Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: JUNE 30, 2022

Investment Performance Review for

Tulare County Employees' Retirement Association

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Investment Performance Review TAB II

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Investment Landscape

Recent Verus research

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

Topics of interest papers

A CLOSER LOOK AT CHINA

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

A PRIMER: TIMBERLAND & FARMLAND

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

Annual research

2022 REAL ASSETS OUTLOOK

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

Verus business update

Since our last Investment Landscape webinar:

— Verus hired several new employees. **John Santopadre, CFA**, Director | Portfolio Management; **Colleen Flannery,** Associate Director | Public Markets; **Lukas Seeley**, Performance Analyst; **James Wadner**, Performance Analyst; **Jonah Coffee**, Performance Analyst; and **Nicholas Pecache**, Performance Analyst.

— The firm continues to grow with new clients that stretch from Hawaii to South Carolina. We now proudly serve clients in 26 states in every domestic time zone.

— Recent research found at *verusinvestments.com/insights*

- In May, we released our ***2022 Real Assets Outlook***
- In June, we published a ***Primer on Mortgage Income*** and ***A Primer: Timberland & Farmland***
- Earlier this month, we released a *Topics of Interest* paper on ***A Closer Look at China***

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2nd quarter summary

THE ECONOMIC CLIMATE

— U.S. real GDP fell again during Q2, down -0.9% annualized (+1.6% over the past full year). This stoked broad fears of recession, as two consecutive quarters of negative growth is a common definition of technical recession.

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

PORTFOLIO IMPACTS

— U.S. core CPI slowed to 5.9% year-over-year in June. Headline inflation, which includes food and energy prices, came in surprisingly hot at 9.1% year-over-year, exceeding expectations. Higher energy prices were a major driver of the inflation print, with energy commodities and gasoline moving more than 10% higher from May to June.

— Credit markets sold off during Q2, impacted by concerns of a slowing economy and possibility of recession as the Fed signaled a willingness to raise rates until inflation slows. Bank loans performed the best at -4.4% and outperformed longer duration bonds such as investment grade and high yield (-7.3% and -9.8%, respectively).

THE INVESTMENT CLIMATE

— Russia's invasion of Ukraine continued, resulting in heavy losses on both sides. Most fighting has taken place in the east, as Russia gradually advances. Both Finland and Sweden are in the process of joining NATO—a landmark move and result of war likely unforeseen by Russia.

— Early in 2022 many investors feared a potential global commodity shortage—a product of underinvestment in production capacity in recent years. Russia's invasion of Ukraine further amplified these concerns, pushing commodities higher. This trend appears to have reversed, as recession is a notable possibility, and many commodities have seen sharp losses.

ASSET ALLOCATION ISSUES

— Nearly every asset class delivered moderate to deeply negative returns during Q2. Global equities saw a -15.7% pullback (MSCI ACWI), fixed income experienced losses as interest rates rose and credit spreads widened (BBG US Aggregate -4.7%, BBG US High Yield -9.8%), and commodities saw a reversal (BBG Commodity -5.7%).

— Value stocks outperformed Growth stocks by a wide margin again during Q2 (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations were hit by rising rates and risk-off sentiment. Large capitalization stocks slightly outperformed small cap stocks (Russell 1000 -16.7%, Russell 2000 -17.2%).

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

What drove the market in Q2?

"Inflation Surges Heap Pressure on Global Policy Makers"

HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

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

Article Source: Financial Times, April 13th, 2022

"Fed Raises Rates by 0.75%, Largest Increase Since 1994"

FED FUNDS RATE EXPECTED AT YEAR-END 2022

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

Article Source: Wall Street Journal, June 15th, 2022

"Risk of Global Recession by End of Year Rises on High Inflation"

IMF U.S. 2022 GDP GROWTH PROJECTIONS

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

Article Source: Bloomberg, April 11th, 2022

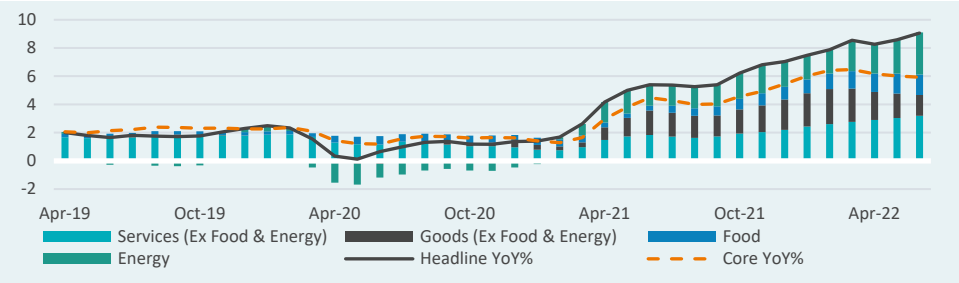
"Consumer Sentiment Plunges to Record Low Amid Surging Inflation"

UNIVERSITY OF MICHIGAN CONSUMER SENTIMENT INDEX

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

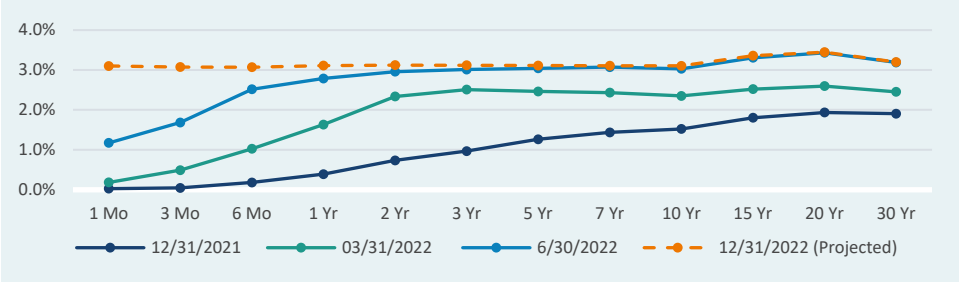
Article Source: CNN, June 10th, 2022

CONTRIBUTION TO HEADLINE CONSUMER PRICE INFLATION



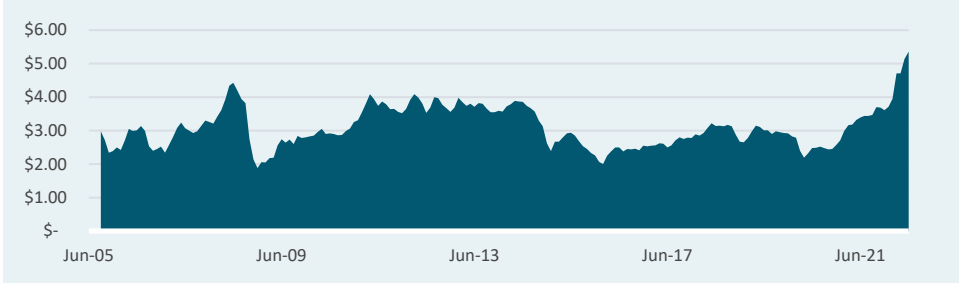
Source: Bureau of Labor Statistics, as of 6/30/22

U.S. TREASURY CURVE MOVEMENT



Source: Bloomberg, as of 6/30/22

AVERAGE U.S. GASOLINE PRICES (PER GALLON)



Source: Bloomberg, as of 6/30/22

Economic environment

U.S. economics summary

— U.S. real GDP fell -0.9% annualized during Q2 (+1.6% over the past full year). Most aspects of economic activity showed decline, including private investment (-2.7%), government spending (-0.3%), and imports (-0.5%). This stoked fears of recession, as two quarters of negative growth is a common definition of technical recession.

— The Federal Reserve's objective of a "soft landing" for the economy appears to have failed. An increasingly aggressive stance during the first half of the year contributed to a broad market selloff. The negative wealth effect of the market selloff, paired with a slowdown in big ticket purchases, has slowed the economy.

— U.S. core CPI, which excludes food & energy prices, slowed to 5.9% year-over-year in June. However, headline inflation which includes food and energy prices, came in surprisingly hot at 9.1% year-over-year, exceeding expectations. Higher energy prices were a major driver of the inflation print, with energy commodities and gasoline moving more than 10% higher just from May to June.

— Unemployment was unchanged at 3.6% during Q2. The broader U-6 unemployment rate tightened from 6.9% to 6.7%. A strong job market likely emboldens the Federal Reserve in its fight against high inflation, as the Fed holds a dual mandate to maximize employment and keep prices stable.

— Consumer sentiment collapsed to the lowest reading on record, according to the University of Michigan survey, which moved from 59.4 to 50.0. Survey respondents across all income, age, education, region, and political affiliation groups displayed deterioration in their outlook for the economy. Nearly half of respondents feel that inflation is damaging living standards.

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

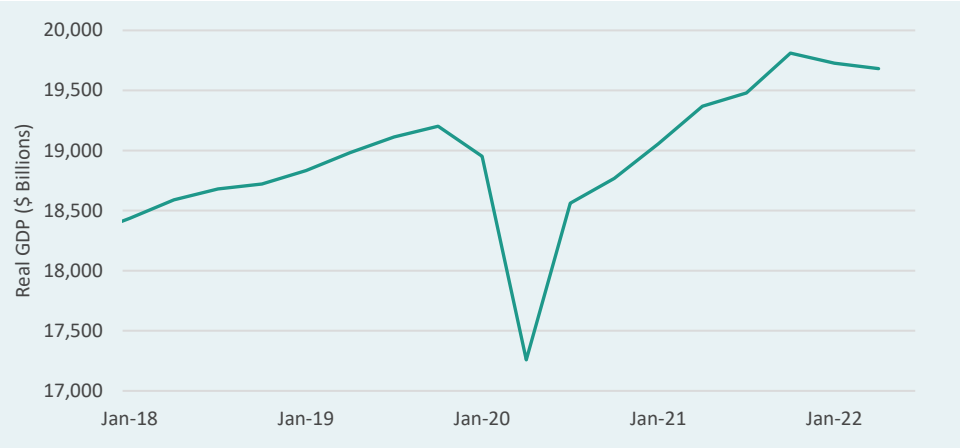
GDP growth

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

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

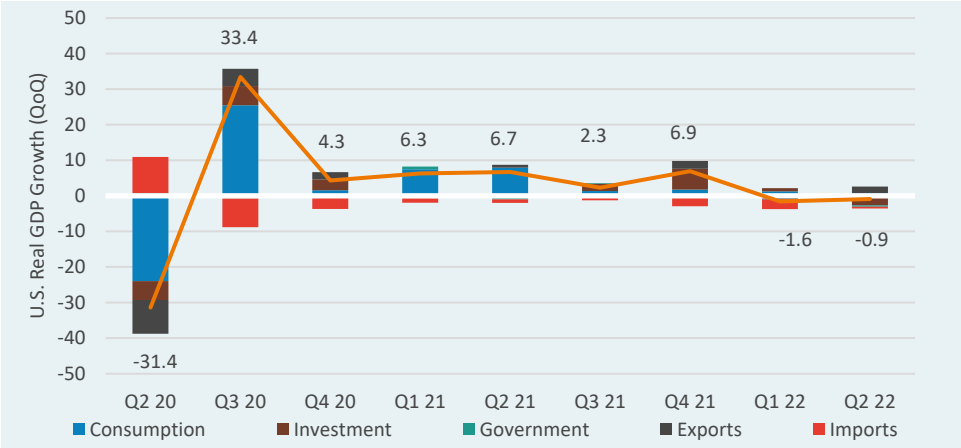
The U.S. has likely entered recession

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 6/30/22

U.S. REAL GDP COMPONENTS (QOQ)



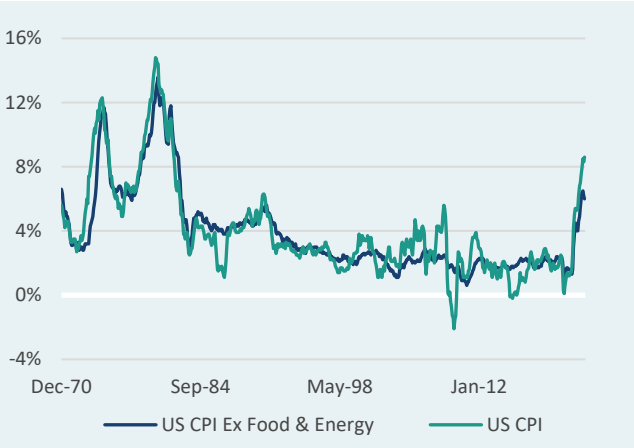
Source: FRED, as of 6/30/22

Inflation

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

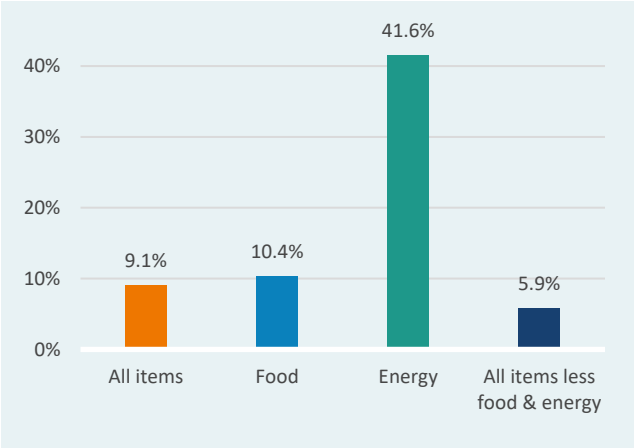
We believe there is a rising chance of economic deceleration coinciding with a drop in inflation. There appear to be a variety of forces that could contribute to this scenario, such as: the recent sharp fall in commodity prices, Federal Reserve tightening which has contributed to a slowdown in consumer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

U.S. CPI (YOY)



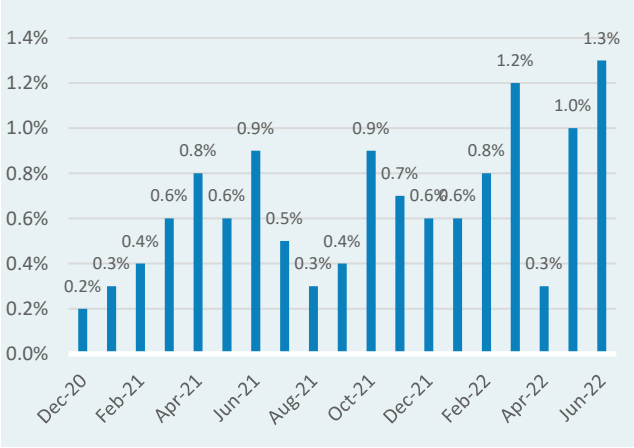
Source: BLS, as of 6/30/22

U.S. CPI (YOY)



Source: BLS, as of 6/30/22

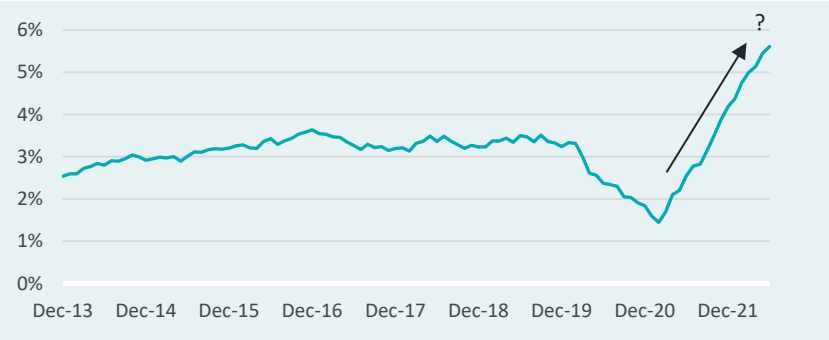
MONTHLY PRICE MOVEMENT



Source: BLS, as of 6/30/22

How are inflation conditions evolving?

CPI SHELTER COSTS (YEAR-OVER-YEAR)



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

USED CAR & TRUCK PRICES

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

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

BLOOMBERG COMMODITY SPOT INDEX

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

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

FREIGHTOS SHIPPING CONTAINER COST INDEX

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

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

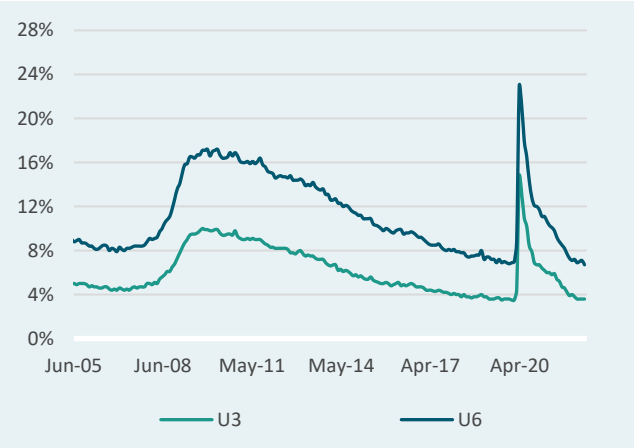
Labor market

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

A strong job market likely emboldens the Federal Reserve in its fight against high inflation, as the Fed holds a *dual mandate* to maximize employment and keep prices stable.

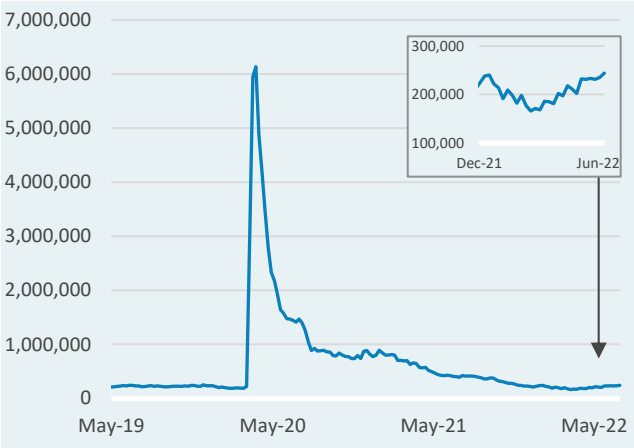
Abnormally early retirements of older workers during the pandemic had a large impact on the overall U.S. labor participation rate. While workers younger than age 55 have gradually gone back to work, much of the age 55+ cohort has not returned to the job market. In fact, more workers in the 55+ age cohort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

U.S. UNEMPLOYMENT



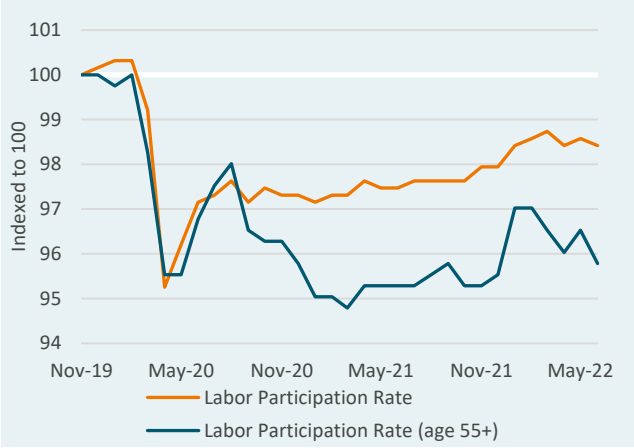
Source: FRED, as of 6/30/22

INITIAL JOBLESS CLAIMS



Source: FRED, as of 7/9/22

U.S. LABOR PARTICIPATION RATE



Source: FRED, as of 6/30/22

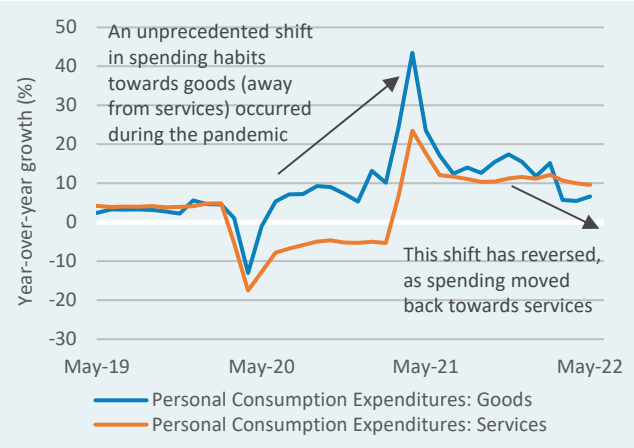
The consumer

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

At the same time overall spending has slowed, savings rates have also dropped to 5.4%—the lowest level since 2009. Less saving but also less spending (inflation-adjusted) may indicate that household budgets are being squeezed by the higher prices of goods and services.

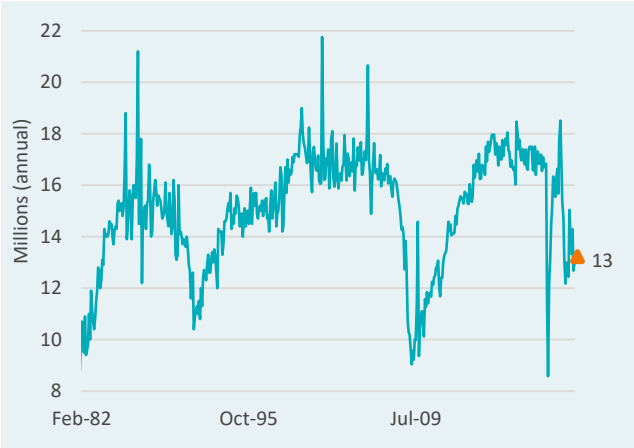
Auto sales activity remains very weak, at levels that have historically occurred during recession. The long-lasting semiconductor shortage has created widespread difficulties for auto manufacturers and has led to skyrocketing used vehicle prices. We also suspect that stimulus checks and heightened spending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

PERSONAL CONSUMPTION EXPENDITURES



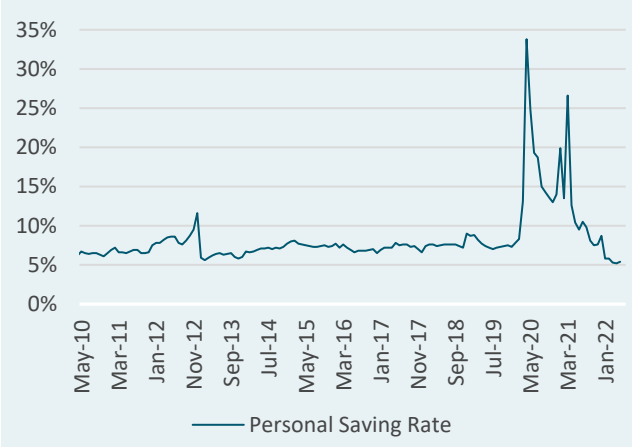
Source: FRED, as of 5/31/22

AUTO SALES



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

PERSONAL SAVINGS RATE



Source: FRED, as of 5/31/22

Sentiment

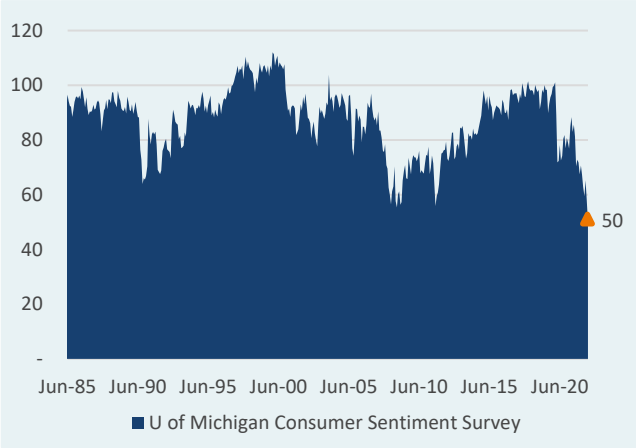
Consumer sentiment collapsed to the lowest reading on record, according to the University of Michigan survey, which fell from 59.4 to 50.0 during Q2. Survey respondents across all income, age, education, region, and political affiliation groups showed deterioration in their outlook for the economy. Nearly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

In a June Economist/YouGov Poll, more than half of respondents said they believe the U.S. is in recession. Of those respondents, 43% called the recession moderate and 38% called it serious (only 19% called it mild). Interestingly, the survey suggested that most Americans view *the prices they pay for goods and services* as the most important indicator of recession. Much of the blame was generally placed on supply chain issues and COVID-19 for economic woes.

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

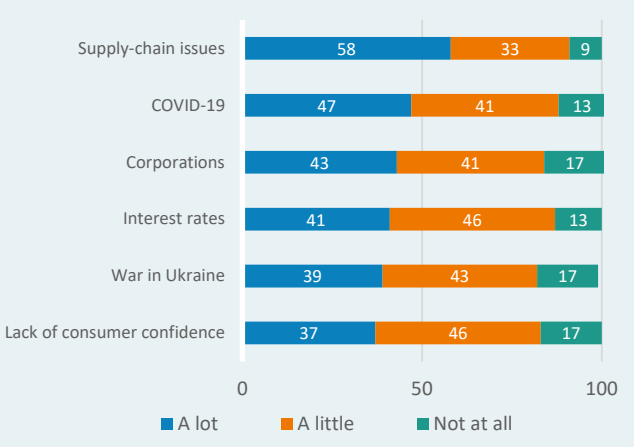
Sentiment, by most measures, is extremely poor

CONSUMER SENTIMENT



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

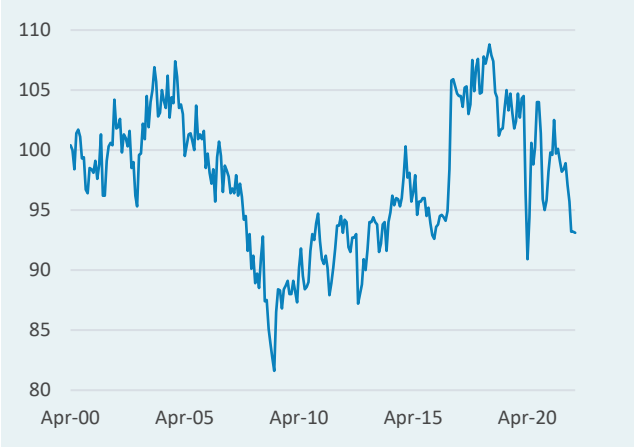
WHAT TO BLAME FOR ECONOMIC PROBLEMS?



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

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

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 5/31/22

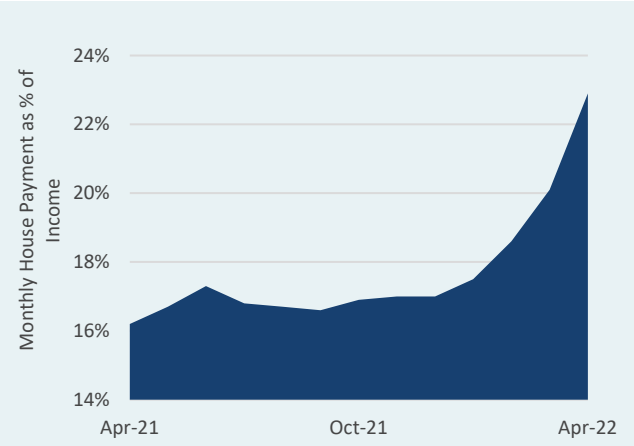
Housing

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

High home prices coupled with a material jump in mortgage interest rates has acted as a double whammy for potential homebuyers. According to the National Association of Realtors, the cost for a family with an average income to buy an average priced home jumped from around 16% of that family's income one year ago, to more than 22% of that family's income in April (a 38% increase in overall cost). Housing and rent prices have contributed to higher inflation.

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

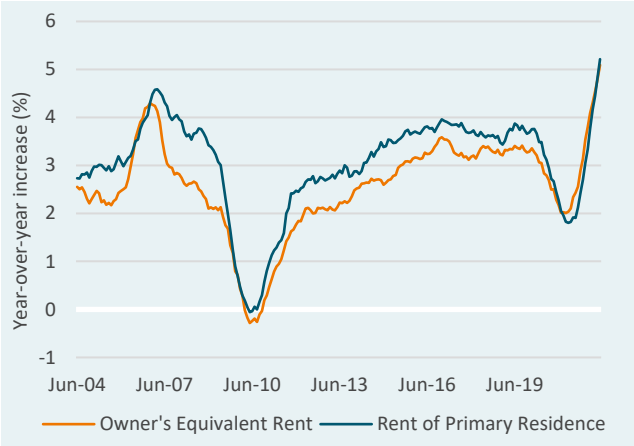
CHANGE IN HOUSING AFFORDABILITY



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

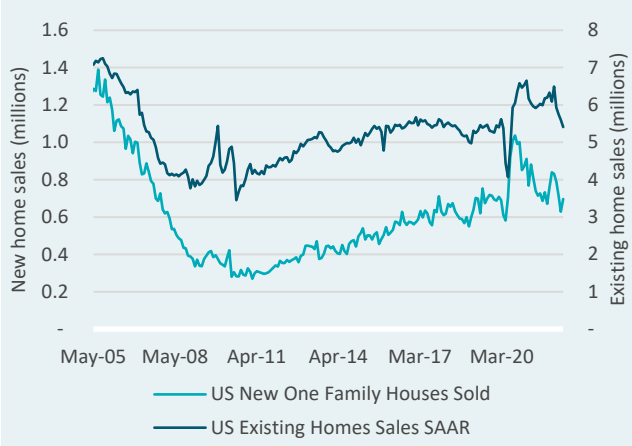
Census Bureau median family income is compared here to the monthly cost (principal + interest) of an average priced home

HOUSING & RENT COSTS



Source: FRED, as of 5/31/22

HOME SALES ACTIVITY



Source: Bloomberg, as of 5/31/22

International economics summary

— Economic growth has moderated in most countries, moving toward average levels. Higher inflation continues to erode growth figures as GDP is typically quoted as *inflation-adjusted* growth.

— Inflation trends continue to be disparate around the world. Japan and China are experiencing very low inflation and muted price pressures, while Europe and the United States are coping with multidecade-high inflation. Countries with low inflation and countries with high inflation all appear to have experienced an uptick during the second quarter.

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

— Russia's invasion of Ukraine continued in the second quarter, leading to heavy loss of life on both sides. Most fighting has taken place in the east, as Russia generally gradually pushing forward. Concerns around food shortages in nearby countries that depend on Ukrainian agriculture persist, though many commodity prices that had shot higher in March and April have eased, falling closer to pre-invasion costs.

— During the first week of July, millions of Chinese citizens were put back into lockdown, and subjected to mass testing, as small outbreaks have led to renewed restrictions. China continues to stick to a "zero COVID" approach, which is increasingly at odds with the recognition by most nations that civilization will have to live *with* the virus for the long-term, while moving back to normal life.

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

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

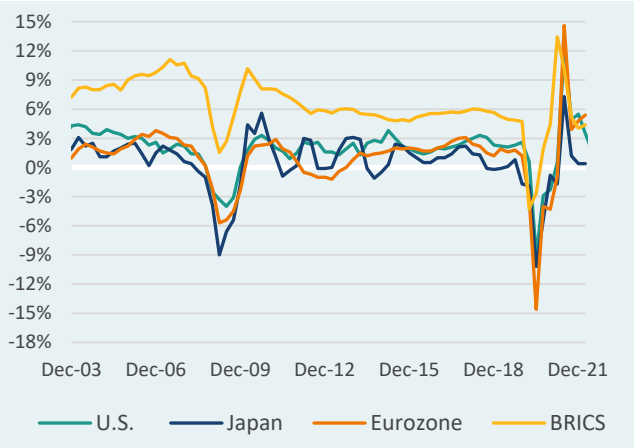
International economics

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

For some central banks, the issue of fighting inflation has been made more challenging given economic deceleration, as overly aggressive monetary policy might quickly send an economy into recession. Inflation has become a lightning rod for political leaders, as rising prices squeeze household budgets and standards of living.

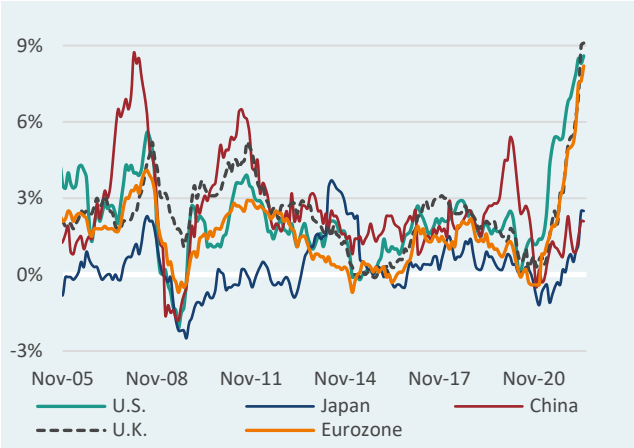
Unemployment rates were relatively stable in developed markets, with conditions in the Eurozone strengthening. Joblessness in emerging markets was mixed—Brazil and Russia experienced improvement, while India and China saw a slight weakening.

REAL GDP GROWTH (YOY)



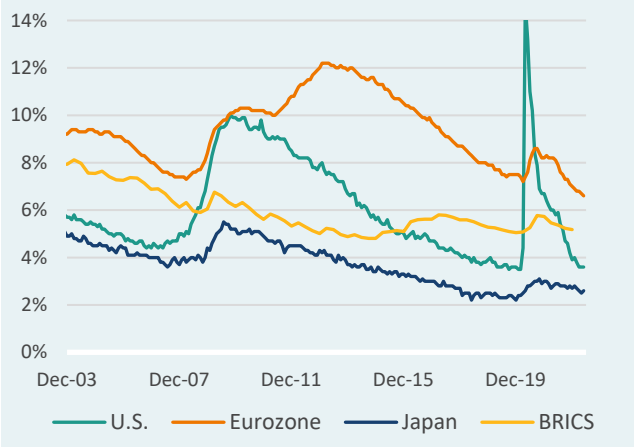
Source: Bloomberg, as of 6/30/22

INFLATION (CPI YOY)



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

UNEMPLOYMENT



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

Fixed income rates & credit

Fixed income environment

— The 10-year U.S. Treasury yield jumped during Q2 from 2.34% to nearly 3.50%, ending the quarter at 2.89%. Yields have fallen from their highs as recession fears mount. The Federal Reserve has a history of cutting interest rates during recession. This implies a higher chance of rate cuts as it appears the U.S. may currently be in recession.

— Credit markets sold off during Q2, impacted by concerns of a slowing economy and recession as the Fed signaled a willingness to raise rates until inflation slows. Bank loans performed the best at -4.4% and outperformed longer duration bonds such as investment grade and high yield (-7.3% and -9.8%, respectively).

— Credit spreads jumped considerably alongside the broader market selloff. U.S. high yield spreads increased from 3.4% to 5.6% and U.S. investment grade spreads headed from 1.2% to 1.6%. In contrast to the recent low yield environment, fixed income now offers investors more robust yields.

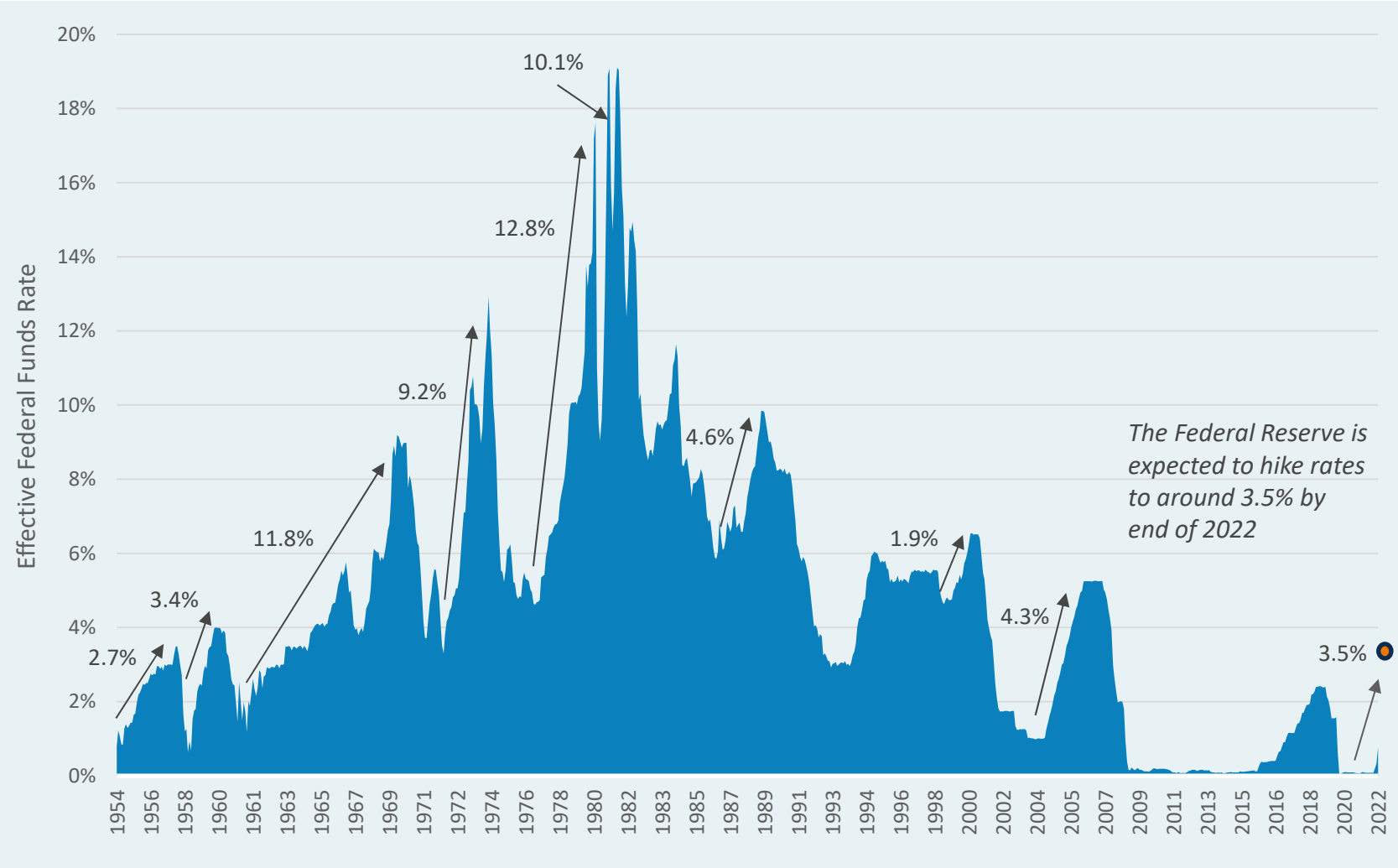
— The U.S. yield curve remained fairly flat during the second quarter. The 10-year minus 2-year yield spread fluctuated between -0.05% and 0.4%. Markets continue to price a flat or inverted yield curve, which is generally recognized as a sign of incoming recession.

— In June, the U.S. Federal Reserve began to unwind its $9 trillion balance sheet. Initially this action involved *not purchasing new bonds* and letting existing bonds mature and roll off. The Fed signaled plans to allow $30 billion of U.S. Treasuries and $17.5 billion of mortgage-backed securities to fall off the balance sheet by end of month. Leadership has admitted that this size of divestment program is essentially the first of its kind and that the committee will be moving with caution.

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

Source: Bloomberg, as of 6/30/22

How does this tightening cycle stack up?



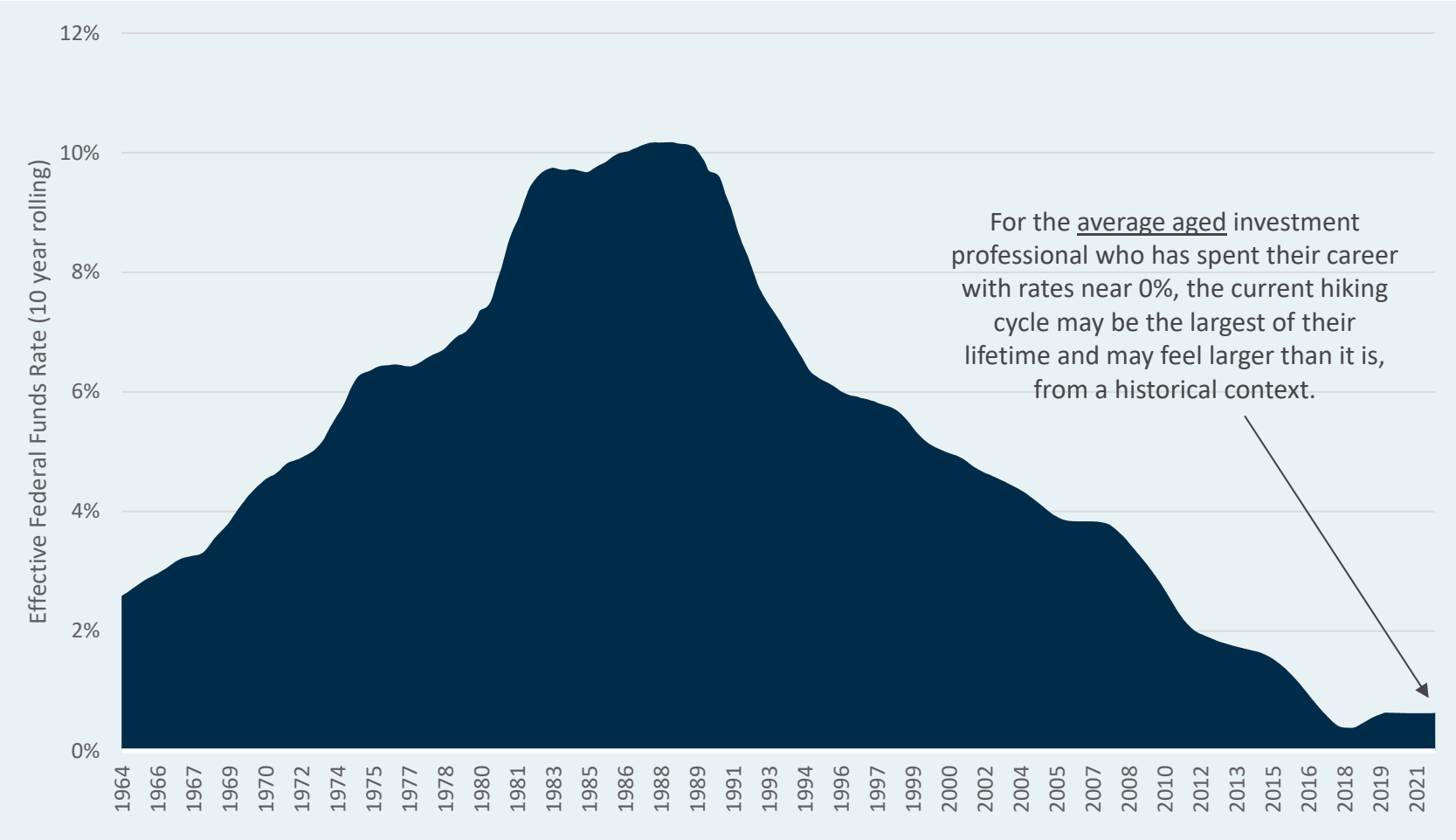
This tightening cycle is milder than most, in terms of total magnitude of hikes

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

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

How does this tightening cycle stack up?

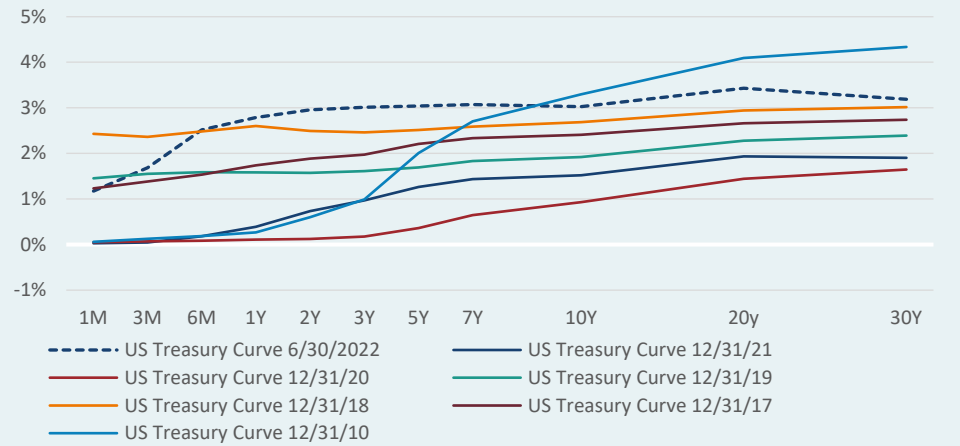
10 YEAR ROLLING AVERAGE FED FUNDS LEVEL



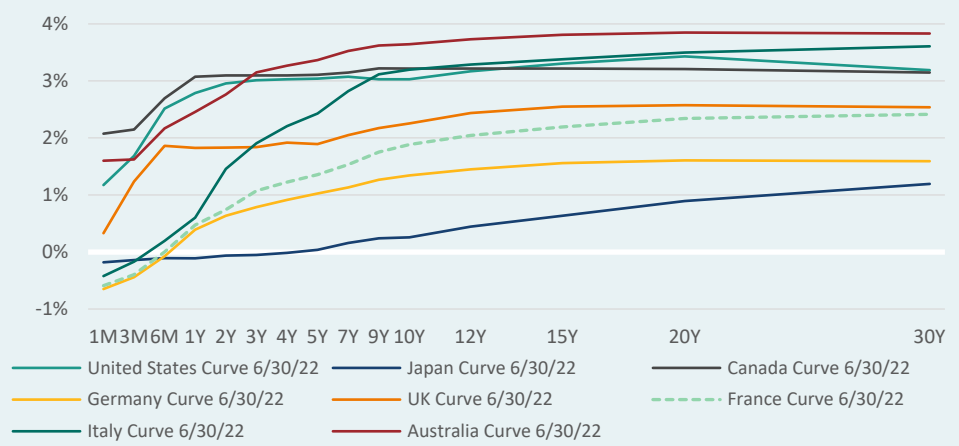
Source: FRED, Verus, as of 6/30/22

Yield environment

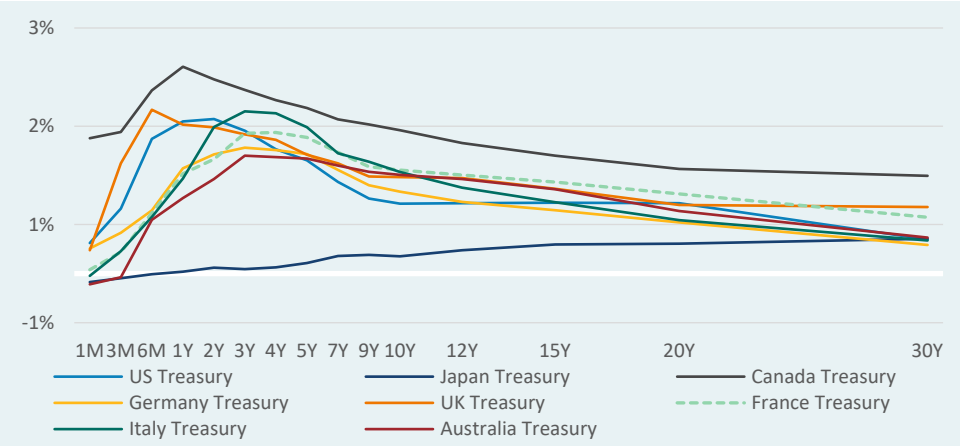
U.S. YIELD CURVE



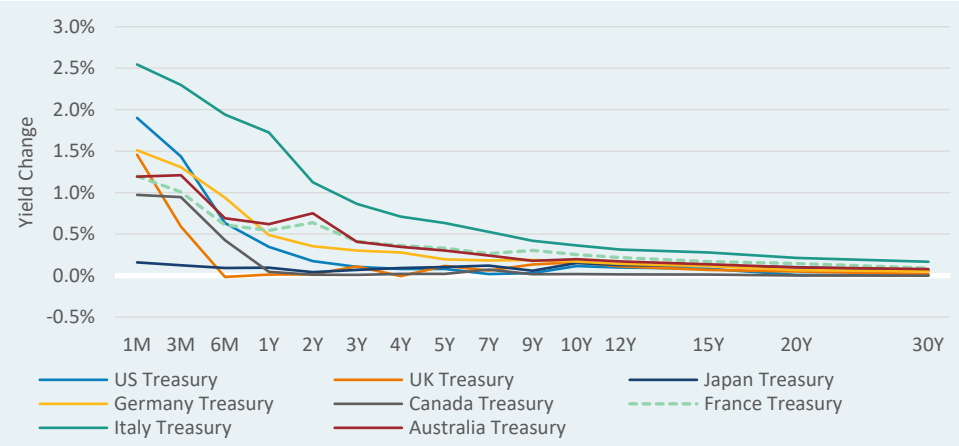
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/22

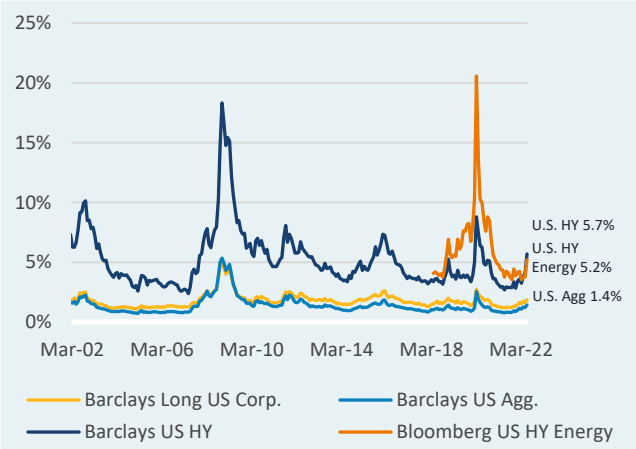
Credit environment

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

Risk-off sentiment and elevated concerns over economic growth prospects contributed to spread widening during the quarter. Investment grade credit spreads increased 39 basis points to end the quarter at 155 bps. High yield spreads increased 163 basis points to end the quarter and 569 bps which was above the long term non-recessionary average of 454 bps.

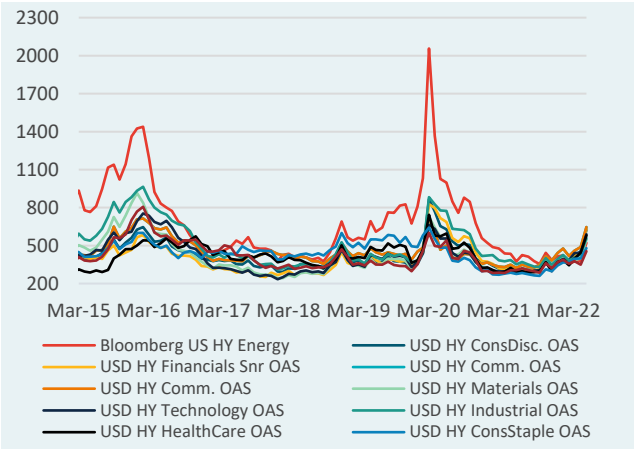
At the end of June, the Bloomberg US High Yield Index offered a yield just shy of 9%, up more than 4% from the beginning of the year. While these levels appear attractive in the context of the recent low yield environment, there is still potential for spreads to widen from these levels if recession concerns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

SPREADS



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

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/22

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

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/22
**Discount margin (4-year life)*

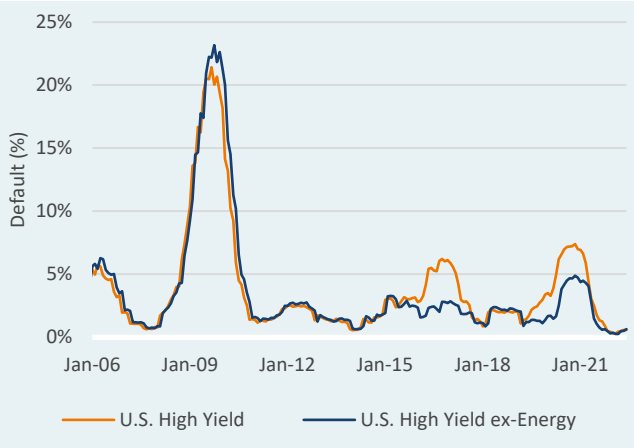
Default & issuance

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

Default rates for par-weighted US high yield and bank loans ended the quarter at 0.76% and 0.74%, respectively—well below the longer-term historical averages of 3.2% and 3.1%. The default rate is expected to rise modestly over the remainder of 2022 and throughout 2023, given the prospects for lower growth, more restrictive financing rates, and an expected surge in rising stars exiting the high yield index. While modest increases in default rates are expected, record bond and loan refinancing activity totaling over $1 trillion in 2020 and 2021 has led to relatively healthy issuer fundamentals and very limited near-term financing needs.

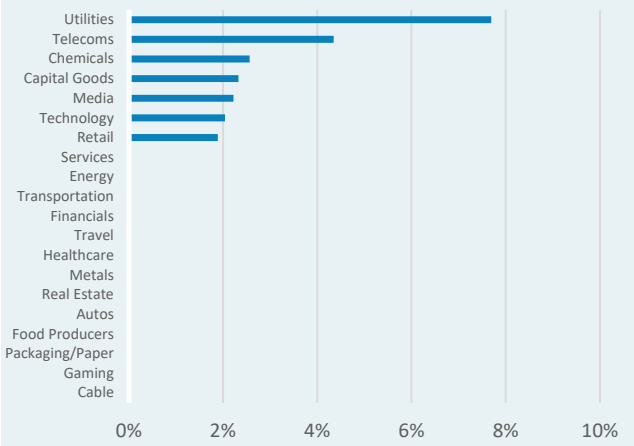
Leveraged credit issuance continued to be light amid high market volatility. The $24.6 billion of high yield bonds issued over the quarter was the lowest issuance since the fourth quarter of 2018 and second lowest total since 2009. Similarly, bank loan issuance totaled $60.6 billion, which was down from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

HY DEFAULT RATE (ROLLING 1-YEAR)



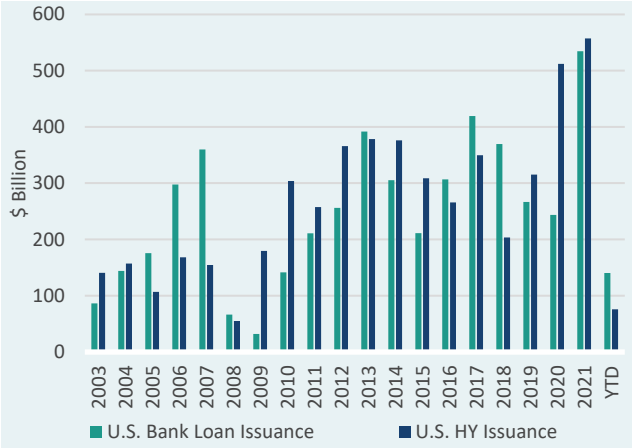
Source: BofA Merrill Lynch, as of 6/30/22

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



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

U.S. ISSUANCE ($ BILLIONS)



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

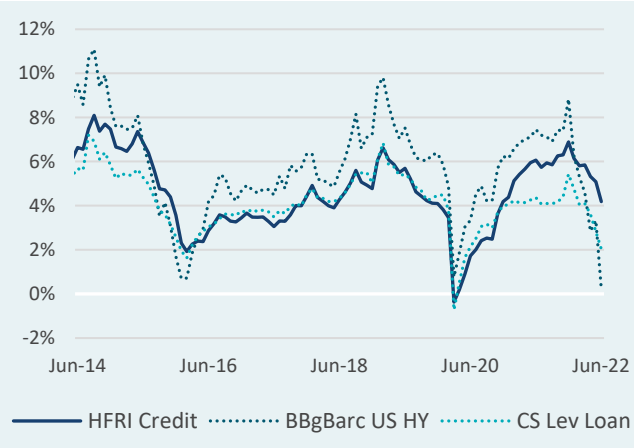
Alternative credit

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

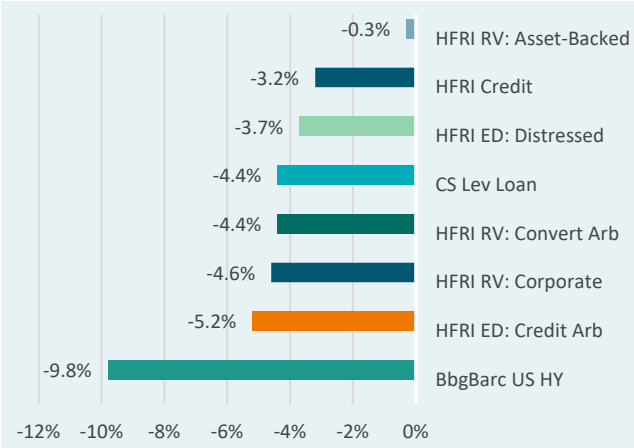
Looking closer within hedge fund credit, managers focused on structured credit remained the bright spot with only slightly negative returns for the quarter and continued outperformance relative to other credit strategies and fixed income markets.

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

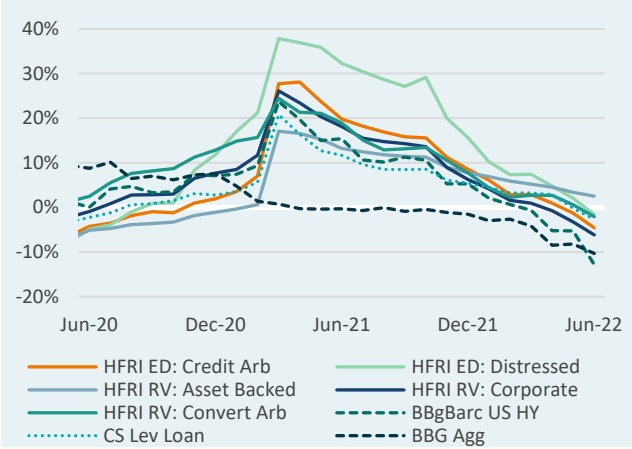
3 YEAR ROLLING ANNUALIZED RETURN



2Q 2022 QUARTERLY RETURN



1 YEAR ROLLING RETURN



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

Equity

Equity environment

— U.S. equities suffered large losses during the second quarter (S&P 500 -16.1%), as many highly priced growth stocks took an exceptionally large hit due to interest rate rises and risk-off sentiment. International developed equities (MSCI EAFE -14.5%) experienced similar losses, while emerging market equities (MSCI Emerging Markets -11.4%) outperformed materially, on an unhedged currency basis.

— As mentioned during Q2 earnings calls, a rising number of S&P 500 companies were concerned about material & commodity costs, COVID costs, and oil & gas prices. A decreasing number of companies were concerned about labor costs & shortages, supply chain disruptions, transport & freight costs, and Russia/Ukraine.

— Currency movement generated large losses for investors who do not hedge their foreign currency exposure. Investors in international developed markets would have seen a loss of approximately -7.3% with a currency hedging program, rather than the -14.5% loss of unhedged investors. Over the past full year, losses from currency movement were -12.4%.

— Value stocks outperformed Growth stocks by a wide margin again in Q2 (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations suffered due to rising interest rates and broader risk-off sentiment. Large capitalization stocks outperformed small cap stocks slightly (Russell 1000 -16.7%, Russell 2000 -17.2%).

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

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

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

Domestic equity

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

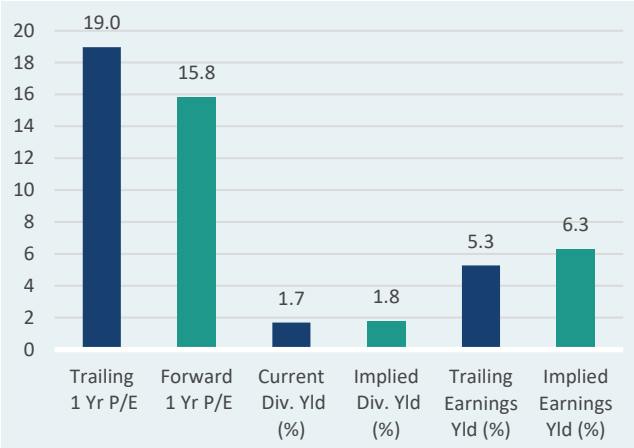
Calendar year 2022 bottom-up earnings estimates for the S&P 500 improved slightly during the quarter, despite the equity bear market. A rosier earnings outlook was fueled mostly by the energy and materials sectors, while consumer discretionary and communication services sectors saw worsening expectations. According to Factset, an increased number of companies issued negative earnings guidance during the quarter, though the balance of companies offering positive and negative guidance remains in a relatively normal range.

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

S&P 500 PRICE INDEX

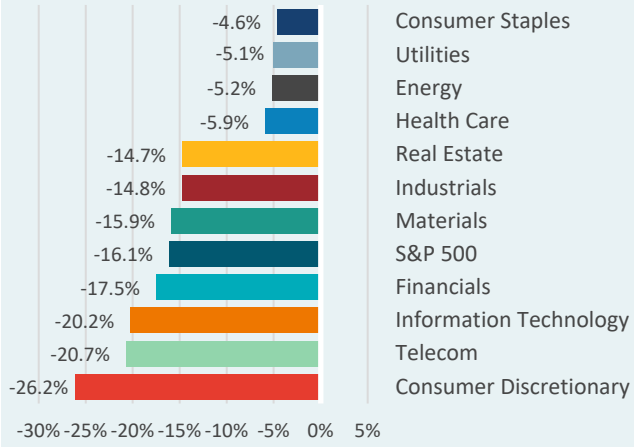
Source: Standard & Poor's, as of 6/30/22

S&P VALUATION SNAPSHOT



Source: Bloomberg, as of 6/30/22

Q2 SECTOR PERFORMANCE



Source: Morningstar, as of 6/30/22

Domestic equity size & style

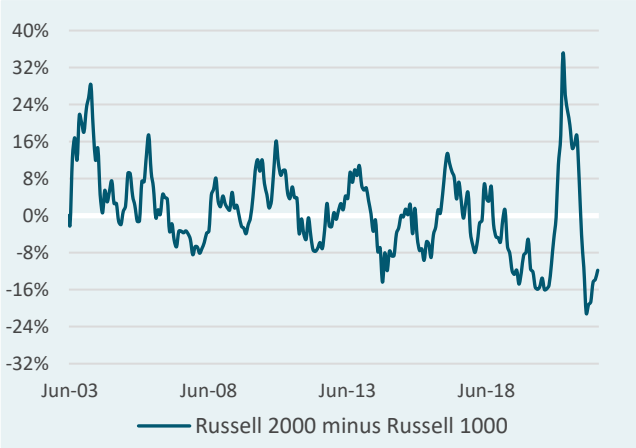
Value stocks outperformed Growth stocks by a wide margin once again in the second quarter (Russell 1000 Value -12.2% vs Russell 1000 Growth -20.9%) as many Growth stocks with lofty valuations suffered due to rising interest rates and broader risk-off sentiment. Large capitalization stocks outperformed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

The recent drawdown of Growth stocks has helped partially close the historically wide price gap between Value and Growth, as reflected in the bottom right chart. Sector trends contributed to style performance during the quarter. The energy sector outperformed, and information technology was a poor performer. Other Value-concentrated sectors such as financials and materials performed closely in line with the overall index.

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

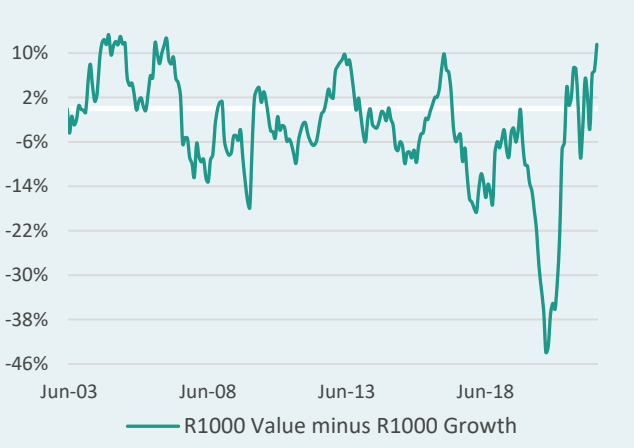
A rebound in Value continued during Q2

SMALL CAP VS LARGE CAP (YOY)



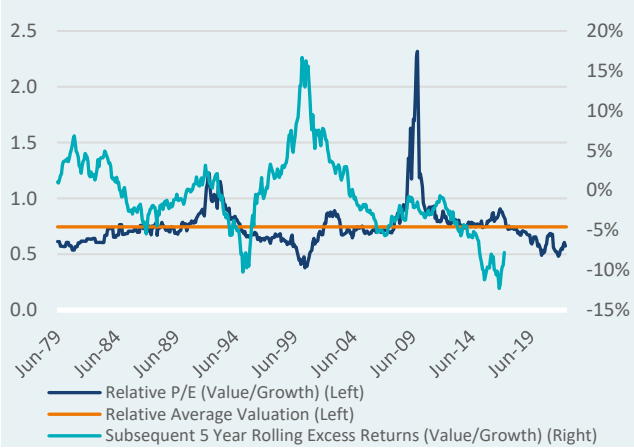
Source: FTSE, as of 6/30/22

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/22

VALUE VS. GROWTH RELATIVE VALUATIONS



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

International developed equity

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

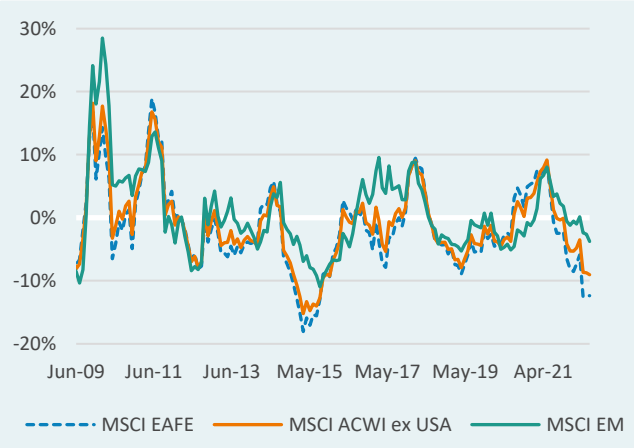
Currency movement during the quarter generated large losses for investors who do not hedge foreign currency exposure. Investors in international developed markets would have seen a loss of approximately -7.3% with a currency hedging program, rather than the -14.5% loss if currency was left unhedged. Over the past year, investors in international equities with a currency hedging program would have experienced roughly a -5.4% return, compared to a return of -17.8% if currency was left unhedged.

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

INTERNATIONAL DEVELOPED EQUITY

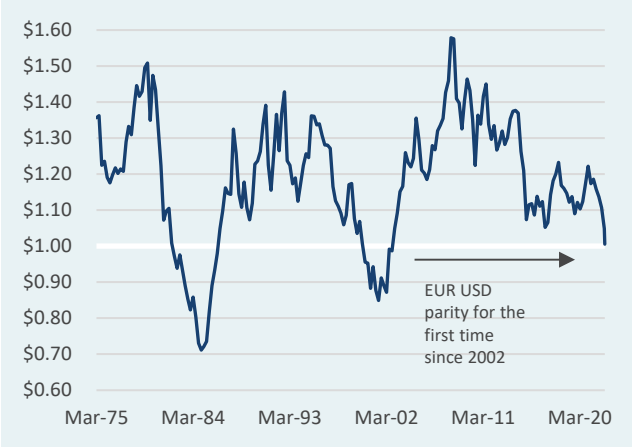
Source: MSCI, as of 6/30/22

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/22

PRICE OF 1 EUR IN USD



Source: Bloomberg, as of 7/14/22

Emerging market equity

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

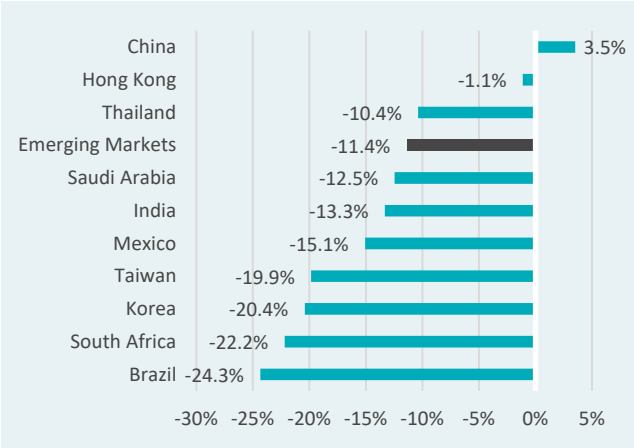
Strong returns from the consumer discretionary sector (12.9%)—the largest sector in the MSCI China Index—propelled Chinese equity performance forward. Outside of Chinese equities, emerging markets struggled, as central banks around the world tightened policy to fight inflation. Emerging market countries whose economies are reliant on raw goods exports were particularly impacted by tightening, as global commodity prices have drawn down from peaks seen earlier in the year.

