PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: JUNE 30, 2024

Investment Performance Review for

Imperial County Employees' Retirement System

Table of Contents

Verus

VERUSINVESTMENTS.COM

SEATTLE 206.622.3700
CHICAGO 312.815.5228
PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
SAN FRANCISCO 415.362.3484

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

3RD QUARTER 2024
Investment Landscape

Verus business update

Since our last Investment Landscape webinar:

— Verus hired Dillon Kuk, Kacey Franich, Nico Caballero, and Sarah Khan as Performance Analysts, and Margie Lane as a Marketing Associate, in our Seattle office.

— The Los Angeles office relocated to N. Continental Blvd., 2 miles from our prior location.

— Verus hired Dawit Ewnetu as a Summer Intern in our Seattle office, in partnership with Rainier Scholars.

— Recent research, found at *verusinvestments.com/research:*

- ***2024 Real Assets Outlook***
- ***Mid-year Capital Markets Update***
- ***Is the U.S. heading for a recession?***

Table of contents

VERUSINVESTMENTS.COM

SEATTLE 206.622.3700
CHICAGO 312.815.5228
PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
SAN FRANCISCO 415.362.3484

Recent Verus research

Visit: verusinvestments.com/research

Thought leadership

REAL ASSETS OUTLOOK

As inflation has moderated and interest rates have stabilized, the market has been eager for the Fed to pivot towards a looser monetary policy. Asset prices are broadly rich, pricing in an economic soft landing and a couple rate cuts by year-end. While we are less bearish this year across real assets, given more positive signs of a soft landing, rich asset valuations temper our enthusiasm.

MID-YEAR CAPITAL MARKETS UPDATE

Equity forecasts fell across U.S., International, and Emerging markets. The cash forecast decreased slightly. High cash rates have mixed impacts, while model changes mitigated some effects. Falling yields and spread compression lowered fixed income forecasts, especially U.S. Treasury and emerging market debt. Real Estate forecasts increased due to rising capitalization rates and higher U.S. real GDP expectations.

IS THE U.S. HEADING FOR A RECESSION?

Many market strategies have been predicting a U.S. recession since the start of 2023. This short video presents our team's analysis of key indicators to determine whether a recession is likely in the coming year.

2nd quarter summary

THE ECONOMY

— U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If the slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (ex-Food & Energy) was 3.3% year-over-year in June.

— The U.S. labor market remains strong, but recently some cracks of weakness have appeared. Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market, though it will be important to monitor conditions closely.

EQUITY

— Emerging market equities outperformed during Q2, up +5.0%, despite significant ongoing underperformance of China. U.S. equities were close behind (S&P 500 +4.3%), setting a new all-time-high price level. In contrast, international developed equities were flat.

— Small cap and value style investing underperformed. Small cap lagged large cap by -6.9% while value underperformed growth by -10.5%. The style premia performance gap was even wider over the past year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

FIXED INCOME

— The 10-year U.S. Treasury yield increased slightly from 4.20% to 4.36% during Q2, resulting in near-zero or negative performance for high quality fixed income of a longer duration profile.

— Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) on pace for a record high.

ASSET ALLOCATION ISSUES

— Many goods and services prices have been falling in areas such as autos, energy, and transportation. This trend has occurred alongside signs of weakness in the job market and consumer spending, and has reignited hopes for lower inflation, which would ease pressures on household budgets and allow for interest rate cuts. It is possible that an economic *soft landing* may be occurring, which would suggest lower rates and further gains for risk assets.

— Market-priced volatility (Cboe VIX Index) remained very low, ending at 12.4% in June. This has raised eyebrows, given a variety of risks that domestic equities face, but low volatility is typical of strongly up trending equity environments. Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has receded.

Risk assets delivered moderate returns in Q2, while fixed income was flat to mildly positive, depending on duration profile.

A *soft landing* appears possible for the U.S. economy.

What drove the market in Q2?

"The US Economy is showing clear signs of a slowdown"

Employment change, Non-farm payrolls					
January	February	March	April	May	June
256k	236k	240k	108k	218k	206k

Article Source: Bloomberg, July 8th, 2024

"Earnings bolster US stocks, but crucial inflation report looms"

S&P 500 EPS Growth, Year-over-year					
Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024
+4.3%	-1.5%	-2.0%	-5.0%	+4.1%	+6.9%

Article Source: Reuters, May 14th, 2024

"Slowing U.S. inflation fuels expectations of interest rate cuts"

Consumer Price Index, Year-over-year change					
Jan 23	Feb 24	March 24	April 24	May 24	June 24
3.1%	3.2%	3.5%	3.4%	3.3%	3.0%

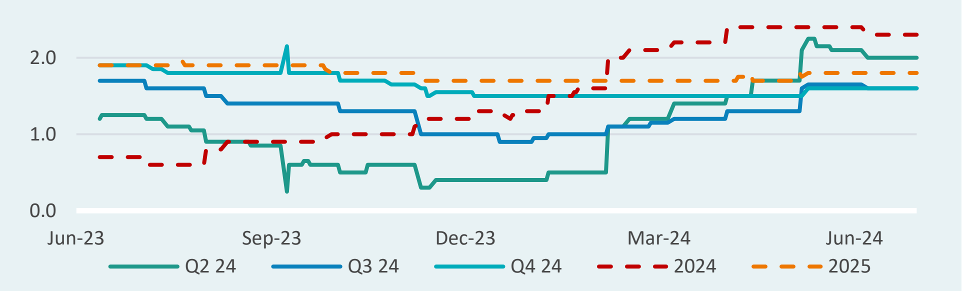
Article Source: Wall Street Journal, June 28th, 2024

"European Central Bank cuts interest rates for first time in 5 years"

ECB Overnight Rate, Actual and Implied					
March 24	June 24	Sep 24 (E)	Dec 24 (E)	March 25 (E)	June 25 (E)
4.0%	3.75%	3.45%	3.20%	2.98%	2.75%

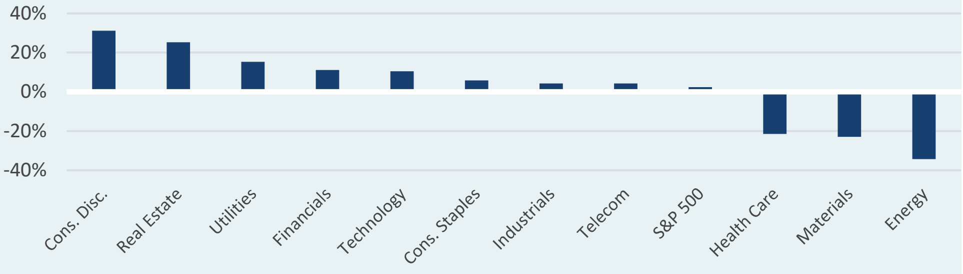
Article Source: Financial Times, June 6th, 2024

US GDP GROWTH PROJECTIONS (%)



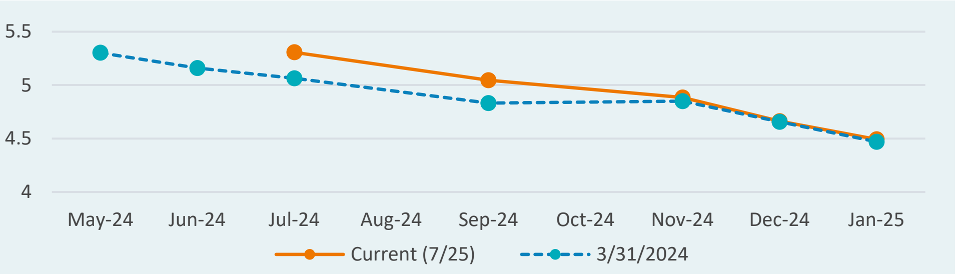
Source: Bloomberg, as of 6/30/24

S&P 500 TRAILING 12M EARNINGS GROWTH, YOY



Source: Bloomberg, as of 6/30/24

U.S. MARKET IMPLIED FUTURE INTEREST RATES (%)



Source: Bloomberg, as of 7/25/24

Economic environment

U.S. economics summary

— Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods. Residential fixed investment detracted from GDP growth, as did the trade deficit.

— U.S. inflation (CPI) fell to 3.0% YoY in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The report reflected a slowing in shelter costs, which have been a primary hurdle for inflation reaching the 2% Federal Reserve target. If a slowing of shelter prices persists, inflation could fall rather quickly. Core inflation (e.g., Food & Energy) was 3.3% year-over-year in June.

— Inflation adjusted personal spending growth was 2.6% year-over-year in June, remaining in a 2-3% range for the past two years and suggesting more moderate economic expansion in line with pre-pandemic conditions. Purchases of goods have been weaker than services, perhaps partly a reflection of higher interest rates, which impact the affordability of big-ticket items such as autos and homes.

— The U.S. labor market remains strong, but in recent months some cracks of weakness have appeared. Unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising. This negative data could prove to be a continuation of the trend towards a more balanced labor market.

— Consumer sentiment deteriorated in Q2, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and the impacts of inflation on personal income. Household expectations for lower interest rates in the future helped to buoy the index somewhat.

	Most Recent	12 Months Prior
Real GDP *(YoY)*	3.1% *6/30/24*	2.4% *6/30/23*
Inflation *(CPI YoY, Core)*	3.3% *6/30/24*	3.1% *6/30/23*
Expected Inflation *(5yr-5yr forward)*	2.3% *6/30/24*	2.3% *6/30/23*
Fed Funds Target Range	5.25–5.50% *6/30/24*	5.00–5.25% *6/30/23*
10-Year Rate	4.20% *6/30/24*	3.80% *6/30/23*
U-3 Unemployment	4.1% *6/30/24*	3.6% *6/30/23*
U-6 Unemployment	7.4% *6/30/24*	6.9% *6/30/23*

Inflation

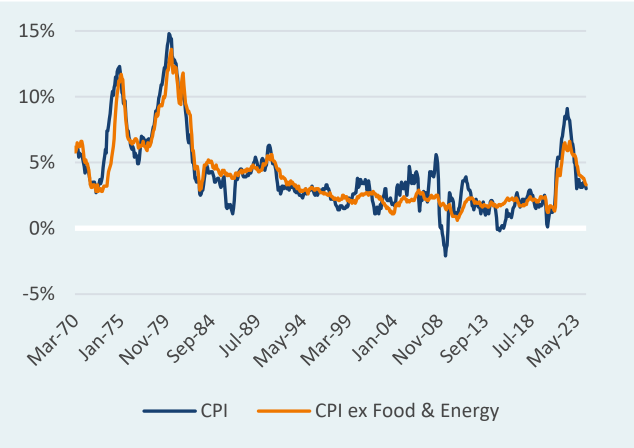
U.S. inflation (CPI) fell to 3.0% year-over-year in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The June report was the first which reflected slower shelter cost increases, which have been a large hurdle for inflation falling to the Fed's 2% target. If this slowing in shelter prices persists, inflation could fall much more quickly to the Fed's 2% target. Core inflation (ex-Food & Energy) dropped to 3.3% year-over-year in June. Many goods and services prices have been *falling* in recent months in areas such as automobiles, energy, and transportation services. This trend has occurred alongside signs of weakness in the job market and other areas of the economy, and has reignited hopes for inflation to normalize, easing pressures on household budgets and allowing for interest rate cuts.

Investors have been watching monthly inflation reports very closely for potential signs of the future inflation path. If monthly inflation reports come in at a 0.2% to 0.3%, we can expect inflation to remain around today's level. However, if additional inflation reports come in at 0.1% or lower, inflation would fall rather quickly to 2%.

Inflation has fluctuated between 3-3.5% over the past year.

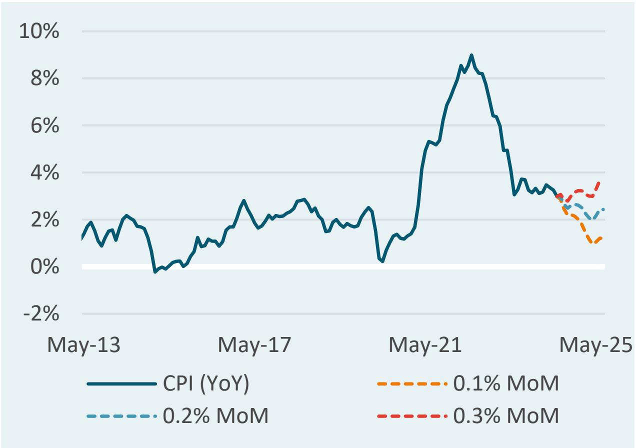
Shelter will likely need to slow further for inflation to reach 2%.

U.S. CPI (YOY)



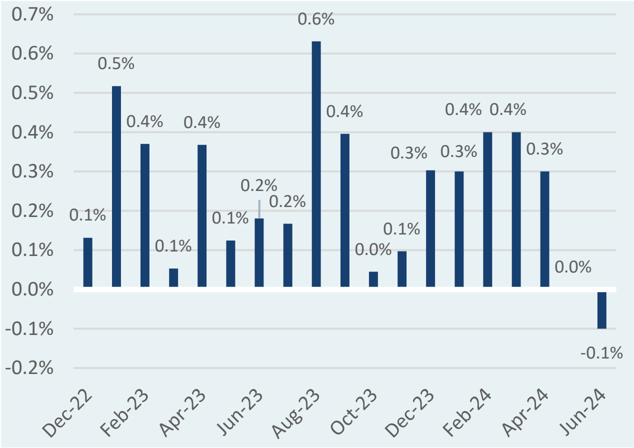
Source: BLS, as of 6/30/24

POTENTIAL INFLATION PATHS



Source: FRED, Verus, of 6/30/24

MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 6/30/24

GDP growth

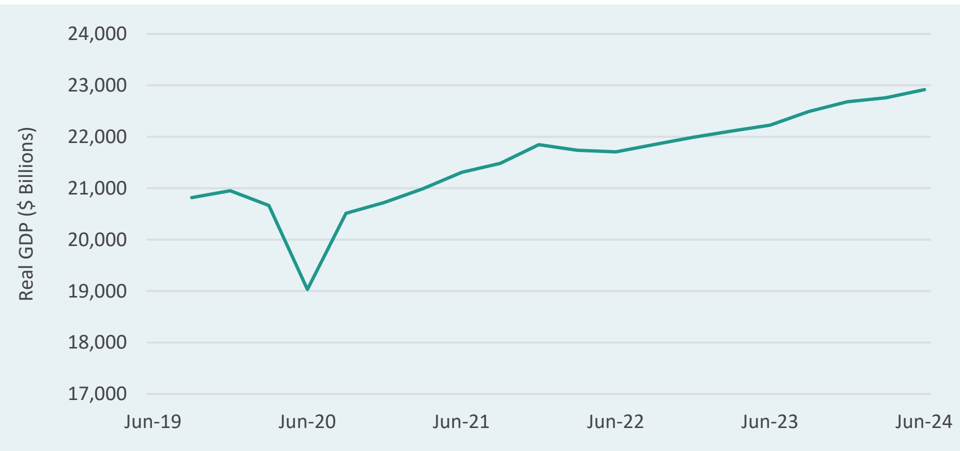
Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods. Residential fixed investment detracted from GDP growth, as did the trade deficit.

While consumption increased this quarter, economists are wary of the sustainability of consumer spending growth. Much of the increase in spending was concentrated in necessities, and with a cooling labor market and low savings rate, consumer spending could slow if these issues persist.

Recent economic data seems to reaffirm the idea that the U.S. economy is moving towards a more moderate growth phase after many quarters of surprisingly hot growth and spending. Unlike past periods of economic weakening, many trends today could reasonably be summarized as a *return to normalcy*. For example, following the pandemic, the domestic labor market was experiencing a historic mismatch between the number of jobs available and the number of workers available. Resolving that mismatch required a material weakening in the labor market from *extreme tightness* to *relatively strong*, but not a move (yet) towards anything that suggests recession.

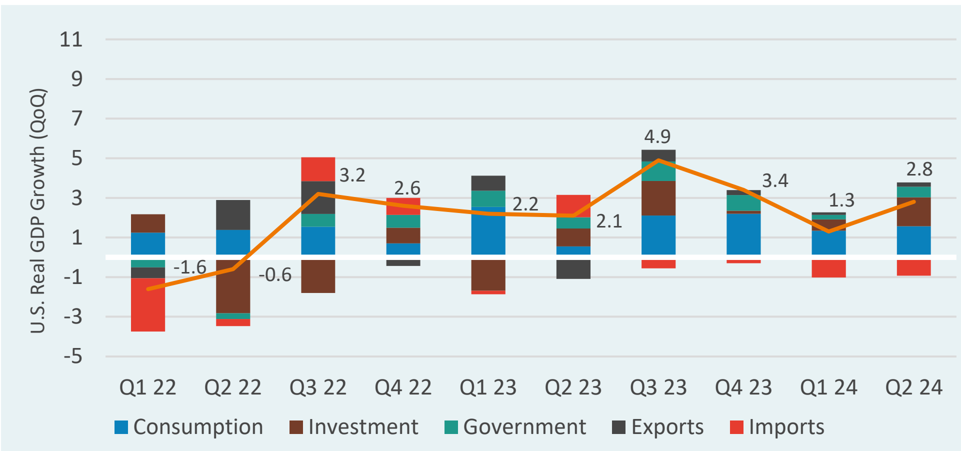
U.S. growth picked up in Q2, but concerns remain regarding the strength of the consumer.

U.S. REAL GROSS DOMESTIC PRODUCT



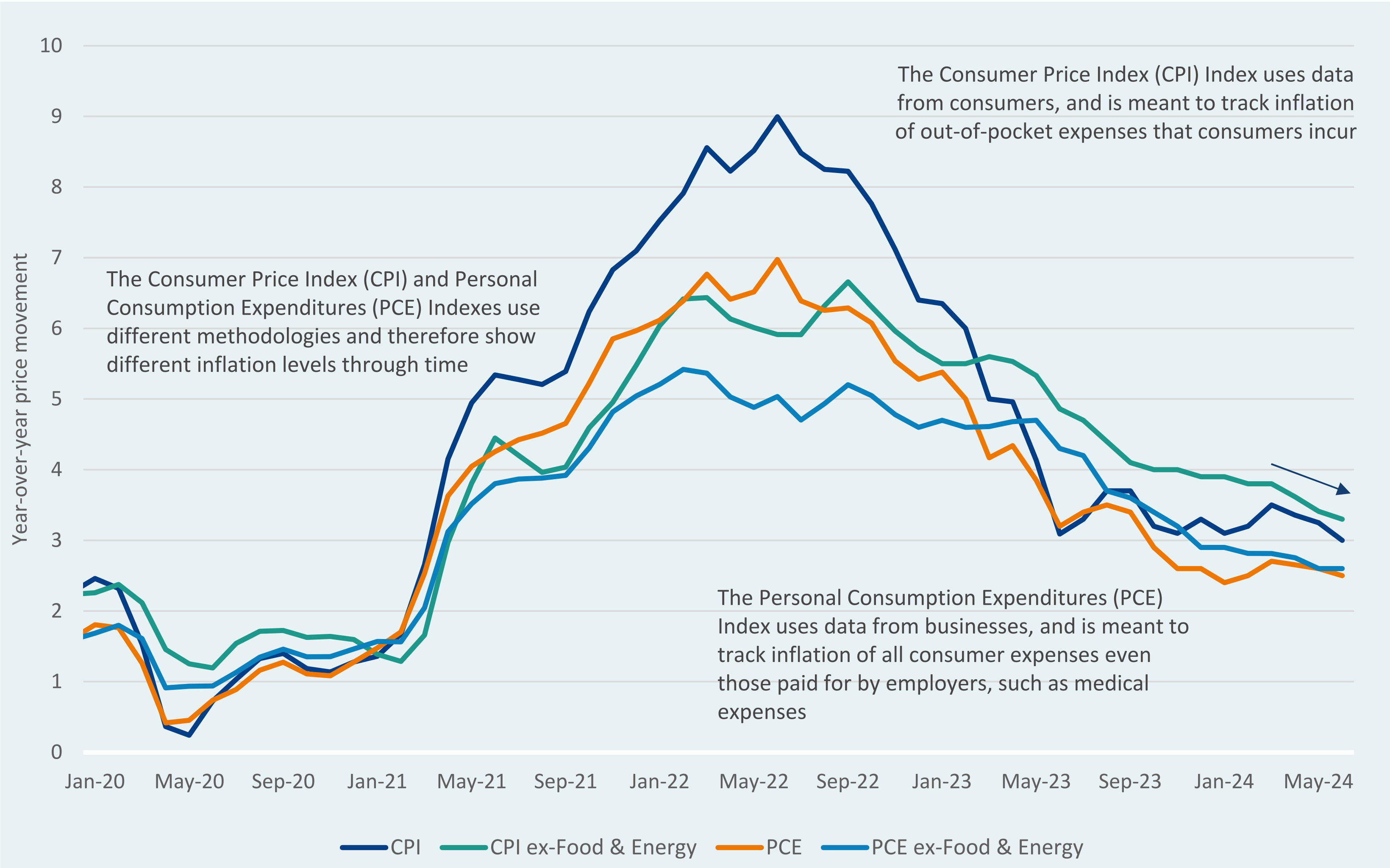
Source: FRED, as of 6/30/24

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 6/30/24

Inflation conditions are normalizing



Moderating price pressures in recent months have helped to push year-over-year CPI inflation to 3.0%.

Source: FRED, Verus, as of 6/30/24

Labor market

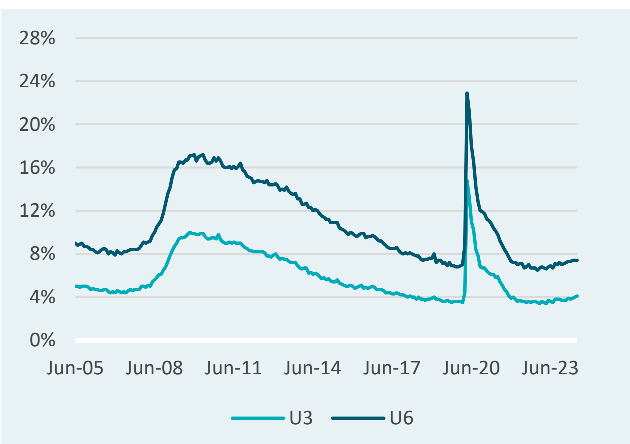
The U.S. labor market remains strong relative to history, but in recent months some cracks of weakness have appeared. The rate of unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising throughout the year. This negative data could prove to be a continuation of the trend towards a more balanced labor market, though it will be important to monitor conditions closely.

Average hourly earnings growth was 3.9% year-over-year in June, slightly outpacing the rate of inflation. As inflation has fallen, wage growth has also slowed, likely a reflection of a more normal balance between jobs available and workers available, as well as less urgency for cost-of-living adjustments.

In many past instances of increasing unemployment, job losses were quick and accelerating, which often preceded recession. In contrast, more recently the rate of unemployment has more gradually moved up. Recessions have rarely occurred without a sharper downtrend in employment, which given current conditions might suggest we are seeing a moderation of economic growth rather than a move towards something worse.

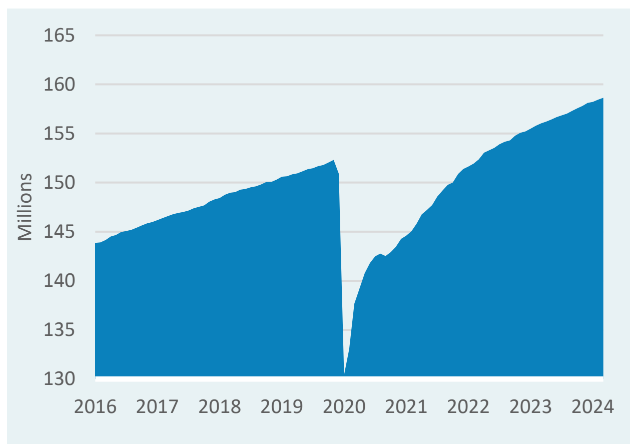
The labor market remains strong by historical standards, though conditions have moved in a weaker direction.

U.S. UNEMPLOYMENT



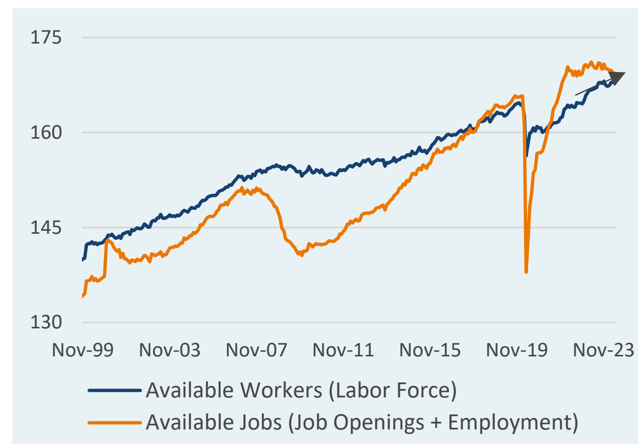
Source: FRED, as of 6/30/24

TOTAL U.S. EMPLOYMENT



Source: FRED, as of 6/30/24

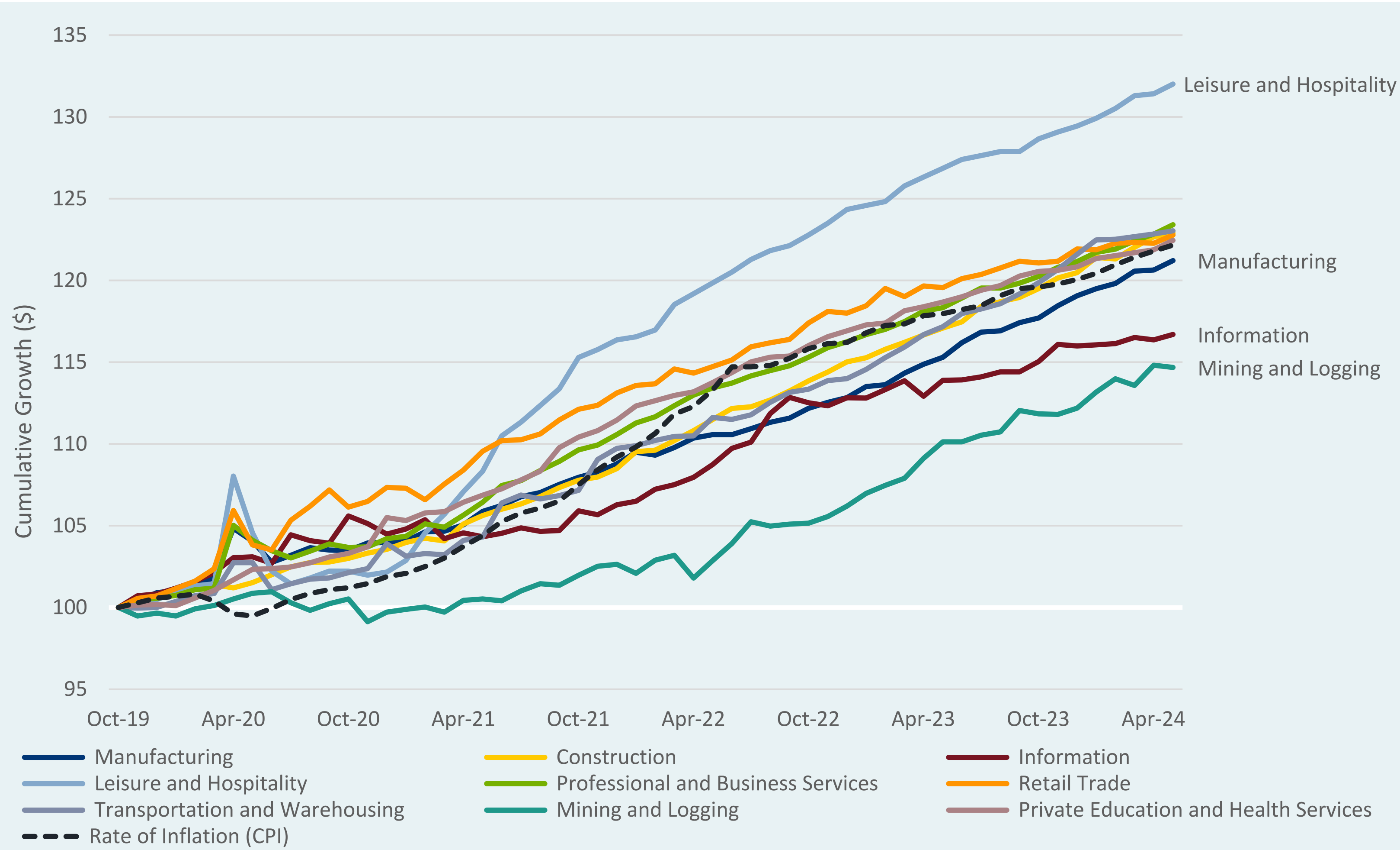
WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, Verus, as of 5/31/24

Wage gains vs. rate of inflation

AVERAGE HOURLY EARNINGS



Source: FRED, Verus, as of 6/30/24

Over the past few years, inflation has eaten into wallets and resulted in shrinking pay for many types of work.

If inflation were to move higher, many households do not have much room to maneuver financially.

The consumer

Inflation adjusted personal spending growth was 2.6% year-over-year in June, and has remained in a 2-3% range for the past two years. This rate indicates moderate economic expansion in line with pre-pandemic rates of growth. Purchases of goods have been much weaker than purchases of services, perhaps partly a reflection of higher interest rates which have impacted the affordability of big ticket items such as automobiles and homes.

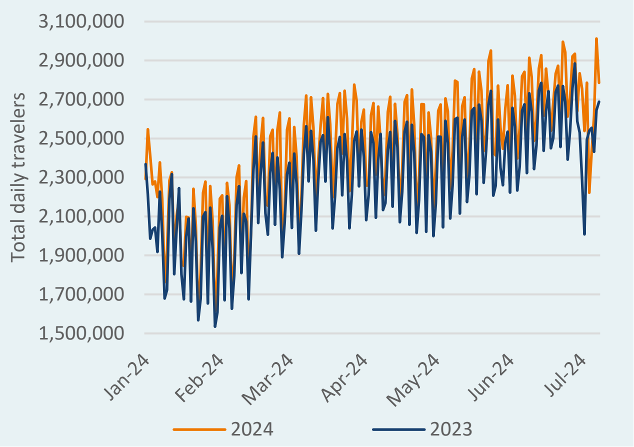
Many Americans continue to spend rather freely despite higher costs of goods and services taking up a greater portion of take-home income, and extreme discontent around inflation. However, certain non-essential spending such as for vacations has been robust. Total traveler volumes at U.S. airports in late June reached a record level.

Personal savings rates improved slightly over the quarter, from 3.5% to 3.9%. It seems reasonable to assume that savings rates should improve if wage gains continue to outpace the rate of inflation, all else equal.

REAL PERSONAL SPENDING

Source: FRED, as of 6/30/24

U.S. TSA AIRPORT ACTIVITY



Source: FRED, as of 7/8/24

PERSONAL SAVINGS RATE

Source: FRED, as of 6/30/24

Sentiment

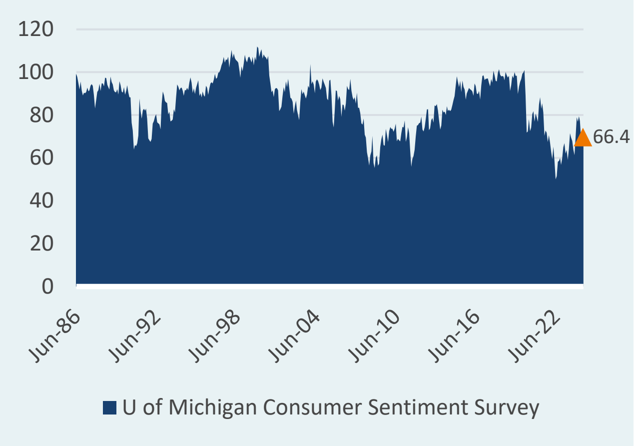
Consumer sentiment deteriorated over the quarter, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and impacts of inflation on personal income. Household expectations for lower interest rates in the future helped to buoy the index somewhat.

Poor consumer sentiment and the discontent around higher prices can only be partially captured by the rate of inflation. Higher prices of goods and services make life more difficult, but the jump in interest rates further exacerbated the problem, in some cases substantially. The total monthly loan cost of a car or a home has rocketed upward with increased prices for those items and much higher interest costs baked into payments. For example, if a family had purchased an average home in 2021, the monthly payment would have been $1,206. In early 2024, if the same family purchased an average home, the monthly payment for that home would be $2,209 – an 83% increase!

The NFIB Small Business Optimism index was flat during the quarter, continuing to show an extremely poor reading. Inflation remains the top business concern. NFIB Chief Economist Bill Dunkelberg explained that “Increasing compensation costs has led to higher prices all around. Meanwhile, no relief from inflation is in sight for small business owners as they prepare for the uncertain months ahead.”

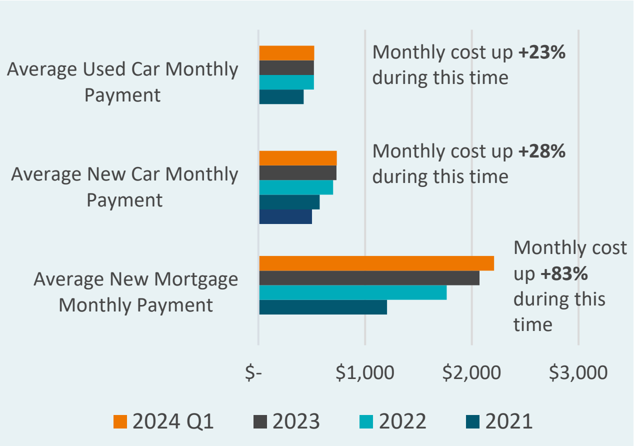
Consumer sentiment weakened during Q2, while small business optimism remained depressed.

CONSUMER SENTIMENT



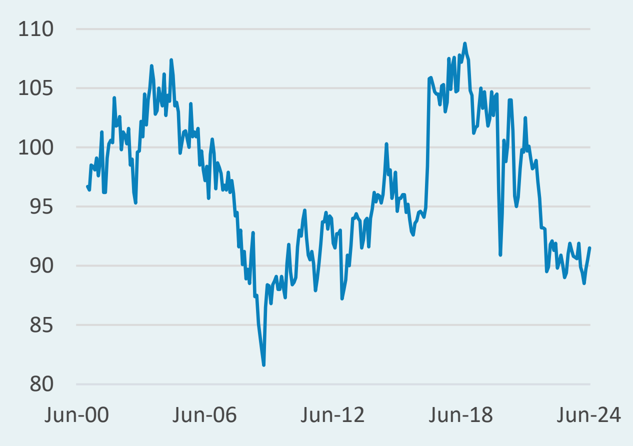
Source: University of Michigan, as of 6/30/24

INFLATION EATING UP BUDGETS



Source: Edmunds, Verus, as of April 2024

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 6/30/24

Housing

Imbalances in the U.S. housing market appear to be here to stay, at least for a while, as sharply lower home prices and/or lower mortgage rates (the conditions needed for reasonable affordability) seem unlikely. Affordability is extremely difficult for new homebuyers, currently near record lows, and has worsened as the average home price was up +5.8% year-over-year in May. The other saving grace for potential homebuyers would be lower mortgage rates, but Federal Reserve rate cuts are expected to be moderate and may not have a large impact on the longer end of the yield curve. A driver of ultra-low mortgage rates during the pandemic was government quantitative easing, much of which was focused on mortgage debt and therefore pushed mortgage interest rate spreads to unusually low levels. In short, mortgage rates may fall in the next few years but perhaps only mildly.

Fortunately, rent price growth has slowed considerably, up only 0.8% year-over-year in May, according to Redfin. As the cost of renting versus owning has dramatically shifted, a strong surge in activity towards renting and away from homeownership would not be surprising in the near future.

Depressed home sales activity reflects extreme unaffordability. Monthly home sales are at levels similar to that which followed the 2008-2009 housing bubble. Prior to that crisis, the mid-1990s were the most recent time that compares to this level of sales activity. On the other hand, *new home sales* activity has been fairly robust, which may provide some incremental easing to home prices through increased supply.

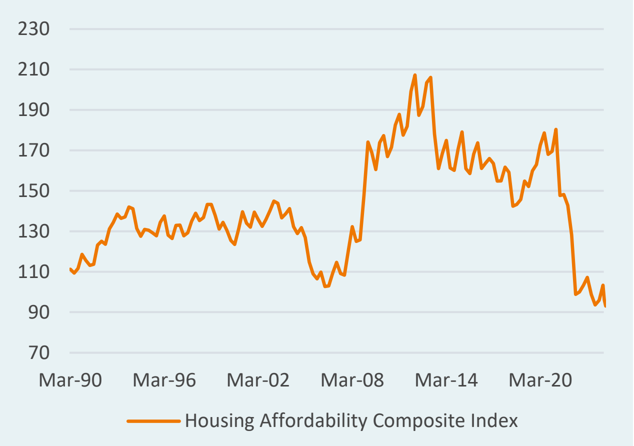
30-YEAR MORTGAGE RATE (%)

Source: Freddie Mac, as of 6/30/24

EXISTING HOME SALES

Source: FRED, as of 6/30/24

HOUSING AFFORDABILITY



Source: FRED, as of 3/31/24 – Housing affordability is calculated as the cost of a median priced single-family home at the current mortgage rate, as a percentage of the median family income

International economics summary

— Global economic data continues to paint a picture of slower but positive growth—a move back to pre-pandemic rates of expansion in the United States and across emerging markets, but with concerning weakness in Europe and Japan. Moderating conditions have allowed for rate cut signaling from central banks, which will likely provide an incremental boost to activity in the near-term.

— Inflation has fallen to a 2-3% range for most developed countries. Big inflation trends have tended historically to rhyme across the developed world, as crises often impact prices of global goods and services in similar ways. Recently, pandemic effects such as global supply chain issues, government stimulus, and higher energy prices had resulted in a similar ebb and flow to prices across marketplaces.

— India's economy continues to face uncertainty for this upcoming quarter. In the last five out of six years, India's real GDP growth rate has fallen short of the Economic Survey projections, but they have seen growth in private investments and infrastructure spending. Annual retail inflation rose to 5.1% in June compared to 4.8% from the previous month, primarily due to food prices. The Reserve Bank of India paused rate hikes, with the goal of not obstructing growth, and bringing inflation to its target rate of 4%.

— China year-over-year inflation was just 0.2% in June, as the country struggles with deflationary pressures, given a real estate slump, a weak job market, and generally poor economic conditions. According to some reports, excess manufacturing capacity and government incentives for overinvestment have created a situation where supply is outstripping demand. A declining population significantly adds to uncertainty around these issues.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.1% *6/30/24*	3.0% *6/30/24*	4.1% *6/30/24*
Eurozone	0.4% *3/31/24*	2.5% *6/30/24*	6.4% *5/31/24*
Japan	(0.7%) *3/31/24*	2.3% *6/30/24*	2.8% *5/31/24*
BRICS Nations	5.3% *3/31/24*	1.9% *6/30/24*	4.8% *12/31/22*
Brazil	2.5% *3/31/24*	4.2% *6/30/24*	7.1% *5/31/24*
Russia	5.4% *3/31/24*	8.6% *6/30/24*	2.6% *5/31/24*
India	7.8% *3/31/24*	5.1% *6/30/24*	9.2% *6/30/24*
China	4.7% *6/30/24*	0.2% *6/30/24*	5.0% *6/30/24*

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

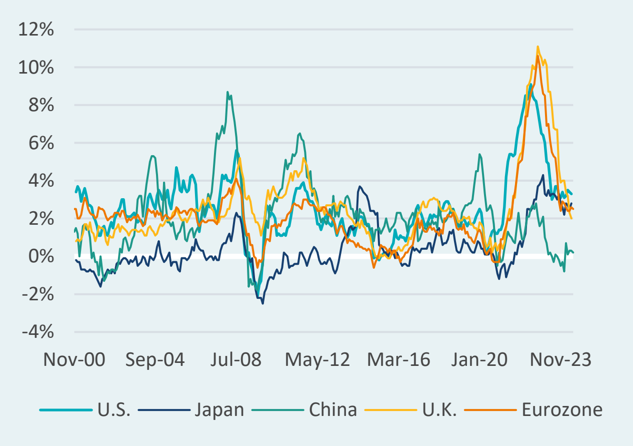
International economics

The global narrative appears to remain intact—that many economies are set to slow in 2024 but will likely avoid recession. The United States leads the developed world in growth with a 3.1% YoY real rate of GDP expansion. Europe and Japan have demonstrated anemic economic growth.

Inflation moderation continues, and in much of the world has normalized. Big inflation trends have tended historically to rhyme across developed countries, as crises often impact prices of global goods and services in similar ways. This seems to be at least partially the case recently, as pandemic effects such as global supply chain issues, government stimulus, and higher energy prices have followed global growth outpacing expectations. This resulted in a similar ebb and flow in prices across most economies. If history is a guide, normal rates of inflation elsewhere may be a good sign for domestic inflation issues.

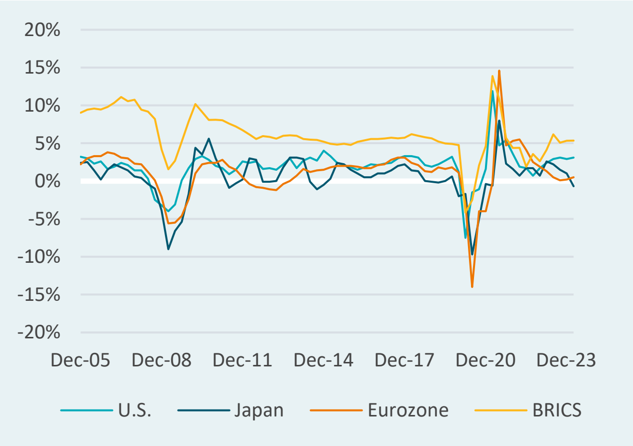
China year-over-year inflation was just 0.2% in June, as the country struggles with deflationary pressures, given a real estate slump, weak job market, and generally poor economic conditions. According to some reports, excess manufacturing capacity and government incentives for overinvestment have created conditions where supply has outstripped demand. A declining population significantly adds to uncertainty around these issues.

INFLATION (CPI YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/24

REAL GDP GROWTH (YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/24 – or most recent release

IMF JULY 2024 GDP FORECASTS

Source: IMF April World Economic Outlook, as of 7/17/24

Fixed income rates & credit

Fixed income environment

— The 10-year U.S. Treasury yield initially increased in Q2, rising from 4.20% to a peak of 4.70% before gradually falling to 4.36%, resulting in an overall increase in yields with a downward trend going into Q3. These movements resulted in near-zero performance for short to intermediate duration high quality fixed income and negative performance for longer duration.

— By comparison, most credit indices saw positive returns. High yield gained +1.1% (Bbg U.S. Corporate High Yield), while bank loans rose +1.9% (S&P/LSTA Leveraged Loan). Longer duration investment grade corporate bonds declined by -1.6% (Bloomberg U.S. Long Corporate Credit) as sensitivity to rising yields in April overwhelmed gradual returns in the latter half of the quarter. This reflects a continued concern in the market over inflation and higher-for-longer Fed policy.

— The U.S. yield curve, indicated by the 10-year minus the 2-year Treasury yield, continues to remain inverted, marking over two years of continuous yield curve inversion (June 6th, 2022). The curve ended the quarter inverted by -35bps. While an inverted yield curve has been a common metric for predicting recessions, the recent continued economic resilience has increased public optimism of a potential soft-landing.

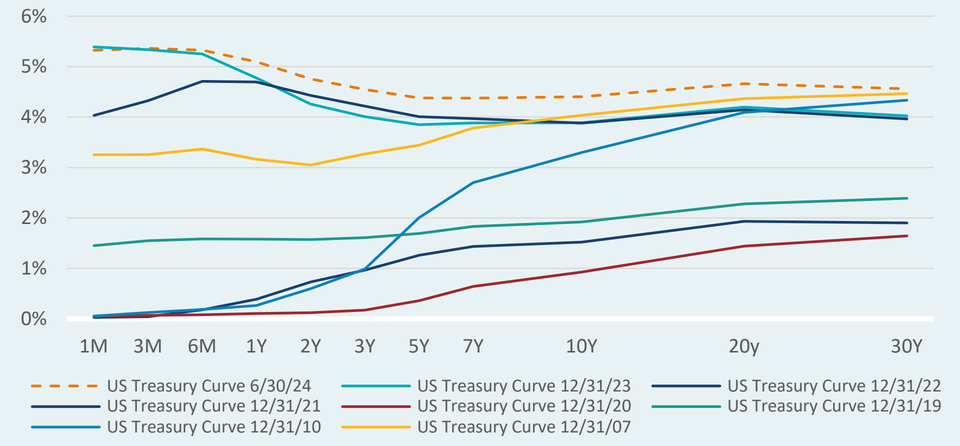
— Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) is on pace to be a record high proportion. During the period, a total of $15.2 billion of bank loan and high yield bonds were impacted by default or distressed exchanges, down from $20.6 billion in the prior quarter. Notably, default/distressed exchange volume averaged $17.9 billion quarterly since 2020 and $14 billion quarterly over the last 17.5 years.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	0.1%	2.6%
Core Plus Fixed Income (Bloomberg U.S. Universal)	0.2%	3.5%
U.S. Treasuries (Bloomberg U.S. Treasury)	0.1%	1.5%
U.S. Treasuries: Long (Bloomberg U.S. Treasury 20+)	(2.2%)	(7.2%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	1.1%	10.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.9%	11.1%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	-1.6%	0.7%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	0.3%	9.2%
Mortgage-Backed Securities (Bloomberg MBS)	0.1%	2.1%

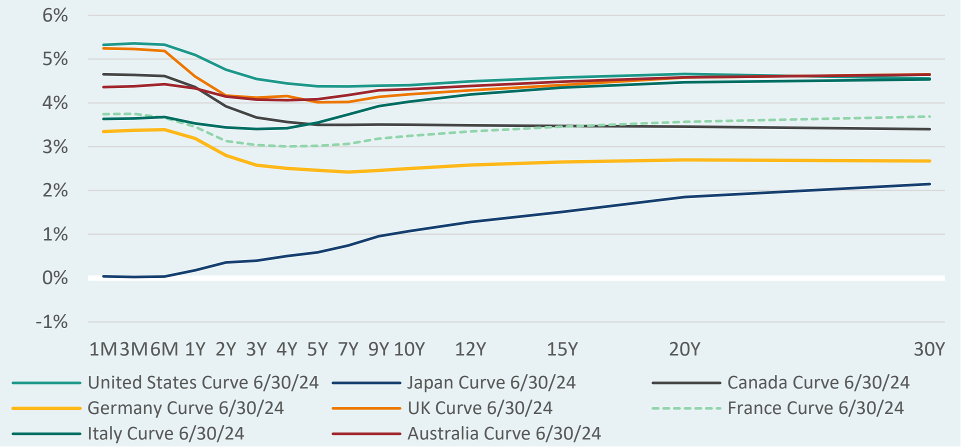
Source: Bloomberg, as of 6/30/24

Yield environment

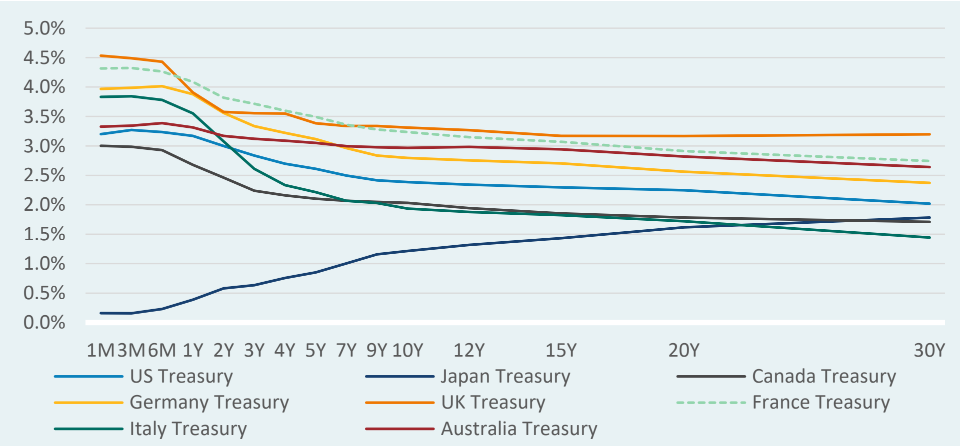
U.S. YIELD CURVE



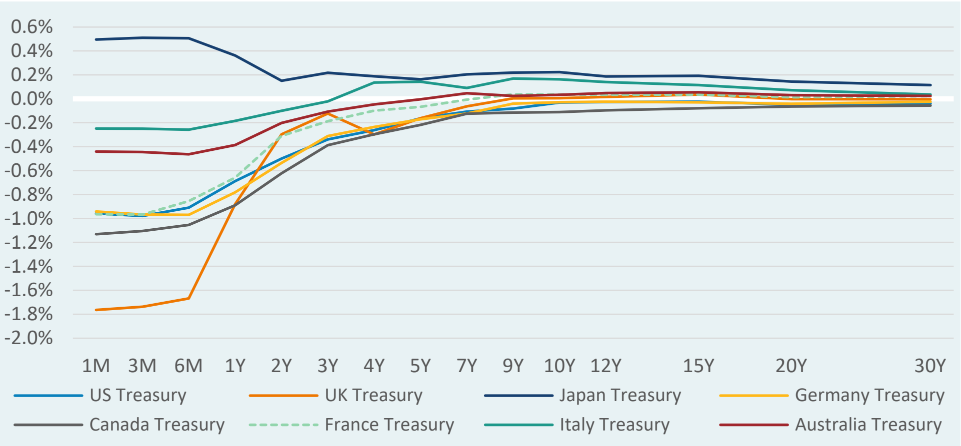
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/24

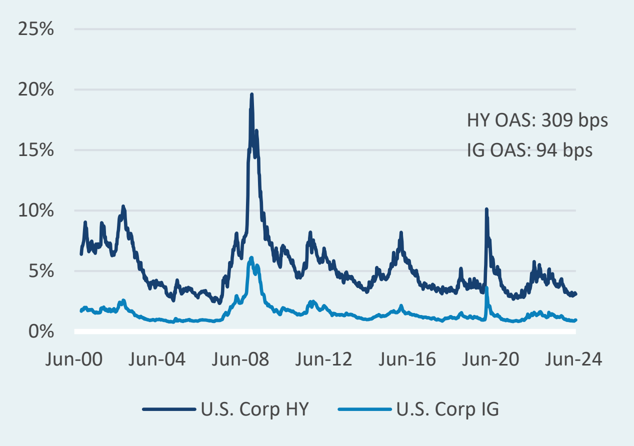
Credit environment

During the second quarter, credit markets delivered mostly positive returns with lower-quality credit such as high yield bonds and bank loans leading. Bank loans rose +1.9% (CS Leveraged Loans), while high yield bonds increased by +1.1% (Bbg U.S. Corporate High Yield). Longer duration investment grade corporate bonds (Bloomberg U.S. Long Corporate Credit) fell by -1.6% as concerns over rising interest rates and higher expected inflation acted as a headwind to performance.

Returns across credit ratings were broadly positive during Q2. Higher-quality BB-rated bonds returned +1.4% compared to +1.1% for B-rated, while non-distressed CCC's led with +2.0% returns. CCC-rated bonds including distressed lagged other credits with +0.2% returns. Higher-quality bank loans outperformed lower quality, with BB- and B- rated loans returning +1.88% and +2.13%, while CCC-rated loans only returned +0.14%.

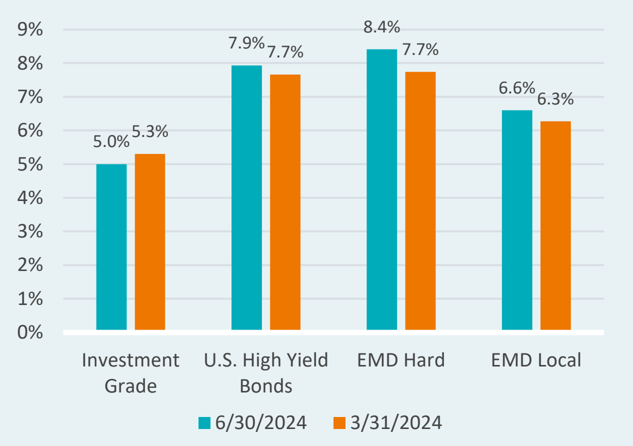
High quality credit spreads declined during the quarter while high yield spreads were mixed as recession concerns contended with further resilience in the corporate sector. Lower-quality high yield bond spreads rose by roughly 0.1% to 3.2%, while investment grade spreads continued to tighten by 0.3% to 0.9%. These trends continue to show spreads below long-term historical averages, suggesting that investors remain confident in the ability of most businesses to service debt. However, widening spreads and lower returns in CCC and distressed suggest that the highest risk credit sectors are beginning to show strain under the continued pressure of higher lending rates.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/24

YIELD TO MATURITY



Source: Bloomberg, J.P. Morgan as of 6/30/24

CREDIT SPREAD (OAS)

Market	6/30/24	6/30/23
Long U.S. Corp	1.2%	1.5%
U.S. Inv Grade Corp	0.9%	1.2%
U.S. High Yield	3.1%	3.9%
U.S. Bank Loans*	3.9%	3.8%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/24
**Discount margin (4-year life)*

Default & issuance

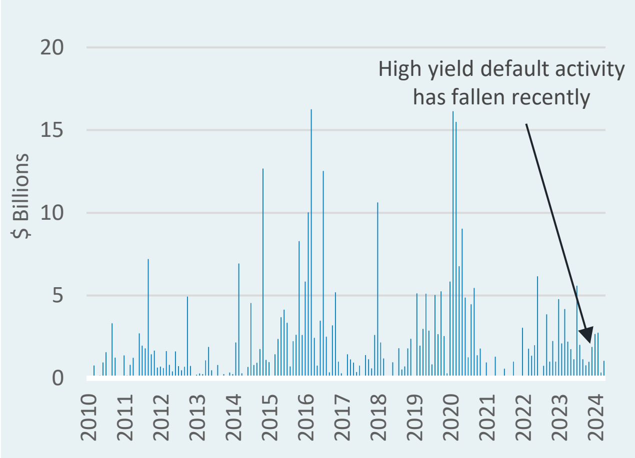
Default activity declined during the quarter as concerns around slowing economic growth abated. During the period, $15 billion of bank loans and high yield bonds were affected by default or distressed exchanges, down from $22 billion in the prior quarter. Year-to-date, 19 defaults and 23 distressed exchanges have occurred totaling more than $37 billion, down roughly -14% from the same period last year.

