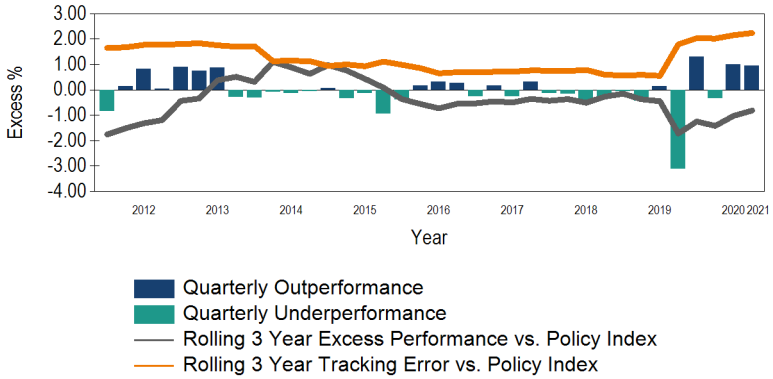
Period Ending: March 31, 2021

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Fund	**2.9**	**17.1**	**28.0**	**7.9**	**8.8**	**6.8**	**5.5**	**6.2**
Policy Index	*1.9*	*15.4*	*24.6*	*8.7*	*9.2*	*7.1*	*6.4*	*6.9*
InvMetrics Public DB Net Rank	*62*	*86*	*93*	*93*	*90*	*93*	*96*	*72*
Total Domestic Equity	**7.9**	**34.0**	**63.8**	**16.0**	**16.3**	**13.5**	**9.8**	**9.2**
Russell 3000	*6.3*	*33.2*	*62.5*	*17.1*	*16.6*	*13.8*	*10.1*	*8.9*
InvMetrics Public DB US Eq Net Rank	*35*	*58*	*41*	*45*	*32*	*14*	*31*	*27*
Total International Equity	**4.7**	**30.9**	**53.4**	**7.8**	**10.8**	**5.2**	**3.6**	**5.6**
MSCI ACWI ex USA Gross	*3.6*	*29.0*	*50.0*	*7.0*	*10.3*	*5.4*	*5.0*	*6.6*
InvMetrics Public DB ex-US Eq Net Rank	*16*	*42*	*68*	*21*	*25*	*76*	*91*	*75*
Total Global Equity	**7.2**	**38.4**	**63.3**	**10.2**	**12.9**	**--**	**--**	**--**
MSCI ACWI Gross	*4.7*	*30.1*	*55.3*	*12.7*	*13.8*	*--*	*--*	*--*
InvMetrics Public DB Glbl Eq Net Rank	*15*	*7*	*7*	*48*	*22*	*--*	*--*	*--*
Total Fixed Income	**-3.4**	**0.6**	**6.3**	**3.3**	**3.1**	**3.5**	**4.4**	**4.6**
BBgBarc US Aggregate TR	*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*4.3*	*4.5*
InvMetrics Public DB US Fix Inc Net Rank	*92*	*33*	*27*	*99*	*52*	*55*	*35*	*42*

Actual vs Target Allocation (%)



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



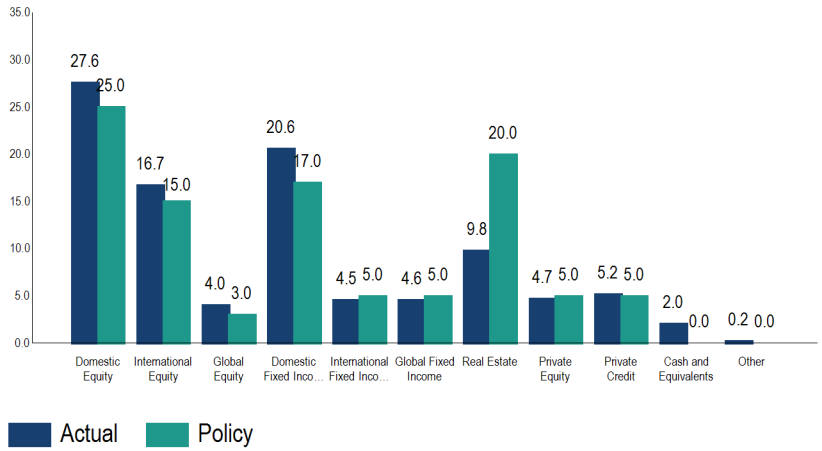
New Policy Index as of 10/1/2020: 25% Russell 3000, 15% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns.

Total Fund
Executive Summary (Net of Fees)

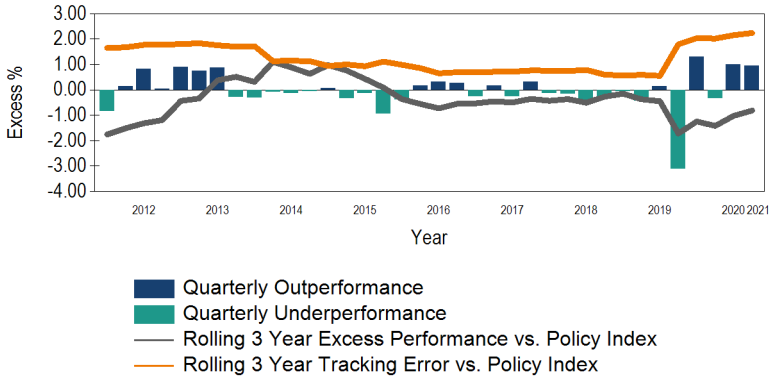
Period Ending: March 31, 2021

	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Total Domestic Fixed Income	**-2.9**	**0.1**	**5.1**	**4.9**	**3.8**	**3.9**	**--**	**--**
BBgBarc US Aggregate TR	*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	--	--
Total Global Fixed Income	**-2.9**	**-2.7**	**-2.3**	**-2.5**	**0.4**	**--**	**--**	**--**
JPM GBI Global TR USD	*-5.7*	*-1.1*	*0.4*	*2.2*	*2.1*	--	--	--
Total Emerging Markets Fixed Income	**-6.1**	**5.8**	**21.8**	**--**	**--**	**--**	**--**	**--**
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	*-5.6*	*3.1*	*14.5*	--	--	--	--	--
Total Real Estate	**0.8**	**0.2**	**1.1**	**4.8**	**5.4**	**8.3**	**5.0**	**7.1**
NCREIF-ODCE	*2.1*	*3.9*	*2.3*	*4.9*	*6.2*	*9.7*	*6.3*	*7.5*
NCREIF Property Index	*1.7*	*3.7*	*2.6*	*4.9*	*5.8*	*8.8*	*7.0*	*8.2*
Total Private Equity	**3.0**	**15.9**	**10.7**	**15.0**	**12.7**	**13.3**	**--**	**--**
Private Equity Benchmark	*3.0*	*15.9*	*10.7*	*15.0*	*12.7*	*12.3*	--	--
Total Private Credit	**5.1**	**23.4**	**8.8**	**9.8**	**--**	**--**	**--**	**--**
Private Credit Benchmark	*5.1*	*23.4*	*8.8*	*9.8*	--	--	--	--
Total Opportunistic	**13.6**	**17.0**	**8.4**	**7.6**	**7.8**	**12.0**	**--**	**--**

Actual vs Target Allocation (%)

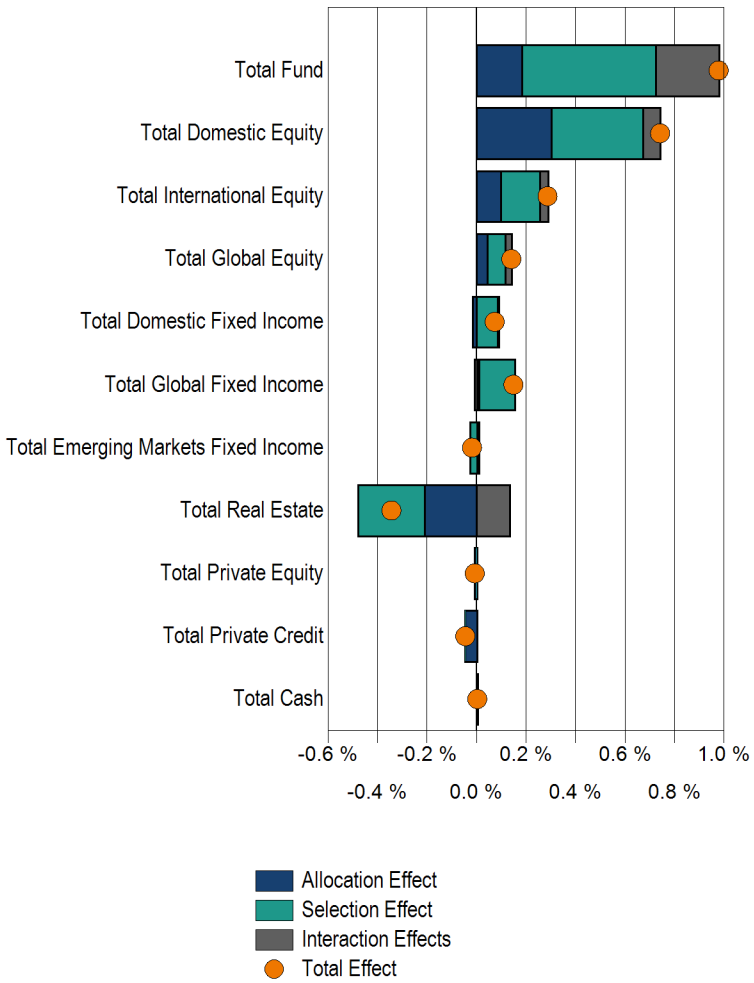


Rolling Annualized Excess Performance and Tracking Error Total Fund vs. Policy Index



New Policy Index as of 10/1/2020: 25% Russell 3000, 15% 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.

Attribution Effects
3 Months Ending March 31, 2021



Performance Attribution

	Last 3 Mo.
Wtd. Actual Return	2.9%
Wtd. Index Return *	1.9%
Excess Return	**1.0%**
Selection Effect	0.5%
Allocation Effect	0.2%
Interaction Effect	0.3%

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

Attribution Summary
3 Months Ending March 31, 2021

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	7.9%	6.3%	1.5%	0.4%	0.3%	0.1%	0.7%
Total International Equity	4.7%	3.6%	1.1%	0.2%	0.1%	0.0%	0.3%
Total Global Equity	7.2%	4.7%	2.5%	0.1%	0.0%	0.0%	0.1%
Total Domestic Fixed Income	-2.9%	-3.4%	0.5%	0.1%	0.0%	0.0%	0.1%
Total Global Fixed Income	-2.9%	-5.7%	2.8%	0.1%	0.0%	0.0%	0.1%
Total Emerging Markets Fixed Income	-6.1%	-5.6%	-0.5%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	0.8%	2.1%	-1.3%	-0.3%	-0.2%	0.1%	-0.3%
Total Private Equity	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Private Credit	5.1%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Cash	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**2.9%**	**1.9%**	**1.0%**	**0.5%**	**0.2%**	**0.3%**	**1.0%**

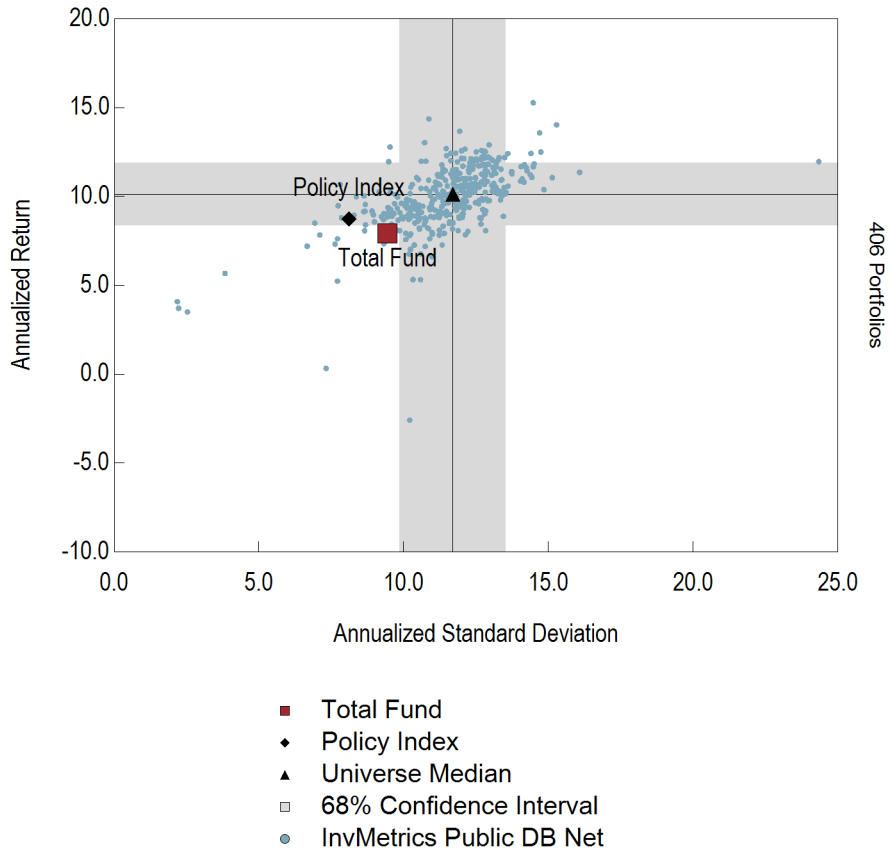
Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

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

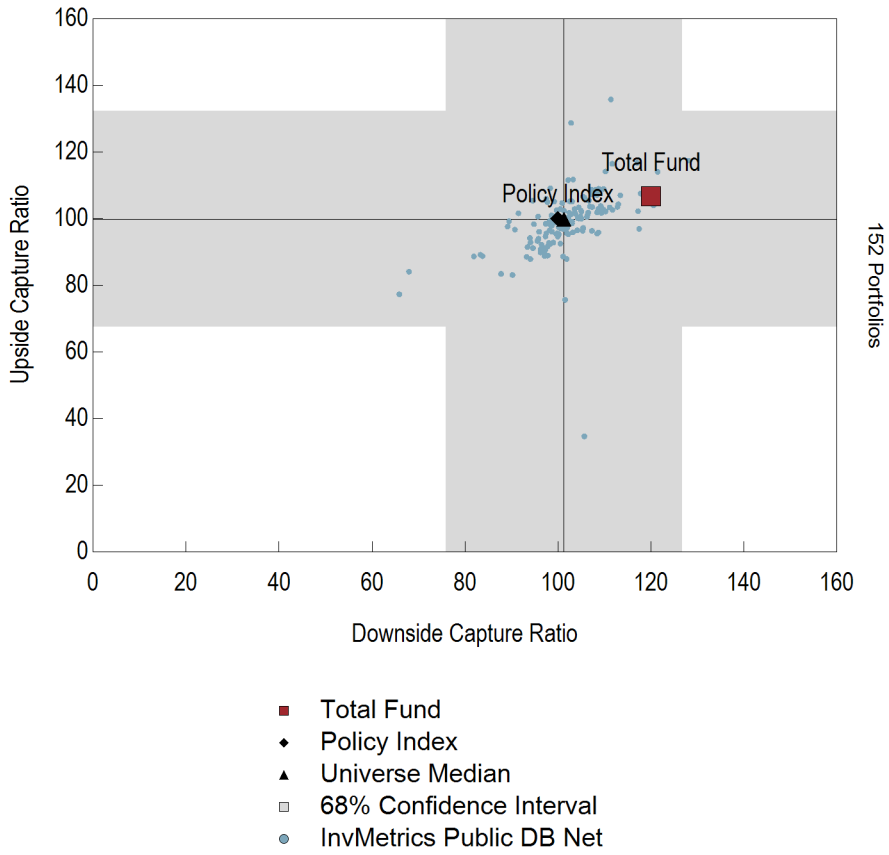
Period Ending: March 31, 2021

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	7.90%	9.44%	-2.13%	1.15	1.88%	0.98	0.68	-0.43	106.67%	120.01%

Risk vs. Return

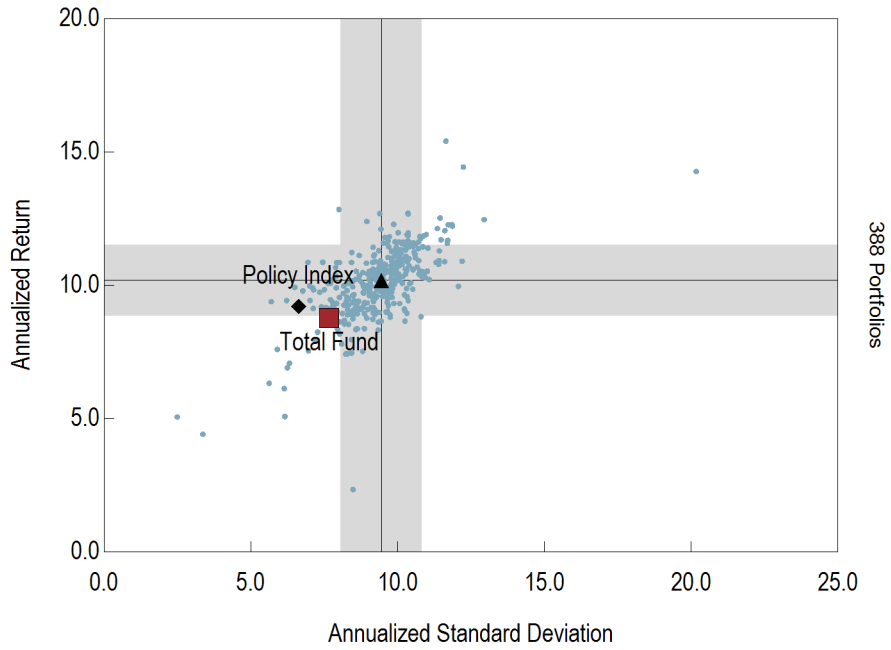


Up Markets vs. Down Markets



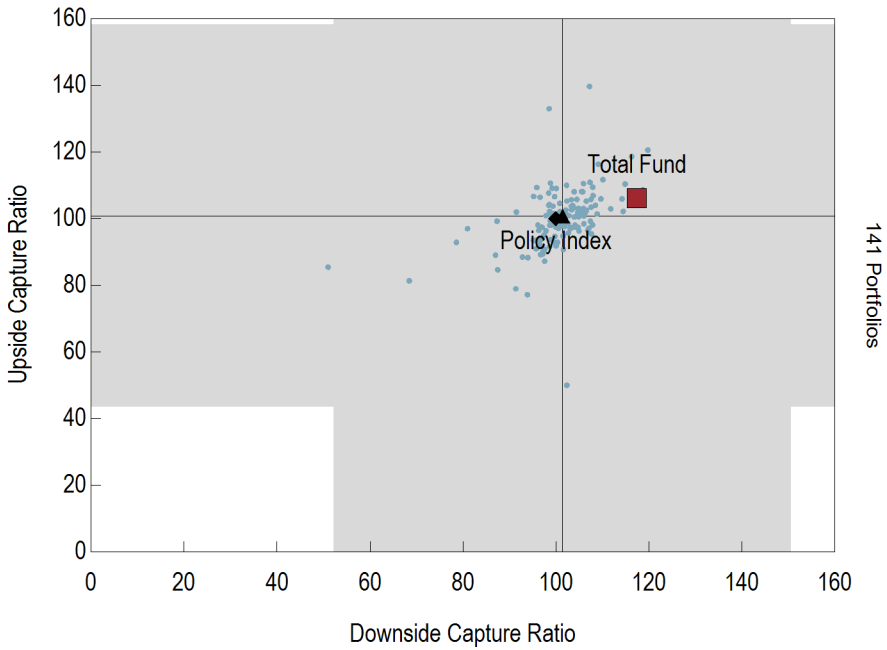
	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	8.78%	7.66%	-1.71%	1.14	1.52%	0.98	1.00	-0.27	106.15%	117.36%

Risk vs. Return



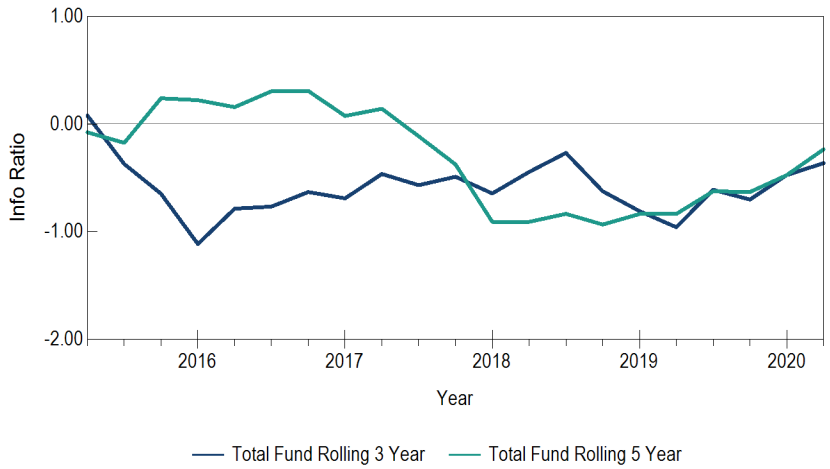
- Total Fund
- Policy Index
- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB Net

Up Markets vs. Down Markets

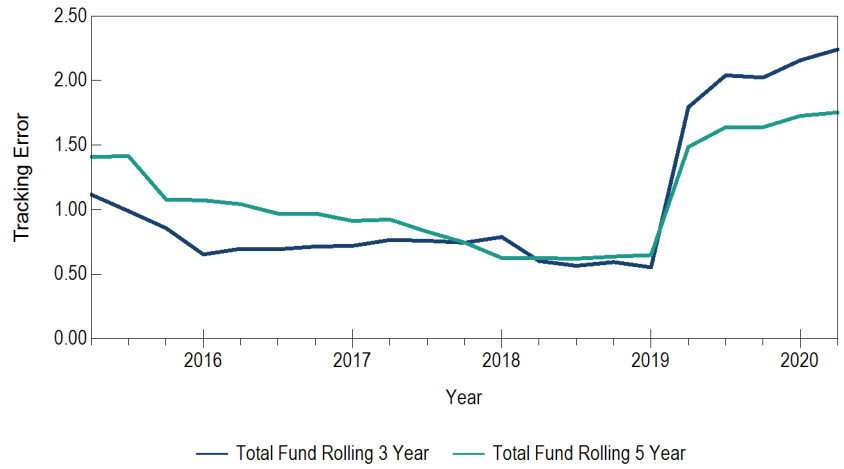


- Total Fund
- Policy Index
- Universe Median
- 68% Confidence Interval
- InvMetrics Public DB Net

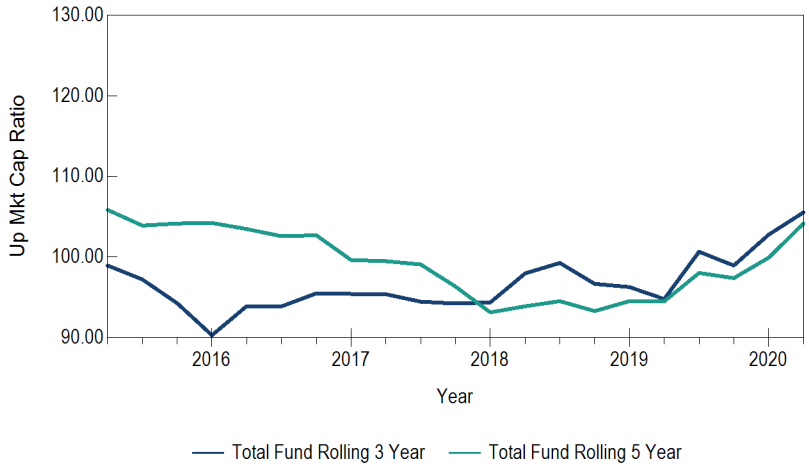
Rolling Information Ratio



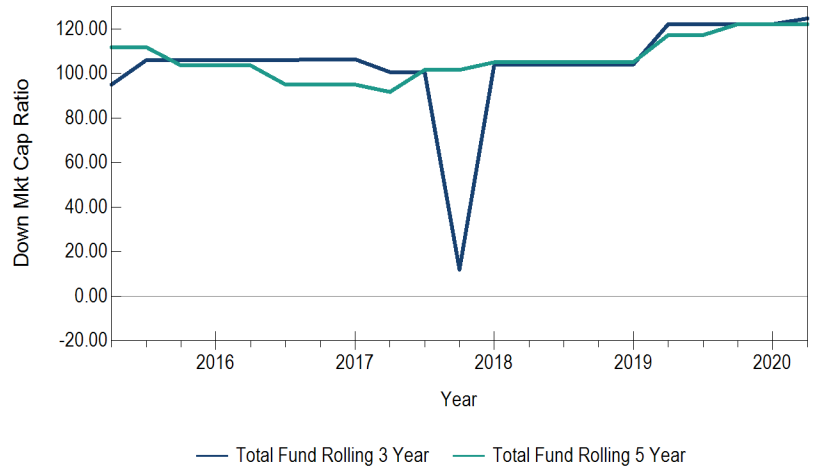
Rolling Tracking Error



Rolling Up Market Capture Ratio (%)



Rolling Down Market Capture Ratio (%)



Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2021

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Fund	**1,843,906,342**	**100.0**	**2.9**	**17.1**	**28.0**	**7.9**	**8.8**	**6.8**	**8.9**	**15.4**	**-2.9**	**13.9**	**7.1**
Policy Index			*1.9*	*15.4*	*24.6*	*8.7*	*9.2*	*7.1*	*10.8*	*16.1*	*-2.4*	*14.0*	*8.0*
InvMetrics Public DB Net Rank			*62*	*86*	*93*	*93*	*90*	*93*	*92*	*94*	*14*	*69*	*59*
Total Domestic Equity	**508,539,092**	**27.6**	**7.9**	**34.0**	**63.8**	**16.0**	**16.3**	**13.5**	**18.2**	**29.8**	**-5.4**	**21.9**	**11.1**
Russell 3000			*6.3*	*33.2*	*62.5*	*17.1*	*16.6*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*
InvMetrics Public DB US Eq Net Rank			*35*	*58*	*41*	*45*	*32*	*14*	*44*	*59*	*34*	*18*	*80*
SSGA S&P 500 Flagship Fund	118,880,882	6.4	6.2	29.7	56.3	16.8	16.3	--	18.3	31.5	-4.4	21.8	12.0
S&P 500			*6.2*	*29.7*	*56.4*	*16.8*	*16.3*	--	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
eV US Large Cap Core Equity Net Rank			*56*	*41*	*42*	*23*	*18*	--	*29*	*29*	*32*	*46*	*20*
QMA Large Cap Core	84,800,668	4.6	9.1	29.5	57.5	14.1	14.6	13.5	12.0	28.6	-6.8	22.1	12.1
S&P 500			*6.2*	*29.7*	*56.4*	*16.8*	*16.3*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
eV US Large Cap Core Equity Net Rank			*16*	*42*	*35*	*59*	*54*	*21*	*66*	*56*	*62*	*43*	*19*
Ivy Large Cap Growth	89,328,809	4.8	1.4	21.8	52.5	21.4	20.4	16.1	30.9	36.6	2.7	29.5	1.6
Russell 1000 Growth			*0.9*	*27.3*	*62.7*	*22.8*	*21.0*	*16.6*	*38.5*	*36.4*	*-1.5*	*30.2*	*7.1*
eV US Large Cap Growth Equity Net Rank			*56*	*88*	*84*	*51*	*42*	*27*	*64*	*25*	*16*	*46*	*70*
Boston Partners Large Cap Value	91,870,323	5.0	15.1	41.9	65.6	10.5	12.7	11.6	2.4	23.8	-9.0	19.6	14.2
Russell 1000 Value			*11.3*	*36.6*	*56.1*	*11.0*	*11.7*	*11.0*	*2.8*	*26.5*	*-8.3*	*13.7*	*17.3*
eV US Large Cap Value Equity Net Rank			*15*	*22*	*29*	*55*	*37*	*35*	*57*	*75*	*51*	*26*	*47*
SSGA Russell Small Cap Completeness Index	43,397,579	2.4	7.3	51.1	97.5	18.2	18.0	--	32.6	27.8	-9.2	18.1	16.5
Russell Small Cap Completeness			*7.3*	*51.2*	*97.6*	*18.3*	*18.1*	--	*32.9*	*28.0*	*-9.2*	*18.3*	*16.6*
eV US Small Cap Core Equity Net Rank			*93*	*53*	*27*	*17*	*15*	--	*12*	*19*	*36*	*21*	*78*
William Blair SMID Cap Growth	39,333,343	2.1	4.2	37.0	73.2	19.1	20.4	15.1	32.6	31.1	-1.7	29.3	7.2
Russell 2500 Growth			*2.5*	*41.1*	*87.5*	*20.0*	*19.9*	*14.2*	*40.5*	*32.7*	*-7.5*	*24.5*	*9.7*
eV US Mid Cap Growth Equity Net Rank			*14*	*22*	*42*	*63*	*29*	*11*	*64*	*78*	*30*	*14*	*28*
Lee Munder Small Value	40,927,488	2.2	16.6	53.6	81.4	10.2	11.0	9.3	3.0	26.3	-15.5	7.7	27.3
Russell 2000 Value			*21.2*	*65.7*	*97.1*	*11.6*	*13.6*	*10.1*	*4.6*	*22.4*	*-12.9*	*7.8*	*31.7*
eV US Small Cap Value Equity Net Rank			*71*	*68*	*75*	*54*	*67*	*73*	*56*	*25*	*56*	*71*	*38*
Total International Equity	**308,595,115**	**16.7**	**4.7**	**30.9**	**53.4**	**7.8**	**10.8**	**5.2**	**13.4**	**22.7**	**-14.5**	**26.5**	**5.9**
MSCI ACWI ex USA Gross			*3.6*	*29.0*	*50.0*	*7.0*	*10.3*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*
InvMetrics Public DB ex-US Eq Net Rank			*16*	*42*	*68*	*21*	*25*	*76*	*41*	*54*	*42*	*77*	*19*

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. Aetos holdback of $93,982 included in total market value.

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2021

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
SSGA MSCI ACWI Ex US Index Fund	114,320,036	6.2	3.5	28.7	49.6	6.7	10.0	5.1	10.9	21.8	-14.0	27.5	4.7
MSCI ACWI ex USA			*3.5*	*28.7*	*49.4*	*6.5*	*9.8*	*4.9*	*10.7*	*21.5*	*-14.2*	*27.2*	*4.5*
eV All EAFE Equity Net Rank			*58*	*50*	*58*	*39*	*37*	*86*	*36*	*54*	*38*	*45*	*15*
PIMCO RAE Fundamental Global Ex US Fund	101,169,450	5.5	10.0	39.3	59.4	3.4	9.1	--	1.7	16.1	-15.1	26.0	13.0
MSCI ACWI ex USA Value			*7.1*	*31.9*	*48.7*	*2.4*	*7.2*	--	*-0.8*	*15.7*	*-14.0*	*22.7*	*8.9*
eV EAFE Value Equity Net Rank			*15*	*27*	*35*	*60*	*31*	--	*61*	*86*	*38*	*38*	*1*
SGA Global Growth	93,105,628	5.0	1.0	25.2	50.4	--	--	--	26.0	30.5	--	--	--
MSCI ACWI ex USA Growth			*-0.1*	*25.4*	*49.4*	--	--	--	*22.2*	*27.3*	--	--	--
eV ACWI ex-US Growth Equity Net Rank			*33*	*74*	*79*	--	--	--	*50*	*42*	--	--	--
Total Global Equity	**74,523,013**	**4.0**	**7.2**	**38.4**	**63.3**	**10.2**	**12.9**	**--**	**14.3**	**24.2**	**-15.9**	**32.6**	**15.1**
MSCI ACWI Gross			*4.7*	*30.1*	*55.3*	*12.7*	*13.8*	--	*16.8*	*27.3*	*-8.9*	*24.6*	*8.5*
InvMetrics Public DB Glbl Eq Net Rank			*15*	*7*	*7*	*48*	*22*	--	*48*	*59*	*95*	*1*	*3*
Skellig Water Fund (aka KBI)	74,523,013	4.0	7.2	38.4	63.3	10.2	12.9	--	14.3	24.2	-15.9	32.6	15.1
MSCI ACWI			*4.6*	*29.7*	*54.6*	*12.1*	*13.2*	--	*16.3*	*26.6*	*-9.4*	*24.0*	*7.9*
eV Global All Cap Equity Net Rank			*29*	*26*	*41*	*69*	*51*	--	*59*	*65*	*91*	*12*	*6*
Total Fixed Income	**548,000,106**	**29.7**	**-3.4**	**0.6**	**6.3**	**3.3**	**3.1**	**3.5**	**4.7**	**8.1**	**0.1**	**3.9**	**5.1**
BBgBarc US Aggregate TR			*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
InvMetrics Public DB US Fix Inc Net Rank			*92*	*33*	*27*	*99*	*52*	*55*	*99*	*49*	*60*	*46*	*36*
Total Domestic Fixed Income	**379,771,051**	**20.6**	**-2.9**	**0.1**	**5.1**	**4.9**	**3.8**	**3.9**	**7.9**	**9.0**	**-0.2**	**4.1**	**4.8**
BBgBarc US Aggregate TR			*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
BlackRock Fixed Income	144,585,716	7.8	-3.4	-1.5	2.8	5.0	3.4	3.7	8.4	8.7	0.1	3.6	2.9
BBgBarc US Aggregate TR			*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV All US Fixed Inc Net Rank			*84*	*89*	*72*	*39*	*54*	*51*	*26*	*44*	*53*	*56*	*54*
Doubleline Core Plus	115,162,646	6.2	-2.2	1.0	6.1	3.9	3.2	--	5.2	8.3	-0.3	3.9	4.6
BBgBarc US Aggregate TR			*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	--	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV US Core Plus Fixed Inc Net Rank			*21*	*46*	*64*	*97*	*97*	--	*98*	*90*	*34*	*87*	*53*
MacKay Shields Core Plus	120,022,689	6.5	-3.0	1.1	6.8	5.5	4.3	--	9.9	9.6	-1.0	4.5	4.7
BBgBarc US Aggregate TR			*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	--	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV US Core Plus Fixed Inc Net Rank			*66*	*42*	*48*	*37*	*44*	--	*22*	*56*	*74*	*62*	*47*
Total Global Fixed Income	**84,424,670**	**4.6**	**-2.9**	**-2.7**	**-2.3**	**-2.5**	**0.4**	**--**	**-5.7**	**0.9**	**1.9**	**2.4**	**6.4**
JPM GBI Global TR USD			*-5.7*	*-1.1*	*0.4*	*2.2*	*2.1*	--	*9.7*	*6.0*	*-0.7*	*6.8*	*1.6*

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. Aetos holdback of $93,982 included in total market value.

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Franklin Templeton Global Bond Plus	84,424,670	4.6	-2.9	-2.7	-2.3	-2.5	0.4	--	-5.7	0.9	1.9	2.4	6.1
JPM GBI Global TR USD			*-5.7*	*-1.1*	*0.4*	*2.2*	*2.1*	*--*	*9.7*	*6.0*	*-0.7*	*6.8*	*1.6*
eV Global Government Fixed Inc Net Rank			*16*	*85*	*90*	*99*	*99*	*--*	*99*	*99*	*11*	*93*	*6*
Total Emerging Markets Fixed Income	**83,804,385**	**4.5**	**-6.1**	**5.8**	**21.8**	**--**	**--**	**--**	**4.6**	**--**	**--**	**--**	**--**
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-5.6*	*3.1*	*14.5*	*--*	*--*	*--*	*4.0*	*--*	*--*	*--*	*--*
PGIM Emerging Markets Debt	83,804,385	4.5	-6.1	5.8	21.8	--	--	--	4.6	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-5.6*	*3.1*	*14.5*	*--*	*--*	*--*	*4.0*	*--*	*--*	*--*	*--*
eV Emg Mkts Fixed Inc - Blended Currency Net Rank			*95*	*39*	*28*	*--*	*--*	*--*	*67*	*--*	*--*	*--*	*--*
Total Real Estate	**180,493,368**	**9.8**	**0.8**	**0.2**	**1.1**	**4.8**	**5.4**	**8.3**	**1.8**	**5.2**	**8.8**	**4.3**	**8.0**
NCREIF-ODCE			*2.1*	*3.9*	*2.3*	*4.9*	*6.2*	*9.7*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index			*1.7*	*3.7*	*2.6*	*4.9*	*5.8*	*8.8*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
RREEF America II	165,436,183	9.0	0.8	0.2	1.1	4.7	5.4	9.2	1.8	5.3	8.6	4.4	8.2
NCREIF-ODCE			*2.1*	*3.9*	*2.3*	*4.9*	*6.2*	*9.7*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index			*1.7*	*3.7*	*2.6*	*4.9*	*5.8*	*8.8*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
American Realty	15,057,185	0.8	0.7	1.0	1.6	--	--	--	1.1	--	--	--	--
NCREIF-ODCE			*2.1*	*3.9*	*2.3*	*--*	*--*	*--*	*1.2*	*--*	*--*	*--*	*--*
NCREIF Property Index			*1.7*	*3.7*	*2.6*	*--*	*--*	*--*	*1.6*	*--*	*--*	*--*	*--*

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. Aetos holdback of $93,982 included in total market value.

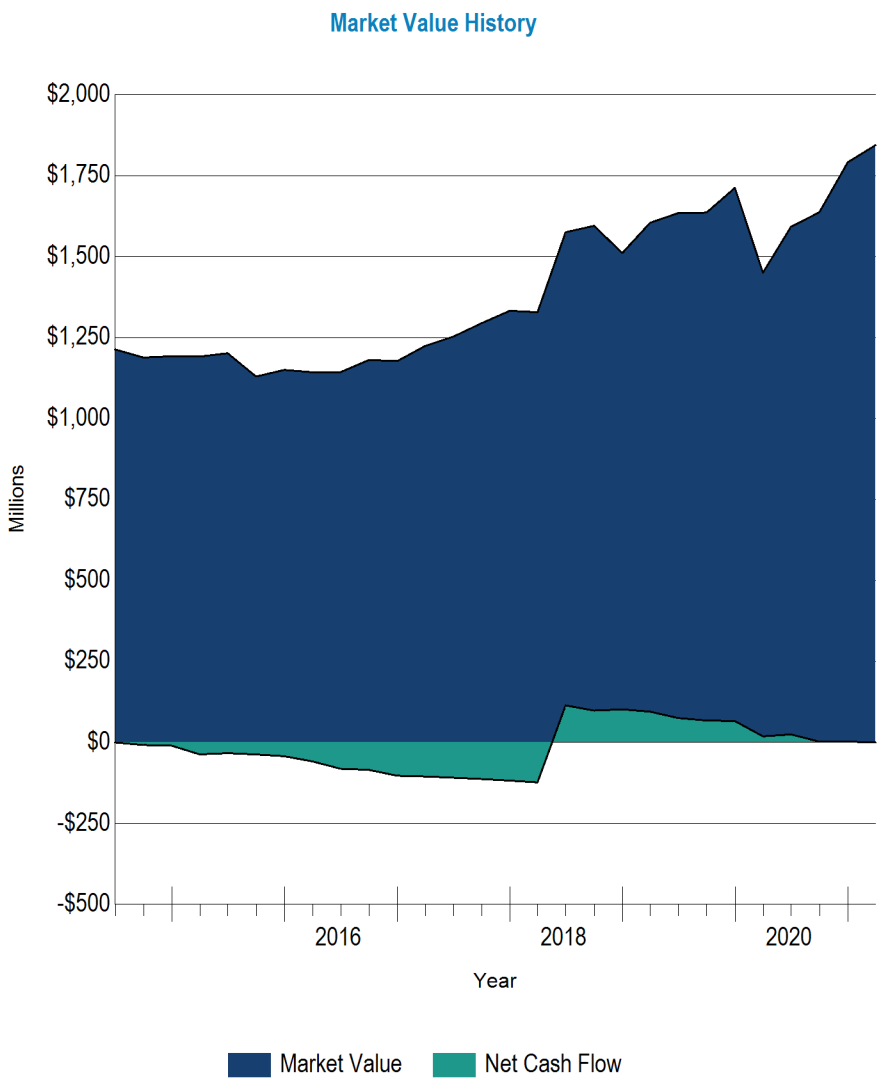
Total Fund
Performance Analysis - 5 Years (Net of Fees)

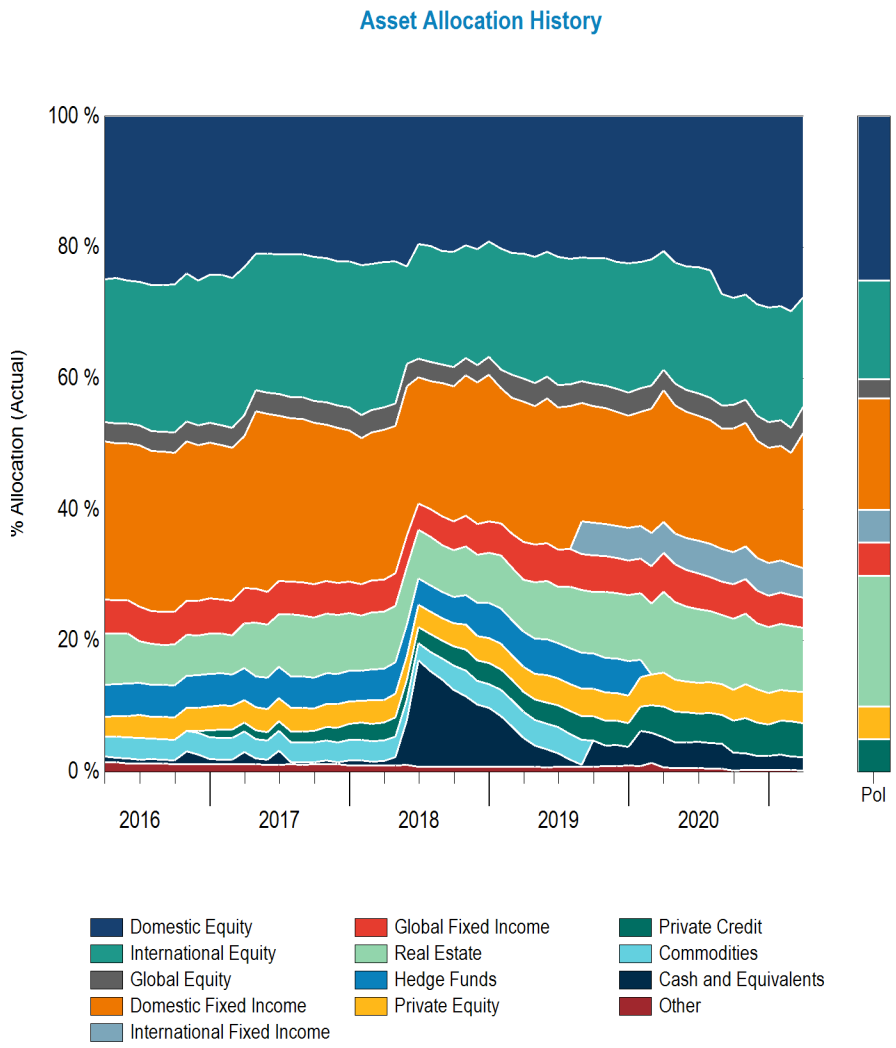
Period Ending: March 31, 2021

	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	16.28%	14.89%	-0.02%	1.00	0.02%	1.00	1.02	-0.43	99.99%	100.04%
QMA Large Cap Core	14.59%	15.85%	-2.61%	1.06	2.22%	0.98	0.85	-0.77	99.78%	108.05%
Ivy Large Cap Growth	20.41%	14.80%	1.13%	0.92	3.16%	0.96	1.30	-0.20	91.82%	95.14%
Boston Partners Large Cap Value	12.71%	17.41%	0.21%	1.07	3.09%	0.97	0.66	0.32	108.12%	101.27%
SSGA Russell Small Cap Completeness Index	18.01%	20.14%	-0.11%	1.00	0.09%	1.00	0.84	-1.53	99.47%	100.11%
William Blair SMID Cap Growth	20.43%	17.41%	3.15%	0.87	4.72%	0.95	1.11	0.11	84.41%	85.65%
Lee Munder Small Value	10.97%	21.19%	-1.68%	0.93	4.37%	0.96	0.46	-0.59	78.45%	95.75%
SSGA MSCI ACWI Ex US Index Fund	9.99%	14.58%	0.26%	1.00	0.12%	1.00	0.61	1.93	100.86%	99.58%
PIMCO RAE Fundamental Global Ex US Fund	9.09%	17.29%	1.64%	1.03	2.78%	0.97	0.46	0.66	108.87%	98.28%
Skellig Water Fund (aka KBI)	12.94%	16.45%	-1.13%	1.07	5.81%	0.88	0.72	-0.05	105.97%	105.93%
BlackRock Fixed Income	3.36%	3.42%	0.24%	1.01	0.73%	0.95	0.65	0.36	106.05%	101.81%
Doubleline Core Plus	3.23%	3.94%	0.48%	0.89	2.66%	0.55	0.53	0.05	102.89%	100.89%
MacKay Shields Core Plus	4.25%	3.85%	1.05%	1.03	1.76%	0.79	0.81	0.65	122.71%	100.91%
Franklin Templeton Global Bond Plus	0.37%	5.78%	0.84%	-0.23	8.55%	0.04	-0.13	-0.20	-14.03%	-36.61%
RREEF America II	5.39%	2.69%	5.45%	-0.01	4.07%	0.00	1.58	-0.20	16.94%	--

Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 3/31/2021 [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
			IRR Analysis as of IRR date									
Private Equity												
2004	Pantheon USA Fund VI	$451,311	$15,000,000	$14,175,000	95%	$825,000	$21,515,924	$1,111,311	*151.8%*	*155.0%*	*6.8%*	12/31/20
2005	BlackRock Private Capital II[6]	$2,684,500	$15,000,000	$15,000,000	100%	$0	$22,281,661	$2,811,602	*148.5%*	*166.4%*	*7.1%*	09/30/20
2011	Stepstone Secondary Opportunities Fund II	$11,100,931	$27,500,000	$27,500,000	100%	$0	$25,257,895	$11,907,383	*91.8%*	*132.2%*	*11.0%*	09/30/20
2016	Ocean Avenue Fund III	$19,544,055	$20,000,000	$17,400,000	87%	$2,600,000	$8,400,000	$21,344,055	*48.3%*	*160.6%*	*22.6%*	12/31/20
2016	Pathway Private Equity Fund Investors 8	$23,856,659	$20,000,000	$14,273,407	71%	$5,726,593	$2,285,069	$21,748,318	*16.0%*	*183.1%*	*19.8%*	09/30/20
2017	Pathway Private Equity Fund Investors 9	$15,862,235	$20,000,000	$12,572,149	63%	$7,427,851	$936,955	$14,225,607	*7.5%*	*133.6%*	*16.5%*	09/30/20
2019	Ocean Avenue Fund IV	$12,059,527	$20,000,000	$13,031,964	65%	$6,968,036	$1,690,000	$5,691,932	*13.0%*	*105.5%*	*21.5%*	09/30/20
2020	Pathway Private Equity Fund Investors 10[4]	$1,407,294	$10,000,000	$1,592,708	16%	$8,407,292	$277,541	$0	*17.4%*	*105.8%*	*N/A*	N/A
Private Credit												
2016	Sixth Street DCP	$80,835,231	$100,000,000	$72,113,829	72%	$27,886,171	$8,876,817	$73,801,002	*12.3%*	*124.4%*	*8.5%*	09/30/20
Opportunistic												
2010	KKR Mezzanine Partners	$3,583,826	$15,000,000	$13,535,064	90%	$1,464,936	$17,988,819	$3,601,963	*132.9%*	*159.4%*	*6.7%*	12/31/20
2011	PIMCO Bravo	$17,564	$15,000,000	$15,000,000	100%	$0	$27,216,525	$148,451	*181.4%*	*181.6%*	*22.1%*	09/30/19
2020	Sixth Street TAO Contingent	$14,813,294	$50,000,000	$14,040,567	28%	$35,959,433	$2,444,515	$11,568,602	*17.4%*	*122.9%*	*10.2%*	12/31/20
	Total Private Markets	**$186,216,427**	$327,500,000	$230,234,688	70%	$97,265,312	$139,171,720	$167,960,226	*60.4%*	*141.3%*		
	% of Portfolio (Market Value)	***10.1%***										

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions
[4]IRR currently unavailable for these funds.
[5]Net 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.
[6]BlackRock: Total capital called is $15,519,967 which includes recycled distributions.

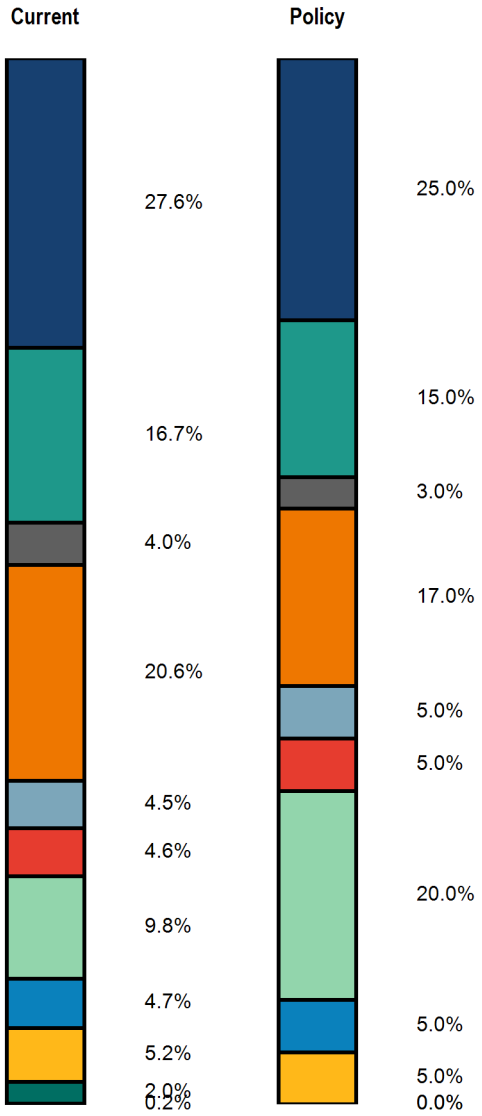




Net Cash flow history prior to 4Q 2010 is not available due to lack of data from previous consultant.

