

Meeting Date  
**08/25/2021**  
Agenda Item  
**#6a.**

**Verus** 



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2021**

Investment Performance Review for

**Contra Costa County Employees' Retirement Association**

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Investment Landscape

TAB I

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Investment Performance  
Review

TAB II



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

3<sup>RD</sup> QUARTER 2021  
Investment Landscape

# Recent Verus research

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

## 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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# 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 pandemic-induced 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 15<sup>th</sup>, 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 18<sup>th</sup>, 2021

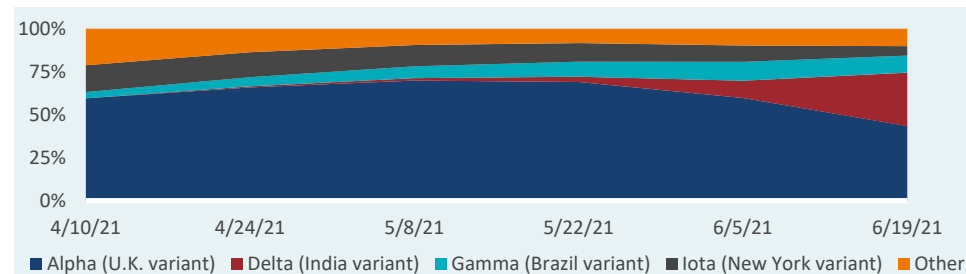
**“Is the reflation trade over? What stock-market investors need to watch”**

## TEN-YEAR U.S. TREASURY YIELD

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

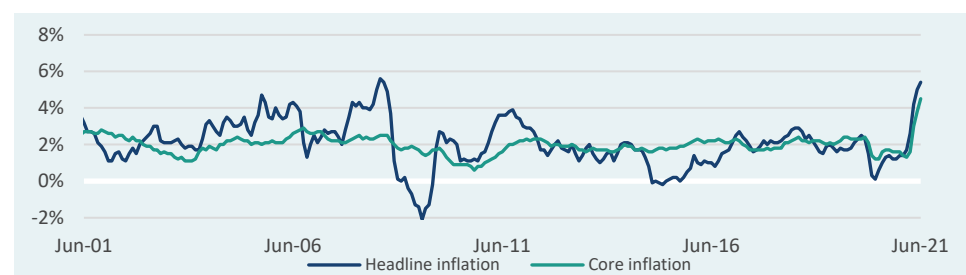
Article Source: MarketWatch, June 21<sup>st</sup>, 2021

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



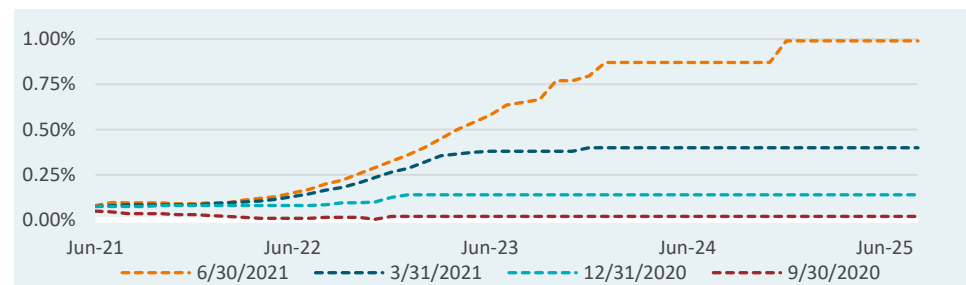
Source: U.S. Center for Disease Control, as of 6/19/21

## 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 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 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 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 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.

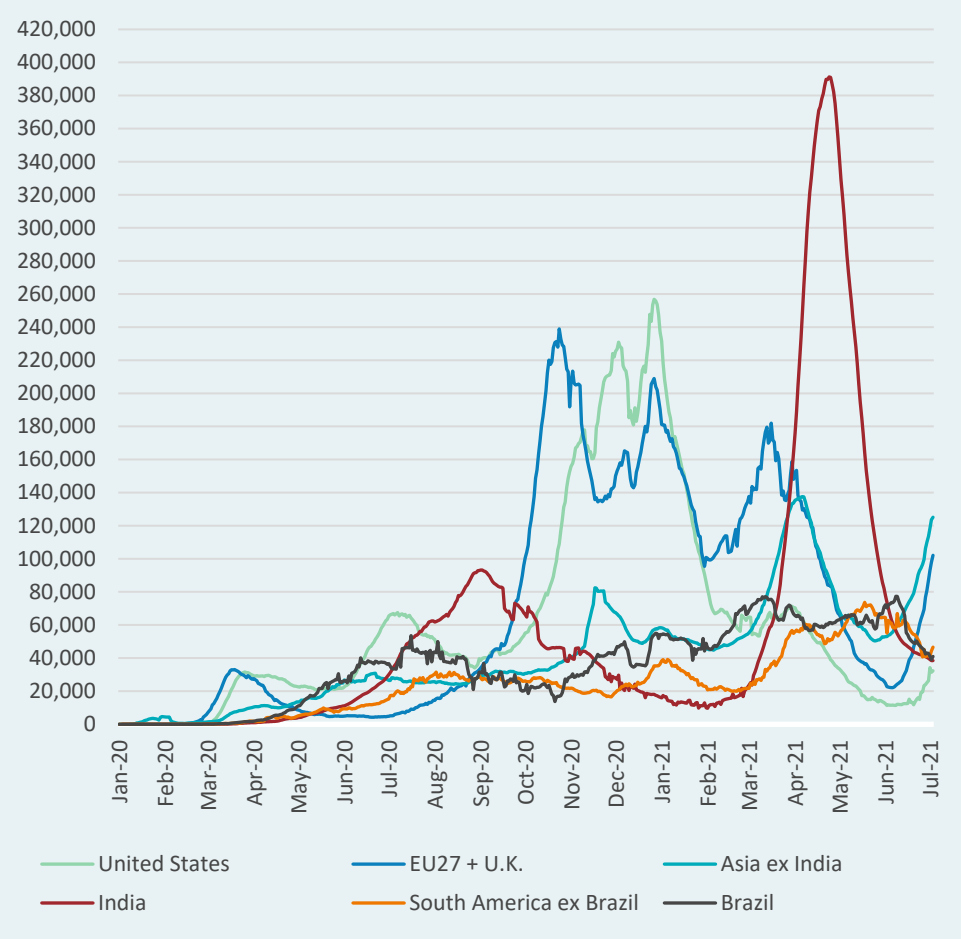
— Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise. U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few specific 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.

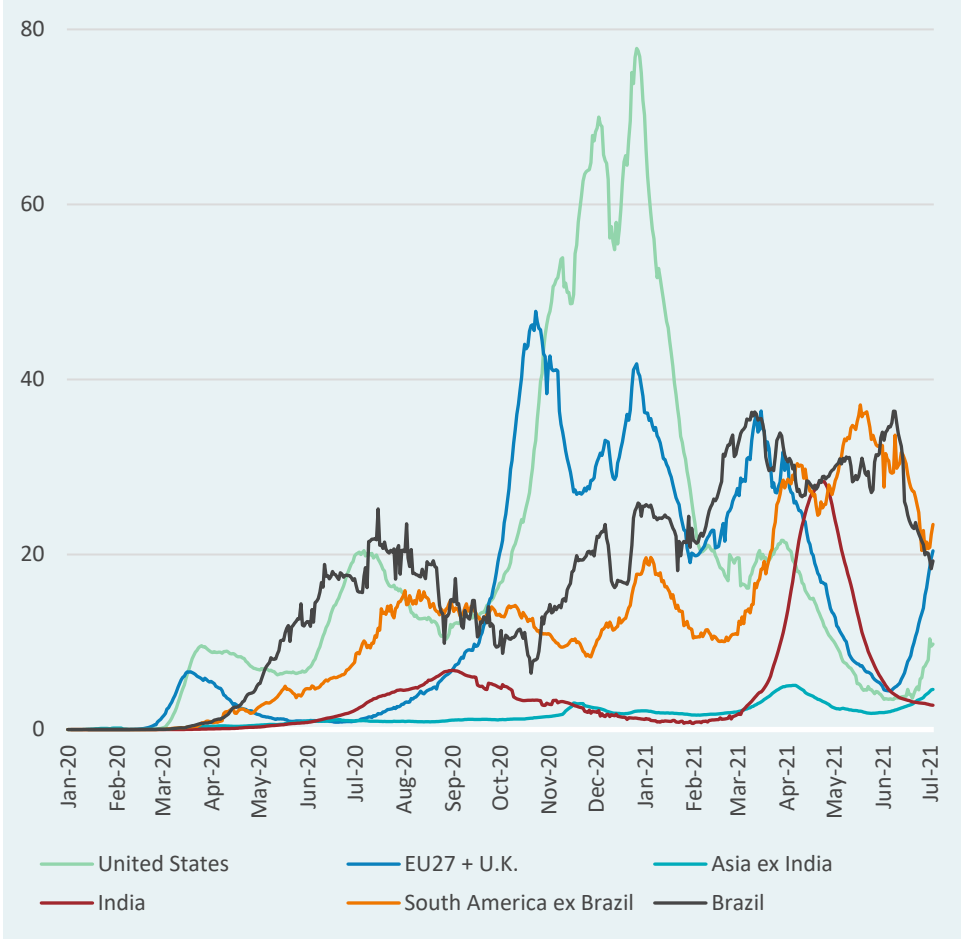
	Most Recent	12 Months Prior
GDP (YoY)	0.4% 3/31/21	0.3% 3/31/20
Inflation (CPI YoY, Core)	4.5% 6/30/21	1.2% 6/30/20
Expected Inflation (5yr-5yr forward)	2.20% 6/30/21	1.5% 6/30/20
Fed Funds Target Range	0% – 0.25% 6/30/21	0% – 0.25% 6/30/20
10-Year Rate	1.47% 6/30/21	0.66% 6/30/20
U-3 Unemployment	5.9%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

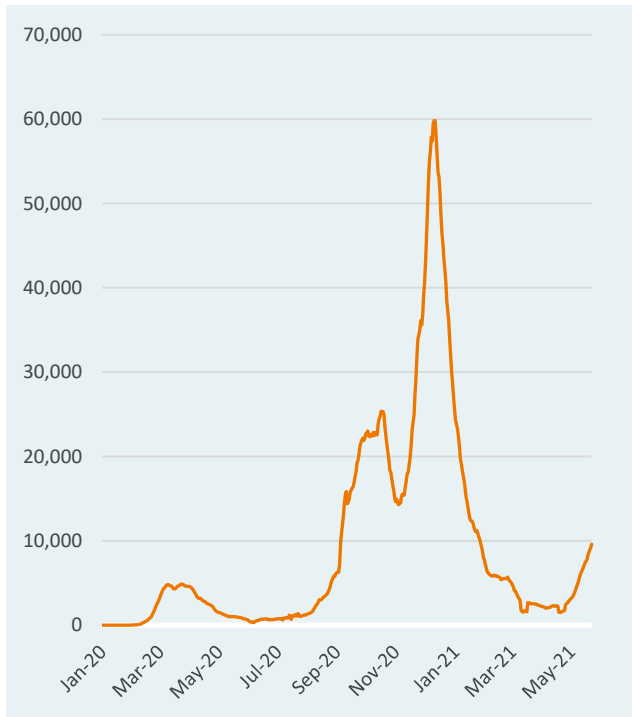


Source: Bloomberg, as of 7/18/21

# 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.

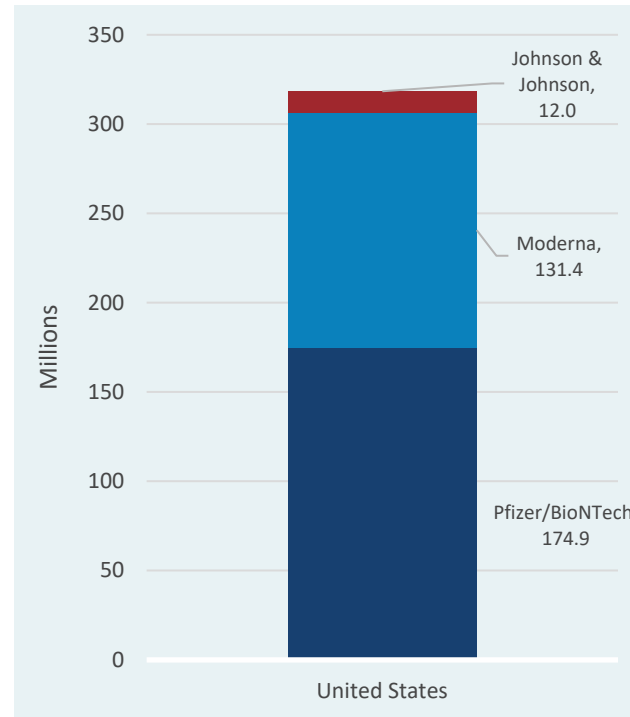
U.K. – SEVEN-DAY AVERAGE CASE GROWTH



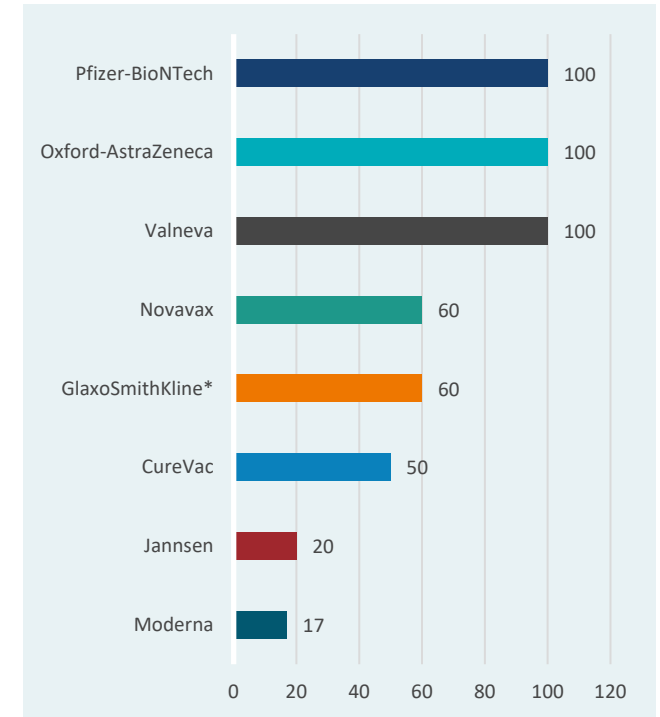
Source: Bloomberg, BBC, U.K. government, as of 6/21/21

\*Joint project with Sanofi Pasteur.

U.S. – VACCINE DOSES ADMINISTERED BY TYPE



U.K. VACCINE DOSE ORDERS (MILLIONS)

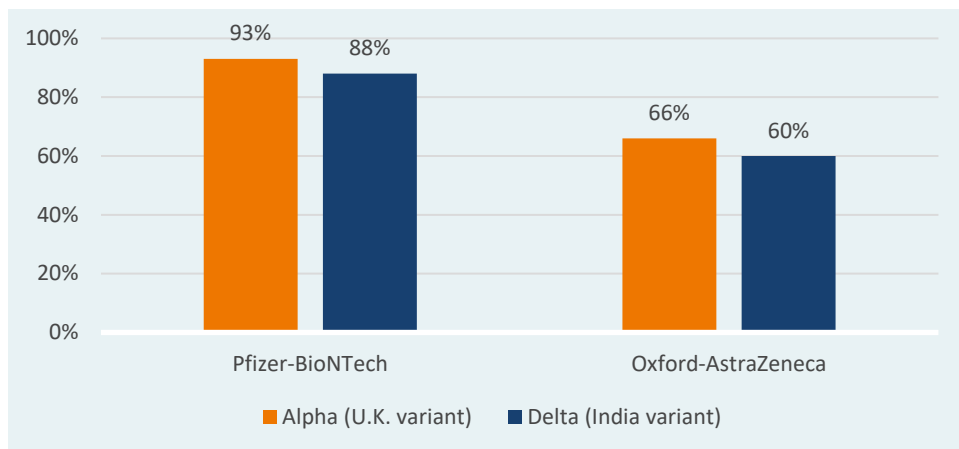


# Public Health England (PHE) findings

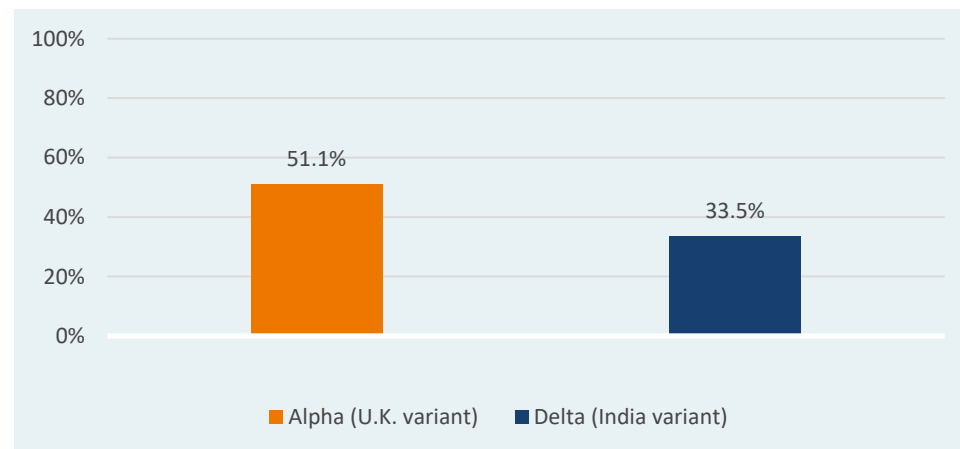
While case growth has picked up from very low levels within the U.K., there are several factors in play which probably reduce the likelihood that delta case growth picks up materially in the U.S.

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**



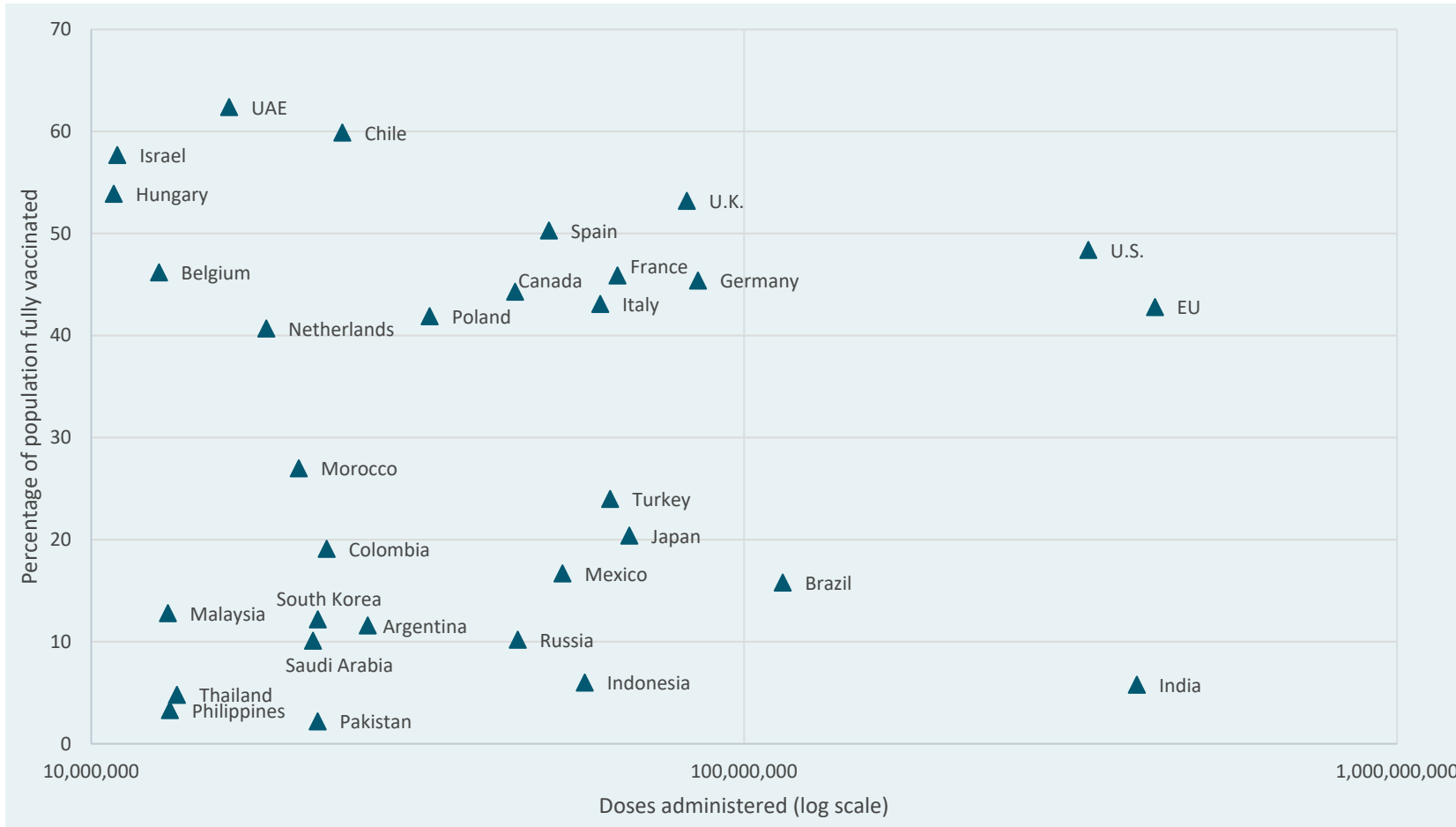
**ONE-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA**



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).

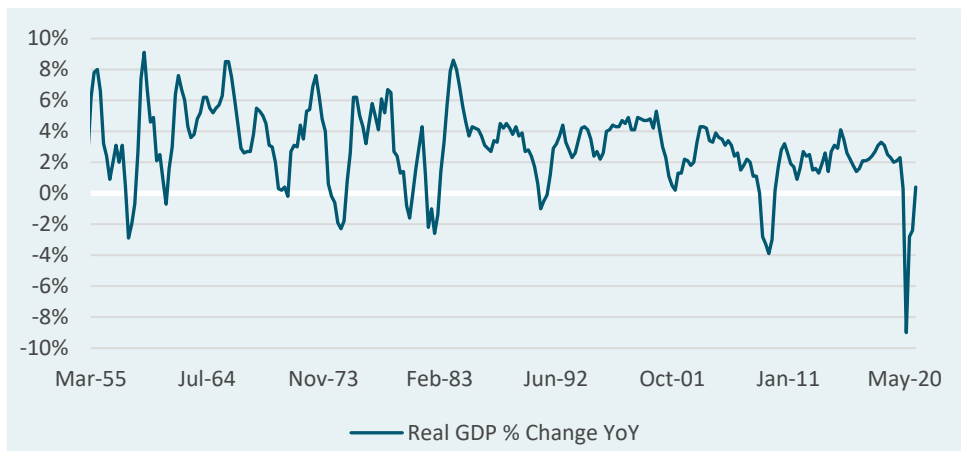
The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for \$4.1 trillion in spending, comprised of \$3.5 trillion in “human infrastructure” (Medicare funding, childcare, government-funded 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 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.

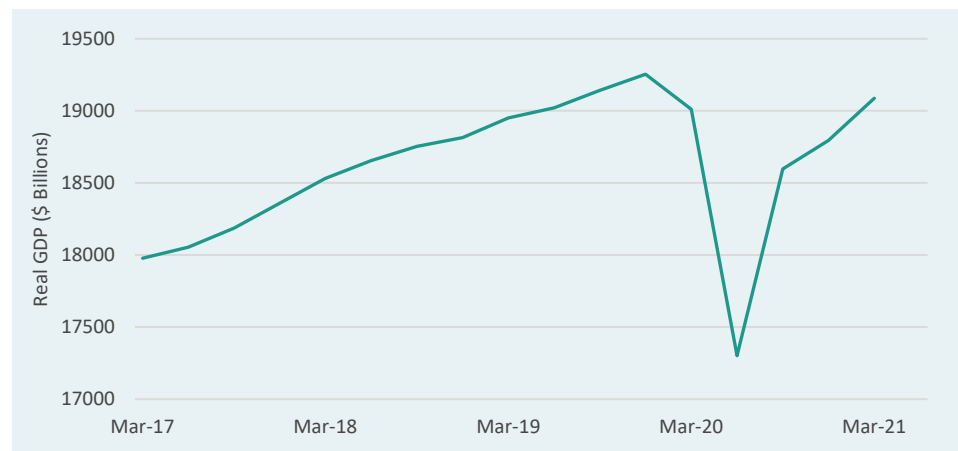
The U.S. economy likely fully recovered during Q2 2021

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/21

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 3/31/21

# Inflation

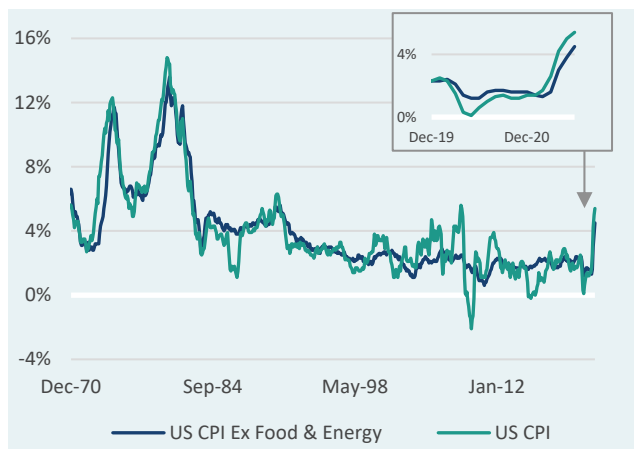
Inflation surprised on the upside in Q2, adding to investor concerns around a sustained rise. U.S. core CPI, which excludes food & energy prices, rose 4.5% YoY in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few areas. Energy prices (+24.5% YoY) 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.

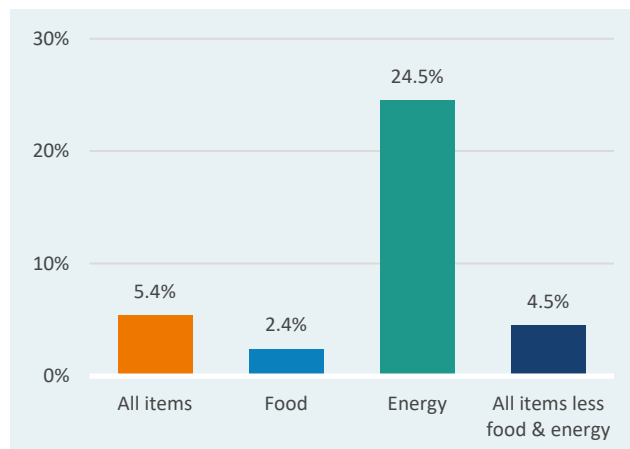
It is important to distinguish between *one-time* and *transitory* price rises in the current environment

U.S. CPI (YOY)



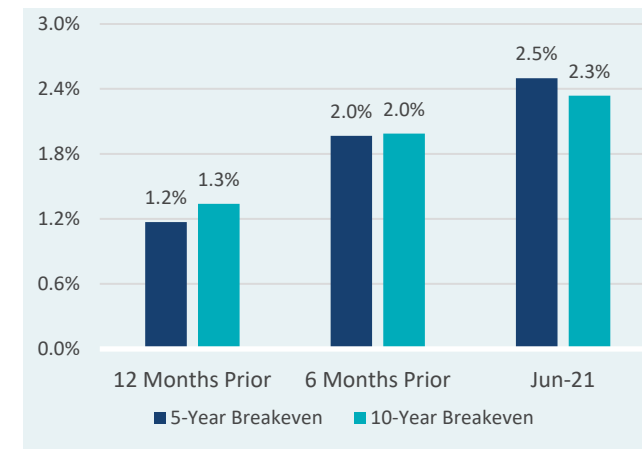
Source: Bloomberg, as of 6/30/21

U.S. CPI (YOY)



Source: BLS, as of 6/30/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 6/30/21

# Labor market

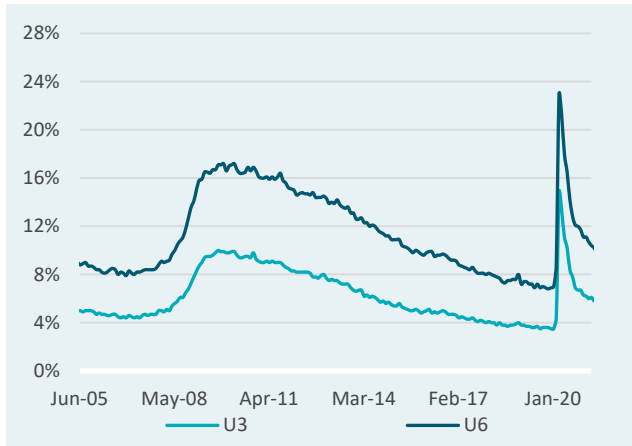
The U.S. labor market rate has been slow to recover, as unemployment fell only slightly from 6.0% in March to 5.9% in June. Labor participation also paints a lukewarm picture, rising from 61.5% to 61.6% during the quarter. The labor market remains materially weaker relative to pre-pandemic conditions. 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.

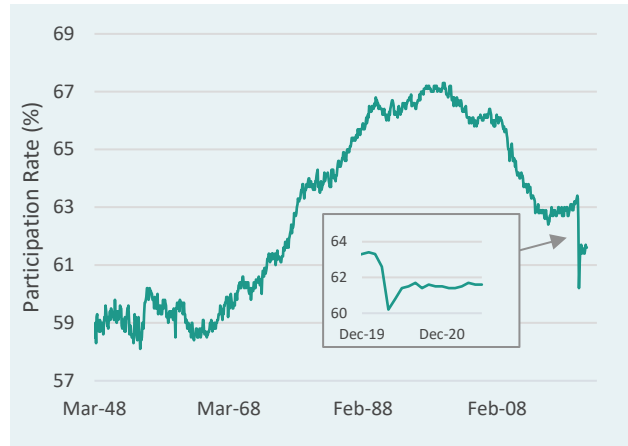
**A large portion of the U.S. labor force remains neither employed nor seeking work**

## U.S. UNEMPLOYMENT



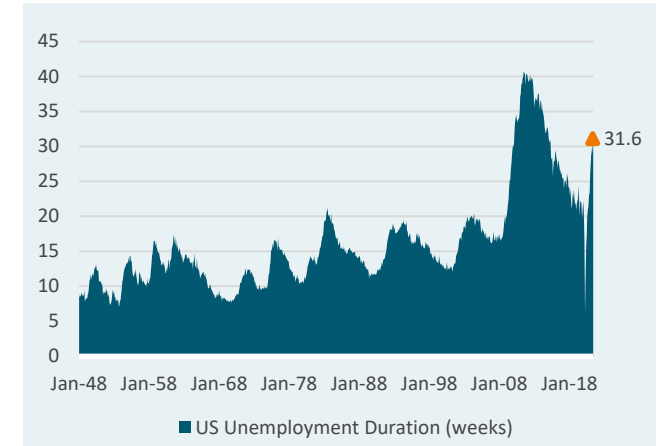
Source: FRED, as of 6/30/21

## LABOR PARTICIPATION RATE



Source: FRED, as of 6/30/21

## UNEMPLOYMENT DURATION



Source: FRED, as of 6/30/21



# Employment conditions

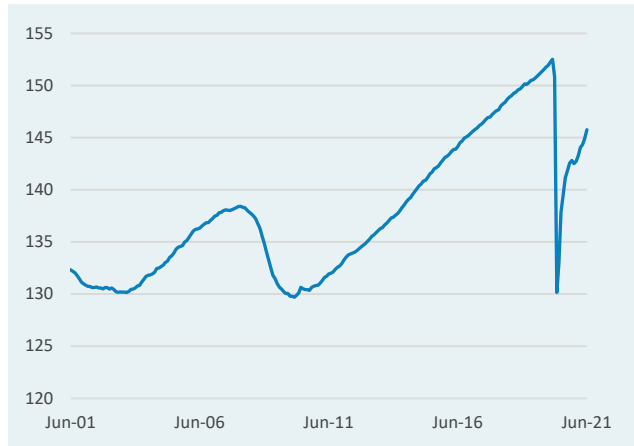
Nonfarm payrolls expanded by 567,000 per month on average in the second quarter, reaching a total of 145.8 million by quarter-end. This number was 6.8 million below the pre-pandemic peak of February 2020. Labor market conditions have been improving overall, but the road has been bumpy, given the ebb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

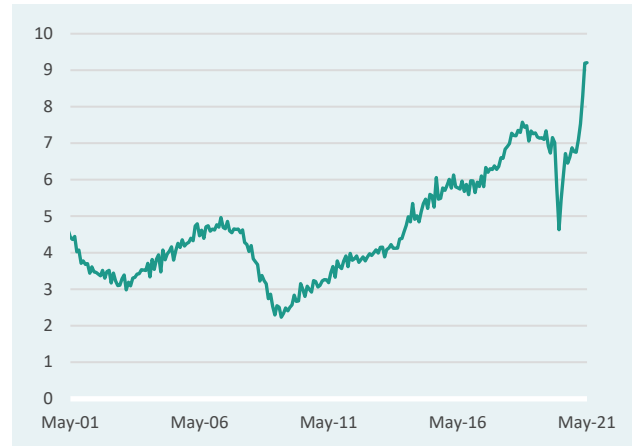
While employers are struggling to find qualified employees in the current environment, the expiration of a litany of additional unemployment insurance programs through the end of the year could push up labor market supply. Whether the skills of the currently not-working contingent matches up with current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

**U.S. EMPLOYEES ON NONFARM PAYROLLS**



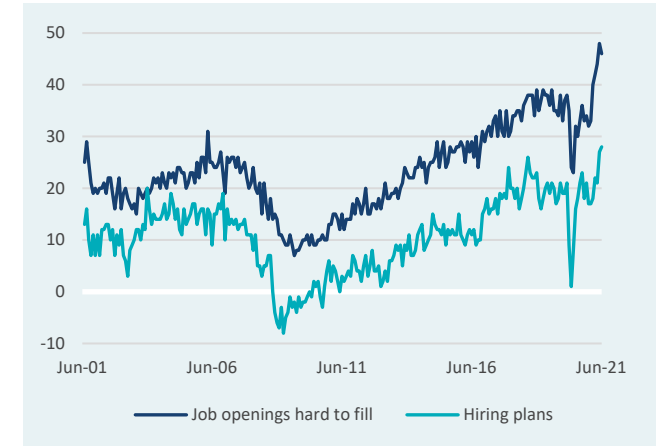
Source: BLS, as of 6/30/21

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



Source: BLS, as of 5/31/21

**SMALL BUSINESS OWNERS' HIRING CONDITIONS**



Source: NFIB, as of 6/30/21

# The consumer

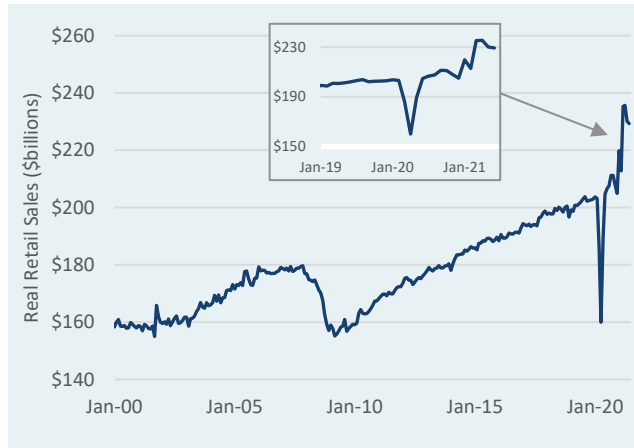
U.S. retail sales would appear red hot if defined on a year-over-year growth basis (+12%). But, as we have mentioned during past quarters, year-over-year numbers are skewed due to the events of early-2020. In reality, retail sales fell -2.5% from Q1 to Q2.

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.

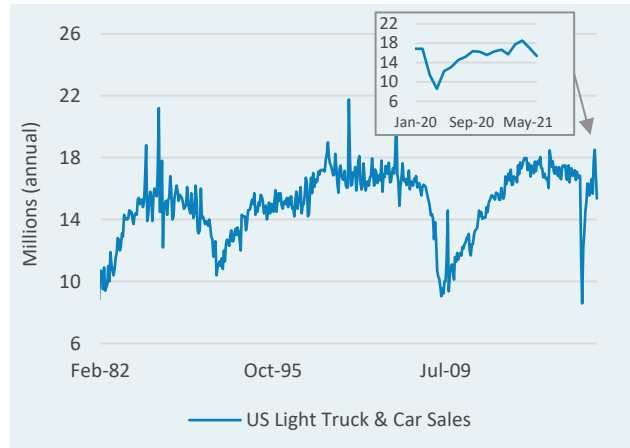
According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans appear to have returned to normal life in most respects. Travel to the workplace and transit usage, however, remain notably depressed relative to pre-COVID activity. If work-from-home policies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

## REAL RETAIL SALES



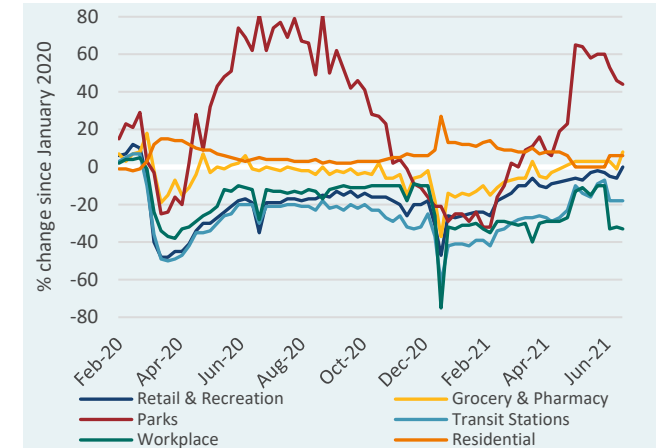
Source: FRED, as of 6/30/21

## AUTO SALES



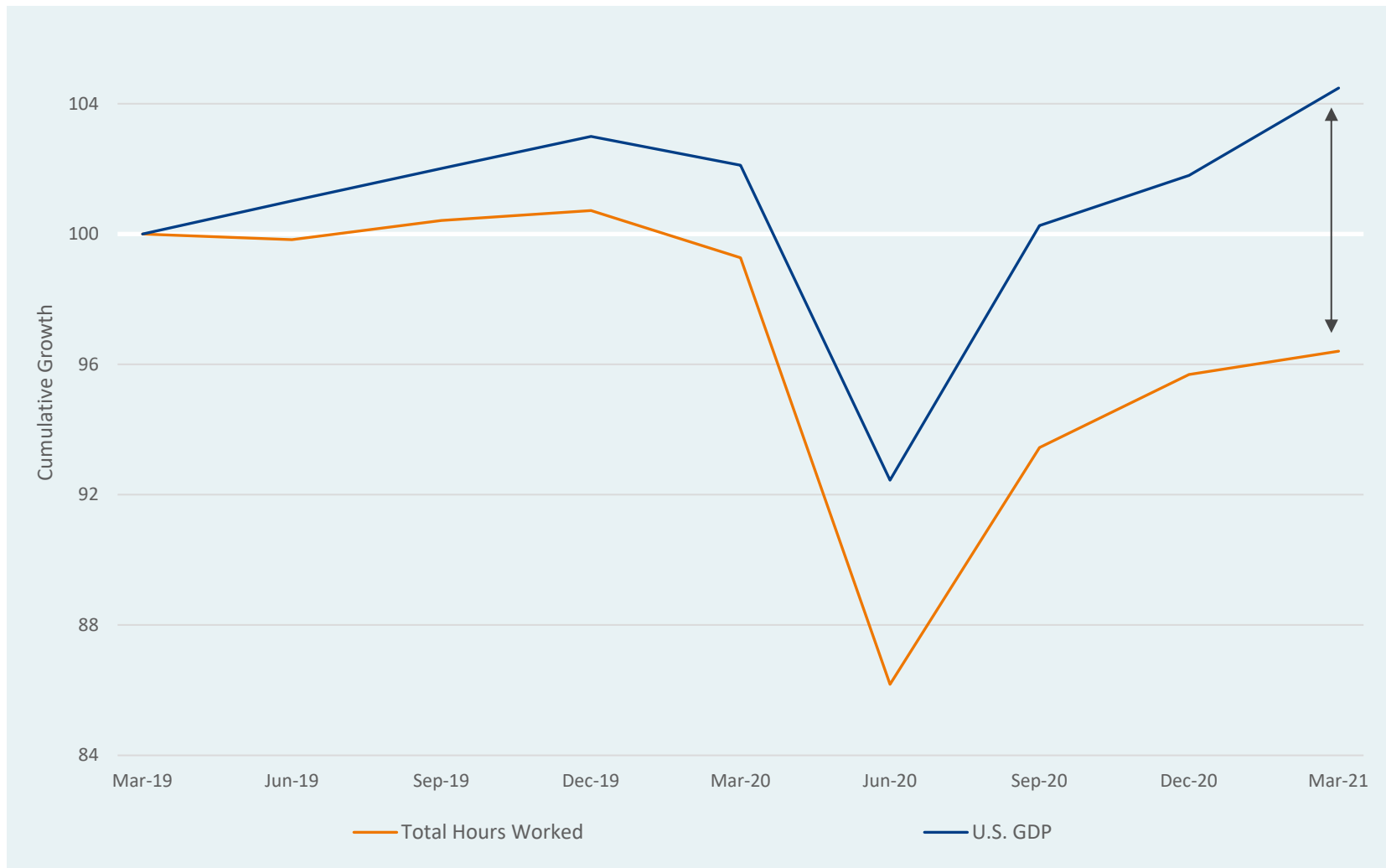
Source: Federal Reserve, as of 6/30/21

## GOOGLE U.S. ACTIVITY TRACKER



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

# 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

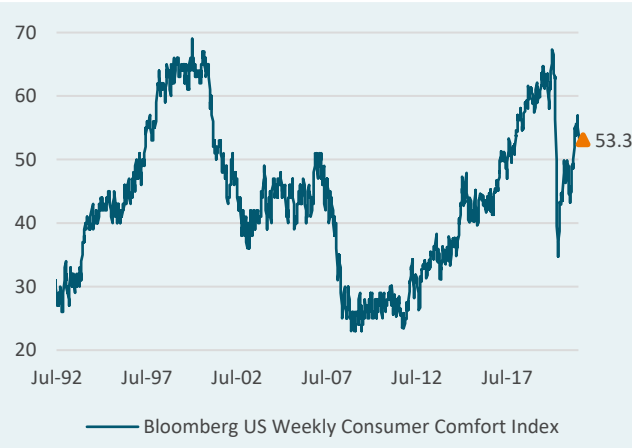
Consumer sentiment further improved over the quarter but has only recovered roughly half of the deterioration post-COVID, according to the indices below.

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.

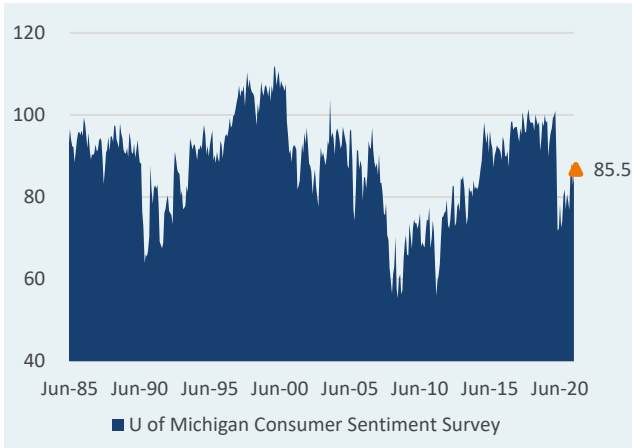
Small business optimism improved over the quarter but remained below pre-pandemic levels. Business owners are optimistic on the outlook, supported by expectations for gradual economic reopening, but continue to struggle to fill open positions due to a shortage of qualified employees in the labor pool.

**CONSUMER COMFORT**



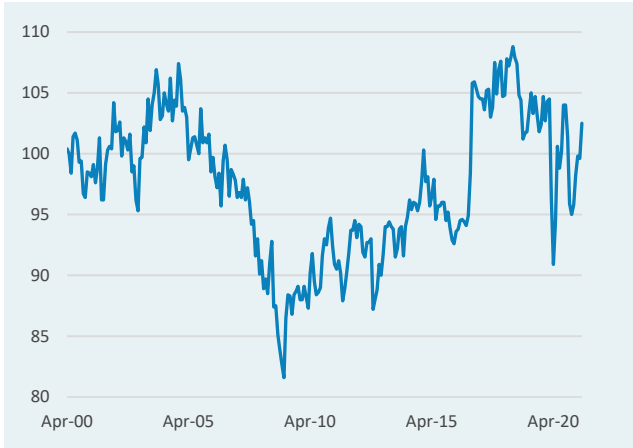
Source: Bloomberg, as of 6/30/21

**CONSUMER SENTIMENT**



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

**SMALL BUSINESS OPTIMISM**



Source: NFIB, as of 6/30/21

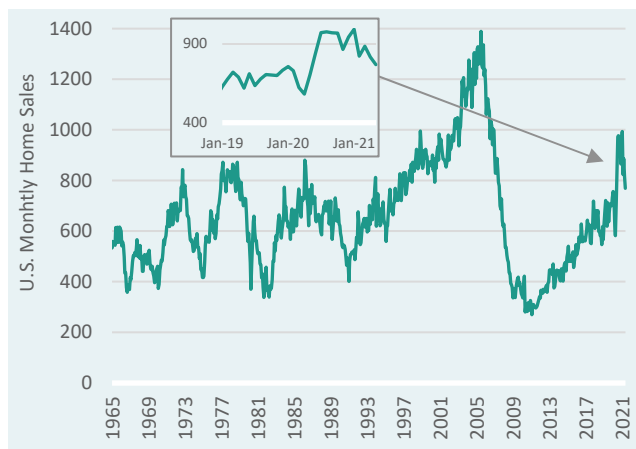
# Housing

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

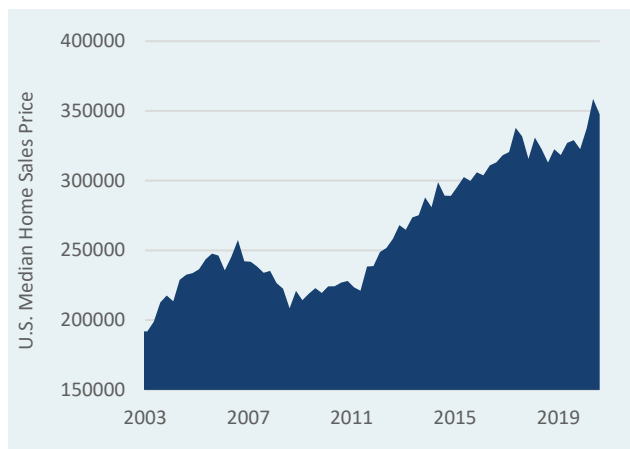
trend will persist. Housing inventory has improved, now standing at 5.1 months of supply, which is closer to pre-pandemic levels. This likely eases some price pressure. Earlier in the year it appeared that mortgage interest rates were rebounding towards prior levels, beginning the year at 2.67% and reaching 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**



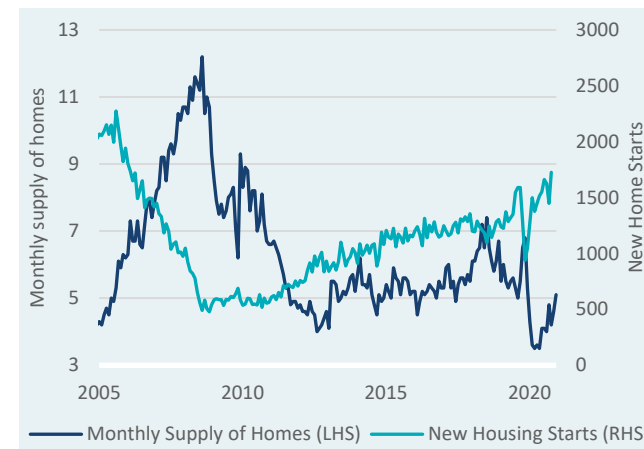
Source: U.S. Census Bureau, as of 5/31/21

**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 all-time-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% 3/31/21	5.4% 6/30/21	5.9% 6/30/21
Eurozone	(1.3%) 3/31/21	1.9% 6/30/21	7.9% 5/31/21
Japan	(1.6%) 3/31/21	0.0% 6/30/21	3.1% 5/31/21
BRICS Nations	13.3% 3/31/21	2.5% 6/30/21	5.7% 12/31/20
Brazil	1.0% 3/31/21	8.4% 6/30/21	14.7% 4/30/21
Russia	(0.7%) 3/31/21	6.5% 6/30/21	4.9% 5/31/21
India	1.6% 3/31/21	6.3% 6/30/21	9.2% 6/30/21
China	7.9% 6/30/21	1.1% 6/30/21	5.0% 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

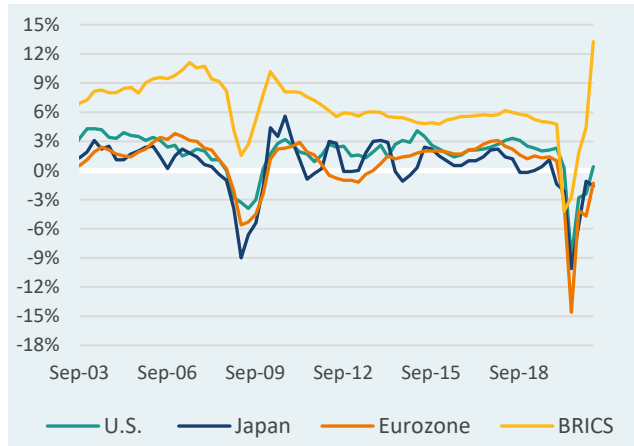
Economies around the world continued to recover, as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID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

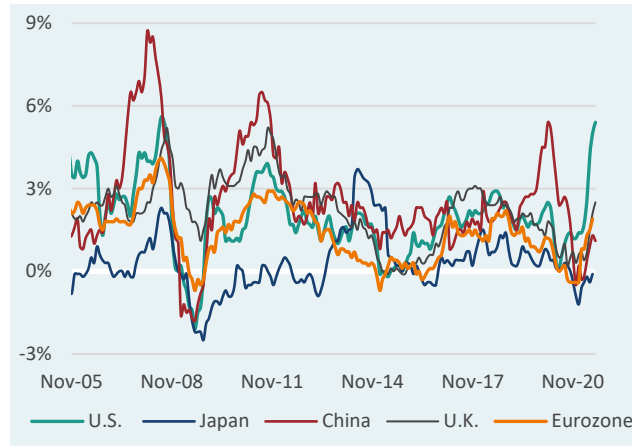
The rate of unemployment was mixed during the second quarter. The U.S. and Eurozone labor markets improved moderately over the quarter, while Japan saw a rise in joblessness. As we have described in prior quarters, governments have taken very different approaches to supporting workers, which has made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

**REAL GDP GROWTH (YOY)**



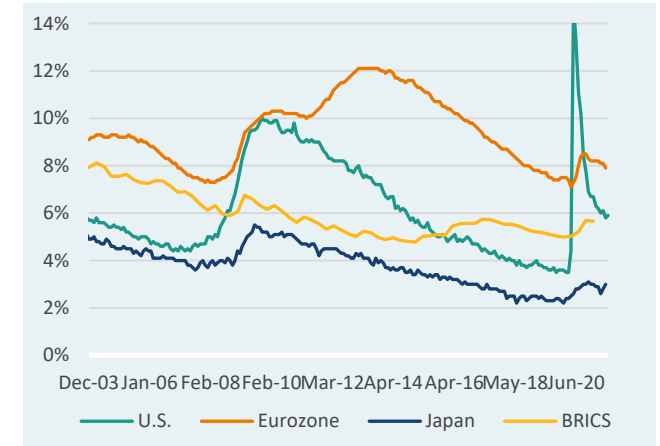
Source: Bloomberg, as of 3/31/21

**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

# Fixed income rates & credit



# Fixed income environment

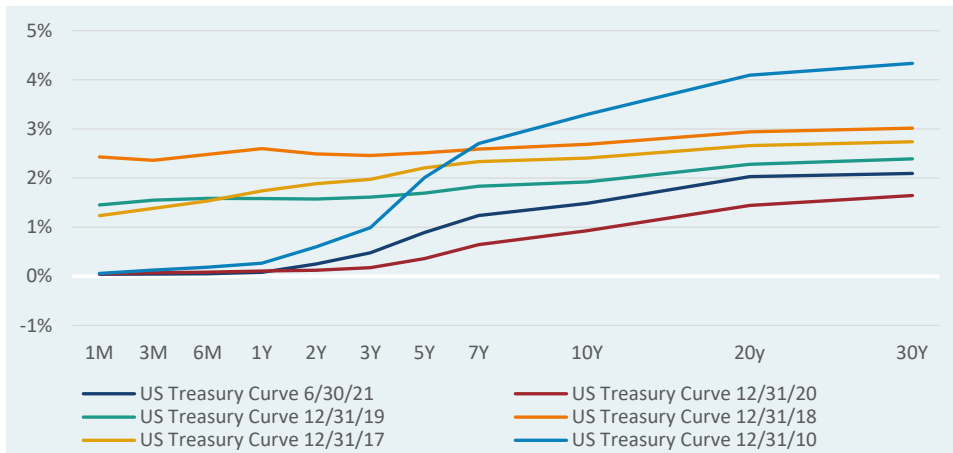
- The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve’s recent indications that monetary policy will be kept very easy for the medium term. “Lower-for-longer” interest rates may act as a support to risk asset prices.
- Despite 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%)

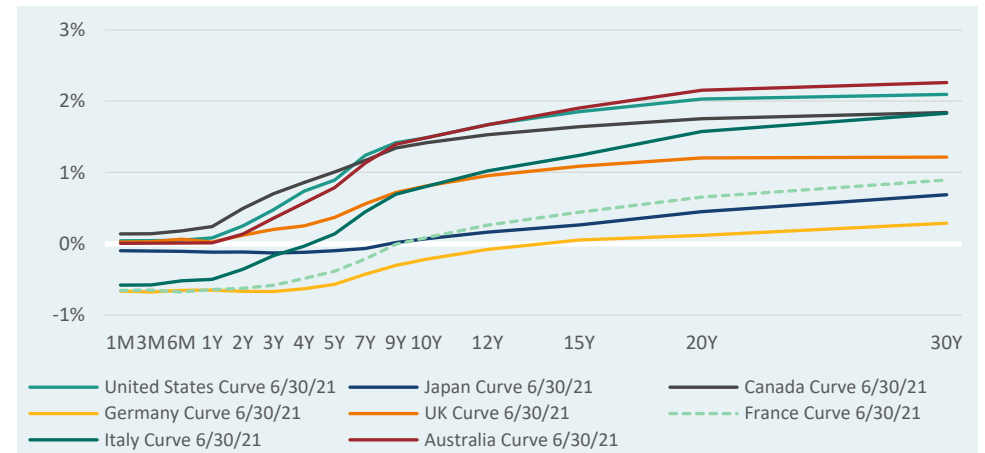
Source: Bloomberg, as of 6/30/21

# Yield environment

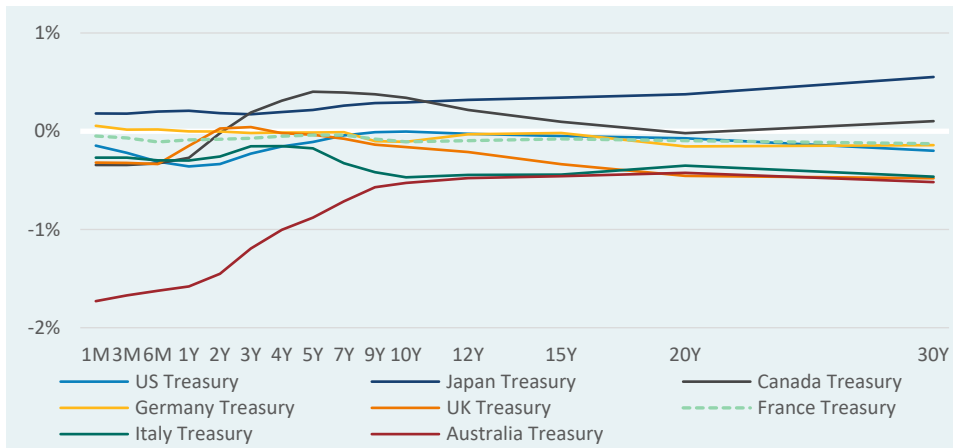
## U.S. YIELD CURVE



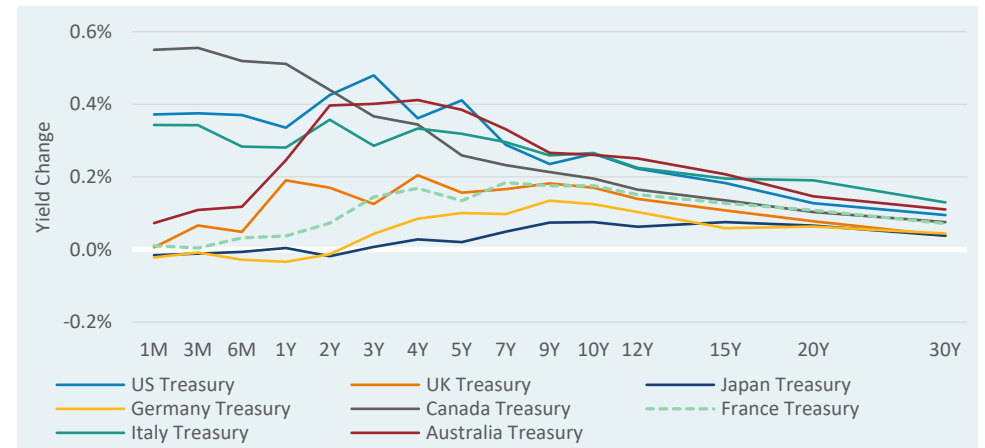
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/21

# Credit environment

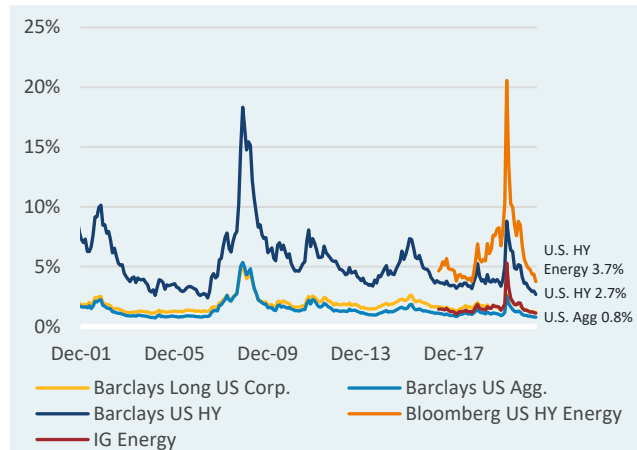
Credit markets performed positively in the second quarter, supported by strong corporate earnings, strong inflows and the expectation that supply will moderate in the second half of the year. Interest rates, specifically on the long-end of the curve, fell over the quarter, providing further duration 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.