The bank loan market has shown notable weakness compared to high yield bonds. Year-to-date, roughly 80%, or $29.6 billion of loans, have either defaulted or resulted in distressed exchanges compared to $7.5 billion for high yield bonds.

High yield bond default rates declined to roughly 1.8%, down from 2.7% a year ago, and are well below the long-term annual average of roughly 3.4%. High-yield default recovery rates ended the quarter at 38.8%, up significantly from 17.4% at the same time last year.

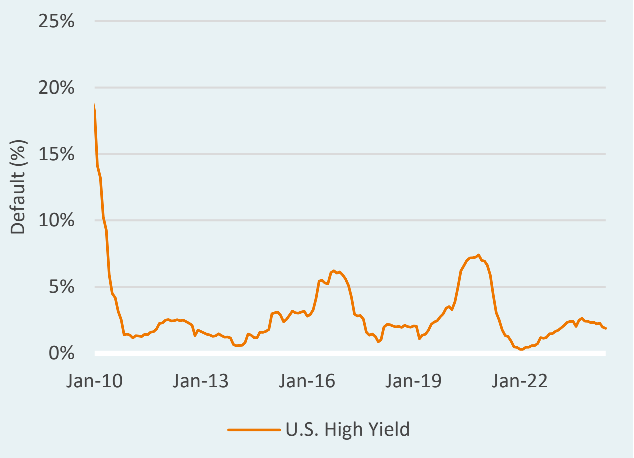
The issuance of investment grade credit declined significantly from the prior quarter, $343 billion versus $531 billion. Year-to-date issuance stands at $874 billion, up 23% compared to last year at the same time. High yield bond issuance declined slightly to $79.4 billion, down from $86.6 billion during the previous quarter. Broadly, credit spreads remain near their recent lows, which despite the higher yield environment, allows companies to issue at more competitive rates.

U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)



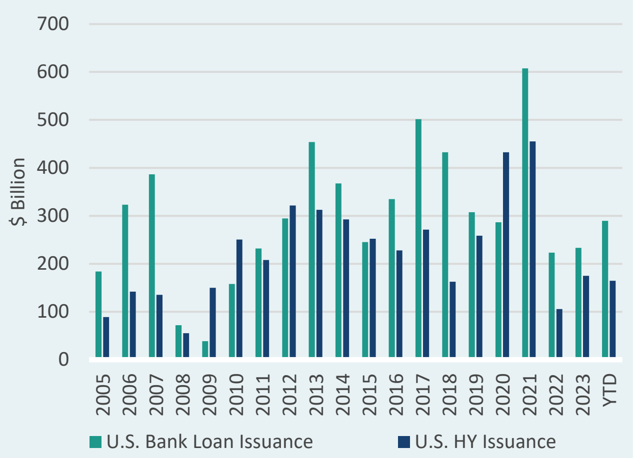
Source: BofA Merrill Lynch, as of 6/30/24

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



Source: BofA Merrill Lynch, as of 6/30/24 – par weighted

DEVELOPED MARKET ISSUANCE ($ BILLIONS)



Source: BofA Merrill Lynch, all developed markets, as of 6/30/24

Credit hedge funds

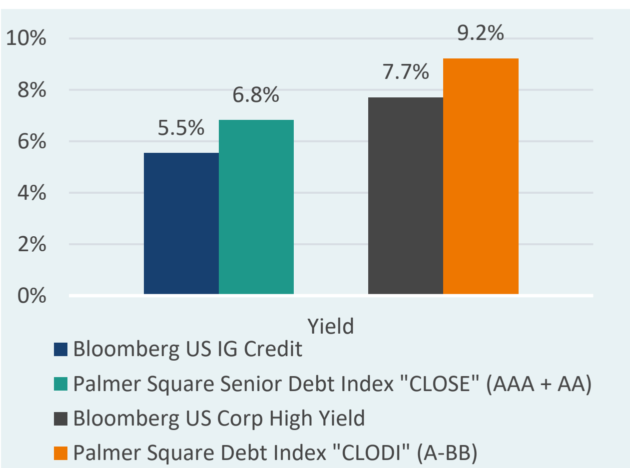
Credit hedge funds have outperformed high yield and leveraged loans through 2Q 2024, benefiting from high total yields and low duration.

Even though headline default numbers imply a benign opportunity set, according to JP Morgan, although default volume is lower year over year, the volume of distressed exchanges is already the third highest annual total since at least 2008. Additionally, the volume of Loan distressed transactions YTD is already the largest annual total on record for loans. Credit hedge funds are a natural participant in these types of transactions and are finding no shortage of actionable ideas even as broad markets are at or near highs.

Hedge funds focused on structured credit continue to take advantage of excess yield in CLO and other securitized markets. In the CLO market, an index of AAA and AA tranches (as proxied by the Palmer Square Indexes) are offering 1.3% excess yield over US Investment Grade Credit and A, BBB, and BB tranches are yielding 1.5% more than the Bloomberg US High Yield index.

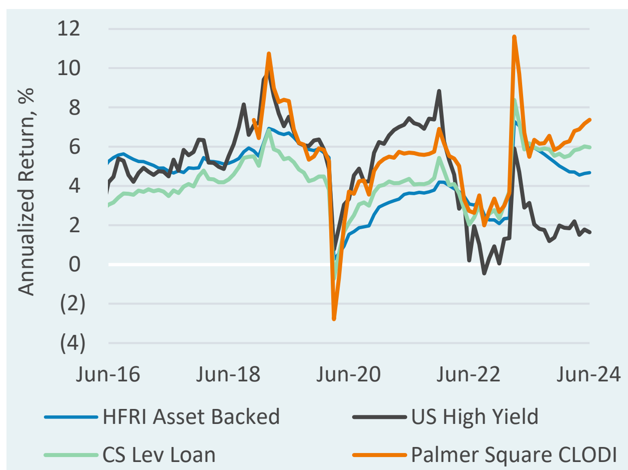
Distressed funds should continue to benefit from elevated levels of capital market activity in credit markets, with strong issuance in both HY and Loan markets set against a backdrop of tight credit spreads and low defaults.

CLO VS CORPORATE BOND YIELDS AS OF JUNE 30



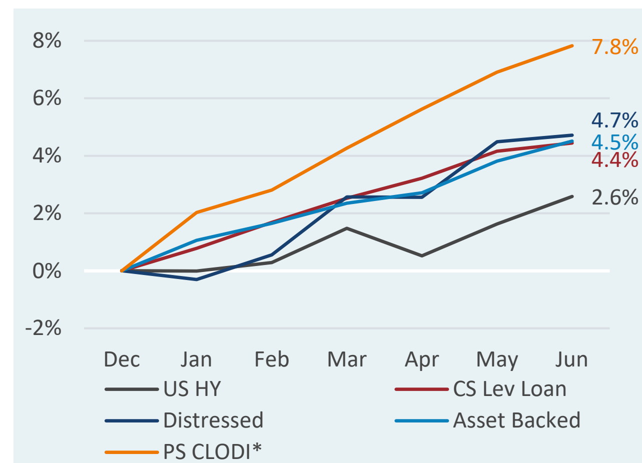
Source: MPI, Bloomberg, Palmer Square. As of 6/30/2024

3 YEAR ROLLING RETURN



Source: CS, HFR, Bloomberg, Palmer Square, MPI

YTD RETURN



Source: Bloomberg, Palmer Square, HFR, MPI

Equity

Equity environment

— Emerging market equities outperformed during Q2, up +5.0% (MSCI Emerging Markets), despite ongoing poor returns from China. U.S. equities were close behind (S&P 500 +4.3%), setting a new all-time-high price level. In contrast, international developed equities were relatively rangebound (MSCI EAFE -0.4%).

— Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12th. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022.

— The U.S. dollar rose moderately in value during Q2, resulting in losses for U.S. investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar rate cuts as other developed economies, it is unclear the extent to which the global rate cutting path will impact relative currency valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.

— Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

— Markets continue to present a unique environment of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all-time high 2023.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	4.3%		24.6%	
U.S. Small Cap (Russell 2000)	(3.3%)		10.1%	
U.S. Equity (Russell 3000)	3.2%		23.1%	
U.S. Large Value (Russell 1000 Value)	(2.2%)		13.1%	
US Large Growth (Russell 1000 Growth)	8.3%		33.5%	
Global Equity (MSCI ACWI)	2.9%	3.5%	19.4%	21.6%
International Large (MSCI EAFE)	(0.4%)	1.7%	11.5%	18.5%
Eurozone (EURO STOXX 50)	(2.8%)	(1.7%)	12.0%	16.3%
U.K. (FTSE 100)	3.8%	3.8%	12.1%	13.2%
Japan (TOPIX)	(4.3%)	3.0%	12.7%	32.5%
Emerging Markets (MSCI Emerging Markets)	5.0%	6.3%	12.5%	15.8%

Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 6/30/24

Domestic equity

U.S. equities further outperformed international developed equities, but lagged emerging market shares, with the S&P 500 finishing up +4.3% during the quarter. The artificial intelligence boom provided a tailwind to earnings of chip manufacturers and has likely helped to lift valuations more broadly. Signs of cooling in the labor market, as well as surprisingly weak inflation figures, helped reignite investor hopes for an economic *soft landing* and interest rate cuts.

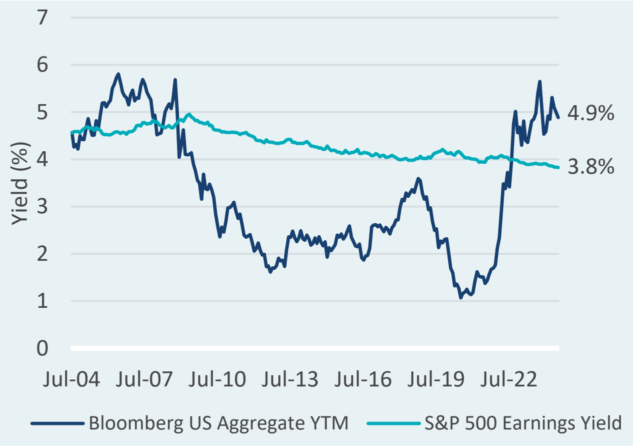
Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12th. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022. Communication Services (+18.4%) and Information Technology (+16.4%) were the earnings leaders, while Materials (-11.8%) and Industrials (-3.7%) lagged.

Strong price gains have moved valuations towards the richer side of the historical range. This effect, alongside higher interest rates and more attractive bond yields, has resulted in a regime shift regarding the attractiveness of equity and fixed income. Expensive equity prices have pushed total U.S. equity yield to below 4%, at a time when holding cash yields materially more than 5% and core fixed income yields 5%. This new regime is captured in institutional capital market assumptions which now tend to reflect mild future domestic equity returns and robust fixed income returns.

S&P 500 PRICE INDEX

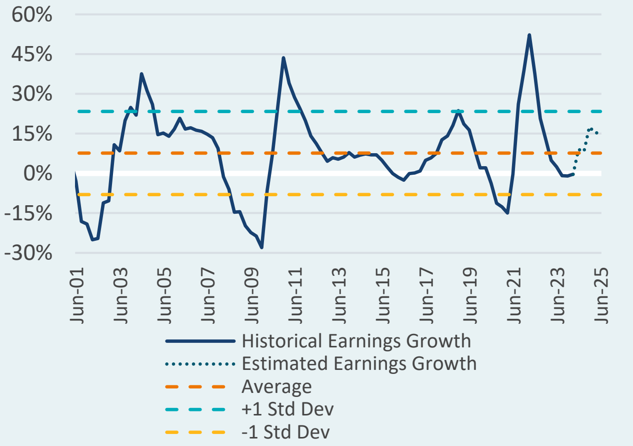
Source: Bloomberg, as of 6/30/24

RELATIVE YIELD: EQUITY VS FIXED INCOME



Source: Bloomberg, Standard & Poor's, Verus, as of 6/30/24

S&P 500 EPS GROWTH (YEAR-OVER-YEAR)



Source: Bloomberg, Factset, Verus, as of 7/19/24

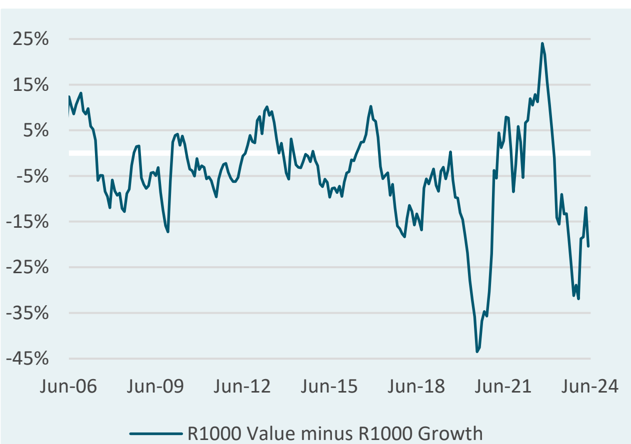
Domestic equity size & style

Small cap and value style investing drastically underperformed during Q1. Small cap lagged large cap by -6.9% (Russell 2000 -3.3% vs. Russell 1000 +3.6%), while value underperformed growth by -10.5% (Russell 1000 Value -2.2% vs. Russell 1000 Growth +8.3%). The style premia performance gap was even wider over the last year, as small cap underperformed large cap by -13.8% and value underperformed growth by -20.4%.

Much of the difference in style performance is driven by sector differences. Growth has a much greater exposure to mega cap technology companies, which continued to overshadow all other sectors in the second quarter. Nvidia extended its historic run, while Apple and Tesla bounced back from a poor first quarter. Technology and Communication companies led earnings growth and this is expected to persist going forward. Per Factset, Communication Services and Technology companies within the S&P 500 are expected to provide earnings growth of 21% and 18.7%, respectively, leading all other sectors. This has translated into volatility between sectors, where Technology (+13.8%) and Communications (+9.4%) led the S&P 500 in Q2, while six out of eleven sectors declined in value over the quarter.

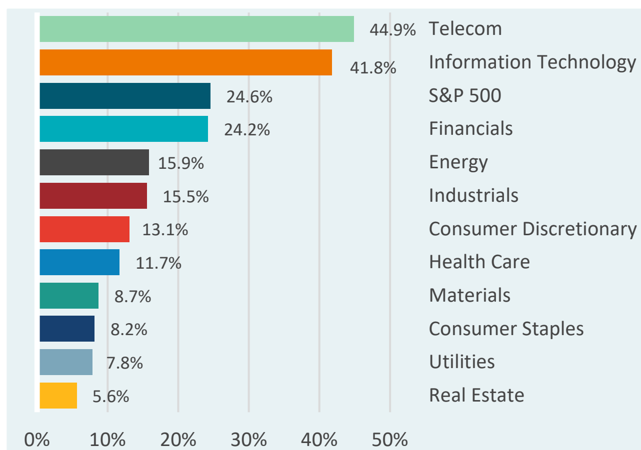
Unusually large disparities in style performance has been apparent, driven by sector trends and mega cap stock dominance. Market behavior continues to support our stance that short-term factor timing decisions should in most circumstances be pursued only in the rare occasion of obvious market mispricing and with a clear catalyst for price correction.

VALUE VS. GROWTH 1-YR ROLLING



Source: FTSE, Bloomberg, as of 6/30/24

S&P 500 SECTOR RETURNS (1 YEAR ROLLING)



Source: FTSE, Bloomberg, as of 6/30/24

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	13.1%	23.9%	33.5%
Mid Cap	12.0%	12.9%	15.1%
Small Cap	10.9%	10.1%	9.1%

Source: FTSE, Bloomberg, as of 6/30/24

International developed equity

International developed shares had a weak second quarter, trailing domestic and emerging markets equities. The MSCI EAFE Index returned +1.7% in U.S. dollar terms, while losing value (-0.4%) if the exposure remained unhedged. The ECB cut rates for the first time in five years in June, with the intention of stimulating a set of economies that had been otherwise stagnant, especially in comparison to the U.S. economy. The dollar's advance was likely fueled by this ECB rate cut, which increased the interest rate differential between the U.S. dollar and the Euro, providing a headwind for unhedged investors.

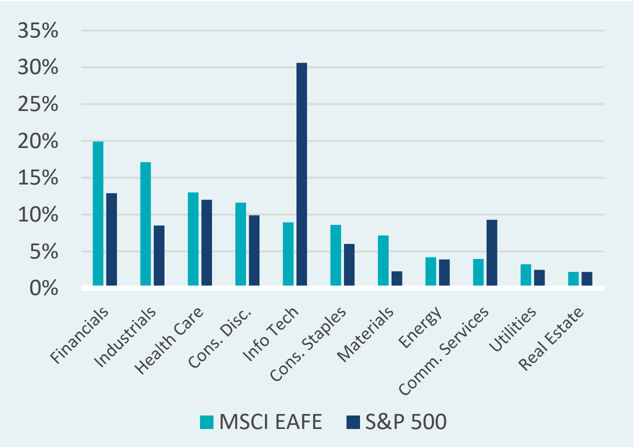
Some of the discrepancy in performance between U.S. and international developed equities can be attributed to sector differences. U.S. equities are heavily concentrated in technology companies, while developed markets have a more diversified sector breakdown, with Financials and Industrials – two sectors that tilt towards value – more heavily weighted in developed markets. This lower exposure to technology companies has not helped developed equity performance over the past couple of years, but if richly valued U.S. tech companies have a pullback, it would provide a material boost.

Markets will continue to watch the effect of adjustments to rate cut expectations, as European economies attempt to stimulate growth that has been lackluster this year without reigniting inflation.

INTERNATIONAL DEVELOPED EQUITY

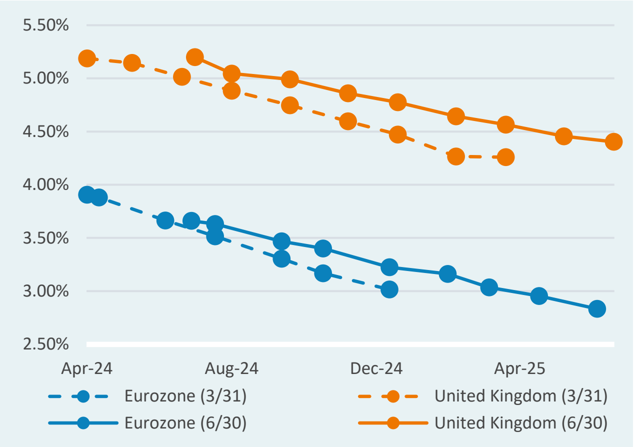
Source: MSCI, as of 6/30/24

MSCI EAFE VS. S&P 500 SECTOR DISTRIBUTION



Source: MSCI, S&P, as of 5/31/24

ECB & BOE RATE EXPECTATIONS VS Q1



Source: Bloomberg, as of 6/30/24

Emerging market equity

Emerging market equities were the highest performing equity market in portfolios (MSCI EM +5.0%), outpacing the domestic market (S&P 500 +4.3%) and international developed equities (MSCI EAFE -0.4%).

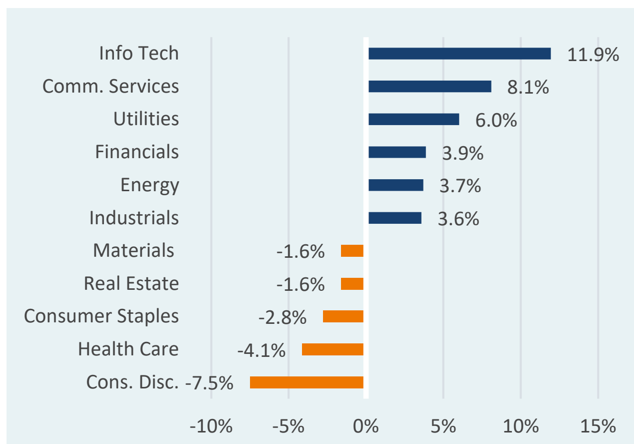
Sector differences played out in Emerging Markets, much as they did in the U.S., with Info Tech (+11.9%) being the best performing sector in the MSCI EM Index. This growth was bolstered by Taiwan Semiconductor Manufacturing Company (TSMC), who reported earnings growth of +36% in Q2. TSMC works directly with several domestic mega cap tech companies and makes up nearly 10% of the MSCI EM index.

Chinese equities continue to be cheap from a valuation perspective but face serious structural issues which could further act as a drag on performance. Real estate market shakiness has come back to the forefront of many investors' minds. A large inventory of real estate sits empty, China's population is in decline and that decline is expected to accelerate, and a large portion of the economic boom has only been possible through ongoing real estate construction. It is difficult to imagine how these woes are resolved without a serious downward resetting of prices which would be incredibly painful for Chinese citizens who, on average, hold a large portion of their wealth in real estate.

EMERGING MARKET EQUITY

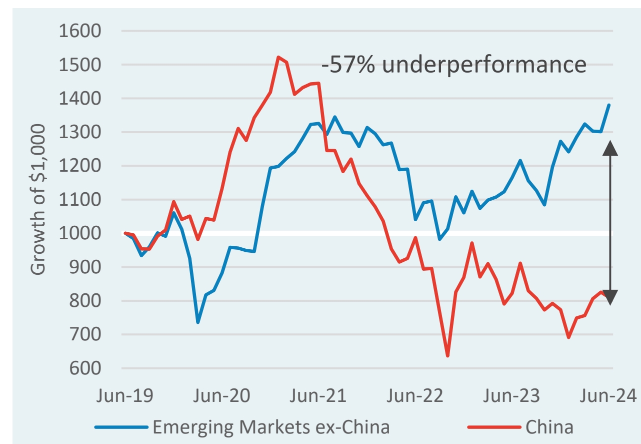
Source: MSCI, as of 6/30/24

MSCI EM Q2 2024 SECTOR RETURNS (USD)



Source: MSCI, J.P. Morgan, as of 6/30/24

SUBSTANTIAL CHINA UNDERPERFORMANCE



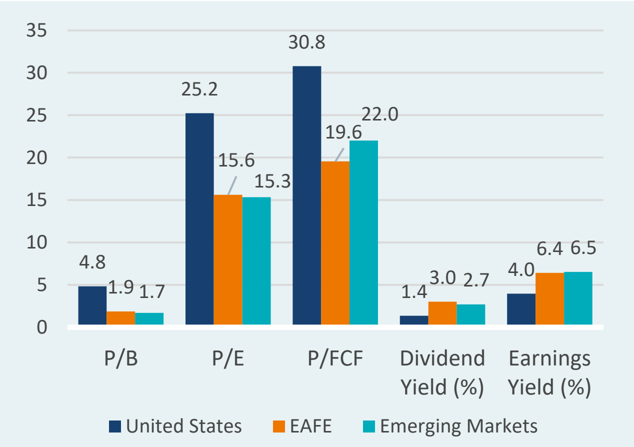
Source: MSCI, as of 6/30/24

Equity valuations

Valuations moved higher in Q2 across each market. The S&P 500 traded at a Forward P/E of 21.4 at the end of June and a Trailing P/E of 25.2. High valuations have pushed the U.S. dividend yield to a nearly all-time historic low of 1.4%.

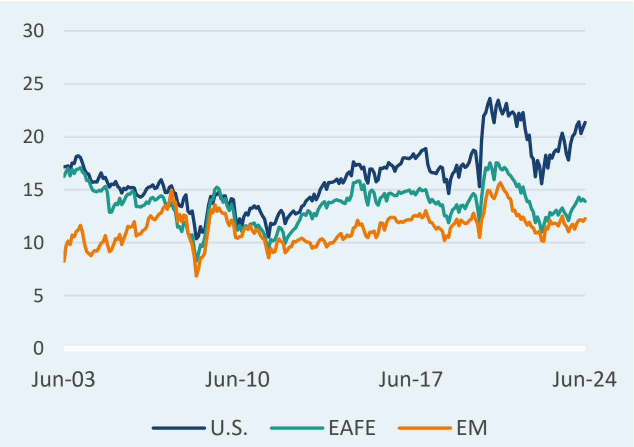
Lofty prices, along with a much more attractive environment for fixed income, suggest to us that the next decade may look much different than the past decade of unusually strong U.S. equity performance. The past decade was made possible by a very low equity valuation starting point, the impressive rise of mega cap tech / social media / online retailing businesses, extreme government stimulus pumped into the system, corporate tax cuts, and financial engineering following ultra low interest rates which contributed to a very large gain in corporate profit margins. Now, looking at the next 10 years, we are starting with high valuations, already high corporate profit margins, large debt burdens across many segments of the economy, and arguably a lower chance of future debt-driven stimulus. Fixed income may be very competitive with equity in terms of yields and prospective return over the next ten years. We believe this change in regime is noteworthy and may reasonably act as a theme for institutional asset allocation.

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 6/30/24 – Trailing P/E

FORWARD PRICE/EARNINGS RATIO

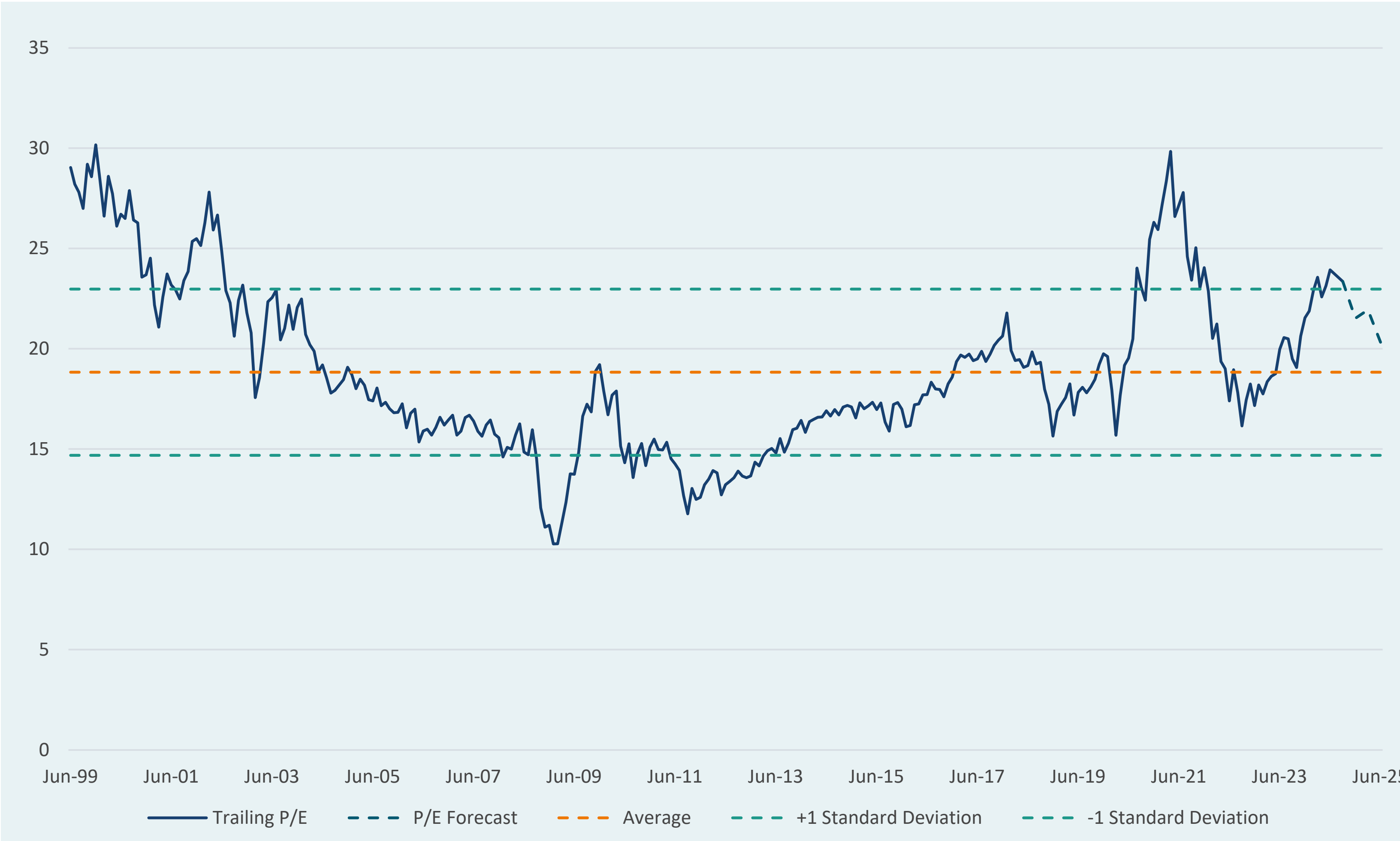


Source: MSCI, Bloomberg, as of 6/30/24

S&P 500 HISTORICAL DIVIDEND YIELD

Source: S&P, Bloomberg, as of 6/30/24

U.S. valuations & expected earnings



If projected earnings growth rates hold over the next two years, and the market increases in price at a more moderate rate, then valuations will come down toward historical averages.

Source: Bloomberg, Verus, as of 7/19/24 – here we assume that both: a) the S&P 500 delivers earnings growth over the next two years in line with current estimates (11% in 2024 and 14.7% in 2025) , and b) The S&P 500 delivers a total return in those years equivalent to the Verus 2024 CMA return estimate. If both of things occur, the S&P 500 Price/Earnings ratio will move back towards the historical average.

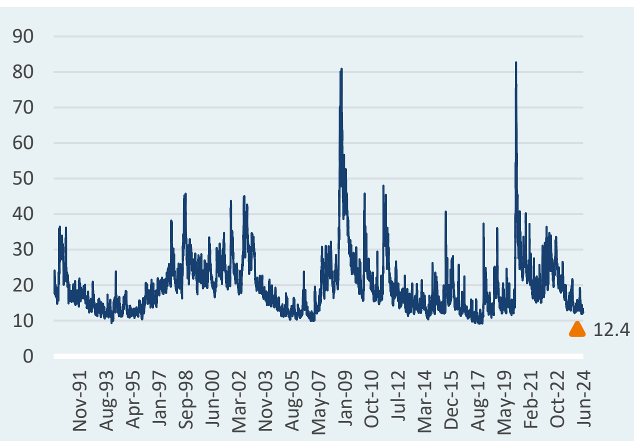
Market volatility

Market-priced volatility (Cboe VIX Index) remained very low during the second quarter, ending at 12.4% in June. This has reasonably raised eyebrows, given a variety of risks that domestic equities face, but low volatility is typical of strongly up trending equity environments.

Recent realized one-year volatility has also been fairly mild across global markets, relative to history. Domestic, international developed, and emerging market equities have all delivered between 14.6% and 15.8% volatility during that time, with emerging markets marking the upper end of the range.

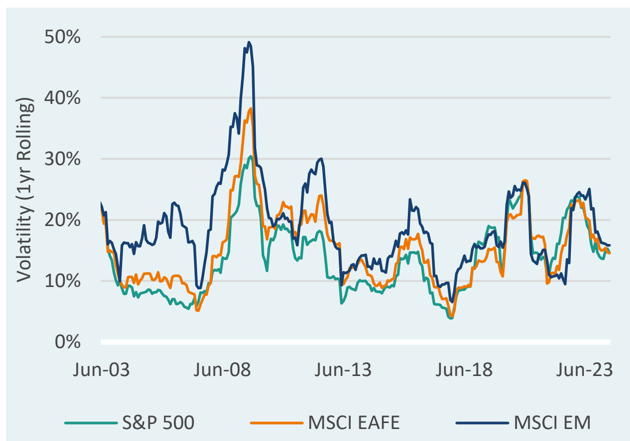
This asset allocation environment is unique in terms of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all time high in 2023. Bond characteristics are captured by the "MOVE" Index—which calculates the implied volatility of U.S. Treasury securities. As further clarity is gained around the path of the Federal Reserve, we would expect that bond volatility will further moderate.

U.S. IMPLIED VOLATILITY (VIX)



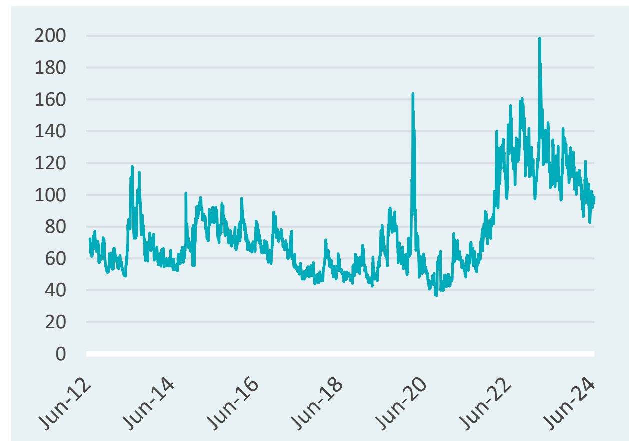
Source: Cboe, as of 6/30/24

REALIZED VOLATILITY



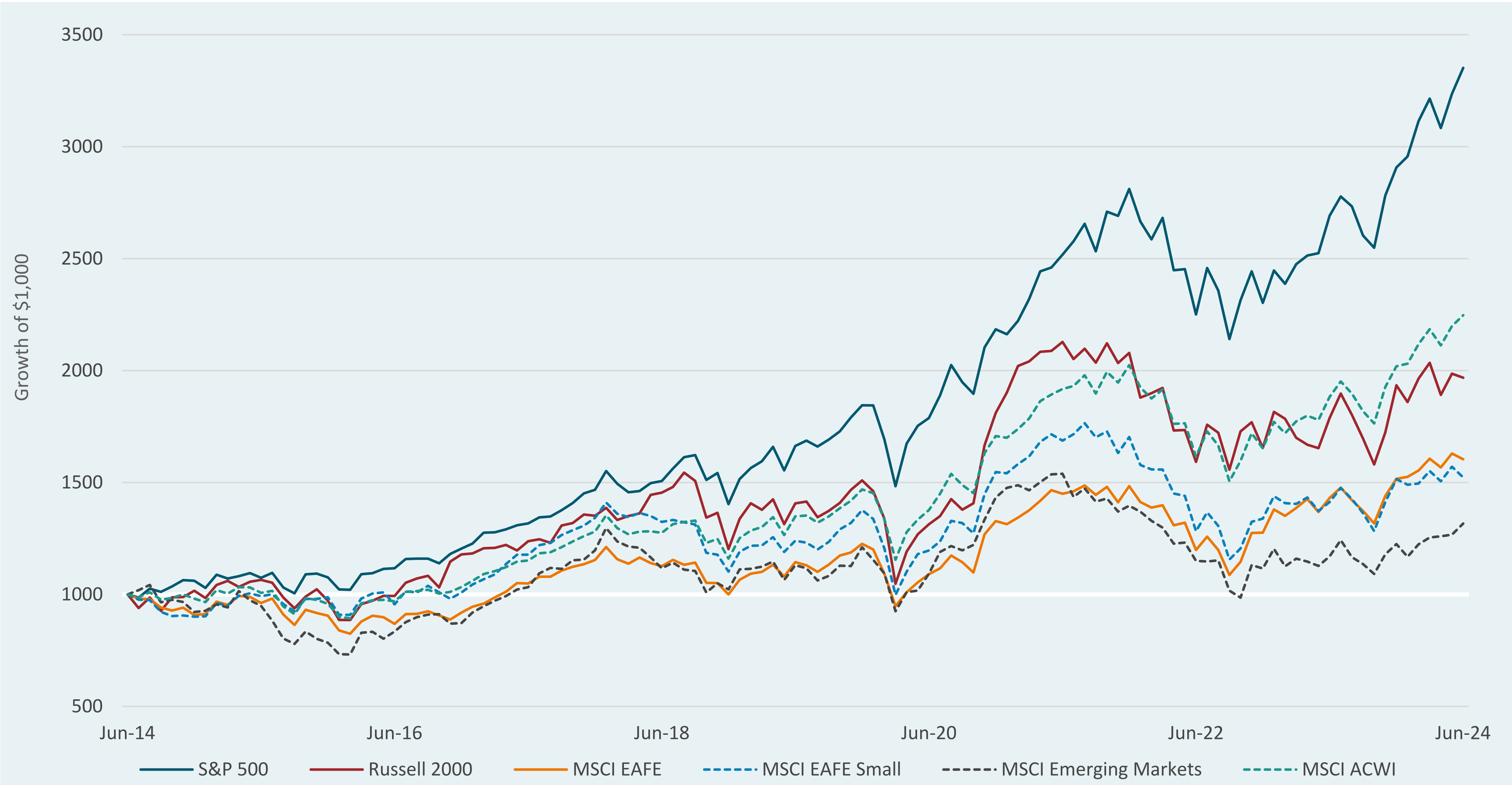
Source: S&P, MSCI, as of 6/30/24

U.S. TREASURY IMPLIED VOL ("MOVE" INDEX)



Source: Bloomberg, as of 6/30/24

Long-term equity performance



Source: MPI, as of 6/30/24

Verus

Other assets

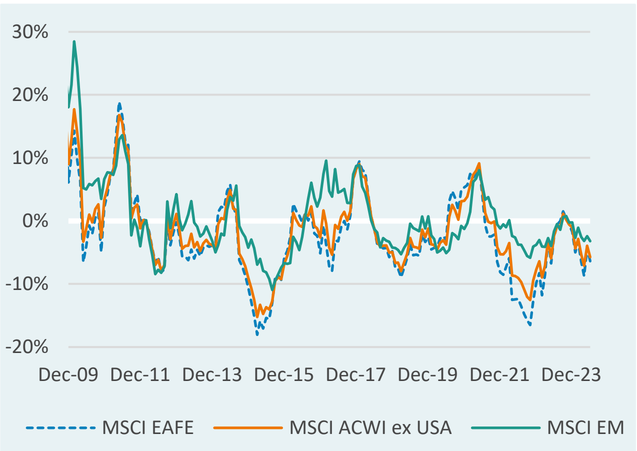
Currency

The U.S. dollar rose modestly in value during Q2, resulting in losses for investors with unhedged foreign currency exposure. Given that the Federal Reserve is expected to engage in similar sized rate cuts as other developed central banks, it is unclear the extent to which the *rate cutting path* will impact relative currency valuations. Unexpected central bank actions will likely have the greatest directional impact in the future.

Investors without a currency hedging program lost -1.2% from their international developed equity exposure (MSCI EAFE) during Q2 due to currency movements and -7.0% over the past year. Losses from unhedged Japanese currency exposure have once again been extreme (-7.3% over the quarter, -19.8% over the past year, based on the TOPIX Index), while unhedged European equity exposure losses due to currency were milder (-1.1% over the quarter, -4.3% over the past year, EURO Stoxx 50 Index).

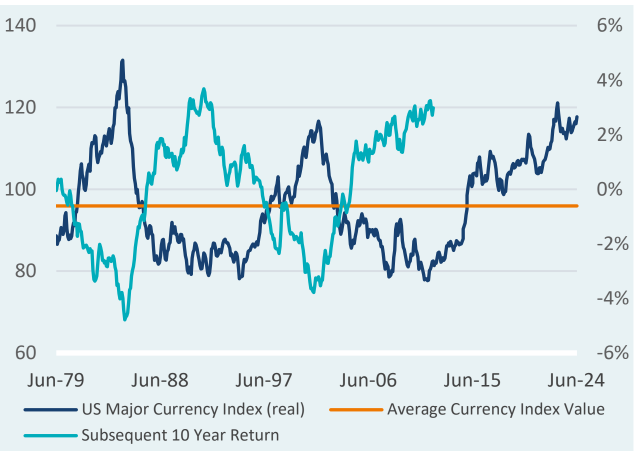
A more thoughtful portfolio approach to currency exposure has provided the dual benefit of lower portfolio volatility and also higher returns—a rare proposition in markets. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, making a passive investment in the currency market by investing in currencies with higher interest rates, currencies that are undervalued, and currencies that are showing positive price momentum. This approach, represented by the MSCI Currency Factor Mix Index—has offered a positive one-year rolling return over most periods with far lower volatility than the unhedged currency exposure that many investors hold. The past year is testament to this approach, this program would have far outperformed unhedged currency exposure, and with much less volatility.

EFFECT OF CURRENCY (1-YEAR ROLLING)



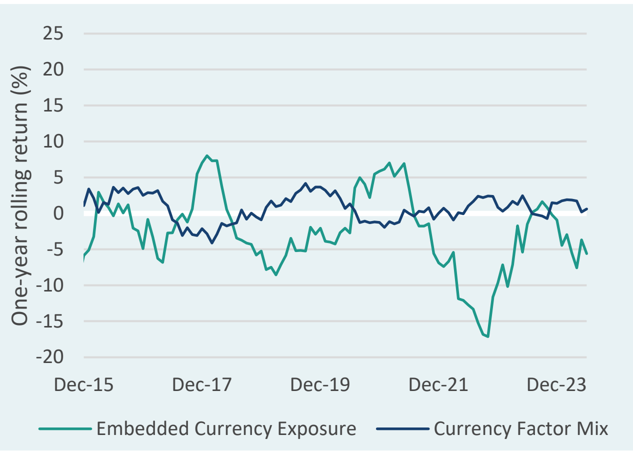
Source: MSCI, as of 6/30/24

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Bloomberg, as of 6/30/24

EMBEDDED CURRENCY VS CURRENCY FACTORS



Source: Bloomberg, MSCI, as of 6/30/24

Appendix

Periodic table of returns

BEST ↑ … ↓ WORST

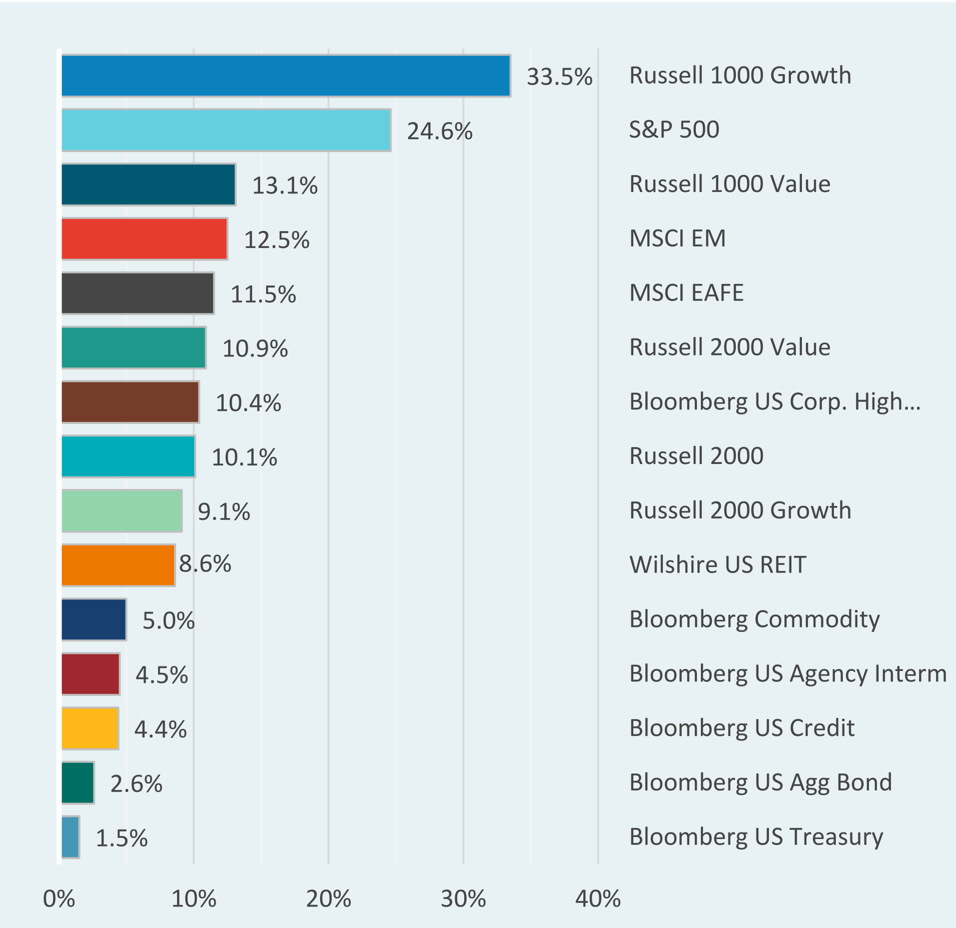
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	5-Year	10-Year
Large Cap Growth	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	16.1	42.7	20.7	19.3	16.3
Large Cap Equity	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	9.4	26.5	14.2	14.6	12.5
Emerging Markets Equity	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	1.5	18.7	7.5	9.0	8.2
Large Cap Value	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	-4.7	18.2	6.6	7.2	7.4
International Equity	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	-7.5	16.9	5.3	7.1	7.0
60/40 Global Portfolio	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	22.4	14.0	17.7	-13.0	15.4	5.3	6.9	6.4
Commodities	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	22.0	10.3	14.8	-14.5	14.6	5.1	6.5	6.2
Hedge Funds of Funds	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	-14.5	11.5	4.6	6.2	5.0
Small Cap Growth	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	-17.3	9.8	4.4	5.7	4.3
Cash	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	-19.1	6.3	2.6	4.8	3.5
Small Cap Equity	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	-20.1	5.5	1.7	3.8	2.8
US Bonds	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	-20.4	5.0	-0.7	3.1	1.5
Small Cap Value	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	-26.4	-7.9	-0.8	2.1	1.3
Real Estate	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	-29.1	-7.9	-1.0	-0.2	-1.3

- 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

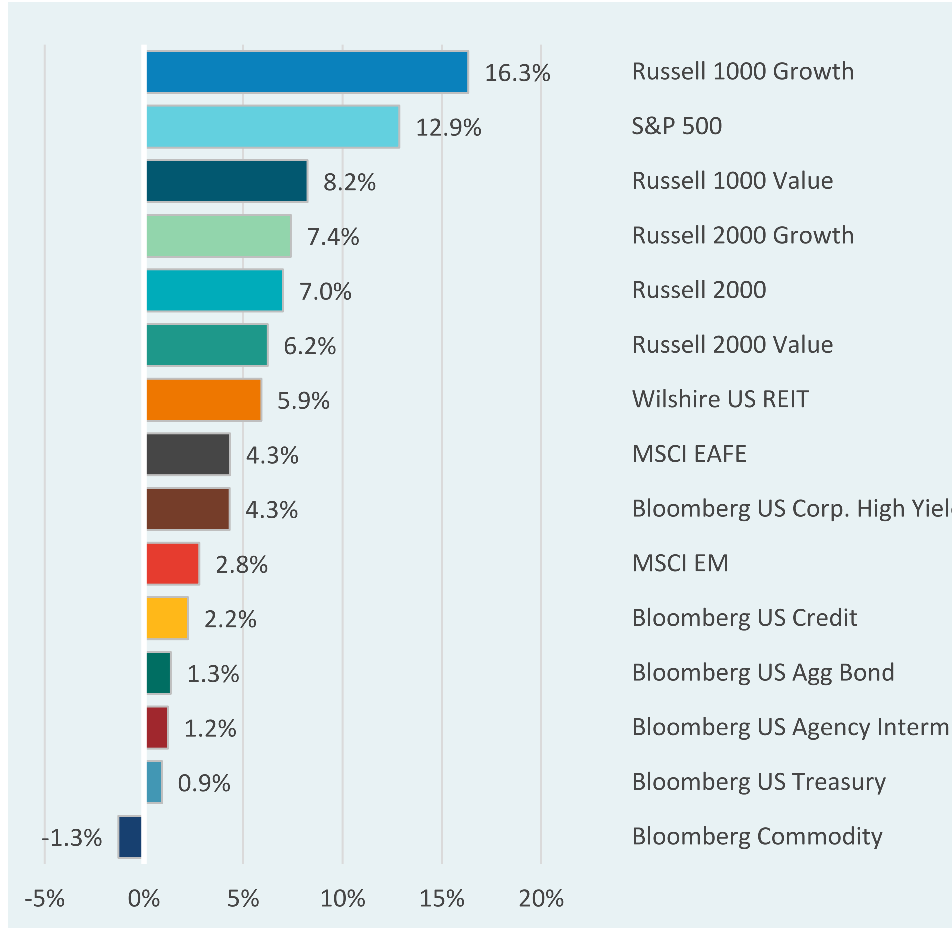
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, Bloomberg Global Bond. NCREIF Property Index performance data as of 12/31/23.

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



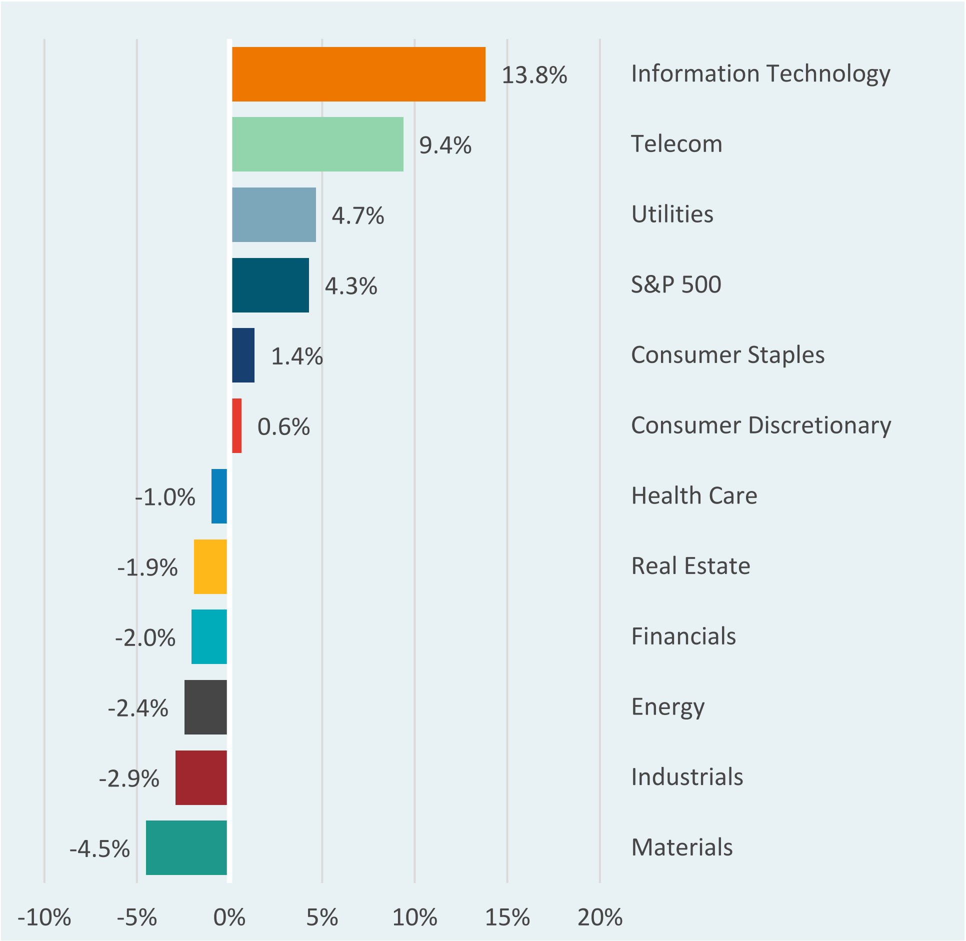
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 6/30/24

Source: Morningstar, as of 6/30/24

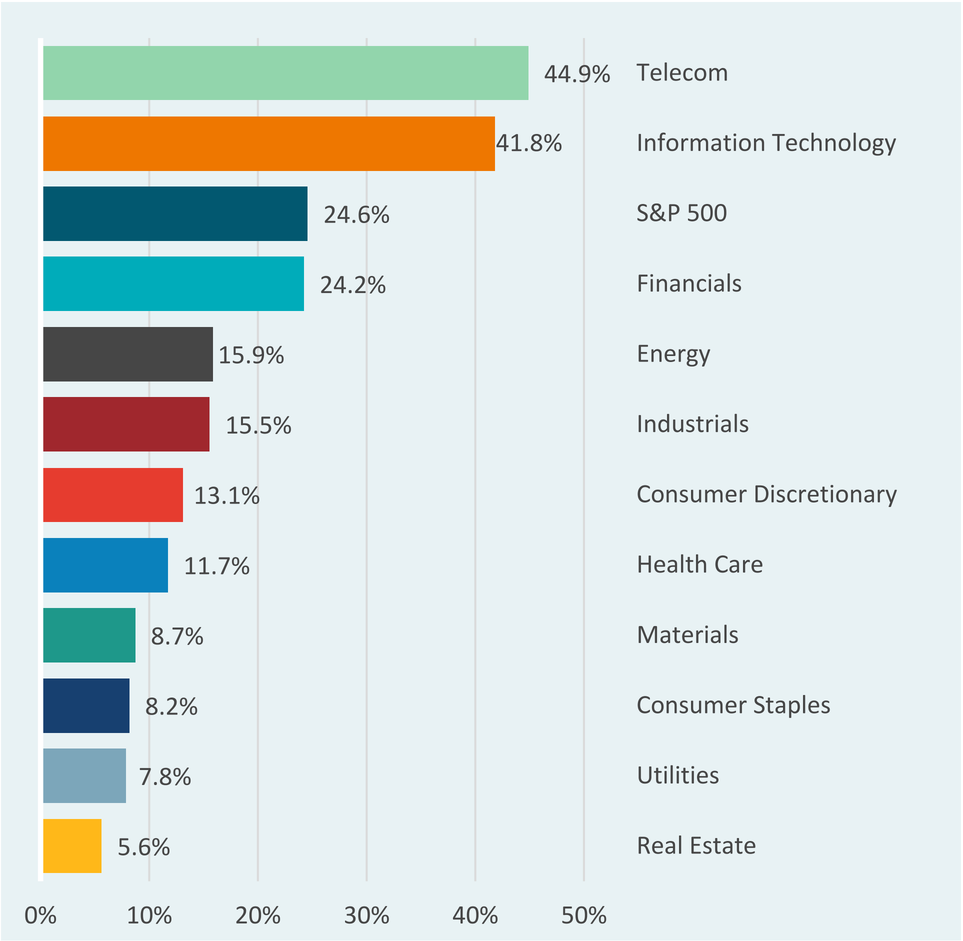
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/24

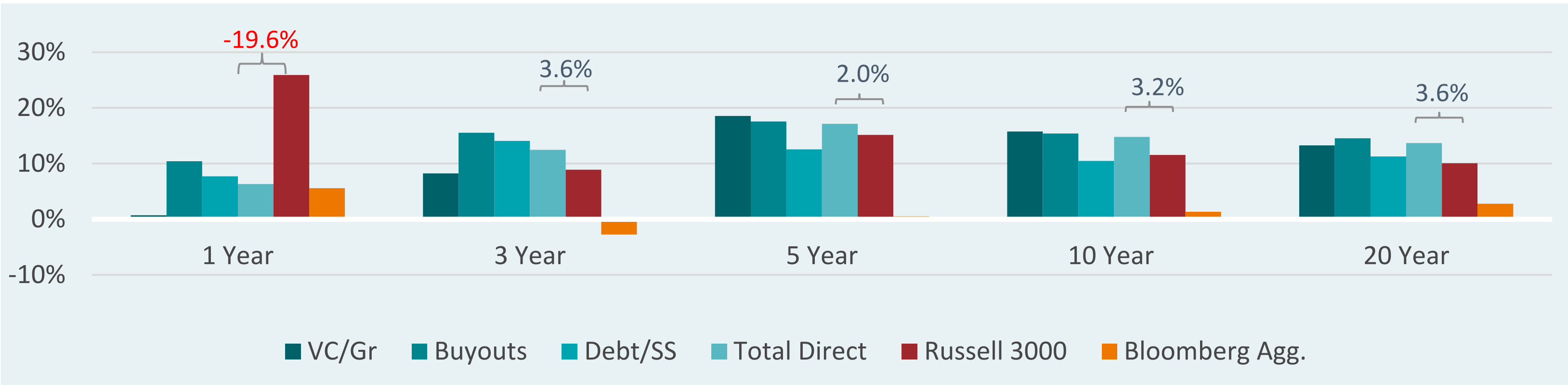
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/24

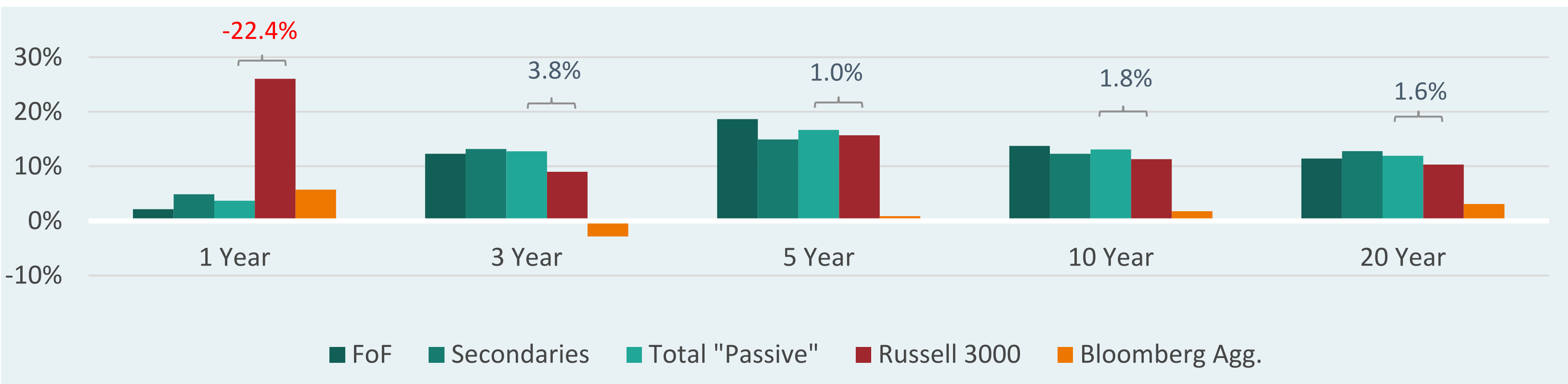
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equites across all time periods, aside from the 1-year.

