





PERIOD ENDING: JUNE 30, 2021

Investment Performance Review for

**Sacramento County Employees' Retirement System** 

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### **VERUSINVESTMENTS.COM**

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# Recent Verus research

Visit: <a href="https://www.verusinvestments.com/insights/">https://www.verusinvestments.com/insights/</a>

### **Topics of interest**

### MEASURING & BUDGETING ACTIVE RISK

Active risk budgeting is valuable in the construction, monitoring, and overall governance of the investment portfolio. An active risk budget identifies how much risk an investor wants to take in the portfolio and where the investor plans to allocate that risk. In this paper we provide an introduction to active risk and demonstrate how to measure and budget that risk. We also discuss the individual sources that drive active risk and why they're important to identify. Last, we review a practical example of how active risk can inform portfolio construction and demonstrate how the Verus active management environment research can be used to inform active/passive allocations throughout the portfolio.

### Sound thinking

### THINKING SKEPTICALLY

Risk markets are currently trading at all-time highs, cryptocurrencies are soaring, and investment markets are looking forward to a broadly positive post-COVID future. At times like these it can be valuable to consider the role that skepticism plays in the investment process. This short paper is designed to help clarify the role that skepticism can play, and also to clarify how investors can use it as a tool without being captured by it, because excessive skepticism may lead to missed opportunities.

### Annual research

### 2021 REAL ASSETS OUTLOOK

In last year's outlook, COVID-19 was front and center in our views and outlooks across all asset classes. A year later, we are beginning to return to a more normalized pre-COVID lifestyle and with that, a recovery in many of the sectors impacted in 2020. One of the topics being debated among investors is the potential for inflationary pressure, a portfolio risk that hasn't emerged in several decades. That discussion has reignited interest in real assets and capital flows into the asset class.

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### **VERUSINVESTMENTS.COM**

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# 2<sup>nd</sup> quarter summary

### THE ECONOMIC CLIMATE

- Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that GDP will fully recover in Q2. p. 12
- The U.S. unemployment rate has been slow to rebound, despite a full recovery in economic activity. This might suggest that government spending has had an outsized impact, and raises risks around a stimulus "hangover" when spending programs end. p. 14
- Economies around the world continued to recover as life began moving back to normal. This description does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus. p. 20

### **PORTFOLIO IMPACTS**

- Credit spreads grew even tighter during Q2, driven by investor demand and improvements in economic fundamentals. High yield spreads tightened to 2.68%—a new cycle low. Investment grade tightened 11 basis points to end the quarter at 0.80%. p. 25
- Inflation surprised on the upside in Q2, adding to investor fears. U.S. core CPI rose 4.5% year-over-year, while headline came in at 5.4%. The jump in prices has been concentrated in a few areas, including energy (+24.5% YoY) and used car & truck prices (+45.2% YoY). p. 13

### THE INVESTMENT CLIMATE

- The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in "human infrastructure" and \$600 billion towards "traditional infrastructure" It is unclear whether this proposal will gain sufficient support from Democrats. p. 12
- It seems that investors have put the 2020 pandemicinduced recession behind them. Implied volatility, realized market volatility, and the risks reflected in asset prices are very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few threats on the horizon. p. 35

### **ASSET ALLOCATION ISSUES**

- U.S. equities were a top performer again in Q2 (S&P 500 +8.5%). International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.1% MSCI Emerging Markets Index) on an unhedged currency basis. p. 28
- Factor performance suffered during Q2, reversing much of the gains from the prior quarter. Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%). p. 30

Economic progress continues to exceed expectations, though strong optimism may already be reflected in asset prices

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



# What drove the market in Q2?

"Delta Covid variant first found in India spreads to 62 countries, hot spots form in Asia and Africa, WHO says"

### **GLOBAL COVID-19 CASES (MILLIONS)**

Jan	Feb	Mar	Apr	May	Jun
26.3	28.7	30.5	32.3	33.3	33.7

Article Source: CNBC, as of June 2<sup>nd</sup>, 2021

### "Inflation: Is it transitory or not?"

### **CORE CPI GROWTH (YEAR-OVER-YEAR)**

Jan	Feb	Mar	Apr	May	Jun
1.4%	1.3%	1.6%	3.0%	3.8%	4.5%

Article Source: Yahoo Finance, June 15th, 2021

## "TREASURIES-U.S. Treasury yield curve flattens as Fed seen more proactive on inflation"

### **IMPLIED EFFECTIVE FED FUNDS RATE IN DECEMBER 2023**

Jan	Feb	Mar	Apr	May	Jun
0.15%	0.30%	0.40%	0.47%	0.49%	0.80%

Article Source: Reuters, June 18th, 2021

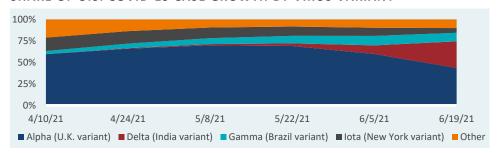
### "Is the reflation trade over? What stock-market investors need to watch"

### **TEN-YEAR U.S. TREASURY YIELD**

Jan	Feb	Mar	Apr	May	Jun
1.07%	1.40%	1.74%	1.63%	1.59%	1.47%

Article Source: MarketWatch, June 21st, 2021

### SHARE OF U.S. COVID-19 CASE GROWTH BY VIRUS VARIANT



Source: U.S. Center for Disease Control, as of 6/19/21

### U.S. INFLATION RATES (YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/21

### IMPLIED EFFECTIVE FED FUNDS RATE



Source: Bloomberg, as of 6/30/21



# Economic environment



# U.S. economics summary

- Real GDP grew at a 0.4% rate yearover-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that gross domestic product (GDP) will fully recover in Q2.
- The U.S. unemployment rate has been slow to improve, falling very slightly from 6.0% in March to 5.9% in June. The labor market remains materially weaker relative to prepandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending, and raises concerns about whether recent strength may prove fleeting when government intervention slows.
- The Biden Administration's
   Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July,
   Democrat legislators had reached

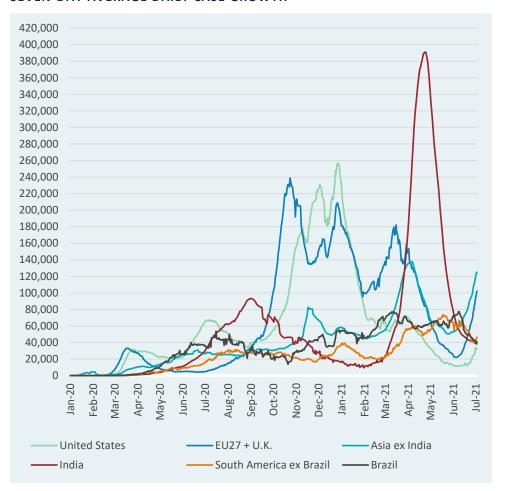
- an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in "human infrastructure" and \$600 billion towards "traditional infrastructure" It is unclear whether this proposal will garner sufficient support from Democrats.
- Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise.
   U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June.
   U.S. headline inflation came in at 5.4%.
   The rise in prices has so far been concentrated in a few specific areas, including energy (+24.5% YoY) and used car and truck prices (+45.2% YoY).
- Consumer sentiment further improved over the quarter, but has only regained roughly half of the deterioration post-pandemic.

	Most Recent	12 Months Prior
GDP (YoY)	0.4% 3/31/21	0.3% 3/31/20
Inflation (CPI YoY, Core)	<b>4.5</b> % <i>6/30/21</i>	1.2% 6/30/20
Expected Inflation (5yr-5yr forward)	2.20% 6/30/21	1.5% 6/30/20
Fed Funds Target Range	0% – 0.25% 6/30/21	0% – 0.25% 6/30/20
10-Year Rate	1.47% 6/30/21	0.66% 6/30/20
U-3 Unemployment	5.9% 6/30/21	11.1% 6/30/20
U-6 Unemployment	9.8% 6/30/21	18.0% 6/30/20

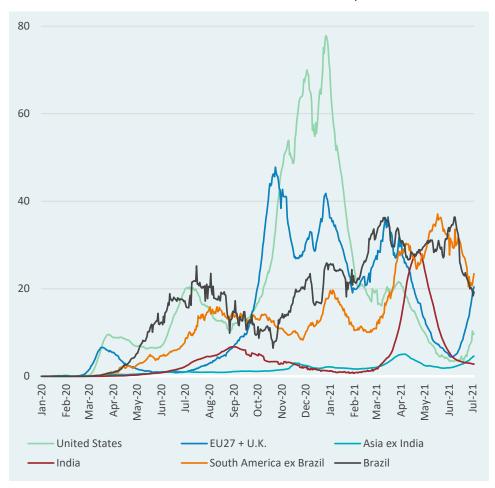


# COVID-19 case growth

### SEVEN-DAY AVERAGE DAILY CASE GROWTH



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



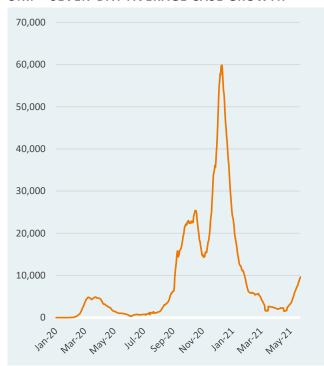
Source: Bloomberg, as of 7/18/21



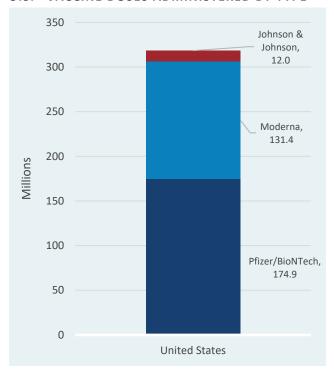
# Delta variant

Spread of the more virulent delta variant (which originated in India) of the coronavirus within the U.K. led officials to push back the date for reopening from mid-June to mid-July, and has sparked concerns in recent months that material spread outside of the U.K. could lead to a reintroduction of social distancing controls.

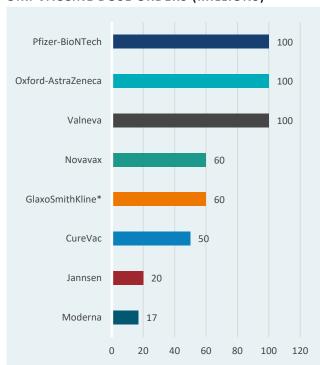
### U.K. - SEVEN-DAY AVERAGE CASE GROWTH



U.S. -VACCINE DOSES ADMINISTERED BY TYPE



**U.K. VACCINE DOSE ORDERS (MILLIONS)** 



Source: Bloomberg, BBC, U.K. government, as of 6/21/21

\*Joint project with Sanofi Pasteur.

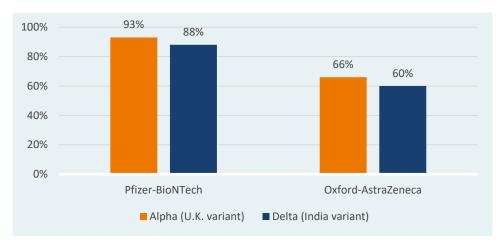


# Public Health England (PHE) findings

While case growth has picked up from very low levels within the U.K., there are several factors in play which probably reduce the likelihood that delta case growth picks up materially in the U.S.

- 1. The U.K. has a much higher exposure to the Astra vaccine, which is significantly less effective at preventing symptomatic infection.
- 2. Early prioritization of the one-dose vaccine regimen in the U.K. resulted in lower levels of protection.

### TWO-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA



### ONE-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA

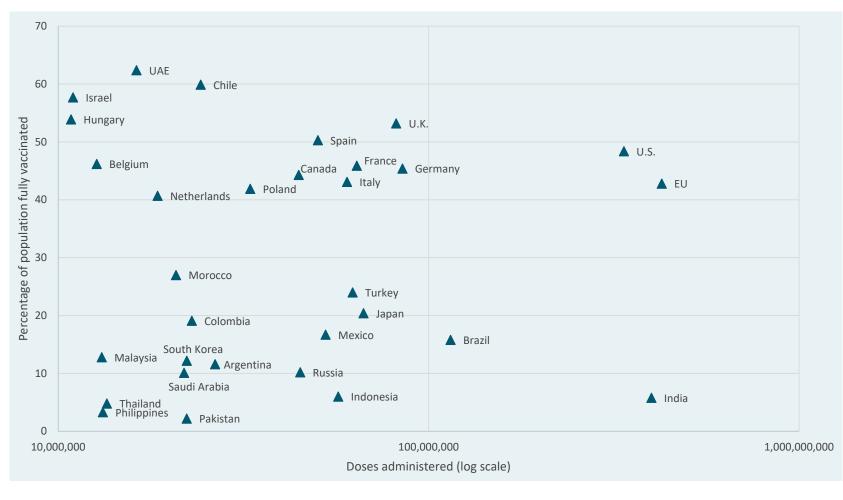


Source: https://www.medrxiv.org/content/10.1101/2021.05.22.21257658v1



# Global vaccination campaign

### DOSES ADMINISTERED RELATIVE TO PERCENTAGE OF POPULATION FULLY VACCINATED



The EU has closed the vaccine gap relative to the U.S. and the U.K., led by a pickup in administration in Germany

Source: Bloomberg, as of 7/16/21



# GDP growth

Real GDP grew at a 0.4% rate year-over-year in Q1 (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that real gross domestic product (GDP) will once again reach its pre-pandemic level in Q2. The Atlanta Fed GDPNow estimate suggests a 7.9% Q2 growth rate as of July 9<sup>th</sup> (seasonally-adjusted quarterly annualized rate).

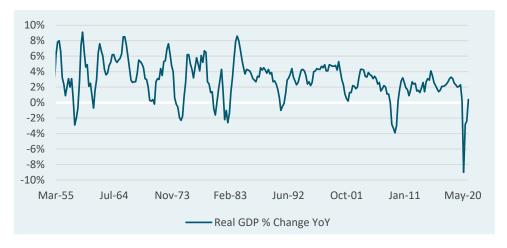
The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in "human infrastructure" (Medicare funding, childcare, government-funded college, and energy transition), and \$600 billion towards "traditional"

infrastructure" (roads, bridges, power infrastructure, rail, broadband internet, and water infrastructure). It is unclear whether this proposal will garner adequate buy-in, and it is also unclear whether Republicans will withdraw support, now that Democrats appear ready to proceed with many of the more controversial spending items that the RNC negotiated against.

The U.S. economy likely fully recovered during Q2 2021

The Biden Administration has held strong in its push for further government spending, despite an arguably speedy economic recovery. These efforts have been met with opposition, as some view these proposals as excessive, given the stronger state of the economy. Additional government spending may increase the risk of economic overheating and inflation.

### U.S. REAL GDP GROWTH (YOY)



### U.S. REAL GROSS DOMESTIC PRODUCT



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



# Inflation

Inflation surprised on the upside in Q2, adding to investor concerns around a sustained rise. U.S. core CPI, which excludes food & energy prices, rose 4.5% YoY in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few areas. Energy prices (+24.5% YoY) have had the most significant impact, with extreme gasoline price rises (+45.1% YoY) being very noticeable at the pump. Used automobile prices (+45.2% YoY) have also seen large gains.

We maintain our belief that recent price rises will generally prove transitory as most increases can be explained either by base effects or one-time effects from pandemic supply and spending dynamics. Energy price growth is an example of 'base effects',

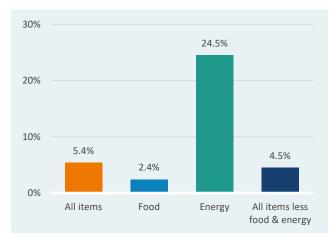
where prices fell dramatically in spring 2020 and then recovered by spring 2021, creating the mirage of high inflation (inflation is a 12-month price change measurement). Higher used car prices is likely an example of 'one-time effects' from supply issues (chip shortages led to decreased supply of new cars) and also consumer spending habit changes during COVID (fear of public transportation led to auto purchases, and stimulus checks provided funds for purchases). As auto sales slow, we believe this will mitigate high prices. However, there are also some signs of more structural price rises, such as owner's equivalent rent (OER) which is much slower moving due to the impact of lease arrangements and the longer time it takes for home price increases to impact household budgets more broadly.

It is important to distinguish between *one-time* and *transitory* price rises in the current environment

### U.S. CPI (YOY)



### U.S. CPI (YOY)



### **BREAKEVEN INFLATION RATES**



Source: BLS, as of 6/30/21 Source: Bloomberg, as of 6/30/21





# Labor market

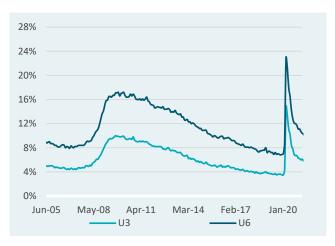
The U.S. labor market rate has been slow to recover, as unemployment fell only slightly from 6.0% in March to 5.9% in June. Labor participation also paints a lukewarm picture, rising from 61.5% to 61.6% during the quarter. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending and raises concerns about whether recent strength may prove fleeting once government spending slows.

Beginning mid-June, a few U.S. states decided to stop accepting Federal emergency unemployment benefits. Among the benefits were a \$300 weekly unemployment add-on, expanded eligibility,

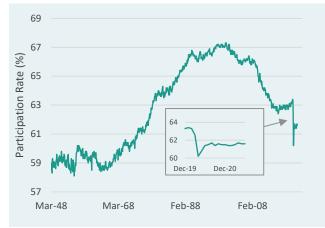
and an extension of the duration of benefits overall. Research regarding the impacts of these programs on joblessness are mixed. Based on one study from the Federal Reserve Bank of St. Louis, states that have stopped these programs have seen unemployment fall by 5% more than states that have continued offering expanded benefits (12% unemployment vs. 7%). This study suggests that many unemployed workers may come back into the workforce as government subsidies roll off. It is worth mentioning that other factors are in play regarding the timid labor market recovery, including parents declining work to care for children, fears of workplace safety, and early retirements. These labor dynamics are complex and it may be overly simplistic to attribute problems to a single cause.

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

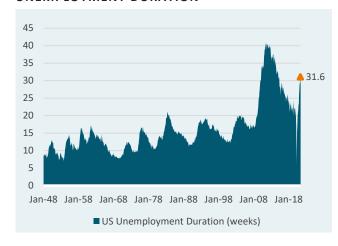
### U.S. UNEMPLOYMENT



### LABOR PARTICIPATION RATE



### UNEMPLOYMENT DURATION



Source: FRED, as of 6/30/21 Source: FRED, as of 6/30/21

# Employment conditions

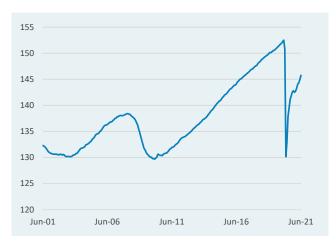
Nonfarm payrolls expanded by 567,000 per month on average in the second quarter, reaching a total of 145.8 million by quarter-end. This number was 6.8 million below the pre-pandemic peak of February 2020. Labor market conditions have been improving overall, but the road has been bumpy, given the ebb and flow of virus cases and the impact on individual state and city policy decisions.

Job openings rose to a fresh record of 9.2 million in May, underscoring the fact that the recent bounce back in consumer demand has outpaced the ability of business owners to hire to meet that demand. In order to address that shortfall, many business owners have begun to raise wages,

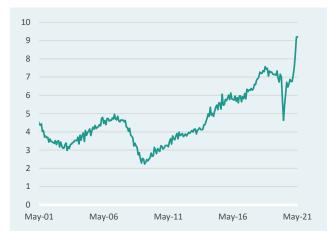
offer signing bonuses, offer more flexible work hours, and offer the ability to work from home. Said another way, the sellers have the upper hand in the labor market at present. The number of people who quit their jobs in May (3.6 million) remained near record levels, reflecting workers' confidence in their ability to find other employment.