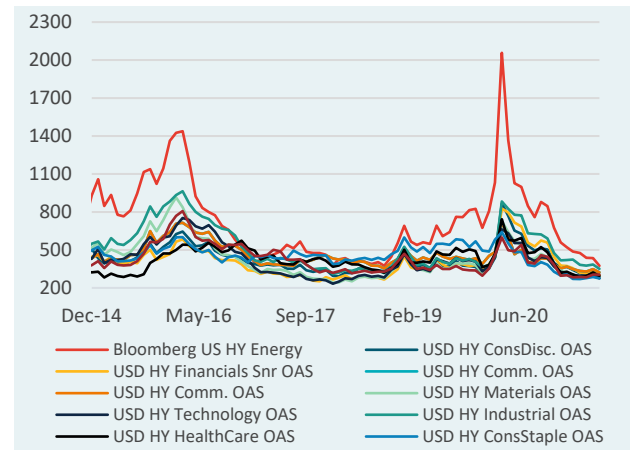
Lower quality bonds continue to outperform within both high yield and leverage loans. CCC bonds have now outperformed the broad high yield bond index in 10 of the past 11 months while split B/CCC loans have outperformed in 11 consecutive months.

## SPREADS



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

## HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/21

Market	Credit Spread (OAS)	
	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)

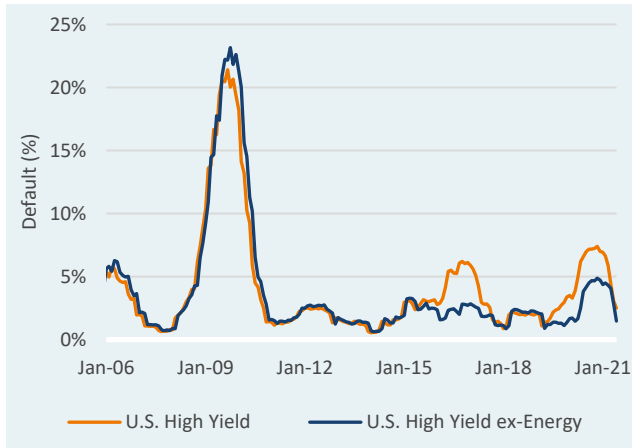
# Default & issuance

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.

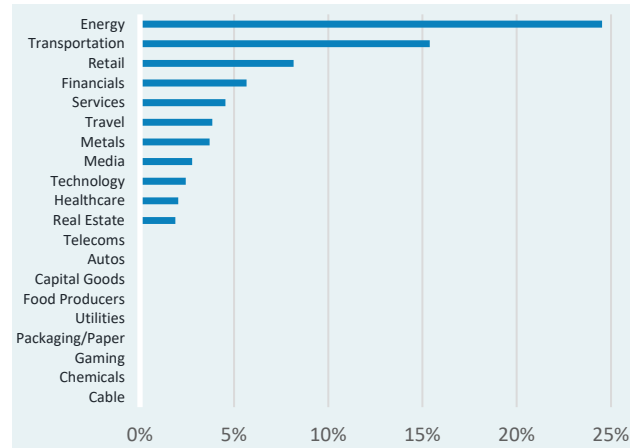
Investment grade issuance for the quarter totaled \$350 billion, below the four-year average second quarter issuance of \$401, and less than the \$423 billion issued in Q1.

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



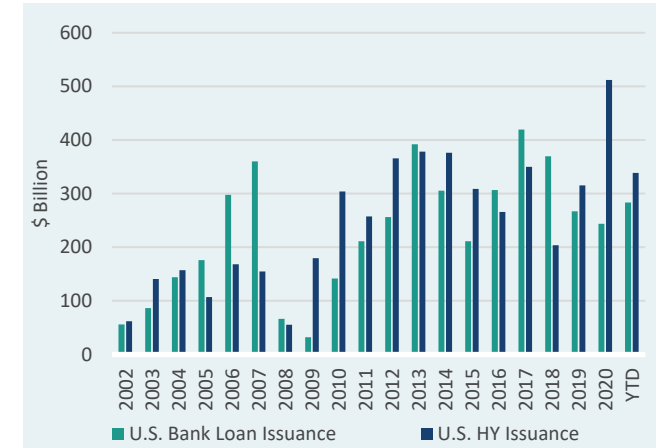
Source: BofA Merrill Lynch, as of 6/30/21

**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 TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5%		40.8%	
US Small Cap (Russell 2000)	4.3%		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 30<sup>th</sup> was 64.0%. If that rate were to materialize, it would mark the highest year-over-year 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.

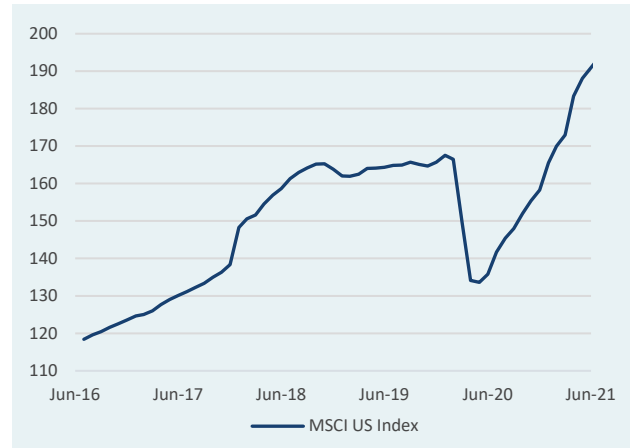
While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

**S&P 500 INDEX**



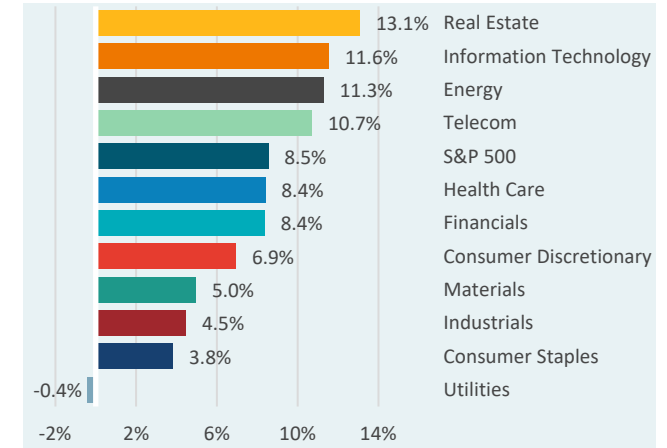
Source: Standard & Poor's, as of 6/30/21

**FORWARD 12-MONTH EARNINGS PER SHARE**



Source: MSCI, as of 6/30/21

**Q2 SECTOR PERFORMANCE**



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.

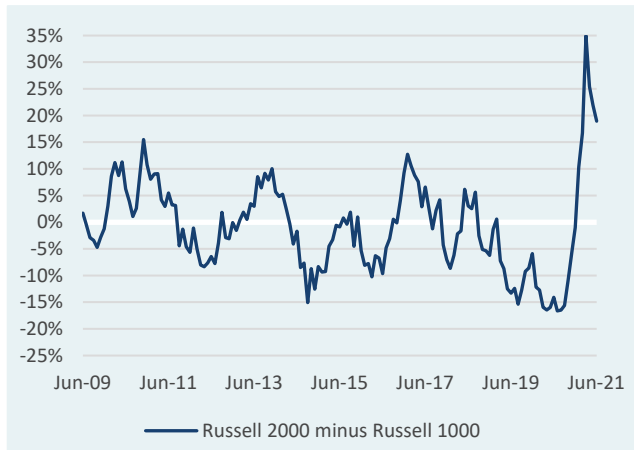
Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on

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.

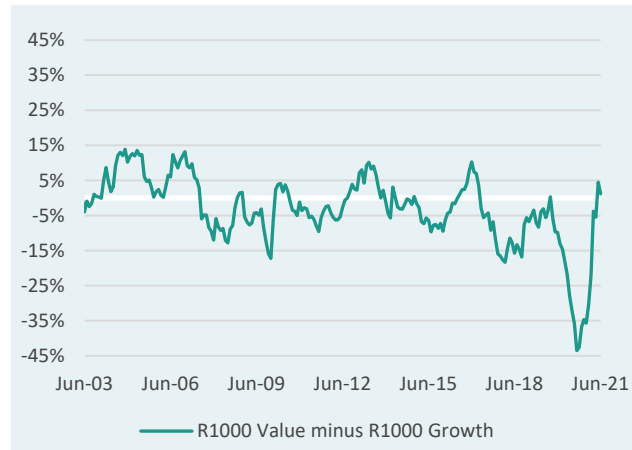
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



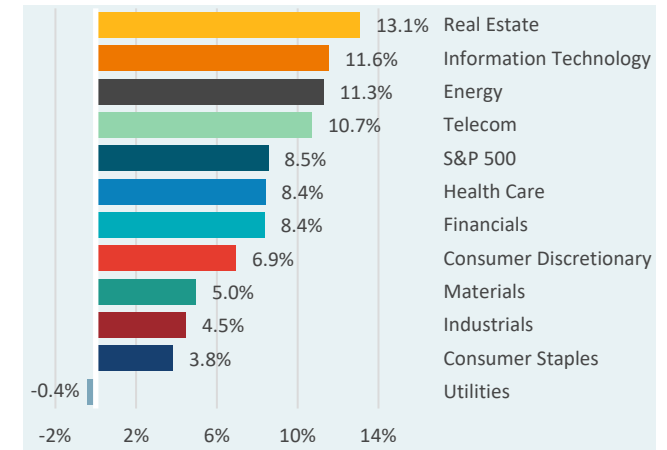
Source: FTSE, as of 6/30/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/21

Q2 SECTOR PERFORMANCE



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



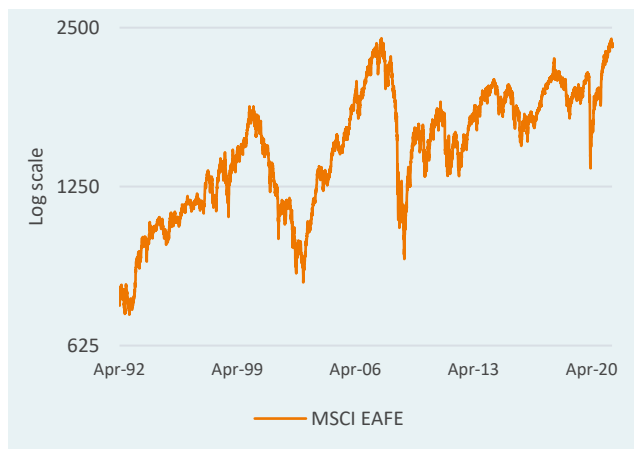
# International developed equity

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.

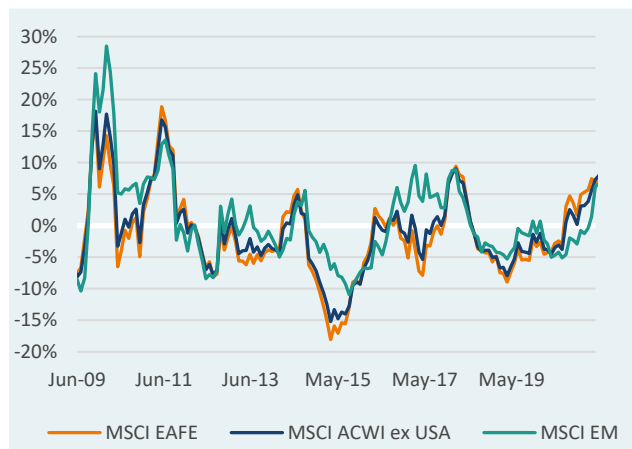
Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions 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**



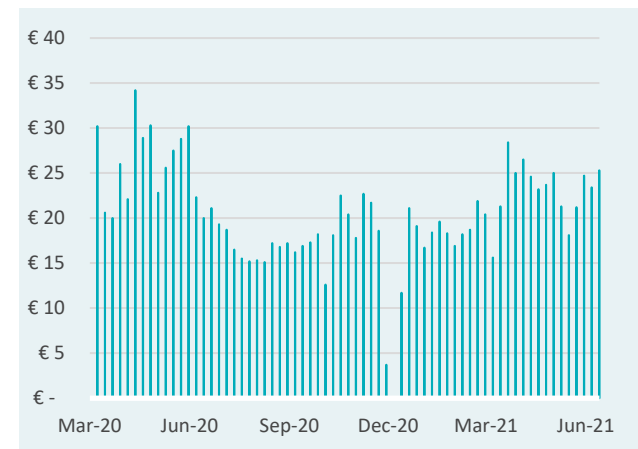
Source: MSCI, as of 6/30/21

**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

# Emerging market equity

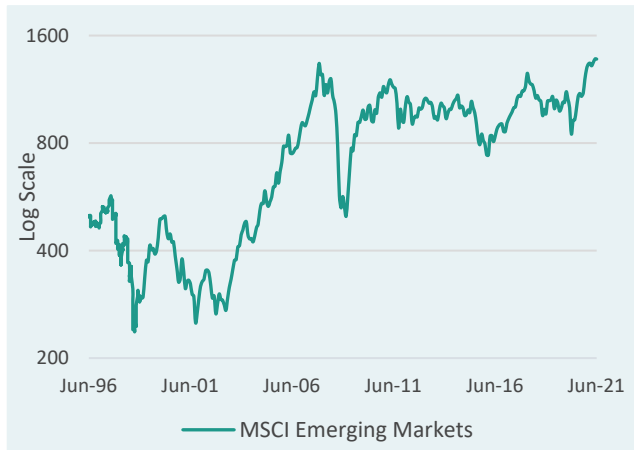
Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

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.

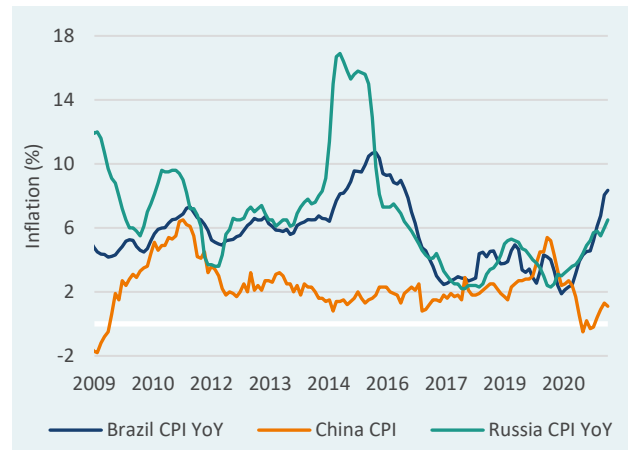
Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that 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



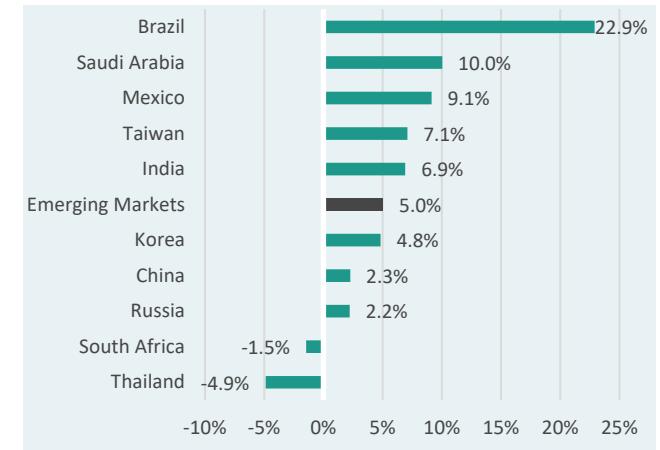
Source: MSCI, as of 6/30/21

## INFLATION (YOY)



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

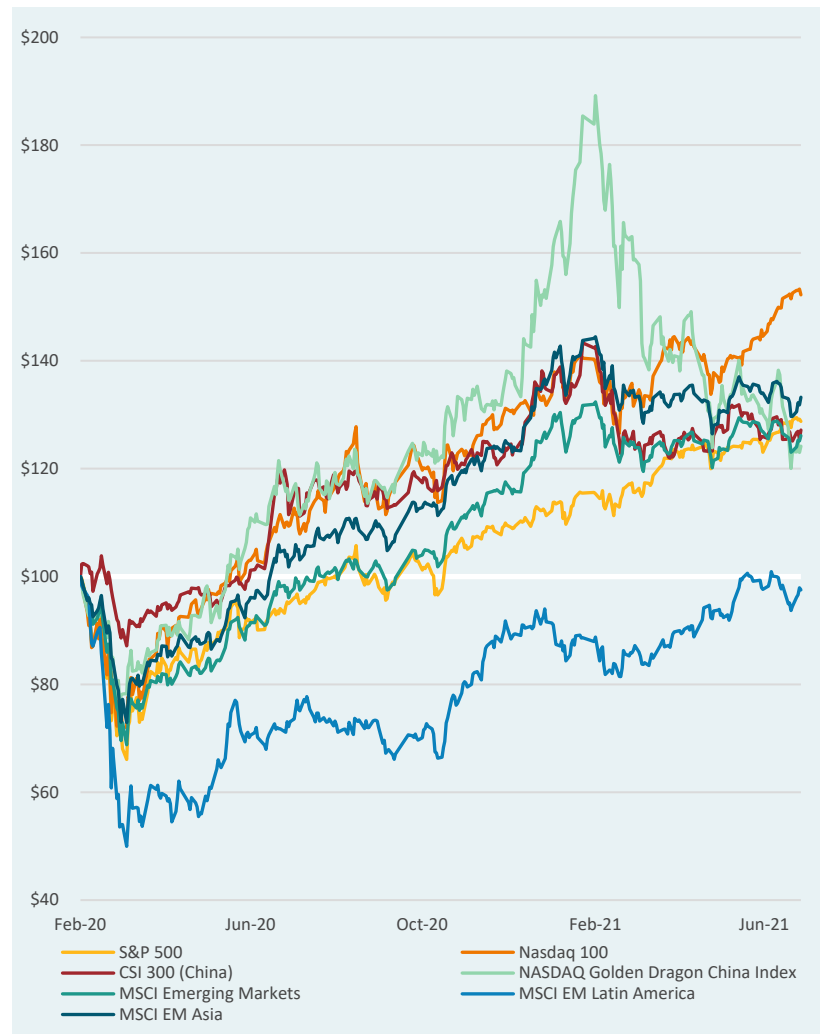
## Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



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

# 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

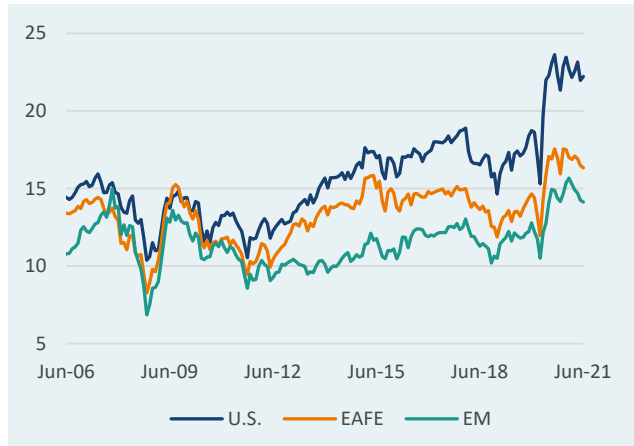
# Equity valuations

Industry analysts forecast a 11.2% gain over the next 12 months for the S&P 500, according to FactSet, despite record-high 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

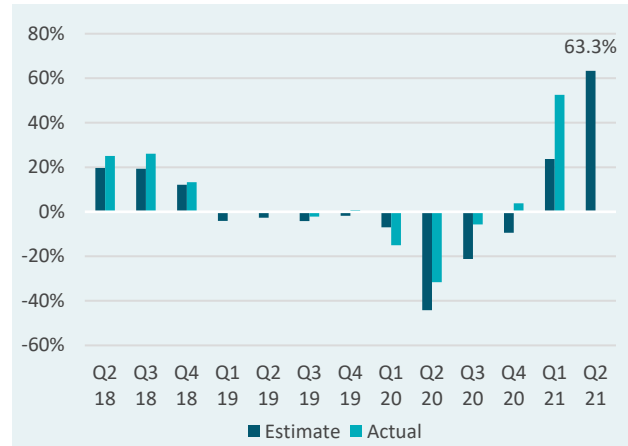
excessive and will come back down due to a market correction. Some investors might question the possibility of a third scenario – that future earnings growth will be strong enough to naturally bring down valuations. However, this third scenario is not currently supported by earnings forecasts. Our view 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



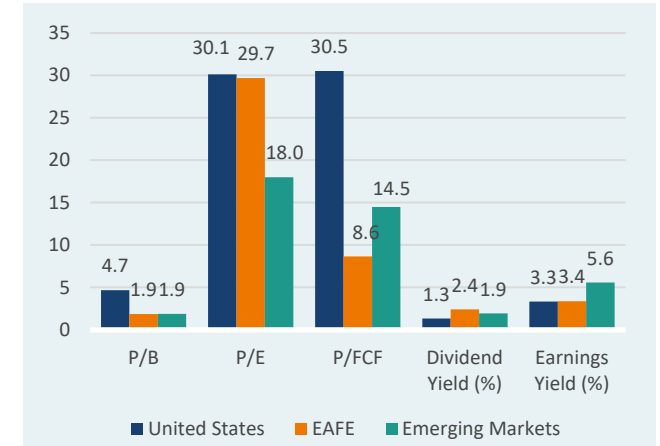
Source: MSCI, 12m forward P/E, as of 6/30/21

## 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

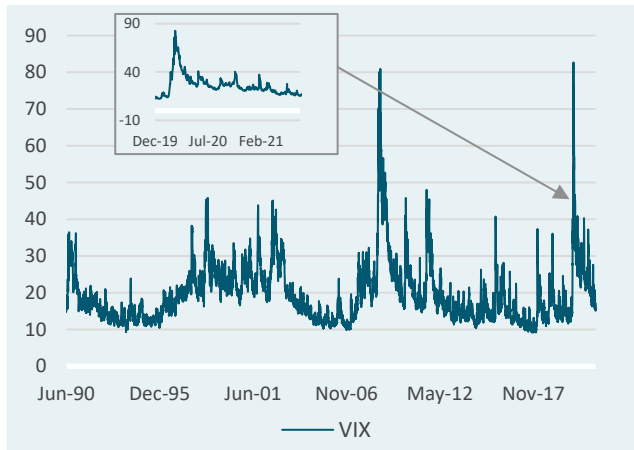
The Cboe VIX Index has fallen further year-to-date, reaching 15 in June. This compares to the longer-term average of 19. One-year trailing realized volatility has now returned to pre-COVID levels.

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.

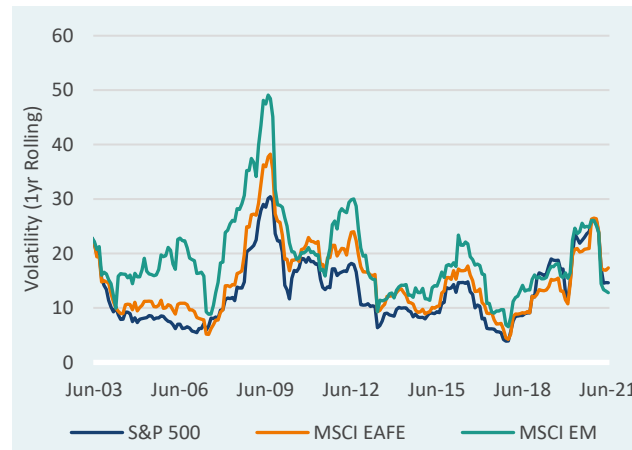
The Cboe Skew Index, which measures the perceived tail risk of the distribution of S&P 500 Index returns over a 30-day horizon, rose to 161.9, 35% above its average level since inception in 1990. The high level of the skew index indicates a steep implied volatility curve, which could be interpreted as 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)**



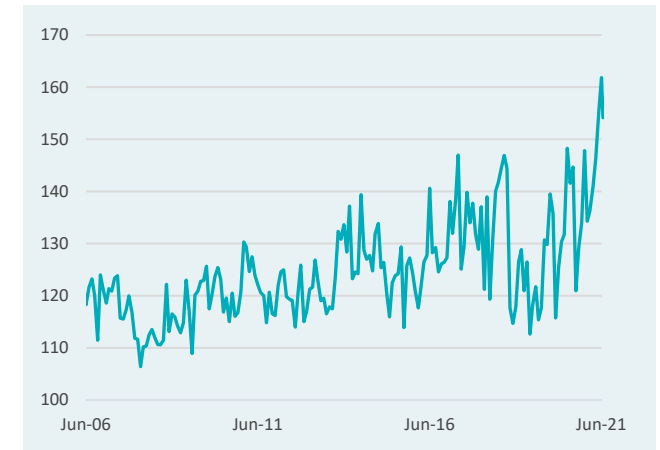
Source: Cboe, as of 6/30/21

**REALIZED VOLATILITY**



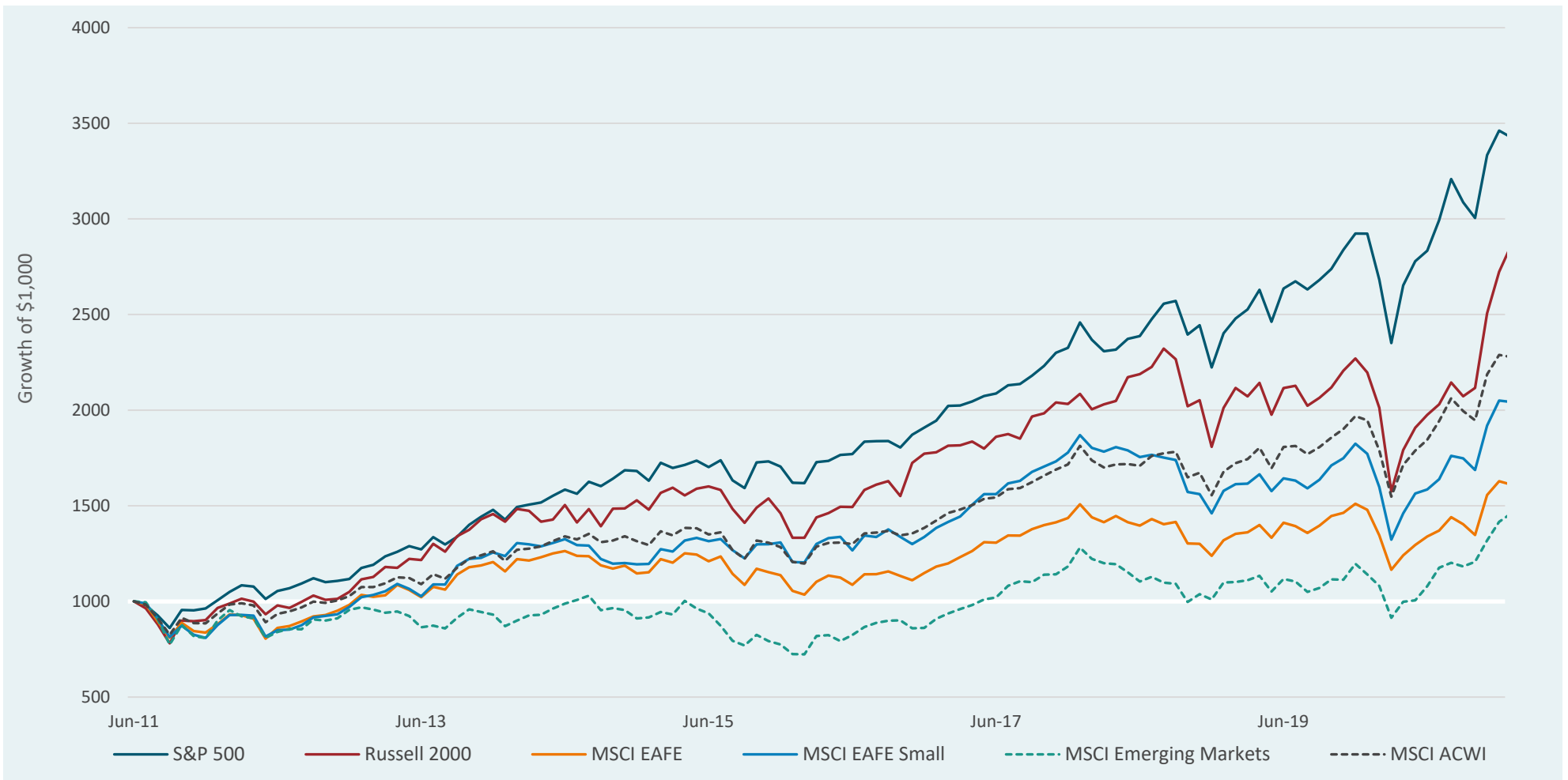
Source: Standard & Poor's, MSCI, as of 6/30/21

**CBOE SKEW INDEX**



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

# Long-term equity performance



Source: Morningstar, as of 6/30/21

# Other assets

# Currency

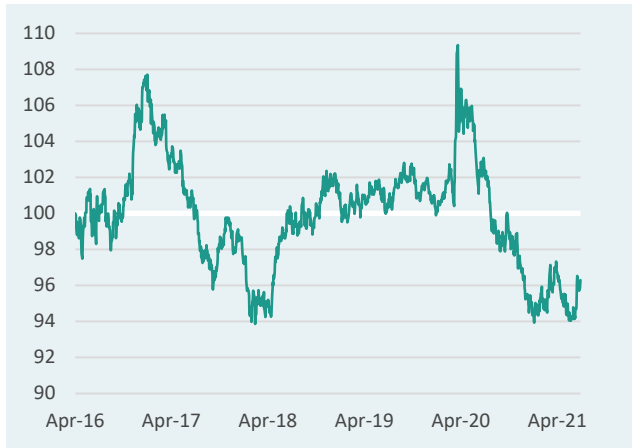
The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly 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.

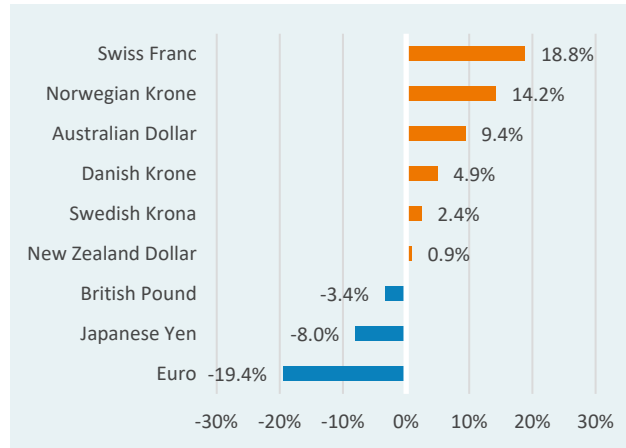
The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, 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



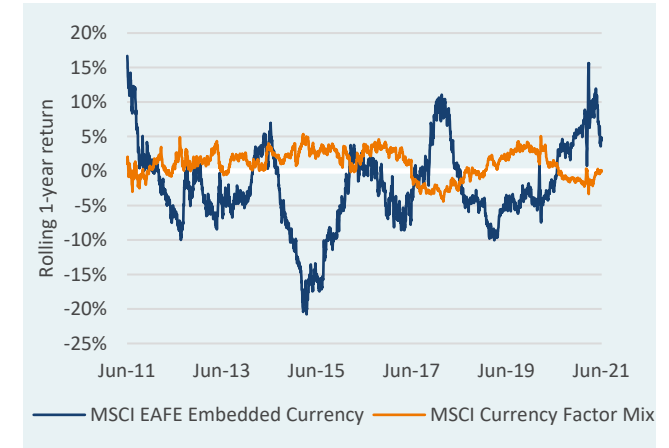
Source: Bloomberg, as of 6/30/21

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



Source: Bloomberg, as of 6/30/21

## CURRENCY BETA RELATIVE PERFORMANCE



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



# Appendix

# Periodic table of returns

BEST

	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 Equity	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 Portfolio	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	6.0	6.1	4.3
Hedge Funds of Funds	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

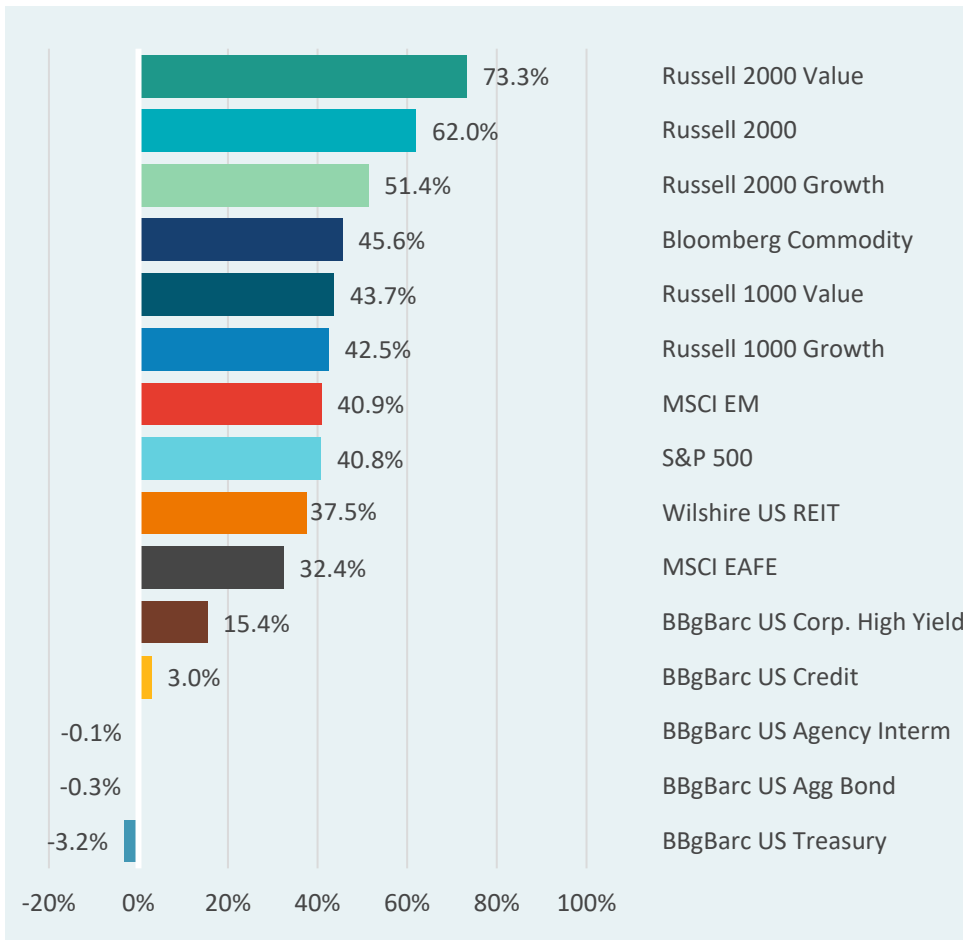
WORST



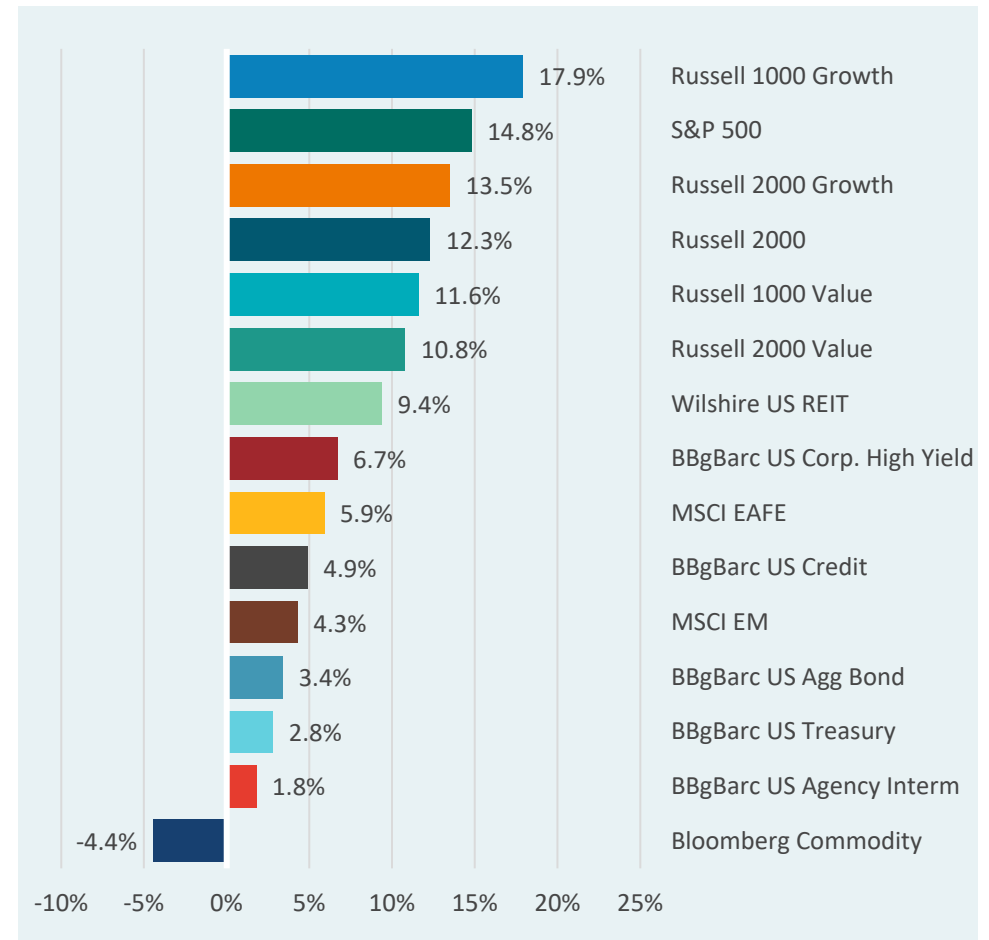
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill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

# Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



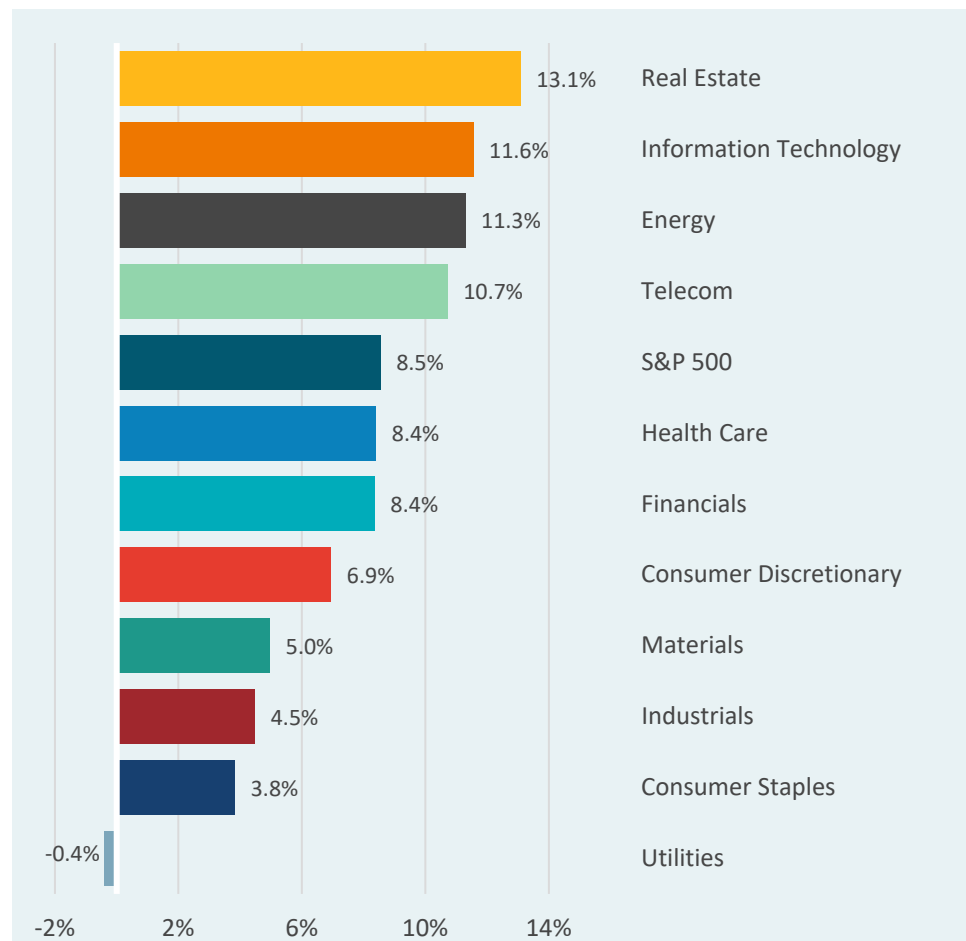
\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/21

Source: Morningstar, as of 6/30/21

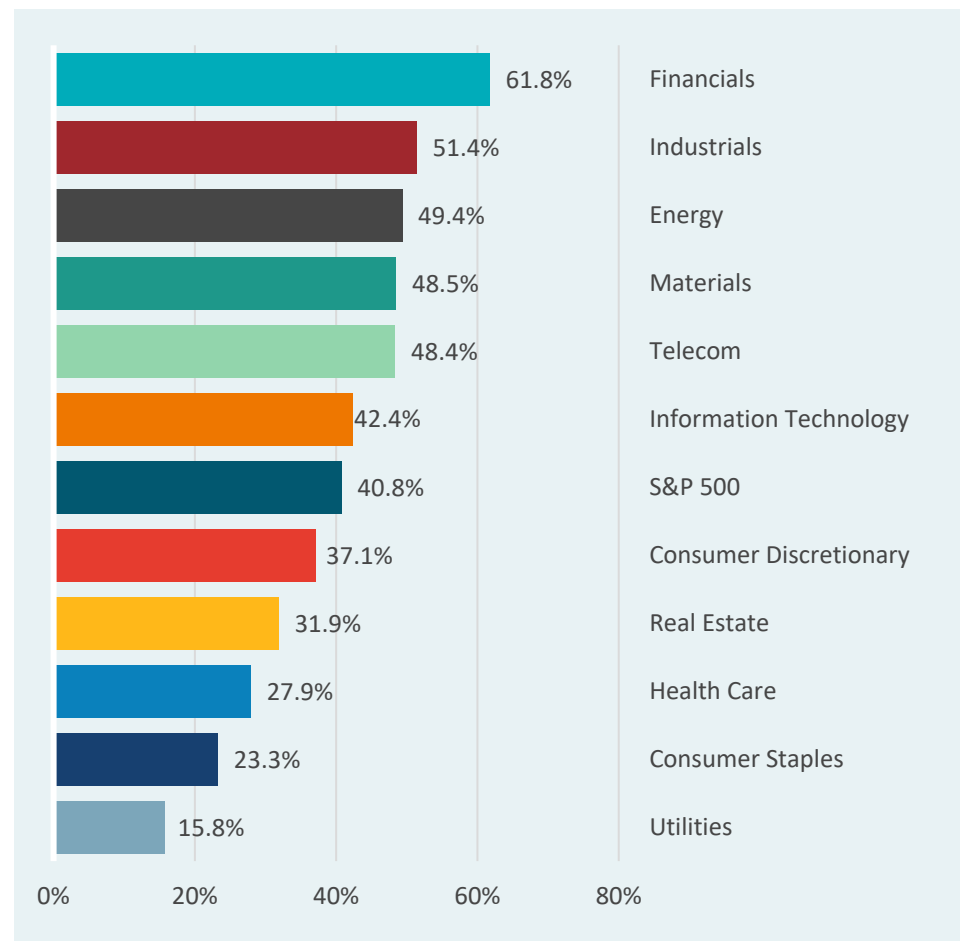
# S&P 500 sector returns

Q2 2021



Source: Morningstar, as of 6/30/21

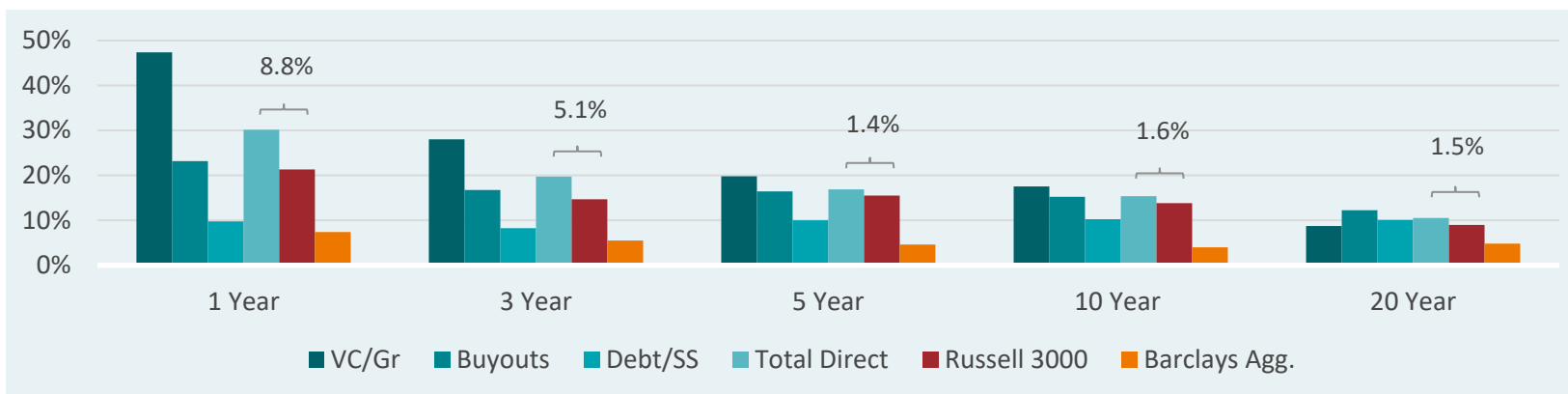
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/21

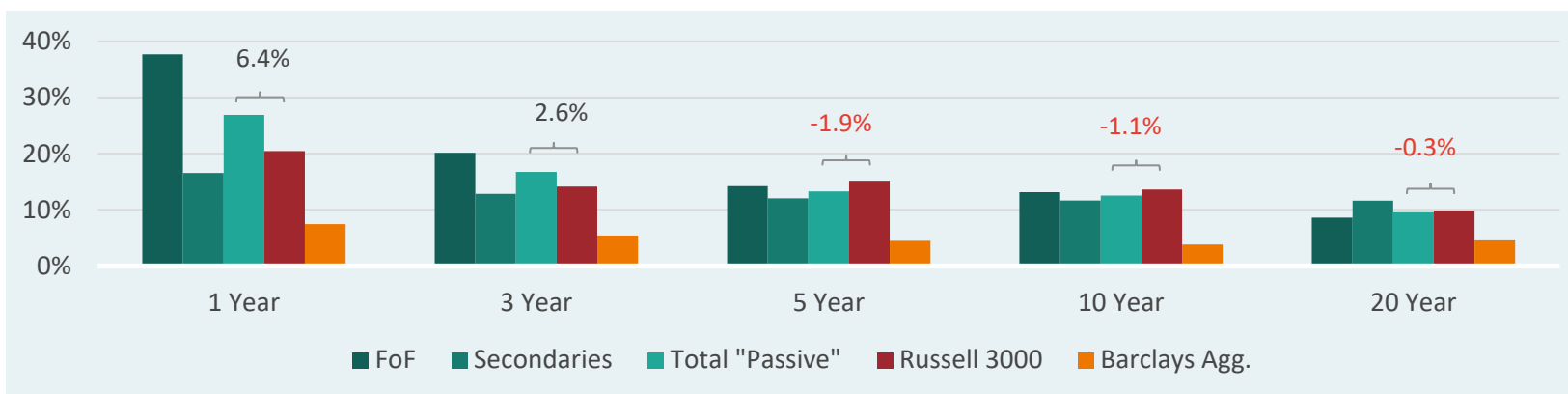
# Private equity vs. traditional assets performance

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

## “PASSIVE” STRATEGIES

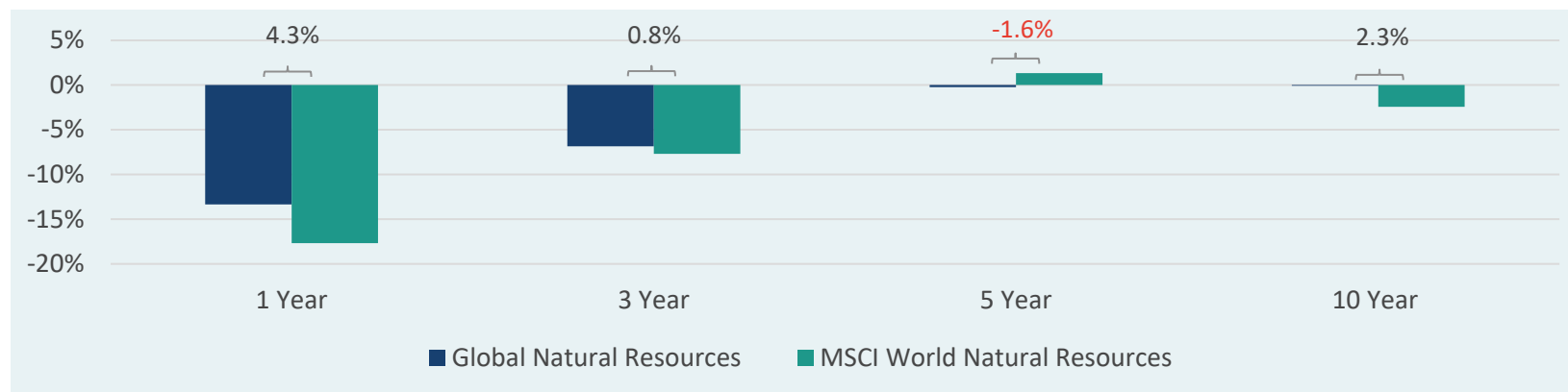


“Passive” strategies underperformed comparable public equities across all time periods, aside from the 1 and 3-year basis.

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.

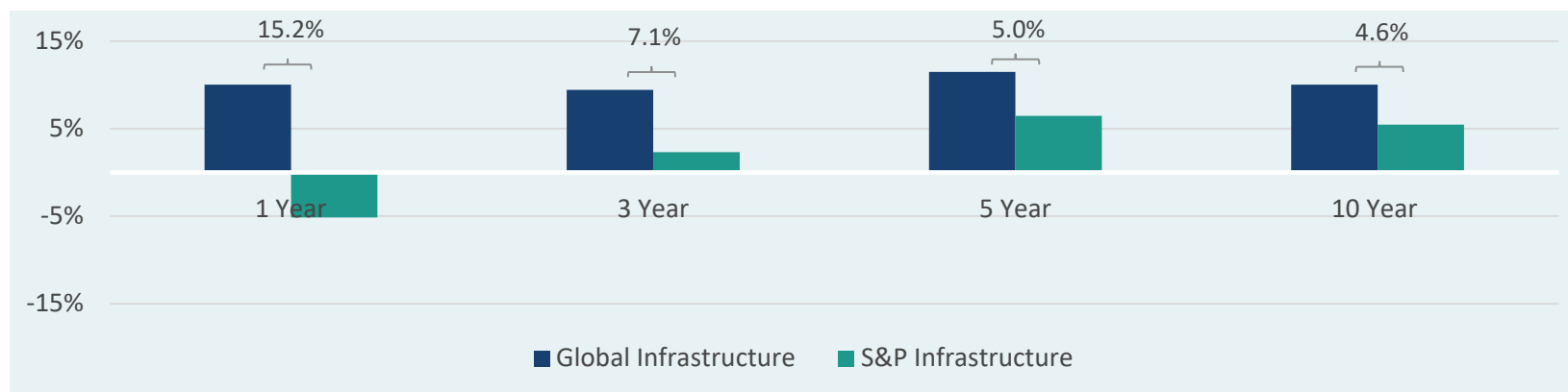
# Private vs. liquid real assets performance

## 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

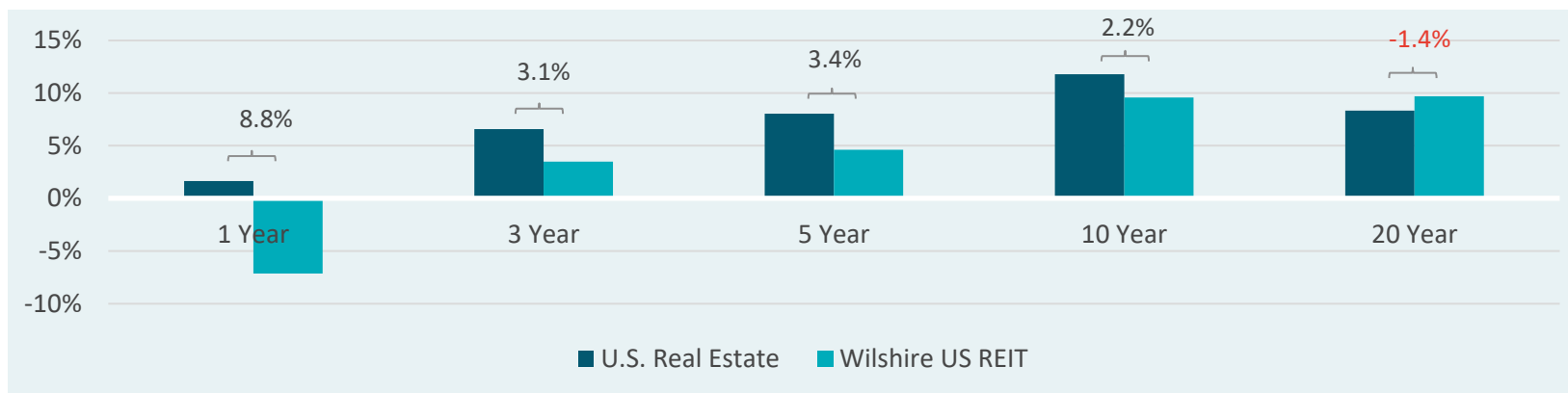


Infra. funds outperformed the S&P Infra. across all periods.

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.