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

EMERGING MARKET EQUITY

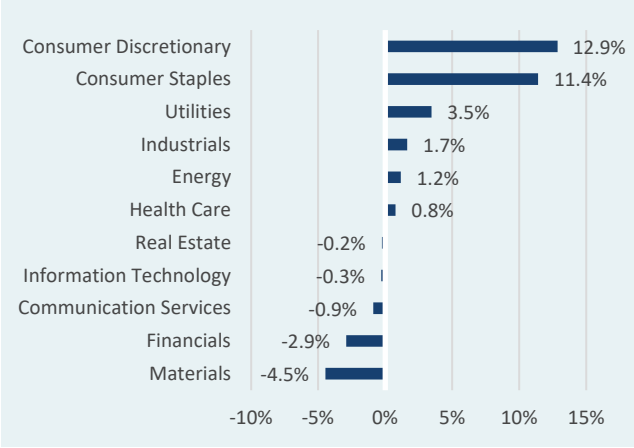
Source: MSCI, as of 6/30/22

Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



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

MSCI CHINA Q2 SECTOR PERFORMANCE



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

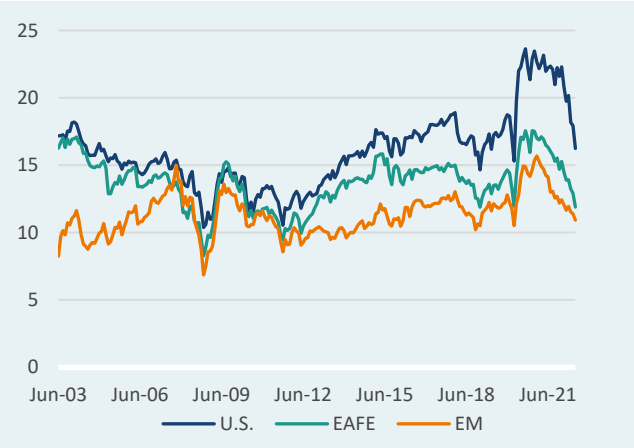
Equity valuations

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

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

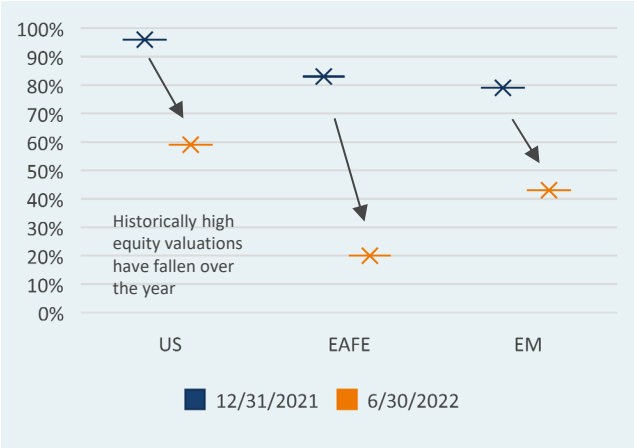
Most equity valuations have moved back towards normal levels, though U.S. prices remain rich

FORWARD P/E RATIOS



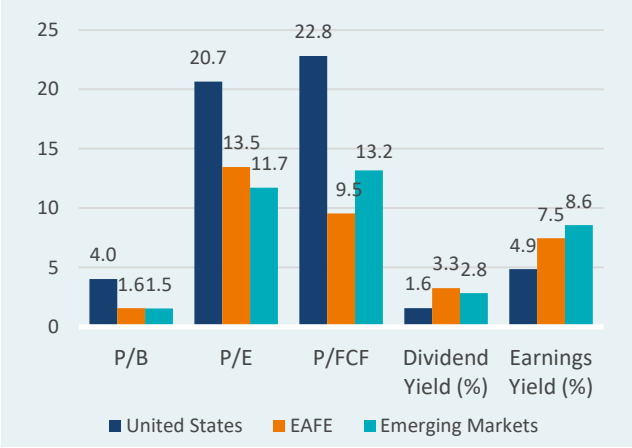
Source: MSCI, 12m forward P/E, as of 6/30/22

FORWARD P/E PERCENTILE RANKINGS



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

VALUATION METRICS (3-MONTH AVERAGE)



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

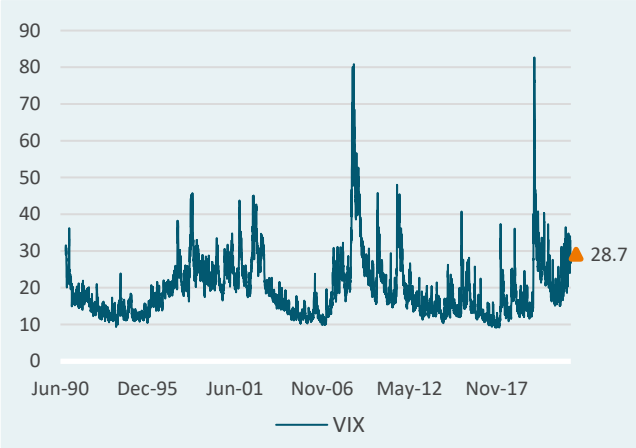
Equity volatility

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

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

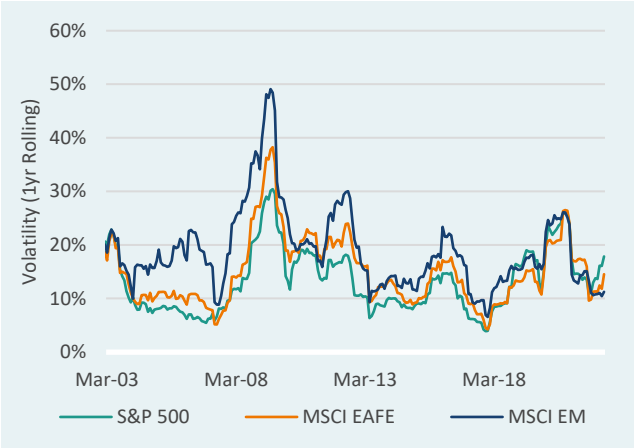
The 2022 equity bear market, while fairly moderate in speed and magnitude by historical standards, may justifiably feel severe for investors due to the broad-based nature of the selloff. Fixed income has delivered notable losses, failing to provide the diversification which investors expect. Commodities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

U.S. IMPLIED VOLATILITY (VIX)



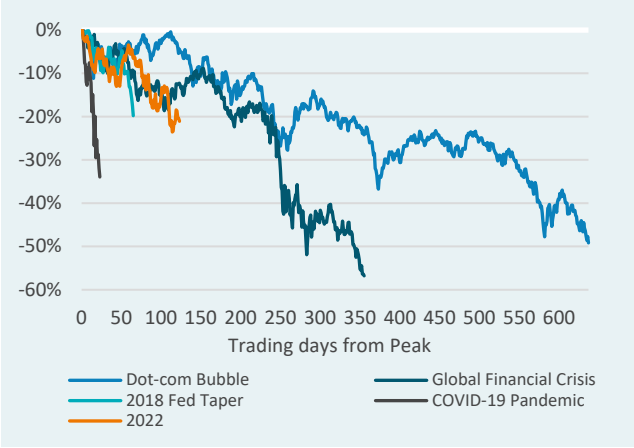
Source: Cboe, as of 6/30/22

REALIZED VOLATILITY



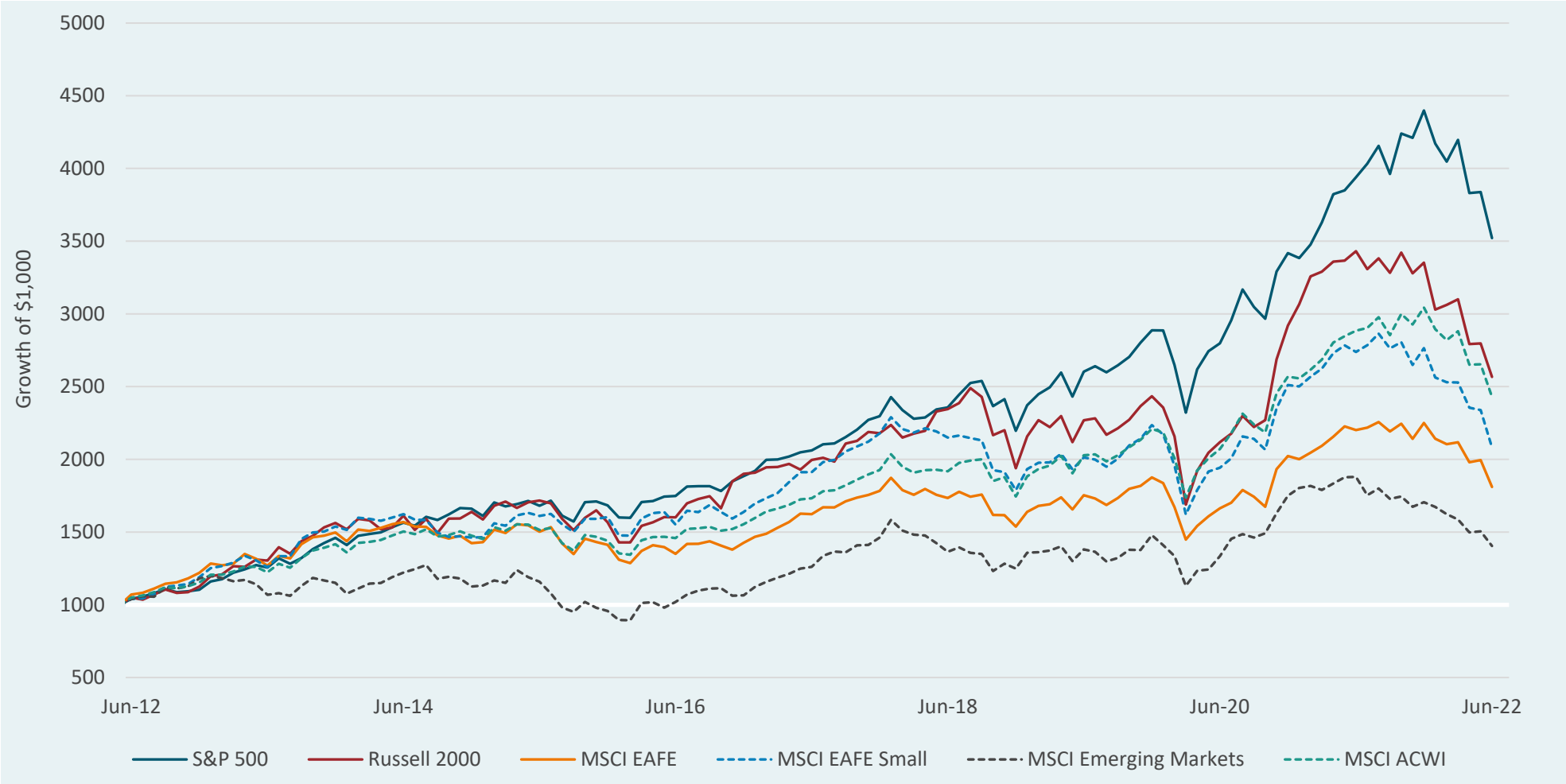
Source: Standard & Poor's, MSCI, as of 6/30/22

S&P 500 PEAK DRAWDOWNS



Source: Bloomberg, as of 6/30/22

Long-term equity performance



Source: Morningstar, as of 6/30/22

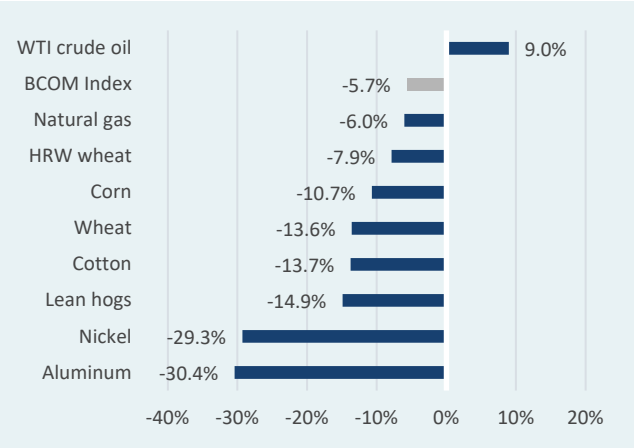
Other assets

Commodities

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

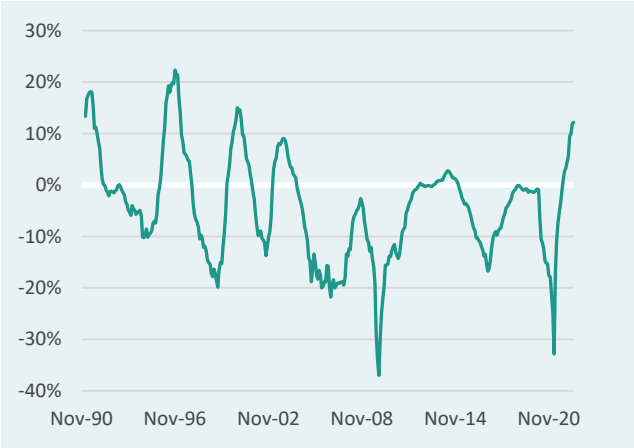
Early in 2022 many investors expressed fears about a potential global commodity supply shortage, perhaps fueled by underinvestment in production capacity preceding and throughout the COVID-19 recession. Russia's invasion of Ukraine further amplified these fears and commodity price growth accelerated further. Later in the second quarter this trend appears to have reversed. Fears of a recession which would hinder the demand for commodities, and likely some easing of uncertainty around Ukraine, have contributed to a sharp drop in commodity prices. If weaker prices persist, the reversal in commodity markets should have a deflationary impact on broader consumer prices, though this effect may take time to flow through to broader prices. For example, lower oil prices have far-reaching impacts on the U.S. economy, such as on the transportation of goods, ground transportation and taxis, air travel, and the production of plastics.

BLOOMBERG COMMODITY INDEX – Q2 2022



Source: Bloomberg, as of 6/30/22

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



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

INDEX AND SECTOR PERFORMANCE

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

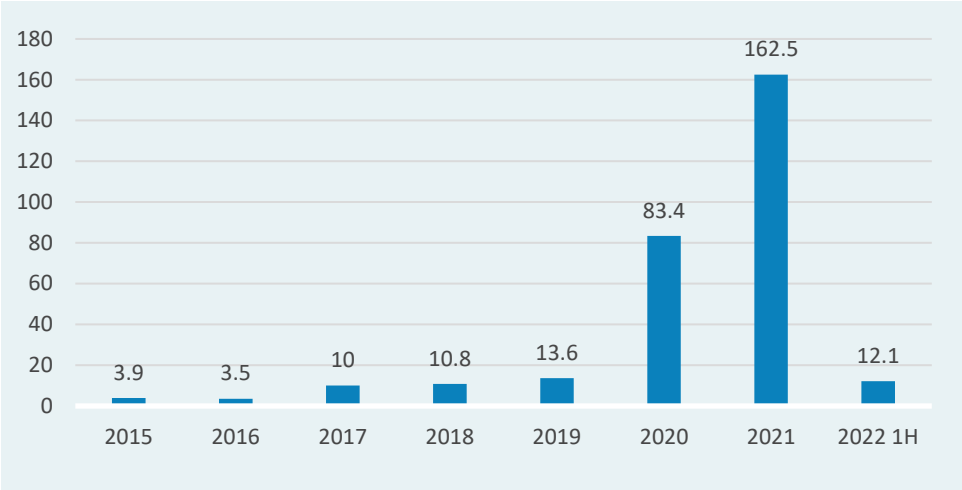
Source: Morningstar, as of 6/30/22

SPACs development

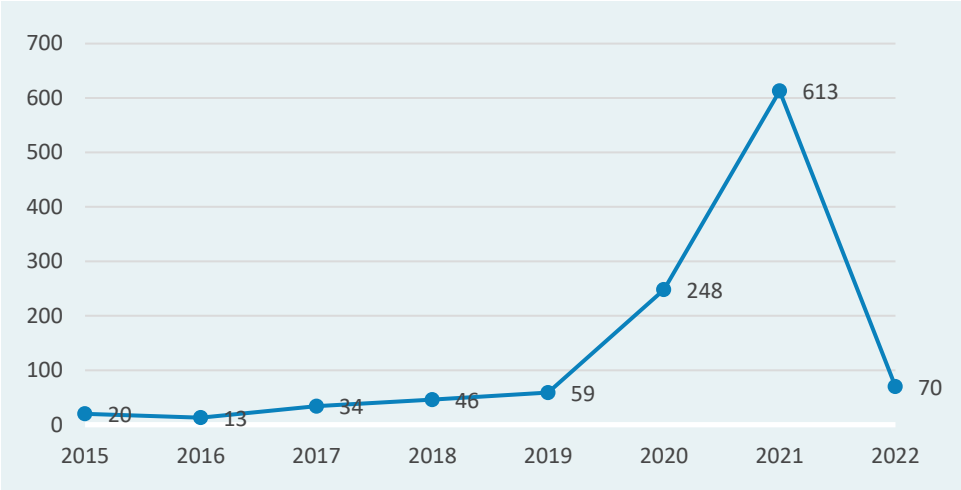
While SPACs proliferated between 2020 through 2021, coinciding with record retail investor trading volume, this activity has subsided notably in 2022.

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

U.S. SPAC AMOUNT RAISED ($BILLIONS)



NUMBER OF SPAC IPOS



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

SPACs return analysis

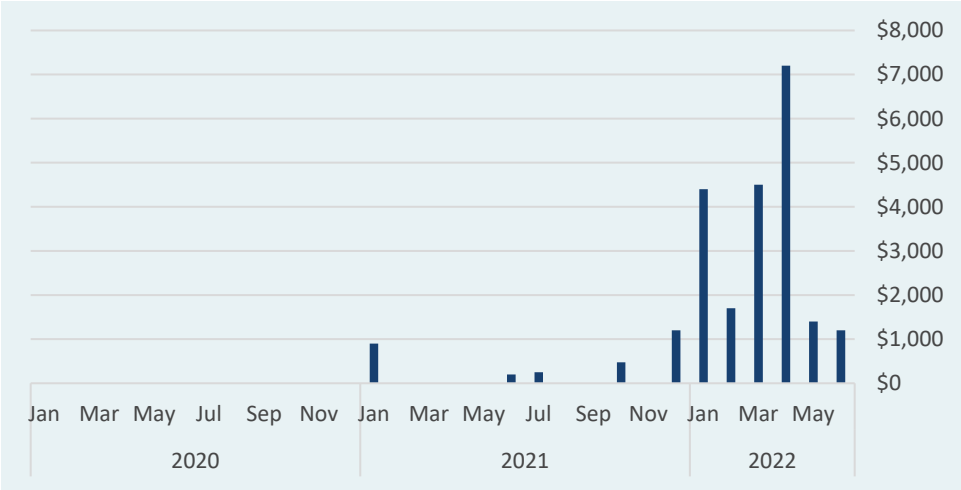
— For **institutional investors**: A number of companies that initially went public via a merger with a SPAC have seen very large share price declines and have since been acquired by a competitor at a far lower price.

— For **retail investors**: Declining share prices of SPACs have eroded billions of dollars of value for shareholders who held SPACs after their acquisition deals.

— Blank check companies have a history of surging and subsiding. During the 1980s, SPACs had boomed, and many were eventually wiped out when Congress passed more stringent regulations. The Securities Exchange Commission is currently tightening regulations around SPACs amid the resurgence.

DE-SPAC INDEX - CHANGE SINCE JUNE 17, 2021

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



Source: Bloomberg, as of 6/30/22

Appendix

Periodic table of returns

BEST ↑ ↓ WORST

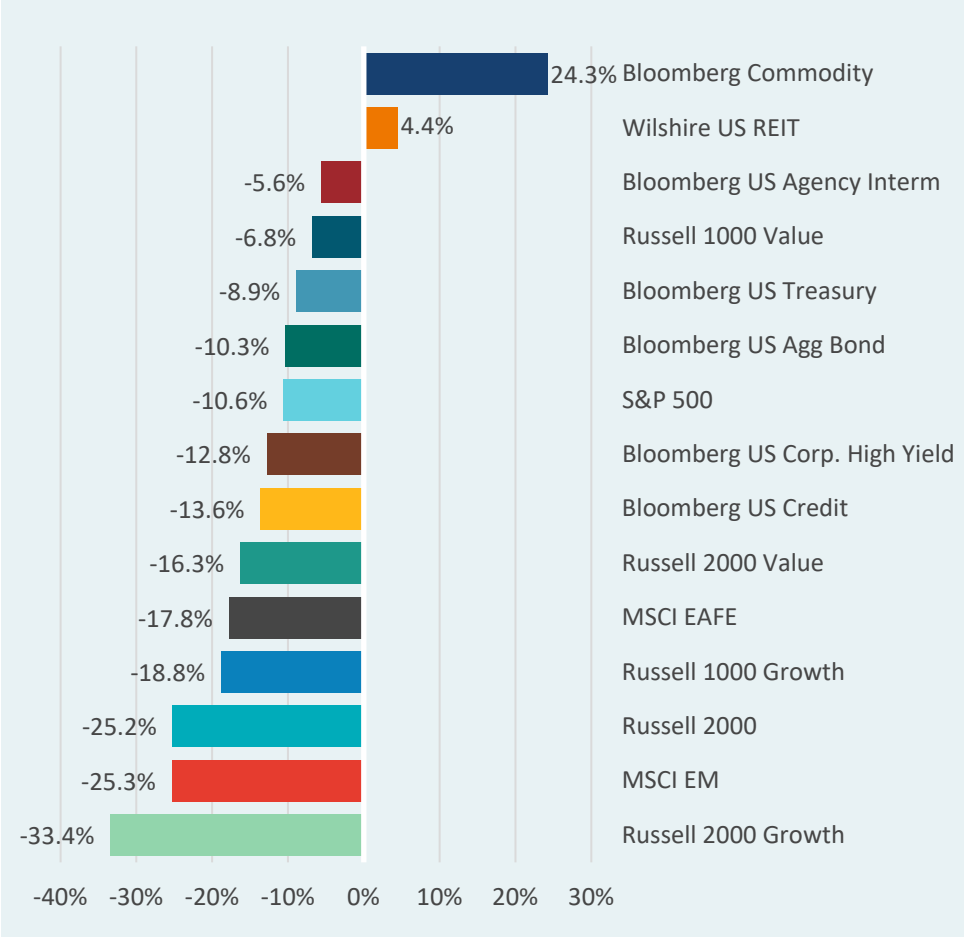
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	5-Year	10-Year
Commodities	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	18.4	14.3	14.8
Real Estate	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	5.3	11.0	12.8
Cash	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	27.1	0.1	8.5	10.5
Hedge Funds of Funds	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	26.5	-6.3	8.4	9.6
US Bonds	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	25.2	-10.3	7.2	9.4
Large Cap Value	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	14.0	17.7	-12.9	5.2	9.3
Small Cap Value	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	10.3	14.8	-17.3	4.9	9.1
Emerging Markets Equity	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	11.3	-17.6	4.8	5.4
60/40 Global Portfolio	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	8.9	-17.7	4.2	5.4
International Equity	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	6.5	-19.6	3.7	3.8
Large Cap Equity	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	2.8	-20.9	2.2	3.1
Small Cap Equity	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	0.5	0.0	-23.4	2.2	1.5
Large Cap Growth	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	-1.5	-28.1	1.0	0.6
Small Cap Growth	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	-2.5	-29.5	0.9	-0.8

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% Bloomberg Global Bond

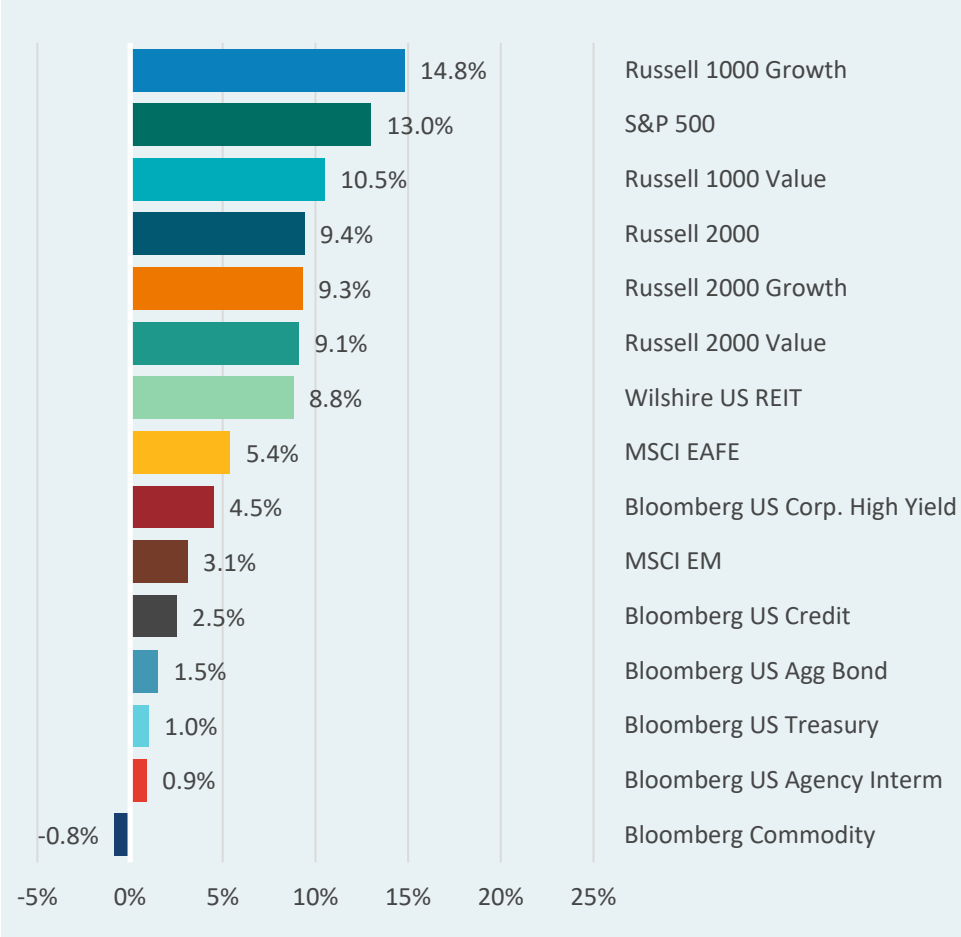
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill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

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



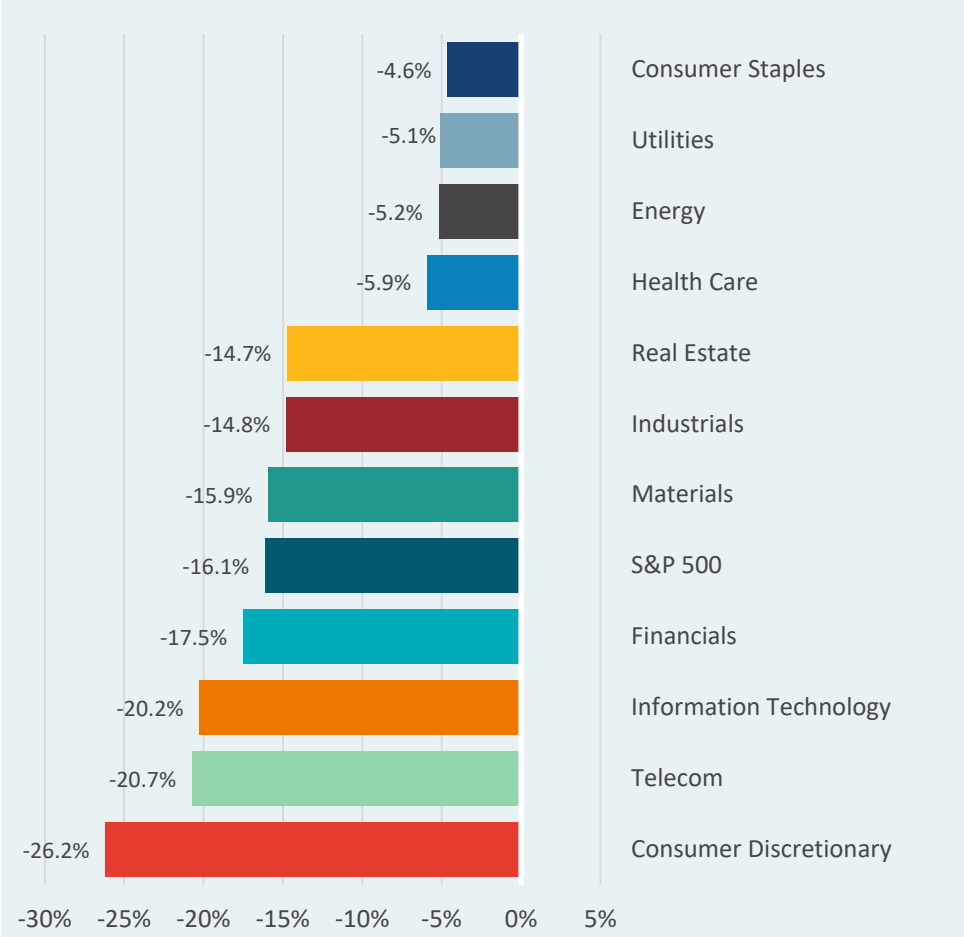
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 6/30/22

Source: Morningstar, as of 6/30/22

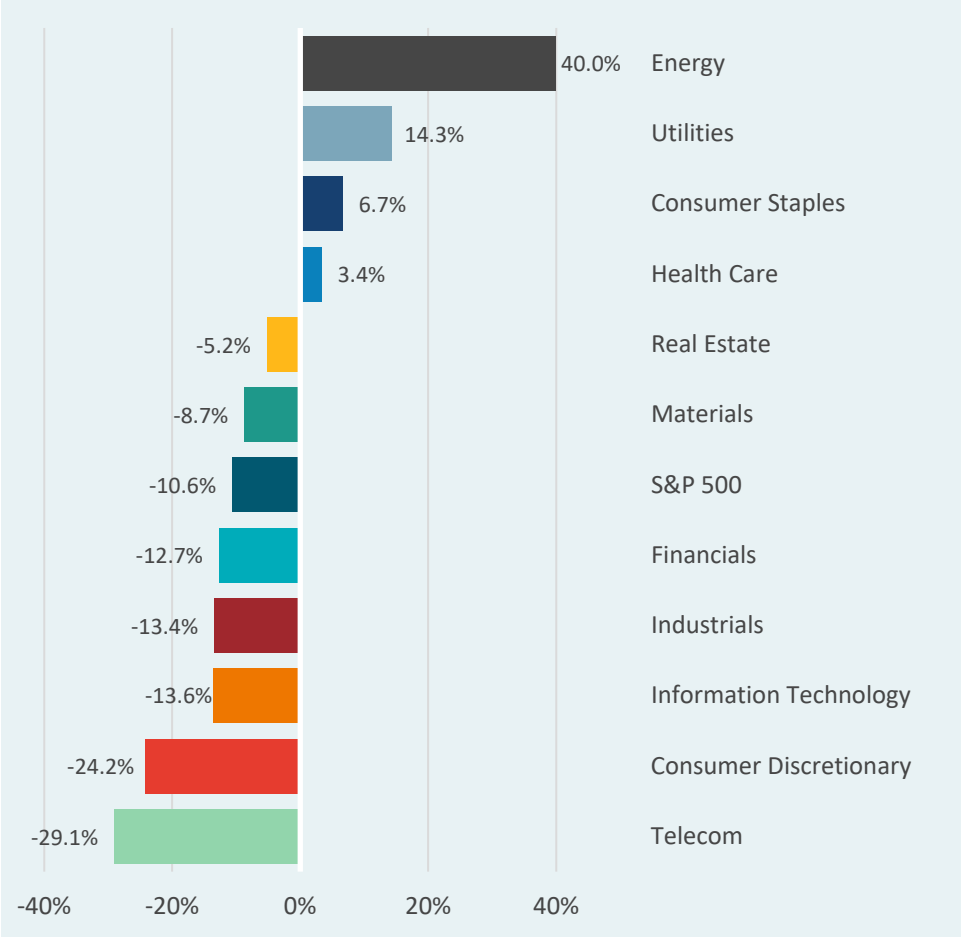
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/22

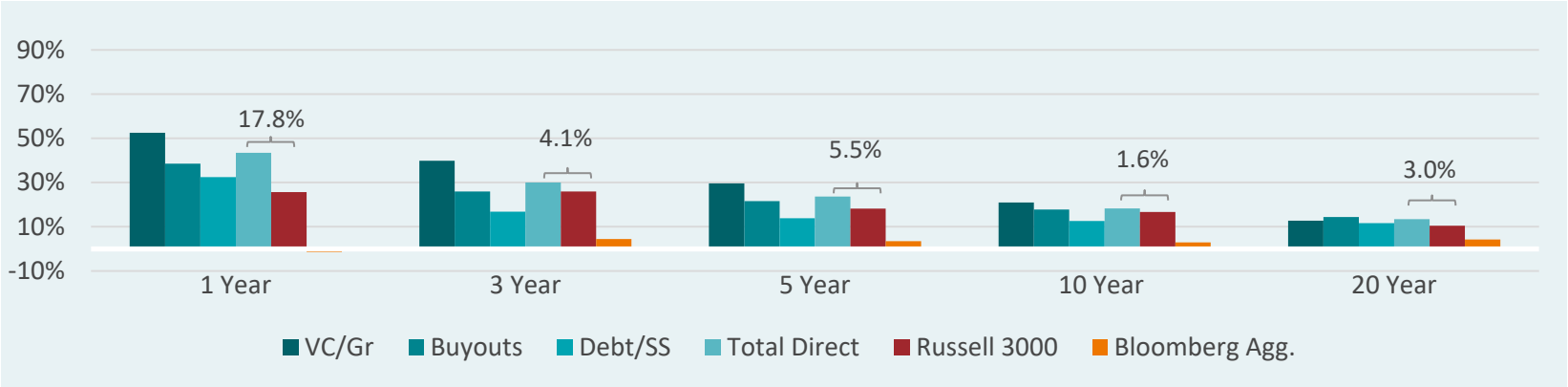
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/22

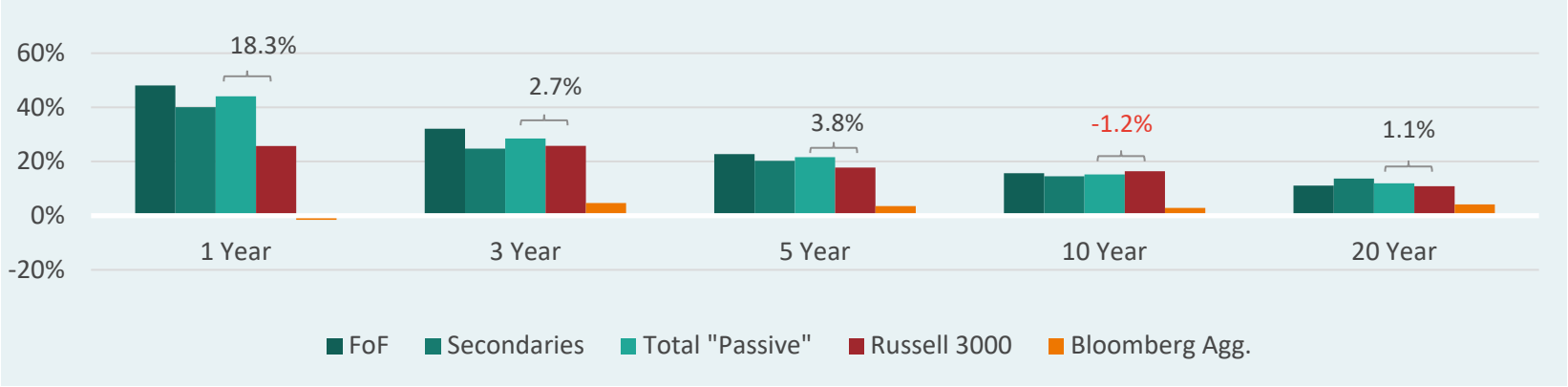
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

"PASSIVE" STRATEGIES

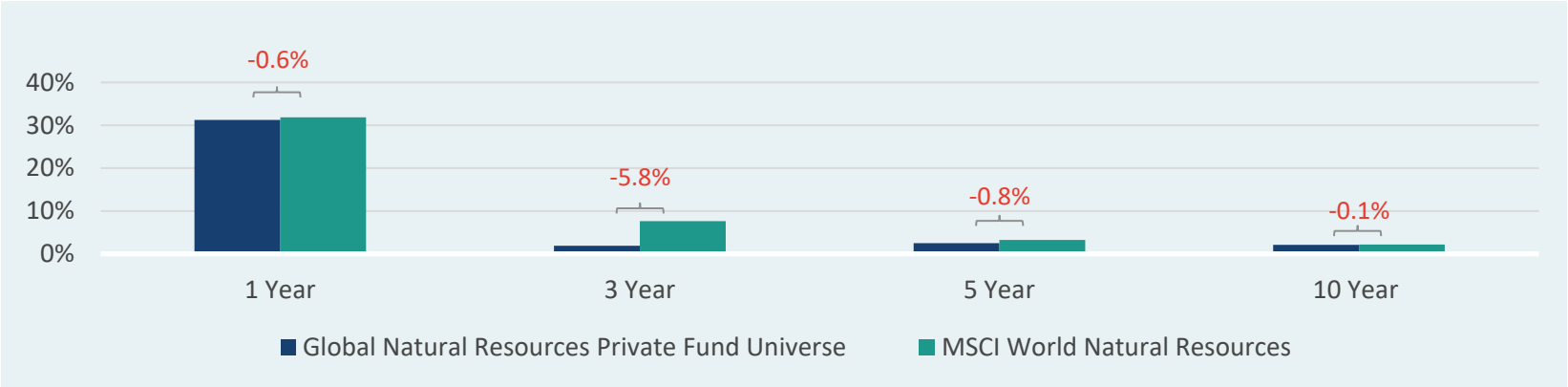


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 10-year basis.

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

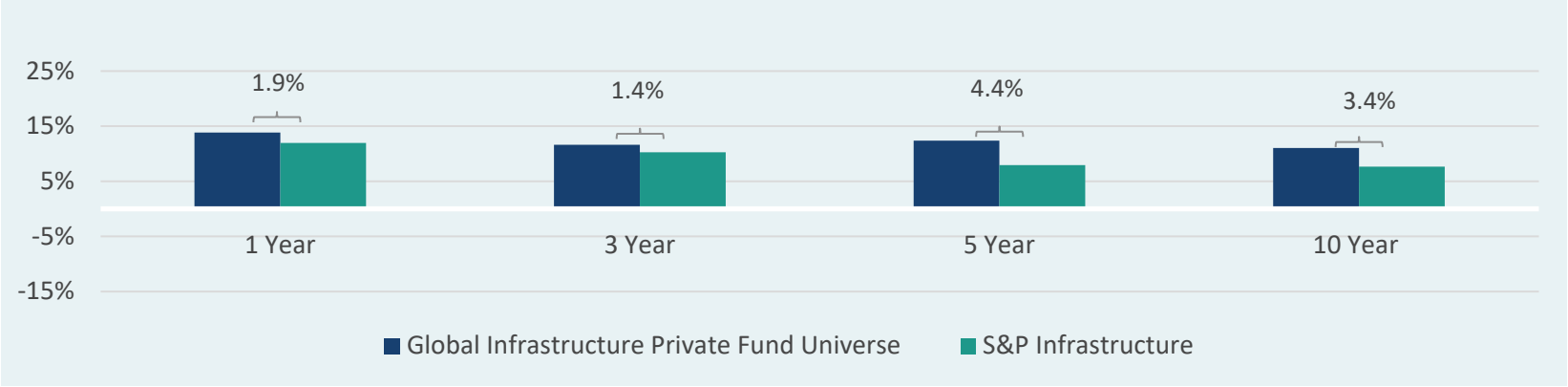
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

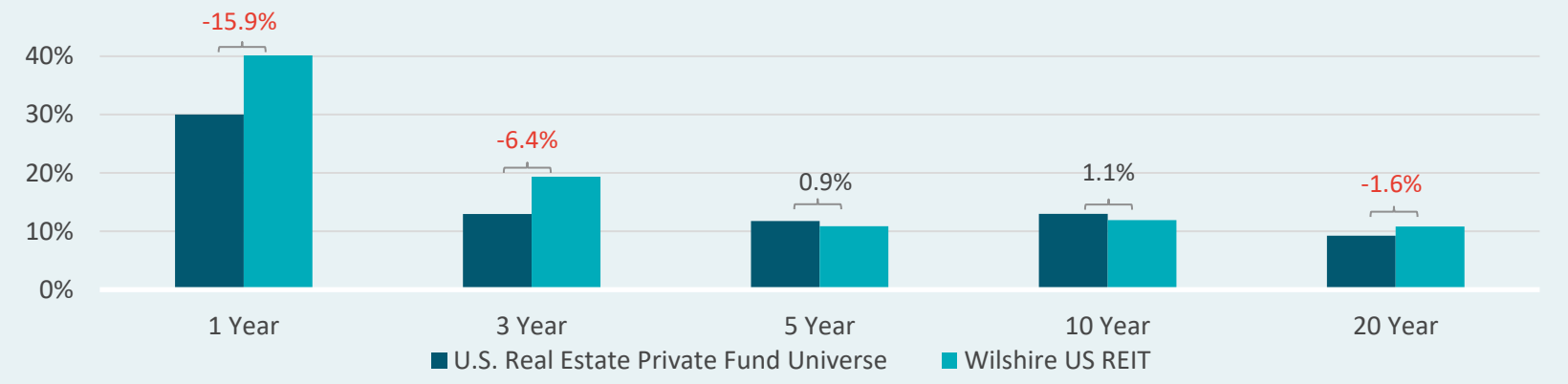


Infra. funds outperformed the S&P Infra. across all periods.

Sources: Refinitiv PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of December 31, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

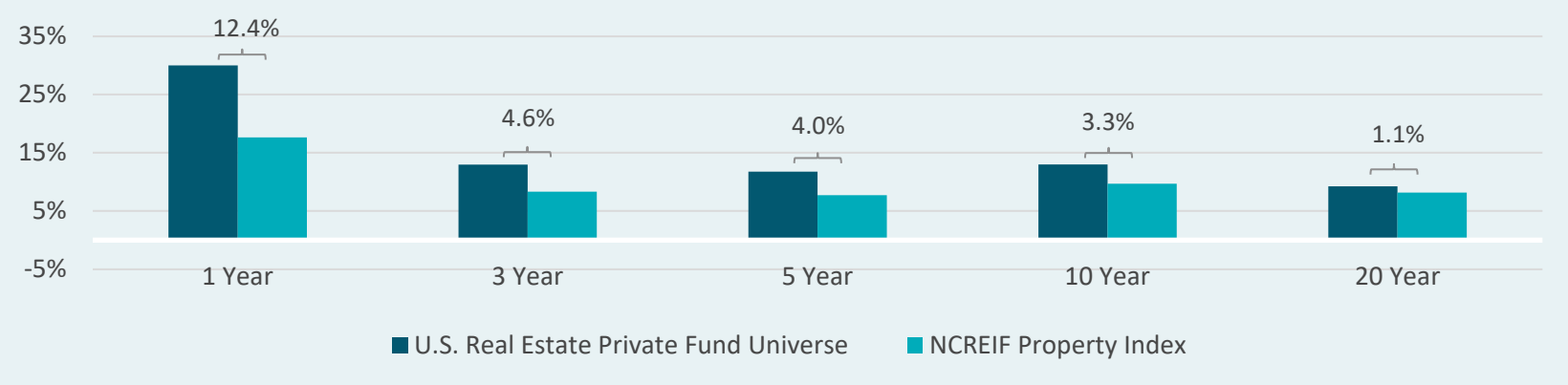
Private vs. liquid and core real estate performance

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



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

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



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

Sources: Refinitiv PME: U.S. Real Estate universes as of December 31, 2021. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	(8.3)	(16.1)	(20.0)	(10.6)	10.6	11.3	13.0
S&P 500 Equal Weighted	(9.4)	(14.4)	(16.7)	(9.4)	9.7	9.9	12.7
DJ Industrial Average	(6.6)	(10.8)	(14.4)	(9.1)	7.2	10.0	11.7
Russell Top 200	(7.8)	(16.6)	(20.7)	(11.5)	11.5	12.2	13.4
Russell 1000	(8.4)	(16.7)	(20.9)	(13.0)	10.2	11.0	12.8
Russell 2000	(8.2)	(17.2)	(23.4)	(25.2)	4.2	5.2	9.4
Russell 3000	(8.4)	(16.7)	(21.1)	(13.9)	9.8	10.6	12.6
Russell Mid Cap	(10.0)	(16.8)	(21.6)	(17.3)	6.6	8.0	11.3
Style Index							
Russell 1000 Growth	(7.9)	(20.9)	(28.1)	(18.8)	12.6	14.3	14.8
Russell 1000 Value	(8.7)	(12.2)	(12.9)	(6.8)	6.9	7.2	10.5
Russell 2000 Growth	(6.2)	(19.3)	(29.5)	(33.4)	1.4	4.8	9.3
Russell 2000 Value	(9.9)	(15.3)	(17.3)	(16.3)	6.2	4.9	9.1

INTERNATIONAL EQUITY

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

FIXED INCOME

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

OTHER

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

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

Definitions

Bloomberg US Weekly Consumer Comfort Index *- tracks the public's economic attitudes each week, providing a high-frequency read on consumer sentiment. The index, based on cell and landline telephone interviews with a random, representative national sample of U.S. adults, tracks Americans' ratings of the national economy, their personal finances and the buying climate on a weekly basis, with views of the economy's direction measured separately each month. (www.langerresearch.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 induces for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula "(Good-Poor + 100)/2" to the present and future sales series and "(High/Very High-Low/Very Low + 100)/2" to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.*

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Tulare County Employees' Retirement Association

Investment Performance Review

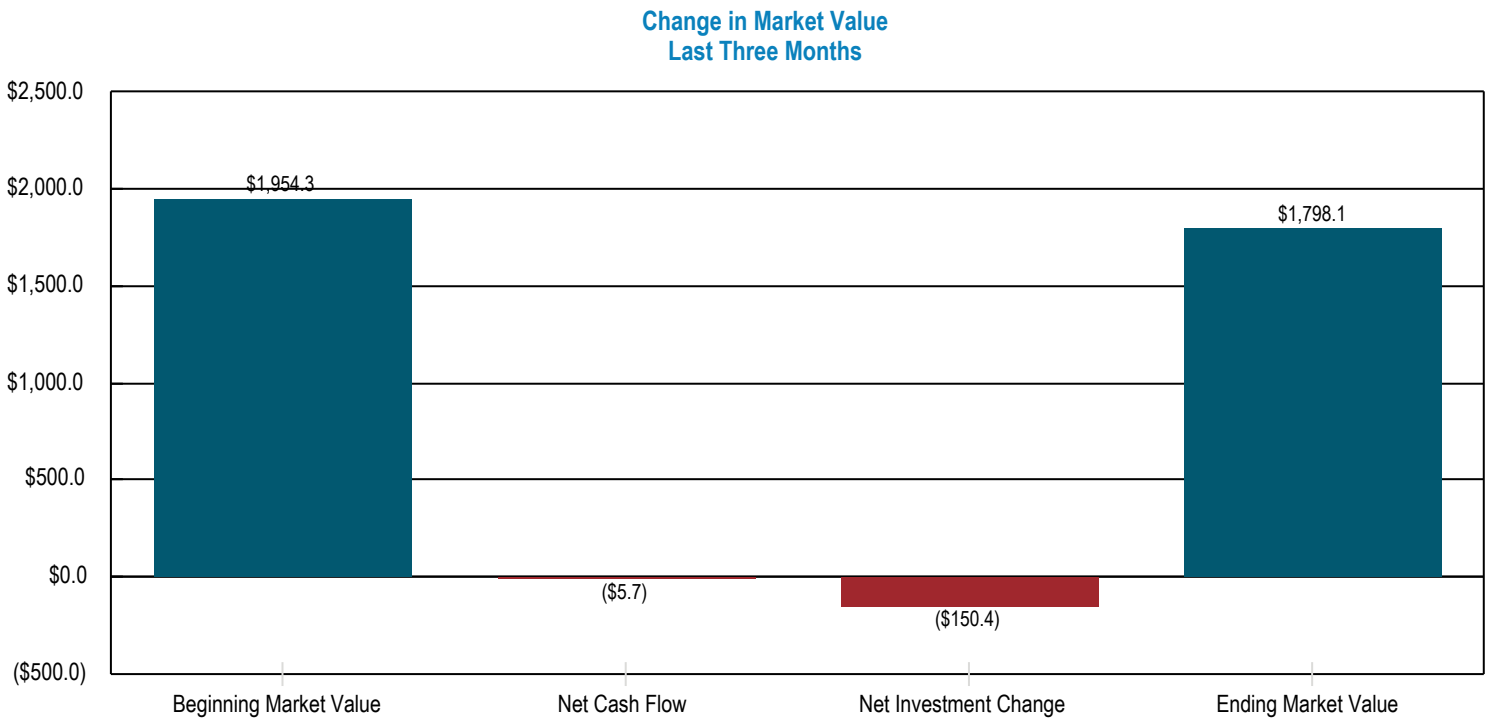
Period Ending: June 30, 2022

Verus

VERUSINVESTMENTS.COM

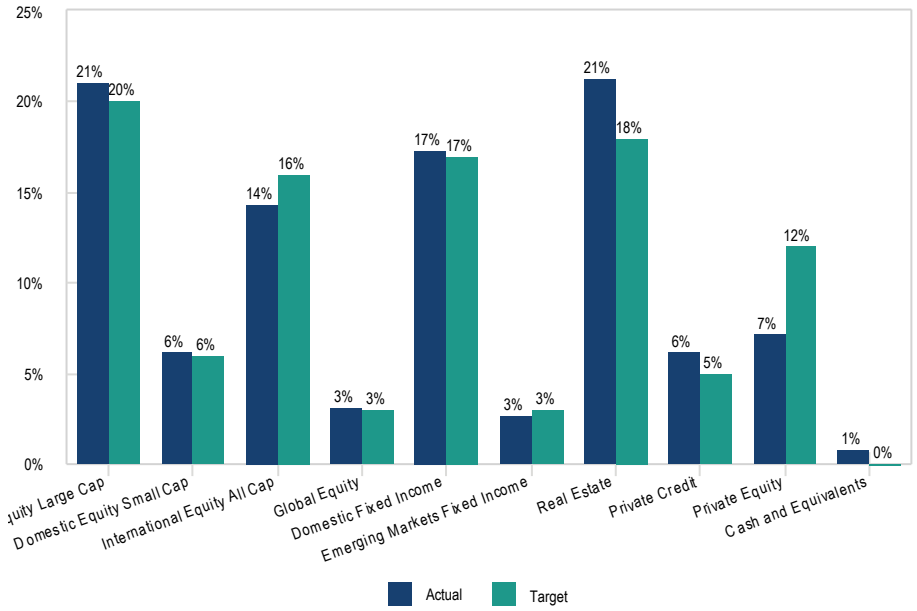
SEATTLE 206-622-3700
PITTSBURGH 412-784-6678
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484

	3 Mo	Fiscal Year-To-Date
Beginning Market Value	1,954,302,697	1,949,660,335
Net Cash Flow	-5,685,813	-43,245,929
Net Investment Change	-150,374,860	-107,801,912
Ending Market Value	1,798,087,640	1,798,087,640

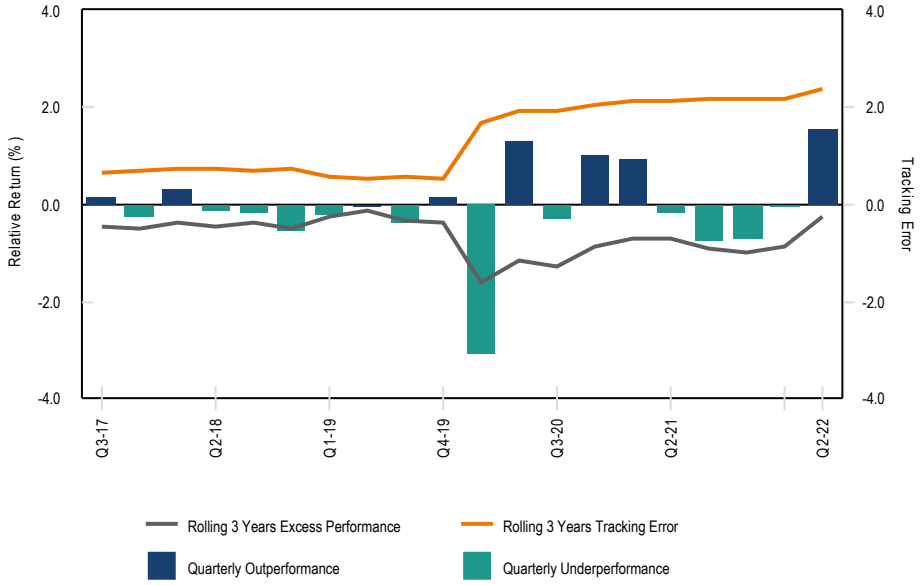


	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Fund	**-7.6**	**-9.9**	**-5.9**	**-5.9**	**5.4**	**5.9**	**6.8**	**4.3**
Policy Index	*-9.2*	*-11.4*	*-6.2*	*-6.2*	*5.6*	*6.2*	*6.8*	*4.9*
All DB Public Plans >1B Rank	*40*	*33*	*35*	*35*	*70*	*68*	*77*	*95*
Total Domestic Equity	**-16.4**	**-20.6**	**-13.9**	**-13.9**	**9.0**	**10.2**	**12.4**	**8.1**
Russell 3000 Index	*-16.7*	*-21.1*	*-13.9*	*-13.9*	*9.8*	*10.6*	*12.6*	*8.4*
Total International Equity	**-12.8**	**-17.8**	**-18.5**	**-18.5**	**2.7**	**3.5**	**5.5**	**0.9**
MSCI AC World ex USA Index	*-13.5*	*-18.2*	*-19.0*	*-19.0*	*1.8*	*3.0*	*5.3*	*2.0*
Total Global Equity	**-11.3**	**-20.4**	**-12.2**	**-12.2**	**8.4**	**7.0**	**-**	**-**
MSCI AC World Index	*-15.5*	*-20.0*	*-15.4*	*-15.4*	*6.7*	*7.5*	*9.3*	*5.3*
Total Fixed Income	**-6.0**	**-11.9**	**-12.6**	**-12.6**	**-2.6**	**-0.2**	**1.2**	**3.2**
Blmbg. U.S. Aggregate Index	*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*3.3*
Total Domestic Fixed Income	**-5.5**	**-11.1**	**-11.0**	**-11.0**	**-0.8**	**1.0**	**1.8**	**-**
Blmbg. U.S. Aggregate Index	*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*3.3*

Actual vs. Target Allocation (%)



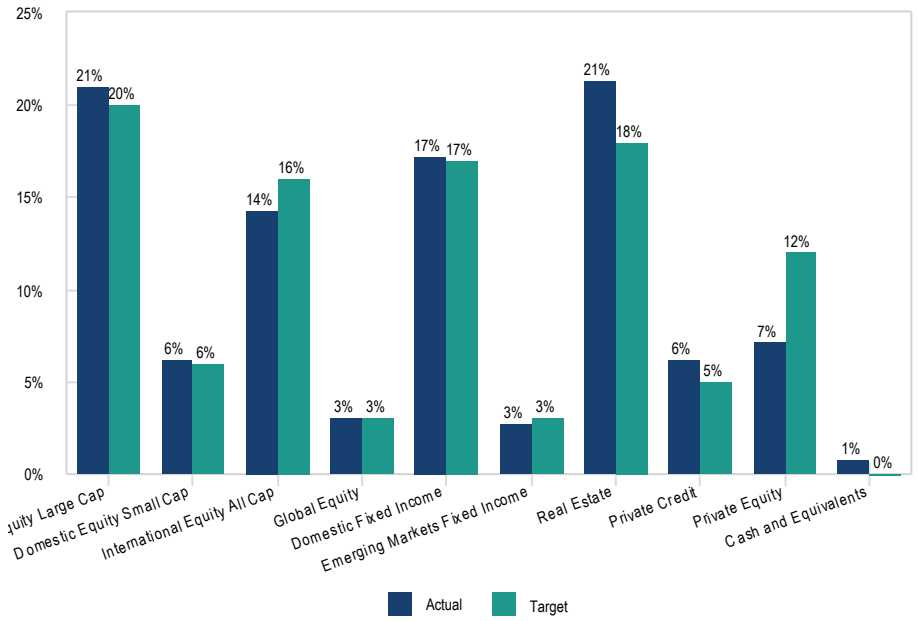
Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



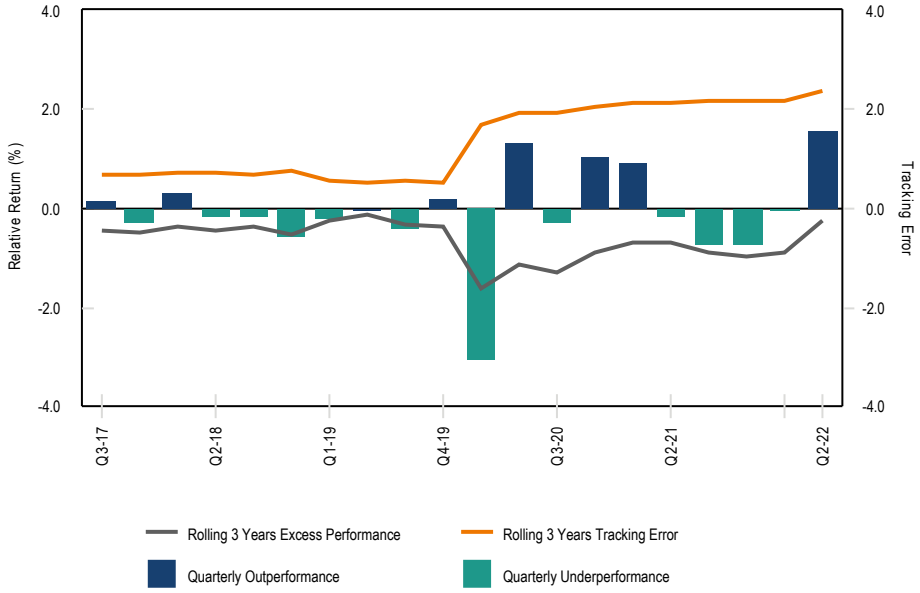
Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM GBI Global, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns.

	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Emerging Markets Fixed Income	**-9.2**	**-16.7**	**-19.4**	**-19.4**	**-4.6**	**-**	**-**	**-**
50% JPM EMBI Global Div/ 50% JPM GBI EM Global Div	*-10.0*	*-17.5*	*-20.2*	*-20.2*	*-5.5*	*-1.7*	*0.4*	*3.2*
Total Real Estate	**4.1**	**10.0**	**20.7**	**20.7**	**9.1**	**8.3**	**9.3**	**5.0**
NCREIF ODCE net 1Q Lag	*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*6.0*
NCREIF-ODCE	*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*7.0*
Total Private Equity	**-0.1**	**9.9**	**26.4**	**26.4**	**23.8**	**21.2**	**15.9**	**-**
Private Equity Benchmark	*-0.1*	*9.9*	*26.4*	*26.4*	*23.8*	*21.2*	*16.4*	*-*
Total Private Credit	**0.0**	**0.1**	**3.0**	**3.0**	**8.1**	**8.7**	**-**	**-**
Private Credit Benchmark	*0.1*	*0.2*	*3.1*	*3.1*	*8.1*	*8.7*	*-*	*-*
Total Opportunistic	**-2.2**	**10.6**	**22.7**	**22.7**	**9.8**	**9.8**	**12.1**	**-**

Actual vs. Target Allocation (%)



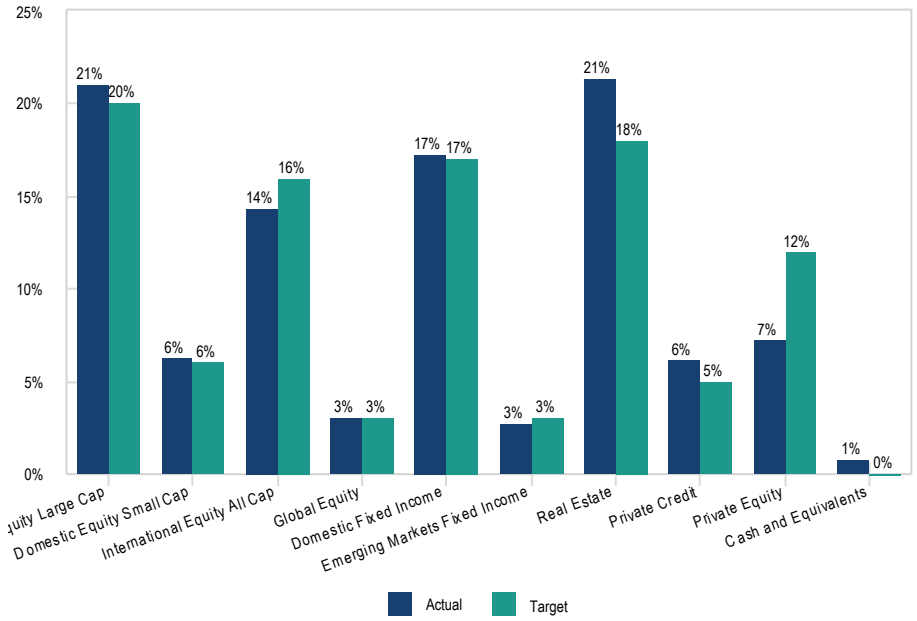
Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



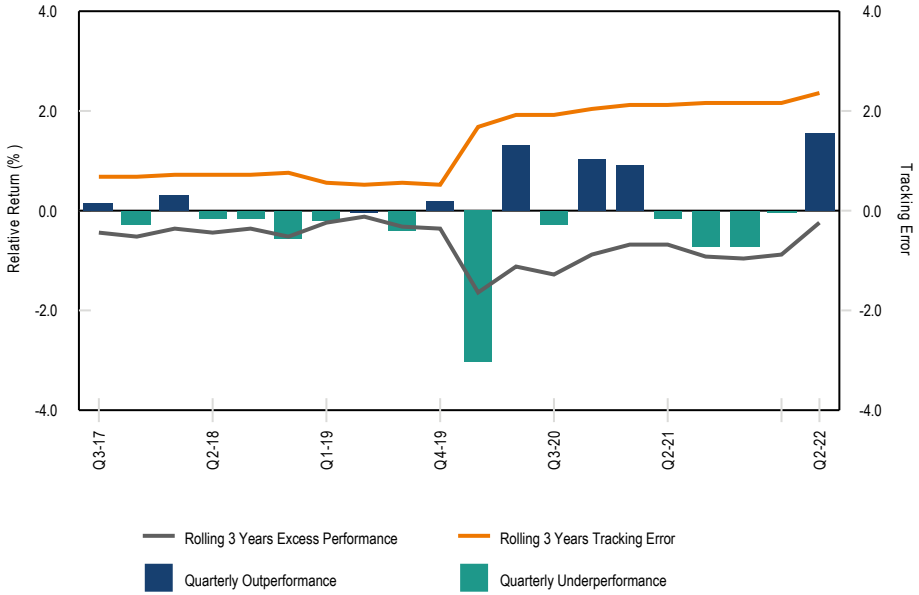
Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM GBI Global, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns. All return periods greater than 1-year are rolling annualized returns.