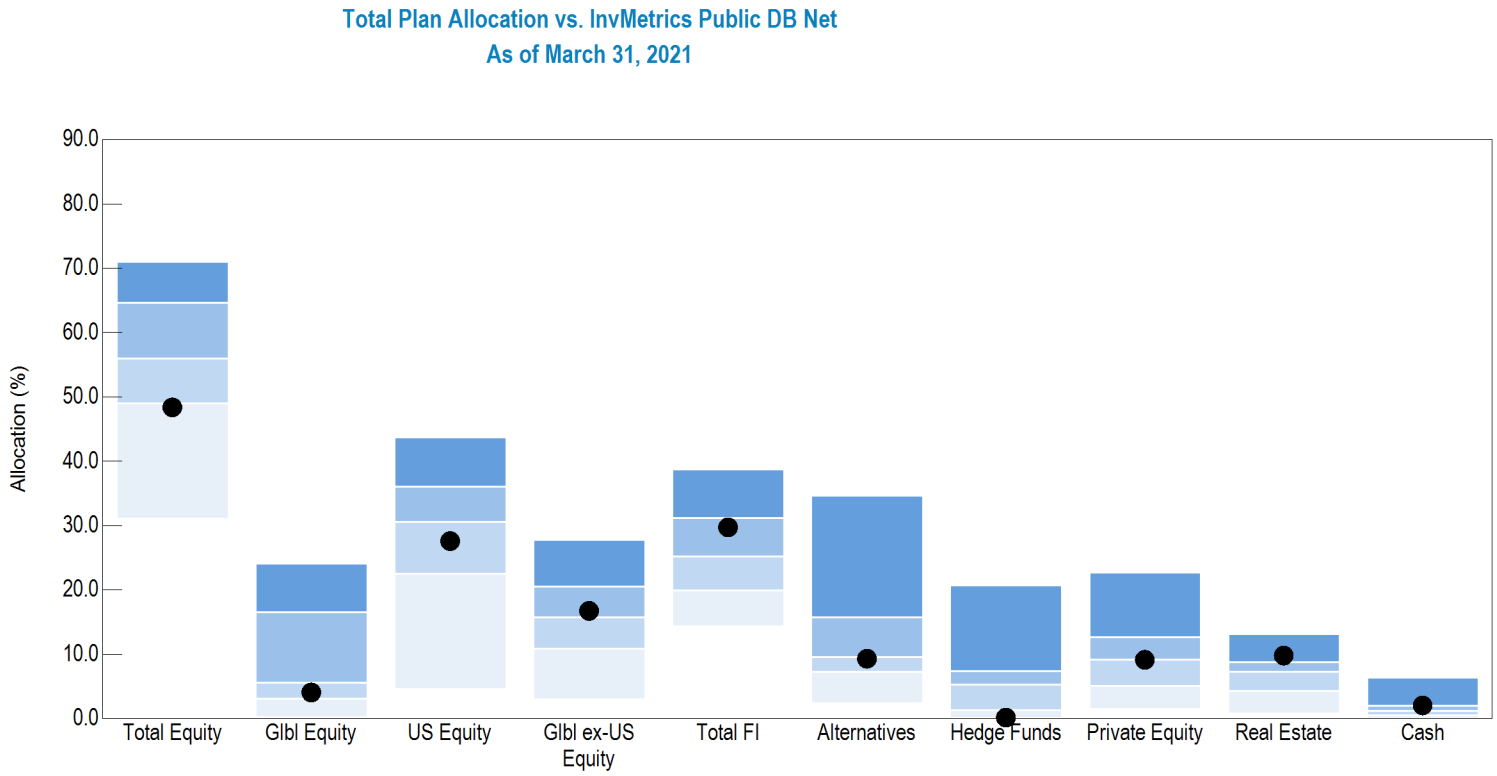
Total Fund
Asset Allocation vs. Policy

Period Ending: March 31, 2021



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	$508,539,092	27.6%	25.0%	$47,586,003	10.0% - 30.0%	Yes
International Equity	$308,595,115	16.7%	15.0%	$32,023,261	10.0% - 30.0%	Yes
Global Equity	$74,523,013	4.0%	3.0%	$19,208,642	0.0% - 5.0%	Yes
Domestic Fixed Income	$379,771,051	20.6%	17.0%	$66,322,950	10.0% - 30.0%	Yes
International Fixed Income	$83,804,385	4.5%	5.0%	-$8,386,233	0.0% - 10.0%	Yes
Global Fixed Income	$84,424,670	4.6%	5.0%	-$7,765,948	0.0% - 10.0%	Yes
Real Estate	$180,493,368	9.8%	20.0%	-$188,269,104	10.0% - 30.0%	No
Private Equity	$86,966,511	4.7%	5.0%	-$5,224,107	0.0% - 10.0%	Yes
Private Credit	$95,648,525	5.2%	5.0%	$3,457,907	0.0% - 10.0%	Yes
Cash and Equivalents	$37,445,240	2.0%	--	$37,445,240	--	No
Other	$3,601,390	0.2%	--	$3,601,390	--	No
Total	**$1,843,812,359**	**100.0%**	**100.0%**			

Aetos holdback of $93,982 not included in total market value.



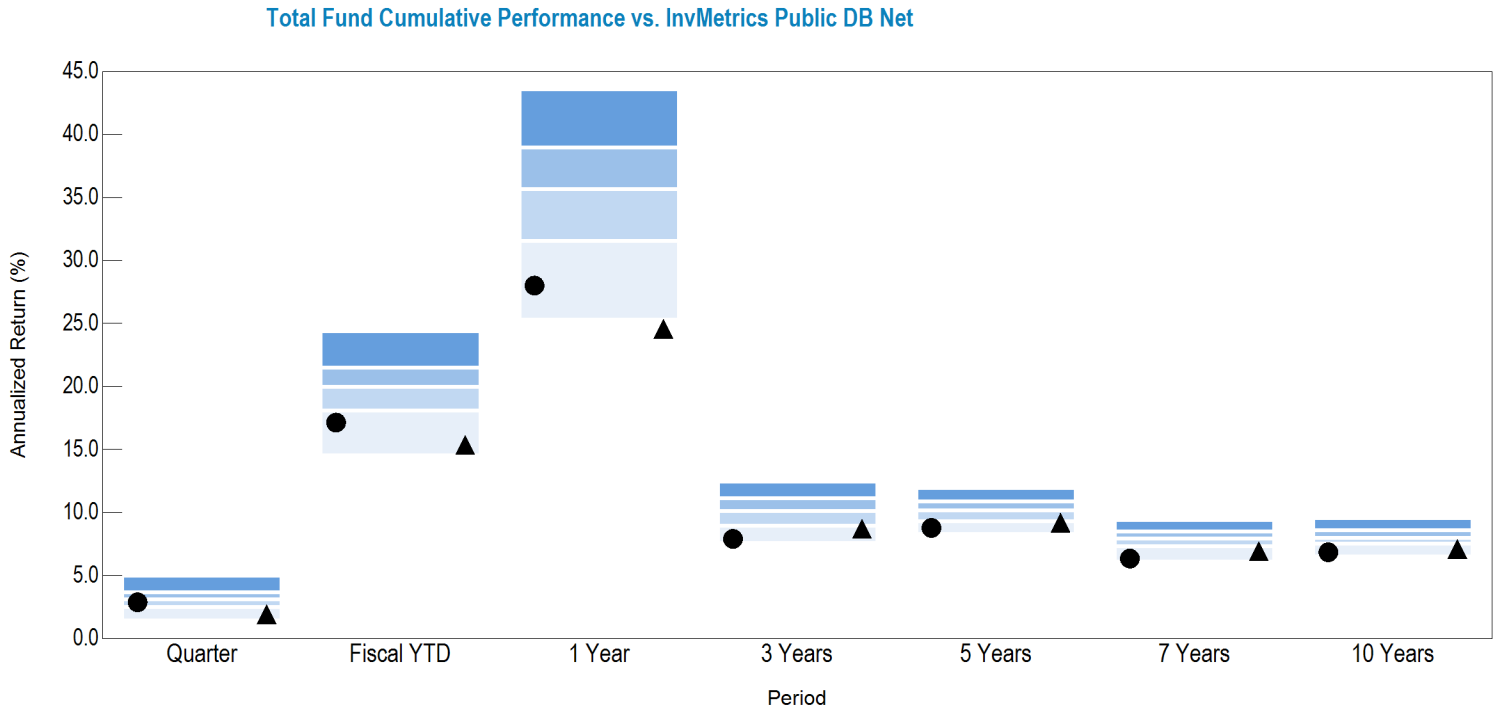
	Total Equity	Glbl Equity	US Equity	Glbl ex-US Equity	Total FI	Alternatives	Hedge Funds	Private Equity	Real Estate	Cash	
	Allocation (Rank)										
5th Percentile	71.0	24.1	43.7	27.8	38.8	34.6	20.7	22.7	13.1	6.3	-
25th Percentile	64.8	16.6	36.1	20.6	31.3	15.9	7.5	12.7	8.8	2.1	-
Median	56.1	5.7	30.6	15.8	25.2	9.6	5.4	9.3	7.3	1.3	-
75th Percentile	49.1	3.2	22.6	10.9	20.0	7.4	1.4	5.1	4.4	0.6	-
95th Percentile	31.1	0.3	4.7	3.1	14.4	2.5	0.2	1.6	0.9	0.1	-
# of Portfolios	179	61	110	142	179	114	53	80	118	172	-
● **Total Fund**	48.4 (78)	4.0 (65)	27.6 (63)	16.7 (45)	29.7 (32)	9.3 (53)	0.1 (96)	9.1 (51)	9.8 (18)	2.0 (28)	-

Account	Fee Schedule	Market Value As of 3/31/2021	% 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	$15,057,185	0.8%	$185,686	1.23%
BlackRock Alternative Advisors	120,000 Annually	$2,684,500	0.1%	$120,000	4.47%
BlackRock Fixed Income	0.25% of First 100.0 Mil, 0.25% of Next 100.0 Mil	$144,585,716	7.8%	$361,464	0.25%
Boston Partners Large Cap Value	0.45% of First 50.0 Mil, 0.35% of Next 50.0 Mil, 0.30% Thereafter	$91,870,323	5.0%	$371,546	0.40%
Doubleline Core Plus	0.28% of First 100.0 Mil, 0.25% Thereafter	$115,162,646	6.2%	$317,907	0.28%
Franklin Templeton Global Bond Plus	0.62% of First 50.0 Mil, 0.51% of Next 50.0 Mil, 0.45% Thereafter	$84,424,670	4.6%	$485,566	0.58%
Ivy Large Cap Growth	0.60% of First 25.0 Mil, 0.50% of Next 25.0 Mil, 0.40% Thereafter	$89,328,809	4.8%	$432,315	0.48%
KKR Mezzanine Partners I	0.38% of Assets	$3,583,826	0.2%	$13,439	0.38%
Lee Munder Small Value	0.70% of Assets	$40,927,488	2.2%	$286,492	0.70%
MacKay Shields Core Plus	0.30% of Assets	$120,022,689	6.5%	$360,068	0.30%
Mellon Capital Cash Account	No Fee	$37,445,240	2.0%	--	--
Ocean Avenue Fund III	0.85% of Assets	$19,544,055	1.1%	$166,124	0.85%
Ocean Avenue Fund IV	1.25% of Assets	$12,059,527	0.7%	$150,744	1.25%
Pantheon Ventures	0.47% of Assets	$451,311	0.0%	$2,139	0.47%
Pathway Private Equity Fund Investors 10	0.58% of Assets	$1,407,294	0.1%	$8,162	0.58%
Pathway Private Equity Fund Investors 8	0.61% of Assets	$23,856,659	1.3%	$145,526	0.61%
Pathway Private Equity Fund Investors 9	0.58% of Assets	$15,862,235	0.9%	$92,001	0.58%
PGIM Emerging Markets Debt	0.55% of First 75.0 Mil, 0.45% of Next 100.0 Mil, 0.35% Thereafter	$83,804,385	4.5%	$452,120	0.54%
PIMCO Bravo	1.60% of Assets	$17,564	0.0%	$1,124	6.40%
PIMCO RAE Fundamental Global Ex US Fund	0.78% of First 25.0 Mil, 0.43% of Next 75.0 Mil, 0.38% Thereafter	$101,169,450	5.5%	$521,944	0.52%

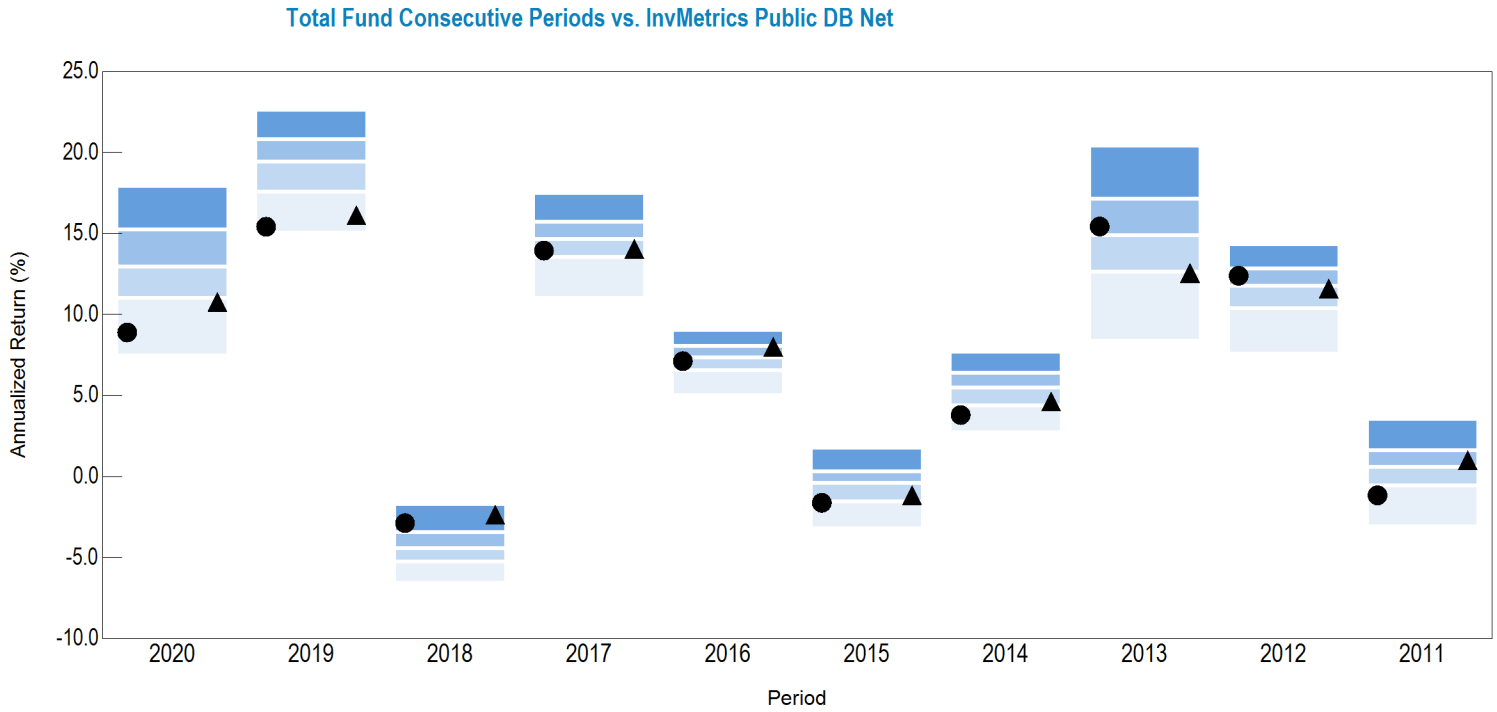
Fees shown for Pathway are estimated effective average fees over 15-year fund lifespan.

Account	Fee Schedule	Market Value As of 3/31/2021	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
QMA Large Cap Core	Performance-based 0.00 and 25.00	$84,800,668	4.6%	$349,966	0.41%
RREEF America II	0.95% of Assets	$165,436,183	9.0%	$1,571,644	0.95%
SGA Global Growth	0.45% of Assets	$93,105,628	5.0%	$418,975	0.45%
Sixth Street DCP (frmrly TSSP DCP)	No Fee	$80,835,231	4.4%	--	--
Sixth Street TAO Contingent (frmrly TSSP TAO Contingent)	No Fee	$14,813,294	0.8%	--	--
Skellig Water Fund (aka KBI)	0.77% of Assets	$74,523,013	4.0%	$570,101	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	$114,320,036	6.2%	$76,092	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	$43,397,579	2.4%	$21,699	0.05%
SSGA S&P 500 Flagship Fund	0.03% of Assets	$118,880,882	6.4%	$35,664	0.03%
Stepstone Secondary Opportunities Fund II	343,750 Annually	$11,100,931	0.6%	$343,750	3.10%
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	$39,333,343	2.1%	$325,000	0.83%
Investment Management Fee		**$1,843,812,359**	**100.0%**	**$8,187,260**	**0.44%**

**Sixth Streett Partners 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. TAO Contingent fee schedule is 65bps on unfunded commitments and 1.35% on remaining capital contributions.*

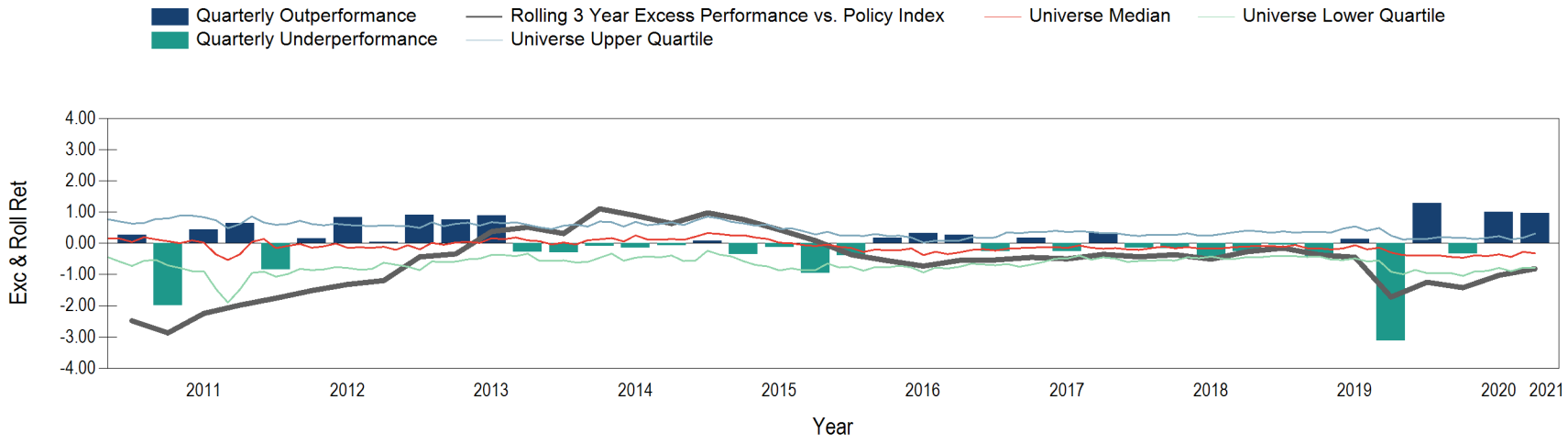


	Return (Rank)													
5th Percentile	5.0		24.4		43.5		12.4		11.9		9.4		9.5	
25th Percentile	3.7		21.5		39.0		11.2		10.9		8.5		8.6	
Median	3.1		20.0		35.7		10.1		10.2		8.0		8.0	
75th Percentile	2.5		18.1		31.6		9.0		9.3		7.3		7.5	
95th Percentile	1.5		14.5		25.4		7.6		8.3		6.1		6.5	
# of Portfolios	427		426		425		406		388		360		320	
● **Total Fund**	2.9	(62)	17.1	(86)	28.0	(93)	7.9	(93)	8.8	(90)	6.3	(94)	6.8	(93)
▲ **Policy Index**	1.9	(90)	15.4	(94)	24.6	(96)	8.7	(84)	9.2	(79)	6.9	(86)	7.1	(89)

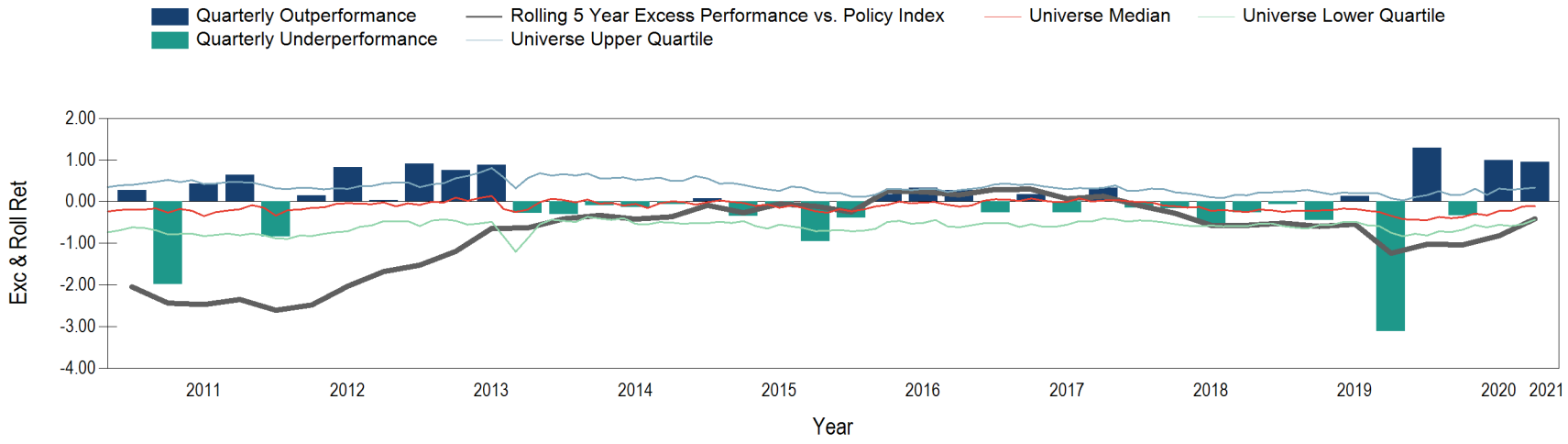


	Return (Rank)																					
5th Percentile	17.9		22.6		-1.7		17.5		9.0		1.7		7.7		20.4		14.3		3.6	
25th Percentile	15.3		20.8		-3.4		15.8		8.1		0.4		6.4		17.2		12.9		1.6	
Median	13.0		19.5		-4.4		14.7		7.4		-0.4		5.5		14.9		11.8		0.6	
75th Percentile	11.0		17.6		-5.2		13.6		6.6		-1.5		4.4		12.7		10.4		-0.5	
95th Percentile	7.5		15.1		-6.5		11.1		5.0		-3.2		2.7		8.4		7.6		-3.1	
# of Portfolios	596		550		496		269		269		262		210		191		159		137	
● Total Fund	8.9	(92)	15.4	(94)	-2.9	(14)	13.9	(69)	7.1	(59)	-1.6	(78)	3.8	(85)	15.4	(45)	12.4	(39)	-1.2	(82)
▲ Policy Index	10.8	(78)	16.1	(90)	-2.4	(9)	14.0	(67)	8.0	(29)	-1.1	(70)	4.6	(71)	12.6	(76)	11.6	(54)	1.0	(39)

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance

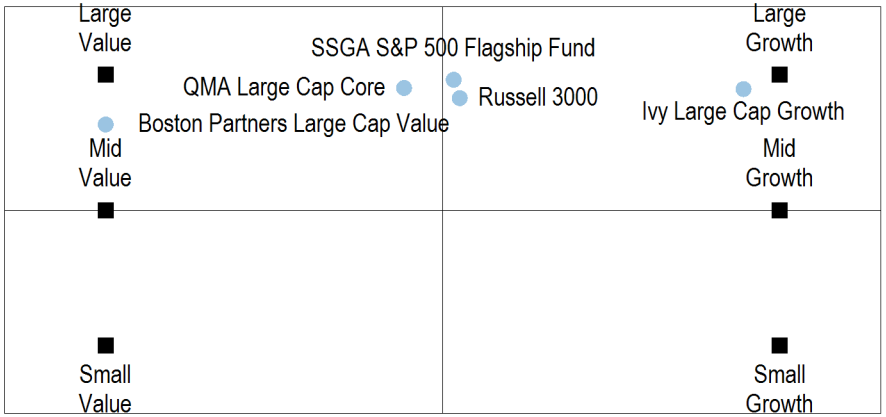


Total Domestic Equity
Asset Class Overview (Net of Fees)

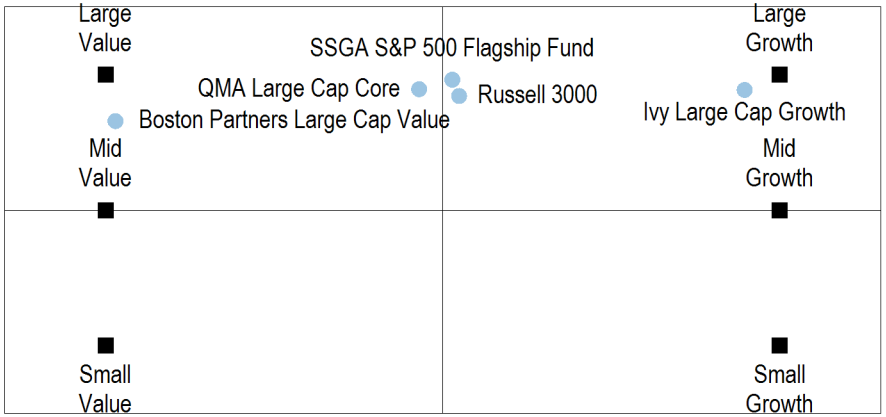
Period Ending: March 31, 2021

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Domestic Equity	**508,539,092**	**7.9**	**34.0**	**63.8**	**16.0**	**16.3**	**13.5**	**18.2**	**29.8**	**-5.4**	**21.9**	**11.1**
Russell 3000		*6.3*	*33.2*	*62.5*	*17.1*	*16.6*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*
InvMetrics Public DB US Eq Net Rank		*35*	*58*	*41*	*45*	*32*	*14*	*44*	*59*	*34*	*18*	*80*
SSGA S&P 500 Flagship Fund	118,880,882	6.2	29.7	56.3	16.8	16.3	--	18.3	31.5	-4.4	21.8	12.0
S&P 500		*6.2*	*29.7*	*56.4*	*16.8*	*16.3*	--	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
eV US Large Cap Core Equity Net Rank		*56*	*41*	*42*	*23*	*18*	--	*29*	*29*	*32*	*46*	*20*
QMA Large Cap Core	84,800,668	9.1	29.5	57.5	14.1	14.6	13.5	12.0	28.6	-6.8	22.1	12.1
S&P 500		*6.2*	*29.7*	*56.4*	*16.8*	*16.3*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
eV US Large Cap Core Equity Net Rank		*16*	*42*	*35*	*59*	*54*	*21*	*66*	*56*	*62*	*43*	*19*
Ivy Large Cap Growth	89,328,809	1.4	21.8	52.5	21.4	20.4	16.1	30.9	36.6	2.7	29.5	1.6
Russell 1000 Growth		*0.9*	*27.3*	*62.7*	*22.8*	*21.0*	*16.6*	*38.5*	*36.4*	*-1.5*	*30.2*	*7.1*
eV US Large Cap Growth Equity Net Rank		*56*	*88*	*84*	*51*	*42*	*27*	*64*	*25*	*16*	*46*	*70*
Boston Partners Large Cap Value	91,870,323	15.1	41.9	65.6	10.5	12.7	11.6	2.4	23.8	-9.0	19.6	14.2
Russell 1000 Value		*11.3*	*36.6*	*56.1*	*11.0*	*11.7*	*11.0*	*2.8*	*26.5*	*-8.3*	*13.7*	*17.3*
eV US Large Cap Value Equity Net Rank		*15*	*22*	*29*	*55*	*37*	*35*	*57*	*75*	*51*	*26*	*47*

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years

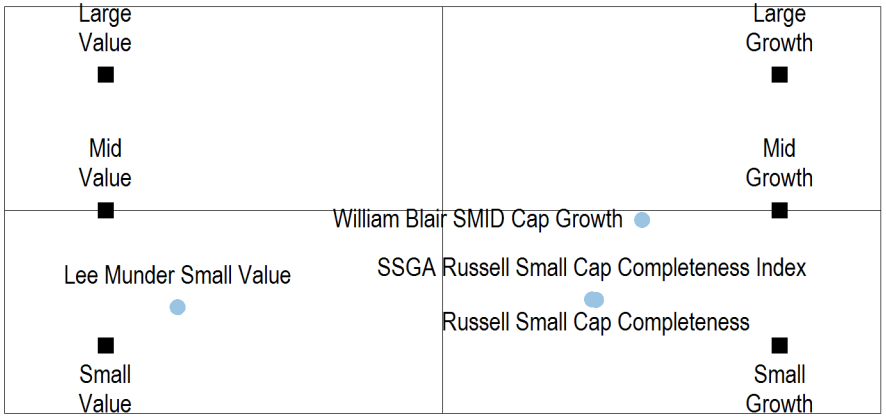


Total Domestic Equity
Asset Class Overview (Net of Fees)

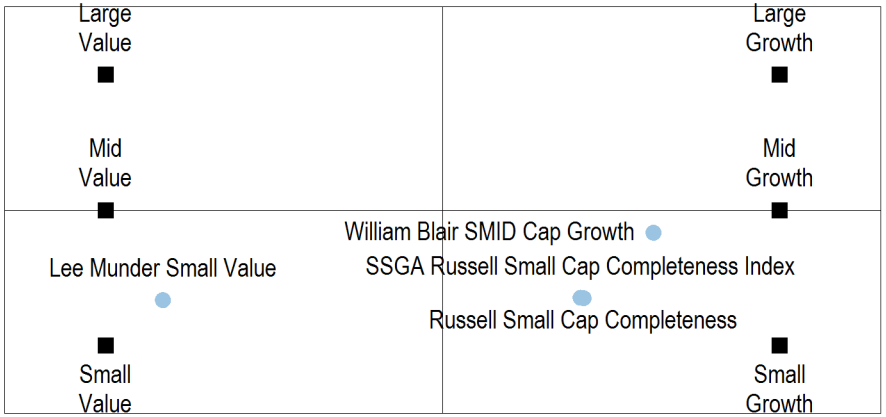
Period Ending: March 31, 2021

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
SSGA Russell Small Cap Completeness Index	43,397,579	7.3	51.1	97.5	18.2	18.0	--	32.6	27.8	-9.2	18.1	16.5
Russell Small Cap Completeness		*7.3*	*51.2*	*97.6*	*18.3*	*18.1*	--	*32.9*	*28.0*	*-9.2*	*18.3*	*16.6*
eV US Small Cap Core Equity Net Rank		*93*	*53*	*27*	*17*	*15*	--	*12*	*19*	*36*	*21*	*78*
William Blair SMID Cap Growth	39,333,343	4.2	37.0	73.2	19.1	20.4	15.1	32.6	31.1	-1.7	29.3	7.2
Russell 2500 Growth		*2.5*	*41.1*	*87.5*	*20.0*	*19.9*	*14.2*	*40.5*	*32.7*	*-7.5*	*24.5*	*9.7*
eV US Mid Cap Growth Equity Net Rank		*14*	*22*	*42*	*63*	*29*	*11*	*64*	*78*	*30*	*14*	*28*
Lee Munder Small Value	40,927,488	16.6	53.6	81.4	10.2	11.0	9.3	3.0	26.3	-15.5	7.7	27.3
Russell 2000 Value		*21.2*	*65.7*	*97.1*	*11.6*	*13.6*	*10.1*	*4.6*	*22.4*	*-12.9*	*7.8*	*31.7*
eV US Small Cap Value Equity Net Rank		*71*	*68*	*75*	*54*	*67*	*73*	*56*	*25*	*56*	*71*	*38*

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years



	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	--	--	142	90.9	38	94.2	74	87.4	7	10.4	0	0.0	1	0.1
QMA Large Cap Core	142	61.9	--	--	16	58.3	38	48.9	1	1.1	4	5.1	56	4.3
Ivy Large Cap Growth	38	31.6	16	27.8	--	--	4	4.6	0	0.0	0	0.0	2	0.7
Boston Partners Large Cap Value	74	23.1	38	25.1	4	12.9	--	--	0	0.0	0	0.0	13	1.7
William Blair SMID Cap Growth	7	0.4	1	0.1	0	0.0	0	0.0	--	--	2	3.6	60	6.3
Lee Munder Small Value	0	0.0	4	0.3	0	0.0	0	0.0	2	3.8	--	--	89	4.2
SSGA Russell Small Cap Completeness Index	1	0.0	56	8.7	2	1.8	13	6.1	60	76.3	89	94.4	--	--

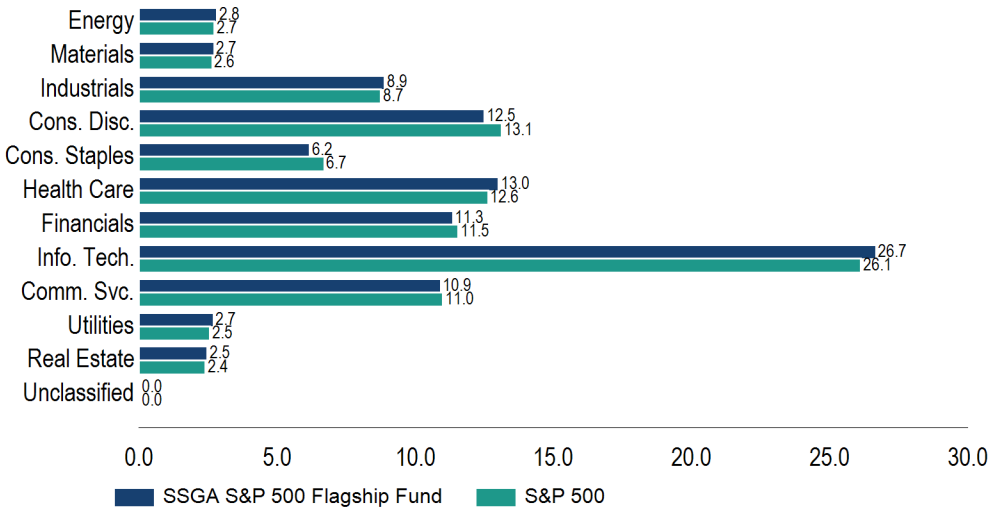
Correlation Matrix
3 Months Ending March 31, 2021

	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	S&P 500
SSGA S&P 500 Flagship Fund	1.00	--	--	--	--	--	--	--
QMA Large Cap Core	0.94	1.00	--	--	--	--	--	--
Ivy Large Cap Growth	1.00	0.91	1.00	--	--	--	--	--
Boston Partners Large Cap Value	0.96	0.80	0.97	1.00	--	--	--	--
William Blair SMID Cap Growth	-0.20	-0.54	-0.15	0.08	1.00	--	--	--
Lee Munder Small Value	0.69	0.40	0.73	0.87	0.56	1.00	--	--
SSGA Russell Small Cap Completeness Index	-0.25	-0.57	-0.19	0.04	1.00	0.52	1.00	--
S&P 500	1.00	0.94	1.00	0.96	-0.21	0.69	-0.25	1.00

Characteristics

	Portfolio	S&P 500
Number of Holdings	505	505
Weighted Avg. Market Cap. ($B)	461.98	467.60
Median Market Cap. ($B)	29.47	29.46
Price To Earnings	30.06	30.06
Price To Book	4.52	4.53
Price To Sales	3.26	3.19
Return on Equity (%)	26.89	27.06
Yield (%)	1.47	1.44
Beta	1.00	1.00

Sector Allocation (%) vs S&P 500



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

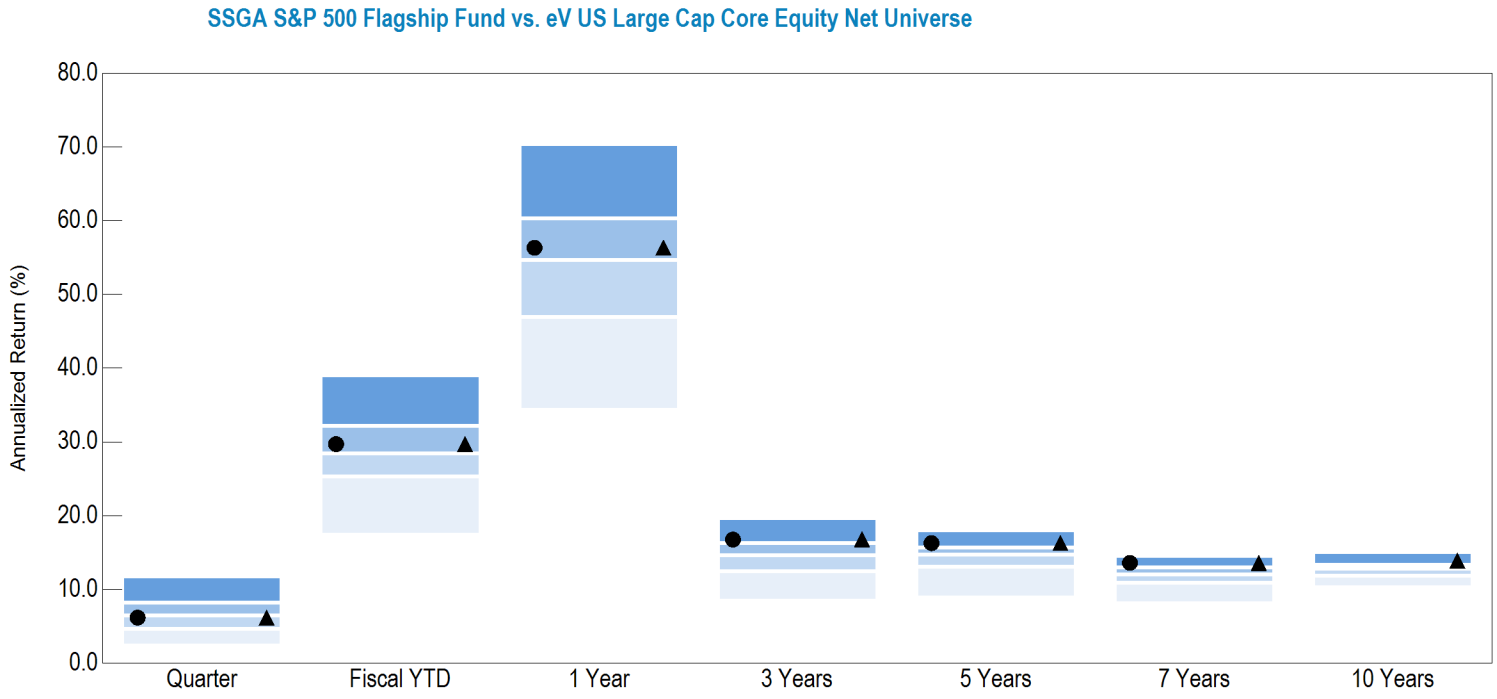
APPLE INC	5.73%
MICROSOFT CORP	5.29%
AMAZON.COM INC	3.94%
FACEBOOK INC	2.11%
ALPHABET INC	1.85%
ALPHABET INC	1.77%
TESLA INC	1.53%
BERKSHIRE HATHAWAY INC	1.45%
JPMORGAN CHASE & CO	1.38%
JOHNSON & JOHNSON	1.29%
Total	**26.33%**

Top Contributors

	Avg Wgt	Return	Contribution
MICROSOFT CORP	5.31	6.25	0.33
ALPHABET INC	1.66	17.68	0.29
ALPHABET INC	1.61	18.08	0.29
JPMORGAN CHASE & CO	1.22	20.66	0.25
EXXON MOBIL CORP	0.55	37.77	0.21
BANK OF AMERICA	0.73	28.28	0.21
INTEL CORP	0.64	29.22	0.19
FACEBOOK INC	2.07	7.82	0.16
BERKSHIRE HATHAWAY INC	1.42	10.18	0.14
HOME DEPOT INC. (THE)	0.90	15.63	0.14

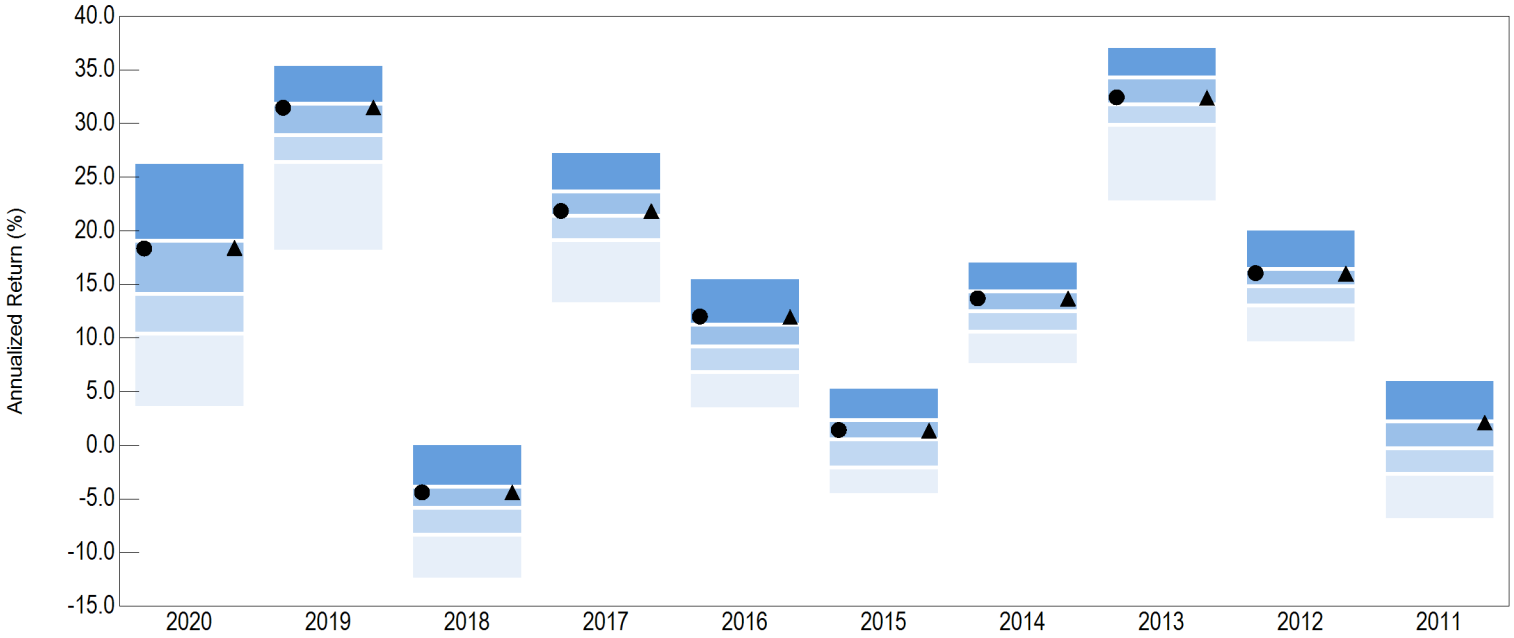
Bottom Contributors

	Avg Wgt	Return	Contribution
APPLE INC	6.70	-7.81	-0.52
AMAZON.COM INC	4.39	-5.00	-0.22
TESLA INC	1.69	-5.35	-0.09
QUALCOMM INC.	0.54	-12.52	-0.07
ADVANCED MICRO DEVICES INC	0.34	-14.40	-0.05
ADOBE INC	0.76	-4.95	-0.04
VISA INC	1.17	-3.05	-0.04
WALMART INC	0.63	-5.37	-0.03
NIKE INC	0.56	-5.87	-0.03
COSTCO WHOLESALE CORP	0.52	-6.27	-0.03

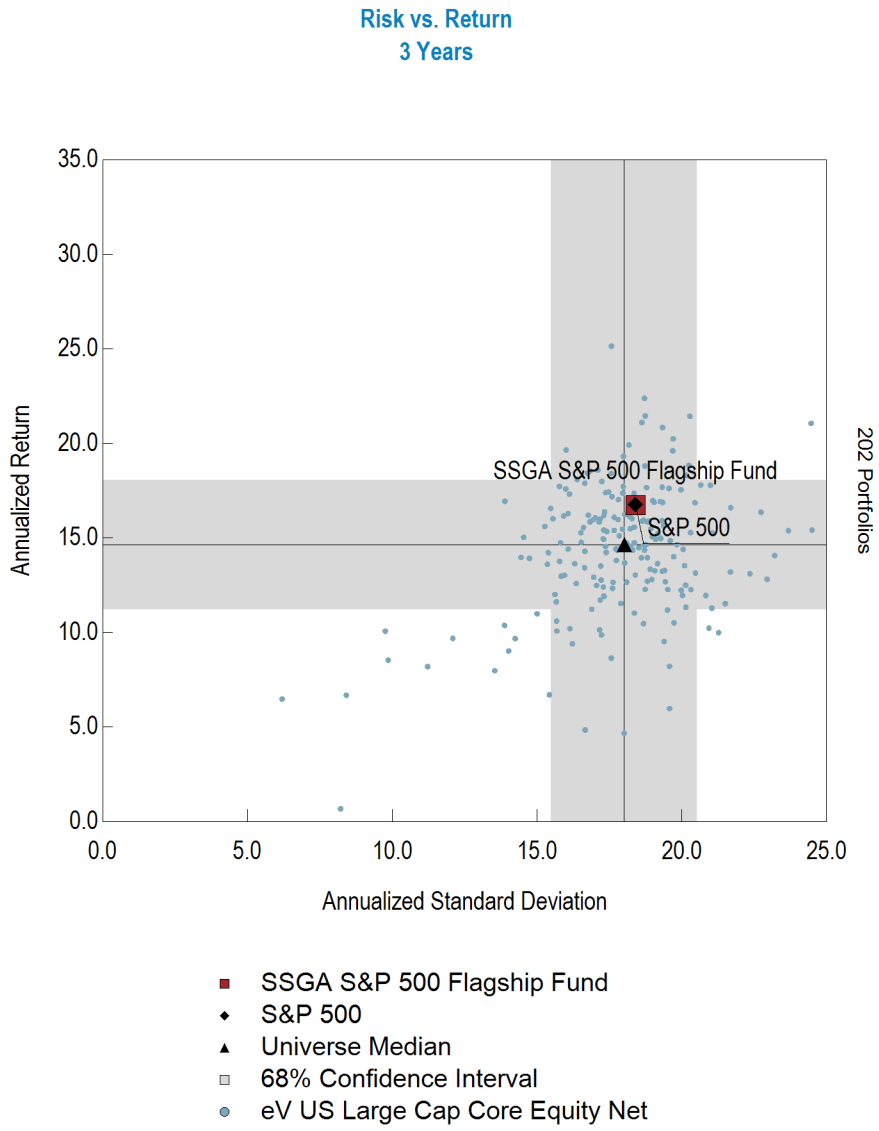


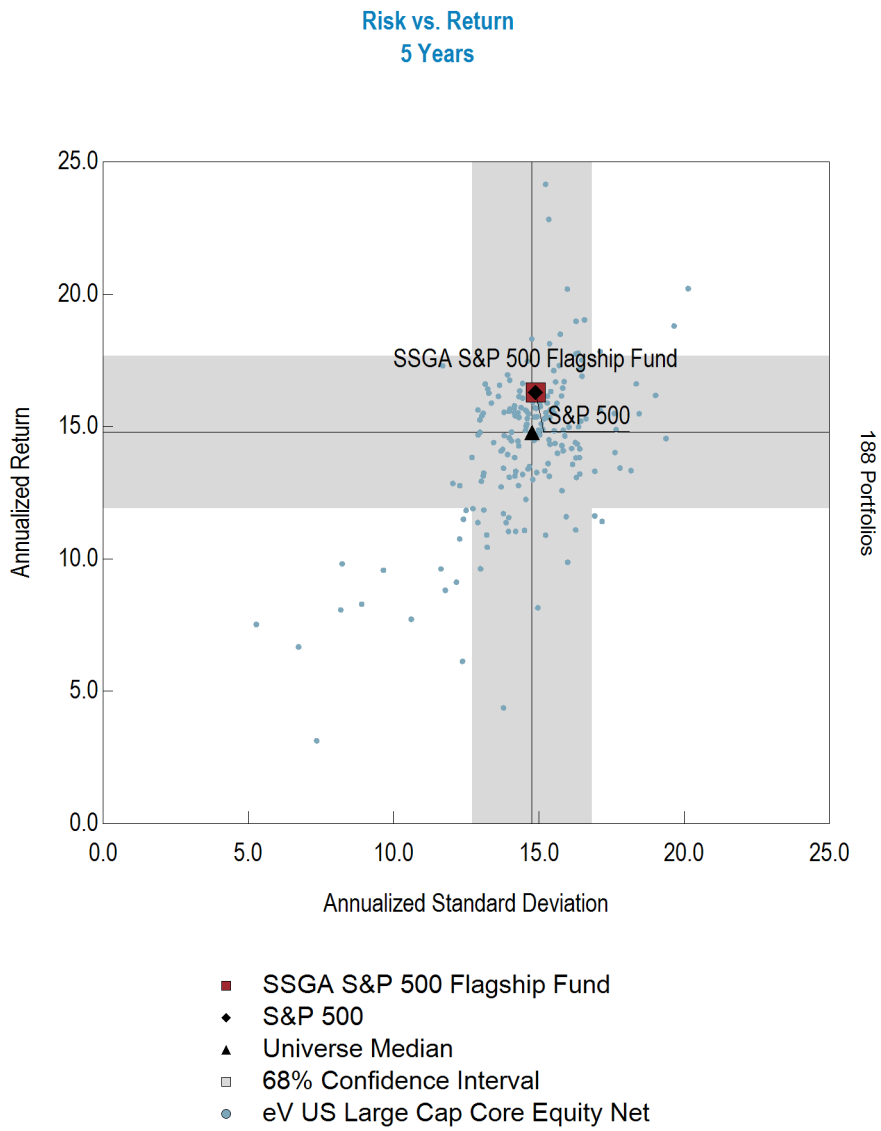
	Return (Rank)													
5th Percentile	11.7		39.0		70.4		19.6		18.0		14.5		15.0	
25th Percentile	8.2		32.2		60.4		16.4		15.8		13.0		13.4	
Median	6.5		28.5		54.7		14.6		14.8		12.1		12.8	
75th Percentile	4.7		25.4		47.0		12.5		13.1		11.0		11.9	
95th Percentile	2.4		17.4		34.4		8.5		8.9		8.1		10.4	
# of Portfolios	213		212		212		202		188		175		141	
● **SSGA S&P 500 Flagship Fund**	6.2	(56)	29.7	(41)	56.3	(42)	16.8	(23)	16.3	(18)	13.6	(14)	--	(--)
▲ **S&P 500**	6.2	(56)	29.7	(41)	56.4	(42)	16.8	(23)	16.3	(18)	13.6	(14)	13.9	(14)

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



	Return (Rank)																			
5th Percentile	26.4		35.5		0.1		27.4		15.6		5.4		17.2		37.2		20.2		6.1	
25th Percentile	19.1		31.9		-3.8		23.7		11.3		2.4		14.4		34.3		16.5		2.2	
Median	14.1		28.9		-5.8		21.4		9.3		0.6		12.5		31.8		14.8		-0.3	
75th Percentile	10.4		26.5		-8.3		19.2		6.9		-2.0		10.6		29.9		13.0		-2.7	
95th Percentile	3.5		18.1		-12.5		13.2		3.4		-4.6		7.5		22.7		9.5		-6.9	
# of Portfolios	216		203		189		188		177		142		140		125		111		97	
● SSGA S&P 500 Flagship Fund	18.3	(29)	31.5	(29)	-4.4	(32)	21.8	(46)	12.0	(20)	1.4	(36)	13.7	(33)	32.4	(42)	16.0	(30)	--	(--)
▲ S&P 500	18.4	(29)	31.5	(28)	-4.4	(32)	21.8	(46)	12.0	(21)	1.4	(37)	13.7	(33)	32.4	(43)	16.0	(30)	2.1	(26)

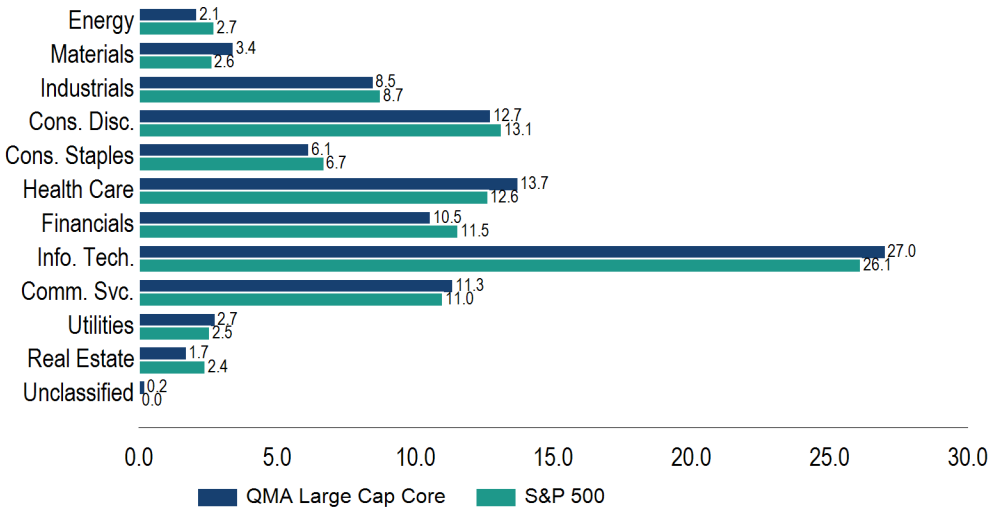

Risk vs. Return
3 Years
Annualized Return
Annualized Standard Deviation
SSGA S&P 500 Flagship Fund
S&P 500
202 Portfolios
SSGA S&P 500 Flagship Fund
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net


Risk vs. Return
5 Years
Annualized Return
Annualized Standard Deviation
SSGA S&P 500 Flagship Fund
S&P 500
188 Portfolios
SSGA S&P 500 Flagship Fund
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net

Characteristics

	Portfolio	S&P 500
Number of Holdings	189	505
Weighted Avg. Market Cap. ($B)	444.90	467.60
Median Market Cap. ($B)	38.28	29.46
Price To Earnings	25.27	30.06
Price To Book	4.40	4.53
Price To Sales	2.53	3.19
Return on Equity (%)	29.20	27.06
Yield (%)	1.59	1.44
Beta	1.07	1.00

