Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: JUNE 30, 2024

Investment Performance Review for

Sacramento County Employees' Retirement System

Verus
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?***

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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. ***p. 9***

— 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. ***p. 12***

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. ***p. 27***

— 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%. ***p. 29***

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. ***p. 21***

— 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. ***p. 20***

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. ***p. 9***

— 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. ***p. 34***

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

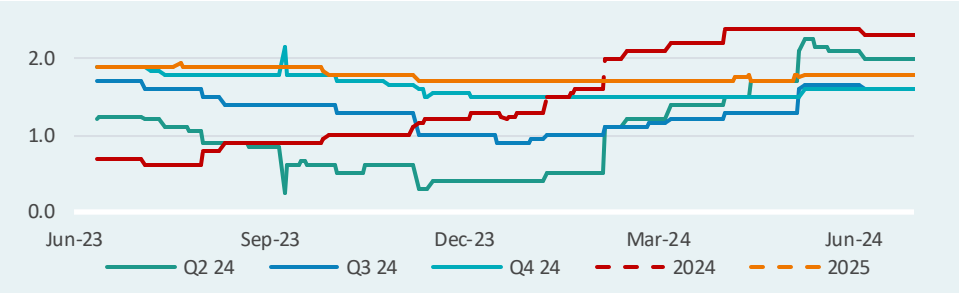
"European Central Bank cuts interest rates for first time in 5 years"

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%

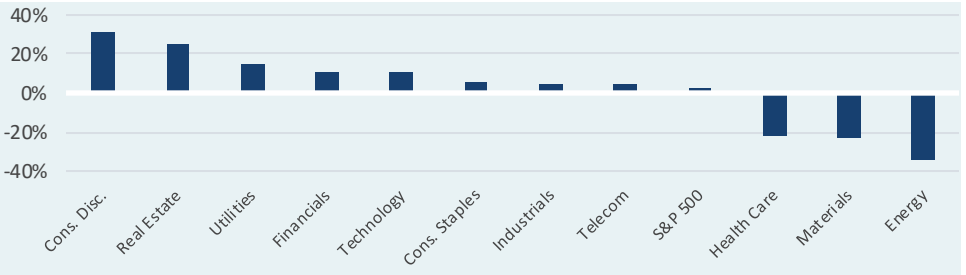
Article Source: Financial Times, June 6th, 2024

US GDP GROWTH PROJECTIONS (%)



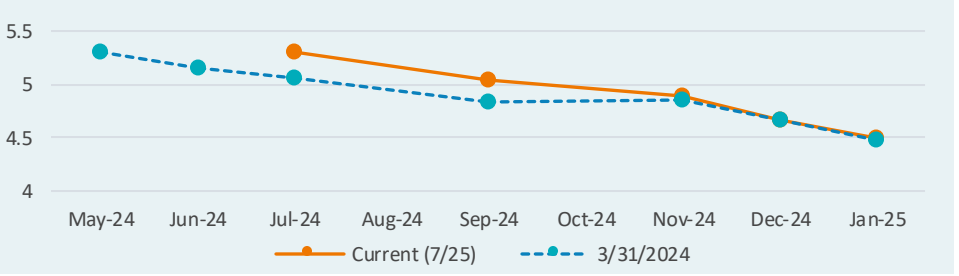
Source: Bloomberg, as of 6/30/24

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

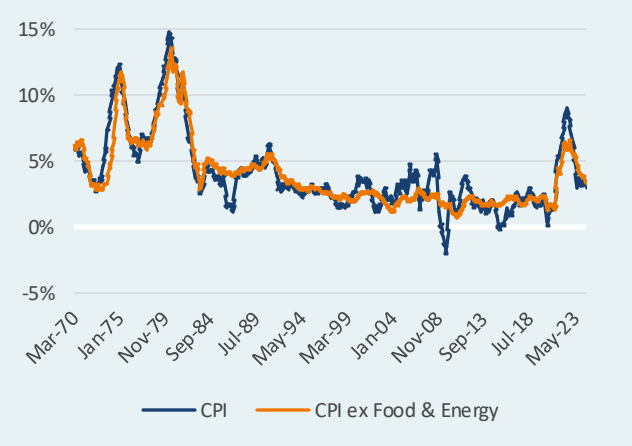
U.S. inflation (CPI) fell to 3.0% year-over-year in June, following two consecutive months of flat prices (0.0% in May and -0.1% in June). The June report was the first which reflected slower shelter cost increases, which have been a large hurdle for inflation falling to the Fed's 2% target. If this 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.

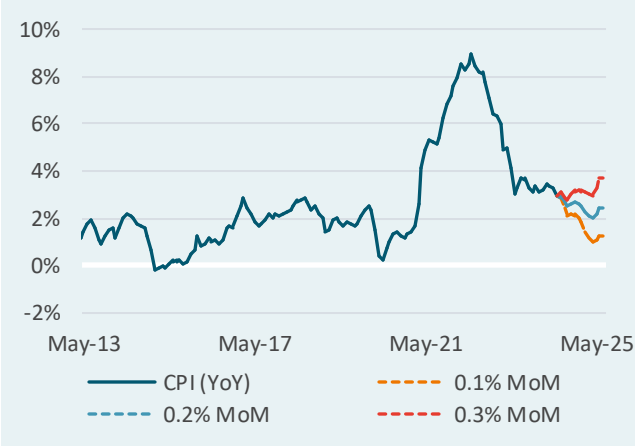
Shelter will likely need to slow further for inflation to reach 2%.

U.S. CPI (YOY)



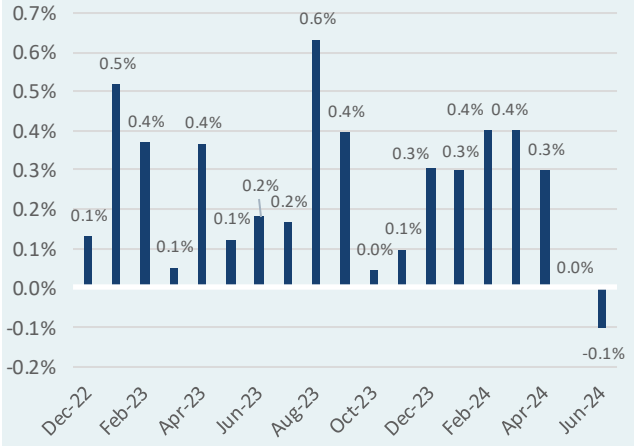
Source: BLS, as of 6/30/24

POTENTIAL INFLATION PATHS



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

MONTHLY PRICE MOVEMENT (CPI)



Source: BLS, as of 6/30/24

GDP growth

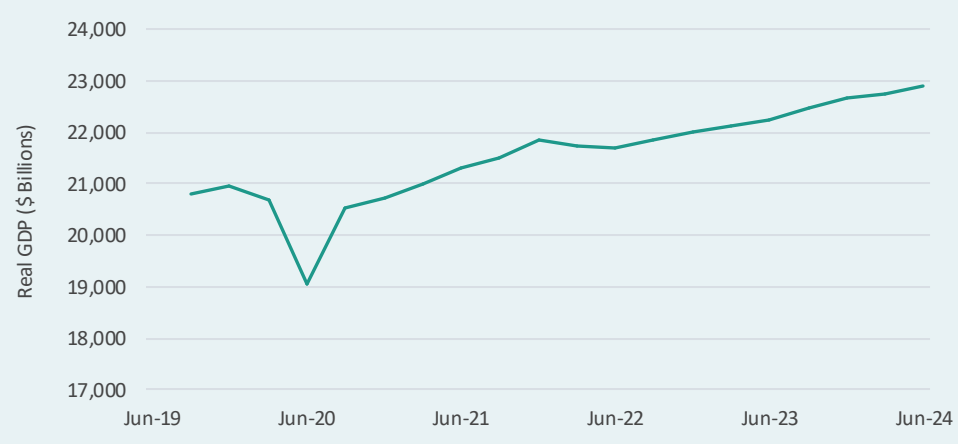
Real GDP growth was substantially higher than expected in Q2, rising 2.8% quarter-over-quarter (3.1% year-over-year), beating economist forecasts of a 2.0% increase on the quarter. The GDP release reflected an increase in consumer spending, as well as increased investment in inventories and capital goods.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

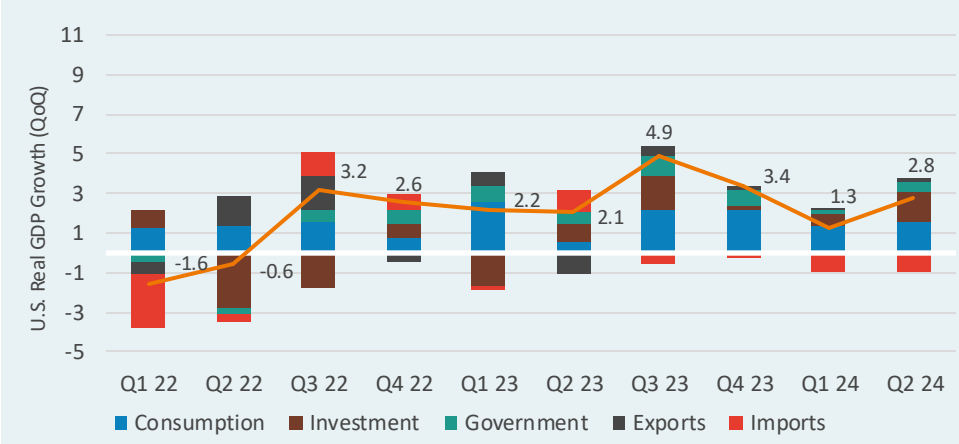
U.S. growth picked up in Q2, but concerns remain regarding the strength of the consumer.

U.S. REAL GROSS DOMESTIC PRODUCT



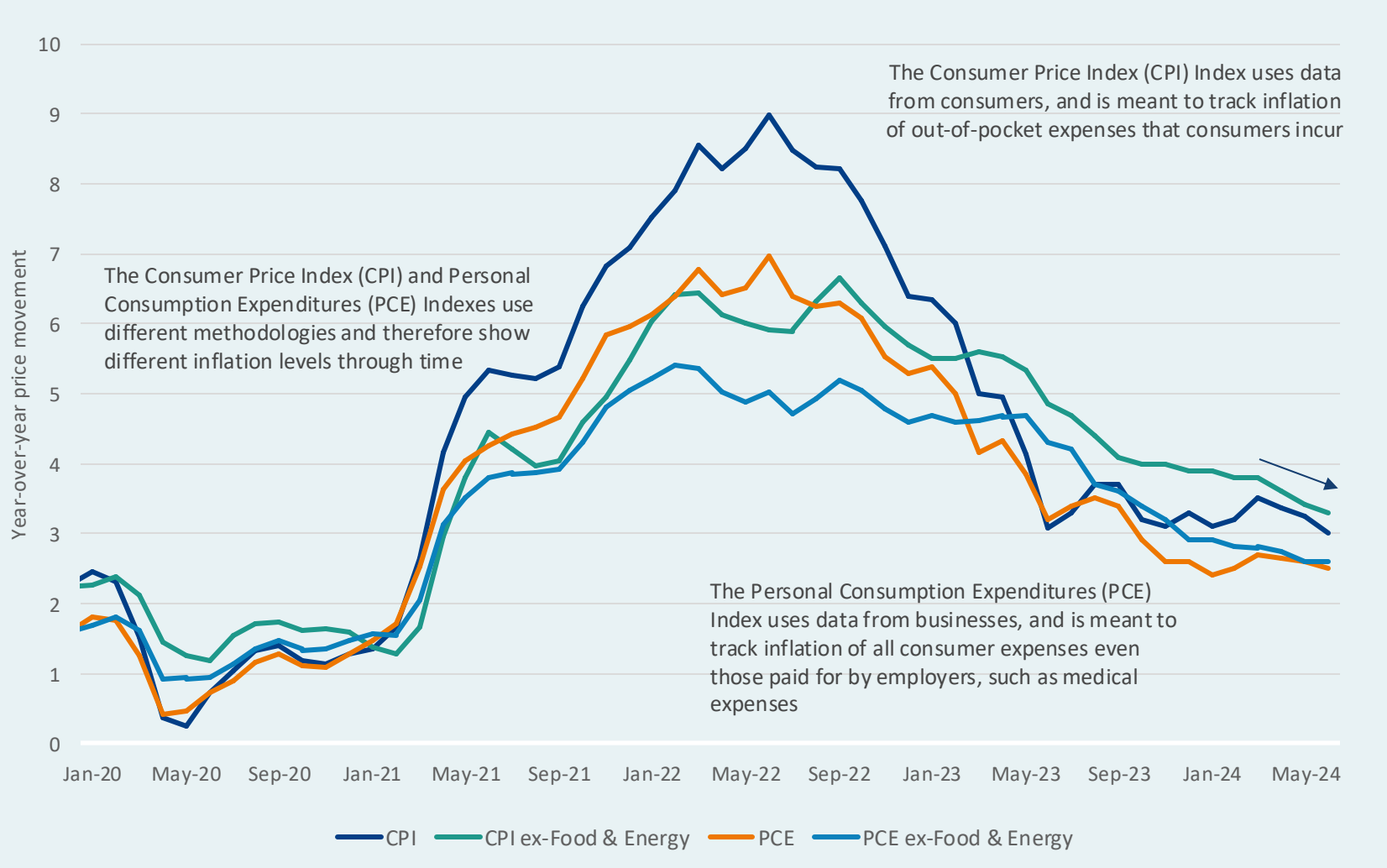
Source: FRED, as of 6/30/24

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

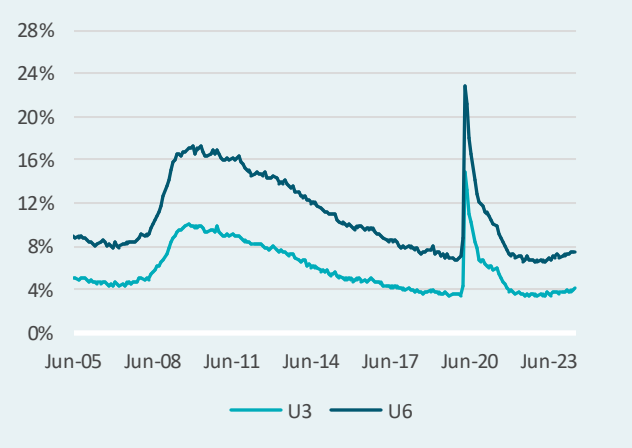
The U.S. labor market remains strong relative to history, but in recent months some cracks of weakness have appeared. The rate of unemployment jumped unexpectedly to 4.1% in June—a level not seen since 2021. Jobless claims have also been rising throughout the year. This negative data could prove to be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

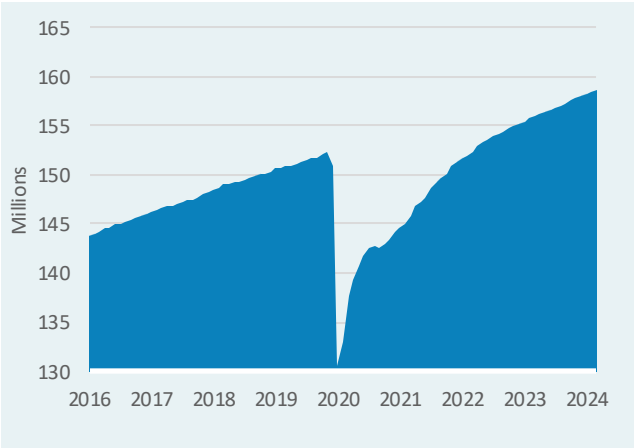
The labor market remains strong by historical standards, though conditions have moved in a weaker direction.

U.S. UNEMPLOYMENT



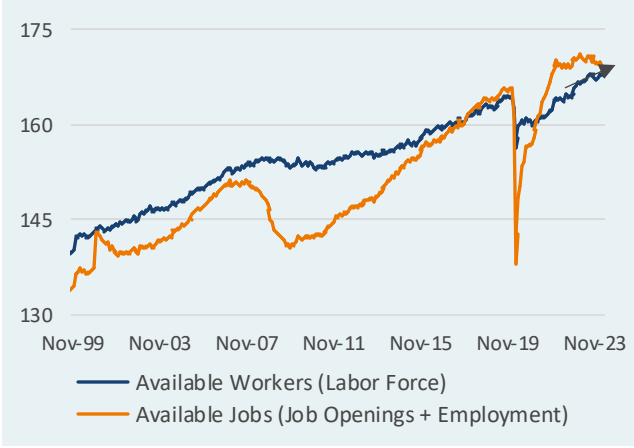
Source: FRED, as of 6/30/24

TOTAL U.S. EMPLOYMENT



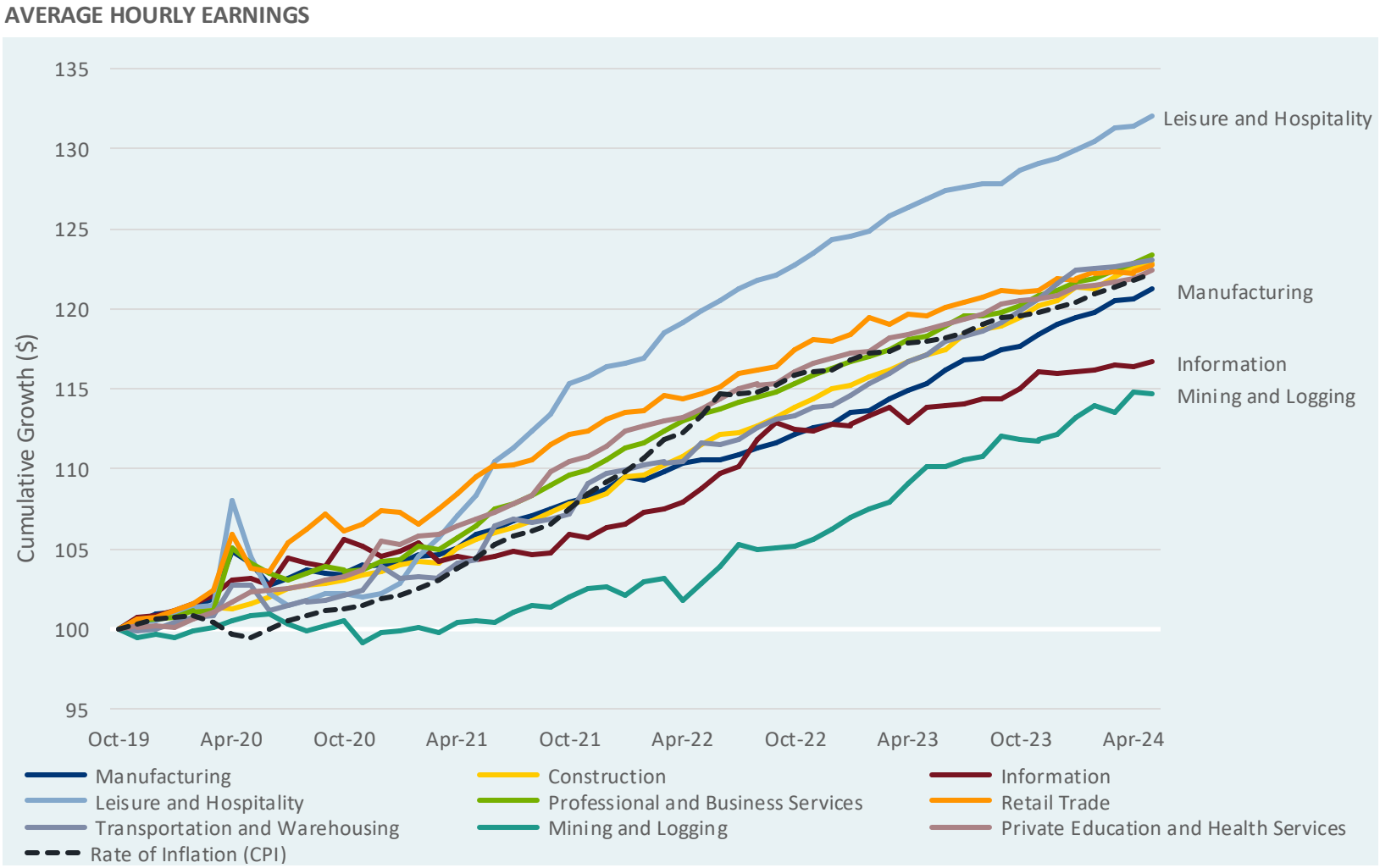
Source: FRED, as of 6/30/24

WORKERS AVAILABLE VS. AVAILABLE JOBS



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

Wage gains vs. rate of inflation



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.

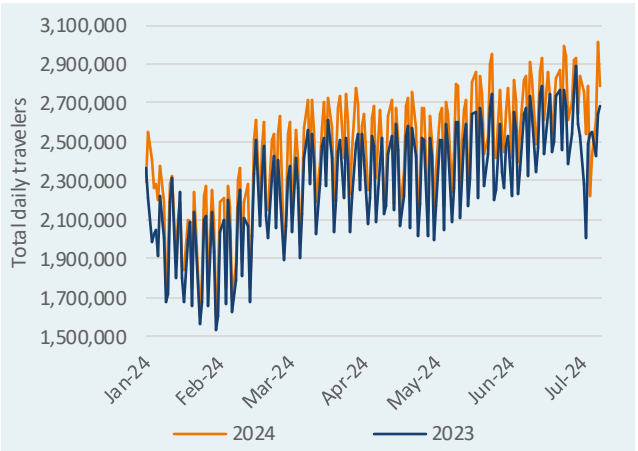
Many Americans continue to spend rather freely despite higher costs of goods and services taking up a greater portion of take-home income, and extreme discontent around inflation. However, certain non-essential spending such as for vacations has been robust. Total traveler volumes at U.S. airports in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

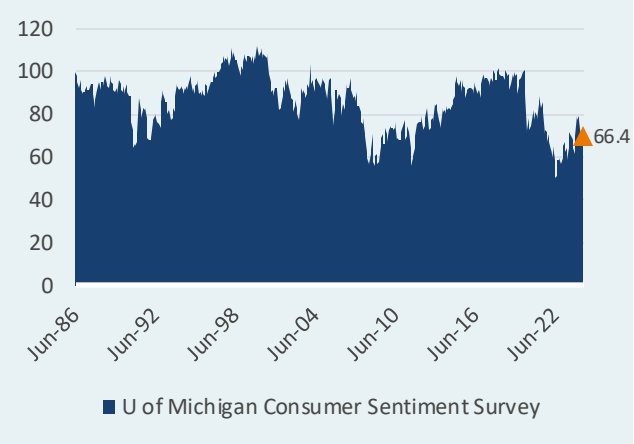
Consumer sentiment deteriorated over the quarter, moving back towards the lows of 2022. The University of Michigan Consumer Sentiment survey dropped from 79.4 to 66.4 on concerns over high goods and services prices and impacts of inflation on personal income. Household expectations for lower interest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

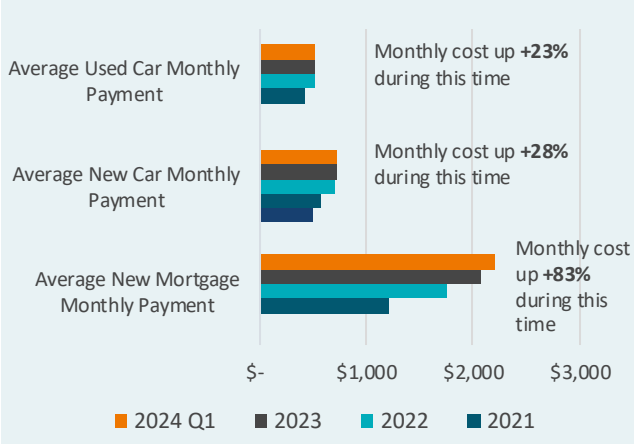
Consumer sentiment weakened during Q2, while small business optimism remained depressed.

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.

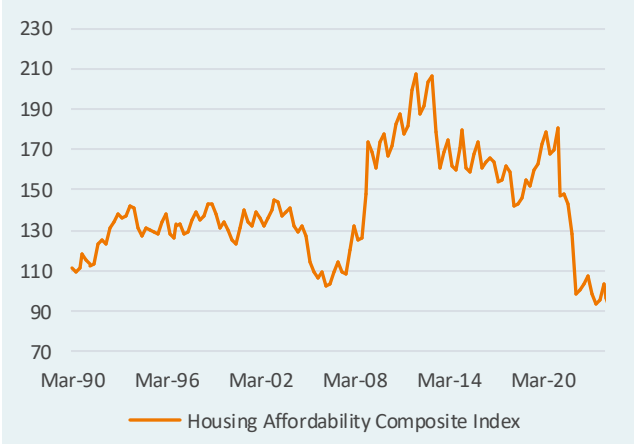
30-YEAR MORTGAGE RATE (%)

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.

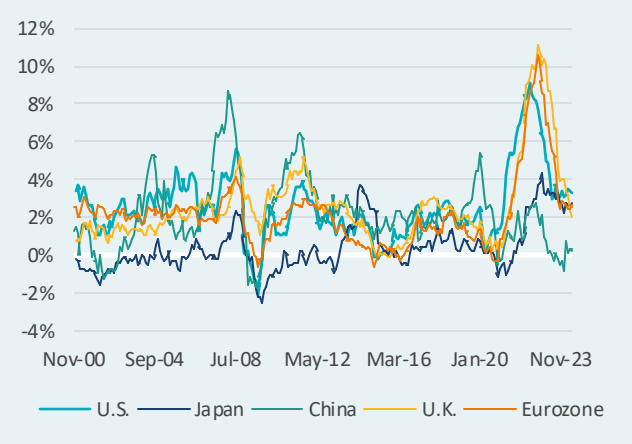
International economics

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.

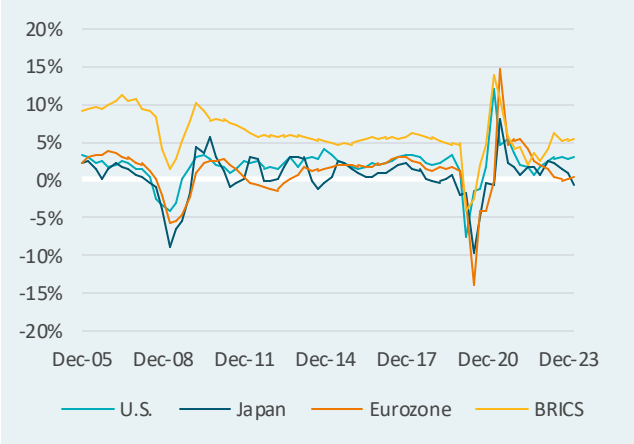
China year-over-year inflation was just 0.2% in June, as the country struggles with deflationary pressures, given a real estate slump, weak job market, and generally poor economic conditions. According to some reports, excess manufacturing capacity and government incentives for overinvestment have created 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.