“PASSIVE” STRATEGIES

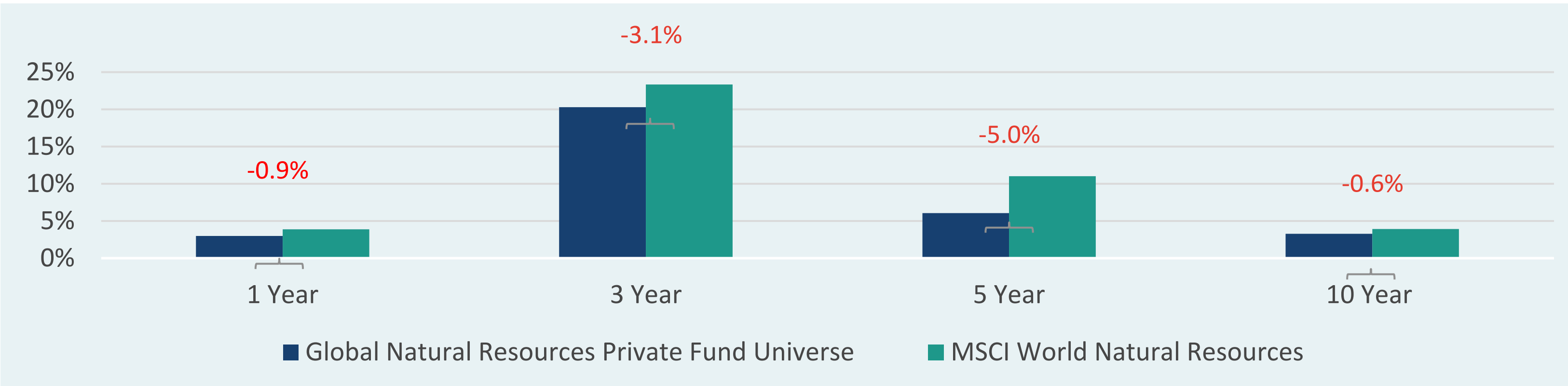


“Passive” strategies outperformed comparable public equities across all time periods, aside from the 1-year.

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of September 30, 2023. Public Market Equivalent returns resulted from “Total Passive” and Total Direct’s identical cash flows invested into and distributed from respective traditional asset comparable.

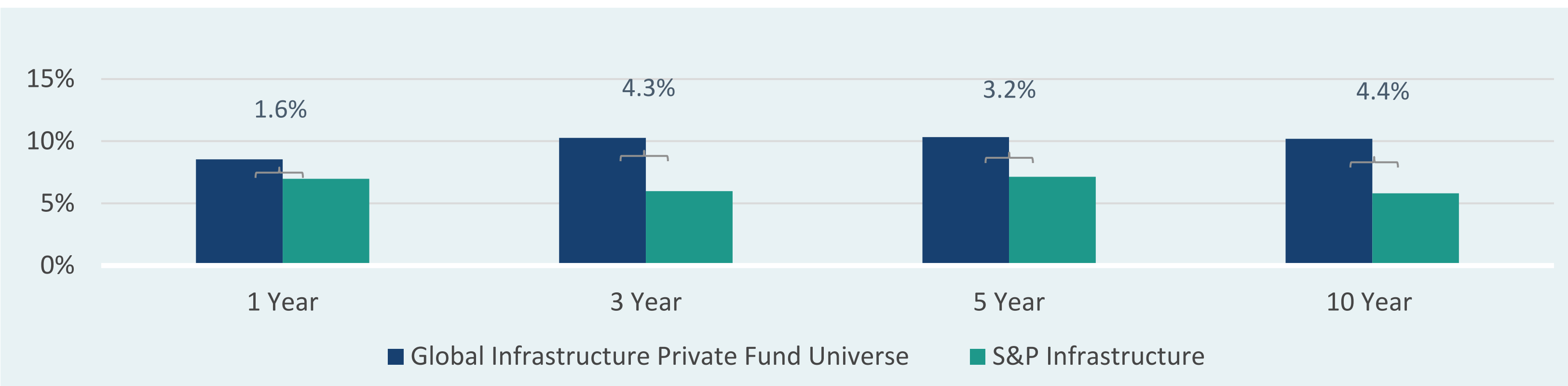
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

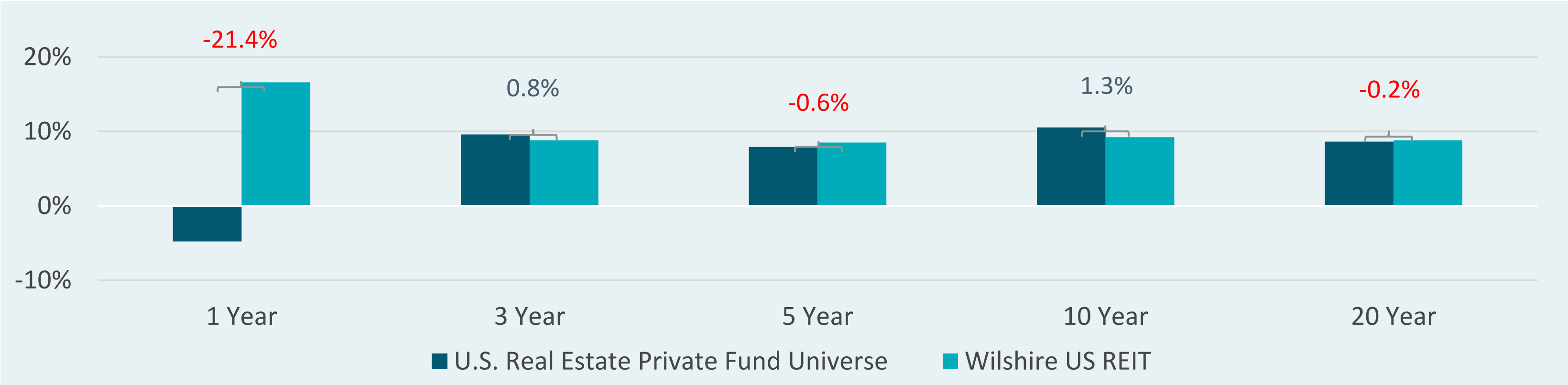


Infra. funds outperformed the S&P Infra. across all periods.

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 September 30, 2023. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

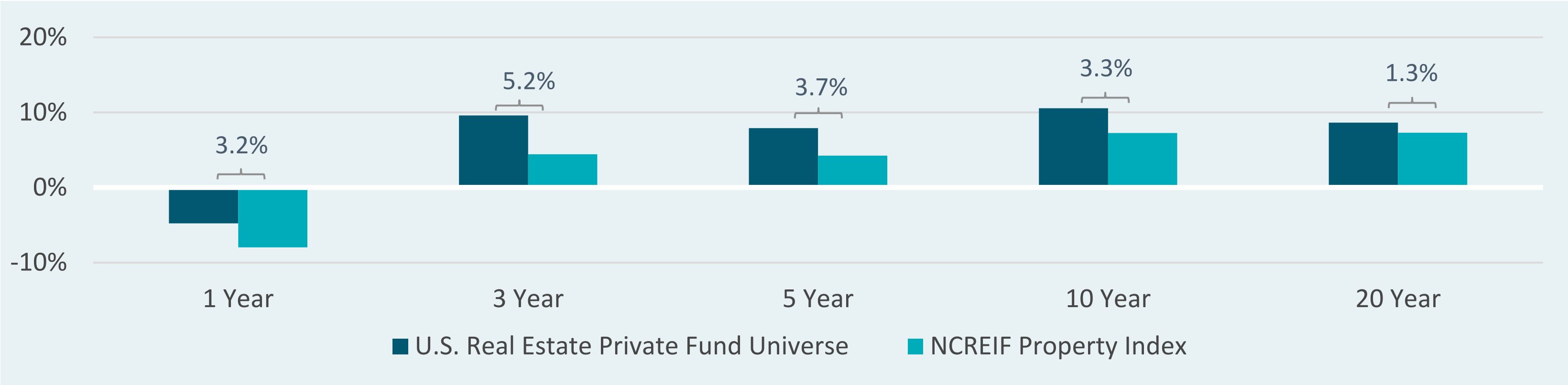
Private vs. liquid and core real estate performance

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



U.S. Private R.E. fund performance vs. the Wilshire U.S. REIT Index has been mixed.

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 September 30, 2023. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	3.6	4.3	15.3	24.6	10.0	15.0	12.9
S&P 500 Equal Weighted	(0.5)	(2.6)	5.1	11.8	4.8	10.9	10.0
DJ Industrial Average	1.2	(1.3)	4.8	16.0	6.4	10.3	11.3
Russell Top 200	4.5	5.7	17.2	27.4	10.9	16.4	13.8
Russell 1000	3.3	3.6	14.2	23.9	8.7	14.6	12.5
Russell 2000	(0.9)	(3.3)	1.7	10.1	(2.6)	6.9	7.0
Russell 3000	3.1	3.2	13.6	23.1	8.1	14.1	12.1
Russell Mid Cap	(0.7)	(3.3)	5.0	12.9	2.4	9.5	9.0
Style Index							
Russell 1000 Growth	6.7	8.3	20.7	33.5	11.3	19.3	16.3
Russell 1000 Value	(0.9)	(2.2)	6.6	13.1	5.5	9.0	8.2
Russell 2000 Growth	(0.2)	(2.9)	4.4	9.1	(4.9)	6.2	7.4
Russell 2000 Value	(1.7)	(3.6)	(3.6)	10.9	(0.5)	7.1	6.2

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	2.2	2.9	11.3	19.4	5.4	10.8	8.4
MSCI ACWI ex US	(0.1)	1.0	5.7	11.6	0.5	5.5	3.8
MSCI EAFE	(1.6)	(0.4)	5.3	11.5	2.9	6.5	4.3
MSCI EM	3.9	5.0	7.5	12.5	(5.1)	3.1	2.8
MSCI EAFE Small Cap	(3.0)	(1.8)	0.5	7.8	(3.4)	4.2	4.3
Style Index							
MSCI EAFE Growth	(0.4)	(0.8)	6.2	9.4	0.1	6.5	5.4
MSCI EAFE Value	(2.8)	0.0	4.5	13.7	5.5	6.1	3.0
Regional Index							
MSCI UK	(1.8)	3.7	6.9	12.5	6.9	5.7	2.7
MSCI Japan	(0.7)	(4.3)	6.3	13.1	2.3	6.6	5.5
MSCI Euro	(3.3)	(2.8)	5.4	10.1	3.6	7.2	4.1
MSCI EM Asia	5.0	7.4	11.0	15.1	(5.5)	4.6	4.5
MSCI EM Latin American	(6.1)	(12.2)	(15.7)	(5.6)	0.9	0.1	(0.3)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	0.8	0.8	0.7	2.7	(1.3)	2.1	1.9
Bloomberg US Treasury Bills	0.4	1.3	2.6	5.5	3.0	2.2	1.5
Bloomberg US Agg Bond	0.9	0.1	(0.7)	2.6	(3.0)	(0.2)	1.3
Bloomberg US Universal	0.9	0.2	(0.3)	3.5	(2.7)	0.1	1.6
Duration							
Bloomberg US Treasury 1-3 Yr	0.6	0.9	1.2	4.5	0.3	1.0	1.1
Bloomberg US Treasury Long	1.7	(1.8)	(5.0)	(5.6)	(10.5)	(4.3)	0.6
Bloomberg US Treasury	1.0	0.1	(0.9)	1.5	(3.3)	(0.7)	0.9
Issuer							
Bloomberg US MBS	1.2	0.1	(1.0)	2.1	(2.9)	(0.8)	0.9
Bloomberg US Corp. High Yield	0.9	1.1	2.6	10.4	1.6	3.9	4.3
Bloomberg US Agency Interm	0.7	0.8	1.0	4.5	(0.5)	0.6	1.2
Bloomberg US Credit	0.7	(0.0)	(0.5)	4.4	(2.9)	0.5	2.2

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(1.5)	2.9	5.1	5.0	5.7	7.2	(1.3)
Wilshire US REIT	3.0	(0.2)	(0.3)	8.6	0.3	4.0	5.9
CS Leveraged Loans	0.3	1.9	4.4	11.0	6.0	5.4	4.6
S&P Global Infrastructure	(2.9)	2.7	4.0	7.0	5.6	4.3	4.6
Alerian MLP	4.7	3.8	19.2	34.2	22.3	11.1	1.9
Regional Index							
JPM EMBI Global Div	0.6	0.3	2.3	9.2	(3.5)	0.6	3.2
JPM GBI-EM Global Div	(1.1)	(1.6)	0.7	0.7	(3.3)	(1.3)	(0.9)
Hedge Funds							
HFRI Composite	(0.2)	0.4	4.8	9.6	2.8	6.6	4.8
HFRI FOF Composite	0.1	0.4	4.6	8.4	2.0	4.8	3.5
Currency (Spot)							
Euro	(1.3)	(1.8)	(3.0)	(1.8)	(3.3)	(1.2)	(2.4)
Pound Sterling	(0.7)	0.3	(0.8)	(0.6)	(2.9)	(0.1)	(3.0)
Yen	(2.3)	(10.1)	(12.4)	(10.2)	(11.6)	(7.7)	(4.5)

Source: Morningstar, HFRI, as of 6/30/24

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.*

Notices & disclosures

Imperial County Employees' Retirement System

Investment Performance Review
Period Ending: June 30, 2024

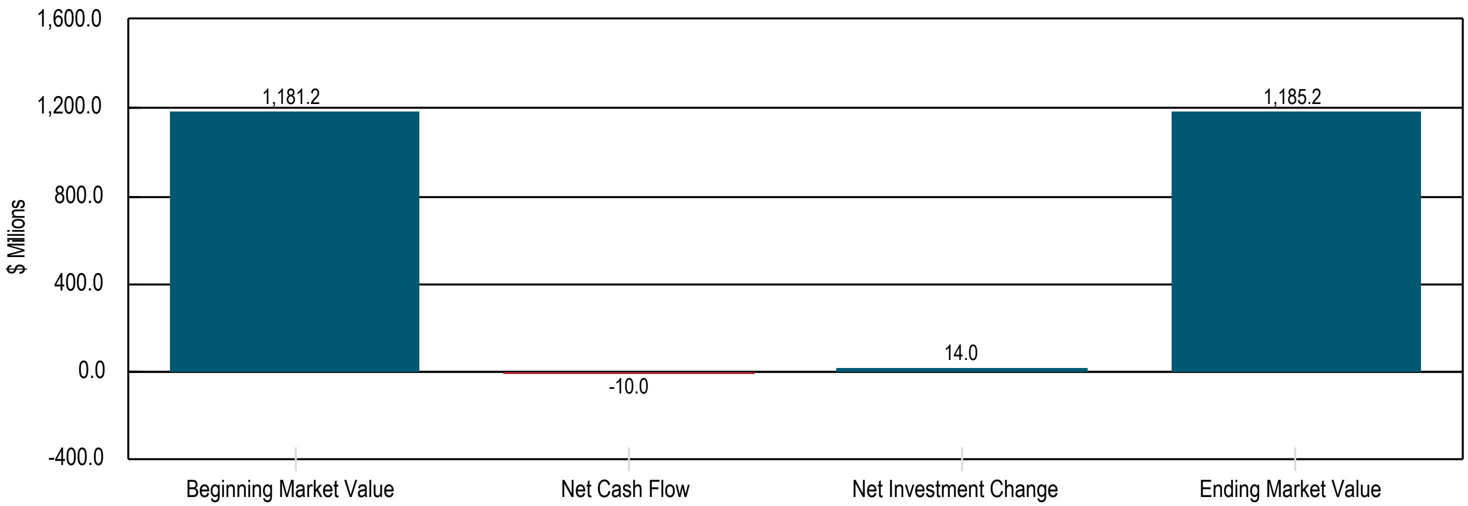
VERUSINVESTMENTS.COM

SEATTLE 206.622.3700
CHICAGO 312.815.5228
PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
SAN FRANCISCO 415.362.3484

Portfolio Reconciliation

	Last Three Months	YTD	Fiscal Year-To-Date	One Year
Beginning Market Value	$1,181,204,795	$1,131,753,444	$1,095,987,714	$1,095,987,714
Net Cash Flows	-$9,962,378	-$9,125,764	-$21,147,825	-$21,147,825
Net Investment Change	$13,966,224	$62,729,043	$110,516,834	$110,516,834
Ending Market Value	**$1,185,208,641**	**$1,185,208,641**	**$1,185,208,641**	**$1,185,208,641**

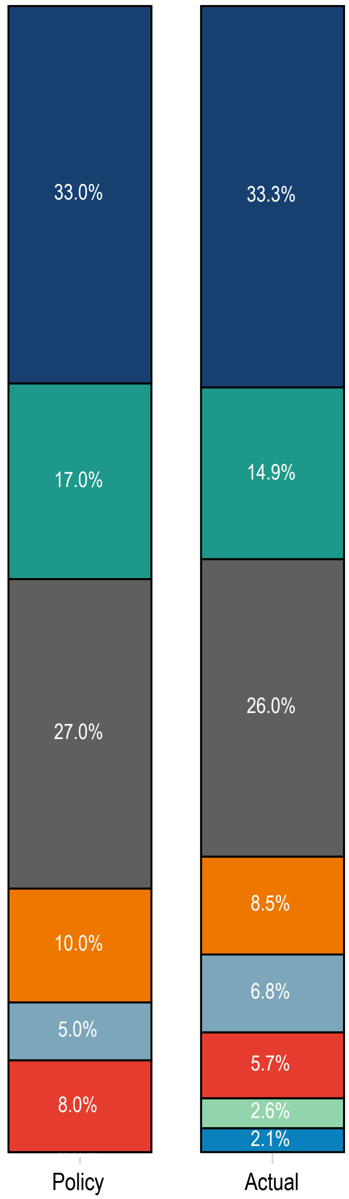
Change in Market Value
Last Three Months



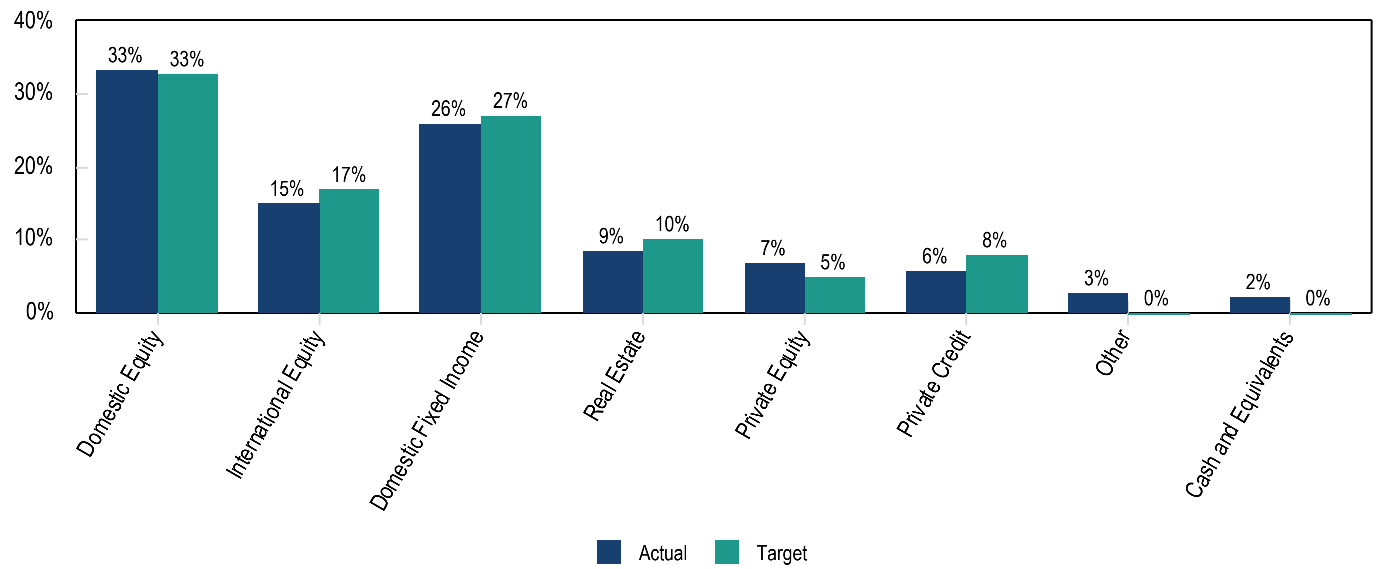
Contributions and withdrawals may include intra-account transfers between managers/funds. Fee transactions are excluded from Portfolio Reconciliation.

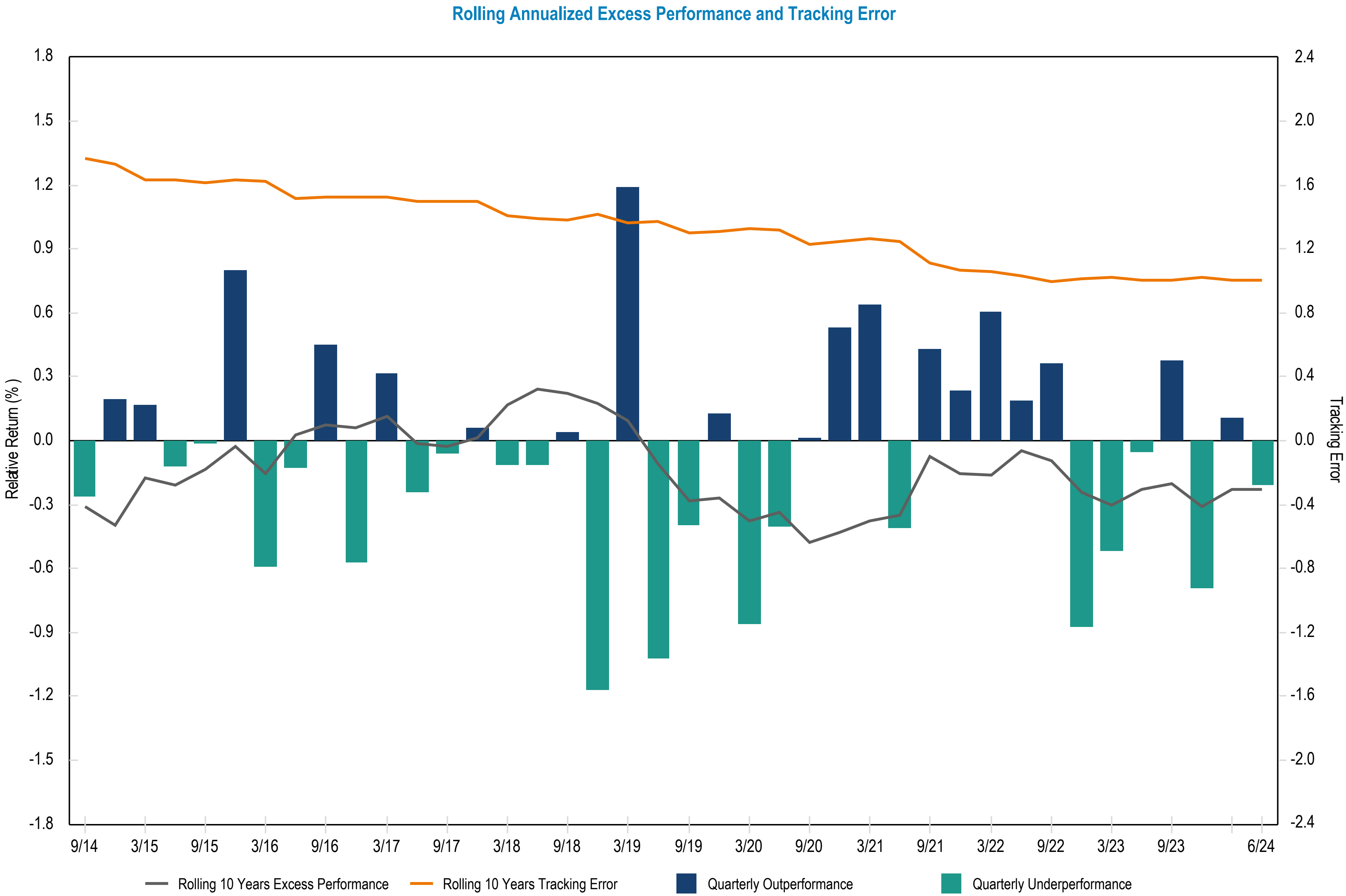
	Market Value	% of Portfolio	QTD	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	**1,185,208,641**	**100.0**	**1.1**	**5.5**	**10.2**	**10.2**	**3.6**	**7.6**	**6.6**
Policy Index			*1.4*	*5.6*	*10.6*	*10.6*	*3.5*	*7.7*	*6.8*
InvMetrics Public DB Rank			*45*	*64*	*70*	*70*	*27*	*40*	*55*
Total Domestic Equity	**395,102,726**	**33.3**	**3.2**	**13.6**	**23.2**	**23.2**	**8.1**	**14.2**	**12.0**
Russell 3000 Index			*3.2*	*13.6*	*23.1*	*23.1*	*8.1*	*14.1*	*12.1*
Total International Equity	**177,117,808**	**14.9**	**0.4**	**5.3**	**11.0**	**11.0**	**1.4**	**5.7**	**4.1**
MSCI AC World ex USA Index			*1.2*	*6.0*	*12.2*	*12.2*	*1.0*	*6.1*	*4.3*
Total Fixed Income	**308,036,691**	**26.0**	**0.5**	**0.3**	**4.1**	**4.1**	**-2.6**	**0.7**	**1.9**
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	*1.3*
Total Real Estate	**101,168,885**	**8.5**	**-2.8**	**-6.2**	**-12.8**	**-12.8**	**-1.0**	**1.6**	**5.2**
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*
Total Private Equity	**80,158,438**	**6.8**	**-0.1**	**3.5**	**4.8**	**4.8**	**9.6**	**17.5**	**16.8**
Private Equity Benchmark			*-0.1*	*3.5*	*4.8*	*4.8*	*9.6*	*17.5*	*17.4*
Total Private Credit	**67,194,137**	**5.7**	**1.6**	**3.9**	**10.1**	**10.1**	**11.2**	**9.7**	**N/A**
Private Credit Benchmark			*1.6*	*3.9*	*10.1*	*10.1*	*11.2*	*10.4*	*N/A*
Total Opportunistic	**31,267,991**	**2.6**	**2.6**	**4.1**	**10.2**	**10.2**	**11.3**	**9.4**	**8.2**
Assumption Rate + 1%			*2.1*	*4.2*	*8.5*	*8.5*	*8.5*	*8.5*	*8.5*

New Policy Index (as of 12/1/2023): 33% Russell 3000, 17% MSCI ACWI ex USA Gross, 27% Bloomberg Aggregate, 10% NCREIF Property, 5% Private Equity Benchmark, 8% Private Credit Benchmark. Prior quarter Private Equity returns, and index data are used. All returns are Net of fees. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. As of 10/1/20 the SAA Target for equity changed to 33% Russell 3000 + 20% ACWI ex-US (see Exhibit B attached).

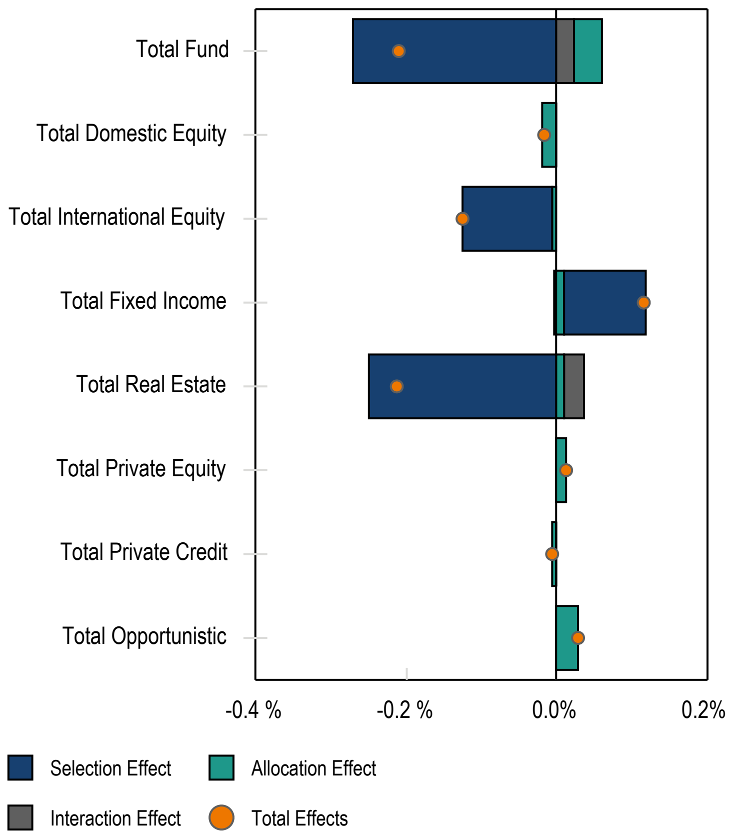


	Current Balance ($)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	395,102,726	33.3	33.0	0.3	19.0 - 39.0	Yes
International Equity	177,117,808	14.9	17.0	-2.1	14.0 - 34.0	Yes
Domestic Fixed Income	308,036,691	26.0	27.0	-1.0	17.0 - 40.0	Yes
Real Estate	101,168,885	8.5	10.0	-1.5	5.0 - 15.0	Yes
Private Equity	80,158,438	6.8	5.0	1.8	0.0 - 10.0	Yes
Private Credit	67,194,137	5.7	8.0	-2.3	0.0 - 10.0	Yes
Other	31,267,991	2.6	0.0	2.6	0.0 - 10.0	Yes
Cash and Equivalents	25,161,964	2.1	0.0	2.1	0.0 - 0.0	No
Total	**1,185,208,641**	**100.0**	**100.0**	**0.0**		




Rolling Annualized Excess Performance and Tracking Error
1.8
1.5
1.2
0.9
0.6
0.3
0.0
-0.3
-0.6
-0.9
-1.2
-1.5
-1.8
Relative Return (%)
2.4
2.0
1.6
1.2
0.8
0.4
0.0
-0.4
-0.8
-1.2
-1.6
-2.0
-2.4
Tracking Error
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
3/22
9/22
3/23
9/23
6/24
Rolling 10 Years Excess Performance
Rolling 10 Years Tracking Error
Quarterly Outperformance
Quarterly Underperformance

Attribution Effects
Last Three Months



Performance Attribution

	Quarter	YTD
Wtd. Actual Return	1.1	5.5
Wtd. Index Return	1.4	5.6
Excess Return	**-0.2**	**-0.1**
Selection Effect	-0.3	-0.4
Allocation Effect	0.0	0.3
Interaction Effect	0.0	0.0

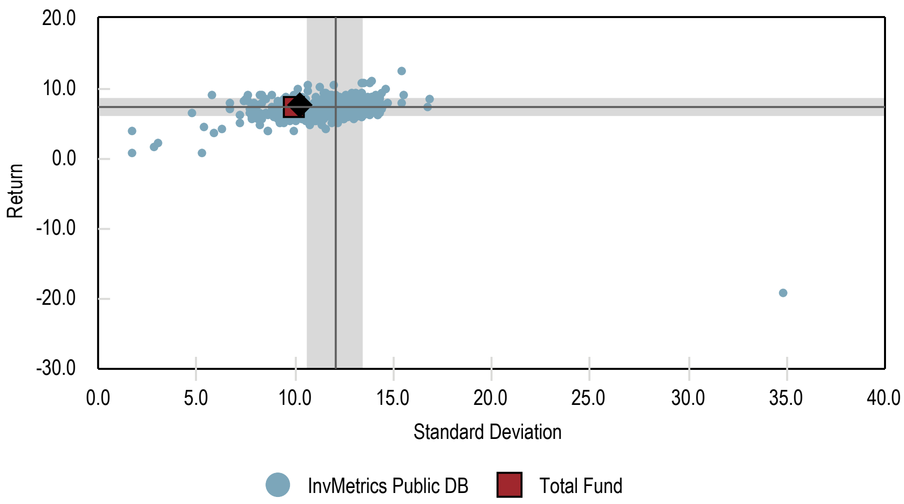
Attribution Summary
Last Three Months

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	3.2	3.2	0.0	0.0	0.0	0.0	0.0
Total International Equity	0.4	1.2	-0.7	-0.1	0.0	0.0	-0.1
Total Fixed Income	0.5	0.1	0.4	0.1	0.0	0.0	0.1
Total Real Estate	-2.8	-0.3	-2.5	-0.3	0.0	0.0	-0.2
Total Private Equity	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0
Total Private Credit	1.6	1.6	0.0	0.0	0.0	0.0	0.0
Total Opportunistic	2.6	2.1	0.5	0.0	0.0	0.0	0.0
Total Fund	**1.1**	**1.4**	**-0.2**	**-0.3**	**0.0**	**0.0**	**-0.2**

Weighted returns shown in attribution analysis may differ from actual returns.

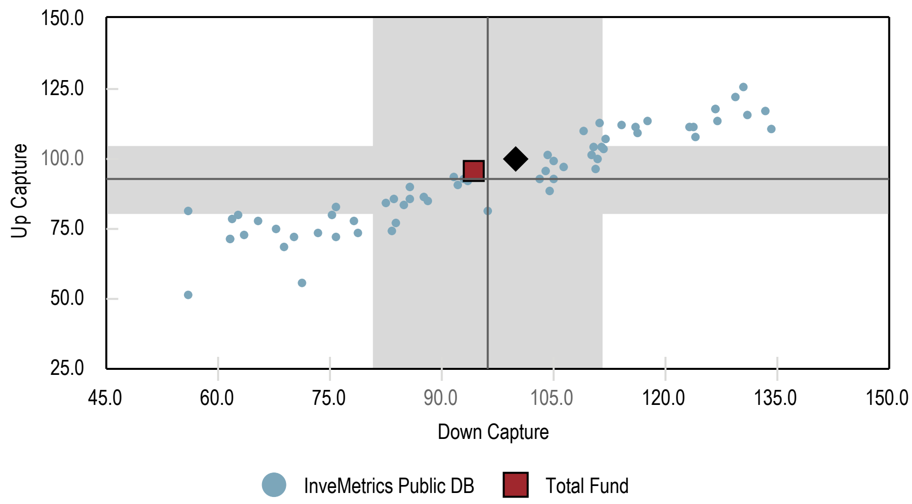
	Annualized Return	Annualized Excess Return	Annualized Standard Deviation	Annualized Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
Total Fund	7.57	5.67	9.95	0.07	0.97	0.99	0.99	0.57	-0.19	97.18	96.83

Risk vs. Return

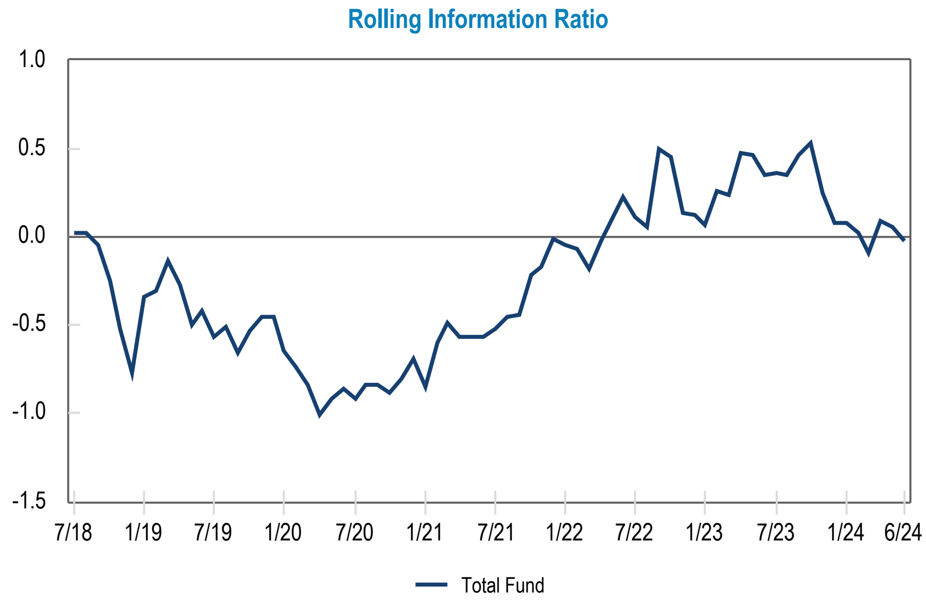


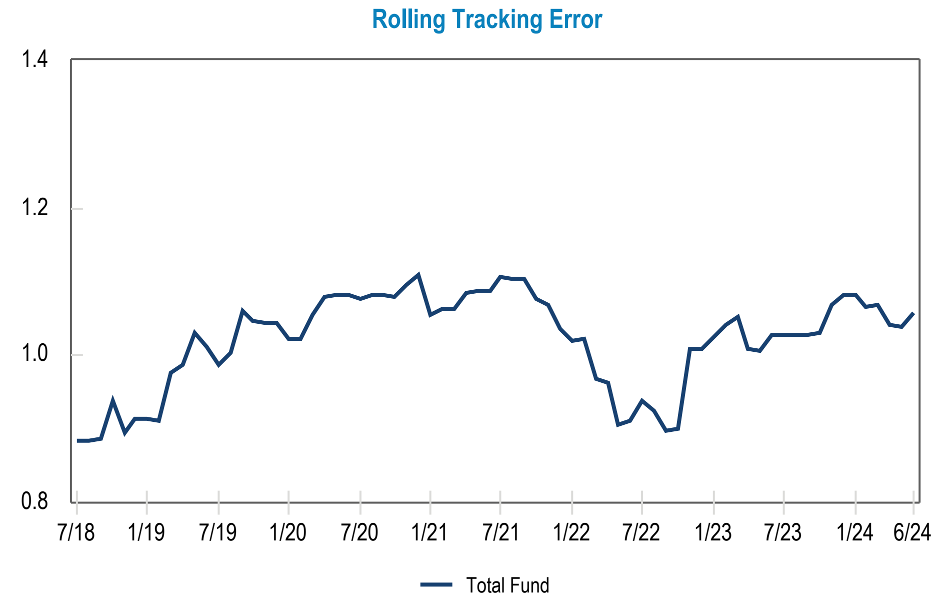
	Return	Standard Deviation
Total Fund	7.57	9.95
Policy Index	7.74	10.23
Median	7.34	12.04
Population	586	586

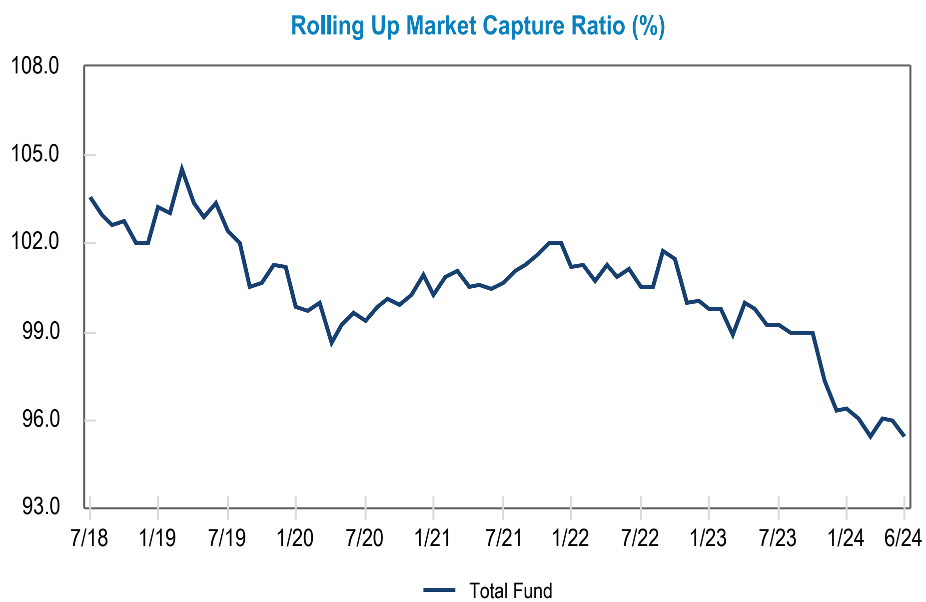
Up Markets vs. Down Markets

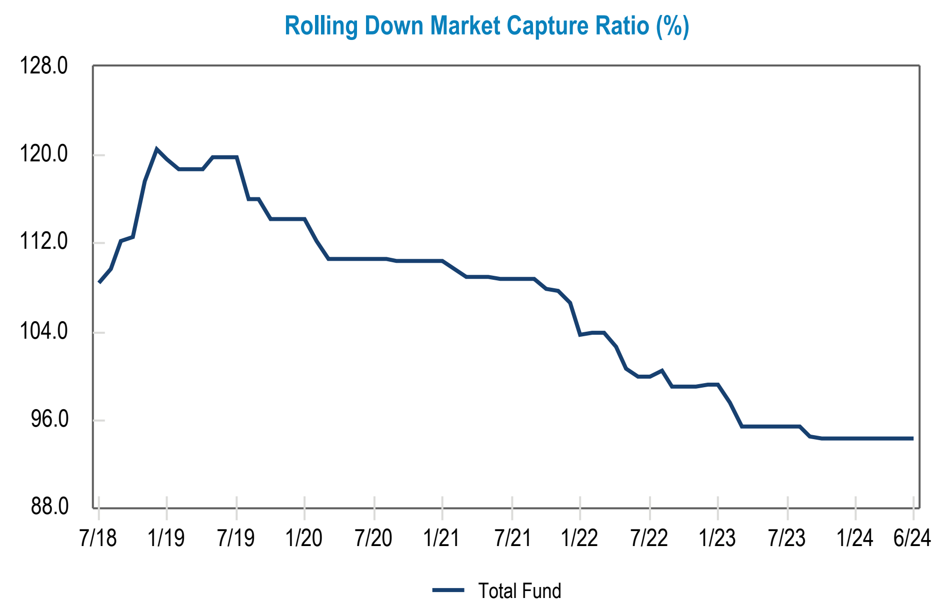


	Up Capture	Down Capture
Total Fund	95.46	94.33
Policy Index	100.00	100.00
Median	92.58	96.18
Population	63	63


Rolling Information Ratio
1.0
0.5
0.0
-0.5
-1.0
-1.5
7/18
1/19
7/19
1/20
7/20
1/21
7/21
1/22
7/22
1/23
7/23
1/24
6/24
Total Fund


Rolling Tracking Error
1.4
1.2
1.0
0.8
7/18
1/19
7/19
1/20
7/20
1/21
7/21
1/22
7/22
1/23
7/23
1/24
6/24
Total Fund


Rolling Up Market Capture Ratio (%)
108.0
105.0
102.0
99.0
96.0
93.0
7/18
1/19
7/19
1/20
7/20
1/21
7/21
1/22
7/22
1/23
7/23
1/24
6/24
Total Fund


Rolling Down Market Capture Ratio (%)
128.0
120.0
112.0
104.0
96.0
88.0
7/18
1/19
7/19
1/20
7/20
1/21
7/21
1/22
7/22
1/23
7/23
1/24
6/24
Total Fund

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total Fund	**1,185,208,641**	**100.0**	**1.1**	**5.5**	**10.2**	**10.2**	**3.6**	**7.6**	**6.6**	**11.9**	**-11.6**	**15.8**	**12.3**	**17.9**		
Policy Index			*1.4*	*5.6*	*10.6*	*10.6*	*3.5*	*7.7*	*6.8*	*12.8*	*-11.9*	*14.8*	*13.3*	*18.0*		
InvMetrics Public DB Rank			*45*	*64*	*70*	*70*	*27*	*40*	*55*	*70*	*23*	*22*	*59*	*71*		
Total Domestic Equity	**395,102,726**	**33.3**	**3.2**	**13.6**	**23.2**	**23.2**	**8.1**	**14.2**	**12.0**	**26.0**	**-19.2**	**25.7**	**21.0**	**31.1**		
Russell 3000 Index			*3.2*	*13.6*	*23.1*	*23.1*	*8.1*	*14.1*	*12.1*	*26.0*	*-19.2*	*25.7*	*20.9*	*31.0*		
BlackRock Russell 3000	395,102,726	33.3	3.2	13.6	23.2	23.2	8.1	14.2	-	26.0	-19.2	25.7	21.0	31.1	13.4	Dec-15
Russell 3000 Index			*3.2*	*13.6*	*23.1*	*23.1*	*8.1*	*14.1*	-	*26.0*	*-19.2*	*25.7*	*20.9*	*31.0*	*13.3*	
eV US All Cap Core Equity Rank			*25*	*28*	*32*	*32*	*35*	*26*	-	*24*	*59*	*53*	*41*	*38*		
Total International Equity	**177,117,808**	**14.9**	**0.4**	**5.3**	**11.0**	**11.0**	**1.4**	**5.7**	**4.1**	**16.9**	**-15.4**	**10.1**	**8.1**	**20.7**		
MSCI AC World ex USA Index			*1.2*	*6.0*	*12.2*	*12.2*	*1.0*	*6.1*	*4.3*	*16.2*	*-15.6*	*8.3*	*11.1*	*22.1*		
BlackRock International Equity	152,491,730	12.9	-0.2	5.6	11.7	11.7	3.2	6.8	4.6	18.6	-14.1	11.6	8.1	22.4	7.0	Jul-03
MSCI EAFE (Net)			*-0.4*	*5.3*	*11.5*	*11.5*	*2.9*	*6.5*	*4.3*	*18.2*	*-14.5*	*11.3*	*7.8*	*22.0*	*7.0*	
eV All EAFE Equity Rank			*41*	*35*	*35*	*35*	*28*	*40*	*43*	*32*	*37*	*52*	*52*	*49*		
DFA Emerging Markets Value	24,626,078	2.1	5.9	8.7	16.7	16.7	3.1	5.9	3.9	16.5	-10.7	12.4	2.7	9.6	4.4	Jan-07
MSCI Emerging Markets Value (Net)			*5.1*	*6.5*	*14.1*	*14.1*	*-1.1*	*2.9*	*2.0*	*14.2*	*-15.8*	*4.0*	*5.5*	*12.0*	*3.5*	
eV Emg Mkts All Cap Value Equity Rank			*11*	*22*	*27*	*27*	*18*	*49*	*71*	*43*	*38*	*19*	*82*	*94*		
Total Fixed Income	**308,036,691**	**26.0**	**0.5**	**0.3**	**4.1**	**4.1**	**-2.6**	**0.7**	**1.9**	**6.2**	**-14.2**	**0.6**	**9.8**	**9.5**		
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*		
Income Research & Management	131,766,154	11.1	0.2	-0.4	-	-	-	-	-	-	-	-	-	-	4.6	Sep-23
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	-	-	-	-	-	-	-	-	-	-	*3.4*	
eV US Core Plus Fixed Inc Rank			*78*	*80*	-	-	-	-	-	-	-	-	-	-		
MacKay Shields Core Plus Opportunities	133,495,773	11.3	0.6	0.9	5.1	5.1	-2.7	0.7	-	6.7	-14.5	-0.5	9.9	9.7	1.6	Mar-15
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	-	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*	*1.1*	
eV US Core Plus Fixed Inc Rank			*15*	*17*	*17*	*17*	*60*	*45*	-	*46*	*86*	*52*	*21*	*54*		
BlackRock US TIPS	42,774,765	3.6	0.9	0.9	2.7	2.7	-1.3	2.1	2.0	3.9	-11.9	5.9	11.2	8.5	3.4	Apr-07
Blmbg. U.S. TIPS Index			*0.8*	*0.7*	*2.7*	*2.7*	*-1.3*	*2.1*	*1.9*	*3.9*	*-11.8*	*6.0*	*11.0*	*8.4*	*3.4*	
eV US TIPS / Inflation Fixed Inc Rank			*46*	*45*	*55*	*55*	*55*	*49*	*30*	*44*	*68*	*29*	*29*	*33*		

TSSP Adjacent funded 4/16/2020. Portfolio Advisors and Crescent Direct Lending market values as of 3/31/2024. PIMCO BRAVO liquidated 12/30/2022. Income Research & Management replaced Duenta 9/2023. Harbourvest 2023 funded 12/28/2023. Harding Loevner liquidated 6/2024.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Total Real Estate	**101,168,885**	**8.5**	**-2.8**	**-6.2**	**-12.8**	**-12.8**	**-1.0**	**1.6**	**5.2**	**-14.3**	**8.5**	**18.4**	**2.1**	**5.7**		
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*		
NCREIF ODCE Net			*-0.7*	*-3.2*	*-10.0*	*-10.0*	*1.0*	*2.3*	*5.5*	*-12.7*	*6.5*	*21.0*	*0.3*	*4.4*		
ASB Real Estate	21,017,420	1.8	-7.9	-14.2	-24.0	-24.0	-6.7	-2.9	2.5	-21.5	10.7	14.2	1.5	3.0	3.7	Jan-13
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*	*6.7*	
NCREIF ODCE Net			*-0.7*	*-3.2*	*-10.0*	*-10.0*	*1.0*	*2.3*	*5.5*	*-12.7*	*6.5*	*21.0*	*0.3*	*4.4*	*6.3*	
Clarion Lion	27,255,306	2.3	-1.7	-4.3	-9.5	-9.5	0.5	3.0	6.4	-15.5	9.6	23.6	2.3	6.8	4.3	Jan-07
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*	*5.9*	
NCREIF ODCE Net			*-0.7*	*-3.2*	*-10.0*	*-10.0*	*1.0*	*2.3*	*5.5*	*-12.7*	*6.5*	*21.0*	*0.3*	*4.4*	*4.3*	
ARA American Strategic Value Realty	50,852,753	4.3	-1.2	-3.8	-9.6	-9.6	0.8	3.1	-	-10.3	6.8	18.6	2.4	7.8	4.2	Jan-18
NCREIF Property Index +2%			*0.2*	*-0.3*	*-3.6*	*-3.6*	*4.4*	*5.5*	-	*-6.1*	*7.6*	*20.0*	*3.6*	*8.5*	*6.2*	
NCREIF ODCE Net			*-0.7*	*-3.2*	*-10.0*	*-10.0*	*1.0*	*2.3*	-	*-12.7*	*6.5*	*21.0*	*0.3*	*4.4*	*3.2*	
1221 State St. Corp	2,043,406	0.2	0.0	0.0	0.0	0.0	0.0	1.5	2.4	0.0	0.0	0.0	0.0	7.9	1.2	Jun-08
Total Private Equity	**80,158,438**	**6.8**	**-0.1**	**3.5**	**4.8**	**4.8**	**9.6**	**17.5**	**16.8**	**3.9**	**-0.8**	**57.3**	**23.0**	**13.3**		
Harbourvest Buyout IX	4,570,760	0.4	-1.7	-1.1	0.1	0.1	5.5	14.3	16.2	5.9	-6.0	49.6	21.3	17.6		
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	*15.5*	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*		
Harbourvest Credit Ops IX	737,149	0.1	-10.9	-11.5	-10.4	-10.4	5.9	7.4	9.6	5.0	11.0	32.1	0.3	8.0		
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	*15.5*	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*		
Harbourvest International PE VI	1,225,348	0.1	-5.8	-4.6	-4.8	-4.8	-4.9	7.2	10.3	3.9	-16.7	41.2	17.2	6.0		
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	*15.5*	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*		
Harbourvest Venture IX	4,213,448	0.4	-2.8	0.7	-1.5	-1.5	0.1	20.2	18.9	-9.5	-15.9	91.1	52.4	24.6		
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	*15.5*	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*		
Harbourvest 2017 Global Fund	26,878,561	2.3	-0.9	5.9	8.3	8.3	10.2	17.6	-	4.6	-1.3	61.6	18.8	8.8	17.5	Oct-17
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	-	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*	*16.7*	
Harbourvest 2018 Global Fund	20,655,233	1.7	-0.1	1.5	1.6	1.6	13.3	15.5	-	4.0	9.7	37.0	16.0	14.3	14.5	Jan-19
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	*17.6*	-	*29.7*	*-16.8*	*29.4*	*24.5*	*34.9*	*19.8*	
Harbourvest 2019 Global Fund	20,068,328	1.7	2.3	4.5	6.9	6.9	14.6	-	-	6.1	5.4	49.6	34.6	-	20.5	Dec-19
Russell 3000 + 3%			*4.0*	*15.2*	*26.8*	*26.8*	*11.3*	-	-	*29.7*	*-16.8*	*29.4*	*24.5*	-	*17.2*	
Harbourvest 2023 Global Fund	1,809,611	0.2	7.2	16.7	-	-	-	-	-	-	-	-	-	-		
Russell 3000 + 3%			*4.0*	*15.2*	-	-	-	-	-	-	-	-	-	-		
Total Private Credit	**67,194,137**	**5.7**	**1.6**	**3.9**	**10.1**	**10.1**	**11.2**	**9.7**	**-**	**11.1**	**8.1**	**16.1**	**4.8**	**9.4**		
Portfolio Advisors Credit Strategies Fund	11,497,447	1.0	N/A	1.0	2.9	2.9	8.6	9.2	-	4.0	7.7	26.8	3.9	8.2	8.5	Oct-17
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	*6.3*	-	*12.5*	*-12.4*	*13.5*	*5.3*	*8.5*	*6.2*	
Crescent Direct Lending Levered Fund II	2,887,144	0.2	N/A	2.3	9.3	9.3	9.1	9.4	-	9.3	10.9	11.5	6.0	12.4	9.2	Mar-18
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	*6.3*	-	*12.5*	*-12.4*	*13.5*	*5.3*	*8.5*	*6.2*	

TSSP Adjacent funded 4/16/2020. Portfolio Advisors and Crescent Direct Lending market values as of 3/31/2024. PIMCO BRAVO liquidated 12/30/2022. Income Research & Management replaced Duenta 9/2023. Harbourvest 2023 funded 12/28/2023. Harding Loevner liquidated 6/2024.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Audax Direct Lending Fund A	5,231,351	0.4	3.0	5.9	11.5	11.5	15.3	14.5	-	10.4	15.5	23.1	10.1	16.3	16.5	Oct-18
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	*6.3*	-	*12.5*	*-12.4*	*13.5*	*5.3*	*8.5*	*6.6*	
Ares Capital Europe IV	5,745,612	0.5	2.1	3.4	6.3	6.3	8.1	8.8	-	7.8	7.0	11.8	8.2	13.1	9.3	Aug-18
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	*6.3*	-	*12.5*	*-12.4*	*13.5*	*5.3*	*8.5*	*6.5*	
Lone Star XI	4,560,663	0.4	1.7	4.3	13.4	13.4	46.6	18.5	-	16.2	13.7	538.0	-62.8	-	18.1	Jun-19
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	*6.3*	-	*12.5*	*-12.4*	*13.5*	*5.3*	-	*6.4*	
Sixth Street Diversified Credit	32,175,382	2.7	0.5	3.6	12.1	12.1	9.7	-	-	16.1	13.2	-1.4	-	-	7.0	May-20
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	*4.2*	-	-	*12.5*	*-12.4*	*13.5*	-	-	*5.5*	
Ascribe Opportunities Fund IV	5,096,538	0.4	11.9	14.6	20.8	20.8	-	-	-	11.0	5.6	-	-	-	15.9	Oct-21
Bloomberg High Yield +2% (Lagged)			*2.0*	*9.8*	*13.4*	*13.4*	-	-	-	*12.5*	*-12.4*	-	-	-	*3.3*	
Total Opportunistic	**31,267,991**	**2.6**	**2.6**	**4.1**	**10.2**	**10.2**	**11.3**	**9.4**	**8.2**	**13.0**	**10.4**	**18.6**	**0.9**	**-10.7**		
KKR Mezzanine Partners	1,711,505	0.1	0.8	4.1	7.0	7.0	-1.4	-3.1	1.9	22.5	-31.0	10.5	-15.2	-4.2	5.2	Jun-11
TSSP Adjacent Opportunities Partners	29,556,486	2.5	2.7	4.1	10.4	10.4	14.6	-	-	12.4	16.2	26.1	-	-	16.1	Apr-20
Total Cash	**25,161,964**	**2.1**	**1.3**	**2.3**	**2.3**	**2.3**	**0.8**	**0.5**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**		
Invesco Treasury Portfolio	25,161,964	2.1	1.3	2.2	-	-	-	-	-	-	-	-	-	-	2.2	Jan-24
FTSE 3 Month T-Bill			*1.4*	*2.8*	-	-	-	-	-	-	-	-	-	-	*2.8*	

TSSP Adjacent funded 4/16/2020. Portfolio Advisors and Crescent Direct Lending market values as of 3/31/2024. PIMCO BRAVO liquidated 12/30/2022. Income Research & Management replaced Duenta 9/2023. Harbourvest 2023 funded 12/28/2023. Harding Loevner liquidated 6/2024.