Sector Allocation (%) vs S&P 500



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

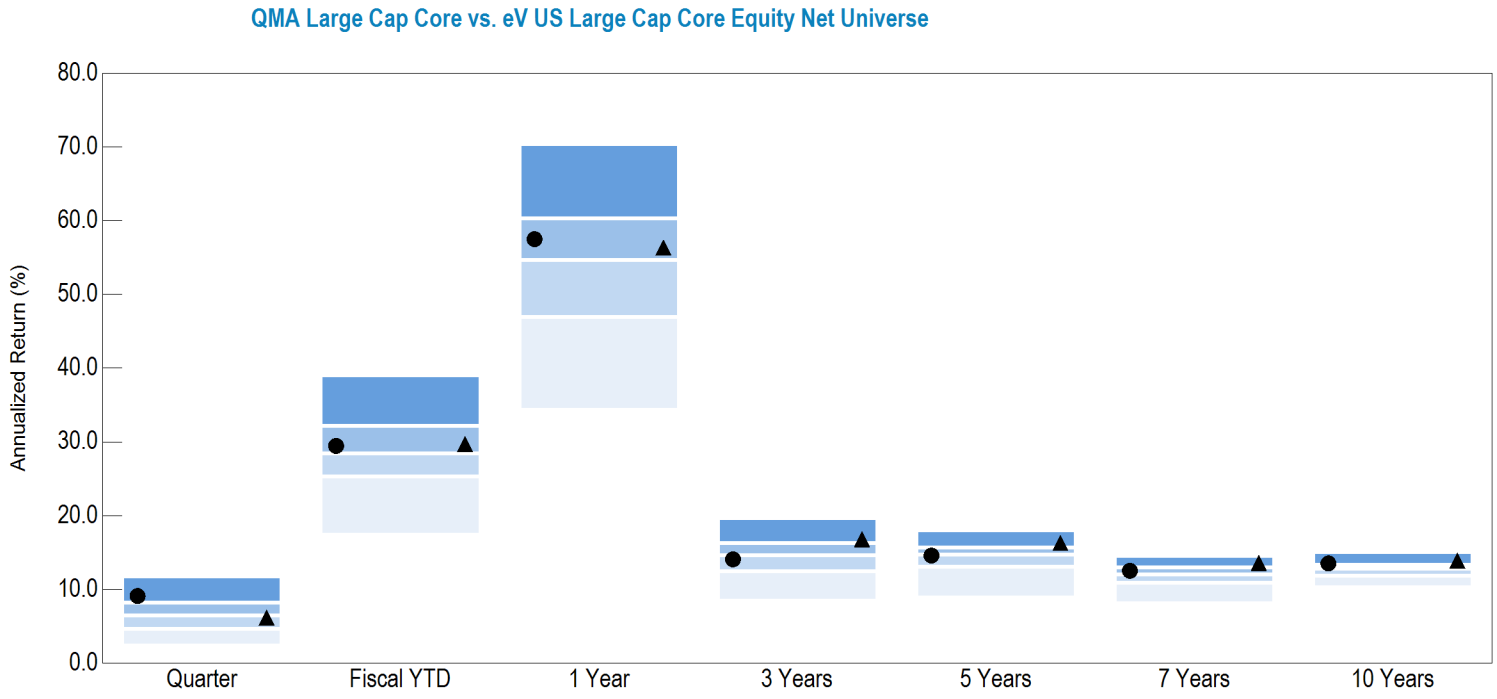
MICROSOFT CORP	5.89%
APPLE INC	4.82%
AMAZON.COM INC	4.20%
FACEBOOK INC	2.74%
ALPHABET INC	1.99%
ALPHABET INC	1.86%
JPMORGAN CHASE & CO	1.74%
UNITEDHEALTH GROUP INC	1.58%
JOHNSON & JOHNSON	1.47%
PROCTER & GAMBLE CO (THE)	1.47%
Total	**27.77%**

Top Contributors

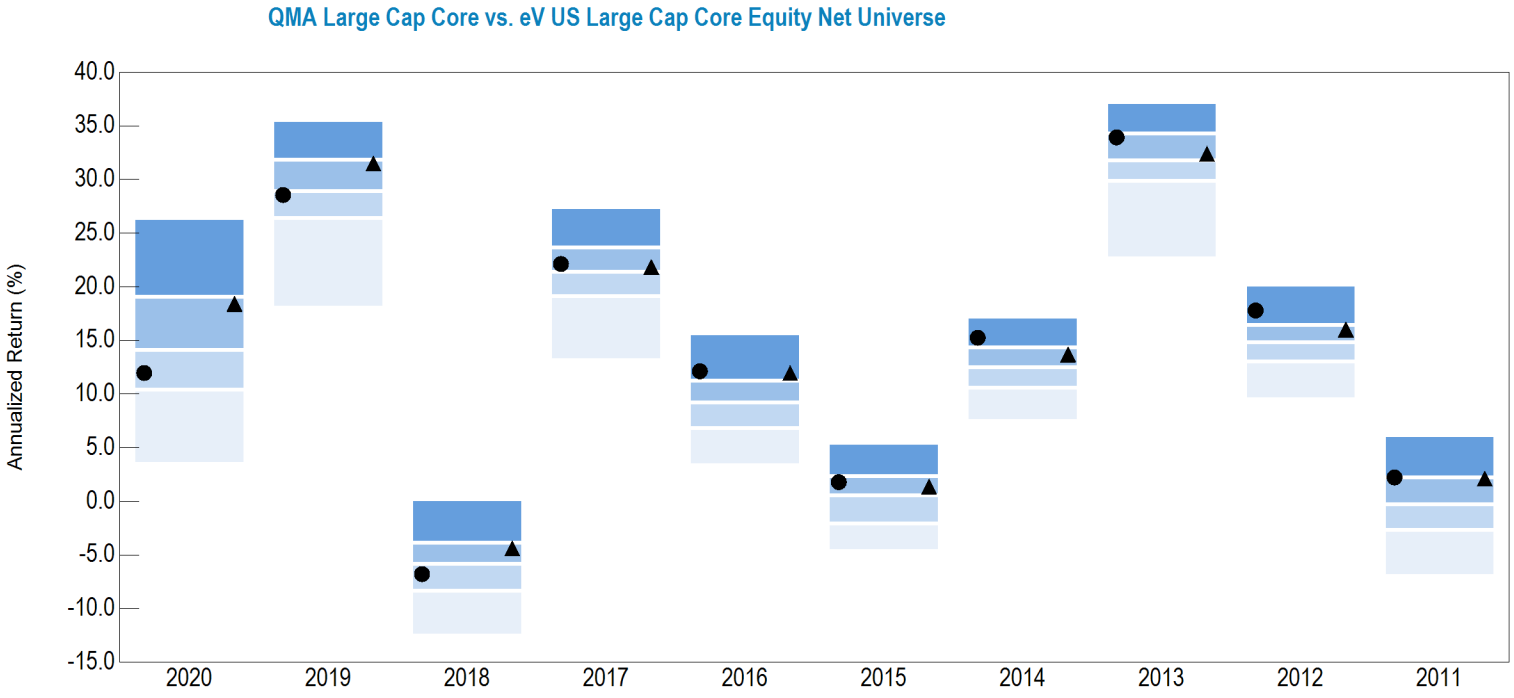
	Avg Wgt	Return	Contribution
FIRST BANCORP (PUERTO RICO)	2.70	22.93	0.62
APPLIED MATERIALS INC.	0.92	55.09	0.51
GOLDMAN SACHS GROUP INC (THE)	1.73	24.47	0.42
CIMAREX ENERGY CO.	0.67	59.00	0.40
UFP INDUSTRIES INC	0.97	36.87	0.36
WORTHINGTON INDUSTRIES INC.	1.12	31.13	0.35
DEERE & CO	0.81	39.39	0.32
WELLS FARGO & CO	0.99	29.85	0.30
GMS INC	0.79	36.98	0.29
ALPHABET INC	1.65	17.68	0.29

Bottom Contributors

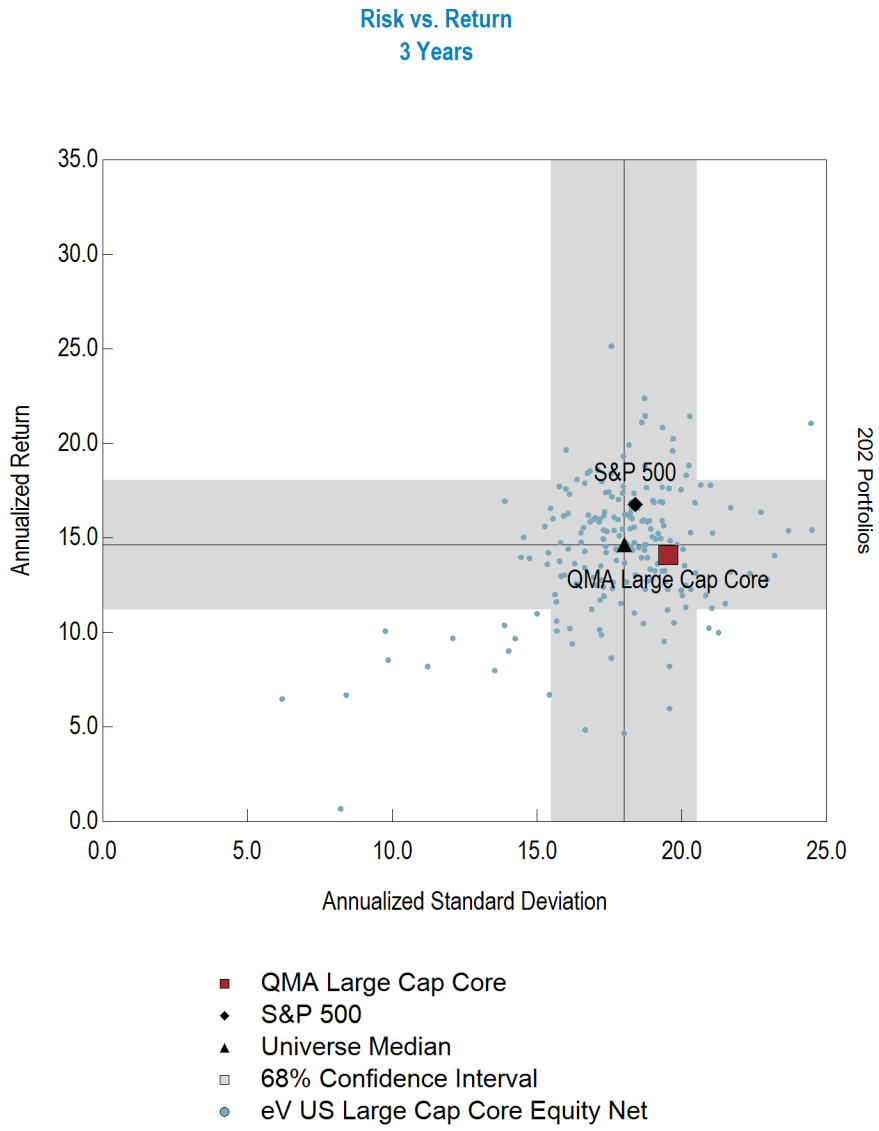
	Avg Wgt	Return	Contribution
APPLE INC	6.19	-7.81	-0.48
AMAZON.COM INC	4.77	-5.00	-0.24
PERKINELMER INC.	1.58	-10.56	-0.17
WALMART INC	2.11	-5.37	-0.11
ADOBE INC	1.25	-4.95	-0.06
SERVICENOW INC	0.58	-9.14	-0.05
VISTRA CORP	0.47	-9.33	-0.04
ELECTRONIC ARTS INC	0.68	-5.61	-0.04
MERCK & CO INC	0.73	-4.94	-0.04
COGNIZANT TECHNOLOGY SOLUTIONS CORP	0.76	-4.37	-0.03

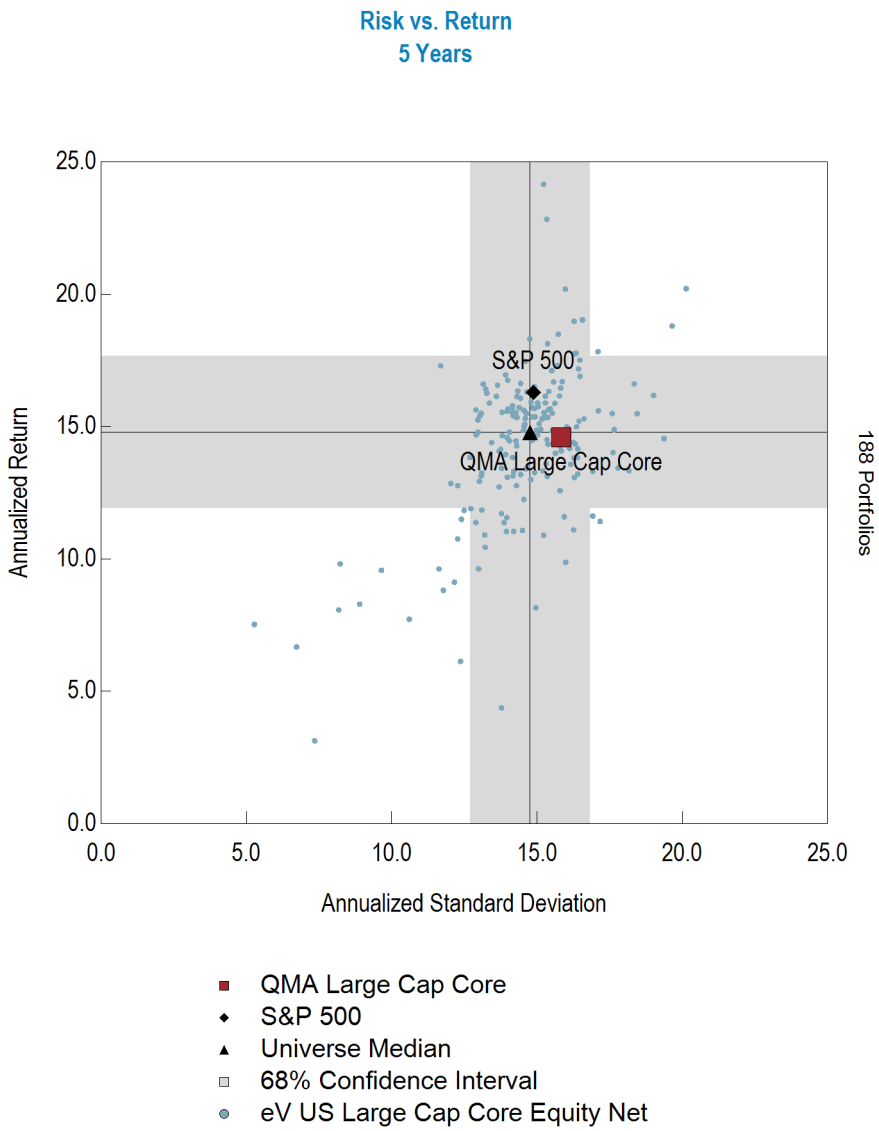


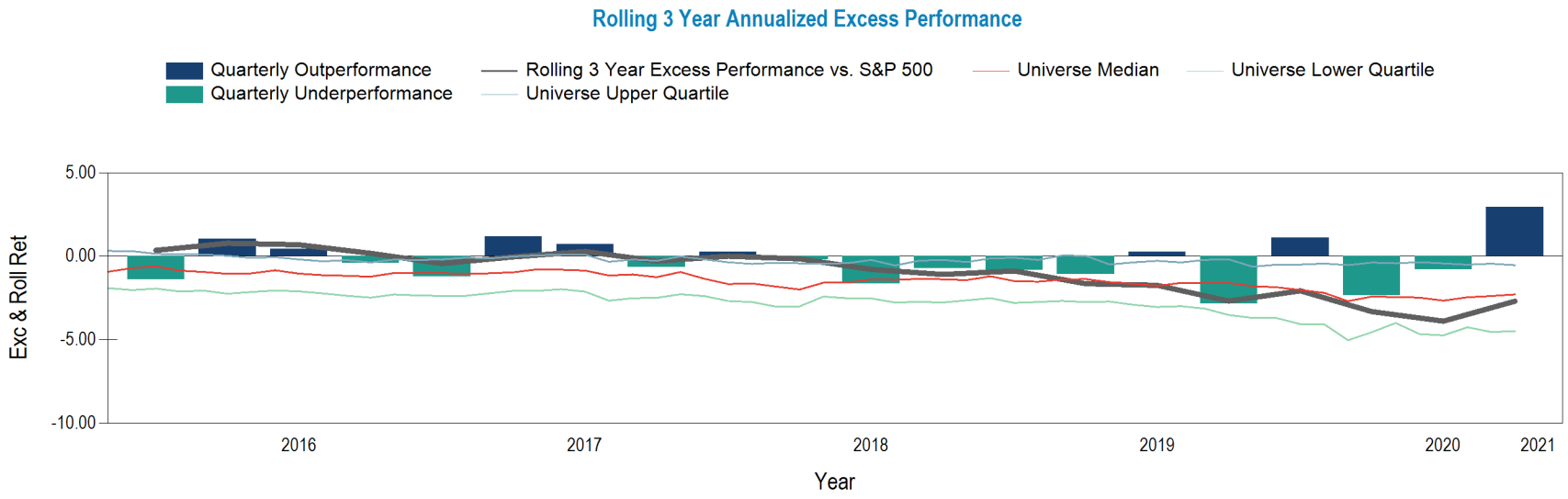
	Return (Rank)													
5th Percentile	11.7		39.0		70.4		19.6		18.0		14.5		15.0	
25th Percentile	8.2		32.2		60.4		16.4		15.8		13.0		13.4	
Median	6.5		28.5		54.7		14.6		14.8		12.1		12.8	
75th Percentile	4.7		25.4		47.0		12.5		13.1		11.0		11.9	
95th Percentile	2.4		17.4		34.4		8.5		8.9		8.1		10.4	
# of Portfolios	213		212		212		202		188		175		141	
● QMA Large Cap Core	9.1	(16)	29.5	(42)	57.5	(35)	14.1	(59)	14.6	(54)	12.5	(42)	13.5	(21)
▲ S&P 500	6.2	(56)	29.7	(41)	56.4	(42)	16.8	(23)	16.3	(18)	13.6	(14)	13.9	(14)

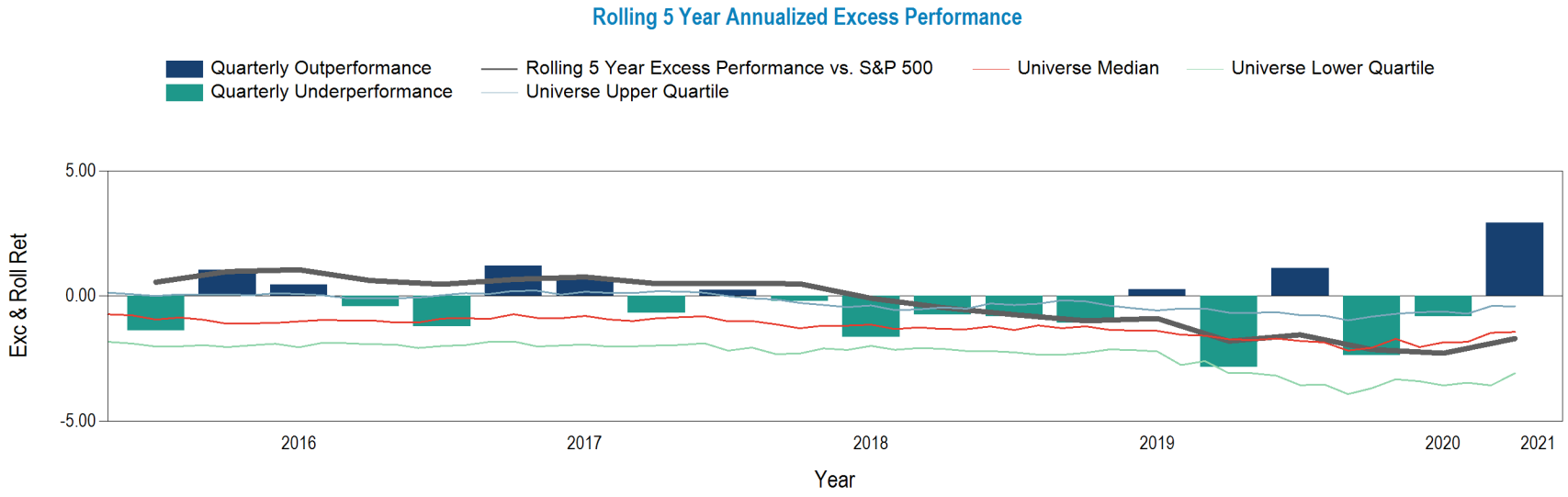


	Return (Rank)																			
5th Percentile	26.4		35.5		0.1		27.4		15.6		5.4		17.2		37.2		20.2		6.1	
25th Percentile	19.1		31.9		-3.8		23.7		11.3		2.4		14.4		34.3		16.5		2.2	
Median	14.1		28.9		-5.8		21.4		9.3		0.6		12.5		31.8		14.8		-0.3	
75th Percentile	10.4		26.5		-8.3		19.2		6.9		-2.0		10.6		29.9		13.0		-2.7	
95th Percentile	3.5		18.1		-12.5		13.2		3.4		-4.6		7.5		22.7		9.5		-6.9	
# of Portfolios	216		203		189		188		177		142		140		125		111		97	
● QMA Large Cap Core	12.0	(66)	28.6	(56)	-6.8	(62)	22.1	(43)	12.1	(19)	1.8	(30)	15.2	(18)	33.9	(29)	17.8	(13)	2.2	(26)
▲ S&P 500	18.4	(29)	31.5	(28)	-4.4	(32)	21.8	(46)	12.0	(21)	1.4	(37)	13.7	(33)	32.4	(43)	16.0	(30)	2.1	(26)


Risk vs. Return
3 Years
Annualized Return
Annualized Standard Deviation
S&P 500
QMA Large Cap Core
202 Portfolios
QMA Large Cap Core
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net


Risk vs. Return
5 Years
Annualized Return
Annualized Standard Deviation
S&P 500
QMA Large Cap Core
188 Portfolios
QMA Large Cap Core
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net

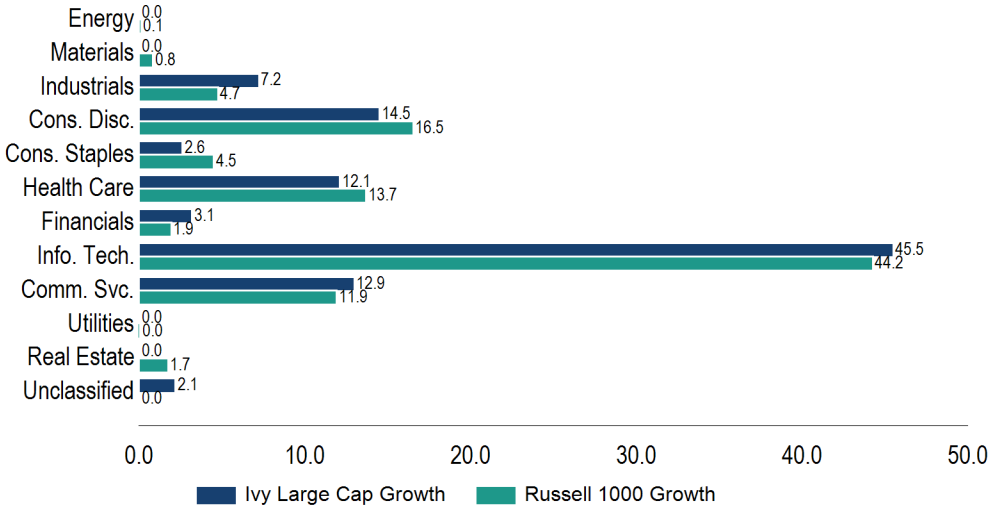

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. S&P 500
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. S&P 500
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	42	453
Weighted Avg. Market Cap. ($B)	643.45	688.96
Median Market Cap. ($B)	84.93	17.32
Price To Earnings	37.69	38.26
Price To Book	9.44	11.53
Price To Sales	6.33	5.46
Return on Equity (%)	51.97	36.90
Yield (%)	0.62	0.79
Beta	0.90	1.00

Sector Allocation (%) vs Russell 1000 Growth



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

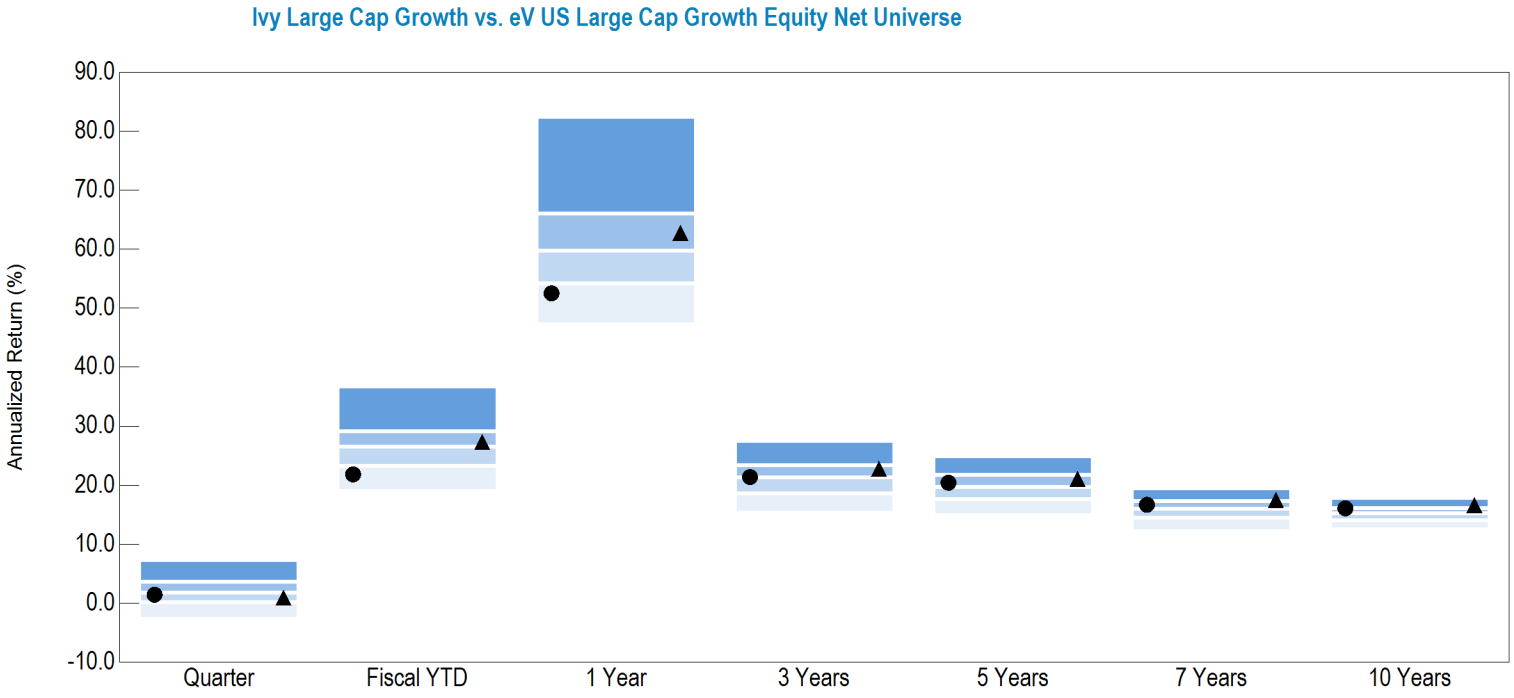
MICROSOFT CORP	9.64%
APPLE INC	7.86%
AMAZON.COM INC	6.90%
ALPHABET INC	4.94%
VISA INC	4.75%
FACEBOOK INC	3.67%
MOTOROLA SOLUTIONS INC	3.40%
UNITEDHEALTH GROUP INC	3.11%
INTUIT INC.	2.98%
PAYPAL HOLDINGS INC	2.84%
Total	**50.07%**

Top Contributors

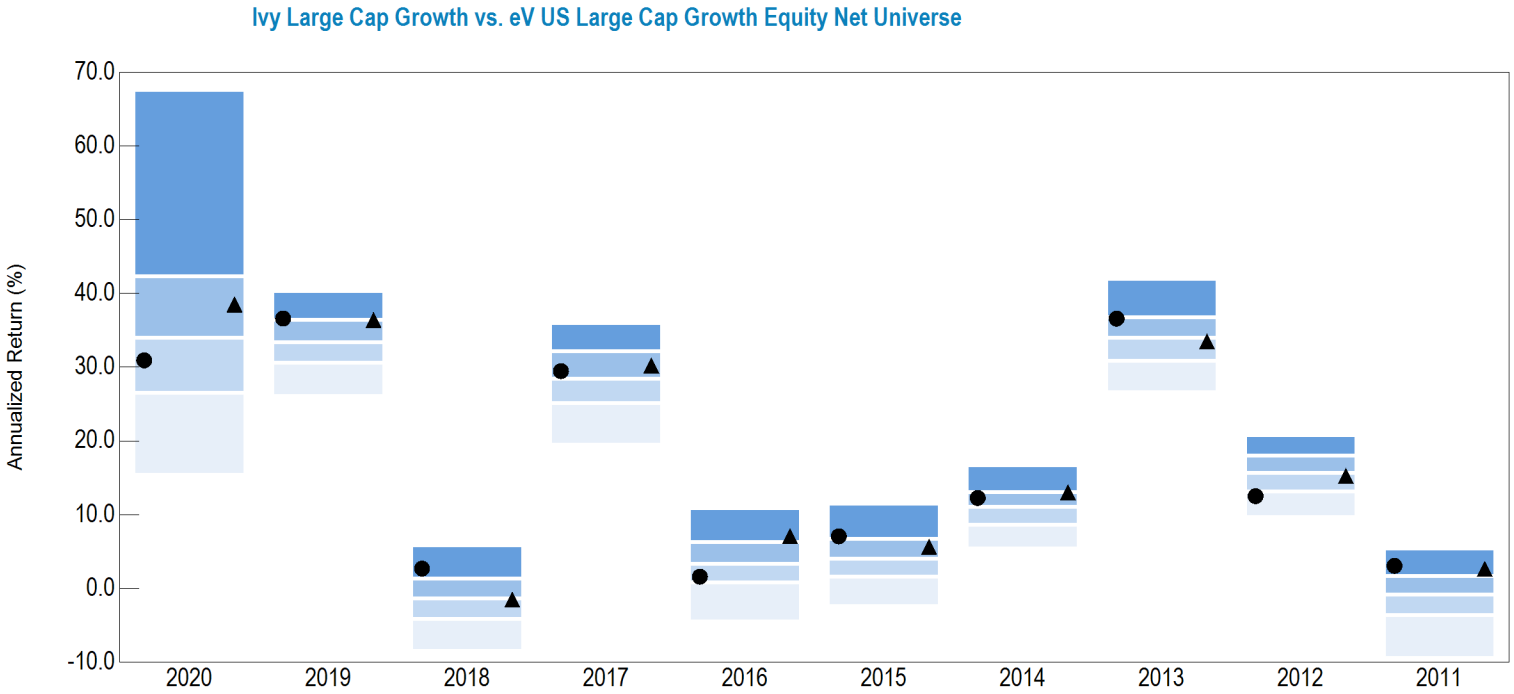
	Avg Wgt	Return	Contribution
ALPHABET INC	4.26	17.68	0.75
MICROSOFT CORP	9.46	6.25	0.59
MOTOROLA SOLUTIONS INC	3.02	11.02	0.33
J.B. HUNT TRANSPORT SERVICES INC.	1.43	23.24	0.33
ZEBRA TECHNOLOGIES CORP.	1.21	26.24	0.32
FACEBOOK INC	3.61	7.82	0.28
HOME DEPOT INC. (THE)	1.73	15.63	0.27
STANLEY BLACK & DECKER INC	2.08	12.24	0.25
TRACTOR SUPPLY CO	0.81	26.35	0.21
UNITEDHEALTH GROUP INC	2.82	6.47	0.18

Bottom Contributors

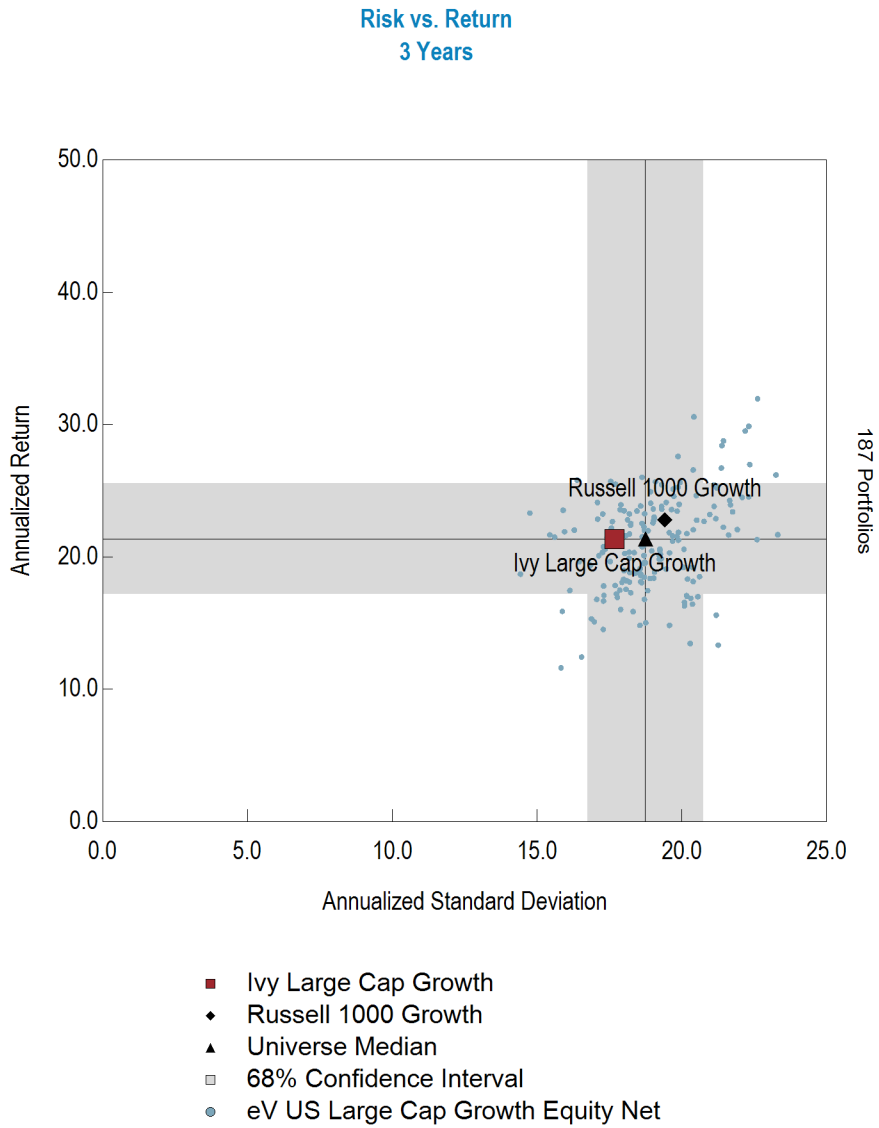
	Avg Wgt	Return	Contribution
APPLE INC	8.67	-7.81	-0.68
AMAZON.COM INC	7.38	-5.00	-0.37
CERNER CORP	2.77	-8.41	-0.23
VERISK ANALYTICS INC	1.35	-14.74	-0.20
VERISIGN INC	2.40	-8.15	-0.20
FERRARI NV	2.20	-8.82	-0.19
ADOBE INC	3.07	-4.95	-0.15
ELECTRONIC ARTS INC	2.69	-5.61	-0.15
VISA INC	4.23	-3.05	-0.13
INTUITIVE SURGICAL INC	1.30	-9.68	-0.13

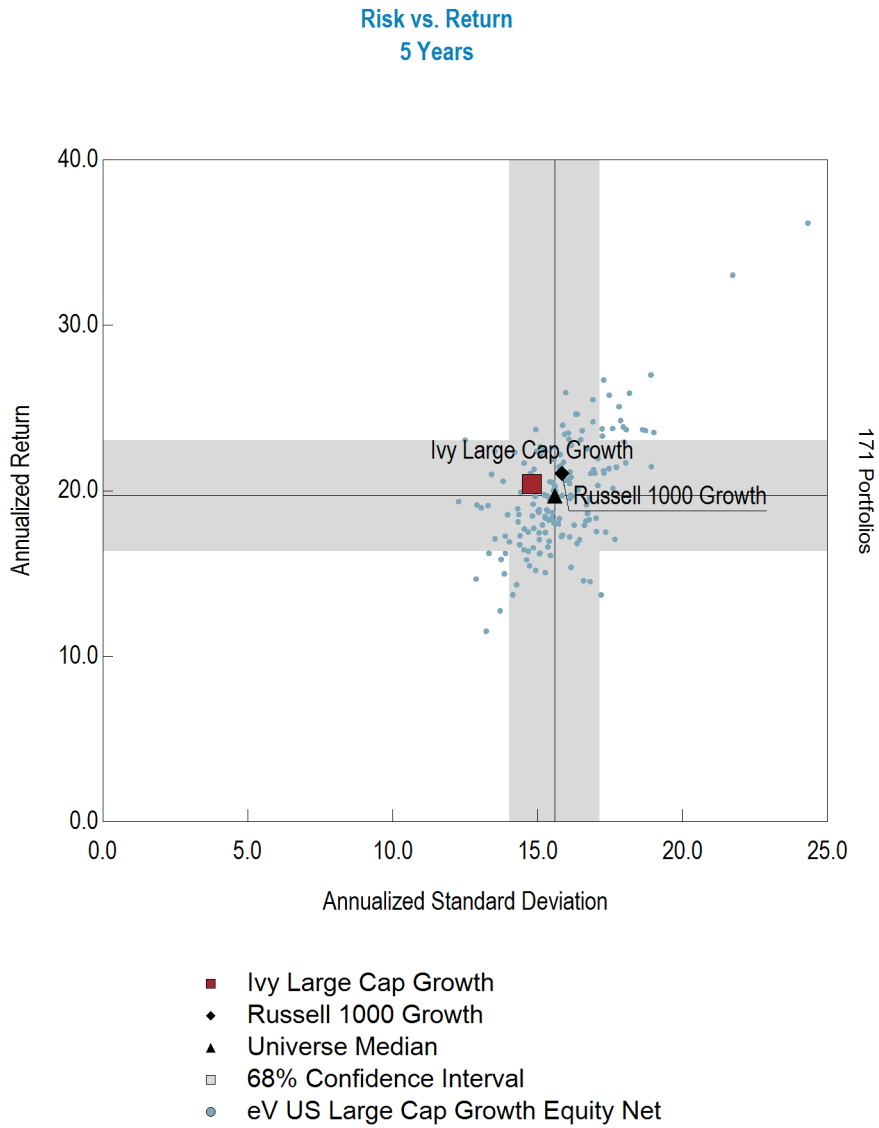


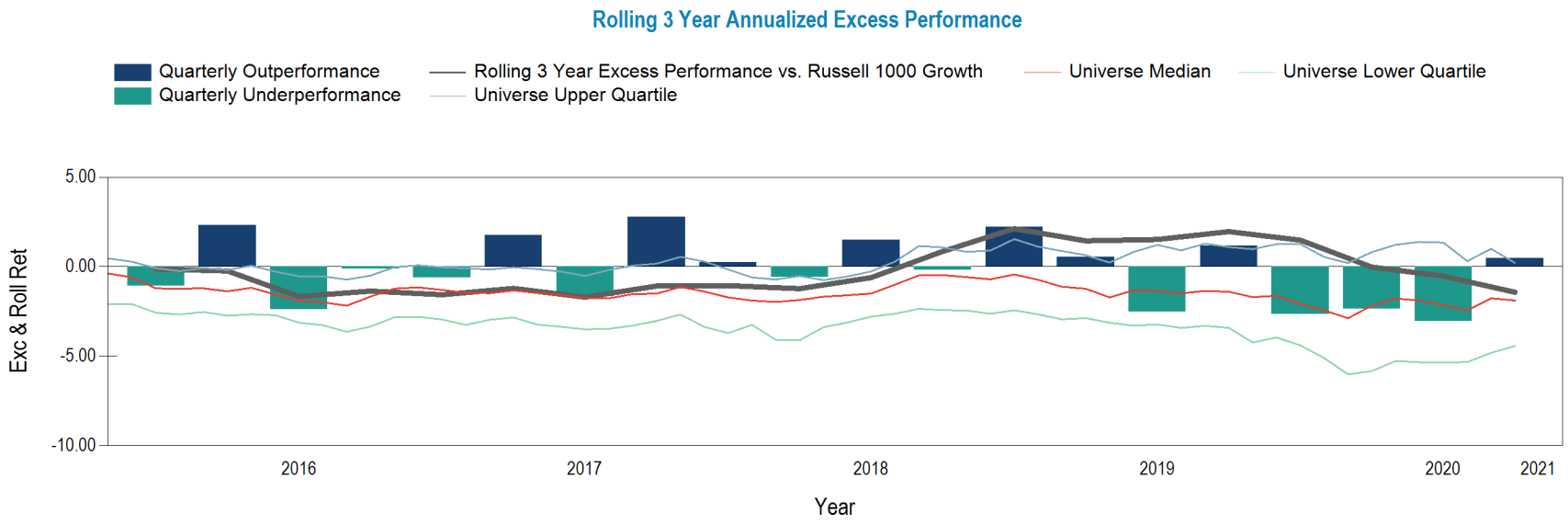
	Return (Rank)													
5th Percentile	7.2		36.6		82.3		27.4		24.9		19.4		17.8	
25th Percentile	3.6		29.2		66.1		23.5		21.8		17.4		16.2	
Median	1.8		26.6		59.8		21.4		19.7		16.0		15.3	
75th Percentile	0.2		23.4		54.3		18.6		17.7		14.5		14.1	
95th Percentile	-2.6		19.1		47.3		15.4		15.0		12.2		12.6	
# of Portfolios	197		196		195		187		171		159		145	
● **Ivy Large Cap Growth**	1.4	(56)	21.8	(88)	52.5	(84)	21.4	(51)	20.4	(42)	16.7	(35)	16.1	(27)
▲ **Russell 1000 Growth**	0.9	(62)	27.3	(43)	62.7	(37)	22.8	(32)	21.0	(34)	17.5	(24)	16.6	(18)

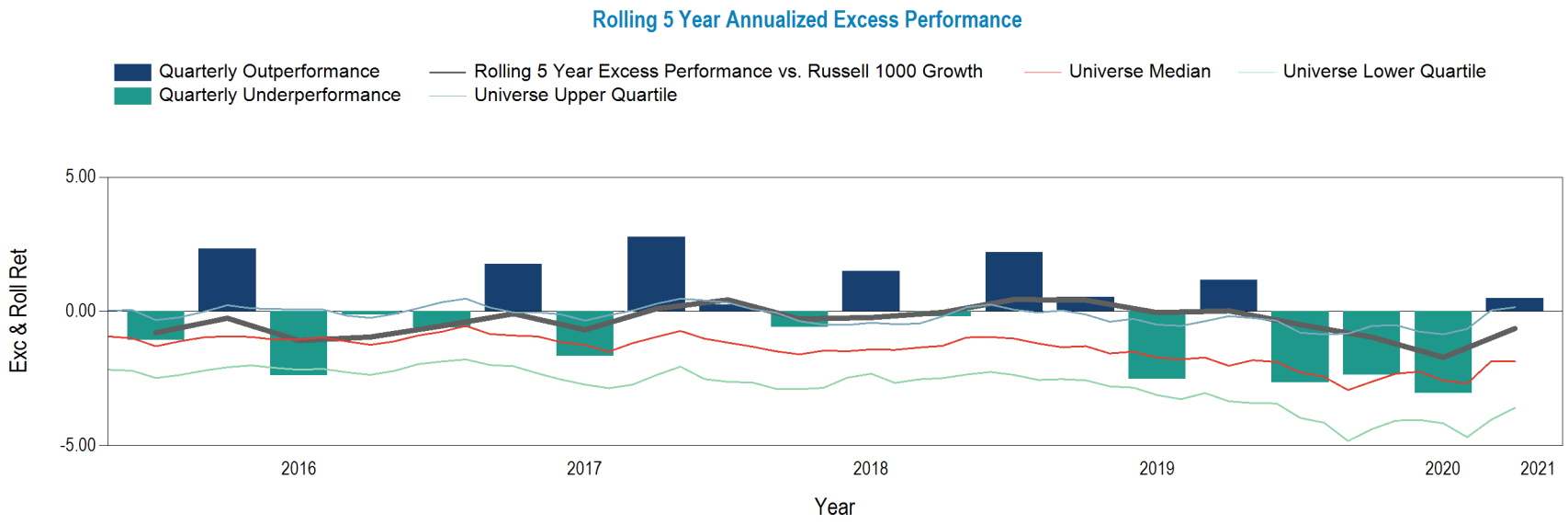


	Return (Rank)									
5th Percentile	67.5	40.3	5.8	36.0	10.8	11.4	16.7	41.9	20.7	5.4
25th Percentile	42.4	36.5	1.4	32.2	6.3	6.8	13.1	36.8	18.1	1.7
Median	34.1	33.4	-1.3	28.5	3.4	4.1	11.1	34.0	15.7	-0.8
75th Percentile	26.6	30.6	-4.1	25.2	0.8	1.6	8.7	30.9	13.2	-3.5
95th Percentile	15.5	26.1	-8.4	19.5	-4.5	-2.3	5.5	26.6	9.7	-9.4
# of Portfolios	198	186	179	182	182	175	180	158	140	133
● **Ivy Large Cap Growth**	30.9 (64)	36.6 (25)	2.7 (16)	29.5 (46)	1.6 (70)	7.1 (23)	12.3 (36)	36.6 (28)	12.5 (80)	3.1 (17)
▲ **Russell 1000 Growth**	38.5 (33)	36.4 (27)	-1.5 (52)	30.2 (38)	7.1 (20)	5.7 (35)	13.0 (28)	33.5 (54)	15.3 (58)	2.6 (20)


Risk vs. Return
3 Years
Annualized Return
Annualized Standard Deviation
Russell 1000 Growth
Ivy Large Cap Growth
187 Portfolios
Ivy Large Cap Growth
Russell 1000 Growth
Universe Median
68% Confidence Interval
eV US Large Cap Growth Equity Net


Risk vs. Return
5 Years
Annualized Return
Annualized Standard Deviation
Ivy Large Cap Growth
Russell 1000 Growth
171 Portfolios
Ivy Large Cap Growth
Russell 1000 Growth
Universe Median
68% Confidence Interval
eV US Large Cap Growth Equity Net

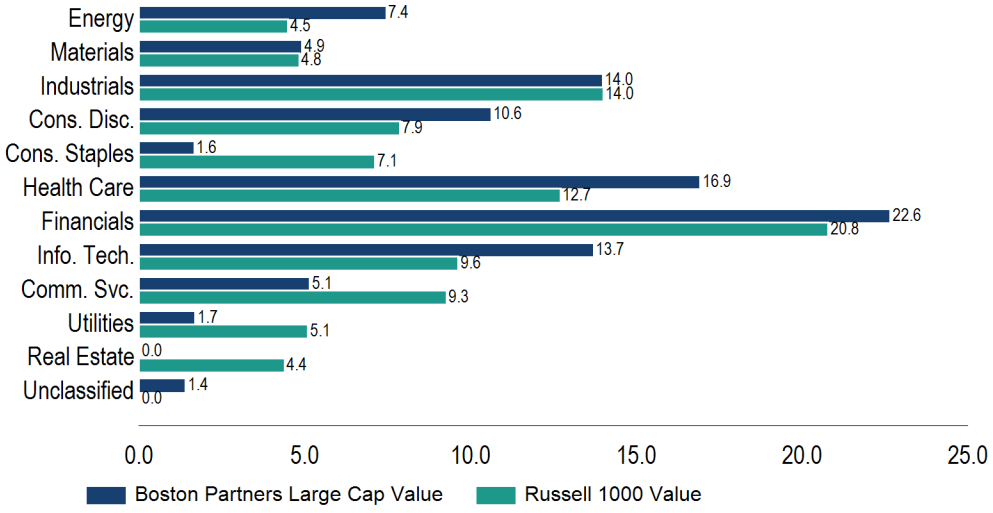

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Russell 1000 Growth
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Russell 1000 Growth
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	96	849
Weighted Avg. Market Cap. ($B)	155.00	146.56
Median Market Cap. ($B)	41.31	12.99
Price To Earnings	22.88	24.09
Price To Book	2.59	2.72
Price To Sales	1.74	2.29
Return on Equity (%)	12.07	10.75
Yield (%)	1.72	2.01
Beta	1.11	1.00

Sector Allocation (%) vs Russell 1000 Value



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

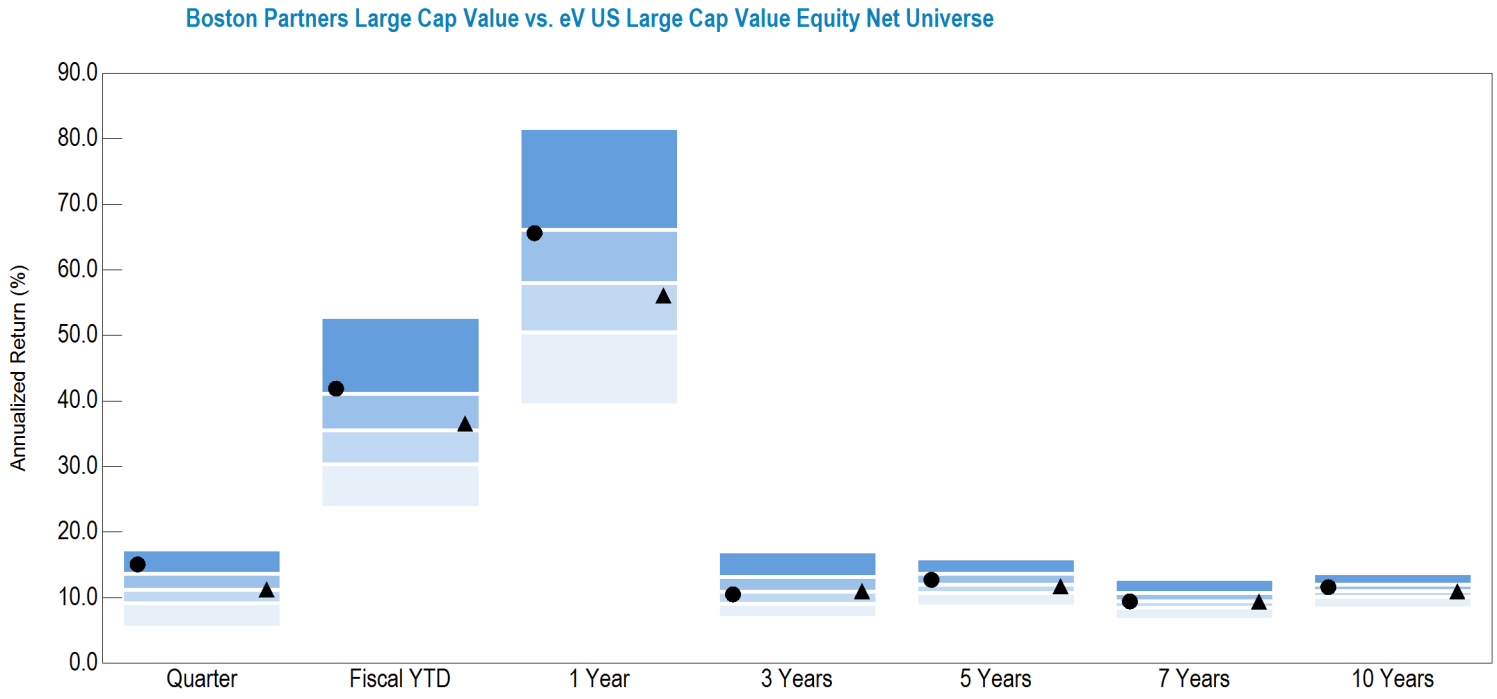
JPMORGAN CHASE & CO	3.36%
JOHNSON & JOHNSON	3.21%
BANK OF AMERICA CORP	2.98%
BERKSHIRE HATHAWAY INC	2.77%
CISCO SYSTEMS INC	2.76%
CIGNA CORP	2.07%
AUTOZONE INC	2.04%
CONOCOPHILLIPS	1.98%
DEERE & CO	1.96%
TRUIST FINANCIAL CORP	1.91%
Total	**25.03%**