While employers are struggling to find qualified employees in the current environment, the expiration of a litany of additional unemployment insurance programs through the end of the year could push up labor market supply. Whether the skills of the currently not-working contingent matches up with current labor demand remains to be seen.

### U.S. EMPLOYEES ON NONFARM PAYROLLS



### U.S. JOB OPENINGS (MILLIONS)



### SMALL BUSINESS OWNERS' HIRING CONDITIONS



*Source: BLS, as of 5/31/21* 

Source: NFIB, as of 6/30/21



Source: BLS, as of 6/30/21

# The consumer

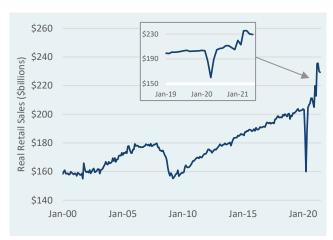
U.S. retail sales would appear red hot if defined on a year-over-year growth basis (+12%). But, as we have mentioned during past quarters, year-over-year numbers are skewed due to the events of early-2020. In reality, retail sales fell -2.5% from Q1 to Q2.

As vast government stimulus translated to hot consumer spending, it might be reasonable to ask what will happen to recent trends as government spending slows and once stimulus money has been spent. This effect might in part explain the recent drop in U.S. auto sales, which have fallen to the lowest level since 2014. We remain cautious about assuming a clean economic turnaround, as much of the recent rebound has been due to government spending rather

than a natural rebound in jobs, spending, and household economic/financial security. This effect may tie closely with the more muted improvement in consumer sentiment and comfort indicators, as illustrated on slide 18.

According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans appear to have returned to normal life in most respects. Travel to the workplace and transit usage, however, remain notably depressed relative to pre-COVID activity. If work-from-home policies are extended or even made permanent at many businesses, it is likely that this type of travel remains lower.

### **REAL RETAIL SALES**



### **AUTO SALES**



### Source: Federal Reserve, as of 6/30/21

### **GOOGLE U.S. ACTIVITY TRACKER**

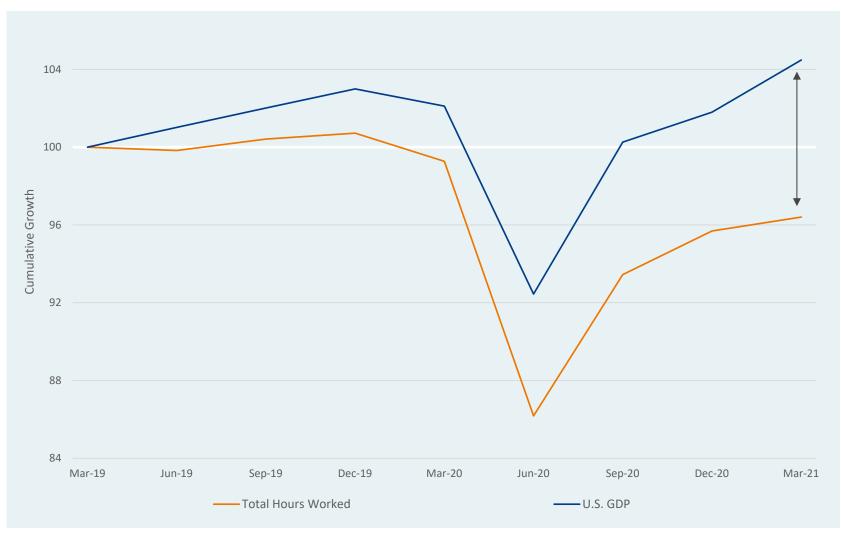


Source: Google anonymized U.S. citizen mobility, as of 6/30/21



Source: FRED, as of 6/30/21

# An unbalanced recovery



Despite the strong recovery in U.S. GDP, the labor market remains depressed

The stark contrast between GDP and the total number of hours worked by Americans illustrates this divide

Source: Fred, Verus, as of 3/31/21 – Nonfarm business sector total hours worked, nominal U.S. gross domestic product (GDP)



# Sentiment

Consumer sentiment further improved over the quarter but has only recovered roughly half of the deterioration post-COVID, according to the indices below.

The Bloomberg Consumer Comfort Index attempts to gauge Americans' views on the economy, their personal financial situations, and buying conditions. The index rose from 50.0 to 53.3. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. The index jumped from 84.9 to 85.5. As reported by the university, "...consumers' complaints about rising prices on

homes, vehicles, and household durables reached an all-time record." The survey surmised that Americans have accumulated significant savings, and a critical issue going forward will be whether these savings are held for safety or are spent.

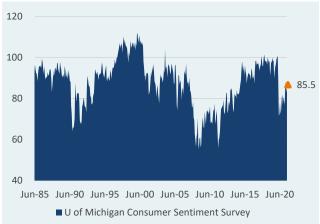
Small business optimism improved over the quarter but remained below pre-pandemic levels. Business owners are optimistic on the outlook, supported by expectations for gradual economic reopening, but continue to struggle to fill open positions due to a shortage of qualified employees in the labor pool.

### **CONSUMER COMFORT**



Source: Bloomberg, as of 6/30/21

### **CONSUMER SENTIMENT**



Source: University of Michigan, as of 6/30/21

### **SMALL BUSINESS OPTIMISM**



Source: NFIB, as of 6/30/21



# Housing

Home sales activity surged considerably in late 2020, but has slowed year-to-date, closer to pre-COVID levels in May. The median home sales price in May was 23.6% higher than one year prior, pushed upward by very low inventory and very high demand. Recent price rises have been some of the strongest on record, generating wealth for many Americans, but also hurting affordability and diminishing the chance of homeownership for prospective future homeowners.

The strength of the recent housing boom has been surprising. It is not yet clear whether the current upward

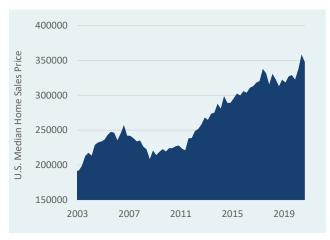
trend will persist. Housing inventory has improved, now standing at 5.1 months of supply, which is closer to prepandemic levels. This likely eases some price pressure. Earlier in the year it appeared that mortgage interest rates were rebounding towards prior levels, beginning the year at 2.67% and reaching 3.18% by the end of March. However, this trend reversed course during the second quarter, as rates fell back to 2.98%. An increasing volume of new home construction is likely easing tight inventories, as demonstrated below.

### U.S. MONTHLY HOME SALES



### Source: U.S. Census Bureau, as of 5/31/21

### U.S. MEDIAN HOME SALES PRICE



### Source: FRED, as of 6/30/21

### HOUSING SUPPLY VS NEW CONSTRUCTION



Source: FRED, as of 5/31/21



# International economics summary

- Economies around the world continued to recover as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.
- While expanding access to quality vaccines enabled mainland Europe to close the gap relative to the U.K. and the U.S. regarding vaccination rates, many countries in Asia, Africa, and Central Europe continued to face procurement issues, which has led public policymakers to respond more forcefully to pickups in case growth.
- Inflation has risen around the world, with the U.S. experiencing one of the largest rises. This will likely be a key theme for markets in the coming months.

- The U.S. trade balance of goods and services remained at a near alltime-low level of \$75B per month, perhaps indicating that the relative strength of the U.S. consumer has pushed up domestic imports to levels above exports. The U.S. trade deficit might be primed to recede if the global recovery were to broaden.
- The pace of global manufacturing sector activity growth remained high, while services sector activity in many countries began to expand.
- Chinese GDP growth reportedly moderated from a year-over-year pace of 18.3% in Q1 to 7.9% in Q2—slightly missing expectations (+8.0%), but keeping the 6% annual target in range. Retail sales (+12.1%) and industrial production (+8.3%) both grew by more than forecast, but policymakers continue to worry that the economic recovery has been uneven in composition, which could weigh on future growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.4%	5.4%	5.9%
	3/31/21	6/30/21	6/30/21
Eurozone	(1.3%) 3/31/21	1.9% 6/30/21	<b>7.9%</b> 5/31/21
Japan	(1.6%)	0.0%	3.1%
	3/31/21	6/30/21	5/31/21
BRICS	13.3%	2.5%	5.7%
Nations	3/31/21	6/30/21	12/31/20
Brazil	1.0%	8.4%	14.7%
	3/31/21	6/30/21	4/30/21
Russia	(0.7%) 3/31/21	6.5% 6/30/21	<b>4.9%</b> 5/31/21
India	1.6%	6.3%	9.2%
	3/31/21	6/30/21	6/30/21
China	7.9% 6/30/21	1.1% 6/30/21	<b>5.0%</b> 5/31/21

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.



# International economics

Economies around the world continued to recover, as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

A third wave of COVID has hit the Asia-Pacific region, as the Delta variant triggered economic restrictions in the area. Slower vaccination rollouts in many countries has resulted in greater vulnerability to new variants.

Inflation has jumped nearly everywhere across the globe, though the U.S. has seen one of the largest rises. This will likely be a key theme for markets and central banks in the coming months.

The rate of unemployment was mixed during the second quarter. The U.S. and Eurozone labor markets improved moderately over the quarter, while Japan saw a rise in joblessness. As we have described in prior quarters, governments have taken very different approaches to supporting workers, which has made global labor market trends difficult to compare.

### REAL GDP GROWTH (YOY)

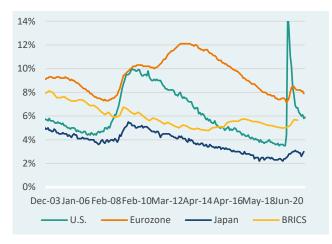


### **INFLATION (CPI YOY)**



### Source: Bloomberg, as of 6/30/21 – or most recent release

### UNEMPLOYMENT



Source: Bloomberg, as of 6/30/21 – or most recent release



Source: Bloomberg, as of 3/31/21

# Fixed income rates & credit



# Fixed income environment

- The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve's recent indications that monetary policy will be kept very easy for the medium term. "Lower-for-longer" interest rates may act as a support to risk asset prices.
- Despite very dovish communication from central banks, derivative markets suggest investors are pricing between a 0-0.4% rise in interest rates over the next year in most developed countries.
- Headline Inflation in Brazil has risen to 8.4%, double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25 to 5.5%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be.

- Risky credit outperformed over the quarter as spread levels compressed to decade-lows in the United States, and emerging markets debt bounced back. Hard-currency denominated emerging market debt returned 4.1% and high yield credit in the U.S. returned 2.7%.
- Policy shifts from the People's Bank of China resulted in a drawdown of liquidity across Asian markets over most of the quarter, which weighed on valuations for larger tech companies across the region. More recent concerns over the pace of the economic recovery in China may lead the government to withdraw liquidity more gradually.
- While some developed market central banks (Bank of Canada, Bank of Korea, Norges Bank) have started to marginally tighten (or signal tighter) policy, the Federal Reserve and the European Central Bank are expected to keep policies accommodative for at least the next year to 18 months.

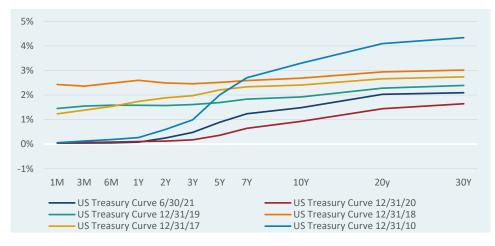
	QTD Total Return	1 Year Total Return
Core Fixed Income (BBgBarc U.S. Aggregate)	1.8%	(0.3%)
Core Plus Fixed Income (BBgBarc U.S. Universal)	2.0%	1.1%
U.S. Treasuries (BBgBarc U.S. Treasury)	1.7%	(3.2%)
U.S. High Yield (BBgBarc U.S. Corporate HY)	2.7%	15.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.4%	11.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	3.5%	6.6%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	4.1%	7.5%
Mortgage-Backed Securities (BBgBarc MBS)	0.3%	(0.4%)

Source: Bloomberg, as of 6/30/21

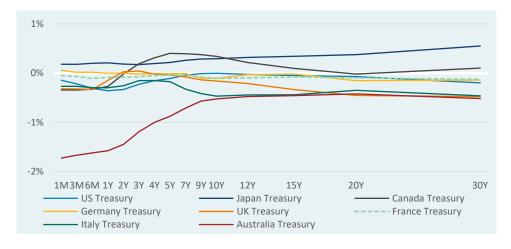


# Yield environment

### **U.S. YIELD CURVE**

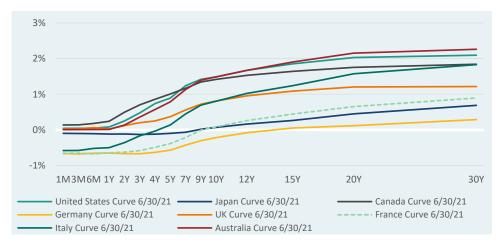


### YIELD CURVE CHANGES OVER LAST FIVE YEARS



### Source: Bloomberg, as of 6/30/21

### **GLOBAL GOVERNMENT YIELD CURVES**



### **IMPLIED CHANGES OVER NEXT YEAR**





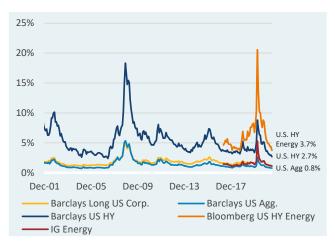
# Credit environment

Credit markets performed positively in the second quarter, supported by strong corporate earnings, strong inflows and the expectation that supply will moderate in the second half of the year. Interest rates, specifically on the long-end of the curve, fell over the quarter, providing further duration tailwinds for fixed income securities. Corporate investment grade credit returned +3.6% over the quarter while high yield and leverage loans returned +2.7% and +1.4%, respectively.

Credit spreads grew tighter during the quarter, driven by strong investor demand and continued improvements in economic fundamentals. High yield spreads tightened 42 basis points to 268 basis points, a new cycle low. Investment grade tightened a more modest 11 basis points to end the quarter at 80 basis points.

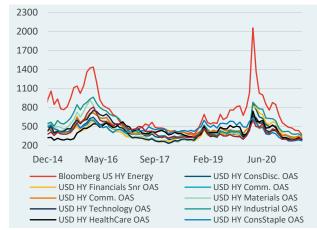
Lower quality bonds continue to outperform within both high yield and leverage loans. CCC bonds have now outperformed the broad high yield bond index in 10 of the past 11 months while split B/CCC loans have outperformed in 11 consecutive months.

### **SPREADS**



Source: Barclays, Bloomberg, as of 6/30/21

### HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/21

	Credit Spread (OAS)		
Market	6/30/21	6/30/20	
Long U.S. Corp	1.2%	2.0%	
U.S. Inv Grade Corp	0.8%	1.5%	
U.S. High Yield	2.7%	6.3%	
U.S. Bank Loans*	4.3%	6.2%	

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/21

\*Discount margin (4-year life)



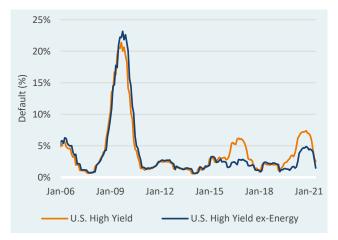
# Default & issuance

Default activity remained modest over the quarter, with defaults totaling \$3.5 billion on bonds and loans. Notably, fewer defaults occurred during the past two quarters than at any time in the past two years—an impressive development, given that the U.S. economy is still recovering from the pandemic. In addition, rolling twelve-month defaults have fallen as larger default volumes experienced last June exited the rolling window. This brought the par-weighted U.S. high yield default rate down 3.4% to end the quarter at 2.5%. Similarly, the loan par-weighted default rate ended the quarter at 1.9%, down 1.9% since March and down 2.5% year-to-date.

High yield bond issuance remains elevated, but has slowed from the record-setting levels experienced last quarter. Gross issuance for the quarter was \$160.8 billion, bringing the year-to date total to \$338.4 billion. This was notably greater than the \$238.0 billion issued in the first half of 2020. Leveraged loan issuance also slowed to \$119.3, down from \$163.9 billion issued in the first quarter.

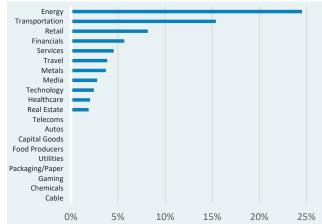
Investment grade issuance for the quarter totaled \$350 billion, below the four-year average second quarter issuance of \$401, and less than the \$423 billion issued in Q1.

### **HY DEFAULT RATE (ROLLING 1-YEAR)**



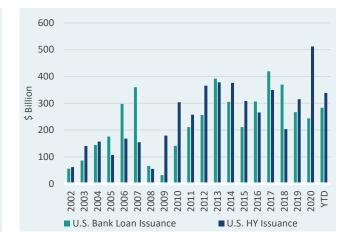
Source: BofA Merrill Lynch, as of 6/30/21

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



Source: BofA Merrill Lynch, as of 6/30/21 - par weighted

### U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 6/30/21



# Equity



# Equity environment

- U.S. equities were a top performer again in Q2, returning +8.5%.
   International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.0% MSCI Emerging Markets Index) on an unhedged currency basis.
- Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2. Growth stocks beat value by 6.7% during the quarter, dampening excitement for a value comeback.
- U.S. small-cap stocks (+4.3%) lagged large-cap stocks (+8.5%) as the reflation trade lost steam, but have still outperformed by 21.2% over the last year.
- It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset

- prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon.
- Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of Q2 2021 is 64.0%. If that rate were to materialize, it would mark the highest year-over-year growth rate reported by the index since Q4 2009 (109.1%).
- Global equities have marched higher without many hiccups over the last six months. The MSCI ACWI Index has not closed more than 5% below its prior peak level since November 2<sup>nd</sup>, 2020. In the second quarter, the furthest the ACWI ever closed below its prior high-water-mark was 3.3%.

	QTD TOTAL RETURN		1 YEAR TO	TAL RETURN
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5	5%	40	.8%
US Small Cap (Russell 2000)	4.3	3%	62	.0%
US Large Value (Russell 1000 Value)	5.2%		43	.7%
US Large Growth (Russell 1000 Growth)	11.9%		42.5%	
International Large (MSCI EAFE)	5.2%	4.9%	32.4%	28.0%
Eurozone (Euro Stoxx 50)	5.8%	5.1%	35.4%	29.7%
U.K. (FTSE 100)	5.8%	5.7%	31.9%	18.5%
Japan (NIKKEI 225)	(1.6%)	(1.0%)	27.0%	31.7%
Emerging Markets (MSCI Emerging Markets)	5.0%	3.5%	40.9%	35.1%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/21



# Domestic equity

U.S. equities were a top performer again in Q2, returning +8.5%. Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of June 30th was 64.0%. If that rate were to materialize, it would mark the highest year-overyear rate reported by the index since Q4 2009 (109.1%).

Concerns over the potential of the coronavirus delta variant to crimp the growth outlook helped to drive a rotation away from the more cyclical sectors that had driven the advance in U.S. equities since last August. Interest rates fell substantially, supporting outperformance of the Real Estate (+13.1%), IT

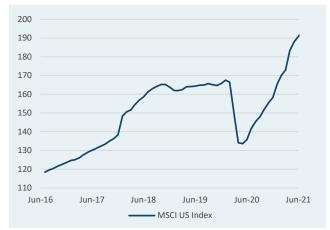
(+11.6%), and Telecom (+10.7%) sectors. The shift in sentiment towards more cautious risk positioning led the quality factor (+10.6%) to outperform relative to MSCI's suite of long-only factor indices.