	Annualized Return	Annualized Excess Return	Annualized Standard Deviation	Annualized Alpha	Annualized Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
BlackRock Russell 3000	8.06	6.37	17.83	0.00	1.00	0.02	1.00	0.36	0.24	100.01	99.99
BlackRock International Equity	3.22	1.57	16.68	0.33	1.00	0.18	1.00	0.10	1.77	100.68	99.36
DFA Emerging Markets Value	3.14	1.29	15.49	4.22	0.96	2.60	0.97	0.08	1.59	103.37	83.87
MacKay Shields Core Plus Opportunities	-2.71	-5.43	7.78	0.50	1.05	1.18	0.98	-0.71	0.30	103.19	99.31
BlackRock US TIPS	-1.31	-4.06	7.09	0.01	1.00	0.22	1.00	-0.57	0.07	100.24	100.06
ASB Real Estate	-6.69	-9.24	11.37	-9.32	1.38	7.08	0.66	-0.79	-1.24	114.38	326.66
Clarion Lion	0.48	-1.99	10.34	-2.70	1.48	4.42	0.91	-0.19	-0.35	141.26	200.95
ARA American Strategic Value Realty	0.82	-1.91	7.32	-3.66	1.07	1.71	0.95	-0.25	-2.01	84.26	153.49
Portfolio Advisors Credit Strategies Fund	8.64	5.49	5.94	8.46	0.08	9.66	0.01	0.89	0.41	51.74	-20.74
Crescent Direct Lending Levered Fund II	9.11	5.88	4.90	9.62	-0.08	10.13	0.02	1.21	0.43	40.42	-42.64
Audax Direct Lending Fund A	15.26	11.57	7.56	14.99	0.11	10.48	0.02	1.49	0.96	75.55	-55.90
Ares Capital Europe IV	8.10	4.98	5.63	7.87	0.08	9.42	0.01	0.87	0.37	46.65	-22.50
Lone Star XI	46.62	47.89	63.55	61.42	0.45	63.61	0.00	0.75	0.73	347.04	-68.33
Sixth Street Diversified Credit	9.71	6.77	9.71	9.39	0.17	11.81	0.02	0.70	0.45	36.58	-59.02
Ascribe Opportunities Fund IV	23.95	20.09	18.05	24.87	0.15	19.33	0.00	1.11	0.96	148.65	-44.46

	Annualized Return	Annualized Excess Return	Annualized Standard Deviation	Annualized Alpha	Annualized Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
BlackRock Russell 3000	8.06	6.37	17.83	0.00	1.00	0.02	1.00	0.36	0.24	100.01	99.99
BlackRock International Equity	3.22	1.57	16.68	0.33	1.00	0.18	1.00	0.10	1.77	100.68	99.36
DFA Emerging Markets Value	3.14	1.29	15.49	4.22	0.96	2.60	0.97	0.08	1.59	103.37	83.87
MacKay Shields Core Plus Opportunities	-2.71	-5.43	7.78	0.50	1.05	1.18	0.98	-0.71	0.30	103.19	99.31
BlackRock US TIPS	-1.31	-4.06	7.09	0.01	1.00	0.22	1.00	-0.57	0.07	100.24	100.06
ASB Real Estate	-6.69	-9.24	11.37	-9.32	1.38	7.08	0.66	-0.79	-1.24	114.38	326.66
Clarion Lion	0.48	-1.99	10.34	-2.70	1.48	4.42	0.91	-0.19	-0.35	141.26	200.95
ARA American Strategic Value Realty	0.82	-1.91	7.32	-3.66	1.07	1.71	0.95	-0.25	-2.01	84.26	153.49
Portfolio Advisors Credit Strategies Fund	8.64	5.49	5.94	8.46	0.08	9.66	0.01	0.89	0.41	51.74	-20.74
Crescent Direct Lending Levered Fund II	9.11	5.88	4.90	9.62	-0.08	10.13	0.02	1.21	0.43	40.42	-42.64
Audax Direct Lending Fund A	15.26	11.57	7.56	14.99	0.11	10.48	0.02	1.49	0.96	75.55	-55.90
Ares Capital Europe IV	8.10	4.98	5.63	7.87	0.08	9.42	0.01	0.87	0.37	46.65	-22.50
Lone Star XI	46.62	47.89	63.55	61.42	0.45	63.61	0.00	0.75	0.73	347.04	-68.33

Vintage	Manager & Fund Name	Estimated 6/30/2024 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[4]	IRR Date
2011	HarbourVest IX-Buyout	$4,570,760	$10,000,000	$8,525,000	85%	$1,475,000	$14,371,299	$5,953,294	*168.6%*	*222.2%*	*17.6%*	*3/31/24*
2011	HarbourVest IX-Credit	$737,149	$2,000,000	$1,641,541	82%	$358,459	$1,950,233	$963,189	*118.8%*	*163.7%*	*11.9%*	*3/31/24*
2008	HarbourVest Int'l VI[5]	$1,225,348	$3,712,930	$2,630,078	71%	$1,082,852	$4,494,996	$1,792,538	*170.9%*	*217.5%*	*13.8%*	*3/31/24*
2011	HarbourVest IX-Venture	$4,213,448	$4,000,000	$3,800,000	95%	$200,000	$1,059,397	$5,553,519	*27.9%*	*138.8%*	*20.8%*	*3/31/24*
2017	HarbourVest 2017 Global	$26,878,561	$30,000,000	$19,364,051	65%	$10,635,949	$12,836,101	$24,826,789	*66.3%*	*205.1%*	*19.2%*	*3/31/24*
2018	HarbourVest 2018 Global	$20,655,233	$20,000,000	$11,238,043	56%	$8,761,957	$5,275,530	$21,172,519	*46.9%*	*230.7%*	*19.4%*	*3/31/24*
2019	HarbourVest 2019 Global	$20,068,328	$20,000,000	$13,975,273	70%	$6,024,727	$2,809,888	$16,756,917	*20.1%*	*163.7%*	*21.2%*	*3/31/24*
2023	HarbourVest 2023 Global	$1,809,611	$10,000,000	$1,603,540	16%	$8,396,460	$0	NA	*0.0%*	*112.9%*	NA	NA
	Total Illiquid Private Equity	**$80,158,438**	$99,712,930	$62,777,526	63%	$36,935,404	$42,797,444	$77,018,765	*68.2%*	*195.9%*		
	% of Portfolio (Market Value)	**6.76%**										

	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense[6]
HarbourVest IX-Buyout	$18,171	$0	$5,735	$849	$24,755
HarbourVest IX-Credit	$3,630	$0	$751	$569	$4,950
HarbourVest Int'l VI	$2,019	$0	$305	$138	$2,462
HarbourVest IX-Venture	$7,281	$0	$2,403	$363	$10,047
HarbourVest 2017 Global	$66,000	$0	$2,708	$54,433	$123,141
HarbourVest 2018 Global	$34,133	$0	$5,726	$27,082	$66,941
HarbourVest 2019 Global	$43,138	$0	$26,641	$29,423	$99,202
HarbourVest 2023 Global	$14,354	$0	$1,484	$22,192	$38,030
	$188,726	$0	$45,753	$135,049	**$369,528**

[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 (preliminary MV's as of 6/30/2024)
[4]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 HarbourVest.
[5]HarbourVest International Private Equity Partners VI-Partnership Fund L.P. values are originally presented in euros and are calculated to dollars using XE™.
[6]fees and expenses are for 1Q 2024

HarbourVest 2017 Global Fund first capital call issued 9/21/2017. Portfolio Advisors first capital call issued 10/5/2017. HarbourVest 2018 Global Fund first capital call issued 12/13/2018.
HarbourVest 2023 Global Fund first capital call issued 12/28/2023.

Vintage	Manager & Fund Name	Estimated 6/30/2024 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[4]	IRR Date
2013	Portfolio Advisors Credit Strategies Fund	$11,497,447	$11,250,000	$11,250,000	100%	$0	$3,731,292	$12,166,621	33.2%	135.4%	8.3%	3/31/24
2017	Crescent Direct Lending Levered Fund II	$2,887,144	$7,000,000	$5,707,507	82%	$1,292,493	$4,651,325	$2,770,407	81.5%	132.1%	9.5%	3/31/24
2017	Audax Direct Lending Fund A	$5,231,351	$7,000,000	$5,791,026	83%	$1,208,974	$3,246,001	$5,227,810	56.1%	146.4%	14.9%	12/31/23
2018	Ares Capital Europe IV	$5,745,612	$8,000,000	$6,762,884	85%	$1,237,116	$3,713,023	$6,896,335	54.9%	139.9%	8.2%	12/31/23
2019	Lone Star Fund XI	$4,560,663	$5,750,000	$5,026,116	87%	$723,884	$3,210,404	$3,611,793	63.9%	154.6%	29.1%	6/30/24
2019	Ascribe Opportunities IV	$5,096,538	$6,000,000	$5,207,450	87%	$792,550	$1,513,899	$5,351,462	29.1%	126.9%	9.9%	3/31/24
2020	Sixth Street Diversified Credit	$32,175,382	$50,000,000	$29,778,787	60%	$20,221,213	$3,542,097	$18,961,608	11.9%	119.9%	11.1%	3/31/24
	Total Illiquid Private Credit	**$67,194,137**	$95,000,000	$69,523,770	73.2%	$25,476,230	$23,608,041	$54,986,036	34.0%	130.6%		
	% of Portfolio (Market Value)	**5.67%**										

	Management Fee	Accrued Carried Interest	Admin Fee	Interest Expense	Other Expense	Total Expense[5]
Portfolio Advisors CSF	$0	$0	$0	$0	$0	$0
Crescent Direct Lending II	$39,638	$7,428	$9,079	$0	$0	$56,145
Audax Direct Lending A	$29,055	$0	$0	$0	$15,205	$44,260
Ares Capital Europe IV	$25,253	$21,806	$0	$73,613	$7,706	$128,378
Ascribe Opportunities IV	$96,636	$0	$0	$0	$0	$96,636
Lone Star Fund XI	$0	$0	$0	$0	$0	$0
Sixth Street Diversified Credit	$0	$0	$0	$0	$0	$0
	$190,582	$29,234	$9,079	$73,613	$22,911	**$325,419**

[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 (preliminary MV's as of 6/30/2024)
[4]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.
[5]All fees and expenses are for 1Q 2024

Portfolio Advisors first capital call issued 10/5/2017. Crescent Direct Lending first called 3/13/2018. Ares IV first called 8/13/2018. Audax Direct Lending first called 10/26/2018.

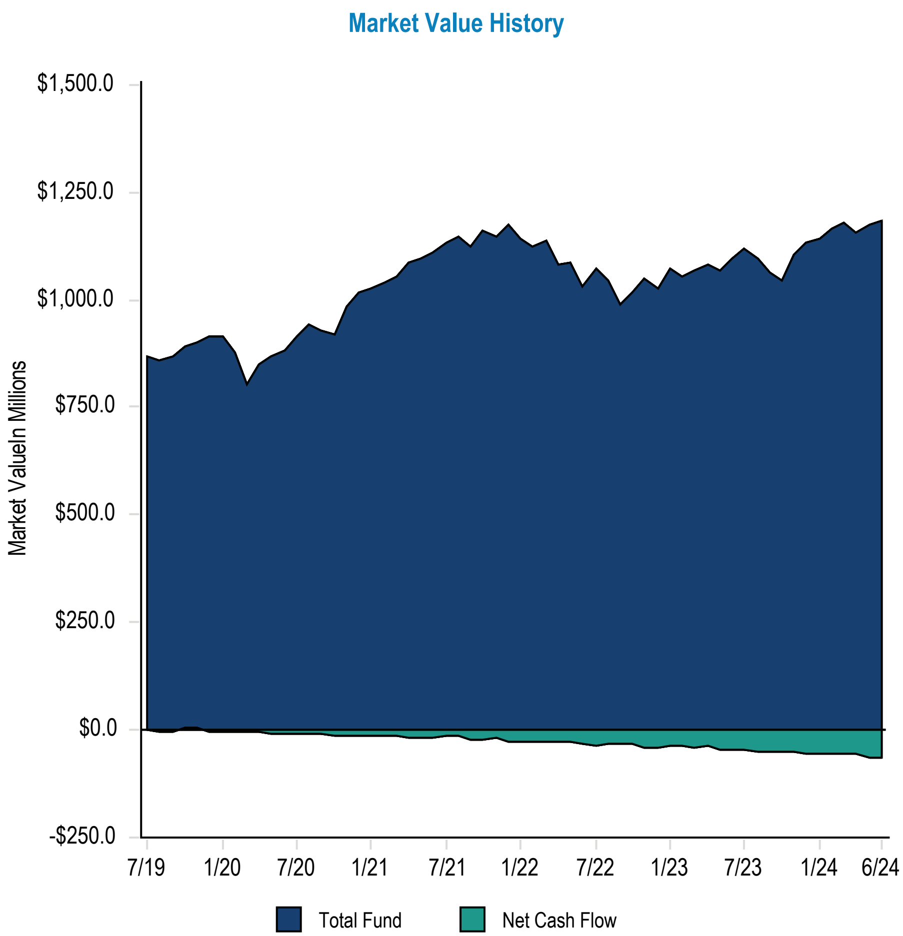
Vintage	Manager & Fund Name	Estimated 6/30/2024 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value for IRR	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[5]	IRR Date
2010	KKR Mezzanine[6]	$1,711,505	$10,000,000	$10,000,000	100%	$0	$14,153,380	$1,372,673	*141.5%*	*158.6%*	*5.9%*	*3/31/24*
2020	TSSP Adjacent Opportunities Partners	$29,556,486	$40,000,000	$25,993,880	65%	$14,006,120	$6,182,047	*NA*	*23.8%*	*137.5%*	*NA*	*NA*
	Total Illiquid Opportunistic	**$31,267,991**	$50,000,000	$35,993,880	72%	$14,006,120	$20,335,427	$1,386,290	*3.9%*	*60.3%*		
	% of Portfolio (Market Value)	**2.64%**										

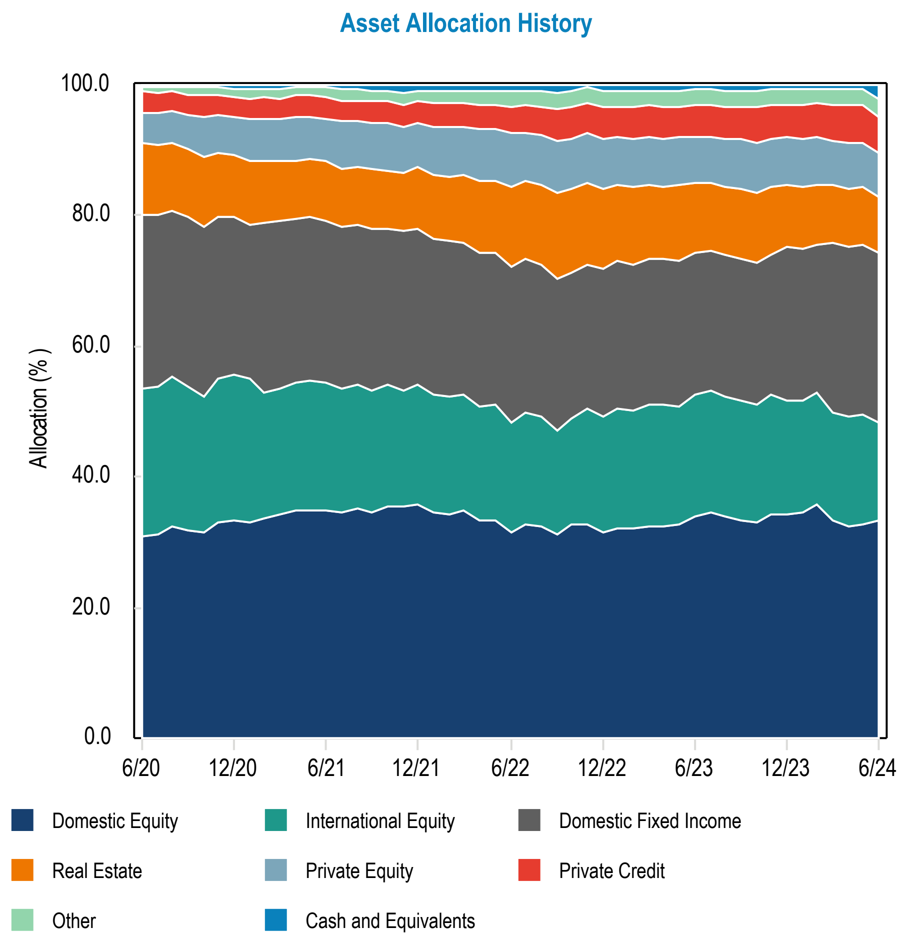
	Management Fee	Accrued Carried Interest	Admin Fee	Interest Expense	Other Expense	Total Expense[6]
KKR Mezzanine	$0	$0	$0	$0	$2,512	$2,512
TSSP Adjacent Opportunities Pa	$0	$0	$0	$0	$0	$0
	$0	$0	$0	$0	$2,512	**$2,512**

[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 (preliminary MV's as of 6/30/2024)
[4]Investment period ended, no further capital to be called.
[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]All fees and expenses are for 1Q 2024

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flows	Capital Appreciation	Ending Market Value
BlackRock Russell 3000	$392,658,056	$0	-$10,000,000	-$10,000,000	$12,444,671	$395,102,726
BlackRock International Equity	$152,770,748	$0	$0	$0	-$279,018	$152,491,730
DFA Emerging Markets Value	$23,258,675	$0	$0	$0	$1,367,403	$24,626,078
Harding Loevner Emerging Markets	$19,709,741	$0	-$19,639,097	-$19,639,097	-$70,644	$0
Income Research & Management	$131,450,941	$0	$0	$0	$315,213	$131,766,154
MacKay Shields Core Plus Opportunities	$132,695,712	$0	$0	$0	$800,060	$133,495,773
BlackRock US TIPS	$42,396,534	$0	$0	$0	$378,231	$42,774,765
ASB Real Estate	$22,788,968	$0	$0	$0	-$1,771,548	$21,017,420
Clarion Lion	$27,817,460	$177,902	-$259,425	-$81,523	-$480,631	$27,255,306
ARA American Strategic Value Realty	$51,409,930	$0	$0	$0	-$557,177	$50,852,753
1221 State St. Corp	$2,027,100	$23,934	-$7,815	$16,118	$188	$2,043,406
Harbourvest Buyout IX	$5,117,810	$0	-$457,716	-$457,716	-$89,334	$4,570,760
Harbourvest Credit Ops IX	$827,540	$0	$0	$0	-$90,391	$737,149
Harbourvest International PE VI	$1,386,902	$0	-$81,008	-$81,008	-$80,546	$1,225,348
Harbourvest Venture IX	$4,564,187	$0	-$222,760	-$222,760	-$127,979	$4,213,448
Harbourvest 2017 Global Fund	$27,233,724	$0	-$116,844	-$116,844	-$238,319	$26,878,561
Harbourvest 2018 Global Fund	$21,509,424	$300,000	-$1,132,614	-$832,614	-$21,577	$20,655,233
Harbourvest 2019 Global Fund	$19,623,093	$0	$0	$0	$445,235	$20,068,328
Harbourvest 2023 Global Fund	$1,688,165	$0	$0	$0	$121,446	$1,809,611
Portfolio Advisors Credit Strategies Fund	$11,700,692	$0	-$203,245	-$203,245	$0	$11,497,447
Crescent Direct Lending Levered Fund II	$3,026,117	$0	-$138,973	-$138,973	$0	$2,887,144
Audax Direct Lending Fund A	$5,214,129	$0	-$138,693	-$138,693	$155,915	$5,231,351
Ares Capital Europe IV	$5,760,622	$0	-$138,624	-$138,624	$123,614	$5,745,612
Lone Star XI	$4,215,169	$404,839	-$135,197	$269,642	$75,853	$4,560,663
Sixth Street Diversified Credit	$29,328,800	$2,689,567	$0	$2,689,567	$157,015	$32,175,382
Ascribe Opportunities Fund IV	$5,096,538	$0	-$543,557	-$543,557	$543,557	$5,096,538
KKR Mezzanine Partners	$1,698,617	$0	$0	$0	$12,888	$1,711,505
TSSP Adjacent Opportunities Partners	$26,740,787	$2,093,505	$0	$2,093,505	$722,194	$29,556,486
Cash Account	$0	$0	$0	$0	$0	$0
Invesco Treasury Portfolio	$7,488,615	$33,051,354	-$15,487,911	$17,563,443	$109,905	$25,161,964
Total Fund	**$1,181,204,795**	**$38,741,100**	**-$48,703,479**	**-$9,962,378**	**$13,966,224**	**$1,185,208,641**

Harbourvest, KKR Mezzanine, Portfolio Advisors, Crescent Direct Lending, Audax Direct Lending, Ares Capital, Sixth Street Diversified Credit, and Sixth Street TAO Partners market values as of 03/31/2024 +/- 2Q24 calls/distributions. Ascribe and Lone Star market values as of 06/30/2024.


Market Value History
$1,500.0
$1,250.0
$1,000.0
$750.0
$500.0
$250.0
$0.0
-$250.0
Market ValueIn Millions
7/19
1/20
7/20
1/21
7/21
1/22
7/22
1/23
7/23
1/24
6/24
Total Fund
Net Cash Flow

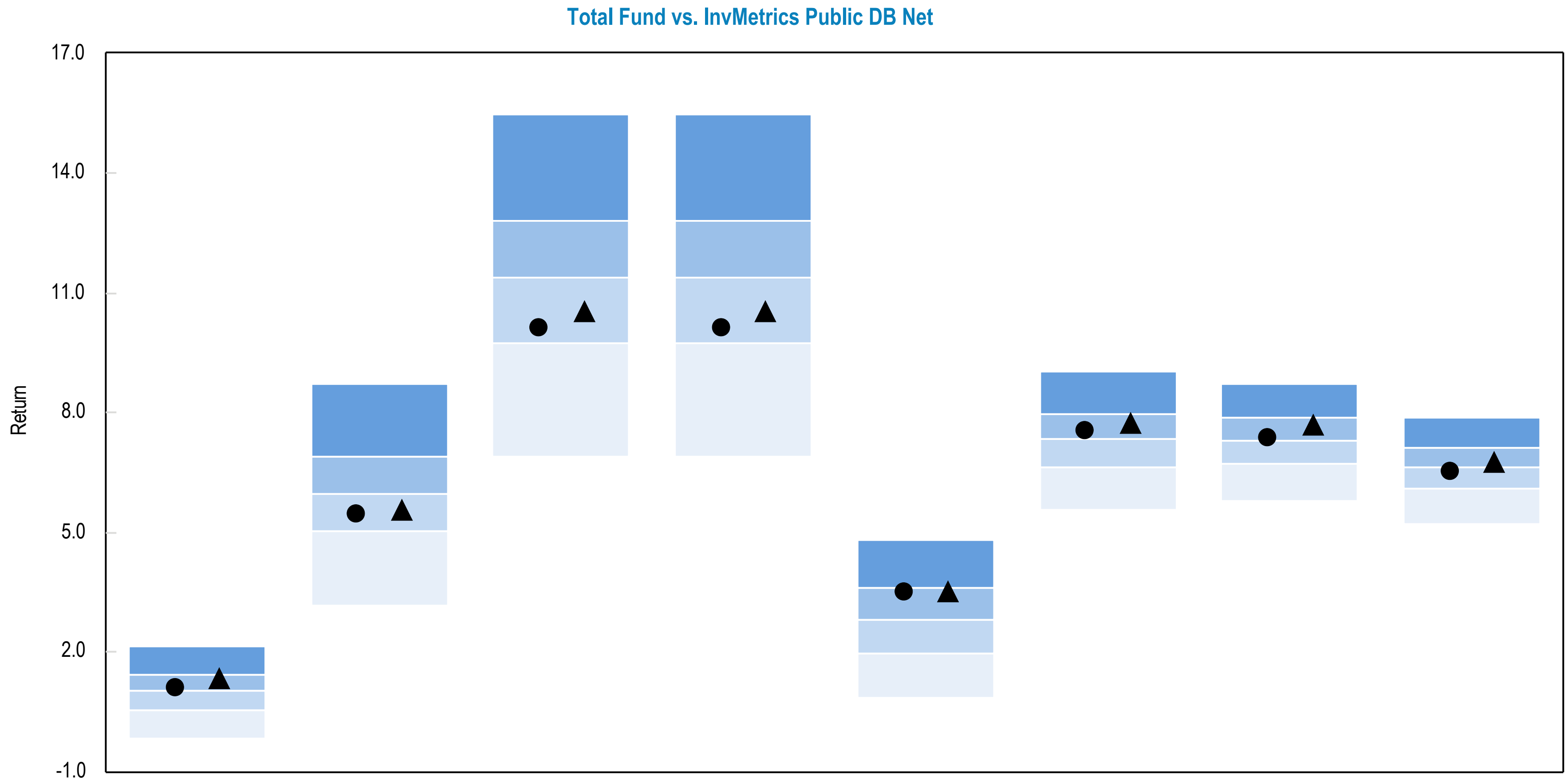

Asset Allocation History
100.0
80.0
60.0
40.0
20.0
0.0
Allocation (%)
6/20
12/20
6/21
12/21
6/22
12/22
6/23
12/23
6/24
Domestic Equity
International Equity
Domestic Fixed Income
Real Estate
Private Equity
Private Credit
Other
Cash and Equivalents

Account	Fee Schedule	Market Value	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
ARA American Strategic Value Realty	1.25 % of First $10 M 1.20 % of Next $15 M 1.10 % of Next $25 M 1.00 % Thereafter	50,852,753	4.29	588,528	1.16
Ares Capital Europe IV	1.38 % of Assets	5,745,612	0.48	79,289	1.38
ASB Real Estate	1.25 % of First $5 M 1.00 % of Next $10 M 0.75 % Thereafter	21,017,420	1.77	207,631	0.99
Ascribe Opportunities Fund IV	1.50 % of Assets	5,096,538	0.43	76,448	1.50
Audax Direct Lending Fund A	0.85 % of Assets	5,231,351	0.44	44,466	0.85
BlackRock International Equity	0.15 % of First $50 M 0.10 % of Next $50 M 0.00 % Thereafter	152,491,730	12.87	125,000	0.08
BlackRock Russell 3000	0.03 % of Assets	395,102,726	33.34	118,531	0.03
BlackRock US TIPS	0.07 % of Assets	42,774,765	3.61	29,942	0.07
Clarion Lion	1.25 % of First $10 M 1.00 % of Next $15 M 0.85 % Thereafter	27,255,306	2.30	294,170	1.08
Crescent Direct Lending Levered Fund II	Minimum Fee: $25,280	2,887,144	0.24	25,280	0.88
DFA Emerging Markets Value	0.44 % of Assets	24,626,078	2.08	108,355	0.44
Income Research & Management	0.20 % of First $100 M 0.17 % Thereafter	131,766,154	11.12	254,002	0.19
Harbourvest 2017 Global Fund	Minimum Fee: $262,500	26,878,561	2.27	262,500	0.98
Harbourvest 2018 Global Fund	Minimum Fee: $138,000	20,655,233	1.74	138,000	0.67
Harbourvest 2019 Global Fund	0.45 % of Assets	20,068,328	1.69	90,307	0.45
Harbourvest 2023 Global Fund	0.50 % of Assets	1,809,611	0.15	9,048	0.50
Harbourvest Buyout IX	Minimum Fee: $100,000	4,570,760	0.39	100,000	2.19
Harbourvest Credit Ops IX	Minimum Fee: $20,000	737,149	0.06	20,000	2.71
Harbourvest International PE VI	Minimum Fee: $35,000	1,225,348	0.10	35,000	2.86
Harbourvest Venture IX	Minimum Fee: $40,000	4,213,448	0.36	40,000	0.95
Invesco Treasury Portfolio		25,161,964	2.12	-	-
KKR Mezzanine Partners	Minimum Fee: $150,000	1,711,505	0.14	150,000	8.76
Lone Star XI	0.71 % of Assets	4,560,663	0.38	32,335	0.71
MacKay Shields Core Plus Opportunities	0.30 % of Assets	133,495,773	11.26	400,487	0.30

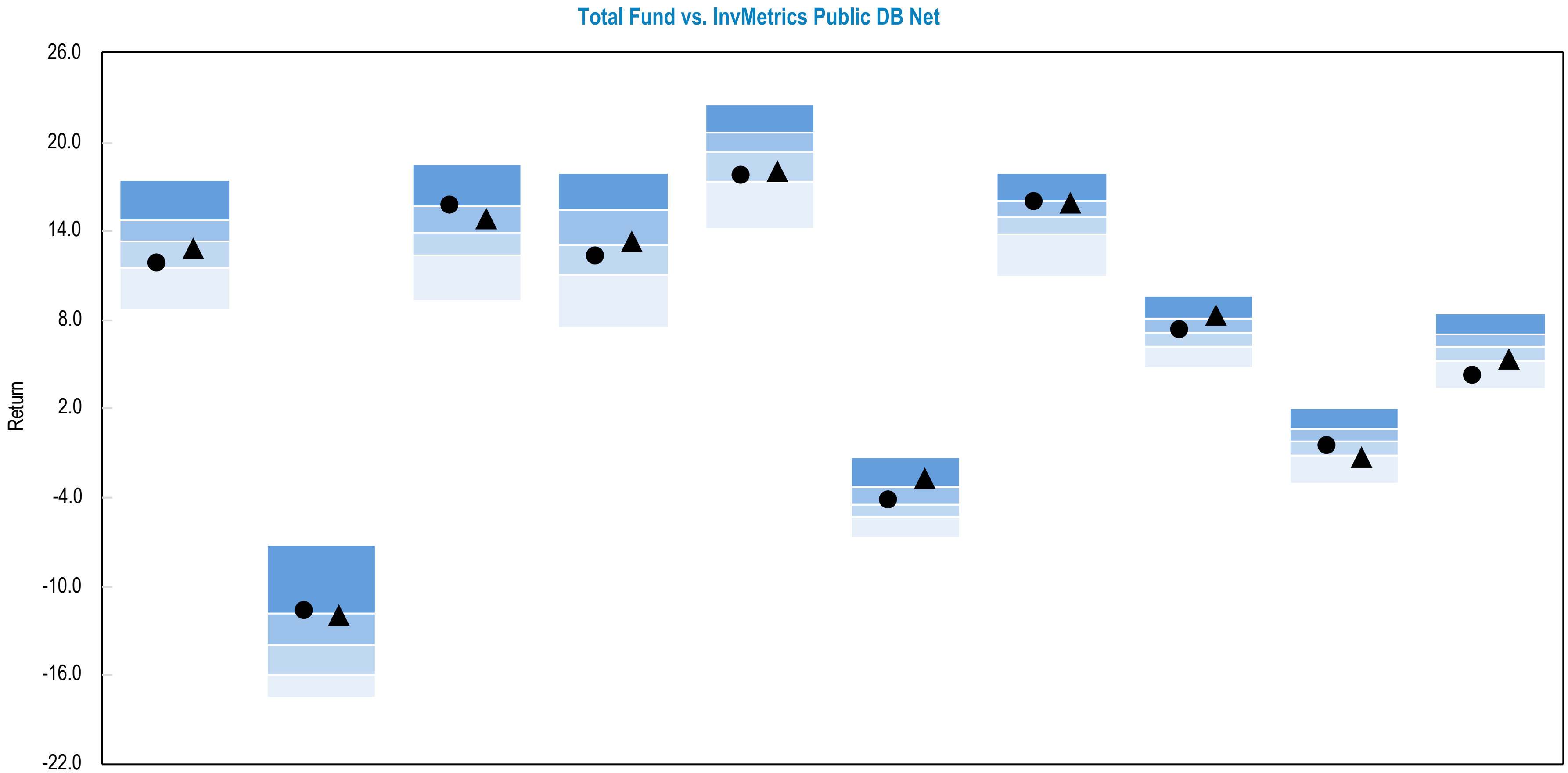
**HarbourVest and KKR fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund.*
**HarbourVest International Private Equity VI fees are based on committed Euros, actual US Dollar amount will fluctuate based on exchange rates.*
**Verus advisory fee shown for disclosure purposes only and is not included in total investment management fee calculations.*
**Portfolio Advisors fee is 0.20% on committed capital and 1.00% on invested capital.*

Account	Fee Schedule	Market Value	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Portfolio Advisors Credit Strategies Fund	Minimum Fee: $180,000	11,497,447	0.97	180,000	1.57
Sixth Street Diversified Credit	1.35 % of Assets	32,175,382	2.71	434,368	1.35
TSSP Adjacent Opportunities Partners		29,556,486	2.49	-	-
Investment Management Fee		**1,185,208,641**	**100.00**	**3,843,688**	**0.32**

**HarbourVest and KKR fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund.*
**HarbourVest International Private Equity VI fees are based on committed Euros, actual US Dollar amount will fluctuate based on exchange rates.*
**Verus advisory fee shown for disclosure purposes only and is not included in total investment management fee calculations.*
**Portfolio Advisors fee is 0.20% on committed capital and 1.00% on invested capital.*

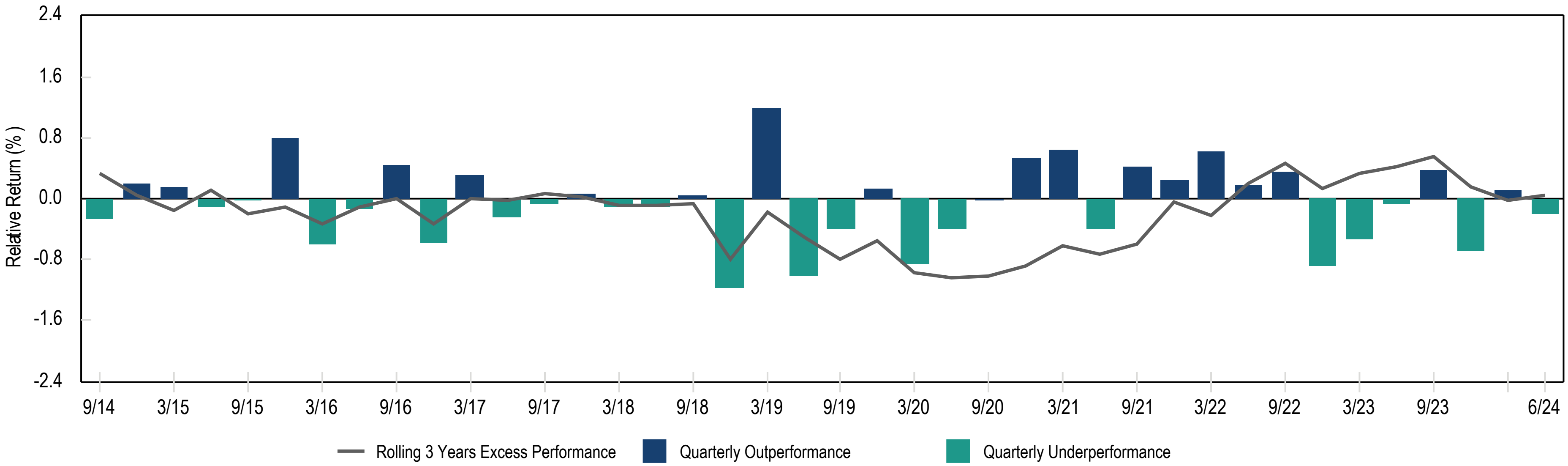


	Quarter	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	1.15 (45)	5.48 (64)	10.15 (70)	10.15 (70)	3.55 (27)	7.57 (40)	7.41 (46)	6.57 (55)
▲ Policy Index	1.36 (31)	5.59 (61)	10.55 (66)	10.55 (66)	3.52 (28)	7.74 (35)	7.73 (32)	6.80 (40)
5th Percentile	2.14	8.76	15.49	15.49	4.81	9.04	8.73	7.88
1st Quartile	1.45	6.90	12.84	12.84	3.62	7.96	7.90	7.14
Median	1.05	5.99	11.40	11.40	2.80	7.34	7.31	6.63
3rd Quartile	0.56	5.06	9.76	9.76	1.96	6.64	6.72	6.12
95th Percentile	-0.14	3.18	6.91	6.91	0.86	5.57	5.78	5.24
Population	632	630	626	626	604	586	551	489

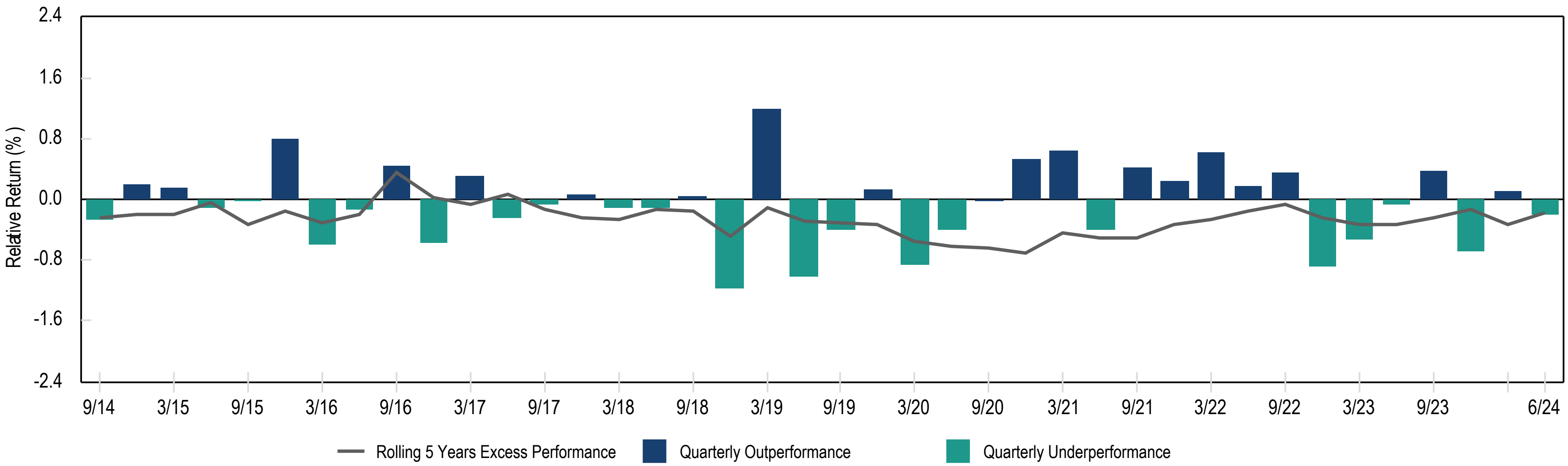


	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
● Total Fund	11.93 (70)	-11.60 (23)	15.84 (22)	12.33 (59)	17.85 (71)	-4.12 (41)	16.02 (27)	7.45 (44)	-0.41 (58)	4.37 (87)
▲ Policy Index	12.85 (58)	-11.93 (27)	14.83 (35)	13.29 (47)	18.03 (69)	-2.73 (15)	15.93 (29)	8.36 (21)	-1.22 (77)	5.33 (73)
5th Percentile	17.46	-7.14	18.53	17.92	22.56	-1.22	17.89	9.67	2.02	8.48
1st Quartile	14.72	-11.81	15.67	15.41	20.67	-3.33	16.09	8.12	0.62	7.06
Median	13.30	-13.95	13.88	13.05	19.41	-4.41	15.03	7.15	-0.21	6.16
3rd Quartile	11.56	-15.96	12.36	11.10	17.31	-5.30	13.78	6.25	-1.16	5.23
95th Percentile	8.76	-17.48	9.30	7.56	14.11	-6.68	10.92	4.74	-3.00	3.31
Population	1,072	1,089	1,137	1,181	1,091	1,045	1,029	1,017	960	912

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



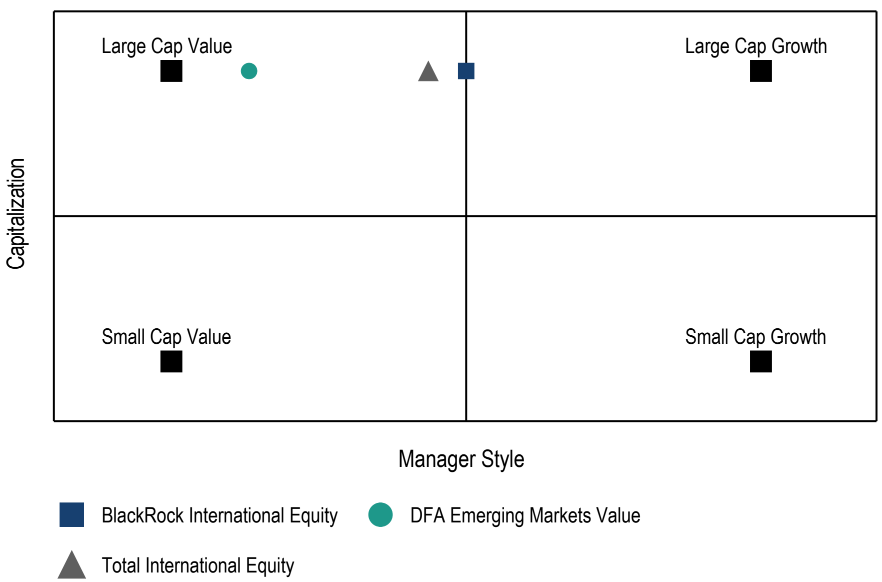
	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total Domestic Equity	**395,102,726**	**100.0**	**3.2**	**13.6**	**23.2**	**23.2**	**8.1**	**14.2**	**12.0**	**26.0**	**-19.2**	**25.7**	**21.0**	**31.1**
Russell 3000 Index			*3.2*	*13.6*	*23.1*	*23.1*	*8.1*	*14.1*	*12.1*	*26.0*	*-19.2*	*25.7*	*20.9*	*31.0*
BlackRock Russell 3000	395,102,726	100.0	3.2	13.6	23.2	23.2	8.1	14.2	-	26.0	-19.2	25.7	21.0	31.1
Russell 3000 Index			*3.2*	*13.6*	*23.1*	*23.1*	*8.1*	*14.1*	-	*26.0*	*-19.2*	*25.7*	*20.9*	*31.0*
eV US All Cap Core Equity Rank			*25*	*28*	*32*	*32*	*35*	*26*	-	*24*	*59*	*53*	*41*	*38*

U.S. Effective Style Map
3 Years Ending: June 30, 2024

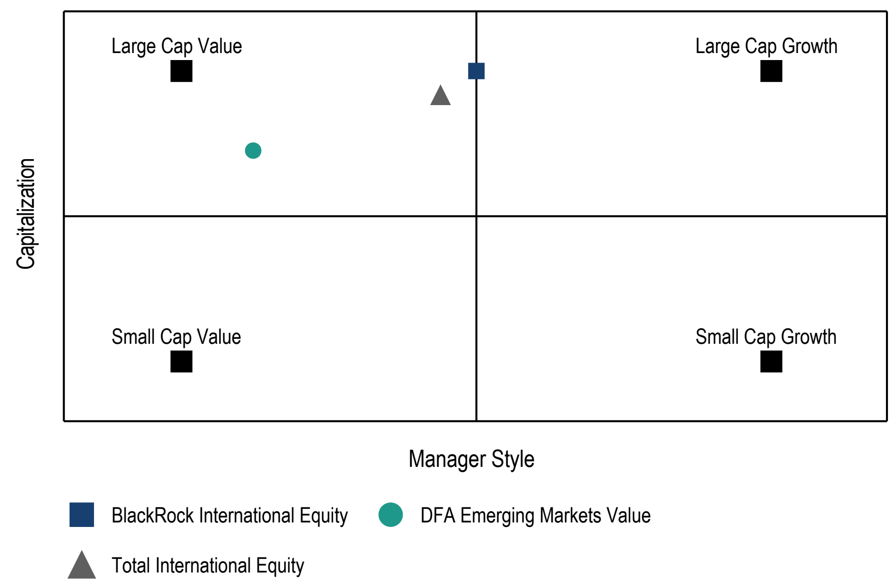
U.S. Effective Style Map
5 Years Ending: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total International Equity	**177,117,808**	**100.0**	**0.4**	**5.3**	**11.0**	**11.0**	**1.4**	**5.7**	**4.1**	**16.9**	**-15.4**	**10.1**	**8.1**	**20.7**
MSCI AC World ex USA Index			*1.2*	*6.0*	*12.2*	*12.2*	*1.0*	*6.1*	*4.3*	*16.2*	*-15.6*	*8.3*	*11.1*	*22.1*
BlackRock International Equity	152,491,730	86.1	-0.2	5.6	11.7	11.7	3.2	6.8	4.6	18.6	-14.1	11.6	8.1	22.4
MSCI EAFE (Net)			*-0.4*	*5.3*	*11.5*	*11.5*	*2.9*	*6.5*	*4.3*	*18.2*	*-14.5*	*11.3*	*7.8*	*22.0*
eV All EAFE Equity Rank			*41*	*35*	*35*	*35*	*28*	*40*	*43*	*32*	*37*	*52*	*52*	*49*
DFA Emerging Markets Value	24,626,078	13.9	5.9	8.7	16.7	16.7	3.1	5.9	3.9	16.5	-10.7	12.4	2.7	9.6
MSCI Emerging Markets Value (Net)			*5.1*	*6.5*	*14.1*	*14.1*	*-1.1*	*2.9*	*2.0*	*14.2*	*-15.8*	*4.0*	*5.5*	*12.0*
eV Emg Mkts All Cap Value Equity Rank			*11*	*22*	*27*	*27*	*18*	*49*	*71*	*43*	*38*	*19*	*82*	*94*

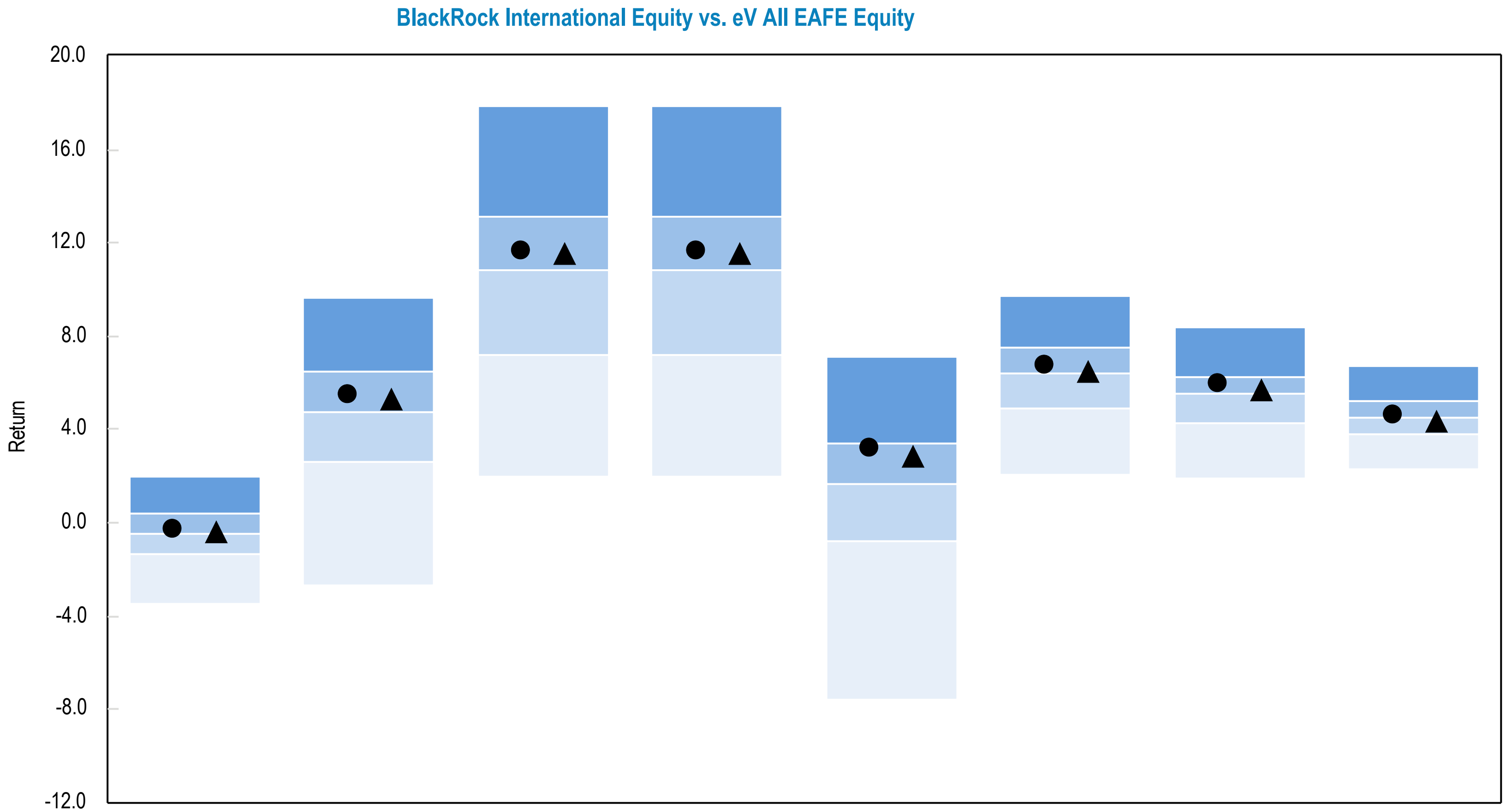
MSCI Effective Style Map
3 Years Ending: June 30, 2024



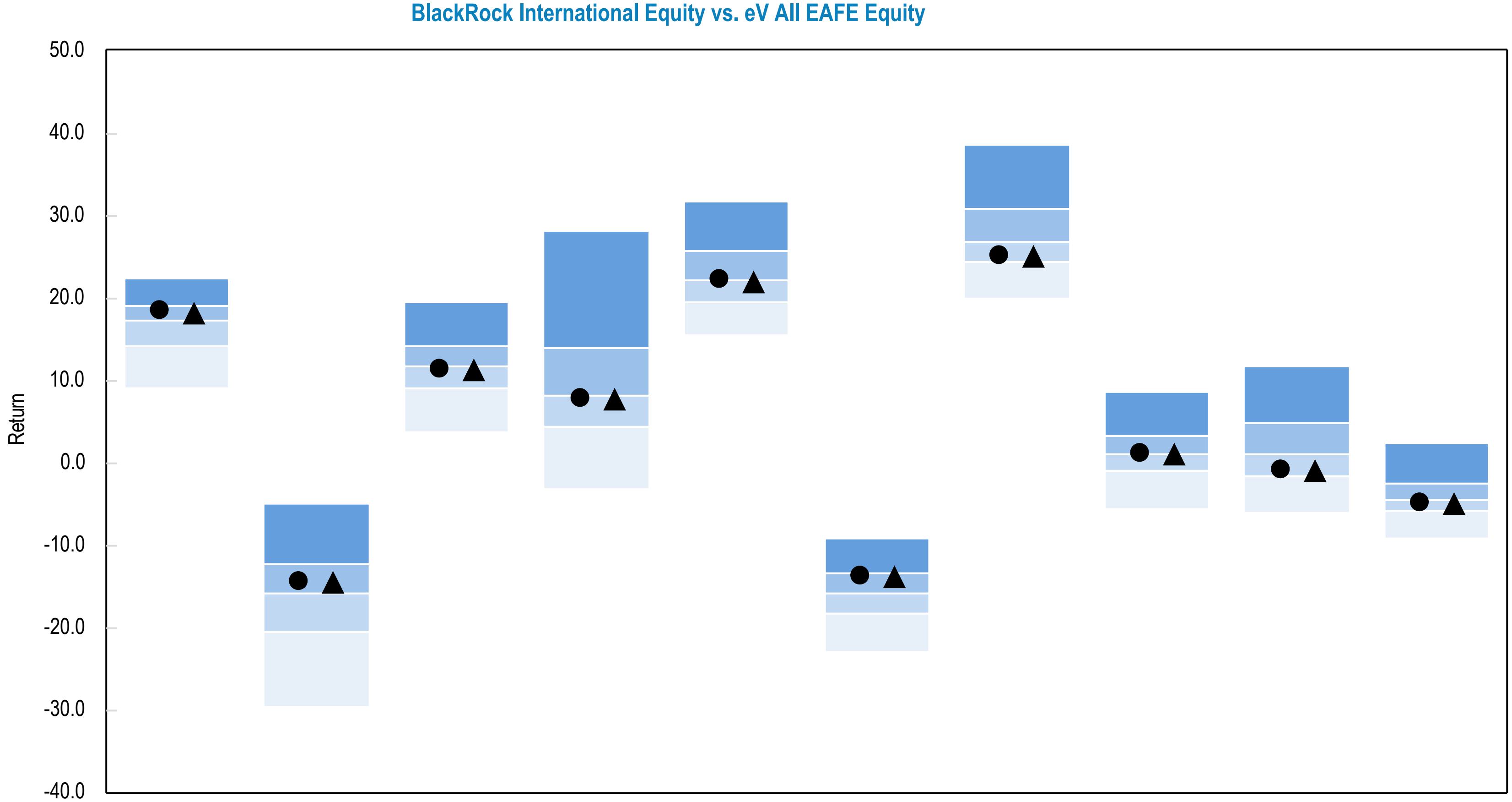
MSCI Effective Style Map
5 Years Ending: June 30, 2024



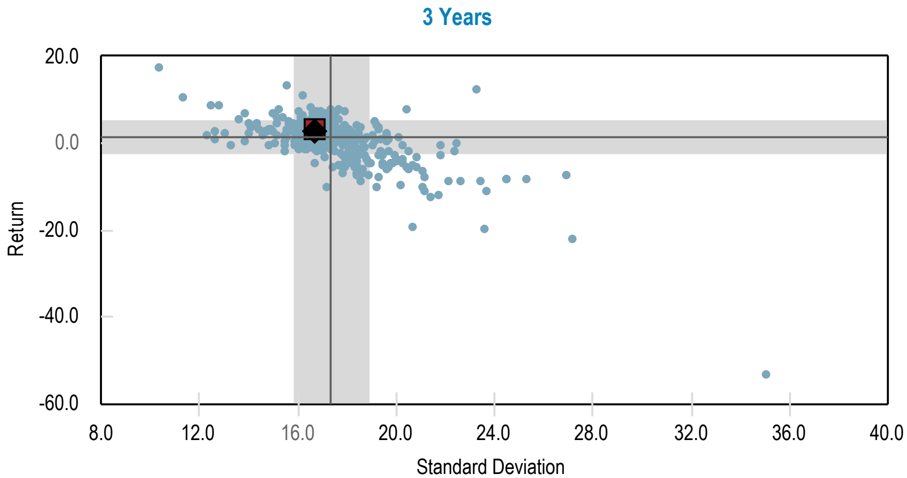
Harding Loevner liquidated 6/24.