Top Contributors

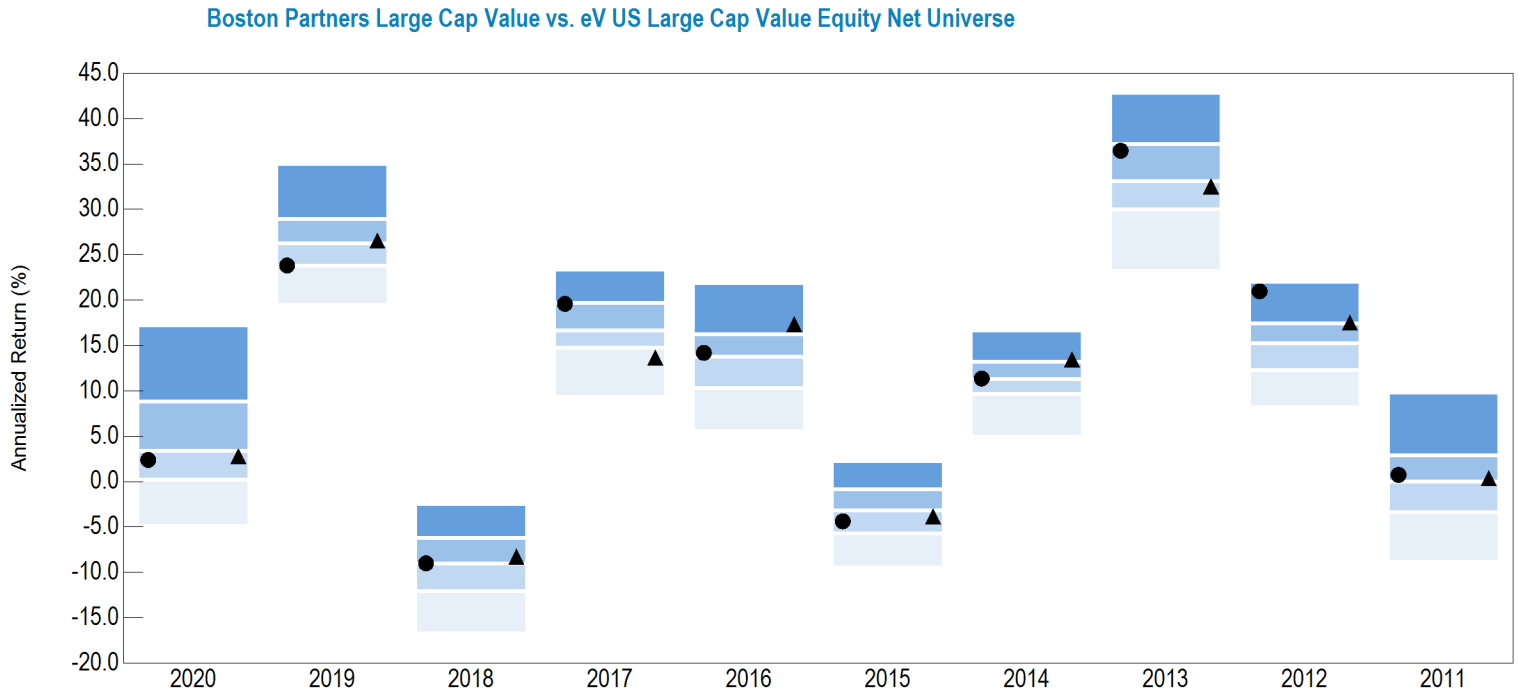
	Avg Wgt	Return	Contribution
APPLIED MATERIALS INC.	1.48	55.09	0.81
BANK OF AMERICA CORP	2.68	28.28	0.76
DEERE & CO	1.76	39.39	0.69
JPMORGAN CHASE & CO	3.21	20.66	0.66
CONOCOPHILLIPS	1.71	33.69	0.58
LAM RESEARCH CORP	1.85	26.34	0.49
TRUIST FINANCIAL CORP	1.80	22.71	0.41
CIGNA CORP	2.38	16.61	0.40
CISCO SYSTEMS INC	2.32	16.50	0.38
MOHAWK INDUSTRIES INC.	1.05	36.44	0.38

Bottom Contributors

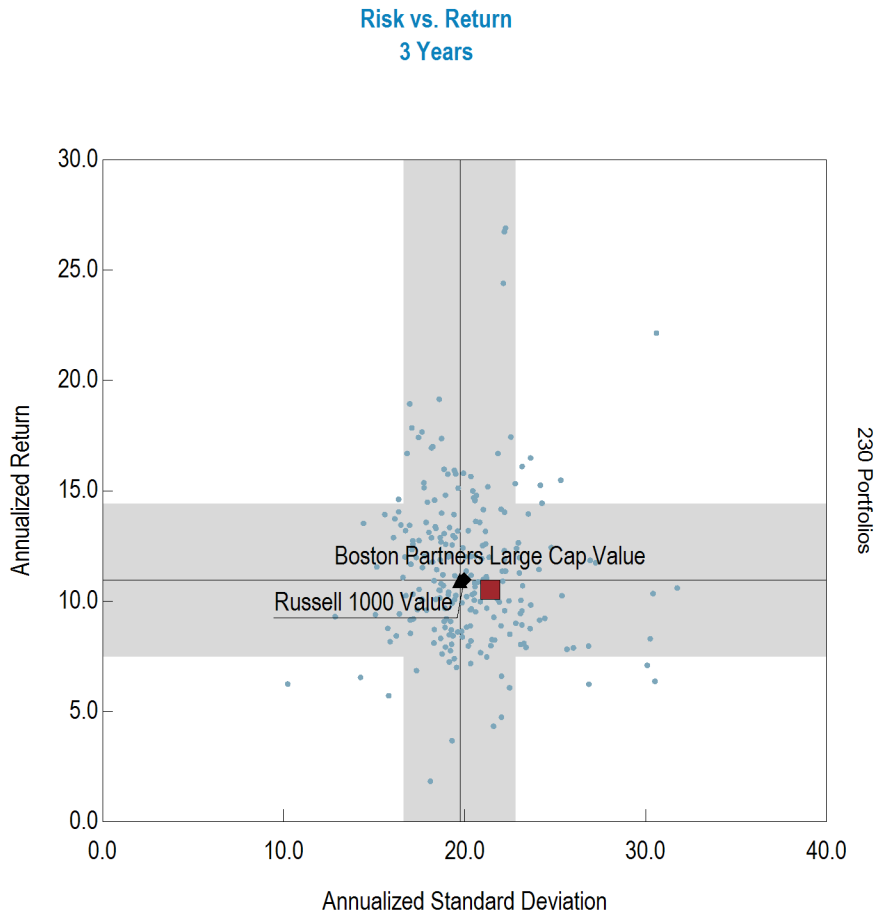
	Avg Wgt	Return	Contribution
PETROLEO BRASILEIRO S.A.- PETROBRAS	0.59	-24.49	-0.14
YAMANA GOLD INC	0.59	-23.45	-0.14
VIATRIS INC	0.41	-25.45	-0.10
T-MOBILE US INC	1.44	-7.09	-0.10
NOVARTIS AG	1.63	-6.01	-0.10
VISTRA CORP	0.82	-9.33	-0.08
EDISON INTERNATIONAL	1.01	-5.68	-0.06
SS&C TECHNOLOGIES HOLDINGS INC	0.86	-3.73	-0.03
KINROSS GOLD CORP	0.32	-8.71	-0.03
FMC CORP.	0.61	-3.34	-0.02



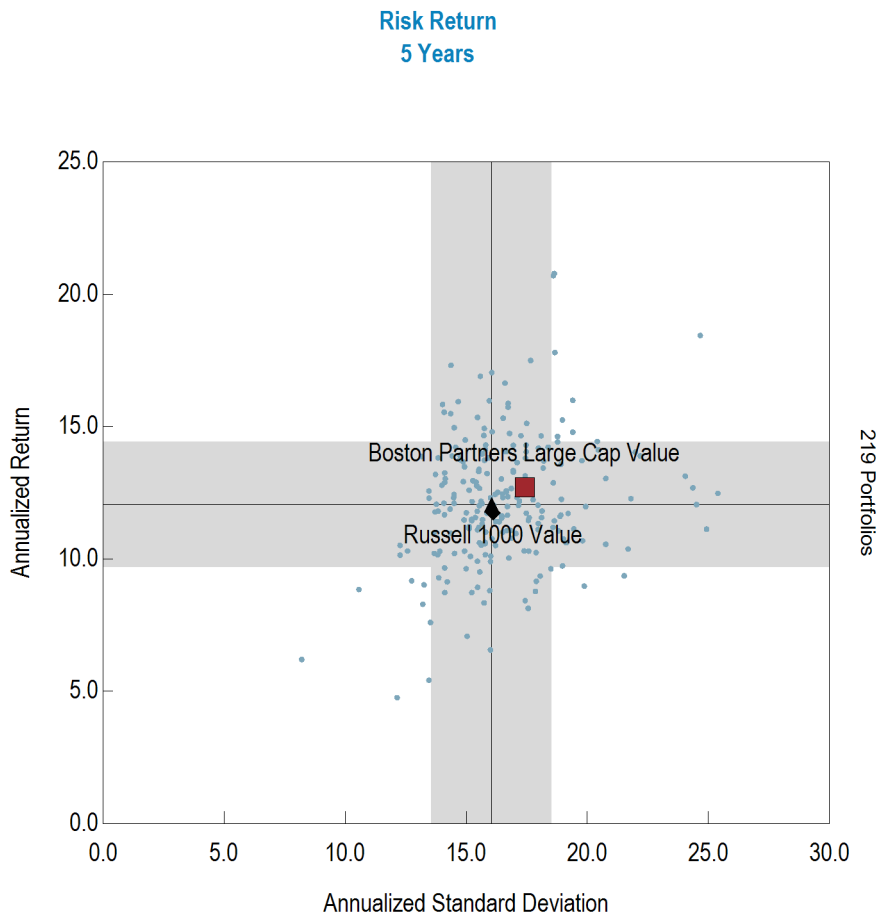
	Return (Rank)													
5th Percentile	17.3		52.7		81.5		17.0		15.9		12.8		13.7	
25th Percentile	13.7		41.1		66.2		13.2		13.7		10.7		12.0	
Median	11.3		35.6		58.0		10.9		12.1		9.5		11.0	
75th Percentile	9.2		30.4		50.5		9.1		10.7		8.5		10.1	
95th Percentile	5.5		23.7		39.3		6.9		8.7		6.7		8.4	
# of Portfolios	235		235		234		230		219		204		178	
● **Boston Partners Large Cap Value**	15.1	(15)	41.9	(22)	65.6	(29)	10.5	(55)	12.7	(37)	9.4	(52)	11.6	(35)
▲ **Russell 1000 Value**	11.3	(51)	36.6	(46)	56.1	(57)	11.0	(50)	11.7	(57)	9.4	(53)	11.0	(51)



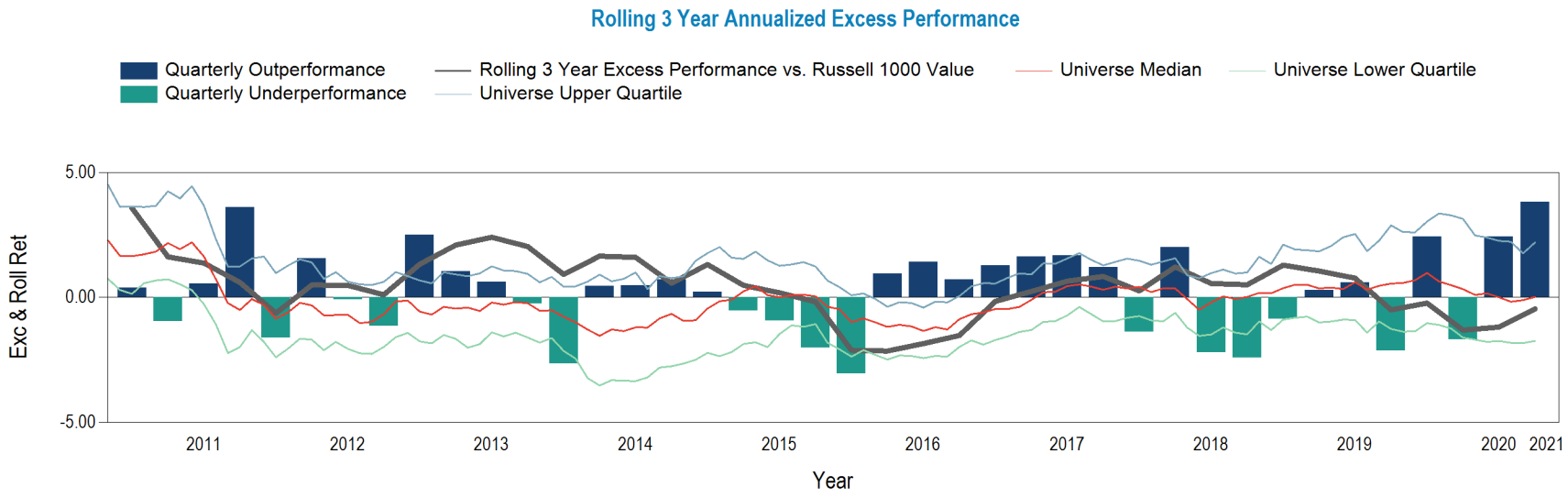
	Return (Rank)																			
5th Percentile	17.2		34.9		-2.5		23.3		21.8		2.2		16.6		42.8		22.0		9.8	
25th Percentile	8.9		28.9		-6.1		19.7		16.3		-0.8		13.3		37.3		17.5		2.9	
Median	3.4		26.3		-9.0		16.7		13.8		-3.1		11.3		33.1		15.3		0.0	
75th Percentile	0.2		23.8		-12.0		14.8		10.4		-5.7		9.7		30.0		12.3		-3.4	
95th Percentile	-4.8		19.5		-16.7		9.4		5.6		-9.4		5.0		23.2		8.2		-8.8	
# of Portfolios	239		249		239		231		225		195		197		184		164		149	
● Boston Partners Large Cap Value	2.4	(57)	23.8	(75)	-9.0	(51)	19.6	(26)	14.2	(47)	-4.4	(63)	11.4	(50)	36.4	(30)	21.0	(7)	0.7	(44)
▲ Russell 1000 Value	2.8	(54)	26.5	(49)	-8.3	(43)	13.7	(86)	17.3	(19)	-3.8	(59)	13.5	(24)	32.5	(54)	17.5	(25)	0.4	(48)



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



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


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Russell 1000 Value
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2011
2012
2013
2014
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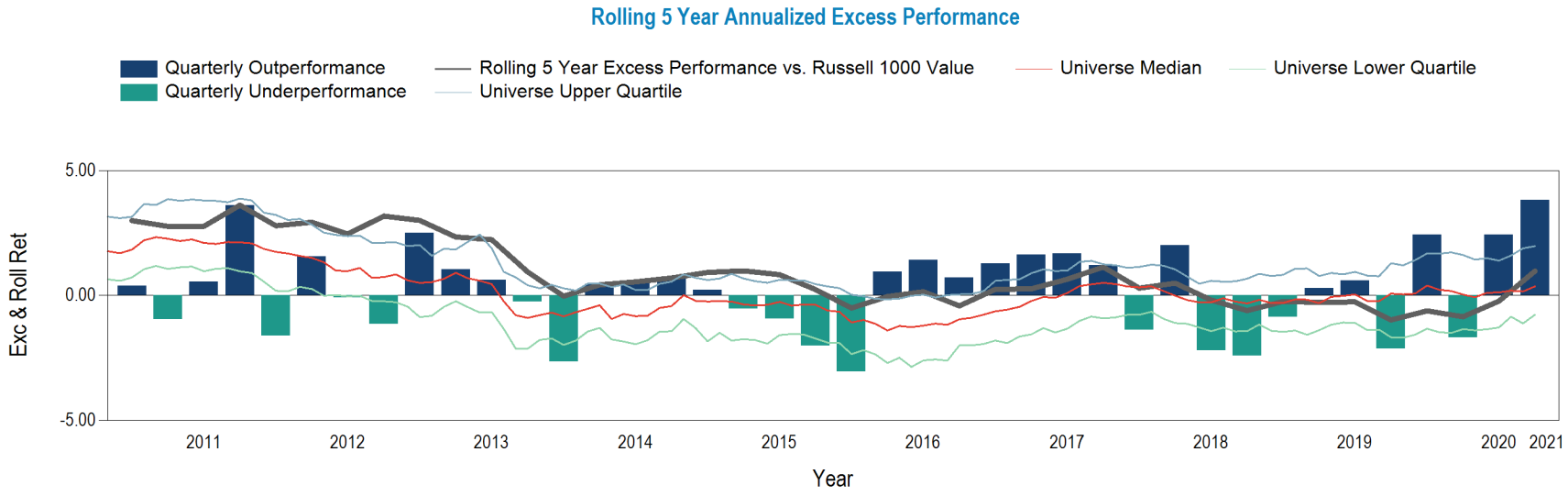
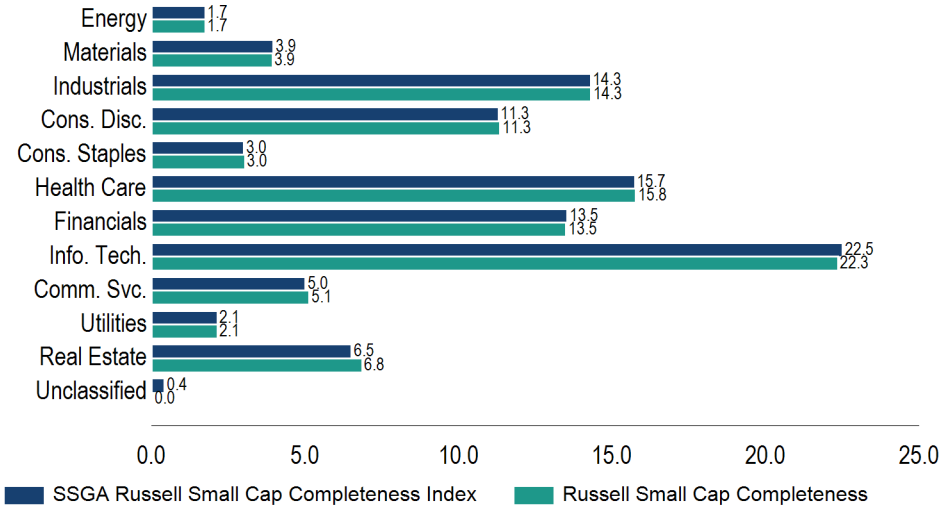
2020
2021
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Russell 1000 Value
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year

Characteristics

	Portfolio	Russell Small Cap Completeness
Number of Holdings	2,549	2,529
Weighted Avg. Market Cap. ($B)	13.16	13.32
Median Market Cap. ($B)	1.55	1.60
Price To Earnings	27.05	27.73
Price To Book	3.41	3.44
Price To Sales	2.35	2.38
Return on Equity (%)	-3.14	-3.41
Yield (%)	0.93	0.94
Beta	1.00	1.00

Sector Allocation (%) vs Russell Small Cap Completeness



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

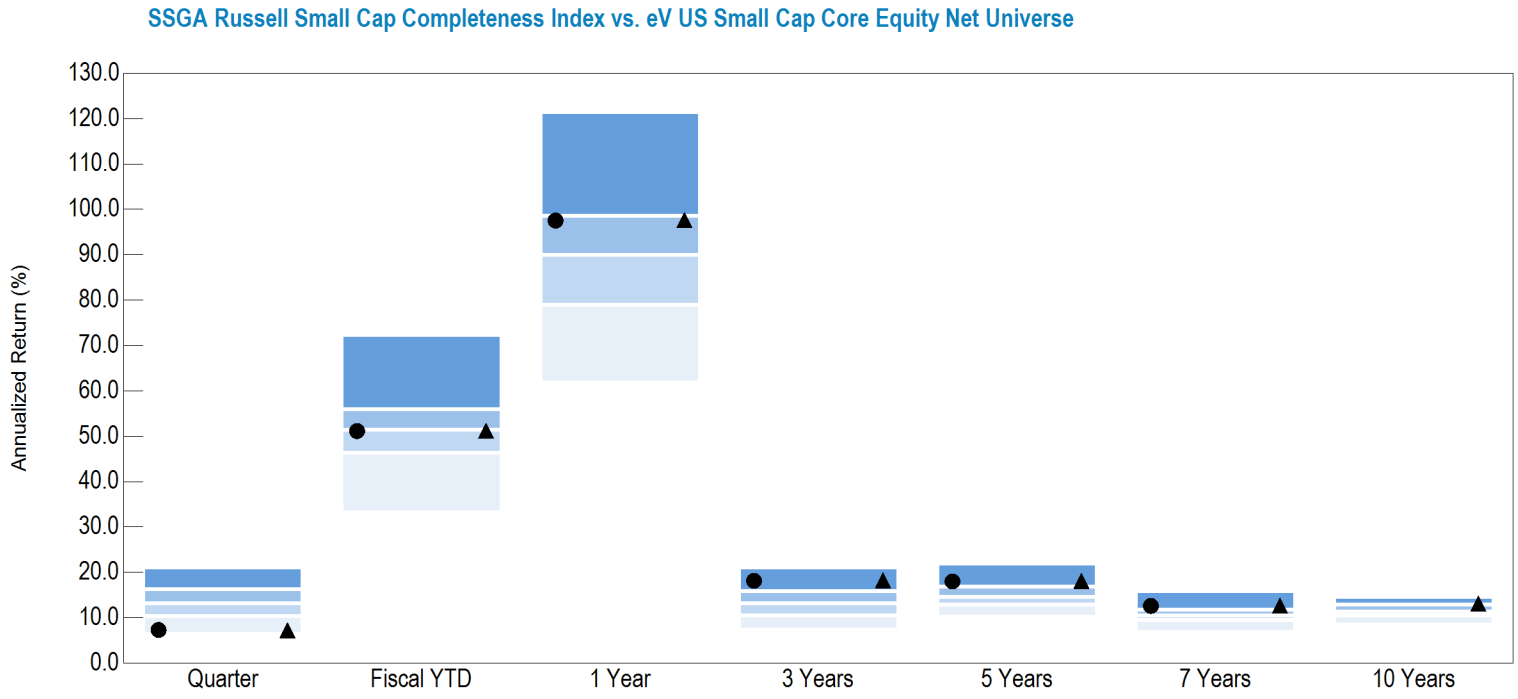
SQUARE INC	1.19%
UBER TECHNOLOGIES INC	1.07%
ZOOM VIDEO COMMUNICATIONS INC	0.80%
TWILIO INC	0.70%
WORKDAY INC	0.63%
MODERNA INC	0.53%
DOCUSIGN INC.	0.52%
SPOTIFY TECHNOLOGY S.A	0.51%
ROKU INC	0.51%
VEEVA SYSTEMS CL.A	0.50%
Total	**6.96%**

Top Contributors

	Avg Wgt	Return	Contribution
GAMESTOP CORP.	0.02	907.55	0.15
MODERNA INC	0.45	25.35	0.11
WAYFAIR CL.A	0.24	39.39	0.10
GENERAC HOLDINGS INC	0.21	43.99	0.09
WILLIAMS-SONOMA INC.	0.12	76.70	0.09
UBER TECHNOLOGIES INC	1.07	6.88	0.07
SIGNATURE BANK	0.11	67.69	0.07
KKR & CO INC	0.33	21.00	0.07
NOVAVAX INC	0.10	62.59	0.07
DELL TECHNOLOGIES INC	0.29	20.27	0.06

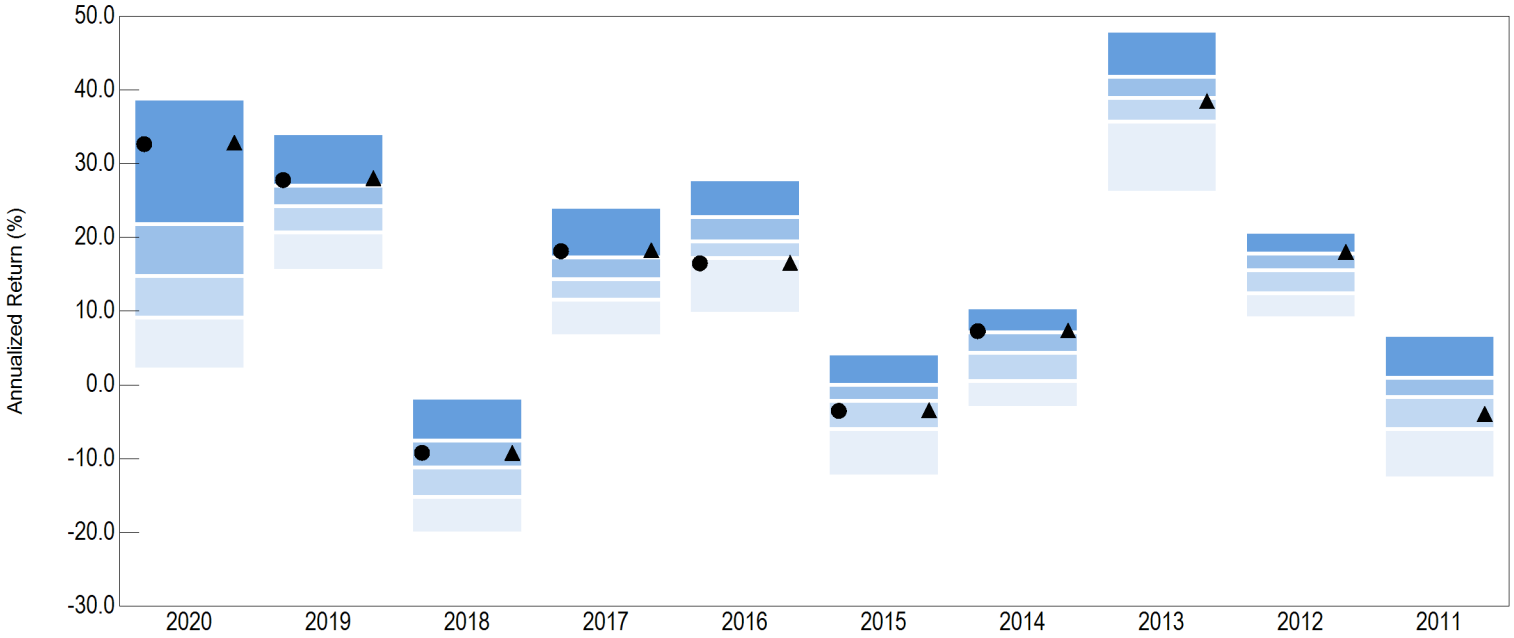
Bottom Contributors

	Avg Wgt	Return	Contribution
PELOTON INTERACTIVE INC	0.59	-25.89	-0.15
SAREPTA THERAPEUTICS INC	0.20	-56.28	-0.11
RINGCENTRAL ORD	0.45	-21.40	-0.10
TRADE DESK INC (THE)	0.50	-18.64	-0.09
SPOTIFY TECHNOLOGY S.A	0.63	-14.84	-0.09
COUPA SOFTWARE INC	0.35	-24.91	-0.09
SPLUNK INC	0.41	-20.25	-0.08
LULULEMON ATHLETICA INC	0.60	-11.87	-0.07
MONGODB INC	0.28	-25.52	-0.07
SEAGEN INC	0.34	-20.71	-0.07

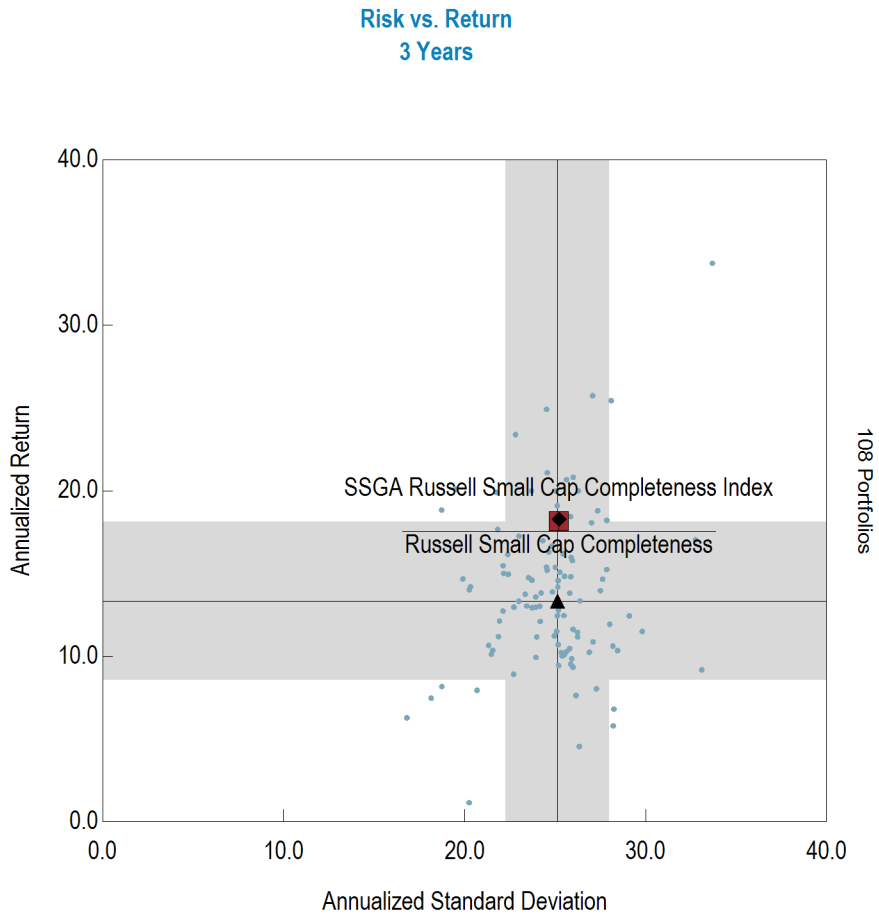


	Return (Rank)													
5th Percentile	21.1		72.2		121.3		21.0		21.9		15.9		14.5	
25th Percentile	16.4		56.0		98.7		16.0		16.9		11.9		12.9	
Median	13.3		51.6		90.0		13.3		14.7		10.6		11.5	
75th Percentile	10.4		46.5		79.1		10.6		13.0		9.5		10.6	
95th Percentile	6.5		33.4		61.9		7.5		10.3		6.9		8.6	
# of Portfolios	110		110		110		108		102		97		82	
● **SSGA Russell Small Cap Completeness Index**	7.3	(93)	51.1	(53)	97.5	(27)	18.2	(17)	18.0	(15)	12.6	(20)	--	(--)
▲ **Russell Small Cap Completeness**	7.3	(93)	51.2	(52)	97.6	(27)	18.3	(16)	18.1	(15)	12.7	(19)	13.2	(20)

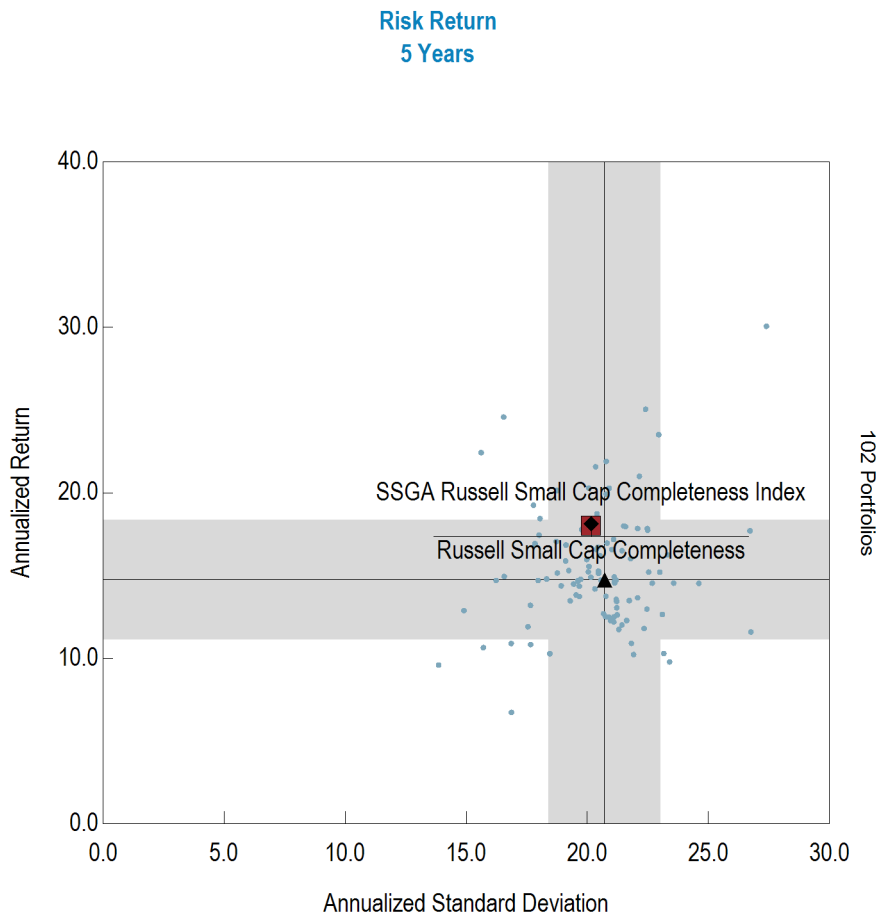
SSGA Russell Small Cap Completeness Index vs. eV US Small Cap Core Equity Net Universe



	Return (Rank)																			
5th Percentile	38.8		34.1		-1.8		24.1		27.8		4.2		10.5		48.0		20.7		6.8	
25th Percentile	21.8		27.0		-7.5		17.3		22.8		0.1		7.2		41.8		17.9		1.0	
Median	14.8		24.3		-11.1		14.4		19.5		-2.1		4.4		38.9		15.6		-1.6	
75th Percentile	9.1		20.7		-15.1		11.6		17.3		-5.9		0.6		35.8		12.5		-5.9	
95th Percentile	2.1		15.5		-20.1		6.7		9.7		-12.3		-3.1		26.1		9.1		-12.7	
# of Portfolios	113		112		113		106		99		88		77		73		60		57	
● **SSGA Russell Small Cap Completeness Index**	32.6	(12)	27.8	(19)	-9.2	(36)	18.1	(21)	16.5	(78)	-3.5	(65)	7.3	(22)	--	(--)	--	(--)	--	(--)
▲ **Russell Small Cap Completeness**	32.9	(11)	28.0	(19)	-9.2	(36)	18.3	(21)	16.6	(78)	-3.4	(64)	7.4	(21)	38.5	(53)	18.0	(25)	-3.9	(69)



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

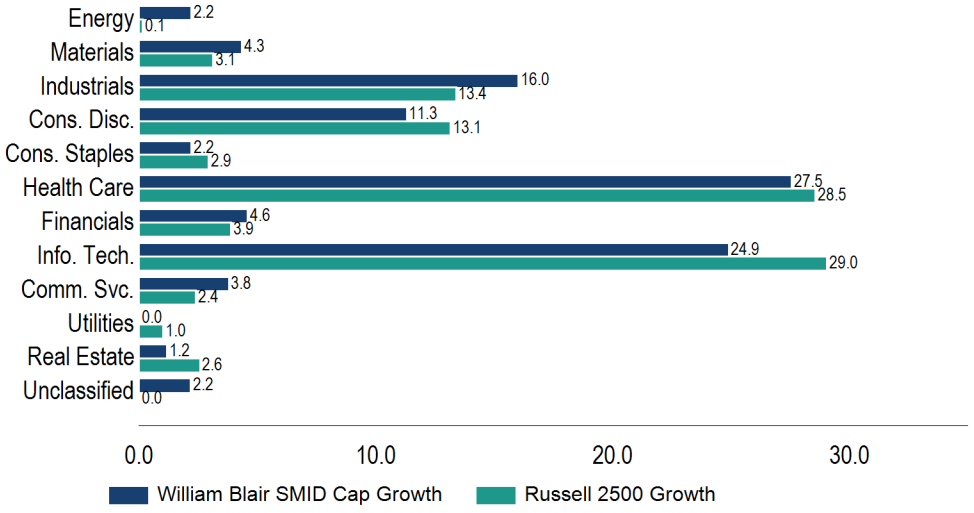


- SSGA Russell Small Cap Completeness Index
- Russell Small Cap Completeness
- Universe Median
- 68% Confidence Interval
- eV US Small Cap Core Equity Net

Characteristics

	Portfolio	Russell 2500 Growth
Number of Holdings	76	1,311
Weighted Avg. Market Cap. ($B)	9.79	7.60
Median Market Cap. ($B)	8.08	1.76
Price To Earnings	39.67	36.33
Price To Book	6.26	6.41
Price To Sales	4.08	3.78
Return on Equity (%)	5.75	-1.08
Yield (%)	0.35	0.38
Beta	0.83	1.00

Sector Allocation (%) vs Russell 2500 Growth



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

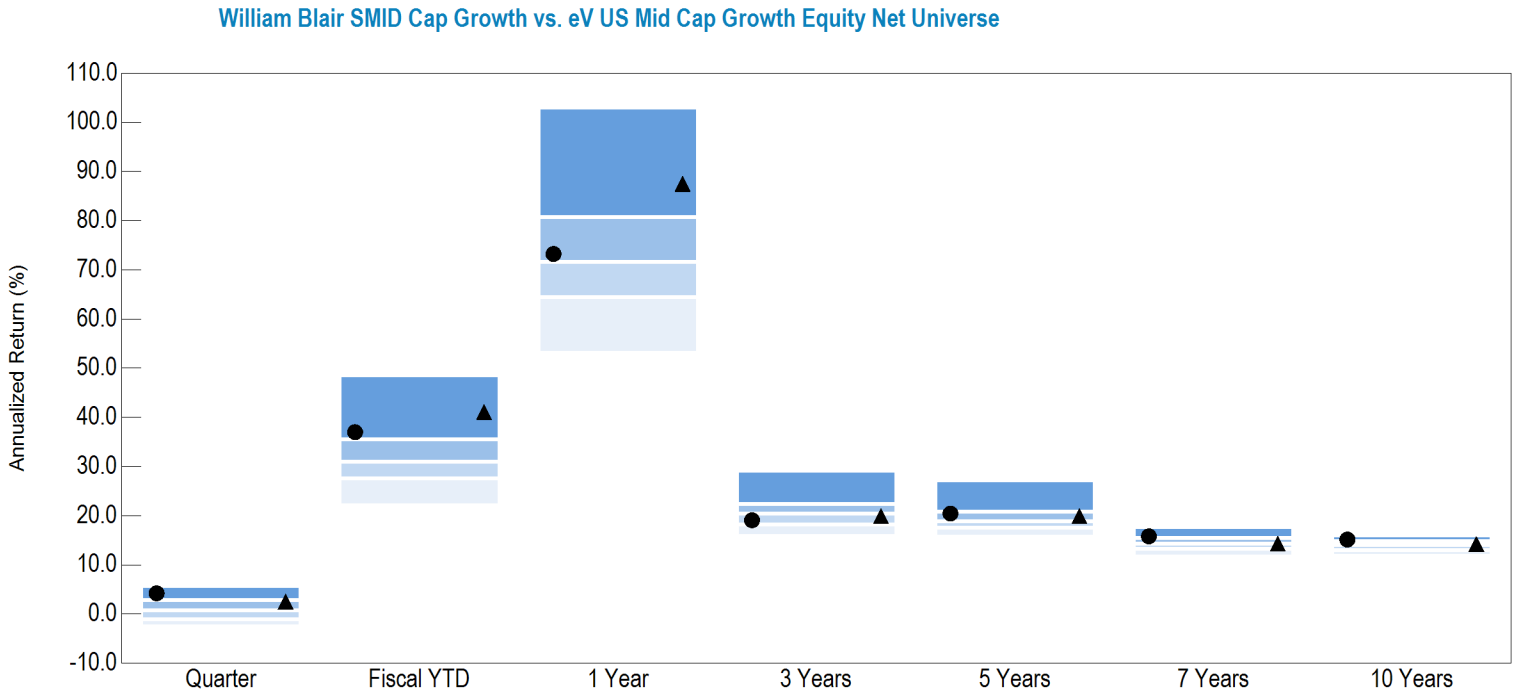
BWX TECHNOLOGIES INC	2.69%
GRAND CANYON EDUCATION INC	2.59%
BRINK'S CO (THE)	2.26%
MARTIN MARIETTA MATERIALS INC.	2.23%
HORIZON THERAPEUTICS PUBLIC LTD CO	2.21%
CROWN HOLDINGS INC	2.18%
ENCOMPASS HEALTH CORP	2.18%
BIO-TECHNE CORP	2.13%
TREX CO INC	1.90%
PURE STORAGE INC	1.81%
Total	**22.18%**

Top Contributors

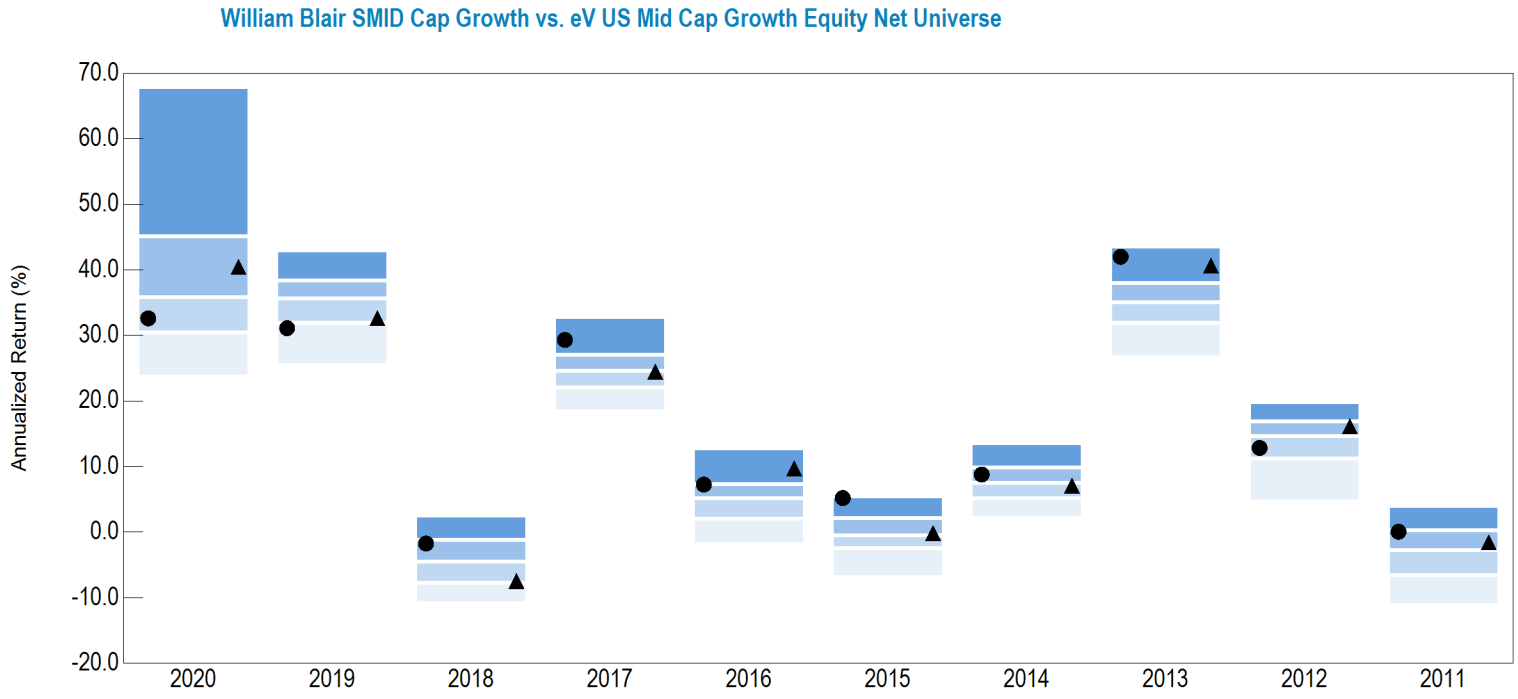
	Avg Wgt	Return	Contribution
PENUMBRA INC	1.46	54.62	0.80
HORIZON THERAPEUTICS PUBLIC LTD CO	2.34	25.82	0.60
LIGAND PHARMACEUTICALS INC	1.11	53.29	0.59
GENERAC HOLDINGS INC	1.27	43.99	0.56
WESTERN ALLIANCE BANCORPORATION	0.77	58.01	0.44
MARTIN MARIETTA MATERIALS INC.	2.27	18.46	0.42
GRAND CANYON EDUCATION INC	2.28	15.02	0.34
10X GENOMICS INC	1.22	27.82	0.34
ETSY INC	2.49	13.35	0.33
BIO-TECHNE CORP	1.58	20.37	0.32

Bottom Contributors

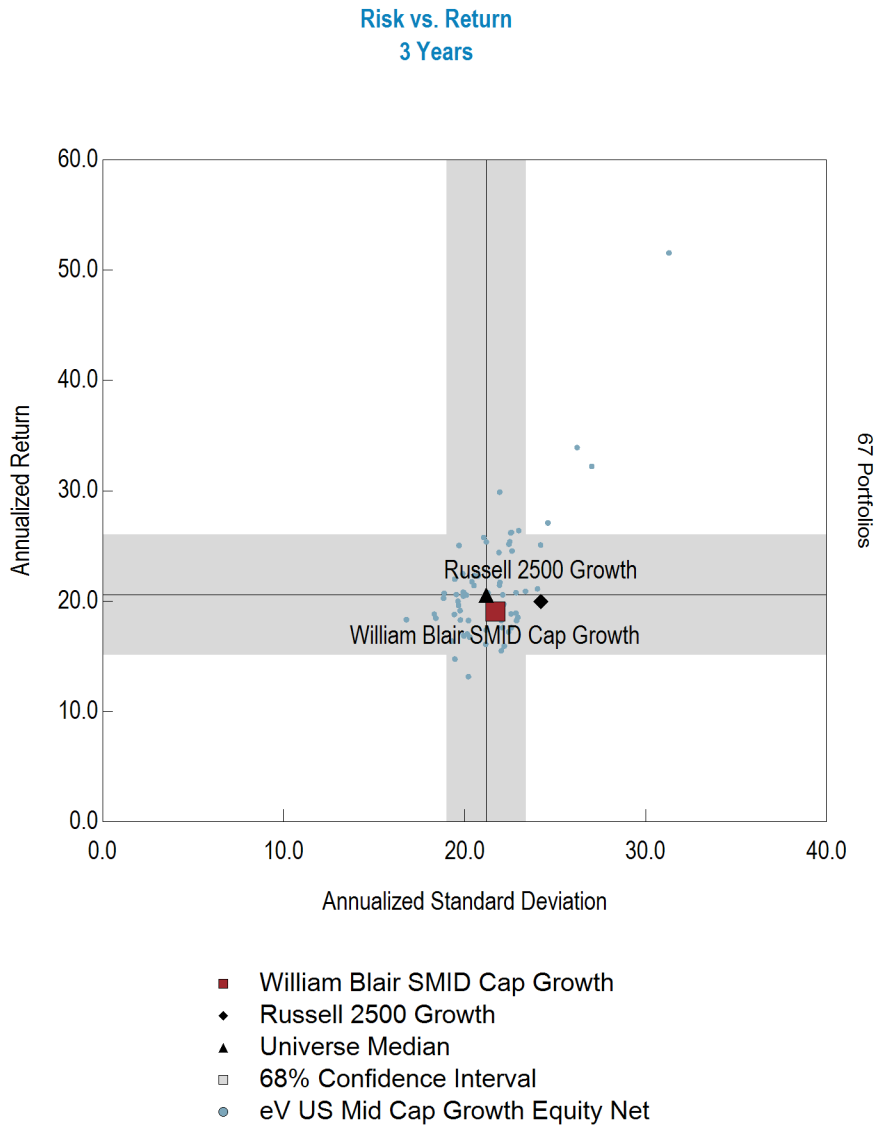
	Avg Wgt	Return	Contribution
NICE LTD	2.24	-23.13	-0.52
LIVERAMP HOLDINGS INC	1.29	-29.12	-0.38
MERCURY SYSTEMS INC	1.89	-19.77	-0.37
MONGODB INC	1.26	-25.52	-0.32
AVALARA INC	1.52	-19.08	-0.29
ALARM.COM HOLDINGS INC	1.74	-16.50	-0.29
CABLE ONE INC	1.57	-17.83	-0.28
RITCHIE BROS AUCTIONEERS INC	1.76	-15.49	-0.27
GUIDEWIRE SOFTWARE INC	0.83	-21.05	-0.18
SOLAREDGE TECHNOLOGIES INC	1.70	-9.93	-0.17

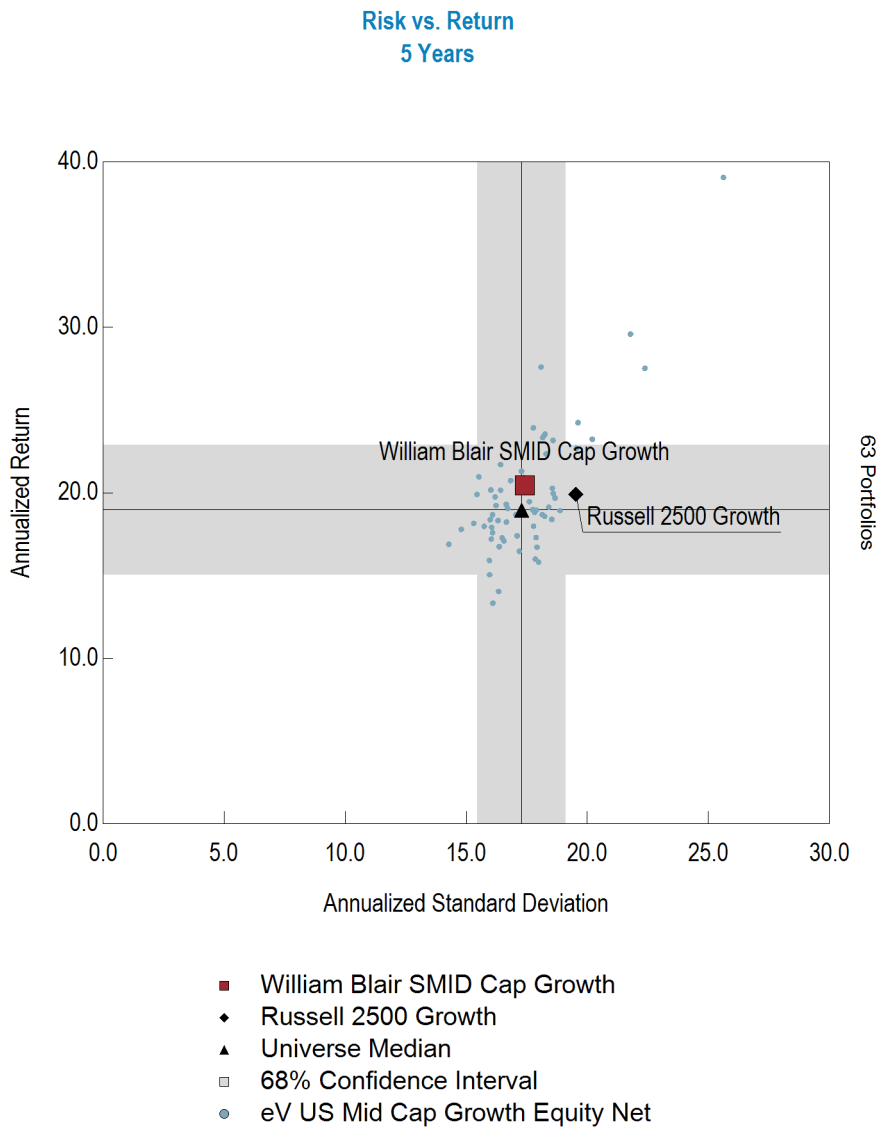


	Return (Rank)													
5th Percentile	5.6		48.4		102.9		29.0		27.2		17.7		16.0	
25th Percentile	2.9		35.5		80.8		22.4		20.9		15.6		14.9	
Median	0.9		31.0		71.6		20.5		19.0		14.3		14.1	
75th Percentile	-1.0		27.7		64.5		18.3		17.7		13.4		13.1	
95th Percentile	-2.5		22.2		53.2		16.0		15.8		11.8		11.9	
# of Portfolios	70		70		69		67		63		60		56	
● **William Blair SMID Cap Growth**	4.2	(14)	37.0	(22)	73.2	(42)	19.1	(63)	20.4	(29)	15.8	(23)	15.1	(11)
▲ **Russell 2500 Growth**	2.5	(30)	41.1	(11)	87.5	(13)	20.0	(55)	19.9	(36)	14.3	(50)	14.2	(48)