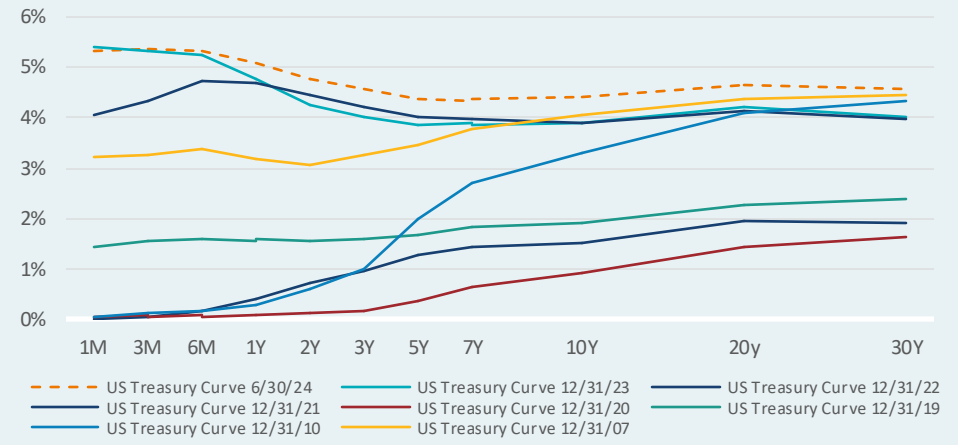
— Default activity in loans and credit reached a one-year low at the end of Q2. However, the gap between bank loan and high yield default activity has increased to a 10-year high, with total volume of distressed or defaults comprised of loans (80%) to bonds (20%) is on pace to be a record high proportion.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

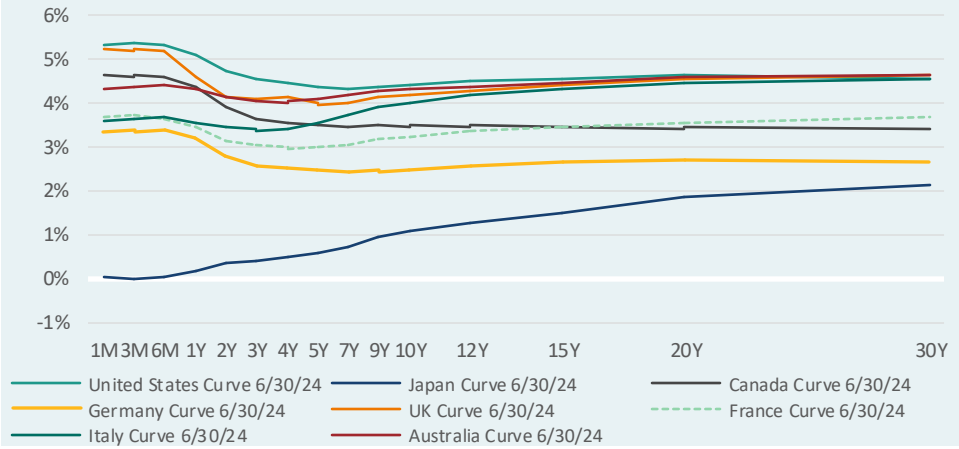
Source: Bloomberg, as of 6/30/24

Yield environment

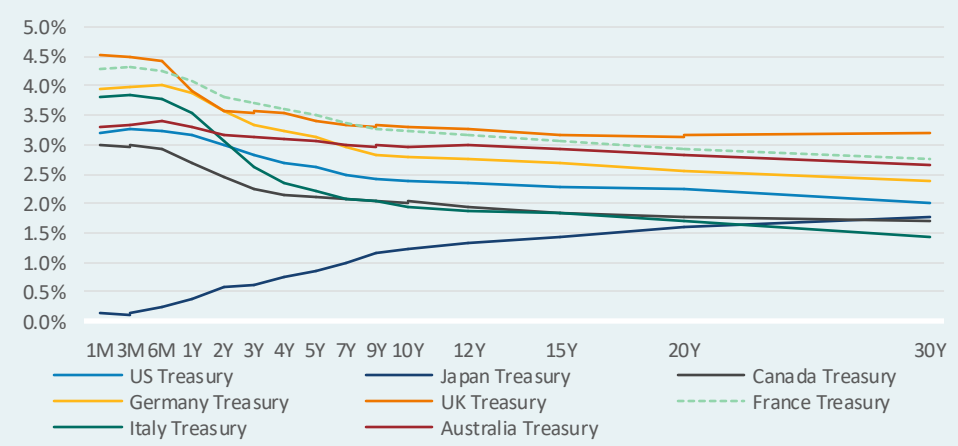
U.S. YIELD CURVE



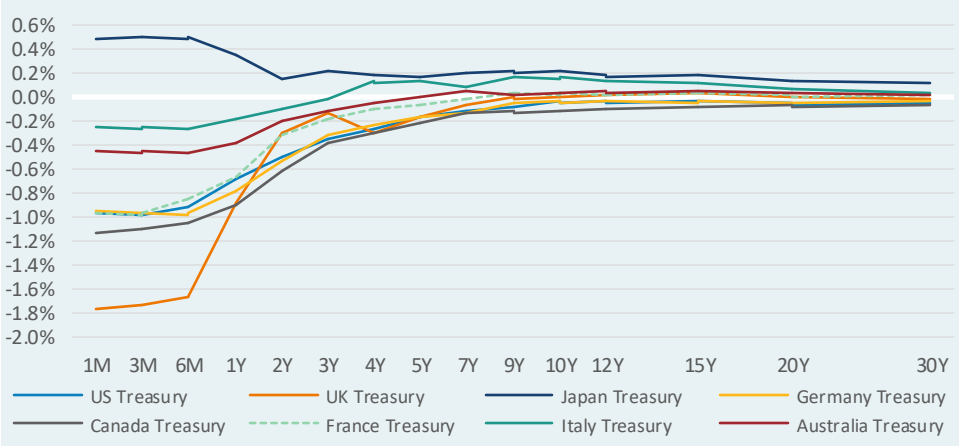
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/24

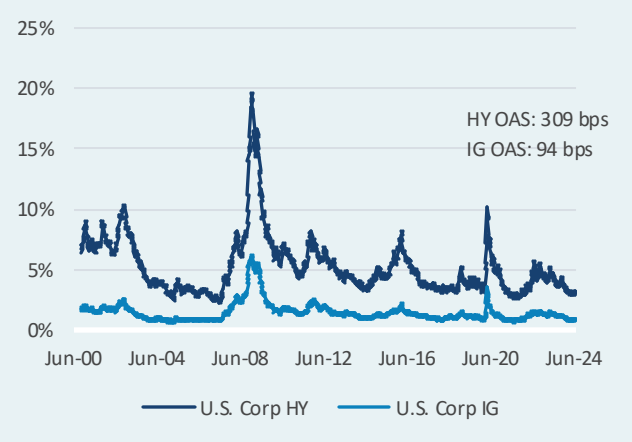
Credit environment

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%.

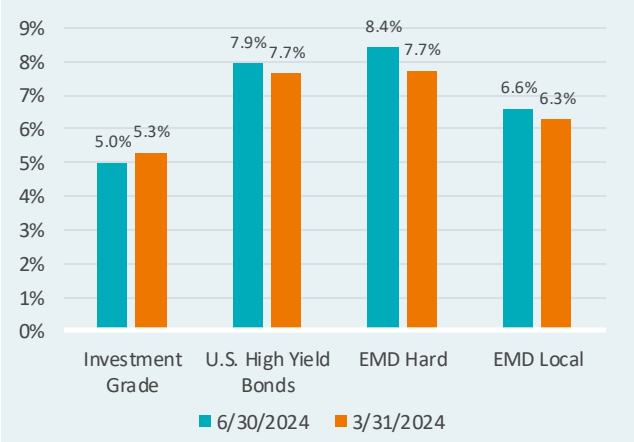
High quality credit spreads declined during the quarter while high yield spreads were mixed as recession concerns contended with further resilience in the corporate sector. Lower-quality high yield bond spreads rose by roughly 0.1% to 3.2%, while investment grade spreads continued to tighten by 0.3% 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

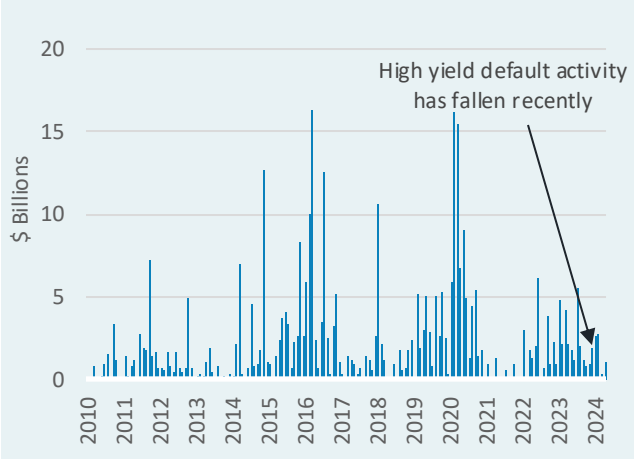
Default activity declined during the quarter as concerns around slowing economic growth abated. During the period, $15 billion of bank loans and high yield bonds were affected by default or distressed exchanges, down from $22 billion in the prior quarter. Year-to-date, 19 defaults and 23 distressed exchanges 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.

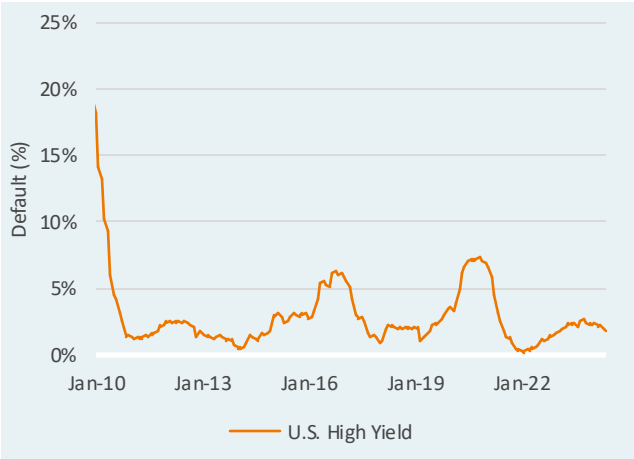
The issuance of investment grade credit declined significantly from the prior quarter, $343 billion versus $531 billion. Year-to-date issuance stands at $874 billion, up 23% compared to last year at the same time. High yield bond issuance declined slightly to $79.4 billion, down from $86.6 billion during 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)



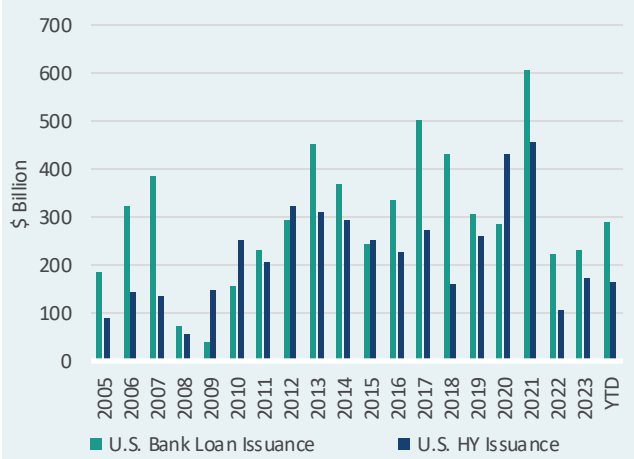
Source: BofA Merrill Lynch, as of 6/30/24

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

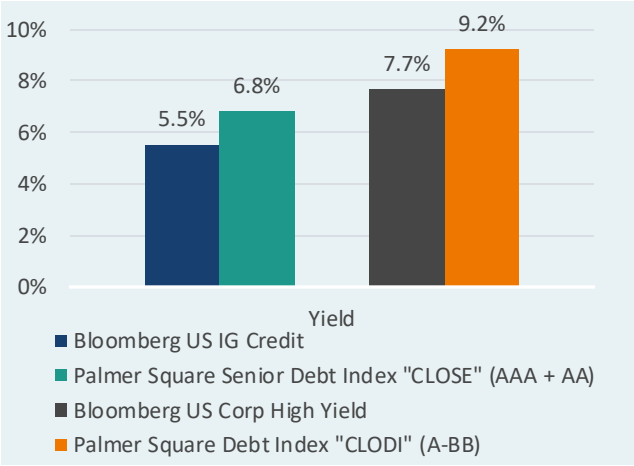
Credit hedge funds have outperformed high yield and leveraged loans through 2Q 2024, benefiting from high total yields and low duration.

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.

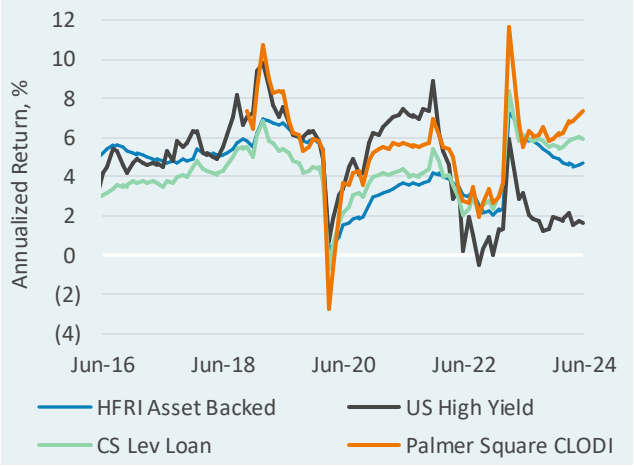
Distressed funds should continue to benefit from elevated levels of capital market activity in credit markets, with strong issuance in both HY and Loan markets set against a backdrop of tight credit spreads and low defaults.

CLO VS CORPORATE BOND YIELDS AS OF JUNE 30



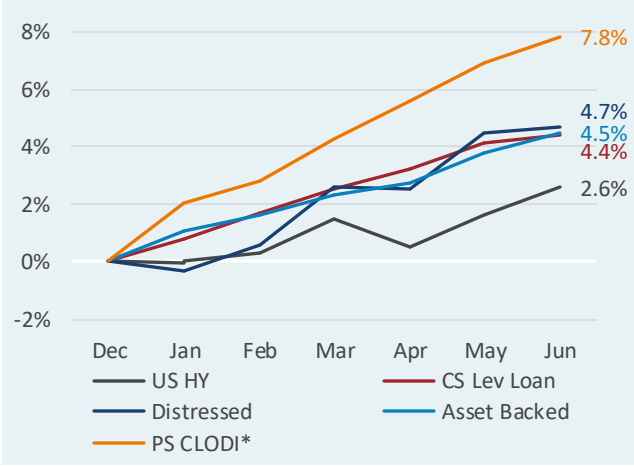
Source: MPI, Bloomberg, Palmer Square. As of 6/30/2024

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.

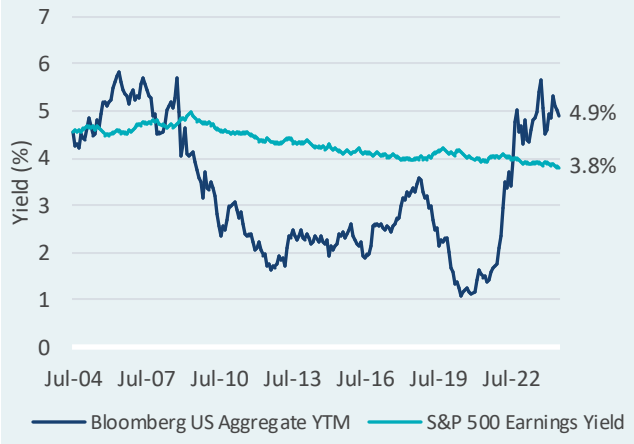
Blended S&P 500 year-over-year Q2 earnings growth was +9.3% as of July 12th. If total reported earnings growth ends at this +9.3% rate, it would mark the largest year-over-year earnings growth rate since Q1 of 2022. Communication Services (+18.4%) and Information Technology (+16.4%) were the earnings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

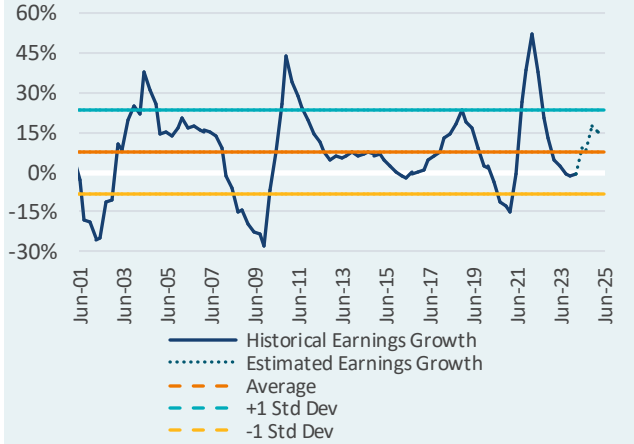
Source: Bloomberg, as of 6/30/24

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

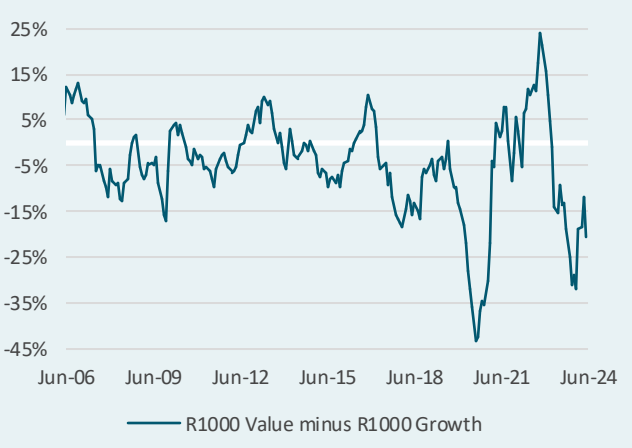
Domestic equity size & style

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.

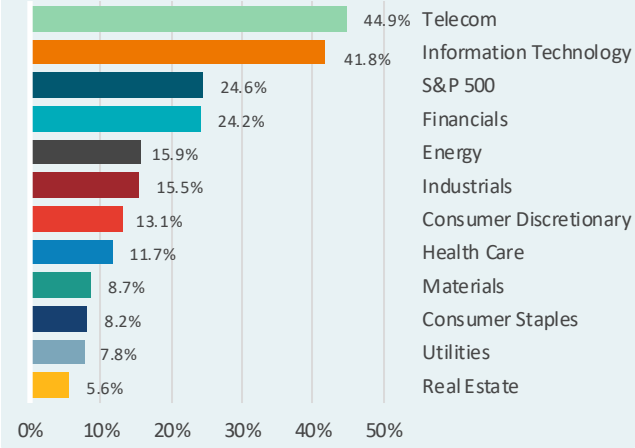
Unusually large disparities in style performance has been apparent, driven by sector trends and mega cap stock dominance. Market behavior continues to support our stance that short-term factor timing decisions should in most circumstances be pursued only in the rare occasion of obvious market mispricing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

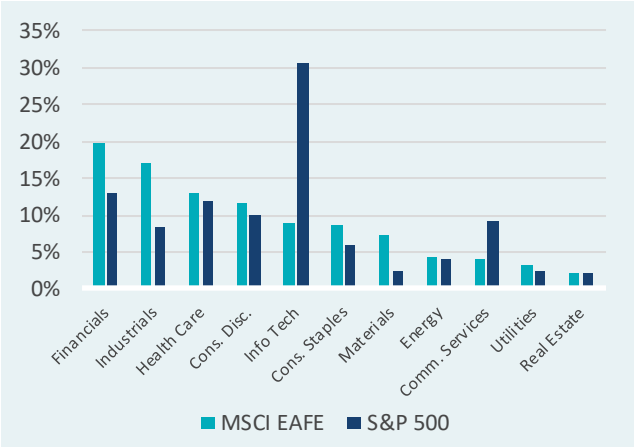
Some of the discrepancy in performance between U.S. and international developed equities can be attributed to sector differences. U.S. equities are heavily concentrated in technology companies, while developed markets have a more diversified sector breakdown, with Financials and Industrials – two sectors 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

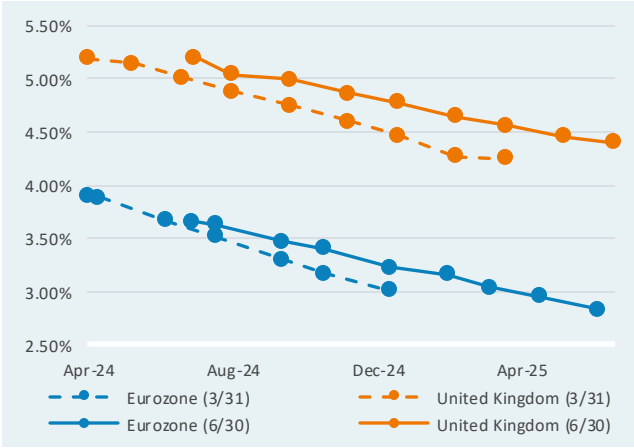
Source: MSCI, as of 6/30/24

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%).

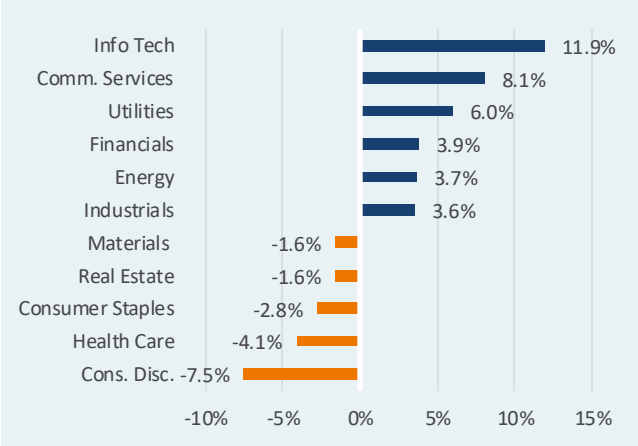
Sector differences played out in Emerging Markets, much as they did in the U.S., with Info Tech (+11.9%) being the best performing sector in the MSCI EM Index. This growth was bolstered by Taiwan Semiconductor Manufacturing Company (TSMC), who reported earnings growth of +36% in Q2. TSMC works directly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

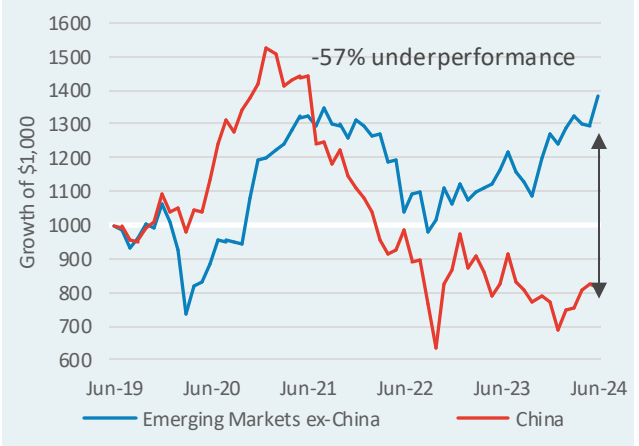
Source: MSCI, as of 6/30/24

MSCI EM Q2 2024 SECTOR RETURNS (USD)



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

SUBSTANTIAL CHINA UNDERPERFORMANCE



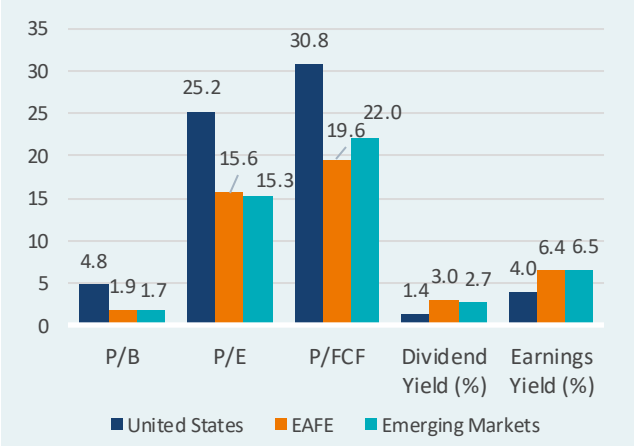
Source: MSCI, as of 6/30/24

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%.

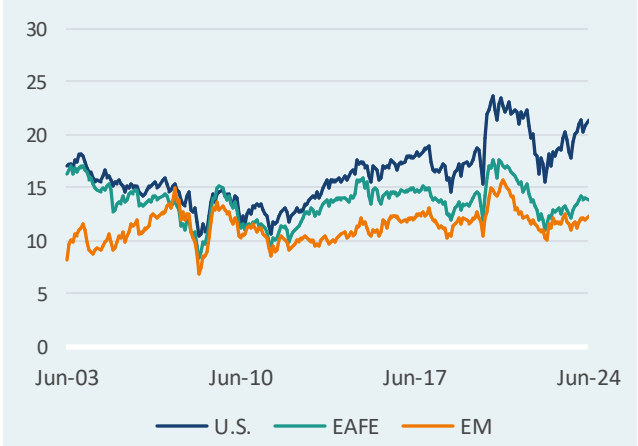
Lofty prices, along with a much more attractive environment for fixed income, suggest to us that the next decade may look much different than the past decade of unusually strong U.S. equity performance. The past decade was made possible by a very low equity valuation starting point, the impressive rise 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

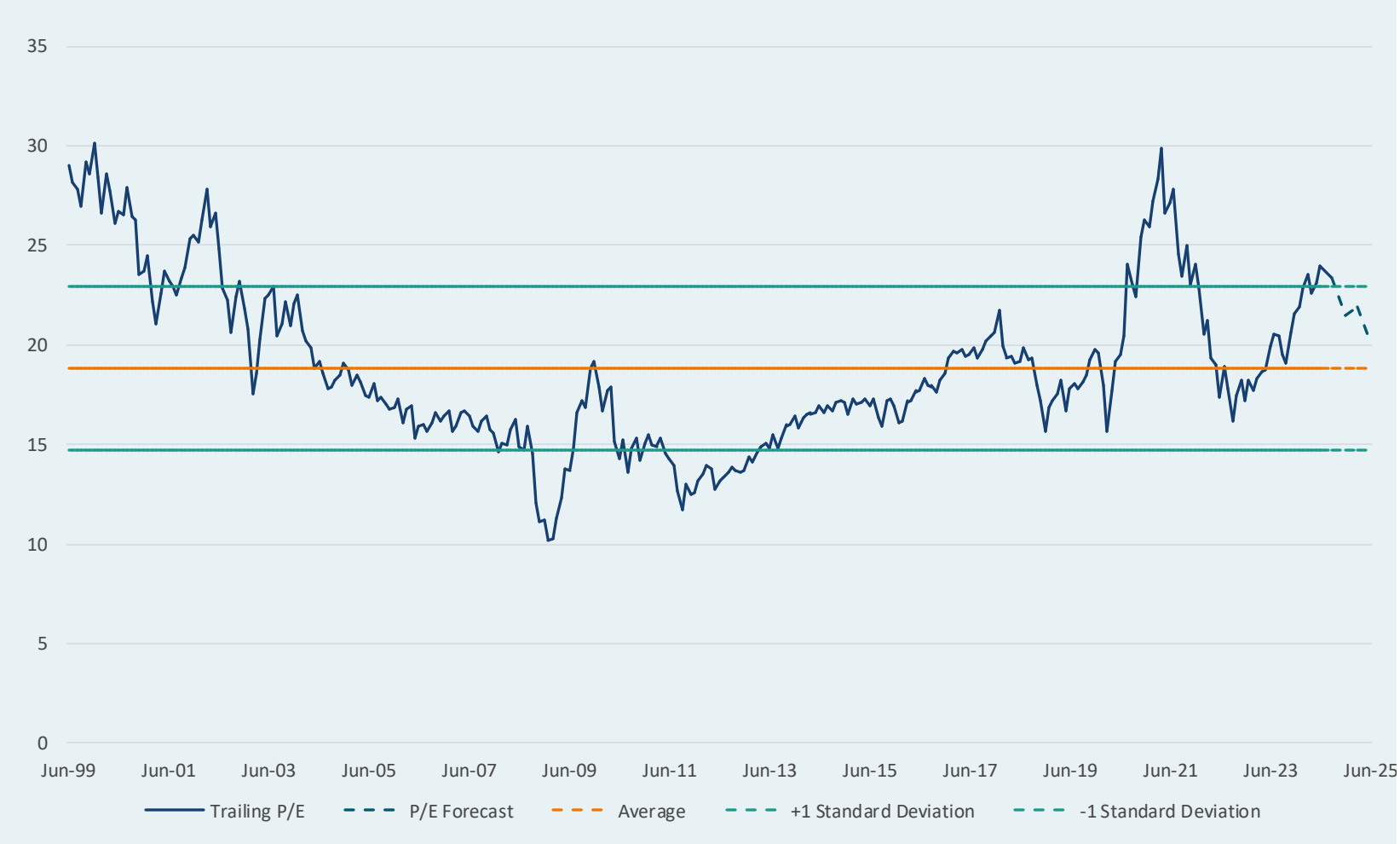


Source: MSCI, Bloomberg, as of 6/30/24

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.

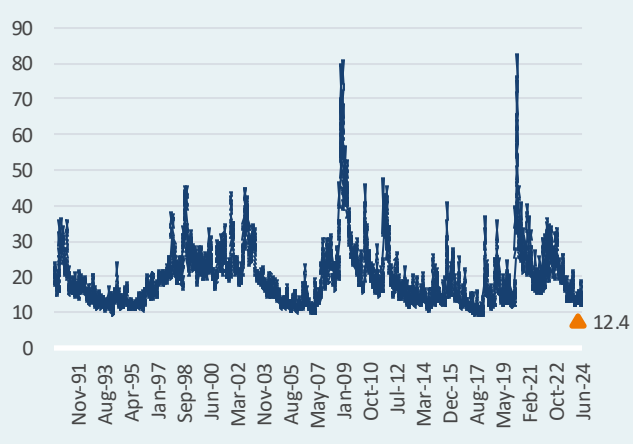
Market volatility

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.