While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

### S&P 500 INDEX



### FORWARD 12-MONTH EARNINGS PER SHARE



O2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

Source: MSCI, as of 6/30/21

Source: Standard & Poor's, as of 6/30/21



# Domestic equity size & style

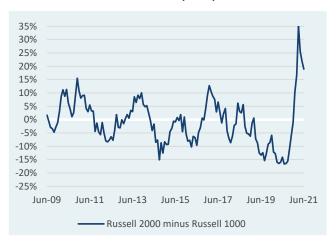
Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%), as investors rotated portfolios away from riskier exposures to larger, more quality names amid a more cautious risk outlook.

Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on

factor behavior. This may have been the case with value in the first quarter. Small capitalization stocks have exhibited a spectacular run over the past year, outperforming large cap stocks by 21.2% (Russell 2000 +62.0, Russell 1000 +43.1%).

In general, factor performance tends to be noisy and difficult to predict, which suggests that style investing should in most cases involve a longer-term focus. Small cap and value stocks delivered strong relative performance during Q1

### SMALL CAP VS LARGE CAP (YOY)

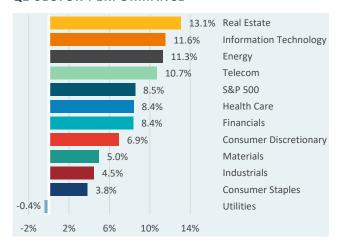


### VALUE VS GROWTH (YOY)



### Source: FTSE, as of 6/30/21

### **Q2 SECTOR PERFORMANCE**



Source: Standard & Poor's, as of 6/30/21



Source: FTSE, as of 6/30/21

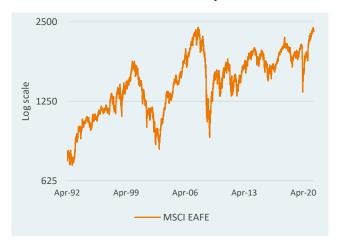
# International developed equity

International equities delivered +5.2% (MSCI EAFE Index) during the quarter on an unhedged currency basis, lagging U.S. equities but in line with emerging market equities (MSCI Emerging Markets +5.0%). Broad dollar weakness over most of the quarter boosted returns for unhedged investors in international developed equities by 0.3%, European equities by 0.7%, and emerging markets by 1.5%. The Japanese yen depreciated slightly relative to the U.S. dollar, which presented headwinds for unhedged investors in Japanese equities. Fading of risk-on sentiment in June helped to spur a turnaround in the U.S. dollar late in the quarter, though short

covering dynamics also played a factor.

Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions supporting a strong recovery. The commitment to easier policy over the short-to-intermediate term helped to keep interest rates at relatively low levels, which buoyed the valuation of European equities.

### INTERNATIONAL DEVELOPED EQUITIES



### **EFFECT OF CURRENCY (1-YEAR ROLLING)**



### Source: MSCI, as of 6/30/21

### ECB WEEKLY PEPP PURCHASES (BILLIONS)



Source: Bloomberg, ECB, as of 7/9/21



Source: MSCI, as of 6/30/21

# Emerging market equity

Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

Latin American equities once again took the lead during the second quarter, outperforming the broader index by 10% (MSCI Latin America 15.0%, MSCI Emerging Markets +5.0%). Much of this performance was due to the notable underperformance of Chinese equities, which lagged the overall index by -2.8% during Q2 and -14.4% over the past year. Single countries in the emerging markets complex often

display high volatility. In other words, large idiosyncratic moves such as the one witnessed recently by Chinese equities are not unusual.

Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be, although volatile rates of inflation are common in the emerging markets.

### **EMERGING MARKET EQUITY**



### **INFLATION (YOY)**



Source: Bloomberg, as of 6/30/21 or most recent data

### Q2 PERFORMANCE - TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI, as of 6/30/21, performance in USD terms



Source: MSCI, as of 6/30/21

# Chinese markets

- The Chinese equity market has now lagged the broader emerging markets by -1.1% on a 3-year annualized basis, 13.8% on a 1-year basis, and -5.7% year-to-date (MSCI China, MSCI Emerging Markets).
- Chinese equities began to sell off in late February, with the
  initial catalyst appearing to be a decision by the People's Bank
  of China to shift its focus away from an accommodative
  financial stance towards tightening, with the aim of limiting
  the risks that excessive leverage within certain segments of
  the economy poses to the economy.
- This shift in focus from ensuring economic recovery to managing the risks of financial excesses came in the form of a marginal tightening of liquidity across the country, which sparked a sell-off in some of the high-flying tech companies that had driven outperformance in the early days of the pandemic. Losses in China accelerated in the second quarter of 2021 when regulators cracked down on some national champions in the IT industry, reportedly over concerns around the risks of the data gathered by those companies falling into the wrong hands, which could undermine the position of the Communist Party of China. While it appears that both general liquidity conditions have begun to improve and the tech crackdown has showed signs of easing, these issues remain front and center for the broader emerging market universe.
- Recent larger idiosyncratic moves in the Chinese market highlight the benefits of gaining diversified exposure to the asset class.



Chinese tech companies listed in the U.S. but whose business is primarily conducted in China have sold off significantly since late February 2021



# Equity valuations

Industry analysts forecast a 11.2% gain over the next 12 months for the S&P 500, according to FactSet, despite recordhigh valuations.

Valuations remain at very high levels relative to history, supported by extremely low interest rates, central bank accommodation, and unprecedented government spending. As is often the case when valuations rise, opinions differ regarding whether: a) valuations are supported by the environment and will stay elevated for the long-term, resulting in lower expected returns, or b) valuations are

excessive and will come back down due to a market correction. Some investors might question the possibility of a third scenario – that future earnings growth will be strong enough to naturally bring down valuations. However, this third scenario is not currently supported by earnings forecasts. Our view on these conditions continues to be somewhat aligned with scenario "a"—that valuations are indeed high, but that unusual conditions and a potentially synchronized global economic comeback may support these high prices for the medium term. Nonetheless, with such optimism baked into risk asset prices, it will be important to watch closely for any disruptions to the market's optimistic outlook.

### FORWARD P/E RATIOS



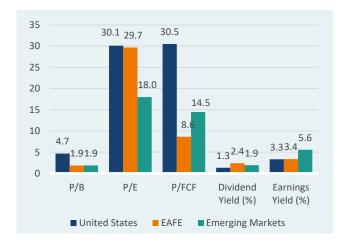
Source: MSCI, 12m forward P/E, as of 6/30/21

### S&P 500 EARNINGS GROWTH VS. FORECASTS



Source: Bloomberg, as of 6/30/21

### **VALUATION METRICS (3-MONTH AVERAGE)**



Source: Bloomberg, MSCI as of 6/30/21 - trailing P/E



# Equity volatility

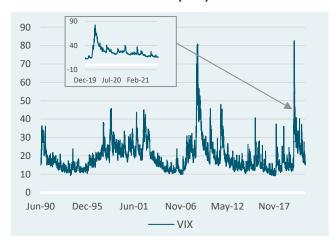
The Cboe VIX Index has fallen further year-to-date, reaching 15 in June. This compares to the longer-term average of 19. One-year trailing realized volatility has now returned to pre-COVID levels.

It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon. However, it is reasonable to question the degree to

which unprecedented government stimulus and easy money has influenced markets as of late.

The Cboe Skew Index, which measures the perceived tail risk of the distribution of S&P 500 Index returns over a 30-day horizon, rose to 161.9, 35% above its average level since inception in 1990. The high level of the skew index indicates a steep implied volatility curve, which could be interpreted as more bearish bears, more bullish bulls, or both. In any case, disagreement among investors appears to be wide at present, which could allow for larger short-term price swings.

# U.S. IMPLIED VOLATILITY (VIX)

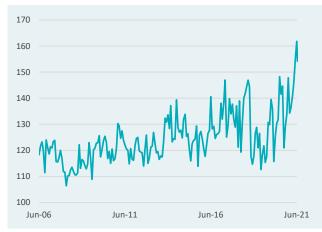


# REALIZED VOLATILITY



# Source: Standard & Poor's, MSCI, as of 6/30/21

# **CBOE SKEW INDEX**



Source: Choe, Bloomberg, as of 6/30/21



Source: Choe, as of 6/30/21

# Long-term equity performance







# Other assets



# Currency

The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly more cautious sentiment. Investors remain quite polarized over the medium-to-long term path of the dollar, which might increase the probability of more volatility in the future.

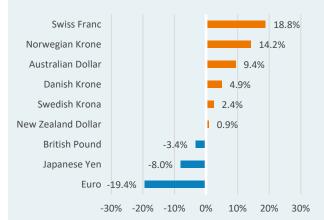
Despite U.S. dollar weakness relative to the euro and British pound over the quarter, those two European currencies remain relatively cheap on a purchasing power parity basis. The Japanese yen became even cheaper relative to the dollar over the period, while the Swiss franc and Norwegian Krone remained at relatively expensive valuations.

The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, as frequent shifts in market risk sentiment limited the capacity of risk-on and risk-off currencies from sustaining trends in one direction or the other.

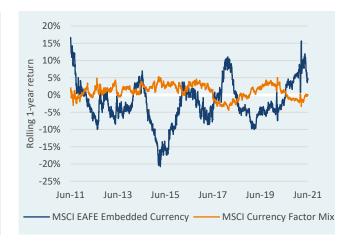
### **BLOOMBERG DOLLAR SPOT INDEX**



# PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (OECD)



# **CURRENCY BETA RELATIVE PERFORMANCE**



Source: Bloomberg, as of 6/30/21 Source: Bloomberg, MSCI, as of 6/30/21

Source: Bloomberg, as of 6/30/21

# 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	26.7	23.7	17.9
Commodities	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	21.1	18.8	14.9
Small Cap Equity	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	17.5	18.0	13.5
Large Cap Value	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	17.0	16.5	12.3
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	15.0	13.6	11.6
Large 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	13.0	13.0	10.8
Small Cap Growth	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	9.0	11.9	8.8
International 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	8.8	10.3	6.9
Emerging Markets Equi	у 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	7.4	9.8	5.9
60/40 Global Portfoli	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	6.0	6.1	4.3
Hedge Funds of Fund	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	4.7	5.8	3.8
Real Estate	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	1.7	3.0	3.4
Cash	-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	2.4	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	-1.6	1.1	-4.4

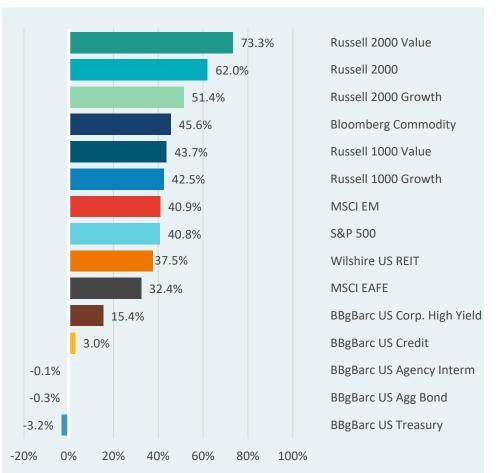


Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/21.

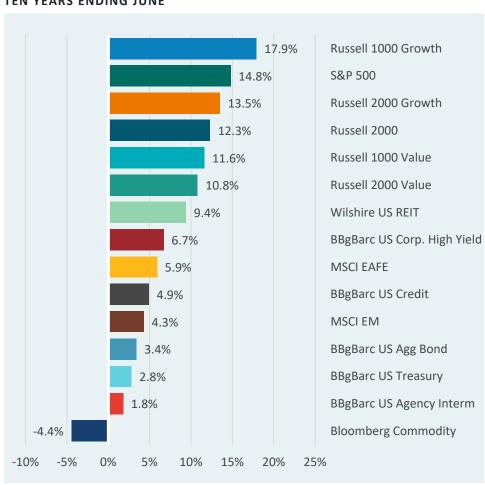


# Major asset class returns

# ONE YEAR ENDING JUNE



# **TEN YEARS ENDING JUNE**



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

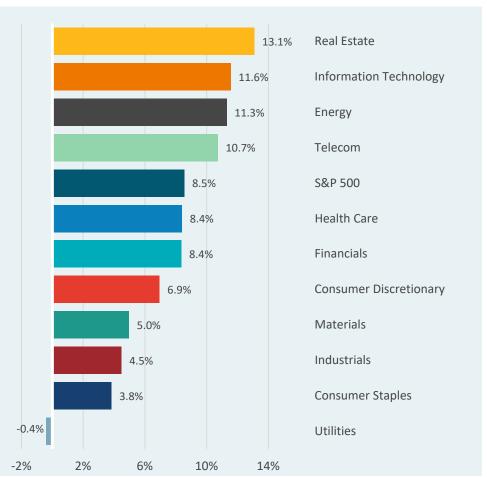
Source: Morningstar, as of 6/30/21

Source: Morningstar, as of 6/30/21

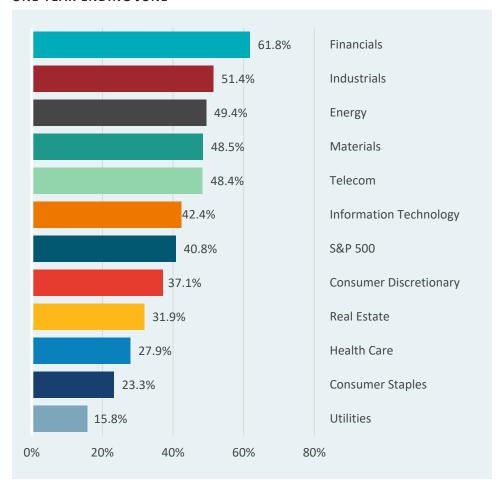


# S&P 500 sector returns

# Q2 2021



# ONE YEAR ENDING JUNE



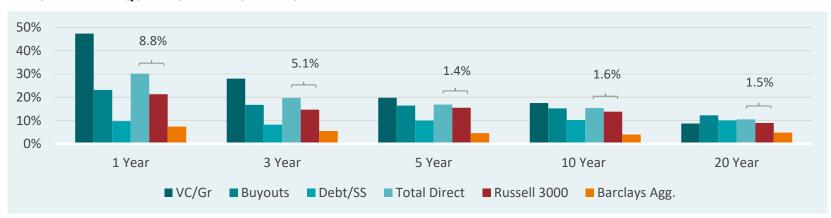
Source: Morningstar, as of 6/30/21

Source: Morningstar, as of 6/30/21



# Private equity vs. traditional assets performance

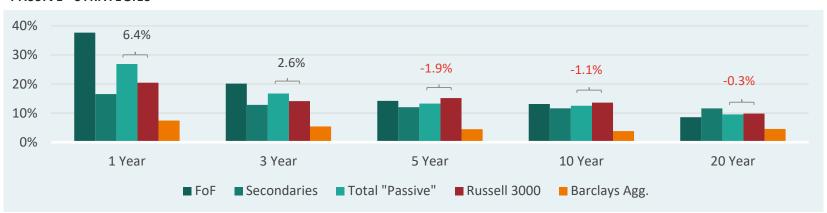
# **DIRECT PRIVATE EQUITY FUND INVESTMENTS**



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

# "Passive" strategies underperformed comparable public equities across all time periods, aside from the 1 and 3-year basis.

# "PASSIVE" STRATEGIES



Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of December 31, 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, aside on a 5-year basis.

## GLOBAL INFRASTRUCTURE FUNDS



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

Sources: Thomson Reuters C/A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of December 31, 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
over the past 10
years, but have
lagged on a 20year 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, besides
the past year.

Sources: Thomson Reuters C/A PME: Global and U.S. Real Estate universes as of December 31, 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	2.3	8.5	15.3	40.8	18.7	17.6	14.8	BBgBarc US TIPS	0.6	3.2	1.7	6.5	6.5	4.2	3.4
S&P 500 Equal Weighted	0.1	6.9	19.2	50.7	16.4	15.7	13.8	BBgBarc US Treasury Bills	(0.0)	0.0	0.0	0.1	1.4	1.2	0.7
DJ Industrial Average	0.0	5.1	13.8	36.3	15.0	16.7	13.5	BBgBarc US Agg Bond	0.7	1.8	(1.6)	(0.3)	5.3	3.0	3.4
Russell Top 200	2.9	8.9	14.5	40.8	20.2	18.9	15.6	BBgBarc US Universal	0.7	2.0	(1.1)	1.1	5.6	3.5	3.7
Russell 1000	2.5	8.5	15.0	43.1	19.2	18.0	14.9	Duration							
Russell 2000	1.9	4.3	17.5	62.0	13.5	16.5	12.3	BBgBarc US Treasury 1-3 Yr	(0.2)	(0.0)	(0.1)	0.1	2.7	1.6	1.2
Russell 3000	2.5	8.2	15.1	44.2	18.7	17.9	14.7	BBgBarc US Treasury Long	3.6	6.5	(7.9)	(10.6)	8.0	3.1	6.7
Russell Mid Cap	1.5	7.5	16.2	49.8	16.4	15.6	13.2	BBgBarc US Treasury	0.6	1.7	(2.6)	(3.2)	4.7	2.2	2.8
Style Index								Issuer							
Russell 1000 Growth	6.3	11.9	13.0	42.5	25.1	23.7	17.9	BBgBarc US MBS	(0.0)	0.3	(0.8)	(0.4)	3.8	2.3	2.6
Russell 1000 Value	(1.1)	5.2	17.0	43.7	12.4	11.9	11.6	BBgBarc US Corp. High Yield	1.3	2.7	3.6	15.4	7.4	7.5	6.7
Russell 2000 Growth	4.7	3.9	9.0	51.4	15.9	18.8	13.5	BBgBarc US Agency Interm	(0.1)	0.5	(0.6)	(0.1)	3.3	1.9	1.8
Russell 2000 Value	(0.6)	4.6	26.7	73.3	10.3	13.6	10.8	BBgBarc US Credit	1.5	3.3	(1.3)	3.0	7.4	4.6	4.9
INTERNATIONAL EQUITY	,							OTHER							
Broad Index								Index							
MSCI ACWI	1.3	7.4	12.3	39.3	14.6	14.6	9.9	Bloomberg Commodity	1.9	13.3	21.1	45.6	3.9	2.4	(4.4)
MSCI ACWI ex US	(0.6)	5.5	9.2	35.7	9.4	11.1	5.4	Wilshire US REIT	3.1	12.8	22.8	37.5	10.1	6.4	9.4
MSCI EAFE	(1.1)	5.2	8.8	32.4	8.3	10.3	5.9	CS Leveraged Loans	0.4	1.4	3.5	11.7	4.4	5.0	4.5
MSCI EM	0.2	5.0	7.4	40.9	11.3	13.0	4.3	Alerian MLP	5.2	21.2	47.8	64.0	(1.1)	(2.0)	1.3
MSCI EAFE Small Cap	(1.7)	4.3	9.0	41.0	8.4	12.0	8.4	Regional Index							
Style Index								JPM EMBI Global Div	0.7	4.1	(0.7)	7.5	6.7	4.9	5.7
MSCI EAFE Growth	0.0	7.4	6.8	31.0	12.5	12.5	7.8	JPM GBI-EM Global Div	(1.2)	3.5	(3.4)	6.6	4.1	3.2	0.5
MSCI EAFE Value	(2.3)	3.0	10.7	33.5	3.8	7.8	3.9	Hedge Funds							
Regional Index								HFRI Composite	0.4	4.0	10.0	27.4	8.7	7.9	5.1
MSCI UK	(2.4)	6.0	12.5	31.3	1.9	5.7	3.7	HFRI FOF Composite	0.3	2.7	4.7	18.1	6.2	6.1	3.8
MSCI Japan	(0.3)	(0.3)	1.3	24.8	7.2	10.2	7.2	Currency (Spot)							
MSCI Europe	0.7	6.7	(1.1)	1.1	5.6	3.5	3.7	Euro	(3.0)	0.9	(3.1)	5.6	0.5	1.3	(2.0)
MSCI EM Asia	0.1	3.8	6.0	41.0	13.1	15.3	7.0	Pound Sterling	(2.8)	0.1	1.1	11.8	1.5	0.7	(1.5)
MSCI EM Latin American	2.7	15.0	8.9	44.9	5.1	5.9	(2.5)	Yen	(1.4)	(0.4)	(7.0)	(2.8)	(0.1)	(1.6)	(3.1)