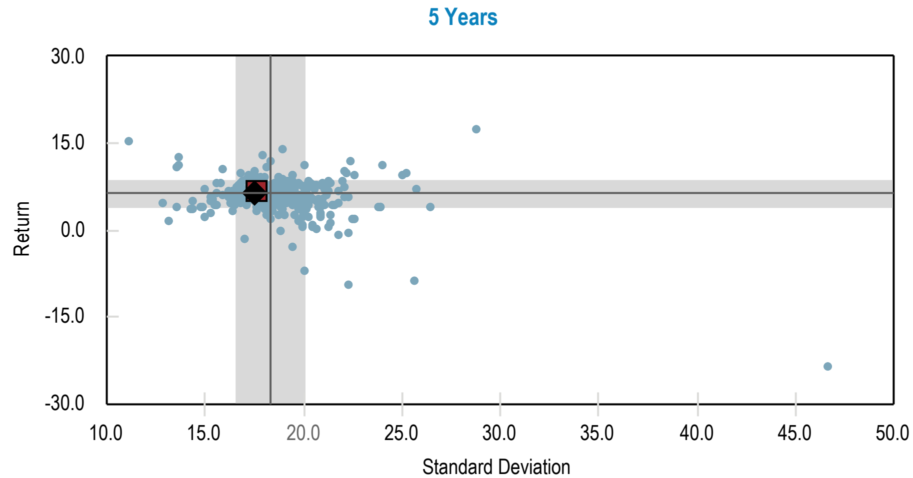


	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
● BlackRock International Equity	-0.20 (41)	5.57 (35)	11.73 (35)	11.73 (35)	3.22 (28)	6.78 (40)	6.05 (31)	4.63 (43)
▲ MSCI EAFE (Net)	-0.42 (49)	5.34 (40)	11.54 (39)	11.54 (39)	2.89 (34)	6.46 (49)	5.73 (44)	4.33 (61)
5th Percentile	1.99	9.66	17.86	17.86	7.13	9.73	8.37	6.75
1st Quartile	0.37	6.52	13.12	13.12	3.38	7.53	6.24	5.25
Median	-0.44	4.74	10.81	10.81	1.66	6.40	5.52	4.51
3rd Quartile	-1.34	2.63	7.22	7.22	-0.80	4.94	4.27	3.78
95th Percentile	-3.44	-2.72	1.99	1.99	-7.60	2.07	1.88	2.32
Population	426	425	424	424	395	367	343	282



	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
● BlackRock International Equity	18.56 (32)	-14.12 (37)	11.62 (52)	8.07 (52)	22.40 (49)	-13.52 (29)	25.42 (63)	1.34 (46)	-0.63 (65)	-4.77 (56)
▲ MSCI EAFE (Net)	18.24 (37)	-14.45 (42)	11.26 (58)	7.82 (56)	22.01 (54)	-13.79 (34)	25.03 (68)	1.00 (52)	-0.81 (68)	-4.90 (60)
5th Percentile	22.48	-4.83	19.57	28.19	31.69	-9.15	38.71	8.71	11.74	2.50
1st Quartile	19.07	-12.11	14.19	13.91	25.85	-13.30	30.82	3.39	4.99	-2.41
Median	17.32	-15.79	11.76	8.19	22.19	-15.71	26.99	1.07	1.17	-4.47
3rd Quartile	14.15	-20.44	9.18	4.41	19.61	-18.23	24.39	-0.97	-1.57	-5.86
95th Percentile	9.14	-29.47	3.74	-3.15	15.52	-22.92	19.90	-5.45	-6.00	-9.10
Population	439	454	459	466	470	477	470	455	440	432





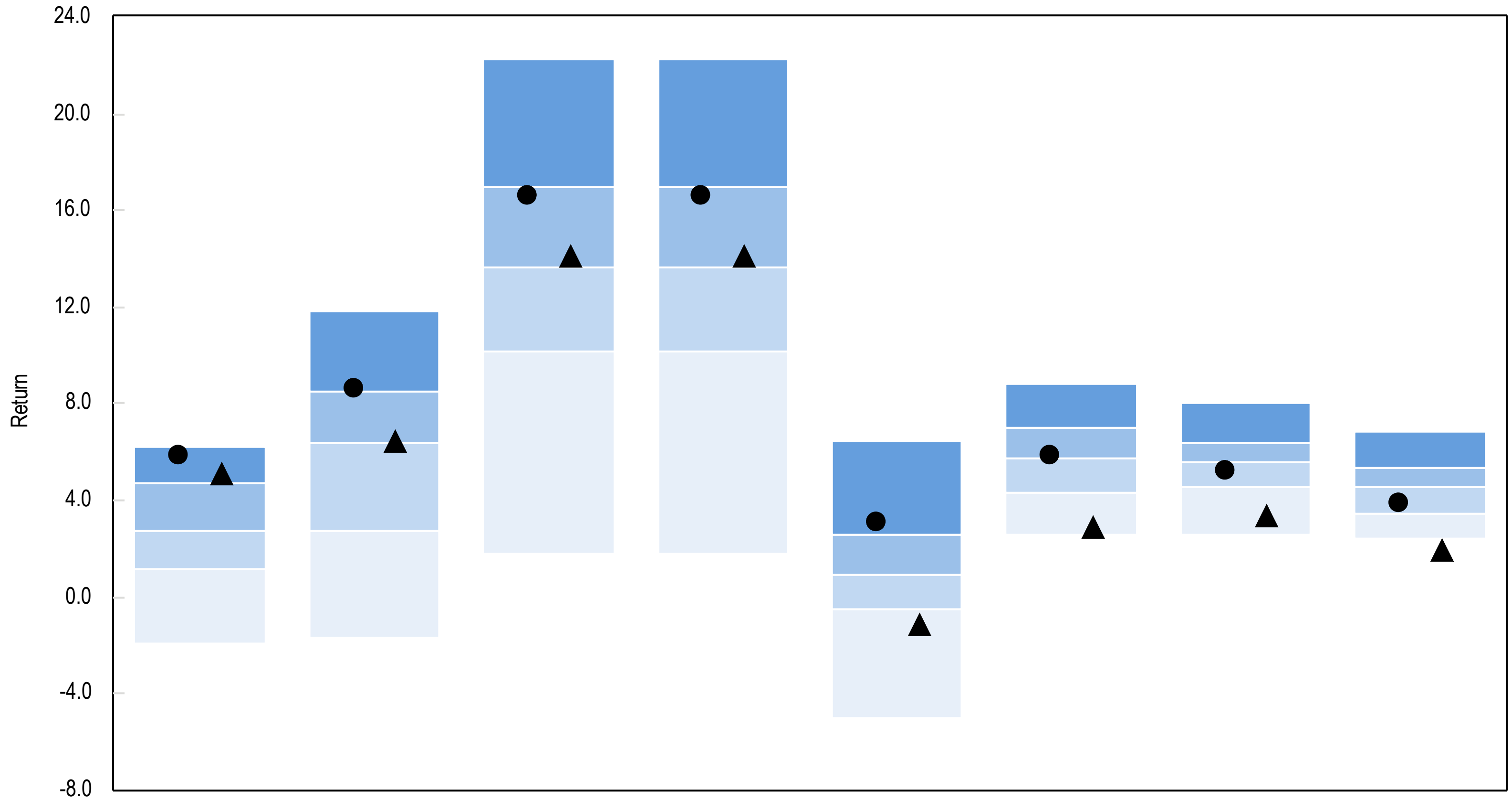
eV All EAFE Equity

	Return	Standard Deviation
BlackRock International Equity	3.22	16.68
MSCI EAFE (Net)	2.89	16.70
Median	1.66	17.35
Population	395	395

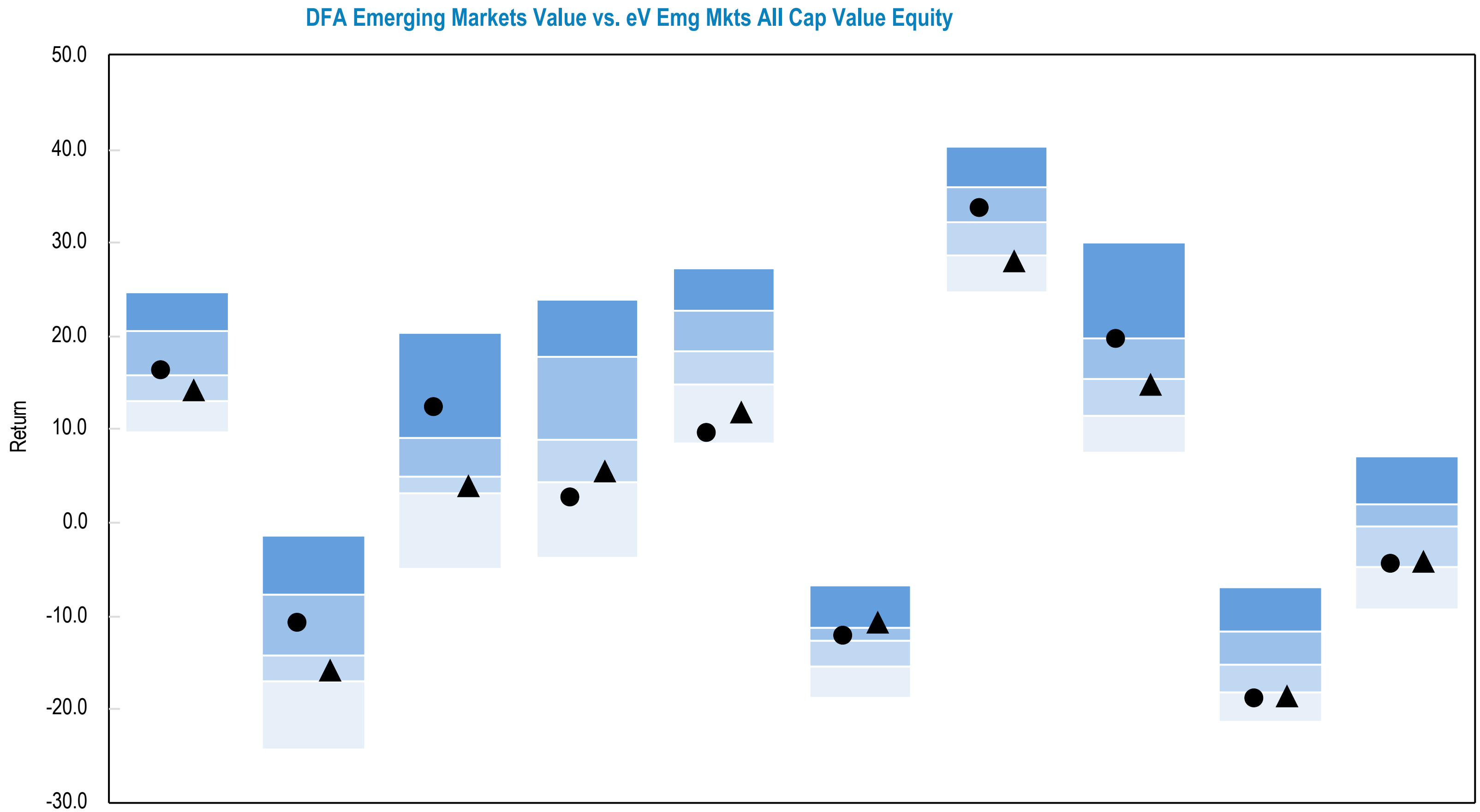
eV All EAFE Equity

	Return	Standard Deviation
BlackRock International Equity	6.78	17.59
MSCI EAFE (Net)	6.46	17.56
Median	6.40	18.31
Population	367	367

DFA Emerging Markets Value vs. eV Emg Mkts All Cap Value Equity

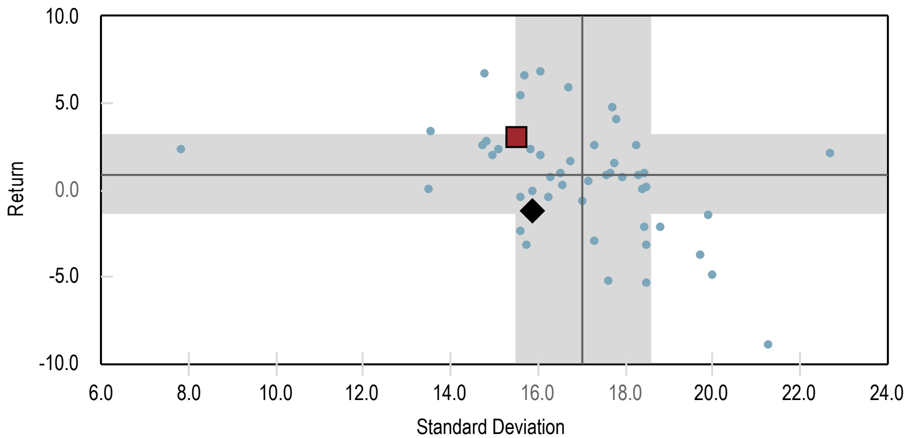


	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
● DFA Emerging Markets Value	5.88 (11)	8.70 (22)	16.68 (27)	16.68 (27)	3.14 (18)	5.90 (49)	5.30 (59)	3.93 (71)
▲ MSCI Emerging Markets Value (Net)	5.08 (22)	6.46 (49)	14.13 (44)	14.13 (44)	-1.09 (77)	2.91 (92)	3.41 (91)	1.96 (100)
5th Percentile	6.20	11.82	22.26	22.26	6.42	8.86	8.06	6.85
1st Quartile	4.72	8.48	16.94	16.94	2.61	6.98	6.35	5.32
Median	2.78	6.36	13.61	13.61	0.96	5.73	5.63	4.53
3rd Quartile	1.14	2.73	10.15	10.15	-0.53	4.32	4.52	3.49
95th Percentile	-1.88	-1.70	1.79	1.79	-5.03	2.59	2.55	2.47
Population	52	52	52	52	49	43	39	30

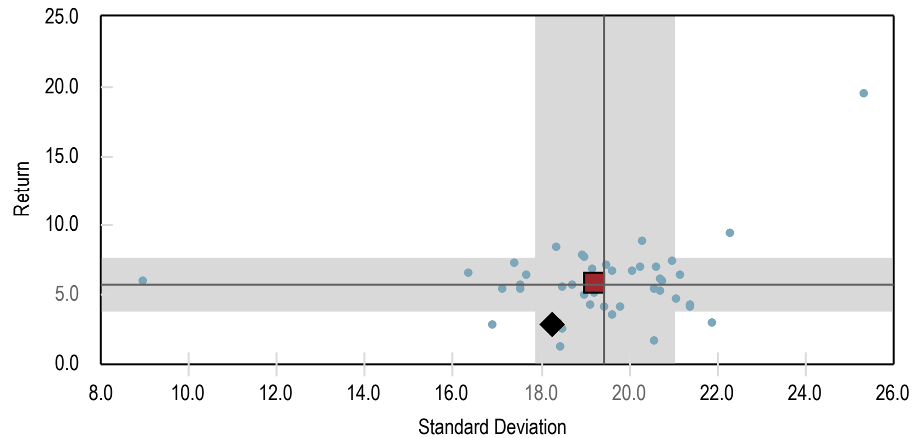


	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
● DFA Emerging Markets Value	16.49 (43)	-10.74 (38)	12.41 (19)	2.73 (82)	9.64 (94)	-11.93 (38)	33.76 (38)	19.84 (25)	-18.77 (84)	-4.41 (73)
▲ MSCI Emerging Markets Value (Net)	14.21 (67)	-15.83 (62)	4.00 (68)	5.48 (71)	11.96 (93)	-10.74 (23)	28.07 (79)	14.90 (54)	-18.57 (83)	-4.08 (71)
5th Percentile	24.78	-1.44	20.40	23.96	27.36	-6.64	40.40	30.07	-6.89	7.06
1st Quartile	20.53	-7.67	9.02	17.81	22.69	-11.18	35.95	19.73	-11.68	2.07
Median	15.78	-14.26	4.86	8.90	18.43	-12.63	32.23	15.49	-15.27	-0.29
3rd Quartile	13.03	-16.88	3.26	4.47	14.93	-15.36	28.71	11.51	-18.15	-4.73
95th Percentile	9.79	-24.26	-5.01	-3.71	8.58	-18.81	24.63	7.47	-21.30	-9.35
Population	52	57	56	58	59	57	53	49	47	51

3 Years



5 Years

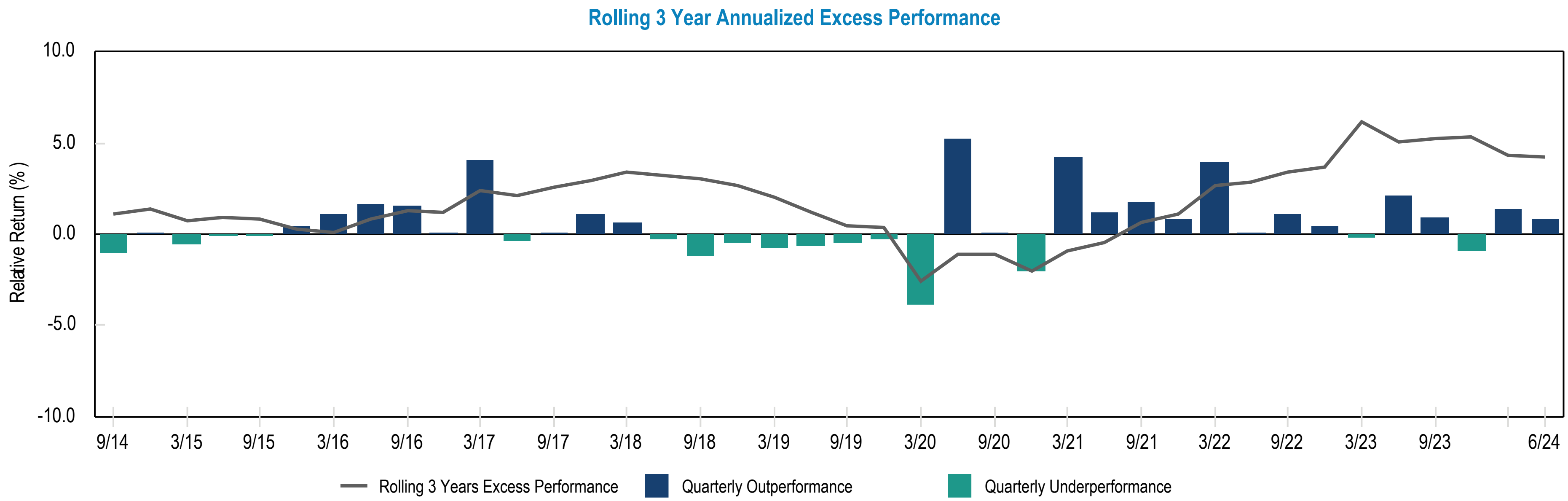


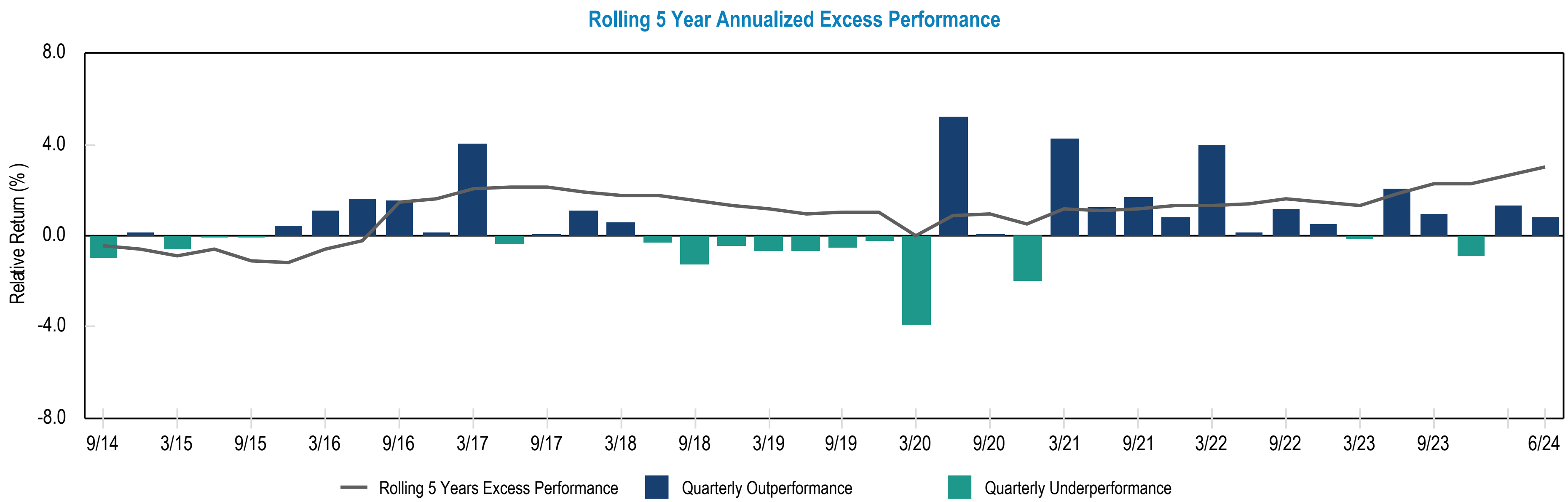
eV Emg Mkts All Cap Value Equity

	Return	Standard Deviation
DFA Emerging Markets Value	3.14	15.49
MSCI Emerging Markets Value (Net)	-1.09	15.88
Median	0.96	17.02
Population	49	49

eV Emg Mkts All Cap Value Equity

	Return	Standard Deviation
DFA Emerging Markets Value	5.90	19.18
MSCI Emerging Markets Value (Net)	2.91	18.25
Median	5.73	19.43
Population	43	43

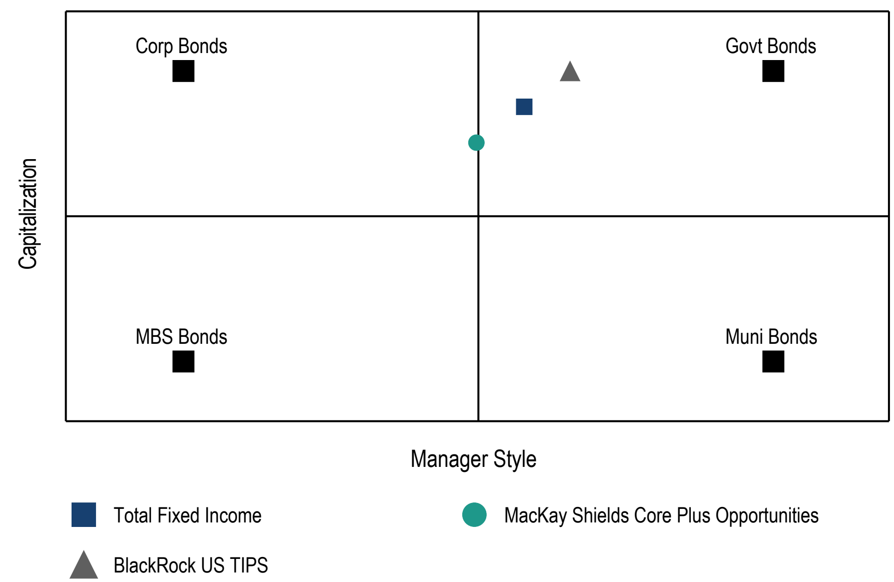

Rolling 3 Year Annualized Excess Performance
10.0
5.0
0.0
-5.0
-10.0
Relative Return (%)
9/14
3/15
9/15
3/16
9/16
3/17
9/17
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
3/22
9/22
3/23
9/23
6/24
Rolling 3 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance


Rolling 5 Year Annualized Excess Performance
8.0
4.0
0.0
-4.0
-8.0
Relative Return (%)
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
3/22
9/22
3/23
9/23
6/24
Rolling 5 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total Fixed Income	**308,036,691**	**100.0**	**0.5**	**0.3**	**4.1**	**4.1**	**-2.6**	**0.7**	**1.9**	**6.2**	**-14.2**	**0.6**	**9.8**	**9.5**
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*
Income Research & Management	131,766,154	42.8	0.2	-0.4	-	-	-	-	-	-	-	-	-	-
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	-	-	-	-	-	-	-	-	-	-
eV US Core Plus Fixed Inc Rank			*78*	*80*	-	-	-	-	-	-	-	-	-	-
MacKay Shields Core Plus Opportunities	133,495,773	43.3	0.6	0.9	5.1	5.1	-2.7	0.7	-	6.7	-14.5	-0.5	9.9	9.7
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	-	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*
eV US Core Plus Fixed Inc Rank			*15*	*17*	*17*	*17*	*60*	*45*	-	*46*	*86*	*52*	*21*	*54*
BlackRock US TIPS	42,774,765	13.9	0.9	0.9	2.7	2.7	-1.3	2.1	2.0	3.9	-11.9	5.9	11.2	8.5
Blmbg. U.S. TIPS Index			*0.8*	*0.7*	*2.7*	*2.7*	*-1.3*	*2.1*	*1.9*	*3.9*	*-11.8*	*6.0*	*11.0*	*8.4*
eV US TIPS / Inflation Fixed Inc Rank			*46*	*45*	*55*	*55*	*55*	*49*	*30*	*44*	*68*	*29*	*29*	*33*

Fixed Income Style Map
3 Years Ending June 30, 2024

Fixed Income Style Map
5 Years Ending June 30, 2024

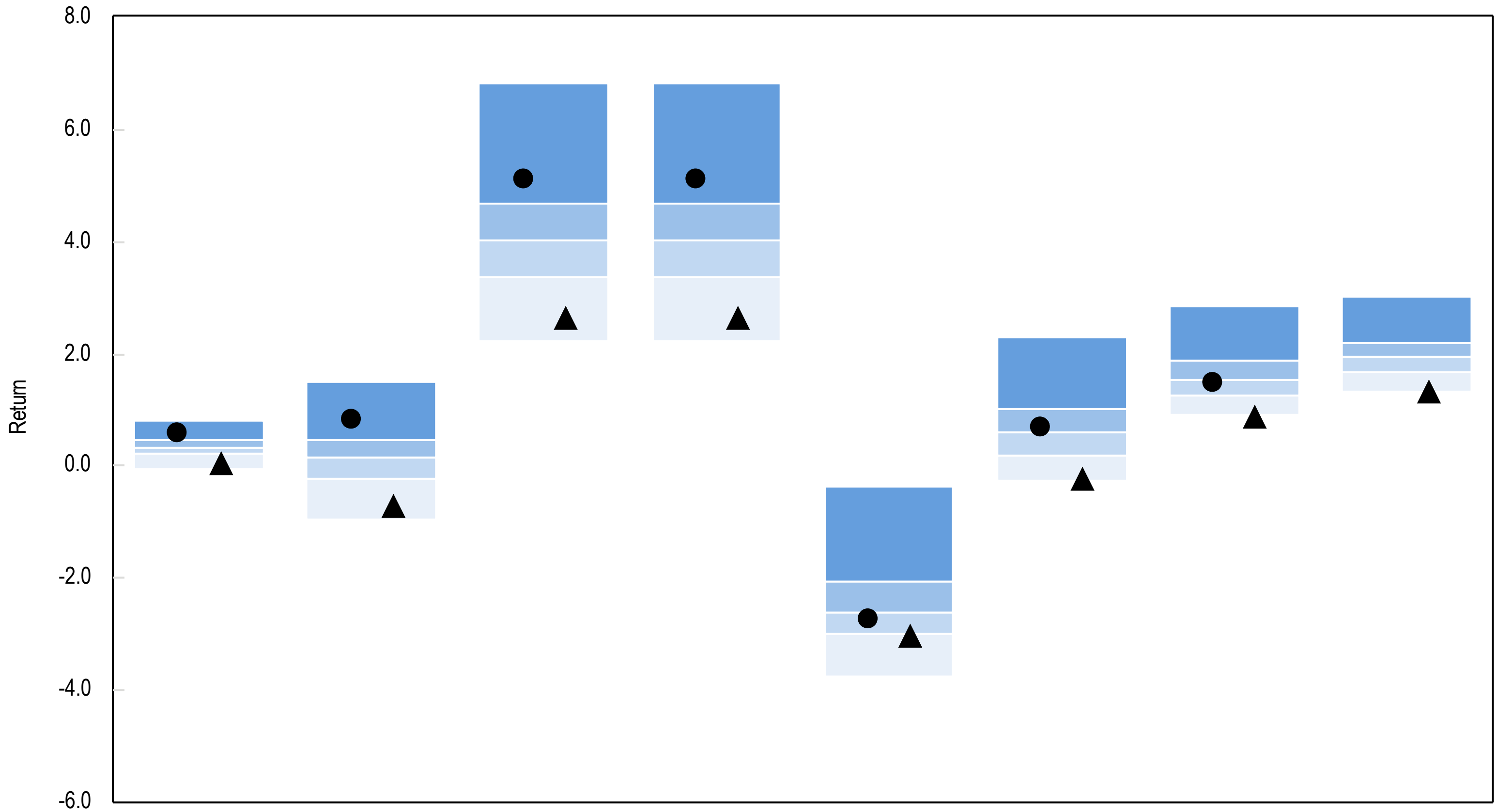


Income Research & Management replaced Duenta 9/2023.

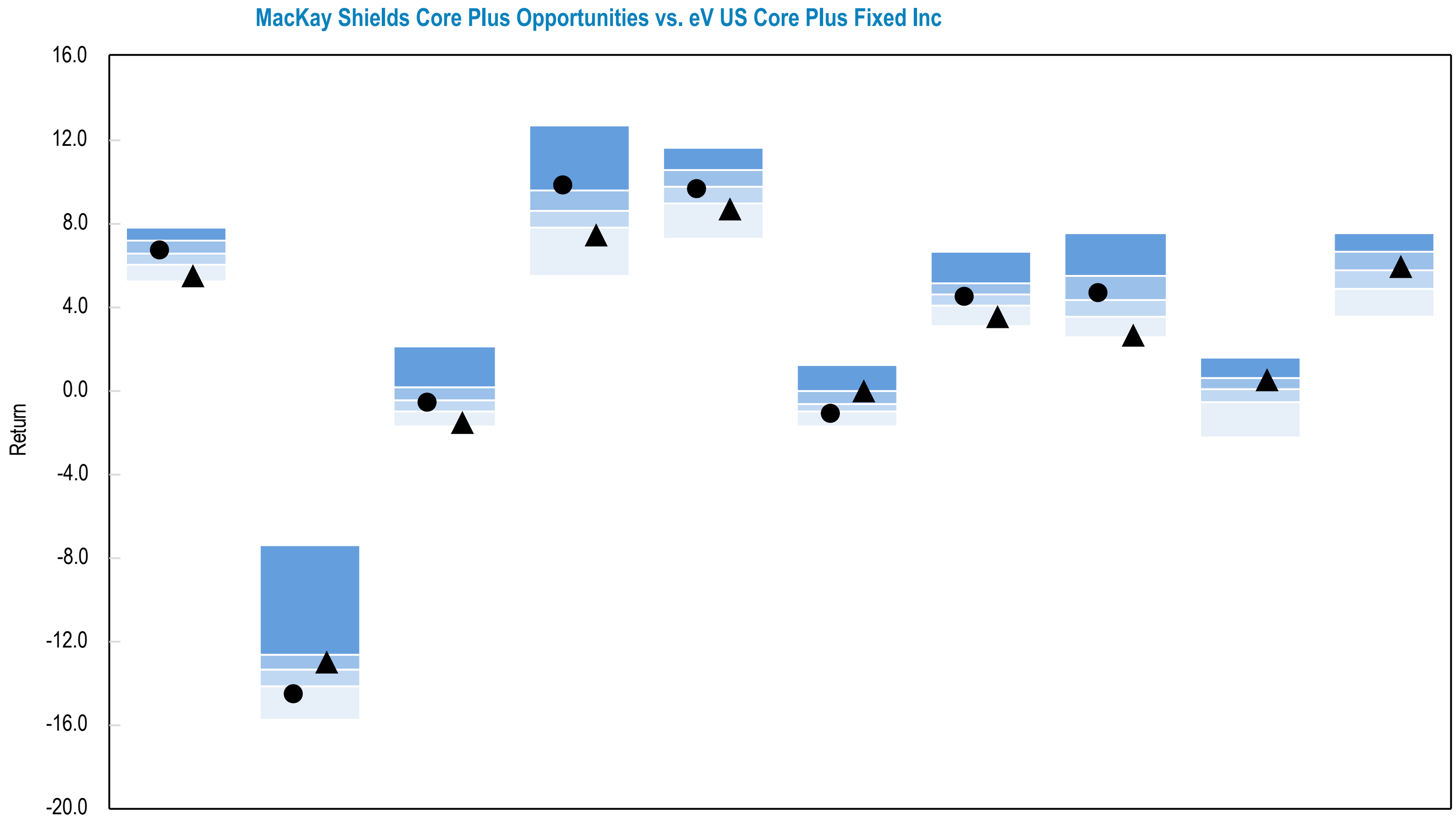
	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total Fixed Income	**308,036,691**	**100.0**	**0.5**	**0.3**	**4.1**	**4.1**	**-2.6**	**0.7**	**1.9**	**6.2**	**-14.2**	**0.6**	**9.8**	**9.5**
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	*1.3*	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*
Income Research & Management	131,766,154	42.8	0.2	-0.4	-	-	-	-	-	-	-	-	-	-
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	-	-	-	-	-	-	-	-	-	-
MacKay Shields Core Plus Opportunities	133,495,773	43.3	0.6	0.9	5.1	5.1	-2.7	0.7	-	6.7	-14.5	-0.5	9.9	9.7
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*2.6*	*-3.0*	*-0.2*	-	*5.5*	*-13.0*	*-1.5*	*7.5*	*8.7*
BlackRock US TIPS	42,774,765	13.9	0.9	0.9	2.7	2.7	-1.3	2.1	2.0	3.9	-11.9	5.9	11.2	8.5
Blmbg. U.S. TIPS Index			*0.8*	*0.7*	*2.7*	*2.7*	*-1.3*	*2.1*	*1.9*	*3.9*	*-11.8*	*6.0*	*11.0*	*8.4*

	Total Fixed Income	MacKay Shields Core Plus Opportunities	BlackRock US TIPS	Blmbg. U.S. Aggregate Index
Total Fixed Income	1.00			
MacKay Shields Core Plus Opportunities	0.99	1.00		
BlackRock US TIPS	0.91	0.88	1.00	
Blmbg. U.S. Aggregate Index	0.97	0.97	0.85	1.00

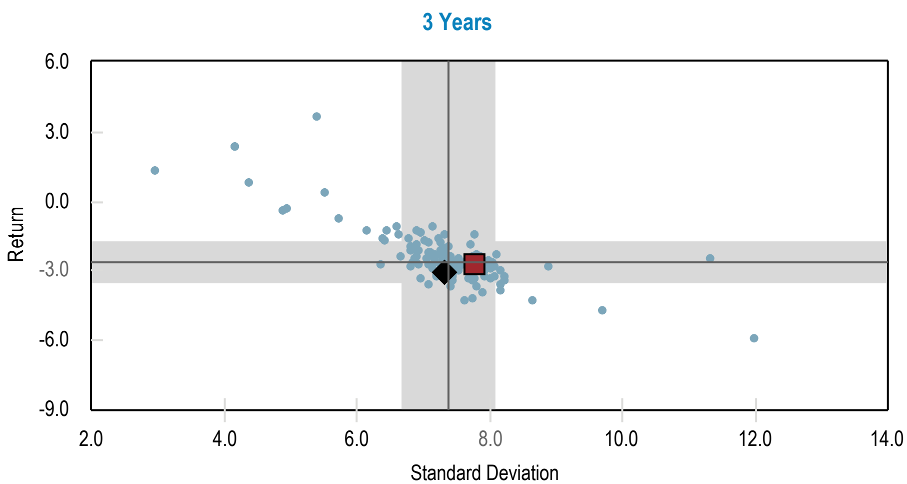
Income Research & Management replaced Duenta 9/2023. Managers need 5 years of history to appear on the Correlation Matrix.

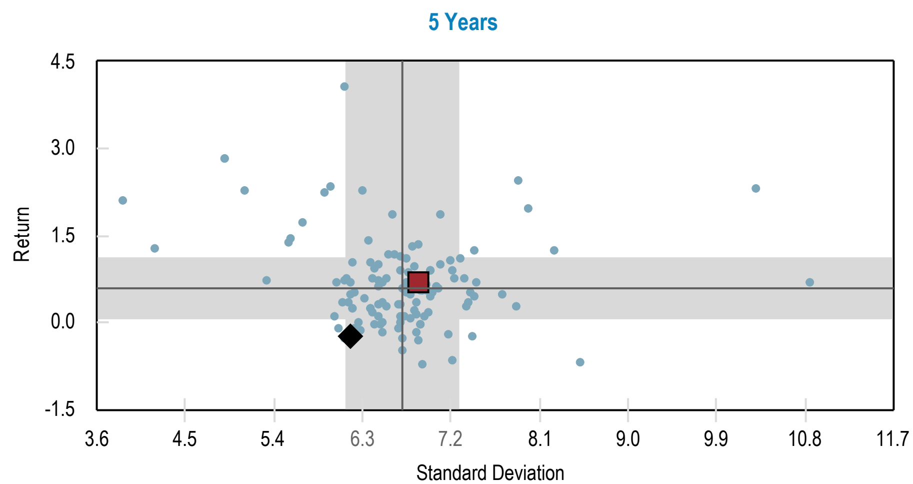


	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
● MacKay Shields Core Plus Opportunities	0.60 (15)	0.85 (17)	5.13 (17)	5.13 (17)	-2.71 (60)	0.69 (45)	1.50 (55)	-
▲ Blmbg. U.S. Aggregate Index	0.07 (88)	-0.71 (93)	2.63 (90)	2.63 (90)	-3.02 (77)	-0.23 (95)	0.86 (96)	1.35 (93)
5th Percentile	0.82	1.52	6.84	6.84	-0.37	2.30	2.85	3.01
1st Quartile	0.45	0.47	4.69	4.69	-2.07	1.01	1.89	2.21
Median	0.33	0.17	4.03	4.03	-2.61	0.60	1.53	1.94
3rd Quartile	0.21	-0.24	3.38	3.38	-2.98	0.20	1.25	1.67
95th Percentile	-0.06	-0.97	2.22	2.22	-3.76	-0.25	0.90	1.32
Population	138	138	138	138	132	125	116	107



	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
● MacKay Shields Core Plus Opportunities	6.74 (46)	-14.51 (86)	-0.49 (52)	9.91 (21)	9.67 (54)	-1.03 (76)	4.53 (54)	4.69 (41)	-	-
▲ Blmbg. U.S. Aggregate Index	5.53 (91)	-13.01 (40)	-1.55 (90)	7.51 (81)	8.72 (80)	0.01 (25)	3.54 (91)	2.65 (93)	0.55 (28)	5.97 (40)
5th Percentile	7.81	-7.40	2.11	12.70	11.62	1.26	6.63	7.57	1.59	7.57
1st Quartile	7.17	-12.65	0.14	9.62	10.59	0.01	5.17	5.49	0.60	6.63
Median	6.62	-13.36	-0.42	8.64	9.74	-0.60	4.59	4.38	0.09	5.75
3rd Quartile	6.05	-14.09	-0.97	7.79	9.01	-1.02	4.11	3.56	-0.52	4.86
95th Percentile	5.27	-15.76	-1.69	5.50	7.32	-1.71	3.09	2.57	-2.25	3.58
Population	144	150	151	150	151	150	152	148	147	146



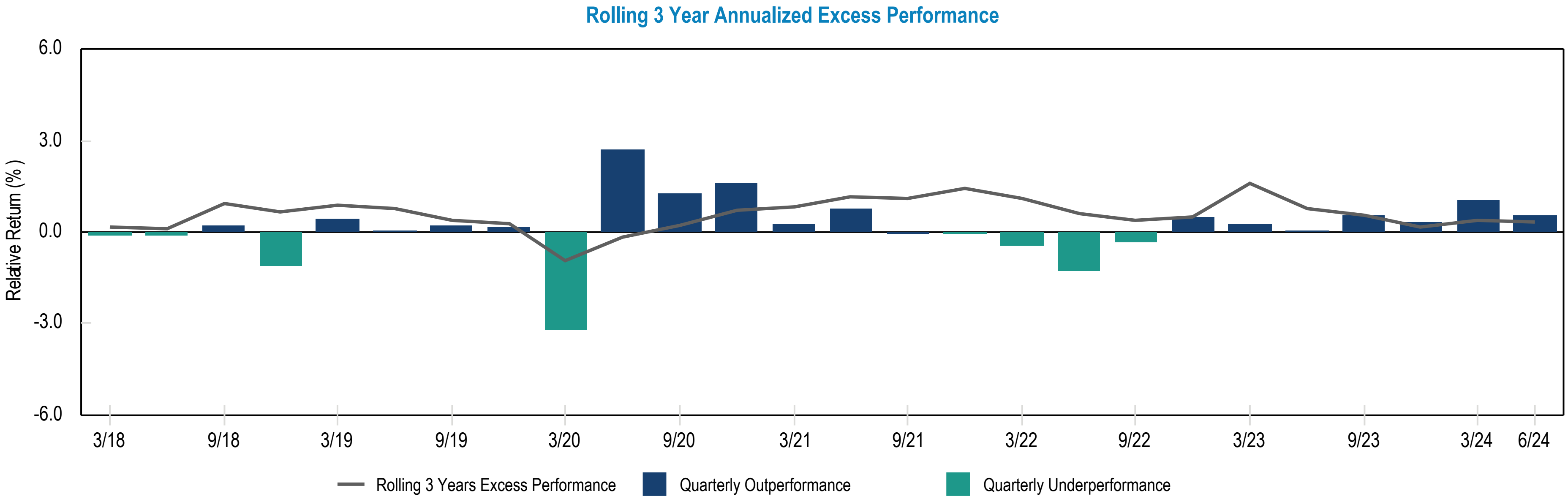


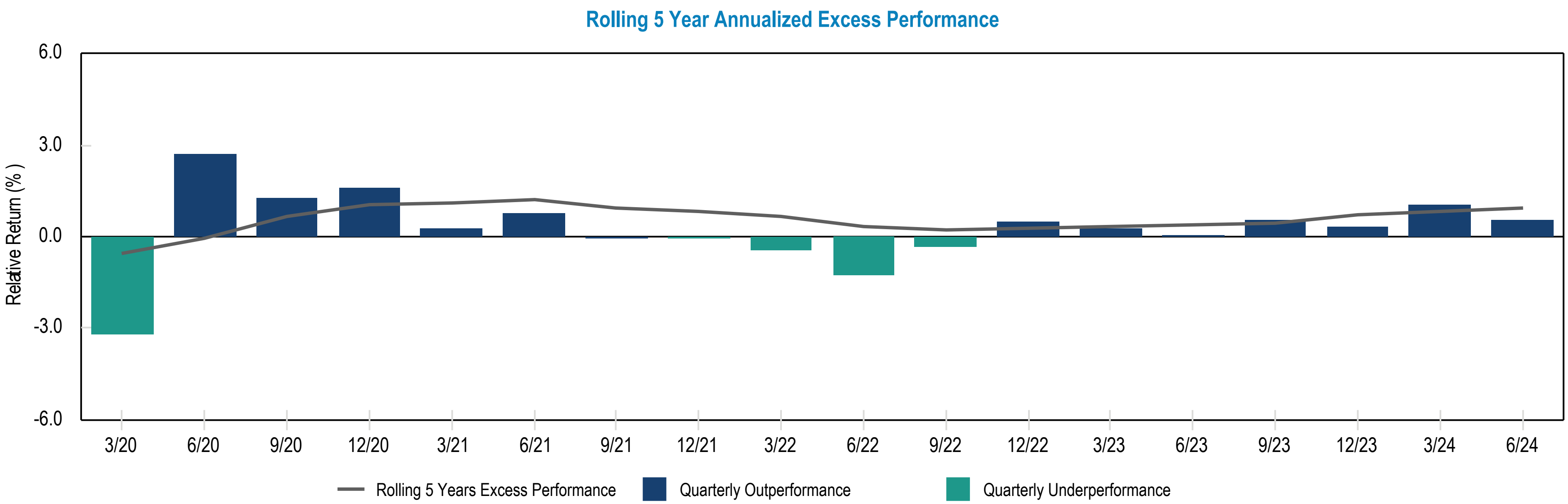
eV US Core Plus Fixed Inc (3 Years)

	Return	Standard Deviation
MacKay Shields Core Plus Opportunities	-2.71	7.78
Blmbg. U.S. Aggregate Index	-3.02	7.33
Median	-2.61	7.38
Population	132	132

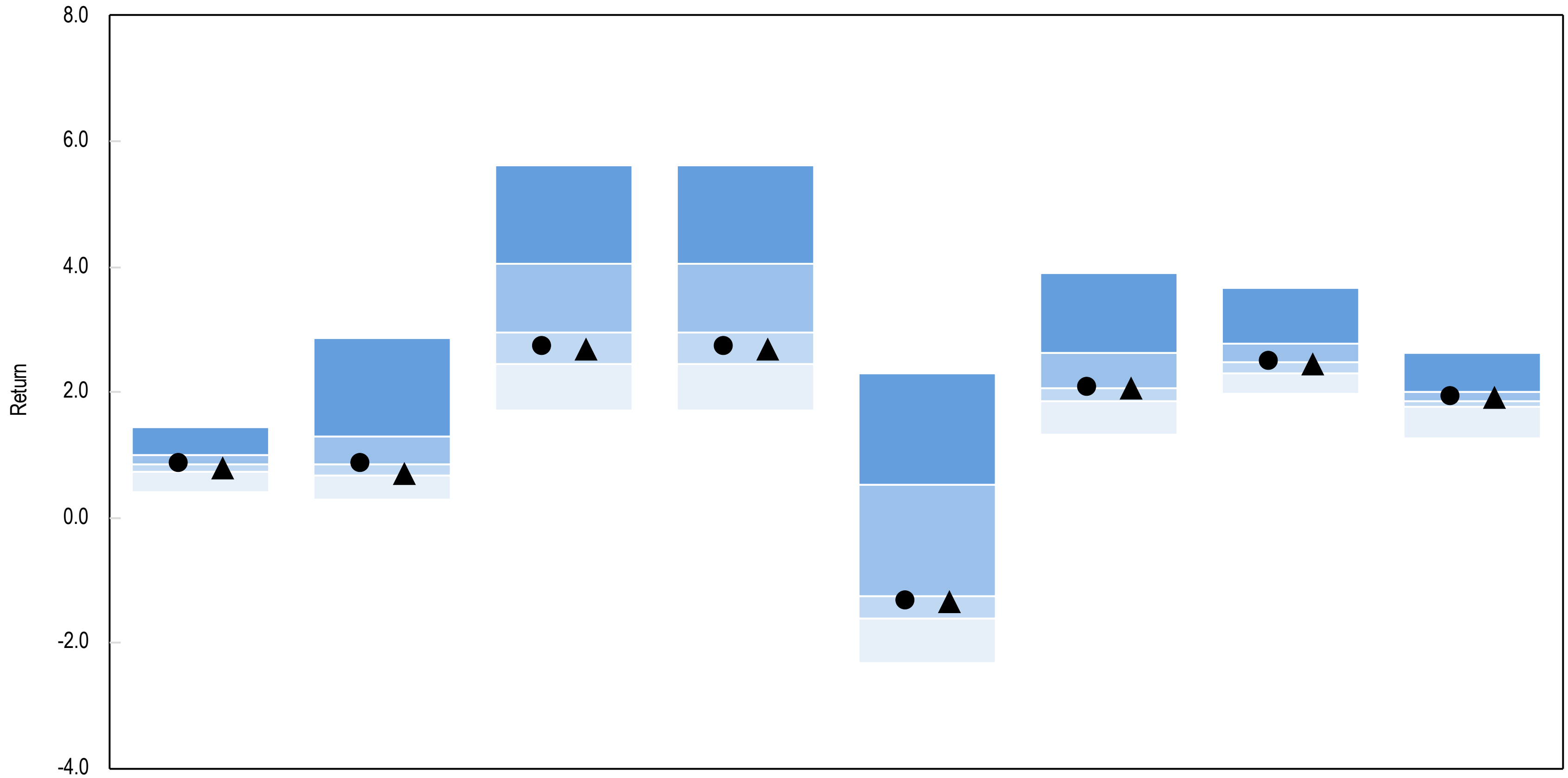
eV US Core Plus Fixed Inc (5 Years)

