





PERIOD ENDING: MARCH 31, 2021Investment Performance Review for

Sacramento County Employees' Retirement System

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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 assetliability 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



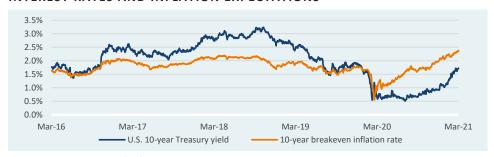
Source: Wall Street Journal, as of 3/11/21

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

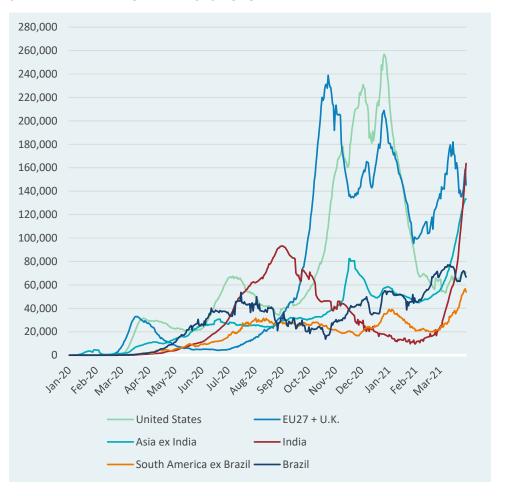
- such as power grid, railway, and public transit.
- U.S. core inflation remained low and stable, at 1.6% year-over-year in March. A jump in gasoline prices, along with base effects from the 2020 recession, pushed up headline inflation to 2.6%. It appears likely that inflation will continue to see a 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
(2.4%)	2.3%
12/31/20	12/31/19
1.6%	2.1%
3/31/21	3/31/20
2.20%	1.25%
3/31/21	3/31/20
0% – 0.25%	0% – 0.25%
3/31/21	3/31/20
1.74%	0.67%
3/31/21	3/31/20
6.0% 3/31/21	4.4% 3/31/20
10.7%	8.8%
3/31/21	3/31/20
	(2.4%) 12/31/20 1.6% 3/31/21 2.20% 3/31/21 0% - 0.25% 3/31/21 1.74% 3/31/21 6.0% 3/31/21 10.7%

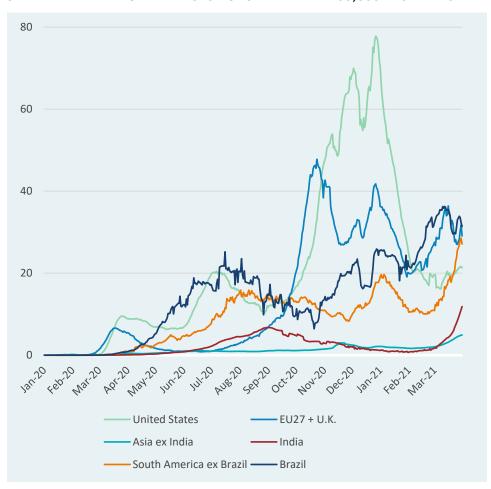


COVID-19 case growth

SEVEN-DAY AVERAGE DAILY CASE GROWTH



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

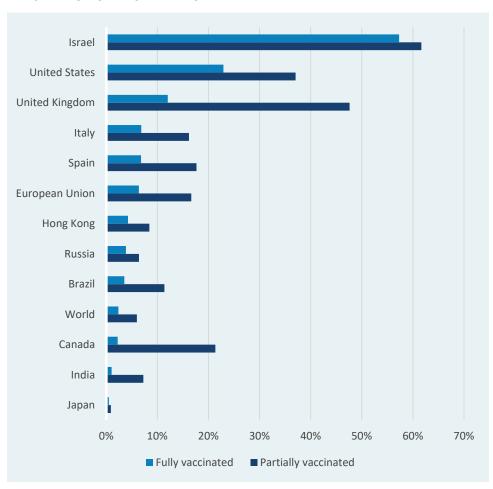


Source: Bloomberg, as of 4/15/21

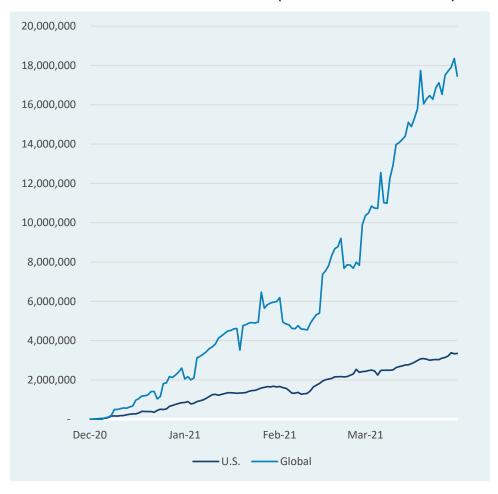


Global vaccination campaign

PERCENTAGE OF PEOPLE WHO ARE...



DAILY VACCINE DOSE ADMINISTRATIONS (7-DAY TRAILING AVERAGE)



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

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.

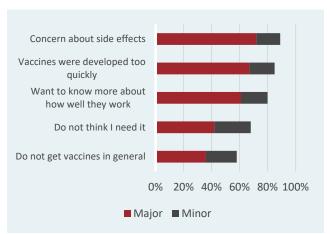
Though today these side effects appear quite rare, these developments will likely result in further delays in the push toward herd immunity over the short-term. If suspensions are lifted in the intermediate term, the vaccines in question are likely to face public relations issues which could

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.

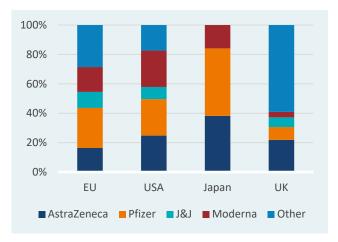
VACCINE WILLINGNESS



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

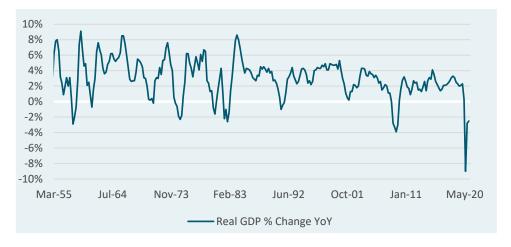
Real GDP grew at a -2.4% rate year-over-year in the fourth quarter (+4.3% quarterly annualized rate) as the U.S. economic recovery continued. The Atlanta Fed's GDPNow forecast for 2021 Q1 growth was 6.0% on a quarter-over-quarter annualized basis as of April 9th, suggesting an even quicker pace than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

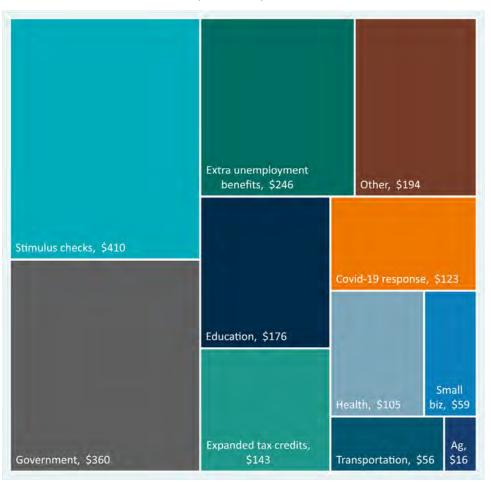


Source: BEA, annualized quarterly rate, as of 12/31/20

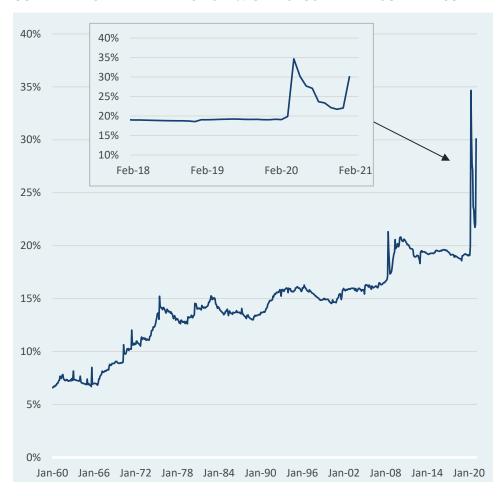


American Rescue Plan Act of 2021

STIMULUS BILL ALLOCATIONS (BILLIONS)



GOVT. TRANSFER PAYMENTS AS A % OF DISPOSABLE PERSONAL INCOME



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

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.

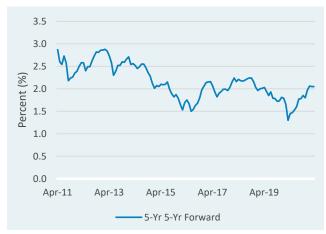
The 10-year TIPS breakeven inflation rate continued higher during the quarter to nearly 2.4% from 2.0%. Most inflation indicators have risen, though we believe that government purchases of TIPS may be artificially pushing up the breakeven rate.

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)



MARKET INFLATION EXPECTATIONS



Source: FRED, as of 3/31/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 3/31/21



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.

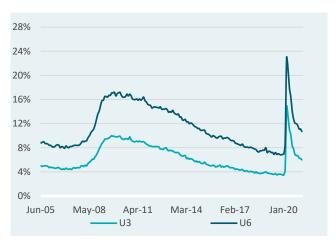
The U.S. labor force showed a strong rebound during the fall of 2020, but more recently appears to have stalled. Approximately 2% of the total U.S. workforce remains out of a job and is not seeking work, relative to pre-COVID levels. This effect is illustrated in the labor participation rate, which is 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.

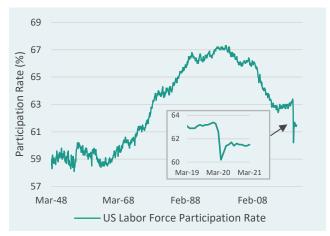
The most recent NFIB Small Business Optimism report explained "Main Street is doing better as state and local restrictions are eased, but finding qualified labor is a critical issue for small businesses nationwide... Small business owners are competing with the pandemic and increased unemployment benefits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



LABOR PARTICIPATION RATE



NFIB SMALL BUSINESS HIRING PLANS INDEX



Source: FRED, as of 3/31/21 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.

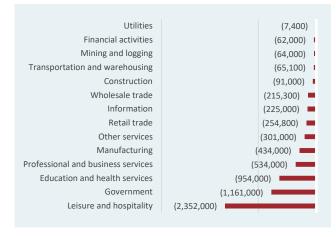
NON-FARM PAYROLLS - ONE-MONTH CHANGE



NON-FARM PAYROLLS - THREE-MONTH CHANGE



NON-FARM PAYROLLS - ONE-YEAR CHANGE



Source: BLS, as of 3/31/21



The consumer

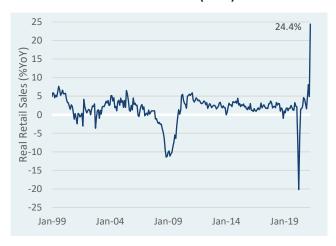
U.S. retail sales rocketed higher in the first quarter, accelerating to a 9.8% month-over-month pace in March (this rate was an astounding 24.4% on a year-over-year basis, though this metric is more difficult to interpret since it calculates growth from a starting point of March 2020—the depths of the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

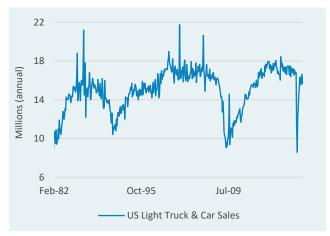
began to surge, many types of activities dipped once again. It now appears that activity such as retail, recreation, and grocery shopping are moving back to normal levels. At the same time, public transit usage and travel to workplaces remains depressed.

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)



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



Source: FRED, 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



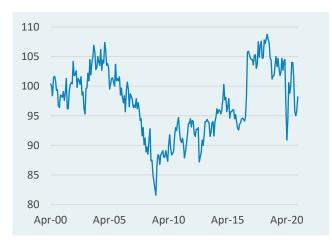
Source: Bloomberg, Langer, as of 3/28/21

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.

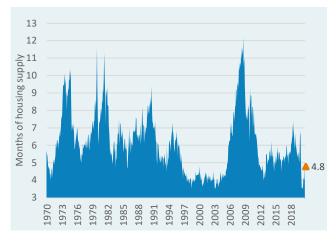
U.S. HOME SALES (YOY)



30-YEAR FIXED MORTGAGE RATE (AVERAGE)



HOUSING INVENTORY



Source: FRED, as of 3/31/21 Source: FRED, as of 2/28/21



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 yearover-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%)	2.6%	6.0%
	12/31/20	3/31/21	3/31/21
Eurozone	(4.9%)	1.3%	8.3%
	12/31/20	3/31/21	2/28/21
Japan	(1.4%)	(0.2%)	2.8%
	12/31/20	3/31/21	2/28/21
BRICS	1.6%	1.4%	5.7%
Nations	12/31/20	3/31/21	12/31/20
Brazil	(4.1%)	6.1%	14.2%
	12/31/20	3/31/21	1/31/21
Russia	(3.0%)	5.8%	5.4%
	12/31/20	3/31/21	3/31/21
India	0.4%	5.5%	6.5%
	12/31/20	3/31/21	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)

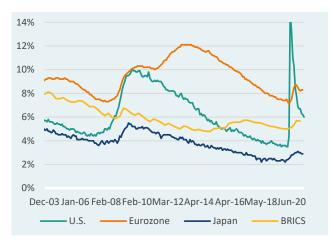


INFLATION (CPI YOY)



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

UNEMPLOYMENT



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



Source: Bloomberg, as of 12/31/20

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 aboveaverage 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 higheryielding bonds remained high, and concerns over a wave of pandemicdriven 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%.

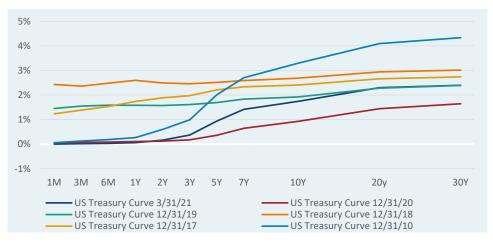
Short Term (3M)	10-Year
0.02%	1.74%
(0.67%)	(0.29%)
(0.62%)	(0.05%)
(0.56%)	0.34%
(0.54%)	0.67%
(0.24%)	0.86%
(0.01%)	0.85%
(0.11%)	0.09%
0.00%	1.79%
2.28%	3.19%
3.32%	9.28%
4.70%	7.00%
	0.02% (0.67%) (0.62%) (0.56%) (0.54%) (0.24%) (0.01%) (0.11%) 0.00% 2.28% 3.32%

Source: Bloomberg, as of 3/31/21

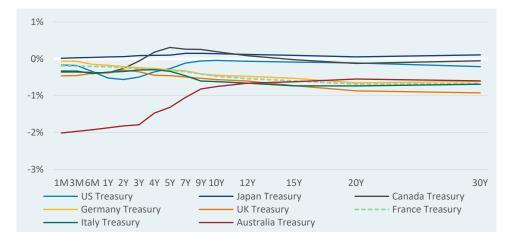


Yield environment

U.S. YIELD CURVE

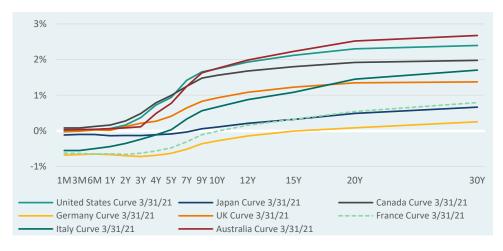


YIELD CURVE CHANGES OVER LAST FIVE YEARS



Source: Bloomberg, as of 3/31/21

GLOBAL GOVERNMENT YIELD CURVES



IMPLIED CHANGES OVER NEXT YEAR





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.

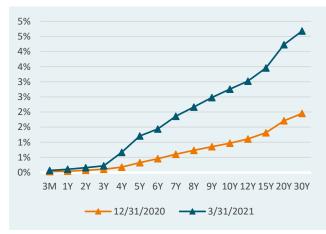
European Central Bank: Elected not to expand the size of its Pandemic Emergency Purchase Programme (PEPP), but elected to frontload bond purchases to increase short-term accommodation.

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.

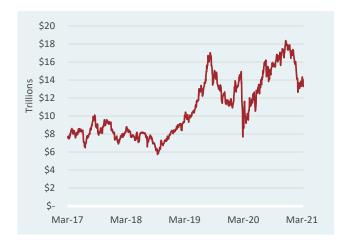
BANK OF JAPAN 10-YEAR YIELD TARGET BAND



AUD AUSTRALIAN YIELD CURVE



VALUE OF GLOBAL NEGATIVE YIELDING DEBT



Source: Bloomberg, as of 3/31/21



Credit environment

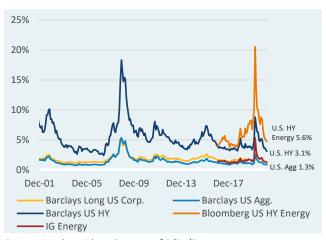
During the first quarter, credit market performance largely reflected the movements of the US Treasury curve, which steepened significantly as 10-year yields rose 82 basis points while 2-year yields remained anchored near zero. Investment grade credit, with an effective duration of 8.5, returned -4.65% 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.