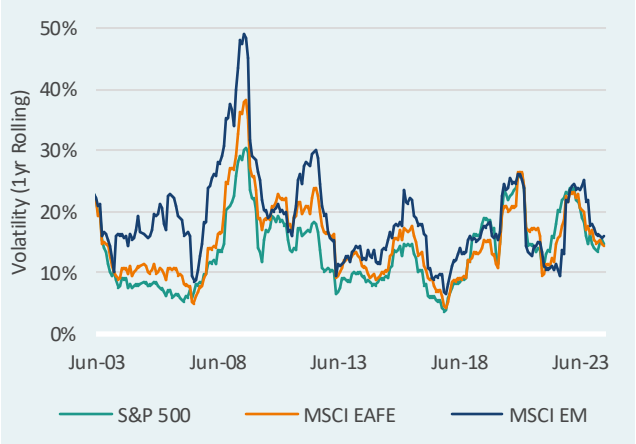
This asset allocation environment is unique in terms of low equity volatility but high fixed income volatility. This gap has closed somewhat, as bond market implied volatility has moved a bit back towards normal levels since reaching a nearly all time high in 2023. Bond characteristics are captured by 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)



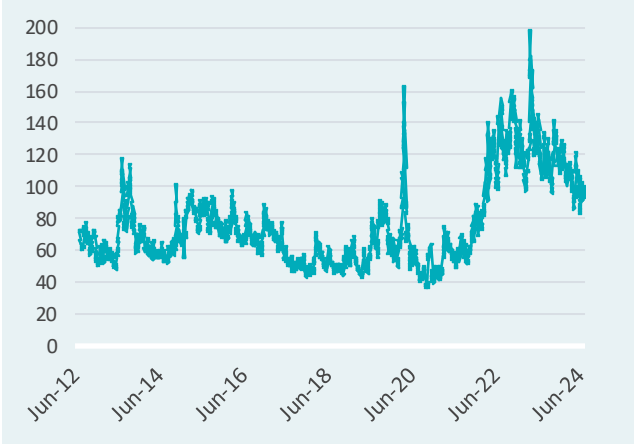
Source: Cboe, as of 6/30/24

REALIZED VOLATILITY



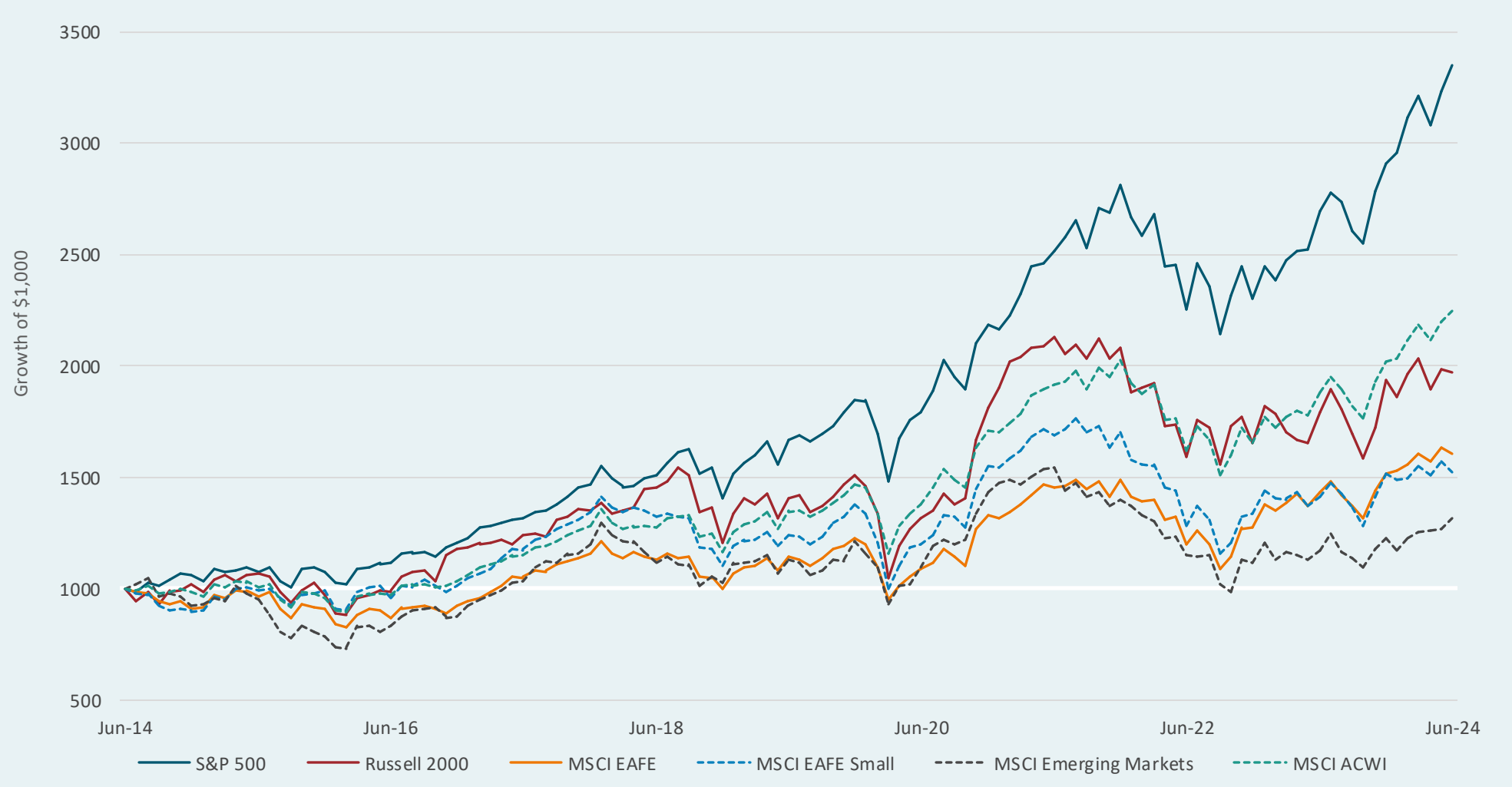
Source: S&P, MSCI, as of 6/30/24

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

Other assets

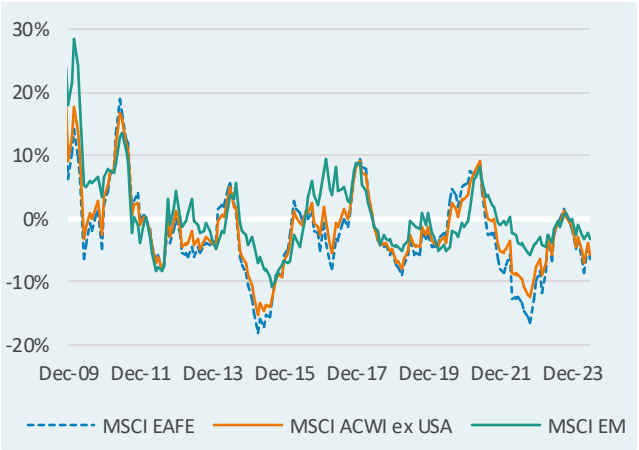
Currency

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).

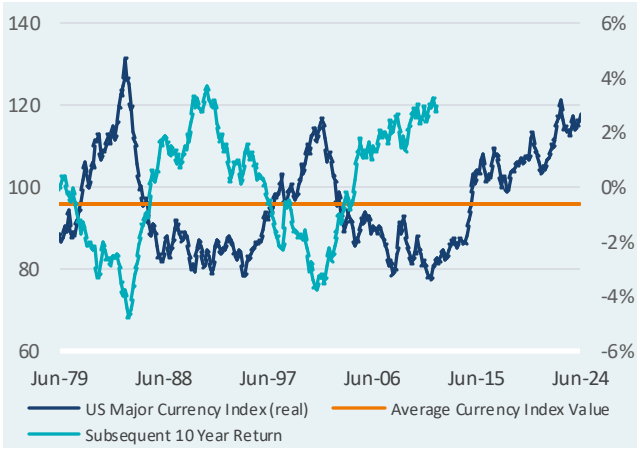
A more thoughtful portfolio approach to currency exposure has provided the dual benefit of lower portfolio volatility and also higher returns—a rare proposition in markets. This approach involves reducing the uncompensated risk of unhedged foreign currency exposure, and instead of unhedged exposure, 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)



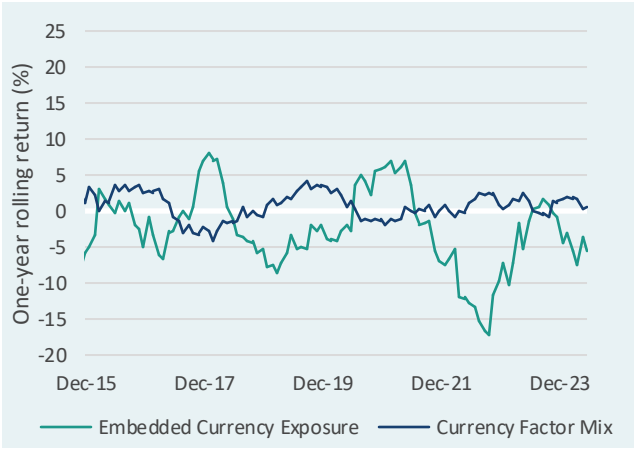
Source: MSCI, as of 6/30/24

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

	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

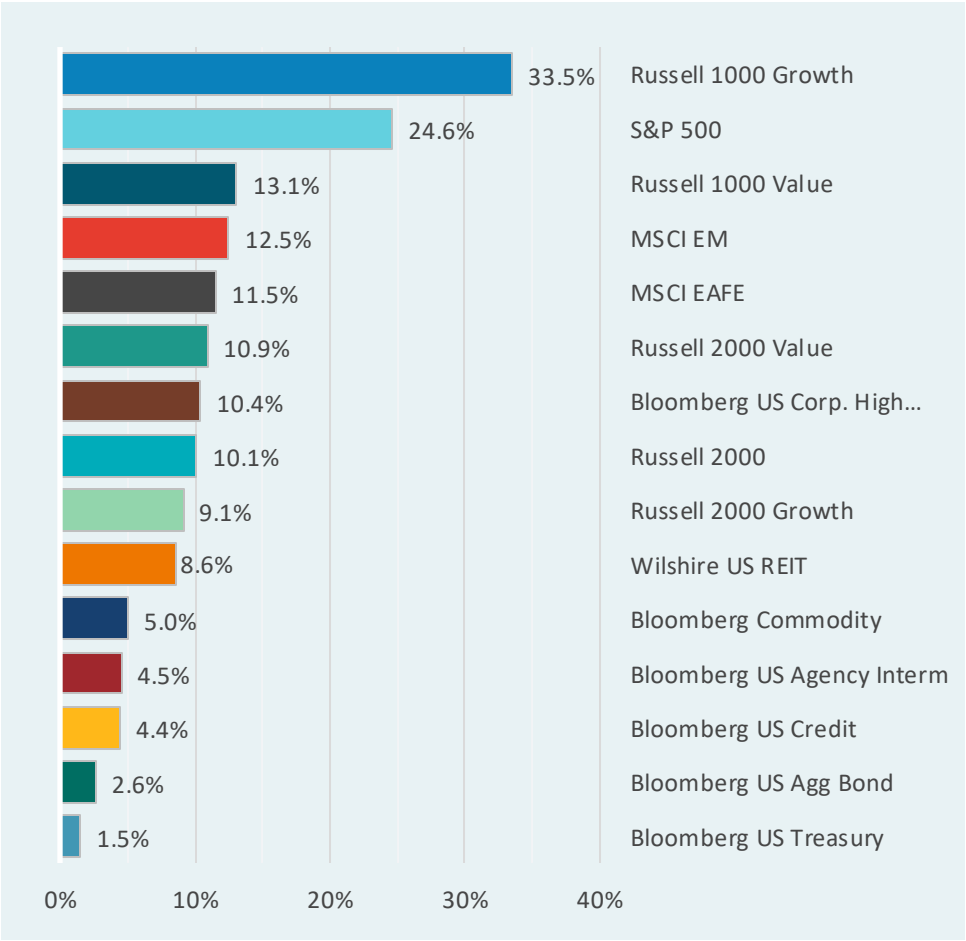
WORST

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

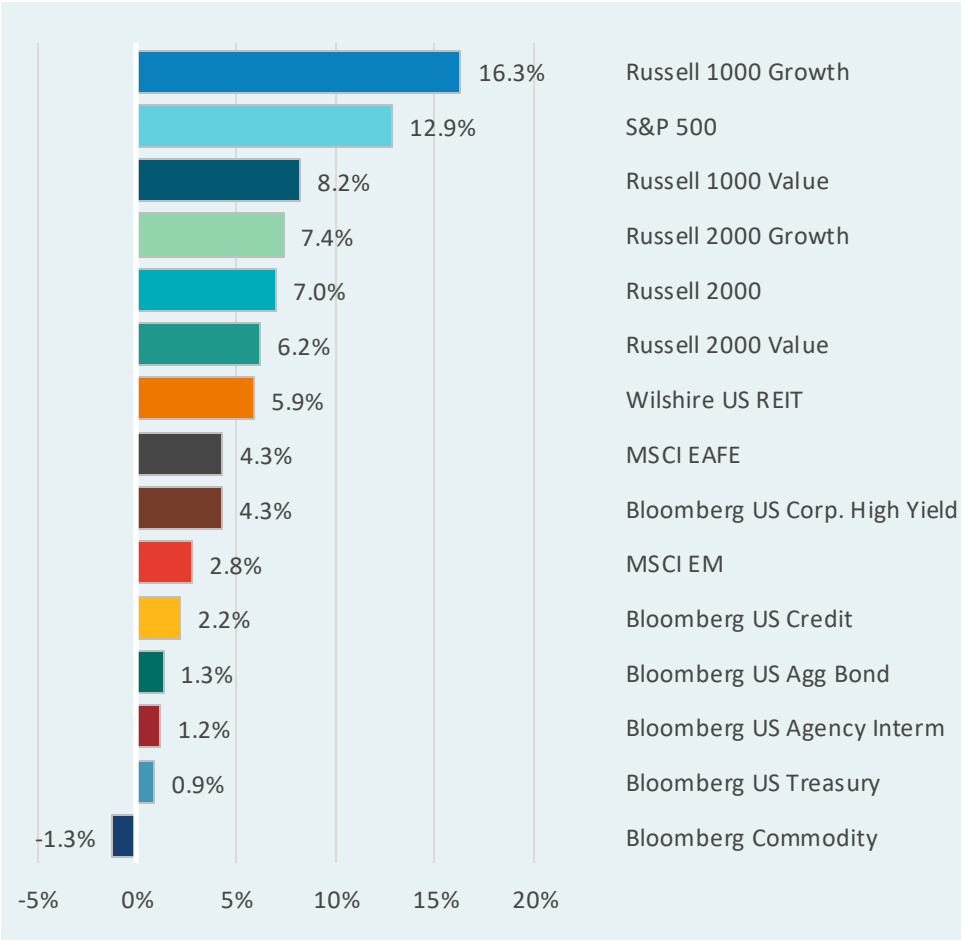
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill 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



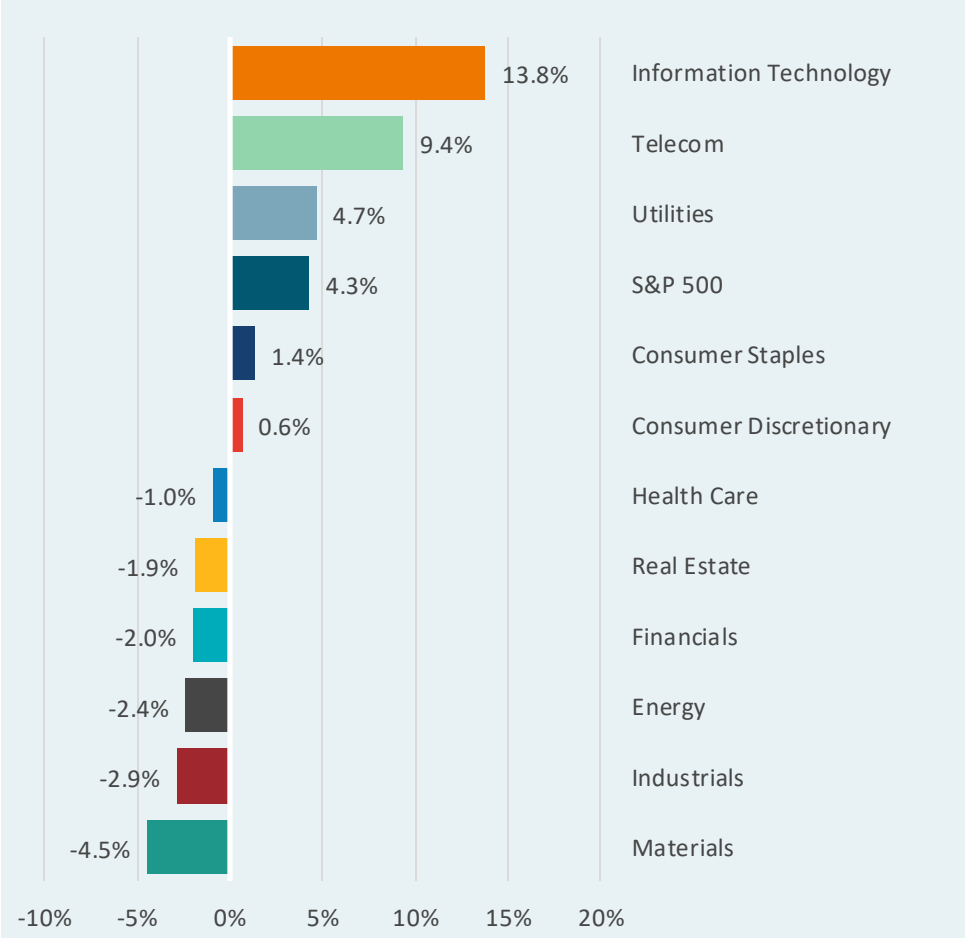
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 6/30/24

Source: Morningstar, as of 6/30/24

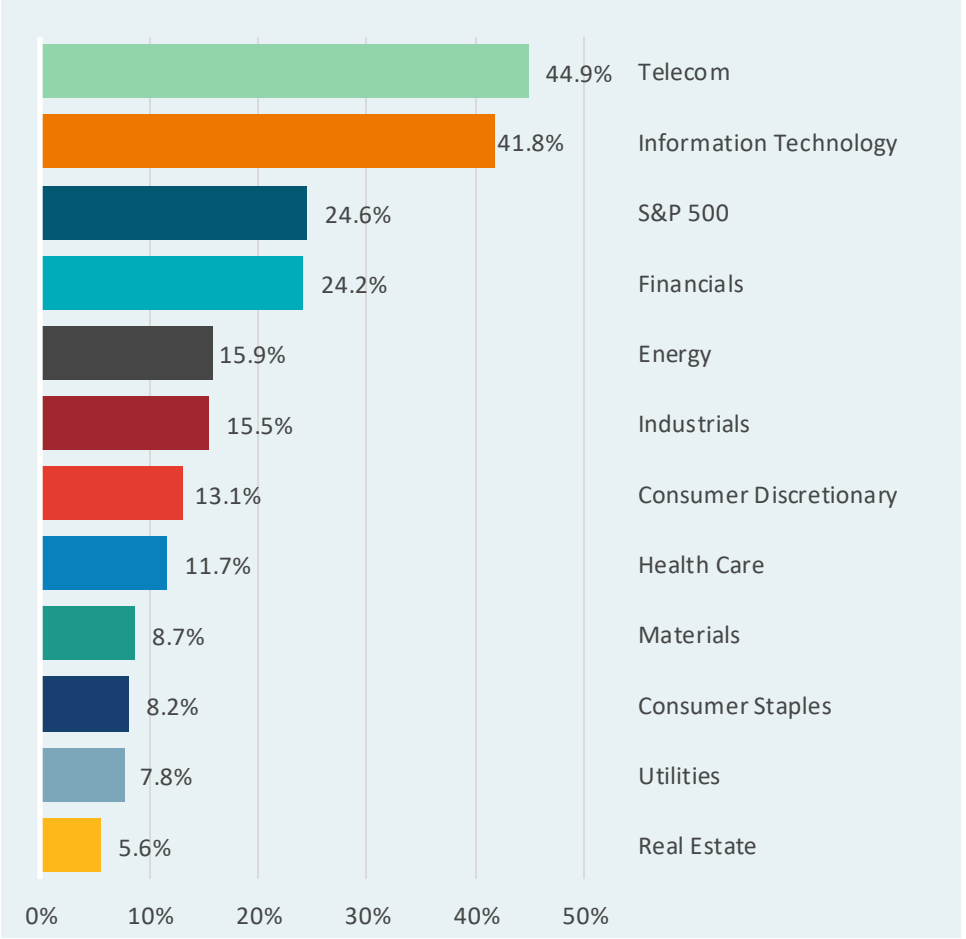
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/24

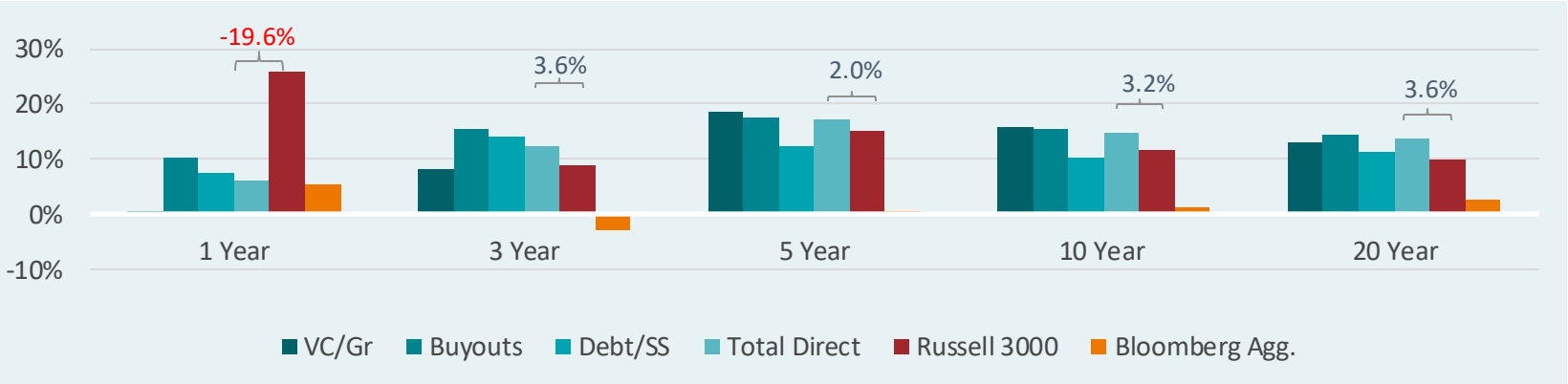
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/24

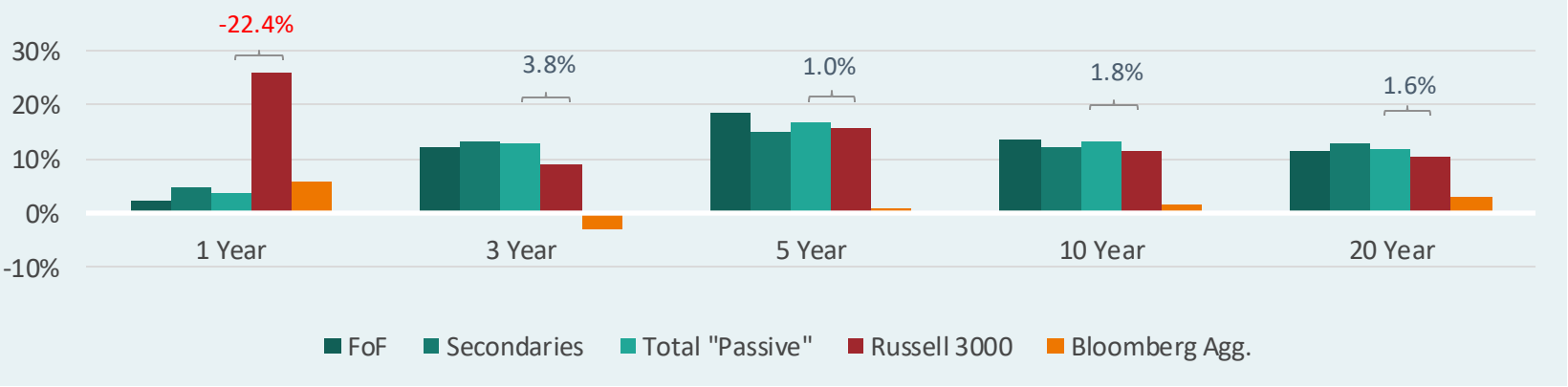
Private equity vs. traditional assets performance

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

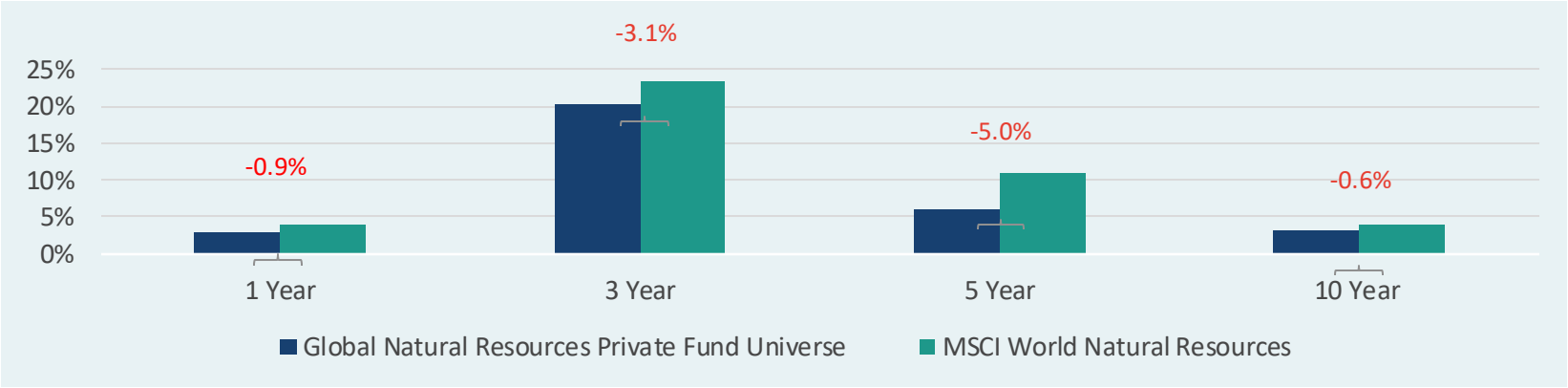


"Passive" strategies outperformed comparable public equities across all time periods, aside from the 1-year.

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.

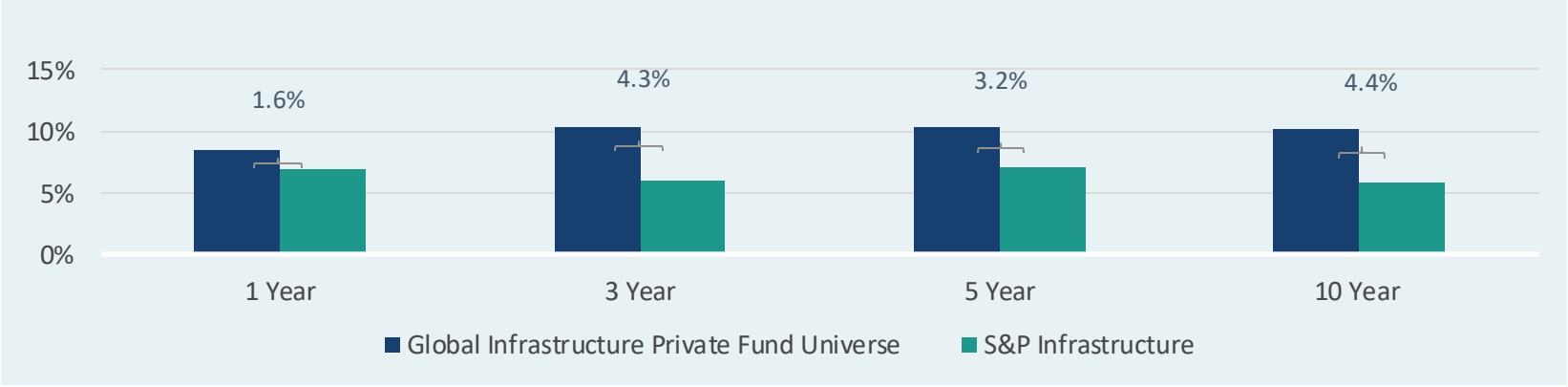
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

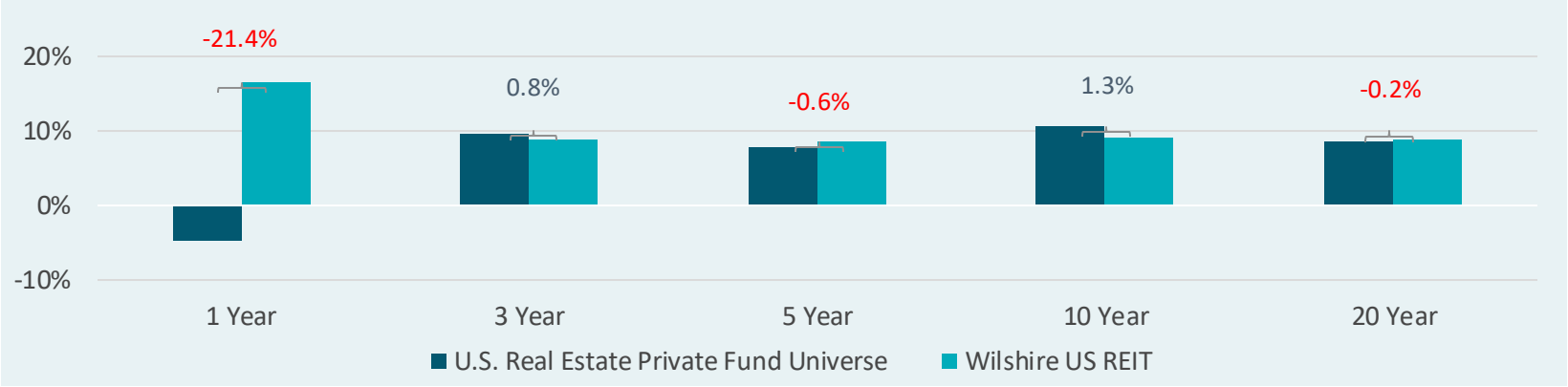


Infra. funds outperformed the S&P Infra. across all periods.

