

Meeting Date
05/25/2022
Agenda Item
#9a.

Verus 



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: MARCH 31, 2022

Investment Performance Review for

Contra Costa County Employees' Retirement Association

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Investment Landscape

TAB I

Investment Performance
Review

TAB II



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

2ND QUARTER 2022
Investment Landscape

Recent Verus research

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

Sound thinking

2022: BACK TOWARDS NORMAL?

As we do every year, during January we sit down to think about what might matter for the coming year – and that process always begins with us assessing how we did the previous year. The goal of this is to help boards prioritize their work, whether it is actually allocating money or simply setting the agenda of topics they should be thinking about. In the latest Sound Thinking, our CIO, Ian Toner, CFA will review topics from the previous year and outline the following topics that an investor might want to add to their agenda for the coming year.

Annual research

2022 ACTIVE MANAGEMENT ENVIRONMENT

Active manager dispersion has been very wide recently, as the pandemic-induced global recession and subsequent fast-paced recovery resulted in considerable economic divergence. These dynamics have created interesting opportunities for active managers to show differentiated performance and deliver alpha to clients. We hope that the insights from this unique mathematical approach provide a deeper understanding of active manager behavior and assists investors in their selection process.

Verus business update

Since our last Investment Landscape webinar:

- Verus has hired three employees. **Tim McEnery**, Managing Director | Senior Consultant; **Samantha Grant**, Senior Consultant; and **Kyle Jangard**, Public Markets Research Analyst.
 - Tim and Samantha will establish a Verus office in Chicago. Expanding our Midwest presence has been a long-term strategic goal to grow our nationwide services.
- We've had success over the last three months in retaining several new clients. Our national client footprint expanded to 25 states, with our recent additions of clients in Hawaii and North Dakota.
- The IIDC grew to 25 consulting firms with over \$42 trillion in assets under advisement. Verus founded the Institutional Investing Diversity Cooperative in December 2020, leading a call to action in the consulting industry for disclosure of asset manager diversity data at the investment team level.



TIM MCENERY, CFA
Managing Director | Senior Consultant



SAMANTHA GRANT, CFA, CAIA
Senior Consultant



KYLE JANGARD
Public Markets Research Analyst

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1st quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a 5.5% rate year-over-year in Q4 (+6.9% quarterly annualized rate). Strong expenditures into new inventory boosted growth, as many businesses have struggled to replenish inventory levels in the face of global supply chain issues. Business investment and rising exports also contributed to the strong pace of growth. **p. 8**
- The rate of unemployment in the U.S. has continued to fall, improving from 3.9% to 3.6% during the quarter. The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. A historic shortage of workers may remain a sticky issue, as 11.3 million job openings are posted, but only 6.0 million Americans are seeking work. **p. 11**

PORTFOLIO IMPACTS

- High yield credit spreads expanded from 2.8% to 3.3%, although default activity is expected to remain historically low. It appears spread movement has been more of an effect of broader risk-off market moves, rather than a specific reflection of changing credit conditions. **p. 24**
- U.S. core CPI, excluding food & energy, rose by 6.5% year-over-year in March. Headline inflation, which is being closely watched at the moment as this includes energy & food prices, reached 8.5%. Prices in some other areas have stabilized. Many investors believe inflation peaked in March, though there remains much uncertainty around the path from here. **p. 9**

THE INVESTMENT CLIMATE

- In late February, Russian forces invaded Ukraine—a move which was anticipated by major Western intelligence communities. Ukraine has put together a remarkable defense thus far, as many citizens have taken up arms to defend their country. **p. 18**
- Multi-year underinvestment in energy, and now the Russia/Ukraine war, has created a shock to energy markets and crisis-level prices in many European countries. Government officials have been hesitant to vocally support increased local energy production, primarily due to climate concerns. In the U.S., many shale firms have opted to increase production on existing land, but have been slow to pursue new projects—partly due to supply chain issues (shortages in labor, truck drivers, and frack sand) and also due to prioritization of profits over growth. **p. 38**

ASSET ALLOCATION ISSUES

- Nearly every asset class delivered negative performance in Q1. Equity markets pulled back, credit spreads widened, and interest rates headed higher. Certain real assets including commodities were the exception. **p. 49**
- Value stocks outperformed Growth stocks by a substantial margin during Q1, as the Energy sector outpaced the index by 43.6% (Energy 39.0%, S&P 500 -4.6%). Large capitalization stocks outperformed small capitalization stocks (Russell 1000 +9.8%, Russell 2000 +2.1%). **p. 30**

Nearly every asset class delivered losses during Q1, as risk assets sold off, credit spreads widened, and interest rates moved higher

What drove the market in Q1?

“U.S. Inflation Accelerated to 8.5% in March, Hitting Four-Decade High”

HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

Oct	Nov	Dec	Jan	Feb	Mar
6.2%	6.8%	7.0%	7.5%	7.9%	8.5%

Article Source: Wall Street Journal, April 12th, 2022

“Russian Stocks’ 33% Crash Is Fifth-Worst in Market History”

MOEX RUSSIA EQUITY INDEX PRICE LEVEL

Oct	Nov	Dec	Jan	Feb	Mar
4150	3891	3787	3530	2470	2704

Article Source: Bloomberg, February 24th, 2022

“Commodity prices surge after Russia’s Ukraine invasion”

BLOOMBERG COMMODITY SPOT INDEX

Oct	Nov	Dec	Jan	Feb	Mar
525.1	487.3	502.2	546.8	577.7	625.3

Article Source: Axios, March 1st, 2022

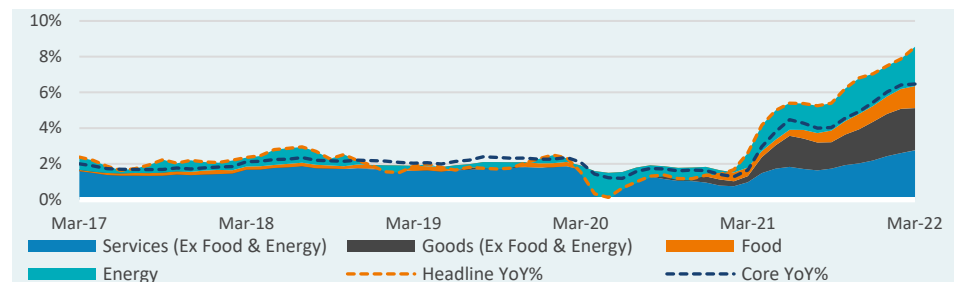
“Global Bond Rout Deepens on Fear Rate Hikes Will Stoke Recession”

BLOOMBERG GLOBAL AGGREGATE TREASURIES TOTAL RETURN

Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Q1 2022
3.2%	(5.5%)	0.9%	(1.1%)	(1.0%)	(6.2%)

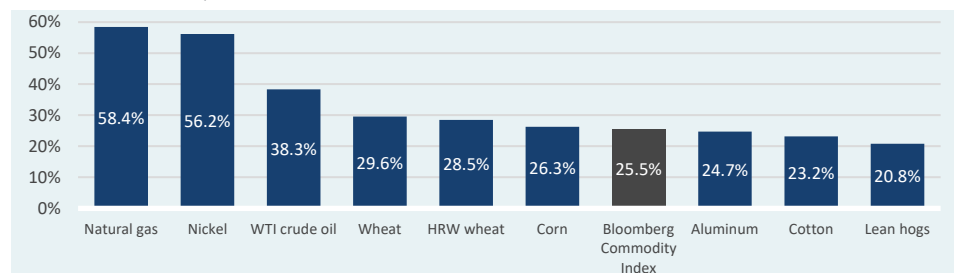
Article Source: Bloomberg, March 27th, 2022

CONTRIBUTION TO HEADLINE CONSUMER PRICE INFLATION



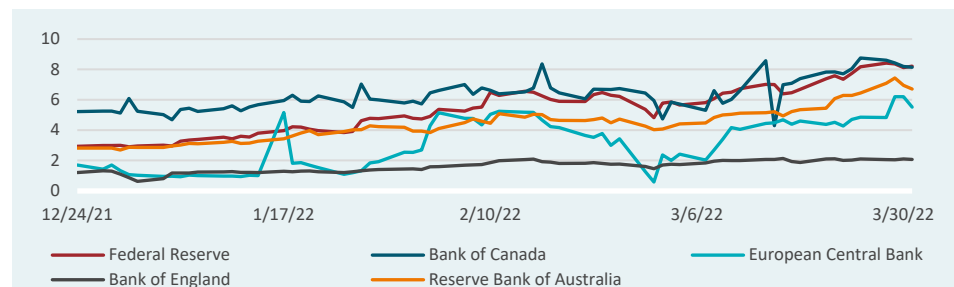
Source: Bureau of Labor Statistics, as of 3/31/22

COMMODITY Q1 PERFORMANCE



Source: Bloomberg, as of 3/31/22

EXPECTED NUMBER OF RATE HIKES BY DECEMBER 2022



Source: Bloomberg, as of 3/31/22

Economic environment

U.S. economics summary

- Real GDP grew at a 5.5% rate year-over-year in the fourth quarter (+6.9% quarterly annualized rate). Strong expenditures into new inventory boosted the economy during the quarter, as many businesses had struggled to replenish inventory levels in the face of global supply chain issues. Business investment and rising exports also contributed to the strong Q4 pace of growth.
- In economic terms, the effects of COVID-19 seem to be in the rearview mirror. Travel volumes have risen closer to prior levels, credit card transactions are extremely strong, and Americans are once again dining out and spending on entertainment.
- U.S. core CPI, which excludes food & energy prices, rose by 6.5% year-over-year in March. Headline inflation, which is being closely watched at the moment as this includes many of the goods that exhibited the largest price gains (energy & food), reached 8.5%. Price rises have become more broad-based in recent months, with many goods and services experiencing increases.
- U.S. unemployment continued to fall, improving from 3.9% to 3.6%. The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. The historic shortage of workers may remain a sticky issue, as 11.3 million job openings are currently posted, but only 6.0 million Americans are seeking work.
- The fast rise of 30-year fixed mortgage rates to near 5.0%, along with skyrocketing home prices, has made homeownership a nearly impossible goal for some Americans, and is squeezing the budgets of many (though at the same time generating much wealth for homeowners). This effect is captured in the Housing Affordability Index, which further deteriorated during Q1.

	Most Recent	12 Months Prior
Real GDP (YoY)	5.5% 12/31/21	(2.3%) 12/31/21
Inflation (CPI YoY, Core)	6.5% 3/31/22	1.6% 3/31/21
Expected Inflation (5yr-5yr forward)	2.4% 3/31/22	2.3% 3/31/21
Fed Funds Target Range	0.25% – 0.50% 3/31/22	0.00% – 0.25% 3/31/21
10-Year Rate	2.34% 3/31/22	1.74% 3/31/21
U-3 Unemployment	3.6% 3/31/22	6.0% 3/31/21
U-6 Unemployment	6.9% 3/31/22	10.7% 3/31/21

GDP growth

Real GDP grew at a 5.5% rate year-over-year in the fourth quarter (+6.9% quarterly annualized rate). Strong expenditures into new inventory boosted growth, as many businesses had struggled to replenish inventory levels in the face of global supply chain issues. Business investment and rising exports also contributed to strong fourth quarter GDP.

During Q1 2022, concerns rose around the possibility of slowing economic growth or even a recession in the near-term, though the chances of recession appear low. The Atlanta Fed GDPNow real-time forecast for first quarter growth was 1.1%, as of April 11th (seasonally adjusted QoQ annualized rate).

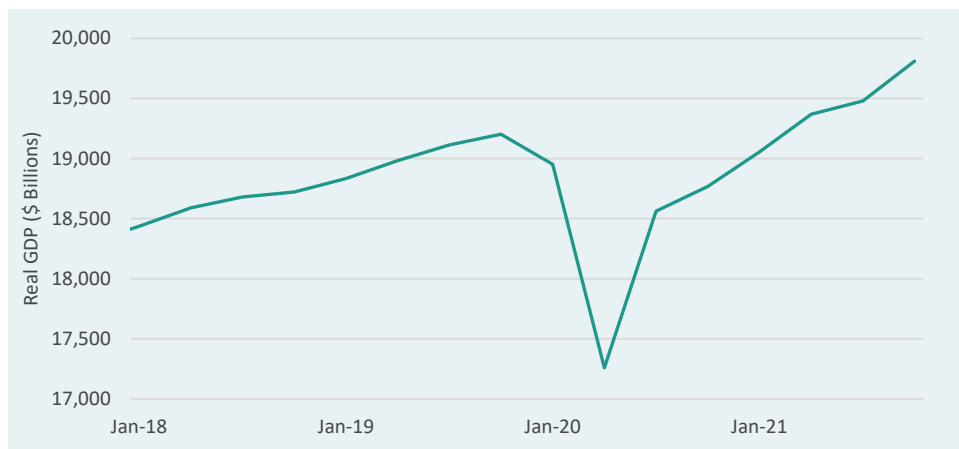
However, it is broadly expected that economic growth picks back up to around 3% throughout the remainder of 2022.

As we mentioned last quarter, U.S. GDP growth is quoted in *inflation-adjusted* terms. This will mean that inflation trends could have large impacts on upcoming U.S. GDP growth numbers. Higher inflation would depress the rate of GDP growth, and falling inflation would likely boost GDP figures, all else equal. Multiple past U.S. recessions were caused at least partially by rising inflation rather than solely by slowing growth (see 1970s, 1980s).

Q4 GDP growth was very strong

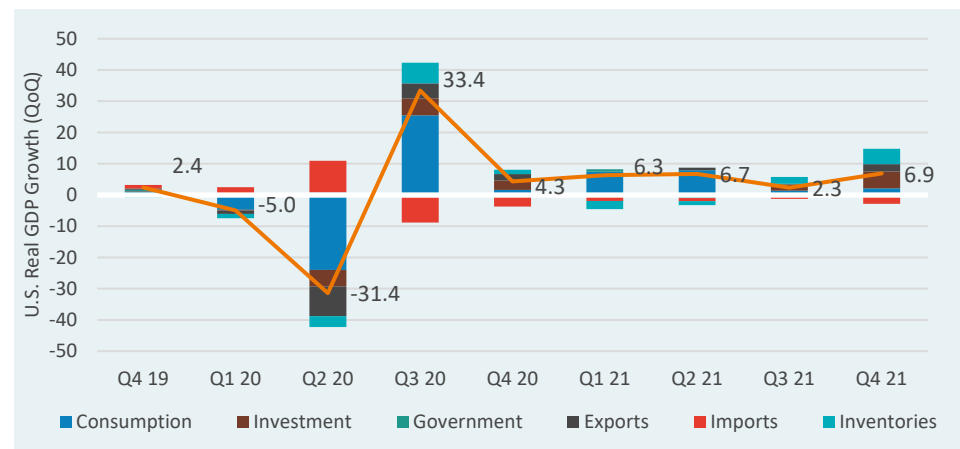
Economists expect weak growth in Q1, followed by a mild economic reacceleration

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 12/31/21

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 12/31/21

Inflation

U.S. core CPI, which excludes food & energy prices, rose by 6.5% year-over-year in March. Headline inflation, which is being closely watched at the moment as this includes many goods that have exhibited the most notable price gains (energy & food), reached 8.5%. While price rises in energy and food have been large in recent months, prices in some other areas have stabilized. Many investors believe inflation peaked in March, though much uncertainty exists regarding the path from here.

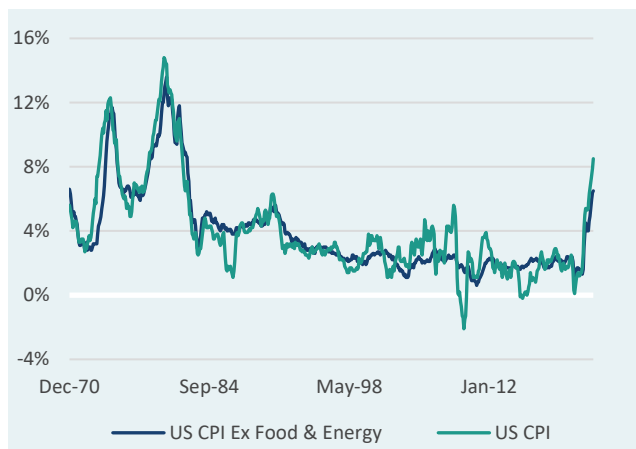
There are both inflationary and deflationary forces at play in the current environment. On the inflationary side, Russia's invasion of Ukraine has led to substantial disruptions to energy and agricultural markets, which flowed through to price spikes in many commodity markets. These moves can be seen in the March

inflation report. Geopolitical crises tend to result in *upward* commodity price movement, which suggests continued war or wider conflict could have inflationary effects. On the *deflationary* side, large single-month inflation numbers are beginning to *fall out* of the 12-month CPI calculation window. This will naturally have a depressing effect on future CPI figures. Furthermore, many pandemic-specific issues are beginning to be resolved, such as clogged supply chains, unusually high demand for physical goods, and abnormally strong spending patterns. On the next slide we visualize some of these *inflationary* and *deflationary* effects.

Overall, we believe that inflation will most likely begin falling later in 2022, though this could be a slower process than originally believed.

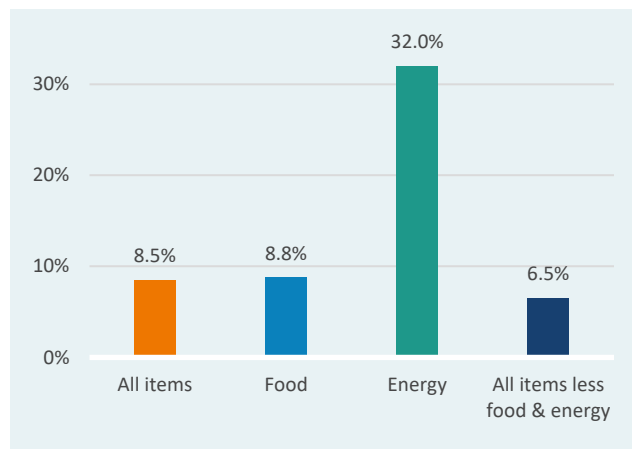
Inflation has proven more sticky (less transitory) than previously expected

U.S. CPI (YOY)



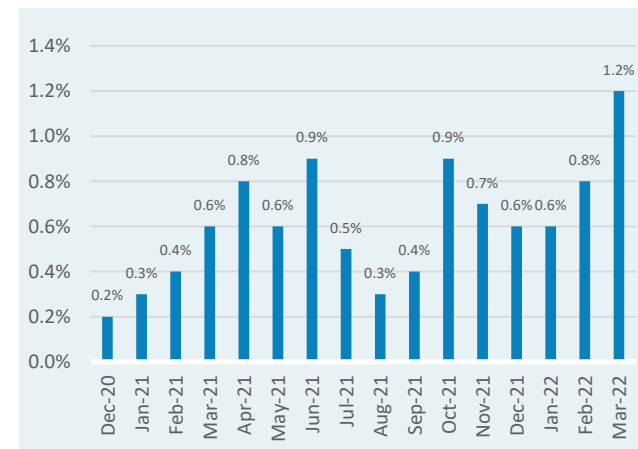
Source: BLS, as of 3/31/22

U.S. CPI (YOY)



Source: BLS, as of 3/31/22

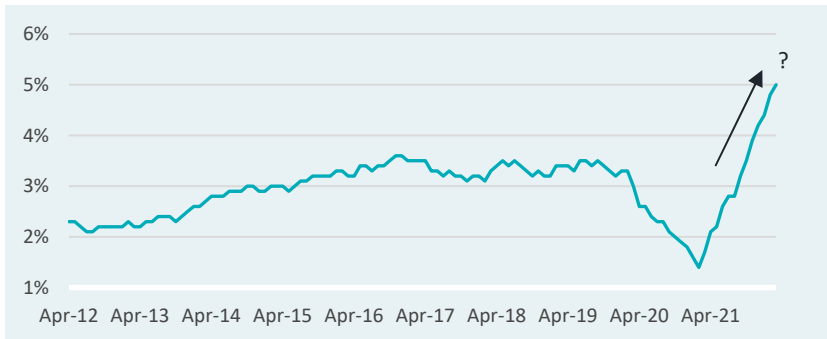
MONTHLY PRICE MOVEMENT



Source: BLS, as of 3/31/22

Inflationary & deflationary forces

CPI SHELTER COSTS (YEAR-OVER-YEAR)



Shelter costs, which account for ~40% of the core CPI gauge, have continued to track rent prices higher. The continuation of this trend could mute the impact of a potential rollover in prices for consumer durables like used cars, and result in a higher floor for inflation near-term.

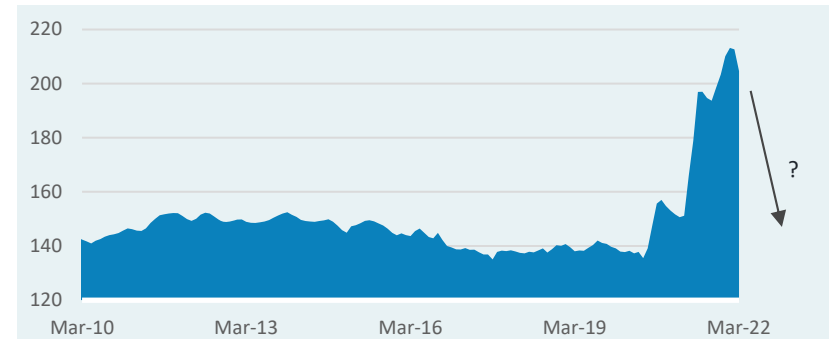
U.S. CORNBELT AMMONIUM NITRATE (FERTILIZER) PRICES



Russia, the world's largest fertilizer exporter, imposed a two-month ban on ammonium nitrate exports, which will threaten the reduction of fertilizer supplies. The export ban is likely to result in higher prices for U.S. farmers.

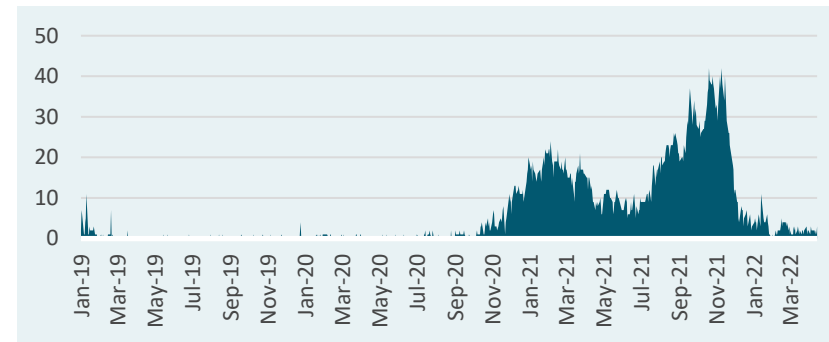
Source: FRED, as of 3/31/22 (upper), Bloomberg, as of 3/31/22 (lower)

USED CAR & TRUCK PRICES



If certain pandemic-related price rises were to reverse as conditions ease, this could bring inflation down materially

SHIPS AT ANCHOR – PORT OF L.A.



Pandemic-related supply and demand complexities contributed to many supply shortages and price spikes. As these issues are resolved, we would expect prices of some goods to stabilize and perhaps even move closer to prior levels.

Source: FRED, as of 3/31/22 (upper), Port of Los Angeles, as of 4/15/22 (lower)

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

Labor market

The rate of unemployment in the U.S. has continued to fall, improving from 3.9% to 3.6% during the quarter. The labor force participation rate has gradually increased, rising from 61.6% to 62.4%. The historic shortage of workers may remain a sticky issue, as 11.3 million job openings are posted, but only 6.0 million Americans seeking work.

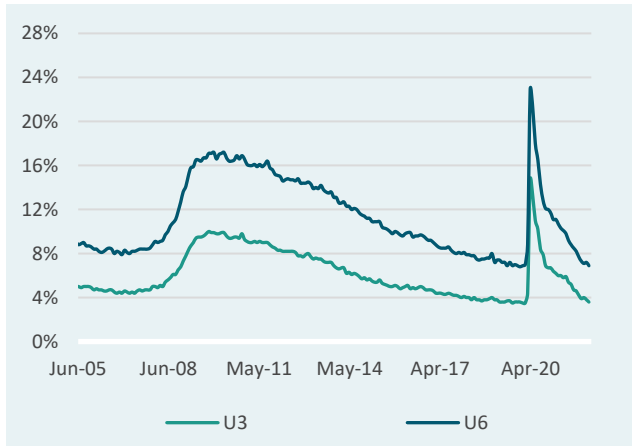
Throughout the latter part of the pandemic, our belief has been that abnormally early retirements have shrunk the overall labor force, and that the U.S. labor participation rate will not likely fully rebound to prior levels. This forecast has proven accurate, as much of the 55+ U.S. worker age cohort remains out of the workforce and not seeking employment. This compares to

younger age cohorts which have made greater progress toward rejoining the labor pool.

The shortage of workers is likely having a dampening effect on the U.S. economy, as fewer workers means less productive activity, which translates to fewer paychecks and total household income. At the onset of the labor supply shortage, some held the view that fewer workers might mean greater overall wage income if this gave workers more negotiating power with employers. Unfortunately, the results have not met those expectations, as wages have failed to keep up with inflation.

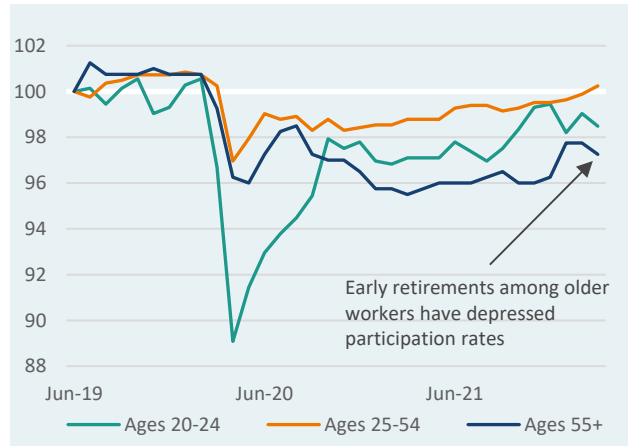
U.S. labor participation continues to see gradual improvement

U.S. UNEMPLOYMENT



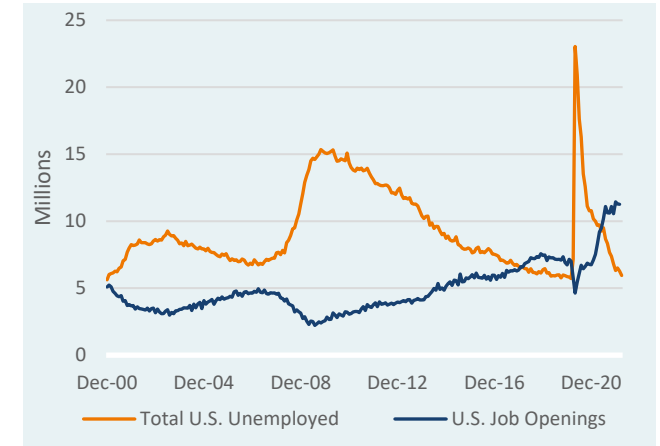
Source: FRED, as of 3/31/22

LABOR PARTICIPATION RATE



Source: FRED, as of 3/31/22

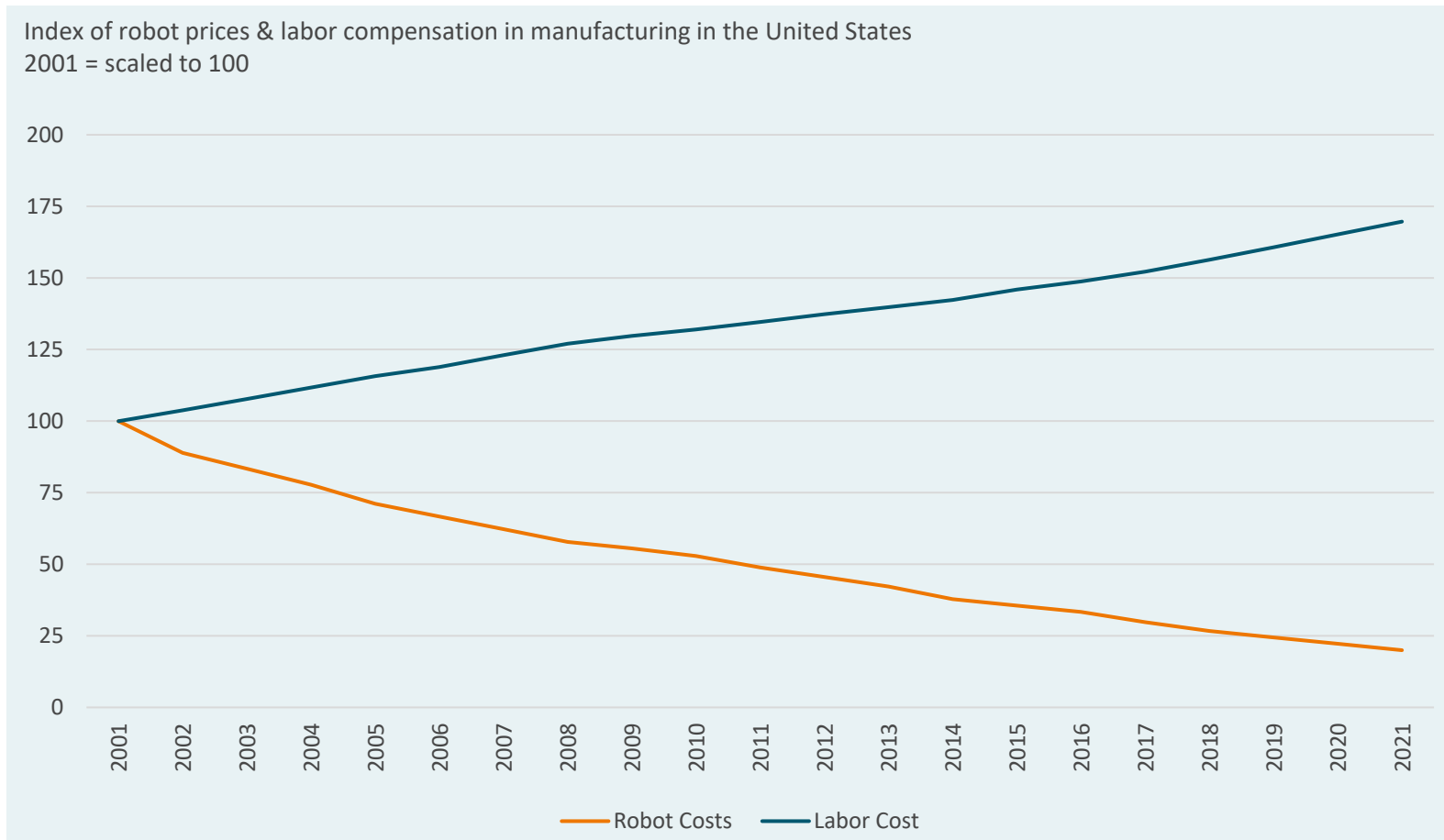
UNEMPLOYED VS # JOBS AVAILABLE



Source: FRED, as of 2/28/22 or most recent data

Labor costs alternatives

COSTS OF AUTOMATION



With widespread labor shortages, companies are increasingly adopting robotics and automation to stay competitive

Spending on robotics was approximately \$2 billion in 2021 (a 14% increase over the previous high in 2017)

Source: U.S. Bureau of Labor Statistics; ARK Investment Management [Ark-investment.com](https://ark-investment.com); United Nations Economic Commission; BCG

The consumer

U.S. personal consumption expenditures (PCE) represents consumer spending across a broad basket of goods. Spending boomed during the COVID-19 recovery, with a surprisingly large shift towards purchases of goods and away from services. This substantial shift was believed to be a major contributor to demand/supply imbalances and price inflation of goods during the pandemic. After adjusting for inflation, consumption has risen 1.6% per year since February of 2020.

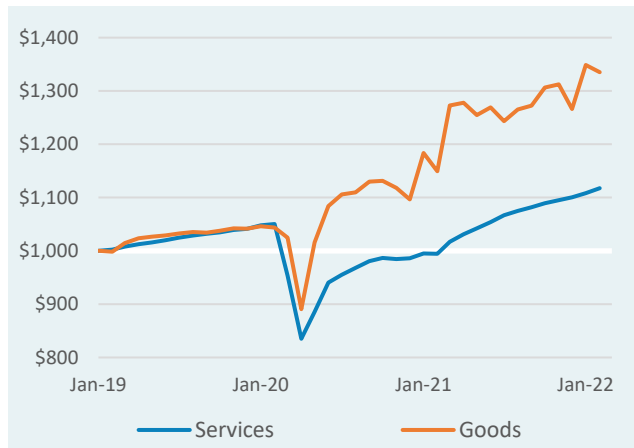
Auto sales remain depressed relative to pre-pandemic volumes and are at the lowest level since 2011. Sales have likely been hindered by supply chain and therefore inventory issues surrounding new vehicles as well as affordability issues for used

vehicles due to the unprecedented rise in prices.

While economic growth and spending appears to be slowing, it is worth noting how significant the increase in U.S. household wealth has been. Asset prices broadly headed higher during the COVID-19 recovery, which included skyrocketing home prices. While these moves certainly create difficulties for new investors (dollars invested today are expected to generate relatively lower long-term returns) and also for future homebuyers (home affordability has been very negatively affected), rising markets have created great profits for many Americans, as indicated by surging total household wealth.

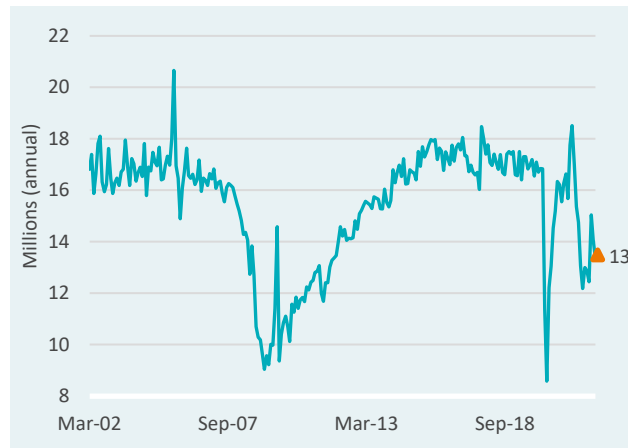
Despite vastly increased American wealth and strong job prospects, sentiment is very depressed as living costs rocket higher

PERSONAL CONSUMPTION EXPENDITURES



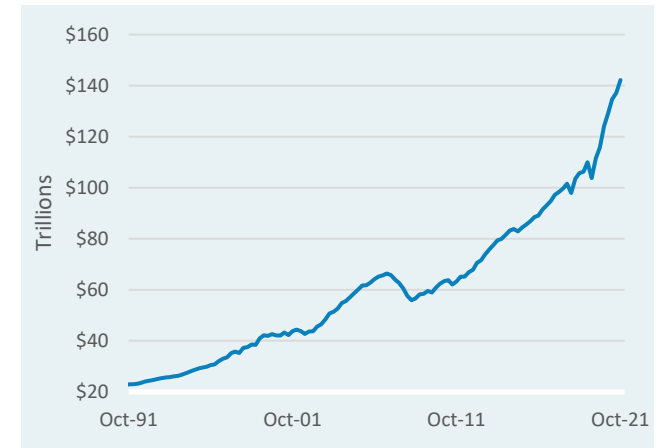
Source: FRED, as of 2/28/22

AUTO SALES



Source: Federal Reserve, as of 2/28/22

U.S. HOUSEHOLD WEALTH



Source: FRED, as of 12/31/21

Sentiment

Consumer sentiment has collapsed to levels not seen since the depths of the 2008-2009 Global Financial Crisis. The University of Michigan survey fell from 70.6 to 59.4 during the quarter, as survey respondents indicated deteriorating living conditions due to high inflation and expectations that household financial conditions will worsen throughout the year. On a more positive note, Americans are reportedly optimistic about job prospects and the strong labor market.

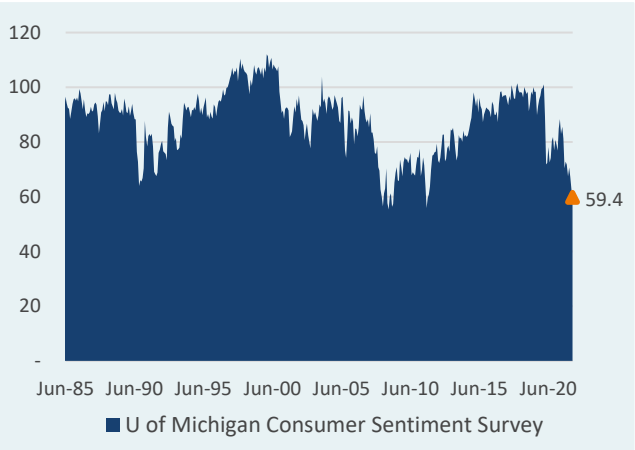
There remain 11.3 million open jobs but only 6.0 million unemployed people in the labor force, indicating significant

labor market tightness. Per the Conference Board, the percentage of Americans who believe it is difficult to land a job right now is at the lowest level since year 2000. A competitive market has led to strong nominal wage gains, but real (adjusted for inflation) average hourly earnings failed to keep up with inflation, and have actually contracted -2.7% over the last year.

The NFIB Small Business Optimism index weakened further. As detailed in the survey, 31% of small businesses see inflation as the largest problem they face. Labor shortages and supply chain issues continue to weigh on business activity.

Sentiment, by some measures, has reached lows not seen since the 2008-2009 Global Financial Crisis

CONSUMER SENTIMENT



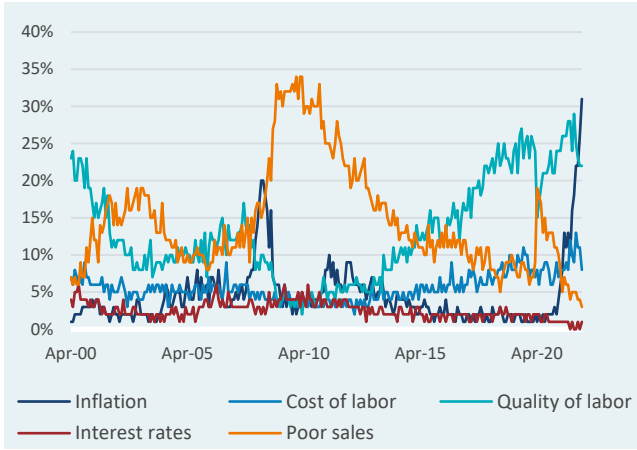
Source: University of Michigan, as of 3/31/22

CONSUMER VIEWS ON THE LABOR MARKET



Source: Conference Board, as of 3/31/22

BIGGEST ISSUES FOR SMALL BUSINESSES



Source: NFIB, as of 3/31/22

Housing

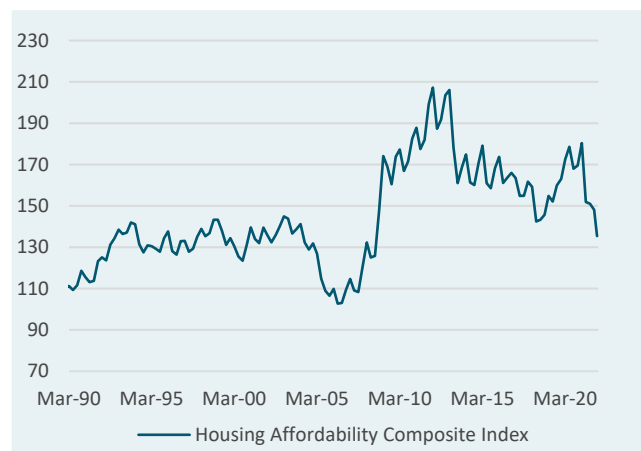
U.S. home prices continued higher, up +19% over the past year ending January, and up a whopping 32% since pre-pandemic. Price appreciation may be set to cool off as the 30-year fixed mortgage rate has risen to 5%, inventories have risen, and sales activity has slowed considerably.

The fast rise of 30-year fixed mortgage rates to near 5%, along with skyrocketing home prices, has made homeownership a nearly impossible goal for some Americans, and is squeezing the budgets of many (though at the same time generating much wealth for homeowners). This effect is captured in the

Housing Affordability Index, which deteriorated during Q1.

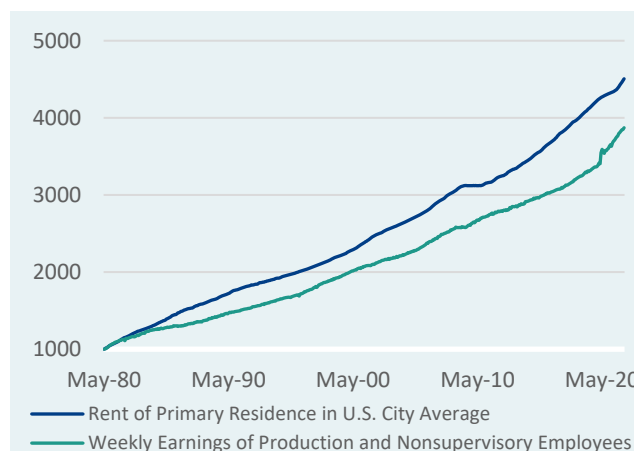
The cost of housing has outpaced wage gains for decades, although only mildly so (not as dramatically as some might assume). Lower and lower interest rates had largely counteracted higher home prices in terms of total ownership costs. This rough equilibrium seems to have swung in the other direction over the past year. Lack of affordability may mean a continued slowdown in home sales activity, and perhaps a plateauing or even decline in property values in some areas.

HOUSING AFFORDABILITY INDEX



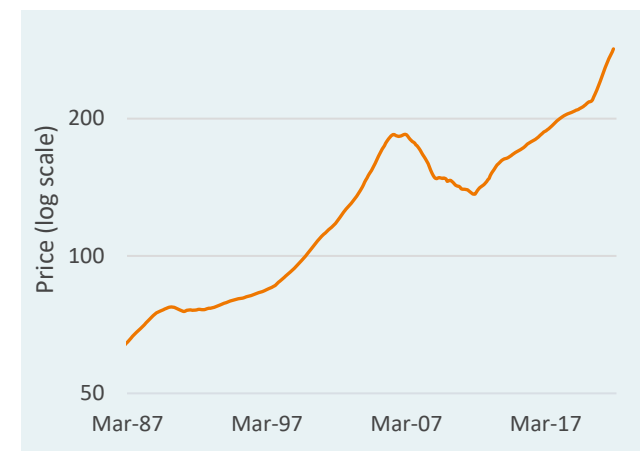
Source: NFIB, as of 2/28/22

WAGES VS RENTING COSTS



Source: FRED, as of 2/28/22

CASE-SHILLER HOME PRICE INDEX



Source: FRED, as of 1/31/22

International economics summary

— The pace of economic growth has moved further back toward average levels in most economies. In January, the International Monetary Fund cut their 2021 advanced economy growth projections from 5.2% to 4.3%. Growth in 2022 is expected to slow to 3.1%.

— Unemployment continued to fall to, or below, pre-pandemic levels. However, in countries such as the United States these data do not tell the whole story, since the total size of the labor pool has shrunk substantially.

— Inflation trends have been surprisingly bifurcated by region. While the United States and Europe are generally contending with a spike in prices and inflation not seen in decades, Japan and China are experiencing very low inflation and muted price pressures.

— In late February, Russian forces

invaded Ukraine—a move which was anticipated by major Western intelligence communities. Ukraine has put together a remarkable defense thus far, as many citizens have taken up arms to defend their country.

— Russia’s invasion of Ukraine led to substantial spikes in energy and agricultural prices as concerns grew of a potential supply shock. Eurozone producer prices grew 31.4% over the 12 months ending February, reflecting the impact of surging natural gas prices (+58.4%).

— COVID-19 case growth rose to record levels in China, which led CCP officials to reinstate lockdowns in some of the largest provinces in the country. Continued commitment to the “zero-Covid” policy in China could weigh on the outlook for global growth, as well as elongate the process of supply chain normalization, particularly within the freight shipping industry.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	5.5% 12/31/21	8.5% 3/31/22	3.6% 3/31/22
Eurozone	4.6% 12/31/21	7.5% 3/31/22	6.8% 2/28/22
Japan	0.4% 12/31/21	1.3% 3/31/22	2.6% 2/28/22
BRICS Nations	4.0% 12/31/21	3.2% 3/31/22	5.2% 12/31/21
Brazil	1.6% 12/31/21	10.5% 2/28/22	11.2% 2/28/22
Russia	5.0% 12/31/21	9.2% 2/28/22	4.1% 2/28/22
India	5.4% 12/31/21	6.1% 2/28/22	7.6% 3/31/22
China	4.8% 3/31/22	0.9% 2/28/22	5.8% 3/31/22

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

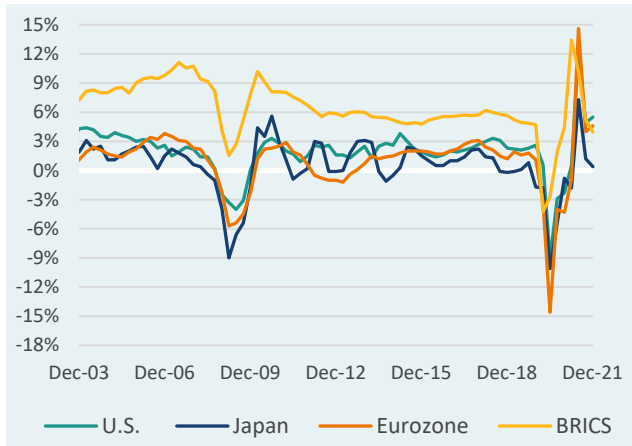
The pace of economic growth has moved further back towards average levels in most economies. This is reflected in quarter-over-quarter GDP growth figures, as these provide a better gauge of *short-term* growth trends. The International Monetary Fund estimates a 4.3% growth rate for calendar year 2021, and then a slowing to 3.1% in 2022. The IMF reports that recovery strength will likely vary considerably by location, due to access to medical care, types of government policy support, and regional cross-country spillovers.

Inflation trends continue to be disparate from country-to-country, as spiking inflation is a problem for a certain subset

of economies. While the United States and Europe are generally contending with a jump in prices and inflation not seen in decades, Japan and China are experiencing very low inflation and muted price pressure.

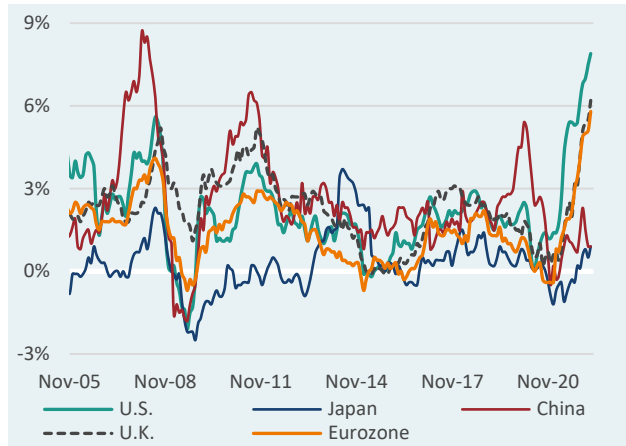
Unemployment has further improved to, or below, pre-pandemic levels. Investors should also note the change in labor market *size*. For example, disenfranchised workers falling out of the workforce or early retirements may not be captured in popular unemployment metrics but can have just as deleterious effects on economic activity as traditional job loss.

REAL GDP GROWTH (YOY)



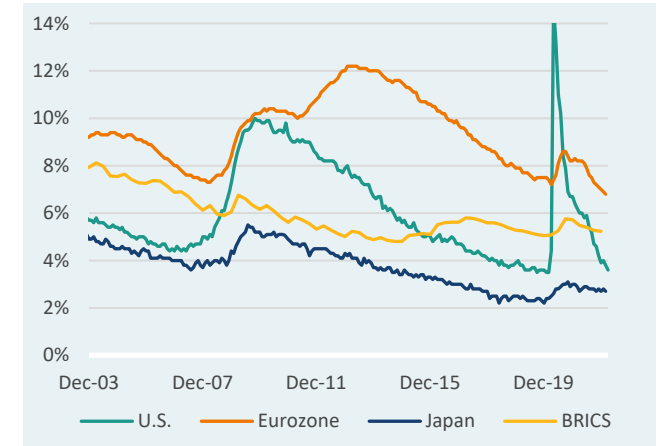
Source: Bloomberg, as of 12/31/21

INFLATION (CPI YOY)



Source: Bloomberg, as of 3/31/22 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 3/31/22 – or most recent release

Assessed control of terrain in Ukraine

3/15/2022 – 12:00PM PST



4/13/2022 – 12:00PM PST



Russian forces have been repelled from Kyiv, and have shifted their focus to consolidating control over area around the separatist-controlled Donetsk and Luhansk Oblasts in Eastern Ukraine

Source: Institute for the Study of War, as of 4/13/22, 12:00 PM PST

Conflict summary and key themes

Russian forces were unsuccessful in their attempt to take Kyiv, and have since withdrawn to refocus efforts on taking the territory around the Donetsk and Luhansk Oblasts in Eastern Ukraine. What have been the drivers of Ukrainian success thus far?

Ukrainian Tactics

- Effective withdrawal into major population centers which have proven easier to defend
- Efficient utilization of anti-aircraft (Stinger) and anti-armor (Javelin) technology
- Judicious use of airpower to disrupt Russian supply lines

Russian Military Incompetence

- Issues transporting adequate oil and fuel supplies to the front lines to support the advance
- Lack of experienced troops (many conscripts have 1-2 years experience and were not expecting to actually be sent into combat)
- Low morale (many troops have surrendered to Ukrainian forces, or have sabotaged their vehicles to slow the advance)
- Poor battlefield intelligence (many Russian troops are wandering into Ukrainian cities with little awareness of those cities, which has left them in an incredibly vulnerable positions and made it easier for Ukrainians to use their anti-armor weaponry)
- NATO estimated that between 7-15K Russian troops have been killed, and another 15-30K have been injured

Western Sanctions

- The Federal Reserve and the European Central Bank officially sanctioned the Central Bank of Russia, an unprecedented strategy for containing a G20 economy
- Key Russian banks have been excluded from SWIFT, disconnecting them from sources of foreign capital and preventing them from sending or receiving money from other financial institutions around the world. This is often considered the “nuclear option” relative to the menu of economic sanctions
- Entire industries have instituted export controls, banning the shipment of key technology input goods such as semiconductors, aircraft, aircraft parts, and oil equipment to Russia

Source: Verus, as of 4/13/22

Fixed income rates & credit

Fixed income environment

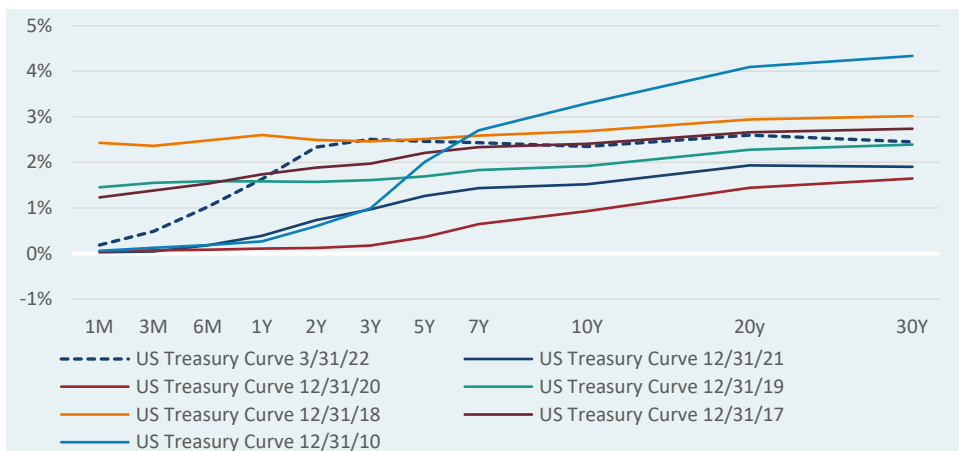
- The 10-year U.S. Treasury yield jumped during Q1, from 1.51% to 2.34%, as the Federal Reserve signaled that more aggressive tightening is ahead.
- Fixed income broadly delivered losses during the first quarter, as interest rates headed higher and credit spreads expanded. Higher duration exposures (Bloomberg U.S. Aggregate -5.9%) underperformed lower duration exposures (Bloomberg U.S. Corporate High Yield -4.8%). This theme was also visible over the past year.
- The U.S. yield curve has flattened, or even inverted, depending on the measure. The 10-year minus 2-year yield spread ended the quarter at exactly +0.00%. Yield curve inversion is generally believed to be a sign of nearing recession, as in most cases recession occurs within 1 to 2 years following the initial inversion.
- History suggests that interest rate rises have been more of an effect of Federal Reserve action rather than solely due to spiking inflation. This likely means that the Fed's plans for moderate tightening will translate to only moderate rate rises. This statement is of course not intended to minimize the pain of interest rate rises on bond portfolios, which has been notable.
- Credit spreads expanded during the quarter, with U.S. high yield spreads moving from 2.8% to 3.3% and U.S. investment grade spreads heading from 0.9% to 1.2%. Spread movement often occurs alongside broader market risk-off environments, which implies that investors should not necessarily assume that these moves were specific to the credit outlook.
- Write-downs of Russian (-100%) and Ukrainian (-51.4%) bonds weighed heavily on hard-currency emerging market debt (JPM EMBI Global Diversified -10.0%).

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(5.9%)	(4.2%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(6.1%)	(4.2%)
U.S. Treasuries (Bloomberg U.S. Treasury)	(5.6%)	(3.7%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	(4.8%)	(0.7%)
Bank Loans (S&P/LSTA Leveraged Loan)	(0.1%)	3.3%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	(6.5%)	(8.5%)
Emerging Market Debt Hard (JPM EMBI Global Diversified)	(10.0%)	(7.4%)
Mortgage-Backed Securities (Bloomberg MBS)	(5.0%)	(4.9%)

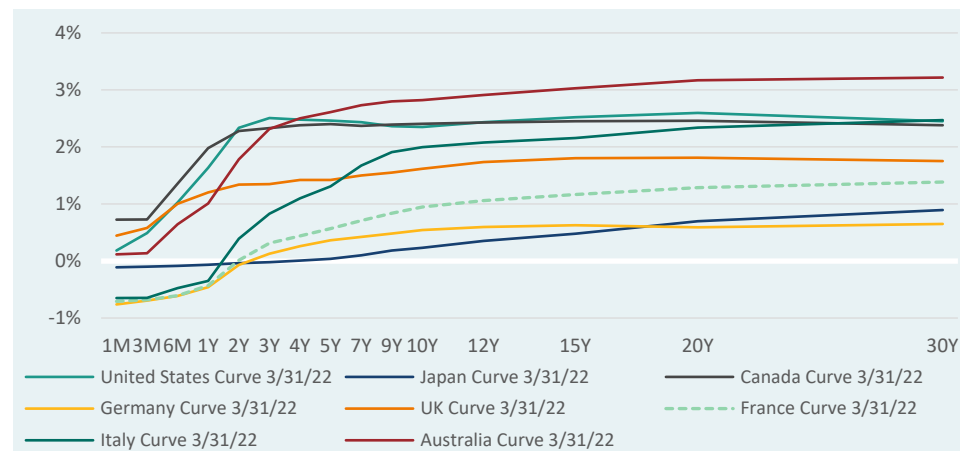
Source: Bloomberg, as of 3/31/22

Yield environment

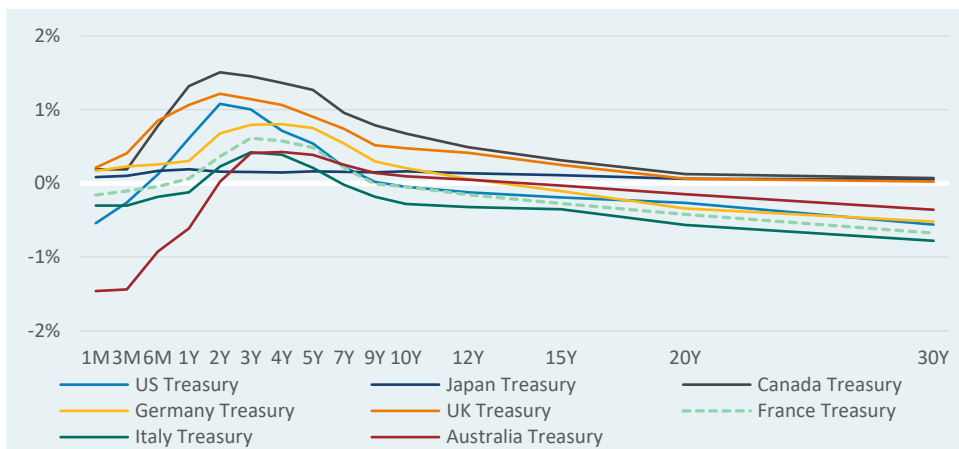
U.S. YIELD CURVE



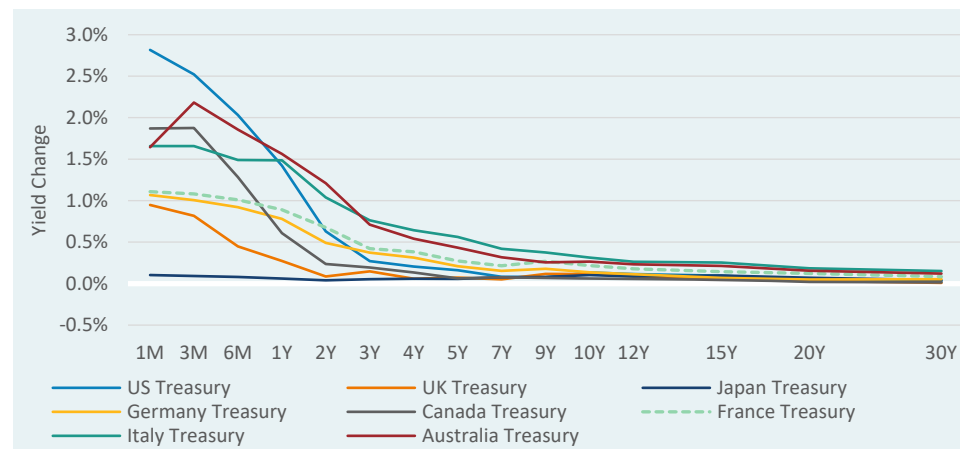
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR

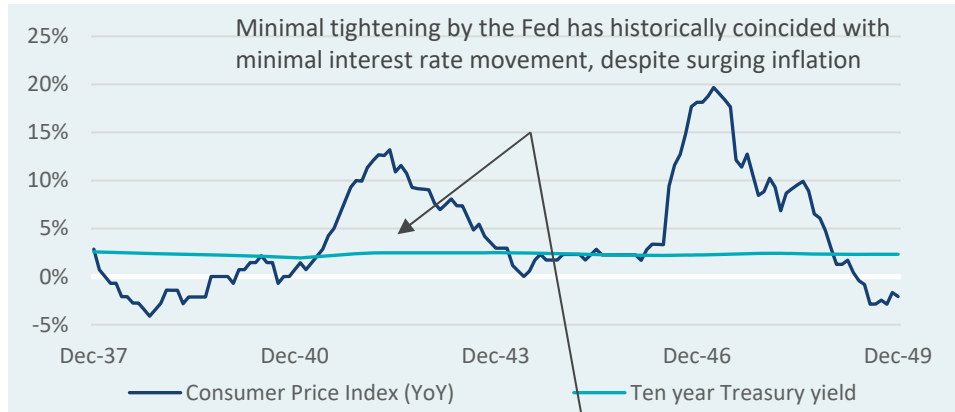


Source: Bloomberg, as of 3/31/22

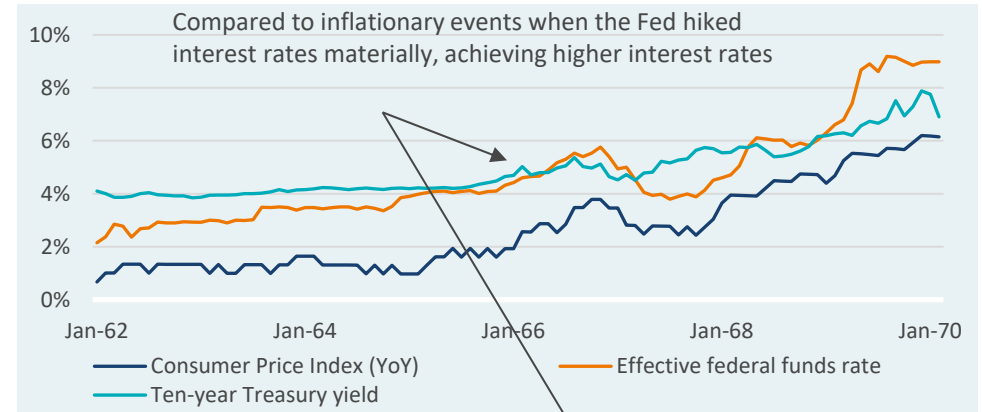
What history tells us about *rising rates*

During historical periods where inflation was rising but the Fed was not hiking rates, interest rate moves were minimal. This may mean that the Federal Reserve's currently moderate interest rate policy suggests only moderate interest rate rises from here.