	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Fund	**-7.6**	**-9.8**	**-5.7**	**-5.7**	**5.6**	**6.2**	**7.1**	**4.6**
Policy Index	*-9.2*	*-11.4*	*-6.2*	*-6.2*	*5.6*	*6.2*	*6.8*	*4.9*
Total Domestic Equity	**-16.3**	**-20.6**	**-13.8**	**-13.8**	**9.3**	**10.6**	**12.8**	**8.5**
Russell 3000 Index	*-16.7*	*-21.1*	*-13.9*	*-13.9*	*9.8*	*10.6*	*12.6*	*8.4*
Total International Equity	**-12.8**	**-17.7**	**-18.3**	**-18.3**	**3.0**	**3.9**	**5.9**	**1.2**
MSCI AC World ex USA Index	*-13.5*	*-18.2*	*-19.0*	*-19.0*	*1.8*	*3.0*	*5.3*	*2.0*
Total Global Equity	**-11.1**	**-20.1**	**-11.5**	**-11.5**	**9.2**	**7.8**	**-**	**-**
MSCI AC World Index	*-15.5*	*-20.0*	*-15.4*	*-15.4*	*6.7*	*7.5*	*9.3*	*5.3*
Total Fixed Income	**-6.0**	**-11.8**	**-12.4**	**-12.4**	**-2.3**	**0.1**	**1.6**	**3.5**
Blmbg. U.S. Aggregate Index	*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*3.3*
Total Domestic Fixed Income	**-5.4**	**-11.0**	**-10.8**	**-10.8**	**-0.5**	**1.3**	**2.1**	**-**
Blmbg. U.S. Aggregate Index	*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*3.3*

Actual vs. Target Allocation (%)



Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



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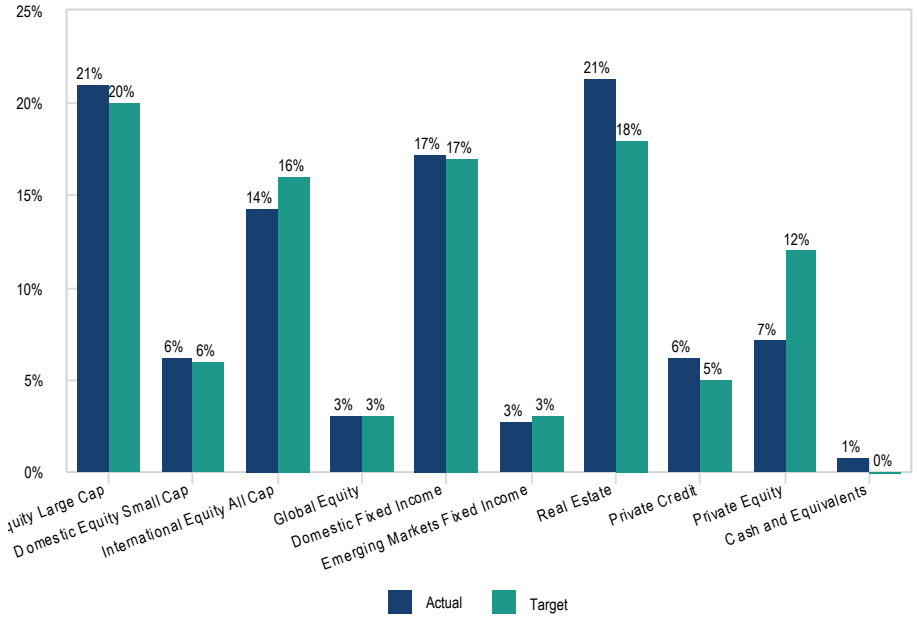
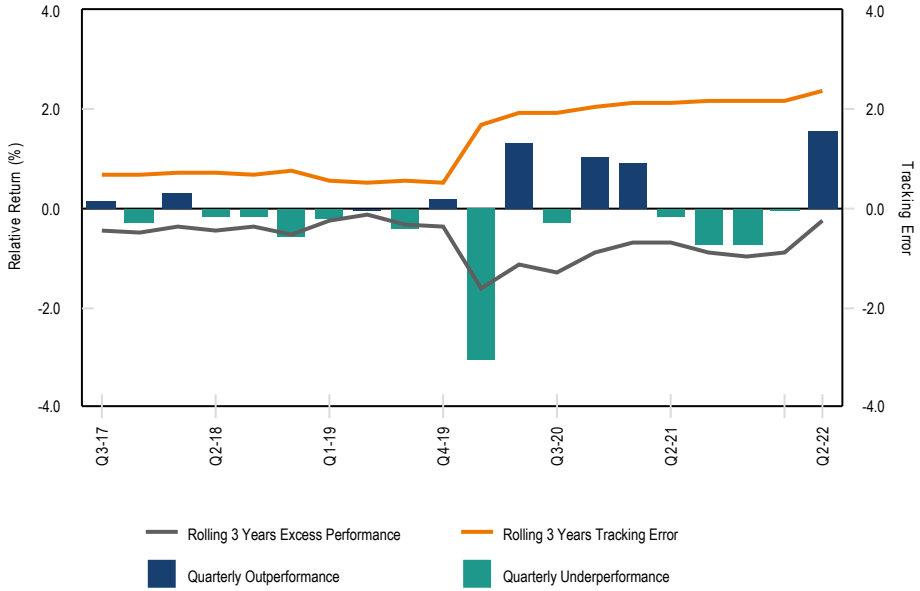
	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Emerging Markets Fixed Income	**-9.2**	**-16.7**	**-19.2**	**-19.2**	**-4.3**	**-**	**-**	**-**
50% JPM EMBI Global Div/ 50% JPM GBI EM Global Div	*-10.0*	*-17.5*	*-20.2*	*-20.2*	*-5.5*	*-1.7*	*0.4*	*3.2*
Total Real Estate	**4.2**	**10.2**	**20.9**	**20.9**	**9.2**	**8.4**	**9.6**	**5.2**
NCREIF ODCE net 1Q Lag	*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*6.0*
NCREIF-ODCE	*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*7.0*
Total Private Equity	**-0.1**	**9.9**	**26.4**	**26.4**	**23.8**	**21.2**	**16.4**	**-**
Private Equity Benchmark	*-0.1*	*9.9*	*26.4*	*26.4*	*23.8*	*21.2*	*16.4*	*-*
Total Private Credit	**0.1**	**0.2**	**3.1**	**3.1**	**8.1**	**8.7**	**-**	**-**
Private Credit Benchmark	*0.1*	*0.2*	*3.1*	*3.1*	*8.1*	*8.7*	*-*	*-*
Total Opportunistic	**-2.1**	**10.7**	**22.8**	**22.8**	**9.8**	**9.9**	**12.7**	**-**

Actual vs. Target Allocation (%)



Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



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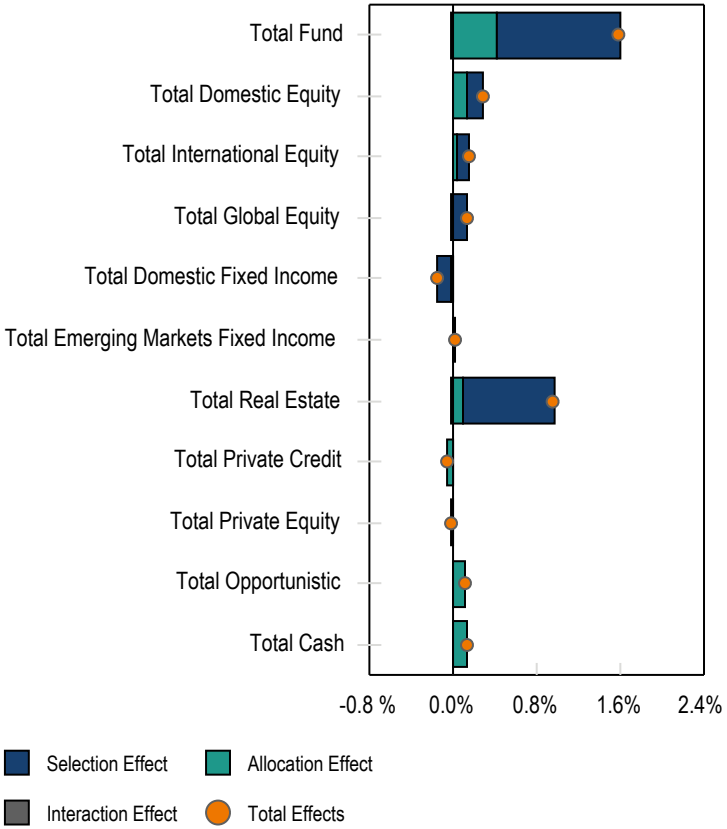
Attribution Effects
3 Months Ending June 30, 2022



Performance Attribution

	Last 3 Mo.
Wtd. Actual Return	-7.6
Wtd. Index Return	-9.2
Excess Return	**1.6**
Selection Effect	1.2
Allocation Effect	0.4
Interaction Effect	0.0

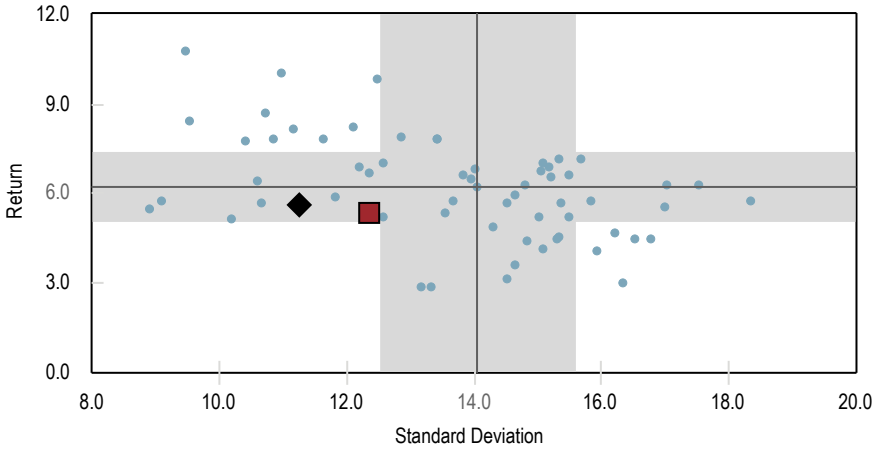
Attribution Summary
3 Months Ending June 30, 2022

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	-16.4	-16.8	0.4	0.1	0.1	0.0	0.3
Total International Equity	-12.8	-13.5	0.7	0.1	0.0	0.0	0.2
Total Global Equity	-11.3	-15.5	4.3	0.1	0.0	0.0	0.1
Total Domestic Fixed Income	-5.5	-4.7	-0.8	-0.1	0.0	0.0	-0.1
Total Emerging Markets Fixed Income	-9.2	-9.7	0.5	0.0	0.0	0.0	0.0
Total Real Estate	4.1	-1.1	5.1	0.9	0.1	0.0	1.0
Total Private Credit	0.0	0.1	-0.1	0.0	-0.1	0.0	-0.1
Total Private Equity	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Total Opportunistic	-2.2	-0.1	-2.1	0.0	0.1	0.0	0.1
Total Cash	0.2	0.1	0.1	0.0	0.1	0.0	0.1
Total Fund	**-7.6**	**-9.2**	**1.6**	**1.1**	**0.4**	**0.0**	**1.6**

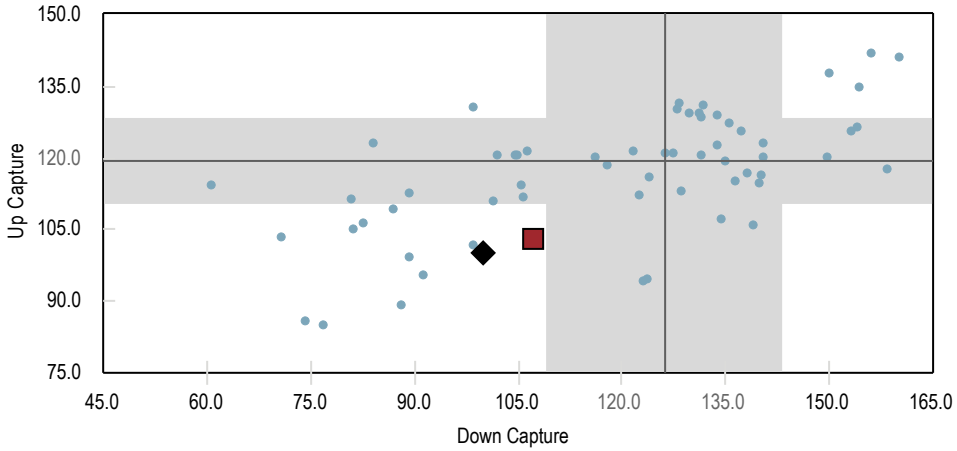
Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
Total Fund	5.37	12.36	-0.59	1.08	2.38	0.97	0.43	-0.04	103.06	107.09

Annualized Return vs. Annualized Standard Deviation



Up Markets vs. Down Markets



InvMetrics Public DB > $1B

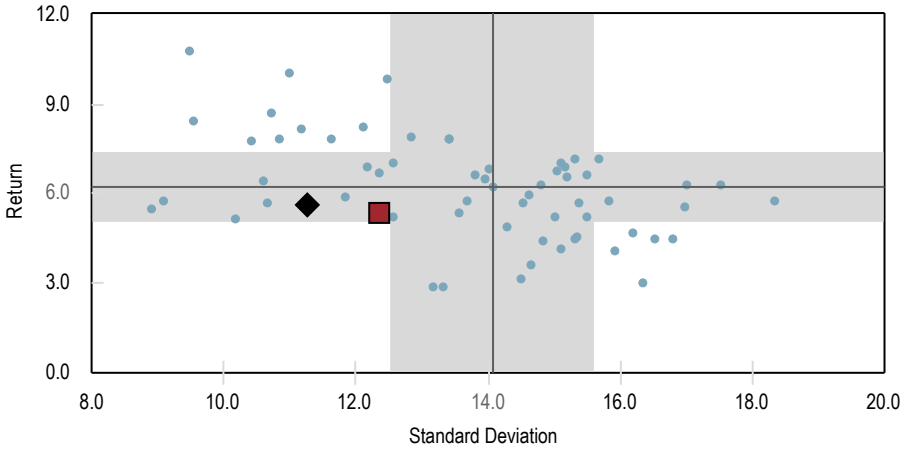
	Return	Standard Deviation
Total Fund	5.37	12.36
Policy Index	5.61	11.25
Median	6.22	14.06
Population	61	61

InvMetrics Public DB > $1B

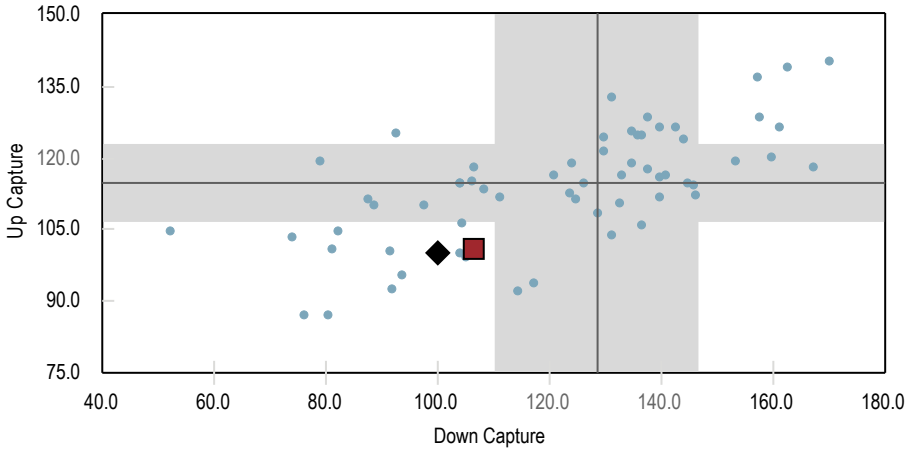
	Up Capture	Down Capture
Total Fund	103.06	107.09
Policy Index	100.00	100.00
Median	119.38	126.22
Population	61	61

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
Total Fund	5.91	10.44	-0.68	1.07	1.88	0.97	0.49	-0.12	101.05	106.47

Annualized Return vs. Annualized Standard Deviation



Up Markets vs. Down Markets

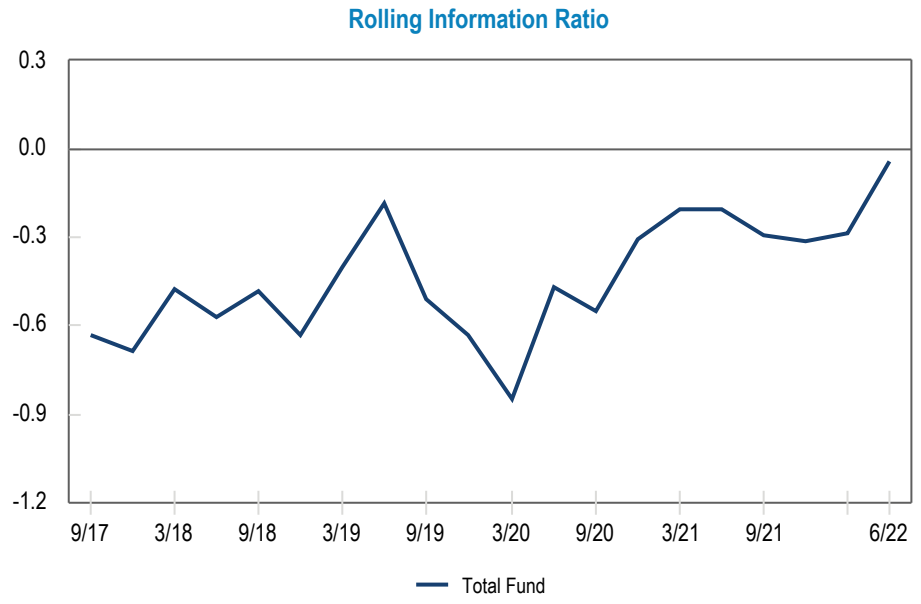


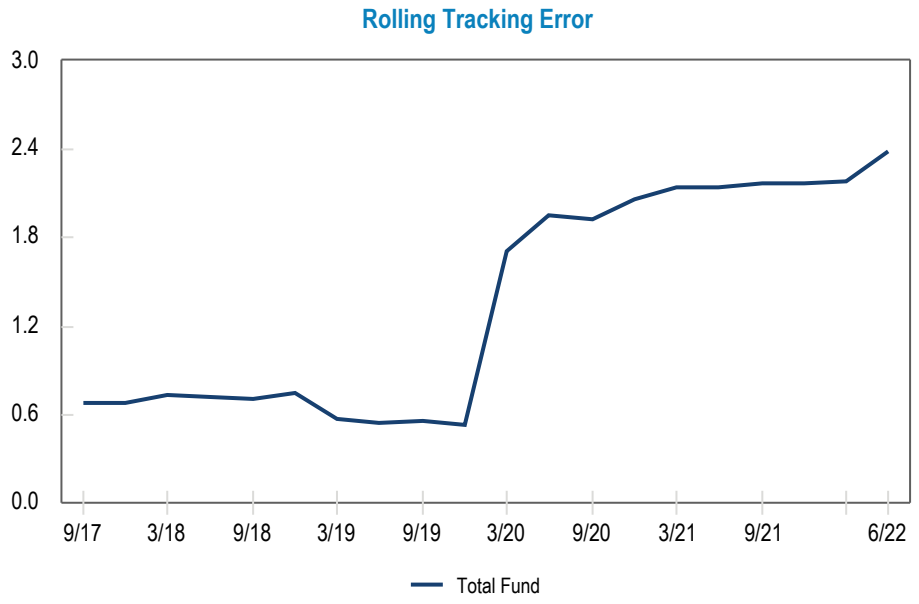
InvMetrics Public DB > $1B

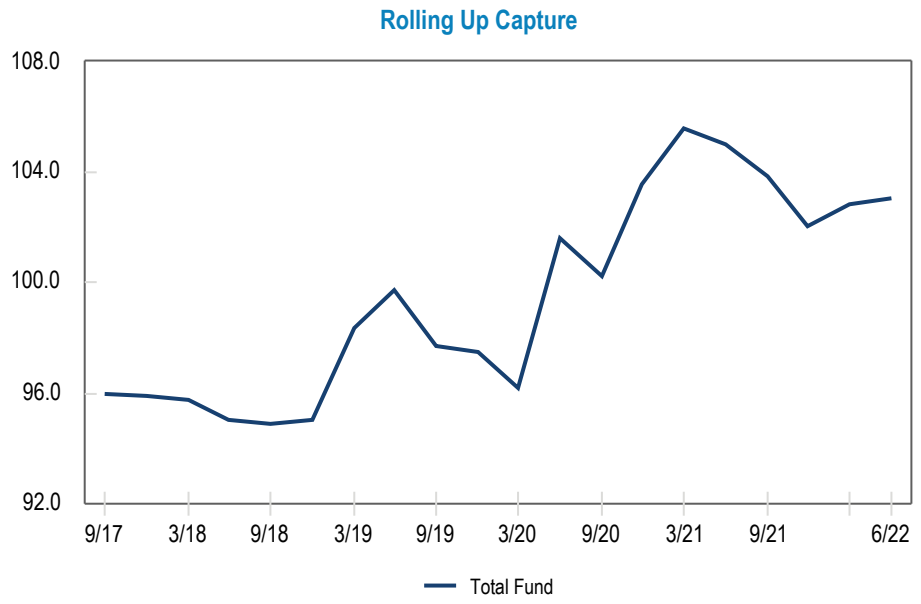
	Return	Standard Deviation
Total Fund	5.37	12.36
Policy Index	5.61	11.25
Median	6.22	14.06
Population	61	61

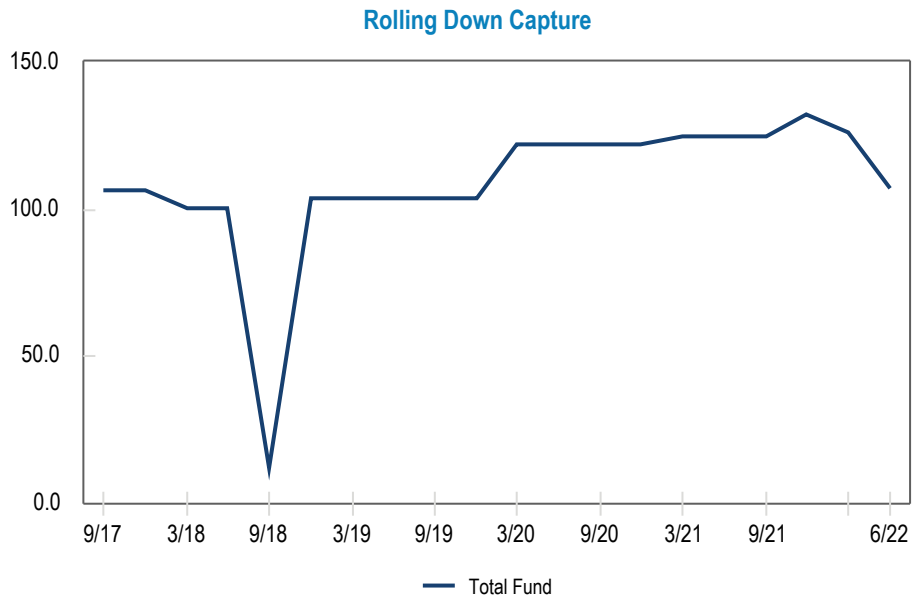
InvMetrics Public DB > $1B

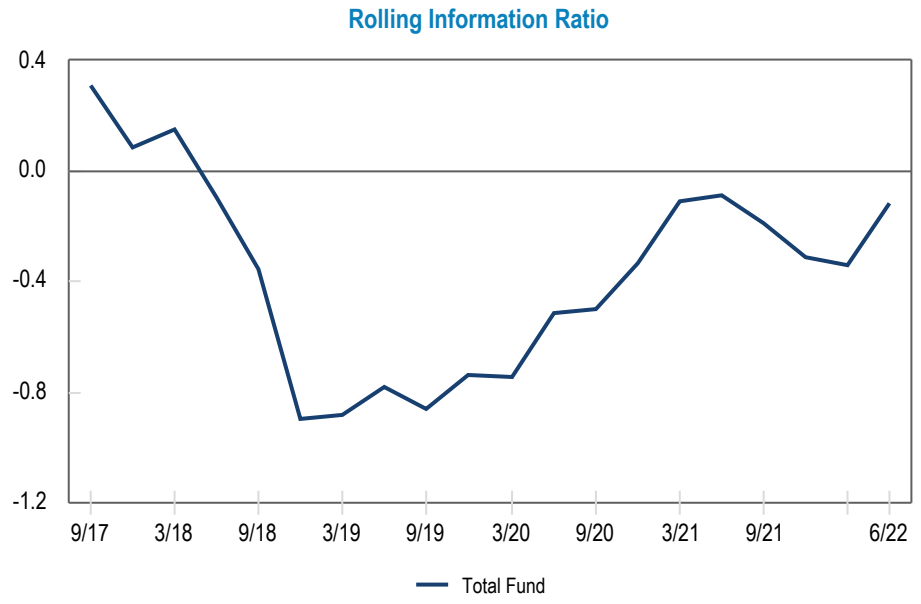
	Up Capture	Down Capture
Total Fund	101.05	106.47
Policy Index	100.00	100.00
Median	114.90	128.49
Population	61	61


Rolling Information Ratio
0.3
0.0
-0.3
-0.6
-0.9
-1.2
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Tracking Error
3.0
2.4
1.8
1.2
0.6
0.0
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Up Capture
108.0
104.0
100.0
96.0
92.0
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Down Capture
150.0
100.0
50.0
0.0
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Information Ratio
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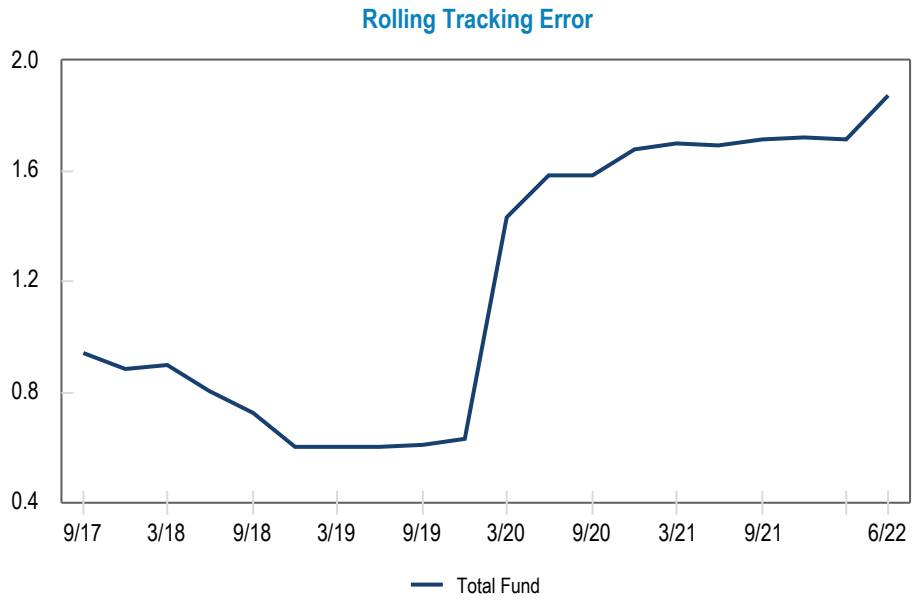
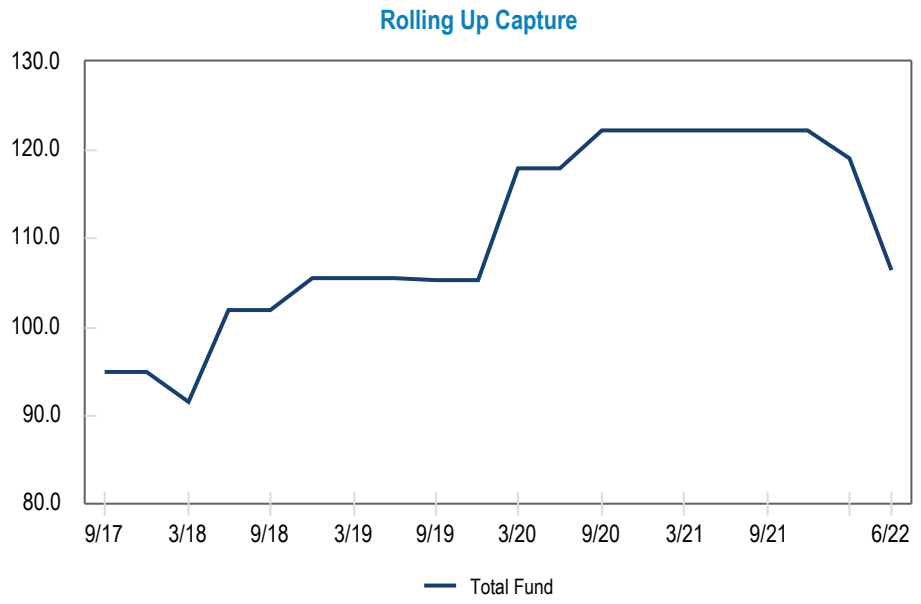
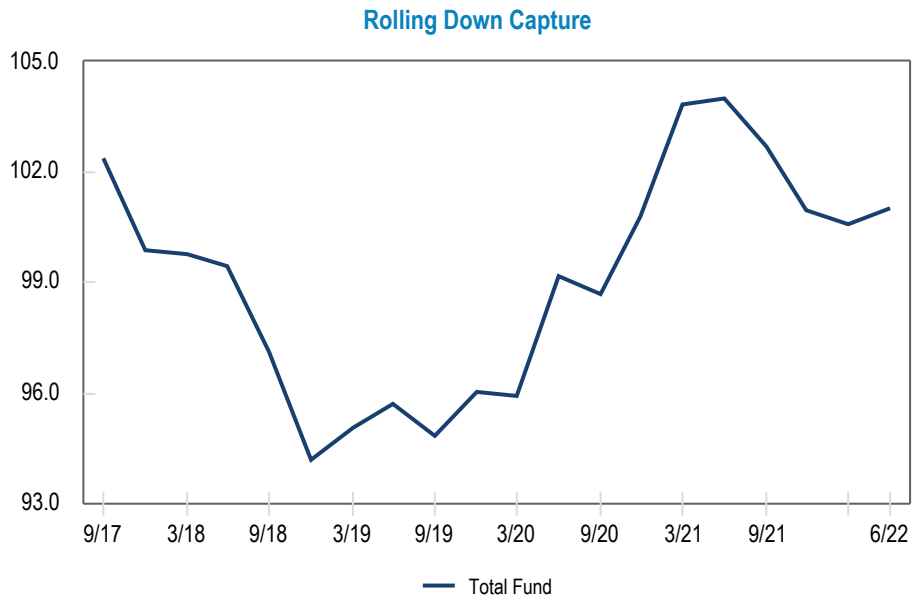
0.0
-0.4
-0.8
-1.2
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Tracking Error
2.0
1.6
1.2
0.8
0.4
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Up Capture
130.0
120.0
110.0
100.0
90.0
80.0
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund


Rolling Down Capture
105.0
102.0
99.0
96.0
93.0
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Total Fund

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Fund	**1,798,087,640**	**100.0**	**-7.6**	**-9.9**	**-5.9**	**-5.9**	**5.4**	**5.9**	**6.8**	**13.4**	**8.9**	**15.4**	**-2.9**	**13.9**
Policy Index			*-9.2*	*-11.4*	*-6.2*	*-6.2*	*5.6*	*6.2*	*6.8*	*14.2*	*10.6*	*15.9*	*-2.3*	*14.0*
All DB Public Plans >1B Rank			*40*	*33*	*35*	*35*	*70*	*68*	*77*	*72*	*82*	*80*	*38*	*76*
Total Domestic Equity	**490,003,550**	**27.3**	**-16.4**	**-20.6**	**-13.9**	**-13.9**	**9.0**	**10.2**	**12.4**	**26.1**	**18.2**	**29.8**	**-5.4**	**21.9**
Russell 3000 Index			*-16.7*	*-21.1*	*-13.9*	*-13.9*	*9.8*	*10.6*	*12.6*	*25.7*	*20.9*	*31.0*	*-5.2*	*21.1*
SSGA S&P 500 Flagship Fund	187,342,912	10.4	-16.1	-20.0	-10.7	-10.7	10.6	11.3	13.0	28.6	18.3	31.5	-4.4	21.8
S&P 500 Index			*-16.1*	*-20.0*	*-10.6*	*-10.6*	*10.6*	*11.3*	*13.0*	*28.7*	*18.4*	*31.5*	*-4.4*	*21.8*
eV US Large Cap Core Equity Rank			*77*	*62*	*48*	*48*	*22*	*28*	*16*	*30*	*37*	*29*	*39*	*43*
PGIM QS US Core Equity	62,670,683	3.5	-15.3	-17.5	-9.0	-9.0	9.7	10.3	12.6	29.8	12.0	28.6	-6.8	22.1
S&P 500 Index			*-16.1*	*-20.0*	*-10.6*	*-10.6*	*10.6*	*11.3*	*13.0*	*28.7*	*18.4*	*31.5*	*-4.4*	*21.8*
eV US Large Cap Core Equity Rank			*58*	*35*	*34*	*34*	*41*	*48*	*25*	*20*	*70*	*57*	*70*	*40*
William Blair Large Cap Growth	61,152,063	3.4	-	-	-	-	-	-	-	-	-	-	-	-
Russell 1000 Growth Index			*-20.9*	-	-	-	-	-	-	-	-	-	-	-
eV US Large Cap Core Equity Rank			-	-	-	-	-	-	-	-	-	-	-	-
Boston Partners Large Cap Value	67,182,384	3.7	-11.1	-10.5	-3.8	-3.8	9.5	8.6	11.3	30.4	2.4	23.8	-9.0	19.6
Russell 1000 Value Index			*-12.2*	*-12.9*	*-6.8*	*-6.8*	*6.9*	*7.2*	*10.5*	*25.2*	*2.8*	*26.5*	*-8.3*	*13.7*
eV US Large Cap Value Equity Rank			*39*	*35*	*32*	*32*	*31*	*39*	*30*	*17*	*60*	*75*	*52*	*25*
SSGA US Extended Market Index	58,389,670	3.2	-20.6	-28.0	-29.8	-29.8	-	-	-	-	-	-	-	-
Dow Jones U.S. Completion Total Stock Market Indx			*-20.7*	*-28.1*	*-30.0*	*-30.0*	-	-	-	-	-	-	-	-
eV Extended US Equity Rank			*96*	*100*	*100*	*100*	-	-	-	-	-	-	-	-
William Blair SMID Cap Growth	23,729,769	1.3	-21.0	-28.3	-28.1	-28.1	2.8	8.1	12.4	8.7	32.6	31.1	-1.7	29.3
Russell 2500 Growth Index			*-19.6*	*-29.4*	*-31.8*	*-31.8*	*3.7*	*7.5*	*10.9*	*5.0*	*40.5*	*32.7*	*-7.5*	*24.5*
eV US Small-Mid Cap Growth Equity Rank			*59*	*35*	*48*	*48*	*76*	*66*	*23*	*73*	*64*	*49*	*37*	*20*
Leeward Small Cap Value	29,536,069	1.6	-10.7	-13.7	-7.4	-7.4	8.7	5.9	9.8	31.6	3.8	26.3	-15.5	7.7
Russell 2000 Value Index			*-15.3*	*-17.3*	*-16.3*	*-16.3*	*6.2*	*4.9*	*9.1*	*28.3*	*4.6*	*22.4*	*-12.9*	*7.8*
eV US Small Cap Value Equity Rank			*16*	*24*	*15*	*15*	*25*	*44*	*47*	*37*	*57*	*25*	*57*	*72*

Shenkman High Yield liquidated 3/11/2019. PGIM EMD funded 8/26/19. Gresham Commodity and Wellington Commodity liquidated 9/27/19. American Realty funded 12/20/2019. Titan and Aetos liquidated 1Q 2020. SSGA Russell Small Cap replaced with SSGA US Extended Market Index on 6/10/21. Invesco Commercial Mortgage funded 9/1/21. Franklin Templeton Global liquidated 12/28/2021. SSGA US REIT Index Funded 12/10/2021. QMA Large Cap Core changed name to PGIM QS US Core Equity. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total International Equity	**257,425,018**	**14.3**	**-12.8**	**-17.8**	**-18.5**	**-18.5**	**2.7**	**3.5**	**5.5**	**9.6**	**13.4**	**22.7**	**-14.5**	**26.5**
MSCI AC World ex USA Index			*-13.5*	*-18.2*	*-19.0*	*-19.0*	*1.8*	*3.0*	*5.3*	*8.3*	*11.1*	*22.1*	*-13.8*	*27.8*
SSGA MSCI ACWI Ex US Index Fund	89,330,536	5.0	-13.5	-18.2	-19.2	-19.2	1.6	2.7	5.1	7.9	10.9	21.8	-14.0	27.5
MSCI AC World ex USA (Net)			*-13.7*	*-18.4*	*-19.4*	*-19.4*	*1.4*	*2.5*	*4.8*	*7.8*	*10.7*	*21.5*	*-14.2*	*27.2*
eV All EAFE Equity Rank			*42*	*35*	*53*	*53*	*50*	*38*	*78*	*77*	*37*	*56*	*36*	*45*
PIMCO RAE Fundamental Global Ex US Fund	89,217,836	5.0	-11.3	-13.7	-15.5	-15.5	1.5	1.8	-	12.3	1.7	16.1	-15.1	26.0
MSCI AC World ex USA Value (Net)			*-11.9*	*-11.8*	*-12.8*	*-12.8*	*0.6*	*1.2*	*-*	*10.5*	*-0.8*	*15.7*	*-14.0*	*22.7*
eV EAFE Value Equity Rank			*47*	*44*	*58*	*58*	*53*	*39*	*-*	*41*	*62*	*87*	*37*	*30*
SGA International Growth	78,876,645	4.4	-13.7	-21.6	-21.0	-21.0	4.1	-	-	9.1	26.0	30.5	-	-
MSCI AC World ex USA Growth (Net)			*-15.7*	*-24.8*	*-25.8*	*-25.8*	*1.6*	*-*	*-*	*5.1*	*22.2*	*27.3*	*-*	*-*
eV ACWI ex-US Growth Equity Rank			*18*	*17*	*18*	*18*	*30*	*-*	*-*	*47*	*51*	*40*	*-*	*-*
Total Global Equity	**55,165,885**	**3.1**	**-11.3**	**-20.4**	**-12.2**	**-12.2**	**8.4**	**7.0**	**-**	**28.5**	**14.3**	**24.2**	**-15.9**	**32.6**
MSCI AC World Index			*-15.5*	*-20.0*	*-15.4*	*-15.4*	*6.7*	*7.5*	*-*	*19.0*	*16.8*	*27.3*	*-8.9*	*24.6*
Skellig Water Fund (aka KBI)	55,165,885	3.1	-11.3	-20.4	-12.2	-12.2	8.4	7.0	-	28.5	14.3	24.2	-15.9	32.6
MSCI AC World Index (Net)			*-15.7*	*-20.2*	*-15.8*	*-15.8*	*6.2*	*7.0*	*-*	*18.5*	*16.3*	*26.6*	*-9.4*	*24.0*
eV Global All Cap Equity Rank			*15*	*45*	*24*	*24*	*22*	*45*	*-*	*2*	*58*	*64*	*89*	*15*
Total Fixed Income	**357,688,214**	**19.9**	**-6.0**	**-11.9**	**-12.6**	**-12.6**	**-2.6**	**-0.2**	**1.2**	**-2.2**	**4.7**	**8.1**	**0.1**	**3.9**
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*
Total Domestic Fixed Income	**309,919,643**	**17.2**	**-5.5**	**-11.1**	**-11.0**	**-11.0**	**-0.8**	**1.0**	**1.8**	**-0.7**	**7.9**	**9.0**	**-0.2**	**4.1**
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*
BlackRock Core Plus Fixed Income	105,065,625	5.8	-5.1	-11.0	-10.9	-10.9	-0.8	1.0	1.7	-1.4	8.4	8.7	0.1	3.6
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*
eV US Core Plus Fixed Inc Rank			*24*	*38*	*42*	*42*	*74*	*80*	*94*	*89*	*54*	*81*	*24*	*89*
Doubleline Core Plus	103,022,224	5.7	-5.4	-10.2	-10.1	-10.1	-1.3	0.6	-	-0.2	5.2	8.3	-0.3	3.9
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*-*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*
eV US Core Plus Fixed Inc Rank			*35*	*21*	*16*	*16*	*94*	*95*	*-*	*40*	*97*	*88*	*35*	*83*
MacKay Shields Core Plus	101,831,795	5.7	-6.0	-12.1	-12.0	-12.0	-0.3	1.2	-	-0.4	9.9	9.6	-1.0	4.5
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*-*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*
eV US Core Plus Fixed Inc Rank			*61*	*79*	*77*	*77*	*35*	*55*	*-*	*47*	*21*	*54*	*75*	*52*

Shenkman High Yield liquidated 3/11/2019. PGIM EMD funded 8/26/19. Gresham Commodity and Wellington Commodity liquidated 9/27/19. American Realty funded 12/20/2019. Titan and Aetos liquidated 1Q 2020. SSGA Russell Small Cap replaced with SSGA US Extended Market Index on 6/10/21. Invesco Commercial Mortgage funded 9/1/21. Franklin Templeton Global liquidated 12/28/2021. SSGA US REIT Index Funded 12/10/2021. QMA Large Cap Core changed name to PGIM QS US Core Equity. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Emerging Markets Fixed Income	**47,768,571**	**2.7**	**-9.2**	**-16.7**	**-19.4**	**-19.4**	**-4.6**	**-**	**-**	**-5.3**	**4.6**	**-**	**-**	**-**
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-10.0*	*-17.5*	*-20.2*	*-20.2*	*-5.5*	-	-	*-5.3*	*4.0*	-	-	-
PGIM Emerging Markets Debt	47,768,571	2.7	-9.2	-16.7	-19.4	-19.4	-	-	-	-5.3	4.6	-	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-10.0*	*-17.5*	*-20.2*	*-20.2*	-	-	-	*-5.3*	*4.0*	-	-	-
eV Emg Mkts Fixed Inc - Blended Currency Rank			*34*	*49*	*48*	*48*	-	-	-	*77*	*70*	-	-	-
Total Real Estate	**380,569,510**	**21.2**	**4.1**	**10.0**	**20.7**	**20.7**	**9.1**	**8.3**	**9.3**	**12.8**	**1.8**	**5.2**	**8.8**	**4.3**
NCREIF-ODCE			*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*22.2*	*1.2*	*5.3*	*8.3*	*7.6*
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
RREEF America II	210,655,847	11.7	6.2	17.5	29.0	29.0	11.5	9.7	10.8	12.8	1.8	5.3	8.6	4.4
NCREIF-ODCE			*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*22.2*	*1.2*	*5.3*	*8.3*	*7.6*
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
American Realty Strategic Value Fund	87,220,315	4.9	6.6	11.3	20.2	20.2	-	-	-	11.3	1.1	-	-	-
NCREIF-ODCE + 200 BP			*5.3*	*13.6*	*32.1*	*32.1*	-	-	-	*24.6*	*3.2*	-	-	-
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	-	-	-	*13.6*	*0.5*	-	-	-
Invesco Commercial Mortgage Income Fund	67,135,834	3.7	1.9	3.1	-	-	-	-	-	-	-	-	-	-
NCREIF-ODCE			*4.8*	*12.5*	-	-	-	-	-	-	-	-	-	-
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	-	-	-	-	-	-	-	-	-	-
SSGA US REIT Index Non-Lending Fund	15,557,514	0.9	-18.1	-21.1	-	-	-	-	-	-	-	-	-	-
Dow Jones U.S. REIT Index			*-14.0*	*-18.9*	-	-	-	-	-	-	-	-	-	-
eV US REIT Rank			*77*	*75*	-	-	-	-	-	-	-	-	-	-

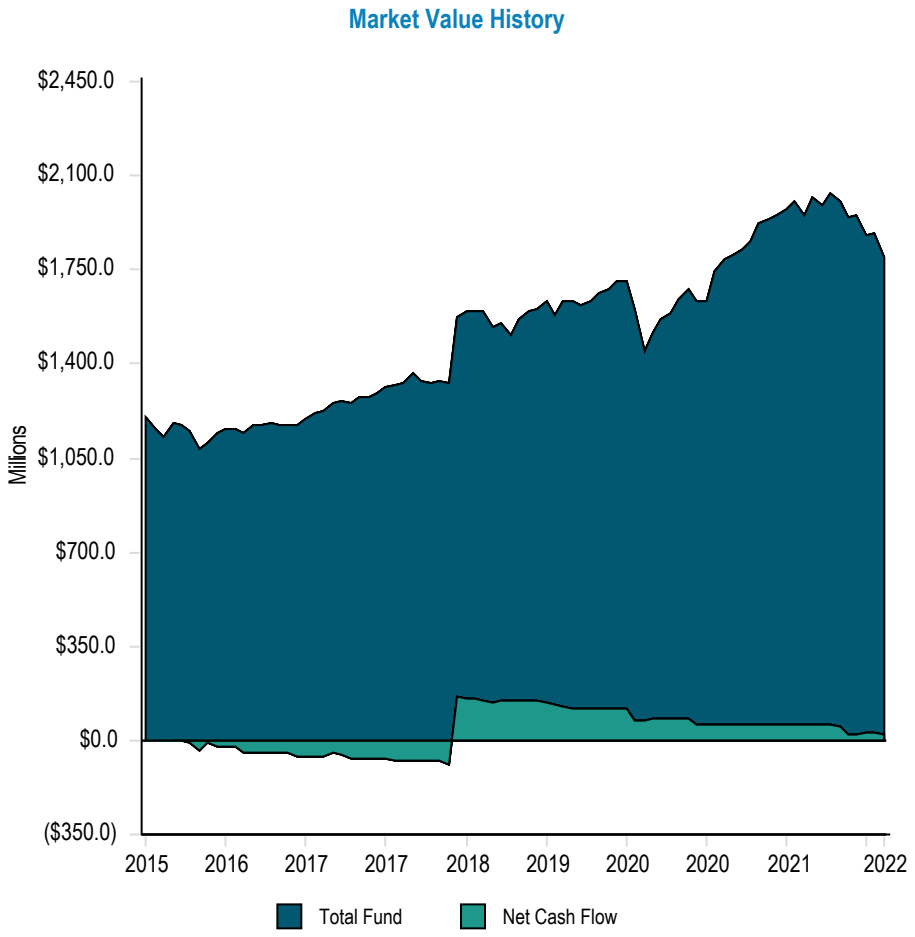
Shenkman High Yield liquidated 3/11/2019. PGIM EMD funded 8/26/19. Gresham Commodity and Wellington Commodity liquidated 9/27/19. American Realty funded 12/20/2019. Titan and Aetos liquidated 1Q 2020. SSGA Russell Small Cap replaced with SSGA US Extended Market Index on 6/10/21. Invesco Commercial Mortgage funded 9/1/21. Franklin Templeton Global liquidated 12/28/2021. SSGA US REIT Index Funded 12/10/2021. QMA Large Cap Core changed name to PGIM QS US Core Equity. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

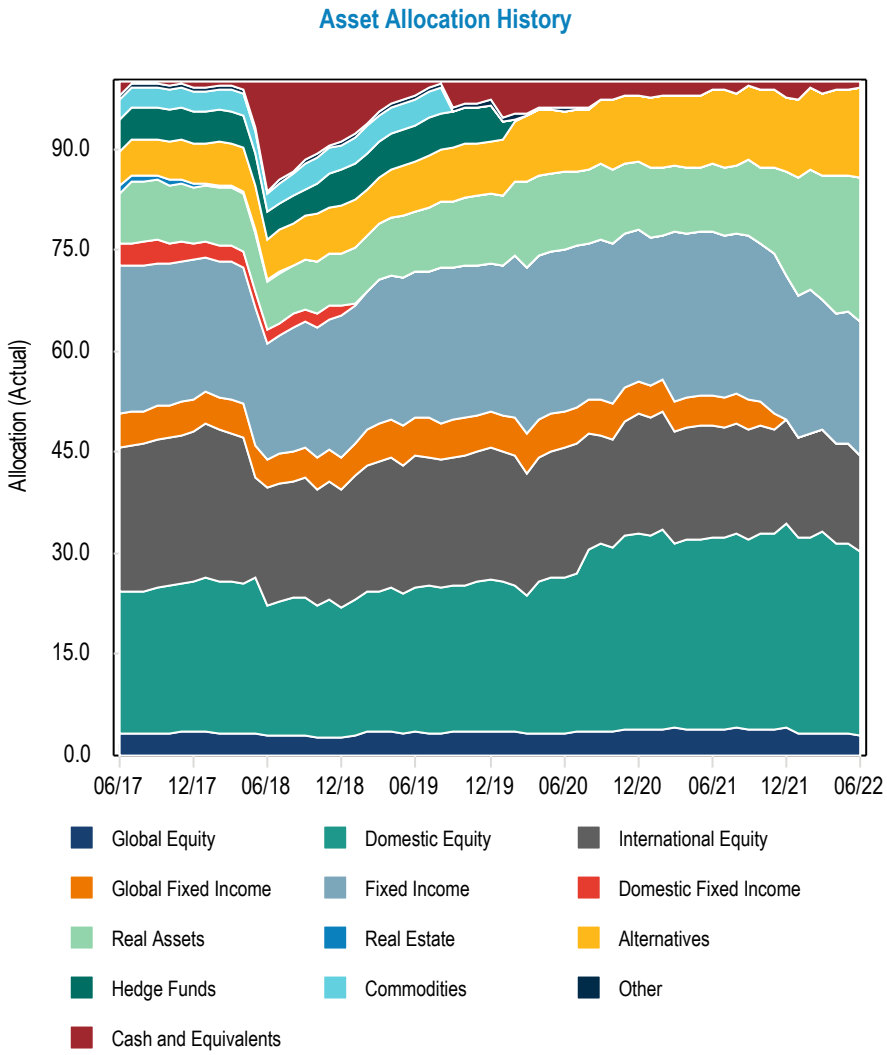
	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
SSGA S&P 500 Flagship Fund	11.28	19.74	-0.03	1.00	0.02	1.00	0.59	-1.44	99.91	100.07
PGIM QS US Core Equity	10.25	20.52	-1.18	1.03	2.71	0.98	0.53	-0.29	98.69	104.39
Boston Partners Large Cap Value	8.58	21.42	0.98	1.09	3.50	0.98	0.45	0.50	110.28	102.80
William Blair SMID Cap Growth	8.15	24.22	1.34	0.86	5.92	0.97	0.40	-0.05	89.97	84.80
Leeward Small Cap Value	5.89	26.29	1.13	0.92	4.20	0.98	0.32	0.08	95.53	90.67
SSGA MSCI ACWI Ex US Index Fund	2.72	18.85	0.21	1.00	0.11	1.00	0.18	1.91	100.64	99.21
PIMCO RAE Fundamental Global Ex US Fund	1.76	21.21	0.61	1.07	2.66	0.99	0.14	0.32	107.08	102.16
Skellig Water Fund (aka KBI)	6.98	21.18	-0.16	1.06	5.10	0.94	0.38	0.07	106.91	109.13
BlackRock Core Plus Fixed Income	0.95	5.15	0.05	1.04	0.97	0.97	0.00	0.09	106.07	105.12
Doubleline Core Plus	0.62	5.02	-0.08	0.83	3.11	0.64	-0.07	-0.08	84.66	87.84
MacKay Shields Core Plus	1.20	5.70	0.29	1.07	2.29	0.84	0.05	0.16	116.72	110.28
RREEF America II	9.70	4.98	0.48	0.88	2.87	0.68	1.63	-0.27	88.01	-60.88

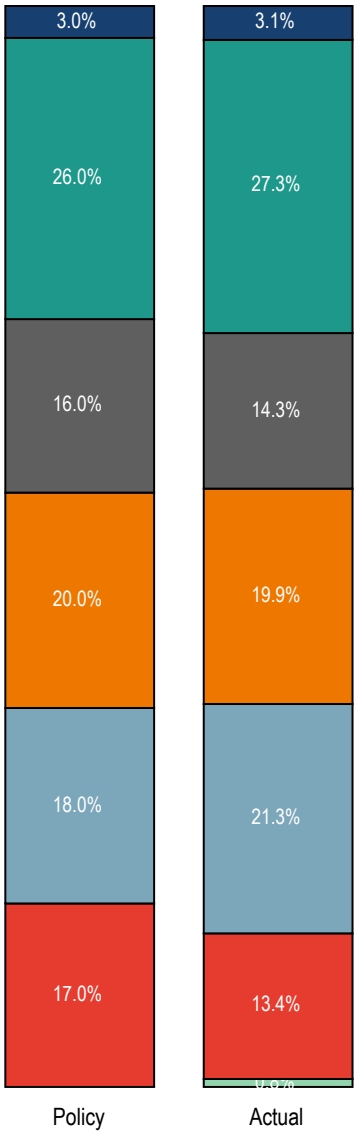
Risk analysis excludes managers with less than 5 years history.

Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 6/30/2022[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[5]	IRR Date
			IRR Analysis as of IRR date									
Private Equity												
2004	Pantheon USA Fund VI	$259,944	$15,000,000	$14,175,000	95%	$825,000	$21,590,924	$271,184	*152.3%*	*154.2%*	*6.8%*	03/31/22
2011	Stepstone Secondary Opportunities Fund II	$5,191,927	$27,500,000	$27,500,000	100%	$0	$32,807,052	$5,191,927	*119.3%*	*138.2%*	*11.0%*	03/31/22
2016	Ocean Avenue Fund III	$19,781,511	$20,000,000	$18,200,000	91%	$1,800,000	$18,400,000	$19,781,511	*101.1%*	*209.8%*	*24.3%*	03/31/22
2016	Pathway Private Equity Fund Investors 8	$33,282,786	$20,000,000	$14,567,357	73%	$5,432,643	$8,207,220	$33,462,005	*56.3%*	*284.8%*	*26.0%*	03/31/22
2017	Pathway Private Equity Fund Investors 9	$27,699,444	$20,000,000	$13,241,850	66%	$6,758,150	$1,904,454	$26,179,338	*14.4%*	*223.6%*	*30.1%*	12/31/21
2019	Ocean Avenue Fund IV	$25,814,193	$26,000,000	$20,051,964	77%	$5,948,036	$3,380,000	$25,814,193	*16.9%*	*145.6%*	*41.1%*	12/31/21
2020	Pathway Private Equity Fund Investors 10[4]	$16,605,025	$10,000,000	$14,005,466	140%	-$4,005,466	$630,145	$0	*4.5%*	*123.1%*	*N/A*	N/A
Private Credit												
2016	Sixth Street DCP	$85,054,769	$140,000,000	$78,274,949	56%	$61,725,051	$16,635,075	$83,610,238	*21.3%*	*129.9%*	*11.9%*	12/31/21
Opportunistic												
2010	KKR Mezzanine Partners	$2,413,123	$15,000,000	$13,535,064	90%	$1,464,936	$18,894,518	$3,283,806	*139.6%*	*157.4%*	*6.9%*	03/31/22
2011	PIMCO Bravo	$10,246	$15,000,000	$15,000,000	100%	$0	$27,216,525	$10,246	*181.4%*	*181.5%*	*22.1%*	03/31/22
2020	Sixth Street TAO Contingent	$26,227,845	$50,000,000	$21,951,188	44%	$28,048,812	$3,984,317	$24,221,558	*18.2%*	*137.6%*	*10.9%*	12/31/21
	Total Private Markets	**$242,855,298**	$373,500,000	$265,502,838	71%	$107,997,162	$177,529,058	$223,950,504	*66.9%*	*158.3%*		
	% of Portfolio (Market Value)	***22.4%***										

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions
[4]IRR currently unavailable for these funds.
[5]Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.
[6]BlackRock: Total capital called is $15,519,967 which includes recycled distributions.

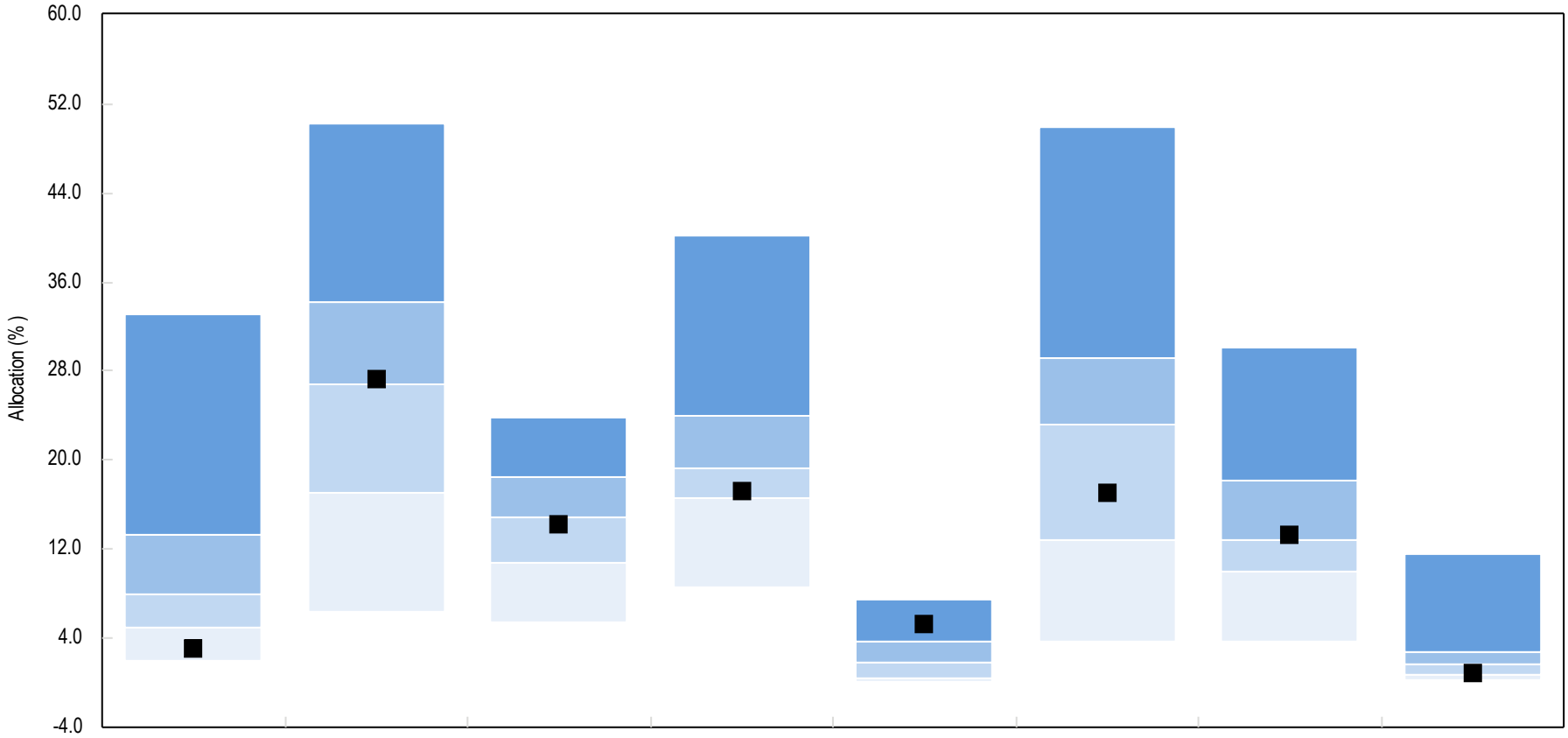

Market Value History
$2,450.0
$2,100.0
$1,750.0
$1,400.0
$1,050.0
$700.0
$350.0
$0.0
($350.0)
Millions
2015
2016
2017
2017
2018
2019
2020
2020
2021
2022
Total Fund
Net Cash Flow


Asset Allocation History
90.0
75.0
60.0
45.0
30.0
15.0
0.0
Allocation (Actual)
06/17
12/17
06/18
12/18
06/19
12/19
06/20
12/20
06/21
12/21
06/22
Global Equity
Domestic Equity
International Equity
Global Fixed Income
Fixed Income
Domestic Fixed Income
Real Assets
Real Estate
Alternatives
Hedge Funds
Commodities
Other
Cash and Equivalents



	Current Balance ($)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation ($)	Policy Range (%)	Within IPS Range?
Global Equity	55,165,885	3.1	3.0	1,223,256	0.0 - 5.0	Yes
Domestic Equity	490,003,550	27.3	26.0	22,500,764	15.0 - 35.0	Yes
International Equity	257,425,018	14.3	16.0	-30,269,005	5.0 - 25.0	Yes
Fixed Income	357,688,214	19.9	20.0	-1,929,314	10.0 - 35.0	Yes
Real Assets	382,992,878	21.3	18.0	59,337,103	10.0 - 30.0	Yes
Alternatives	240,352,165	13.4	17.0	-65,322,733	10.0 - 30.0	Yes
Cash and Equivalents	14,459,929	0.8	0.0	14,459,929	0.0 - 10.0	Yes
Total	**1,798,087,640**	**100.0**	**100.0**			

Total Plan Allocation vs. All DB Public Plans >1B
As of June 30, 2022



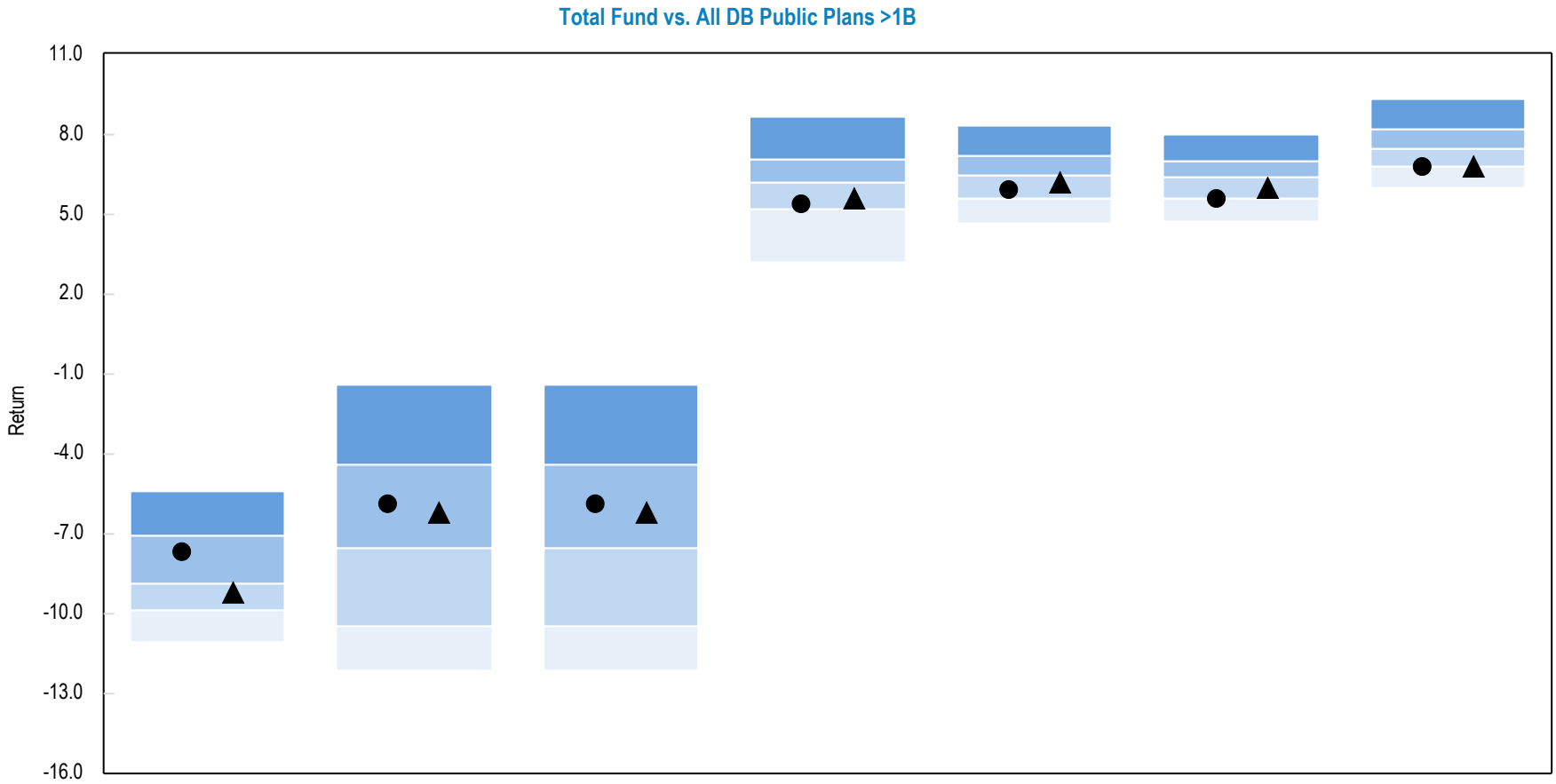
	Global Equity	US Equity	Global ex-US Equity	US Fixed	Global ex-US Fixed	Alternatives	Private Equity	Cash & Equivalents
■ Total Fund	3.1 (92)	27.3 (47)	14.3 (53)	17.2 (69)	5.3 (10)	17.1 (63)	13.3 (46)	0.8 (75)
5th Percentile	33.1	50.3	23.9	40.2	7.4	50.0	30.1	11.6
1st Quartile	13.3	34.3	18.5	24.0	3.7	29.2	18.1	2.8
Median	7.9	26.8	14.8	19.3	1.8	23.2	12.8	1.7
3rd Quartile	5.0	17.1	10.9	16.7	0.3	12.8	10.1	0.8
95th Percentile	1.9	6.4	5.4	8.6	0.0	3.7	3.7	0.2
Population	20	126	126	123	60	100	41	94

Account	Fee Schedule	Market Value As of June 30, 2022	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
American Realty Strategic Value Fund	1.25 % of First $10 M 1.20 % of Next $15 M 1.10 % of Next $25 M 1.00 % Thereafter	87,220,315	4.85	952,203	1.09
BlackRock Alternative Advisors	Minimum Fee: $120,000	434,721	0.02	120,000	27.60
BlackRock Core Plus Fixed Income	0.25 % of First $100 M 0.25 % of Next $100 M 0.00 % Thereafter	105,065,625	5.84	262,664	0.25
Boston Partners Large Cap Value	0.45 % of First $50 M 0.35 % of Next $50 M 0.30 % Thereafter	67,182,384	3.74	285,138	0.42
Doubleline Core Plus	0.28 % of First $100 M 0.25 % Thereafter	103,022,224	5.73	287,556	0.28
Invesco Commercial Mortgage Income Fund	1.00 % of First $50 M 0.90 % Thereafter	67,135,834	3.73	654,223	0.97
KKR Mezzanine Partners I	0.38 % of Assets	2,413,123	0.13	9,049	0.38
Leeward Small Cap Value	0.65 % of Assets	29,536,069	1.64	191,984	0.65
MacKay Shields Core Plus	0.30 % of Assets	101,831,795	5.66	305,495	0.30
Mellon Capital Cash Account		14,459,929	0.80	-	-
Ocean Avenue Fund III	0.85 % of Assets	19,781,511	1.10	168,143	0.85
Ocean Avenue Fund IV	1.25 % of Assets	25,814,193	1.44	322,677	1.25
Pantheon Ventures	0.47 % of Assets	259,944	0.01	1,232	0.47
Pathway Private Equity Fund Investors 10	0.58 % of Assets	16,605,025	0.92	96,309	0.58
Pathway Private Equity Fund Investors 8	0.61 % of Assets	33,282,786	1.85	203,025	0.61
Pathway Private Equity Fund Investors 9	0.58 % of Assets	27,699,444	1.54	160,657	0.58
PGIM Emerging Markets Debt	0.44 % of Assets	47,768,571	2.66	210,182	0.44
PGIM QS US Core Equity		62,670,683	3.49	-	0.00
PIMCO Bravo	6.40 % of Assets	10,246	0.00	656	6.40
PIMCO RAE Fundamental Global Ex US Fund	0.78 % of First $25 M 0.43 % of Next $75 M 0.38 % Thereafter	89,217,836	4.96	471,137	0.53
RREEF America II	0.95 % of Assets	210,655,847	11.72	2,001,231	0.95
SGA International Growth	0.45 % of Assets	78,876,645	4.39	354,945	0.45
Sixth Street DCP (frmrly TSSP DCP)	1.11 % of Assets	85,054,769	4.73	944,108	1.11
Sixth Street TAO Contingent (frmrly TSSP TAO Contingent)	1.35 % of Assets	26,227,845	1.46	354,076	1.35
Skellig Water Fund (aka KBI)	0.77 % of Assets	55,165,885	3.07	422,019	0.76

**Sixth Street Partners fee schedule is as follows: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term investor designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions. TAO Contingent fee schedule is 65bps on unfunded commitments and 1.35% on remaining capital contributions. Fees shown for Pathway are estimated effective average fees over 15-year fund lifespan.*

Account	Fee Schedule	Market Value As of June 30, 2022	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
SSGA MSCI ACWI Ex US Index Fund	0.08 % of First $25 M 0.07 % of Next $25 M 0.06 % Thereafter	89,330,536	4.97	61,098	0.07
SSGA S&P 500 Flagship Fund	0.03 % of Assets	187,342,912	10.42	56,203	0.03
SSGA US Extended Market Index	0.03 % of First $50 M 0.03 % of Next $50 M 0.02 % Thereafter	58,389,670	3.25	17,181	0.03
SSGA US REIT Index Non-Lending Fund	1.04 % of Assets	15,557,514	0.87	161,798	1.04
Stepstone Secondary Opportunities Fund II	Minimum Fee: $343,750	5,191,927	0.29	343,750	6.62
William Blair Large Cap Growth	0.50 % of First $50 M 0.35 % Thereafter	61,152,063	3.40	289,032	0.47
William Blair SMID Cap Growth	0.95 % of First $10 M 0.80 % of Next $20 M 0.75 % of Next $20 M 0.70 % of Next $50 M 0.65 % of Next $100 M 0.60 % Thereafter	23,729,769	1.32	204,838	0.86
Investment Management Fee		**1,798,087,640**	**100.00**	**9,912,609**	**0.55**