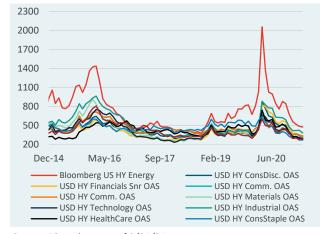
Spreads in higher quality investment grade assets have continued to compress over the past year. Notably, the BBB/A spread is now at an all-time low of 40 basis points, down from a high of 163 basis points experienced in Q1 2020. Similarly, the BB/BBB spread is now 155 basis points, down from recent 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: E	Bloon	ıberg,	as o	f 3/	/31/2	1
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	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)

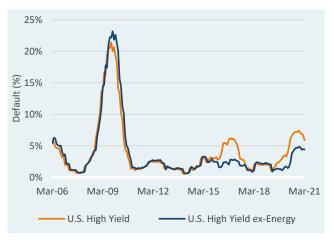
Default & issuance

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.

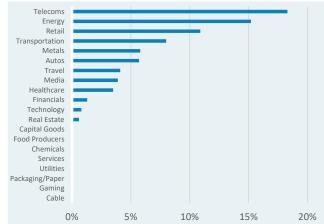
Given the market perception of upside rate risk throughout the remainder of 2021, high yield bond issuers continued to come to market at a blistering pace. Gross issuance for the quarter set a new quarterly record of \$158.6 billion, outpacing the previous record set in Q2 2020 of \$145.5 billion. Quarterly 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)

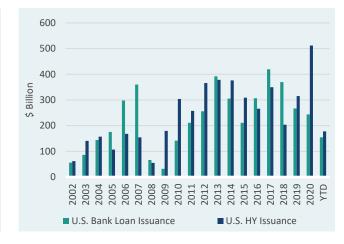


U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)



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

U.S. ISSUANCE (\$ BILLIONS)



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



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 TOTA	L RETURN	1 YEAR TOT	AL RETURN
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	6.2	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

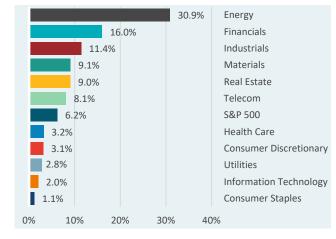


DIVIDEND YIELD VS BOND YIELD



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

Q1 SECTOR PERFORMANCE



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



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

Retail market speculation

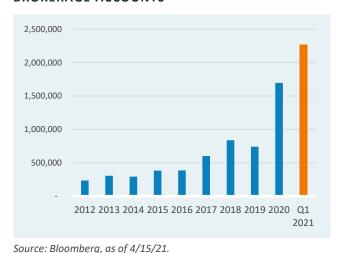
In recent years, trading has become free on certain platforms, making day trading a more attractive proposition. Retail's portion of total market trading has increased from 10% in 2010 to 23% in 2020, according to Bloomberg Intelligence.

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.

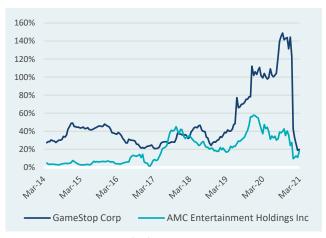
SCHWAB - ORGANIC CHANGE IN ACTIVE BROKERAGE ACCOUNTS*



GAMESTOP & AMC THEATERS STOCK PRICES



SHORT INTEREST AS A PERCENTAGE OF FLOAT



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



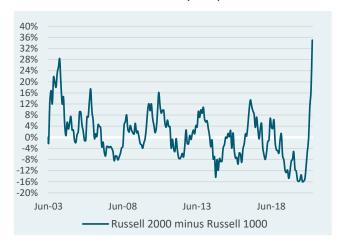
Domestic equity size & style

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)

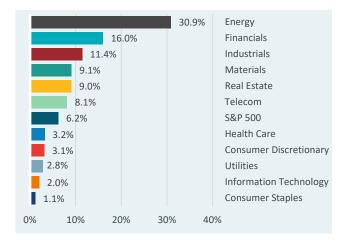


VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/21

Q1 SECTOR PERFORMANCE



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



Source: FTSE, 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



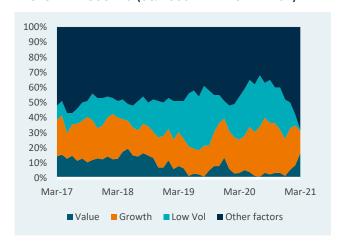
Source: J.P. Morgan, as of 3/27/21

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

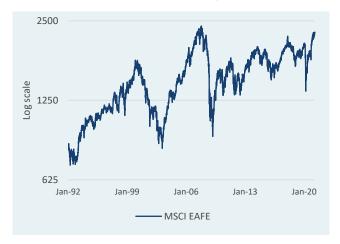
International equities delivered +3.5% (MSCI EAFE Index) during the first quarter on an unhedged currency basis. International developed underperformed the S&P 500 Index (+6.2%) while outperforming the MSCI Emerging Markets Index (+2.3%). The trend towards U.S. dollar weakness has boosted the performance 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.

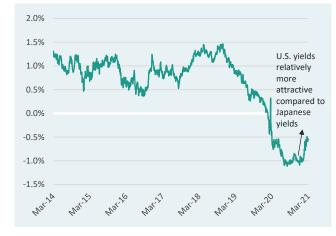
INTERNATIONAL DEVELOPED EQUITIES



EFFECT OF CURRENCY (1-YEAR ROLLING)



10-YEAR REAL YIELD SPREAD (US MINUS JAPAN)



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

Source: MSCI, as of 3/31/21

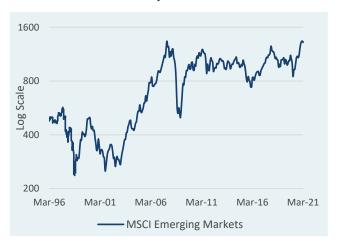
Emerging market equity

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



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



Source: MSCI, 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

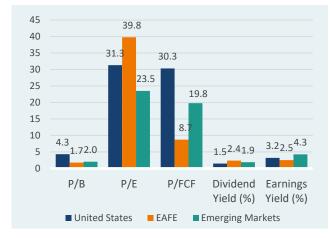


S&P 500 PRICE & EARNINGS EXPECTATIONS



Source: Bloomberg, as of 3/31/21

VALUATION METRICS (3-MONTH AVERAGE)



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



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

Equity volatility

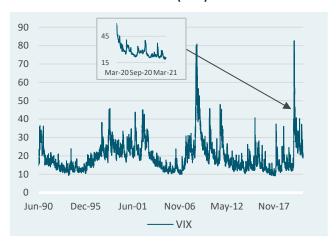
The Cboe VIX Index has slowly been falling back towards the longer-term average of 19. The index fluctuated in the low 20s during Q1, falling below 19 briefly in late March.

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)



REALIZED VOLATILITY



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

MAX DRAWDOWNS FROM PRIOR PEAKS

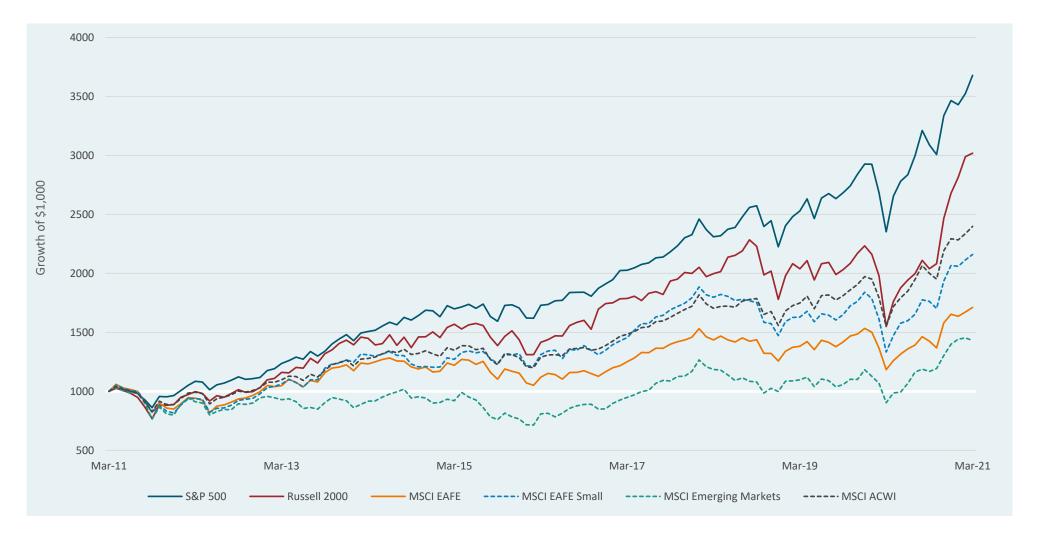


Source: Standard & Poor's, MSCI, Bloomberg, as of 3/31/21



Source: Choe, as of 3/31/21

Long-term equity performance



Source: Morningstar, as of 3/31/21



Other assets



Currency

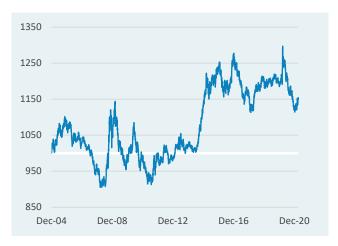
U.S. dollar weakness had prevailed for most of 2020, but turned around in the first quarter of 2021. The Bloomberg Dollar Spot Index increased 2.8% over the quarter, after slipping -5.4% in 2020. Strength in the dollar was attributed to rising relative yields in the U.S., the relatively effective vaccination 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

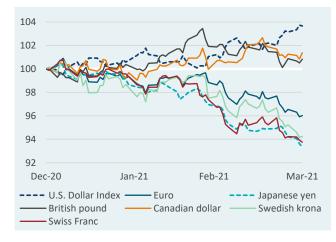


CURRENCY BETA (ONE-YEAR RETURNS)



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

U.S. DOLLAR INDEX CONSTITUENTS



Source: Bloomberg, as of 3/31/21



Source: Bloomberg, as of 3/31/21

Appendix

Periodic table of returns

	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

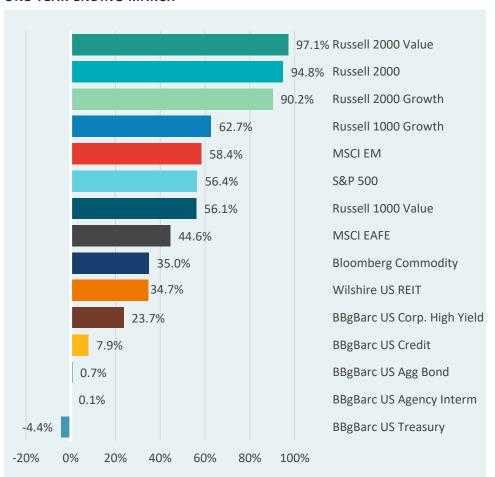


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF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

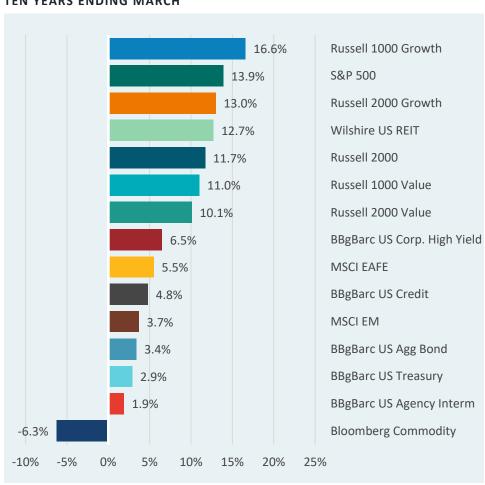


Major asset class returns

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.

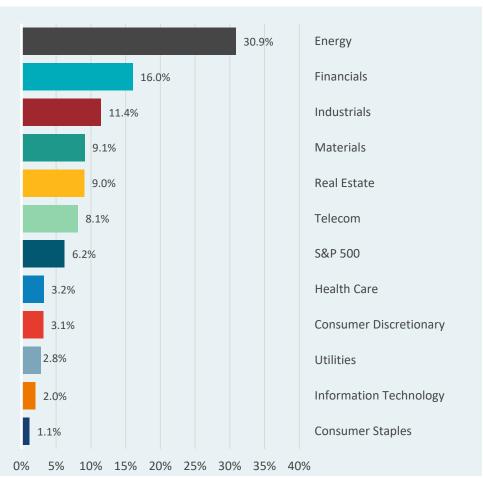
Source: Morningstar, as of 3/31/21

Source: Morningstar, as of 3/31/21

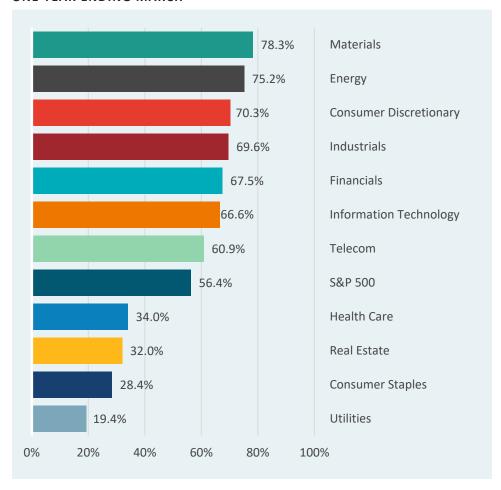


S&P 500 sector returns

Q1 2021



ONE YEAR ENDING MARCH



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



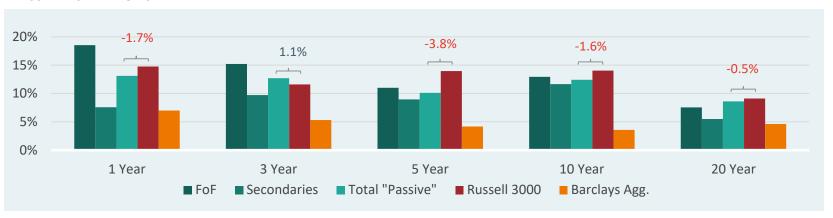
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

"PASSIVE" STRATEGIES



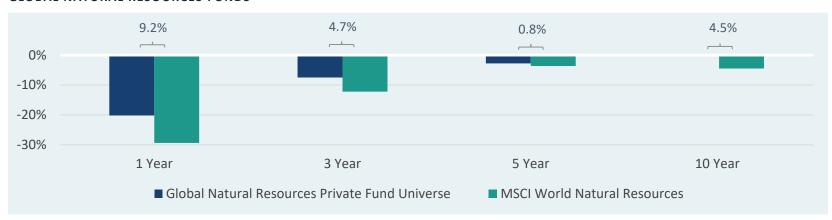
"Passive" strategies underperformed comparable public equities across all time periods, aside from the 3-year basis.

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.



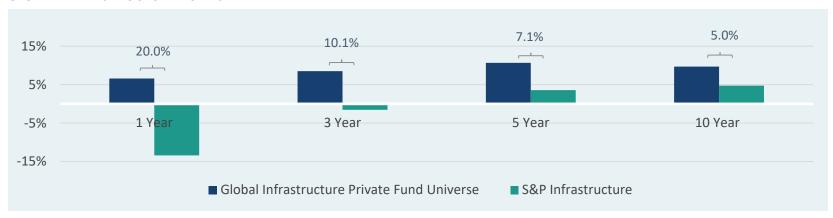
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS



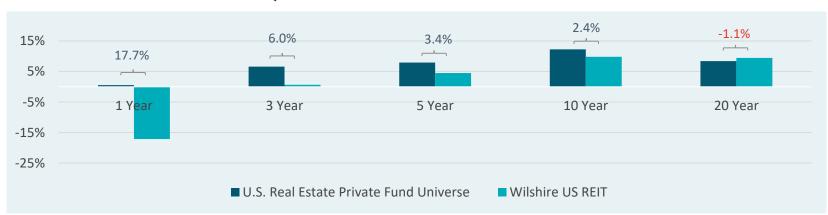
Infra. funds outperformed the S&P Infra. across all periods.