Source: Morningstar, HFRI, as of 6/30/21



# **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.Bloombera.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. (<a href="https://www.nfib-sbet.org/about/">https://www.nfib-sbet.org/about/</a>)

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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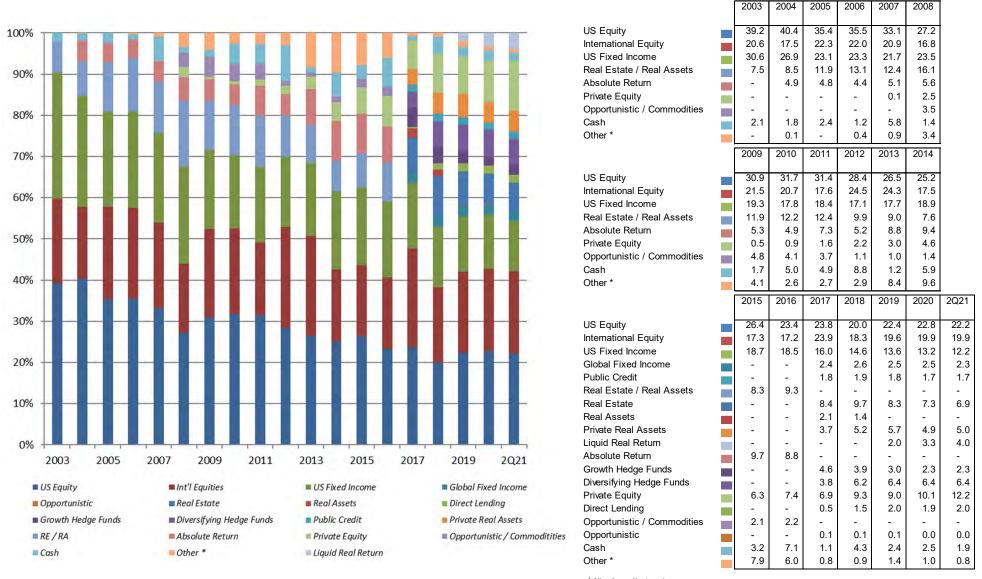
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Total Fund Actual Yearly and Quarterly Asset Allocation

# Period Ending: June 30, 2021



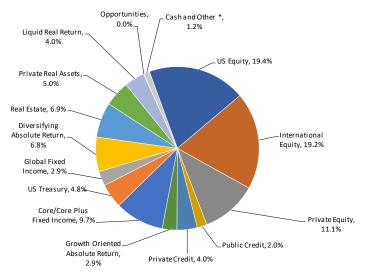
<sup>\*</sup> Allocations without overlay.



 $<sup>^{\</sup>star}$  Other includes SSgA Overlay and closing accounts. Prior to Q2 2017 SSgA Real Assets is also included

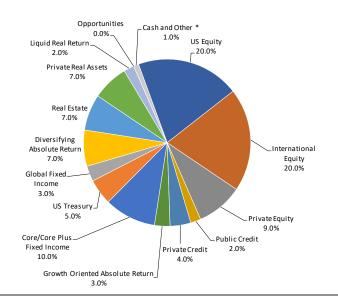
# Asset Allocation Analysis

# Current w/Overlay



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/OVERLAY	W/O OVERLAY
US Equity	2,412,829,315	19.4%	22.2%
International Equity	2,391,738,454	19.2%	19.9%
Private Equity	1,378,937,679	11.1%	12.2%
Public Credit	243,356,533	2.0%	1.7%
Private Credit	496,213,814	4.0%	2.0%
Growth Oriented Absolute Return	361,108,692	2.9%	2.3%
Core/Core Plus Fixed Income	1,205,017,848	9.7%	8.4%
US Treasury	602,019,118	4.8%	3.9%
Global Fixed Income	359,536,367	2.9%	2.3%
Diversifying Absolute Return	849,179,374	6.8%	6.4%
Real Estate	862,904,416	6.9%	6.9%
Private Real Assets	628,240,822	5.0%	5.0%
Liquid Real Return	497,668,797	4.0%	4.0%
Opportunities	5,218,865	0.0%	0.0%
Cash and Other *	149,823,465	1.2%	2.7%
TOTAL	12,443,793,557	100.0%	100.0%

# **Target**

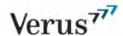


ASSET ALLOCATION	ACTUAL	TARGET	DIFF
US Equity	19.4%	20.0%	-0.6%
International Equity	19.2%	20.0%	-0.8%
Private Equity	11.1%	9.0%	2.1%
Public Credit	2.0%	2.0%	0.0%
Private Credit	4.0%	4.0%	0.0%
Growth Oriented Absolute Return	2.9%	3.0%	-0.1%
Core/Core Plus Fixed Income	9.7%	10.0%	-0.3%
US Treasury	4.8%	5.0%	-0.2%
Global Fixed Income	2.9%	3.0%	-0.1%
Diversifying Absolute Return	6.8%	7.0%	-0.2%
Real Estate	6.9%	7.0%	-0.1%
Private Real Assets	5.0%	7.0%	-2.0%
Liquid Real Return	4.0%	2.0%	2.0%
Opportunities	0.0%	0.0%	0.0%
Cash and Other *	1.2%	1.0%	0.2%



<sup>\*</sup> Other includes closing accounts (Heitman), Transition Account and SSgA Overlay of \$96.1 million.

- The Total Plan returned 6.1% net in the second quarter of 2021 and ranked in the top quartile among other public funds greater than \$1 billion. The Plan outperformed its policy index by 120 bps over this time period. Longer-term, the three-year return of 11.9% ranks in the top quartile of large public plan peer group which returned 11.0%. The five-year return of 11.9% also ranks in the top quartile of the large public plan peer group.
- First quarter results (net) were enhanced by the following factors:
  - The Growth Asset category returned 8.6% for the quarter, led by private equity which returned 17.7% and US equity returning 8.1%.
  - Eagle Capital returned 9.3% for the quarter, outperforming the Russell 1000 index by 80 bps and ranking in the top quartile of its universe. Eagle benefited from stock selection in financials which railed in the quarter and stock selection within information technology.
  - Weatherbie Small Cap Growth returned 7.8% for the quarter, outperforming its benchmark by 390 bps and ranking in the top quartile of the US small cap growth universe.
  - Within public credit, Brigade returned 3.5% during the quarter and ranked in the top decile of its universe. Performance benefited from a rally in lower quality high yield issuers.
- First quarter results (net) were hindered by the following factors:
  - The Diversifying Asset category was up 2.4% in the second quarter, led by poor absolute performance from the US Treasury
    allocation and TCW Core Plus Fixed Income. Relative to its universe, Neuberger's US Treasury mandate ranked in the top decile
    but on an absolute basis, was a drag on portfolio returns.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date+
Total Fund - Gross*	12,443,793,557	100.0	6.1	17	10.3	15	27.9	36	12.2	18	12.1	9	8.7	Jun-86
Total Fund - Net			6.1	17	10.2	20	27.7	38	11.9	24	11.9	21	8.5	
Policy Index <sup>1</sup>			4.9	62	8.8	55	24.4	86	10.3	72	10.2	77	8.7	Jun-86
InvMetrics Public DB > \$1B Gross Median			5.1		8.9		26.7		11.0		10.9		8.4	Jun-86
Total Fund ex Overlay - Gross**	12,347,695,779	99.2	6.2	16	10.6	9	27.9	36	11.8	26	11.9	21	8.6	Jun-86
Total Fund ex Overlay - Net			6.1	17	10.5	10	27.7	37	11.6	33	11.6	27	8.4	
Policy Index			4.9	62	8.8	55	24.4	86	10.3	72	10.2	77	8.7	Jun-86
Growth Asset Category - Gross	7,511,837,955	60.4	8.6		15.5		43.6		16.5				15.9	Mar-17
Growth Asset Category - Net			8.6		15.4		43.3		16.2				15.6	
Growth Custom <sup>1</sup>			6.7		13.3		38.9		14.3		14.3		13.7	Mar-17
Equities - Gross Public	5,242,640,228	42.1	7.0		12.1		41.6		15.4		15.9		11.2	Jun-11
Equities - Net			6.9		11.9		41.2		15.0		15.5		10.8	
MSCI ACWI			7.4		12.3		39.3		14.6		14.6		9.9	Jun-11
US Equity - Gross	2,763,693,140	22.2	8.2	23	15.3	53	45.6	35	18.8	14	18.2	22	10.9	Jun-86
US Equity - Net			8.1	25	15.2	61	45.3	38	18.6	25	17.9	34	10.7	
Russell 3000 <sup>1</sup>			8.2	19	15.1	66	44.2	58	18.7	20	17.9	34	11.0	Jun-86
InvMetrics All DB US Eq Gross Median			7.6		15.4		44.4		17.7		17.4		10.8	Jun-86
Large Cap - Gross	2,478,259,967	19.9	8.5		15.8		44.9		19.0		18.3		7.8	Mar-98
Large Cap - Net			8.4		15.7		44.6		18.7		18.1		7.7	
Russell 1000			8.5		15.0		43.1		19.2		18.0		8.3	Mar-98

<sup>1.</sup> See Policy Index and Benchmark History



<sup>\*</sup>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.

<sup>\*\*</sup>Total Fund ex Overlay returns from 2/1/2006-12/31/2010 were calculated using the overlay impact provided by SSgA.

<sup>+</sup> Since inception date denotes last day of the month.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap - Index - Gross	1,435,355,724	11.5	8.5		14.9		43.0		19.1	-	18.0		13.3	Sep-08
Large Cap - Index - Net			8.5		14.9		43.0		19.1		17.9		13.3	
Russell 1000			8.5		15.0		43.1		19.2		18.0		13.3	Sep-08
AB - Gross	1,435,355,724	11.5	8.5	64	14.9	75	43.0	33	19.1	28	18.0	33	10.9	Apr-89
AB - Net			8.5	64	14.9	76	43.0	34	19.1	29	17.9	34	10.9	
Russell 1000 <sup>1</sup>			8.5	52	15.0	72	43.1	28	19.2	24	18.0	28		Apr-89
eV US Passive Large Cap Equity Gross Median			8.5		15.2		41.5		18.7		17.6		10.9	Apr-89
Large Cap - Enhanced - Gross	335,708,931	2.7	7.4		16.3		44.0						16.6	Jul-18
Large Cap - Enhanced - Net			7.4		16.1		43.7						16.3	
Russell 1000			8.5		15.0		43.1		19.2		18.0		18.4	Jul-18
AQR US Enhanced Equity - Gross	335,708,931	2.7	7.4	71	16.3	39	44.0	29					16.6	Jul-18
AQR US Enhanced Equity - Net			7.4	72	16.1	40	43.7	30					16.3	
Russell 1000			8.5	24	15.0	73	43.1	34	19.2	29	18.0	30	18.4	Jul-18
eV US Enh Equity Gross Median			8.2		15.6		41.9		18.4		17.5		17.5	Jul-18
Large Cap (130/30) - Gross	347,088,250	2.8	8.2		13.2		42.7		18.6		18.8		13.8	Sep-08
Large Cap (130/30) - Net			8.0	-	13.0	-	42.0	-	18.1	-	18.1		13.2	
Russell 1000			8.5		15.0		43.1		19.2		18.0		13.3	Sep-08
JP Morgan 130/30 - Gross	178,241,171	1.4	8.5	24	15.3	64	43.9	28	21.0	8	20.2	5	14.1	Jul-08
JP Morgan 130/30 - Net			8.3	27	14.9	67	43.1	30	20.2	21	19.4	21	13.3	
Russell 1000			8.5	24	15.0	67	43.1	30	19.2	29	18.0	33	12.4	Jul-08
eV Extended US Equity Gross Median			7.7		18.2		40.3		15.2		15.7		12.6	Jul-08
DE Shaw Broad Mkt Core Alpha Ext - Gross	168,847,079	1.4	7.8	45	11.0	83	41.4	38					21.4	Jan-19
DE Shaw Broad Mkt Core Alpha Ext - Net			7.7	49	10.9	85	40.9	45					20.9	
Russell 1000			8.5	24	15.0	67	43.1	30	19.2	29	18.0	33	24.1	Jan-19
eV Extended US Equity Gross Median			7.7		18.2		40.3		15.2		15.7		20.3	Jan-19

<sup>1.</sup> See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Large Cap Active - Gross	360,107,062	2.9	9.5		21.8		56.3		19.8		19.4		13.1	Sep-08
Large Cap Active - Net			9.3		21.4		55.2		18.9		18.5		12.4	
Russell 1000 <sup>1</sup>			8.5		15.0		43.1		19.3		15.9		11.7	Sep-08
Eagle Capital - Gross	360,086,797	2.9	9.5	13	21.8	2	56.3	3	20.0	26	20.4	9	16.8	Feb-12
Eagle Capital - Net			9.3	17	21.4	3	55.2	3	19.0	35	19.5	15	16.0	
Russell 1000			8.5	37	15.0	56	43.1	30	19.3	33	15.9	73	14.4	Feb-12
eV US Large Cap Core Equity Gross Median			8.1		15.3		40.5		17.9		17.2		15.0	Feb-12
Small Cap - Gross	285,433,174	2.3	5.9		11.0		51.2		17.8		20.4		12.8	Dec-90
Small Cap - Net			5.8		11.0		51.0		17.3		19.8		12.1	
Russell 2000			4.3		17.5		62.0		13.5		16.5		11.4	Dec-90
Small Cap - Growth - Gross	165,473,773	1.3	7.8		9.3		49.9		27.5		30.1		16.3	Sep-08
Small Cap - Growth - Net			7.8		9.3		49.8		26.9		29.6		15.6	
Russell 2000 Growth			3.9		9.0		51.4		15.9		18.8		13.2	Sep-08
Weatherbie - Gross	165,473,773	1.3	7.8	20	9.3	71	49.9	69	27.2	18	32.3	7	15.9	Dec-02
Weatherbie - Net			7.8	20	9.3	71	49.8	69	26.6	21	31.7	9	15.1	
Russell 2000 Growth			3.9	79	9.0	71	51.4	67	15.9	86	18.8	82	12.5	Dec-02
eV US Small Cap Growth Equity Gross Median			5.5		11.8		55.3		21.7		22.5		14.5	Dec-02
Small Cap - Value - Gross	119,959,400	1.0	3.4		13.5		52.6		6.6		9.7		9.6	Sep-08
Small Cap - Value - Net			3.3		13.3		52.2		6.2		9.1		8.8	
Russell 2000 Value			4.6		26.7		73.3		10.3		13.6		9.8	Sep-08
Snyder Capital Management - Gross	119,959,400	1.0	3.4	69									11.1	Jan-21
Snyder Capital Management - Net			3.3	72									10.9	
Russell 2000 Value			4.6	43	26.7	37	73.3	33	10.3	58	13.6	53	20.4	Jan-21
eV US Small Cap Value Equity Gross Median			4.2		24.6		66.7		10.8		13.7		21.5	Jan-21

<sup>1.</sup> See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
International Equity - Gross	2,478,947,088	19.9	5.6	54	8.6	73	37.2	61	11.6	26	13.0	25	7.0	Dec-87
International Equity - Net			5.6	60	8.4	75	36.7	65	11.0	36	12.4	34	6.7	
MSCI ACWI ex US <sup>1</sup>			5.6	54	9.4	52	36.3	74	9.9	56	11.6	52	6.7	Dec-87
InvMetrics All DB ex-US Eq Gross Median			5.7		9.5	_	38.1		10.2	_	11.6		7.5	Dec-87
International - Developed - Gross	1,957,368,914	15.7	6.1	46	9.3	48	34.6	71	10.8	50	12.8	44	5.5	Mar-98
International - Developed - Net			6.0	47	9.1	52	34.2	75	10.0	57	12.2	49	5.1	
MSCI World ex US Gross			5.9	51	10.3	29	34.2	75	9.1	64	10.9	69	5.4	Mar-98
InvMetrics All DB Dev Mkt ex-US Eq Gross Median			5.9		9.1		37.0		10.8		12.0		6.0	Mar-98
Lazard - Gross	486,539,792	3.9	4.3	83	8.7	64	36.6	69	9.9	64	11.2	76	10.1	Jun-12
Lazard - Net			4.2	85	8.5	66	36.2	71	9.6	70	10.8	80	9.8	
MSCI ACWI ex USA Gross			5.6	60	9.4	57	36.3	70	9.9	65	11.6	67	8.4	Jun-12
eV All ACWI ex-US Equity Gross Median			6.1		10.0		39.8		11.6		13.0		10.4	Jun-12
Walter Scott & Partners Limited - Gross	672,342,884	5.4	9.1	13	7.5	44	28.0	88	14.6	41			15.4	Mar-17
Walter Scott & Partners Limited - Net			9.0	13	7.4	47	27.7	90	13.4	55			14.5	
MSCI World ex USA Growth GR USD			7.8	38	7.5	44	31.5	78	13.0	65	12.8	78	13.3	Mar-17
eV EAFE Large Cap Growth Gross Median			7.4		7.3		35.5		14.2		14.8		15.2	Mar-17
LSV - Gross	540,125,608	4.3	3.8	74	13.8	27	40.2	32	6.9	47	10.5	25	5.4	Dec-04
LSV - Net			3.7	74	13.6	27	39.7	34	6.5	56	10.1	36	4.9	
MSCI World ex US Value Gross			4.0	69	12.8	35	36.7	47	4.9	83	8.7	62	4.8	Dec-04
eV EAFE Large Cap Value Gross Median			4.6		11.6		36.4		6.7		9.3		5.6	Dec-04
Mondrian Dev Small Cap - Gross	125,349,053	1.0	4.6	99	8.2	72	40.8	79	8.9	68	11.8	80	10.1	Aug-10
Mondrian Dev Small Cap - Net			4.4	99	7.8	78	39.9	81	8.2	76	11.0	86	9.4	
MSCI World ex US Small Cap GD			5.0	96	10.2	60	42.8	73	9.3	63	12.3	71	10.1	Aug-10
eV ACWI ex-US Small Cap Equity Gross Median			8.1		12.8		47.5		11.2		13.9		12.2	Aug-10