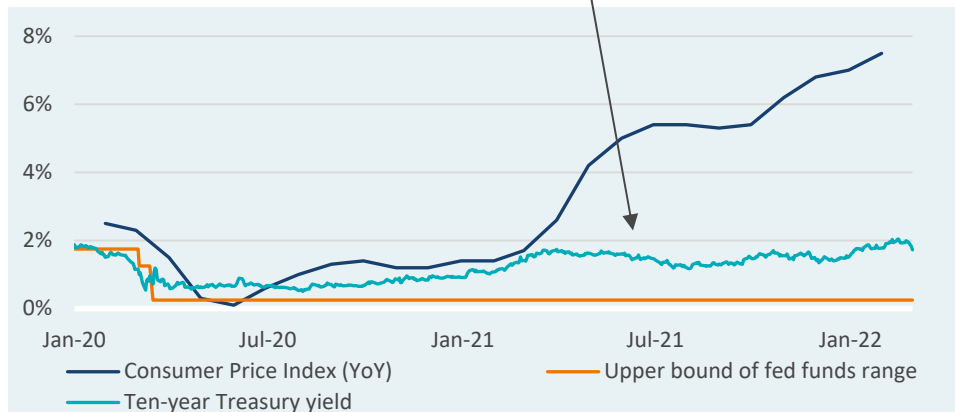
WORLD WAR II



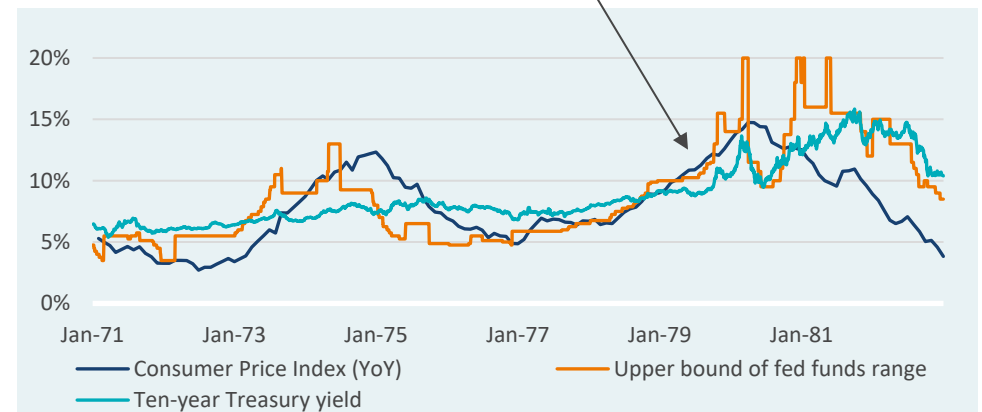
LATE 1960S



COVID-19



1970S OIL SHOCKS



Source: BLS, Federal Reserve, Bloomberg, as of 3/1/22

NOTE: These conclusions were reached via a broader historical inflation and interest rate analysis. For further information about these findings, please reach out to your Verus consultant.

Credit environment

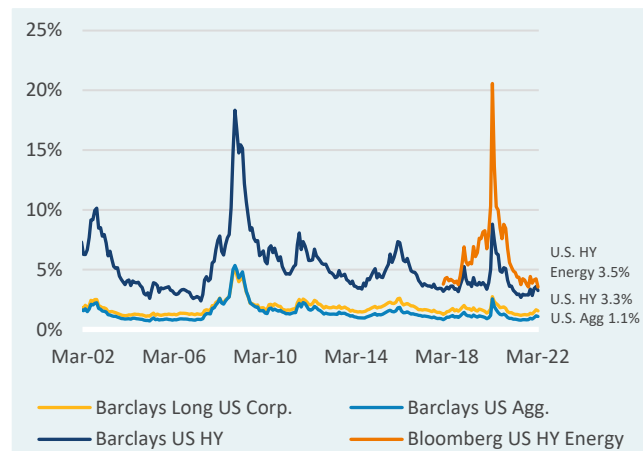
Fixed income broadly delivered losses during the first quarter, as interest rates headed higher and credit spreads expanded. Higher duration exposures such as core fixed income (Bloomberg U.S. Aggregate -5.9%) underperformed lower duration exposures such as U.S. high yield (Bloomberg U.S. Corporate High Yield -4.8%). This effect was also visible over the past year.

Credit spreads expanded moderately during the quarter, with U.S. high yield spreads moving from 2.8% to 3.3% and U.S. investment grade spreads heading upward from 0.9% to 1.2%. Spread movement of this nature often occurs alongside broader market risk-off environments,

which implies investors should not necessarily assume that these moves are specific to a worsening credit outlook.

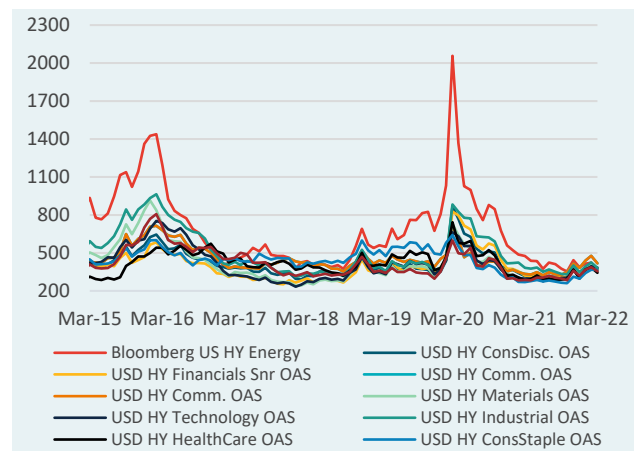
The low yield environment has pushed many investors to search for greater yield, such as through the pursuit of increased private markets exposure and/or taking on riskier holdings. The mild move higher in the yield curve likely helps ease this market environment issue, although high inflation has created new problems for investors. Looking further into the future, following the Fed's planned hiking cycle, markets are expecting interest rates to fall back down, presumably as economic conditions worsen and the Fed begins easing.

SPREADS



Source: Barclays, Bloomberg, as of 3/31/22

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/22

Market	Credit Spread (OAS)	
	3/31/22	3/31/21
Long U.S. Corp	1.6%	1.3%
U.S. Inv Grade Corp	1.2%	0.9%
U.S. High Yield	3.3%	3.1%
U.S. Bank Loans*	4.3%	4.3%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/22

*Discount margin (4-year life)

Default & issuance

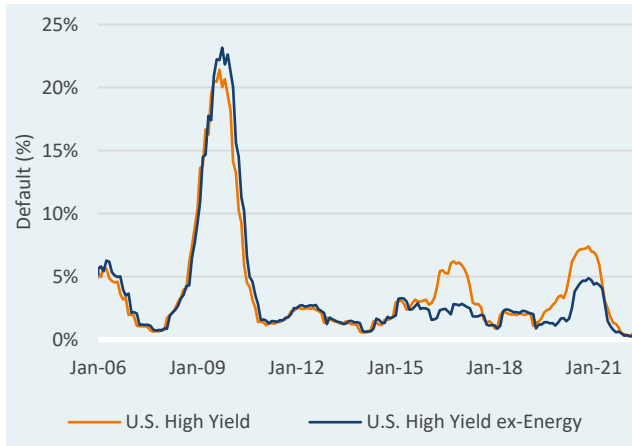
Despite a general increase in volatility and a sell-off across high-yield and leveraged loan markets, default activity remained negligible. Over the first quarter only \$1.6 billion in defaults occurred, marking the third-lowest quarterly total since Q4 2013. Realized recovery rates for high yield bonds over the past 12 months have lingered around 48%, significantly elevated above the 25-year average (39.9%). Loan recovery rates have come in slightly lower than the historical average (58.6% vs. 64.4%).

High-yield and loan default rates ended the quarter at 0.50% and 0.86%, respectively, and are expected to rise slightly through the rest of the year. J.P. Morgan forecasts default rates of 0.75% for high yield bonds and loans in 2022, with those rates picking up to 1.25% in 2023. For context, the long-

term average historical default rates for bonds and loans have been around 3.6% and 3.1%, respectively.

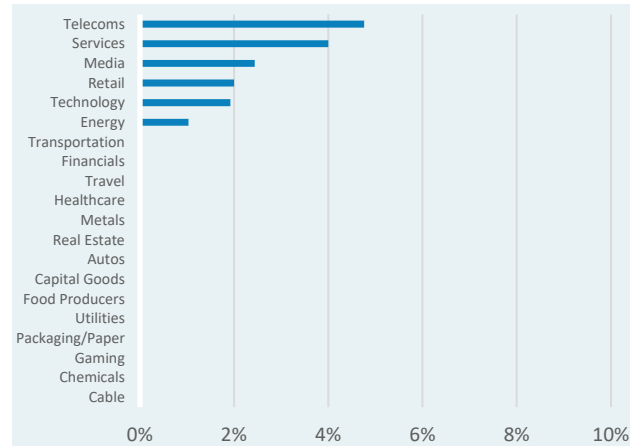
High yield issuance hit its lowest level since March 2020 in February, and then fell further in March, as issuers contended with a sharp increase in global bond yields. High-yield issuance totaled just \$46.5 billion so far this year, down from \$158.8 billion (-71%) over the same period a year ago. Year-to-date loan issuance is also down approximately 60% relative to Q1 2021. Extensive capital raises that occurred in 2021, as well as broadly higher interest rates, have likely contributed to very low financing activity so far this year.

HY DEFAULT RATE (ROLLING 1-YEAR)



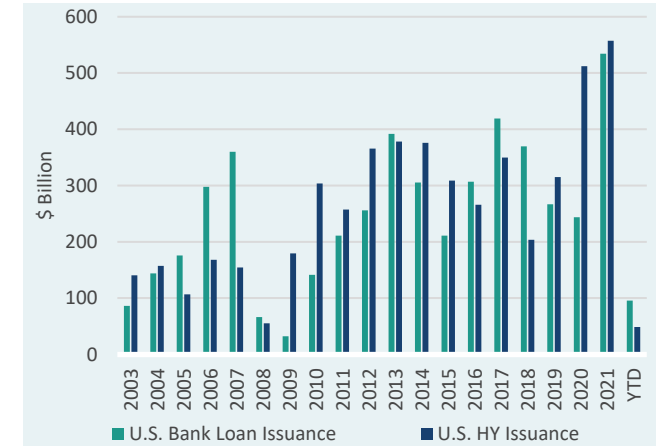
Source: BofA Merrill Lynch, as of 3/31/22

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



Source: BofA Merrill Lynch, as of 3/31/22 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 3/31/22

Alternative credit

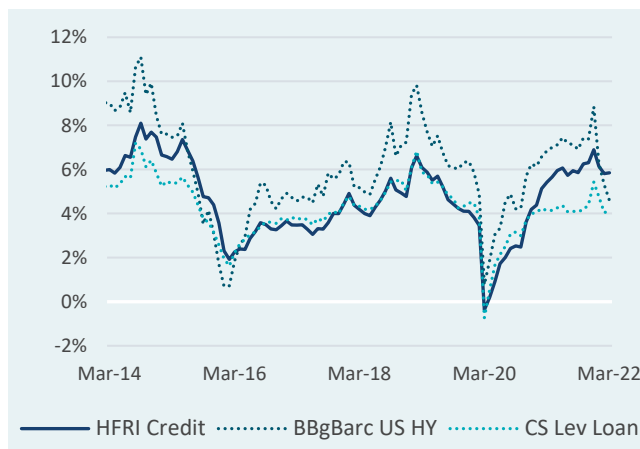
Credit hedge fund strategies were a bright spot in Q1 relative to fixed income markets. The HFRI Credit Index, which typically tracks between high yield and leveraged loan indices, gained 0.2% during the quarter despite widening credit spreads and rising rates which detracted from the performance of traditional credit.

Looking more closely at hedge fund credit, distressed/restructuring strategies, as well as asset-backed, were strong performers during the quarter

and have outperformed credit markets over the past year.

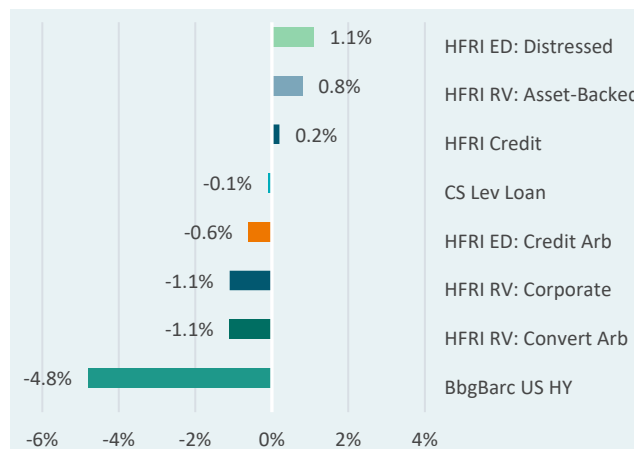
Distressed investors have benefitted from out-of-favor, deep value assets rebounding over the prior 18 months. Asset-backed strategies have been able to limit duration exposure while finding new ways to maintain access to higher yielding securitized instruments, such as by expanding into origination/securitization or moving further out on the liquidity spectrum.

3 YEAR ROLLING RETURN



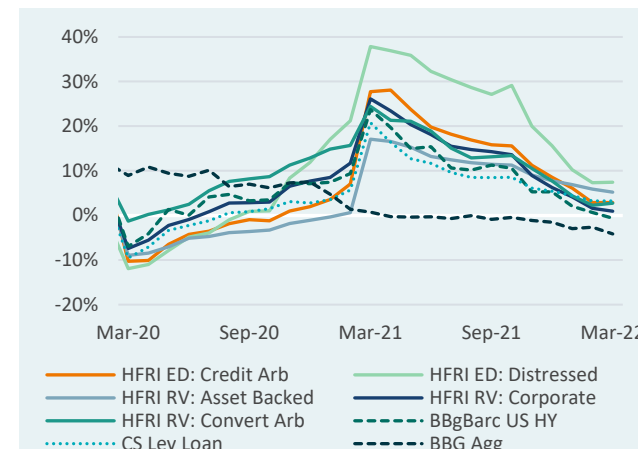
Source: HFRI, as of 3/31/22

1Q 2022 QUARTERLY RETURN



Source: HFRI, as of 3/31/22

1 YEAR ROLLING RETURN



Source: HFRI, as of 3/31/22

Equity

Equity environment

- U.S. equities held up marginally better during the first quarter (S&P 500 -4.6%), followed by international developed equities (MSCI EAFE -5.9%) and emerging market equities (MSCI Emerging Markets -7.0%), on an unhedged currency basis.
- Currency movement during the quarter detracted from the performance of investors who do not hedge foreign currency exposure. Currency movements in international developed markets generated losses of -2.4% (MSCI EAFE).
- Value stocks outperformed Growth stocks by a substantial margin during Q1 (Russell 1000 Value -0.7% vs Russell 1000 Growth -9.0%) as Growth stocks fell sharply, reversing the gains delivered in the second half of 2021. Large capitalization stocks beat small capitalization stocks by a narrower margin (Russell 1000 -5.1%, Russell 2000 -7.5%).
- The Cboe VIX Index spiked mid-quarter during Russia's invasion of Ukraine, as fears of potential broader global conflict, food shortages, and higher inflation roiled markets. The index fell to 20 to end the quarter, moderately above the longer-term average. Realized volatility over the past year was more muted as the pandemic has moved into the rearview mirror.
- Emerging market equities appear attractively priced, as EM equities are in the 8th percentile of cheapness relative to U.S. equities, looking back to 2003. Much of this valuation difference is due to Chinese markets, which have sold off massively over concerns around possible sanctions due to relations with Russia, regulatory crackdowns on the real estate and internet sectors, and major city lockdowns due to COVID-19.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	(4.6%)		15.6%	
U.S. Small Cap (Russell 2000)	(7.5%)		(5.8%)	
U.S. Equity (Russell 3000)	(5.3%)		11.9%	
U.S. Large Value (Russell 1000 Value)	(0.7%)		11.7%	
US Large Growth (Russell 1000 Growth)	(9.0%)		15.0%	
Global Equity (MSCI ACWI)	(5.4%)	(4.8%)	7.3%	8.8%
International Large (MSCI EAFE)	(5.9%)	(3.5%)	1.2%	7.1%
Eurozone (Euro Stoxx 50)	(10.9%)	(8.7%)	(3.9%)	2.7%
U.K. (FTSE 100)	0.0%	2.8%	10.7%	16.4%
Japan (NIKKEI 225)	(7.8%)	(2.6%)	(11.9%)	(2.9%)
Emerging Markets (MSCI Emerging Markets)	(7.0%)	(7.0%)	(11.4%)	(11.5%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/22

Domestic equity

U.S. equities fell during the first quarter (S&P 500 -4.6%), though less so than other global markets (MSCI ACWI ex-USA -5.4%). Within the U.S. market, sector dispersion was very wide, with large-cap energy companies advancing 39.0% on spiking energy prices, and large-cap technology stocks (-8.4%) and consumer discretionary (-9.0%) selling off on concerns that higher inflation (influenced by spiking energy prices) might result in a much more hawkish outlook for Fed policy and interest rates. Energy sector earnings are expected to bolster overall index level earnings on a year-on-year basis in Q1, primarily due to the average price of oil rising from \$58.14 to \$95.01. If the energy sector were excluded, Q1 year-over-year earnings growth would be expected at -0.6%, instead of +5.1%.

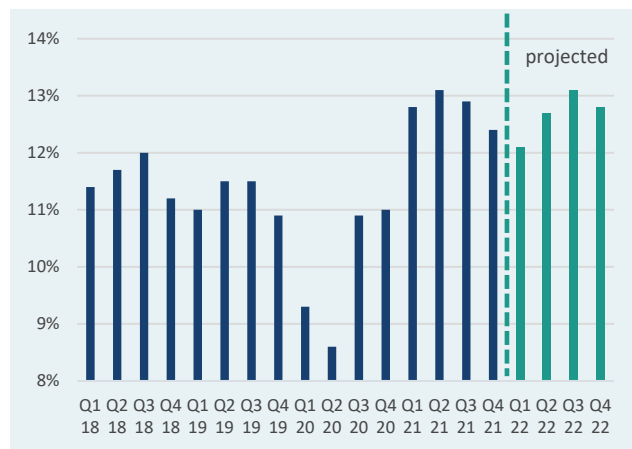
Companies continue to contend with headwinds from supply chain disruptions, surging commodity prices which were given a leg higher by the conflict in Ukraine, ongoing labor shortages and higher prices in general. In Q4 of 2021, 365 S&P 500 companies mentioned “inflation” on earnings calls, which was the highest number in at least 10 years, per FactSet. Under this backdrop, companies are raising their prices to help offset higher costs, and the S&P 500 Index is expected to report a fifth consecutive quarter of revenue growth north of 10% in Q1. Interestingly, analysts expect net profit margins will be higher through the rest of the year than they are expected to be in Q1 (+12.1%).

S&P 500 PRICE INDEX



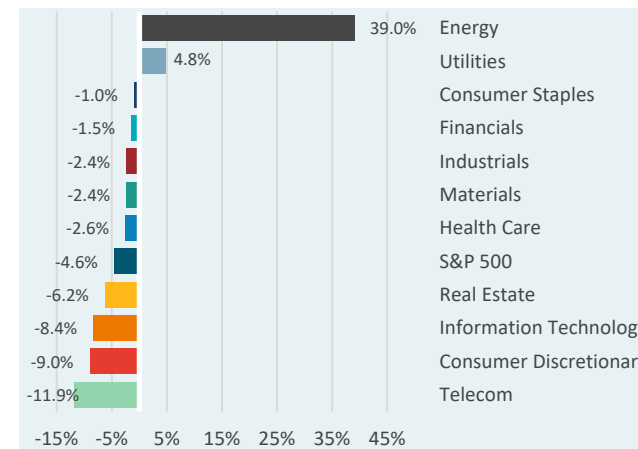
Source: Standard & Poor's, as of 3/31/22

NET PROFIT MARGIN – S&P 500 INDEX



Source: FactSet, as of 4/14/22

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/22

Domestic equity size & style

Value stocks outperformed Growth stocks by a substantial margin during the first quarter (Russell 1000 Value -0.7% vs Russell 1000 Growth -9.0%) as Growth stocks fell sharply, reversing the gains delivered in the second half of 2021. Large capitalization stocks outperformed small capitalization stocks by a narrower margin (Russell 1000 -5.1%, Russell 2000 -7.5%).

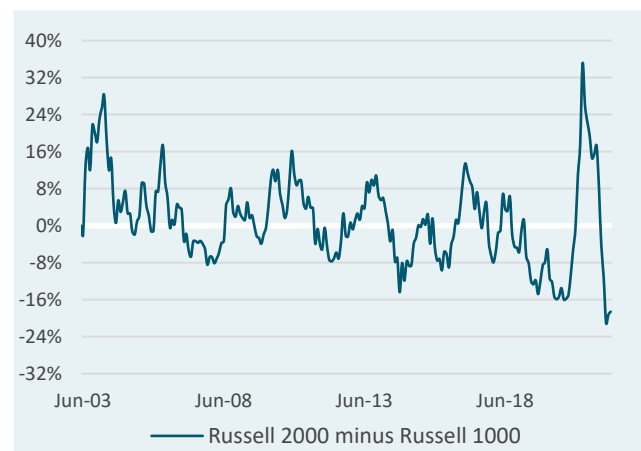
Energy stocks dramatically outperformed during Q1, as global demand has outpaced energy production for quite some time, pushing prices higher. Additionally, Russia's invasion of Ukraine led to widespread fears of an energy supply crunch, which temporarily sent oil to \$123/bbl—the highest level since 2008. Attractive conditions for energy producers coincided with outperformance of

Utilities, Financials, Industrials, and Materials sectors, which tend to have a Value tilt. During Q1, the Information Technology sector, which is tilted towards Growth, underperformed the index.

Further tightening of Fed policy and interest rate hikes will likely impact Value and Growth stock behavior, though these relationships are complex. For example, rate rises that result in a flattening of the yield curve may not be as boosting to financial sector performance, since banks profit from interest curve steepening (banks lend at the long end of the curve and borrow at the short end). The nature of the environment in which interest rates rise will contribute to future style factor behavior.

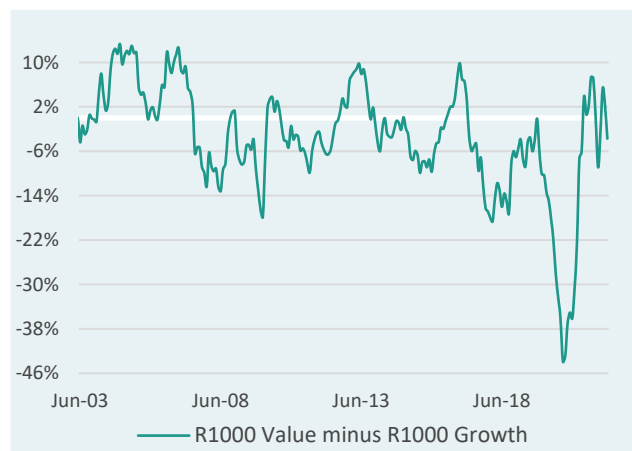
Value strongly outperformed during Q1

SMALL CAP VS LARGE CAP (YOY)



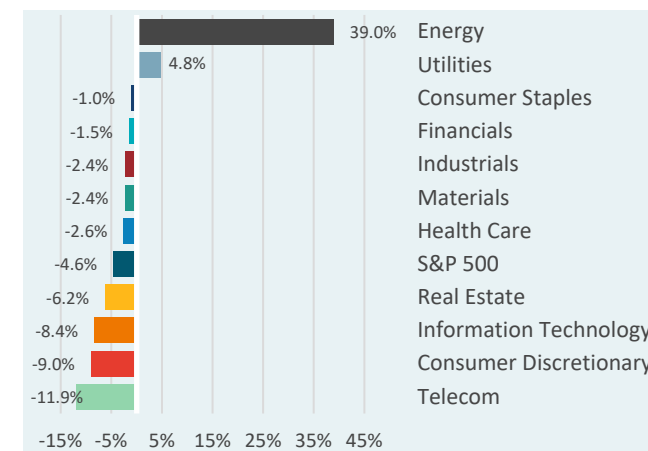
Source: FTSE, as of 3/31/22

VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/22

Q1 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 3/31/22

International developed equity

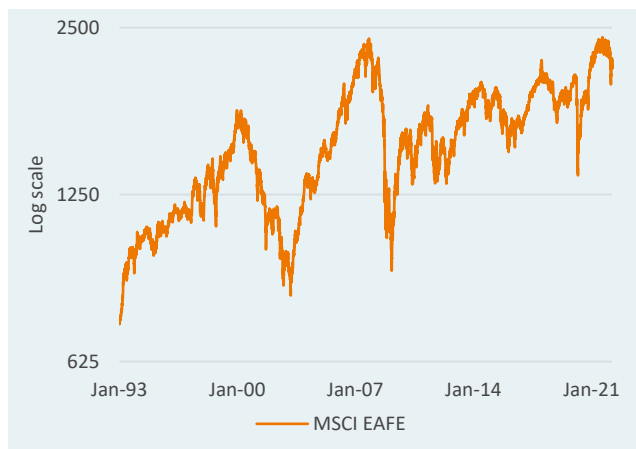
International developed equities fell -5.9% during the quarter, while U.S. equities performed slightly better (S&P 500 -4.6%) and emerging market equities trailed (MSCI Emerging Markets -7.0%), on an unhedged currency basis. Currency movement during the quarter detracted from the performance of investors who do not hedge foreign currency exposure. Currency movements in international developed markets generated losses of -2.4% (MSCI EAFE).

Eurozone and Japanese equities were among the worst performers during the quarter (Euro Stoxx 50 -10.9%, Nikkei 225 -7.8%), though much of these losses were driven by currency market movement. U.K. equities were among the top

performers at 1.8% (MSCI UK). Investors with a currency hedging program would have outperformed unhedged investors by roughly +2.2% in Eurozone equities, +5.2% in Japanese equities, and +2.8% in U.K. equities.

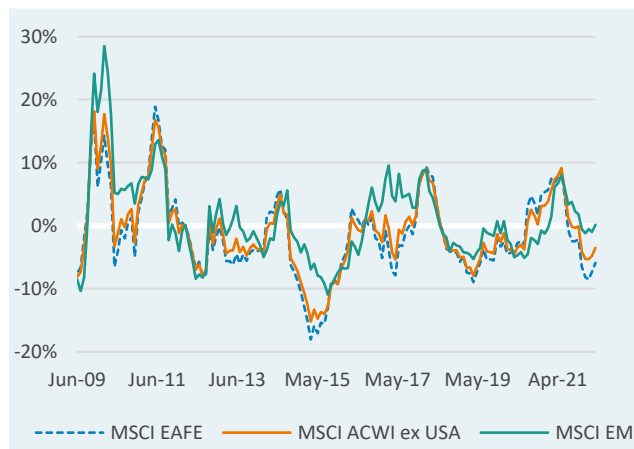
German equities (MSCI Germany -13.1%) detracted significantly from international developed equity returns, as investors expressed concern over the country's large exposure to Russian energy imports. Producer prices in Germany rose 25.9% year-over-year in February, partly due to surging gas prices. It is not yet known the degree to which businesses will be able to pass through higher prices to customers. Inflation in Germany rose to 7.3%—the highest level in decades.

INTERNATIONAL DEVELOPED EQUITY



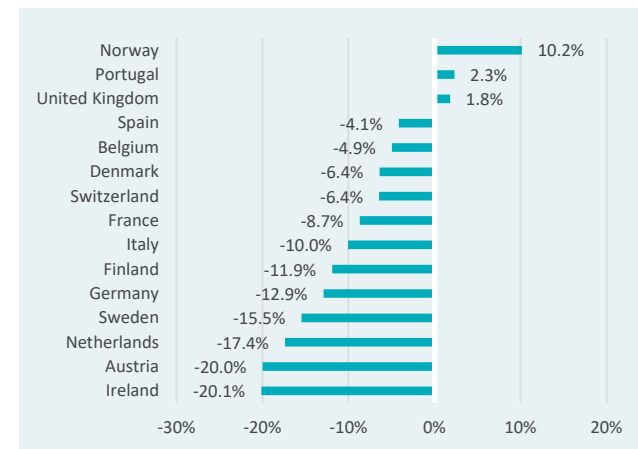
Source: MSCI, as of 3/31/22

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/22

EUROPEAN EQUITY PERFORMANCE – Q1 2022



Source: MSCI, Bloomberg, as of 3/31/22. Returns in USD terms.

Emerging market equity

Emerging market equities delivered losses (MSCI EM -7.0%) on an unhedged currency basis, lagging developed markets during the quarter. Latin American markets substantially outperformed Asian markets (MSCI EM Latin America +27.3%, MSCI EM Asia -8.7%).

Chinese equities have seen large losses over the last year. The Nasdaq Golden Dragon China Index recently drew down further than its maximum loss during the Global Financial Crisis. Concerns over imposed sanctions due to relations with Russia, regulatory crackdowns on the real estate and internet sectors, and rising COVID-19 cases resulting in major city lockdowns

have provided the backdrop to the massive sell-off in Chinese equities. More supportive government policies appear to be coming down the pike, which may contribute to a turnaround.

Emerging market equities are attractively priced relative to developed markets. The valuation divide is now extremely large. On a price-to-earnings basis, emerging market equities are in the 8th percentile cheap relative to U.S. equities going back to 2003, meaning they have been cheaper just 7% of the time since 2003. Emerging market equities have also recently fallen back to more average valuations relative to international developed markets.

EMERGING MARKET EQUITY



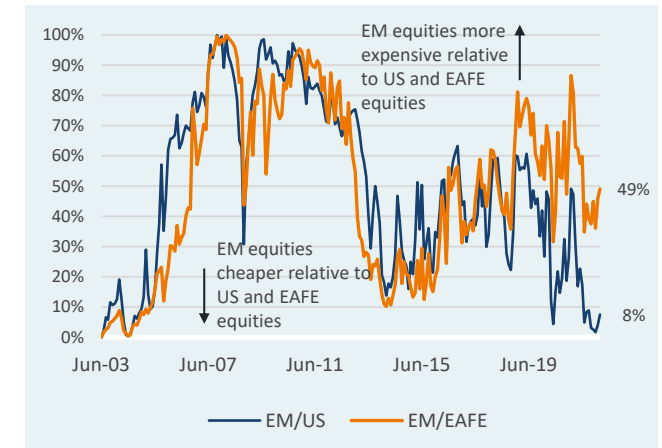
Source: MSCI, as of 12/31/21

CHINESE EQUITY DRAWDOWNS



Source: MSCI, Nasdaq, as of 3/22/22

VALUATION PERCENTILES



Source: MSCI, forward 12m price multiples, as of 2/28/22

Equity valuations

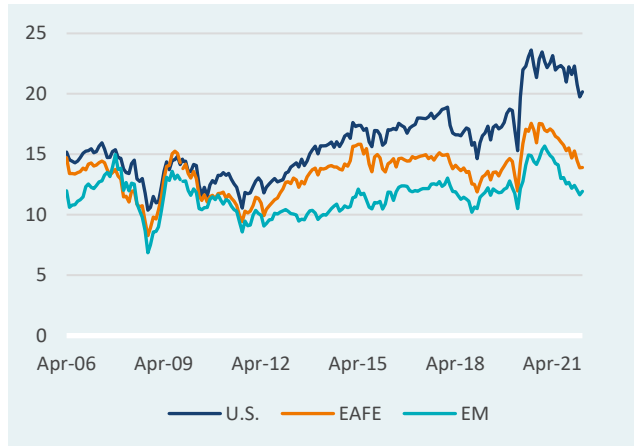
Valuations drifted lower over the first quarter as earnings expectations remained relatively steady and prices moderated. The forward 12-month P/E ratio for the S&P 500 closed the quarter at 19.0—slightly above the five-year average. Forward multiples have fallen back to pre-pandemic levels for most international developed and emerging equity markets.

In the domestic market, analysts appear optimistic about the outlook. If earnings over the next 12 months meet expectations and valuations hold at current levels, the S&P 500 Price Index is forecast to rise 18.5% to around an index level of 5250.

U.S. equity forward P/E valuations remain at historically stretched levels relative to international developed and emerging market equities. U.S. forward price multiples closed the quarter in the 99th percentile relative to EAFE, and in the 92nd percentile relative to EM, using monthly data going back to 2003. The strength of U.S. institutions, the resilience of the U.S. consumer, the United States' energy independence, as well its distance from ongoing conflict in Ukraine may help to tilt international investor flows toward U.S. equities, likely supporting a healthy U.S. equity valuation premium.

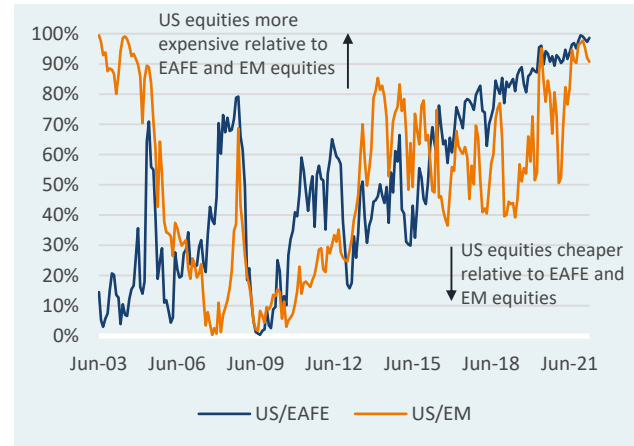
Most equity valuations have moved back towards normal levels, though U.S. prices remain rich

FORWARD P/E RATIOS



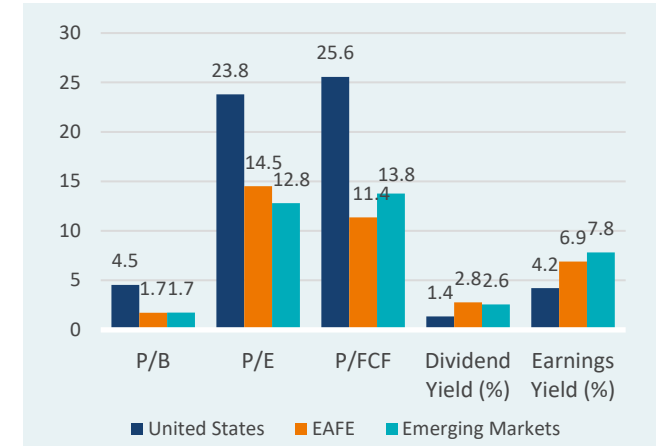
Source: MSCI, 12m forward P/E, as of 3/31/22

RELATIVE FORWARD PRICE MULTIPLES – VALUATION PERCENTILE ANALYSIS



Source: Bloomberg, MSCI, as of 3/31/22

VALUATION METRICS (3-MONTH AVERAGE)



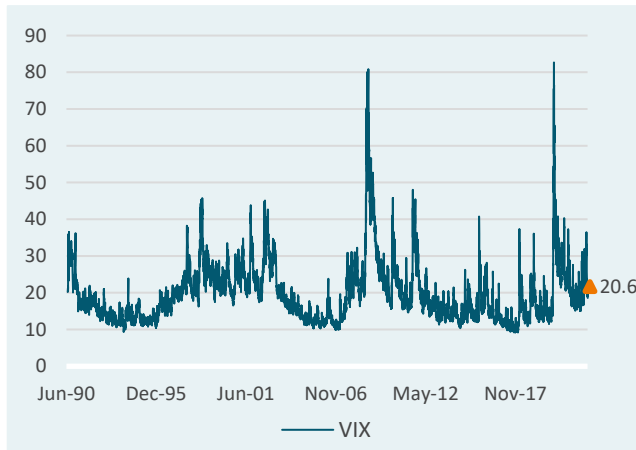
Source: Bloomberg, MSCI as of 3/31/22 - trailing P/E

Equity volatility

The Cboe VIX Index spiked mid-quarter during Russia’s invasion of Ukraine, as fears of potential global conflict, food shortages, and higher inflation roiled markets. The index fell to 20 to end the quarter—moderately above the longer-term average. Realized volatility over the past year was muted as the pandemic and its associated pain has moved into the rearview mirror. U.S. markets were the most volatile among developed and emerging markets, which has been rare historically. Implied volatility for close-to-the-money put and call options on U.S. large-cap stocks appears to be reflecting fairly-neutral risk positioning. In short, the price of downside protection relative to upside participation is around average.

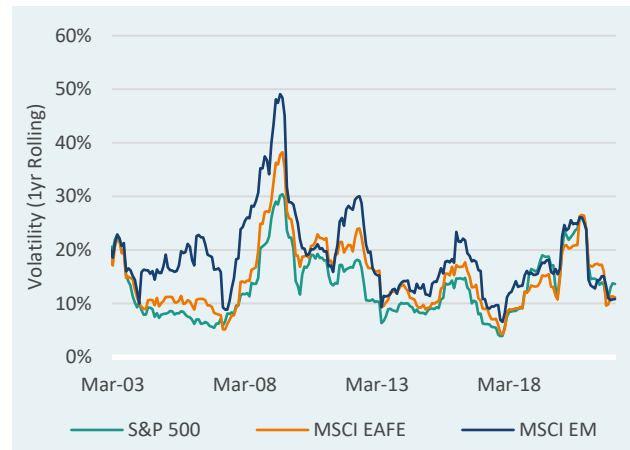
While realized volatility in emerging market equities was fairly low relative to history in Q1, weakness in tech shares and concerns over potential sanctions resulted in material selloffs in highly-tech-weighted regional markets. In U.S. dollar terms, the MSCI China Index closed the quarter -44% below previous records, and Russian stocks were marked down -100%. Moving forward, the exclusion of Russian equities from MSCI’s Emerging Market benchmark will result in an even higher weighting for the Asian segment of the EM complex, which tends to be more growth-tilted and more volatile.

U.S. IMPLIED VOLATILITY (VIX)



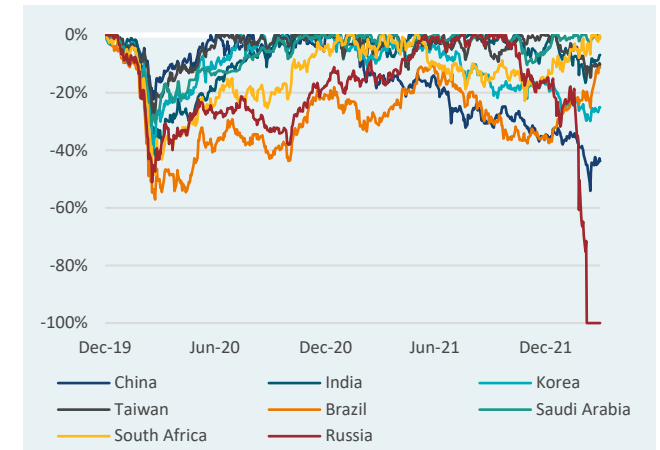
Source: Cboe, as of 3/31/22

REALIZED VOLATILITY



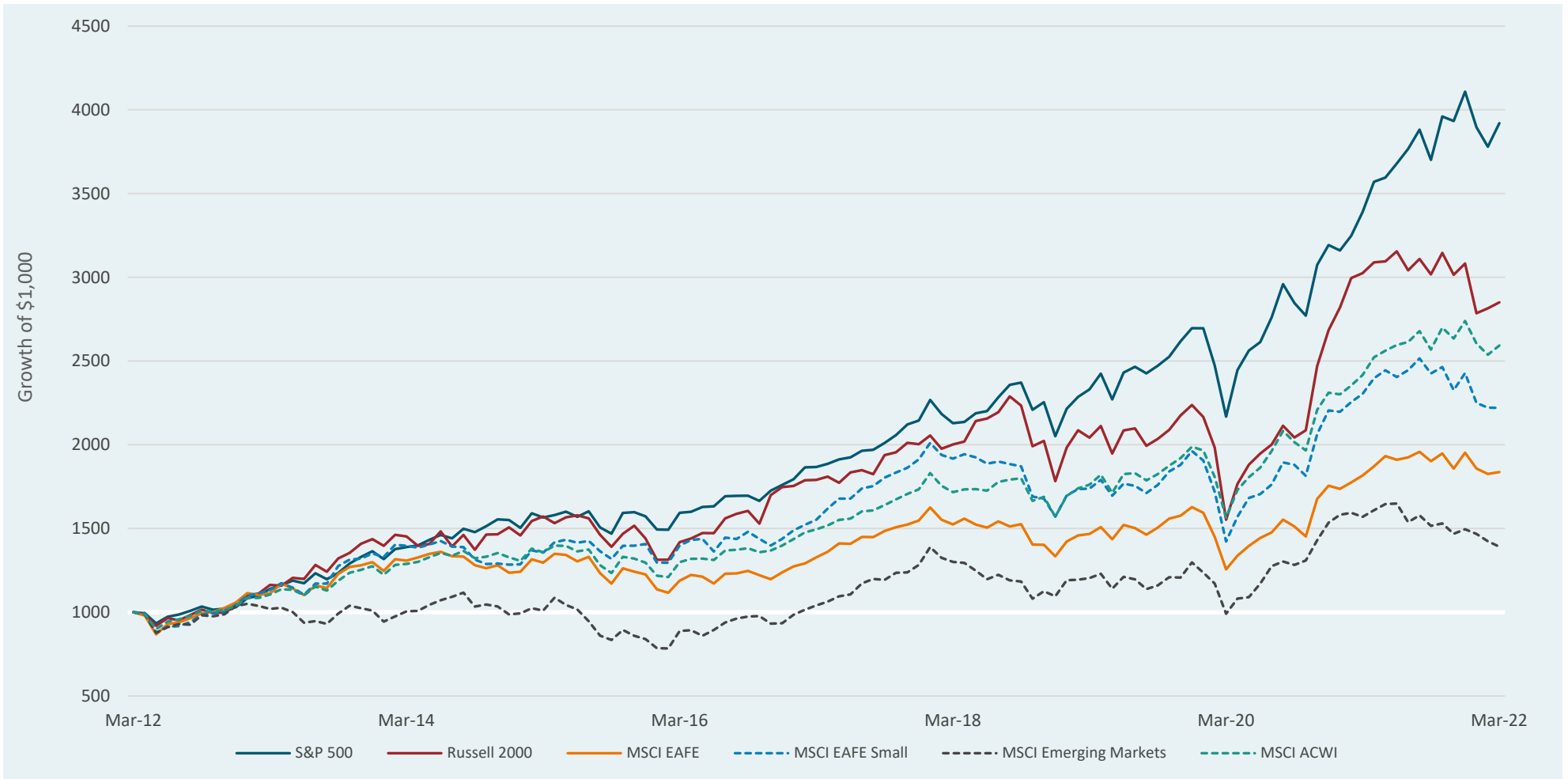
Source: Standard & Poor’s, MSCI, as of 3/31/22

EM EQUITY – MAX DRAWDOWNS FROM PEAKS



Source: MSCI, Bloomberg, as of 3/31/22, returns in USD

Long-term equity performance



Source: Morningstar, as of 3/31/22

Other assets

Commodities

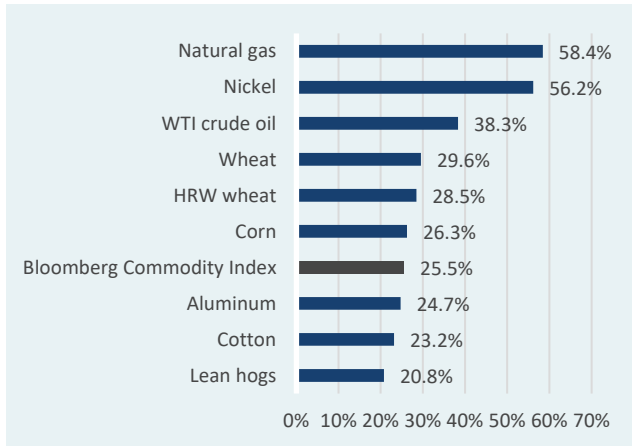
Commodities were by far the best-performing major asset class in Q1 2022 (Bloomberg Commodity Index +25.5%), with every major sector contributing positively to overall index returns. The Energy (+47.9%) and Grains (+24.9%) sectors drove the advance, as investors speculated on what war in the Ukraine and the economic ostracization of Russia might mean for energy access and wheat and corn production.

Industrial metals (+22.7%) also rallied substantially, influenced by clean energy transition efforts that have ramped up in recent months. A short squeeze in nickel (+56.2%) was

additive to performance.

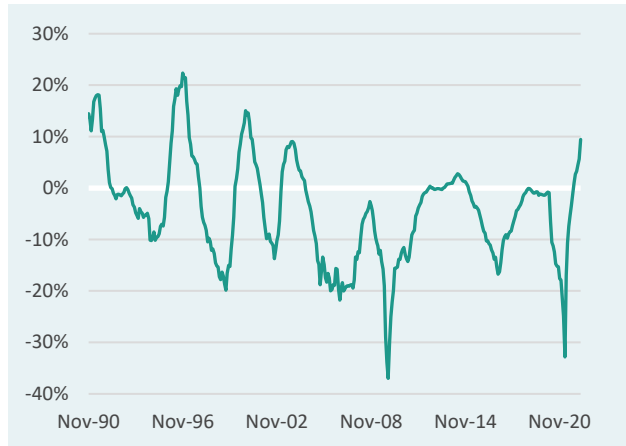
Improving roll yield has been a huge component of the outsized total return offered by commodities, adding +9.4% to performance over the last twelve months. Massive increases in spot prices relative to further-dated contracts pushed many commodity futures curves into relatively steep backwardation over the near-term, allowing investors to roll their contracts for a profit. In order for this roll yield to be sustainable, spot prices will need to stay elevated relative to futures pricing.

BLOOMBERG COMMODITY INDEX – Q1 2022



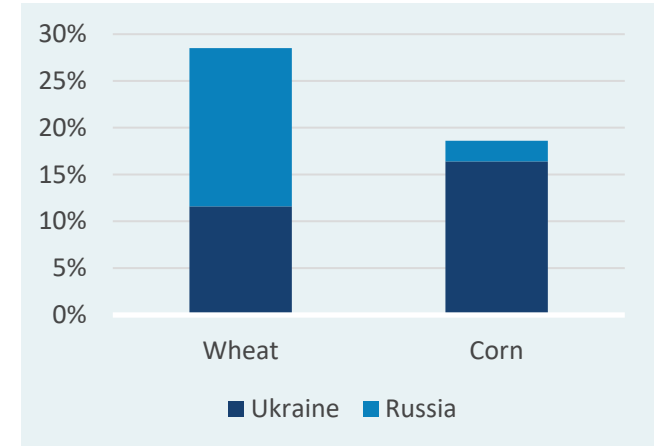
Source: Bloomberg, as of 3/31/22

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



Source: Standard & Poor's, Bloomberg, as of 3/31/22

SHARE OF GLOBAL GRAIN EXPORTS



Source: Food and Agriculture Organization of the United Nations

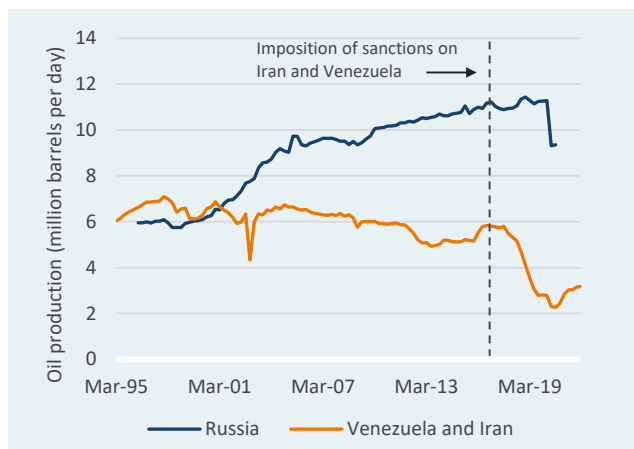
How can the Russian oil gap be filled?

Russia produced approximately 11 million barrels of oil per day prior the onset of Covid-19 and the recent economic sanctions. Since then, many countries have imposed embargoes on Russian oil, and higher prices have incentivized policymakers to reopen discussions with other producers, including Venezuela and Iran.

Prior to the imposition of sanctions on Venezuelan and Iranian oil in January 2019 and June 2019, respectively, the two countries were producing around 5.8 million barrels per day. Today, they are producing around 3.2 million barrels per day. Even if the two countries were able to ramp up production back to pre-sanction levels, which would be an impressive feat both diplomatically and physically, that would only replace roughly a quarter of Russian output.

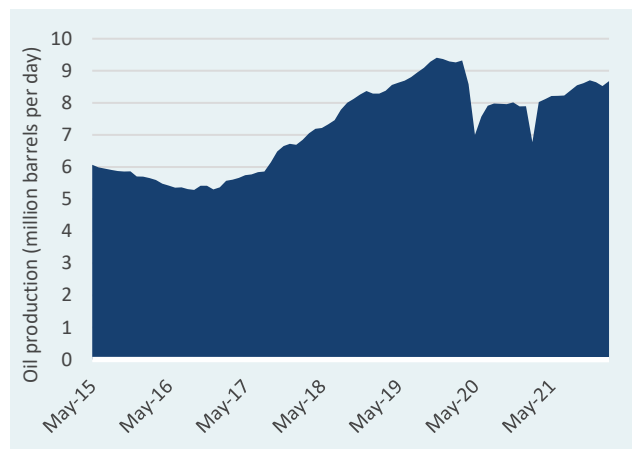
Increased energy production is needed to alleviate high prices, but this conflicts with the West's climate priorities. U.S. government officials have given mixed signals to oil producers. For example, the administration announced in April that it will resume its sale of leases for drilling on federal land, though 80% less land will be leased relative to the footprint that had been originally evaluated. Furthermore, required royalties for energy extraction were raised from 12.5% to 18.75%. In the U.S., many shale firms have opted to increase production on existing land, but have been slow to pursue new projects—partly due to supply chain issues (shortages in labor, truck drivers, and frack sand) and also due to prioritization of profits over growth. This newfound conservatism is reflected by recent comments from Scott Sheffield, CEO of Pioneer Natural Resources Co., who said his company, the largest oil producer in the Permian Basin, is not currently considering raising its long-term goal of increasing oil production by 0-5% per year. As shown on the bottom right, Pioneer's goal this year is to return 80% of cash flow to investors.

WHAT ABOUT VENEZUELA AND IRAN?



Source: Bloomberg News, as of 2/28/22

TOTAL U.S. SHALE PRODUCTION



Source: Rystad Energy, as of 4/30/22

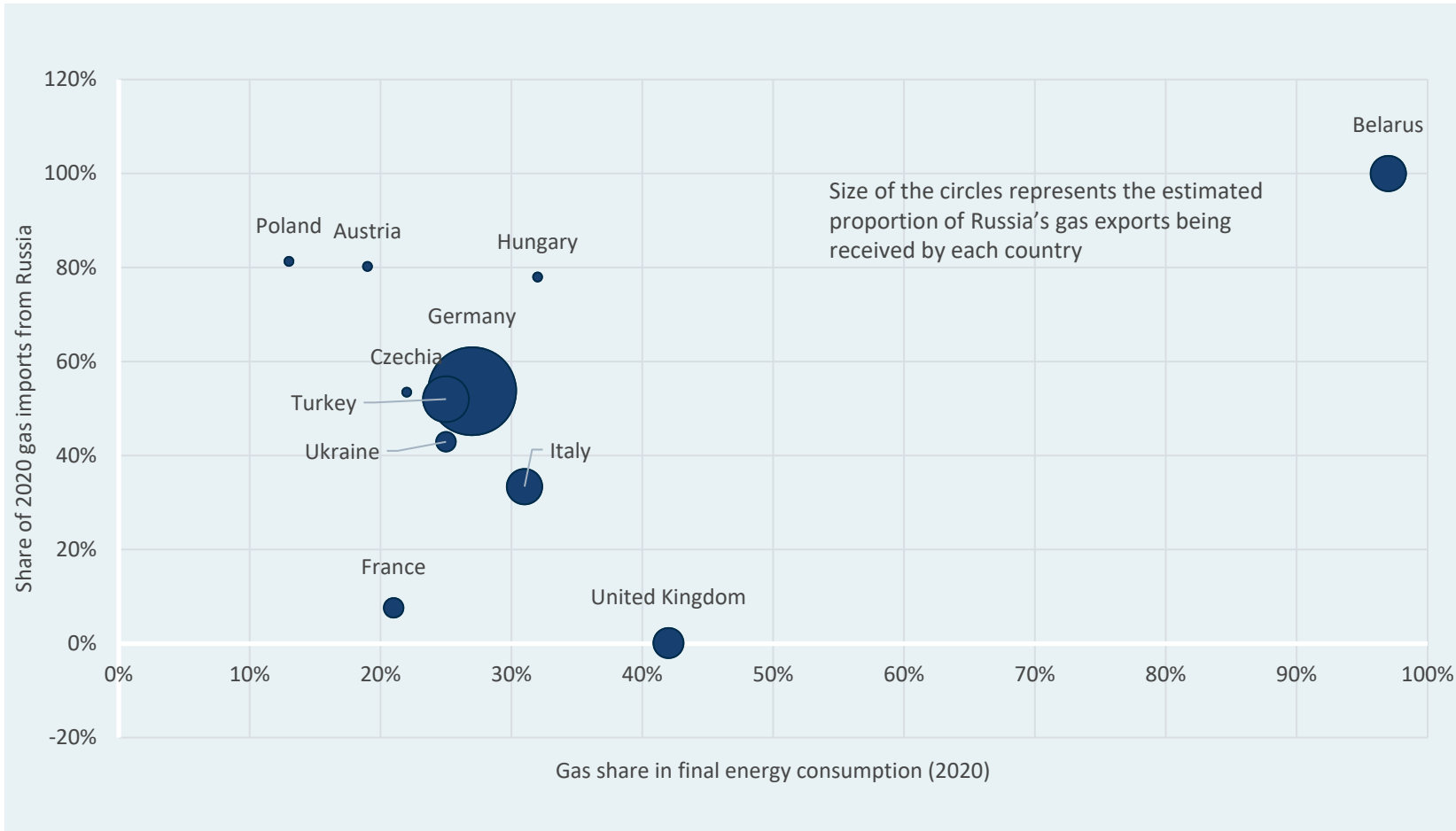
SHALE PRODUCERS' FOCUS ON DIVIDENDS



Source: Pioneer Natural Resources, Q4 2021 Earnings Presentation

Russian energy embargoes

RUSSIAN GAS EXPOSURE VS. GAS DEPENDENCE



Most countries which have banned Russian oil and gas do not rely heavily on Russia for their energy resources

Source: Bruegel, as of 2/28/22

Grain supply outlook

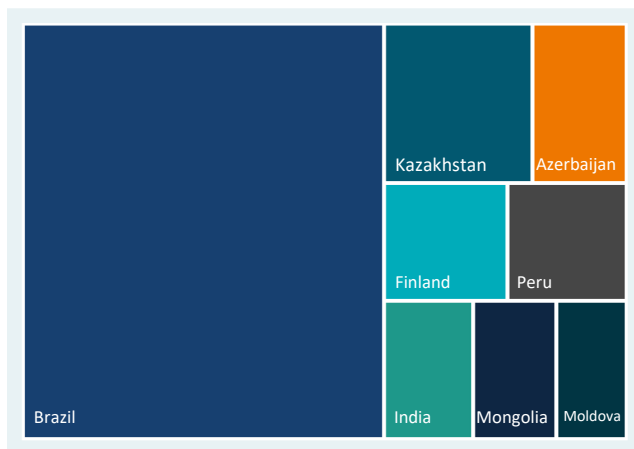
Russia, the world's largest fertilizer exporter, imposed a two-month ban on ammonium nitrate exports, which threatens the availability of fertilizer supplies, especially to South America, as the region enters a critical point in the growing season. Although the United States is not a direct buyer of Russian ammonium nitrate, the export ban is likely to result in higher prices for U.S. farmers.