	Return	Standard Deviation
MacKay Shields Core Plus Opportunities	0.69	6.87
Blmbg. U.S. Aggregate Index	-0.23	6.17
Median	0.60	6.70
Population	125	125


Rolling 3 Year Annualized Excess Performance
6.0
3.0
0.0
-3.0
-6.0
Relative Return (%)
3/18
9/18
3/19
9/19
3/20
9/20
3/21
9/21
3/22
9/22
3/23
9/23
3/24
6/24
Rolling 3 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

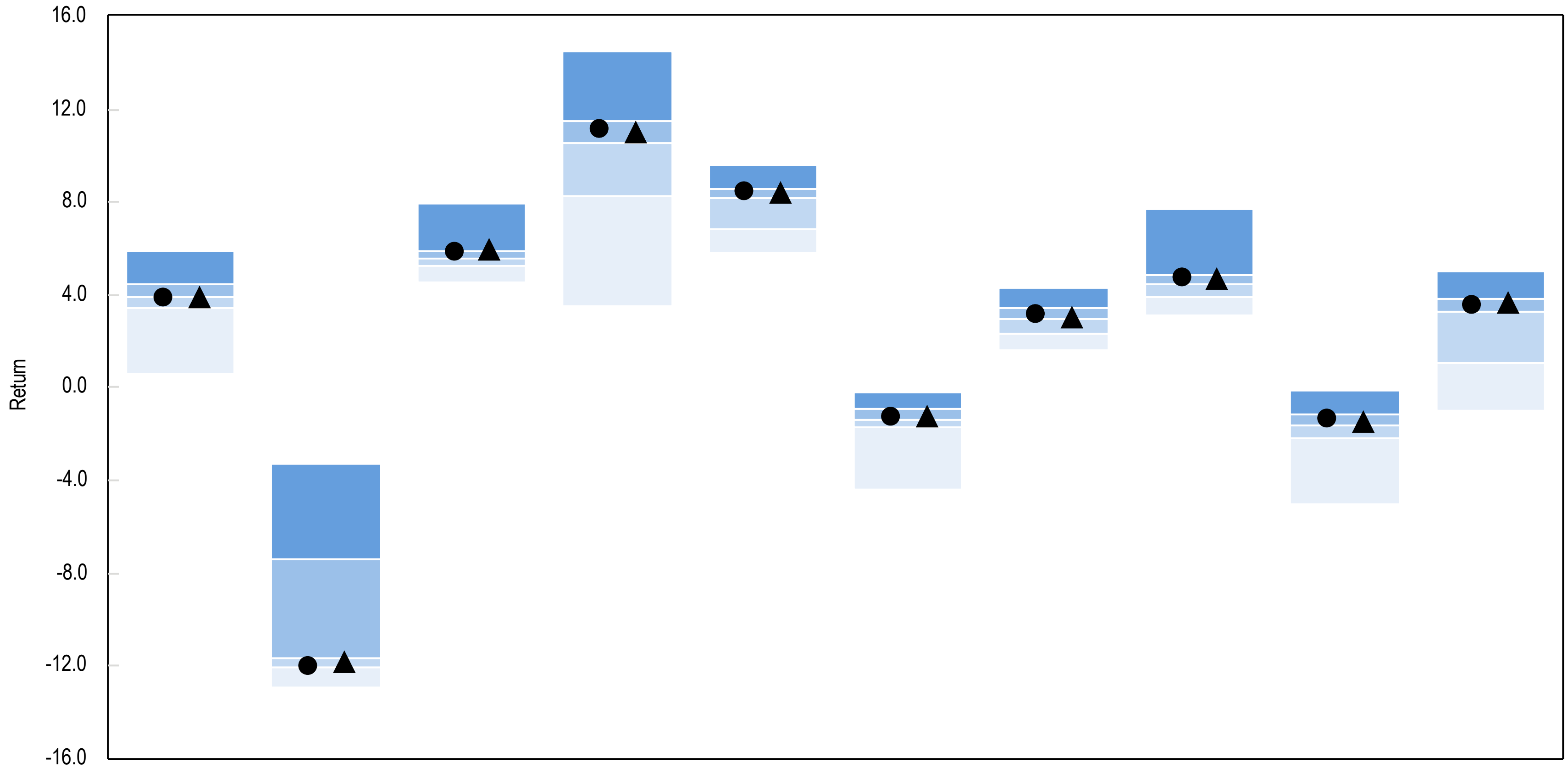

Rolling 5 Year Annualized Excess Performance
6.0
3.0
0.0
-3.0
-6.0
Relative Return (%)
3/20
6/20
9/20
12/20
3/21
6/21
9/21
12/21
3/22
6/22
9/22
12/22
3/23
6/23
9/23
12/23
3/24
6/24
Rolling 5 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

BlackRock US TIPS vs. eV US TIPS / Inflation Fixed Inc



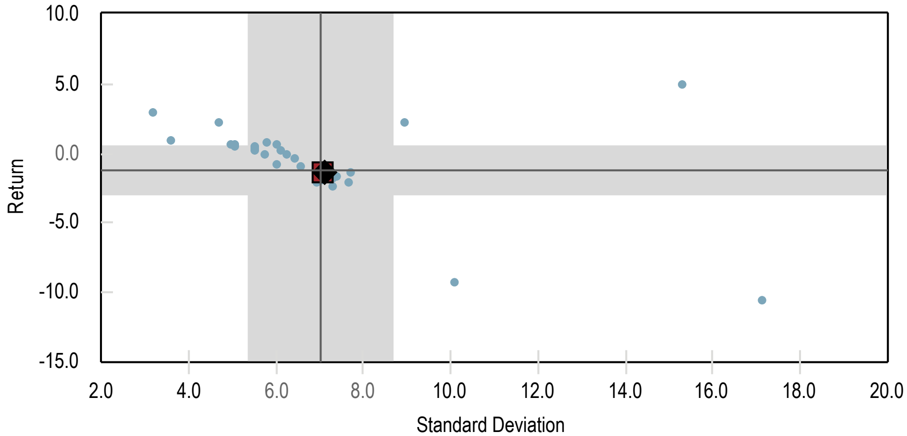
	Quarter	YTD	Fiscal YTD	1 Year	3 Years	5 Years	7 Years	10 Years
● BlackRock US TIPS	0.87 (46)	0.89 (45)	2.75 (55)	2.75 (55)	-1.31 (55)	2.11 (49)	2.52 (49)	1.97 (30)
▲ Blmbg. U.S. TIPS Index	0.79 (64)	0.70 (73)	2.71 (60)	2.71 (60)	-1.33 (58)	2.07 (52)	2.47 (53)	1.91 (40)
5th Percentile	1.45	2.88	5.62	5.62	2.31	3.93	3.68	2.64
1st Quartile	1.02	1.30	4.07	4.07	0.52	2.65	2.78	2.01
Median	0.85	0.85	2.97	2.97	-1.24	2.08	2.50	1.88
3rd Quartile	0.75	0.69	2.45	2.45	-1.60	1.86	2.30	1.78
95th Percentile	0.43	0.28	1.73	1.73	-2.31	1.33	1.97	1.27
Population	44	44	44	44	41	40	39	37

BlackRock US TIPS vs. eV US TIPS / Inflation Fixed Inc

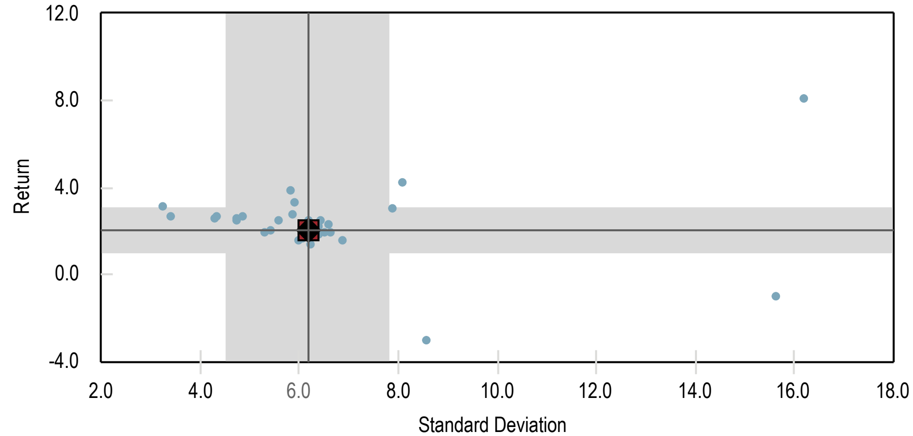


	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
● BlackRock US TIPS	3.94 (44)	-11.94 (68)	5.86 (29)	11.15 (29)	8.46 (33)	-1.19 (39)	3.17 (39)	4.77 (32)	-1.31 (35)	3.56 (38)
▲ Blmbg. U.S. TIPS Index	3.90 (49)	-11.85 (62)	5.96 (22)	10.99 (33)	8.43 (34)	-1.26 (42)	3.01 (49)	4.68 (37)	-1.44 (38)	3.64 (33)
5th Percentile	5.90	-3.30	7.92	14.52	9.59	-0.23	4.33	7.72	-0.10	5.00
1st Quartile	4.47	-7.39	5.88	11.47	8.57	-0.91	3.44	4.87	-1.14	3.81
Median	3.89	-11.63	5.61	10.57	8.21	-1.36	2.98	4.43	-1.61	3.29
3rd Quartile	3.45	-12.04	5.25	8.27	6.87	-1.70	2.32	3.94	-2.15	1.05
95th Percentile	0.59	-12.95	4.54	3.53	5.78	-4.42	1.65	3.15	-5.03	-0.95
Population	46	47	47	46	48	53	55	58	60	63

3 Years



5 Years

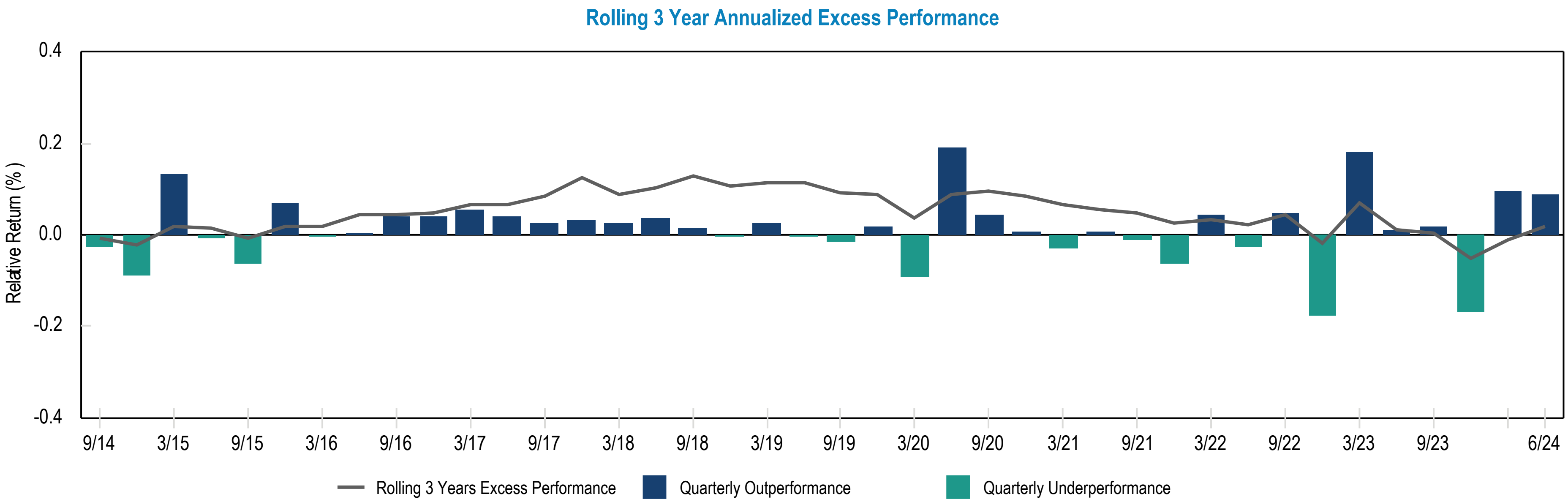


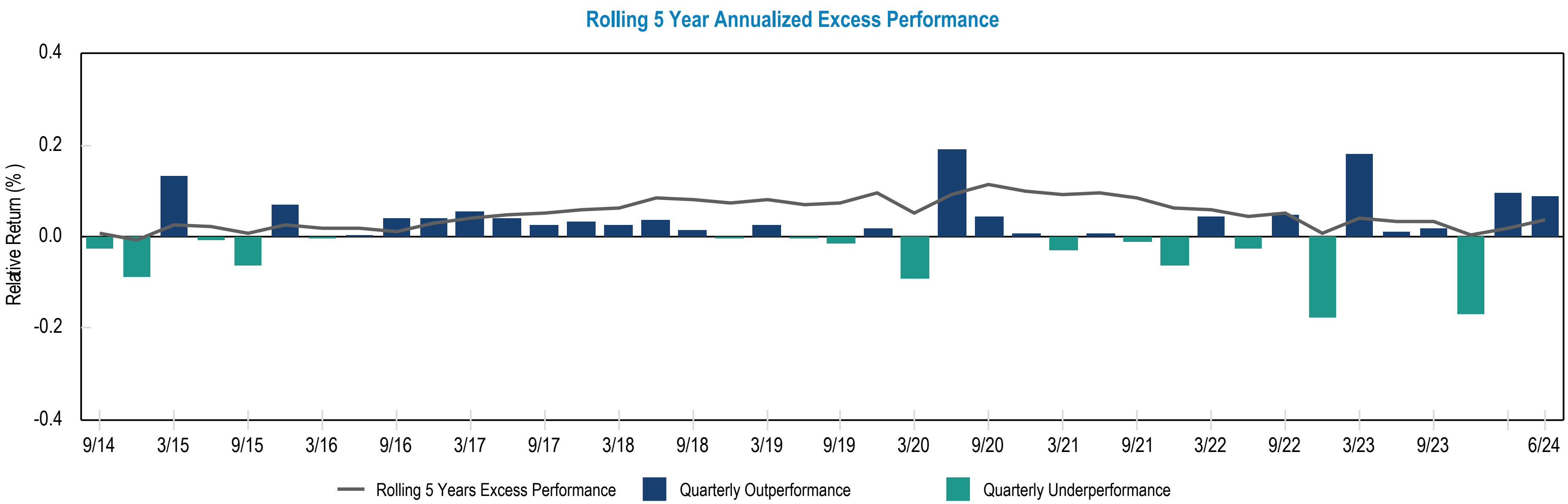
eV US TIPS / Inflation Fixed Inc

	Return	Standard Deviation
BlackRock US TIPS	-1.31	7.09
Blmbg. U.S. TIPS Index	-1.33	7.11
Median	-1.24	7.03
Population	41	41

eV US TIPS / Inflation Fixed Inc

	Return	Standard Deviation
BlackRock US TIPS	2.11	6.21
Blmbg. U.S. TIPS Index	2.07	6.20
Median	2.08	6.19
Population	40	40


Rolling 3 Year Annualized Excess Performance
0.4
0.2
0.0
-0.2
-0.4
Relative Return (%)
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
3/22
9/22
3/23
9/23
6/24
Rolling 3 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance


Rolling 5 Year Annualized Excess Performance
0.4
0.2
0.0
-0.2
-0.4
Relative Return (%)
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
3/22
9/22
3/23
9/23
6/24
Rolling 5 Years Excess Performance
Quarterly Outperformance
Quarterly Underperformance

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2023	2022	2021	2020	2019
Total Real Estate	**101,168,885**	**100.0**	**-2.8**	**-6.2**	**-12.8**	**-12.8**	**-1.0**	**1.6**	**5.2**	**-14.3**	**8.5**	**18.4**	**2.1**	**5.7**
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*
NCREIF ODCE			*-0.4*	*-2.8*	*-9.3*	*-9.3*	*1.9*	*3.2*	*5.9*	*-12.0*	*7.5*	*22.2*	*1.2*	*5.3*
ASB Real Estate	21,017,420	20.8	-7.9	-14.2	-24.0	-24.0	-6.7	-2.9	2.5	-21.5	10.7	14.2	1.5	3.0
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*
NCREIF ODCE			*-0.4*	*-2.8*	*-9.3*	*-9.3*	*1.9*	*3.2*	*5.9*	*-12.0*	*7.5*	*22.2*	*1.2*	*5.3*
Clarion Lion	27,255,306	26.9	-1.7	-4.3	-9.5	-9.5	0.5	3.0	6.4	-15.5	9.6	23.6	2.3	6.8
NCREIF Property Index			*-0.3*	*-1.2*	*-5.5*	*-5.5*	*2.3*	*3.4*	*6.1*	*-7.9*	*5.5*	*17.7*	*1.6*	*6.4*
NCREIF ODCE			*-0.4*	*-2.8*	*-9.3*	*-9.3*	*1.9*	*3.2*	*5.9*	*-12.0*	*7.5*	*22.2*	*1.2*	*5.3*
ARA American Strategic Value Realty	50,852,753	50.3	-1.2	-3.8	-9.6	-9.6	0.8	3.1	-	-10.3	6.8	18.6	2.4	7.8
NCREIF Property Index +2%			*0.2*	*-0.3*	*-3.6*	*-3.6*	*4.4*	*5.5*	-	*-6.1*	*7.6*	*20.0*	*3.6*	*8.5*
NCREIF ODCE +2%			*0.0*	*-1.8*	*-7.4*	*-7.4*	*3.9*	*5.2*	-	*-10.3*	*9.6*	*24.6*	*3.2*	*7.4*
1221 State St. Corp	2,043,406	2.0	0.0	0.0	0.0	0.0	0.0	1.5	2.4	0.0	0.0	0.0	0.0	7.9

Performance Return Calculations

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

Data Source

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

Illiquid Alternatives

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

Manager Line Up

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
BlackRock Russell 3000	12/10/2015	J.P. Morgan	Cash	-	J.P. Morgan
BlackRock International Equity	7/3/2003	J.P. Morgan	HarbourVest IX-Buyout	2011[1]	HarbourVest
DFA Emerging Markets Value	1/11/2007	J.P. Morgan	HarbourVest IX-Credit	2011[1]	HarbourVest
MacKay Shields Core Plus Ops	3/2/2015	CITCO	HarbourVest International VI	2008[1]	HarbourVest
BlackRock US TIPS	4/11/2007	J.P. Morgan	Harbourvest IX-Venture	2011[1]	HarbourVest
ASB Real Estate	12/31/2012	ASB Real Estate	Harbourvest 2017 Global	2017[1]	HarbourVest
Clarion Lion	12/31/2006	Clarion Lion	Harbourvest 2018 Global	2018[1]	HarbourVest
Portfolio Advisors	10/31/2017	Portfolio Advisors	Harbourvest 2019 Global	2019[1]	HarbourVest
TSSP Adjacent Opportunities Partners	4/16/2020	Sixth Street	Harbourvest 2023 Global	2023[1]	HarbourVest
Sixth Street Diversified Credit	5/29/2020	Sixth Street	KKR Mezzanine	2010[1]	KKR
1221 State Street Corp	9/30/2008	ICERS/Union Bank	ARA American Strategic Value Realty	01/04/2018	ARA
Income Research & Management	9/1/2023	IR&M			

[1]Represents fund vintage year.

Policy & Custom Index Composition

Policy Index (12/1/2023-Present)	33% Russell 3000, 17% MSCI ACWI ex USA Gross, 27% Bloomberg Aggregate, 10% NCREIF Property, 5% Private Equity Benchmark, 8% Private Credit Benchmark.
Policy Index (8/1/2020- 11/30/2023)	33% Russell 3000, 20% MSCI ACWI ex USA Gross, 29% Bloomberg Aggregate, 10% NCREIF Property, 5% Private Equity Benchmark, 3% Private Credit Benchmark.
Policy Index (1/1/2020-7/31/2020)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% Bloomberg Aggregate, 10% NCREIF Property,1% Russell 3000, 2% Bloomberg Aggregate, 4% Private Equity Benchmark, 3% Private Credit Benchmark.
Policy Index (10/1/2018-12/31/2019)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% Bloomberg Aggregate, 10% NCREIF Property, 5% Russell 3000 +3% (Lagged), 5% Bloomberg High Yield +2% (Lagged).
Policy Index (10/1/2016-9/30/2018)	29% Russell 3000, 24% MSCI ACWI ex USA Gross, 27% Bloomberg Aggregate, 5% NCREIF Property, 5% NCREIF Property +2%, 5% Russell 3000 +3% (Lagged), 5% Bloomberg High Yield +2% (Lagged).

Private Equity Benchmark and Private Credit Benchmarks are equal to the actual private equity and private credit returns, respectively.

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.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management,(c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvMetrics, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.

Memorandum

To: Board of Trustees, Imperial County Employees' Retirement System
From: Brian J. Kwan, Managing Director and Senior Consultant
Date: September 18, 2024
RE: Audax DLS I – Recommendation to Maintain Existing Interest

---

Summary and Recommendation

On August 26, 2024, Audax notified ICERS that Audax Private Debt is raising a new investment vehicle and is expected to purchase a pro rata strip of assets from Audax Direct Lending Solutions Fund I ("DLS"), which is a current allocation in the ICERS' private credit portfolio ($5.23mm as of 6/30/2024). The planned transaction is resulting in an option for ICERS to either:

1) Receive liquidity in exchange for ICERS' interest in DLS; or
2) Maintain ICERS' existing interest in DLS, which will enter winddown mode later this year (no new investments are made) with the portfolio expected to be fully liquidated in mid-2027.

Verus recommends ICERS maintain their existing interest in the fund based on the following reasons:

- Audax is selling assets from DLS to another Audax fund. This suggests Audax has a positive view on the assets in DLS, which have performed well to-date (14.9% IRR).
- ICERS is currently underweight private credit. Retaining the allocation helps the ICERS portfolio be closer to policy targets as the Sixth Street portfolio is built out.
- DLS will naturally fully liquidate by mid-2027.
- ICERS does not have any additional liquidity needs.

Below is an exit scenario analysis provided by Audax illustrating projections under the various options:

DLS Exit Scenarios - Silo A						
Scenario	Actual / Estimated Final Net IRR	Actual / Estimated Final Net MOIC	Final Liquidation Date	Avg. Debt Liquidation Price (Unrealized and Projected)	Avg. Equity Multiple (Unrealized and Projected)	ABL Winddown
Actual @ 12/31/23	14.92%	1.39x	12/31/2023	98.62%	1.25x	N/A
Liquidate @ 9/30/24	14.6-14.8%	~1.45x	9/30/2024	98.62%	1.50x	No
Full Winddown	14.3-14.6%	1.55-1.60x	6/30/2027	98.50%	1.97x	Yes


Verus
PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS
MARCH 2024
Active Management Environment

The active management environment

Our work on active management addresses some shortfalls of the traditional analysis, which uses the median product to describe the active management universe as a whole.

These improvements and insights have allowed us to better understand product behavior and may allow for more informed selection in the future. For first-time readers, an introduction to our active-management research and methodological details can be accessed by visiting https://www.verusinvestments.com/active-management-environment-supporting-material-2/ . For those familiar with the new approach, please read on.

— Even without skilled selection, there are many cases in which active management may help investors achieve better portfolio outcomes in risk and return terms.

— Those better portfolio outcomes may come from additional return or lower risk. Not all investors have the same definition of better outcomes, and the risk/return trade-offs vary by universe.

— Adding skilled selection to the process may create additional value in portfolio construction.

— Fees remain an important part of the active management conversation. Fees and survivorship bias should be taken into account when analyzing active universes.

Using median product (median manager) performance to decide whether active management is beneficial can be misleading. This new tool can help investors make better-informed decisions.

What changed for 2024?

- The past year showed a resilient macroeconomic environment, as risk-assets performed well in the face of slowing economic growth driven by tightening monetary policy across most developed-economy central banks. Inflation continued to move lower as the year progressed, allowing central banks to communicate to the world that rate cuts are likely forthcoming, providing a tailwind for risk-assets. All major asset classes outside of commodities finished the 2023 calendar year with positive returns, an inverse from what investors experienced during 2022.

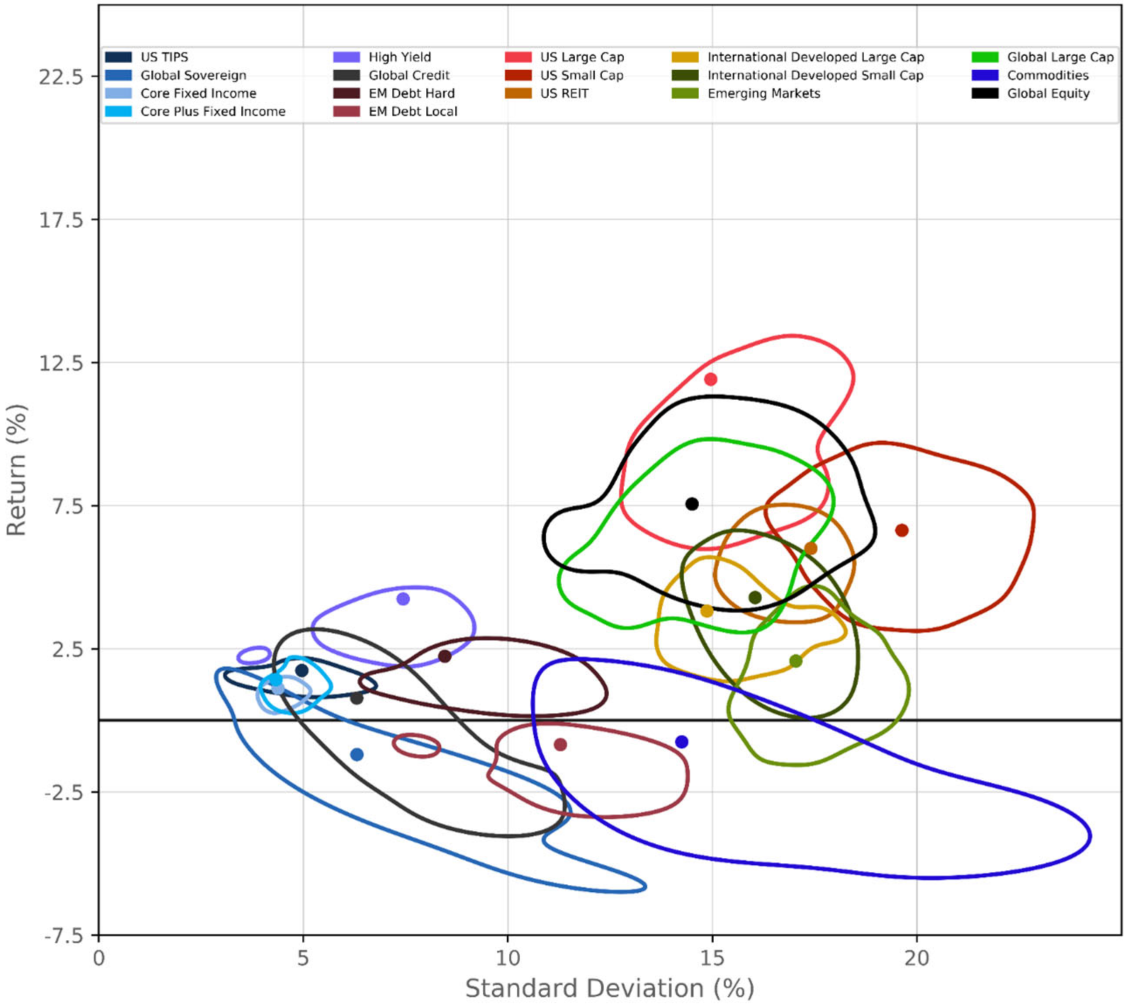
- While positive performance visibly lifted active manager performance over the 3-year period, large losses of 2022 remain a net drag across the longer 5-, 7-, and 10-year time horizons. This is especially visible across fixed income, as asset classes such as core and core plus experienced historically negative returns during 2022.

- The dispersion of manager returns across universes over the past three years has been notable, driven by significant market volatility. It is often the case that over shorter timeframes active dispersion will be wider. Environments of elevated dispersion are often attractive for skilled active managers to deliver differentiated results to their investors. In this year's release we see wider active manager dispersion over shorter time horizons, with narrower dispersion over longer lookback periods. It could be argued that recent years represent a regime shift for active managers, relative to the low dispersion bull market that occurred following the 2008-2009 Global Financial Crisis.

- In many active universes we observe that manager outperformance has been accomplished through risk-reduction rather than risk-taking, as managers are often not compensated for taking risk relative to the benchmark. This can be seen in universe shapes that are flat (active managers are, on average, not compensated for additional risk) or worse, are tilted down and to the right (active managers that took more risk than the benchmark underperformed the benchmark, on average).

The true investment opportunity set

RISK-RETURN REGIONS ACROSS ASSET CLASSES: 10-YEAR RESULTS



This represents 10-year product performance data and 75% contour areas.
Source: eVestment, Verus, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias.

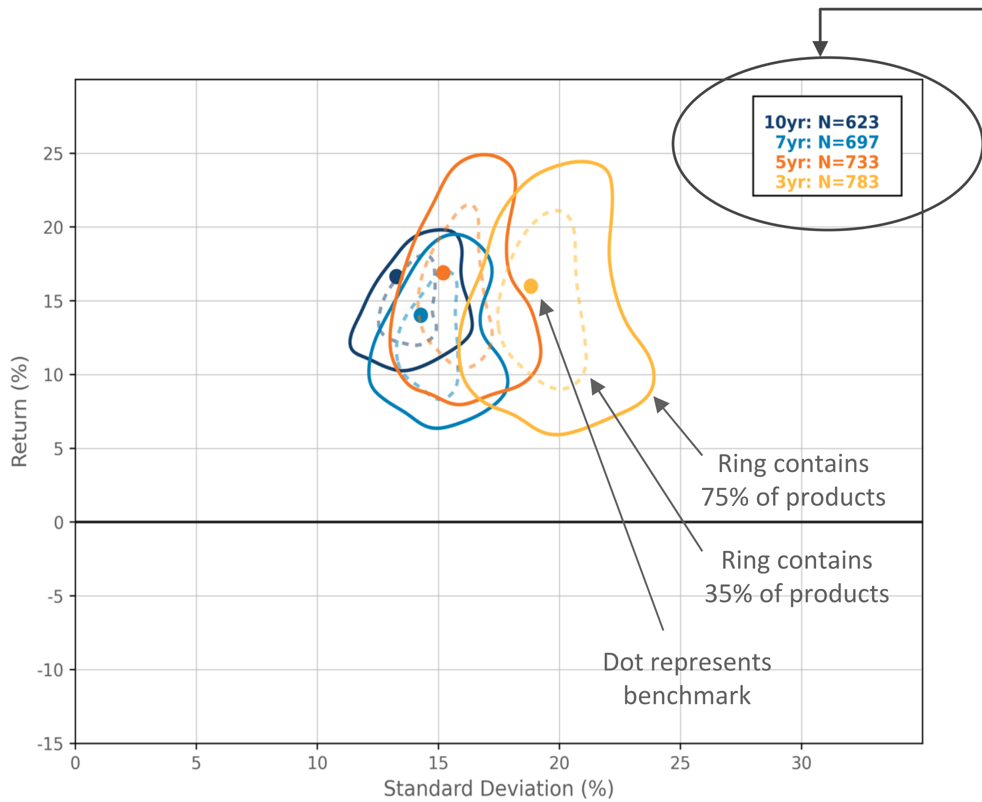
Investors often think of the investment opportunity set as a risk-return chart, in the form of single-point (dot) benchmark risk and return, and possibly single-point median product to represent active management.

However, active management universes in each asset class often have wide distributions and this traditional analysis misses the true universe characteristics. Much of the risk-return surface between -6% and 13% return and between 3% and 24% volatility is covered by various asset class options, and many parts of this space are covered by multiple active management universes.

This year, readers may notice a wider universe dispersion, especially amongst the 3-year lookback period. A volatile macroeconomic environment has led to a wider spectrum of manager returns relative to past publications.

How to read a universe chart

The movement of the universe, the change in shape, and the change of size, all provide information about product behavior.



The number of products included in the analysis provides insight into the robustness of the analysis.

The position of the benchmark relative to the universe may also change through time, representing dynamic structure changes.

Throughout this report, each asset class universe chart is placed at the same position on the page, at the same size, and with the scales of the axes identical. This allows for easy comparison between universes. **In this 2024 edition, we provide an additional slide with a full-sized universe chart for each asset class, to allow a more detailed look at active management performance characteristics**.

Asset class environments

Note: *Universes are defined at the broadest level. Products vary in terms of style and/or treatment of currency exposure. Equity universes include both value and growth styles. International universes may include both products that hedge currency exposure and products that do not hedge currency exposure.*

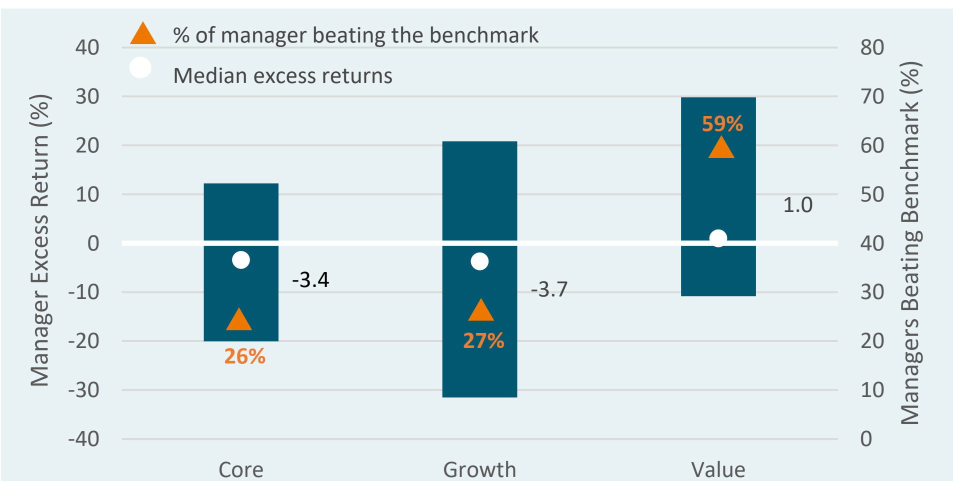
Equities – U.S. large cap

— The data indicates that U.S. large cap equity has functioned as a largely efficient asset class. The trailing 10-year horizon included an extended period of abnormally low interest rates, which likely contributed to dampened earnings volatility and a more challenging environment for active managers. That said, the trailing 3-year time period indicates that active managers have recently produced more positive results.

— Active management data suggest that some managers have been successful in producing higher risk-adjusted returns, particularly over shorter time horizons. However, the majority appear to have elevated risk in attempts to surpass their respective benchmarks. Examining the trailing 7- and 10-year universe shapes, the relationship between higher volatility and the attainment of stronger returns has been weak.

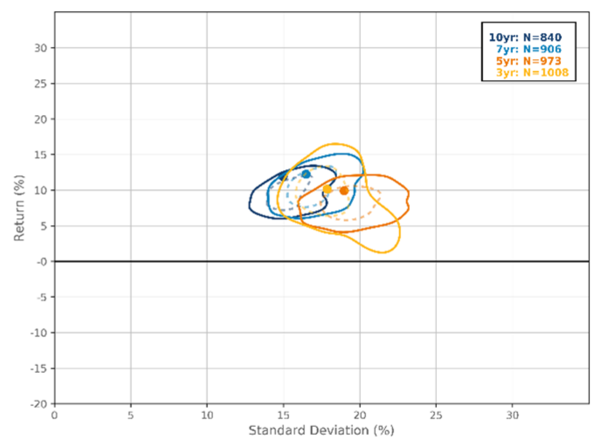
— The environment was very challenging for most large cap managers on a year-to-date basis through September 30, 2023. The median excess return for core and growth managers was -3.4% and -3.7%, respectively, with nearly 75% of the managers in each segment failing to generate positive excess return. On the other hand, value managers posted a median excess return of 1.0%, with 59% of the cohort outperforming the benchmark.

U.S. LARGE CAP UNIVERSE – EXCESS RETURNS (YEAR-TO-DATE)



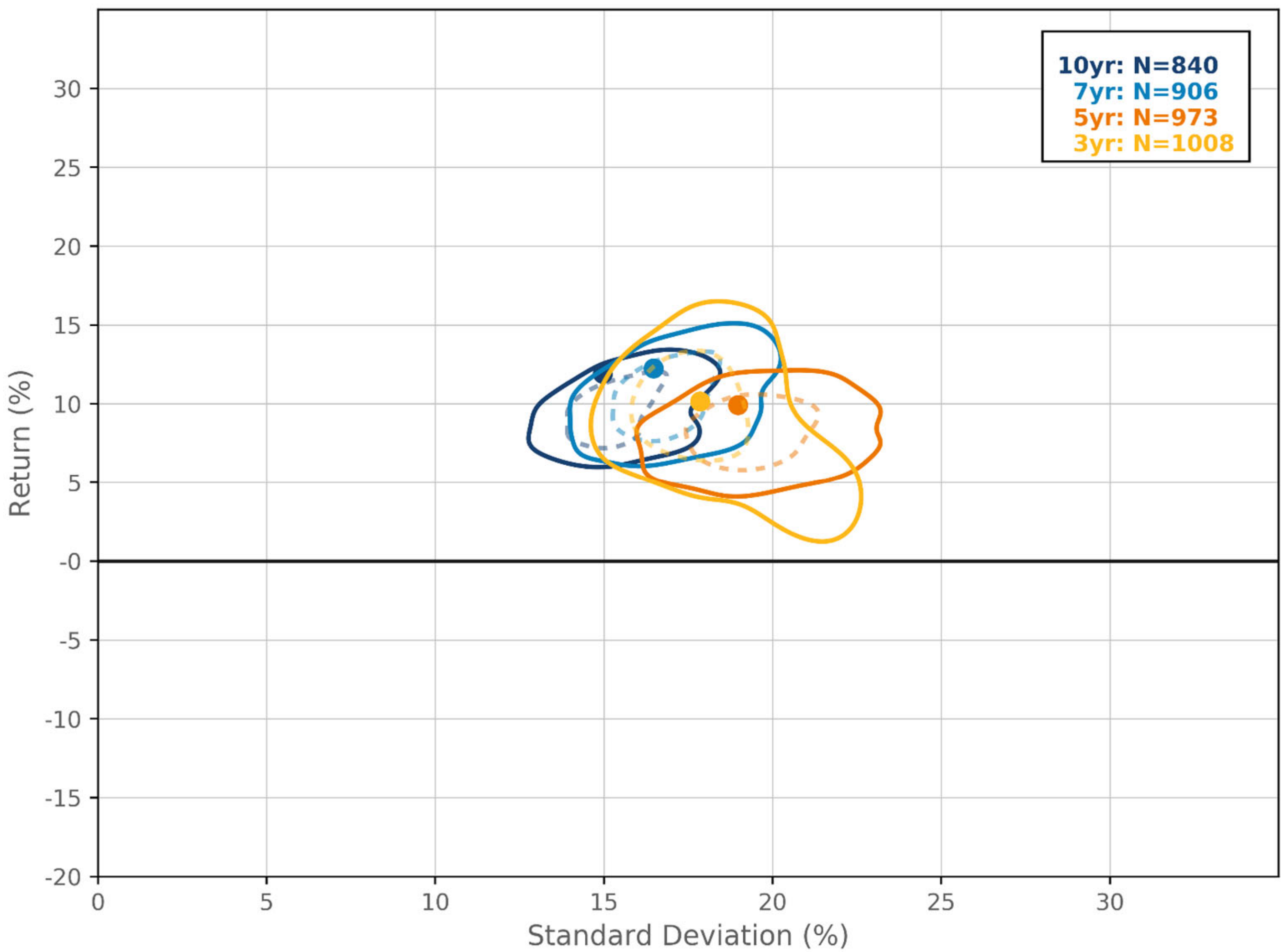
Source: eVestment, as of 9/30/23, gross of fees

U.S. LARGE CAP



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the S&P 500 Index

Equities – U.S. large cap



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the S&P 500 Index

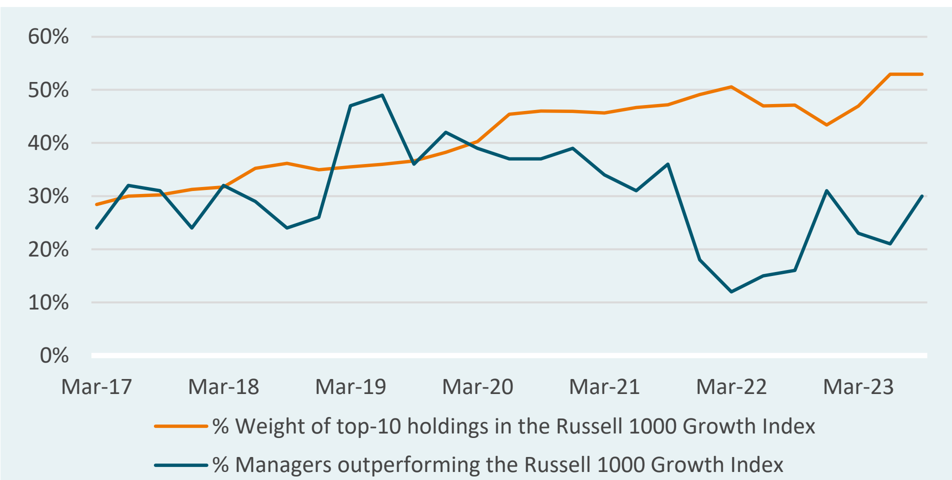
Equities – U.S. large cap growth

— In comparison to the broad U.S. large cap universe presented on the prior page, the data suggest that the growth cohort within the U.S. large cap universe has faced even greater challenges in surpassing the benchmark.

— Similar to the broad U.S. large cap universe, looking at longer time periods, the relationship between increased volatility and achieving additional return does not appear to be a strong one. However, over a shorter time period—the trailing 3-year in particular—it appears that some managers have successfully generated superior risk-adjusted returns (relative to the benchmark).

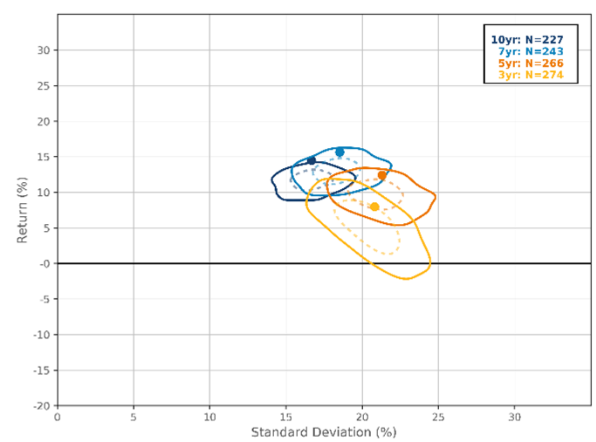
— As depicted in the chart on the left, the Russell 1000 Growth Index has become increasingly concentrated in recent years. With a small cohort of mega-cap stocks driving the market, active managers limited by position sizing are facing difficulties in outperforming the benchmark as they strive to attain diversification through active stock picking across different industries. In early 2017, the benchmark’s ten largest constituents accounted for less than 30% of the index's weight. By mid-2023, the benchmark's top-10 share expanded to 53%. During approximately the same period, the percentage of large cap growth managers outperforming the benchmark over a three-year trailing period declined significantly, dropping from a high of 49% in 2019 to a low of 12% in 2022, although the percentage has since rebounded into the 20-30% range.

BENCHMARK CONCENTRATION & MANAGER OUTPERFORMANCE



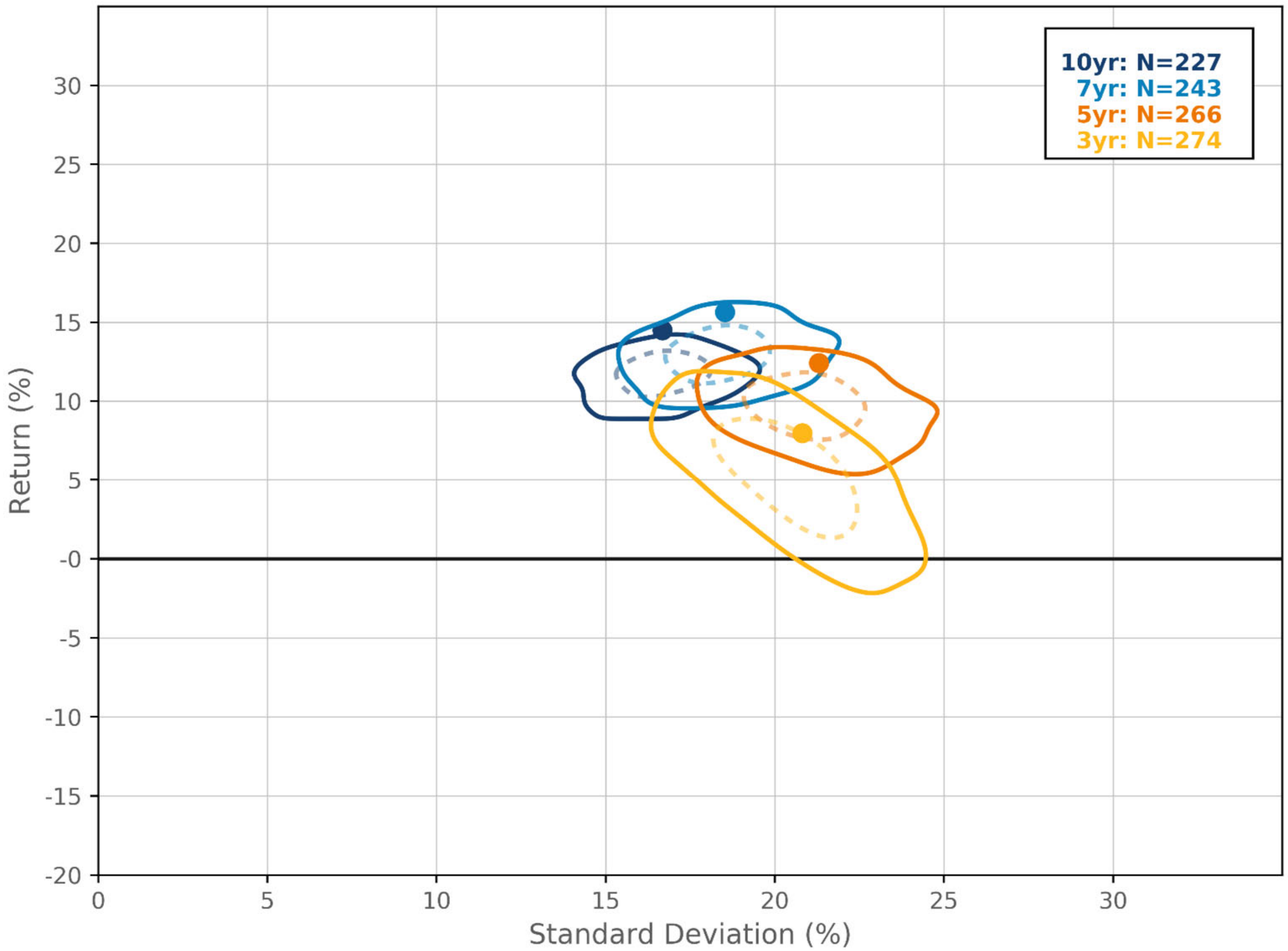
Source: eVestment & MSCI BarraOne, as of 9/30/23, 3-year rolling performance gross of fees

U.S. LARGE CAP GROWTH



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship
Benchmark displayed is the Russell 1000 Growth Index

Equities – U.S. large cap growth



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Russell 1000 Growth Index

Equities – U.S. large cap value

— In contrast to the broad U.S. large cap universe, the data show that value-focused managers have been more successful in generating positive excess returns. Specifically, we observed the trailing 3- and 5-year periods as the most favorable for active large cap value managers.

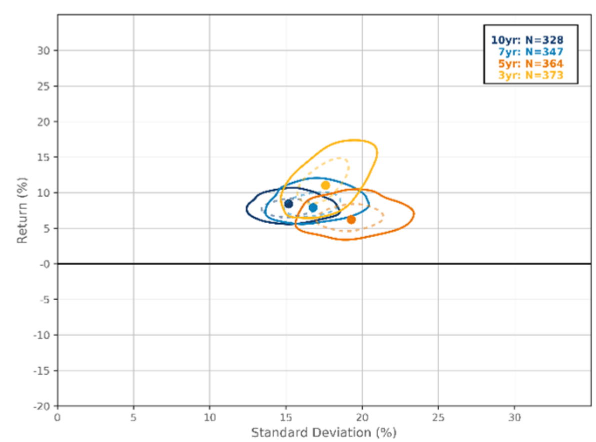
— Relative to their growth counterparts, this year's report shows that large cap value managers have had greater success in exceeding their benchmarks in terms of risk-adjusted returns, especially over shorter trailing periods. Furthermore, unlike large cap growth, a significant number of value managers turned higher-than-benchmark volatility into a performance advantage, notably during the trailing 3-year period.

— As shown in the left chart, following a dramatic surge in 2022 that marked the first instance of value outperforming growth in many years, growth made a strong comeback in 2023. This resurgence was driven in large part by the outsized performance of the 'Magnificent Seven' stocks, which carry significant weight in the Russell 1000 Growth Index.

U.S. LARGE CAP VALUE VS U.S. LARGE CAP GROWTH (YOY)

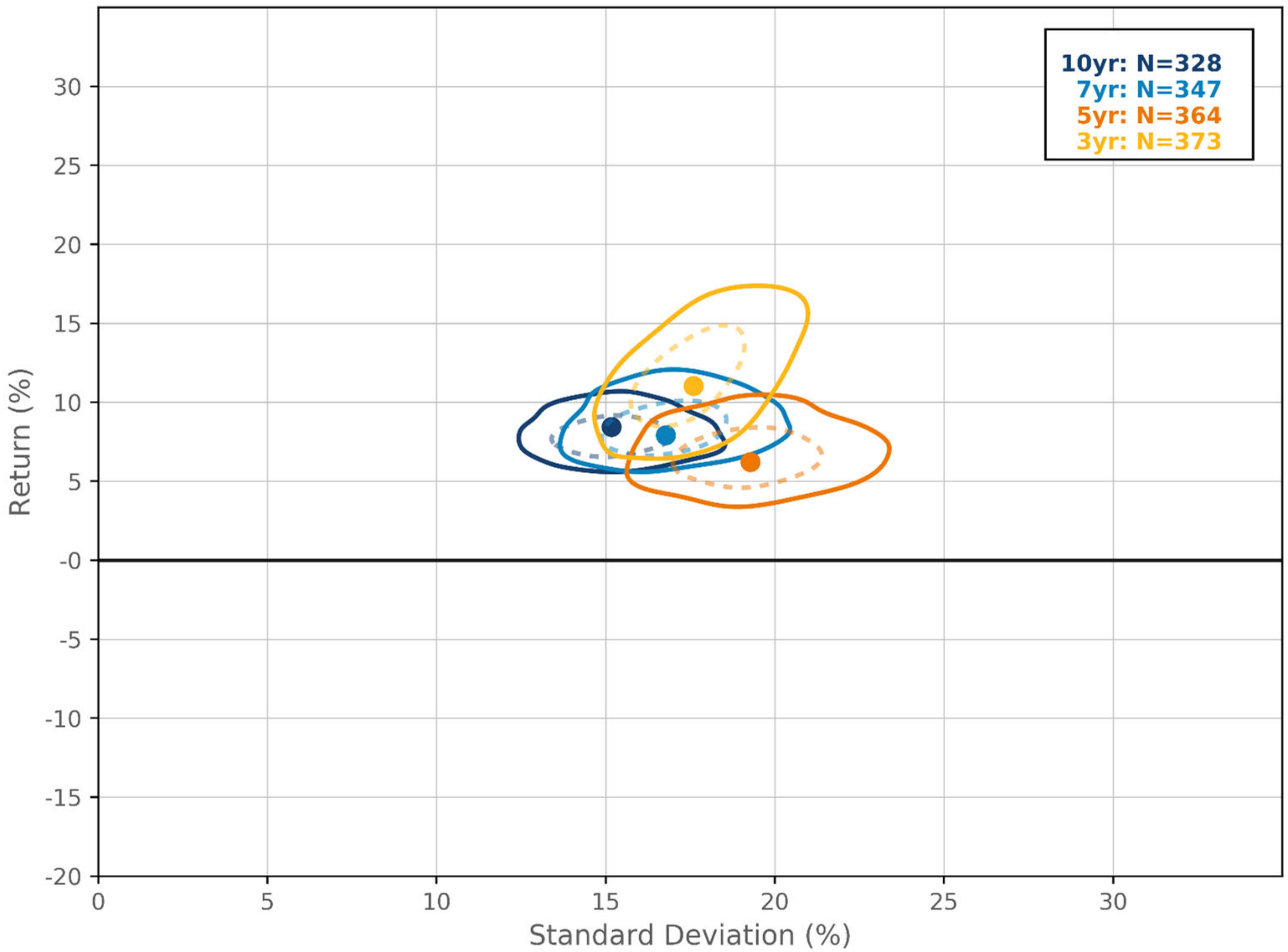
Source: FTSE, Bloomberg, as of 9/30/23

U.S. LARGE CAP VALUE



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Russell 1000 Value Index

Equities – U.S. large cap value



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Russell 1000 Value Index

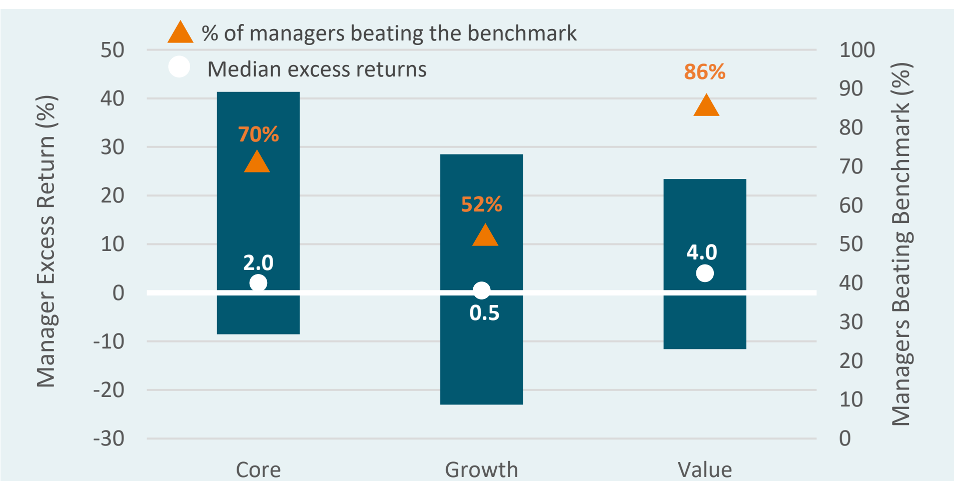
Equities – U.S. small cap

— Relative to their large cap counterparts, the evidence suggests that U.S. small cap managers have demonstrated greater proficiency in generating meaningful excess return over the benchmark during most time periods. Additionally, on a risk-adjusted basis, U.S. small cap managers appear to have achieved this more efficiently than managers in the U.S. large cap space. Broadly speaking, active management appears to have been more efficacious in this space compared to the large cap universe.

