



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



PERIOD ENDING: JUNE 30, 2023

Investment Performance Review for

Tulare County Employees' Retirement Association

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Investment Landscape	TAB I
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Investment Performance Review	TAB II
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A large, semi-transparent geometric overlay consisting of a grid of triangles in various shades of blue and green, covering the left and bottom portions of the slide. A white triangle is positioned to the left of the main title text.

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

**3RD QUARTER 2023
Investment Landscape**

Verus business update

Since our last Investment Landscape webinar:

- Verus hired four employees:
 - **Dan Hougard, FSA**, Associate Director | Actuarial Services (Chicago)
 - **Chibueze Odoh**, Public Markets Analyst (Seattle)
 - **Madison Martin**, Performance Analyst (Seattle)
 - **Palmer Pederson**, Performance Analyst (Seattle)
- In addition, we've partnered with Rainier Scholars for a summer internship position. Rainier Scholars is a program that offers a pathway to college graduation for underrepresented communities.
 - **Moses Dagmawi**, Summer Intern (Seattle)

Recent Verus research

Visit: verusinvestments.com/research

Annual research

2023 REAL ASSETS OUTLOOK

In our Outlook last year, we said, “We believe inflation will likely begin falling later in 2022.” And though that turned out to be true, we came to that conclusion because we believed the Fed would choke off the pressures of inflation. Coming into 2023, it appeared as though inflation would continue to retreat lower, but unexpected price increases have complicated the picture. There are now banking instability issues, geopolitics, a softening economy, and a dozen other headline issues weighing on investors’ minds.

We believe the Fed will keep policy tight until inflation returns to their target level. We expect rates to stay higher for longer, which could present challenges and opportunities across private markets which have broadly failed to adjust equity values for the new higher-rate environment.

The Verus 2023 Real Assets Outlook includes insights around the following trends:

- Dislocations in Commercial Real Estate
- Elevated valuations in Infrastructure
- Declining interest in Natural Resources

Topics of interest

PRIVATE REAL ESTATE IN TAFT-HARTLEY PORTFOLIOS

Taft-Hartley pension funds in the United States often make allocations to private real estate with the dual objectives of generating robust returns and supporting union workers by investing in “labor-friendly” real estate strategies. There is occasionally a misconception that investing in labor-friendly real estate strategies involves sacrificing performance.

In this Topic of Interest whitepaper, we examine core real estate manager performance over time using the North American Building Trades Report Card to identify whether a performance difference does in fact exist. We conclude, based on the data, that labor-friendly private real estate performance has been competitive with the broader private real estate universe and that significant return was not sacrificed when investing in labor-friendly strategies during the period examined.

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2nd quarter summary

THE ECONOMIC CLIMATE

- Real GDP increased at a 2.0% rate in Q1 (1.8% growth year-over-year). The slowdown from the prior quarter reflected weaker inventory buildups and slower business investment. An upturn in consumer spending was the greatest support to economic growth, as consumption has ticked along at a steady rate.
- The unemployment rate remained very tight at 3.6% in June. The workforce appears to be experiencing a healthy, and possibly low pain, rebalancing of resources. Many workers are returning to the workforce while fewer job openings are being posted. Both of these effects reduce the mismatch between *workers available* and *available jobs*.

PORTFOLIO IMPACTS

- The U.S. consumer has shown resiliency. Household budgets have been strained by high inflation and a jump in interest rates; however, the boom in wealth over the past decade, fueled by a substantial bull market in stocks and in residential real estate, may provide a cushion in the next downturn. It remains unclear whether the U.S. will face recession in the near-term.
- The Cboe VIX implied volatility index fell to a surprisingly low level, despite broad expectations of recession, regional bank risks, and other not-yet-known consequences of liquidity withdrawal from the financial system. The index fell from 18.7% to 13.6% during the second quarter.

THE INVESTMENT CLIMATE

- The Fed implemented an additional rate hike to a new range of 5.00–5.25%, but longer-term U.S. interest rates remain anchored. This has resulted in the most deeply inverted U.S. yield curve since the early 1980s at -1.06% (defined as 10-year UST yield minus 2-year UST yield).
- Inflation fell further in the U.S., with June CPI coming in at a surprisingly low 3% year-over-year and Core CPI at 4.8%. Weakening energy prices have had a big impact on overall inflation levels, though prices appear to also be softening across many other types of goods and services, suggesting milder inflation is not solely an energy story.

ASSET ALLOCATION ISSUES

- Global equities persisted in their upward trajectory during Q2 (MSCI ACWI +6.2%). International developed markets underperformed domestic equities (S&P 500 +8.7%, MSCI EAFE +3.0%), as did emerging markets (MSCI EM +0.9%). U.S. equities rallied for a third consecutive quarter. A surge in AI-focused hype helped drive an expansion in the valuations of large tech firms.
- Growth stocks (+12.8%) outpaced value (+4.1%) once again, bringing the year-to-date performance differential to +23.9%. Sector-specific drivers, including product launches and upward adjustments to company guidance among Information Technology (+18.6%) mega-caps, drove growth stocks higher. Over recent years, certain style factors have exhibited some of the wildest swings in history.

Equity & credit markets performed strongly during Q2

A variety of risks hang overhead, though markets appear to be expecting a “soft landing”

What drove the market in Q2?

“U.S. inflation cooled in June for the 12th straight month”

HEADLINE CONSUMER PRICE INFLATION (YEAR-OVER-YEAR)

Jan	Feb	Mar	Apr	May	Jun
6.4%	6.0%	5.0%	4.9%	4.1%	3.0%

Article Source: CNN, July 12th, 2023

“Top U.S. banks raise dividends after sailing through Fed stress tests”

KBW REGIONAL BANKING INDEX (MONTHLY RETURN)

Jan	Feb	Mar	Apr	May	June
2.9%	0.5%	-20.6%	-3.6%	-8.7%	7.1%

Article Source: Reuters, June 30th, 2023

“This classic recession indicator just hit its lowest level since 1981”

10-YEAR U.S. TREASURY YIELD MINUS 2-YEAR U.S. TREASURY YIELD

Jan	Feb	Mar	Apr	May	Jun
-0.68%	-0.79%	-0.64%	-0.56%	-0.56%	-0.89%

Article Source: CNBC, July 7th, 2023

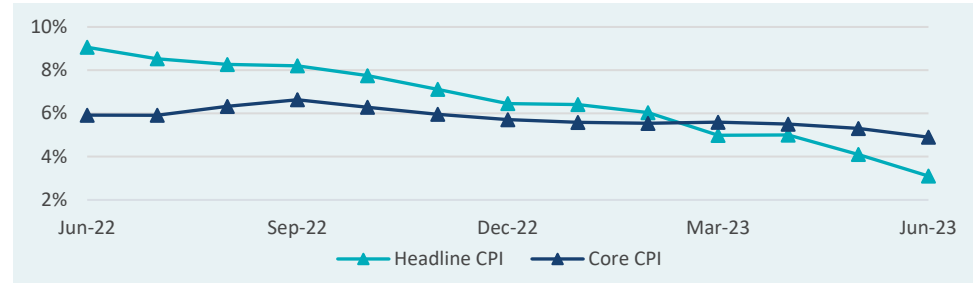
“Fed pauses interest rate hikes, signals two more increases likely...”

FED FUNDS TARGET RATE – UPPER BOUND

Q1 22	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23
0.50%	1.75%	3.25%	4.50%	5.00%	5.25%

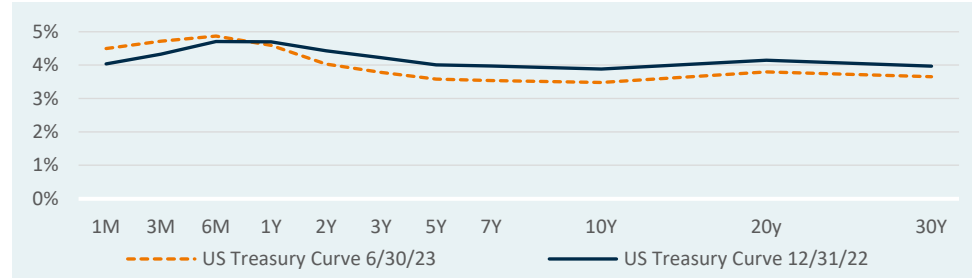
Article Source: USA Today, June 14th, 2023

U.S. HEADLINE VS. CORE INFLATION (YEAR-OVER-YEAR)



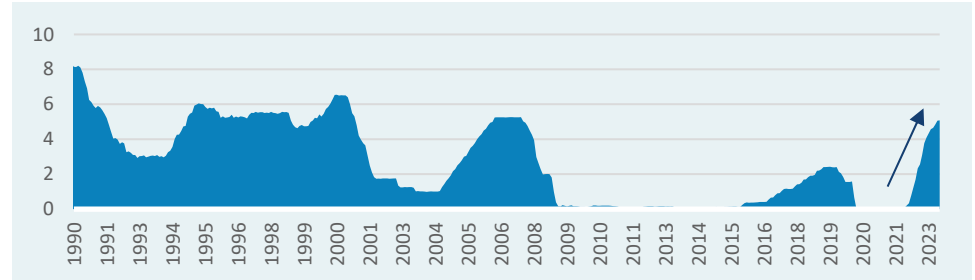
Source: FRED, as of 6/30/23

DEEP U.S. YIELD CURVE INVERSION



Source: Bloomberg, as of 6/30/23

EFFECTIVE FED FUNDS RATE (%)



Source: FRED, as of 6/30/23

Economic environment

U.S. economics summary

- Real GDP increased at a 2.0% rate in the first quarter of 2023 (1.8% growth year-over-year). The slowdown reflected weaker inventory buildups and slower business investment. Despite loftier inflation and higher interest rates, many economic signals are positive and/or improving.
- Inflation fell further in the U.S., with June CPI coming in at a surprisingly low 3% year-over-year and Core CPI at 4.8%. Weaker energy prices have had a large impact on overall inflation levels, though prices appear to also be softening across many other types of goods and services, suggesting milder inflation is not solely an energy story.
- The U.S. consumer has shown resiliency, with spending moving along at a moderate pace—at 2.1% year-over-year in May. These consumption patterns will be worth watching, as spending is the largest driver of economic growth.
- The Fed released its annual banking stress test results, which was applicable to the “too big to fail” class of banks. Results helped ease banking concerns as all 23 banks passed.
- The unemployment rate remained very tight at 3.6% in June. The workforce appears to be experiencing a healthy, and possibly low pain, rebalancing of resources. Many workers are returning to the workforce at the same time that fewer job openings are posted. Both of these effects reduce the mismatch between the total number of workers available relative to available jobs.
- Consumer sentiment improved slightly during the second quarter by most measures but remains pessimistic. The University of Michigan Consumer Sentiment survey showed that the outlook has improved due to factors such as the debt ceiling resolution and falling inflation.

	Most Recent	12 Months Prior
Real GDP (YoY)	1.8% 3/31/23	3.7% 3/31/22
Inflation (CPI YoY, Core)	4.8% 6/30/23	8.9% 6/30/22
Expected Inflation (5yr-5yr forward)	2.3% 6/30/23	2.1% 6/30/22
Fed Funds Target Range	5.00–5.25% 6/30/23	1.50–1.75% 6/30/22
10-Year Rate	3.81% 6/30/23	2.98% 6/30/22
U-3 Unemployment	3.6% 6/30/23	3.6% 6/30/22
U-6 Unemployment	6.9% 6/30/23	6.7% 6/30/22

GDP growth

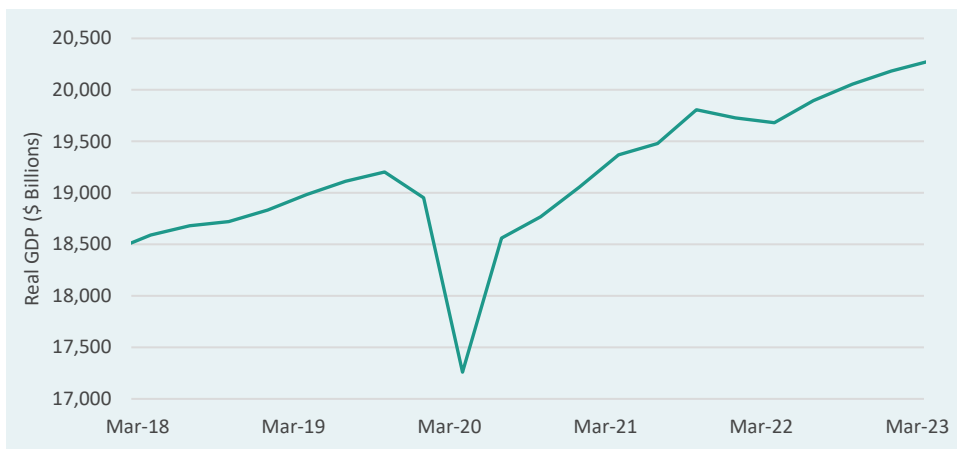
Real GDP increased at a 2.0% rate in the first quarter of 2023 (1.8% growth year-over-year). The slowdown from the prior quarter reflected weaker inventory buildups and slower business investment. An upturn in consumer spending was the greatest support to economic growth, as consumption has ticked along at a steady rate despite higher costs of borrowing. Second quarter GDP growth is expected to be 2.3%, according to the Atlanta Fed GDPNow forecast, as of July 10th.