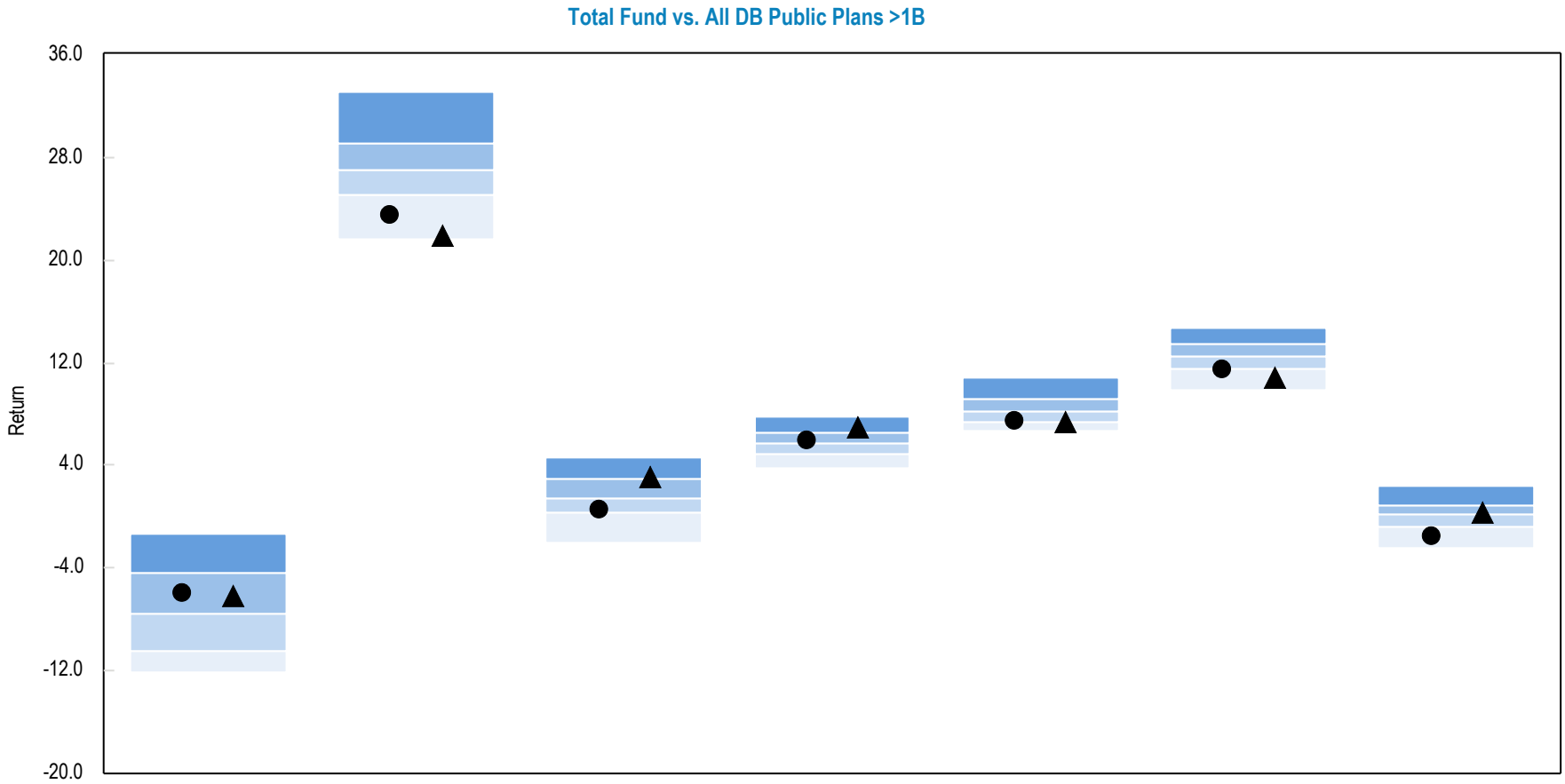
**Sixth Street Partners fee schedule is as follows: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term investor designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions. TAO Contingent fee schedule is 65bps on unfunded commitments and 1.35% on remaining capital contributions. Fees shown for Pathway are estimated effective average fees over 15-year fund lifespan.*



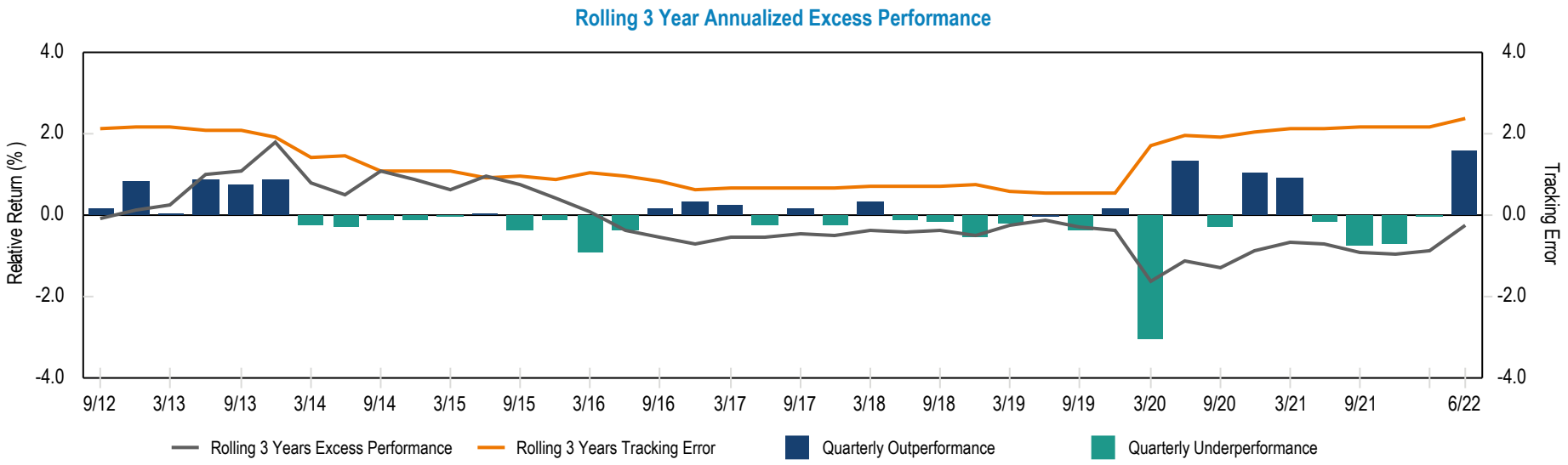
	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	-7.64 (40)	-5.89 (35)	-5.89 (35)	5.37 (70)	5.91 (68)	5.59 (76)	6.78 (77)
▲ Policy Index	-9.22 (61)	-6.19 (37)	-6.19 (37)	5.61 (66)	6.23 (56)	6.02 (57)	6.79 (76)
5th Percentile	-5.37	-1.38	-1.38	8.67	8.36	7.98	9.32
1st Quartile	-7.08	-4.43	-4.43	7.04	7.23	7.01	8.23
Median	-8.89	-7.56	-7.56	6.22	6.47	6.41	7.47
3rd Quartile	-9.89	-10.47	-10.47	5.18	5.63	5.61	6.82
95th Percentile	-11.07	-12.16	-12.16	3.19	4.66	4.73	6.00
Population	65	64	64	63	63	61	60

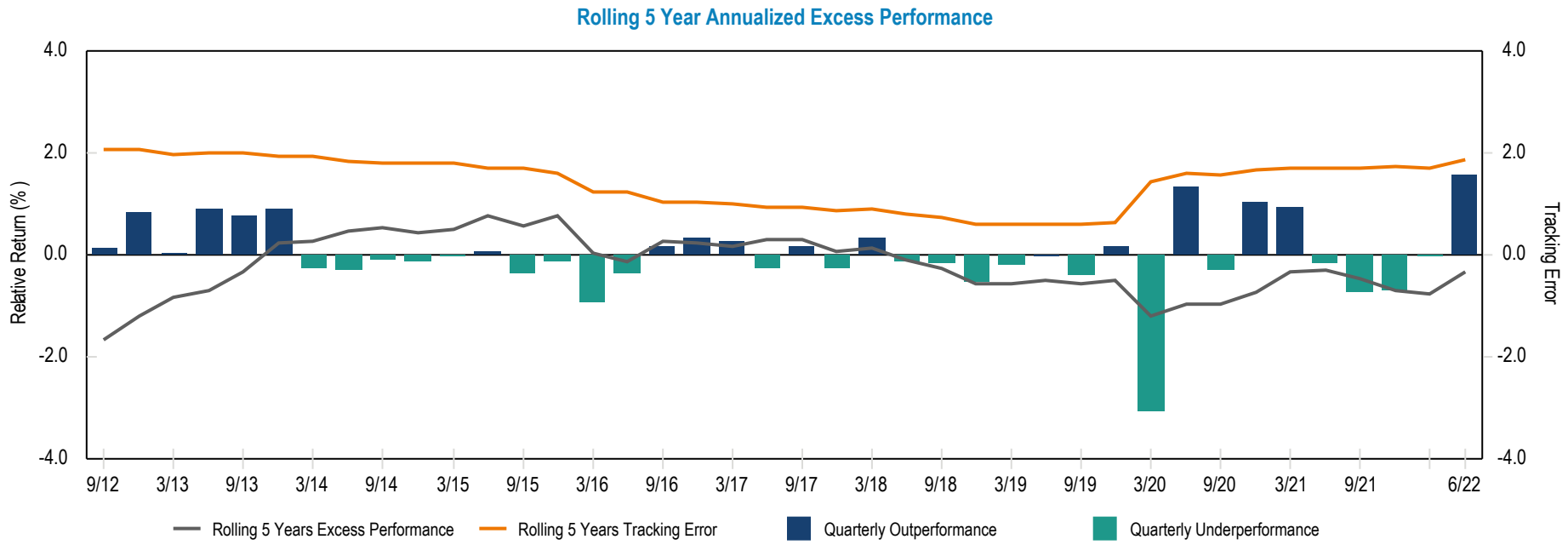
Peer Universe Comparison: Consecutive Periods (Net of Fees)

Period Ending: June 30, 2022



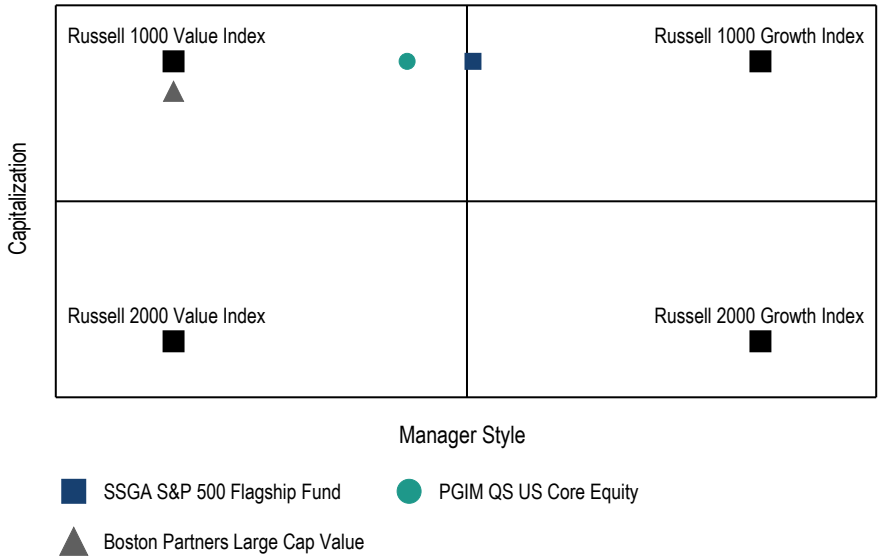
	Fiscal YTD	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016
● Total Fund	-5.89 (35)	23.62 (87)	0.56 (69)	5.95 (44)	7.52 (72)	11.46 (76)	-1.46 (81)
▲ Policy Index	-6.19 (37)	21.86 (95)	3.04 (22)	6.92 (16)	7.42 (75)	10.90 (85)	0.36 (45)
5th Percentile	-1.38	33.13	4.61	7.75	10.79	14.74	2.44
1st Quartile	-4.43	29.11	2.89	6.54	9.18	13.53	0.92
Median	-7.56	26.97	1.41	5.73	8.22	12.56	0.20
3rd Quartile	-10.47	25.08	0.29	4.85	7.41	11.49	-0.84
95th Percentile	-12.16	21.66	-2.01	3.75	6.73	9.82	-2.50
Population	64	151	143	114	90	90	87


Rolling 3 Year Annualized Excess Performance
4.0
2.0
0.0
-2.0
-4.0
Relative Return (%)
Tracking Error
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Rolling 3 Years Excess Performance
Rolling 3 Years Tracking Error
Quarterly Outperformance
Quarterly Underperformance

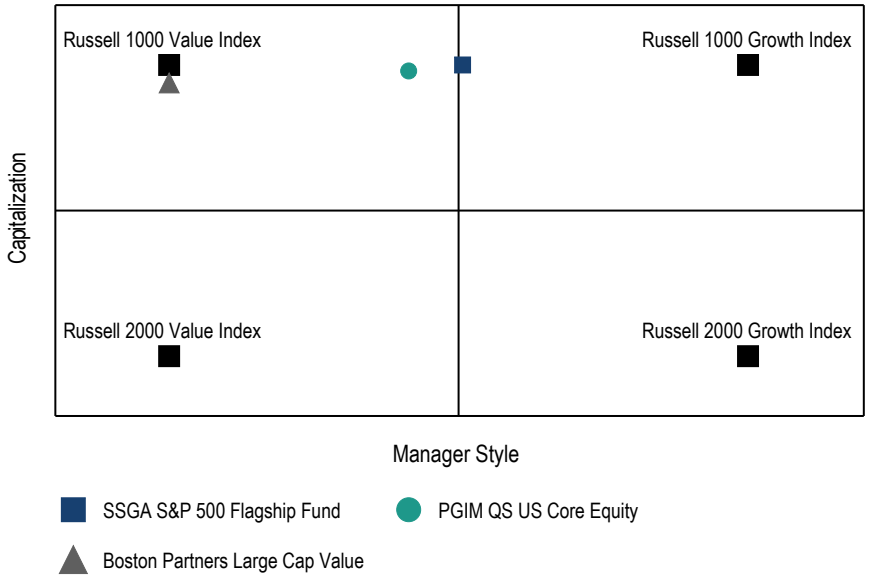

Rolling 5 Year Annualized Excess Performance
4.0
2.0
0.0
-2.0
-4.0
Relative Return (%)
Tracking Error
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Rolling 5 Years Excess Performance
Rolling 5 Years Tracking Error
Quarterly Outperformance
Quarterly Underperformance

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Domestic Equity	**490,003,550**	**100.0**	**-16.4**	**-20.6**	**-13.9**	**-13.9**	**9.0**	**10.2**	**12.4**	**26.1**	**18.2**	**29.8**	**-5.4**	**21.9**
Russell 3000 Index			*-16.7*	*-21.1*	*-13.9*	*-13.9*	*9.8*	*10.6*	*12.6*	*25.7*	*20.9*	*31.0*	*-5.2*	*21.1*
SSGA S&P 500 Flagship Fund	187,342,912	38.2	-16.1	-20.0	-10.7	-10.7	10.6	11.3	13.0	28.6	18.3	31.5	-4.4	21.8
S&P 500 Index			*-16.1*	*-20.0*	*-10.6*	*-10.6*	*10.6*	*11.3*	*13.0*	*28.7*	*18.4*	*31.5*	*-4.4*	*21.8*
eV US Large Cap Core Equity Rank			*77*	*62*	*48*	*48*	*22*	*28*	*16*	*30*	*37*	*29*	*39*	*43*
PGIM QS US Core Equity	62,670,683	12.8	-15.3	-17.5	-9.0	-9.0	9.7	10.3	12.6	29.8	12.0	28.6	-6.8	22.1
S&P 500 Index			*-16.1*	*-20.0*	*-10.6*	*-10.6*	*10.6*	*11.3*	*13.0*	*28.7*	*18.4*	*31.5*	*-4.4*	*21.8*
eV US Large Cap Core Equity Rank			*58*	*35*	*34*	*34*	*41*	*48*	*25*	*20*	*70*	*57*	*70*	*40*
William Blair Large Cap Growth	61,152,063	12.5	-	-	-	-	-	-	-	-	-	-	-	-
Russell 1000 Growth Index			*-20.9*	*-28.1*	*-18.8*	*-18.8*	*12.6*	*14.3*	*14.8*	*27.6*	*38.5*	*36.4*	*-1.5*	*30.2*
eV US Large Cap Value Equity Rank			*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Boston Partners Large Cap Value	67,182,384	13.7	-11.1	-10.5	-3.8	-3.8	9.5	8.6	11.3	30.4	2.4	23.8	-9.0	19.6
Russell 1000 Value Index			*-12.2*	*-12.9*	*-6.8*	*-6.8*	*6.9*	*7.2*	*10.5*	*25.2*	*2.8*	*26.5*	*-8.3*	*13.7*
eV US Large Cap Value Equity Rank			*39*	*35*	*32*	*32*	*31*	*39*	*30*	*17*	*60*	*75*	*52*	*25*

U.S. Effective Style Map
3 Years



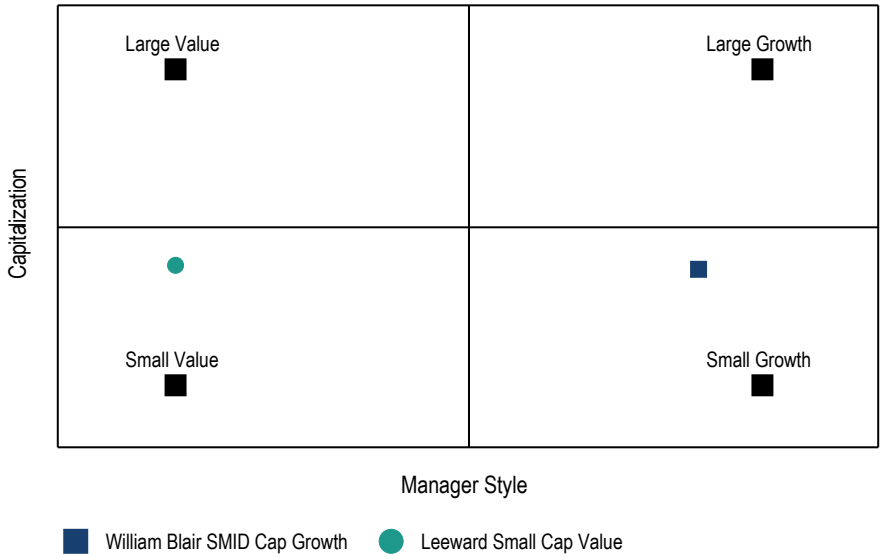
U.S. Effective Style Map
5 Years



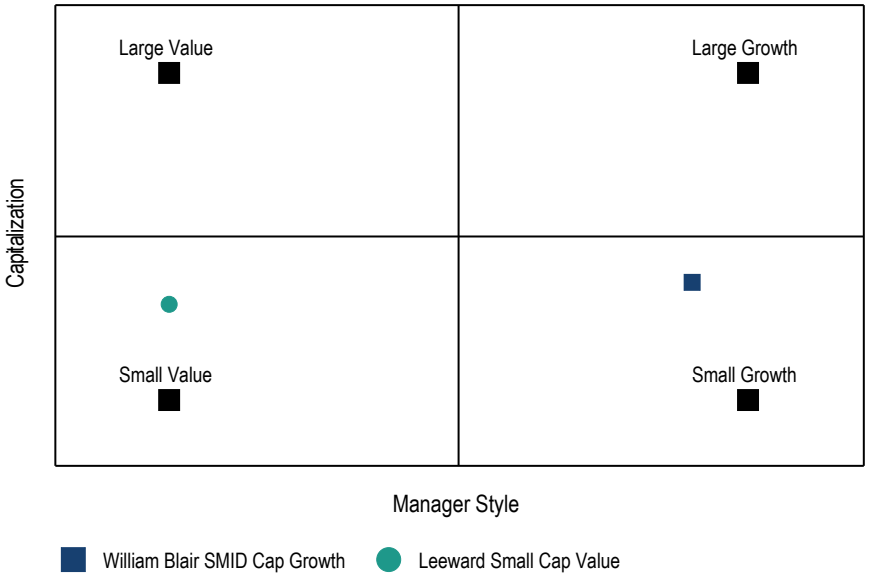
Managers need 3 years of history to be included in the style map. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
SSGA US Extended Market Index	58,389,670		-20.6	-28.0	-29.8	-29.8	-	-	-	-	-	-	-	-
Dow Jones U.S. Completion Total Stock Market Indx			*-20.7*	*-28.1*	*-30.0*	*-30.0*	*4.6*	*6.3*	*10.1*	*12.4*	*32.2*	*27.9*	*-9.6*	*18.1*
eV US Small-Mid Cap Equity Rank			*82*	*75*	*86*	*86*	-	-	-	-	-	-	-	-
William Blair SMID Cap Growth	23,729,769		-21.0	-28.3	-28.1	-28.1	2.8	8.1	12.4	8.7	32.6	31.1	-1.7	29.3
Russell 2500 Growth Index			*-19.6*	*-29.4*	*-31.8*	*-31.8*	*3.7*	*7.5*	*10.9*	*5.0*	*40.5*	*32.7*	*-7.5*	*24.5*
eV US Small-Mid Cap Growth Equity Rank			*59*	*35*	*48*	*48*	*76*	*66*	*23*	*73*	*64*	*49*	*37*	*20*
Leeward Small Cap Value	29,536,069		-10.7	-13.7	-7.4	-7.4	8.7	5.9	9.8	31.6	3.8	26.3	-15.5	7.7
Russell 2000 Value Index			*-15.3*	*-17.3*	*-16.3*	*-16.3*	*6.2*	*4.9*	*9.1*	*28.3*	*4.6*	*22.4*	*-12.9*	*7.8*
eV US Small Cap Value Equity Rank			*16*	*24*	*15*	*15*	*25*	*44*	*47*	*37*	*57*	*25*	*57*	*72*

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years



Managers need 3 years of history to be included in the style map.

	SSGA S&P 500 Flagship Fund		PGIM QS US Core Equity		Boston Partners Large Cap Value		SSGA US Extended Market Index		William Blair SMID Cap Growth		Leeward Small Value	
	#	%	#	%	#	%	#	%	#	%	#	%
SSGA S&P 500 Flagship Fund	0	0	154	93	67	82	0	0	6	11	0	0
PGIM QS US Core Equity	154	67	0	0	38	5	0	0	3	4	5	10
Boston Partners Large Cap Value	35	35	21	33	4	7	0	0	0	0	0	0
SSGA US Extended Market Index	67	21	13	4	0	0	0	0	0	0	0	0
William Blair SMID Cap Growth	6	0	2	0	0	0	0	0	0	0	3	4
Leeward Small Value	0	0	5	1	0	0	0	0	0	3	0	0

William Blair Large Cap Growth not included in Correlation matrix until it reaches 1 year history.

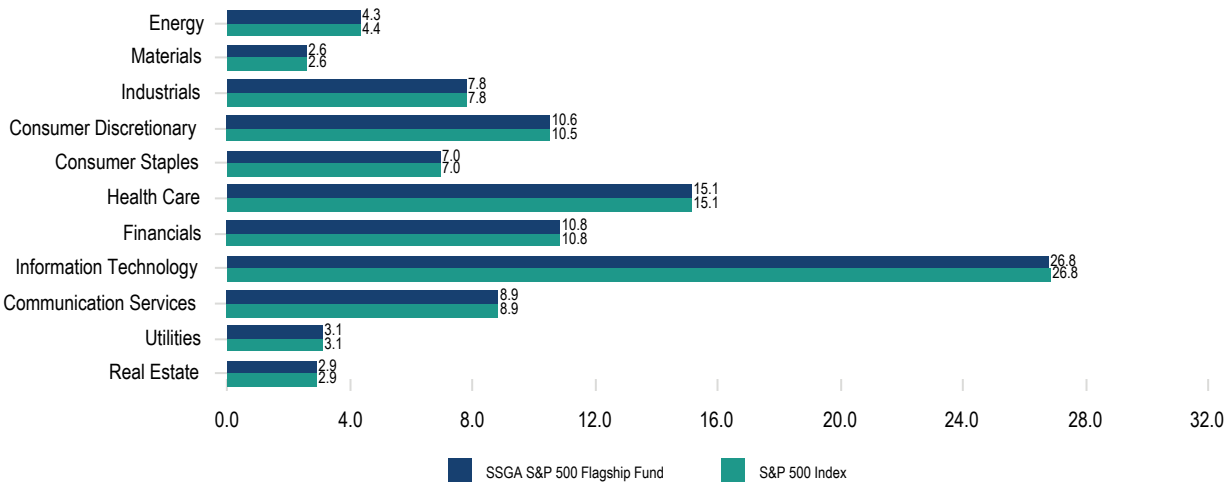
Correlation Matrix
1 Year Ending June 30, 2022

	SSGA S&P 500 Flagship Fund	PGIM QS US Core Equity	William Blair Large Cap Growth	Boston Partners Large Cap Value	SSGA US Extended Market Index	William Blair SMID Cap Growth	Leeward Small Value	S&P 500 Index
SSGA S&P 500 Flagship Fund	1.0							
PGIM QS US Core Equity	0.9	1.0						
William Blair Large Cap Growth	-	-	-					
Boston Partners Large Cap Value	0.9	0.7	-	1.0				
SSGA US Extended Market Index	0.9	0.8	-	0.7	1.0			
William Blair SMID Cap Growth	0.8	0.8	-	0.6	1.0	1.0		
Leeward Small Value	0.8	0.6	-	0.9	0.8	0.8	1.0	
S&P 500 Index	1.0	0.9	-	0.9	0.9	0.8	0.8	1.0

Characteristics

	Portfolio	Benchmark
Number of Stocks	504	503
Wtd. Avg. Mkt. Cap $B	477.6	477.9
Median Mkt. Cap $B	27.3	27.3
Price/Earnings ratio	18.55	18.57
Price/Book ratio	3.94	3.94
Return on Equity (%)	2.79	2.63
Current Yield (%)	1.71	1.71
Beta (5 Years, Monthly)	1.00	1.00
R-Squared (5 Years, Monthly)	1.00	1.00

Sector Allocation (%)



Largest Equity Holdings

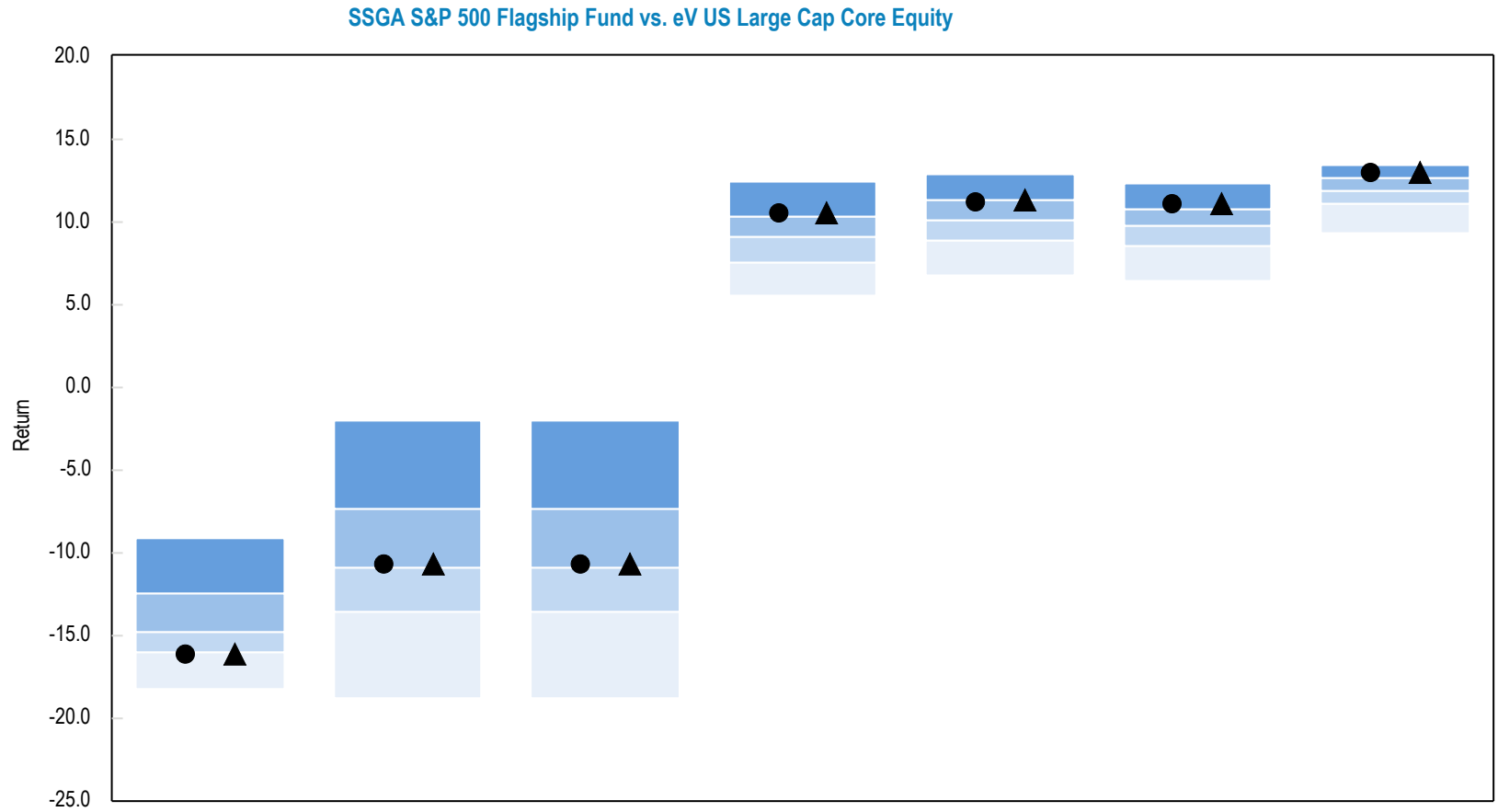
	Wgt (%)	Return (%)
Apple Inc	6.59	-21.59
Microsoft Corp	6.02	-16.49
Amazon.com Inc	2.91	-34.84
Alphabet Inc	2.05	-21.65
Alphabet Inc	1.89	-21.68
Tesla Inc	1.77	-37.51
Berkshire Hathaway Inc	1.55	-22.64
Unitedhealth Group Inc	1.51	1.08
Johnson & Johnson	1.46	0.79
NVIDIA Corporation	1.19	-44.43

Top Contributors

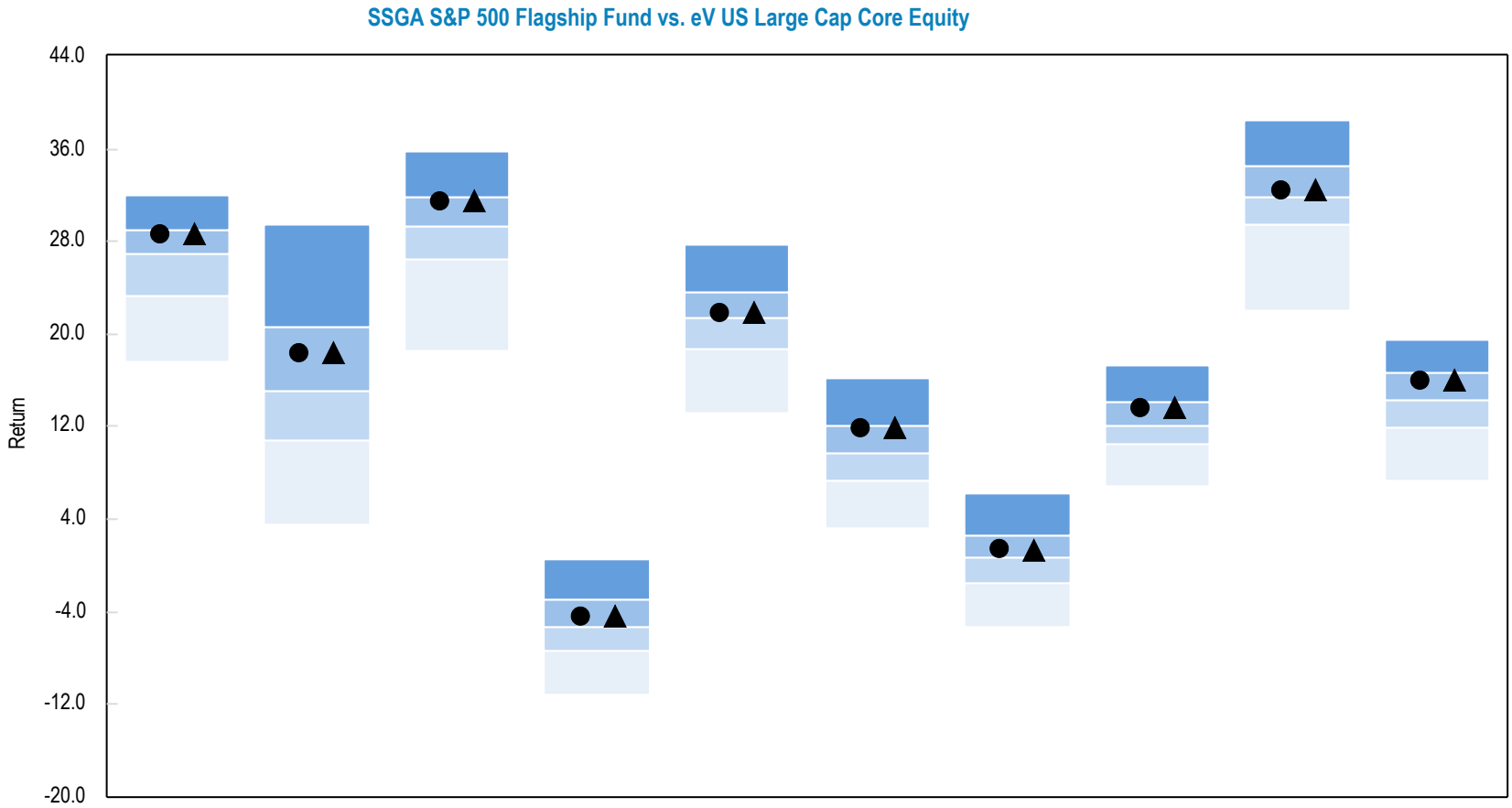
	Wgt (%)	Return (%)	Contr (%)
Eli Lilly and Co	0.75	13.60	0.10
AT&T Inc	0.56	16.66	0.09
Merck & Co Inc	0.69	12.02	0.08
Exxon Mobil Corp	1.16	4.75	0.05
International Business Machines Corp	0.39	9.92	0.04
Bristol-Myers Squibb Co	0.53	6.16	0.03
Philip Morris International Inc	0.48	6.41	0.03
Cigna Corp	0.26	10.45	0.03
Pfizer Inc	0.96	2.08	0.02
Dollar General Corporation	0.17	10.51	0.02

Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Microsoft Corp	7.64	-16.49	-1.26
Tesla Inc	2.98	-37.51	-1.12
NVIDIA Corporation	2.25	-44.43	-1.00
Alphabet Inc	2.76	-21.65	-0.60
Alphabet Inc	2.56	-21.68	-0.56
Meta Platforms Inc	1.70	-27.48	-0.47
Netflix Inc	0.55	-53.32	-0.29
Walt Disney Co (The)	0.83	-31.18	-0.26
JPMorgan Chase & Co	1.33	-16.77	-0.22
Broadcom Inc	0.86	-22.22	-0.19

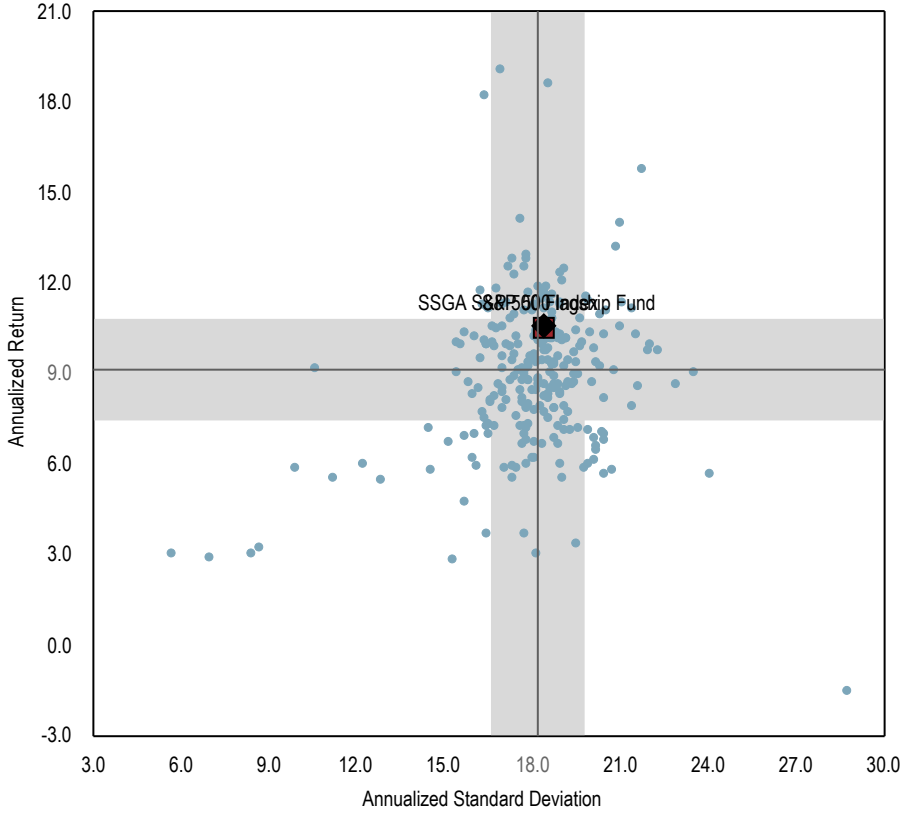


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● SSGA S&P 500 Flagship Fund	-16.11 (77)	-10.67 (49)	-10.67 (49)	10.55 (22)	11.28 (27)	11.14 (17)	12.95 (16)
▲ S&P 500 Index	-16.10 (77)	-10.62 (48)	-10.62 (48)	10.60 (21)	11.31 (27)	11.14 (17)	12.96 (16)
5th Percentile	-9.16	-2.04	-2.04	12.39	12.85	12.37	13.45
1st Quartile	-12.39	-7.35	-7.35	10.38	11.35	10.73	12.64
Median	-14.77	-10.91	-10.91	9.16	10.11	9.75	11.89
3rd Quartile	-16.04	-13.57	-13.57	7.60	8.85	8.59	11.06
95th Percentile	-18.19	-18.78	-18.78	5.58	6.74	6.43	9.36
Population	270	270	270	261	242	221	187

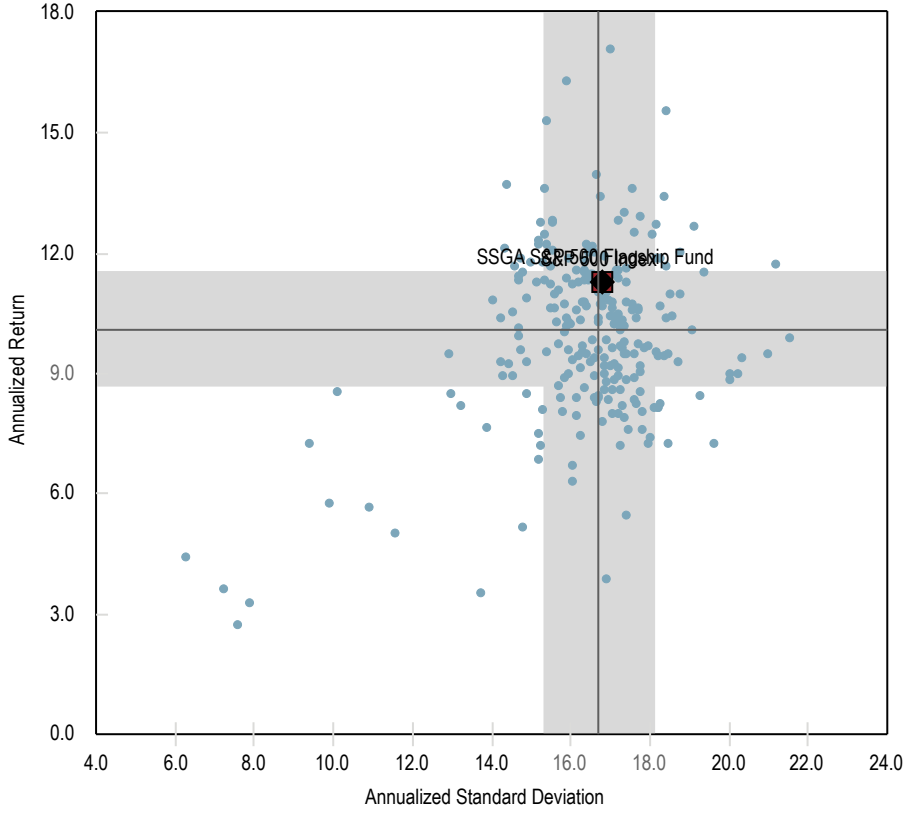


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● SSGA S&P 500 Flagship Fund	28.63 (30)	18.34 (37)	31.46 (29)	-4.39 (39)	21.84 (43)	12.00 (26)	1.43 (41)	13.69 (30)	32.44 (46)	16.04 (32)
▲ S&P 500 Index	28.71 (29)	18.40 (36)	31.49 (29)	-4.38 (39)	21.83 (43)	11.96 (27)	1.38 (41)	13.69 (30)	32.39 (47)	16.00 (32)
5th Percentile	32.01	29.44	35.80	0.49	27.65	16.25	6.19	17.31	38.44	19.55
1st Quartile	29.02	20.63	31.91	-2.87	23.57	12.07	2.67	14.17	34.53	16.61
Median	26.90	15.08	29.29	-5.31	21.37	9.78	0.73	12.13	31.89	14.32
3rd Quartile	23.37	10.75	26.50	-7.42	18.77	7.29	-1.45	10.45	29.44	11.92
95th Percentile	17.65	3.57	18.50	-11.12	13.16	3.21	-5.37	6.84	22.08	7.40
Population	290	314	325	330	337	339	345	347	342	342

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Core Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Core Equity



	3 Years		
	Return	Standard Deviation	Sharpe Ratio
SSGA S&P 500 Flagship Fund	10.55	18.38	0.60
S&P 500 Index	10.60	18.38	0.61

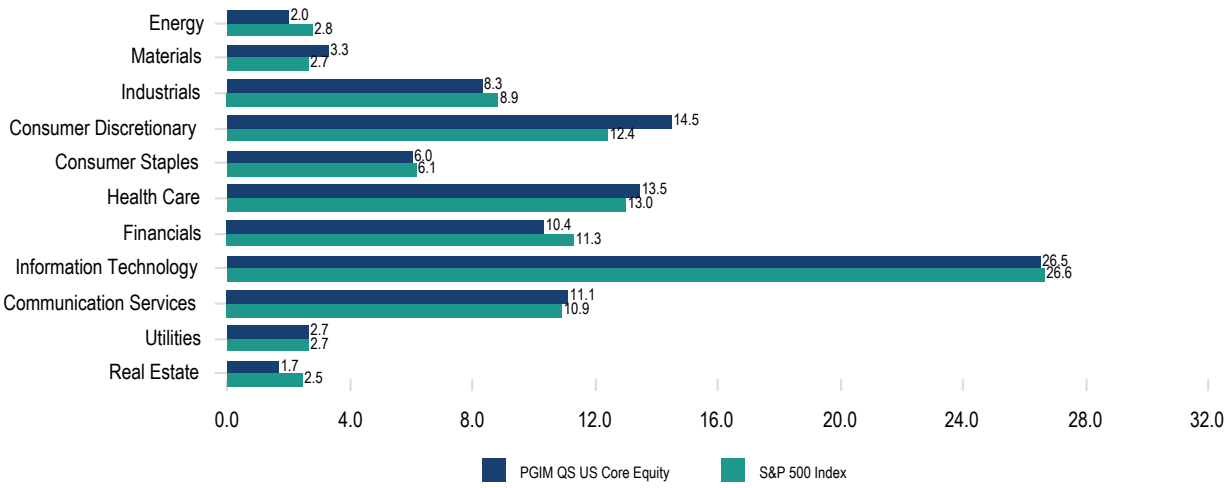
	5 Years		
	Return	Standard Deviation	Sharpe Ratio
SSGA S&P 500 Flagship Fund	11.28	16.81	0.66
S&P 500 Index	11.31	16.80	0.66

Holdings as of 6/30/22.

Characteristics

	Portfolio	Benchmark
Number of Stocks	204	505
Wtd. Avg. Mkt. Cap $B	436.1	461.2
Median Mkt. Cap $B	38.2	29.5
Price/Earnings ratio	25.09	29.90
Price/Book ratio	4.44	4.52
Return on Equity (%)	13.15	9.95
Current Yield (%)	1.71	1.47
Beta (5 Years, Monthly)	1.06	1.00
R-Squared (5 Years, Monthly)	0.98	1.00

Sector Allocation (%)



Largest Equity Holdings

	Wgt (%)	Return (%)
Microsoft Corp	5.78	6.25
Apple Inc	4.73	-7.81
Amazon.com Inc	4.12	-5.00
Meta Platforms Inc	2.69	7.82
Qurate Retail Inc	2.00	4.73
Alphabet Inc	1.95	17.68
Alphabet Inc	1.83	18.08
JPMorgan Chase & Co	1.71	20.66
Unitedhealth Group Inc	1.55	6.47
Johnson & Johnson	1.44	5.08

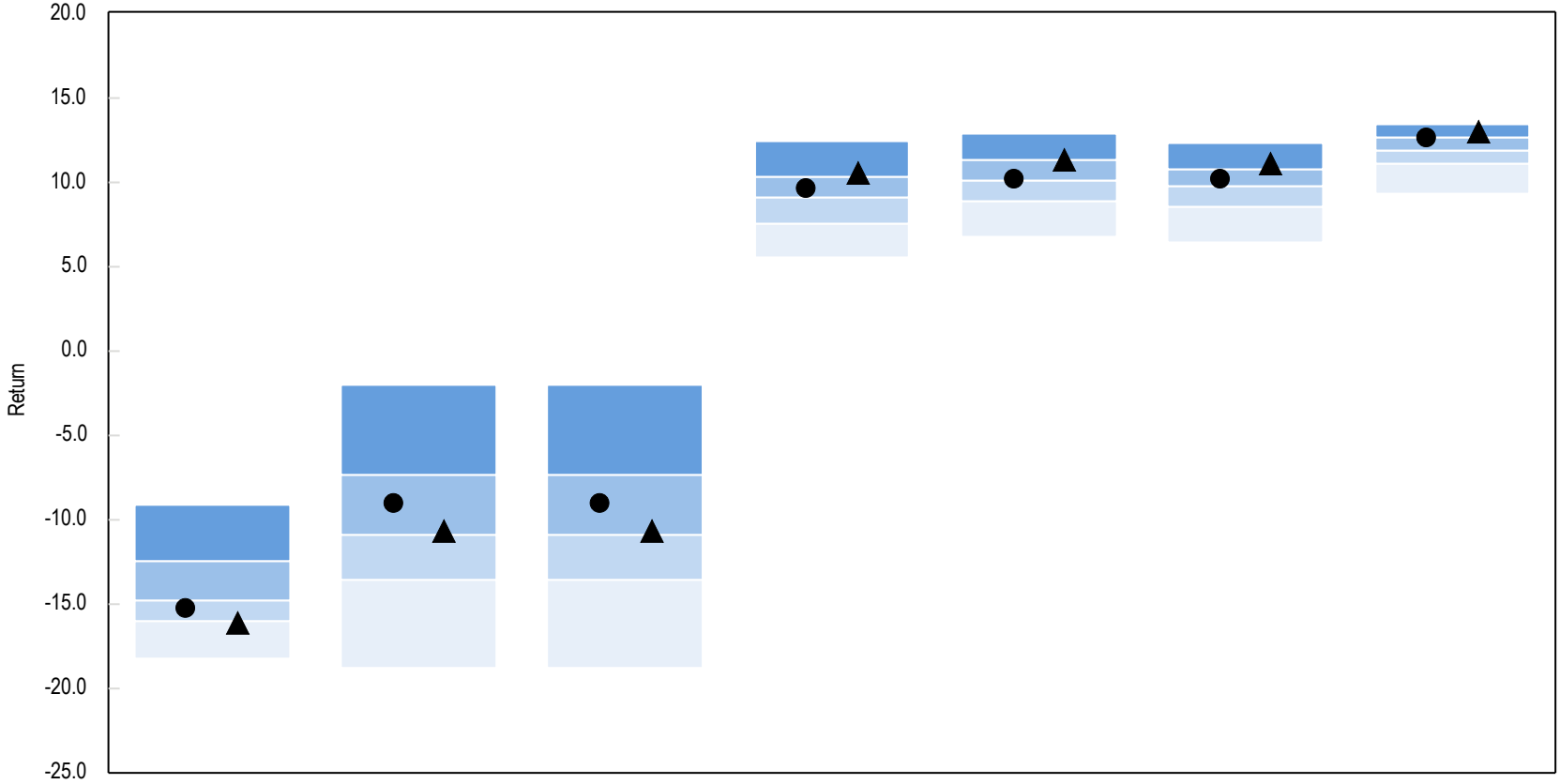
Top Contributors

	Wgt (%)	Return (%)	Contr (%)
First BanCorp (Puerto Rico)	2.69	22.93	0.62
Applied Materials Inc	0.92	55.09	0.50
Goldman Sachs Group Inc (The)	1.73	24.47	0.42
Cimarex Energy Co.	0.67	59.00	0.40
UFP Industries Inc	0.96	36.87	0.35
Worthington Industries Inc.	1.12	31.13	0.35
DEERE & COMPANY	0.81	39.39	0.32
Wells Fargo & Co	0.99	29.85	0.29
GMS Inc	0.79	36.98	0.29
Alphabet Inc	1.65	17.68	0.29

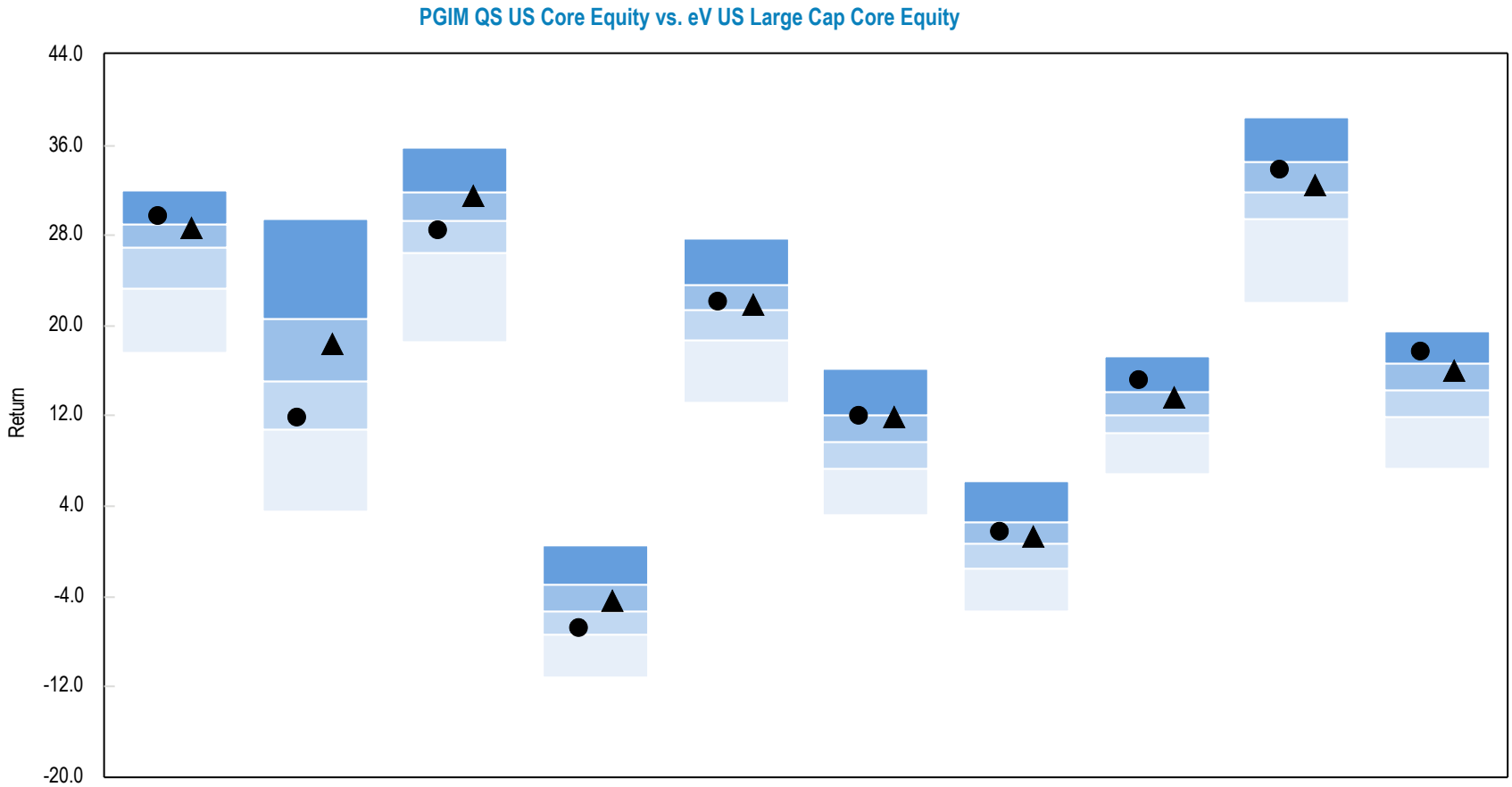
Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Apple Inc	6.17	-7.81	-0.48
Amazon.com Inc	4.75	-5.00	-0.24
PerkinElmer Inc.	1.58	-10.56	-0.17
Walmart Inc	2.10	-5.37	-0.11
Adobe Inc	1.25	-4.95	-0.06
ServiceNow Inc	0.58	-9.14	-0.05
Vistra Corp	0.47	-9.33	-0.04
Electronic Arts Inc	0.68	-5.61	-0.04
Merck & Co Inc	0.73	-4.94	-0.04
Cognizant Technology	0.76	-4.37	-0.03

PGIM QS US Core Equity vs. eV US Large Cap Core Equity

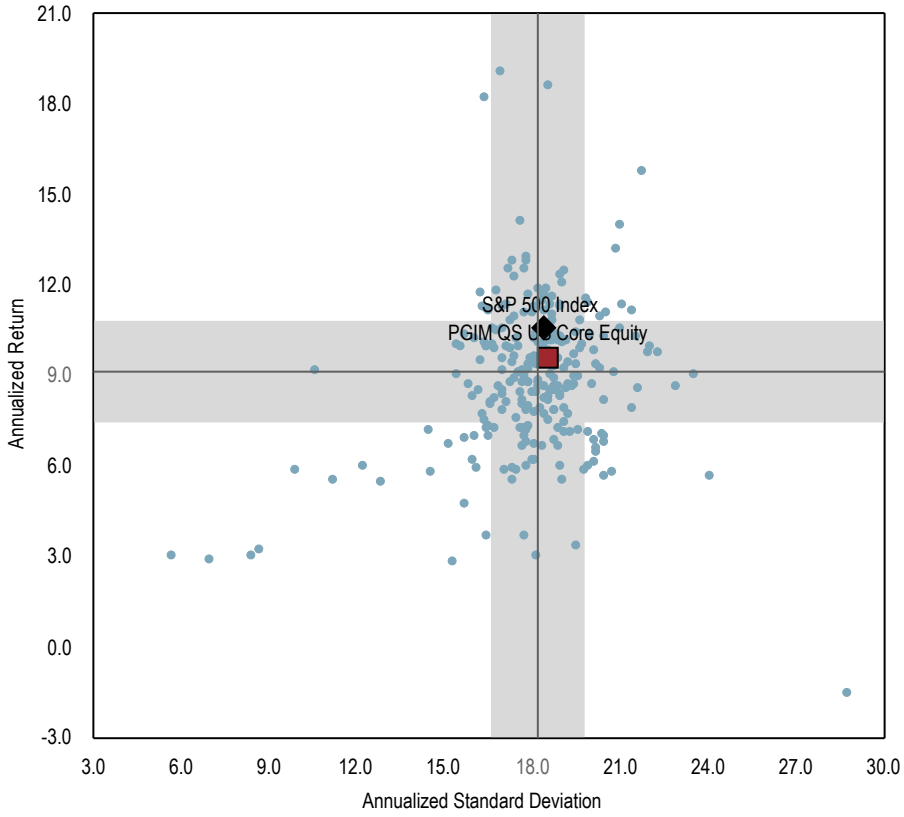


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● PGIM QS US Core Equity	-15.25 (59)	-8.98 (35)	-8.98 (35)	9.65 (41)	10.25 (48)	10.17 (41)	12.65 (25)
▲ S&P 500 Index	-16.10 (77)	-10.62 (48)	-10.62 (48)	10.60 (21)	11.31 (27)	11.14 (17)	12.96 (16)
5th Percentile	-9.16	-2.04	-2.04	12.39	12.85	12.37	13.45
1st Quartile	-12.39	-7.35	-7.35	10.38	11.35	10.73	12.64
Median	-14.77	-10.91	-10.91	9.16	10.11	9.75	11.89
3rd Quartile	-16.04	-13.57	-13.57	7.60	8.85	8.59	11.06
95th Percentile	-18.19	-18.78	-18.78	5.58	6.74	6.43	9.36
Population	270	270	270	261	242	221	187

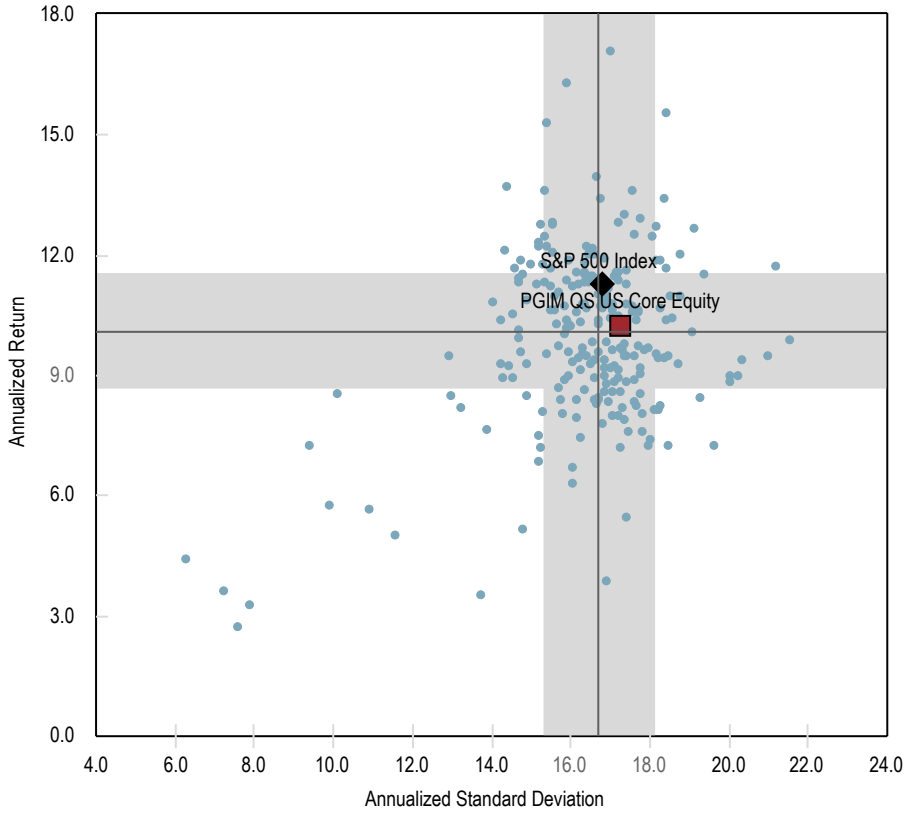


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● PGIM QS US Core Equity	29.78 (20)	11.96 (70)	28.55 (57)	-6.79 (70)	22.12 (40)	12.12 (25)	1.78 (35)	15.25 (14)	33.91 (30)	17.78 (15)
▲ S&P 500 Index	28.71 (29)	18.40 (36)	31.49 (29)	-4.38 (39)	21.83 (43)	11.96 (27)	1.38 (41)	13.69 (30)	32.39 (47)	16.00 (32)
5th Percentile	32.01	29.44	35.80	0.49	27.65	16.25	6.19	17.31	38.44	19.55
1st Quartile	29.02	20.63	31.91	-2.87	23.57	12.07	2.67	14.17	34.53	16.61
Median	26.90	15.08	29.29	-5.31	21.37	9.78	0.73	12.13	31.89	14.32
3rd Quartile	23.37	10.75	26.50	-7.42	18.77	7.29	-1.45	10.45	29.44	11.92
95th Percentile	17.65	3.57	18.50	-11.12	13.16	3.21	-5.37	6.84	22.08	7.40
Population	290	314	325	330	337	339	345	347	342	342

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Core Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Core Equity

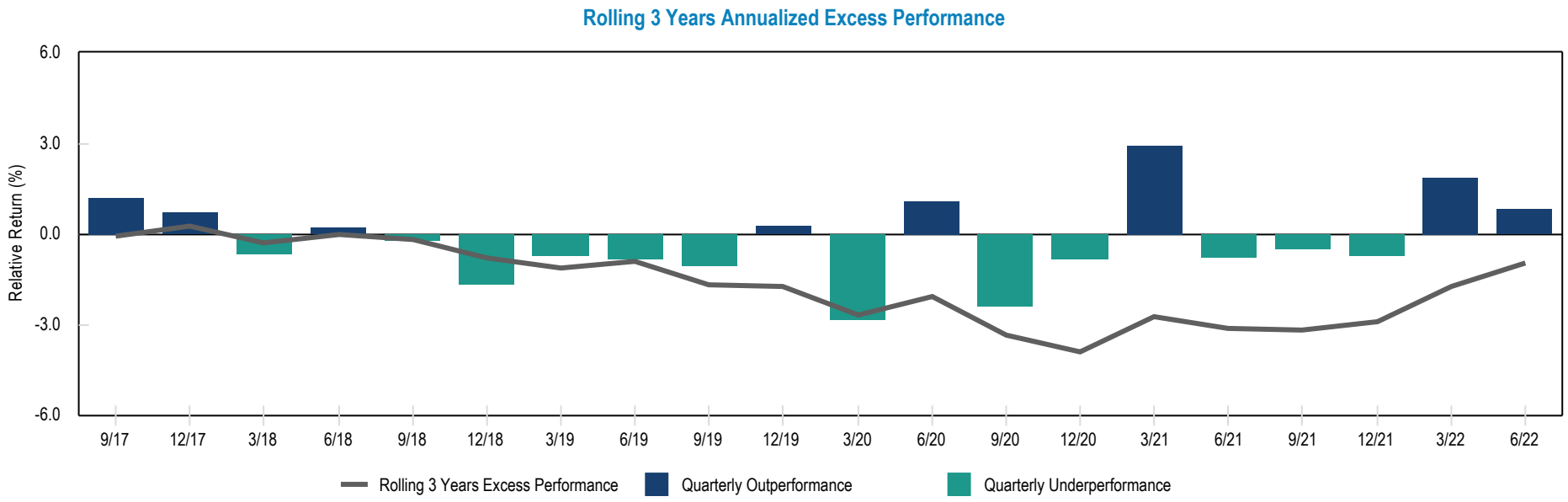


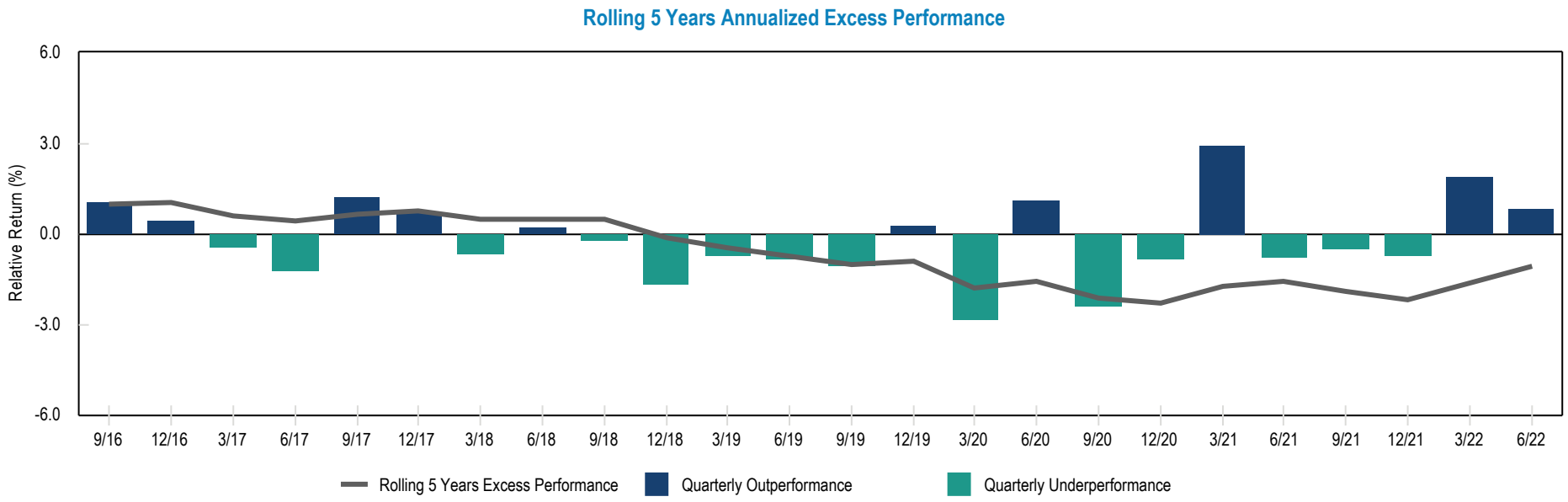
3 Years

	Return	Standard Deviation	Sharpe Ratio
PGIM QS US Core Equity	9.65	18.54	0.56
S&P 500 Index	10.60	18.38	0.61

5 Years

	Return	Standard Deviation	Sharpe Ratio
PGIM QS US Core Equity	10.25	17.25	0.59
S&P 500 Index	11.31	16.80	0.66



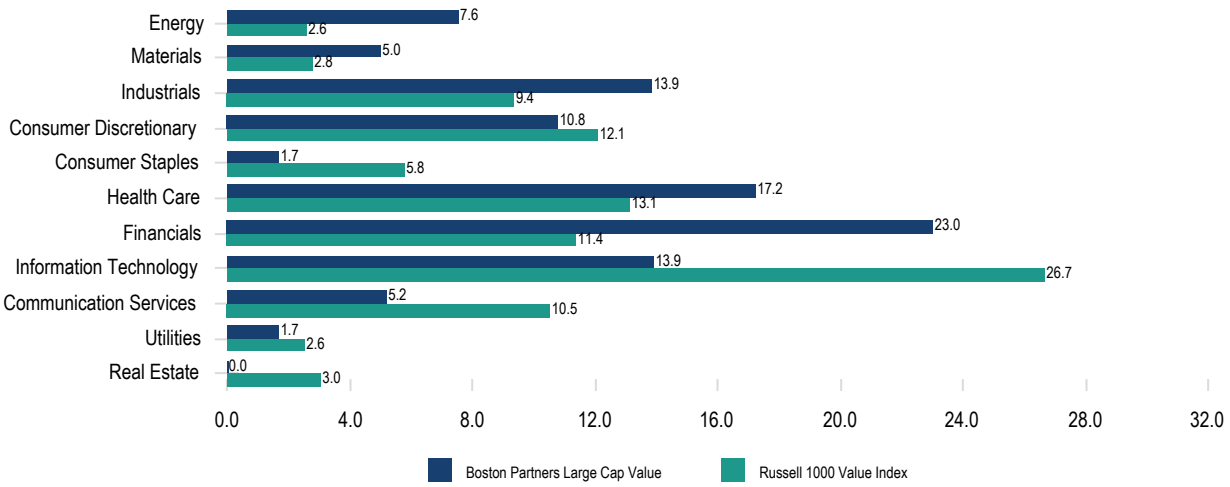


Holdings as of 3/31/22.