The outlook for South America's soybean crops has deteriorated as a second year of drought, brought on by La Nina, drags down yield and production forecasts. *Gro*

Intelligence's yield forecast model indicates a production decline which would take soybean stocks to the tightest levels since 2015/2016. The outlook for corn is less dire, as planted acreage is up approximately 5% in Brazil this year, though falling crop yields could offset greater acreage.

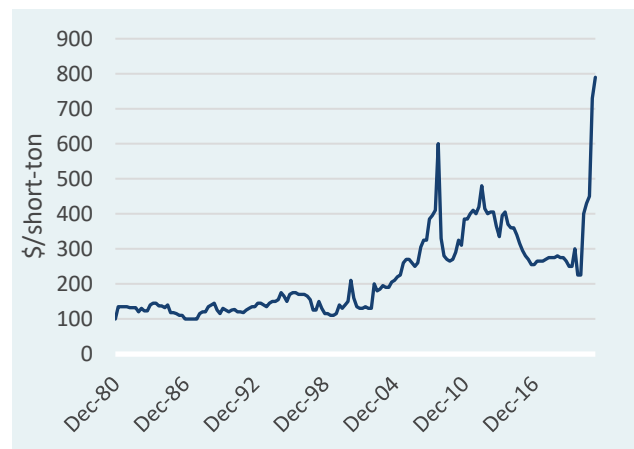
China, the world's largest grain consumer is also facing significant food shortages. Recently, the country's agriculture minister stated that the condition of the winter wheat crop was the "worst in history", and that yields are expected to fall around 20%.

MAJOR DESTINATIONS FOR RUSSIAN AMMONIUM NITRATE EXPORTS (VOLUME)



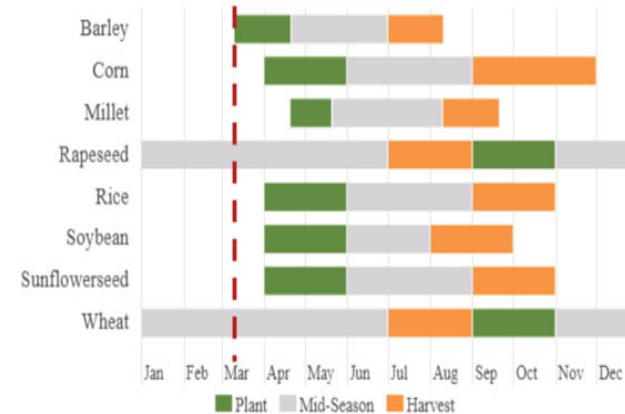
Source: COMTRADE, *Gro Intelligence*, as of 12/31/20

U.S. CORNBELT AMMONIUM NITRATE PRICES



Source: Bloomberg, as of 3/23/22

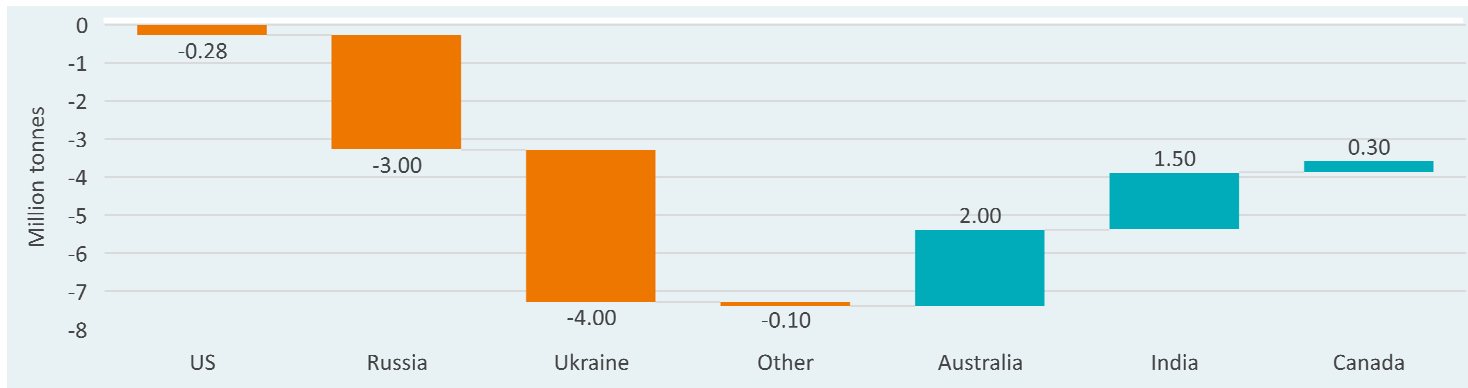
UKRAINE – CROP CALENDAR



Source: USDA, Ukraine Ministry of Agriculture

Where will incremental supply come from?

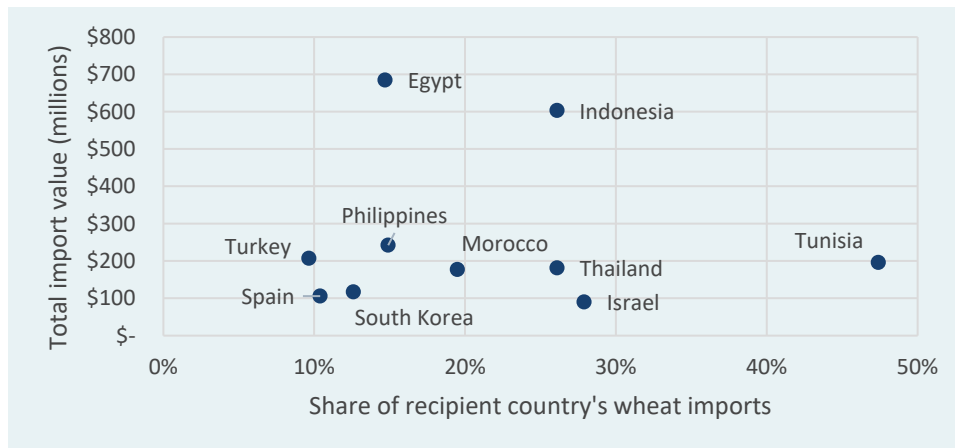
FEBRUARY TO MARCH CHANGE IN 2022 GLOBAL WHEAT EXPORTS



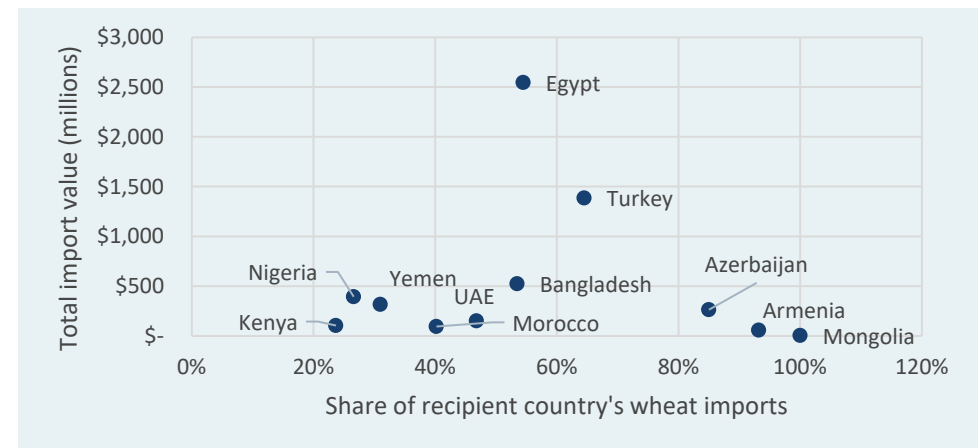
Global production is expected to drop 3.5 million metric tons in 2022, as substitution from farmers in Australia, India, and Canada is not expected to be able to fully offset production declines in the Black Sea region

Source: USDA March 2022 World Agricultural Supply and Demand Estimates. Export change based on revised projections from the USDA World Agricultural Supply and Demand Estimates

UKRAINIAN GLOBAL WHEAT EXPORTS



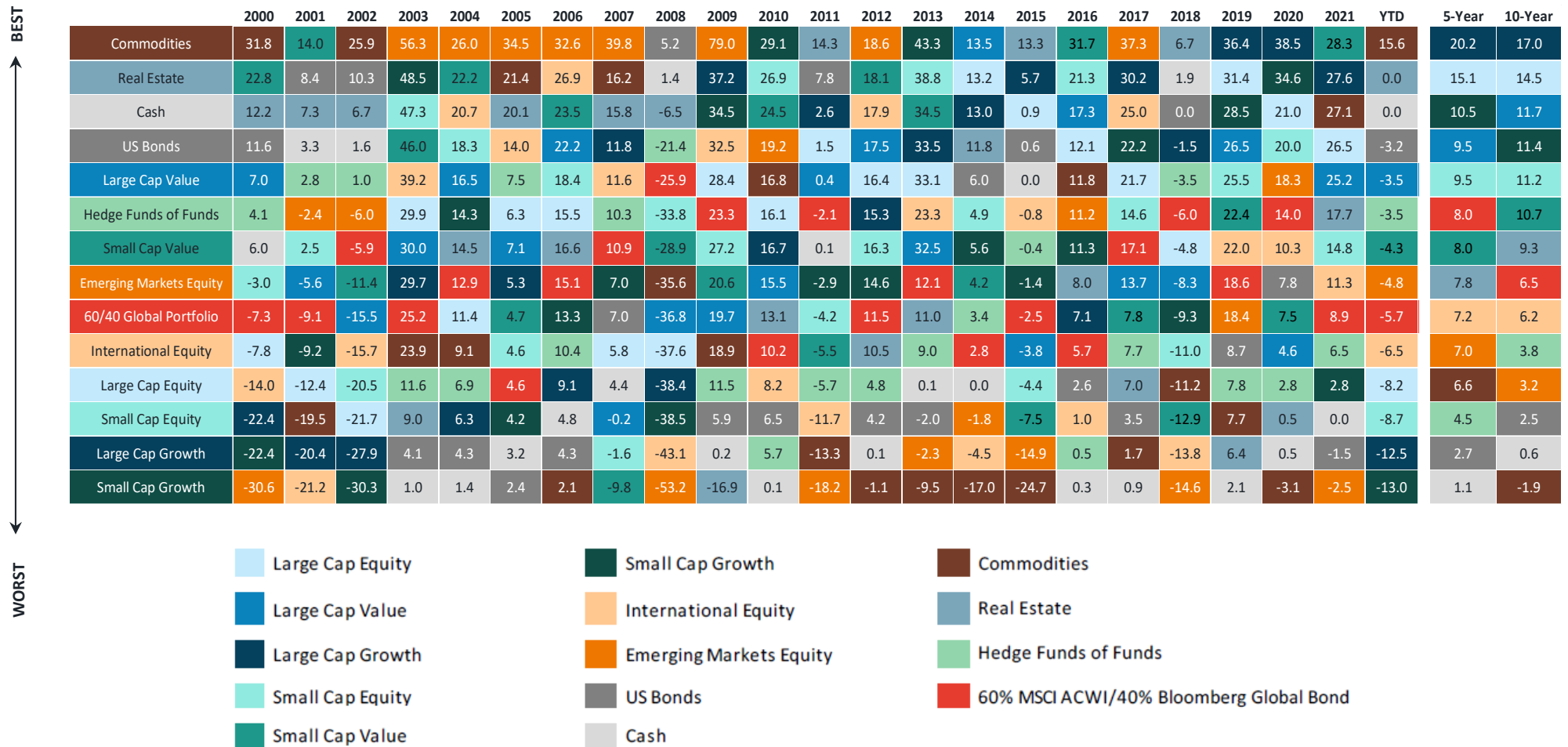
RUSSIAN GLOBAL WHEAT EXPORTS



Source: OEC, BACI

Appendix

Periodic table of returns



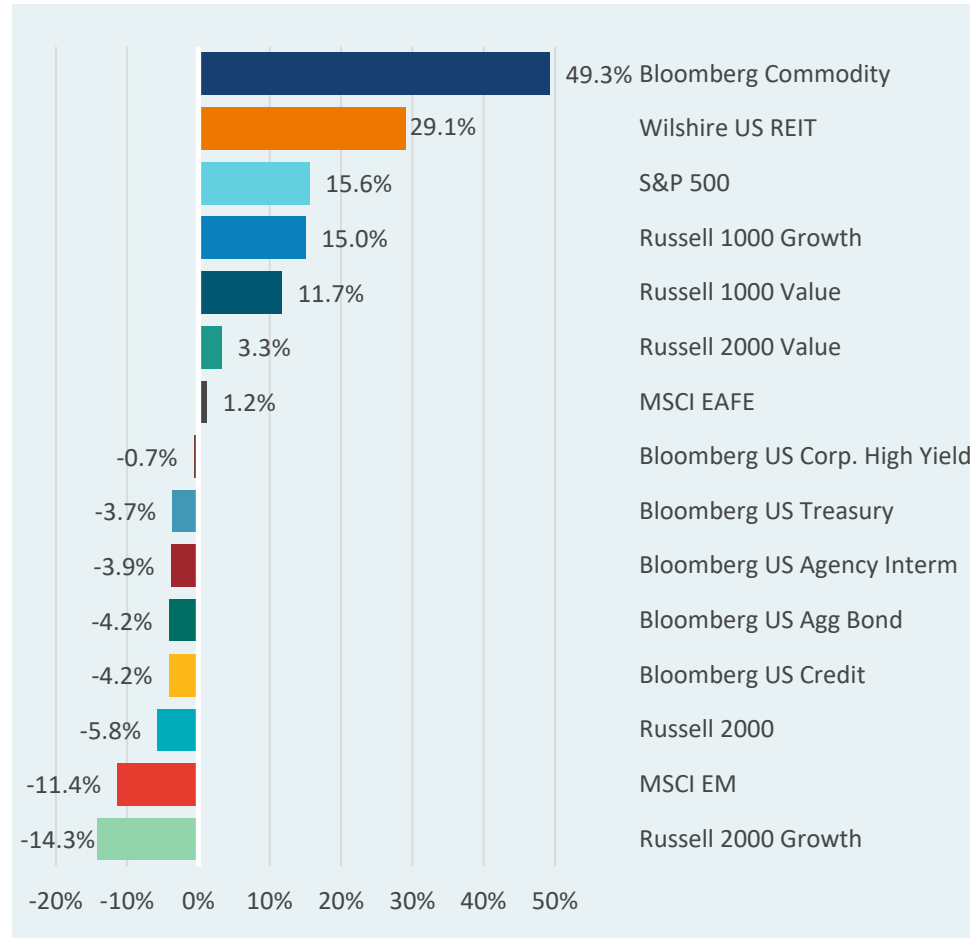
BEST
↑
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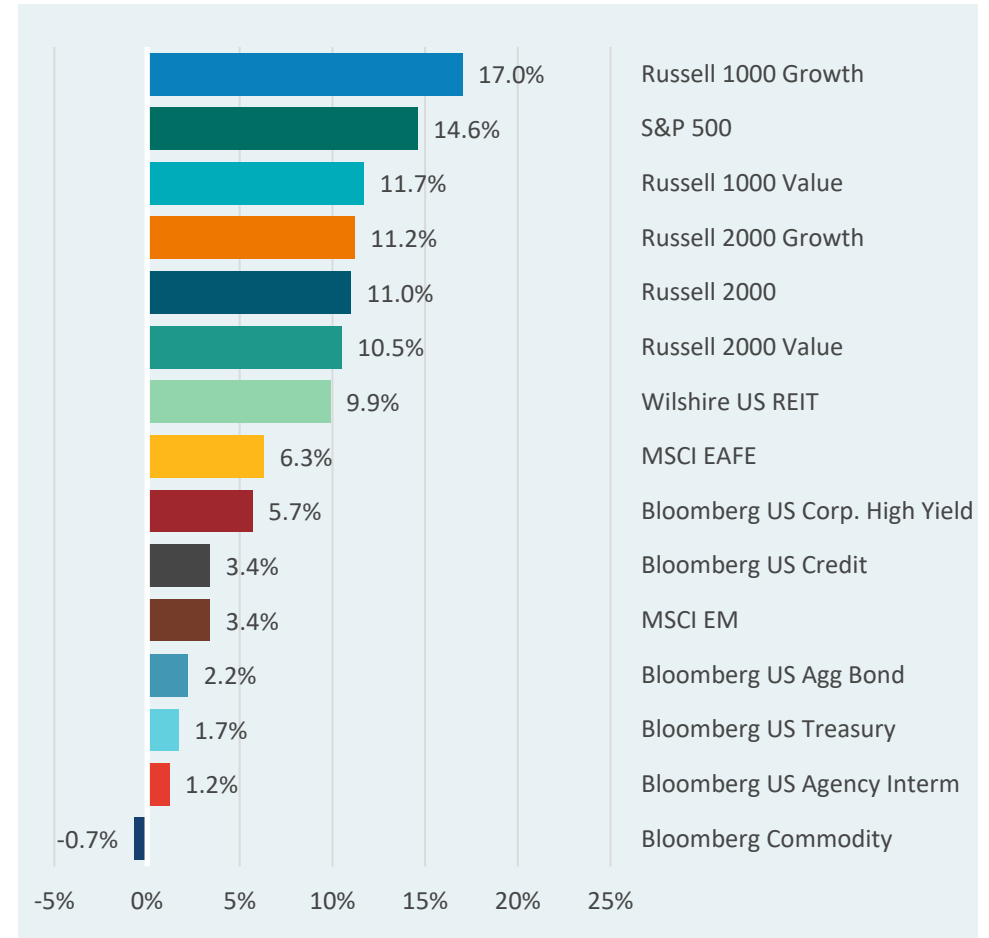
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/21.

Major asset class returns

ONE YEAR ENDING MARCH



TEN YEARS ENDING MARCH



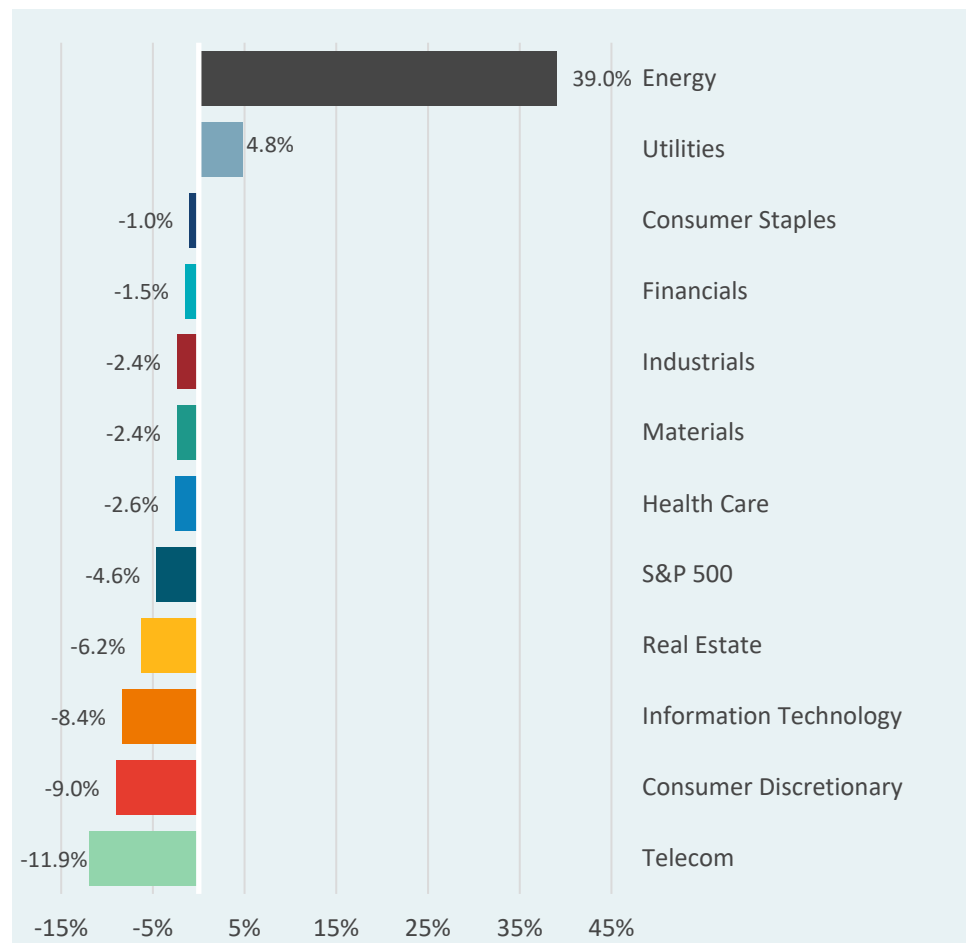
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 3/31/22

Source: Morningstar, as of 3/31/22

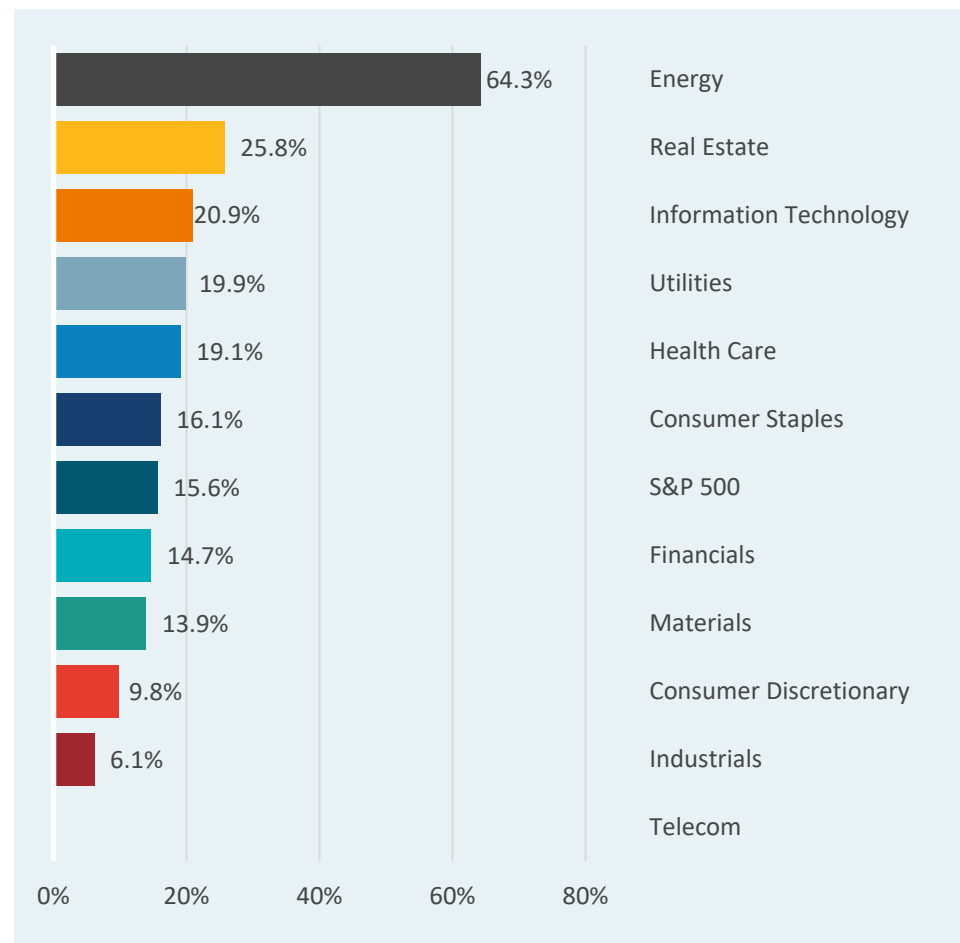
S&P 500 sector returns

Q1 2022



Source: Morningstar, as of 3/31/22

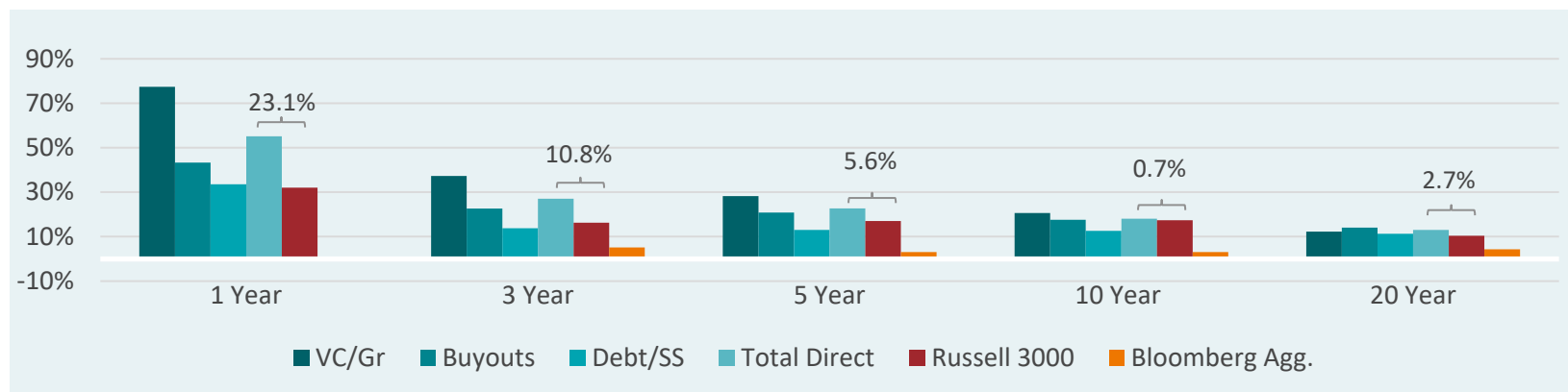
ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/22

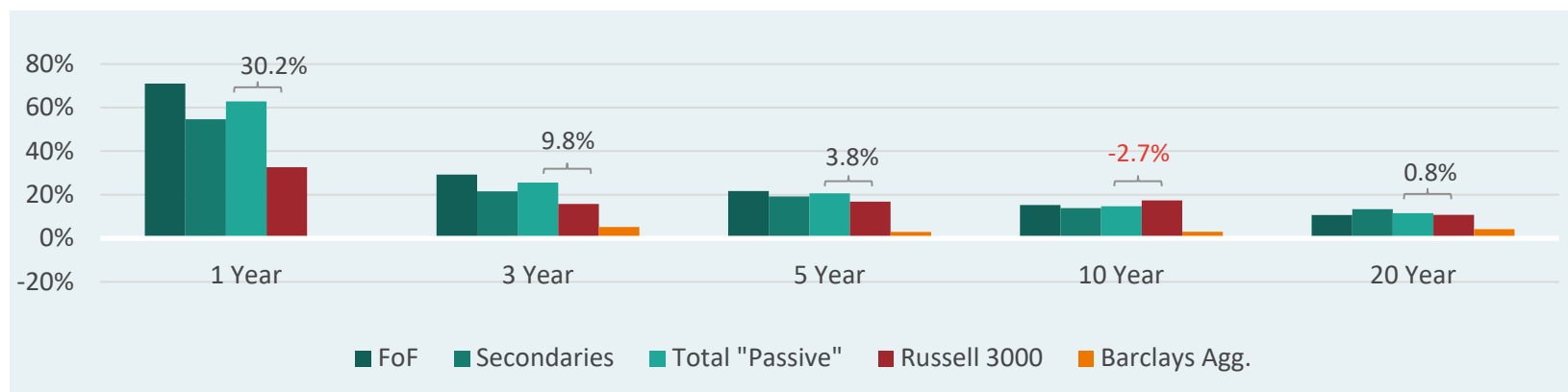
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

“PASSIVE” STRATEGIES

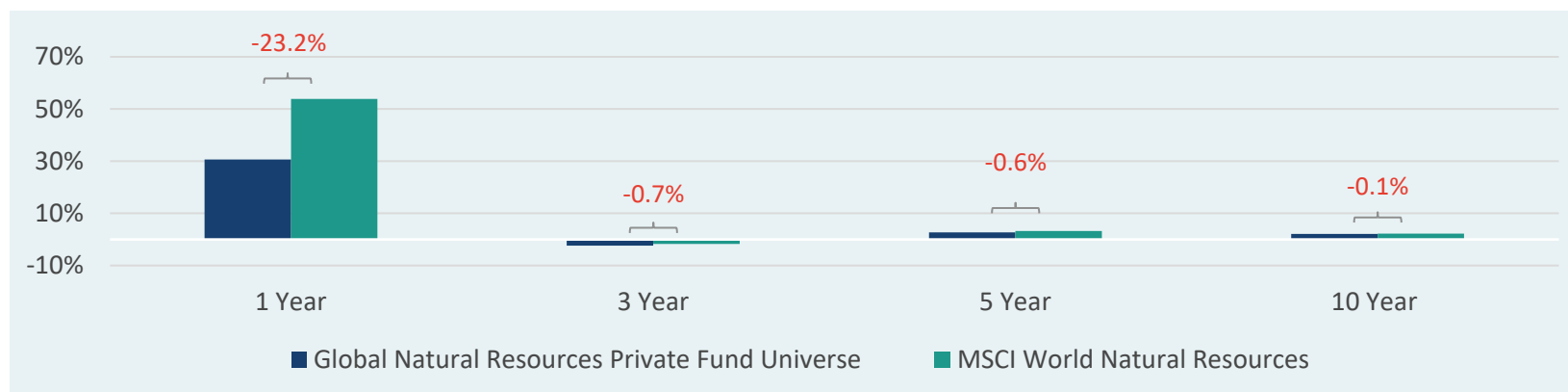


“Passive” strategies outperformed comparable public equities across all time periods, aside from the 10-year basis.

Sources: CJA PME: U.S. Private Equity Funds sub asset classes as of September 30, 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.

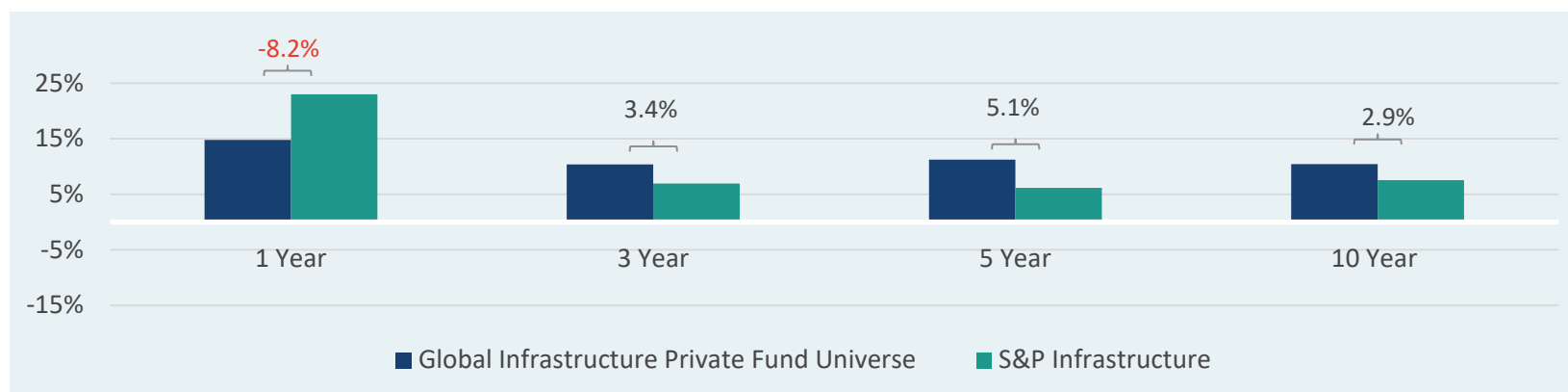
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

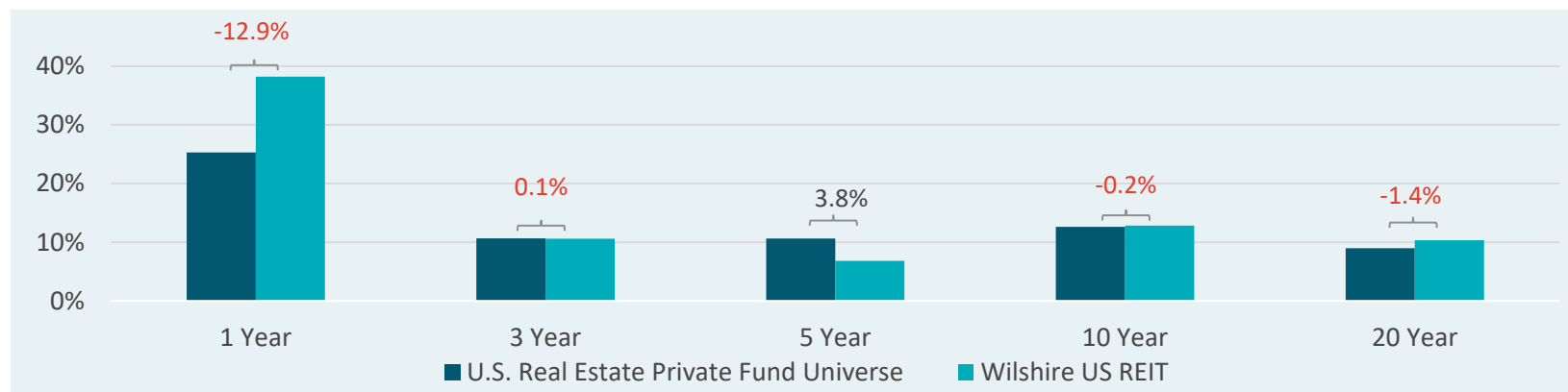


Infra. funds outperformed the S&P Infra. across all periods, aside from the 1-year basis.

Sources: CJA PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

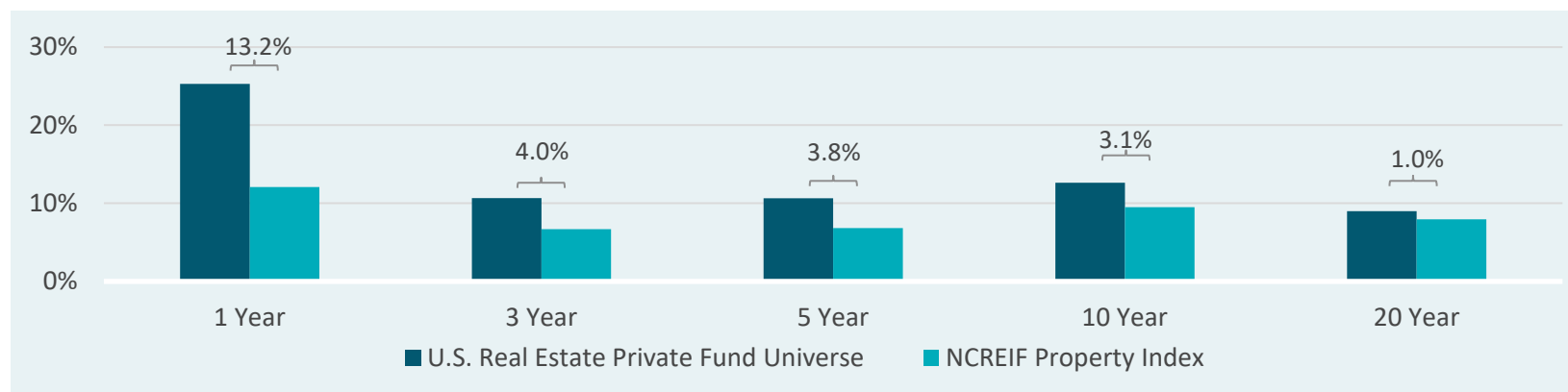
Private vs. liquid and core real estate performance

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-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: CJA PME: U.S. Real Estate universes as of September 30, 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
Core Index							
S&P 500	3.7	(4.6)	(4.6)	15.6	18.9	16.0	14.6
S&P 500 Equal Weighted	2.6	(2.7)	(2.7)	13.1	17.0	13.9	14.0
DJ Industrial Average	2.5	(4.1)	(4.1)	7.1	12.6	13.4	12.8
Russell Top 200	3.7	(4.9)	(4.9)	15.7	20.1	17.0	15.2
Russell 1000	3.4	(5.1)	(5.1)	13.3	18.7	15.8	14.5
Russell 2000	1.2	(7.5)	(7.5)	(5.8)	11.7	9.7	11.0
Russell 3000	3.2	(5.3)	(5.3)	11.9	18.2	15.4	14.3
Russell Mid Cap	2.6	(5.7)	(5.7)	6.9	14.9	12.6	12.9
Style Index							
Russell 1000 Growth	3.9	(9.0)	(9.0)	15.0	23.6	20.9	17.0
Russell 1000 Value	2.8	(0.7)	(0.7)	11.7	13.0	10.3	11.7
Russell 2000 Growth	0.5	(12.6)	(12.6)	(14.3)	9.9	10.3	11.2
Russell 2000 Value	2.0	(2.4)	(2.4)	3.3	12.7	8.6	10.5

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	2.2	(5.4)	(5.4)	7.3	13.8	11.6	10.0
MSCI ACWI ex US	0.2	(5.4)	(5.4)	(1.5)	7.5	6.8	5.6
MSCI EAFE	0.6	(5.9)	(5.9)	1.2	7.8	6.7	6.3
MSCI EM	(2.3)	(7.0)	(7.0)	(11.4)	4.9	6.0	3.4
MSCI EAFE Small Cap	(0.0)	(8.5)	(8.5)	(3.6)	8.5	7.4	8.3
Style Index							
MSCI EAFE Growth	0.6	(11.9)	(11.9)	(1.5)	9.8	8.9	7.5
MSCI EAFE Value	0.7	0.3	0.3	3.6	5.2	4.2	4.9
Regional Index							
MSCI UK	0.1	1.8	1.8	13.6	5.3	5.5	4.5
MSCI Japan	(0.5)	(6.6)	(6.6)	(6.5)	6.8	6.1	6.5
MSCI Euro	(1.7)	(11.1)	(11.1)	(3.4)	6.8	5.5	5.9
MSCI EM Asia	(3.1)	(8.7)	(8.7)	(15.2)	6.1	7.2	5.8
MSCI EM Latin American	13.1	27.3	27.3	23.5	3.2	4.1	(1.1)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	(1.9)	(3.0)	(3.0)	4.3	6.2	4.4	2.7
Bloomberg US Treasury Bills	(0.0)	(0.0)	(0.0)	(0.0)	0.8	1.1	0.6
Bloomberg US Agg Bond	(2.8)	(5.9)	(5.9)	(4.2)	1.7	2.1	2.2
Bloomberg US Universal	(2.7)	(6.1)	(6.1)	(4.2)	1.9	2.3	2.6
Duration							
Bloomberg US Treasury 1-3 Yr	(1.4)	(2.5)	(2.5)	(3.0)	0.8	1.0	0.8
Bloomberg US Treasury Long	(5.3)	(10.6)	(10.6)	(1.4)	3.3	3.9	4.0
Bloomberg US Treasury	(3.1)	(5.6)	(5.6)	(3.7)	1.4	1.8	1.7
Issuer							
Bloomberg US MBS	(2.6)	(5.0)	(5.0)	(4.9)	0.6	1.4	1.7
Bloomberg US Corp. High Yield	(1.1)	(4.8)	(4.8)	(0.7)	4.6	4.7	5.7
Bloomberg US Agency Interm	(2.1)	(3.7)	(3.7)	(3.9)	0.7	1.1	1.2
Bloomberg US Credit	(2.5)	(7.4)	(7.4)	(4.2)	2.8	3.2	3.4

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	8.6	25.5	25.5	49.3	16.1	9.0	(0.7)
Wilshire US REIT	6.9	(3.9)	(3.9)	29.1	11.9	10.0	9.9
CS Leveraged Loans	0.0	(0.1)	(0.1)	3.2	4.1	4.1	4.5
S&P Global Infrastructure	5.9	7.5	7.5	16.7	8.0	7.7	7.8
Alerian MLP	2.0	18.9	18.9	37.5	1.4	(1.1)	1.2
Regional Index							
JPM EMBI Global Div	(0.9)	(10.0)	(10.0)	(7.4)	0.0	1.7	3.7
JPM GBI-EM Global Div	(1.5)	(6.5)	(6.5)	(8.5)	(1.1)	0.2	(0.7)
Hedge Funds							
HFRI Composite	(0.1)	(1.6)	(1.6)	2.6	8.3	6.2	5.1
HFRI FOF Composite	0.6	(2.7)	(2.7)	1.3	5.9	4.6	3.9
Currency (Spot)							
Euro	(0.9)	(2.2)	(2.2)	(5.3)	(0.3)	0.8	(1.8)
Pound Sterling	(1.9)	(2.8)	(2.8)	(4.6)	0.3	1.0	(1.9)
Yen	(5.1)	(5.1)	(5.1)	(9.0)	(3.0)	(1.7)	(3.8)

Source: Morningstar, HFRI, as of 3/31/22.

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)

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

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

NAHB Housing Market Index - the housing market index is a weighted average of separate diffusion 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: March 31, 2022



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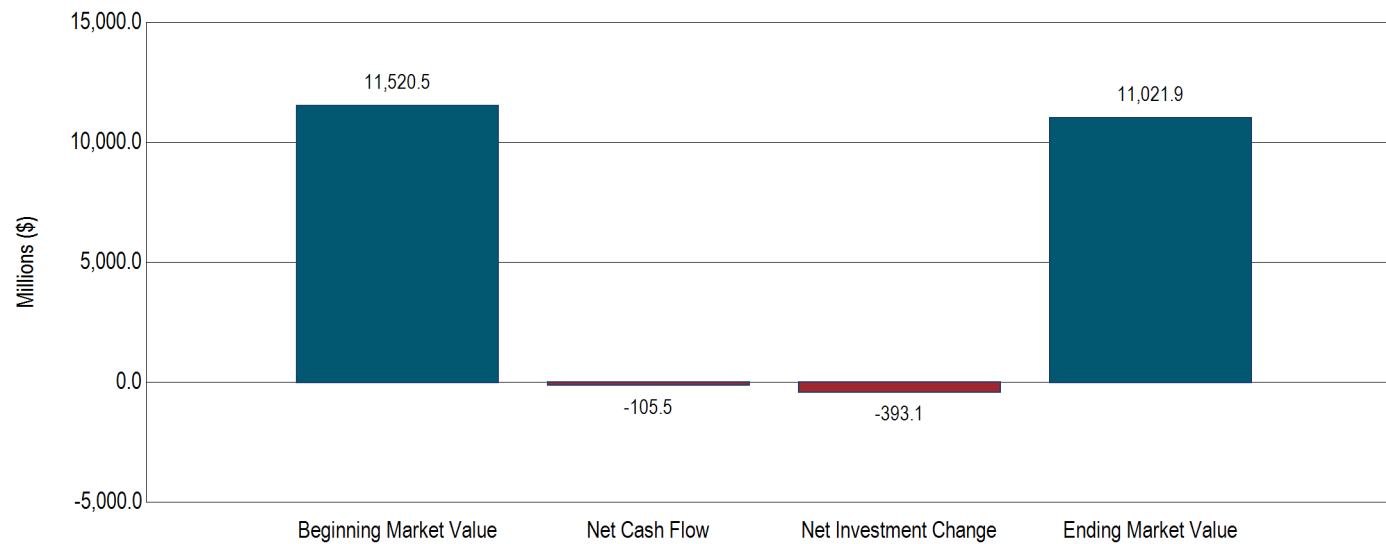
SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Portfolio Reconciliation

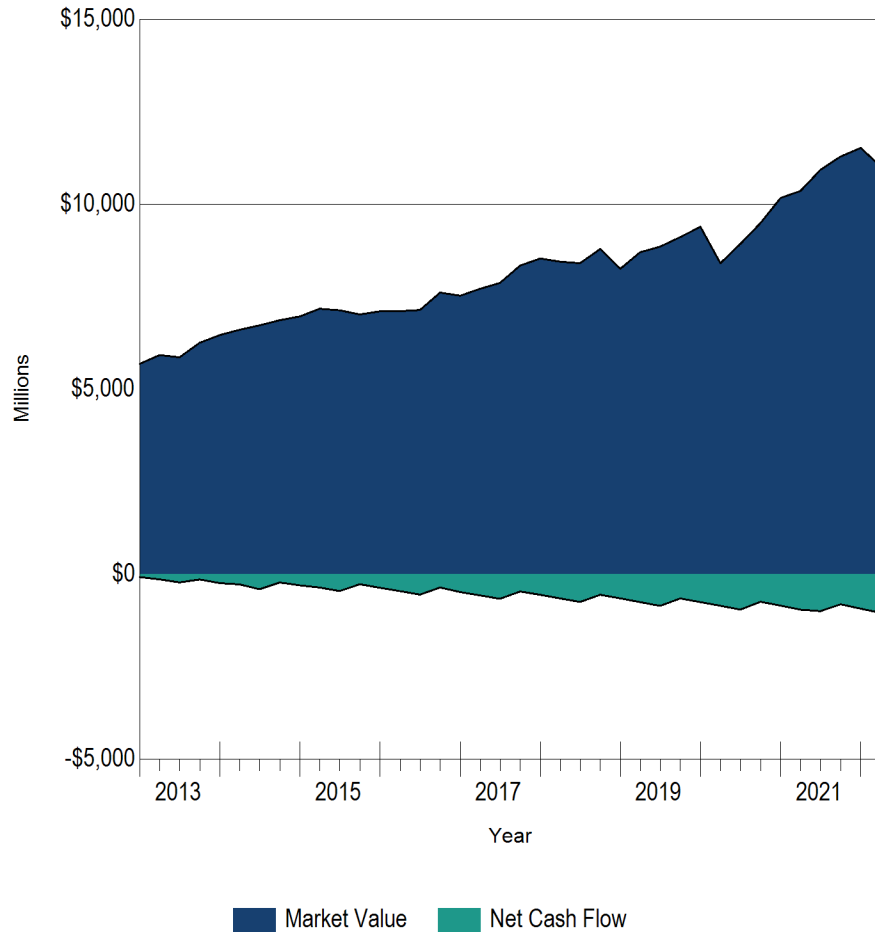
	Last Three Months	Year-To-Date
Beginning Market Value	\$11,520,465,270	\$11,520,465,270
Net Cash Flow	-\$105,510,215	-\$105,510,215
Net Investment Change	-\$393,082,960	-\$393,082,960
Ending Market Value	\$11,021,872,095	\$11,021,872,095

Change in Market Value
Last Three Months

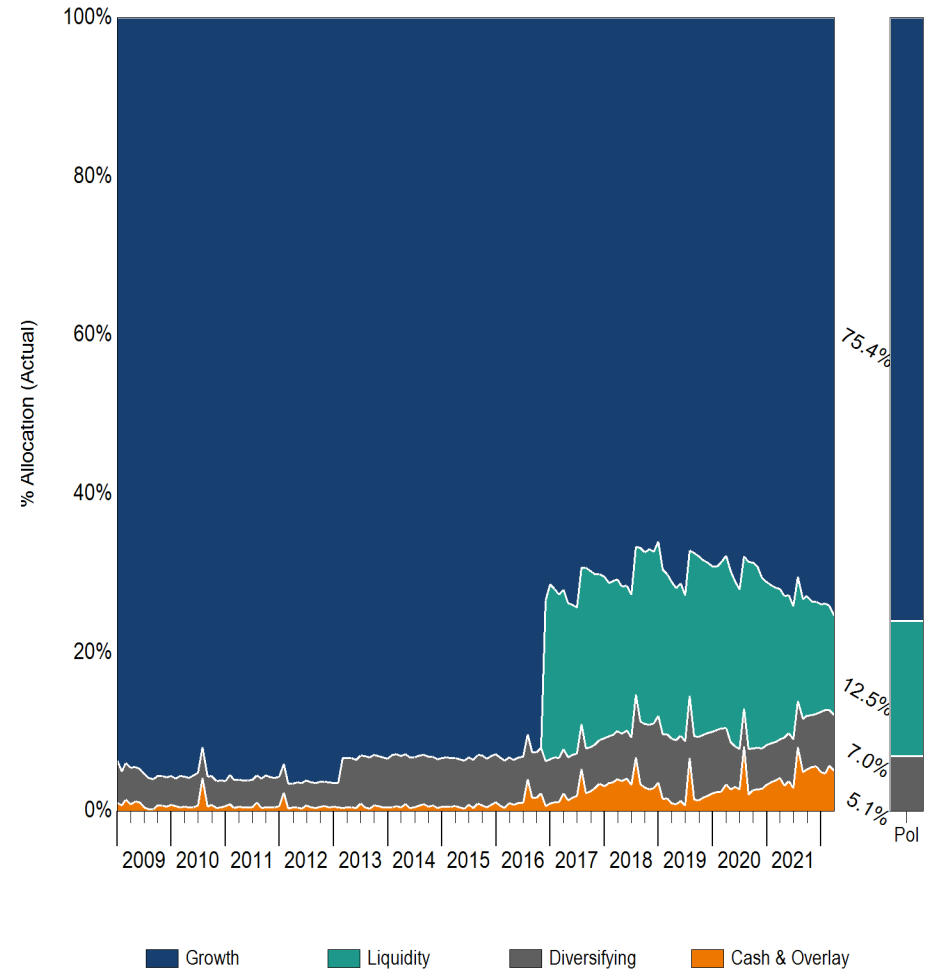


Contributions and withdrawals may include intra-account transfers between managers/funds.

Market Value History
Cumulative Cash Flows



Asset Allocation History

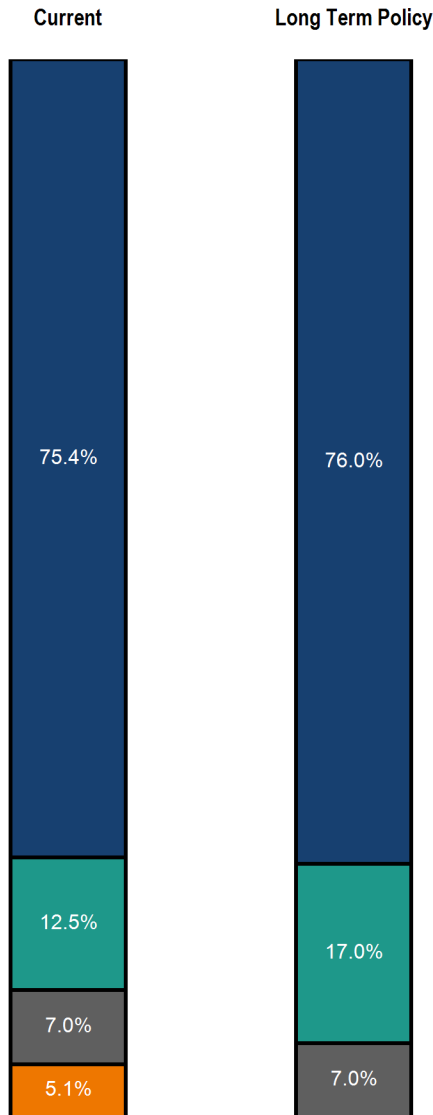


Policy reflects FFP 4-Yr allocations approved in June 2021.