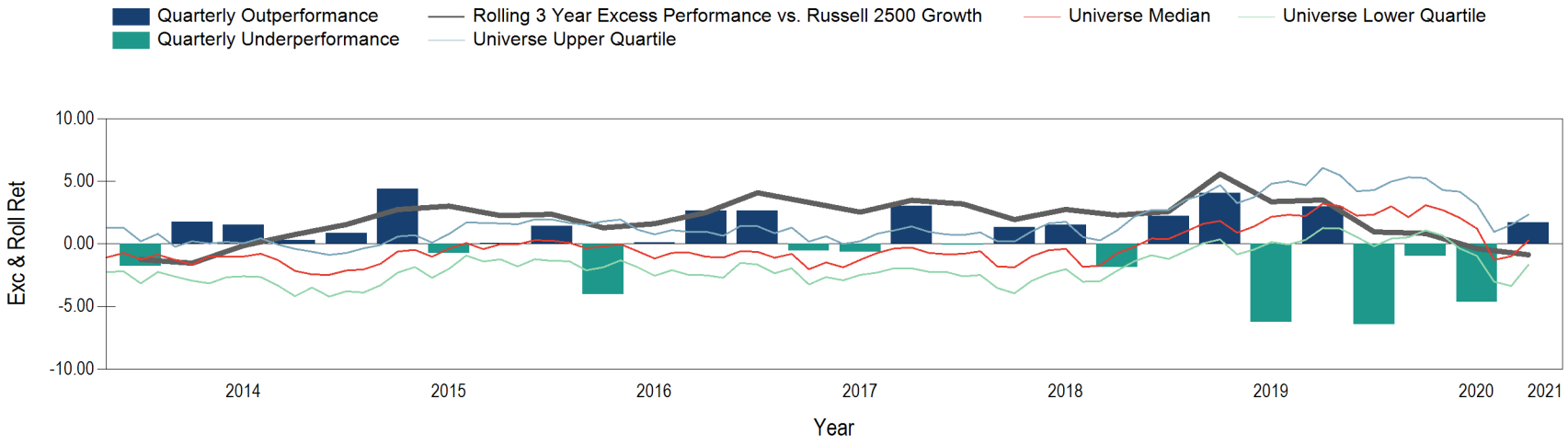


	Return (Rank)									
5th Percentile	67.8	42.9	2.5	32.8	12.7	5.4	13.5	43.5	19.8	3.9
25th Percentile	45.2	38.4	-1.2	27.1	7.3	2.2	9.9	38.0	16.9	0.4
Median	35.9	35.7	-4.4	24.7	5.2	-0.5	7.6	35.1	14.7	-2.7
75th Percentile	30.5	32.0	-7.7	22.1	2.1	-2.4	5.2	32.0	11.3	-6.5
95th Percentile	23.8	25.6	-10.8	18.5	-1.8	-6.8	2.2	26.7	4.7	-11.1
# of Portfolios	71	65	70	73	72	63	75	68	64	58
● William Blair SMID Cap Growth	32.6 (64)	31.1 (78)	-1.7 (30)	29.3 (14)	7.2 (28)	5.2 (6)	8.8 (36)	42.0 (9)	12.8 (69)	0.1 (27)
▲ Russell 2500 Growth	40.5 (40)	32.7 (70)	-7.5 (74)	24.5 (52)	9.7 (12)	-0.2 (48)	7.1 (59)	40.7 (14)	16.1 (33)	-1.6 (40)

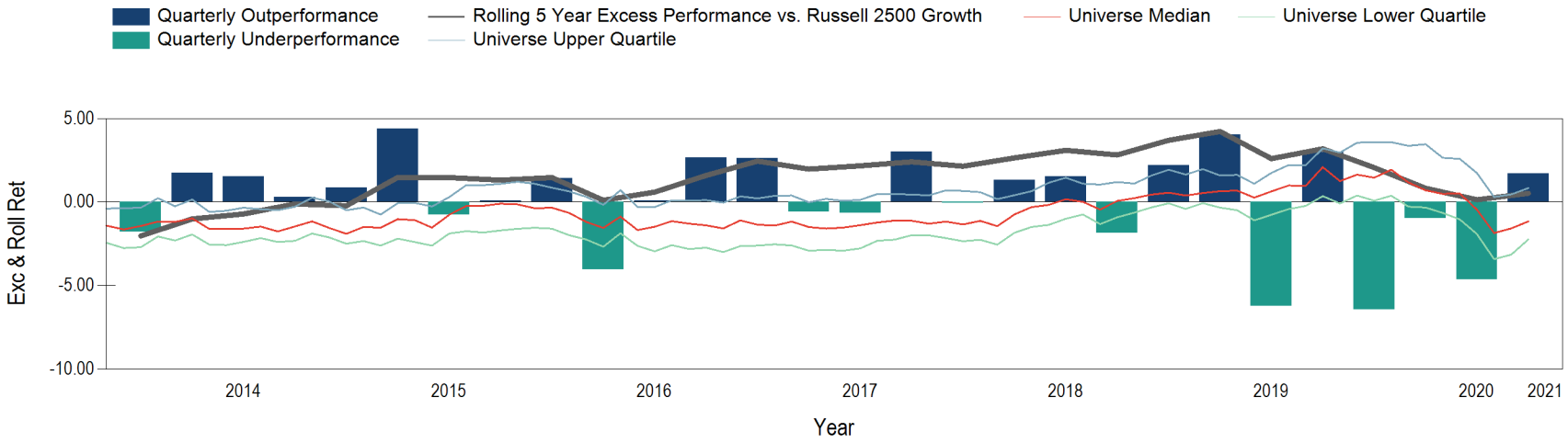

Risk vs. Return
3 Years
Annualized Return
Annualized Standard Deviation
60.0
50.0
40.0
30.0
20.0
10.0
0.0
0.0
10.0
20.0
30.0
40.0
Russell 2500 Growth
William Blair SMID Cap Growth
67 Portfolios
William Blair SMID Cap Growth
Russell 2500 Growth
Universe Median
68% Confidence Interval
eV US Mid Cap Growth Equity Net


Risk vs. Return
5 Years
Annualized Return
Annualized Standard Deviation
40.0
30.0
20.0
10.0
0.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
William Blair SMID Cap Growth
Russell 2500 Growth
63 Portfolios
William Blair SMID Cap Growth
Russell 2500 Growth
Universe Median
68% Confidence Interval
eV US Mid Cap Growth Equity Net

Rolling 3 Year Annualized Excess Performance



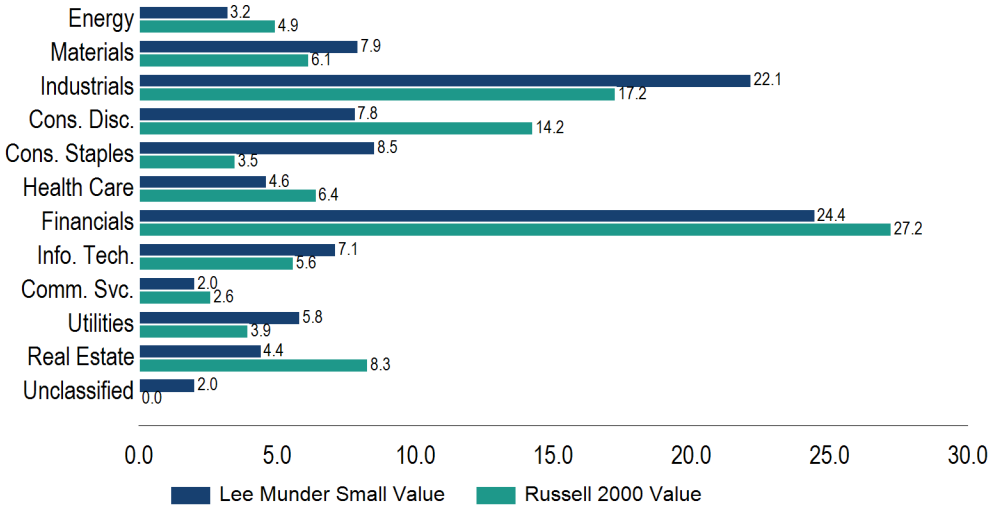
Rolling 5 Year Annualized Excess Performance



Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	93	1,474
Weighted Avg. Market Cap. ($B)	3.91	3.16
Median Market Cap. ($B)	3.58	0.94
Price To Earnings	22.93	19.34
Price To Book	2.26	1.97
Price To Sales	1.64	1.30
Return on Equity (%)	2.65	-5.98
Yield (%)	1.57	1.46
Beta	0.93	1.00

Sector Allocation (%) vs Russell 2000 Value



**Unclassified includes Cash*

Top Holdings
Ending Period Weight

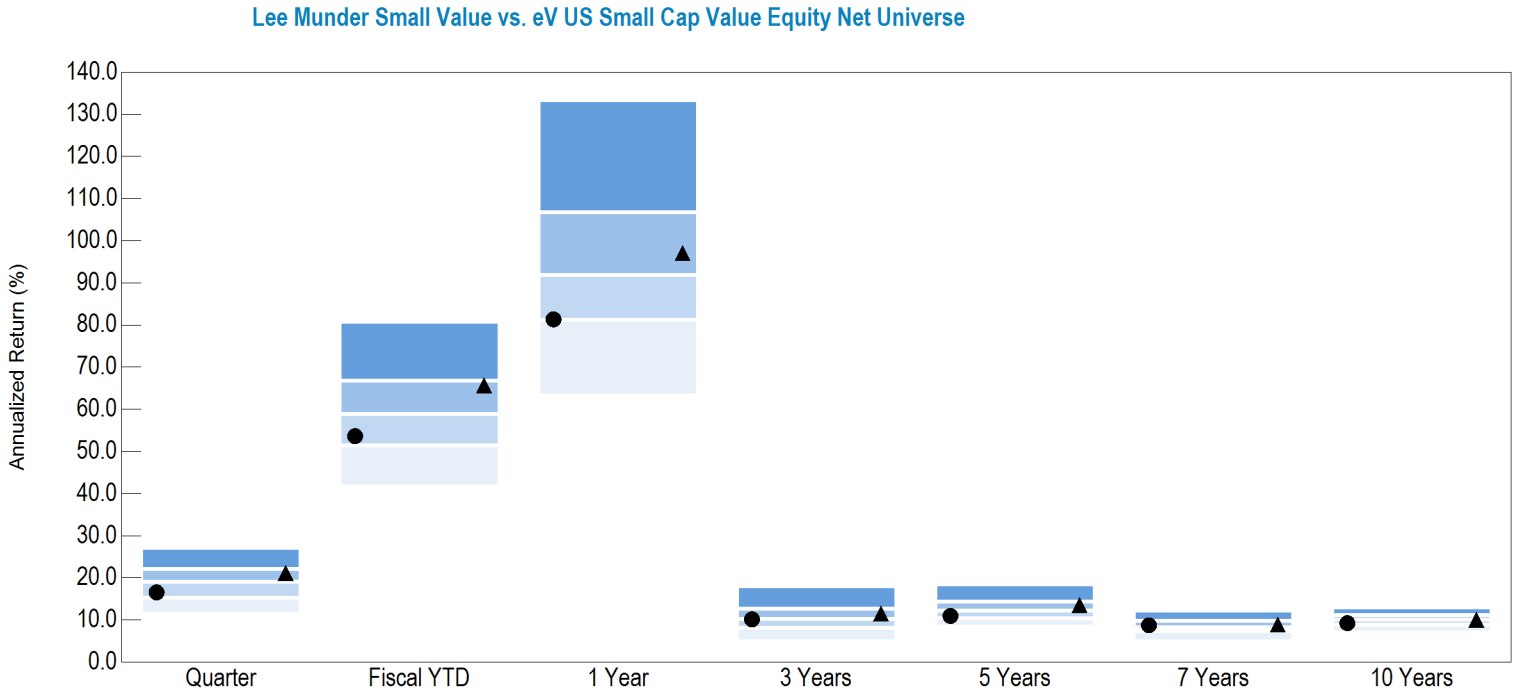
PORTLAND GENERAL ELECTRIC CO	2.86%
PINNACLE FINANCIAL PARTNERS INC	2.66%
BANKUNITED INC	2.35%
WESTERN ALLIANCE BANCORPORATION	2.35%
STERLING BANCORP	2.25%
F.N.B. CORP	2.04%
REGAL BELOIT CORP	2.04%
TREEHOUSE FOODS INC	2.04%
MGIC INVESTMENT CORP	1.94%
BANK BUTTERFIELD & SON LTD	1.84%
Total	**22.39%**

Top Contributors

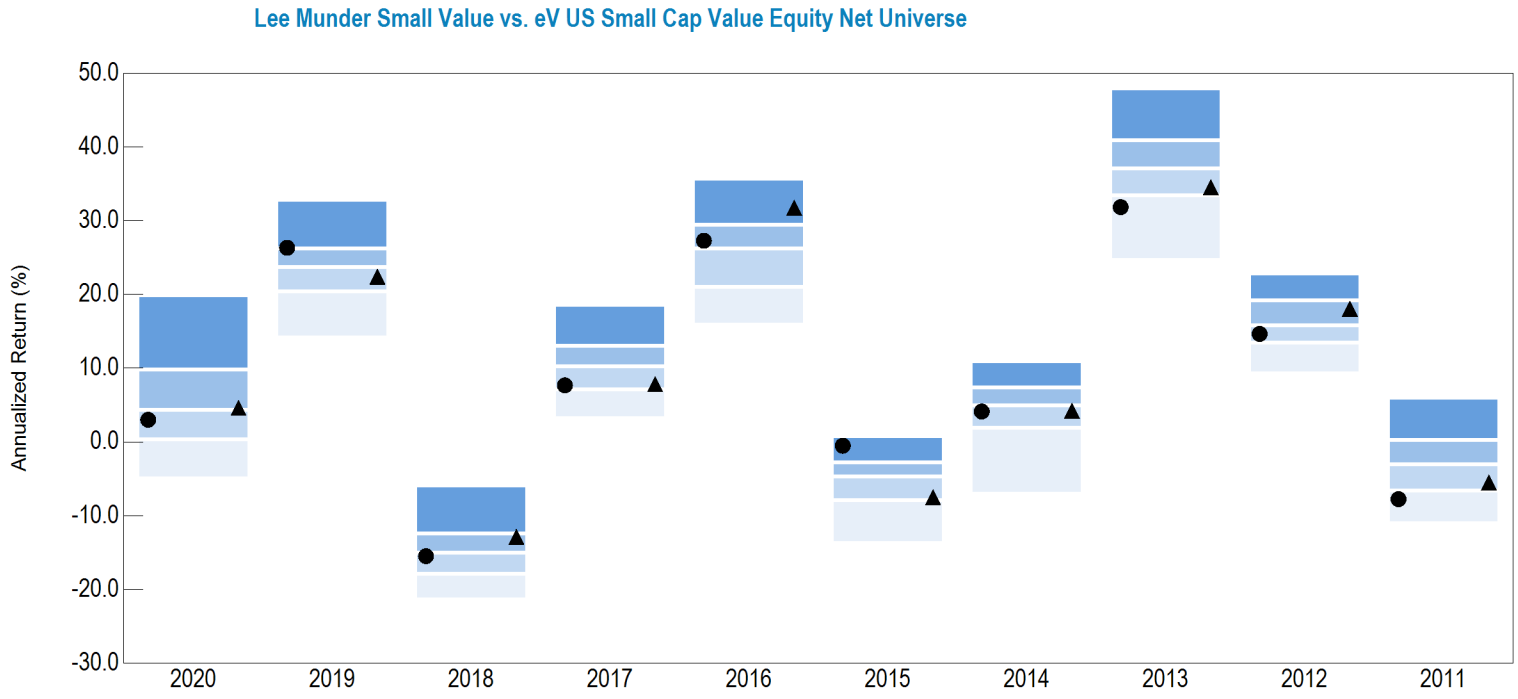
	Avg Wgt	Return	Contribution
WESTERN ALLIANCE BANCORPORATION	1.79	58.01	1.04
PINNACLE FINANCIAL PARTNERS INC	2.19	38.01	0.83
FIRST HORIZON CORP	2.29	33.68	0.77
BANKUNITED INC	2.19	27.11	0.59
STERLING BANCORP	1.99	28.52	0.57
F.N.B. CORP	1.49	35.00	0.52
KORN FERRY	1.10	43.61	0.48
TREEHOUSE FOODS INC	1.89	22.95	0.43
TEGNA INC	1.20	35.50	0.42
AMERICAN EAGLE OUTFITTERS INC.	0.90	46.37	0.42

Bottom Contributors

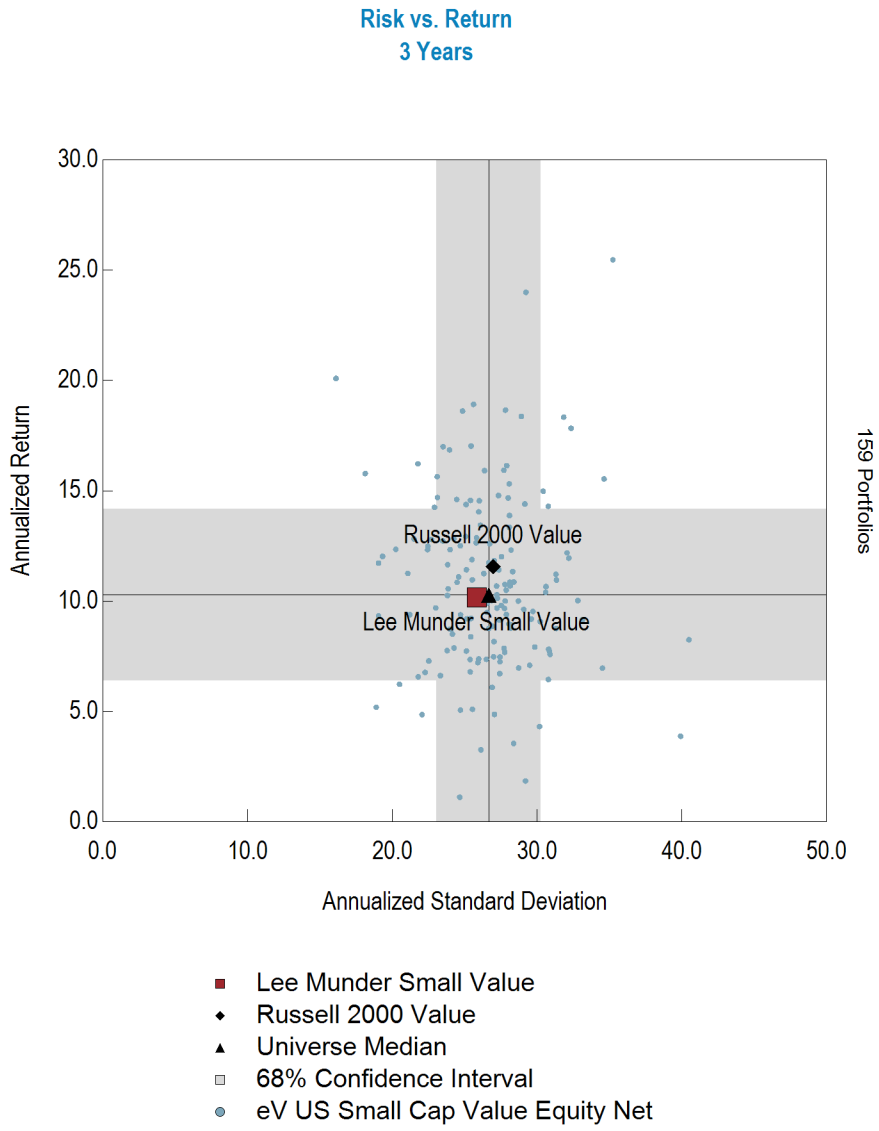
	Avg Wgt	Return	Contribution
HURON CONSULTING GROUP INC	1.29	-14.54	-0.19
LIVENT CORP	1.20	-8.07	-0.10
CIRCOR INTERNATIONAL INC	0.80	-9.42	-0.08
HARSCO CORP	0.90	-4.62	-0.04
CARTER'S INC.	0.60	-5.46	-0.03
HOSTESS BRANDS INC	1.29	-2.05	-0.03
MANTECH INTERNATIONAL CORP	1.00	-1.78	-0.02
CACI INTERNATIONAL INC	1.29	-1.07	-0.01
INGEVITY CORP	1.00	-0.26	0.00
ALTRA INDUSTRIAL MOTION CORP	1.39	-0.10	0.00

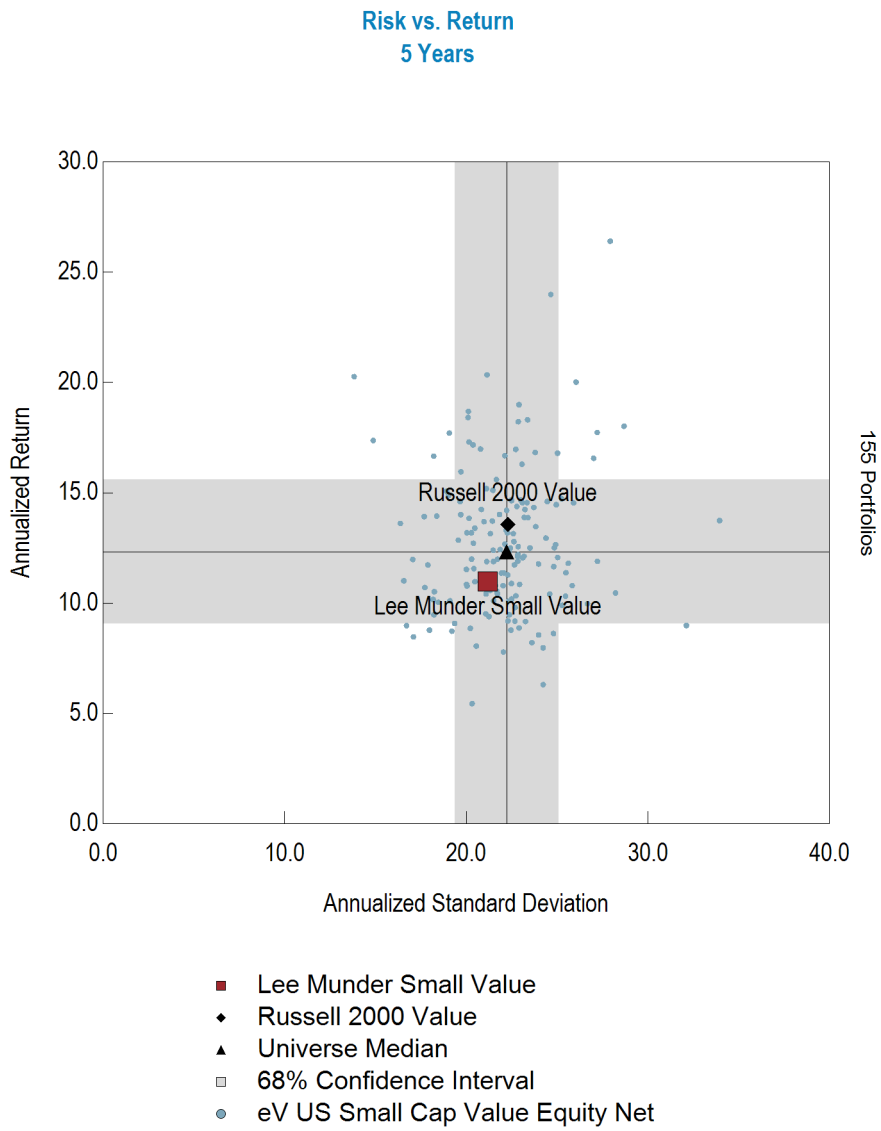


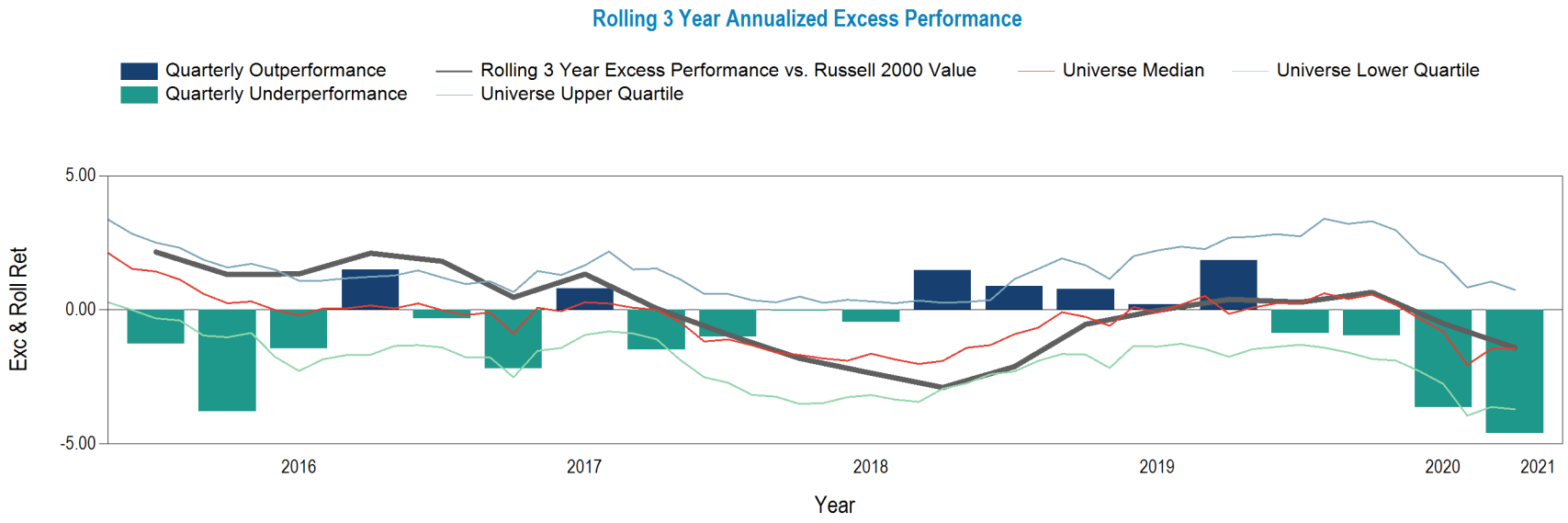
	Return (Rank)													
5th Percentile	27.1		80.7		133.3		17.9		18.3		12.1		13.0	
25th Percentile	22.2		66.9		106.8		12.8		14.5		9.9		11.2	
Median	19.2		59.0		91.9		10.3		12.3		8.4		10.2	
75th Percentile	15.4		51.5		81.3		8.2		10.5		7.4		9.0	
95th Percentile	11.6		41.8		63.4		5.0		8.6		5.1		7.2	
# of Portfolios	167		166		165		159		155		144		132	
● **Lee Munder Small Value**	16.6	(71)	53.6	(68)	81.4	(75)	10.2	(54)	11.0	(67)	8.8	(45)	9.3	(73)
▲ **Russell 2000 Value**	21.2	(32)	65.7	(28)	97.1	(40)	11.6	(37)	13.6	(36)	8.9	(41)	10.1	(54)

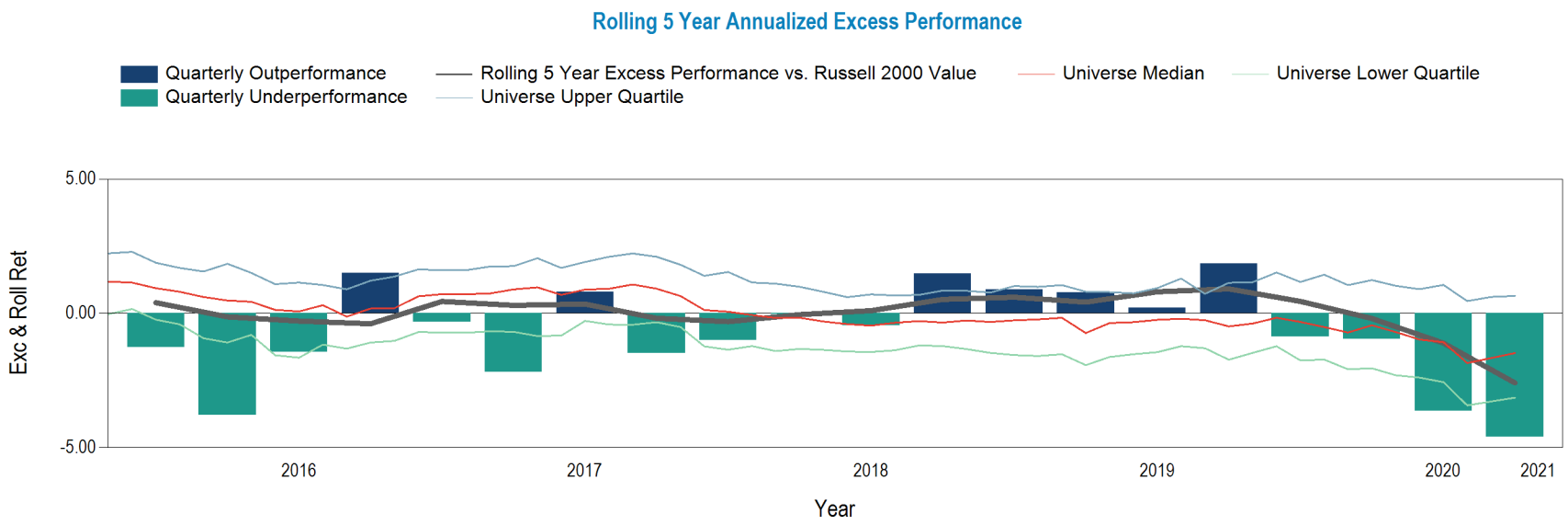


	Return (Rank)																			
5th Percentile	19.9		32.8		-6.0		18.6		35.7		0.8		10.9		47.9		22.8		6.0	
25th Percentile	9.9		26.3		-12.4		13.1		29.5		-2.7		7.4		41.0		19.2		0.3	
Median	4.4		23.8		-15.0		10.3		26.2		-4.6		5.0		37.1		15.9		-3.0	
75th Percentile	0.4		20.4		-17.8		7.2		21.1		-7.8		2.0		33.4		13.5		-6.5	
95th Percentile	-4.9		14.2		-21.3		3.3		15.9		-13.7		-7.0		24.7		9.4		-11.0	
# of Portfolios	178		176		168		170		151		137		135		125		104		85	
● Lee Munder Small Value	3.0	(56)	26.3	(25)	-15.5	(56)	7.7	(71)	27.3	(38)	-0.5	(10)	4.1	(59)	31.8	(86)	14.6	(59)	-7.8	(85)
▲ Russell 2000 Value	4.6	(50)	22.4	(60)	-12.9	(31)	7.8	(70)	31.7	(15)	-7.5	(73)	4.2	(58)	34.5	(70)	18.1	(34)	-5.5	(70)


Risk vs. Return
3 Years
Annualized Return
Annualized Standard Deviation
Russell 2000 Value
Lee Munder Small Value
159 Portfolios
30.0
25.0
20.0
15.0
10.0
5.0
0.0
0.0
10.0
20.0
30.0
40.0
50.0
Lee Munder Small Value
Russell 2000 Value
Universe Median
68% Confidence Interval
eV US Small Cap Value Equity Net


Risk vs. Return
5 Years
Annualized Return
Annualized Standard Deviation
Russell 2000 Value
Lee Munder Small Value
155 Portfolios
30.0
25.0
20.0
15.0
10.0
5.0
0.0
0.0
10.0
20.0
30.0
40.0
Lee Munder Small Value
Russell 2000 Value
Universe Median
68% Confidence Interval
eV US Small Cap Value Equity Net


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Russell 2000 Value
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year

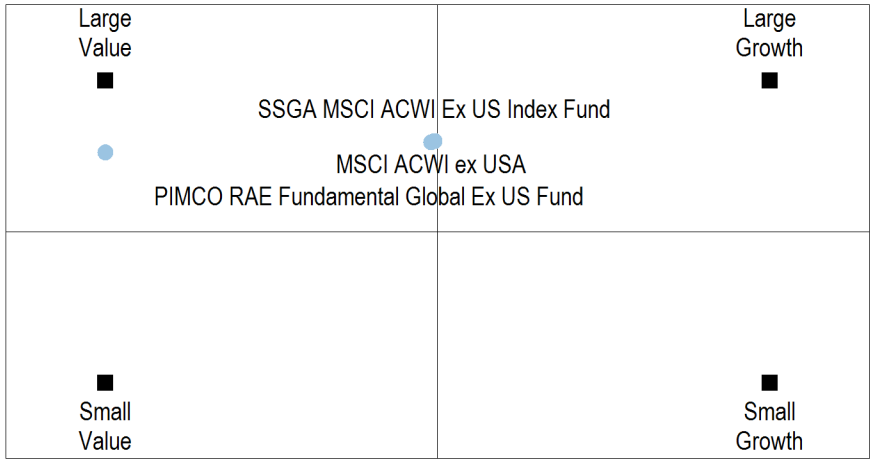

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Russell 2000 Value
Universe Upper Quartile
Universe Median
Universe Lower Quartile
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
2021
Year

Total International Equity
Asset Class Overview (Net of Fees)

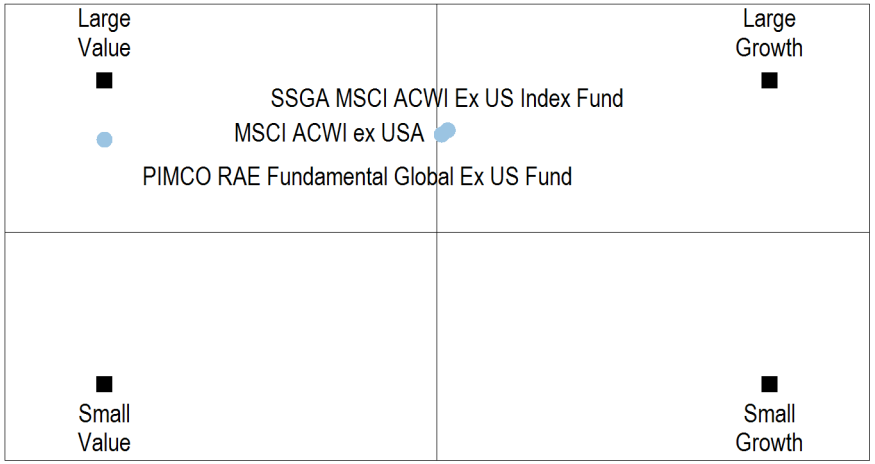
Period Ending: March 31, 2021

	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total International Equity	**308,595,115**	**4.7**	**30.9**	**53.4**	**7.8**	**10.8**	**5.2**	**13.4**	**22.7**	**-14.5**	**26.5**	**5.9**
MSCI ACWI ex USA Gross		*3.6*	*29.0*	*50.0*	*7.0*	*10.3*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*
InvMetrics Public DB ex-US Eq Net Rank		*16*	*42*	*68*	*21*	*25*	*76*	*41*	*54*	*42*	*77*	*19*
SSGA MSCI ACWI Ex US Index Fund	114,320,036	3.5	28.7	49.6	6.7	10.0	5.1	10.9	21.8	-14.0	27.5	4.7
MSCI ACWI ex USA		*3.5*	*28.7*	*49.4*	*6.5*	*9.8*	*4.9*	*10.7*	*21.5*	*-14.2*	*27.2*	*4.5*
eV All EAFE Equity Net Rank		*58*	*50*	*58*	*39*	*37*	*86*	*36*	*54*	*38*	*45*	*15*
PIMCO RAE Fundamental Global Ex US Fund	101,169,450	10.0	39.3	59.4	3.4	9.1	--	1.7	16.1	-15.1	26.0	13.0
MSCI ACWI ex USA Value		*7.1*	*31.9*	*48.7*	*2.4*	*7.2*	--	*-0.8*	*15.7*	*-14.0*	*22.7*	*8.9*
eV EAFE Value Equity Net Rank		*15*	*27*	*35*	*60*	*31*	--	*61*	*86*	*38*	*38*	*1*
SGA Global Growth	93,105,628	1.0	25.2	50.4	--	--	--	26.0	30.5	--	--	--
MSCI ACWI ex USA Growth		*-0.1*	*25.4*	*49.4*	--	--	--	*22.2*	*27.3*	--	--	--
eV ACWI ex-US Growth Equity Net Rank		*33*	*74*	*79*	--	--	--	*50*	*42*	--	--	--

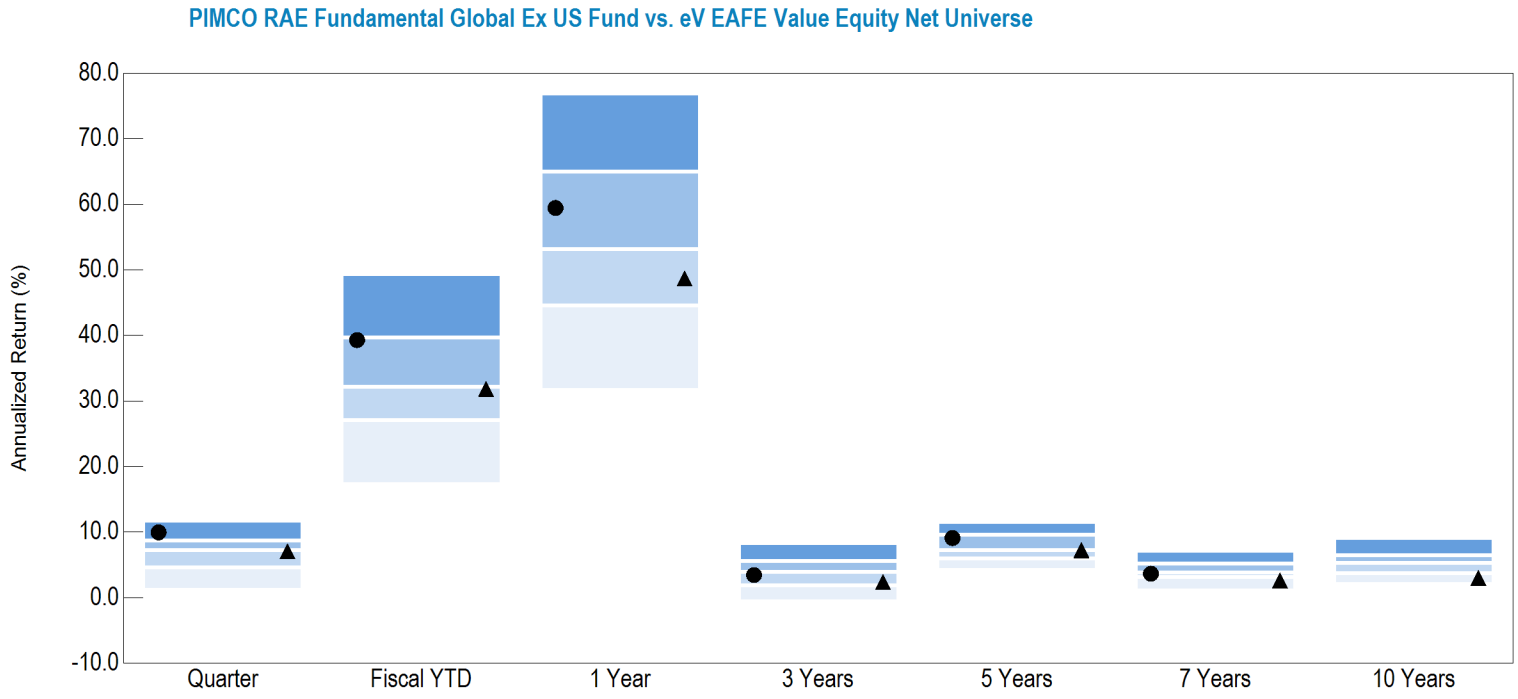
EAFE Effective Style Map
3 Years



EAFE Effective Style Map
5 Years

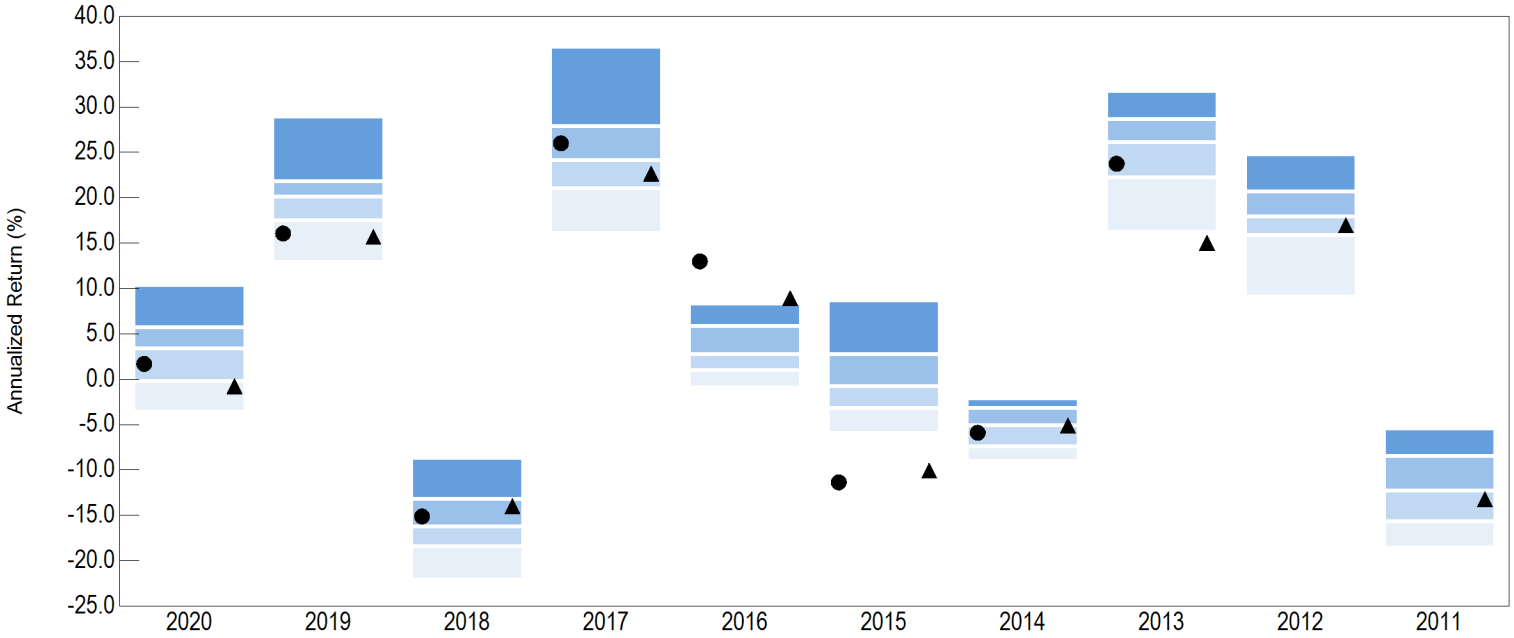


Research Affiliates converted to PIMCO RAE Fundamental Global Ex US Fund on 6/5/15 (performance prior to this date represents previously held Enhanced RAFI Global ex US).

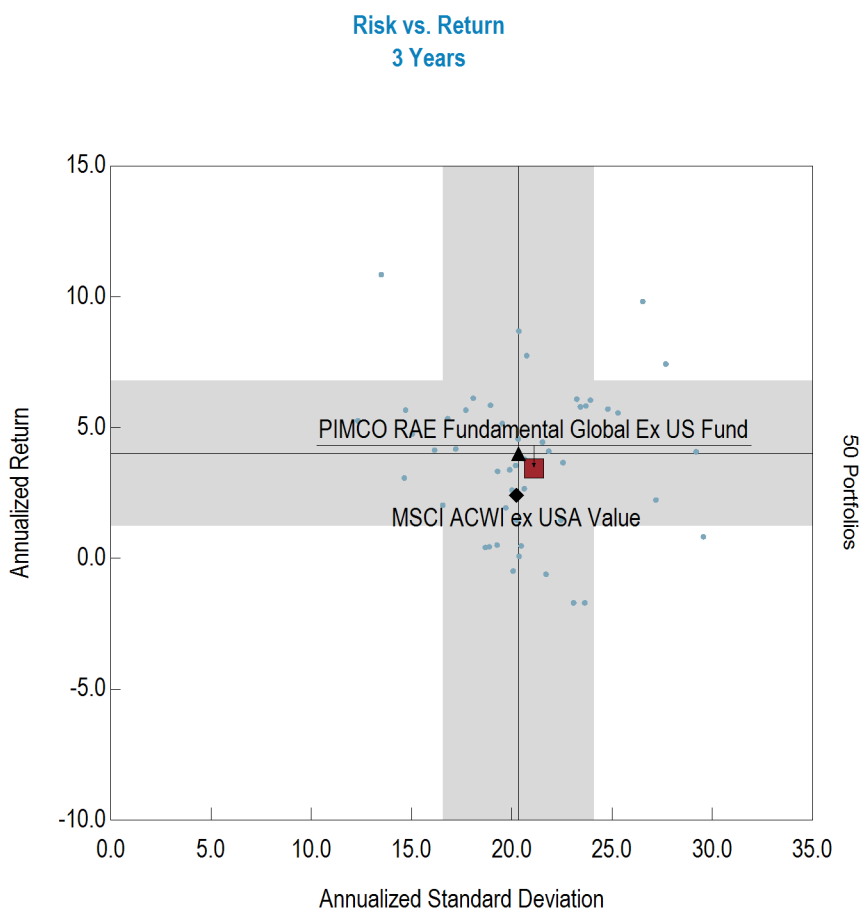


	Return (Rank)													
5th Percentile	11.7		49.3		76.8		8.3		11.5		7.1		9.0	
25th Percentile	8.8		39.7		65.0		5.7		9.6		5.3		6.6	
Median	7.3		32.2		53.3		4.0		7.3		3.9		5.4	
75th Percentile	4.7		27.1		44.7		2.0		6.0		3.2		3.8	
95th Percentile	1.3		17.4		31.7		-0.6		4.3		1.2		2.2	
# of Portfolios	60		60		60		50		44		40		36	
● **PIMCO RAE Fundamental Global Ex US Fund**	10.0	(15)	39.3	(27)	59.4	(35)	3.4	(60)	9.1	(31)	3.6	(56)	--	(--)
▲ **MSCI ACWI ex USA Value**	7.1	(56)	31.9	(57)	48.7	(64)	2.4	(71)	7.2	(52)	2.6	(85)	3.0	(88)

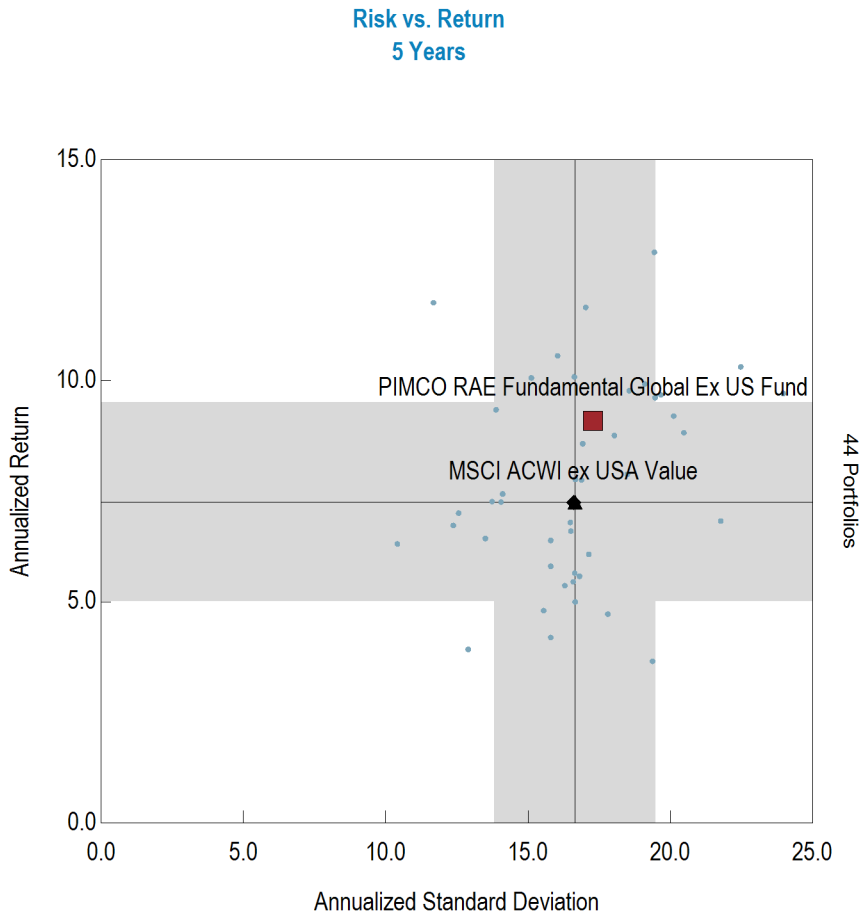
PIMCO RAE Fundamental Global Ex US Fund vs. eV EAFE Value Equity Net Universe



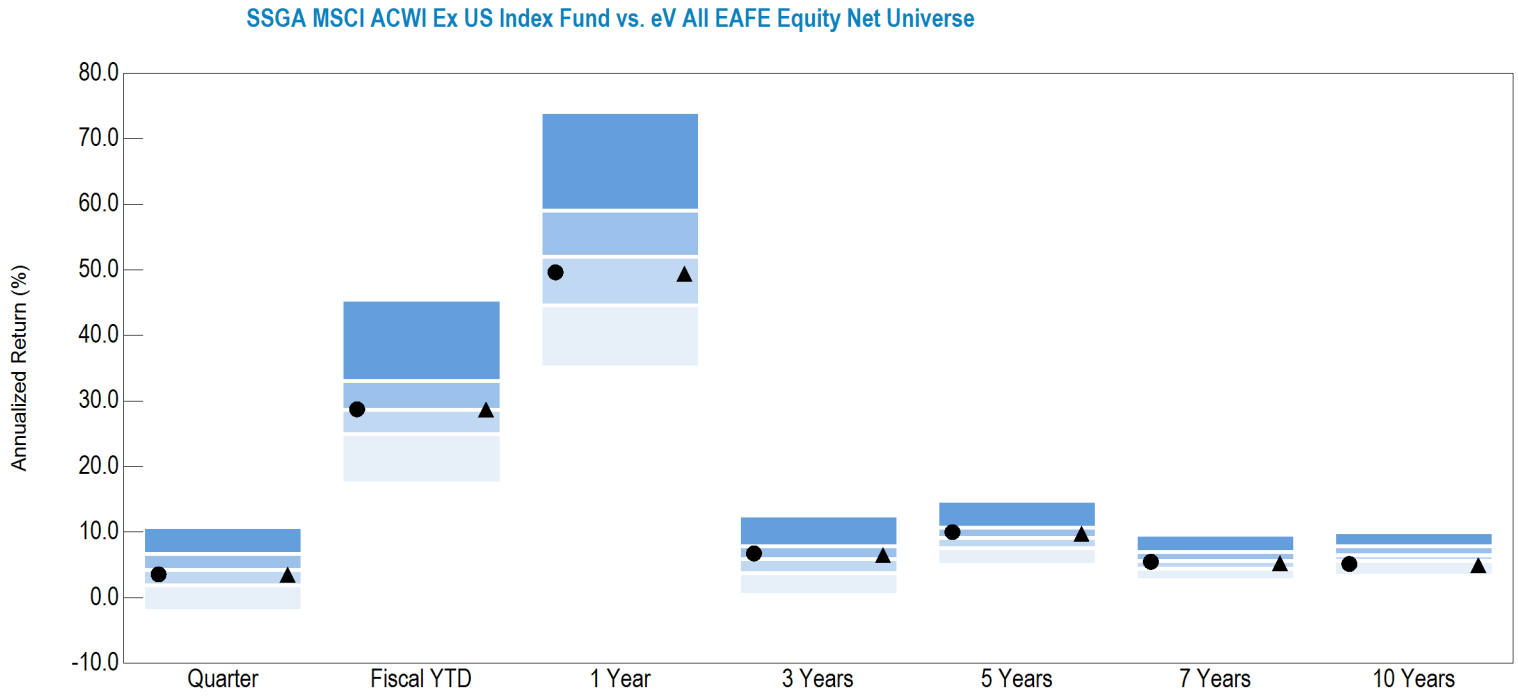
	Return (Rank)																					
5th Percentile	10.3		28.9		-8.7		36.6		8.3		8.7		-2.1		31.8		24.7		-5.4	
25th Percentile	5.7		21.9		-13.2		27.9		5.9		2.8		-3.1		28.7		20.8		-8.4	
Median	3.5		20.2		-16.2		24.2		2.8		-0.7		-5.0		26.1		18.0		-12.2	
75th Percentile	-0.1		17.5		-18.3		21.1		1.0		-3.1		-7.3		22.3		15.9		-15.6	
95th Percentile	-3.6		13.0		-22.0		16.1		-0.9		-5.9		-9.0		16.3		9.2		-18.5	
# of Portfolios	59		56		53		53		58		55		52		49		47		48	
● PIMCO RAE Fundamental Global Ex US Fund	1.7	(61)	16.1	(86)	-15.1	(38)	26.0	(38)	13.0	(1)	-11.4	(99)	-5.9	(65)	23.7	(64)	--	(--)	--	(--)
▲ MSCI ACWI ex USA Value	-0.8	(80)	15.7	(88)	-14.0	(34)	22.7	(58)	8.9	(4)	-10.1	(99)	-5.1	(53)	15.0	(97)	17.0	(64)	-13.2	(56)



