

*Meeting Date*  
**08/24/2022**  
*Agenda Item*  
**#5a.**

**Verus**<sup>777</sup>



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2022**

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 2022  
Investment Landscape

# Recent Verus research

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

## Topics of interest papers

### A CLOSER LOOK AT CHINA

China's ascension over the past twenty years to the second largest economy in the world has changed the global landscape in a variety of ways. As China's economic size and market capitalization grows, many investors have reasonably been pondering how to treat their allocations to Chinese assets. In this Topic of Interest white paper, we offer some potential opportunities and threats around Chinese investment that should help provide context to investors in their decisions around this market.

### A PRIMER: TIMBERLAND & FARMLAND

In this Topic of Interest white paper, we will aim to inform readers of the investment thesis for timberland and agriculture, detailing the return drivers and characteristics unique to each asset class. Next, we cover historical performance and how these asset classes might fit within institutional portfolios and contribute to portfolio return objectives. Here we touch on the commonly acknowledged issues around interpreting the volatility of private market assets, due to data lag and appraisal-smoothing effects. Last, we conclude with a Verus outlook on both Timberland and Agriculture in the current market environment.

## Annual research

### 2022 REAL ASSETS OUTLOOK

For the first time in decades, high inflation has emerged and is creating challenges for consumers and investors. We believe inflation will likely begin falling later in 2022, though notable inflationary and deflationary forces are in play, and it is difficult to gauge which of these forces will have greater impacts. While inflation remains the topic most discussed in the media, and among many investors, how the Fed responds and whether the tightening path overcorrects is an issue we are discussing more today. Learning from history and the actions of the Volker Fed, we would not rule out the possibility that this inflation cycle quickly turns into deflation as recessionary forces take hold.

# Verus business update

## Since our last Investment Landscape webinar:

- Verus hired several new employees. **John Santopadre, CFA**, Director | Portfolio Management; **Colleen Flannery**, Associate Director | Public Markets; **Lukas Seeley**, Performance Analyst; **James Wadner**, Performance Analyst; **Jonah Coffee**, Performance Analyst; and **Nicholas Pecache**, Performance Analyst.
- The firm continues to grow with new clients that stretch from Hawaii to South Carolina. We now proudly serve clients in 26 states in every domestic time zone.
- Recent research found at [verusinvestments.com/insights](https://verusinvestments.com/insights)
  - In May, we released our **2022 Real Assets Outlook**
  - In June, we published a **Primer on Mortgage Income** and **A Primer: Timberland & Farmland**
  - Earlier this month, we released a *Topics of Interest* paper on **A Closer Look at China**

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

## THE ECONOMIC CLIMATE

- U.S. real GDP fell again during Q2, down -0.9% annualized (+1.6% over the past full year). This stoked broad fears of recession, as two consecutive quarters of negative growth is a common definition of technical recession.
- U.S. real personal consumption slowed to pre-COVID rates of growth, coming in at 2.1% year-over-year in May. The buying habits of consumers appear to have transitioned back towards services and away from goods, reversing the unprecedented spending shift that had occurred during the pandemic. This trend should help mitigate strained supply chains, as fewer goods require shipping.

## PORTFOLIO IMPACTS

- U.S. core CPI slowed to 5.9% year-over-year in June. Headline inflation, which includes food and energy prices, came in surprisingly hot at 9.1% year-over-year, exceeding expectations. Higher energy prices were a major driver of the inflation print, with energy commodities and gasoline moving more than 10% higher from May to June.
- Credit markets sold off during Q2, impacted by concerns of a slowing economy and possibility of recession as the Fed signaled a willingness to raise rates until inflation slows. Bank loans performed the best at -4.4% and outperformed longer duration bonds such as investment grade and high yield (-7.3% and -9.8%, respectively).

## THE INVESTMENT CLIMATE

- Russia's invasion of Ukraine continued, resulting in heavy losses on both sides. Most fighting has taken place in the east, as Russia gradually advances. Both Finland and Sweden are in the process of joining NATO—a landmark move and result of war likely unforeseen by Russia.
- Early in 2022 many investors feared a potential global commodity shortage—a product of underinvestment in production capacity in recent years. Russia's invasion of Ukraine further amplified these concerns, pushing commodities higher. This trend appears to have reversed, as recession is a notable possibility, and many commodities have seen sharp losses.

## ASSET ALLOCATION ISSUES

- Nearly every asset class delivered moderate to deeply negative returns during Q2. Global equities saw a -15.7% pullback (MSCI ACWI), fixed income experienced losses as interest rates rose and credit spreads widened (BBG US Aggregate -4.7%, BBG US High Yield -9.8%), and commodities saw a reversal (BBG Commodity -5.7%).
- Value stocks outperformed Growth stocks by a wide margin again during Q2 (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations were hit by rising rates and risk-off sentiment. Large capitalization stocks slightly outperformed small cap stocks (Russell 1000 -16.7%, Russell 2000 -17.2%).

Most asset classes delivered further losses during Q2 over fears of inflation and recession

# What drove the market in Q2?

## “Inflation Surges Heap Pressure on Global Policy Makers”

### HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

Jan	Feb	Mar	Apr	May	Jun
7.5%	7.9%	8.5%	8.3%	8.6%	9.1%

Article Source: Financial Times, April 13<sup>th</sup>, 2022

## “Fed Raises Rates by 0.75%, Largest Increase Since 1994”

### FED FUNDS RATE EXPECTED AT YEAR-END 2022

Jan	Feb	Mar	Apr	May	Jun
1.4%	1.4%	2.4%	2.9%	2.7%	3.4%

Article Source: Wall Street Journal, June 15<sup>th</sup>, 2022

## “Risk of Global Recession by End of Year Rises on High Inflation”

### IMF U.S. 2022 GDP GROWTH PROJECTIONS

Jul 21	Oct 21	Jan 22	Apr 22	Jun 22	Jul 22
4.9%	5.2%	4.0%	3.7%	2.9%	2.3%

Article Source: Bloomberg, April 11<sup>th</sup>, 2022

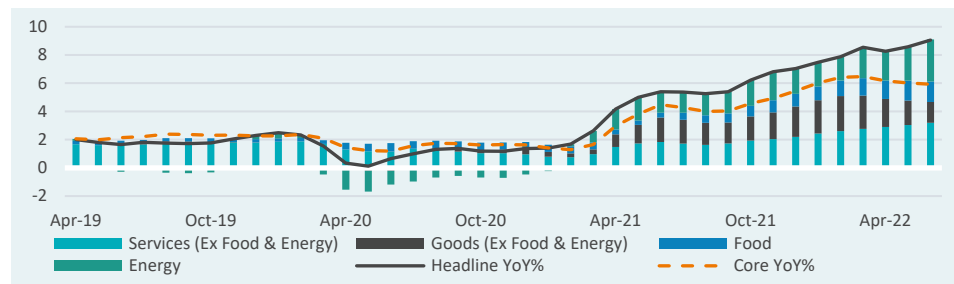
## “Consumer Sentiment Plunges to Record Low Amid Surging Inflation”

### UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT INDEX

Jan	Feb	Mar	Apr	May	Jun
67.2	62.8	59.4	65.2	58.4	50.0

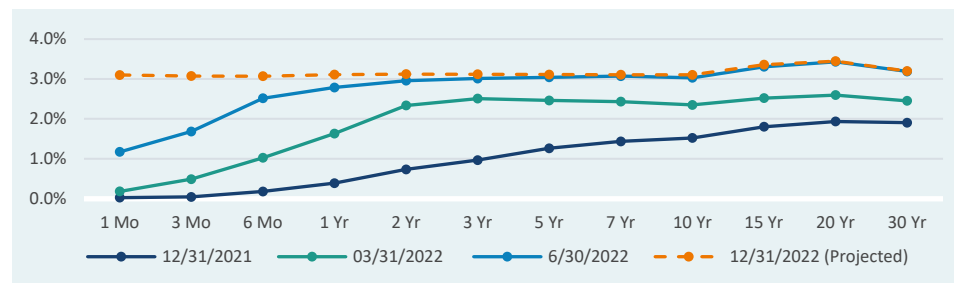
Article Source: CNN, June 10<sup>th</sup>, 2022

## CONTRIBUTION TO HEADLINE CONSUMER PRICE INFLATION



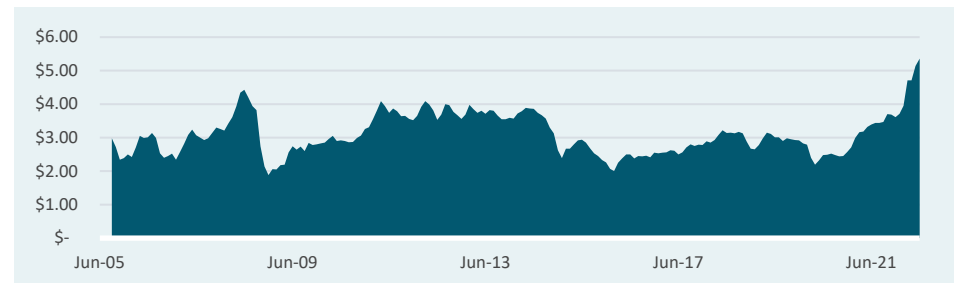
Source: Bureau of Labor Statistics, as of 6/30/22

## U.S. TREASURY CURVE MOVEMENT



Source: Bloomberg, as of 6/30/22

## AVERAGE U.S. GASOLINE PRICES (PER GALLON)



Source: Bloomberg, as of 6/30/22



# Economic environment

# U.S. economics summary

- U.S. real GDP fell -0.9% annualized during Q2 (+1.6% over the past full year). Most aspects of economic activity showed decline, including private investment (-2.7%), government spending (-0.3%), and imports (-0.5%). This stoked fears of recession, as two quarters of negative growth is a common definition of technical recession.
- The Federal Reserve’s objective of a “soft landing” for the economy appears to have failed. An increasingly aggressive stance during the first half of the year contributed to a broad market selloff. The negative wealth effect of the market selloff, paired with a slowdown in big ticket purchases, has slowed the economy.
- U.S. core CPI, which excludes food & energy prices, slowed to 5.9% year-over-year in June. However, headline inflation which includes food and energy prices, came in surprisingly hot at 9.1% year-over-year, exceeding expectations.

Higher energy prices were a major driver of the inflation print, with energy commodities and gasoline moving more than 10% higher just from May to June.

- Unemployment was unchanged at 3.6% during Q2. The broader U-6 unemployment rate tightened from 6.9% to 6.7%. A strong job market likely emboldens the Federal Reserve in its fight against high inflation, as the Fed holds a dual mandate to maximize employment and keep prices stable.
- Consumer sentiment collapsed to the lowest reading on record, according to the University of Michigan survey, which moved from 59.4 to 50.0. Survey respondents across all income, age, education, region, and political affiliation groups displayed deterioration in their outlook for the economy. Nearly half of respondents feel that inflation is damaging living standards.

	Most Recent	12 Months Prior
Real GDP (YoY)	1.6% 6/30/22	12.2% 6/30/21
Inflation (CPI YoY, Core)	5.9% 6/30/22	4.4% 6/30/21
Expected Inflation (5yr-5yr forward)	2.1% 6/30/22	2.2% 6/30/21
Fed Funds Target Range	1.50% – 1.75% 6/30/22	0.00% – 0.25% 6/30/21
10-Year Rate	2.89% 6/30/22	1.45% 6/30/21
U-3 Unemployment	3.6% 6/30/22	5.9% 6/30/21
U-6 Unemployment	6.7% 6/30/22	9.8% 6/30/21

# GDP growth

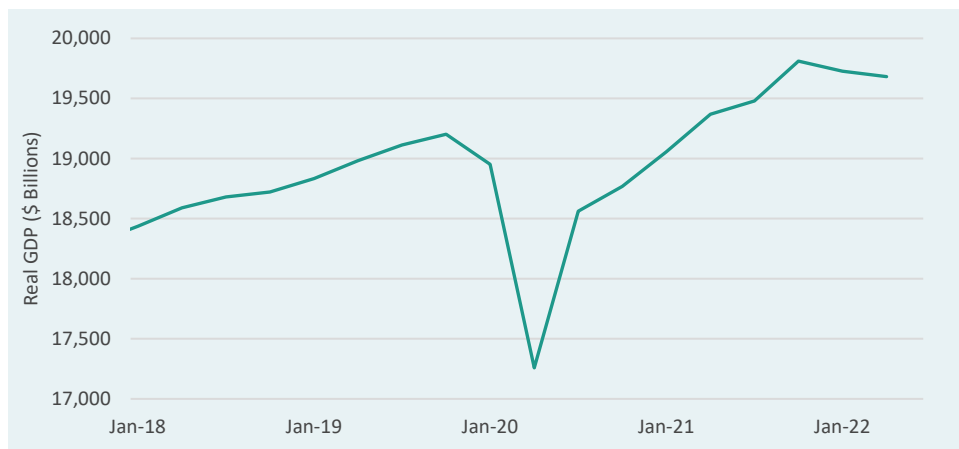
U.S. real GDP fell again in Q2, down -0.9% annualized (+1.6% over the past full year). Most aspects of economic activity showed decline, including private investment (-2.7%), government spending (-0.3%), and imports (-0.5%). This stoked fears of recession, as two consecutive quarters of negative growth is a common definition of technical recession. Interestingly, the definition of “recession” has become hotly debated, with some arguing that the relatively strong labor market suggests no recession. However, every instance of two consecutive quarters of negative GDP growth in modern history has ultimately been classified as an official recession. In other words, it would be extremely unusual if 2022 was not eventually

labeled as an official recession.

A variety of economic data indicates further deceleration, and sentiment remains very poor across citizens and businesses. In July, the IMF cut its U.S. 2022 GDP growth forecast from 2.9% to 2.3%. The Federal Reserve’s objective of a “soft landing” for the economy appears to have failed. An increasingly aggressive stance throughout the first half of the year contributed to a bear market for equities and other risk assets, as well as sharp losses for bonds. The negative wealth effect of market losses, paired with a slowdown in bigger ticket purchases such as homes and automobiles has created a drop in economic activity.

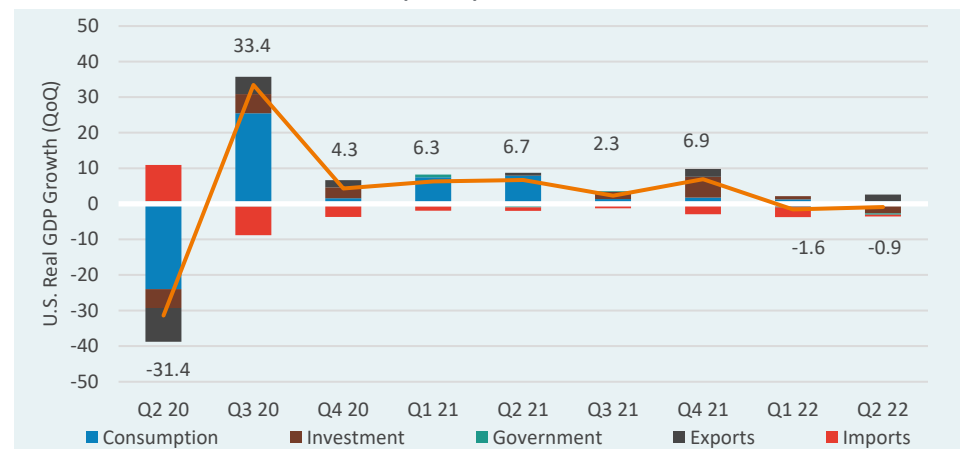
The U.S. has likely entered recession

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 6/30/22

U.S. REAL GDP COMPONENTS (QOQ)



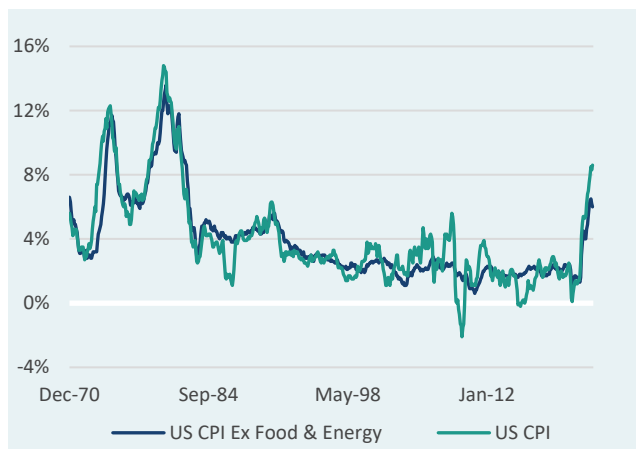
Source: FRED, as of 6/30/22

# Inflation

U.S. core CPI, which excludes food & energy prices, slowed to 5.9% year-over-year in June. However, headline inflation which includes food and energy prices, came in surprisingly hot at 9.1% year-over-year, exceeding expectations. Higher energy prices were a major driver of the inflation print, with energy commodities and gasoline moving more than 10% higher from May to June. Inflation has been mixed during the quarter, with April showing very moderate price growth, May showing a hot print across almost all price categories, and then June also surprising to the upside.

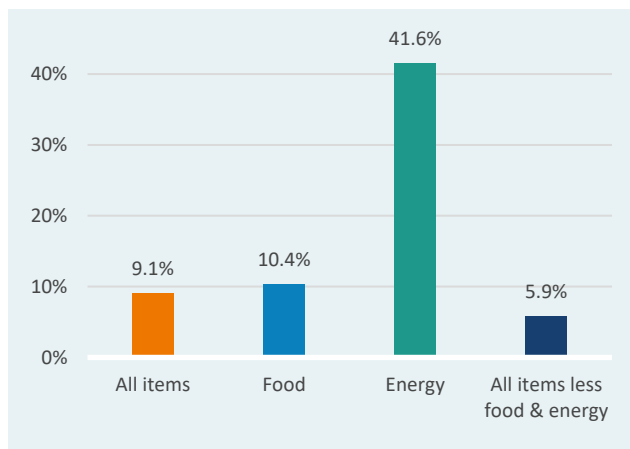
We believe there is a rising chance of economic deceleration coinciding with a drop in inflation. There appear to be a variety of forces that could contribute to this scenario, such as: the recent sharp fall in commodity prices, Federal Reserve tightening which has contributed to a slowdown in consumer demand, further easing of supply chain and shipping problems which reduces cost burdens on businesses, and reports that many businesses have *overbought* inventories which could lead to excesses and the need to offer more attractive pricing for quicker inventory liquidation.

U.S. CPI (YOY)



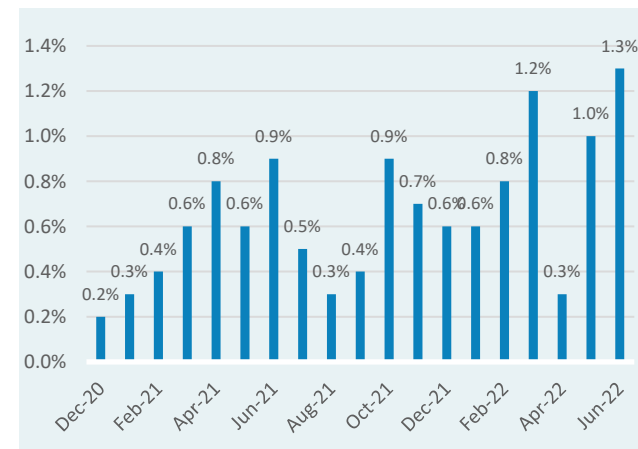
Source: BLS, as of 6/30/22

U.S. CPI (YOY)



Source: BLS, as of 6/30/22

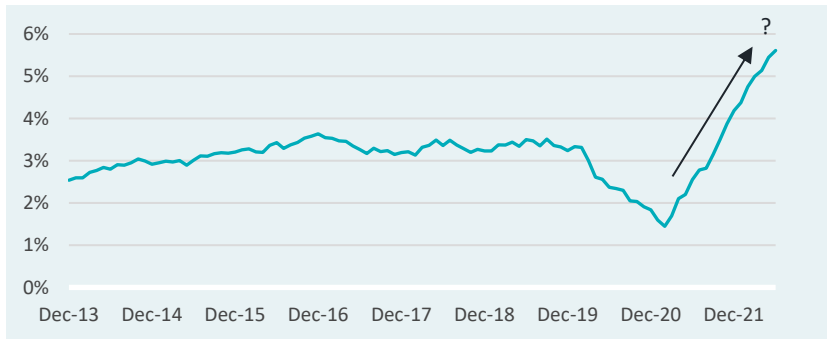
MONTHLY PRICE MOVEMENT



Source: BLS, as of 6/30/22

# How are inflation conditions evolving?

**CPI SHELTER COSTS (YEAR-OVER-YEAR)**



Shelter costs, which account for 32% of CPI gauge, have moved considerably higher along with the broader real estate boom. The continuation of this trend could result in a higher floor for inflation near-term. This is possible since shelter CPI is survey-based and slow moving as consumers tend to anchor their survey responses on recent data.

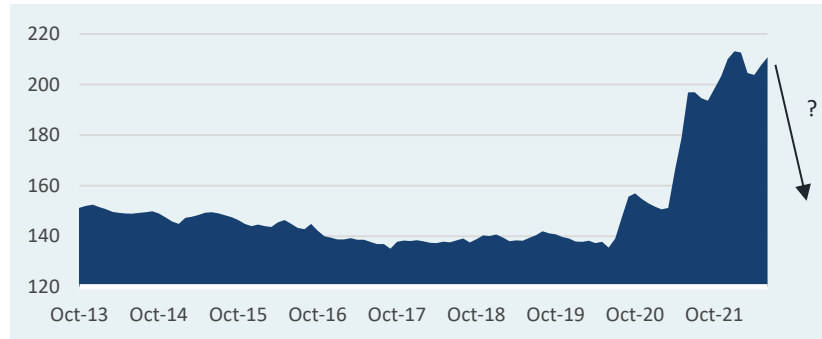
**BLOOMBERG COMMODITY SPOT INDEX**



Fears of a recession which would hinder the demand for commodities, and likely some easing of uncertainty around Ukraine, have contributed to a sharp drop in commodity prices. If weaker prices persist, the reversal in commodity markets should have a deflationary impact on broader consumer prices, though this effect may take time to flow through to broader prices.

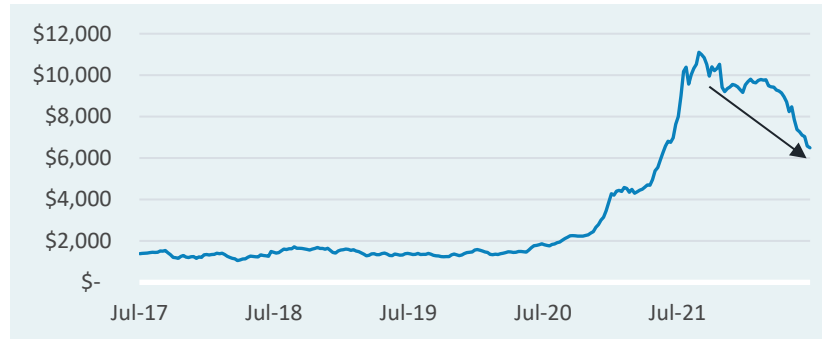
Source: FRED, as of 6/30/22 (upper), Bloomberg, as of 6/30/22 (lower)

**USED CAR & TRUCK PRICES**



Used auto prices remain high as the shortage of cars continues. If this pandemic-related price rise reverses, it could bring inflation down materially.

**FREIGHTOS SHIPPING CONTAINER COST INDEX**



Pandemic-related supply and demand complexities contributed to many supply shortages and price spikes. These shipping costs are quickly falling back towards pre-pandemic levels. We would expect the mitigation of shipping problems to have a deflationary effect on prices, assuming businesses begin to pass these cost savings on to customers.

Source: FRED, as of 6/30/22 (upper), Freightos, as of 7/10/22 (lower)

Inflation dynamics are complex. On this slide we take a look at a few potentially *inflationary* forces and *deflationary* forces

# Labor market

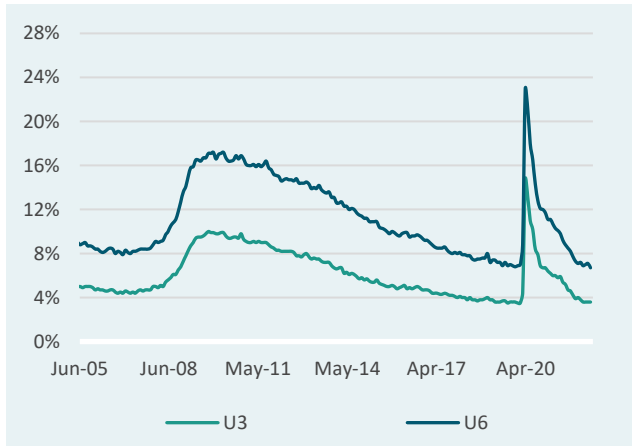
The U.S. labor market continues to be strong. Unemployment was unchanged at 3.6% during the quarter. Meanwhile, the broader U-6 unemployment rate, which includes workers who are underemployed and those who are unemployed but have given up looking for work, tightened from 6.9% to 6.7%. Weekly *initial jobless claims* — a measure of the number of workers who filed for unemployment during any given week — moved higher during the quarter from a low of 166,000 in mid-March to 244,000 in early July.

A strong job market likely emboldens the Federal Reserve in

its fight against high inflation, as the Fed holds a *dual mandate* to maximize employment and keep prices stable.

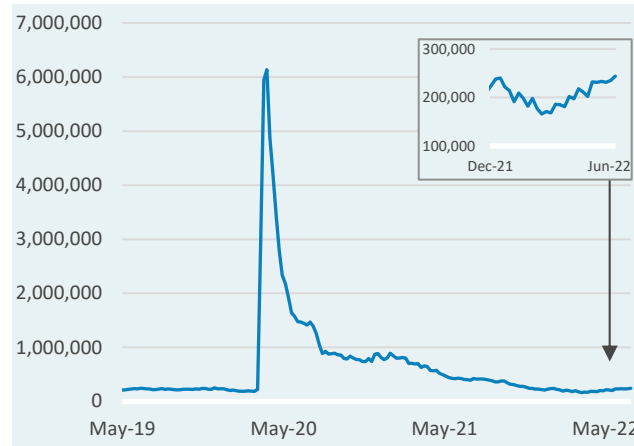
Abnormally early retirements of older workers during the pandemic had a large impact on the overall U.S. labor participation rate. While workers younger than age 55 have gradually gone back to work, much of the age 55+ cohort has not returned to the job market. In fact, more workers in the 55+ age cohort have dropped out of the labor force in 2022 than returned. Overall, there are materially fewer workers available nationwide now relative to pre-pandemic times.

**U.S. UNEMPLOYMENT**



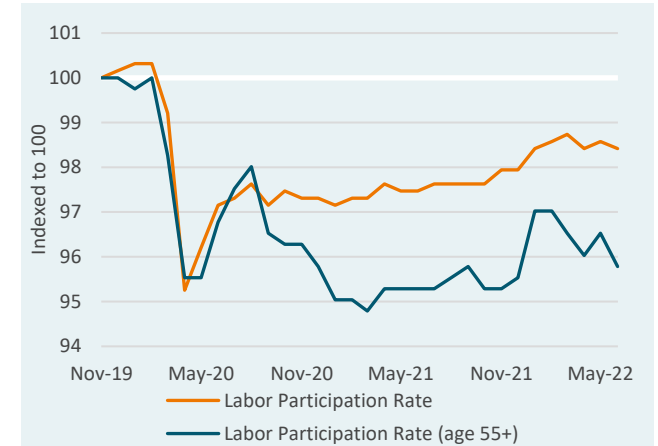
Source: FRED, as of 6/30/22

**INITIAL JOBLESS CLAIMS**



Source: FRED, as of 7/9/22

**U.S. LABOR PARTICIPATION RATE**



Source: FRED, as of 6/30/22

# The consumer

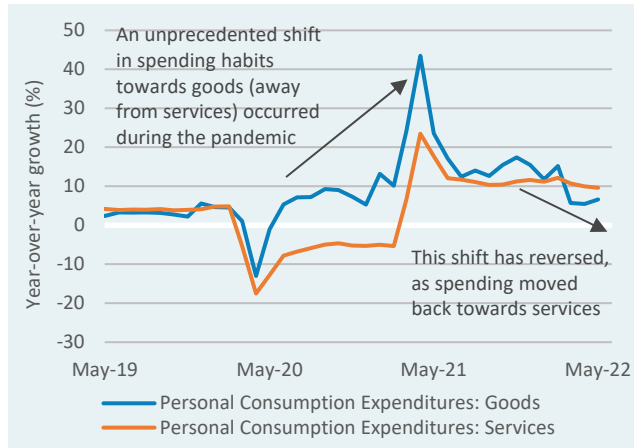
U.S. real (inflation-adjusted) personal consumption expenditures slowed to pre-COVID rates of growth, coming in at 2.1% year-over-year in May. The buying habits of consumers appear to have transitioned back towards services and away from goods, reversing the unprecedented spending shift that had occurred during the pandemic. This trend should help mitigate strained supply chains, as fewer goods require shipping.

At the same time overall spending has slowed, savings rates have also dropped to 5.4%—the lowest level since 2009. Less saving but also less spending (inflation-adjusted) may

indicate that household budgets are being squeezed by the higher prices of goods and services.

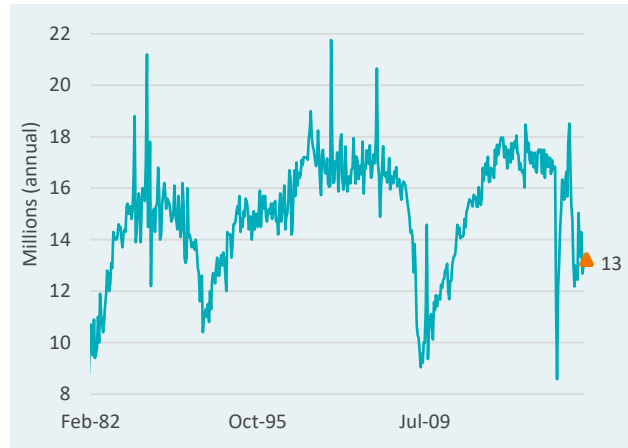
Auto sales activity remains very weak, at levels that have historically occurred during recession. The long-lasting semiconductor shortage has created widespread difficulties for auto manufacturers and has led to skyrocketing used vehicle prices. We also suspect that stimulus checks and heightened spending habits during the pandemic are contributing to the current slowdown, as this spending may have effectively *pulled forward* spending that would have otherwise occurred in years subsequent to the pandemic.

## PERSONAL CONSUMPTION EXPENDITURES



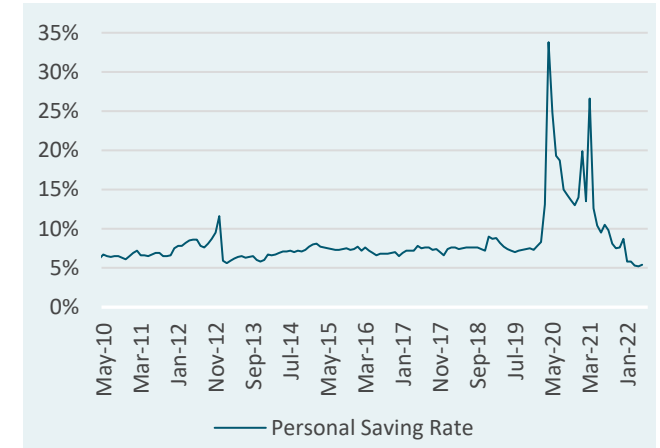
Source: FRED, as of 5/31/22

## AUTO SALES



Source: Federal Reserve, as of 6/30/22

## PERSONAL SAVINGS RATE



Source: FRED, as of 5/31/22

# Sentiment

Consumer sentiment collapsed to the lowest reading on record, according to the University of Michigan survey, which fell from 59.4 to 50.0 during Q2. Survey respondents across all income, age, education, region, and political affiliation groups showed deterioration in their outlook for the economy. Nearly half of respondents pointed to inflation as damaging living standards. Around 79% of respondents expected bad times over the next year for business conditions, which was the highest reading since 2009.

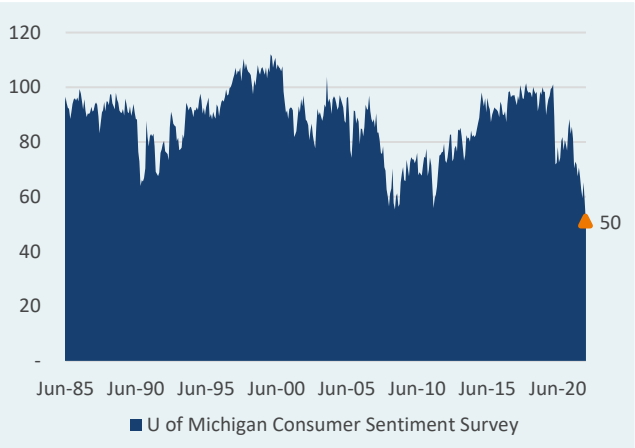
In a June Economist/YouGov Poll, more than half of respondents said they believe the U.S. is in recession. Of those respondents, 43% called the recession moderate and 38% called it serious (only

19% called it mild). Interestingly, the survey suggested that most Americans view *the prices they pay for goods and services* as the most important indicator of recession. Much of the blame was generally placed on supply chain issues and COVID-19 for economic woes.

The NFIB Small Business Optimism index dropped substantially to the weakest level in 48 years. According to NFIB, expected business conditions have further weakened in every month of 2022. Twenty-eight percent of small businesses reported that inflation was the greatest problem to business operations. Owners remain pessimistic about the second half of 2022 and foresee supply chain issues, higher input prices, and labor shortages.

Sentiment, by most measures, is extremely poor

### CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/22

### WHAT TO BLAME FOR ECONOMIC PROBLEMS?



Source: The Economist / YouGov, June 11-14, 2022

Survey asked "How much, if at all, do you attribute economic problems in the U.S. to the following?"

### NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 5/31/22



# Housing

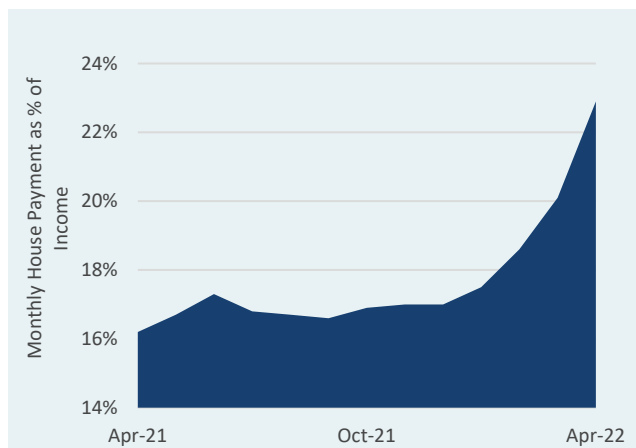
U.S. home prices rose 2.1% from March to April, continuing steady appreciation. Home prices were 7.9% higher year-to-date, as of April, and 20.3% higher year-over-year. The average 30-year fixed rate mortgage began the year at 2.67% and ended June at 5.70%.

High home prices coupled with a material jump in mortgage interest rates has acted as a double whammy for potential homebuyers. According to the National Association of Realtors, the cost for a family with an average income to buy an average priced home jumped from around 16% of that family's income one year ago, to more than 22% of that family's income in April

(a 38% increase in overall cost). Housing and rent prices have contributed to higher inflation.

Historically, larger jumps in interest rates resulted in a softening of the real estate market and placed downward pressure on home values, all else equal. This effect appears to be occurring somewhat in recent months, as home sales have fallen to pre-pandemic levels and bidding wars have become less frequent. Conditions may result in a moderation of the real estate market, though continued tight inventory levels could act as an ongoing support to high prices.

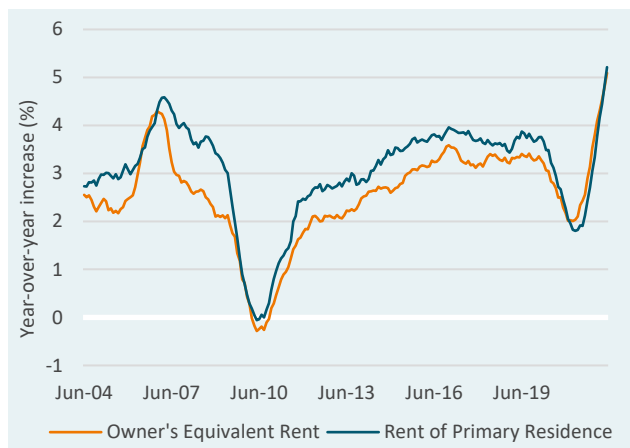
## CHANGE IN HOUSING AFFORDABILITY



Source: National Association of Realtors, as of 4/30/22

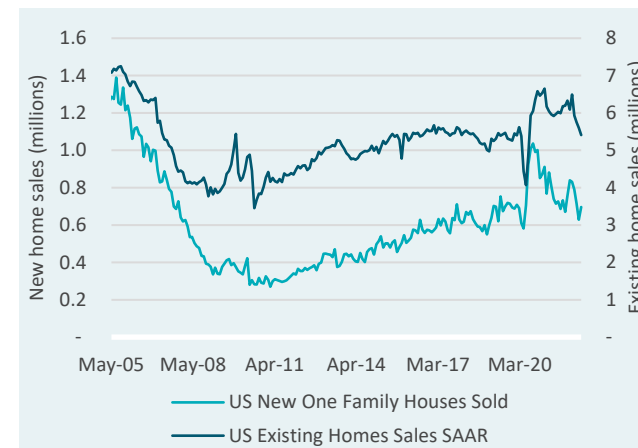
Census Bureau median family income is compared here to the monthly cost (principal + interest) of an average priced home

## HOUSING & RENT COSTS



Source: FRED, as of 5/31/22

## HOME SALES ACTIVITY



Source: Bloomberg, as of 5/31/22

# International economics summary

- Economic growth has moderated in most countries, moving toward average levels. Higher inflation continues to erode growth figures as GDP is typically quoted as *inflation-adjusted* growth.
- Inflation trends continue to be disparate around the world. Japan and China are experiencing very low inflation and muted price pressures, while Europe and the United States are coping with multidecade-high inflation. Countries with low inflation and countries with high inflation all appear to have experienced an uptick during the second quarter.
- Labor markets have been relatively stable in developed markets, with conditions in the Eurozone strengthening. Unemployment in emerging markets were mixed—Brazil and Russia experienced improvement, while India and China saw slight weakening.
- Russia’s invasion of Ukraine continued in the second quarter, leading to heavy loss of life on both sides. Most fighting has taken place in the east, as Russia generally gradually pushing forward. Concerns around food shortages in nearby countries that depend on Ukrainian agriculture persist, though many commodity prices that had shot higher in March and April have eased, falling closer to pre-invasion costs.
- During the first week of July, millions of Chinese citizens were put back into lockdown, and subjected to mass testing, as small outbreaks have led to renewed restrictions. China continues to stick to a “zero COVID” approach, which is increasingly at odds with the recognition by most nations that civilization will have to live *with* the virus for the long-term, while moving back to normal life.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.6% 6/30/22	9.1% 6/30/22	3.6% 6/30/22
Eurozone	5.4% 3/31/22	8.6% 6/30/22	6.6% 5/31/22
Japan	0.4% 3/31/22	2.3% 6/30/22	2.6% 5/31/22
BRICS Nations	4.4% 3/31/22	4.6% 6/30/22	5.2% 12/31/21
Brazil	1.7% 3/31/22	11.9% 6/30/22	9.8% 5/31/22
Russia	3.5% 3/31/22	15.9% 6/30/22	3.9% 5/31/22
India	4.1% 3/31/22	7.0% 6/30/22	7.8% 6/30/22
China	4.8% 3/31/22	2.5% 6/30/22	5.9% 5/31/22

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

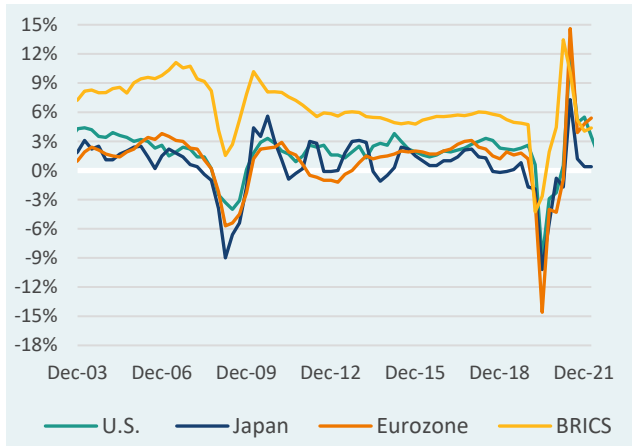
Economic growth has moderated in most countries, moving toward average levels. Inflation trends remain disparate across geographies. Japan and China are experiencing very low inflation and muted price pressures, while Europe and the United States are coping with multidecade-high inflation. Countries with low inflation and countries with high inflation all appear to have experienced an uptick during Q2.

For some central banks, the issue of fighting inflation has been made more challenging given economic deceleration,

as overly aggressive monetary policy might quickly send an economy into recession. Inflation has become a lightning rod for political leaders, as rising prices squeeze household budgets and standards of living.

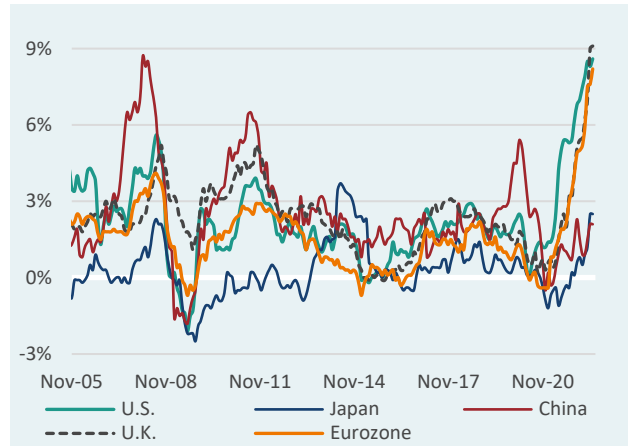
Unemployment rates were relatively stable in developed markets, with conditions in the Eurozone strengthening. Joblessness in emerging markets was mixed—Brazil and Russia experienced improvement, while India and China saw a slight weakening.

**REAL GDP GROWTH (YOY)**



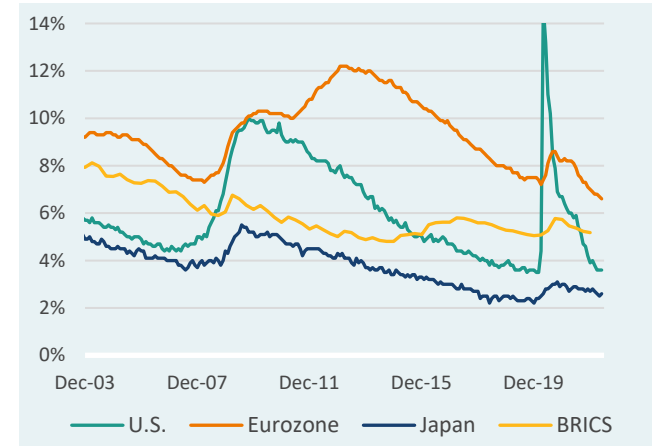
Source: Bloomberg, as of 6/30/22

**INFLATION (CPI YOY)**



Source: Bloomberg, as of 5/31/22 – or most recent release

**UNEMPLOYMENT**



Source: Bloomberg, as of 6/30/22 – or most recent release

# Fixed income rates & credit

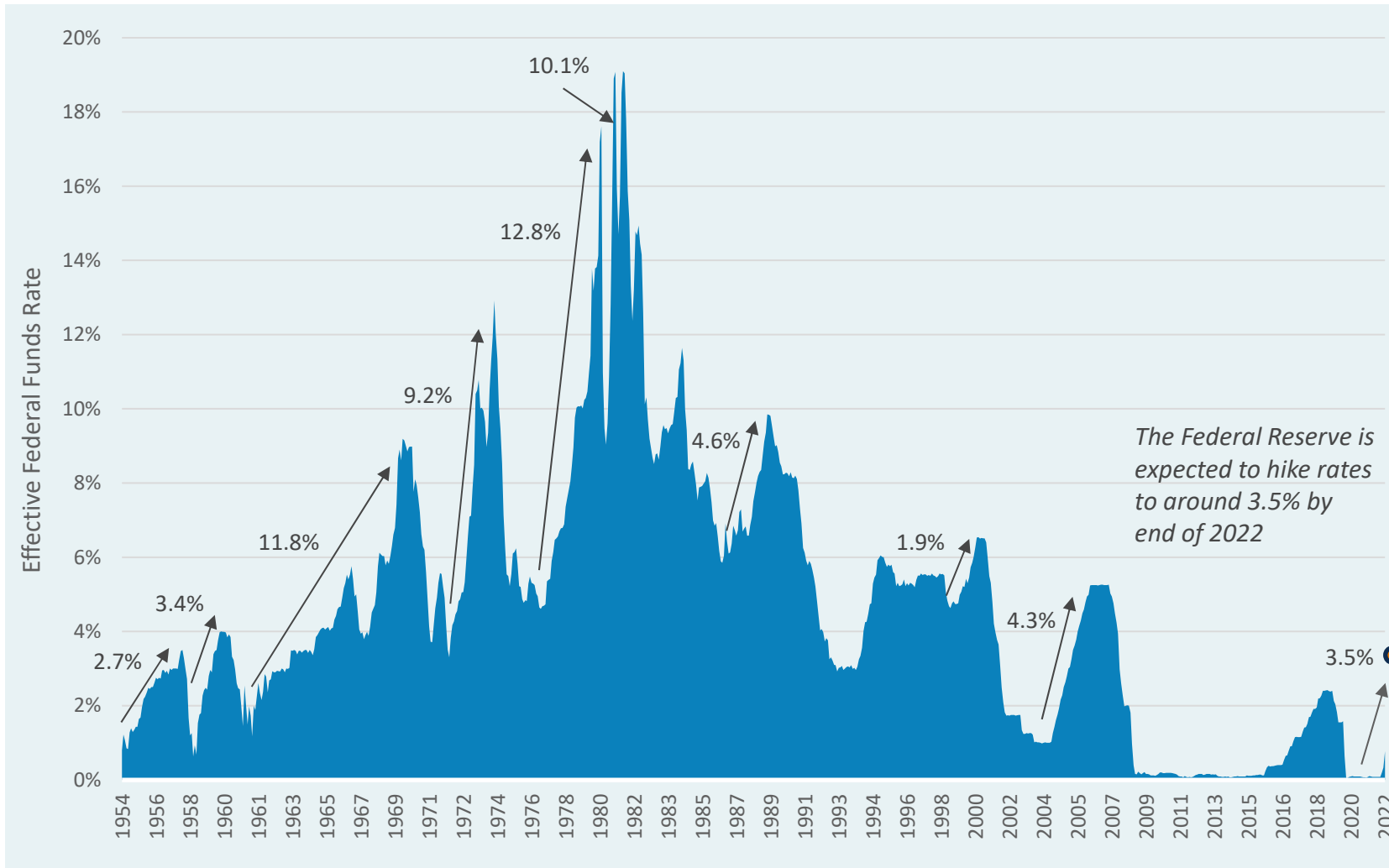
# Fixed income environment

- The 10-year U.S. Treasury yield jumped during Q2 from 2.34% to nearly 3.50%, ending the quarter at 2.89%. Yields have fallen from their highs as recession fears mount. The Federal Reserve has a history of cutting interest rates during recession. This implies a higher chance of rate cuts as it appears the U.S. may currently be in recession.
- Credit markets sold off during Q2, impacted by concerns of a slowing economy and recession as the Fed signaled a willingness to raise rates until inflation slows. Bank loans performed the best at -4.4% and outperformed longer duration bonds such as investment grade and high yield (-7.3% and -9.8%, respectively).
- Credit spreads jumped considerably alongside the broader market selloff. U.S. high yield spreads increased from 3.4% to 5.6% and U.S. investment grade spreads headed from 1.2% to 1.6%. In contrast to the recent low yield environment, fixed income now offers investors more robust yields.
- The U.S. yield curve remained fairly flat during the second quarter. The 10-year minus 2-year yield spread fluctuated between -0.05% and 0.4%. Markets continue to price a flat or inverted yield curve, which is generally recognized as a sign of incoming recession.
- In June, the U.S. Federal Reserve began to unwind its \$9 trillion balance sheet. Initially this action involved *not purchasing new bonds* and letting existing bonds mature and roll off. The Fed signaled plans to allow \$30 billion of U.S. Treasuries and \$17.5 billion of mortgage-backed securities to fall off the balance sheet by end of month. Leadership has admitted that this size of divestment program is essentially the first of its kind and that the committee will be moving with caution.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(4.7%)	(10.3%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(5.1%)	(10.9%)
U.S. Treasuries (Bloomberg U.S. Treasury)	(3.8%)	(8.9%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	(9.8%)	(12.8%)
Bank Loans (S&P/LSTA Leveraged Loan)	(4.4%)	(2.7%)
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(8.6%)	(19.3%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	(11.4%)	(21.1%)
Mortgage-Backed Securities (Bloomberg MBS)	(4.0%)	(9.0%)

Source: Bloomberg, as of 6/30/22

# How does this tightening cycle stack up?



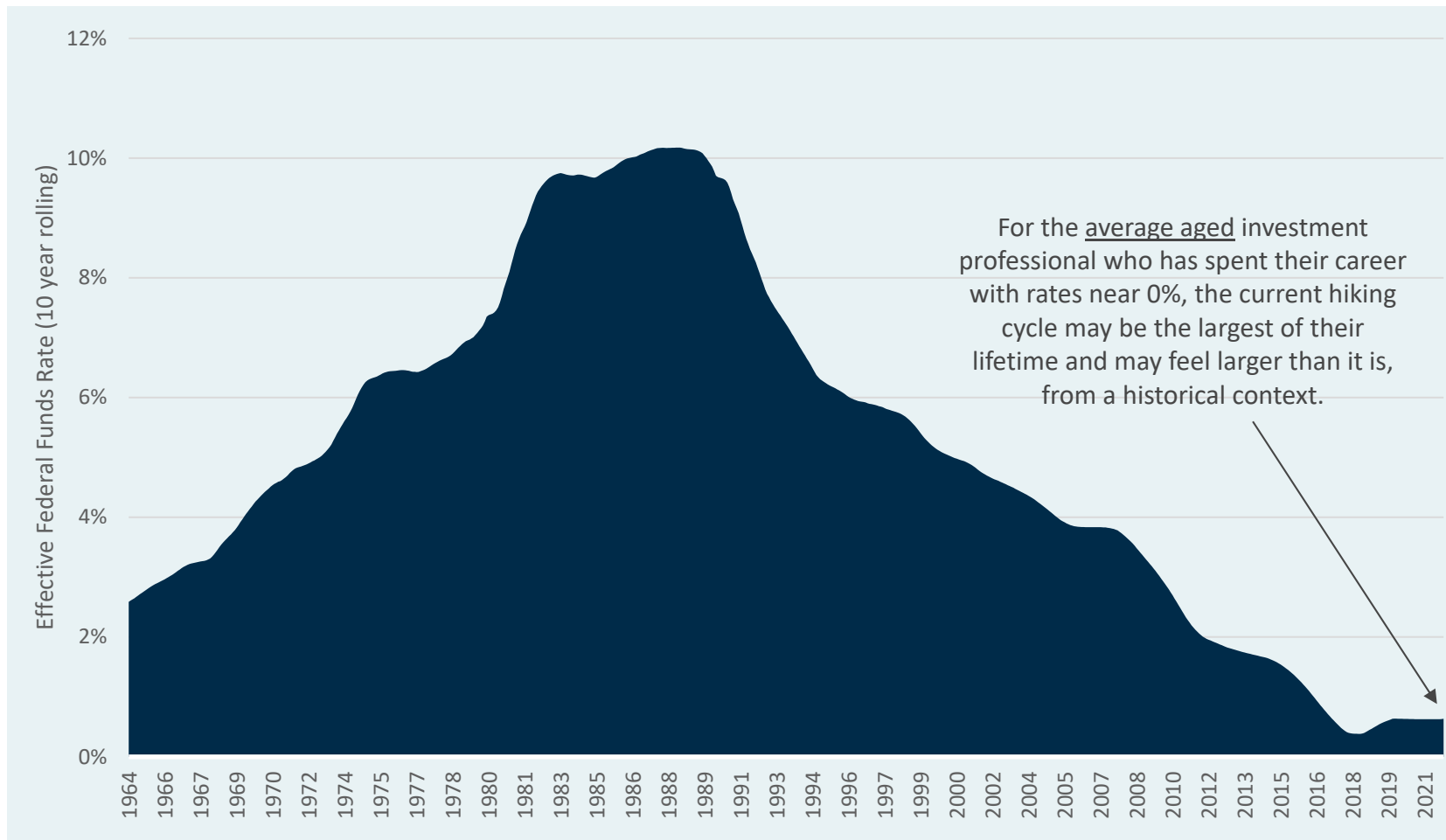
This tightening cycle is milder than most, in terms of total magnitude of hikes

The Fed's plans to reduce their large balance sheet does pose a unique challenge relative to past cycles, however

Source: FRED, as of 6/30/22 - rate hiking cycle of each economic cycle shown

# How does this tightening cycle stack up?

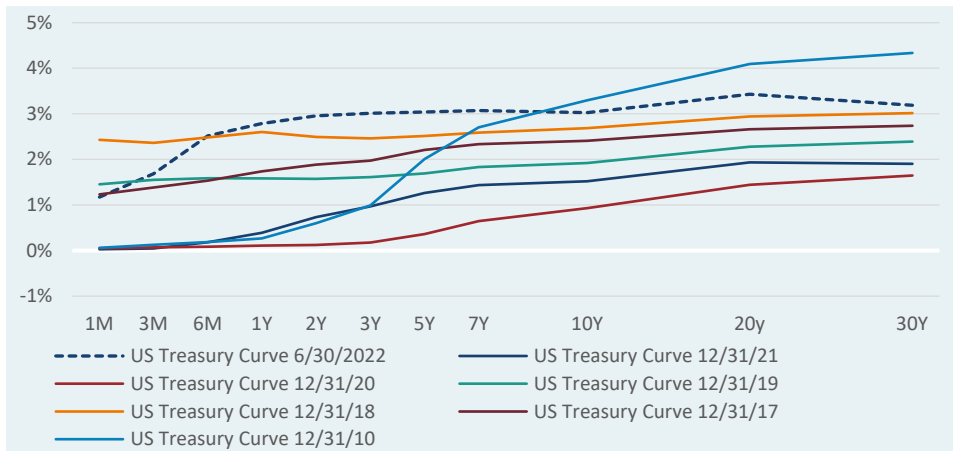
## 10 YEAR ROLLING AVERAGE FED FUNDS LEVEL



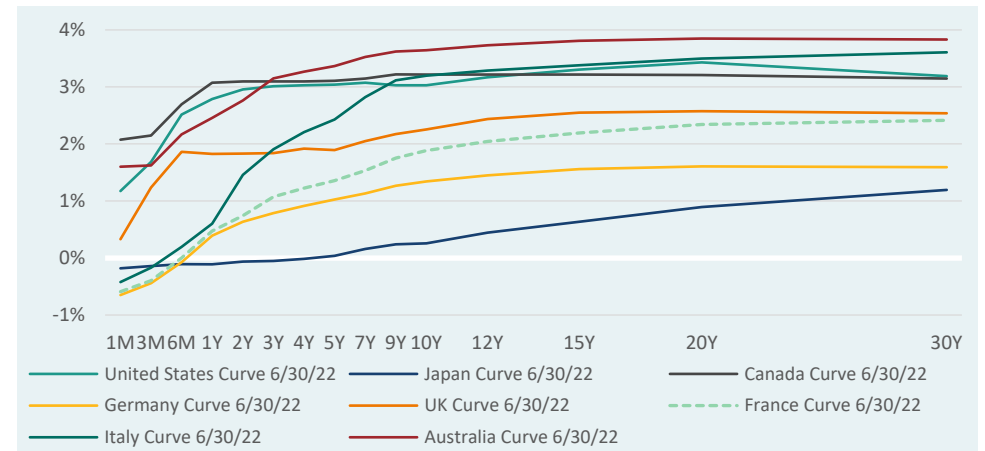
Source: FRED, Verus, as of 6/30/22

# Yield environment

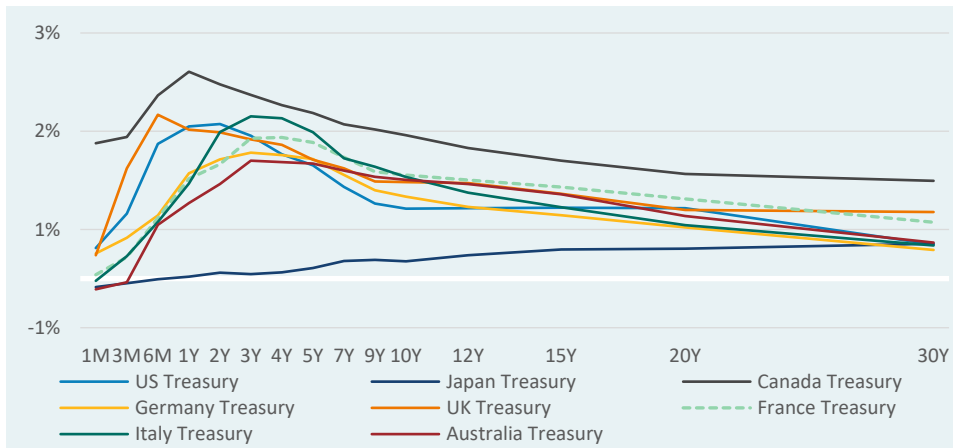
## U.S. YIELD CURVE



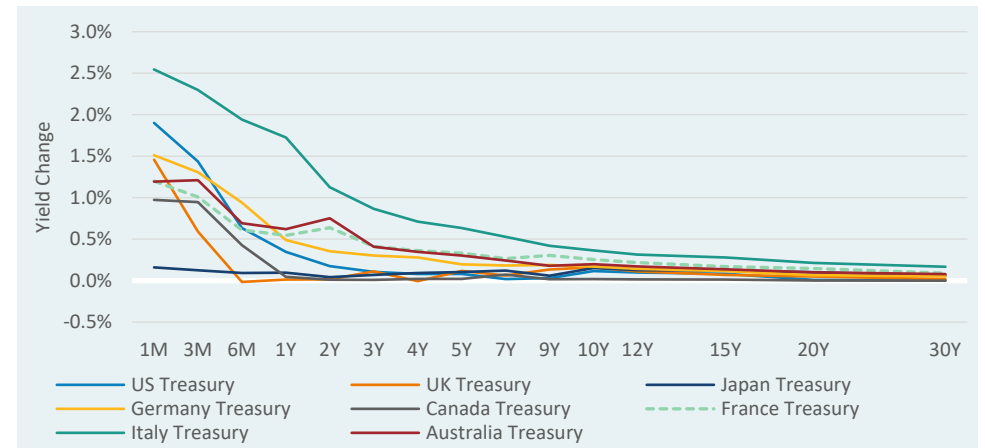
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/22



# Credit environment

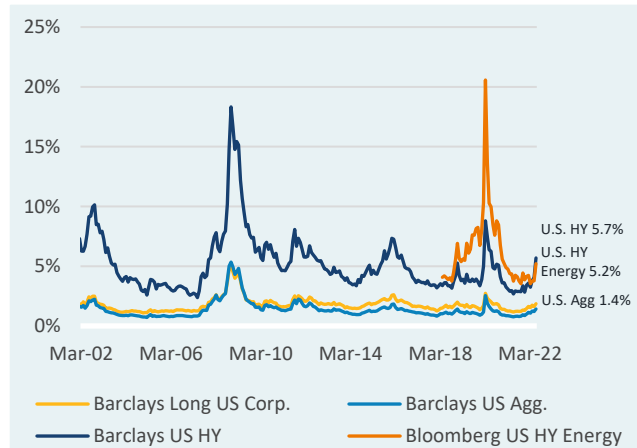
Credit markets experienced a broad selloff over the quarter impacted by concerns of slowing economic growth and recession as the Fed signaled a willingness to raise rates until inflation slows. Bank loans performed the best, returning -4.4% and outperforming higher duration exposures such as investment grade and high yield corporate credit which returned -7.3% and -9.8%, respectively. The decline in high yield was the third worst quarterly decline since 2000, behind the 18% decline experienced during Q4 of 2008 and the 13% decline experienced during Q1 of 2020.