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								FIXED INCOME							
	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year		Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index								Broad Index							
S&P 500	4.4	6.2	6.2	56.4	16.8	16.3	13.9	BBgBarc US TIPS	(0.2)	(1.5)	(1.5)	7.5	5.7	3.9	3.4
S&P 500 Equal Weighted	6.0	11.5	11.5	71.6	14.9	14.7	13.1	BBgBarc US Treasury Bills	0.0	0.0	0.0	0.1	1.5	1.2	0.7
DJ Industrial Average	6.8	8.3	8.3	53.8	13.6	16.0	13.1	BBgBarc US Agg Bond	(1.2)	(3.4)	(3.4)	0.7	4.7	3.1	3.4
Russell Top 200	4.2	5.1	5.1	56.3	18.3	17.4	14.6	BBgBarc US Universal	(1.2)	(3.1)	(3.1)	3.0	4.9	3.6	3.8
Russell 1000	3.8	5.9	5.9	60.6	17.3	16.7	14.0	Duration							
Russell 2000	1.0	12.7	12.7	94.8	14.8	16.4	11.7	BBgBarc US Treasury 1-3 Yr	(0.0)	(0.1)	(0.1)	0.3	2.8	1.7	1.3
Russell 3000	3.6	6.3	6.3	62.5	17.1	16.6	13.8	BBgBarc US Treasury Long	(5.0)	(13.5)	(13.5)	(15.8)	5.9	3.1	6.3
Russell Mid Cap	2.7	8.1	8.1	73.6	14.7	14.7	12.5	BBgBarc US Treasury	(1.5)	(4.3)	(4.3)	(4.4)	4.1	2.2	2.9
Style Index								Issuer							
Russell 1000 Growth	1.7	0.9	0.9	62.7	22.8	21.0	16.6	BBgBarc US MBS	(0.5)	(1.1)	(1.1)	(0.1)	3.7	2.4	2.8
Russell 1000 Value	5.9	11.3	11.3	56.1	11.0	11.7	11.0	BBgBarc US Corp. High Yield	0.1	0.9	0.9	23.7	6.8	8.1	6.5
Russell 2000 Growth	(3.1)	4.9	4.9	90.2	17.2	18.6	13.0	BBgBarc US Agency Interm	(0.4)	(1.0)	(1.0)	0.1	3.2	2.0	1.9
Russell 2000 Value	5.2	21.2	21.2	97.1	11.6	13.6	10.1	BBgBarc US Credit	(1.6)	(4.5)	(4.5)	7.9	5.9	4.7	4.8
INTERNATIONAL EQUITY								OTHER							
Broad Index								Index							
MSCI ACWI	2.7	4.6	4.6	54.6	12.1	13.2	9.1	Bloomberg Commodity	(2.1)	6.9	6.9	35.0	(0.2)	2.3	(6.3)
MSCI ACWI ex US	1.3	3.5	3.5	49.4	6.5	9.8	4.9	Wilshire US REIT	4.8	8.8	8.8	34.7	9.0	5.7	12.7
MSCI EAFE	2.3	3.5	3.5	44.6	6.0	8.8	5.5	CS Leveraged Loans	0.1	2.0	2.0	20.8	4.1	4.6	5.0
MSCI EM	(1.5)	2.3	2.3	58.4	6.5	12.1	3.7	Alerian MLP	6.9	22.0	22.0	99.1	(4.0)	(2.1)	(0.7)
MSCI EAFE Small Cap	2.2	4.5	4.5	62.0	6.3	10.5	8.0	Regional Index							
Style Index								JPM EMBI Global Div	(1.0)	(4.5)	(4.5)	16.0	4.0	5.1	5.6
MSCI EAFE Growth	1.2	(0.6)	(0.6)	42.6	9.8	10.8	7.2	JPM GBI-EM Global Div	(3.1)	(6.7)	(6.7)	13.0	(8.0)	3.1	0.5
MSCI EAFE Value	3.4	7.4	7.4	45.7	1.8	6.6	3.7	Hedge Funds							
Regional Index								HFRI Composite	1.0	6.1	6.1	34.0	7.7	7.5	4.6
MSCI UK	2.8	6.2	6.2	33.5	0.9	4.3	3.3	HFRI FOF Composite	0.4	2.0	2.0	23.9	5.4	5.6	3.4
MSCI Japan	1.1	1.6	1.6	39.7	6.3	10.5	7.2	Currency (Spot)							
MSCI Europe	3.1	4.1	4.1	44.9	5.6	8.2	5.1	Euro	(3.2)	(3.9)	(3.9)	7.1	(1.5)	0.6	(1.9)
MSCI EM Asia	(3.0)	2.2	2.2	60.1	9.5	14.5	6.6	Pound Sterling	(1.3)	0.9	0.9	11.3	(0.6)	(0.8)	(1.5)
MSCI EM Latin American	4.6	(5.3)	(5.3)	50.1	(6.1)	4.0	(4.1)	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 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. (https://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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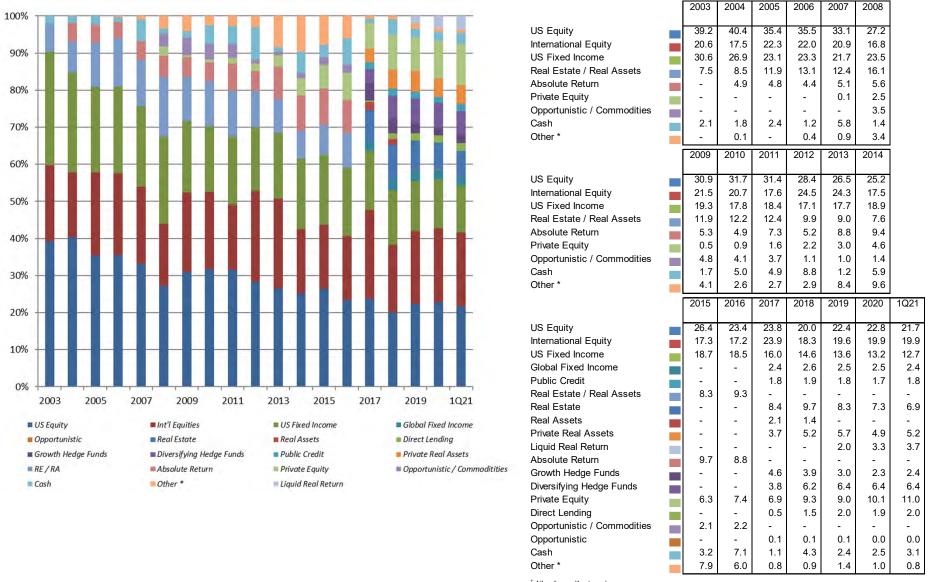
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Total Fund Actual Yearly and Quarterly Asset Allocation

Period Ending: March 31, 2021

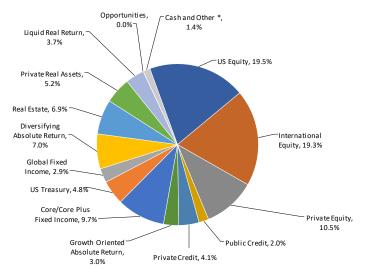


^{*} Allocations without overlay



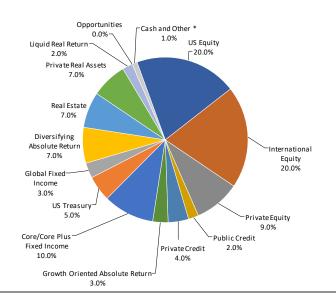
^{*} Other includes SSgA Overlay and closing accounts. Prior to Q2 2017 SSgA Real Assets is also included

Current w/Overlay



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	2,301,384,286	19.5%	21.7%
International Equity	2,275,065,854	19.3%	19.9%
Private Equity	1,236,811,515	10.5%	11.0%
Public Credit	231,000,954	2.0%	1.8%
Private Credit	478,626,289	4.1%	2.0%
Growth Oriented Absolute Return	359,085,209	3.0%	2.4%
Core/Core Plus Fixed Income	1,139,299,657	9.7%	8.7%
US Treasury	570,883,422	4.8%	4.0%
Global Fixed Income	337,276,865	2.9%	2.4%
Diversifying Absolute Return	822,714,391	7.0%	6.4%
Real Estate	817,841,446	6.9%	6.9%
Private Real Assets	614,823,030	5.2%	5.2%
Liquid Real Return	439,026,934	3.7%	3.7%
Opportunities	5,520,752	0.0%	0.0%
Cash and Other *	163,081,571	1.4%	3.9%
TOTAL	11,792,442,174	100.0%	100.0%

Target



ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	19.5%	20.0%	-0.5%
International Equity	19.3%	20.0%	-0.7%
Private Equity	10.5%	9.0%	1.5%
Public Credit	2.0%	2.0%	0.0%
Private Credit	4.1%	4.0%	0.1%
Growth Oriented Absolute Return	3.0%	3.0%	0.0%
Core/Core Plus Fixed Income	9.7%	10.0%	-0.3%
US Treasury	4.8%	5.0%	-0.2%
Global Fixed Income	2.9%	3.0%	-0.1%
Diversifying Absolute Return	7.0%	7.0%	0.0%
Real Estate	6.9%	7.0%	-0.1%
Private Real Assets	5.2%	7.0%	-1.8%
Liquid Real Return	3.7%	2.0%	1.7%
Opportunities	0.0%	0.0%	0.0%
Cash and Other *	1.4%	1.0%	0.4%

^{*} Other includes closing accounts (Heitman), Transition Account and SSgA Overlay of \$94.5 million.



- The Total Plan returned 3.6% net in the first quarter of 2021 and ranked in the second quartile among other public funds greater than \$1 billion. The Plan trailed its policy index by 30 bps over this time period. Longer-term, the three-year return of 10.1% beat the median large public plan peer group (9.3%) and ranked in the second quartile. The five-year return of 10.9% ranked just outside of the top quartile for the large public plan peer group.
- First quarter results (net) were enhanced by the following factors:
 - The Growth Asset category returned 6.0% for the quarter, led by private equity which returned 11.2% and US equity returning 6.5%.
 - Eagle Capital retuned 11.0% for the quarter, outperforming the Russell 1000 index by 510 bps and ranking in the top decile of its universe. Eagle benefited from an overweight position in financials which railed in the quarter and stock selection within information technology.
 - AQR US Enhanced returned 8.2% for the quarter, outperforming its benchmark by 230 bps and ranking in the top quartile of the US enhanced equity universe.
 - 4. Within public credit, Brigade returned 6.4% during the quarter and ranked in the top 1% of its universe. Performance benefited from a rally in lower quality high yield issuers and exposure to energy-related credit.
- First quarter results (net) were hindered by the following factors:
 - The Diversifying Asset category was down 2.0% in the first quarter, led by poor performance from the US Treasury allocation and Brandywine Global. Rising yields during the first quarter was a headwind for fixed income and a strong dollar created a performance challenge for Brandywine.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date ⁺
Total Fund - Gross*	11,792,442,174	100.0	3.6	37	20.1	49	29.2	86	10.3	25	11.2	11	8.6	Jun-86
Total Fund - Net			3.6	40	19.9	51	28.9	88	10.1	34	10.9	26	8.4	
Policy Index ¹			3.9	28	18.8	73	26.8	93	9.1	57	9.6	72	8.7	Jun-86
InvMetrics Public DB > \$1B Gross Median			3.4		20.1		33.1		9.3		10.2		8.3	Jun-86
Total Fund ex Overlay - Gross**	11,697,911,220	99.2	3.8	29	20.1	49	28.6	89	9.9	35	10.8	29	8.5	Jun-86
Total Fund ex Overlay - Net			3.8	30	19.9	51	28.3	90	9.7	38	10.6	33	8.3	
Policy Index			3.9	28	18.8	73	26.8	93	9.1	57	9.6	72	8.7	Jun-86
Allocation ex Overlay Index			4.1	21	18.9	71	26.5	94	9.0	63				Jun-86
Growth Asset Category - Gross	6,928,242,746	58.8	6.0		31.8		48.1		13.9			-	14.5	Mar-17
Growth Asset Category - Net			6.0	-	31.6	-	47.7		13.5				14.2	
Growth Custom ¹			6.5		30.5		45.3		12.4				12.8	Mar-17
Equities - Gross Public	4,910,547,143	41.6	4.8		32.4		58.4		13.2		14.6	-	10.7	Jun-11
Equities - Net			4.7	-	32.1	-	57.8	-	12.8		14.2		10.3	
MSCIACWI			4.6		29.7		54.6		12.1		13.2		9.4	Jun-11
US Equity - Gross	2,559,403,647	21.7	6.6	69	34.5	49	64.4	45	17.4	15	16.9	22	10.7	Jun-86
US Equity - Net			6.5	70	34.3	53	64.1	47	17.1	22	16.6	37	10.5	
Russell 3000 ¹			6.3	80	33.2	71	62.5	64	17.1	24	16.6	36	10.8	Jun-86
InvMetrics All DB US Eq Gross Median			7.4		34.5		63.8		16.2		16.2		10.6	Jun-86
Large Cap - Gross	2,289,634,173	19.4	6.8		33.6		62.1		17.1		16.9		7.6	Mar-98
Large Cap - Net			6.7		33.4		61.8		16.9		16.7		7.4	
Russell 1000			5.9		31.8		60.6		17.3		16.7		8.0	Mar-98

^{1.} See Policy Index and Benchmark History



^{*}Total Fund and asset class composites are ranked against InvestorForce universes. Managers are ranked against eVest manager universes. Net Returns are ranked against gross universe. Ranking of 1 is a top ranking and ranking of 100 is a bottom rating.

^{**}Total Fund ex Overlay returns from 2/1/2006-12/31/2010 were calculated using the overlay impact provided by SSgA.

⁺ Since inception date denotes last day of the month.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap - Index - Gross	1,326,380,276	11.2	5.9		31.8		60.4		17.3		16.6		12.8	Sep-08
Large Cap - Index - Net			5.9	-	31.8	-	60.3	-	17.3	-	16.6		12.8	
Russell 1000			5.9		31.8		60.6		17.3		16.7		12.9	Sep-08
AB - Gross	1,326,380,276	11.2	5.9	73	31.8	38	60.4	36	17.3	27	16.6	31	10.7	Apr-89
AB - Net			5.9	73	31.8	39	60.3	36	17.3	31	16.6	33	10.7	
Russell 1000 ¹			5.9	70	31.8	32	60.6	29	17.3	25	16.7	27		Apr-89
eV US Passive Large Cap Equity Gross Median	_		6.2		29.8		56.6		16.8		16.3		10.7	Apr-89
Large Cap - Enhanced - Gross	312,629,068	2.7	8.2		34.1		63.3						15.1	Jul-18
Large Cap - Enhanced - Net			8.2	-	33.8	-	62.9	-		-			14.8	
Russell 1000			5.9		31.8		60.6		17.3		16.7		16.6	Jul-18
AQR US Enhanced Equity - Gross	312,629,068	2.7	8.2	24	34.1	22	63.3	19					15.1	Jul-18
AQR US Enhanced Equity - Net			8.2	24	33.8	23	62.9	19					14.8	
Russell 1000			5.9	75	31.8	33	60.6	34	17.3	22	16.7	30	16.6	Jul-18
eV US Enh Equity Gross Median			6.8		30.6		58.7		16.0		16.1		15.6	Jul-18
Large Cap (130/30) - Gross	321,263,312	2.7	4.7		32.0		60.8		17.1		17.1		13.4	Sep-08
Large Cap (130/30) - Net			4.5	-	31.4		60.0		16.4		16.4		12.8	
Russell 1000			5.9		31.8		60.6		17.3		16.7		12.9	Sep-08
JP Morgan 130/30 - Gross	164,528,830	1.4	6.3	62	32.7	27	63.7	12	19.2	4	18.4	15	13.6	Jul-08
JP Morgan 130/30 - Net			6.0	67	31.9	31	62.5	15	18.4	17	17.6	23	12.9	
Russell 1000			5.9	68	31.8	31	60.6	19	17.3	23	16.7	37	11.9	Jul-08
eV Extended US Equity Gross Median			9.8		29.4		53.9		11.4		13.7		12.2	Jul-08
DE Shaw Broad Mkt Core Alpha Ext - Gross	156,734,482	1.3	3.0	93	31.2	34	57.8	24					19.9	Jan-19
DE Shaw Broad Mkt Core Alpha Ext - Net			2.9	93	30.8	36	57.2	31					19.4	
Russell 1000			5.9	68	31.8	31	60.6	19	17.3	23	16.7	37	22.5	Jan-19
eV Extended US Equity Gross Median			9.8		29.4		53.9		11.4		13.7		17.7	Jan-19

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap Active - Gross	329,361,517	2.8	11.2		42.7		69.2		17.1		17.8		12.6	Sep-08
Large Cap Active - Net			11.0		42.0		68.0		16.2		16.9		11.9	
Russell 1000 ¹			5.9		31.8		60.6		16.5		15.0		11.2	Sep-08
Eagle Capital - Gross	329,341,252	2.8	11.2	8	42.7	4	69.2	9	17.6	27	18.8	8	16.1	Feb-12
Eagle Capital - Net			11.0	9	42.0	4	68.0	11	16.7	38	17.9	16	15.3	
Russell 1000			5.9	61	31.8	34	60.6	30	16.5	43	15.0	67	13.8	Feb-12
eV US Large Cap Core Equity Gross Median			6.6		29.8		56.0		16.0		15.8		14.4	Feb-12
Small Cap - Gross	269,769,474	2.3	4.9		42.8		88.4		18.9		19.7		12.7	Dec-90
Small Cap - Net			4.9		42.7		88.1		18.2		19.1		12.0	
Russell 2000			12.7		55.4		94.8		14.8		16.4		11.3	Dec-90
Small Cap - Growth - Gross	153,586,289	1.3	1.4		39.1		98.2		29.1		29.3		16.0	Sep-08
Small Cap - Growth - Net			1.4		39.0		97.9		28.3		28.7		15.3	
Russell 2000 Growth			4.9		45.7		90.2		17.2		18.6		13.1	Sep-08
Weatherbie - Gross	153,586,289	1.3	1.4	84	39.1	78	98.2	47	29.1	16	31.2	9	15.7	Dec-02
Weatherbie - Net			1.4	84	39.0	79	97.9	47	28.3	20	30.5	12	14.8	
Russell 2000 Growth			4.9	55	45.7	54	90.2	62	17.2	85	18.6	79	12.4	Dec-02
eV US Small Cap Growth Equity Gross Median			5.7		46.4		96.8		22.6		22.1		14.4	Dec-02
Small Cap - Value - Gross	116,183,185	1.0	9.8		47.6		73.0		7.1		9.5		9.5	Sep-08
Small Cap - Value - Net			9.8	-	47.4	-	72.7		6.7		8.8		8.7	
Russell 2000 Value			21.2		65.7		97.1		11.6		13.6		9.6	Sep-08
Snyder Capital Management - Gross*	116,183,185	1.0											7.5	Jan-21
Snyder Capital Management - Net													7.5	
Russell 2000 Value			21.2	33	65.7	32	97.1	43	11.6	46	13.6	46	15.1	Jan-21
eV US Small Cap Value Equity Gross Median			19.4		59.6		92.9		11.2		13.2		16.6	Jan-21

^{*} Funded January 2021.