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

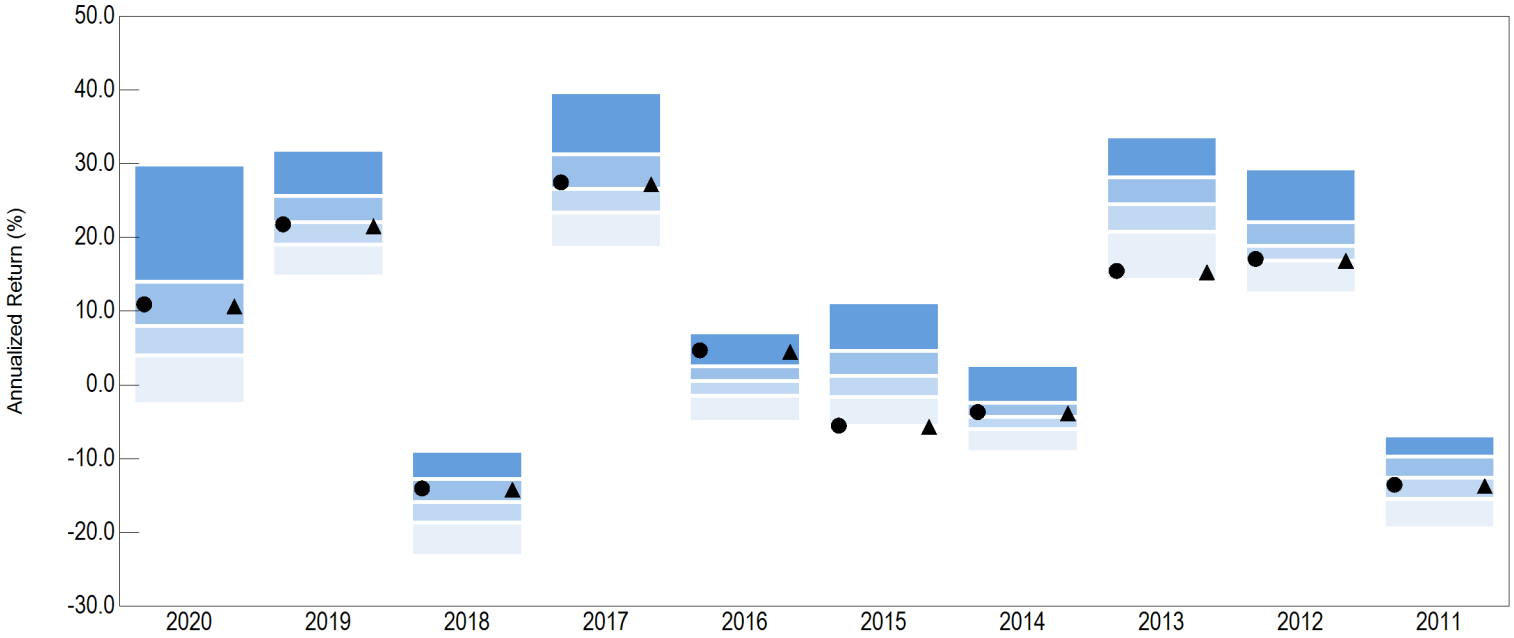


- PIMCO RAE Fundamental Global Ex US Fund
- MSCI ACWI ex USA Value
- Universe Median
- 68% Confidence Interval
- eV EAFE Value Equity Net

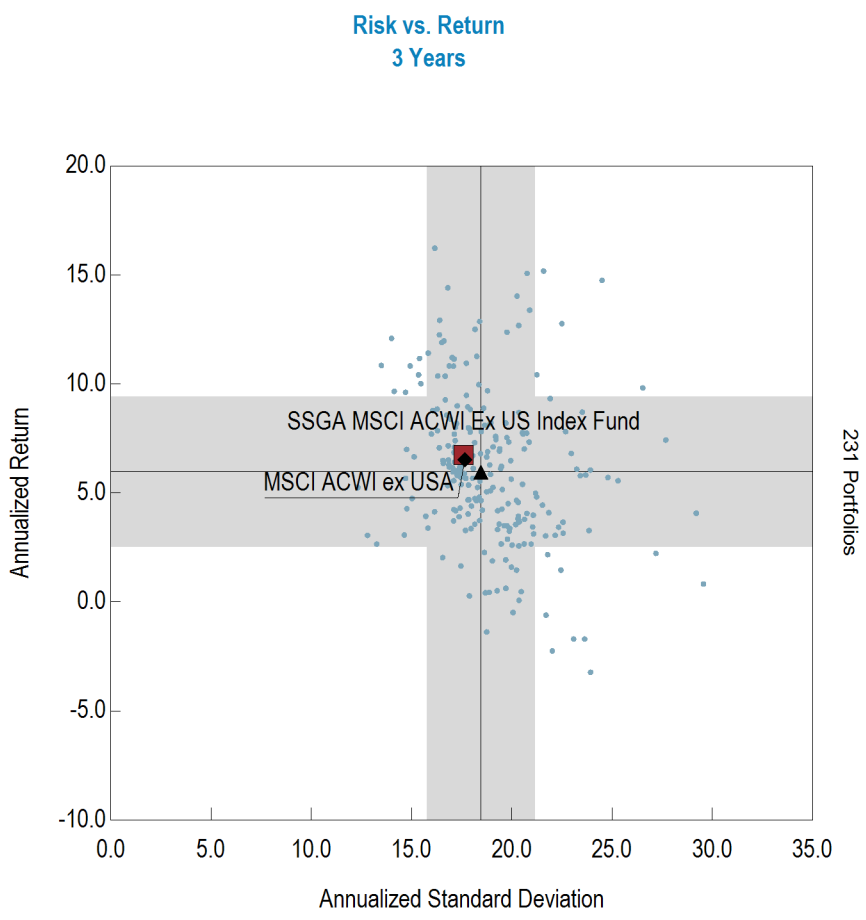


	Return (Rank)													
5th Percentile	10.8		45.4		74.1		12.4		14.7		9.6		10.0	
25th Percentile	6.7		33.1		59.1		7.9		10.8		7.0		7.9	
Median	4.3		28.7		52.0		6.0		9.2		5.7		6.5	
75th Percentile	2.0		25.0		44.7		3.8		7.6		4.4		5.6	
95th Percentile	-2.0		17.4		35.2		0.5		5.1		2.7		3.4	
# of Portfolios	244		244		244		231		213		181		146	
● **SSGA MSCI ACWI Ex US Index Fund**	3.5	(58)	28.7	(50)	49.6	(58)	6.7	(39)	10.0	(37)	5.5	(53)	5.1	(86)
▲ **MSCI ACWI ex USA**	3.5	(59)	28.7	(51)	49.4	(59)	6.5	(41)	9.8	(41)	5.3	(58)	4.9	(88)

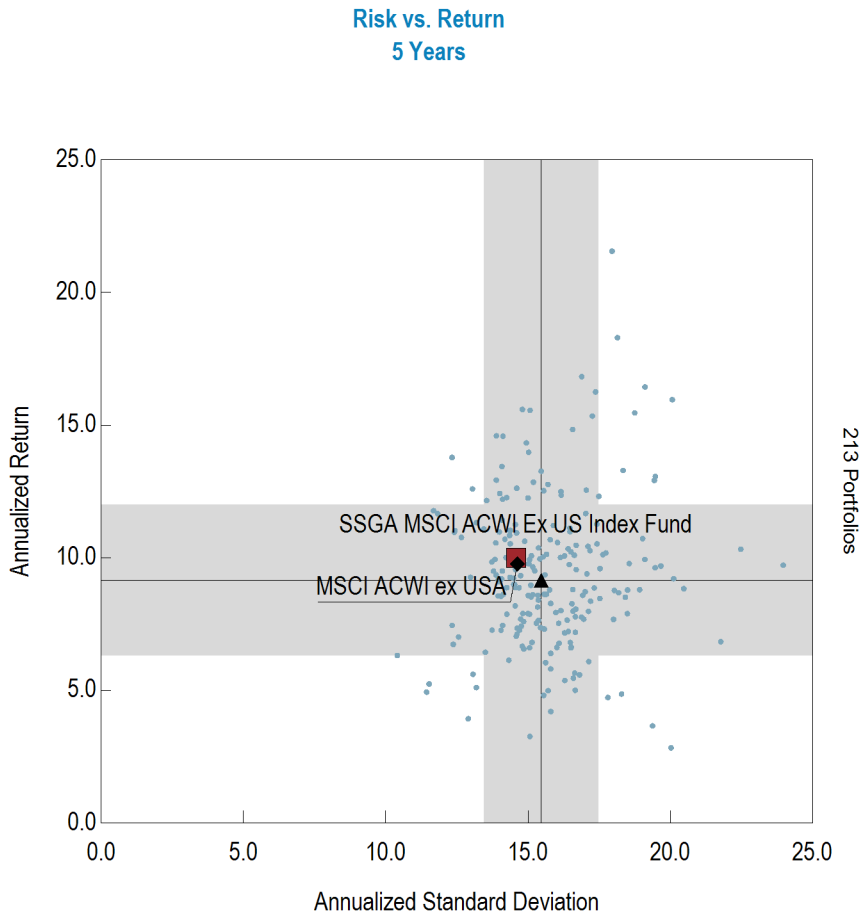
SSGA MSCI ACWI Ex US Index Fund vs. eV All EAFE Equity Net Universe



	Return (Rank)																			
5th Percentile	29.8		31.9		-9.0		39.6		7.1		11.2		2.6		33.6		29.3		-6.9	
25th Percentile	14.0		25.7		-12.7		31.3		2.6		4.7		-2.4		28.2		22.1		-9.7	
Median	8.0		22.1		-15.8		26.6		0.6		1.2		-4.3		24.5		18.9		-12.6	
75th Percentile	4.0		19.1		-18.6		23.4		-1.5		-1.6		-6.0		20.8		16.9		-15.4	
95th Percentile	-2.6		14.7		-23.1		18.6		-5.0		-5.5		-9.1		14.3		12.5		-19.4	
# of Portfolios	255		255		243		232		215		188		164		151		144		129	
● **SSGA MSCI ACWI Ex US Index Fund**	10.9	(36)	21.8	(54)	-14.0	(38)	27.5	(45)	4.7	(15)	-5.5	(96)	-3.7	(42)	15.5	(92)	17.1	(74)	-13.5	(57)
▲ **MSCI ACWI ex USA**	10.7	(37)	21.5	(58)	-14.2	(39)	27.2	(46)	4.5	(16)	-5.7	(96)	-3.9	(45)	15.3	(92)	16.8	(77)	-13.7	(60)



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



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

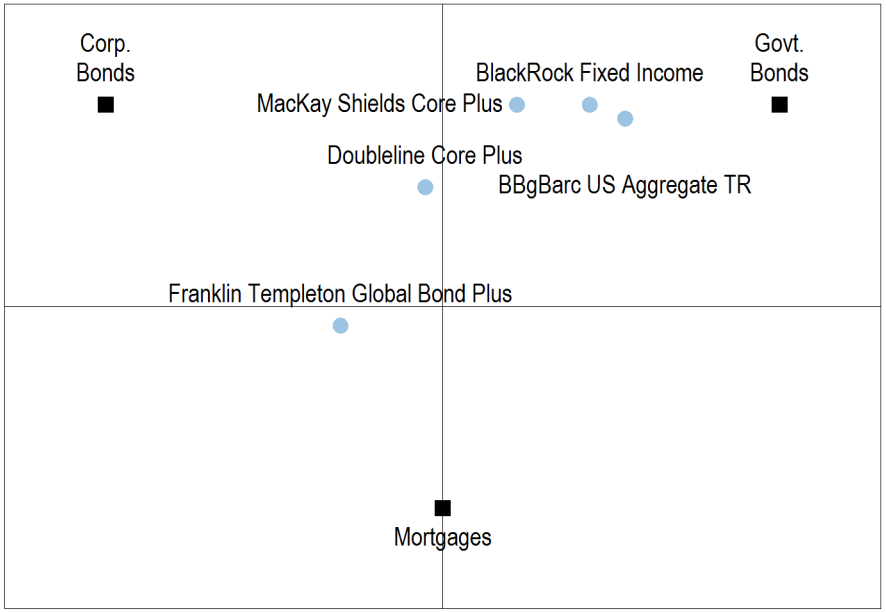
Total Fixed Income
Asset Class Overview (Net of Fees)

Period Ending: March 31, 2021

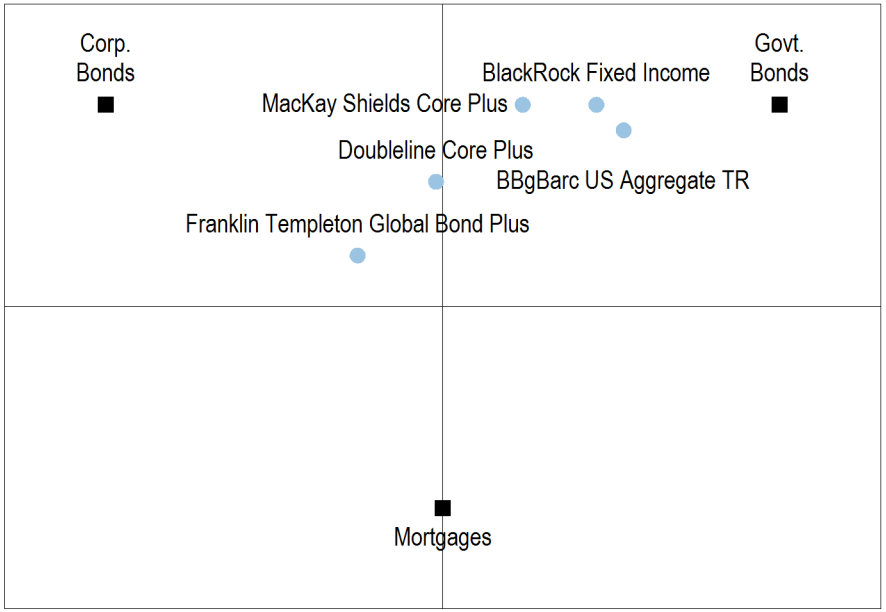
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Fixed Income	**548,000,106**	**-3.4**	**0.6**	**6.3**	**3.3**	**3.1**	**3.5**	**4.7**	**8.1**	**0.1**	**3.9**	**5.1**
BBgBarc US Aggregate TR		*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
InvMetrics Public DB US Fix Inc Net Rank		*92*	*33*	*27*	*99*	*52*	*55*	*99*	*49*	*60*	*46*	*36*
Total Domestic Fixed Income	**379,771,051**	**-2.9**	**0.1**	**5.1**	**4.9**	**3.8**	**3.9**	**7.9**	**9.0**	**-0.2**	**4.1**	**4.8**
BBgBarc US Aggregate TR		*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
BlackRock Fixed Income	144,585,716	-3.4	-1.5	2.8	5.0	3.4	3.7	8.4	8.7	0.1	3.6	2.9
BBgBarc US Aggregate TR		*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	*3.4*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV All US Fixed Inc Net Rank		*84*	*89*	*72*	*39*	*54*	*51*	*26*	*44*	*53*	*56*	*54*
Doubleline Core Plus	115,162,646	-2.2	1.0	6.1	3.9	3.2	--	5.2	8.3	-0.3	3.9	4.6
BBgBarc US Aggregate TR		*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	--	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV US Core Plus Fixed Inc Net Rank		*21*	*46*	*64*	*97*	*97*	--	*98*	*90*	*34*	*87*	*53*
MacKay Shields Core Plus	120,022,689	-3.0	1.1	6.8	5.5	4.3	--	9.9	9.6	-1.0	4.5	4.7
BBgBarc US Aggregate TR		*-3.4*	*-2.1*	*0.7*	*4.7*	*3.1*	--	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
eV US Core Plus Fixed Inc Net Rank		*66*	*42*	*48*	*37*	*44*	--	*22*	*56*	*74*	*62*	*47*
Total Global Fixed Income	**84,424,670**	**-2.9**	**-2.7**	**-2.3**	**-2.5**	**0.4**	**--**	**-5.7**	**0.9**	**1.9**	**2.4**	**6.4**
JPM GBI Global TR USD		*-5.7*	*-1.1*	*0.4*	*2.2*	*2.1*	--	*9.7*	*6.0*	*-0.7*	*6.8*	*1.6*
Franklin Templeton Global Bond Plus	84,424,670	-2.9	-2.7	-2.3	-2.5	0.4	--	-5.7	0.9	1.9	2.4	6.1
JPM GBI Global TR USD		*-5.7*	*-1.1*	*0.4*	*2.2*	*2.1*	--	*9.7*	*6.0*	*-0.7*	*6.8*	*1.6*
eV Global Government Fixed Inc Net Rank		*16*	*85*	*90*	*99*	*99*	--	*99*	*99*	*11*	*93*	*6*
Total Emerging Markets Fixed Income	**83,804,385**	**-6.1**	**5.8**	**21.8**	**--**	**--**	**--**	**4.6**	**--**	**--**	**--**	**--**
50% JPM EMBI Global Div/50% JPM GBI EM Global Div		*-5.6*	*3.1*	*14.5*	--	--	--	*4.0*	--	--	--	--
PGIM Emerging Markets Debt	83,804,385	-6.1	5.8	21.8	--	--	--	4.6	--	--	--	--
50% JPM EMBI Global Div/50% JPM GBI EM Global Div		*-5.6*	*3.1*	*14.5*	--	--	--	*4.0*	--	--	--	--
eV Emg Mkts Fixed Inc - Blended Currency Net Rank		*95*	*39*	*28*	--	--	--	*67*	--	--	--	--

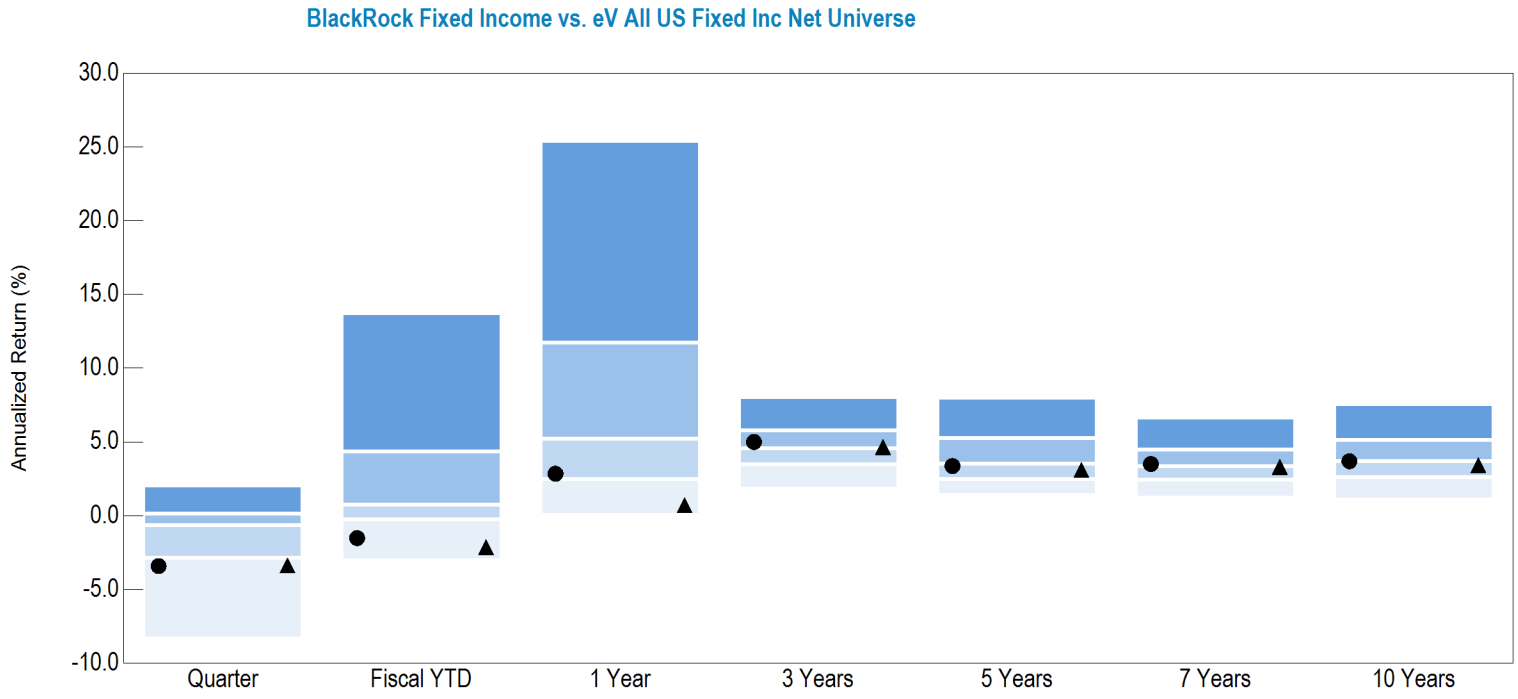
SSGA TIPS liquidated in 12/28/18. Shenkman HY liquidated 3/11/19. PGIM EMD funded 8/26/19.

Fixed Income Style Map
3 Years

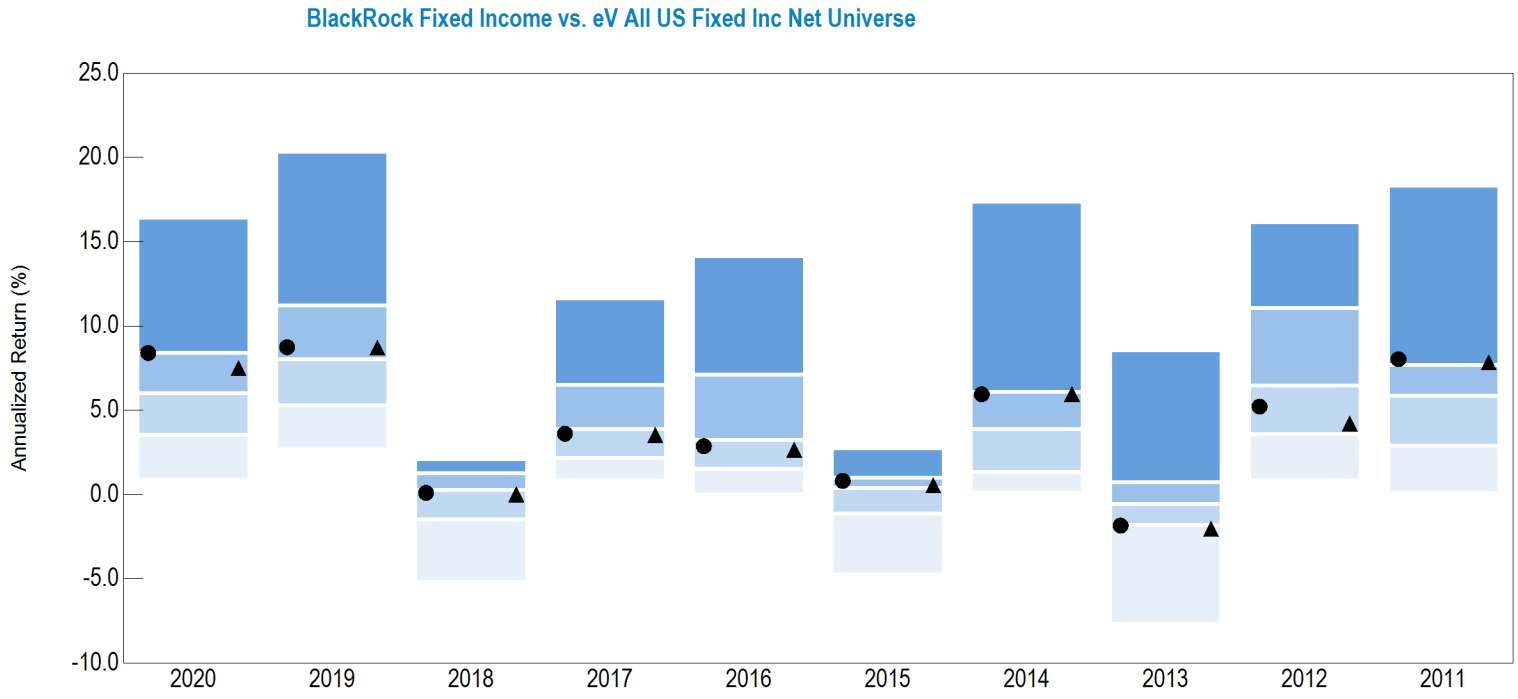


Fixed Income Style Map
5 Years

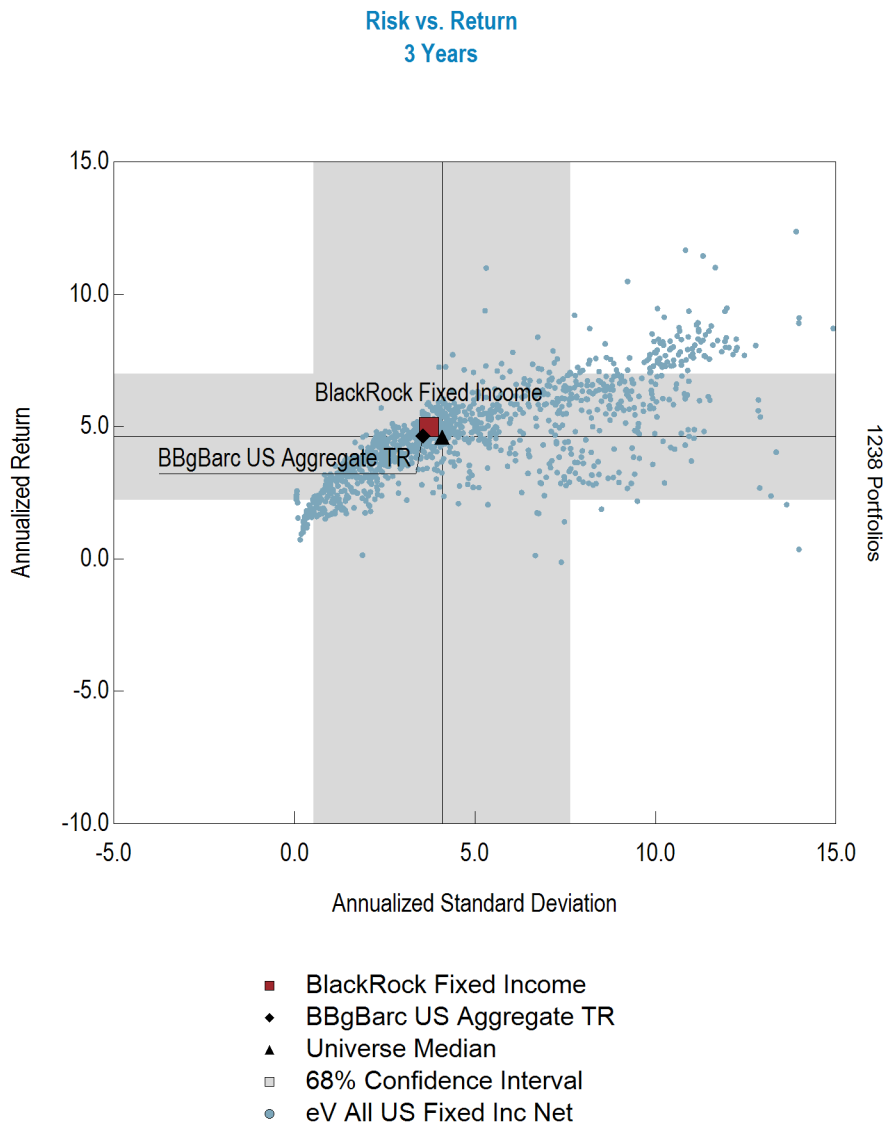


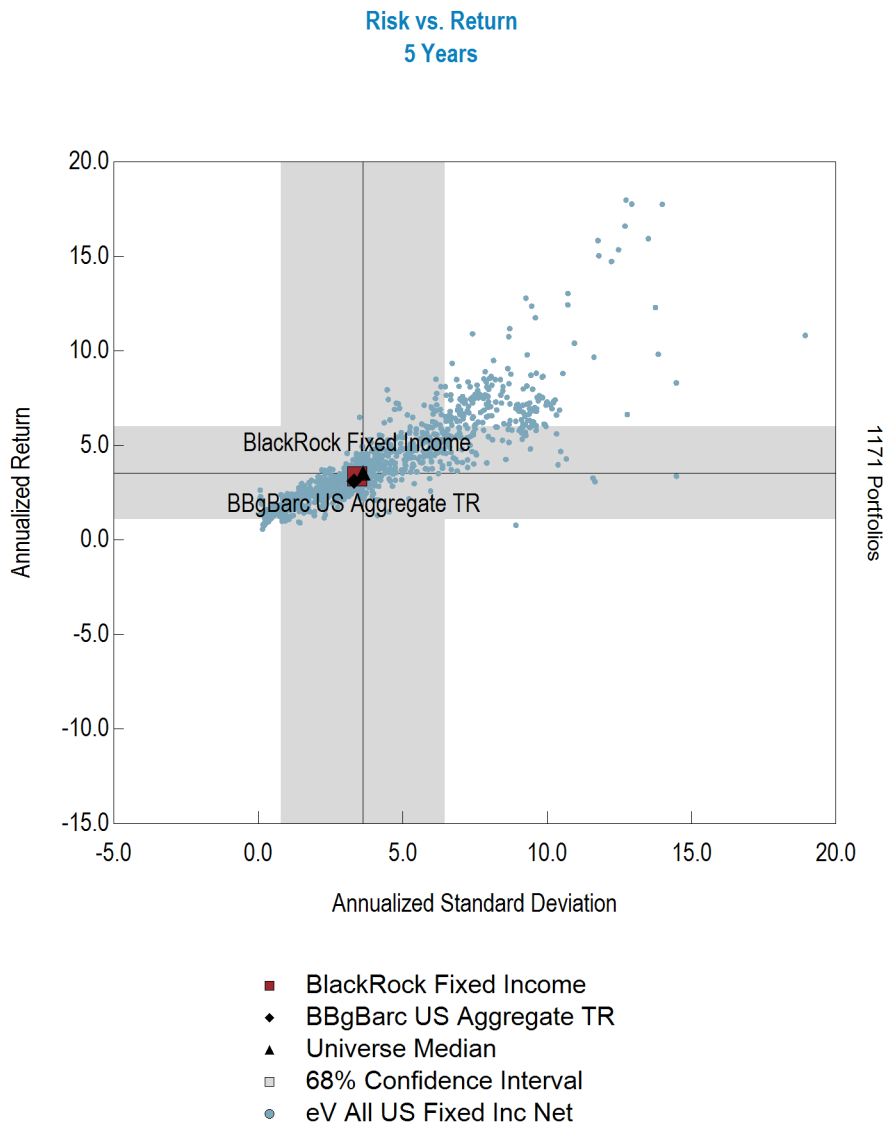


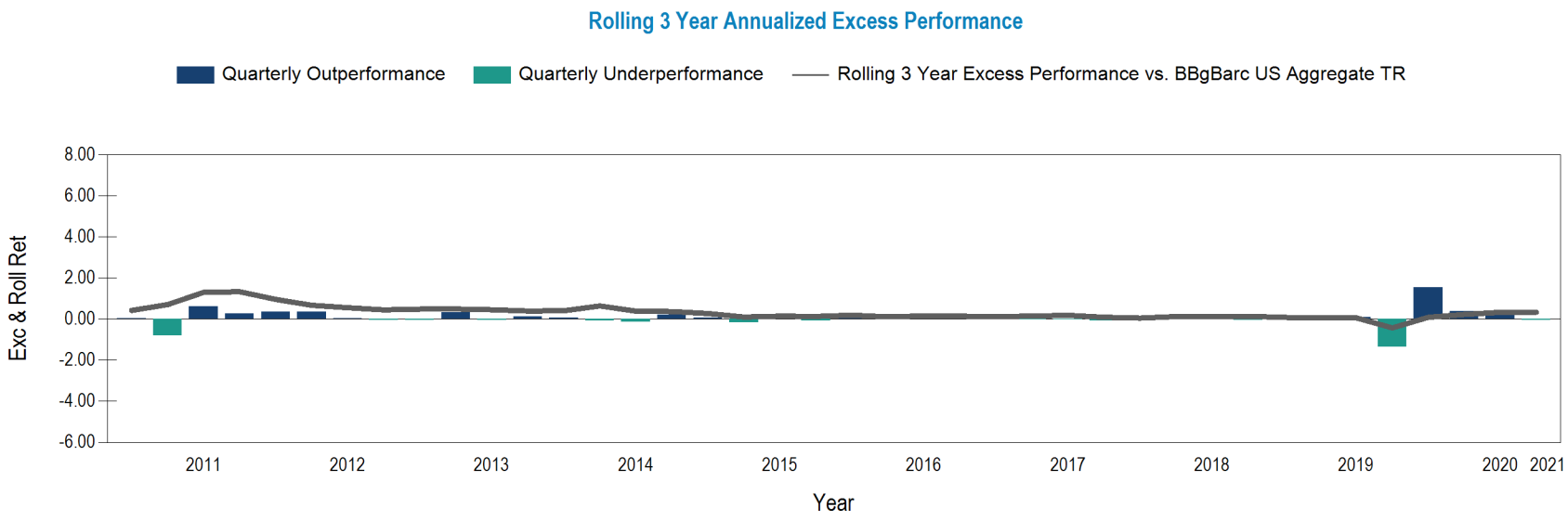
	Return (Rank)													
5th Percentile	2.0		13.7		25.4		8.0		8.0		6.7		7.5	
25th Percentile	0.2		4.4		11.7		5.8		5.3		4.5		5.2	
Median	-0.6		0.8		5.2		4.6		3.6		3.4		3.7	
75th Percentile	-2.8		-0.2		2.5		3.5		2.5		2.4		2.6	
95th Percentile	-8.3		-3.0		0.1		1.8		1.4		1.2		1.1	
# of Portfolios	1,297		1,291		1,288		1,238		1,171		1,091		947	
● BlackRock Fixed Income	-3.4	(84)	-1.5	(89)	2.8	(72)	5.0	(39)	3.4	(54)	3.5	(48)	3.7	(51)
▲ BBgBarc US Aggregate TR	-3.4	(83)	-2.1	(93)	0.7	(92)	4.7	(50)	3.1	(61)	3.3	(54)	3.4	(58)

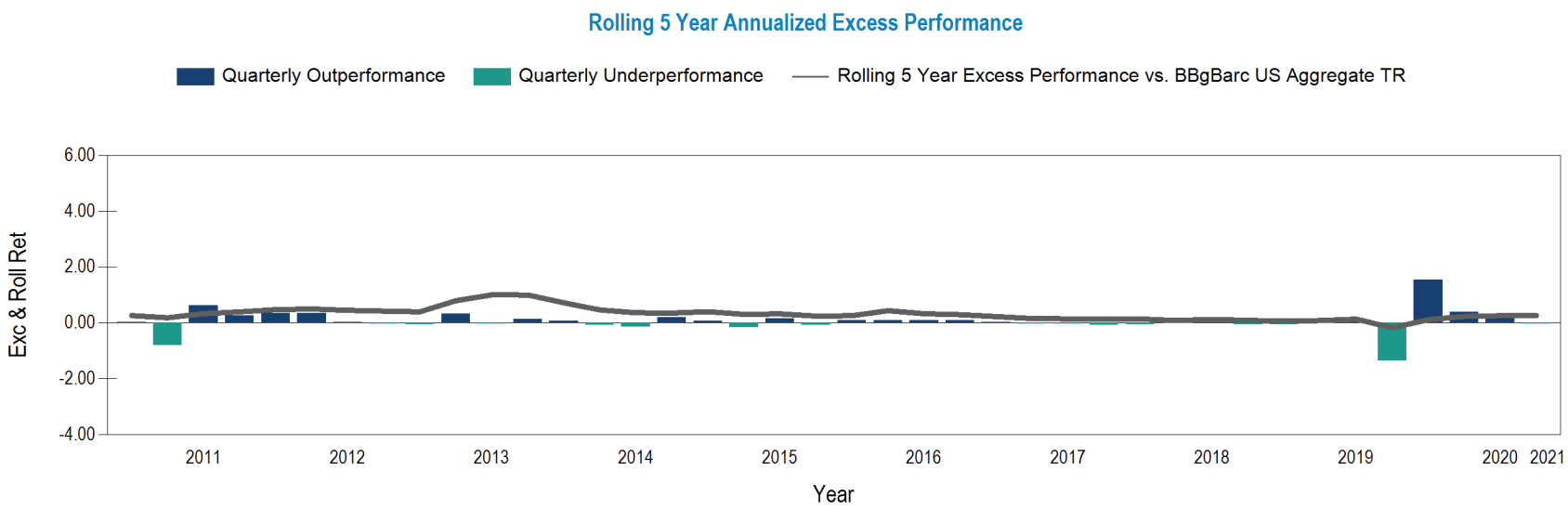


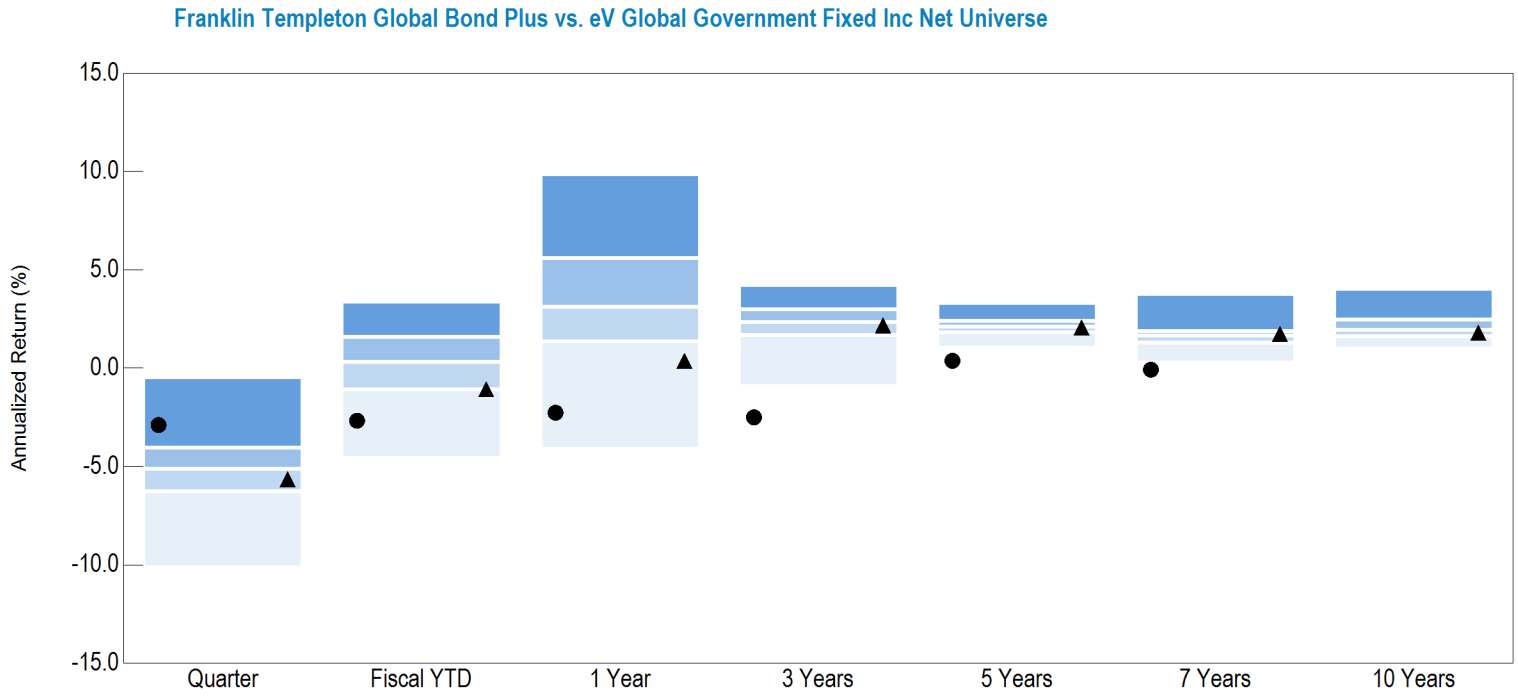
	Return (Rank)									
5th Percentile	16.4	20.3	2.1	11.6	14.1	2.7	17.4	8.5	16.1	18.3
25th Percentile	8.4	11.2	1.3	6.5	7.1	1.0	6.1	0.8	11.1	7.7
Median	6.0	8.1	0.3	3.9	3.3	0.4	3.9	-0.5	6.5	5.9
75th Percentile	3.6	5.3	-1.5	2.2	1.6	-1.1	1.4	-1.8	3.6	2.9
95th Percentile	0.9	2.7	-5.2	0.9	0.0	-4.7	0.2	-7.6	0.9	0.1
# of Portfolios	1,295	1,248	1,173	1,135	1,033	827	758	662	555	483
● BlackRock Fixed Income	8.4 (26)	8.7 (44)	0.1 (53)	3.6 (56)	2.9 (54)	0.8 (35)	6.0 (28)	-1.8 (76)	5.2 (60)	8.0 (20)
▲ BBgBarc US Aggregate TR	7.5 (36)	8.7 (45)	0.0 (55)	3.5 (57)	2.6 (57)	0.6 (45)	6.0 (28)	-2.0 (80)	4.2 (70)	7.8 (24)


Risk vs. Return
3 Years
15.0
10.0
5.0
0.0
-5.0
-10.0
Annualized Return
BlackRock Fixed Income
BBgBarc US Aggregate TR
-5.0
0.0
5.0
10.0
15.0
Annualized Standard Deviation
1238 Portfolios
BlackRock Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV All US Fixed Inc Net


Risk vs. Return
5 Years
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
Annualized Return
BlackRock Fixed Income
BBgBarc US Aggregate TR
-5.0
0.0
5.0
10.0
15.0
20.0
Annualized Standard Deviation
1171 Portfolios
BlackRock Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV All US Fixed Inc Net

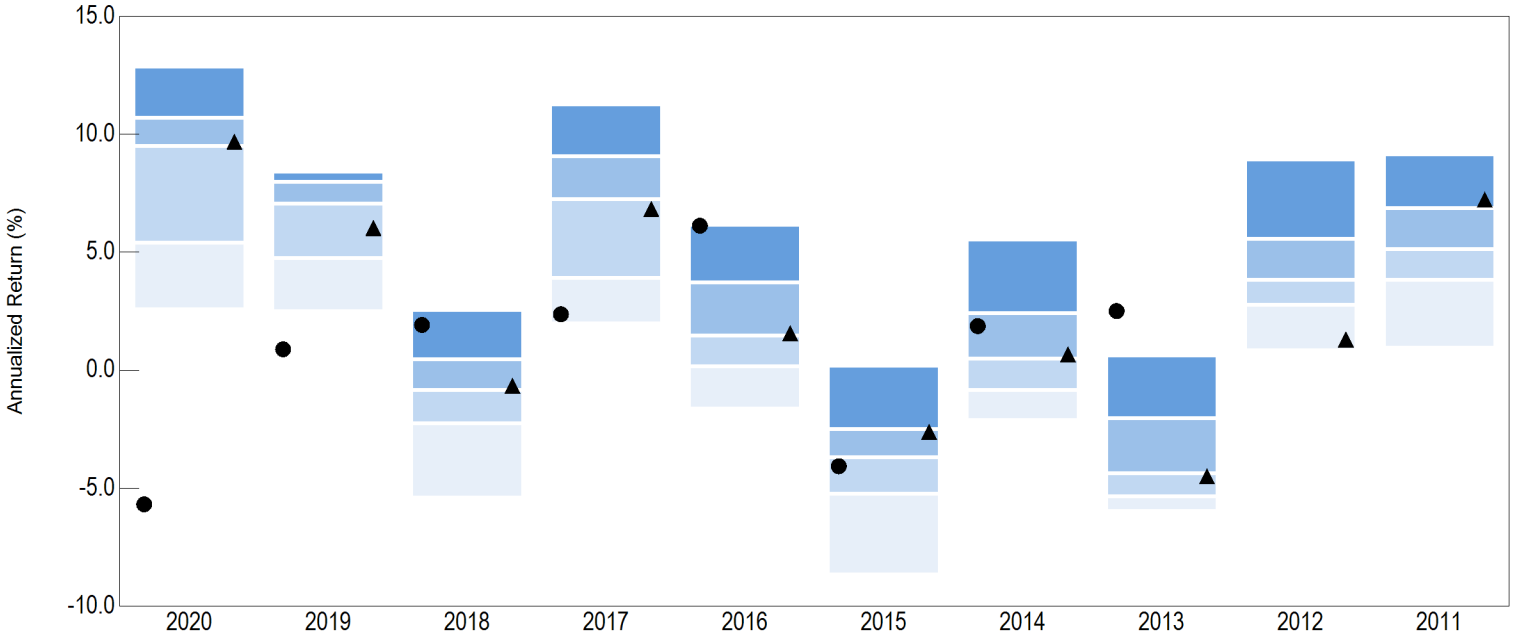

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. BBgBarc US Aggregate TR
8.00
6.00
4.00
2.00
0.00
-2.00
-4.00
-6.00
Exc & Roll Ret
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. BBgBarc US Aggregate TR
6.00
4.00
2.00
0.00
-2.00
-4.00
Exc & Roll Ret
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year

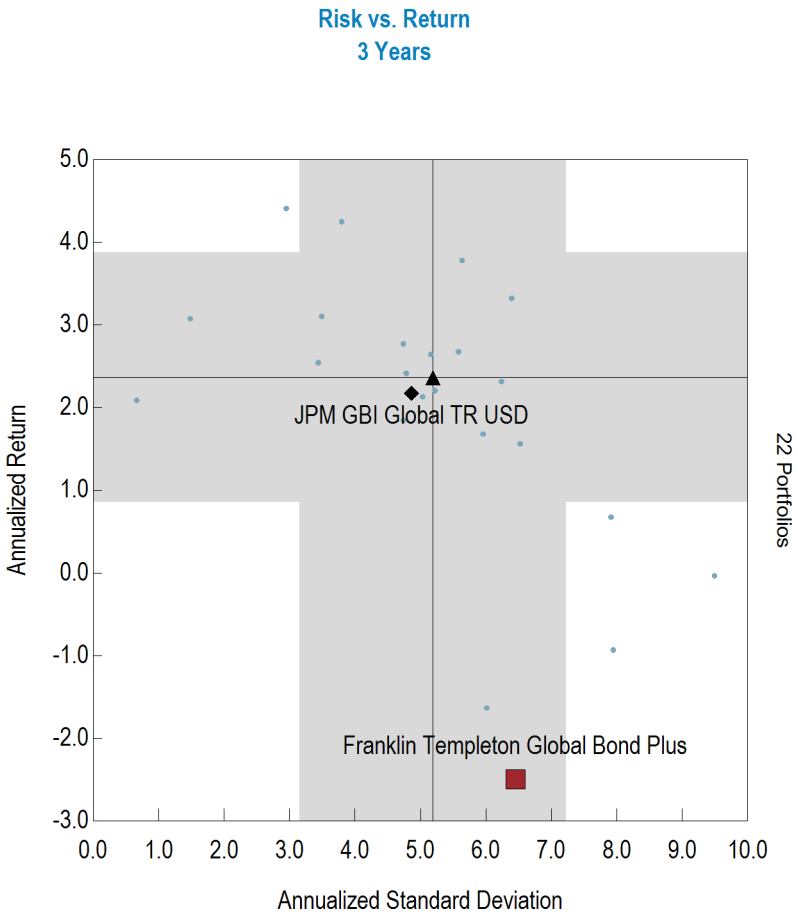


	Return (Rank)													
5th Percentile	-0.5		3.4		9.8		4.2		3.3		3.8		4.0	
25th Percentile	-4.0		1.6		5.6		3.0		2.4		1.9		2.5	
Median	-5.1		0.4		3.1		2.4		2.1		1.7		2.0	
75th Percentile	-6.2		-1.1		1.4		1.7		1.8		1.3		1.6	
95th Percentile	-10.1		-4.5		-4.1		-0.9		1.1		0.3		1.0	
# of Portfolios	23		23		23		22		21		19		18	
● Franklin Templeton Global Bond Plus	-2.9	(16)	-2.7	(85)	-2.3	(90)	-2.5	(99)	0.4	(99)	-0.1	(99)	--	(--)
▲ JPM GBI Global TR USD	-5.7	(62)	-1.1	(76)	0.4	(83)	2.2	(60)	2.1	(53)	1.7	(46)	1.8	(62)

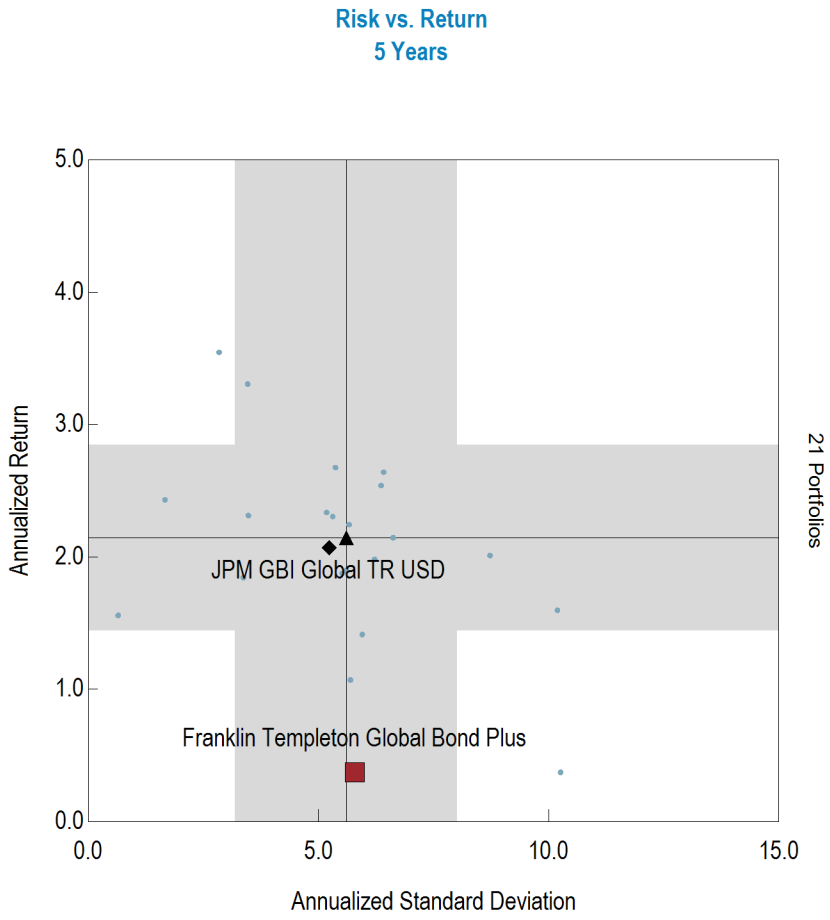
Franklin Templeton Global Bond Plus vs. eV Global Government Fixed Inc Net Universe



	Return (Rank)																			
5th Percentile	12.8		8.4		2.5		11.2		6.1		0.2		5.5		0.6		8.9		9.1	
25th Percentile	10.7		8.0		0.5		9.1		3.7		-2.5		2.4		-2.0		5.6		6.9	
Median	9.5		7.1		-0.8		7.3		1.5		-3.7		0.5		-4.3		3.8		5.2	
75th Percentile	5.4		4.8		-2.2		3.9		0.2		-5.2		-0.8		-5.3		2.8		3.9	
95th Percentile	2.6		2.5		-5.4		2.0		-1.6		-8.6		-2.1		-6.0		0.9		1.0	
# of Portfolios	22		19		21		22		23		19		16		11		14		13	
● Franklin Templeton Global Bond Plus	-5.7	(99)	0.9	(99)	1.9	(11)	2.4	(93)	6.1	(6)	-4.1	(68)	1.9	(30)	2.5	(1)	--	(--)	--	(--)
▲ JPM GBI Global TR USD	9.7	(43)	6.0	(67)	-0.7	(43)	6.8	(60)	1.6	(50)	-2.6	(26)	0.7	(45)	-4.5	(55)	1.3	(92)	7.2	(16)