Total Fund

Asset Allocation vs. Long Term Target Policy

Period Ending: March 31, 2022



Allocation vs. Long Term Target

	Current Balance	Current Allocation	Long Term Target	Difference
Growth	\$8,310,707,236	75.4%	76.0%	-\$65,915,556
Liquidity	\$1,382,350,861	12.5%	17.0%	-\$491,367,395
Diversifying	\$771,283,389	7.0%	7.0%	-\$247,657
Cash & Overlay	\$557,530,609	5.1%	--	\$557,530,609
Total	\$11,021,872,095	100.0%	100.0%	

Allocation vs. Current Targets

	Current Balance	Current Allocation	Current Target	Difference
Growth	\$8,310,707,236	75.4%	75.0%	\$44,303,165
Liquidity	\$1,382,350,861	12.5%	18.0%	-\$601,586,116
Diversifying	\$771,283,389	7.0%	7.0%	-\$247,657
Cash & Overlay	\$557,530,609	5.1%	--	\$557,530,609
Total	\$11,021,872,095	100.0%	100.0%	

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)

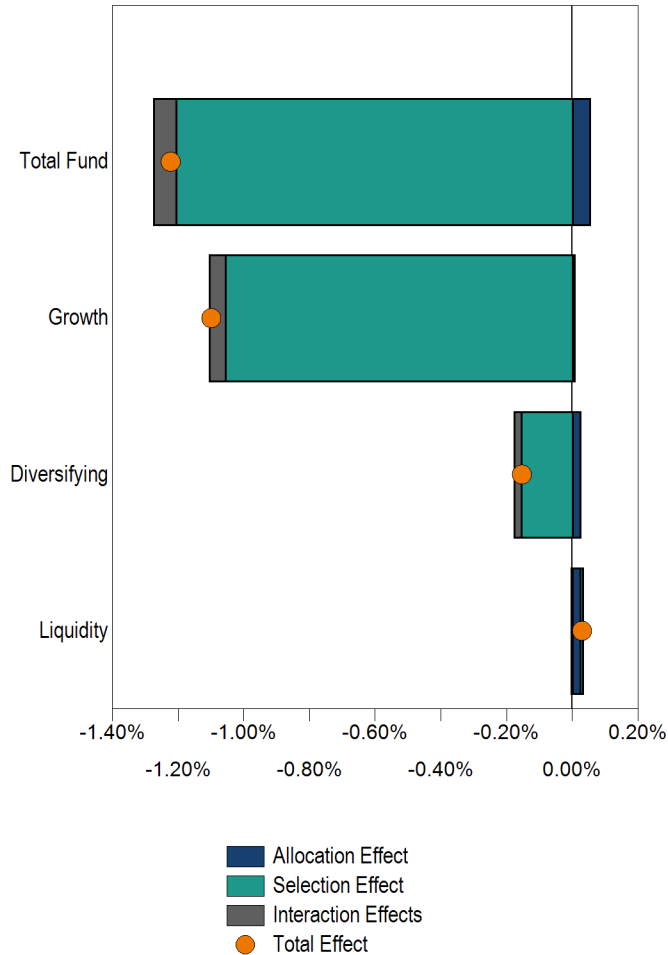
Period Ending: March 31, 2022

	% of Portfolio	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Fund	100.0	-3.4	7.0	9.0	8.1	8.1	13.9	9.2	14.6	-2.7	13.9
<i>Policy Index</i>		-2.0	9.5	11.0	9.2	9.0	15.3	10.8	14.6	-0.9	13.7
Growth	75.4	-3.5	10.6	12.1	10.7	9.8	19.2	12.0	18.3	-3.9	18.7
<i>Custom Growth Benchmark</i>		-2.1	13.7	15.0	12.4	10.8	21.6	13.8	19.3	-2.1	19.3
Diversifying	7.0	-2.8	-0.7	0.4	0.7	0.7	1.7	-1.7	6.8	-2.3	2.6
<i>Custom Diversifying Benchmark</i>		-2.9	-0.4	2.3	2.8	3.0	1.6	4.7	6.1	1.4	4.7
Liquidity	12.5	-2.5	-2.6	1.2	1.6	--	-0.3	3.4	4.8	1.7	1.4
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>		-2.5	-2.9	1.0	1.3	--	-0.5	3.3	4.0	1.6	0.8

*Correlation between the Growth and Diversifying composites is .30, .63 and .55 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 March 31, 2022



Performance Attribution

	Quarter
Wtd. Actual Return	-3.26%
Wtd. Index Return *	-2.04%
Excess Return	-1.22%
Selection Effect	-1.21%
Allocation Effect	0.05%
Interaction Effect	-0.07%

*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	-3.5%	-2.1%	-1.4%	-1.1%	0.0%	0.0%	-1.1%
Diversifying	-2.8%	-0.5%	-2.2%	-0.2%	0.0%	0.0%	-0.2%
Liquidity	-2.5%	-2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-3.3%	-2.0%	-1.2%	-1.2%	0.1%	-0.1%	-1.2%

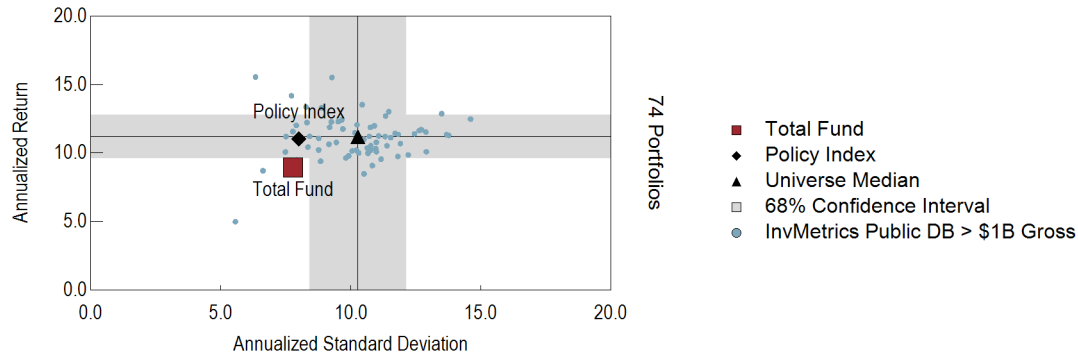
Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 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	8.95%	-2.08%	7.78%	-1.37%	0.94	2.21%	0.92	1.07	-0.94	89.90%	107.62%

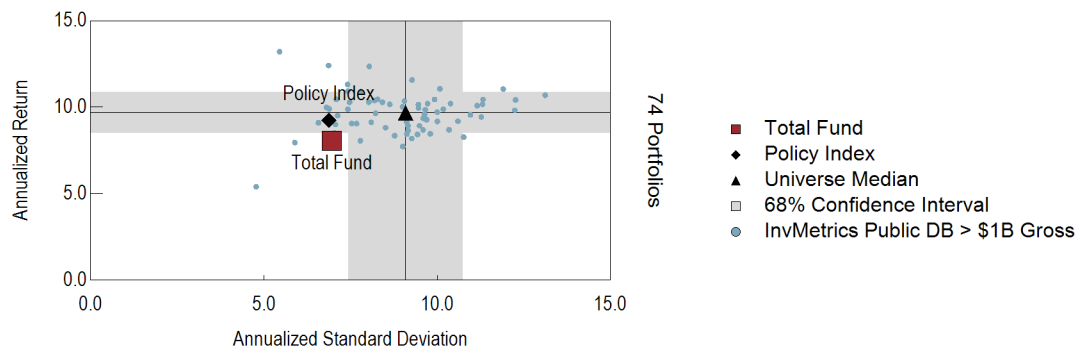
Risk vs. Return



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	8.06%	-1.17%	6.96%	-0.92%	0.97	1.97%	0.92	1.01	-0.59	95.14%	109.24%

Risk vs. Return



Total Fund
Performance Summary (Gross of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Total Fund	11,021,872,095	100.0	-3.4	7.2	9.2	8.3	8.6	14.2	9.5	14.9	-2.5	14.2		
Policy Index			-2.0	9.5	11.0	9.2	9.0	15.3	10.8	14.6	-0.9	13.7		
InvMetrics Public DB > \$1B Gross Rank			38	54	93	89	69	62	78	83	25	83		
Total Fund ex Overlay & Cash	10,464,341,486	94.9	-3.2	7.7	9.5	8.5	8.7	14.6	9.7	14.7	-2.1	14.1		
Policy Index			-2.0	9.5	11.0	9.2	9.0	15.3	10.8	14.6	-0.9	13.7		
InvMetrics Public DB > \$1B Gross Rank			36	47	91	84	64	55	72	85	20	84		
Growth	8,310,707,236	75.4	-3.4	11.0	12.4	11.0	10.3	19.6	12.4	18.7	-3.6	19.1		
Custom Growth Benchmark			-2.1	13.7	15.0	12.4	10.8	21.6	13.8	19.3	-2.1	19.3		
Total Domestic Equity	1,749,520,872	15.9	-6.2	6.0	15.6	13.8	13.5	20.6	22.2	26.7	-7.2	23.9		
Russell 3000			-5.3	11.9	18.2	15.4	14.3	25.7	20.9	31.0	-5.2	21.1		
InvMetrics Public DB US Eq Gross Rank			91	97	89	78	61	97	10	87	78	6		
BlackRock Russell 1000 Index	612,596,790	5.6	-5.1	13.3	18.7	--	--	26.5	21.0	31.4	-4.8	--	15.9	Apr-17
Russell 1000			-5.1	13.3	18.7	--	--	26.5	21.0	31.4	-4.8	--	15.9	Apr-17
eV US Large Cap Equity Gross Rank			55	50	38	--	--	55	36	39	47	--		
Jackson Square Partners	291,974,099	2.6	-13.6	-3.6	15.8	15.4	13.2	8.8	44.8	27.9	-2.0	29.3	11.1	May-05
Russell 1000 Growth			-9.0	15.0	23.6	20.9	17.0	27.6	38.5	36.4	-1.5	30.2	12.8	May-05
eV US Large Cap Growth Equity Gross Rank			88	96	93	92	95	97	20	93	59	47		
Boston Partners	417,910,620	3.8	0.7	15.0	15.6	12.3	12.8	31.3	3.0	24.3	-8.7	20.1	11.1	Jun-95
Russell 1000 Value			-0.7	11.7	13.0	10.3	11.7	25.2	2.8	26.5	-8.3	13.7	9.7	Jun-95
eV US Large Cap Value Equity Gross Rank			32	34	41	44	37	17	61	77	55	23		
Emerald Advisers	229,413,749	2.1	-10.5	-7.9	12.1	13.5	13.6	5.5	39.0	30.3	-10.1	28.8	13.5	Apr-03
Russell 2000 Growth			-12.6	-14.3	9.9	10.3	11.2	2.8	34.6	28.5	-9.3	22.2	11.2	Apr-03
eV US Small Cap Growth Equity Gross Rank			23	49	81	74	65	76	57	45	85	26		
Ceredex	197,625,614	1.8	-6.3	5.0	9.4	7.2	10.3	28.4	2.3	18.4	-11.3	11.4	11.0	Nov-11
Russell 2000 Value			-2.4	3.3	12.7	8.6	10.5	28.3	4.6	22.4	-12.9	7.8	11.4	Nov-11
eV US Small Cap Value Equity Gross Rank			84	57	95	92	86	60	69	87	25	48		

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

Total Fund
Performance Summary (Gross of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Total International Equity	1,716,795,723	15.6	-8.4	-4.7	8.6	7.5	6.8	8.3	15.8	23.7	-14.3	25.5		
MSCI ACWI ex USA Gross			-5.3	-1.0	8.0	7.3	6.0	8.3	11.1	22.1	-13.8	27.8		
MSCI EAFE Gross			-5.8	1.6	8.3	7.2	6.8	11.8	8.3	22.7	-13.4	25.6		
InvMetrics Public DB ex-US Eq Gross Rank			80	79	37	39	35	45	23	28	44	90		
International Equity	967,008,125	8.8	-8.7	-1.0	10.4	8.7	7.5	9.0	19.0	27.0	-13.6	25.3		
MSCI ACWI ex USA Gross			-5.3	-1.0	8.0	7.3	6.0	8.3	11.1	22.1	-13.8	27.8		
InvMetrics Public DB ex-US Eq Gross Rank			86	19	3	9	6	32	13	7	21	93		
Pyrford	487,895,895	4.4	-1.7	3.3	7.3	6.4	--	7.6	4.7	22.1	-10.1	19.8	4.5	May-14
MSCI ACWI ex USA Value			0.1	3.3	5.4	4.7	--	10.5	-0.8	15.7	-14.0	22.7	2.5	May-14
eV ACWI ex-US Value Equity Gross Rank			31	25	51	35	--	84	33	35	5	84		
William Blair	479,112,230	4.3	-14.9	-5.1	13.2	10.9	8.7	10.5	33.3	32.0	-16.8	30.9	7.9	Oct-10
MSCI ACWI ex USA Growth			-10.8	-6.2	9.1	8.6	6.7	5.1	22.2	27.3	-14.4	32.0	5.9	Oct-10
eV ACWI ex-US Growth Equity Gross Rank			69	47	35	50	46	44	30	39	69	81		
Emerging Markets Equity	749,787,598	6.8	-8.1	-9.2	6.2	5.6	--	7.6	11.4	19.4	-15.3	--		
MSCI Emerging Markets			-7.0	-11.4	4.9	6.0	--	-2.5	18.3	18.4	-14.6	--		
InvMetrics Public DB Emg Mkt Eq Gross Rank			--	--	--	--	--	2	81	31	51	--		
PIMCO RAE Emerging Markets	372,890,359	3.4	-3.6	1.1	7.5	6.1	--	17.1	2.1	14.6	-12.3	--	6.1	Feb-17
MSCI Emerging Markets Value NR			-3.4	-3.5	3.2	4.2	--	4.0	5.5	12.0	-10.7	--	4.5	Feb-17
eV Emg Mkts All Cap Value Equity Gross Rank			45	27	29	61	--	6	85	72	44	--		
TT Emerging Markets	376,897,240	3.4	-12.1	-17.7	5.0	--	--	-0.2	20.8	24.8	-18.4	--	4.2	Jul-17
MSCI Emerging Markets			-7.0	-11.4	4.9	--	--	-2.5	18.3	18.4	-14.6	--	3.7	Jul-17
eV Emg Mkts Equity Gross Rank			80	83	72	--	--	58	39	24	83	--		
Total Global Equity	1,074,275,240	9.7	-6.8	5.1	14.8	12.6	11.1	14.1	25.3	28.9	-7.8	23.7		
MSCI ACWI			-5.4	7.3	13.8	11.6	10.0	18.5	16.3	26.6	-9.4	24.0		
InvMetrics Public DB Glbl Eq Gross Rank			88	92	3	5	62	88	2	3	60	79		
Artisan Partners	547,750,803	5.0	-13.1	1.5	18.5	16.5	--	15.0	41.7	37.0	-7.9	32.9	14.5	Oct-12
MSCI ACWI Growth NR USD			-9.7	5.4	17.9	15.5	--	17.1	33.6	32.7	-8.1	30.0	12.7	Oct-12
eV All Global Equity Gross Rank			89	78	13	13	--	80	9	7	40	11		
First Eagle	526,400,117	4.8	0.8	8.9	10.8	8.5	8.6	13.0	8.5	21.0	-7.6	15.1	8.6	Jan-11
MSCI ACWI Value NR USD			-1.0	8.8	9.0	7.5	7.6	19.6	-0.3	20.6	-10.8	18.3	7.0	Jan-11
eV All Global Equity Gross Rank			8	38	78	86	83	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: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Private Credit	892,762,869	8.1	2.7	13.0	8.3	7.8	10.9	10.0	4.0	7.7	8.3	10.4		
Total High Yield Yield	175,881,035	1.6	-4.4	-0.2	4.3	4.3	5.2	5.3	5.2	15.3	-3.2	6.5		
<i>ICE BofAML High Yield Master II</i>			-4.5	-0.3	4.4	4.6	5.7	5.4	6.2	14.4	-2.3	7.5		
<i>eV US High Yield Fixed Inc Gross Rank</i>			74	75	74	82	81	51	74	31	88	74		
Allianz Global Investors	175,881,035	1.6	-4.4	-0.2	4.3	4.3	5.2	5.3	5.2	15.3	-3.2	6.5	6.6	Apr-00
<i>ICE BofAML High Yield Master II</i>			-4.5	-0.3	4.4	4.6	5.7	5.4	6.2	14.4	-2.3	7.5	6.8	Apr-00
<i>eV US High Yield Fixed Inc Gross Rank</i>			74	75	74	82	81	51	74	31	88	74		
Total Real Estate	783,534,694	7.1	4.0	19.0	6.5	8.0	10.2	19.2	-5.9	8.1	7.4	11.1		
<i>Real Estate Benchmark</i>			3.2	18.3	9.0	8.4	9.3	19.3	0.6	7.5	6.8	7.1		
<i>NCREIF-ODCE</i>			7.4	28.5	11.3	9.9	10.9	22.2	1.2	5.3	8.3	7.6		
<i>NCREIF Property Index</i>			5.3	21.9	9.6	8.5	9.6	17.7	1.6	6.4	6.7	7.0		
Total Core RE	214,113,144	1.9	-3.8	30.9	14.1	12.1	11.1	48.3	-4.6	28.2	-5.0	7.8		
Adelante	109,454,839	1.0	-3.5	31.2	14.2	12.2	11.1	48.3	-4.6	28.2	-5.0	7.8	11.2	Sep-01
<i>Wilshire REIT</i>			-3.9	29.1	11.9	10.0	9.9	46.2	-7.9	25.8	-4.8	4.2	10.6	Sep-01
Invesco US Fundamental Beta	104,658,304	0.9	--	--	--	--	--	--	--	--	--	--	6.3	Mar-22
<i>Wilshire REIT</i>			--	--	--	--	--	--	--	--	--	--	6.9	Mar-22
Total Private Real Estate	569,421,550	5.2	4.9	16.8	5.4	7.4	10.3	15.3	-6.1	6.2	8.8	11.4		
Private Equity	1,442,598,899	13.1	3.1	49.4	24.3	19.2	15.7	60.4	8.7	8.4	12.1	11.9		
Risk Parity	475,337,904	4.3	-4.9	5.8	8.2	--	--	9.7	10.0	--	--	--		
<i>60% MSCI ACWI Net/40% Bloomberg Global Aggregate</i>			-5.6	1.7	8.7	--	--	8.8	14.0	--	--	--	10.6	Jan-19
AQR Global Risk Premium-EL	216,916,803	2.0	-3.9	7.3	7.9	--	--	10.7	6.2	--	--	--	9.5	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			-4.9	3.1	4.5	--	--	6.8	3.6	--	--	--	7.0	Jan-19
PanAgora Risk Parity Multi Asset	258,421,101	2.3	-5.8	4.6	8.6	--	--	8.7	14.0	--	--	--	9.6	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			-4.9	3.1	4.5	--	--	6.8	3.6	--	--	--	5.3	Feb-19

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

Total Fund

Performance Summary (Gross of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Diversifying	771,283,389	7.0	-2.7	-0.4	0.8	1.0	1.1	2.0	-1.3	7.1	-2.0	2.8		
<i>Custom Diversifying Benchmark</i>			-2.9	-0.4	2.3	2.8	3.0	1.6	4.7	6.1	1.4	4.7		
Diversifying Fixed Income	244,021,498	2.2	-5.9	-4.5	0.0	0.7	1.7	-0.7	1.6	8.6	-1.7	2.8	3.5	Dec-03
<i>eV US Core Fixed Inc Gross Rank</i>			57	95	99	99	99	30	99	80	99	96	98	Dec-03
AFL-CIO	243,935,990	2.2	-5.9	-4.5	1.6	2.2	2.5	-0.7	6.6	8.2	0.6	3.6	5.7	Jun-91
<i>Bloomberg US Aggregate TR</i>			-5.9	-4.2	1.7	2.1	2.2	-1.5	7.5	8.7	0.0	3.5	5.3	Jun-91
<i>eV US Core Fixed Inc Gross Rank</i>			58	95	95	93	86	30	95	88	16	76		
Diversifying Multi-Asset	527,261,891	4.8	-1.5	1.3	--	--	--	2.8	--	--	--	--		
<i>Custom Diversifying Multi-Asset Benchmark</i>			-2.3	0.5	--	--	--	4.1	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	248,052,861	2.3	-2.5	-0.9	--	--	--	1.7	--	--	--	--	0.5	Aug-20
<i>FTSE 3-Month T-bill +5%</i>			1.3	5.1	--	--	--	5.0	--	--	--	--	5.1	Aug-20
Sit LLCAR	279,209,030	2.5	-0.5	3.9	--	--	--	--	--	--	--	--	3.9	Apr-21
<i>Bloomberg US Aggregate Index + 100 bps</i>			-5.7	-3.2	--	--	--	--	--	--	--	--	-3.2	Apr-21
Liquidity	1,382,350,861	12.5	-2.4	-2.5	1.3	1.7	--	-0.2	3.5	4.9	1.8	1.5		
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-2.5	-2.9	1.0	1.3	--	-0.5	3.3	4.0	1.6	0.8		
<i>eV US Short Duration Fixed Inc Gross Rank</i>			50	52	63	49	--	40	77	34	24	50		
DFA Short Credit	281,621,981	2.6	-3.8	-4.0	0.6	1.2	--	-0.4	2.9	5.2	1.2	1.9	1.3	Nov-16
<i>ICE BofA 1-5 Yrs US Corp & Govt TR</i>			-3.5	-3.8	1.2	1.4	--	-0.9	4.6	5.1	1.4	1.3	1.5	Nov-16
<i>eV US Short Duration Fixed Inc Gross Rank</i>			99	99	99	95	--	64	90	21	93	26		
Insight Short Duration	579,542,761	5.3	-1.2	-1.1	1.7	1.9	--	0.1	3.2	4.7	1.7	1.5	1.9	Nov-16
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-2.5	-2.9	1.0	1.3	--	-0.5	3.3	4.0	1.6	0.8	1.3	Nov-16
<i>eV US Short Duration Fixed Inc Gross Rank</i>			4	7	22	31	--	25	86	45	38	50		
Sit Short Duration	521,186,119	4.7	-3.1	-3.5	1.3	1.8	--	-0.3	4.6	4.9	2.5	1.3	1.8	Nov-16
<i>Bloomberg US Govt 1-3 Yr TR</i>			-2.5	-3.0	0.8	1.1	--	-0.6	3.1	3.6	1.6	0.4	1.0	Nov-16
<i>eV US Short Duration Fixed Inc Gross Rank</i>			83	91	60	33	--	55	26	35	1	68		
Total Cash	446,180,033	4.0	0.2	0.5	1.5	1.5	2.4	0.4	1.3	3.3	1.7	0.9		
<i>91 Day T-Bills</i>			0.0	0.1	0.7	1.1	0.6	0.0	0.5	2.1	1.9	0.9		
Cash	445,580,523	4.0	0.1	0.3	1.5	1.5	2.4	0.4	1.3	3.4	1.7	0.9		
Northern Trust Transition	599,510	0.0	2,930.9	2,889.0	290.9	--	--	-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. \$126,992.88 in residual value is reflected in the Diversifying Fixed Income composite. State Street Cash/Tax Reclaims balance of \$-28,918 in cash and \$223,127 in potential tax reclaims at State Street after assets were transferred to Northern Trust.

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Total Fund	11,021,872,095	100.0	-3.4	7.0	9.0	8.1	8.1	13.9	9.2	14.6	-2.7	13.9		
<i>Policy Index</i>			-2.0	9.5	11.0	9.2	9.0	15.3	10.8	14.6	-0.9	13.7		
Total Fund ex Overlay & Cash	10,464,341,486	94.9	-3.3	7.4	9.2	8.2	8.2	14.3	9.4	14.3	-2.4	13.8		
<i>Policy Index</i>			-2.0	9.5	11.0	9.2	9.0	15.3	10.8	14.6	-0.9	13.7		
Growth	8,310,707,236	75.4	-3.5	10.6	12.1	10.7	9.8	19.2	12.0	18.3	-3.9	18.7		
<i>Custom Growth Benchmark</i>			-2.1	13.7	15.0	12.4	10.8	21.6	13.8	19.3	-2.1	19.3		
Total Domestic Equity	1,749,520,872	15.9	-6.3	5.7	15.2	13.4	13.0	20.3	21.8	26.1	-7.6	23.5		
<i>Russell 3000</i>			-5.3	11.9	18.2	15.4	14.3	25.7	20.9	31.0	-5.2	21.1		
BlackRock Russell 1000 Index	612,596,790	5.6	-5.1	13.3	18.7	--	--	26.5	20.9	31.4	-4.8	--	15.8	Apr-17
<i>Russell 1000</i>			-5.1	13.3	18.7	--	--	26.5	21.0	31.4	-4.8	--	15.9	Apr-17
Jackson Square Partners	291,974,099	2.6	-13.7	-4.0	15.4	14.9	12.8	8.3	44.1	27.3	-2.4	28.7	10.7	May-05
<i>Russell 1000 Growth</i>			-9.0	15.0	23.6	20.9	17.0	27.6	38.5	36.4	-1.5	30.2	12.8	May-05
Boston Partners	417,910,620	3.8	0.7	14.7	15.2	11.9	12.5	31.0	2.6	23.8	-8.9	19.7	10.7	Jun-95
<i>Russell 1000 Value</i>			-0.7	11.7	13.0	10.3	11.7	25.2	2.8	26.5	-8.3	13.7	9.7	Jun-95
Emerald Advisers	229,413,749	2.1	-10.7	-8.4	11.4	12.8	12.9	4.9	38.2	29.4	-10.7	28.0	12.9	Apr-03
<i>Russell 2000 Growth</i>			-12.6	-14.3	9.9	10.3	11.2	2.8	34.6	28.5	-9.3	22.2	11.2	Apr-03
Ceredex	197,625,614	1.8	-6.4	4.4	8.7	6.6	9.7	27.7	1.7	17.7	-11.8	10.7	10.4	Nov-11
<i>Russell 2000 Value</i>			-2.4	3.3	12.7	8.6	10.5	28.3	4.6	22.4	-12.9	7.8	11.4	Nov-11
Total International Equity	1,716,795,723	15.6	-8.5	-5.1	8.1	7.0	6.3	7.8	15.2	23.2	-14.7	25.0		
<i>MSCI ACWI ex USA Gross</i>			-5.3	-1.0	8.0	7.3	6.0	8.3	11.1	22.1	-13.8	27.8		
<i>MSCI EAFE Gross</i>			-5.8	1.6	8.3	7.2	6.8	11.8	8.3	22.7	-13.4	25.6		
International Equity	967,008,125	8.8	-8.7	-1.2	10.0	8.3	7.1	8.7	18.5	26.5	-13.9	24.8		
<i>MSCI ACWI ex USA Gross</i>			-5.3	-1.0	8.0	7.3	6.0	8.3	11.1	22.1	-13.8	27.8		
Pyrford	487,895,895	4.4	-1.7	3.1	6.9	6.0	--	7.3	4.2	21.6	-10.5	19.3	4.1	May-14
<i>MSCI ACWI ex USA Value</i>			0.1	3.3	5.4	4.7	--	10.5	-0.8	15.7	-14.0	22.7	2.5	May-14
William Blair	479,112,230	4.3	-14.9	-5.3	12.9	10.5	8.3	10.2	32.8	31.5	-17.1	30.4	7.4	Oct-10
<i>MSCI ACWI ex USA Growth</i>			-10.8	-6.2	9.1	8.6	6.7	5.1	22.2	27.3	-14.4	32.0	5.9	Oct-10
Emerging Markets Equity	749,787,598	6.8	-8.2	-9.7	5.5	5.0	--	7.0	10.7	18.7	-15.7	--		
<i>MSCI Emerging Markets</i>			-7.0	-11.4	4.9	6.0	--	-2.5	18.3	18.4	-14.6	--		
PIMCO RAE Emerging Markets	372,890,359	3.4	-3.8	0.5	6.9	5.6	--	16.5	1.6	14.0	-12.6	--	5.6	Feb-17
<i>MSCI Emerging Markets Value NR</i>			-3.4	-3.5	3.2	4.2	--	4.0	5.5	12.0	-10.7	--	4.5	Feb-17
TT Emerging Markets	376,897,240	3.4	-12.2	-18.2	4.4	--	--	-0.9	20.0	24.0	-18.9	--	3.5	Jul-17
<i>MSCI Emerging Markets</i>			-7.0	-11.4	4.9	--	--	-2.5	18.3	18.4	-14.6	--	3.7	Jul-17

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

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Total Global Equity	1,074,275,240	9.7	-7.0	4.3	14.0	11.8	10.4	13.2	24.4	27.9	-8.5	22.8		
<i>MSCI ACWI</i>			-5.4	7.3	13.8	11.6	10.0	18.5	16.3	26.6	-9.4	24.0		
Artisan Partners	547,750,803	5.0	-13.3	0.7	17.6	15.6	--	14.1	40.6	36.0	-8.6	31.9	13.7	Oct-12
<i>MSCI ACWI Growth NR USD</i>			-9.7	5.4	17.9	15.5	--	17.1	33.6	32.7	-8.1	30.0	12.7	Oct-12
First Eagle	526,400,117	4.8	0.6	8.1	9.9	7.7	7.8	12.1	7.7	20.1	-8.3	14.3	7.9	Jan-11
<i>MSCI ACWI Value NR USD</i>			-1.0	8.8	9.0	7.5	7.6	19.6	-0.3	20.6	-10.8	18.3	7.0	Jan-11
Private Credit	892,762,869	8.1	2.7	13.0	8.3	7.8	10.1	10.0	4.0	7.7	8.3	10.4		
Total High Yield	175,881,035	1.6	-4.5	-0.6	3.8	3.8	4.8	4.9	4.7	14.7	-3.6	6.1		
<i>ICE BofAML High Yield Master II</i>			-4.5	-0.3	4.4	4.6	5.7	5.4	6.2	14.4	-2.3	7.5		
Allianz Global Investors	175,881,035	1.6	-4.5	-0.6	3.8	3.8	4.8	4.9	4.7	14.7	-3.6	6.1	6.2	Apr-00
<i>ICE BofAML High Yield Master II</i>			-4.5	-0.3	4.4	4.6	5.7	5.4	6.2	14.4	-2.3	7.5	6.8	Apr-00
Total Real Estate	783,534,694	7.1	3.9	18.9	6.4	7.9	9.6	19.2	-6.0	8.1	7.4	11.0		
<i>Real Estate Benchmark</i>			3.2	18.3	9.0	8.4	9.3	19.3	0.6	7.5	6.8	7.1		
<i>NCREIF-ODCE</i>			7.4	28.5	11.3	9.9	10.9	22.2	1.2	5.3	8.3	7.6		
<i>NCREIF Property Index</i>			5.3	21.9	9.6	8.5	9.6	17.7	1.6	6.4	6.7	7.0		
Total Core RE	214,113,144	1.9	-3.9	30.2	13.5	11.5	10.5	47.5	-5.2	27.5	-5.5	7.2		
Adelante	109,454,839	1.0	-3.7	30.5	13.5	11.6	10.6	47.5	-5.2	27.5	-5.5	7.2	10.6	Sep-01
<i>Wilshire REIT</i>			-3.9	29.1	11.9	10.0	9.9	46.2	-7.9	25.8	-4.8	4.2	10.6	Sep-01
Invesco US Fundamental Beta	104,658,304	0.9	--	--	--	--	--	--	--	--	--	--	6.3	Mar-22
<i>Wilshire REIT</i>			--	--	--	--	--	--	--	--	--	--	6.9	Mar-22
Total Private Real Estate	569,421,550	5.2	4.9	16.8	5.4	7.4	9.6	15.3	-6.1	6.2	8.8	11.4		
Private Equity	1,442,598,899	13.1	3.1	49.4	24.3	19.2	14.8	60.4	8.7	8.4	12.1	11.9		
Risk Parity	475,337,904	4.3	-5.0	5.4	7.8	--	--	9.3	9.6	--	--	--		
<i>60% MSCI ACWI Net/40% Bloomberg Global Aggregate</i>			-5.6	1.7	8.7	--	--	8.8	14.0	--	--	--	10.6	Jan-19
AQR Global Risk Premium-EL	216,916,803	2.0	-4.0	6.9	7.5	--	--	10.3	5.8	--	--	--	9.0	Jan-19
<i>HFR Risk Parity Vol 10 Index</i>			-4.9	3.1	4.5	--	--	6.8	3.6	--	--	--	7.0	Jan-19
PanAgora Risk Parity Multi Asset	258,421,101	2.3	-5.9	4.2	8.3	--	--	8.3	13.6	--	--	--	9.2	Feb-19
<i>HFR Risk Parity Vol 10 Index</i>			-4.9	3.1	4.5	--	--	6.8	3.6	--	--	--	5.3	Feb-19

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

Total Fund
Performance Summary (Net of Fees)

Period Ending: March 31, 2022

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017	Inception	Inception Date
Diversifying	771,283,389	7.0	-2.8	-0.7	0.4	0.7	0.7	1.7	-1.7	6.8	-2.3	2.6		
<i>Custom Diversifying Benchmark</i>			-2.9	-0.4	2.3	2.8	3.0	1.6	4.7	6.1	1.4	4.7		
Diversifying Fixed Income	244,021,498	2.2	-5.9	-4.8	-0.3	0.4	1.4	-1.0	1.2	8.3	-2.0	2.6		
AFL-CIO	243,935,990	2.2	-5.9	-4.8	1.2	1.8	2.0	-1.0	6.2	7.8	0.2	3.2	5.3	Jun-91
<i>Bloomberg US Aggregate TR</i>			-5.9	-4.2	1.7	2.1	2.2	-1.5	7.5	8.7	0.0	3.5	5.3	Jun-91
Diversifying Multi-Asset	527,261,891	4.8	-1.6	0.9	--	--	--	2.4	--	--	--	--		
<i>Custom Diversifying Multi-Asset Benchmark</i>			-2.3	0.5	--	--	--	4.1	--	--	--	--		
Acadian Multi-Asset Absolute Return Fund	248,052,861	2.3	-2.6	-1.4	--	--	--	1.1	--	--	--	--	0.0	Aug-20
<i>FTSE 3-Month T-bill +5%</i>			1.3	5.1	--	--	--	5.0	--	--	--	--	5.1	Aug-20
Sit LLCAR	279,209,030	2.5	-0.6	3.6	--	--	--	--	--	--	--	--	3.6	Apr-21
<i>Bloomberg US Aggregate Index + 100 bps</i>			-5.7	-3.2	--	--	--	--	--	--	--	--	-3.2	Apr-21
Liquidity	1,382,350,861	12.5	-2.5	-2.6	1.2	1.6	--	-0.3	3.4	4.8	1.7	1.4		
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-2.5	-2.9	1.0	1.3	--	-0.5	3.3	4.0	1.6	0.8		
DFA Short Credit	281,621,981	2.6	-3.8	-4.1	0.5	1.1	--	-0.5	2.8	5.2	1.1	1.8	1.2	Nov-16
<i>ICE BofA 1-5 Yrs US Corp & Govt TR</i>			-3.5	-3.8	1.2	1.4	--	-0.9	4.6	5.1	1.4	1.3	1.5	Nov-16
Insight Short Duration	579,542,761	5.3	-1.2	-1.1	1.7	1.8	--	0.0	3.1	4.6	1.7	1.5	1.8	Nov-16
<i>Bloomberg US Govt/Credit 1-3 Yr. TR</i>			-2.5	-2.9	1.0	1.3	--	-0.5	3.3	4.0	1.6	0.8	1.3	Nov-16
Sit Short Duration	521,186,119	4.7	-3.1	-3.6	1.1	1.7	--	-0.5	4.4	4.7	2.3	1.1	1.6	Nov-16
<i>Bloomberg US Govt 1-3 Yr TR</i>			-2.5	-3.0	0.8	1.1	--	-0.6	3.1	3.6	1.6	0.4	1.0	Nov-16
Total Cash	446,180,033	4.0	0.2	0.5	1.5	1.5	2.4	0.4	1.3	3.3	1.7	0.9		
<i>91 Day T-Bills</i>			0.0	0.1	0.7	1.1	0.6	0.0	0.5	2.1	1.9	0.9		
Cash	445,580,523	4.0	0.1	0.3	1.5	1.5	2.4	0.4	1.3	3.4	1.7	0.9		
Northern Trust Transition	599,510	0.0	2,930.9	2,889.0	290.9	--	--	-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. \$126,992.88 in residual value is reflected in the Diversifying Fixed Income composite.

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2022

StepStone Group Analysis (*)													
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/2022 ¹	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) ²	Tot. Value/ Paid-In (TVPI) ³	Latest Valuation	
Private Credit													
8/31/2015	Angelo Gordon Energy Credit Opp. ⁴	\$3,546,515	\$16,500,000	0%	\$18,750,000	\$0	\$0	\$18,829,566	\$2,319,783	1.00	1.19	12/31/2021	
12/18/2017	Stepstone CC Opportunities Fund	\$871,230,249	\$1,170,000,000	3%	\$807,174,947	\$40,818,750	\$0	\$89,848,226	\$424,524,509	0.11	1.19	9/30/2021	
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	\$9,122,501	\$60,000,000	0%	\$84,866,971	\$0	\$0	\$106,146,627	\$0	1.25	1.36	3/31/2021	
3/12/2015	Torchlight V	\$8,863,604	\$75,000,000	0%	\$60,000,000	\$0	\$5,725,223	\$70,135,692	\$15,000,000	1.17	1.32	12/31/2021	
Total Private Credit		\$892,762,869											
% of Portfolio (Market Value)		8.1%											

*All Data provided by StepStone Group

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

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

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2022

Verus Internal Analysis												
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/2022 ¹	Total Commitment	Total % Called	Capital Called	Current Qtr. Capital Called	Current Qtr. Distributions	Total Distributions ⁸	Remaining Commitment	Distrib./Paid-In (DPI) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation
Real Estate												
1/23/2012	Angelo Gordon Realty Fund VIII ⁴	\$15,334,276	\$80,000,000	94%	\$75,401,855	\$0	\$0	\$101,711,550	\$12,334,302	1.35	1.55	12/31/2021
12/8/2014	Angelo Gordon Realty Fund IX	\$43,664,926	\$65,000,000	93%	\$60,125,000	\$0	\$2,762,500	\$45,012,501	\$7,572,500	0.75	1.47	12/31/2021
6/23/2005	DLJ RECP III	\$15,902,346	\$75,000,000	134%	\$100,709,313 ⁴	\$0	\$0	\$69,364,915	\$4,031,338	0.69	0.85	12/31/2021
2/11/2008	DLJ RECP IV	\$55,846,590	\$100,000,000	130%	\$129,892,605 ⁵	\$0	\$0	\$97,530,461	\$1,876,084	0.75	1.18	12/31/2021
7/1/2014	DLJ RECP V	\$30,213,011	\$75,000,000	132%	\$98,684,517 ⁶	\$0	\$18,647,101	\$97,880,214	\$13,299,923	0.99	1.30	12/31/2021
3/19/2019	DLJ RECP VI	\$22,087,283	\$50,000,000	60%	\$30,103,770	\$0	\$11,369,099	\$11,589,841	\$20,855,532	0.38	1.12	12/31/2021
6/30/2013	Invesco Real Estate III ⁴	\$0	\$35,000,000	93%	\$32,386,423	\$0	\$153,777	\$47,576,839	\$2,613,577	1.47	1.47	3/31/2022
6/30/2014	Invesco Real Estate IV ⁴	\$2,964,661	\$35,000,000	87%	\$30,546,401	\$0	\$2,788,561	\$38,913,181	\$4,453,599	1.27	1.37	3/31/2022
2/20/2019	Invesco Real Estate V	\$72,739,445	\$75,000,000	79%	\$59,352,270	\$0	\$0	\$7,217,922	\$20,347,630 ⁹	0.12	1.35	3/31/2022
	Invesco Real Estate VI	\$0	\$100,000,000	0%	\$0	\$0	\$0	\$0	\$100,000,000	#DIV/0!	#DIV/0!	N/A
7/16/2013	LaSalle Income & Growth VI ⁴	\$20,071,145	\$75,000,000	95%	\$71,428,571	\$0	\$11,948	\$84,535,301	\$3,571,429	1.18	1.46	12/31/2021
2/28/2017	LaSalle Income & Growth VII	\$55,902,524	\$75,000,000	103%	\$77,293,582	\$0	\$8,681,743	\$52,979,429	\$8,502,405	0.69	1.41	12/31/2021
7/3/2013	Long Wharf Fund IV ⁴	\$1,532,213	\$25,000,000	100%	\$25,000,000	\$0	\$0	\$34,824,789	\$0	1.39	1.45	3/31/2022
9/30/2016	Long Wharf Fund V ⁴	\$31,639,861	\$50,000,000	100%	\$50,000,000	\$0	\$685,479	\$36,101,908	\$0	0.72	1.35	3/31/2022
6/27/2019	Long Wharf Fund VI	\$28,674,828	\$50,000,000	64%	\$31,982,159	\$5,738,355	\$2,775,024	\$12,487,610	\$18,017,841	0.39	1.29	3/31/2022
12/31/2011	Oaktree REOF VI ⁴	\$1,213,282	\$50,000,000	101%	\$50,315,673	\$0	\$268,000	\$85,975,916	\$5,000,000 ⁹	1.71	1.73	3/31/2022
9/30/2013	Oaktree REOF VI ⁴	\$25,861,783	\$80,000,000	100%	\$80,000,000	\$0	\$0	\$84,010,175	\$18,400,000 ⁹	1.05	1.37	3/31/2022
4/1/2015	Oaktree REOF VII	\$49,913,265	\$65,000,000	100%	\$65,000,000	\$0	\$0	\$42,829,688	\$18,915,000 ⁹	0.66	1.43	3/31/2022
11/10/2013	Paulson Real Estate Fund II ⁴	\$19,793,693	\$20,000,000	97%	\$19,345,623	\$0	\$0	\$20,947,018	\$654,377	1.08	2.11	9/30/2021
1/25/2012	Siguler Guff DREOF	\$23,570,061	\$75,000,000	93%	\$69,375,000	\$0	\$762,124	\$96,380,022	\$5,625,000	1.39	1.73	9/30/2021
8/31/2013	Siguler Guff DREOF II	\$39,240,689	\$70,000,000	89%	\$61,985,000	\$0	\$5,259,759	\$49,237,698	\$8,015,000	0.79	1.43	9/30/2021
1/27/2016	Siguler Guff DREOF II Co-Inv	\$12,988,186	\$25,000,000	82%	\$20,537,862	\$0	\$0	\$13,584,170	\$4,462,138	0.66	1.29	9/30/2021
Total Closed End Real Estate		\$569,154,067	\$1,375,000,000	92%	\$1,259,404,089	\$5,738,355	\$54,165,115	\$1,158,168,418	\$278,547,673	0.92	1.37	
% of Portfolio (Market Value)		4.9%										

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

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

⁴Capital has been fully called and fund is in redemption.

⁵Total distributions may include recallable distributions

⁶Remianing commitment includes recallable distributions

Total Fund
Closed End Funds - Investment Summary

Period Ending: March 31, 2022

StepStone Group Analysis (*)													
Closing Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/2022 ¹	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) ²	Tot. Value/Paid-In (TVPI) ³	Latest Valuation	
Private Equity & Venture Capital													
2/11/2004	Adams Street Partners	\$180,594,279	\$210,000,000	0%	\$191,780,625	\$0	\$8,355,731	\$245,131,838	\$18,219,375	1.28	2.22	12/31/2021	
1/15/2009	Adams Street Partners II	\$3,778,775	\$30,000,000	0%	\$28,365,000	\$0	\$898,842	\$45,123,354	\$1,635,000	1.59	1.72	12/31/2021	
9/21/2012	Adams Street Partners - Fund 5	\$14,526,409	\$40,000,000	0%	\$30,845,875	\$0	\$1,622,332	\$28,013,923	\$9,154,125	0.91	1.38	12/31/2021	
1/18/1996	Adams Street Partners - BPF	\$1,652,197	\$59,565,614	0%	\$57,517,409	\$0	\$0	\$102,731,103	\$2,048,205	1.79	1.81	9/30/2021	
3/31/2016	Adams Street Venture Innovation	\$211,850,261	\$75,000,000	0%	\$66,037,500	\$0	\$3,518,386	\$30,786,690	\$8,962,500	0.47	3.67	12/31/2021	
5/18/2018	AE Industrial Partners Fund II, LP	\$42,632,691	\$35,000,000	10%	\$27,336,259	\$3,379,940	\$0	\$3,559,451	\$11,223,193	0.13	1.69	12/31/2021	
11/27/2013	Aether Real Assets III	\$19,308,452	\$25,000,000	2%	\$25,431,612	\$408,777	\$141,549	\$5,206,510	\$1,798,247	0.20	0.96	9/30/2021	
11/30/2013	Aether Real Assets III Surplus	\$41,826,987	\$50,000,000	0%	\$51,968,989	\$180,057	\$81,150	\$11,713,685	\$1,645,476	0.23	1.03	9/30/2021	
1/30/2016	Aether Real Assets IV	\$55,377,863	\$50,000,000	2%	\$48,730,643	\$868,638	\$89,794	\$3,674,722	\$4,103,494	0.08	1.21	9/30/2021	
4/30/2004	Bay Area Equity Fund I ⁴	\$1,241,100	\$10,000,000	0%	\$10,000,000	\$0	\$0	\$37,018,019	\$0	3.70	3.83	12/31/2021	
6/29/2009	Bay Area Equity Fund II ⁴	\$18,516,533	\$10,000,000	0%	\$10,000,000	\$0	\$0	\$3,684,910	\$0	0.37	2.22	12/31/2021	
6/30/2013	Commonfund	\$37,492,843	\$50,000,000	1%	\$46,774,993	\$250,000	\$2,242,245	\$18,581,395	\$3,225,007	0.40	1.20	9/30/2021	
7/15/2005	EIF US Power Fund II ⁴	\$3,584,649	\$50,000,000	0%	\$65,029,556	\$0	\$1,252,091	\$75,253,462	\$0	1.16	1.21	9/30/2021	
5/31/2007	EIF US Power Fund III ⁴	\$10,579,825	\$65,000,000	0%	\$71,409,097	\$0	\$0	\$85,938,521	\$0	1.20	1.35	12/31/2021	
11/28/2011	EIF US Power Fund IV	\$27,276,860	\$50,000,000	0%	\$64,917,547	\$0	\$0	\$41,055,366	\$4	0.63	1.05	9/30/2021	
11/28/2016	EIF US Power Fund V	\$33,526,687	\$50,000,000	12%	\$69,328,438	\$6,244,817	\$0	\$52,513,417	\$6,194,129	0.76	1.24	12/31/2021	
2/21/2019	Genstar Capital Partners IX, L.P.	\$62,554,203	\$50,000,000	-3%	\$46,503,313	-\$1,680,440	\$37,211	\$6,295,337	\$6,353,006	0.14	1.48	12/31/2021	
4/1/2021	Genstar Capital Partners X, L.P.	\$5,480,401	\$42,500,000	1%	\$5,228,730	\$495,866	\$0	\$0	\$37,271,270	0.00	1.05	12/31/2021	
10/27/2020	GTCR Fund XIII, L.P.	\$10,582,123	\$50,000,000	8%	\$9,180,000	\$3,805,000	\$0	\$1,809,154	\$40,820,000	0.20	1.35	12/31/2021	
5/10/2021	Hellman & Friedman Capital Partners X, L.P.	\$38,721,519	\$75,000,000	42%	\$40,882,181	\$31,747,109	\$0	\$0	\$34,117,819	0.00	0.95	12/31/2021	
11/18/2009	Oaktree PIF 2009	\$477,280	\$40,000,000	0%	\$34,812,560	\$0	\$0	\$47,032,470	\$6,308,961	1.35	1.36	12/31/2021	
5/2/2013	Ocean Avenue Fund II	\$30,039,218	\$30,000,000	0%	\$27,000,000	\$0	\$1,318,125	\$38,050,470	\$3,000,000	1.41	2.52	12/31/2021	
4/15/2016	Ocean Avenue Fund III	\$49,737,032	\$50,000,000	4%	\$46,000,000	\$2,000,000	\$0	\$48,000,000	\$4,000,000	1.04	2.12	12/31/2021	
11/30/2007	Paladin III	\$23,922,380	\$25,000,000	0%	\$34,736,206	\$0	\$0	\$67,416,571	\$419,157	1.94	2.63	12/31/2021	
8/22/2011	Pathway 6	\$45,780,297	\$40,000,000	0%	\$39,234,460	\$63,000	\$3,501,050	\$46,277,401	\$3,749,454	1.18	2.35	9/30/2021	
7/10/2013	Pathway 7	\$89,732,272	\$70,000,000	0%	\$68,899,586	\$132,475	\$5,747,650	\$72,356,225	\$5,488,302	1.05	2.35	9/30/2021	
11/23/2015	Pathway 8	\$80,209,243	\$50,000,000	1%	\$46,737,663	\$608,485	\$3,522,254	\$26,832,150	\$5,114,739	0.57	2.29	9/30/2021	
1/19/1999	Pathway	\$4,850,787	\$125,000,000	0%	\$125,909,794	\$61,940	\$1,277,726	\$187,309,007	\$10,614,246	1.49	1.53	9/30/2021	
7/31/2009	Pathway 2008	\$21,018,879	\$30,000,000	0%	\$29,925,866	\$42,147	\$1,008,841	\$48,107,803	\$2,842,743	1.61	2.31	9/30/2021	
6/3/2014	Siguler Guff CCCERA Opportunities	\$151,068,966	\$200,000,000	0%	\$174,083,208	\$0	\$23,928,327	\$189,200,018	\$29,597,500	1.09	1.95	12/31/2021	
5/18/2018	Siris Partners IV, L.P.	\$31,081,399	\$35,000,000	0%	\$22,527,930	\$0	\$0	\$4,030,441	\$14,895,014	0.18	1.56	12/31/2021	
5/27/2021	TA XIV-A, L.P.	\$13,500,000	\$50,000,000	0%	\$13,500,000	\$0	\$0	\$0	\$36,500,000	0.00	1.00	12/31/2021	
6/28/2019	TPG Healthcare Partners, L.P.	\$16,653,502	\$24,000,000	11%	\$13,588,959	\$2,722,784	\$0	\$1,956,092	\$12,030,771	0.14	1.37	12/31/2021	
9/17/2021	Trident IX, L.P.	\$0	\$50,000,000	0%	\$0	\$0	\$0	\$0	\$50,000,000	-	-	-	
5/24/2019	Trident VIII, L.P.	\$48,307,304	\$40,000,000	0%	\$37,182,999	\$0	\$0	\$974,669	\$3,785,168	0.03	1.33	12/31/2021	
12/8/2015	Wastewater Opportunity Fund	\$16,188,655	\$25,000,000	0%	\$29,242,585	\$0	\$0	\$12,893,182	\$1,204,775	0.44	0.99	9/30/2021	
Total Private Equity and Venture Capital		\$1,443,671,872	\$1,961,065,614	87%	\$1,710,649,583	\$51,330,596	\$58,543,306	\$1,588,527,358	\$376,321,680	0.93	1.77		
% of Portfolio (Market Value)		13.1%											

* All Data provided by StepStone Group

¹Latest valuation + capital calls - distributions

²(DPI) is equal to (capital returned / capital called)

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

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - IRR Summary

Period Ending: March 31, 2022

Private Credit	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon Energy Cred Opp. ⁴	9/24/2015	-	-	-	7.4%	12/31/2021
Stepstone CC Opportunities Fund	2/2/2018	-	10.1%	-	14.0%	9/30/2021
Torchlight IV	8/1/2012	12.0%	12.5%	9.7%	10.4%	3/31/2022
Torchlight V	3/12/2015	15.4%	15.5%	10.8%	10.7%	12/31/2021

Real Estate	Inception	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Angelo Gordon VIII ⁴	1/23/2012	-	-	-	13.3%	12/31/2021
Angelo Gordon IX	12/8/2014	-	-	-	9.5%	12/31/2021
DLJ RECP III	6/23/2005	-1.0%	-1.0%	-3.0%	-2.0%	12/31/2021
DLJ RECP IV	2/11/2008	5.0%	5.0%	2.0%	2.0%	12/31/2021
DLJ RECP V	7/1/2014	18.0%	18.0%	10.0%	10.0%	12/31/2021
DLJ RECP VI ¹	3/19/2019	11.0%	11.0%	4.0%	4.0%	12/31/2021
Hearthstone II ⁴	6/17/1998	-	30.3%	-	30.3%	3/31/2020
Invesco Fund III ⁴	6/30/2013	16.6%	-	13.6%	-	12/31/2020
Invesco Fund IV ⁴	6/30/2014	15.6%	-	12.0%	-	12/31/2021
Invesco Fund V	2/20/2019	27.9%	-	19.8%	-	12/31/2021
LaSalle Income & Growth VI ⁴	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 ⁴	7/3/2013	16.5%	15.9%	11.9%	11.9%	12/31/2021
Long Wharf V ⁴	9/30/2016	11.8%	12.4%	9.0%	9.4%	12/31/2021
Long Wharf VI	6/27/2019	52.3%	65.3%	30.9%	37.4%	12/31/2021
Oaktree REOF V ⁴	12/31/2011	16.7%	-	12.3%	-	3/31/2022
Oaktree REOF VI ⁴	9/30/2013	11.5%	-	7.8%	-	3/31/2022
Oaktree REOF VII	4/1/2015	26.2%	-	17.5%	-	3/31/2022
Paulson ⁴	11/10/2013	18.0%	-	12.0%	-	12/31/2021
Siguler Guff I	1/25/2012	13.1%	15.8%	11.6%	12.7%	12/31/2021
Siguler Guff II	8/31/2013	11.2%	11.2%	99.0%	9.1%	12/31/2021
Siguler Guff DREOF II Co-Inv	1/27/2016	7.5%	7.8%	6.5%	6.3%	12/31/2021

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

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

⁴Capital has been fully called and fund is in redemption.

Total Fund
Closed End Funds - IRR Summary

Period Ending: March 31, 2022

Private Equity & Venture Capital	Closing Date	Fund Level (G) ²	CCCERA (G)	Fund Level (N) ^{2,3}	CCCERA (N) ³	IRR Date
Adams Street Partners	2/11/2004	-	15.3%	-	13.3%	12/31/2021
Adams Street Partners II	12/31/2008	-	17.8%	-	14.1%	12/31/2021
Adams Street Partners - Fund 5	12/31/2008	-	10.4%	-	7.3%	12/31/2021
Adams Street Partners Venture	1/18/1996	-	63.8%	-	60.8%	12/31/2021
Adams Street Partners - BPF	3/31/2016	-	14.2%	-	11.6%	12/31/2021
AE Industrial Partners Fund II, LP	5/18/2018	47.5%	-	48.8%	-	12/31/2021
Aether Real Assets III	11/27/2013	2.1%	2.1%	-0.8%	-0.8%	9/30/2021
Aether Real Assets III Surplus	11/30/2013	2.4%	2.4%	0.7%	0.7%	9/30/2021
Aether Real Assets IV	1/30/2016	10.8%	10.8%	7.2%	7.2%	9/30/2021
Bay Area Equity Fund I ⁹	11/26/2003	31.3%	31.3%	23.0%	23.0%	12/31/2021
Bay Area Equity Fund II ⁹	11/26/2003	14.5%	14.5%	0.7%	9.7%	12/31/2021
CommonFund	6/30/2013	-	-	-	5.6%	9/30/2021
Energy Investor Fund II ⁹	7/15/2005	5.6%	5.2%	2.8%	2.5%	12/31/2021
Energy Investor Fund III ⁹	5/31/2007	7.0%	7.0%	4.6%	4.6%	12/31/2021
Energy Investor Fund IV	8/31/2010	5.2%	5.2%	2.0%	1.9%	12/31/2021
Energy Investor Fund V	11/28/2016	17.9%	14.2%	15.2%	11.6%	12/31/2021
Genstar Capital Partners IX, L.P. ¹	2/21/2019	40.0%	-	-	-	12/31/2021
Oaktree PIF 2009	2/28/2010	6.8%	-	6.6%	-	3/31/2022
Ocean Avenue II	8/15/2013	-	-	19.3%	-	6/30/2021
Ocean Avenue III	4/15/2016	-	-	22.6%	-	12/31/2020
Paladin III	11/30/2007	21.8%	-	-	-	12/31/2021
Pathway 6	8/22/2011	20.5%	20.5%	18.3%	18.3%	9/30/2021
Benchmark ⁴		16.6%	-	-	-	9/30/2021
Pathway 7	7/10/2013	23.3%	23.3%	21.2%	21.2%	9/30/2021
Benchmark ⁵		18.1%	-	-	-	9/30/2021
Pathway 8	11/23/2015	28.9%	29.0%	27.5%	27.7%	9/30/2021
Benchmark ⁶		23.7%	-	-	-	9/30/2021
Pathway Private Equity Fund	1/19/1999	10.3%	10.3%	8.4%	8.4%	9/30/2021
Benchmark ⁷		10.6%	-	-	-	9/30/2021
Pathway Private Equity Fund 2008	7/31/2009	18.4%	18.4%	16.2%	16.2%	9/30/2021
Benchmark ⁸		14.5%	-	-	-	9/30/2021
Siguler Guff CCCERA Opportunities	6/3/2014	21.0%	21.8%	20.5%	19.1%	12/31/2021
Siguler Guff Secondary Opportunities ⁹	8/31/2013	55.3%	118.4%	49.5%	69.0%	9/30/2020
Siris Partners IV, L.P.	5/18/2018	30.1%	30.1%	25.0%	25.0%	12/31/2021
TPG Healthcare Partners, L.P.	6/28/2019	45.0%	-	-	28.0%	3/31/2022
Trident VIII, L.P. ¹	5/24/2019	-	-	-	-	-
Wastewater Opportunity Fund	12/8/2015	8.8%	-	5.5%	-	12/31/2021

¹Manager has yet to report IRR figure.

²Fund level data includes CCCERA and all other fund investors.

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

⁴Private IQ global all private equity median pooled return for vintage years 2011-2014, as of September 30, 2021.

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

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

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

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

⁹Capital has been fully called and fund is in redemption.