Risk-off sentiment and elevated concerns over economic growth prospects contributed to spread widening during the quarter. Investment grade credit spreads increased 39 basis points to end the quarter at 155

bps. High yield spreads increased 163 basis points to end the quarter and 569 bps which was above the long term non-recessionary average of 454 bps.

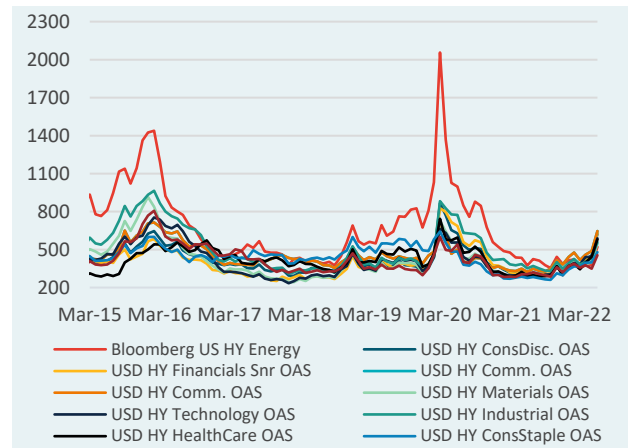
At the end of June, the Bloomberg US High Yield Index offered a yield just shy of 9%, up more than 4% from the beginning of the year. While these levels appear attractive in the context of the recent low yield environment, there is still potential for spreads to widen from these levels if recession concerns worsen.

## SPREADS



Source: Barclays, Bloomberg, as of 6/30/22

## HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/22

Market	Credit Spread (OAS)	
	6/30/22	6/30/21
Long U.S. Corp	1.9%	1.2%
U.S. Inv Grade Corp	1.6%	0.8%
U.S. High Yield	5.7%	2.7%
U.S. Bank Loans*	5.9%	4.3%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/22

\*Discount margin (4-year life)

# Default & issuance

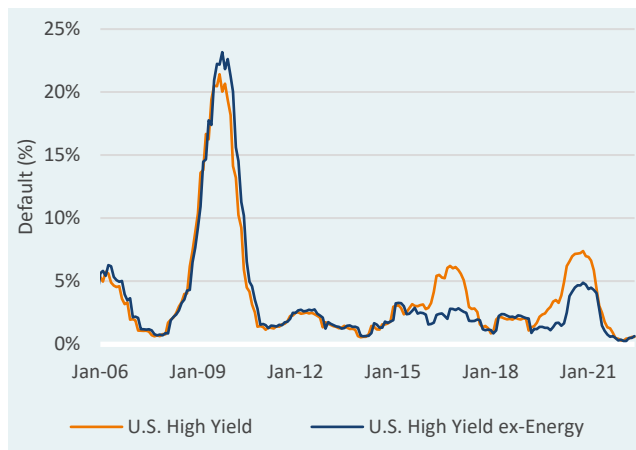
Default activity picked up in the second quarter with seven companies defaulting on loans and bonds, totaling \$15.6 billion. While default volumes have increased from the \$1.2 billion experienced last quarter and \$9.8 billion experienced throughout 2021, the volumes are in line with the 5-year quarterly average of \$16 billion.

Default rates for par-weighted US high yield and bank loans ended the quarter at 0.76% and 0.74%, respectively—well below the longer-term historical averages of 3.2% and 3.1%. The default rate is expected to rise modestly over the remainder of 2022 and throughout 2023, given the prospects for lower growth, more restrictive financing rates, and an expected surge in rising stars exiting the high yield index. While modest

increases in default rates are expected, record bond and loan refinancing activity totaling over \$1 trillion in 2020 and 2021 has led to relatively healthy issuer fundamentals and very limited near-term financing needs.

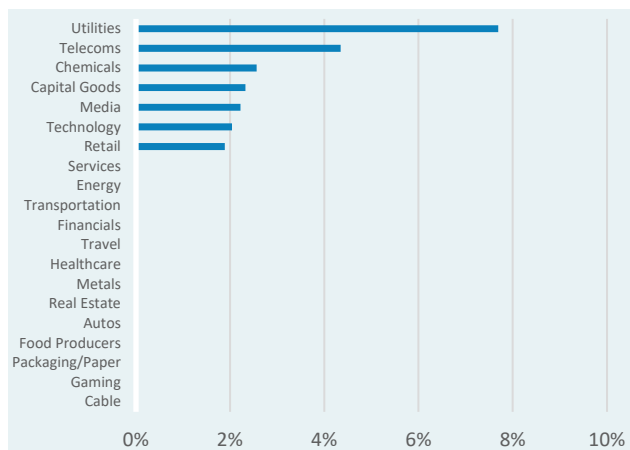
Leveraged credit issuance continued to be light amid high market volatility. The \$24.6 billion of high yield bonds issued over the quarter was the lowest issuance since the fourth quarter of 2018 and second lowest total since 2009. Similarly, bank loan issuance totaled \$60.6 billion, which was down from \$120.5 billion issued in the first quarter. Notably, nearly all of the loans issued over the quarter were SOFR-linked deals as the discontinuation of LIBOR is expected to occur at the end of June 2023.

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



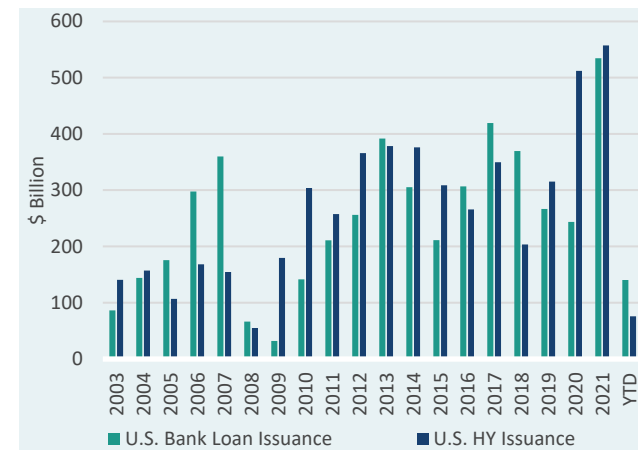
Source: BofA Merrill Lynch, as of 6/30/22

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



Source: BofA Merrill Lynch, as of 6/30/22 – par weighted

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



Source: BofA Merrill Lynch, as of 6/30/22

# Alternative credit

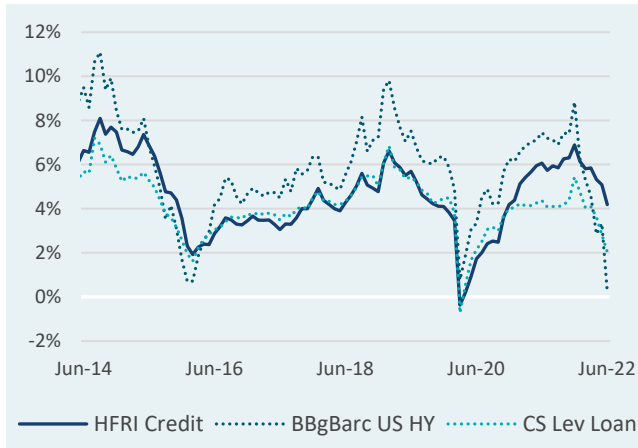
Credit hedge fund strategies succumbed to overwhelming risk-off moves in fixed income markets during the quarter. The HFRI Credit Index lost 3.2% for Q2, slightly outperforming loan markets as hedges helped offset spread widening. On a three-year rolling basis, alternative credit strategies outperformed high yield bonds by nearly 4% annualized. The only other time since 2008 (the inception of the index) that HFRI Credit outperformed high yield on a three-year basis was a brief period after the 2015 energy sector sell-off.

Looking closer within hedge fund credit, managers focused on structured credit remained the bright spot with only slightly negative returns for the

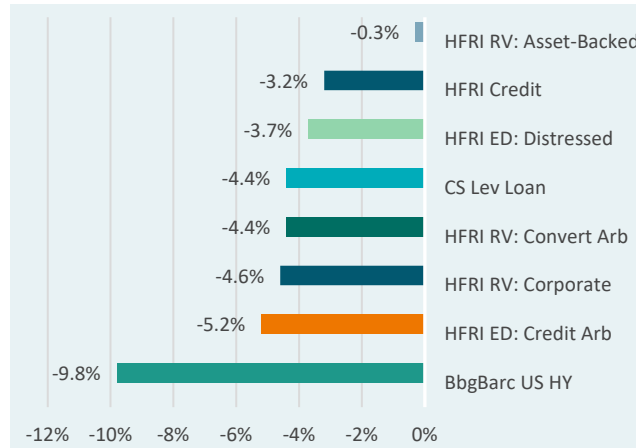
quarter and continued outperformance relative to other credit strategies and fixed income markets.

The magnitude of losses in traditional credit markets began to impact even those strategies which try to minimize duration and credit spread risk, such as convertible arbitrage and credit arbitrage. These strategies typically involve substantial leverage or basis risk, and are susceptible to large down moves in extreme stress periods.

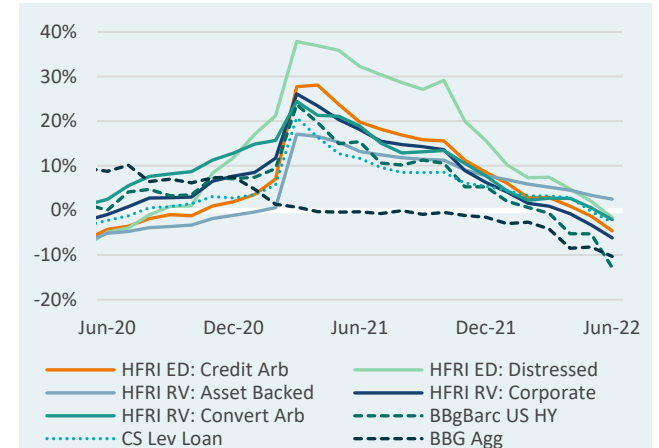
**3 YEAR ROLLING ANNUALIZED RETURN**



**2Q 2022 QUARTERLY RETURN**



**1 YEAR ROLLING RETURN**



Source: HFR, MPI, Morningstar, as of 6/30/22

# Equity

# Equity environment

- U.S. equities suffered large losses during the second quarter (S&P 500 -16.1%), as many highly priced growth stocks took an exceptionally large hit due to interest rate rises and risk-off sentiment. International developed equities (MSCI EAFE -14.5%) experienced similar losses, while emerging market equities (MSCI Emerging Markets -11.4%) outperformed materially, on an unhedged currency basis.
- As mentioned during Q2 earnings calls, a rising number of S&P 500 companies were concerned about material & commodity costs, COVID costs, and oil & gas prices. A decreasing number of companies were concerned about labor costs & shortages, supply chain disruptions, transport & freight costs, and Russia/Ukraine.
- Currency movement generated large losses for investors who do not hedge their foreign currency exposure. Investors in international

developed markets would have seen a loss of approximately -7.3% with a currency hedging program, rather than the -14.5% loss of unhedged investors. Over the past full year, losses from currency movement were -12.4%.

- Value stocks outperformed Growth stocks by a wide margin again in Q2 (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations suffered due to rising interest rates and broader risk-off sentiment. Large capitalization stocks outperformed small cap stocks slightly (Russell 1000 -16.7%, Russell 2000 -17.2%).
- The Cboe VIX Index rose during the quarter from 20.6% to 28.7%, as risk assets sold-off and investors began focusing on potential recession. Investors remain acutely focused on the path of inflation, and market volatility may ease if inflation does in fact begin to moderate in future months.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	(16.1%)		(10.6%)	
U.S. Small Cap (Russell 2000)	(17.1%)		(25.2%)	
U.S. Equity (Russell 3000)	(16.7%)		(13.9%)	
U.S. Large Value (Russell 1000 Value)	(12.2%)		(6.8%)	
US Large Growth (Russell 1000 Growth)	(20.9%)		(18.8%)	
Global Equity (MSCI ACWI)	(15.7%)	(13.5%)	(15.8%)	(12.1%)
International Large (MSCI EAFE)	(14.5%)	(7.3%)	(17.8%)	(5.4%)
Eurozone (Euro Stoxx 50)	(15.3%)	(9.2%)	(23.1%)	(11.3%)
U.K. (FTSE 100)	(11.2%)	(3.6%)	(7.1%)	6.2%
Japan (NIKKEI 225)	(14.8%)	(4.2%)	(23.8%)	(6.0%)
Emerging Markets (MSCI Emerging Markets)	(11.4%)	(8.2%)	(25.3%)	(21.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/22

# Domestic equity

U.S. equities saw sharp losses during the second quarter (S&P 500 -16.1%), underperforming global markets (MSCI ACWI ex-US -13.7%). U.S. sector dispersion was wide, with consumer discretionary stocks suffering the worst pain (-26.2%) and consumer staples faring the best (-4.6%).

Calendar year 2022 bottom-up earnings estimates for the S&P 500 improved slightly during the quarter, despite the equity bear market. A rosier earnings outlook was fueled mostly by the energy and materials sectors, while consumer discretionary and communication services sectors saw worsening expectations. According to Factset, an increased

number of companies issued negative earnings guidance during the quarter, though the balance of companies offering positive and negative guidance remains in a relatively normal range.

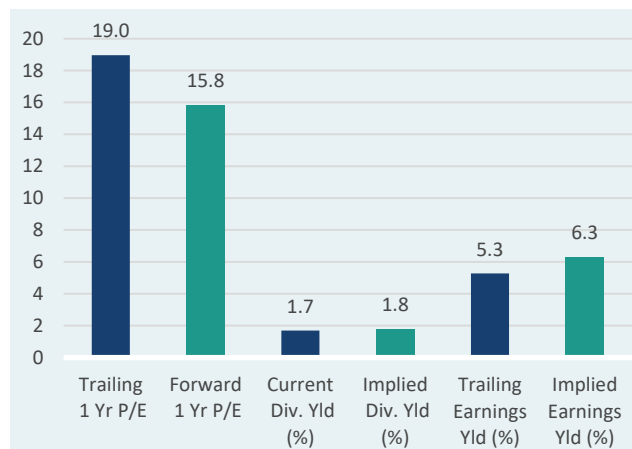
According to Q2 earnings calls, a rising number of S&P 500 companies were concerned about material & commodity costs, COVID costs, and oil & gas prices. A decreasing number of S&P 500 companies were concerned about labor costs & shortages, supply chain disruptions, transport & freight costs, and the economic impacts of Russia's invasion of Ukraine.

## S&P 500 PRICE INDEX



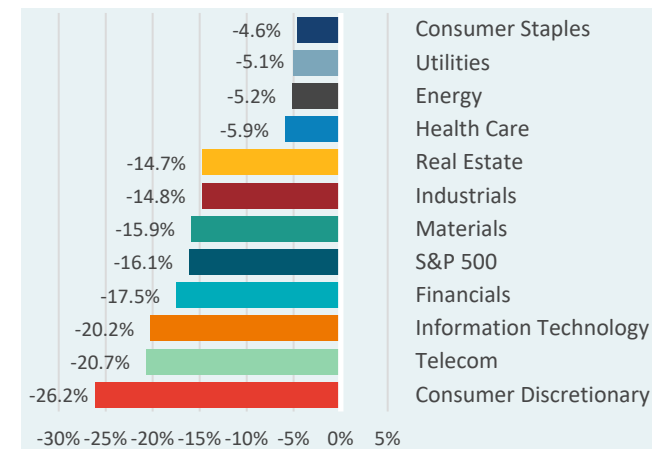
Source: Standard & Poor's, as of 6/30/22

## S&P VALUATION SNAPSHOT



Source: Bloomberg, as of 6/30/22

## Q2 SECTOR PERFORMANCE



Source: Morningstar, as of 6/30/22

# Domestic equity size & style

Value stocks outperformed Growth stocks by a wide margin once again in the second quarter (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations suffered due to rising interest rates and broader risk-off sentiment. Large capitalization stocks outperformed small capitalization stocks slightly (Russell 1000 -16.7%, Russell 2000 -17.2%).

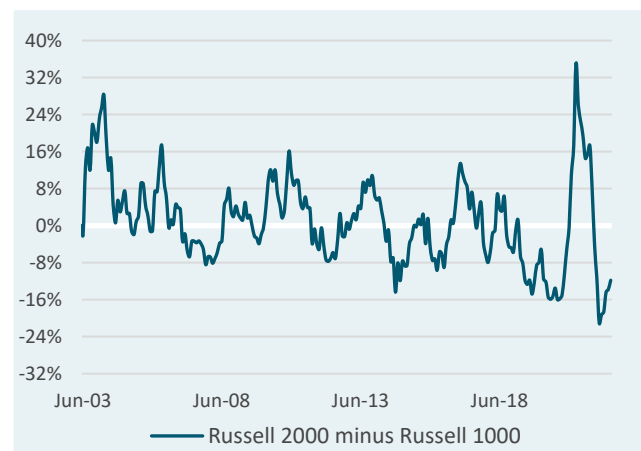
The recent drawdown of Growth stocks has helped partially close the historically wide price gap between Value and Growth, as reflected in the bottom right chart. Sector trends contributed to style performance during the quarter. The energy sector

outperformed, and information technology was a poor performer. Other Value-concentrated sectors such as financials and materials performed closely in line with the overall index.

In last quarter's research commentary we mentioned that further tightening of Fed policy and interest rate hikes would likely impact Value and Growth stock behavior. This foresight was valid and we believe will remain so. Further Fed hawkishness and market risk-off behavior may lead to additional Growth underperformance, but a reversal by the Federal Reserve and easing of interest rates may bolster the returns of Growth, all else equal.

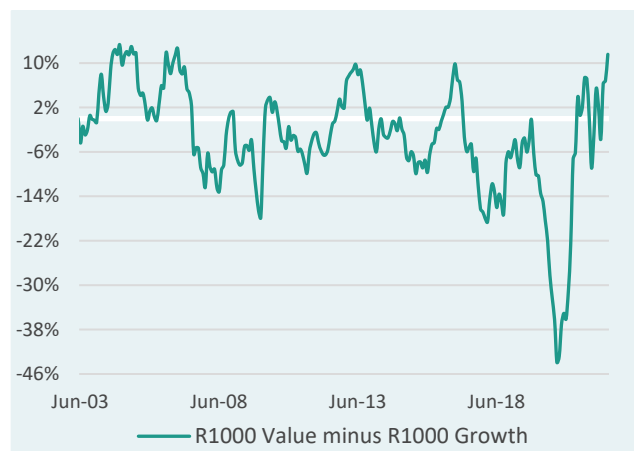
A rebound in Value continued during Q2

SMALL CAP VS LARGE CAP (YOY)



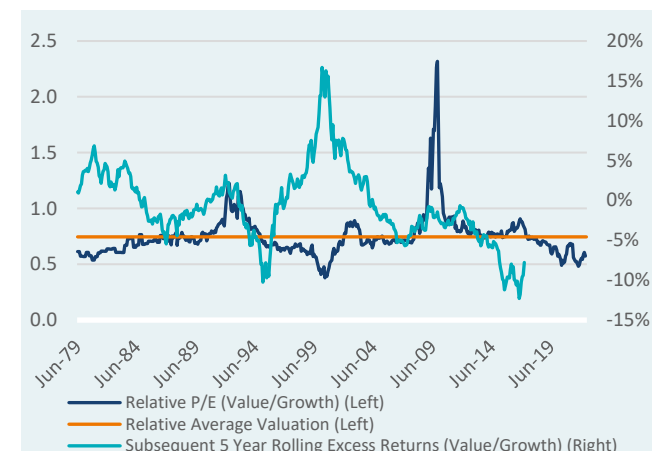
Source: FTSE, as of 6/30/22

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/22

VALUE VS. GROWTH RELATIVE VALUATIONS



Source: Standard & Poor's, as of 6/30/22

# International developed equity

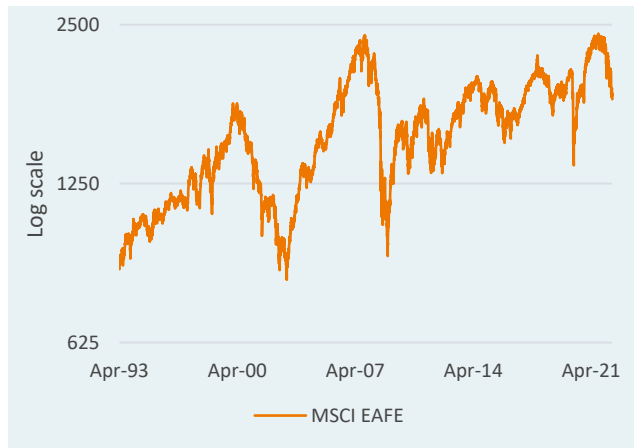
International developed equities fell during the quarter (MSCI EAFE -14.5%), mildly outperforming U.S. equities (S&P 500 -16.1%) and materially underperforming emerging market equities (MSCI Emerging Markets -11.4%), on an unhedged currency basis.

Currency movement during the quarter generated large losses for investors who do not hedge foreign currency exposure. Investors in international developed markets would have seen a loss of approximately -7.3% with a currency hedging program, rather than the -14.5% loss if

currency was left unhedged. Over the past year, investors in international equities with a currency hedging program would have experienced roughly a -5.4% return, compared to a return of -17.8% if currency was left unhedged.

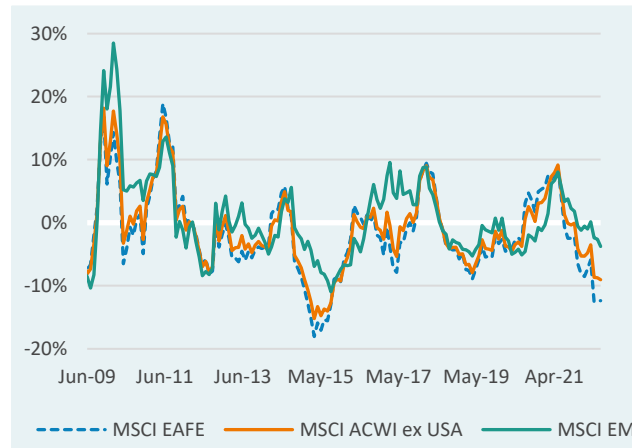
Eurozone equities provided the poorest performers during the quarter (MSCI Euro -11.1%), as EUR/USD reached parity for the first time in nearly 20 years. The United Kingdom market (MSCI UK 1.8%) and Japanese market (MSCI Japan -6.6%) lifted the overall MSCI EAFE Index.

**INTERNATIONAL DEVELOPED EQUITY**



Source: MSCI, as of 6/30/22

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



Source: MSCI, as of 6/30/22

**PRICE OF 1 EUR IN USD**



Source: Bloomberg, as of 7/14/22



# Emerging market equity

Emerging market equities have delivered broad outperformance throughout the global risk asset drawdown (MSCI EM -11.4%, MSCI ACWI -15.7%) on an unhedged currency basis. A bounce-back in Chinese equities over the quarter (MSCI China 3.5%) from their sharp recent losses helped lift overall performance of the asset class. Latin American markets lagged Asian markets (MSCI EM Latin America -21.9%, MSCI EM Asia -9.3%), reversing last quarter's gains.

Strong returns from the consumer discretionary sector (12.9%)—the largest sector in the MSCI China Index—propelled

Chinese equity performance forward. Outside of Chinese equities, emerging markets struggled, as central banks around the world tightened policy to fight inflation. Emerging market countries whose economies are reliant on raw goods exports were particularly impacted by tightening, as global commodity prices have drawn down from peaks seen earlier in the year.

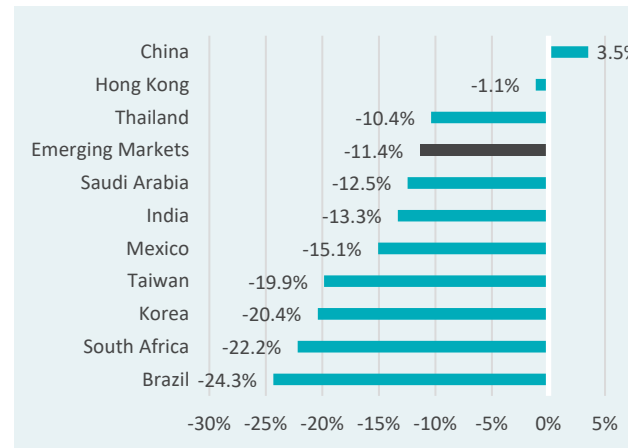
The strong dollar also provided a headwind to emerging market equity returns, as currency movement resulted in a -3.2% loss. Emerging market currencies remain far weaker than the historical average, which may allow performance upside if mean reversion were to occur.

## EMERGING MARKET EQUITY



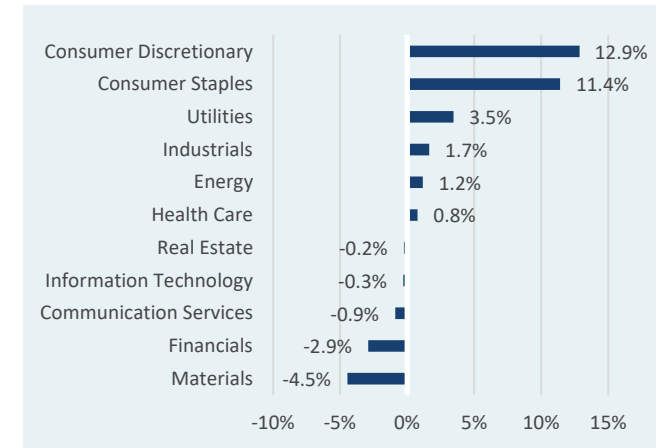
Source: MSCI, as of 6/30/22

## Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI as of 6/30/22, performance in USD terms

## MSCI CHINA Q2 SECTOR PERFORMANCE



Source: Bloomberg, MSCI as of 6/30/22, performance in USD terms

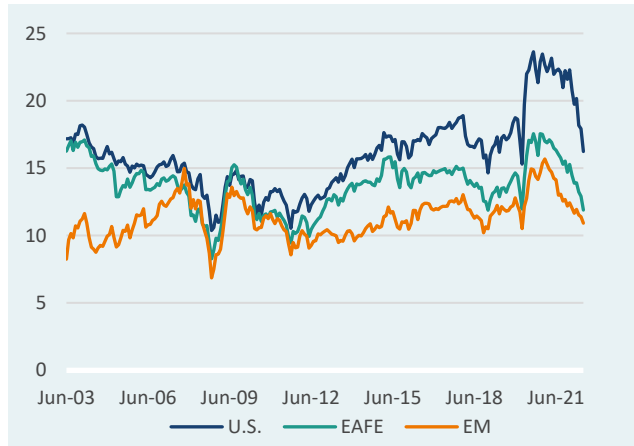
# Equity valuations

Valuations fell substantially during the market selloff, bringing multiples closer in line with long-term historical averages. U.S. earnings forecasts have held strong, and analysts expect 2022 calendar year earnings growth of 10.4%. However, these earnings forecasts arguably contain greater uncertainty, given higher interest rates, higher input prices, and weakening consumer demand. The path of corporate earnings in 2022 will be a key variable in determining whether equity markets recover, remain subdued, or fall further. The bottom-up S&P 500 12-month analyst price target was 4,987 as of June 23<sup>rd</sup>.

Domestic equity valuations remain elevated relative to international developed and emerging markets, which translates to U.S. equities offering a lower yield and likely lower prospective total performance over the longer-term. Domestic equities trade at roughly a 50% valuation premium over international developed equities on a trailing price/earnings basis, and a 75% valuation premium over emerging market equities. While we are more pessimistic around the outlook for international developed equities and believe cheaper prices are justified, we are bullish around emerging markets which appear to offer attractive returns in the current environment.

Most equity valuations have moved back towards normal levels, though U.S. prices remain rich

## FORWARD P/E RATIOS



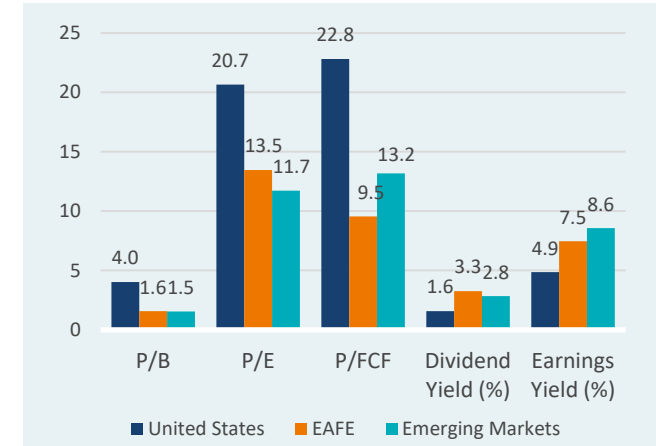
Source: MSCI, 12m forward P/E, as of 6/30/22

## FORWARD P/E PERCENTILE RANKINGS



Source: Bloomberg, MSCI, as of 6/30/22

## VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/22 - trailing P/E

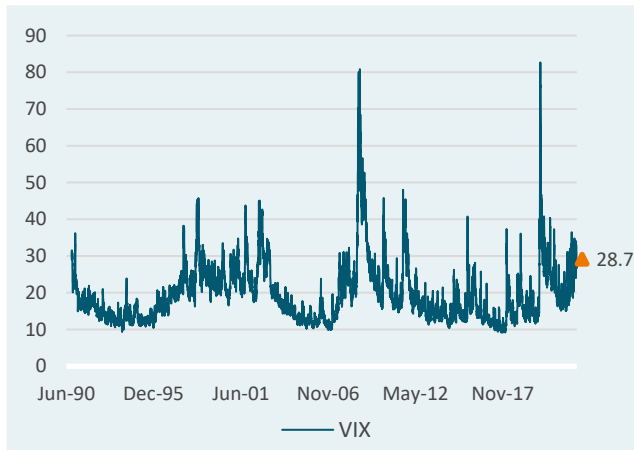
# Equity volatility

The Cboe VIX Index rose during the quarter from 20.6% to 28.7%, as risk assets sold-off and investors began focusing on potential recession. Investors have been acutely focused on the path of inflation, and market volatility may ease if inflation does in fact begin to moderate in future months.

Realized volatility of equity markets over the past year has remained within an average range. U.S. markets were the most volatile relative to developed and emerging markets. This dynamic has been rare historically, and is likely driven in part by inflation and recession risks that are especially high in the United States.

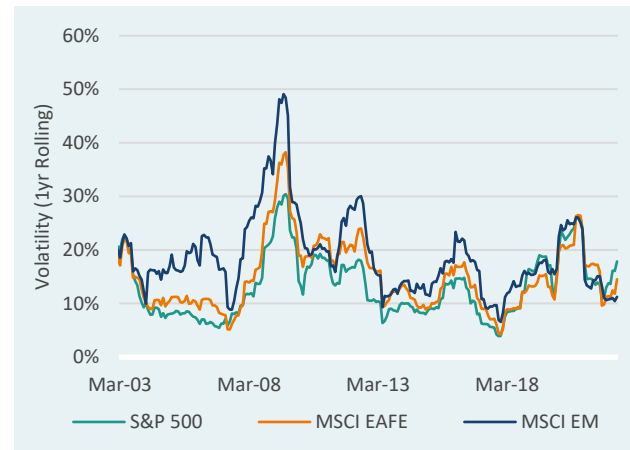
The 2022 equity bear market, while fairly moderate in speed and magnitude by historical standards, may justifiably feel severe for investors due to the broad-based nature of the selloff. Fixed income has delivered notable losses, failing to provide the diversification which investors expect. Commodities were a bright spot in Q1, but a sharp reversal in June led to quarterly Q2 loss of -5.7%. Currency markets also moved against investors, as U.S. dollar appreciation further compounded losses for unhedged international asset exposure. It seems there was nowhere to hide except for cash during the second quarter.

**U.S. IMPLIED VOLATILITY (VIX)**



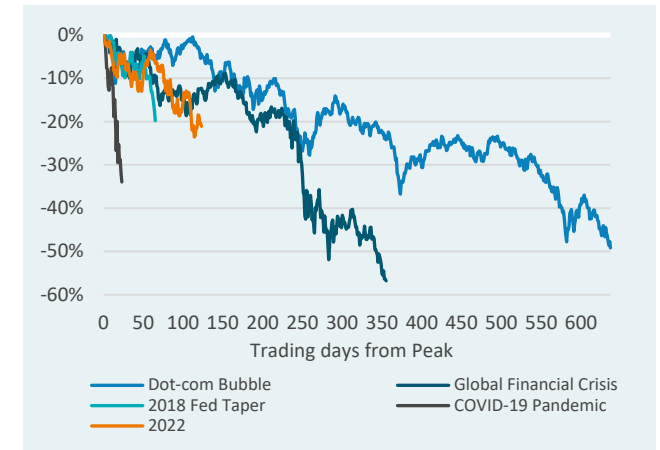
Source: Cboe, as of 6/30/22

**REALIZED VOLATILITY**



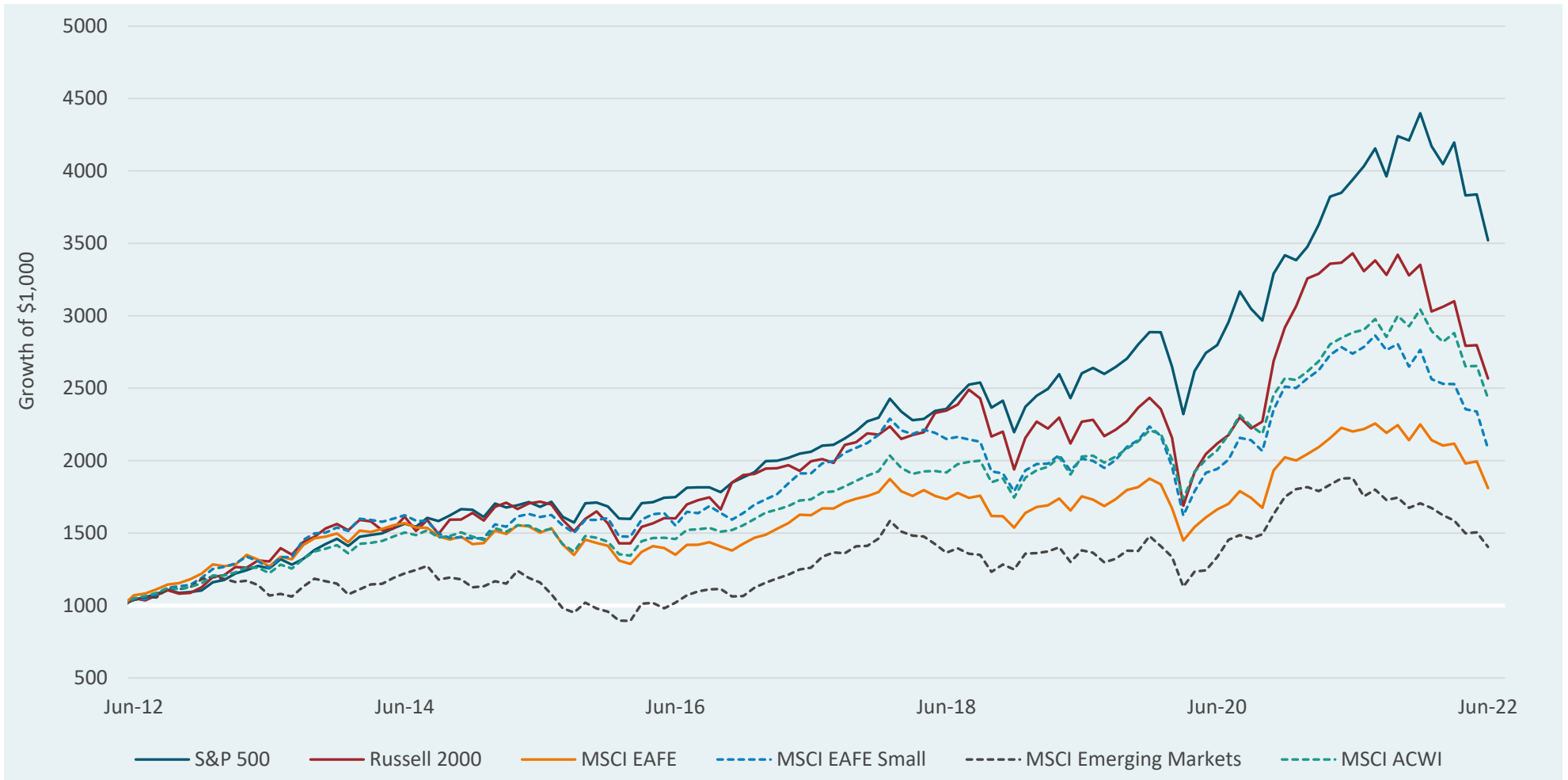
Source: Standard & Poor's, MSCI, as of 6/30/22

**S&P 500 PEAK DRAWDOWNS**



Source: Bloomberg, as of 6/30/22

# Long-term equity performance



Source: Morningstar, as of 6/30/22

# Other assets

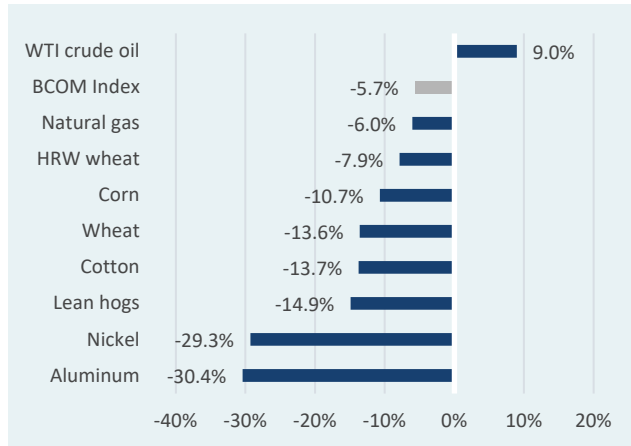
# Commodities

The Bloomberg Commodity Index fell -10.8% during June, bringing the second quarter return to -5.7%. Industrial metals (-26.4%) and precious metals (-10.5%) experienced the largest losses, while energy (7.0%) and petroleum (13.7%) marched higher around fears of a potential global energy shortage, though many prices reversed their gains in June.

Early in 2022 many investors expressed fears about a potential global commodity supply shortage, perhaps fueled by underinvestment in production capacity preceding and throughout the COVID-19 recession. Russia's invasion of

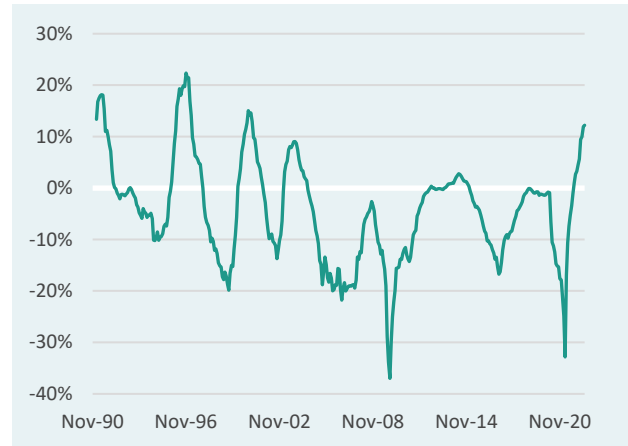
Ukraine further amplified these fears and commodity price growth accelerated further. Later in the second quarter this trend appears to have reversed. Fears of a recession which would hinder the demand for commodities, and likely some easing of uncertainty around Ukraine, have contributed to a sharp drop in commodity prices. If weaker prices persist, the reversal in commodity markets should have a deflationary impact on broader consumer prices, though this effect may take time to flow through to broader prices. For example, lower oil prices have far-reaching impacts on the U.S. economy, such as on the transportation of goods, ground transportation and taxis, air travel, and the production of plastics.

## BLOOMBERG COMMODITY INDEX – Q2 2022



Source: Bloomberg, as of 6/30/22

## S&P GSCI INDEX ROLL YIELD (LAST 12 MONTHS)



Source: Standard & Poor's, Bloomberg, as of 6/30/22

## INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(10.8)	(5.7)	18.4	24.3	14.3	8.4	(0.8)
Bloomberg Agriculture	(9.1)	(5.7)	13.0	18.9	18.8	6.9	(1.2)
Bloomberg Energy	(14.6)	7.0	58.3	66.6	11.7	10.0	(4.7)
Bloomberg Grains	(11.7)	(7.1)	16.1	16.6	17.5	6.2	(2.1)
Bloomberg Industrial Metals	(16.0)	(26.4)	(9.6)	0.2	11.9	7.5	1.2
Bloomberg Livestock	(0.3)	(8.7)	(3.4)	(3.6)	(6.8)	(6.6)	(4.3)
Bloomberg Petroleum	(4.0)	13.7	63.5	79.4	19.5	18.1	(1.2)
Bloomberg Precious Metals	(3.1)	(10.5)	(4.4)	(4.8)	7.2	5.6	(0.8)
Bloomberg Softs	(5.9)	(4.3)	3.3	27.2	16.8	5.3	(3.2)

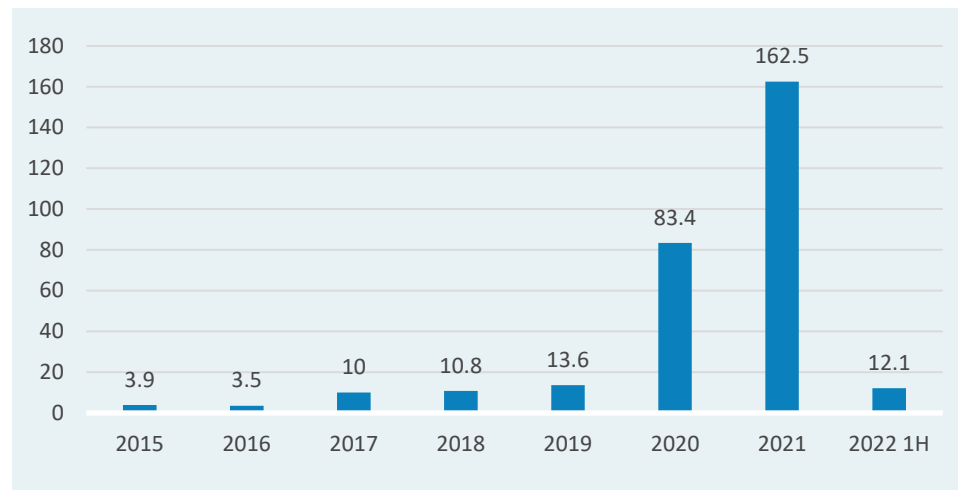
Source: Morningstar, as of 6/30/22

# SPACs development

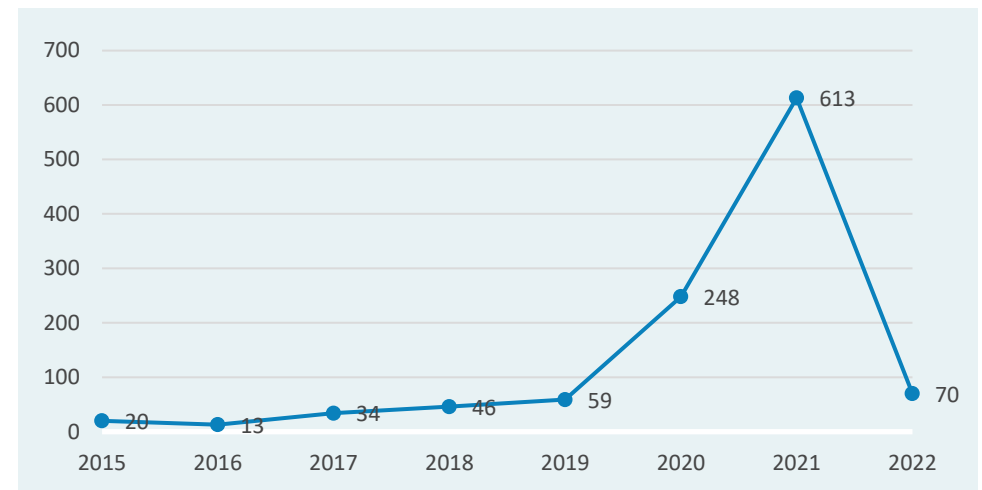
While SPACs proliferated between 2020 through 2021, coinciding with record retail investor trading volume, this activity has subsided notably in 2022.

Market volatility year-to-date and reduced market liquidity have rendered speculative areas of the markets, including SPACs, less attractive. Existing SPAC sponsors from 2020-2021 are struggling to source target deals for their mergers, rendering a large volume of SPAC sponsors at risk of returning their capital to investors without a successful deal executed. The required holding lock-up period after SPACs go public, as well as the impact of market volatility, have led many venture capital and private equity funds to reevaluate the viability of SPAC as an exit channel.

U.S. SPAC AMOUNT RAISED (\$BILLIONS)



NUMBER OF SPAC IPOs

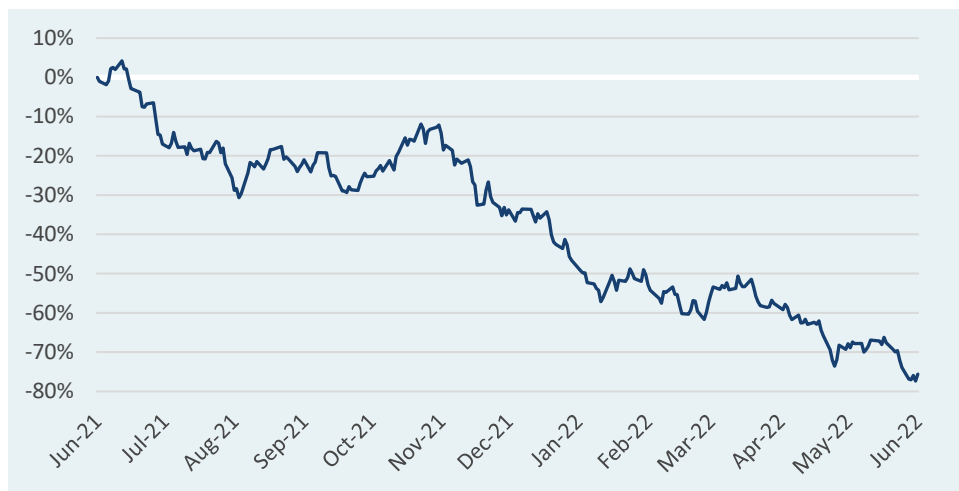


Source: SPAC Research, as of 6/30/22

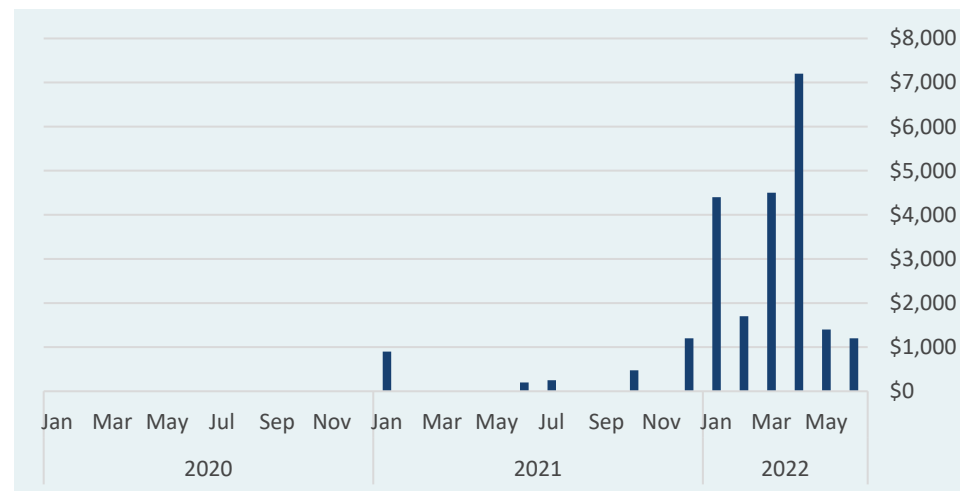
# SPACs return analysis

- For **institutional investors**: A number of companies that initially went public via a merger with a SPAC have seen very large share price declines and have since been acquired by a competitor at a far lower price.
- For **retail investors**: Declining share prices of SPACs have eroded billions of dollars of value for shareholders who held SPACs after their acquisition deals.
- Blank check companies have a history of surging and subsiding. During the 1980s, SPACs had boomed, and many were eventually wiped out when Congress passed more stringent regulations. The Securities Exchange Commission is currently tightening regulations around SPACs amid the resurgence.