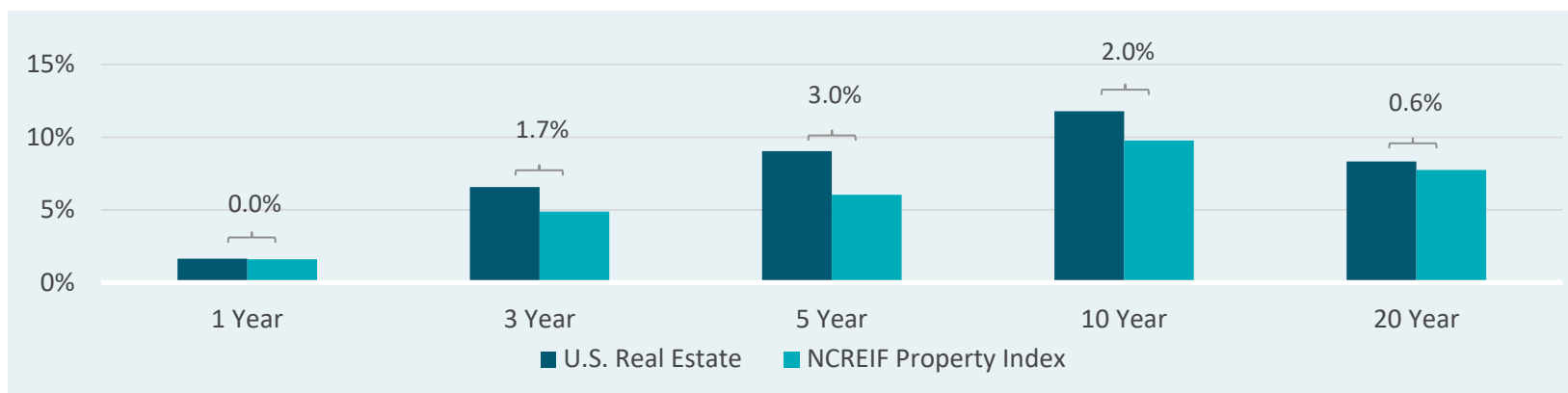
# Private vs. liquid and core real estate performance

## 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 20-year basis.

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



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

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	2.3	8.5	15.3	40.8	18.7	17.6	14.8
S&P 500 Equal Weighted	0.1	6.9	19.2	50.7	16.4	15.7	13.8
DJ Industrial Average	0.0	5.1	13.8	36.3	15.0	16.7	13.5
Russell Top 200	2.9	8.9	14.5	40.8	20.2	18.9	15.6
Russell 1000	2.5	8.5	15.0	43.1	19.2	18.0	14.9
Russell 2000	1.9	4.3	17.5	62.0	13.5	16.5	12.3
Russell 3000	2.5	8.2	15.1	44.2	18.7	17.9	14.7
Russell Mid Cap	1.5	7.5	16.2	49.8	16.4	15.6	13.2
<b>Style Index</b>							
Russell 1000 Growth	6.3	11.9	13.0	42.5	25.1	23.7	17.9
Russell 1000 Value	(1.1)	5.2	17.0	43.7	12.4	11.9	11.6
Russell 2000 Growth	4.7	3.9	9.0	51.4	15.9	18.8	13.5
Russell 2000 Value	(0.6)	4.6	26.7	73.3	10.3	13.6	10.8

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	1.3	7.4	12.3	39.3	14.6	14.6	9.9
MSCI ACWI ex US	(0.6)	5.5	9.2	35.7	9.4	11.1	5.4
MSCI EAFE	(1.1)	5.2	8.8	32.4	8.3	10.3	5.9
MSCI EM	0.2	5.0	7.4	40.9	11.3	13.0	4.3
MSCI EAFE Small Cap	(1.7)	4.3	9.0	41.0	8.4	12.0	8.4
<b>Style Index</b>							
MSCI EAFE Growth	0.0	7.4	6.8	31.0	12.5	12.5	7.8
MSCI EAFE Value	(2.3)	3.0	10.7	33.5	3.8	7.8	3.9
<b>Regional Index</b>							
MSCI UK	(2.4)	6.0	12.5	31.3	1.9	5.7	3.7
MSCI Japan	(0.3)	(0.3)	1.3	24.8	7.2	10.2	7.2
MSCI Europe	0.7	6.7	(1.1)	1.1	5.6	3.5	3.7
MSCI EM Asia	0.1	3.8	6.0	41.0	13.1	15.3	7.0
MSCI EM Latin American	2.7	15.0	8.9	44.9	5.1	5.9	(2.5)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	0.6	3.2	1.7	6.5	6.5	4.2	3.4
BBgBarc US Treasury Bills	(0.0)	0.0	0.0	0.1	1.4	1.2	0.7
BBgBarc US Agg Bond	0.7	1.8	(1.6)	(0.3)	5.3	3.0	3.4
BBgBarc US Universal	0.7	2.0	(1.1)	1.1	5.6	3.5	3.7
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	(0.2)	(0.0)	(0.1)	0.1	2.7	1.6	1.2
BBgBarc US Treasury Long	3.6	6.5	(7.9)	(10.6)	8.0	3.1	6.7
BBgBarc US Treasury	0.6	1.7	(2.6)	(3.2)	4.7	2.2	2.8
<b>Issuer</b>							
BBgBarc US MBS	(0.0)	0.3	(0.8)	(0.4)	3.8	2.3	2.6
BBgBarc US Corp. High Yield	1.3	2.7	3.6	15.4	7.4	7.5	6.7
BBgBarc US Agency Interm	(0.1)	0.5	(0.6)	(0.1)	3.3	1.9	1.8
BBgBarc US Credit	1.5	3.3	(1.3)	3.0	7.4	4.6	4.9
<b>OTHER</b>							
<b>Index</b>							
Bloomberg Commodity	1.9	13.3	21.1	45.6	3.9	2.4	(4.4)
Wilshire US REIT	3.1	12.8	22.8	37.5	10.1	6.4	9.4
CS Leveraged Loans	0.4	1.4	3.5	11.7	4.4	5.0	4.5
Alerian MLP	5.2	21.2	47.8	64.0	(1.1)	(2.0)	1.3
<b>Regional Index</b>							
JPM EMBI Global Div	0.7	4.1	(0.7)	7.5	6.7	4.9	5.7
JPM GBI-EM Global Div	(1.2)	3.5	(3.4)	6.6	4.1	3.2	0.5
<b>Hedge Funds</b>							
HFRI Composite	0.4	4.0	10.0	27.4	8.7	7.9	5.1
HFRI FOF Composite	0.3	2.7	4.7	18.1	6.2	6.1	3.8
<b>Currency (Spot)</b>							
Euro	(3.0)	0.9	(3.1)	5.6	0.5	1.3	(2.0)
Pound Sterling	(2.8)	0.1	1.1	11.8	1.5	0.7	(1.5)
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.lanqerresearch.com](http://www.lanqerresearch.com))

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

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

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

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# Contra Costa County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2021



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

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

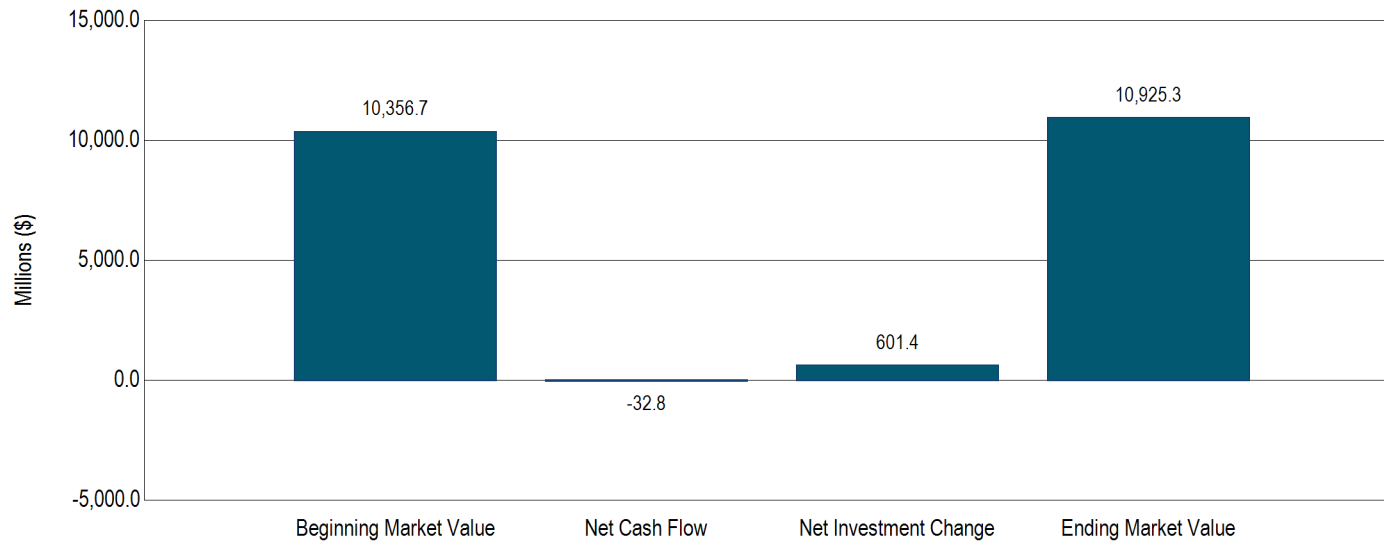
SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Portfolio Reconciliation

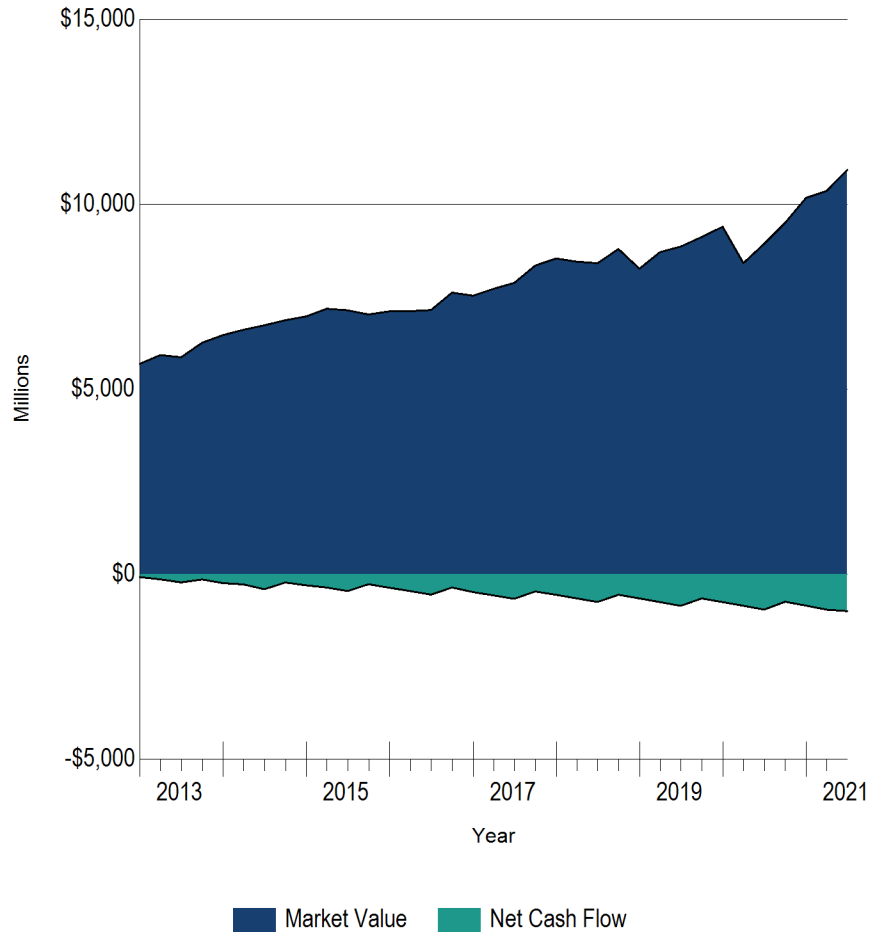
	Last Three Months	Year-To-Date
Beginning Market Value	\$10,356,739,644	\$10,171,802,463
Net Cash Flow	-\$32,766,936	-\$134,331,904
Net Investment Change	\$601,357,676	\$887,859,824
Ending Market Value	\$10,925,330,384	\$10,925,330,384

Change in Market Value  
Last Three Months

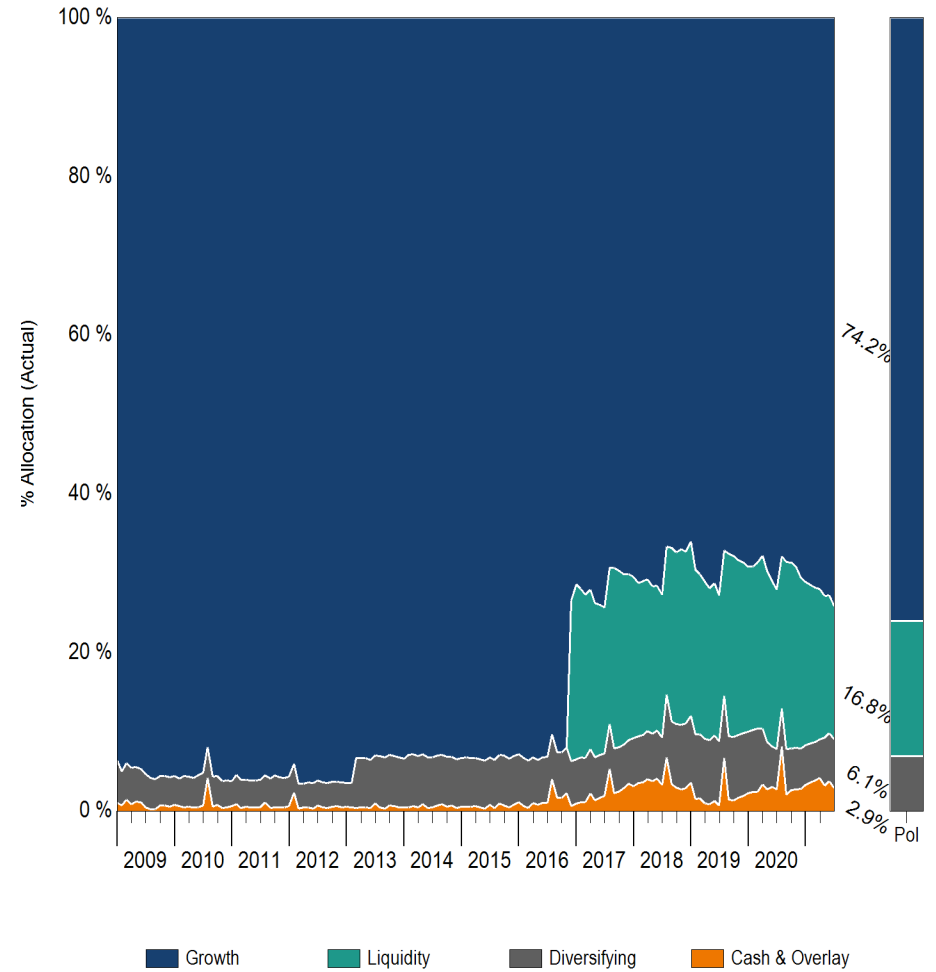


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History  
Cumulative Cash Flows



Asset Allocation History

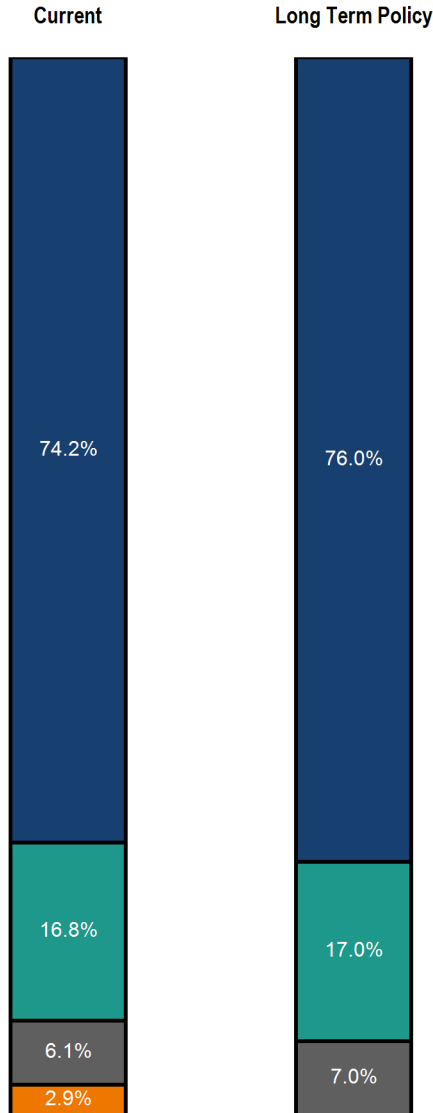


Policy reflects FFP 4-Yr allocations approved in June 2020.

# Total Fund

## Asset Allocation vs. Long Term Target Policy

Period Ending: June 30, 2021



### Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference
Growth	\$8,108,755,188	74.2%	76.0%	-\$194,495,904
Liquidity	\$1,835,684,523	16.8%	17.0%	-\$21,621,642
Diversifying	\$663,527,929	6.1%	7.0%	-\$101,245,198
Cash & Overlay	\$317,362,743	2.9%	--	\$317,362,743
<b>Total</b>	<b>\$10,925,330,384</b>	<b>100.0%</b>	<b>100.0%</b>	

### Allocation vs. Current Targets

	Current Balance	Current Allocation	Current Target	Difference
Growth	\$8,108,755,188	74.2%	68.5%	\$624,903,875
Liquidity	\$1,835,684,523	16.8%	25.0%	-\$895,648,073
Diversifying	\$663,527,929	6.1%	6.5%	-\$46,618,546
Cash & Overlay	\$317,362,743	2.9%	--	\$317,362,743
<b>Total</b>	<b>\$10,925,330,384</b>	<b>100.0%</b>	<b>100.0%</b>	

Long Term Targets reflect FFP 4-Yr allocations approved in June 2020.

Current Targets reflect targets approved in June 2020.

Total Fund  
Executive Summary (Net of Fees)

Period Ending: June 30, 2021

	% of Portfolio	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
<b>Total Fund</b>	<b>100.0</b>	<b>5.8</b>	<b>8.8</b>	<b>22.3</b>	<b>9.7</b>	<b>9.4</b>	<b>8.4</b>	<b>9.2</b>	<b>14.6</b>	<b>-2.7</b>	<b>13.9</b>	<b>6.9</b>
<i>Policy Index</i>		4.9	8.2	23.9	10.4	10.0	9.0	10.8	14.6	-0.9	13.7	8.9
<b>Growth</b>	<b>74.2</b>	<b>7.6</b>	<b>11.9</b>	<b>31.0</b>	<b>12.1</b>	<b>12.1</b>	<b>--</b>	<b>12.0</b>	<b>18.4</b>	<b>-3.9</b>	<b>18.7</b>	<b>7.6</b>
<i>Custom Growth Benchmark</i>		6.9	11.9	35.6	13.6	13.2	--	13.8	19.3	-2.1	19.3	10.1
<b>Diversifying</b>	<b>6.1</b>	<b>1.8</b>	<b>1.4</b>	<b>3.4</b>	<b>1.8</b>	<b>1.3</b>	<b>1.4</b>	<b>-1.7</b>	<b>6.8</b>	<b>-2.3</b>	<b>2.6</b>	<b>0.8</b>
<i>Custom Diversifying Benchmark</i>		1.4	0.4	2.7	3.9	3.3	3.7	4.7	6.1	1.4	4.7	4.1
<b>Liquidity</b>	<b>16.8</b>	<b>0.3</b>	<b>0.2</b>	<b>1.0</b>	<b>3.3</b>	<b>--</b>	<b>--</b>	<b>3.4</b>	<b>4.8</b>	<b>1.7</b>	<b>1.4</b>	<b>--</b>
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>		0.0	0.0	0.4	3.0	--	--	3.3	4.0	1.6	0.8	--

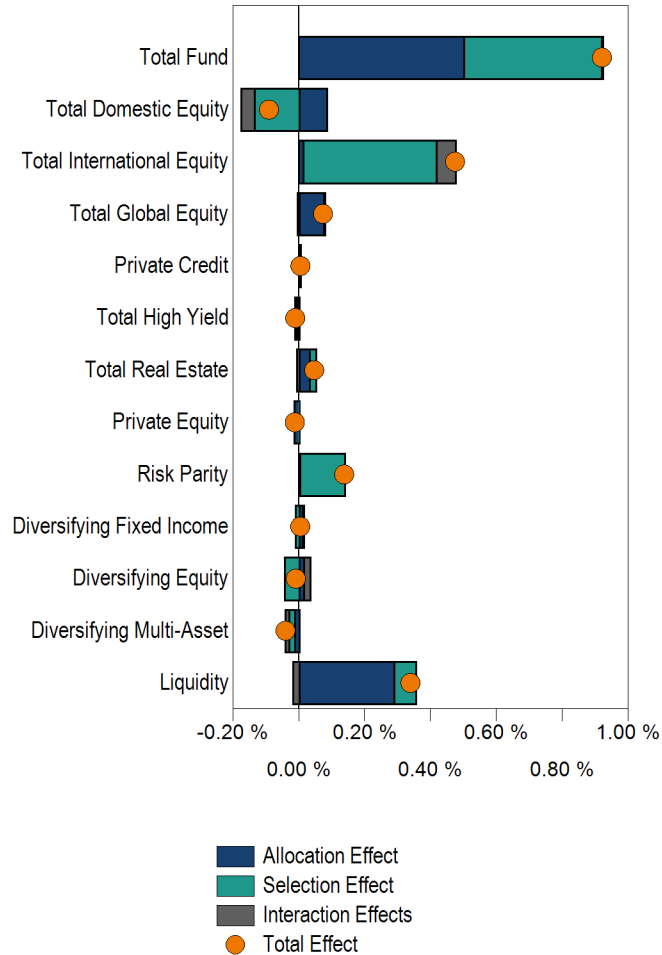
\*Correlation between the Growth and Diversifying composites is .13, .61 and .54 over the previous 1, 3 and 5 year periods respectively.

Policy Index (1/1/2021-Present): 9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 25% BBgBarc 1-3 Yr Gov/Credit, 3% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 7% Private Credit composite returns, 1.5% ICE BofAML High Yield Master II, 1% Wilshire REIT, 8% Private Real Estate composite returns, 1.5% CPI +4%, 11% Private Equity composite returns, 2% HFRI EH Equity Market Neutral. Policy Index (7/1/2020-12/31/2020): 9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 25% BBgBarc 1-3 Yr Gov/Credit, 3% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 7% ICE BofAML High Yield Master II +2%, 1.5% ICE BofAML High Yield Master II, 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 1.5% CPI +4%, 11% S&P 500 +4%(Lagged), 2% HFRI EH Equity Market Neutral.

Total Fund  
 Attribution Analysis - Asset Class Level (Net of Fees)

Period Ending: June 30, 2021

Attribution Effects  
 3 Months Ending June 30, 2021



Performance Attribution

	Quarter
Wtd. Actual Return	5.82%
Wtd. Index Return *	4.90%
<b>Excess Return</b>	<b>0.92%</b>
Selection Effect	0.42%
Allocation Effect	0.50%
Interaction Effect	0.00%

\*Calculated from benchmark returns and weightings of each component.

Attribution Summary  
 Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	6.7%	8.2%	-1.5%	-0.1%	0.1%	0.0%	-0.1%
Total International Equity	7.9%	5.6%	2.3%	0.4%	0.0%	0.1%	0.5%
Total Global Equity	7.4%	7.4%	0.0%	0.0%	0.1%	0.0%	0.1%
Private Credit	7.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total High Yield	2.5%	2.8%	-0.3%	0.0%	0.0%	0.0%	0.0%
Total Real Estate	3.5%	3.3%	0.2%	0.0%	0.0%	0.0%	0.0%
Private Equity	11.7%	11.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk Parity	7.7%	4.9%	2.8%	0.1%	0.0%	0.0%	0.1%
Diversifying Fixed Income	1.5%	1.8%	-0.3%	0.0%	0.0%	0.0%	0.0%
Diversifying Equity	1.0%	3.1%	-2.1%	0.0%	0.0%	0.0%	0.0%
Diversifying Multi-Asset	2.4%	3.6%	-1.2%	0.0%	0.0%	0.0%	0.0%
Liquidity	0.3%	0.0%	0.3%	0.1%	0.3%	0.0%	0.3%
<b>Total</b>	<b>5.8%</b>	<b>4.9%</b>	<b>0.9%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.0%</b>	<b>0.9%</b>

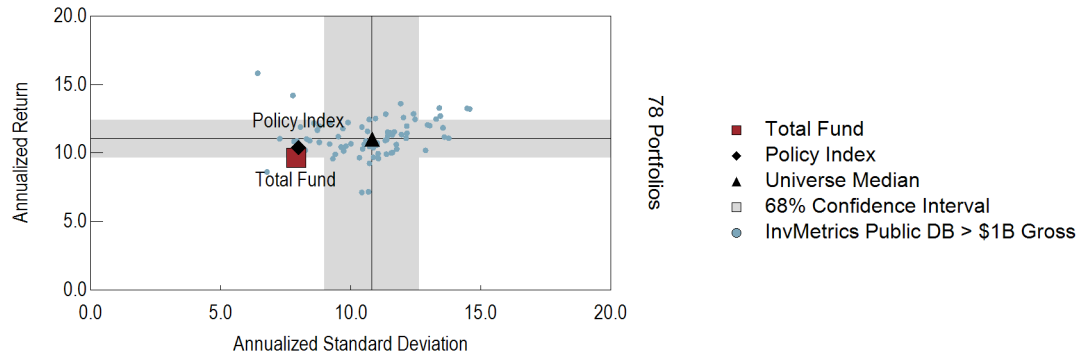
# Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2021

## 3 Years

	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	9.65%	-0.75%	7.89%	-0.18%	0.95	2.36%	0.91	1.07	-0.32	96.27%	102.95%

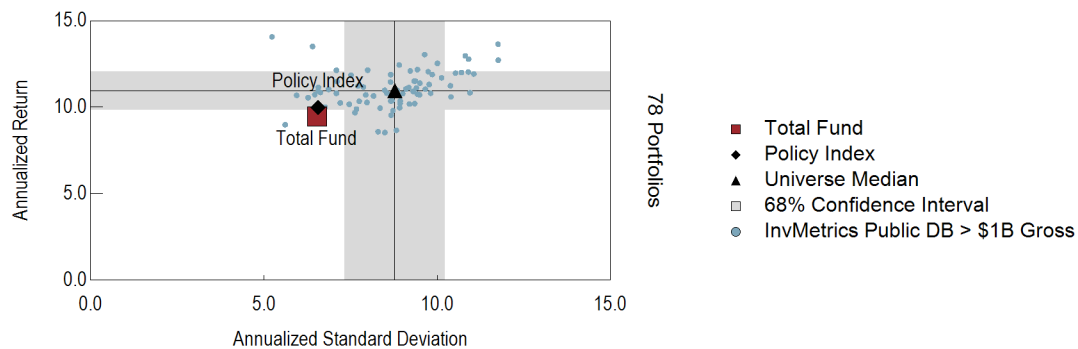
## Risk vs. Return



## 5 Years

	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	9.44%	-0.53%	6.53%	-0.04%	0.95	1.99%	0.91	1.28	-0.27	97.04%	103.63%

## Risk vs. Return





Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Total Fund</b>	<b>10,925,330,384</b>	<b>100.0</b>	<b>5.9</b>	<b>9.0</b>	<b>22.6</b>	<b>10.0</b>	<b>9.8</b>	<b>8.9</b>	<b>9.5</b>	<b>15.0</b>	<b>-2.5</b>	<b>14.2</b>	<b>7.4</b>		
Policy Index			4.9	8.2	23.9	10.4	10.0	9.0	10.8	14.6	-0.9	13.7	8.9		
InvMetrics Public DB > \$1B Gross Rank			28	59	97	86	93	43	78	83	25	83	74		
<b>Total Fund ex Overlay &amp; Cash</b>	<b>10,607,967,640</b>	<b>97.1</b>	<b>5.9</b>	<b>9.0</b>	<b>22.8</b>	<b>10.1</b>	<b>9.8</b>	<b>9.0</b>	<b>9.7</b>	<b>14.7</b>	<b>-2.1</b>	<b>14.1</b>	<b>7.4</b>		
Policy Index			4.9	8.2	23.9	10.4	10.0	9.0	10.8	14.6	-0.9	13.7	8.9		
InvMetrics Public DB > \$1B Gross Rank			28	57	97	83	91	42	72	84	20	84	74		
<b>Growth</b>	<b>8,108,755,188</b>	<b>74.2</b>	<b>7.7</b>	<b>12.0</b>	<b>31.4</b>	<b>12.5</b>	<b>12.5</b>	<b>--</b>	<b>12.4</b>	<b>18.8</b>	<b>-3.6</b>	<b>19.1</b>	<b>8.1</b>		
Custom Growth Benchmark			6.9	11.9	35.6	13.6	13.2	--	13.8	19.3	-2.1	19.3	10.1		
<b>Total Domestic Equity</b>	<b>1,416,158,352</b>	<b>13.0</b>	<b>6.8</b>	<b>14.0</b>	<b>46.1</b>	<b>16.4</b>	<b>17.2</b>	<b>14.4</b>	<b>22.2</b>	<b>26.7</b>	<b>-7.2</b>	<b>23.9</b>	<b>11.5</b>		
Russell 3000			8.2	15.1	44.2	18.7	17.9	14.7	20.9	31.0	-5.2	21.1	12.7		
InvMetrics Public DB US Eq Gross Rank			81	94	26	80	47	34	10	87	78	6	77		
BlackRock Russell 1000 Index	464,332,442	4.3	8.5	15.0	43.1	19.2	--	--	21.0	31.4	-4.8	--	--	17.8	Apr-17
Russell 1000			8.5	15.0	43.1	19.2	--	--	21.0	31.4	-4.8	--	--	17.8	Apr-17
eV US Large Cap Equity Gross Rank			39	55	40	40	--	--	36	39	47	--	--		
Jackson Square Partners	264,001,184	2.4	11.3	8.5	38.0	23.0	21.3	16.7	44.8	27.9	-2.0	29.3	-4.4	12.7	May-05
Russell 1000 Growth			11.9	13.0	42.5	25.1	23.7	17.9	38.5	36.4	-1.5	30.2	7.1	13.2	May-05
eV US Large Cap Growth Equity Gross Rank			49	97	76	63	71	62	20	93	59	47	98		
Boston Partners	285,165,250	2.6	5.5	21.5	50.1	13.0	14.1	12.7	3.0	24.3	-8.7	20.1	15.1	11.1	Jun-95
Russell 1000 Value			5.2	17.0	43.7	12.4	11.9	11.6	2.8	26.5	-8.3	13.7	17.3	9.7	Jun-95
eV US Large Cap Value Equity Gross Rank			55	18	26	52	40	36	61	77	55	23	50		
Emerald Advisers	207,742,200	1.9	4.0	6.6	47.6	17.2	20.7	15.7	39.0	30.3	-10.1	28.8	10.1	14.9	Apr-03
Russell 2000 Growth			3.9	9.0	51.4	15.9	18.8	13.5	34.6	28.5	-9.3	22.2	11.3	12.9	Apr-03
eV US Small Cap Growth Equity Gross Rank			79	83	75	78	62	54	57	45	85	26	54		
Ceredex	194,917,276	1.8	3.6	18.7	54.5	6.8	9.9	--	2.3	18.4	-11.3	11.4	29.8	11.7	Nov-11
Russell 2000 Value			4.6	26.7	73.3	10.3	13.6	--	4.6	22.4	-12.9	7.8	31.7	12.5	Nov-11
eV US Small Cap Value Equity Gross Rank			64	82	83	93	95	--	69	87	25	48	32		

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Total International Equity</b>	<b>2,178,783,537</b>	<b>19.9</b>	<b>8.1</b>	<b>12.4</b>	<b>44.0</b>	<b>13.2</b>	<b>11.9</b>	<b>7.4</b>	<b>15.8</b>	<b>23.7</b>	<b>-14.3</b>	<b>25.5</b>	<b>1.2</b>		
MSCI ACWI ex USA Gross			5.6	9.4	36.3	9.9	11.6	5.9	11.1	22.1	-13.8	27.8	5.0		
MSCI EAFE Gross			5.4	9.2	32.9	8.8	10.8	6.4	8.3	22.7	-13.4	25.6	1.5		
InvMetrics Public DB ex-US Eq Gross Rank			2	1	3	7	41	23	23	28	44	90	89		
<b>International Equity</b>	<b>1,224,245,932</b>	<b>11.2</b>	<b>7.5</b>	<b>8.1</b>	<b>33.9</b>	<b>13.1</b>	<b>12.4</b>	<b>7.6</b>	<b>19.0</b>	<b>27.0</b>	<b>-13.6</b>	<b>25.3</b>	<b>1.2</b>		
MSCI ACWI ex USA Gross			5.6	9.4	36.3	9.9	11.6	5.9	11.1	22.1	-13.8	27.8	5.0		
InvMetrics Public DB ex-US Eq Gross Rank			3	80	88	8	30	19	13	7	21	93	89		
Pyrford	543,778,595	5.0	4.5	7.0	23.0	8.6	8.1	--	4.7	22.1	-10.1	19.8	3.4	5.2	May-14
MSCI ACWI ex USA Value			4.3	11.7	37.6	5.2	8.5	--	-0.8	15.7	-14.0	22.7	8.9	2.9	May-14
eV ACWI ex-US Value Equity Gross Rank			58	99	99	27	68	--	33	35	5	84	74		
William Blair	680,467,338	6.2	10.0	9.0	44.0	17.2	16.4	10.0	33.3	32.0	-16.8	30.9	-1.4	9.9	Oct-10
MSCI ACWI ex USA Growth			6.6	6.5	33.7	13.2	13.4	7.3	22.2	27.3	-14.4	32.0	0.1	7.6	Oct-10
eV ACWI ex-US Growth Equity Gross Rank			16	32	26	24	46	46	30	39	69	81	55		
<b>Emerging Markets Equity</b>	<b>954,537,605</b>	<b>8.7</b>	<b>8.8</b>	<b>18.5</b>	<b>59.3</b>	<b>13.3</b>	<b>--</b>	<b>--</b>	<b>11.4</b>	<b>19.4</b>	<b>-15.3</b>	<b>--</b>	<b>--</b>		
MSCI Emerging Markets			5.0	7.4	40.9	11.3	--	--	18.3	18.4	-14.6	--	--		
InvMetrics Public DB Emg Mkt Eq Gross Rank			13	4	2	32	--	--	81	31	51	--	--		
PIMCO RAE Emerging Markets	452,804,767	4.1	8.4	21.0	58.1	10.1	--	--	2.1	14.6	-12.3	--	--	9.0	Feb-17
MSCI Emerging Markets Value NR			5.7	10.0	41.6	7.8	--	--	5.5	12.0	-10.7	--	--	7.5	Feb-17
eV Emg Mkts All Cap Value Equity Gross Rank			7	6	6	63	--	--	85	72	44	--	--		
TT Emerging Markets	501,732,837	4.6	9.1	16.2	60.4	16.5	--	--	20.8	24.8	-18.4	--	--	12.8	Jul-17
MSCI Emerging Markets			5.0	7.4	40.9	11.3	--	--	18.3	18.4	-14.6	--	--	9.1	Jul-17
eV Emg Mkts Equity Gross Rank			18	14	9	18	--	--	39	24	83	--	--		
<b>Total Global Equity</b>	<b>1,176,806,013</b>	<b>10.8</b>	<b>7.6</b>	<b>8.8</b>	<b>33.1</b>	<b>16.7</b>	<b>16.2</b>	<b>11.1</b>	<b>25.3</b>	<b>28.9</b>	<b>-7.8</b>	<b>23.7</b>	<b>7.6</b>		
MSCI ACWI			7.4	12.3	39.3	14.6	14.6	9.9	16.3	26.6	-9.4	24.0	7.9		
InvMetrics Public DB Gbl Eq Gross Rank			71	99	84	6	4	4	2	3	60	79	40		
Artisan Partners	640,627,497	5.9	9.1	7.4	36.1	22.4	21.8	--	41.7	37.0	-7.9	32.9	5.6	16.8	Oct-12
MSCI ACWI Growth NR USD			10.0	10.3	39.7	20.4	19.2	--	33.6	32.7	-8.1	30.0	3.3	14.4	Oct-12
eV All Global Equity Gross Rank			24	94	71	10	9	--	9	7	40	11	61		
First Eagle	536,041,871	4.9	5.8	10.5	29.4	10.6	10.0	8.7	8.5	21.0	-7.6	15.1	11.7	9.0	Jan-11
MSCI ACWI Value NR USD			4.8	14.1	38.4	8.4	9.8	7.0	-0.3	20.6	-10.8	18.3	12.6	7.1	Jan-11
eV All Global Equity Gross Rank			76	77	89	78	84	80	70	82	38	89	19		

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Private Credit</b>	<b>742,127,163</b>	<b>6.8</b>	<b>7.0</b>	<b>7.0</b>	<b>14.8</b>	<b>8.2</b>	<b>8.7</b>	<b>11.1</b>	<b>4.0</b>	<b>7.7</b>	<b>8.3</b>	<b>10.4</b>	<b>8.2</b>		
<b>Total High Yield</b>	<b>180,898,374</b>	<b>1.7</b>	<b>2.6</b>	<b>2.2</b>	<b>13.4</b>	<b>6.6</b>	<b>6.7</b>	<b>6.1</b>	<b>5.1</b>	<b>16.0</b>	<b>-3.2</b>	<b>6.5</b>	<b>14.3</b>		
<i>ICE BofAML High Yield Master II</i>			2.8	3.7	15.6	7.1	7.3	6.5	6.2	14.4	-2.3	7.5	17.5		
<i>eV US High Yield Fixed Inc Gross Rank</i>			58	95	70	75	74	83	74	15	88	74	47		
Allianz Global Investors	180,898,374	1.7	2.6	2.2	13.4	6.6	6.7	6.1	5.1	16.0	-3.2	6.5	14.3	7.0	Apr-00
<i>ICE BofAML High Yield Master II</i>			2.8	3.7	15.6	7.1	7.3	6.5	6.2	14.4	-2.3	7.5	17.5	7.2	Apr-00
<i>eV US High Yield Fixed Inc Gross Rank</i>			58	95	70	75	74	83	74	15	88	74	47		
<b>Total Real Estate</b>	<b>709,814,502</b>	<b>6.5</b>	<b>3.5</b>	<b>7.8</b>	<b>5.8</b>	<b>3.9</b>	<b>6.0</b>	<b>9.4</b>	<b>-5.9</b>	<b>8.1</b>	<b>7.4</b>	<b>11.1</b>	<b>5.5</b>		
<i>Real Estate Benchmark</i>			3.3	7.6	10.7	6.1	5.8	8.8	0.6	7.5	6.8	7.1	6.7		
<i>NCREIF-ODCE</i>			3.9	6.1	8.0	5.5	6.6	9.6	1.2	5.3	8.3	7.6	8.8		
<i>NCREIF Property Index</i>			3.6	5.4	7.4	5.5	6.1	8.8	1.6	6.4	6.7	7.0	8.0		
Adelante	94,679,965	0.9	13.5	23.7	39.1	12.6	8.4	10.5	-4.6	28.2	-5.0	7.8	4.1	10.8	Sep-01
<i>Wilshire REIT</i>			12.8	22.8	37.5	10.1	6.4	9.4	-7.9	25.8	-4.8	4.2	7.2	10.2	Sep-01
<b>Total Private Real Estate</b>	<b>615,134,537</b>	<b>5.6</b>	<b>2.1</b>	<b>5.8</b>	<b>2.1</b>	<b>2.8</b>	<b>5.7</b>	<b>--</b>	<b>-6.1</b>	<b>6.2</b>	<b>8.8</b>	<b>11.4</b>	<b>6.0</b>		
<b>Private Equity</b>	<b>1,169,845,020</b>	<b>10.7</b>	<b>11.7</b>	<b>23.7</b>	<b>35.6</b>	<b>15.6</b>	<b>14.3</b>	<b>13.1</b>	<b>8.7</b>	<b>8.4</b>	<b>12.1</b>	<b>11.9</b>	<b>9.4</b>		
<b>Risk Parity</b>	<b>534,322,226</b>	<b>4.9</b>	<b>7.8</b>	<b>6.3</b>	<b>20.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>10.0</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>		
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			4.9	5.9	23.6	--	--	--	14.0	--	--	--	--		
AQR Global Risk Premium-EL	266,994,077	2.4	7.8	6.9	19.7	--	--	--	6.2	--	--	--	--	12.7	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			6.1	4.6	15.6	--	--	--	3.6	--	--	--	--	10.5	Jan-19
PanAgora Risk Parity Multi Asset	267,328,149	2.4	7.9	5.6	21.7	--	--	--	14.0	--	--	--	--	14.4	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			6.1	4.6	15.6	--	--	--	3.6	--	--	--	--	8.5	Feb-19

Individual closed end funds are not shown in performance summary table.

# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Diversifying</b>	<b>663,527,929</b>	<b>6.1</b>	<b>1.9</b>	<b>1.6</b>	<b>3.8</b>	<b>2.1</b>	<b>1.7</b>	<b>1.8</b>	<b>-1.3</b>	<b>7.1</b>	<b>-2.0</b>	<b>2.8</b>	<b>1.3</b>		
Custom Diversifying Benchmark			1.4	0.4	2.7	3.9	3.3	3.7	4.7	6.1	1.4	4.7	4.1		
<b>Diversifying Fixed Income</b>	<b>265,002,248</b>	<b>2.4</b>	<b>1.7</b>	<b>-0.5</b>	<b>0.5</b>	<b>3.0</b>	<b>1.7</b>	<b>2.9</b>	<b>1.6</b>	<b>8.6</b>	<b>-1.7</b>	<b>2.8</b>	<b>2.8</b>		
eV US Core Fixed Inc Gross Rank			91	16	64	99	99	99	99	80	99	96	72		
AFL-CIO	264,875,256	2.4	1.7	-0.5	0.6	5.4	3.2	3.6	6.6	8.2	0.6	3.6	2.4	6.1	Jun-91
BBgBarc US Aggregate TR			1.8	-1.6	-0.3	5.3	3.0	3.4	7.5	8.7	0.0	3.5	2.6	5.7	Jun-91
eV US Core Fixed Inc Gross Rank			91	16	64	89	86	82	95	88	16	76	87		
<b>Diversifying Equity</b>	<b>113,593,978</b>	<b>1.0</b>	<b>1.1</b>	<b>4.9</b>	<b>9.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-8.9</b>	<b>3.3</b>	<b>--</b>	<b>--</b>	<b>--</b>		
Parametric Defensive Equity	113,593,978	1.0	1.1	4.9	9.5	--	--	--	-8.9	3.3	--	--	--	-1.2	Jul-18
91 Day T-Bill +4%			1.0	2.0	4.1	--	--	--	4.5	6.1	--	--	--	5.2	Jul-18
<b>Diversifying Multi-Asset</b>	<b>284,931,703</b>	<b>2.6</b>	<b>2.5</b>	<b>2.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>		
FTSE 3-Month T-bill +5%			1.2	2.5	--	--	--	--	--	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	129,199,250	1.2	1.3	1.3	--	--	--	--	--	--	--	--	--	3.0	Aug-20
FTSE 3-Month T-bill +5%			1.2	2.5	--	--	--	--	--	--	--	--	--	4.6	Aug-20
Sit LLCAR	155,732,453	1.4	3.8	--	--	--	--	--	--	--	--	--	--	3.8	Apr-21
BBgBarc US Aggregate Index + 100 bps			2.1	--	--	--	--	--	--	--	--	--	--	2.1	Apr-21
<b>Liquidity</b>	<b>1,835,684,523</b>	<b>16.8</b>	<b>0.3</b>	<b>0.3</b>	<b>1.1</b>	<b>3.4</b>	<b>--</b>	<b>--</b>	<b>3.5</b>	<b>4.9</b>	<b>1.8</b>	<b>1.5</b>	<b>--</b>		
BBgBarc US Govt/Credit 1-3 Yr. TR			0.0	0.0	0.4	3.0	--	--	3.3	4.0	1.6	0.8	--		
eV US Short Duration Fixed Inc Gross Rank			44	31	48	46	--	--	77	34	24	50	--		
DFA Short Credit	336,944,335	3.1	0.4	0.2	1.1	3.3	--	--	2.9	5.2	1.2	1.9	--	2.5	Nov-16
ICE BofA 1-5 Yrs US Corp & Govt TR			0.3	-0.2	0.6	3.7	--	--	4.6	5.1	1.4	1.3	--	2.7	Nov-16
eV US Short Duration Fixed Inc Gross Rank			30	39	46	52	--	--	90	21	93	26	--		
Insight Short Duration	904,613,359	8.3	0.3	0.2	1.2	3.1	--	--	3.2	4.7	1.7	1.5	--	2.5	Nov-16
BBgBarc US Govt/Credit 1-3 Yr. TR			0.0	0.0	0.4	3.0	--	--	3.3	4.0	1.6	0.8	--	2.1	Nov-16
eV US Short Duration Fixed Inc Gross Rank			52	32	45	75	--	--	86	45	38	50	--		
Sit Short Duration	594,126,829	5.4	0.3	0.4	1.0	4.1	--	--	4.6	4.9	2.5	1.3	--	3.0	Nov-16
BBgBarc US Govt 1-3 Yr TR			0.0	-0.1	0.1	2.7	--	--	3.1	3.6	1.6	0.4	--	1.9	Nov-16
eV US Short Duration Fixed Inc Gross Rank			43	23	53	12	--	--	26	35	1	68	--		
<b>Total Cash</b>	<b>165,393,282</b>	<b>1.5</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>1.9</b>	<b>1.6</b>	<b>3.1</b>	<b>1.3</b>	<b>3.3</b>	<b>1.7</b>	<b>0.9</b>	<b>0.9</b>		
91 Day T-Bills			0.0	0.0	0.1	1.2	1.1	0.6	0.5	2.1	1.9	0.9	0.3		
Cash	165,372,809	1.5	0.1	0.2	0.6	2.0	1.6	3.2	1.3	3.4	1.7	0.9	0.9		
Northern Trust Transition	20,472	0.0	2.1	-2.8	91.7	--	--	--	104.1	--	--	--	--		

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. \$126,992.88 in residual value is reflected in the Diversifying Fixed Income composite. State Street Cash/Tax Reclaims balance of \$-28,918 in cash and \$223,127 in potential tax reclaims at State Street after assets were transferred to Northern Trust.

# Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Total Fund</b>	<b>10,925,330,384</b>	<b>100.0</b>	<b>5.8</b>	<b>8.8</b>	<b>22.3</b>	<b>9.7</b>	<b>9.4</b>	<b>8.4</b>	<b>9.2</b>	<b>14.6</b>	<b>-2.7</b>	<b>13.9</b>	<b>6.9</b>		
<i>Policy Index</i>			4.9	8.2	23.9	10.4	10.0	9.0	10.8	14.6	-0.9	13.7	8.9		
<b>Total Fund ex Overlay &amp; Cash</b>	<b>10,607,966,139</b>	<b>97.1</b>	<b>5.8</b>	<b>8.9</b>	<b>22.4</b>	<b>9.8</b>	<b>9.5</b>	<b>8.5</b>	<b>9.4</b>	<b>14.4</b>	<b>-2.4</b>	<b>13.8</b>	<b>6.9</b>		
<i>Policy Index</i>			4.9	8.2	23.9	10.4	10.0	9.0	10.8	14.6	-0.9	13.7	8.9		
<b>Growth</b>	<b>8,108,753,687</b>	<b>74.2</b>	<b>7.6</b>	<b>11.9</b>	<b>31.0</b>	<b>12.1</b>	<b>12.1</b>	<b>--</b>	<b>12.0</b>	<b>18.4</b>	<b>-3.9</b>	<b>18.7</b>	<b>7.6</b>		
<i>Custom Growth Benchmark</i>			6.9	11.9	35.6	13.6	13.2	--	13.8	19.3	-2.1	19.3	10.1		
<b>Total Domestic Equity</b>	<b>1,416,158,352</b>	<b>13.0</b>	<b>6.7</b>	<b>13.8</b>	<b>45.6</b>	<b>16.0</b>	<b>16.8</b>	<b>14.0</b>	<b>21.8</b>	<b>26.1</b>	<b>-7.6</b>	<b>23.5</b>	<b>11.1</b>		
<i>Russell 3000</i>			8.2	15.1	44.2	18.7	17.9	14.7	20.9	31.0	-5.2	21.1	12.7		
BlackRock Russell 1000 Index	464,332,442	4.3	8.5	15.0	43.1	19.1	--	--	20.9	31.4	-4.8	--	--	17.7	Apr-17
<i>Russell 1000</i>			8.5	15.0	43.1	19.2	--	--	21.0	31.4	-4.8	--	--	17.8	Apr-17
Jackson Square Partners	264,001,184	2.4	11.2	8.3	37.4	22.4	20.7	16.2	44.1	27.3	-2.4	28.7	-4.8	12.2	May-05
<i>Russell 1000 Growth</i>			11.9	13.0	42.5	25.1	23.7	17.9	38.5	36.4	-1.5	30.2	7.1	13.2	May-05
Boston Partners	285,165,250	2.6	5.5	21.3	49.7	12.6	13.7	12.4	2.6	23.8	-8.9	19.7	14.7	10.7	Jun-95
<i>Russell 1000 Value</i>			5.2	17.0	43.7	12.4	11.9	11.6	2.8	26.5	-8.3	13.7	17.3	9.7	Jun-95
Emerald Advisers	207,742,200	1.9	3.8	6.2	46.7	16.5	19.9	15.0	38.2	29.4	-10.7	28.0	9.4	14.2	Apr-03
<i>Russell 2000 Growth</i>			3.9	9.0	51.4	15.9	18.8	13.5	34.6	28.5	-9.3	22.2	11.3	12.9	Apr-03
Ceredex	194,917,276	1.8	3.4	18.3	53.7	6.2	9.3	--	1.7	17.7	-11.8	10.7	29.1	11.1	Nov-11
<i>Russell 2000 Value</i>			4.6	26.7	73.3	10.3	13.6	--	4.6	22.4	-12.9	7.8	31.7	12.5	Nov-11
<b>Total International Equity</b>	<b>2,178,783,537</b>	<b>19.9</b>	<b>7.9</b>	<b>12.1</b>	<b>43.3</b>	<b>12.7</b>	<b>11.4</b>	<b>6.9</b>	<b>15.2</b>	<b>23.2</b>	<b>-14.7</b>	<b>25.0</b>	<b>0.8</b>		
<i>MSCI ACWI ex USA Gross</i>			5.6	9.4	36.3	9.9	11.6	5.9	11.1	22.1	-13.8	27.8	5.0		
<i>MSCI EAFE Gross</i>			5.4	9.2	32.9	8.8	10.8	6.4	8.3	22.7	-13.4	25.6	1.5		
<b>International Equity</b>	<b>1,224,245,932</b>	<b>11.2</b>	<b>7.4</b>	<b>7.9</b>	<b>33.4</b>	<b>12.7</b>	<b>11.9</b>	<b>7.2</b>	<b>18.5</b>	<b>26.5</b>	<b>-13.9</b>	<b>24.8</b>	<b>0.8</b>		
<i>MSCI ACWI ex USA Gross</i>			5.6	9.4	36.3	9.9	11.6	5.9	11.1	22.1	-13.8	27.8	5.0		
Pyrford	543,778,595	5.0	4.4	6.8	22.5	8.2	7.6	--	4.2	21.6	-10.5	19.3	3.0	4.7	May-14
<i>MSCI ACWI ex USA Value</i>			4.3	11.7	37.6	5.2	8.5	--	-0.8	15.7	-14.0	22.7	8.9	2.9	May-14
William Blair	680,467,338	6.2	10.0	8.8	43.5	16.8	16.0	9.6	32.8	31.5	-17.1	30.4	-1.8	9.5	Oct-10
<i>MSCI ACWI ex USA Growth</i>			6.6	6.5	33.7	13.2	13.4	7.3	22.2	27.3	-14.4	32.0	0.1	7.6	Oct-10
<b>Emerging Markets Equity</b>	<b>954,537,605</b>	<b>8.7</b>	<b>8.6</b>	<b>18.1</b>	<b>58.4</b>	<b>12.6</b>	<b>--</b>	<b>--</b>	<b>10.7</b>	<b>18.7</b>	<b>-15.7</b>	<b>--</b>	<b>--</b>		
<i>MSCI Emerging Markets</i>			5.0	7.4	40.9	11.3	--	--	18.3	18.4	-14.6	--	--		
PIMCO RAE Emerging Markets	452,804,767	4.1	8.3	20.7	57.2	9.5	--	--	1.6	14.0	-12.6	--	--	8.4	Feb-17
<i>MSCI Emerging Markets Value NR</i>			5.7	10.0	41.6	7.8	--	--	5.5	12.0	-10.7	--	--	7.5	Feb-17
TT Emerging Markets	501,732,837	4.6	8.9	15.8	59.4	15.7	--	--	20.0	24.0	-18.9	--	--	12.1	Jul-17
<i>MSCI Emerging Markets</i>			5.0	7.4	40.9	11.3	--	--	18.3	18.4	-14.6	--	--	9.1	Jul-17

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Total Global Equity</b>	<b>1,176,806,013</b>	<b>10.8</b>	<b>7.4</b>	<b>8.4</b>	<b>32.1</b>	<b>15.8</b>	<b>15.4</b>	<b>10.3</b>	<b>24.4</b>	<b>27.9</b>	<b>-8.5</b>	<b>22.8</b>	<b>6.9</b>		
<i>MSCI ACWI</i>			7.4	12.3	39.3	14.6	14.6	9.9	16.3	26.6	-9.4	24.0	7.9		
Artisan Partners	640,627,497	5.9	8.9	7.0	35.1	21.5	20.8	--	40.6	36.0	-8.6	31.9	4.8	15.9	Oct-12
<i>MSCI ACWI Growth NR USD</i>			10.0	10.3	39.7	20.4	19.2	--	33.6	32.7	-8.1	30.0	3.3	14.4	Oct-12
First Eagle	536,041,871	4.9	5.6	10.1	28.5	9.8	9.2	7.9	7.7	20.1	-8.3	14.3	10.9	8.2	Jan-11
<i>MSCI ACWI Value NR USD</i>			4.8	14.1	38.4	8.4	9.8	7.0	-0.3	20.6	-10.8	18.3	12.6	7.1	Jan-11
<b>Private Credit</b>	<b>742,127,163</b>	<b>6.8</b>	<b>7.0</b>	<b>7.0</b>	<b>14.8</b>	<b>8.2</b>	<b>8.6</b>	<b>10.2</b>	<b>4.0</b>	<b>7.7</b>	<b>8.3</b>	<b>10.4</b>	<b>6.9</b>		
<b>Total High Yield</b>	<b>180,898,374</b>	<b>1.7</b>	<b>2.5</b>	<b>2.0</b>	<b>12.9</b>	<b>6.2</b>	<b>6.2</b>	<b>5.7</b>	<b>4.7</b>	<b>15.4</b>	<b>-3.6</b>	<b>6.1</b>	<b>13.9</b>		
<i>ICE BofAML High Yield Master II</i>			2.8	3.7	15.6	7.1	7.3	6.5	6.2	14.4	-2.3	7.5	17.5		
Allianz Global Investors	180,898,374	1.7	2.5	2.0	12.9	6.2	6.2	5.6	4.7	15.4	-3.6	6.1	13.9	6.5	Apr-00
<i>ICE BofAML High Yield Master II</i>			2.8	3.7	15.6	7.1	7.3	6.5	6.2	14.4	-2.3	7.5	17.5	7.2	Apr-00
<b>Total Real Estate</b>	<b>709,814,502</b>	<b>6.5</b>	<b>3.5</b>	<b>7.8</b>	<b>5.7</b>	<b>3.8</b>	<b>5.9</b>	<b>8.7</b>	<b>-6.0</b>	<b>8.1</b>	<b>7.4</b>	<b>11.0</b>	<b>4.8</b>		
<i>Real Estate Benchmark</i>			3.3	7.6	10.7	6.1	5.8	8.8	0.6	7.5	6.8	7.1	6.7		
<i>NCREIF-ODCE</i>			3.9	6.1	8.0	5.5	6.6	9.6	1.2	5.3	8.3	7.6	8.8		
<i>NCREIF Property Index</i>			3.6	5.4	7.4	5.5	6.1	8.8	1.6	6.4	6.7	7.0	8.0		
Adelante	94,679,965	0.9	13.3	23.4	38.3	12.0	7.8	10.0	-5.2	27.5	-5.5	7.2	3.6	10.2	Sep-01
<i>Wilshire REIT</i>			12.8	22.8	37.5	10.1	6.4	9.4	-7.9	25.8	-4.8	4.2	7.2	10.2	Sep-01
<b>Total Private Real Estate</b>	<b>615,134,537</b>	<b>5.6</b>	<b>2.1</b>	<b>5.8</b>	<b>2.1</b>	<b>2.8</b>	<b>5.6</b>	<b>--</b>	<b>-6.1</b>	<b>6.2</b>	<b>8.8</b>	<b>11.4</b>	<b>5.2</b>		
<b>Private Equity</b>	<b>1,169,845,020</b>	<b>10.7</b>	<b>11.7</b>	<b>23.7</b>	<b>35.6</b>	<b>15.6</b>	<b>14.3</b>	<b>12.0</b>	<b>8.7</b>	<b>8.4</b>	<b>12.1</b>	<b>11.9</b>	<b>8.9</b>		
<b>Risk Parity</b>	<b>534,322,226</b>	<b>4.9</b>	<b>7.7</b>	<b>6.1</b>	<b>20.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>9.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>		
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			4.9	5.9	23.6	--	--	--	14.0	--	--	--	--		
AQR Global Risk Premium-EL	266,994,077	2.4	7.7	6.7	19.2	--	--	--	5.8	--	--	--	--	12.3	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			6.1	4.6	15.6	--	--	--	3.6	--	--	--	--	10.5	Jan-19
PanAgora Risk Parity Multi Asset	267,328,149	2.4	7.8	5.4	21.2	--	--	--	13.6	--	--	--	--	13.9	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			6.1	4.6	15.6	--	--	--	3.6	--	--	--	--	8.5	Feb-19

Individual closed end funds are not shown in performance summary table.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2021

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
<b>Diversifying</b>	<b>663,527,929</b>	<b>6.1</b>	<b>1.8</b>	<b>1.4</b>	<b>3.4</b>	<b>1.8</b>	<b>1.3</b>	<b>1.4</b>	<b>-1.7</b>	<b>6.8</b>	<b>-2.3</b>	<b>2.6</b>	<b>0.8</b>		
<i>Custom Diversifying Benchmark</i>			1.4	0.4	2.7	3.9	3.3	3.7	4.7	6.1	1.4	4.7	4.1		
<b>Diversifying Fixed Income</b>	<b>265,002,248</b>	<b>2.4</b>	<b>1.5</b>	<b>-0.7</b>	<b>0.1</b>	<b>2.7</b>	<b>1.4</b>	<b>2.5</b>	<b>1.2</b>	<b>8.3</b>	<b>-2.0</b>	<b>2.6</b>	<b>2.3</b>		
AFL-CIO	264,875,256	2.4	1.5	-0.7	0.1	5.0	2.7	3.2	6.2	7.8	0.2	3.2	1.9	5.7	Jun-91
<i>BBgBarc US Aggregate TR</i>			1.8	-1.6	-0.3	5.3	3.0	3.4	7.5	8.7	0.0	3.5	2.6	5.7	Jun-91
<b>Diversifying Equity</b>	<b>113,593,978</b>	<b>1.0</b>	<b>1.0</b>	<b>4.7</b>	<b>8.9</b>	--	--	--	<b>-9.4</b>	<b>3.0</b>	--	--	--		
Parametric Defensive Equity	113,593,978	1.0	1.0	4.7	8.9	--	--	--	-9.4	3.0	--	--	--	-1.6	Jul-18
<i>91 Day T-Bill +4%</i>			1.0	2.0	4.1	--	--	--	4.5	6.1	--	--	--	5.2	Jul-18
<b>Diversifying Multi-Asset</b>	<b>284,931,703</b>	<b>2.6</b>	<b>2.4</b>	<b>2.2</b>	--	--	--	--	--	--	--	--	--		
<i>FTSE 3-Month T-bill +5%</i>			1.2	2.5	--	--	--	--	--	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	129,199,250	1.2	1.1	1.0	--	--	--	--	--	--	--	--	--	2.6	Aug-20
<i>FTSE 3-Month T-bill +5%</i>			1.2	2.5	--	--	--	--	--	--	--	--	--	4.6	Aug-20
Sit LLCAR	155,732,453	1.4	3.7	--	--	--	--	--	--	--	--	--	--	3.7	Apr-21
<i>BBgBarc US Aggregate Index + 100 bps</i>			2.1	--	--	--	--	--	--	--	--	--	--	2.1	Apr-21
<b>Liquidity</b>	<b>1,835,684,523</b>	<b>16.8</b>	<b>0.3</b>	<b>0.2</b>	<b>1.0</b>	<b>3.3</b>	--	--	<b>3.4</b>	<b>4.8</b>	<b>1.7</b>	<b>1.4</b>	--		
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			0.0	0.0	0.4	3.0	--	--	3.3	4.0	1.6	0.8	--		
DFA Short Credit	336,944,335	3.1	0.4	0.1	1.0	3.2	--	--	2.8	5.2	1.1	1.8	--	2.4	Nov-16
<i>ICE BofA 1-5 Yrs US Corp &amp; Govt TR</i>			0.3	-0.2	0.6	3.7	--	--	4.6	5.1	1.4	1.3	--	2.7	Nov-16
Insight Short Duration	904,613,359	8.3	0.3	0.2	1.1	3.1	--	--	3.1	4.6	1.7	1.5	--	2.4	Nov-16
<i>BBgBarc US Govt/Credit 1-3 Yr. TR</i>			0.0	0.0	0.4	3.0	--	--	3.3	4.0	1.6	0.8	--	2.1	Nov-16
Sit Short Duration	594,126,829	5.4	0.3	0.3	0.8	4.0	--	--	4.4	4.7	2.3	1.1	--	2.8	Nov-16
<i>BBgBarc US Govt 1-3 Yr TR</i>			0.0	-0.1	0.1	2.7	--	--	3.1	3.6	1.6	0.4	--	1.9	Nov-16
<b>Total Cash</b>	<b>165,393,282</b>	<b>1.5</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>1.9</b>	<b>1.6</b>	<b>3.1</b>	<b>1.3</b>	<b>3.3</b>	<b>1.7</b>	<b>0.9</b>	<b>0.9</b>		
<i>91 Day T-Bills</i>			0.0	0.0	0.1	1.2	1.1	0.6	0.5	2.1	1.9	0.9	0.3		
Cash	165,372,809	1.5	0.1	0.2	0.6	2.0	1.6	3.1	1.3	3.4	1.7	0.9	0.9		
Northern Trust Transition	20,472	0.0	2.1	-2.8	91.7	--	--	--	104.1	--	--	--	--		

Individual closed end funds are not shown in performance summary table. Effective 3/1/2019 the custodian of record switched from State Street to Northern Trust. Wellington Real Total Return was liquidated 4/30/2020. \$126,992.88 in residual value is reflected in the Diversifying Fixed Income composite.