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.

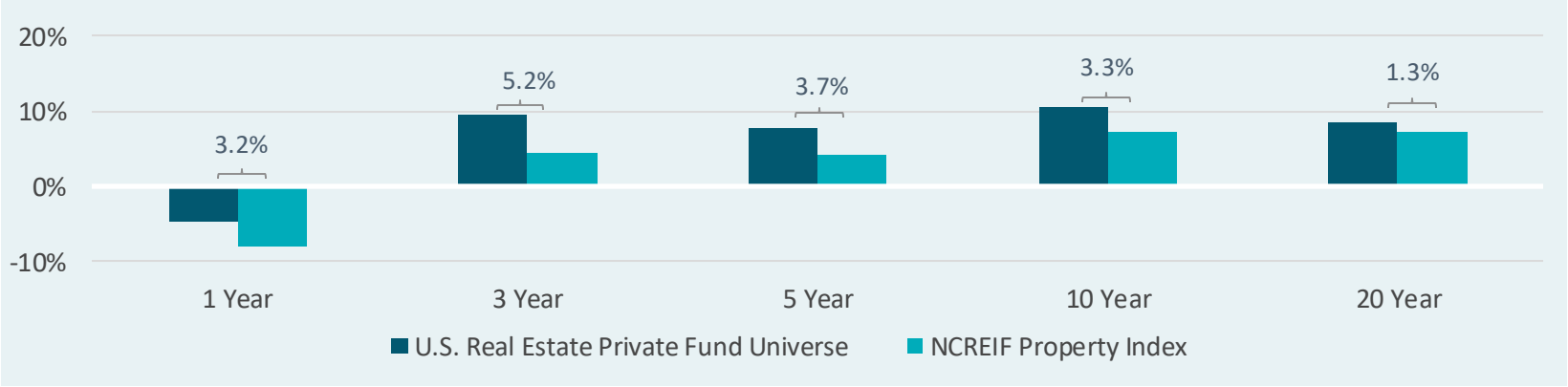
Private vs. liquid and core real estate performance

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.*

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SCERS

Quarter ending June 30th, 2024

- The Total Plan produced a gross return of +1.6% in the second quarter of 2024, positioning it in the top quartile among other public funds with assets over $1 billion. The Plan outperformed its policy index by +40 bps over this period. Over the longer term, the three-year return of +4.0% secures a second quartile ranking within the large public plan peer group. Similarly, the five-year return of +8.2% also places just outside the top quartile of the same peer group

- First quarter results (net) were enhanced by the following factors:

    1. Within the Growth Asset Category (+2.4%), which outperformed the total fund, Domestic Equity (+3.9%) was the main outperformer of the portfolio, with Large Cap (130/30) (+5.8%) and Large Cap Active (+5.2%) being one of the top performing sub-asset classes.
    2. International Emerging Markets, which is also within the Growth Asset Category, enhanced returns by gaining +4.0% over the quarter.

- First quarter results (net) were hindered by the following factors:

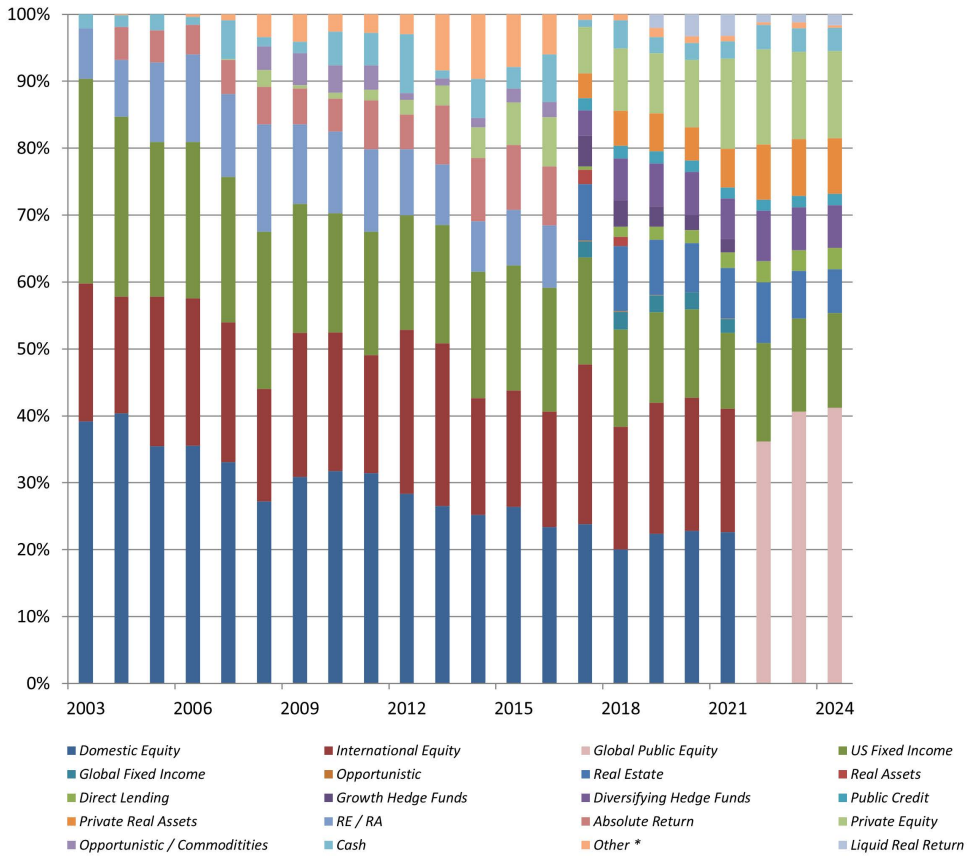
    1. International Developed Markets, which detracted from the portfolio's overall performance, returned -1.0%. The Large Cap sub-asset class was the underperformer, with a -1.3% return over the quarter.

    2. Fixed Income mildly detracted from overall portfolio performance, returning just +0.1% on the quarter.

    3. Non-Core Real Estate (Opportunistic) declined by -2.1% this quarter, underperforming against the Real Estate composite's retraction of -0.9%.

Total Fund
Actual Yearly and Quarterly Asset Allocation

Sacramento County Employees' Retirement System
Period Ending: June 30, 2024



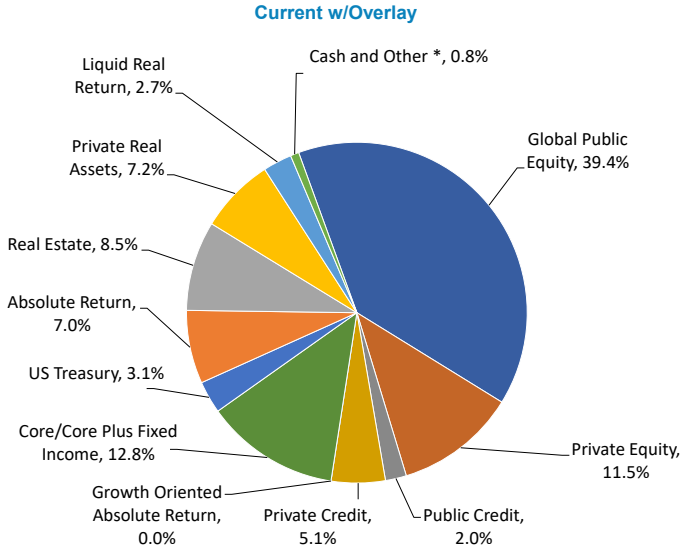
	2003	2004	2005	2006	2007	2008	2009
US Equity	39.2	40.4	35.4	35.5	33.1	27.2	30.9
International Equity	20.6	17.5	22.3	22.0	20.9	16.8	21.5
US Fixed Income	30.6	26.9	23.1	23.3	21.7	23.5	19.3
Real Estate / Real Assets	7.5	8.5	11.9	13.1	12.4	16.1	11.9
Absolute Return	-	4.9	4.8	4.4	5.1	5.6	5.3
Private Equity	-	-	-	-	0.1	2.5	0.5
Opportunistic / Commodities	-	-	-	-	-	3.5	4.8
Cash	2.1	1.8	2.4	1.2	5.8	1.4	1.7
Other *	-	0.1	-	0.4	0.9	3.4	4.1

	2010	2011	2012	2013	2014	2015	2016
US Equity	31.7	31.4	28.4	26.5	25.2	26.4	23.4
International Equity	20.7	17.6	24.5	24.3	17.5	17.3	17.2
US Fixed Income	17.8	18.4	17.1	17.7	18.9	18.7	18.5
Real Estate / Real Assets	12.2	12.4	9.9	9.0	7.6	8.3	9.3
Absolute Return	4.9	7.3	5.2	8.8	9.4	9.7	8.8
Private Equity	0.9	1.6	2.2	3.0	4.6	6.3	7.4
Opportunistic / Commodities	4.1	3.7	1.1	1.0	1.4	2.1	2.2
Cash	5.0	4.9	8.8	1.2	5.9	3.2	7.1
Other *	2.6	2.7	2.9	8.4	9.6	7.9	6.0

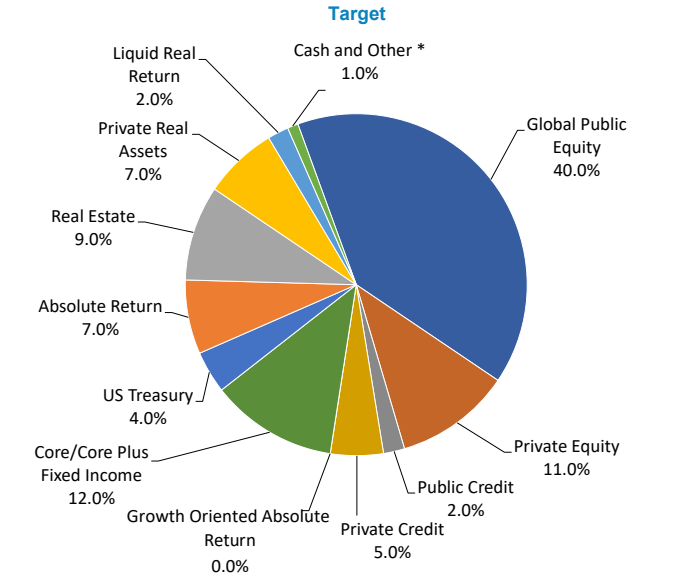
	2017	2018	2019	2020	2021	2022	2023	2024
Domestic Equity	23.8	20.0	22.4	22.8	22.6	-	-	-
International Equity	23.9	18.3	19.6	19.9	18.4	-	-	-
Global Public Equity	-	-	-	-	-	36.2	40.6	41.4
US Fixed Income	16.0	14.6	13.6	13.2	11.4	14.8	13.9	14.3
Global Fixed Income	2.4	2.6	2.5	2.5	2.1	-	-	-
Public Credit	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.7
Real Estate / Real Assets	-	-	-	-	-	-	-	-
Real Estate	8.4	9.7	8.3	7.3	7.6	9.0	7.1	6.6
Real Assets	2.1	1.4	-	-	-	-	-	-
Private Real Assets	3.7	5.2	5.7	4.9	5.8	8.2	8.5	8.3
Liquid Real Return	-	-	2.0	3.3	3.2	1.2	1.2	1.7
Absolute Return	-	-	-	-	-			
Growth Hedge Funds	4.6	3.9	3.0	2.3	2.0	0.1	0.1	0.1
Diversifying Hedge Funds	3.8	6.2	6.4	6.4	6.0	7.5	6.3	6.4
Private Equity	6.9	9.3	9.0	10.1	13.4	14.2	13.0	13.1
Direct Lending	0.5	1.5	2.0	1.9	2.3	3.2	3.1	3.2
Opportunistic / Commodities	-	-	-	-	-	-	-	-
Opportunistic	0.1	0.1	0.1	0.0	0.0	-	-	-
Cash	1.1	4.3	2.4	2.5	2.6	3.7	3.5	2.9
Other *	0.8	0.9	1.4	1.0	0.8	0.4	0.9	0.4

[+] Allocations without overlay.

* Other includes SSgA Overlay and closing accounts. Prior to Q2 2017 SSgA Real Assets is also included.



ASSET ALLOCATION	MARKET VALUE W/OVERLAY	W/ OVERLAY	W/O OVERLAY
Global Public Equity	5,243,591,917	39.4%	41.4%
Private Equity	1,533,876,826	11.5%	13.1%
Public Credit	265,437,882	2.0%	1.7%
Private Credit	682,197,222	5.1%	3.2%
Growth Oriented Absolute Return	44,726	0.0%	0.1%
Core/Core Plus Fixed Income	1,700,089,267	12.8%	11.2%
US Treasury	408,063,286	3.1%	3.1%
Absolute Return	927,281,428	7.0%	6.4%
Real Estate	1,135,850,316	8.5%	6.6%
Private Real Assets	953,226,876	7.2%	8.3%
Liquid Real Return	364,898,815	2.7%	1.7%
Cash and Other *	107,240,280	0.8%	3.2%
TOTAL	**13,321,798,841**	**100.0%**	**100.0%**



ASSET ALLOCATION	ACTUAL	TARGET	DIFF
Global Public Equity	39.4%	40.0%	-0.6%
Private Equity	11.5%	11.0%	0.5%
Public Credit	2.0%	2.0%	0.0%
Private Credit	5.1%	5.0%	0.1%
Growth Oriented Absolute Return	0.0%	0.0%	0.0%
Core/Core Plus Fixed Income	12.8%	12.0%	0.8%
US Treasury	3.1%	4.0%	-0.9%
Absolute Return	7.0%	7.0%	0.0%
Real Estate	8.5%	9.0%	-0.5%
Private Real Assets	7.2%	7.0%	0.2%
Liquid Real Return	2.7%	2.0%	0.7%
Cash and Other *	0.8%	1.0%	-0.2%

* Other includes closing accounts (SSgA Overlay)

Total Fund
Performance Summary

Sacramento County Employees' Retirement System
Period Ending: June 30, 2024

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Total Fund - Gross	**13,321,798,841**	**100.0**	**1.6 (20)**	**5.5 (39)**	**9.4 (60)**	**4.0 (29)**	**8.2 (26)**	**7.4 (24)**	**8.4**	**Jul-86**
Total Fund - Net			**1.5**	**5.4**	**9.2**	**3.8**	**8.0**	**7.1**	**8.2**	**Jul-86**
Policy Index			*1.4 (24)*	*4.9 (56)*	*9.4 (60)*	*3.9 (31)*	*7.2 (56)*	*6.7 (50)*	*8.3*	*Jul-86*
InvMetrics Public DB > $1B Median			*1.0*	*5.1*	*9.8*	*3.3*	*7.4*	*6.6*	-	
Total Fund ex Overlay - Gross	**13,271,942,034**	**99.6**	**1.6 (13)**	**5.6 (33)**	**9.6 (54)**	**4.2 (19)**	**8.2 (27)**	**7.4 (23)**	**8.3**	**Jul-86**
Total Fund ex Overlay - Net			**1.6**	**5.6**	**9.5**	**4.0**	**7.9**	**7.2**	**8.1**	**Jul-86**
Policy Index			*1.4 (24)*	*4.9 (56)*	*9.4 (60)*	*3.9 (31)*	*7.2 (56)*	*6.7 (50)*	*8.3*	*Jul-86*
Growth Asset Category - Gross	**7,942,010,703**	**59.6**	**2.4**	**8.9**	**15.0**	**5.1**	**11.2**	**-**	**11.3**	**Apr-17**
Growth Asset Category - Net			**2.4**	**8.8**	**14.8**	**4.8**	**10.9**	**-**	**11.0**	**Apr-17**
Growth Custom			*2.1*	*8.3*	*15.1*	*5.3*	*10.4*	-	*10.1*	
Global Public Equity - Gross	**5,525,561,330**	**41.5**	**2.4 (20)**	**10.6 (24)**	**18.4 (35)**	**4.4 (45)**	**10.5 (40)**	**8.9 (24)**	**9.6**	**Jul-11**
Global Public Equity - Net			**2.4**	**10.5**	**18.0**	**4.0**	**10.1**	**8.5**	**9.2**	**Jul-11**
MSCI AC World IMI Index (Net)			*2.4*	*10.3*	*18.4*	*4.7*	*10.4*	*8.2*	*8.7*	
Domestic Equity - Gross	**2,906,326,528**	**21.8**	**3.9 (6)**	**15.3 (5)**	**25.4 (3)**	**8.6 (12)**	**14.6 (13)**	**12.4 (22)**	**10.7**	**Jul-86**
Domestic Equity - Net			**3.9**	**15.1**	**25.1**	**8.3**	**14.3**	**12.1**	**10.5**	**Jul-86**
Russell 3000 Index			*3.2 (23)*	*13.6 (28)*	*23.1 (33)*	*8.1 (31)*	*14.1 (31)*	*12.1 (31)*	*10.6*	*Jul-86*
InvMetrics All DB US Equity Median			*2.5*	*12.6*	*22.0*	*7.4*	*13.7*	*11.8*	-	
Large Cap - Gross	**2,661,223,525**	**20.0**	**4.2**	**16.0**	**26.8**	**9.8**	**15.3**	**12.8**	**8.1**	**Apr-98**
Large Cap - Net			**4.2**	**15.9**	**26.6**	**9.6**	**15.1**	**12.6**	**7.9**	**Apr-98**
Russell 1000 Index			*3.6*	*14.2*	*23.9*	*8.7*	*14.6*	*12.5*	*8.3*	
Large Cap - Index	**1,397,151,202**	**10.5**	**3.5**	**14.2**	**23.8**	**8.8**	**14.6**	**12.5**	**12.4**	**Oct-08**
Large Cap - Index			**3.5**	**14.2**	**23.8**	**8.8**	**14.6**	**12.5**	**12.4**	**Oct-08**
Russell 1000 Index			*3.6*	*14.2*	*23.9*	*8.7*	*14.6*	*12.5*	*12.4*	
AB - Gross	1,397,151,202	10.5	3.5 (66)	14.2 (65)	23.8 (64)	8.8 (63)	14.6 (63)	12.5 (65)	10.7	May-89
AB - Net			3.5	14.2	23.8	8.8	14.6	12.5	10.7	May-89
Russell 1000 Index			*3.6 (63)*	*14.2 (62)*	*23.9 (62)*	*8.7 (69)*	*14.6 (63)*	*12.5 (64)*	*10.8*	*May-89*
eV US Passive Large Cap Equity Median			*4.0*	*15.0*	*24.3*	*9.5*	*14.9*	*12.8*	-	
Large Cap - Enhanced - Gross	**415,046,105**	**3.1**	**3.8**	**15.4**	**27.4**	**11.0**	**15.7**	**-**	**13.7**	**Aug-18**
Large Cap - Enhanced - Net			**3.7**	**15.3**	**27.1**	**10.7**	**15.4**	**-**	**13.4**	**Aug-18**
Russell 1000 Index			*3.6*	*14.2*	*23.9*	*8.7*	*14.6*	-	*13.4*	
AQR US Enhanced Equity - Gross	415,046,105	3.1	3.8 (50)	15.4 (44)	27.4 (12)	11.0 (20)	15.7 (17)	-	13.7	Aug-18
AQR US Enhanced Equity - Net			3.7	15.3	27.1	10.7	15.4	-	13.4	Aug-18
Russell 1000 Index			*3.6 (58)*	*14.2 (61)*	*23.9 (64)*	*8.7 (64)*	*14.6 (55)*	-	*13.4*	*Aug-18*
eV US Enh Equity Median			*3.7*	*15.0*	*24.7*	*9.5*	*14.7*	*12.6*	-	

See Policy Index and Benchmark History
**Total Fund and asset class composites are ranked against Investment Metrics universes. Managers are ranked against eVestment manager universes. Ranking of 1 is a top ranking and ranking of 100 is a bottom rating.*
***Total Fund ex Overlay returns from 2/1/2006-12/31/2010 were calculated using the overlay impact provided by SSgA.*
+ Since inception date denotes first day of the month.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Large Cap (130/30) - Gross	**424,872,052**	**3.2**	**5.9**	**20.0**	**30.8**	**11.9**	**16.9**	**13.5**	**13.5**	**Oct-08**
Large Cap (130/30) - Net			**5.8**	**19.9**	**30.4**	**11.4**	**16.4**	**12.9**	**12.9**	**Oct-08**
Russell 1000 Index			*3.6*	*14.2*	*23.9*	*8.7*	*14.6*	*12.5*	*12.4*	
JP Morgan 130/30 - Gross	223,061,480	1.7	6.5 (1)	21.7 (3)	34.0 (15)	14.1 (40)	19.4 (18)	14.8 (26)	14.1	Aug-08
JP Morgan 130/30 - Net			6.4	21.5	33.5	13.4	18.7	14.1	13.3	Aug-08
Russell 1000 Index			*3.6 (36)*	*14.2 (46)*	*23.9 (57)*	*8.7 (74)*	*14.6 (60)*	*12.5 (67)*	*11.7*	*Aug-08*
eV Extended US Equity Median			*1.9*	*13.2*	*25.0*	*12.4*	*15.8*	*13.3*	-	
DE Shaw Broad Mkt Core Alpha Ext - Gross	201,810,572	1.5	5.2 (16)	18.3 (27)	27.4 (40)	9.6 (68)	14.3 (62)	-	14.7	Feb-19
DE Shaw Broad Mkt Core Alpha Ext - Net			5.1	18.1	27.0	9.3	13.9	-	14.3	Feb-19
Russell 1000 Index			*3.6 (36)*	*14.2 (46)*	*23.9 (57)*	*8.7 (74)*	*14.6 (60)*	-	*15.4*	*Feb-19*
eV Extended US Equity Median			*1.9*	*13.2*	*25.0*	*12.4*	*15.8*	*13.3*	-	
Large Cap Active - Gross	**424,154,166**	**3.2**	**5.4**	**19.5**	**33.4**	**10.3**	**15.7**	**12.8**	**12.6**	**Oct-08**
Large Cap Active - Net			**5.2**	**19.1**	**32.5**	**9.5**	**14.9**	**12.0**	**11.9**	**Oct-08**
Russell 1000			*3.6*	*14.2*	*23.9*	*8.7*	*14.6*	*11.2*	*11.1*	
Eagle Capital - Gross	424,133,901	3.2	5.4 (11)	19.5 (8)	33.4 (5)	10.3 (34)	15.7 (21)	13.8 (12)	15.2	Mar-12
Eagle Capital - Net			5.2	19.1	32.5	9.5	14.9	12.9	14.3	Mar-12
Russell 1000 Index			*3.6 (40)*	*14.2 (47)*	*23.9 (46)*	*8.7 (56)*	*14.6 (43)*	*12.5 (42)*	*13.8*	*Mar-12*
eV US Large Cap Core Equity Median			*2.9*	*13.8*	*23.1*	*9.0*	*14.2*	*12.2*	-	
Small Cap - Gross	**245,103,003**	**1.8**	**0.9**	**7.2**	**11.4**	**-2.2**	**7.9**	**8.8**	**11.4**	**Jan-91**
Small Cap - Net			**0.8**	**6.9**	**10.8**	**-3.0**	**7.2**	**8.1**	**10.7**	**Jan-91**
Russell 2000 Index			*-3.3*	*1.7*	*10.1*	*-2.6*	*6.9*	*7.0*	*10.0*	
Small Cap - Growth - Gross	**105,111,401**	**0.8**	**0.1**	**4.2**	**7.2**	**-10.0**	**5.7**	**9.9**	**10.8**	**Oct-08**
Small Cap - Growth - Net			**0.1**	**4.1**	**7.0**	**-10.7**	**5.0**	**9.3**	**10.1**	**Oct-08**
Russell 2000 Growth Index			*-2.9*	*4.4*	*9.1*	*-4.9*	*6.2*	*7.4*	*9.5*	
Weatherbie - Gross	105,111,401	0.8	0.1 (22)	4.2 (59)	7.2 (66)	-10.0 (88)	5.7 (90)	11.4 (26)	11.9	Jan-03
Weatherbie - Net			0.1	4.1	7.0	-10.7	5.0	10.7	11.1	Jan-03
Russell 2000 Growth Index			*-2.9 (58)*	*4.4 (57)*	*9.1 (54)*	*-4.9 (63)*	*6.2 (86)*	*7.4 (93)*	*9.9*	*Jan-03*
eV US Small Cap Growth Equity Median			*-2.3*	*5.2*	*9.5*	*-2.7*	*8.2*	*10.1*	-	