Characteristics

	Portfolio	Benchmark
Number of Stocks	96	1,023
Wtd. Avg. Mkt. Cap $B	155.7	413.8
Median Mkt. Cap $B	44.4	13.7
Price/Earnings ratio	22.55	29.79
Price/Book ratio	2.57	4.45
Return on Equity (%)	20.11	17.26
Current Yield (%)	1.72	1.41
Beta (5 Years, Monthly)	1.07	1.00
R-Squared (5 Years, Monthly)	0.97	1.00

Sector Allocation (%)



Largest Equity Holdings

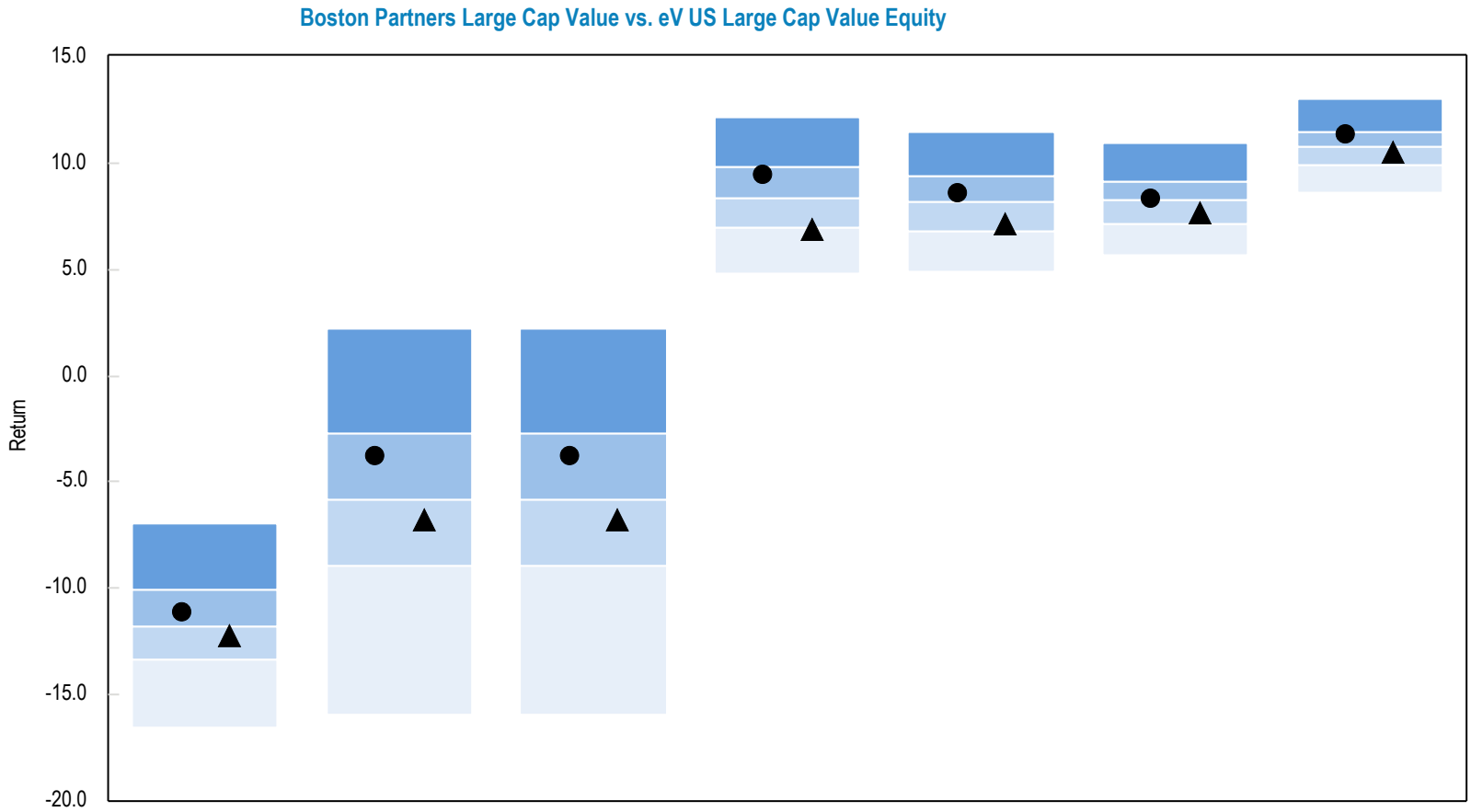
	Wgt (%)	Return (%)
JPMorgan Chase & Co	3.42	20.66
Johnson & Johnson	3.26	5.08
Bank of America Corp	3.03	28.28
Berkshire Hathaway Inc	2.82	10.18
Cisco Systems Inc	2.81	16.50
Cigna Corp	2.11	16.61
AutoZone Inc	2.07	18.46
Conocophillips	2.01	33.69
DEERE & COMPANY	1.99	39.39
Truist Financial Corp	1.94	22.71

Top Contributors

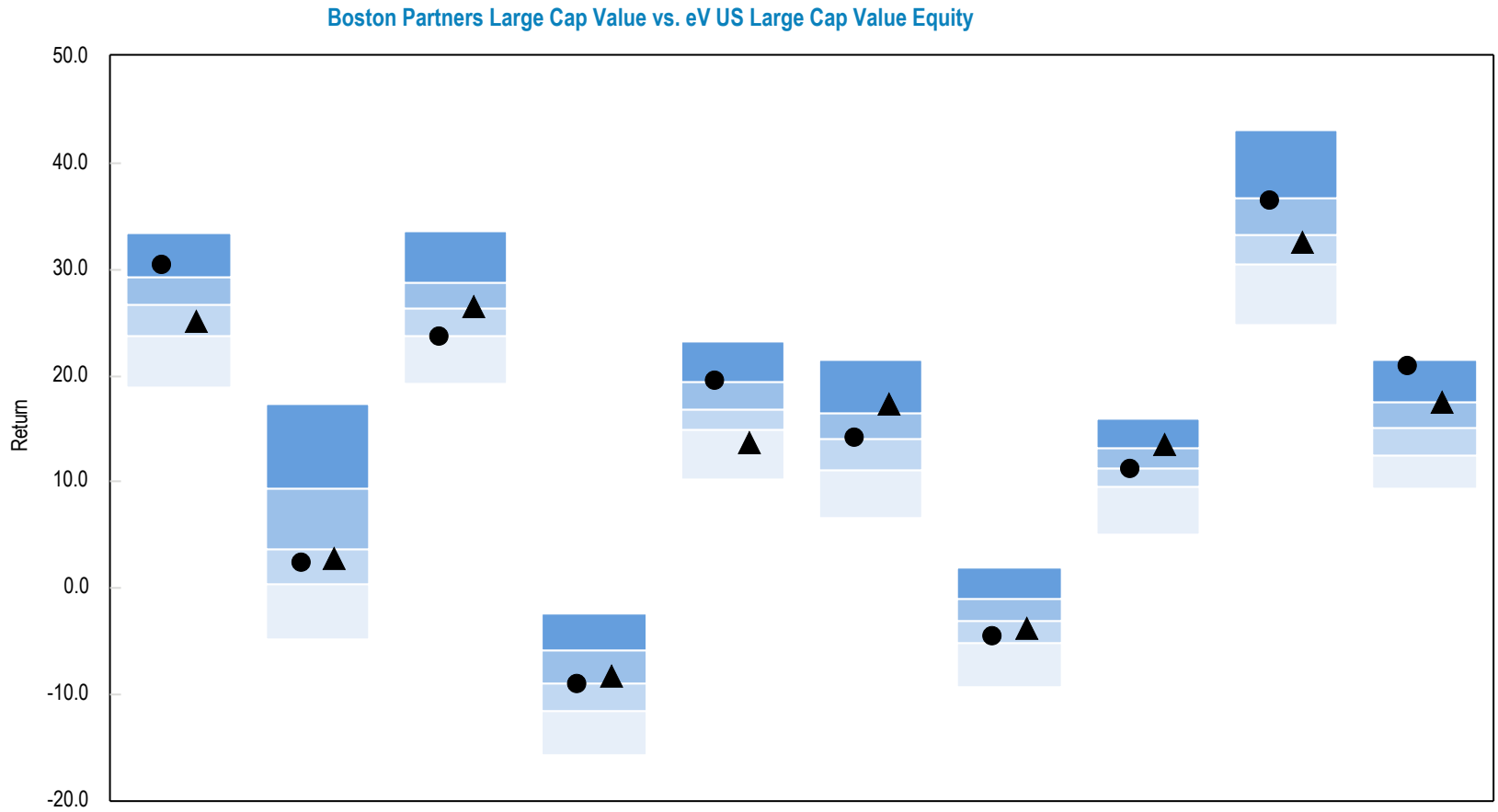
	Wgt (%)	Return (%)	Contr (%)
Applied Materials Inc	1.51	55.09	0.83
Bank of America Corp	2.73	28.28	0.77
DEERE & COMPANY	1.79	39.39	0.71
JPMorgan Chase & Co	3.28	20.66	0.68
Conocophillips	1.75	33.69	0.59
Lam Research Corp	1.89	26.34	0.50
Truist Financial Corp	1.83	22.71	0.42
Cigna Corp	2.43	16.61	0.40
Cisco Systems Inc	2.37	16.50	0.39
Mohawk Industries Inc.	1.07	36.44	0.39

Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Petroleo Brasileiro S.A.- Petrobras	0.60	-24.49	-0.15
Yamana Gold Inc	0.60	-23.52	-0.14
Viatris Inc	0.42	-25.45	-0.11
T-Mobile US Inc	1.47	-7.09	-0.10
Novartis AG	1.66	-6.01	-0.10
Vistra Corp	0.84	-9.33	-0.08
Edison International	1.04	-5.68	-0.06
SS&C Technologies Holdings Inc	0.88	-3.73	-0.03
Kinross Gold Corp	0.32	-8.71	-0.03
FMC Corp.	0.62	-3.34	-0.02

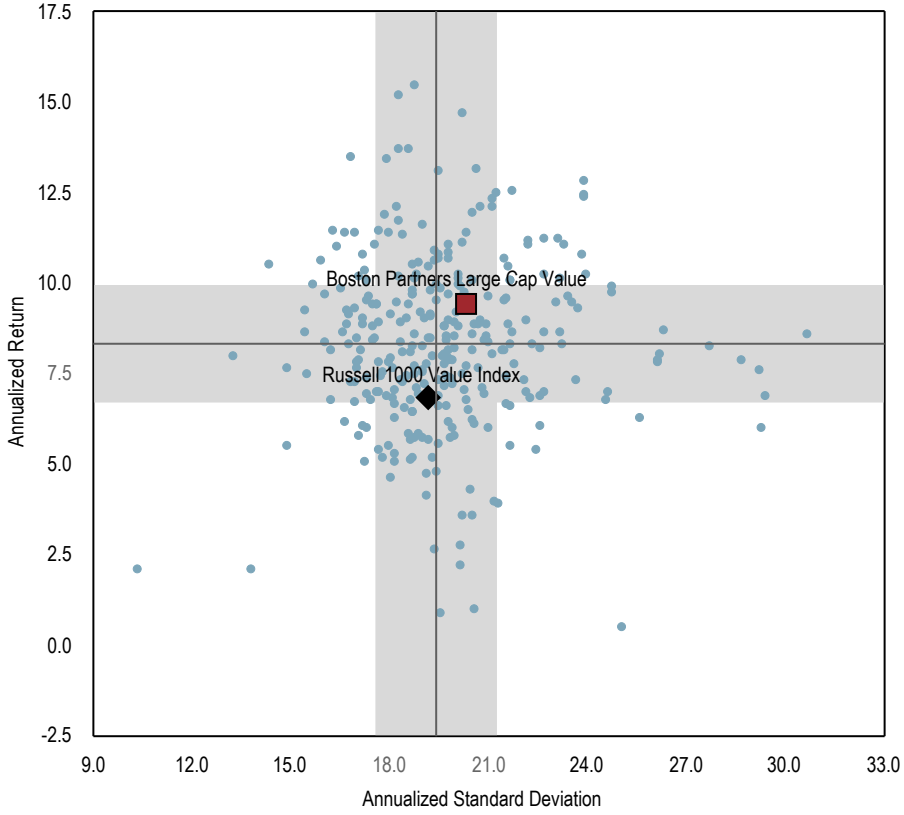


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Boston Partners Large Cap Value	-11.06 (39)	-3.76 (33)	-3.76 (33)	9.47 (32)	8.58 (40)	8.35 (47)	11.34 (30)
▲ Russell 1000 Value Index	-12.21 (60)	-6.82 (60)	-6.82 (60)	6.87 (78)	7.17 (71)	7.69 (63)	10.50 (59)
5th Percentile	-6.93	2.23	2.23	12.17	11.43	10.90	13.03
1st Quartile	-10.05	-2.73	-2.73	9.82	9.35	9.13	11.47
Median	-11.78	-5.80	-5.80	8.35	8.13	8.22	10.79
3rd Quartile	-13.31	-8.92	-8.92	7.00	6.82	7.12	9.89
95th Percentile	-16.51	-15.91	-15.91	4.78	4.86	5.70	8.62
Population	307	307	307	300	292	276	252

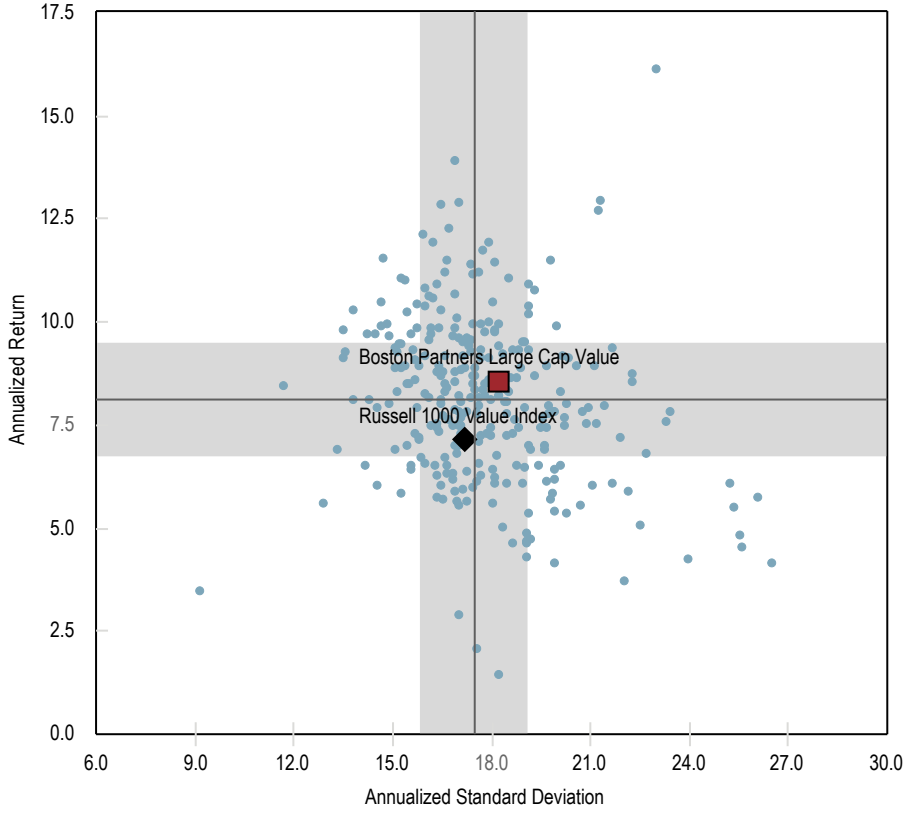


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● Boston Partners Large Cap Value	30.43 (17)	2.38 (60)	23.81 (75)	-9.00 (52)	19.58 (24)	14.19 (49)	-4.38 (68)	11.33 (51)	36.44 (28)	20.96 (7)
▲ Russell 1000 Value Index	25.16 (65)	2.80 (57)	26.54 (47)	-8.27 (43)	13.66 (86)	17.34 (20)	-3.83 (63)	13.45 (23)	32.53 (55)	17.51 (25)
5th Percentile	33.41	17.25	33.66	-2.30	23.18	21.49	1.99	16.02	43.03	21.46
1st Quartile	29.30	9.39	28.72	-5.85	19.46	16.54	-0.92	13.14	36.64	17.48
Median	26.61	3.66	26.25	-8.91	16.78	14.04	-3.08	11.35	33.27	15.10
3rd Quartile	23.66	0.43	23.79	-11.54	14.84	11.12	-5.16	9.64	30.45	12.53
95th Percentile	18.90	-4.73	19.20	-15.62	10.32	6.64	-9.24	5.04	24.83	9.46
Population	327	342	370	383	389	398	411	410	405	399

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Value Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Large Cap Value Equity

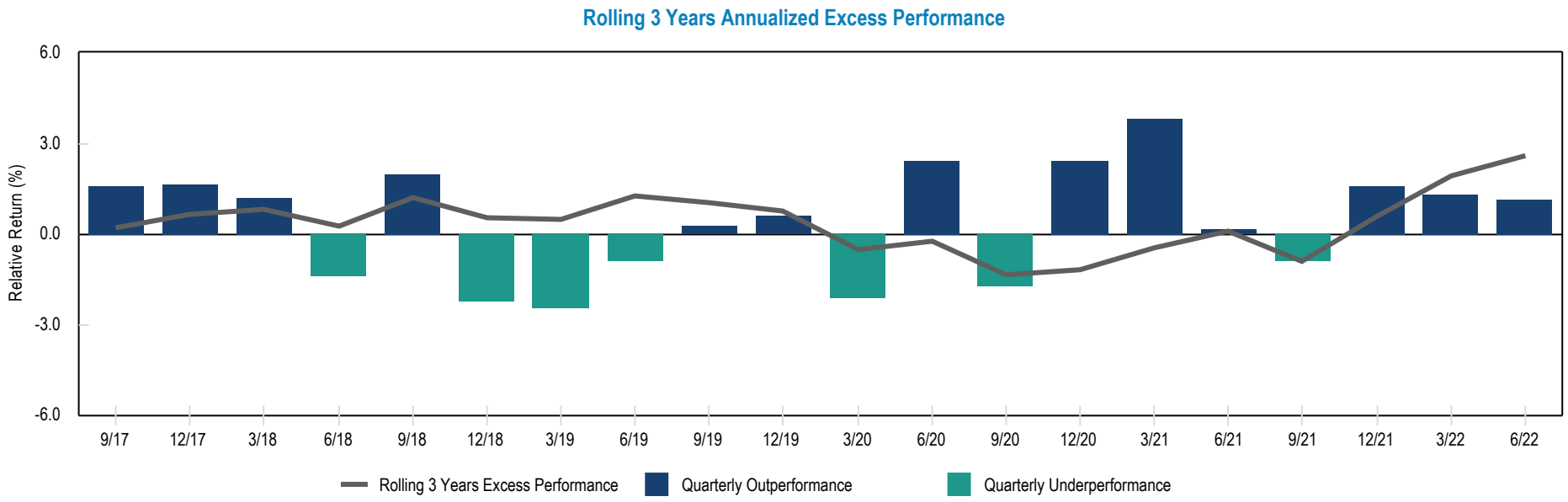


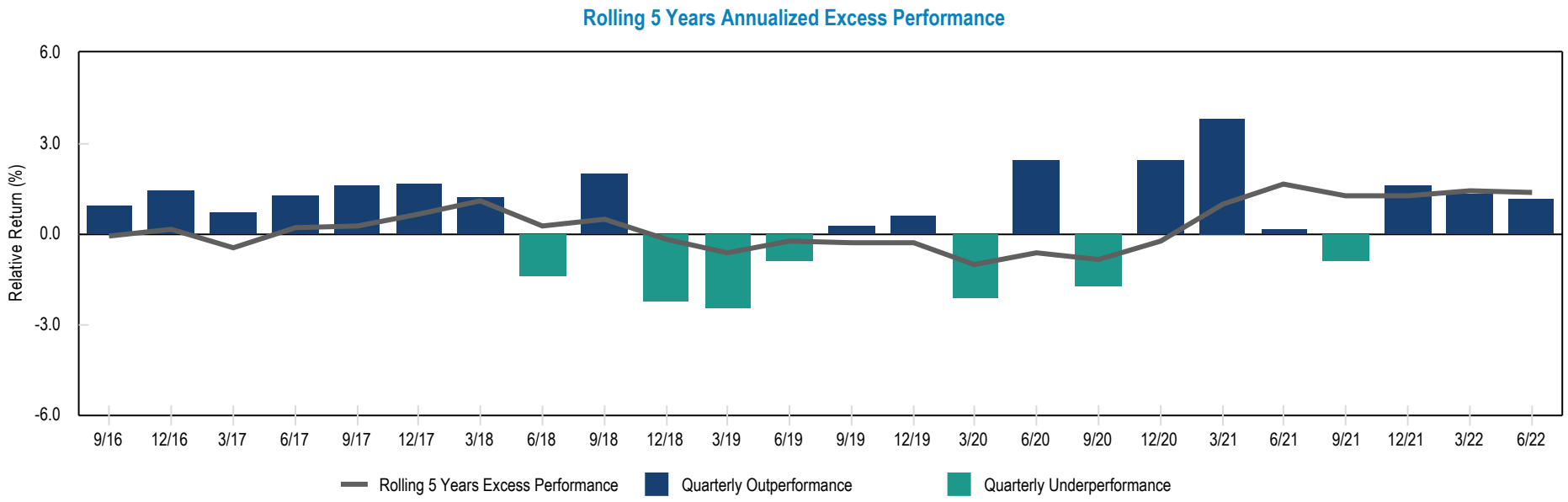
3 Years

	Return	Standard Deviation	Sharpe Ratio
Boston Partners Large Cap Value	9.47	20.31	0.52
Russell 1000 Value Index	6.87	19.18	0.41

5 Years

	Return	Standard Deviation	Sharpe Ratio
Boston Partners Large Cap Value	8.58	18.21	0.48
Russell 1000 Value Index	7.17	17.21	0.43



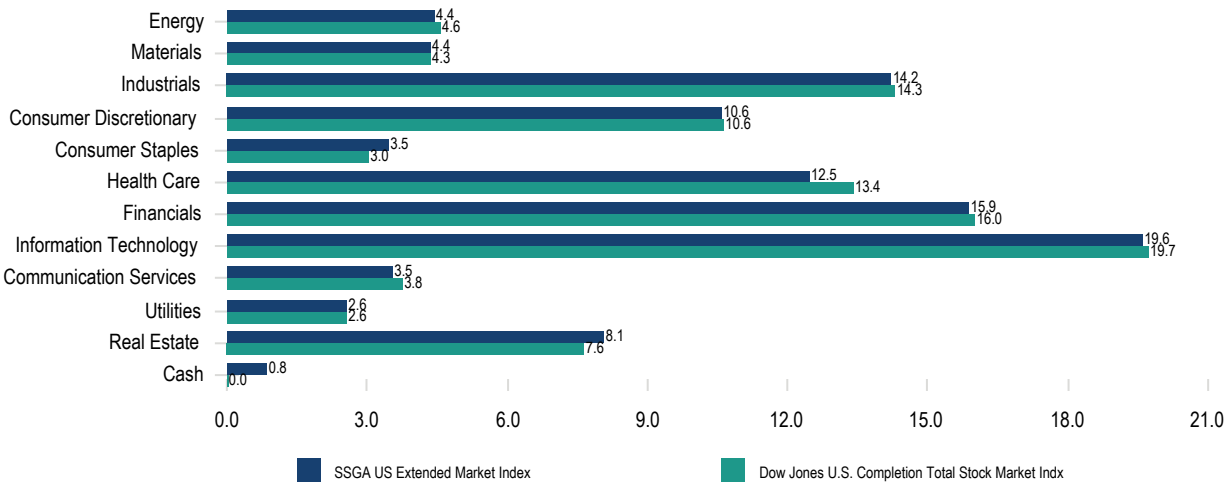


Holdings as of 3/31/22.

Characteristics

	Portfolio	Benchmark
Number of Stocks	3,705	3,753
Wtd. Avg. Mkt. Cap $B	9.6	9.4
Median Mkt. Cap $B	0.6	0.5
Price/Earnings ratio	13.03	13.05
Price/Book ratio	2.62	2.63
Return on Equity (%)	5.32	6.11
Current Yield (%)	1.44	1.40
Beta	-	1.00
R-Squared	-	-

Sector Allocation (%)



Largest Equity Holdings

	Wgt (%)	Return (%)
Blackstone Group Inc	1.11	-27.26
Palo Alto Networks Inc	0.83	-20.65
Marvell Technology Inc	0.63	-39.24
CrowdStrike Holdings Inc	0.60	-25.77
Uber Technologies Inc	0.59	-42.66
Snowflake Inc	0.56	-39.31
Lululemon Athletica Inc	0.55	-25.36
Cheniere Energy Inc.	0.54	-3.82
Airbnb Inc	0.53	-48.14
Block Inc	0.53	-54.68

Top Contributors

	Wgt (%)	Return (%)	Contr (%)
Seagen Inc	0.26	22.83	0.06
United Therapeutics Corp	0.11	31.34	0.04
Turning Point Therapeutics Inc	0.02	180.26	0.03
Block H&R Inc	0.06	36.65	0.02
Biohaven Pharmaceutical Holding Co Ltd	0.09	22.89	0.02
American Campus Communities Inc	0.11	15.19	0.02
Royalty Pharma plc	0.19	8.42	0.02
Black Knight Inc	0.12	12.76	0.02
Biomarin Pharmaceutical Inc	0.19	7.48	0.01
VICI Properties Inc	0.24	5.96	0.01

Bottom Contributors

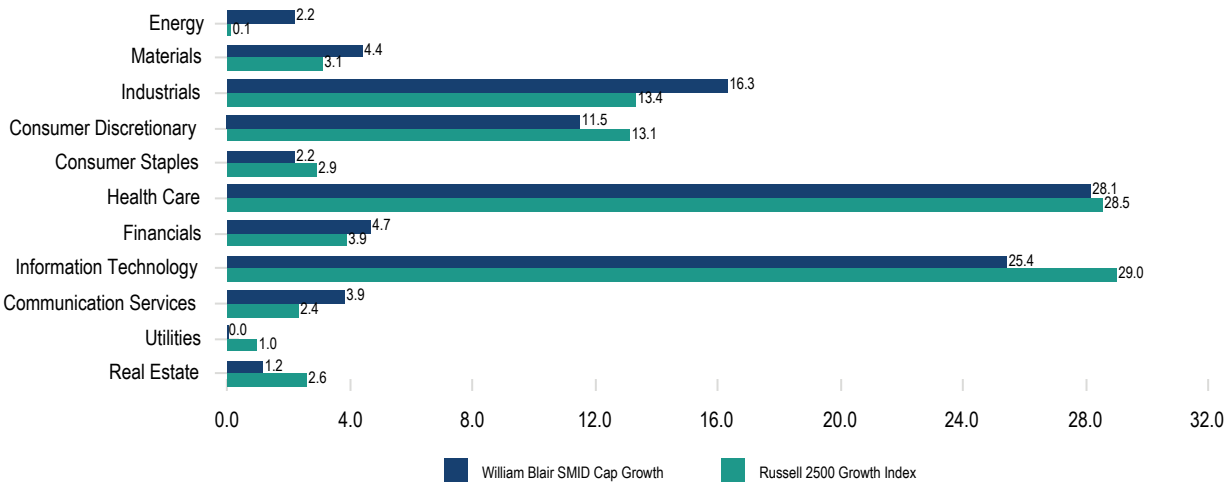
	Wgt (%)	Return (%)	Contr (%)
Block Inc	0.92	-54.68	-0.50
Airbnb Inc	0.81	-48.14	-0.39
Uber Technologies Inc	0.81	-42.66	-0.34
Snap Inc	0.53	-63.52	-0.33
Blackstone Group Inc	1.21	-27.26	-0.33
Marvell Technology Inc	0.82	-39.24	-0.32
Snowflake Inc	0.73	-39.31	-0.29
Cloudflare Inc	0.45	-63.45	-0.28
Workday Inc	0.62	-41.71	-0.26
Datadog Inc	0.53	-37.12	-0.20

Holdings as of 3/31/22.

Characteristics

	Portfolio	Benchmark
Number of Stocks	76	1,353
Wtd. Avg. Mkt. Cap $B	9.8	7.6
Median Mkt. Cap $B	8.1	1.7
Price/Earnings ratio	36.22	35.79
Price/Book ratio	6.11	6.43
Return on Equity (%)	-1.71	141.14
Current Yield (%)	0.35	0.38
Beta (5 Years, Monthly)	0.87	1.00
R-Squared (5 Years, Monthly)	0.95	1.00

Sector Allocation (%)



Largest Equity Holdings

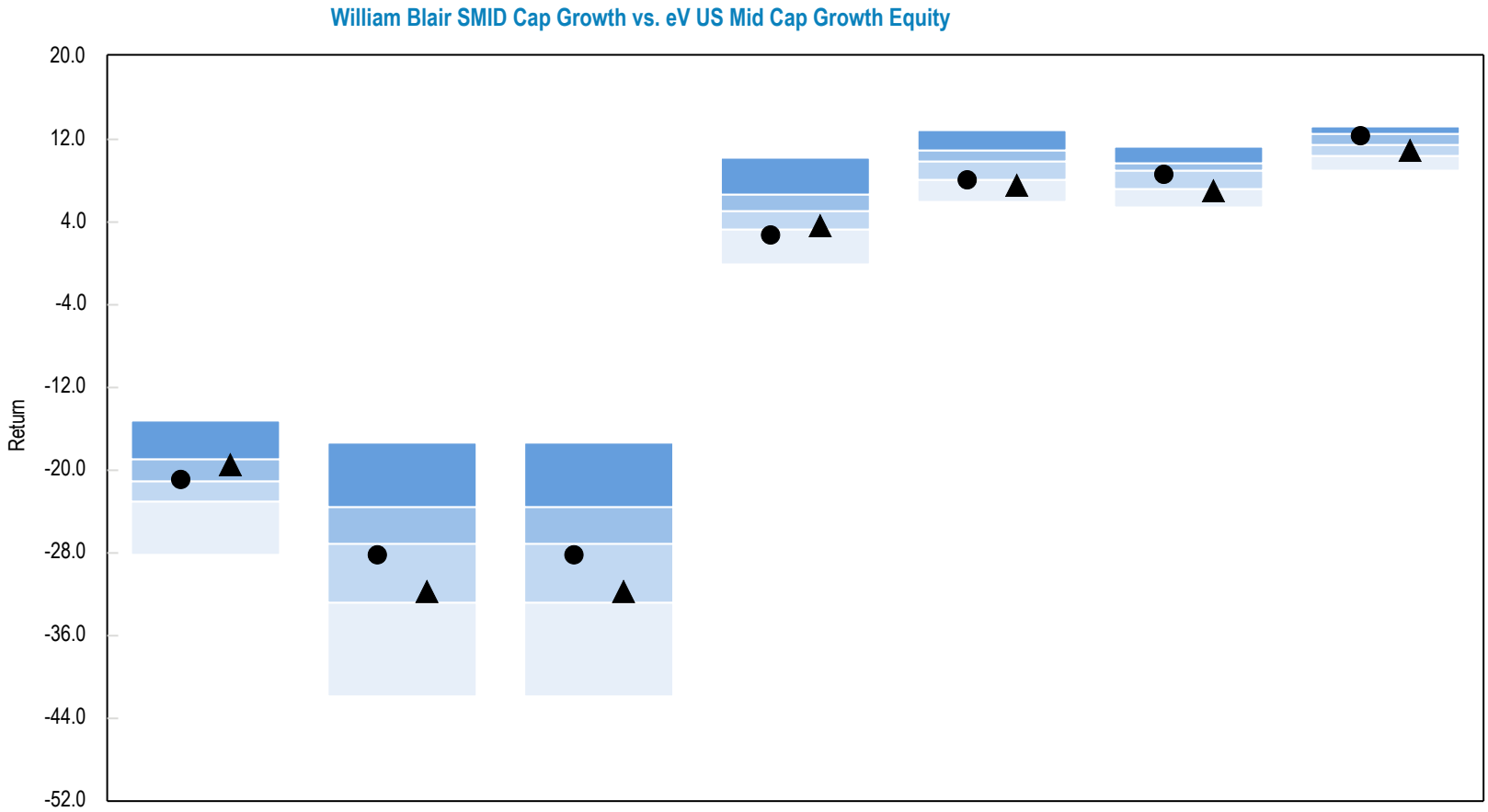
	Wgt (%)	Return (%)
BWX Technologies Inc	2.69	9.77
Grand Canyon Education Inc	2.59	15.02
Brink's Co (The)	2.26	10.27
Martin Marietta Materials Inc.	2.23	18.46
Horizon Therapeutics Public Ltd Co	2.21	25.82
Crown Holdings Inc	2.18	-2.96
Encompass Health Corp	2.18	-0.62
Bio-Techne Corp	2.13	20.37
Trex Co Inc	1.90	9.34
Pure Storage Inc	1.81	-4.73

Top Contributors

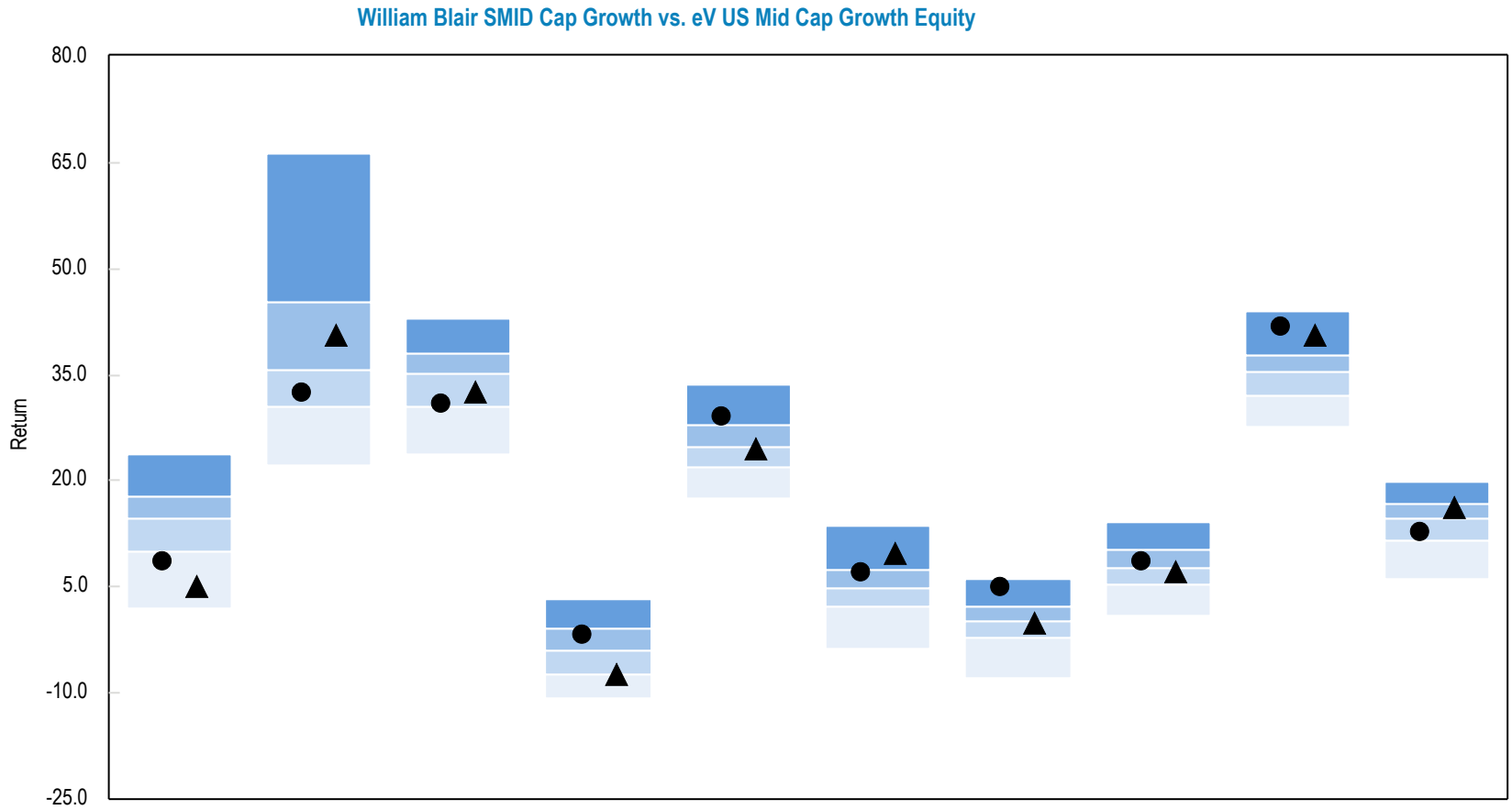
	Wgt (%)	Return (%)	Contr (%)
Penumbra Inc	1.46	54.62	0.80
Horizon Therapeutics Public Ltd Co	2.34	25.82	0.60
Ligand Pharmaceuticals Inc	1.11	53.29	0.59
Generac Holdings Inc	1.27	43.99	0.56
Western Alliance Bancorporation	0.77	58.01	0.44
Martin Marietta Materials Inc.	2.27	18.46	0.42
Grand Canyon Education Inc	2.28	15.02	0.34
10x Genomics Inc	1.22	27.82	0.34
Etsy Inc	2.49	13.35	0.33
Bio-Techne Corp	1.58	20.37	0.32

Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
NICE Ltd	2.24	-23.13	-0.52
Liveramp Holdings Inc	1.29	-29.12	-0.38
Mercury Systems Inc	1.89	-19.77	-0.37
MongoDB Inc	1.26	-25.52	-0.32
Avalara Inc	1.52	-19.08	-0.29
Alarm.com Holdings Inc	1.74	-16.50	-0.29
Cable One Inc	1.57	-17.83	-0.28
Ritchie Bros Auctioneers Inc	1.76	-15.49	-0.27
Guidewire Software Inc	0.83	-21.05	-0.18
SolarEdge Technologies Inc	1.70	-9.93	-0.17

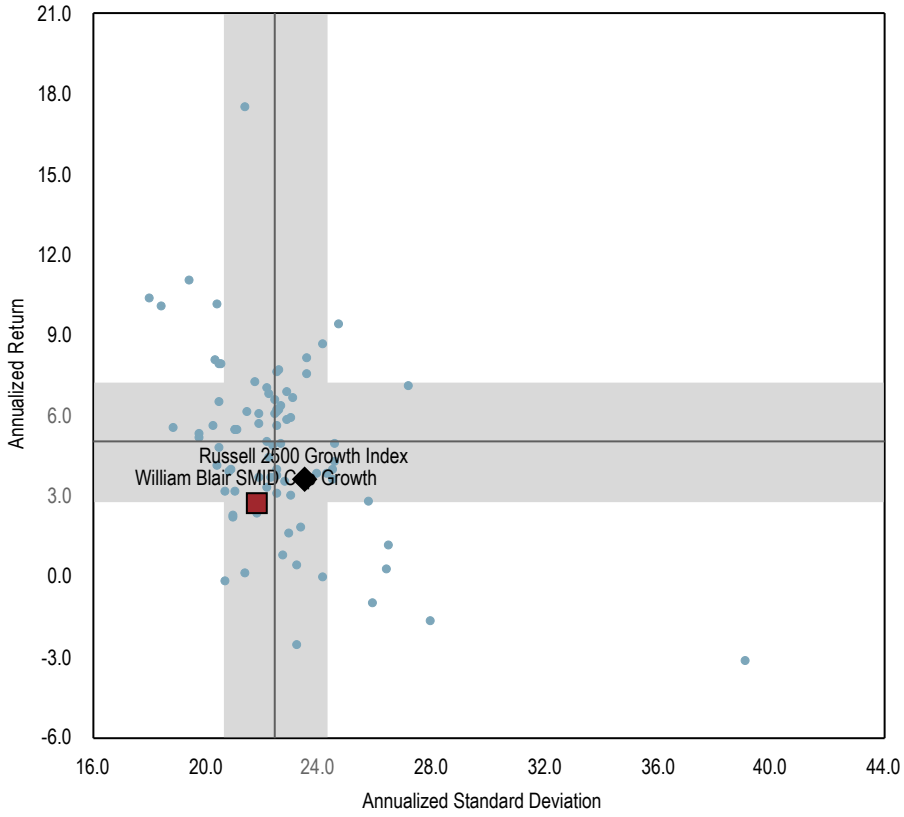


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● William Blair SMID Cap Growth	-20.95 (50)	-28.10 (53)	-28.10 (53)	2.81 (81)	8.15 (71)	8.54 (57)	12.37 (27)
▲ Russell 2500 Growth Index	-19.55 (31)	-31.81 (73)	-31.81 (73)	3.68 (72)	7.53 (80)	7.05 (79)	10.88 (65)
5th Percentile	-15.28	-17.37	-17.37	10.17	12.90	11.38	13.33
1st Quartile	-18.90	-23.61	-23.61	6.63	10.89	9.72	12.47
Median	-20.99	-27.07	-27.07	5.07	9.78	9.06	11.49
3rd Quartile	-22.99	-32.75	-32.75	3.22	8.01	7.27	10.40
95th Percentile	-28.14	-41.94	-41.94	-0.14	5.93	5.49	8.97
Population	84	84	84	81	76	74	73

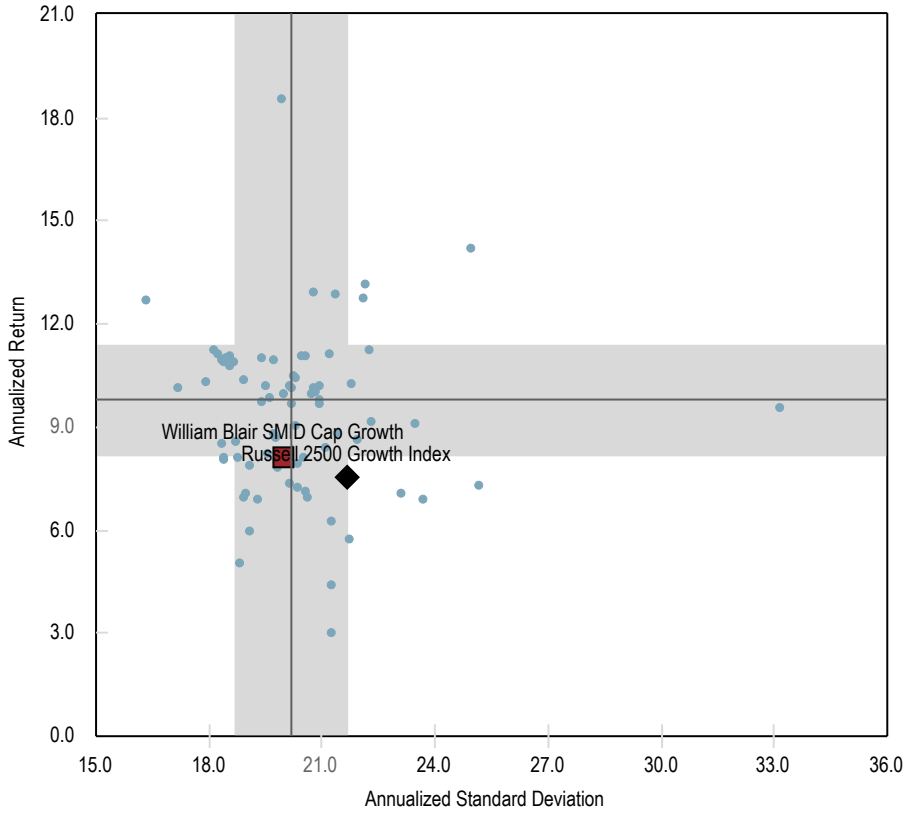


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● William Blair SMID Cap Growth	8.67 (79)	32.60 (65)	31.10 (74)	-1.74 (31)	29.31 (16)	7.24 (27)	5.19 (8)	8.78 (39)	41.79 (9)	12.83 (70)
▲ Russell 2500 Growth Index	5.04 (91)	40.47 (39)	32.65 (62)	-7.47 (76)	24.46 (56)	9.73 (13)	-0.19 (55)	7.05 (61)	40.65 (13)	16.13 (32)
5th Percentile	23.66	66.37	42.80	3.18	33.60	13.54	6.00	14.24	44.03	19.84
1st Quartile	17.90	45.14	38.08	-0.93	27.81	7.30	2.26	10.34	37.65	16.80
Median	14.60	35.68	35.21	-4.11	24.73	4.86	0.27	7.77	35.53	14.59
3rd Quartile	10.12	30.61	30.61	-7.29	22.06	2.17	-2.29	5.34	31.95	11.68
95th Percentile	2.00	22.17	23.85	-10.77	17.53	-3.85	-7.80	0.86	27.76	6.06
Population	91	96	97	102	106	113	120	121	123	124

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Mid Cap Growth Equity

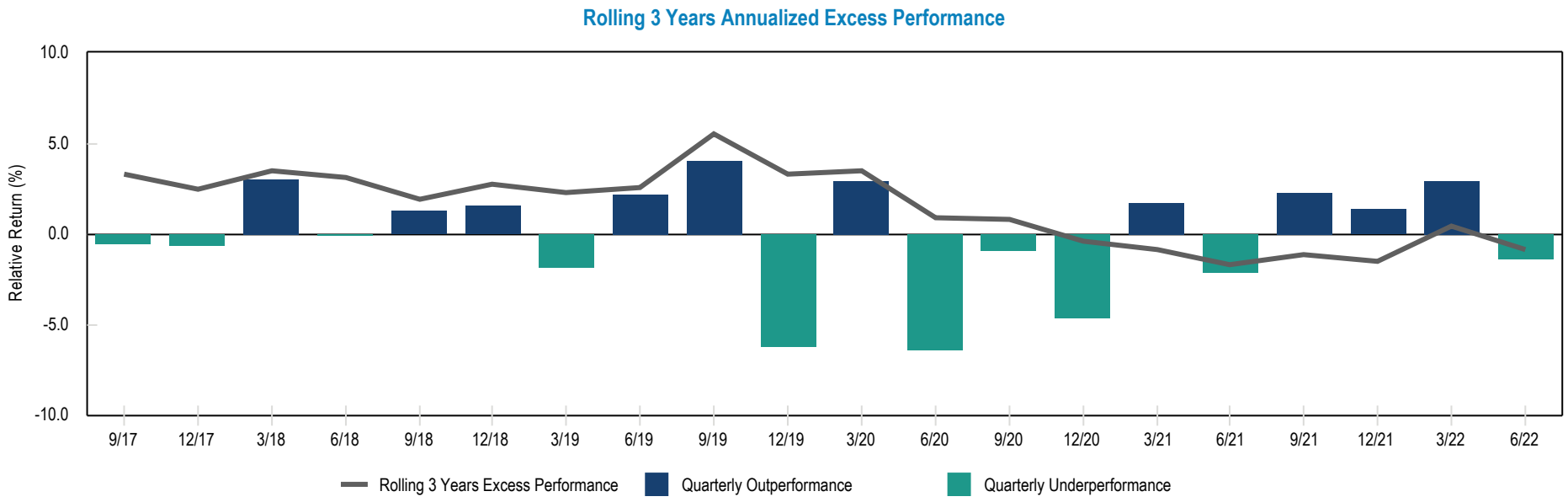


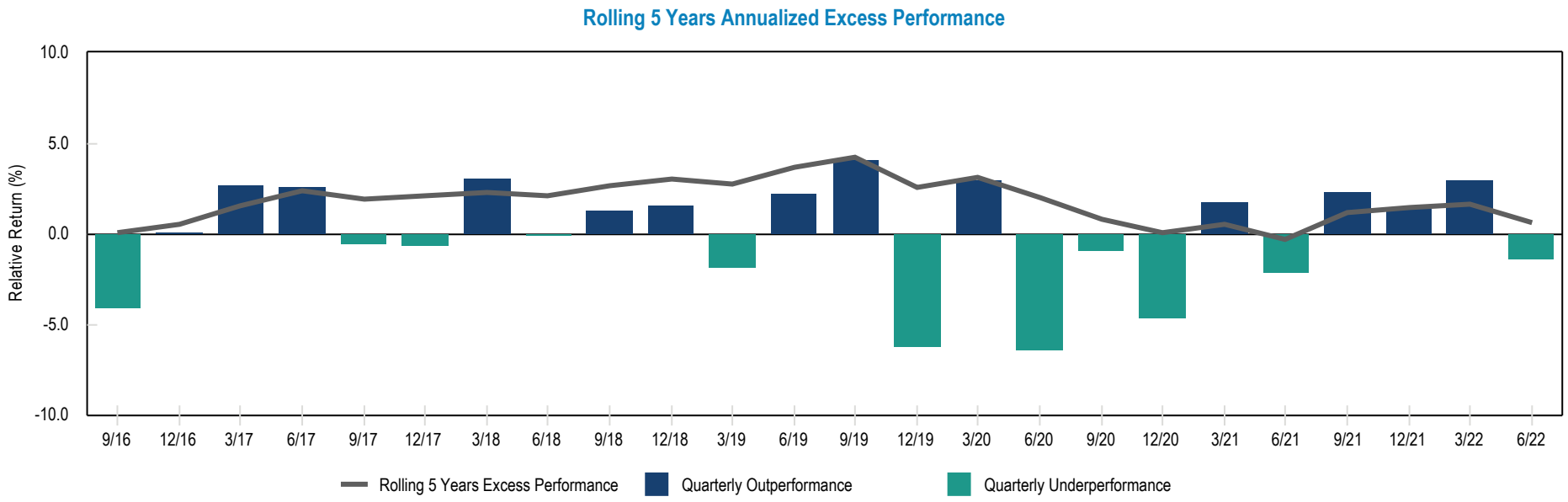
5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Mid Cap Growth Equity



	3 Years		
	Return	Standard Deviation	Sharpe Ratio
William Blair SMID Cap Growth	2.81	21.75	0.21
Russell 2500 Growth Index	3.68	23.46	0.25

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
William Blair SMID Cap Growth	8.15	19.98	0.44
Russell 2500 Growth Index	7.53	21.65	0.39

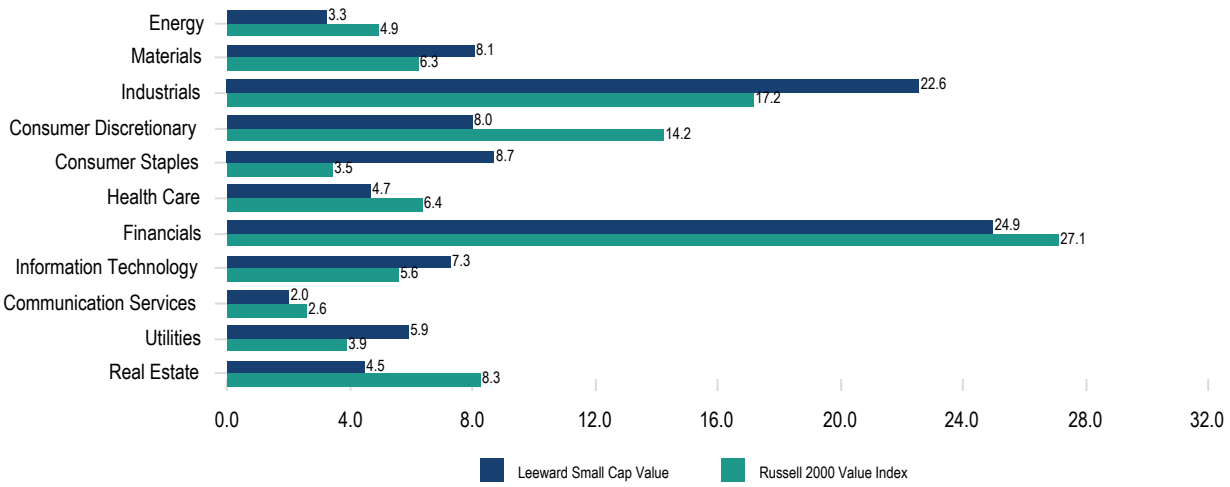

Rolling 3 Years Annualized Excess Performance
10.0
5.0
0.0
-5.0
-10.0
Relative Return (%)
9/17
12/17
3/18
6/18
9/18
12/18
3/19
6/19
9/19
12/19
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
Rolling 3 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance


Rolling 5 Years Annualized Excess Performance
10.0
5.0
0.0
-5.0
-10.0
Relative Return (%)
9/16
12/16
3/17
6/17
9/17
12/17
3/18
6/18
9/18
12/18
3/19
6/19
9/19
12/19
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
Rolling 5 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

Characteristics

	Portfolio	Benchmark
Number of Stocks	93	1,507
Wtd. Avg. Mkt. Cap $B	3.9	3.2
Median Mkt. Cap $B	3.6	0.9
Price/Earnings ratio	21.66	17.42
Price/Book ratio	2.27	1.98
Return on Equity (%)	0.89	4.88
Current Yield (%)	1.55	1.46
Beta (5 Years, Monthly)	0.93	1.00
R-Squared (5 Years, Monthly)	0.96	1.00

Sector Allocation (%)



Largest Equity Holdings

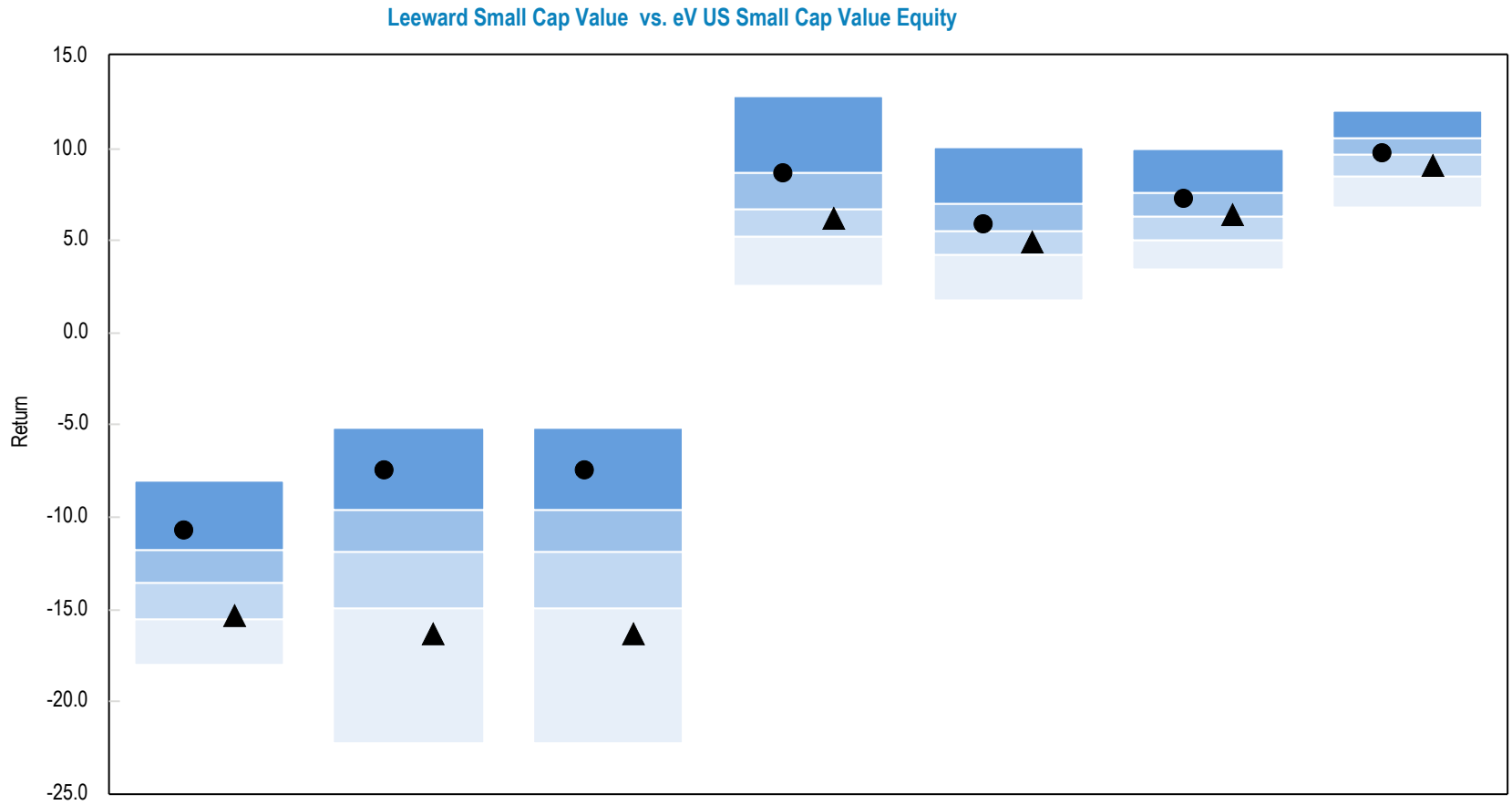
	Wgt (%)	Return (%)
Portland General Electric Co	2.86	11.96
Pinnacle Financial Partners Inc	2.66	38.01
Western Alliance Bancorporation	2.35	58.01
BankUnited Inc	2.35	27.11
Sterling Bancorp	2.25	28.52
F.N.B. Corp	2.04	35.00
TreeHouse Foods Inc	2.04	22.95
Regal Rexnord Corporation	2.04	16.42
MGIC Investment Corp	1.94	10.88
Murphy USA Inc	1.84	10.68

Top Contributors

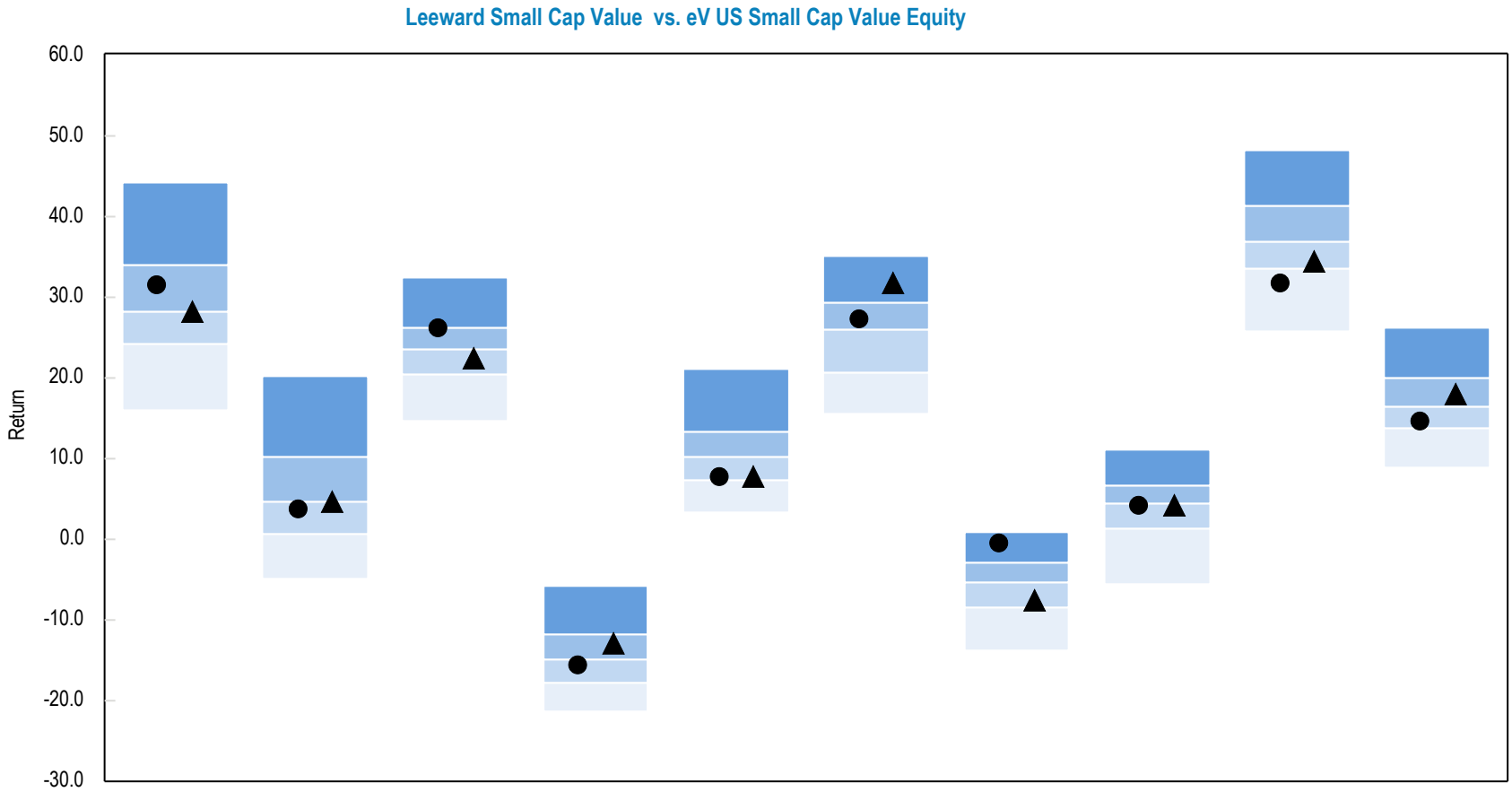
	Wgt (%)	Return (%)	Contr (%)
Western Alliance Bancorporation	1.83	58.01	1.06
Pinnacle Financial Partners Inc	2.24	38.01	0.85
First Horizon Corp	2.34	33.68	0.79
BankUnited Inc	2.24	27.11	0.61
Sterling Bancorp	2.03	28.52	0.58
F.N.B. Corp	1.53	35.00	0.53
Korn Ferry	1.12	43.61	0.49
TreeHouse Foods Inc	1.93	22.95	0.44
TEGNA Inc	1.22	35.50	0.43
American Eagle Outfitters Inc.	0.92	46.37	0.42

Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Huron Consulting Group Inc	1.32	-14.54	-0.19
Livent Corp	1.22	-8.07	-0.10
CIRCOR International Inc	0.81	-9.42	-0.08
Harsco Corp	0.92	-4.62	-0.04
Carter's Inc.	0.61	-5.46	-0.03
Hostess Brands Inc	1.32	-2.05	-0.03
ManTech International Corp	1.02	-1.78	-0.02
CACI International Inc	1.32	-1.07	-0.01
Ingevity Corp	1.02	-0.26	0.00
Altra Industrial Motion Corp	1.42	-0.10	0.00

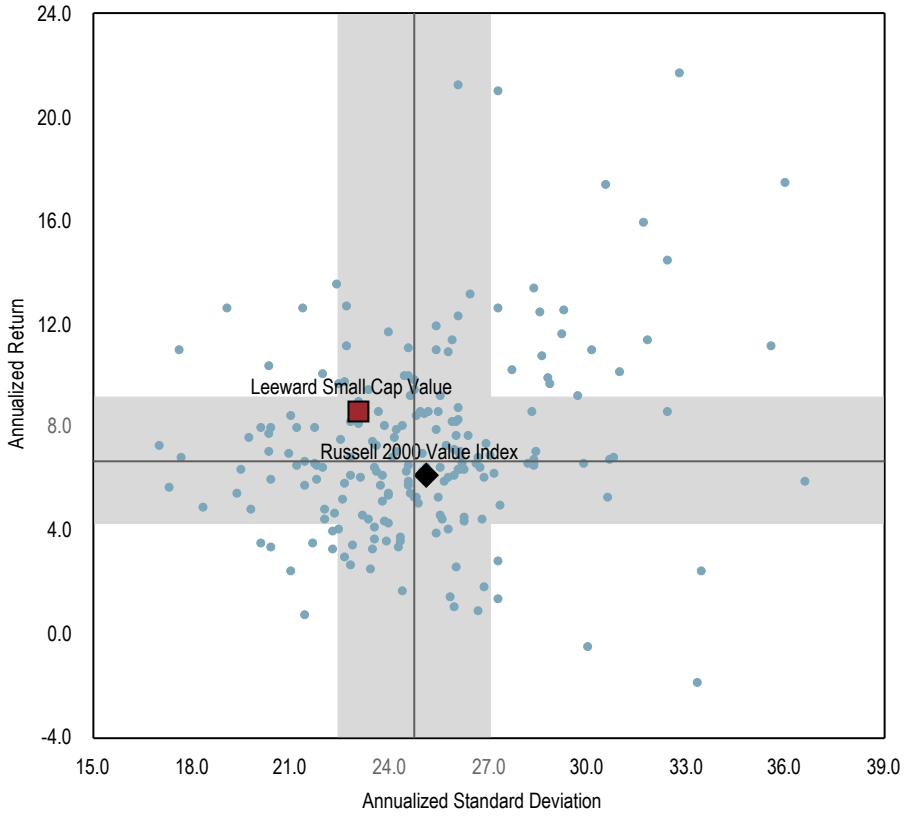


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Leeward Small Cap Value	-10.68 (15)	-7.44 (14)	-7.44 (14)	8.68 (25)	5.89 (44)	7.33 (29)	9.79 (46)
▲ Russell 2000 Value Index	-15.28 (74)	-16.28 (80)	-16.28 (80)	6.18 (64)	4.89 (64)	6.40 (49)	9.05 (64)
5th Percentile	-7.98	-5.12	-5.12	12.84	10.10	9.92	12.01
1st Quartile	-11.74	-9.58	-9.58	8.66	6.96	7.63	10.52
Median	-13.51	-11.85	-11.85	6.75	5.55	6.28	9.62
3rd Quartile	-15.49	-14.88	-14.88	5.26	4.21	5.07	8.44
95th Percentile	-17.96	-22.27	-22.27	2.51	1.75	3.40	6.77
Population	204	202	202	197	190	178	167

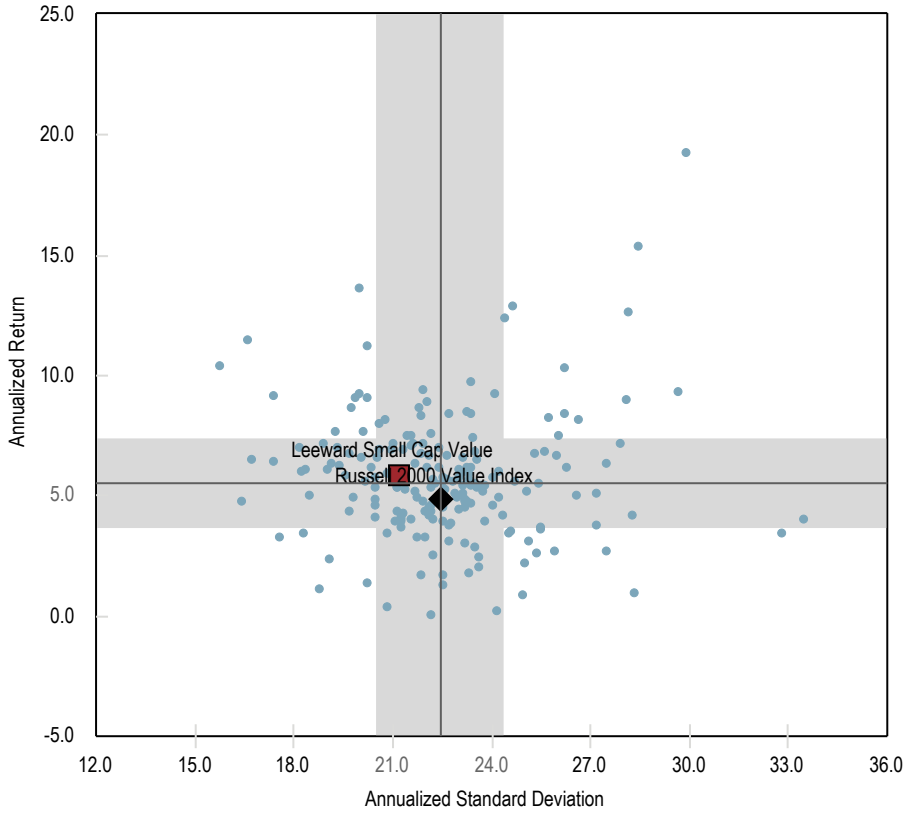


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● Leeward Small Cap Value	31.60 (37)	3.78 (57)	26.32 (25)	-15.49 (57)	7.67 (72)	27.28 (38)	-0.52 (10)	4.12 (55)	31.83 (85)	14.64 (66)
▲ Russell 2000 Value Index	28.27 (50)	4.63 (51)	22.39 (61)	-12.86 (34)	7.84 (71)	31.74 (14)	-7.47 (71)	4.22 (55)	34.52 (71)	18.05 (41)
5th Percentile	44.20	20.22	32.43	-5.70	21.21	35.06	0.86	11.04	48.28	26.16
1st Quartile	34.04	10.28	26.28	-11.75	13.41	29.27	-2.94	6.75	41.26	19.93
Median	28.15	4.72	23.55	-14.85	10.28	25.96	-5.27	4.52	36.87	16.47
3rd Quartile	24.18	0.70	20.43	-17.83	7.30	20.71	-8.42	1.35	33.58	13.70
95th Percentile	16.10	-4.81	14.59	-21.24	3.30	15.61	-13.80	-5.46	25.80	8.91
Population	211	223	232	239	250	249	249	256	252	247