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2021

StepStone Group Analysis (*)												
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2021 <sup>1</sup>	Total Commitment	% Called	Contributed Capital	Current Qtr. Change in Contributed Capital	Current Qtr. Change in Distributed Capital	Total Distributions	Remaining Commitment	Distrib./ Paid-In (DPI) <sup>2</sup>	Tot. Value/ Paid-In (TVPI) <sup>3</sup>	Latest Valuation
<b>Private Credit</b>												
8/31/2015	Angelo Gordon Energy Credit Opp. <sup>4</sup>	\$3,440,530	\$16,500,000	0%	\$18,750,000	\$0	\$0	\$18,829,566	\$2,319,783	1.00	1.19	3/31/2021
12/18/2017	Stepstone CC Opportunities Fund	\$711,276,805	\$1,020,000,000	63%	\$640,912,964	-\$49,687,028	\$20	\$41,561,990	\$420,551,937	0.06	1.17	3/31/2021
7/1/2006	Torchlight II	-\$59,952	\$128,000,000	0%	\$218,263,562	\$0	\$0	\$208,623,727	\$0	0.96	0.96	9/30/2019
12/12/2008	Torchlight III	-\$13,696	\$75,000,000	0%	\$83,825,058	\$0	\$0	\$124,848,870	\$0	1.49	1.49	12/28/2018
8/1/2012	Torchlight IV	\$9,757,393	\$60,000,000	0%	\$84,866,971	\$0	\$0	\$104,809,507	\$0	1.23	1.35	3/31/2021
3/12/2015	Torchlight V	\$17,726,083	\$75,000,000	0%	\$60,000,000	\$0	\$3,070,407	\$59,314,141	\$15,000,000	0.99	1.28	3/31/2021
<b>Total Private Credit</b>		<b>\$742,127,163</b>										
<b>% of Portfolio (Market Value)</b>		<b>6.8%</b>										

\*All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.



Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2021

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2021 <sup>1</sup>	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions <sup>8</sup>	Remaining Commitment	Distrib./Paid-In (DPI) <sup>2</sup>	Tot. Value/Paid-In (TVPI) <sup>3</sup>	Latest Valuation
<b>Real Estate</b>												
1/23/2012	Angelo Gordon Realty Fund VIII <sup>7</sup>	\$18,487,795	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$98,433,174	\$12,334,302	1.31	1.55	3/31/2021
12/8/2014	Angelo Gordon Realty Fund IX	\$54,640,817	\$65,000,000	93%	\$60,125,000	\$0	\$5,687,500	\$24,050,001	\$7,572,500	0.40	1.31	3/31/2021
6/23/2005	DLJ RECP III	\$16,214,995	\$75,000,000	134%	\$100,709,313 <sup>4</sup>	\$0	\$0	\$69,364,915	\$4,031,338	0.69	0.85	3/31/2021
2/11/2008	DLJ RECP IV	\$56,820,300	\$100,000,000	130%	\$129,892,605 <sup>5</sup>	\$0	\$0	\$90,463,629	\$3,162,610	0.70	1.13	3/31/2021
7/1/2014	DLJ RECP V	\$61,984,647	\$75,000,000	131%	\$98,556,790 <sup>6</sup>	\$12,944,752	\$0	\$58,913,882	\$7,612,001	0.60	1.23	3/31/2021
3/19/2019	DLJ RECP VI	\$27,159,803	\$50,000,000	51%	\$25,335,866	\$0	\$0	\$220,742	\$25,050,462	0.01	1.08	3/31/2021
6/17/1998	Hearthstone II <sup>7</sup>	\$5,654	\$25,000,000	80%	\$19,938,463	\$0	\$0	\$27,473,662	\$0	1.38	1.38	3/31/2021
6/30/2013	Invesco Real Estate III <sup>7</sup>	\$162,975	\$35,000,000	93%	\$32,386,423	\$0	\$0	\$47,423,062	\$2,613,577	1.46	1.47	3/31/2021
6/30/2014	Invesco Real Estate IV <sup>7</sup>	\$16,395,885	\$35,000,000	87%	\$30,546,401	\$0	\$1,996,747	\$22,353,948	\$4,453,599	0.73	1.27	6/30/2021
6/30/2013	Invesco Real Estate V	\$61,399,552	\$75,000,000	77%	\$57,485,048	\$8,487,379	\$958,398	\$5,681,837	\$21,256,455 <sup>9</sup>	0.10	1.17	6/30/2021
7/16/2013	LaSalle Income & Growth VI <sup>7</sup>	\$19,555,813	\$75,000,000	95%	\$71,428,571	\$0	\$3,105,590	\$84,523,353	\$3,571,429	1.18	1.46	3/31/2021
2/28/2017	LaSalle Income & Growth VII	\$54,056,105	\$75,000,000	103%	\$77,293,582	\$0	\$3,227,082	\$36,698,925	-\$2,293,582	0.47	1.17	3/31/2021
7/3/2013	Long Wharf Fund IV <sup>7</sup>	\$1,705,111	\$25,000,000	100%	\$25,000,000	\$0	\$147,958	\$34,676,831	\$0	1.39	1.46	6/30/2021
9/30/2016	Long Wharf Fund V <sup>7</sup>	\$34,691,598	\$50,000,000	100%	\$50,000,000	\$0	\$2,284,930	\$28,904,375	\$0	0.58	1.27	6/30/2021
6/27/2019	Long Wharf Fund VI	\$13,123,262	\$50,000,000	33%	\$16,650,148	\$5,371,655	\$5,748,265	\$5,748,265	\$33,349,852	0.35	1.13	6/30/2021
12/31/2011	Oaktree REOF V <sup>7</sup>	\$2,989,127	\$50,000,000	101%	\$50,315,673	\$249,832	\$1,029,832	\$75,692,733	\$5,000,000 <sup>9</sup>	1.50	1.56	6/30/2021
9/30/2013	Oaktree REOF VI <sup>7</sup>	\$27,743,023	\$80,000,000	100%	\$80,000,000	\$0	\$0	\$84,010,175	\$18,400,000 <sup>9</sup>	1.05	1.40	6/30/2021
4/1/2015	Oaktree REOF VII	\$42,584,000	\$65,000,000	96%	\$62,400,000	\$0	\$8,980,101	\$27,040,000	\$21,515,000 <sup>9</sup>	0.43	1.12	6/30/2021
11/10/2013	Paulson Real Estate Fund II <sup>7</sup>	\$22,386,532	\$20,000,000	97%	\$19,345,623	\$0	\$2,034,086	\$8,830,276	\$654,377	0.46	1.61	3/31/2021
1/25/2012	Siguler Guff DREOF	\$22,498,913	\$75,000,000	93%	\$69,375,000	\$0	\$4,246,842	\$98,365,088	\$5,625,000	1.42	1.74	3/31/2021
8/31/2013	Siguler Guff DREOF II	\$44,432,895	\$70,000,000	89%	\$61,985,000	\$0	\$1,120,741	\$39,645,160	\$8,015,000	0.64	1.36	3/31/2021
1/27/2016	Siguler Guff DREOF II Co-Inv	\$16,095,735	\$25,000,000	82%	\$20,537,862	\$0	\$0	\$10,273,350	\$4,462,138	0.50	1.28	3/31/2021
<b>Total Closed End Real Estate</b>		<b>\$615,134,537</b>	<b>\$1,275,000,000</b>	<b>97%</b>	<b>\$1,234,709,225</b>	<b>\$27,053,618</b>	<b>\$40,568,073</b>	<b>\$978,787,385</b>	<b>\$186,386,056</b>	<b>0.79</b>	<b>1.29</b>	
<b>% of Portfolio (Market Value)</b>		<b>5.6%</b>										

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Includes \$7,360,987 in management fees charged outside the fund.

<sup>5</sup>Includes \$11,322,966 in management fees charged outside the fund.

<sup>6</sup>Includes \$986,559 in management fees charged outside the fund.

<sup>7</sup>Capital has been fully called and fund is in redemption.

<sup>8</sup>Total distributions may include recallable distributions

<sup>9</sup>Remianing commitment includes recallable distributions

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2021

StepStone Group Analysis (\*)

Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2021 <sup>1</sup>	Total Commitment	Total % Called	Contributed Capital	Current Qtr. Change in Contributed Capital	Current Qtr. Change in Distributed Capital	Total Distributions	Remaining Commitment	Distrib./Paid-In (DPI) <sup>2</sup>	Tot. Value/Paid-In (TVPI) <sup>3</sup>	Latest Valuation
<b>Private Equity &amp; Venture Capital</b>												
2/11/2004	Adams Street Partners	\$171,609,563	\$210,000,000	2%	\$190,875,625	\$3,475,000	\$19,744,703	\$205,966,466	\$19,124,375	1.08	1.98	3/31/2021
1/15/2009	Adams Street Partners II	\$5,917,328	\$30,000,000	0%	\$28,365,000	\$0	\$0	\$42,951,012	\$1,635,000	1.51	1.72	12/31/2020
9/21/2012	Adams Street Partners - Fund 5	\$19,063,555	\$40,000,000	0%	\$30,845,875	\$0	\$1,634,873	\$21,284,092	\$9,154,125	0.69	1.31	3/31/2021
1/18/1996	Adams Street Partners - BPF	\$1,896,838	\$59,565,614	0%	\$57,517,409	\$0	\$0	\$102,731,103	\$2,048,205	1.79	1.82	3/31/2021
3/31/2016	Adams Street Venture Innovation	\$104,626,170	\$75,000,000	5%	\$59,287,500	\$3,750,000	\$8,269,019	\$8,269,019	\$15,712,500	0.14	1.90	12/31/2020
5/18/2018	AE Industrial Partners Fund II, LP	\$22,683,033	\$35,000,000	6%	\$18,612,287	\$2,057,518	\$0	\$804,335	\$17,192,048	0.04	1.26	3/31/2021
11/27/2013	Aether Real Assets III	\$18,804,218	\$25,000,000	0%	\$24,407,721	\$0	\$0	\$3,913,883	\$2,822,138	0.16	0.93	3/31/2021
11/30/2013	Aether Real Assets III Surplus	\$44,610,380	\$50,000,000	0%	\$51,339,959	\$0	\$0	\$8,973,151	\$1,925,536	0.17	1.04	3/31/2021
1/30/2016	Aether Real Assets IV	\$46,245,506	\$50,000,000	3%	\$44,919,033	\$1,275,297	\$0	\$3,442,429	\$7,682,755	0.08	1.11	3/31/2021
4/30/2004	Bay Area Equity Fund I <sup>4</sup>	\$2,391,176	\$10,000,000	0%	\$10,000,000	\$0	\$0	\$37,018,019	\$0	3.70	3.94	3/31/2021
6/29/2009	Bay Area Equity Fund II <sup>4</sup>	\$12,663,995	\$10,000,000	0%	\$10,000,000	\$0	\$0	\$3,684,910	\$0	0.37	1.63	3/31/2021
6/30/2013	Commonfund	\$33,427,492	\$50,000,000	0%	\$45,899,994	\$0	\$559,624	\$13,253,075	\$4,100,006	0.29	1.02	12/31/2020
7/15/2005	EIF US Power Fund II <sup>4</sup>	\$4,883,535	\$50,000,000	0%	\$65,029,556	\$0	\$0	\$74,001,371	\$0	1.14	1.21	3/31/2021
5/31/2007	EIF US Power Fund III <sup>4</sup>	\$17,292,848	\$65,000,000	0%	\$71,409,097	\$0	\$0	\$73,782,321	\$0	1.03	1.28	3/31/2021
11/28/2011	EIF US Power Fund IV	\$32,871,476	\$50,000,000	1%	\$64,917,547	\$383,084	\$1,969,361	\$34,235,809	-\$762,069	0.53	1.03	12/31/2020
11/28/2016	EIF US Power Fund V	\$20,343,562	\$50,000,000	0%	\$52,779,673	\$0	\$19,146,526	\$48,433,922	\$22,742,894	0.92	1.30	3/31/2021
2/21/2019	Genstar Capital Partners IX, L.P.	\$38,224,538	\$50,000,000	22%	\$30,860,654	\$11,232,378	\$0	\$1,166,668	\$20,293,503	0.04	1.28	3/31/2021
4/1/2021	Genstar Capital Partners X, L.P.	\$0	\$42,500,000	0%	\$0	\$0	\$0	\$0	\$42,500,000	-	-	3/31/2021
5/10/2021	Hellman & Friedman Capital Partners X, L.P.	\$0	\$75,000,000	0%	\$0	\$0	\$0	\$0	\$75,000,000	-	-	3/31/2021
11/18/2009	Oaktree PIF 2009	\$998,913	\$40,000,000	0%	\$34,812,384	-\$4,175	\$147,685	\$46,272,470	\$6,308,961	1.33	1.36	3/31/2021
5/2/2013	Ocean Avenue Fund II	\$24,499,622	\$30,000,000	0%	\$27,000,000	\$0	\$1,800,000	\$33,439,096	\$3,000,000	1.24	2.15	3/31/2021
4/15/2016	Ocean Avenue Fund III	\$55,271,738	\$50,000,000	0%	\$44,000,000	\$0	\$0	\$23,000,000	\$6,000,000	0.52	1.78	3/31/2021
11/30/2007	Paladin III	\$32,208,986	\$25,000,000	0%	\$34,331,097	\$0	\$0	\$60,680,169	\$419,157	1.77	2.71	3/31/2021
8/22/2011	Pathway 6	\$42,093,302	\$40,000,000	0%	\$39,045,460	\$68,242	\$1,666,439	\$36,415,132	\$3,699,425	0.93	2.01	12/31/2020
7/10/2013	Pathway 7	\$79,650,394	\$70,000,000	0%	\$67,470,913	\$0	\$8,291,723	\$52,102,333	\$6,405,626	0.77	1.95	12/31/2020
11/23/2015	Pathway 8	\$67,021,685	\$50,000,000	4%	\$45,066,547	\$1,768,735	\$5,127,365	\$15,686,157	\$9,137,253	0.35	1.84	12/31/2020
1/19/1999	Pathway	\$8,853,865	\$125,000,000	0%	\$125,640,121	\$172,119	\$2,314,238	\$181,905,233	\$10,606,259	1.45	1.52	12/31/2020
7/31/2009	Pathway 2008	\$14,943,180	\$30,000,000	0%	\$29,608,019	\$33,750	\$6,194,848	\$42,350,017	\$3,051,576	1.43	1.94	12/31/2020
6/3/2014	Siguler Guff CCCERA Opportunities	\$175,402,780	\$200,000,000	1%	\$173,083,208	\$2,500,000	\$16,010,980	\$129,313,635	\$30,597,500	0.75	1.76	3/31/2021
5/18/2018	Siris Partners IV, L.P.	\$20,081,494	\$35,000,000	0%	\$19,610,842	\$0	\$0	\$2,894,896	\$17,473,632	0.15	1.17	3/31/2021
6/28/2019	TPG Healthcare Partners, L.P.	\$8,584,037	\$24,000,000	7%	\$8,492,136	\$1,696,032	\$573,787	\$1,956,092	\$17,127,594	-	-	3/31/2021
5/24/2019	Trident VIII, L.P.	\$26,500,051	\$40,000,000	28%	\$24,569,979	\$11,020,451	\$0	\$565,951	\$15,892,041	-	-	-
12/8/2015	Wastewater Opportunity Fund	\$16,179,759	\$25,000,000	0%	\$28,693,102	\$0	\$0	\$12,239,088	\$1,754,258	0.43	0.99	3/31/2021
<b>Total Private Equity and Venture Capital</b>		<b>\$1,169,845,020</b>	<b>\$1,811,065,614</b>	<b>86%</b>	<b>\$1,558,490,737</b>	<b>\$39,428,432</b>	<b>\$93,451,172</b>	<b>\$1,322,731,855</b>	<b>\$372,644,298</b>	<b>0.85</b>	<b>1.60</b>	

% of Portfolio (Market Value) 10.7%

\* All Data provided by StepStone Group

<sup>1</sup>Latest valuation + capital calls - distributions

<sup>2</sup>(DPI) is equal to (capital returned / capital called)

<sup>3</sup>(TVPI) is equal to (market value + capital returned) / capital called

<sup>4</sup>Capital has been fully called and fund is in redemption.

Total Fund  
Closed End Funds - IRR Summary

Period Ending: June 30, 2021

Private Credit	Inception	Fund Level (G) <sup>2</sup>	CCCERA (G)	Fund Level (N) <sup>2,3</sup>	CCCERA (N) <sup>3</sup>	IRR Date
Angelo Gordon Energy Cred Opp. <sup>4</sup>	09/24/2015	-	-	-	7.5%	03/31/2021
Stepstone CC Opportunities Fund	02/02/2018	-	8.8%	-	9.3%	03/31/2021
Torchlight IV	08/01/2012	12.0%	12.5%	9.7%	10.4%	03/31/2021
Torchlight V	03/12/2015	15.0%	14.8%	10.5%	10.1%	03/31/2021

Real Estate	Inception	Fund Level (G) <sup>2</sup>	CCCERA (G)	Fund Level (N) <sup>2,3</sup>	CCCERA (N) <sup>3</sup>	IRR Date
Angelo Gordon VIII <sup>4</sup>	01/23/2012	-	-	-	13.5%	03/31/2021
Angelo Gordon IX	12/08/2014	-	-	-	8.1%	03/31/2021
DLJ RECP III	06/23/2005	-1.0%	-1.0%	-4.0%	-3.0%	03/31/2021
DLJ RECP IV	02/11/2008	4.0%	4.0%	2.0%	2.0%	03/31/2021
DLJ RECP V	07/01/2014	16.0%	16.0%	9.0%	9.0%	03/31/2021
DLJ RECP VI <sup>1</sup>	03/19/2019	11.0%	11.0%	3.0%	3.0%	03/31/2021
Hearthstone II <sup>4</sup>	06/17/1998	-	30.1%	-	30.1%	03/31/2020
Invesco Fund III <sup>4</sup>	06/30/2013	16.6%	-	13.6%	-	12/31/2020
Invesco Fund IV <sup>4</sup>	06/30/2014	15.4%	-	11.9%	-	03/31/2021
Invesco Fund V	02/20/2019	22.5%	-	14.6%	-	03/31/2021
LaSalle Income & Growth VI <sup>4</sup>	07/16/2013	12.9%	12.9%	10.7%	10.7%	03/31/2021
LaSalle Income & Growth VII	02/28/2017	9.3%	9.3%	7.4%	7.4%	03/31/2021
Long Wharf IV <sup>4</sup>	07/03/2013	16.6%	16.2%	12.0%	12.0%	03/31/2021
Long Wharf V <sup>4</sup>	09/30/2016	11.1%	11.7%	8.1%	8.5%	03/31/2021
Long Wharf VI	06/27/2019	33.2%	45.9%	12.5%	16.3%	03/31/2021
Oaktree REOF V <sup>4</sup>	12/31/2011	16.7%	-	12.3%	-	03/31/2021
Oaktree REOF VI <sup>4</sup>	09/30/2013	12.4%	-	8.5%	-	03/31/2021
Oaktree REOF VII	04/01/2015	25.1%	-	15.6%	-	03/31/2021
Paulson <sup>4</sup>	11/10/2013	-	-	13.8%	-	12/31/2020
Siguler Guff I	01/25/2012	13.0%	15.7%	11.5%	12.6%	03/31/2021
Siguler Guff II	08/31/2013	10.6%	10.6%	9.2%	8.4%	03/31/2021
Siguler Guff DREOF II Co-Inv	01/27/2016	8.1%	8.4%	7.1%	6.8%	03/31/2021

<sup>1</sup>Manager has yet to report IRR figure.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Capital has been fully called and fund is in redemption.

Total Fund  
Closed End Funds - IRR Summary

Period Ending: June 30, 2021

Private Equity & Venture Capital	Closing Date	Fund Level (G) <sup>2</sup>	CCCERA (G)	Fund Level (N) <sup>2,3</sup>	CCCERA (N) <sup>3</sup>	IRR Date
Adams Street Partners	2/11/2004	-	14.7%	-	12.6%	3/31/2021
Adams Street Partners II	12/31/2008	-	18.0%	-	14.3%	3/31/2021
Adams Street Partners - Fund 5	12/31/2008	-	9.8%	-	6.7%	3/31/2021
Adams Street Partners Venture	1/18/1996	-	60.0%	-	56.3%	3/31/2021
Adams Street Partners - BPF	3/31/2016	-	14.2%	-	11.6%	3/31/2021
AE Industrial Partners Fund II, LP	5/18/2018	30.6%	-	27.4%	-	3/31/2021
Aether Real Assets III	11/27/2013	1.2%	1.2%	-1.8%	-1.8%	3/31/2021
Aether Real Assets III Surplus	11/30/2013	2.7%	2.7%	1.0%	1.0%	3/31/2021
Aether Real Assets IV	1/30/2016	8.0%	8.0%	4.1%	4.1%	3/31/2021
Bay Area Equity Fund I <sup>9</sup>	11/26/2003	31.4%	31.4%	23.1%	23.1%	3/31/2021
Bay Area Equity Fund II <sup>9</sup>	11/26/2003	11.2%	11.2%	6.5%	6.5%	3/31/2021
CommonFund	6/30/2013	-	-	-	4.8%	3/31/2021
Energy Investor Fund II <sup>9</sup>	7/15/2005	6.1%	5.7%	3.4%	3.1%	3/31/2021
Energy Investor Fund III <sup>9</sup>	5/31/2007	6.4%	6.4%	3.9%	3.9%	3/31/2021
Energy Investor Fund IV	8/31/2010	5.0%	5.1%	1.7%	1.5%	3/31/2021
Energy Investor Fund V	11/28/2016	19.3%	16.2%	15.5%	12.4%	3/31/2021
Genstar Capital Partners IX, L.P. <sup>1</sup>	2/21/2019	21.6%	-	-	-	3/31/2021
Oaktree PIF 2009	2/28/2010	6.8%	-	6.5%	-	3/31/2021
Ocean Avenue II	8/15/2013	-	-	17.3%	-	12/31/2020
Ocean Avenue III	4/15/2016	-	-	22.6%	-	12/31/2020
Paladin III	11/30/2007	22.7%	-	15.7%	-	3/31/2021
Pathway 6	8/22/2011	20.0%	20.0%	17.8%	17.8%	3/31/2021
<i>Benchmark</i> <sup>4</sup>		15.9%	-	-	-	3/31/2021
Pathway 7	7/10/2013	22.5%	22.5%	20.3%	20.3%	3/31/2021
<i>Benchmark</i> <sup>5</sup>		16.8%	-	-	-	3/31/2021
Pathway 8	11/23/2015	27.1%	27.3%	25.6%	25.9%	3/31/2021
<i>Benchmark</i> <sup>6</sup>		20.6%	-	-	-	3/31/2021
Pathway Private Equity Fund	1/19/1999	10.3%	10.3%	8.4%	8.4%	3/31/2021
<i>Benchmark</i> <sup>7</sup>		10.5%	-	-	-	3/31/2021
Pathway Private Equity Fund 2008	7/31/2009	17.9%	17.9%	15.6%	15.6%	3/31/2021
<i>Benchmark</i> <sup>8</sup>		14.1%	-	-	-	3/31/2021
Siguler Guff CCCERA Opportunities	6/3/2014	20.1%	20.8%	19.6%	18.0%	3/31/2021
Siguler Guff Secondary Opportunities <sup>9</sup>	8/31/2013	55.3%	118.4%	49.5%	69.0%	9/30/2020
Siris Partners IV, L.P. <sup>1</sup>	5/18/2018	-	-	-	-	-
TPG Healthcare Partners, L.P. <sup>1</sup>	6/28/2019	-	-	-	-	-
Trident VIII, L.P. <sup>1</sup>	5/24/2019	-	-	-	-	-
Wastewater Opportunity Fund	12/8/2015	4.1%	-	-0.2%	-	3/31/2021

<sup>1</sup>Manager has yet to report IRR figure.

<sup>2</sup>Fund level data includes CCCERA and all other fund investors.

<sup>3</sup>Net IRR calculated after deductions of management fees and carried interest to the General Partner.

<sup>4</sup>Private iQ global all private equity median pooled return for vintage years 2011-2014, as of June 30, 2020.

<sup>5</sup>Private iQ global all private equity median pooled return for vintage years 2012-2016, as of June 30, 2020.

<sup>6</sup>Private iQ global all private equity median pooled return for vintage years 2015-2018, as of June 30, 2020.

<sup>7</sup>Private iQ global all private equity median pooled return for vintage years 1999-2011, as of June 30, 2020.

<sup>8</sup>Private iQ global all private equity median pooled return for vintage years 2008-2014, as of June 30, 2020.

<sup>9</sup>Capital has been fully called and fund is in redemption.

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

Period Ending: June 30, 2021

	3 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
BlackRock Russell 1000 Index	19.14%	-0.02%	19.10%	-0.01%	1.00	0.02%	1.00	0.94	-1.11	99.91%	99.98%
Jackson Square Partners	22.45%	-2.70%	20.28%	-2.00%	0.97	6.43%	0.90	1.05	-0.42	87.47%	96.19%
Boston Partners	12.61%	0.20%	21.50%	-0.58%	1.06	2.88%	0.99	0.53	0.07	107.60%	104.61%
Emerald Advisers	16.46%	0.51%	25.19%	1.21%	0.96	6.15%	0.94	0.61	0.08	97.96%	97.72%
Ceredex	6.18%	-4.09%	24.80%	-3.02%	0.90	6.59%	0.94	0.20	-0.62	78.29%	96.46%
Pyrford	8.18%	2.97%	14.87%	4.53%	0.70	7.68%	0.90	0.47	0.39	75.88%	74.31%
William Blair	16.77%	3.54%	18.00%	2.35%	1.09	3.79%	0.96	0.86	0.93	120.99%	103.40%
PIMCO RAE Emerging Markets	9.51%	1.69%	22.33%	0.73%	1.12	4.93%	0.96	0.37	0.34	119.27%	106.42%
TT Emerging Markets	15.75%	4.48%	22.75%	2.48%	1.18	6.28%	0.95	0.64	0.71	140.89%	111.86%
Artisan Partners	21.47%	1.08%	17.13%	2.77%	0.92	4.56%	0.94	1.18	0.24	92.89%	87.75%
First Eagle	9.79%	1.41%	14.16%	3.79%	0.72	6.48%	0.94	0.61	0.22	74.34%	74.90%
JP Morgan Global Opportunities	2.83%	-11.73%	6.67%	1.22%	0.11	17.19%	0.09	0.24	-0.68	10.05%	14.73%
Allianz Global Investors	6.16%	-0.99%	8.39%	-0.01%	0.86	2.30%	0.95	0.59	-0.43	86.00%	90.83%
Adelante	12.03%	1.97%	18.04%	2.50%	0.95	1.66%	0.99	0.60	1.18	101.91%	93.87%
AFL-CIO	4.96%	-0.38%	3.05%	0.49%	0.84	1.07%	0.91	1.23	-0.36	83.69%	69.74%
DFA Short Credit	3.24%	-0.50%	1.75%	0.09%	0.84	1.32%	0.45	1.16	-0.38	78.68%	13.52%
Insight Short Duration	3.08%	0.12%	1.99%	0.42%	0.90	1.80%	0.19	0.94	0.07	96.30%	-64.14%
Sit Short Duration	3.96%	1.25%	1.85%	0.38%	1.32	1.07%	0.71	1.49	1.17	156.83%	245.57%

Performance Analysis excludes closed end funds and those funds without 3 years of performance.

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

Period Ending: June 30, 2021

	5 Years										
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Jackson Square Partners	20.75%	-2.91%	16.72%	-2.31%	0.97	5.75%	0.88	1.17	-0.51	83.12%	96.61%
Boston Partners	13.70%	1.83%	17.48%	1.04%	1.07	2.91%	0.98	0.72	0.63	114.05%	101.48%
Emerald Advisers	19.92%	1.16%	20.74%	1.84%	0.96	5.32%	0.94	0.91	0.22	99.22%	96.20%
Ceredex	9.25%	-4.37%	20.35%	-2.67%	0.88	6.35%	0.92	0.40	-0.69	70.22%	95.48%
Pyrford	7.64%	-0.90%	12.51%	1.66%	0.70	6.88%	0.85	0.52	-0.13	63.64%	77.78%
William Blair	15.95%	2.58%	14.93%	1.74%	1.06	3.29%	0.95	0.99	0.79	115.61%	99.22%
Total Global Equity	15.35%	0.74%	12.51%	3.16%	0.83	3.93%	0.94	1.14	0.19	86.29%	83.05%
Artisan Partners	20.85%	1.70%	14.50%	2.96%	0.93	4.42%	0.91	1.36	0.38	95.79%	86.31%
First Eagle	9.21%	-0.60%	11.42%	2.25%	0.71	5.51%	0.92	0.71	-0.11	66.07%	74.88%
Allianz Global Investors	6.24%	-1.06%	6.73%	-0.11%	0.87	1.82%	0.95	0.76	-0.58	85.00%	92.64%
Adelante	7.80%	1.44%	15.46%	1.81%	0.94	1.73%	0.99	0.43	0.83	96.97%	92.94%
AFL-CIO	2.74%	-0.28%	2.86%	0.19%	0.84	0.95%	0.92	0.57	-0.30	81.01%	76.62%

Performance Analysis excludes closed end funds and those funds without 5 years of performance.

# Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2021

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
BlackRock Russell 1000 Index	Growth	0.03% of Assets	\$464,332,442	\$139,300	0.03%
Jackson Square Partners	Growth	0.40% of First 400.0 Mil, 0.35% Thereafter	\$264,001,184	\$1,056,005	0.40%
Boston Partners	Growth	0.50% of First 25.0 Mil, 0.30% Thereafter	\$285,165,250	\$905,496	0.32%
Emerald Advisers	Growth	0.75% of First 10.0 Mil, 0.60% Thereafter	\$207,742,200	\$1,261,453	0.61%
Ceredex	Growth	0.85% of First 10.0 Mil, 0.68% of Next 40.0 Mil, 0.51% Thereafter	\$194,917,276	\$1,096,078	0.56%
Pyrford	Growth	0.70% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.35% Thereafter	\$543,778,595	\$2,153,225	0.40%
William Blair	Growth	0.80% of First 20.0 Mil, 0.60% of Next 30.0 Mil, 0.50% of Next 50.0 Mil, 0.45% of Next 50.0 Mil, 0.40% of Next 50.0 Mil, 0.30% Thereafter	\$680,467,338	\$2,456,402	0.36%
PIMCO RAE Emerging Markets	Growth	0.75% of First 50.0 Mil, 0.68% of Next 50.0 Mil, 0.50% of Next 100.0 Mil, 0.45% Thereafter	\$452,804,767	\$2,350,121	0.52%
TT Emerging Markets	Growth	0.70% of First 100.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$501,732,837	\$3,160,397	0.63%
Artisan Partners	Growth	0.75% of Assets	\$640,627,497	\$4,804,706	0.75%
First Eagle	Growth	0.75% of Assets	\$536,041,871	\$4,020,314	0.75%
Allianz Global Investors	Growth	0.50% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	\$180,898,374	\$733,144	0.41%
AQR Global Risk Premium-EL	Growth	0.38% of Assets	\$266,994,077	\$1,014,577	0.38%
PanAgora Risk Parity Multi Asset	Growth	0.35% of Assets	\$267,328,149	\$935,649	0.35%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

Total Fund  
Investment Fund Fee Analysis

Period Ending: June 30, 2021

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
AFL-CIO	Diversifying	0.43% of Assets	\$264,875,256	\$1,138,964	0.43%
Parametric Defensive Equity	Diversifying	0.42% of First 200.0 Mil, 0.39% Thereafter	\$113,593,978	\$477,095	0.42%
Acadian Multi-Asset Absolute Return Fund	Diversifying	0.50% of Assets	\$129,199,250	\$645,996	0.50%
Sit LLCAR	Diversifying	0.39% of First 200.0 Mil, 0.35% Thereafter	\$155,732,453	\$607,357	0.39%
DFA Short Credit	Liquidity	0.20% of First 25.0 Mil, 0.10% Thereafter	\$336,944,335	\$361,944	0.11%

Mutual fund fees shown are sourced from Morningstar and are as of the most current prospectus.

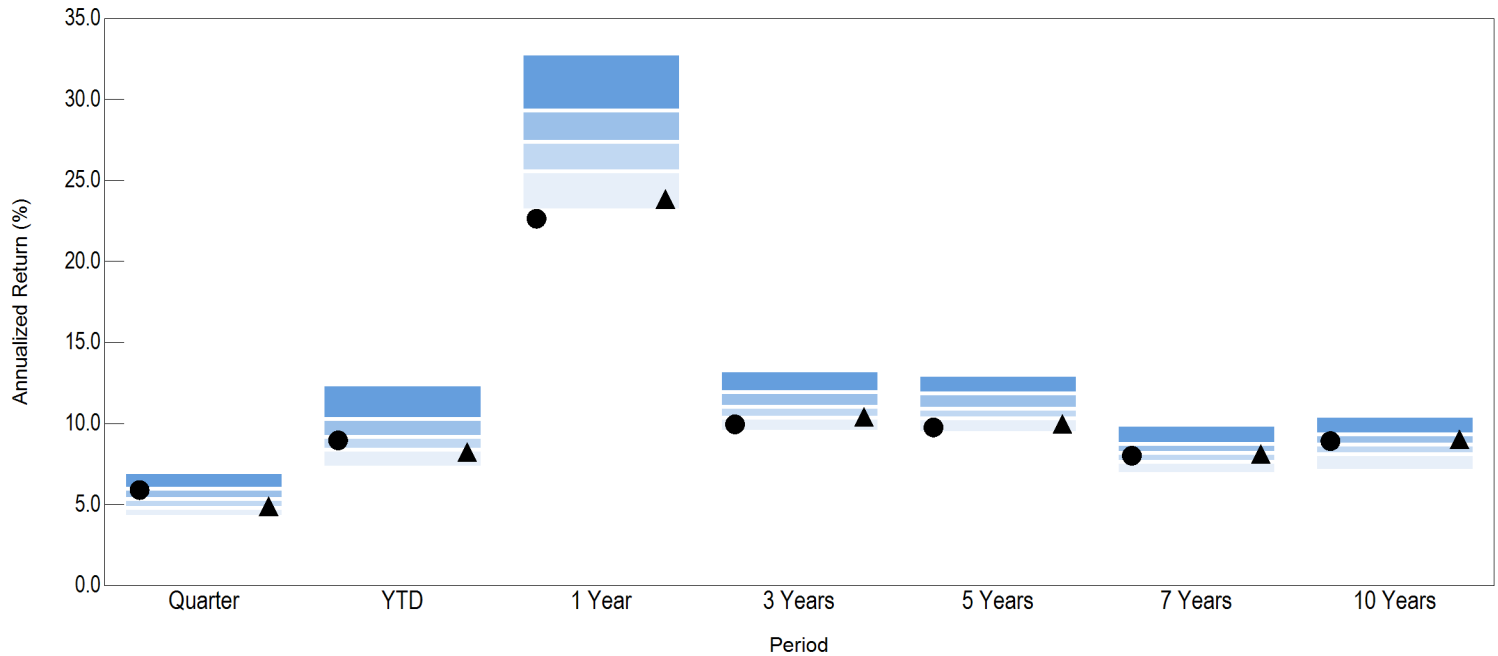


Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: June 30, 2021

Total Fund Cumulative Performance vs. InvMetrics Public DB > \$1B Gross



	Return (Rank)													
5th Percentile	7.0	12.4	32.8	13.3	13.0	9.9	10.5							
25th Percentile	6.0	10.3	29.4	12.0	11.9	8.8	9.3							
Median	5.4	9.2	27.4	11.0	11.0	8.2	8.7							
75th Percentile	4.8	8.4	25.6	10.4	10.4	7.6	8.1							
95th Percentile	4.3	7.3	23.2	9.5	9.4	6.9	7.1							
# of Portfolios	78	78	78	78	78	77	74							
● Total Fund	5.9	(28)	9.0	(59)	22.6	(97)	10.0	(86)	9.8	(93)	8.0	(60)	8.9	(43)
▲ Policy Index	4.9	(74)	8.2	(79)	23.9	(92)	10.4	(74)	10.0	(87)	8.1	(57)	9.0	(40)

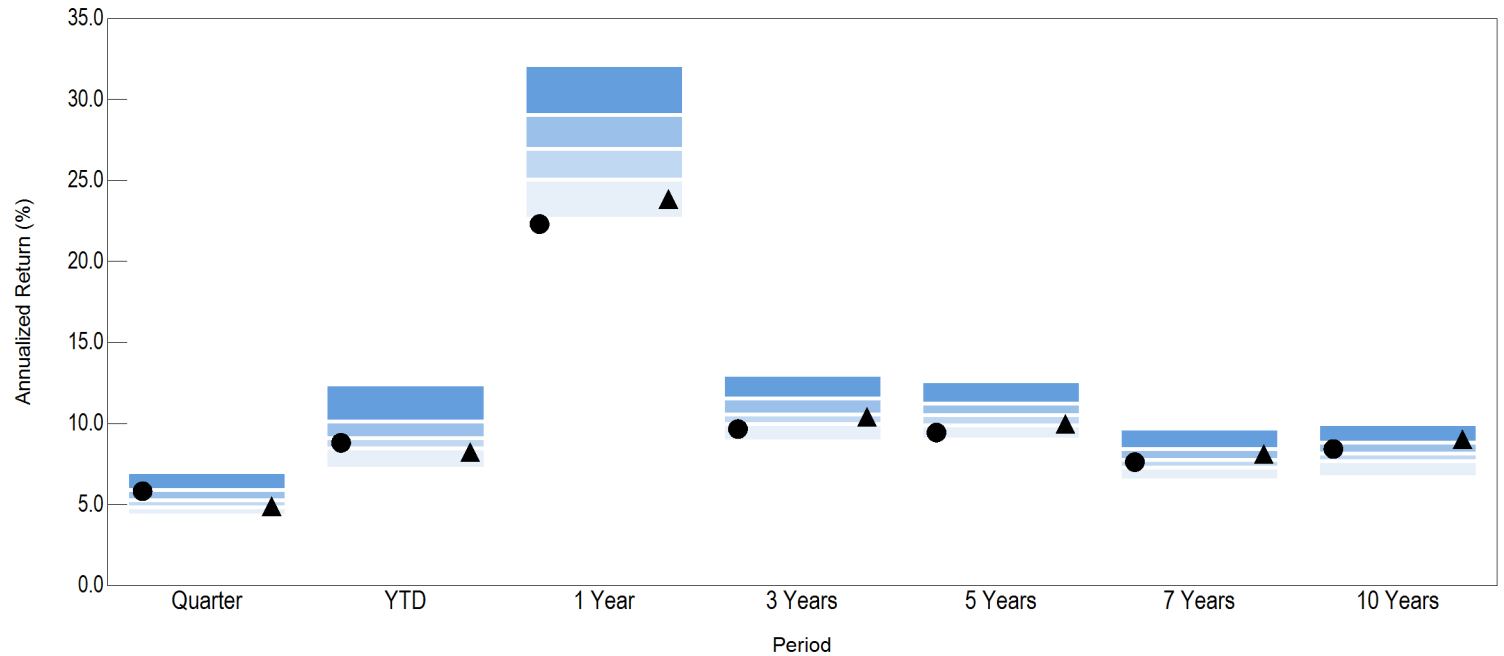
Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Cumulative Performance (Net of Fees)

Period Ending: June 30, 2021

Total Fund Cumulative Performance vs. InvMetrics Public DB > \$1B Net

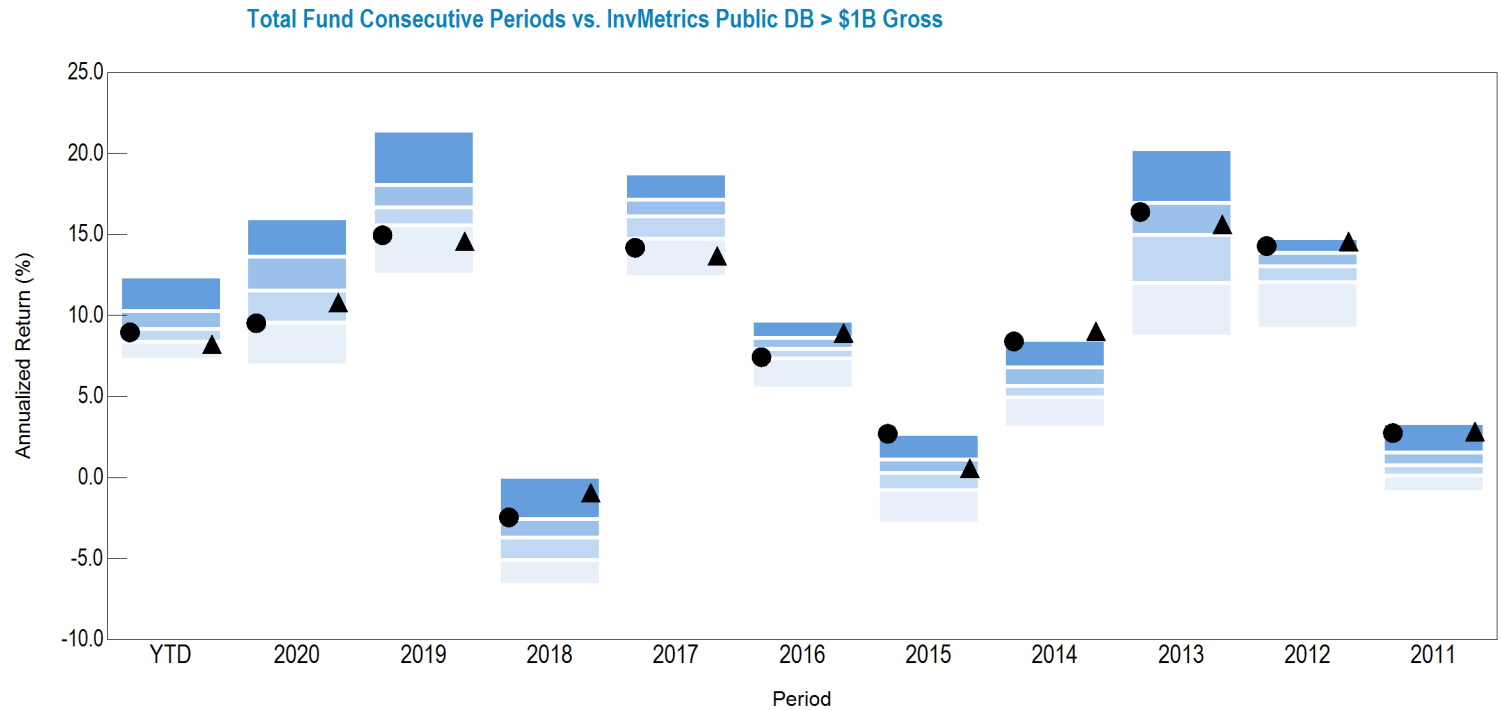


	Return (Rank)													
	Quarter	YTD	1 Year	3 Years	5 Years	7 Years	10 Years	Quarter	YTD	1 Year	3 Years	5 Years	7 Years	10 Years
5th Percentile	7.0	12.4	32.1	13.0	12.6	9.7	10.0							
25th Percentile	5.9	10.1	29.1	11.6	11.3	8.4	8.8							
Median	5.3	9.1	27.0	10.6	10.5	7.8	8.2							
75th Percentile	4.8	8.5	25.1	10.0	9.9	7.3	7.7							
95th Percentile	4.3	7.2	22.7	8.9	9.0	6.5	6.7							
# of Portfolios	77	77	77	77	77	76	72							
● Total Fund	5.8 (27)	8.8 (60)	22.3 (96)	9.7 (86)	9.4 (92)	7.6 (59)	8.4 (43)							
▲ Policy Index	4.9 (73)	8.2 (79)	23.9 (90)	10.4 (57)	10.0 (70)	8.1 (37)	9.0 (20)							

# Total Fund

## Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: June 30, 2021



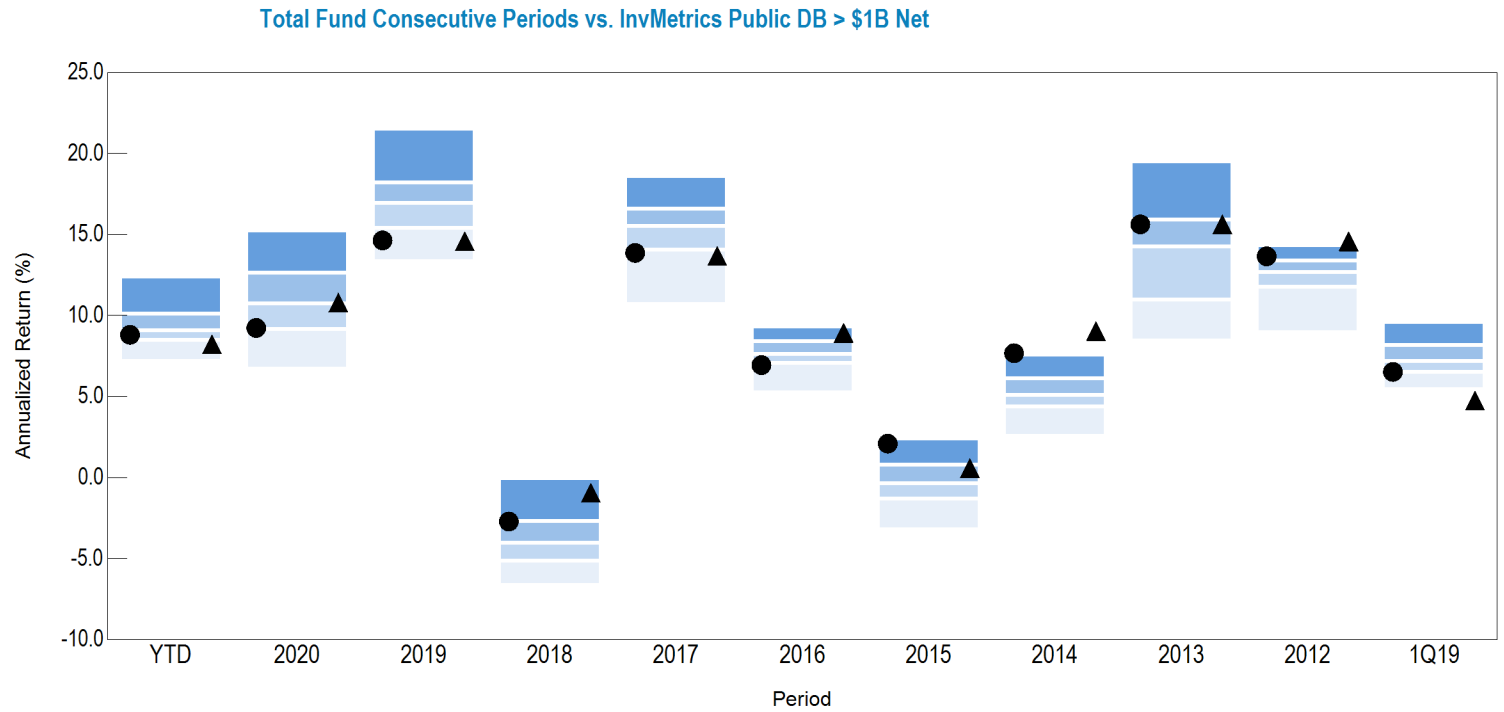
	Return (Rank)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
5th Percentile	12.4	16.0	21.4	0.0	18.8	9.7	2.7	8.5	20.2	14.7	3.3
25th Percentile	10.3	13.6	18.1	-2.6	17.2	8.6	1.1	6.8	17.0	13.9	1.6
Median	9.2	11.5	16.7	-3.7	16.2	8.0	0.3	5.7	15.0	13.0	0.8
75th Percentile	8.4	9.6	15.6	-5.1	14.8	7.4	-0.7	4.9	12.0	12.1	0.1
95th Percentile	7.3	6.9	12.5	-6.6	12.4	5.5	-2.8	3.1	8.7	9.2	-0.9
# of Portfolios	78	94	81	71	98	92	98	79	67	74	68
● Total Fund	9.0 (59)	9.5 (78)	15.0 (83)	-2.5 (25)	14.2 (83)	7.4 (74)	2.7 (5)	8.4 (6)	16.4 (33)	14.3 (13)	2.7 (9)
▲ Policy Index	8.2 (79)	10.8 (60)	14.6 (87)	-0.9 (8)	13.7 (89)	8.9 (15)	0.6 (40)	9.0 (2)	15.6 (43)	14.6 (8)	2.8 (9)

Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Consecutive Periods (Net of Fees)

Period Ending: June 30, 2021

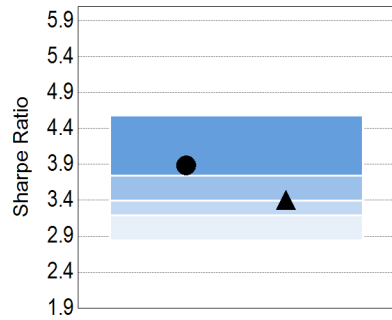


	Return (Rank)										
	YTD	2020	2019	2018	2017	2016	2015	2014	2013	2012	1Q19
5th Percentile	12.4	15.2	21.5	-0.1	18.6	9.3	2.4	7.6	19.5	14.3	9.6
25th Percentile	10.1	12.7	18.2	-2.7	16.6	8.4	0.8	6.1	16.0	13.4	8.2
Median	9.1	10.8	17.0	-4.0	15.6	7.7	-0.4	5.1	14.3	12.7	7.2
75th Percentile	8.5	9.2	15.4	-5.1	14.1	7.1	-1.3	4.4	11.0	11.8	6.5
95th Percentile	7.2	6.8	13.4	-6.6	10.7	5.3	-3.2	2.6	8.5	9.0	5.5
# of Portfolios	77	80	69	63	61	62	57	55	48	44	78
● Total Fund	8.8 (60)	9.2 (73)	14.6 (92)	-2.7 (27)	13.9 (81)	6.9 (78)	2.1 (12)	7.7 (5)	15.6 (33)	13.6 (21)	6.5 (76)
▲ Policy Index	8.2 (79)	10.8 (49)	14.6 (92)	-0.9 (8)	13.7 (85)	8.9 (13)	0.6 (29)	9.0 (2)	15.6 (33)	14.6 (1)	4.7 (99)

Total Fund  
Sharpe Ratio Ranking (Gross of Fees)

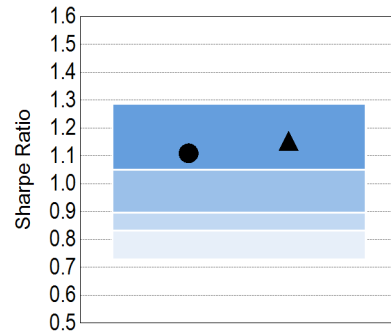
Period Ending: June 30, 2021

Sharpe Ratio  
1 Year



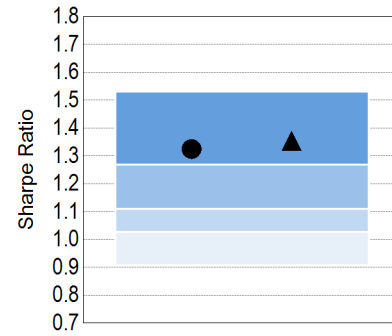
● Total Fund	
Value	3.9
Rank	19
▲ Policy Index	
Value	3.4
Rank	51
Universe	
5th %tile	4.6
25th %tile	3.7
Median	3.4
75th %tile	3.2
95th %tile	2.9

Sharpe Ratio  
3 Year



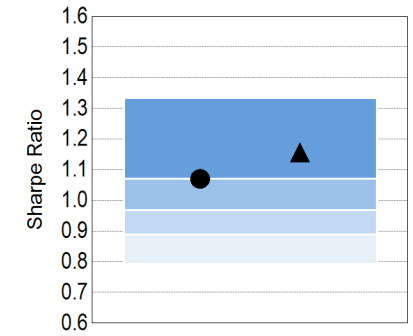
● Total Fund	
Value	1.1
Rank	18
▲ Policy Index	
Value	1.2
Rank	15
Universe	
5th %tile	1.3
25th %tile	1.1
Median	0.9
75th %tile	0.8
95th %tile	0.7

Sharpe Ratio  
5 Year



● Total Fund	
Value	1.3
Rank	20
▲ Policy Index	
Value	1.4
Rank	19
Universe	
5th %tile	1.5
25th %tile	1.3
Median	1.1
75th %tile	1.0
95th %tile	0.9

Sharpe Ratio  
10 Year



● Total Fund	
Value	1.1
Rank	26
▲ Policy Index	
Value	1.2
Rank	14
Universe	
5th %tile	1.3
25th %tile	1.1
Median	1.0
75th %tile	0.9
95th %tile	0.8

## **Domestic Equity Managers**

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# Jackson Square Partners Manager Portfolio Overview

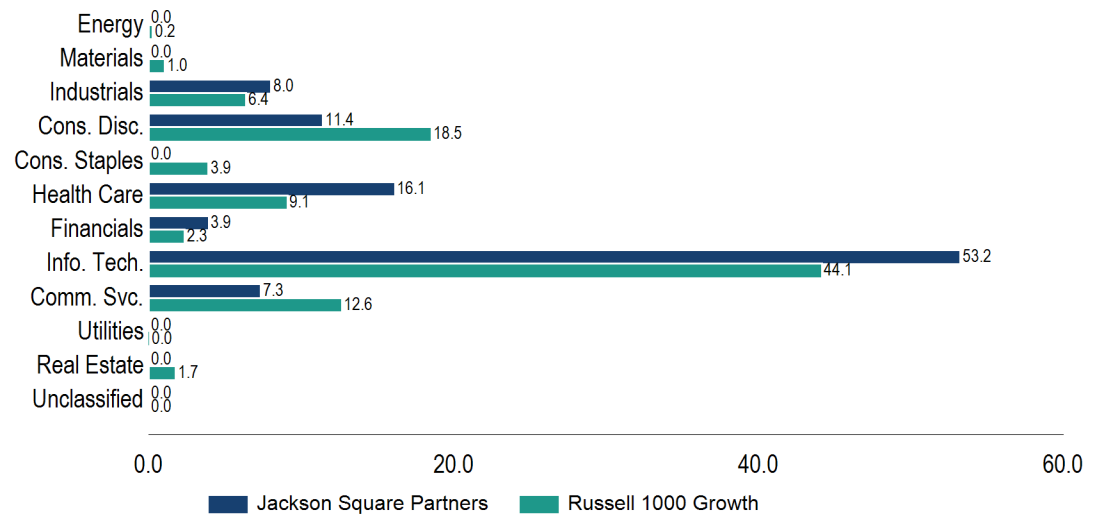
Period Ending: June 30, 2021

Domestic equity large cap growth portfolio concentrated in companies with sustainable long-term growth characteristics. Primary personnel include Jeffrey Van Harte, Christopher Ericksen, Billy Montana, and Daniel Prislin. Daniel Prislin will be retiring at the end of 2021.

## Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	27	486
Weighted Avg. Market Cap. (\$B)	420.83	787.79
Median Market Cap. (\$B)	92.88	19.39
Price To Earnings	51.20	38.31
Price To Book	11.89	13.49
Price To Sales	10.16	6.12
Return on Equity (%)	13.42	41.37
Yield (%)	0.27	0.72
Beta	0.95	1.00

## Sector Allocation (%) vs Russell 1000 Growth



## Largest Holdings

	End Weight	Return
MICROSOFT CORP	9.17	15.17
AMAZON.COM INC	5.93	11.19
VISA INC	5.73	10.59
UBER TECHNOLOGIES INC	5.46	-8.05
TWILIO INC	5.38	15.67
PAYPAL HOLDINGS INC	5.13	20.03
CHARTER COMMUNICATIONS INC	4.59	16.93
MASTERCARD INC	4.26	2.66
SERVICENOW INC	4.01	9.89
EDWARDS LIFESCIENCES CORP	3.95	23.83

## Top Contributors

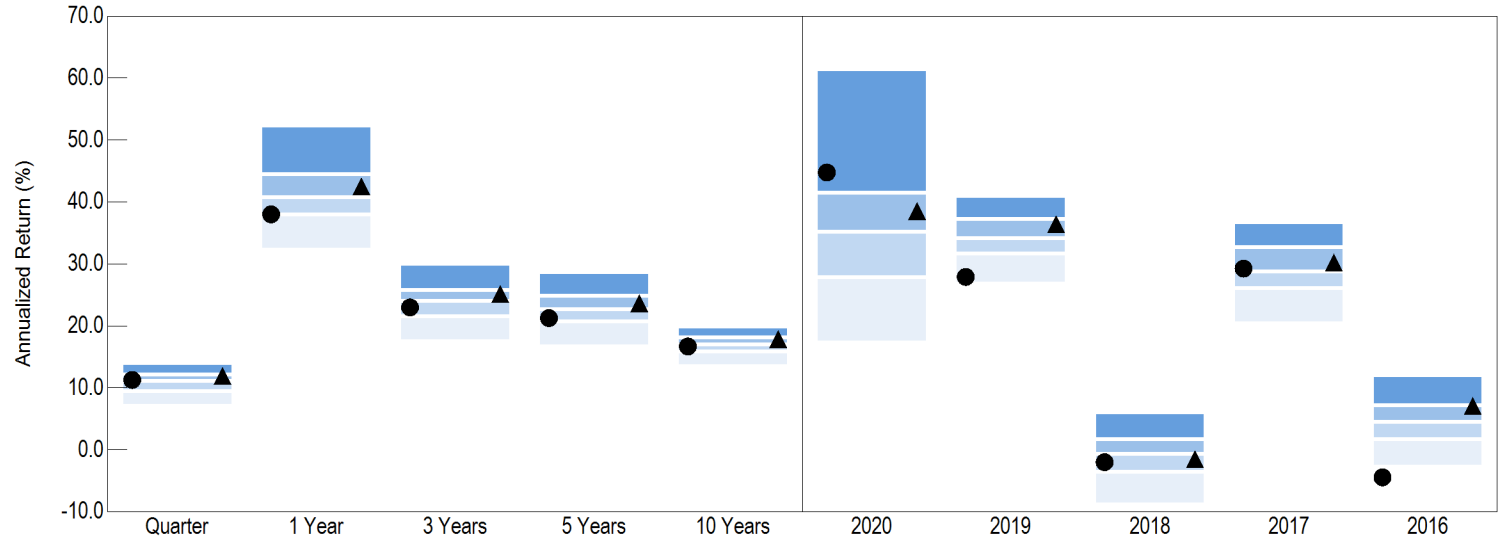
	Avg Wgt	Return	Contribution
MICROSOFT CORP	2.97	15.17	0.45
PAYPAL HOLDINGS INC	1.59	20.03	0.32
EDWARDS LIFESCIENCES CORP	1.19	23.83	0.28
TWILIO INC	1.73	15.67	0.27
INTUITIVE SURGICAL INC	1.05	24.46	0.26
KKR & CO INC	1.16	21.58	0.25
CHARTER COMMUNICATIONS INC	1.46	16.93	0.25
AMAZON.COM INC	1.99	11.19	0.22
DATADOG INC	0.88	24.89	0.22
VISA INC	1.93	10.59	0.20

## Bottom Contributors

	Avg Wgt	Return	Contribution
UBER TECHNOLOGIES INC	2.21	-8.05	-0.18
PAYCOM SOFTWARE INC	1.05	-1.78	-0.02
META FINANCIAL GRP INC	0.10	11.85	0.01
NETFLIX INC	1.01	1.26	0.01
STARBUCKS CORP	0.77	2.74	0.02
COUPA SOFTWARE INC	0.85	3.00	0.03
WIX.COM LTD	0.91	3.96	0.04
MASTERCARD INC	1.55	2.66	0.04
10X GENOMICS INC	0.82	8.19	0.07
WASTE MANAGEMENT INC.	0.95	9.04	0.09

Unclassified sector allocation includes cash allocations.

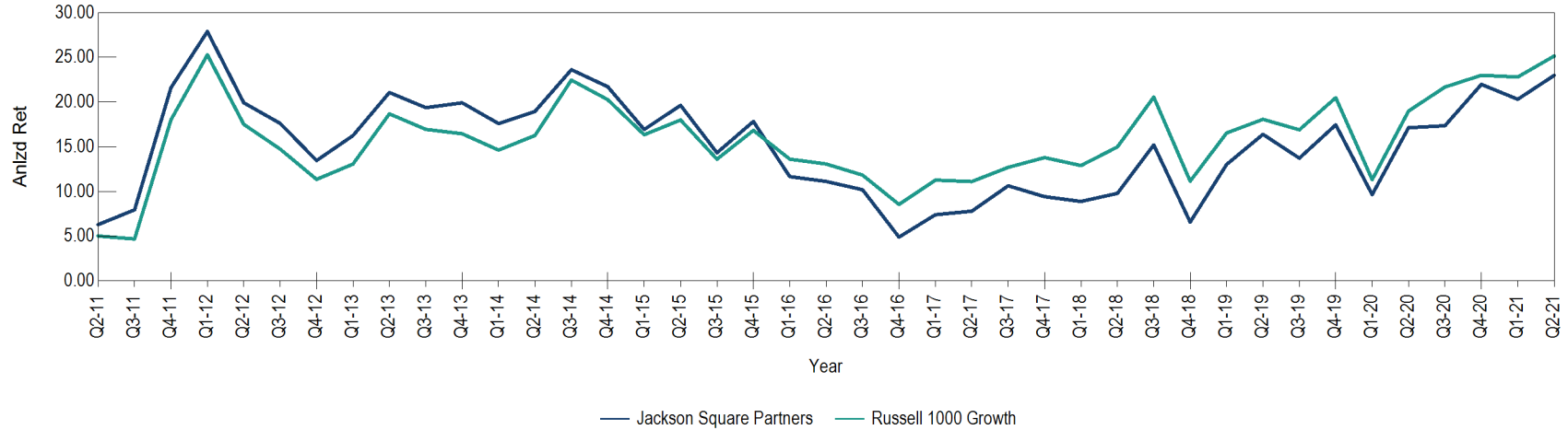
Jackson Square Partners vs. eV US Large Cap Growth Equity Gross Universe



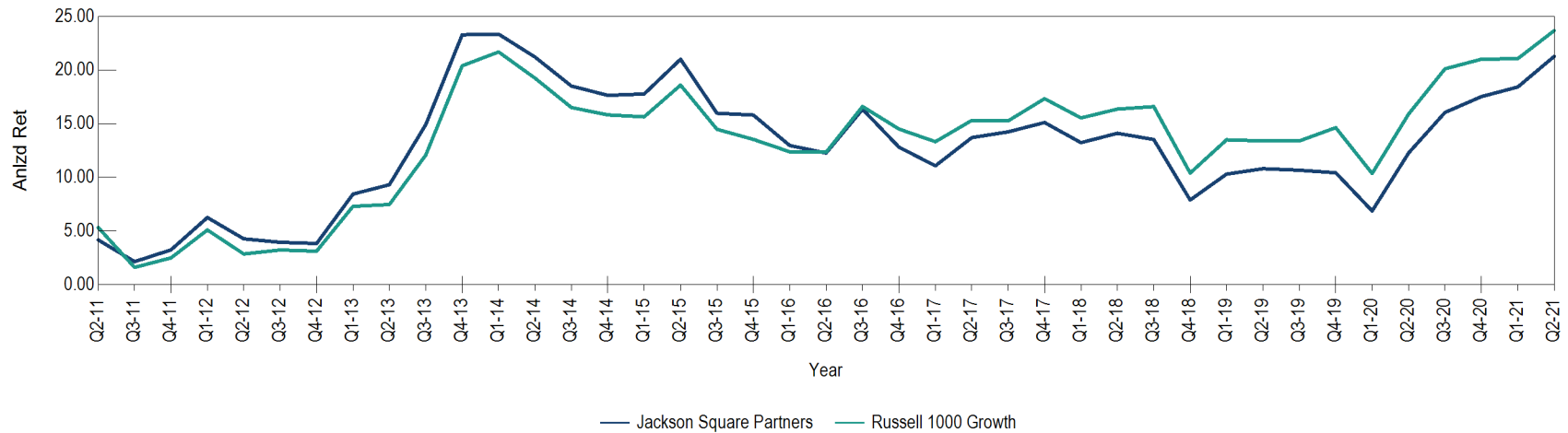
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	14.0	52.3	30.0	28.6	19.8	61.4	41.0	6.1	36.7	12.0
25th Percentile	12.2	44.6	25.8	24.9	18.2	41.6	37.3	1.7	32.7	7.3
Median	11.2	40.8	24.1	22.7	17.1	35.2	34.2	-0.6	28.8	4.6
75th Percentile	9.5	38.1	21.6	20.8	15.9	27.9	31.7	-3.5	26.2	1.8
95th Percentile	7.1	32.4	17.6	16.8	13.6	17.4	26.9	-8.8	20.5	-2.7
# of Portfolios	259	259	253	235	209	263	253	255	265	282
● Jackson Square Partners	11.3 (49)	38.0 (76)	23.0 (63)	21.3 (71)	16.7 (62)	44.8 (20)	27.9 (93)	-2.0 (59)	29.3 (47)	-4.4 (98)
▲ Russell 1000 Growth	11.9 (32)	42.5 (38)	25.1 (34)	23.7 (42)	17.9 (30)	38.5 (34)	36.4 (32)	-1.5 (57)	30.2 (42)	7.1 (26)



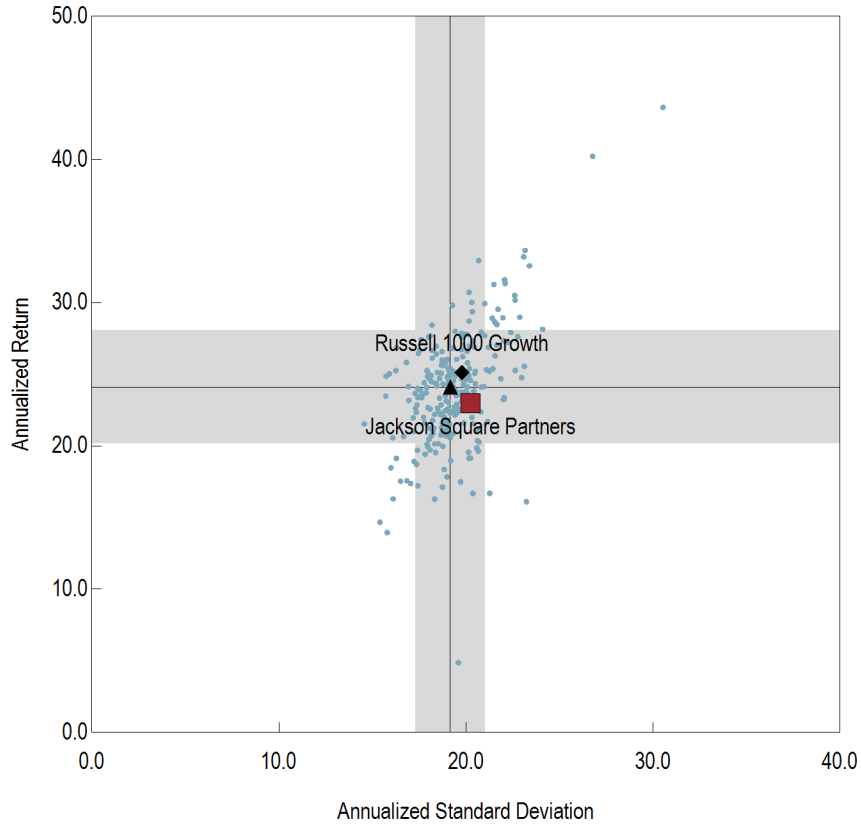
Rolling 3 Year Annualized Return (%)



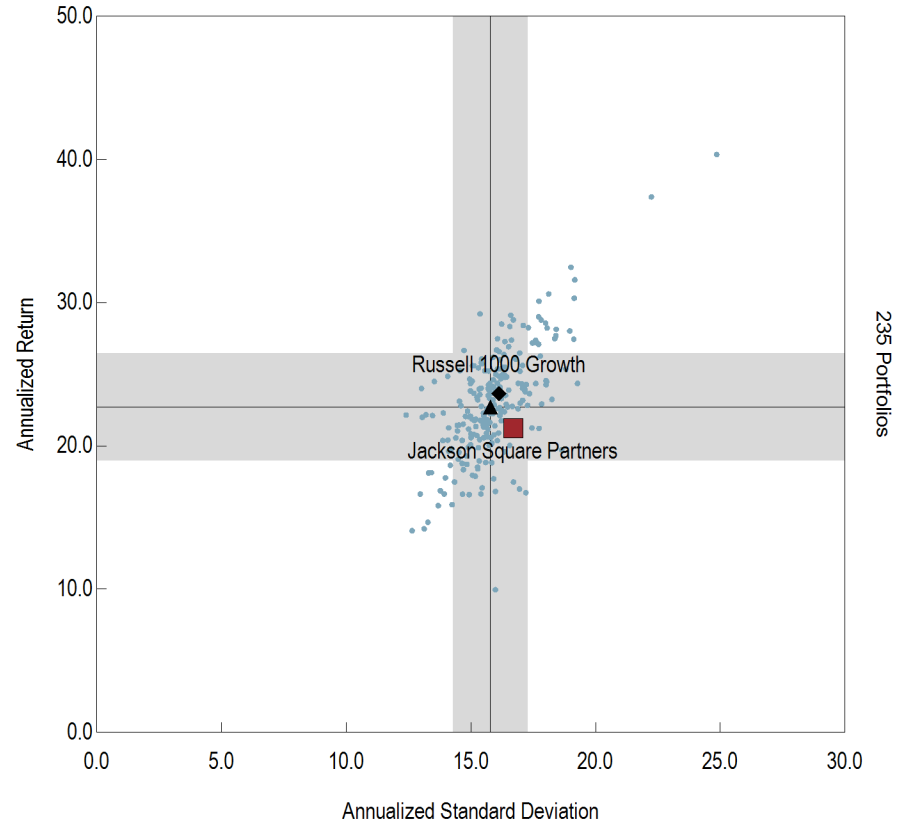
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	23.0%	20.3%	1.1
Russell 1000 Growth	25.1%	19.8%	1.2
eV US Large Cap Growth Equity Gross Median	24.1%	19.2%	1.2

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	21.3%	16.7%	1.2
Russell 1000 Growth	23.7%	16.1%	1.4
eV US Large Cap Growth Equity Gross Median	22.7%	15.8%	1.4

# Boston Partners Manager Portfolio Overview

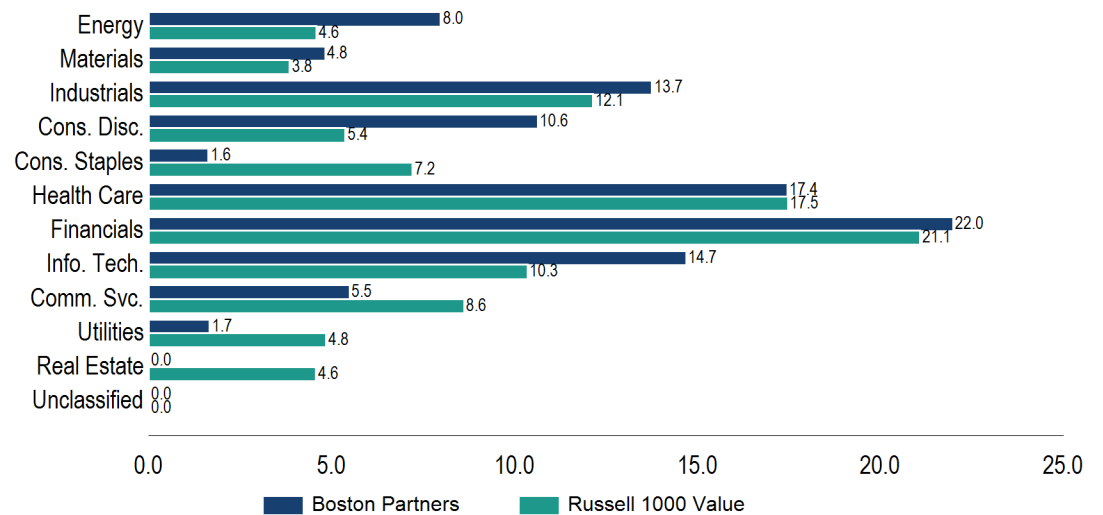
Period Ending: June 30, 2021

Domestic equity large cap value portfolio exhibiting low turnover in companies with low valuations relative to intrinsic value. Primary personnel include Mark Donovan and David Pyle.

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	92	832
Weighted Avg. Market Cap. (\$B)	171.93	153.08
Median Market Cap. (\$B)	49.20	14.25
Price To Earnings	19.52	20.81
Price To Book	2.58	2.73
Price To Sales	1.81	2.40
Return on Equity (%)	15.90	13.27
Yield (%)	1.53	1.94
Beta	1.10	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	3.09	0.86
JPMORGAN CHASE & CO	3.09	2.77
BERKSHIRE HATHAWAY INC	2.90	8.79
CISCO SYSTEMS INC	2.72	3.22
CONOCOPHILLIPS	2.20	15.88
ALPHABET INC	2.09	18.39
AUTOZONE INC	2.08	6.26
BANK OF AMERICA CORP	2.06	7.01
CIGNA CORP	1.95	-1.54
APPLIED MATERIALS INC.	1.93	6.77

## Top Contributors

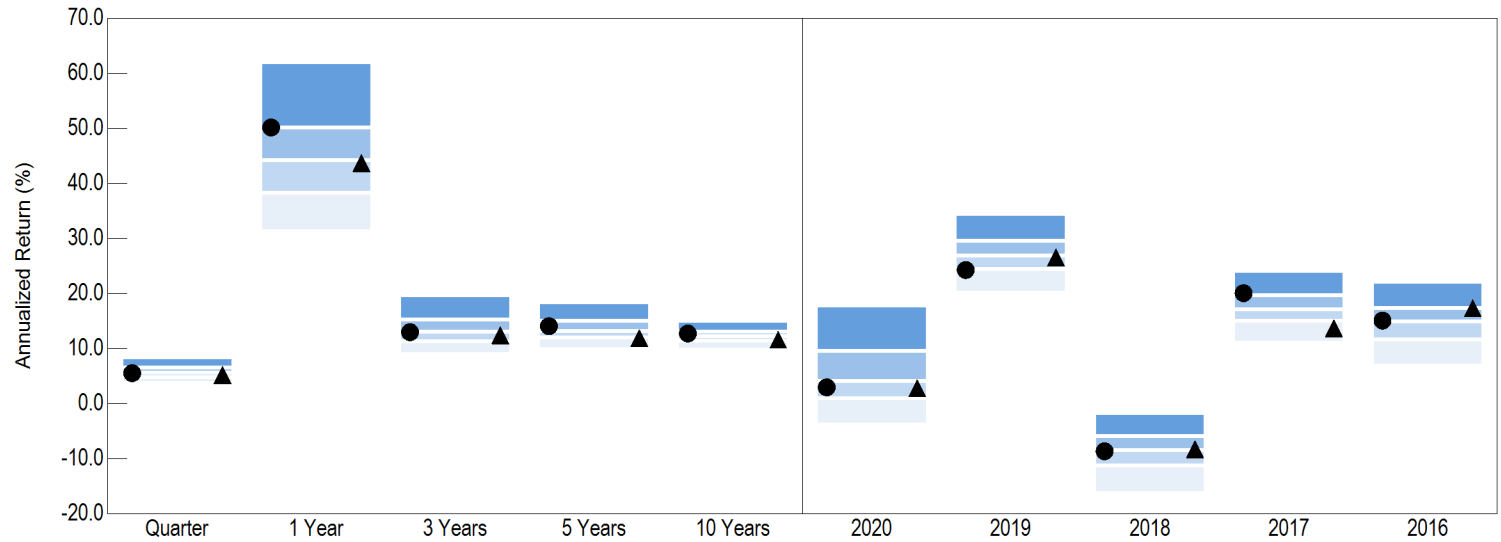
	Avg Wgt	Return	Contribution
ALPHABET INC	0.62	18.39	0.11
CONOCOPHILLIPS	0.67	15.88	0.11
T-MOBILE US INC	0.56	15.60	0.09
BERKSHIRE HATHAWAY INC	0.94	8.79	0.08
CAPITAL ONE FINANCIAL CORP.	0.34	21.89	0.08
BANK OF AMERICA CORP	1.00	7.01	0.07
GOLDMAN SACHS GROUP INC (THE)	0.42	16.45	0.07
MARATHON PETROLEUM CORP	0.47	14.04	0.07
AVANTOR INC	0.25	22.74	0.06
OTIS WORLDWIDE CORP	0.28	19.83	0.06

## Bottom Contributors

	Avg Wgt	Return	Contribution
DEERE & CO	0.66	-5.48	-0.04
LAS VEGAS SANDS CORP	0.24	-13.28	-0.03
CATERPILLAR INC	0.51	-5.72	-0.03
TRUIST FINANCIAL CORP	0.64	-4.13	-0.03
BOEING CO	0.43	-5.95	-0.03
MICRON TECHNOLOGY INC.	0.57	-3.66	-0.02
AERCAP HOLDINGS NV	0.12	-12.82	-0.02
HOLLYFRONTIER CORP	0.18	-8.05	-0.01
KOHL'S CORP	0.20	-7.13	-0.01
WILLIAMS-SONOMA INC.	0.13	-10.60	-0.01

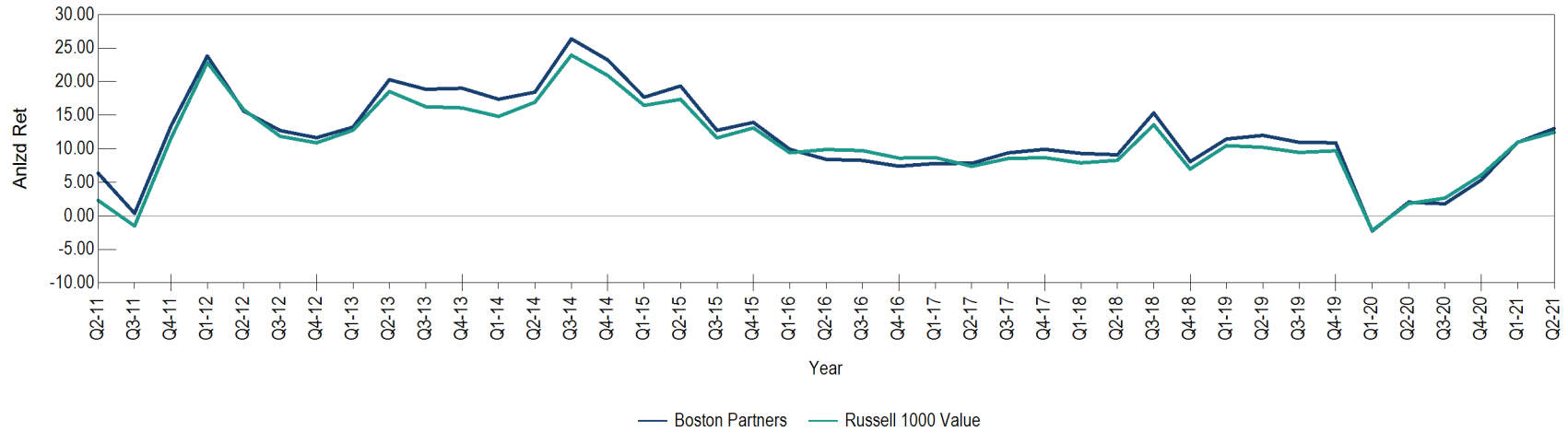
Unclassified sector allocation includes cash allocations.

Boston Partners vs. eV US Large Cap Value Equity Gross Universe

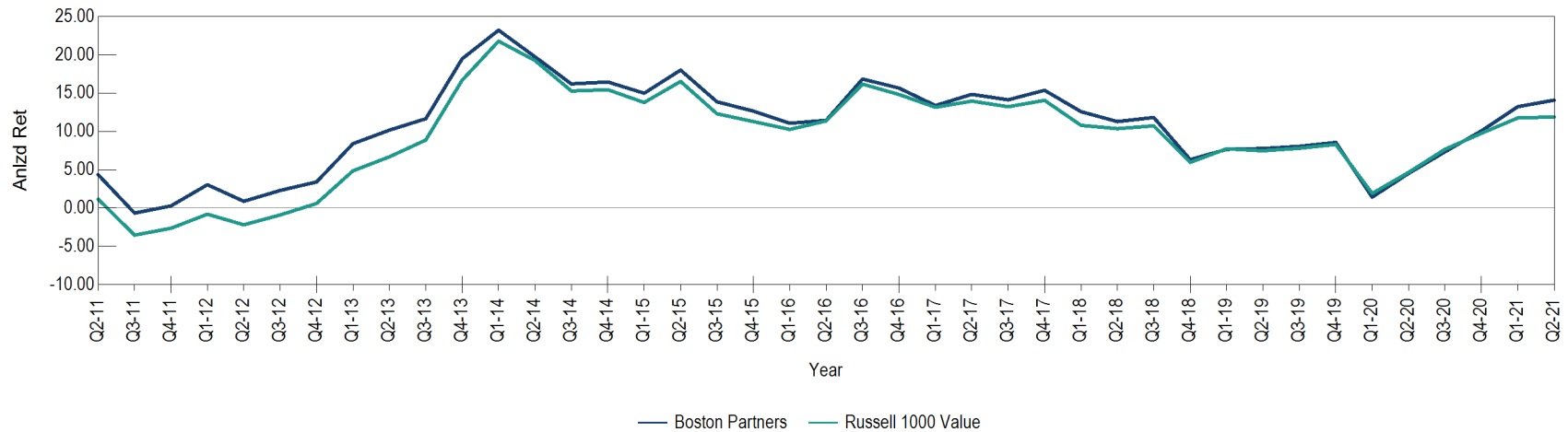


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	8.3	62.0	19.6	18.4	14.9	17.8	34.4	-1.8	24.0	22.1
25th Percentile	6.6	50.2	15.3	15.1	13.1	9.6	29.6	-5.8	19.8	17.4
Median	5.7	44.3	13.2	13.3	12.3	4.2	26.9	-8.3	17.2	15.0
75th Percentile	4.9	38.3	11.4	12.0	11.4	1.1	24.5	-11.1	15.1	11.8
95th Percentile	3.8	31.4	9.1	9.9	9.8	-3.8	20.3	-16.1	11.2	7.0
# of Portfolios	334	334	325	309	267	326	331	336	342	346
● Boston Partners	5.5 (55)	50.1 (26)	13.0 (52)	14.1 (40)	12.7 (36)	3.0 (61)	24.3 (77)	-8.7 (55)	20.1 (23)	15.1 (50)
▲ Russell 1000 Value	5.2 (63)	43.7 (53)	12.4 (61)	11.9 (79)	11.6 (71)	2.8 (62)	26.5 (54)	-8.3 (50)	13.7 (87)	17.3 (26)

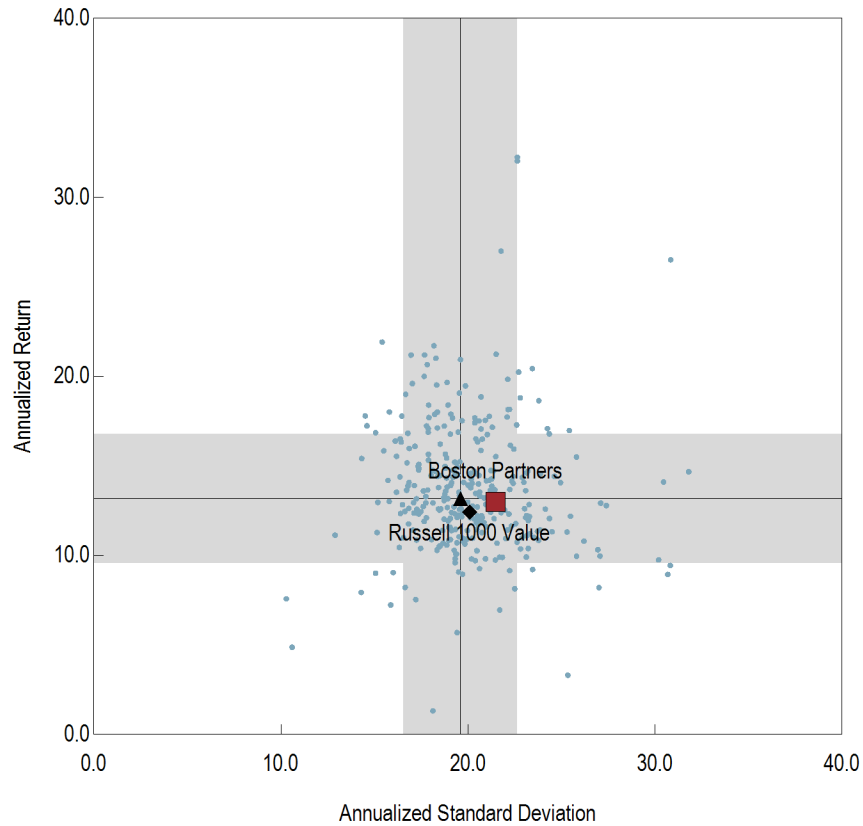
Rolling 3 Year Annualized Return (%)



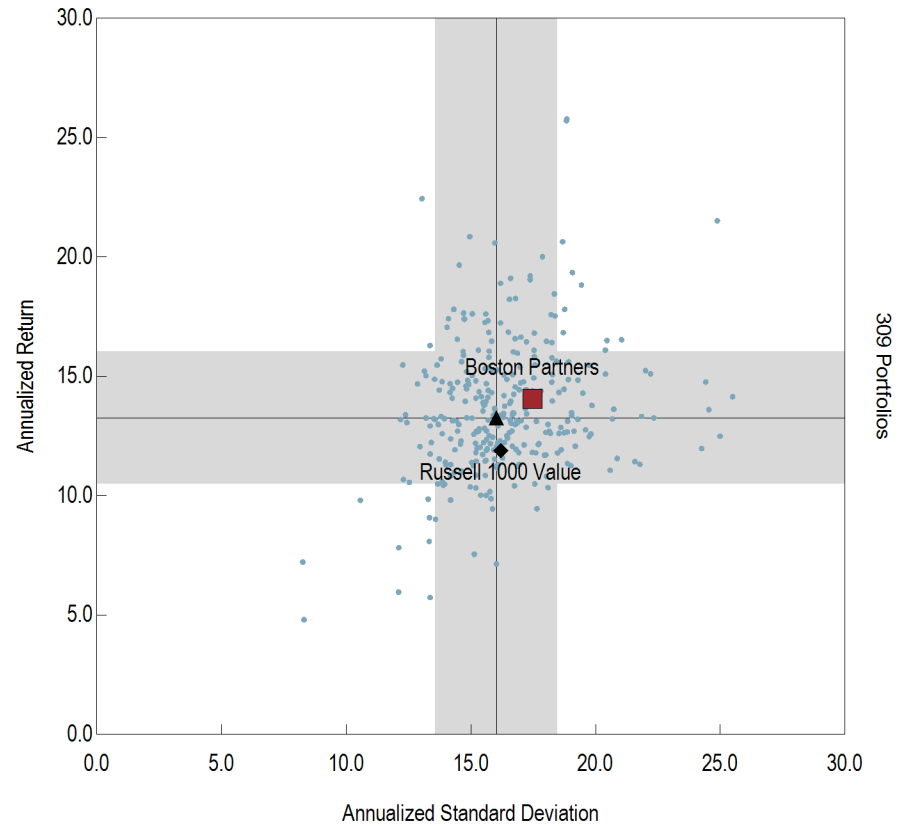
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	13.0%	21.5%	0.5
Russell 1000 Value	12.4%	20.1%	0.6
eV US Large Cap Value Equity Gross Median	13.2%	19.6%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	14.1%	17.5%	0.7
Russell 1000 Value	11.9%	16.2%	0.7
eV US Large Cap Value Equity Gross Median	13.3%	16.0%	0.8

# Emerald Advisers Manager Portfolio Overview

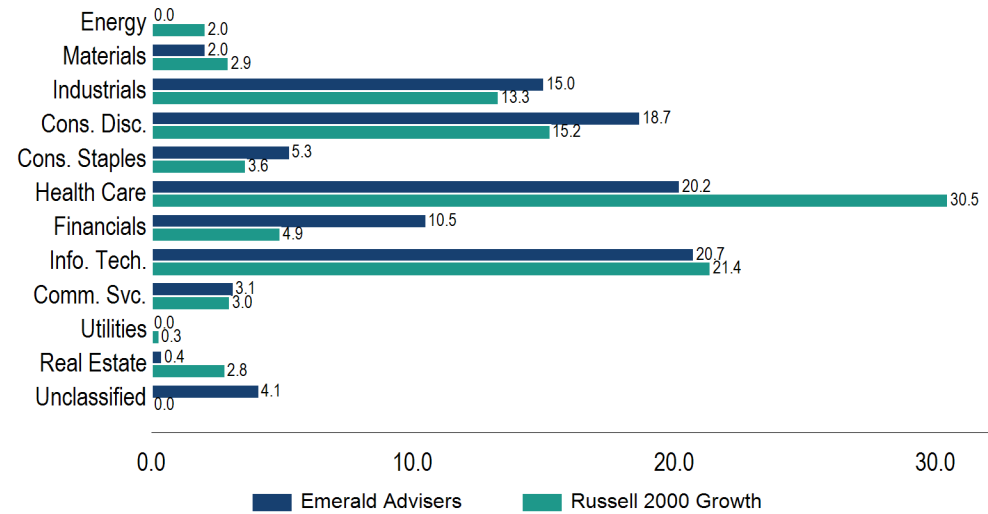
Period Ending: June 30, 2021

Domestic equity small cap growth portfolio of companies with significantly high growth rates. Primary personnel include Kenneth Mertz, Joseph Garner, and Stacey Sears.

## Characteristics

	Portfolio	Russell 2000 Growth
Number of Holdings	119	1,107
Weighted Avg. Market Cap. (\$B)	4.01	3.77
Median Market Cap. (\$B)	3.09	1.54
Price To Earnings	33.36	30.91
Price To Book	4.40	5.72
Price To Sales	3.72	2.82
Return on Equity (%)	-7.41	-9.67
Yield (%)	0.36	0.38
Beta	1.00	1.00

## Sector Allocation (%) vs Russell 2000 Growth



## Largest Holdings

	End Weight	Return
FRESHPET INC	2.25	2.61
RAPID7 INC	2.18	26.83
CHART INDUSTRIES INC	2.02	2.79
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	1.96	10.44
VARONIS SYSTEMS INC	1.88	12.23
CHEGG INC	1.75	-2.98
JACK IN THE BOX INC.	1.65	1.91
SIMPLY GOOD FOODS CO (THE)	1.65	20.02
EVERI HOLDINGS INC	1.64	76.75
NEOGENOMICS INC	1.59	-6.34

## Top Contributors

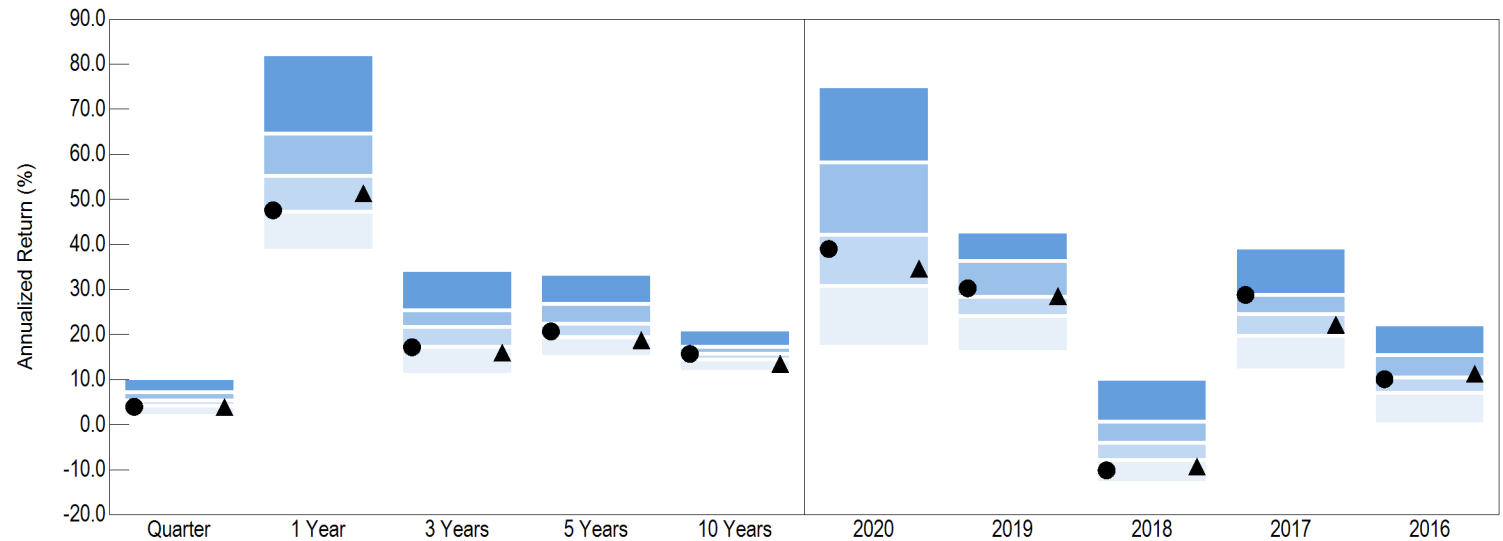
	Avg Wgt	Return	Contribution
EVERI HOLDINGS INC	0.30	76.75	0.23
RAPID7 INC	0.59	26.83	0.16
REATA PHARMACEUTICALS INC	0.33	41.96	0.14
PERFICIENT INC	0.35	36.95	0.13
BELLRING BRANDS INC	0.36	32.74	0.12
DICK'S SPORTING GOODS INC.	0.35	32.06	0.11
YETI HOLDINGS INC	0.35	27.16	0.09
REPLIMUNE GROUP INC	0.35	25.93	0.09
SIMPLY GOOD FOODS CO (THE)	0.43	20.02	0.09
ATRICURE INC	0.39	21.08	0.08

## Bottom Contributors

	Avg Wgt	Return	Contribution
CHEMOCENTRYX INC	0.18	-73.87	-0.13
ADAPTHEALTH CORP	0.34	-25.44	-0.09
CHURCHILL DOWNS INC	0.65	-12.82	-0.08
CURIS INC	0.26	-28.71	-0.07
TRANSMEDICS GROUP INC	0.30	-20.03	-0.06
TETRA TECH INC	0.56	-9.93	-0.06
ORIC PHARMACEUTICALS INC	0.20	-27.80	-0.06
ULTRAGENYX PHARMACEUTICAL INC	0.33	-16.26	-0.05
LIVE OAK BANCSHARES INC	0.34	-13.81	-0.05

Unclassified sector allocation includes cash allocations.

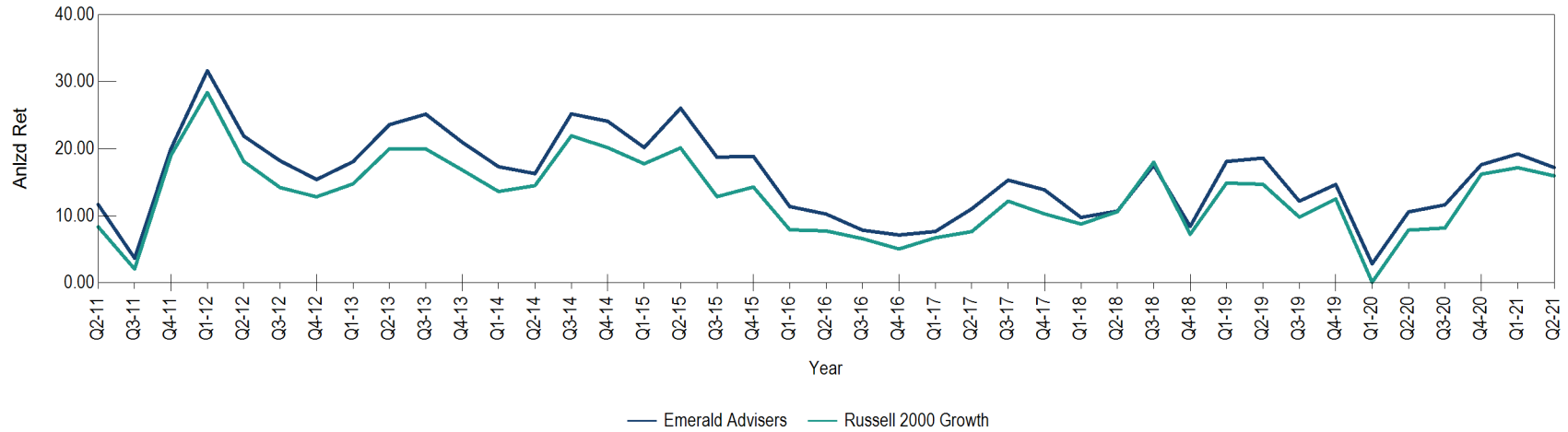
Emerald Advisers vs. eV US Small Cap Growth Equity Gross Universe



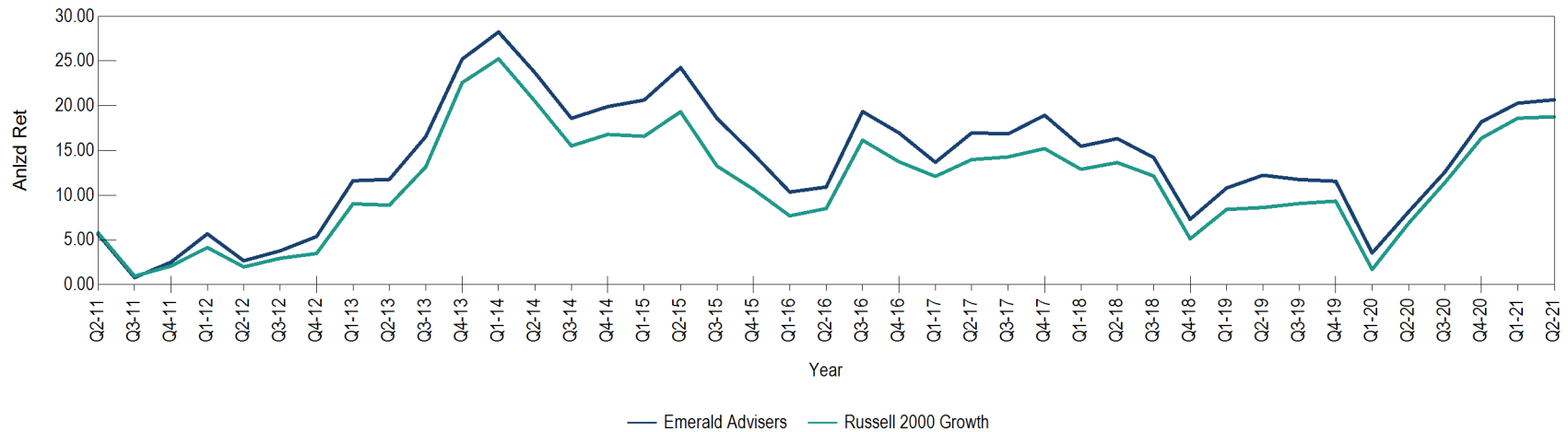
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
<b>5th Percentile</b>	10.3	82.2	34.3	33.3	21.1	75.0	42.8	10.2	39.2	22.2
<b>25th Percentile</b>	7.2	64.7	25.4	26.9	17.4	58.3	36.4	0.7	28.9	15.5
<b>Median</b>	5.5	55.3	21.7	22.5	15.8	42.2	28.5	-3.9	24.6	10.6
<b>75th Percentile</b>	4.3	47.3	17.3	19.5	14.6	30.8	24.2	-7.9	19.8	7.1
<b>95th Percentile</b>	2.0	38.7	11.1	15.1	11.9	17.4	16.2	-12.8	12.1	0.2
<b># of Portfolios</b>	160	160	157	151	135	161	157	164	174	170
<b>● Emerald Advisers</b>	4.0 (79)	47.6 (75)	17.2 (78)	20.7 (62)	15.7 (54)	39.0 (57)	30.3 (45)	-10.1 (85)	28.8 (26)	10.1 (54)
<b>▲ Russell 2000 Growth</b>	3.9 (79)	51.4 (67)	15.9 (86)	18.8 (82)	13.5 (86)	34.6 (66)	28.5 (51)	-9.3 (80)	22.2 (62)	11.3 (49)

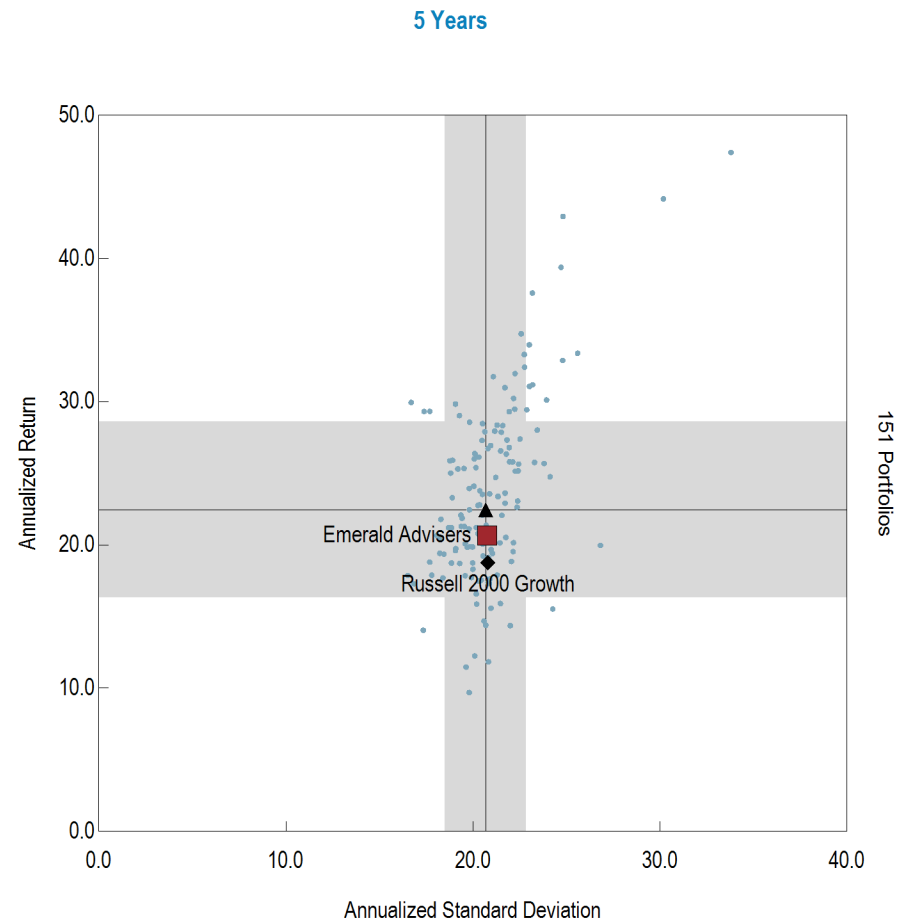
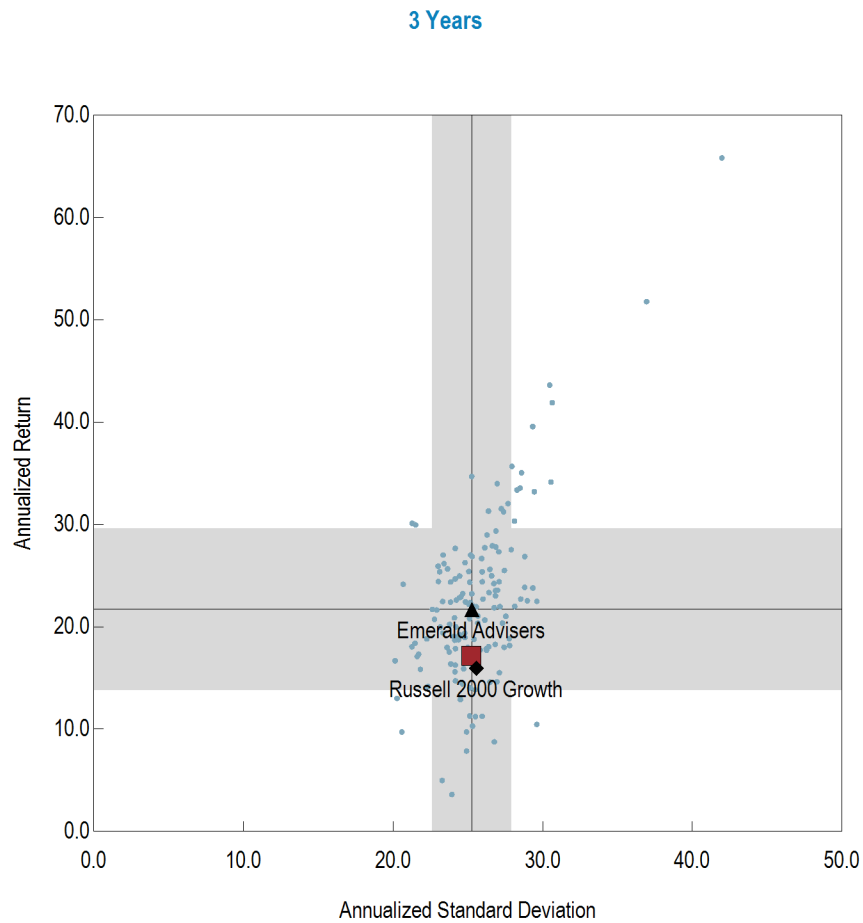


Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	17.2%	25.2%	0.6
Russell 2000 Growth	15.9%	25.6%	0.6
eV US Small Cap Growth Equity Gross Median	21.7%	25.3%	0.8

	<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	20.7%	20.8%	0.9
Russell 2000 Growth	18.8%	20.8%	0.8
eV US Small Cap Growth Equity Gross Median	22.5%	20.7%	1.0

# Ceredex Manager Portfolio Overview

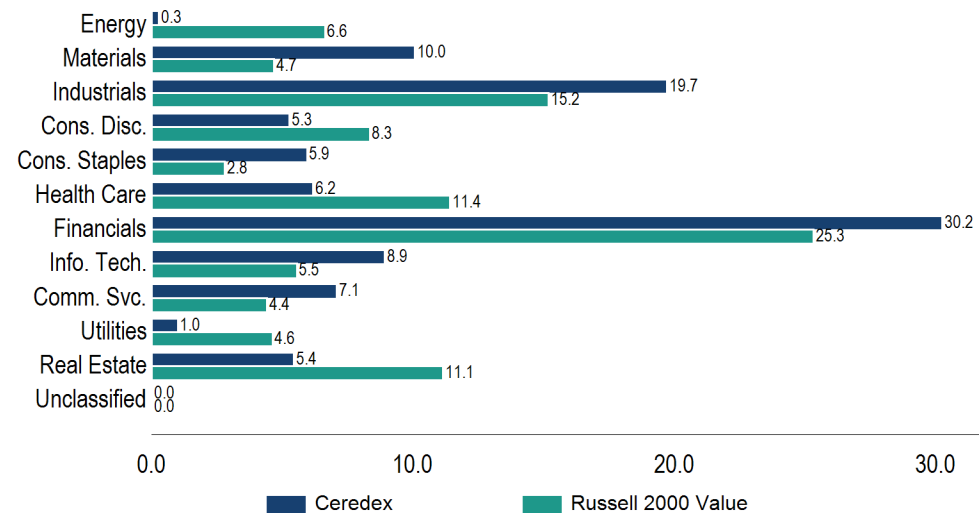
Period Ending: June 30, 2021

Domestic equity small cap value portfolio of companies with dividend yields and low valuations. Primary personnel include Brett Barner and David Maynard.

## Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	62	1,337
Weighted Avg. Market Cap. (\$B)	5.28	3.07
Median Market Cap. (\$B)	5.66	1.16
Price To Earnings	21.78	15.26
Price To Book	2.28	1.83
Price To Sales	1.78	1.45
Return on Equity (%)	12.29	1.68
Yield (%)	1.89	1.63
Beta	0.86	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
OWENS & MINOR INC.	4.45	12.62
ASHLAND GLOBAL HOLDINGS INC	4.13	-1.12
SCHOLASTIC CORP	3.76	26.46
APTARGROUP INC.	3.59	-0.34
FIRST HAWAIIAN INC	3.58	4.50
FIRST CITIZENS BANCSHARES INC	3.45	-0.31
LAZARD LTD	3.23	5.05
SOUTH STATE CORP	3.16	4.69
KEMPER CORP	3.04	-6.93
TENNANT CO	3.04	0.23

## Top Contributors

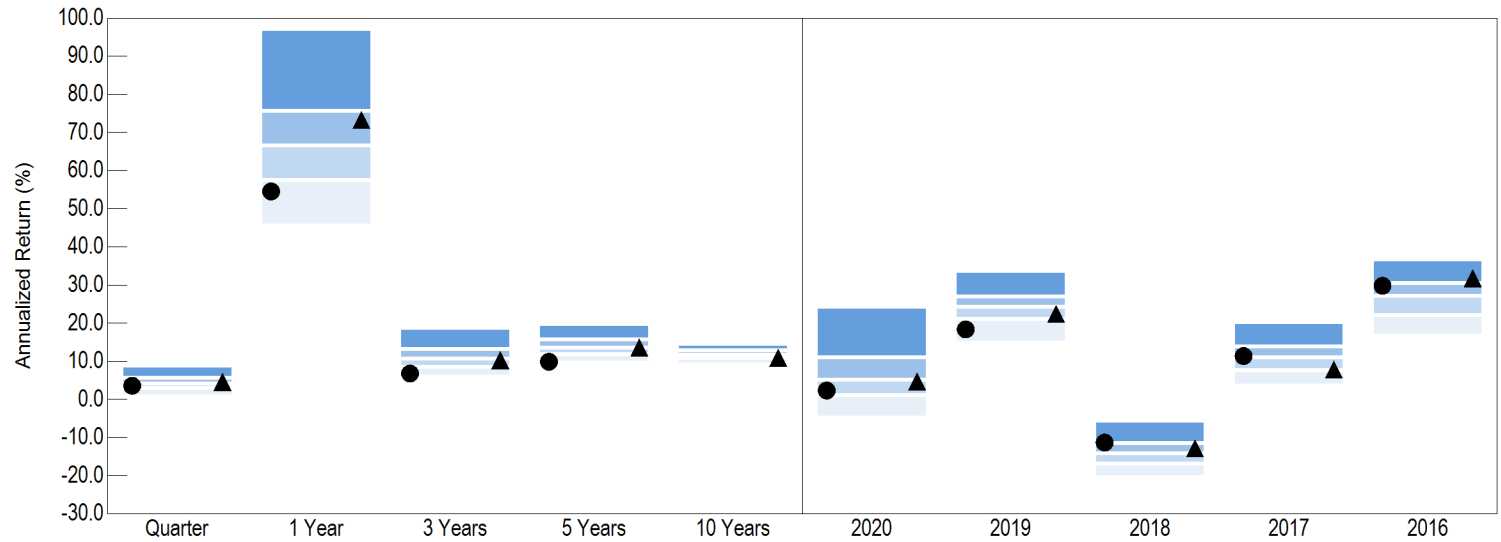
	Avg Wgt	Return	Contribution
INTERPUBLIC GROUP OF COS INC (THE)	1.66	12.16	0.20
SLM CORP	1.03	16.70	0.17
JEFFERIES FINANCIAL GROUP INC	0.94	14.32	0.13
GRACE (W R) & CO	0.66	15.47	0.10
BRUKER CORP	0.55	18.27	0.10
CORESITE REALTY CORP	0.73	13.37	0.10
EVERCORE INC	1.23	7.35	0.09
EMCOR GROUP INC.	0.89	9.96	0.09
NVENT ELECTRIC PLC	0.69	12.60	0.09
COGENT COMMUNICATIONS HOLDINGS INC	0.59	12.96	0.08

## Bottom Contributors

	Avg Wgt	Return	Contribution
CALAVO GROWERS INC	0.47	-18.32	-0.09
KEMPER CORP	1.22	-6.93	-0.08
CASEY'S GENERAL STORES INC.	0.71	-9.83	-0.07
HORACE MANN EDUCATORS CORP	0.35	-12.70	-0.05
MKS INSTRUMENTS INC	0.70	-3.91	-0.03
FIRST INTERSTATE BANCSYSTEM INC	0.31	-8.35	-0.03
BANK OF HAWAII CORP	0.48	-5.18	-0.03
HEALTHCARE TRUST OF AMERICA INC	1.10	-2.03	-0.02
PENSKE AUTOMOTIVE GROUP INC	0.41	-5.44	-0.02

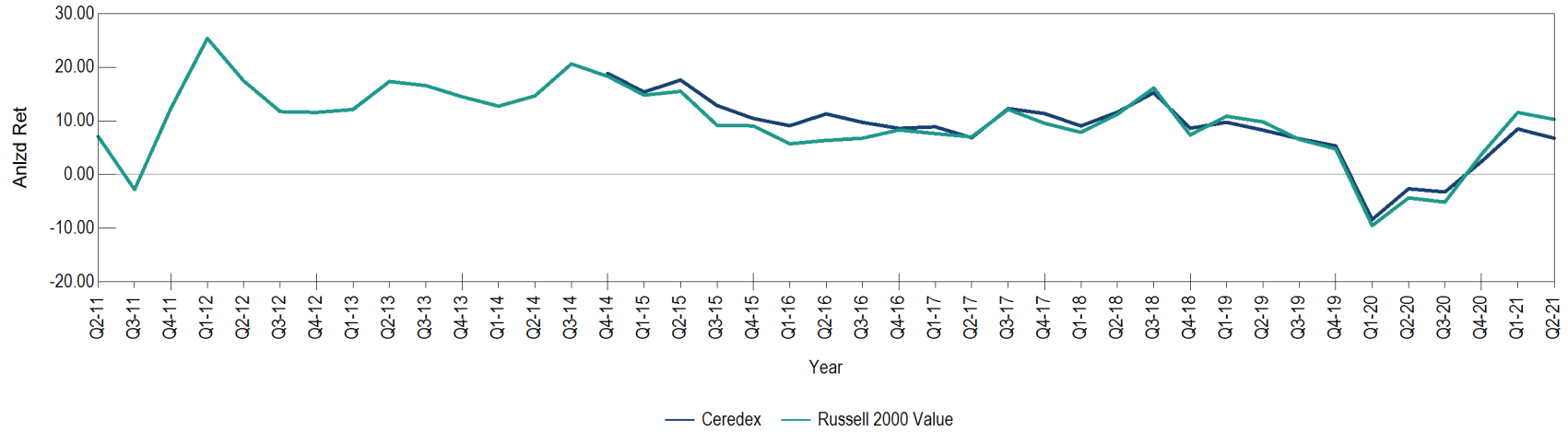
Unclassified sector allocation includes cash allocations.

Ceredex vs. eV US Small Cap Value Equity Gross Universe

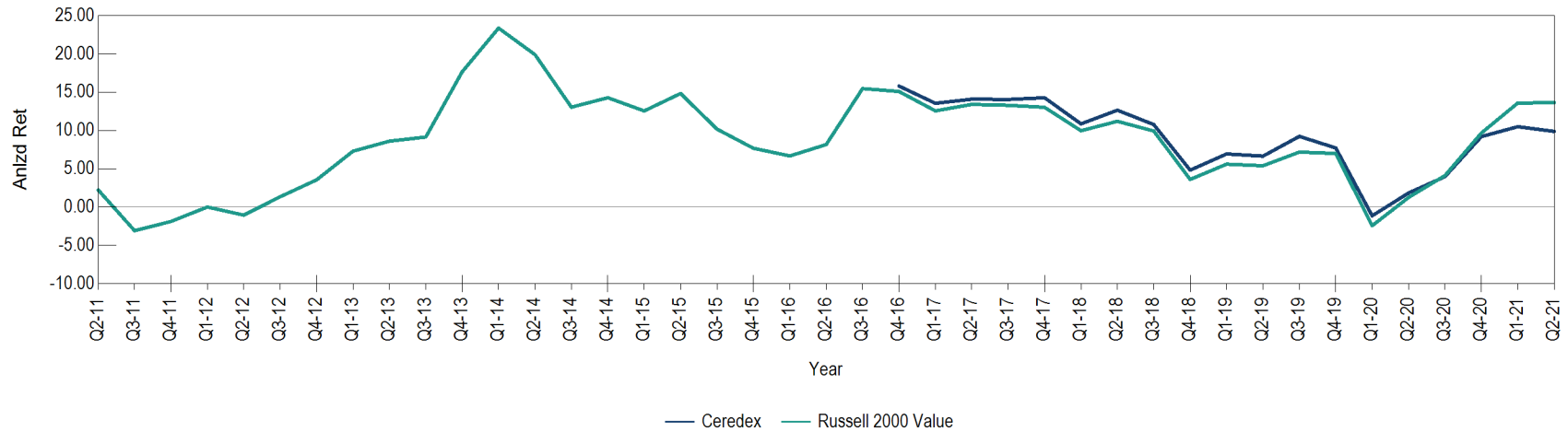


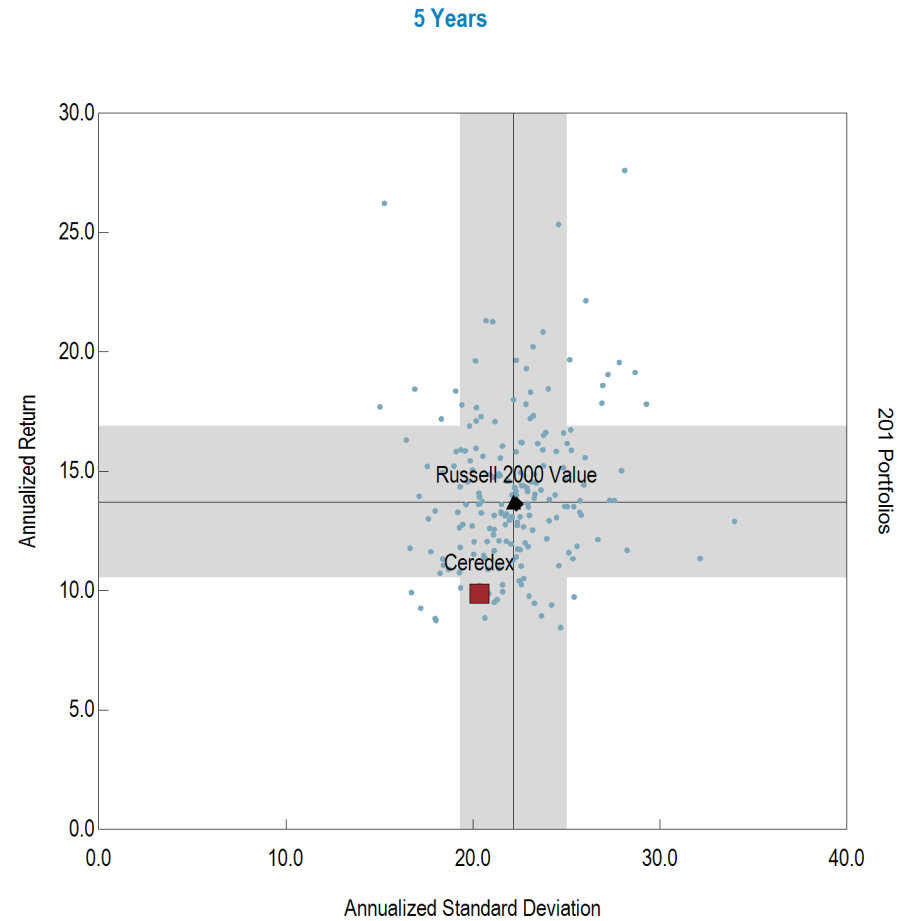
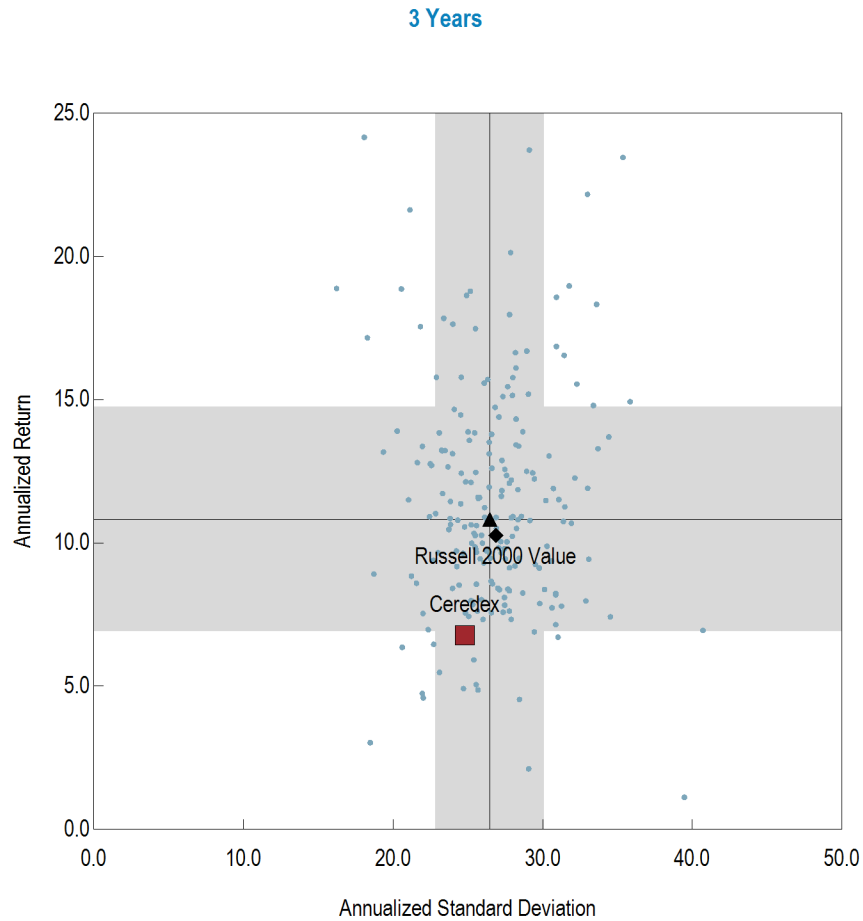
	Return (Rank)									
5th Percentile	8.8	97.1	18.6	19.6	14.5	24.2	33.6	-5.7	20.2	36.7
25th Percentile	5.7	75.8	13.4	15.8	13.0	11.1	27.0	-11.4	14.1	30.7
Median	4.2	66.7	10.8	13.7	11.8	5.3	24.4	-14.0	11.1	27.2
75th Percentile	3.0	57.7	8.6	12.0	10.9	1.3	21.2	-16.7	7.8	22.2
95th Percentile	0.8	45.7	6.1	9.7	9.4	-4.6	15.0	-20.2	3.7	16.8
# of Portfolios	217	217	208	201	179	219	217	220	224	222
● Ceredex	3.6 (64)	54.5 (83)	6.8 (93)	9.9 (95)	-- (--)	2.3 (69)	18.4 (87)	-11.3 (25)	11.4 (48)	29.8 (32)
▲ Russell 2000 Value	4.6 (43)	73.3 (33)	10.3 (58)	13.6 (53)	10.8 (78)	4.6 (53)	22.4 (69)	-12.9 (39)	7.8 (75)	31.7 (17)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	<b>3 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	6.8%	24.8%	0.2
Russell 2000 Value	10.3%	26.9%	0.3
eV US Small Cap Value Equity Gross Median	10.8%	26.5%	0.4

	<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	9.9%	20.4%	0.4
Russell 2000 Value	13.6%	22.3%	0.6
eV US Small Cap Value Equity Gross Median	13.7%	22.2%	0.6

# International Equity Managers

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# Pyrford Manager Portfolio Overview

Period Ending: June 30, 2021

International equity value portfolio of non-US companies with low valuations at the country and stock level. Primary personnel include Tony Cousins, Daniel McDonagh, and Paul Simons.

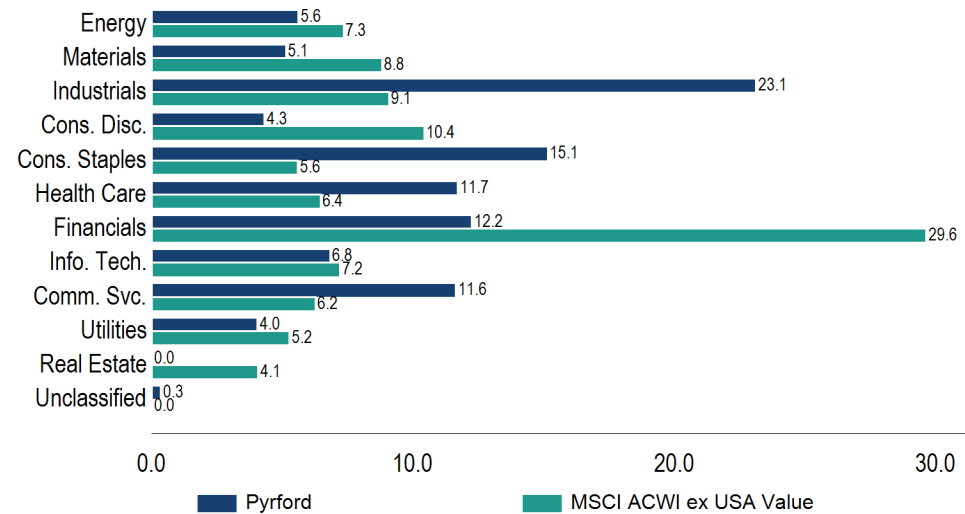
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	71	1,500
Weighted Avg. Market Cap. (\$B)	70.13	70.91
Median Market Cap. (\$B)	28.31	9.63
Price To Earnings	20.09	14.06
Price To Book	2.38	1.88
Price To Sales	1.80	1.02
Return on Equity (%)	13.46	7.97
Yield (%)	3.66	3.45
Beta	0.70	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	92.3%	68.9%
Emerging*	7.7%	31.1%
<b>Top 10 Largest Countries</b>		
United Kingdom	17.3%	10.8%
Japan	13.9%	14.8%
Switzerland	12.0%	4.3%
Germany	9.9%	7.1%
Australia	9.5%	4.6%
France	8.0%	6.9%
Singapore	5.9%	0.7%
Hong Kong	4.6%	2.0%
Netherlands	3.0%	1.2%
Taiwan*	2.9%	4.3%
<b>Total-Top 10 Largest Countries</b>	<b>87.0%</b>	<b>56.6%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Value



## Top Contributors

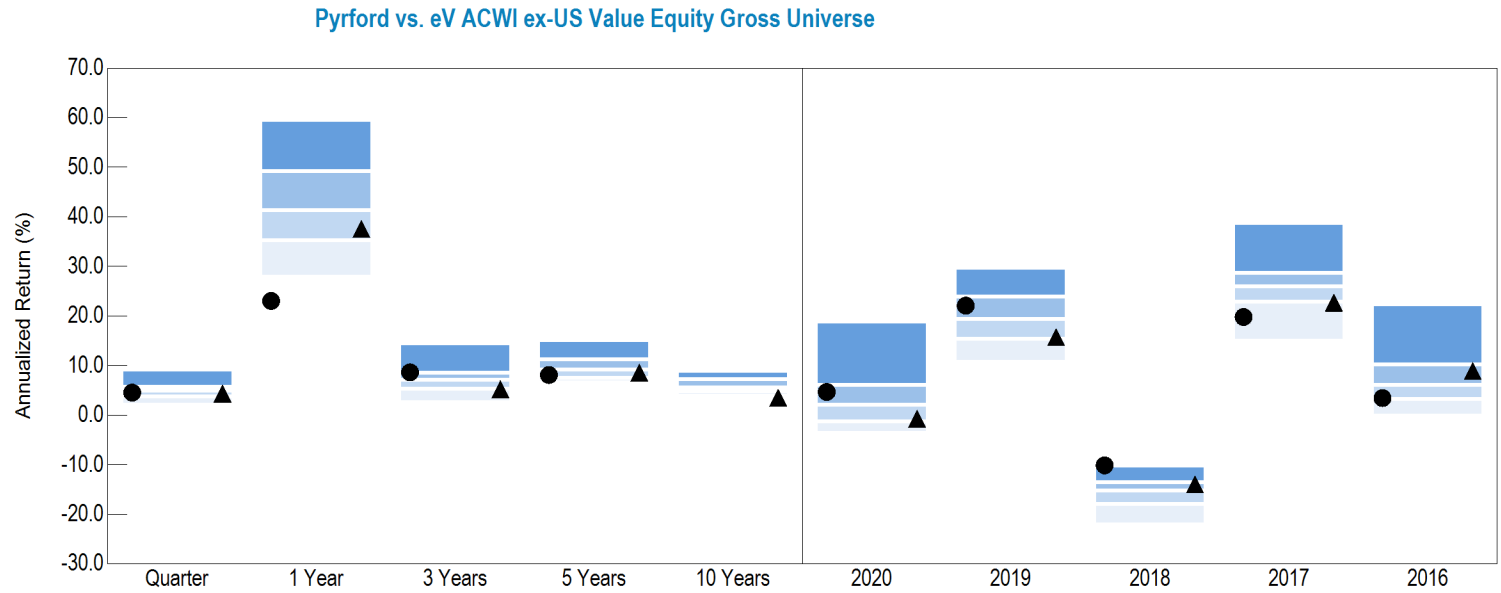
	Avg Wgt	Return	Contribution
DEUTSCHE POST AG	1.81	27.31	0.50
NESTLE SA, CHAM UND VEVEY	2.60	14.38	0.37
ROCHE HOLDING AG	2.21	16.33	0.36
SUMITOMO RUBBER INDUSTRIES LTD	1.65	18.61	0.31
IMI PLC	1.00	30.73	0.31
SAP SE	1.81	16.87	0.30
GLAXOSMITHKLINE PLC	1.86	12.03	0.22
COMPUTERSHARE LTD CPU	1.92	10.70	0.21
LEGRAND	1.30	15.56	0.20
BRENTAG SE	1.87	10.76	0.20

## Bottom Contributors

	Avg Wgt	Return	Contribution
WOODSIDE PETROLEUM LTD	1.78	-8.84	-0.16
NABTESCO	0.95	-16.53	-0.16
KONINKLIJKE PHILIPS NV	1.05	-11.69	-0.12
SINGAPORE TELECOMMUNICATIONS LTD	1.98	-6.15	-0.12
mitsubishi electric corp	2.26	-4.71	-0.11
KONINKLIJKE VOPAK NV	1.46	-5.97	-0.09
PT BANK RAKYAT INDONESIA TBK	1.01	-8.16	-0.08
LEGAL & GENERAL GROUP PLC	2.21	-3.23	-0.07

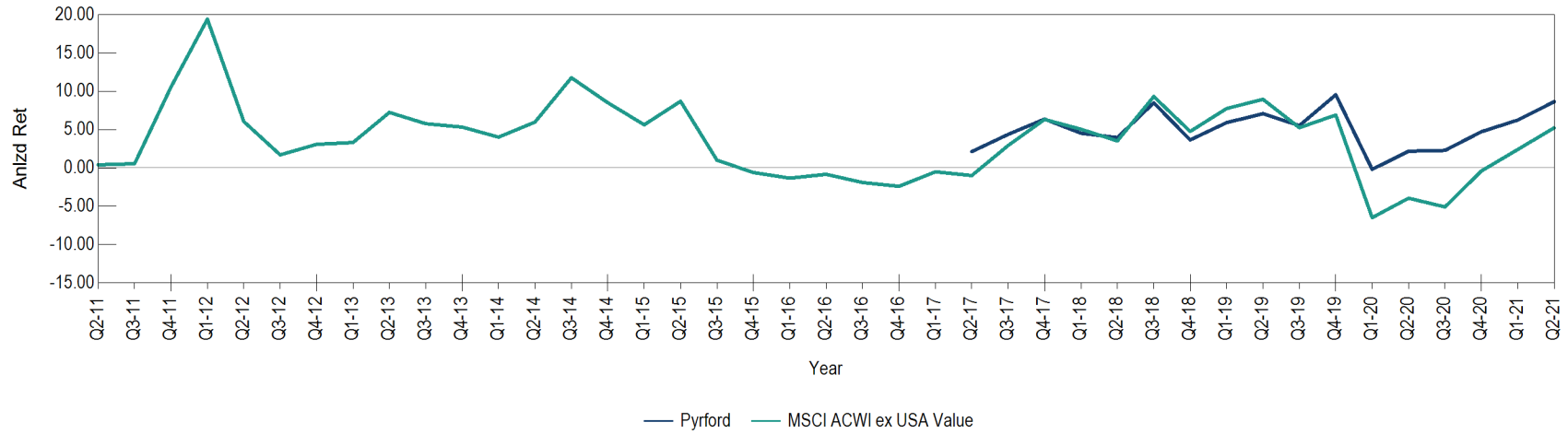
Unclassified sector allocation includes cash allocations.



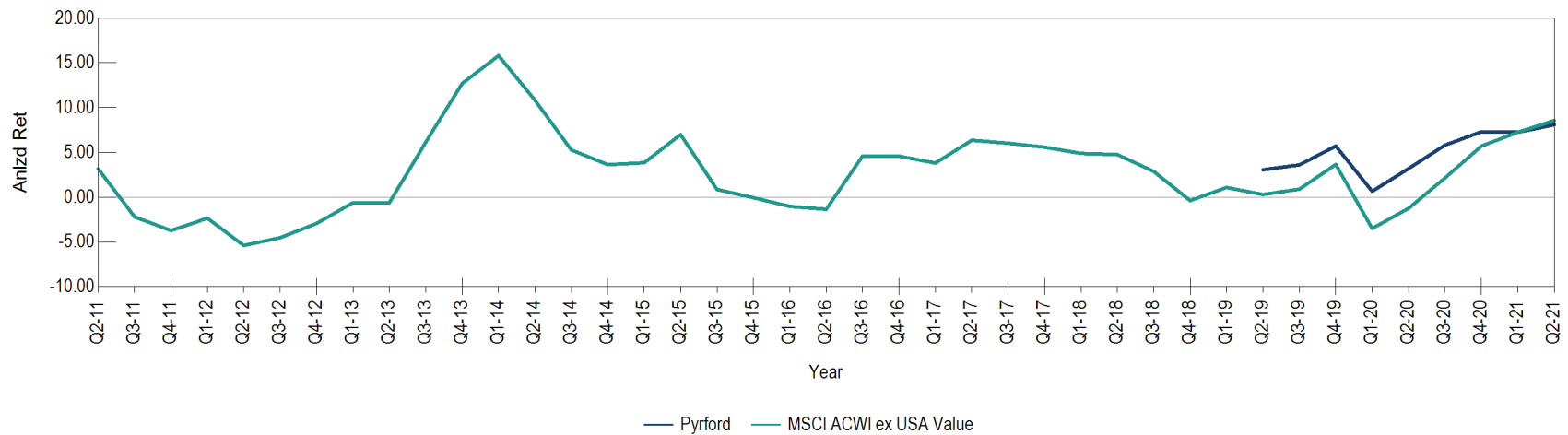


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016	
5th Percentile	9.1	59.5	14.4	15.1	8.9	18.8	29.6	-10.2	38.8	22.3	
25th Percentile	5.7	49.3	8.6	11.4	7.4	6.2	24.0	-13.4	28.8	10.2	
Median	4.9	41.4	7.2	9.2	5.6	2.1	19.5	-15.2	26.0	6.2	
75th Percentile	3.8	35.3	5.4	7.6	4.8	-1.2	15.4	-17.9	23.0	3.3	
95th Percentile	2.2	28.0	2.7	6.7	3.9	-3.5	10.8	-21.9	15.0	-0.1	
# of Portfolios	47	47	47	45	27	49	52	54	56	55	
● Pyrford	4.5 (58)	23.0 (99)	8.6 (27)	8.1 (68)	-- (--)	4.7 (33)	22.1 (35)	-10.1 (5)	19.8 (84)	3.4 (74)	
▲ MSCI ACWI ex USA Value	4.3 (64)	37.6 (68)	5.2 (76)	8.5 (63)	3.5 (99)	-0.8 (73)	15.7 (74)	-14.0 (32)	22.7 (77)	8.9 (35)	

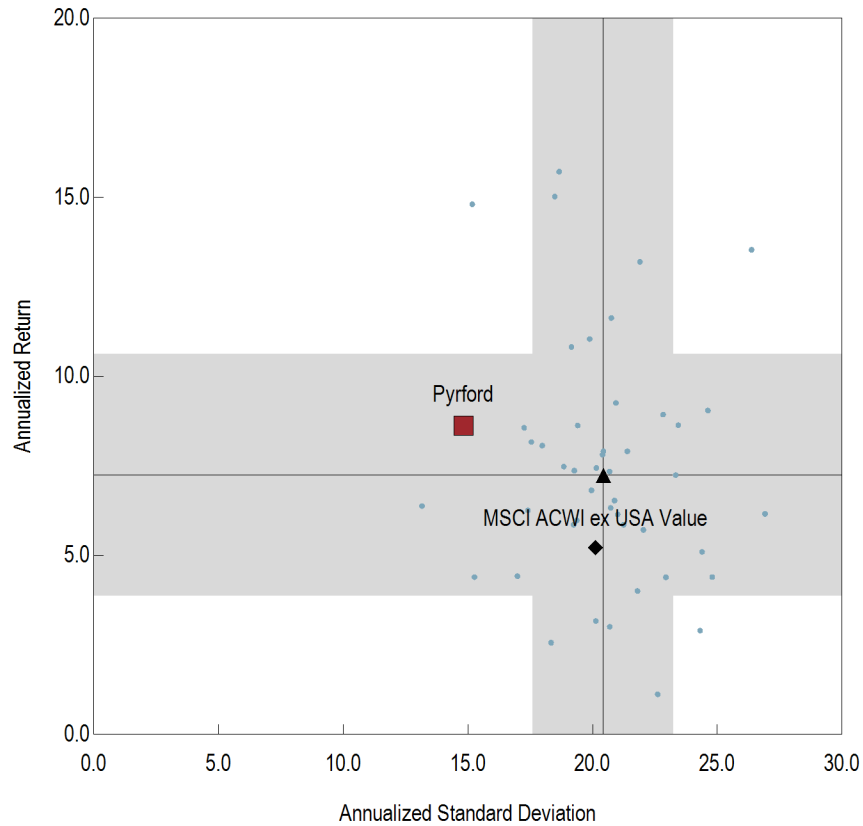
Rolling 3 Year Annualized Return (%)



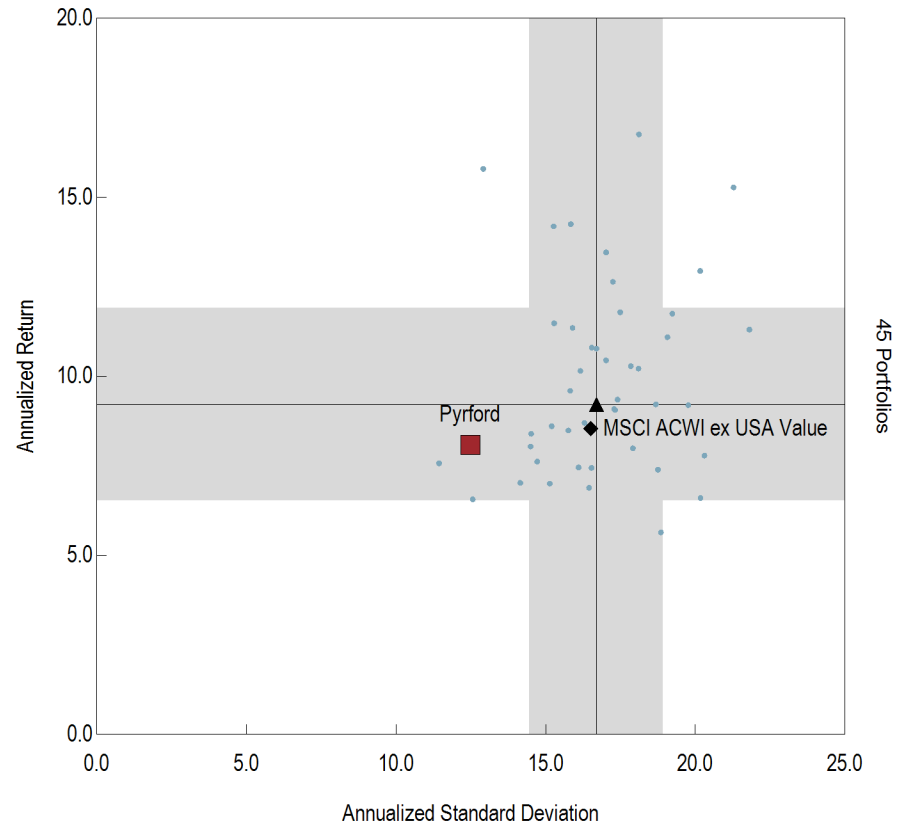
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	8.6%	14.8%	0.5
MSCI ACWI ex USA Value	5.2%	20.1%	0.2
eV ACWI ex-US Value Equity Gross Median	7.2%	20.4%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	8.1%	12.5%	0.6
MSCI ACWI ex USA Value	8.5%	16.5%	0.5
eV ACWI ex-US Value Equity Gross Median	9.2%	16.7%	0.5

# William Blair Manager Portfolio Overview

Period Ending: June 30, 2021

International equity growth portfolio of non-US companies with high growth rates constructed from the security level. Primary personnel include Simon Fennell and Kenneth McAtamney.

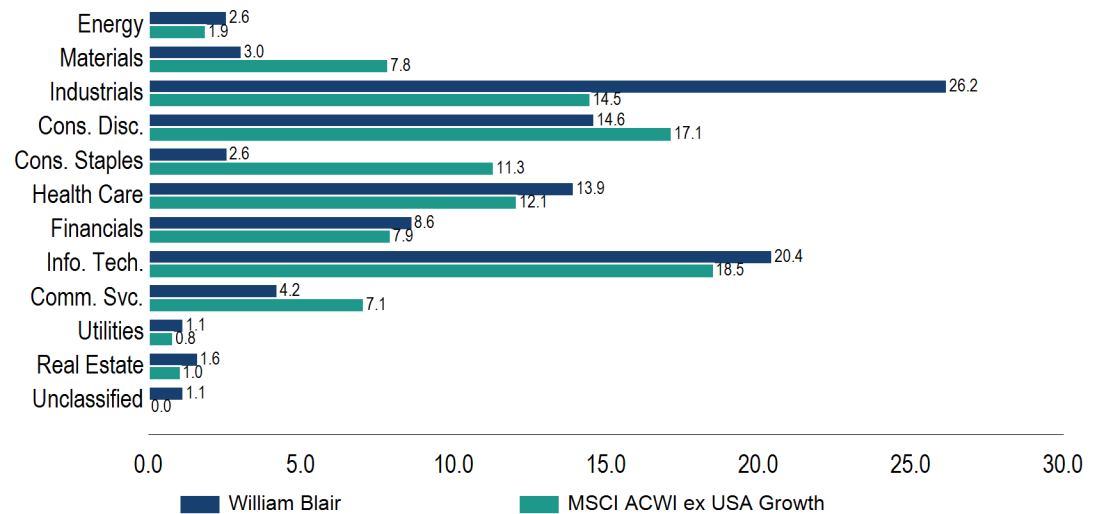
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	198	1,161
Weighted Avg. Market Cap. (\$B)	83.79	139.92
Median Market Cap. (\$B)	12.71	11.29
Price To Earnings	36.69	28.74
Price To Book	5.90	4.13
Price To Sales	5.27	3.09
Return on Equity (%)	12.76	15.41
Yield (%)	0.83	1.39
Beta	1.19	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	78.3%	68.6%
Emerging*	21.7%	31.4%
<b>Top 10 Largest Countries</b>		
United Kingdom	10.7%	7.1%
China*	9.7%	12.1%
France	9.5%	7.3%
Japan	9.3%	13.9%
Switzerland	7.0%	7.8%
Sweden	6.2%	3.4%
Netherlands	6.0%	4.2%
Germany	5.9%	4.5%
Hong Kong	4.2%	2.0%
Denmark	4.1%	2.7%
<b>Total-Top 10 Largest Countries</b>	<b>73.1%</b>	<b>64.9%</b>

## Sector Allocation (%) vs MSCI ACWI ex USA Growth



## Top Contributors

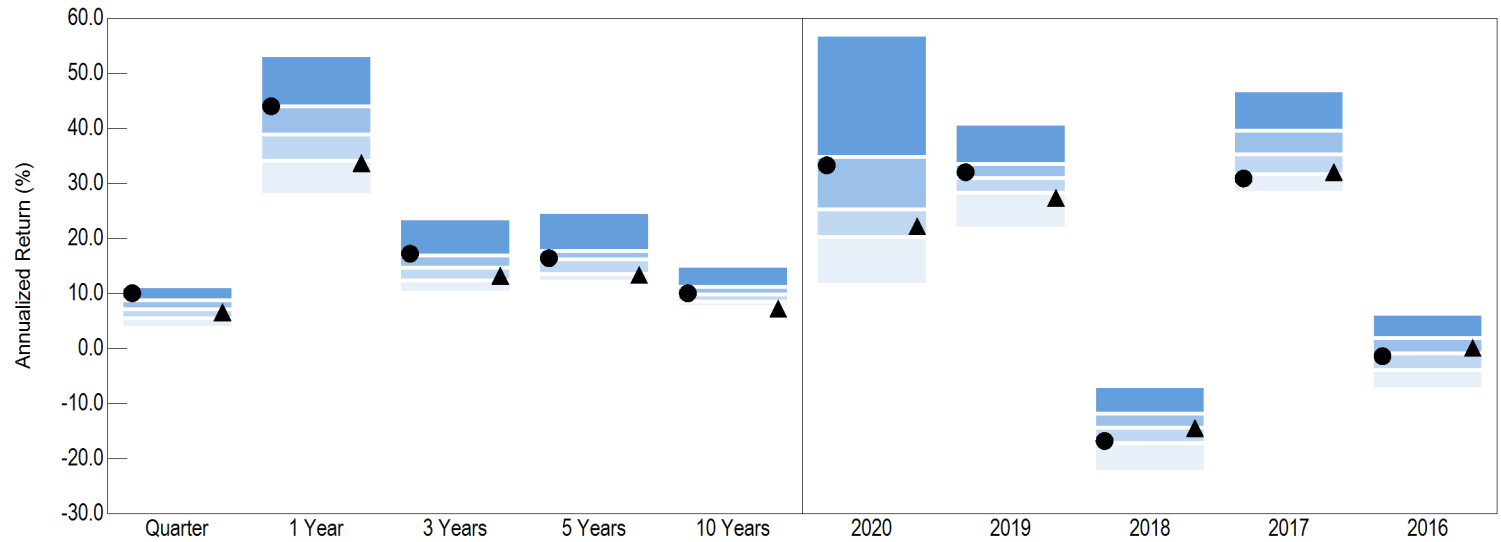
	Avg Wgt	Return	Contribution
LI NING CO LTD	0.59	88.56	0.52
WUXI BIOLOGICS (CAYMAN) INC	0.87	46.35	0.41
ASHTHEAD GROUP PLC	1.58	24.28	0.38
DSV PANALPINA A/S	1.89	18.75	0.35
KERING	1.18	27.52	0.32
KAKAO CORP	0.51	63.23	0.32
LONZA GROUP AG, ZUERICH	1.08	27.19	0.29
LVMH MOET HENNESSY LOUIS VUITTON SE	1.57	18.37	0.29
ASML HOLDING NV	1.92	13.54	0.26
SIKA AG, BAAR	1.60	15.26	0.24

## Bottom Contributors

	Avg Wgt	Return	Contribution
TAL EDUCATION GROUP	0.43	-53.15	-0.23
PING AN INSURANCE GROUP	1.36	-16.14	-0.22
CANADIAN NATIONAL RAILWAY CO	1.79	-8.53	-0.15
ORSTED A/S	0.64	-13.20	-0.09
DAIKIN INDUSTRIES LTD	1.05	-7.62	-0.08
TRAINLINE PLC	0.21	-35.87	-0.08
INFINEON TECHNOLOGIES AG	1.17	-5.50	-0.06
TENCENT HOLDINGS LTD	1.59	-3.89	-0.06
MONOTARO	0.43	-12.27	-0.05
TENCENT MUSIC ENTERTAINMENT GROUP	0.21	-24.45	-0.05

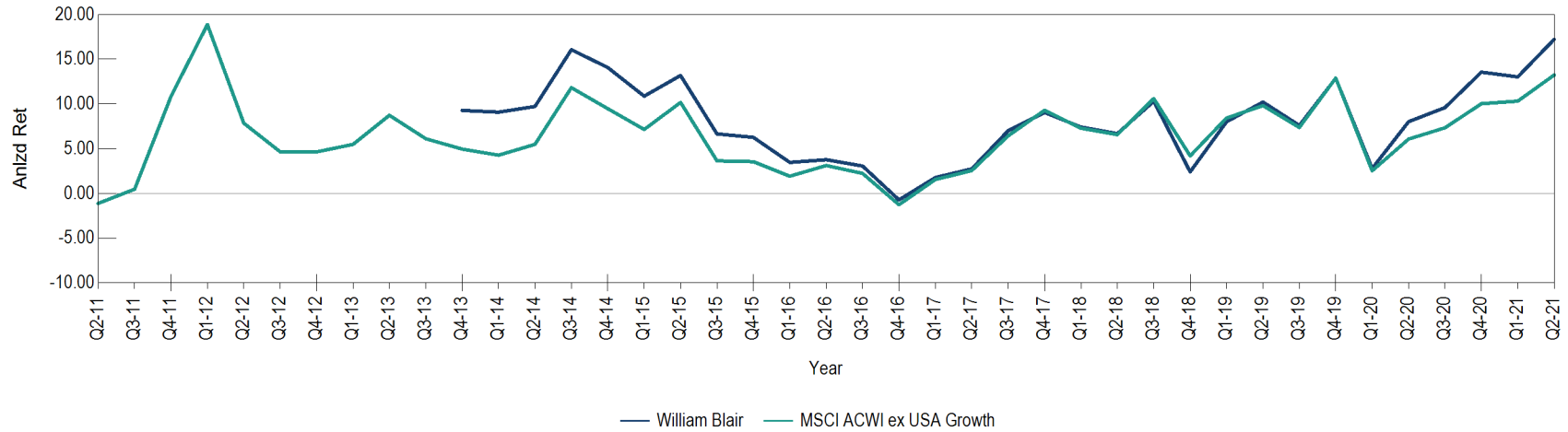
Unclassified sector allocation includes cash allocations.

William Blair vs. eV ACWI ex-US Growth Equity Gross Universe

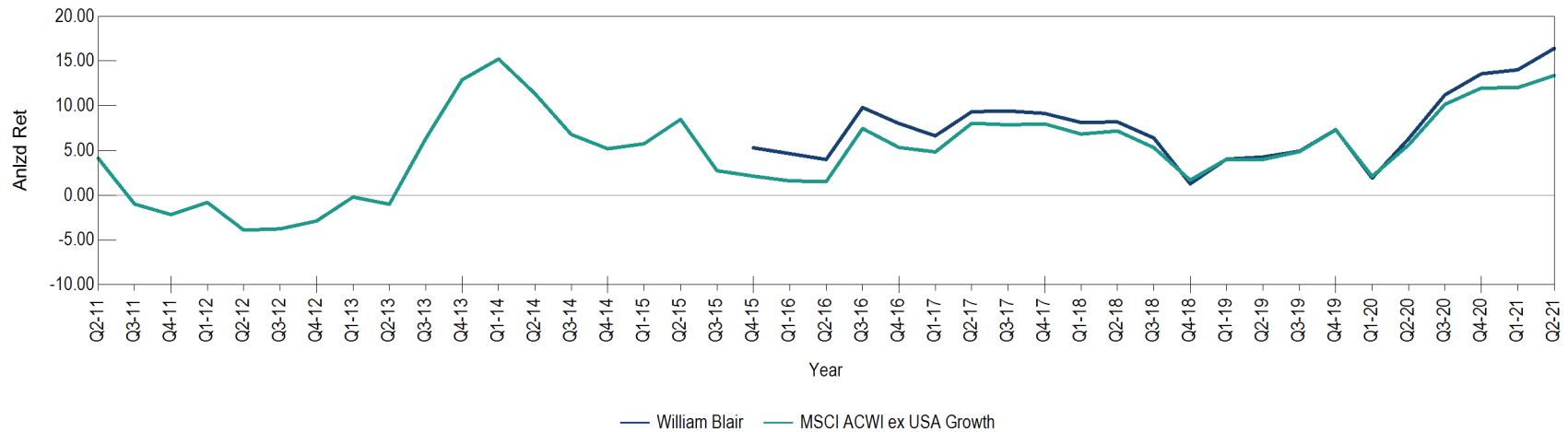


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	11.3	53.2	23.6	24.7	15.0	57.0	40.8	-6.8	46.8	6.3
25th Percentile	8.9	44.0	17.0	17.8	11.3	34.8	33.6	-11.7	39.6	2.0
Median	7.2	38.9	14.8	16.2	9.9	25.4	31.0	-14.3	35.3	-0.9
75th Percentile	5.6	34.2	12.4	13.6	8.5	20.3	28.3	-17.2	31.8	-3.9
95th Percentile	3.8	27.9	10.2	12.1	7.7	11.6	21.8	-22.3	28.3	-7.4
# of Portfolios	96	96	92	85	59	95	93	82	94	90
● William Blair	10.0 (16)	44.0 (26)	17.2 (24)	16.4 (46)	10.0 (46)	33.3 (30)	32.0 (39)	-16.8 (69)	30.9 (81)	-1.4 (55)
▲ MSCI ACWI ex USA Growth	6.6 (60)	33.7 (77)	13.2 (61)	13.4 (78)	7.3 (99)	22.2 (64)	27.3 (80)	-14.4 (51)	32.0 (75)	0.1 (45)

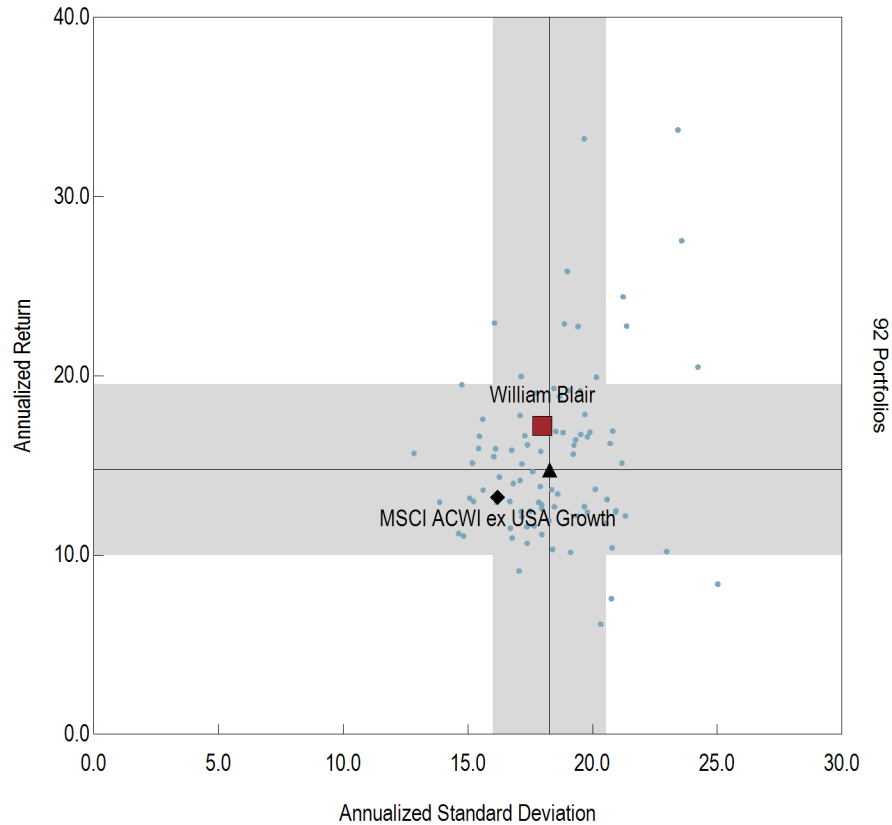
Rolling 3 Year Annualized Return (%)



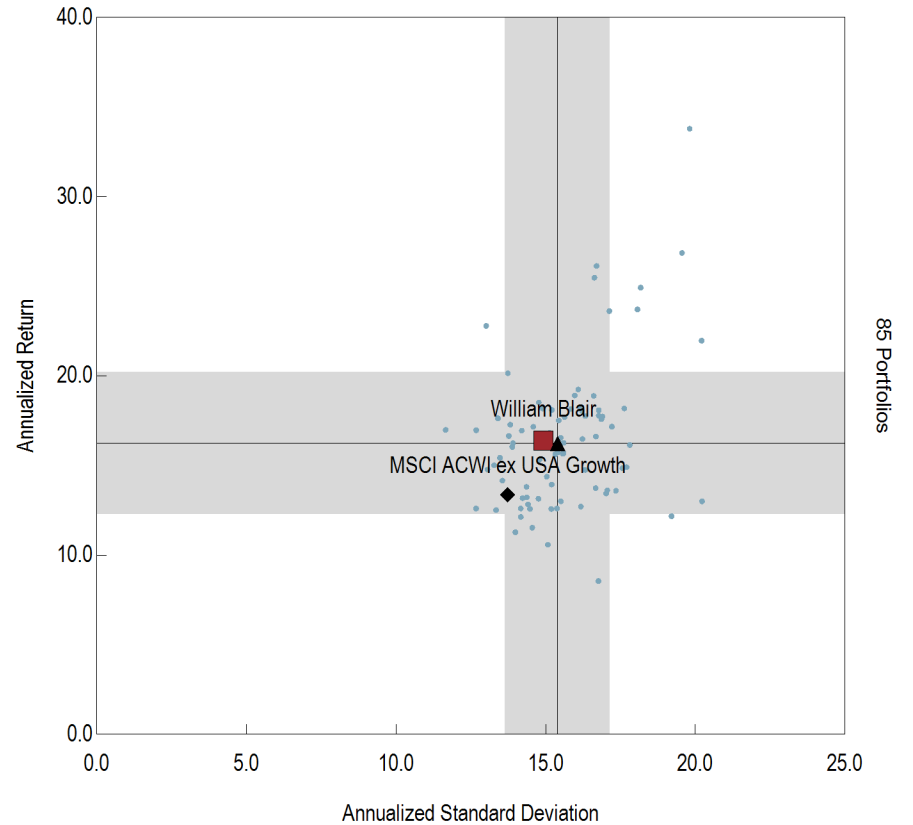
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	17.2%	18.0%	0.9
MSCI ACWI ex USA Growth	13.2%	16.2%	0.7
eV ACWI ex-US Growth Equity Gross Median	14.8%	18.3%	0.8

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	16.4%	14.9%	1.0
MSCI ACWI ex USA Growth	13.4%	13.7%	0.9
eV ACWI ex-US Growth Equity Gross Median	16.2%	15.4%	1.0

# PIMCO RAE Emerging Markets Manager Portfolio Overview

Period Ending: June 30, 2021

The PIMCO RAE Emerging Markets seeks to invest 80% of its assets in investments that are economically tied to emerging market countries. The portfolio is sub-advised by Research Affiliates, LLC.

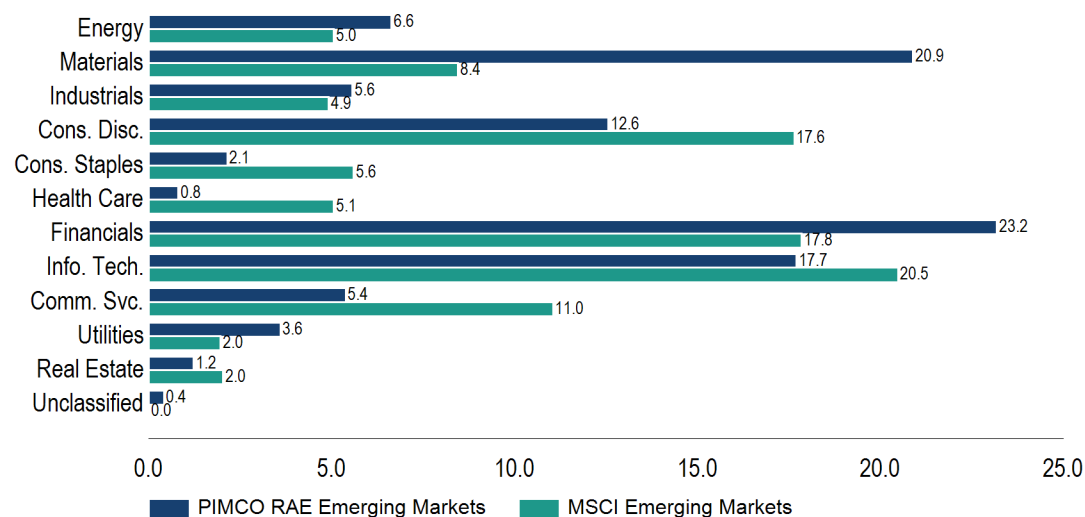
## Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	393	1,411
Weighted Avg. Market Cap. (\$B)	29.43	169.12
Median Market Cap. (\$B)	4.86	7.27
Price To Earnings	9.50	16.35
Price To Book	1.76	3.05
Price To Sales	0.53	1.51
Return on Equity (%)	8.58	12.46
Yield (%)	3.44	2.10
Beta	1.17	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	3.7%	0.0%
Emerging*	96.3%	100.0%
<b>Top 10 Largest Countries</b>		
India*	18.6%	9.9%
Korea*	14.5%	13.3%
Taiwan*	13.5%	14.0%
Brazil*	12.9%	5.2%
China*	10.0%	37.6%
Russia*	7.1%	3.0%
Mexico*	6.0%	1.7%
South Africa*	4.3%	3.5%
Thailand*	3.5%	1.6%
Hong Kong	3.4%	0.0%
<b>Total-Top 10 Largest Countries</b>	<b>93.9%</b>	<b>90.0%</b>

## Sector Allocation (%) vs MSCI Emerging Markets



## Top Contributors

	End Weight	Return	Contribution
DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO LTD	1.01	82.99	0.84
TATA STEEL LTD	1.66	44.64	0.74
ULTRAPAR PARTICIPACOES SA	0.52	112.07	0.59
BRASKEM SA	0.77	69.08	0.54
TATA MOTORS	4.85	10.75	0.52
BANCO BRADESCO SA BRAD	2.57	19.41	0.50
BANCO DO BRASIL ON	1.95	20.98	0.41
INDIABULLS HOUSING FINANCE LTD	1.01	36.02	0.36
CEMEX SAB DE CV	1.73	19.71	0.34
VALE SA	0.98	32.83	0.32

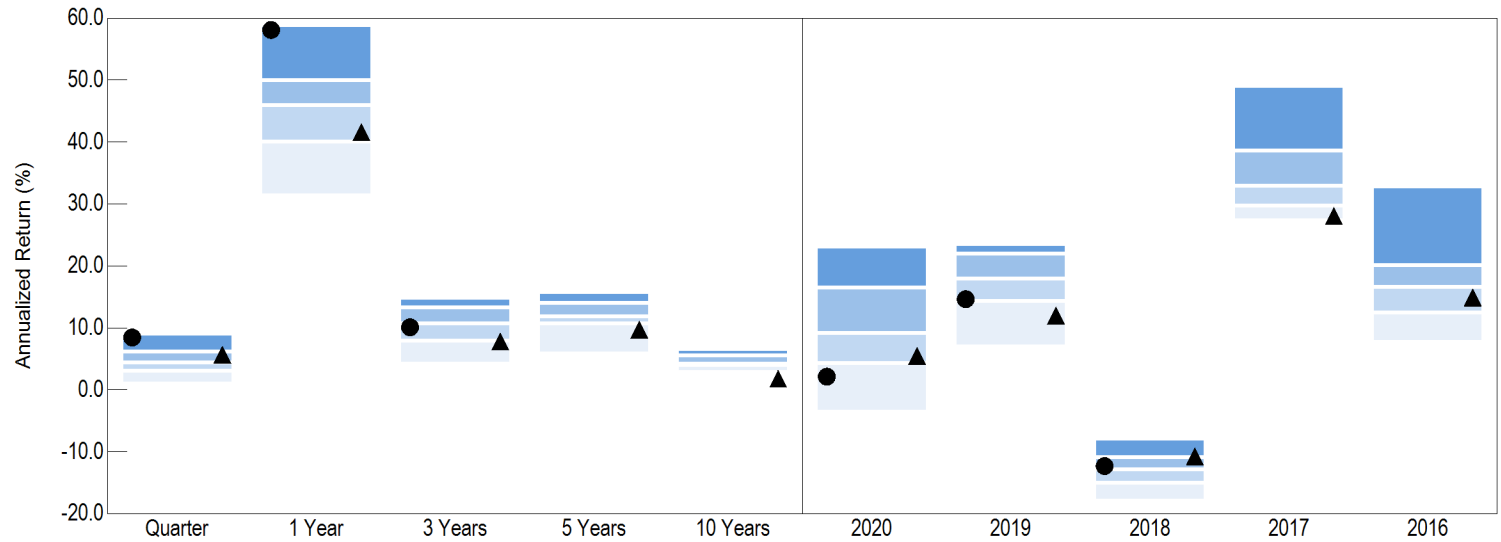
## Bottom Contributors

	End Weight	Return	Contribution
LENOVO GROUP LTD	1.72	-19.16	-0.33
CHINA CONSTRUCTION BANK CORP	2.69	-6.46	-0.17
INDUSTRIAL & COMMERCIAL BANK OF CHINA LTD	1.16	-12.60	-0.15
KASIKORNBANK PUBLIC CO LTD	0.47	-19.50	-0.09
HON HAI PRECISION INDUSTRY CO LTD	1.14	-7.81	-0.09
KOREA PETROCH.IND.	0.26	-27.07	-0.07
SIAM COMMERCIAL BANK PUBLIC CO LTD	0.53	-9.68	-0.05
GRUPO MEXICO S.A.B. DE C.V.	0.56	-8.98	-0.05

Unclassified sector allocation includes cash allocations.