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

Period Ending: March 31, 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	18.69%	-0.02%	18.28%	-0.01%	1.00	0.01%	1.00	0.99	-1.23	99.92%	100.00%	
Jackson Square Partners	15.35%	-8.25%	20.45%	-7.58%	0.97	7.76%	0.86	0.72	-1.06	70.06%	96.47%	
Boston Partners	15.24%	2.22%	20.14%	1.68%	1.04	3.07%	0.98	0.72	0.72	106.58%	97.56%	
Emerald Advisers	11.39%	1.51%	23.08%	2.18%	0.93	5.78%	0.94	0.46	0.26	102.49%	97.88%	
Ceredex	8.75%	-3.98%	23.05%	-2.52%	0.89	7.19%	0.92	0.35	-0.55	74.28%	92.58%	
Pyrford	6.90%	1.45%	14.59%	3.06%	0.70	7.59%	0.88	0.43	0.19	74.83%	77.16%	
William Blair	12.86%	3.74%	18.33%	2.62%	1.12	4.72%	0.95	0.67	0.79	125.32%	103.97%	
PIMCO RAE Emerging Markets	6.93%	3.70%	21.88%	3.31%	1.12	5.72%	0.94	0.29	0.65	124.67%	101.87%	
TT Emerging Markets	4.38%	-0.56%	22.93%	-1.66%	1.22	6.54%	0.95	0.16	-0.09	131.24%	117.11%	
Artisan Partners	17.57%	-0.29%	17.09%	1.02%	0.93	4.97%	0.92	0.99	-0.06	90.55%	91.55%	
First Eagle	9.93%	0.91%	13.59%	3.52%	0.71	6.31%	0.94	0.68	0.15	73.91%	74.67%	
JP Morgan Global Opportunities	0.91%	-12.84%	6.90%	-0.92%	0.13	16.28%	0.11	0.04	-0.79	9.07%	23.21%	
Allianz Global Investors	3.82%	-0.58%	8.07%	0.04%	0.86	1.95%	0.97	0.39	-0.30	87.26%	91.15%	
Adelante	13.54%	1.60%	18.31%	2.22%	0.95	1.60%	1.00	0.70	1.00	100.56%	94.55%	
AQR Global Risk Premium-EL	7.45%	--	8.97%	--	--	--	--	0.76	--	--	--	
PanAgora Risk Parity Multi Asset	8.27%	--	10.25%	--	--	--	--	0.74	--	--	--	
AFL-CIO	1.25%	-0.44%	3.72%	-0.25%	0.89	1.10%	0.93	0.16	-0.40	81.48%	86.87%	
DFA Short Credit	0.48%	-0.68%	2.27%	-0.60%	0.93	1.31%	0.67	-0.08	-0.52	70.32%	90.31%	
Insight Short Duration	1.66%	0.64%	2.07%	0.92%	0.72	1.85%	0.24	0.48	0.35	94.89%	37.28%	
Sit Short Duration	1.14%	0.30%	2.25%	0.06%	1.29	1.10%	0.80	0.21	0.27	148.33%	151.69%	

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: March 31, 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
Jackson Square Partners	14.95%	-5.94%	17.92%	-5.05%	0.96	6.58%	0.87	0.78	-0.90	69.34%	96.65%
Boston Partners	11.91%	1.63%	17.54%	1.17%	1.04	2.97%	0.97	0.62	0.55	107.62%	98.46%
Emerald Advisers	12.82%	2.49%	21.50%	2.89%	0.96	5.41%	0.94	0.55	0.46	104.88%	96.29%
Ceredex	6.61%	-1.96%	20.39%	-1.03%	0.89	6.32%	0.92	0.27	-0.31	76.93%	94.77%
Pyrford	5.96%	1.30%	12.72%	2.65%	0.71	6.64%	0.87	0.39	0.20	69.19%	77.70%
William Blair	10.52%	1.92%	16.39%	0.97%	1.11	4.06%	0.95	0.58	0.47	119.74%	103.46%
PIMCO RAE Emerging Markets	5.57%	1.33%	19.35%	0.87%	1.11	4.94%	0.94	0.23	0.27	115.68%	102.34%
Total Global Equity	11.78%	0.14%	13.18%	1.95%	0.84	3.95%	0.94	0.81	0.03	83.97%	87.59%
Artisan Partners	15.61%	0.14%	15.63%	0.91%	0.95	4.24%	0.93	0.93	0.03	92.89%	94.14%
First Eagle	7.70%	0.24%	11.73%	2.37%	0.71	5.44%	0.93	0.57	0.04	66.37%	75.48%
JP Morgan Global Opportunities	2.36%	-9.28%	6.55%	1.11%	0.11	14.93%	0.06	0.20	-0.62	8.54%	16.13%
Allianz Global Investors	3.84%	-0.72%	6.86%	-0.19%	0.88	1.54%	0.97	0.41	-0.47	88.14%	95.76%
Adelante	11.59%	1.55%	16.48%	2.08%	0.95	1.70%	0.99	0.64	0.91	98.28%	93.41%
AFL-CIO	1.78%	-0.37%	3.30%	-0.14%	0.89	0.93%	0.93	0.22	-0.39	83.14%	87.29%
DFA Short Credit	1.11%	-0.34%	1.96%	-0.27%	0.95	1.03%	0.72	0.03	-0.33	84.01%	93.12%
Insight Short Duration	1.82%	0.56%	1.66%	0.91%	0.72	1.44%	0.28	0.46	0.39	96.56%	30.51%
Sit Short Duration	1.69%	0.64%	2.03%	0.25%	1.38	1.02%	0.81	0.31	0.63	165.03%	156.96%

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

Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2022

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
BlackRock Russell 1000 Index	Growth	0.03% of Assets	\$612,596,790	\$183,779	0.03%
Jackson Square Partners	Growth	0.40% of First 400.0 Mil, 0.35% Thereafter	\$291,974,099	\$1,167,896	0.40%
Boston Partners	Growth	0.50% of First 25.0 Mil, 0.30% Thereafter	\$417,910,620	\$1,303,732	0.31%
Emerald Advisers	Growth	0.75% of First 10.0 Mil, 0.60% Thereafter	\$229,413,749	\$1,391,482	0.61%
Ceredex	Growth	0.85% of First 10.0 Mil, 0.68% of Next 40.0 Mil, 0.51% Thereafter	\$197,625,614	\$1,109,891	0.56%
Pyrford	Growth	0.70% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.35% Thereafter	\$487,895,895	\$1,957,636	0.40%
William Blair	Growth	0.80% of First 20.0 Mil, 0.60% of Next 30.0 Mil, 0.50% of Next 50.0 Mil, 0.45% of Next 50.0 Mil, 0.40% of Next 50.0 Mil, 0.30% Thereafter	\$479,112,230	\$1,852,337	0.39%
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	\$372,890,359	\$1,990,507	0.53%
TT Emerging Markets	Growth	0.70% of First 100.0 Mil, 0.65% of Next 100.0 Mil, 0.60% Thereafter	\$376,897,240	\$2,411,383	0.64%
Artisan Partners	Growth	0.75% of Assets	\$547,750,803	\$4,108,131	0.75%
First Eagle	Growth	0.75% of Assets	\$526,400,117	\$3,948,001	0.75%
Allianz Global Investors	Growth	0.50% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	\$175,881,035	\$715,584	0.41%
Invesco US Fundamental Beta	Growth		\$104,658,304		
AQR Global Risk Premium-EL	Growth	0.38% of Assets	\$216,916,803	\$824,284	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: March 31, 2022

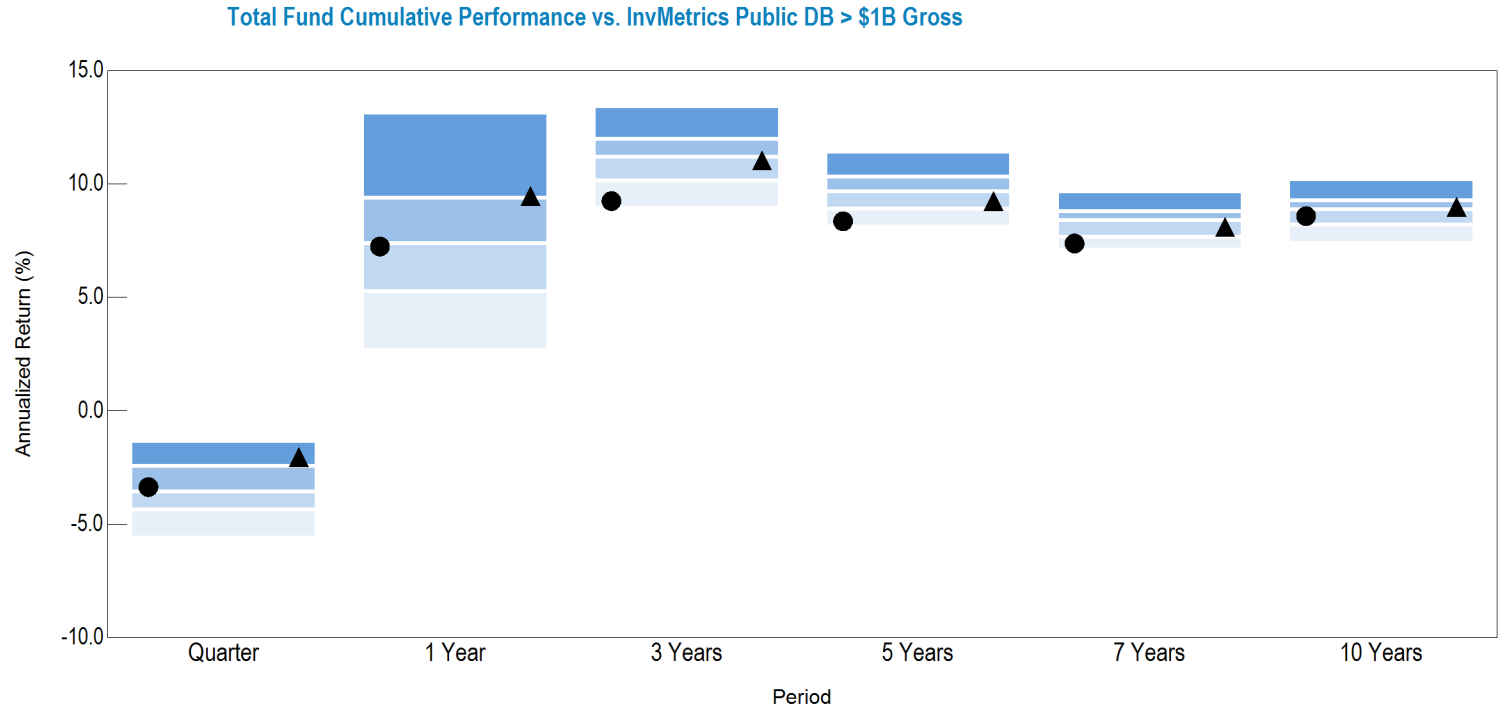
Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
PanAgora Risk Parity Multi Asset	Growth	0.35% of Assets	\$258,421,101	\$904,474	0.35%
AFL-CIO	Diversifying	0.32% of Assets	\$243,935,990	\$780,595	0.32%
Parametric Defensive Equity	Diversifying	0.42% of First 200.0 Mil, 0.39% Thereafter	\$0	\$0	0.36%
Acadian Multi-Asset Absolute Return Fund	Diversifying	0.50% of Assets	\$248,052,861	\$1,240,264	0.50%
Sit LLCAR	Diversifying	0.39% of First 200.0 Mil, 0.35% Thereafter	\$279,209,030	\$1,057,232	0.38%
DFA Short Credit	Liquidity	0.20% of First 25.0 Mil, 0.10% Thereafter	\$281,621,981	\$306,622	0.11%

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

Total Fund

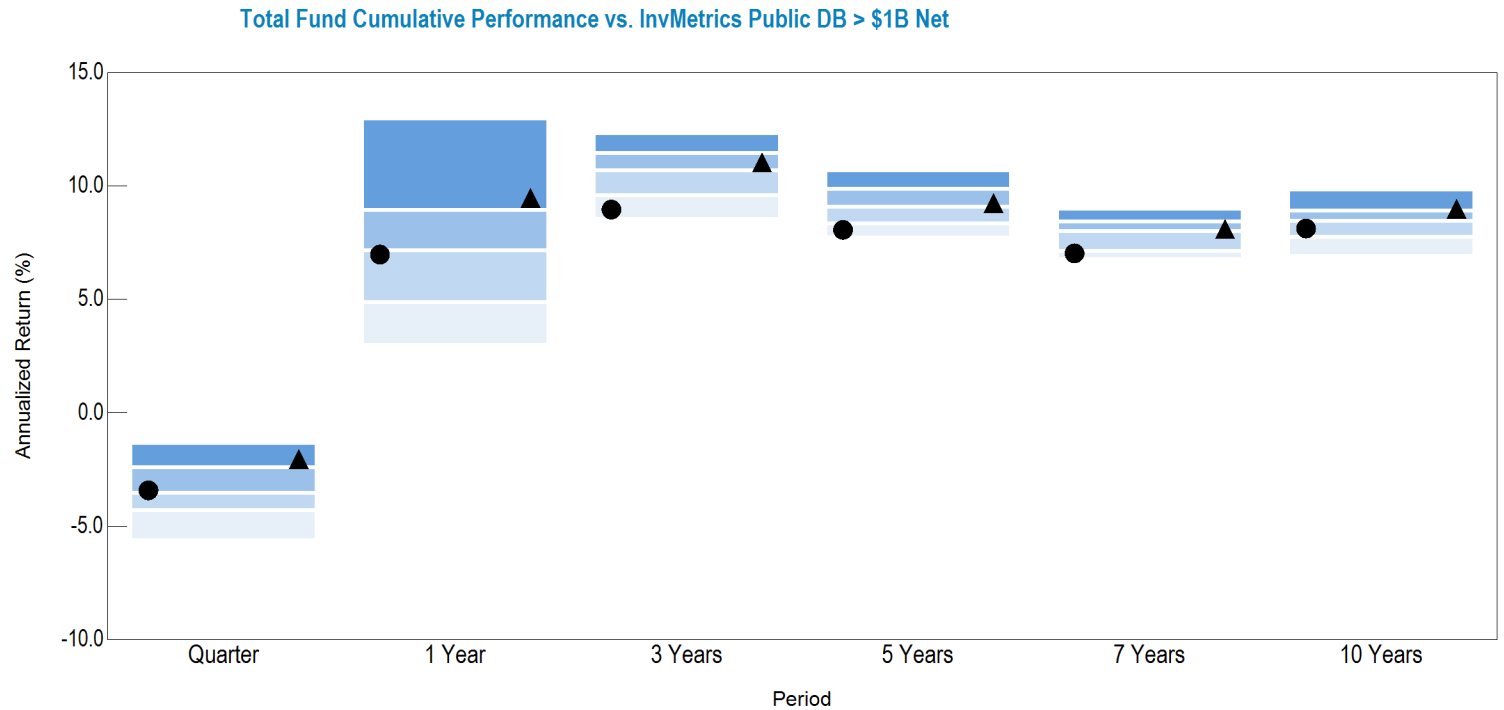
Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: March 31, 2022



	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-1.3		13.1		13.4		11.4		9.7		10.2	
25th Percentile	-2.4		9.4		12.0		10.3		8.8		9.3	
Median	-3.5		7.4		11.2		9.7		8.4		8.9	
75th Percentile	-4.3		5.3		10.2		8.9		7.7		8.2	
95th Percentile	-5.6		2.7		8.9		8.1		7.1		7.4	
# of Portfolios	75		74		74		74		73		71	
● Total Fund	-3.4	(38)	7.2	(54)	9.2	(93)	8.3	(89)	7.4	(91)	8.6	(69)
▲ Policy Index	-2.0	(16)	9.5	(25)	11.0	(55)	9.2	(64)	8.1	(64)	9.0	(45)

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.

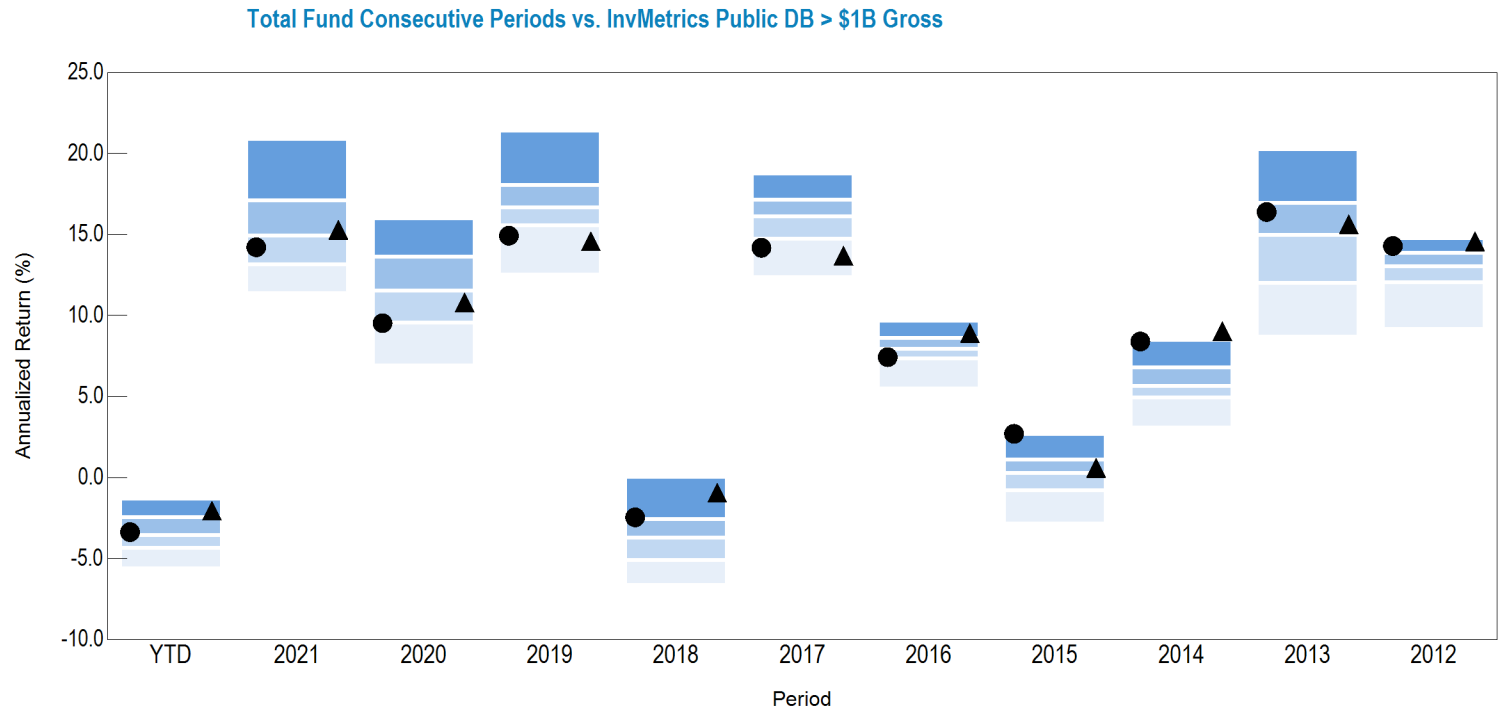


	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	-1.3		12.9		12.3		10.7		9.0		9.8	
25th Percentile	-2.4		8.9		11.5		9.9		8.4		8.9	
Median	-3.5		7.2		10.7		9.1		8.0		8.5	
75th Percentile	-4.3		4.9		9.6		8.4		7.2		7.8	
95th Percentile	-5.6		3.0		8.6		7.7		6.8		6.9	
# of Portfolios	62		61		61		61		60		56	
● Total Fund	-3.4	(44)	7.0	(53)	9.0	(92)	8.1	(85)	7.0	(90)	8.1	(62)
▲ Policy Index	-2.0	(18)	9.5	(20)	11.0	(39)	9.2	(48)	8.1	(43)	9.0	(23)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: March 31, 2022



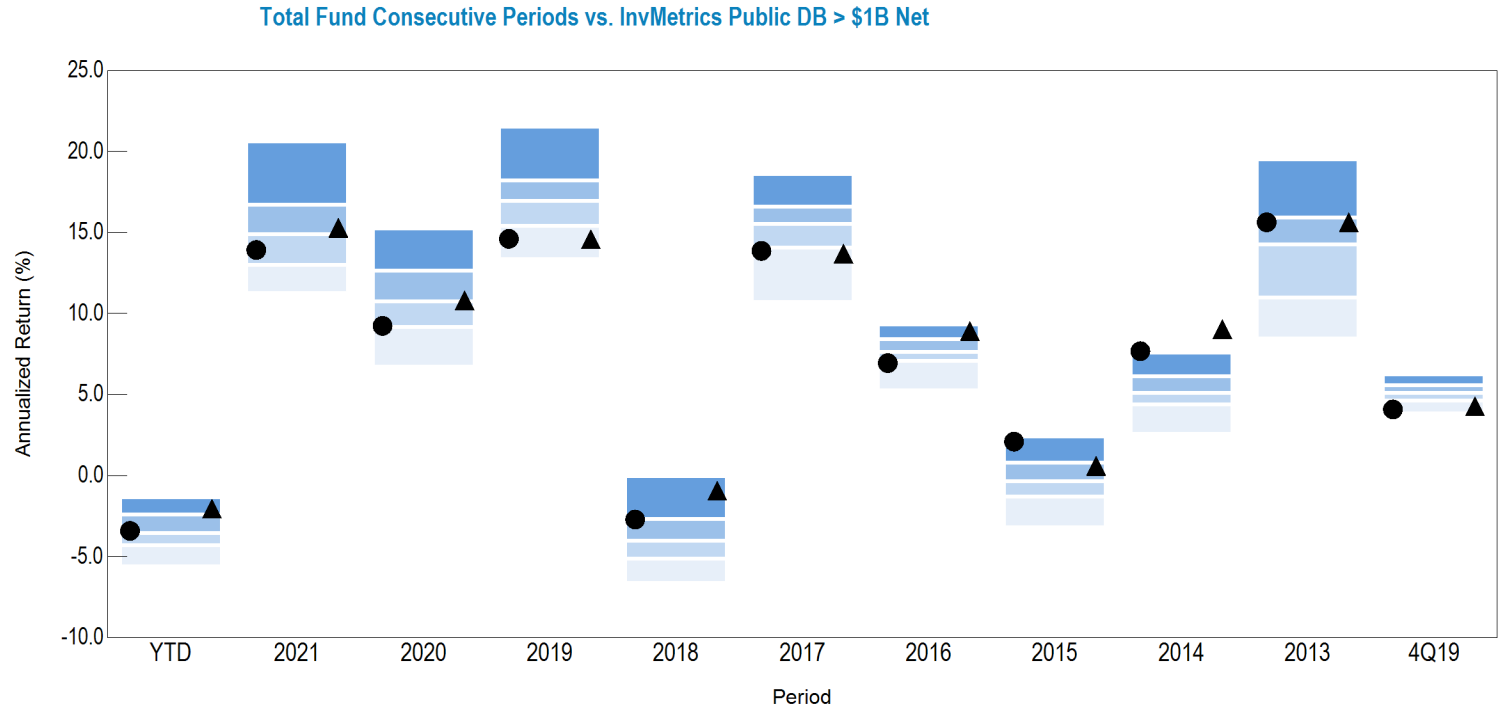
	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Return (Rank)											
5th Percentile	-1.3	20.9	16.0	21.4	0.0	18.8	9.7	2.7	8.5	20.2	14.7
25th Percentile	-2.4	17.1	13.6	18.1	-2.6	17.2	8.6	1.1	6.8	17.0	13.9
Median	-3.5	14.9	11.5	16.7	-3.7	16.2	8.0	0.3	5.7	15.0	13.0
75th Percentile	-4.3	13.2	9.6	15.6	-5.1	14.8	7.4	-0.7	4.9	12.0	12.1
95th Percentile	-5.6	11.4	6.9	12.5	-6.6	12.4	5.5	-2.8	3.1	8.7	9.2
# of Portfolios	75	84	94	81	71	98	92	98	79	67	74
● Total Fund	-3.4 (38)	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)
▲ Policy Index	-2.0 (16)	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: March 31, 2022



	YTD	2021	2020	2019	2018	2017	2016	2015	2014	2013	4Q19
5th Percentile	-1.3	20.6	15.2	21.5	-0.1	18.6	9.3	2.4	7.6	19.5	6.2
25th Percentile	-2.4	16.7	12.7	18.2	-2.7	16.6	8.4	0.8	6.1	16.0	5.6
Median	-3.5	14.9	10.8	17.0	-4.0	15.6	7.7	-0.4	5.1	14.3	5.1
75th Percentile	-4.3	13.0	9.2	15.4	-5.1	14.1	7.1	-1.3	4.4	11.0	4.6
95th Percentile	-5.6	11.3	6.8	13.4	-6.6	10.7	5.3	-3.2	2.6	8.5	3.9
# of Portfolios	62	74	80	69	63	61	62	57	55	48	69
● Total Fund	-3.4 (44)	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)	4.1 (89)
▲ Policy Index	-2.0 (18)	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)	4.3 (84)

Domestic Equity Managers

Jackson Square Partners Manager Portfolio Overview

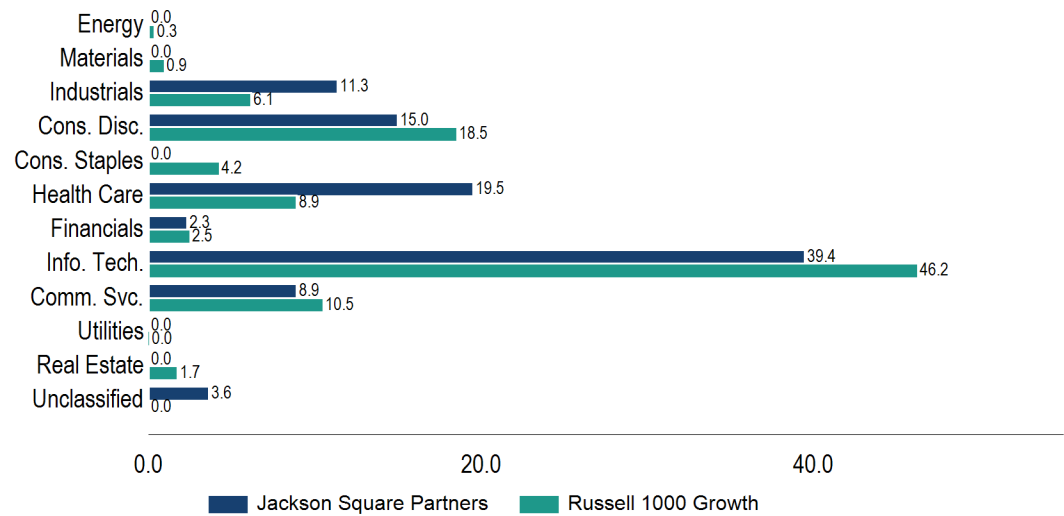
Period Ending: March 31, 2022

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

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	29	499
Weighted Avg. Market Cap. (\$B)	517.46	983.05
Median Market Cap. (\$B)	74.94	18.31
Price To Earnings	37.21	30.97
Price To Book	8.67	11.84
Price To Sales	6.81	5.12
Return on Equity (%)	23.58	42.15
Yield (%)	0.31	0.78
Beta	1.01	1.00

Sector Allocation (%) vs Russell 1000 Growth



Largest Holdings

	End Weight	Return
AMAZON.COM INC	9.50	-2.23
MICROSOFT CORP	9.32	-8.14
MASTERCARD INC	6.38	-0.41
VISA INC	6.03	2.50
UBER TECHNOLOGIES INC	4.86	-14.91
EDWARDS LIFESCIENCES CORP	4.73	-9.13
CHARTER COMMUNICATIONS INC	3.86	-16.33
CATALENT INC	3.85	-13.38
SERVICENOW INC	3.73	-14.21
NIKE INC	3.45	-19.08

Top Contributors

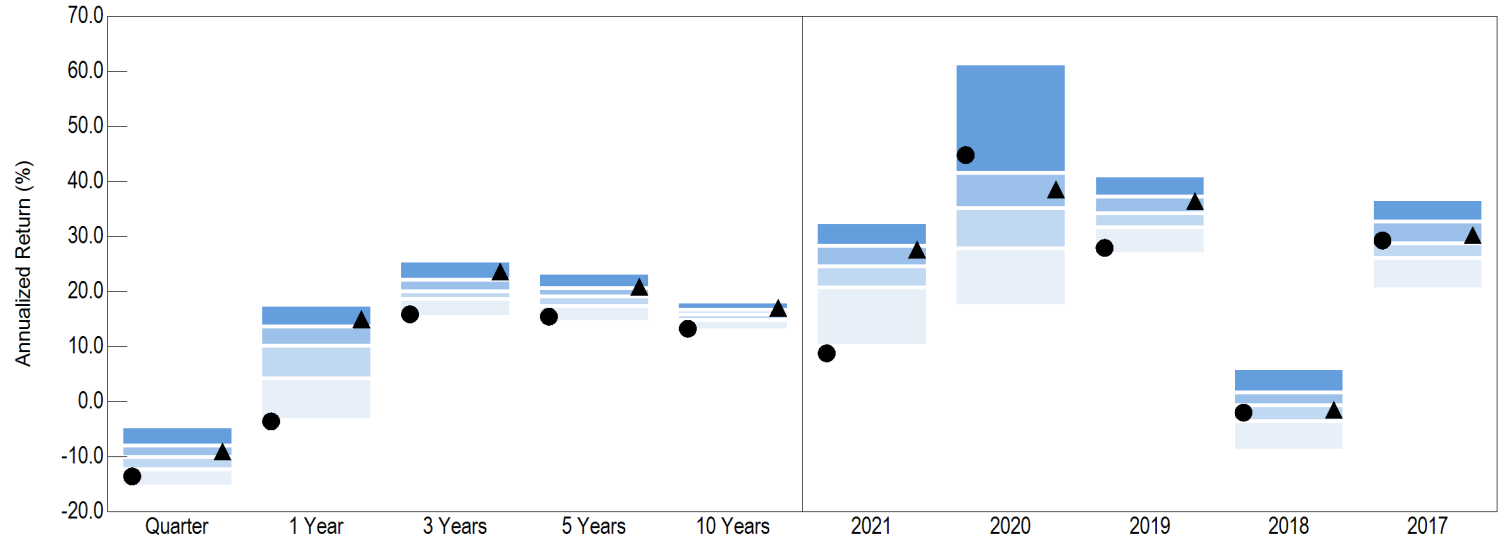
	Avg Wgt	Return	Contribution
CANADIAN PACIFIC RAILWAY LTD	0.87	14.95	0.13
VISA INC	1.73	2.50	0.04
MASTERCARD INC	1.88	-0.41	-0.01
WASTE MANAGEMENT INC.	0.95	-4.63	-0.04
AMAZON.COM INC	2.85	-2.23	-0.06
ADOBE INC	0.66	-19.65	-0.13
EDWARDS LIFESCIENCES CORP	1.53	-9.13	-0.14
CATALENT INC	1.31	-13.38	-0.17
VEEVA SYSTEMS INC	1.04	-16.84	-0.18
INTUITIVE SURGICAL INC	1.12	-16.04	-0.18

Bottom Contributors

	Avg Wgt	Return	Contribution
TWILIO INC	1.17	-37.42	-0.44
NETFLIX INC	0.91	-37.82	-0.35
ALIGN TECHNOLOGY INC	1.02	-33.66	-0.34
10X GENOMICS INC	0.69	-48.93	-0.34
MICROSOFT CORP	3.22	-8.14	-0.26
COUPA SOFTWARE INC	0.73	-35.70	-0.26
UBER TECHNOLOGIES INC	1.68	-14.91	-0.25
NIKE INC	1.25	-19.08	-0.24
CHARTER COMMUNICATIONS INC	1.35	-16.33	-0.22
WIX.COM LTD	0.63	-33.80	-0.21

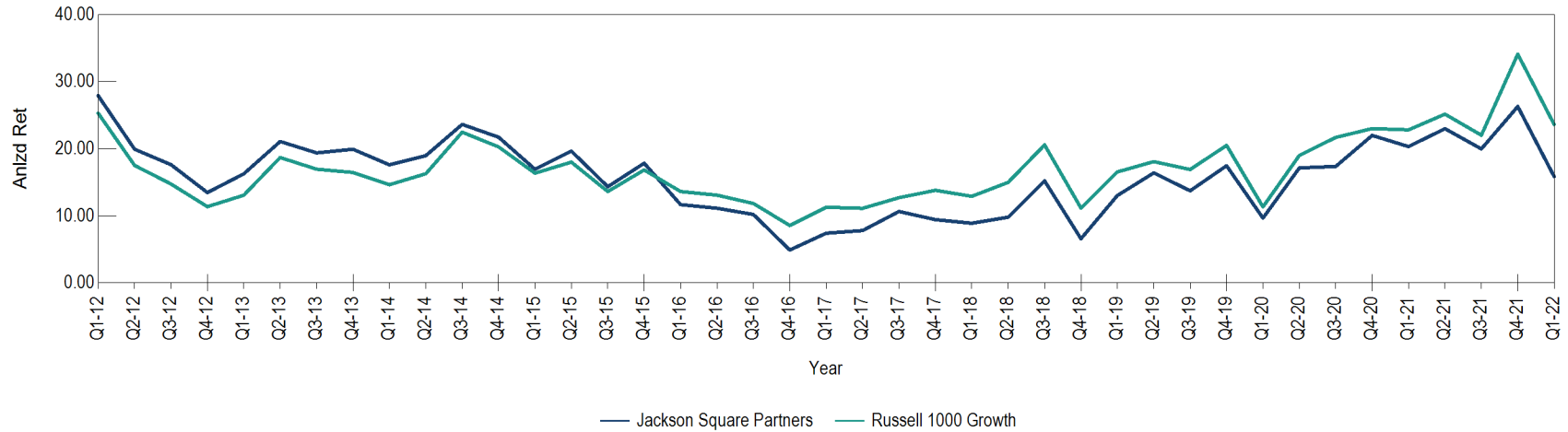
Unclassified sector allocation includes cash allocations.

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

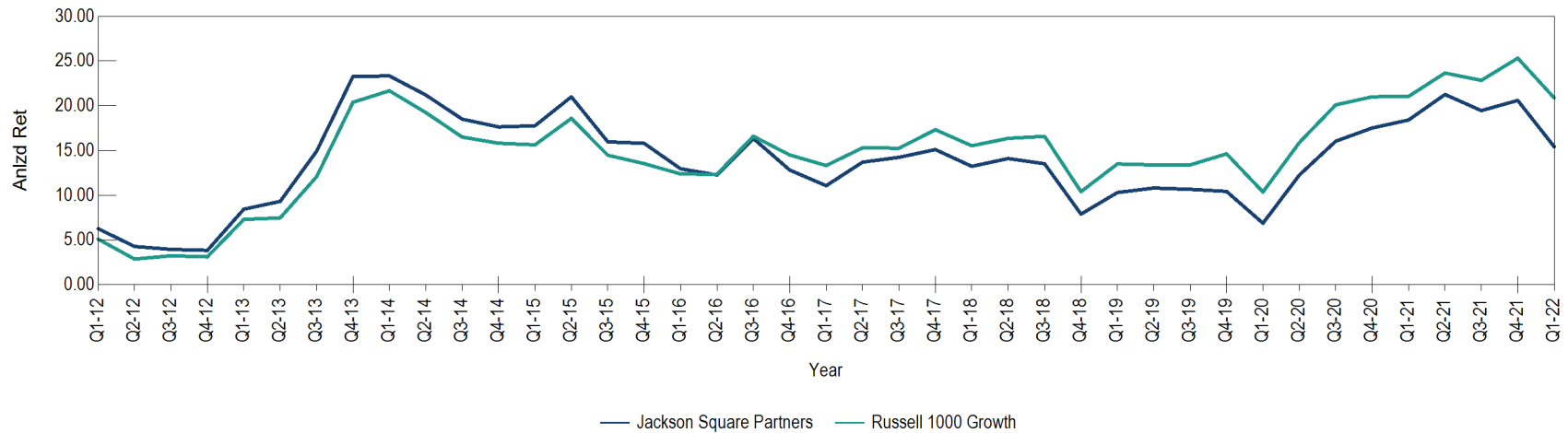


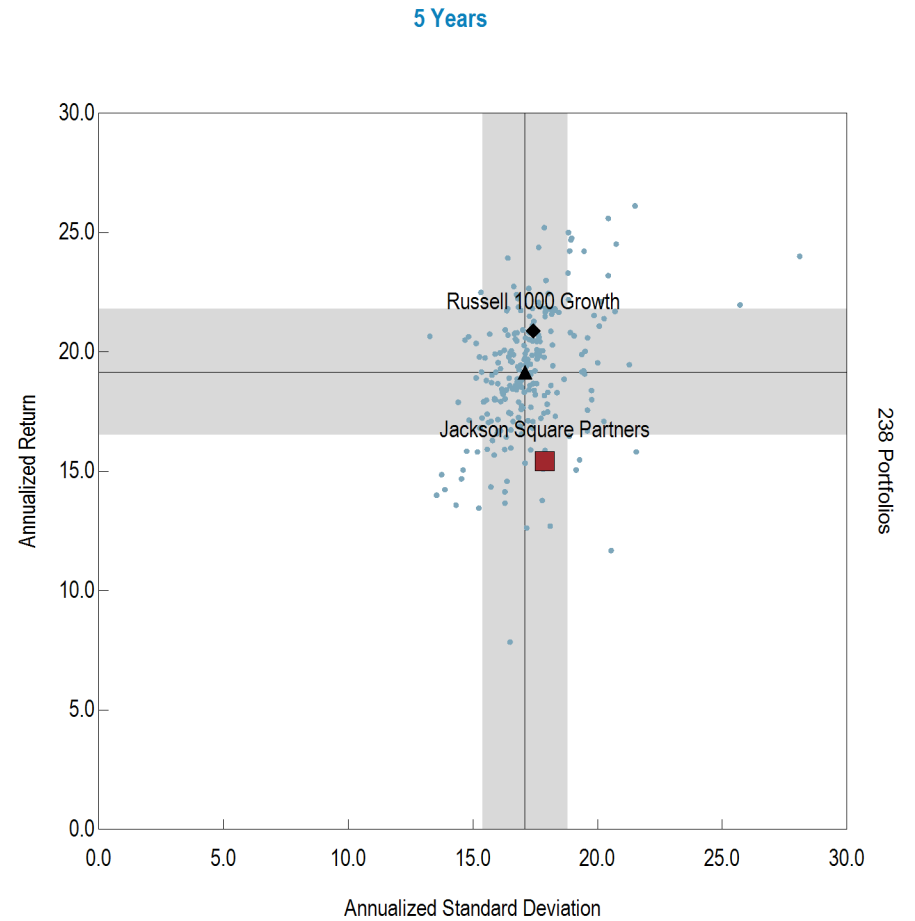
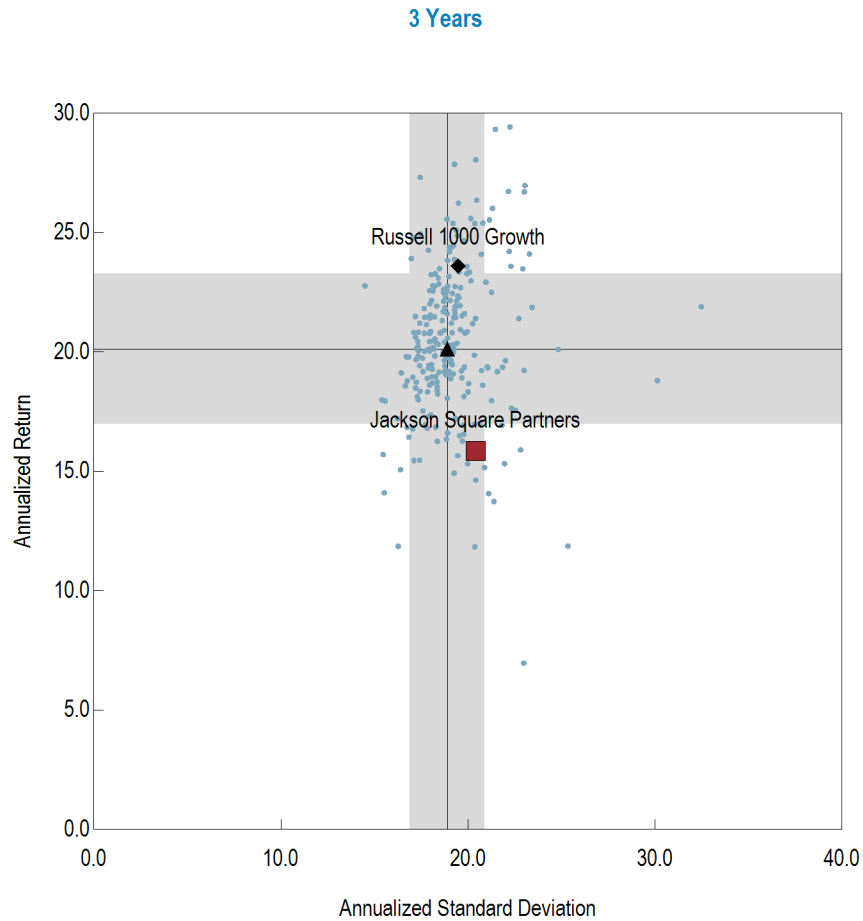
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-4.6	17.5	25.5	23.4	18.1	32.5	61.4	41.0	6.1	36.7
25th Percentile	-7.9	13.7	22.2	20.7	16.8	28.3	41.6	37.3	1.7	32.7
Median	-10.0	10.2	20.1	19.2	15.9	24.6	35.2	34.2	-0.6	28.8
75th Percentile	-12.2	4.3	18.7	17.5	14.9	20.8	27.9	31.7	-3.5	26.2
95th Percentile	-15.3	-3.2	15.4	14.5	13.0	10.2	17.4	26.9	-8.8	20.5
# of Portfolios	259	259	254	238	209	258	263	253	255	265
● Jackson Square Partners	-13.6 (88)	-3.6 (96)	15.8 (93)	15.4 (92)	13.2 (95)	8.8 (97)	44.8 (20)	27.9 (93)	-2.0 (59)	29.3 (47)
▲ Russell 1000 Growth	-9.0 (38)	15.0 (18)	23.6 (14)	20.9 (21)	17.0 (18)	27.6 (29)	38.5 (34)	36.4 (32)	-1.5 (57)	30.2 (42)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	15.8%	20.4%	0.7
Russell 1000 Growth	23.6%	19.5%	1.2
eV US Large Cap Growth Equity Gross Median	20.1%	18.9%	1.1

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Jackson Square Partners	15.4%	17.9%	0.8
Russell 1000 Growth	20.9%	17.4%	1.1
eV US Large Cap Growth Equity Gross Median	19.2%	17.1%	1.1

Boston Partners Manager Portfolio Overview

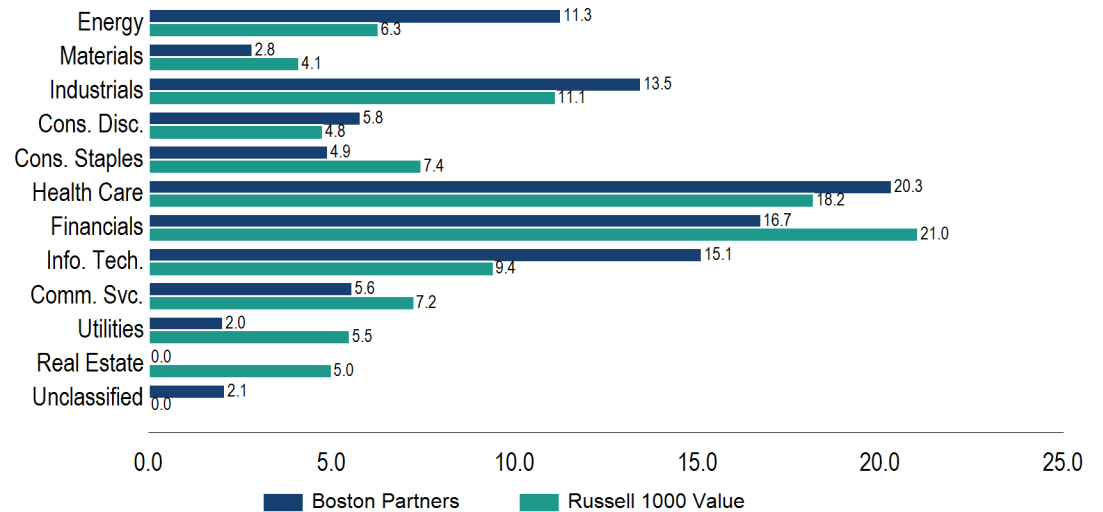
Period Ending: March 31, 2022

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	83	848
Weighted Avg. Market Cap. (\$B)	199.23	169.56
Median Market Cap. (\$B)	57.56	14.67
Price To Earnings	17.98	17.09
Price To Book	2.66	2.68
Price To Sales	1.76	2.07
Return on Equity (%)	21.49	17.40
Yield (%)	1.60	1.98
Beta	1.11	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	3.65	4.27
BERKSHIRE HATHAWAY INC	3.34	18.03
CONOCOPHILLIPS	3.29	39.22
ALPHABET INC	2.77	-3.99
JPMORGAN CHASE & CO	2.55	-13.39
UNITEDHEALTH GROUP INC	2.42	1.86
AUTOZONE INC	2.40	-2.47
CISCO SYSTEMS INC	2.13	-11.48
WELLS FARGO & CO	2.13	1.46
CIGNA CORP	1.81	4.86

Top Contributors

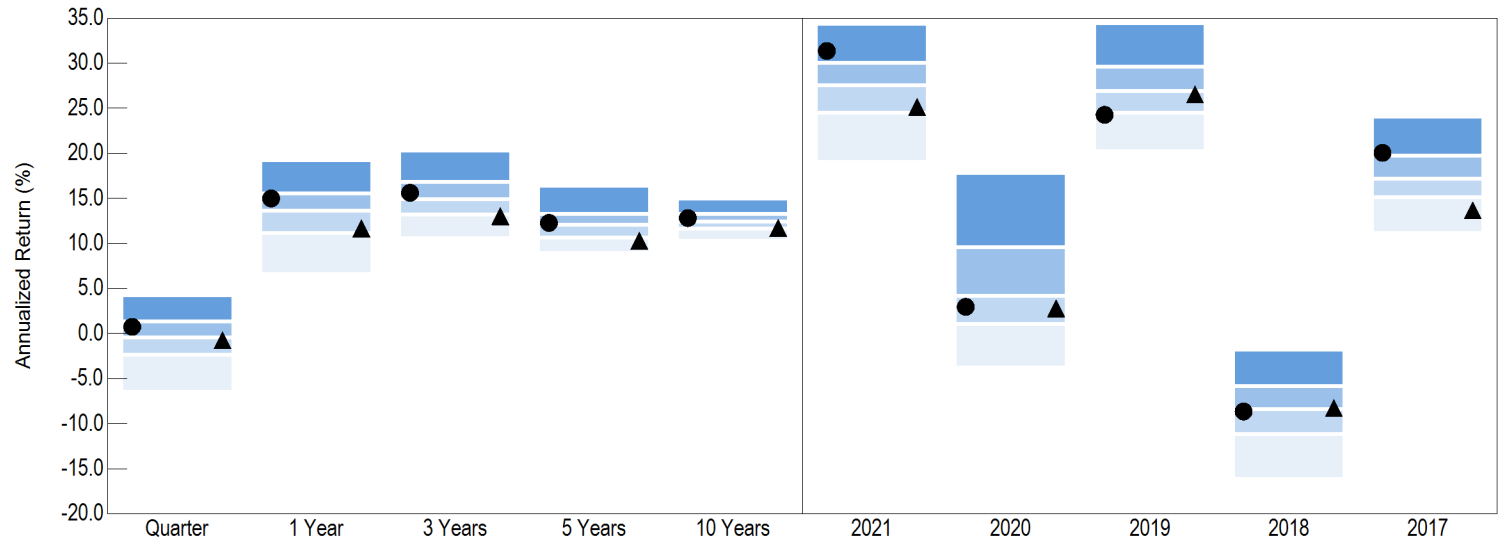
	Avg Wgt	Return	Contribution
CONOCOPHILLIPS	0.79	39.22	0.31
BERKSHIRE HATHAWAY INC	0.95	18.03	0.17
MARATHON PETROLEUM CORP	0.49	34.60	0.17
PIONEER NATURAL RESOURCES CO	0.41	39.74	0.16
CANADIAN NATURAL RESOURCES LTD	0.32	48.12	0.15
SCHLUMBERGER LTD	0.29	38.37	0.11
EOG RESOURCES INC.	0.30	36.38	0.11
DEERE & COMPANY	0.41	21.47	0.09
ABBVIE INC	0.40	20.99	0.08
GENERAL DYNAMICS CORP	0.49	16.34	0.08

Bottom Contributors

	Avg Wgt	Return	Contribution
META PLATFORMS INC	0.43	-33.89	-0.15
JPMORGAN CHASE & CO	0.96	-13.39	-0.13
QUALCOMM INC.	0.64	-16.10	-0.10
MICRON TECHNOLOGY INC.	0.60	-16.38	-0.10
CISCO SYSTEMS INC	0.82	-11.48	-0.09
MOHAWK INDUSTRIES INC.	0.29	-31.83	-0.09
AVANTOR INC	0.41	-19.74	-0.08
AXALTA COATING SYSTEMS LTD	0.31	-25.79	-0.08
SONY GROUP CORPORATION	0.41	-18.74	-0.08
VERTIV HOLDINGS CO	0.17	-43.93	-0.08

Unclassified sector allocation includes cash allocations.

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

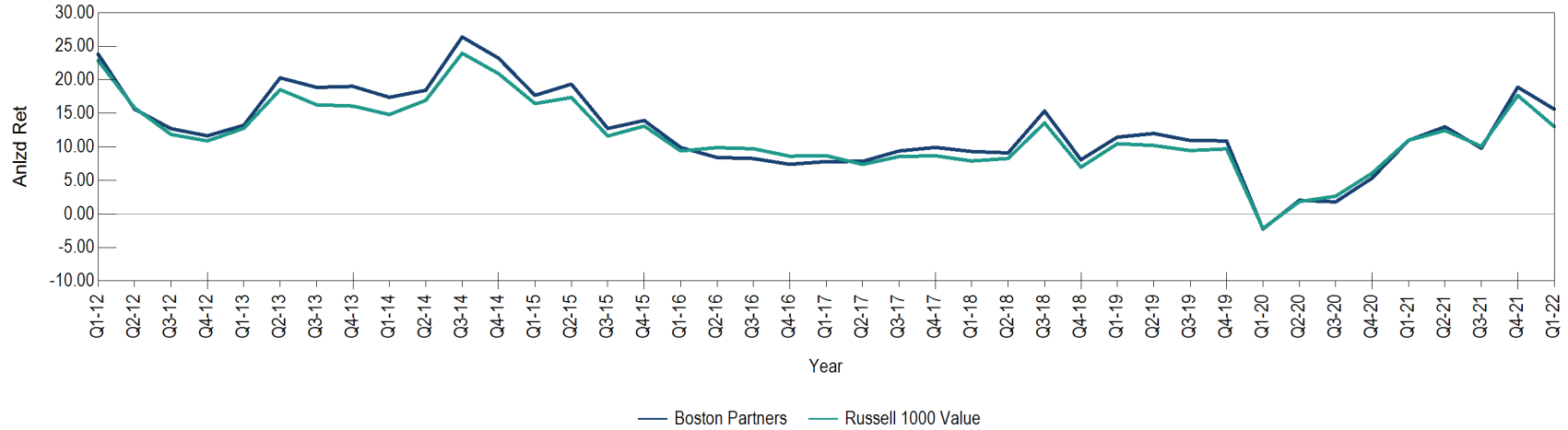


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	4.2	19.2	20.2	16.3	14.9	34.4	17.8	34.4	-1.8	24.0
25th Percentile	1.4	15.6	16.8	13.3	13.3	30.0	9.6	29.6	-5.8	19.8
Median	-0.4	13.7	15.0	12.1	12.5	27.6	4.2	26.9	-8.3	17.2
75th Percentile	-2.3	11.2	13.2	10.7	11.7	24.5	1.1	24.5	-11.1	15.1
95th Percentile	-6.5	6.6	10.6	9.0	10.3	19.1	-3.8	20.3	-16.1	11.2
# of Portfolios	339	339	327	315	279	337	326	331	336	342
● Boston Partners	0.7 (32)	15.0 (34)	15.6 (41)	12.3 (44)	12.8 (37)	31.3 (17)	3.0 (61)	24.3 (77)	-8.7 (55)	20.1 (23)
▲ Russell 1000 Value	-0.7 (56)	11.7 (72)	13.0 (80)	10.3 (84)	11.7 (75)	25.2 (72)	2.8 (62)	26.5 (54)	-8.3 (50)	13.7 (87)

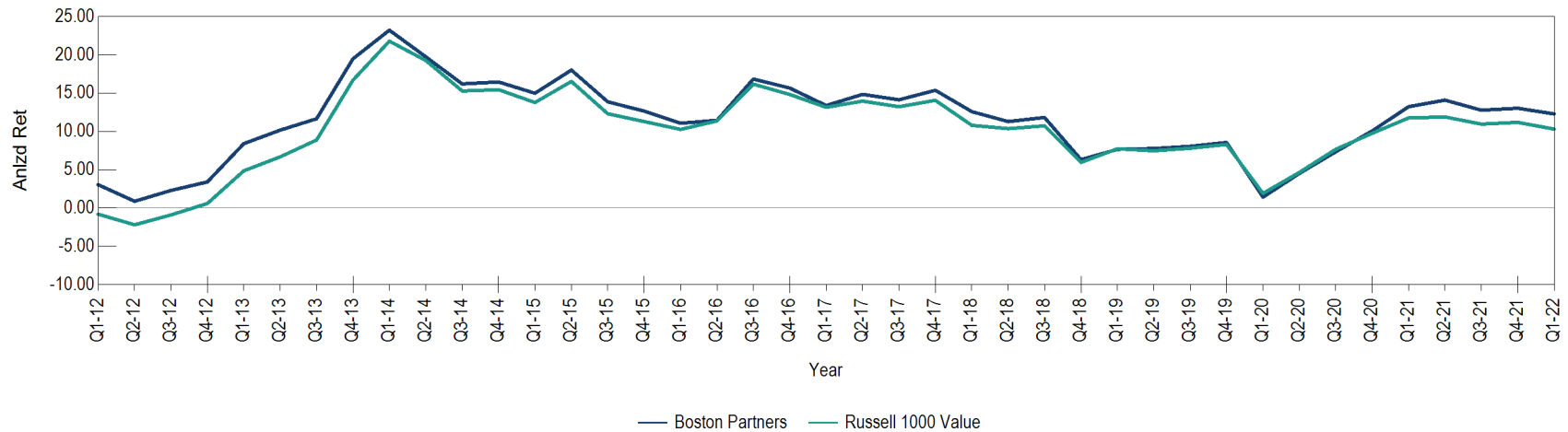
Boston Partners
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2022

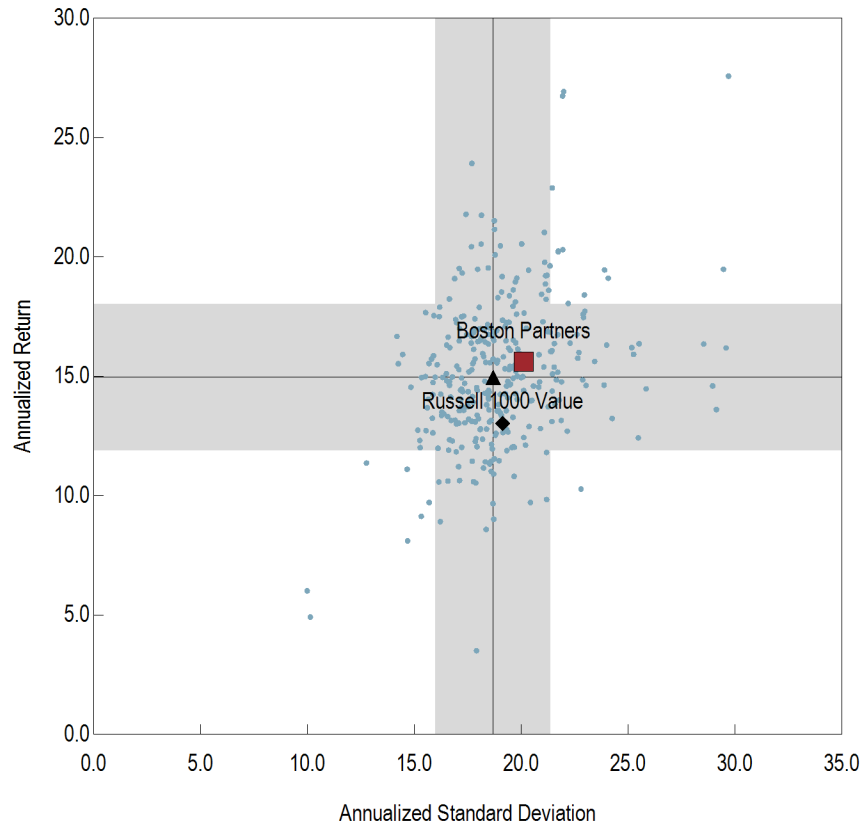
Rolling 3 Year Annualized Return (%)



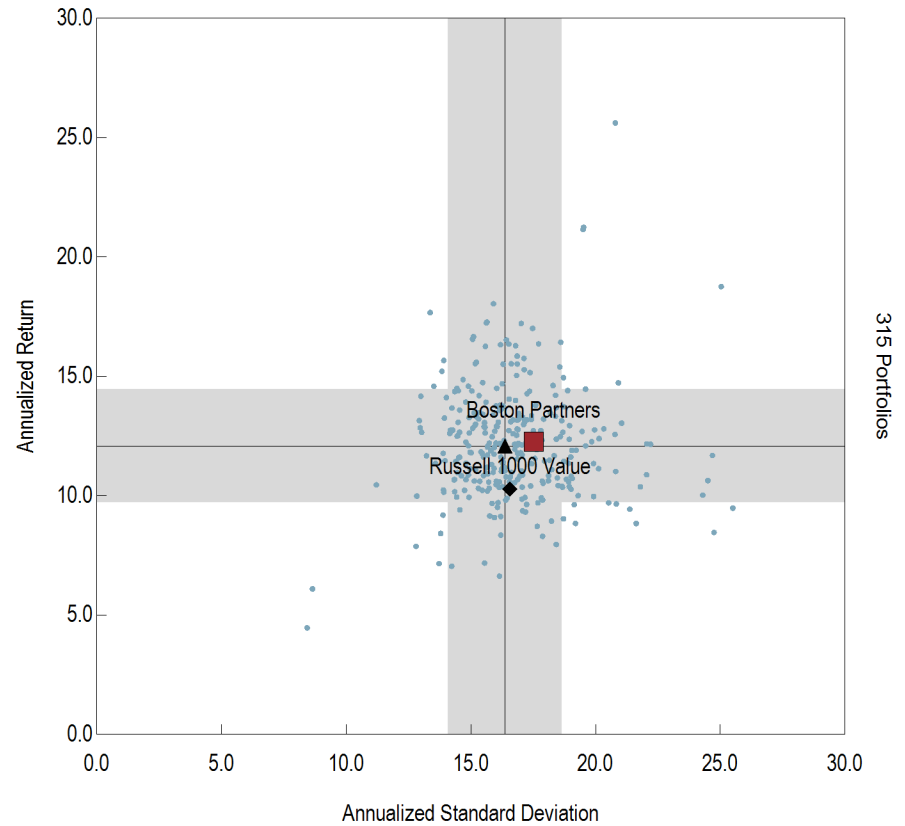
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	15.6%	20.1%	0.7
Russell 1000 Value	13.0%	19.1%	0.6
eV US Large Cap Value Equity Gross Median	15.0%	18.7%	0.8

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Boston Partners	12.3%	17.5%	0.6
Russell 1000 Value	10.3%	16.6%	0.6
eV US Large Cap Value Equity Gross Median	12.1%	16.4%	0.7

Emerald Advisers Manager Portfolio Overview

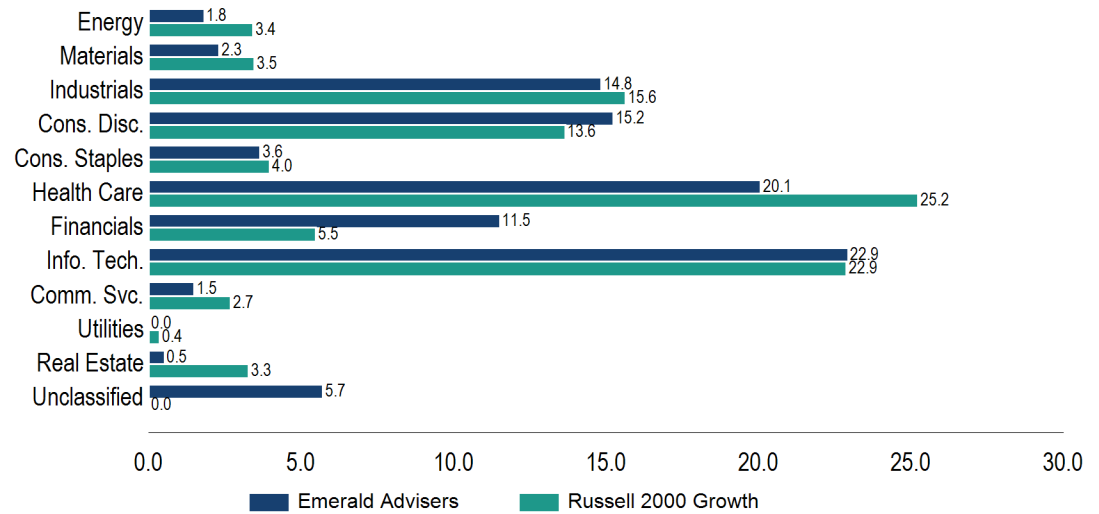
Period Ending: March 31, 2022

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	118	1,243
Weighted Avg. Market Cap. (\$B)	3.89	3.68
Median Market Cap. (\$B)	3.23	1.31
Price To Earnings	25.63	20.60
Price To Book	3.71	4.22
Price To Sales	3.20	2.01
Return on Equity (%)	5.58	1.39
Yield (%)	0.40	0.55
Beta	0.95	1.00

Sector Allocation (%) vs Russell 2000 Growth



Largest Holdings

	End Weight	Return
CHART INDUSTRIES INC	2.46	7.70
RAPID7 INC	2.44	-5.48
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	2.19	-23.54
SIMPLY GOOD FOODS CO (THE)	1.91	-8.71
CHURCHILL DOWNS INC	1.86	-7.94
SEAWORLD ENTERTAINMENT INC	1.86	14.77
PERFICIENT INC	1.77	-14.85
VARONIS SYSTEMS INC	1.74	-2.54
FRESHPET INC	1.61	7.74
TRINET GROUP INC	1.61	3.25

Top Contributors

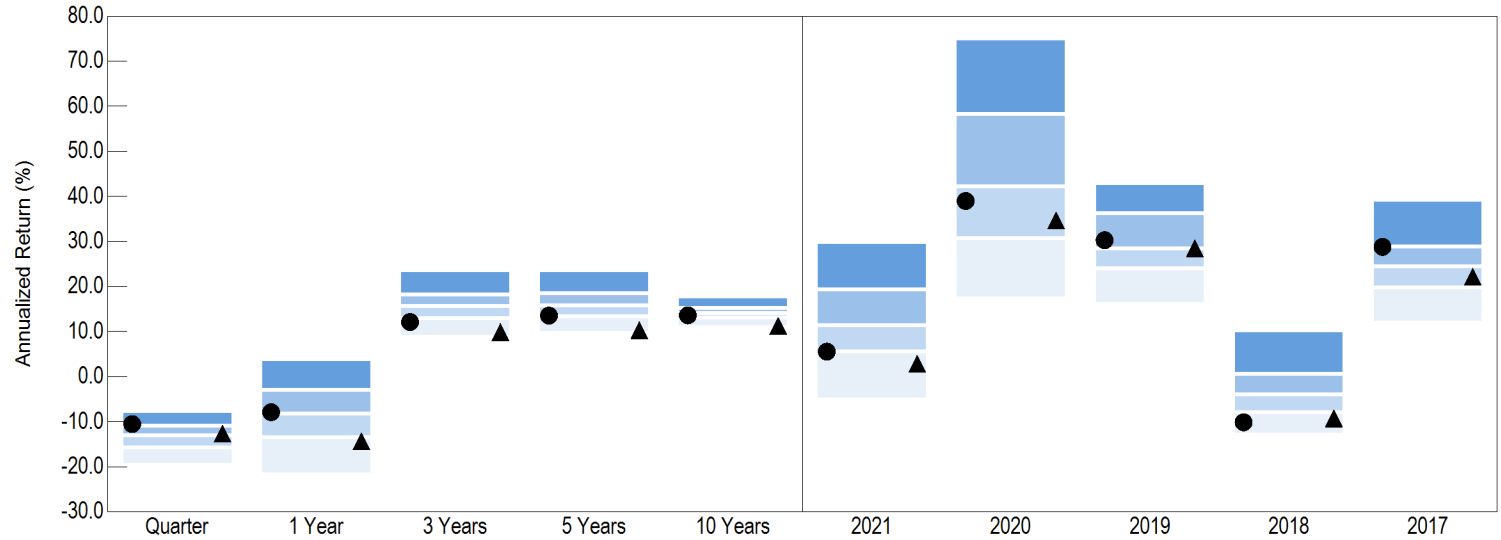
	Avg Wgt	Return	Contribution
CACTUS INC	0.17	49.14	0.08
SEAWORLD ENTERTAINMENT INC	0.49	14.77	0.07
CHART INDUSTRIES INC	0.66	7.70	0.05
ARIS WATER SOLUTION INC	0.10	42.09	0.04
PING IDENTITY HOLDING CORP	0.21	19.89	0.04
ALKERMES PLC	0.30	13.11	0.04
EASTERN BANKSHARES INC	0.51	7.29	0.04
FRESHPET INC	0.46	7.74	0.04
JACK IN THE BOX INC.	0.42	7.36	0.03
MERIT MEDICAL SYSTEMS INC	0.41	6.77	0.03

Bottom Contributors

	Avg Wgt	Return	Contribution
NEOGENOMICS INC	0.41	-64.39	-0.27
MACOM TECHNOLOGY SOLUTIONS HOLDINGS INC	0.87	-23.54	-0.21
LIVE OAK BANCSHARES INC	0.49	-41.67	-0.21
MOELIS & CO	0.61	-23.97	-0.15
BRP GROUP INC	0.53	-25.70	-0.14
TREX CO INC	0.26	-51.62	-0.13
REPLIMUNE GROUP INC	0.35	-37.34	-0.13
MONTROSE ENVIRONMENTAL GROUP INC	0.48	-24.93	-0.12

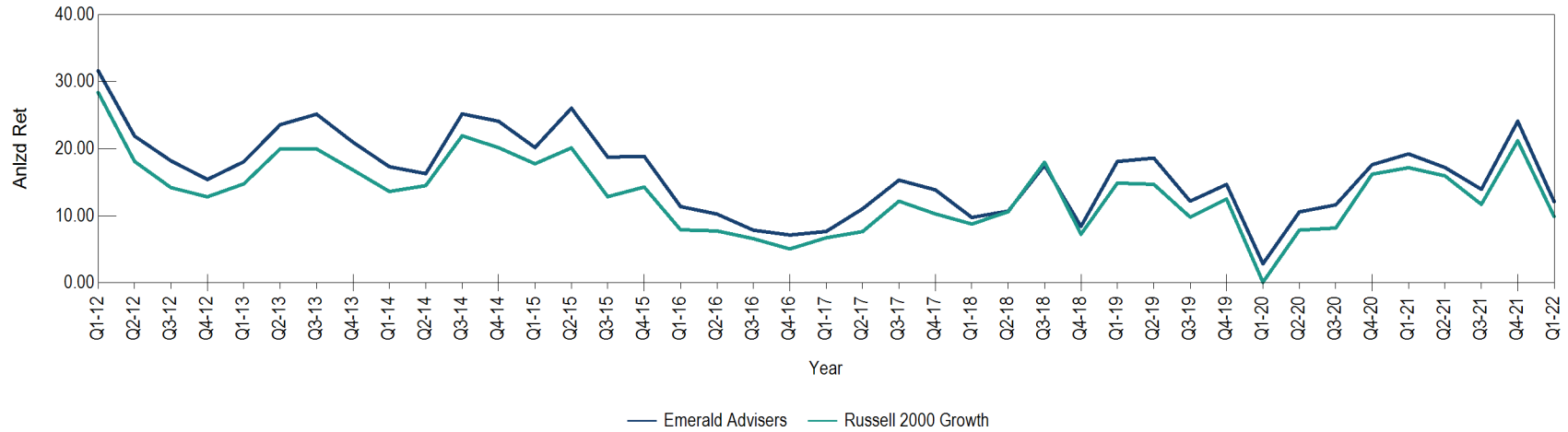
Unclassified sector allocation includes cash allocations.