<sup>1.</sup> See Policy Index and Benchmark History.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
William Blair Dev Small Cap - Gross	133,011,577	1.1	9.8	20	7.4	80	42.6	74	13.9	31	14.3	48	11.4	Sep-08
William Blair Dev Small Cap - Net			9.5	22	6.9	82	41.4	77	12.9	33	13.2	62	10.4	
MSCI World ex US Small Cap GD			5.0	96	10.2	60	42.8	73	9.3	63	12.3	71	9.7	Sep-08
eV ACWI ex-US Small Cap Equity Gross Median			8.1		12.8		47.5		11.2		13.9		11.5	Sep-08
International - Emerging - Gross	521,572,885	4.2	3.9	87	6.4	85	47.9	19	15.1	8	14.6	19	7.6	Jan-00
International - Emerging - Net			3.8	87	6.2	85	47.6	22	14.8	16	14.2	24	7.1	
MSCI Emerging Markets Gross			5.1	68	7.6	66	41.4	60	11.7	52	13.4	37	7.7	Jan-00
InvMetrics All DB Emg Mkt Eq Gross Median			6.1		9.3		43.3		11.7		12.6		7.3	Jan-00
Baillie Gifford Emg All Cap - Gross	293,978,323	2.4	4.6	62	5.8	79	50.0	28	17.5	14	19.4	5	18.1	Mar-16
Baillie Gifford Emg All Cap - Net			4.6	62	5.8	79	50.0	28	17.5	14	19.4	5	18.1	
MSCI Emerging Markets Gross			5.1	51	7.6	64	41.4	68	11.7	58	13.4	56	12.9	Mar-16
eV Emg Mkts Equity Gross Median			5.2		9.3		45.1		12.2		13.8		13.6	Mar-16
Mondrian Emg All Cap - Gross	227,594,562	1.8	3.0	85	7.1	71	45.4	48	12.2	50	10.6	85	10.4	Mar-16
Mondrian Emg All Cap - Net			2.8	85	6.8	75	44.6	52	11.6	59	9.9	88	9.8	
MSCI Emerging Markets Gross			5.1	51	7.6	64	41.4	68	11.7	58	13.4	56	12.9	Mar-16
eV Emg Mkts Equity Gross Median			5.2		9.3		45.1		12.2		13.8		13.6	Mar-16



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Equity - Gross***+	1,513,754,481	12.2	17.7	4	33.1	6	62.2	14	28.4	4	24.1	5	7.0	Feb-08
Private Equity - Net			17.7	4	33.1	6	62.2	14	28.4	4	24.1	5	7.2	
Thomson Reuters C A All PE 1 Qtr Lag <sup>1</sup>			9.4	39	25.6	24	50.0	25	18.9	27	17.6	23	12.0	Feb-08
Russell 3000 +3% 1Q Lag			7.2	47	23.7	30	65.5	12	20.2	23	19.7	16	13.2	Feb-08
InvMetrics All DB Private Eq Net Median			6.3		17.5		37.2		15.3		14.3		9.4	Feb-08
Abbott VI - Gross	42,121,973	0.3	12.6		30.1		61.6		22.3		20.9		7.8	Jul-08
Abbott VI - Net			12.6		30.1		61.6		22.3		20.9		-	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		12.8	Jul-08
Accel-KKR IV - Gross	15,225,873	0.1	11.5		15.8		31.9		55.4		44.5		14.7	Jun-13
Accel-KKR IV - Net			11.5		15.8		31.9		55.4	-	44.5		14.7	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.4	Jun-13
Accel-KKR V - Gross	23,335,857	0.2	44.3		49.5		51.3		33.1				25.6	Jan-17
Accel-KKR V - Net			44.3		49.5		51.3		33.1	-			25.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.5	Jan-17
Accel-KKR VI - Gross	1,000,196	0.0	-44.5										-44.5	Feb-21
Accel-KKR VI - Net			-44.5					-					-44.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		25.6	Feb-21
Accel-KKR Growth Partners II - Gross	14,019,965	0.1	85.4	-	90.3	-	95.5		44.6		30.7		16.2	Feb-15
Accel-KKR Growth Partners II - Net			85.4	-	90.3	-	95.5		44.6		30.7		16.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		14.7	Feb-15
Accel-KKR Growth Partners III - Gross	15,490,287	0.1	15.5	-	17.2	-	22.9						-5.0	Jul-19
Accel-KKR Growth Partners III - Net			15.5	-	17.2	-	22.9						-5.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4	-	25.6	-	50.0		18.9	-	17.6		23.2	Jul-19

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



<sup>1.</sup> See Policy Index and Benchmark History.

<sup>\*\*</sup> Private Equity Composite includes the historical returns of Summit Credit and Athyrium Opportunities up to 4/1/17.

<sup>++</sup> Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Atalaya Special Opp VI - Gross	9,349,610	0.1	2.3		27.0		50.1		23.4		16.4		15.8	Apr-16
Atalaya Special Opp VI - Net			2.3		27.0		50.1		23.4		16.4		15.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.6	Apr-16
Canvas Ventures III - Gross	3,363,486	0.0	-4.8		-10.8								-10.8	Nov-20
Canvas Ventures III - Net			-4.8		-10.8								-10.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		37.8	Nov-20
Cortec Group Fund VII - Gross	11,957,857	0.1	-1.5	-	26.7		51.3						27.8	Dec-19
Cortec Group Fund VII - Net			-1.5		26.7		51.3						27.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		27.0	Dec-19
CRV Select Fund I - Gross*	11,950,000	0.1											0.0	May-21
CRV Select Fund I - Net													0.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		9.4	May-21
CRV XVIII LP - Gross	6,757,335	0.1	-4.2										-4.2	Feb-21
CRV XVIII LP - Net			-4.2										-4.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		25.6	Feb-21
Davidson Kempner LT Dist Opp IV - Gross	37,759,322	0.3	3.0		6.2		21.3		9.9				9.3	Mar-18
Davidson Kempner LT Dist Opp IV - Net			3.0		6.2		21.3		9.9				9.3	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.3	Mar-18
Davidson Kempner LT Dist Opp V - Gross	14,431,168	0.1	8.1		16.8		35.2						32.1	May-20
Davidson Kempner LT Dist Opp V - Net			8.1		16.8		35.2						32.1	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		33.8	May-20
Digital Colony Partners II - Gross*	11,112,148	0.1											0.0	May-21
Digital Colony Partners II - Net													0.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		9.4	May-21
Dyal Capital Partners II - Gross	25,211,963	0.2	7.1		20.7		31.5		3.3		0.3		-2.6	Dec-14
Dyal Capital Partners II - Net			7.1		20.7		31.5		3.3		0.3		-2.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.1	Dec-14

<sup>\*</sup> Funded May 2021.

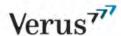


	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Dyal Capital Partners III - Gross	24,279,398	0.2	2.6		29.4		63.9		28.9				26.2	Dec-16
Dyal Capital Partners III - Net			2.6		29.4		63.9		28.9				26.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.7	Dec-16
Garrison Investment Group - Gross	8,011,339	0.1	9.6		11.1		6.9		-0.1		-1.6		0.1	May-12
Garrison Investment Group - Net			9.6		11.1		6.9		-0.1		-1.6		0.1	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.7	May-12
Gridiron Capital Fund IV - Gross	17,826,632	0.1	7.4		12.1		27.4						25.0	May-20
Gridiron Capital Fund IV - Net			7.4		12.1		27.4						25.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0	-	18.9	-	17.6		33.8	May-20
Harbourvest VIII - Gross	10,828,139	0.1	14.8		30.9		63.9		18.8		17.8		11.7	Dec-07
Harbourvest VIII - Net			14.8		30.9		63.9		18.8		17.8			
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		11.6	Dec-07
Harbourvest Intl VI - Gross	38,863,691	0.3	14.6		35.6		66.7		22.5		20.0		-1.9	Mar-09
Harbourvest Intl VI - Net			14.6		35.6		66.7		22.5		20.0			
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.2	Mar-09
H.I.G. Bayside Loan III - Gross	5,904,503	0.0	1.1		10.8		8.5		0.3		4.4		4.1	Jan-13
H.I.G. Bayside Loan III - Net			1.1		10.8		8.5		0.3		4.4		4.1	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.3	Jan-13
H.I.G. Capital V - Gross	16,271,025	0.1	5.4		19.5		32.7		20.7		27.9		12.0	Jul-13
H.I.G. Capital V - Net			5.4		19.5		32.7	-	20.7	-	27.9		12.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.2	Jul-13
H.I.G. Europe Capital II - Gross*	15,477,616	0.1	3.6		33.6		64.5		16.6		-15.2			Jan-14
H.I.G. Europe Capital II - Net			3.6		33.6		64.5		16.6		-15.2			
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.5	Jan-14
Khosla IV - Gross	23,323,686	0.2	20.9		110.5		125.9		53.0		38.3		25.5	Jul-11
Khosla IV - Net			20.9		110.5		125.9	-	53.0	-	38.3		25.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.7	Jul-11

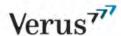
<sup>\*</sup> Unable to calculate a since inception return due to system limitations when HIG Europe Capital II experienced 2 quarters of negative fund values in 2016.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Khosla V - Gross	50,277,726	0.4	65.7		111.1		110.7		36.7		26.9		20.5	Nov-14
Khosla V - Net			65.7		111.1		110.7		36.7		26.9		20.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		14.7	Nov-14
Khosla VI - Gross	30,963,993	0.2	5.5		24.3		15.9						2.7	Aug-18
Khosla VI - Net			5.5		24.3		15.9						2.7	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		20.1	Aug-18
Khosla VII - Gross	2,017,493	0.0	-22.3										-22.3	Jan-21
Khosla VII - Net			-22.3		-								-22.3	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		25.6	Jan-21
Linden Capital III - Gross	41,090,964	0.3	9.1		43.3		99.1		45.5		29.0		29.0	Jun-16
Linden Capital III - Net			9.1		43.3		99.1		45.5		29.0		29.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.6	Jun-16
Linden Capital Partners IV - Gross	27,104,011	0.2	0.3		8.4		31.0						8.2	Sep-18
Linden Capital Partners IV - Net			0.3		8.4		31.0						8.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.6	Sep-18
Marlin Equity IV - Gross	11,400,612	0.1	10.2		15.2		19.8		16.7		12.1		6.8	Nov-13
Marlin Equity IV - Net			10.2		15.2		19.8		16.7		12.1		6.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.4	Nov-13
Marlin Equity V - Gross	16,046,575	0.1	12.6		27.5		45.6		26.5				21.6	Feb-18
Marlin Equity V - Net			12.6		27.5		45.6		26.5				21.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		19.3	Feb-18
Marlin Heritage - Gross	8,205,311	0.1	2.5		17.9		28.9		30.6		40.8		25.7	Jul-14
Marlin Heritage - Net			2.5		17.9		28.9		30.6		40.8		25.7	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.2	Jul-14
Marlin Heritage II - Gross	9,006,559	0.1	6.4		17.3		29.6		11.2				4.4	Oct-17
Marlin Heritage II - Net			6.4		17.3		29.6		11.2				4.4	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.5	Oct-17



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Marlin Heritage Europe - Gross	23,783,351	0.2	8.5		22.9		44.3		31.2				22.8	Aug-17
Marlin Heritage Europe - Net			8.5		22.9		44.3		31.2				22.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.6	Aug-17
New Enterprise 14 - Gross	58,713,454	0.5	65.9		103.4		125.7		38.6		30.1		21.6	May-12
New Enterprise 14 - Net			65.9		103.4		125.7		38.6		30.1		21.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.7	May-12
New Enterprise 15 - Gross	77,779,328	0.6	27.4		55.0		84.0		29.6		28.9		23.1	Apr-15
New Enterprise 15 - Net			27.4		55.0		84.0		29.6		28.9		23.1	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.6	Apr-15
New Enterprise 16 - Gross	48,553,261	0.4	19.7		32.3		68.4		24.7				15.6	May-17
New Enterprise 16 - Net			19.7		32.3		68.4		24.7				15.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.3	May-17
New Enterprise 17 - Gross	17,529,199	0.1	33.0		44.3		70.5						28.5	Jul-19
New Enterprise 17 - Net			33.0		44.3		70.5						28.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		23.2	Jul-19
OrbiMed Private Investments VIII, LP - Gross	3,699,777	0.0	6.0		-9.3								-9.3	Dec-20
OrbiMed Private Investments VIII, LP - Net			6.0		-9.3								-9.3	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		25.6	Dec-20
Private Equity X - Gross	29,472,607	0.2	9.2		36.8		48.5		15.3		15.8		1.0	Jun-08
Private Equity X - Net			9.2		36.8		48.5		15.3		15.8			
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		13.2	Jun-08
RCP Multi-Fund Feeder - Gross	41,899,821	0.3	6.4		15.1		29.4						3.5	Nov-18
RCP Multi-Fund Feeder - Net			6.4		15.1		29.4						3.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		19.9	Nov-18



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
RRJ Capital Master Fund II - Gross	15,295,997	0.1	10.0		34.2		97.3		13.3		11.2		13.2	May-13
RRJ Capital Master Fund II - Net			10.0		34.2		97.3		13.3		11.2		13.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.8	May-13
RRJ Capital Master Fund III - Gross	11,540,842	0.1	5.3		11.8		-5.1		4.6		6.3		-7.5	Dec-15
RRJ Capital Master Fund III - Net			5.3		11.8		-5.1		4.6		6.3		-7.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.7	Dec-15
Shamrock Capital II - Gross	5,547,450	0.0	1.9		-5.6	-		-					-98.8	Jul-20
Shamrock Capital II - Net			1.9		-5.6								-98.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		50.0	Jul-20
Spectrum Equity VII - Gross	63,774,615	0.5	19.7		6.5	-	127.4	-	78.1		59.5		31.6	Dec-14
Spectrum Equity VII - Net			19.7		6.5	-	127.4	-	78.1		59.5		31.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.1	Dec-14
Spectrum Equity Fund VIII - Gross	29,400,843	0.2	95.5		176.9		182.5		-22.5				-22.5	Jun-18
Spectrum Equity Fund VIII - Net			95.5		176.9		182.5		-22.5	-			-22.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.9	Jun-18
Spectrum Equity Fund IX - Gross	3,517,617	0.0	-8.7		-12.5								-15.5	Sep-20
Spectrum Equity Fund IX - Net			-8.7		-12.5		-			-			-15.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		37.8	Sep-20
Summit EUR Growth Equity II - Gross	30,139,617	0.2	-0.9		2.9		29.5		121.4				76.2	Jan-18
Summit EUR Growth Equity II - Net			-0.9		2.9		29.5		121.4	-			76.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.8	Jan-18
Summit EUR Growth Equity III - Gross	3,728,726	0.0	-18.8										-18.8	Jan-21
Summit EUR Growth Equity III - Net			-18.8							-			-18.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		25.6	Jan-21
Summit Ventures III - Gross	3,245,869	0.0	-1.2		8.6		32.5		16.6		22.1		14.0	Jun-12
Summit Ventures III - Net			-1.2		8.6		32.5		16.6		22.1		14.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.5	Jun-12



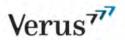
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Summit Ventures IV - Gross	43,819,237	0.4	81.0		73.6	-	107.0	-	53.3	-	44.6		43.7	May-16
Summit Ventures IV - Net			81.0		73.6		107.0		53.3		44.6		43.7	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.8	May-16
Summit Ventures V - Gross*	1,063,839	0.0											0.0	May-21
Summit Ventures V - Net													0.0	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		9.4	May-21
Thoma Bravo XI - Gross	51,111,970	0.4	12.1		18.0		73.0		56.3		44.9		30.8	Jun-14
Thoma Bravo XI - Net			12.1		18.0		73.0		56.3		44.9		30.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.1	Jun-14
Thoma Bravo XII - Gross	47,514,953	0.4	2.3		12.1		32.9		21.4		11.1		10.9	May-16
Thoma Bravo XII - Net			2.3		12.1		32.9		21.4		11.1		10.9	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.8	May-16
Thoma Bravo XIII - Gross	53,713,013	0.4	4.5		12.8		121.4						45.6	Feb-19
Thoma Bravo XIII - Net			4.5		12.8		121.4						45.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		20.3	Feb-19
Threshold Ventures III - Gross	10,468,988	0.1	6.2		5.2		-0.3						-7.8	Oct-19
Threshold Ventures III - Net			6.2		5.2		-0.3						-7.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		24.4	Oct-19
TPG Opp Partners III - Gross	16,339,143	0.1	11.9		14.7		21.8		9.1		11.5		-9.3	Mar-14
TPG Opp Partners III - Net			11.9		14.7		21.8		9.1		11.5		-9.3	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.0	Mar-14
Trinity Ventures XI - Gross	46,413,358	0.4	1.4		29.2		36.2		20.9		16.8		8.7	Apr-13
Trinity Ventures XI - Net			1.4		29.2		36.2		20.9		16.8		8.7	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.8	Apr-13
Trinity Ventures XII - Gross	68,783,581	0.6	53.6		81.5		111.1		49.1		32.0		30.8	Apr-16
Trinity Ventures XII - Net			53.6		81.5		111.1		49.1		32.0		30.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		18.6	Apr-16

<sup>\*</sup> Funded May 2021.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
TSG7 A LP - Gross+	19,871,932	0.2	11.4	-	26.0		47.1		21.1					Mar-16
TSG7 A LP - Net			11.4		26.0		47.1		21.1					
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.1	Mar-16
TSG7 B LP - Gross	3,997,996	0.0	17.9		25.2		50.5		13.6		-6.7		-8.5	Jan-16
TSG7 B LP - Net			17.9		25.2		50.5		13.6		-6.7		-8.5	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.3	Jan-16
TSG8 LP - Gross**	14,111,781	0.1	22.3		26.4		26.5							Jan-19
TSG8 LP - Net			22.3		26.4		26.5						-	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		19.5	Jan-19
TSSP Opportunities Partners IV - Gross	21,716,965	0.2	2.7		23.4		37.0						15.8	Jan-19
TSSP Opportunities Partners IV - Net			2.7		23.4		37.0						15.8	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		19.5	Jan-19
Waterland V - Gross	15,145,690	0.1	-1.5		11.6		37.4		24.1		33.3		23.3	Aug-11
Waterland V - Net			-1.5		11.6		37.4		24.1		33.3		23.3	· ·
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.0	Aug-11
Waterland VI - Gross	22,983,569	0.2	7.6		18.0		66.5		32.9		30.5		6.2	Jul-15
Waterland VI - Net	, ,		7.6		18.0		66.5		32.9		30.5		6.2	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		15.1	Jul-15
Wayzata Opportunities III - Gross	4,509,839	0.0	-0.4		-13.0		-0.2		-8.1		-1.6		-6.1	Feb-13
Wayzata Opportunities III - Net	1,000,000		-0.4		-13.0		-0.2		-8.1		-1.6		-6.1	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		17.4	Feb-13
Wynnchurch Capital Partners V - Gross	4,579,940	0.0	26.8		35.6		-37.8		10.5				-33.4	Apr-20
Wynnchurch Capital Partners V - Net	7,010,340	0.0	26.8	-	35.6		-37.8						-33.4	Αμι-20
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		31.0	Apr-20
monison rediers Of All PE T Qlf Lag			9.4		20.0		50.0		10.9		17.0	-	31.0	Apr-20

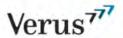
<sup>++</sup> Unable to calculate a year to date, 1-year and since inception return due to system limitations when account experienced serveral months of negative fund value in 2019 and 2020.