— Similar to the broad large cap universe, the evidence suggests that more recent trailing time periods (i.e., 3- and 5-year) have been more favorable to active small cap manager outperformance.

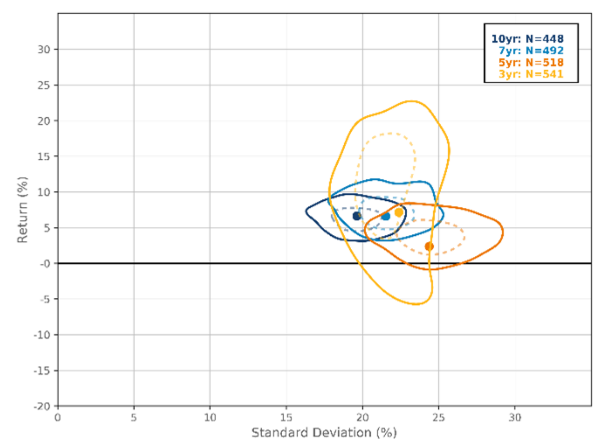
— Year-to-date through September 30, 2023, the active management environment has been significantly more attractive for small cap managers relative to larger cap, with the median core, growth, and value managers outperforming their respective preferred benchmarks on a gross-of-fee basis. Value managers had the most success beating their benchmark, with 86% of the cohort generating positive excess return.

U.S. SMALL CAP UNIVERSE –EXCESS RETURNS (YEAR-TO-DATE)



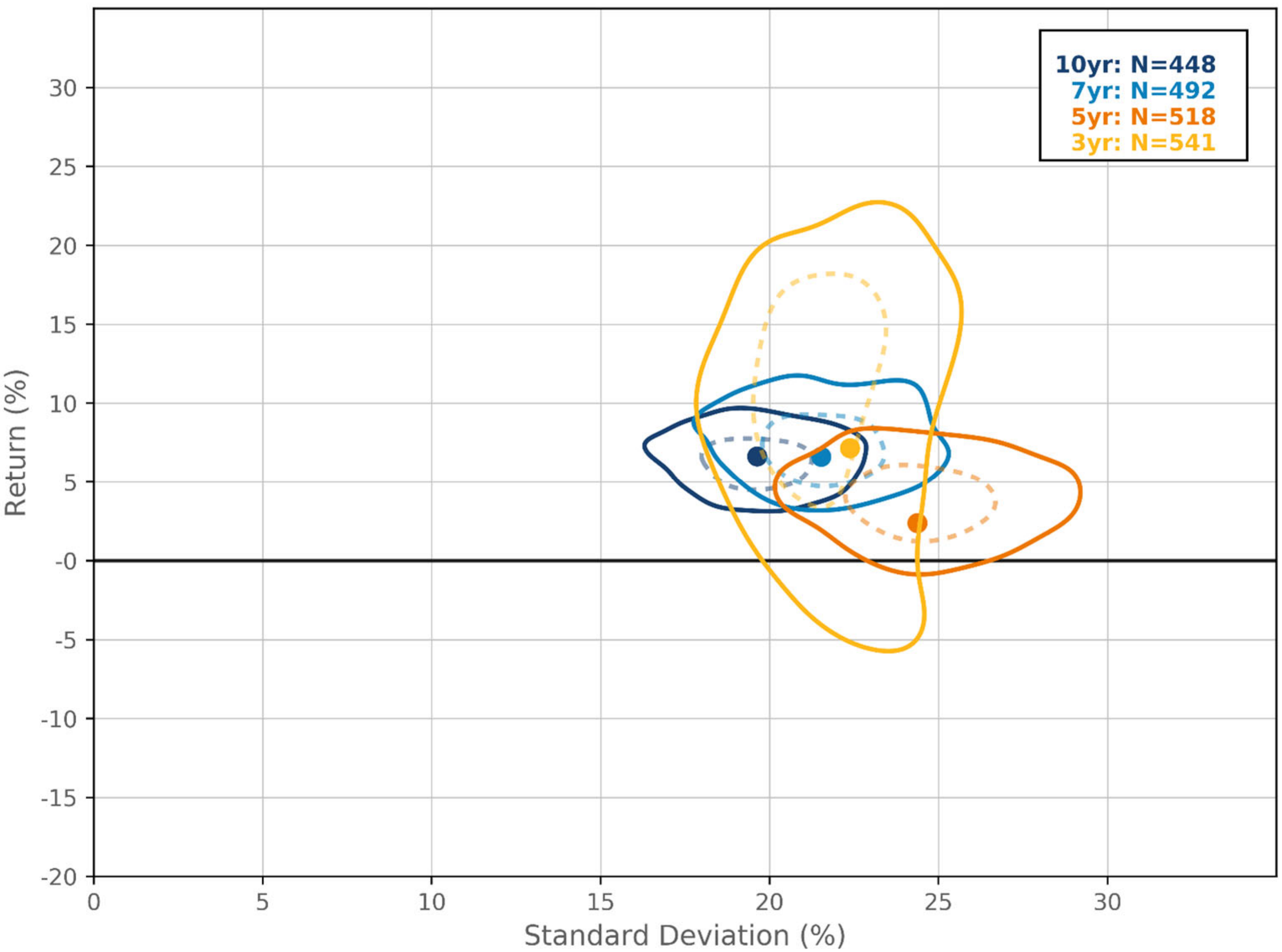
Source: eVestment, as of 9/30/23, gross of fees

U.S. SMALL CAP



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Russell 2000 Index

Equities – U.S. small cap



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Russell 2000 Index

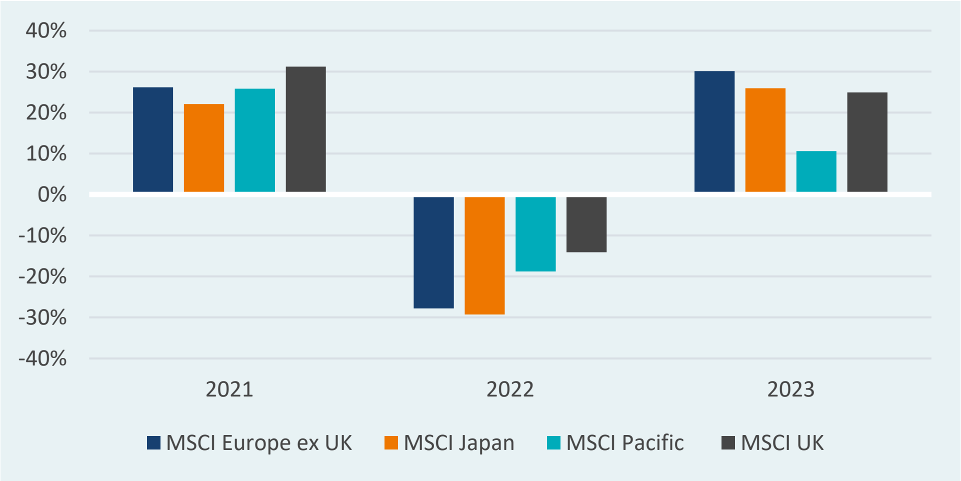
Equities – International developed

— The data reflects a generally weak relationship between incremental risk-taking and return among non-U.S. developed equity managers. For the 5-year, 7-year, and 10-year periods, a large portion of managers exhibited more risk than the benchmark. The 3-year period, which no longer includes the volatile early pandemic period, shows a more balanced spread of managers exhibiting more, or less, risk than the benchmark.

— The 3-year period illustrates a broad distribution of investment performance with a significant portion of managers, approximately half, registering negative excess return. In fact, many managers who exhibited excess risk to the benchmark generated negative absolute returns over the period, evidence of a challenging market environment punctuated by financial, macroeconomic, and geopolitical influences.

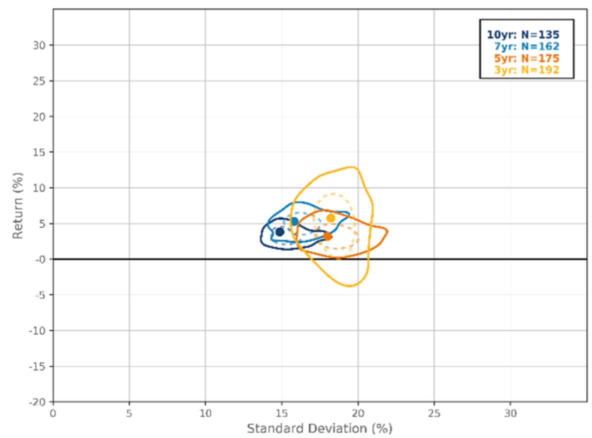
— The lefthand chart illustrates the different regional influences impacting non-U.S. developed market managers during the latest three years. During the first year, there was a fairly narrow spread of return among the regions. As market conditions became more challenging in 2022, the two largest EAFE regions—Europe and Japan—underperformed the U.K. and developed Pacific markets. This pattern reversed throughout most of 2023. Managers were forced to be nimble in regional, sector, and stock selection to be able to outperform the benchmark. When considering an allocation to developed non-U.S. markets, we believe investors should prioritize strategies with good stock selection rather than relying solely on country selection to add value.

INTL. DEVELOPED REGIONAL RETURNS



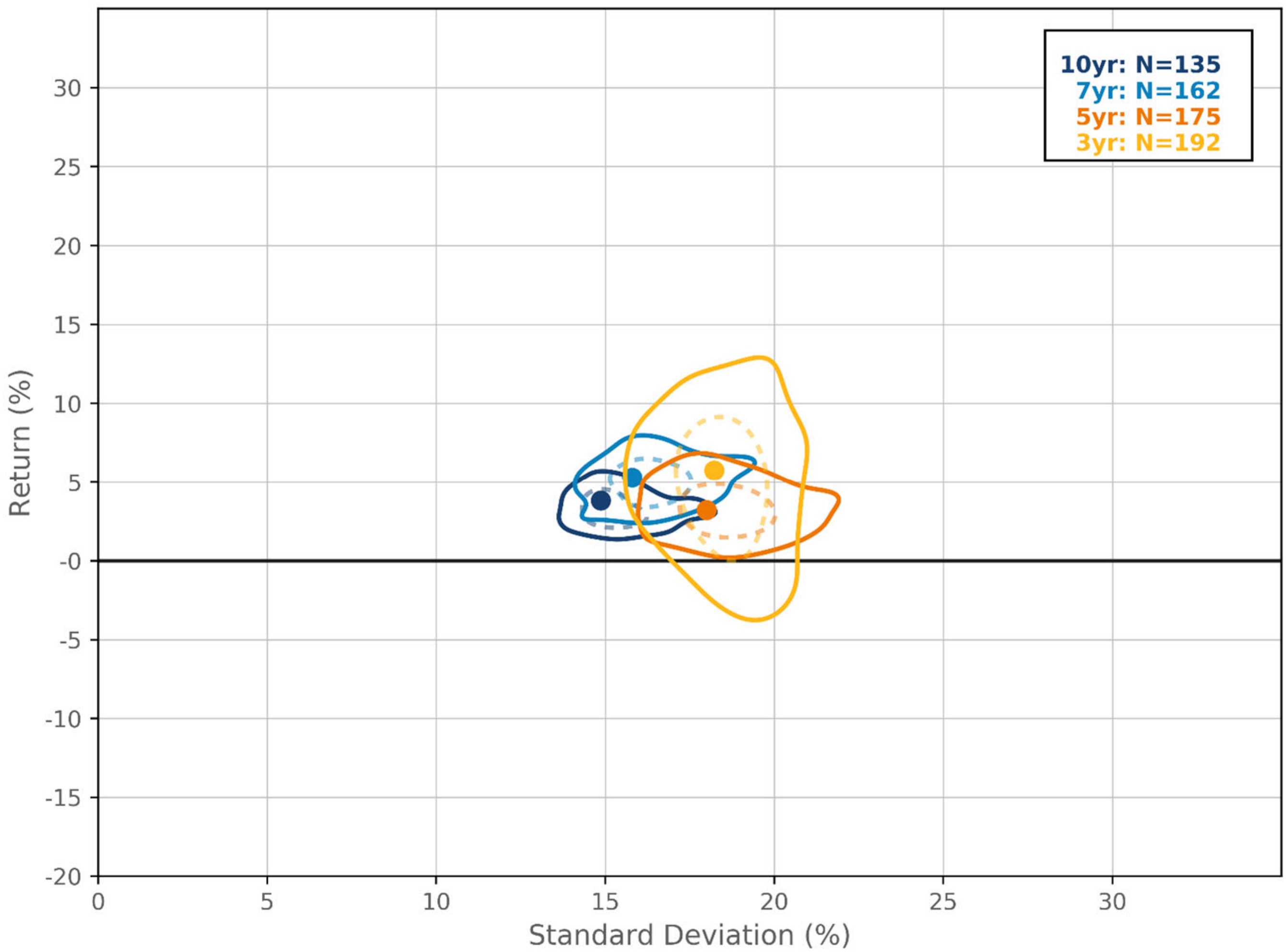
Source: eVestment, as of 9/30/23

INTERNATIONAL LARGE CAP



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI EAFE Index

Equities – International developed



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI EAFE Index

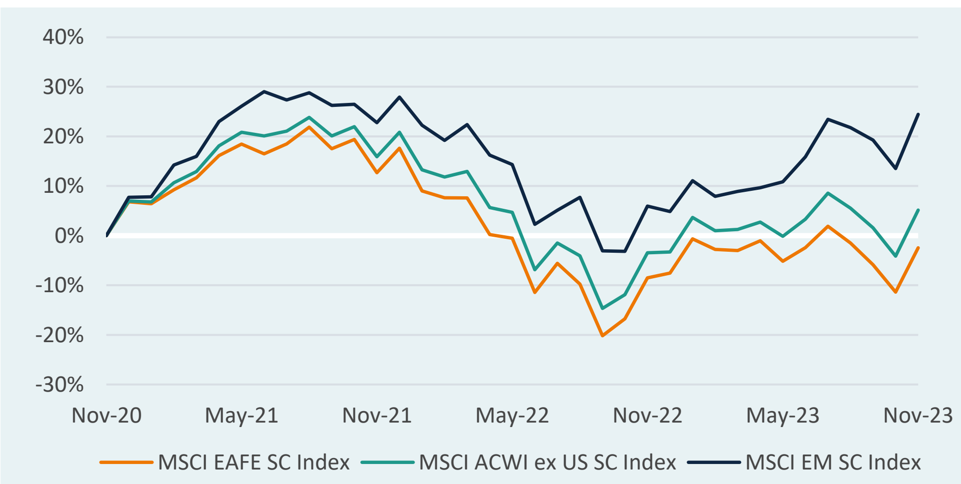
Equities – International developed small cap

— The bottom right chart highlights the negative relationship between non-U.S. developed small cap equity manager returns and the risk they are taking, as all universe shapes exhibit a slightly downward sloping posture (higher risk managers have, on average, delivered less total return). Many of the active managers that posted a standard deviation in excess of the benchmark over 3- and 5-year periods generated a negative absolute return, despite positive benchmark performance.

— Most managers with a trailing 10-year return have failed to outperform the MSCI EAFE Small Cap benchmark, though this relationship improves over shorter periods. Approximately half of all non-U.S. developed small cap managers generated positive relative performance over the last three years, although the dispersion of returns was extremely wide compared to history.

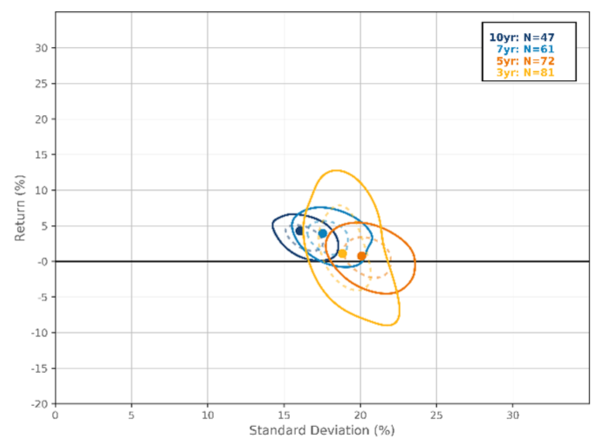
— As the lefthand chart illustrates, emerging-market small cap companies have outpaced developed small cap peers by a wide margin over the trailing 3 years. European small cap companies underperformed over the past 18 months, facing higher inflation and recession concerns compared to that of emerging economies. This regional performance dispersion creates opportunities for those developed small cap managers who have latitude to invest in these inefficient markets.

3-YEAR NON-US SMALL CAP INDEX CUMULATIVE RETURN



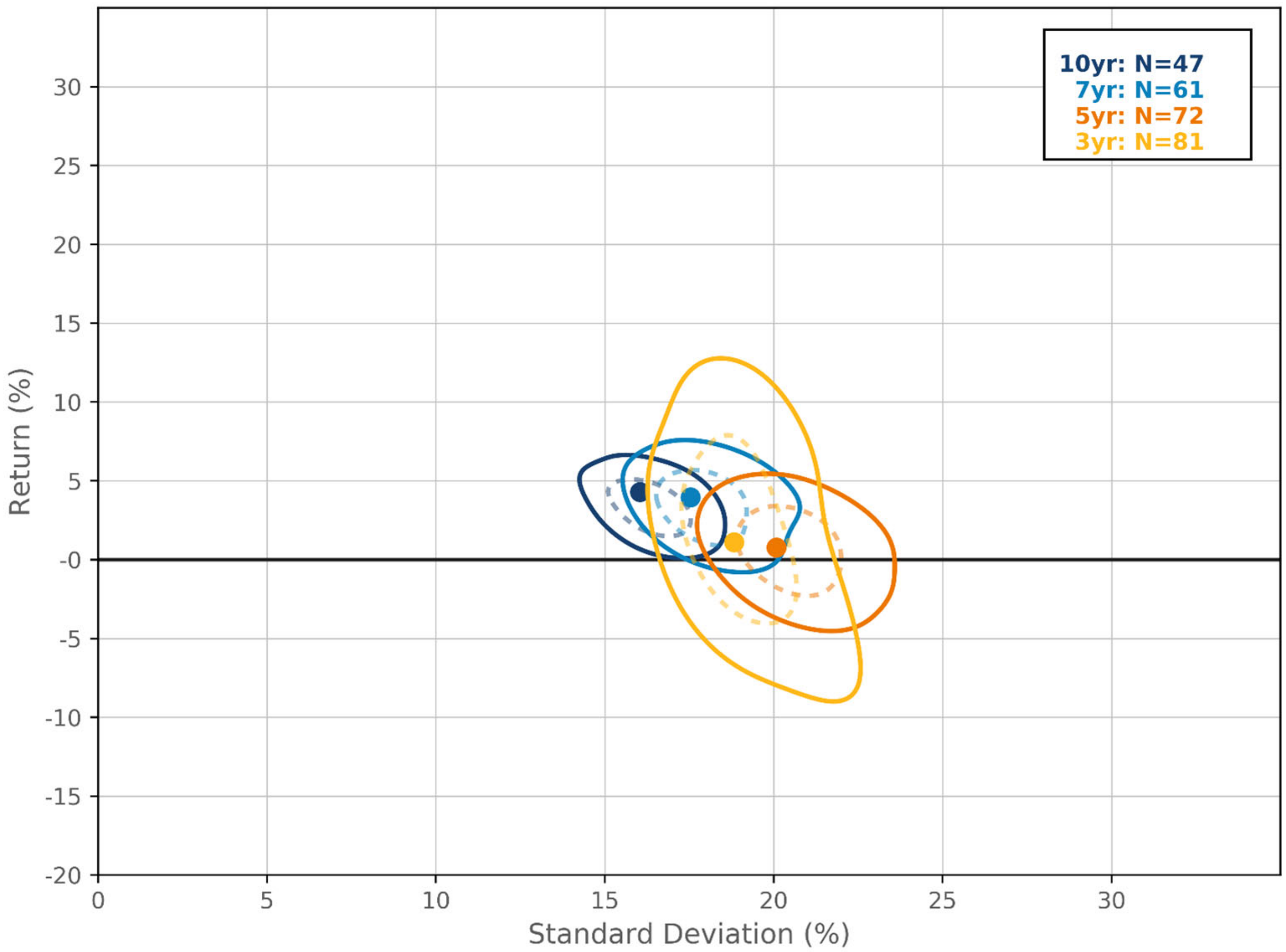
Source: eVestment as of 11/30/23, monthly returns

INTERNATIONAL SMALL CAP



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI EAFE Small Cap Index

Equities – International developed small cap



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI EAFE Small Cap Index

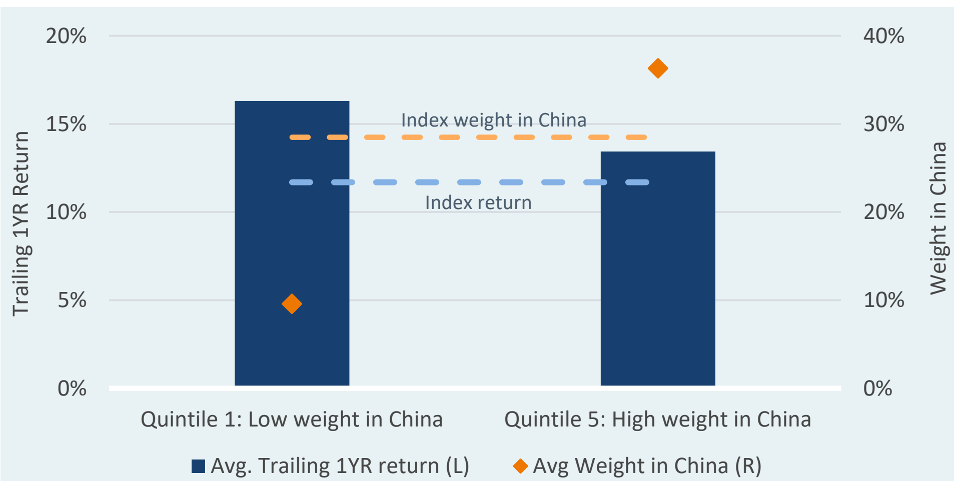
Equities – Emerging markets

— Over the trailing 3-year period, the distribution of emerging markets equity strategy returns was wide, with top and bottom performers exhibiting an over 20% performance spread. Rising geopolitical tension and active, yet differing, monetary and fiscal policies have driven material differences in country-level performance. For example, in 2023 the MSCI China Index underperformed the MSCI India Index by over 30%.

— Managers in the universe tend to take more risk than the MSCI Emerging Markets Index and over 5- and 7-year trailing periods the relationship between incremental risk-taking and incremental return was visibly positive. However, this pattern has reversed over shorter periods. As investment managers approached 5% excess volatility to the benchmark, excess return generation was very challenged.

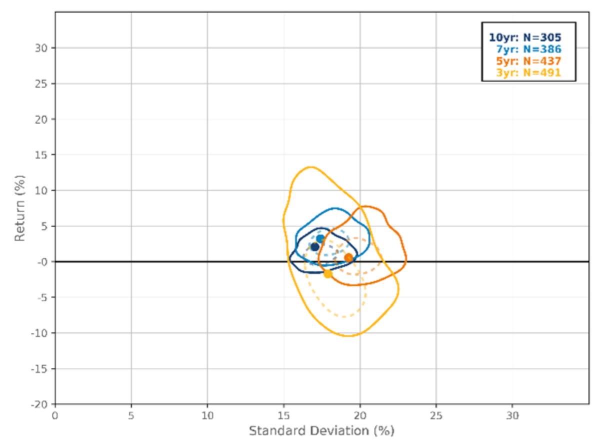
— Despite strong underperformance from China, the largest country constituent in the benchmark, active managers were largely able to outperform the MSCI Emerging Markets Index over the trailing year regardless of their active weight in China. The chart on the bottom left highlights how managers who underweighted China by approximately 20% benefitted from a strong performance tailwind; however, even those who maintained an overweight position in China generated positive excess return, on average.

ACTIVE MANAGER PERFORMANCE BY CHINA WEIGHT QUINTILE



Source: eVestment & Bloomberg as of 9/30/23, gross of fees

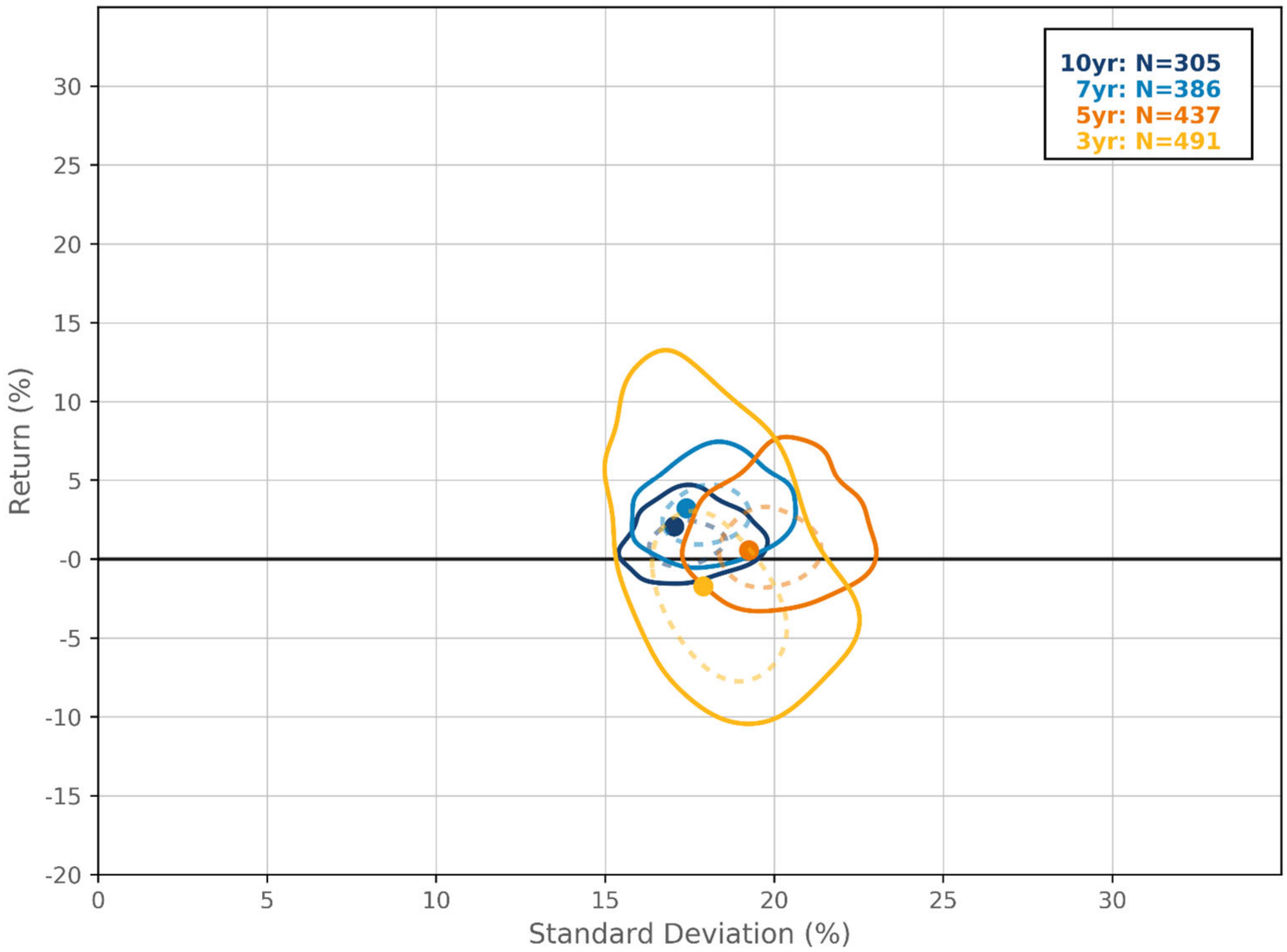
EMERGING MARKETS



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias.

Benchmark displayed is the MSCI Emerging Markets Index

Equities – Emerging markets



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI Emerging Markets Index

Equities – Global

— Over longer time horizons (i.e., 10- and 7-year), an approximately equal portion of global managers generated excess returns against the benchmark (the MSCI ACWI index). The 5-year period, and even more significantly, the 3-year period, reflect the challenges of active management of global equity with a larger proportion of managers failing to beat the benchmark.

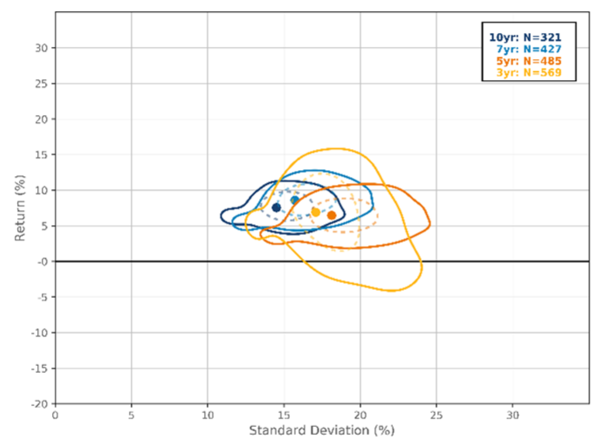
— The relationship between risk and return appears negligible when looking at short and long periods in the bottom-right chart. However, closer examination of the 3-year period reveals a distinct performance advantage to managers exhibiting lower standard deviation, indicating that risk taking has not been rewarded more recently. Balancing a portfolio across style factors is one way to reduce overall risk in the portfolio; during the last three years, managers taking that approach experienced stronger returns.

— The chart on the bottom left uses MSCI and FTSE style indices or factors to examine differing approaches to global equity management. During 2021, growth, value, and quality were rewarded about equally. 2022 brought rising interest rates, market declines, and geopolitical concerns. Value stocks, while they underperformed, were the least penalized of the styles. Growth enjoyed a recovery year-to-date 2023, although we observe that investment approaches combining growth with quality fared best.

GLOBAL EQUITY MANAGER STYLE IMPACT

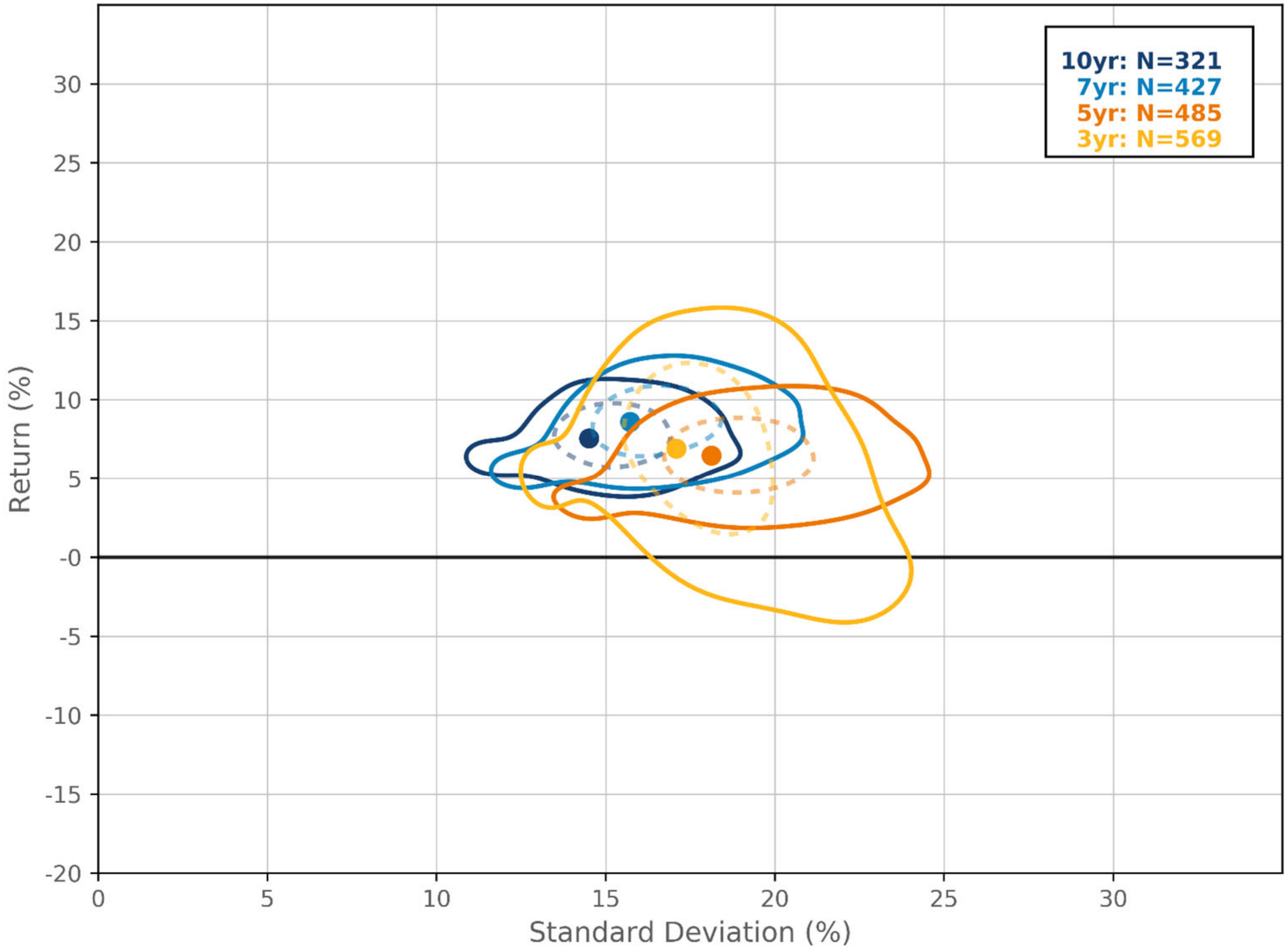
Source: eVestment as of 9/30/23, gross of fees

GLOBAL EQUITY



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI ACWI Index

Equities – Global



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the MSCI ACWI Index

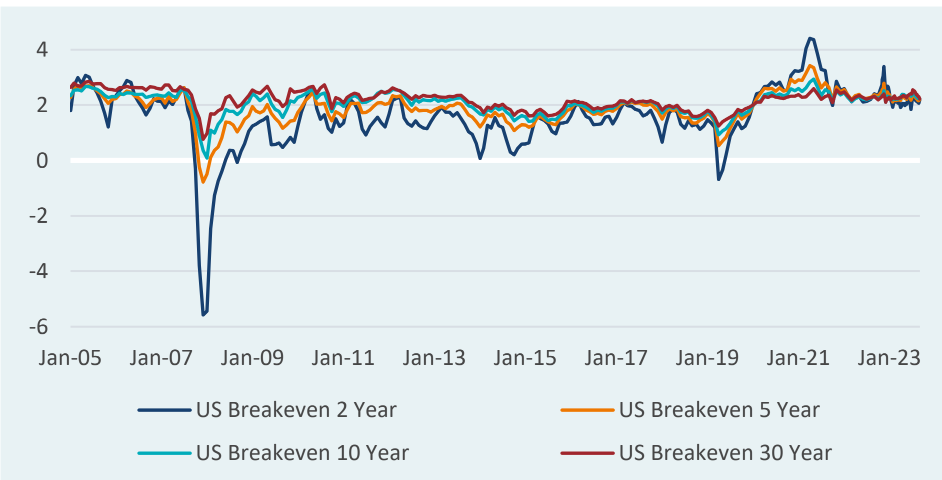
Fixed income – U.S. TIPS

— Over the 3-year period, the U.S. TIPS market experienced a significantly wider distribution of returns relative to longer rolling periods, which is reflected in the chart on the bottom-right of the page. This wider distribution reflects a significant increase in market volatility driven by changes in interest rates, as well as in both realized and expected inflation. Over the past year, U.S. inflation has fallen dramatically, leading to higher real interest rates. TIPS strategies with a longer duration tended to outperform the index over the trailing 3-year period while shorter duration strategies lagged the benchmark.

— Historically, U.S. TIPS have been a relatively efficient asset class, with a limited active opportunity set. This is reflected in a much narrower distribution of outcomes over the longer 5-, 7-, and 10-year periods, relative to other fixed income classes. While the 7- and 10-year returns show a slightly elongated shape compared to the 5-year period, there appears to be little evidence that active managers broadly possess the ability to generate excess returns per unit of risk within the active TIPS universe.

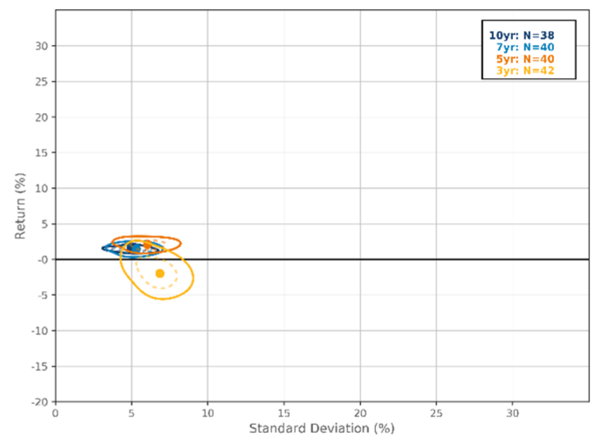
— While active management opportunities within the asset class appear to be limited, exposure to TIPS may still provide valuable diversification compared to traditional core bonds, especially for those clients concerned about potential future inflation.

U.S. BREAKEVEN INFLATION RATES



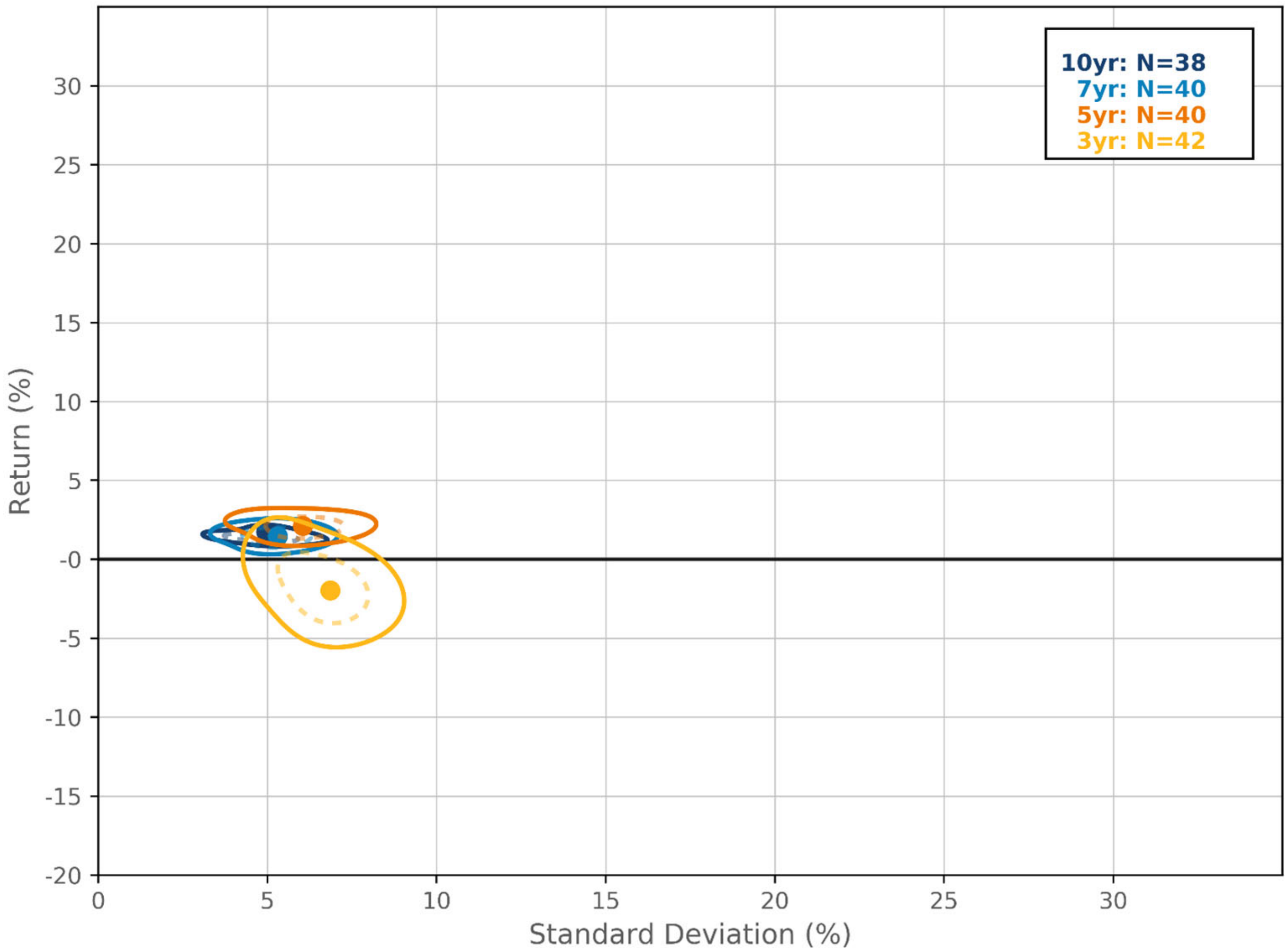
Source: Bloomberg, as of 11/30/23

U.S. TIPS



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. TIPS Index

Fixed income – U.S. TIPS



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. TIPS Index

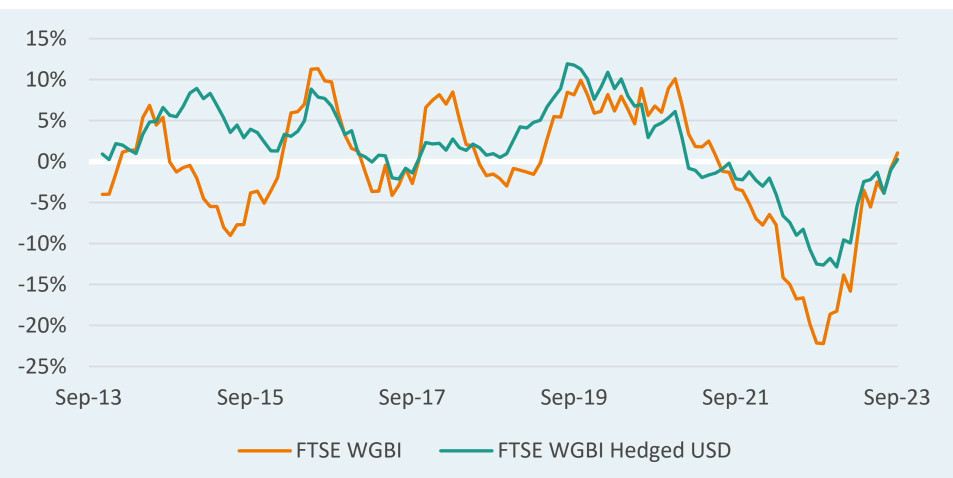
Fixed income – Global sovereign

— Within the global sovereign active management universe, dispersion amongst managers has increased significantly over the recent 3-year period relative to other periods examined. This was driven primarily by a notable increase in developed market interest rate volatility, combined with wider currency fluctuations. All periods observed show a negative slope to the universe chart, with the highest degree of dispersion and negative tilt occurring during the most recent period. This shows that higher-risk active products did not benefit from higher volatility within the global sovereign universe.

— The scope and opportunity set within the active global sovereign universe is not homogeneous, with exposures to credit and currencies varying across strategies. The extent to which active strategies deviate by credit or currency exposures relative to the FTSE World Government Bond Index (WGBI) has played a large role in dispersion within the universe recently.

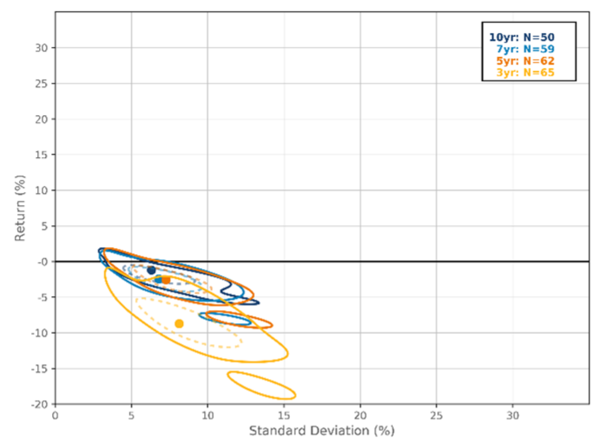
— The pace of interest rate hikes by developed market central banks slowed in 2023 with the U.S. Federal Reserve, Bank of England, and European Central Bank all pausing during the third quarter. Yields of many 10-year bonds also peaked shortly thereafter and began falling during the fourth quarter as investors began to anticipate interest rate cuts sometime in 2024. Despite continuing challenges, recent performance has improved, aided by elevated yields, declining inflation, and the potential for lower interest rates and/or central bank rate cuts, which could create a more favorable environment for active management.

12-MONTH ROLLING PERFORMANCE



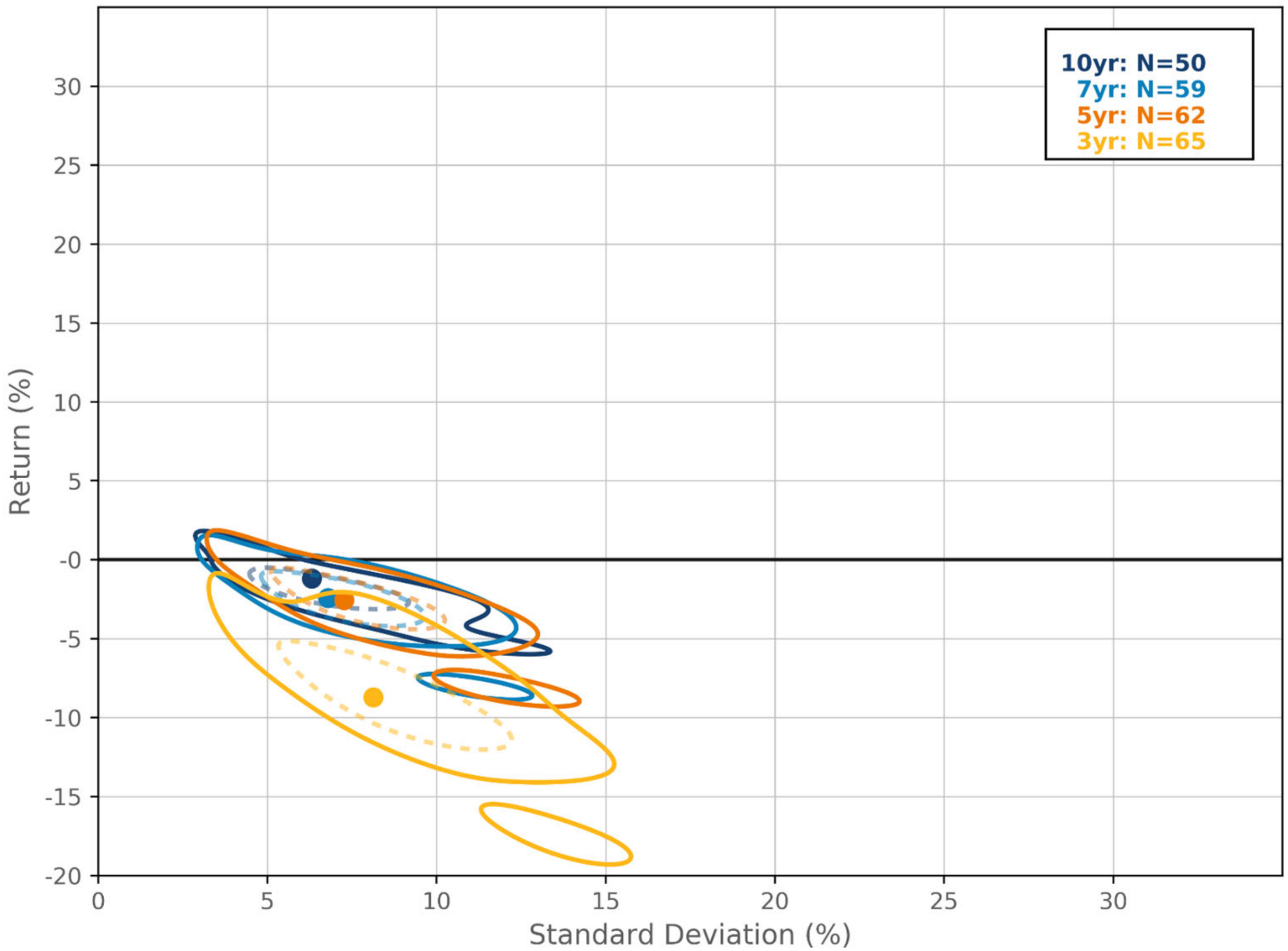
Source: eVestment, as of 9/30/23

GLOBAL SOVEREIGN



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the FTSE WGBI

Fixed income – Global sovereign



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the FTSE WGBI

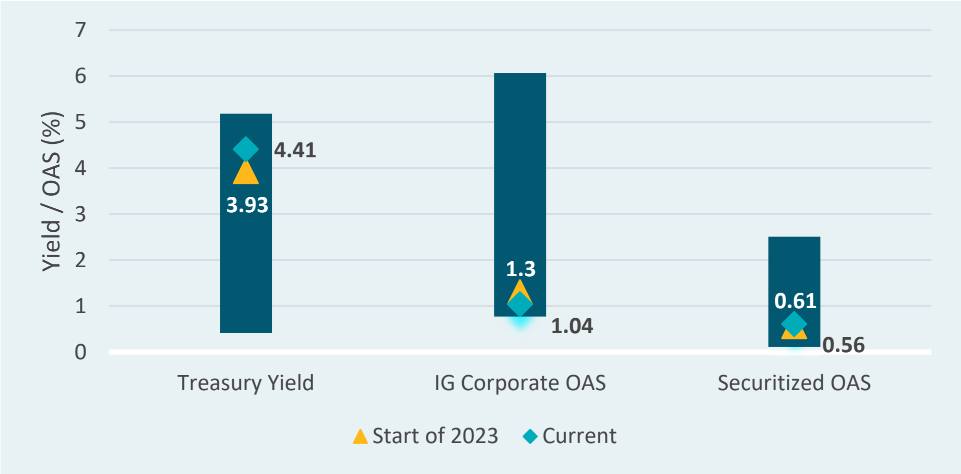
Fixed income – U.S. core

— The U.S. core universe has historically exhibited very low dispersion among active managers, with minimal differentiation from the benchmark regarding both risk and return. The distribution of outcomes over longer trailing periods has been normal, as demonstrated by the even, circular distributions shown in the bottom-right chart. Historically, the core universe has exhibited no tilt, indicating a minimal relationship between additional risk and additional return. Over the 3-year period, the universe has shown a negative tilt, indicating that managers who took less risk than the benchmark *outperformed* the benchmark.

— Year-to-date, there has been minimal variation in performance across the components of the U.S. Aggregate index. While the U.S. Treasury yield component increased by roughly 0.50%, the Federal Reserve began signaling an end to rate hikes that dominated market returns in 2022. This, combined with minimal spread movement in both the corporate and securitized components, led manager performance to be dominated by their duration positioning relative to the index.

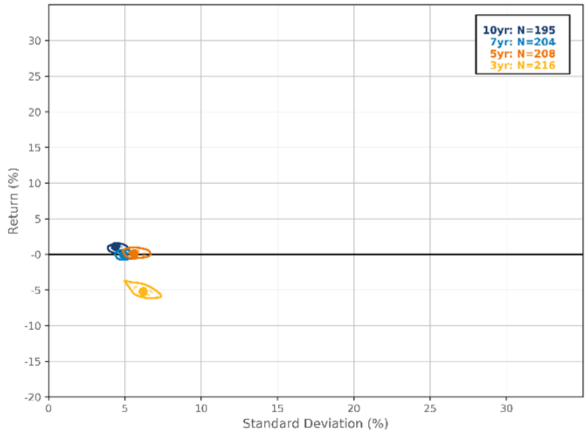
— Recently, the U.S. Aggregate index suffered deeply negative absolute returns, which impacted the entirety of the manager universe over the 3-year period. Over longer periods, the universe showed both positive and negative absolute returns, with most managers underperforming the benchmark over the 10-year period on a net-of-fees basis. Despite limited product dispersion, we believe that some active U.S. core strategies are well-equipped to effectively manage risk and liquidity in market drawdowns.