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

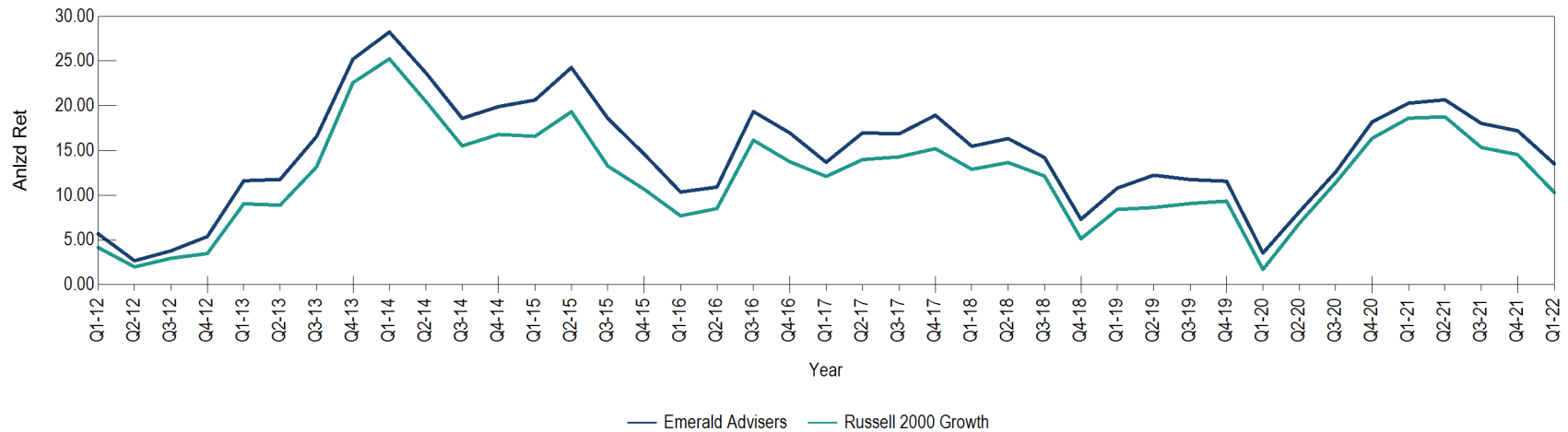


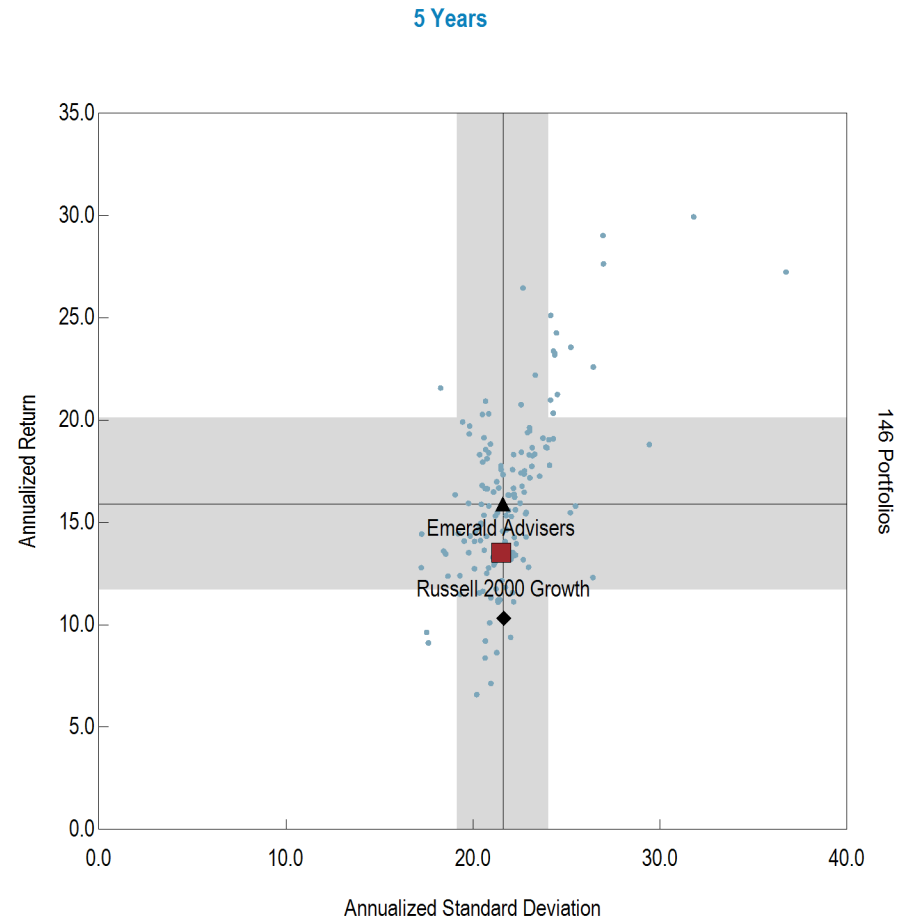
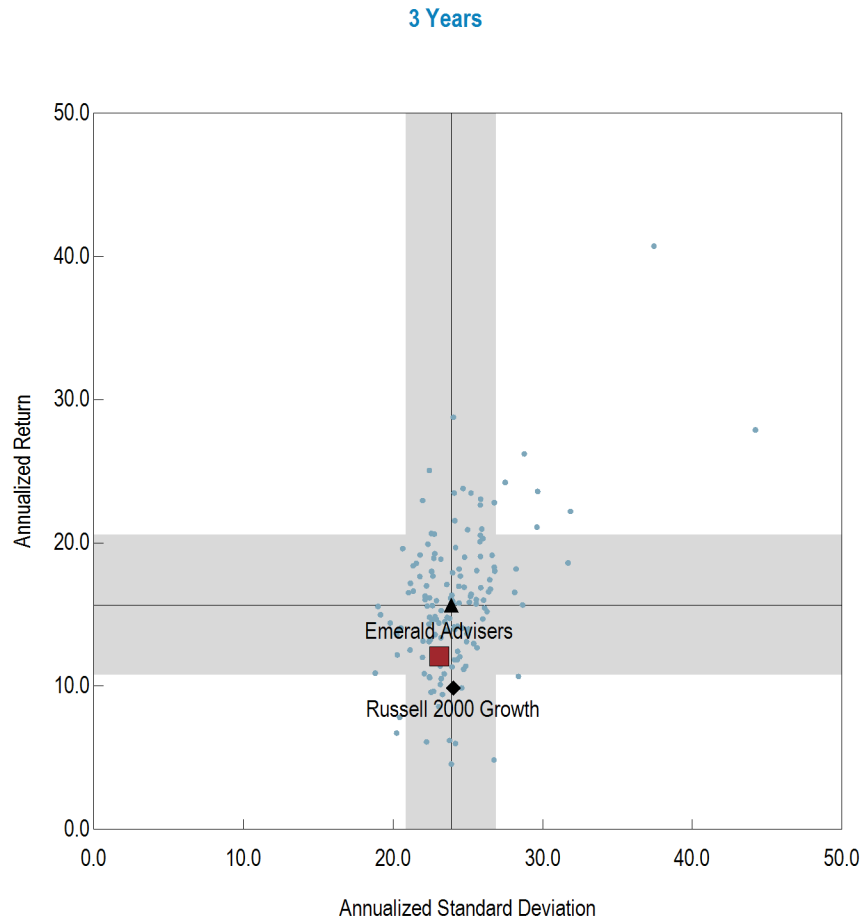
	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-7.6	3.7	23.6	23.5	17.7	29.8	75.0	42.8	10.2	39.2
25th Percentile	-10.8	-2.9	18.3	18.5	15.3	19.5	58.3	36.4	0.7	28.9
Median	-12.9	-8.2	15.7	15.9	14.2	11.5	42.2	28.5	-3.9	24.6
75th Percentile	-15.6	-13.3	13.1	13.4	13.2	5.7	30.8	24.2	-7.9	19.8
95th Percentile	-19.5	-21.6	8.9	9.7	11.0	-5.1	17.4	16.2	-12.8	12.1
# of Portfolios	151	151	149	146	126	158	161	157	164	174
● Emerald Advisers	-10.5 (23)	-7.9 (49)	12.1 (81)	13.5 (74)	13.6 (65)	5.5 (76)	39.0 (57)	30.3 (45)	-10.1 (85)	28.8 (26)
▲ Russell 2000 Growth	-12.6 (48)	-14.3 (79)	9.9 (93)	10.3 (95)	11.2 (95)	2.8 (84)	34.6 (66)	28.5 (51)	-9.3 (80)	22.2 (62)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)





	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	12.1%	23.1%	0.5
Russell 2000 Growth	9.9%	24.0%	0.4
eV US Small Cap Growth Equity Gross Median	15.7%	23.9%	0.6

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Emerald Advisers	13.5%	21.5%	0.6
Russell 2000 Growth	10.3%	21.7%	0.4
eV US Small Cap Growth Equity Gross Median	15.9%	21.6%	0.7

Ceredex Manager Portfolio Overview

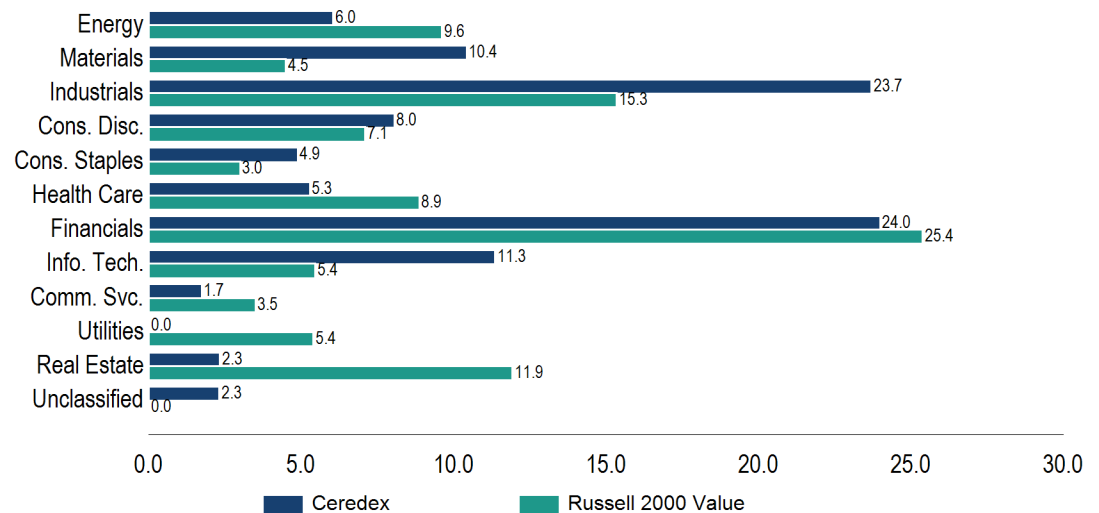
Period Ending: March 31, 2022

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	71	1,435
Weighted Avg. Market Cap. (\$B)	5.86	3.16
Median Market Cap. (\$B)	3.95	1.12
Price To Earnings	15.74	13.12
Price To Book	2.54	1.78
Price To Sales	1.34	1.29
Return on Equity (%)	17.21	6.74
Yield (%)	1.96	1.84
Beta	0.86	1.00

Sector Allocation (%) vs Russell 2000 Value



Largest Holdings

	End Weight	Return
POWER INTEGRATIONS INC	4.16	-0.03
OVINTIV INC	3.95	61.18
SLM CORP	3.59	-6.11
FIRST CITIZENS BANCSHARES INC	3.40	-19.74
APTARGROUP INC.	3.29	-4.07
RPM INTERNATIONAL INC	3.26	-19.01
KEMPER CORP	3.10	-3.24
STANTEC INC	2.98	-10.61
LENNOX INTERNATIONAL INC.	2.77	-20.23
EMCOR GROUP INC.	2.62	-11.50

Top Contributors

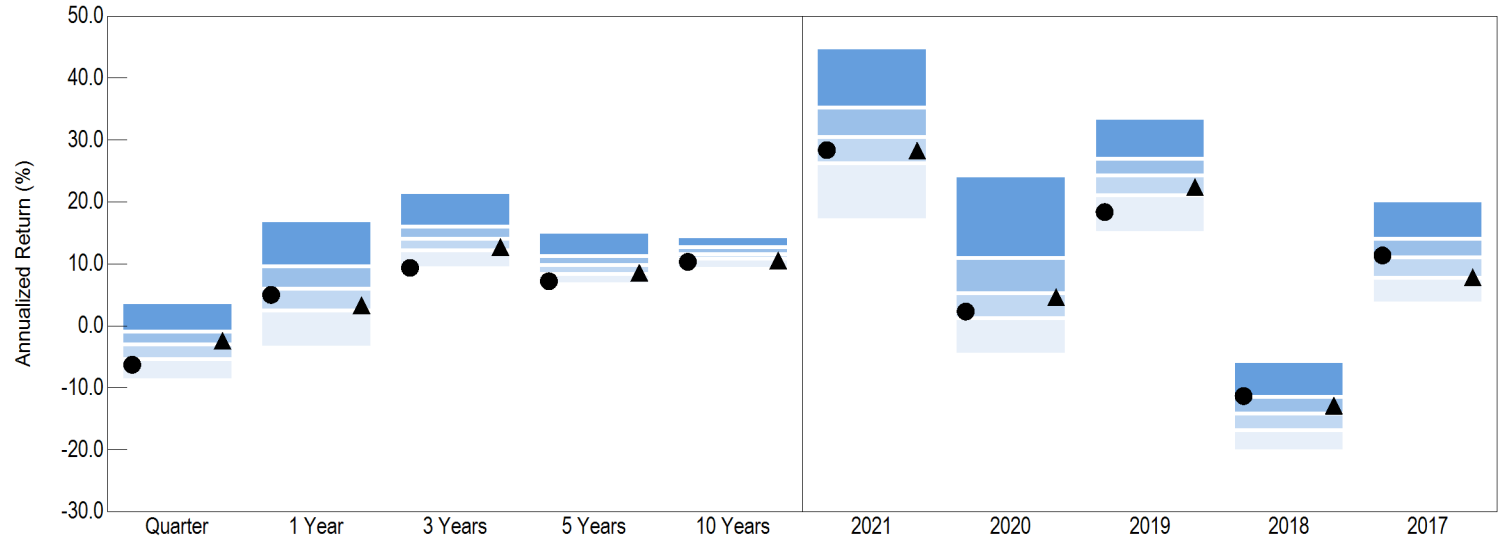
	Avg Wgt	Return	Contribution
OVINTIV INC	1.23	61.80	0.76
PATTERSON COS INC	0.68	11.32	0.08
KBR INC	0.48	15.19	0.07
HORACE MANN EDUCATORS CORP	0.30	8.94	0.03
AMERICAN FINANCIAL GROUP INC	0.33	8.04	0.03
CATHAY GENERAL BANCORP	0.40	4.87	0.02
FIRST HAWAIIAN INC	0.46	2.97	0.01
OWENS & MINOR INC.	1.08	1.20	0.01
PRICESMART INC	0.13	8.45	0.01
ZIONS BANCORPORATION	0.26	4.33	0.01

Bottom Contributors

	Avg Wgt	Return	Contribution
FIRST CITIZENS BANCSHARES INC	1.18	-19.74	-0.23
AZENTA INC	0.98	-19.62	-0.19
RPM INTERNATIONAL INC	0.99	-19.01	-0.19
EVERCORE INC	0.87	-17.61	-0.15
ENERGIZER HOLDINGS INC	0.58	-22.62	-0.13
TEMPUR SEALY INTERNATIONAL INC	0.30	-40.43	-0.12
JEFFERIES FINANCIAL GROUP INC	0.82	-14.66	-0.12
LITTELFUSE INC	0.58	-20.57	-0.12
STANTEC INC	1.06	-10.31	-0.11
EMCOR GROUP INC.	0.88	-11.50	-0.10

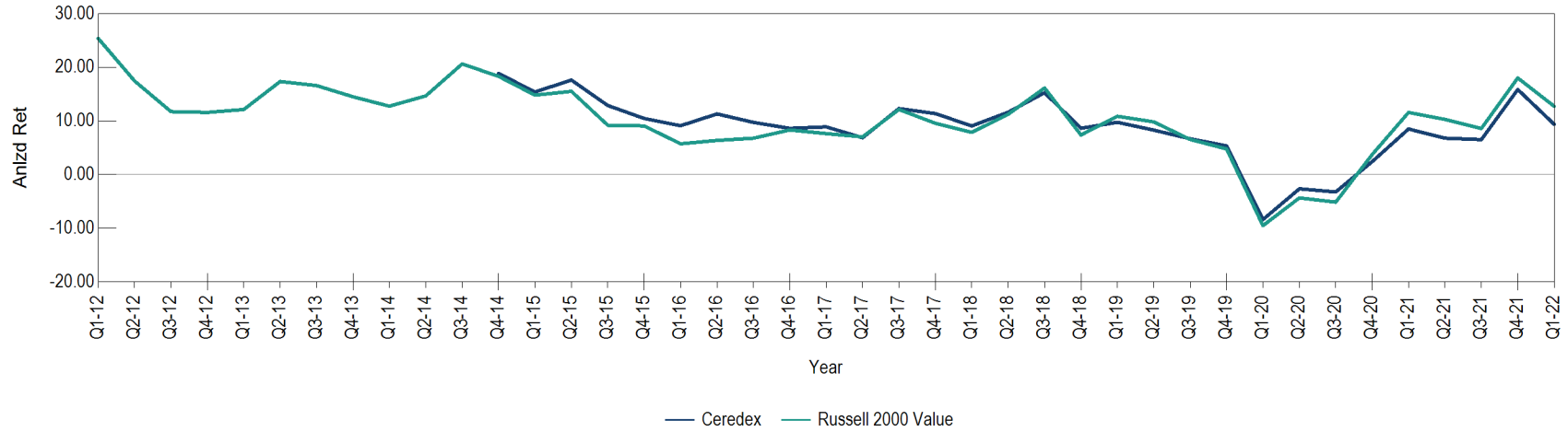
Unclassified sector allocation includes cash allocations.

Ceredex vs. eV US Small Cap Value Equity Gross Universe

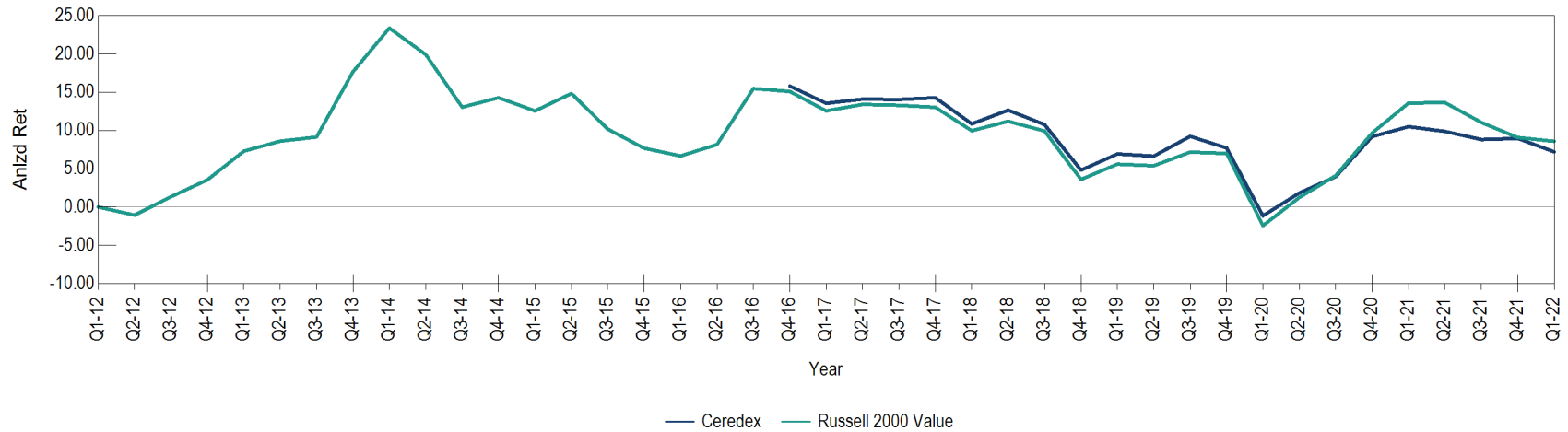


	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	3.7	17.0	21.6	15.2	14.4	44.9	24.2	33.6	-5.7	20.2
25th Percentile	-0.9	9.6	16.1	11.3	12.8	35.3	11.1	27.0	-11.4	14.1
Median	-2.9	6.1	14.2	9.9	11.7	30.5	5.3	24.4	-14.0	11.1
75th Percentile	-5.3	2.6	12.2	8.4	10.9	26.3	1.3	21.2	-16.7	7.8
95th Percentile	-8.8	-3.4	9.4	6.8	9.3	17.1	-4.6	15.0	-20.2	3.7
# of Portfolios	210	210	207	195	173	210	219	217	220	224
● Ceredex	-6.3 (84)	5.0 (57)	9.4 (95)	7.2 (92)	10.3 (86)	28.4 (60)	2.3 (69)	18.4 (87)	-11.3 (25)	11.4 (48)
▲ Russell 2000 Value	-2.4 (40)	3.3 (69)	12.7 (67)	8.6 (74)	10.5 (81)	28.3 (60)	4.6 (53)	22.4 (69)	-12.9 (39)	7.8 (75)

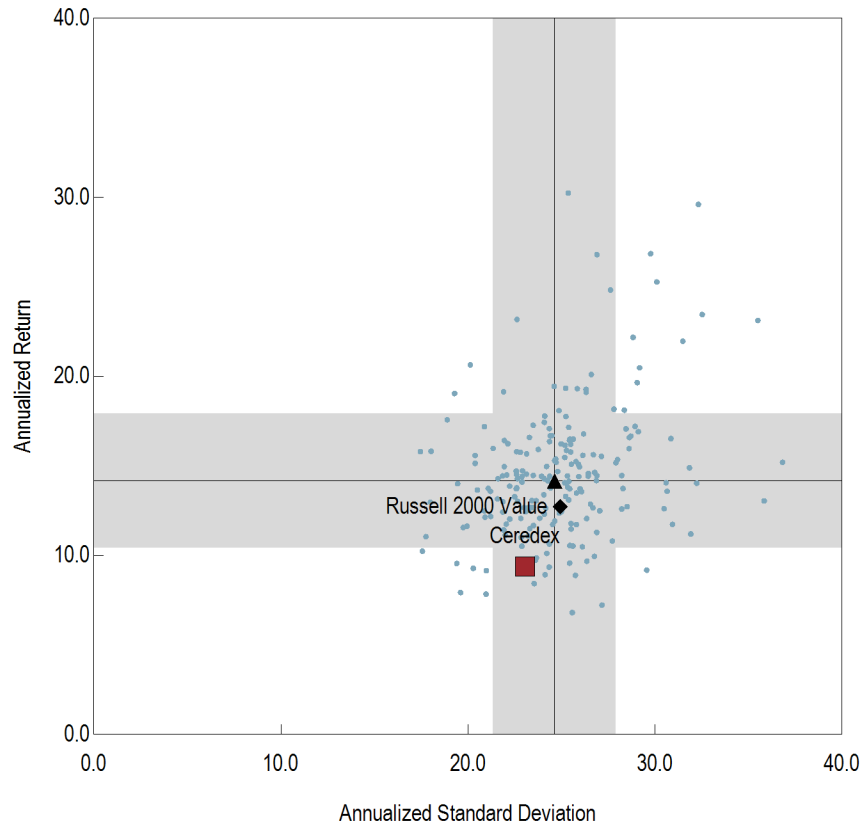
Rolling 3 Year Annualized Return (%)



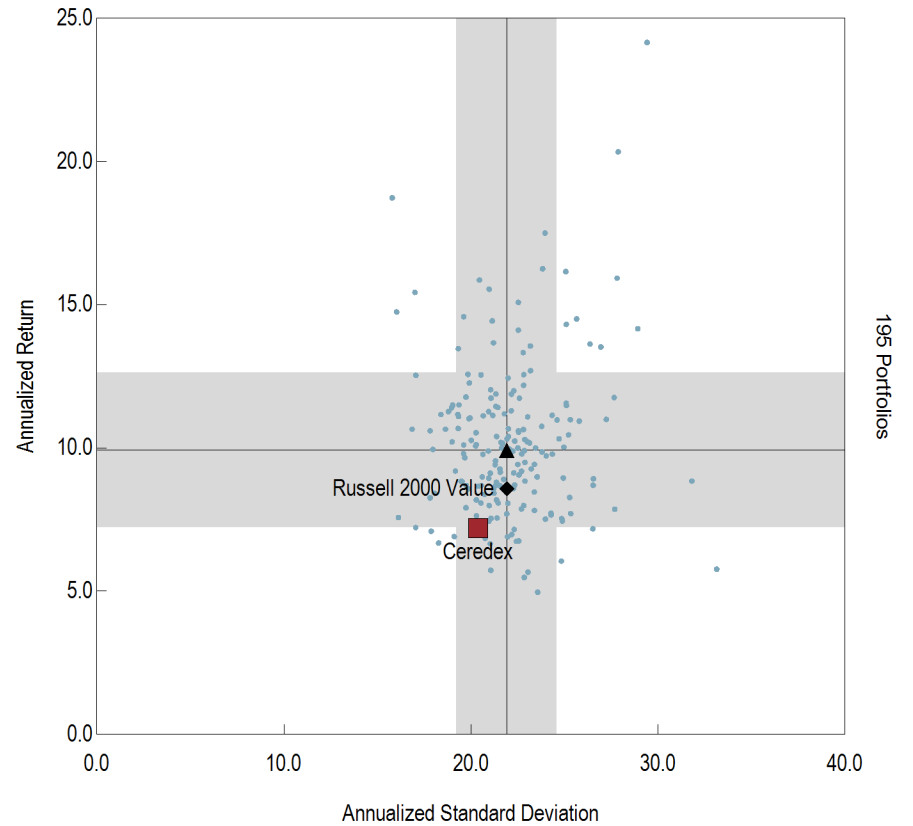
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	9.4%	23.1%	0.4
Russell 2000 Value	12.7%	24.9%	0.5
eV US Small Cap Value Equity Gross Median	14.2%	24.6%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Ceredex	7.2%	20.4%	0.3
Russell 2000 Value	8.6%	21.9%	0.3
eV US Small Cap Value Equity Gross Median	9.9%	21.9%	0.4

International Equity Managers

Pyrford Manager Portfolio Overview

Period Ending: March 31, 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.

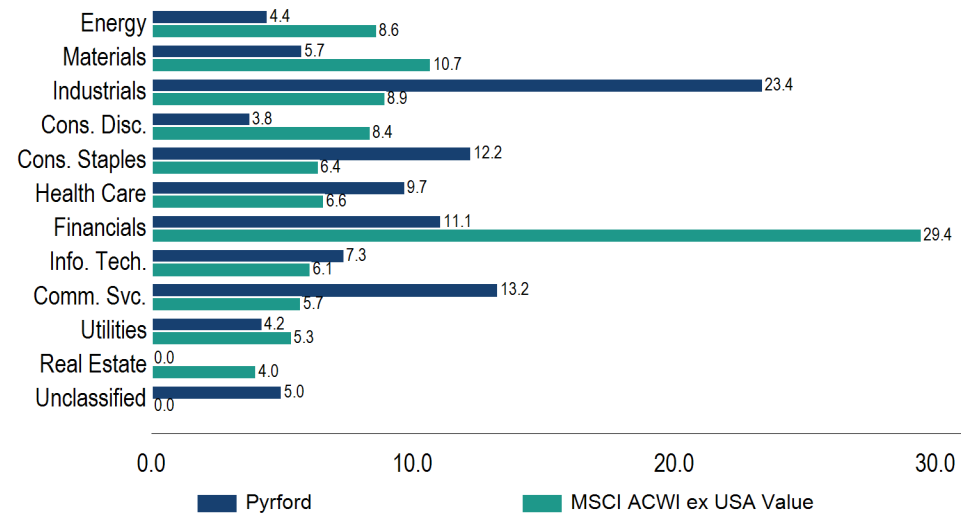
Characteristics

	MSCI ACWI Portfolio	MSCI ACWI ex USA Value
Number of Holdings	67	1,433
Weighted Avg. Market Cap. (\$B)	71.18	71.48
Median Market Cap. (\$B)	25.66	9.52
Price To Earnings	16.48	10.71
Price To Book	2.37	1.82
Price To Sales	1.70	0.94
Return on Equity (%)	15.17	12.19
Yield (%)	3.69	4.05
Beta	0.68	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	86.7%	72.4%
Emerging*	8.7%	27.6%
Top 10 Largest Countries		
Japan	14.0%	14.3%
Switzerland	12.1%	5.3%
United Kingdom	10.5%	12.3%
Australia	10.0%	5.5%
Germany	9.8%	6.8%
France	8.1%	6.4%
Singapore	6.4%	0.9%
Hong Kong	5.0%	1.7%
Cash	4.6%	0.0%
Netherlands	4.4%	1.1%
Total-Top 10 Largest Countries	84.8%	54.4%

Sector Allocation (%) vs MSCI ACWI ex USA Value



Top Contributors

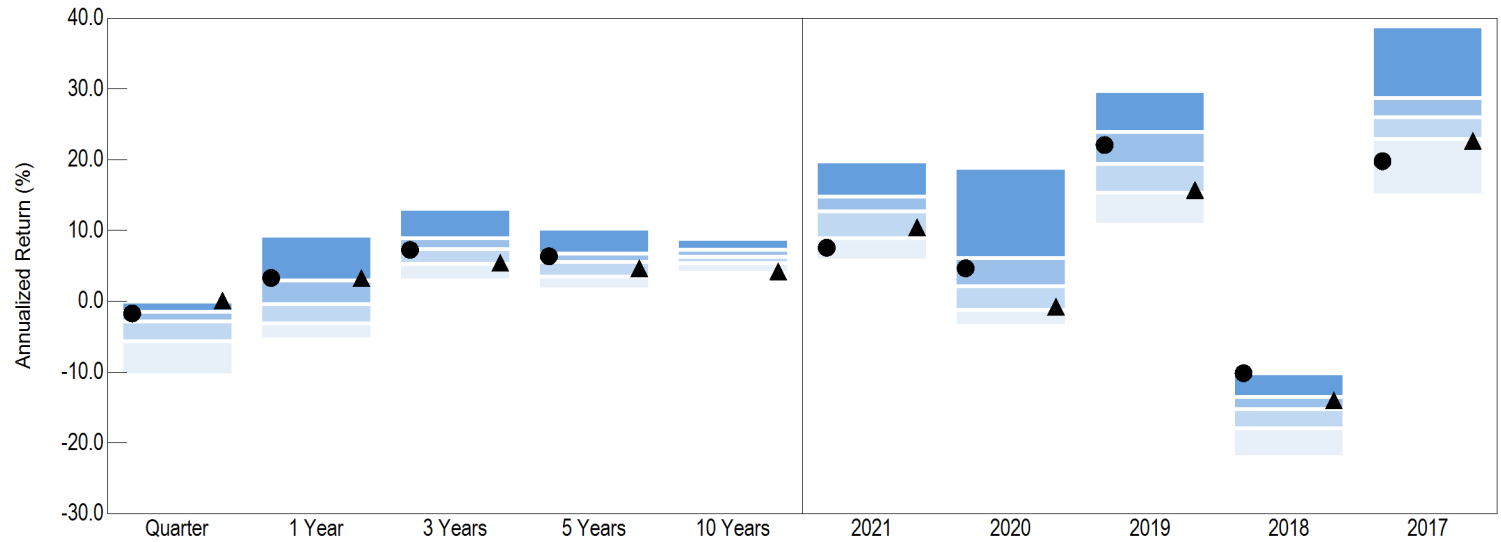
	Avg Wgt	Return	Contribution
WOODSIDE PETROLEUM LTD	1.87	58.92	1.10
COMPUTERSHARE LTD CPU	1.80	28.76	0.52
UNITED OVERSEAS BANK LTD	1.94	18.53	0.36
RIO TINTO GROUP	1.10	30.11	0.33
KDDI CORP	2.07	14.79	0.31
BRITISH AMERICAN TOBACCO PLC	1.87	15.34	0.29
SINGAPORE TELECOMMUNICATIONS LTD	1.92	13.31	0.26
MALAYAN BANKING BHD MAYBANK	2.08	10.13	0.21

Bottom Contributors

	Avg Wgt	Return	Contribution
JAPAN TOBACCO INC	3.10	-14.78	-0.46
DEUTSCHE POST AG	1.78	-24.77	-0.44
SAP SE	2.02	-20.92	-0.42
FUCHS PETROLUB SE	1.77	-19.80	-0.35
UNILEVER PLC COMMON STOCK GBP.0311	1.99	-14.17	-0.28
LEGAL & GENERAL GROUP PLC	2.19	-11.25	-0.25
LEGRAND	1.32	-18.01	-0.24
KONE OYJ	1.02	-23.12	-0.24
FIELMANN AG, HAMBURG	1.26	-18.43	-0.23
NESTLE SA, CHAM UND VEVEY	3.19	-6.63	-0.21

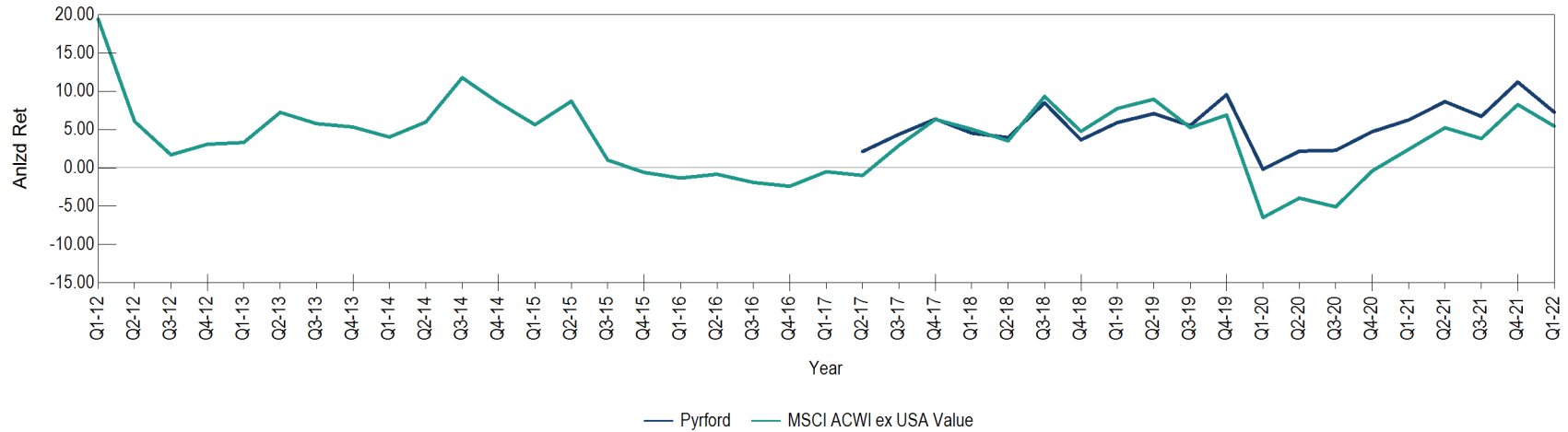
Unclassified sector allocation includes cash allocations.

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

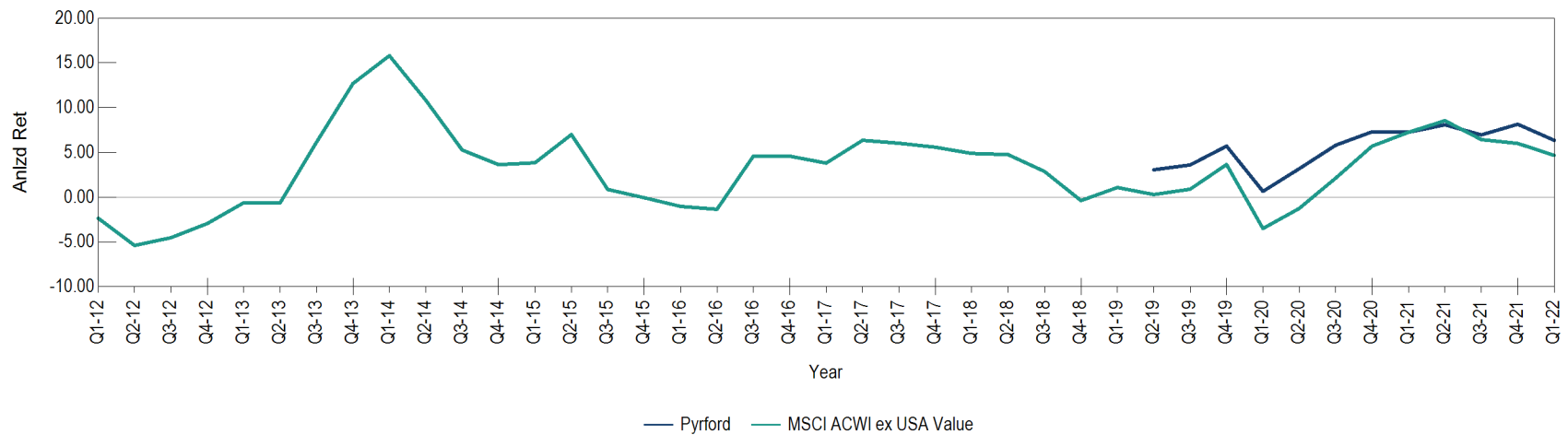


	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	-0.1	9.2	13.0	10.2	8.8	19.7	18.8	29.6	-10.2	38.8	
25th Percentile	-1.5	3.0	9.0	6.8	7.3	14.8	6.2	24.0	-13.4	28.8	
Median	-2.8	-0.3	7.4	5.6	6.4	12.8	2.1	19.5	-15.2	26.0	
75th Percentile	-5.6	-3.0	5.3	3.5	5.4	8.9	-1.2	15.4	-17.9	23.0	
95th Percentile	-10.4	-5.4	3.0	1.8	4.1	5.8	-3.5	10.8	-21.9	15.0	
# of Portfolios	46	46	45	43	33	46	49	52	54	56	
● Pyrford	-1.7 (31)	3.3 (25)	7.3 (51)	6.4 (35)	-- (--)	7.6 (84)	4.7 (33)	22.1 (35)	-10.1 (5)	19.8 (84)	
▲ MSCI ACWI ex USA Value	0.1 (5)	3.3 (25)	5.4 (74)	4.7 (64)	4.2 (94)	10.5 (69)	-0.8 (73)	15.7 (74)	-14.0 (32)	22.7 (77)	

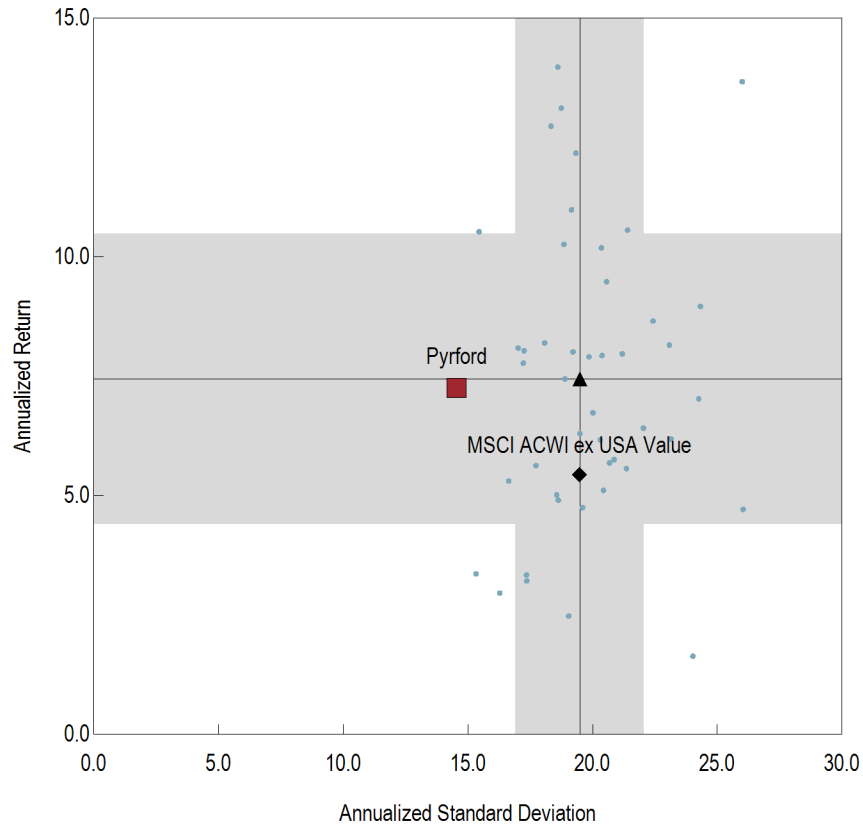
Rolling 3 Year Annualized Return (%)



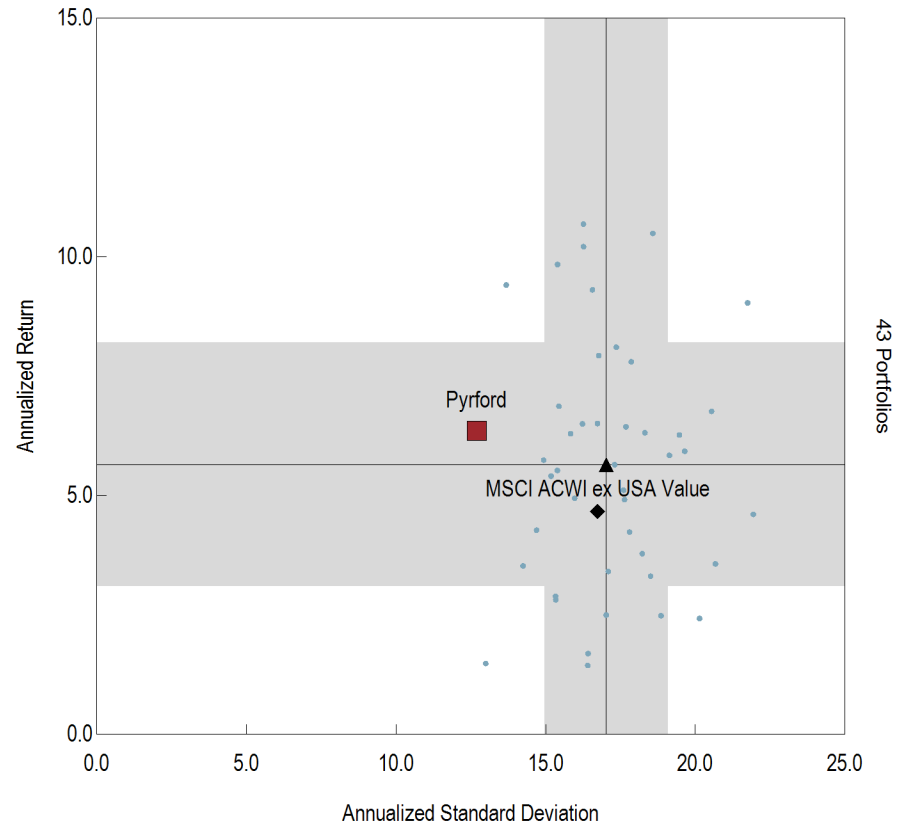
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	7.3%	14.5%	0.5
MSCI ACWI ex USA Value	5.4%	19.5%	0.2
eV ACWI ex-US Value Equity Gross Median	7.4%	19.5%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Pyrford	6.4%	12.7%	0.4
MSCI ACWI ex USA Value	4.7%	16.7%	0.2
eV ACWI ex-US Value Equity Gross Median	5.6%	17.0%	0.3

William Blair Manager Portfolio Overview

Period Ending: March 31, 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.

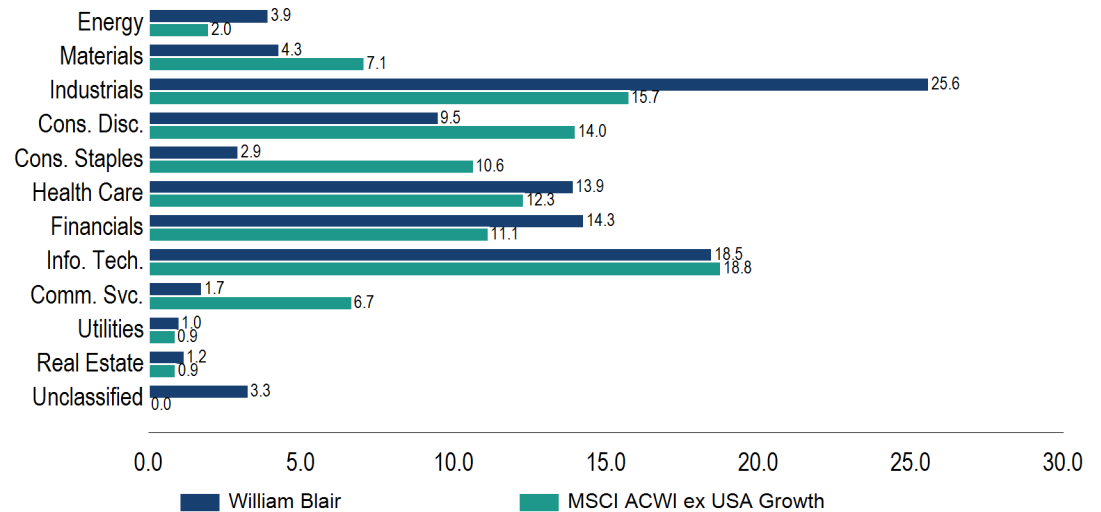
Characteristics

	Portfolio	MSCI ACWI ex USA Growth
Number of Holdings	171	1,184
Weighted Avg. Market Cap. (\$B)	73.85	118.17
Median Market Cap. (\$B)	12.93	10.23
Price To Earnings	29.32	22.15
Price To Book	4.53	3.65
Price To Sales	4.58	2.83
Return on Equity (%)	18.07	18.72
Yield (%)	1.17	1.53
Beta	1.18	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	79.5%	70.4%
Emerging*	17.4%	29.6%
Top 10 Largest Countries		
United Kingdom	12.7%	6.8%
France	9.4%	8.0%
Japan	7.6%	13.8%
India*	6.8%	4.0%
Switzerland	6.6%	7.9%
Canada	6.4%	8.0%
Netherlands	5.7%	4.5%
Sweden	5.6%	3.2%
Denmark	5.0%	3.0%
Germany	4.8%	3.5%
Total-Top 10 Largest Countries	70.5%	62.8%

Sector Allocation (%) vs MSCI ACWI ex USA Growth



Top Contributors

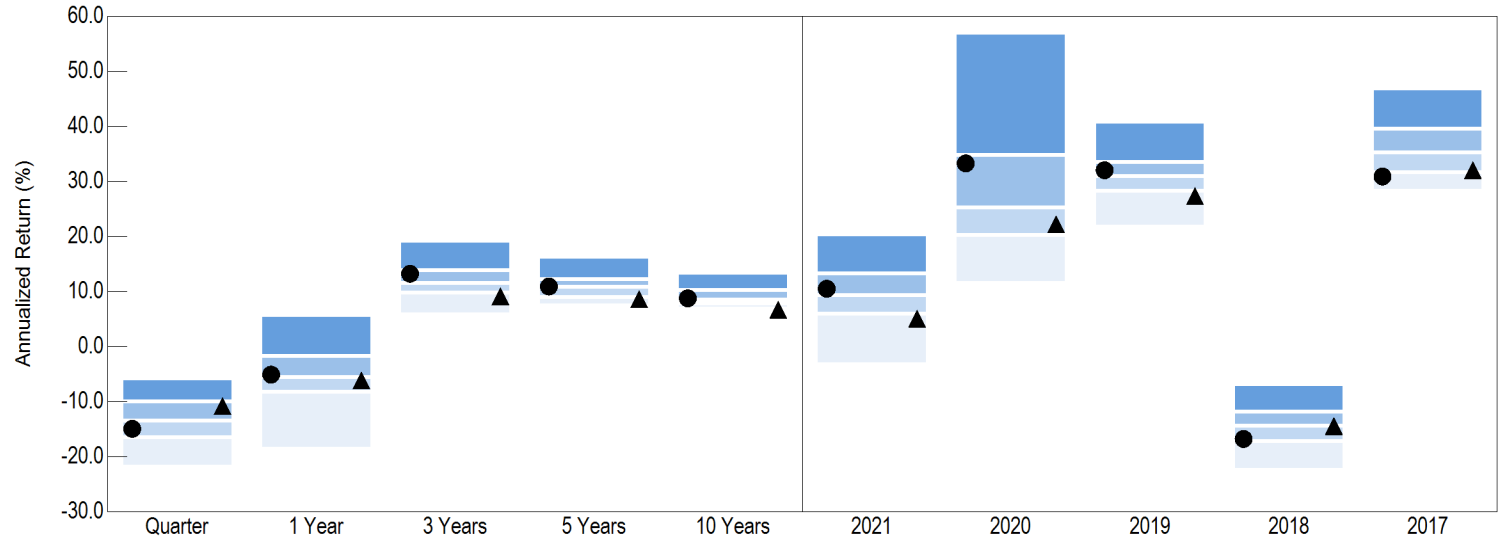
	Avg Wgt	Return	Contribution
CANADIAN NATIONAL RAILWAY CO	1.70	9.90	0.17
MTU AERO ENGINES AG	1.07	14.72	0.16
RELIANCE INDUSTRIES LTD	1.61	9.23	0.15
B3 S.A.-BRASIL BOLSA BALCAO	0.20	68.11	0.13
PT BANK CENTRAL ASIA TBK	1.25	10.09	0.13
TENARIS SA, LUXEMBOURG	0.22	45.88	0.10
LONDON STOCK EXCHANGE GROUP PLC	0.78	11.59	0.09
AIA GROUP LTD	1.40	4.44	0.06
MONSTAR	0.05	00.17	0.05

Bottom Contributors

	Avg Wgt	Return	Contribution
ATLAS COPCO AB	1.88	-23.93	-0.45
ASHTREAD GROUP PLC	1.91	-20.92	-0.40
SIKA AG, BAAR	1.87	-19.96	-0.37
ASML HOLDING NV	2.28	-15.69	-0.36
MEDIATEK INCORPORATION	1.34	-26.43	-0.36
SEA LTD	0.70	-46.45	-0.32
PARTNERS GROUP AG	1.29	-24.50	-0.32
KEYENCE CORP	1.27	-24.77	-0.31
DSV A/S	1.78	-16.60	-0.30
YANDEX NV	0.42	-68.69	-0.29

Unclassified sector allocation includes cash allocations.