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Small Cap Value Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Small Cap Value Equity

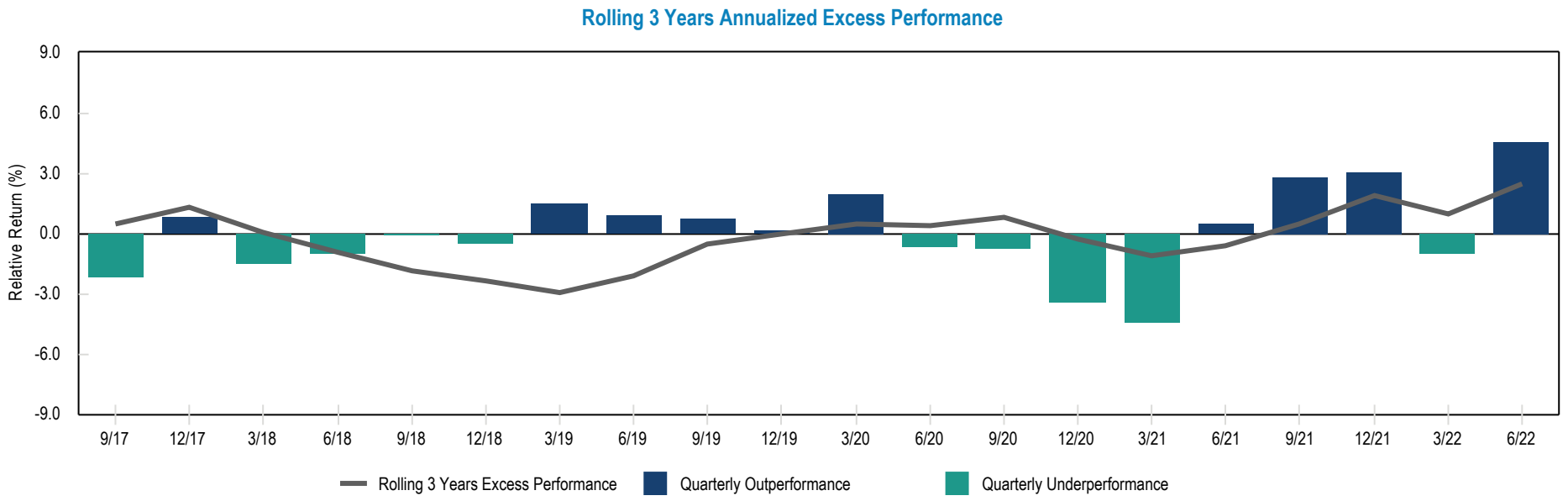


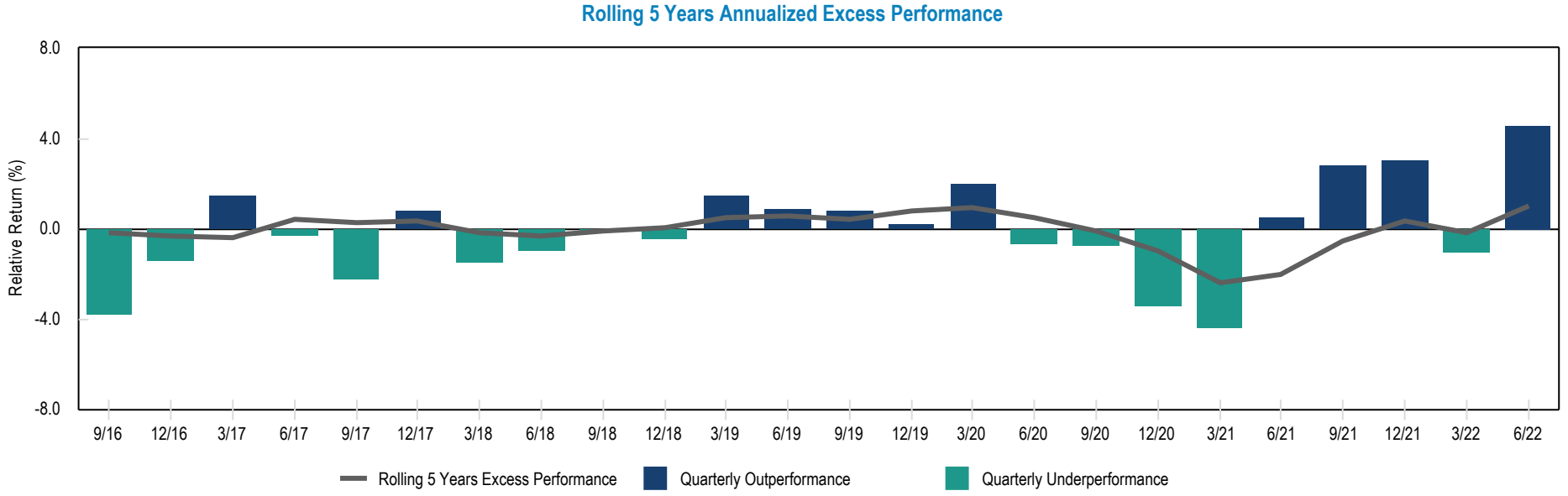
3 Years

	Return	Standard Deviation	Sharpe Ratio
Leeward Small Cap Value	8.68	23.04	0.45
Russell 2000 Value Index	6.18	25.10	0.34

5 Years

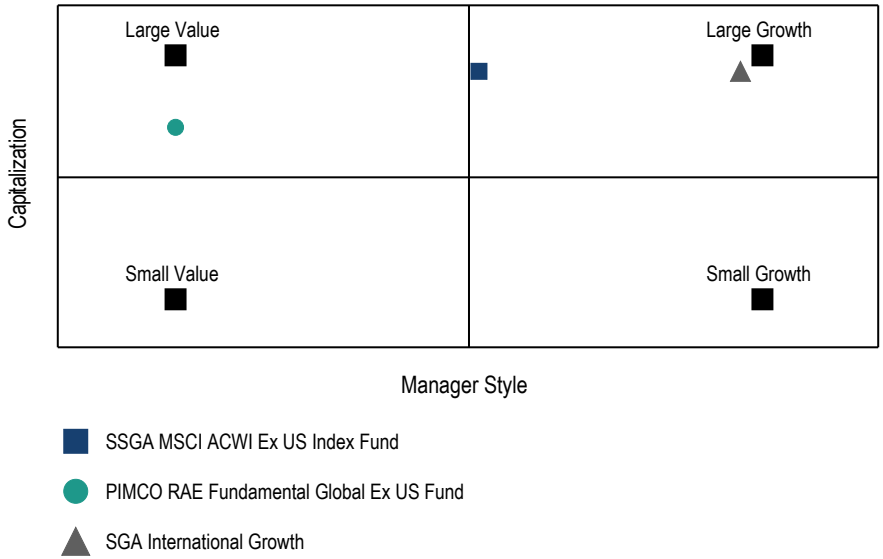
	Return	Standard Deviation	Sharpe Ratio
Leeward Small Cap Value	5.89	21.21	0.33
Russell 2000 Value Index	4.89	22.49	0.28


Rolling 3 Years Annualized Excess Performance
9.0
6.0
3.0
0.0
-3.0
-6.0
-9.0
Relative Return (%)
9/17
12/17
3/18
6/18
9/18
12/18
3/19
6/19
9/19
12/19
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
Rolling 3 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

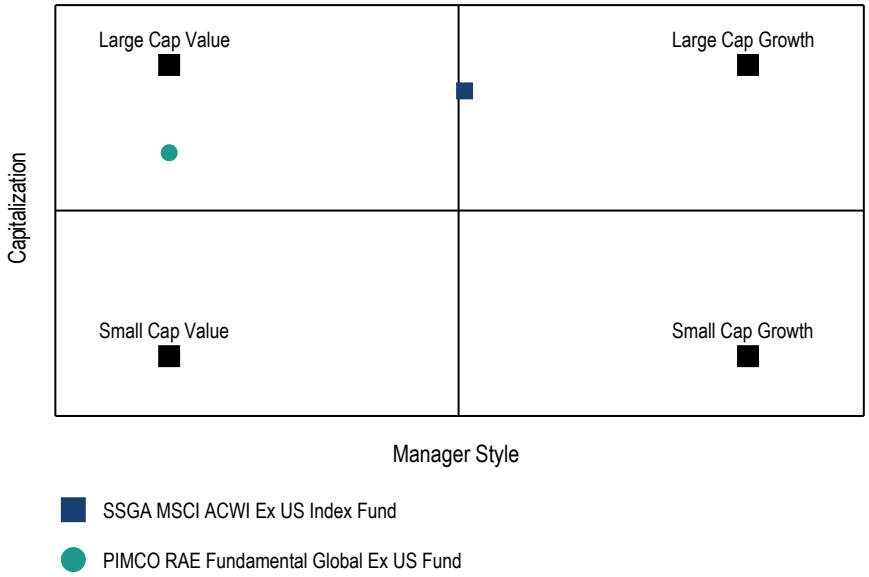

Rolling 5 Years Annualized Excess Performance
8.0
4.0
0.0
-4.0
-8.0
Relative Return (%)
9/16
12/16
3/17
6/17
9/17
12/17
3/18
6/18
9/18
12/18
3/19
6/19
9/19
12/19
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
Rolling 5 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

	Market Value	% of Portfolio	Quarter	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2021	2020	2019	2018
Total International Equity	**257,425,018**	**100.0**	**-12.8**	**-17.8**	**-18.5**	**-18.5**	**2.7**	**3.5**	**5.5**	**9.6**	**9.6**	**13.4**	**22.7**	**-14.5**
MSCI AC World ex USA Index			*-13.5*	*-18.2*	*-19.0*	*-19.0*	*1.8*	*3.0*	*5.3*	*8.3*	*8.3*	*11.1*	*22.1*	*-13.8*
SSGA MSCI ACWI Ex US Index Fund	89,330,536	34.7	-13.5	-18.2	-19.2	-19.2	1.6	2.7	5.1	7.9	7.9	10.9	21.8	-14.0
MSCI AC World ex USA (Net)			*-13.7*	*-18.4*	*-19.4*	*-19.4*	*1.4*	*2.5*	*4.8*	*7.8*	*7.8*	*10.7*	*21.5*	*-14.2*
eV All EAFE Equity Rank			*42*	*35*	*53*	*53*	*50*	*38*	*78*	*77*	*77*	*37*	*56*	*36*
PIMCO RAE Fundamental Global Ex US Fund	89,217,836	34.7	-11.3	-13.7	-15.5	-15.5	1.5	1.8	-	12.3	12.3	1.7	16.1	-15.1
MSCI AC World ex USA Value (Net)			*-11.9*	*-11.8*	*-12.8*	*-12.8*	*0.6*	*1.2*	*3.8*	*10.5*	*10.5*	*-0.8*	*15.7*	*-14.0*
eV EAFE Value Equity Rank			*47*	*44*	*58*	*58*	*53*	*39*	*-*	*41*	*41*	*62*	*87*	*37*
SGA International Growth	78,876,645	30.6	-13.7	-21.6	-21.0	-21.0	4.1	-	-	9.1	9.1	26.0	30.5	-
MSCI AC World ex USA Growth (Net)			*-15.7*	*-24.8*	*-25.8*	*-25.8*	*1.6*	*3.4*	*5.7*	*5.1*	*5.1*	*22.2*	*27.3*	*-14.4*
eV ACWI ex-US Growth Equity Rank			*18*	*17*	*18*	*18*	*30*	*-*	*-*	*47*	*47*	*51*	*40*	*-*

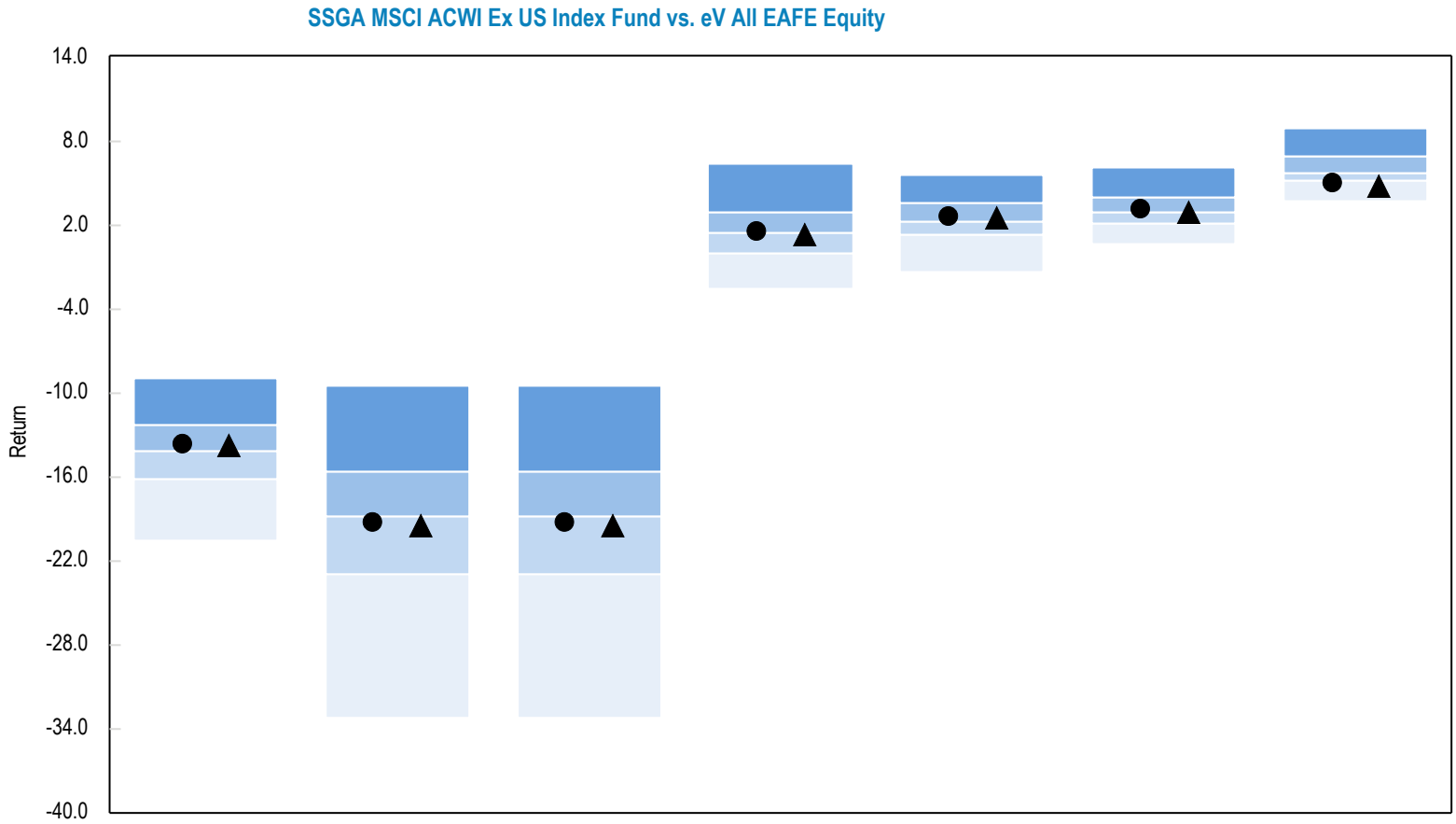
EAFE Effective Style Map
3 Years



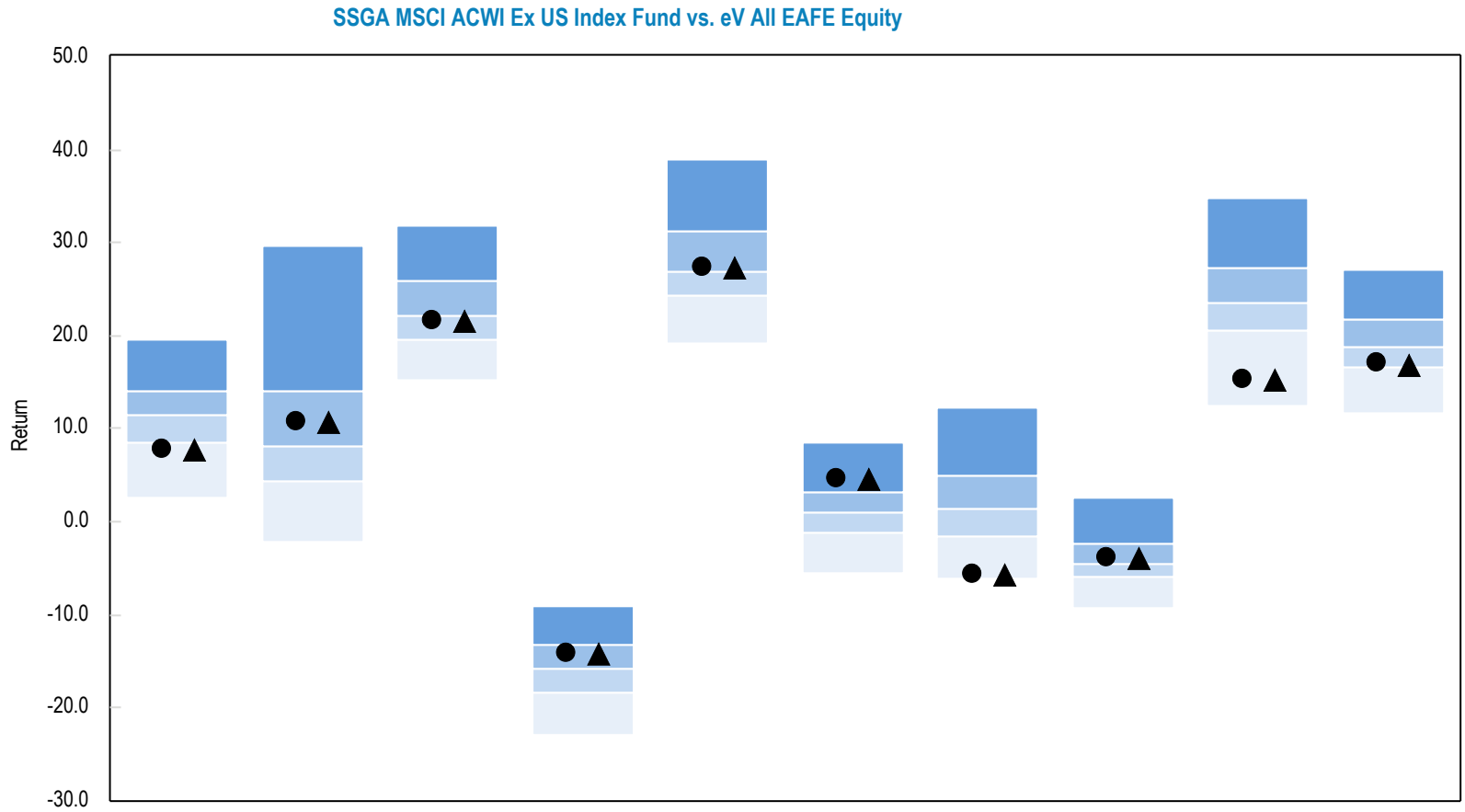
EAFE Effective Style Map
5 Years



Research Affiliates converted to PIMCO RAE Fundamental Global Ex US Fund on 6/5/15 (performance prior to this date represents previously held Enhanced RAFI Global ex US).

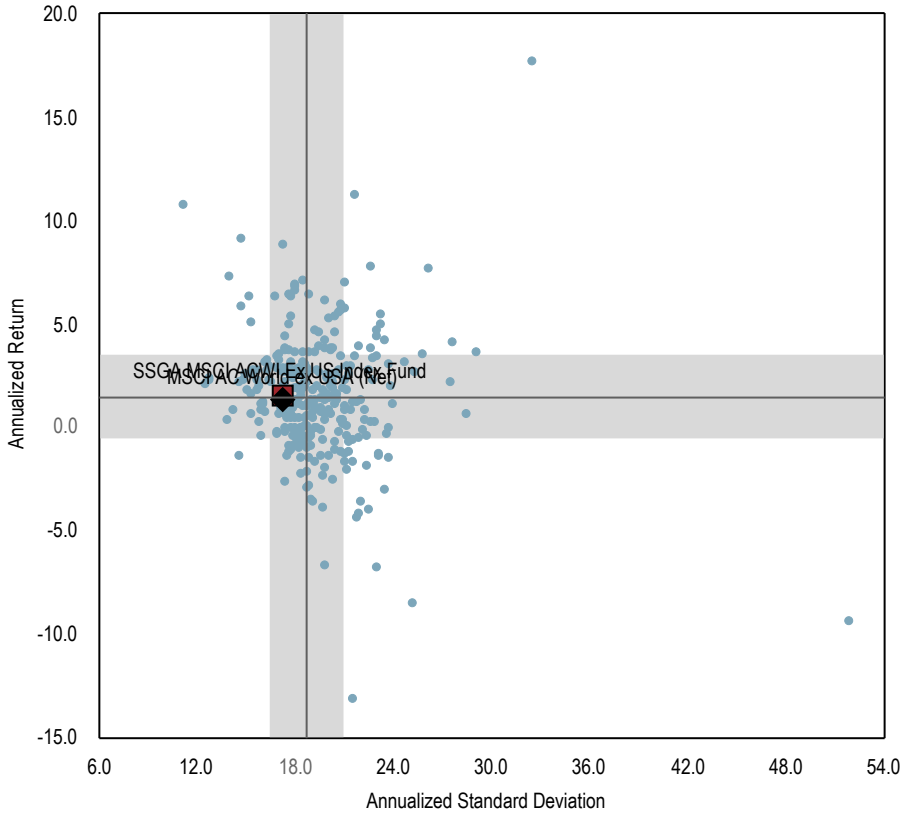


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● SSGA MSCI ACWI Ex US Index Fund	-13.54 (42)	-19.21 (53)	-19.21 (53)	1.57 (50)	2.72 (38)	3.13 (47)	5.05 (78)
▲ MSCI AC World ex USA (Net)	-13.73 (44)	-19.42 (55)	-19.42 (55)	1.35 (54)	2.50 (42)	2.92 (51)	4.83 (82)
5th Percentile	-8.91	-9.43	-9.43	6.41	5.64	6.13	9.00
1st Quartile	-12.21	-15.64	-15.64	2.92	3.55	3.95	6.87
Median	-14.20	-18.86	-18.86	1.50	2.25	2.95	5.80
3rd Quartile	-16.15	-22.88	-22.88	0.06	1.28	2.11	5.22
95th Percentile	-20.55	-33.18	-33.18	-2.49	-1.33	0.68	3.79
Population	334	333	333	315	295	259	209

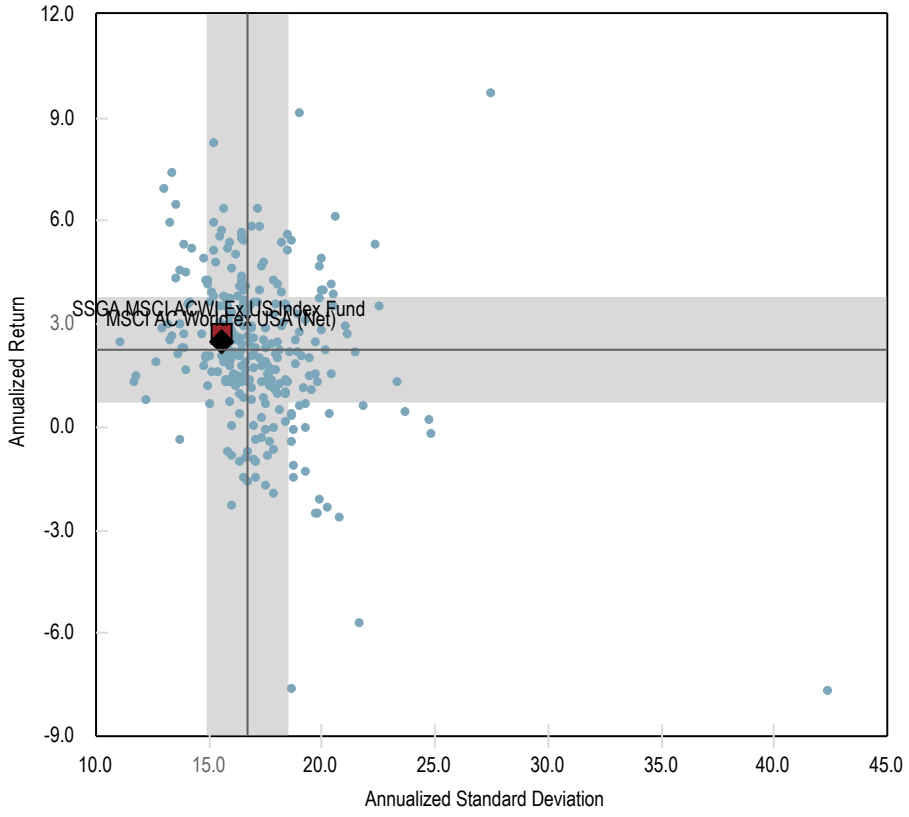


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● SSGA MSCI ACWI Ex US Index Fund	7.95 (77)	10.93 (37)	21.78 (56)	-14.04 (36)	27.46 (45)	4.69 (19)	-5.54 (94)	-3.68 (39)	15.50 (92)	17.21 (68)
▲ MSCI AC World ex USA (Net)	7.82 (77)	10.65 (38)	21.51 (59)	-14.20 (37)	27.19 (47)	4.50 (19)	-5.66 (94)	-3.87 (43)	15.29 (92)	16.83 (74)
5th Percentile	19.60	29.59	31.80	-9.00	38.96	8.59	12.23	2.61	34.73	27.15
1st Quartile	14.09	14.07	25.90	-13.19	31.32	3.28	5.00	-2.41	27.28	21.68
Median	11.40	8.18	22.16	-15.81	26.91	0.97	1.43	-4.42	23.58	18.74
3rd Quartile	8.57	4.29	19.49	-18.38	24.23	-1.09	-1.58	-5.94	20.49	16.59
95th Percentile	2.50	-2.22	15.25	-22.92	19.22	-5.47	-6.02	-9.17	12.50	11.63
Population	355	374	385	395	394	388	374	368	343	341

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV All EAFE Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV All EAFE Equity



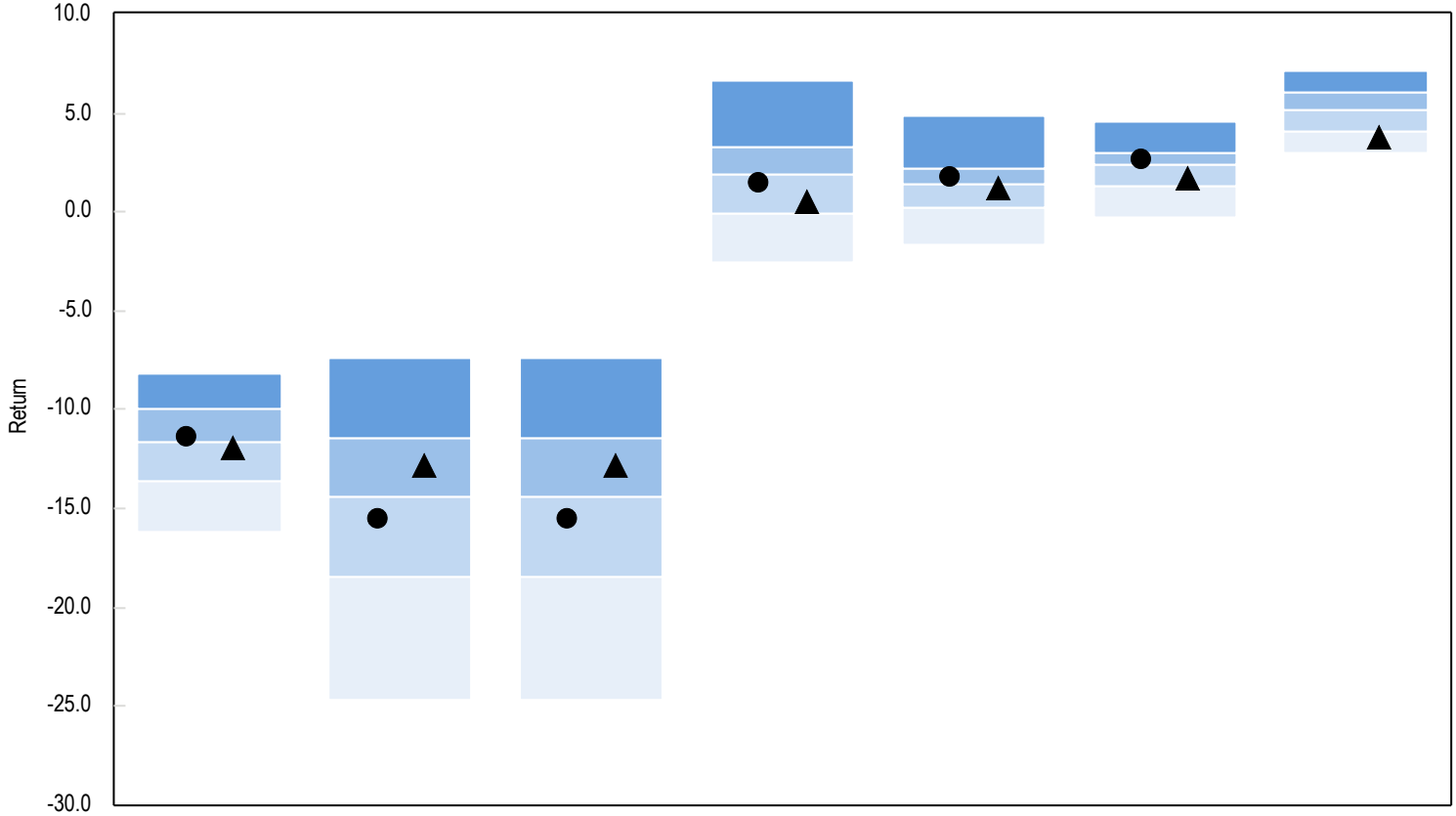
3 Years

	Return	Standard Deviation	Sharpe Ratio
SSGA MSCI ACWI Ex US Index Fund	1.57	17.17	0.14
MSCI AC World ex USA (Net)	1.35	17.22	0.13

5 Years

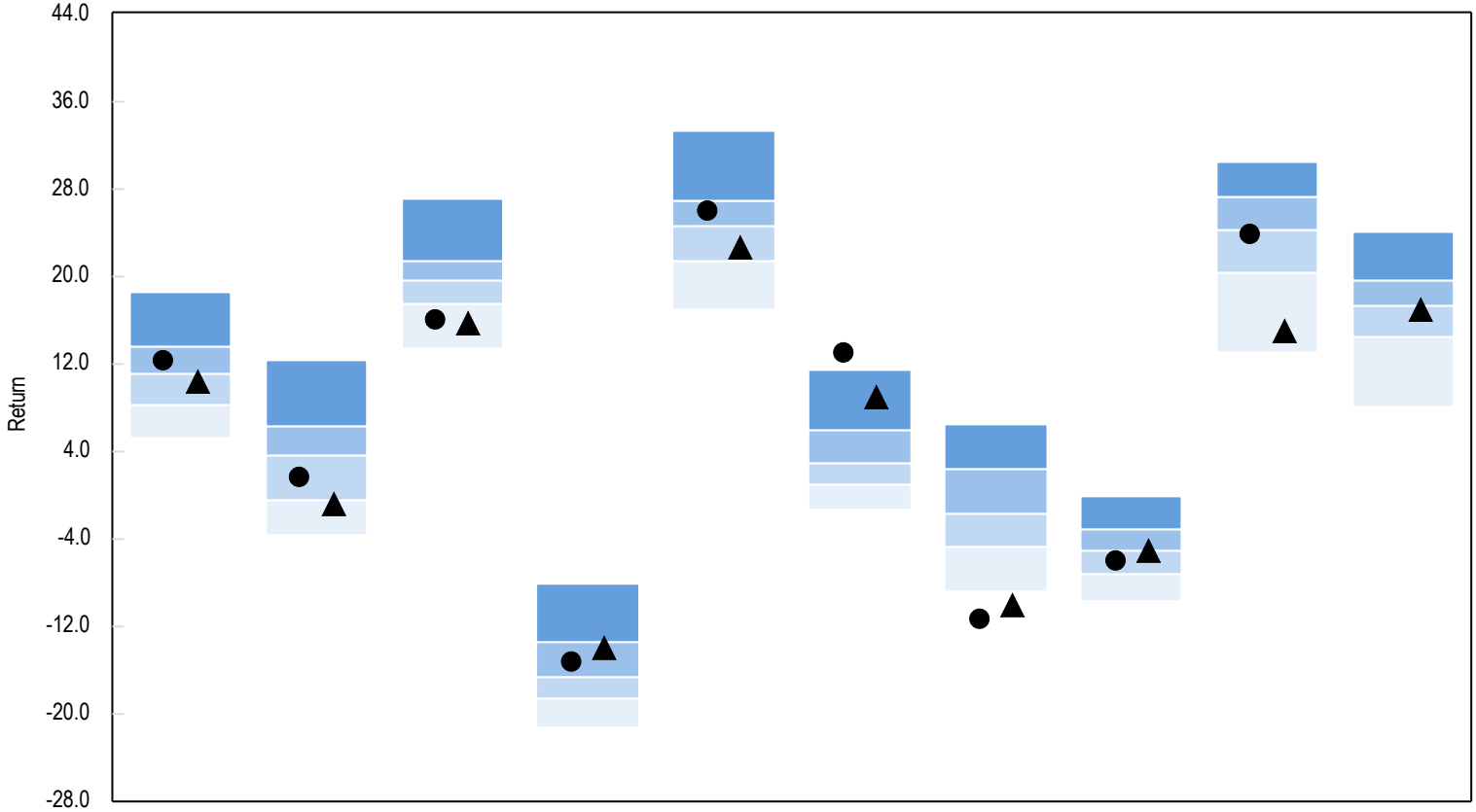
	Return	Standard Deviation	Sharpe Ratio
SSGA MSCI ACWI Ex US Index Fund	2.72	15.53	0.18
MSCI AC World ex USA (Net)	2.50	15.57	0.17

PIMCO RAE Fundamental Global Ex US Fund vs. eV EAFE Value Equity



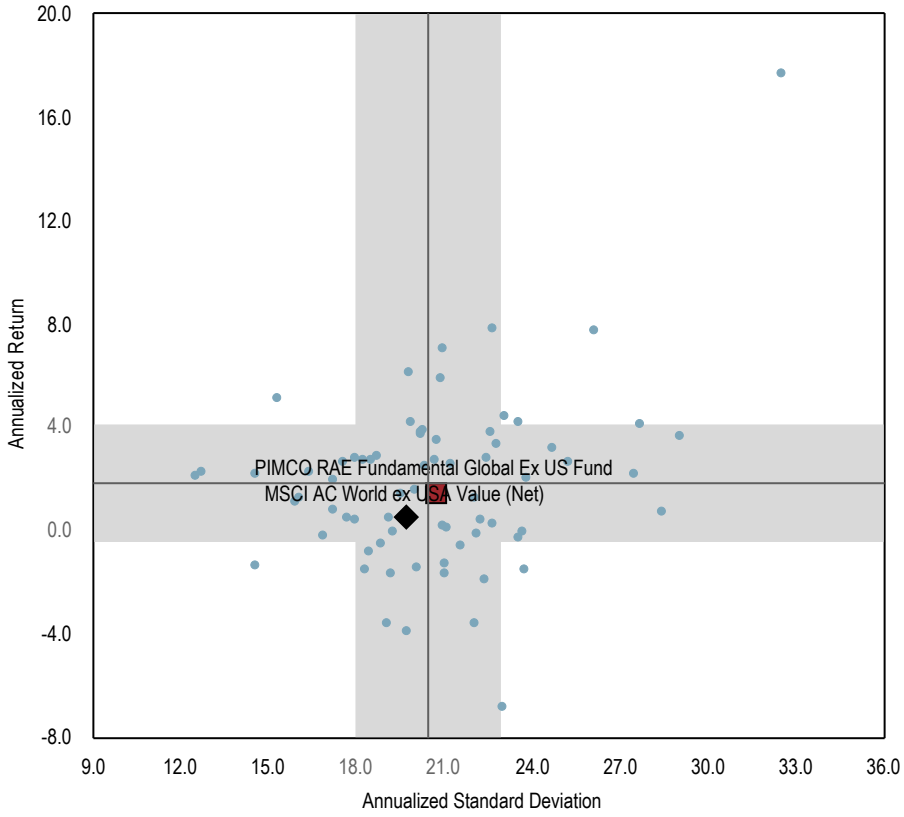
	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● PIMCO RAE Fundamental Global Ex US Fund	-11.34 (48)	-15.49 (59)	-15.49 (59)	1.48 (54)	1.76 (40)	2.65 (36)	-
▲ MSCI AC World ex USA Value (Net)	-11.90 (53)	-12.77 (35)	-12.77 (35)	0.56 (65)	1.23 (60)	1.72 (67)	3.76 (87)
5th Percentile	-8.17	-7.40	-7.40	6.62	4.90	4.59	7.17
1st Quartile	-9.98	-11.44	-11.44	3.28	2.23	2.99	6.01
Median	-11.61	-14.44	-14.44	1.86	1.41	2.38	5.19
3rd Quartile	-13.64	-18.40	-18.40	-0.02	0.20	1.30	4.10
95th Percentile	-16.19	-24.71	-24.71	-2.57	-1.63	-0.27	2.94
Population	78	78	78	72	64	56	48

PIMCO RAE Fundamental Global Ex US Fund vs. eV EAFE Value Equity

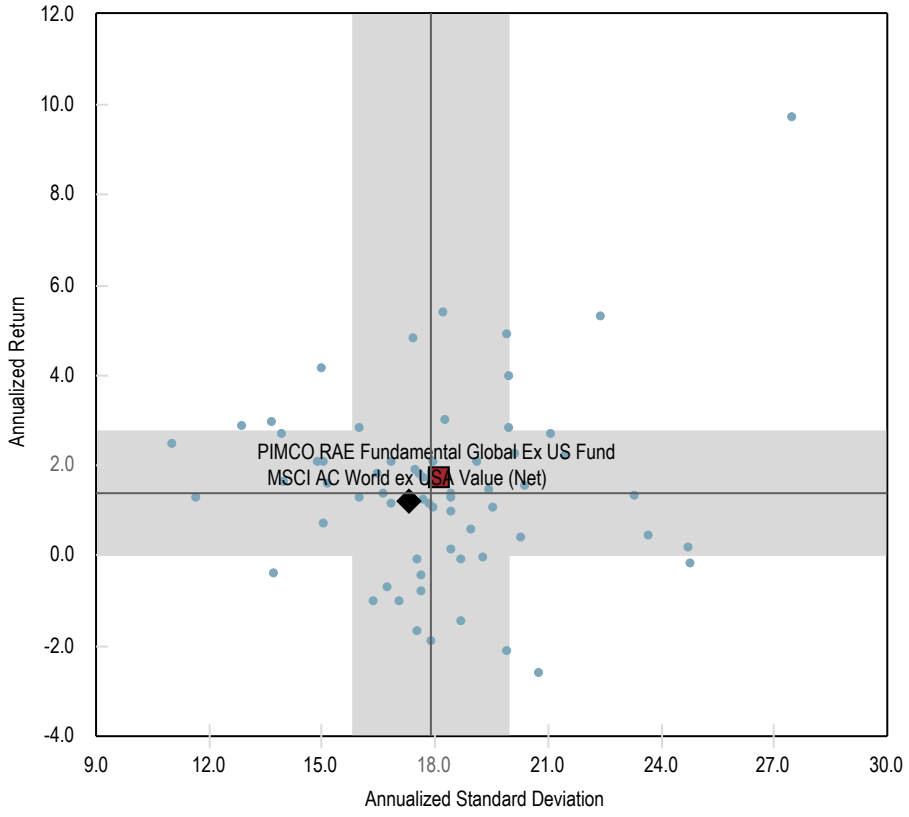


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● PIMCO RAE Fundamental Global Ex US Fund	12.30 (41)	1.69 (62)	16.05 (87)	-15.12 (37)	25.99 (30)	12.99 (2)	-11.36 (99)	-5.90 (62)	23.92 (53)	-
▲ MSCI AC World ex USA Value (Net)	10.46 (58)	-0.77 (77)	15.72 (88)	-13.97 (31)	22.66 (61)	8.92 (11)	-10.06 (98)	-5.10 (51)	15.04 (93)	16.97 (55)
5th Percentile	18.65	12.42	27.16	-8.16	33.39	11.45	6.53	-0.05	30.50	24.06
1st Quartile	13.64	6.25	21.50	-13.45	27.01	5.95	2.48	-3.16	27.26	19.64
Median	11.20	3.56	19.61	-16.62	24.65	3.01	-1.76	-5.08	24.19	17.42
3rd Quartile	8.25	-0.44	17.54	-18.54	21.36	1.03	-4.72	-7.15	20.34	14.41
95th Percentile	5.19	-3.73	13.34	-21.30	16.89	-1.42	-8.77	-9.66	13.01	8.15
Population	85	88	85	84	85	88	88	87	82	83

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV EAFE Value Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV EAFE Value Equity

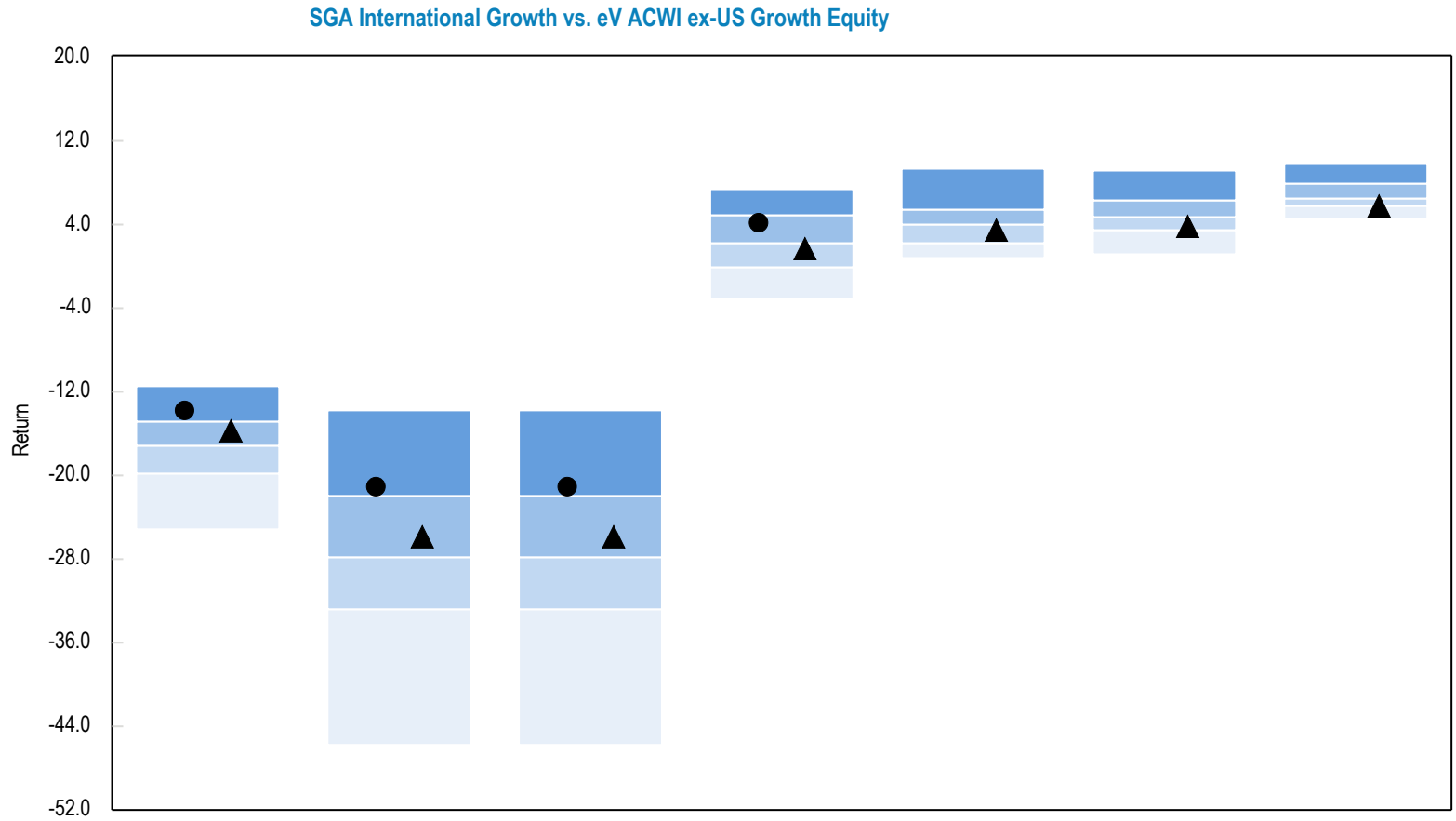


3 Years

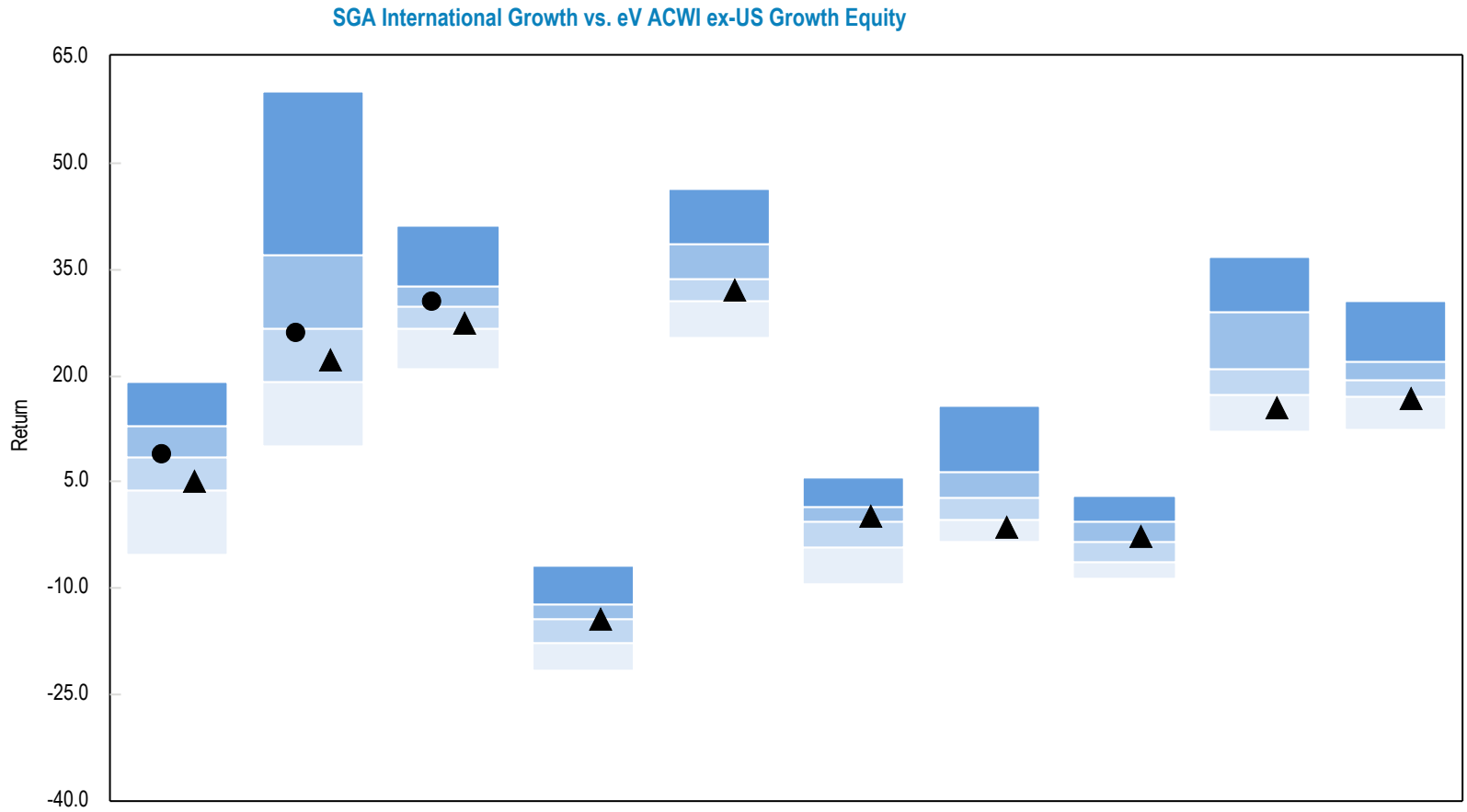
	Return	Standard Deviation	Sharpe Ratio
PIMCO RAE Fundamental Global Ex US Fund	1.48	20.72	0.15
MSCI AC World ex USA Value (Net)	0.56	19.71	0.10

5 Years

	Return	Standard Deviation	Sharpe Ratio
PIMCO RAE Fundamental Global Ex US Fund	1.76	18.12	0.13
MSCI AC World ex USA Value (Net)	1.23	17.29	0.09

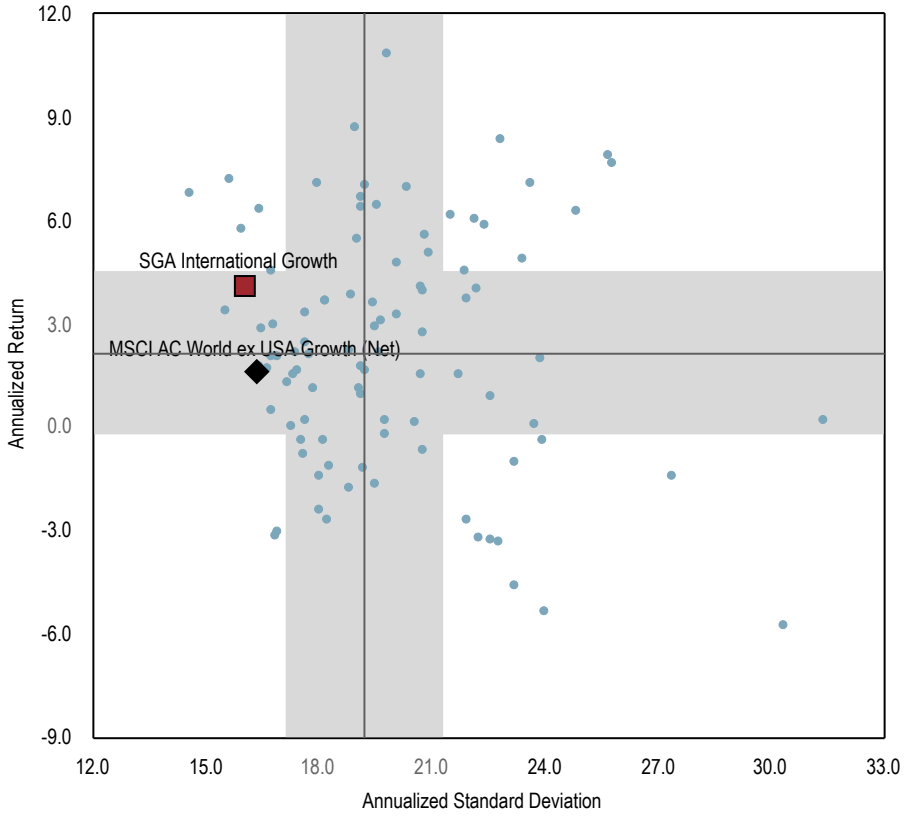


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● SGA International Growth	-13.72 (18)	-21.01 (18)	-21.01 (18)	4.14 (29)	-	-	-
▲ MSCI AC World ex USA Growth (Net)	-15.71 (31)	-25.80 (40)	-25.80 (40)	1.62 (60)	3.43 (58)	3.86 (66)	5.71 (80)
5th Percentile	-11.51	-13.77	-13.77	7.40	9.31	9.10	9.95
1st Quartile	-14.84	-22.02	-22.02	4.87	5.50	6.33	7.88
Median	-17.17	-27.83	-27.83	2.18	3.98	4.77	6.54
3rd Quartile	-19.75	-32.72	-32.72	-0.02	2.22	3.54	5.81
95th Percentile	-25.20	-45.80	-45.80	-3.19	0.71	1.19	4.62
Population	104	104	104	95	85	75	61

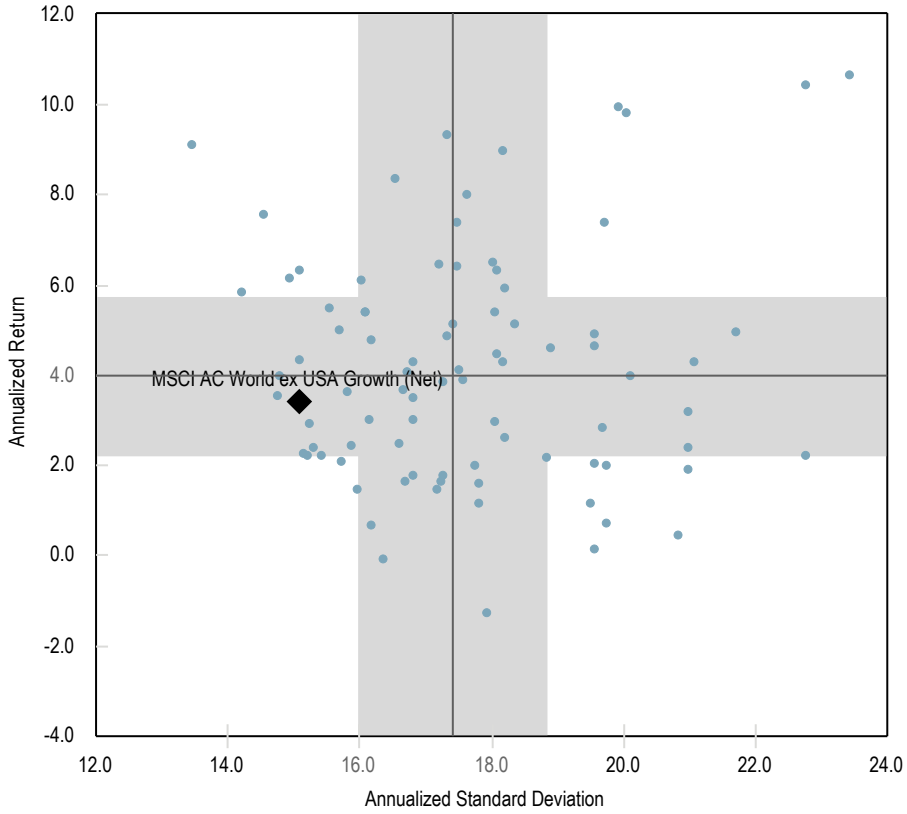


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● SGA International Growth	9.11 (47)	26.04 (51)	30.52 (40)	-	-	-	-	-	-	-
▲ MSCI AC World ex USA Growth (Net)	5.09 (72)	22.20 (66)	27.34 (74)	-14.43 (52)	32.01 (69)	0.12 (43)	-1.25 (84)	-2.65 (46)	15.49 (79)	16.67 (77)
5th Percentile	19.03	60.14	41.26	-6.81	46.27	5.54	15.69	2.98	36.85	30.39
1st Quartile	12.98	36.96	32.58	-12.36	38.43	1.59	6.38	-0.72	28.85	21.94
Median	8.55	26.67	29.71	-14.25	33.74	-0.56	2.81	-3.32	21.01	19.38
3rd Quartile	3.72	19.17	26.75	-17.60	30.47	-4.25	-0.44	-6.34	17.41	17.01
95th Percentile	-5.15	9.98	20.93	-21.53	25.33	-9.34	-3.49	-8.73	12.17	12.29
Population	106	103	102	97	98	95	88	82	76	77

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV ACWI ex-US Growth Equity



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV ACWI ex-US Growth Equity



3 Years

	Return	Standard Deviation	Sharpe Ratio
SGA International Growth	4.14	16.00	0.29
MSCI AC World ex USA Growth (Net)	1.62	16.32	0.14

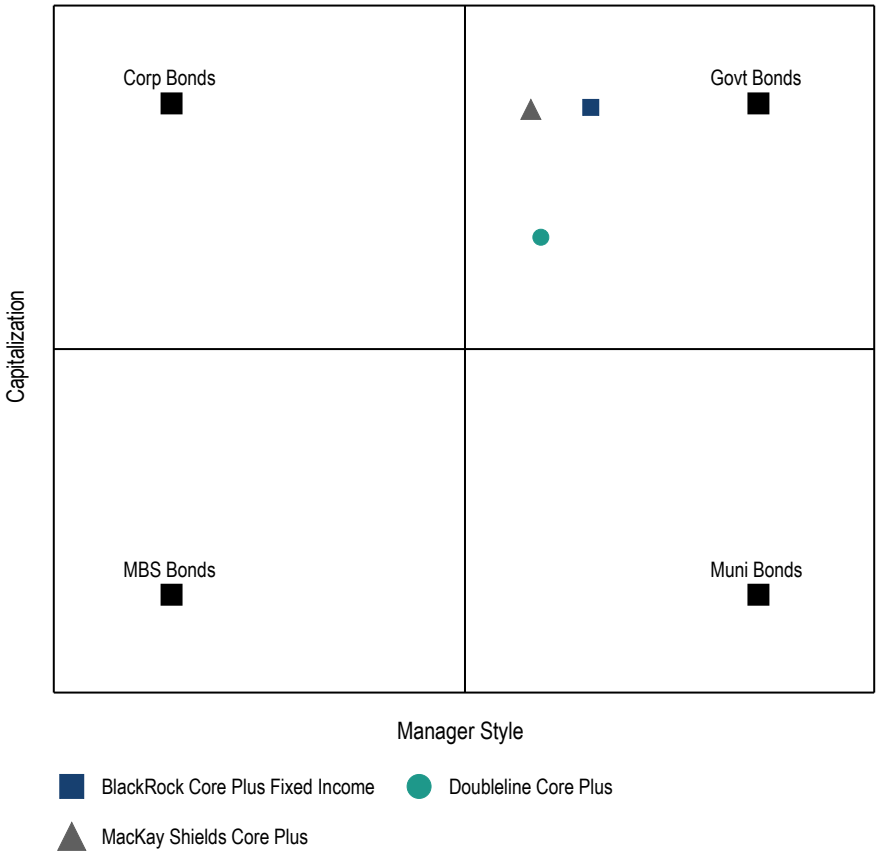
5 Years

	Return	Standard Deviation	Sharpe Ratio
SGA International Growth	-	-	-
MSCI AC World ex USA Growth (Net)	3.43	15.08	0.23

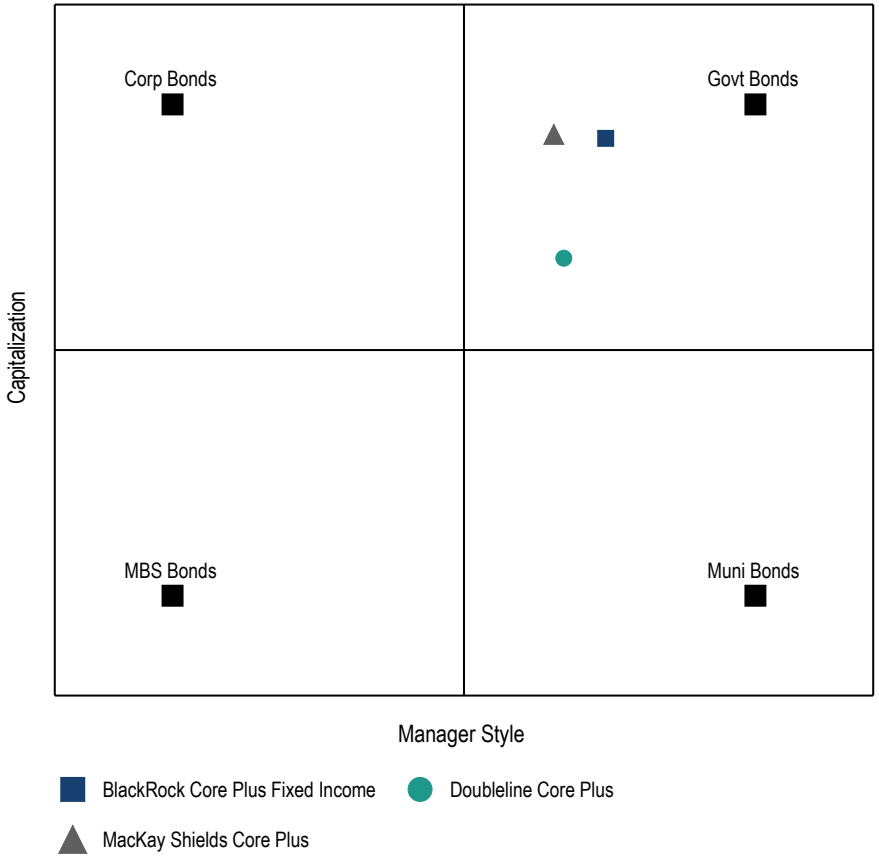
	Market Value	% of Portfolio	Quarter	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	20
Total Fixed Income	**357,688,214**	**100.0**	**-6.0**	**-11.9**	**-12.6**	**-12.6**	**-2.6**	**-0.2**	**1.2**	**-2.2**	**4.7**	**8.1**	**0.1**	
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	
Total Domestic Fixed Income	**309,919,643**	**86.6**	**-5.5**	**-11.1**	**-11.0**	**-11.0**	**-0.8**	**1.0**	**1.8**	**-0.7**	**7.9**	**9.0**	**-0.2**	
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	
BlackRock Core Plus Fixed Income	105,065,625	29.4	-5.1	-11.0	-10.9	-10.9	-0.8	1.0	1.7	-1.4	8.4	8.7	0.1	
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	
eV US Core Plus Fixed Inc Rank			*24*	*38*	*42*	*42*	*74*	*80*	*94*	*89*	*54*	*81*	*24*	
Doubleline Core Plus	103,022,224	28.8	-5.4	-10.2	-10.1	-10.1	-1.3	0.6	-	-0.2	5.2	8.3	-0.3	
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	
eV US Core Plus Fixed Inc Rank			*35*	*21*	*16*	*16*	*94*	*95*	*-*	*40*	*97*	*88*	*35*	
MacKay Shields Core Plus	101,831,795	28.5	-6.0	-12.1	-12.0	-12.0	-0.3	1.2	-	-0.4	9.9	9.6	-1.0	
Blmbg. U.S. Aggregate Index			*-4.7*	*-10.3*	*-10.3*	*-10.3*	*-0.9*	*0.9*	*1.5*	*-1.5*	*7.5*	*8.7*	*0.0*	
eV US Core Plus Fixed Inc Rank			*61*	*79*	*77*	*77*	*35*	*55*	*-*	*47*	*21*	*54*	*75*	
Total Emerging Markets Fixed Income	**47,768,571**	**13.4**	**-9.2**	**-16.7**	**-19.4**	**-19.4**	**-4.6**	**-**	**-**	**-5.3**	**4.6**	**-**	**-**	
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-10.0*	*-17.5*	*-20.2*	*-20.2*	*-5.5*	*-1.7*	*0.4*	*-5.3*	*4.0*	*14.3*	*-5.2*	*1*
PGIM Emerging Markets Debt	47,768,571	13.4	-9.2	-16.7	-19.4	-19.4	-	-	-	-5.3	4.6	-	-	
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			*-10.0*	*-17.5*	*-20.2*	*-20.2*	*-5.5*	*-1.7*	*0.4*	*-5.3*	*4.0*	*14.3*	*-5.2*	*1*
eV Emg Mkts Fixed Inc - Blended Currency Rank			*34*	*49*	*48*	*48*	*-*	*-*	*-*	*77*	*70*	*-*	*-*	

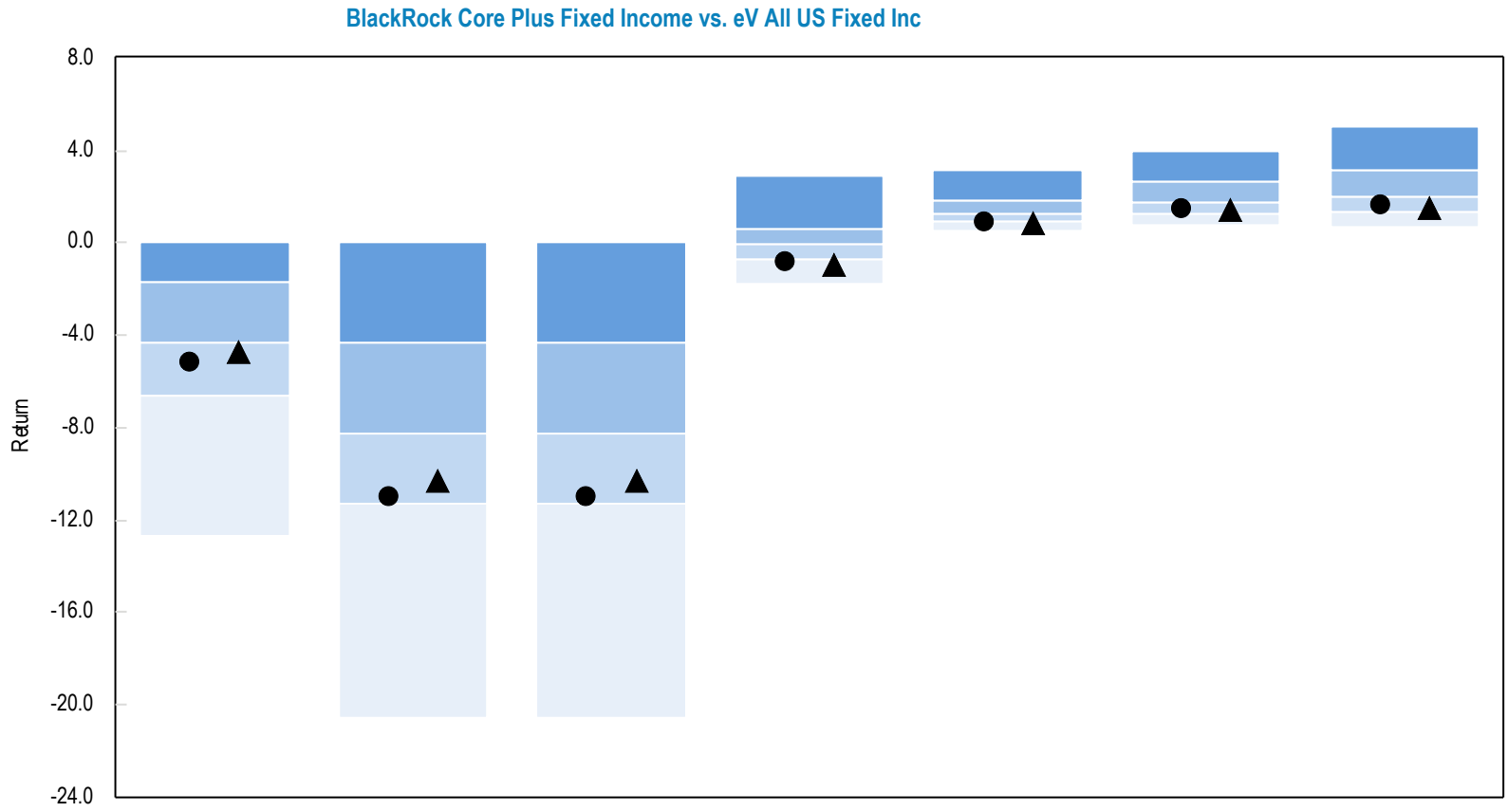
SSGA TIPS liquidated in 12/28/18. Shenkman HY liquidated 3/11/19. PGIM EMD funded 8/26/19. Franklin Templeton Global Bond Plus liquidated 12/28/2021.