<sup>+</sup> 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	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Public Credit - Gross	216,470,210	1.7	3.5		10.1		26.4		6.7		7.8		5.5	Nov-13
Public Credit - Net			3.5		10.1		26.4		6.7		7.8		5.5	
Brigade Custom <sup>1</sup>			2.1		3.6		13.7		5.8		6.2		5.0	Nov-13
Brigade Capital - Gross	216,470,210	1.7	3.5	8	10.1	2	26.4	3	6.7	74	7.8	32	5.5	Nov-13
Brigade Capital - Net			3.5	8	10.1	2	26.4	3	6.7	74	7.8	32	5.5	
Brigade Custom			2.1	82	3.6	51	13.7	67	5.8	87	6.2	84	5.0	Nov-13
eV US High Yield Fixed Inc Gross Median			2.7		3.6		14.8		7.4		7.4		5.8	Nov-13
Private Credit - Gross***	250,745,181	2.0	1.9		9.5		22.3		8.9		9.6		7.7	Oct-11
Private Credit - Net			1.9		9.5		22.3		8.9		9.6		7.7	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.6	Oct-11
Athyrium Opp II - Gross	14,335,462	0.1	3.8		10.1		26.4		13.7		12.6		9.5	Jun-15
Athyrium Opp II - Net			3.8		10.1		26.4		13.7		12.6		9.5	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.3	Jun-15
Athyrium Opp III - Gross	19,907,076	0.2	0.7		5.3		17.2		8.6				3.5	May-17
Athyrium Opp III - Net			0.7		5.3		17.2		8.6				3.5	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.2	May-17
Benefit St Pr Sr Secure Opp - Gross	37,776,236	0.3	4.4		9.6		19.7		5.6				5.8	Jan-18
Benefit St Pr Sr Secure Opp - Net			4.4		9.6		19.7		5.6				5.8	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.3	Jan-18
Benefit St Pr Sr Secure Opp II - Gross	17,603,136	0.1	-17.3		-15.2		3.7						0.4	Dec-19
Benefit St Pr Sr Secure Opp II - Net			-17.3		-15.2		3.7						0.4	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.4	Dec-19
IFM US Infrastructure DB FD LP - Gross	1,596,708	0.0	0.0										0.0	Mar-21
IFM US Infrastructure DB FD LP - Net			0.0										0.0	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		2.5	Mar-21

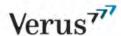
<sup>+</sup> Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



<sup>1.</sup> See Policy Index and Benchmark History.

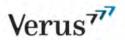
<sup>++</sup> Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
MCP Private Capital IV - Gross	4,906,291	0.0	-16.7		-19.9		-18.9						-16.4	Apr-20
MCP Private Capital IV - Net			-16.7		-19.9		-18.9						-16.4	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		5.7	Apr-20
OrbiMed Royalty & Credit Opp III - Gross	16,079,215	0.1	-6.2		50.4		106.5						43.3	Sep-19
OrbiMed Royalty & Credit Opp III - Net			-6.2		50.4		106.5						43.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.4	Sep-19
Silver Point Specialty Credit Fund II - Gross	18,899,297	0.2	1.6		7.2								25.2	Jul-20
Silver Point Specialty Credit Fund II - Net			1.6		7.2								25.2	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		17.8	Jul-20
Summit Credit - Gross	399,517	0.0	5.6		15.9		20.6		4.7		6.4		6.7	Oct-11
Summit Credit - Net			5.6		15.9		20.6		4.7		6.4		6.7	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.6	Oct-11
Summit Credit II - Gross	19,443,793	0.2	5.1		6.8		6.4		3.7		7.1		5.3	Nov-14
Summit Credit II - Net			5.1		6.8		6.4		3.7		7.1		5.3	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.1	Nov-14
Summit Credit III - Gross	29,370,561	0.2	3.6		16.0		25.8						15.1	Oct-18
Summit Credit III - Net			3.6		16.0		25.8						15.1	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.1	Oct-18
TCP Direct Lending VIII - Gross	70,427,889	0.6	3.8		8.0		24.5		8.4				7.4	Feb-18
TCP Direct Lending VIII - Net	, ,		3.8		8.0		24.5		8.4				7.4	
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			2.5		6.8		22.8		6.1		7.4		6.4	Feb-18



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Growth Oriented Absolute Return - Gross***	288,227,854	2.3	3.9		10.0		30.4		8.3		9.0		5.6	Aug-04
Growth Oriented Absolute Return - Net			3.9		10.0		30.4		8.3		9.0		5.6	
HFRI FoF Composite Index + 1%			3.1		5.5		19.5		7.4		6.8		6.5	Aug-04
Grosvenor SCARF Growth - Gross	93,567,440	0.8	4.1	24	2.7	73	17.9	44	4.8	71	7.1	46	6.1	Nov-11
Grosvenor SCARF Growth - Net			4.1	24	2.7	73	17.9	44	4.8	71	7.1	46	6.1	
HFRI FoF Composite Index + 1%			3.1	38	5.5	45	19.5	40	7.4	48	6.8	51	6.0	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			2.6		5.0		16.6		7.2		6.8		6.1	Nov-11
Lakewood - Gross	55,025,741	0.4	5.9	39	22.9	16	47.2	29	8.2	60	7.7	71	6.9	Jun-13
Lakewood - Net			5.9	39	22.9	16	47.2	29	8.2	60	7.7	71	6.9	
HFRI FoF Composite Index + 1%			3.1	61	5.5	67	19.5	72	7.4	65	6.8	77	6.1	Jun-13
eV Alt Fundamental - Long/Short Equity Median			4.4		9.4		31.6		10.1		11.1		8.2	Jun-13
Sculptor Domestic II - Gross	66,527,179	0.5	2.2	57	5.8	55	18.9	48	10.9	26	11.1	23	8.8	Dec-11
Sculptor Domestic II - Net			2.2	57	5.8	55	18.9	48	10.9	26	11.1	23	8.7	
HFRI FoF Composite Index + 1%			3.1	46	5.5	57	19.5	46	7.4	42	6.8	47	6.0	Dec-11
eV Alt All Multi-Strategy Median			2.7		6.5		17.4		6.1		6.3		6.2	Dec-11
Third Point Offshore Fund - Gross	73,107,494	0.6	3.8	41	15.6	16	51.2	11	13.7	11	12.7	13	11.7	Apr-12
Third Point Offshore Fund - Net			3.8	41	15.6	16	51.2	11	13.7	11	12.7	13	11.7	
HFRI FoF Composite Index + 1%			3.1	51	5.5	64	19.5	52	7.4	46	6.8	57	6.0	Apr-12
eV Alt All Event Driven Median			3.2		7.2		19.7		6.7		7.2		6.5	Apr-12

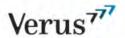
<sup>\*\*</sup> Composite reflects net returns from Cliffwater up to March 2017.



<sup>++</sup> Absolute Return managers are ranked in the eVest net of fee universe.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Diversifying Asset Category - Gross	2,603,906,321	20.9	2.4		0.4		5.5		5.5				4.4	Mar-17
Diversifying Asset Category - Net			2.4	-	0.3	-	5.4		5.3	-			4.3	
Diversifying Custom <sup>1</sup>			1.8		-0.2		3.4		5.1		3.5		4.2	Mar-17
Core/Core Plus Fixed Income - Gross	1,039,230,077	8.4	2.5		-1.0		2.6		6.6		4.3		4.0	Jun-11
Core/Core Plus Fixed Income - Net			2.5		-1.1		2.4		6.4		4.2		3.8	
BBgBarc US Aggregate TR			1.8		-1.6		-0.3		5.3		3.0		3.4	Jun-11
Prudential - Gross	521,451,419	4.2	3.0	4	-1.0	40	3.5	8	6.7	12	4.9	4	4.9	Jul-14
Prudential - Net			3.0	4	-1.1	47	3.3	8	6.5	19	4.7	5	4.7	
BBgBarc US Aggregate TR			1.8	85	-1.6	83	-0.3	88	5.3	89	3.0	91	3.4	Jul-14
eV US Core Fixed Inc Gross Median			2.1		-1.2		1.0		6.0		3.7		3.9	Jul-14
TCW MetWest Fixed - Gross	517,778,658	4.2	2.0	68	-1.0	34	1.6	33	6.5	22	4.1	15	5.9	Dec-01
TCW MetWest Fixed - Net			2.0	68	-1.0	34	1.5	35	6.3	24	4.0	27	5.7	
BBgBarc US Aggregate TR			1.8	85	-1.6	83	-0.3	88	5.3	89	3.0	91	4.4	Dec-01
eV US Core Fixed Inc Gross Median			2.1		-1.2		1.0		6.0		3.7		5.0	Dec-01
U.S. Treasury - Gross	483,131,725	3.9	1.8		-2.4		-3.0		4.7				4.5	Feb-18
U.S. Treasury - Net			1.8		-2.4		-3.0		4.7				4.5	
BBgBarc US Treasury TR			1.7		-2.6		-3.2		4.7		2.2		4.5	Feb-18
Neuberger Berman - Gross⁺	483,131,725	3.9	1.8	8	-2.4	83	-3.0	95	4.7	43	2.8	16	6.3	Jun-88
Neuberger Berman - Net			1.8	8	-2.4	83	-3.0	96	4.7	49	2.8	19	6.2	
BBgBarc US Govt TR			1.7	14	-2.5	85	-3.1	99	4.7	53	2.2	88	5.7	Jun-88
eV US Government Fixed Inc Gross Median			1.1		-1.2		-0.6		4.7		2.6			Jun-88

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



<sup>1.</sup> See Policy Index and Benchmark History.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Global Fixed Income - Gross	285,258,837	2.3	2.7	-	-1.3	-	13.1	-	6.0	-	4.6		3.6	May-13
Global Fixed Income - Net			2.6		-1.5		12.7		5.6		4.2		3.2	
Brandywine Custom <sup>1</sup>			1.5		-4.5		1.9		3.8		2.0		1.6	May-13
Brandywine Global - Gross	285,258,837	2.3	2.7	23	-1.3	66	13.1	24	6.0	48	4.6	52	3.6	May-13
Brandywine Global - Net			2.6	26	-1.5	67	12.7	25	5.6	54	4.2	59	3.2	
Brandywine Custom			1.5	65	-4.5	93	1.9	88	3.8	86	2.0	92	1.6	May-13
eV All Global Fixed Inc Gross Median			1.9		-0.3		6.8		5.9		4.7		3.7	May-13
Diversifying Absolute Return - Gross***	796,285,682	6.4	2.6		4.9		13.1		3.9		3.2	-	2.8	Nov-11
Diversifying Absolute Return - Net			2.5		4.9		13.0		3.8		3.2		2.8	
HFRI FoF Conservative Index			2.0		5.7		14.8		5.3		5.1		5.1	Nov-11
Aristeia Partners LP - Gross	47,589,000	0.4	1.6	39	5.8	24		-					5.8	Dec-20
Aristeia Partners LP - Net			1.6	39	5.8	24		-					5.8	
HFRI FoF Conservative Index			2.0	35	5.7	24	14.8	25	5.3	65	5.1	62	5.7	Dec-20
eV Alt Relative Value - Multi-Market Arbitrage Median			0.1		1.3		6.6		7.1		6.6		1.3	Dec-20
BlackRock Event Driven Equity Fund - Gross	54,072,430	0.4	2.3	63	3.4	76	10.3	79					8.3	Feb-20
BlackRock Event Driven Equity Fund - Net			1.9	71	2.6	79	8.6	83					6.7	
HFRI FoF Conservative Index			2.0	67	5.7	63	14.8	65	5.3	64	5.1	71	9.6	Feb-20
eV Alt All Event Driven Median			3.2		7.2		19.7		6.7		7.2		12.1	Feb-20
Davidson Kempner Instl Partners LP - Gross	58,720,256	0.5	3.2	46	7.1	47	17.3	51					8.1	Apr-19
Davidson Kempner Instl Partners LP - Net			3.2	46	7.1	47	17.3	51					8.1	
HFRI FoF Conservative Index			2.0	64	5.7	57	14.8	58	5.3	56	5.1	60	6.6	Apr-19
eV Alt All Multi-Strategy Median			2.7		6.5		17.4		6.1		6.3		7.7	Apr-19
Eisler Capital Fund LP - Gross*	45,000,000	0.4												Jun-21
Eisler Capital Fund LP - Net														
HFRI FoF Conservative Index			2.0	64	5.7	57	14.8	58	5.3	56	5.1	60		Jun-21
eV Alt All Multi-Strategy Median			2.7		6.5		17.4		6.1		6.3			Jun-21

<sup>1.</sup> See Policy Index and Benchmark History.

<sup>\*</sup> Funded June 2021.

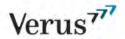


<sup>++</sup> Absolute Return managers are ranked in the eVest net of fee universe.

<sup>\*\*</sup> Composite reflects net returns from Cliffwater up to March 2017.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Elliott Associates - Gross+	69,029,925	0.6	2.8	56	6.1	58	13.0	74	8.1	39	8.8	39	8.1	Apr-12
Elliott Associates - Net			2.8	56	6.1	58	13.0	74	8.1	39	8.8	39	8.1	
HFRI FoF Conservative Index			2.0	67	5.7	63	14.8	65	5.3	64	5.1	71	5.1	Apr-12
eV Alt All Event Driven Median			3.2		7.2		19.7		6.7		7.2		6.5	Apr-12
Graham Global Inv II - Gross	38,722,473	0.3	1.6	66	6.4	57	19.0	41	5.9	54			2.6	Feb-17
Graham Global Inv II - Net			1.6	66	6.4	57	19.0	41	5.9	54			2.6	
HFRI FoF Conservative Index			2.0	64	5.7	60	14.8	55	5.3	60	5.1	33	5.1	Feb-17
eV Alt All Managed Futures Median			3.2		8.1		15.7		6.4		3.7		5.0	Feb-17
Grosvenor SCARF Diversifying - Gross	212,991,811	1.7	0.5	89	-0.3	91	9.3	87	4.3	79	2.8	92	2.4	Nov-11
Grosvenor SCARF Diversifying - Net			0.5	89	-0.3	91	9.3	87	4.3	79	2.8	92	2.4	
HFRI FoF Conservative Index			2.0	66	5.7	44	14.8	62	5.3	69	5.1	73	5.1	Nov-11
eV Alt Fund of Funds - Multi-Strategy Median			2.6		5.0		16.6		7.2		6.8		6.1	Nov-11
Grosvenor SCARF B Diversifying - Gross	568,697	0.0	-3.7	99	-2.5	96	2.8	99	2.5	91	0.8	96	1.2	Jan-13
Grosvenor SCARF B Diversifying - Net			-3.7	99	-2.5	96	2.8	99	2.5	91	0.8	96	1.2	
HFRI FoF Conservative Index			2.0	66	5.7	44	14.8	62	5.3	69	5.1	73	5.1	Jan-13
eV Alt Fund of Funds - Multi-Strategy Median			2.6		5.0		16.6		7.2		6.8		5.7	Jan-13
KLS Diversified Fund - Gross	7,237,095	0.1	-0.8	76	2.7	36	11.4	38					-1.9	Dec-18
KLS Diversified Fund - Net			-0.8	76	2.7	36	11.4	38					-1.9	
HFRI FoF Conservative Index			2.0	35	5.7	24	14.8	25	5.3	65	5.1	62	7.4	Dec-18
eV Alt Relative Value - Multi-Market Arbitrage Median			0.1		1.3		6.6		7.1		6.6		7.6	Dec-18
Laurion Capital - Gross	68,406,089	0.5	8.4	1	27.8	7	36.6	17	20.6	9	14.7	10	12.1	Mar-14
Laurion Capital - Net			8.4	1	27.8	7	36.6	17	20.6	9	14.7	10	12.1	
HFRI FoF Conservative Index			2.0	52	5.7	57	14.8	54	5.3	74	5.1	82	5.1	Mar-14
eV Alt Relative Value - Equity Relative Value Median			2.3		7.1		16.1		9.4		6.5		6.3	Mar-14

<sup>+</sup> Preliminary quarterly returns as of 6/30/2021 (Market Values estimated based on preliminary performance numbers provided by the manager.)



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
LMR Fund LTD - Gross LMR Fund LTD - Net	46,943,555	0.4	1.4 1.4	75 75	8.6 8.6	38 38	21.0 21.0	43 43					2.6 2.6	Oct-19
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			2.0 2.7	64	5.7 6.5	57	14.8 17.4	58	5.3 6.1	56	5.1 6.3	60	8.3 9.1	Oct-19 Oct-19
MW Global Opportunities Fund - Gross  MW Global Opportunities Fund - Net	51,783,815	0.4	-0.2 -0.2	88 88	-7.5 -7.5	97 97	5.6 5.6	92 92					6.5 6.5	Dec-18
HFRI FoF Conservative Index eV Alt Fundamental - Long/Short Equity Median			2.0 4.4	77	5.7 9.4	67	14.8 31.6	80	5.3 10.1	76	5.1 11.1	85	7.4 16.4	Dec-18 Dec-18
PSquared Event Driven Opp Fund - Gross PSquared Event Driven Opp Fund - Net	50,869,343	0.4	0.7 0.7	87 87	-0.1 -0.1	95 95							1.9 1.9	Jul-20
HFRI FoF Conservative Index eV Alt All Event Driven Median			2.0 3.2	67	5.7 7.2	63	14.8 19.7	65	5.3 6.7	64	5.1 7.2	71	13.1 17.2	Jul-20 Jul-20
Two Sigma Risk Premia Enhanced - Gross Two Sigma Risk Premia Enhanced - Net	44,351,193	0.4	12.8 12.8	5 5	10.5 10.5	30 30	14.0 14.0	59 59					-0.8 -0.8	Sep-19
HFRI FoF Conservative Index eV Alt All Multi-Strategy Median			2.0 2.7	64	5.7 6.5	57	14.8 17.4	58	5.3 6.1	56	5.1 6.3	60	7.9 9.2	Sep-19 Sep-19
Real Return (with SSgA RA Overlay Proxy) - Gross Real Return (with SSgA RA Overlay Proxy) - Net	1,988,814,035	16.0	3.4 3.3		8.3 8.3		14.1 14.0		5.2 5.0			 	7.7 7.5	Mar-17
Real Return Custom <sup>1</sup>			3.7		7.7		11.9		4.0		5.2		5.2	Mar-17
Real Return Asset Category - Gross Real Return Asset Category - Net	1,988,814,035	16.0	3.4 3.3		8.3 8.3		14.1 14.0		5.3 5.1				8.3 8.1	Mar-17
Real Return Custom			3.7		7.7		11.9		4.0		5.2		5.2	Mar-17
Real Estate - Gross Real Estate - Net	862,904,416	6.9	3.6 3.6	42 43	7.1 7.0	7 7	11.6 11.4	2 2	6.2 5.9	11 12	9.1 8.8	1	10.7 10.0	Jun-11
Real Estate Custom <sup>1</sup> InvMetrics All DB Real Estate Priv Net Median			3.3 3.2	47	5.9 4.9	31	6.1 6.1	50	5.3 4.7	35	6.3 5.7	38	8.9 8.4	Jun-11 Jun-11

<sup>1.</sup> See Policy Index and Benchmark History.