Growth varied across industries, with service-producing industries producing 2.6% growth, government-related growing 2.7%, and goods-producing industry growth falling by -0.7%.

The economy has increasingly shown signs of resilience, casting doubt on whether a recession is imminent. Markets seem to be interpreting this resilience as a negative development, due to implications for even tighter monetary policy and a more aggressive Federal Reserve in the fight against inflation. This *bad news is good news* dynamic was illustrated on July 6th when ADP's National Employment Report indicated that 497,000 private sector jobs were added in June—double the expected number. This strong report sent bond yields higher and equity markets lower.

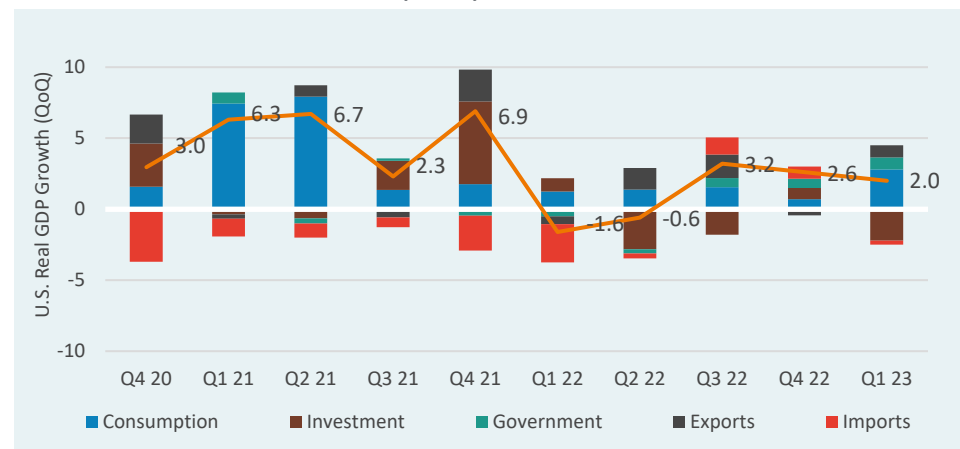
The U.S. economy continues to show resilience despite aggressive monetary tightening & low consumer confidence

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 3/31/23

U.S. REAL GDP COMPONENTS (QOQ)



Source: FRED, as of 3/31/23

Inflation

Inflation has continued to move lower in the U.S., with June CPI coming in at a surprisingly low 3% year-over-year and Core CPI (ex-food & energy) at 4.8%. Weaker energy prices have had a significant impact on overall inflation levels, as well as *base effects* as larger price moves of 2022 begin to fall out of the official twelve-month inflation calculation. In recent months, prices appear to also be softening across many other types of goods and services, suggesting milder inflation is not solely an energy story. Inflation concerns are now centered on core inflation (ex-food & energy) which remains stubbornly high and has shown fewer signs of abating.

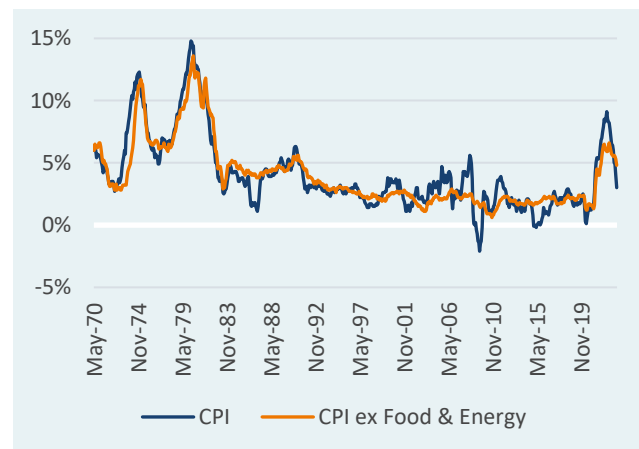
Earlier in the U.S. inflationary cycle business input costs were

rising faster than wages which contributed to an environment where real household incomes were falling (wages not keeping up with goods and services prices). Recently this trend has reversed. This may lead to an environment in which households are benefiting from inflation as wages rise faster than inflation in the prices of goods and services.

In past editions of this document, we predicted that inflation (CPI) was very likely to fall to around 4% in Q2 for technical reasons related to the twelve-month window with which inflation is calculated. These effects have played out as expected.

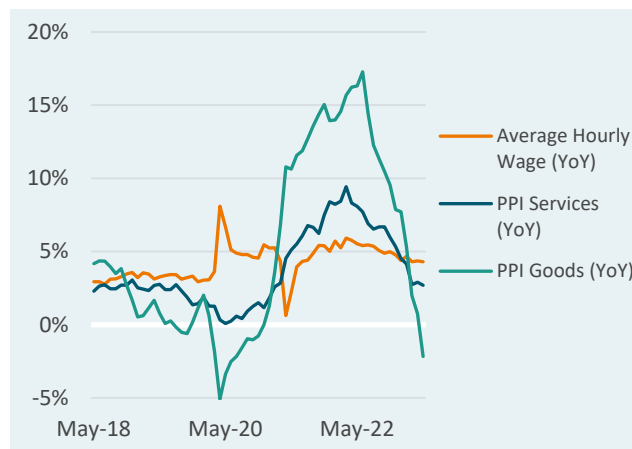
U.S. inflation continues to fall, though persistent monthly core inflation (ex-food & energy) is a concern

U.S. CPI (YOY)



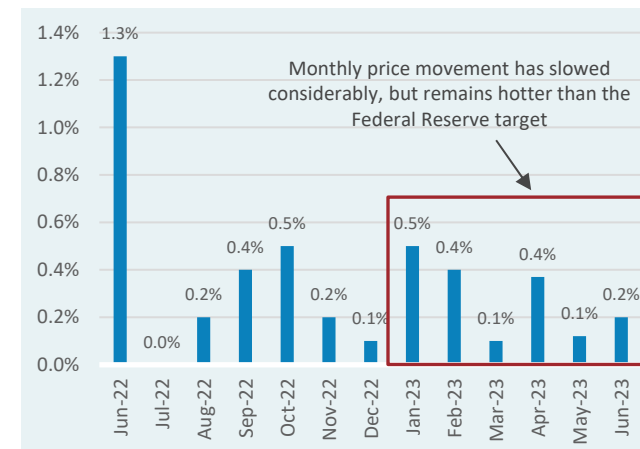
Source: BLS, as of 6/30/23

HIGHER PRICES MAY NOW BENEFIT CONSUMERS



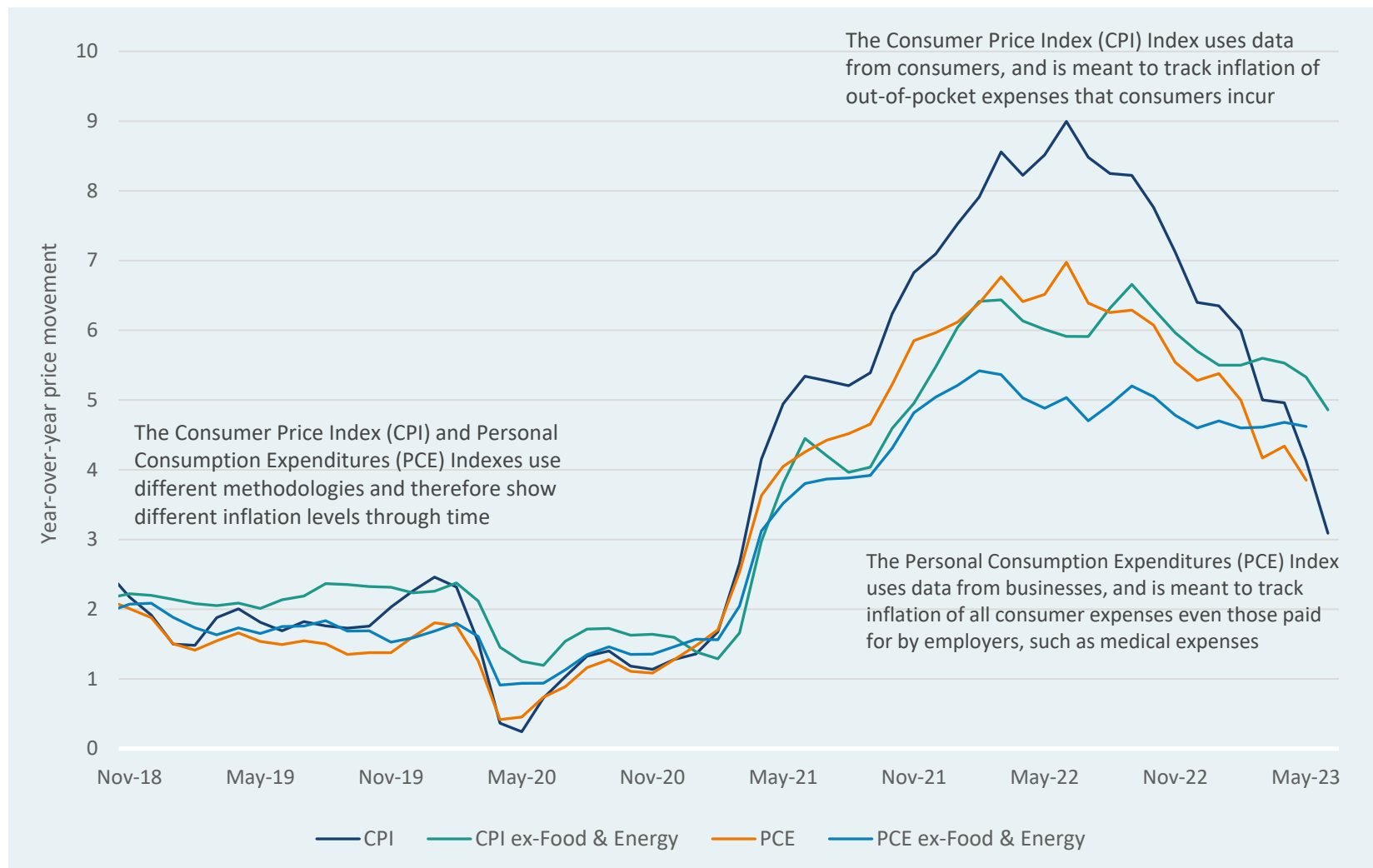
Source: FRED, BLS, as of 5/31/23

MONTHLY PRICE MOVEMENT



Source: BLS, as of 6/30/23

How are inflation conditions evolving?



U.S. inflation continues to fall, though persistent monthly core inflation (ex-food & energy) is a concern

Source: FRED, Verus, PCE data as of 5/31/23, CPI data as of 6/30/23

Labor market

The unemployment rate remained very tight at 3.6% in June, despite far higher interest rates, liquidity withdrawal from the Federal Reserve, and concerns of a possible recession.

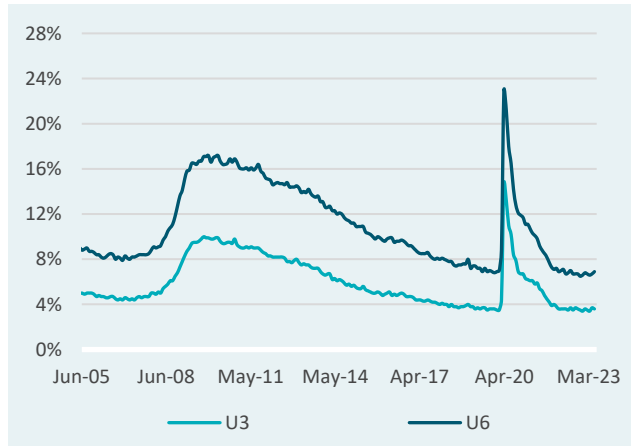
Labor participation rates further recovered over the quarter as many workers who had left the labor force during the pandemic are once again seeking employment. This recovery has been highly concentrated in the core age cohort (25-54 years). In fact, the labor participation rate of this age group has surpassed the pre-pandemic level. Workers aged 55 and older have overall not been returning to the workforce. Participation of these workers has actually declined slightly

over the past year.

Overall, the workforce appears to be experiencing a healthy, and possibly relatively low pain, rebalancing of resources. Many workers are returning to the workforce at the same time that fewer job openings are posted. Both of those effects reduce the mismatch between the number of *workers available* and the *available jobs*. These unique dynamics could allow for a reduction in labor market tightness without a major cycle of layoffs, while potentially also helping ease inflation pressure if a looser labor market helps dampen wage growth.