^{1.} See Policy Index and Benchmark History.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
International Equity - Gross	2,351,143,496	19.9	2.8	73	29.9	61	51.5	80	8.6	24	11.6	27	6.9	Dec-87
International Equity - Net			2.7	74	29.5	66	50.6	85	7.9	34	11.0	37	6.5	
MSCI ACWI ex US ¹			3.6	50	29.0	76	50.0	85	7.0	52	10.3	56	6.5	Dec-87
InvMetrics All DB ex-US Eq Gross Median			3.6		30.6		55.4		7.1		10.4		7.3	Dec-87
International - Developed - Gross	1,848,961,857	15.7	2.9	50	26.9	75	47.0	78	8.2	53	11.2	45	5.3	Mar-98
International - Developed - Net			2.9	51	26.5	75	45.9	80	7.4	56	10.6	52	4.9	
MSCI World ex US Gross			4.2	29	26.8	75	46.5	78	6.9	64	9.5	72	5.2	Mar-98
InvMetrics All DB Dev Mkt ex-US Eq Gross Median			2.9		29.3		51.5		8.6		10.7		6.1	Mar-98
Lazard - Gross	466,774,324	4.0	4.2	43	30.9	56	52.2	69	7.1	59	10.3	66	9.9	Jun-12
Lazard - Net			4.1	43	30.7	59	51.7	72	6.8	64	9.9	73	9.6	
MSCI ACWI ex USA Gross			3.6	50	29.0	68	50.0	77	7.0	61	10.3	66	8.0	Jun-12
eV All ACWI ex-US Equity Gross Median			3.5		31.6		56.7		8.5		11.6		10.0	Jun-12
Walter Scott & Partners Limited - Gross	616,866,042	5.2	-1.4	68	17.4	97	34.3	99	11.9	43			13.9	Mar-17
Walter Scott & Partners Limited - Net			-1.5	68	17.2	98	32.8	99	10.8	63			13.0	
MSCI World ex USA Growth GR USD			-0.3	54	22.0	74	44.0	82	10.5	65	11.2	83	12.0	Mar-17
eV EAFE Large Cap Growth Gross Median			0.3		28.6		56.5		11.3		13.3		14.3	Mar-17
LSV - Gross	524,021,444	4.4	9.7	23	35.1	32	54.4	38	4.5	47	9.2	22	5.2	Dec-04
LSV - Net			9.6	24	34.7	34	53.8	40	4.1	55	8.7	35	4.7	
MSCI World ex US Value Gross			8.5	39	31.5	47	48.0	54	2.9	75	7.5	68	4.6	Dec-04
eV EAFE Large Cap Value Gross Median			7.1		30.5		49.5		4.4		8.0		5.4	Dec-04
Mondrian Dev Small Cap - Gross	119,869,102	1.0	3.5	52	34.6	61	59.4	86	8.1	45	10.2	79	9.9	Aug-10
Mondrian Dev Small Cap - Net			3.3	53	34.0	62	58.1	88	7.3	53	9.5	87	9.2	
MSCI World ex US Small Cap GD			5.0	45	36.1	51	65.8	66	7.3	53	11.0	66	9.8	Aug-10
eV ACWI ex-US Small Cap Equity Gross Median			3.9		36.3		69.4		7.6		12.1		11.6	Aug-10

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
William Blair Dev Small Cap - Gross	121,430,945	1.0	-2.2	97	29.9	84	65.9	66	9.4	36	11.7	57	10.8	Sep-08
William Blair Dev Small Cap - Net			-2.4	98	29.1	86	64.6	72	8.4	40	10.7	69	9.8	
MSCI World ex US Small Cap GD			5.0	45	36.1	51	65.8	66	7.3	53	11.0	66	9.5	Sep-08
eV ACWI ex-US Small Cap Equity Gross Median			3.9		36.3		69.4		7.6		12.1		10.9	Sep-08
International - Emerging - Gross	502,176,379	4.3	2.4	76	42.4	6	71.4	15	10.0	10	13.9	16	7.5	Jan-00
International - Emerging - Net			2.3	77	42.2	9	70.9	16	9.8	12	13.6	18	7.0	
MSCI Emerging Markets Gross			2.3	77	34.5	52	58.9	73	6.9	38	12.5	39	7.6	Jan-00
InvMetrics All DB Emg Mkt Eq Gross Median			3.6		35.0		63.4		6.0		11.8		8.2	Jan-00
Baillie Gifford Emg All Cap - Gross	281,120,891	2.4	1.2	82	43.4	16	78.5	16	12.2	13	18.1	7	18.1	Mar-16
Baillie Gifford Emg All Cap - Net			1.2	82	43.4	16	78.5	16	12.2	13	18.1	7	18.1	
MSCI Emerging Markets Gross			2.3	68	34.5	69	58.9	72	6.9	55	12.5	59	12.5	Mar-16
eV Emg Mkts Equity Gross Median			3.5		37.5		64.8		7.3		13.1		13.1	Mar-16
Mondrian Emg All Cap - Gross	221,055,488	1.9	4.0	48	41.2	26	63.2	56	7.5	48	10.3	82	10.3	Mar-16
Mondrian Emg All Cap - Net			3.9	49	40.6	28	62.0	61	6.9	55	9.7	87	9.7	
MSCI Emerging Markets Gross			2.3	68	34.5	69	58.9	72	6.9	55	12.5	59	12.5	Mar-16
eV Emg Mkts Equity Gross Median			3.5		37.5		64.8		7.3		13.1		13.1	Mar-16



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Equity - Gross+**++	1,295,420,866	11.0	11.2	17	35.5	13	26.3	23	22.9	7	19.8	10	5.7	Feb-08
Private Equity - Net			11.2	17	35.5	13	26.3	23	22.9	7	19.8	10	5.9	
Thomson Reuters C A All PE 1 Qtr Lag1*			16.6	3	39.3	9	27.2	19	17.0	25	16.3	24	11.6	Feb-08
Russell 3000 +3% 1Q Lag			15.3	5	54.4	3	23.9	28	17.5	22	18.5	11	12.9	Feb-08
InvMetrics All DB Private Eq Net Median			5.4		23.4		17.5		13.4		13.0		10.1	Feb-08
Abbott VI - Gross*	34,559,664	0.3	0.0		24.2		9.4		13.5		14.9		5.7	Jul-08
Abbott VI - Net			0.0		24.2		9.4		13.5		14.9			
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		12.4	Jul-08
Accel-KKR IV - Gross	14,625,691	0.1	3.9		18.3		18.3		52.2		41.8		13.6	Jun-13
Accel-KKR IV - Net			3.9		18.3		18.3		52.2		41.8		13.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.8	Jun-13
Accel-KKR V - Gross	20,854,072	0.2	3.6		4.8		4.0		18.6				16.6	Jan-17
Accel-KKR V - Net			3.6		4.8	-	4.0		18.6				16.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.6	Jan-17
Accel-KKR VI - Gross***	1,137,456	0.0											0.0	Feb-21
Accel-KKR VI - Net													0.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.6	Feb-21
Accel-KKR Growth Partners II - Gross	10,331,481	0.1	2.6		5.4		2.3		19.0		16.1		5.6	Feb-15
Accel-KKR Growth Partners II - Net			2.6		5.4		2.3		19.0		16.1		5.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		13.9	Feb-15
Accel-KKR Growth Partners III - Gross	11,333,246	0.1	1.5		6.4		6.5						-13.5	Jul-19
Accel-KKR Growth Partners III - Net			1.5		6.4		6.5						-13.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		21.6	Jul-19

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



^{1.} See Policy Index and Benchmark History.

^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)

^{**} Private Equity Composite includes the historical returns of Summit Credit and Athyrium Opportunities up to 4/1/17.

^{***} Funded February 2021.

⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Atalaya Special Opp VI - Gross	14,515,493	0.1	24.1		46.8		46.5		23.6				16.1	Apr-16
Atalaya Special Opp VI - Net			24.1		46.8		46.5		23.6				16.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.8	Apr-16
Canvas Ventures III - Gross	2,228,588	0.0	-6.3										-6.3	Nov-20
Canvas Ventures III - Net			-6.3										-6.3	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		27.9	Nov-20
Cortec Group Fund VII - Gross	13,122,522	0.1	39.3		66.3		60.2						44.7	Dec-19
Cortec Group Fund VII - Net			39.3		66.3		60.2						44.7	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		25.5	Dec-19
CRV XVIII LP - Gross*	3,400,000	0.0											0.0	Feb-21
CRV XVIII LP - Net							-						0.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.6	Feb-21
Davidson Kempner LT Dist Opp IV - Gross	35,345,842	0.3	3.1		17.7		2.5		9.1			-	9.1	Mar-18
Davidson Kempner LT Dist Opp IV - Net			3.1		17.7		2.5		9.1				9.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.0	Mar-18
Davidson Kempner LT Dist Opp V - Gross	9,187,824	0.1	8.1		25.1								25.1	May-20
Davidson Kempner LT Dist Opp V - Net			8.1		25.1								25.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		27.2	May-20
Dyal Capital Partners II - Gross	23,534,561	0.2	12.7		22.8		26.7		-1.5		-2.9		-3.8	Dec-14
Dyal Capital Partners II - Net			12.7		22.8		26.7		-1.5		-2.9		-3.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.4	Dec-14
Dyal Capital Partners III - Gross	24,235,809	0.2	26.2		59.8		53.9		33.3				27.2	Dec-16
Dyal Capital Partners III - Net			26.2		59.8		53.9	-	33.3				27.2	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.7	Dec-16

^{*} Funded February 2021.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Garrison Investment Group - Gross	9,093,897	0.1	1.4		-2.4		-15.1		-2.2		-4.1		-1.0	May-12
Garrison Investment Group - Net			1.4		-2.4		-15.1		-2.2	-	-4.1		-1.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.3	May-12
Gridiron Capital Fund IV - Gross	16,600,618	0.1	4.4		18.6								18.6	May-20
Gridiron Capital Fund IV - Net			4.4		18.6								18.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		27.2	May-20
Harbourvest VIII - Gross*	9,742,299	0.1	0.0		25.2		9.9		9.8		11.7		9.7	Dec-07
Harbourvest VIII - Net			0.0		25.2		9.9		9.8		11.7		-	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		11.3	Dec-07
Harbourvest Intl VI - Gross*	29,628,312	0.3	0.0		23.0		9.0		11.6		13.6		-4.4	Mar-09
Harbourvest Intl VI - Net			0.0		23.0		9.0		11.6		13.6			
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.9	Mar-09
H.I.G. Bayside Loan III - Gross	6,919,383	0.1	9.6		7.3		-8.4		2.1		4.1		4.1	Jan-13
H.I.G. Bayside Loan III - Net			9.6		7.3		-8.4		2.1		4.1		4.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.8	Jan-13
H.I.G. Capital V - Gross	16,895,900	0.1	13.4		25.9		12.8		23.3		25.5		11.7	Jul-13
H.I.G. Capital V - Net			13.4		25.9		12.8		23.3		25.5		11.7	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.7	Jul-13
H.I.G. Europe Capital II - Gross**	15,285,383	0.1	28.9		58.7		33.3		21.4					Jan-14
H.I.G. Europe Capital II - Net			28.9		58.7		33.3		21.4					
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.9	Jan-14
Khosla IV - Gross	23,109,177	0.2	74.2		86.9		85.3		46.3		33.0		23.8	Jul-11
Khosla IV - Net			74.2		86.9		85.3		46.3		33.0		23.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.3	Jul-11

^{**} Unable to calculate a since inception return due to system limitations when HIG Europe Capital II experienced 2 quarters of negative fund values in 2016.



^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)

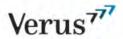
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Khosla V - Gross	33,110,713	0.3	27.4	-	27.1		27.7		15.9		15.6		12.1	Nov-14
Khosla V - Net			27.4		27.1		27.7		15.9		15.6		12.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.0	Nov-14
Khosla VI - Gross	26,455,233	0.2	17.8		9.9		8.2						0.9	Aug-18
Khosla VI - Net			17.8		9.9		8.2						0.9	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.8	Aug-18
Khosla VII - Gross*	460,000	0.0											0.0	Jan-21
Khosla VII - Net							-						0.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.6	Jan-21
Linden Capital - Gross	47,113,755	0.4	31.4		82.6		61.2		43.1	-			28.4	Jun-16
Linden Capital - Net			31.4		82.6		61.2	-	43.1	-			28.4	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.7	Jun-16
Linden Capital Partners IV - Gross	25,526,352	0.2	8.1		30.6		12.0						9.0	Sep-18
Linden Capital Partners IV - Net			8.1		30.6		12.0						9.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.1	Sep-18
Marlin Equity IV - Gross	12,394,748	0.1	4.5		8.6		10.7		12.8		9.7		5.6	Nov-13
Marlin Equity IV - Net			4.5		8.6		10.7		12.8		9.7		5.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.8	Nov-13
Marlin Equity V - Gross	19,014,654	0.2	13.3		29.3		30.7		19.4				18.8	Feb-18
Marlin Equity V - Net			13.3		29.3		30.7		19.4				18.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.2	Feb-18
Marlin Heritage - Gross	9,382,704	0.1	14.9		25.7		28.7		30.0		40.1		26.3	Jul-14
Marlin Heritage - Net			14.9		25.7		28.7		30.0		40.1		26.3	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.5	Jul-14
Marlin Heritage II - Gross	10,357,284	0.1	10.2		21.8		20.5		7.7				2.8	Oct-17
Marlin Heritage II - Net			10.2		21.8		20.5		7.7				2.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.4	Oct-17

^{*} Funded January 2021.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Marlin Heritage Europe - Gross	21,916,617	0.2	13.3		33.0		32.1		29.9				21.8	Aug-17
Marlin Heritage Europe - Net			13.3		33.0		32.1		29.9				21.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.6	Aug-17
New Enterprise 14 - Gross	35,394,011	0.3	22.6		36.1		22.3		21.6		17.7		15.4	May-12
New Enterprise 14 - Net			22.6		36.1		22.3		21.6	-	17.7		15.4	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.3	May-12
New Enterprise 15 - Gross	64,678,538	0.5	21.7		44.4		30.4		26.9		22.3		19.2	Apr-15
New Enterprise 15 - Net			21.7		44.4		30.4		26.9		22.3		19.2	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.8	Apr-15
New Enterprise 16 - Gross	40,277,883	0.3	10.5		40.7		28.4		18.3				11.3	May-17
New Enterprise 16 - Net			10.5		40.7		28.4		18.3				11.3	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.4	May-17
New Enterprise 17 - Gross	11,963,743	0.1	8.5		28.2		22.3						12.5	Jul-19
New Enterprise 17 - Net			8.5		28.2		22.3			-			12.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		21.6	Jul-19
OrbiMed Private Investments VIII, LP - Gross	2,216,584	0.0	-14.5										-14.5	Dec-20
OrbiMed Private Investments VIII, LP - Net			-14.5										-14.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.6	Dec-20
Private Equity X - Gross	25,388,602	0.2	17.8		27.9		10.0		9.8		12.8		-0.1	Jun-08
Private Equity X - Net			17.8		27.9		10.0		9.8		12.8			
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		12.8	Jun-08
RCP Multi-Fund Feeder - Gross*	33,063,295	0.3	0.0		12.5		3.6						-2.1	Nov-18
RCP Multi-Fund Feeder - Net			0.0		12.5		3.6						-2.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.4	Nov-18

^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
RRJ Capital Master Fund II - Gross	14,085,281	0.1	22.0		79.5	-	19.7	-	10.3		8.2		12.3	May-13
RRJ Capital Master Fund II - Net			22.0	-	79.5	-	19.7	-	10.3		8.2		12.3	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.2	May-13
RRJ Capital Master Fund III - Gross	10,737,666	0.1	6.1		-9.9		-16.3		3.9		5.8		-8.7	Dec-15
RRJ Capital Master Fund III - Net			6.1		-9.9		-16.3		3.9		5.8		-8.7	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.0	Dec-15
Shamrock Capital II - Gross	4,999,842	0.0	-7.4										-98.9	Jul-20
Shamrock Capital II - Net			-7.4										-98.9	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		39.3	Jul-20
Spectrum Equity VII - Gross	60,076,747	0.5	-11.0		90.0		85.5		72.8		55.1		29.3	Dec-14
Spectrum Equity VII - Net			-11.0		90.0		85.5		72.8		55.1		29.3	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.4	Dec-14
Spectrum Equity Fund VIII - Gross	16,836,395	0.1	41.7		44.5		41.8						-40.6	Jun-18
Spectrum Equity Fund VIII - Net			41.7		44.5		41.8						-40.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.6	Jun-18
Spectrum Equity Fund IX - Gross	1,388,762	0.0	-4.2										-7.4	Sep-20
Spectrum Equity Fund IX - Net			-4.2										-7.4	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		27.9	Sep-20
Summit EUR Growth Equity II - Gross	27,309,840	0.2	3.8		30.6		28.6		91.1				84.7	Jan-18
Summit EUR Growth Equity II - Net			3.8		30.6		28.6		91.1				84.7	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.6	Jan-18
Summit EUR Growth Equity III - Gross*	827,982	0.0											0.0	Jan-21
Summit EUR Growth Equity III - Net													0.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.6	Jan-21
Summit Ventures III - Gross	3,285,326	0.0	9.9		34.1		33.7		18.5		22.4		14.6	Jun-12
Summit Ventures III - Net			9.9		34.1	-	33.7	-	18.5		22.4		14.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.0	Jun-12

^{*} Funded January 2021.