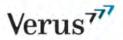
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Core RE -Limited Partnership - Gross	640,362,071	5.1	5.3		8.5		13.5		8.5		9.7		5.7	Sep-08
Core RE -Limited Partnership - Net			5.2		8.4		13.3		8.2		9.5		5.2	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		5.5	Sep-08
Brookfield Premier RE Partners - Gross	108,252,890	0.9	3.9		6.6		8.0						6.9	Sep-18
Brookfield Premier RE Partners - Net			3.9		6.6		8.0						6.9	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		5.2	Sep-18
Clarion Lion Properties - Gross	115,813,892	0.9	5.6		7.9		10.8						7.1	Sep-18
Clarion Lion Properties - Net			5.3		7.5		9.9						6.2	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		5.2	Sep-18
Metlife Core Property - Gross	70,097,310	0.6	6.6		9.5		10.6		7.2		8.2		10.4	Dec-13
Metlife Core Property - Net			6.5		9.2		10.1		6.7		7.6		9.8	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		8.6	Dec-13
Principal US Property - Gross	51,860,666	0.4	3.7		6.2		8.0	-	5.5		6.7		7.2	Oct-15
Principal US Property - Net			3.7		6.2		8.0		5.5		6.7		7.2	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		7.2	Oct-15
Prologis Targeted Euro Logistics - Gross	69,771,432	0.6	8.4		11.0		30.9	-	15.4		15.6		14.4	Oct-15
Prologis Targeted Euro Logistics - Net			8.4		11.0		30.9		15.4		15.6		14.4	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		7.2	Oct-15
Prologis Targeted US Logistics - Gross	97,181,326	0.8	11.9		18.0		30.5		17.3		17.9		17.4	Jul-15
Prologis Targeted US Logistics - Net			11.9		18.0		30.5		17.3		17.9		17.4	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		7.5	Jul-15
Townsend Real Estate - Gross <sup>1</sup>	127,384,555	1.0	0.0		3.8		7.1		5.7		7.5		7.8	Mar-16
Townsend Real Estate - Net			0.0		3.8		7.1		5.7		7.5		7.8	
NFI-ODCE			3.9		6.1		8.0		5.5		6.6		6.7	Mar-16

<sup>\*</sup> Preliminary quarterly returns as of 6/30/2021.



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Non-Core RE -Opportunistic - Gross***	160,239,564	1.3	-1.9		3.6		7.5		-2.3		6.7		16.6	Feb-14
Non-Core RE -Opportunistic - Net			-1.9		3.6		7.5		-2.3		6.5	-	16.0	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		8.7	Feb-14
Carlyle China Realty - Gross	8,339,682	0.1	-0.6		1.2		6.0		0.5				-1.9	Jun-17
Carlyle China Realty - Net			-0.6		1.2		6.0		0.5				-1.9	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		5.8	Jun-17
Carlyle China Rome Logistics - Gross	37,033,346	0.3	-0.4		1.4		6.7		-2.5				-1.4	Jun-17
Carlyle China Rome Logistics - Net			-0.4		1.4		6.7		-2.5				-1.4	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		5.8	Jun-17
CIM Opportunity VIII - Gross	31,316,787	0.3	-2.2		-5.4		-15.2		-4.7		-0.1		1.0	Feb-15
CIM Opportunity VIII - Net			-2.2		-5.4		-15.2		-4.7		-0.4		0.1	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		8.1	Feb-15
Kohlberg Kravis Roberts - Gross	2,160,890	0.0	3.5		-6.6		-24.3	-	-35.9		-15.5		0.4	Feb-14
Kohlberg Kravis Roberts - Net			3.5		-6.6	-	-24.3		-35.9		-15.5		0.2	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		8.7	Feb-14
NREP Nordic Strat FCP-FIS - Gross	281,463	0.0	-2.4		-29.9		-16.0		-4.7		10.6		13.7	Dec-14
NREP Nordic Strat FCP-FIS - Net			-2.4	-	-29.9	-	-16.0		-4.7		10.6		13.7	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		8.0	Dec-14
NREP Nordic Strat II - Gross	37,082,376	0.3	-2.5		10.5		27.5		12.8		15.7		15.7	Jun-16
NREP Nordic Strat II - Net			-2.5		10.5	-	27.5		12.8		15.7		15.7	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		6.3	Jun-16
NREP Nordic Strat III - Gross	25,397,620	0.2	-4.3		10.0	-	30.4						3.9	Jul-18
NREP Nordic Strat III - Net			-4.3		10.0	-	30.4						3.9	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		5.1	Jul-18
NREP Nordic Strat IV - Gross	6,514,187	0.1	-15.9		90.0								13.2	Jul-20
NREP Nordic Strat IV - Net			-15.9		90.0	-							13.2	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		2.4	Jul-20

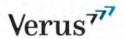
<sup>+</sup> Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.



<sup>++</sup> Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Sculptor Real Estate Fund III - Gross	8,428,813	0.1	4.5		8.2		16.0		13.1		18.1		8.3	Sep-14
Sculptor Real Estate Fund III - Net			4.5		8.2		16.0		13.1		17.5		5.2	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		8.1	Sep-14
Sculptor Real Estate Fund IV - Gross	3,684,400	0.0	1.1		13.0		-9.3						-9.3	Jun-20
Sculptor Real Estate Fund IV - Net			1.1		13.0		-9.3						-9.3	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		2.5	Jun-20
Core RE -Value Added - Gross***	62,302,781	0.5	1.1		1.7		3.8		8.0		9.5		0.2	Sep-08
Non-Core RE -Value Added - Net			1.1	-	1.7	-	3.8		8.0		9.3		-0.9	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		7.3	Sep-08
Asana Partners Fund II - Gross*	12,234,927	0.1	9.7		15.9		5.6							Apr-19
Asana Partners Fund II - Net			9.7		15.9		5.6							
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		4.1	Apr-19
ECE Euro Prime Shopping II - Gross	34,481,821	0.3	-3.1		-2.6		-1.1		0.9		8.8		10.2	Jul-15
ECE Euro Prime Shopping II - Net			-3.1		-2.6		-1.1		0.9		8.3		9.4	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		7.6	Jul-15
European RE Debt II - Gross	2,282,958	0.0	14.5		-66.4		-63.7		-29.2		-14.7		-9.1	Nov-13
European RE Debt II - Net			14.5		-66.4		-63.7		-29.2		-14.7		-9.1	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		9.1	Nov-13
Hammes II - Gross	2,547,074	0.0	2.7		980.9		1,046.5		245.0		118.2		100.9	Jul-15
Hammes II - Net			2.7		980.9		1,046.5		245.0		117.2		97.7	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		7.6	Jul-15
Hammes III - Gross	10,756,001	0.1	4.4		34.5	-	39.8						-12.1	Oct-18
Hammes III - Net			4.4		34.5		39.8						-12.1	
NFI-ODCE net +1% 1Q Lag			2.1		5.4		2.5		5.0		6.3		4.8	Oct-18

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

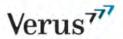


<sup>\*</sup> Unable to calculate a since inception and 1-Year return due to system limitations when account experienced 2 quarter of negative fund value in 2019.

<sup>++</sup> Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%) F	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Private Real Assets - Gross***	628,240,822	5.0	2.2		10.2		14.8		5.4		10.1		4.5	Jan-13
Private Real Assets - Net			2.2		10.2		14.8		5.4		10.1		4.5	
Private Real Assets Custom <sup>1</sup>			3.7		9.3		15.2		3.0		5.1		5.5	Jan-13
CPI-U Headline +5%			3.6		5.9		10.4		7.5		7.4		6.8	Jan-13
ACM II - Gross	17,170,351	0.1	-0.8		-5.4		-9.8		-7.5				-7.4	Sep-16
ACM II - Net			-0.8		-5.4		-9.8		-7.5				-7.4	
NCREIF Farmland 1 Qtr Lag			0.1		1.7		3.3		4.4		5.3	-	5.3	Sep-16
ArcLight Energy VI - Gross	26,646,162	0.2	6.8		2.3		5.9		-2.6		2.6		0.7	Aug-15
ArcLight Energy VI - Net			6.8		2.3		5.9		-2.6		2.6		0.7	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		11.7	Aug-15
Brookfield Infra III - Gross	32,209,038	0.3	0.1		6.0		11.7		8.7		11.2		11.0	May-16
Brookfield Infra III - Net			0.1		6.0		11.7		8.7		11.2		11.0	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		11.4	May-16
Brookfield Infra IV - Gross	22,823,789	0.2	5.2		7.4		21.7						6.9	Sep-19
Brookfield Infra IV - Net			5.2		7.4		21.7						6.9	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		9.0	Sep-19
Carlyle Power II - Gross	34,606,017	0.3	-7.2		8.9		20.4		10.5		8.0		2.5	Oct-15
Carlyle Power II - Net			-7.2		8.9		20.4		10.5		8.0		2.5	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		11.0	Oct-15
EnCap Energy IX - Gross	12,723,522	0.1	18.7		56.6		64.3		-12.5		-0.1		-5.3	Jan-13
EnCap Energy IX - Net			18.7		56.6		64.3		-12.5		-0.1		-5.3	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-0.7	Jan-13
EnCap Energy X - Gross	29,429,776	0.2	9.0		29.6		40.9		-0.3		7.0		-1.9	Apr-15
EnCap Energy X - Net			9.0		29.6		40.9		-0.3		7.0		-1.9	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-2.2	Apr-15

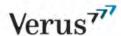
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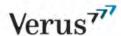
<sup>1.</sup> See Policy and Benchmark History .

<sup>++</sup> Returns are one-quarter lag.

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
EnCap Flatrock Midstream III - Gross	16,245,988	0.1	1.8		6.9		7.3		-0.3		6.6		4.8	Jul-14
EnCap Flatrock Midstream III - Net			1.8		6.9		7.3		-0.3		6.6		4.8	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		10.1	Jul-14
EnCap Flatrock Midstream IV - Gross	10,017,267	0.1	0.4		5.3		9.3		3.2				0.1	Feb-18
EnCap Flatrock Midstream IV - Net			0.4		5.3		9.3		3.2				0.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		9.9	Feb-18
EQT Infrastructure Fund IV - Gross	24,314,235	0.2	3.0		11.1		19.0						-6.1	Jun-19
EQT Infrastructure Fund IV - Net			3.0		11.1		19.0						-6.1	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		9.1	Jun-19
First Reserve - Gross	20,363,202	0.2	0.1		-3.6		0.5		4.7		17.6		-0.4	Dec-14
First Reserve - Net			0.1		-3.6		0.5		4.7		17.6		-0.4	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		10.4	Dec-14
IFM Global Infrastructure US LP - Gross	133,240,980	1.1	1.7		5.7		8.9		9.8				11.0	Apr-17
IFM Global Infrastructure US LP - Net			1.7		5.7		8.9		9.8				11.0	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		11.5	Apr-17
ISQ Global Infrastructure Fund II - Gross	40,353,664	0.3	1.8		10.2		17.1						13.0	Oct-18
ISQ Global Infrastructure Fund II - Net			1.8		10.2		17.1						13.0	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		9.5	Oct-18
Meridiam Infra N America III - Gross	4,137,177	0.0	11.7		-1.6		-19.4		-69.2				-78.2	Sep-17
Meridiam Infra N America III - Net			11.7		-1.6		-19.4		-69.2				-78.2	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		10.1	Sep-17
NGP Royalty Partners - Gross	15,073,983	0.1	25.1		23.1								8.0	Aug-20
NGP Royalty Partners - Net			25.1		23.1								8.0	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		21.2	Aug-20



	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Paine Schwartz Food Chain V - Gross	11,132,318	0.1	0.8		1.3		9.5						-14.5	Jan-20
Paine Schwartz Food Chain V - Net			0.8		1.3		9.5						-14.5	
NCREIF Farmland 1 Qtr Lag			0.1		1.7		3.3		4.4		5.3		3.9	Jan-20
Pantheon Ventures - Gross	63,241,583	0.5	2.7	-	11.6		16.8		6.2		8.1		17.2	Jul-14
Pantheon Ventures - Net			2.7		11.6		16.8		6.2		8.1		17.2	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		10.1	Jul-14
Quantum Energy VI - Gross	33,586,530	0.3	-0.2		19.1		33.3		11.0		23.3		18.7	Nov-14
Quantum Energy VI - Net			-0.2		19.1		33.3		11.0		23.3		18.7	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-4.2	Nov-14
Quantum Energy VII - Gross	24,214,670	0.2	-5.4		40.2		62.2		4.9				2.4	Aug-17
Quantum Energy VII - Net			-5.4		40.2		62.2		4.9				2.4	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-2.5	Aug-17
Tailwater Energy Fund III - Gross	25,283,007	0.2	3.7		-1.5		-2.1						-5.9	Sep-18
Tailwater Energy Fund III - Net			3.7		-1.5		-2.1						-5.9	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-6.6	Sep-18
Tailwater Energy IV - Gross	15,247,804	0.1	10.2		4.0		9.3						-21.3	Oct-19
Tailwater Energy IV - Net			10.2		4.0		9.3						-21.3	
Cambridge Associates Private Energy 1 Qtr Lag			8.2		15.2		21.2		-5.0		2.2		-7.6	Oct-19
Wastewater Opportunity - Gross	16,179,759	0.1	2.3		18.0		-2.6		3.0		-4.2		-16.8	Dec-15
Wastewater Opportunity - Net			2.3		18.0		-2.6		3.0		-4.2		-16.8	
Cambridge Associates Private Infrastructure 1 Qtr Lag			1.8		8.1		16.6		8.8		10.5		11.1	Dec-15



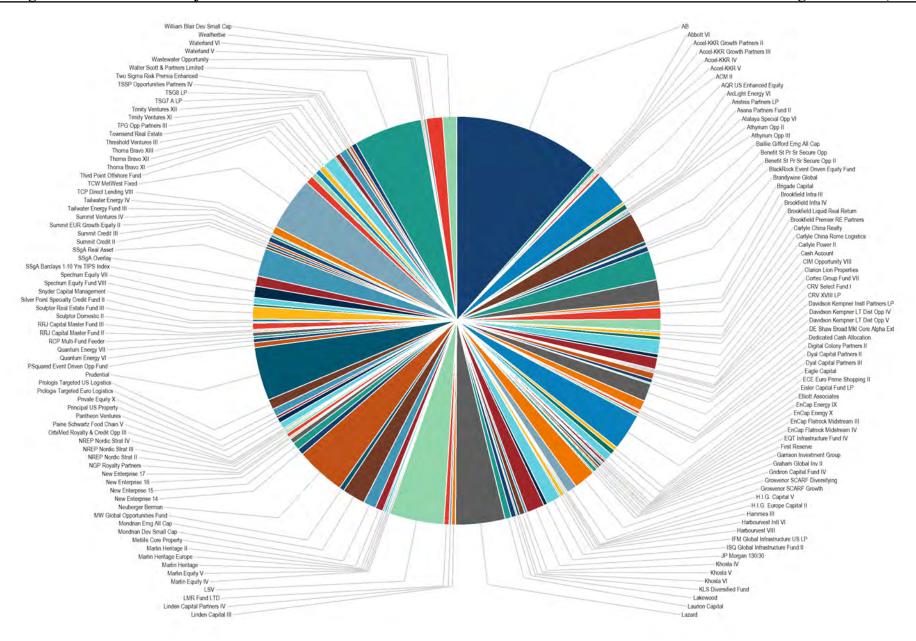
	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	Inception (%)	Inception Date
Liquid Real Return - Gross	497,668,797	4.0	4.7		8.3		21.1						7.0	Jun-19
Liquid Real Return - Net			4.6		8.1		20.8						6.6	
SSgA Real Asset <sup>1</sup>			4.5		8.1		21.2		5.9		5.0		6.2	Jun-19
Brookfield Liquid Real Return - Gross	112,205,182	0.9	4.9		8.4		20.4						8.4	Nov-19
Brookfield Liquid Real Return - Net			4.8		8.0		19.7						7.7	
Brookfield Real Return Custom			4.5		6.1		17.6						6.7	Nov-19
SSgA Passive Real Return Proxy - Gross	385,463,615	3.1	4.6		8.3		21.4		6.2		5.2		2.4	Jan-08
SSgA Passive Real Return Proxy - Net			4.5		8.2		21.2		5.9		4.9		2.2	
SSgA Real Asset			4.5		8.1		21.2		5.9		5.0			Jan-08
Opportunities Asset Category - Gross** ++	5,218,865	0.0	2.1		16.7		19.3		9.7		7.5		14.6	Oct-07
Opportunities Asset Category - Net			2.1		16.7		19.3		9.7		7.5		14.6	
Policy Index			4.9		8.8		24.4		10.3		10.2		8.5	Oct-07
Atalaya Special Opportunities V - Gross	5,218,865	0.0	2.1		16.7		19.3		9.7		7.0		6.6	Jul-13
Atalaya Special Opportunities V - Net			2.1		16.7		19.3		9.7		7.0		6.6	
Thomson Reuters C A All PE 1 Qtr Lag			9.4		25.6		50.0		18.9		17.6		16.2	Jul-13
Cash - Gross	237,910,295	1.9	0.3		0.4		1.0		2.0		1.9		3.1	Jun-92
Cash - Net			0.3		0.4		1.0		2.0		1.9			
91 Day T-Bills			0.0		0.0		0.1		1.2		1.1		2.3	Jun-92
Cash Account - Gross	141,565,908	1.1	0.4		0.7		1.4		2.3		2.0		3.1	Jun-92
Cash Account - Net			0.4		0.7		1.4		2.3		2.0			
91 Day T-Bills			0.0		0.0		0.1		1.2		1.1		2.3	Jun-92
Dedicated Cash Allocation - Gross	96,344,387	0.8	0.0		0.0		0.1						0.7	Jun-19
Dedicated Cash Allocation - Net			0.0		0.0		0.1						0.7	
ICE LIBOR Spot/Next Overnight USD			0.0		0.0		0.1		1.2		1.1		0.7	Jun-19

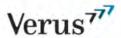
<sup>++</sup> Returns are one-quarter lag.



<sup>1.</sup> See Policy and Benchmark History .

<sup>\*\*</sup> Composite reflects net returns from Cliffwater up to March 2017.