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



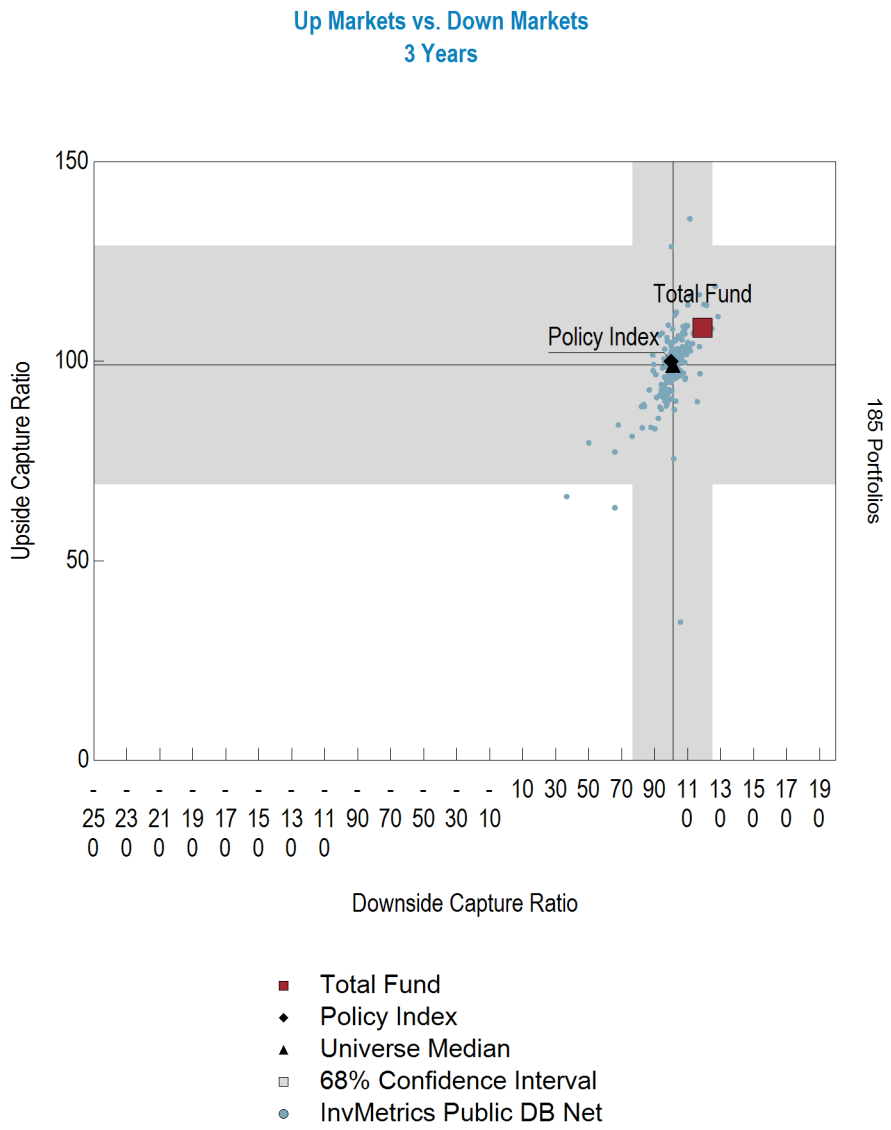
- Franklin Templeton Global Bond Plus
- JPM GBI Global TR USD
- Universe Median
- 68% Confidence Interval
- eV Global Government Fixed Inc Net

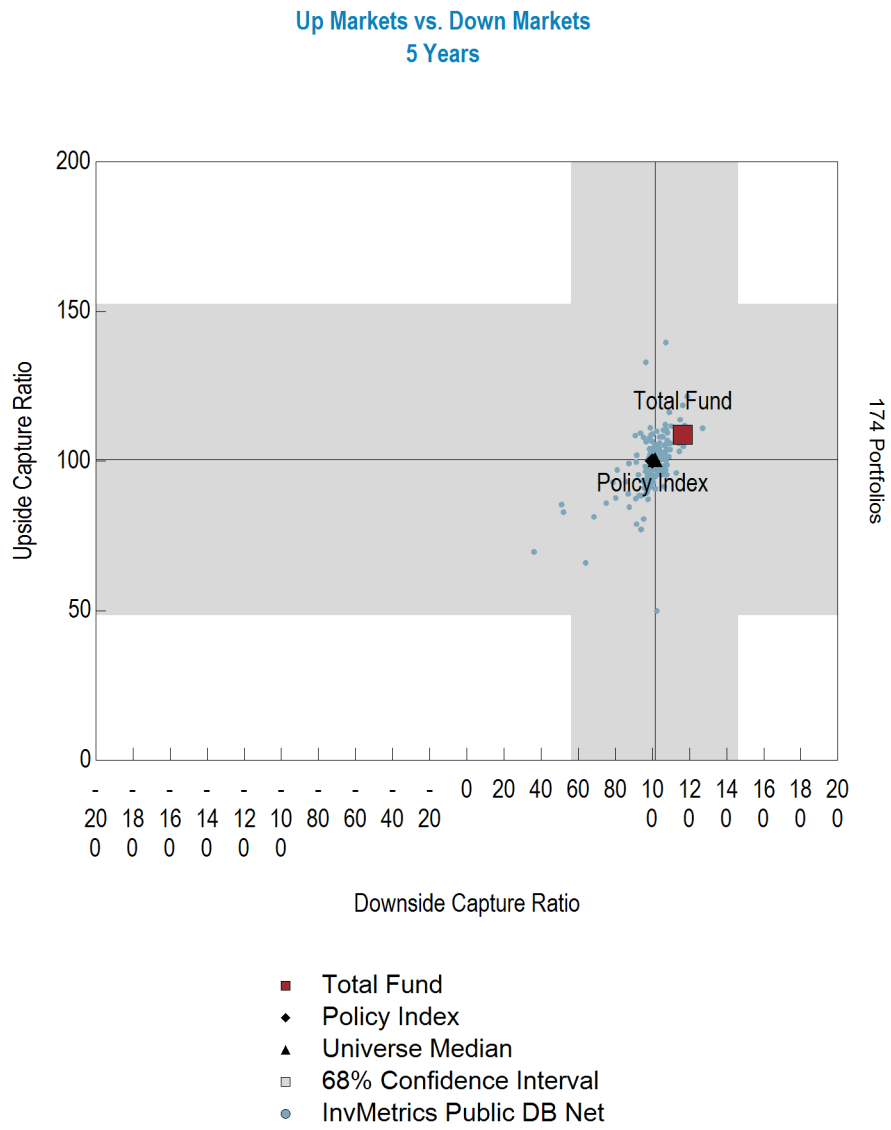
Total Real Estate
Asset Class Overview (Net of Fees)

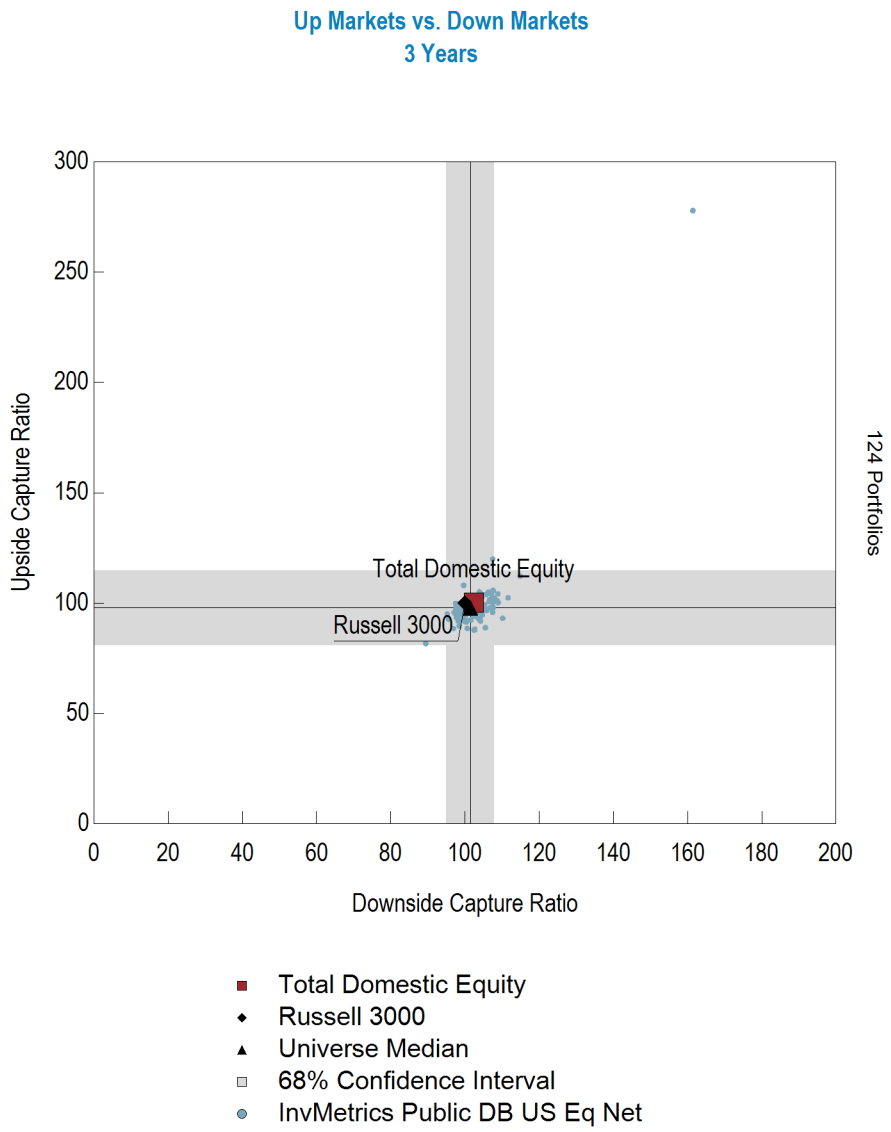
Period Ending: March 31, 2021

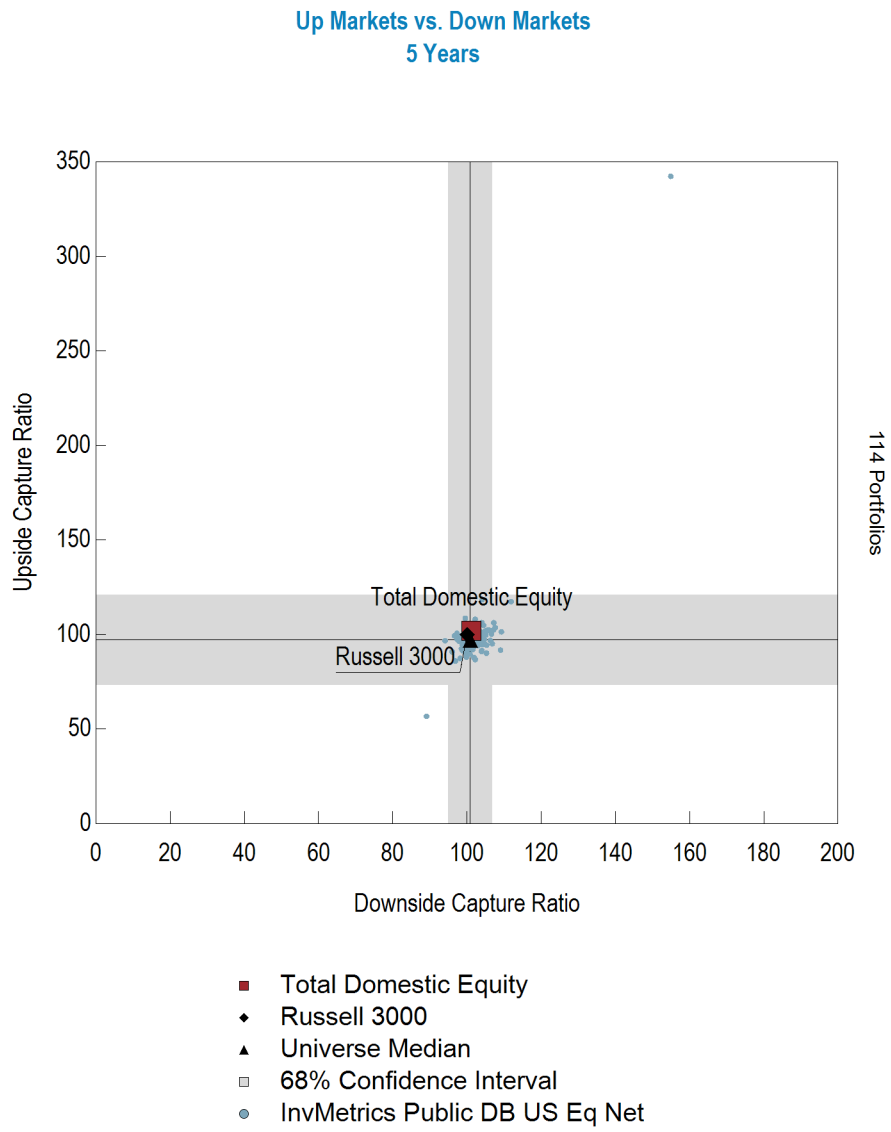
	Market Value	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Real Estate	**180,493,368**	**0.8**	**0.2**	**1.1**	**4.8**	**5.4**	**8.3**	**1.8**	**5.2**	**8.8**	**4.3**	**8.0**
NCREIF-ODCE		*2.1*	*3.9*	*2.3*	*4.9*	*6.2*	*9.7*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index		*1.7*	*3.7*	*2.6*	*4.9*	*5.8*	*8.8*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
RREEF America II	165,436,183	0.8	0.2	1.1	4.7	5.4	9.2	1.8	5.3	8.6	4.4	8.2
NCREIF-ODCE		*2.1*	*3.9*	*2.3*	*4.9*	*6.2*	*9.7*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index		*1.7*	*3.7*	*2.6*	*4.9*	*5.8*	*8.8*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
American Realty	15,057,185	0.7	1.0	1.6	--	--	--	1.1	--	--	--	--
NCREIF-ODCE		*2.1*	*3.9*	*2.3*	--	--	--	*1.2*	--	--	--	--
NCREIF Property Index		*1.7*	*3.7*	*2.6*	--	--	--	*1.6*	--	--	--	--

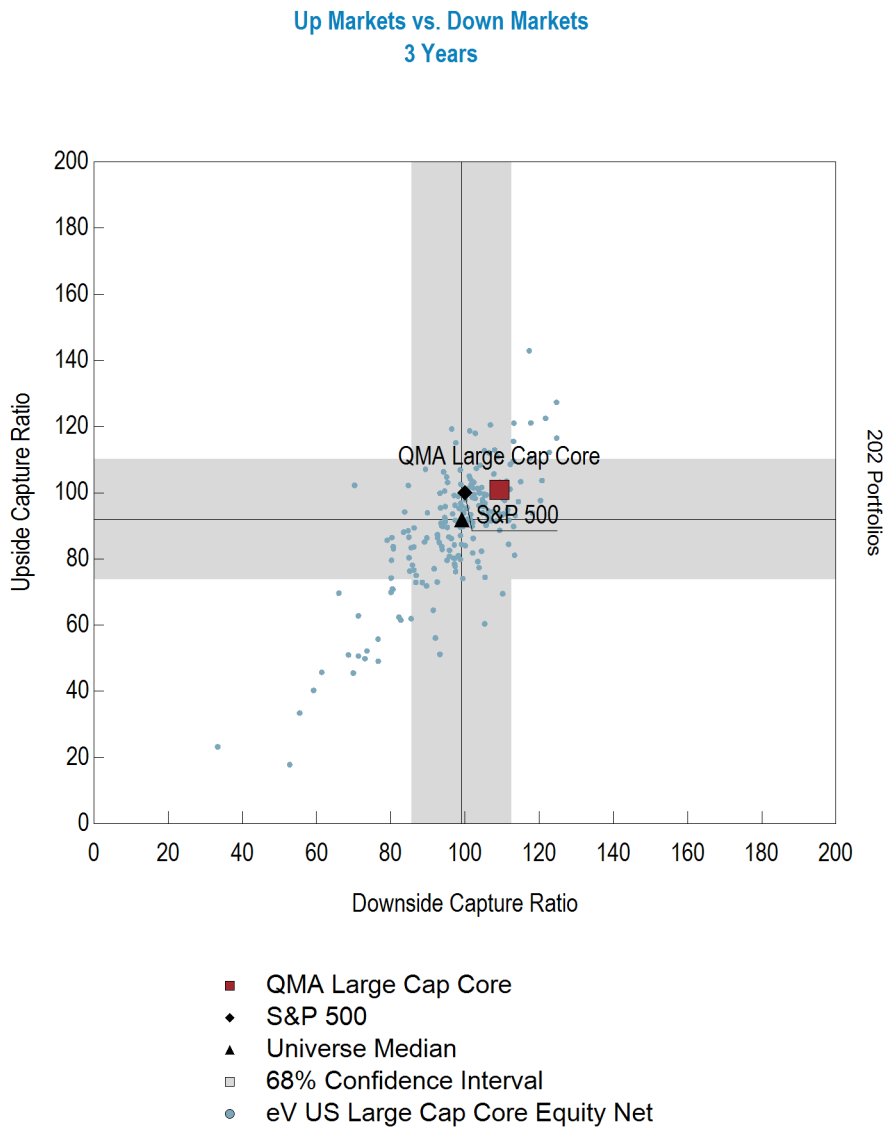
RREEF liquidated in 1Q 2018. American Realty funded 4Q 2019.

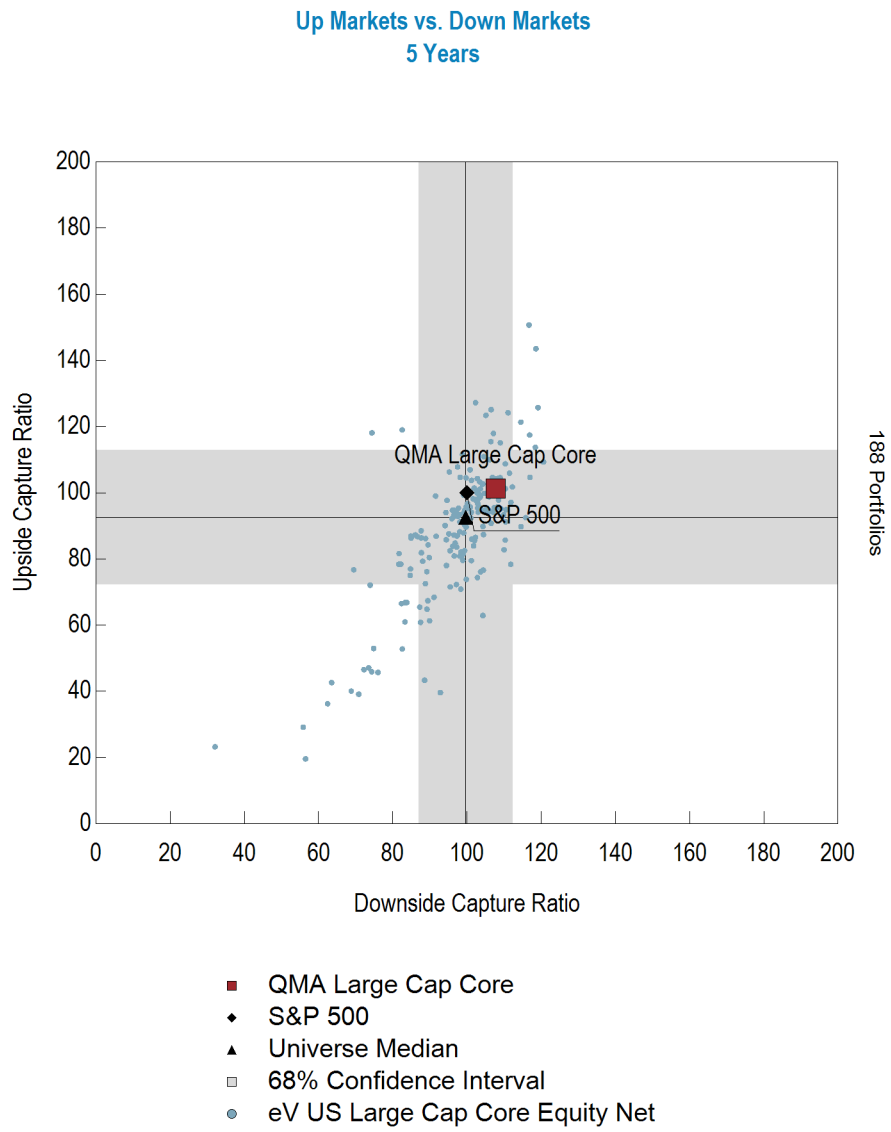

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Total Fund
Policy Index
185 Portfolios
Total Fund
Policy Index
Universe Median
68% Confidence Interval
InvMetrics Public DB Net

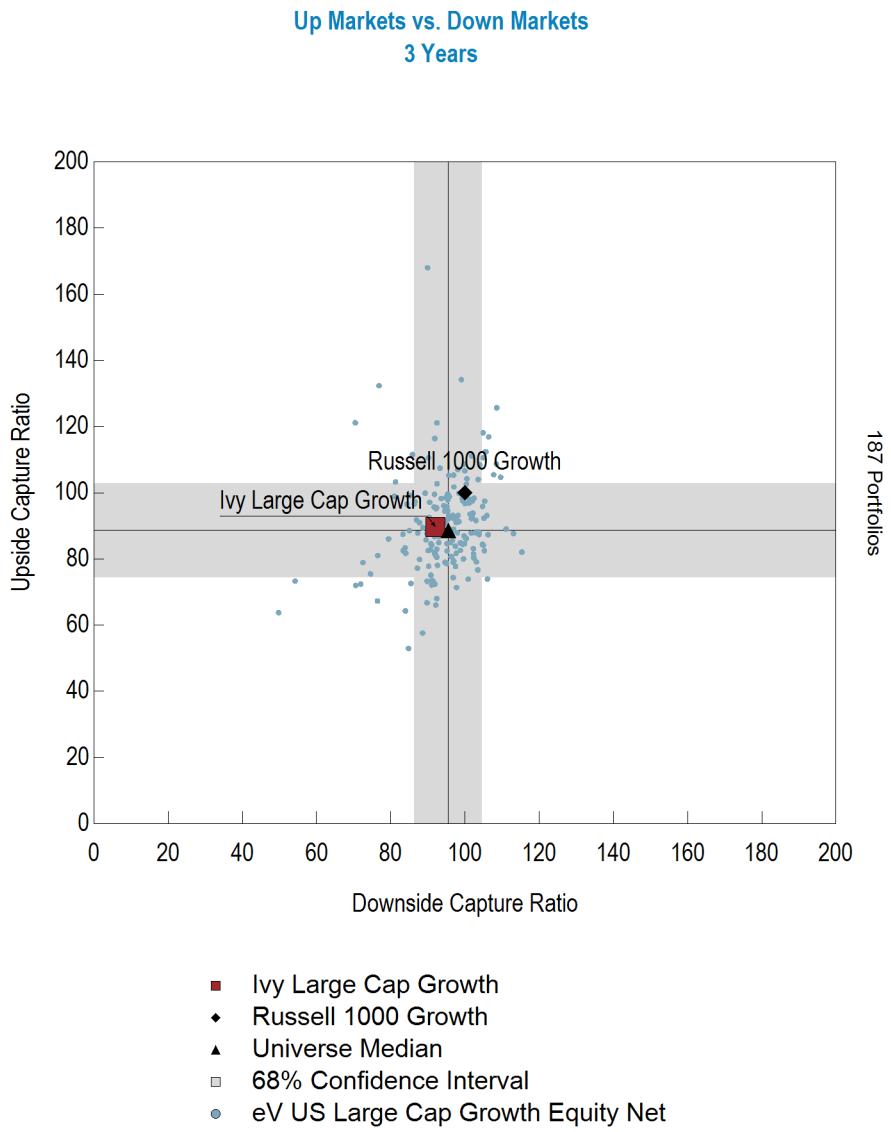

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Total Fund
Policy Index
174 Portfolios
Total Fund
Policy Index
Universe Median
68% Confidence Interval
InvMetrics Public DB Net

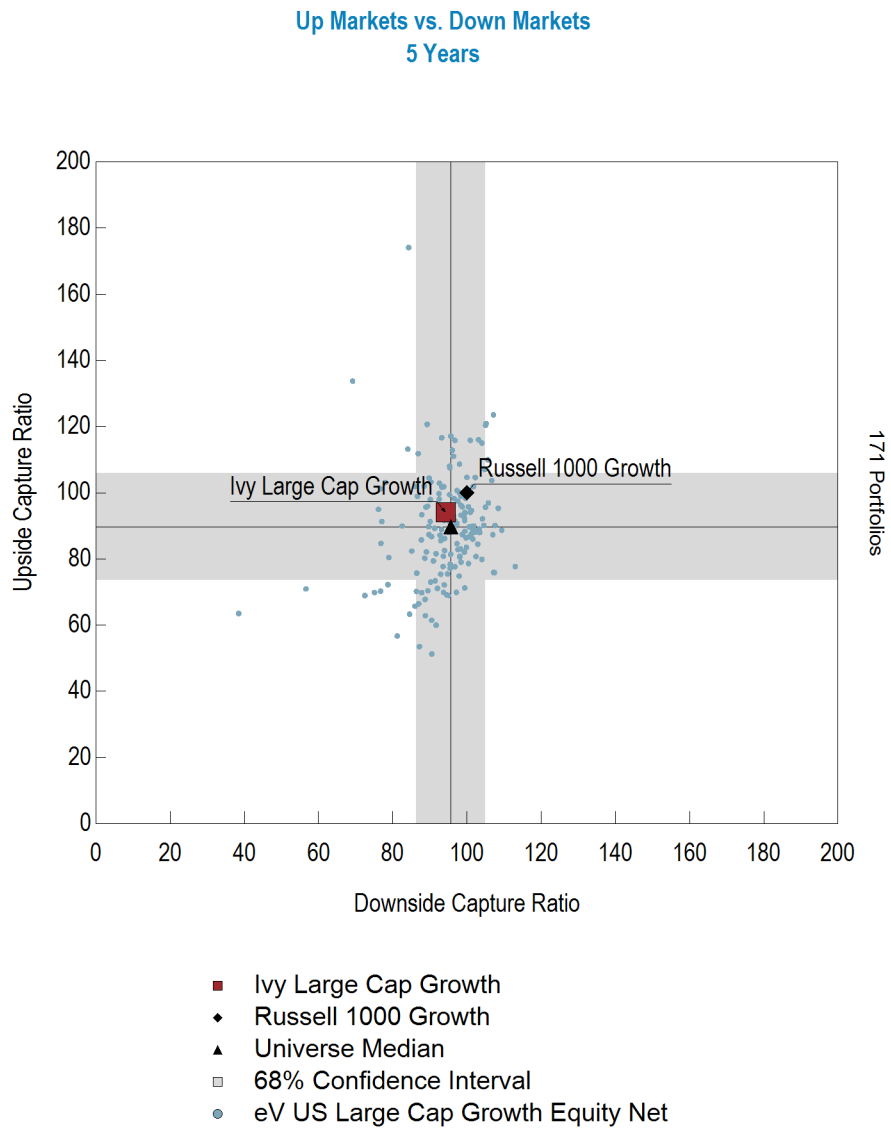

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Total Domestic Equity
Russell 3000
124 Portfolios
Total Domestic Equity
Russell 3000
Universe Median
68% Confidence Interval
InvMetrics Public DB US Eq Net

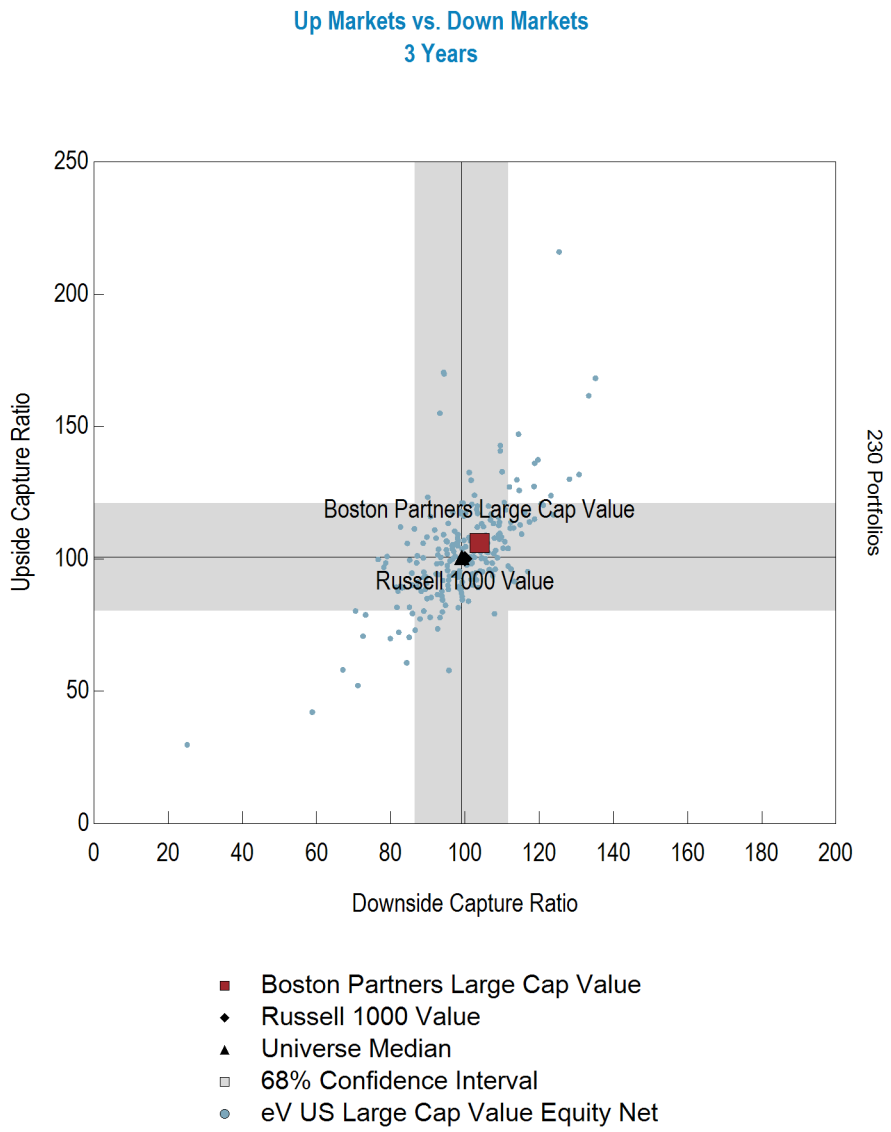

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Total Domestic Equity
Russell 3000
114 Portfolios
Total Domestic Equity
Russell 3000
Universe Median
68% Confidence Interval
InvMetrics Public DB US Eq Net

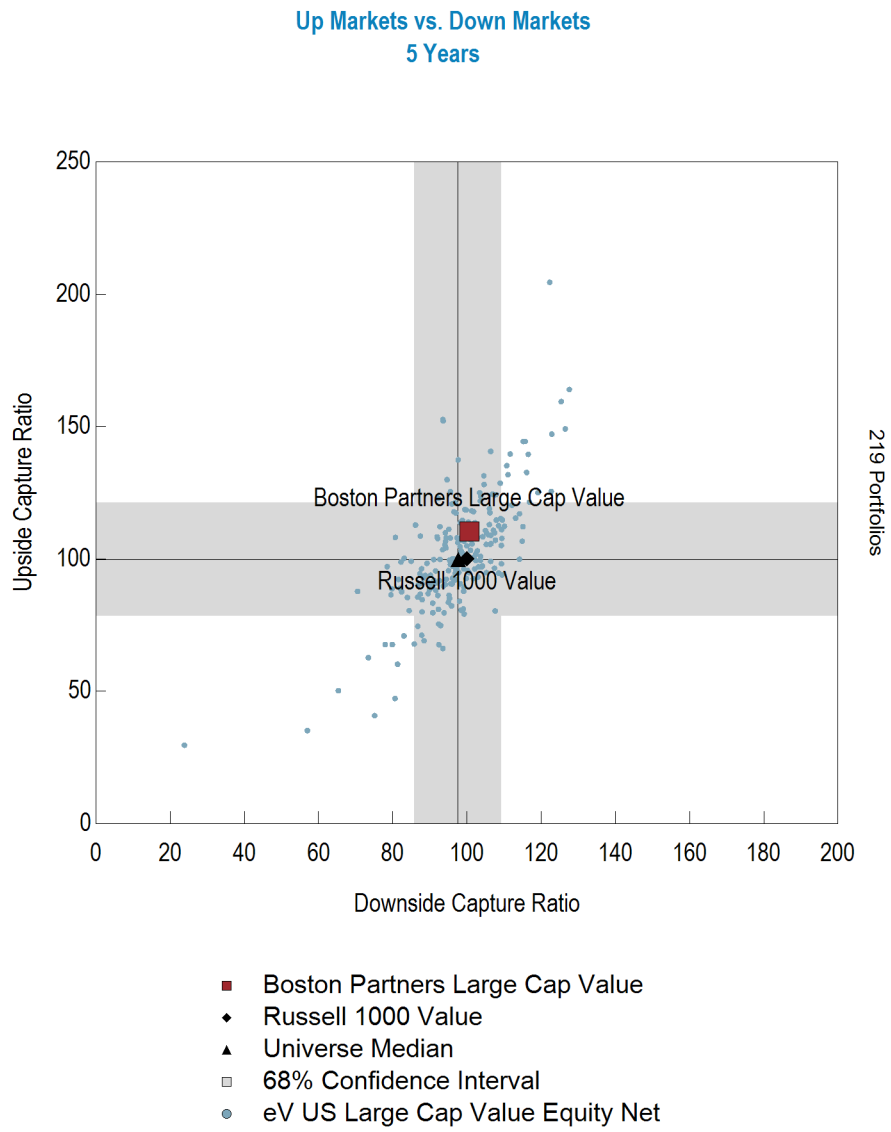

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
QMA Large Cap Core
S&P 500
202 Portfolios
0
20
40
60
80
100
120
140
160
180
200
QMA Large Cap Core
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net

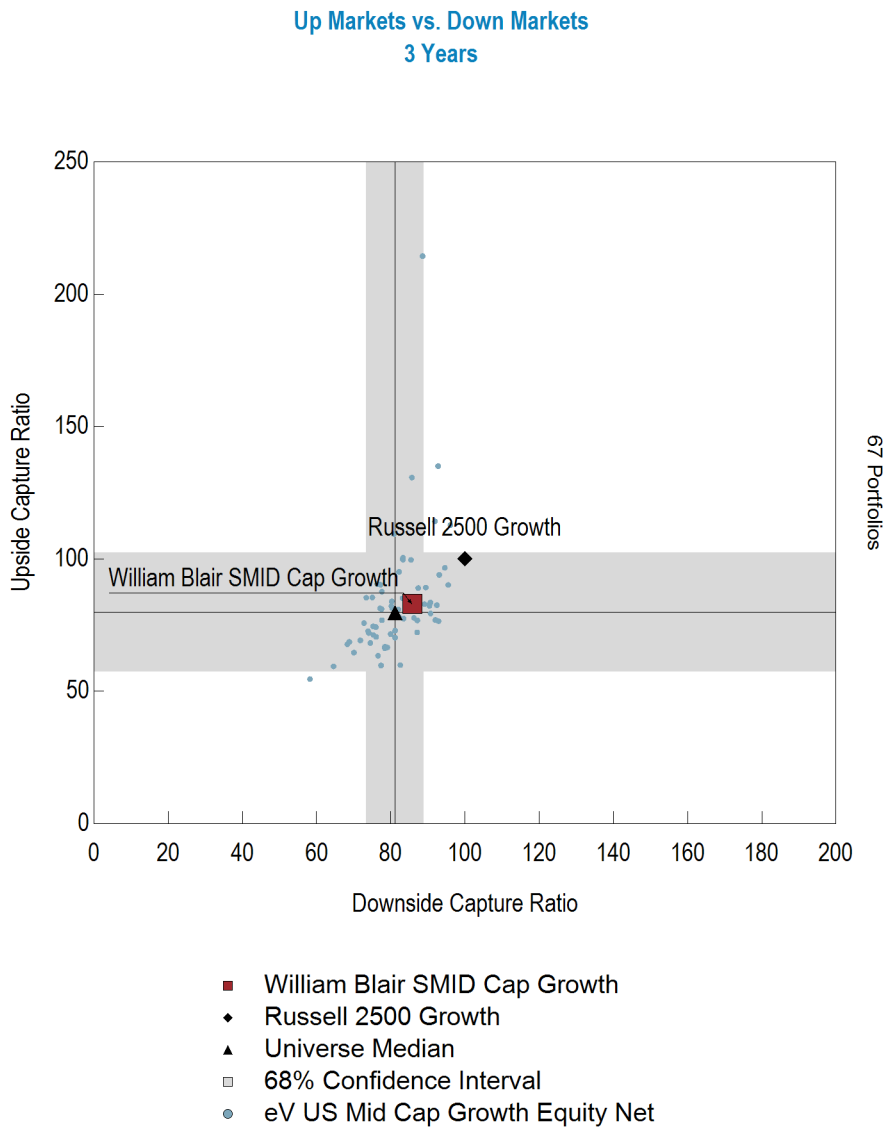

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
QMA Large Cap Core
S&P 500
188 Portfolios
0
20
40
60
80
100
120
140
160
180
200
QMA Large Cap Core
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Net

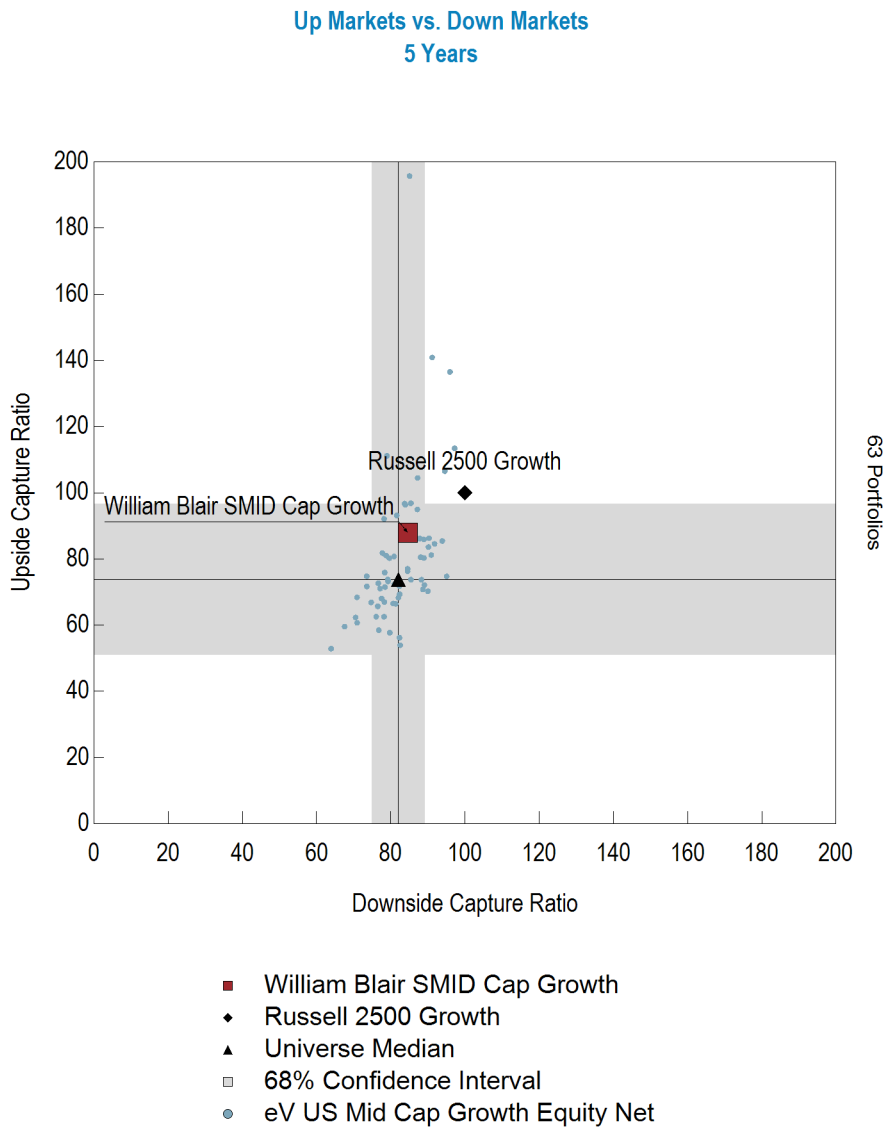

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Russell 1000 Growth
Ivy Large Cap Growth
187 Portfolios
Ivy Large Cap Growth
Russell 1000 Growth
Universe Median
68% Confidence Interval
eV US Large Cap Growth Equity Net

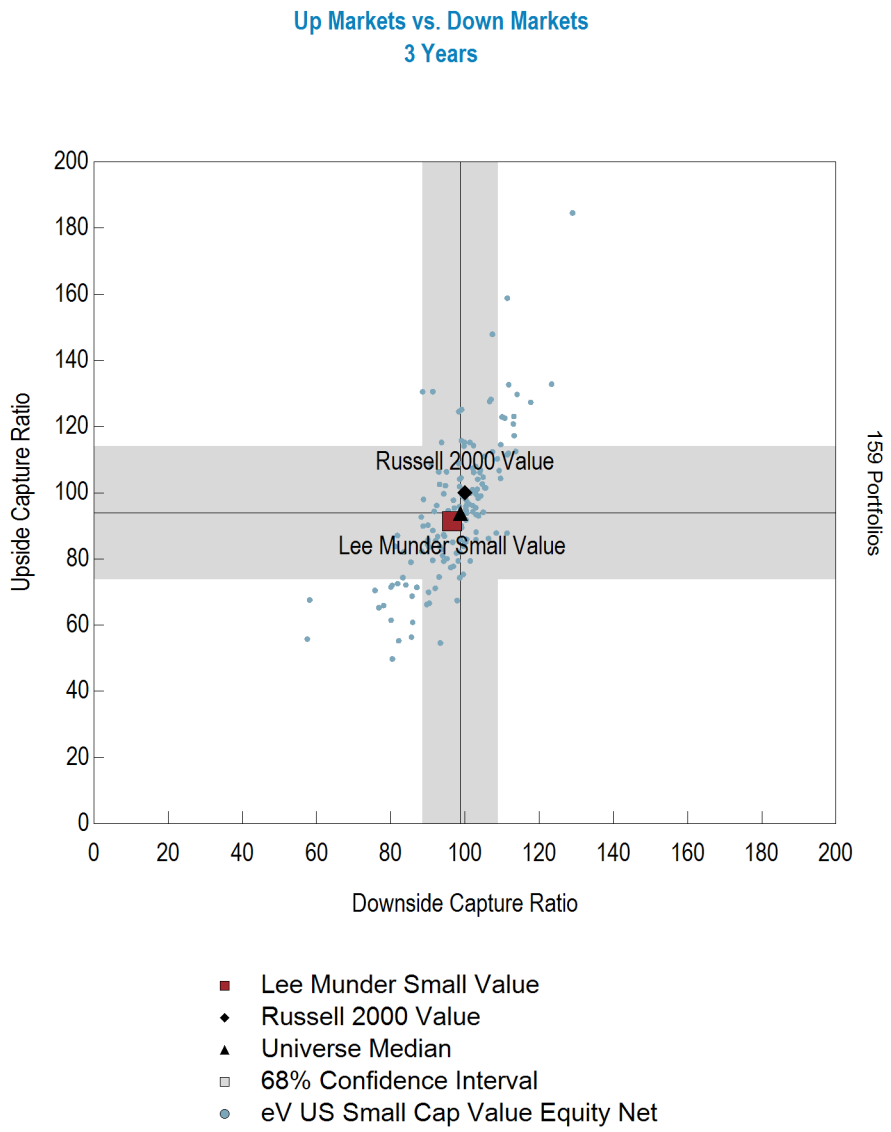

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Ivy Large Cap Growth
Russell 1000 Growth
171 Portfolios
Ivy Large Cap Growth
Russell 1000 Growth
Universe Median
68% Confidence Interval
eV US Large Cap Growth Equity Net


Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Boston Partners Large Cap Value
Russell 1000 Value
230 Portfolios
0
50
100
150
200
250
0
20
40
60
80
100
120
140
160
180
200
Boston Partners Large Cap Value
Russell 1000 Value
Universe Median
68% Confidence Interval
eV US Large Cap Value Equity Net

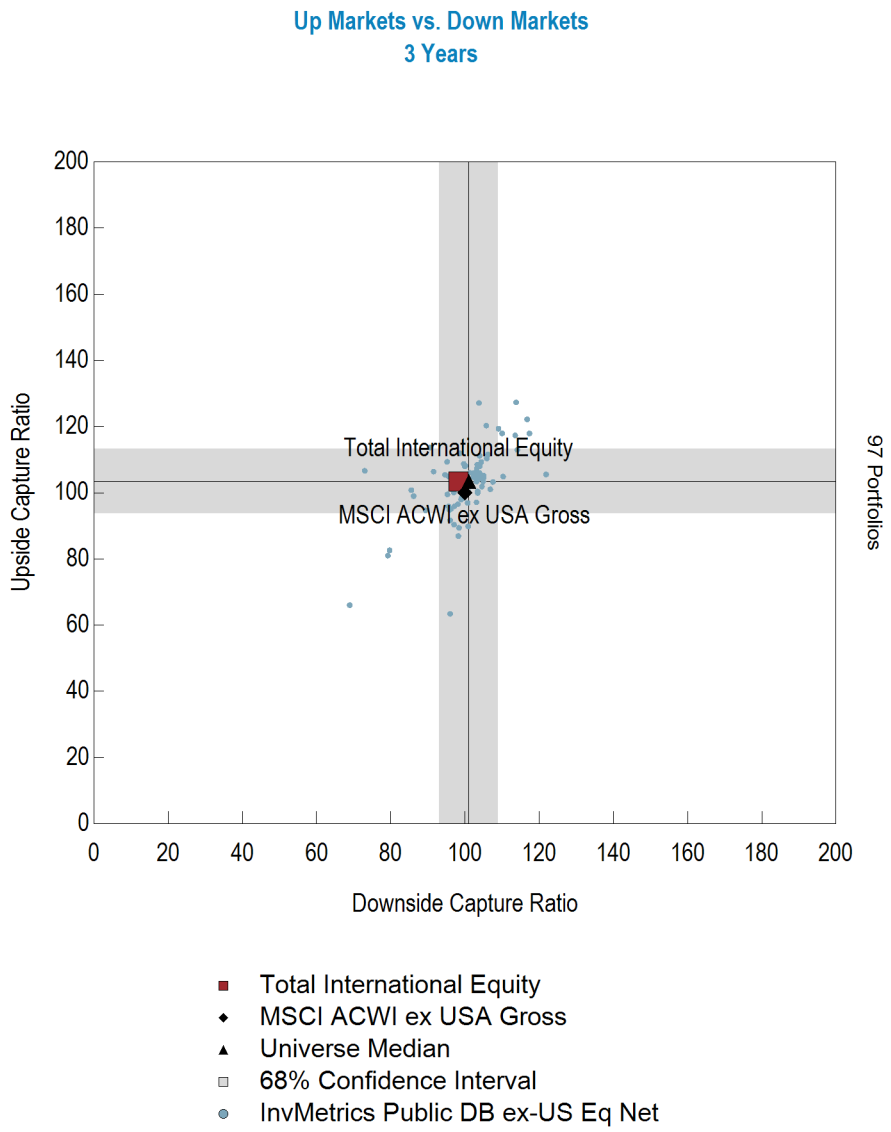

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Boston Partners Large Cap Value
Russell 1000 Value
219 Portfolios
0
50
100
150
200
250
0
20
40
60
80
100
120
140
160
180
200
Boston Partners Large Cap Value
Russell 1000 Value
Universe Median
68% Confidence Interval
eV US Large Cap Value Equity Net

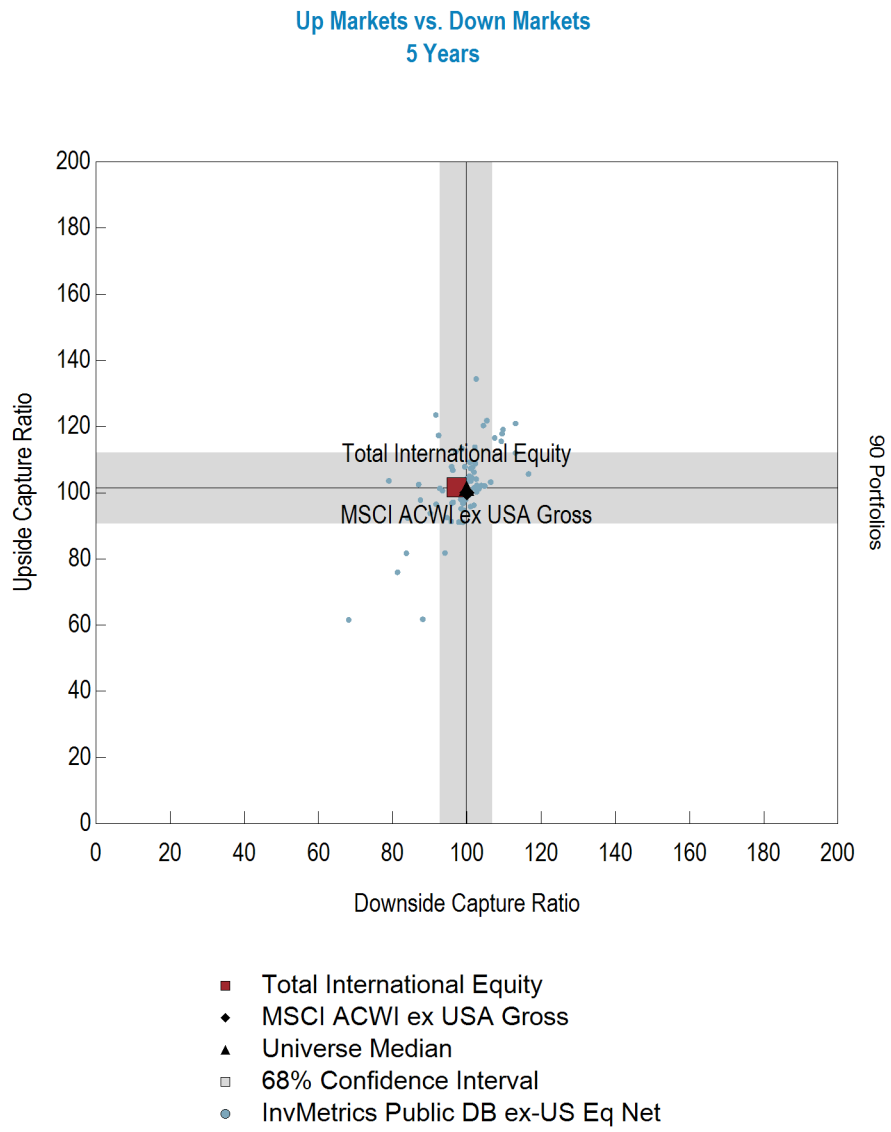

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Russell 2500 Growth
William Blair SMID Cap Growth
67 Portfolios
0
50
100
150
200
250
0
20
40
60
80
100
120
140
160
180
200
William Blair SMID Cap Growth
Russell 2500 Growth
Universe Median
68% Confidence Interval
eV US Mid Cap Growth Equity Net