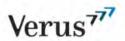
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Summit Ventures IV - Gross	23,611,303	0.2	-4.1		14.3		12.4		27.1				29.5	May-16
Summit Ventures IV - Net			-4.1	-	14.3		12.4	-	27.1	-			29.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.1	May-16
Thoma Bravo XI - Gross	45,605,258	0.4	5.3		54.4		48.2		52.7		41.6		29.9	Jun-14
Thoma Bravo XI - Net			5.3		54.4		48.2		52.7		41.6		29.9	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.4	Jun-14
Thoma Bravo XII - Gross	46,428,252	0.4	9.5		29.8		18.7		20.1			-	11.0	May-16
Thoma Bravo XII - Net			9.5		29.8	-	18.7		20.1				11.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.1	May-16
Thoma Bravo XIII - Gross	51,380,829	0.4	7.9		111.8		115.3						49.1	Feb-19
Thoma Bravo XIII - Net			7.9	-	111.8		115.3		-	-			49.1	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		18.7	Feb-19
Threshold Ventures III - Gross	7,265,295	0.1	-1.0		-6.2		-10.2						-12.9	Oct-19
Threshold Ventures III - Net			-1.0		-6.2		-10.2						-12.9	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		22.6	Oct-19
TPG Opp Partners III - Gross	14,984,160	0.1	2.5		8.8		-0.6		6.7		9.7		-11.0	Mar-14
TPG Opp Partners III - Net			2.5		8.8		-0.6		6.7		9.7		-11.0	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.3	Mar-14
Trinity Ventures XI - Gross	45,164,615	0.4	27.4		34.4		14.0		21.2		15.7		8.8	Apr-13
Trinity Ventures XI - Net			27.4		34.4		14.0		21.2		15.7		8.8	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.3	Apr-13
Trinity Ventures XII - Gross	53,765,535	0.5	18.1		37.4		26.6		37.9				21.6	Apr-16
Trinity Ventures XII - Net			18.1		37.4		26.6		37.9				21.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.8	Apr-16
TSG7 A LP - Gross⁺	18,640,791	0.2	13.1	-	32.1		26.9	-	17.8					Mar-16
TSG7 A LP - Net			13.1	-	32.1		26.9	-	17.8					
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.3	Mar-16

⁺ Unable to calculate a since inception return due to system limitations when account experienced 1 quarter of negative fund value in 2016.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
TSG7 B LP - Gross	3,209,726	0.0	6.2		27.7		32.0		5.4		-12.1		-11.7	Jan-16
TSG7 B LP - Net			6.2	-	27.7		32.0		5.4		-12.1		-11.7	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.5	Jan-16
TSG8 LP - Gross**	11,420,071	0.1	3.3	-	3.4		-33.0							Jan-19
TSG8 LP - Net			3.3		3.4		-33.0							
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.9	Jan-19
TSSP Opportunities Partners IV - Gross	17,972,057	0.2	20.1		33.4		27.1						16.4	Jan-19
TSSP Opportunities Partners IV - Net			20.1		33.4	-	27.1						16.4	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		17.9	Jan-19
Waterland V - Gross [*]	13,573,549	0.1	0.0		23.1		21.2		22.8		31.4		22.6	Aug-11
Waterland V - Net			0.0		23.1		21.2		22.8		31.4		22.6	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.5	Aug-11
Waterland VI - Gross*	31,504,341	0.3	0.0		41.1		50.6		27.7		20.9		3.5	Jul-15
Waterland VI - Net			0.0		41.1		50.6		27.7		20.9		3.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		14.3	Jul-15
Wayzata Opportunities III - Gross	4,530,099	0.0	-12.6		0.3		-8.6		-7.6		-1.1		-6.2	Feb-13
Wayzata Opportunities III - Net			-12.6		0.3		-8.6		-7.6		-1.1		-6.2	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		16.9	Feb-13
Wynnchurch Capital Partners V - Gross	2,415,210	0.0	6.9		-50.9								-50.9	Apr-20
Wynnchurch Capital Partners V - Net			6.9		-50.9								-50.9	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		27.2	Apr-20

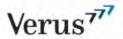
^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)



⁺⁺ Unable to calculate a year to date, 1-year and since inception return due to system limitations when account experienced serveral months of negative fund value in 2019 and 2020.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Public Credit - Gross	209,215,865	1.8	6.4		22.2		35.4		6.0		8.9		5.2	Nov-13
Public Credit - Net			6.4	-	22.2	-	35.4		6.0		8.9		5.2	
Brigade Custom ¹			1.5		11.3		22.0		5.3		6.6		4.8	Nov-13
Brigade Capital - Gross	209,215,865	1.8	6.4	1	22.2	2	35.4	3	6.0	77	8.9	15	5.2	Nov-13
Brigade Capital - Net			6.4	1	22.2	2	35.4	3	6.0	77	8.9	15	5.2	
Brigade Custom			1.5	34	11.3	61	22.0	53	5.3	87	6.6	78	4.8	Nov-13
eV US High Yield Fixed Inc Gross Median			1.0		11.8		22.7		6.8		7.8		5.7	Nov-13
Private Credit - Gross***	235,724,834	2.0	6.3		18.6		11.3		8.5		9.2		7.6	Oct-11
Private Credit - Net			6.3	-	18.6	-	11.3	-	8.5	-	9.2		7.6	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		6.5	Oct-11
Athyrium Opp II - Gross	14,367,424	0.1	6.1		21.8		14.9		13.4		11.8		9.2	Jun-15
Athyrium Opp II - Net			6.1		21.8		14.9		13.4		11.8		9.2	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		6.1	Jun-15
Athyrium Opp III - Gross	21,416,551	0.2	4.6		16.4		16.8		8.7				3.6	May-17
Athyrium Opp III - Net			4.6		16.4		16.8		8.7				3.6	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		5.9	May-17
Benefit St Pr Sr Secure Opp - Gross	44,176,499	0.4	5.0		14.7		3.7		5.1				4.9	Jan-18
Benefit St Pr Sr Secure Opp - Net			5.0		14.7		3.7		5.1				4.9	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		6.0	Jan-18
Benefit St Pr Sr Secure Opp II - Gross	9,444,082	0.1	2.5		25.4		30.5						17.0	Dec-19
Benefit St Pr Sr Secure Opp II - Net			2.5		25.4		30.5						17.0	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		5.6	Dec-19
MCP Private Capital IV - Gross	1,743,233	0.0	-7.6		-20.3								-20.3	Apr-20
MCP Private Capital IV - Net			-7.6		-20.3								-20.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		4.1	Apr-20

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

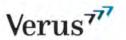


^{1.} See Policy Index and Benchmark History.

⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
OrbiMed Royalty & Credit Opp III - Gross	16,211,927	0.1	60.3		120.2		124.0						58.8	Sep-19
OrbiMed Royalty & Credit Opp III - Net			60.3		120.2		124.0						58.8	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		5.7	Sep-19
Silver Point Specialty Credit Fund II - Gross	10,379,803	0.1	5.5										23.2	Jul-20
Silver Point Specialty Credit Fund II - Net			5.5										23.2	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		14.9	Jul-20
Summit Credit - Gross	560,634	0.0	9.8		14.2		-9.6		3.0		5.9		6.3	Oct-11
Summit Credit - Net			9.8	-	14.2		-9.6	-	3.0		5.9		6.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		6.5	Oct-11
Summit Credit II - Gross	22,926,415	0.2	1.6		1.2		-5.9		2.2		6.4		4.7	Nov-14
Summit Credit II - Net			1.6		1.2		-5.9		2.2		6.4		4.7	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		5.9	Nov-14
Summit Credit III - Gross	27,837,868	0.2	12.0		21.4	-	18.8	-					15.1	Oct-18
Summit Credit III - Net			12.0		21.4		18.8						15.1	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		5.6	Oct-18
TCP Direct Lending VIII - Gross	66,660,398	0.6	0.0	-	15.4		5.5		5.5				5.3	Feb-18
TCP Direct Lending VIII - Net			0.0	-	15.4		5.5		5.5				5.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			4.1		19.7		4.8		6.0		7.2		6.0	Feb-18
Growth Oriented Absolute Return - Gross***	277,334,038	2.4	5.9		25.5		39.0		7.6		8.5		5.5	Aug-04
Growth Oriented Absolute Return - Net			5.9	-	25.5		39.0	-	7.6	-	8.5		5.5	
HFRI FoF Composite Index + 1%			2.0		15.6		24.9		6.4		6.3		6.4	Aug-04
Grosvenor SCARF Growth - Gross	89,866,215	0.8	-1.4	89	13.2	58	23.8	55	4.1	77	6.7	53	5.8	Nov-11
Grosvenor SCARF Growth - Net			-1.4	89	13.2	58	23.8	55	4.1	77	6.7	53	5.8	
HFRI FoF Composite Index + 1%			2.0	64	15.6	50	24.9	52	6.4	56	6.3	56	5.7	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			2.5		15.5		25.4		6.7		7.0		6.2	Nov-11

^{**} Composite reflects net returns from Cliffwater up to March 2017.



⁺⁺ Absolute Return managers are ranked in the eVest net of fee universe.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Lakewood - Gross	51,958,802	0.4	16.0	14	39.0	29	53.8	41	5.8	66	6.8	71	6.3	Jun-13
Lakewood - Net			16.0	14	39.0	29	53.8	41	5.8	66	6.8	71	6.3	
HFRI FoF Composite Index + 1%			2.0	66	15.6	70	24.9	72	6.4	63	6.3	73	5.9	Jun-13
eV Alt Fundamental - Long/Short Equity Median			4.7		24.9		42.4		8.6		9.5		8.2	Jun-13
Sculptor Domestic II - Gross	65,078,139	0.6	3.5	47	16.3	45	31.9	32	10.8	19	10.9	21	8.8	Dec-11
Sculptor Domestic II - Net			3.5	47	16.3	45	31.9	32	10.8	19	10.9	21	8.7	
HFRI FoF Composite Index + 1%			2.0	60	15.6	47	24.9	43	6.4	40	6.3	48	5.8	Dec-11
eV Alt All Multi-Strategy Median			3.0		13.2		21.9		4.9		6.0		5.5	Dec-11
Third Point Offshore Fund - Gross	70,430,882	0.6	11.4	9	45.7	8	62.4	8	12.8	12	12.8	8	11.6	Apr-12
Third Point Offshore Fund - Net			11.4	9	45.7	8	62.4	8	12.8	12	12.8	8	11.6	
HFRI FoF Composite Index + 1%			2.0	64	15.6	50	24.9	49	6.4	51	6.3	53	5.8	Apr-12
eV Alt All Event Driven Median			3.3		15.1		24.3		6.5		6.7		5.4	Apr-12
Diversifying Asset Category - Gross	2,532,160,978	21.5	-2.0		3.0		7.6		4.3				4.1	Mar-17
Diversifying Asset Category - Net			-2.0		2.9		7.5		4.2				3.9	
Diversifying Custom ¹			-1.9		1.6		4.9		4.3				4.0	Mar-17
Core/Core Plus Fixed Income - Gross	1,021,215,218	8.7	-3.4		0.1		5.7		5.7		4.3		3.8	Jun-11
Core/Core Plus Fixed Income - Net			-3.5		-0.1		5.5		5.6		4.2		3.7	
BBgBarc US Aggregate TR			-3.4		-2.1		0.7		4.7		3.1		3.3	Jun-11
Prudential - Gross	507,724,711	4.3	-4.0	90	0.4	11	7.7	6	5.6	21	4.9	4	4.6	Jul-14
Prudential - Net			-4.0	91	0.3	15	7.5	6	5.4	31	4.7	5	4.4	
BBgBarc US Aggregate TR			-3.4	67	-2.1	84	0.7	90	4.7	90	3.1	91	3.2	Jul-14
eV US Core Fixed Inc Gross Median			-3.2		-1.1		3.2		5.2		3.7		3.7	Jul-14
TCW MetWest Fixed - Gross	513,490,507	4.4	-2.9	25	-0.4	28	3.6	44	5.8	13	4.2	17	5.9	Dec-01
TCW MetWest Fixed - Net	, ,		-2.9	25	-0.4	30	3.5	45	5.7	20	4.0	27	5.7	
BBgBarc US Aggregate TR			-3.4	67	-2.1	84	0.7	90	4.7	90	3.1	91	4.4	Dec-01
eV US Core Fixed Inc Gross Median			-3.2	-	-1.1	-	3.2		5.2		3.7	-	4.9	Dec-01

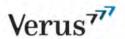
^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
U.S. Treasury - Gross	476,709,727	4.0	-4.2		-4.7	-	-4.4	-	4.1	-			4.3	Feb-18
U.S. Treasury - Net			-4.2	-	-4.7		-4.5	-	4.1			-	4.3	
BBgBarc US Treasury TR			-4.3		-4.9		-4.4		4.1		2.2		4.3	Feb-18
Neuberger Berman - Gross⁺	476,709,727	4.0	-4.2	87	-4.7	98	-4.4	99	4.1	76	2.9	20	6.3	Jun-88
Neuberger Berman - Net			-4.2	88	-4.7	98	-4.5	99	4.1	78	2.8	27	6.2	
BBgBarc US Govt TR			-4.1	87	-4.7	98	-4.3	99	4.1	77	2.3	84	5.7	Jun-88
eV US Government Fixed Inc Gross Median			-2.0		-1.5		-0.7		4.4		2.6			Jun-88
Global Fixed Income - Gross	277,995,848	2.4	-3.9		10.1		21.3		2.7		4.4		3.4	May-13
Global Fixed Income - Net			-4.0		9.8		20.9		2.3		4.0		3.0	
Brandywine Custom ¹			-5.9		0.4		4.0		1.6		2.4		1.5	May-13
Brandywine Global - Gross	277,995,848	2.4	-3.9	72	10.1	24	21.3	26	2.7	82	4.4	53	3.4	May-13
Brandywine Global - Net			-4.0	73	9.8	26	20.9	28	2.3	85	4.0	62	3.0	
Brandywine Custom			-5.9	92	0.4	90	4.0	89	1.6	93	2.4	89	1.5	May-13
eV All Global Fixed Inc Gross Median			-2.3		4.9		13.1		4.5		4.6		3.6	May-13
Diversifying Absolute Return - Gross***	756,240,185	6.4	2.3		10.2		14.8		2.9		2.8		2.6	Nov-11
Diversifying Absolute Return - Net			2.2		10.2		14.7		2.9		2.8		2.6	
HFRI FoF Conservative Index			3.7		12.7		19.0		5.0		5.0		5.0	Nov-11
Aristeia Partners LP - Gross	46,835,176	0.4	4.1	9									4.1	Dec-20
Aristeia Partners LP - Net			4.1	9									4.1	
HFRI FoF Conservative Index			3.7	11	12.7	23	19.0	21	5.0	45	5.0	47	3.7	Dec-20
eV Alt Relative Value - Multi-Market Arbitrage Median			1.3		4.2		7.1		2.5		4.0		1.3	Dec-20
BlackRock Event Driven Equity Fund - Gross	48,172,351	0.4	1.1	71	7.8	75	14.5	74					8.1	Feb-20
BlackRock Event Driven Equity Fund - Net			0.7	73	6.6	79	12.8	78					6.5	
HFRI FoF Conservative Index			3.7	46	12.7	58	19.0	60	5.0	62	5.0	65	10.0	Feb-20
eV Alt All Event Driven Median			3.3		15.1		24.3		6.5		6.7		10.7	Feb-20

^{1.} See Policy Index and Benchmark History.

^{**} Composite reflects net returns from Cliffwater up to March 2017.

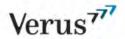


⁺ Account converted to U.S. Treasury from Core Fixed Income in February 2018. Reflects linked historical returns up to February 2018.