See Policy Index and Benchmark History

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Small Cap - Value - Gross	**139,991,602**	**1.1**	**1.5**	**9.6**	**14.8**	**6.1**	**8.8**	**6.9**	**8.9**	**Oct-08**
Small Cap - Value - Net			**1.3**	**9.2**	**13.9**	**5.3**	**8.1**	**6.2**	**8.1**	**Oct-08**
Russell 2000 Value Index			*-3.6*	*-0.8*	*10.9*	*-0.5*	*7.1*	*6.2*	*7.7*	
Snyder Capital Management - Gross	139,991,602	1.1	1.5 (4)	9.6 (7)	14.8 (36)	6.1 (24)	-	-	8.7	Feb-21
Snyder Capital Management - Net			1.3	9.2	13.9	5.3	-	-	7.9	Feb-21
Russell 2000 Value Index - Net			*-3.6 (64)*	*-0.8 (83)*	*10.9 (64)*	*-0.5 (91)*	-	-	*5.1*	*Feb-21*
eV US Small Cap Value Equity Median			*-3.1*	*2.0*	*12.7*	*3.7*	*9.9*	*8.0*	-	
International Equity - Gross	**2,217,406,434**	**16.6**	**0.5 (61)**	**4.5 (88)**	**9.8 (81)**	**-0.3 (76)**	**5.9 (66)**	**4.9 (48)**	**6.4**	**Jan-88**
International Equity - Net			**0.4 (67)**	**4.3 (89)**	**9.4 (84)**	**-0.8 (87)**	**5.4 (83)**	**4.3 (71)**	**6.0**	**Jan-88**
MSCI AC World ex USA (Net)			*1.0 (36)*	*5.7 (50)*	*11.6 (41)*	*0.5 (62)*	*5.5 (81)*	*3.8 (86)*	*5.7*	*Jan-88*
InvMetrics All DB Global ex-US Equity Median			*0.8*	*5.7*	*11.4*	*0.8*	*6.7*	*4.8*	-	
International - Developed - Gross	**1,563,894,477**	**11.7**	**-0.9 (85)**	**3.9 (83)**	**9.9 (72)**	**1.8 (50)**	**7.0 (52)**	**5.6 (57)**	**5.1**	**Apr-98**
International - Developed - Net			**-1.0 (87)**	**3.7 (84)**	**9.5 (76)**	**1.2 (54)**	**6.4 (68)**	**5.0 (69)**	**4.6**	**Apr-98**
MSCI World ex U.S. (Net)			*-0.6 (78)*	*5.0 (65)*	*11.2 (48)*	*2.8 (39)*	*6.6 (67)*	*4.3 (81)*	*4.7*	*Apr-98*
InvMetrics All DB Developed Market ex-US Equity Median			*0.3*	*5.8*	*11.1*	*1.7*	*7.0*	*5.9*	-	
Large Cap - Gross	**1,345,344,798**	**10.1**	**-1.2 (81)**	**4.0 (69)**	**9.8 (64)**	**2.6 (56)**	**7.3 (54)**	**5.7 (40)**	**5.6**	**Jan-05**
Large Cap - Net			**-1.3 (82)**	**3.8 (72)**	**9.4 (67)**	**2.1 (65)**	**6.7 (69)**	**5.1 (57)**	**5.1**	**Jan-05**
MSCI World ex U.S. (Net)			*-0.6 (68)*	*5.0 (56)*	*11.2 (49)*	*2.8 (52)*	*6.6 (73)*	*4.3 (84)*	*5.1*	*Jan-05*
eV EAFE Large Cap Equity Median			*0.0*	*5.2*	*11.0*	*3.0*	*7.5*	*5.3*	-	
Lazard - Gross	330,707,277	2.5	-3.2 (94)	4.2 (67)	8.6 (72)	0.9 (50)	5.7 (78)	5.0 (65)	7.7	Jul-12
Lazard - Net			-3.3	3.9	8.0	0.4	5.3	4.6	7.4	Jul-12
MSCI World ex U.S. (Net)			*-0.6 (73)*	*5.0 (59)*	*11.2 (52)*	*2.8 (30)*	*6.6 (60)*	*4.3 (83)*	*6.8*	*Jul-12*
eV All ACWI ex-US Equity Median			*0.6*	*5.5*	*11.4*	*0.9*	*7.0*	*5.5*	-	
Walter Scott & Partners Limited - Gross	496,473,871	3.7	-1.2 (79)	2.4 (88)	5.4 (74)	0.6 (30)	7.1 (63)	-	9.0	Apr-17
Walter Scott & Partners Limited - Net			-1.3	2.2	5.1	-0.2	6.3	-	8.2	Apr-17
MSCI World ex U.S. Growth (Net)			*-0.9 (72)*	*5.9 (43)*	*9.4 (37)*	*0.0 (40)*	*6.5 (76)*	-	*7.3*	*Apr-17*
eV EAFE Large Cap Growth Median			*-0.1*	*4.9*	*8.3*	*-0.8*	*7.4*	*6.3*	-	
LSV - Gross	518,163,651	3.9	0.1 (51)	5.4 (28)	15.3 (14)	6.4 (30)	8.7 (33)	5.5 (16)	5.5	Jan-05
LSV - Net			0.0	5.2	14.8	5.9	8.3	5.1	5.0	Jan-05
MSCI World ex U.S. Value (Net)			*-0.2 (56)*	*4.0 (52)*	*13.2 (25)*	*5.4 (40)*	*6.2 (68)*	*3.1 (88)*	*4.3*	*Jan-05*
eV EAFE Large Cap Value Median			*0.2*	*4.2*	*10.9*	*4.4*	*7.5*	*4.6*	-	

See Policy Index and Benchmark History

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Small Cap - Gross	**218,549,679**	**1.6**	**0.6 (16)**	**3.2 (49)**	**10.7 (43)**	**-4.8 (77)**	**4.3 (68)**	**4.4 (76)**	**7.5**	**Oct-08**
Small Cap - Net			**0.4**	**2.9**	**10.0**	**-5.4**	**3.6**	**3.7**	**6.7**	**Oct-08**
MSCI World ex U.S. Small Cap Index (Net)			*-1.6 (67)*	*1.0 (69)*	*7.8 (62)*	*-3.0 (59)*	*4.7 (64)*	*4.0 (82)*	*6.8*	*Oct-08*
eV EAFE Small Cap Equity Median			*-1.0*	*2.9*	*9.6*	*-1.5*	*5.7*	*5.6*	-	
William Blair Dev Small Cap - Gross	102,596,341	0.8	-0.7 (66)	-1.4 (84)	4.4 (84)	-7.5 (86)	4.2 (84)	4.2 (92)	7.5	Oct-08
William Blair Dev Small Cap - Net			-0.9	-1.9	3.4	-8.4	3.3	3.3	6.6	Oct-08
MSCI World ex U.S. Small Cap Index (Net)			*-1.6 (77)*	*1.0 (66)*	*7.8 (72)*	*-3.0 (60)*	*4.7 (75)*	*4.0 (93)*	*6.8*	*Oct-08*
eV ACWI ex-US Small Cap Equity Median			*0.5*	*4.1*	*10.5*	*-1.4*	*6.9*	*5.9*	-	
Acadian Asset Management - Gross	115,953,337	0.9	1.7 (31)	7.7 (24)	17.0 (26)	-	-	-	13.8	Apr-23
Acadian Asset Management - Net			1.6 (32)	7.5 (26)	16.5 (27)	-	-	-	13.4	Apr-23
MSCI World ex U.S. Small Value (Net)			*-1.8 (81)*	*1.0 (66)*	*10.0 (54)*	-	-	-	*9.1*	*Apr-23*
eV ACWI ex-US Small Cap Equity Median			*0.5*	*4.1*	*10.5*	*-1.4*	*6.9*	*5.9*	-	
International - Emerging - Gross	**653,507,916**	**4.9**	**4.0 (94)**	**5.7 (96)**	**9.1 (100)**	**-7.0 (96)**	**2.7 (87)**	**2.7 (67)**	**5.7**	**Feb-00**
International - Emerging - Net			**4.0**	**5.5**	**8.6**	**-7.3**	**2.4**	**2.4**	**5.2**	**Feb-00**
MSCI Emerging Markets (Net)			*5.0*	*7.5*	*12.5*	*-5.1*	*3.1*	*2.8*	*5.8*	
Arga Emg - Gross	210,037,095	1.6	3.8 (63)	5.2 (74)	9.9 (73)	-	-	-	8.6	Feb-23
Arga Emg - Net			3.7	4.8	9.1	-	-	-	7.8	Feb-23
MSCI Emerging Markets (Net)			*5.0 (44)*	*7.5 (52)*	*12.5 (53)*	-	-	-	*6.6*	*Feb-23*
eV Emg Mkts Equity Median			*4.7*	*7.7*	*12.7*	*-3.3*	*4.8*	*4.3*	-	
Baillie Gifford Emg All Cap - Gross	235,519,221	1.8	6.8 (15)	10.6 (24)	13.8 (43)	-7.1 (82)	3.7 (65)	-	8.2	Apr-16
Baillie Gifford Emg All Cap - Net			6.8	10.6	13.8	-7.1	3.7	-	8.2	Apr-16
MSCI Emerging Markets (Net)			*5.0 (44)*	*7.5 (52)*	*12.5 (53)*	*-5.1 (65)*	*3.1 (74)*	-	*5.8*	*Apr-16*
eV Emg Mkts Equity Median			*4.7*	*7.7*	*12.7*	*-3.3*	*4.8*	*4.3*	-	
Oaktree Emg - Gross	201,830,802	1.5	0.1 (93)	-0.3 (94)	1.1 (96)	-	-	-	-2.4	Feb-23
Oaktree Emg - Net			0.1	-0.5	0.5	-	-	-	-3.1	Feb-23
MSCI Emerging Markets (Net)			*5.0 (44)*	*7.5 (52)*	*12.5 (53)*	-	-	-	*6.6*	*Feb-23*
eV Emg Mkts Equity Median			*4.7*	*7.7*	*12.7*	*-3.3*	*4.8*	*4.3*	-	

See Policy Index and Benchmark History

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Global/Unconstrained Equity - Gross	**401,828,369**	**3.0**	**2.9 (15)**	**13.6 (8)**	**20.2 (13)**	**-**	**-**	**-**	**5.4**	**Apr-22**
Global/Unconstrained Equity - Net			**2.9**	**13.6**	**20.2**	**-**	**-**	**-**	**5.4**	**Apr-22**
MSCI AC World IMI Index (Net)			*2.4 (23)*	*10.3 (31)*	*18.4 (35)*	-	-	-	*6.7*	*Apr-22*
InvMetrics All DB Global Equity Median			*1.6*	*9.5*	*16.3*	*4.2*	*9.9*	*7.8*	-	
Artisan Partners Global Opp - Gross	153,080,063	1.1	1.4 (50)	12.4 (28)	20.2 (31)	-	-	-	15.9	Sep-22
Artisan Partners Global Opp - Net			1.4	12.4	20.2	-	-	-	15.9	Sep-22
MSCI AC World IMI Index (Net)			*2.4 (35)*	*10.3 (39)*	*18.4 (39)*	-	-	-	*16.9*	*Sep-22*
eV Global All Cap Equity Median			*1.4*	*8.9*	*16.5*	*4.8*	*10.6*	*8.7*	-	
Nikko Asset Management - Gross	150,840,000	1.1	3.1 (26)	17.6 (6)	21.3 (26)	-	-	-	16.6	Sep-22
Nikko Asset Management - Net			3.1	17.6	21.3	-	-	-	16.6	Sep-22
MSCI AC World IMI Index (Net)			*2.4 (35)*	*10.3 (39)*	*18.4 (39)*	-	-	-	*16.9*	*Sep-22*
eV Global All Cap Equity Median			*1.4*	*8.9*	*16.5*	*4.8*	*10.6*	*8.7*	-	
Third Point Offshore Fund - Gross	4,392,496	0.0	6.3 (3)	9.1 (47)	16.2 (52)	-1.5 (88)	7.0 (89)	5.9 (92)	8.3	May-12
Third Point Offshore Fund - Net			6.3	9.1	16.2	-1.5	7.0	5.9	8.3	May-12
MSCI AC World IMI Index (Net)			*2.4 (35)*	*10.3 (39)*	*18.4 (39)*	*4.7 (51)*	*10.4 (54)*	*8.2 (60)*	*9.5*	*May-12*
eV Global All Cap Equity Median			*1.4*	*8.9*	*16.5*	*4.8*	*10.6*	*8.7*	-	
Allspring Global Investments - Gross	93,515,810	0.7	3.9 (15)	10.8 (37)	-	-	-	-	23.9	Sep-23
Allspring Global Investments - Net			3.9	10.8	-	-	-	-	23.9	Sep-23
MSCI AC World IMI Index (Net)			*2.4 (35)*	*10.3 (39)*	-	-	-	-	*17.4*	*Sep-23*
eV Global All Cap Equity Median			*1.4*	*8.9*	*16.5*	*4.8*	*10.6*	*8.7*	-	
Private Equity - Gross* **	**1,751,011,949**	**13.1**	**2.3 (17)**	**5.2 (7)**	**7.0 (20)**	**7.4 (54)**	**16.2 (30)**	**15.7 (14)**	**7.1**	**Mar-08**
Private Equity - Net* **			**2.3**	**5.2**	**7.0**	**7.4**	**16.2**	**15.7**	**7.3**	**Mar-08**
Cambridge Associates All PE 1 Qtr Lag			*1.2 (33)*	*3.6 (23)*	*4.9 (48)*	*7.5 (53)*	*13.6 (52)*	*13.1 (37)*	*11.4*	*Mar-08*
Russell 3000 +3% 1Q Lag			*10.7 (1)*	*24.9 (1)*	*32.3 (1)*	*12.8 (14)*	*17.4 (10)*	*15.4 (14)*	*13.1*	*Mar-08*
InvMetrics All DB Private Equity Median			*0.0*	*1.7*	*4.4*	*7.9*	*13.8*	*10.6*	-	
Abbott VI - Gross	21,232,538	0.2	-1.0	1.6	1.5	0.8	10.0	12.9	6.4	Aug-08
Abbott VI - Net			-1.0	1.6	1.5	0.8	10.0	12.9	-	Aug-08
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*12.0*	
Accel-KKR V - Gross	35,216,895	0.3	35.1	38.8	48.1	27.9	35.7	-	26.5	Feb-17
Accel-KKR V - Net			35.1	38.8	48.1	27.9	35.7	-	26.5	Feb-17
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.4*	
Accel-KKR VI - Gross	27,939,348	0.2	0.0	0.0	0.0	-2.3	-	-	-17.9	Mar-21
Accel-KKR VI - Net			0.0	0.0	0.0	-2.3	-	-	-17.9	Mar-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.8*	

See Policy Index and Benchmark History
** Account converted to Global/Unconstrained Equity from Growth Oriented Absolute Return in April 2022. Reflects linked historical returns up to March 2022.*
*** Private Equity Composite includes the historical returns of Summit Credit and Athyrium Opportunities up to 4/1/17.*
**** Returns are one-quarter lag.*
+ Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar weighted-returns.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Accel-KKR Growth Partners II - Gross	8,762,069	0.1	2.3	11.3	22.6	22.8	37.1	-	18.3	Mar-15
Accel-KKR Growth Partners II - Net			2.3	11.3	22.6	22.8	37.1	-	18.3	Mar-15
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*12.7*	
Accel-KKR Growth Partners III - Gross	34,165,362	0.3	1.7	3.6	8.2	11.3	-	-	4.6	Aug-19
Accel-KKR Growth Partners III - Net			1.7	3.6	8.2	11.3	-	-	4.6	Aug-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*13.8*	
Accel-KKR Growth Partners IV - Gross	13,679,670	0.1	-0.5	0.4	1.3	-	-	-	-16.2	Jul-22
Accel-KKR Growth Partners IV - Net			-0.5	0.4	1.3	-	-	-	-16.2	Jul-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.3*	
Alchemy Special Opportunities Fund V - Gross	1,714,801	0.0	-	-	-	-	-	-	-	May-24
Alchemy Special Opportunities Fund V - Net			-	-	-	-	-	-	-	May-24
Cambridge Associates All PE 1 Qtr Lag			-	-	-	-	-	-	*1.2*	
Atalaya Special Opp V - Gross	91,119	0.0	-7.4	-7.3	-8.3	-7.2	0.0	3.1	2.6	Aug-13
Atalaya Special Opp V - Net			-7.4	-7.3	-8.3	-7.2	0.0	3.1	2.6	Aug-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.1*	
Atalaya Special Opp VI - Gross	1,043,475	0.0	-9.8	-2.5	-16.1	-5.2	7.0	-	7.6	May-16
Atalaya Special Opp VI - Net			-9.8	-2.5	-16.1	-5.2	7.0	-	7.6	May-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.8*	
Canvas Ventures III - Gross	14,324,383	0.1	-0.8	-8.1	-12.0	1.4	-	-	-2.0	Dec-20
Canvas Ventures III - Net			-0.8	-8.1	-12.0	1.4	-	-	-2.0	Dec-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*16.8*	
Cortec Group Fund VII - Gross	27,316,332	0.2	-0.3	3.6	7.9	19.9	-	-	22.4	Jan-20
Cortec Group Fund VII - Net			-0.3	3.6	7.9	19.9	-	-	22.4	Jan-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.2*	
Cortec Group Fund VIII - Gross**	3,036,620	0.0	-9.6	-16.5	-28.8	-	-	-	-24.0	Apr-23
Cortec Group Fund VIII - Net**			-9.6	-16.5	-28.8	-	-	-	-24.0	Apr-23
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*5.5*	
CRV Select Fund I - Gross	18,161,437	0.1	-0.6	1.2	4.4	0.6	-	-	0.6	Jun-21
CRV Select Fund I - Net			-0.6	1.2	4.4	0.6	-	-	0.6	Jun-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*10.7*	
CRV Select Fund II - Gross	6,884,981	0.1	-0.6	-0.3	2.9	-	-	-	-7.2	Apr-22
CRV Select Fund II - Net			-0.6	-0.3	2.9	-	-	-	-7.2	Apr-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.0*	

See Policy Index and Benchmark History
** Account converted to Global/Unconstrained Equity from Growth Oriented Absolute Return in April 2022. Reflects linked historical returns up to March 2022.*

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
CRV XVIII LP - Gross	17,024,360	0.1	-2.4	-4.4	-7.3	1.7	-	-	0.3	Mar-21
CRV XVIII LP - Net			-2.4	-4.4	-7.3	1.7	-	-	0.3	Mar-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.8*	
CRV XIX LP - Gross	7,275,315	0.1	-2.3	-4.8	-10.3	-	-	-	-17.1	Jul-22
CRV XIX LP - Net			-2.3	-4.8	-10.3	-	-	-	-17.1	Jul-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.3*	
Davidson Kempner LT Dist Opp IV - Gross	19,210,816	0.1	2.9	4.1	10.6	24.7	17.1	-	16.4	Apr-18
Davidson Kempner LT Dist Opp IV - Net			2.9	4.1	10.6	24.7	17.1	-	16.4	Apr-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
Davidson Kempner LT Dist Opp V - Gross	34,504,642	0.3	6.8	8.9	12.4	8.8	-	-	14.5	Jun-20
Davidson Kempner LT Dist Opp V - Net			6.8	8.9	12.4	8.8	-	-	14.5	Jun-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.4*	
Dyal Capital Partners II - Gross	36,823,925	0.3	3.6	-1.4	6.0	21.6	19.4	-	4.4	Jan-15
Dyal Capital Partners II - Net			3.6	-1.4	6.0	21.6	19.4	-	4.4	Jan-15
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
Dyal Capital Partners III - Gross	34,851,061	0.3	6.7	11.8	21.2	21.8	26.7	-	24.4	Jan-17
Dyal Capital Partners III - Net			6.7	11.8	21.2	21.8	26.7	-	24.4	Jan-17
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.0*	
Garrison Investment Group - Gross	1,393,566	0.0	0.6	-0.5	-6.5	43.9	22.7	9.6	9.5	Jun-12
Garrison Investment Group - Net			0.6	-0.5	-6.5	43.9	22.7	9.6	9.5	Jun-12
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.7*	
Golden Capital Co Invest - Gross	41,689,096	0.3	3.4	8.4	20.5	-	-	-	9.2	Nov-22
Golden Capital Co Invest - Net			3.4	8.4	20.5	-	-	-	9.2	Nov-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*3.6*	
Gridiron Capital Fund IV - Gross	53,561,629	0.4	-1.9	1.2	7.1	27.3	-	-	26.7	Jun-20
Gridiron Capital Fund IV - Net			-1.9	1.2	7.1	27.3	-	-	26.7	Jun-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.4*	
Gridiron Capital Fund V - Gross	15,885,856	0.1	0.2	1.9	40.0	-	-	-	11.6	Feb-23
Gridiron Capital Fund V - Net			0.2	1.9	40.0	-	-	-	11.6	Feb-23
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*5.5*	
Harbourvest VIII - Gross	1,383,891	0.0	-3.3	-21.9	-52.3	-21.7	-6.3	3.3	4.7	Jan-08
Harbourvest VIII - Net			-3.3	-21.9	-52.3	-21.7	-6.3	3.3	-	Jan-08
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*11.1*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
H.I.G. Bayside Loan III - Gross	3,432,625	0.0	-1.4	0.6	-12.7	-4.5	-4.5	3.0	1.8	Feb-13
H.I.G. Bayside Loan III - Net			-1.4	0.6	-12.7	-4.5	-4.5	3.0	1.8	Feb-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*15.0*	
H.I.G. Capital V - Gross	7,170,691	0.1	-0.2	5.7	-11.8	11.5	14.9	13.7	11.9	Aug-13
H.I.G. Capital V - Net			-0.2	5.7	-11.8	11.5	14.9	13.7	11.9	Aug-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.1*	
H.I.G. Europe Capital II - Gross	10,611,827	0.1	-2.0	2.5	3.9	3.8	11.3	-14.4	-14.2	Feb-14
H.I.G. Europe Capital II - Net			-2.0	2.5	3.9	3.8	11.3	-14.4	-14.2	Feb-14
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*13.5*	
Khosla IV - Gross	14,229,726	0.1	3.0	18.4	7.6	-5.2	15.7	19.6	17.6	Aug-11
Khosla IV - Net			3.0	18.4	7.6	-5.2	15.7	19.6	17.6	Aug-11
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.0*	
Khosla V - Gross	34,494,535	0.3	-4.9	-4.1	-6.0	2.8	20.1	-	14.6	Dec-14
Khosla V - Net			-4.9	-4.1	-6.0	2.8	20.1	-	14.6	Dec-14
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*12.8*	
Khosla VI - Gross	72,925,779	0.5	-1.8	26.1	25.3	27.6	19.2	-	14.9	Sep-18
Khosla VI - Net			-1.8	26.1	25.3	27.6	19.2	-	14.9	Sep-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.5*	
Khosla VII - Gross	21,905,415	0.2	12.8	19.7	28.0	17.8	-	-	7.2	Feb-21
Khosla VII - Net			12.8	19.7	28.0	17.8	-	-	7.2	Feb-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.5*	
Linden Capital III - Gross	22,272,335	0.2	10.3	20.4	7.6	0.6	17.1	-	17.5	Jul-16
Linden Capital III - Net			10.3	20.4	7.6	0.6	17.1	-	17.5	Jul-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.1*	
Linden Capital Partners IV - Gross	44,753,938	0.3	6.2	21.2	32.6	29.0	18.3	-	18.6	Oct-18
Linden Capital Partners IV - Net			6.2	21.2	32.6	29.0	18.3	-	18.6	Oct-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*12.9*	
Linden Capital Partners V - Gross	18,601,720	0.1	1.9	5.1	13.9	-	-	-	7.8	Aug-22
Linden Capital Partners V - Net			1.9	5.1	13.9	-	-	-	7.8	Aug-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.4*	
Marlin Equity IV - Gross	8,392,300	0.1	-3.0	-10.8	-16.8	-5.5	1.8	4.3	3.2	Dec-13
Marlin Equity IV - Net			-3.0	-10.8	-16.8	-5.5	1.8	4.3	3.2	Dec-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.2*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Marlin Equity V - Gross	31,975,763	0.2	2.0	2.5	8.4	14.0	21.1	-	17.9	Mar-18
Marlin Equity V - Net			2.0	2.5	8.4	14.0	21.1	-	17.9	Mar-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.8*	
Marlin Heritage - Gross	3,674,460	0.0	-7.0	-12.4	-26.4	-17.5	-1.5	-	10.7	Aug-14
Marlin Heritage - Net			-7.0	-12.4	-26.4	-17.5	-1.5	-	10.7	Aug-14
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.2*	
Marlin Heritage II - Gross	9,663,503	0.1	-2.3	-2.8	-13.0	3.7	9.6	-	4.1	Nov-17
Marlin Heritage II - Net			-2.3	-2.8	-13.0	3.7	9.6	-	4.1	Nov-17
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.7*	
Marlin Heritage III - Gross	7,263,901	0.1	2.6	11.1	4.8	-	-	-	-40.5	Jan-23
Marlin Heritage III - Net			2.6	11.1	4.8	-	-	-	-40.5	Jan-23
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*5.2*	
Marlin Heritage Europe - Gross	16,092,163	0.1	-4.8	0.0	0.0	14.9	22.6	-	19.3	Sep-17
Marlin Heritage Europe - Net			-4.8	0.0	0.0	14.9	22.6	-	19.3	Sep-17
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.1*	
New Enterprise 14 - Gross	38,583,693	0.3	-1.1	-1.3	9.2	-11.5	10.3	14.0	12.4	Jun-12
New Enterprise 14 - Net			-1.1	-1.3	9.2	-11.5	10.3	14.0	12.4	Jun-12
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.7*	
New Enterprise 15 - Gross	26,638,437	0.2	-3.7	-3.0	-2.4	-18.9	0.0	-	7.4	May-15
New Enterprise 15 - Net			-3.7	-3.0	-2.4	-18.9	0.0	-	7.4	May-15
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.3*	
New Enterprise 16 - Gross	39,682,264	0.3	14.1	11.0	14.9	-2.6	8.7	-	7.5	Jun-17
New Enterprise 16 - Net			14.1	11.0	14.9	-2.6	8.7	-	7.5	Jun-17
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.1*	
New Enterprise 17 - Gross	22,224,186	0.2	0.8	4.0	1.6	-3.3	-	-	8.0	Aug-19
New Enterprise 17 - Net			0.8	4.0	1.6	-3.3	-	-	8.0	Aug-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*13.8*	
Oaktree Power Opp Fund VI - Gross	28,179,469	0.2	5.7	8.2	23.6	-	-	-	8.2	Jun-22
Oaktree Power Opp Fund VI - Net			5.7	8.2	23.6	-	-	-	8.2	Jun-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.0*	
OrbiMed Private Investments VIII - Gross	11,485,250	0.1	7.1	15.6	26.6	11.1	-	-	6.4	Jan-21
OrbiMed Private Investments VIII - Net			7.1	15.6	26.6	11.1	-	-	6.4	Jan-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.1*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
OrbiMed Private Investments IX - Gross	7,079,878	0.1	14.4	6.8	25.5	-	-	-	-12.9	Dec-22
OrbiMed Private Investments IX - Net			14.4	6.8	25.5	-	-	-	-12.9	Dec-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*3.8*	
RCP Multi-Fund Feeder - Gross	82,833,049	0.6	2.1	5.6	9.7	17.9	14.9	-	11.0	Dec-18
RCP Multi-Fund Feeder - Net			2.1	5.6	9.7	17.9	14.9	-	11.0	Dec-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.3*	
RRJ Capital Master Fund II - Gross	3,668,399	0.0	-13.2	15.4	20.8	-6.9	-0.5	5.5	7.4	Jun-13
RRJ Capital Master Fund II - Net			-13.2	15.4	20.8	-6.9	-0.5	5.5	7.4	Jun-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.5*	
RRJ Capital Master Fund III - Gross	8,445,883	0.1	12.0	-1.1	-16.5	-13.7	-9.1	-	-9.7	Jan-16
RRJ Capital Master Fund III - Net			12.0	-1.1	-16.5	-13.7	-9.1	-	-9.7	Jan-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.4*	
Shamrock Capital II - Gross	13,434,711	0.1	4.7	7.1	12.6	11.2	-	-	-65.2	Aug-20
Shamrock Capital II - Net			4.7	7.1	12.6	11.2	-	-	-65.2	Aug-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*17.9*	
Shamrock Capital III - Gross	169,081	0.0	-96.3	-100.4	-100.0	-	-	-	-100.0	Jan-23
Shamrock Capital III - Net			-96.3	-100.4	-100.0	-	-	-	-100.0	Jan-23
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*5.2*	
Shamrock Capital Growth Fund V - Gross	14,589,985	0.1	15.4	17.6	21.5	-	-	-	-19.9	Aug-21
Shamrock Capital Growth Fund V - Net			15.4	17.6	21.5	-	-	-	-19.9	Aug-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*7.8*	
Sixth Street Opp Partners V - Gross	19,471,823	0.1	4.2	4.9	10.7	-	-	-	-0.5	Jul-22
Sixth Street Opp Partners V - Net			4.2	4.9	10.7	-	-	-	-0.5	Jul-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.3*	
Spectrum Equity VII - Gross	34,132,507	0.3	0.8	4.8	2.1	-9.6	21.4	-	16.9	Jan-15
Spectrum Equity VII - Net			0.8	4.8	2.1	-9.6	21.4	-	16.9	Jan-15
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
Spectrum Equity Fund VIII - Gross	26,842,473	0.2	2.7	15.5	19.4	5.5	25.4	-	-9.6	Jul-18
Spectrum Equity Fund VIII - Net			2.7	15.5	19.4	5.5	25.4	-	-9.6	Jul-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
Spectrum Equity Fund IX - Gross	21,398,318	0.2	-0.1	-0.4	0.9	-4.7	-	-	-8.0	Oct-20
Spectrum Equity Fund IX - Net			-0.1	-0.4	0.9	-4.7	-	-	-8.0	Oct-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*16.0*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Spectrum Equity Fund X - Gross	3,978,675	0.0	-1.9	-4.2	-	-	-	-	-4.2	Jan-24
Spectrum Equity Fund X - Net			-1.9	-4.2	-	-	-	-	-4.2	Jan-24
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	-	-	-	-	*3.6*	
Strategic Value Spl Fund V - Gross	23,319,691	0.2	5.5	10.8	21.1	-	-	-	12.0	Sep-21
Strategic Value Spl Fund V - Net			5.5	10.8	21.1	-	-	-	12.0	Sep-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*8.0*	
Summit EUR Growth Equity II - Gross	55,613,712	0.4	10.2	19.0	37.4	57.5	48.8	-	67.2	Feb-18
Summit EUR Growth Equity II - Net			10.2	19.0	37.4	57.5	48.8	-	67.2	Feb-18
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.6*	
Summit EUR Growth Equity III - Gross	21,296,858	0.2	9.7	17.8	36.8	6.8	-	-	-0.3	Feb-21
Summit EUR Growth Equity III - Net			9.7	17.8	36.8	6.8	-	-	-0.3	Feb-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.5*	
Summit Ventures III - Gross	3,435,108	0.0	0.0	-4.8	-6.3	6.1	11.8	15.3	12.0	Jul-12
Summit Ventures III - Net			0.0	-4.8	-6.3	6.1	11.8	15.3	12.0	Jul-12
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.5*	
Summit Ventures IV - Gross	61,374,511	0.5	5.0	19.1	15.2	16.4	29.4	-	32.9	Jun-16
Summit Ventures IV - Net			5.0	19.1	15.2	16.4	29.4	-	32.9	Jun-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*15.0*	
Summit Ventures V - Gross	14,046,329	0.1	-1.2	4.5	8.2	-0.9	-	-	-0.9	Jun-21
Summit Ventures V - Net			-1.2	4.5	8.2	-0.9	-	-	-0.9	Jun-21
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*10.7*	
Thoma Bravo XI - Gross	23,933,107	0.2	3.3	13.9	21.6	2.8	23.1	21.7	21.7	Jul-14
Thoma Bravo XI - Net			3.3	13.9	21.6	2.8	23.1	21.7	21.7	Jul-14
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*13.1*	
Thoma Bravo XII - Gross	37,623,549	0.3	2.7	12.3	19.7	14.5	17.5	-	12.2	Jun-16
Thoma Bravo XII - Net			2.7	12.3	19.7	14.5	17.5	-	12.2	Jun-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*15.0*	
Thoma Bravo XIII - Gross	65,527,768	0.5	-1.4	2.8	13.2	8.6	25.6	-	23.5	Mar-19
Thoma Bravo XIII - Net			-1.4	2.8	13.2	8.6	25.6	-	23.5	Mar-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.3*	
Threshold Ventures III - Gross	21,229,396	0.2	-2.0	-7.0	-21.0	13.4	-	-	5.3	Nov-19
Threshold Ventures III - Net			-2.0	-7.0	-21.0	13.4	-	-	5.3	Nov-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*13.8*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Threshold Ventures IV - Gross	7,241,405	0.1	-3.5	-2.1	-10.4	-	-	-	-69.4	Jul-22
Threshold Ventures IV - Net			-3.5	-2.1	-10.4	-	-	-	-69.4	Jul-22
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*0.3*	
TPG Opp Partners III - Gross	5,922,831	0.0	1.4	-2.7	-11.6	-3.4	1.5	4.3	-7.6	Apr-14
TPG Opp Partners III - Net			1.4	-2.7	-11.6	-3.4	1.5	4.3	-7.6	Apr-14
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*13.1*	
Trinity Ventures XI - Gross	41,522,084	0.3	-1.1	-8.6	-5.6	-2.4	2.1	10.0	5.6	May-13
Trinity Ventures XI - Net			-1.1	-8.6	-5.6	-2.4	2.1	10.0	5.6	May-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.5*	
Trinity Ventures XII - Gross	33,334,803	0.3	-8.3	-37.6	-29.0	-17.1	3.4	-	10.6	May-16
Trinity Ventures XII - Net			-8.3	-37.6	-29.0	-17.1	3.4	-	10.6	May-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.8*	
TSG7 A LP - Gross	11,717,065	0.1	1.9	13.9	-6.6	11.4	16.8	-	-183.2	Apr-16
TSG7 A LP - Net			1.9	13.9	-6.6	11.4	16.8	-	-183.2	Apr-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*14.0*	
TSG7 B LP - Gross	3,483,532	0.0	1.3	4.5	-3.3	4.9	10.7	-	-3.9	Feb-16
TSG7 B LP - Net			1.3	4.5	-3.3	4.9	10.7	-	-3.9	Feb-16
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.5*	
TSG8 LP - Gross	37,195,881	0.3	-1.7	-5.7	-11.0	-3.7	-158.4	-	-59.6	Feb-19
TSG8 LP - Net			-1.7	-5.7	-11.0	-3.7	-158.4	-	-59.6	Feb-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
TSG9 LP - Gross	6,586,771	0.0	-4.0	-5.9	-8.4	-	-	-	-30.6	Feb-23
TSG9 LP - Net			-4.0	-5.9	-8.4	-	-	-	-30.6	Feb-23
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	-	-	-	*5.5*	
TSSP Opportunities Partners IV - Gross	26,005,869	0.2	1.6	3.7	10.1	7.7	11.2	-	11.2	Feb-19
TSSP Opportunities Partners IV - Net			1.6	3.7	10.1	7.7	11.2	-	11.2	Feb-19
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*13.1*	
Waterland V - Gross	535,152	0.0	-24.1	-24.1	-11.1	8.6	12.7	32.0	19.7	Sep-11
Waterland V - Net			-24.1	-24.1	-11.1	8.6	12.7	32.0	19.7	Sep-11
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*14.2*	
Waterland VI - Gross	12,717,000	0.1	1.9	1.9	10.8	11.5	20.9	-	8.0	Aug-15
Waterland VI - Net			1.9	1.9	10.8	11.5	20.9	-	8.0	Aug-15
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	-	*12.9*	