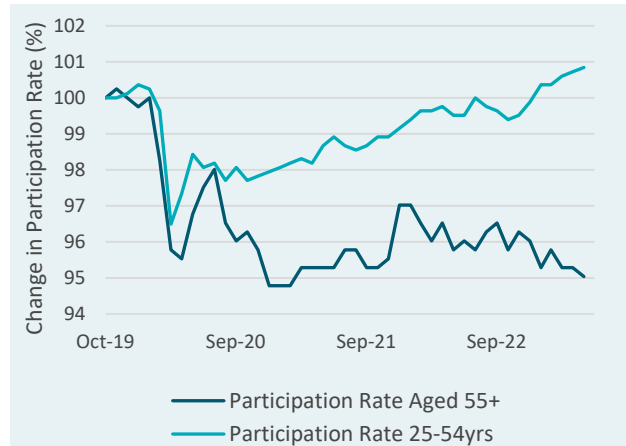
Many workers who left the labor force during the pandemic are returning to the job market, helping to rebalance labor conditions

U.S. UNEMPLOYMENT



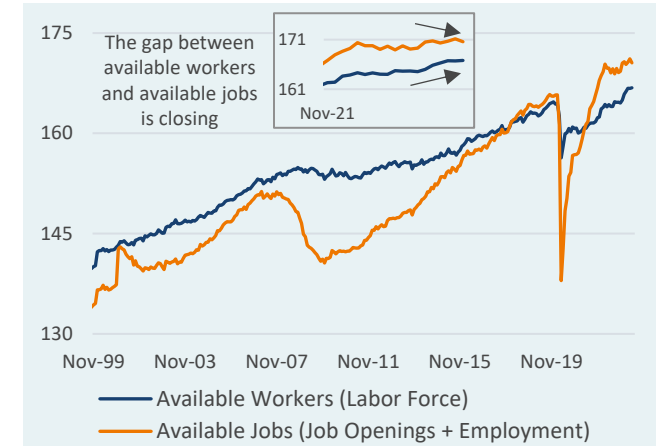
Source: FRED, as of 6/30/23

LABOR FORCE PARTICIPATION RATE



Source: FRED, as of 6/30/23

WORKERS AVAILABLE VS. AVAILABLE JOBS



Source: BLS, as of 5/31/23

The consumer

The U.S. consumer has shown resiliency, with real (inflation-adjusted) personal consumption expenditures moving along at a moderate pace—at 2.1% year-over-year in May. These consumption patterns will be worth watching, as spending is the largest driver of economic growth and is likely the greatest determinant of whether recession occurs in the near-term.

Personal savings rates remain depressed, but this does not seem to be resulting in stronger spending behavior. We suspect lower savings rates are at least partly a product of

high inflation and falling real (inflation-adjusted) incomes.

Household budgets have come under strain due to high inflation in recent years and a sharp increase in interest rates which impacted borrowing costs. However, it is important to contrast this with the fact that Americans have experienced a boom in wealth and prosperity over the past decade, fueled by substantial bull markets in stocks and in residential real estate, among other assets. This wealth may serve as somewhat of a unique buffer against economic weakness.

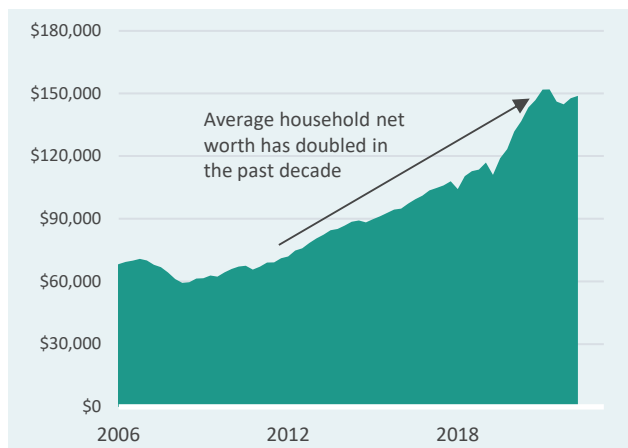
The vast wealth created over the past decade may serve as a unique buffer against economic weakness

REAL PERSONAL SPENDING



Source: FRED, as of 5/31/23

AVERAGE HOUSEHOLD NET WORTH



Source: FRED, as of 1/31/23

PERSONAL SAVINGS RATE



Source: FRED, as of 5/31/23

Sentiment

Consumer sentiment improved slightly during the second quarter by most measures but remains pessimistic. The University of Michigan Consumer Sentiment survey showed that the outlook has brightened due to factors such as the debt ceiling resolution and falling inflation.

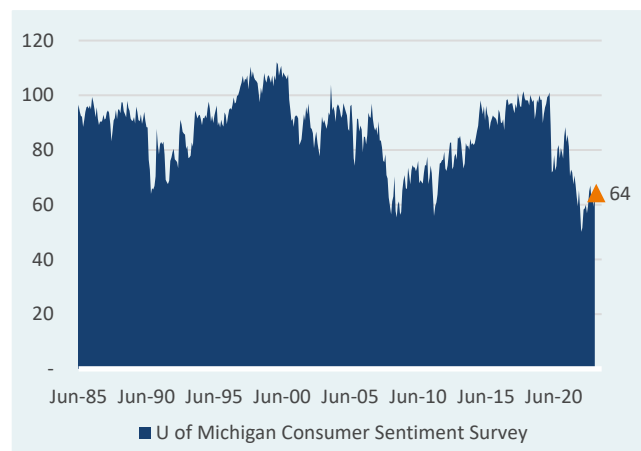
Consumer confidence as indicated by the Conference Board improved materially, although confidence readings reflect levels typically associated with recession within the next year. According to the Conference Board survey, responses suggested a more positive outlook for family finances, better

labor market conditions, and further declines in inflation. Across age cohorts, Americans younger than age 35 expressed the largest gains in optimism.

The NFIB Small Business Optimism index improved slightly but remains at very depressed levels. Difficulties in hiring qualified employees and high inflation were the greatest small business concerns in June. Fewer business owners reported plans to increase prices, perhaps an indication of easing inflation pressure.

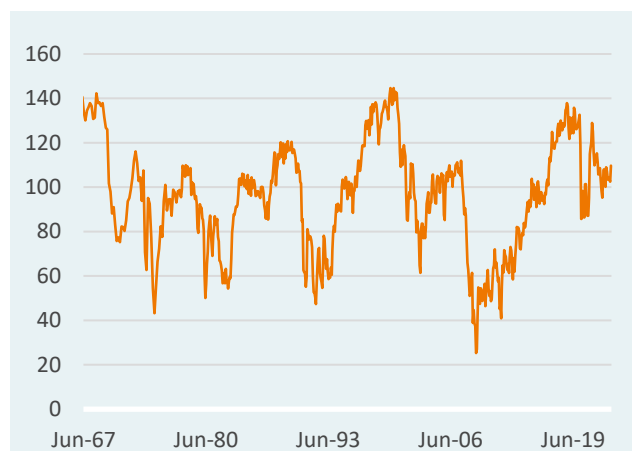
Sentiment improved during Q2 but remains poor by most measures

CONSUMER SENTIMENT



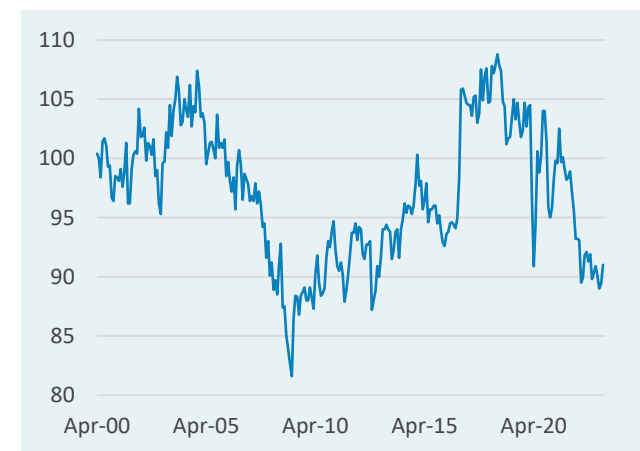
Source: University of Michigan, as of 6/30/23

CONFERENCE BOARD CONSUMER CONFIDENCE



Source: Conference Board, as of 6/30/23

NFIB SMALL BUSINESS SENTIMENT



Source: NFIB, as of 6/30/23

Housing

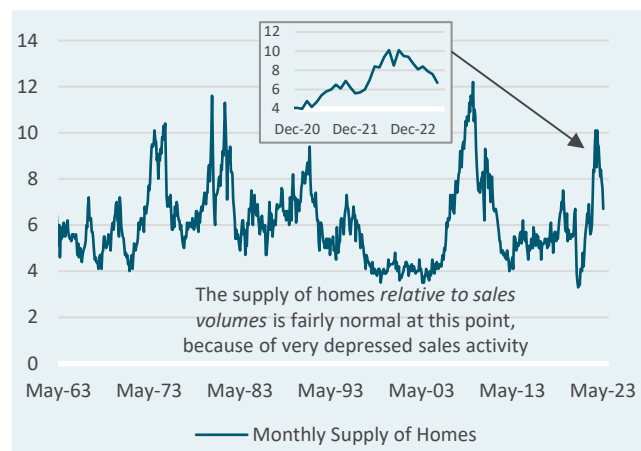
The U.S. housing market continues to face difficult conditions. High mortgage rates and extremely poor affordability have led to the slowest existing home sales activity since the depths of the bear market following the 2008-2009 Housing Crisis. However, conditions are currently very different from that time, as there are few signs of distressed sales. Many sellers are simply refusing to list their homes rather than selling at lower prices—effectively reducing available inventory. Additionally, many potential sellers with very low mortgage interest rates are choosing not to list their homes due to the high financial costs of giving up their low mortgage rate. These dynamics

have contributed to very low housing supply, effectively providing an ongoing support to higher home values.

Together, very low home inventories and weak sales activity have resulted in a fairly normal supply of homes *relative to demand*. It remains to be seen whether the market will experience a cooling and leveling off in the near-term, or whether price depreciation will need to occur to rebalance the market and incentivize potential buyers to make a purchase.

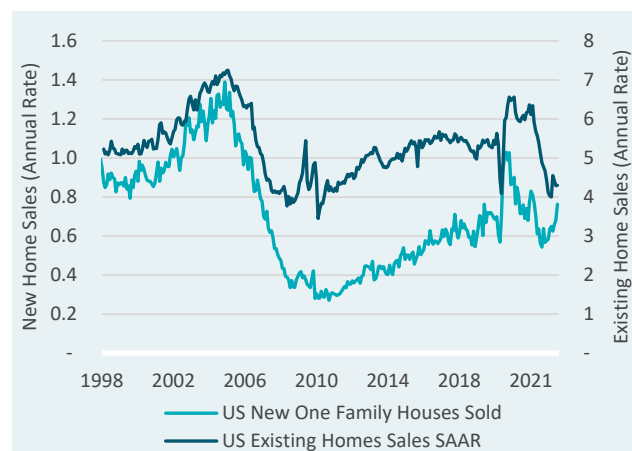
Home sales have slowed to a crawl as affordability is poor, and potential sellers don't want to lose their low interest rates

HOUSING SUPPLY



Source: FRED, as of 5/31/23

HOME SALES: NEW & EXISTING (MILLIONS)



Source: FRED, as of 5/31/23

HOUSING AFFORDABILITY



Source: FRED, as of 4/30/23

International economics summary

- Developed-economy growth has slowed materially. Many countries faced heavy risks, including energy crises, inflation uncertainty, contracting government spending, and higher interest rates. However, many areas have fared better than initially feared, helping to boost the performance of international equities. The IMF forecasts a pronounced slowing of growth in developed economies from 2.7% in 2022 to 1.3% in 2023, and a relatively unchanged emerging market growth rate from 4.0% to 3.9%.
- Unlike the Federal Reserve's recent pause, many central banks have opted for more rate hikes amid backdrops of relative economic strength and persistent inflation. In June, the Bank of England voted 7-2 for a +50bps increase while the European Central Bank and Bank of Canada hiked +25bps. The ECB also raised core inflation projections to 5.4% through year-end and lowered GDP growth to 0.9% for the year.
- On June 16th, the Bank of Japan announced that they would keep their low-rate policy unchanged. The dovish stance, including expectations for cooling inflation, was negative for the yen. Following the announcement, the yen weakened through month-end to finish -2.5% lower against the dollar.
- Inflation fell further across developed countries and has dropped surprisingly quickly in the emerging markets. China now faces a 0% inflation rate and risks of deflation, while inflation in Brazil has fallen from over 11% in late 2022 to below 4% in May. Further declines in prices could create new market risks as deflation has serious economic implications, especially in heavily debt-burdened nations.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	1.8% 3/31/23	3.0% 6/30/23	3.6% 6/30/23
Eurozone	1.0% 3/31/23	5.5% 6/30/23	6.5% 5/31/23
Japan	1.3% 3/31/23	3.2% 5/31/23	2.6% 5/31/23
BRICS Nations	4.9% 3/31/23	4.2% 3/31/23	4.8% 12/31/22
Brazil	4.0% 3/31/23	3.9% 5/31/23	8.3% 5/31/23
Russia	(1.8%) 3/31/23	2.5% 5/31/23	3.2% 5/31/23
India	6.1% 3/31/23	4.8% 6/30/23	7.7% 5/31/23
China	4.5% 3/31/23	0.0% 6/30/23	5.2% 5/31/23

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.