DE-SPAC INDEX - CHANGE SINCE JUNE 17, 2021



WITHDRAWN SPACs - VALUE OF FILINGS PULLED BY SPONSORS (\$M)

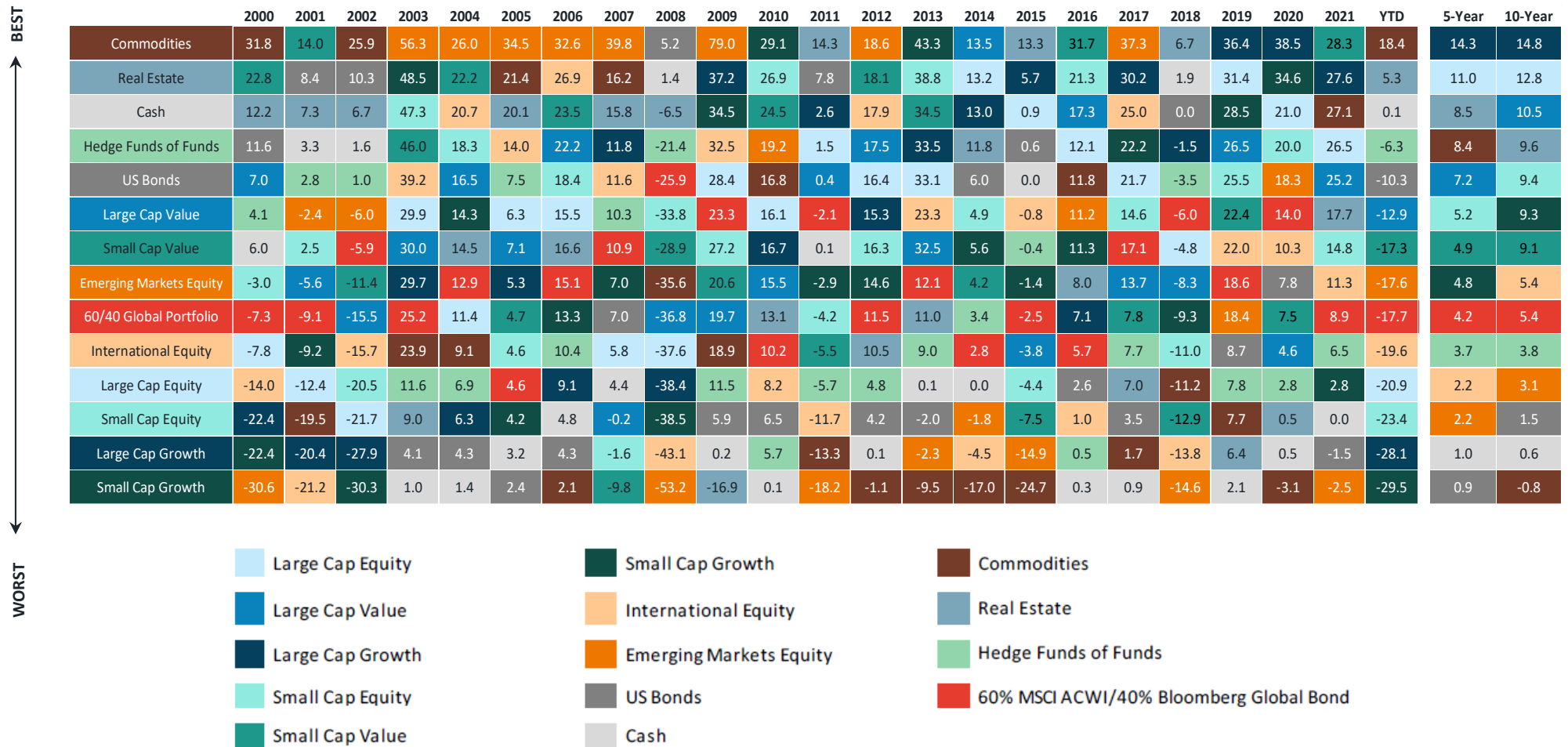


Source: Bloomberg, as of 6/30/22



# Appendix

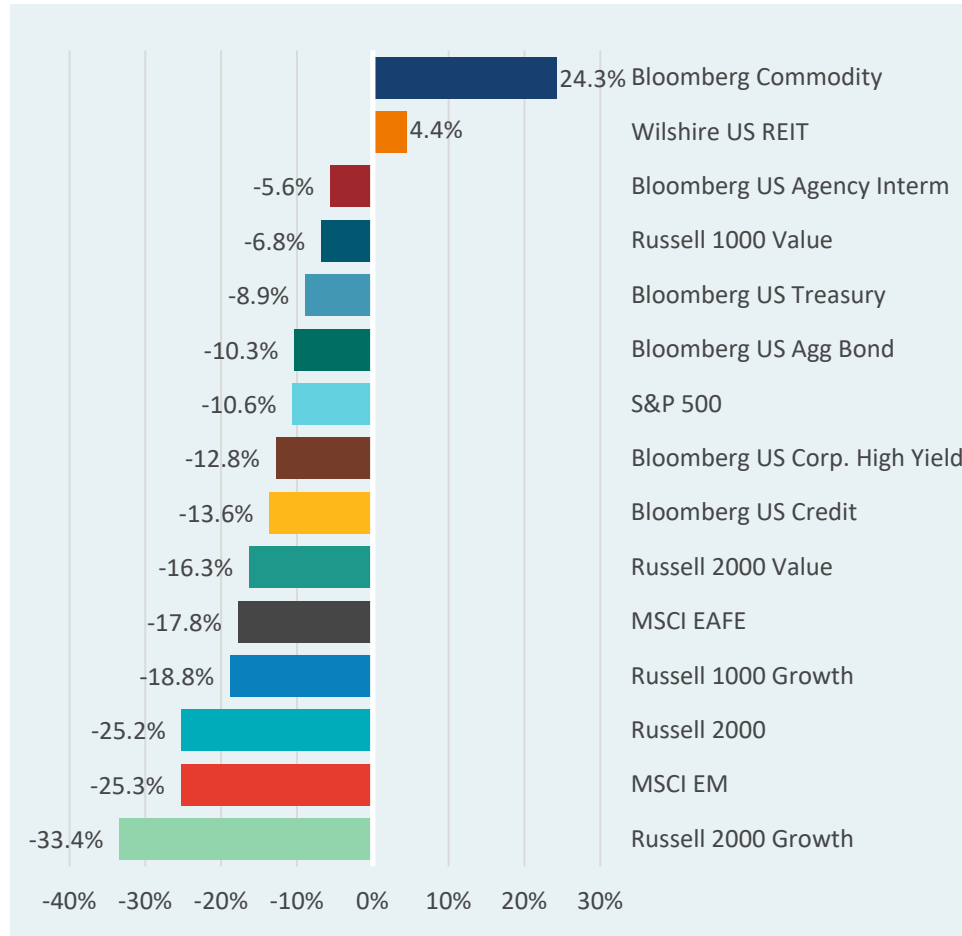
# Periodic table of returns



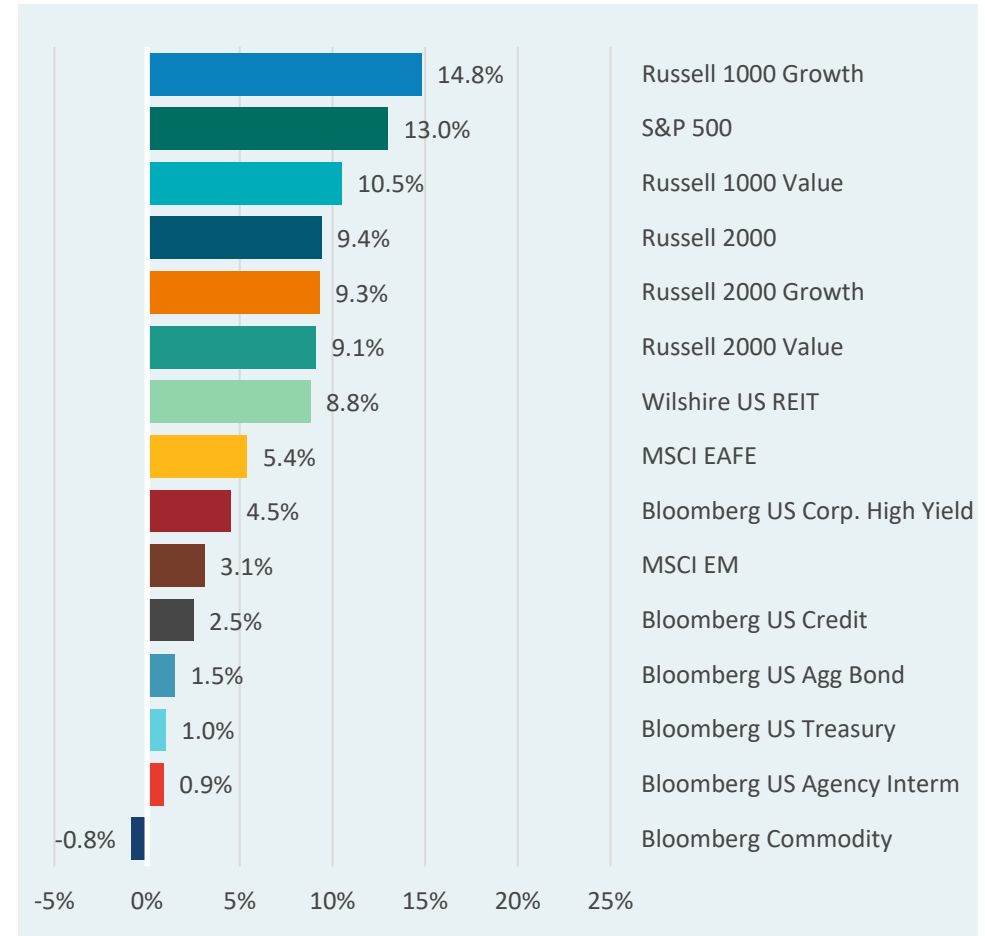
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 3/31/22.

# Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



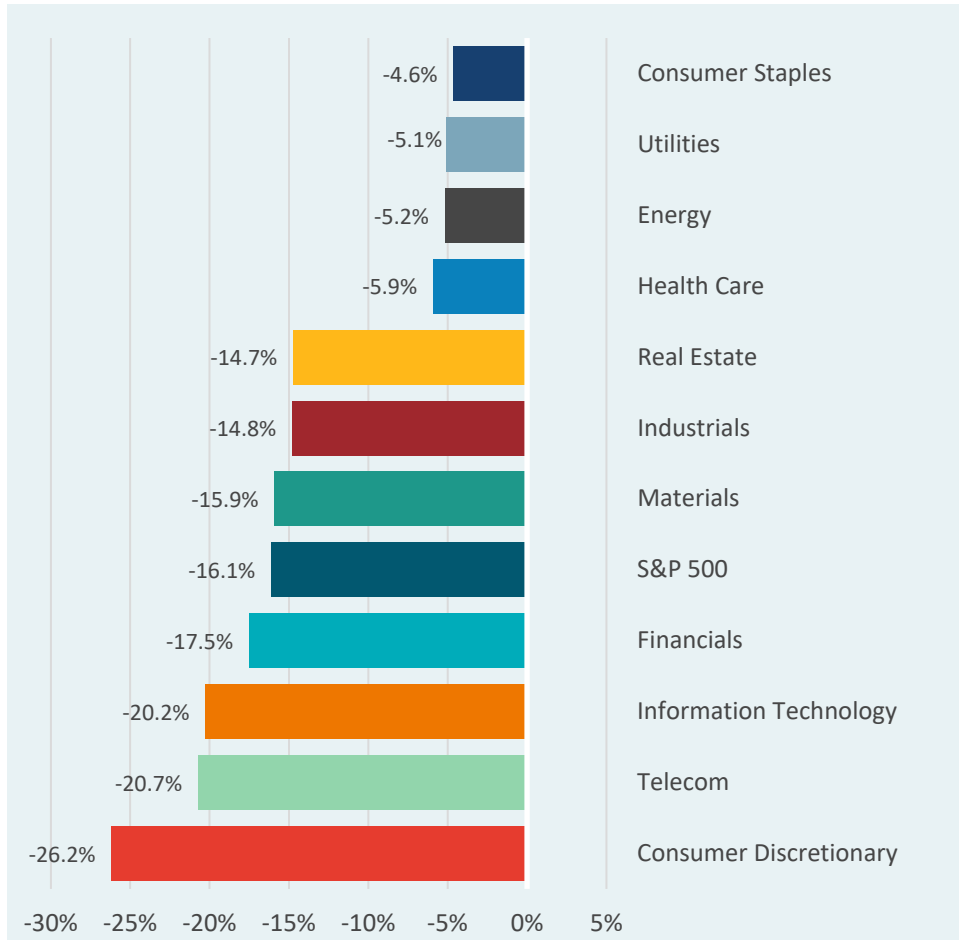
\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/22

Source: Morningstar, as of 6/30/22

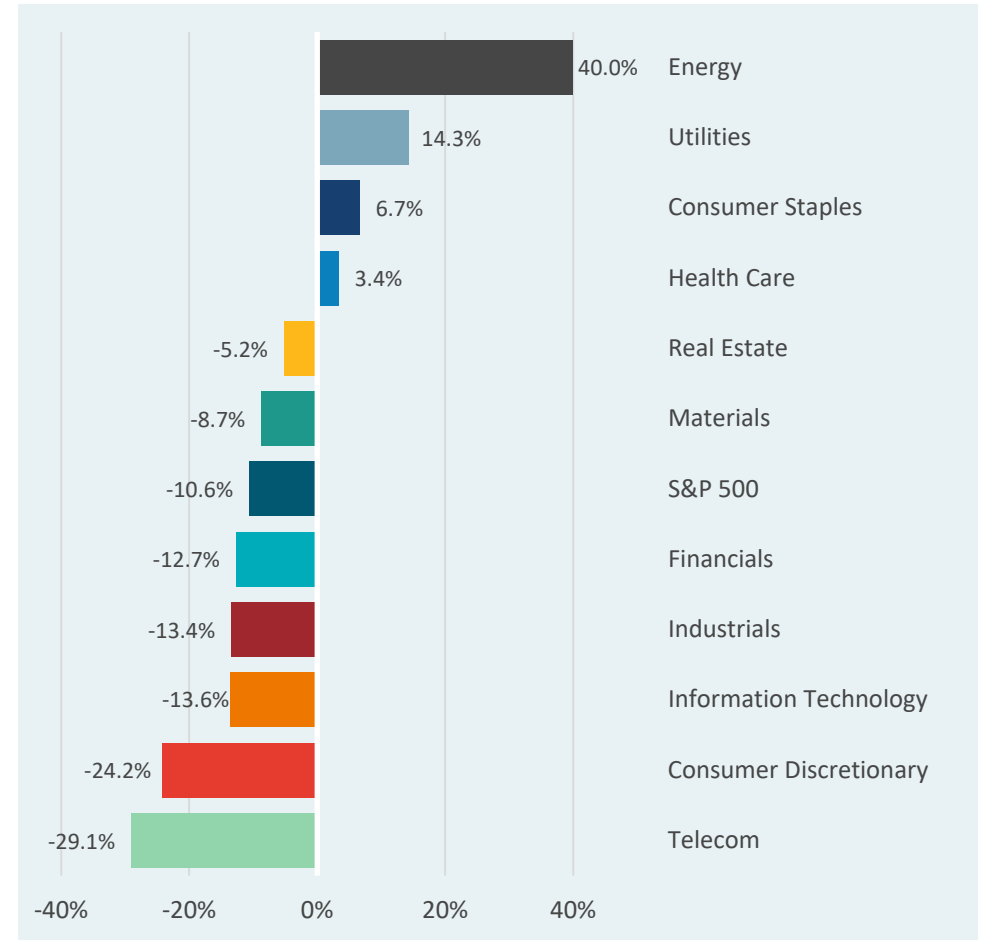
# S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/22

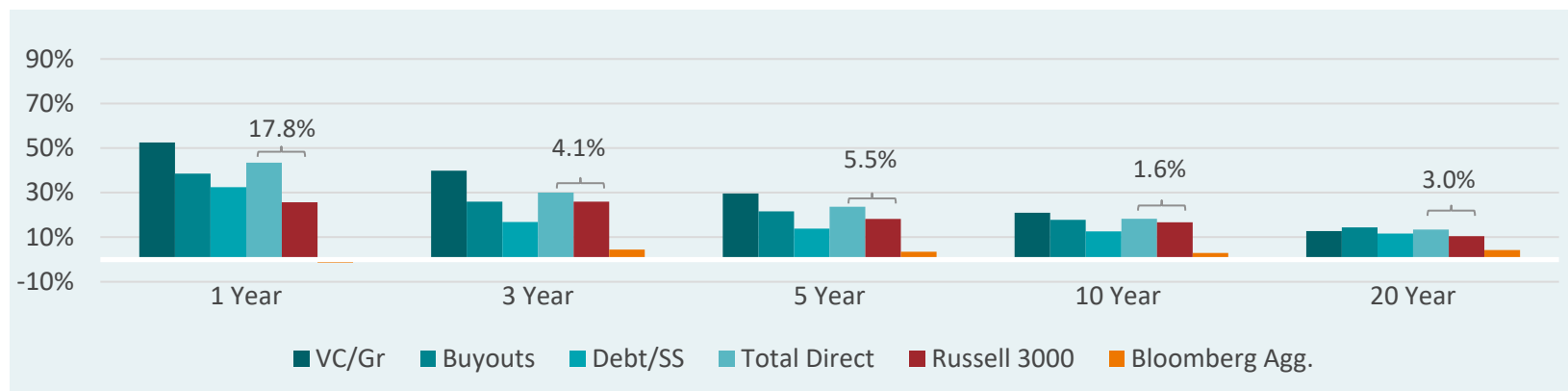
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/22

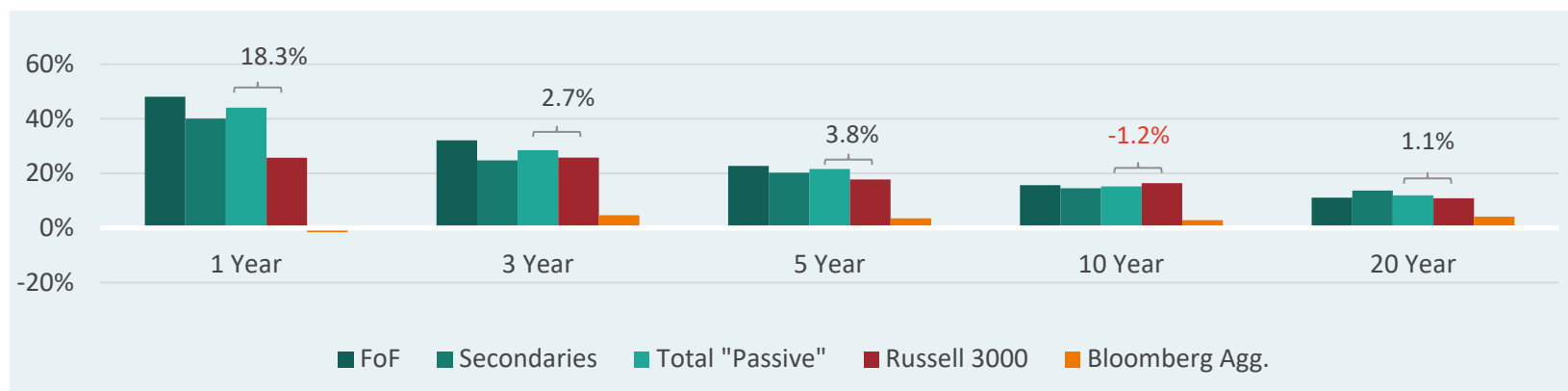
# Private equity vs. traditional assets performance

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

## "PASSIVE" STRATEGIES

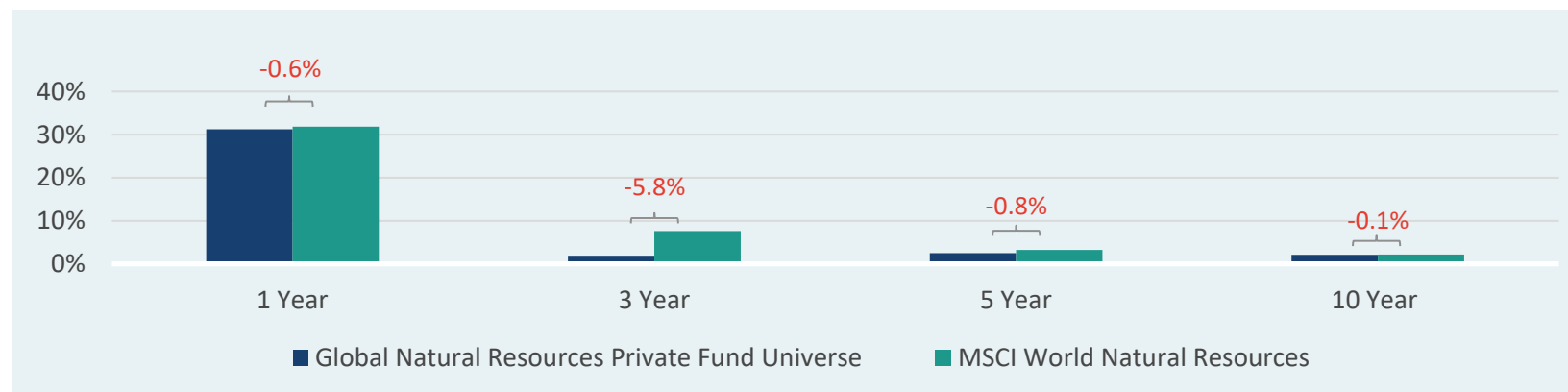


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 10-year basis.

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of December 31 2021. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

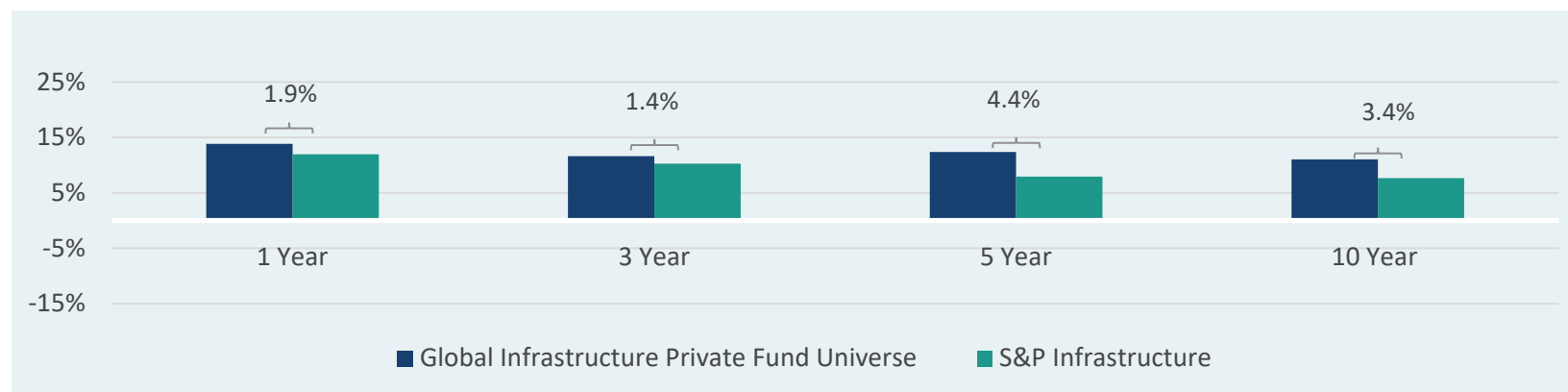
# Private vs. liquid real assets performance

## GLOBAL NATURAL RESOURCES FUNDS



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

## GLOBAL INFRASTRUCTURE FUNDS

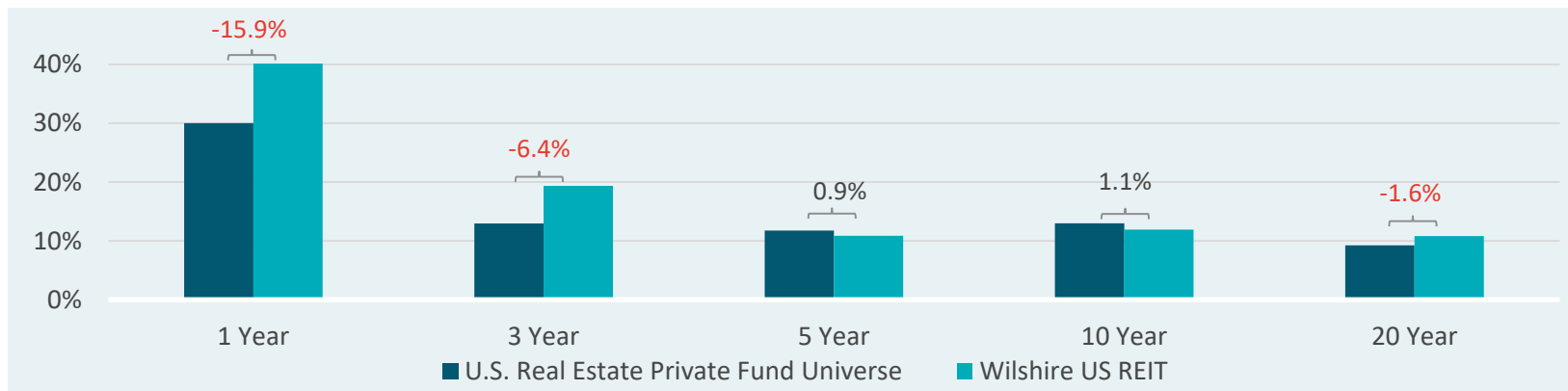


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Refinitiv 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, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

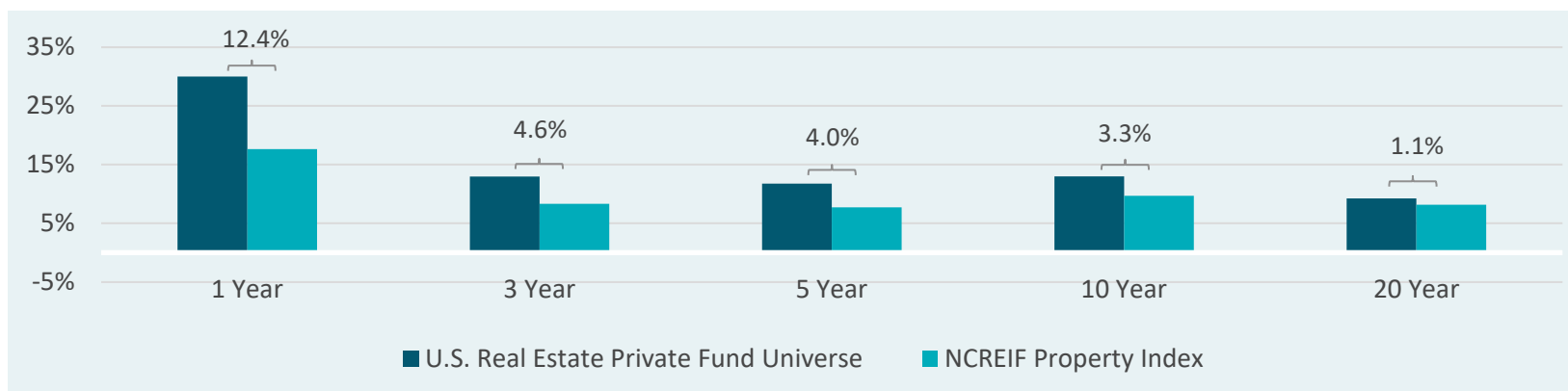
# Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index across all time periods, aside on a 5 and 10 -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.

Sources: Refinitiv PME: U.S. Real Estate universes as of December 31, 2021. 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	(8.3)	(16.1)	(20.0)	(10.6)	10.6	11.3	13.0
S&P 500 Equal Weighted	(9.4)	(14.4)	(16.7)	(9.4)	9.7	9.9	12.7
DJ Industrial Average	(6.6)	(10.8)	(14.4)	(9.1)	7.2	10.0	11.7
Russell Top 200	(7.8)	(16.6)	(20.7)	(11.5)	11.5	12.2	13.4
Russell 1000	(8.4)	(16.7)	(20.9)	(13.0)	10.2	11.0	12.8
Russell 2000	(8.2)	(17.2)	(23.4)	(25.2)	4.2	5.2	9.4
Russell 3000	(8.4)	(16.7)	(21.1)	(13.9)	9.8	10.6	12.6
Russell Mid Cap	(10.0)	(16.8)	(21.6)	(17.3)	6.6	8.0	11.3
<b>Style Index</b>							
Russell 1000 Growth	(7.9)	(20.9)	(28.1)	(18.8)	12.6	14.3	14.8
Russell 1000 Value	(8.7)	(12.2)	(12.9)	(6.8)	6.9	7.2	10.5
Russell 2000 Growth	(6.2)	(19.3)	(29.5)	(33.4)	1.4	4.8	9.3
Russell 2000 Value	(9.9)	(15.3)	(17.3)	(16.3)	6.2	4.9	9.1

## INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
MSCI ACWI	(8.4)	(15.7)	(20.2)	(15.8)	6.2	7.0	8.8
MSCI ACWI ex US	(8.6)	(13.7)	(18.4)	(19.4)	1.4	2.5	4.8
MSCI EAFE	(9.3)	(14.5)	(19.6)	(17.8)	1.1	2.2	5.4
MSCI EM	(6.6)	(11.4)	(17.6)	(25.3)	0.6	2.2	3.1
MSCI EAFE Small Cap	(11.0)	(17.7)	(24.7)	(24.0)	1.1	1.7	7.2
<b>Style Index</b>							
MSCI EAFE Growth	(8.6)	(16.9)	(26.8)	(23.8)	1.3	3.5	6.3
MSCI EAFE Value	(10.0)	(12.4)	(12.1)	(11.9)	0.2	0.5	4.2
<b>Regional Index</b>							
MSCI UK	(8.6)	(10.5)	(8.8)	(4.0)	1.2	2.2	3.7
MSCI Japan	(7.9)	(14.6)	(20.3)	(19.9)	1.0	1.8	5.6
MSCI Euro	(11.3)	(15.8)	(25.2)	(23.8)	(1.1)	0.4	5.3
MSCI EM Asia	(4.8)	(9.3)	(17.2)	(25.9)	3.1	3.4	5.5
MSCI EM Latin American	(17.0)	(21.9)	(0.6)	(16.1)	(6.3)	(0.6)	(2.2)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
Bloomberg US TIPS	(3.2)	(6.1)	(8.9)	(5.1)	3.0	3.2	1.7
Bloomberg US Treasury Bills	(0.0)	0.1	0.0	0.0	0.6	1.1	0.6
Bloomberg US Agg Bond	(1.6)	(4.7)	(10.3)	(10.3)	(0.9)	0.9	1.5
Bloomberg US Universal	(2.0)	(5.1)	(10.9)	(10.9)	(0.9)	0.9	1.8
<b>Duration</b>							
Bloomberg US Treasury 1-3 Yr	(0.6)	(0.5)	(3.0)	(3.5)	0.2	0.9	0.8
Bloomberg US Treasury Long	(1.5)	(11.9)	(21.3)	(18.5)	(2.9)	0.5	1.6
Bloomberg US Treasury	(0.9)	(3.8)	(9.1)	(8.9)	(0.9)	0.7	1.0
<b>Issuer</b>							
Bloomberg US MBS	(1.6)	(4.0)	(8.8)	(9.0)	(1.4)	0.4	1.2
Bloomberg US Corp. High Yield	(6.7)	(9.8)	(14.2)	(12.8)	0.2	2.1	4.5
Bloomberg US Agency Interm	(0.6)	(1.3)	(5.0)	(5.6)	(0.3)	0.8	0.9
Bloomberg US Credit	(2.6)	(6.9)	(13.8)	(13.6)	(1.0)	1.2	2.5

## OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Index</b>							
Bloomberg Commodity	(10.8)	(5.7)	18.4	24.3	14.3	8.4	(0.8)
Wilshire US REIT	(7.3)	(5.4)	(14.9)	4.4	7.4	7.5	8.8
CS Leveraged Loans	(2.1)	(4.4)	(4.4)	(2.7)	2.0	3.0	3.9
S&P Global Infrastructure	(7.7)	(7.4)	(0.5)	5.6	3.5	4.8	7.2
Alerian MLP	(14.0)	(7.4)	10.1	4.1	(1.2)	(1.2)	0.8
<b>Regional Index</b>							
JPM EMBI Global Div	(6.2)	(11.4)	(20.3)	(21.2)	(5.2)	(1.2)	2.2
JPM GBI-EM Global Div	(4.5)	(8.6)	(14.5)	(19.3)	(5.8)	(2.3)	(1.5)
<b>Hedge Funds</b>							
HFRI Composite	(3.1)	(4.9)	(5.9)	(5.8)	6.1	5.0	5.0
HFRI FOF Composite	(0.9)	(3.6)	(6.3)	(5.2)	4.1	3.7	3.8
<b>Currency (Spot)</b>							
Euro	(2.4)	(6.0)	(8.1)	(11.8)	(2.8)	(1.7)	(1.9)
Pound Sterling	(3.6)	(7.8)	(10.3)	(12.1)	(1.5)	(1.3)	(2.5)
Yen	(5.3)	(10.7)	(15.2)	(18.3)	(7.4)	(3.7)	(5.2)

Source: Morningstar, HFRI, as of 6/30/22.



# 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, 2022



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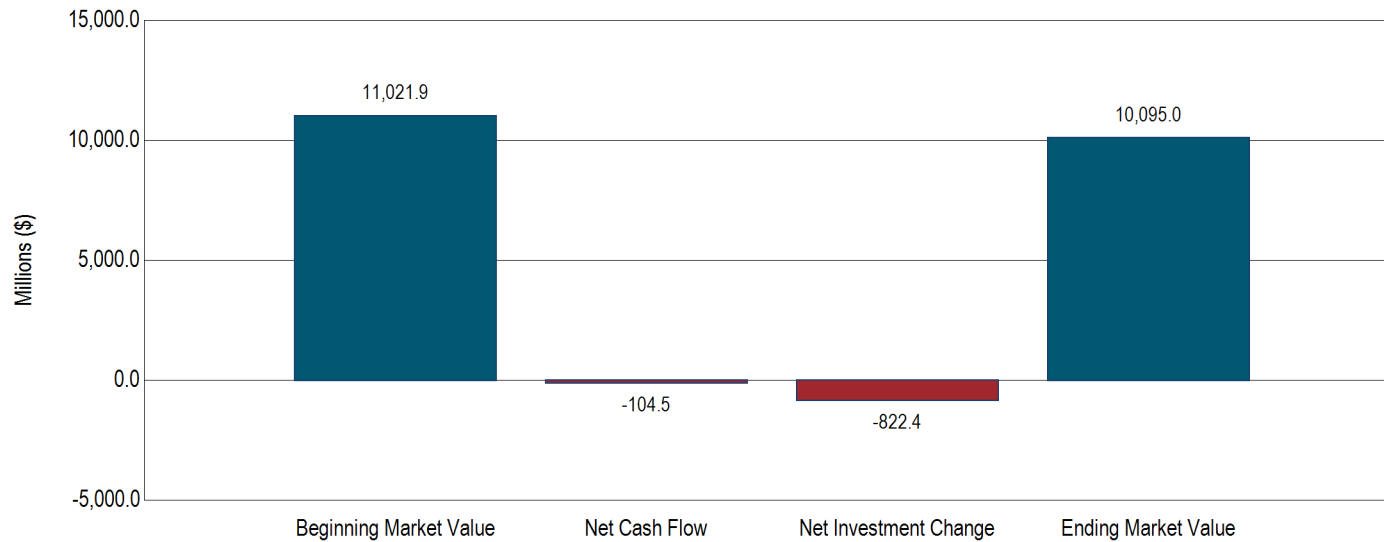
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PITTSBURGH 412-784-6678

Portfolio Reconciliation

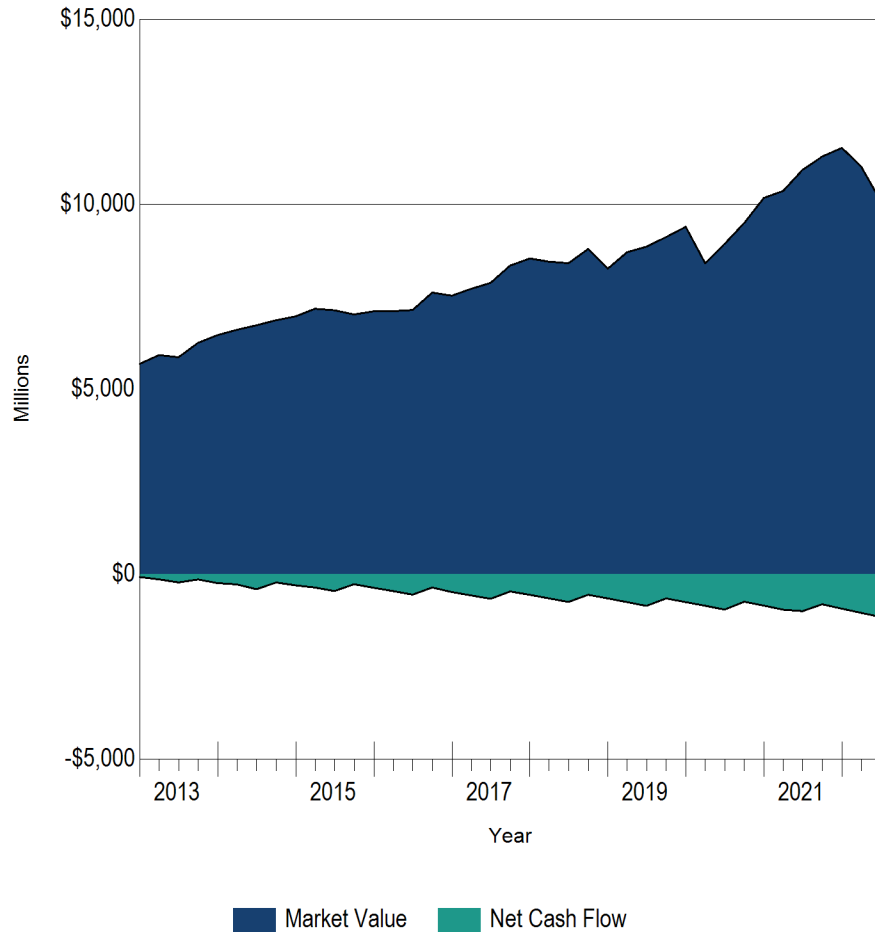
	Last Three Months	Year-To-Date
Beginning Market Value	\$11,021,872,095	\$11,520,465,270
Net Cash Flow	-\$104,487,485	-\$209,997,700
Net Investment Change	-\$822,389,795	-\$1,215,472,755
Ending Market Value	\$10,094,994,815	\$10,094,994,815

Change in Market Value  
Last Three Months

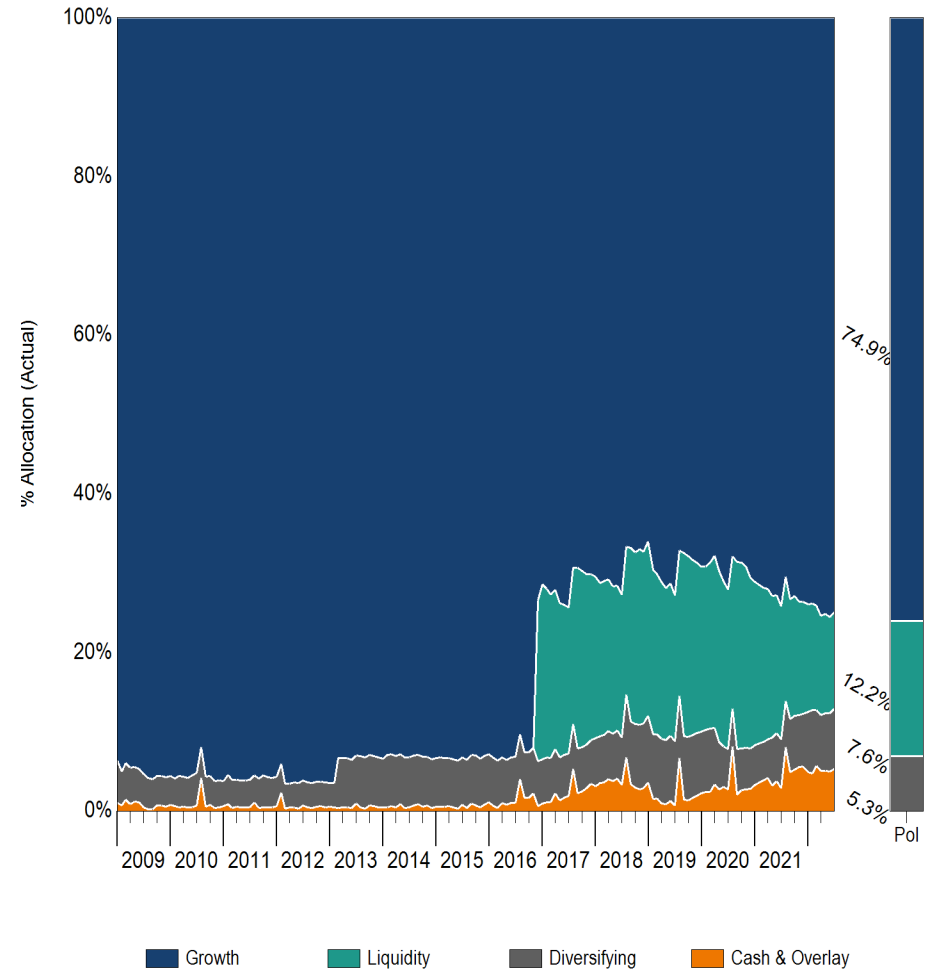


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History  
Cumulative Cash Flows



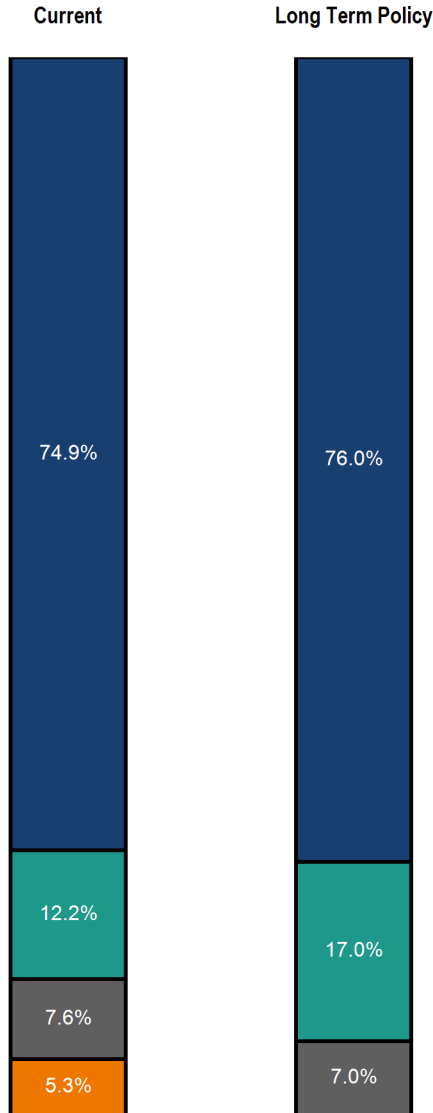
Asset Allocation History



Policy reflects FFP 4-Yr allocations approved in June 2021.

Total Fund  
Asset Allocation vs. Long Term Target Policy

Period Ending: June 30, 2022



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference
Growth	\$7,563,348,619	74.9%	76.0%	-\$108,638,483
Liquidity	\$1,228,383,394	12.2%	17.0%	-\$487,718,984
Diversifying	\$764,977,671	7.6%	7.0%	\$58,347,280
Cash & Overlay	\$538,010,187	5.3%	--	\$538,010,187
<b>Total</b>	<b>\$10,094,719,872</b>	<b>100.0%</b>	<b>100.0%</b>	

Allocation vs. Current Targets

	Current Balance	Current Allocation	Current Target	Difference
Growth	\$7,563,348,619	74.9%	75.0%	-\$7,691,285
Liquidity	\$1,228,383,394	12.2%	18.0%	-\$588,666,183
Diversifying	\$764,977,671	7.6%	7.0%	\$58,347,280
Cash & Overlay	\$538,010,187	5.3%	--	\$538,010,187
<b>Total</b>	<b>\$10,094,719,872</b>	<b>100.0%</b>	<b>100.0%</b>	

Long Term Targets reflect FFP 4-Yr allocations approved in June 2021.  
Current Targets reflect targets approved in June 2021.

Total Fund  
Executive Summary (Net of Fees)

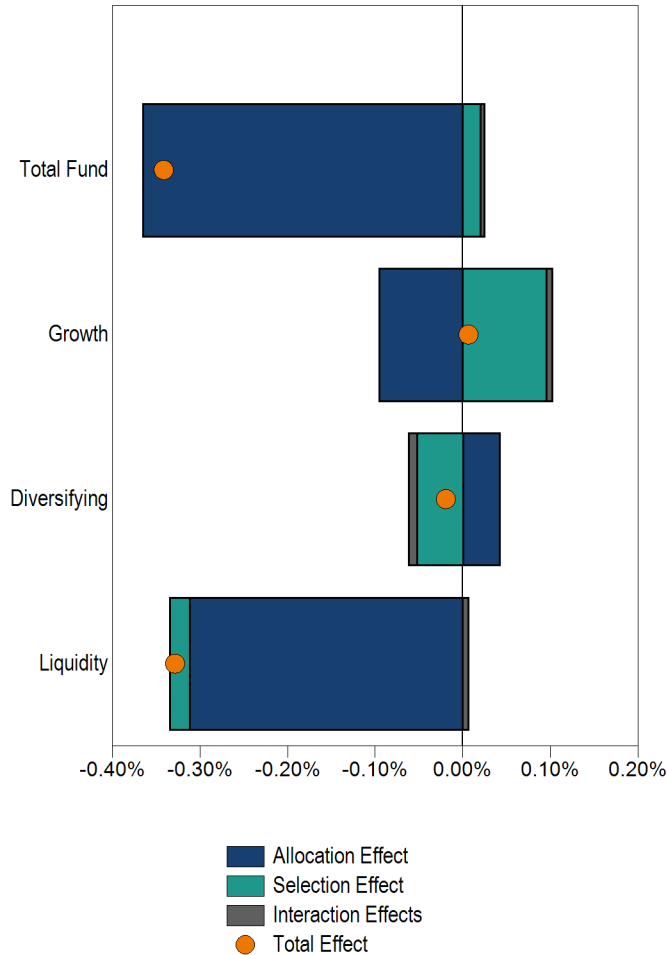
Period Ending: June 30, 2022

	% of Portfolio	QTD	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
<b>Total Fund</b>	<b>100.0</b>	<b>-7.7</b>	<b>-10.8</b>	<b>-6.7</b>	<b>5.1</b>	<b>5.7</b>	<b>7.4</b>	<b>13.9</b>	<b>9.2</b>	<b>14.6</b>	<b>-2.7</b>	<b>13.9</b>
<i>Policy Index</i>		-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7
<b>Growth</b>	<b>74.9</b>	<b>-9.0</b>	<b>-12.1</b>	<b>-6.4</b>	<b>7.5</b>	<b>7.7</b>	<b>8.9</b>	<b>19.2</b>	<b>12.0</b>	<b>18.3</b>	<b>-3.9</b>	<b>18.7</b>
<i>Custom Growth Benchmark</i>		-9.1	-11.0	-3.3	9.7	9.4	9.8	21.6	13.8	19.3	-2.1	19.3
<b>Diversifying</b>	<b>7.6</b>	<b>-0.7</b>	<b>-3.5</b>	<b>-3.2</b>	<b>-0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>1.7</b>	<b>-1.7</b>	<b>6.8</b>	<b>-2.3</b>	<b>2.6</b>
<i>Custom Diversifying Benchmark</i>		-2.1	-4.9	-3.9	1.0	2.1	2.5	1.6	4.7	6.1	1.4	4.7
<b>Liquidity</b>	<b>12.2</b>	<b>-0.8</b>	<b>-3.2</b>	<b>-3.7</b>	<b>0.4</b>	<b>1.3</b>	<b>--</b>	<b>-0.3</b>	<b>3.4</b>	<b>4.8</b>	<b>1.7</b>	<b>1.4</b>
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>		-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8

\*Correlation between the Growth and Diversifying composites is .50, .62 and .54 over the previous 1, 3 and 5 year periods respectively.

Policy Index (7/1/2021-Present): 16% Russell 3000, 16% MSCI ACWI ex-US (Gross), 9% MSCI ACWI (Net), 2% Wilshire REIT, 8% Private Real Estate composite returns, 3% CPI +4%, 11% Private Equity composite returns, 3% CPI +4%, 11% Private Equity composite returns, 8% Private Credit composite returns, 2% ICE BofAML High Yield Master II, 18% Bloomberg 1-3 Yr Gov/Credit, 2.5% Bloomberg US Aggregate, 3% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate, 1.5% HFRI EH Equity Market Neutral.

Attribution Effects  
 3 Months Ending June 30, 2022



Performance Attribution

	Quarter
Wtd. Actual Return	-7.31%
Wtd. Index Return *	-6.96%
<b>Excess Return</b>	<b>-0.34%</b>
Selection Effect	0.02%
Allocation Effect	-0.37%
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
Growth	-9.0%	-9.1%	0.1%	0.1%	-0.1%	0.0%	0.0%
Diversifying	-0.7%	0.1%	-0.8%	-0.1%	0.0%	0.0%	0.0%
Liquidity	-0.8%	-0.6%	-0.1%	0.0%	-0.3%	0.0%	-0.3%
<b>Total</b>	<b>-7.3%</b>	<b>-7.0%</b>	<b>-0.3%</b>	<b>0.0%</b>	<b>-0.4%</b>	<b>0.0%</b>	<b>-0.3%</b>

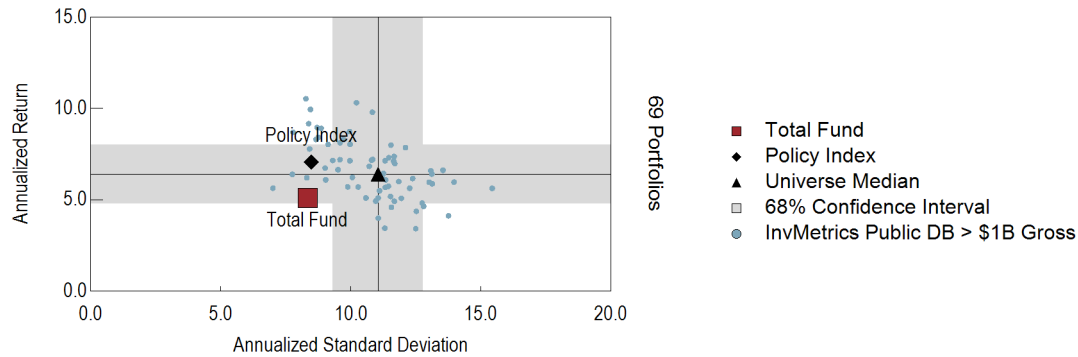
# Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2022

## 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	5.10%	-1.94%	8.34%	-1.60%	0.95	2.20%	0.93	0.55	-0.88	90.51%	107.16%

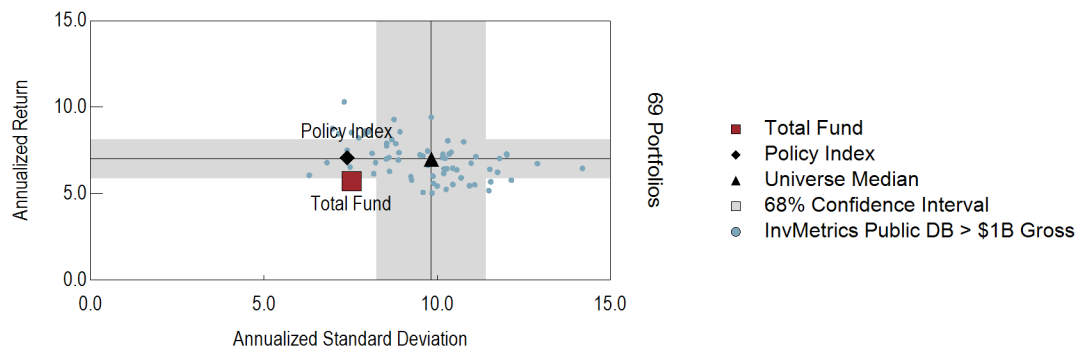
## Risk vs. Return



## 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	5.69%	-1.37%	7.53%	-1.25%	0.98	1.93%	0.93	0.62	-0.71	94.34%	108.66%

## Risk vs. Return





Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Total Fund</b>	<b>10,094,994,815</b>	<b>100.0</b>	<b>-7.6</b>	<b>-10.7</b>	<b>-6.5</b>	<b>5.4</b>	<b>6.0</b>	<b>7.9</b>	<b>14.2</b>	<b>9.5</b>	<b>14.9</b>	<b>-2.5</b>	<b>14.2</b>		
Policy Index			-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7		
InvMetrics Public DB > \$1B Gross Rank			35	43	41	79	82	61	62	78	83	25	83		
<b>Total Fund ex Overlay &amp; Cash</b>	<b>9,556,984,628</b>	<b>94.7</b>	<b>-7.3</b>	<b>-10.2</b>	<b>-5.6</b>	<b>5.7</b>	<b>6.2</b>	<b>8.0</b>	<b>14.6</b>	<b>9.7</b>	<b>14.7</b>	<b>-2.1</b>	<b>14.1</b>		
Policy Index			-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7		
InvMetrics Public DB > \$1B Gross Rank			25	35	36	68	72	54	55	72	85	20	84		
<b>Growth</b>	<b>7,563,623,562</b>	<b>74.9</b>	<b>-8.9</b>	<b>-12.0</b>	<b>-6.1</b>	<b>7.8</b>	<b>8.1</b>	<b>9.4</b>	<b>19.6</b>	<b>12.4</b>	<b>18.7</b>	<b>-3.6</b>	<b>19.1</b>		
Custom Growth Benchmark			-9.1	-11.0	-3.3	9.7	9.4	9.8	21.6	13.8	19.3	-2.1	19.3		
<b>Total Domestic Equity</b>	<b>1,465,205,679</b>	<b>14.5</b>	<b>-16.9</b>	<b>-22.0</b>	<b>-17.5</b>	<b>7.2</b>	<b>8.8</b>	<b>11.9</b>	<b>20.6</b>	<b>22.2</b>	<b>26.7</b>	<b>-7.2</b>	<b>23.9</b>		
Russell 3000			-16.7	-21.1	-13.9	9.8	10.6	12.6	25.7	20.9	31.0	-5.2	21.1		
InvMetrics Public DB US Eq Gross Rank			92	95	97	96	87	64	97	10	87	78	6		
BlackRock Russell 1000 Index	735,558,303	7.3	-16.7	-20.9	-13.0	10.2	11.0	--	26.5	21.0	31.4	-4.8	--	11.0	Apr-17
Russell 1000			-16.7	-20.9	-13.0	10.2	11.0	--	26.5	21.0	31.4	-4.8	--	11.0	Apr-17
eV US Large Cap Equity Gross Rank			71	65	67	44	46	--	55	36	39	47	--		
Boston Partners	372,114,916	3.7	-11.0	-10.3	-3.0	10.1	9.1	11.9	31.3	3.0	24.3	-8.7	20.1	10.5	Jun-95
Russell 1000 Value			-12.2	-12.9	-6.8	6.9	7.2	10.5	25.2	2.8	26.5	-8.3	13.7	9.1	Jun-95
eV US Large Cap Value Equity Gross Rank			44	38	33	34	46	34	17	61	77	55	23		
Emerald Advisers	183,413,674	1.8	-20.0	-28.5	-29.2	2.8	7.2	12.0	5.5	39.0	30.3	-10.1	28.8	12.0	Apr-03
Russell 2000 Growth			-19.3	-29.5	-33.4	1.4	4.8	9.3	2.8	34.6	28.5	-9.3	22.2	9.9	Apr-03
eV US Small Cap Growth Equity Gross Rank			52	39	48	81	82	61	76	57	45	85	26		
Ceredex	173,993,462	1.7	-12.0	-17.5	-10.7	4.0	4.9	9.4	28.4	2.3	18.4	-11.3	11.4	9.4	Nov-11
Russell 2000 Value			-15.3	-17.3	-16.3	6.2	4.9	9.1	28.3	4.6	22.4	-12.9	7.8	9.4	Nov-11
eV US Small Cap Value Equity Gross Rank			29	69	45	91	79	81	60	69	87	25	48		

Individual closed end funds are not shown in performance summary table. Jackson Square has a residual balance of \$125,323.