See Policy Index and Benchmark History

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Wayzata Opportunities III - Gross	1,235,679	0.0	4.5	28.0	13.0	21.4	8.2	3.4	0.5	Mar-13
Wayzata Opportunities III - Net			4.5	28.0	13.0	21.4	8.2	3.4	0.5	Mar-13
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	*13.6*	*13.1*	*15.0*	
Wynnchurch Capital Partners V - Gross	20,191,537	0.2	1.6	5.0	5.1	13.6	-	-	-2.2	May-20
Wynnchurch Capital Partners V - Net			1.6	5.0	5.1	13.6	-	-	-2.2	May-20
Cambridge Associates All PE 1 Qtr Lag			*1.2*	*3.6*	*4.9*	*7.5*	-	-	*14.1*	
Public Credit - Gross	**231,019,902**	**1.7**	**0.5**	**3.3**	**9.2**	**2.2**	**4.8**	**4.2**	**4.5**	**Dec-13**
Public Credit - Net			**0.5**	**3.3**	**9.2**	**2.2**	**4.8**	**4.2**	**4.5**	**Dec-13**
Brigade Custom			*1.5*	*3.5*	*10.8*	*3.8*	*4.6*	*4.4*	*4.6*	
Brigade Capital - Gross	231,019,902	1.7	0.5 (96)	3.3 (28)	9.2 (76)	2.2 (39)	4.8 (16)	4.2 (38)	4.5	Dec-13
Brigade Capital - Net			0.5 (96)	3.3 (28)	9.2 (76)	2.2 (39)	4.8 (16)	4.2 (38)	4.5	Dec-13
Brigade Custom			*1.5 (19)*	*3.5 (19)*	*10.8 (24)*	*3.8 (6)*	*4.6 (20)*	*4.4 (23)*	*4.6*	*Dec-13*
eV US High Yield Fixed Inc Median			*1.2*	*2.8*	*9.9*	*1.8*	*3.8*	*4.0*	-	
Private Credit - Gross	**427,542,821**	**3.2**	**3.3**	**5.2**	**10.2**	**8.1**	**9.2**	**8.2**	**7.8**	**Nov-11**
Private Credit - Net			**3.3**	**5.2**	**10.2**	**8.1**	**9.2**	**8.2**	**7.8**	**Nov-11**
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	*6.7*	*6.9*	
Ares Capital Europe Fund V - Gross	31,608,019	0.2	2.6	6.2	11.8	-	-	-	12.4	Aug-21
Ares Capital Europe Fund V - Net			2.6	6.2	11.8	-	-	-	12.4	Aug-21
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*7.9*	
Athyrium Opp II - Gross	4,182,920	0.0	25.5	43.5	61.0	17.5	16.9	-	12.1	Jul-15
Athyrium Opp II - Net			25.5	43.5	61.0	17.5	16.9	-	12.1	Jul-15
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*6.9*	
Athyrium Opp III - Gross	7,725,183	0.1	0.1	-0.2	4.2	-4.8	1.2	-	-0.1	Jun-17
Athyrium Opp III - Net			0.1	-0.2	4.2	-4.8	1.2	-	-0.1	Jun-17
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*7.0*	
Benefit St Pr Sr Secure Opp - Gross	17,546,492	0.1	1.5	3.2	7.4	6.4	6.4	-	6.1	Feb-18
Benefit St Pr Sr Secure Opp - Net			1.5	3.2	7.4	6.4	6.4	-	6.1	Feb-18
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*7.1*	
Benefit St Pr Sr Secure Opp II - Gross	40,527,252	0.3	2.2	4.3	11.4	13.8	-	-	9.1	Jan-20
Benefit St Pr Sr Secure Opp II - Net			2.2	4.3	11.4	13.8	-	-	9.1	Jan-20
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	-	-	*7.4*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Brookfield Infra Debt Fund III - Gross	21,321,885	0.2	1.6	3.2	6.9	-	-	-	5.8	Apr-23
Brookfield Infra Debt Fund III - Net			1.6	3.2	6.9	-	-	-	5.8	Apr-23
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*14.8*	
IFM US Infrastructure DB FD LP - Gross	34,365,582	0.3	-1.9	-0.2	3.1	7.1	-	-	6.5	Apr-21
IFM US Infrastructure DB FD LP - Net			-1.9	-0.2	3.1	7.1	-	-	6.5	Apr-21
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	-	-	*8.1*	
MCP Private Capital IV - Gross	33,643,620	0.3	11.0	19.3	31.2	15.2	-	-	9.4	May-20
MCP Private Capital IV - Net			11.0	19.3	31.2	15.2	-	-	9.4	May-20
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	-	-	*7.3*	
OrbiMed Royalty & Credit Opp III - Gross	16,478,771	0.1	2.4	2.1	6.4	0.6	-	-	14.6	Oct-19
OrbiMed Royalty & Credit Opp III - Net			2.4	2.1	6.4	0.6	-	-	14.6	Oct-19
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	-	-	*7.3*	
OrbiMed Royalty & Credit Opp IV - Gross	13,675,297	0.1	3.6	6.0	12.5	-	-	-	11.2	Oct-22
OrbiMed Royalty & Credit Opp IV - Net			3.6	6.0	12.5	-	-	-	11.2	Oct-22
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*13.2*	
Shamrock Capital Debt Fund I - Gross	9,781,352	0.1	2.4	5.0	8.7	-	-	-	-33.8	Aug-21
Shamrock Capital Debt Fund I - Net			2.4	5.0	8.7	-	-	-	-33.8	Aug-21
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*7.9*	
Silver Point Specialty Credit Fund II - Gross	33,039,471	0.2	2.7	5.4	11.3	8.7	-	-	12.9	Aug-20
Silver Point Specialty Credit Fund II - Net			2.7	5.4	11.3	8.7	-	-	12.9	Aug-20
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	-	-	*10.6*	
Silver Point Specialty Credit Fund III - Gross	13,009,829	0.1	4.4	16.9	10.5	-	-	-	5.2	Apr-23
Silver Point Specialty Credit Fund III - Net			4.4	16.9	10.5	-	-	-	5.2	Apr-23
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*14.8*	
Summit Credit - Gross	83,966	0.0	2.4	175.7	96.1	37.5	24.7	15.3	13.3	Nov-11
Summit Credit - Net			2.4	175.7	96.1	37.5	24.7	15.3	13.3	Nov-11
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	*6.7*	*6.9*	
Summit Credit II - Gross	7,226,967	0.1	-1.9	-30.2	-36.9	-10.4	-5.5	-	0.1	Dec-14
Summit Credit II - Net			-1.9	-30.2	-36.9	-10.4	-5.5	-	0.1	Dec-14
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*6.7*	
Summit Credit III - Gross	11,057,562	0.1	-1.6	-5.5	-9.3	5.8	10.5	-	10.1	Nov-18
Summit Credit III - Net			-1.6	-5.5	-9.3	5.8	10.5	-	10.1	Nov-18
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*7.1*	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Summit Credit IV - Gross	15,031,233	0.1	2.8	6.2	12.4	-	-	-	11.0	Dec-21
Summit Credit IV - Net			2.8	6.2	12.4	-	-	-	11.0	Dec-21
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	-	-	-	*8.1*	
TCP Direct Lending VIII - Gross	117,237,420	0.9	4.5	6.1	12.8	8.8	9.2	-	8.0	Mar-18
TCP Direct Lending VIII - Net			4.5	6.1	12.8	8.8	9.2	-	8.0	Mar-18
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag			*3.0*	*6.5*	*14.6*	*7.9*	*7.4*	-	*7.1*	
Growth Oriented Absolute Return - Gross	**6,874,700**	**0.1**	**1.4**	**-0.1**	**1.5**	**-2.0**	**3.6**	**3.3**	**4.4**	**Sep-04**
Growth Oriented Absolute Return - Net			**1.4**	**-0.1**	**1.5**	**-2.0**	**3.6**	**3.3**	**4.4**	**Sep-04**
HFRI FoF Composite Index + 1%			*0.9*	*5.4*	*9.8*	*3.1*	*5.9*	*5.3*	*6.0*	
Grosvenor SCARF Growth - Gross	6,874,700	0.1	1.4 (19)	-0.1 (73)	1.5 (85)	-1.7 (88)	1.8 (90)	2.3 (91)	4.2	Dec-11
Grosvenor SCARF Growth - Net			1.4	-0.1	1.5	-1.7	1.8	2.3	4.2	Dec-11
HFRI FoF Composite Index + 1%			*0.9 (52)*	*5.4 (33)*	*9.8 (30)*	*3.1 (58)*	*5.9 (28)*	*5.3 (23)*	*5.3*	*Dec-11*
eV Alt Fund of Funds - Multi-Strategy Median			*0.9*	*3.6*	*8.1*	*3.4*	*4.3*	*4.4*	-	
Diversifying Asset Category - Gross	**3,011,046,700**	**22.6**	**0.3**	**1.0**	**4.1**	**-0.6**	**1.7**	**-**	**2.3**	**Apr-17**
Diversifying Asset Category - Net			**0.3**	**0.9**	**4.0**	**-0.7**	**1.6**	**-**	**2.2**	**Apr-17**
Diversifying Custom			*0.3*	*0.6*	*3.8*	*-1.1*	*1.1*	-	*1.9*	
Fixed Income - Gross	**1,903,012,361**	**14.3**	**0.2**	**-0.5**	**2.7**	**-2.7**	**0.3**	**2.0**	**2.3**	**Jul-11**
Fixed Income - Net	**1,903,012,361**	**14.3**	**0.1**	**-0.6**	**2.5**	**-2.9**	**0.1**	**1.8**	**2.1**	**Jul-11**
Fixed Income Custom			*0.2*	*-0.3*	*3.3*	*-2.5*	*0.0*	*1.4*	-	
Core/Core Plus Fixed Income - Gross	**1,496,121,826**	**11.2**	**0.2**	**-0.5**	**2.9**	**-2.6**	**0.6**	**2.2**	**2.4**	**Jul-11**
Core/Core Plus Fixed Income - Net			**0.1**	**-0.6**	**2.7**	**-2.8**	**0.4**	**2.0**	**2.3**	**Jul-11**
Blmbg. U.S. Aggregate Index			*0.1*	*-0.7*	*2.6*	*-3.0*	*-0.2*	*1.3*	*1.9*	
Prudential - Gross	378,009,536	2.8	0.5 (14)	0.9 (9)	5.6 (6)	-2.2 (25)	0.9 (19)	-	2.7	Aug-14
Prudential - Net			0.5	0.8	5.4	-2.4	0.7	-	2.5	Aug-14
Blmbg. U.S. Aggregate Index			*0.1 (94)*	*-0.7 (97)*	*2.6 (92)*	*-3.0 (89)*	*-0.2 (96)*	-	*1.4*	*Aug-14*
eV US Core Fixed Inc Median			*0.3*	*-0.1*	*3.5*	*-2.5*	*0.4*	*1.9*	-	
TCW MetWest Fixed - Gross	369,905,767	2.8	0.3 (48)	-0.7 (96)	3.0 (77)	-2.6 (58)	0.6 (35)	2.0 (38)	4.7	Jan-02
TCW MetWest Fixed - Net			0.2	-0.8	2.8	-2.8	0.4	1.8	4.5	Jan-02
Blmbg. U.S. Aggregate Index			*0.1 (94)*	*-0.7 (97)*	*2.6 (92)*	*-3.0 (89)*	*-0.2 (96)*	*1.3 (99)*	*3.4*	*Jan-02*
eV US Core Fixed Inc Median			*0.3*	*-0.1*	*3.5*	*-2.5*	*0.4*	*1.9*	-	
Brandywine US FI - Gross	363,572,733	2.7	-0.4 (99)	-2.0 (100)	0.6 (100)	-	-	-	-0.8	Jun-22
Brandywine US FI - Net			-0.5	-2.1	0.4	-	-	-	-1.0	Jun-22
Blmbg. U.S. Aggregate Index			*0.1 (95)*	*-0.7 (95)*	*2.6 (95)*	-	-	-	*0.0*	*Jun-22*
eV US Core Plus Fixed Inc Median			*0.3*	*0.2*	*4.0*	*-2.6*	*0.6*	*1.9*	-	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Reams Core Plus FI - Gross	384,633,790	2.9	0.3 (75)	-0.4 (87)	2.6 (95)	-	-	-	1.6	Jun-22
Reams Core Plus FI - Net			0.2	-0.4	2.5	-	-	-	1.5	Jun-22
Blmbg. U.S. Aggregate Index			*0.1 (95)*	*-0.7 (95)*	*2.6 (95)*	-	-	-	*0.0*	*Jun-22*
eV US Core Plus Fixed Inc Median			*0.4*	*0.3*	*4.4*	*-2.3*	*0.9*	*2.3*	-	
U.S. Treasury - Gross	**406,890,535**	**3.1**	**0.2**	**-0.6**	**1.7**	**-3.1**	**-0.5**	**-**	**0.8**	**Mar-18**
U.S. Treasury - Net			**0.2**	**-0.7**	**1.7**	**-3.2**	**-0.6**	**-**	**0.8**	**Mar-18**
Blmbg. U.S. Treasury Index			*0.1*	*-0.9*	*1.5*	*-3.3*	*-0.7*	-	*0.8*	
Neuberger Berman - Gross	406,890,535	3.1	0.2 (74)	-0.6 (73)	1.7 (86)	-3.1 (80)	-0.5 (85)	1.2 (61)	5.5	Jul-88
Neuberger Berman - Net			0.2	-0.7	1.7	-3.2	-0.6	1.2	5.4	Jul-88
Blmbg. U.S. Government Index			*0.1 (83)*	*-0.8 (80)*	*1.6 (87)*	*-3.2 (82)*	*-0.6 (89)*	*0.9 (86)*	*4.9*	*Jul-88*
eV US Government Fixed Inc Median			*0.3*	*-0.2*	*2.6*	*-2.4*	*0.0*	*1.3*	-	
Absolute Return - Gross	**847,858,924**	**6.4**	**0.2**	**3.8**	**6.9**	**3.8**	**4.5**	**2.8**	**3.0**	**Dec-11**
Absolute Return - Net			**0.2**	**3.8**	**6.9**	**3.8**	**4.5**	**2.8**	**3.0**	**Dec-11**
HFRI FoF Conservative Index			*0.6*	*3.2*	*6.8*	*3.5*	*4.9*	*4.6*	*4.7*	
Aristeia Partners LP - Gross	53,701,757	0.4	0.6 (73)	1.6 (13)	5.1 (29)	4.1 (30)	-	-	5.2	Jan-21
Aristeia Partners LP - Net			0.6	1.6	5.1	4.1	-	-	5.2	Jan-21
HFRI FoF Conservative Index			*0.6 (73)*	*3.2 (9)*	*6.8 (14)*	*3.5 (32)*	-	-	*4.7*	*Jan-21*
eV Alt Relative Value - Multi-Market Arbitrage Median			*1.3*	*0.5*	*4.0*	*2.9*	*0.7*	*1.6*	-	
BlackRock Event Driven Equity Fund - Gross	56,726,144	0.4	-0.5 (78)	0.2 (69)	5.5 (79)	1.6 (77)	-	-	3.2	Mar-20
BlackRock Event Driven Equity Fund - Net			-0.5	0.2	5.5	1.6	-	-	3.2	Mar-20
HFRI FoF Conservative Index			*0.6 (55)*	*3.2 (45)*	*6.8 (59)*	*3.5 (60)*	-	-	*5.4*	*Mar-20*
eV Alt All Event Driven Median			*0.8*	*2.1*	*7.6*	*4.6*	*5.7*	*8.7*	-	
Davidson Kempner Instl Partners LP - Gross	64,583,436	0.5	1.1 (55)	4.3 (67)	8.3 (66)	3.2 (57)	5.3 (59)	-	5.2	May-19
Davidson Kempner Instl Partners LP - Net			1.1	4.3	8.3	3.2	5.3	-	5.2	May-19
HFRI FoF Conservative Index			*0.6 (64)*	*3.2 (75)*	*6.8 (76)*	*3.5 (56)*	*4.9 (61)*	-	*4.8*	*May-19*
eV Alt All Multi-Strategy Median			*1.2*	*5.6*	*9.7*	*4.0*	*6.3*	*4.4*	-	
Elliott Associates - Gross	85,873,712	0.6	0.0 (71)	2.4 (48)	6.9 (57)	7.5 (5)	8.7 (44)	7.5 (64)	7.9	May-12
Elliott Associates - Net			0.0	2.4	6.9	7.5	8.7	7.5	7.9	May-12
HFRI FoF Conservative Index			*0.6 (55)*	*3.2 (45)*	*6.8 (59)*	*3.5 (60)*	*4.9 (69)*	*4.6 (95)*	*4.7*	*Jan-11*
eV Alt All Event Driven Median			*0.8*	*2.1*	*7.6*	*4.6*	*5.7*	*8.7*	-	

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	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Graham Global Inv II - Gross	51,049,672	0.4	-1.1 (71)	15.8 (7)	2.6 (59)	9.7 (16)	8.7 (30)	-	5.4	Mar-17
Graham Global Inv II - Net			-1.1	15.8	2.6	9.7	8.7	-	5.4	Mar-17
HFRI FoF Conservative Index			*0.6 (38)*	*3.2 (66)*	*6.8 (41)*	*3.5 (57)*	*4.9 (71)*	-	*4.4*	*Mar-17*
eV Alt All Managed Futures Median			*-0.3*	*4.3*	*5.1*	*4.8*	*5.9*	*1.4*	-	
Grosvenor SCARF Diversifying - Gross	255,646,850	1.9	2.0 (8)	7.9 (9)	12.0 (21)	6.2 (8)	6.2 (27)	2.9 (88)	3.3	Dec-11
Grosvenor SCARF Diversifying - Net			2.0	7.9	12.0	6.2	6.2	2.9	3.3	Dec-11
HFRI FoF Conservative Index			*0.6 (69)*	*3.2 (56)*	*6.8 (59)*	*3.5 (49)*	*4.9 (33)*	*4.6 (38)*	*4.7*	*Dec-11*
eV Alt Fund of Funds - Multi-Strategy Median			*0.9*	*3.6*	*8.1*	*3.4*	*4.3*	*4.4*	-	
Junto Capital Partners - Gross	52,124,580	0.4	1.7 (41)	4.2 (59)	-	-	-	-	4.2	Jan-24
Junto Capital Partners - Net			1.7	4.2	-	-	-	-	4.2	Jan-24
HFRI FoF Conservative Index			*0.6 (53)*	*3.2 (66)*	*6.8 (69)*	*3.5 (45)*	*4.9 (71)*	*4.6 (69)*	*4.7*	*Jan-11*
Laurion Capital - Gross	59,825,552	0.4	-4.2 (100)	-3.8 (100)	0.7 (100)	-4.4 (100)	7.7 (73)	7.4 (-)	7.0	Mar-14
Laurion Capital - Net			-4.2	-3.8	0.7	-4.4	7.7	7.4	7.0	Mar-14
HFRI FoF Conservative Index			*0.6 (58)*	*3.2 (54)*	*6.8 (100)*	*3.5 (90)*	*4.9 (100)*	*4.6 (-)*	*4.6*	*Mar-14*
MW Global Opportunities Fund - Gross	64,161,439	0.5	2.1 (39)	8.1 (54)	11.8 (55)	7.4 (40)	7.2 (80)	-	7.0	Jan-19
MW Global Opportunities Fund - Net			2.1	8.1	11.8	7.4	7.2	-	7.0	Jan-19
HFRI FoF Conservative Index			*0.6 (64)*	*3.2 (83)*	*6.8 (81)*	*3.5 (70)*	*4.9 (85)*	-	*5.3*	*Jan-19*
eV Alt Fundamental - Long/Short Equity Median			*1.2*	*8.7*	*13.7*	*5.6*	*11.4*	*8.1*	-	
PSquared Event Driven Opp Fund - Gross	52,687,269	0.4	-5.1 (90)	-5.3 (96)	0.3 (96)	1.2 (80)	-	-	1.4	Aug-20
PSquared Event Driven Opp Fund - Net			-5.1	-5.3	0.3	1.2	-	-	1.4	Aug-20
HFRI FoF Conservative Index			*0.6 (55)*	*3.2 (45)*	*6.8 (59)*	*3.5 (60)*	*4.9 (69)*	*4.6 (95)*	*4.7*	*Jan-11*
eV Alt All Event Driven Median			*0.8*	*2.1*	*7.6*	*4.6*	*5.7*	*8.7*	-	
Tudor BVI Global Fund - Gross	51,478,514	0.4	-0.7	-0.4	3.0	-	-	-	2.0	Jan-23
Tudor BVI Global Fund - Net			-0.7	-0.4	3.0	-	-	-	2.0	Jan-23
HFRI FOF Conservative Index			*0.6*	*3.2*	*6.8*	-	-	-	*5.8*	

See Policy Index and Benchmark History

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Dedicated Cash Allocation - Gross	**260,175,415**	**2.0**	**1.3**	**2.6**	**5.4**	**3.2**	**2.2**	**-**	**2.2**	**Jul-19**
Dedicated Cash Allocation - Net			**1.3**	**2.6**	**5.4**	**3.2**	**2.2**	**-**	**2.2**	**Jul-19**
Secured Overnight Financing Rate			*1.4*	*2.7*	*5.5*	*3.2*	*2.3*	-	*2.3*	
Real Return Asset Category - Gross	**2,204,812,621**	**16.6**	**0.7**	**0.8**	**-1.3**	**6.1**	**5.9**	**-**	**7.4**	**Apr-17**
Real Return Asset Category - Net			**0.6**	**0.8**	**-1.4**	**6.0**	**5.8**	**-**	**7.3**	**Apr-17**
Real Return Custom			*0.4*	*-0.4*	*-1.7*	*6.1*	*5.3*	-	*5.7*	
Real Estate - Gross	**875,371,906**	**6.6**	**-0.9 (86)**	**-2.8 (46)**	**-9.7 (64)**	**1.8 (49)**	**4.3 (40)**	**7.6 (14)**	**8.7**	**Jul-11**
Real Estate - Net			**-0.9**	**-2.9**	**-9.8**	**1.7**	**4.1**	**7.1**	**8.1**	**Jul-11**
Real Estate Custom			*-1.2 (88)*	*-4.5 (88)*	*-10.0 (65)*	*2.6 (43)*	*3.4 (43)*	*6.2 (35)*	*7.4*	*Jul-11*
InvMetrics All DB Real Estate Private Median			*0.0*	*-2.9*	*-7.3*	*1.7*	*2.5*	*5.4*	-	
Core RE - Limited Partnership - Gross	**580,830,262**	**4.4**	**-0.4**	**-1.8**	**-8.5**	**2.2**	**5.0**	**8.1**	**5.1**	**Oct-08**
Core RE - Limited Partnership - Net			**-0.4**	**-1.9**	**-8.6**	**2.0**	**4.7**	**7.8**	**4.6**	**Oct-08**
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	*6.4*	*4.8*	
Brookfield Premier RE Partners - Gross*	95,217,080	0.7	0.0	-5.0	-14.6	-0.5	2.3	-	3.0	Oct-18
Brookfield Premier RE Partners - Net*			0.0	-5.0	-14.6	-0.5	2.3	-	3.0	Oct-18
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*3.5*	
Clarion Lion Properties - Gross	102,108,801	0.8	-1.7	-4.4	-9.5	0.4	3.0	-	3.6	Oct-18
Clarion Lion Properties - Net			-2.0	-4.8	-10.3	-0.4	2.1	-	2.7	Oct-18
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*3.5*	
Metlife Core Property - Gross	71,352,081	0.5	-1.2	-2.6	-9.9	2.2	4.1	7.4	8.0	Jan-14
Metlife Core Property - Net			-1.2	-2.6	-9.9	1.9	3.7	7.0	7.5	Jan-14
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	*6.4*	*6.6*	
Principal US Property - Gross	53,944,653	0.4	-0.9	-2.9	-8.9	1.3	2.7	-	5.1	Nov-15
Principal US Property - Net			-0.9	-2.9	-8.9	1.3	2.7	-	5.1	Nov-15
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*5.2*	
Prologis Targeted Euro Logistics - Gross	59,773,596	0.4	0.1	1.1	-1.1	-3.0	5.0	-	8.0	Nov-15
Prologis Targeted Euro Logistics - Net			0.1	1.1	-1.1	-3.0	5.0	-	8.0	Nov-15
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*5.2*	
Prologis Targeted US Logistics - Gross	73,756,901	0.6	1.5	3.4	-6.1	8.6	12.6	-	14.4	Aug-15
Prologis Targeted US Logistics - Net			1.3	3.3	-6.2	8.6	12.6	-	14.4	Aug-15
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*5.5*	
Townsend Real Estate - Gross*	124,677,150	0.9	0.0	-5.2	-10.2	2.3	4.5	-	6.4	Apr-16
Townsend Real Estate - Net*			0.0	-5.2	-10.2	2.3	4.5	-	6.4	Apr-16
NFI-ODCE			*-0.5*	*-2.8*	*-9.3*	*1.9*	*3.2*	-	*4.9*	