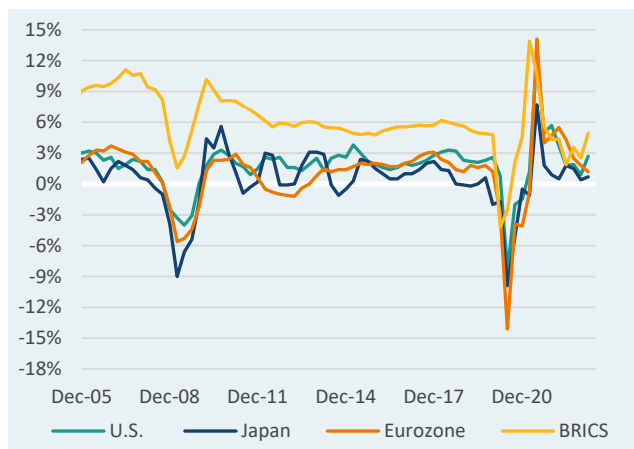
International economics

Developed economies have suffered a material slowdown in growth, though not as dramatic as economists had feared at the beginning of the year. All twenty countries of the Eurozone have now entered a technical recession, on the back of a significant contraction in government spending as well as central bank rate hikes. Meanwhile, as many developed economies cope with stagnating growth, emerging economies have fared better overall, despite the more moderate growth rate of China. The IMF forecasts a pronounced slowing of growth in developed economies from 2.7% in 2022 to 1.3% in 2023, and a relatively unchanged rate of growth of emerging

markets from 4.0% to 3.9%.

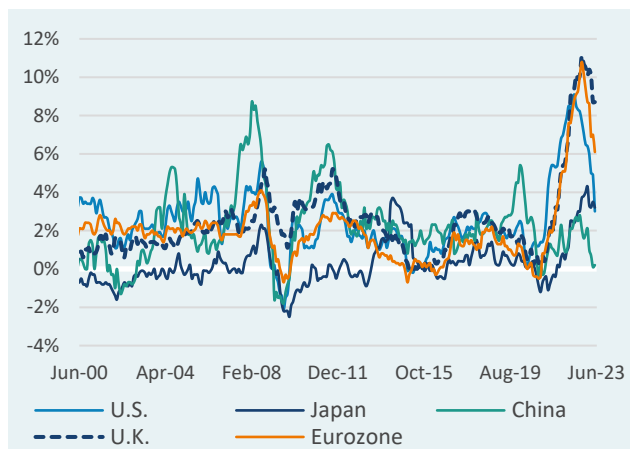
Inflation has subsided in many developed countries and dropped surprisingly quickly across emerging markets. China now faces a 0% inflation rate and risks of deflation, while inflation in Brazil has fallen from over 11% in late 2022 to below 4% in May. Further declines in prices could create new market risks as deflation has serious economic implications, especially in heavily debt-burdened nations. Deflation creates an environment where debt loads are *growing* on an inflation-adjusted basis.

REAL GDP GROWTH (YOY)



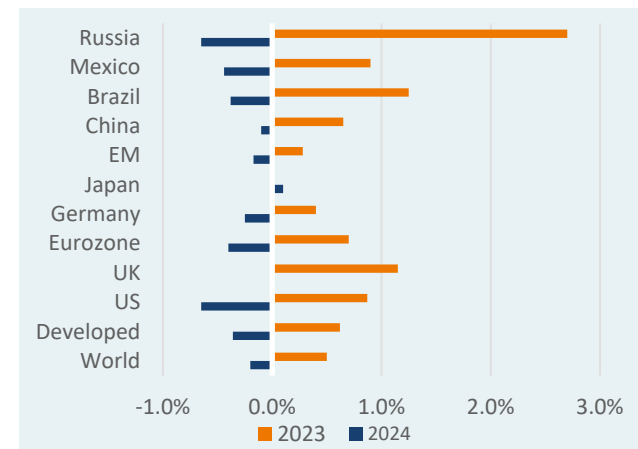
Source: Bloomberg, as of 3/31/23

INFLATION (CPI YOY)



Source: Bloomberg, as of 6/30/23 – or most recent release

GROWTH FORECASTS: CHANGES OVER PAST 6M



Source: Bloomberg median of economist estimates, as of 6/22/23

Fixed income rates & credit

Fixed income environment

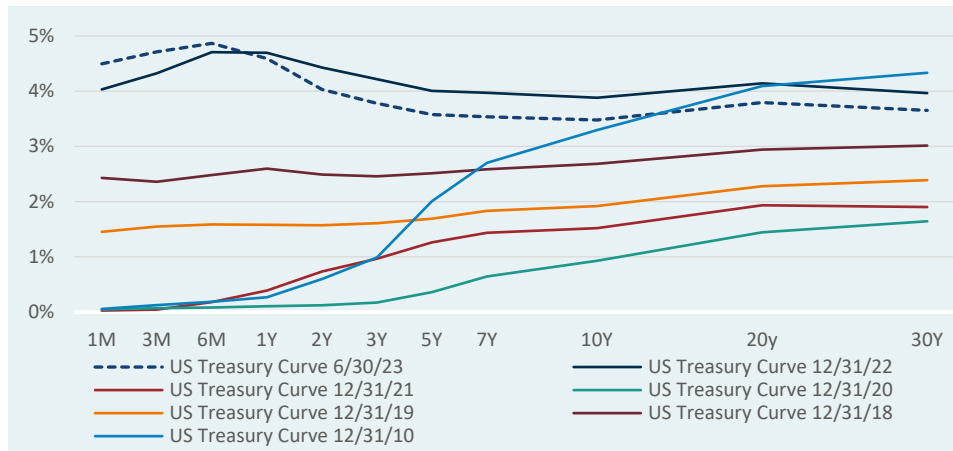
- The 10-year U.S. Treasury yield increased during the quarter from 3.48% to 3.81%, reversing the decline experienced during Q1. Despite an additional rise in short-term interest rates, longer-term interest rates remain anchored. This has resulted in the most deeply inverted yield curve since the early 1980s at -1.06% (10-year Treasury yield minus 2-year Treasury yield).
- The Federal Reserve opted to keep interest rates stable in June, but signaled two more rate hikes were ahead in 2023. Some referred to this messaging as a “hawkish pause”. Despite cooling inflation, the Fed appears concerned about strong ongoing labor market conditions and persistent monthly price rises. Markets are pricing in a high likelihood of a +25bps July hike.
- Historically, equities and bonds have experienced negative correlation (moved in opposite directions through time). In 2022, both equities and bonds suffered losses as the Fed continued tightening monetary policy. Following the failure of SVB, the asset classes seems to have resumed negative correlation behavior.
- During the second quarter, higher quality credit and U.S. Treasuries saw mild losses. Riskier credit performed very well as credit spreads have stayed surprisingly tight. Longer duration investment grade corporate bonds disappointed, returning -0.3%.
- Despite concerns related to the future path of Federal Reserve rate hikes, interest rate volatility declined during the quarter as indicated by the ICE BofA “MOVE” Index, which measures the volatility priced into U.S. Treasury bonds. While inflation has moderated in recent quarters, the market may need to price in additional rate hikes should it remain above the Federal Reserve's target of roughly 2%, which could contribute to further volatility.

	QTD Total Return	1 Year Total Return
Core Fixed Income (Bloomberg U.S. Aggregate)	(0.8%)	(0.9%)
Core Plus Fixed Income (Bloomberg U.S. Universal)	(0.6%)	0.0%
U.S. Treasuries (Bloomberg U.S. Treasury)	(1.4%)	(2.1%)
U.S. High Yield (Bloomberg U.S. Corporate HY)	1.7%	9.1%
Bank Loans (S&P/LSTA Leveraged Loan)	3.1%	10.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	2.5%	11.4%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	2.2%	7.4%
Mortgage-Backed Securities (Bloomberg MBS)	(0.6%)	(1.5%)

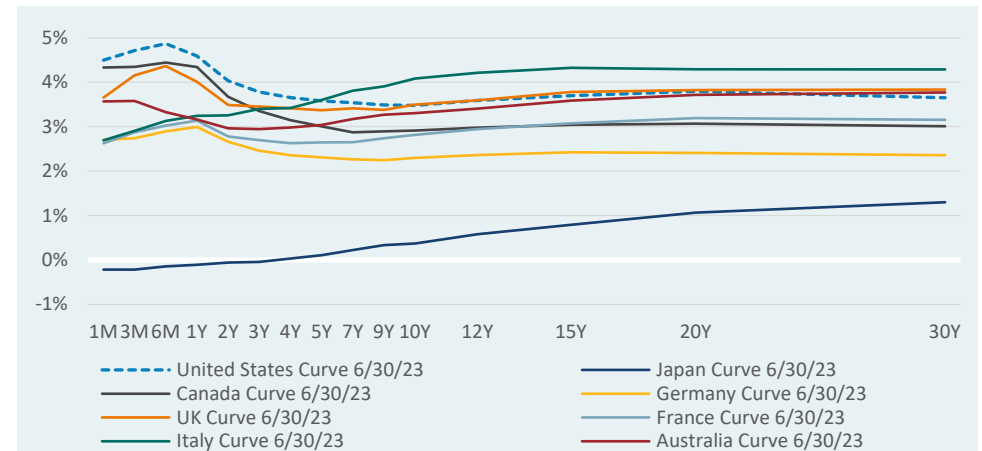
Source: Bloomberg, as of 6/30/23

Yield environment

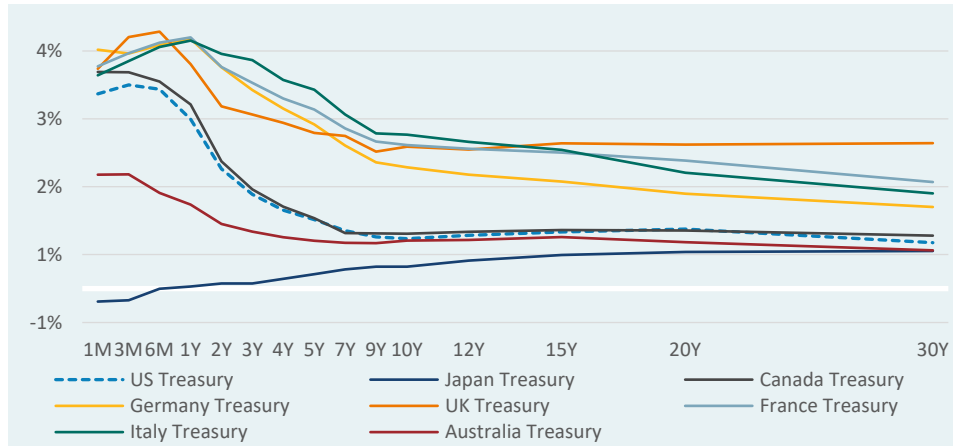
U.S. YIELD CURVE



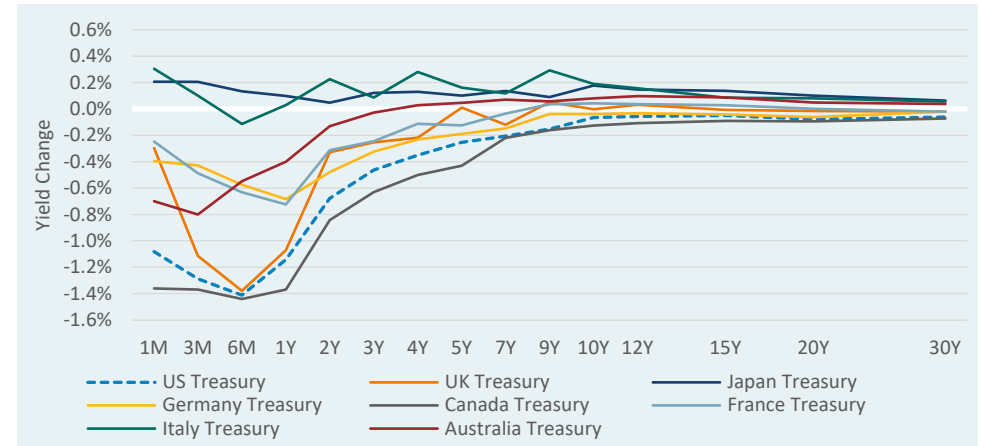
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/23

Credit environment

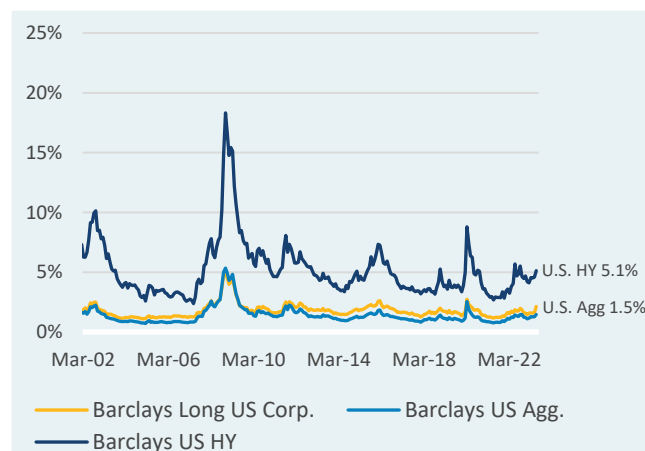
During the second quarter, fixed income markets delivered mixed results with lower-quality credits such as bank loans and high yield bonds outperforming higher-quality credits. Bank loans posted strong returns for the period, delivering 3.1%, followed by high-yield bonds which returned 1.7%. Longer duration investment grade corporate bonds disappointed, returning -0.3%.