	Current	%
AB	\$1,435,355,724	11.5%
AQR US Enhanced Equity	\$335,708,931	2.7%
JP Morgan 130/30	\$178,241,171	1.4%
DE Shaw Broad Mkt Core Alpha Ext	\$168,847,079	1.4%
Eagle Capital	\$360,086,797	2.9%
Huber Capital	\$20,264	0.0%
Weatherbie	\$165,473,773	1.3%
Snyder Capital Management	\$119,959,400	1.0%
Lazard	\$486,539,792	3.9%
Walter Scott & Partners Limited	\$672,342,884	5.4%
LSV	\$540,125,608	4.3%
Mondrian Dev Small Cap	\$125,349,053	1.0%
William Blair Dev Small Cap	\$133,011,577	1.1%
Baillie Gifford Emg All Cap	\$293,978,323	2.4%
Mondrian Emg All Cap	\$227,594,562	1.8%
CBRE Clarion	\$5,289	0.0%
Abbott VI	\$42,121,973	0.3%
Accel-KKR IV	\$15,225,873	0.1%
Accel-KKR V	\$23,335,857	0.2%
Accel-KKR VI	\$1,000,196	0.0%
Accel-KKR Growth Partners II	\$14,019,965	0.1%
Accel-KKR Growth Partners III	\$15,490,287	0.1%
Atalaya Special Opp VI	\$9,349,610	0.1%
Canvas Ventures III	\$3,363,486	0.0%
Cortec Group Fund VII	\$11,957,857	0.1%
CRV Select Fund I	\$11,950,000	0.1%
CRV XVIII LP	\$6,757,335	0.1%
Davidson Kempner LT Dist Opp IV	\$37,759,322	0.3%



	Current	%
Davidson Kempner LT Dist Opp V	\$14,431,168	0.1%
Digital Colony Partners II	\$11,112,148	0.1%
Dyal Capital Partners II	\$25,211,963	0.2%
Dyal Capital Partners III	\$24,279,398	0.2%
Garrison Investment Group	\$8,011,339	0.1%
Gridiron Capital Fund IV	\$17,826,632	0.1%
Harbourvest VIII	\$10,828,139	0.1%
Harbourvest Intl VI	\$38,863,691	0.3%
H.I.G. Bayside Loan III	\$5,904,503	0.0%
H.I.G. Capital V	\$16,271,025	0.1%
H.I.G. Europe Capital II	\$15,477,616	0.1%
Khosla IV	\$23,323,686	0.2%
Khosla V	\$50,277,726	0.4%
Khosla VI	\$30,963,993	0.2%
Khosla VII	\$2,017,493	0.0%
Linden Capital III	\$41,090,964	0.3%
Linden Capital Partners IV	\$27,104,011	0.2%
Marlin Equity IV	\$11,400,612	0.1%
Marlin Equity V	\$16,046,575	0.1%
Marlin Heritage	\$8,205,311	0.1%
Marlin Heritage II	\$9,006,559	0.1%
Marlin Heritage Europe	\$23,783,351	0.2%
New Enterprise 14	\$58,713,454	0.5%
New Enterprise 15	\$77,779,328	0.6%
New Enterprise 16	\$48,553,261	0.4%
New Enterprise 17	\$17,529,199	0.1%
OrbiMed Private Investments VIII, LP	\$3,699,777	0.0%
Private Equity X	\$29,472,607	0.2%



	Current	%
RCP Multi-Fund Feeder	\$41,899,821	0.3%
RRJ Capital Master Fund II	\$15,295,997	0.1%
RRJ Capital Master Fund III	\$11,540,842	0.1%
Shamrock Capital II	\$5,547,450	0.0%
Spectrum Equity VII	\$63,774,615	0.5%
Spectrum Equity Fund VIII	\$29,400,843	0.2%
Spectrum Equity Fund IX	\$3,517,617	0.0%
Summit EUR Growth Equity II	\$30,139,617	0.2%
Summit EUR Growth Equity III	\$3,728,726	0.0%
Summit Ventures III	\$3,245,869	0.0%
Summit Ventures IV	\$43,819,237	0.4%
Summit Ventures V	\$1,063,839	0.0%
Thoma Bravo XI	\$51,111,970	0.4%
Thoma Bravo XII	\$47,514,953	0.4%
Thoma Bravo XIII	\$53,713,013	0.4%
Threshold Ventures III	\$10,468,988	0.1%
TPG Opp Partners III	\$16,339,143	0.1%
Trinity Ventures XI	\$46,413,358	0.4%
Trinity Ventures XII	\$68,783,581	0.6%
TSG7 A LP	\$19,871,932	0.2%
TSG7 B LP	\$3,997,996	0.0%
TSG8 LP	\$14,111,781	0.1%
TSSP Opportunities Partners IV	\$21,716,965	0.2%
Waterland V	\$15,145,690	0.1%
Waterland VI	\$22,983,569	0.2%
Wayzata Opportunities III	\$4,509,839	0.0%
Wynnchurch Capital Partners V	\$4,579,940	0.0%
Brigade Capital	\$216,470,210	1.7%



	Current	%
Athyrium Opp II	\$14,335,462	0.1%
Athyrium Opp III	\$19,907,076	0.2%
Benefit St Pr Sr Secure Opp	\$37,776,236	0.3%
Benefit St Pr Sr Secure Opp II	\$17,603,136	0.1%
IFM US Infrastructure DB FD LP	\$1,596,708	0.0%
MCP Private Capital IV	\$4,906,291	0.0%
OrbiMed Royalty & Credit Opp III	\$16,079,215	0.1%
Silver Point Specialty Credit Fund II	\$18,899,297	0.2%
Summit Credit	\$399,517	0.0%
Summit Credit II	\$19,443,793	0.2%
Summit Credit III	\$29,370,561	0.2%
TCP Direct Lending VIII	\$70,427,889	0.6%
Grosvenor SCARF Growth	\$93,567,440	0.8%
Lakewood	\$55,025,741	0.4%
Sculptor Domestic II	\$66,527,179	0.5%
Third Point Offshore Fund	\$73,107,494	0.6%
Prudential	\$521,451,419	4.2%
TCW MetWest Fixed	\$517,778,658	4.2%
Neuberger Berman	\$483,131,725	3.9%
Brandywine Global	\$285,258,837	2.3%
Aristeia Partners LP	\$47,589,000	0.4%
BlackRock Event Driven Equity Fund	\$54,072,430	0.4%
Davidson Kempner Instl Partners LP	\$58,720,256	0.5%
Eisler Capital Fund LP	\$45,000,000	0.4%
Elliott Associates	\$69,029,925	0.6%
Graham Global Inv II	\$38,722,473	0.3%
Grosvenor SCARF Diversifying	\$212,991,811	1.7%
Grosvenor SCARF B Diversifying	\$568,697	0.0%



	Current	%
KLS Diversified Fund	\$7,237,095	0.1%
Laurion Capital	\$68,406,089	0.5%
LMR Fund LTD	\$46,943,555	0.4%
MW Global Opportunities Fund	\$51,783,815	0.4%
PSquared Event Driven Opp Fund	\$50,869,343	0.4%
Two Sigma Risk Premia Enhanced	\$44,351,193	0.4%
Brookfield Premier RE Partners	\$108,252,890	0.9%
Clarion Lion Properties	\$115,813,892	0.9%
Metlife Core Property	\$70,097,310	0.6%
Principal US Property	\$51,860,666	0.4%
Prologis Targeted Euro Logistics	\$69,771,432	0.6%
Prologis Targeted US Logistics	\$97,181,326	0.8%
Townsend Real Estate	\$127,384,555	1.0%
Carlyle China Realty	\$8,339,682	0.1%
Carlyle China Rome Logistics	\$37,033,346	0.3%
CIM Opportunity VIII	\$31,316,787	0.3%
Kohlberg Kravis Roberts	\$2,160,890	0.0%
NREP Nordic Strat FCP-FIS	\$281,463	0.0%
NREP Nordic Strat II	\$37,082,376	0.3%
NREP Nordic Strat III	\$25,397,620	0.2%
NREP Nordic Strat IV	\$6,514,187	0.1%
Sculptor Real Estate Fund III	\$8,428,813	0.1%
Sculptor Real Estate Fund IV	\$3,684,400	0.0%
Asana Partners Fund II	\$12,234,927	0.1%
ECE Euro Prime Shopping II	\$34,481,821	0.3%
European RE Debt II	\$2,282,958	0.0%
Hammes II	\$2,547,074	0.0%
Hammes III	\$10,756,001	0.1%



	Current	%
ACM II	\$17,170,351	0.1%
ArcLight Energy VI	\$26,646,162	0.2%
Brookfield Infra III	\$32,209,038	0.3%
Brookfield Infra IV	\$22,823,789	0.2%
Carlyle Power II	\$34,606,017	0.3%
EnCap Energy IX	\$12,723,522	0.1%
EnCap Energy X	\$29,429,776	0.2%
EnCap Flatrock Midstream III	\$16,245,988	0.1%
EnCap Flatrock Midstream IV	\$10,017,267	0.1%
EQT Infrastructure Fund IV	\$24,314,235	0.2%
First Reserve	\$20,363,202	0.2%
IFM Global Infrastructure US LP	\$133,240,980	1.1%
ISQ Global Infrastructure Fund II	\$40,353,664	0.3%
Meridiam Infra N America III	\$4,137,177	0.0%
NGP Royalty Partners	\$15,073,983	0.1%
Paine Schwartz Food Chain V	\$11,132,318	0.1%
Pantheon Ventures	\$63,241,583	0.5%
Quantum Energy VI	\$33,586,530	0.3%
Quantum Energy VII	\$24,214,670	0.2%
Tailwater Energy Fund III	\$25,283,007	0.2%
Tailwater Energy IV	\$15,247,804	0.1%
Wastewater Opportunity	\$16,179,759	0.1%
Brookfield Liquid Real Return	\$112,205,182	0.9%
SSgA Barclays 1-10 Yrs TIPS Index	\$116,365,628	0.9%
SSgA Real Asset	\$269,097,987	2.2%
Atalaya Special Opportunities V	\$5,218,865	0.0%
Cash Account	\$141,565,908	1.1%
Dedicated Cash Allocation	\$96,344,387	0.8%



# Period Ending: June 30, 2021

Total	\$12,443,793,557	100.0%
SSgA Overlay	\$96,097,778	0.8%
Heitman Adv JMB V	\$8,390	0.0%
Transition Account	-\$80	0.0%
	Current	%



# **Statistics Summary**

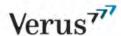
#### 3 Years

	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	12.2%	18	8.7%	14	1.3	1	0.6	18	3.0%	88
Policy Index	10.3%	72	8.2%	7	1.1	15			0.0%	1
Total Fund ex Overlay	11.8%	26	8.6%	12	1.2	1	0.5	26	3.1%	88
Policy Index	10.3%	72	8.2%	7	1.1	15			0.0%	1

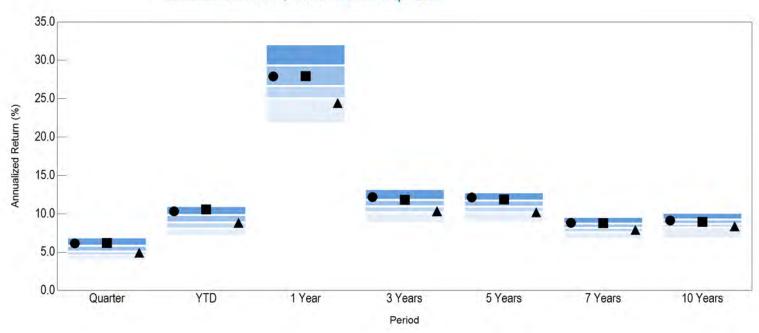
## **Statistics Summary**

#### 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	12.1%	9	7.1%	17	1.5	1	0.8	17	2.5%	87
Policy Index	10.2%	77	6.6%	7	1.4	15			0.0%	1
Total Fund ex Overlay	11.9%	21	7.0%	12	1.5	2	0.7	21	2.5%	87
Policy Index	10.2%	77	6.6%	7	1.4	15			0.0%	1



#### InvMetrics Public DB > \$1B Gross Return Comparison



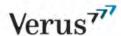
5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
# of Portfolios

Total Fund

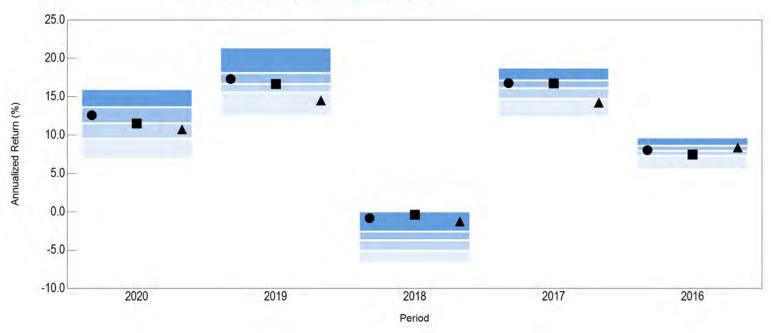
■ Total Fund ex Overlay

▲ Policy Index

6.9		11.0		32.1		13.2		12.8		9.6		10.1	
5.9		9.9		29.3		11.8		11.7		8.7		9.3	
5.1		8.9		26.7		11.0		10.9		8.2		8.7	
4.6		8.1		25.1		10.2		10.2		7.6		8.2	
3.9		7.1		21.8		8.9		9.0		6.7		6.8	
60		60		60		60		60		60		58	
6.1	(17)	10.3	(15)	27.9	(36)	12.2	(18)	12.1	(9)	8.8	(18)	9.1	(36)
6.2	(16)	10.6	(9)	27.9	(36)	11.8	(26)	11.9	(21)	8.8	(19)	8.9	(40)
4.9	(62)	8.8	(55)	24.4	(86)	10.3	(72)	10.2	(77)	7.9	(63)	8.4	(65)







5th	Percentile
25t	h Percentile
Me	dian
75t	h Percentile
95t	h Percentile
# 0	f Portfolios

**Total Fund** 

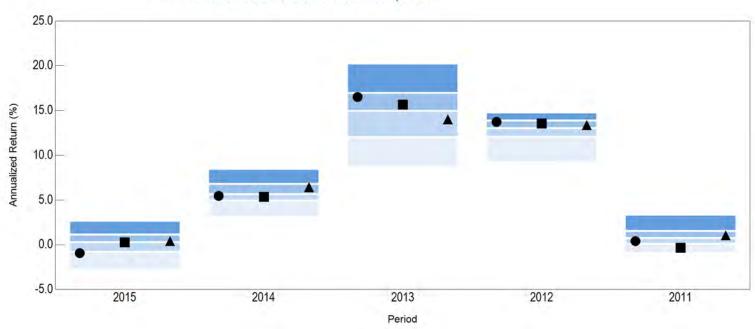
Total Fund ex Overlay

▲ Policy Index

turn (Rank)									
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)
10.8	(61)	14.5	(88)	-1.3	(10)	14.2	(82)	8.4	(34)



#### InvMetrics Public DB > \$1B Gross Return Comparison



5th Percentile
25th Percentile
Median
75th Percentile
95th Percentile
# of Portfolios
Total Fund
■ Total Fund ex Overlay
▲ Policy Index

Return (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)	

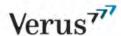


Total Plan Policy Index	As of:									
	7/1/19	7/1/17	4/1/17	1/1/14	1/1/12	1/1/08	2/1/06	9/1/04	1/1/00	7/1/8
91-day UST Bill +5% (AR)			10.0%	10.0%	10.0%	5.0%	5.0%	5.0%		
BBgBarc Aggregate	10.0%	10.0%	10.0%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
BBgBarc US Treasury	5.0%	5.0%	5.0%							
ICE BofA ML High Yield II	1.0%	1.0%	1.0%	1.0%						
Bloomberg Commodity		2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.5%	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	3.2%	3.2%								
FTSE BIG										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	711111	- 171				2011	15.0%	15.0%	15.0%	15.
MSCI Emerging Markets							5.0%	5.0%	5.0%	2.50
NAREIT						3.0%	3.0%	218.07	131212	
NFI-ODCE	4.6%	4.6%				20101	414.14			
NFI-ODCE net +1% 1Q Lag	2.5%	2.5%								
NCREIF	2.4.15		7.0%			12.0%	12.0%	15.0%	10.0%	15.0
NCREIF Farmland 1 Qtr Lag	0.7%	0.7%	1.074			12.010	15.0.0	10.070	10.070	
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				10.075	10.019		5.0%	5.0%	5.0%	
Russell 3000	20.0%	21.0%	21.0%	22.5%	22.5%	30.0%	0.070	0.070	0.070	47.0
S&P 500 +2% 1QL (PE)			2.1.2.7			5.0%				
Thomson Reuters C A All PE 1 Qtr Lag	9.0%	9.0%	9.0%			0.010				
Bloomberg Roll Select Commodity Total Return	0.2%	0.070	0.070							
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%									
TOE EIDON OPOUNDAL OVORHIGHT OOD	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%			100.09
Market and the second	100.0%	100.0%	100.0%	100.0%
Large Cap Active Benchmark	As of:			
Large Cap Active Delicililark	2/1/19	9/1/08		
Russell 1000 Value	2/1/19	100.0%		
Russell 1000 Value	100.0%	100.0%		
Russell 1000	100.0%	100.0%		
	100.070	100.078		
International Equity Benchmark	As of:			
Contraction of the Contraction o	1/1/08	1/1/00	7/1/86	
MSCI ACWI ex US	100.0%			
MSCI EAFE	33,610,10	75.0%	100.0%	
MSCI Emerging Markets		25.0%		
	100.0%	100.0%	100.0%	
Private Equity Benchmark	As of:			
Triate Equity Denomination	4/1/17	1/1/12	1/1/08	
Russell 1000 +3% 1QL	3/11/1	100.0%	17 1700	
S&P 500 +2% 1QL		100,070	100.0%	
Thomson Reuters CIA All PE 1 Qtr Lag	100.0%		100,070	
Thomson Nedicis Of Air FE T Qui Lag	100.0%	100.0%	100.0%	
Public Credit Benchmark	As of:			
rubiic Credit Belicilliaix	AS 01.			
ICE Both MI High Viold II				
ICE BofA ML High Yield II	50.0%			
Credit Suisse Leveraged Loans	50.0%			
	100.0%			

Private Credit Benchmark	As of:		
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	4/1/17		
	100.0% 100.0%		
	100.070		
Growth Oriented Absolute Return Benchmark	As of:		
	7/1/17	4/1/17	
91-day UST Bill +5%		100.0%	
HFRI FoF Composite Index + 1%	100.0%		
	100.0%	100.0%	
Diversifying Benchmark	As of:		
Diversitying Denominary	7/1/17	4/1/1	
91 Day T-Bill +5%		28.09	
BBgBarc US Aggregate	40.0%	40.0%	
BBgBarc US Treasury	20.0%	20.09	
FTSE WGBI ex US Unhedged	9.6%	9.69	
HFRI FoF Conservative Index	28.0%		
JPM GBI EM Diversified	2.4%	2.4%	
	100.0%	100.0%	
arra de Marca de La Contra de Caracteria de Caracteria de Caracteria de Caracteria de Caracteria de Caracteria	1.40		
Global Fixed Income Benchmark	As of:		
TOT WORLD IN THE I	6/1/13		
FTSE WGBI ex US Unhedged	80.0%		
JPM GBI EM Diversified	20.0%		
15 11 2	100.0%		
Diversifying Absolute Return Benchmark	As of:		
	7/1/17	4/1/17	
91-day UST Bill +5%		100.0%	
HFRI FoF Conservative Index	100.0%		
	100.0%	100.09	
Real Return Benchmark	As of:		
Real Return Benchmark	4/1/19	4/1/17	
Real Estate Benchmark	43.75%	43.75%	
Private Real Assets Benchmark	43.75%	43.75%	
Bloomberg Commodity	15.1070	12.50%	
Liquid Real Return Custom Benchmark	12.50%		
	100.0%	100.0%	
2-d F-t-d- D-s-burnel	As of:		
Real Estate Benchmark	As of: 7/1/17 7	/2011	
NCREIF	mar r	100.0%	
NFI-ODCE	65.0%	100.0%	
NFI-ODCE net +1% 1Q Lag	35.0%		
mi robot not - the rectag	100.0%	100.0%	



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%		
	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 CHARLES OF THE REAL PROPERTY.	100.0%		

AllianceBernstein Benchmark	As of: 1/1/01	1/1/98	5/1/89
Russell 1000	100.0%	1/1/30	3/1/03
Russell 3000	100.070	100.0%	
Wilshire 2500		100.070	100.0%
Thomas 2000	100.0%	100.0%	100.0%
Eagle Capital Benchmark	As of:		
Lagic Capital Delloman	2/1/19	9/1/08	
Russell 1000 Value	2000	100.0%	
Russell 1000	100.0%	100.070	
Control Co.	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:		
-19-11-11-11-11	12/1/13		
ICE BofA ML High Yield II	50.0%		
Credit Suisse Leveraged Loans	50.0%		
Ordan Guisse Edveraged Eduns	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:		
	3/2/2018	10/1/15	2/1/08
BBgBarc US Govt Inflation-Linked 1-10 Yrs		10.0%	
BBgBarc US TIPS		10.0%	20.0%
BBgBarc 1-10 Yr US TIPS	30.0%		
BBgBarc Roll Select Commodity TR	10.0%	20.0%	
BBgBarc USD Floating Rate Note <5yr	10.0%		
DJ US Select REIT			30.0%
FTSE EPRA/NAREIT Developed Liquid	15.0%	10.0%	
MSCI World Natural Resources		20.0%	25.0%
S&P Global Large Mid Cap Commodity Resources	10.0%		
S&P Global Infrastructure	25.0%	20.0%	
00D 00 0 PP			25.0%
S&P GS Commodities			
S&P GS Commodities S&P MLP		10.0%	



### 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.

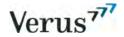
Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard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