Fixed Income Style Map 3 Years

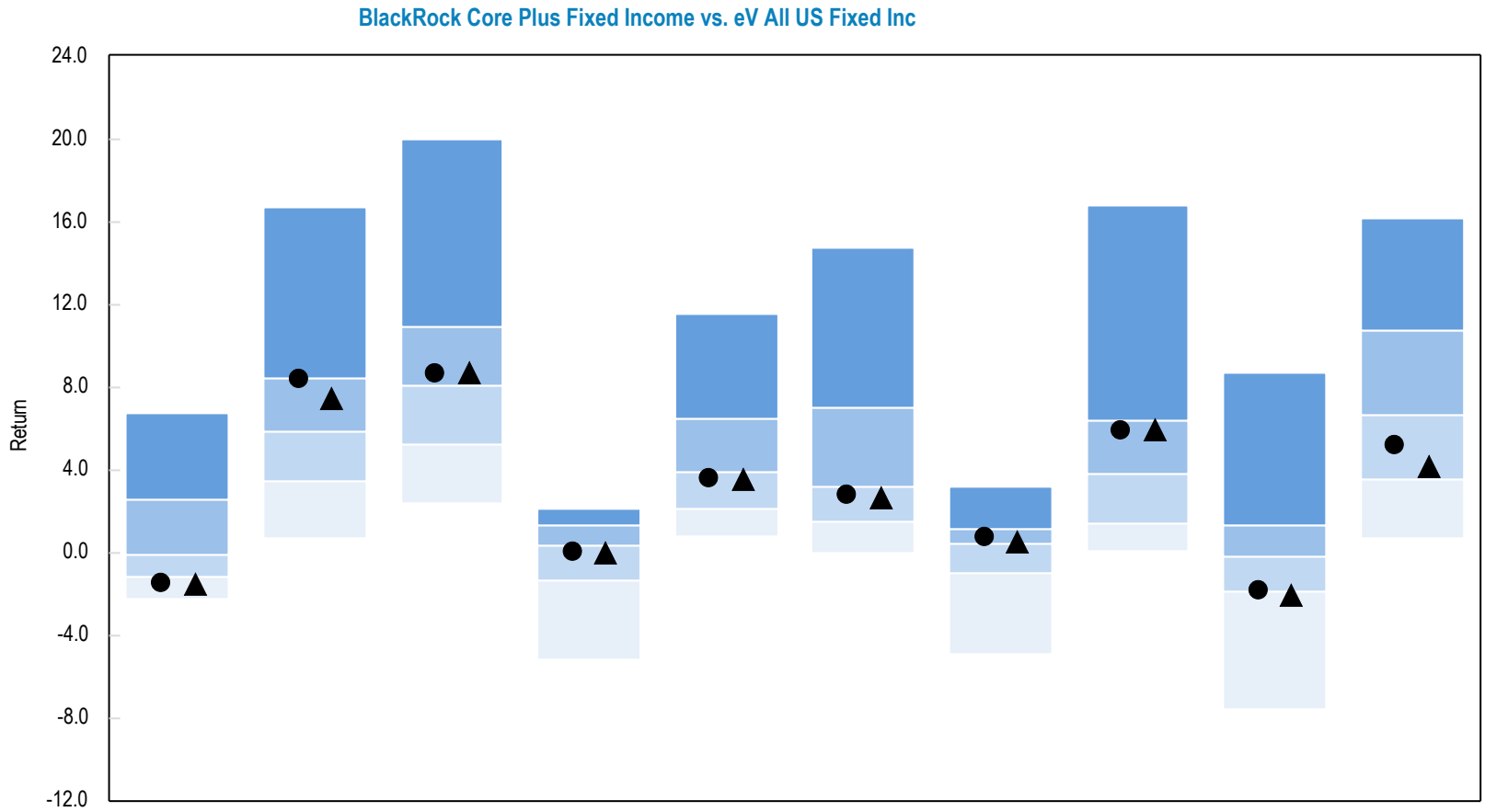


Fixed Income Style Map 5 Years



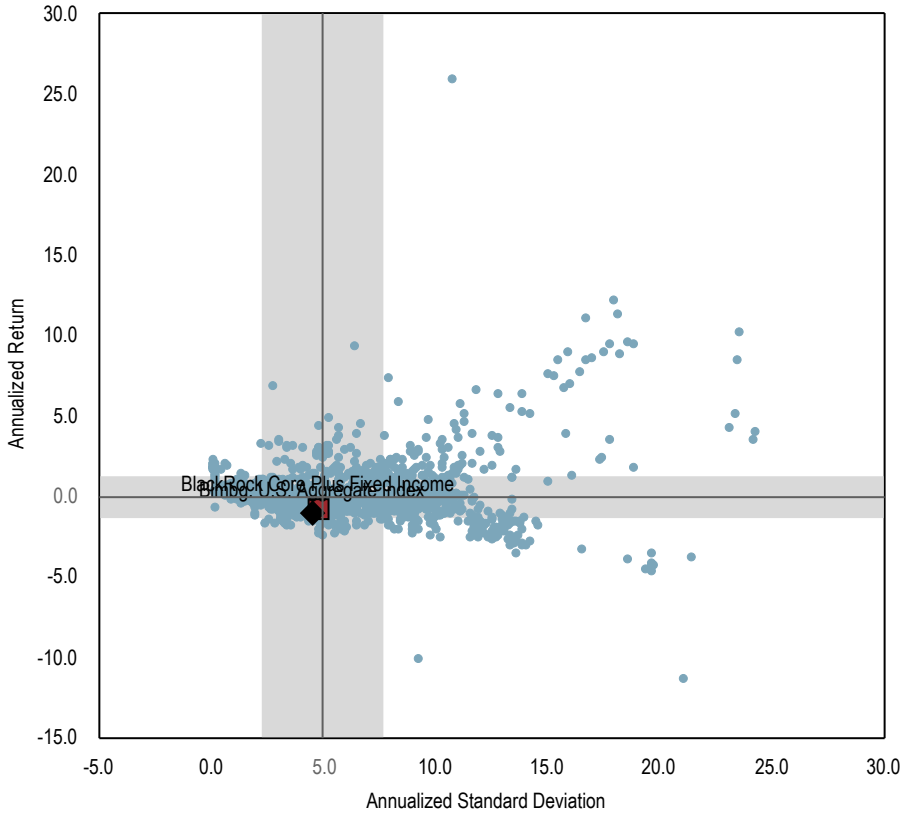


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● BlackRock Core Plus Fixed Income	-5.13 (62)	-10.92 (72)	-10.92 (72)	-0.80 (80)	0.95 (77)	1.52 (62)	1.70 (60)
▲ Blmbg. U.S. Aggregate Index	-4.69 (55)	-10.29 (63)	-10.29 (63)	-0.94 (83)	0.88 (82)	1.42 (67)	1.54 (66)
5th Percentile	0.08	0.04	0.04	2.91	3.20	3.98	5.03
1st Quartile	-1.66	-4.27	-4.27	0.60	1.82	2.69	3.13
Median	-4.33	-8.24	-8.24	-0.04	1.29	1.80	1.97
3rd Quartile	-6.64	-11.32	-11.32	-0.68	0.97	1.25	1.35
95th Percentile	-12.65	-20.54	-20.54	-1.74	0.50	0.76	0.70
Population	1,682	1,672	1,672	1,618	1,546	1,433	1,270

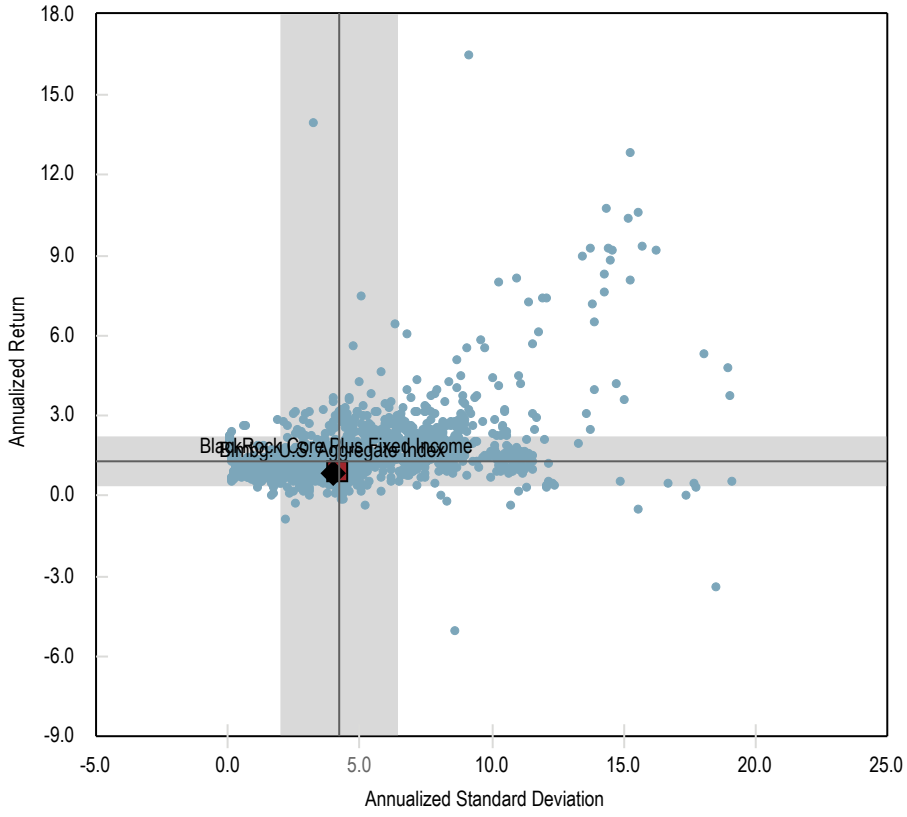


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● BlackRock Core Plus Fixed Income	-1.41 (83)	8.40 (26)	8.75 (43)	0.10 (54)	3.61 (55)	2.87 (54)	0.81 (36)	5.95 (31)	-1.75 (74)	5.22 (61)
▲ Blmbg. U.S. Aggregate Index	-1.55 (85)	7.51 (35)	8.72 (44)	0.01 (56)	3.54 (56)	2.65 (57)	0.55 (46)	5.97 (31)	-2.02 (78)	4.21 (69)
5th Percentile	6.78	16.72	20.02	2.10	11.56	14.74	3.24	16.81	8.69	16.18
1st Quartile	2.62	8.46	10.94	1.29	6.45	7.03	1.17	6.42	1.37	10.72
Median	-0.08	5.84	8.07	0.36	3.88	3.20	0.45	3.86	-0.22	6.62
3rd Quartile	-1.12	3.50	5.28	-1.37	2.14	1.47	-0.98	1.43	-1.85	3.53
95th Percentile	-2.25	0.67	2.38	-5.12	0.83	0.00	-4.91	0.06	-7.59	0.67
Population	1,779	1,846	1,883	1,931	1,930	1,923	1,915	1,888	1,857	1,811

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV All US Fixed Inc



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV All US Fixed Inc

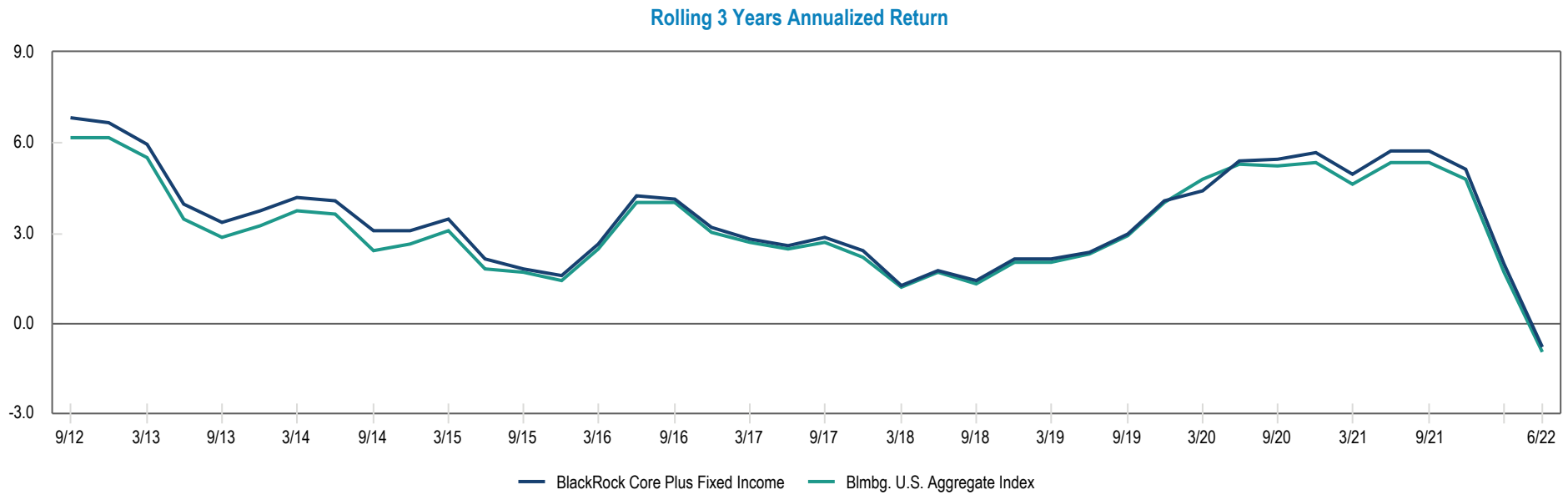


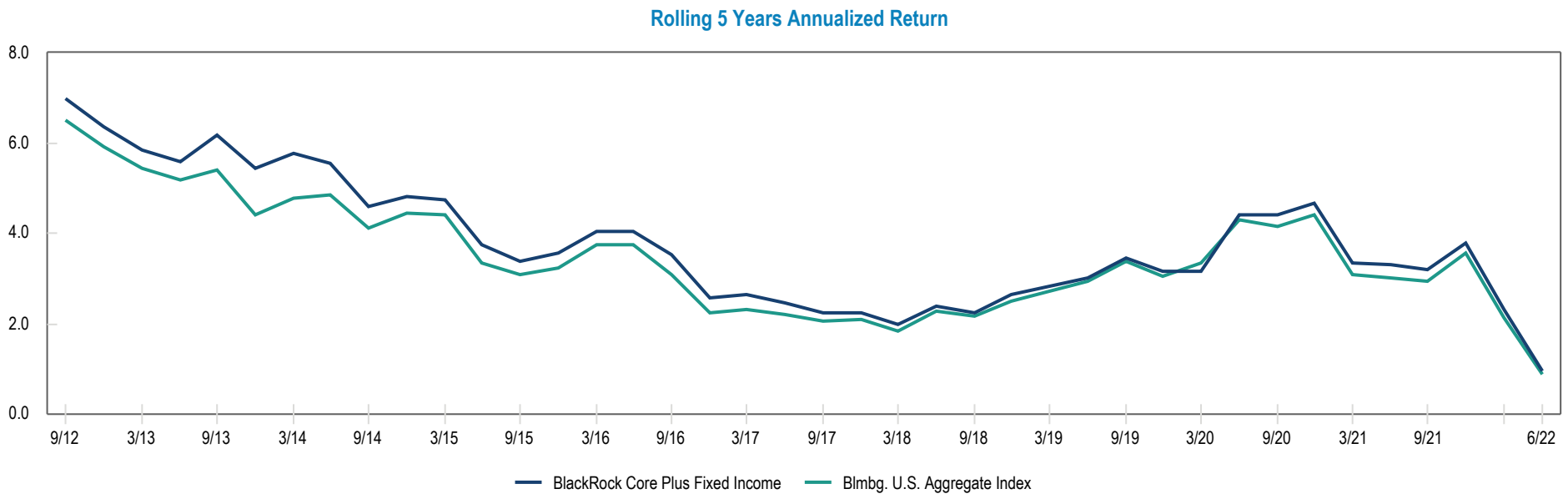
3 Years

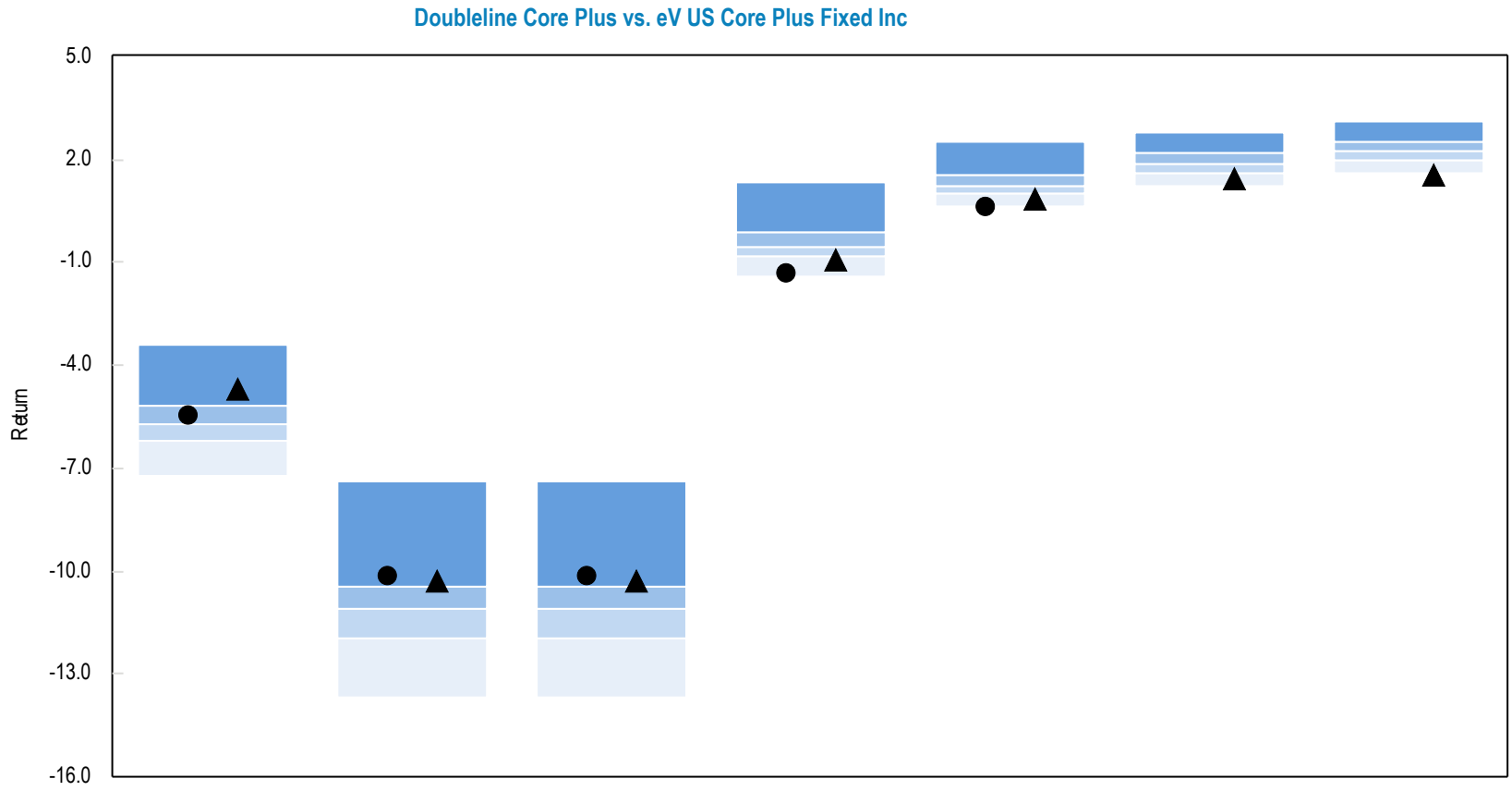
	Return	Standard Deviation	Sharpe Ratio
BlackRock Core Plus Fixed Income	-0.80	4.80	-0.27
Blmbg. U.S. Aggregate Index	-0.94	4.49	-0.33

5 Years

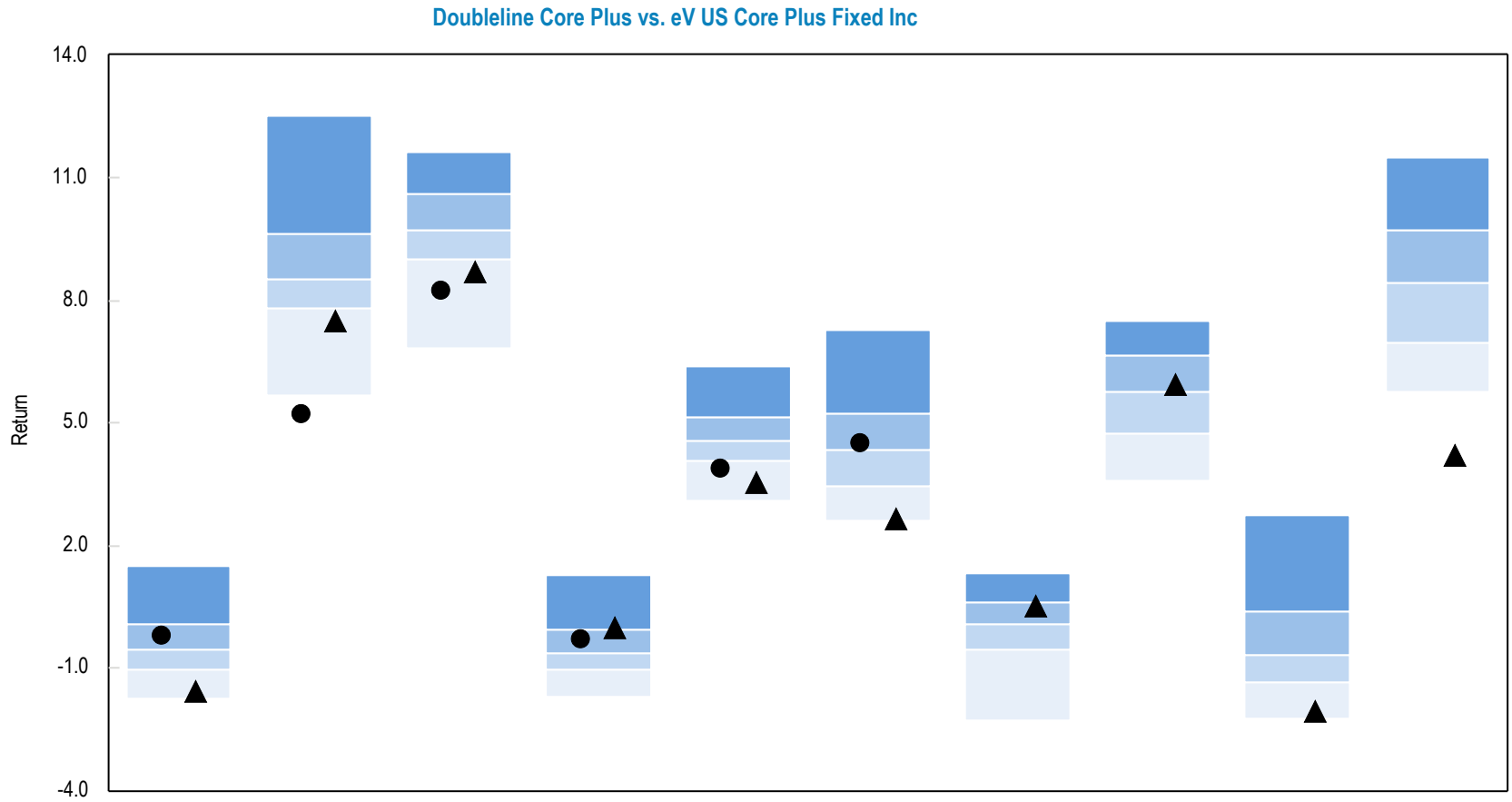
	Return	Standard Deviation	Sharpe Ratio
BlackRock Core Plus Fixed Income	0.95	4.18	-0.02
Blmbg. U.S. Aggregate Index	0.88	4.01	-0.04


Rolling 3 Years Annualized Return
9.0
6.0
3.0
0.0
-3.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
BlackRock Core Plus Fixed Income
Blmbg. U.S. Aggregate Index


Rolling 5 Years Annualized Return
8.0
6.0
4.0
2.0
0.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
BlackRock Core Plus Fixed Income
Blmbg. U.S. Aggregate Index

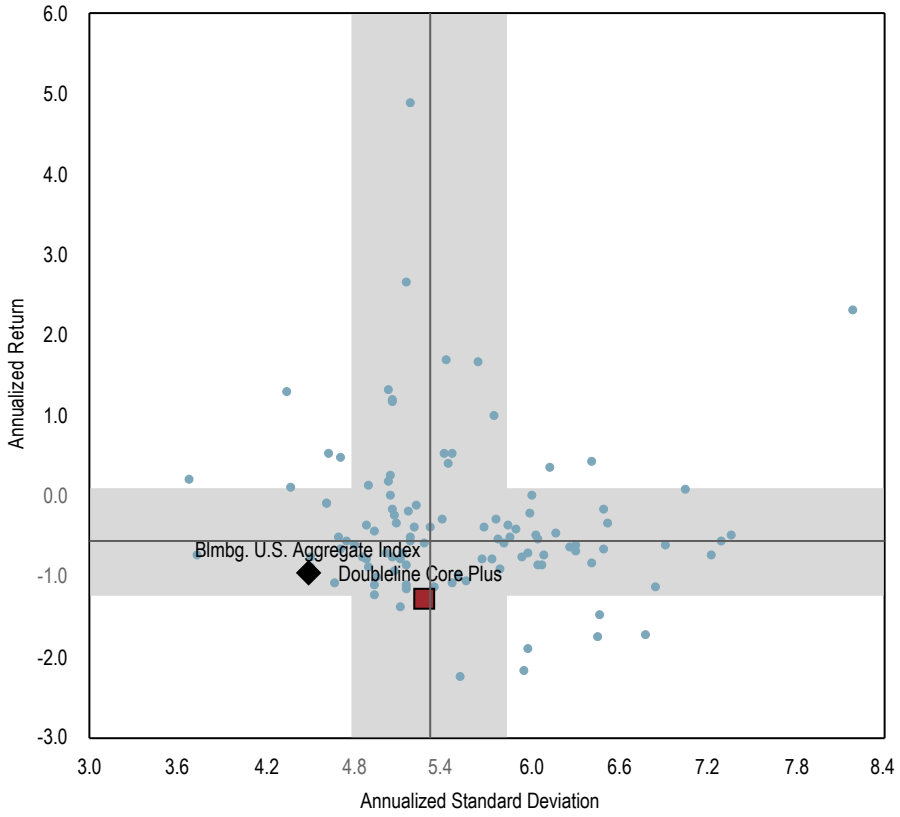


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Doubleline Core Plus	-5.43 (36)	-10.11 (16)	-10.11 (16)	-1.28 (94)	0.62 (95)	-	-
▲ Blmbg. U.S. Aggregate Index	-4.69 (12)	-10.29 (19)	-10.29 (19)	-0.94 (82)	0.88 (84)	1.42 (85)	1.54 (96)
5th Percentile	-3.41	-7.37	-7.37	1.34	2.55	2.81	3.13
1st Quartile	-5.18	-10.47	-10.47	-0.10	1.54	2.21	2.55
Median	-5.72	-11.11	-11.11	-0.55	1.23	1.87	2.25
3rd Quartile	-6.22	-11.95	-11.95	-0.83	1.01	1.63	2.01
95th Percentile	-7.22	-13.68	-13.68	-1.43	0.61	1.21	1.61
Population	109	109	109	107	99	95	89

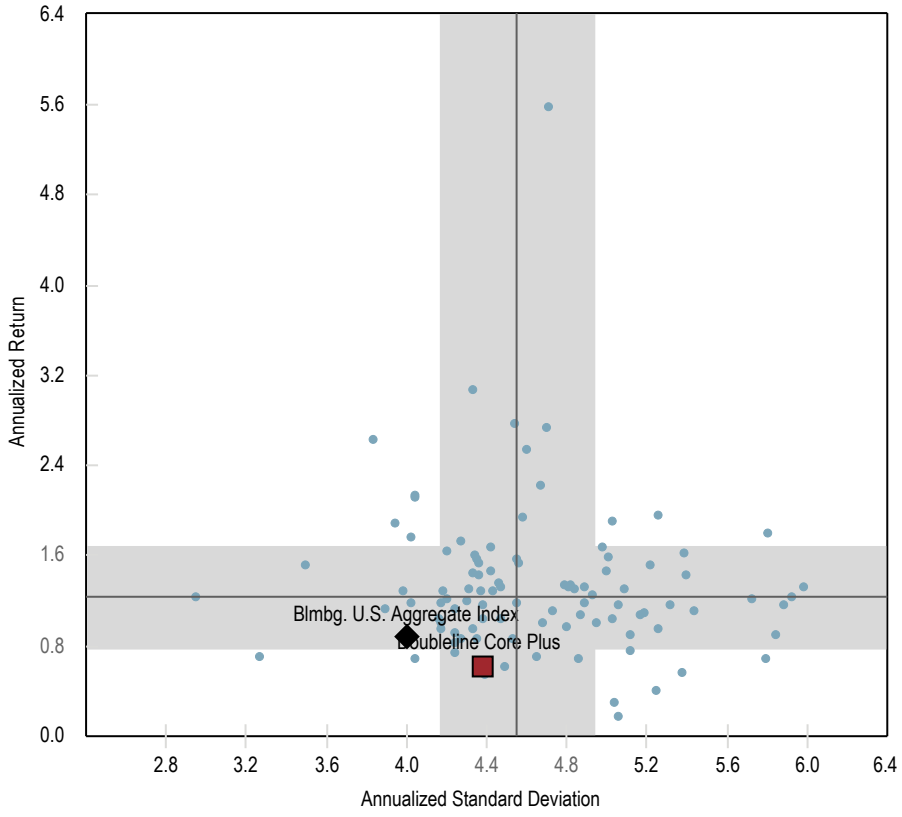


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● Doubleline Core Plus	-0.18 (40)	5.23 (97)	8.28 (88)	-0.28 (35)	3.93 (83)	4.55 (43)	-	-	-	-
▲ Blmbg. U.S. Aggregate Index	-1.55 (92)	7.51 (82)	8.72 (81)	0.01 (25)	3.54 (90)	2.65 (95)	0.55 (29)	5.97 (40)	-2.02 (90)	4.21 (100)
5th Percentile	1.52	12.52	11.65	1.28	6.40	7.28	1.35	7.53	2.75	11.53
1st Quartile	0.11	9.63	10.60	-0.05	5.14	5.23	0.64	6.65	0.41	9.73
Median	-0.52	8.55	9.71	-0.61	4.60	4.37	0.11	5.78	-0.65	8.46
3rd Quartile	-1.03	7.83	9.01	-1.02	4.10	3.44	-0.55	4.76	-1.35	6.99
95th Percentile	-1.75	5.70	6.86	-1.67	3.11	2.63	-2.28	3.61	-2.23	5.77
Population	115	119	120	120	123	122	122	120	119	118

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Core Plus Fixed Inc



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Core Plus Fixed Inc

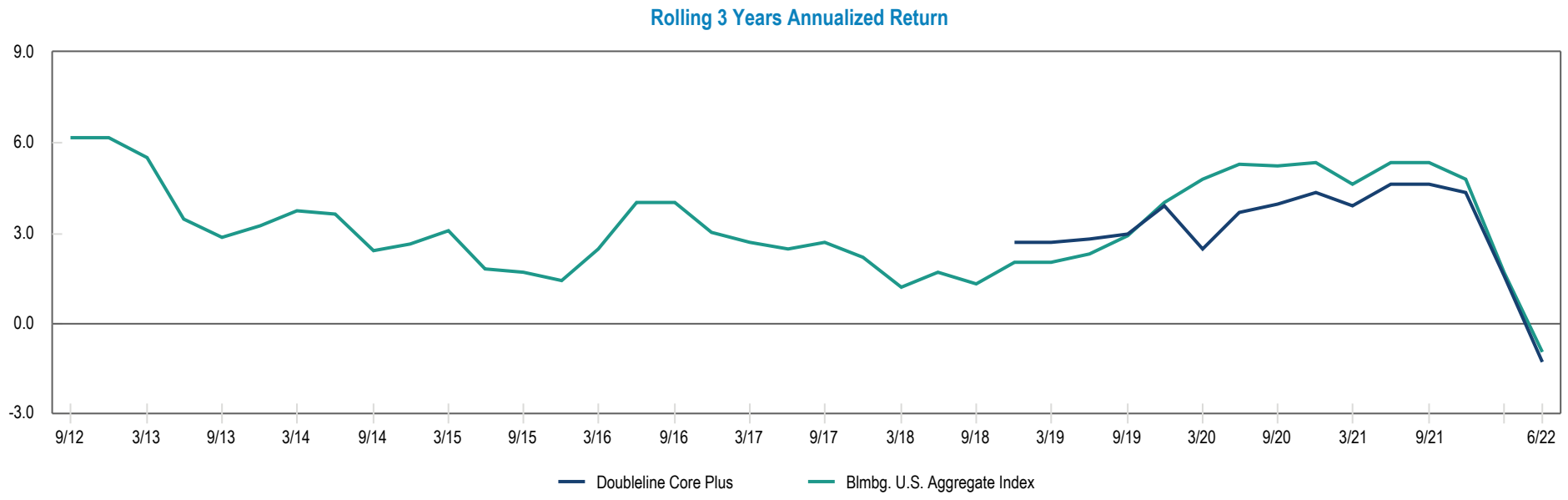


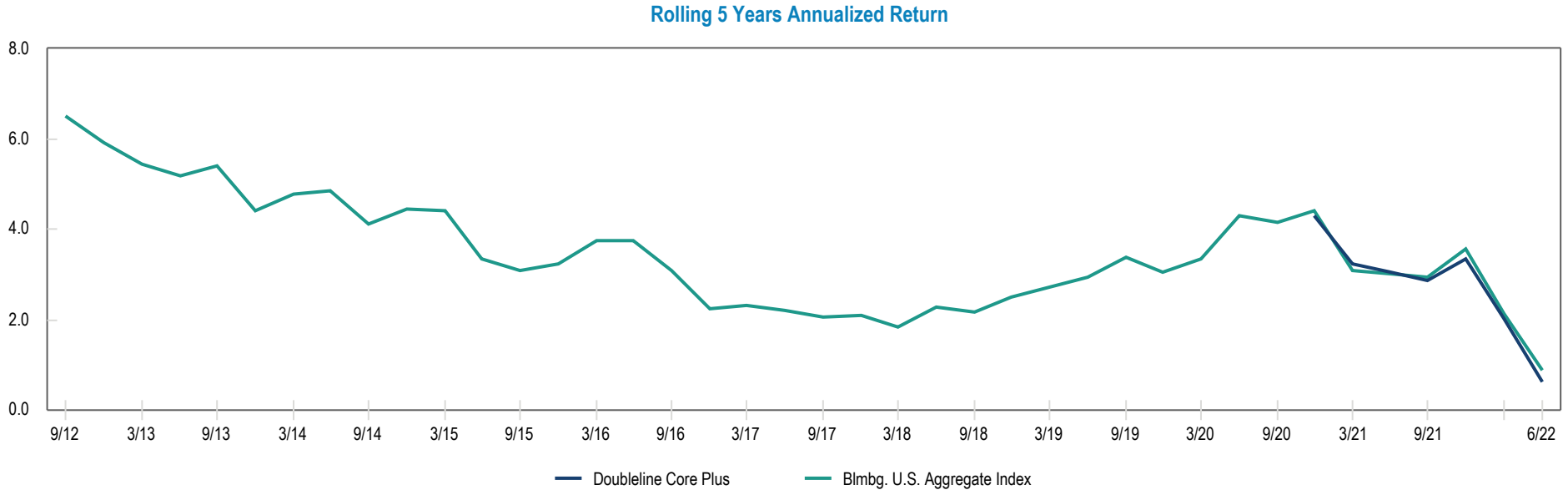
3 Years

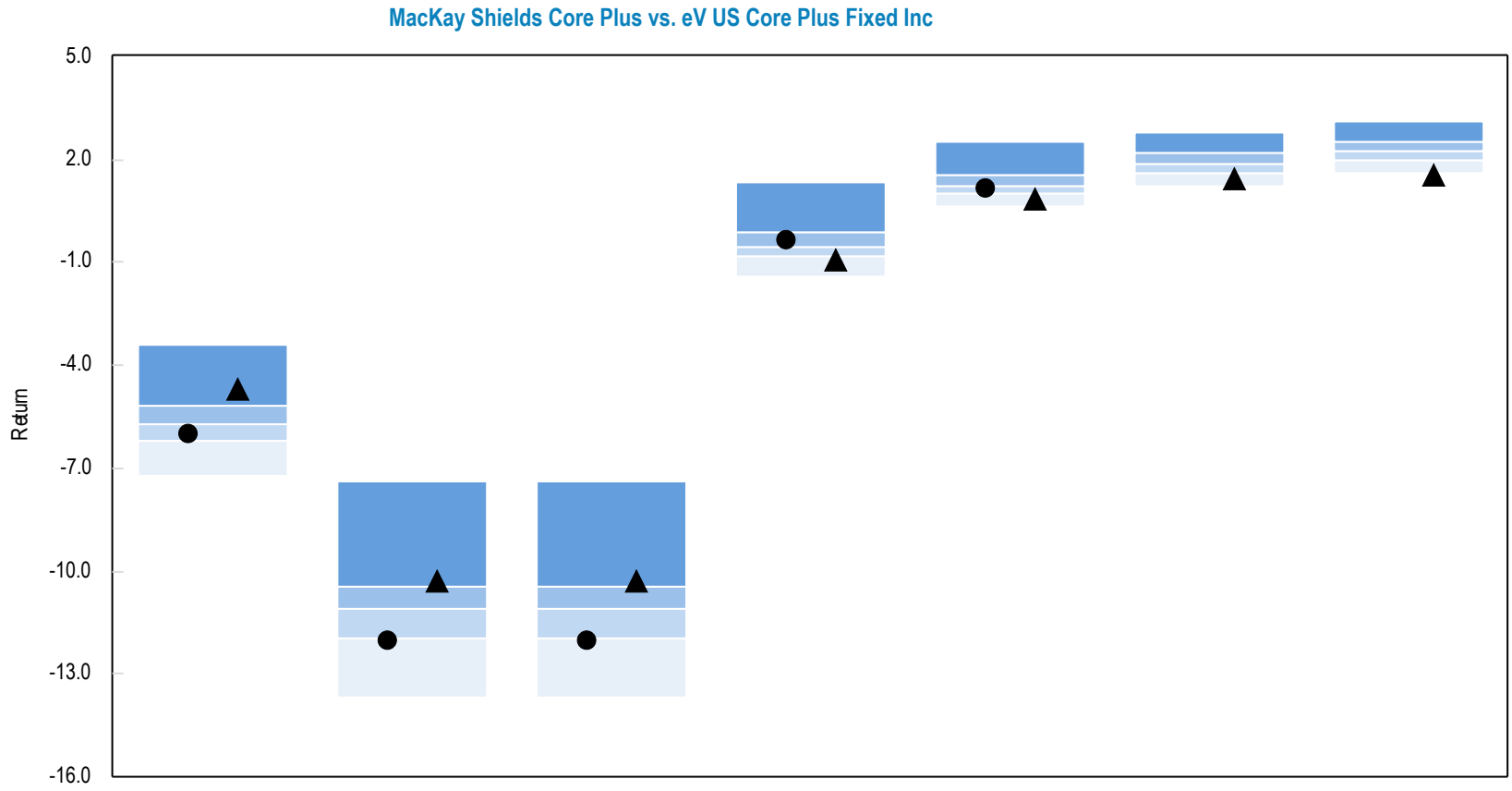
	Return	Standard Deviation	Sharpe Ratio
Doubleline Core Plus	-1.28	5.27	-0.33
Blmbg. U.S. Aggregate Index	-0.94	4.49	-0.33

5 Years

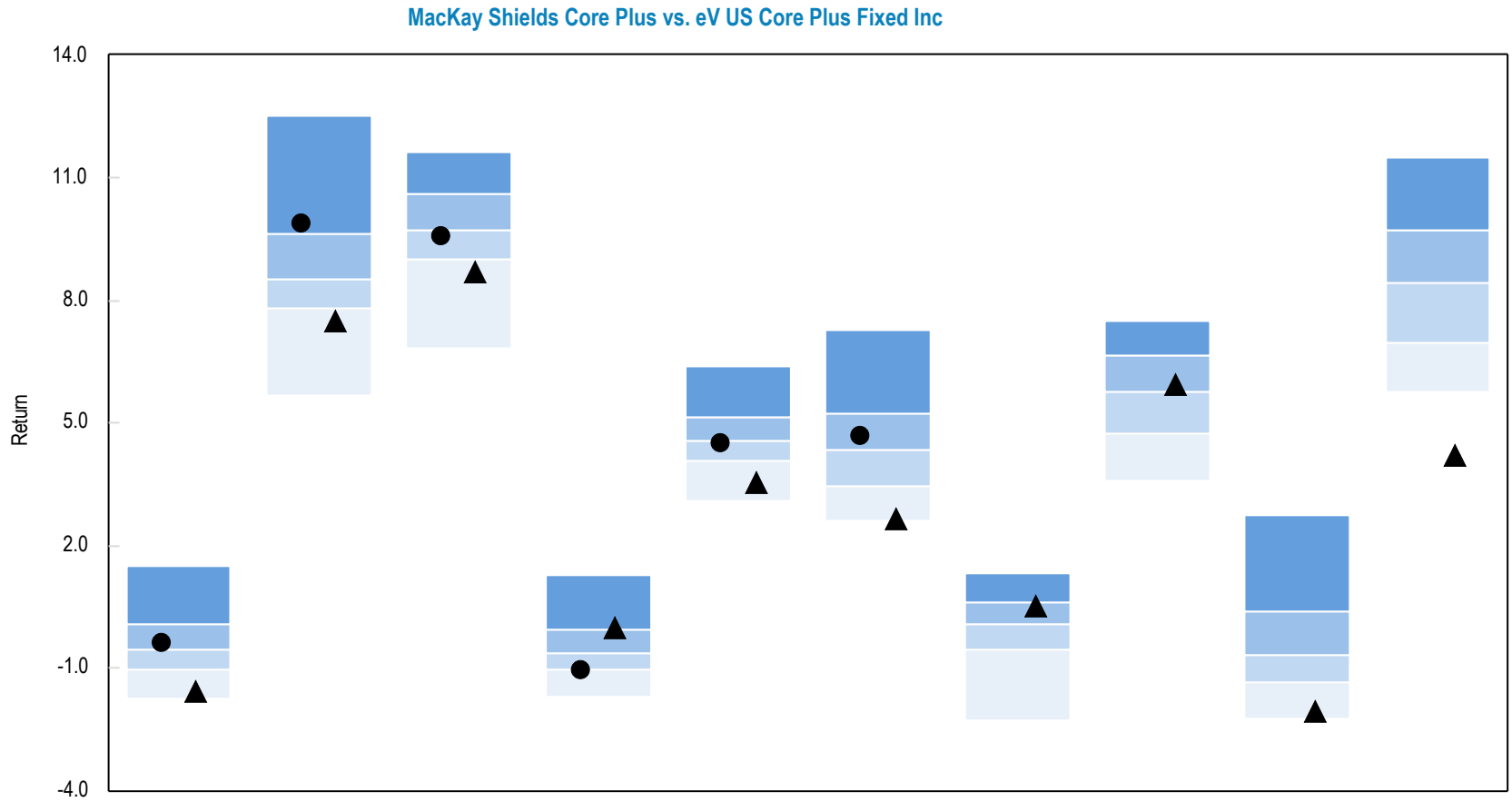
	Return	Standard Deviation	Sharpe Ratio
Doubleline Core Plus	0.62	4.38	-0.09
Blmbg. U.S. Aggregate Index	0.88	4.01	-0.04


Rolling 3 Years Annualized Return
9.0
6.0
3.0
0.0
-3.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Doubleline Core Plus
Blmbg. U.S. Aggregate Index


Rolling 5 Years Annualized Return
8.0
6.0
4.0
2.0
0.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
Doubleline Core Plus
Blmbg. U.S. Aggregate Index

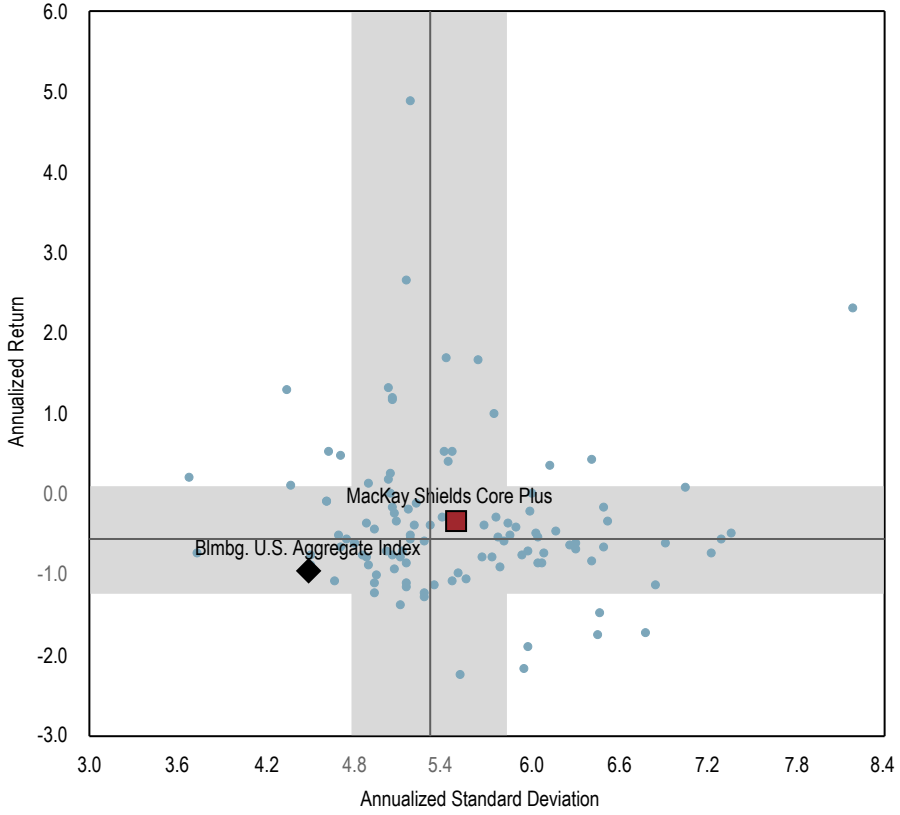


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● MacKay Shields Core Plus	-5.98 (63)	-12.00 (78)	-12.00 (78)	-0.32 (34)	1.20 (54)	-	-
▲ Blmbg. U.S. Aggregate Index	-4.69 (12)	-10.29 (19)	-10.29 (19)	-0.94 (82)	0.88 (84)	1.42 (85)	1.54 (96)
5th Percentile	-3.41	-7.37	-7.37	1.34	2.55	2.81	3.13
1st Quartile	-5.18	-10.47	-10.47	-0.10	1.54	2.21	2.55
Median	-5.72	-11.11	-11.11	-0.55	1.23	1.87	2.25
3rd Quartile	-6.22	-11.95	-11.95	-0.83	1.01	1.63	2.01
95th Percentile	-7.22	-13.68	-13.68	-1.43	0.61	1.21	1.61
Population	109	109	109	107	99	95	89

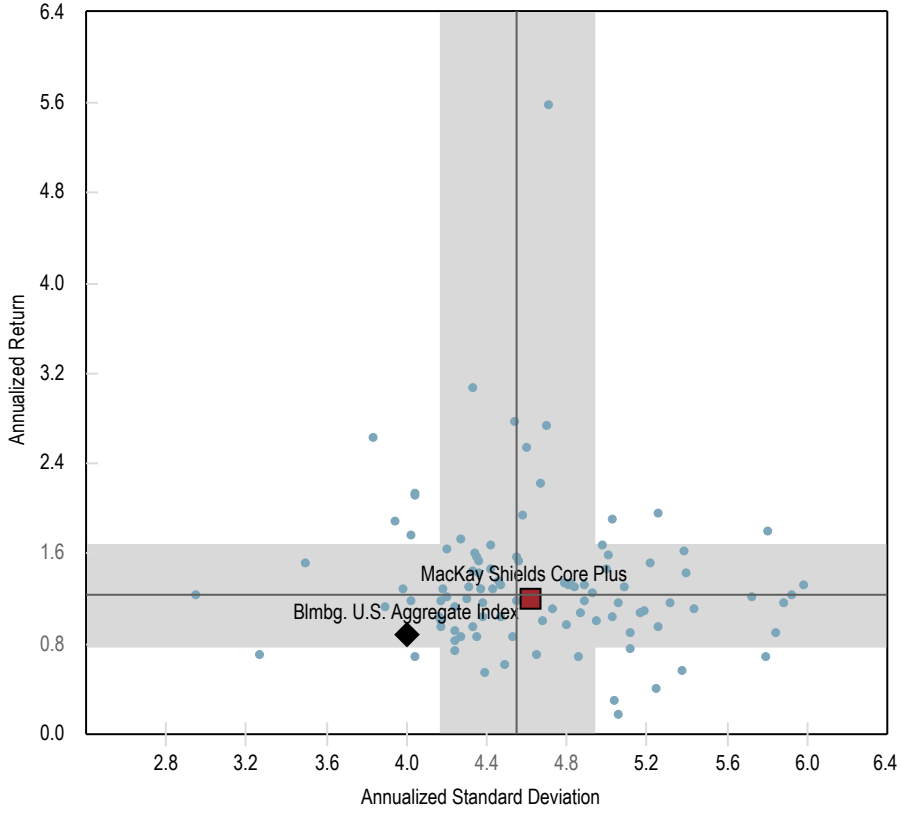


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● MacKay Shields Core Plus	-0.36 (47)	9.92 (21)	9.60 (54)	-1.02 (76)	4.53 (52)	4.70 (39)	-	-	-	-
▲ Blmbg. U.S. Aggregate Index	-1.55 (92)	7.51 (82)	8.72 (81)	0.01 (25)	3.54 (90)	2.65 (95)	0.55 (29)	5.97 (40)	-2.02 (90)	4.21 (100)
5th Percentile	1.52	12.52	11.65	1.28	6.40	7.28	1.35	7.53	2.75	11.53
1st Quartile	0.11	9.63	10.60	-0.05	5.14	5.23	0.64	6.65	0.41	9.73
Median	-0.52	8.55	9.71	-0.61	4.60	4.37	0.11	5.78	-0.65	8.46
3rd Quartile	-1.03	7.83	9.01	-1.02	4.10	3.44	-0.55	4.76	-1.35	6.99
95th Percentile	-1.75	5.70	6.86	-1.67	3.11	2.63	-2.28	3.61	-2.23	5.77
Population	115	119	120	120	123	122	122	120	119	118

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Core Plus Fixed Inc



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV US Core Plus Fixed Inc

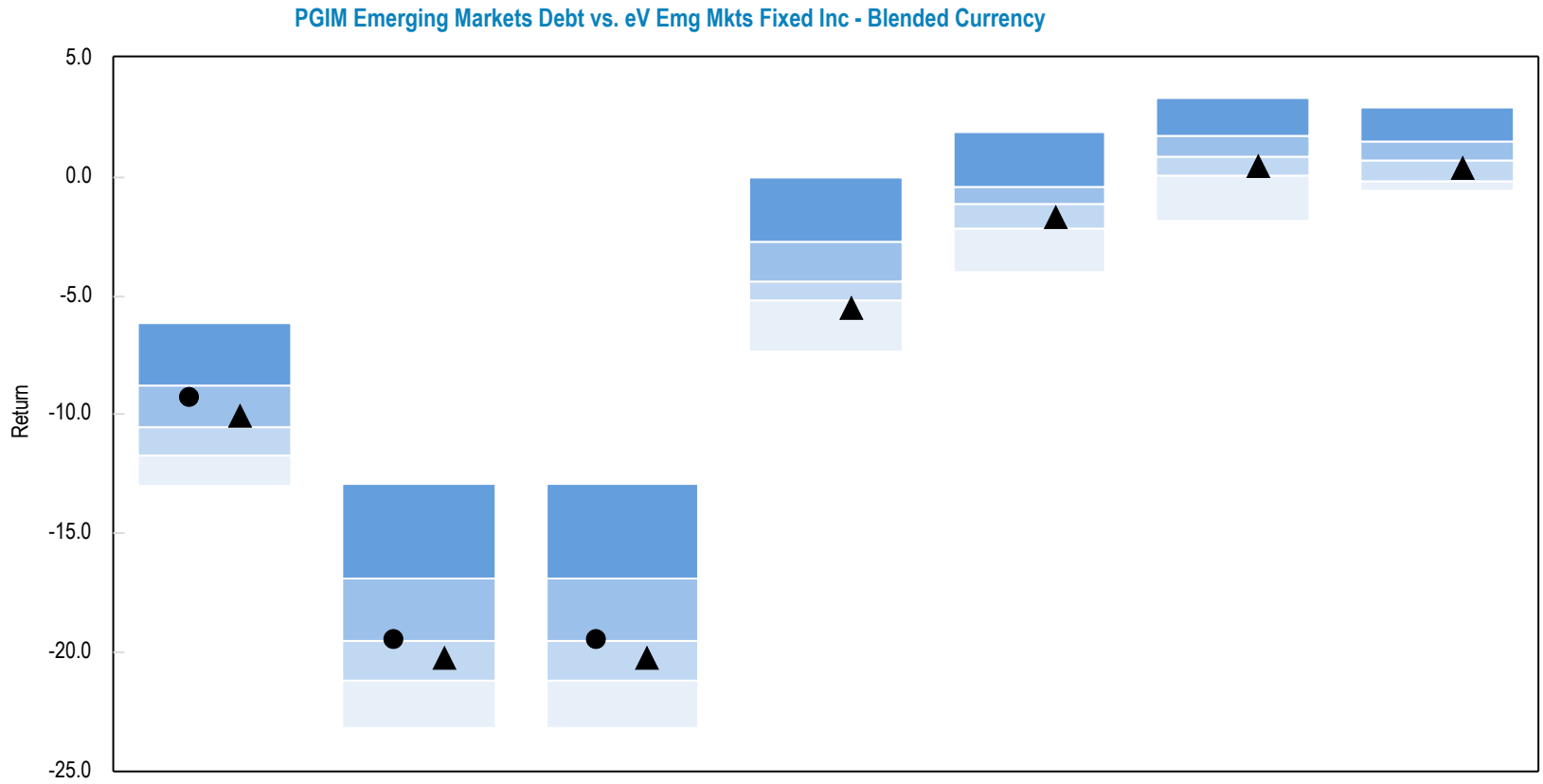


3 Years

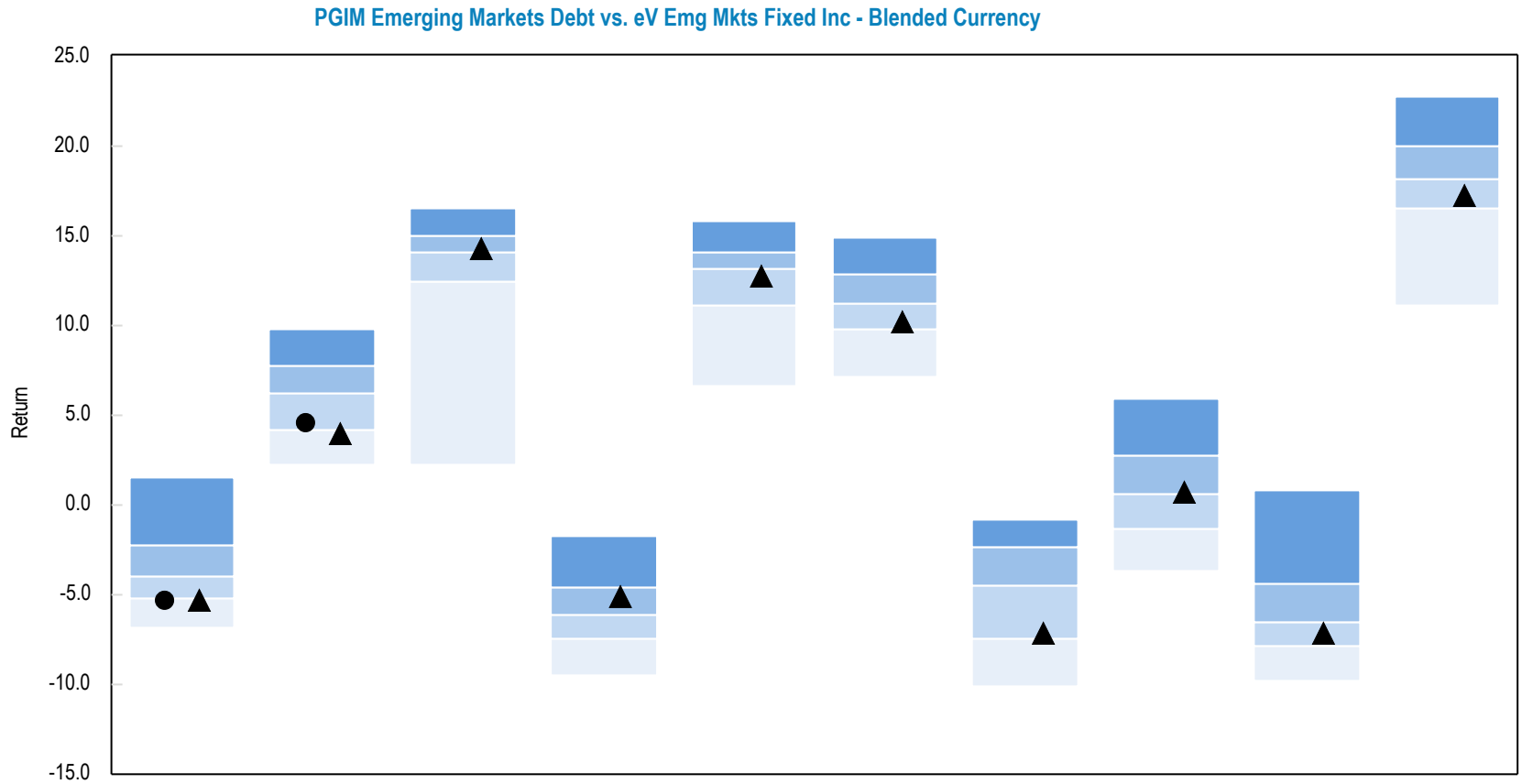
	Return	Standard Deviation	Sharpe Ratio
MacKay Shields Core Plus	-0.32	5.49	-0.14
Blmbg. U.S. Aggregate Index	-0.94	4.49	-0.33

5 Years

	Return	Standard Deviation	Sharpe Ratio
MacKay Shields Core Plus	1.20	4.62	0.04
Blmbg. U.S. Aggregate Index	0.88	4.01	-0.04

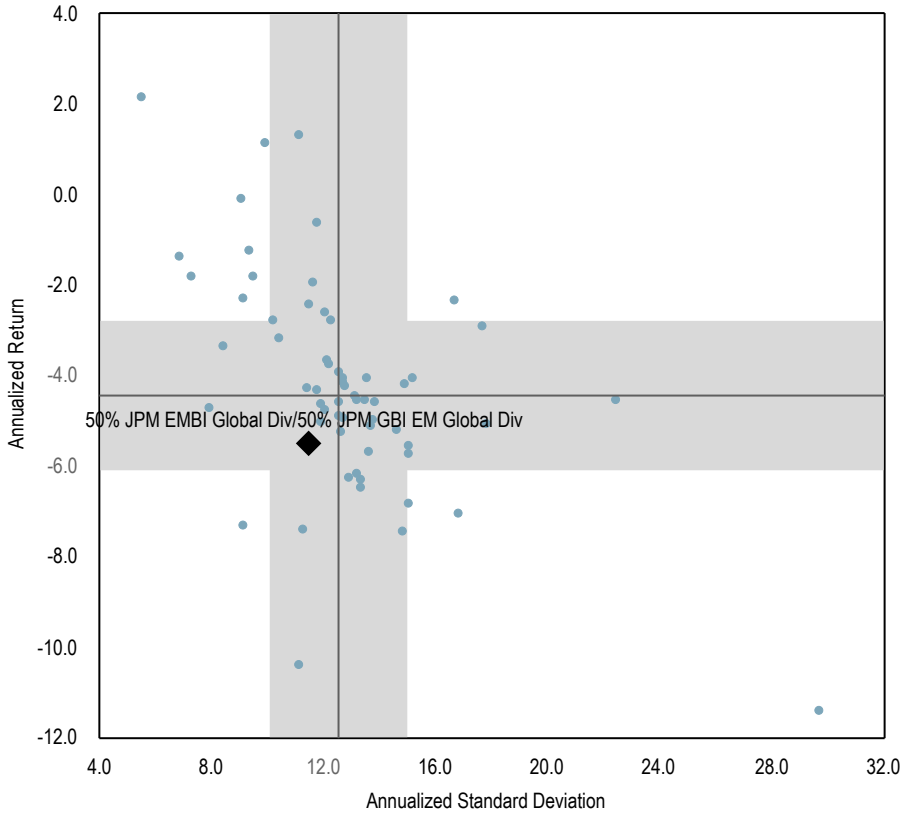


	Quarter	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● PGIM Emerging Markets Debt	-9.23 (34)	-19.43 (48)	-19.43 (48)	-	-	-	-
▲ 50% JPM EMBI Global Div /50% JPM GBI EM Global Div	-10.03 (42)	-20.23 (62)	-20.23 (62)	-5.47 (78)	-1.70 (69)	0.47 (59)	0.40 (66)
5th Percentile	-6.18	-12.87	-12.87	-0.05	1.88	3.30	2.94
1st Quartile	-8.73	-16.85	-16.85	-2.75	-0.41	1.70	1.52
Median	-10.49	-19.55	-19.55	-4.42	-1.15	0.88	0.71
3rd Quartile	-11.68	-21.17	-21.17	-5.15	-2.17	0.03	-0.20
95th Percentile	-13.00	-23.14	-23.14	-7.36	-3.99	-1.83	-0.58
Population	63	62	62	61	56	42	24

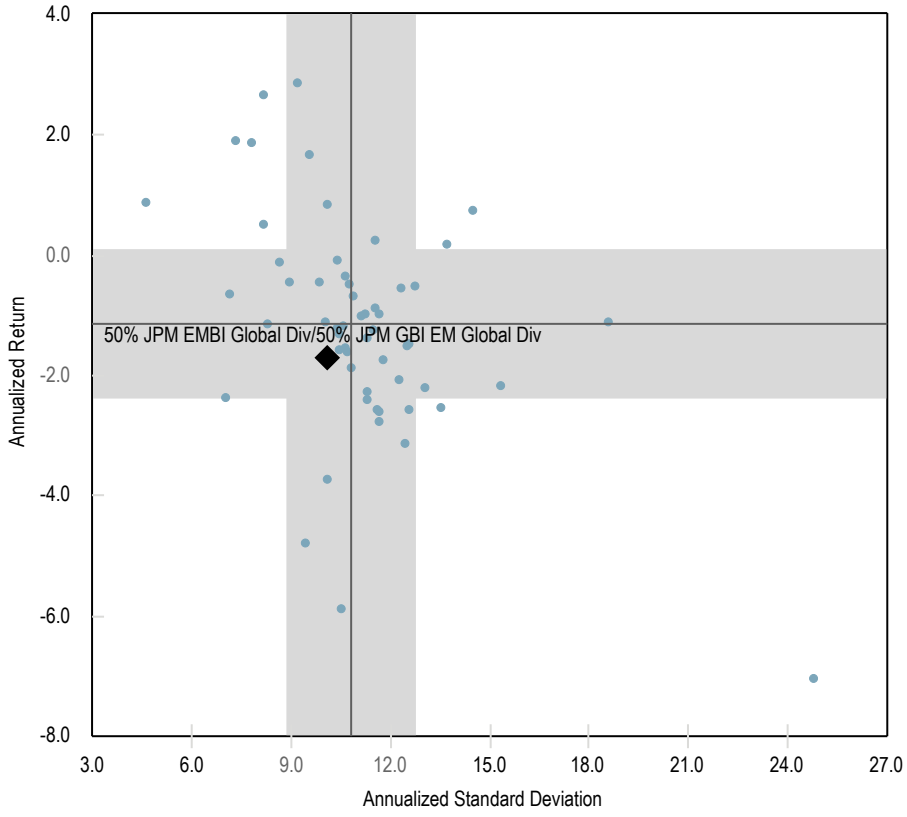


	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
● PGIM Emerging Markets Debt	-5.30 (77)	4.56 (70)	-	-	-	-	-	-	-	-
▲ 50% JPM EMBI Global Div /50% JPM GBI EM Global Div	-5.32 (77)	4.02 (79)	14.31 (44)	-5.15 (34)	12.74 (54)	10.16 (71)	-7.14 (72)	0.71 (48)	-7.10 (59)	17.21 (62)
5th Percentile	1.51	9.83	16.53	-1.74	15.83	14.94	-0.83	5.95	0.77	22.76
1st Quartile	-2.23	7.71	15.04	-4.55	14.06	12.90	-2.30	2.80	-4.39	19.99
Median	-4.00	6.26	14.08	-6.12	13.17	11.21	-4.48	0.65	-6.49	18.17
3rd Quartile	-5.19	4.16	12.40	-7.41	11.09	9.78	-7.45	-1.34	-7.88	16.50
95th Percentile	-6.85	2.27	2.22	-9.46	6.63	7.16	-10.10	-3.69	-9.79	11.12
Population	69	69	65	65	61	55	51	45	38	32