Within high-yield bonds, lower quality CCC-rated bonds continued their strong run, outperforming BB- and B-rated bonds. CCC-rated bonds returned 4.7% during the period compared to 1.8% and 0.8% for B-rated and BB-rated bonds, respectively. Bank loans delivered strong returns during the period as investors favored shorter-duration assets given the expectation of interest rate rises. Lower-quality bank loans also

outperformed higher-quality loans, with CCC-rated loans rising 3.3% compared to 2.5% for BB-rated loans.

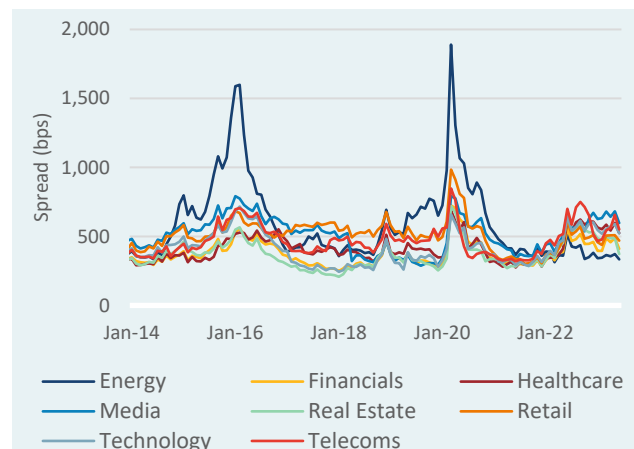
Credit spreads widened during the quarter on fears of an economic slowdown, the effects of higher interest rates, and as heightened credit stress weighed on prices. Lower-quality high-yield bond spreads rose by more than 0.6% during the period to 5.1%, while investment grade spreads increased by roughly 0.2% to 1.5%. Broadly, spreads remain close to their long-term historical averages, which suggests that investors maintain a fairly positive credit outlook. However, if the U.S. economy were to show real signs of weakening, credit spreads would likely move wider.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/23

HIGH YIELD SECTOR SPREADS



Source: Bank of America, as of 6/30/23

CREDIT SPREAD (OAS)

Market	6/30/23	6/30/22
Long U.S. Corp	2.1%	1.9%
U.S. Inv Grade Corp	1.3%	1.6%
U.S. High Yield	5.1%	5.7%
U.S. Bank Loans*	5.4%	5.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/23

*Discount margin (4-year life)

Default & issuance

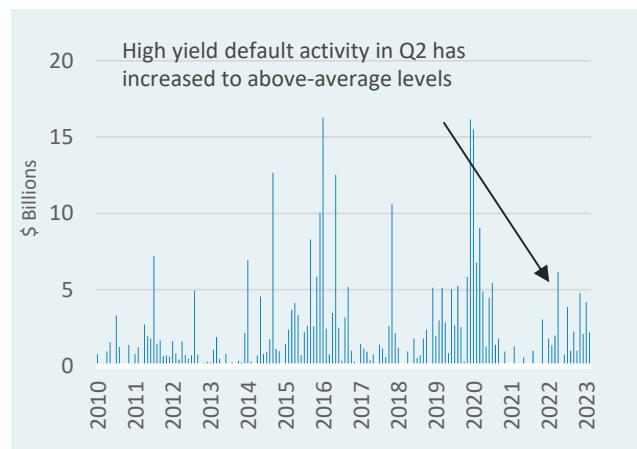
Default activity, while remaining below the long-term trend, increased during the second quarter. Twelve companies defaulted, which were concentrated in the Technology, Industrial, Retail, and Financial-related sectors. A total of \$32.2 billion was affected by default or distressed exchanges during Q2, up from \$20.8 billion in the prior quarter. Notable company defaults included Diebold (Technology), WeWork (Financials), Westco (Industrial) and Bed, Bath & Beyond (Retail).

Past twelve-month default rates for both high-yield bonds and bank loans increased as the cost of borrowing jumped. At the end of the quarter, the trailing one-year default rate of high-yield bonds rose to 2.4%, up from 1.9% in the prior quarter. While defaults have increased, they remain

below the long-term annual average of roughly 3.2% for high-yield bonds. High-yield default recovery rates fell, ending the period at 33.0%, down -11.5% from the previous quarter.

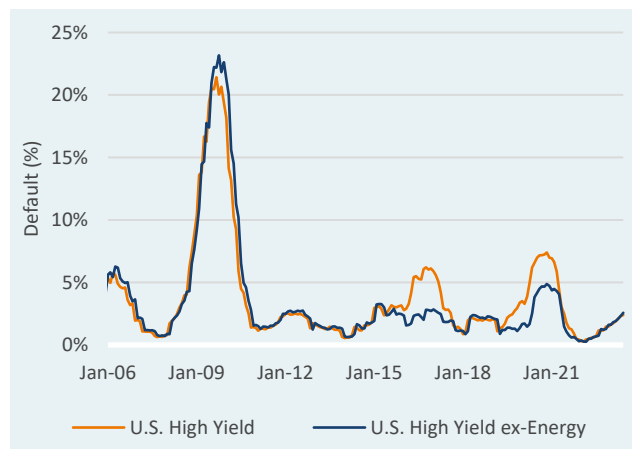
The pace of investment-grade credit issuance slowed, with \$333 billion of issuance compared to \$412 billion in the first quarter. Conditions were different in levered credit, which saw high-yield bond issuance accelerate to \$56 billion—up from \$40.2 billion in Q1. In contrast to prior years, the 2023 level of investment-grade issuance is on track to match 2022, while high-yield issuance is significantly ahead of the pace set during that same period.

U.S. HY MONTHLY DEFAULTS (PAR WEIGHTED)



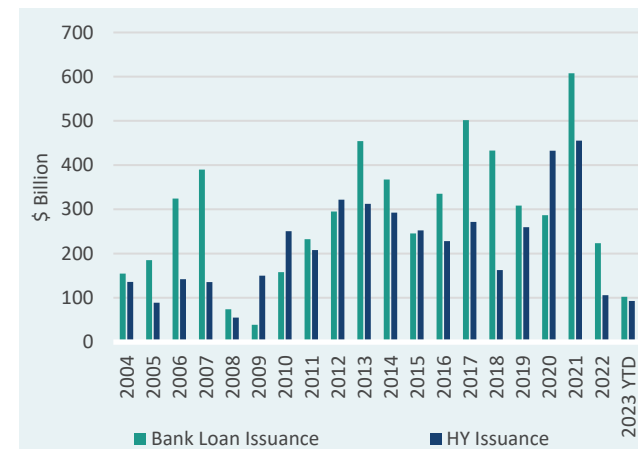
Source: BofA Merrill Lynch, as of 6/30/23

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



Source: BofA Merrill Lynch, as of 6/30/23 – par weighted

DEVELOPED MARKET ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, all developed markets, as of 6/30/23

Equity

Equity environment

- Global equities persisted in their upward trajectory during Q2 (MSCI ACWI +6.2%). Domestic equities (S&P 500 +8.7%) outperformed both international developed (MSCI EAFE +3.0%) and emerging markets (MSCI EM +0.9%).
- U.S. equities rallied for a third consecutive quarter as mega-cap technology stocks remained top performers. A surge in AI-focused hype helped drive an expansion in the valuations of large tech firms including Nvidia and Apple – which became the first company to exceed \$3 trillion in market cap.
- The effects of currency movements on portfolio performance was mixed during Q2. Varying central bank approaches to inflation have contributed to much uncertainty around the path of the U.S. dollar and therefore heightened volatility for investors with unhedged currency exposure. During the past year, currency movement led to a -2.5% loss for investors with unhedged exposure to international developed equity (MSCI EAFE unhedged +18.8%, MSCI EAFE hedged +21.3%).
- Growth stocks (+12.8%) again outpaced value (+4.1%), bringing the year-to-date performance differential to +23.9%. Over recent years, style factors (ex: small vs large, value vs growth) have exhibited some of the wildest swings in history.
- The Cboe VIX implied volatility index moved to surprisingly low levels, despite broad expectations of recession, ongoing risks of regional bank contagion, and other not-yet-known consequences of central bank liquidity withdrawal from the financial system. The index fell from 18.7% to 13.6% during the second quarter.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
U.S. Large Cap (S&P 500)	8.7%		19.6%	
U.S. Small Cap (Russell 2000)	5.2%		12.3%	
U.S. Equity (Russell 3000)	8.4%		19.0%	
U.S. Large Value (Russell 1000 Value)	4.1%		11.5%	
US Large Growth (Russell 1000 Growth)	12.8%		27.1%	
Global Equity (MSCI ACWI)	6.2%	6.2%	16.5%	17.5%
International Large (MSCI EAFE)	3.0%	5.0%	18.8%	21.3%
Eurozone (EURO STOXX 50)	4.1%	4.5%	36.3%	34.7%
U.K. (FTSE 100)	2.4%	0.0%	14.0%	10.9%
Japan (TOPIX)	4.2%	16.0%	19.4%	31.2%
Emerging Markets (MSCI Emerging Markets)	0.9%	1.6%	1.8%	3.4%

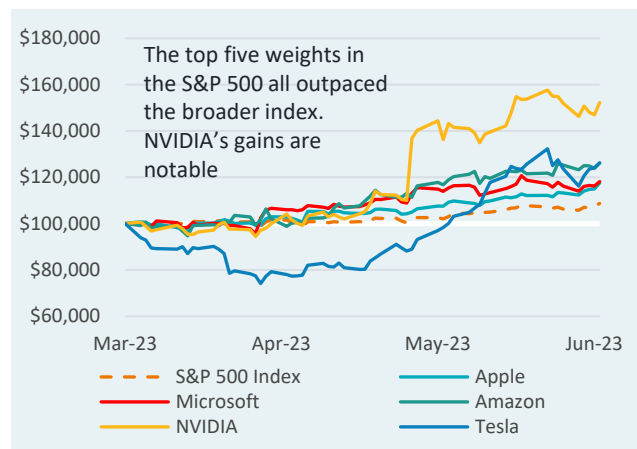
Source: Russell Investments, MSCI, STOXX, FTSE, JPX, as of 6/30/23

Domestic equity

U.S. equities rallied (S&P 500 Index +8.7%) for a third consecutive quarter as mega-cap technology stocks remained top performers. A surge in AI-focused hype helped drive an expansion in the valuations of tech firms such as Apple, which became the first company to exceed \$3 trillion in market cap, and Nvidia, which became the fifth trillion-dollar company in the S&P 500 following its recent ascent. This trend was apparent from the strong overall outperformance of the Information Technology sector. Breadth improved near quarter-end as investors digested a pause in Fed rate hikes and expectations for a U.S. recession eased, providing a tailwind for sectors excluded from the tech rally.

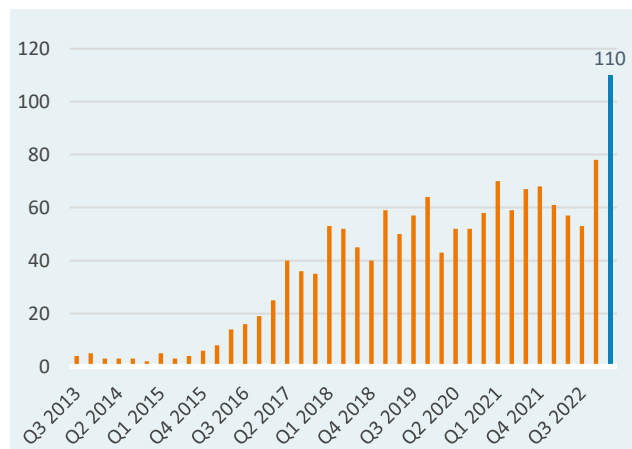
The Financial sector (+5.3%) saw some reprieve in the second quarter and recovered slightly from steep March declines which resulted from the collapse of three mid-sized banks. In its annual stress test, the Federal Reserve found the 23 largest U.S. banks capable of weathering a severe recession while proceeding with their respective lending businesses. Despite the results, the industry faces mounting headwinds including a deeply-inverted yield curve and the prospect of further Fed tightening.