⁺⁺ Absolute Return managers are ranked in the eVest net of fee universe.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Davidson Kempner Instl Partners LP - Gross	52,067,898	0.4	3.8	43	13.7	48	21.4	52		-	-		7.4	Apr-19
Davidson Kempner Instl Partners LP - Net			3.8	43	13.7	48	21.4	52					7.4	
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			3.7 3.0	44	12.7 13.2	53	19.0 21.9	55	5.0 4.9	50	5.0 6.0	56	6.4 7.2	Apr-19 Apr-19
Elliot Associates - Gross⁺	67,129,844	0.6	3.2	53	9.8	70	13.7	77	7.7	35	8.6	31	8.0	Apr-12
Elliot Associates - Net			3.2	53	9.8	70	13.7	77	7.7	35	8.6	31	8.0	•
HFRI FoF Conservative Index			3.7	46	12.7	58	19.0	60	5.0	62	5.0	65	5.0	Apr-12
eV Alt All Event Driven Median			3.3		15.1		24.3		6.5		6.7		5.4	Apr-12
Graham Global Inv II - Gross	38,098,503	0.3	4.7	45	17.1	40	14.5	44	4.6	64			2.4	Feb-17
Graham Global Inv II - Net			4.7	45	17.1	40	14.5	44	4.6	64			2.4	
HFRI FoF Conservative Index			3.7	52	12.7	49	19.0	38	5.0	62	5.0	36	4.9	Feb-17
eV Alt All Managed Futures Median			3.9		12.3		11.1		6.0		3.6		3.8	Feb-17
Grosvenor SCARF Diversifying - Gross	211,695,111	1.8	-0.9	87	8.7	85	14.8	84	4.1	78	2.9	95	2.4	Nov-11
Grosvenor SCARF Diversifying - Net			-0.9	87	8.7	85	14.8	84	4.1	78	2.9	95	2.4	
HFRI FoF Conservative Index			3.7	36	12.7	58	19.0	68	5.0	71	5.0	72	5.0	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			2.5		15.5		25.4		6.7		7.0		6.2	Nov-11
Grosvenor SCARF B Diversifying - Gross	1,563,033	0.0	1.4	71	6.8	91	13.4	87	3.5	84	1.5	98	1.7	Jan-13
Grosvenor SCARF B Diversifying - Net			1.4	71	6.8	91	13.4	87	3.5	84	1.5	98	1.7	
HFRI FoF Conservative Index			3.7	36	12.7	58	19.0	68	5.0	71	5.0	72	5.0	Jan-13
eV Alt Fund of Funds - Multi-Strategy Median			2.5		15.5		25.4		6.7		7.0		5.9	Jan-13
KLS Diversified Fund - Gross	38,475,165	0.3	3.5	13	12.4	25	15.0	27					-1.7	Dec-18
KLS Diversified Fund - Net			3.5	13	12.4	25	15.0	27					-1.7	
HFRI FoF Conservative Index			3.7	11	12.7	23	19.0	21	5.0	45	5.0	47	7.4	Dec-18
eV Alt Relative Value - Multi-Market Arbitrage Median			1.3		4.2		7.1		2.5		4.0		6.8	Dec-18
Laurion Capital - Gross	74,195,964	0.6	18.0	8	26.0	23	34.7	17	18.1	5	13.1	20	11.3	Mar-14
Laurion Capital - Net			18.0	8	26.0	23	34.7	17	18.1	5	13.1	20	11.3	
HFRI FoF Conservative Index			3.7	68	12.7	72	19.0	75	5.0	70	5.0	81	5.0	Mar-14
eV Alt Relative Value - Equity Relative Value Median			5.8		18.3		27.3		7.5		7.0		7.1	Mar-14

⁺ Preliminary quarterly returns as of 3/31/2021 (Market Values estimated based on preliminary performance numbers provided by the manager.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
LMR Fund LTD - Gross	46,279,061	0.4	7.0	22	19.3	35	35.1	27			-		2.0	Oct-19
LMR Fund LTD - Net			7.0	22	19.3	35	35.1	27					2.0	2
HFRI FoF Conservative Index			3.7	44	12.7	53	19.0	55	5.0	50	5.0	56	8.3	Oct-19
eV Alt All Multi-Strategy Median			3.0		13.2		21.9		4.9		6.0		8.3	Oct-19
MW Global Opportunities Fund - Gross	46,855,887	0.4	-7.4	96	5.8	88	9.1	92		-			7.3	Dec-18
MW Global Opportunities Fund - Net			-7.4	96	5.8	88	9.1	92				-	7.3	
HFRI FoF Conservative Index			3.7	56	12.7	77	19.0	81	5.0	71	5.0	83	7.4	Dec-18
eV Alt Fundamental - Long/Short Equity Median			4.7		24.9		42.4		8.6		9.5		15.8	Dec-18
PSquared Event Driven Opp Fund - Gross	45,559,249	0.4	-0.8	82						-			1.2	Jul-20
PSquared Event Driven Opp Fund - Net			-0.8	82				-		-	-		1.2	
HFRI FoF Conservative Index			3.7	46	12.7	58	19.0	60	5.0	62	5.0	65	11.0	Jul-20
eV Alt All Event Driven Median			3.3		15.1		24.3		6.5		6.7		11.8	Jul-20
Two Sigma Risk Premia Enhanced - Gross	39,312,942	0.3	-2.0	88	1.0	88	-0.8	88					-8.6	Sep-19
Two Sigma Risk Premia Enhanced - Net			-2.0	88	1.0	88	-0.8	88		-			-8.6	
HFRI FoF Conservative Index			3.7	44	12.7	53	19.0	55	5.0	50	5.0	56	8.0	Sep-19
eV Alt All Multi-Strategy Median			3.0		13.2		21.9		4.9		6.0		7.9	Sep-19
Real Return (with SSgA RA Overlay Proxy) - Gross	1,871,691,410	15.9	4.0		9.5		4.2		4.7				7.0	Mar-17
Real Return (with SSgA RA Overlay Proxy) - Net			3.9		9.4		4.0		4.5				6.8	
Real Return Custom ¹			3.9		8.1		4.2		4.2				5.3	Mar-17
Real Return Asset Category - Gross	1,871,691,410	15.9	4.0		9.5		4.2		4.8				7.7	Mar-17
Real Return Asset Category - Net			3.9		9.4		4.0		4.6			_	7.6	
Real Return Custom			3.9		8.1		4.2		4.2				5.3	Mar-17
Real Estate - Gross	817,841,446	6.9	1.5	63	5.8	7	3.4	11	5.5	10	8.4	4	10.4	Jun-11
Real Estate - Net			1.5	65	5.7	7	3.2	12	5.2	18	8.0	4	9.7	
Real Estate Custom ¹			2.5	7	2.7	56	2.0	43	6.9	5	7.2	8	9.3	Jun-11
InvMetrics All DB Real Estate Priv Net Median			1.7		2.8		1.4		4.4		5.5		8.4	Jun-11

^{1.} See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Core RE -Limited Partnership - Gross	607,229,897	5.1	1.9		6.4	-	4.8	-	7.0	-	8.7		5.3	Sep-08
Core RE -Limited Partnership - Net			1.9		6.3		4.6		6.7		8.5		4.7	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		6.0	Sep-08
Brookfield Premier RE Partners - Gross*	101,571,136	0.9	0.0		0.3		-1.1						4.4	Sep-18
Brookfield Premier RE Partners - Net			0.0		0.3	-	-1.1	-		-			4.4	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		7.7	Sep-18
Clarion Lion Properties - Gross	114,716,173	1.0	2.2		5.0		3.1						5.5	Sep-18
Clarion Lion Properties - Net			2.0		4.4		2.2						4.7	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		7.7	Sep-18
Metlife Core Property - Gross	65,816,868	0.6	2.7		3.8		2.8		5.9		7.1		9.8	Dec-13
Metlife Core Property - Net			2.6		3.4		2.3		5.4		6.6		9.2	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		9.6	Dec-13
Prime Property - Gross	0	0.0	1.9		4.9		3.1		6.0		7.7		10.0	Sep-13
Prime Property - Net			1.9		4.5		2.6		5.1		6.6		8.9	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		9.7	Sep-13
Principal US Property - Gross	50,033,083	0.4	2.4		4.2		2.6		5.0		6.4		6.8	Oct-15
Principal US Property - Net			2.4		4.2		2.6		5.0		6.4		6.8	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		8.4	Oct-15
Prologis Targeted Euro Logistics - Gross	64,904,332	0.6	2.4		20.8		21.0		11.9		13.5		13.4	Oct-15
Prologis Targeted Euro Logistics - Net			2.4		20.8		21.0		11.9		13.5		13.4	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		8.4	Oct-15
Prologis Targeted US Logistics - Gross	87,413,759	0.7	5.4		16.6	-	13.0		14.3		16.0		15.9	Jul-15
Prologis Targeted US Logistics - Net			5.4		16.6		13.0		14.3		16.0		15.9	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		8.7	Jul-15
Townsend Real Estate - Gross*	122,774,547	1.0	0.0		3.2		1.8		5.2		7.4		7.4	Mar-16
Townsend Real Estate - Net			0.0		3.2		1.8		5.2		7.4		7.4	
NFI-ODCE			2.1		3.9		2.3		7.9		8.0		8.0	Mar-16

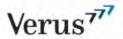
^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Non-Core RE -Opportunistic - Gross***	152,999,079	1.3	0.2	-	4.5	-	-1.1	-	-1.9	-	7.0		16.8	Feb-14
Non-Core RE -Opportunistic - Net			0.2	-	4.5	-	-1.1	-	-1.9	-	6.8		16.2	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		8.7	Feb-14
Carlyle China Realty - Gross	8,393,124	0.1	1.8		6.6		-2.1		3.4				-1.8	Jun-17
Carlyle China Realty - Net			1.8		6.6		-2.1		3.4				-1.8	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		5.5	Jun-17
Carlyle China Rome Logistics - Gross	37,193,211	0.3	1.8		7.1		-2.0		0.2				-1.3	Jun-17
Carlyle China Rome Logistics - Net			1.8		7.1		-2.0		0.2				-1.3	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		5.5	Jun-17
CIM Opportunity VIII - Gross	32,059,724	0.3	-3.3		-13.3		-17.5		-2.5		0.2		1.4	Feb-15
CIM Opportunity VIII - Net			-3.3		-13.3		-17.5		-2.5		-0.1		0.5	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		8.1	Feb-15
Kohlberg Kravis Roberts - Gross	2,291,595	0.0	-9.7		-26.9		-42.0		-36.1		-15.2		-0.1	Feb-14
Kohlberg Kravis Roberts - Net			-9.7		-26.9		-42.0		-36.1		-15.2		-0.3	
NFI-ODCE net +1% 1Q Lag NREP			3.2		0.3		1.3		5.0		6.3		8.7	Feb-14
Nordic Strat FCP-FIS - Gross*	1,395,678	0.0	0.0		19.9		15.6		8.9		20.3		20.9	Dec-14
NREP Nordic Strat FCP-FIS - Net			0.0		19.9		15.6		8.9		20.3		20.9	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		7.9	Dec-14
NREP Nordic Strat II - Gross*	30,899,335	0.3	0.0		15.4		11.6		10.4				14.2	Jun-16
NREP Nordic Strat II - Net			0.0		15.4		11.6		10.4				14.2	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		6.1	Jun-16
NREP Nordic Strat III - Gross*	23,096,609	0.2	0.0		18.6		16.6						0.6	Jul-18
NREP Nordic Strat III - Net			0.0		18.6		16.6						0.6	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		4.7	Jul-18
NREP Nordic Strat IV - Gross*	3,937,367	0.0	0.0										0.2	Jul-20
NREP Nordic Strat IV - Net			0.0										0.2	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		0.2	Jul-20

^{*} Preliminary quarterly returns as of 3/31/2021. (Returns are not available at reporting period.)

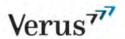
⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Sculptor Real Estate Fund III - Gross	10,315,418	0.1	3.6		10.9		9.9		13.5		18.3		7.8	Sep-14
Sculptor Real Estate Fund III - Net			3.6		10.9		9.9		13.5		17.2		4.7	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.3		8.1	Sep-14
Sculptor Real Estate Fund IV - Gross	3,417,018	0.0	11.8		-10.3								-10.3	Jun-20
Sculptor Real Estate Fund IV - Net			11.8		-10.3								-10.3	
NFI-ODCE net +1% 1Q Lag			3.2		0.3	-	1.3		5.0		6.3		0.3	Jun-20
Non-Core RE -Value Added - Gross***	57,612,470	0.5	0.6		2.7		-0.5		8.1		9.7		0.1	Sep-08
Non-Core RE -Value Added - Net			0.6		2.7	-	-0.5	-	8.1		9.4		-1.0	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		7.3	Sep-08
Asana Partners Fund II - Gross*	11,151,091	0.1	5.7		-3.8		-41.4						-	Apr-19
Asana Partners Fund II - Net			5.7		-3.8		-41.4							
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		3.5	Apr-19
ECE Euro Prime Shopping II - Gross	35,609,004	0.3	0.5		2.0		1.7		3.2		10.5		11.3	Jul-15
ECE Euro Prime Shopping II - Net			0.5		2.0		1.7		3.2		9.7		10.5	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		7.5	Jul-15
European RE Debt II - Gross	1,994,243	0.0	-70.6		-68.3		-71.0		-31.4		-16.9		-11.1	Nov-13
European RE Debt II - Net			-70.6		-68.3		-71.0		-31.4		-16.9		-11.1	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		9.1	Nov-13
Hammes II - Gross	2,505,296	0.0	952.3		1,016.1		1,038.5		244.1		119.1		106.2	Jul-15
Hammes II - Net			952.3		1,016.1		1,038.5		244.1		117.4		102.8	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		7.5	Jul-15
Hammes III - Gross	6,352,836	0.1	28.9		34.0		32.5						-14.8	Oct-18
Hammes III - Net			28.9		34.0		32.5						-14.8	
NFI-ODCE net +1% 1Q Lag			3.2		0.3		1.3		5.0		6.4		4.4	Oct-18

⁺ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.

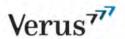


^{*} Unable to calculate a since inception and 1-Year return due to system limitations when account experienced 2 quarter of negative fund value in 2019.

⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Real Assets - Gross***	614,823,030	5.2	7.8	-	12.4	-	-1.0	-	5.1	-	9.7		4.4	Jan-13
Private Real Assets - Net			7.8	-	12.4		-1.0		5.1		9.7		4.4	
Private Real Assets Custom ¹			5.5		11.3		0.3		2.3		4.8		5.2	Jan-13
CPI-U Headline +5%			2.2		6.6		7.6		7.0		7.2		6.6	Jan-13
ACM II - Gross	17,302,715	0.1	-4.7		-9.1		-10.2		-7.6				-7.6	Sep-16
ACM II - Net			-4.7		-9.1		-10.2		-7.6				-7.6	
NCREIF Farmland 1 Qtr Lag			1.6		3.2		3.1		4.9		5.6		5.6	Sep-16
ArcLight Energy VI - Gross	24,946,000	0.2	-4.2		-0.8		-26.2		-4.5		0.9		-0.4	Aug-15
ArcLight Energy VI - Net			-4.2		-0.8		-26.2	-	-4.5	-	0.9		-0.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		12.1	Aug-15
Atalaya SMA - Gross	-98,494	0.0	1.7		7.7		9.0		11.2		9.8		9.1	May-15
Atalaya SMA - Net			1.7		7.7		9.0	-	11.2	-	9.8		9.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		11.1	May-15
Brookfield Infra III - Gross	32,345,480	0.3	5.9		11.6		6.7		9.9				11.5	May-16
Brookfield Infra III - Net			5.9		11.6		6.7		9.9				11.5	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		11.8	May-16
Brookfield Infra IV - Gross	19,655,011	0.2	2.1		15.6		9.2						4.4	Sep-19
Brookfield Infra IV - Net			2.1		15.6		9.2						4.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		9.9	Sep-19
Carlyle Power II - Gross	37,303,109	0.3	17.3		29.8		13.8		5.6		8.9		4.1	Oct-15
Carlyle Power II - Net			17.3		29.8		13.8		5.6		8.9		4.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3	-	11.4	Oct-15
EnCap Energy IX - Gross	10,717,426	0.1	31.9		38.4		-32.7		-18.6		-3.9		-7.4	Jan-13
EnCap Energy IX - Net			31.9		38.4		-32.7		-18.6		-3.9		-7.4	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-1.7	Jan-13

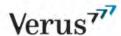
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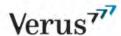
^{1.} See Policy and Benchmark History .