3 Years Annualized Return vs. Annualized Standard Deviation vs. eV Emg Mkts Fixed Inc - Blended Currency



5 Years Annualized Return vs. Annualized Standard Deviation vs. eV Emg Mkts Fixed Inc - Blended Currency

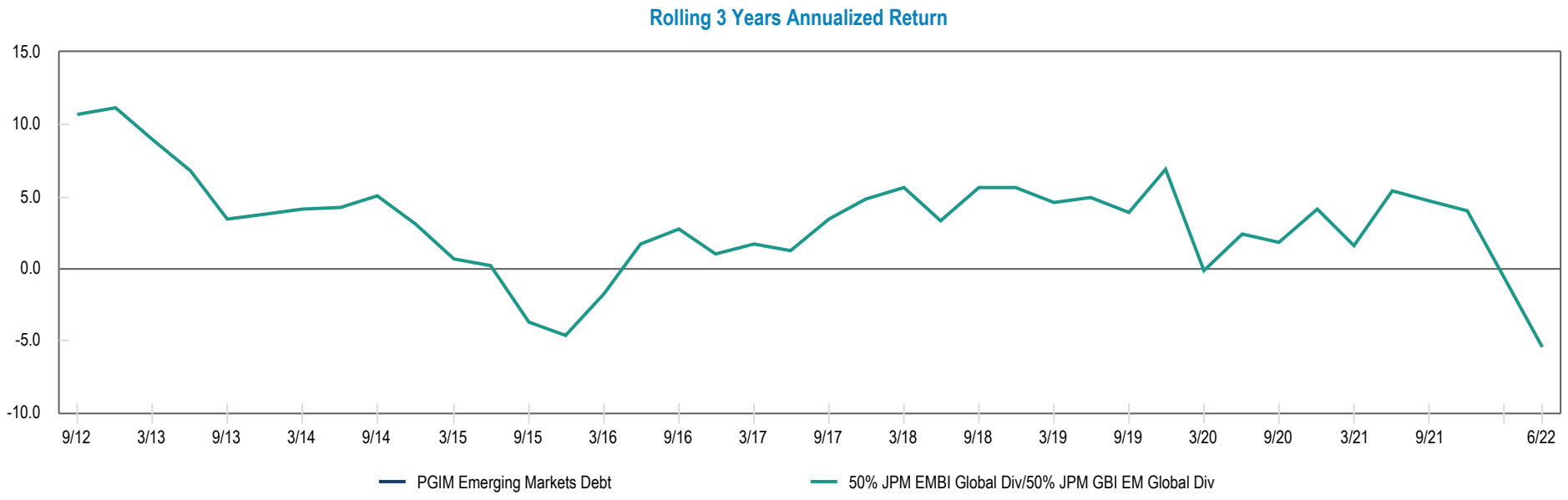


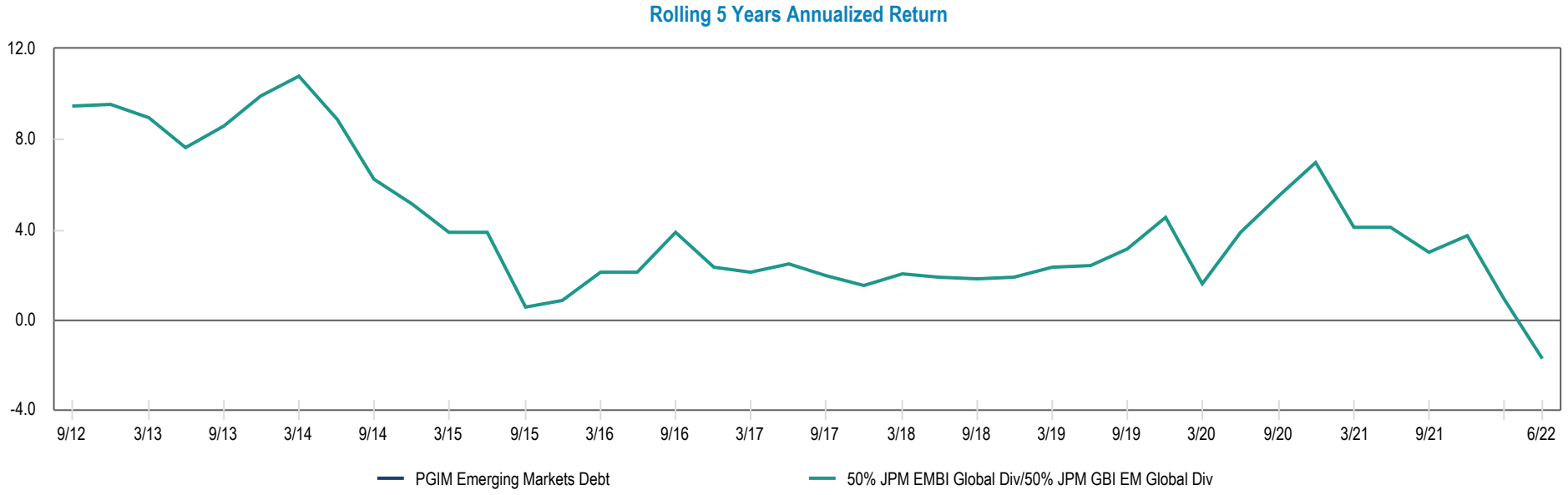
3 Years

	Return	Standard Deviation	Sharpe Ratio
PGIM Emerging Markets Debt	-	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	-5.47	11.47	-0.48

5 Years

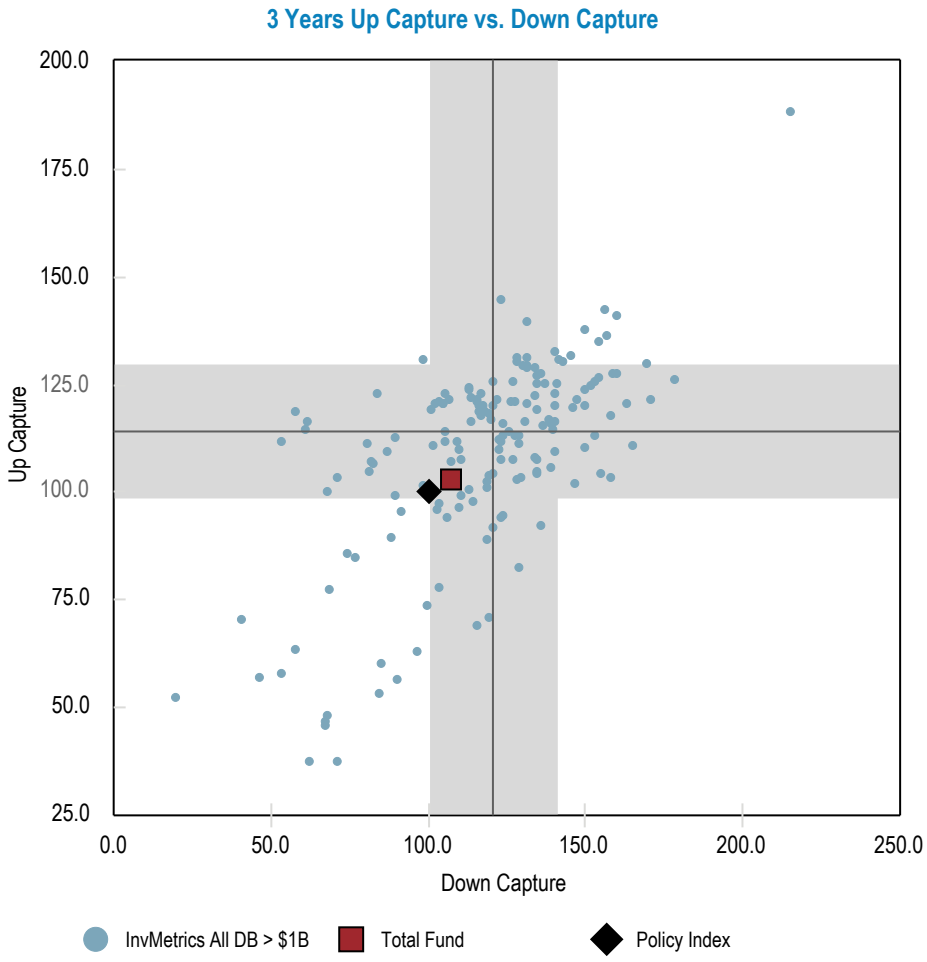
	Return	Standard Deviation	Sharpe Ratio
PGIM Emerging Markets Debt	-	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	-1.70	10.11	-0.23


Rolling 3 Years Annualized Return
15.0
10.0
5.0
0.0
-5.0
-10.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
PGIM Emerging Markets Debt
50% JPM EMBI Global Div/50% JPM GBI EM Global Div

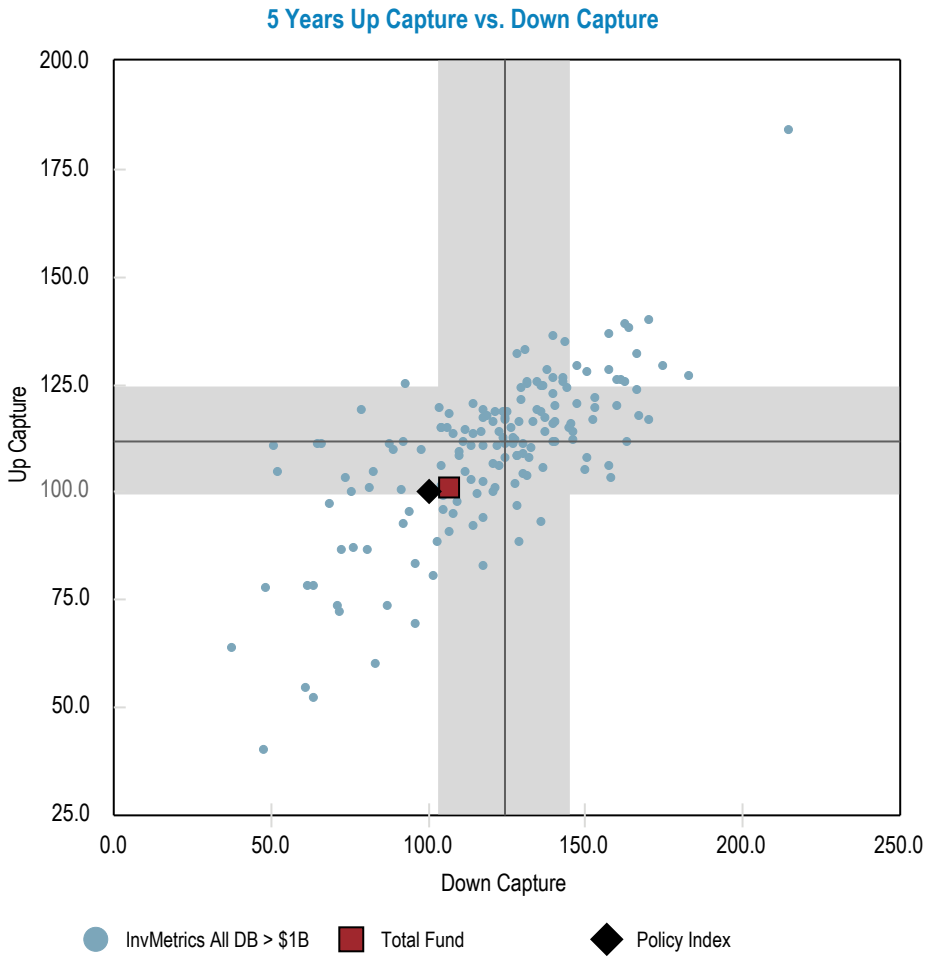

Rolling 5 Years Annualized Return
12.0
8.0
4.0
0.0
-4.0
9/12
3/13
9/13
3/14
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
6/22
PGIM Emerging Markets Debt
50% JPM EMBI Global Div/50% JPM GBI EM Global Div

	Market Value	% of Portfolio	Quarter	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2021	2020	2019	2018	2017
Total Real Estate	**380,569,510**	**100.0**	**4.1**	**10.0**	**20.7**	**20.7**	**9.1**	**8.3**	**9.3**	**12.8**	**1.8**	**5.2**	**8.8**	**4.3**
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
NCREIF-ODCE			*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*22.2*	*1.2*	*5.3*	*8.3*	*7.6*
RREEF America II	210,655,847	55.4	6.2	17.5	29.0	29.0	11.5	9.7	10.8	12.8	1.8	5.3	8.6	4.4
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
NCREIF-ODCE			*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*22.2*	*1.2*	*5.3*	*8.3*	*7.6*
American Realty Strategic Value Fund	87,220,315	22.9	6.6	11.3	20.2	20.2	-	-	-	11.3	1.1	-	-	-
NCREIF-ODCE + 200 BP			*5.3*	*13.6*	*32.1*	*32.1*	*14.9*	*12.7*	*13.4*	*24.6*	*3.2*	*7.4*	*10.5*	*9.8*
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
Invesco Commercial Mortgage Income Fund	67,135,834	17.6	1.9	3.1	-	-	-	-	-	-	-	-	-	-
NCREIF ODCE net 1Q Lag			*7.1*	*15.3*	*27.3*	*27.3*	*10.3*	*8.9*	*9.9*	*13.6*	*0.5*	*4.6*	*7.7*	*6.7*
NCREIF-ODCE			*4.8*	*12.5*	*29.5*	*29.5*	*12.7*	*10.5*	*11.2*	*22.2*	*1.2*	*5.3*	*8.3*	*7.6*
SSGA US REIT Index Non-Lending Fund	15,557,514	4.1	-18.1	-21.1	-	-	-	-	-	-	-	-	-	-
Dow Jones U.S. REIT Index			*-14.0*	*-18.9*	*-5.3*	*-5.3*	*5.0*	*6.5*	*8.0*	*41.2*	*-6.3*	*28.0*	*-3.5*	*9.4*

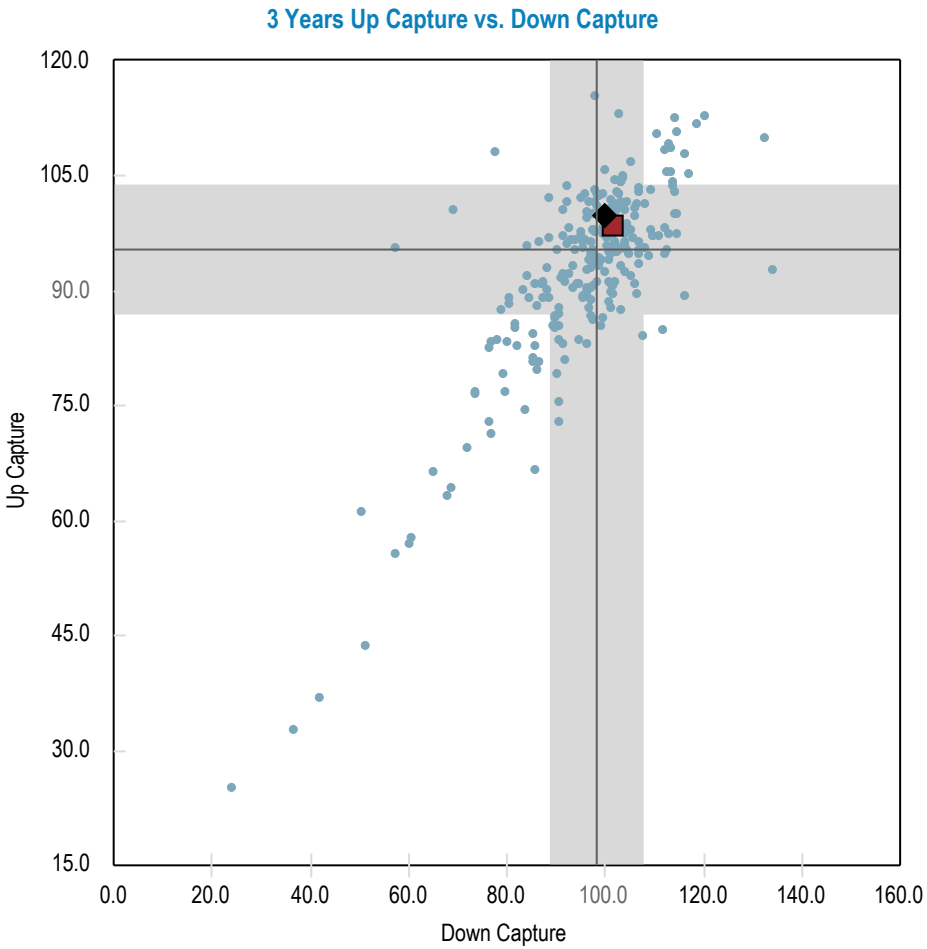
RREEF liquidated in 1Q 2018. American Realty funded 4Q 2019. Invesco Commerical Mortgage Income Fund was funded 9/1/2021. SSGA US REIT Index was funded 12/10/2021. Invesco Commercial Mortgage Income Fund some recent return is 0.02% rounded.



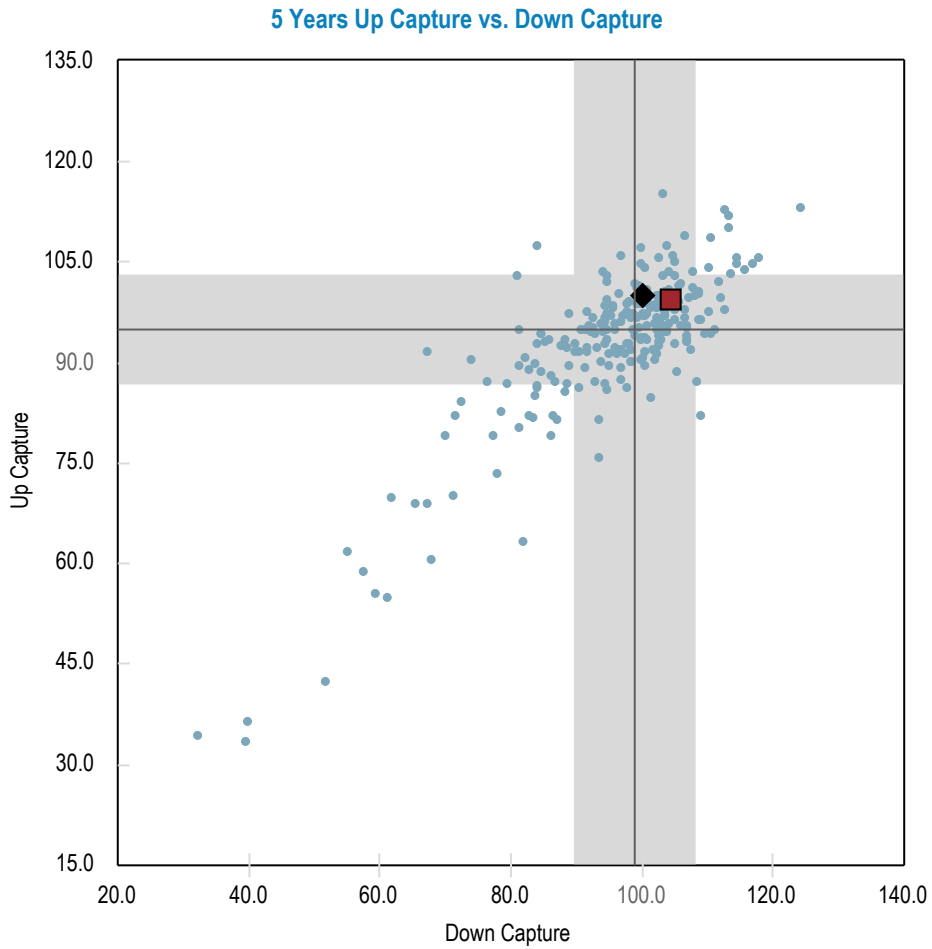
	Up Capture	Down Capture
Total Fund	103.06	107.09
Policy Index	100.00	100.00
Median	114.11	120.82
Population	167	167



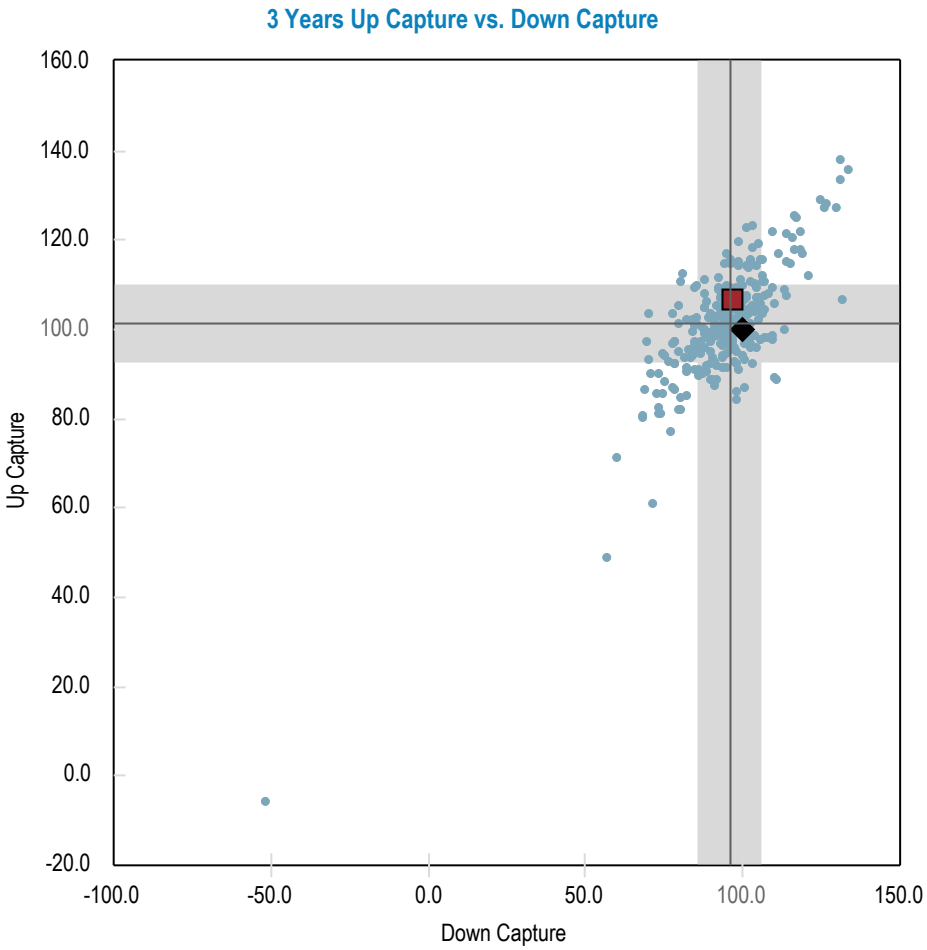
	Up Capture	Down Capture
Total Fund	101.05	106.47
Policy Index	100.00	100.00
Median	111.87	124.29
Population	161	161



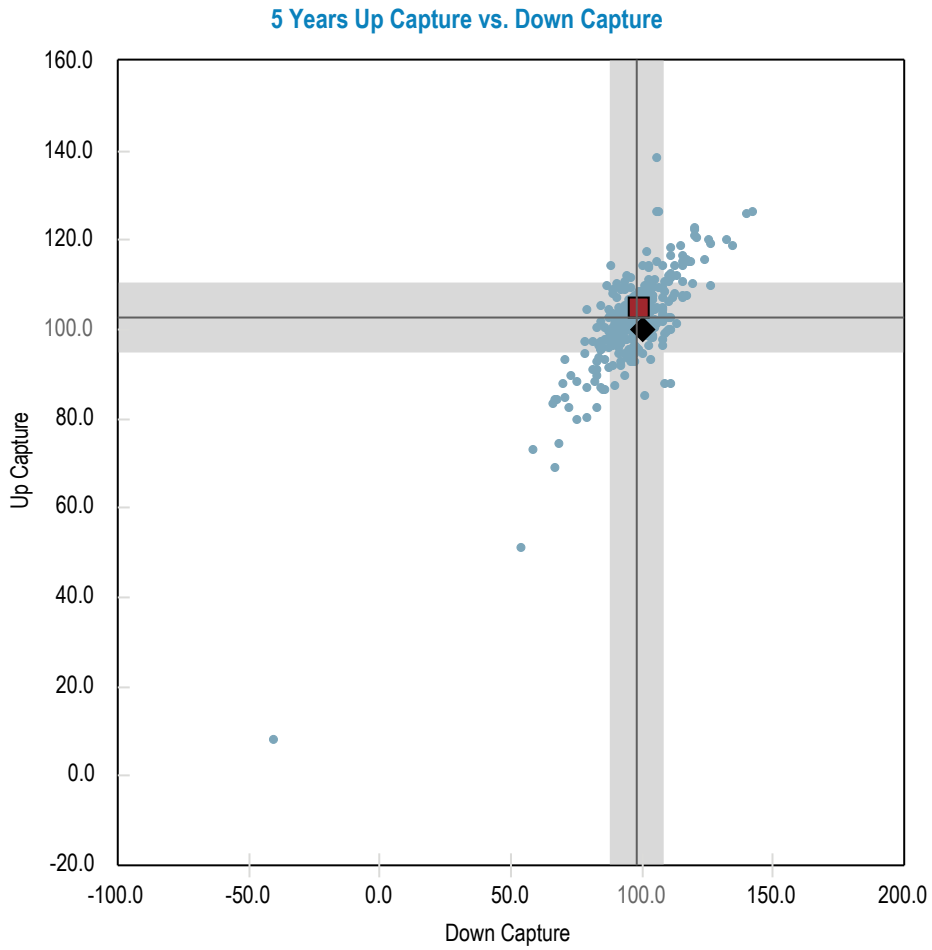
	Up Capture	Down Capture
PGIM QS US Core Equity	98.48	101.71
S&P 500 Index	100.00	100.00
Median	95.40	98.32
Population	261	261



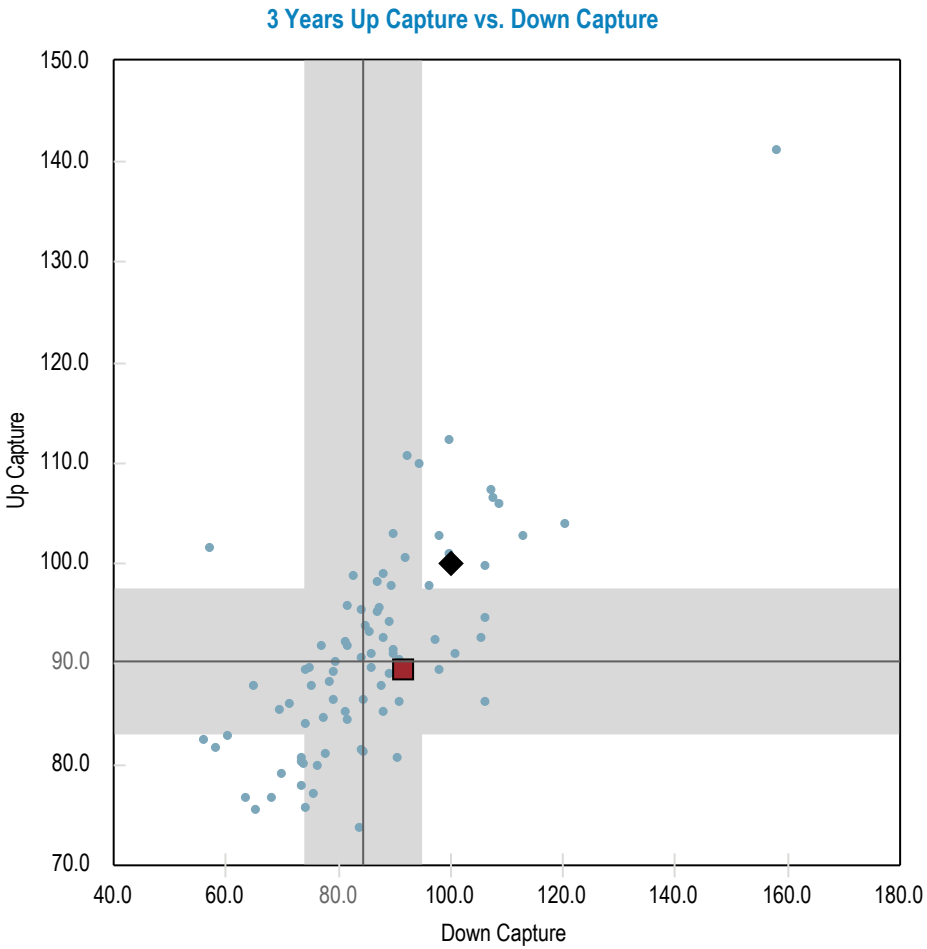
	Up Capture	Down Capture
PGIM QS US Core Equity	99.59	104.26
S&P 500 Index	100.00	100.00
Median	94.93	98.80
Population	242	242



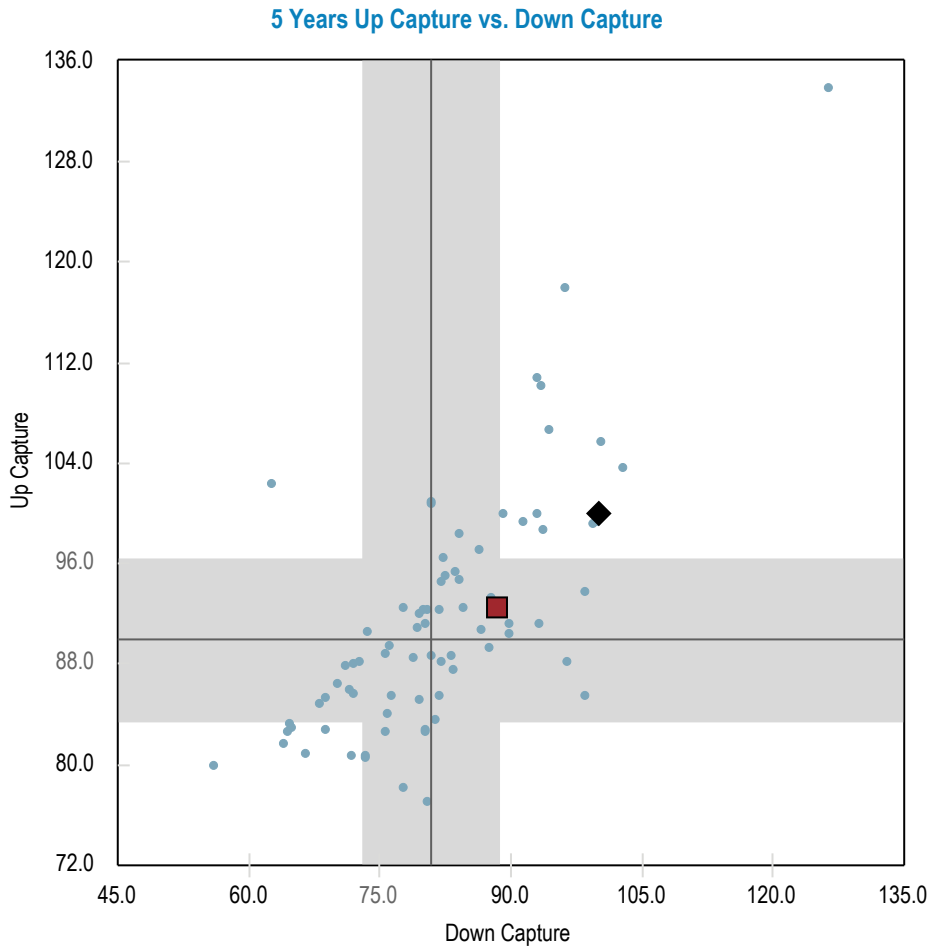
	Up Capture	Down Capture
Boston Partners Large Cap Value	106.65	96.80
Russell 1000 Value Index	100.00	100.00
Median	101.25	95.82
Population	300	300



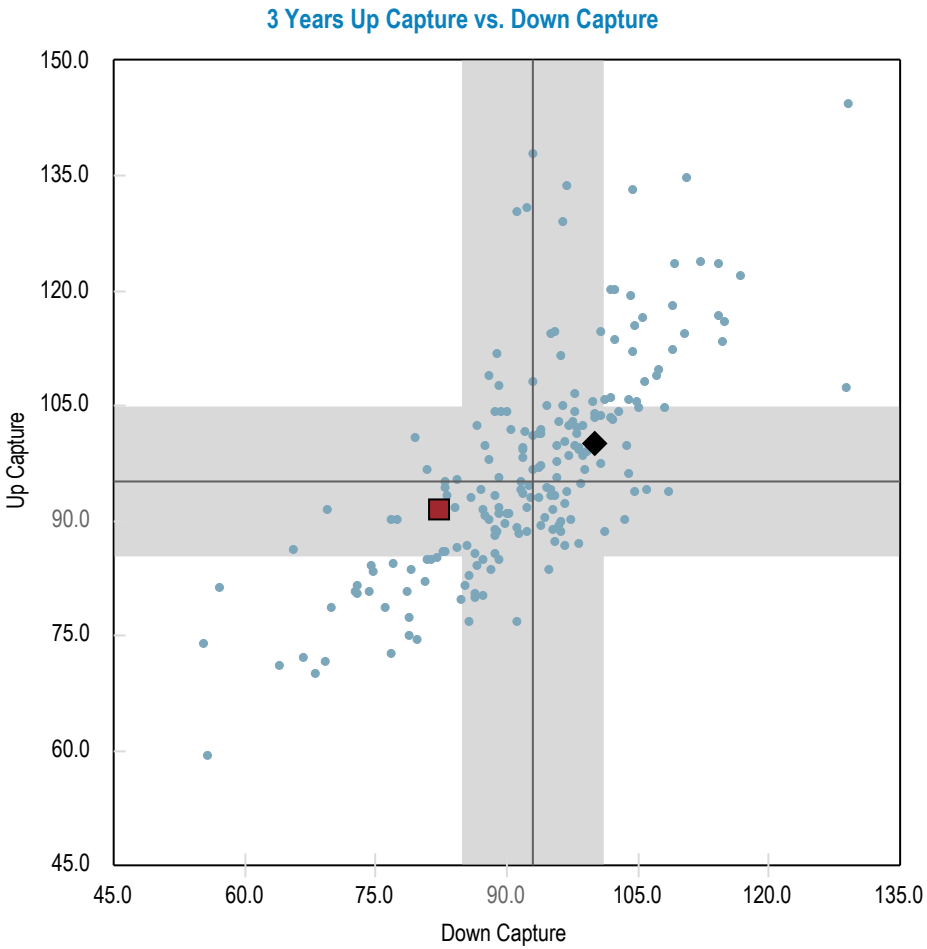
	Up Capture	Down Capture
Boston Partners Large Cap Value	104.79	98.88
Russell 1000 Value Index	100.00	100.00
Median	102.57	98.07
Population	292	292



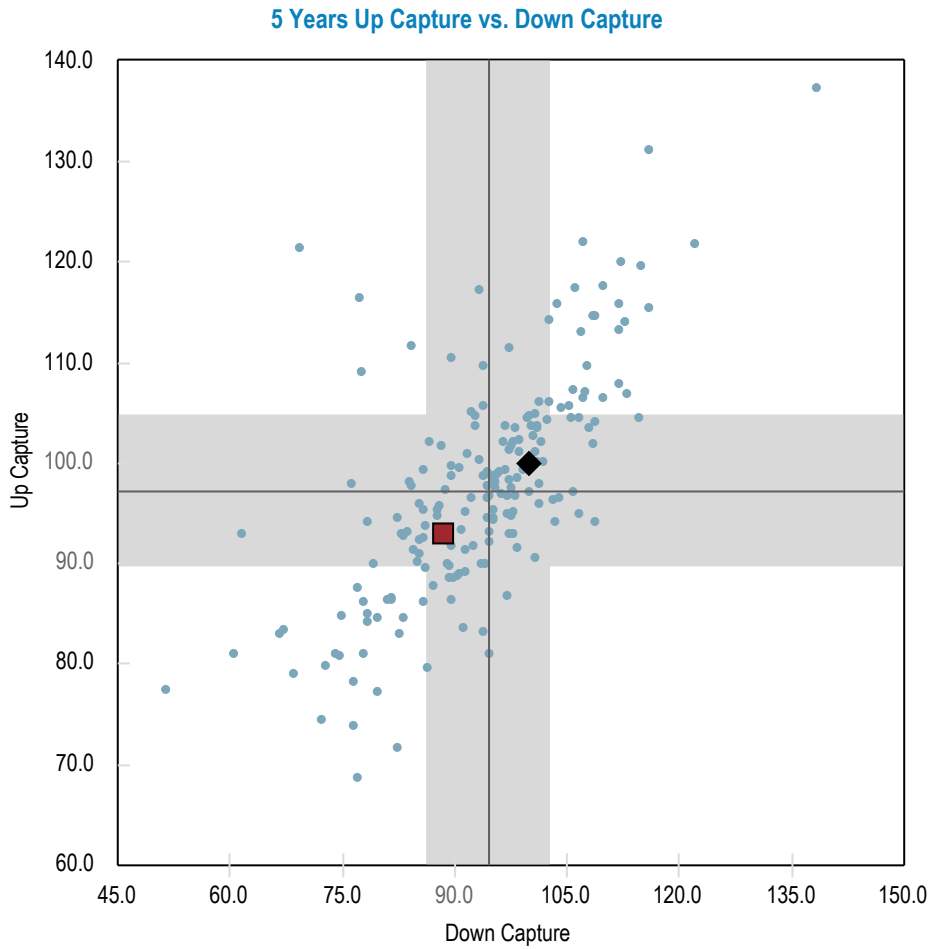
	Up Capture	Down Capture
William Blair SMID Cap Growth	89.43	91.48
Russell 2500 Growth Index	100.00	100.00
Median	90.25	84.42
Population	81	81



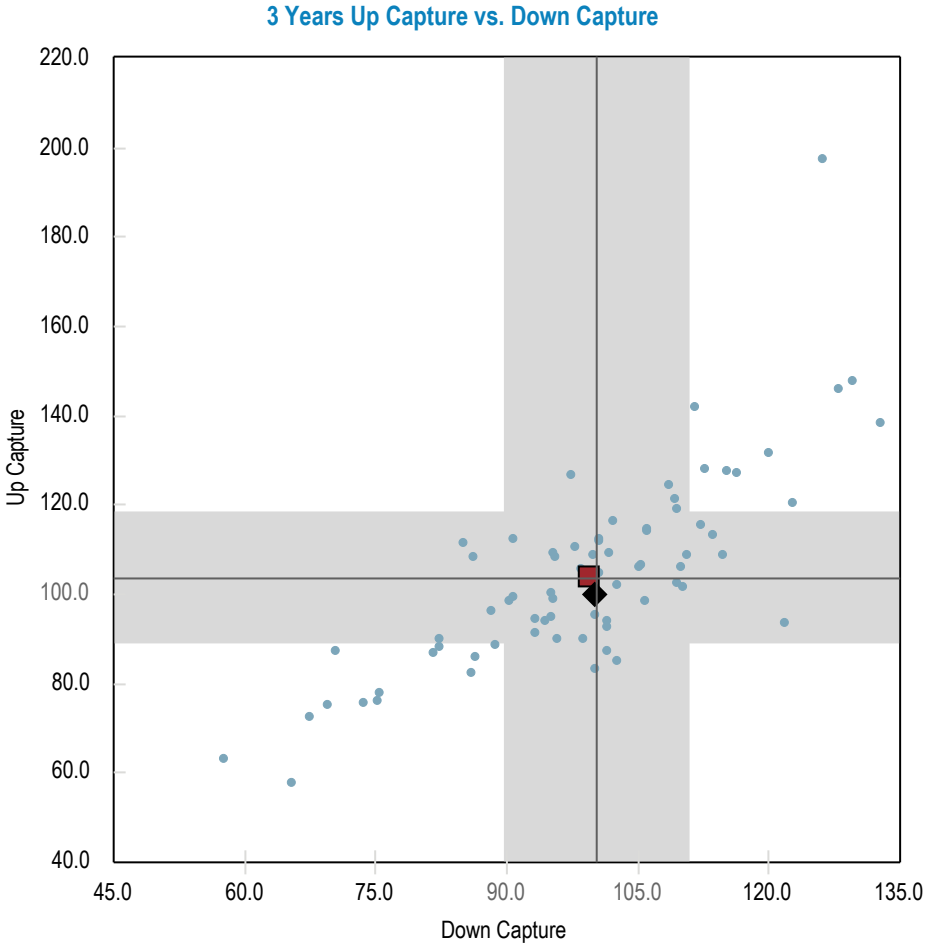
	Up Capture	Down Capture
William Blair SMID Cap Growth	92.52	88.42
Russell 2500 Growth Index	100.00	100.00
Median	89.94	80.80
Population	76	76



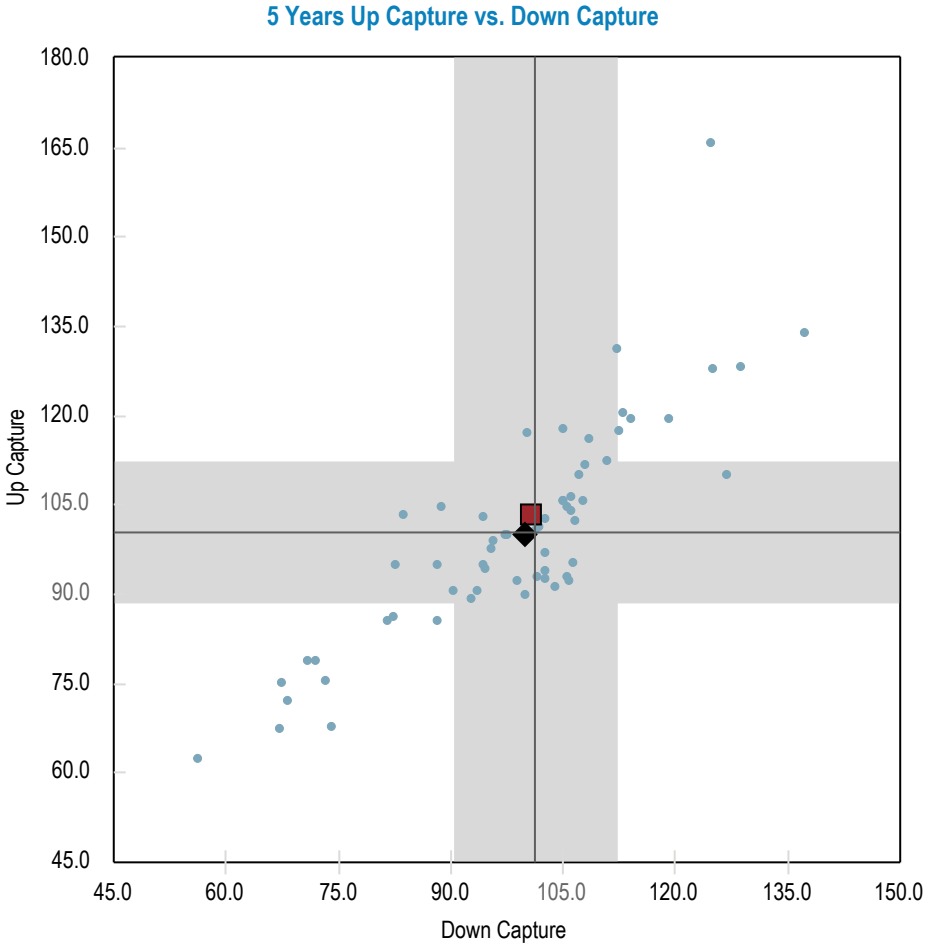
	Up Capture	Down Capture
Leeward Small Cap Value	91.58	82.26
Russell 2000 Value Index	100.00	100.00
Median	95.14	92.94
Population	197	197



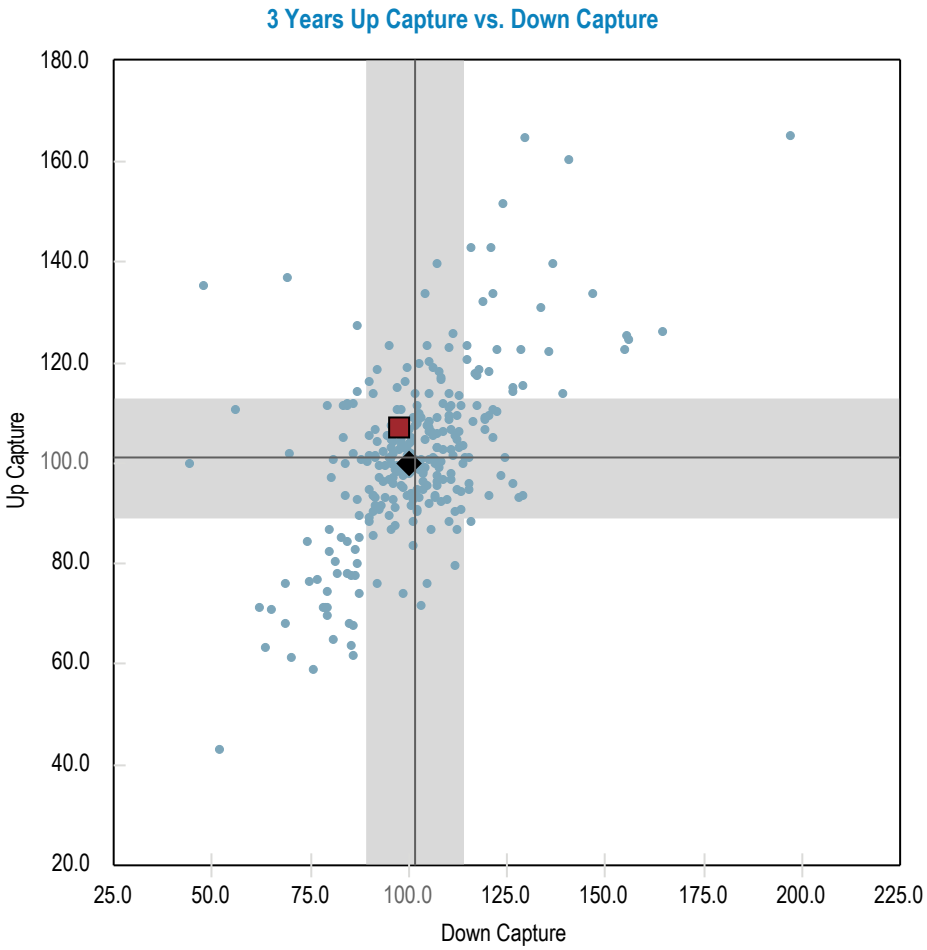
	Up Capture	Down Capture
Leeward Small Cap Value	92.99	88.33
Russell 2000 Value Index	100.00	100.00
Median	97.26	94.48
Population	190	190



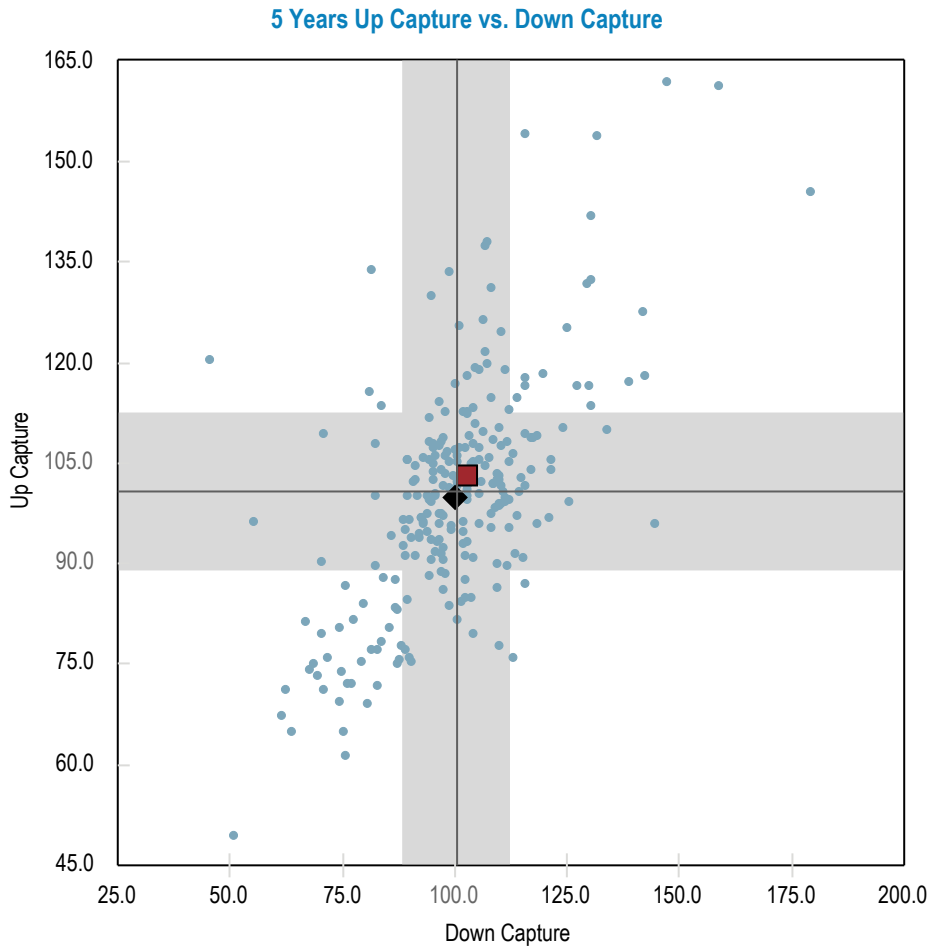
	Up Capture	Down Capture
PIMCO RAE Fundamental Global Ex US Fund	103.82	99.41
MSCI AC World ex USA Value (Net)	100.00	100.00
Median	103.76	100.23
Population	72	72



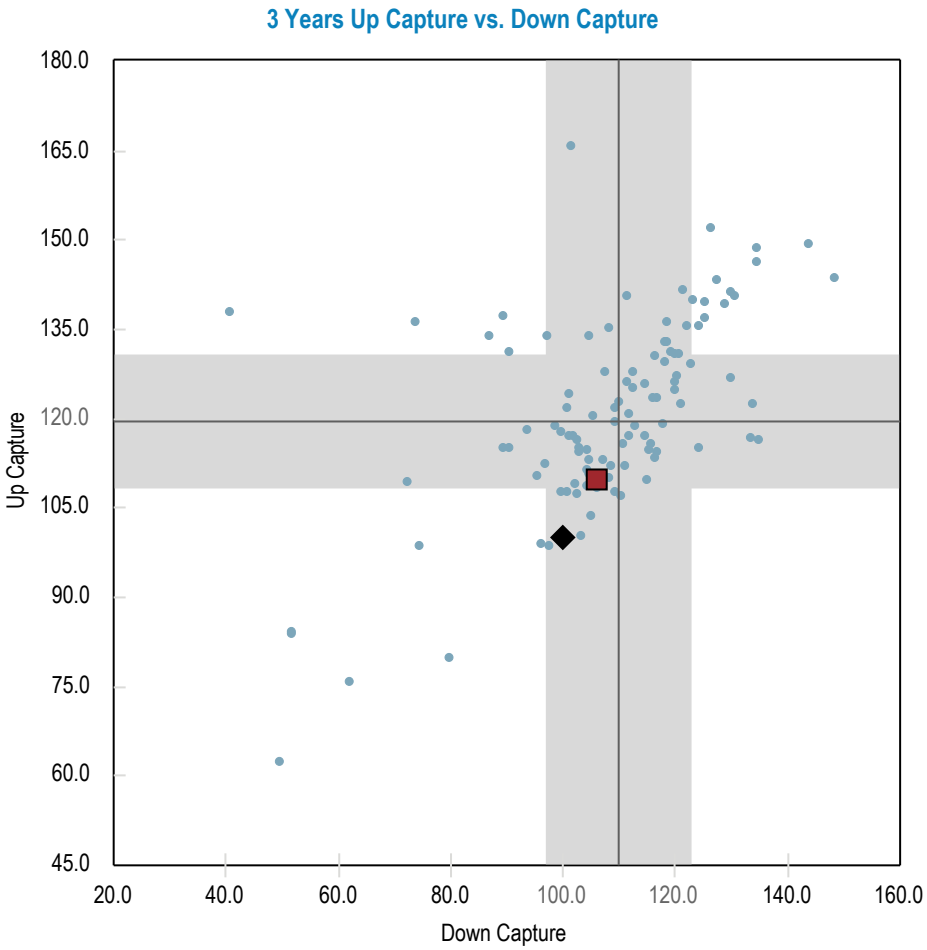
	Up Capture	Down Capture
PIMCO RAE Fundamental Global Ex US Fund	103.59	100.80
MSCI AC World ex USA Value (Net)	100.00	100.00
Median	100.55	101.36
Population	64	64



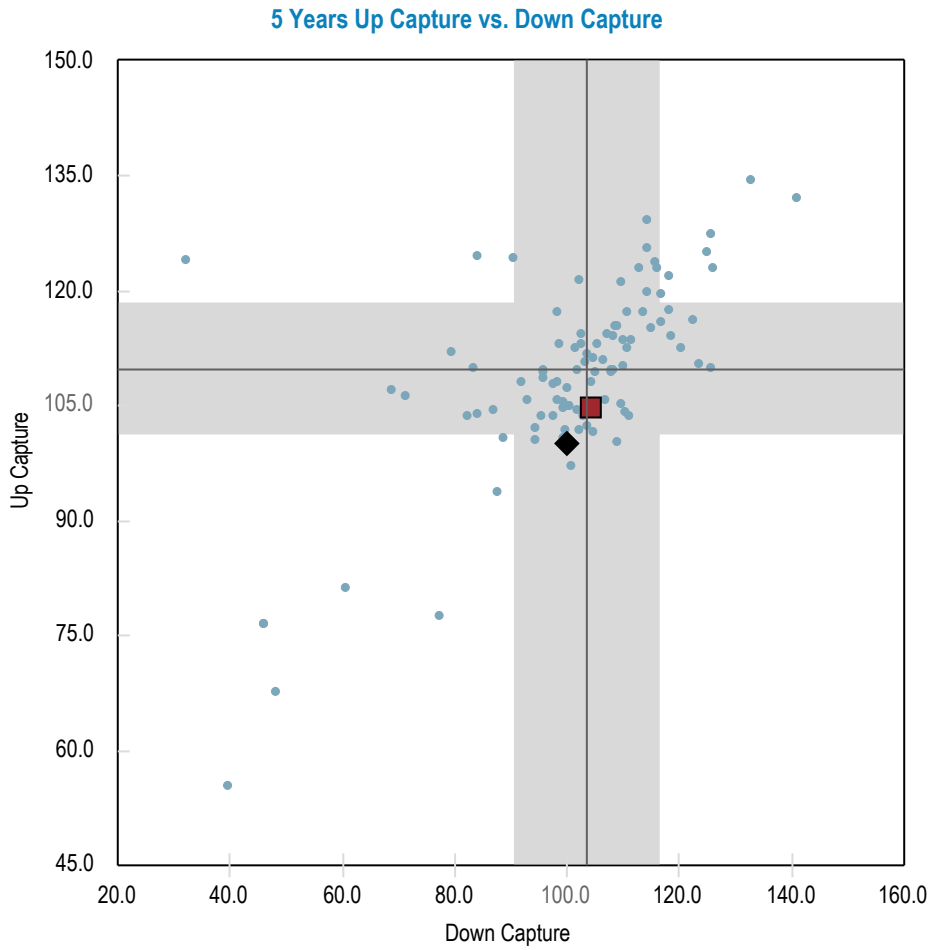
	Up Capture	Down Capture
Skellig Water Fund (aka KBI)	107.09	97.77
MSCI AC World Index (Net)	100.00	100.00
Median	101.04	101.55
Population	281	281



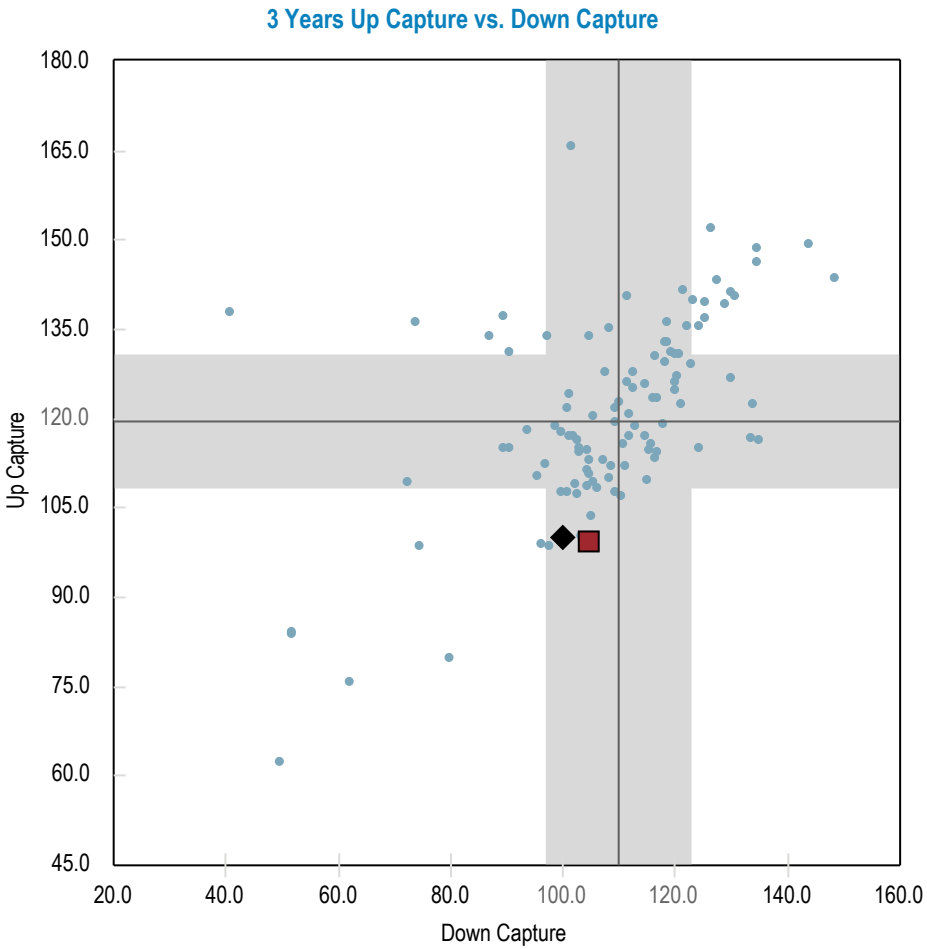
	Up Capture	Down Capture
Skellig Water Fund (aka KBI)	103.17	102.76
MSCI AC World Index (Net)	100.00	100.00
Median	100.82	100.37
Population	249	249



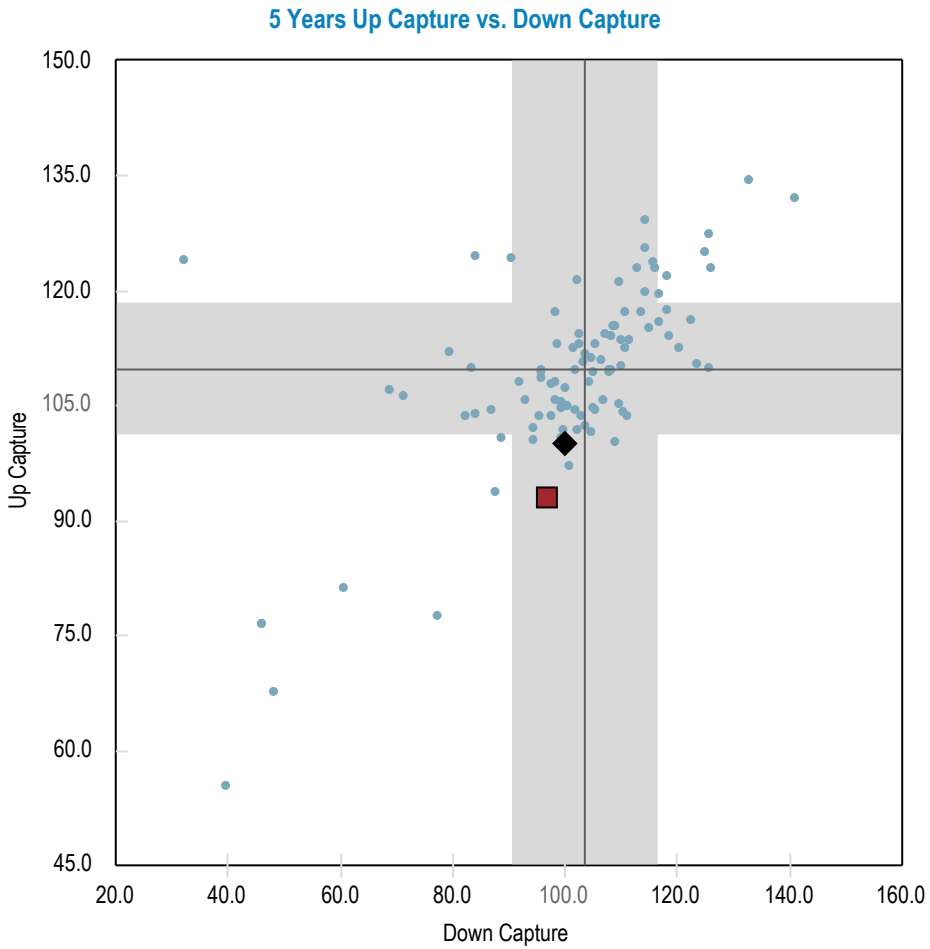
	Up Capture	Down Capture
BlackRock Core Plus Fixed Income	109.98	106.14
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	119.56	109.98
Population	107	107



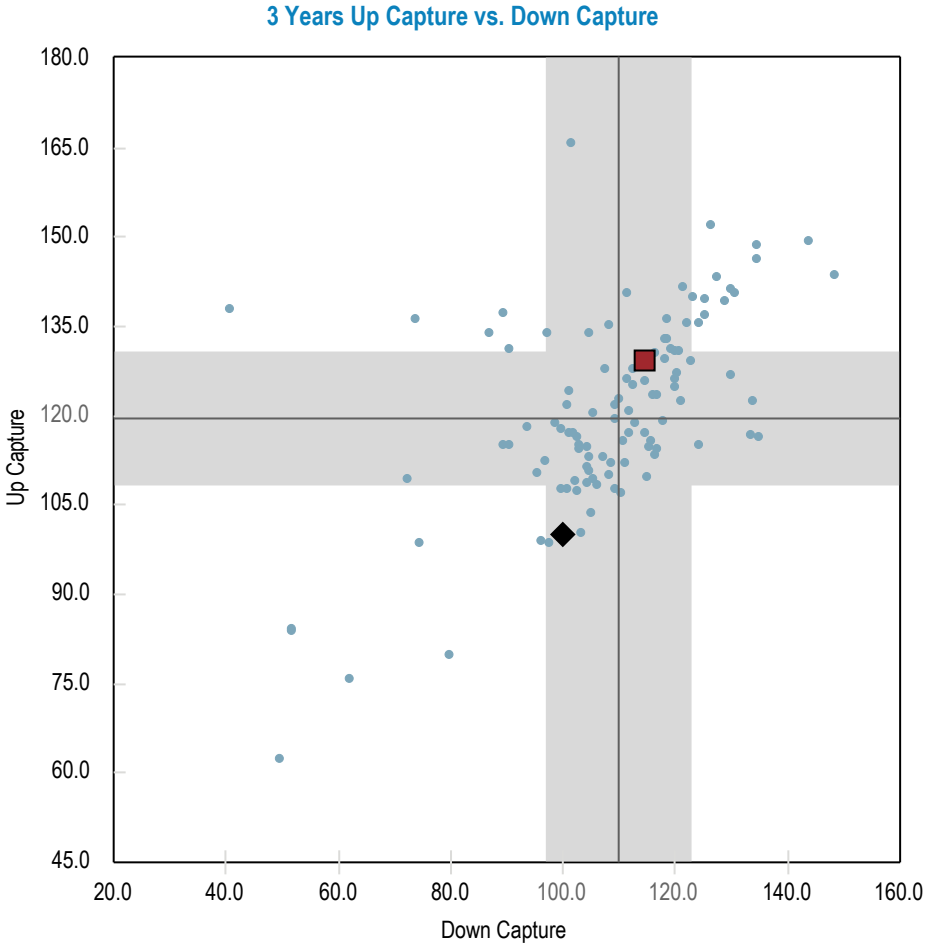
	Up Capture	Down Capture
BlackRock Core Plus Fixed Income	104.83	104.05
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.85	103.55
Population	99	99



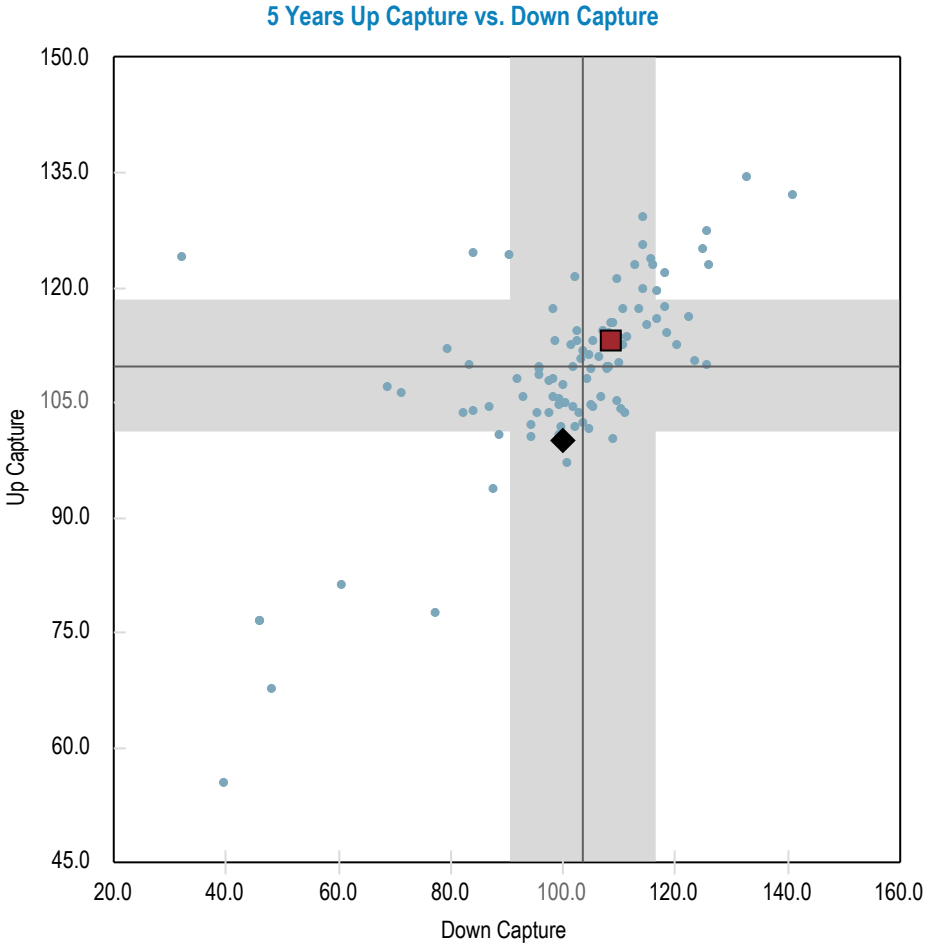
	Up Capture	Down Capture
Doubleline Core Plus	99.56	104.48
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	119.56	109.98
Population	107	107



	Up Capture	Down Capture
Doubleline Core Plus	93.11	96.79
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.85	103.55
Population	99	99



	Up Capture	Down Capture
MacKay Shields Core Plus	129.15	114.48
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	119.56	109.98
Population	107	107



	Up Capture	Down Capture
MacKay Shields Core Plus	113.13	108.42
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.85	103.55
Population	99	99

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are linked geometrically 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.

Manager Line Up

Manager	Fund Incepted	Data Source	Manager	Fund Incepted	Data Source
SSGA S&P 500 Flagship Fund	7/27/2011	SSGA	RREEF America II	3/1/2003	Deutsche
PGIM QS US Core Equity	12/1/2008	BNY	Pantheon USA Fund VI	7/26/2005	Pantheon
Boston Partners Large Cap Value	2/1/1999	BNY	PIMCO BRAVO	1/14/2011	PIMCO
William Blair Large Cap Growth	4/25/2022	BNY	KKR Mezzanine Partners	7/8/2011	KKR
SSGA US Extended Market Index	6/10/2021	SSGA	Stepstone Secondary Opps II	5/10/2013	Stepstone
Leeward Small Cap Value	8/26/2009	BNY	Ocean Avenue Fund III	5/27/2016	Ocean Ave
SSGA MSCI ACWI ex US	1/1/2010	SSGA	Ocean Avenue Fund IV	9/16/2019	Ocean Ave
PIMCO RAE	8/14/2012	PIMCO	Pathway Fund 8	4/12/2016	Pathway
SGA Global Growth	6/4/2018	SGA	Pathway Fund 9	5/31/2018	Pathway
Skellig DST Water Fund	10/28/2014	KBI	Pathway Fund 10	3/31/2020	Pathway
BlackRock Fixed Income	12/1/1995	BNY	Sixth Street Partners Diversified Credit	11/21/2016	Sixth Street
Doubleline Core Plus	12/1/2015	BNY	Sixth Stree TAO Contingent	4/16/2020	Sixth Street
MacKay Shields Core Plus	12/1/2015	MacKay	American Realty	12/20/2019	American Realty
PGIM Emerging Markets Debt	8/26/2019	BNY	Invesco Commercial Mortgage	9/1/2021	Invesco
SSGA US REIT Index Non-Lending Fund	12/10/2021	BNY			

Policy & Custom Index Composition

Policy Index: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM GBI Global, 13.4% NCREIF-ODCE, 7% Private Equity Returns, 5% Private Credit Returns, 5% Russell 2000, 4.6% MSCI US REIT Index.

Other Disclosures

Glossary

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

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

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: Portfolio Excess Return / Portfolio Standard Deviation.

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

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

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

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

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