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Total International Equity</b>	<b>1,498,122,285</b>	<b>14.8</b>	<b>-12.7</b>	<b>-20.1</b>	<b>-23.0</b>	<b>2.6</b>	<b>3.7</b>	<b>6.0</b>	<b>8.3</b>	<b>15.8</b>	<b>23.7</b>	<b>-14.3</b>	<b>25.5</b>		
MSCI ACWI ex USA Gross			-13.5	-18.2	-19.0	1.8	3.0	5.3	8.3	11.1	22.1	-13.8	27.8		
MSCI EAFE Gross			-14.3	-19.3	-17.3	1.5	2.7	5.9	11.8	8.3	22.7	-13.4	25.6		
InvMetrics Public DB ex-US Eq Gross Rank			24	57	87	20	13	29	45	23	28	44	90		
<b>International Equity</b>	<b>839,367,883</b>	<b>8.3</b>	<b>-13.2</b>	<b>-20.8</b>	<b>-20.1</b>	<b>3.7</b>	<b>4.5</b>	<b>6.6</b>	<b>9.0</b>	<b>19.0</b>	<b>27.0</b>	<b>-13.6</b>	<b>25.3</b>		
MSCI ACWI ex USA Gross			-13.5	-18.2	-19.0	1.8	3.0	5.3	8.3	11.1	22.1	-13.8	27.8		
InvMetrics Public DB ex-US Eq Gross Rank			40	77	46	4	5	5	32	13	7	21	93		
Pyrford	447,718,985	4.4	-8.2	-9.8	-9.3	2.9	3.5	--	7.6	4.7	22.1	-10.1	19.8	3.3	May-14
MSCI ACWI ex USA Value			-11.9	-11.8	-12.8	0.6	1.2	--	10.5	-0.8	15.7	-14.0	22.7	0.8	May-14
eV ACWI ex-US Value Equity Gross Rank			8	10	9	45	23	--	84	33	35	5	84		
William Blair	391,648,898	3.9	-18.3	-30.5	-29.5	4.0	5.0	7.2	10.5	33.3	32.0	-16.8	30.9	5.8	Oct-10
MSCI ACWI ex USA Growth			-15.7	-24.8	-25.8	1.6	3.4	5.7	5.1	22.2	27.3	-14.4	32.0	4.2	Oct-10
eV ACWI ex-US Growth Equity Gross Rank			63	65	61	37	51	63	44	30	39	69	81		
<b>Emerging Markets Equity</b>	<b>658,754,402</b>	<b>6.5</b>	<b>-12.1</b>	<b>-19.2</b>	<b>-26.6</b>	<b>1.1</b>	<b>2.9</b>	<b>--</b>	<b>7.6</b>	<b>11.4</b>	<b>19.4</b>	<b>-15.3</b>	<b>--</b>		
MSCI Emerging Markets			-11.4	-17.6	-25.3	0.6	2.2	--	-2.5	18.3	18.4	-14.6	--		
InvMetrics Public DB Emg Mkt Eq Gross Rank			--	--	--	--	--	--	2	81	31	51	--		
PIMCO RAE Emerging Markets	324,030,742	3.2	-13.1	-16.2	-19.0	1.6	3.1	--	17.1	2.1	14.6	-12.3	--	3.1	Feb-17
MSCI Emerging Markets Value NR			-10.8	-13.9	-18.6	-1.0	1.2	--	4.0	5.5	12.0	-10.7	--	2.1	Feb-17
eV Emg Mkts All Cap Value Equity Gross Rank			82	55	49	48	47	--	6	85	72	44	--		
TT Emerging Markets	334,723,660	3.3	-11.0	-21.8	-32.9	0.7	--	--	-0.2	20.8	24.8	-18.4	--	1.5	Jul-17
MSCI Emerging Markets			-11.4	-17.6	-25.3	0.6	--	--	-2.5	18.3	18.4	-14.6	--	1.0	Jul-17
eV Emg Mkts Equity Gross Rank			27	72	91	64	--	--	58	39	24	83	--		
<b>Total Global Equity</b>	<b>905,924,774</b>	<b>9.0</b>	<b>-15.6</b>	<b>-21.4</b>	<b>-17.6</b>	<b>6.7</b>	<b>7.8</b>	<b>9.9</b>	<b>14.1</b>	<b>25.3</b>	<b>28.9</b>	<b>-7.8</b>	<b>23.7</b>		
MSCI ACWI			-15.7	-20.2	-15.8	6.2	7.0	8.8	18.5	16.3	26.6	-9.4	24.0		
InvMetrics Public DB Glbl Eq Gross Rank			92	93	96	57	18	83	88	2	3	60	79		
Artisan Partners	434,618,621	4.3	-20.5	-30.9	-26.1	7.5	9.4	--	15.0	41.7	37.0	-7.9	32.9	11.4	Oct-12
MSCI ACWI Growth NR USD			-20.2	-27.9	-23.5	7.6	9.2	--	17.1	33.6	32.7	-8.1	30.0	9.8	Oct-12
eV All Global Equity Gross Rank			90	91	87	35	24	--	80	9	7	40	11		
First Eagle	471,188,220	4.7	-10.5	-9.8	-7.8	5.4	5.8	7.8	13.0	8.5	21.0	-7.6	15.1	7.4	Jan-11
MSCI ACWI Value NR USD			-11.5	-12.3	-8.1	3.9	4.3	6.9	19.6	-0.3	20.6	-10.8	18.3	5.7	Jan-11
eV All Global Equity Gross Rank			13	8	15	65	74	81	85	70	82	38	89		

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

Total Fund  
Performance Summary (Gross of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Private Credit</b>	<b>902,261,132</b>	<b>8.9</b>	<b>4.4</b>	<b>7.3</b>	<b>10.3</b>	<b>8.6</b>	<b>8.2</b>	<b>10.9</b>	<b>10.0</b>	<b>4.0</b>	<b>7.7</b>	<b>8.3</b>	<b>10.4</b>		
<b>Total High Yield</b>	<b>158,440,530</b>	<b>1.6</b>	<b>-9.9</b>	<b>-13.9</b>	<b>-12.4</b>	<b>-0.1</b>	<b>1.7</b>	<b>4.0</b>	<b>5.3</b>	<b>5.2</b>	<b>15.3</b>	<b>-3.2</b>	<b>6.5</b>		
<i>ICE BofAML High Yield Master II</i>			-10.0	-14.0	-12.7	0.0	2.0	4.4	5.4	6.2	14.4	-2.3	7.5		
<i>eV US High Yield Fixed Inc Gross Rank</i>			77	77	79	85	97	84	51	74	31	88	74		
Allianz Global Investors	158,440,530	1.6	-9.9	-13.9	-12.4	-0.1	1.7	4.0	5.3	5.2	15.3	-3.2	6.5	6.1	Apr-00
<i>ICE BofAML High Yield Master II</i>			-10.0	-14.0	-12.7	0.0	2.0	4.4	5.4	6.2	14.4	-2.3	7.5	6.2	Apr-00
<i>eV US High Yield Fixed Inc Gross Rank</i>			77	77	79	85	97	84	51	74	31	88	74		
<b>Total Real Estate</b>	<b>796,021,101</b>	<b>7.9</b>	<b>-3.6</b>	<b>0.2</b>	<b>10.8</b>	<b>4.9</b>	<b>6.7</b>	<b>9.4</b>	<b>19.2</b>	<b>-5.9</b>	<b>8.1</b>	<b>7.4</b>	<b>11.1</b>		
<i>Real Estate Benchmark</i>			-2.9	0.3	11.4	7.5	7.5	8.6	19.3	0.6	7.5	6.8	7.1		
<i>NCREIF-ODCE</i>			4.8	12.5	29.5	12.7	10.5	11.2	22.2	1.2	5.3	8.3	7.6		
<i>NCREIF Property Index</i>			3.2	8.7	21.5	10.2	8.9	9.7	17.7	1.6	6.4	6.7	7.0		
<b>Total Core RE</b>	<b>203,967,263</b>	<b>2.0</b>	<b>-16.0</b>	<b>-19.2</b>	<b>-3.2</b>	<b>6.9</b>	<b>7.7</b>	<b>8.7</b>	<b>48.3</b>	<b>-4.6</b>	<b>28.2</b>	<b>-5.0</b>	<b>7.8</b>		
Adelante	89,840,083	0.9	-17.9	-20.8	-5.1	6.2	7.2	8.5	48.3	-4.6	28.2	-5.0	7.8	10.0	Sep-01
<i>Wilshire REIT</i>			-18.5	-21.6	-6.7	4.0	5.3	7.3	46.2	-7.9	25.8	-4.8	4.2	9.4	Sep-01
Invesco US Fundamental Beta	114,127,181	1.1	-14.3	--	--	--	--	--	--	--	--	--	--	-8.9	Mar-22
<i>Wilshire REIT</i>			-18.5	--	--	--	--	--	--	--	--	--	--	-12.9	Mar-22
<b>Total Private Real Estate</b>	<b>592,053,837</b>	<b>5.9</b>	<b>1.4</b>	<b>6.4</b>	<b>15.9</b>	<b>5.6</b>	<b>7.1</b>	<b>10.1</b>	<b>15.3</b>	<b>-6.1</b>	<b>6.2</b>	<b>8.8</b>	<b>11.4</b>		
<b>Private Equity</b>	<b>1,422,347,997</b>	<b>14.1</b>	<b>0.5</b>	<b>3.6</b>	<b>34.4</b>	<b>23.7</b>	<b>17.9</b>	<b>15.3</b>	<b>60.4</b>	<b>8.7</b>	<b>8.4</b>	<b>12.1</b>	<b>11.9</b>		
<b>Risk Parity</b>	<b>415,300,065</b>	<b>4.1</b>	<b>-12.6</b>	<b>-16.9</b>	<b>-14.2</b>	<b>1.7</b>	<b>--</b>	<b>--</b>	<b>9.7</b>	<b>10.0</b>	<b>--</b>	<b>--</b>	<b>--</b>		
<i>60% MSCI ACWI Net/40% Bloomberg Global Aggregate</i>			-12.7	-17.7	-15.4	2.6	--	--	8.8	14.0	--	--	--		
AQR Global Risk Premium-EL	196,593,496	1.9	-9.3	-12.8	-9.7	2.7	--	--	10.7	6.2	--	--	--	5.8	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			-11.0	-15.4	-13.6	-0.7	--	--	6.8	3.6	--	--	--	3.0	Jan-19
PanAgora Risk Parity Multi Asset	218,706,569	2.2	-15.3	-20.2	-17.9	1.0	--	--	8.7	14.0	--	--	--	3.5	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			-11.0	-15.4	-13.6	-0.7	--	--	6.8	3.6	--	--	--	1.3	Feb-19

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

# Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Diversifying</b>	<b>764,977,671</b>	<b>7.6</b>	<b>-0.6</b>	<b>-3.3</b>	<b>-2.8</b>	<b>0.0</b>	<b>0.8</b>	<b>0.7</b>	<b>2.0</b>	<b>-1.3</b>	<b>7.1</b>	<b>-2.0</b>	<b>2.8</b>		
Custom Diversifying Benchmark			-2.1	-4.9	-3.9	1.0	2.1	2.5	1.6	4.7	6.1	1.4	4.7		
<b>Diversifying Fixed Income</b>	<b>232,483,592</b>	<b>2.3</b>	<b>-4.1</b>	<b>-9.7</b>	<b>-9.8</b>	<b>-2.3</b>	<b>-0.2</b>	<b>1.1</b>	<b>-0.7</b>	<b>1.6</b>	<b>8.6</b>	<b>-1.7</b>	<b>2.8</b>		
Bloomberg US Aggregate TR			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-1.5	7.5	8.7	0.0	3.5		
eV US Core Fixed Inc Gross Rank			14	23	26	99	99	99	30	99	80	99	96		
AFL-CIO	232,398,083	2.3	-4.1	-9.7	-9.8	-0.9	1.0	1.8	-0.7	6.6	8.2	0.6	3.6	5.5	Jun-91
Bloomberg US Aggregate TR			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-1.5	7.5	8.7	0.0	3.5	5.1	Jun-91
eV US Core Fixed Inc Gross Rank			14	23	26	90	87	85	30	95	88	16	76		
<b>Diversifying Multi-Asset</b>	<b>532,494,080</b>	<b>5.3</b>	<b>1.0</b>	<b>-0.5</b>	<b>-0.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>		
Custom Diversifying Multi-Asset Benchmark			-1.6	-3.8	-2.3	--	--	--	4.1	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	255,461,740	2.5	3.0	0.4	0.8	--	--	--	1.7	--	--	--	--	2.0	Aug-20
FTSE 3-Month T-bill +5%			1.4	2.6	5.2	--	--	--	5.0	--	--	--	--	5.1	Aug-20
Sit LLCAR	277,032,339	2.7	-0.8	-1.3	-0.6	--	--	--	--	--	--	--	--	2.5	Apr-21
Bloomberg US Aggregate Index + 100 bps			-4.5	-9.9	-9.4	--	--	--	--	--	--	--	--	-6.0	Apr-21
<b>Liquidity</b>	<b>1,228,383,394</b>	<b>12.2</b>	<b>-0.7</b>	<b>-3.1</b>	<b>-3.6</b>	<b>0.5</b>	<b>1.4</b>	<b>--</b>	<b>-0.2</b>	<b>3.5</b>	<b>4.9</b>	<b>1.8</b>	<b>1.5</b>		
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8		
eV US Short Duration Fixed Inc Gross Rank			31	43	48	63	41	--	40	77	34	24	50		
DFA Short Credit	263,008,267	2.6	-1.8	-5.5	-6.1	-0.5	0.7	--	-0.4	2.9	5.2	1.2	1.9	0.9	Nov-16
ICE BofA 1-5 Yrs US Corp & Govt TR			-1.1	-4.6	-5.2	0.1	1.1	--	-0.9	4.6	5.1	1.4	1.3	1.2	Nov-16
eV US Short Duration Fixed Inc Gross Rank			91	96	97	99	99	--	64	90	21	93	26	99	Nov-16
Insight Short Duration	473,746,543	4.7	-0.3	-1.5	-1.6	1.2	1.7	--	0.1	3.2	4.7	1.7	1.5	1.7	Nov-16
Bloomberg US Govt/Credit 1-3 Yr. TR			-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8	1.1	Nov-16
eV US Short Duration Fixed Inc Gross Rank			2	4	4	7	15	--	25	86	45	38	50	20	Nov-16
Sit Short Duration	491,628,584	4.9	-0.6	-3.7	-4.4	0.3	1.6	--	-0.3	4.6	4.9	2.5	1.3	1.6	Nov-16
Bloomberg US Govt 1-3 Yr TR			-0.5	-3.0	-3.5	0.2	0.9	--	-0.6	3.1	3.6	1.6	0.4	0.9	Nov-16
eV US Short Duration Fixed Inc Gross Rank			23	62	73	74	20	--	55	26	35	1	68	30	Nov-16
<b>Total Cash</b>	<b>444,315,979</b>	<b>4.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.5</b>	<b>1.2</b>	<b>1.5</b>	<b>2.2</b>	<b>0.4</b>	<b>1.3</b>	<b>3.3</b>	<b>1.7</b>	<b>0.9</b>		
91 Day T-Bills			0.1	0.1	0.2	0.5	1.0	0.6	0.0	0.5	2.1	1.9	0.9		
Cash	443,752,652	4.4	0.2	0.3	0.4	1.2	1.5	2.2	0.4	1.3	3.4	1.7	0.9		
Northern Trust Transition	563,327	0.0	-6.0	2,748.0	2,651.6	281.9	--	--	-6.1	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. \$85,508.16 in residual value is reflected in the Diversifying Fixed Income composite.

# Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Total Fund</b>	<b>10,094,994,815</b>	<b>100.0</b>	<b>-7.7</b>	<b>-10.8</b>	<b>-6.7</b>	<b>5.1</b>	<b>5.7</b>	<b>7.4</b>	<b>13.9</b>	<b>9.2</b>	<b>14.6</b>	<b>-2.7</b>	<b>13.9</b>		
<i>Policy Index</i>			-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7		
<b>Total Fund ex Overlay &amp; Cash</b>	<b>9,556,984,628</b>	<b>94.7</b>	<b>-7.3</b>	<b>-10.3</b>	<b>-5.9</b>	<b>5.5</b>	<b>5.9</b>	<b>7.5</b>	<b>14.3</b>	<b>9.4</b>	<b>14.3</b>	<b>-2.4</b>	<b>13.8</b>		
<i>Policy Index</i>			-7.0	-8.9	-2.9	7.0	7.1	8.2	15.3	10.8	14.6	-0.9	13.7		
<b>Growth</b>	<b>7,563,623,562</b>	<b>74.9</b>	<b>-9.0</b>	<b>-12.1</b>	<b>-6.4</b>	<b>7.5</b>	<b>7.7</b>	<b>8.9</b>	<b>19.2</b>	<b>12.0</b>	<b>18.3</b>	<b>-3.9</b>	<b>18.7</b>		
<i>Custom Growth Benchmark</i>			-9.1	-11.0	-3.3	9.7	9.4	9.8	21.6	13.8	19.3	-2.1	19.3		
<b>Total Domestic Equity</b>	<b>1,465,205,679</b>	<b>14.5</b>	<b>-16.9</b>	<b>-22.2</b>	<b>-17.7</b>	<b>6.8</b>	<b>8.4</b>	<b>11.5</b>	<b>20.3</b>	<b>21.8</b>	<b>26.1</b>	<b>-7.6</b>	<b>23.5</b>		
<i>Russell 3000</i>			-16.7	-21.1	-13.9	9.8	10.6	12.6	25.7	20.9	31.0	-5.2	21.1		
BlackRock Russell 1000 Index	735,558,303	7.3	-16.7	-20.9	-13.0	10.2	11.0	--	26.5	20.9	31.4	-4.8	--	11.0	Apr-17
<i>Russell 1000</i>			-16.7	-20.9	-13.0	10.2	11.0	--	26.5	21.0	31.4	-4.8	--	11.0	Apr-17
Boston Partners	372,114,916	3.7	-11.0	-10.4	-3.3	9.7	8.8	11.6	31.0	2.6	23.8	-8.9	19.7	10.2	Jun-95
<i>Russell 1000 Value</i>			-12.2	-12.9	-6.8	6.9	7.2	10.5	25.2	2.8	26.5	-8.3	13.7	9.1	Jun-95
Emerald Advisers	183,413,674	1.8	-20.2	-28.7	-29.6	2.2	6.5	11.3	4.9	38.2	29.4	-10.7	28.0	11.4	Apr-03
<i>Russell 2000 Growth</i>			-19.3	-29.5	-33.4	1.4	4.8	9.3	2.8	34.6	28.5	-9.3	22.2	9.9	Apr-03
Ceredex	173,993,462	1.7	-12.1	-17.7	-11.2	3.4	4.3	8.8	27.7	1.7	17.7	-11.8	10.7	8.8	Nov-11
<i>Russell 2000 Value</i>			-15.3	-17.3	-16.3	6.2	4.9	9.1	28.3	4.6	22.4	-12.9	7.8	9.4	Nov-11
<b>Total International Equity</b>	<b>1,498,122,285</b>	<b>14.8</b>	<b>-12.7</b>	<b>-20.2</b>	<b>-23.2</b>	<b>2.2</b>	<b>3.2</b>	<b>5.6</b>	<b>7.8</b>	<b>15.2</b>	<b>23.2</b>	<b>-14.7</b>	<b>25.0</b>		
<i>MSCI ACWI ex USA Gross</i>			-13.5	-18.2	-19.0	1.8	3.0	5.3	8.3	11.1	22.1	-13.8	27.8		
<i>MSCI EAFE Gross</i>			-14.3	-19.3	-17.3	1.5	2.7	5.9	11.8	8.3	22.7	-13.4	25.6		
<b>International Equity</b>	<b>839,367,883</b>	<b>8.3</b>	<b>-13.2</b>	<b>-20.8</b>	<b>-20.2</b>	<b>3.4</b>	<b>4.1</b>	<b>6.3</b>	<b>8.7</b>	<b>18.5</b>	<b>26.5</b>	<b>-13.9</b>	<b>24.8</b>		
<i>MSCI ACWI ex USA Gross</i>			-13.5	-18.2	-19.0	1.8	3.0	5.3	8.3	11.1	22.1	-13.8	27.8		
Pyrford	447,718,985	4.4	-8.2	-9.8	-9.4	2.6	3.2	--	7.3	4.2	21.6	-10.5	19.3	2.9	May-14
<i>MSCI ACWI ex USA Value</i>			-11.9	-11.8	-12.8	0.6	1.2	--	10.5	-0.8	15.7	-14.0	22.7	0.8	May-14
William Blair	391,648,898	3.9	-18.3	-30.5	-29.6	3.7	4.7	6.8	10.2	32.8	31.5	-17.1	30.4	5.4	Oct-10
<i>MSCI ACWI ex USA Growth</i>			-15.7	-24.8	-25.8	1.6	3.4	5.7	5.1	22.2	27.3	-14.4	32.0	4.2	Oct-10
<b>Emerging Markets Equity</b>	<b>658,754,402</b>	<b>6.5</b>	<b>-12.1</b>	<b>-19.4</b>	<b>-27.0</b>	<b>0.5</b>	<b>2.3</b>	<b>--</b>	<b>7.0</b>	<b>10.7</b>	<b>18.7</b>	<b>-15.7</b>	<b>--</b>		
<i>MSCI Emerging Markets</i>			-11.4	-17.6	-25.3	0.6	2.2	--	-2.5	18.3	18.4	-14.6	--		
PIMCO RAE Emerging Markets	324,030,742	3.2	-13.1	-16.4	-19.3	1.1	2.6	--	16.5	1.6	14.0	-12.6	--	2.6	Feb-17
<i>MSCI Emerging Markets Value NR</i>			-10.8	-13.9	-18.6	-1.0	1.2	--	4.0	5.5	12.0	-10.7	--	2.1	Feb-17
TT Emerging Markets	334,723,660	3.3	-11.2	-22.0	-33.3	0.1	--	--	-0.9	20.0	24.0	-18.9	--	0.9	Jul-17
<i>MSCI Emerging Markets</i>			-11.4	-17.6	-25.3	0.6	--	--	-2.5	18.3	18.4	-14.6	--	1.0	Jul-17

Individual closed end funds are not shown in performance summary table. Jackson Square has a residual market value of \$125,323.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Total Global Equity</b>	<b>905,924,774</b>	<b>9.0</b>	<b>-15.8</b>	<b>-21.7</b>	<b>-18.2</b>	<b>5.9</b>	<b>7.0</b>	<b>9.1</b>	<b>13.2</b>	<b>24.4</b>	<b>27.9</b>	<b>-8.5</b>	<b>22.8</b>		
<i>MSCI ACWI</i>			-15.7	-20.2	-15.8	6.2	7.0	8.8	18.5	16.3	26.6	-9.4	24.0		
Artisan Partners	434,618,621	4.3	-20.7	-31.2	-26.6	6.7	8.6	--	14.1	40.6	36.0	-8.6	31.9	10.6	Oct-12
<i>MSCI ACWI Growth NR USD</i>			-20.2	-27.9	-23.5	7.6	9.2	--	17.1	33.6	32.7	-8.1	30.0	9.8	Oct-12
First Eagle	471,188,220	4.7	-10.7	-10.1	-8.5	4.6	5.0	7.0	12.1	7.7	20.1	-8.3	14.3	6.6	Jan-11
<i>MSCI ACWI Value NR USD</i>			-11.5	-12.3	-8.1	3.9	4.3	6.9	19.6	-0.3	20.6	-10.8	18.3	5.7	Jan-11
<b>Private Credit</b>	<b>902,261,132</b>	<b>8.9</b>	<b>4.4</b>	<b>7.3</b>	<b>10.3</b>	<b>8.6</b>	<b>8.2</b>	<b>10.2</b>	<b>10.0</b>	<b>4.0</b>	<b>7.7</b>	<b>8.3</b>	<b>10.4</b>		
<b>Total High Yield</b>	<b>158,440,530</b>	<b>1.6</b>	<b>-10.0</b>	<b>-14.1</b>	<b>-12.8</b>	<b>-0.5</b>	<b>1.2</b>	<b>3.6</b>	<b>4.9</b>	<b>4.7</b>	<b>14.7</b>	<b>-3.6</b>	<b>6.1</b>		
<i>ICE BofAML High Yield Master II</i>			-10.0	-14.0	-12.7	0.0	2.0	4.4	5.4	6.2	14.4	-2.3	7.5		
Allianz Global Investors	158,440,530	1.6	-10.0	-14.1	-12.8	-0.5	1.2	3.6	4.9	4.7	14.7	-3.6	6.1	5.6	Apr-00
<i>ICE BofAML High Yield Master II</i>			-10.0	-14.0	-12.7	0.0	2.0	4.4	5.4	6.2	14.4	-2.3	7.5	6.2	Apr-00
<b>Total Real Estate</b>	<b>796,021,101</b>	<b>7.9</b>	<b>-3.6</b>	<b>0.2</b>	<b>10.7</b>	<b>4.8</b>	<b>6.6</b>	<b>8.9</b>	<b>19.2</b>	<b>-6.0</b>	<b>8.1</b>	<b>7.4</b>	<b>11.0</b>		
<i>Real Estate Benchmark</i>			-2.9	0.3	11.4	7.5	7.5	8.6	19.3	0.6	7.5	6.8	7.1		
<i>NCREIF-ODCE</i>			4.8	12.5	29.5	12.7	10.5	11.2	22.2	1.2	5.3	8.3	7.6		
<i>NCREIF Property Index</i>			3.2	8.7	21.5	10.2	8.9	9.7	17.7	1.6	6.4	6.7	7.0		
<b>Total Core RE</b>	<b>203,967,263</b>	<b>2.0</b>	<b>-16.1</b>	<b>-19.4</b>	<b>-3.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8.2</b>	<b>47.5</b>	<b>-5.2</b>	<b>27.5</b>	<b>-5.5</b>	<b>7.2</b>		
Adelante	89,840,083	0.9	-18.0	-21.0	-5.6	5.6	6.6	8.0	47.5	-5.2	27.5	-5.5	7.2	9.4	Sep-01
<i>Wilshire REIT</i>			-18.5	-21.6	-6.7	4.0	5.3	7.3	46.2	-7.9	25.8	-4.8	4.2	9.4	Sep-01
Invesco US Fundamental Beta	114,127,181	1.1	-14.3	--	--	--	--	--	--	--	--	--	--	-9.0	Mar-22
<i>Wilshire REIT</i>			-18.5	--	--	--	--	--	--	--	--	--	--	-12.9	Mar-22
<b>Total Private Real Estate</b>	<b>592,053,837</b>	<b>5.9</b>	<b>1.4</b>	<b>6.4</b>	<b>15.9</b>	<b>5.6</b>	<b>7.1</b>	<b>9.5</b>	<b>15.3</b>	<b>-6.1</b>	<b>6.2</b>	<b>8.8</b>	<b>11.4</b>		
<b>Private Equity</b>	<b>1,422,347,997</b>	<b>14.1</b>	<b>0.5</b>	<b>3.6</b>	<b>34.4</b>	<b>23.7</b>	<b>17.9</b>	<b>14.5</b>	<b>60.4</b>	<b>8.7</b>	<b>8.4</b>	<b>12.1</b>	<b>11.9</b>		
<b>Risk Parity</b>	<b>415,300,065</b>	<b>4.1</b>	<b>-12.6</b>	<b>-17.0</b>	<b>-14.5</b>	<b>1.3</b>	<b>--</b>	<b>--</b>	<b>9.3</b>	<b>9.6</b>	<b>--</b>	<b>--</b>	<b>--</b>		
<i>60% MSCI ACWI Net/40% Bloomberg Global Aggregate</i>			-12.7	-17.7	-15.4	2.6	--	--	8.8	14.0	--	--	--		
AQR Global Risk Premium-EL	196,593,496	1.9	-9.4	-13.0	-10.0	2.3	--	--	10.3	5.8	--	--	--	5.4	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			-11.0	-15.4	-13.6	-0.7	--	--	6.8	3.6	--	--	--	3.0	Jan-19
PanAgora Risk Parity Multi Asset	218,706,569	2.2	-15.4	-20.3	-18.2	0.6	--	--	8.3	13.6	--	--	--	3.2	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			-11.0	-15.4	-13.6	-0.7	--	--	6.8	3.6	--	--	--	1.3	Feb-19

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

# Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2022

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
<b>Diversifying</b>	<b>764,977,671</b>	<b>7.6</b>	<b>-0.7</b>	<b>-3.5</b>	<b>-3.2</b>	<b>-0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>1.7</b>	<b>-1.7</b>	<b>6.8</b>	<b>-2.3</b>	<b>2.6</b>		
<i>Custom Diversifying Benchmark</i>			-2.1	-4.9	-3.9	1.0	2.1	2.5	1.6	4.7	6.1	1.4	4.7		
<b>Diversifying Fixed Income</b>	<b>232,483,592</b>	<b>2.3</b>	<b>-4.2</b>	<b>-9.9</b>	<b>-10.1</b>	<b>-2.6</b>	<b>-0.5</b>	<b>0.7</b>	<b>-1.0</b>	<b>1.2</b>	<b>8.3</b>	<b>-2.0</b>	<b>2.6</b>		
<i>Bloomberg US Aggregate TR</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-1.5	7.5	8.7	0.0	3.5		
AFL-CIO	232,398,083	2.3	-4.2	-9.9	-10.1	-1.2	0.6	1.4	-1.0	6.2	7.8	0.2	3.2	5.1	Jun-91
<i>Bloomberg US Aggregate TR</i>			-4.7	-10.3	-10.3	-0.9	0.9	1.5	-1.5	7.5	8.7	0.0	3.5	5.1	Jun-91
<b>Diversifying Multi-Asset</b>	<b>532,494,080</b>	<b>5.3</b>	<b>0.9</b>	<b>-0.7</b>	<b>-0.6</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>1.7</b>	<b>Aug-20</b>
<i>Custom Diversifying Multi-Asset Benchmark</i>			-1.6	-3.8	-2.3	--	--	--	4.1	--	--	--	--	1.2	Aug-20
Acadian Multi-Asset Absolute Return Fund	255,461,740	2.5	2.9	0.2	0.3	--	--	--	1.1	--	--	--	--	1.5	Aug-20
<i>FTSE 3-Month T-bill +5%</i>			1.4	2.6	5.2	--	--	--	5.0	--	--	--	--	5.1	Aug-20
Sit LLCAR	277,032,339	2.7	-0.9	-1.5	-0.9	--	--	--	--	--	--	--	--	2.2	Apr-21
<i>Bloomberg US Aggregate Index + 100 bps</i>			-4.5	-9.9	-9.4	--	--	--	--	--	--	--	--	-6.0	Apr-21
<b>Liquidity</b>	<b>1,228,383,394</b>	<b>12.2</b>	<b>-0.8</b>	<b>-3.2</b>	<b>-3.7</b>	<b>0.4</b>	<b>1.3</b>	<b>--</b>	<b>-0.3</b>	<b>3.4</b>	<b>4.8</b>	<b>1.7</b>	<b>1.4</b>		
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8		
DFA Short Credit	263,008,267	2.6	-1.8	-5.5	-6.2	-0.6	0.6	--	-0.5	2.8	5.2	1.1	1.8	0.8	Nov-16
<i>ICE BofA 1-5 Yrs US Corp &amp; Govt TR</i>			-1.1	-4.6	-5.2	0.1	1.1	--	-0.9	4.6	5.1	1.4	1.3	1.2	Nov-16
Insight Short Duration	473,746,543	4.7	-0.3	-1.5	-1.7	1.1	1.7	--	0.0	3.1	4.6	1.7	1.5	1.7	Nov-16
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-0.6	-3.1	-3.6	0.3	1.1	--	-0.5	3.3	4.0	1.6	0.8	1.1	Nov-16
Sit Short Duration	491,628,584	4.9	-0.7	-3.8	-4.6	0.2	1.5	--	-0.5	4.4	4.7	2.3	1.1	1.4	Nov-16
<i>Bloomberg US Govt 1-3 Yr TR</i>			-0.5	-3.0	-3.5	0.2	0.9	--	-0.6	3.1	3.6	1.6	0.4	0.9	Nov-16
<b>Total Cash</b>	<b>444,315,979</b>	<b>4.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.5</b>	<b>1.2</b>	<b>1.5</b>	<b>2.2</b>	<b>0.4</b>	<b>1.3</b>	<b>3.3</b>	<b>1.7</b>	<b>0.9</b>		
<i>91 Day T-Bills</i>			0.1	0.1	0.2	0.5	1.0	0.6	0.0	0.5	2.1	1.9	0.9		
Cash	443,752,652	4.4	0.2	0.3	0.4	1.2	1.5	2.2	0.4	1.3	3.4	1.7	0.9		
Northern Trust Transition	563,327	0.0	-6.0	2,748.0	2,651.6	281.9	--	--	-6.1	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. \$85,508.16 in residual value is reflected in the Diversifying Fixed Income composite.

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2022

StepStone Group Analysis (*)												
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2022 <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>	\$3,887,741	\$16,500,000	0%	\$18,750,000	\$0	\$0	\$18,829,566	\$2,319,783	1.00	1.21	3/31/2022
12/18/2017	Stepstone CC Opportunities Fund	\$880,931,591	\$1,170,000,000	3%	\$835,508,679	\$28,333,732	\$57,364,030	\$147,212,256	\$424,759,467	0.18	1.23	3/31/2022
7/1/2006	Torchlight II	\$0	\$128,000,000	0%	\$218,263,562	\$0	\$0	\$208,623,727	\$0	0.96	0.96	12/31/2020
12/12/2008	Torchlight III	\$0	\$75,000,000	0%	\$83,825,058	\$0	\$0	\$124,848,870	\$0	1.49	1.49	12/23/2020
8/1/2012	Torchlight IV	\$9,045,133	\$60,000,000	0%	\$84,866,971	\$0	\$0	\$106,146,627	\$0	1.25	1.36	6/30/2022
3/12/2015	Torchlight V	\$8,396,667	\$75,000,000	0%	\$60,000,000	\$0	\$662,261	\$70,797,953	\$15,000,000	1.18	1.32	3/31/2022
<b>Total Private Credit</b>		<b>\$902,261,132</b>										
<b>% of Portfolio (Market Value)</b>		<b>8.9%</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, 2022

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/2022 <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>4</sup>	\$15,333,535	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$101,711,550	\$12,334,302	1.35	1.55	3/31/2022
12/8/2014	Angelo Gordon Realty Fund IX	\$39,624,797	\$65,000,000	93%	\$60,125,000	\$0	\$4,550,000	\$52,000,001	\$7,572,500	0.86	1.52	3/31/2022
6/23/2005	DLJ RECP III	\$15,678,712	\$75,000,000	134%	\$100,709,313	\$0	\$0	\$69,364,915	\$4,031,338	0.69	0.84	3/31/2022
2/11/2008	DLJ RECP IV	\$54,897,897	\$100,000,000	130%	\$129,892,605	\$0	\$2,311,274	\$99,841,735	\$1,876,084	0.77	1.19	3/31/2022
7/1/2014	DLJ RECP V	\$30,558,376	\$75,000,000	132%	\$98,684,517	\$0	\$0	\$97,880,214	\$15,567,682	0.99	1.30	3/31/2022
3/19/2019	DLJ RECP VI	\$22,014,741	\$50,000,000	63%	\$31,544,190	\$0	\$0	\$11,589,841	\$22,707,500	0.37	1.07	3/31/2022
6/30/2013	Invesco Real Estate III <sup>4</sup>	\$0	\$35,000,000	93%	\$32,386,423	\$0	\$0	\$47,576,839	\$2,613,577	1.47	1.47	3/31/2022
6/30/2014	Invesco Real Estate IV <sup>4</sup>	\$2,821,874	\$35,000,000	87%	\$30,546,401	\$0	\$0	\$38,913,181	\$4,453,599	1.27	1.37	3/31/2022
2/20/2019	Invesco Real Estate V	\$77,485,738	\$75,000,000	91%	\$68,009,397	\$4,328,563	\$0	\$7,217,922	\$11,690,503	0.11	1.25	3/31/2022
	Invesco Real Estate VI	\$0	\$100,000,000	0%	\$0	\$0	\$0	\$0	\$100,000,000	0.00	0.00	
7/16/2013	LaSalle Income & Growth VI <sup>4</sup>	\$20,208,434	\$75,000,000	95%	\$71,428,571	\$0	\$0	\$84,535,301	\$0	1.18	1.47	3/31/2022
2/28/2017	LaSalle Income & Growth VII	\$63,555,317	\$75,000,000	107%	\$79,936,634	\$2,643,052	\$0	\$52,979,429	\$8,502,405	0.66	1.46	3/31/2022
7/3/2013	Long Wharf Fund IV <sup>4</sup>	\$1,441,579	\$25,000,000	100%	\$25,000,000	\$0	\$0	\$34,824,789	\$0	1.39	1.45	6/30/2022
9/30/2016	Long Wharf Fund V <sup>4</sup>	\$31,968,263	\$50,000,000	100%	\$50,000,000	\$0	\$0	\$37,244,373	\$0	0.74	1.38	6/30/2022
6/27/2019	Long Wharf Fund VI	\$27,660,734	\$50,000,000	71%	\$35,252,724	\$1,090,188	\$2,081,269	\$14,568,879	\$14,747,276	0.41	1.20	6/30/2022
12/31/2011	Oaktree REOF V <sup>4</sup>	\$1,209,092	\$50,000,000	101%	\$50,315,673	\$0	\$0	\$85,975,916	\$5,000,000	1.71	1.73	6/30/2022
9/30/2013	Oaktree REOF VI <sup>4</sup>	\$25,686,057	\$80,000,000	100%	\$80,000,000	\$0	\$0	\$86,843,996	\$18,400,000	1.09	1.41	6/30/2022
4/1/2015	Oaktree REOF VII	\$49,657,865	\$65,000,000	100%	\$65,000,000	\$0	\$0	\$42,932,991	\$18,915,000	0.66	1.42	6/30/2022
11/10/2013	Paulson Real Estate Fund II <sup>4</sup>	\$16,671,486	\$20,000,000	97%	\$19,345,623	\$0	\$3,084,633	\$24,069,538	\$654,377	1.24	2.11	3/31/2022
4/28/2022	PCCP IX	\$43,557,683	\$75,000,000	32%	\$23,801,564	\$23,801,564	\$0	\$0	\$51,198,436	0.00	1.83	
1/25/2012	Siguler Guff DREOF	\$21,670,223	\$75,000,000	93%	\$69,375,000	\$0	\$2,382,123	\$98,000,021	\$5,625,000	1.41	1.72	3/31/2022
8/31/2013	Siguler Guff DREOF II	\$37,412,422	\$70,000,000	89%	\$61,985,000	\$0	\$2,600,715	\$46,578,654	\$8,015,000	0.75	1.36	3/31/2022
1/27/2016	Siguler Guff DREOF II Co-Inv	\$12,695,131	\$25,000,000	82%	\$20,537,862	\$0	\$0	\$13,871,261	\$4,462,138	0.68	1.29	3/31/2022
<b>Total Closed End Real Estate</b>		<b>\$611,809,956</b>	<b>\$1,450,000,000</b>	<b>90%</b>	<b>\$1,299,216,816</b>	<b>\$31,863,367</b>	<b>\$17,010,013</b>	<b>\$1,175,998,615</b>	<b>\$318,366,716</b>	<b>0.91</b>	<b>1.38</b>	
<b>% of Portfolio (Market Value)</b>		<b>6.1%</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>Capital has been fully called and fund is in redemption.

<sup>5</sup>Total distributions may include recallable distributions

<sup>6</sup>Remianing commitment includes recallable distributions

Total Fund  
Closed End Funds - Investment Summary

Period Ending: June 30, 2022

StepStone Group Analysis (*)												
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 6/30/2022 <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	\$163,788,142	\$210,000,000	92%	\$194,045,264	\$2,264,639	\$9,449,148	\$254,580,986	\$15,954,736	1.31	2.16	3/31/2022
1/15/2009	Adams Street Partners II	\$4,070,660	\$30,000,000	95%	\$28,365,000	\$0	\$0	\$45,123,354	\$1,635,000	1.59	1.73	3/31/2022
9/21/2012	Adams Street Partners - Fund 5	\$13,393,276	\$40,000,000	77%	\$30,845,875	\$0	\$1,204,077	\$29,218,000	\$9,154,125	0.95	1.38	3/31/2022
1/18/1996	Adams Street Partners - BPF	\$560,883	\$59,565,614	97%	\$57,517,409	\$0	\$0	\$103,810,247	\$2,048,205	1.80	1.81	3/31/2022
3/31/2016	Adams Street Venture Innovation	\$203,007,657	\$75,000,000	88%	\$66,037,500	\$0	\$0	\$30,786,690	\$8,962,500	0.47	3.54	3/31/2022
5/18/2018	AE Industrial Partners Fund II, LP	\$51,091,101	\$35,000,000	84%	\$29,515,578	\$2,179,319	\$675,639	\$4,235,090	\$9,719,513	0.14	1.87	3/31/2022
11/27/2013	Aether Real Assets III	\$20,144,643	\$25,000,000	100%	\$25,604,516	\$172,904	\$72,929	\$5,279,439	\$1,625,343	0.21	0.99	3/31/2022
11/30/2013	Aether Real Assets III Surplus	\$42,690,564	\$50,000,000	100%	\$52,244,418	\$275,429	\$184,770	\$11,898,455	\$1,370,047	0.23	1.04	3/31/2022
1/30/2016	Aether Real Assets IV	\$66,726,283	\$50,000,000	97%	\$48,730,469	-\$174	-\$174	\$3,674,548	\$4,103,494	0.08	1.44	3/31/2022
4/30/2004	Bay Area Equity Fund I <sup>4</sup>	1,237,972	10,000,000	100%	10,000,000	0	0	37,018,019	0	3.70	3.83	3/31/2022
6/29/2009	Bay Area Equity Fund II <sup>4</sup>	18,634,998	10,000,000	100%	10,000,000	0	0	3,684,910	0	0.37	2.23	3/31/2022
6/30/2013	Commonfund	\$37,518,990	\$50,000,000	95%	\$47,274,993	\$500,000	\$2,642,990	\$21,224,385	\$2,725,007	0.45	1.24	12/31/2022
7/15/2005	EIF US Power Fund II <sup>4</sup>	-\$26,487	\$50,000,000	100%	\$65,029,556	\$0	\$839,193	\$76,092,655	\$0	1.17	1.17	3/31/2022
5/31/2007	EIF US Power Fund III <sup>4</sup>	1,671,760	65,000,000	100%	\$71,409,097	\$0	\$6,757,256	\$92,695,777	\$0	1.30	1.32	3/31/2022
11/28/2011	EIF US Power Fund IV	22,098,803	50,000,000	100%	\$64,917,547	\$3,652,834	\$44,708,201	\$4	\$4	0.69	1.03	3/31/2022
11/28/2016	EIF US Power Fund V	\$33,526,687	\$50,000,000	100%	\$69,328,438	\$6,244,817	\$0	\$52,513,417	\$6,194,129	0.76	1.24	3/31/2022
2/21/2019	Genstar Capital Partners IX, L.P.	\$65,695,903	\$50,000,000	93%	\$46,676,618	\$173,304	\$0	\$6,295,337	\$6,482,943	0.13	1.54	3/31/2022
4/1/2021	Genstar Capital Partners X, L.P.	\$9,269,834	\$42,500,000	21%	\$8,723,310	\$3,494,580	\$0	\$0	\$33,776,690	0.00	1.06	3/31/2022
10/27/2020	GTCR Fund XIII, L.P.	\$15,488,684	\$50,000,000	25%	\$12,430,000	\$3,250,000	\$0	\$1,809,154	\$37,570,000	0.15	1.39	3/31/2022
5/10/2021	Hellman & Friedman Capital Partners X, L.P.	41,768,289	75,000,000	55%	\$40,882,181	\$0	\$0	\$0	\$34,117,819	0.00	1.02	3/31/2022
11/18/2009	Oaktree PIF 2009	\$464,381	\$40,000,000	87%	\$34,812,560	\$0	\$0	\$47,032,470	\$6,308,961	1.35	1.36	3/31/2022
5/2/2013	Ocean Avenue Fund II	\$27,841,681	\$30,000,000	90%	\$27,000,000	\$0	\$3,330,000	\$41,380,470	\$3,000,000	1.53	2.56	3/31/2022
4/15/2016	Ocean Avenue Fund III	\$54,261,818	\$50,000,000	92%	\$46,000,000	\$0	\$0	\$48,000,000	\$4,000,000	1.04	2.22	3/31/2022
11/30/2007	Paladin III	\$12,693,920	\$25,000,000	100%	\$34,836,639	\$100,433	\$3,766,387	\$71,182,958	\$387,482	2.04	2.41	3/31/2022
8/22/2011	Pathway 6	\$40,586,192	\$40,000,000	98%	\$39,293,701	\$59,242	\$1,015,679	\$47,293,080	\$3,738,184	1.20	2.24	3/31/2022
7/10/2013	Pathway 7	\$82,687,972	\$70,000,000	99%	\$69,025,586	\$126,000	\$2,232,986	\$74,589,212	\$5,342,065	1.08	2.28	3/31/2022
11/23/2015	Pathway 8	\$80,852,012	\$50,000,000	95%	\$47,408,780	\$671,117	\$2,401,140	\$29,233,290	\$4,485,975	0.62	2.32	3/31/2022
1/19/1999	Pathway	\$4,423,238	\$125,000,000	100%	\$125,977,014	\$67,219	\$774,582	\$188,083,589	\$10,597,048	1.49	1.53	12/31/2022
7/31/2009	Pathway 2008	\$20,055,628	\$30,000,000	100%	\$29,989,891	\$64,025	\$1,000,277	\$49,108,079	\$2,799,211	1.64	2.31	12/31/2022
6/3/2014	Siguler Guff CCCERA Opportunities	\$155,928,057	\$200,000,000	87%	\$174,083,208	\$0	\$3,659,789	\$192,859,806	\$29,597,500	1.11	2.00	3/31/2022
5/18/2018	Siris Partners IV, L.P.	\$37,957,011	\$35,000,000	82%	\$28,676,885	\$6,148,955	\$99,701	\$4,130,142	\$8,845,760	0.14	1.47	3/31/2022
5/27/2021	TA XIV-A, L.P.	\$12,918,141	\$50,000,000	27%	\$13,500,000	\$0	\$0	\$0	\$36,500,000	0.00	0.96	3/31/2022
6/28/2019	TPG Healthcare Partners, L.P.	\$13,874,874	\$24,000,000	59%	\$14,042,887	\$453,928	\$4,265,525	\$6,221,617	\$13,110,866	0.44	1.43	3/31/2022
9/17/2021	Trident IX, L.P.	\$3,411,831	\$50,000,000	9%	\$4,680,870	\$4,680,870	\$0	\$0	\$45,319,130	-	-	3/31/2022
5/24/2019	Trident VIII, L.P.	\$47,008,047	\$40,000,000	92%	\$36,885,981	-\$297,018	\$1,633,515	\$2,608,184	\$5,426,540	0.07	1.35	3/31/2022
12/8/2015	Wastewater Opportunity Fund	\$20,314,246	\$25,000,000	100%	\$29,242,585	\$0	\$0	\$12,893,182	\$1,204,775	0.44	1.14	3/31/2022
<b>Total Private Equity and Venture Capital</b>		<b>\$1,427,637,690</b>	<b>\$1,961,065,614</b>	<b>88%</b>	<b>\$1,735,034,356</b>	<b>\$30,629,590</b>	<b>\$49,658,242</b>	<b>\$1,639,264,745</b>	<b>\$356,103,051</b>	<b>0.94</b>	<b>1.77</b>	

% of Portfolio (Market Value) 14.1%

\* 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, 2022

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>	9/24/2015	-	-	-	7.8%	3/31/2022
Stepstone CC Opportunities Fund	2/2/2018	-	-	-	14.1%	12/31/2021
Torchlight IV	8/1/2012	12.0%	12.5%	9.7%	10.4%	3/31/2022
Torchlight V	3/12/2015	15.3%	15.4%	10.8%	10.7%	3/31/2022
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>	1/23/2012	-	-	-	13.2%	3/31/2022
Angelo Gordon IX	12/8/2014	-	-	-	9.4%	3/31/2022
DLJ RECP III	6/23/2005	-1.0%	-1.0%	-3.0%	-3.0%	3/31/2022
DLJ RECP IV	2/11/2008	5.0%	5.0%	2.0%	3.0%	3/31/2022
DLJ RECP V	7/1/2014	17.0%	17.0%	10.0%	10.0%	3/31/2022
DLJ RECP VI <sup>1</sup>	3/19/2019	10.0%	10.0%	3.0%	4.0%	3/31/2022
Hearthstone II <sup>4</sup>	6/17/1998	-	30.3%	-	30.3%	3/31/2020
Invesco Fund III <sup>4</sup>	6/30/2013	16.6%	-	13.6%	-	12/31/2020
Invesco Fund IV <sup>4</sup>	6/30/2014	15.4%	-	11.9%	-	3/31/2022
Invesco Fund V	2/20/2019	26.6%	-	19.1%	-	3/31/2022
LaSalle Income & Growth VI <sup>4</sup>	7/16/2013	12.7%	12.7%	10.5%	10.5%	3/31/2022
LaSalle Income & Growth VII	2/28/2017	14.7%	14.8%	12.3%	12.3%	3/31/2022
Long Wharf IV <sup>4</sup>	7/3/2013	16.3%	15.7%	11.8%	11.7%	3/31/2022
Long Wharf V <sup>4</sup>	9/30/2016	12.2%	12.8%	9.3%	9.7%	3/31/2022
Long Wharf VI	6/27/2019	48.0%	55.8%	29.9%	33.8%	3/31/2022
Oaktree REOF V <sup>4</sup>	12/31/2011	16.7%	-	12.3%	-	3/31/2022
Oaktree REOF VI <sup>4</sup>	9/30/2013	11.5%	-	7.8%	-	3/31/2022
Oaktree REOF VII	4/1/2015	26.2%	-	17.5%	-	3/31/2022
Paulson <sup>4</sup>	11/10/2013	18.0%	-	12.0%	-	12/31/2021
PCCP IX	5/27/2021	22.9%	-	44.0%	-	3/31/2022
Siguler Guff I	1/25/2012	13.1%	15.8%	11.6%	12.7%	3/31/2022
Siguler Guff II	8/31/2013	11.1%	11.2%	9.9%	9.0%	3/31/2022
Siguler Guff DREOF II Co-Inv	1/27/2016	7.1%	7.3%	6.1%	5.9%	3/31/2022

<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, 2022

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	12.7%	14.8%	-	12.9%	3/31/2022
Adams Street Partners II	12/31/2008	16.6%	16.6%	-	14.1%	3/31/2022
Adams Street Partners - Fund 5	12/31/2008	9.8%	9.7%	-	7.2%	3/31/2022
Adams Street Partners Venture	1/18/1996	57.0%	56.9%	-	54.1%	3/31/2022
Adams Street Partners - BPF	3/31/2016	14.2%	14.2%	-	11.6%	3/31/2022
AE Industrial Partners Fund II, LP	5/18/2018	41.0%	-	53.5%	-	3/31/2022
Aether Real Assets III	11/27/2013	1.6%	-	-0.1%	-	3/31/2022
Aether Real Assets III Surplus	11/30/2013	2.0%	-	0.9%	-	3/31/2022
Aether Real Assets IV	1/30/2016	14.0%	-	11.6%	-	3/31/2022
Bay Area Equity Fund I <sup>9</sup>	11/26/2003	31.3%	31.3%	23.0%	23.0%	12/31/2021
Bay Area Equity Fund II <sup>9</sup>	11/26/2003	14.5%	14.5%	0.7%	9.7%	12/31/2021
CommonFund	6/30/2013	-	-	-	7.9%	3/31/2022
Energy Investor Fund II <sup>9</sup>	7/15/2005	5.7%	5.3%	2.9%	2.6%	3/31/2022
Energy Investor Fund III <sup>9</sup>	5/31/2007	6.7%	6.7%	4.3%	4.3%	3/31/2022
Energy Investor Fund IV	8/31/2010	4.0%	4.0%	0.9%	0.7%	3/31/2022
Energy Investor Fund V	11/28/2016	21.0%	19.0%	17.4%	15.4%	3/31/2022
Genstar Capital Partners IX, L.P. <sup>1</sup>	2/21/2019	38.5%	-	-	-	3/31/2022
Oaktree PIF 2009	2/28/2010	6.8%	-	6.6%	-	3/31/2022
Ocean Avenue II	8/15/2013	-	-	20.4%	-	3/31/2022
Ocean Avenue III	4/15/2016	-	-	26.6%	-	3/31/2022
Paladin III	11/30/2007	20.8%	-	-	-	3/31/2022
Pathway 6	8/22/2011	18.8%	18.8%	16.7%	16.7%	3/31/2022
Benchmark <sup>4</sup>		16.1%	-	-	-	3/31/2022
Pathway 7	7/10/2013	21.3%	21.3%	19.3%	19.3%	3/31/2022
Benchmark <sup>5</sup>		17.6%	-	-	-	3/31/2022
Pathway 8	11/23/2015	26.6%	26.8%	25.3%	25.5%	3/31/2022
Benchmark <sup>6</sup>		23.3%	-	-	-	3/31/2022
Pathway Private Equity Fund	1/19/1999	10.3%	10.3%	8.4%	8.4%	3/31/2022
Benchmark <sup>7</sup>		10.5%	-	-	-	3/31/2022
Pathway Private Equity Fund 2008	7/31/2009	17.8%	17.8%	15.6%	15.6%	3/31/2022
Benchmark <sup>8</sup>		14.2%	-	-	-	3/31/2022
Siguler Guff CCCERA Opportunities	6/3/2014	20.9%	21.7%	20.4%	19.0%	3/31/2022
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.	5/18/2018	28.7%	28.7%	24.2%	24.2%	3/31/2022
TPG Healthcare Partners, L.P.	6/28/2019	45.0%	-	-	28.0%	3/31/2022
Trident VIII, L.P. <sup>1</sup>	5/24/2019	39.7%	-	33.8%	-	3/31/2022
Wastewater Opportunity Fund	12/8/2015	8.3%	-	5.1%	-	3/31/2022

<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 September 30, 2021.

<sup>5</sup>Private IQ global all private equity median pooled return for vintage years 2012-2016, as of September 30, 2021.

<sup>6</sup>Private IQ global all private equity median pooled return for vintage years 2015-2018, as of September 30, 2021.

<sup>7</sup>Private IQ global all private equity median pooled return for vintage years 1999-2011, as of September 30, 2021.

<sup>8</sup>Private IQ global all private equity median pooled return for vintage years 2008-2014, as of September 30, 2021.