See Policy Index and Benchmark History
**Value as of 3/31/2024.*

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Non-Core RE - Opportunistic - Gross	**169,322,769**	**1.3**	**-2.1**	**-8.3**	**-19.1**	**-1.4**	**0.5**	**10.7**	**11.1**	**Mar-14**
Non-Core RE - Opportunistic - Net			**-2.1**	**-8.3**	**-19.1**	**-1.4**	**0.5**	**10.4**	**10.7**	**Mar-14**
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	*6.8*	*7.1*	
Carlyle China Realty - Gross	4,663,061	0.0	-2.3	-27.0	-41.7	-18.8	-10.9	-	-9.5	Jul-17
Carlyle China Realty - Net			-2.3	-27.0	-41.7	-18.8	-10.9	-	-9.5	Jul-17
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*4.7*	
Carlyle China Rome Logistics - Gross	20,801,379	0.2	-2.1	-26.7	-41.3	-18.3	-11.9	-	-9.0	Jul-17
Carlyle China Rome Logistics - Net			-2.1	-26.7	-41.3	-18.3	-11.9	-	-9.0	Jul-17
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*4.7*	
CIM Opportunity VIII - Gross	19,374,832	0.1	-8.9	-15.2	-21.2	-14.4	-13.3	-	-4.2	Mar-15
CIM Opportunity VIII - Net			-8.9	-15.2	-21.2	-14.4	-13.3	-	-4.8	Mar-15
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*6.6*	
Kohlberg Kravis Roberts - Gross	346,399	0.0	-1.8	-27.9	-28.1	-12.1	-15.7	-4.2	-3.4	Mar-14
Kohlberg Kravis Roberts - Net			-1.8	-27.9	-28.1	-12.1	-15.7	-4.2	-3.5	Mar-14
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	*6.8*	*7.1*	
Lasalle China Logistics Venture LP - Gross	11,677,257	0.1	0.9	-7.8	-15.1	-	-	-	-22.9	Oct-21
Lasalle China Logistics Venture LP - Net			0.9	-7.8	-15.1	-	-	-	-22.9	Oct-21
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	-	-	-	*2.2*	
NREP Nordic Strat II - Gross	15,233,307	0.1	-1.6	-4.2	-18.2	12.3	14.4	-	14.4	Jul-16
NREP Nordic Strat II - Net			-1.6	-4.2	-18.2	12.3	14.4	-	14.4	Jul-16
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*5.2*	
NREP Nordic Strat III - Gross	36,073,808	0.3	3.0	4.8	-9.3	6.2	10.5	-	5.0	Aug-18
NREP Nordic Strat III - Net			3.0	4.8	-9.3	6.2	10.5	-	5.0	Aug-18
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*4.2*	
NREP Nordic Strat IV - Gross	22,582,273	0.2	-4.9	-3.6	-19.4	3.0	-	-	5.5	Aug-20
NREP Nordic Strat IV - Net			-4.9	-3.6	-19.4	3.0	-	-	5.5	Aug-20
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	-	-	*3.2*	
NREP Nordic Strat V - Gross	13,332,347	0.1	-11.8	-14.4	-16.5	-	-	-	-21.0	Nov-22
NREP Nordic Strat V - Net			-11.8	-14.4	-16.5	-	-	-	-21.0	Nov-22
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	-	-	-	*-11.0*	
Sculptor Real Estate Fund III - Gross	3,980,250	0.0	5.0	8.3	7.1	38.2	27.0	-	16.7	Oct-14
Sculptor Real Estate Fund III - Net			5.0	8.3	7.1	38.2	27.0	-	14.5	Oct-14
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*6.6*	

See Policy Index and Benchmark History
**Non-Core RE returns are lagged one quarter.*
***Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.*

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Sculptor Real Estate Fund IV - Gross	21,257,856	0.2	2.6	4.7	10.8	12.4	-	-	6.6	Jul-20
Sculptor Real Estate Fund IV - Net			2.6	4.7	10.8	12.4	-	-	6.6	Jul-20
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	-	-	*3.2*	
Non-Core RE - Value Added - Gross	**125,218,875**	**0.9**	**-1.6**	**0.1**	**-2.5**	**3.5**	**6.5**	**8.3**	**0.8**	**Oct-08**
Non-Core RE - Value Added - Net			**-1.6**	**0.1**	**-2.5**	**3.5**	**6.5**	**8.0**	**-0.1**	**Oct-08**
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	*7.0*	*6.4*	
Asana Partners Fund II - Gross	34,717,485	0.3	-5.2	-4.0	-6.6	8.8	-177.1	-	-177.8	May-19
Asana Partners Fund II - Net			-5.2	-4.0	-6.6	8.8	-177.1	-	-177.8	May-19
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*3.7*	
Asana Partners Fund III - Gross	16,409,470	0.1	-2.0	-0.5	-9.3	-	-	-	-12.6	May-22
Asana Partners Fund III - Net			-2.0	-0.5	-9.3	-	-	-	-12.6	May-22
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	-	-	-	*-3.5*	
ECE Euro Prime Shopping II - Gross	34,870,096	0.3	2.3	7.4	3.6	2.7	2.4	-	7.6	Aug-15
ECE Euro Prime Shopping II - Net			2.3	7.4	3.6	2.7	2.4	-	7.1	Aug-15
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*6.3*	
European RE Debt II - Gross*	283,507	0.0	-4.0	1.4	-2.5	-26.4	-32.2	-15.3	-14.4	Dec-13
European RE Debt II - Net*			-4.0	1.4	-2.5	-26.4	-32.2	-15.3	-14.4	Dec-13
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	*7.0*	*7.5*	
Hammes II - Gross	2,977,394	0.0	0.7	4.5	10.3	12.8	117.7	-	65.5	Aug-15
Hammes II - Net			0.7	4.5	10.3	12.8	117.7	-	63.7	Aug-15
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*6.3*	
Hammes III - Gross	21,551,326	0.2	1.4	2.6	4.5	8.6	10.9	-	-1.7	Nov-18
Hammes III - Net			1.4	2.6	4.5	8.6	10.9	-	-1.7	Nov-18
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	*3.4*	*3.5*	-	*4.1*	
Hammes IV - Gross	451,364	0.0	-13.2	-28.2	-55.9	-	-	-	-40.4	Dec-22
Hammes IV - Net			-13.2	-28.2	-55.9	-	-	-	-40.4	Dec-22
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	-	-	-	*-11.6*	
Seven Seas Japan Opp Fund - Gross	13,958,233	0.1	-7.1	-1.9	-2.2	-	-	-	0.1	Apr-22
Seven Seas Japan Opp Fund - Net			-7.1	-1.9	-2.2	-	-	-	0.1	Apr-22
NFI-ODCE net +1% 1Q Lag			*-2.3*	*-7.0*	*-11.2*	-	-	-	*-3.4*	

See Policy Index and Benchmark History
**Non-Core RE returns are lagged one quarter.*
***Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.*

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Private Real Assets - Gross	**1,108,201,074**	**8.3**	**1.7**	**3.7**	**6.2**	**13.9**	**8.9**	**14.5**	**6.9**	**Feb-13**
Private Real Assets - Net			**1.7**	**3.7**	**6.2**	**13.9**	**8.9**	**14.5**	**6.9**	**Feb-13**
Private Real Assets Custom			*2.3*	*4.3*	*7.4*	*11.9*	*8.1*	*7.3*	*7.3*	
ACM II - Gross	13,605,544	0.1	-2.3	-8.4	-11.1	-12.7	-11.8	-	-9.5	Oct-16
ACM II - Net			-2.3	-8.4	-11.1	-12.7	-11.8	-	-9.5	Oct-16
NCREIF Farmland 1 Qtr Lag			*0.7*	*3.0*	*3.6*	*7.4*	*6.0*	-	*6.2*	
ARA Partners Fund III LP - Gross	5,592,394	0.0	-2.4	-16.3	-	-	-	-	-16.3	Oct-23
ARA Partners Fund III LP - Net			-2.4	-16.3	-	-	-	-	-16.3	Oct-23
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	-	-	-	-	*6.7*	
ArcLight Energy VI - Gross	12,254,202	0.1	-2.1	-4.5	-9.9	6.0	-2.9	-	2.5	Sep-15
ArcLight Energy VI - Net			-2.1	-4.5	-9.9	6.0	-2.9	-	2.5	Sep-15
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*11.8*	
Brookfield Infra III - Gross	42,962,978	0.3	3.8	7.1	13.9	15.1	13.0	-	12.5	Jun-16
Brookfield Infra III - Net			3.8	7.1	13.9	15.1	13.0	-	12.5	Jun-16
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*11.4*	
Brookfield Infra IV - Gross	40,670,449	0.3	1.1	4.5	11.2	12.8	-	-	10.6	Oct-19
Brookfield Infra IV - Net			1.1	4.5	11.2	12.8	-	-	10.6	Oct-19
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	-	-	*10.2*	
Brookfield Super Core Infra - Gross	106,686,078	0.8	3.2	5.0	9.2	-	-	-	7.4	Aug-22
Brookfield Super Core Infra - Net			3.2	5.0	9.2	-	-	-	7.4	Aug-22
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	-	-	-	*7.8*	
Carlyle Power II - Gross	34,949,269	0.3	-1.3	-1.1	3.2	14.5	11.7	-	6.5	Nov-15
Carlyle Power II - Net			-1.3	-1.1	3.2	14.5	11.7	-	6.5	Nov-15
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*11.2*	
Digital Colony Partners II - Gross	33,131,940	0.2	0.8	3.5	7.6	7.0	-	-	6.8	Jun-21
Digital Colony Partners II - Net			0.8	3.5	7.6	7.0	-	-	6.8	Jun-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	-	-	*10.6*	
EnCap Energy IX - Gross	7,440,864	0.1	25.9	11.8	38.2	47.1	14.6	13.8	6.3	Feb-13
EnCap Energy IX - Net			25.9	11.8	38.2	47.1	14.6	13.8	6.3	Feb-13
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	*6.1*	*2.8*	*3.7*	
EnCap Energy X - Gross	27,842,988	0.2	23.6	22.8	41.5	47.9	23.7	-	12.2	May-15
EnCap Energy X - Net			23.6	22.8	41.5	47.9	23.7	-	12.2	May-15
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	*6.1*	-	*3.7*	

See Policy Index and Benchmark History
**Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.*
++Private Real Assets returns are lagged one quarter.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
EnCap Flatrock Midstream III - Gross	10,355,695	0.1	-1.9	-1.9	-1.1	11.7	5.0	-	6.8	Aug-14
EnCap Flatrock Midstream III - Net			-1.9	-1.9	-1.1	11.7	5.0	-	6.8	Aug-14
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.7*	
EnCap Flatrock Midstream IV - Gross	13,031,184	0.1	-2.3	-0.9	1.9	7.2	6.0	-	3.4	Mar-18
EnCap Flatrock Midstream IV - Net			-2.3	-0.9	1.9	7.2	6.0	-	3.4	Mar-18
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.5*	
EQT Infrastructure Fund IV - Gross	42,216,543	0.3	3.1	7.1	10.2	11.1	3.9	-	3.9	Jul-19
EQT Infrastructure Fund IV - Net			3.1	7.1	10.2	11.1	3.9	-	3.9	Jul-19
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.3*	
First Reserve - Gross	8,681,393	0.1	-1.9	-7.6	-22.7	-13.1	-7.3	-	-4.6	Jan-15
First Reserve - Net			-1.9	-7.6	-22.7	-13.1	-7.3	-	-4.6	Jan-15
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.9*	
Harrison St Social Infra Fd - Gross	109,991,522	0.8	1.3	1.7	4.8	-	-	-	6.0	Aug-21
Harrison St Social Infra Fd - Net			1.3	1.7	4.8	-	-	-	6.0	Aug-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	-	-	-	*10.7*	
IFM Global Infrastructure US LP - Gross	167,449,299	1.3	1.0	2.5	5.5	10.7	9.6	-	10.9	May-17
IFM Global Infrastructure US LP - Net			1.0	2.5	5.5	10.7	9.6	-	10.9	May-17
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*11.5*	
ISQ Global Infrastructure Fund II - Gross	57,611,814	0.4	3.1	6.2	9.8	11.5	12.4	-	12.2	Nov-18
ISQ Global Infrastructure Fund II - Net			3.1	6.2	9.8	11.5	12.4	-	12.2	Nov-18
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.4*	
ISQ Global Infrastructure Fund III - Gross	26,667,764	0.2	2.1	9.4	13.9	-	-	-	17.3	Jan-22
ISQ Global Infrastructure Fund III - Net			2.1	9.4	13.9	-	-	-	17.3	Jan-22
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	-	-	-	*9.8*	
KKR Asia Pacific Infrastructure Investors II - Gross	10,237,012	0.1	-6.1	-	-	-	-	-	-6.1	Mar-24
KKR Asia Pacific Infrastructure Investors II - Net			-6.1	-	-	-	-	-	-6.1	Mar-24
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	-	-	-	-	-	*5.8*	
Meridiam Infra N America III - Gross	48,594,050	0.4	0.6	12.6	9.4	40.0	-2.1	-	-50.2	Oct-17
Meridiam Infra N America III - Net			0.6	12.6	9.4	40.0	-2.1	-	-50.2	Oct-17
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.6*	
Meridiam Infra N America IV - Gross	11,954,637	0.1	13.3	7.9	-	-	-	-	7.9	Aug-23
Meridiam Infra N America IV - Net			13.3	7.9	-	-	-	-	7.9	Aug-23
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	-	-	-	-	*8.3*	

See Policy Index and Benchmark History
**Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.*
++Private Real Assets returns are lagged one quarter.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Meridiam Sa Infra Euro IV - Gross	10,693,441	0.1	1.7	11.9	7.9	-	-	-	-41.7	Aug-21
Meridiam Sa Infra Euro IV - Net			1.7	11.9	7.9	-	-	-	-41.7	Aug-21
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	-	-	-	*10.7*	
NGP Royalty Partners - Gross	22,137,134	0.2	2.0	1.1	17.3	39.3	-	-	32.3	Sep-20
NGP Royalty Partners - Net			2.0	1.1	17.3	39.3	-	-	32.3	Sep-20
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	-	-	*18.5*	
NGP Royalty Partners II - Gross	50,805,368	0.4	1.7	1.5	4.7	-	-	-	-7.5	Jan-23
NGP Royalty Partners II - Net			1.7	1.5	4.7	-	-	-	-7.5	Jan-23
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	-	-	-	*6.2*	
Paine Schwartz Food Chain V - Gross	36,200,846	0.3	1.8	2.0	1.6	23.2	-	-	9.6	Feb-20
Paine Schwartz Food Chain V - Net			1.8	2.0	1.6	23.2	-	-	9.6	Feb-20
NCREIF Farmland 1 Qtr Lag			*0.7*	*3.0*	*3.6*	*7.4*	-	-	*6.4*	
Pantheon Ventures - Gross	33,952,085	0.3	-8.9	-5.8	-9.2	2.5	2.8	-	12.5	Aug-14
Pantheon Ventures - Net			-8.9	-5.8	-9.2	2.5	2.8	-	12.5	Aug-14
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*10.7*	
Quantum Energy VI - Gross	14,424,216	0.1	2.4	-5.1	-9.5	12.9	9.5	-	16.8	Dec-14
Quantum Energy VI - Net			2.4	-5.1	-9.5	12.9	9.5	-	16.8	Dec-14
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	*6.1*	-	*2.0*	
Quantum Energy VII - Gross	33,063,928	0.2	4.0	11.1	8.7	26.3	17.5	-	12.3	Sep-17
Quantum Energy VII - Net			4.0	11.1	8.7	26.3	17.5	-	12.3	Sep-17
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	*6.1*	-	*5.6*	
Ridgewood Water & Strategy Infra II - Gross	20,163,110	0.2	1.2	1.2	2.3	-	-	-	-116.4	Jan-23
Ridgewood Water & Strategy Infra II - Net			1.2	1.2	2.3	-	-	-	-116.4	Jan-23
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	-	-	-	*10.1*	
Tailwater Energy Fund III - Gross	22,200,361	0.2	-1.3	6.6	1.7	11.4	2.9	-	2.8	Oct-18
Tailwater Energy Fund III - Net			-1.3	6.6	1.7	11.4	2.9	-	2.8	Oct-18
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	*6.1*	-	*4.8*	
Tailwater Energy IV - Gross	30,960,670	0.2	0.3	10.5	11.1	28.2	-	-	7.7	Nov-19
Tailwater Energy IV - Net			0.3	10.5	11.1	28.2	-	-	7.7	Nov-19
Cambridge Associates Private Energy 1 Qtr Lag			*3.1*	*1.8*	*6.7*	*16.3*	-	-	*7.1*	
Wastewater Opportunity - Gross	1,672,297	0.0	-1.7	-28.2	-29.6	-1.9	-1.0	-	-11.8	Jan-16
Wastewater Opportunity - Net			-1.7	-28.2	-29.6	-1.9	-1.0	-	-11.8	Jan-16
Cambridge Associates Private Infrastructure 1 Qtr Lag			*2.1*	*5.8*	*8.3*	*10.3*	*10.3*	-	*11.2*	

See Policy Index and Benchmark History
**Returns for private markets are shown on a time-weighted basis and may differ substantially from dollar-weighted returns.*
++Private Real Assets returns are lagged one quarter.

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	Inception	Inception Date
Liquid Real Return - Gross	**221,239,641**	**1.7**	**1.4**	**1.6**	**4.1**	**2.4**	**4.2**	**-**	**4.2**	**Jul-19**
Liquid Real Return - Net			**1.4**	**1.6**	**2.4**	**1.6**	**3.6**	**-**	**3.6**	**Jul-19**
SSgA Real Asset			*1.1*	*1.8*	*5.6*	*2.6*	*4.0*	-	*4.0*	
SSgA Passive Real Return Proxy - Gross	221,169,643	1.7	1.4	1.7	3.6	2.8	4.3	2.3	2.4	Feb-08
SSgA Passive Real Return Proxy - Net			1.4	1.7	3.6	2.5	4.0	2.1	2.2	Feb-08
SSgA Real Asset			*1.1*	*1.8*	*5.6*	*2.6*	*4.0*	*2.0*	-	
Brookfield Liquid Real Return	69,998	0.0								
Cash - Gross	**114,072,010**	**0.9**	**1.4**	**3.0**	**5.9**	**3.6**	**2.7**	**2.2**	**3.1**	**Aug-92**
Cash - Net			**1.4**	**3.0**	**5.9**	**3.6**	**2.7**	**2.2**	**-**	**Aug-92**
Secured Overnight Financing Rate			*1.4*	*2.7*	*5.5*	*3.2*	*2.3*	*1.6*	*2.5*	
Cash Account - Gross	114,072,010	0.9	1.4	3.0	5.9	3.6	2.9	2.4	3.2	Jul-92
Cash Account - Net			1.4	3.0	5.9	3.6	2.9	2.4	-	Jul-92
Secured Overnight Financing Rate			*1.4*	*2.7*	*5.5*	*3.2*	*2.3*	*1.6*	*2.5*	

See Policy Index and Benchmark History

AB	$1,397,151,202	10.5
AQR US Enhanced Equity	$415,046,105	3.1
JP Morgan 130/30	$223,061,480	1.7
DE Shaw Broad Mkt Core Alpha Ext	$201,810,572	1.5
Eagle Capital	$424,133,901	3.2
Huber Capital	$20,264	0.0
Weatherbie	$105,111,401	0.8
Snyder Capital Management	$139,991,602	1.1
Lazard	$330,707,277	2.5
Walter Scott & Partners Limited	$496,473,871	3.7
LSV	$518,163,651	3.9
William Blair Dev Small Cap	$102,596,341	0.8
Acadian Asset Management	$115,953,337	0.9
Arga Emg	$210,037,095	1.6
Baillie Gifford Emg All Cap	$235,519,221	1.8
Oaktree Emg	$201,830,802	1.5
CBRE Clarion	$4,041	0.0
Allspring Global Investments	$93,515,810	0.7
Artisan Partners Global Opp	$153,080,063	1.1
Nikko Asset Management	$150,840,000	1.1
Third Point Offshore Fund	$4,392,496	0.0
Abbott VI	$21,232,538	0.2
Accel-KKR V	$35,216,895	0.3
Accel-KKR VI	$27,939,348	0.2
Accel-KKR Growth Partners II	$8,762,069	0.1
Accel-KKR Growth Partners III	$34,165,362	0.3
Accel-KKR Growth Partners IV	$13,679,670	0.1
Alchemy Special Opportunities Fund V	$1,714,801	0.0
Atalaya Special Opp VI	$1,043,475	0.0
Atalaya Special Opp V	$91,119	0.0
Canvas Ventures III	$14,324,383	0.1
Cortec Group Fund VII	$27,316,332	0.2
Cortec Group Fund VIII	$3,036,620	0.0
CRV Select Fund I	$18,161,437	0.1
CRV Select Fund II	$6,884,981	0.1

CRV XVIII LP	$17,024,360	0.1
CRV XIX LP	$7,275,315	0.1
Davidson Kempner LT Dist Opp IV	$19,210,816	0.1
Davidson Kempner LT Dist Opp V	$34,504,642	0.3
Dyal Capital Partners II	$36,823,925	0.3
Dyal Capital Partners III	$34,851,061	0.3
Garrison Investment Group	$1,393,566	0.0
Golden Capital Co Invest	$41,689,096	0.3
Gridiron Capital Fund IV	$53,561,629	0.4
Gridiron Capital Fund V	$15,885,856	0.1
Harbourvest VIII	$1,383,891	0.0
H.I.G. Bayside Loan III	$3,432,625	0.0
H.I.G. Capital V	$7,170,691	0.1
H.I.G. Europe Capital II	$10,611,827	0.1
Junto Capital Partners	$52,124,580	0.4
Khosla IV	$14,229,726	0.1
Khosla V	$34,494,535	0.3
Khosla VI	$72,925,779	0.5
Khosla VII	$21,905,415	0.2
Linden Capital III	$22,272,335	0.2
Linden Capital Partners IV	$44,753,938	0.3
Linden Capital Partners V	$18,601,720	0.1
Marlin Equity IV	$8,392,300	0.1
Marlin Equity V	$31,975,763	0.2
Marlin Heritage	$3,674,460	0.0
Marlin Heritage II	$9,663,503	0.1
Marlin Heritage III	$7,263,901	0.1
Marlin Heritage Europe	$16,092,163	0.1
New Enterprise 14	$38,583,693	0.3
New Enterprise 15	$26,638,437	0.2
New Enterprise 16	$39,682,264	0.3
New Enterprise 17	$22,224,186	0.2
Oaktree Power Opp Fund VI	$28,179,469	0.2
OrbiMed Private Investments VIII	$11,485,250	0.1
Orbimed Private Investments IX	$7,079,878	0.1

RCP Multi-Fund Feeder	$82,833,049	0.6
RRJ Capital Master Fund II	$3,668,399	0.0
RRJ Capital Master Fund III	$8,445,883	0.1
Shamrock Capital II	$13,434,711	0.1
Shamrock Capital III	$169,081	0.0
Shamrock Capital Growth Fund V	$14,589,985	0.1
Sixth Street Opp Partners V	$19,471,823	0.1
Spectrum Equity VII	$34,132,507	0.3
Spectrum Equity Fund VIII	$26,842,473	0.2
Spectrum Equity Fund IX	$21,398,318	0.2
Spectrum Equity Fund X	$3,978,675	0.0
Strategic Value Spl Fund V	$23,319,691	0.2
Summit EUR Growth Equity II	$55,613,712	0.4
Summit EUR Growth Equity III	$21,296,858	0.2
Summit Ventures III	$3,435,108	0.0
Summit Ventures IV	$61,374,511	0.5
Summit Ventures V	$14,046,329	0.1
Thoma Bravo XI	$23,933,107	0.2
Thoma Bravo XII	$37,623,549	0.3
Thoma Bravo XIII	$65,527,768	0.5
Threshold Ventures III	$21,229,396	0.2
Threshold Ventures IV	$7,241,405	0.1
TPG Opp Partners III	$5,922,831	0.0
Trinity Ventures XI	$41,522,084	0.3
Trinity Ventures XII	$33,334,803	0.3
TSG7 A LP	$11,717,065	0.1
TSG7 B LP	$3,483,532	0.0
TSG8 LP	$37,195,881	0.3
TSG9 LP	$6,586,771	0.0
TSSP Opportunities Partners IV	$26,005,869	0.2
Waterland V	$535,152	0.0
Waterland VI	$12,717,000	0.1
Wayzata Opportunities III	$1,235,679	0.0
Wynnchurch Capital Partners V	$20,191,537	0.2
Brigade Capital	$231,019,902	1.7

Ares Capital Europe Fund V	$31,608,019	0.2
Athyrium Opp II	$4,182,920	0.0
Athyrium Opp III	$7,725,183	0.1
Benefit St Pr Sr Secure Opp	$17,546,492	0.1
Benefit St Pr Sr Secure Opp II	$40,527,252	0.3
Brookfield Infra Debt Fund III	$21,321,885	0.2
IFM US Infrastructure DB FD LP	$34,365,582	0.3
OrbiMed Royalty & Credit Opp III	$16,478,771	0.1
Orbimed Royalty & Credit Opp IV	$13,675,297	0.1
Shamrock Capital Debt Fund I	$9,781,352	0.1
Silver Point Specialty Credit Fund II	$33,039,471	0.2
Silver Point Specialty Credit Fund III	$13,009,829	0.1
Summit Credit	$83,966	0.0
Summit Credit II	$7,226,967	0.1
Summit Credit III	$11,057,562	0.1
Summit Credit IV	$15,031,233	0.1
TCP Direct Lending VIII	$117,237,420	0.9
Grosvenor SCARF Growth	$6,874,700	0.1
Prudential	$378,009,536	2.8
TCW MetWest Fixed	$369,905,767	2.8
Brandywine US FI	$363,572,733	2.7
Reams Core Plus FI	$384,633,790	2.9
Neuberger Berman	$406,890,535	3.1
Aristeia Partners LP	$53,701,757	0.4
BlackRock Event Driven Equity Fund	$56,726,144	0.4
Davidson Kempner Instl Partners LP	$64,583,436	0.5
Elliott Associates	$85,873,712	0.6
Graham Global Inv II	$51,049,672	0.4
Grosvenor SCARF Diversifying	$255,646,850	1.9
Laurion Capital	$59,825,552	0.4
MW Global Opportunities Fund	$64,161,439	0.5
PSquared Event Driven Opp Fund	$52,687,269	0.4
Tudor BVI Global Fund	$51,478,514	0.4
Dedicated Cash Allocation	$260,175,415	2.0