⁺⁺ Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
EnCap Energy X - Gross EnCap Energy X - Net	27,110,548	0.2	18.8 18.8		29.2 29.2		-16.9 -16.9		-3.0 -3.0		4.5 4.5		-3.4 -3.4	Apr-15
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-3.6	Apr-15
EnCap Flatrock Midstream III - Gross	16,051,975	0.1	5.0		5.4	-	-5.7		-1.1		5.9		4.7	Jul-14
EnCap Flatrock Midstream III - Net			5.0		5.4		-5.7		-1.1		5.9		4.7	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.4	Jul-14
EnCap Flatrock Midstream IV - Gross	9,844,608	0.1	4.8		8.8		-1.0		-0.1				-0.1	Feb-18
EnCap Flatrock Midstream IV - Net			4.8		8.8		-1.0		-0.1				-0.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.4	Feb-18
EQT Infrastructure Fund IV - Gross	22,625,484	0.2	7.9		15.6		8.9						-8.4	Jun-19
EQT Infrastructure Fund IV - Net			7.9		15.6		8.9						-8.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		9.9	Jun-19
First Reserve - Gross	20,451,490	0.2	-3.7		0.4		-2.2		4.1		19.6		-0.4	Dec-14
First Reserve - Net			-3.7		0.4		-2.2		4.1		19.6		-0.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.6	Dec-14
IFM Global Infrastructure US LP - Gross	131,029,380	1.1	3.9		7.0		2.8		11.7				11.3	Apr-17
IFM Global Infrastructure US LP - Net			3.9		7.0		2.8		11.7				11.3	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		12.1	Apr-17
ISQ Global Infrastructure Fund II - Gross	38,375,675	0.3	8.2		15.1		16.2						13.6	Oct-18
ISQ Global Infrastructure Fund II - Net			8.2		15.1		16.2			-			13.6	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.1	Oct-18
Meridiam Infra N America III - Gross	2,529,075	0.0	-11.9		-27.8		-32.5		-75.6				-81.1	Sep-17
Meridiam Infra N America III - Net			-11.9		-27.8		-32.5		-75.6				-81.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.6	Sep-17
NGP Royalty Partners - Gross	6,359,240	0.1	-1.6										-13.7	Aug-20
NGP Royalty Partners - Net			-1.6										-13.7	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		11.4	Aug-20



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Paine Schwartz Food Chain V - Gross	11,886,126	0.1	0.4		8.6		-20.5						-17.8	Jan-20
Paine Schwartz Food Chain V - Net			0.4		8.6		-20.5						-17.8	
NCREIF Farmland 1 Qtr Lag			1.6		3.2		3.1		4.9		5.6		4.7	Jan-20
Pantheon Ventures - Gross	70,062,633	0.6	8.7		13.8		0.7		6.4		8.4		17.4	Jul-14
Pantheon Ventures - Net			8.7		13.8		0.7		6.4		8.4		17.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		10.4	Jul-14
Quantum Energy VI - Gross	33,644,681	0.3	19.3		33.5		7.7		11.0		22.9		19.5	Nov-14
Quantum Energy VI - Net			19.3		33.5		7.7		11.0		22.9		19.5	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-5.6	Nov-14
Quantum Energy VII - Gross	28,199,346	0.2	48.2		71.5		25.0		6.3				4.2	Aug-17
Quantum Energy VII - Net			48.2		71.5		25.0		6.3				4.2	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-4.9	Aug-17
Tailwater Energy Fund III - Gross	24,828,507	0.2	-5.0		-5.6		-22.3						-7.8	Sep-18
Tailwater Energy Fund III - Net			-5.0		-5.6		-22.3						-7.8	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-10.3	Sep-18
Tailwater Energy IV - Gross	13,832,194	0.1	-5.6		-0.8		-27.5					-	-29.6	Oct-19
Tailwater Energy IV - Net			-5.6		-0.8		-27.5	-		-			-29.6	
Cambridge Associates Private Energy 1 Qtr Lag			5.9		11.4		-14.4		-7.4		0.1		-14.1	Oct-19
Wastewater Opportunity - Gross	15,820,821	0.1	15.4		-4.8		-5.7		1.6		-8.8		-17.9	Dec-15
Wastewater Opportunity - Net			15.4		-4.8		-5.7		1.6		-8.8		-17.9	
Cambridge Associates Private Infrastructure 1 Qtr Lag			7.1		15.5		10.9		9.3		11.3		11.4	Dec-15



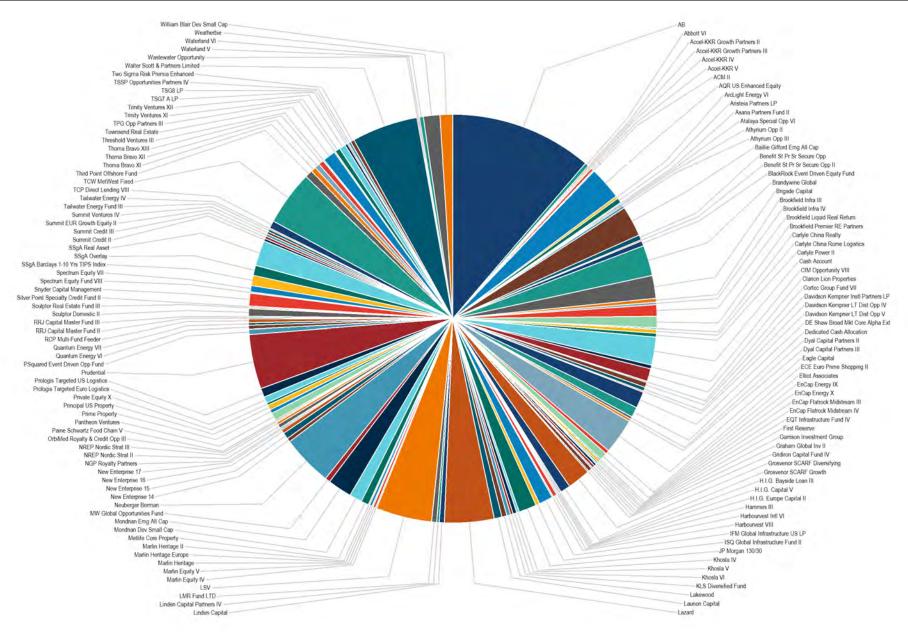
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Liquid Real Return - Gross	439,026,934	3.7	3.4	-	15.7		27.4						5.2	Jun-19
Liquid Real Return - Net			3.4		15.5		26.9						4.8	
SSgA Real Asset ¹			3.5		16.0		26.5		5.1		5.8		4.5	Jun-19
Brookfield Liquid Real Return - Gross	107,076,013	0.9	3.3		14.8		26.8						6.1	Nov-19
Brookfield Liquid Real Return - Net			3.1		14.3		26.1						5.5	
Brookfield Real Return Custom ¹			1.5		12.5		25.3						4.5	Nov-19
SSgA Passive Real Return Proxy - Gross	331,950,921	2.8	3.5		16.0		26.8		5.4		6.0		2.1	Jan-08
SSgA Passive Real Return Proxy - Net			3.5		15.9		26.6		5.1		5.7		1.9	
SSgA Real Asset			3.5		16.0		26.5		5.1		5.8			Jan-08
Opportunities Asset Category - Gross*++	5,520,752	0.0	14.3		16.8		12.2	-	8.6	-	7.3		14.7	Oct-07
Opportunities Asset Category - Net			14.3		16.8		12.2		8.6		7.3		14.7	
Policy Index			3.9		18.8		26.8		9.1		9.6		8.3	Oct-07
Atalaya Special Opportunities V - Gross	5,520,752	0.0	14.3		16.8		12.2		8.6		7.0		6.5	Jul-13
Atalaya Special Opportunities V - Net			14.3		16.8		12.2		8.6		7.0		6.5	
Thomson Reuters C A All PE 1 Qtr Lag			16.6		39.3		27.2		17.0		16.3		15.7	Jul-13
Cash - Gross	360,272,942	3.1	0.1		0.7		1.2		2.0		1.9		3.1	Jun-92
Cash - Net			0.1		0.7		1.2		2.0		1.9			
91 Day T-Bills			0.0		0.1		0.1		1.4		1.1		2.3	Jun-92
Cash Account - Gross	263,944,931	2.2	0.2		1.0		1.7		2.3		2.0		3.2	Jun-92
Cash Account - Net			0.2		1.0		1.7		2.3		2.0		-	
91 Day T-Bills			0.0		0.1		0.1		1.4		1.1		2.3	Jun-92
Dedicated Cash Allocation - Gross	96,328,010	0.8	0.0		0.1		0.4						0.8	Jun-19
Dedicated Cash Allocation - Net			0.0		0.1		0.4						0.8	
ICE LIBOR Spot/Next Overnight USD			0.0		0.1		0.1		1.4		1.2		0.8	Jun-19

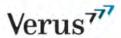
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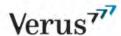
^{1.} See Policy and Benchmark History.

^{*} Composite reflects net returns from Cliffwater up to March 2017.





	Current	%
AB	\$1,326,380,276	11.2%
AQR US Enhanced Equity	\$312,629,068	2.7%
JP Morgan 130/30	\$164,528,830	1.4%
DE Shaw Broad Mkt Core Alpha Ext	\$156,734,482	1.3%
Eagle Capital	\$329,341,252	2.8%
Huber Capital	\$20,264	0.0%
Weatherbie	\$153,586,289	1.3%
Snyder Capital Management	\$116,183,185	1.0%
Lazard	\$466,774,324	4.0%
Walter Scott & Partners Limited	\$616,866,042	5.2%
LSV	\$524,021,444	4.4%
Mondrian Dev Small Cap	\$119,869,102	1.0%
William Blair Dev Small Cap	\$121,430,945	1.0%
Baillie Gifford Emg All Cap	\$281,120,891	2.4%
Mondrian Emg All Cap	\$221,055,488	1.9%
CBRE Clarion	\$5,261	0.0%
Abbott VI	\$34,559,664	0.3%
Accel-KKR IV	\$14,625,691	0.1%
Accel-KKR V	\$20,854,072	0.2%
Accel-KKR VI	\$1,137,456	0.0%
Accel-KKR Growth Partners II	\$10,331,481	0.1%
Accel-KKR Growth Partners III	\$11,333,246	0.1%
Atalaya Special Opp VI	\$14,515,493	0.1%
Canvas Ventures III	\$2,228,588	0.0%
Cortec Group Fund VII	\$13,122,522	0.1%
CRV XVIII LP	\$3,400,000	0.0%
Davidson Kempner LT Dist Opp IV	\$35,345,842	0.3%
Davidson Kempner LT Dist Opp V	\$9,187,824	0.1%
Dyal Capital Partners II	\$23,534,561	0.2%



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	Current	%
Dyal Capital Partners III	\$24,235,809	0.2%
Garrison Investment Group	\$9,093,897	0.1%
Gridiron Capital Fund IV	\$16,600,618	0.1%
Harbourvest VIII	\$9,742,299	0.1%
Harbourvest Intl VI	\$29,628,312	0.3%
H.I.G. Bayside Loan III	\$6,919,383	0.1%
H.I.G. Capital V	\$16,895,900	0.1%
H.I.G. Europe Capital II	\$15,285,383	0.1%
Khosla IV	\$23,109,177	0.2%
Khosla V	\$33,110,713	0.3%
Khosla VI	\$26,455,233	0.2%
Khosla VII	\$460,000	0.0%
Linden Capital	\$47,113,755	0.4%
Linden Capital Partners IV	\$25,526,352	0.2%
Marlin Equity IV	\$12,394,748	0.1%
Marlin Equity V	\$19,014,654	0.2%
Marlin Heritage	\$9,382,704	0.1%
Marlin Heritage II	\$10,357,284	0.1%
Marlin Heritage Europe	\$21,916,617	0.2%
New Enterprise 14	\$35,394,011	0.3%
New Enterprise 15	\$64,678,538	0.5%
New Enterprise 16	\$40,277,883	0.3%
New Enterprise 17	\$11,963,743	0.1%
OrbiMed Private Investments VIII, LP	\$2,216,584	0.0%
Private Equity X	\$25,388,602	0.2%
RCP Multi-Fund Feeder	\$33,063,295	0.3%
RRJ Capital Master Fund II	\$14,085,281	0.1%
RRJ Capital Master Fund III	\$10,737,666	0.1%



Manager Allocation Analysis

	Current	%
Shamrock Capital II	\$4,999,842	0.0%
Spectrum Equity VII	\$60,076,747	0.5%
Spectrum Equity Fund VIII	\$16,836,395	0.1%
Spectrum Equity Fund IX	\$1,388,762	0.0%
Summit EUR Growth Equity II	\$27,309,840	0.2%
Summit EUR Growth Equity III	\$827,982	0.0%
Summit Ventures III	\$3,285,326	0.0%
Summit Ventures IV	\$23,611,303	0.2%
Thoma Bravo XI	\$45,605,258	0.4%
Thoma Bravo XII	\$46,428,252	0.4%
Thoma Bravo XIII	\$51,380,829	0.4%
Threshold Ventures III	\$7,265,295	0.1%
TPG Opp Partners III	\$14,984,160	0.1%
Trinity Ventures XI	\$45,164,615	0.4%
Trinity Ventures XII	\$53,765,535	0.5%
TSG7 A LP	\$18,640,791	0.2%
TSG7 B LP	\$3,209,726	0.0%
TSG8 LP	\$11,420,071	0.1%
TSSP Opportunities Partners IV	\$17,972,057	0.2%
Waterland V	\$13,573,549	0.1%
Waterland VI	\$31,504,341	0.3%
Wayzata Opportunities III	\$4,530,099	0.0%
Wynnchurch Capital Partners V	\$2,415,210	0.0%
Brigade Capital	\$209,215,865	1.8%
Athyrium Opp II	\$14,367,424	0.1%
Athyrium Opp III	\$21,416,551	0.2%
Benefit St Pr Sr Secure Opp	\$44,176,499	0.4%
Benefit St Pr Sr Secure Opp II	\$9,444,082	0.1%



Manager	Allocation	Analysis
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	Current	%
MCP Private Capital IV	\$1,743,233	0.0%
OrbiMed Royalty & Credit Opp III	\$16,211,927	0.1%
Silver Point Specialty Credit Fund II	\$10,379,803	0.1%
Summit Credit	\$560,634	0.0%
Summit Credit II	\$22,926,415	0.2%
Summit Credit III	\$27,837,868	0.2%
TCP Direct Lending VIII	\$66,660,398	0.6%
Grosvenor SCARF Growth	\$89,866,215	0.8%
Lakewood	\$51,958,802	0.4%
Sculptor Domestic II	\$65,078,139	0.6%
Third Point Offshore Fund	\$70,430,882	0.6%
Prudential	\$507,724,711	4.3%
TCW MetWest Fixed	\$513,490,507	4.4%
Neuberger Berman	\$476,709,727	4.0%
Brandywine Global	\$277,995,848	2.4%
Aristeia Partners LP	\$46,835,176	0.4%
BlackRock Event Driven Equity Fund	\$48,172,351	0.4%
Davidson Kempner Instl Partners LP	\$52,067,898	0.4%
Elliot Associates	\$67,129,844	0.6%
Graham Global Inv II	\$38,098,503	0.3%
Grosvenor SCARF Diversifying	\$211,695,111	1.8%
Grosvenor SCARF B Diversifying	\$1,563,033	0.0%
KLS Diversified Fund	\$38,475,165	0.3%
Laurion Capital	\$74,195,964	0.6%
LMR Fund LTD	\$46,279,061	0.4%
MW Global Opportunities Fund	\$46,855,887	0.4%
PSquared Event Driven Opp Fund	\$45,559,249	0.4%
Two Sigma Risk Premia Enhanced	\$39,312,942	0.3%
Brookfield Premier RE Partners	\$101,571,136	0.9%



	Current	%
Clarion Lion Properties	\$114,716,173	1.0%
Metlife Core Property	\$65,816,868	0.6%
Prime Property	\$0	0.0%
Principal US Property	\$50,033,083	0.4%
Prologis Targeted Euro Logistics	\$64,904,332	0.6%
Prologis Targeted US Logistics	\$87,413,759	0.7%
Townsend Real Estate	\$122,774,547	1.0%
Carlyle China Realty	\$8,393,124	0.1%
Carlyle China Rome Logistics	\$37,193,211	0.3%
CIM Opportunity VIII	\$32,059,724	0.3%
Kohlberg Kravis Roberts	\$2,291,595	0.0%
NREP Nordic Strat FCP-FIS	\$1,395,678	0.0%
NREP Nordic Strat II	\$30,899,335	0.3%
NREP Nordic Strat III	\$23,096,609	0.2%
NREP Nordic Strat IV	\$3,937,367	0.0%
Sculptor Real Estate Fund III	\$10,315,418	0.1%
Sculptor Real Estate Fund IV	\$3,417,018	0.0%
Asana Partners Fund II	\$11,151,091	0.1%
ECE Euro Prime Shopping II	\$35,609,004	0.3%
European RE Debt II	\$1,994,243	0.0%
Hammes II	\$2,505,296	0.0%
Hammes III	\$6,352,836	0.1%
ACM II	\$17,302,715	0.1%
ArcLight Energy VI	\$24,946,000	0.2%
Atalaya SMA	-\$98,494	0.0%
Brookfield Infra III	\$32,345,480	0.3%
Brookfield Infra IV	\$19,655,011	0.2%
Carlyle Power II	\$37,303,109	0.3%



Manager Allocation Analysis

	Current	%
EnCap Energy IX	\$10,717,426	0.1%
EnCap Energy X	\$27,110,548	0.2%
EnCap Flatrock Midstream III	\$16,051,975	0.1%
EnCap Flatrock Midstream IV	\$9,844,608	0.1%
EQT Infrastructure Fund IV	\$22,625,484	0.2%
First Reserve	\$20,451,490	0.2%
IFM Global Infrastructure US LP	\$131,029,380	1.1%
ISQ Global Infrastructure Fund II	\$38,375,675	0.3%
Meridiam Infra N America III	\$2,529,075	0.0%
NGP Royalty Partners	\$6,359,240	0.1%
Paine Schwartz Food Chain V	\$11,886,126	0.1%
Pantheon Ventures	\$70,062,633	0.6%
Quantum Energy VI	\$33,644,681	0.3%
Quantum Energy VII	\$28,199,346	0.2%
Tailwater Energy Fund III	\$24,828,507	0.2%
Tailwater Energy IV	\$13,832,194	0.1%
Wastewater Opportunity	\$15,820,821	0.1%
Brookfield Liquid Real Return	\$107,076,013	0.9%
SSgA Barclays 1-10 Yrs TIPS Index	\$99,501,687	0.8%
SSgA Real Asset	\$232,449,234	2.0%
Atalaya Special Opportunities V	\$5,520,752	0.0%
Cash Account	\$263,944,931	2.2%
Dedicated Cash Allocation	\$96,328,010	0.8%
Transition Account	\$14,003	0.0%
Heitman Adv JMB V	\$8,390	0.0%
SSgA Overlay	\$94,530,954	0.8%
Total	\$11,792,442,174	100.0%