<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, 2022

	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	10.16%	-0.02%	19.19%	-0.01%	1.00	0.01%	1.00	0.50	-1.01	99.93%	100.00%	
Boston Partners	9.75%	2.88%	20.58%	2.56%	1.05	3.10%	0.98	0.45	0.93	110.20%	97.58%	
Emerald Advisers	2.15%	0.75%	24.18%	0.82%	0.95	5.87%	0.94	0.07	0.13	105.13%	100.60%	
Ceredex	3.44%	-2.74%	22.76%	-1.89%	0.86	7.04%	0.93	0.13	-0.39	71.57%	90.45%	
Pyrford	2.60%	2.04%	14.63%	2.21%	0.69	7.84%	0.89	0.14	0.26	71.14%	76.99%	
William Blair	3.72%	2.10%	19.41%	1.86%	1.14	4.89%	0.95	0.17	0.43	127.26%	107.13%	
PIMCO RAE Emerging Markets	1.07%	2.04%	22.68%	2.18%	1.15	6.33%	0.94	0.02	0.32	127.69%	106.23%	
TT Emerging Markets	0.11%	-0.46%	22.64%	-0.58%	1.21	6.53%	0.95	-0.02	-0.07	131.33%	114.53%	
Artisan Partners	6.70%	-0.92%	19.01%	-0.58%	0.96	5.05%	0.93	0.33	-0.18	89.71%	96.06%	
First Eagle	4.64%	0.75%	14.05%	1.83%	0.72	6.29%	0.94	0.29	0.12	72.67%	79.10%	
JP Morgan Global Opportunities	-1.59%	-7.80%	7.42%	-2.63%	0.17	16.46%	0.17	-0.28	-0.47	9.91%	32.51%	
Allianz Global Investors	-0.54%	-0.50%	9.12%	-0.51%	0.88	1.92%	0.97	-0.11	-0.26	85.62%	93.31%	
Adelante	5.61%	1.59%	19.79%	1.78%	0.95	1.56%	1.00	0.26	1.02	100.66%	96.20%	
AQR Global Risk Premium-EL	2.29%	2.97%	9.38%	2.93%	0.94	2.12%	0.95	0.19	1.40	108.66%	86.34%	
PanAgora Risk Parity Multi Asset	0.62%	1.30%	11.79%	1.42%	1.17	3.47%	0.93	0.01	0.38	130.90%	110.61%	
AFL-CIO	-1.25%	-0.31%	4.01%	-0.45%	0.85	1.16%	0.94	-0.44	-0.27	76.17%	87.07%	
DFA Short Credit	-0.64%	-0.78%	2.44%	-0.78%	0.99	1.32%	0.71	-0.47	-0.59	70.68%	102.01%	
Insight Short Duration	1.13%	0.82%	2.09%	0.91%	0.71	1.86%	0.25	0.30	0.44	93.45%	41.71%	
Sit Short Duration	0.19%	0.01%	2.20%	-0.03%	1.21	1.09%	0.78	-0.15	0.01	140.86%	141.59%	

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, 2022

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
BlackRock Russell 1000 Index	10.98%	-0.02%	17.35%	-0.02%	1.00	0.02%	1.00	0.57	-1.43	99.87%	100.00%
Boston Partners	8.77%	1.60%	18.35%	1.29%	1.04	3.03%	0.97	0.42	0.53	108.96%	99.32%
Emerald Advisers	6.50%	1.69%	22.53%	1.86%	0.97	5.45%	0.94	0.24	0.31	106.09%	98.77%
Ceredex	4.35%	-0.54%	21.10%	-0.03%	0.89	6.24%	0.93	0.16	-0.09	80.94%	94.72%
Pyrford	3.18%	1.95%	12.99%	2.31%	0.70	6.73%	0.89	0.17	0.29	66.64%	78.56%
William Blair	4.70%	1.27%	17.38%	0.88%	1.12	4.15%	0.95	0.21	0.31	121.17%	104.44%
PIMCO RAE Emerging Markets	2.64%	1.39%	20.17%	1.23%	1.13	5.18%	0.95	0.08	0.27	123.73%	103.93%
Artisan Partners	8.62%	-0.55%	17.27%	-0.24%	0.97	4.27%	0.94	0.44	-0.13	90.80%	97.03%
First Eagle	4.98%	0.71%	12.48%	1.87%	0.73	5.47%	0.94	0.32	0.13	67.01%	79.42%
JP Morgan Global Opportunities	1.29%	-5.71%	7.01%	0.28%	0.14	15.37%	0.11	0.04	-0.37	9.88%	24.39%
Allianz Global Investors	1.22%	-0.73%	7.76%	-0.54%	0.90	1.54%	0.97	0.02	-0.47	87.73%	97.31%
Adelante	6.65%	1.39%	17.44%	1.64%	0.95	1.63%	0.99	0.32	0.85	98.56%	95.64%
AFL-CIO	0.65%	-0.23%	3.65%	-0.12%	0.88	0.98%	0.95	-0.11	-0.23	81.67%	86.85%
DFA Short Credit	0.59%	-0.52%	2.13%	-0.51%	0.99	1.05%	0.76	-0.21	-0.49	83.03%	102.48%
Insight Short Duration	1.65%	0.59%	1.69%	0.90%	0.71	1.46%	0.31	0.37	0.40	93.29%	37.19%
Sit Short Duration	1.48%	0.57%	2.10%	0.27%	1.34	1.04%	0.80	0.21	0.55	160.51%	148.38%

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

# Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2022

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
BlackRock Russell 1000 Index	Growth	0.03% of Assets	\$735,558,303	\$220,667	0.03%
Boston Partners	Growth	0.50% of First 25.0 Mil, 0.30% Thereafter	\$372,114,916	\$1,166,345	0.31%
Emerald Advisers	Growth	0.75% of First 10.0 Mil, 0.60% Thereafter	\$183,413,674	\$1,115,482	0.61%
Ceredex	Growth	0.85% of First 10.0 Mil, 0.68% of Next 40.0 Mil, 0.51% Thereafter	\$173,993,462	\$989,367	0.57%
Pyrford	Growth	0.70% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.35% Thereafter	\$447,718,985	\$1,817,016	0.41%
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	\$391,648,898	\$1,589,947	0.41%
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	\$324,030,742	\$1,770,638	0.55%
TT Emerging Markets	Growth	0.70% of First 100.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$334,723,660	\$2,158,342	0.64%
Artisan Partners	Growth	0.75% of Assets	\$434,618,621	\$3,259,640	0.75%
First Eagle	Growth	0.75% of Assets	\$471,188,220	\$3,533,912	0.75%
Allianz Global Investors	Growth	0.50% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	\$158,440,530	\$654,542	0.41%
Invesco US Fundamental Beta	Growth	0.15% of Assets	\$114,127,181	\$171,191	0.15%
AQR Global Risk Premium-EL	Growth	0.38% of Assets	\$196,593,496	\$747,055	0.38%

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, 2022

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
PanAgora Risk Parity Multi Asset	Growth	0.35% of Assets	\$218,706,569	\$765,473	0.35%
AFL-CIO	Diversifying	0.32% of Assets	\$232,398,083	\$743,674	0.32%
Acadian Multi-Asset Absolute Return Fund	Diversifying	0.50% of Assets	\$255,461,740	\$1,277,309	0.50%
Sit LLCAR	Diversifying	0.39% of First 200.0 Mil, 0.35% Thereafter	\$277,032,339	\$1,049,613	0.38%
DFA Short Credit	Liquidity	0.20% of First 25.0 Mil, 0.10% Thereafter	\$263,008,267	\$288,008	0.11%
Insight Short Duration	Liquidity	0.06% of First 500.0 Mil, 0.05% of Next 500.0 Mil, 0.04% Thereafter	\$473,746,543	\$284,248	0.06%

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

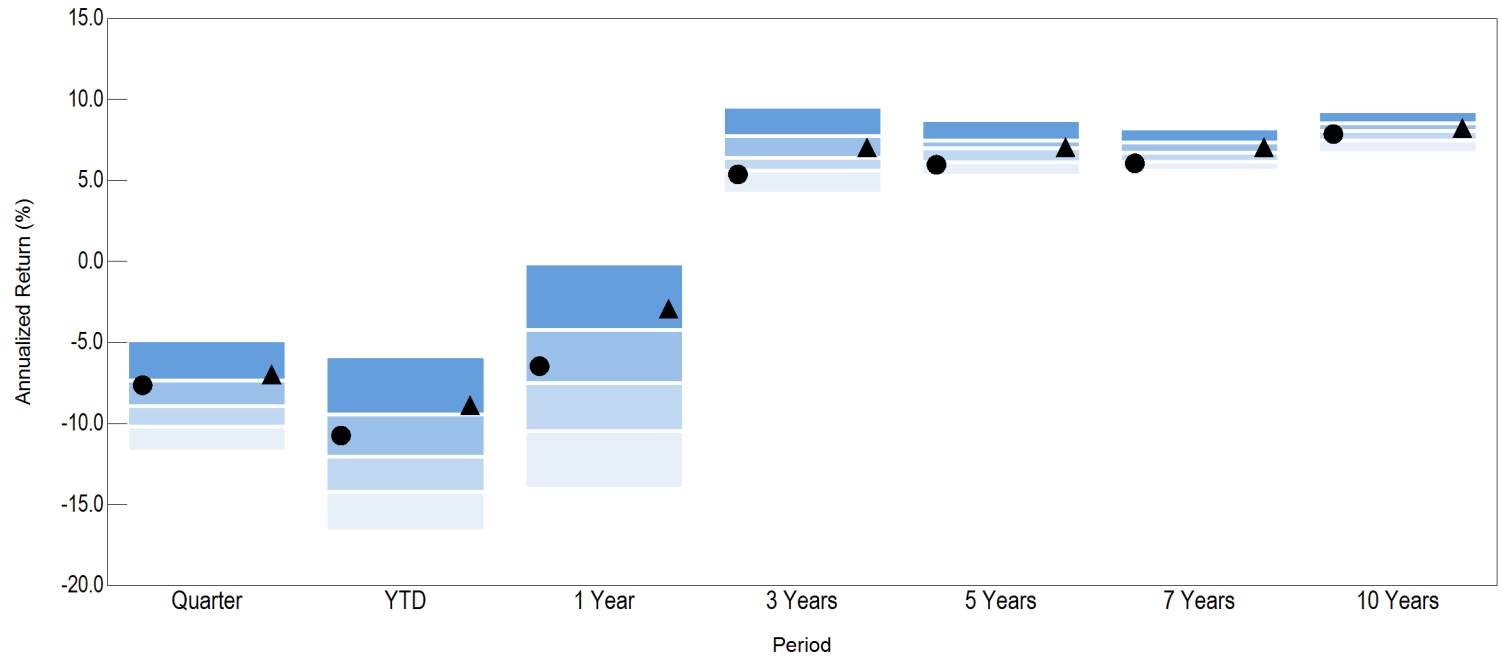


Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: June 30, 2022

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



	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	-4.9	-5.9	-0.1	9.5	8.7	8.2	9.3							
<b>25th Percentile</b>	-7.3	-9.4	-4.2	7.8	7.5	7.4	8.5							
<b>Median</b>	-8.9	-12.0	-7.5	6.4	7.0	6.7	8.1							
<b>75th Percentile</b>	-10.2	-14.2	-10.5	5.6	6.1	6.2	7.5							
<b>95th Percentile</b>	-11.7	-16.6	-14.0	4.2	5.3	5.6	6.7							
<b># of Portfolios</b>	71	71	70	69	69	68	65							
<b>● Total Fund</b>	-7.6 (35)	-10.7 (43)	-6.5 (41)	5.4 (79)	6.0 (82)	6.1 (85)	7.9 (61)							
<b>▲ Policy Index</b>	-7.0 (21)	-8.9 (24)	-2.9 (15)	7.0 (39)	7.1 (46)	7.1 (43)	8.2 (44)							

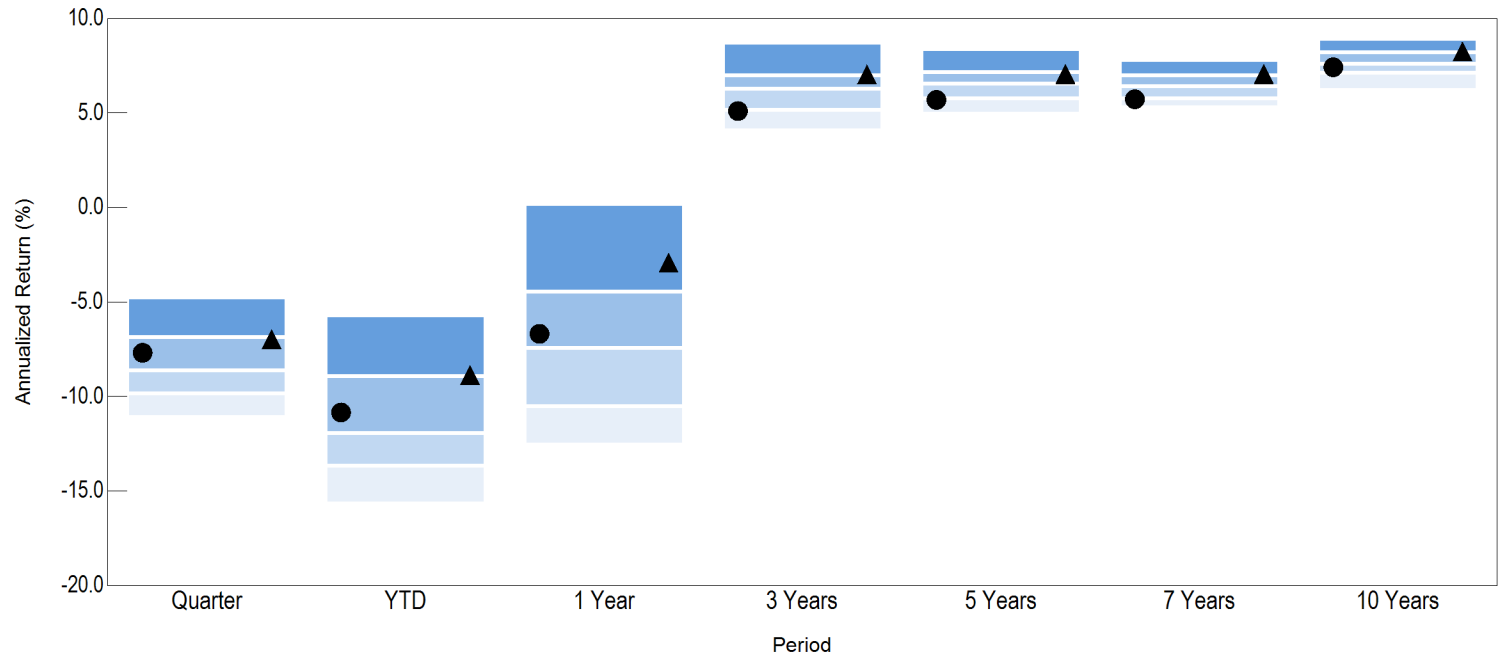
Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

Total Fund

Peer Universe Comparison: Cumulative Performance (Net of Fees)

Period Ending: June 30, 2022

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



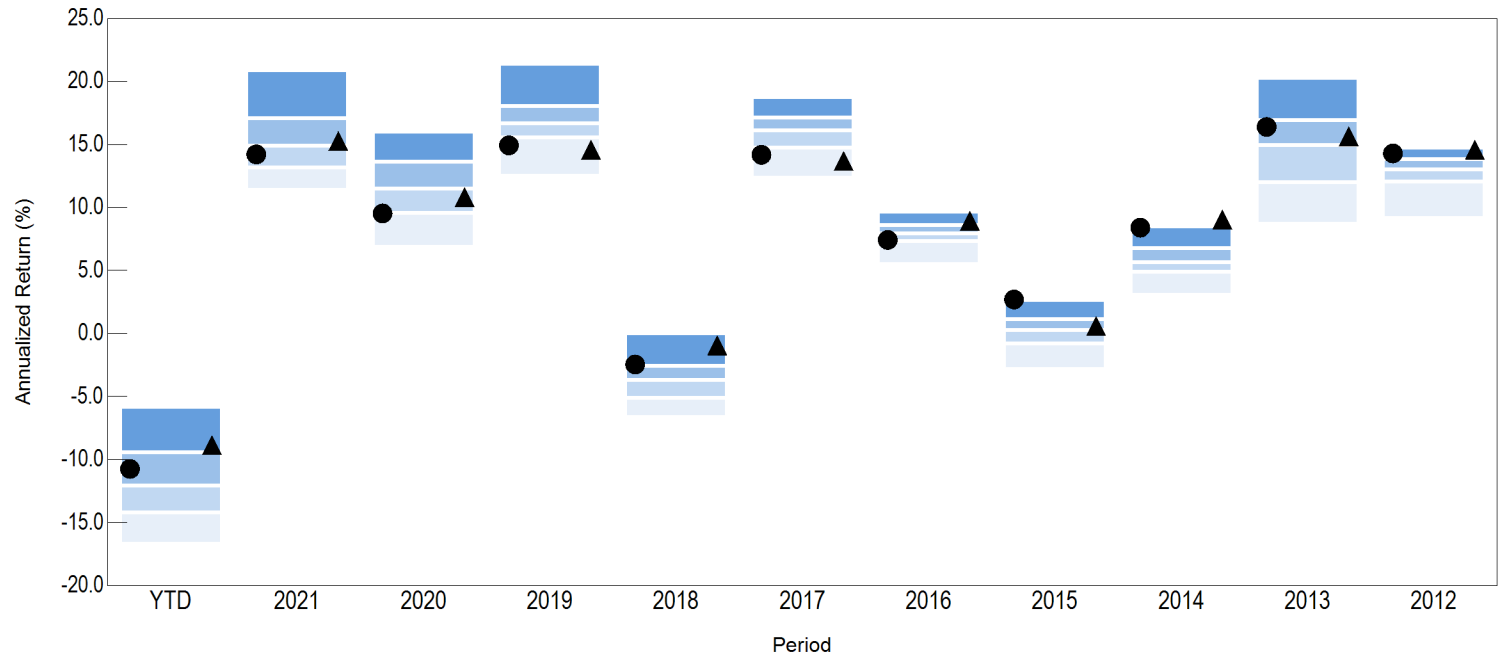
	Quarter		YTD		1 Year		3 Years		5 Years		7 Years		10 Years	
<b>5th Percentile</b>	-4.8	-5.7	0.2	8.7	8.4	7.8	8.9							
<b>25th Percentile</b>	-6.9	-8.9	-4.4	7.0	7.2	7.0	8.2							
<b>Median</b>	-8.6	-11.9	-7.4	6.3	6.6	6.4	7.6							
<b>75th Percentile</b>	-9.8	-13.6	-10.5	5.2	5.8	5.8	7.1							
<b>95th Percentile</b>	-11.1	-15.6	-12.5	4.1	5.0	5.3	6.2							
<b># of Portfolios</b>	64	64	63	62	62	60	57							
<b>● Total Fund</b>	-7.7 (40)	-10.8 (46)	-6.7 (44)	5.1 (78)	5.7 (77)	5.7 (77)	7.4 (60)							
<b>▲ Policy Index</b>	-7.0 (27)	-8.9 (24)	-2.9 (13)	7.0 (25)	7.1 (27)	7.1 (23)	8.2 (24)							

# Total Fund

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

Period Ending: June 30, 2022

Total Fund Consecutive Periods vs. InvMetrics Public DB > \$1B Gross



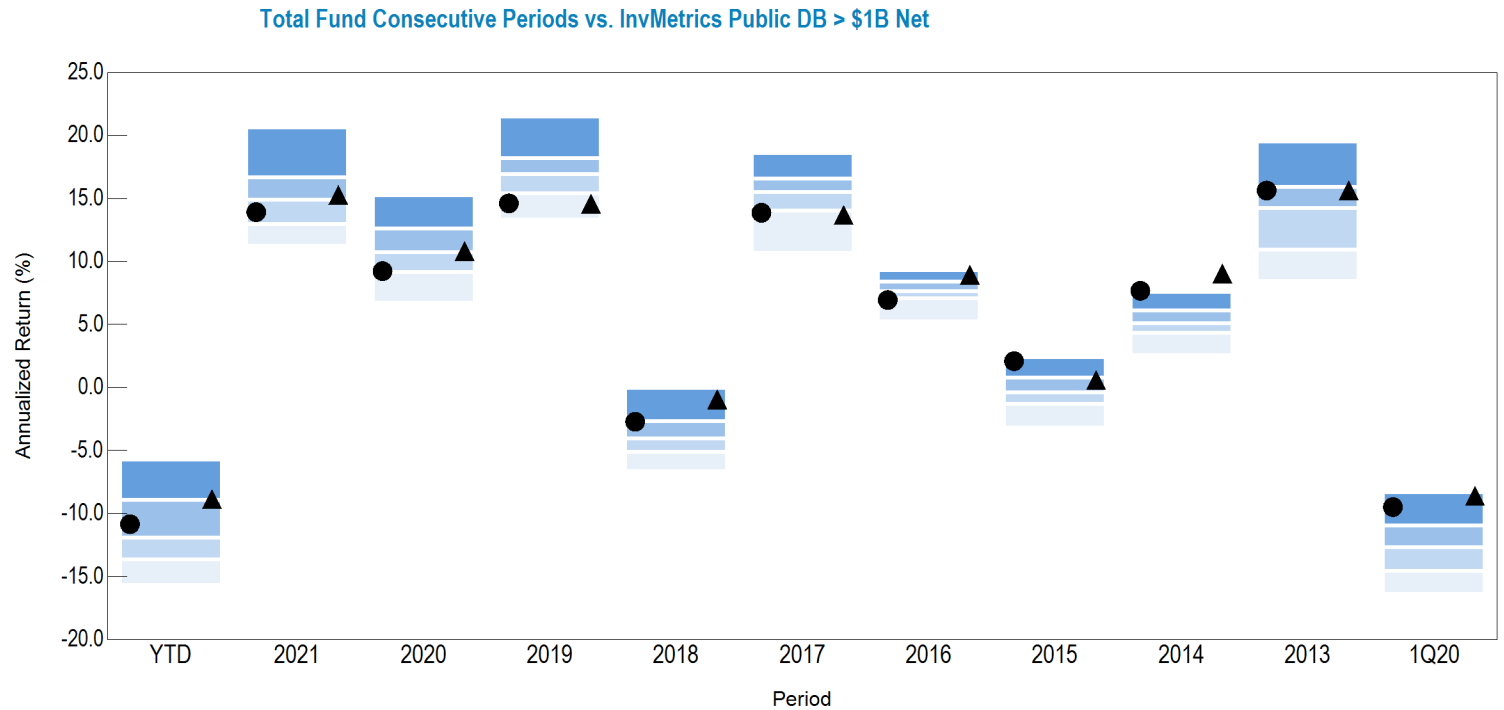
	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
<b>5th Percentile</b>	-5.9	20.9	16.0	21.4	0.0	18.8	9.7	2.7	8.5	20.2	14.7
<b>25th Percentile</b>	-9.4	17.1	13.6	18.1	-2.6	17.2	8.6	1.1	6.8	17.0	13.9
<b>Median</b>	-12.0	14.9	11.5	16.7	-3.7	16.2	8.0	0.3	5.7	15.0	13.0
<b>75th Percentile</b>	-14.2	13.2	9.6	15.6	-5.1	14.8	7.4	-0.7	4.9	12.0	12.1
<b>95th Percentile</b>	-16.6	11.4	6.9	12.5	-6.6	12.4	5.5	-2.8	3.1	8.7	9.2
<b># of Portfolios</b>	71	84	94	81	71	98	92	98	79	67	74
<b>● Total Fund</b>	-10.7 (43)	14.2 (62)	9.5 (78)	14.9 (83)	-2.5 (25)	14.2 (83)	7.4 (74)	2.7 (5)	8.4 (6)	16.4 (33)	14.3 (13)
<b>▲ Policy Index</b>	-8.9 (24)	15.3 (47)	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)

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, 2022



	Return (Rank)										
	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013	1Q20
5th Percentile	-5.7	20.6	15.2	21.5	-0.1	18.6	9.3	2.4	7.6	19.5	-8.3
25th Percentile	-8.9	16.7	12.7	18.2	-2.7	16.6	8.4	0.8	6.1	16.0	-10.9
Median	-11.9	14.9	10.8	17.0	-4.0	15.6	7.7	-0.4	5.1	14.3	-12.6
75th Percentile	-13.6	13.0	9.2	15.4	-5.1	14.1	7.1	-1.3	4.4	11.0	-14.5
95th Percentile	-15.6	11.3	6.8	13.4	-6.6	10.7	5.3	-3.2	2.6	8.5	-16.4
# of Portfolios	64	74	80	69	63	61	62	57	55	48	62
● Total Fund	-10.8 (46)	13.9 (61)	9.2 (73)	14.6 (92)	-2.7 (27)	13.9 (81)	6.9 (78)	2.1 (12)	7.7 (5)	15.6 (33)	-9.5 (12)
▲ Policy Index	-8.9 (24)	15.3 (45)	10.8 (49)	14.6 (92)	-0.9 (8)	13.7 (85)	8.9 (13)	0.6 (29)	9.0 (2)	15.6 (33)	-8.6 (6)

## Domestic Equity Managers

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# Boston Partners Manager Portfolio Overview

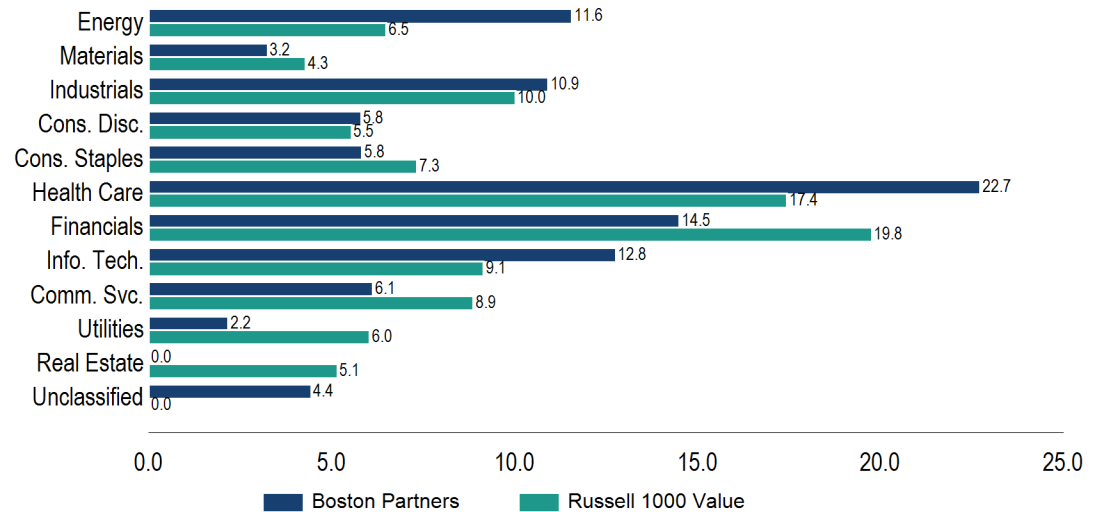
Period Ending: June 30, 2022

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	80	858
Weighted Avg. Market Cap. (\$B)	170.34	145.01
Median Market Cap. (\$B)	50.27	12.02
Price To Earnings	15.01	14.58
Price To Book	2.41	2.37
Price To Sales	1.56	1.82
Return on Equity (%)	22.27	16.90
Yield (%)	1.88	2.31
Beta	1.09	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	4.11	0.79
CONOCOPHILLIPS	3.07	-9.11
BERKSHIRE HATHAWAY INC	2.91	-22.64
AUTOZONE INC	2.83	5.11
UNITEDHEALTH GROUP INC	2.65	1.08
ALPHABET INC	2.44	-21.65
JPMORGAN CHASE & CO	2.37	-16.77
PROCTER & GAMBLE CO (THE)	2.28	-5.37
CIGNA CORP	2.23	10.45
SANOFI	2.05	1.01

## Top Contributors

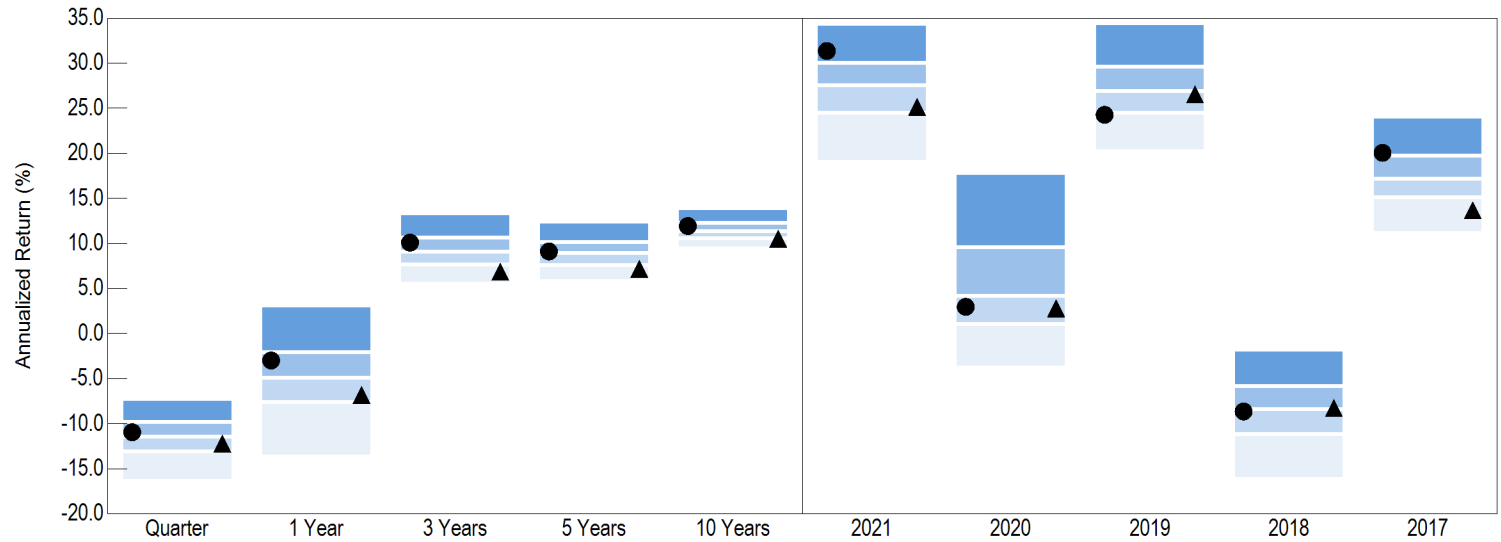
	Avg Wgt	Return	Contribution
CIGNA CORP	0.60	10.45	0.06
AUTOZONE INC	0.80	5.11	0.04
GENOVUS ENERGY INC	0.20	14.39	0.03
BRISTOL-MYERS SQUIBB CO	0.41	6.16	0.03
MCKESSON CORP	0.32	6.71	0.02
COCA-COLA EUROPACIFIC PARTNERS PLC	0.28	7.44	0.02
LKQ CORPORATION	0.23	8.64	0.02
T-MOBILE US INC	0.36	4.82	0.02
JOHNSON & JOHNSON	1.22	0.79	0.01
UNITEDHEALTH GROUP INC	0.81	1.08	0.01

## Bottom Contributors

	Avg Wgt	Return	Contribution
BERKSHIRE HATHAWAY INC	1.11	-22.64	-0.25
ALPHABET INC	0.92	-21.65	-0.20
CISCO SYSTEMS INC	0.71	-23.00	-0.16
MICRON TECHNOLOGY INC.	0.50	-28.93	-0.14
JPMORGAN CHASE & CO	0.85	-16.77	-0.14
DEERE & COMPANY	0.49	-27.65	-0.14
BANK OF AMERICA CORP	0.56	-24.05	-0.14
WELLS FARGO & CO	0.71	-18.72	-0.13
DUPONT DE NEMOURS INC	0.53	-24.10	-0.13
SCHWAB (CHARLES) CORP	0.51	-24.83	-0.13

Unclassified sector allocation includes cash allocations.

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

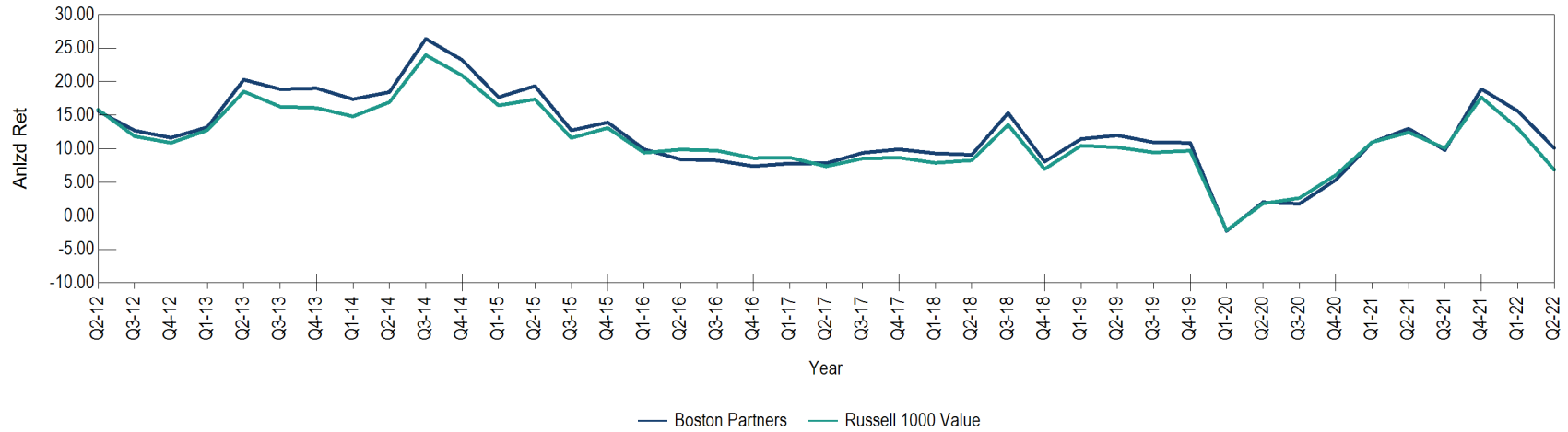


	Return (Rank)										
5th Percentile	-7.3	3.1	13.3	12.4	13.9	34.4	17.8	34.4	-1.8	24.0	
25th Percentile	-9.7	-2.1	10.7	10.2	12.3	30.0	9.6	29.6	-5.8	19.8	
Median	-11.4	-4.9	9.2	9.0	11.4	27.6	4.2	26.9	-8.3	17.2	
75th Percentile	-13.0	-7.6	7.7	7.7	10.6	24.5	1.1	24.5	-11.1	15.1	
95th Percentile	-16.3	-13.6	5.6	5.8	9.5	19.1	-3.8	20.3	-16.1	11.2	
# of Portfolios	335	335	327	317	283	337	326	331	336	342	
● Boston Partners	-11.0 (44)	-3.0 (33)	10.1 (34)	9.1 (46)	11.9 (34)	31.3 (17)	3.0 (61)	24.3 (77)	-8.7 (55)	20.1 (23)	
▲ Russell 1000 Value	-12.2 (64)	-6.8 (71)	6.9 (87)	7.2 (83)	10.5 (79)	25.2 (72)	2.8 (62)	26.5 (54)	-8.3 (50)	13.7 (87)	

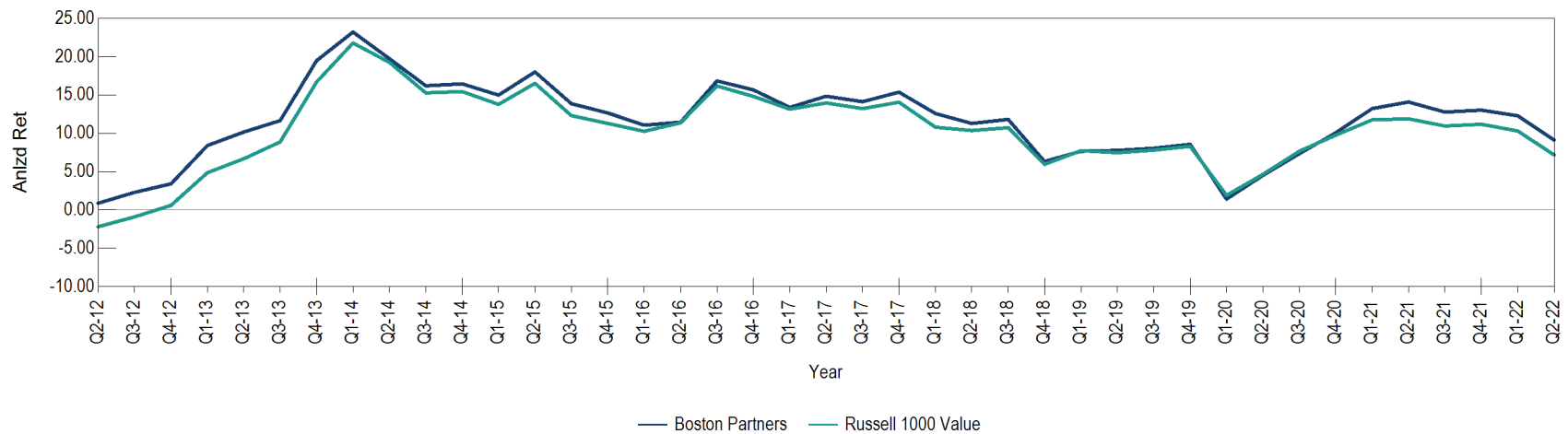
Boston Partners  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2022

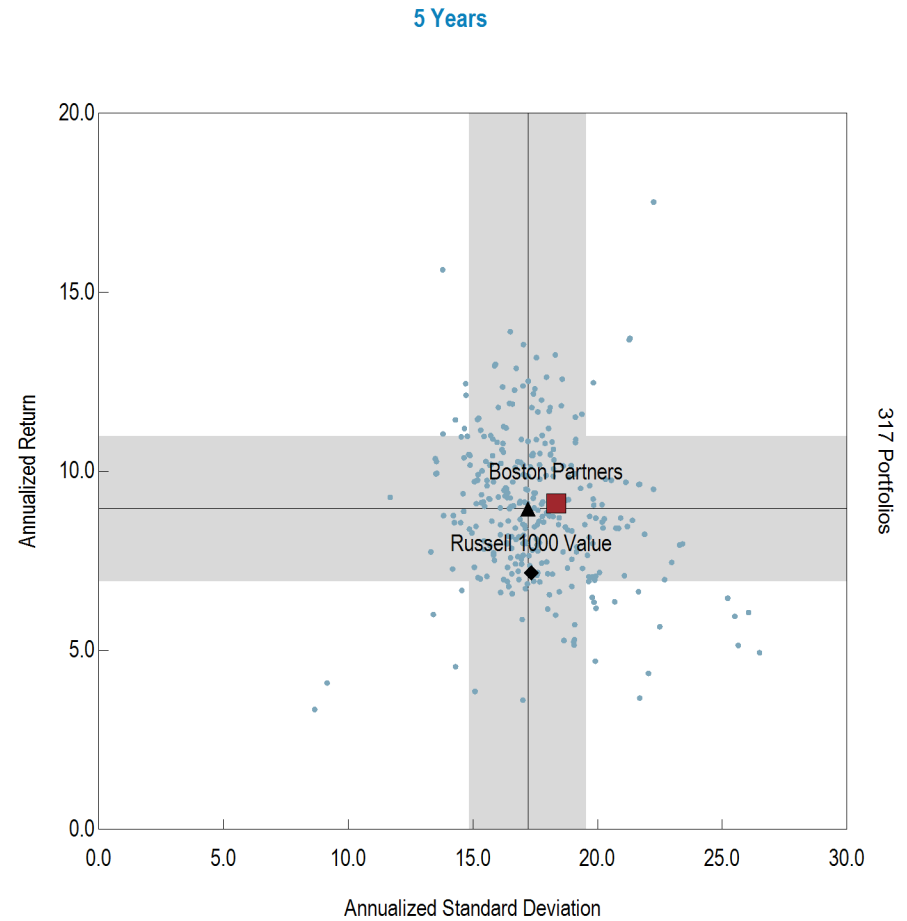
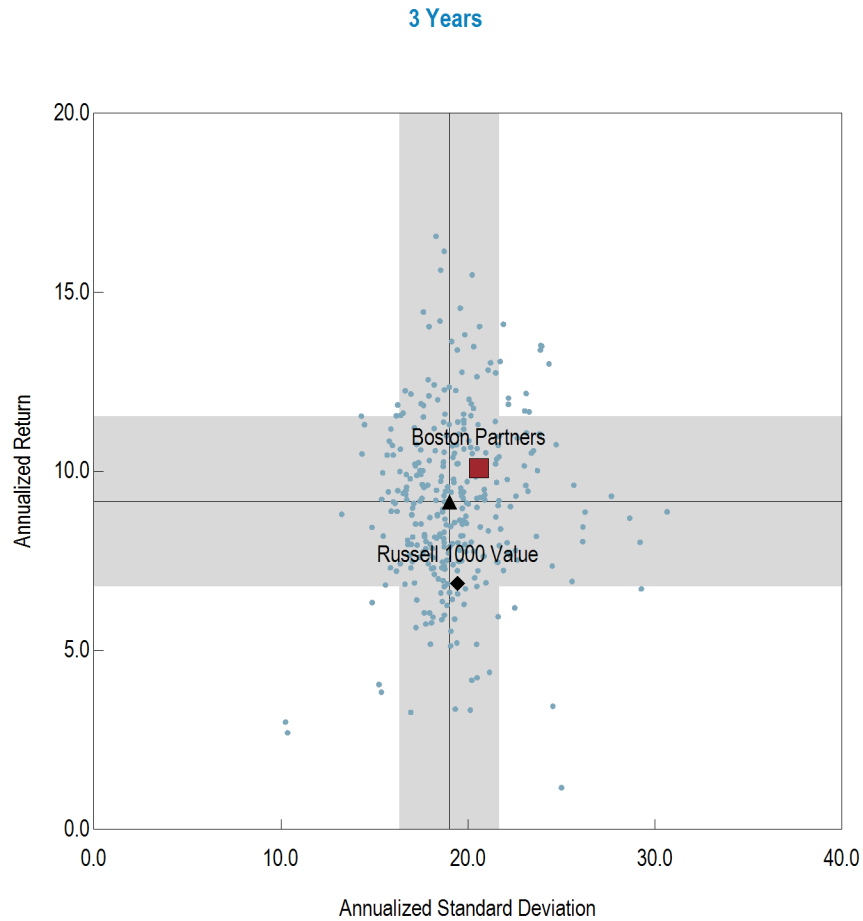
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)







**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	10.1%	20.6%	0.5
Russell 1000 Value	6.9%	19.5%	0.3
eV US Large Cap Value Equity Gross Median	9.2%	19.0%	0.4

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	9.1%	18.3%	0.4
Russell 1000 Value	7.2%	17.4%	0.4
eV US Large Cap Value Equity Gross Median	9.0%	17.2%	0.4

# Emerald Advisers Manager Portfolio Overview

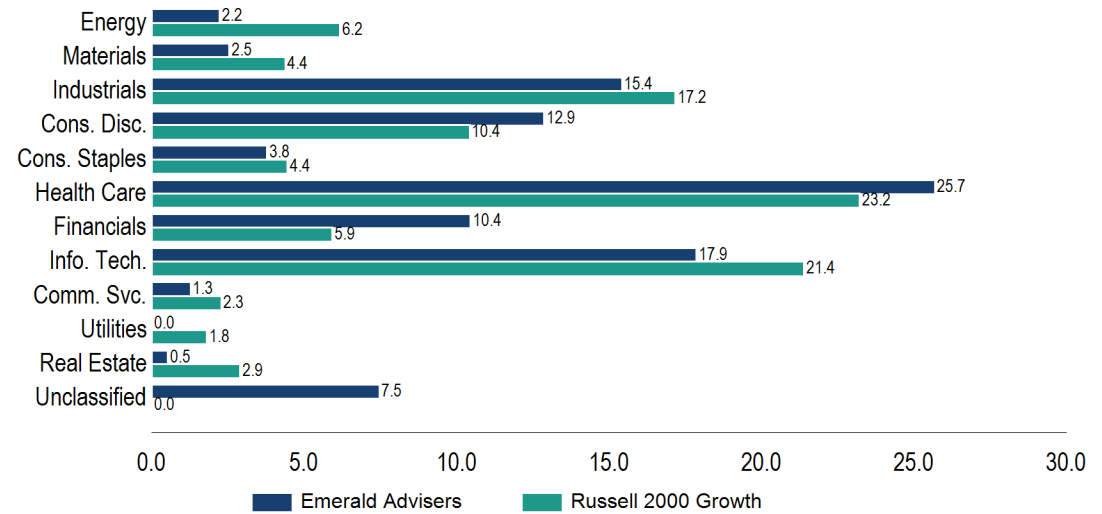
Period Ending: June 30, 2022

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	116	1,102
Weighted Avg. Market Cap. (\$B)	3.22	2.93
Median Market Cap. (\$B)	2.39	1.20
Price To Earnings	20.48	17.06
Price To Book	3.41	3.60
Price To Sales	2.42	1.68
Return on Equity (%)	5.18	3.65
Yield (%)	0.49	0.79
Beta	0.97	1.00

## Sector Allocation (%) vs Russell 2000 Growth



## Largest Holdings

	End Weight	Return
CHART INDUSTRIES INC	2.97	-2.56
SIMPLY GOOD FOODS CO (THE)	2.38	-0.47
PERFICIENT INC	1.85	-16.71
RAPID7 INC	1.83	-39.95
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	1.83	-23.00
UNITED THERAPEUTICS CORP	1.81	31.34
CHURCHILL DOWNS INC	1.71	-13.64
PALOMAR HOLDINGS INC	1.69	0.64
ALKERMES PLC	1.63	13.23
AVIENT CORP	1.62	-16.01

## Top Contributors

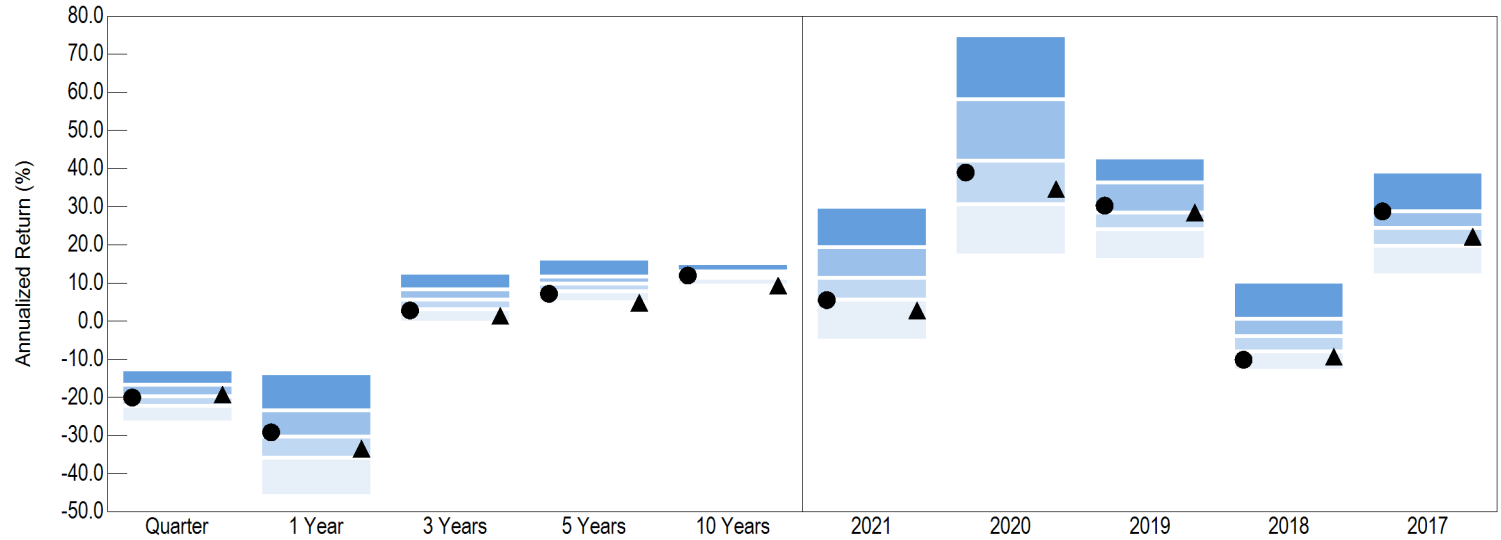
	Avg Wgt	Return	Contribution
UNITED THERAPEUTICS CORP	0.44	31.34	0.14
SAILPOINT TECHNOLOGIES HOLDINGS INC	0.50	22.47	0.11
BIOHAVEN PHARMACEUTICAL HOLDING CO LTD	0.49	22.89	0.11
ALKERMES PLC	0.36	13.23	0.05
SUPER MICRO COMPUTER INC	0.38	5.99	0.02
TRANSMEDICS GROUP INC	0.10	16.74	0.02
MANNKIND CORP	0.27	3.53	0.01

## Bottom Contributors

	Avg Wgt	Return	Contribution
RAPID7 INC	0.81	-39.95	-0.33
FRESHPET INC	0.54	-49.44	-0.27
SEAWORLD ENTERTAINMENT INC	0.62	-40.65	-0.25
VARONIS SYSTEMS INC	0.58	-38.33	-0.22
SILVERGATE CAPITAL CORPORATION	0.31	-64.45	-0.20
JACK IN THE BOX INC.	0.48	-39.60	-0.19
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	0.73	-23.00	-0.17
NATIONAL VISION HOLDINGS INC	0.44	-36.88	-0.16

Unclassified sector allocation includes cash allocations.

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

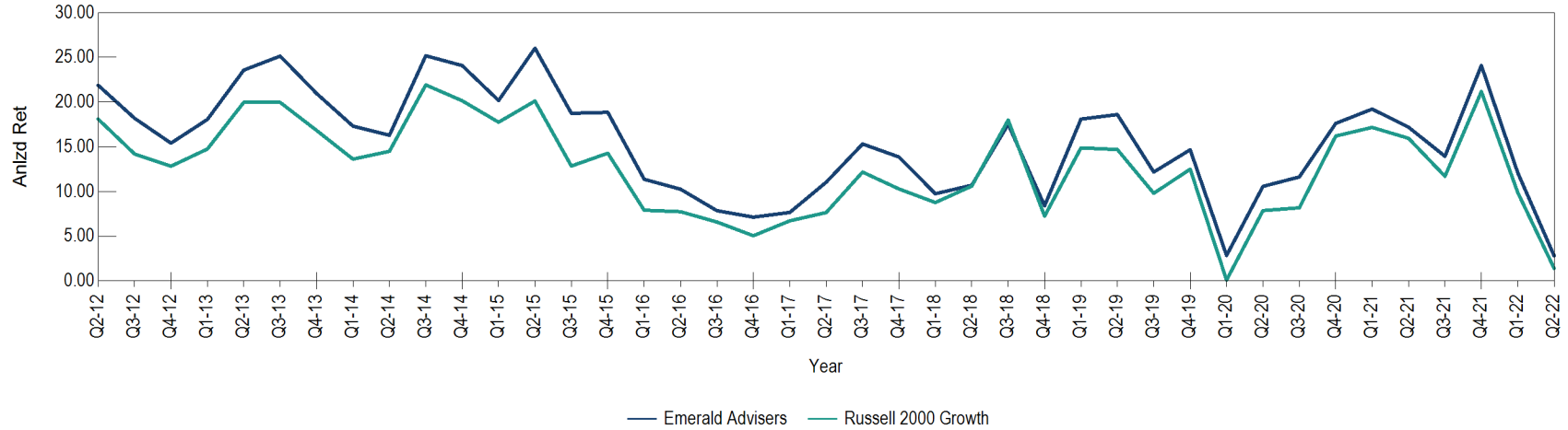


	Return (Rank)									
5th Percentile	-12.7	-13.8	12.6	16.2	15.1	29.8	75.0	42.8	10.2	39.2
25th Percentile	-16.7	-23.4	8.3	11.8	13.2	19.5	58.3	36.4	0.7	28.9
Median	-19.7	-30.2	5.7	9.9	12.2	11.5	42.2	28.5	-3.9	24.6
75th Percentile	-22.1	-35.8	3.3	7.9	11.4	5.7	30.8	24.2	-7.9	19.8
95th Percentile	-26.5	-45.8	-0.3	5.0	9.4	-5.1	17.4	16.2	-12.8	12.1
# of Portfolios	150	150	148	145	127	158	161	157	164	174
● Emerald Advisers	-20.0 (52)	-29.2 (48)	2.8 (81)	7.2 (82)	12.0 (61)	5.5 (76)	39.0 (57)	30.3 (45)	-10.1 (85)	28.8 (26)
▲ Russell 2000 Growth	-19.3 (47)	-33.4 (69)	1.4 (90)	4.8 (96)	9.3 (96)	2.8 (84)	34.6 (66)	28.5 (51)	-9.3 (80)	22.2 (62)

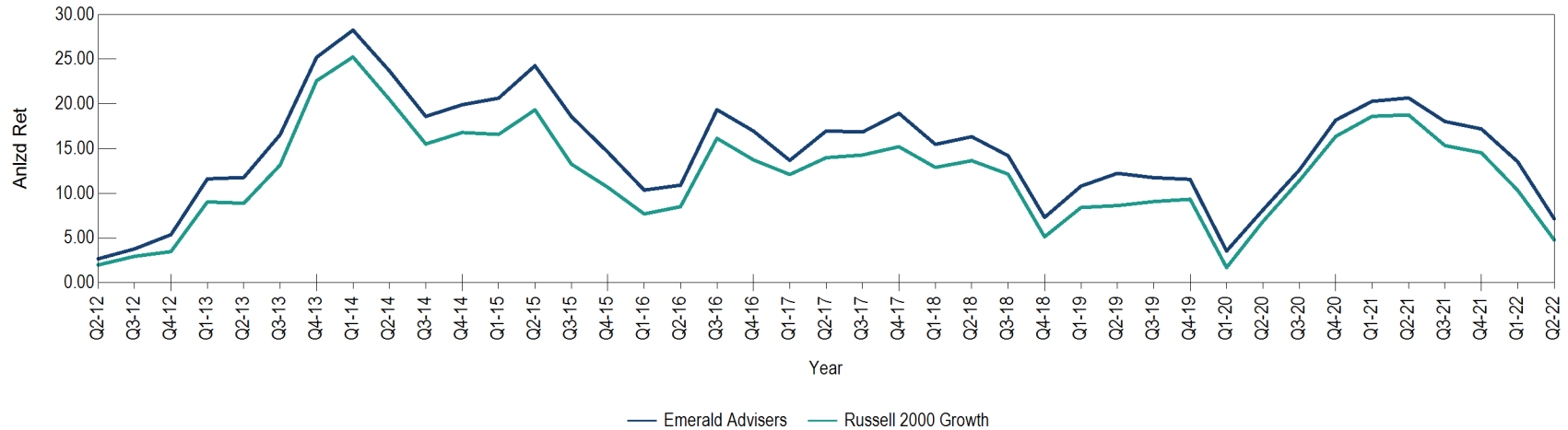
Emerald Advisers  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2022

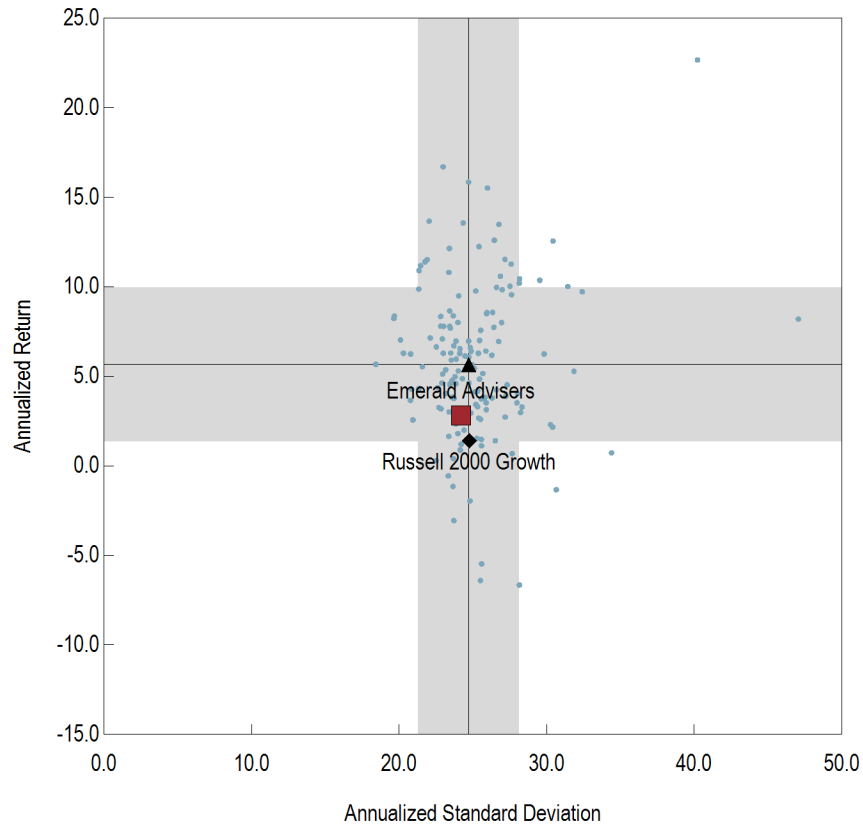
Rolling 3 Year Annualized Return (%)



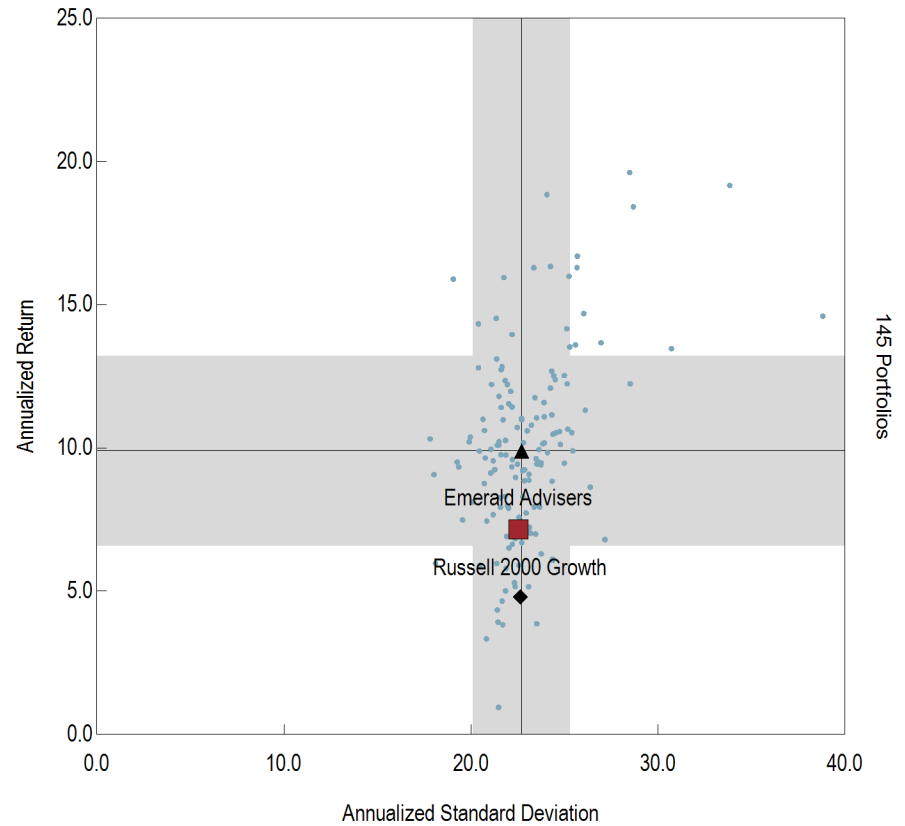
Rolling 5 Year Annualized Return (%)



**3 Years**



**5 Years**



**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	2.8%	24.2%	0.1
Russell 2000 Growth	1.4%	24.7%	0.0
eV US Small Cap Growth Equity Gross Median	5.7%	24.7%	0.2

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	7.2%	22.5%	0.3
Russell 2000 Growth	4.8%	22.6%	0.2
eV US Small Cap Growth Equity Gross Median	9.9%	22.7%	0.4