GROWTH OF \$100,000 QUARTER TO DATE



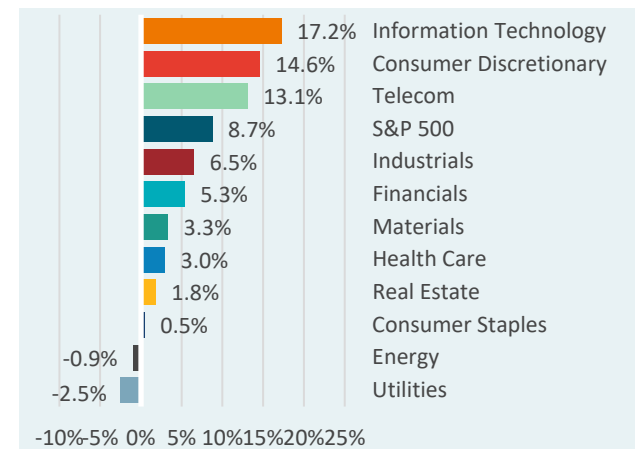
Source: Bloomberg, as of 6/30/23

OF S&P COMPANIES CITING "AI" ON EARNINGS CALLS



Source: FactSet, as of 6/30/23

Q2 2023 SECTOR PERFORMANCE



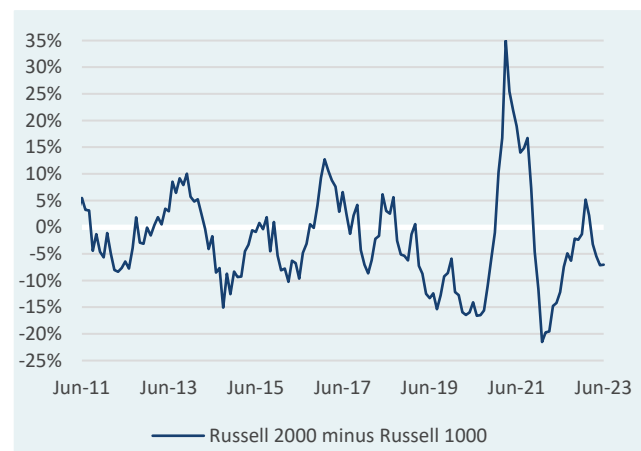
Source: Morningstar, as of 6/30/23

Domestic equity size & style

Growth stocks (+12.8%) continued to outpace value (+4.1%), bringing the year-to-date performance difference to +23.9%. Sector-specific drivers, including product launches and upward adjustments to company guidance among Information Technology (+18.6%) heavyweights, drove growth index performance. Sector behavior has persistently contributed to style factor disparity. This was evident in Q2 alongside large gains in Information Technology (+17.2%) and notable underperformance from Energy and Utilities (-0.9% and -2.5%, respectively).

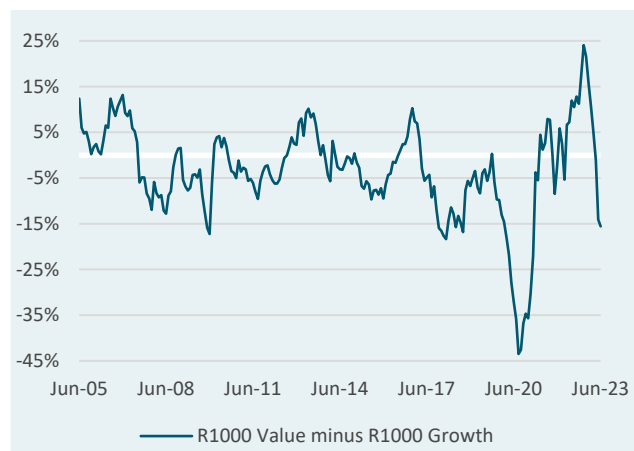
Over recent years, style factors (ex: small vs large, value vs growth) have exhibited some of the wildest swings in history. We maintain our view that factor timing should rarely be pursued for most investors. There are occasions when market mispricing offers a compelling case to tilt into a style factor, though these occasions come along perhaps every few decades rather than every few years. We believe that style investing is most appropriately pursued in a strategic manner based on each individual investor's market beliefs and long-term goals.

SMALL CAP VS LARGE CAP (YOY)



Source: FTSE, as of 6/30/23

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/23

1-YEAR SIZE & STYLE PERFORMANCE

	Value	Core	Growth
Large Cap	11.5%	19.4%	27.1%
Mid Cap	10.5%	14.9%	23.1%
Small Cap	6.0%	12.3%	18.5%

Source: Bloomberg, as of 6/30/23

International developed equity

International developed equities lagged the domestic market but outpaced emerging market equities for a third straight quarter. The MSCI EAFE Index rose +3.0% in unhedged currency terms as both Asian and European equities notched gains. International developed markets have performed very well over the past year despite recession, aggressive central bank interest rate hikes, and a severe energy crisis in Europe, up +18.8% (MSCI EAFE) relative to the global opportunity set at +16.5% (MSCI ACWI). Some of this behavior may relate to Europe's energy crisis turning out less severe than originally feared. We expect that relatively cheap valuations of many

markets may act as somewhat of a floor in the case of near-term equity stress, given that the gap in pricing between U.S. and non-U.S. stocks is at one of the widest levels in history.

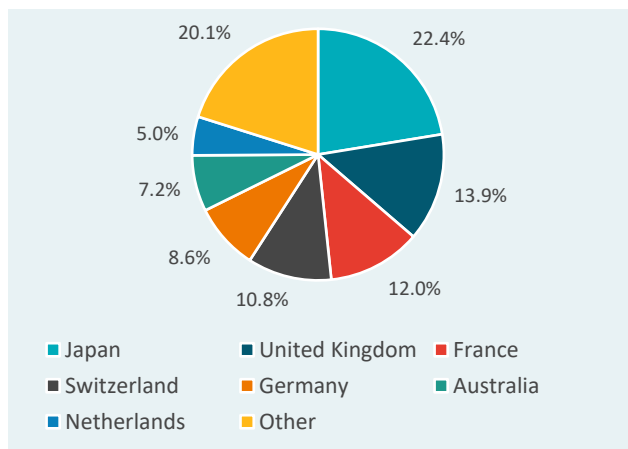
Japanese equities (MSCI Japan +6.4%) saw broad gains after the Bank of Japan held interest rates in negative territory and economic data showed resilience in the face of weakening global demand. Additional factors, including stronger-than-expected earnings from automakers and tech conglomerates, helped boost the Nikkei Index to 33-year highs.

INTERNATIONAL DEVELOPED EQUITY



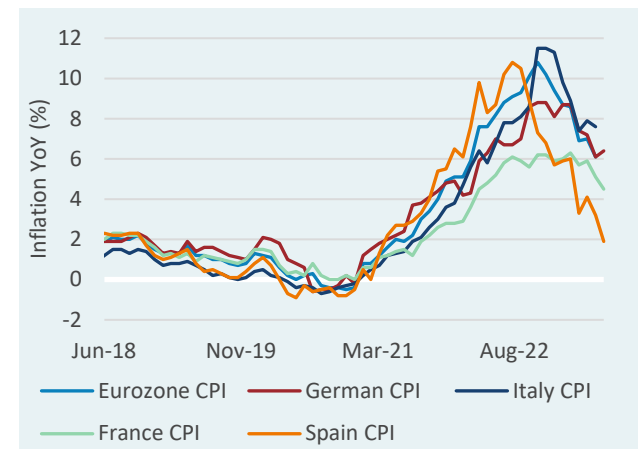
Source: MSCI, as of 6/30/23

MSCI EAFE INDEX COUNTRY DECOMPOSITION



Source: MSCI, as of 6/30/23

EUROZONE INFLATION



Source: Bloomberg, as of 6/30/23 or latest release

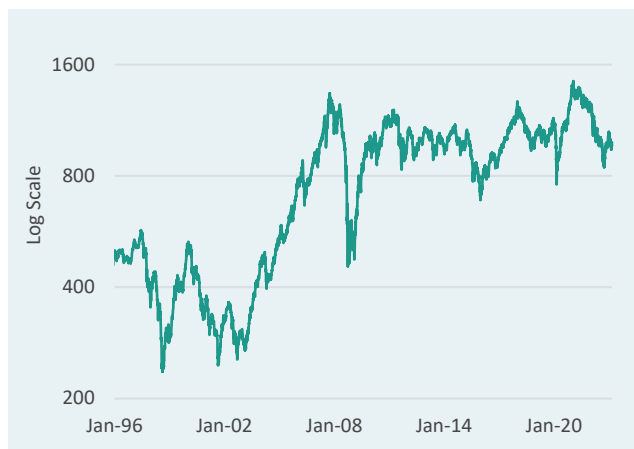
Emerging market equity

Emerging market equities lagged other global markets again in the second quarter. The MSCI EM Index finished up +0.9%, while the MSCI EAFE Index rose +3.0% and the S&P 500 gained +8.7%.

There were substantial performance differences across the emerging markets complex in Q2, ranging from Brazil's performance of +20.7% to China's -9.7%. We believe skilled active management is a preferred way to navigate risks and potentially bolster performance in this asset class.

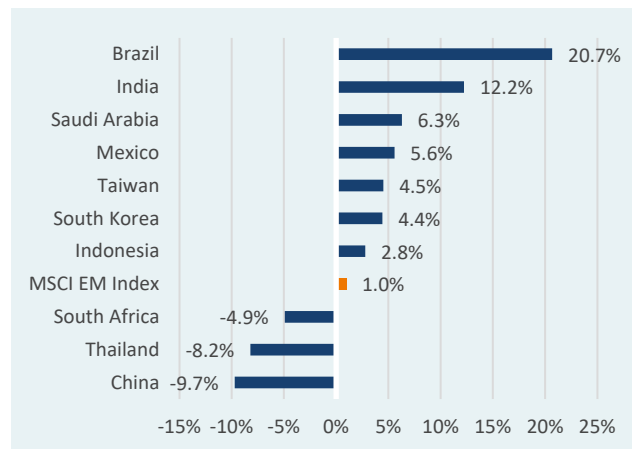
Over the past year, China's reopening provided a significant boost to equities, though not large enough to recover from previous significant losses driven by a mix of the three-year "zero-covid" policy, government crackdowns on large technology names, and knock-on effects from property market stress. Negative China sentiment has been building recently due to developments such as increasing geopolitical tensions with the U.S. (which eased on the margin following Secretary of State Blinken's visit to China), credit issues amongst property and local government financing vehicles, and a very high youth unemployment rate.

EMERGING MARKET EQUITY



Source: MSCI, as of 6/30/23

Q2 2023 MSCI COUNTRY RETURNS (USD)



Source: Bloomberg, MSCI, as of 6/30/23

MSCI CHINA INDEX



Source: MSCI, as of 6/30/23

Equity valuations

Equity valuation disparities continued to be wide. U.S. equities are priced at a 50% valuation premium (Price/Earnings) over international developed, at 21.0 and 14.2, respectively. Although domestic markets arguably face more attractive conditions on a relative basis, high valuations have historically acted as a material headwind to medium- and longer-term performance.

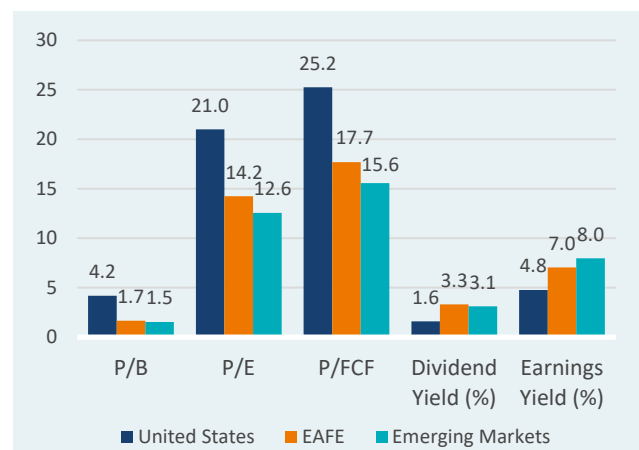
Emerging market equities are now priced near their longer-term average, though valuations differ considerably from country-to-country. For example, Taiwan is cheap by historical standards, with prices likely reflecting a discount for risks

related to China and slowing semiconductor demand. India is richly priced relative to history, perhaps in recognition of the country's high growth and greater potential as Chinese growth has moderated.

Quickly rising interest rates should theoretically result in a sharp fall in equity valuations, in order to maintain the "equity risk premium" of stock returns over bond returns. This effect has not yet occurred, which means the yield of equity is now only slightly more than the yield of high-quality bonds. Many investors may find bonds relatively attractive (and stocks relative less unattractive) in the current environment.