PIMCO RAE Emerging Markets vs. eV Emg Mkts All Cap Value Equity Gross Universe



	Return (Rank)															
5th Percentile	9.0	58.8	14.9	15.7	6.6	23.1	23.5	-7.9	49.0	32.8						
25th Percentile	6.3	50.0	13.4	14.1	5.7	16.6	22.1	-10.8	38.6	20.1						
Median	4.5	46.0	10.8	12.0	4.3	9.2	18.0	-12.7	33.0	16.6						
75th Percentile	3.1	40.1	8.0	10.7	4.1	4.3	14.4	-14.9	29.8	12.6						
95th Percentile	1.1	31.4	4.2	6.0	2.9	-3.4	7.0	-17.8	27.4	7.8						
# of Portfolios	33	33	29	26	17	37	33	36	37	38						
● PIMCO RAE Emerging Markets	8.4 (7)	58.1 (6)	10.1 (63)	-- (--)	-- (--)	2.1 (85)	14.6 (72)	-12.3 (44)	-- (--)	-- (--)						
▲ MSCI Emerging Markets Value NR	5.7 (38)	41.6 (72)	7.8 (76)	9.7 (79)	1.8 (99)	5.5 (73)	12.0 (86)	-10.7 (25)	28.1 (90)	14.9 (59)						

# TT Emerging Markets Manager Portfolio Overview

Period Ending: June 30, 2021

The Emerging Markets Unconstrained strategy aims to outperform its benchmark, MSCI Emerging Markets Index by 5% per annum over a three-year rolling period. It targets high returns and long term capital growth by investing in a focused portfolio of primarily equity and equity-related securities traded in the Emerging Markets.

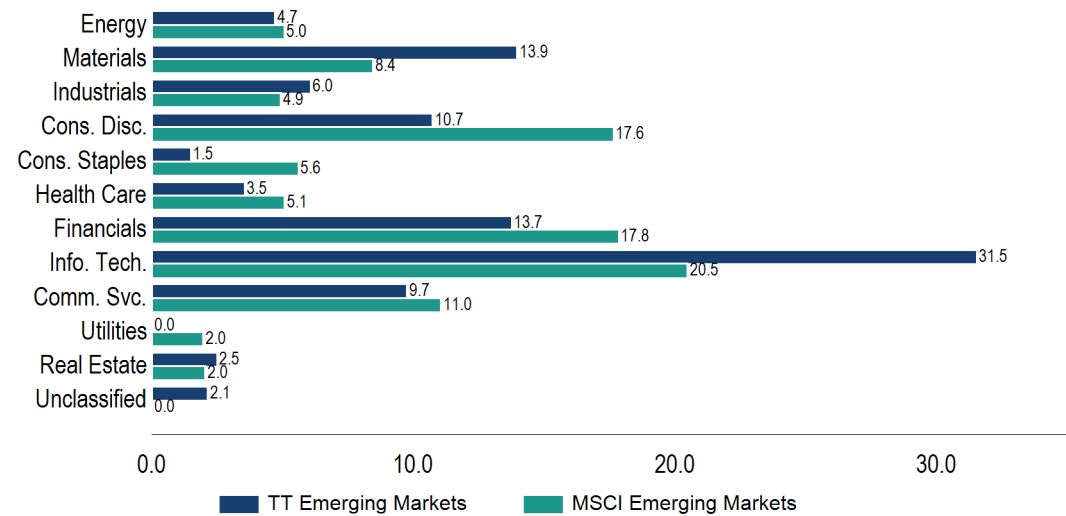
## Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	69	1,411
Weighted Avg. Market Cap. (\$B)	172.07	169.12
Median Market Cap. (\$B)	15.20	7.27
Price To Earnings	17.42	16.35
Price To Book	3.48	3.05
Price To Sales	1.81	1.51
Return on Equity (%)	10.25	12.46
Yield (%)	1.36	2.10
Beta	1.16	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	12.1%	0.0%
Emerging*	87.1%	100.0%
Frontier**	0.8%	0.0%
<b>Top 10 Largest Countries</b>		
China*	30.4%	37.6%
Korea*	15.5%	13.3%
Taiwan*	14.7%	14.0%
India*	7.4%	9.9%
Brazil*	6.3%	5.2%
Hong Kong	4.3%	0.0%
Netherlands	4.1%	0.0%
Russia*	2.9%	3.0%
United Kingdom	2.4%	0.0%
Mexico*	2.3%	1.7%
<b>Total-Top 10 Largest Countries</b>	<b>94.3%</b>	<b>84.8%</b>

## Sector Allocation (%) vs MSCI Emerging Markets



## Top Contributors

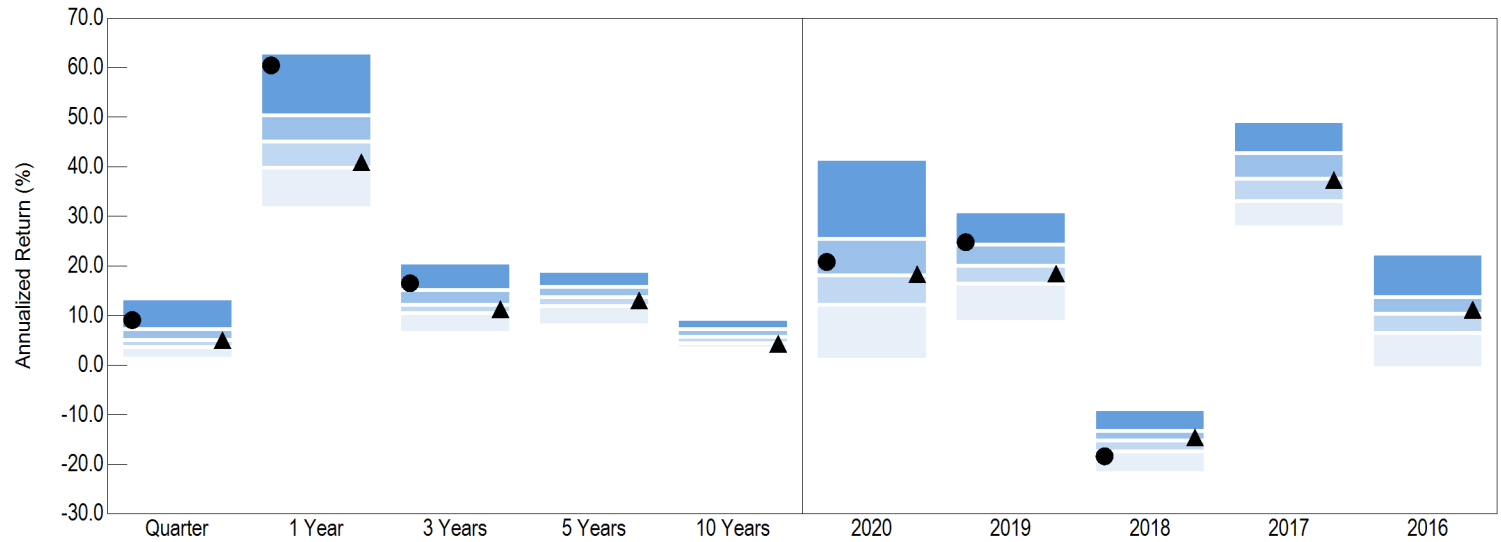
	End Weight	Return	Contribution
360 DIGITECH INC	2.01	60.86	1.23
PETROLEO BRASILEIRO S.A.- PETROBRAS	1.93	49.31	0.95
UNIMICRON TECHNOLOGY CORP	2.11	43.90	0.93
SUNGROW POWER SUPPLY CO LTD	1.35	62.92	0.85
CONTEMPORARY AMPEREX TECHNOLOGY CO LTD	1.07	68.46	0.73
ZHEJIANG SATELLITE PETROCHEMICAL CO LTD	1.49	48.55	0.72

## Bottom Contributors

	End Weight	Return	Contribution
DIAGNOSTICOS DA AMERICA SA	1.24	-51.47	-0.64
21VIANET GROUP INC	2.12	-28.95	-0.62
CHINA FEIHE LTD	1.47	-23.19	-0.34
TENCENT HOLDINGS LTD	7.26	-3.89	-0.28
SUNAC CHINA HOLDINGS LTD	1.14	-20.00	-0.23
MELCO RESORTS & ENTERTAINMENT LTD	1.32	-16.78	-0.22
PING AN INSURANCE GROUP	1.28	-15.55	-0.20
IMPALA PLATINUM HOLDINGS LTD	1.38	-10.99	-0.15
KINGSOFT CLOUD HOLDINGS LTD	1.06	-13.71	-0.15

Unclassified sector allocation includes cash allocations.

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



	Return (Rank)															
5th Percentile	13.4	63.0	20.6	19.0	9.2	41.6	30.9	-9.0	49.2	22.4						
25th Percentile	7.3	50.5	15.2	15.9	7.3	25.5	24.4	-13.2	42.8	13.7						
Median	5.2	45.1	12.2	13.8	5.8	18.2	20.1	-15.2	37.6	10.4						
75th Percentile	3.7	39.8	10.5	12.0	4.5	12.2	16.5	-17.4	33.2	6.6						
95th Percentile	1.4	31.7	6.6	8.1	3.4	1.2	8.8	-21.8	27.8	-0.6						
# of Portfolios	385	384	355	318	196	391	386	355	343	337						
● TT Emerging Markets	9.1 (18)	60.4 (9)	16.5 (18)	-- (--)	-- (--)	20.8 (39)	24.8 (24)	-18.4 (83)	-- (--)	-- (--)						
▲ MSCI Emerging Markets	5.0 (53)	40.9 (69)	11.3 (67)	13.0 (61)	4.3 (85)	18.3 (49)	18.4 (63)	-14.6 (43)	37.3 (53)	11.2 (45)						

## Global Equity Managers

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# Artisan Partners Manager Portfolio Overview

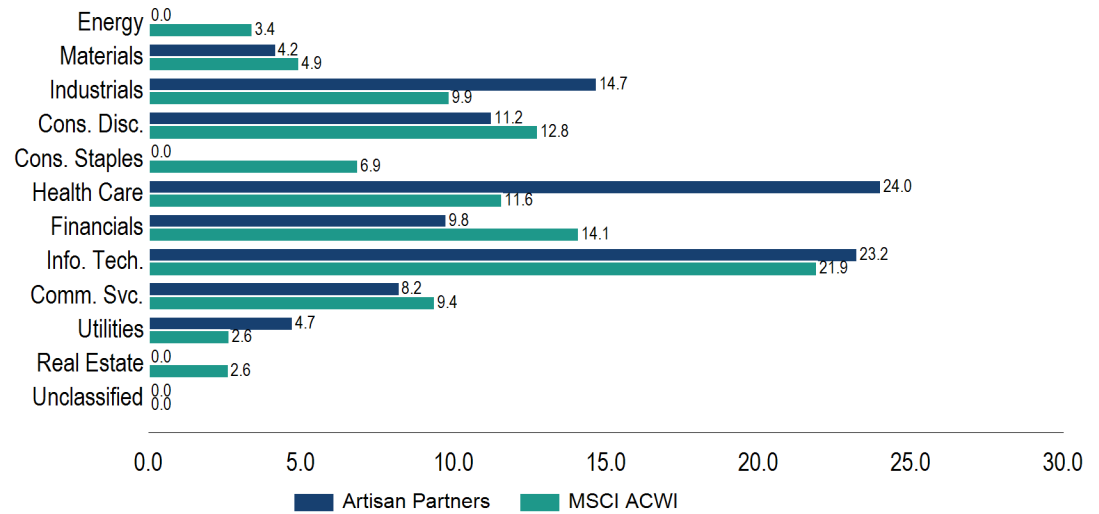
Period Ending: June 30, 2021

Global equity portfolio of companies that is benchmark agnostic with accelerating profit cycles and a focus on capital allocation. Primary personnel include James Hamel, Craigh Cepukenas, and Matthew Kamm.

## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	46	2,973
Weighted Avg. Market Cap. (\$B)	168.98	340.89
Median Market Cap. (\$B)	53.56	13.98
Price To Earnings	30.70	23.38
Price To Book	5.40	3.73
Price To Sales	4.82	2.35
Return on Equity (%)	15.80	17.41
Yield (%)	0.87	1.77
Beta	0.98	1.00

## Sector Allocation (%) vs MSCI ACWI



## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	97.1%	87.1%
Emerging*	2.9%	12.9%
<b>Top 10 Largest Countries</b>		
United States	48.3%	58.7%
United Kingdom	10.5%	3.7%
Hong Kong	7.0%	0.8%
Switzerland	6.0%	2.5%
Sweden	4.9%	1.0%
Netherlands	3.6%	1.1%
Japan	3.4%	5.9%
Spain	3.4%	0.6%
Canada	3.3%	2.9%
Denmark	3.1%	0.7%
<b>Total-Top 10 Largest Countries</b>	<b>93.4%</b>	<b>77.9%</b>

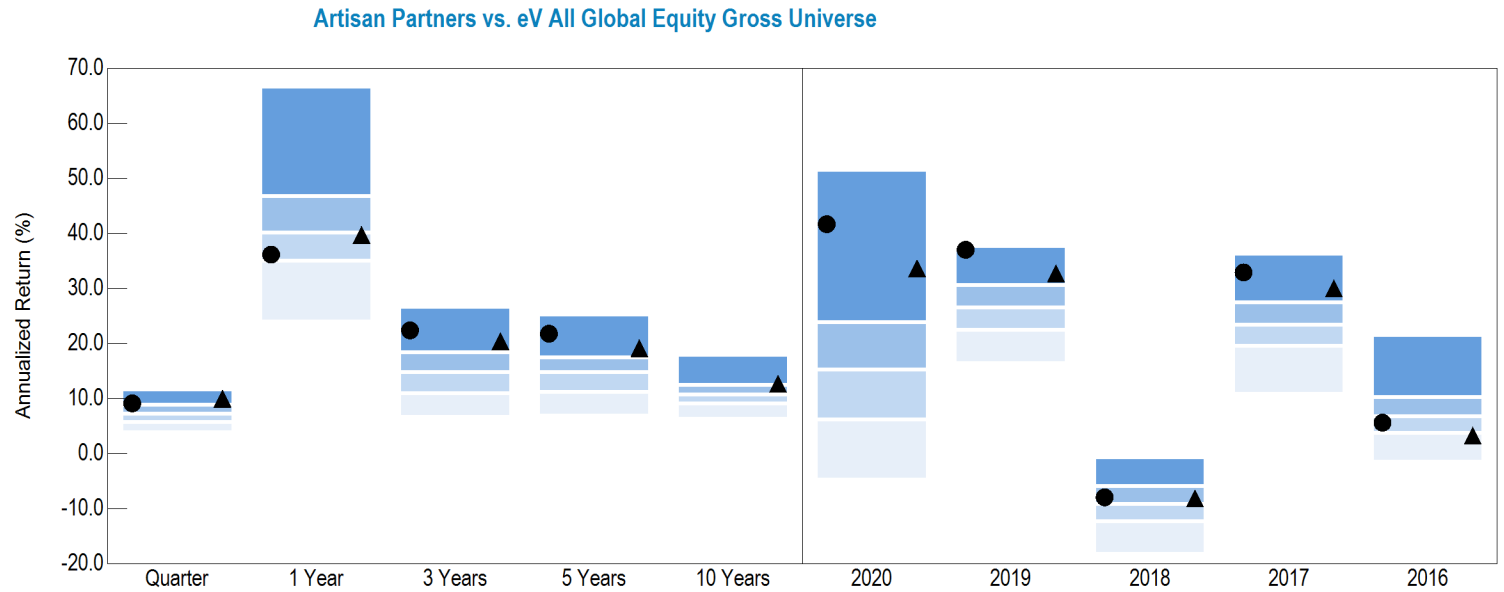
## Top Contributors

	Avg Wgt	Return	Contribution
LONZA GROUP AG, ZUERICH	3.11	27.19	0.85
ASTRAZENECA PLC	4.17	20.12	0.84
ADVANCED MICRO DEVICES INC	3.34	19.66	0.66
DANAHER CORP	2.94	19.32	0.57
IHS MARKIT LTD	3.15	16.62	0.52
VEEVA SYSTEMS INC	2.75	19.03	0.52
GENMAB A/S	2.02	24.24	0.49
ALPHABET INC	2.49	18.39	0.46
SHOPIFY INC	1.35	32.04	0.43

## Bottom Contributors

	Avg Wgt	Return	Contribution
KONINKLIJKE PHILIPS NV	1.72	-11.69	-0.20
ORSTED A/S	1.30	-13.20	-0.17
TELEFONAKTIEBOLAGET LM ERICSSON	3.02	-5.10	-0.15
IBERDROLA SA, BILBAO	2.48	-5.46	-0.14
UBER TECHNOLOGIES INC	1.41	-8.05	-0.11
NEXTERA ENERGY INC	3.22	-2.56	-0.08
VESTAS WIND SYSTEMS A/S	1.80	-4.36	-0.08
VOLKSWAGEN AG	0.73	-10.58	-0.08
FORTIVE CORP	2.75	-1.18	-0.03
RECKITT BENCKISER GROUP PLC	0.69	0.27	0.00

Unclassified sector allocation includes cash allocations.

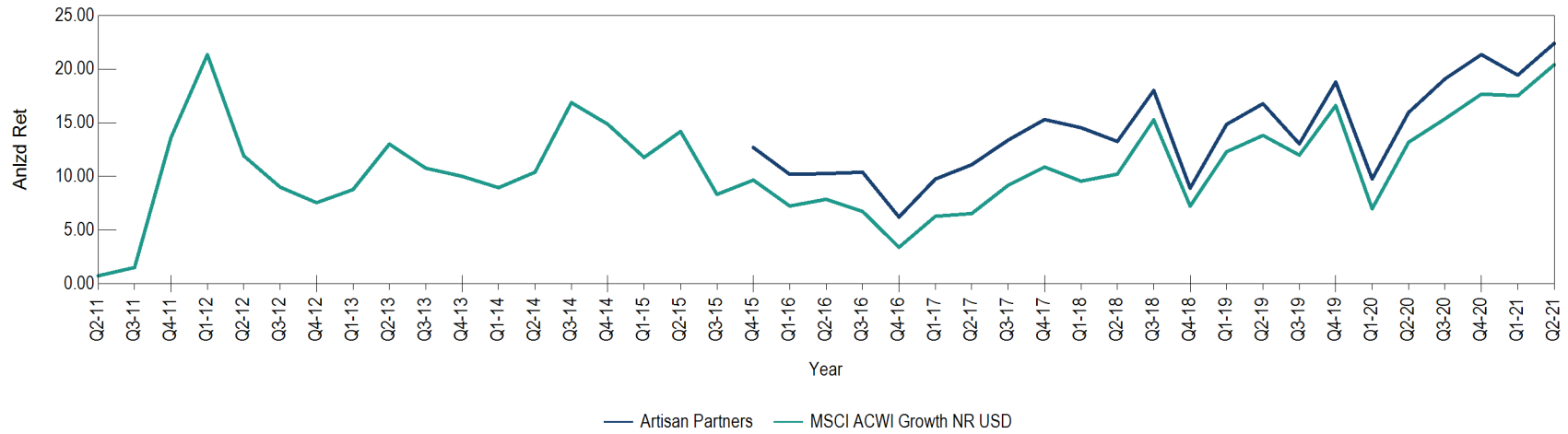


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	11.7	66.6	26.6	25.2	17.8	51.5	37.6	-0.7	36.3	21.5
25th Percentile	8.9	46.8	18.5	17.5	12.5	24.0	30.7	-5.8	27.6	10.3
Median	7.4	40.2	14.9	14.9	10.8	15.4	26.6	-9.1	23.5	6.8
75th Percentile	5.8	35.1	11.0	11.3	9.1	6.3	22.6	-12.2	19.6	3.9
95th Percentile	3.9	24.0	6.8	6.9	6.4	-4.7	16.5	-18.1	11.0	-1.4
# of Portfolios	1,103	1,103	1,012	906	584	1,093	989	920	880	842
● Artisan Partners	9.1 (24)	36.1 (71)	22.4 (10)	21.8 (9)	-- (--)	41.7 (9)	37.0 (7)	-7.9 (40)	32.9 (11)	5.6 (61)
▲ MSCI ACWI Growth NR USD	10.0 (16)	39.7 (54)	20.4 (17)	19.2 (19)	12.7 (24)	33.6 (14)	32.7 (17)	-8.1 (42)	30.0 (17)	3.3 (80)

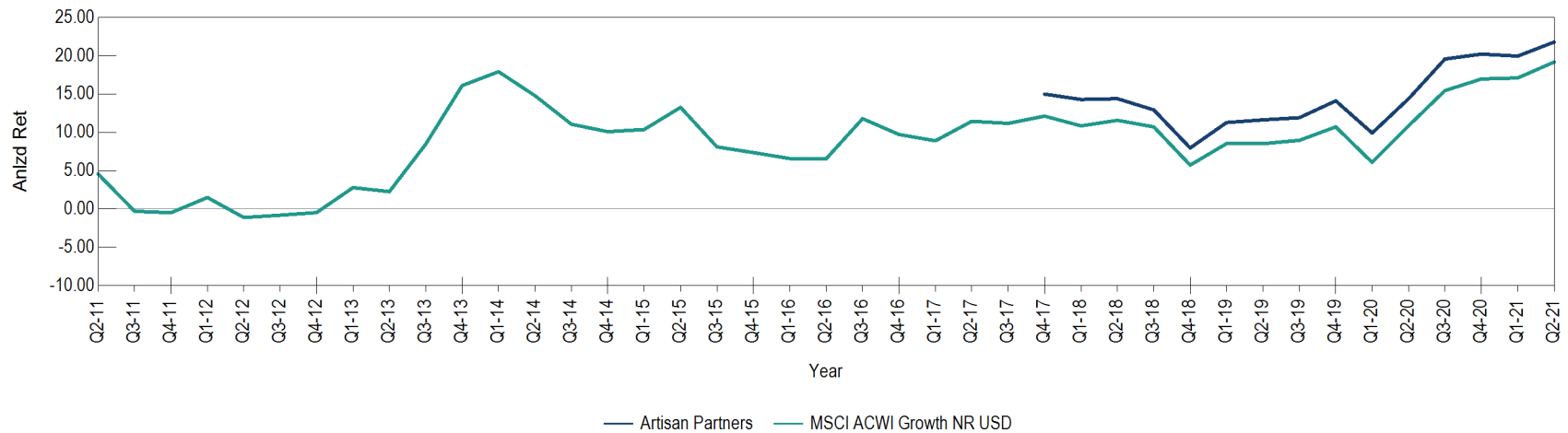
Artisan Partners  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2021

Rolling 3 Year Annualized Return (%)



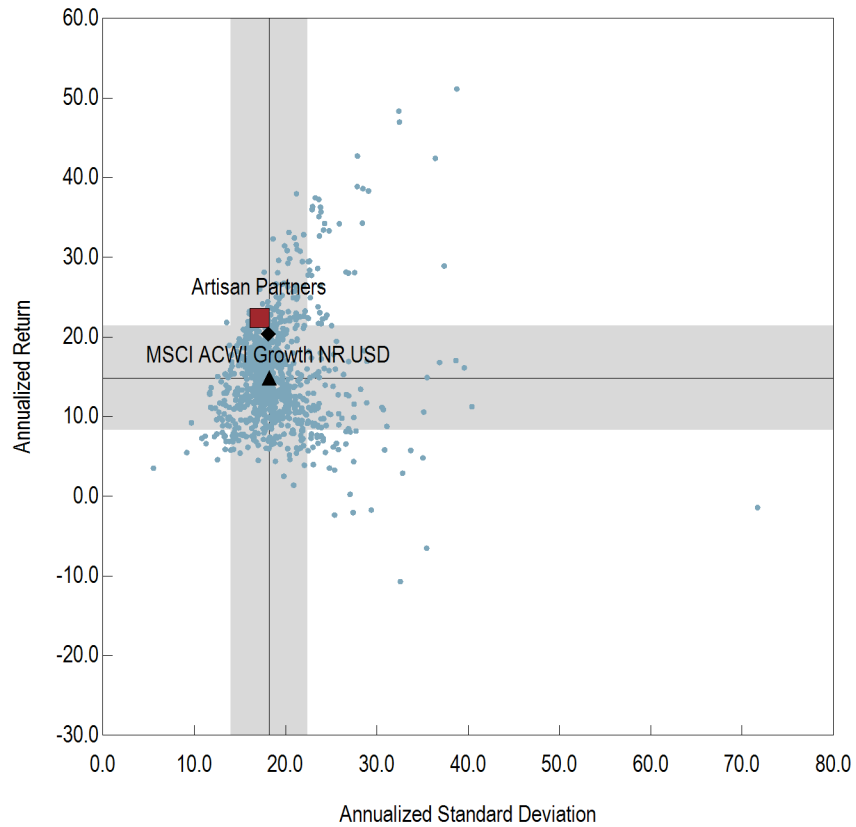
Rolling 5 Year Annualized Return (%)



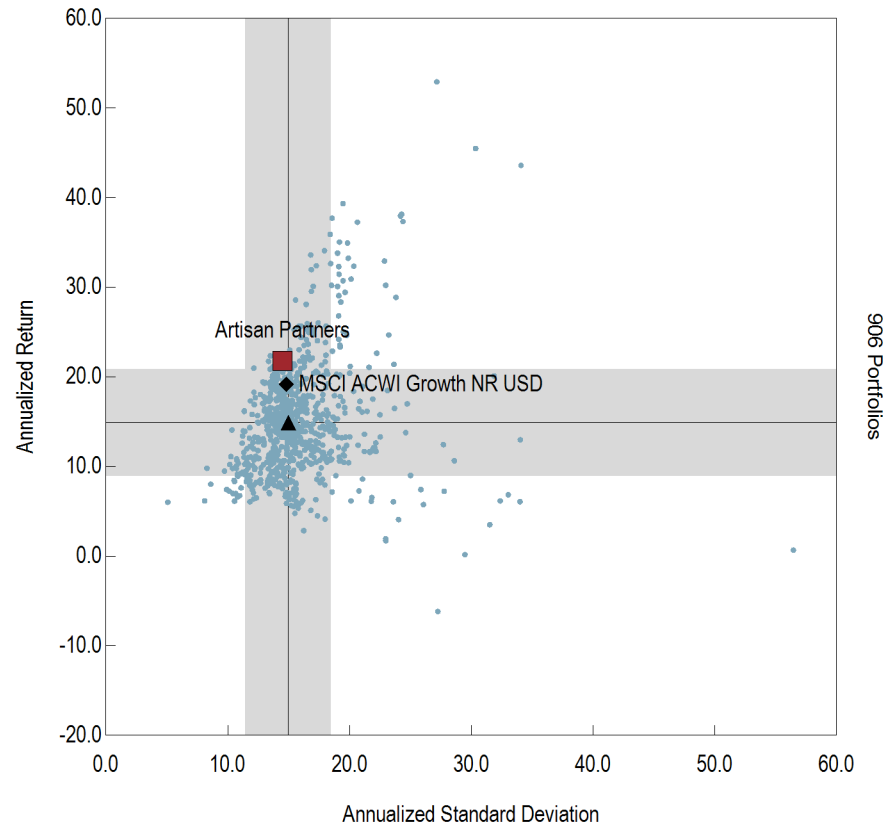
Artisan Partners  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2021

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	22.4%	17.1%	1.2
MSCI ACWI Growth NR USD	20.4%	18.1%	1.1
eV All Global Equity Gross Median	14.9%	18.2%	0.7

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	21.8%	14.5%	1.4
MSCI ACWI Growth NR USD	19.2%	14.8%	1.2
eV All Global Equity Gross Median	14.9%	15.0%	0.9



# First Eagle Manager Portfolio Overview

Period Ending: June 30, 2021

Global equity portfolio that is benchmark agnostic comprised of companies with low valuations. Primary personnel include Matt McLennan and Kimball Brooker.

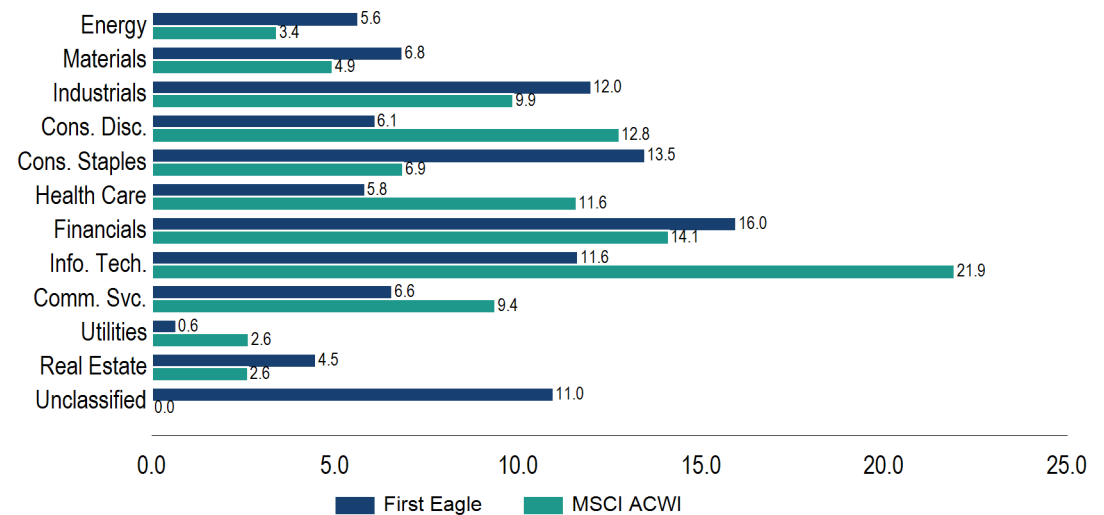
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	132	2,973
Weighted Avg. Market Cap. (\$B)	157.08	340.89
Median Market Cap. (\$B)	31.20	13.98
Price To Earnings	21.89	23.38
Price To Book	2.63	3.73
Price To Sales	1.91	2.35
Return on Equity (%)	14.80	17.41
Yield (%)	1.97	1.77
Beta	0.76	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	92.8%	87.1%
Emerging*	7.2%	12.9%
<b>Top 10 Largest Countries</b>		
United States	58.4%	58.7%
Japan	9.1%	5.9%
United Kingdom	6.0%	3.7%
France	4.8%	2.9%
Canada	4.6%	2.9%
Switzerland	2.7%	2.5%
Korea*	2.0%	1.7%
Belgium	1.7%	0.2%
Sweden	1.5%	1.0%
Taiwan*	1.4%	1.8%
<b>Total-Top 10 Largest Countries</b>	<b>93.4%</b>	<b>81.4%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

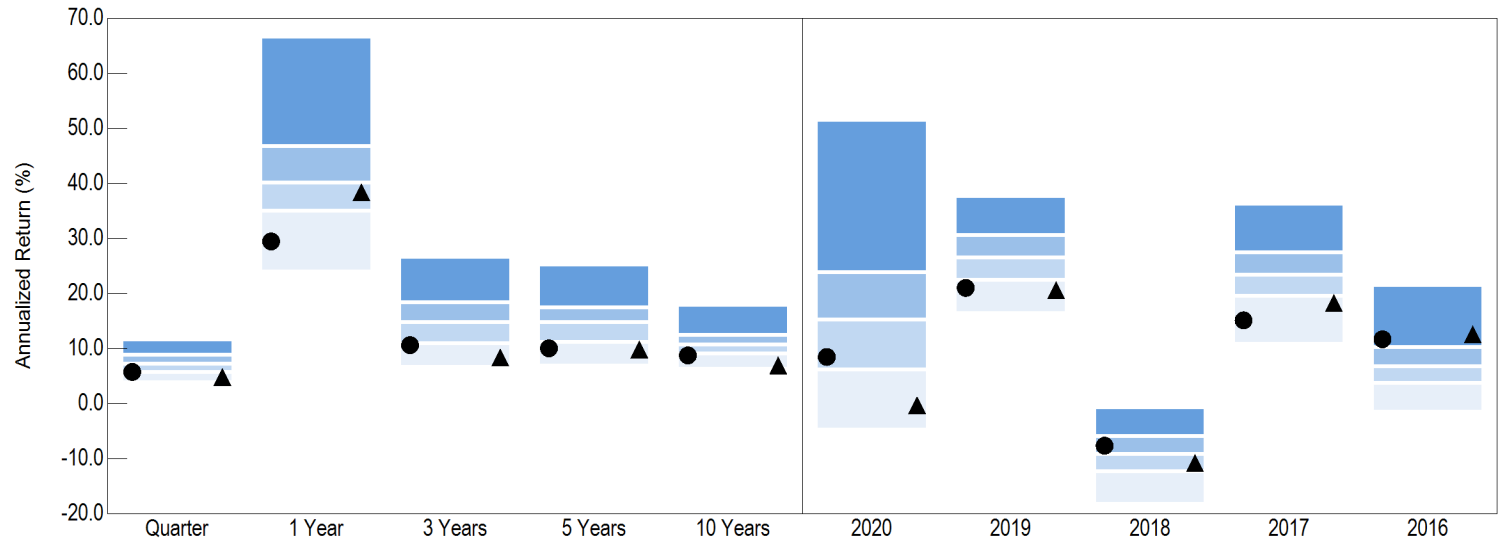
	End Weight	Return	Contribution
CIE FINANCIERE			
RICHEMONT AG, ZUG	1.68	25.77	0.43
ORACLE CORP	3.38	11.41	0.39
EXXON MOBIL CORP	2.48	14.62	0.36
SPDR GOLD TRUST	9.92	3.54	0.35
FACEBOOK INC	1.91	18.06	0.35
SCHLUMBERGER LTD	1.47	18.17	0.27
TERADATA CORP	0.88	29.66	0.26
AMBEV SA	0.97	25.55	0.25
ALPHABET INC	1.16	21.16	0.25
PHILIP MORRIS INTERNATIONAL INC	1.87	13.04	0.24

## Bottom Contributors

	End Weight	Return	Contribution
SECOM CO LTD	1.22	-9.64	-0.12
KOMATSU LTD	0.31	-19.53	-0.06
MITSUBISHI ESTATE CO LTD	0.82	-7.35	-0.06
DEERE & CO	0.89	-5.48	-0.05
BOOKING HOLDINGS INC	0.80	-6.08	-0.05
CUMMINS INC.	0.78	-5.41	-0.04
BANGKOK BANK PUBLIC CO LTD	0.35	-10.89	-0.04
WEYERHAEUSER CO	1.16	-2.86	-0.03
MITSUBISHI ELECTRIC CORP	0.68	-4.71	-0.03
SOMPO HOLDINGS INC	0.88	-3.53	-0.03

Unclassified sector allocation includes cash allocations and Gold allocations (8.55% as of 6/30/2021).

First Eagle vs. eV All Global Equity Gross Universe

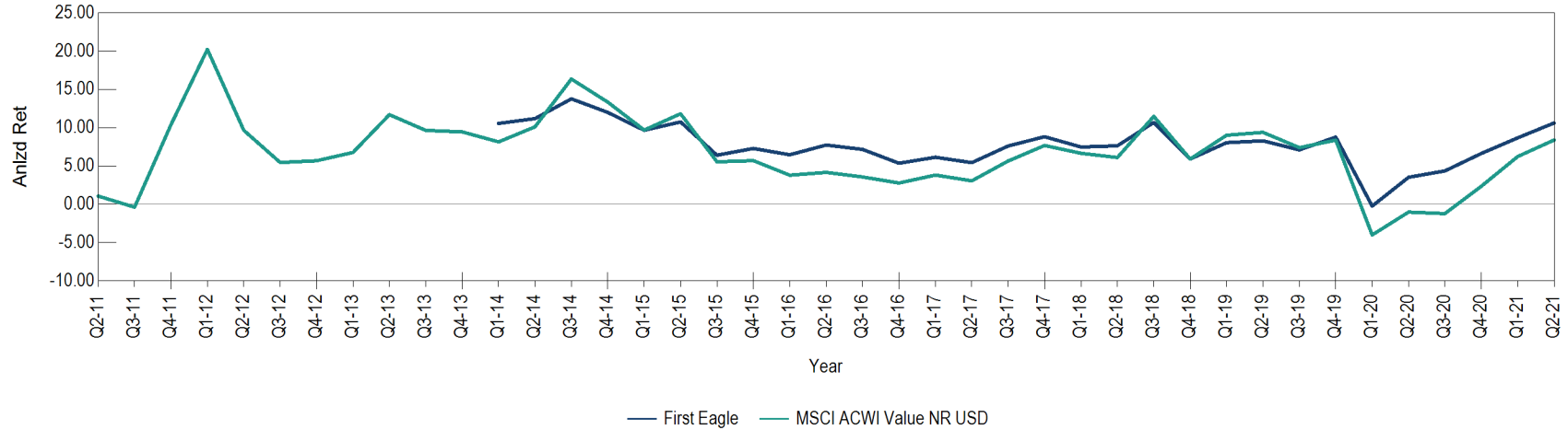


	Return (Rank)										
5th Percentile	11.7	66.6	26.6	25.2	17.8	51.5	37.6	-0.7	36.3	21.5	
25th Percentile	8.9	46.8	18.5	17.5	12.5	24.0	30.7	-5.8	27.6	10.3	
Median	7.4	40.2	14.9	14.9	10.8	15.4	26.6	-9.1	23.5	6.8	
75th Percentile	5.8	35.1	11.0	11.3	9.1	6.3	22.6	-12.2	19.6	3.9	
95th Percentile	3.9	24.0	6.8	6.9	6.4	-4.7	16.5	-18.1	11.0	-1.4	
# of Portfolios	1,103	1,103	1,012	906	584	1,093	989	920	880	842	
● First Eagle	5.8 (76)	29.4 (89)	10.6 (78)	10.0 (84)	8.7 (80)	8.5 (70)	21.0 (82)	-7.6 (38)	15.1 (89)	11.7 (19)	
▲ MSCI ACWI Value NR USD	4.8 (88)	38.4 (63)	8.4 (89)	9.8 (85)	7.0 (94)	-0.3 (89)	20.6 (83)	-10.8 (65)	18.3 (81)	12.6 (16)	

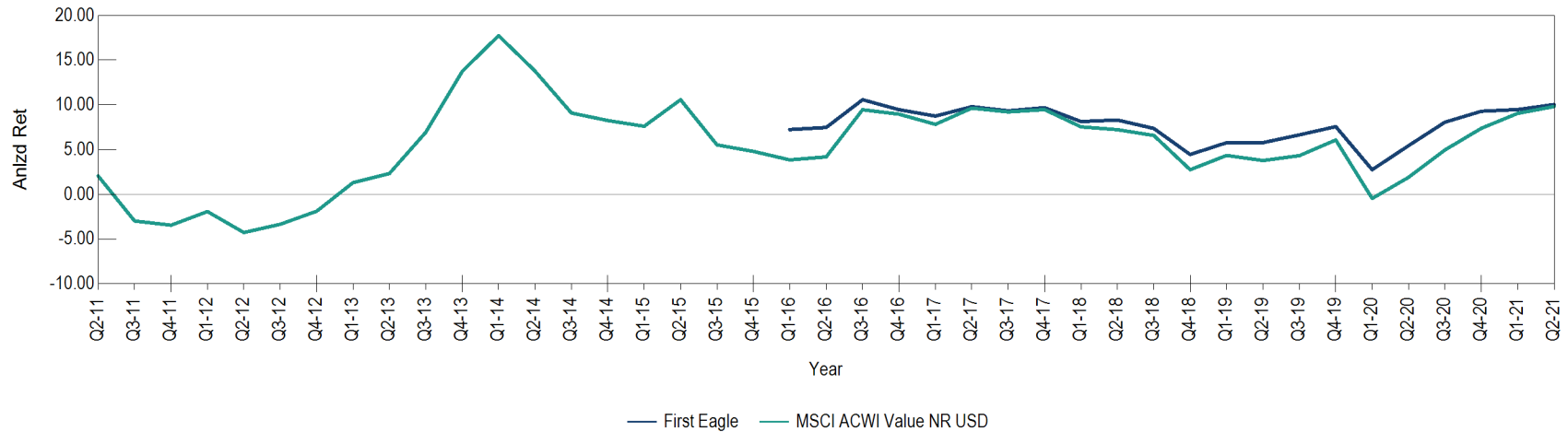
First Eagle  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2021

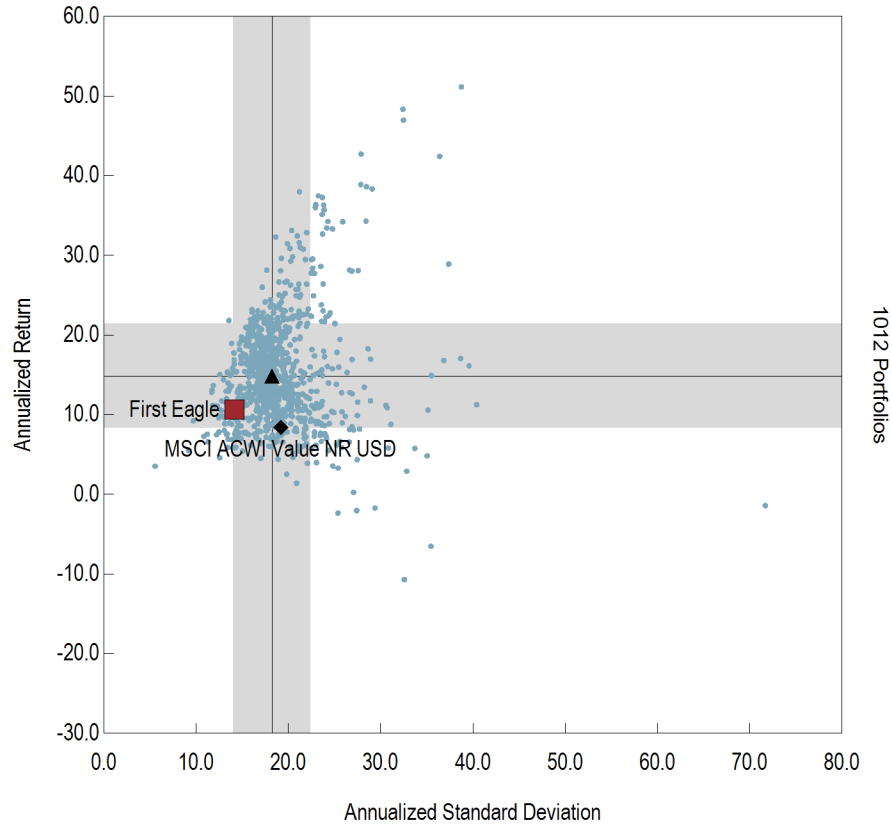
Rolling 3 Year Annualized Return (%)



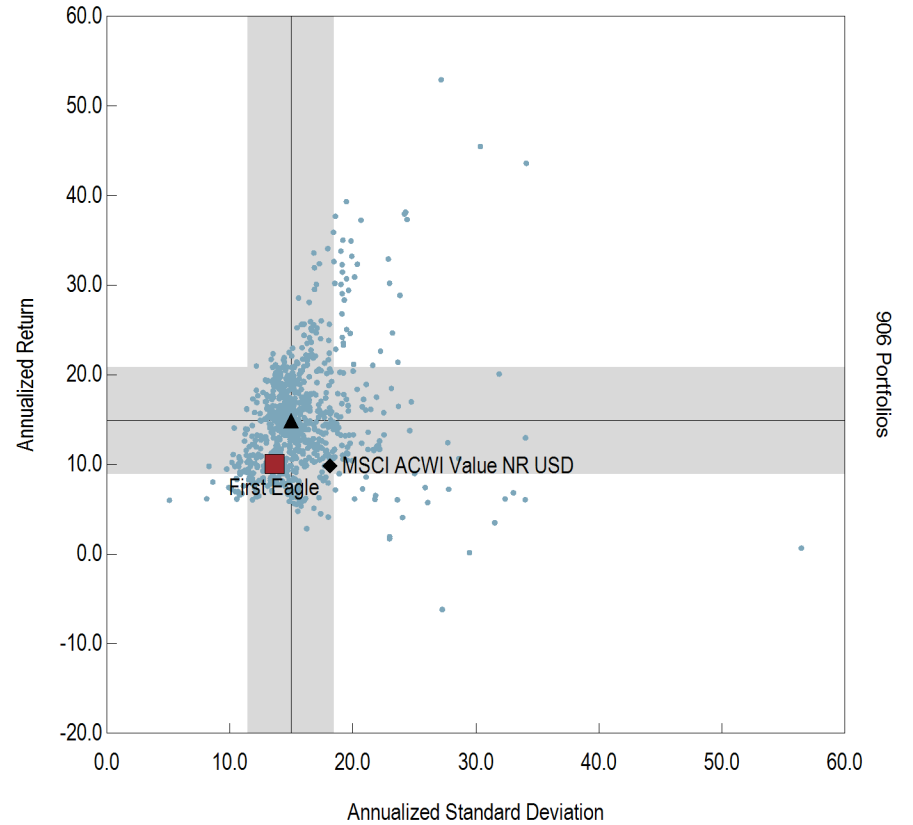
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	10.6%	14.1%	0.7
MSCI ACWI Value NR USD	8.4%	19.2%	0.4
eV All Global Equity Gross Median	14.9%	18.2%	0.7

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	10.0%	11.4%	0.8
MSCI ACWI Value NR USD	9.8%	15.4%	0.6
eV All Global Equity Gross Median	14.9%	15.0%	0.9

## High Yield Managers

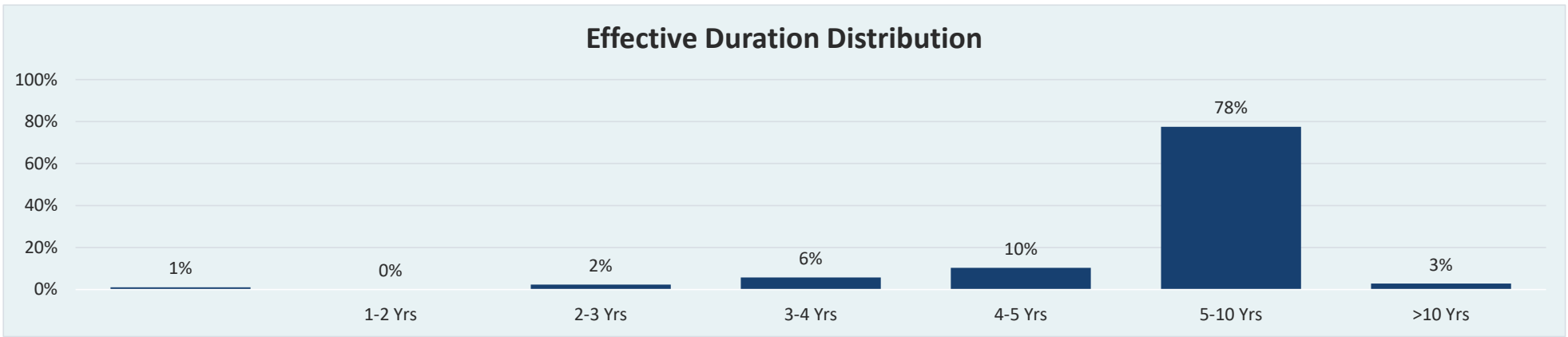
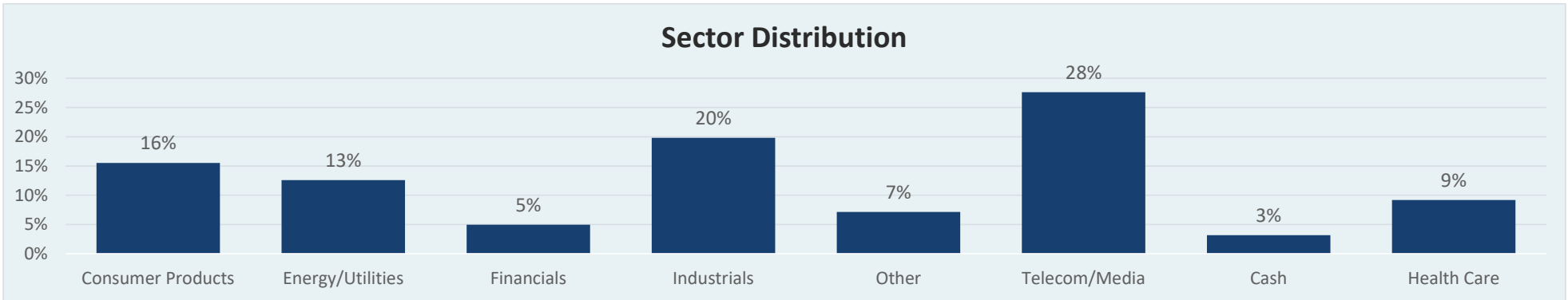
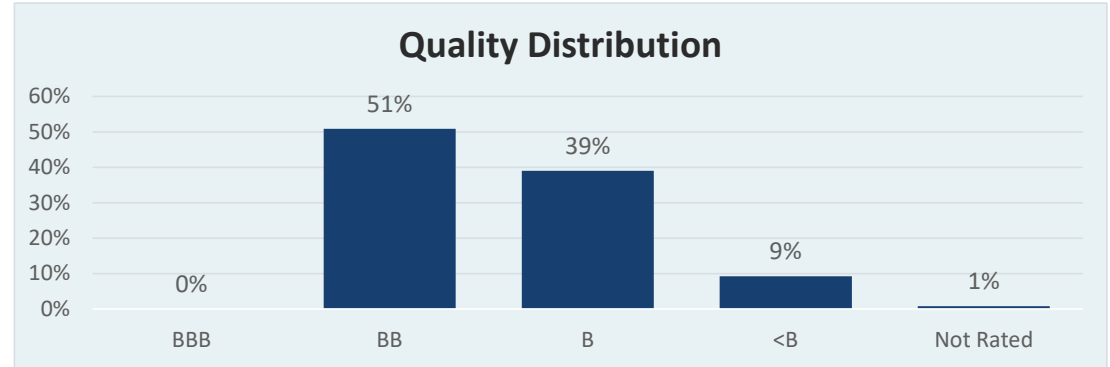
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# Allianz Global Investors Manager Portfolio Overview

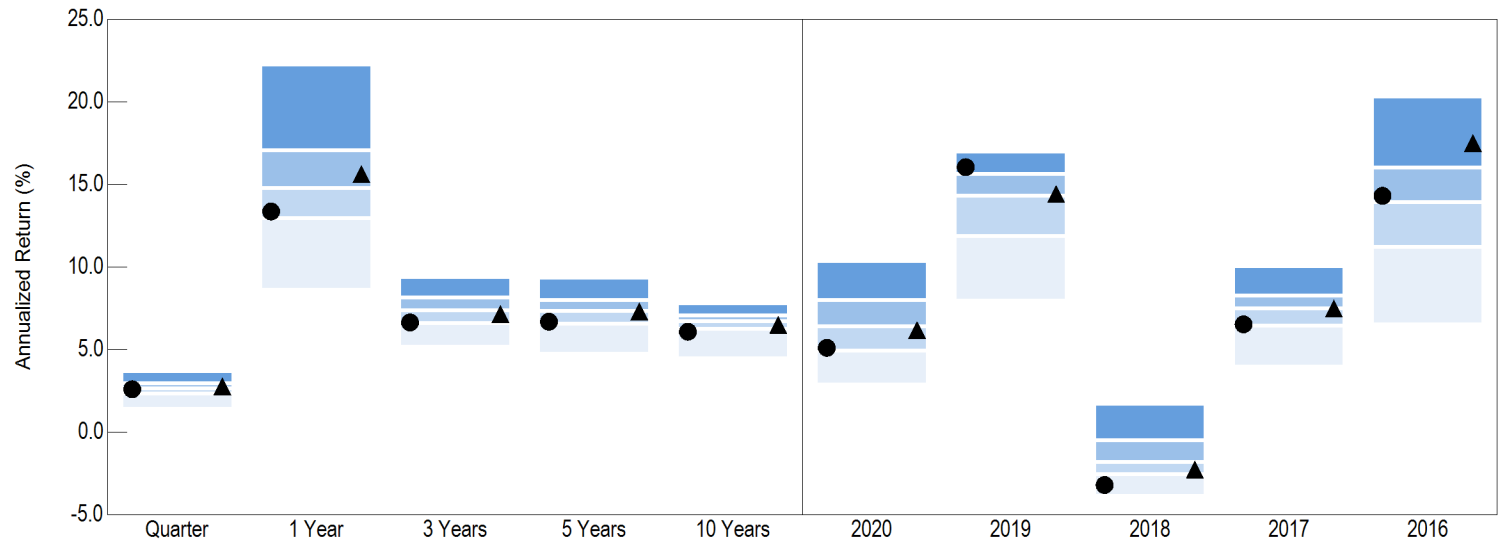
Period Ending: June 30, 2021

Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	ICE BofAML HY Master II
Effective Duration	4.00	4.10
Yield to Maturity	4.70	4.70
Average Quality	B1	B1
Average Coupon	6.0%	5.8%