# Ceredex Manager Portfolio Overview

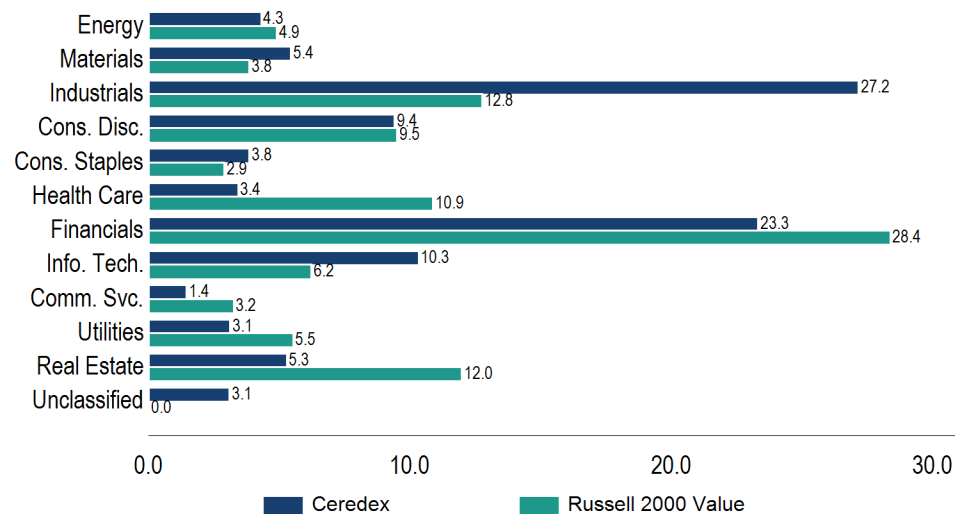
Period Ending: June 30, 2022

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	81	1,371
Weighted Avg. Market Cap. (\$B)	5.07	2.27
Median Market Cap. (\$B)	3.93	0.90
Price To Earnings	13.96	10.45
Price To Book	2.25	1.50
Price To Sales	1.21	1.14
Return on Equity (%)	15.53	6.35
Yield (%)	2.27	2.31
Beta	0.85	1.00

## Sector Allocation (%) vs Russell 2000 Value



## Largest Holdings

	End Weight	Return
LENNOX INTERNATIONAL INC.	2.94	-19.46
POWER INTEGRATIONS INC	2.84	-18.89
EMCOR GROUP INC.	2.60	-8.48
OVINTIV INC	2.42	-18.03
FIRST CITIZENS BANCSHARES INC	2.33	-1.71
AGCO CORP	2.25	-29.73
SLM CORP	2.22	-12.69
PATTERSON COS INC	2.21	-5.69
DOLBY LABORATORIES INC	2.10	-8.21
STANTEC INC	2.09	-12.57

## Top Contributors

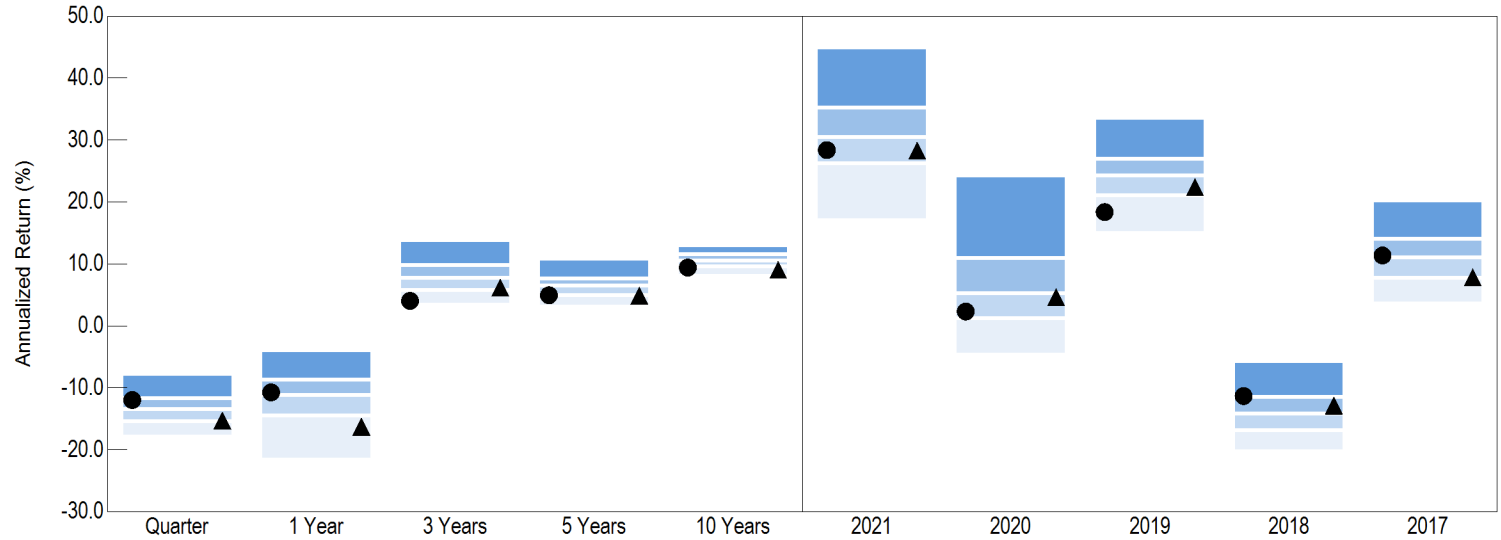
	Avg Wgt	Return	Contribution
CALAVO GROWERS INC	0.30	14.46	0.04
ASHLAND INC	0.75	5.04	0.04
FIRST INTERSTATE BANCSYSTEM INC	0.48	6.11	0.03
PENSKE AUTOMOTIVE GROUP INC	0.22	12.22	0.03
FEDERAL SIGNAL CORP.	0.20	5.77	0.01
LITTELFUSE INC	0.49	2.06	0.01
AMERISAFE INC	0.12	5.38	0.01
AMERICAN FINANCIAL GROUP INC	0.33	1.50	0.00
LEGGETT & PLATT INC	0.39	0.64	0.00
HEALTHCARE REALTY TRUST INC	0.32	0.05	0.00

## Bottom Contributors

	Avg Wgt	Return	Contribution
POWER INTEGRATIONS INC	1.39	-18.89	-0.26
OVINTIV INC	1.32	-17.91	-0.24
OWENS & MINOR INC.	0.74	-28.56	-0.21
MKS INSTRUMENTS INC	0.64	-31.45	-0.20
AGCO CORP	0.67	-29.73	-0.20
HERC HOLDINGS INC	0.42	-45.78	-0.19
LENNOX INTERNATIONAL INC.	0.92	-19.46	-0.18
KEMPER CORP	1.03	-14.72	-0.15
SLM CORP	1.20	-12.69	-0.15
ENERSYS	0.70	-20.72	-0.14

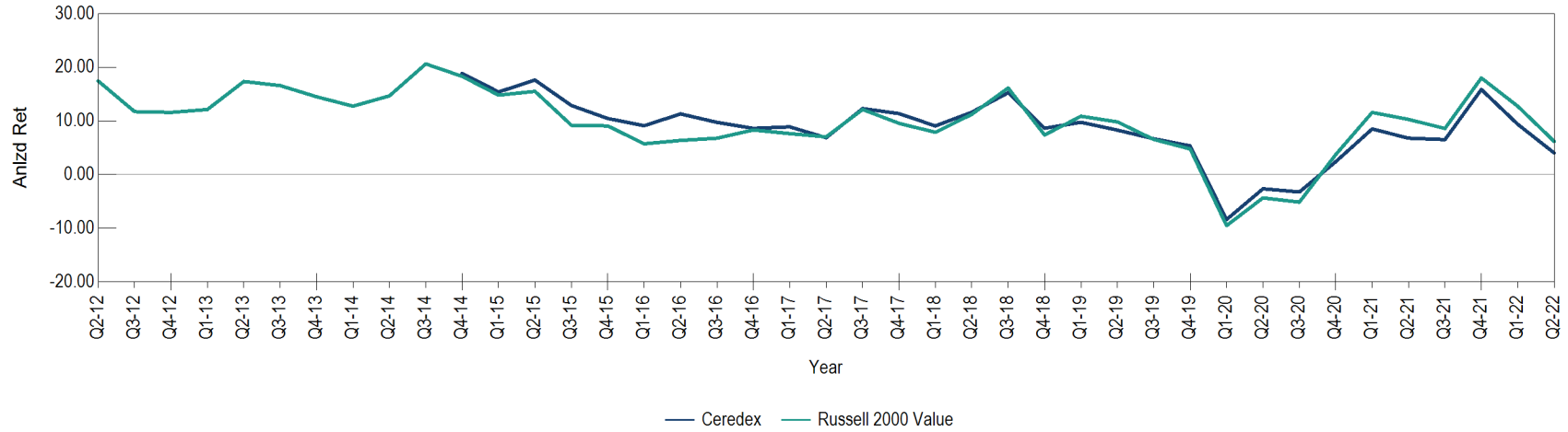
Unclassified sector allocation includes cash allocations.

Ceredex vs. eV US Small Cap Value Equity Gross Universe

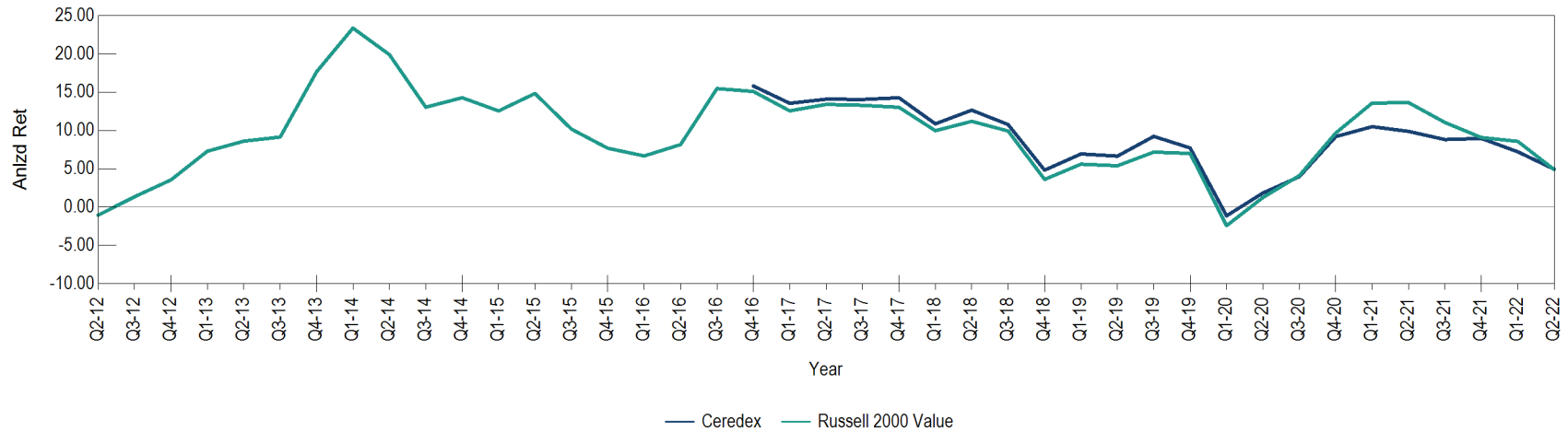


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-7.8	-4.0	13.8	10.8	12.9	44.9	24.2	33.6	-5.7	20.2
25th Percentile	-11.6	-8.6	9.9	7.7	11.6	35.3	11.1	27.0	-11.4	14.1
Median	-13.4	-11.1	7.8	6.5	10.6	30.5	5.3	24.4	-14.0	11.1
75th Percentile	-15.3	-14.4	5.9	5.0	9.6	26.3	1.3	21.2	-16.7	7.8
95th Percentile	-17.8	-21.5	3.4	3.1	8.1	17.1	-4.6	15.0	-20.2	3.7
# of Portfolios	212	212	208	197	177	210	219	217	220	224
● Ceredex	-12.0 (29)	-10.7 (45)	4.0 (91)	4.9 (79)	9.4 (81)	28.4 (60)	2.3 (69)	18.4 (87)	-11.3 (25)	11.4 (48)
▲ Russell 2000 Value	-15.3 (75)	-16.3 (81)	6.2 (75)	4.9 (80)	9.1 (88)	28.3 (60)	4.6 (53)	22.4 (69)	-12.9 (39)	7.8 (75)

Rolling 3 Year Annualized Return (%)

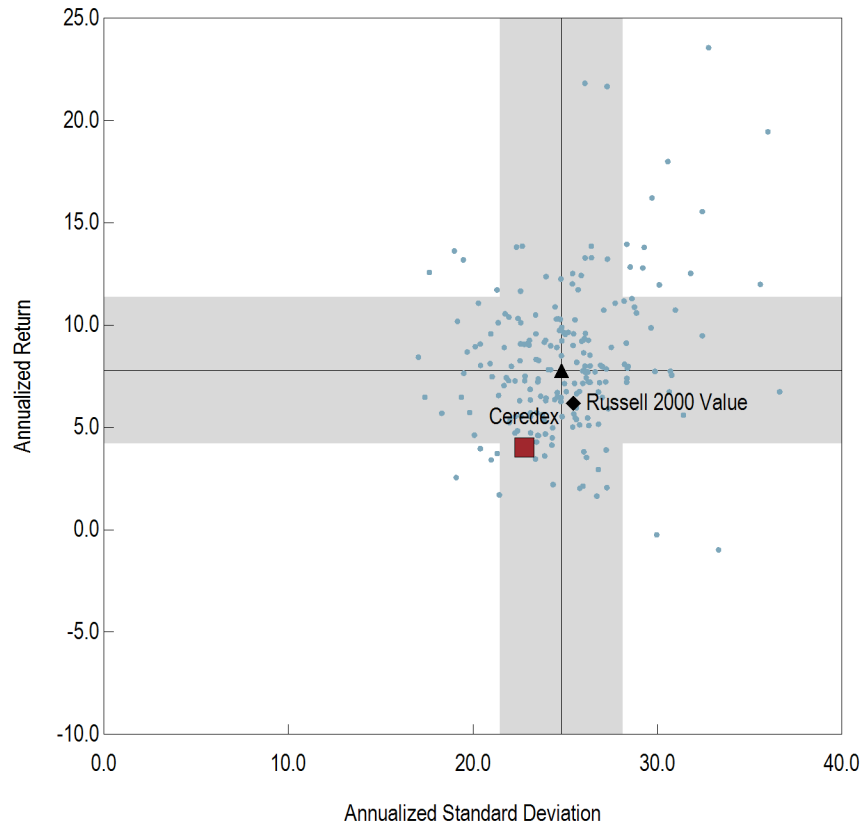


Rolling 5 Year Annualized Return (%)

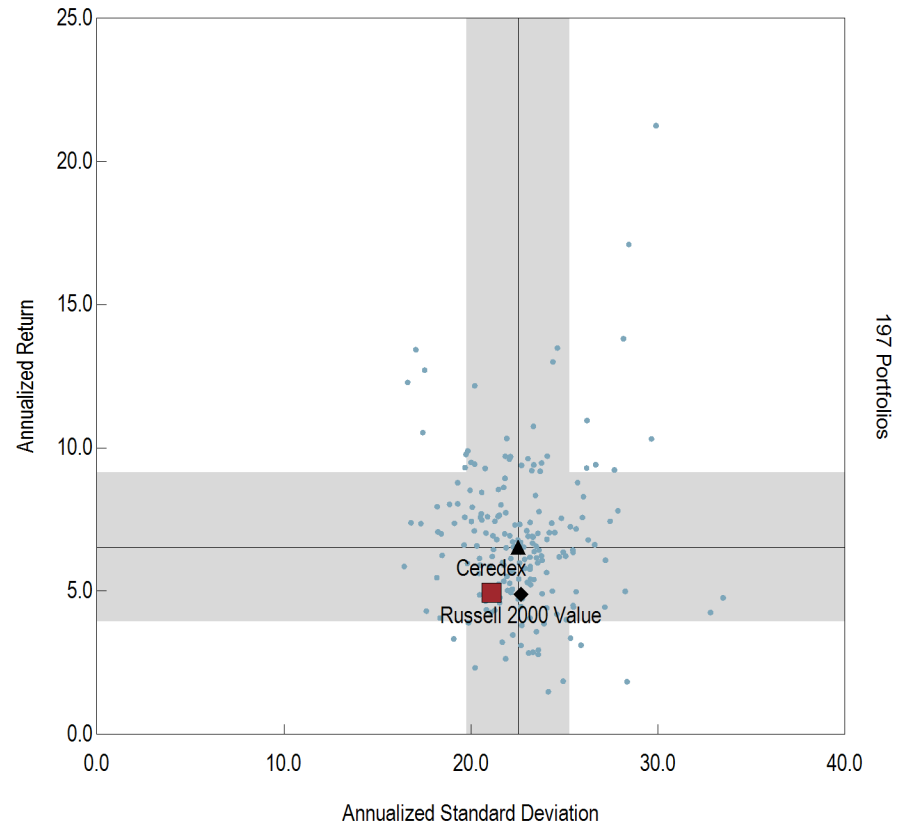




3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	4.0%	22.8%	0.2
Russell 2000 Value	6.2%	25.5%	0.2
eV US Small Cap Value Equity Gross Median	7.8%	24.8%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	4.9%	21.1%	0.2
Russell 2000 Value	4.9%	22.7%	0.2
eV US Small Cap Value Equity Gross Median	6.5%	22.5%	0.2

# International Equity Managers

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# Pyrford Manager Portfolio Overview

Period Ending: June 30, 2022

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.

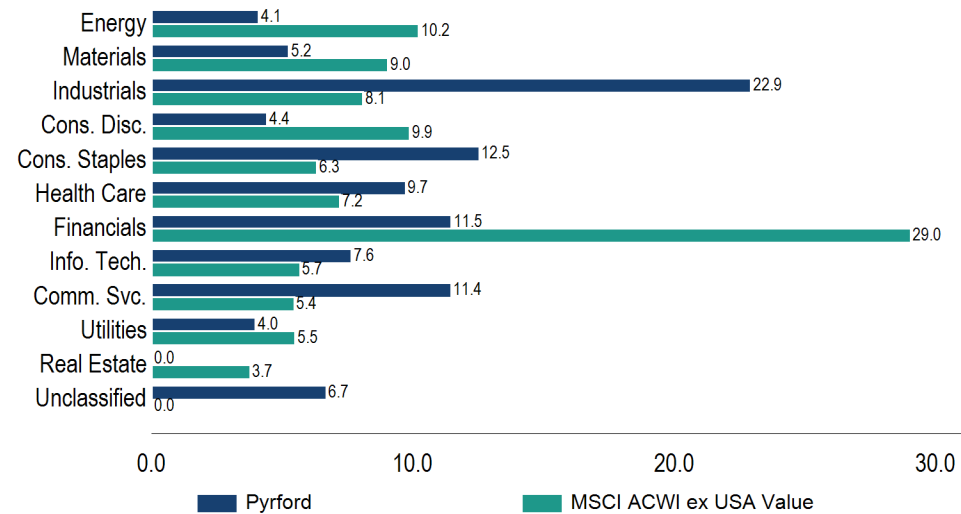
## Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	69	1,251
Weighted Avg. Market Cap. (\$B)	61.07	69.94
Median Market Cap. (\$B)	22.37	8.20
Price To Earnings	15.27	9.35
Price To Book	2.18	1.75
Price To Sales	1.61	0.85
Return on Equity (%)	15.83	12.07
Yield (%)	3.97	5.03
Beta	0.68	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	85.9%	71.3%
Emerging*	8.0%	28.7%
<b>Top 10 Largest Countries</b>		
Japan	14.7%	14.3%
Switzerland	12.2%	4.2%
United Kingdom	10.2%	14.1%
Germany	9.5%	6.1%
Australia	9.5%	4.9%
France	7.4%	5.5%
Singapore	6.3%	1.0%
Cash	6.1%	0.0%
Hong Kong	5.2%	2.0%
Netherlands	4.3%	1.2%
<b>Total-Top 10 Largest Countries</b>	<b>85.4%</b>	<b>53.1%</b>

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



## Top Contributors

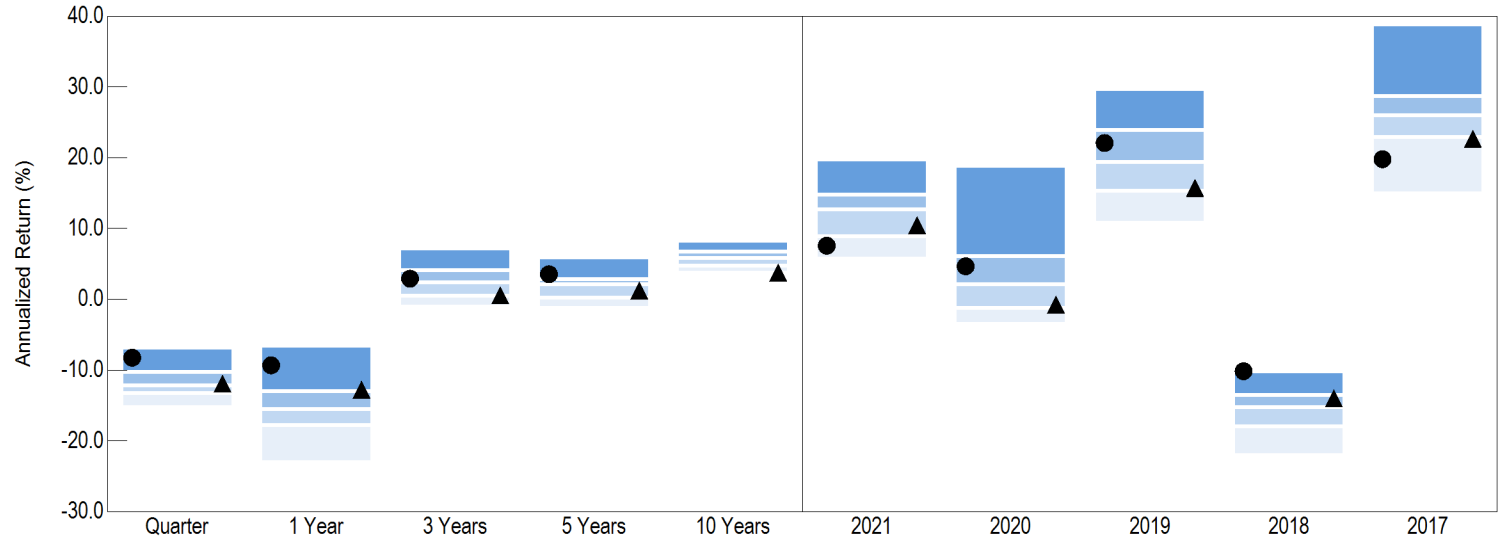
	Avg Wgt	Return	Contribution
ABC-MART INC	1.41	16.18	0.23
JAPAN TOBACCO INC	3.23	3.64	0.12
VTECH HOLDINGS LTD	1.01	8.03	0.08
AIA GROUP LTD	1.09	4.39	0.05
ESSITY AKTIEBOLAG	0.43	9.55	0.04
SANOFI	1.85	1.91	0.04
UNILEVER PLC COMMON STOCK GBP.0311	1.81	0.59	0.01
POWER ASSETS HOLDINGS LTD	1.20	0.24	0.00
SINGAPORE TECHNOLOGIES ENGINEERING LTD	0.84	-0.26	0.00
MERIDA INDUSTRY	0.14	-2.78	0.00

## Bottom Contributors

	Avg Wgt	Return	Contribution
ROCHE HOLDING AG	2.97	-16.17	-0.48
BRENTAG SE	2.08	-18.64	-0.39
UNITED OVERSEAS BANK LTD	2.02	-18.63	-0.38
LEGRAND	1.66	-21.69	-0.36
SAP SE	2.09	-16.91	-0.35
FUCHS PETROLUB SE	1.67	-20.89	-0.35
L'AIR LIQUIDE SA	2.31	-15.04	-0.35
DEUTSCHE POST AG	1.77	-18.94	-0.34
NATIONAL GRID PLC	2.18	-14.56	-0.32
AXIATA GROUP BHD	1.10	-28.62	-0.32

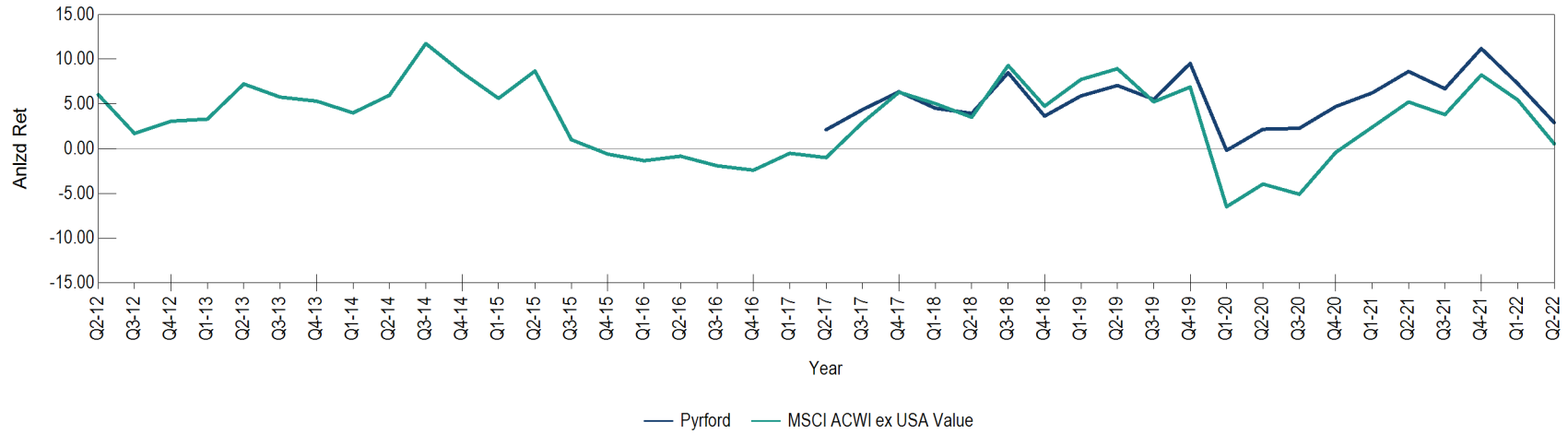
Unclassified sector allocation includes cash allocations.

Pyrford vs. eV ACWI ex-US Value Equity Gross Universe

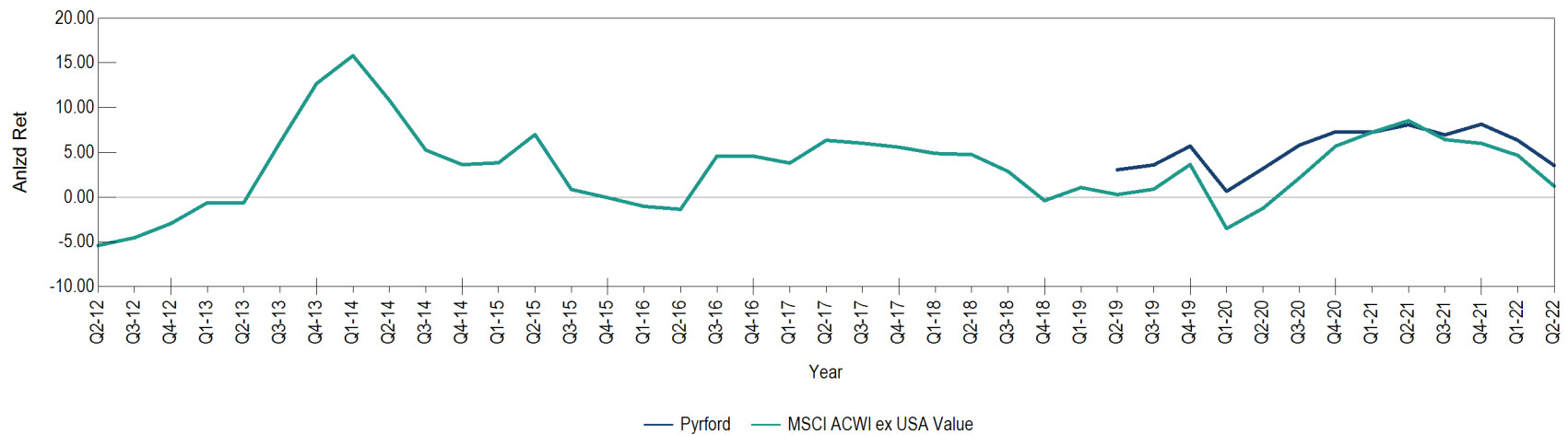


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-6.9	-6.6	7.1	5.9	8.2	19.7	18.8	29.6	-10.2	38.8
25th Percentile	-10.2	-12.9	4.2	2.9	6.8	14.8	6.2	24.0	-13.4	28.8
Median	-12.1	-15.5	2.5	2.2	5.9	12.8	2.1	19.5	-15.2	26.0
75th Percentile	-13.2	-17.7	0.6	0.3	4.8	8.9	-1.2	15.4	-17.9	23.0
95th Percentile	-15.2	-23.0	-1.0	-1.2	3.8	5.8	-3.5	10.8	-21.9	15.0
# of Portfolios	46	46	45	42	32	46	49	52	54	56
● Pyrford	-8.2 (8)	-9.3 (9)	2.9 (45)	3.5 (23)	-- (--)	7.6 (84)	4.7 (33)	22.1 (35)	-10.1 (5)	19.8 (84)
▲ MSCI ACWI ex USA Value	-11.9 (45)	-12.8 (23)	0.6 (76)	1.2 (65)	3.8 (97)	10.5 (69)	-0.8 (73)	15.7 (74)	-14.0 (32)	22.7 (77)

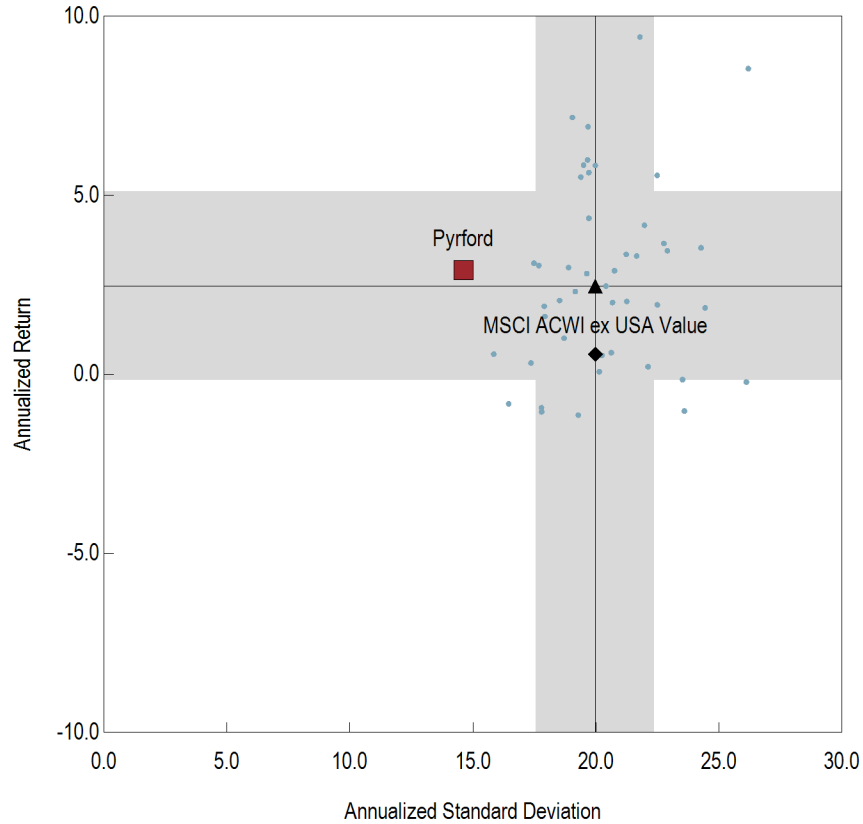
Rolling 3 Year Annualized Return (%)



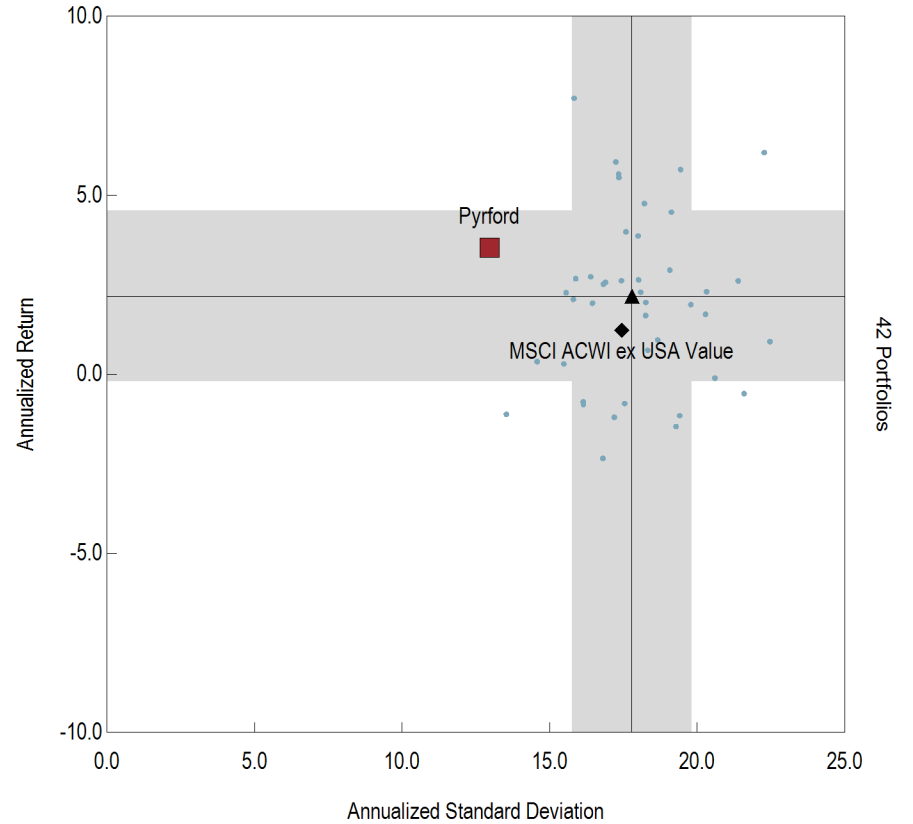
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	2.9%	14.6%	0.2
MSCI ACWI ex USA Value	0.6%	20.0%	0.0
eV ACWI ex-US Value Equity Gross Median	2.5%	20.0%	0.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	3.5%	13.0%	0.2
MSCI ACWI ex USA Value	1.2%	17.4%	0.0
eV ACWI ex-US Value Equity Gross Median	2.2%	17.8%	0.1

# William Blair Manager Portfolio Overview

Period Ending: June 30, 2022

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.

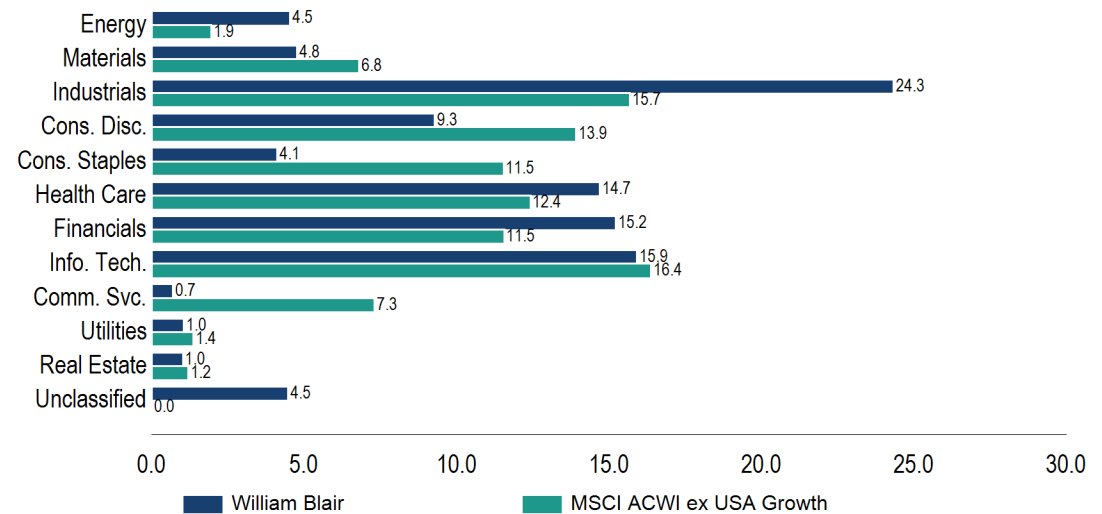
## Characteristics

	Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	172	1,256
Weighted Avg. Market Cap. (\$B)	60.46	93.71
Median Market Cap. (\$B)	10.90	9.02
Price To Earnings	23.16	18.35
Price To Book	3.73	3.18
Price To Sales	3.23	2.28
Return on Equity (%)	17.67	17.55
Yield (%)	1.89	1.91
Beta	1.18	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	79.1%	69.7%
Emerging*	16.4%	30.3%
<b>Top 10 Largest Countries</b>		
United Kingdom	14.7%	5.9%
France	10.4%	8.5%
Canada	7.7%	7.9%
India*	6.9%	3.7%
Japan	6.8%	13.6%
Switzerland	5.7%	8.9%
Denmark	5.3%	3.0%
Netherlands	4.9%	3.8%
Cash	4.5%	0.0%
Sweden	3.8%	2.6%
<b>Total-Top 10 Largest Countries</b>	<b>70.7%</b>	<b>58.0%</b>

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



## Top Contributors

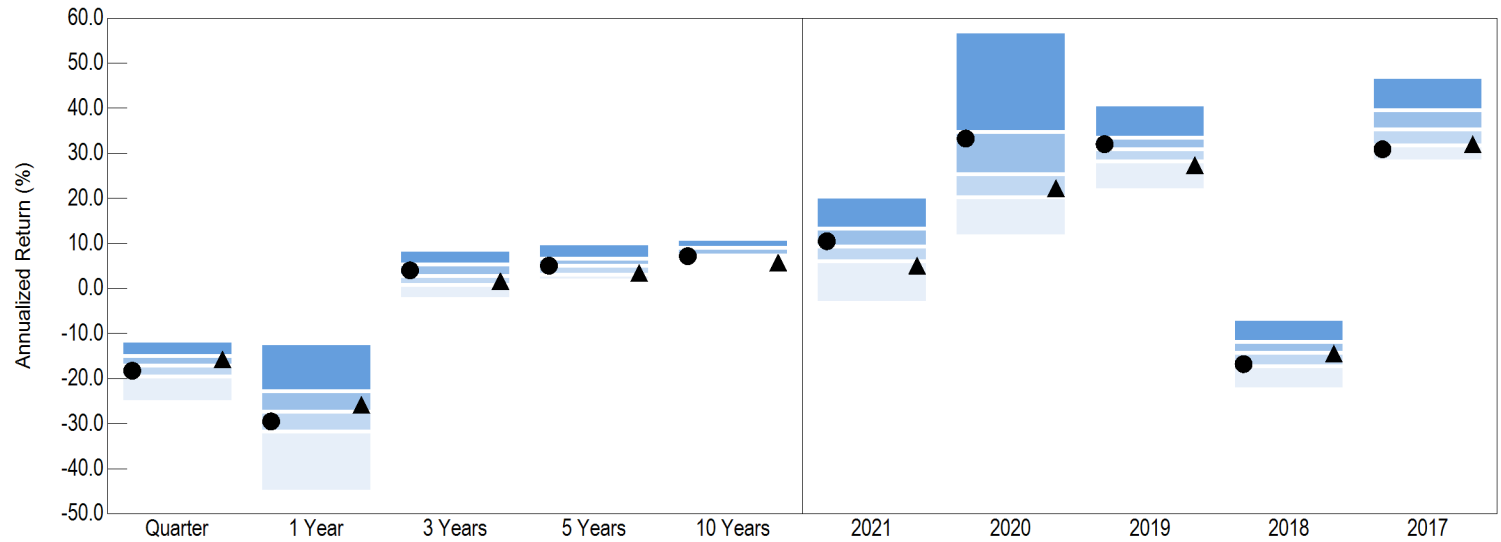
	Avg Wgt	Return	Contribution
AIA GROUP LTD	2.06	4.39	0.09
LI NING CO LTD	0.82	8.24	0.07
PROYA COSMETICS CO LTD	0.23	16.55	0.04
IT HOLDINGS	0.37	10.42	0.04
OLYMPUS CORP	0.90	4.16	0.04
Foshan Haitian Flavouring and Food Co Ltd	0.26	8.60	0.02
PETRONET LNG LTD	0.18	7.71	0.01
AIRTAC INTERNATIONAL GROUP	0.21	2.48	0.01
CHACHA FOOD CO LTD	0.17	1.85	0.00
TRUSTPILOT GROUP PLC	0.01	-35.76	0.00

## Bottom Contributors

	Avg Wgt	Return	Contribution
ASML HOLDING NV	1.96	-29.20	-0.57
SIKA AG, BAAR	1.52	-30.35	-0.46
LONZA GROUP AG	1.63	-26.55	-0.43
ASHTEAD GROUP PLC	1.22	-34.22	-0.42
CANADIAN NATIONAL RAILWAY CO	2.46	-15.90	-0.39
AIRBUS SE	1.87	-20.04	-0.37
MTU AERO ENGINES AG	1.70	-21.56	-0.37
INFOSYS LTD	1.37	-25.59	-0.35
DSV A/S	1.25	-28.15	-0.35
KINGSPAN GROUP PLC	0.87	-39.34	-0.34

Unclassified sector allocation includes cash allocations.

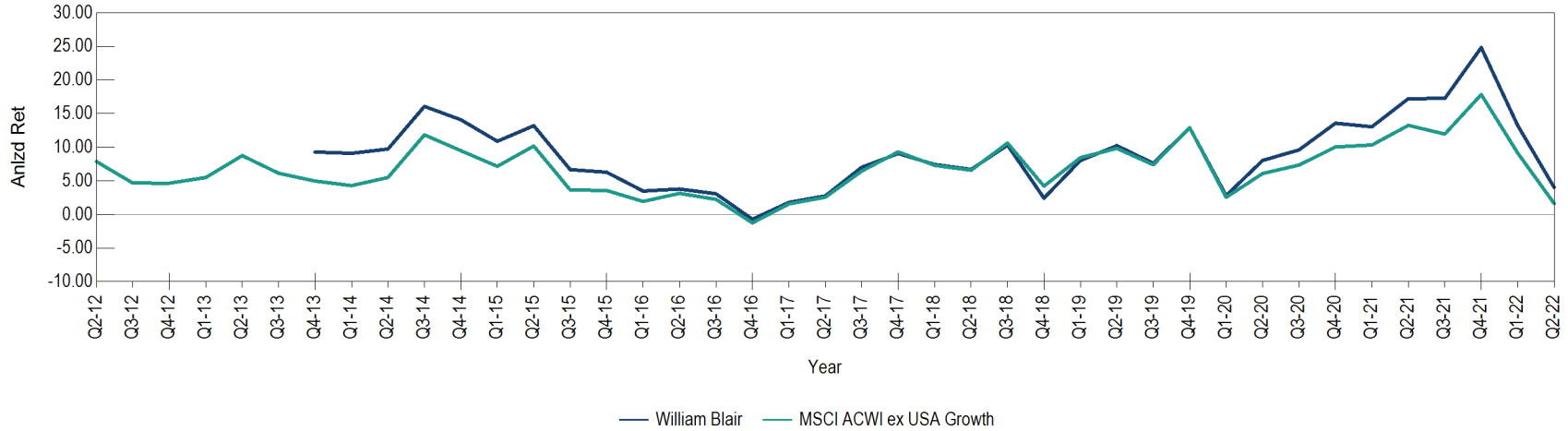
William Blair vs. eV ACWI ex-US Growth Equity Gross Universe



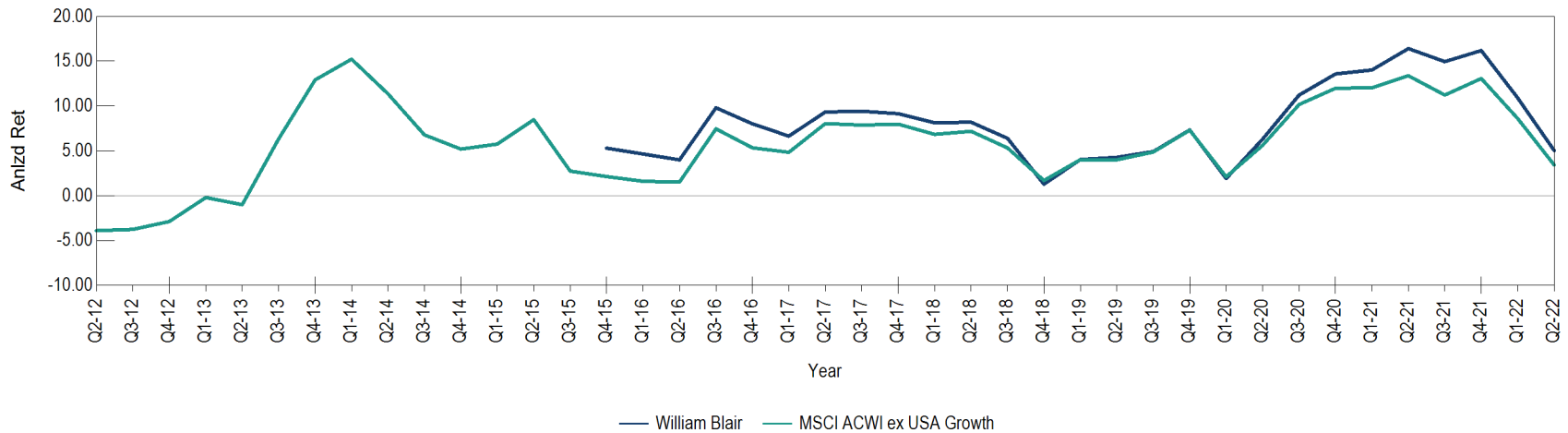
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-11.7	-12.2	8.6	10.0	10.9	20.3	57.0	40.8	-6.8	46.8
25th Percentile	-14.9	-22.7	5.5	6.6	9.1	13.4	34.8	33.6	-11.7	39.6
Median	-17.0	-27.2	2.8	5.1	7.4	9.3	25.4	31.0	-14.3	35.3
75th Percentile	-19.5	-31.7	0.8	3.2	6.6	6.1	20.3	28.3	-17.2	31.8
95th Percentile	-25.1	-45.0	-2.3	1.9	5.9	-3.1	11.6	21.8	-22.3	28.3
# of Portfolios	103	103	93	84	59	102	95	93	82	94
● William Blair	-18.3 (63)	-29.5 (61)	4.0 (37)	5.0 (51)	7.2 (63)	10.5 (44)	33.3 (30)	32.0 (39)	-16.8 (69)	30.9 (81)
▲ MSCI ACWI ex USA Growth	-15.7 (32)	-25.8 (42)	1.6 (66)	3.4 (72)	5.7 (97)	5.1 (78)	22.2 (64)	27.3 (80)	-14.4 (51)	32.0 (75)



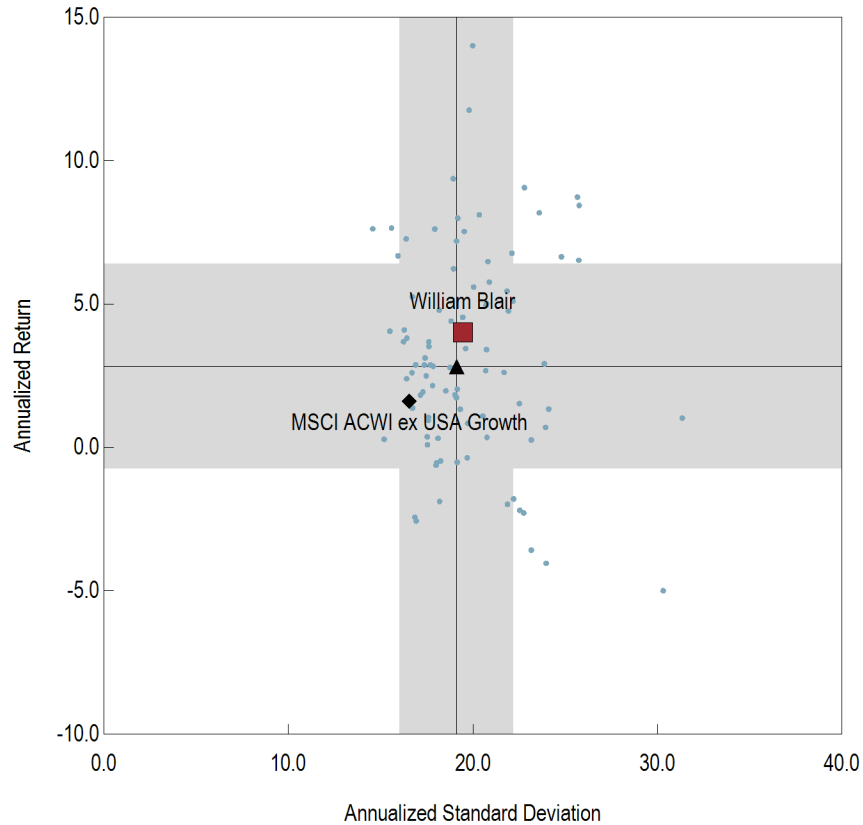
Rolling 3 Year Annualized Return (%)



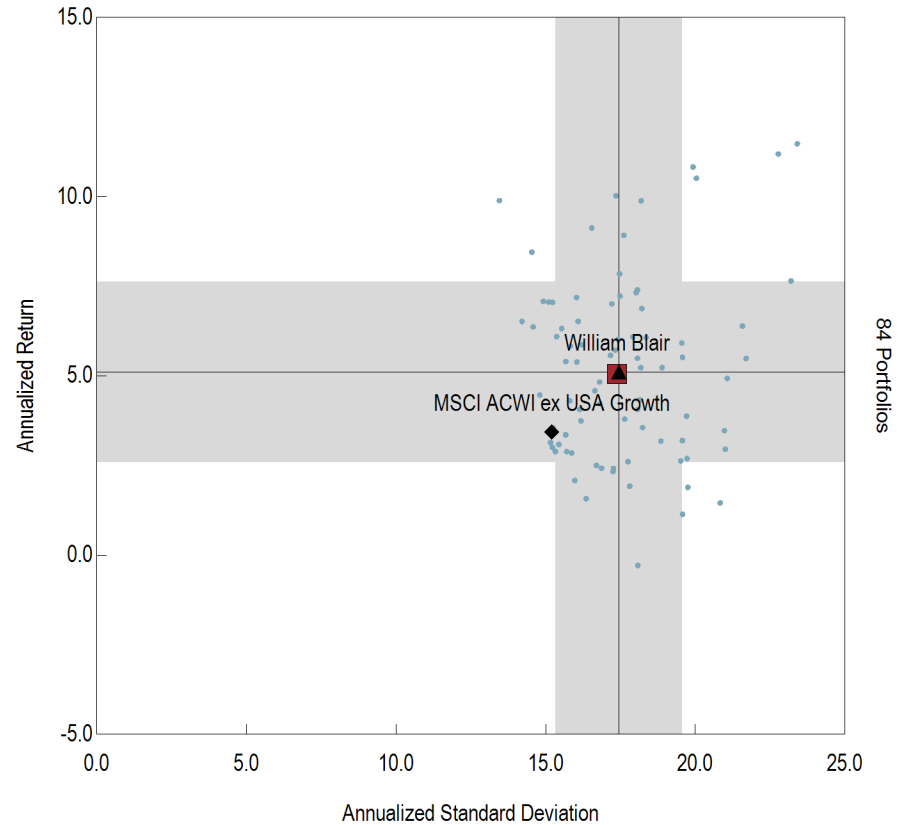
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	4.0%	19.4%	0.2
MSCI ACWI ex USA Growth	1.6%	16.6%	0.1
eV ACWI ex-US Growth Equity Gross Median	2.8%	19.1%	0.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	5.0%	17.4%	0.2
MSCI ACWI ex USA Growth	3.4%	15.2%	0.2
eV ACWI ex-US Growth Equity Gross Median	5.1%	17.4%	0.2

# PIMCO RAE Emerging Markets Manager Portfolio Overview

Period Ending: June 30, 2022

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.

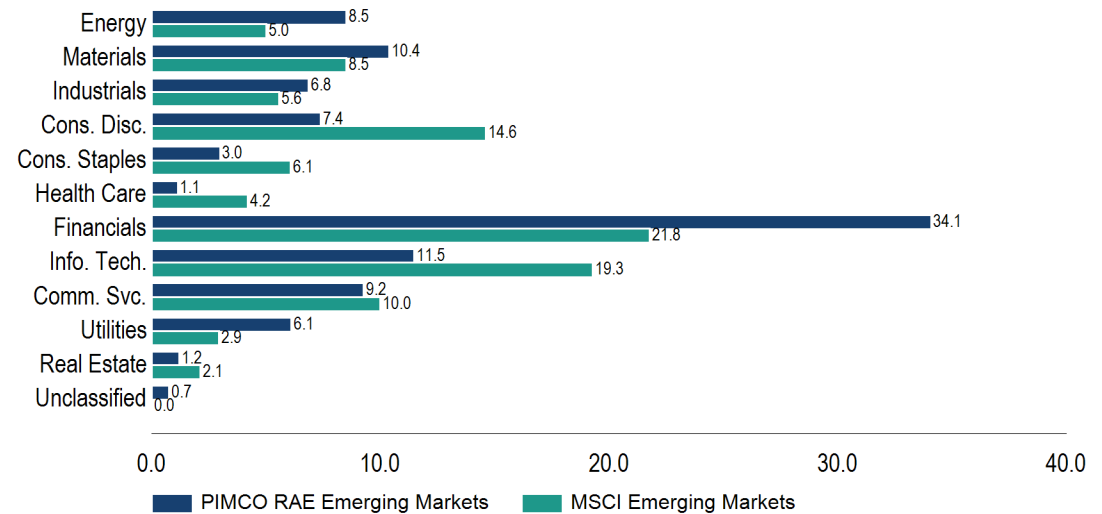
## Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	378	1,290
Weighted Avg. Market Cap. (\$B)	19.85	109.98
Median Market Cap. (\$B)	3.87	6.25
Price To Earnings	5.90	11.05
Price To Book	1.71	2.46
Price To Sales	0.31	1.05
Return on Equity (%)	11.61	14.48
Yield (%)	6.13	3.34
Beta	1.15	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	7.1%	0.0%
Emerging*	92.9%	100.0%
<b>Top 10 Largest Countries</b>		
China*	15.0%	34.5%
Korea*	13.3%	11.4%
Brazil*	12.2%	4.9%
India*	10.1%	12.9%
Thailand*	9.4%	1.9%
South Africa*	7.6%	3.6%
Taiwan*	7.6%	14.8%
Hong Kong	6.7%	0.0%
Mexico*	6.2%	2.1%
Turkey*	4.0%	0.3%
<b>Total-Top 10 Largest Countries</b>	<b>92.2%</b>	<b>86.3%</b>

## Sector Allocation (%) vs MSCI Emerging Markets



## Top Contributors

	End Weight	Return	Contribution
CIELO SA	1.24	17.23	0.21
CHINA RESOURCES POWER HOLDINGS CO LTD	1.40	10.02	0.14
PT INDO TAMBANGRAYA MEGAH	0.46	14.95	0.07
WALSIN LIHWA CORP	0.24	24.24	0.06
CHINA RESOURCES PHARMACEUTICAL GROUP LTD	0.16	35.10	0.06
HERO MOTOCROP LTD	0.41	13.85	0.06
ORIENT OVERSEAS (INTERNATIONAL) LTD	0.55	9.88	0.05
GREAT WALL MOTOR CO	0.17	29.44	0.05
SINOPHARM GROUP 'H'	0.43	11.16	0.05

## Bottom Contributors

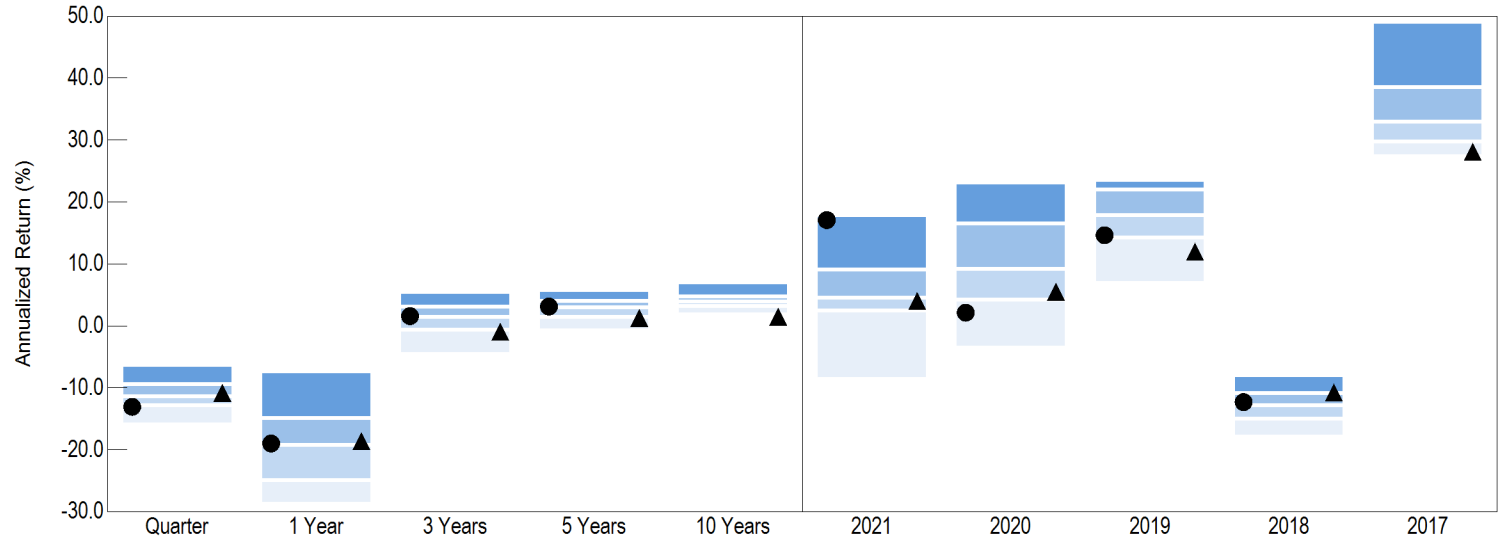
	End Weight	Return	Contribution
VEDANTA LTD	1.82	-42.26	-0.77
ITAU UNIBANCO HOLDING PN	1.84	-23.54	-0.43
MTN GROUP LTD	1.05	-37.89	-0.40
CEMEX SAB DE CV	1.26	-25.42	-0.32
KASIKORNBANK PUBLIC CO LTD	3.01	-10.41	-0.31
LG ELECTRONICS INC	0.96	-31.30	-0.30
NATIONAL ALUMINIUM CO LTD	0.64	-45.75	-0.29
SIAM COMMERCIAL BANK PUBLIC CO LTD	2.51	-11.31	-0.28
LENOVO GROUP LTD	1.92	-14.14	-0.27
BANCO DO BRASIL ON	3.06	-8.25	-0.25

Unclassified sector allocation includes cash allocations.