Statistics Summary

3 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	10.3%	25	8.5%	9	1.1	1	0.4	19	2.7%	86
Policy Index	9.1%	57	8.1%	5	1.0	10			0.0%	1
Total Fund ex Overlay	9.9%	35	8.3%	8	1.0	3	0.3	31	2.8%	86
Policy Index	9.1%	57	8.1%	5	1.0	10			0.0%	1

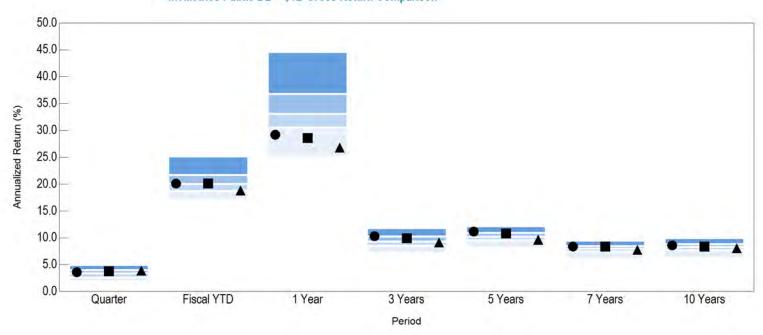
Statistics Summary

5 Years

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	11.2%	11	7.0%	9	1.4	2	0.6	17	2.3%	84
Policy Index	9.6%	72	6.5%	5	1.3	10			0.0%	1
Total Fund ex Overlay	10.8%	29	6.9%	7	1.4	4	0.5	24	2.4%	84
Policy Index	9.6%	72	6.5%	5	1.3	10			0.0%	1



InvMetrics Public DB > \$1B Gross Return Comparison



5th	Percentile
25t	h Percentile
Med	dian
75tl	h Percentile
95tl	h Percentile
# of	Portfolios

Total Fund

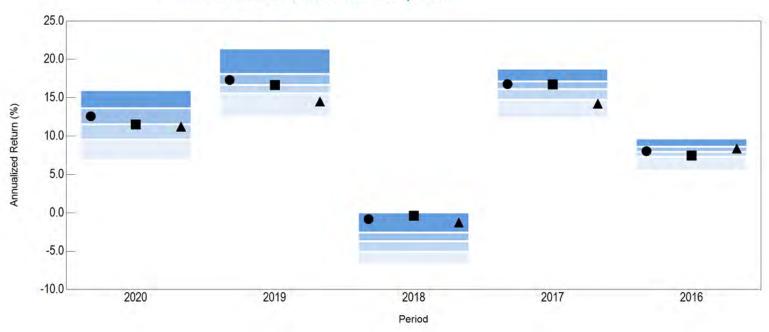
■ Total Fund ex Overlay

▲ Policy Index

turn (Ra	nk)												
4.9		25.1		44.6		11.8		12.1		9.5		9.9	
4.0		21.7		36.8		10.3		10.9		8.5		8.9	
3.4		20.1		33.1		9.3		10.2		8.0		8.3	
2.7		18.7		30.5		8.5		9.5		7.5		7.8	
1.9		17.1		25.2		7.2		8.1		6.1		6.3	
67		67		67		67		67		67		65	
3.6	(37)	20.1	(49)	29.2	(86)	10.3	(25)	11.2	(11)	8.4	(28)	8.6	(36)
3.8	(29)	20.1	(49)	28.6	(89)	9.9	(35)	10.8	(29)	8.3	(29)	8.4	(47)
3.9	(28)	18.8	(73)	26.8	(93)	9.1	(57)	9.6	(72)	7.7	(64)	8.0	(61)



InvMetrics Public DB > \$1B Gross Return Comparison



5th Pero	entile
25th Pe	rcentile
Median	
75th Pe	rcentile
95th Pe	rcentile
# of Por	tfolios
Total	-unal

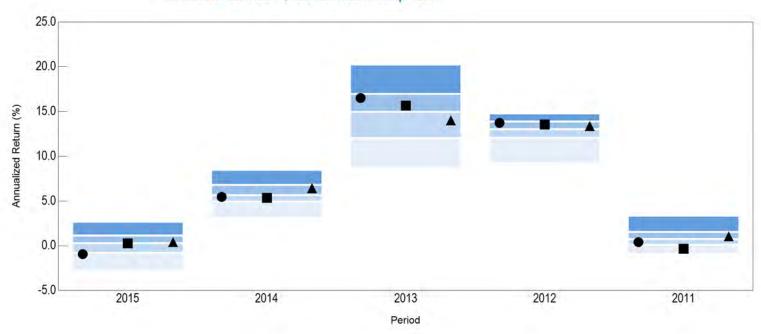
Total FundTotal Fund ex Overlay

▲ Policy Index

16.0		21.4		0.0		18.8		9.7	
13.6		18.1		-2.6		17.2		8.6	
11.5		16.7		-3.7		16.2		8.0	
9.6		15.6		-5.1		14.8		7.4	
6.9		12.5		-6.6		12.4		5.5	
94		81		71		98		92	
12.6	(36)	17.3	(40)	-0.8	(7)	16.8	(38)	8.0	(46)
11.5	(51)	16.6	(52)	-0.4	(6)	16.7	(39)	7.5	(73
11.2	(53)	14.5	(88)	-1.3	(10)	14.2	(82)	8.4	(34)



InvMetrics Public DB > \$1B Gross Return Comparison



	5th Percentile
	25th Percentile
- 1	Median
	75th Percentile
	95th Percentile
1	of Portfolios
•	Total Fund
	Total Fund ex Overlay
•	Policy Index

turn (Rank)									
2.7		8.5		20.2		14.7		3.3	
1.1		6.8		17.0		13.9		1.6	
0.3		5.7		15.0		13.0		0.8	
-0.7		4.9		12.0		12.1		0.1	
-2.8		3.1		8.7		9.2		-0.9	
98		79		67		74		68	
-0.9	(83)	5.5	(61)	16.5	(31)	13.7	(36)	0.4	(60)
0.3	(51)	5.3	(65)	15.6	(43)	13.6	(41)	-0.3	(86)
0.4	(46)	6.4	(34)	14.0	(64)	13.4	(42)	1.0	(38)

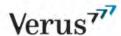


Total Plan Policy Index	As of:	7/4/47	4447	41414.6	414145	4/4/00	0/4/00	0/4/04	4/4/00	714/00
04 doublet bill 150/ (AD)	7/1/19	7/1/17	4/1/17 10.0%	1/1/14 10.0%	1/1/12 10.0%	1/1/08 5.0%	2/1/06 5.0%	9/1/04 5.0%	1/1/00	7/1/86
91-day UST Bill +5% (AR)	40.00/	40.00/							20.00/	
BBgBarc Aggregate	10.0%	10.0%	10.0%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
BBgBarc US Treasury	5.0%	5.0%	5.0%	4.00/						
ICE BofA ML High Yield II	1.0%	1.0%	1.0%	1.0%		F 00/				
Bloomberg Commodity	0.50	2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.5%	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag FTSE BIG	3.2%	3.2%								23.0%
FTSE WGBI ex US Unhedged	2.4%	2.4%	2.4%	2.4%						
CPI-U +5% (PRA)			7.0%	15.0%	15.0%					
Credit Suisse Leveraged Loans	1.0%	1.0%	1.0%	1.0%						
Credit Suisse Leveraged Loans +2% 1 Qtr Lag	4.0%	4.0%	4.0%							
JPM GBI EM Diversified	0.6%	0.6%	0.6%	0.6%						
HFRI FoF Composite Index + 1%	3.0%	3.0%								
HFRI FoF Conservative Index	7.0%	7.0%								
MSCI ACWI ex US	20.0%	20.0%	20.0%	22.5%	22.5%	20.0%				
MSCI EAFE							15.0%	15.0%	15.0%	15.0%
MSCI Emerging Markets							5.0%	5.0%	5.0%	
NAREIT						3.0%	3.0%			
NFI-ODCE	4.6%	4.6%								
NFI-ODCE net +1% 1Q Lag	2.5%	2.5%								
NCREIF			7.0%			12.0%	12.0%	15.0%	10.0%	15.0%
NCREIF Farmland 1 Qtr Lag	0.7%	0.7%								
NCREIF Timberland Index Lagged	0.7%	0.7%								
Russell 1000							30.0%	30.0%	35.0%	
Russell 1000 +3% 1QL (PE)				10.0%	10.0%					
Russell 2000							5.0%	5.0%	5.0%	
Russell 3000	20.0%	21.0%	21.0%	22.5%	22.5%	30.0%				47.0%
S&P 500 +2% 1QL (PE)						5.0%				
Thomson Reuters C A All PE 1 Qtr Lag	9.0%	9.0%	9.0%							
Bloomberg Roll Select Commodity Total Return	0.2%									
Bloomberg Barclays U.S. Floating Rate Note < 5 Yr	0.2%									
S&P Global LargeMidCap Commodity and Resources	0.2%									
S&P Global Infrastructure Index - Net of Tax on Dividend	0.5%									
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	0.6%									
FTSE EPRA Nareit Developed Liquid Index	0.3%									
ICE LIBOR Spot/Next Overnight USD	1.0%									
Contraction to Apply	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



Growth Benchmark	As of:			
	7/1/19	7/1/17	4/1/17	
91 Day T-Bill +5%			5.08%	
ICE BofA ML High Yield II	1.73%	1.70%	1.70%	
Credit Suisse Leveraged Loans	1.73%	1.70%	1.70%	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	6.90%	6.78%	6.78%	
HFRI FoF Composite Index + 1%	5.17%	5.08%		
MSCI ACWI ex US	34.48%	33.90%	33.90%	
Russell 3000	34.48%	35.59%	35.59%	
Thomson Reuters C A All PE 1 Qtr Lag	15.52%	15.25%	15.25%	
	100.0%	100.0%	100.0%	
US Equity Benchmark	As of:			
	1/1/08	9/1/04	1/1/00	7/1/86
Russell 1000		85.71%	87.5%	
Russell 2000		14.29%	12.5%	
Russell 3000	100.0%			100.0%
	100.0%	100.0%	100.0%	100.0%
Large Cap Active Benchmark	As of:			
and the second s	2/1/19	9/1/08		
Russell 1000 Value		100.0%		
Russell 1000	100.0%			
	100.0%	100.0%		
International Equity Benchmark	As of:			
	1/1/08	1/1/00	7/1/86	
MSCI ACWI ex US	100.0%			
MSCI EAFE		75.0%	100.0%	
MSCI Emerging Markets		25.0%		
	100.0%	100.0%	100.0%	
Private Equity Benchmark	As of:			
111111111111111111111111111111111111111	4/1/17	1/1/12	1/1/08	
Russell 1000 +3% 1QL		100.0%	,,,,,,,	
S&P 500 +2% 1QL		1,500,000	100.0%	
Thomson Reuters CIA All PE 1 Qtr Lag	100.0%			
	100.0%	100.0%	100.0%	
Public Credit Benchmark	As of:			
1 95 01 15 17 10 15 15 15 15 15 15 15 15 15 15 15 15 15	4/1/17			
ICE BofA ML High Yield II	50.0%			
Credit Suisse Leveraged Loans	50.0%			
arean career correspon contro	100.0%			

Private Credit Benchmark	As of:	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	4/1/17	
	100.0% 100.0%	
Growth Oriented Absolute Return Benchmark	As of:	
AL Journal Dilly Sty	7/1/17	4/1/17
91-day UST Bill +5% HFRI FoF Composite Index + 1%	100.0%	100.09
HFKI FOF Composite index + 1%	100.0%	100.0%
and a late of the state of		
Diversifying Benchmark	As of:	
	7/1/17	4/1/17
91 Day T-Bill +5%	10.00/	28.0%
BBgBarc US Aggregate	40.0%	40.09
BBgBarc US Treasury FTSE WGBI ex US Unhedged	20.0%	20.0%
HFRI FoF Conservative Index	28.0%	9.07
IPM GBI EM Diversified	26.0%	2.49
PM GBI EM DIVERSITIED	100.0%	100.0%
Control of the Contro		
Global Fixed Income Benchmark	As of:	
	6/1/13	
FTSE WGBI ex US Unhedged	80.0%	
IPM GBI EM Diversified	20.0%	
	100.0%	
Diversifying Absolute Return Benchmark	As of:	
	7/1/17	4/1/1
91-day UST Bill +5%		100.09
HFRI FoF Conservative Index	100.0%	
Programme Control	100.0%	100.09
Real Return Benchmark	As of:	
Total Notalli Dollollillari	4/1/19	4/1/17
Real Estate Benchmark	43.75%	43.75%
Private Real Assets Benchmark	43.75%	43.759
Bloomberg Commodity	161 611 3	12.50%
iquid Real Return Custom Benchmark	12.50%	
	100.0%	100.0%
Real Estate Benchmark	As of:	
tea Latate Delicillian	7/1/17 71	/2011
NCREIF		100.09
NFI-ODCE	65.0%	100.07
NFI-ODCE net +1% 1Q Lag	35.0%	
WARRED WAS AND THE PARTY OF THE	100.0%	100.09



RE-Value Added Benchmark	As of:			
	7/1/16	10/1/08		
NCREIF +2% 1Q Lag		100.0%		
NFI-ODCE net +1% 1Q Lag	100.0%			
The state of the s	100.0%	100.0%		
Private Real Assets Benchmark	As of:			
	7/1/17	4/1/17		
CPI-U Headline +5%		100.0%		
Cambridge Associates Private Energy 1 Qtr Lag	35.0%			
Cambridge Associates Private Infrastructure 1 Qtr Lag	45.0%			
NCREIF Farmland 1 Qtr Lag	10.0%			
NCREIF Timberland Index Lagged	10.0%			
Charles and Control	100.0%	100.0%		
Liquid Real Return Custom Benchmark	As of:			
	7/1/19			
Bloomberg Roll Select Commodity Total Return	10.0%			
Bloomberg Barclays U.S. Floating Rate Note < 5 Yr	10.0%			
S&P Global LargeMidCap Commodity and Resources	10.0%			
S&P Global Infrastructure Index - Net of Tax on Dividend	25.0%			
Bloomberg Barclays U.S. Government Inflation-Linked 1-10 Yrs	30.0%			
FTSE EPRA Nareit Developed Liquid Index	15.0%			
A CONTRACTOR OF THE PARTY OF TH	100.0%			

AllianceBernstein Benchmark	As of:		
D	1/1/01	1/1/98	5/1/89
Russell 1000	100.0%	400.00/	
Russell 3000 Wilshire 2500		100.0%	100.0%
Wilshire 2500	100.0%	100.0%	100.0%
Eagle Capital Benchmark	As of:		
Lagie Capital Belicilliark	2/1/19	9/1/08	
Russell 1000 Value	2/1/15	100.0%	
Russell 1000	100.0%	100.070	
	100.0%	100.0%	
Brandywine Benchmark	As of:		
	6/1/13		
FTSE WGBI ex US Unhedged	80.0%		
JPM GBI EM Diversified	20.0%		
	100.0%		
Brigade Benchmark	As of:		
7.00	12/1/13		
ICE BofA ML High Yield II	50.0%		
Credit Suisse Leveraged Loans	50.0%		
No. of the second	100.0%		
Brookfield Real Return Custom	As of:		
	12/1/2019		
FTSE Global Core Infrastructure 50/50 Index	30.0%		
FTSE EPRA Nareit Developed Index	20.0%		
ICE BofA 7% Constrained REIT Preferred Securities Index	10.0%		
ICE BofA USD Real Asset High Yield Custom Index	16.0%		
ICE BofA USD Real Asset Corporate Custom Index	24.0%		
	100.0%		
SSgA Real Asset Benchmark	As of:	12.72	
DD-D 110 Co. 4 l-Betton Links 4.4.40 Ver	3/2/2018	10/1/15	2/1/08
BBgBarc US Govt Inflation-Linked 1-10 Yrs		10.0%	20.00
BBgBarc US TIPS	20.00/	10.0%	20.0%
BBgBarc 1-10 Yr US TIPS BBgBarc Roll Select Commodity TR	30.0% 10.0%	20.0%	
BBgBarc USD Floating Rate Note <5yr	10.0%	20.070	
DJ US Select REIT	10.076		30.0%
FTSE EPRA/NAREIT Developed Liquid	15.0%	10.0%	30.070
MSCI World Natural Resources	10.070	20.0%	25.0%
S&P Global Large Mid Cap Commodity Resources	10.0%	20.070	20.070
ON CIODA LAIGO MIG OUD COMMINDUITY INCOUNCES	25.0%	20.0%	
		20.070	
S&P Global Infrastructure	25.070		25.0%
	20.070	10.0%	25.0%



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)].

Beachmark 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.

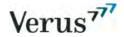
Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard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