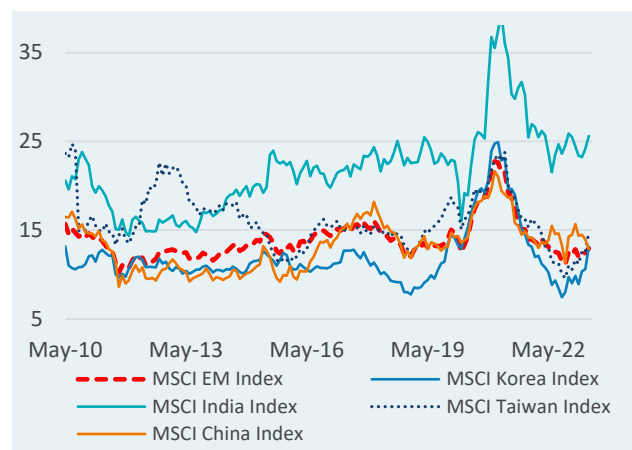
High-quality bonds are yielding nearly as much as equities, increasing the relative attractiveness of bonds

MSCI VALUATION METRICS (3-MONTH AVG)



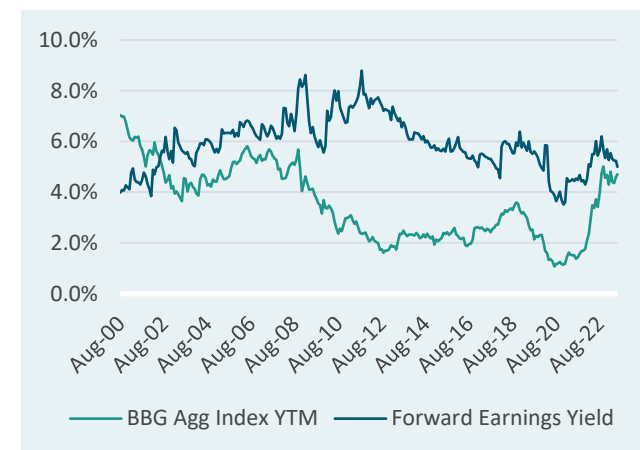
Source: Bloomberg, as of 6/30/23

P/E EMERGING MARKETS



Source: MSCI, Bloomberg, as of 5/31/23

U.S. VALUATIONS: BONDS VS. STOCKS



Source: Bloomberg, Standard & Poor's, as of 6/30/23

Market volatility

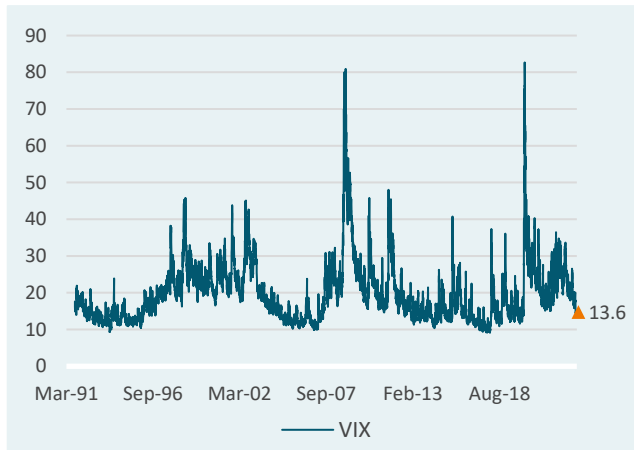
The Cboe VIX implied volatility index has moved to surprisingly low levels, despite broad expectations of recession, ongoing risk of regional bank contagion, and other not-yet-known consequences of central bank liquidity withdrawal from the financial system. The index fell from 18.7% to 13.6% during the second quarter.

The realized volatility of global equity markets has been elevated. Emerging market volatility in recent years has been lower than developed market volatility—an uncommon occurrence historically speaking. This trend has now reversed

as realized risk in emerging markets surpassed most developed economy public markets.

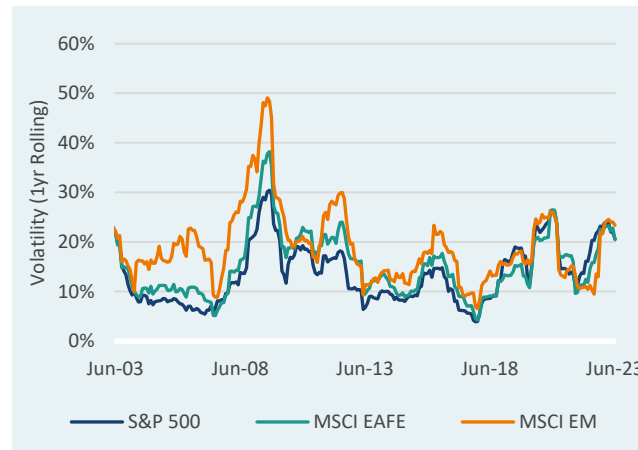
The first half of 2023 has been a truly unique environment for fixed income. Federal Reserve tightening, mass withdrawal of liquidity from the financial system, and a deeply inverted yield curve have led to elevated uncertainty and market volatility. These conditions are captured by the ICE BofA “MOVE” Index, which measures the volatility priced into U.S. Treasury bonds.

U.S. IMPLIED VOLATILITY (VIX)



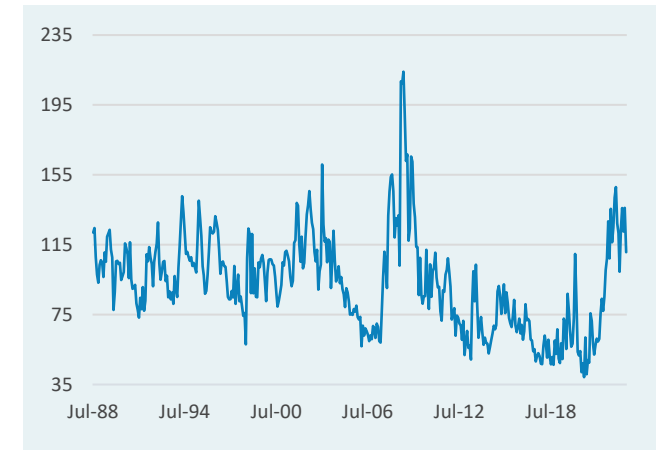
Source: Cboe, as of 6/30/23

REALIZED VOLATILITY



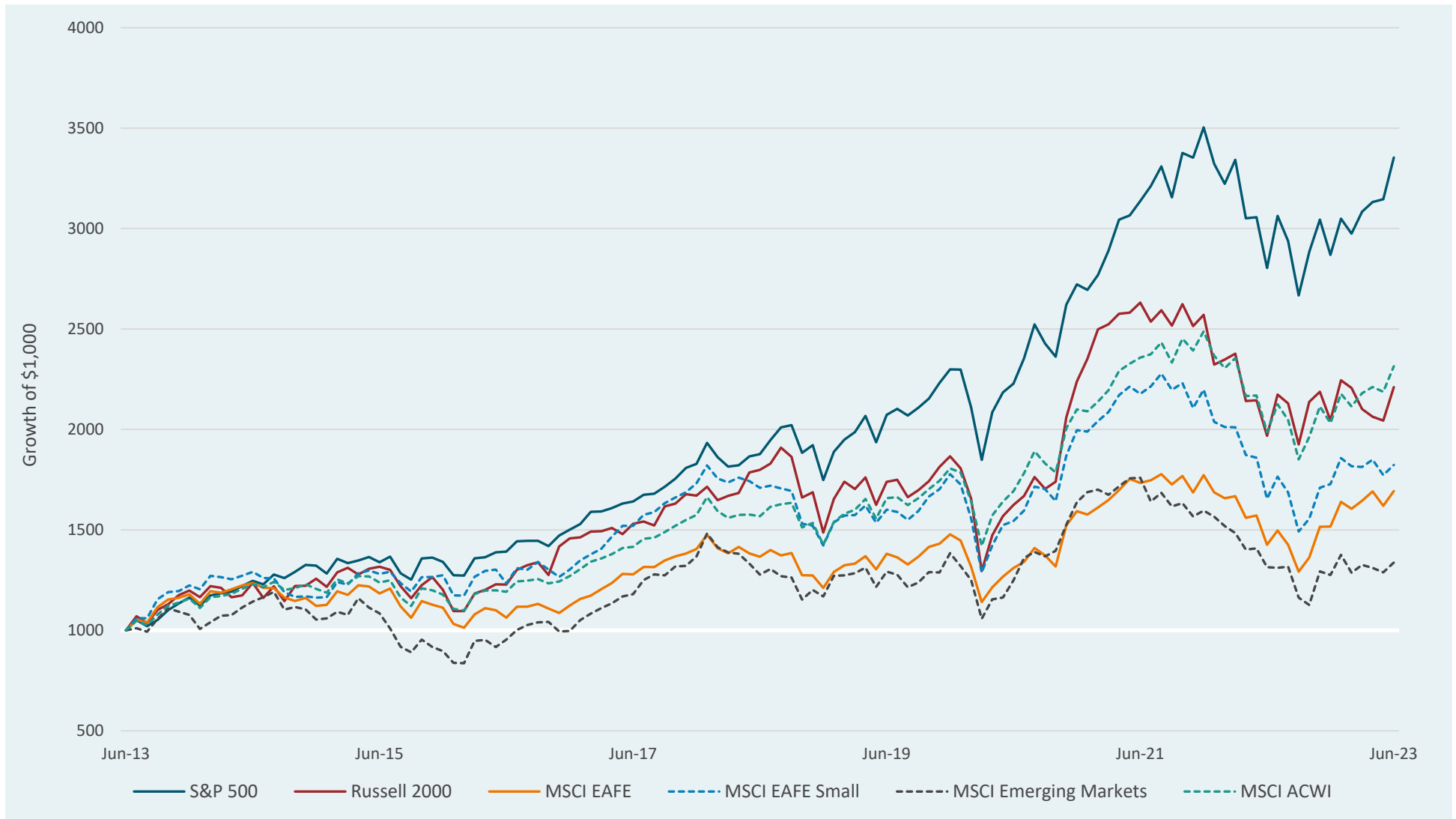
Source: S&P, MSCI, as of 6/30/23

U.S. TREASURY IMPLIED VOL (“MOVE” INDEX)



Source: Bloomberg, as of 6/30/23

Long-term equity performance



Source: MPI, as of 6/30/23

Other assets

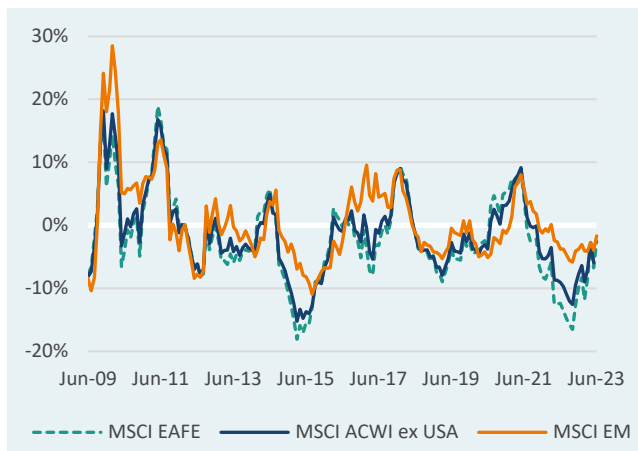
Currency

The effects of currency volatility on portfolio performance was mixed in Q2. Overall, the value of the U.S. dollar was unchanged on a trade-weighted basis. Varying central bank approaches to fighting inflation has contributed to much uncertainty around the path of the U.S. dollar and therefore the volatility generated by currency movement for investors with unhedged currency exposure (what we refer to as “embedded currency”). During the past full year, currency movement led to a -2.5% loss for investors with unhedged exposure to international developed equity (MSCI EAFE unhedged +18.8%, MSCI EAFE hedged +21.3%).

portfolio risk while also increasing long-term expected returns. The MSCI Currency Factor Mix Index—a representation of a passive investment in the currency market—has shown a positive one-year rolling return over most periods with very low volatility. This contrasts to the unhedged currency exposure that most investors own, which has demonstrated high volatility and frequent losses.