PIMCO RAE Emerging Markets  
 Manager Performance Comparisons (Gross of Fees)

Period Ending: June 30, 2022

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



	Return (Rank)												
5th Percentile	-6.3	-7.3	5.5	5.7	6.9	17.8	23.1	23.5	-7.9	49.0			
25th Percentile	-9.3	-14.8	3.1	4.0	4.8	9.1	16.6	22.1	-10.8	38.6			
Median	-11.3	-19.2	1.5	3.1	4.0	4.6	9.2	18.0	-12.7	33.0			
75th Percentile	-12.8	-24.9	-0.5	1.5	3.3	2.5	4.3	14.4	-14.9	29.8			
95th Percentile	-15.8	-28.6	-4.5	-0.7	1.9	-8.5	-3.4	7.0	-17.8	27.4			
# of Portfolios	38	38	34	28	17	35	37	33	36	37			
● PIMCO RAE Emerging Markets	-13.1 (82)	-19.0 (49)	1.6 (48)	3.1 (47)	-- (--)	17.1 (6)	2.1 (85)	14.6 (72)	-12.3 (44)	-- (--)			
▲ MSCI Emerging Markets Value NR	-10.8 (45)	-18.6 (44)	-1.0 (82)	1.2 (76)	1.5 (99)	4.0 (61)	5.5 (73)	12.0 (86)	-10.7 (25)	28.1 (90)			

# TT Emerging Markets Manager Portfolio Overview

Period Ending: June 30, 2022

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

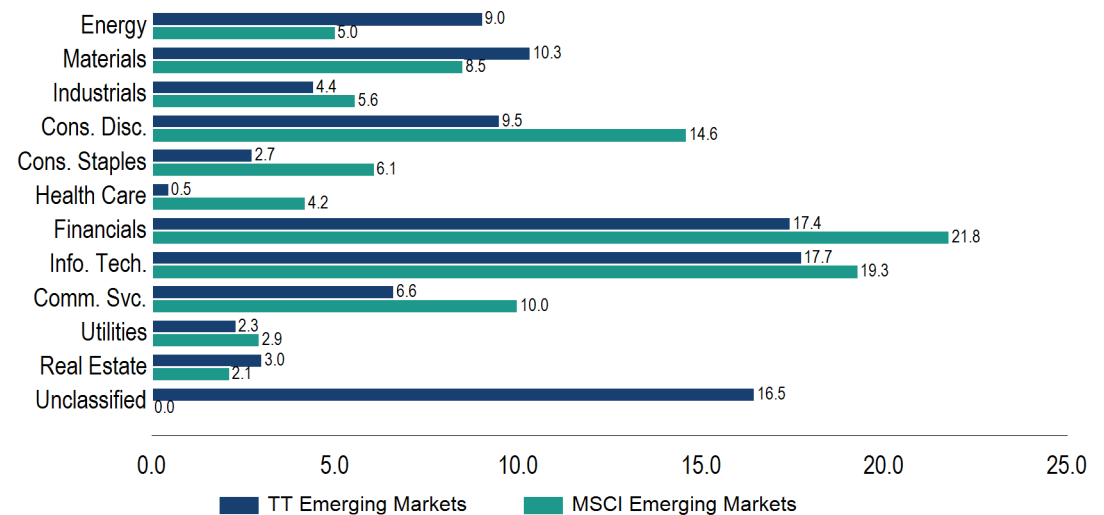
	Portfolio	MSCI Emerging Markets
Number of Holdings	68	1,290
Weighted Avg. Market Cap. (\$B)	135.80	109.98
Median Market Cap. (\$B)	19.41	6.25
Price To Earnings	10.76	11.05
Price To Book	2.25	2.46
Price To Sales	1.16	1.05
Return on Equity (%)	15.36	14.48
Yield (%)	2.72	3.34
Beta	1.19	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	24.1%	0.0%
Emerging*	69.9%	100.0%
Frontier**	0.8%	0.0%
<b>Top 10 Largest Countries</b>		
China*	22.0%	34.5%
India*	12.1%	12.9%
Korea*	10.9%	11.4%
Taiwan*	10.7%	14.8%
Hong Kong	6.8%	0.0%
United States	5.8%	0.0%
Cash	5.2%	0.0%
Brazil*	4.7%	4.9%
United Kingdom	3.6%	0.0%
Netherlands	3.6%	0.0%
<b>Total-Top 10 Largest Countries</b>	<b>85.5%</b>	<b>78.4%</b>

Unclassified sector allocation includes cash allocations.

## Sector Allocation (%) vs MSCI Emerging Markets



## Top Contributors

	End Weight	Return	Contribution
KRANESHARES CSI CHINA INTERNET ETF	3.69	14.91	0.55
YIBIN WULIANGYE CO LTD	2.14	25.18	0.54
GEELY AUTOMOBILE HOLDINGS LTD	0.95	46.02	0.44
360 DIGITECH INC	2.51	15.99	0.40
CENTRAIS ELETRICAS BRASILEIRAS SA-ELETROBRAS	2.30	13.04	0.30
A-LIVING ORD H	1.16	19.27	0.22
EVE ENERGY CO LTD	1.53	14.38	0.22
ALIBABA GROUP HOLDING LTD	2.66	4.49	0.12
XTRACKERS HARVEST CSI 300 CHINA A-SHARES ETF	2.13	3.26	0.07

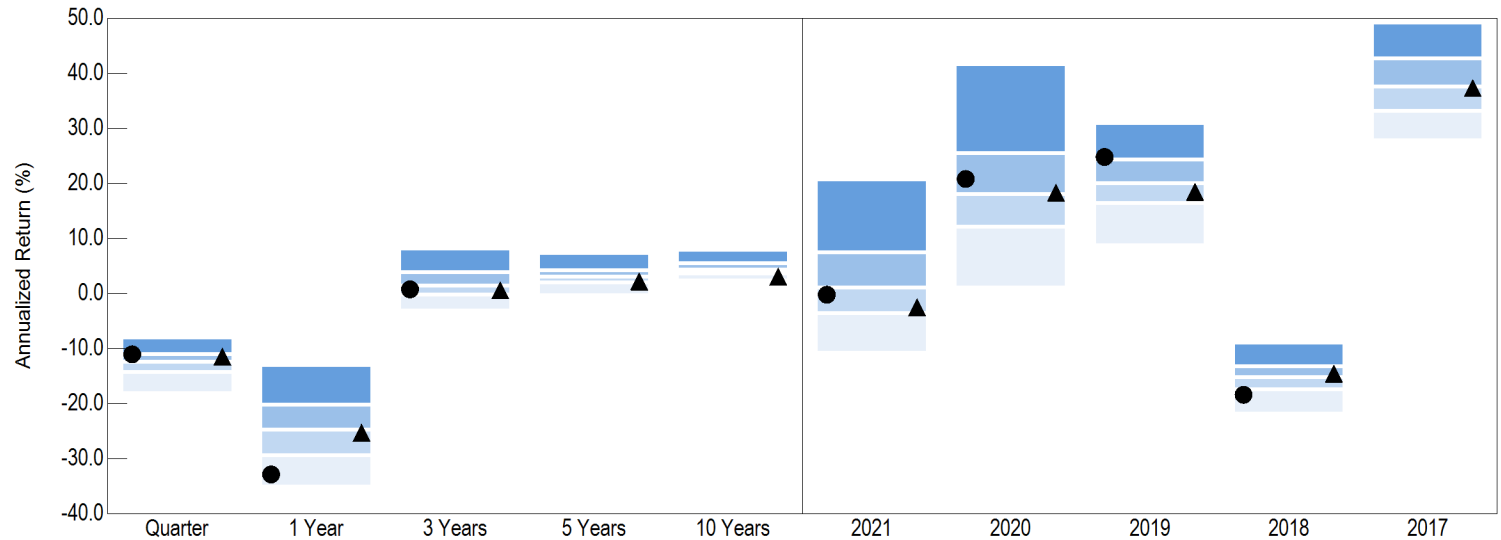
## Bottom Contributors

	End Weight	Return	Contribution
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	8.69	-22.83	-1.98
BARRICK GOLD CORP	2.76	-27.18	-0.75
GLOBANT SA	1.50	-33.61	-0.50
SAMSUNG ELECTRONICS CO LTD	2.20	-22.09	-0.49
KB FINANCIAL GROUP INC	1.53	-26.36	-0.40
POSCO HOLDINGS INC	1.59	-24.98	-0.40
CEMEX SAB DE CV	1.44	-25.90	-0.37
PIRAMAL ENTERPRISES LTD	1.30	-27.29	-0.36
SAMSUNG ELECTRONICS CO LTD	1.49	-22.74	-0.34

TT Emerging Markets  
 Manager Performance Comparisons (Gross of Fees)

Period Ending: June 30, 2022

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



	Return (Rank)															
5th Percentile	-8.0	-13.0	8.1	7.3	7.9	20.7	41.6	30.9	-9.0	49.2						
25th Percentile	-11.0	-20.1	3.9	4.3	5.5	7.5	25.5	24.4	-13.2	42.8						
Median	-12.3	-24.6	1.5	3.1	4.4	1.2	18.2	20.1	-15.2	37.6						
75th Percentile	-14.2	-29.3	-0.1	2.1	3.6	-3.5	12.2	16.5	-17.4	33.2						
95th Percentile	-18.0	-35.0	-3.1	-0.3	2.4	-10.7	1.2	8.8	-21.8	27.8						
# of Portfolios	399	399	365	324	218	391	391	386	355	343						
● TT Emerging Markets	-11.0 (27)	-32.9 (91)	0.7 (64)	-- (--)	-- (--)	-0.2 (58)	20.8 (39)	24.8 (24)	-18.4 (83)	-- (--)						
▲ MSCI Emerging Markets	-11.4 (36)	-25.3 (55)	0.6 (67)	2.2 (71)	3.1 (86)	-2.5 (71)	18.3 (49)	18.4 (63)	-14.6 (43)	37.3 (53)						

# Global Equity Managers

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# Artisan Partners Manager Portfolio Overview

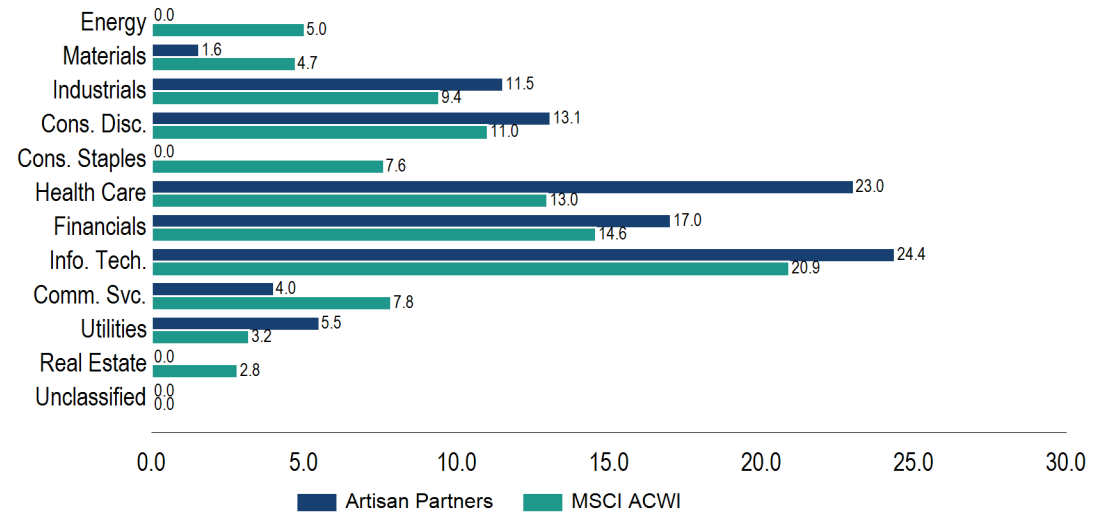
Period Ending: June 30, 2022

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

## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	43	2,795
Weighted Avg. Market Cap. (\$B)	157.95	313.29
Median Market Cap. (\$B)	39.69	11.91
Price To Earnings	22.40	15.76
Price To Book	3.74	3.20
Price To Sales	3.43	1.65
Return on Equity (%)	12.45	22.04
Yield (%)	1.22	2.38
Beta	1.04	1.00

## Sector Allocation (%) vs MSCI ACWI



## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	99.1%	88.5%
Emerging*	0.9%	11.5%
<b>Top 10 Largest Countries</b>		
United States	53.2%	60.8%
United Kingdom	8.8%	3.9%
Switzerland	8.6%	2.6%
Hong Kong	6.9%	0.8%
Sweden	4.6%	0.8%
Denmark	4.6%	0.7%
Australia	3.2%	1.9%
Japan	3.0%	5.5%
Canada	2.0%	3.2%
Netherlands	1.6%	1.0%
<b>Total-Top 10 Largest Countries</b>	<b>96.4%</b>	<b>81.2%</b>

## Top Contributors

	Avg Wgt	Return	Contribution
AIA GROUP LTD	1.61	4.39	0.07
ASTRAZENECA PLC	2.20	-1.47	-0.03
NEXTERA ENERGY INC	0.59	-8.06	-0.05
FORTIVE CORP	0.49	-10.65	-0.05
CIE FINANCIERE RICHEMONT AG, ZUG	0.51	-16.92	-0.09
VEEVA SYSTEMS INC	1.32	-6.79	-0.09
GENMAB A/S	1.58	-12.16	-0.19
FIDELITY NATIONAL INFORMATION SERVICES INC	2.35	-8.28	-0.19
TECHTRONIC INDUSTRIES CO LTD	0.59	-35.03	-0.21
LOWE'S COS INC	1.84	-13.27	-0.24

## Bottom Contributors

	Avg Wgt	Return	Contribution
SHOPIFY INC	5.22	-53.78	-2.81
UBER TECHNOLOGIES INC	4.07	-42.66	-1.74
ADVANCED MICRO DEVICES INC	5.40	-30.06	-1.62
AIRBNB INC	2.22	-48.14	-1.07
DEXCOM INC	2.47	-41.73	-1.03
MAGAZINE LUIZA S/A	1.46	-66.91	-0.98
ATLISSIAN CORP PLC	2.68	-36.22	-0.97
SPOTIFY TECHNOLOGY S.A	2.39	-37.87	-0.90
NU HOLDINGS LTD	1.65	-51.55	-0.85
CAYMAN ISLANDS	3.29	-21.65	-0.71

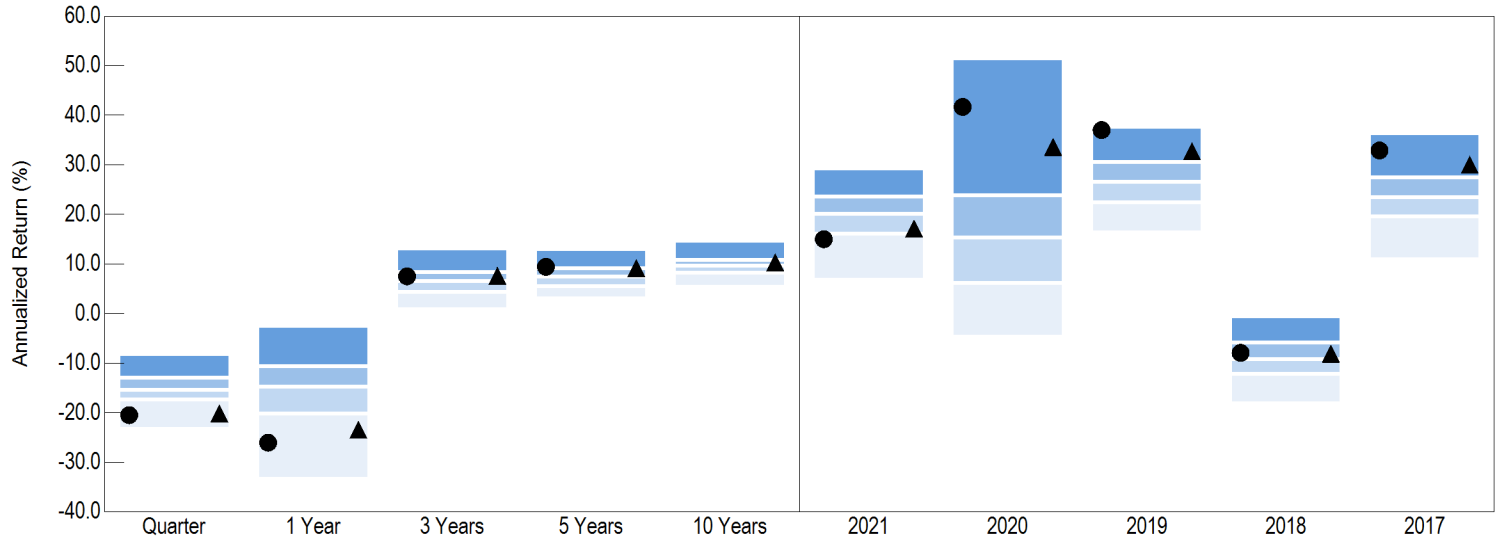
Unclassified sector allocation includes cash allocations.



Artisan Partners  
 Manager Performance Comparisons (Gross of Fees)

Period Ending: June 30, 2022

Artisan Partners vs. eV All Global Equity Gross Universe

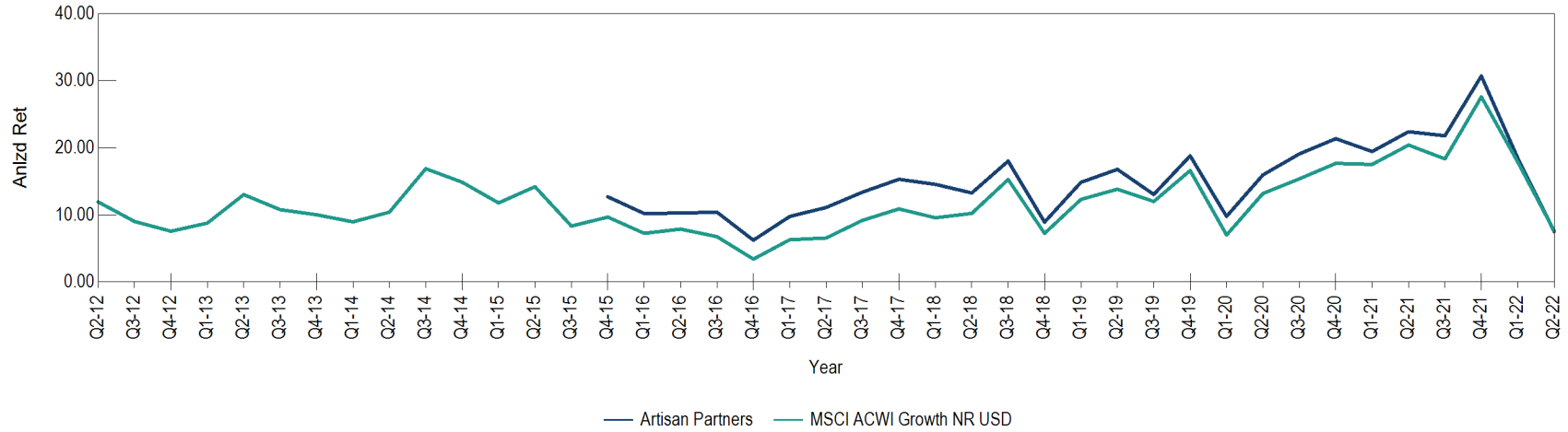


	Return (Rank)									
5th Percentile	-8.3	-2.5	13.1	12.9	14.6	29.2	51.5	37.6	-0.7	36.3
25th Percentile	-12.9	-10.6	8.5	9.2	10.9	23.7	24.0	30.7	-5.8	27.6
Median	-15.3	-14.8	6.6	7.5	9.7	20.2	15.4	26.6	-9.1	23.5
75th Percentile	-17.3	-20.1	4.4	5.6	8.2	16.2	6.3	22.6	-12.2	19.6
95th Percentile	-23.1	-33.2	1.0	3.1	5.5	6.9	-4.7	16.5	-18.1	11.0
# of Portfolios	1,159	1,155	1,053	943	633	1,141	1,093	989	920	880
● Artisan Partners	-20.5 (90)	-26.1 (87)	7.5 (35)	9.4 (24)	-- (--)	15.0 (80)	41.7 (9)	37.0 (7)	-7.9 (40)	32.9 (11)
▲ MSCI ACWI Growth NR USD	-20.2 (89)	-23.5 (83)	7.6 (35)	9.2 (27)	10.3 (37)	17.1 (71)	33.6 (14)	32.7 (17)	-8.1 (42)	30.0 (17)

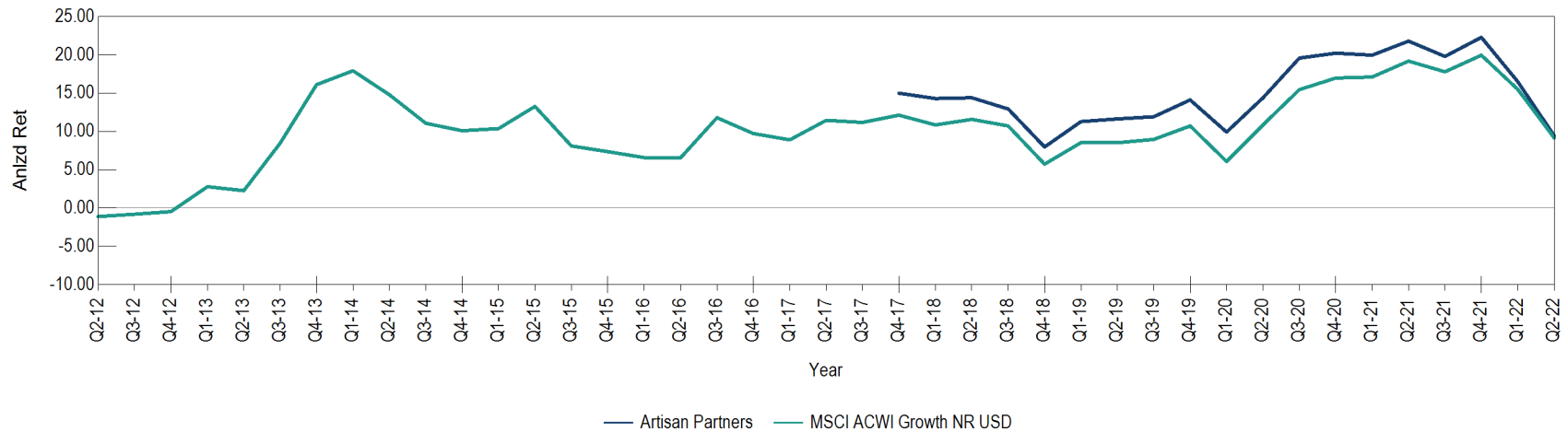
Artisan Partners  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2022

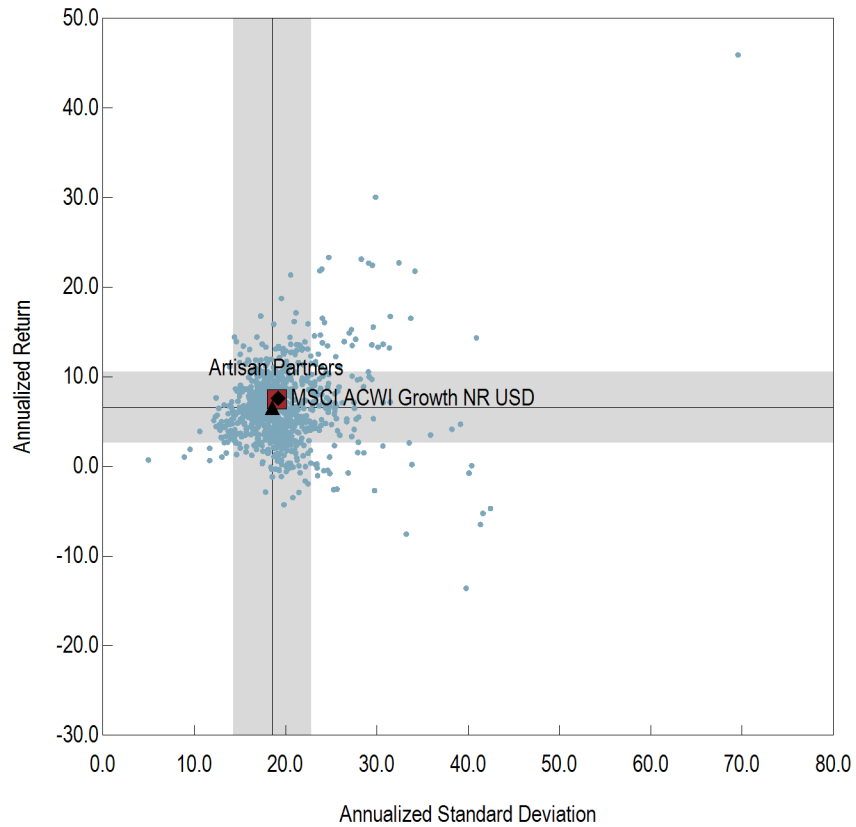
Rolling 3 Year Annualized Return (%)



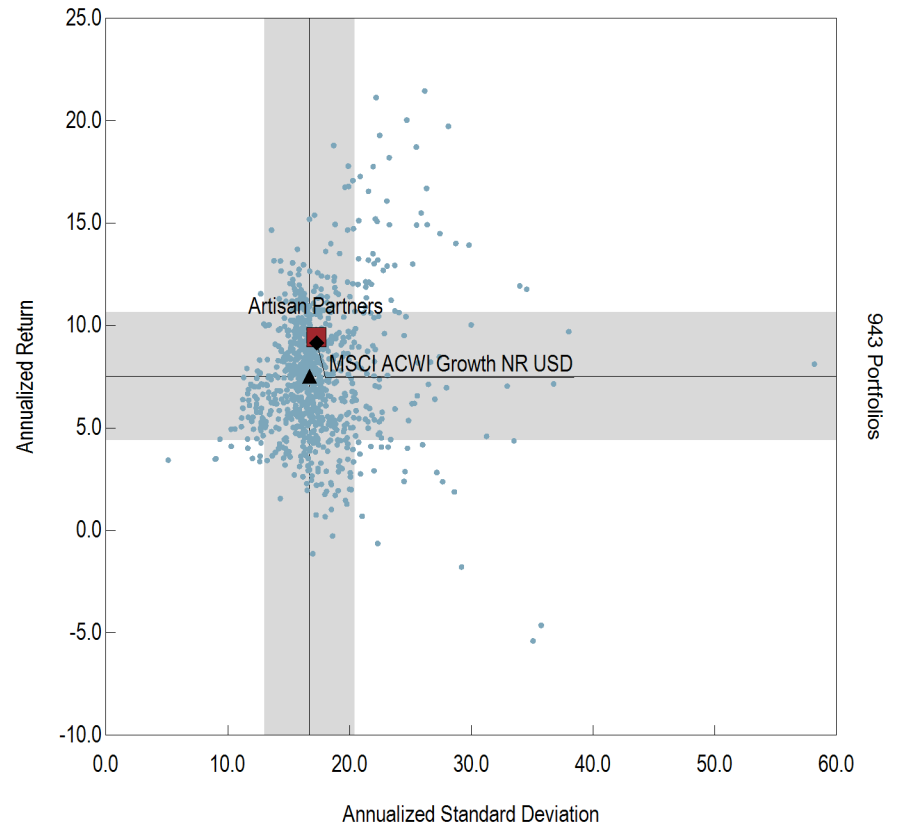
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	7.5%	19.0%	0.4
MSCI ACWI Growth NR USD	7.6%	19.2%	0.4
eV All Global Equity Gross Median	6.6%	18.5%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	9.4%	17.3%	0.5
MSCI ACWI Growth NR USD	9.2%	17.3%	0.5
eV All Global Equity Gross Median	7.5%	16.7%	0.4

# First Eagle Manager Portfolio Overview

Period Ending: June 30, 2022

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

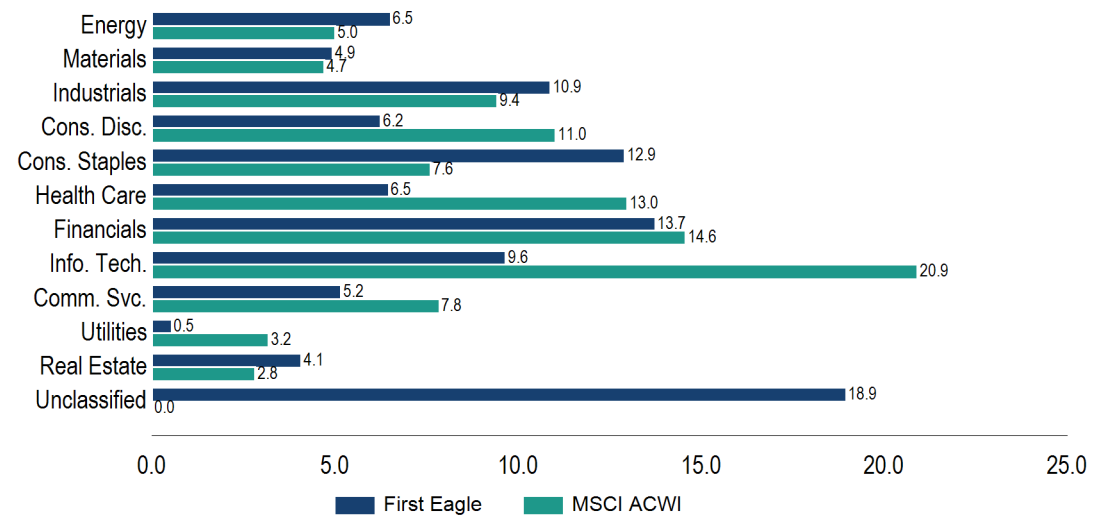
## Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	141	2,795
Weighted Avg. Market Cap. (\$B)	130.18	313.29
Median Market Cap. (\$B)	26.00	11.91
Price To Earnings	14.65	15.76
Price To Book	2.24	3.20
Price To Sales	1.55	1.65
Return on Equity (%)	16.09	22.04
Yield (%)	2.29	2.38
Beta	0.73	1.00

## Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Totals</b>		
Developed	86.1%	88.5%
Emerging*	5.8%	11.5%
<b>Top 10 Largest Countries</b>		
United States	52.6%	60.8%
Cash	8.0%	0.0%
United Kingdom	7.7%	3.9%
Japan	7.6%	5.5%
Canada	4.2%	3.2%
France	3.7%	2.8%
Switzerland	2.8%	2.6%
Hong Kong	1.9%	0.8%
Korea*	1.7%	1.3%
Belgium	1.2%	0.2%
<b>Total-Top 10 Largest Countries</b>	<b>92.6%</b>	<b>81.1%</b>

## Sector Allocation (%) vs MSCI ACWI



## Top Contributors

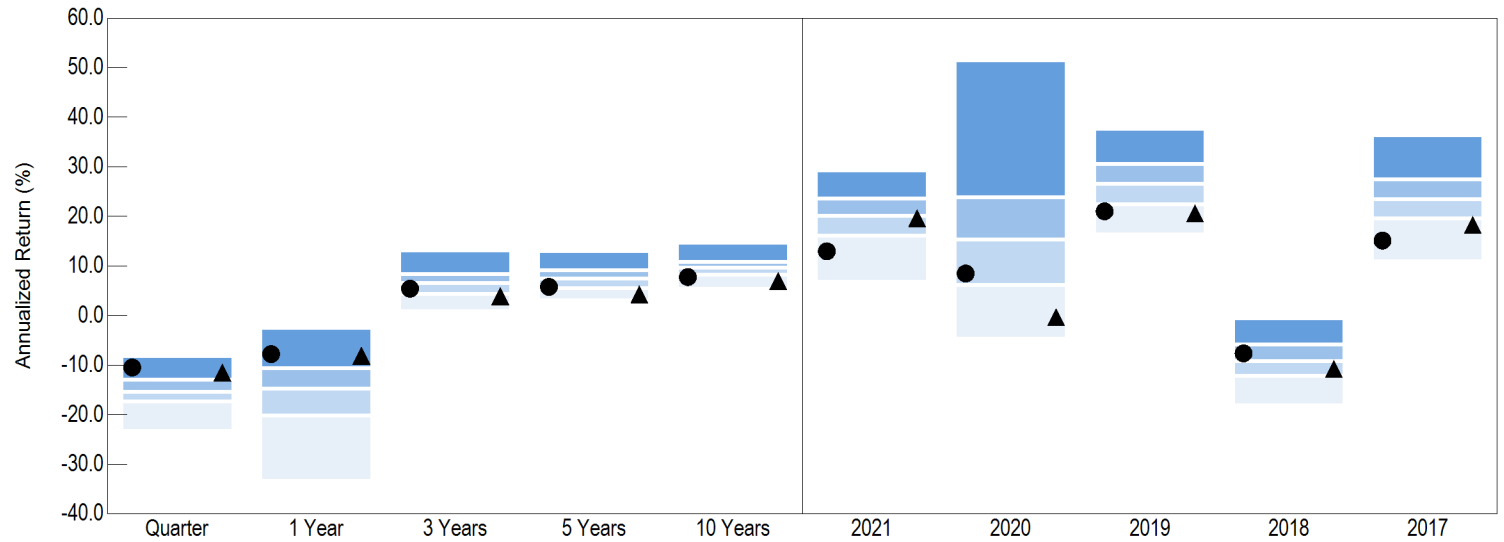
	End Weight	Return	Contribution
PROSUS ORD	0.92	21.04	0.19
EXXON MOBIL CORP	2.77	4.75	0.13
PHILIP MORRIS INTERNATIONAL INC	1.68	6.41	0.11
COLGATE-PALMOLIVE CO	1.31	6.29	0.08
BAE SYSTEMS PLC	0.67	9.17	0.06
DANONE	1.33	3.72	0.05
UGI CORP	0.53	7.56	0.04
CK ASSET HOLDINGS	0.58	6.68	0.04
BRITISH AMERICAN TOBACCO PLC	1.88	1.84	0.03
SANOFI	0.97	1.91	0.02

## Bottom Contributors

	End Weight	Return	Contribution
SPDR GOLD TRUST	9.91	-6.75	-0.67
ORACLE CORP	3.08	-15.21	-0.47
HCA HEALTHCARE INC	1.17	-32.73	-0.38
META PLATFORMS INC	1.39	-27.48	-0.38
COMCAST CORP	1.93	-15.72	-0.30
NEWMONT CORPORATION	1.16	-24.28	-0.28
ALPHABET INC	1.11	-21.68	-0.24
UNIVERSAL HEALTH SERVICES INC.	0.76	-30.41	-0.23
GROUPE BRUXELLES LAMBERT SA	1.22	-17.80	-0.22
CIE FINANCIERE RICHEMONT AG, ZUG	1.28	-16.92	-0.22

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

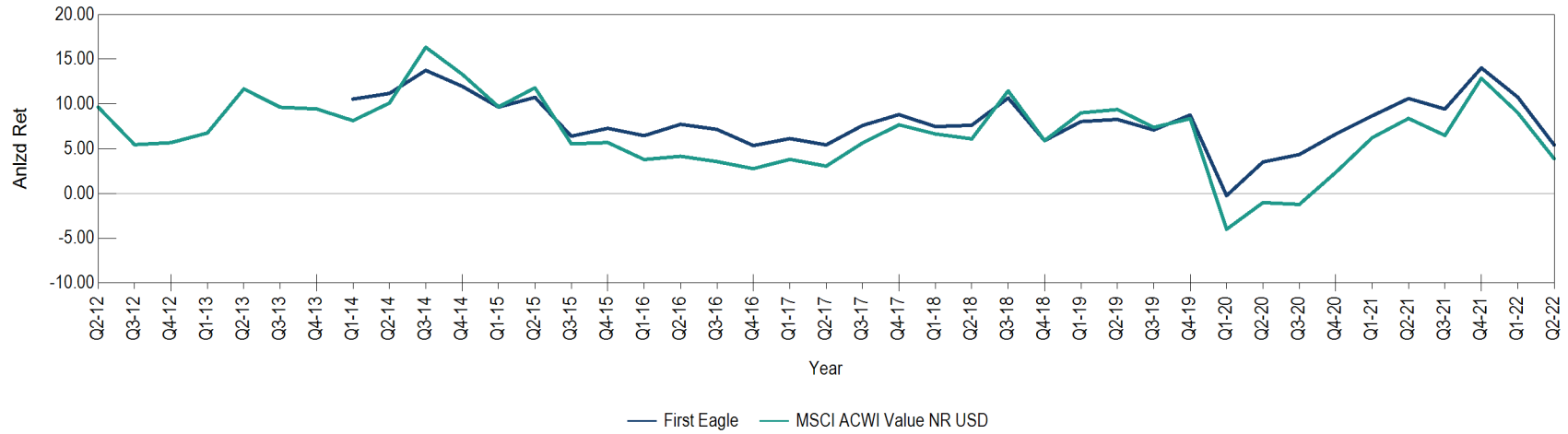


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-8.3	-2.5	13.1	12.9	14.6	29.2	51.5	37.6	-0.7	36.3
25th Percentile	-12.9	-10.6	8.5	9.2	10.9	23.7	24.0	30.7	-5.8	27.6
Median	-15.3	-14.8	6.6	7.5	9.7	20.2	15.4	26.6	-9.1	23.5
75th Percentile	-17.3	-20.1	4.4	5.6	8.2	16.2	6.3	22.6	-12.2	19.6
95th Percentile	-23.1	-33.2	1.0	3.1	5.5	6.9	-4.7	16.5	-18.1	11.0
# of Portfolios	1,159	1,155	1,053	943	633	1,141	1,093	989	920	880
● First Eagle	-10.5 (13)	-7.8 (15)	5.4 (65)	5.8 (74)	7.8 (81)	13.0 (85)	8.5 (70)	21.0 (82)	-7.6 (38)	15.1 (89)
▲ MSCI ACWI Value NR USD	-11.5 (17)	-8.1 (15)	3.9 (81)	4.3 (90)	6.9 (89)	19.6 (55)	-0.3 (89)	20.6 (83)	-10.8 (65)	18.3 (81)

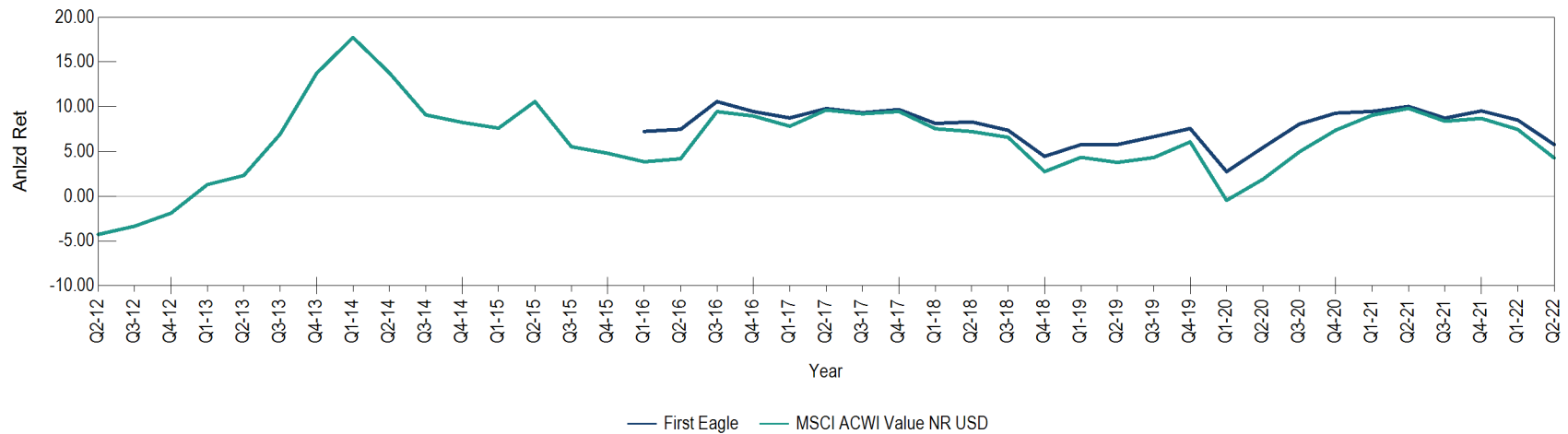
First Eagle  
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2022

Rolling 3 Year Annualized Return (%)



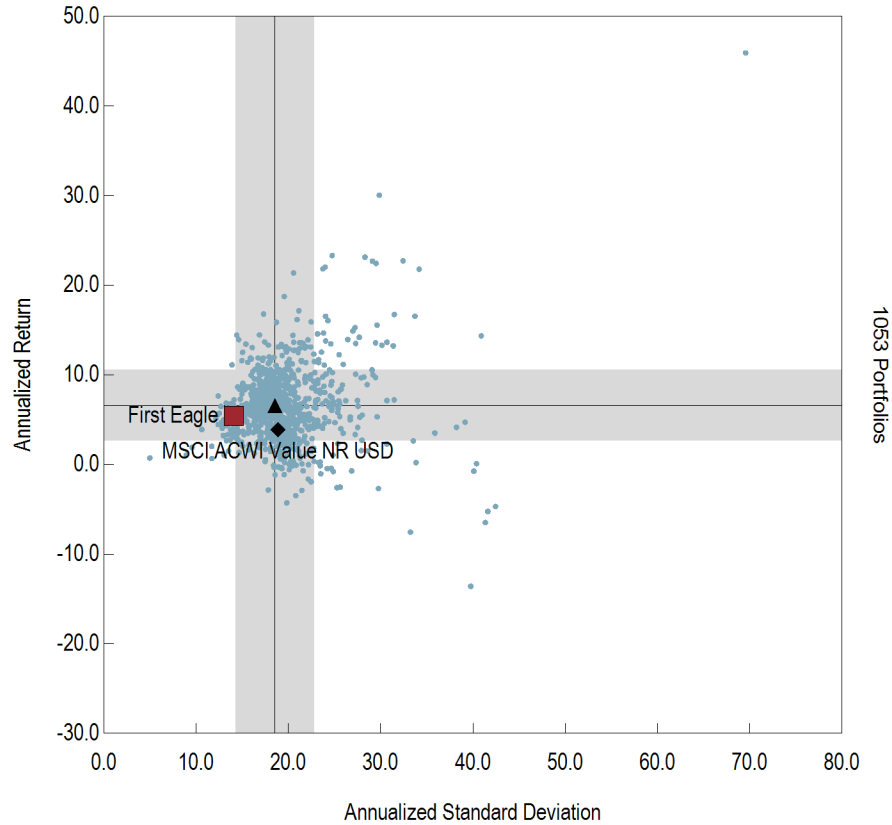
Rolling 5 Year Annualized Return (%)



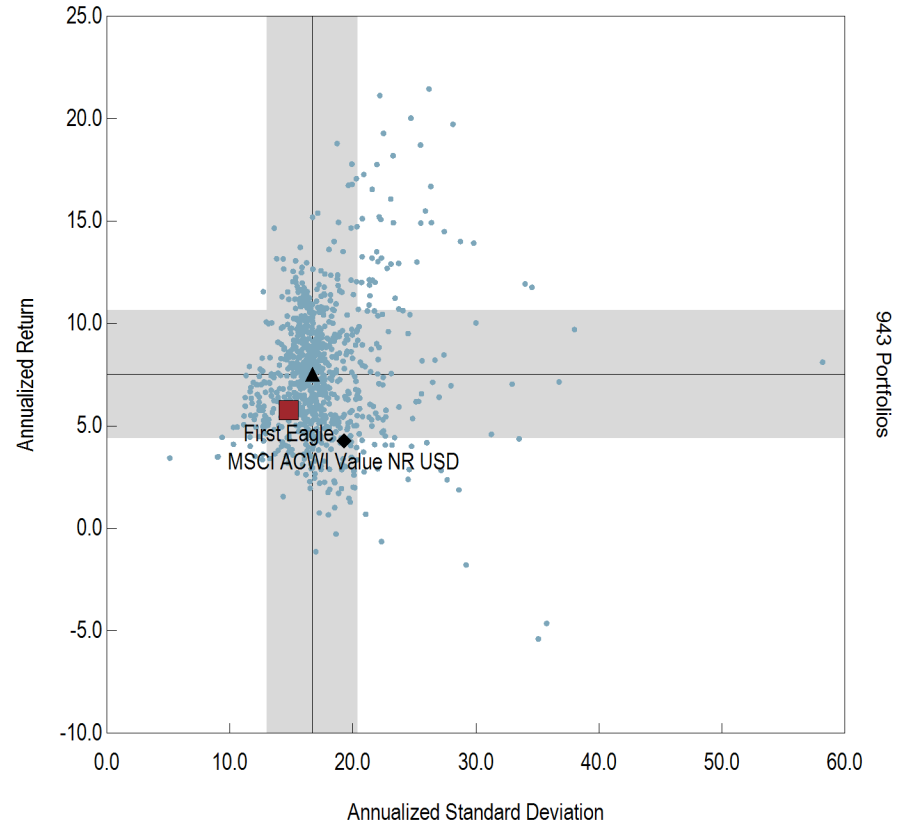
First Eagle  
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: June 30, 2022

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	5.4%	14.1%	0.3
MSCI ACWI Value NR USD	3.9%	18.9%	0.2
eV All Global Equity Gross Median	6.6%	18.5%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	5.8%	12.5%	0.4
MSCI ACWI Value NR USD	4.3%	16.6%	0.2
eV All Global Equity Gross Median	7.5%	16.7%	0.4

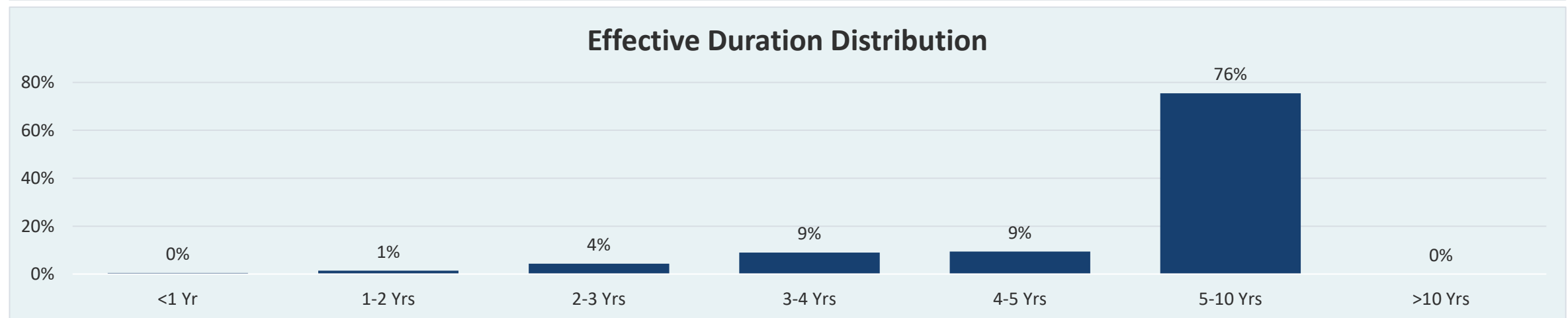
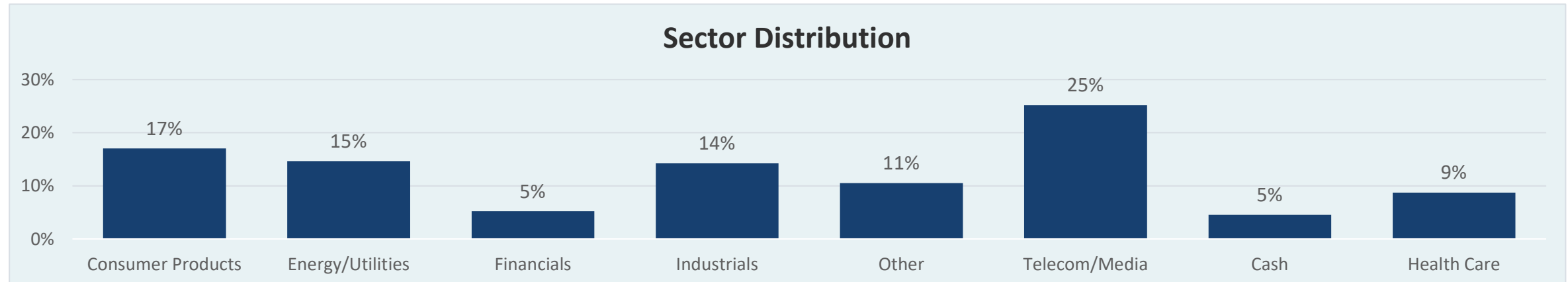
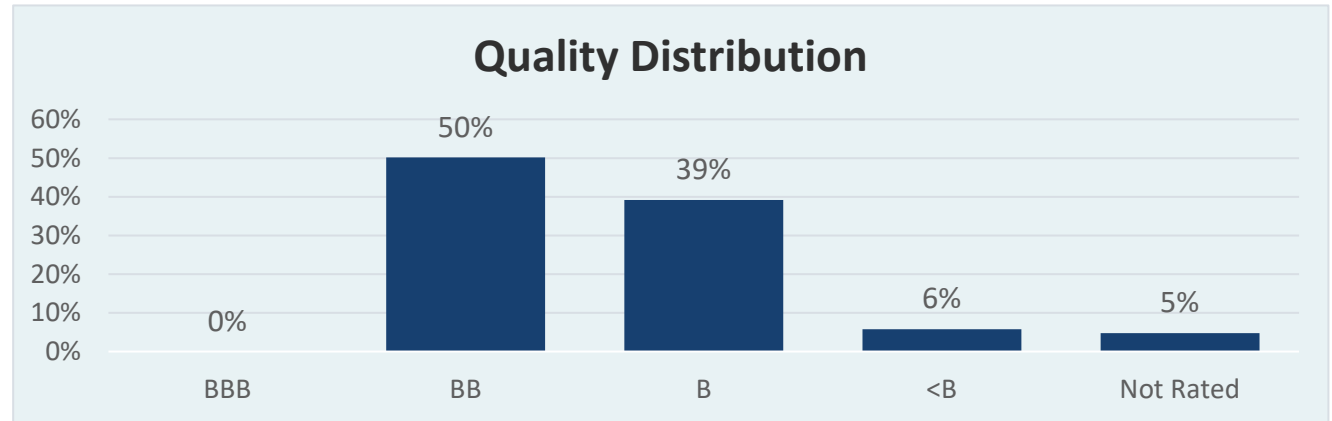
## High Yield Managers

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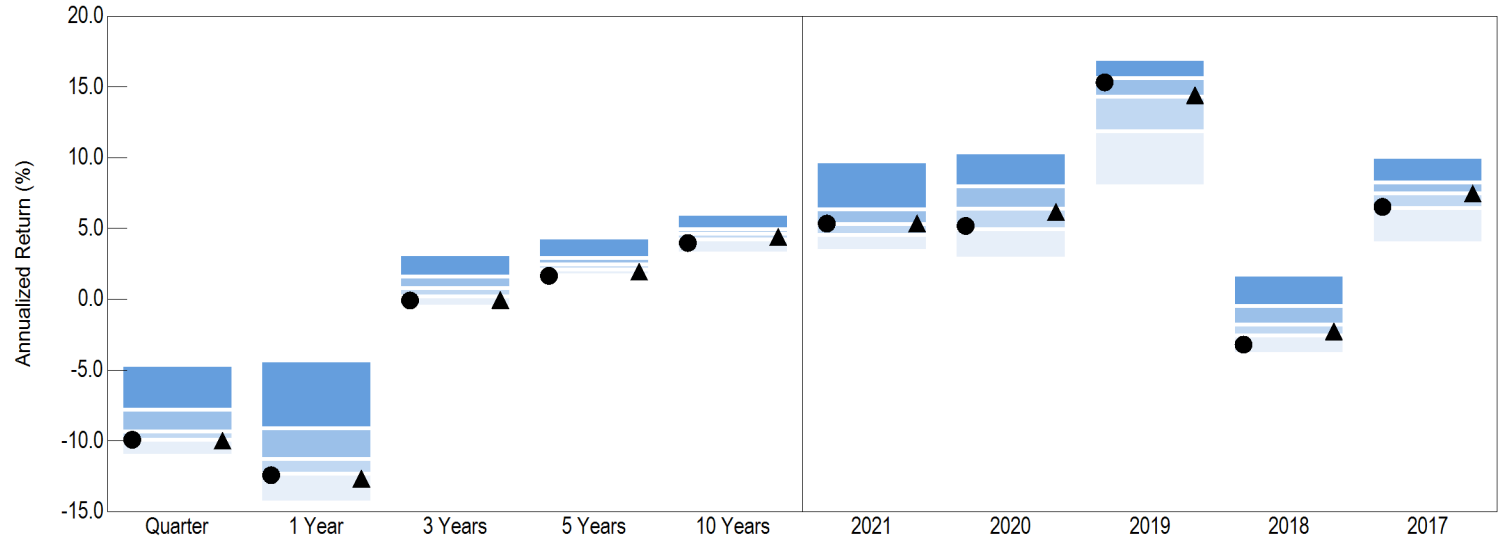
Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	ICE BofAML HY Master II
Effective Duration	4.60	4.50
Yield to Maturity	6.00	5.90
Average Quality	B1	B1
Average Coupon	6.1%	5.7%



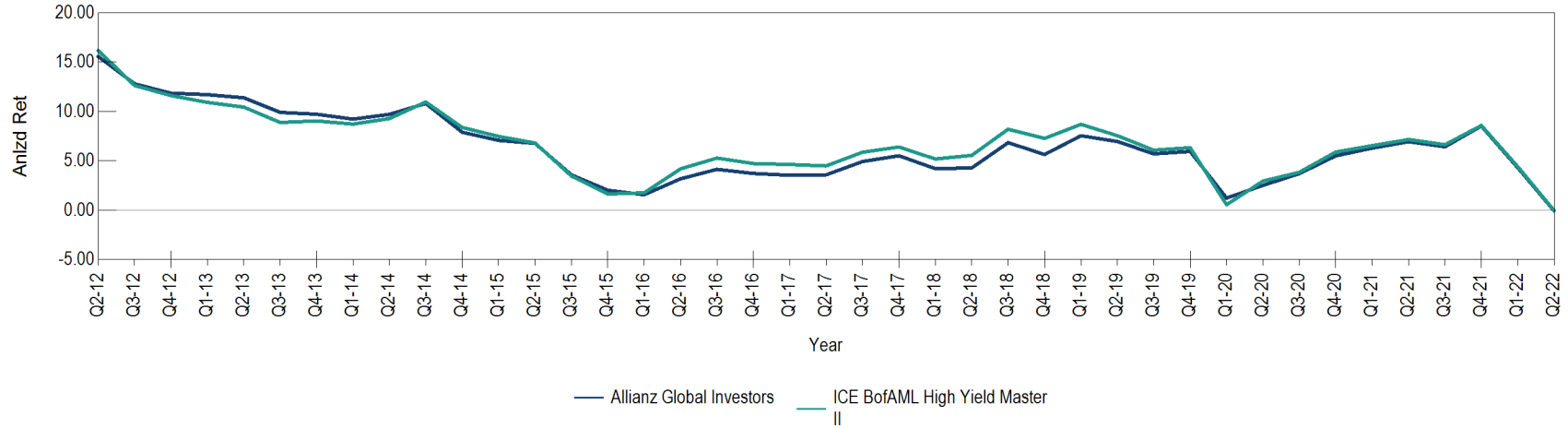
Quality distribution excludes cash.