U.S. AGGREGATE BOND INDEX SECTOR YIELD/OAS RANGES SINCE 2000



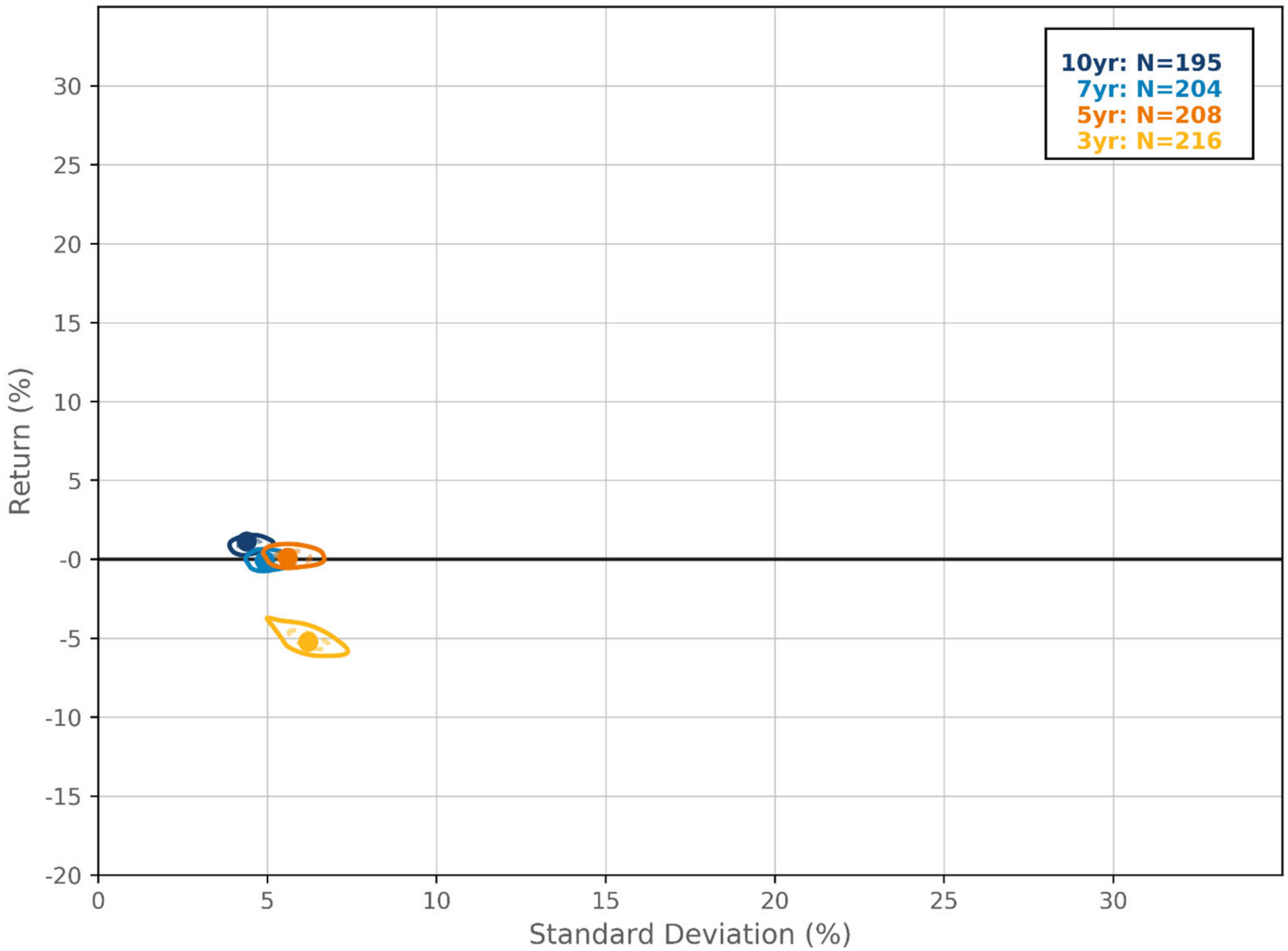
Source: Barclays Live as of 9/30/23.

U.S. CORE



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Aggregate Index

Fixed income – U.S. core

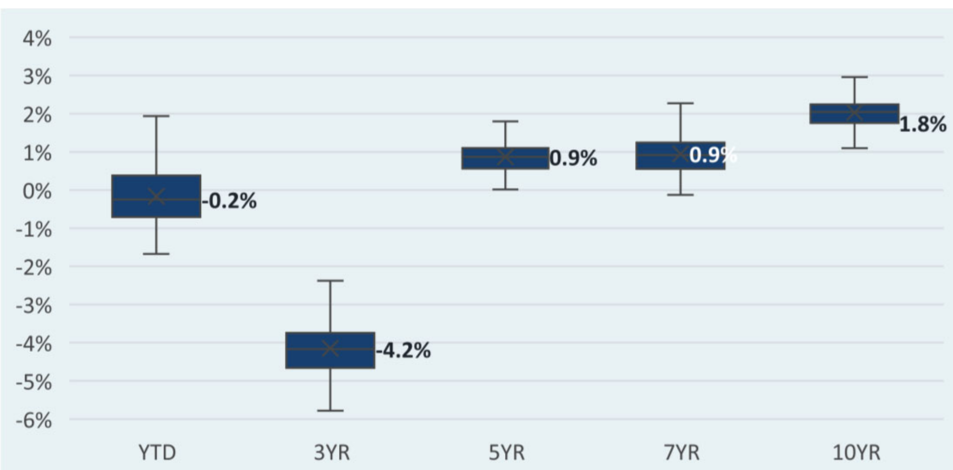


Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Aggregate Index

Fixed income – U.S. core plus

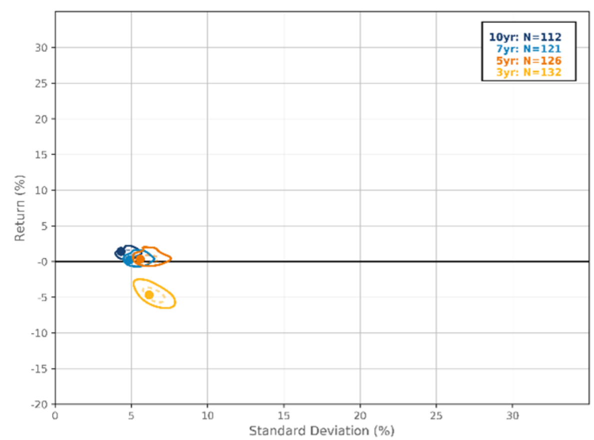
- Over the 3-year lookback, the U.S. core plus asset class has reflected negative returns on an absolute basis in tandem with the core bond space. This asset class was also impacted by deeply negative performance in 2022. Unlike most previous periods where nearly all active managers took on greater risk than the benchmark, with the aim of increasing returns, the past three years have been unique. Many managers reduced risk in credit and securitized to take advantage of higher yields on treasuries, an approach that was not possible in the recent low-rate environment.
- Historically, core plus managers have typically underweighted U.S. Treasury and government bonds and overweighted positions in spread sectors, including out-of-benchmark allocations to high yield and emerging market debt. Due to elevated market volatility in the trailing 3-year period, less dynamic core plus managers that leaned too far into or away from credit risk over the entire period experienced underperformance that hampered relative returns. Additionally, over the longer 5-, 7-, and 10-year periods, more dynamic core plus managers have been able to outperform the benchmark and deliver positive absolute returns.
- While dispersion among U.S. core plus strategies has been relatively narrow, markets environments such as what was experienced in 2023 have strengthened our belief that quality active core plus strategies may be well-equipped to effectively manage liquidity and avoid idiosyncratic risks. This can often be achieved through diligent security selection and sector rotation, as different market environments can reward different components of the universe.

CORE PLUS ACTIVE MANAGER UNIVERSE EXCESS RETURNS



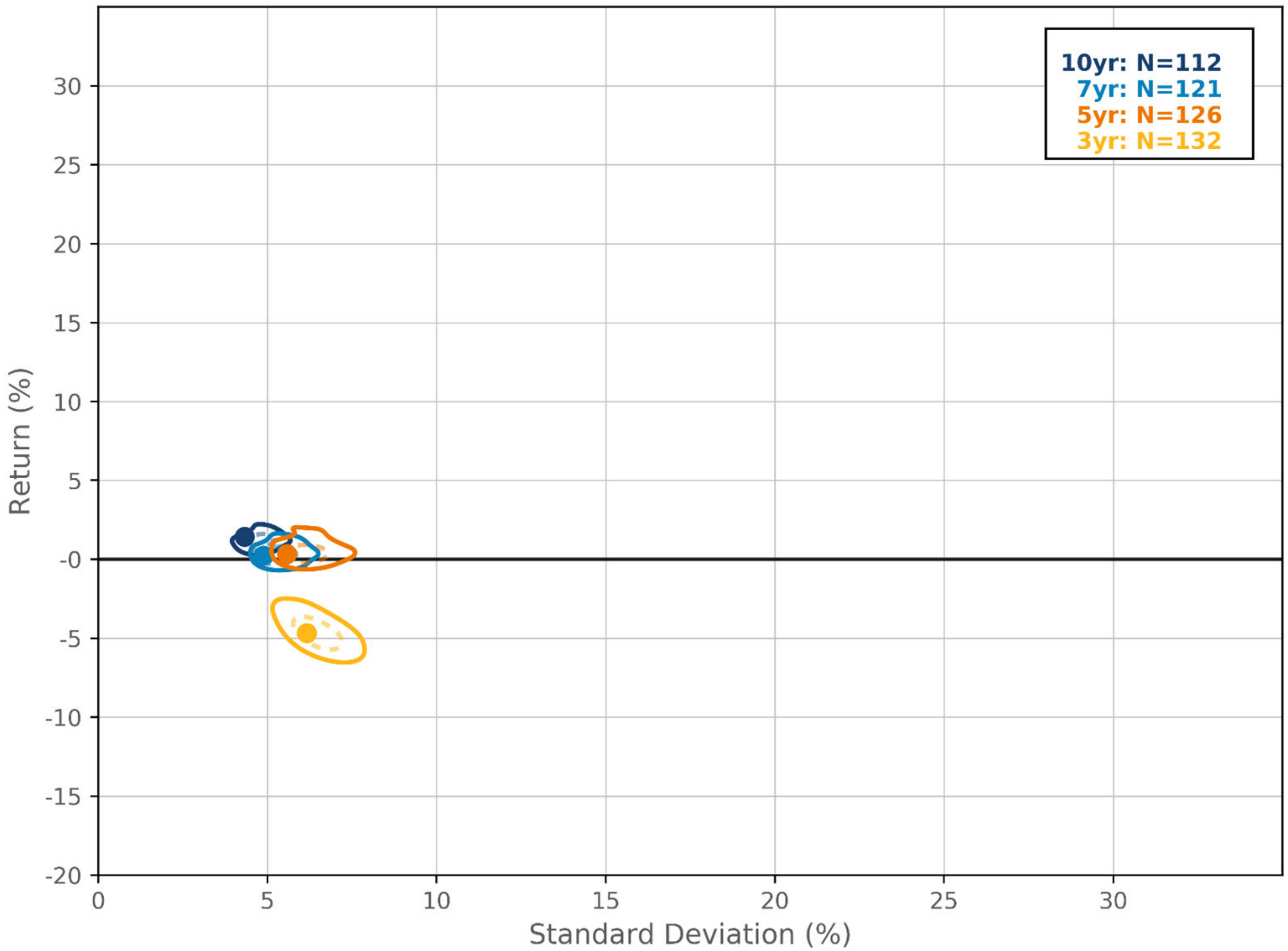
Source: eVestment, as of 9/30/23, Benchmark: Bloomberg US Universal, gross of fees

CORE PLUS



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Universal Index

Fixed income – U.S. core plus

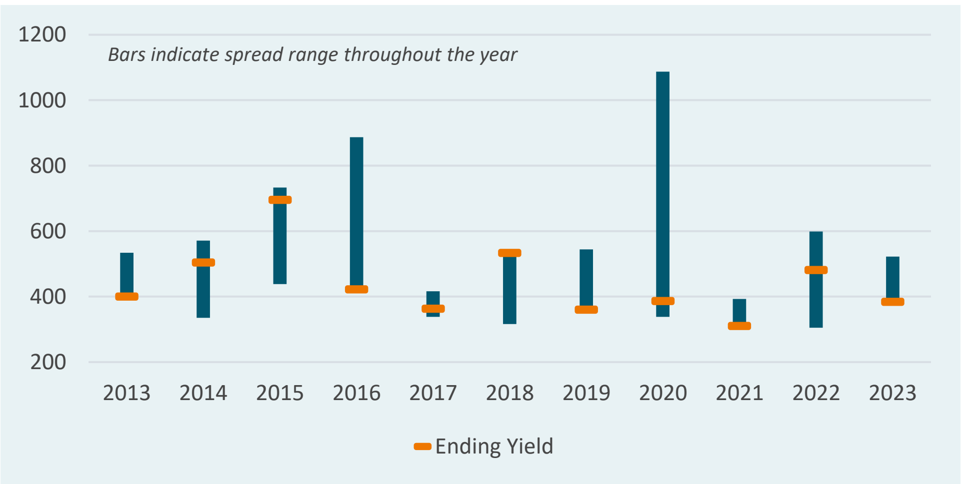


Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Universal Index

Fixed income – U.S. high yield

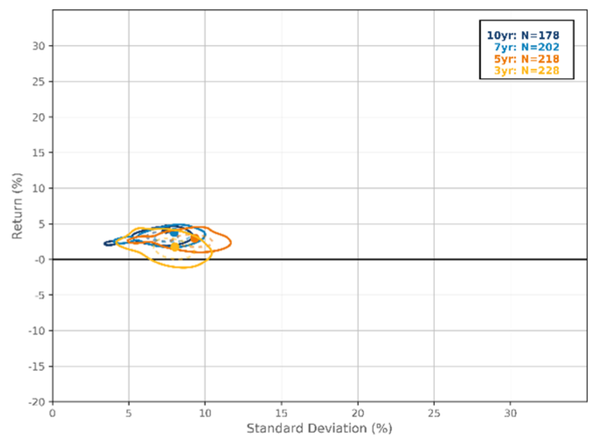
- Historically, actively managed high-yield strategies tend to demonstrate greater dispersion around the benchmark compared to more interest rate-sensitive core and core plus products. However, more recently over the shorter 3-year period, dispersion of both risk and return within the universe has fallen. In terms of performance, during the 3- and 5-year periods, dispersion around the benchmark was symmetrical, indicating the number of strategies adding value was generally in line with the number of strategies underperforming the benchmark. Strategies that were positioned with lower duration were more likely to outperform in that environment. Over the longer 7- and 10-year periods, the benchmark appeared at the top of the universe with few strategies succeeding in outperformance.
- Over the 3-year period, the universe chart was slightly downward sloping, suggesting that those managers who took on more risk than the benchmark underperformed in total return. Over the longer-term 7- and 10-year periods, the universe chart was relatively flat with no discernible relationship between added risk and added return.
- Exposure to high yield has the potential to both increase diversification and add returns to traditional core fixed income portfolios while benefiting from skilled managers who can identify bonds with attractive valuations and positive fundamentals, while avoiding deteriorating credits.

HIGH YIELD OPTION ADJUSTED SPREAD RANGES



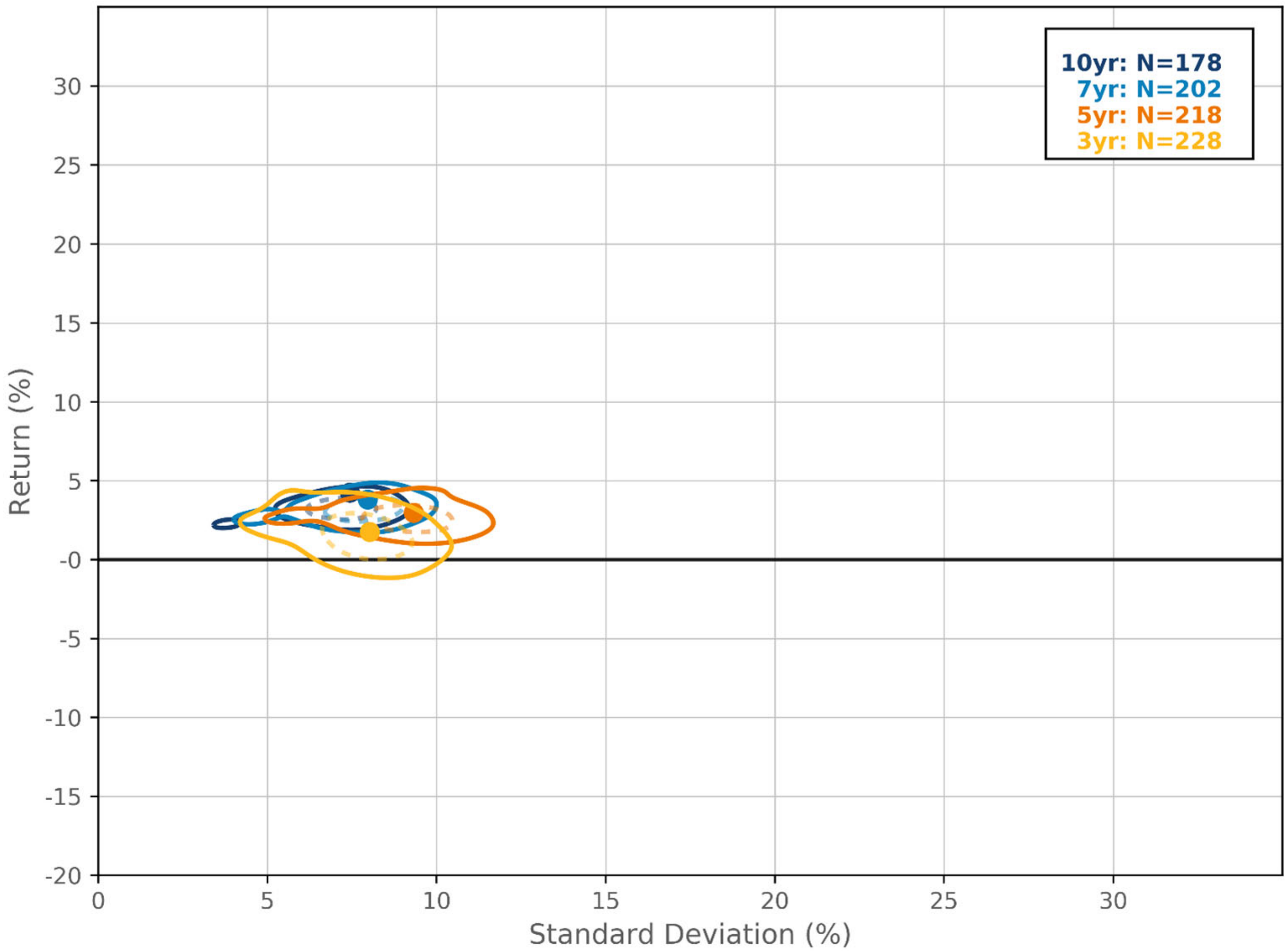
Source: Barclays, as of 9/30/23

U.S. HIGH YIELD



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Corporate High Yield Index

Fixed income – U.S. high yield



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg U.S. Corporate High Yield Index

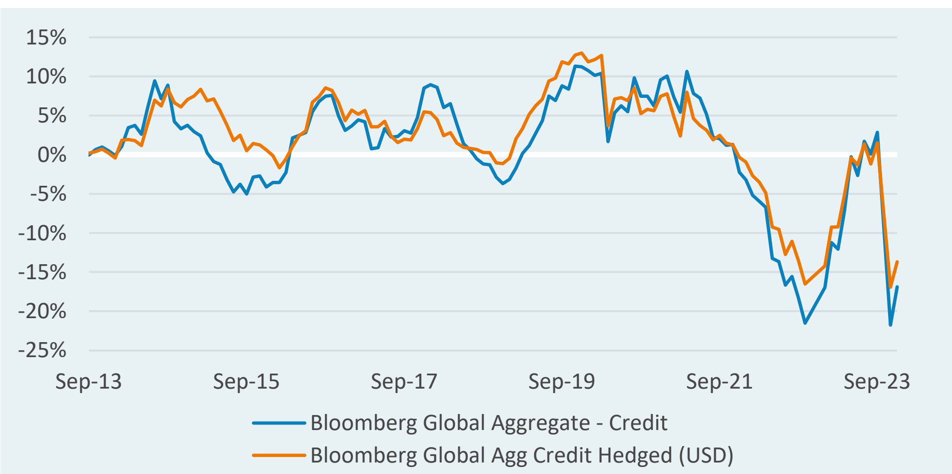
Fixed income – Global credit

— The global credit universe is relatively heterogenous with strategies managing against more than 50 different benchmarks. Strategies tend to have varying exposures across both developed and emerging market corporate debt, foreign currency risk, as well as a wide range of credit quality. This has led to wide universe dispersion with an irregular performance distribution over the periods shown below. Recent dispersion has increased significantly, driven by greater uncertainty regarding global growth, the path of interest rates, geopolitical tensions, and increased currency volatility.

— While the range of outcomes has varied considerably throughout the universe, there has been a strong negative relationship between risk and return in all time periods shown, as managers have not been compensated for taking on additional risk within the global credit universe. We have observed that, historically, most of the strategies within the active universe were able to produce excess returns over the Bloomberg Global Aggregate – Credit Index on a net-of-fee basis. However, those strategies that took on greater risk than the benchmark were much less likely to outperform.

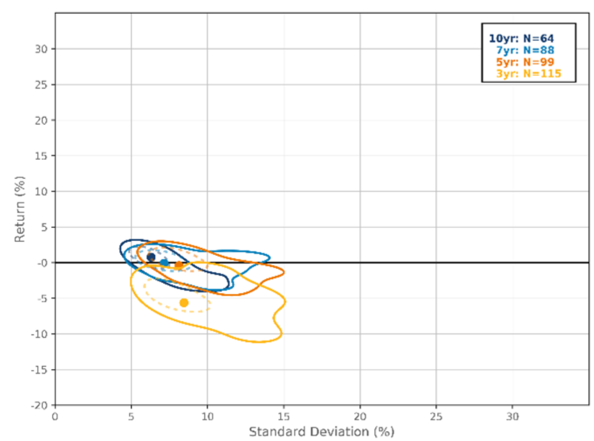
— Currency risk remains a significant consideration when investing in global credit portfolios. Over the rolling 1-year period ending September 2023, the hedged version of the Bloomberg Global Aggregate Credit Index outperformed the unhedged version of the same index by roughly 3.3%. As such, we believe it is important to evaluate unhedged global credit managers on their currency management skill as well as their skill in managing bonds.

12-MONTH ROLLING PERFORMANCE



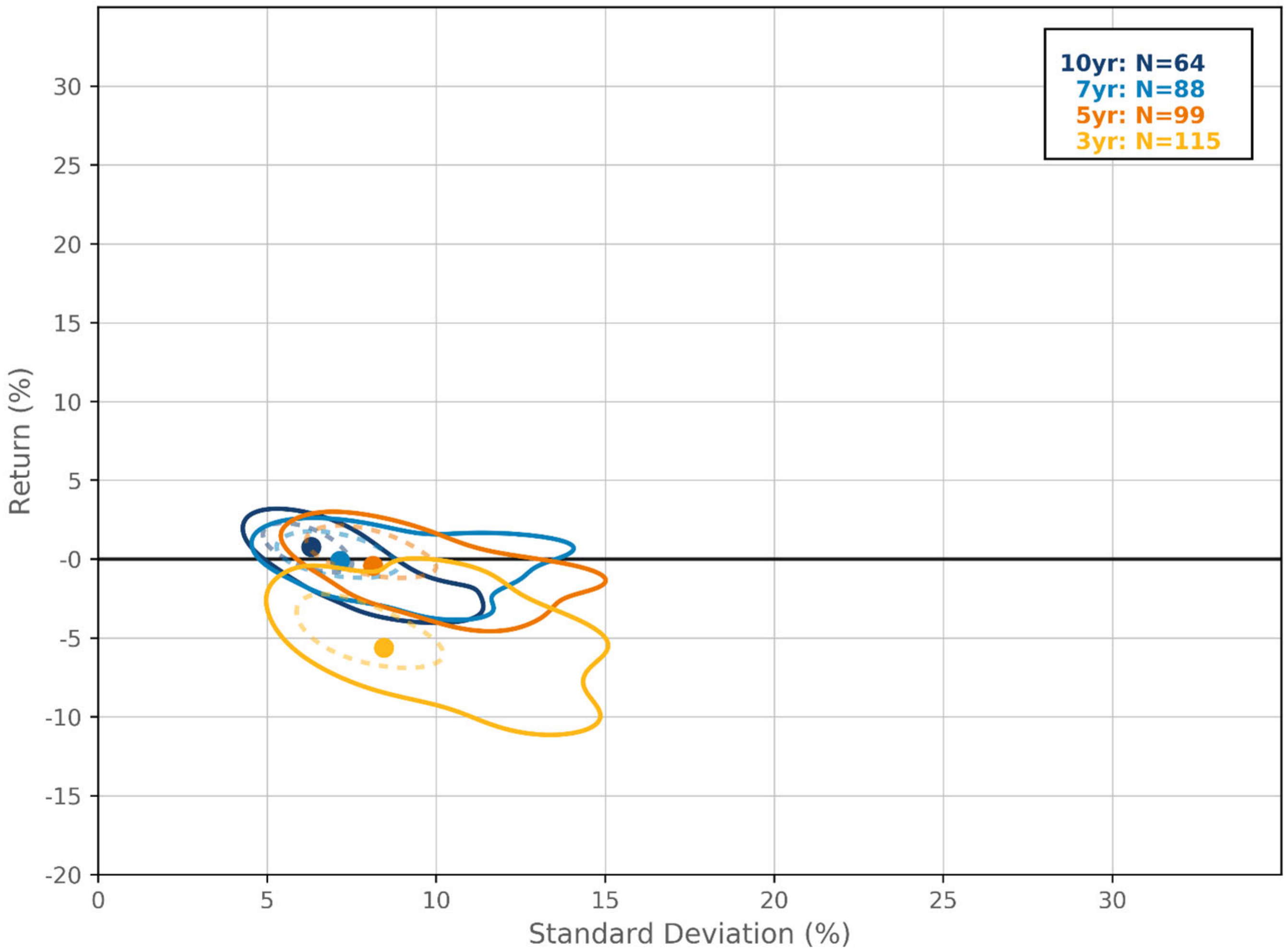
Source: eVestment, as of 9/30/23

GLOBAL CREDIT



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg Global Aggregate – Credit

Fixed income – Global credit



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg Global Aggregate - Credit

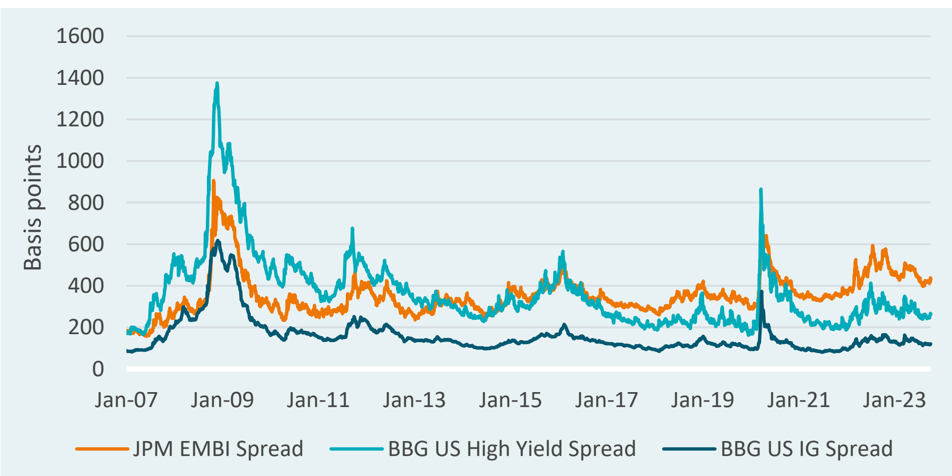
Fixed income – Emerging market debt (hard currency)

— Over the 3-, 5-, and 7-year periods, active universes exhibited a downward-sloping tilt, indicating a negative relationship between total risk and total return amongst strategies within the emerging market debt hard currency universe. Over the 10-year period, dispersion across the universe was narrower and managers struggled to add value relative to the benchmark regardless of the risk taken.

— Relative to longer time horizons, dispersion increased significantly over the 3-year period. This was likely primarily driven by uncertainty around inflation, the impact of rising U.S. interest rates, elevated geopolitical tensions, and weaker-than-expected global growth. Despite heightened volatility during the period, managers struggled to outperform the benchmark on a net-of-fee basis. Active environment was also less favorable over longer-term lookback periods, with only a small subset of strategies delivering outperformance over the benchmark.

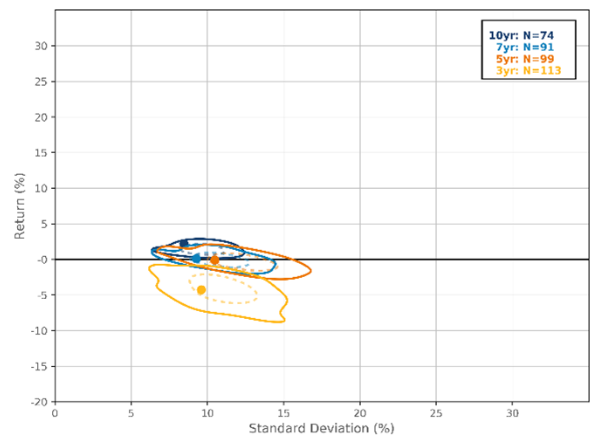
— Hard currency emerging market bonds trade on a spread over comparable U.S. Treasury bonds, similar to U.S. investment grade and high-yield bonds. While idiosyncratic country risk is high, the combination of incremental spread and potential diversification make the asset class a compelling choice for investors seeking higher returns.

EMD HARD CURRENCY SPREADS VERSUS US CREDIT



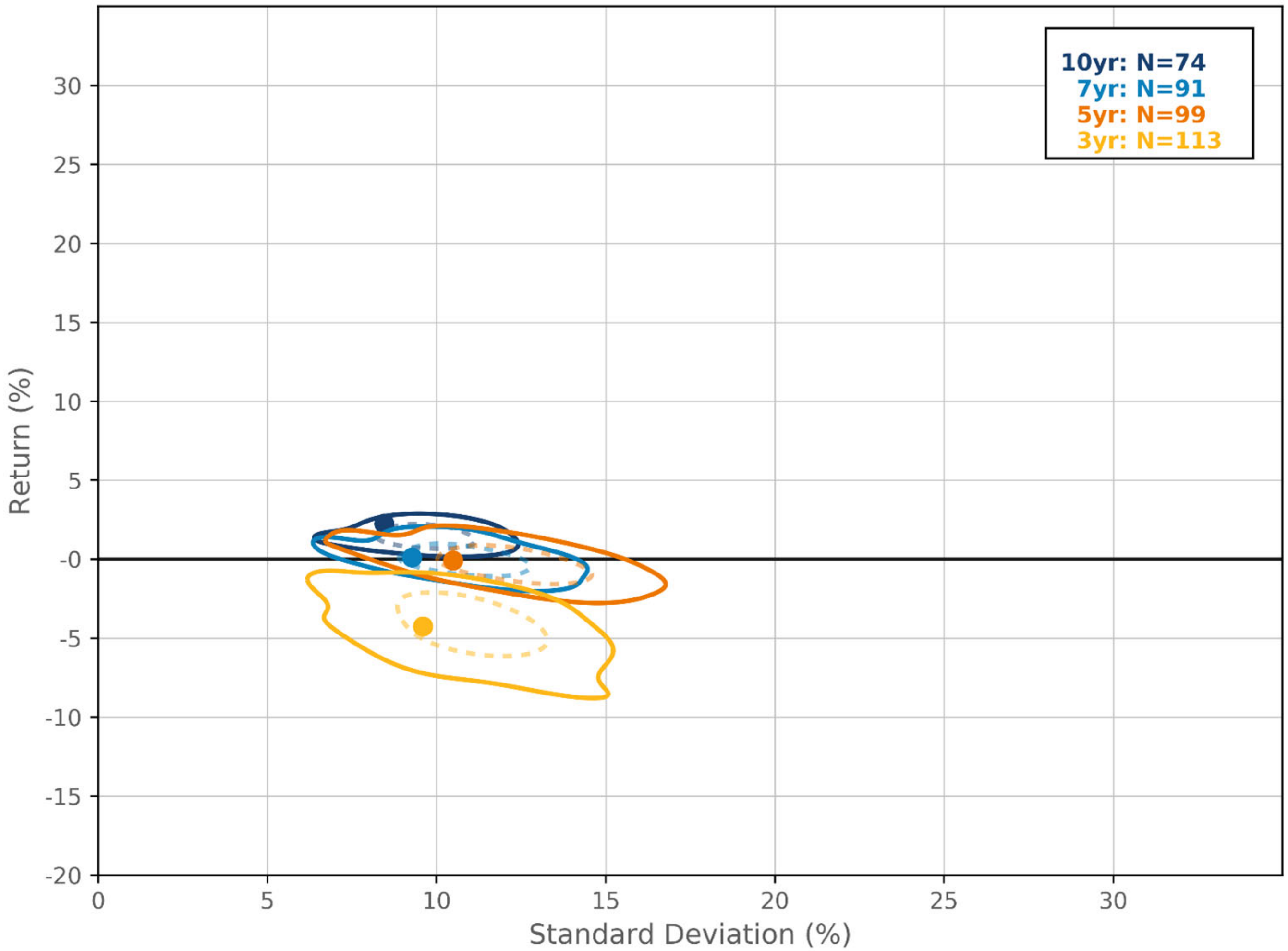
Source: Bloomberg as of 9/30/23

EMERGING MARKET DEBT (HARD)



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the J.P. Morgan EMBI Global Diversified Index

Fixed income – Emerging market debt (hard currency)

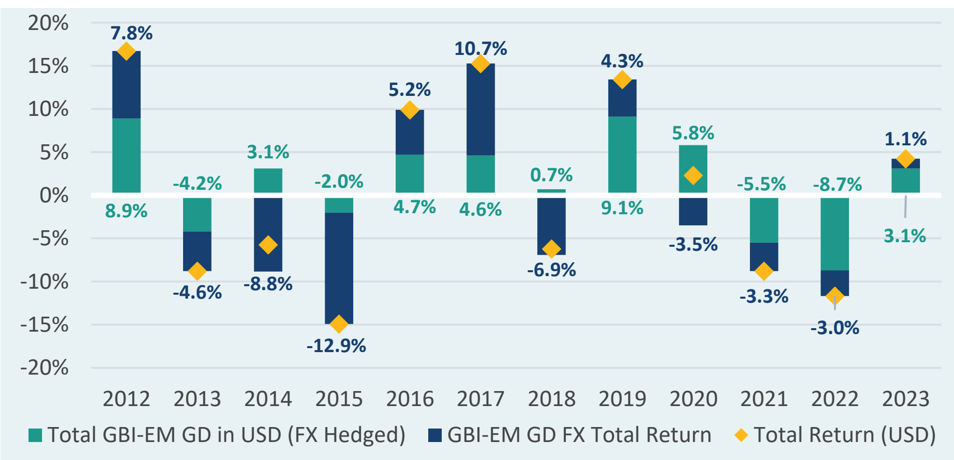


Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the J.P. Morgan EMBI Global Diversified Index

Fixed income – Emerging market debt (local currency)

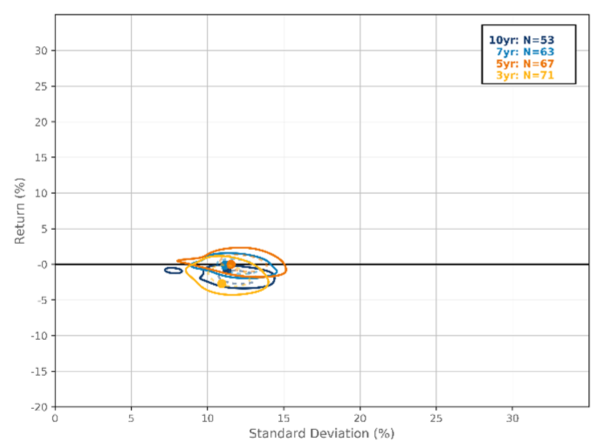
- Over 5-, 7-, and 10-year periods, we observed a relatively neutral relationship between risk and return with little evidence that active local currency strategies have added value on a risk-adjusted basis. More recently during the trailing 3-year period, local currency EMD strategies exhibited a slightly positive relationship between total risk and total return as incremental risk taking has added value relative to the benchmark.
- Dispersion across the universe has increased recently, primarily due to exposures to lower-quality credits which were negatively impacted by slowing economic growth, heightened geopolitical tensions, and increasing currency volatility. Over the 3-year period, a majority of managers showed greater total portfolio risk resulting in relative outperformance compared to the benchmark. While relative performance has improved overall, challenges remain including potentially higher than expected inflation, continued U.S. dollar strength, and concerns about the rate of economic expansion.
- Local currency-denominated emerging market debt can provide a degree of diversification for multi-asset portfolios, primarily due to foreign currency exposure. However, the asset class has historically exhibited higher volatility compared to developed market bonds, a result of geopolitical risk, idiosyncratic country-specific event risk, and other factors.
- The Federal Reserve slowed the pace of interest rate raises in 2023, resulting in a weaker U.S. Dollar, which benefited investors during the first three months of 2023. The foreign currency component of local EMD strategies added approximately 1.2%, with Latin America exhibiting the strongest region performance.

ANNUAL CURRENCY IMPACT ON INDEX RETURNS



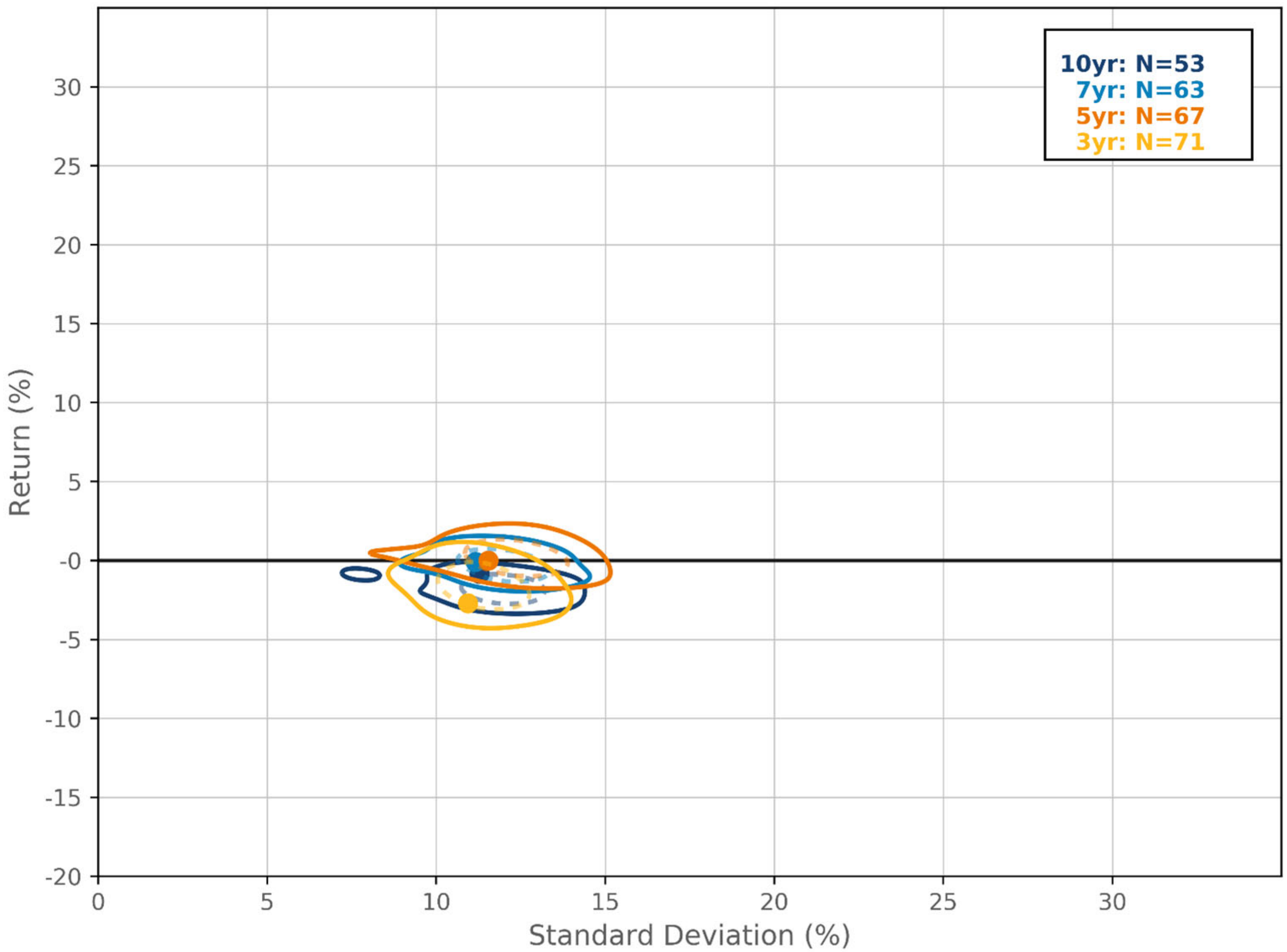
Source: JP Morgan, as of 9/30/23

EMERGING MARKET DEBT (LOCAL)



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the J.P. Morgan GBI-EM Global Diversified Index

Fixed income – Emerging market debt (local currency)



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the J.P. Morgan GBI-EM Global Diversified Index

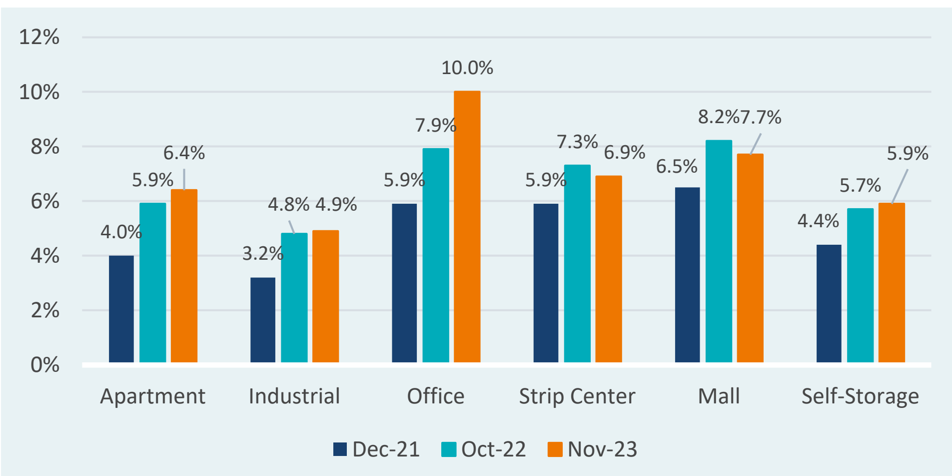
U.S. REITs

— Over longer time periods, active REIT management has broadly provided the benefit of volatility reduction rather than the generation of excess returns. During the most recent three-year time period, however, active management has generally underperformed the benchmark. This is likely due to the extreme volatility of the benchmark and rebalancing effects.

— REITs continued to underperform broad equities in 2023, although performance was positive (Wilshire REIT +16.1% vs S&P 500 +26.3%). The rising interest rate environment, and higher yields more generally, have been key drivers of the underperformance of REITs. The chart on the bottom left shows the extent of implied cap rate movements, by property type, since the end of 2021.

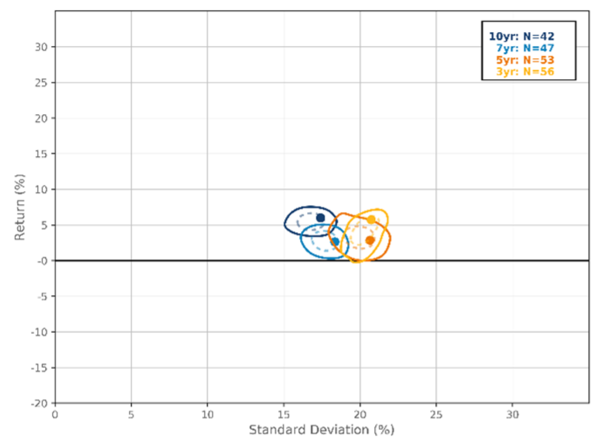
— Sector dispersion has continued to be very high. Fundamental challenges in the office sector due to changes in workplace trends following the pandemic have led to significant valuation adjustments and steep rises in implied cap rates to over 10%. Retail, on the other hand, which has seen fundamental headwinds over the last decade, showed signs of improvement in 2023 as many of those assets had already taken mark-down and seen a slowing of new supply.

IMPLIED CAP RATES – REIT SECTORS



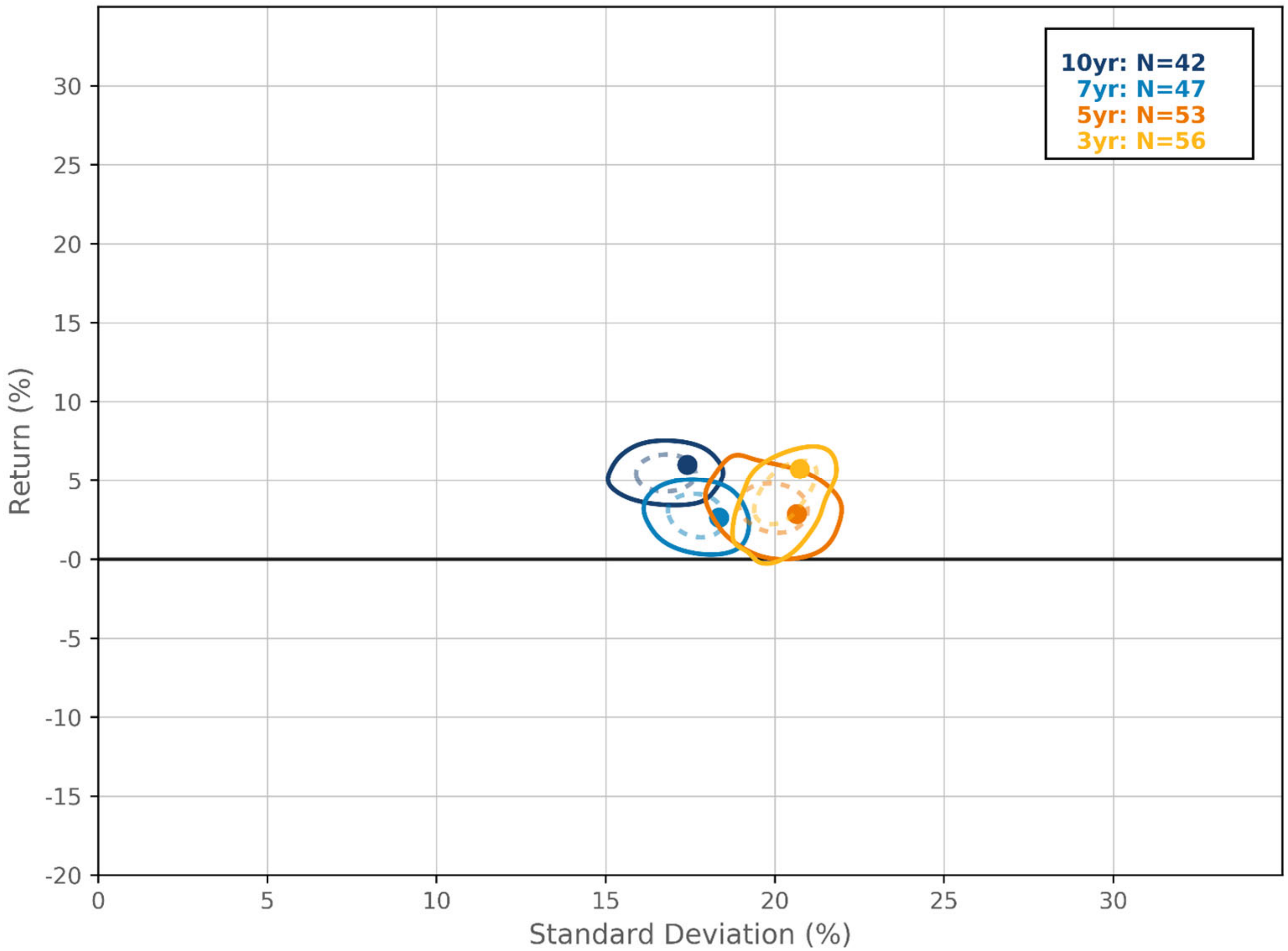
Source: Angelo Gordon, Cohen & Steers, as of 11/30/23

U.S. REITS



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Wilshire REIT Index

U.S. REITs



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Wilshire REIT Index

Commodities

— Active management in the commodity space tends to exhibit wide variation regarding the risk characteristics of strategies. This may be partly a reflection of the variety of manager styles. Strategies which look to mitigate negative roll yield and contango through term-structure management have continued to add value over standard indexes, on average.

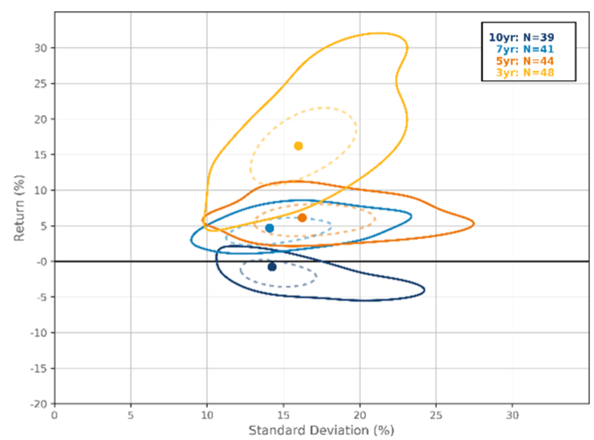
— Over the longest time period, the data suggests a negative relationship between risk and return as strategies with higher volatility levels have tended to underperform. That trend reversed over the most recent three-year period, however, as a more traditional profile is represented (higher risk levels have led to higher returns), although dispersion has been very high due to volatility within the asset class.

— The roll yield component has, in recent decades, provided a headwind to overall commodity returns. However, in 2021, the roll yield moved from near historically negative territory into positive territory, providing a tailwind to futures-based commodity strategies since.

12-MONTH ROLL YIELD

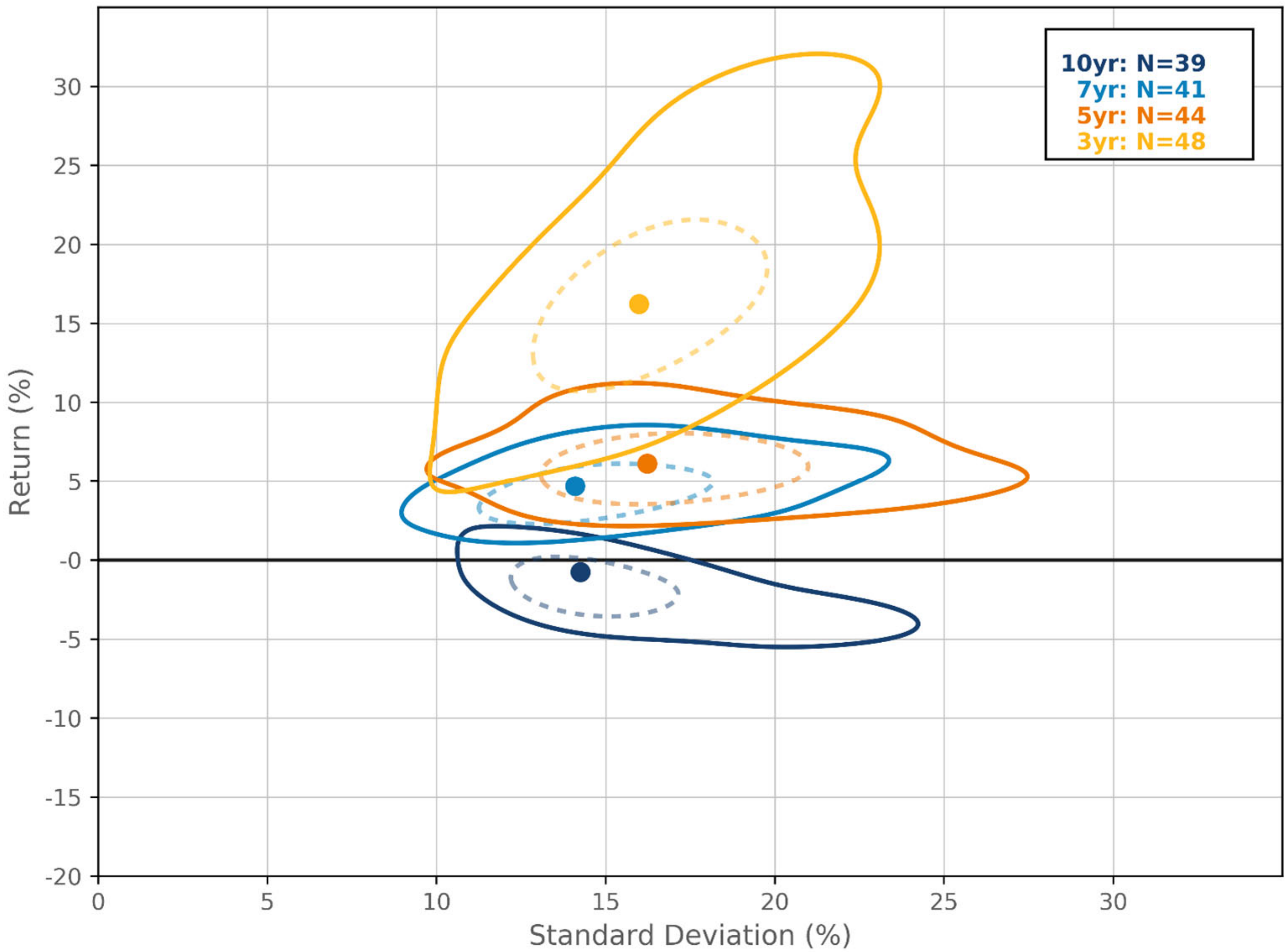
Source: Standard & Poor's, as of 11/30/23

COMMODITIES



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg Commodity Index

Commodities



Source: eVestment, as of 9/30/23. Universe returns have been adjusted for fees and survivorship bias. Benchmark displayed is the Bloomberg Commodity Index

Notices & disclosures

Past performance is no guarantee of future results. *The information presented in this report is provided pursuant to the contractual agreement (the "Contract") by and between the entity named and to which this report or presentation deck is being presented ("Client") and Verus Advisory, Inc. ("Company"). Client is an institutional counter-party and in no event should the information presented be relied upon by a retail investor.*

The information presented has been prepared by the Company from sources that it believes to be reliable and the Company has exercised all reasonable professional care in preparing the information presented. However, the Company cannot guarantee the accuracy of the information contained therein. The Company shall not be liable to Client or any third party for inaccuracy or in-authenticity of information obtained or received from third parties in the analysis or for any errors or omissions in content.

The information presented does not purport to be all-inclusive nor does it contain all information that the Client may desire for its purposes. The information presented should be read in conjunction with any other material furnished by the Company. The Company will be available, upon request, to discuss the information presented in the report that Client may consider necessary, as well as any information needed to verify the accuracy of the information set forth therein, to the extent Company possesses the same or can acquire it without unreasonable effort or expense. Nothing contained therein is, or should be relied on as, a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the client should be prepared to bear.

The material may include estimates, outlooks, projections and other "forward-looking statements." Such statements can be identified by the use of terminology such as "believes," "expects," "may," "will," "should," "anticipates," or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward-looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

Verus – also known as Verus Advisory™ or Verus Investors™.