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

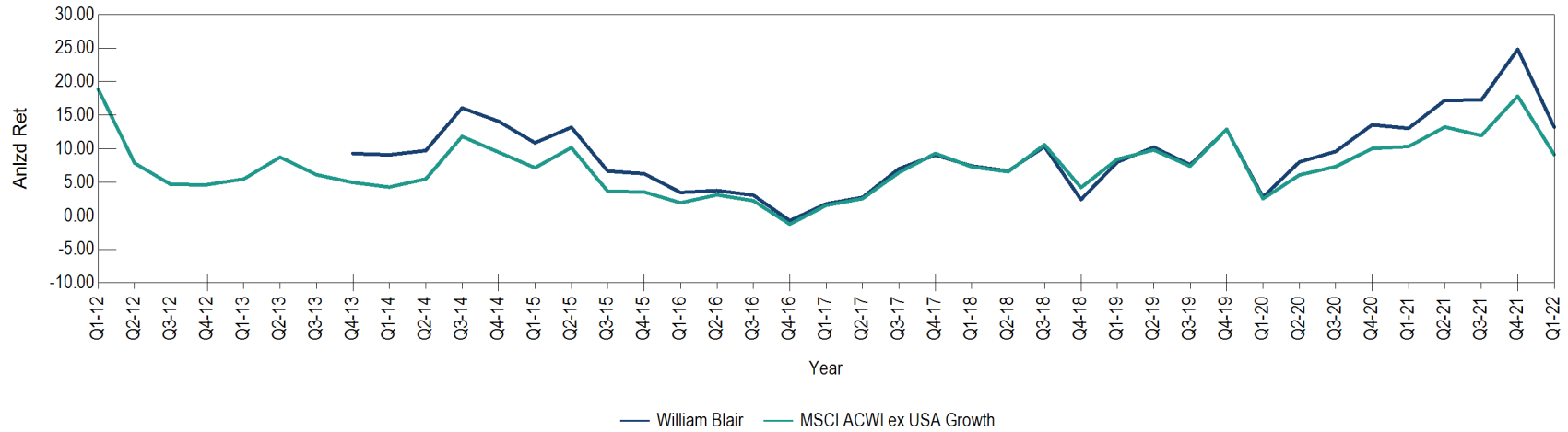


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	-5.8	5.7	19.1	16.2	13.3	20.3	57.0	40.8	-6.8	46.8
25th Percentile	-9.8	-1.7	13.9	12.3	10.3	13.4	34.8	33.6	-11.7	39.6
Median	-13.4	-5.5	11.6	10.9	8.6	9.3	25.4	31.0	-14.3	35.3
75th Percentile	-16.4	-8.1	9.8	9.1	7.9	6.1	20.3	28.3	-17.2	31.8
95th Percentile	-21.7	-18.5	5.9	7.6	7.0	-3.1	11.6	21.8	-22.3	28.3
# of Portfolios	103	103	95	87	60	102	95	93	82	94
● William Blair	-14.9 (69)	-5.1 (47)	13.2 (35)	10.9 (50)	8.7 (46)	10.5 (44)	33.3 (30)	32.0 (39)	-16.8 (69)	30.9 (81)
▲ MSCI ACWI ex USA Growth	-10.8 (35)	-6.2 (56)	9.1 (78)	8.6 (82)	6.7 (98)	5.1 (78)	22.2 (64)	27.3 (80)	-14.4 (51)	32.0 (75)

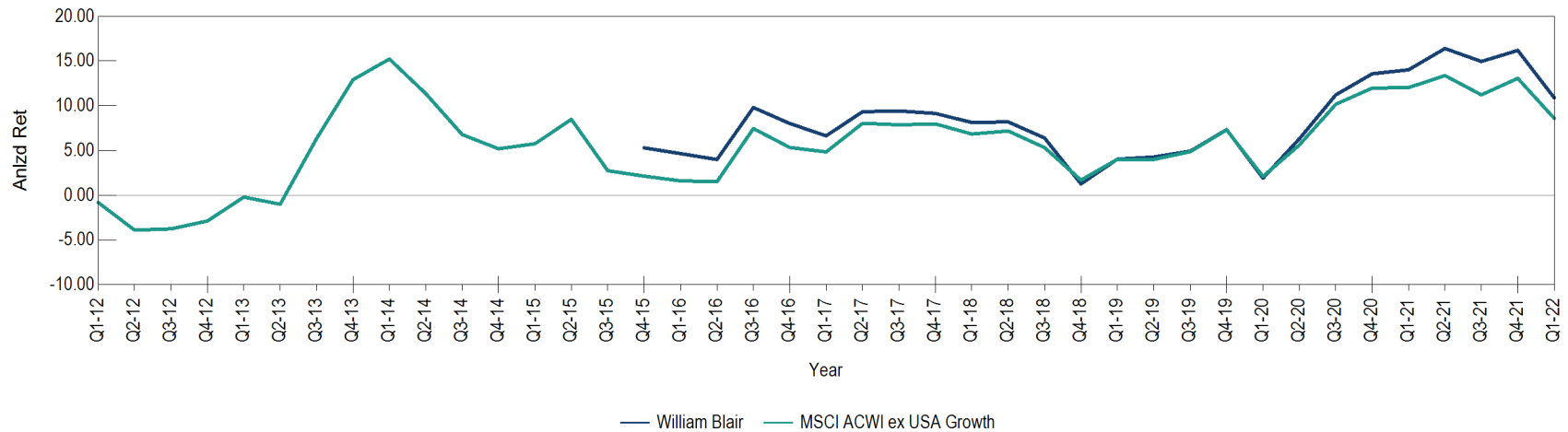
William Blair
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2022

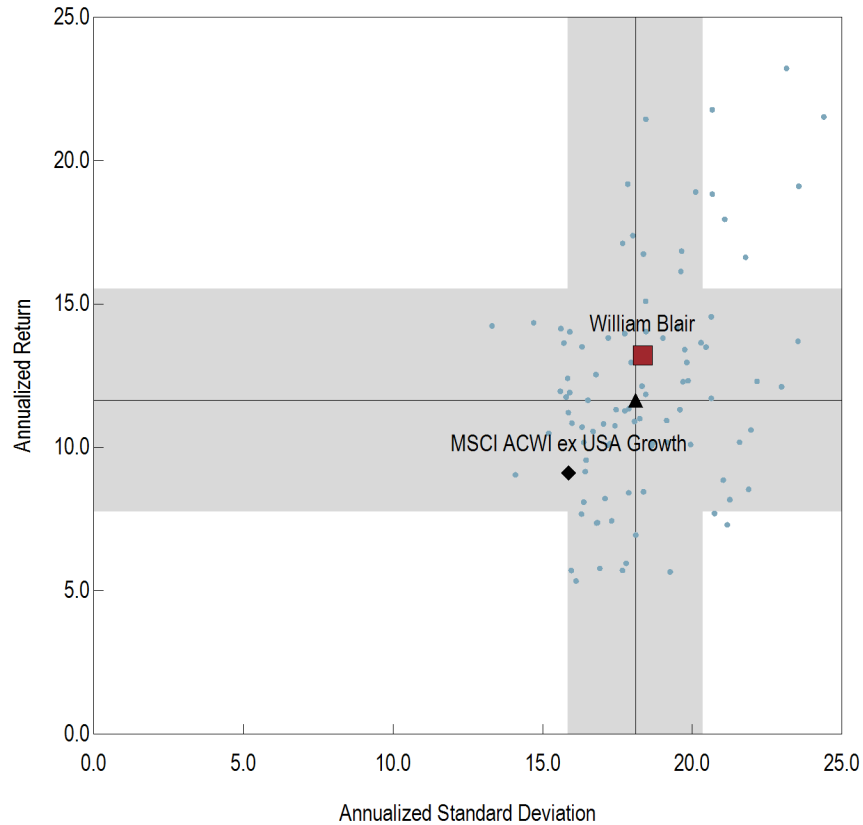
Rolling 3 Year Annualized Return (%)



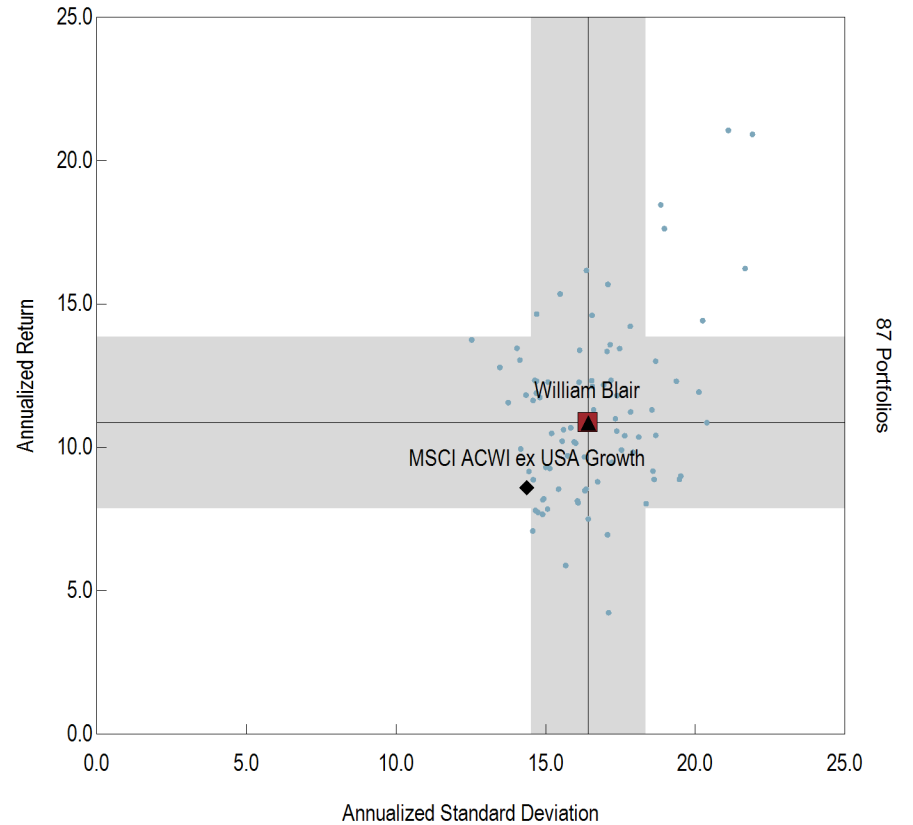
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	13.2%	18.3%	0.7
MSCI ACWI ex USA Growth	9.1%	15.9%	0.5
eV ACWI ex-US Growth Equity Gross Median	11.6%	18.1%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
William Blair	10.9%	16.4%	0.6
MSCI ACWI ex USA Growth	8.6%	14.4%	0.5
eV ACWI ex-US Growth Equity Gross Median	10.9%	16.4%	0.6

PIMCO RAE Emerging Markets Manager Portfolio Overview

Period Ending: March 31, 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.

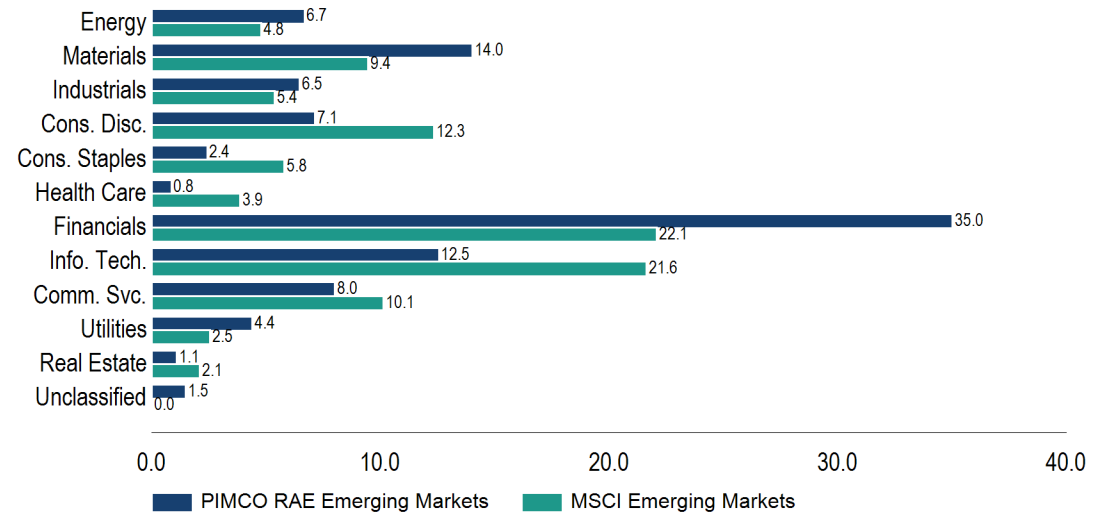
Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	352	1,391
Weighted Avg. Market Cap. (\$B)	21.61	126.89
Median Market Cap. (\$B)	4.38	7.06
Price To Earnings	6.71	12.56
Price To Book	1.76	2.61
Price To Sales	0.40	1.25
Return on Equity (%)	12.77	14.87
Yield (%)	4.96	2.64
Beta	1.14	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	6.2%	0.0%
Emerging*	93.1%	100.0%
Top 10 Largest Countries		
Brazil*	17.8%	5.8%
India*	12.0%	13.1%
Korea*	11.2%	12.6%
China*	10.9%	30.0%
South Africa*	8.8%	4.1%
Taiwan*	8.8%	16.2%
Thailand*	8.4%	1.9%
Mexico*	6.1%	2.3%
Hong Kong	5.7%	0.0%
Turkey*	3.3%	0.3%
Total-Top 10 Largest Countries	93.1%	86.2%

Sector Allocation (%) vs MSCI Emerging Markets



Top Contributors

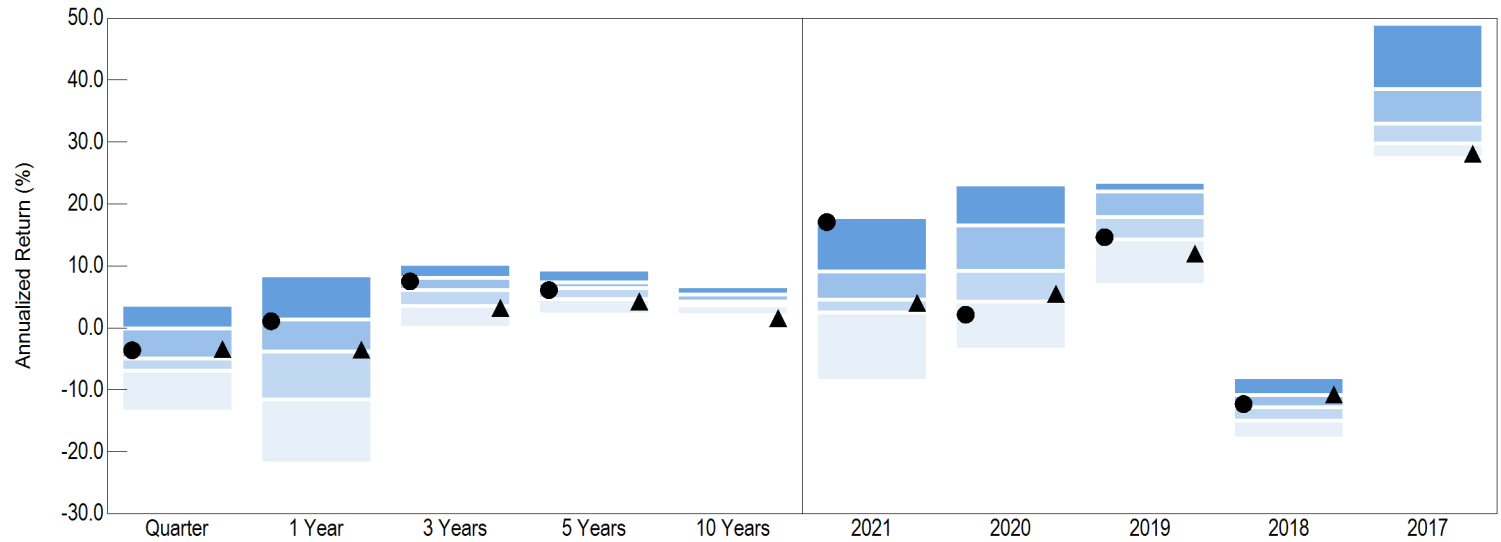
	End Weight	Return	Contribution
BANCO DO BRASIL ON	3.87	45.25	1.75
ITAU UNIBANCO HOLDING PN	3.06	54.19	1.66
BANCO BRADESCO SA BRAD	2.54	35.97	0.92
SASOL LTD	1.66	49.51	0.82
VEDANTA LTD	2.85	20.12	0.57
CIELO SA	0.88	59.90	0.53
KASIKORNBANK PUBLIC CO LTD	2.80	14.24	0.40
MTN GROUP LTD	1.43	23.30	0.33
NEDBANK GROUP LTD	0.65	45.26	0.29
STANDARD BANK GROUP LTD	0.70	41.90	0.29

Bottom Contributors

	End Weight	Return	Contribution
CHINA RESOURCES POWER HOLDINGS CO LTD	1.05	-43.77	-0.46
CEMEX SAB DE CV	1.48	-21.39	-0.32
EMBRAER SA	1.07	-29.34	-0.31
SIAM COMMERCIAL BANK PUBLIC CO LTD	2.37	-9.41	-0.22
INDIABULLS HOUSING FINANCE LTD	0.73	-28.94	-0.21
INNOLUX CORP	1.13	-17.08	-0.19
KIA CORPORATION	1.54	-11.73	-0.18
LG ELECTRONICS INC	1.12	-14.38	-0.16
CEMEX SAB DE CV	0.65	-21.98	-0.14
LG DISPLAY CO LTD	0.70	-17.69	-0.12

Unclassified sector allocation includes cash allocations.

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



	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	3.7	8.4	10.3	9.3	6.7	17.8	23.1	23.5	-7.9	49.0	
25th Percentile	0.0	1.4	8.1	7.4	5.5	9.1	16.6	22.1	-10.8	38.6	
Median	-4.9	-3.8	6.2	6.5	4.3	4.6	9.2	18.0	-12.7	33.0	
75th Percentile	-6.9	-11.5	3.6	4.7	3.7	2.5	4.3	14.4	-14.9	29.8	
95th Percentile	-13.4	-21.8	0.1	2.2	2.1	-8.5	-3.4	7.0	-17.8	27.4	
# of Portfolios	37	37	35	28	18	35	37	33	36	37	
● PIMCO RAE Emerging Markets	-3.6 (45)	1.1 (27)	7.5 (29)	6.1 (61)	-- (--)	17.1 (6)	2.1 (85)	14.6 (72)	-12.3 (44)	-- (--)	
▲ MSCI Emerging Markets Value NR	-3.4 (44)	-3.5 (48)	3.2 (78)	4.2 (80)	1.6 (99)	4.0 (61)	5.5 (73)	12.0 (86)	-10.7 (25)	28.1 (90)	

TT Emerging Markets Manager Portfolio Overview

Period Ending: March 31, 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.

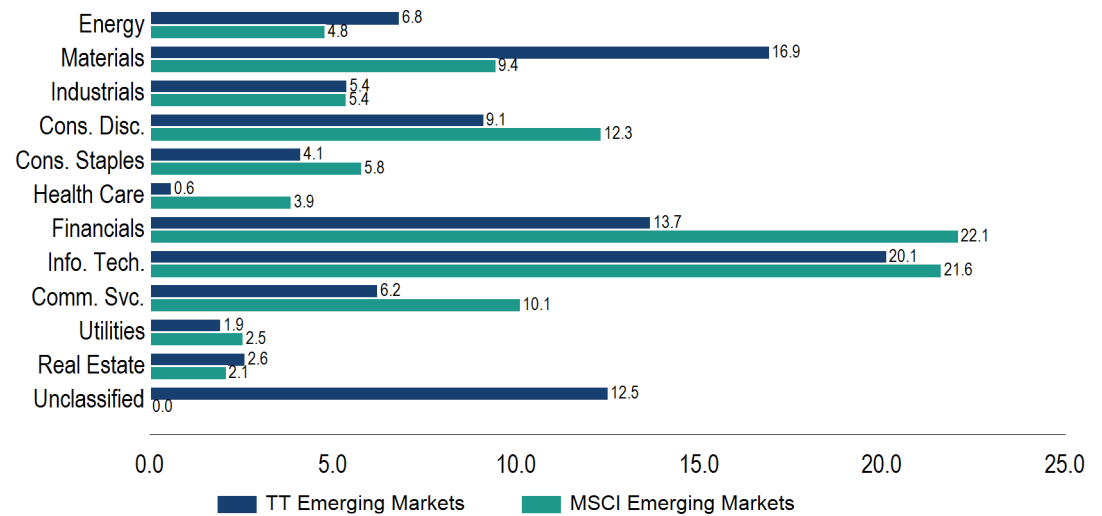
Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	76	1,391
Weighted Avg. Market Cap. (\$B)	162.48	126.89
Median Market Cap. (\$B)	21.03	7.06
Price To Earnings	12.20	12.56
Price To Book	2.91	2.61
Price To Sales	1.36	1.25
Return on Equity (%)	16.22	14.87
Yield (%)	2.25	2.64
Beta	1.21	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	23.5%	0.0%
Emerging*	67.9%	100.0%
Frontier**	0.9%	0.0%
Top 10 Largest Countries		
China*	21.2%	30.0%
Taiwan*	13.4%	16.2%
India*	9.8%	13.1%
Korea*	9.3%	12.6%
Cash	7.7%	0.0%
Brazil*	6.3%	5.8%
United States	6.3%	0.0%
Hong Kong	5.8%	0.0%
Netherlands	2.9%	0.0%
Canada	2.0%	0.0%
Total-Top 10 Largest Countries	84.9%	77.7%

Sector Allocation (%) vs MSCI Emerging Markets



Top Contributors

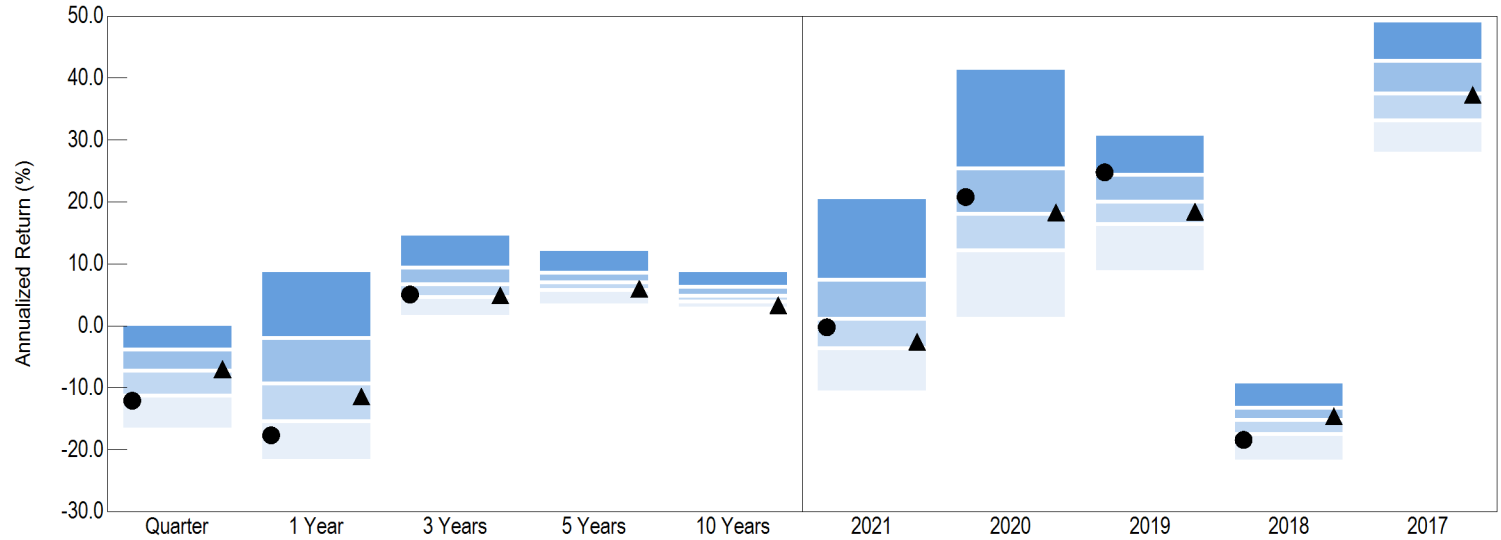
	End Weight	Return	Contribution
OCI NV	1.79	36.12	0.64
BARRICK GOLD CORP	2.05	29.68	0.61
GLENCORE PLC	1.78	29.45	0.52
COSAN SA	1.38	27.82	0.38
EMAAR PROPERTIES	1.50	22.70	0.34
YUNNAN ALUMINIUM CO LTD	1.36	22.71	0.31
QATAR NATIONAL BANK	1.73	17.24	0.30
ZIJIN MINING GROUP CO LTD	1.01	29.38	0.30
PETROLEO BRASILEIRO S.A.- PETROBRAS	0.75	34.56	0.26
OIL & NATURAL GAS CORP LTD	1.69	14.21	0.24

Bottom Contributors

	End Weight	Return	Contribution
TENCENT HOLDINGS LTD	4.36	-16.10	-0.70
360 DIGITECH INC	1.64	-32.88	-0.54
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	9.49	-5.63	-0.53
EVE ENERGY CO LTD	1.56	-31.60	-0.49
SEA LTD	0.99	-46.45	-0.46
WULIANGYE ORD A	1.46	-30.22	-0.44
CEMEX SAB DE CV	1.96	-21.39	-0.42
SAMSUNG ELECTRONICS CO LTD	2.87	-12.74	-0.37
KRANESHARES CSI CHINA INTERNET ETF	1.61	-21.87	-0.35
VNET GROUP INC	0.94	-35.44	-0.33

Unclassified sector allocation includes cash allocations.

TT Emerging Markets vs. eV Emg Mkts Equity Gross Universe



	Return (Rank)															
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017						
5th Percentile	0.3	9.0	14.9	12.3	8.9	20.7	41.6	30.9	-9.0	49.2						
25th Percentile	-3.7	-1.9	9.5	8.6	6.3	7.5	25.5	24.4	-13.2	42.8						
Median	-7.2	-9.3	6.8	7.1	4.9	1.2	18.2	20.1	-15.2	37.6						
75th Percentile	-11.2	-15.4	4.7	5.8	3.9	-3.5	12.2	16.5	-17.4	33.2						
95th Percentile	-16.6	-21.7	1.5	3.3	2.8	-10.7	1.2	8.8	-21.8	27.8						
# of Portfolios	395	395	361	324	215	391	391	386	355	343						
● TT Emerging Markets	-12.1 (80)	-17.7 (83)	5.0 (72)	-- (--)	-- (--)	-0.2 (58)	20.8 (39)	24.8 (24)	-18.4 (83)	-- (--)						
▲ MSCI Emerging Markets	-7.0 (49)	-11.4 (58)	4.9 (73)	6.0 (72)	3.4 (87)	-2.5 (71)	18.3 (49)	18.4 (63)	-14.6 (43)	37.3 (53)						

Global Equity Managers

Artisan Partners Manager Portfolio Overview

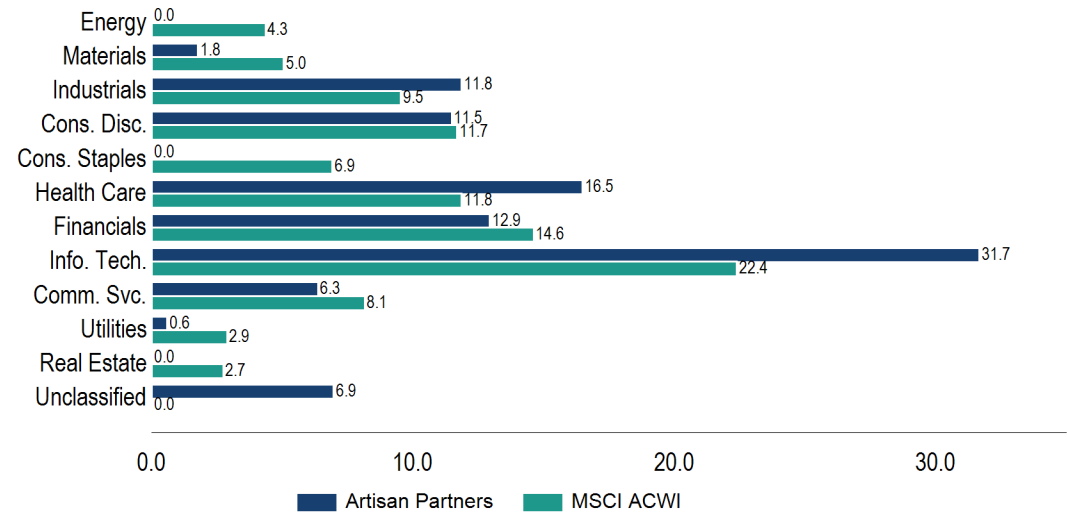
Period Ending: March 31, 2022

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	46	2,929
Weighted Avg. Market Cap. (\$B)	239.37	415.12
Median Market Cap. (\$B)	47.57	13.16
Price To Earnings	29.53	18.43
Price To Book	4.31	3.54
Price To Sales	4.12	2.14
Return on Equity (%)	14.76	22.06
Yield (%)	0.67	1.93
Beta	0.96	1.00

Sector Allocation (%) vs MSCI ACWI



Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	93.2%	89.0%
Emerging*	1.5%	11.0%
Top 10 Largest Countries		
United States	46.7%	61.4%
United Kingdom	11.1%	3.7%
Canada	7.2%	3.2%
Switzerland	6.1%	2.5%
Cash	5.3%	0.0%
Sweden	5.0%	0.9%
Japan	3.1%	5.4%
Denmark	3.1%	0.7%
Australia	2.7%	2.0%
Luxembourg	2.4%	0.0%
Total-Top 10 Largest Countries	92.8%	79.8%

Top Contributors

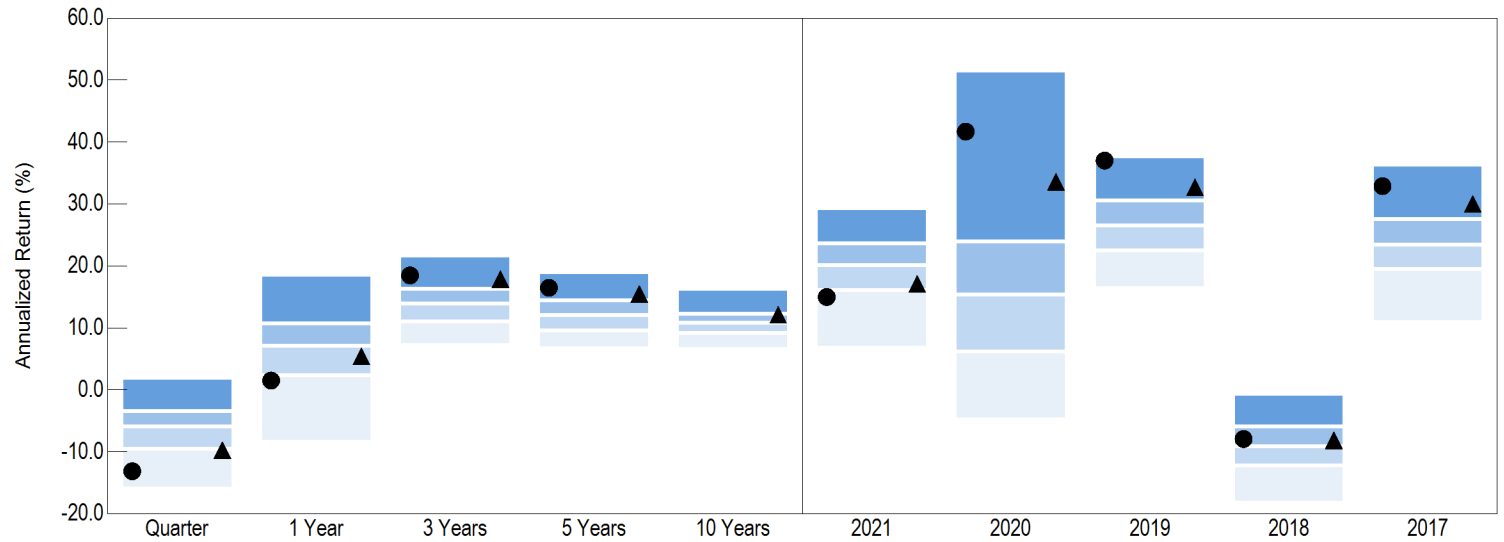
	Avg Wgt	Return	Contribution
UBS GROUP AG	2.93	9.39	0.28
ASTRAZENECA PLC	1.69	15.26	0.26
LONDON STOCK EXCHANGE GROUP PLC	1.28	11.59	0.15
BOSTON SCIENTIFIC CORP	3.08	4.26	0.13
AIA GROUP LTD	1.38	4.44	0.06
MAGAZINE LUIZA S/A	0.48	10.73	0.05
AIRBNB INC	1.57	3.16	0.05
SCHWAB (CHARLES) CORP	2.15	0.47	0.01
VESTAS WIND SYSTEMS A/S	0.93	-2.56	-0.02
DEXCOM INC	0.95	-4.72	-0.04

Bottom Contributors

	Avg Wgt	Return	Contribution
ADVANCED MICRO DEVICES INC	5.75	-24.02	-1.38
SHOPIFY INC	2.30	-50.92	-1.17
TECHTRONIC INDUSTRIES CO LTD	5.37	-18.60	-1.00
APTIV PLC	2.98	-27.43	-0.82
NETFLIX INC	2.04	-37.82	-0.77
ATLASSIAN CORP PLC	2.76	-22.94	-0.63
VEEVA SYSTEMS INC	3.60	-16.84	-0.61
LOWE'S COS INC	2.59	-21.51	-0.56
BURLINGTON STORES INC	1.46	-37.51	-0.55
IHS MARKIT LTD	2.76	-18.29	-0.50

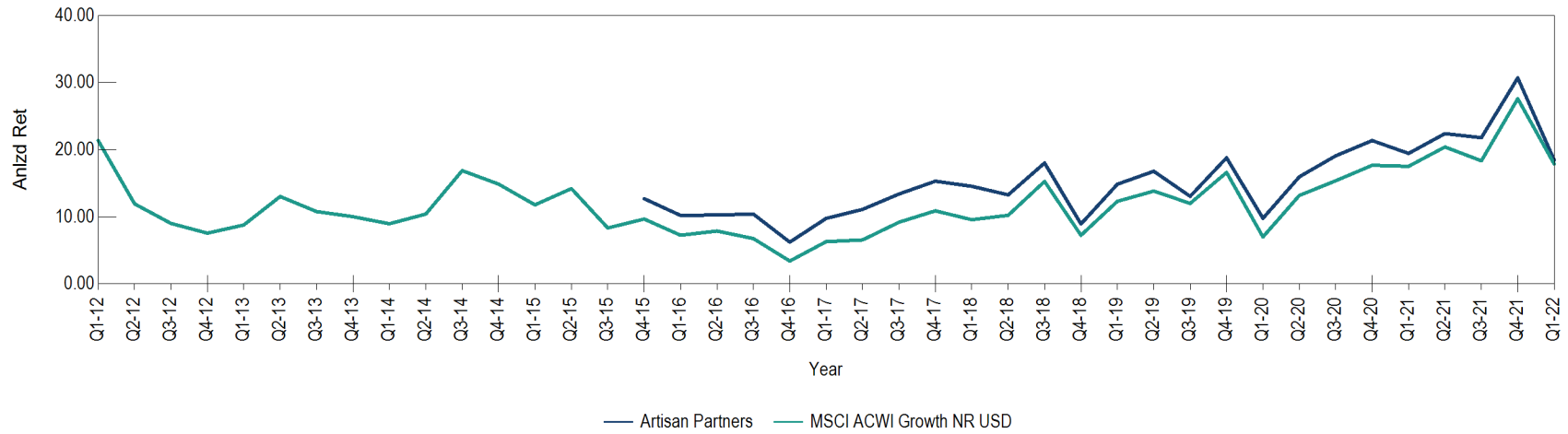
Unclassified sector allocation includes cash allocations.

Artisan Partners vs. eV All Global Equity Gross Universe

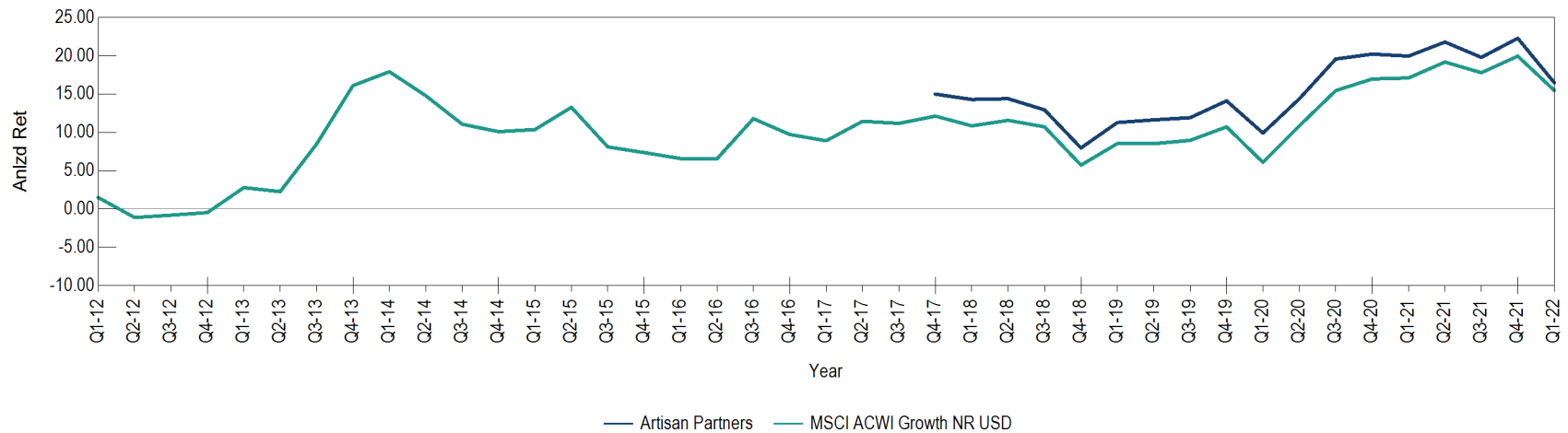


	Return (Rank)									
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	1.9	18.5	21.7	19.0	16.3	29.2	51.5	37.6	-0.7	36.3
25th Percentile	-3.3	10.8	16.4	14.5	12.3	23.7	24.0	30.7	-5.8	27.6
Median	-5.8	7.1	14.0	12.1	10.9	20.2	15.4	26.6	-9.1	23.5
75th Percentile	-9.5	2.5	11.1	9.6	9.3	16.2	6.3	22.6	-12.2	19.6
95th Percentile	-15.9	-8.3	7.2	6.8	6.6	6.9	-4.7	16.5	-18.1	11.0
# of Portfolios	1,154	1,153	1,057	941	618	1,141	1,093	989	920	880
● Artisan Partners	-13.1 (89)	1.5 (78)	18.5 (13)	16.5 (13)	-- (--)	15.0 (80)	41.7 (9)	37.0 (7)	-7.9 (40)	32.9 (11)
▲ MSCI ACWI Growth NR USD	-9.7 (77)	5.4 (62)	17.9 (16)	15.5 (19)	12.1 (27)	17.1 (71)	33.6 (14)	32.7 (17)	-8.1 (42)	30.0 (17)

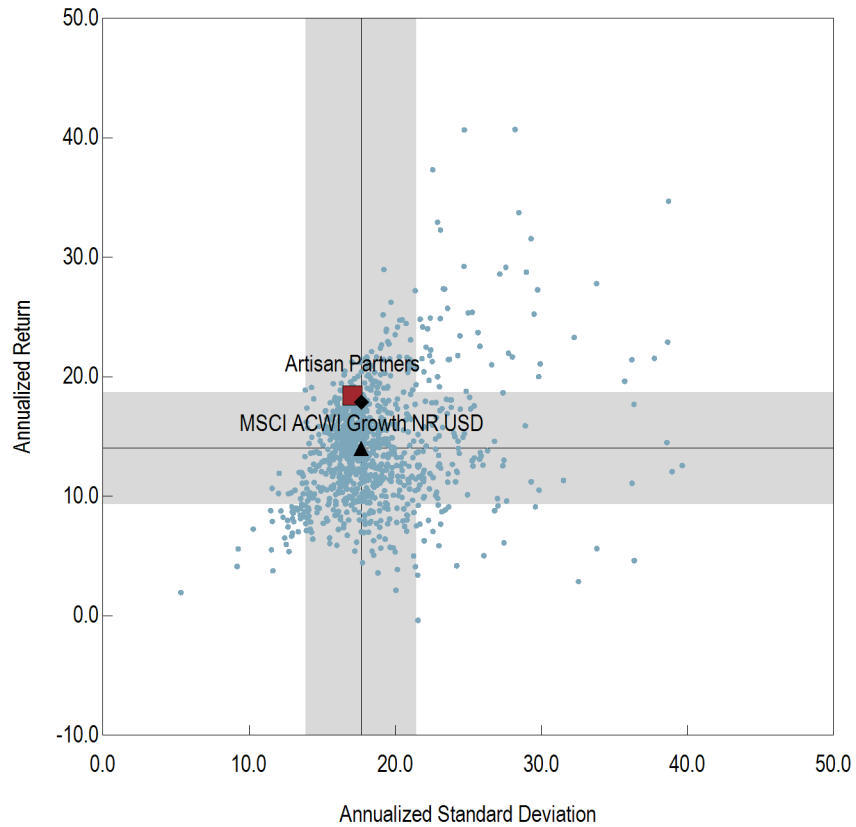
Rolling 3 Year Annualized Return (%)



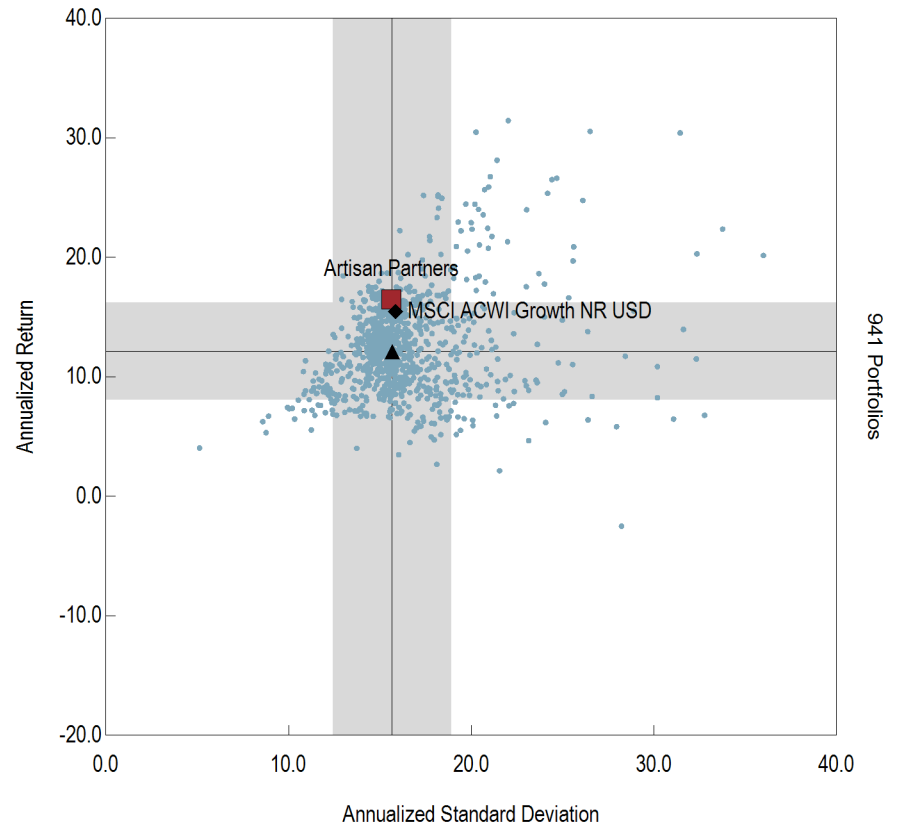
Rolling 5 Year Annualized Return (%)



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	18.5%	17.1%	1.0
MSCI ACWI Growth NR USD	17.9%	17.7%	1.0
eV All Global Equity Gross Median	14.0%	17.7%	0.7

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan Partners	16.5%	15.6%	1.0
MSCI ACWI Growth NR USD	15.5%	15.9%	0.9
eV All Global Equity Gross Median	12.1%	15.7%	0.7

First Eagle Manager Portfolio Overview

Period Ending: March 31, 2022

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

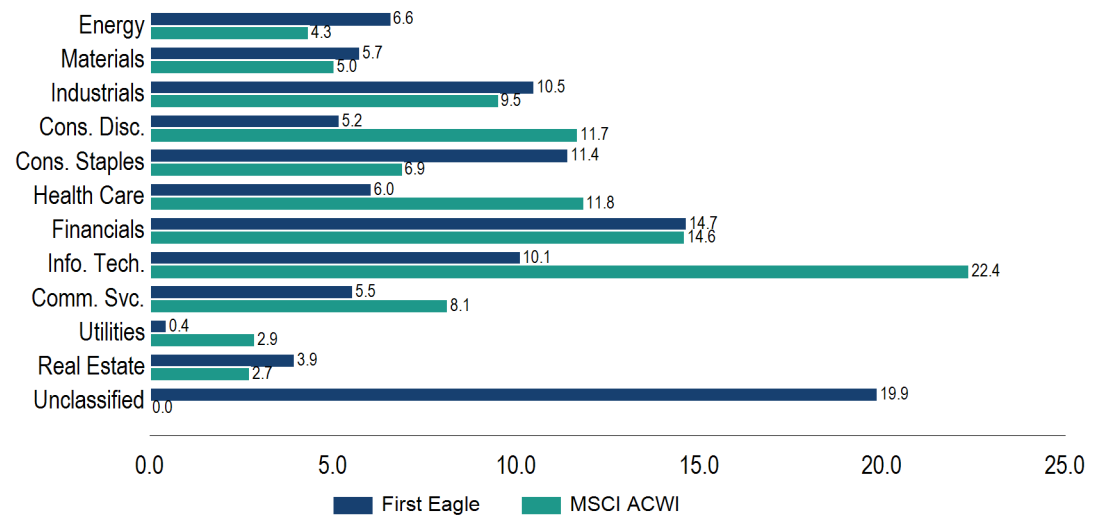
Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	138	2,929
Weighted Avg. Market Cap. (\$B)	160.94	415.12
Median Market Cap. (\$B)	29.52	13.16
Price To Earnings	17.15	18.43
Price To Book	2.41	3.54
Price To Sales	1.82	2.14
Return on Equity (%)	16.44	22.06
Yield (%)	2.03	1.93
Beta	0.74	1.00

Country Allocation

	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
Totals		
Developed	93.3%	89.0%
Emerging*	6.7%	11.0%
Top 10 Largest Countries		
United States	61.5%	61.4%
Japan	7.7%	5.4%
United Kingdom	7.1%	3.7%
Canada	4.5%	3.2%
France	3.6%	2.8%
Switzerland	2.6%	2.5%
Korea*	1.6%	1.4%
Belgium	1.4%	0.2%
Brazil*	1.3%	0.6%
Mexico*	1.0%	0.3%
Total-Top 10 Largest Countries	93.3%	81.6%

Sector Allocation (%) vs MSCI ACWI



Top Contributors

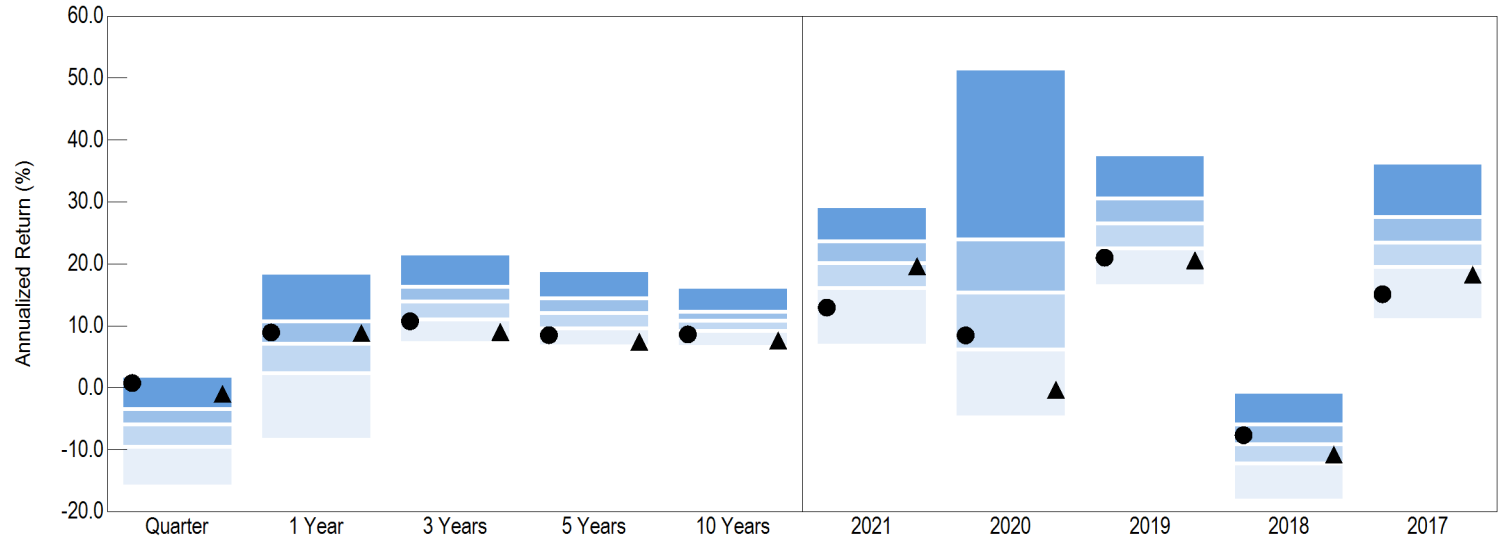
	End Weight	Return	Contribution
EXXON MOBIL CORP	2.84	36.48	1.04
SCHLUMBERGER LTD	1.67	38.37	0.64
SPDR GOLD TRUST	9.47	5.67	0.54
NOV INC	0.96	45.05	0.43
NEWMONT CORPORATION	1.38	29.03	0.40
IMPERIAL OIL LTD	1.11	35.21	0.39
NUTRIEN LTD	0.86	38.93	0.34
BRITISH AMERICAN TOBACCO PLC	1.68	15.34	0.26
ITAUSA INVESTIMENTOS ITAU PN	0.47	44.58	0.21
BARRICK GOLD CORP	0.56	29.68	0.17

Bottom Contributors

	End Weight	Return	Contribution
META PLATFORMS INC	1.63	-33.89	-0.55
PROSUS ORD	0.58	-35.47	-0.21
CIE FINANCIERE RICHEMONT AG, ZUG	1.35	-14.70	-0.20
IPG PHOTONICS CORP	0.52	-36.24	-0.19
BANK OF NEW YORK MELLON CORP (THE)	1.13	-14.05	-0.16
ORACLE CORP	3.25	-4.79	-0.16
UNILEVER PLC COMMON STOCK GBP.0311	1.05	-14.17	-0.15
FANUC CORP	0.91	-15.82	-0.14
COMCAST CORP	2.05	-6.51	-0.13
BERKELEY GROUP HOLDINGS PLC	0.56	-23.97	-0.13

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

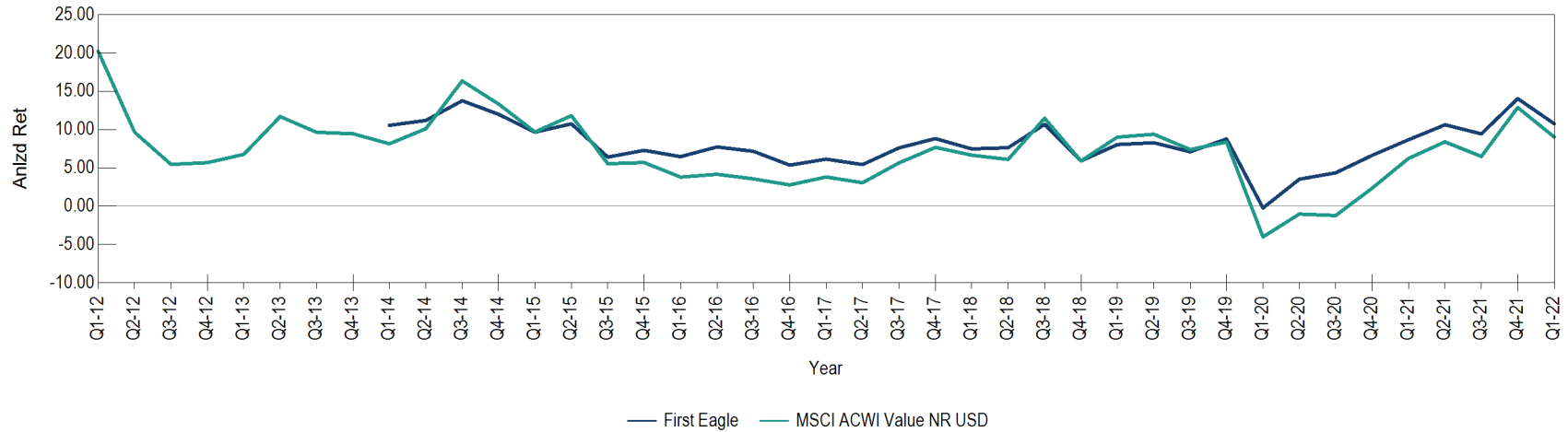


	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017
5th Percentile	1.9	18.5	21.7	19.0	16.3	29.2	51.5	37.6	-0.7	36.3
25th Percentile	-3.3	10.8	16.4	14.5	12.3	23.7	24.0	30.7	-5.8	27.6
Median	-5.8	7.1	14.0	12.1	10.9	20.2	15.4	26.6	-9.1	23.5
75th Percentile	-9.5	2.5	11.1	9.6	9.3	16.2	6.3	22.6	-12.2	19.6
95th Percentile	-15.9	-8.3	7.2	6.8	6.6	6.9	-4.7	16.5	-18.1	11.0
# of Portfolios	1,154	1,153	1,057	941	618	1,141	1,093	989	920	880
● First Eagle	0.8 (8)	8.9 (38)	10.8 (78)	8.5 (86)	8.6 (83)	13.0 (85)	8.5 (70)	21.0 (82)	-7.6 (38)	15.1 (89)
▲ MSCI ACWI Value NR USD	-1.0 (12)	8.8 (39)	9.0 (88)	7.5 (92)	7.6 (92)	19.6 (55)	-0.3 (89)	20.6 (83)	-10.8 (65)	18.3 (81)

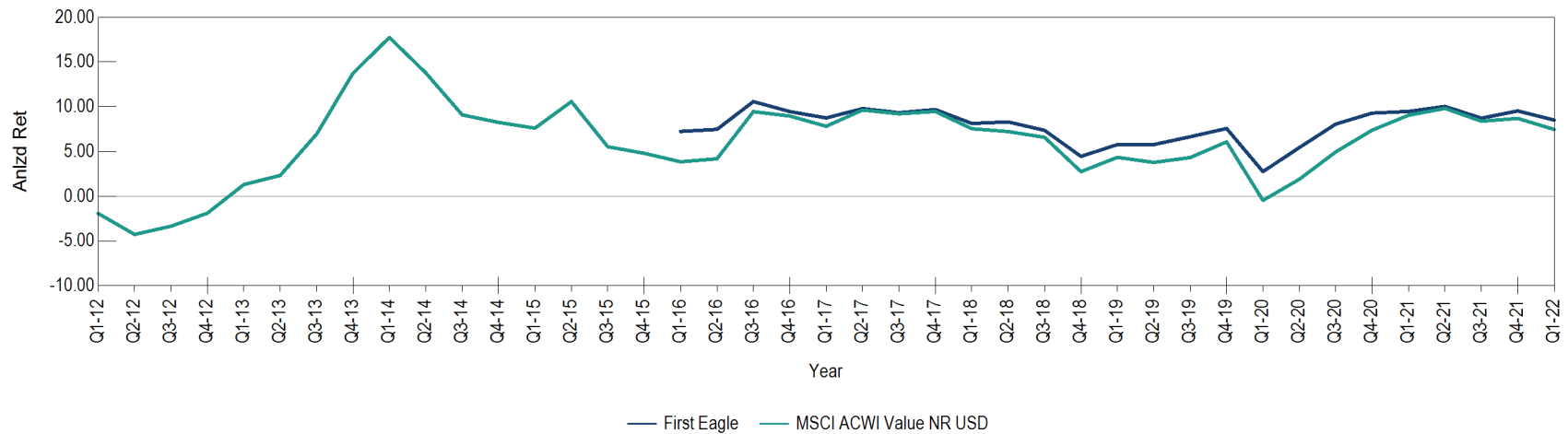
First Eagle
 Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2022

Rolling 3 Year Annualized Return (%)



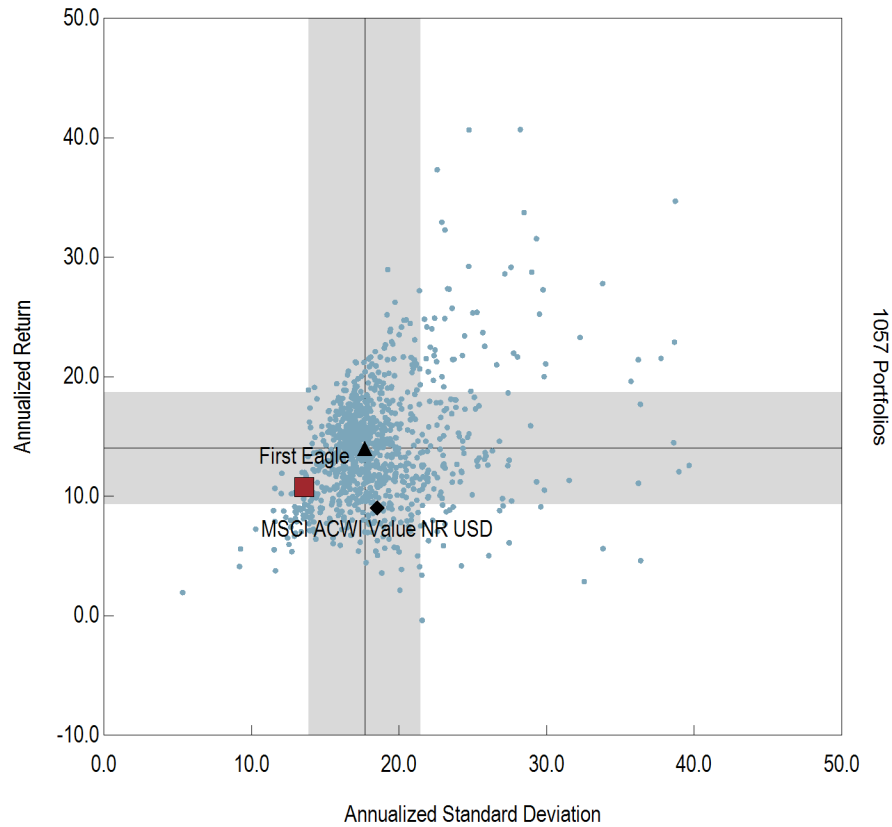
Rolling 5 Year Annualized Return (%)