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

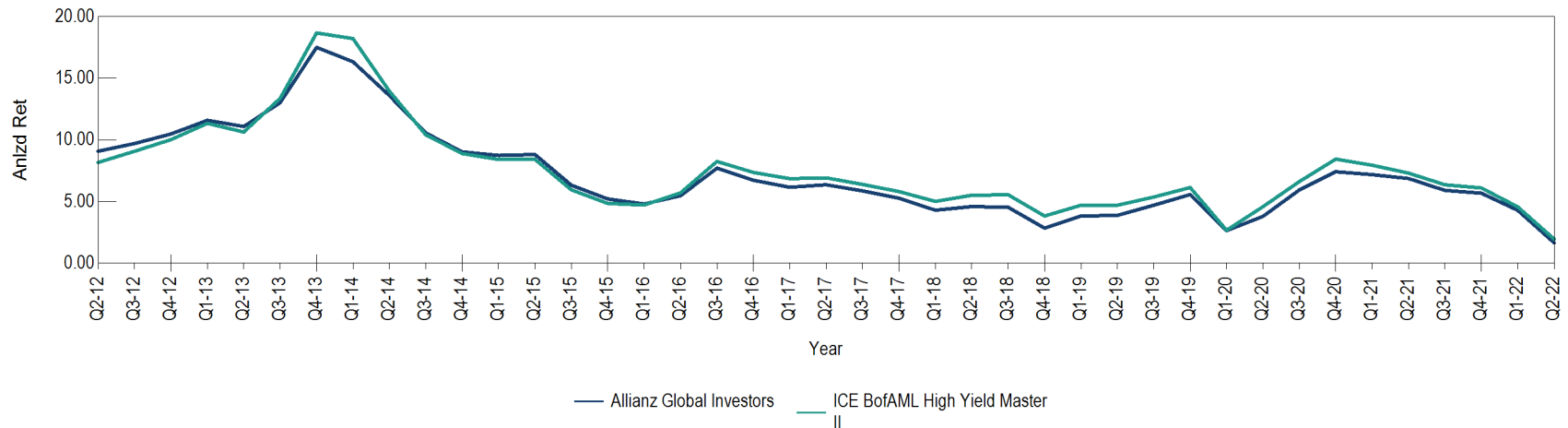


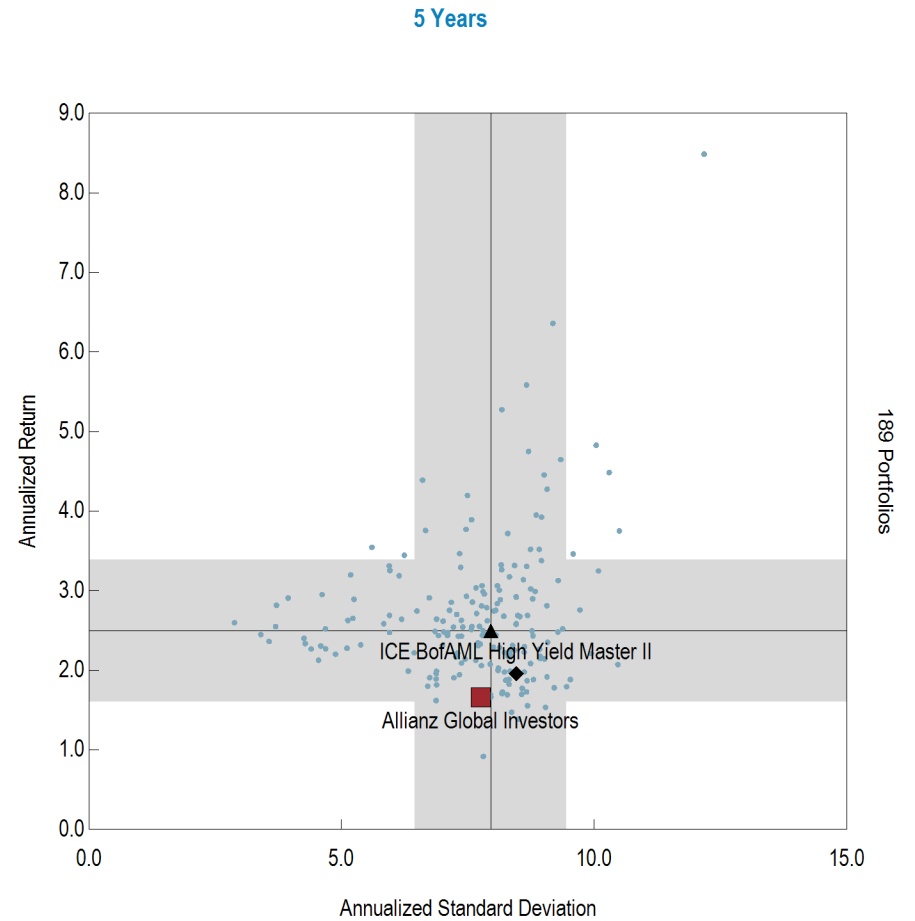
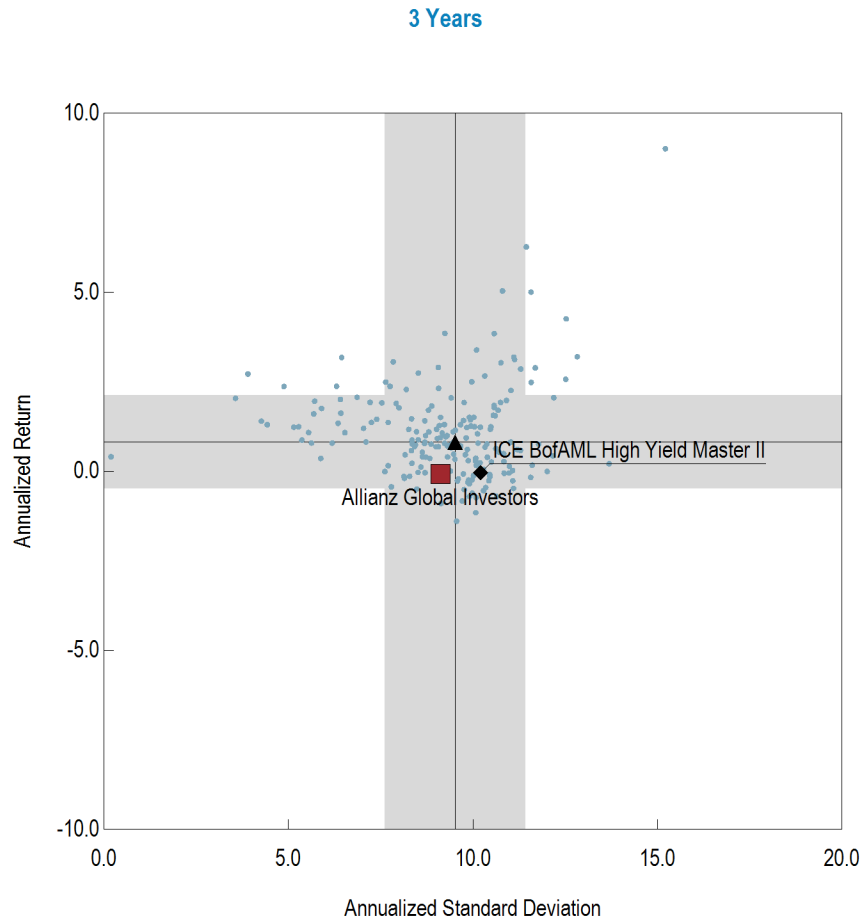
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	-4.7	-4.3	3.2	4.3	6.0	9.7	10.3	16.9	1.7	10.0	
25th Percentile	-7.8	-9.1	1.6	3.0	5.0	6.4	8.0	15.6	-0.5	8.3	
Median	-9.3	-11.2	0.8	2.5	4.7	5.4	6.4	14.3	-1.8	7.5	
75th Percentile	-9.9	-12.3	0.2	2.1	4.3	4.6	5.0	11.9	-2.5	6.5	
95th Percentile	-11.0	-14.3	-0.5	1.7	3.3	3.4	2.9	8.0	-3.8	4.0	
# of Portfolios	202	202	200	189	148	211	217	226	210	198	
● Allianz Global Investors	-9.9 (77)	-12.4 (79)	-0.1 (85)	1.7 (97)	4.0 (84)	5.3 (51)	5.2 (74)	15.3 (31)	-3.2 (88)	6.5 (74)	
▲ ICE BofAML High Yield Master II	-10.0 (78)	-12.7 (82)	0.0 (83)	2.0 (84)	4.4 (65)	5.4 (50)	6.2 (55)	14.4 (49)	-2.3 (69)	7.5 (53)	

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	-0.1%	9.1%	-0.1
ICE BofAML High Yield Master II	0.0%	10.2%	-0.1
eV US High Yield Fixed Inc Gross Median	0.8%	9.5%	0.0

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	1.7%	7.8%	0.1
ICE BofAML High Yield Master II	2.0%	8.5%	0.1
eV US High Yield Fixed Inc Gross Median	2.5%	8.0%	0.2

# Real Estate Managers

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# Adelante Manager Portfolio Overview

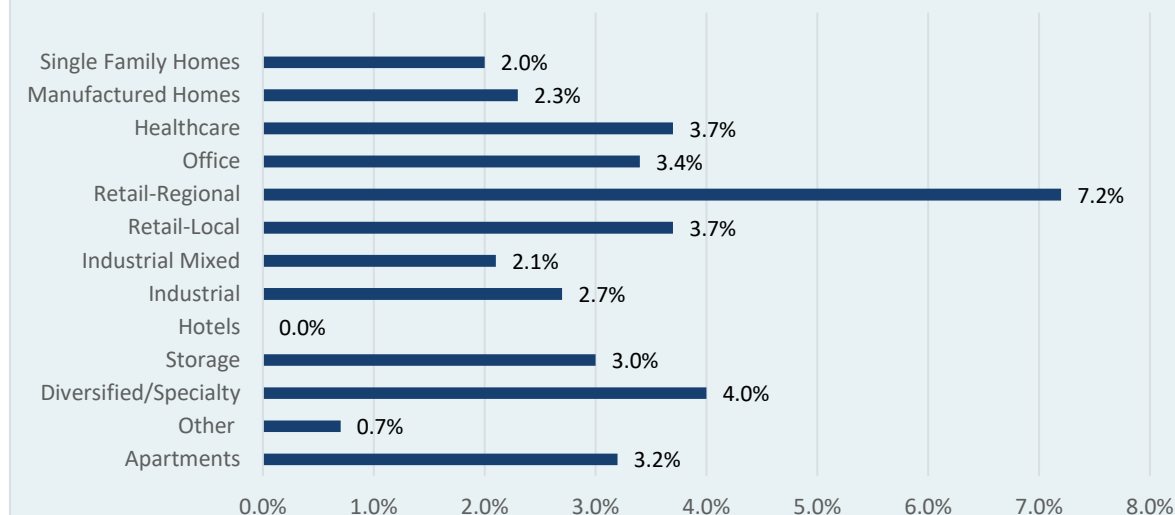
Period Ending: June 30, 2022

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

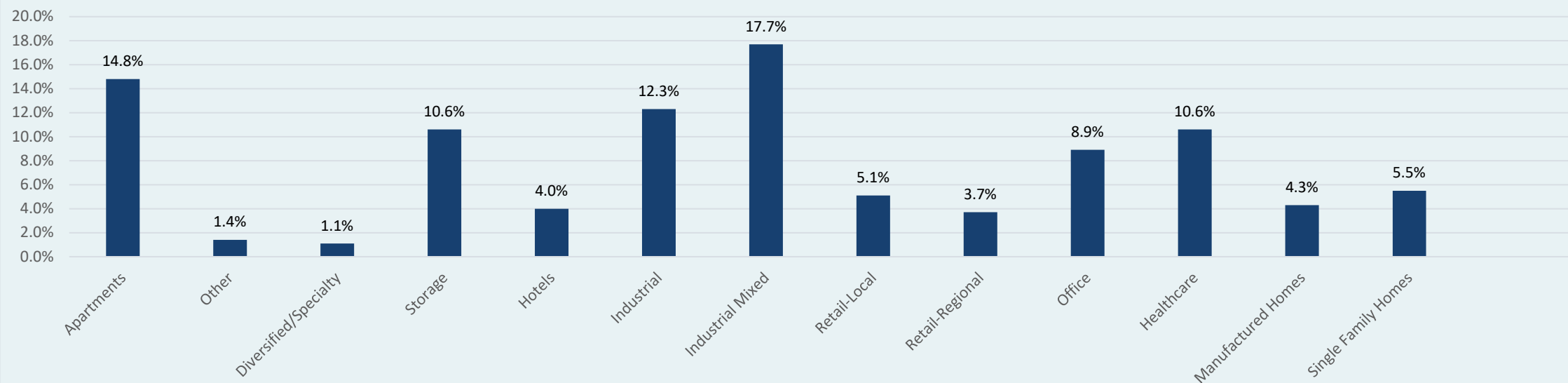
## Top Five Holdings

Company	Property Type	Allocation
ProLogis Inc.	Industrial	10.9%
Equinix Inc	Industrial Mixed	8.6%
Public Storage	Storage	6.1%
Equity Residential	Apartments	5.8%
Duke Realty	Industrial Mixed	5.6%

## Dividend Yield by Property Type



## Property Type Allocation



2.7% is allocated to Cash and Cash Equivalents.

## Diversifying Fixed Income Managers

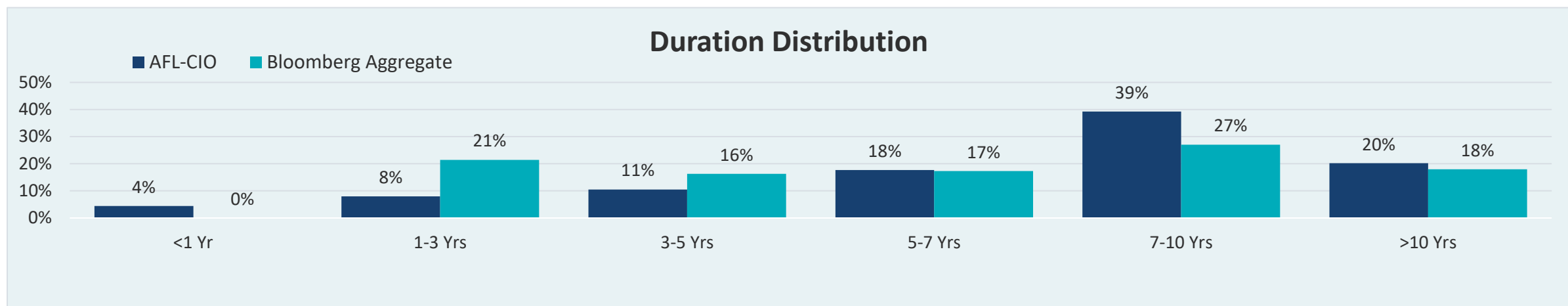
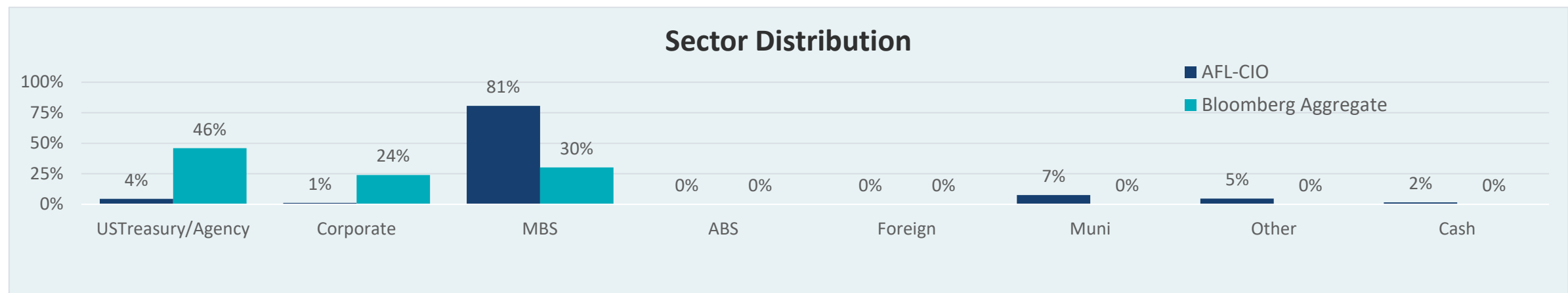
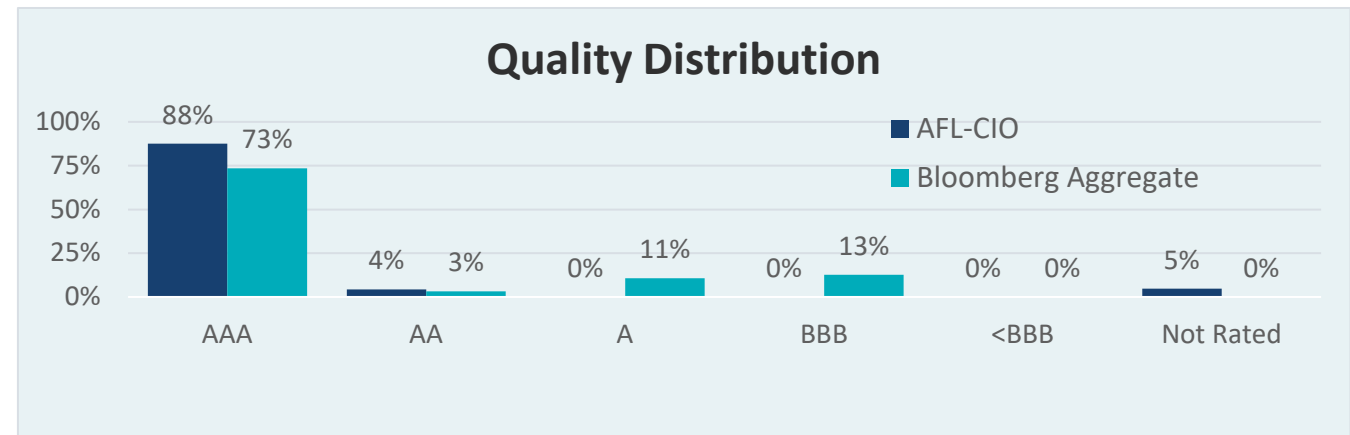
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# AFL-CIO Manager Portfolio Overview

Period Ending: June 30, 2022

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

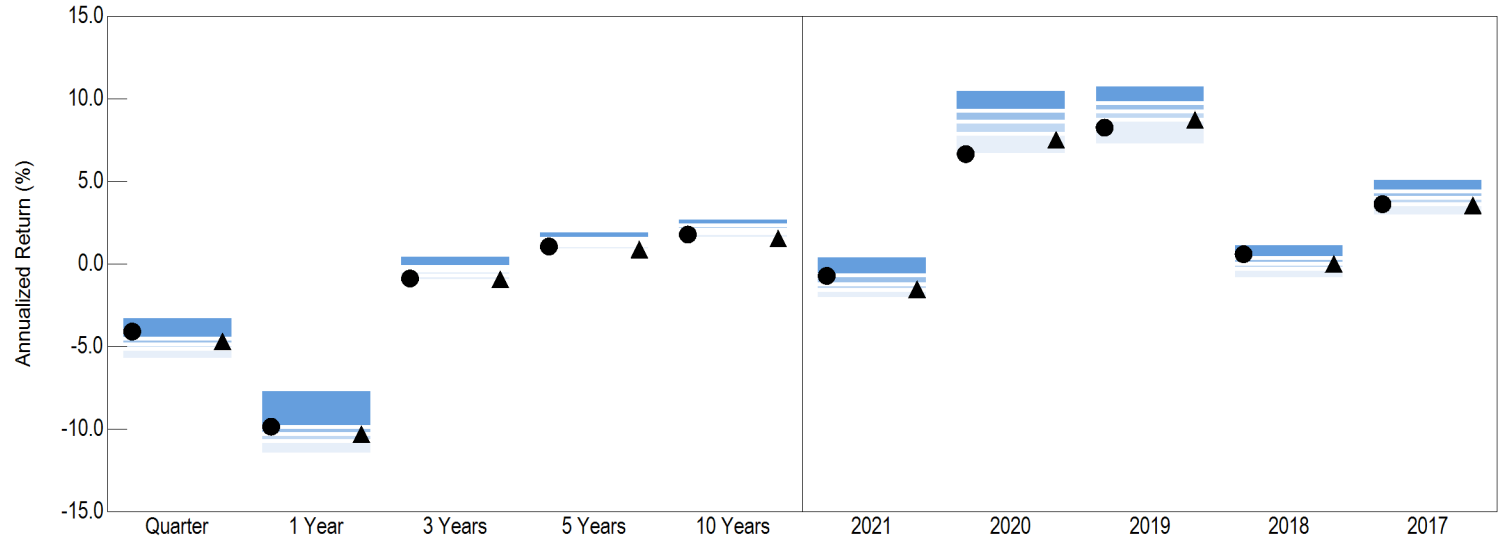
	AFL-CIO	Bloomberg Aggregate
Effective Duration	6.06	6.34
Yield to Maturity	2.79	3.67
Average Quality	AAA	AA
Average Coupon	2.6%	2.5%



Duration and Quality distributions exclude cash.

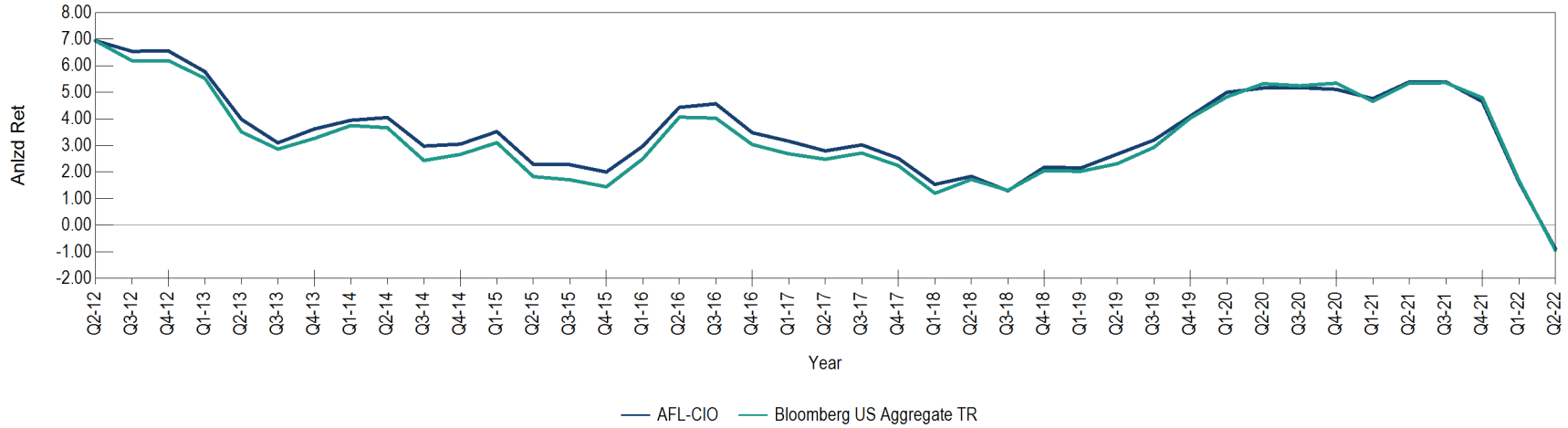


AFL-CIO vs. eV US Core Fixed Inc Gross Universe

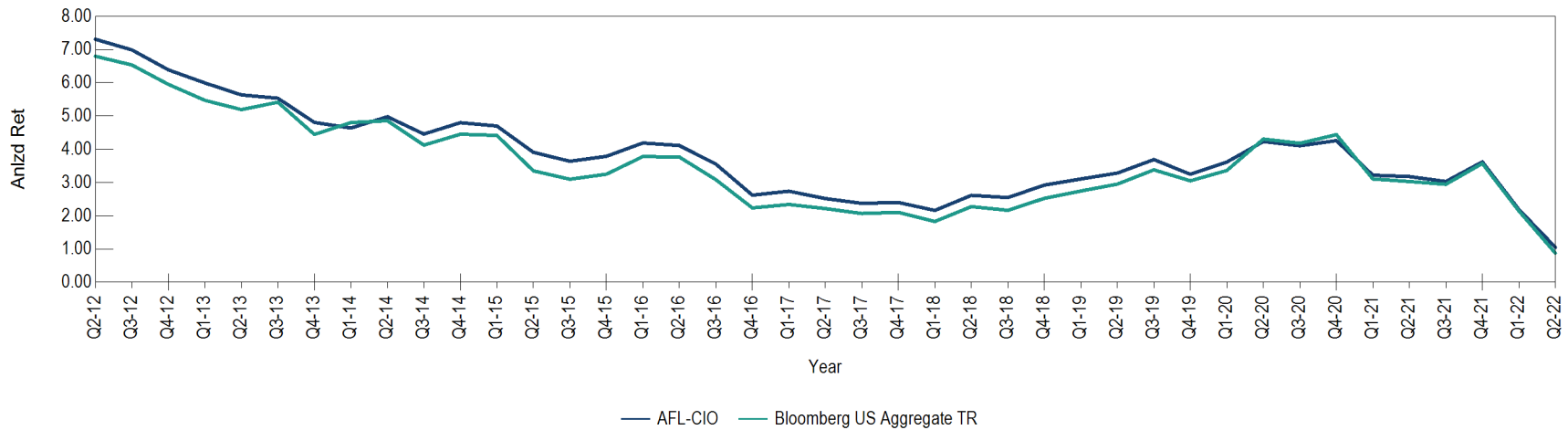


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	-3.2	-7.6	0.5	2.0	2.8	0.5	10.6	10.9	1.2	5.2	
25th Percentile	-4.5	-9.8	-0.1	1.5	2.3	-0.7	9.3	9.8	0.4	4.4	
Median	-4.8	-10.3	-0.4	1.3	2.1	-1.2	8.6	9.3	0.0	4.0	
75th Percentile	-5.1	-10.7	-0.7	1.2	1.9	-1.5	7.9	8.7	-0.3	3.6	
95th Percentile	-5.8	-11.5	-1.0	0.9	1.5	-2.1	6.6	7.2	-0.9	2.9	
# of Portfolios	211	211	202	199	191	217	225	228	240	233	
● AFL-CIO	-4.1 (14)	-9.8 (26)	-0.9 (90)	1.0 (87)	1.8 (85)	-0.7 (30)	6.6 (95)	8.2 (88)	0.6 (16)	3.6 (76)	
▲ Bloomberg US Aggregate TR	-4.7 (39)	-10.3 (53)	-0.9 (93)	0.9 (94)	1.5 (95)	-1.5 (76)	7.5 (85)	8.7 (77)	0.0 (54)	3.5 (79)	

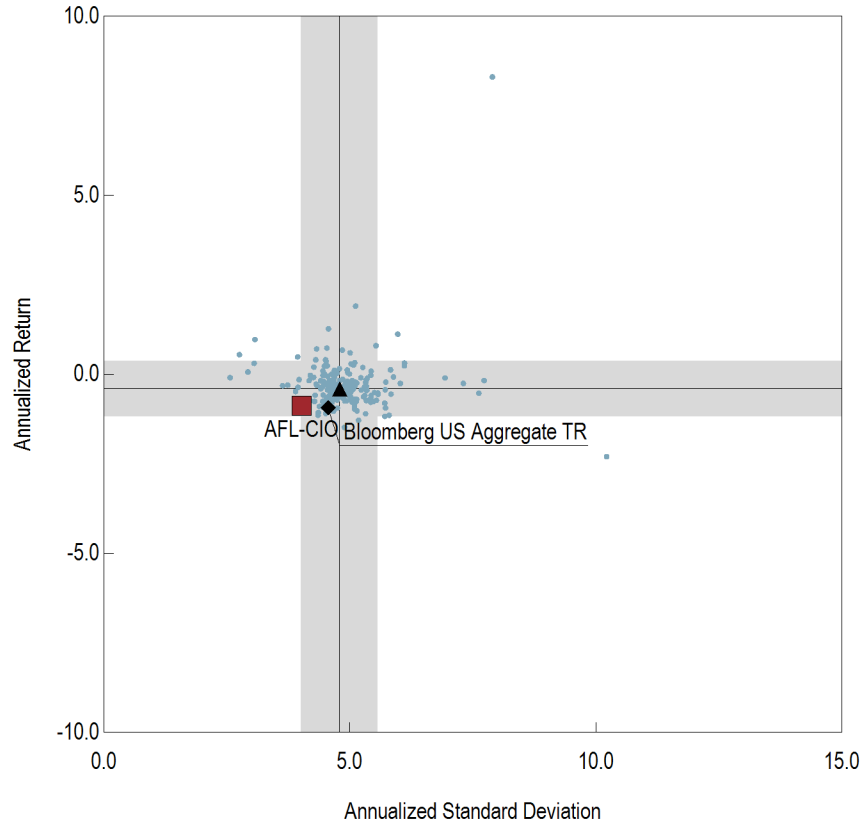
Rolling 3 Year Annualized Return (%)



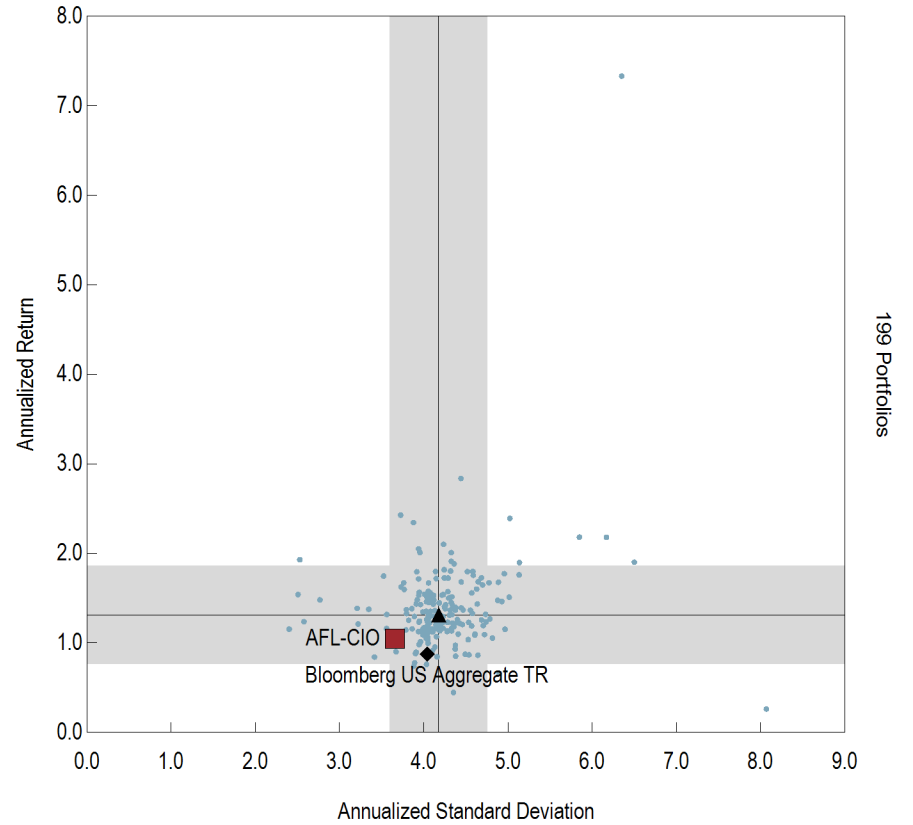
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	-0.9%	4.0%	-0.3
Bloomberg US Aggregate TR	-0.9%	4.6%	-0.3
eV US Core Fixed Inc Gross Median	-0.4%	4.8%	-0.2

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	1.0%	3.7%	0.0
Bloomberg US Aggregate TR	0.9%	4.0%	0.0
eV US Core Fixed Inc Gross Median	1.3%	4.2%	0.1

# Liquidity Managers

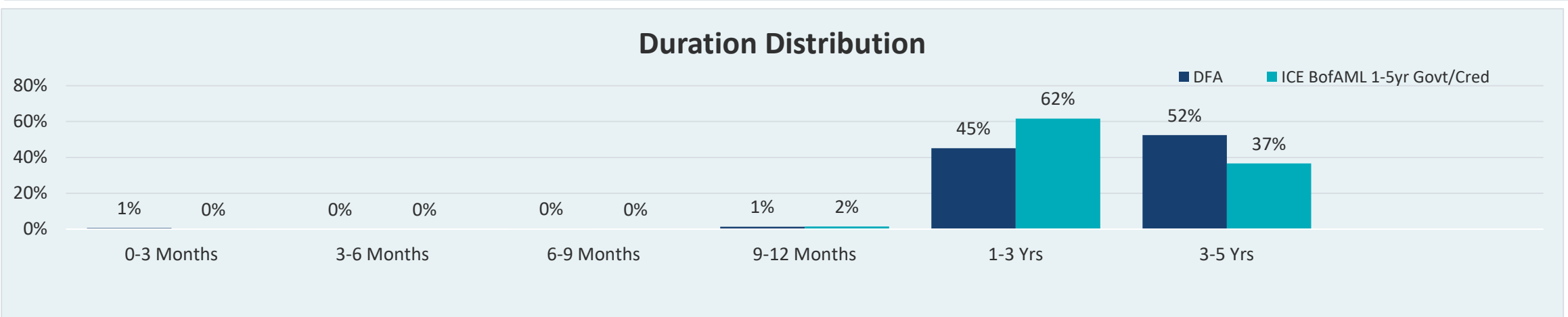
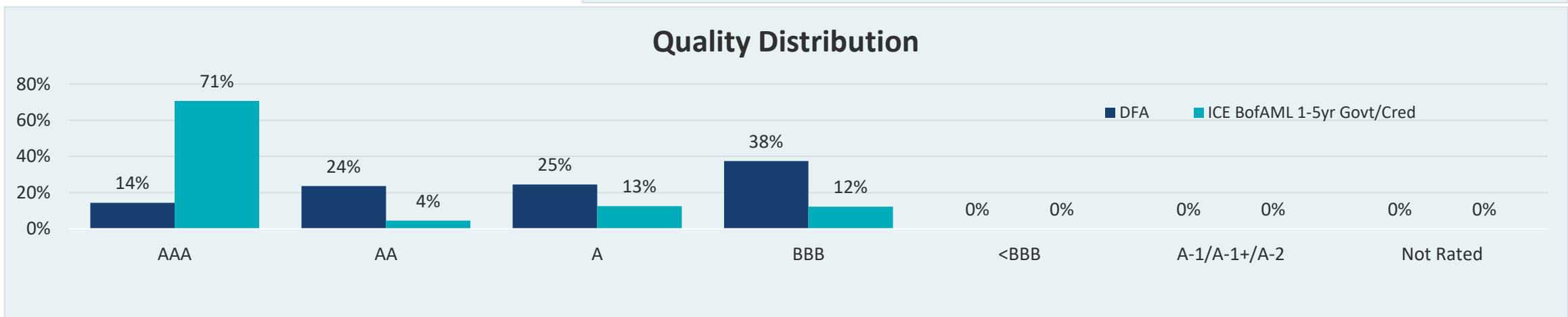
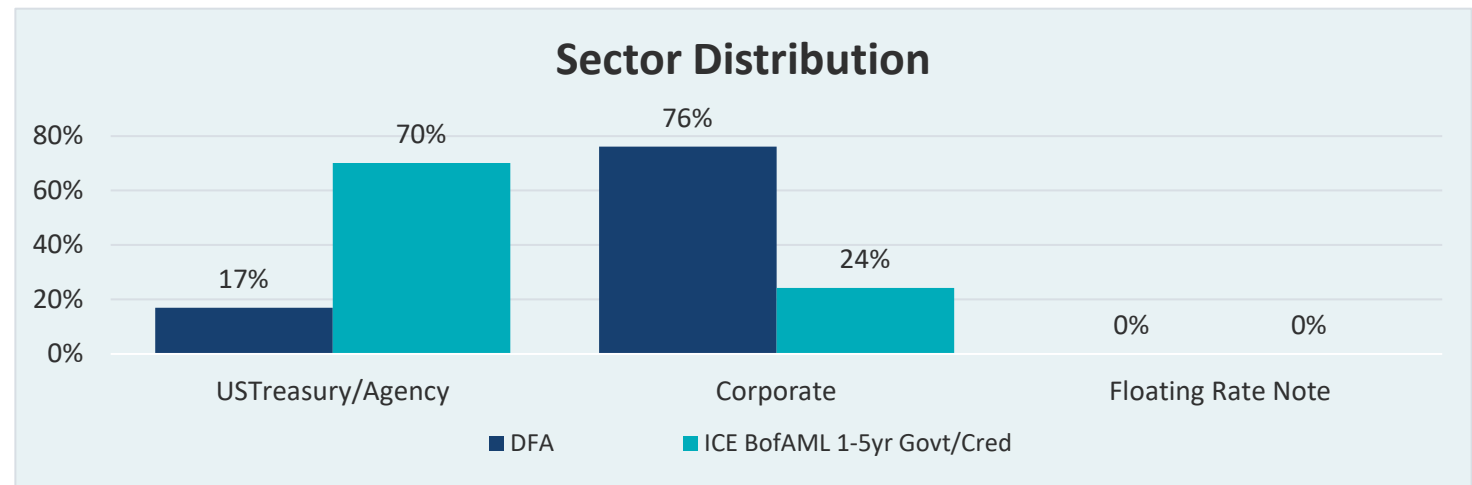
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# DFA Short Credit Manager Portfolio Overview

Period Ending: June 30, 2022

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	2.63
Yield to Maturity	4.04	3.33
Average Quality	A	AA+
Average Coupon	2.13%	1.96%

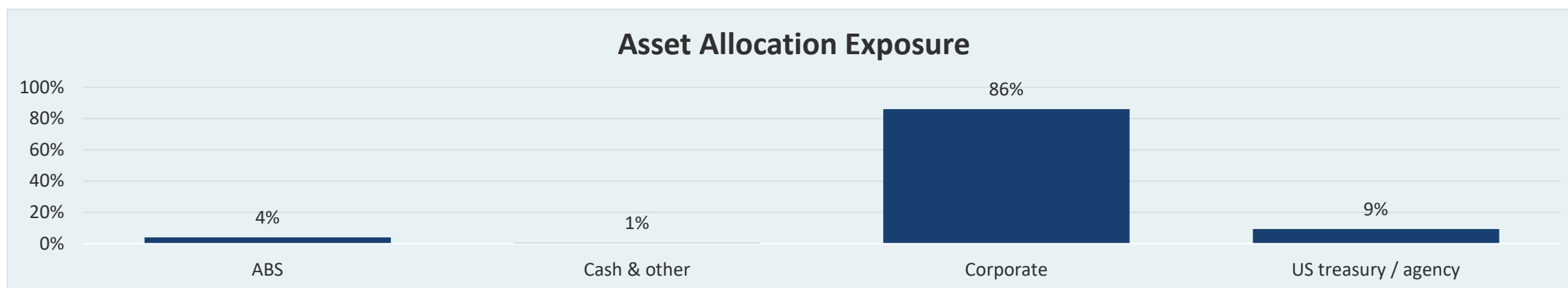
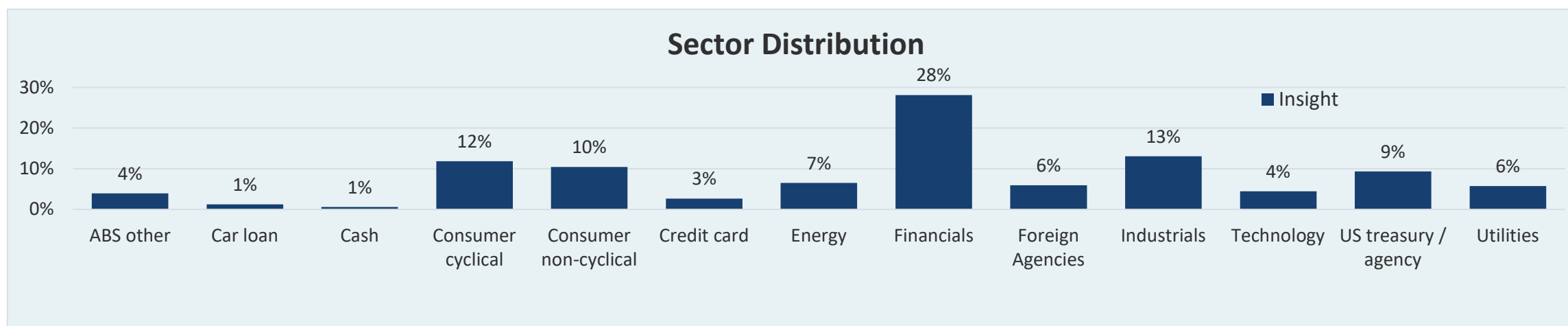
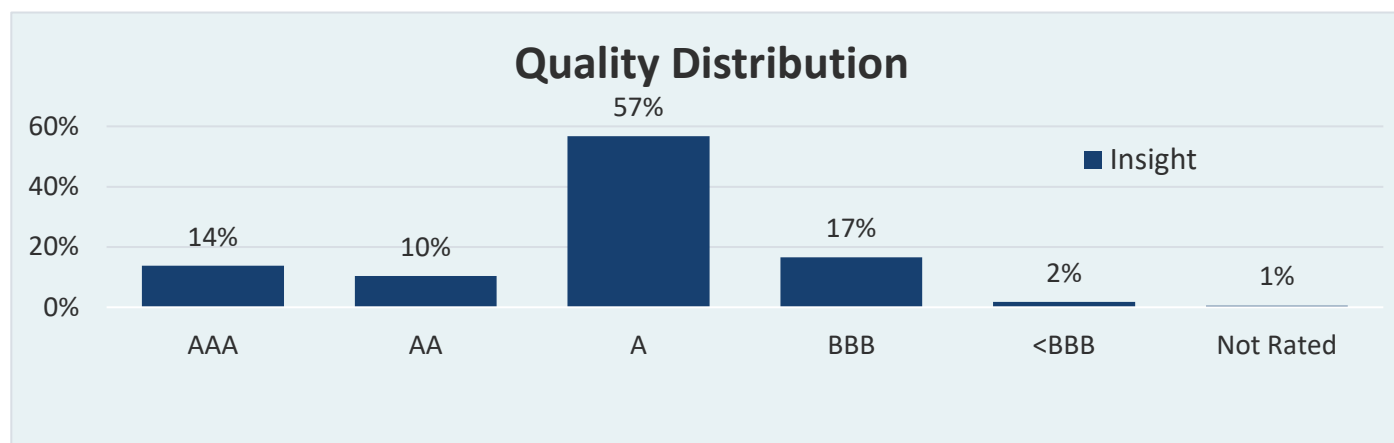


# Insight Short Duration Manager Portfolio Overview

Period Ending: June 30, 2022

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	0.94	1.90
Yield to Maturity	3.45	2.94
Average Quality	A	AAA
Average Coupon	2.69%	1.50%

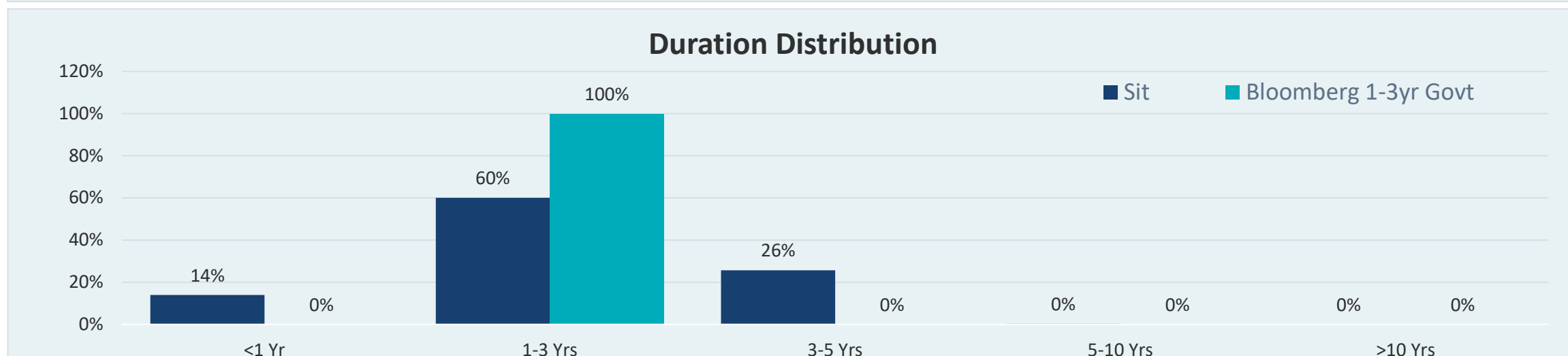
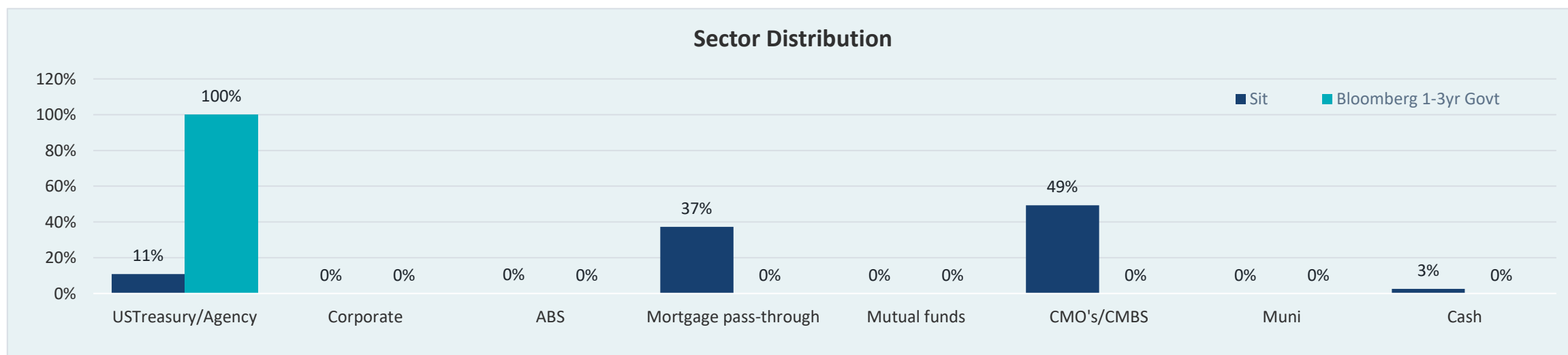
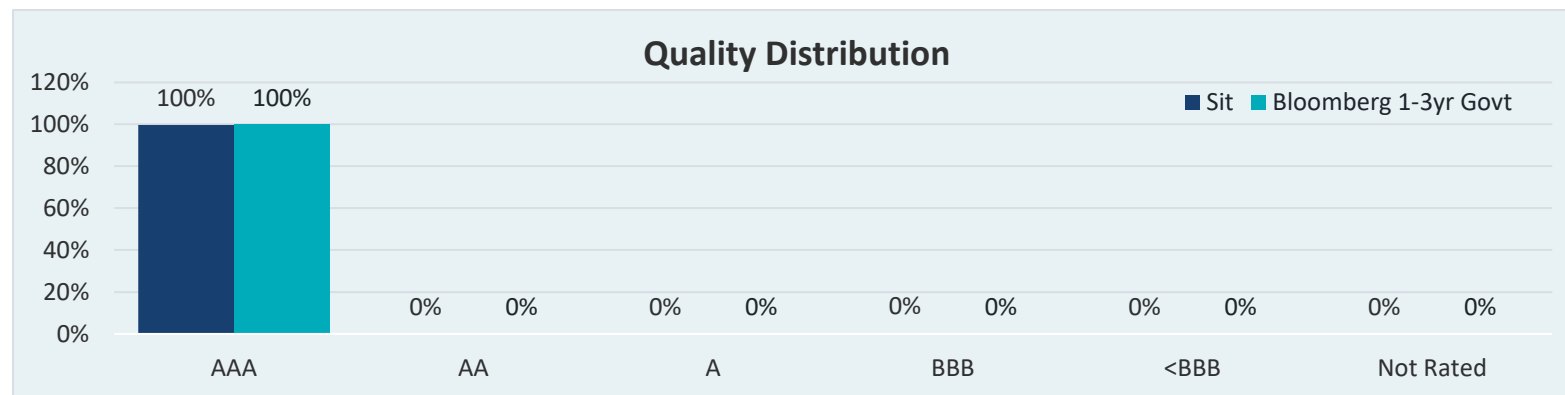


# Sit Short Duration Manager Portfolio Overview

Period Ending: June 30, 2022

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>2.70</b>	<b>1.90</b>
<b>Yield to Maturity</b>	<b>5.10</b>	<b>2.94</b>
<b>Average Quality</b>	<b>AAA</b>	<b>AAA</b>
<b>Average Coupon</b>	<b>5.20%</b>	<b>1.50%</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 (7/1/2021 - present)	16% Russell 3000, 16% MSCI ACWI ex-US (Gross), 9% MSCI ACWI (Net), 2% Wilshire REIT, 8% Private Real Estate composite returns, 3% CPI + 4%, 11% Private Equity composite returns, 8% Private Credit composite returns, 2% ICE BofAML High Yield Master II, 18% Bloomberg 1-3 Yr Gov/Credit, 2.5% Bloomberg US Aggregate, 3% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate, 1.5% HFRI EH Equity Market Neutral.
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% Bloomberg 1-3 Yr Gov/Credit, 3% Bloomberg US Aggregate, 2% Bloomberg 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% Bloomberg 1-3 Yr Gov/Credit, 3% Bloomberg US Aggregate, 2% Bloomberg 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, 23% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate, 2% Bloomberg 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% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate, 2% Bloomberg 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% Bloomberg 1-3 Yr Gov/Credit, 3.5% Bloomberg US Aggregate.
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% Bloomberg 1-3 Yr Gov/Credit, 3.2% Bloomberg 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% Bloomberg U.S. Aggregate, 5% ICE BofAML High Yield Master II, 4% Bloomberg Global Aggregate, 13.5% Real Estate Benchmark, 6.8% S&P 500 +4% (Lagged), 0.5% 91-Day T-Bills.



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

Policy Index (4/1/2011-3/31/2012)	31% Russell 3000, 10.4% MSCI EAFE (Gross), 9.6% MSCI ACWI (Net), 25% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg 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% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg 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% Bloomberg U.S. Aggregate, 3% ICE BofAML High Yield Master II, 4% Bloomberg 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 (7/1/2021 - present)	21.33% Russell 3000, 21.33% MSCI ACWI ex-US (Gross), 12% MSCI ACWI (Net), 2.67% Wilshire REIT, 10.67% Private Real Estate composite returns, 14.67% Private Equity composite returns, 10.67% Private Credit composite returns, 2.67% ICE BofAML High Yield Master II, 4% 60% MSCI ACWI Net/40% Bloomberg Global Aggregate
Custom Growth Benchmark (1/1/2021 - 6/30/2021)	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% Bloomberg 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% Bloomberg 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% Bloomberg 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% Bloomberg 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 (7/1/2021-present)	35.71% Bloomberg US Aggregate, 21.43% FTSE 3-Month T-bill +4%, 21.43 FTSE 3-Month T-bill +5%, 21.43% Bloomberg Barclays US Aggregate +1%
Custom Diversifying Benchmark (8/1/2020 - 6/30/2021)	46.15% Bloomberg 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% Bloomberg US Aggregate, 25% CPI + 4%, 31.25% HFRI EH Equity Market Neutral.
Custom Diversifying Benchmark (10/1/2017 - 6/30/2018)	58.33% Bloomberg US Aggregate, 41.67% CPI + 4%.
Custom Diversifying Benchmark (1/1/2017 - 9/30/2017)	56.1% Bloomberg 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.
Custom Diversifying Multi-Asset Benchmark (current)	50% FTSE 3-Month T-bill +5%, 50% Bloomberg Barclays US Aggregate +1%
Real Estate Benchmark (current)	20% Wilshire REIT, 80% 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	Oaktree REOF V	12/31/2011	Oaktree
Boston Partners	6/1/1995	Northern Trust	Oaktree REOF VI	9/30/2013	Oaktree
Emerald Advisors	4/7/2003	Northern Trust	Oaktree REOF VII	4/1/2015	Oaktree
Ceredex	11/6/2011	Northern Trust	PCCI IX	4/28/222	PCCP
Pyrford	4/25/2014	State Street	Siguler Guff DREOF	1/25/2012	Siguler Guff
William Blair	10/29/2010	William Blair	Siguler Guff DREOF II	8/31/2013	Siguler Guff
PIMCO RAE Emerging Markets	2/28/2017	State Street	Siguler Guff DREOF II Co-Inv	1/27/2016	Siguler Guff
TT Emerging Markets	7/27/2017	TT	Paulson Real Estate Fund II	11/10/2013	Paulson
Artisan Partners	10/1/2012	SEI Trust	AE Industrial Partners Fund II	4/8/2019	StepStone Group
First Eagle	1/18/2011	Northern Trust	Adams Street Partners	3/18/1996	StepStone Group
Allianz Global Investors	4/25/2000	Northern Trust	Adams Street Partners II	1/16/2009	StepStone Group
Adelante	9/30/2001	Northern Trust	Adams Street Partners Venture	4/28/2017	StepStone Group
AQR Global Risk Premium - EL	1/18/2019	AQR	Adams Street Partners - BFP	1/18/1996	StepStone Group
Panagora Risk Parity Multi Asset	3/15/2019	Panagora	Adams Street Partners - Fund 5	9/21/2012	StepStone Group
AFL-CIO	6/30/1991	AFL-CIO	Aether Real Assets IV	3/16/2016	StepStone Group
Wellington Real Total Return (in Liquidation)	2/26/2013	Wellington	Aether Real Assets III	11/27/2013	StepStone Group
Acadian Multi-Asset Absolute Return Fund	8/4/2020	Northern Trust	Aether Real Assets III Surplus	11/30/2013	StepStone Group
Sit LLCAR	4/15/2021	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
Invesco Real Estate IV	6/30/2014	Invesco			
Invesco Real Estate V	2/20/2019	Invesco			

Other Disclosures

All data prior to 12/31/2014 was provided by previous consultant.  
 As of 7/1/2018 all Private Equity and Private Credit data is provided by StepStone Group.

## 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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