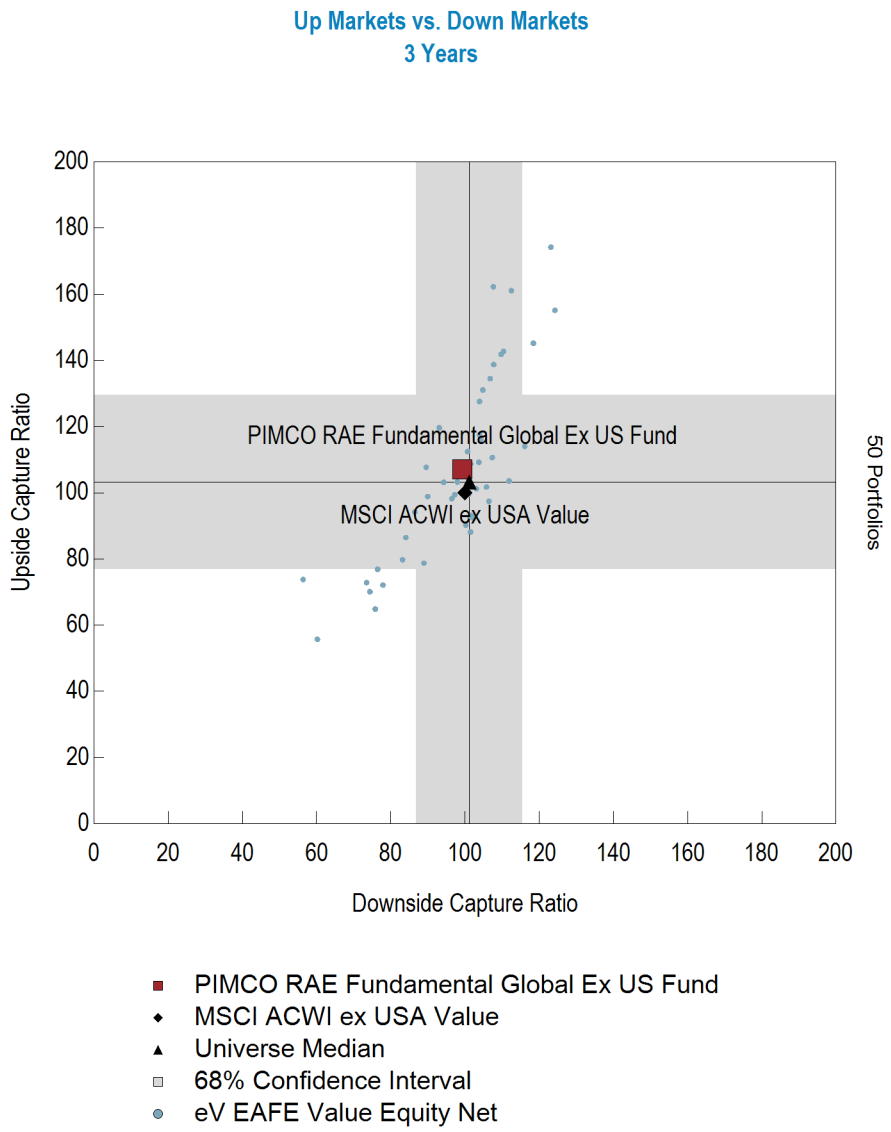

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Russell 2500 Growth
William Blair SMID Cap Growth
63 Portfolios
0
20
40
60
80
100
120
140
160
180
200
0
20
40
60
80
100
120
140
160
180
200
William Blair SMID Cap Growth
Russell 2500 Growth
Universe Median
68% Confidence Interval
eV US Mid Cap Growth Equity Net

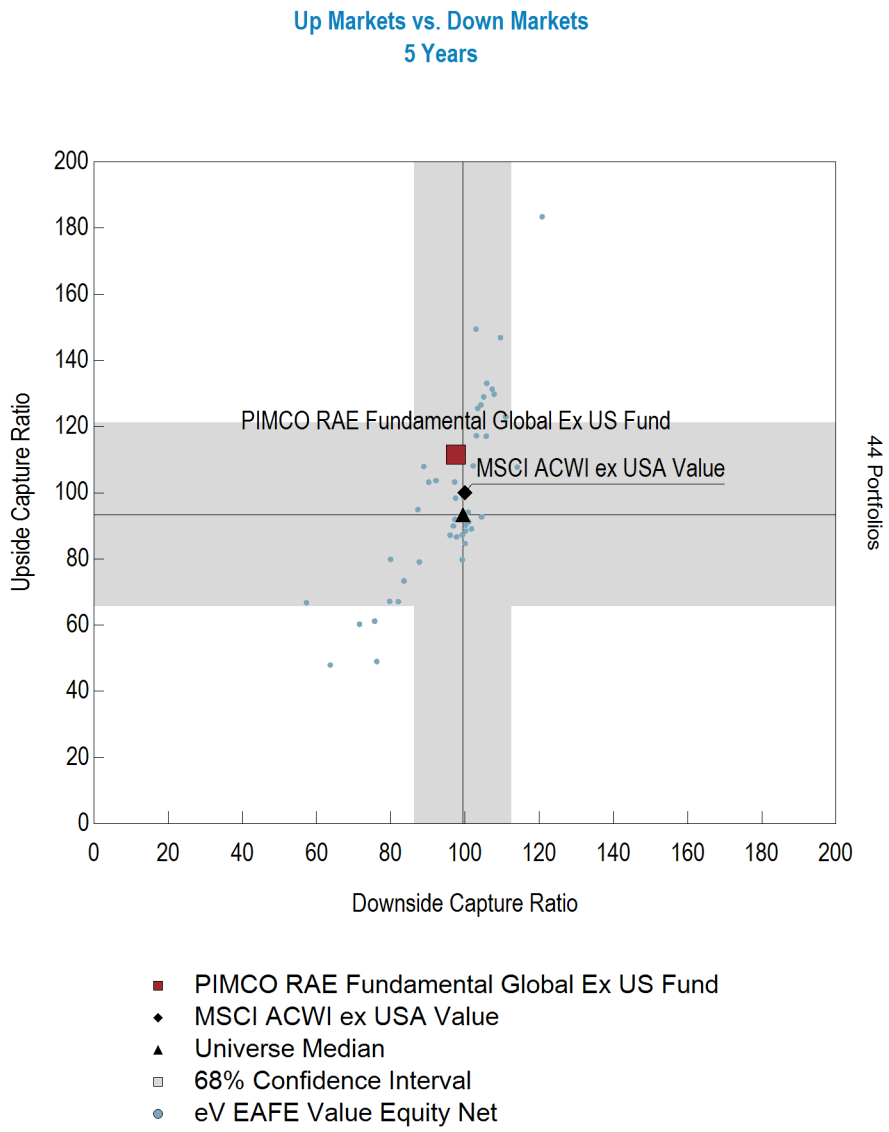

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Russell 2000 Value
Lee Munder Small Value
159 Portfolios
0
20
40
60
80
100
120
140
160
180
200
Lee Munder Small Value
Russell 2000 Value
Universe Median
68% Confidence Interval
eV US Small Cap Value Equity Net

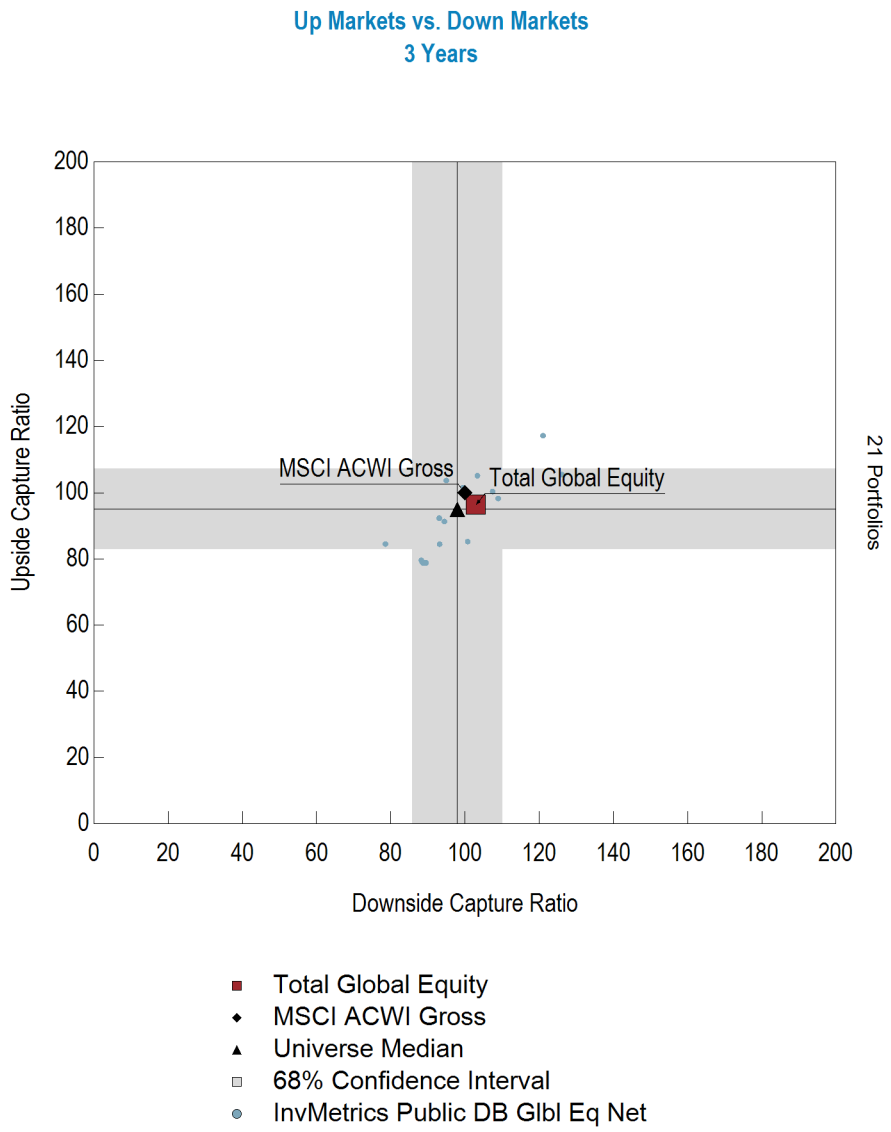
Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Russell 2000 Value
Lee Munder Small Value
155 Portfolios
0
20
40
60
80
100
120
140
160
180
200
Lee Munder Small Value
Russell 2000 Value
Universe Median
68% Confidence Interval
eV US Small Cap Value Equity Net

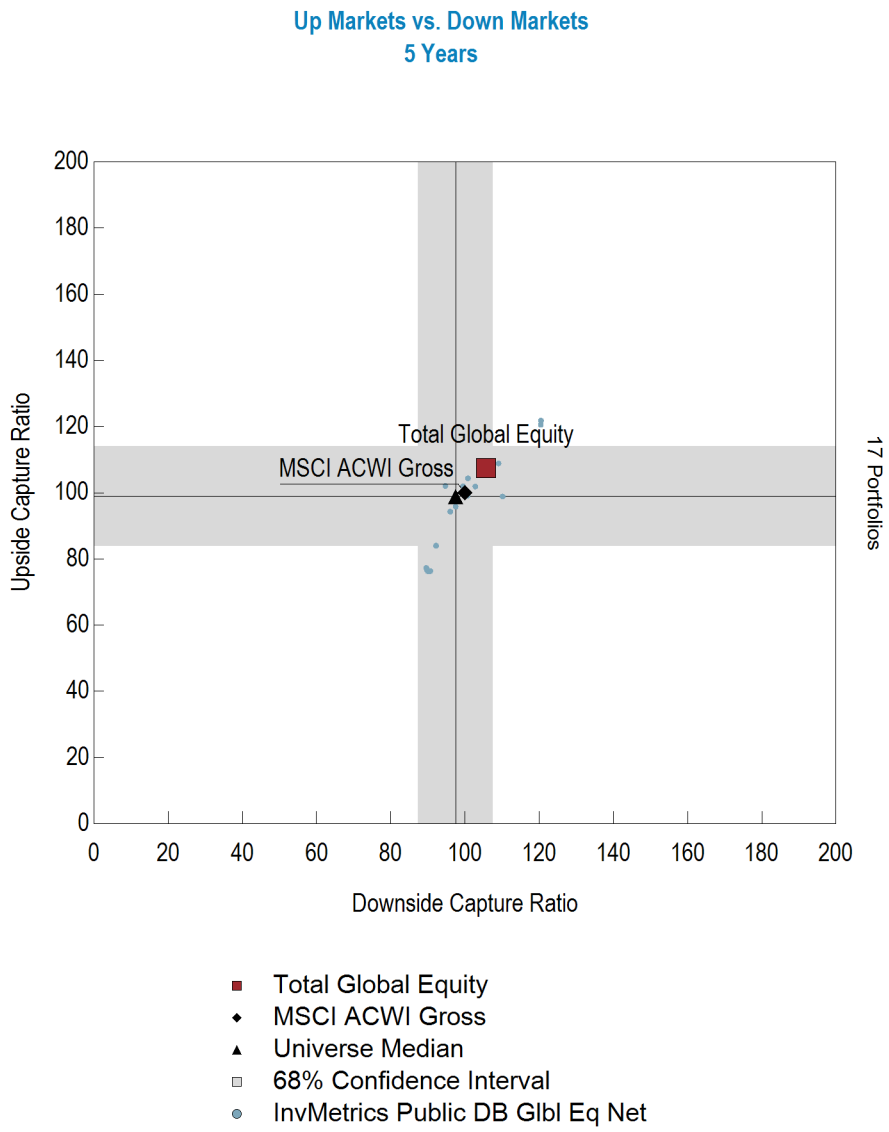

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Total International Equity
MSCI ACWI ex USA Gross
97 Portfolios
0
20
40
60
80
100
120
140
160
180
200
Total International Equity
MSCI ACWI ex USA Gross
Universe Median
68% Confidence Interval
InvMetrics Public DB ex-US Eq Net

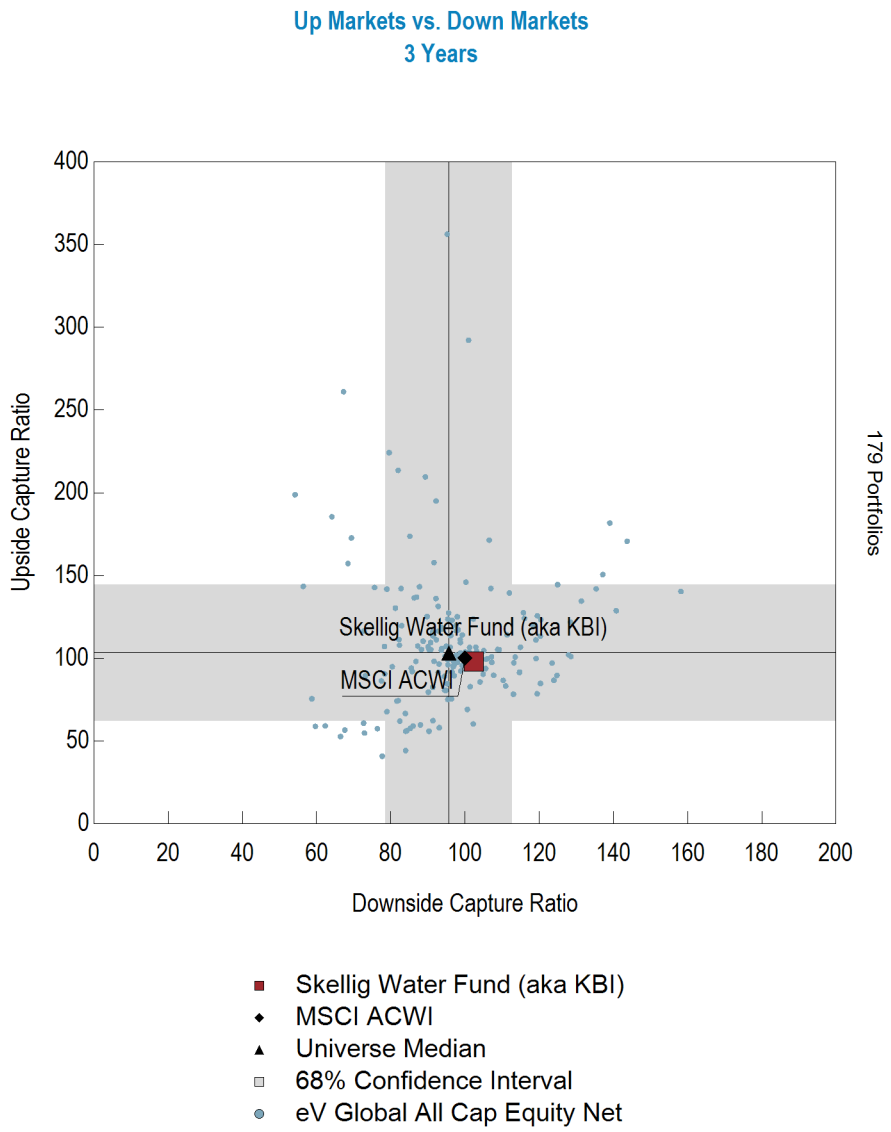

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Total International Equity
MSCI ACWI ex USA Gross
90 Portfolios
0
20
40
60
80
100
120
140
160
180
200
Total International Equity
MSCI ACWI ex USA Gross
Universe Median
68% Confidence Interval
InvMetrics Public DB ex-US Eq Net

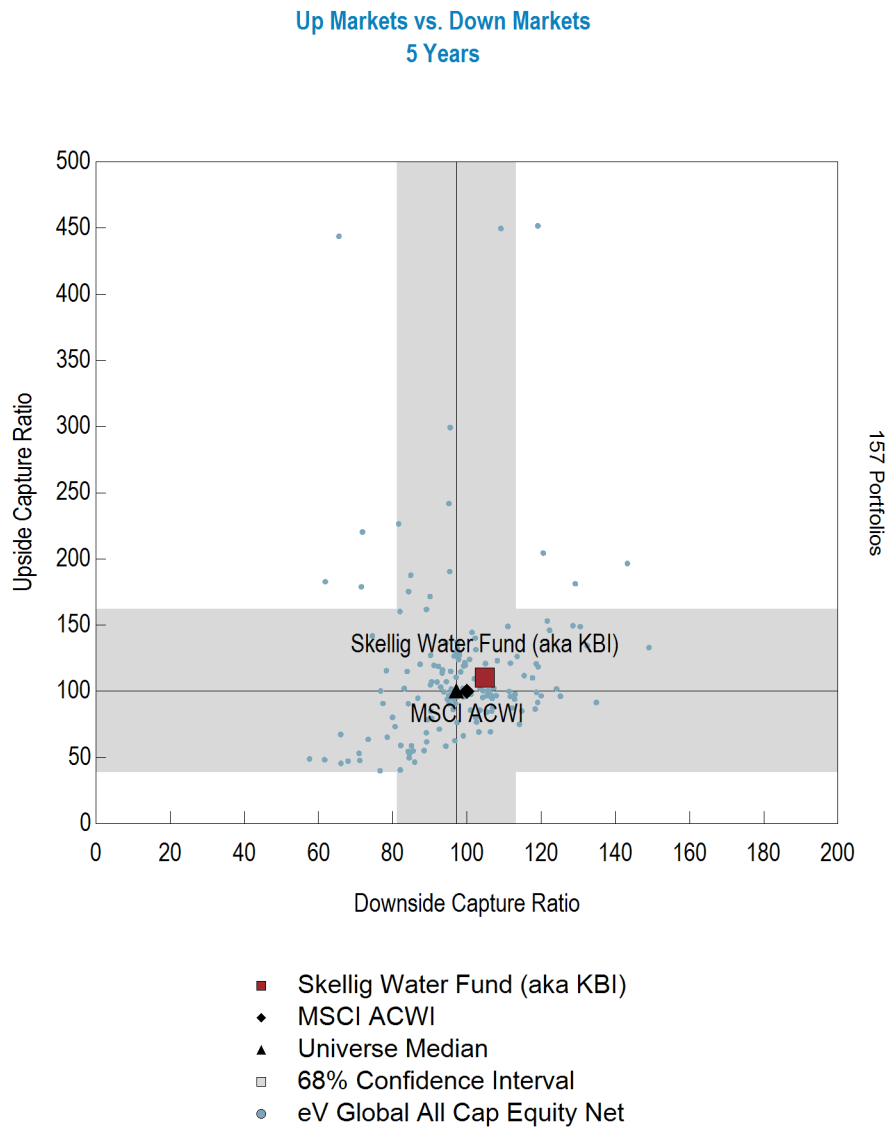

Up Markets vs. Down Markets
3 Years
PIMCO RAE Fundamental Global Ex US Fund
MSCI ACWI ex USA Value
Upside Capture Ratio
Downside Capture Ratio
50 Portfolios
0
20
40
60
80
100
120
140
160
180
200
PIMCO RAE Fundamental Global Ex US Fund
MSCI ACWI ex USA Value
Universe Median
68% Confidence Interval
eV EAFE Value Equity Net

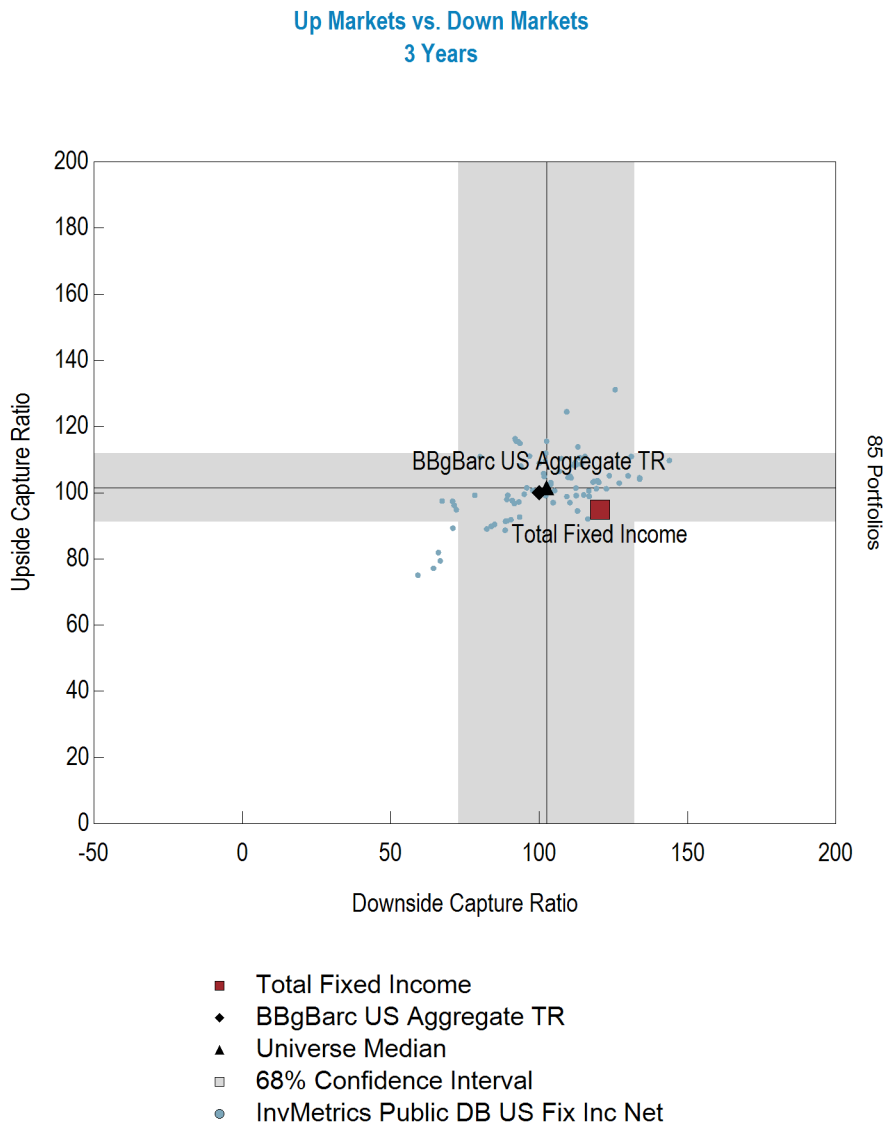

Up Markets vs. Down Markets
5 Years
PIMCO RAE Fundamental Global Ex US Fund
MSCI ACWI ex USA Value
Upside Capture Ratio
Downside Capture Ratio
44 Portfolios
0
20
40
60
80
100
120
140
160
180
200
PIMCO RAE Fundamental Global Ex US Fund
MSCI ACWI ex USA Value
Universe Median
68% Confidence Interval
eV EAFE Value Equity Net

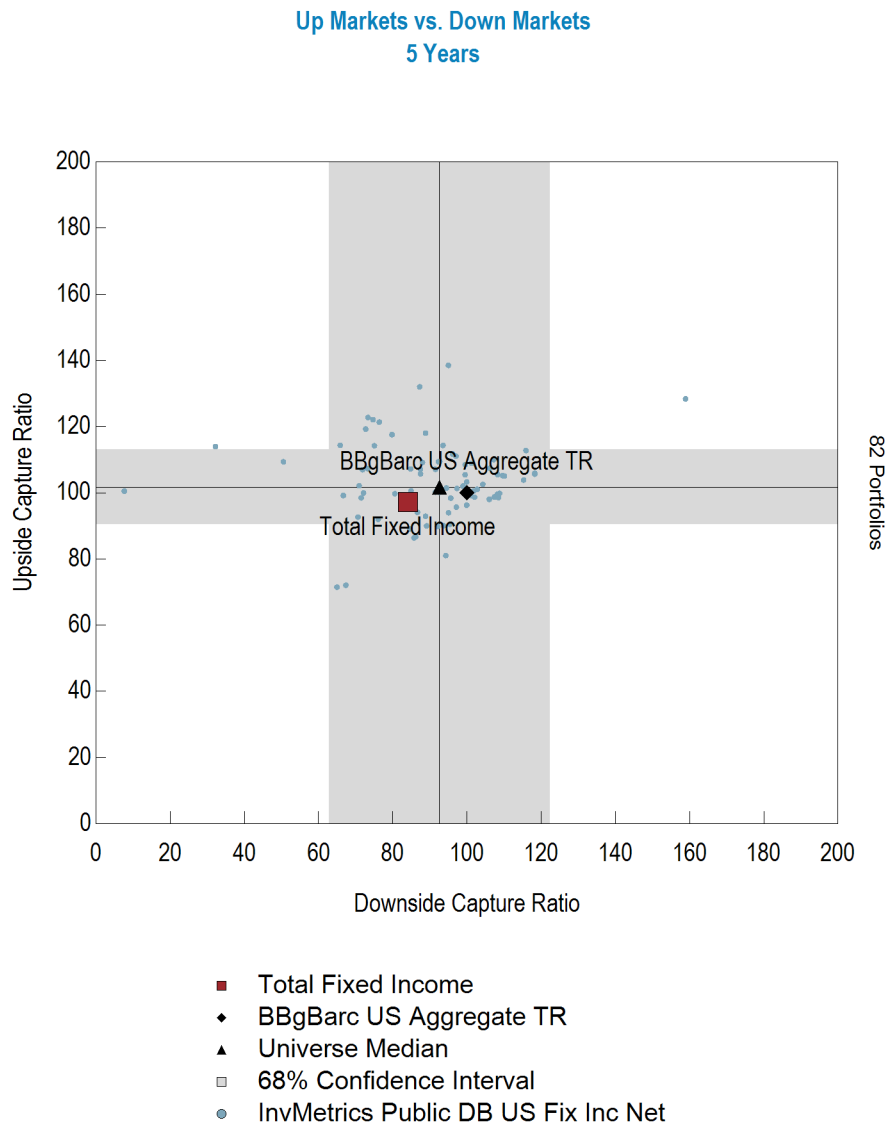

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
MSCI ACWI Gross
Total Global Equity
21 Portfolios
Total Global Equity
MSCI ACWI Gross
Universe Median
68% Confidence Interval
InvMetrics Public DB Glbl Eq Net

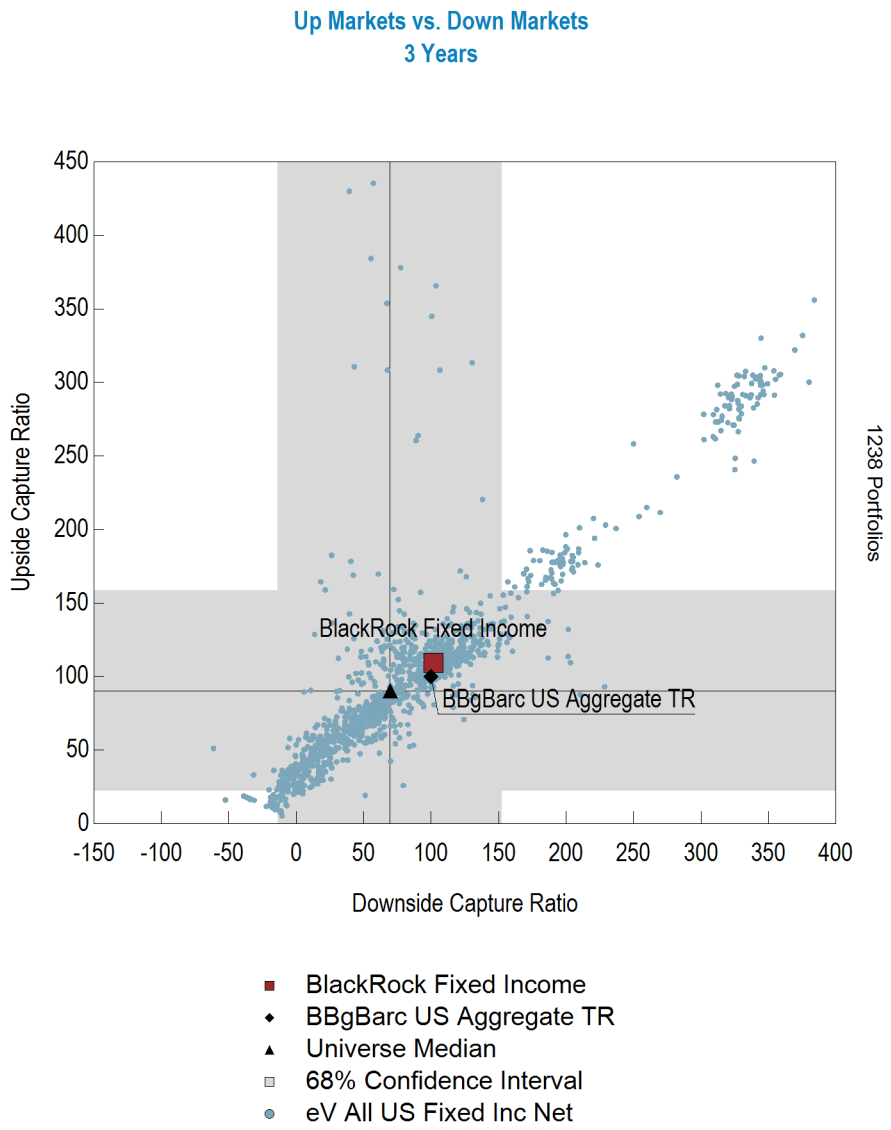

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Total Global Equity
MSCI ACWI Gross
17 Portfolios
Total Global Equity
MSCI ACWI Gross
Universe Median
68% Confidence Interval
InvMetrics Public DB Glbl Eq Net

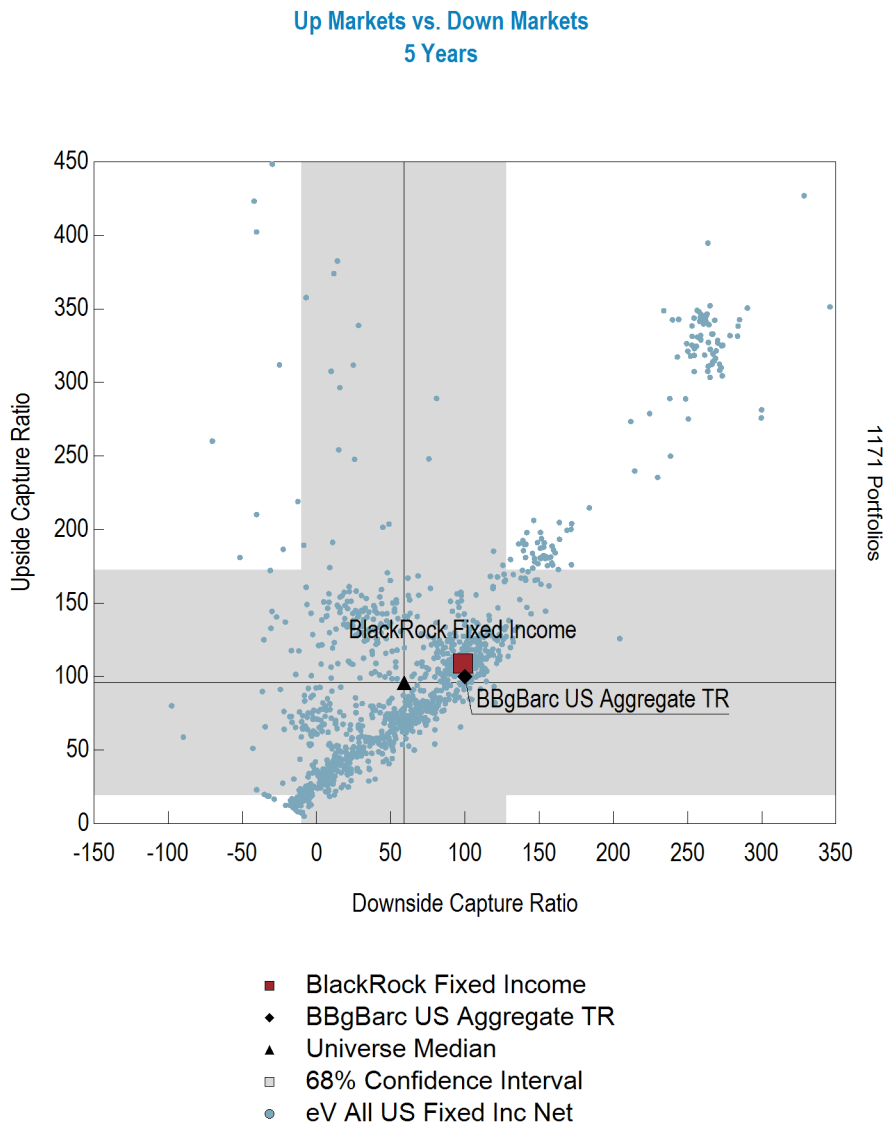

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
179 Portfolios
Skellig Water Fund (aka KBI)
MSCI ACWI
Skellig Water Fund (aka KBI)
MSCI ACWI
Universe Median
68% Confidence Interval
eV Global All Cap Equity Net

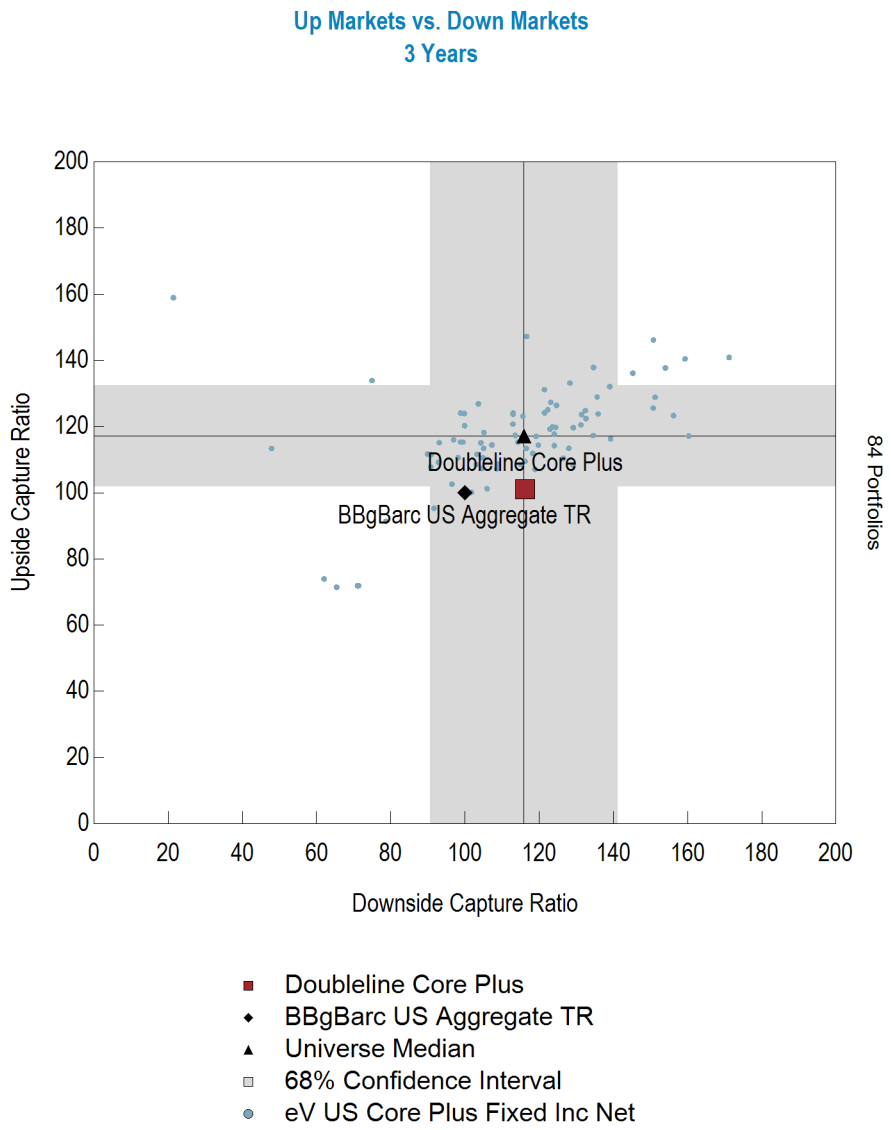

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
157 Portfolios
Skellig Water Fund (aka KBI)
MSCI ACWI
Skellig Water Fund (aka KBI)
MSCI ACWI
Universe Median
68% Confidence Interval
eV Global All Cap Equity Net

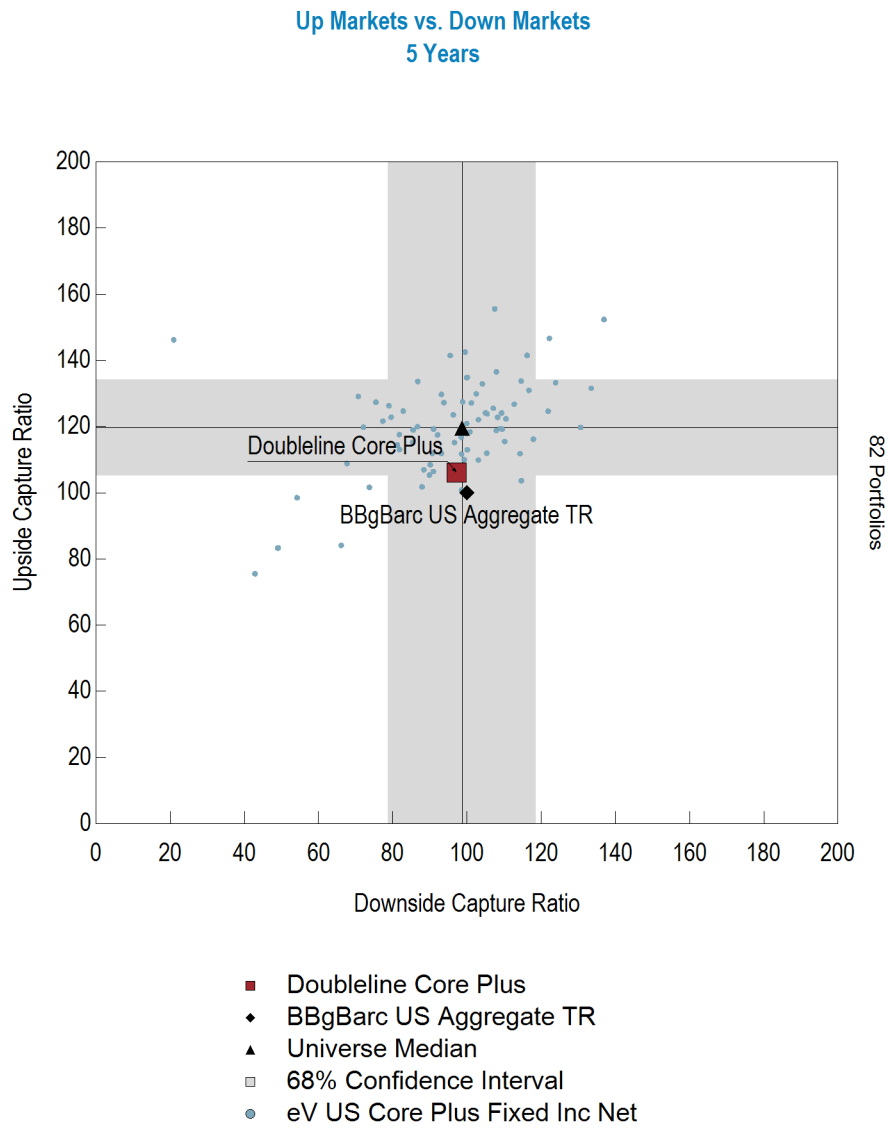

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
BBgBarc US Aggregate TR
Total Fixed Income
85 Portfolios
Total Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
InvMetrics Public DB US Fix Inc Net

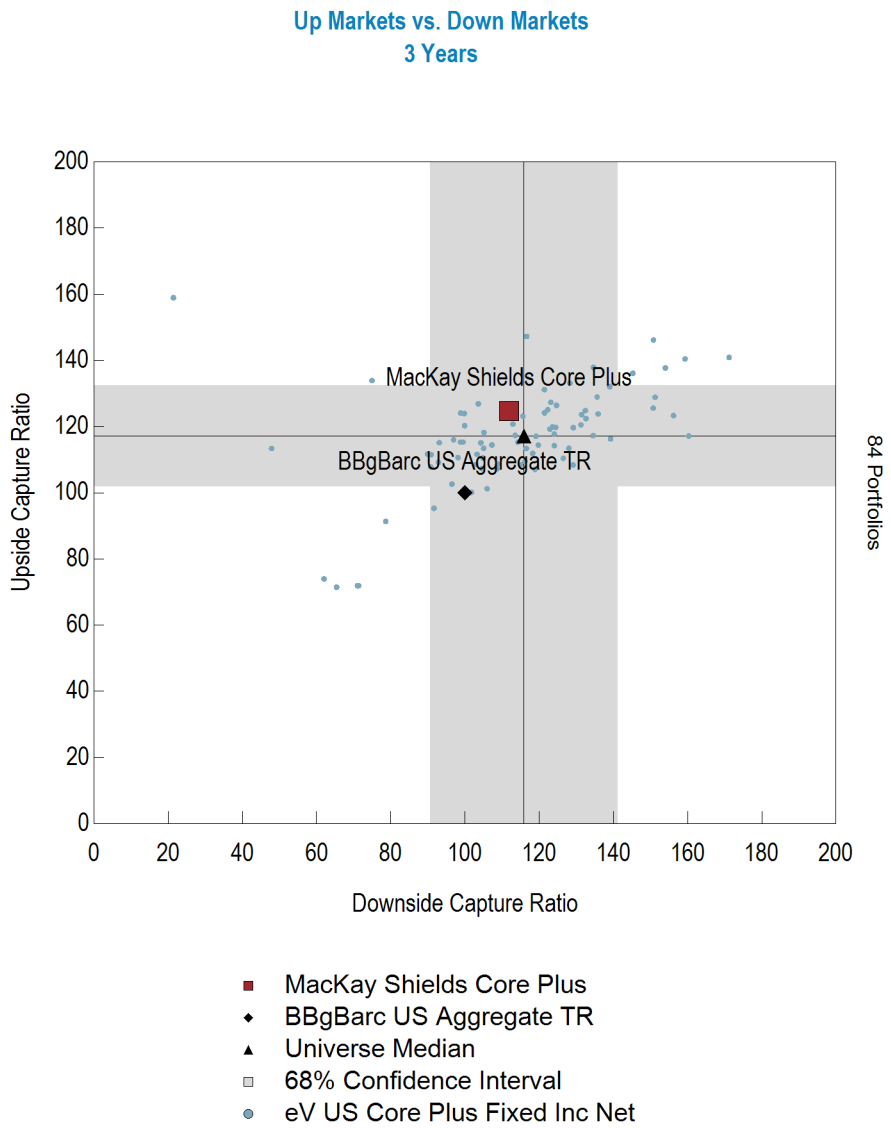

Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
BBgBarc US Aggregate TR
Total Fixed Income
82 Portfolios
Total Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
InvMetrics Public DB US Fix Inc Net

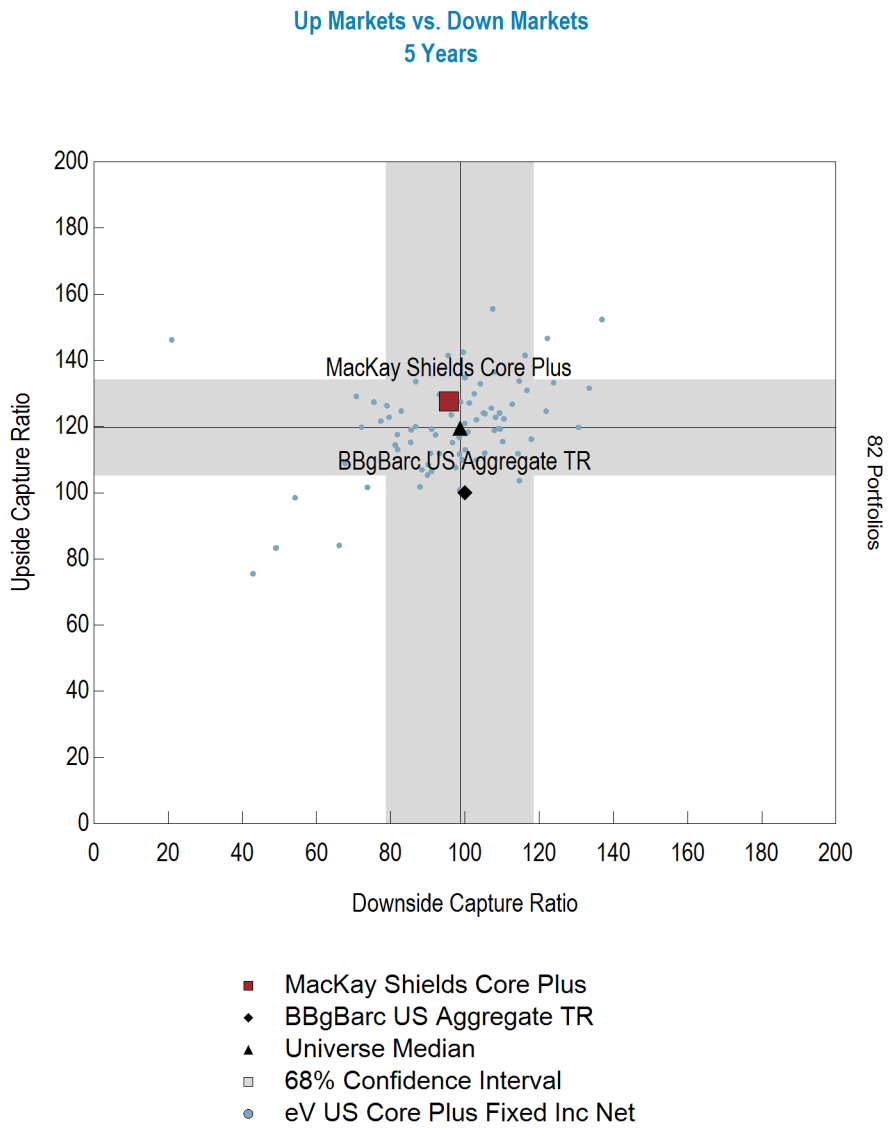

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
1238 Portfolios
BlackRock Fixed Income
BBgBarc US Aggregate TR
BlackRock Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV All US Fixed Inc Net


Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
1171 Portfolios
BlackRock Fixed Income
BBgBarc US Aggregate TR
BlackRock Fixed Income
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV All US Fixed Inc Net

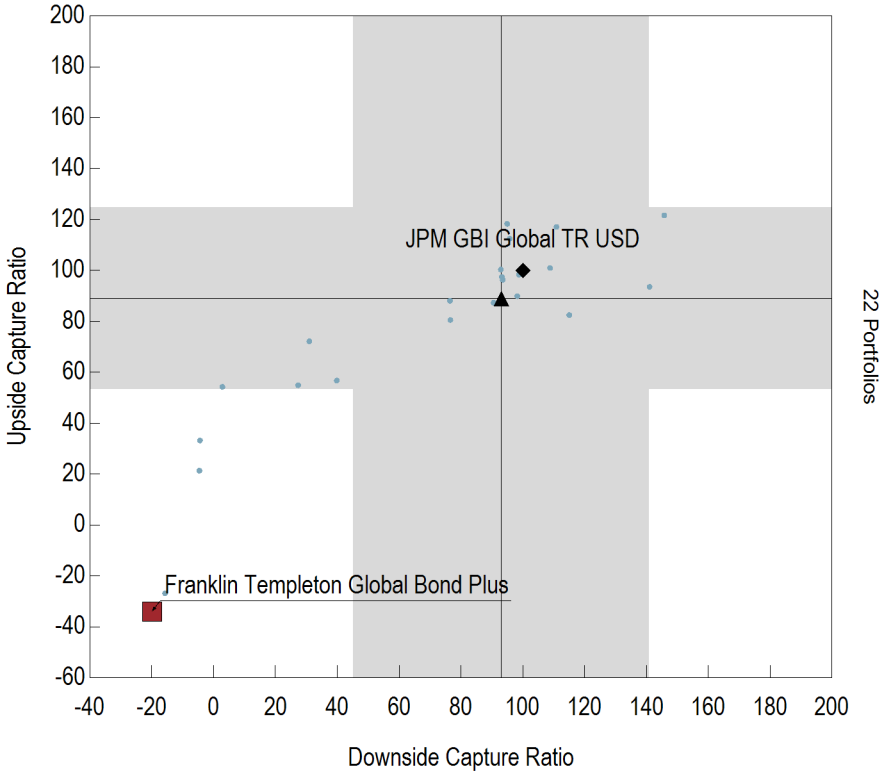

Up Markets vs. Down Markets
3 Years
Upside Capture Ratio
Downside Capture Ratio
Doubleline Core Plus
BBgBarc US Aggregate TR
84 Portfolios
Doubleline Core Plus
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV US Core Plus Fixed Inc Net


Up Markets vs. Down Markets
5 Years
Upside Capture Ratio
Downside Capture Ratio
Doubleline Core Plus
BBgBarc US Aggregate TR
82 Portfolios
Doubleline Core Plus
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV US Core Plus Fixed Inc Net


Up Markets vs. Down Markets
3 Years
MacKay Shields Core Plus
BBgBarc US Aggregate TR
Upside Capture Ratio
Downside Capture Ratio
84 Portfolios
MacKay Shields Core Plus
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV US Core Plus Fixed Inc Net

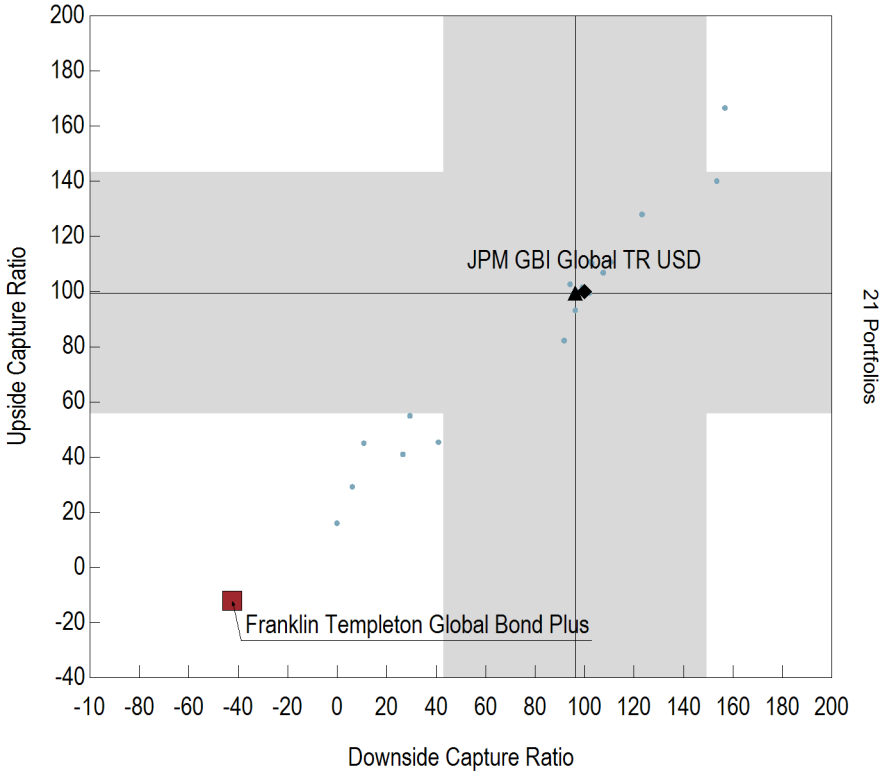

Up Markets vs. Down Markets
5 Years
MacKay Shields Core Plus
BBgBarc US Aggregate TR
Upside Capture Ratio
Downside Capture Ratio
82 Portfolios
MacKay Shields Core Plus
BBgBarc US Aggregate TR
Universe Median
68% Confidence Interval
eV US Core Plus Fixed Inc Net

Up Markets vs. Down Markets
3 Years



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

Up Markets vs. Down Markets
5 Years



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

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

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

Policy & Custom Index Composition

Policy Index: 25% Russell 3000, 15% 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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / Portfolio Standard Deviation.

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

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

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

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

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