Brookfield Premier RE Partners	$95,217,080	0.7
Clarion Lion Properties	$102,108,801	0.8
Metlife Core Property	$71,352,081	0.5
Principal US Property	$53,944,653	0.4
Prologis Targeted Euro Logistics	$59,773,596	0.4
Prologis Targeted US Logistics	$73,756,901	0.6
Townsend Real Estate	$124,677,150	0.9
Carlyle China Realty	$4,663,061	0.0
Carlyle China Rome Logistics	$20,801,379	0.2
CIM Opportunity VIII	$19,374,832	0.1
Kohlberg Kravis Roberts	$346,399	0.0
Lasalle China Logistics Venture LP	$11,677,257	0.1
NREP Nordic Strat II	$15,233,307	0.1
NREP Nordic Strat III	$36,073,808	0.3
NREP Nordic Strat IV	$22,582,273	0.2
NREP Nordic Strat V	$13,332,347	0.1
Sculptor Real Estate Fund III	$3,980,250	0.0
Sculptor Real Estate Fund IV	$21,257,856	0.2
Asana Partners Fund II	$34,717,485	0.3
Asana Partners Fund III	$16,409,470	0.1
ECE Euro Prime Shopping II	$34,870,096	0.3
European RE Debt II	$283,507	0.0
Hammes II	$2,977,394	0.0
Hammes III	$21,551,326	0.2
Hammes IV	$451,364	0.0
Seven Seas Japan Opp Fund	$13,958,233	0.1
ACM II	$13,605,544	0.1
ARA Partners Fund III LP	$5,592,394	0.0
ArcLight Energy VI	$12,254,202	0.1
Brookfield Infra III	$42,962,978	0.3
Brookfield Infra IV	$40,670,449	0.3
Brookfield Super Core Infra	$106,686,078	0.8
Carlyle Power II	$34,949,269	0.3
Digital Colony Partners II	$33,131,940	0.2
EnCap Energy IX	$7,440,864	0.1

EnCap Energy X	$27,842,988	0.2
EnCap Flatrock Midstream III	$10,355,695	0.1
EnCap Flatrock Midstream IV	$13,031,184	0.1
EQT Infrastructure Fund IV	$42,216,543	0.3
First Reserve	$8,681,393	0.1
Harrison St Social Infra Fd	$109,991,522	0.8
IFM Global Infrastructure US LP	$167,449,299	1.3
ISQ Global Infrastructure Fund II	$57,611,814	0.4
ISQ Global Infrastructure Fund III	$26,667,764	0.2
KKR Asia Pacific Infrastructure Investors II	$10,237,012	0.1
Meridiam Infra N America III	$48,594,050	0.4
Meridiam Infra N America IV	$11,954,637	0.1
Meridiam Sa Infra Euro IV	$10,693,441	0.1
NGP Royalty Partners	$22,137,134	0.2
NGP Royalty Partners II	$50,805,368	0.4
Paine Schwartz Food Chain V	$36,200,846	0.3
Pantheon Ventures	$33,952,085	0.3
Quantum Energy VI	$14,424,216	0.1
Quantum Energy VII	$33,063,928	0.2
Ridgewood Water & Strategy Infra II	$20,163,110	0.2
Tailwater Energy IV	$30,960,670	0.2
Tailwater Energy Fund III	$22,200,361	0.2
Wastewater Opportunity	$1,672,297	0.0
Brookfield Liquid Real Return	$69,998	0.0
SSgA Barclays 1-10 Yrs TIPS Index	$66,359,058	0.5
SSgA Real Asset	$154,810,584	1.2
Cash Account	$114,072,010	0.9
Transition Account	$6,120,798	0.0
SSgA Overlay	$49,856,807	0.4
Total Fund	**$13,321,798,841**	**100.0**

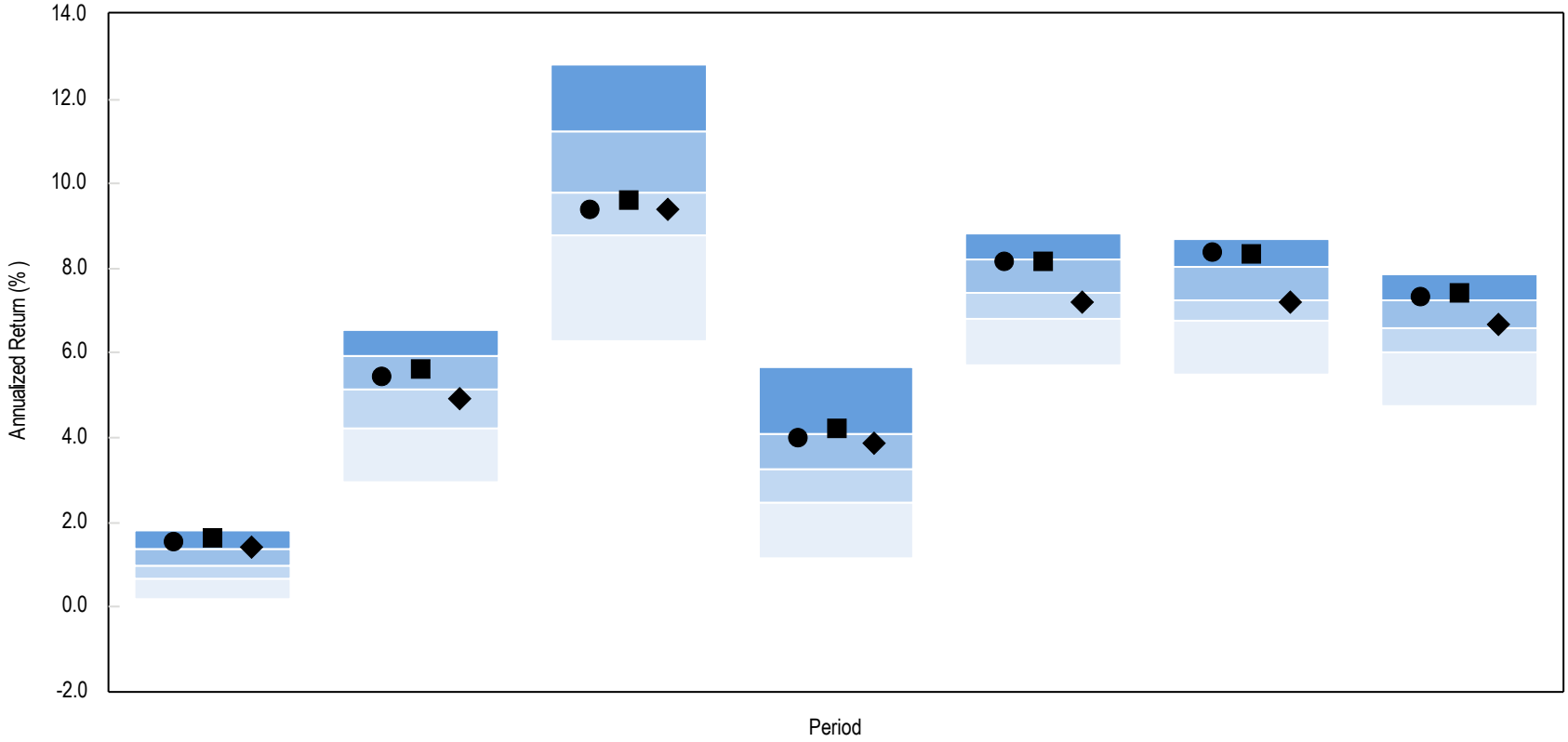
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	4.0 (29)	7.7 (15)	0.2 (25)	0.0 (35)	2.2 (26)
Policy Index	*3.9 (31)*	*8.0 (18)*	*0.1 (29)*	-	*0.0*
Total Fund ex Overlay	4.2 (19)	7.3 (13)	0.2 (15)	0.1 (24)	2.4 (32)
Policy Index	*3.9 (31)*	*8.0 (18)*	*0.1 (29)*	-	*0.0*

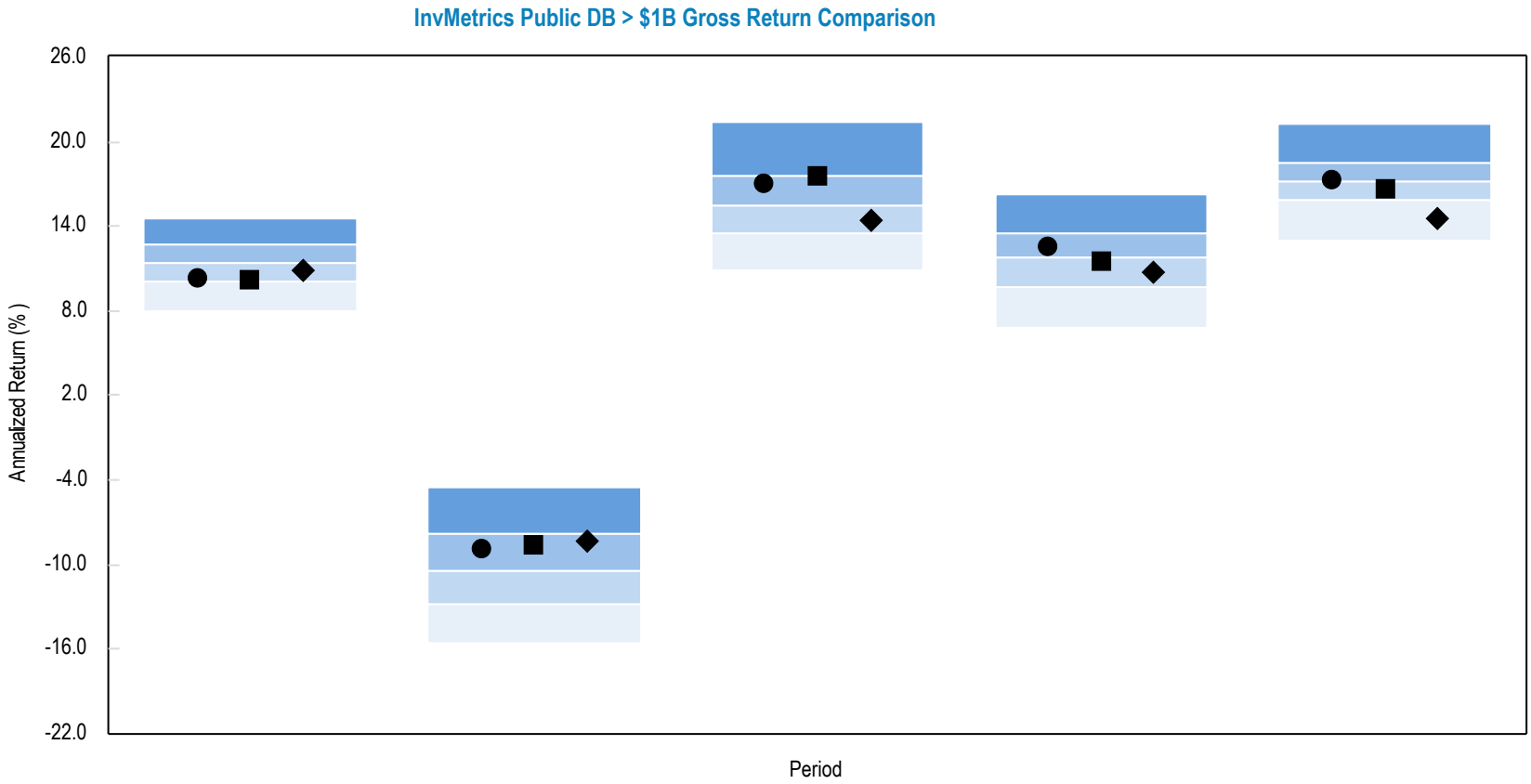
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Total Fund	8.2 (26)	8.3 (13)	0.7 (8)	0.3 (22)	2.8 (24)
Policy Index	*7.2 (56)*	*8.2 (12)*	*0.6 (20)*	-	*0.0*
Total Fund ex Overlay	8.2 (27)	8.0 (11)	0.7 (7)	0.3 (25)	2.9 (28)
Policy Index	*7.2 (56)*	*8.2 (12)*	*0.6 (20)*	-	*0.0*

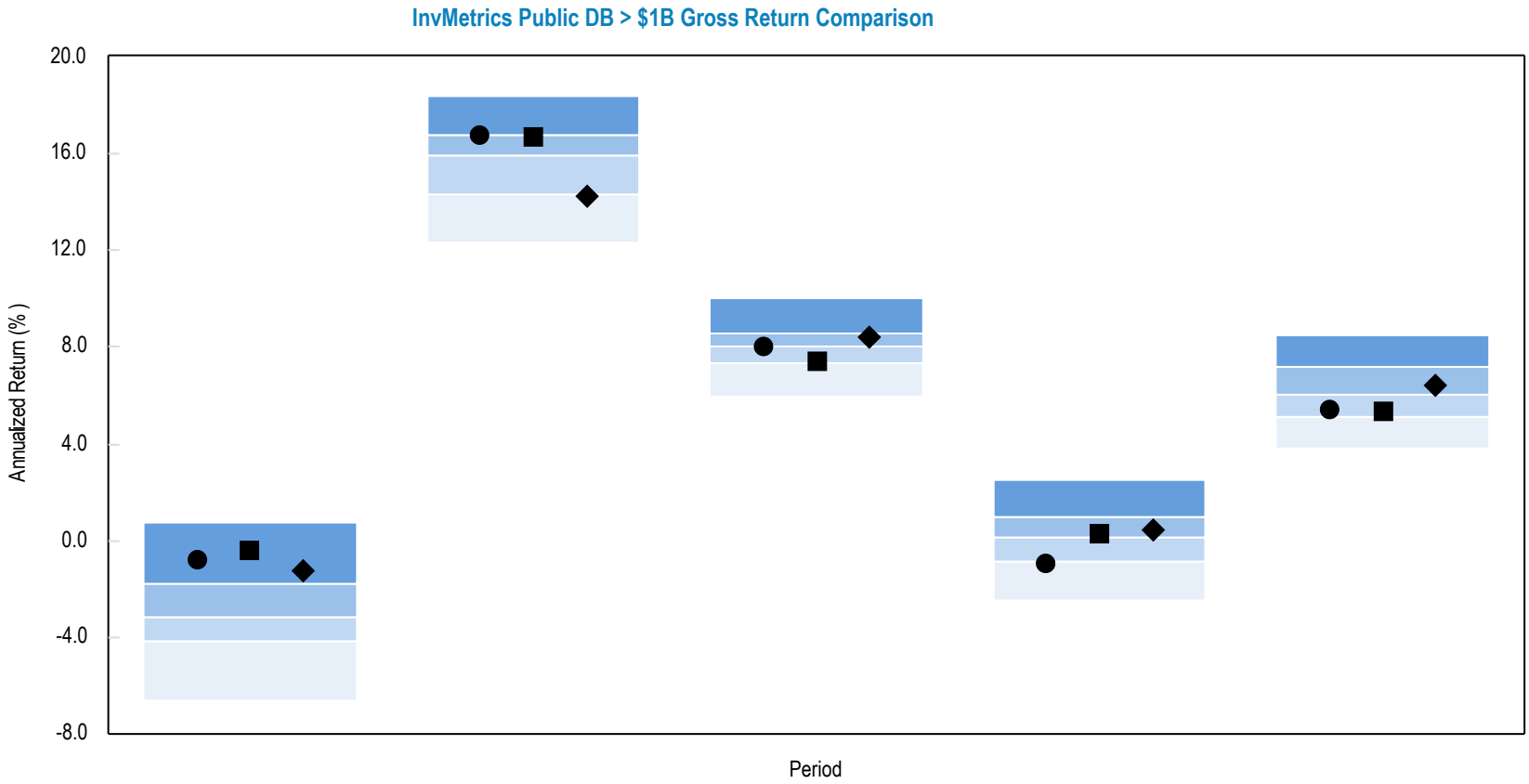
InvMetrics Public DB > $1B Gross Return Comparison



	QTD	YTD	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	1.6 (20)	5.5 (39)	9.4 (60)	4.0 (29)	8.2 (26)	8.4 (13)	7.4 (24)
■ Total Fund ex Overlay	1.6 (13)	5.6 (33)	9.6 (54)	4.2 (19)	8.2 (27)	8.4 (14)	7.4 (23)
◆ Policy Index	1.4 (24)	4.9 (56)	9.4 (60)	3.9 (31)	7.2 (56)	7.2 (51)	6.7 (50)
5th Percentile	1.8	6.5	12.8	5.7	8.8	8.7	7.8
1st Quartile	1.4	5.9	11.3	4.1	8.2	8.0	7.2
Median	1.0	5.1	9.8	3.3	7.4	7.3	6.6
3rd Quartile	0.7	4.2	8.8	2.5	6.8	6.7	6.0
95th Percentile	0.2	2.9	6.3	1.2	5.7	5.5	4.8
Population	71	71	71	67	67	65	65



	2023	2022	2021	2020	2019
● Total Fund	10.4 (73)	-8.9 (35)	17.1 (33)	12.6 (39)	17.3 (47)
■ Total Fund ex Overlay	10.2 (74)	-8.5 (30)	17.6 (26)	11.5 (54)	16.6 (59)
◆ Policy Index	10.8 (63)	-8.3 (28)	14.4 (63)	10.8 (65)	14.5 (88)
5th Percentile	14.5	-4.5	21.4	16.3	21.2
1st Quartile	12.8	-7.8	17.6	13.5	18.5
Median	11.4	-10.4	15.5	11.7	17.2
3rd Quartile	10.1	-12.7	13.5	9.7	15.9
95th Percentile	8.0	-15.5	10.9	6.8	13.0
Population	183	188	222	232	192



	2018	2017	2016	2015	2014
● Total Fund	-0.8 (13)	16.8 (26)	8.0 (53)	-0.9 (78)	5.5 (65)
■ Total Fund ex Overlay	-0.4 (9)	16.7 (28)	7.5 (70)	0.3 (44)	5.3 (69)
◆ Policy Index	-1.3 (15)	14.2 (78)	8.4 (35)	0.4 (41)	6.4 (45)
5th Percentile	0.7	18.4	10.1	2.5	8.5
1st Quartile	-1.8	16.8	8.6	1.0	7.2
Median	-3.1	15.9	8.1	0.1	6.1
3rd Quartile	-4.1	14.4	7.3	-0.9	5.1
95th Percentile	-6.6	12.3	6.0	-2.4	3.8
Population	168	177	178	173	172

Total Plan Policy Index	As of: 4/1/22	7/1/19	7/1/17	4/1/17	1/1/14	1/1/12	1/1/08	2/1/06	9/1/04	1/1/00	7/1/86
91-day UST Bill +5% (AR)				10.0%	10.0%	10.0%	5.0%	5.0%	5.0%		
Bloomberg Aggregate	12.0%	10.0%	10.0%	10.0%	15.0%	20.0%	20.0%	25.0%	25.0%	30.0%	
Bloomberg US Treasury	4.0%	5.0%	5.0%	5.0%							
ICE BofA ML High Yield II	1.0%	1.0%	1.0%	1.0%	1.0%						
Bloomberg Commodity			2.0%	2.0%			5.0%				
Cambridge Associates Private Energy 1 Qtr Lag	2.1%	2.5%	2.5%								
Cambridge Associates Private Infrastructure 1 Qtr Lag	4.2%	3.2%	3.2%								
FTSE BIG											23.0%
FTSE WGBI ex US Unhedged	0.0%	2.4%	2.4%	2.4%	2.4%						
CPI-U +5% (PRA)				7.0%	15.0%	15.0%					
Credit Suisse Leveraged Loans	1.0%	1.0%	1.0%	1.0%	1.0%						
Credit Suisse Leveraged Loans +2% 1 Qtr Lag	5.0%	4.0%	4.0%	4.0%							
JPM GBI EM Diversified	0.0%	0.6%	0.6%	0.6%	0.6%						
HFRI FoF Composite Index + 1%	0.0%	3.0%	3.0%								
HFRI FoF Conservative Index	7.0%	7.0%	7.0%								
MSCI ACWI ex US	16.0%	20.0%	20.0%	20.0%	22.5%	22.5%	20.0%				
MSCI ACWI IMI	4.0%										
MSCI EAFE								15.0%	15.0%	15.0%	15.0%
MSCI Emerging Markets								5.0%	5.0%	5.0%	
NAREIT							3.0%	3.0%			
NFI-ODCE	5.9%	4.6%	4.6%								
NFI-ODCE net +1% 1Q Lag	3.2%	2.5%	2.5%								
NCREIF				7.0%			12.0%	12.0%	15.0%	10.0%	15.0%
NCREIF Farmland 1 Qtr Lag	0.7%	0.7%	0.7%								
NCREIF Timberland Index Lagged		0.7%	0.7%								
Russell 1000								30.0%	30.0%	35.0%	
Russell 1000 +3% 1QL (PE)					10.0%	10.0%					
Russell 2000								5.0%	5.0%	5.0%	
Russell 3000	20.0%	20.0%	21.0%	21.0%	22.5%	22.5%	30.0%				47.0%
S&P 500 +2% 1QL (PE)							5.0%				
Cambridge Associates All PE 1 Qtr Lag	11.0%	9.0%	9.0%	9.0%							
Bloomberg Roll Select Commodity Total Return	0.2%	0.2%									
Bloomberg U.S. Floating Rate Note < 5 Yr	0.2%	0.2%									
S&P Global LargeMidCap Commodity and Resources	0.2%	0.2%									
S&P Global Infrastructure Index - Net of Tax on Dividend	0.5%	0.5%									
Bloomberg U.S. Government Inflation-Linked 1-10 Yrs	0.6%	0.6%									
FTSE EPRA Nareit Developed Liquid Index	0.3%	0.3%									
ICE LIBOR Spot/Next Overnight USD	1.0%	1.0%									
	100.0%	100.0%	100.0%	90.0%	90.0%	90.0%	95.0%	95.0%	95.0%	100.0%	100.0%

Growth Benchmark	As of: 4/1/22	7/1/19	7/1/17	4/1/17
91 Day T-Bill +5%				5.08%
ICE BofA ML High Yield II	1.73%	1.73%	1.70%	1.70%
Credit Suisse Leveraged Loans	1.73%	1.73%	1.70%	1.70%
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	8.62%	6.90%	6.78%	6.78%
HFRI FoF Composite Index + 1%		5.17%	5.08%	
MSCI ACWI ex US	27.58%	34.48%	33.90%	33.90%
MSCI ACWI IMI	6.89%			
Russell 3000	34.48%	34.48%	35.59%	35.59%
Cambridge Associates All PE 1 Qtr Lag	18.97%	15.52%	15.25%	15.25%
	100.0%	100.0%	100.0%	94.9%

Global Public Equity Benchmark	As of: 4/1/22	7/1/11
MSCI ACWI		100.0%
MSCI ACWI IMI	100.0%	
	100.0%	100.0%

Domestic Equity Benchmark	As of: 1/1/08	9/1/04	1/1/00	7/1/86
Russell 1000		85.71%	87.5%	
Russell 2000		14.29%	12.5%	
Russell 3000	100.0%			100.0%
	100.0%	100.0%	100.0%	100.0%

Large Cap Active Benchmark	As of: 2/1/19	9/1/08
Russell 1000 Value		100.0%
Russell 1000	100.0%	
	100.0%	100.0%

International Equity Benchmark	As of: 1/1/08	1/1/00	7/1/86
MSCI ACWI ex US	100.0%		
MSCI EAFE		75.0%	100.0%
MSCI Emerging Markets		25.0%	
	100.0%	100.0%	100.0%

Private Equity Benchmark	As of: 4/1/17	1/1/12	1/1/08
Russell 1000 +3% 1QL		100.0%	
S&P 500 +2% 1QL			100.0%
Cambridge Associates All PE 1 Qtr Lag	100.0%		
	100.0%	100.0%	100.0%

Public Credit Benchmark	As of: 4/1/17
ICE BofA ML High Yield II	50.0%
Credit Suisse Leveraged Loans	50.0%
	100.0%

Private Credit Benchmark	As of: 4/1/17
Credit Suisse Leveraged Loan + 2% 1 Qtr Lag	100.0%
	100.0%

Growth Oriented Absolute Return Benchmark	As of: 7/1/17	4/1/17
91-day UST Bill +5%		100.0%
HFRI FoF Composite Index + 1%	100.0%	
	100.0%	100.0%

Diversifying Benchmark	As of: 4/1/22	7/1/17	4/1/17
91 Day T-Bill +5%			28.00%
Bloomberg US Aggregate	52.17%	40.00%	40.00%
Bloomberg US Treasury	17.39%	20.00%	20.00%
FTSE WGBI ex US Unhedged		9.60%	9.60%
HFRI FoF Conservative Index	30.43%	28.00%	
JPM GBI EM Diversified		2.40%	2.40%
	100.0%	100.0%	100.0%

Diversifying Absolute Return Benchmark	As of: 7/1/17	4/1/17
91-day UST Bill +5%		100.0%
HFRI FoF Conservative Index	100.0%	
	100.0%	100.0%

Real Return Benchmark	As of: 4/1/22	4/1/19	4/1/17
Real Estate Benchmark	50.00%	43.75%	43.75%
Private Real Assets Benchmark	38.89%	43.75%	43.75%
Bloomberg Commodity			12.50%
Liquid Real Return Custom Benchmark	11.11%	12.50%	
	100.0%	100.0%	100.0%

Real Estate Benchmark	As of: 4/1/22	7/1/17	71/2011
NCREIF			100.0%
NFI-ODCE	60.0%	65.0%	
NFI-ODCE net +1% 1Q Lag	40.0%	35.0%	
	100.0%	100.0%	100.0%

RE-Value Added Benchmark	As of: 7/1/16	10/1/08
NCREIF +2% 1Q Lag		100.0%
NFI-ODCE net +1% 1Q Lag	100.0%	
	100.0%	100.0%

Private Real Assets Benchmark	As of: 4/1/22	7/1/17	4/1/17
CPI-U Headline +5%			100.0%
Cambridge Associates Private Energy 1 Qtr Lag	30.0%	35.0%	
Cambridge Associates Private Infrastructure 1 Qtr Lag	60.0%	45.0%	
NCREIF Farmland 1 Qtr Lag	10.0%	10.0%	
NCREIF Timberland Index Lagged		10.0%	
	100.0%	100.0%	100.0%

Liquid Real Return Custom Benchmark	As of: 7/1/19
Bloomberg Roll Select Commodity Total Return	10.0%
Bloomberg U.S. Floating Rate Note < 5 Yr	10.0%
S&P Global LargeMidCap Commodity and Resources	10.0%
S&P Global Infrastructure Index - Net of Tax on Dividend	25.0%
Bloomberg U.S. Government Inflation-Linked 1-10 Yrs	30.0%
FTSE EPRA Nareit Developed Liquid Index	15.0%
	100.0%

Cash Benchmark	As of: 4/1/22	7/1/92
91 Day T-Bills		100.0%
NFI-ODCE net +1% 1Q Lag	100.0%	
	100.0%	100.0%

AllianceBernstein Benchmark	As of: 1/1/01	1/1/98	5/1/89
Russell 1000	100.0%		
Russell 3000		100.0%	
Wilshire 2500			100.0%
	100.0%	100.0%	100.0%

Eagle Capital Benchmark	As of: 2/1/19	9/1/08
Russell 1000 Value		100.0%
Russell 1000	100.0%	
	100.0%	100.0%

Lazard Benchmark	As of: 4/1/22	7/1/12
MSCI ACWI ex USA		100.0%
MSCI World ex US	100.0%	
	100.0%	100.0%

Brigade Benchmark	As of: 12/1/13
ICE BofA ML High Yield II	50.0%
Credit Suisse Leveraged Loans	50.0%
	100.0%

Brookfield Real Return Custom	As of: 12/1/2019
FTSE Global Core Infrastructure 50/50 Index	30.0%
FTSE EPRA Nareit Developed Index	20.0%
ICE BofA 7% Constrained REIT Preferred Securities Index	10.0%
ICE BofA USD Real Asset High Yield Custom Index	16.0%
ICE BofA USD Real Asset Corporate Custom Index	24.0%
	100.0%

SSgA Real Asset Benchmark	As of: 3/2/2018	10/1/15	2/1/08
Bloomberg US Govt Inflation-Linked 1-10 Yrs		10.0%	
Bloomberg US TIPS		10.0%	20.0%
Bloomberg 1-10 Yr US TIPS	30.0%		
Bloomberg Roll Select Commodity TR	10.0%	20.0%	
Bloomberg USD Floating Rate Note <5yr	10.0%		
DJ US Select REIT			30.0%
FTSE EPRA/NAREIT Developed Liquid	15.0%	10.0%	
MSCI World Natural Resources		20.0%	25.0%
S&P Global Large Mid Cap Commodity Resources	10.0%		
S&P Global Infrastructure	25.0%	20.0%	
S&P GS Commodities			25.0%
S&P MLP		10.0%	
	100.0%	100.0%	100.0%

Cash Benchmark	As of: 4/1/22	7/1/92
91 Day T-Bills		100.0%
Secured Overnight Financing Rate	100.0%	
	100.0%	100.0%

Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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