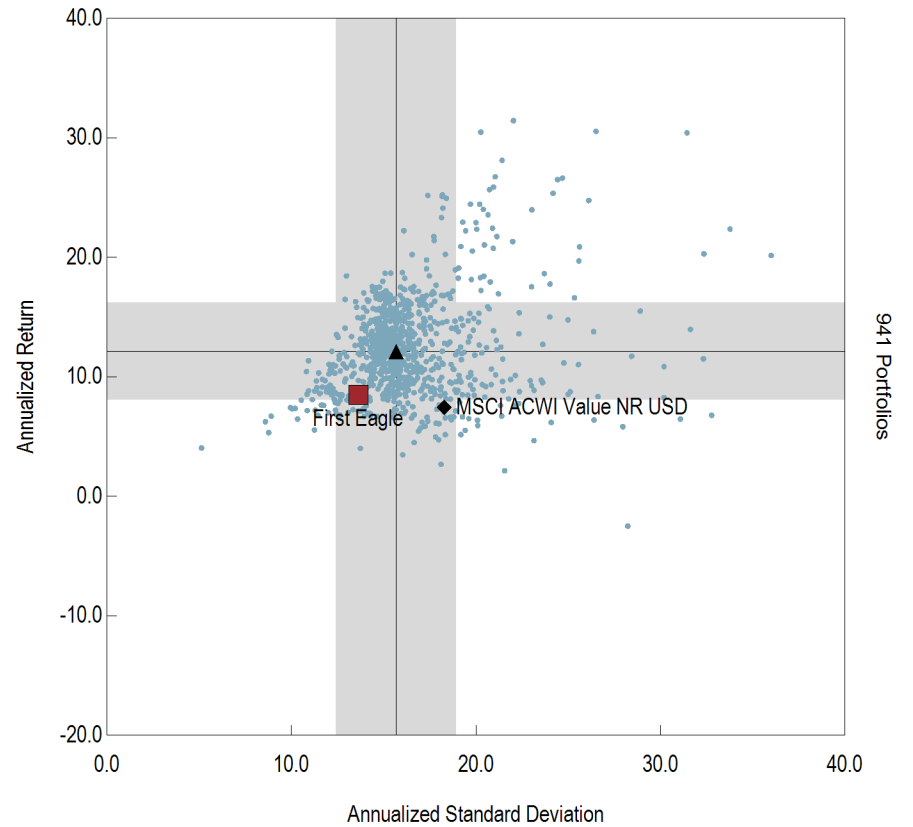
First Eagle
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2022

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	10.8%	13.6%	0.7
MSCI ACWI Value NR USD	9.0%	18.5%	0.5
eV All Global Equity Gross Median	14.0%	17.7%	0.7

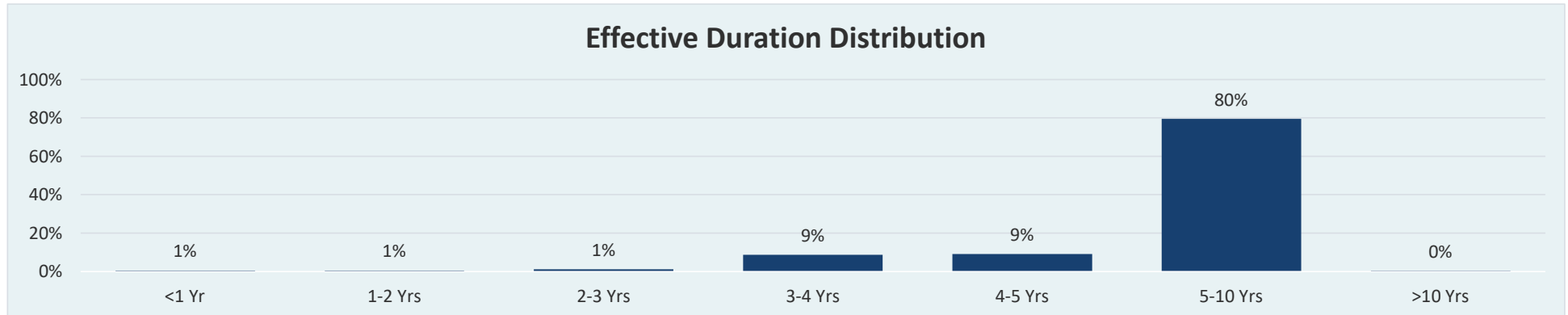
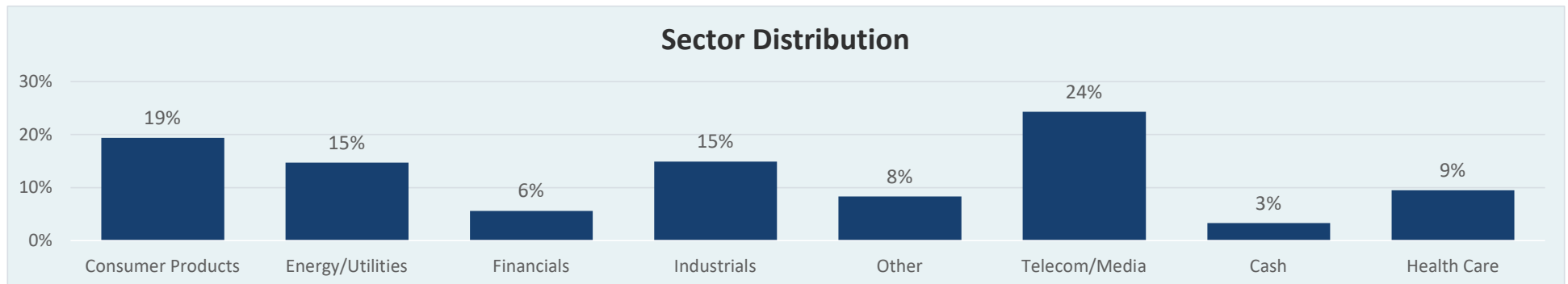
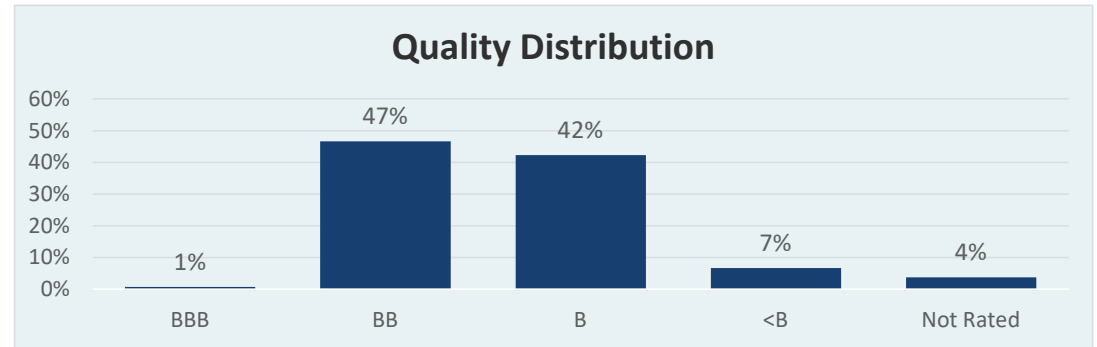
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
First Eagle	8.5%	11.7%	0.6
MSCI ACWI Value NR USD	7.5%	15.9%	0.4
eV All Global Equity Gross Median	12.1%	15.7%	0.7

High Yield Managers

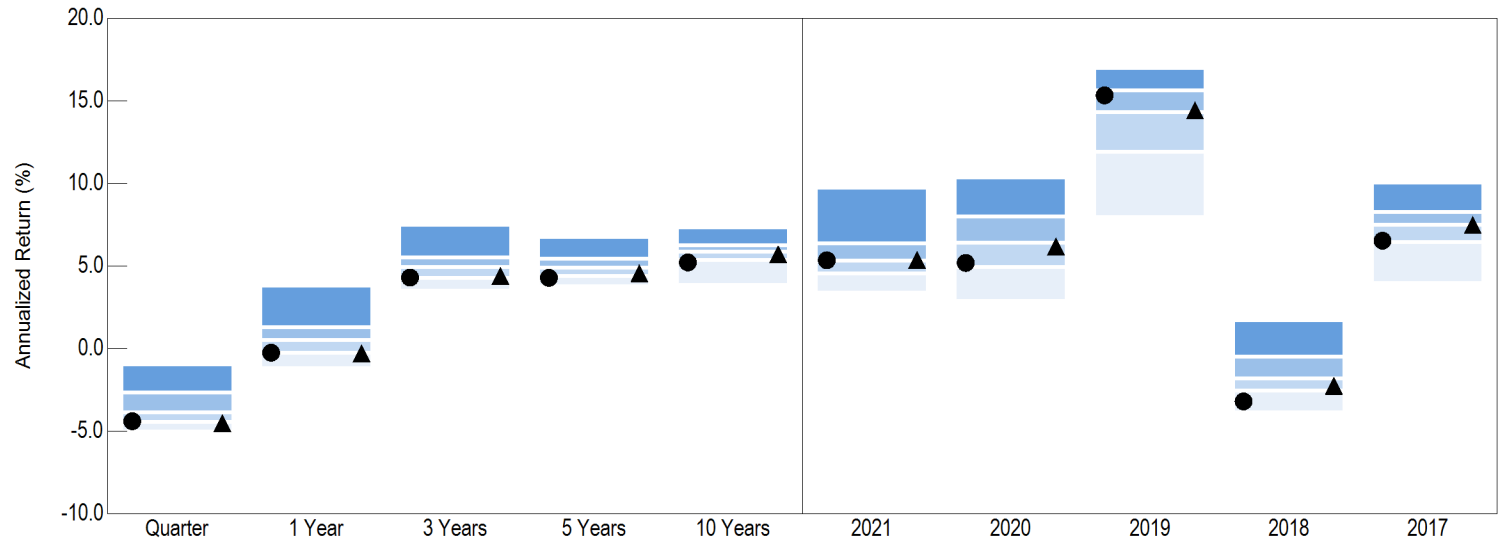
Domestic high yield fixed income portfolio with a focus on security selection. Primary personnel include Douglas Forsyth, Justin Kass, William Stickney, and Michael Yee.

	Allianz	ICE BofAML HY Master II
Effective Duration	4.20	4.20
Yield to Maturity	5.90	6.20
Average Quality	B1	B1
Average Coupon	6.1%	5.7%



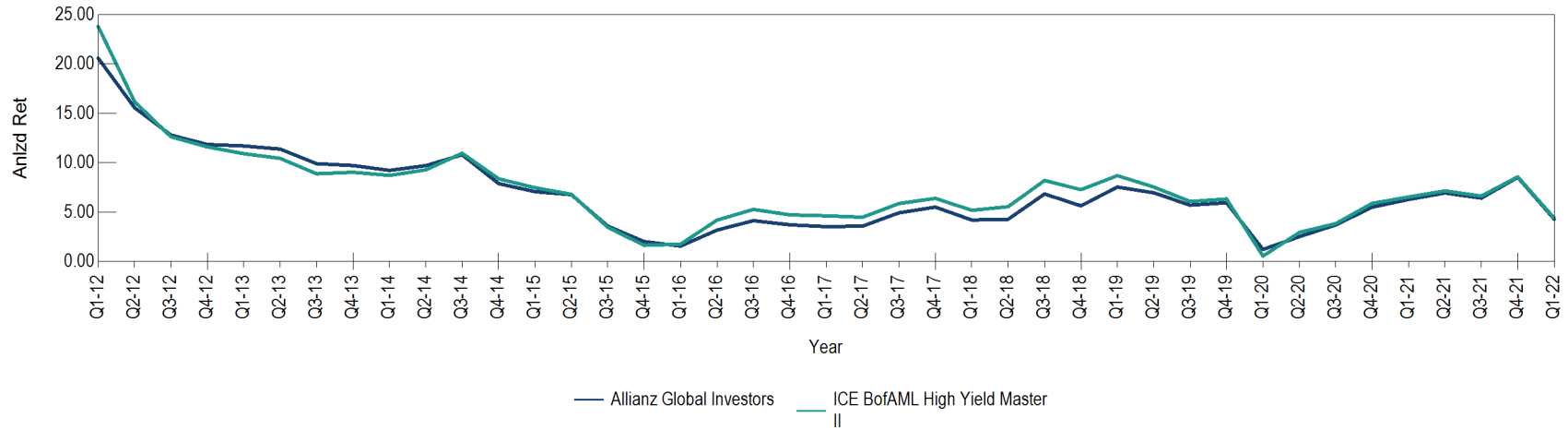
Quality distribution excludes cash.

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

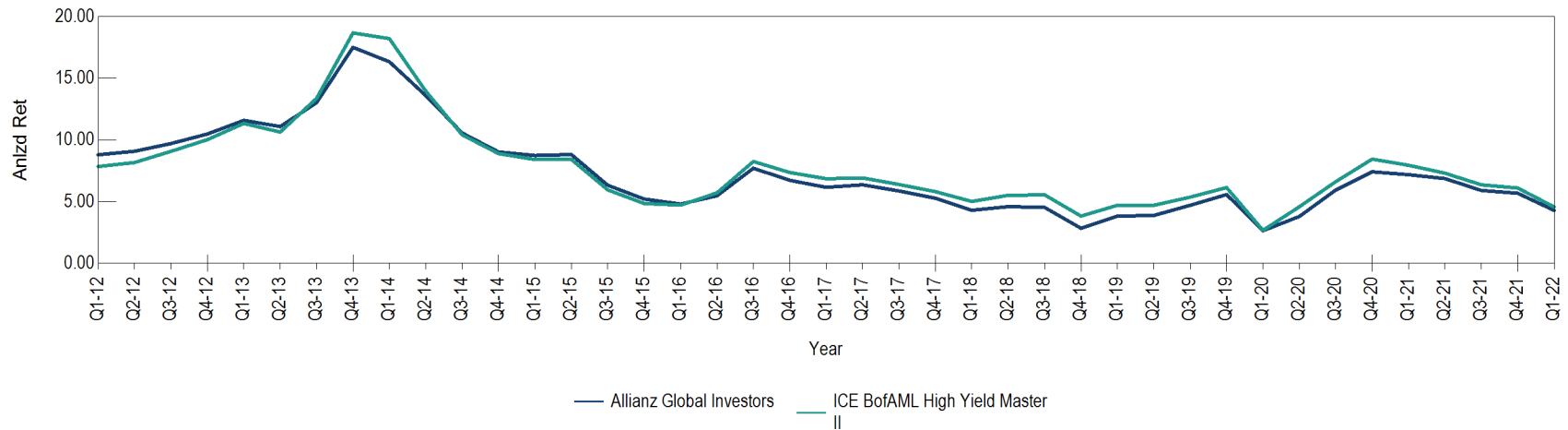


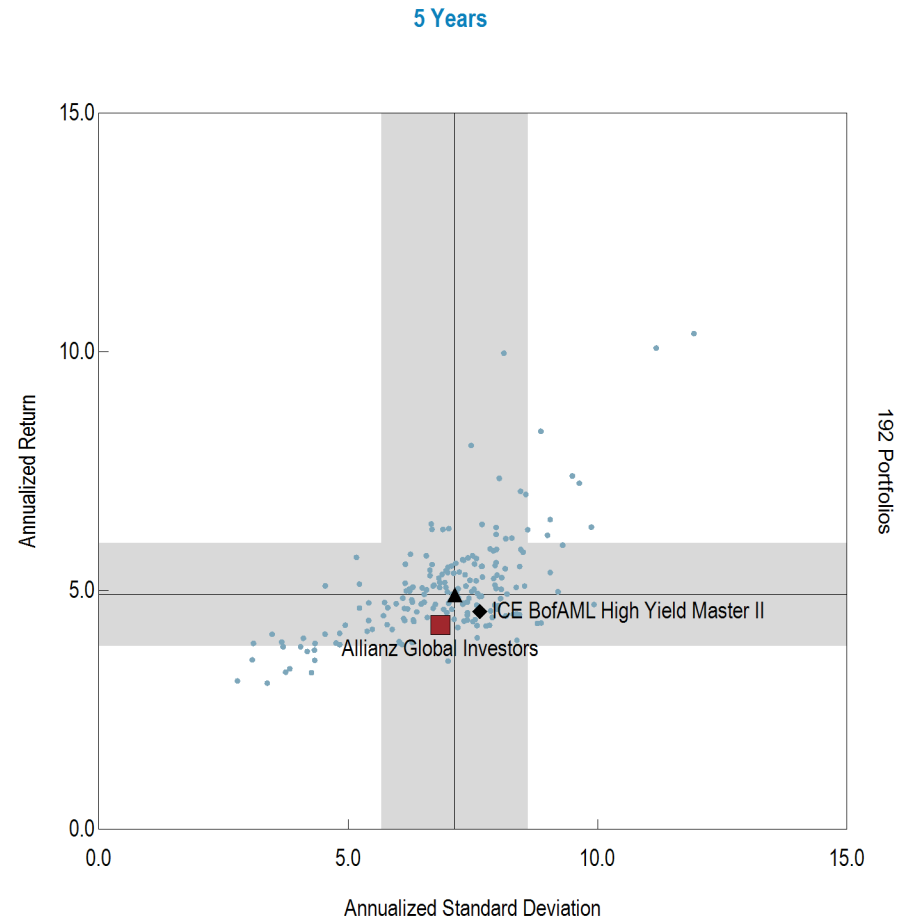
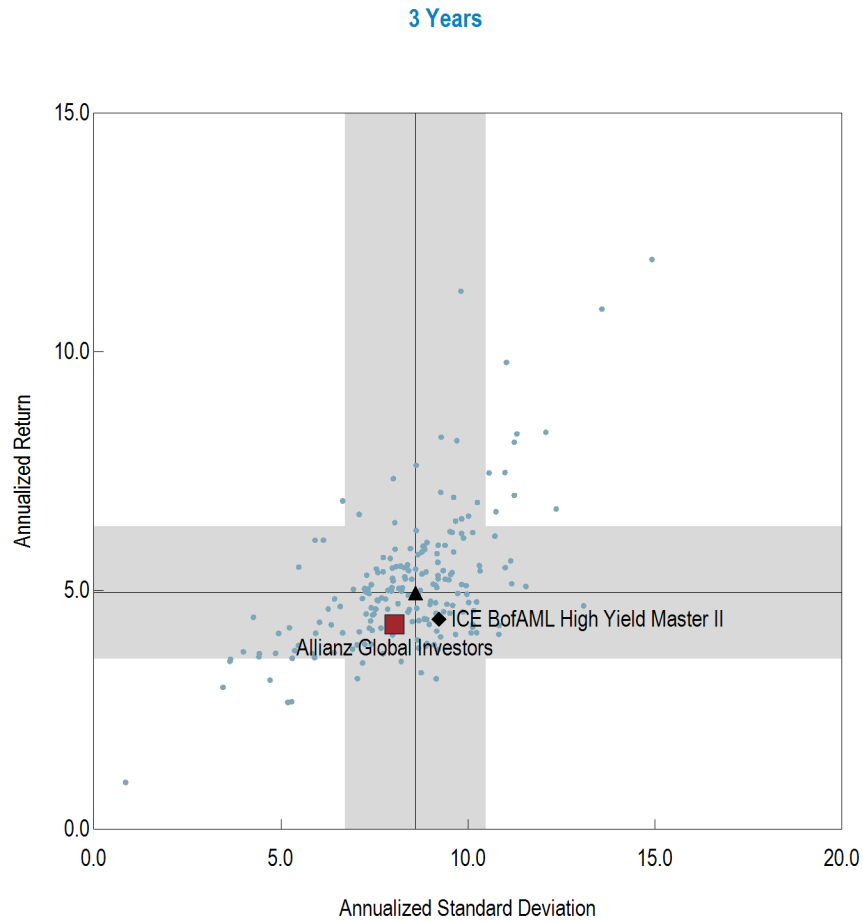
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	-1.0	3.8	7.5	6.7	7.3	9.7	10.3	16.9	1.7	10.0	
25th Percentile	-2.6	1.3	5.5	5.5	6.3	6.4	8.0	15.6	-0.5	8.3	
Median	-3.8	0.5	5.0	4.9	5.9	5.4	6.4	14.3	-1.8	7.5	
75th Percentile	-4.4	-0.3	4.3	4.4	5.4	4.6	5.0	11.9	-2.5	6.5	
95th Percentile	-5.0	-1.2	3.5	3.8	3.9	3.4	2.9	8.0	-3.8	4.0	
# of Portfolios	204	204	203	192	148	211	217	226	210	198	
● Allianz Global Investors	-4.4 (74)	-0.2 (75)	4.3 (74)	4.3 (82)	5.2 (81)	5.3 (51)	5.2 (74)	15.3 (31)	-3.2 (88)	6.5 (74)	
▲ ICE BofAML High Yield Master II	-4.5 (82)	-0.3 (78)	4.4 (71)	4.6 (69)	5.7 (58)	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	4.3%	8.0%	0.5
ICE BofAML High Yield Master II	4.4%	9.2%	0.4
eV US High Yield Fixed Inc Gross Median	5.0%	8.6%	0.5

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Allianz Global Investors	4.3%	6.8%	0.5
ICE BofAML High Yield Master II	4.6%	7.6%	0.5
eV US High Yield Fixed Inc Gross Median	4.9%	7.1%	0.6

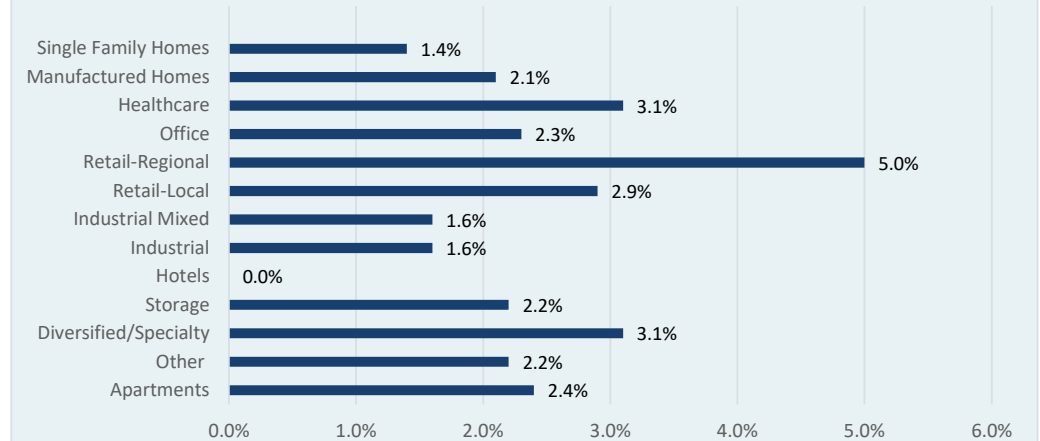
Real Estate Managers

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

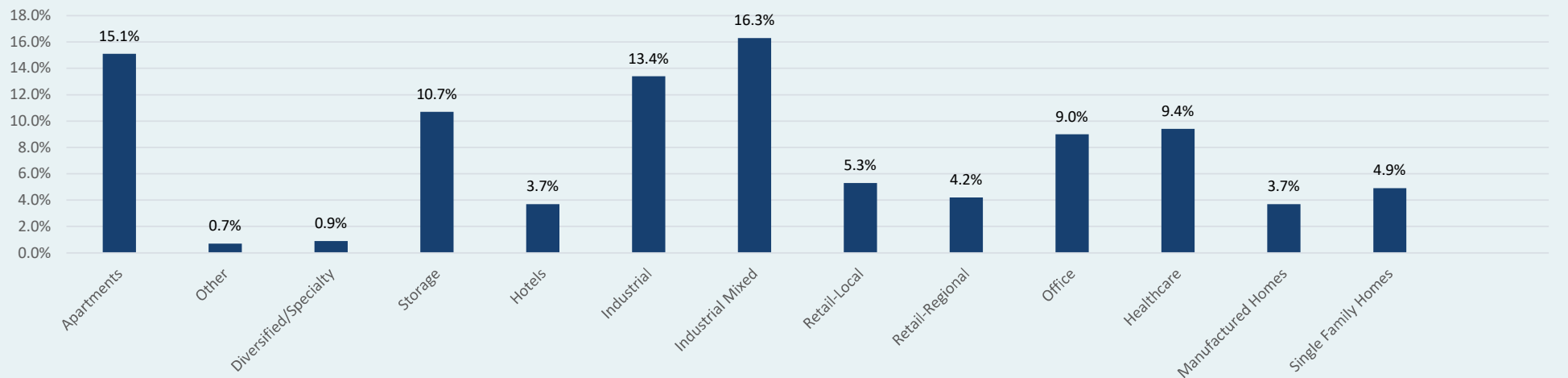
Top Five Holdings

Company	Property Type	Allocation
ProLogis Inc.	Industrial	12.3%
Equinix Inc	Industrial Mixed	8.1%
Public Storage	Storage	6.1%
Equity Residential	Apartments	5.5%
Welltower, Inc.	Healthcare	5.1%

Dividend Yield by Property Type



Property Type Allocation

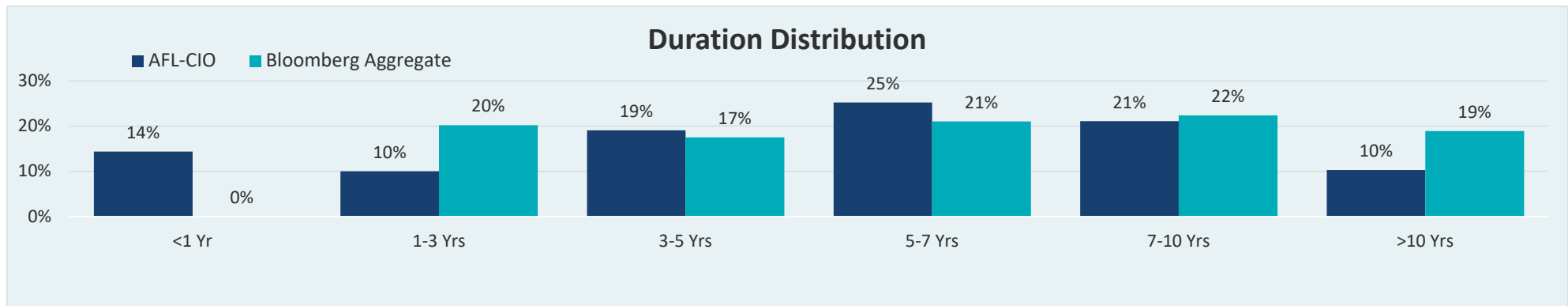
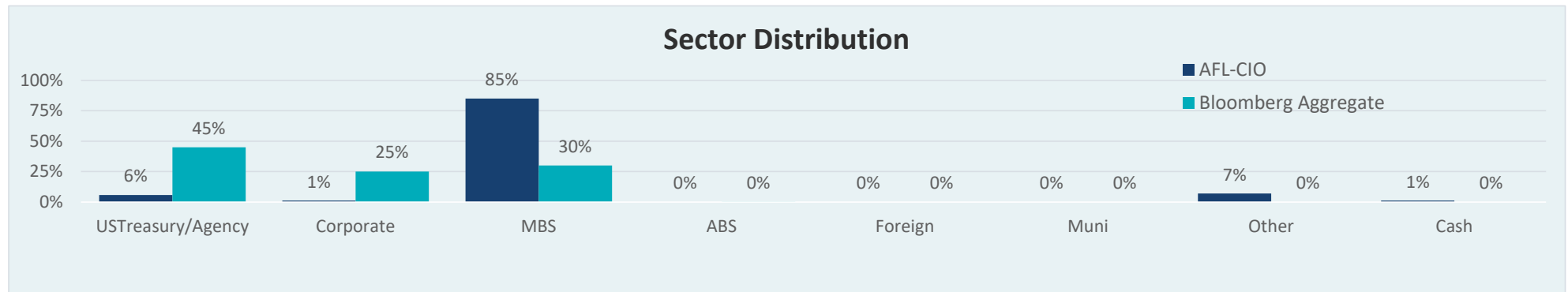
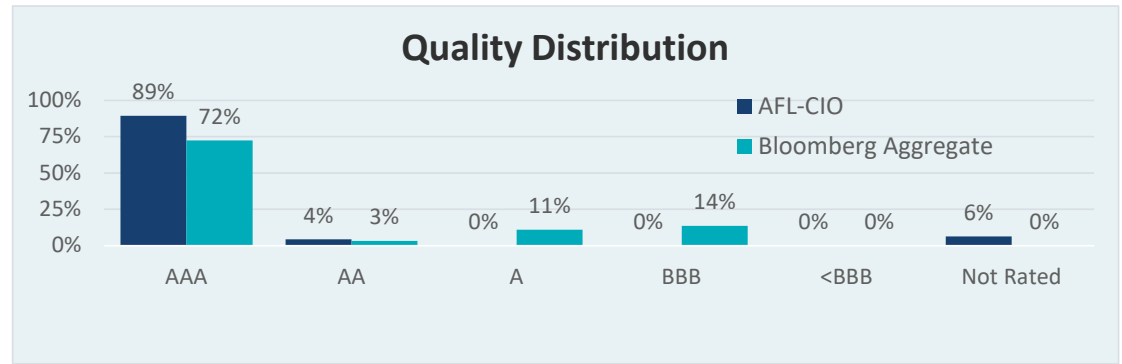


2.7% is allocated to Cash and Cash Equivalents.

Diversifying Fixed Income Managers

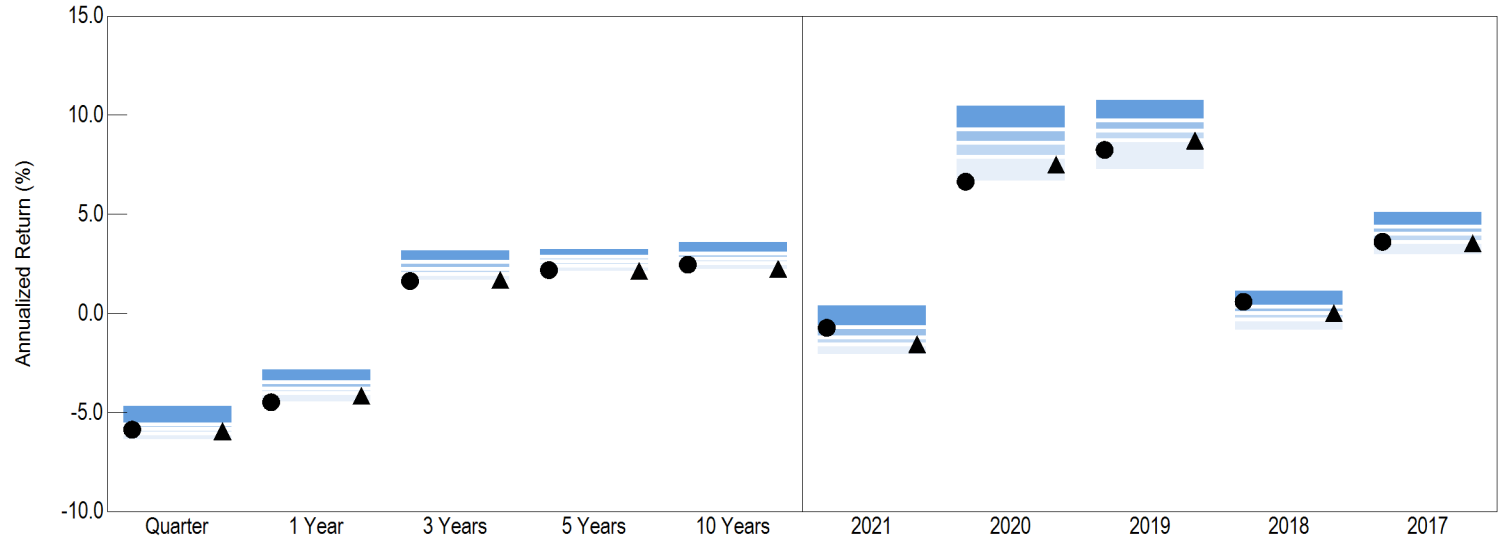
Domestic core fixed income portfolio with an exclusive focus on mortgage-related securities. Primary personnel include Stephen Coyle and Chang Su.

	AFL-CIO	Bloomberg Aggregate
Effective Duration	6.21	6.50
Yield to Maturity	2.63	2.92
Average Quality	AAA	AA/AA+
Average Coupon	2.6%	2.4%



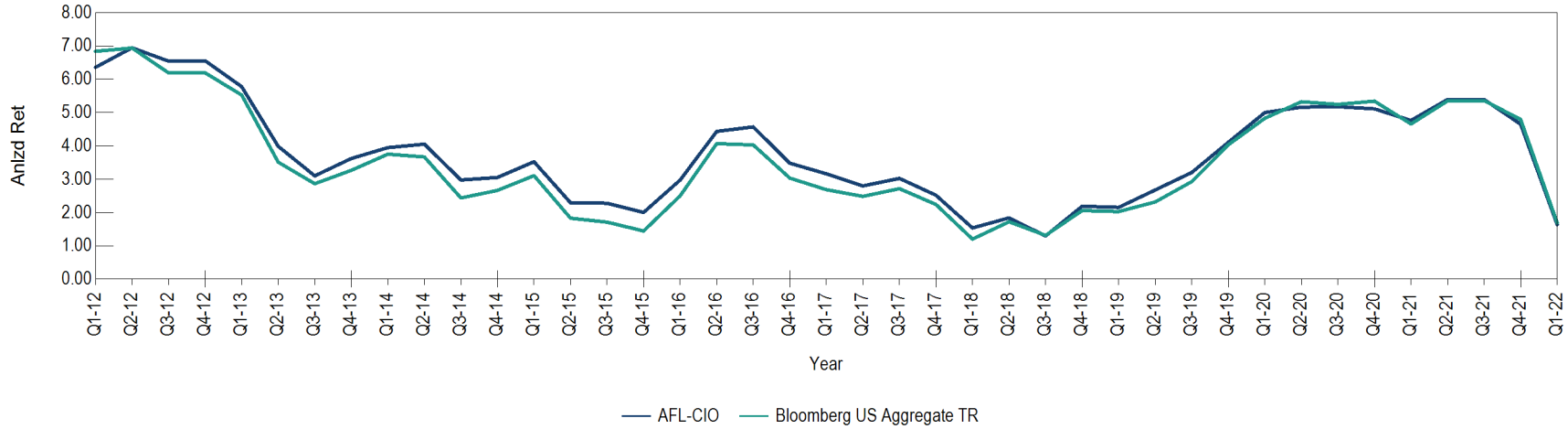
Duration and Quality distributions exclude cash.

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

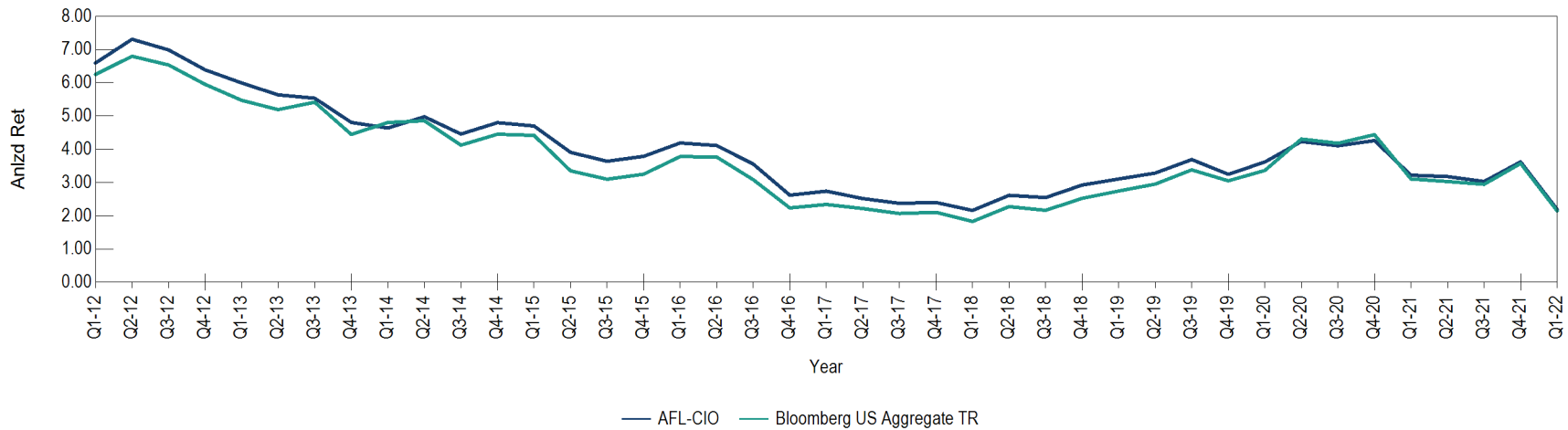


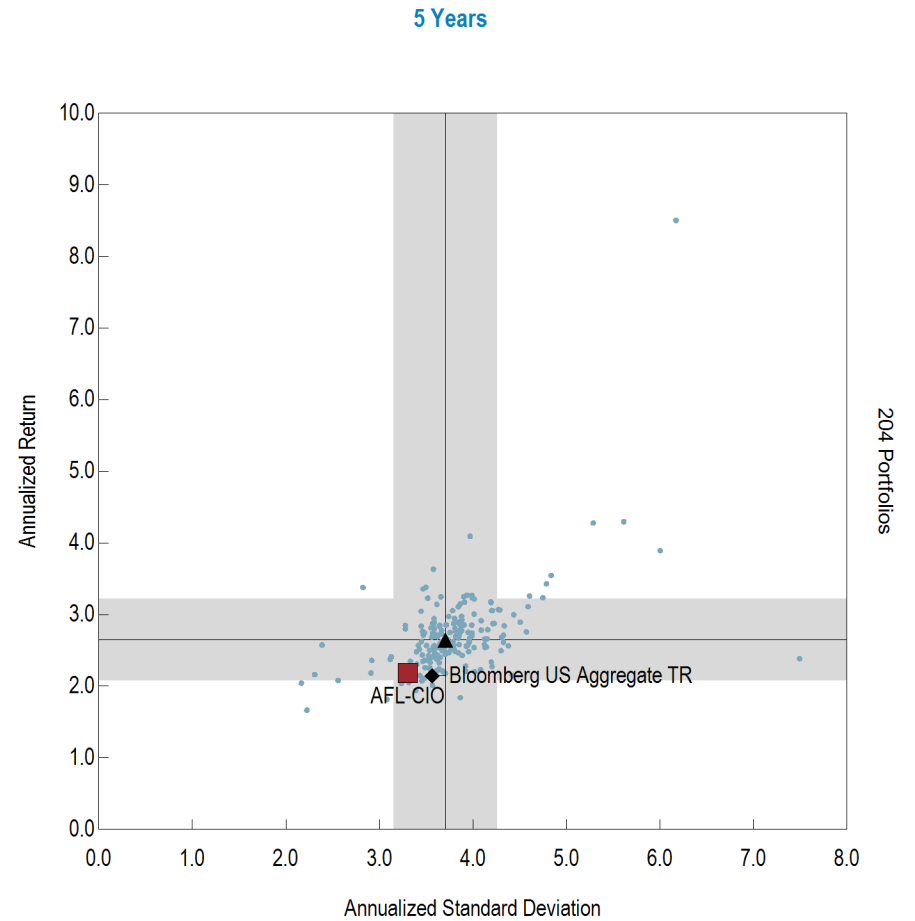
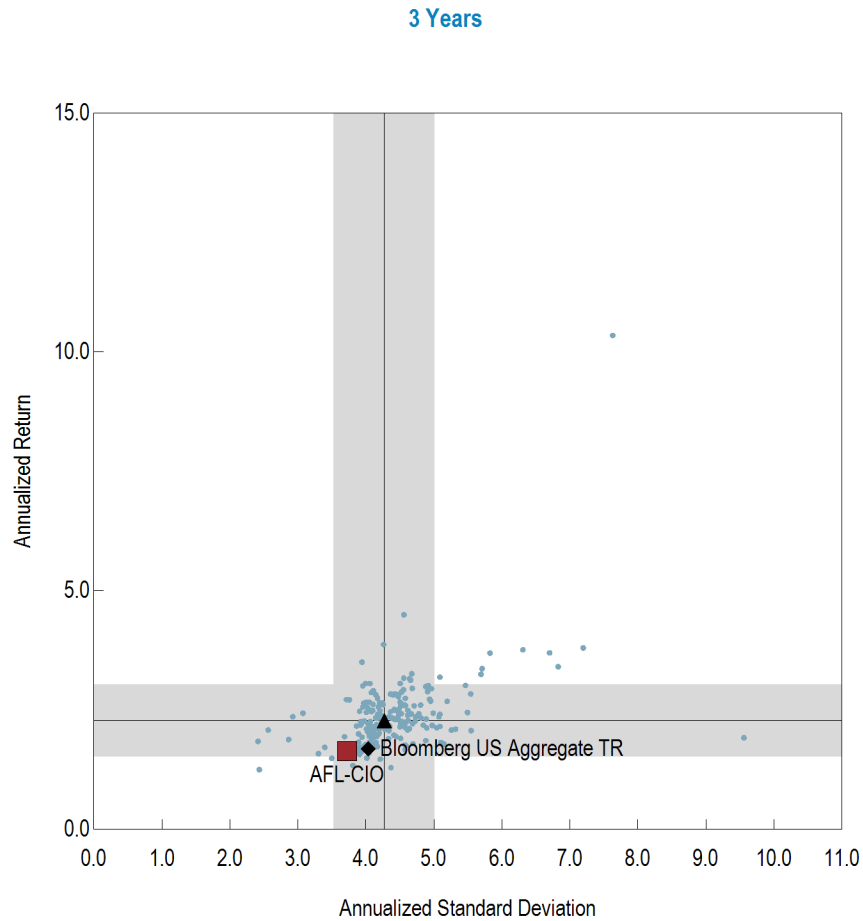
	Return (Rank)										
	Quarter	1 Year	3 Years	5 Years	10 Years	2021	2020	2019	2018	2017	
5th Percentile	-4.6	-2.7	3.3	3.3	3.7	0.5	10.6	10.9	1.2	5.2	
25th Percentile	-5.6	-3.4	2.6	2.9	3.1	-0.7	9.3	9.8	0.4	4.4	
Median	-5.8	-3.8	2.3	2.6	2.8	-1.2	8.6	9.3	0.0	4.0	
75th Percentile	-6.0	-4.0	2.0	2.4	2.6	-1.5	7.9	8.7	-0.3	3.6	
95th Percentile	-6.4	-4.5	1.6	2.1	2.2	-2.1	6.6	7.2	-0.9	2.9	
# of Portfolios	210	210	207	204	196	217	225	228	240	233	
● AFL-CIO	-5.9 (58)	-4.5 (95)	1.6 (95)	2.2 (93)	2.5 (86)	-0.7 (30)	6.6 (95)	8.2 (88)	0.6 (16)	3.6 (76)	
▲ Bloomberg US Aggregate TR	-5.9 (66)	-4.2 (82)	1.7 (94)	2.1 (95)	2.2 (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		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	1.6%	3.7%	0.3
Bloomberg US Aggregate TR	1.7%	4.0%	0.3
eV US Core Fixed Inc Gross Median	2.3%	4.3%	0.4

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
AFL-CIO	2.2%	3.3%	0.3
Bloomberg US Aggregate TR	2.1%	3.6%	0.3
eV US Core Fixed Inc Gross Median	2.6%	3.7%	0.4

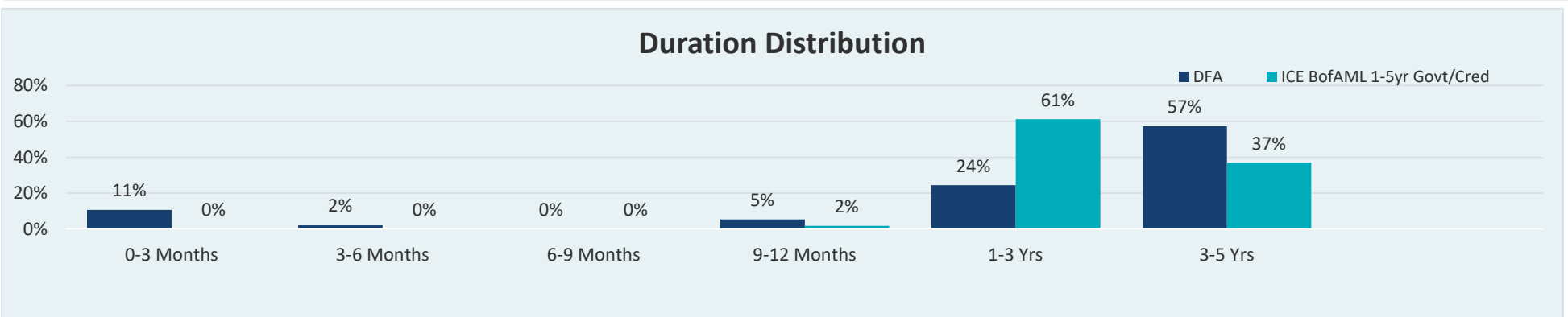
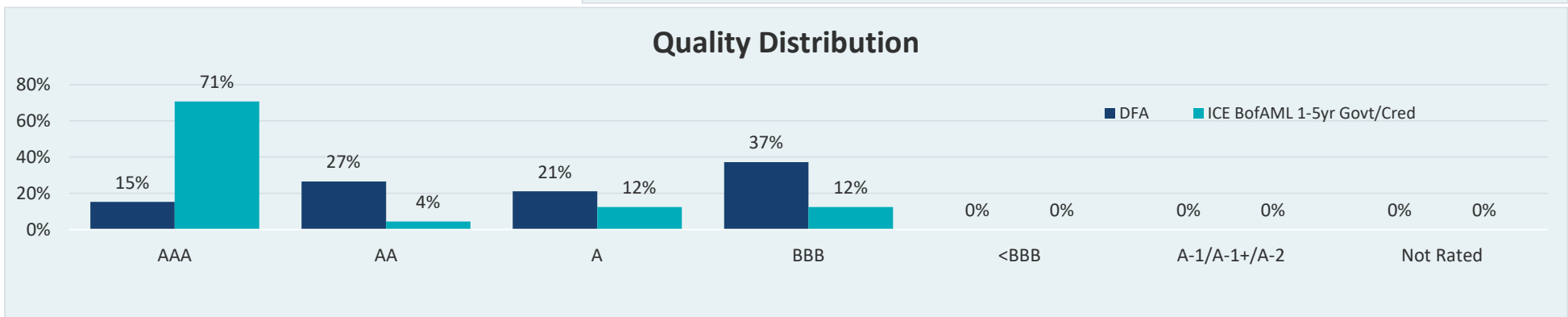
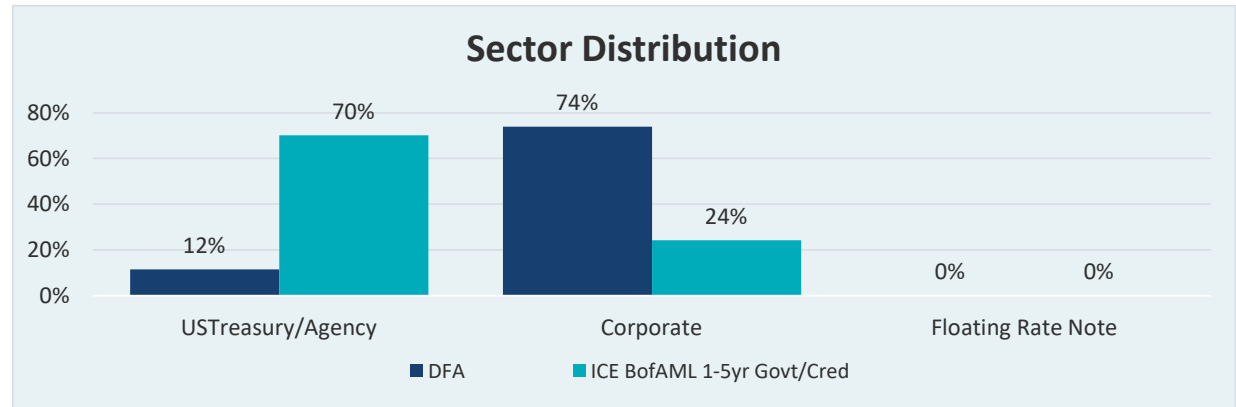
Liquidity Managers

DFA Short Credit Manager Portfolio Overview

Period Ending: March 31, 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	2.81	2.66
Yield to Maturity	2.95	2.55
Average Quality	A	AA+
Average Coupon	2.08%	1.86%

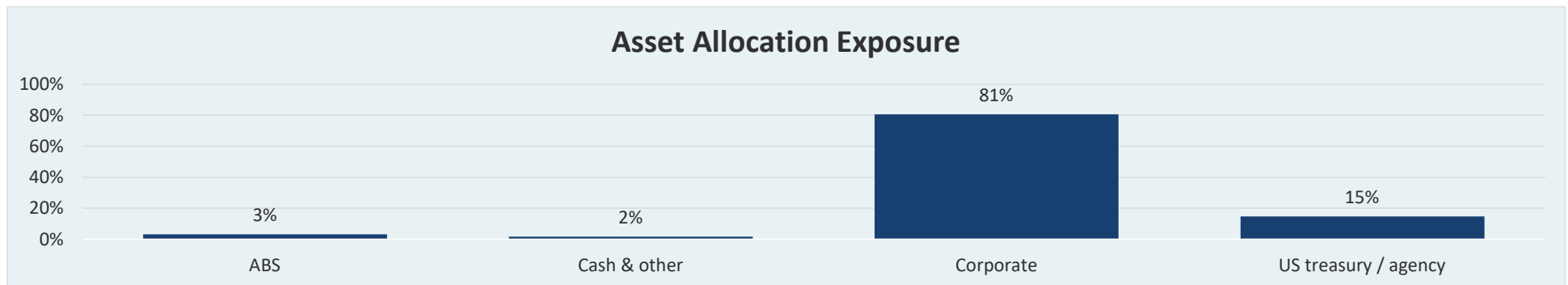
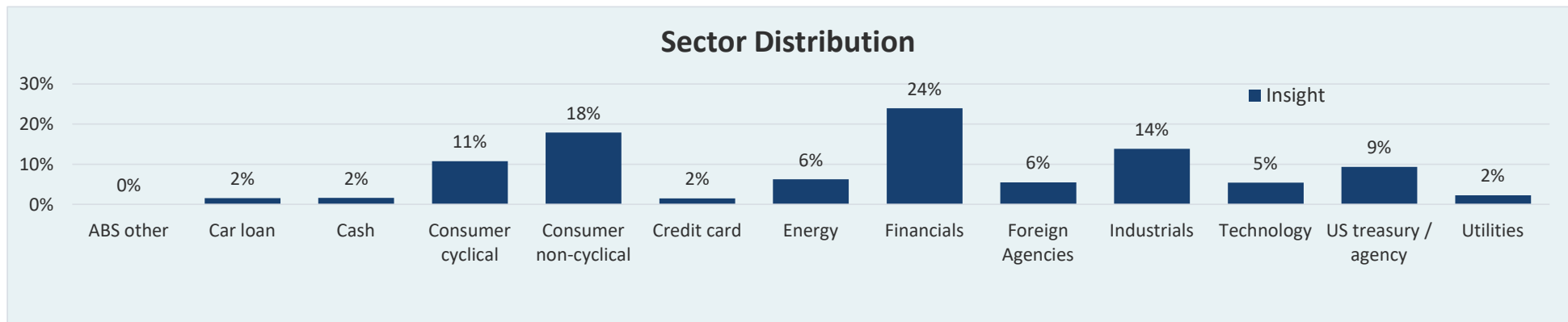
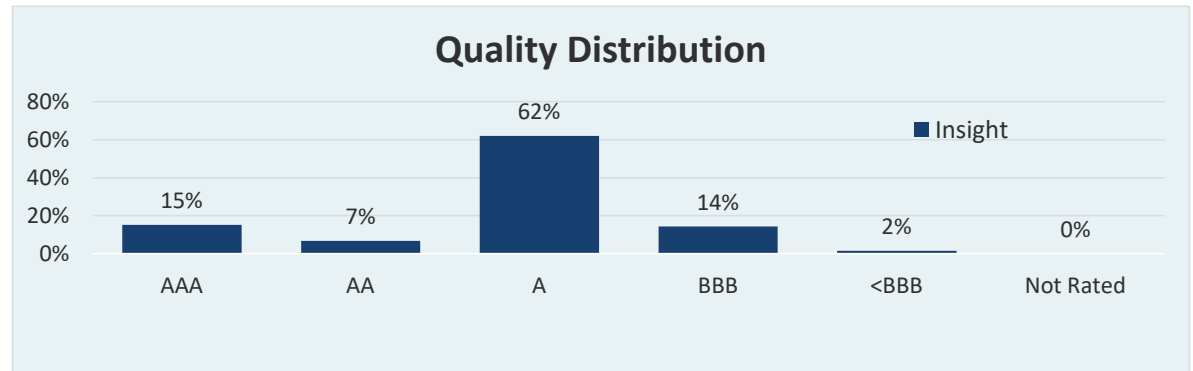


Insight Short Duration Manager Portfolio Overview

Period Ending: March 31, 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	0.99	1.90
Yield to Maturity	2.29	2.23
Average Quality	A	AAA
Average Coupon	2.77%	1.28%

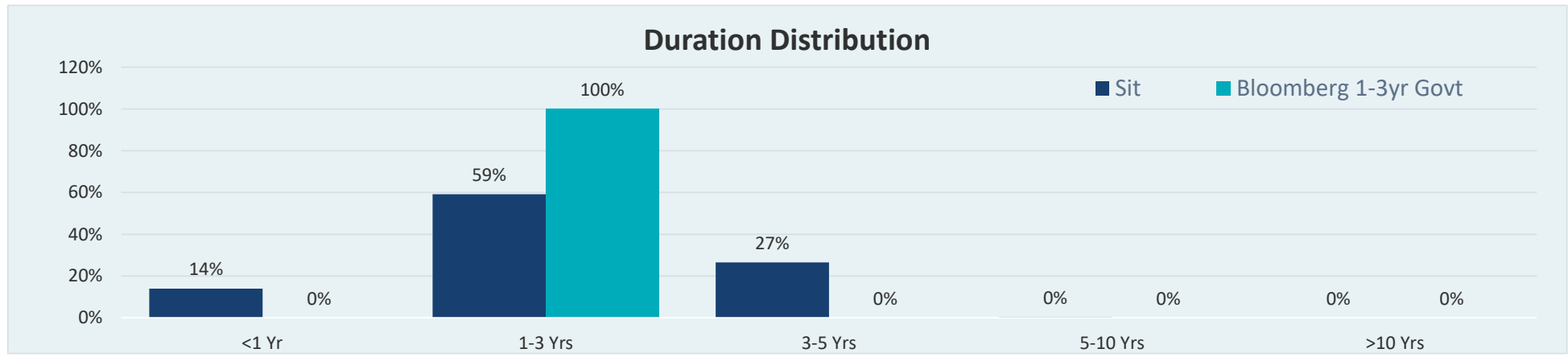
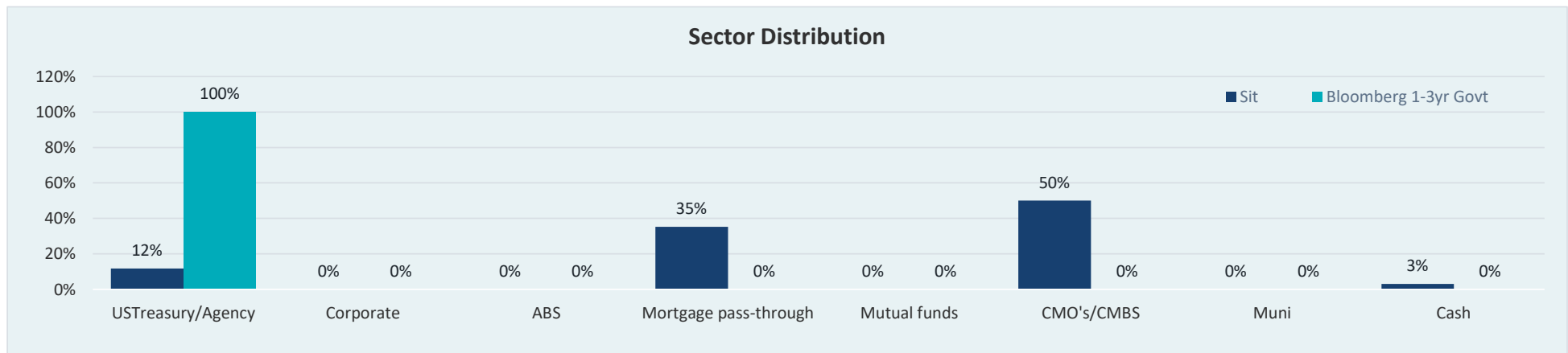
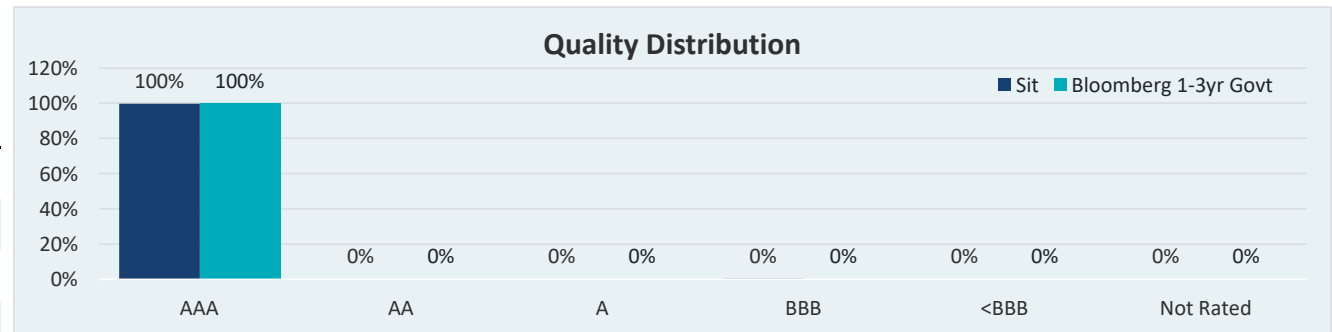


Sit Short Duration Manager Portfolio Overview

Period Ending: March 31, 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
Modified Duration	2.40	1.90
Yield to Maturity	4.80	2.23
Average Quality	AAA	AAA
Average Coupon	5.20%	1.28%



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 - 6/30/20)	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	Invesco Real Estate IV	6/30/2014	Invesco
Jackson Square Partners	5/1/2005	Northern Trust	Invesco Real Estate V	2/20/2019	Invesco
Boston Partners	6/1/1995	Northern Trust	Oaktree REOF V	12/31/2011	Oaktree
Emerald Advisors	4/7/2003	Northern Trust	Oaktree REOF VI	9/30/2013	Oaktree
Ceredex	11/6/2011	Northern Trust	Oaktree REOF VII	4/1/2015	Oaktree
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
			Wastewater Opp. Fund	12/8/2015	StepStone Group

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

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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