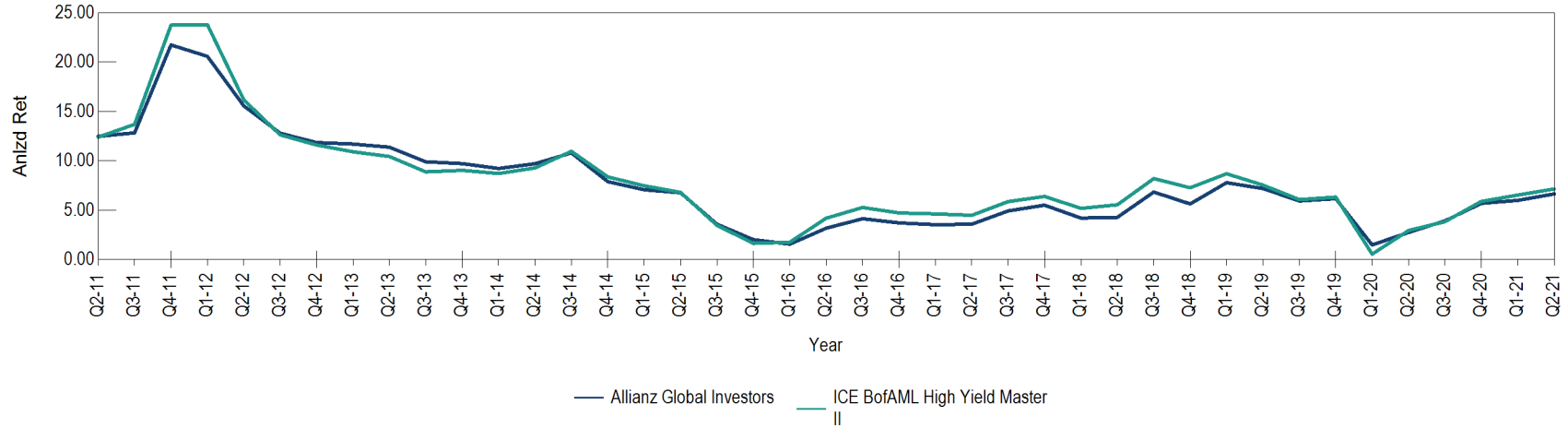


Allianz Global Investors vs. eV US High Yield Fixed Inc Gross Universe

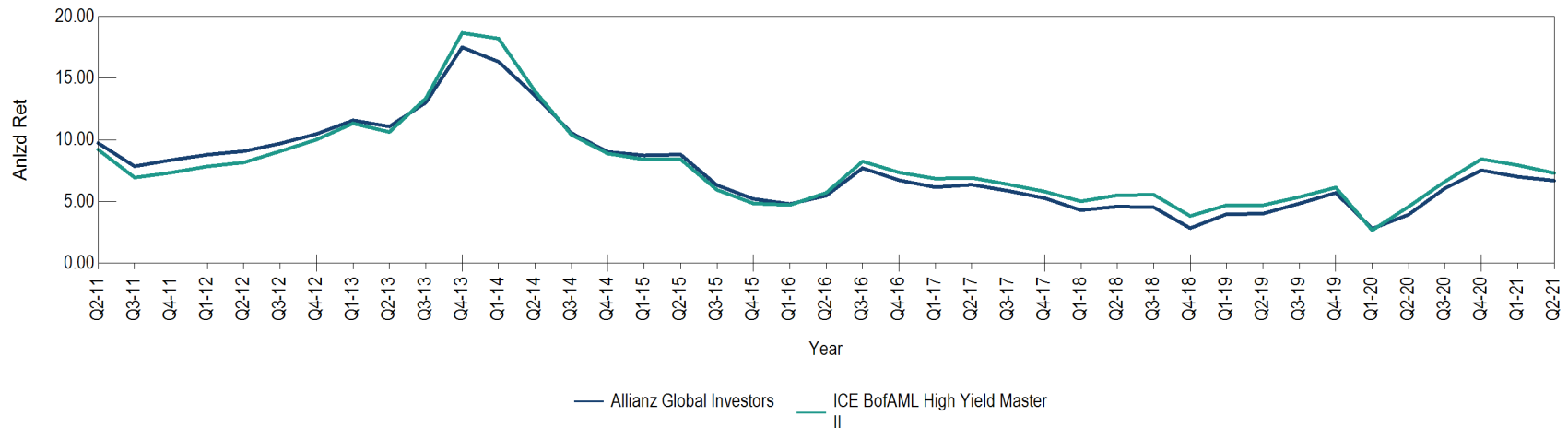


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	3.7	22.2	9.4	9.3	7.8	10.3	16.9	1.7	10.0	20.3
25th Percentile	3.0	17.1	8.2	8.0	7.1	8.0	15.6	-0.5	8.3	16.0
Median	2.7	14.8	7.4	7.4	6.7	6.4	14.3	-1.8	7.5	14.0
75th Percentile	2.4	13.0	6.6	6.6	6.3	5.0	11.9	-2.5	6.5	11.3
95th Percentile	1.4	8.6	5.2	4.7	4.5	2.9	8.0	-3.8	4.0	6.6
# of Portfolios	216	216	210	196	142	217	226	210	198	183
● Allianz Global Investors	2.6 (58)	13.4 (70)	6.6 (75)	6.7 (74)	6.1 (83)	5.1 (74)	16.0 (15)	-3.2 (88)	6.5 (74)	14.3 (47)
▲ ICE BofAML High Yield Master II	2.8 (43)	15.6 (41)	7.1 (63)	7.3 (52)	6.5 (63)	6.2 (55)	14.4 (49)	-2.3 (69)	7.5 (53)	17.5 (14)

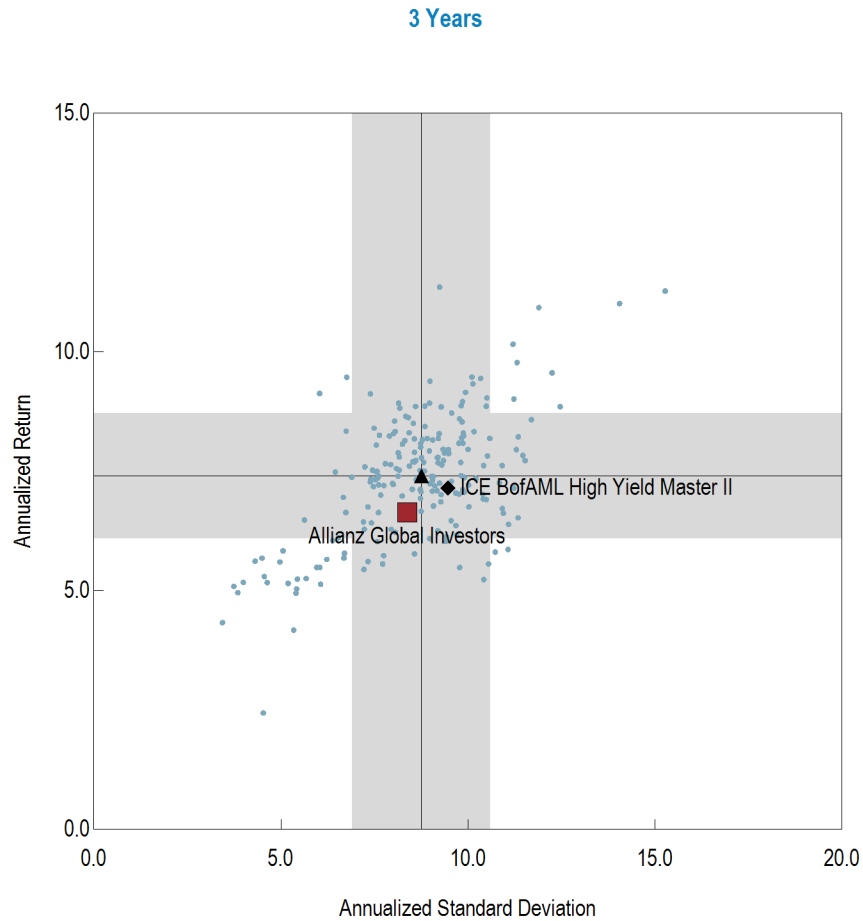
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)







**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	6.6%	8.4%	0.6
ICE BofAML High Yield Master II	7.1%	9.5%	0.6
eV US High Yield Fixed Inc Gross Median	7.4%	8.8%	0.7

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	6.7%	6.7%	0.8
ICE BofAML High Yield Master II	7.3%	7.5%	0.8
eV US High Yield Fixed Inc Gross Median	7.4%	7.1%	0.9

# Real Estate Managers

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# Adelante Manager Portfolio Overview

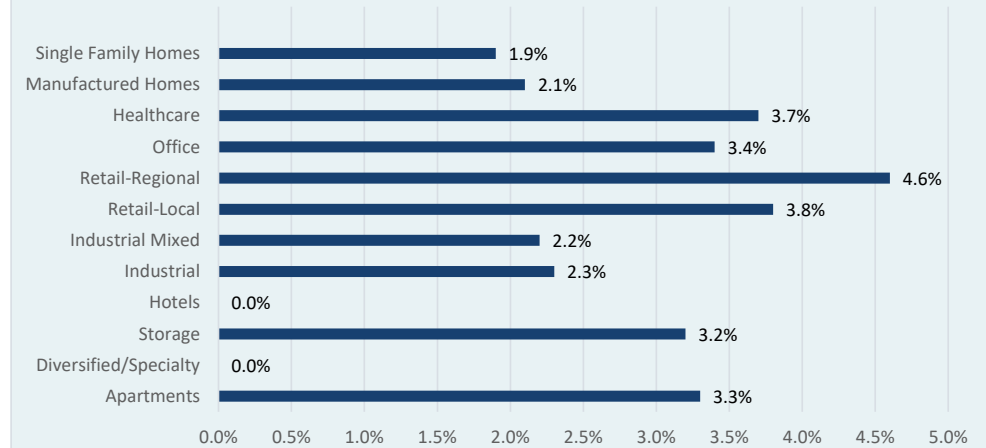
Period Ending: June 30, 2021

Diversified portfolio of U.S. REITs with a focus on the underlying real estate assets

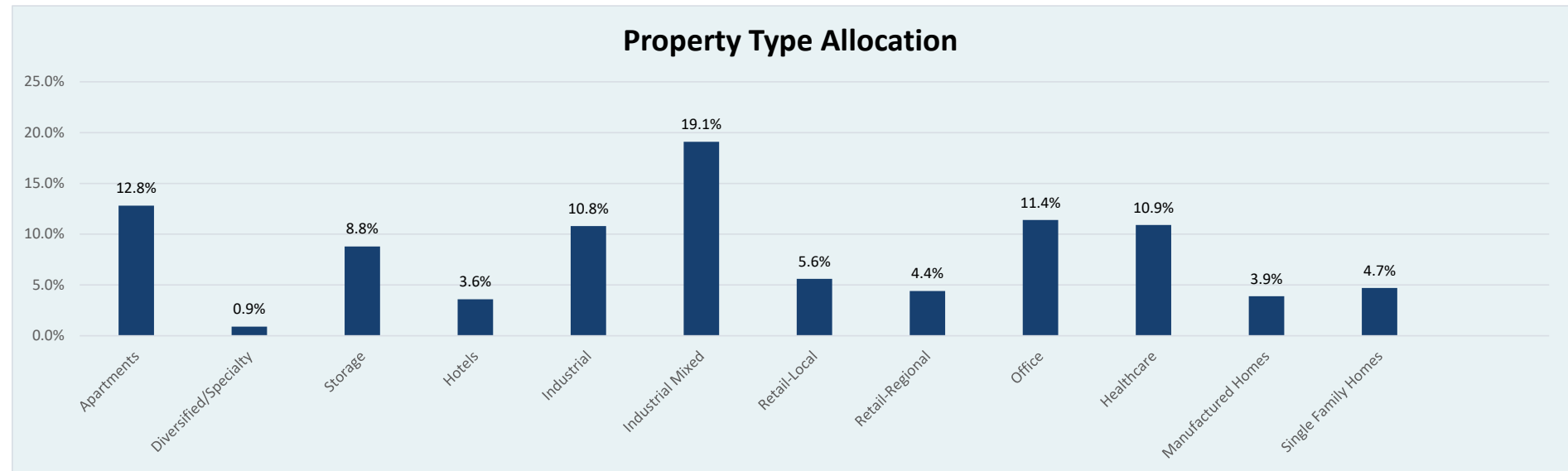
## Top Five Holdings

Company	Property Type	Allocation
Equinix Inc	Industrial Mixed	10.7%
ProLogis Inc.	Industrial	8.9%
Welltower, Inc.	Healthcare	6.6%
Equity Residential	Apartments	5.3%
Duke Realty Corporation	Industrial Mixed	4.7%

## Dividend Yield by Property Type



## Property Type Allocation



## **Diversifying Fixed Income Managers**

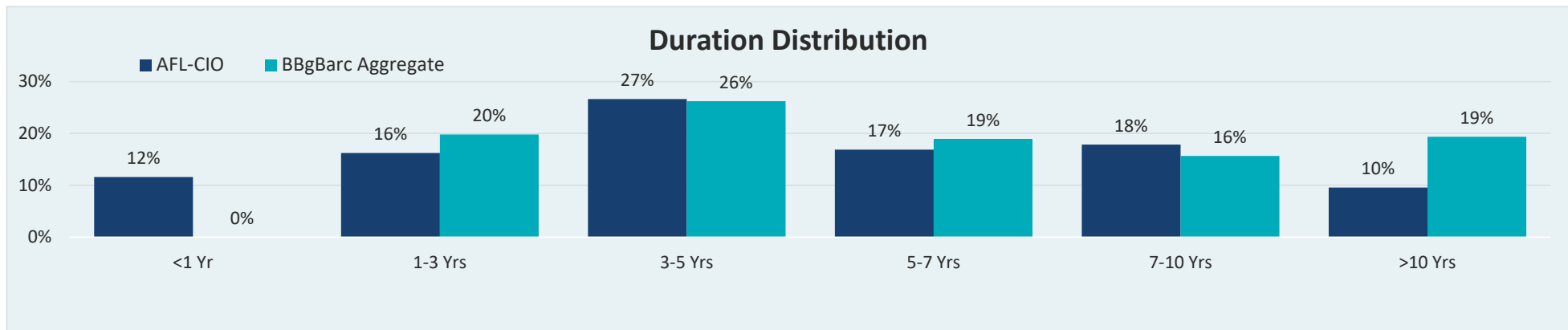
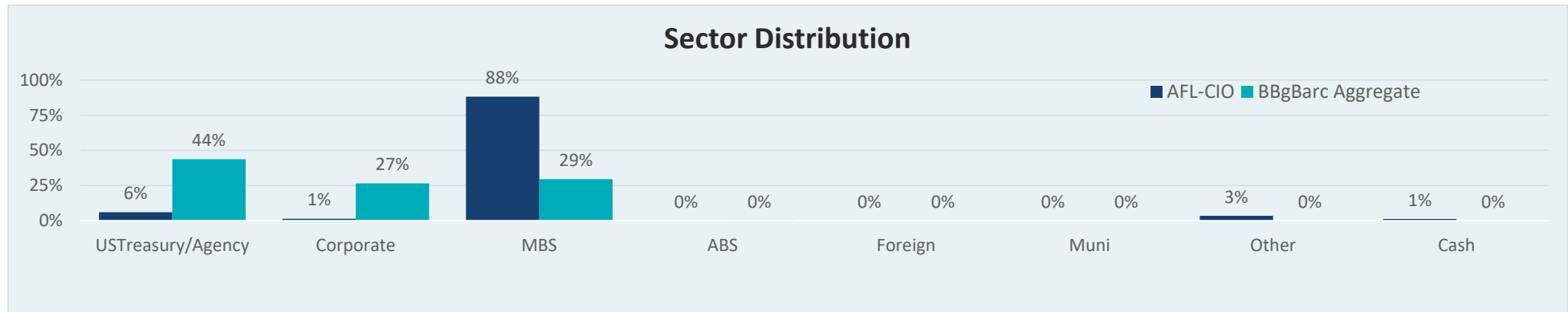
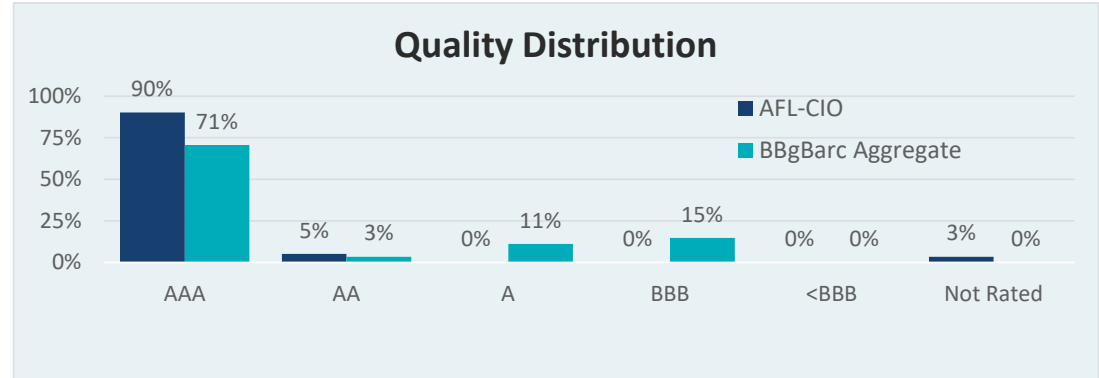
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# AFL-CIO Manager Portfolio Overview

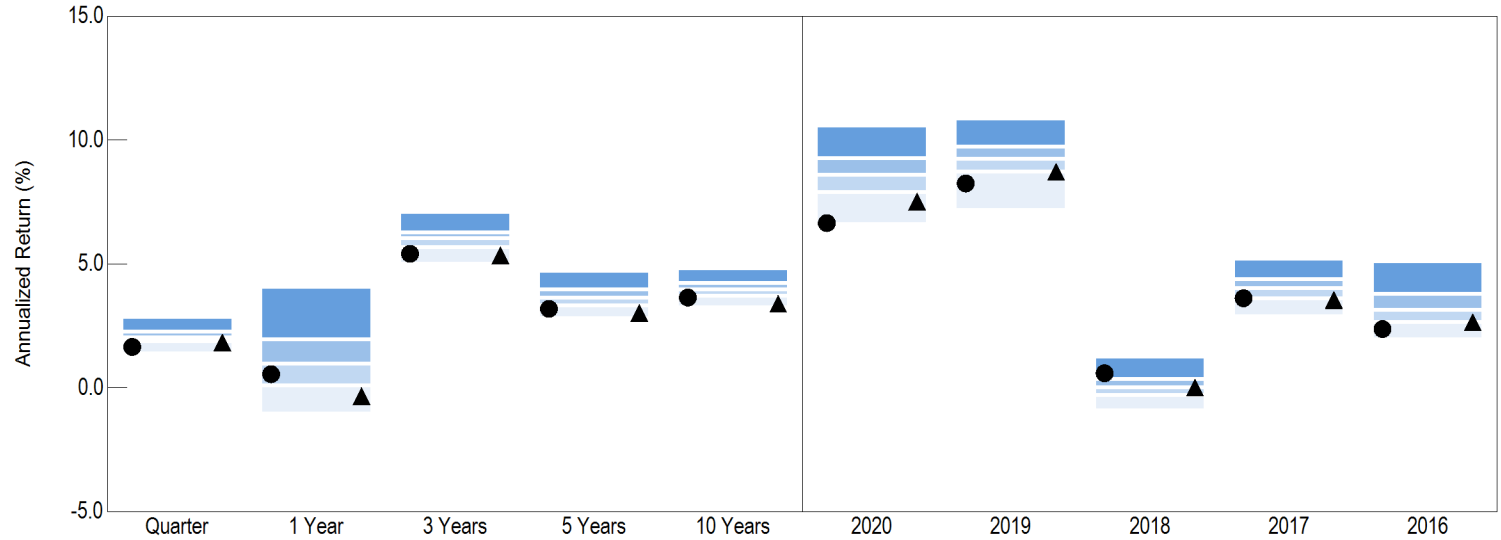
Period Ending: June 30, 2021

Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

	AFL-CIO	BBgBarc Aggregate
Effective Duration	5.88	6.58
Yield to Maturity	1.73	1.50
Average Quality	AAA	AA/AA+
Average Coupon	2.7%	2.6%



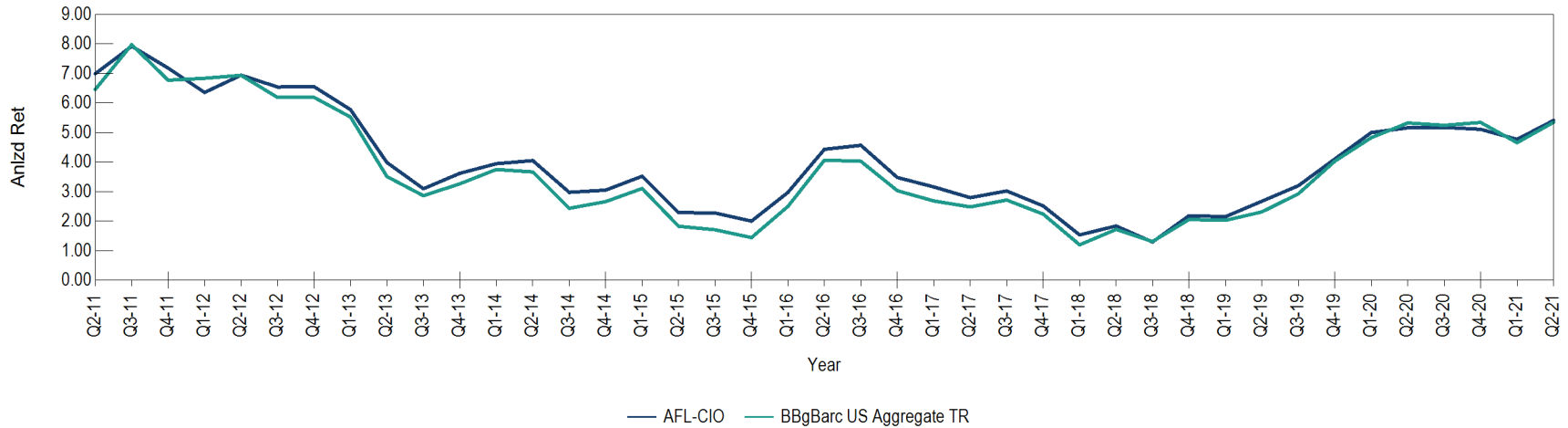
AFL-CIO vs. eV US Core Fixed Inc Gross Universe



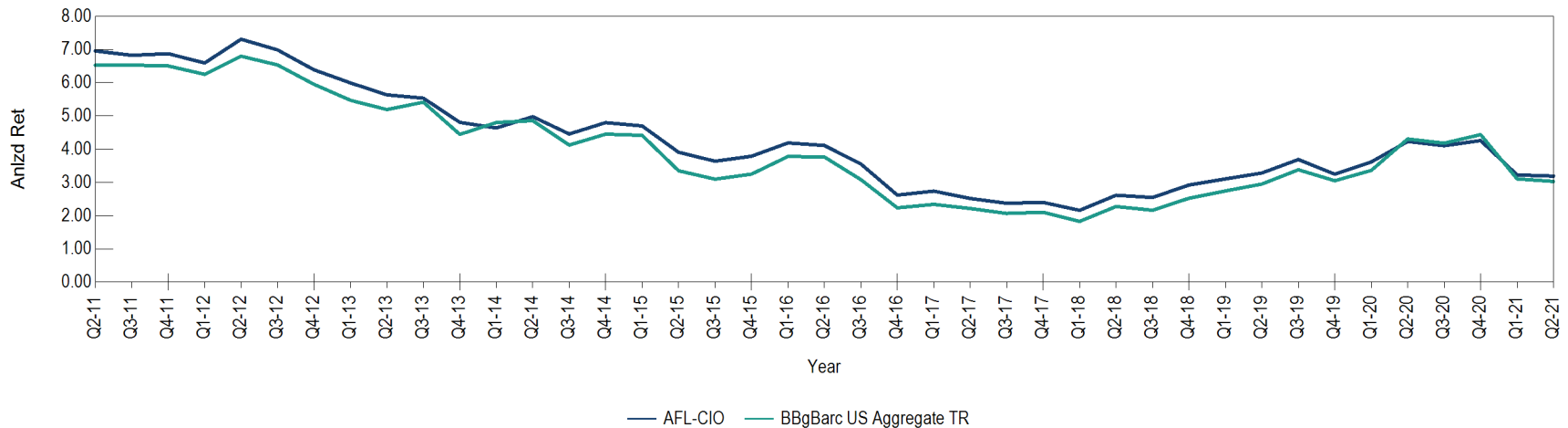
Return (Rank)

	Quarter	1 Year	3 Years	5 Years	10 Years	2020	2019	2018	2017	2016
5th Percentile	2.8	4.1	7.1	4.7	4.8	10.6	10.9	1.2	5.2	5.1
25th Percentile	2.3	2.0	6.3	4.0	4.3	9.3	9.8	0.4	4.4	3.8
Median	2.1	1.0	6.0	3.7	4.0	8.6	9.3	0.0	4.0	3.2
75th Percentile	1.9	0.1	5.7	3.3	3.7	7.9	8.7	-0.3	3.6	2.7
95th Percentile	1.4	-1.0	5.0	2.8	3.3	6.6	7.2	-0.9	2.9	2.0
# of Portfolios	218	218	214	210	203	225	228	240	233	223
● AFL-CIO	1.7 (91)	0.6 (64)	5.4 (89)	3.2 (86)	3.6 (82)	6.6 (95)	8.2 (88)	0.6 (16)	3.6 (76)	2.4 (87)
▲ BgBarc US Aggregate TR	1.8 (85)	-0.3 (88)	5.3 (89)	3.0 (91)	3.4 (93)	7.5 (85)	8.7 (77)	0.0 (54)	3.5 (79)	2.6 (77)

Rolling 3 Year Annualized Return (%)



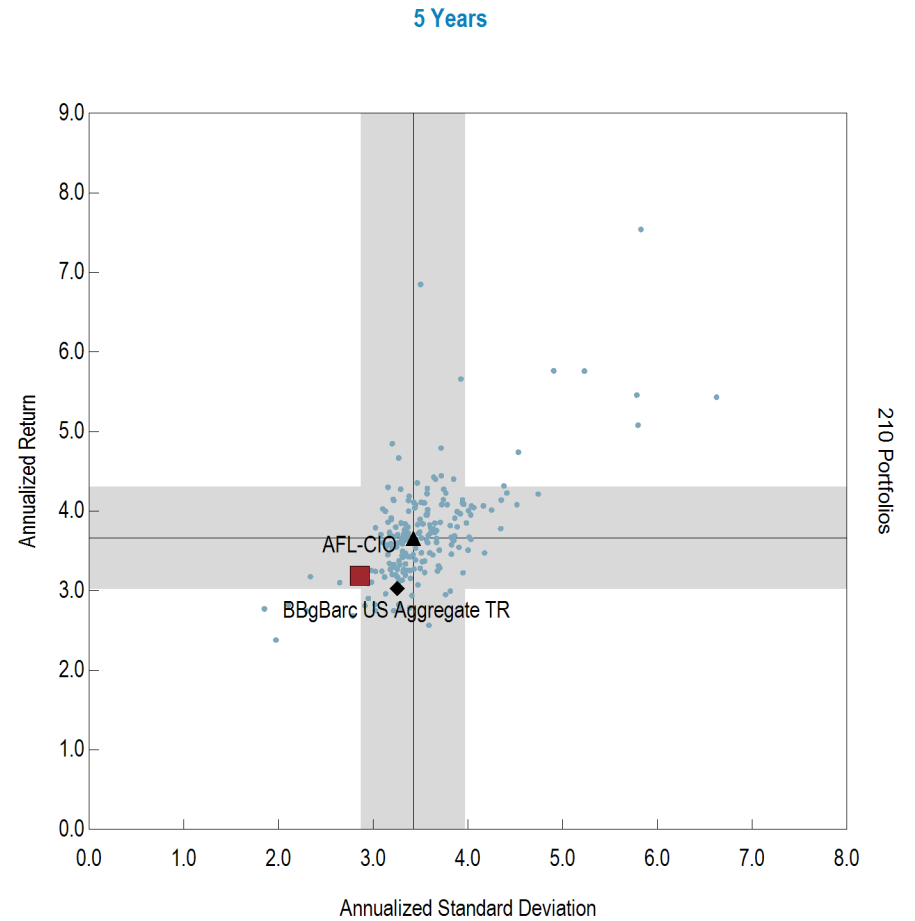
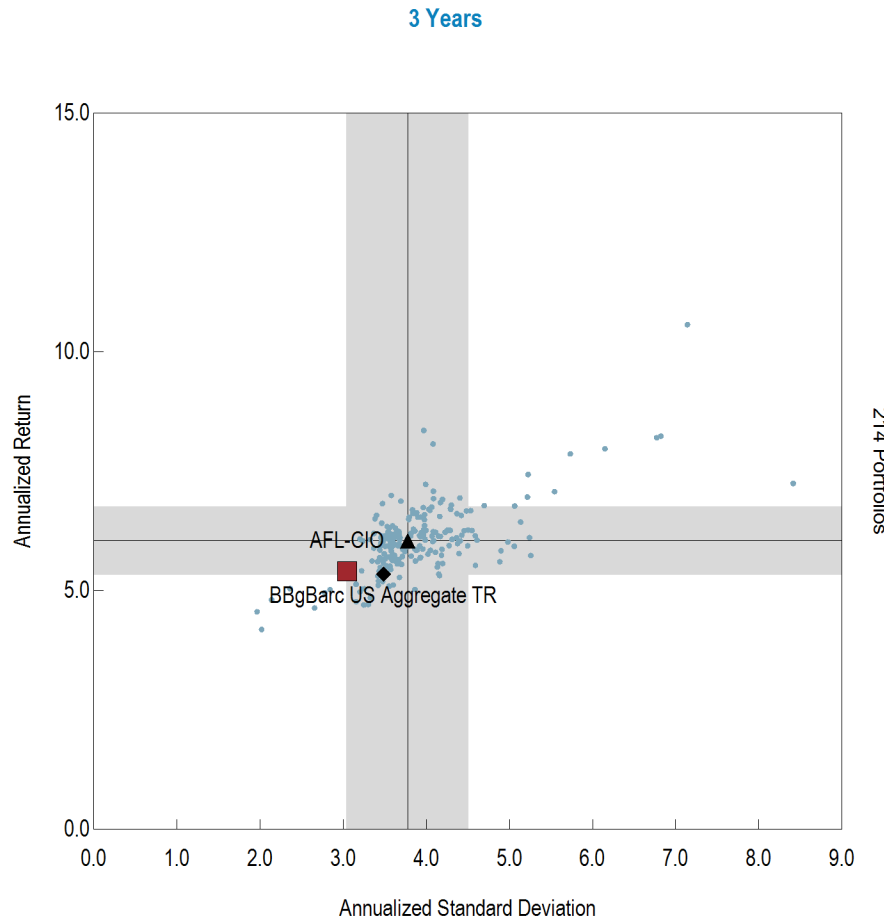
Rolling 5 Year Annualized Return (%)



# AFL-CIO

## Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2021



	<b>3 Years</b>			<b>5 Years</b>		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	5.4%	3.0%	1.4	AFL-CIO	3.2%	2.9%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	BBgBarc US Aggregate TR	3.0%	3.3%
eV US Core Fixed Inc Gross Median	6.0%	3.8%	1.3	eV US Core Fixed Inc Gross Median	3.7%	3.4%



## Liquidity Managers

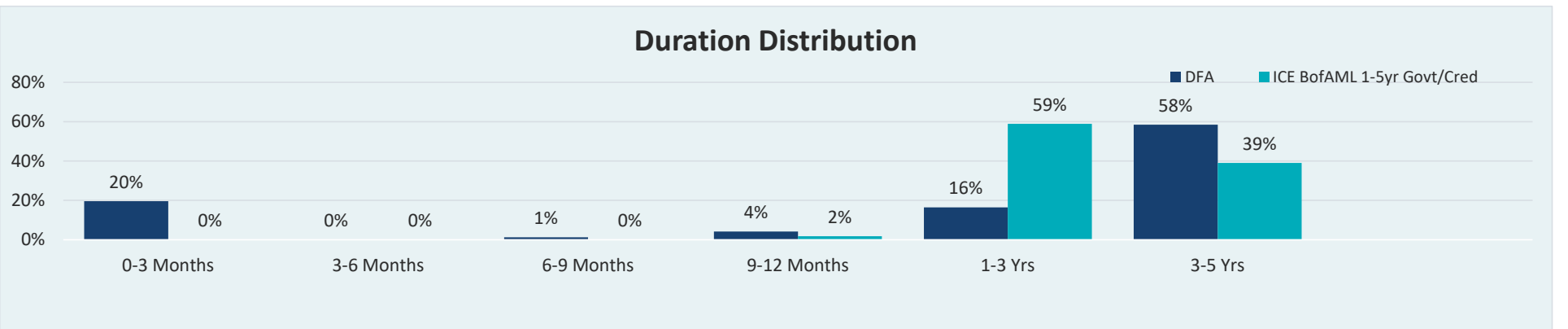
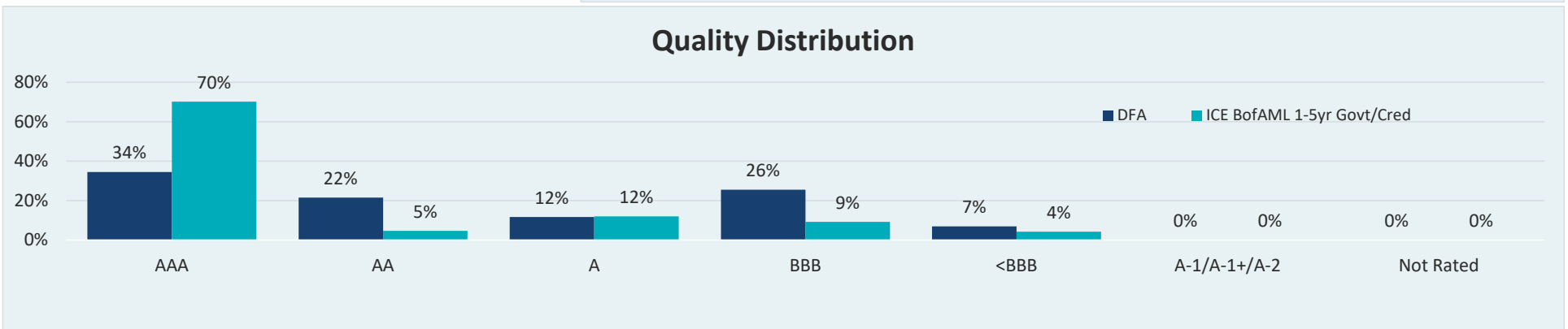
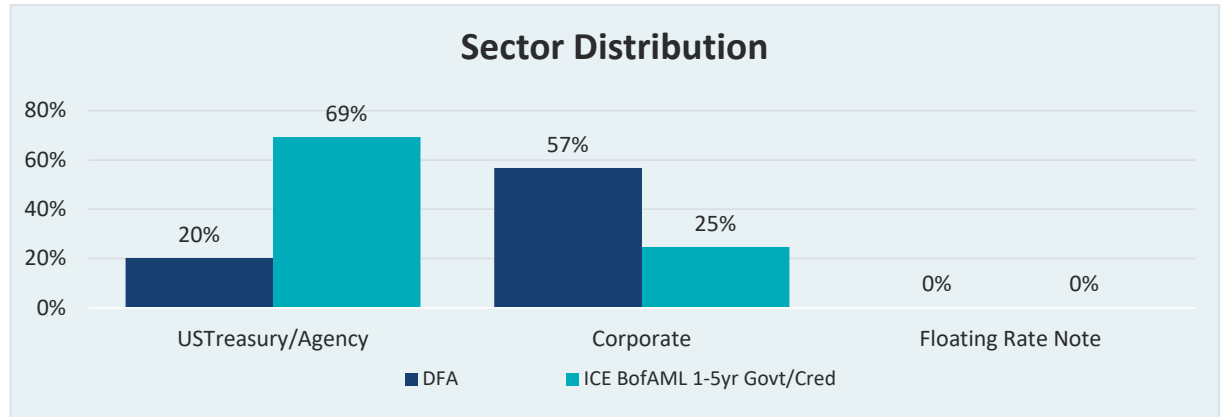
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# DFA Short Credit Manager Portfolio Overview

Period Ending: June 30, 2021

Domestic short term US credit fixed income portfolio that maximizes total return through income and capital appreciation. Primary personnel include Dave Plecha and Joseph Kolerich.

	DFA	ICE BofAML 1-5yr Govt/Cred
Effective Duration	2.89	2.71
Yield to Maturity	0.88	0.61
Average Quality	A+	AA+
Average Coupon	1.79%	1.96%

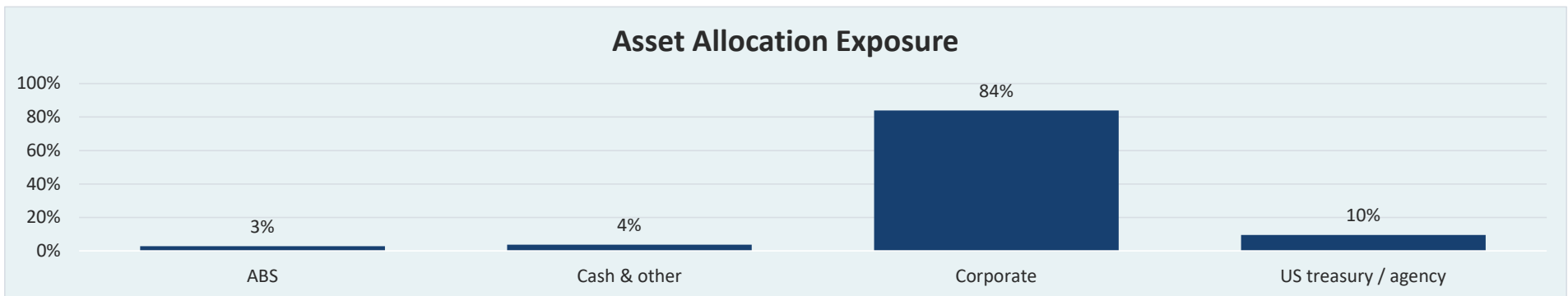
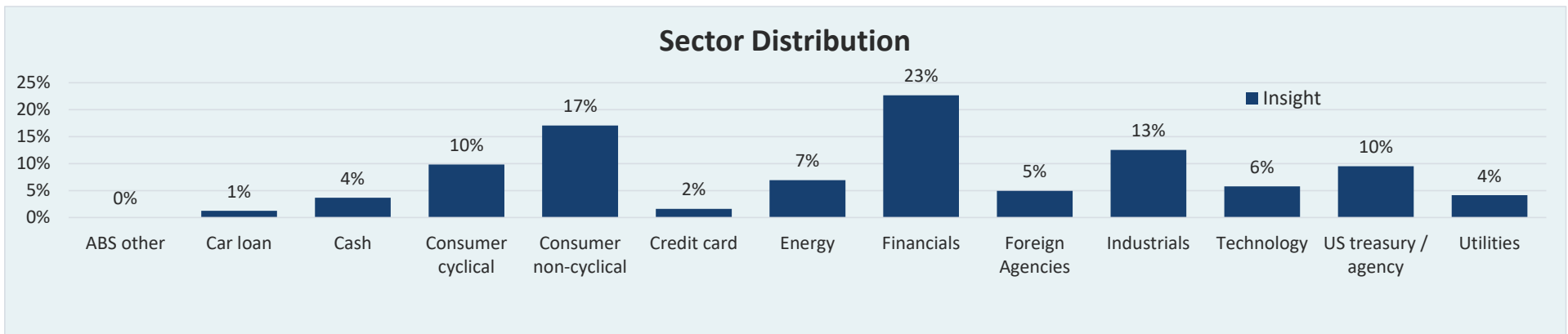
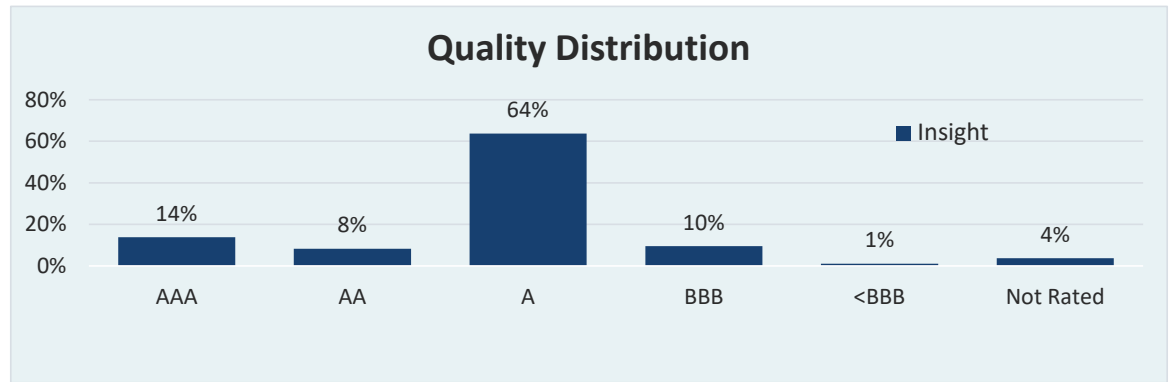


# Insight Short Duration Manager Portfolio Overview

Period Ending: June 30, 2021

High quality, short duration multi-sector fixed income portfolio comprised of Treasuries, Agencies, investment grade corporates, and ABS designed specifically to meet CCCERA's liabilities. Key personnel include Gerard Berrigan and Jesse Fogarty.

	Insight	BBgBarc 1-3yr Govt
Effective Duration	1.32	1.97
Yield to Maturity	0.60	0.26
Average Quality	A+	AAA
Average Coupon	2.73%	1.28%

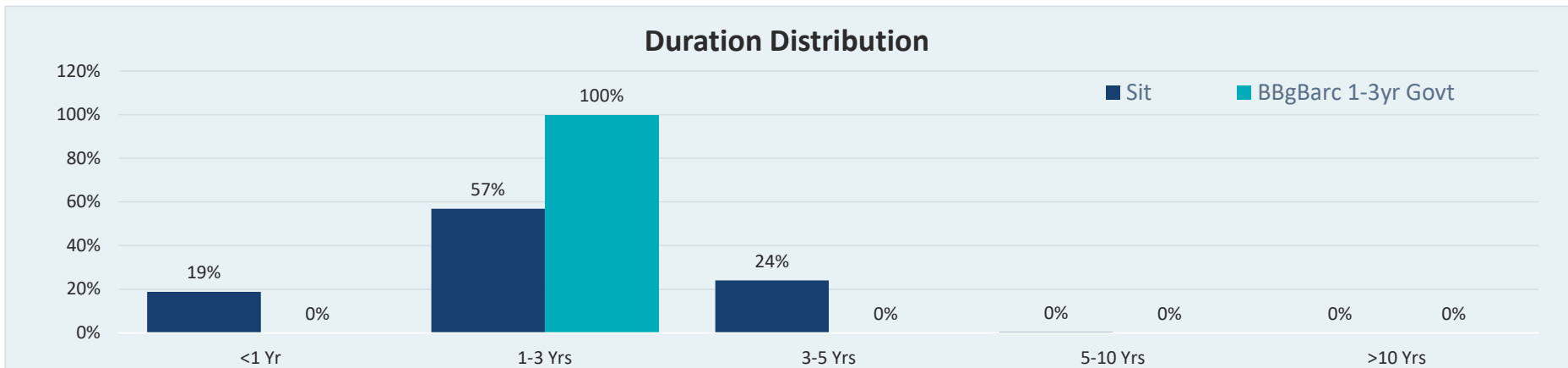
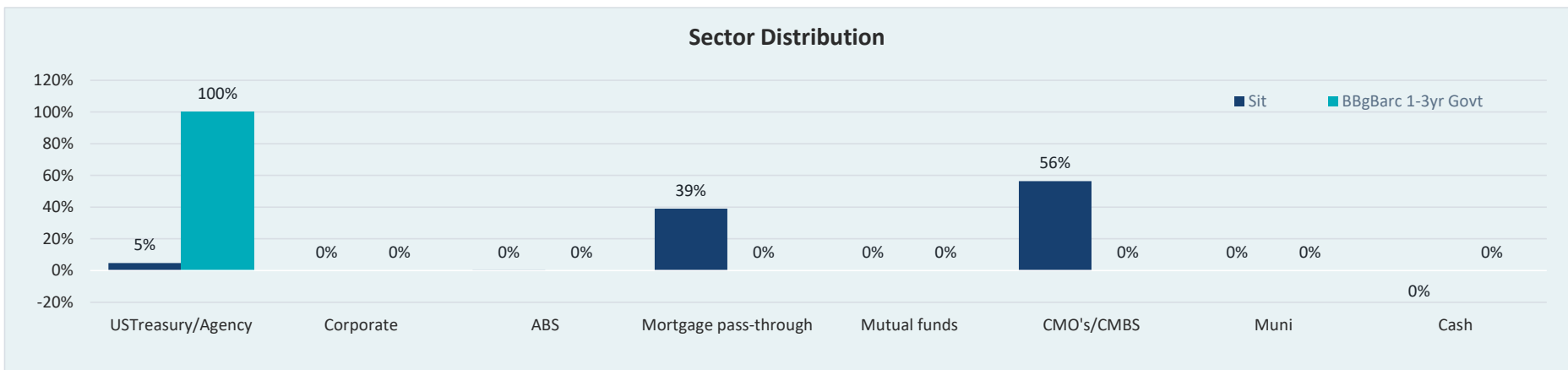


# Sit Short Duration Manager Portfolio Overview

Period Ending: June 30, 2021

Short duration fixed income portfolio with a focus on earning high levels of interest income. Primary personnel include Bryce Doty, Paul Jungquist and Michael Brilley.

	Sit	BBgBarc 1-3yr Govt
<b>Modified Duration</b>	<b>2.00</b>	<b>2.00</b>
<b>Yield to Maturity</b>	<b>1.50</b>	<b>0.30</b>
<b>Average Quality</b>	<b>AAA</b>	<b>AAA</b>
<b>Average Coupon</b>	<b>5.90%</b>	<b>1.30%</b>



**Performance Return Calculations**

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

**Data Source**

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

**Illiquid Alternatives**

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

**Policy & Custom Index Composition**

Policy Index (1/1/2021 - present)	9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 8% Private Real Estate composite returns, 1.5% CPI + 4%, 11% Private Equity composite returns, 7% Private Credit composite returns, 1.5% ICE BofAML High Yield Master II, 25% BBgBarc 1-3 Yr Gov/Credit, 3% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2% HFRI EH Equity Market Neutral.
Policy Index (7/1/2020 - 12/31/2020)	9% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 1.5% CPI + 4%, 11% S&P 500 +4% (Lagged), 7% ICE BofAML High Yield Master II +2%, 1.5% ICE BofAML High Yield Master II, 25% BBgBarc 1-3 Yr Gov/Credit, 3% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2% HFRI EH Equity Market Neutral.
Policy Index (7/1/2019 - 6/30/2020)	10% Russell 3000, 18% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2% CPI + 4%, 11% S&P 500 +4% (Lagged), 5% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 24% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2.5% HFRI EH Equity Market Neutral.
Policy Index (7/1/2018 - 6/30/2019)	11% Russell 3000, 19% MSCI ACWI ex-US (Gross), 11% MSCI ACWI (Net), 1% Wilshire REIT, 1.8% NCREIF Property Index, 7.2% NCREIF ODCE Index, 2% CPI + 4%, 10% S&P 500 +4% (Lagged), 4% ICE BofAML High Yield Master II +2%, 2% ICE BofAML High Yield Master II, 23% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate, 2% BBgBarc Global Aggregate, 2.5% HFRI EH Equity Market Neutral.
Policy Index (10/1/2017 - 6/30/2018)	16.3% Russell 3000, 18.8% MSCI ACWI ex-US (Gross), 8.6% MSCI ACWI (Net), 1% Wilshire REIT, 1.6% NCREIF Property Index, 6.4% NCREIF ODCE Index, 2.5% CPI + 4%, 10.1% S&P 500 +4% (Lagged), 1.9% ICE BofAML High Yield Master II +2%, 4.3% ICE BofAML High Yield Master II, 25% BBgBarc 1-3 Yr Gov/Credit, 3.5% BBgBarc US Aggregate.

**Policy & Custom Index Composition (continued)**

Policy Index (1/1/2017 - 9/30/2017)	22.9% Russell 3000, 11% MSCI ACWI ex-US (Gross), 10.9% MSCI ACWI (Net), 1% Wilshire REIT, 1.7% NCREIF Property Index, 6.8% NCREIF ODCE Index, 3.6% CPI + 4%, 8.1% S&P 500 +4% (Lagged), 1.7% ICE BofAML High Yield Master II +2%, 5.1% ICE BofAML High Yield Master II, 22.4% BBgBarc 1-3 Yr Gov/Credit, 3.2% BBgBarc US Aggregate, 1.6% 91-Day T-Bills.
Policy Index (4/1/2012-12/31/2016)	27.7% Russell 3000, 10.6% MSCI ACWI ex-US (Gross), 12.3% MSCI ACWI (Net), 19.6% BBgBarc U.S. Aggregate, 5% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (4/1/2011-3/31/2012)	31% Russell 3000, 10.4% MSCI EAFE (Gross), 9.6% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (4/1/2010-3/31/2011)	35.6% Russell 3000, 10.4% MSCI EAFE (Gross), 5% MSCI ACWI (Net), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Policy Index (7/1/2009-3/31/2010)	40.6% Russell 3000, 10.4% MSCI EAFE (Gross), 25% BBgBarc U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% BBgBarc Global Aggregate, 8.4% DJ Wilshire REIT, 3.1% NCREIF, 5% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.
Custom Growth Benchmark (12/31/2020 - present)	13.14% Russell 3000, 26.28% MSCI ACWI ex-US (Gross), 16.06% MSCI ACWI (Net), 1.46% Wilshire REIT, 11.68 Private Real Estate composite returns%, 16.06% Private Equity composite returns, 10.22% Private Credit composite returns, 2.19% ICE BofAML High Yield Master II, 2.92% BBgBarc Global Bond
Custom Growth Benchmark (7/1/2020 - 12/31/2020)	13.14% Russell 3000, 26.28% MSCI ACWI ex-US (Gross), 16.06% MSCI ACWI (Net), 1.46% Wilshire REIT, 2.34% NCREIF Property Index, 9.33% NCREIF ODCE Index, 16.06% S&P 500 +4% (Lagged), 10.22% ICE BofAML High Yield Master II +2%, 2.19% ICE BofAML High Yield Master II, 2.92% BBgBarc Global Bond
Custom Growth Benchmark (7/1/2019 - 6/30/2020)	14.7% Russell 3000, 26.4% MSCI ACWI ex-US (Gross), 16.2% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.4% NCREIF Property Index, 9.4% NCREIF ODCE Index, 16.2% S&P 500 +4% (Lagged), 7.4% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% BBgBarc Global Bond
Custom Growth Benchmark (7/1/2018 - 6/30/2019)	16.0% Russell 3000, 27.5% MSCI ACWI ex-US (Gross), 15.9% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.6% NCREIF Property Index, 10.4% NCREIF ODCE Index, 14.5% S&P 500 +4% (Lagged), 5.8% ICE BofAML High Yield Master II +2%, 2.9% ICE BofAML High Yield Master II, 2.9% BBgBarc Global Bond
Custom Growth Benchmark (9/30/2017-6/30/2018)	23.6% Russell 3000, 27.2% MSCI ACWI ex-US (Gross), 12.5% MSCI ACWI (Net), 1.5% Wilshire REIT, 2.3% NCREIF Property Index, 9.3% NCREIF ODCE Index, 14.6% S&P 500 +4% (Lagged), 2.8% ICE BofAML High Yield Master II +2%, 6.2% ICE BofAML High Yield Master II
Custom Growth Benchmark (1/1/2017-9/30/2017)	32.6% Russell 3000, 15.7% MSCI ACWI ex-US (Gross), 15.5% MSCI ACWI (Net), 1.4% Wilshire REIT, 2.4% NCREIF Property Index, 9.6% NCREIF ODCE Index, 1.6% CPI +4%, 11.5% S&P 500 +4% (Lagged), 2.4% ICE BofAML High Yield Master II +2%, 7.3% ICE BofAML High Yield Master II
Custom Growth Benchmark (Prior to 1/1/2017)	Weighted-average of the benchmarks of the sub-composites that make up the composite.
Custom Diversifying Benchmark (8/1/2020 - present)	46.15% BBgBarc US Aggregate, 30.77 FTSE 3-Month T-bill +4%, 23.08 FTSE 3-Month T-bill +5%.
Custom Diversifying Benchmark (7/1/2018 - 7/31/2020)	43.75% BBgBarc US Aggregate, 25% CPI + 4%, 31.25% HFRI EH Equity Market Neutral.
Custom Diversifying Benchmark (10/1/2017 - 6/30/2018)	58.33% BBgBarc US Aggregate, 41.67% CPI + 4%.
Custom Diversifying Benchmark (1/1/2017 - 9/30/2017)	56.1% BBgBarc US Aggregate, 43.9% CPI + 4%.
Custom Diversifying Benchmark (Prior to 1/1/2017)	Weighted-average of the benchmarks of the sub-composites that make up the composite.
Real Estate Benchmark (current)	11% Wilshire REIT, 89% Private Real Estate composite returns.

Real Estate Benchmark  
(4/1/2012-11/30/2016)

40% Wilshire REIT, 50% NCREIF Property Index, 10% FTSE/EPRA NAREIT Developed ex-US.

**Manager Line Up**

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 1000 Index	4/20/2017	BlackRock	Invesco Real Estate III	6/30/2013	Invesco
Jackson Square Partners	5/1/2005	Northern Trust	Invesco Real Estate IV	6/30/2014	Invesco
Boston Partners	6/1/1995	Northern Trust	Invesco Real Estate V	2/20/2019	Invesco
Emerald Advisors	4/7/2003	Northern Trust	Oaktree REOF V	12/31/2011	Oaktree
Ceredex	11/6/2011	Northern Trust	Oaktree REOF VI	9/30/2013	Oaktree
Pyrford	4/25/2014	State Street	Oaktree REOF VII	4/1/2015	Oaktree
William Blair	10/29/2010	William Blair	Siguler Guff DREOF	1/25/2012	Siguler Guff
PIMCO RAE Emerging Markets	2/28/2017	State Street	Siguler Guff DREOF II	8/31/2013	Siguler Guff
TT Emerging Markets	7/27/2017	TT	Siguler Guff DREOF II Co-Inv	1/27/2016	Siguler Guff
Artisan Partners	10/1/2012	SEI Trust	Paulson Real Estate Fund II	11/10/2013	Paulson
First Eagle	1/18/2011	Northern Trust	AE Industrial Partners Fund II	4/8/2019	StepStone Group
Allianz Global Investors	4/25/2000	Northern Trust	Adams Street Partners	3/18/1996	StepStone Group
Adelante	9/30/2001	Northern Trust	Adams Street Partners II	1/16/2009	StepStone Group
AQR Global Risk Premium - EL	1/18/2019	AQR	Adams Street Partners Venture	4/28/2017	StepStone Group
Panagora Risk Parity Multi Asset	3/15/2019	Panagora	Adams Street Partners - BFP	1/18/1996	StepStone Group
AFL-CIO	6/30/1991	AFL-CIO	Adams Street Partners - Fund 5	9/21/2012	StepStone Group
Wellington Real Total Return (in Liquidation)	2/26/2013	Wellington	Aether Real Assets IV	3/16/2016	StepStone Group
Acadian Multi-Asset Absolute Return Fund	8/4/2020	Northern Trust	Aether Real Assets III	11/27/2013	StepStone Group
Sit LLCAR	4/15/2021	Northern Trust	Aether Real Assets III Surplus	11/30/2013	StepStone Group
Parametric Defensive Equity	7/23/2018	Northern Trust	Bay Area Equity Fund	6/14/2004	StepStone Group
Sit Short Duration	11/2/2016	Northern Trust	Bay Area Equity Fund II	12/7/2009	StepStone Group
DFA Short Credit	11/21/2016	Northern Trust	Commonfund	6/28/2013	StepStone Group
Insight Short Duration	11/18/2016	Northern Trust	EIF US Power Fund II	8/16/2005	StepStone Group
Parametric Overlay	3/29/2017	Northern Trust	EIF US Power Fund III	5/30/2007	StepStone Group
Cash	-	Northern Trust	EIF US Power Fund IV	11/28/2011	StepStone Group
Angelo Gordon Energy Credit Opp	9/24/2015	StepStone Group	EIF US Power Fund V	11/28/2016	StepStone Group
StepStone CC Opportunities Fund	2/1/2018	StepStone Group	Genstar Capital Partners IX, L.P.	2/21/2019	StepStone Group
Torchlight II	9/30/2006	StepStone Group	Oaktree PIF 2009	2/28/2010	StepStone Group
Torchlight IV	7/1/2012	StepStone Group	Paladin III	11/30/2007	StepStone Group
Torchlight V	7/1/2012	StepStone Group	Ocean Avenue Fund II	6/11/2014	StepStone Group
Angelo Gordon Realty Fund VIII	1/23/2012	Angelo Gordon	Ocean Avenue Fund III	4/15/2016	StepStone Group
Angelo Gordon Realty Fund IX	12/8/2014	Angelo Gordon	Pathway 6	5/24/2011	StepStone Group
DLJ RECP III	6/23/2005	DLJ	Pathway 7	2/7/2013	StepStone Group
DLJ RECP IV	2/11/2008	DLJ	Pathway 8	11/23/2015	StepStone Group
DLJ RECP V	7/1/2014	DLJ	Pathway	11/9/1998	StepStone Group
DLJ RECP VI	3/19/2019	DLJ	Pathway 2008	12/26/2008	StepStone Group
LaSalle Income & Growth VI	7/16/2013	LaSalle	Siguler Guff CCCERA Opps	6/3/2014	StepStone Group
LaSalle Income & Growth VII	2/28/2017	LaSalle	Siguler Guff Secondary Opps	11/30/2016	StepStone Group
Hearthstone II	6/17/1998	Hearthstone	Siris Partners IV	3/15/2019	StepStone Group
Long Wharf Fund IV	7/3/2013	Long Wharf	TPG Healthcare Partners, L.P.	6/28/2019	StepStone Group
Long Wharf Fund V	9/30/2016	Long Wharf	Trident VIII, L.P.	5/24/2019	StepStone Group
Long Wharf Fund VI	2/5/2020	Long Wharf	Wastewater Opp. Fund	12/8/2015	StepStone Group

**Other Disclosures**

All data prior to 12/31/2014 was provided by previous consultant.

# Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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