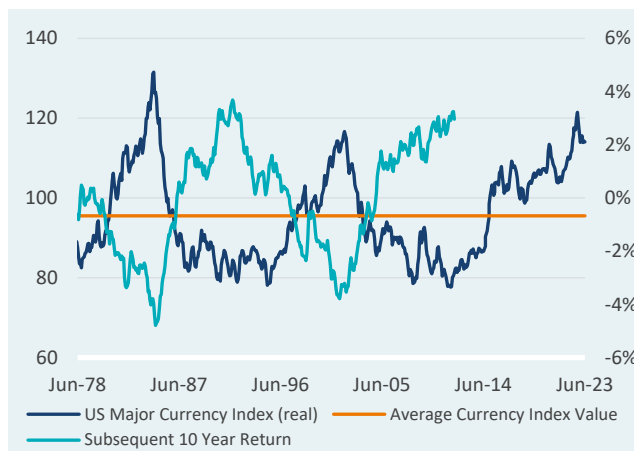
A thoughtful currency program may allow investors to reduce their total

EFFECT OF CURRENCY (1-YEAR ROLLING)



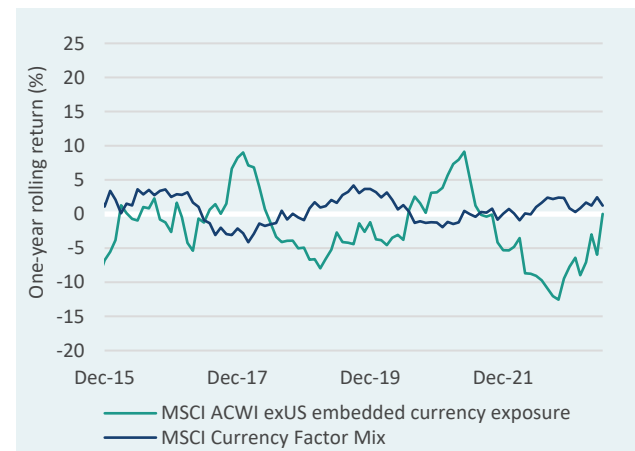
Source: MSCI, as of 6/30/23

BLOOMBERG DOLLAR SPOT INDEX



Source: Federal Reserve, as of 6/30/23

EMBEDDED CURRENCY VS CURRENCY FACTORS



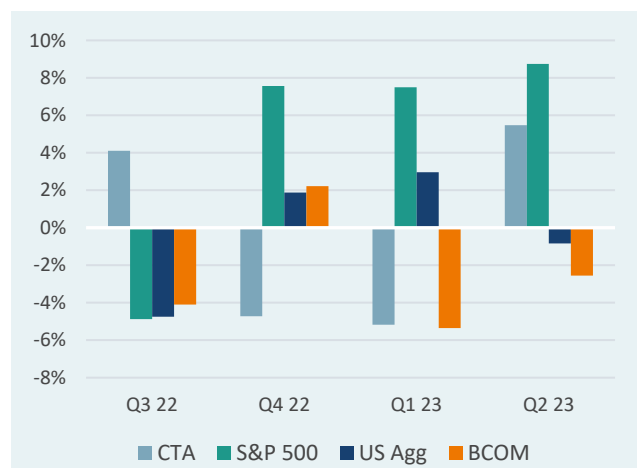
Source: Bloomberg, MSCI, as of 6/30/23

CTAs pivot, merger arbitrage gets hit

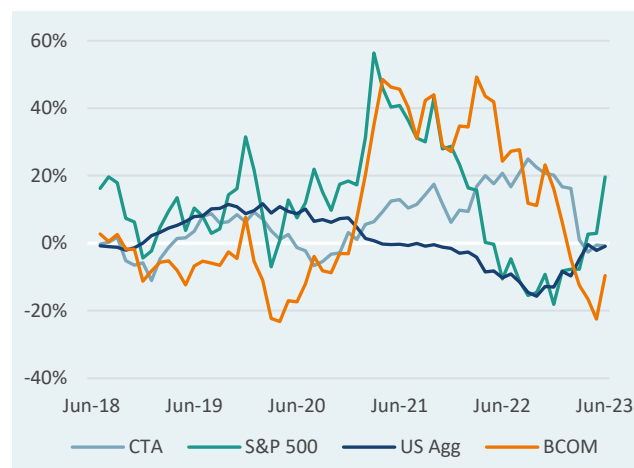
Commodity Trading Advisor (CTA) strategies, as proxied by the SocGen CTA Index, rebounded in Q2 after their worst two consecutive quarters (4Q22 through 1Q23) on record going back to the year 2000. When looking at major asset class returns for each of the last four quarters, it becomes clear that trend following strategies flipped to investing long in the equity markets after two strong quarters in a row for stocks. Trailing twelve-month returns as of the end of the quarter show fixed income at a performance inflection point and commodities bottoming out after a difficult year. Any gains in the near term for CTA strategies will likely depend on whether equity markets continue upward.

An interesting opportunity in merger arbitrage is unfolding, as an aggressive antitrust stance from the Federal Trade Commission and Chairperson Lina Kahn has pushed merger spreads to wide levels while equity markets have enjoyed a period of strong returns over the past year. Average deal spreads have increased to reflect this additional regulatory risk. Prior to this current period, the HFRI Merger Arbitrage index had only posted a negative 12-month return during COVID-19 (2020), the Global Financial Crisis (2008-2009), and the Tech Bubble (2001-2002). Each of those periods involved a recession.

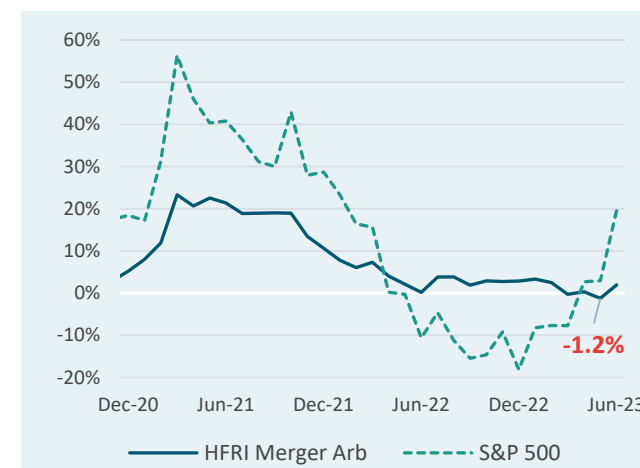
QUARTERLY RETURNS – PAST 4 QUARTERS



CTA 1-YEAR RETURNS, LAST 5 YEARS



MERGER ARB 1-YEAR RETURNS, LAST 3 YEARS



Source: HFR, MPI, Morningstar. SocGen, Data as of 6/30/23

Appendix

Periodic table of returns

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	5-Year	10-Year
Large Cap Growth	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	28.3	16.1	29.0	15.1	15.7
Large Cap Equity	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	27.6	9.4	16.7	11.9	12.6
Small Cap Growth	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	27.1	1.5	13.6	8.1	9.2
International Equity	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	26.5	-4.7	11.7	6.7	8.8
60/40 Global Portfolio	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	25.2	-7.5	8.8	4.7	8.3
Small Cap Equity	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.4	14.0	17.7	-13.0	8.1	4.6	8.3
Large Cap Value	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.0	10.3	14.8	-14.5	5.1	4.4	7.3
Emerging Markets Equity	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	11.3	-14.5	4.9	4.2	5.5
Small Cap Value	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	8.9	-17.3	2.5	4.2	5.4
Hedge Funds of Funds	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	6.5	-19.1	2.3	3.5	3.4
Cash	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	2.8	-20.1	2.3	3.3	3.0
US Bonds	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	0.5	0.0	-20.4	2.1	1.5	1.5
Real Estate	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	-1.5	-26.4	-1.8	0.9	0.9
Commodities	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	-2.5	-29.1	-7.8	0.8	-1.0

BEST

↑

↓

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

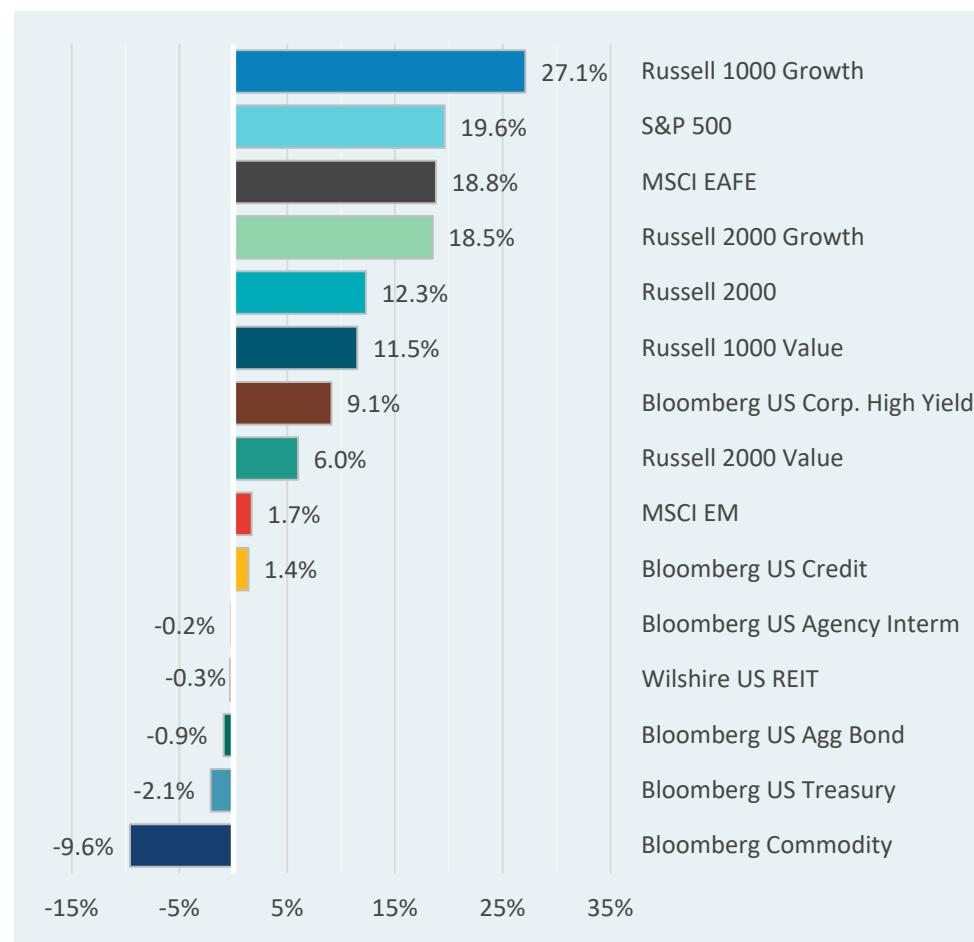
Hedge Funds of Funds

60% MSCI ACWI/40% Bloomberg Global Bond

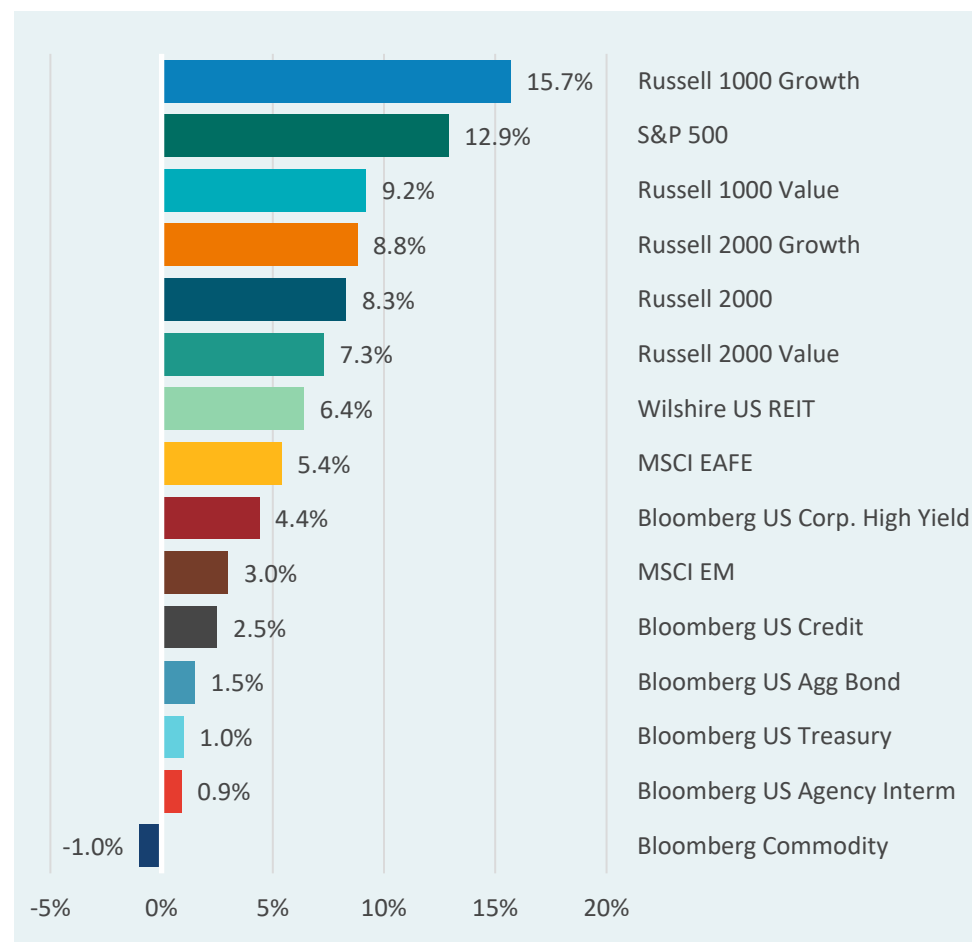
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, Bloomberg US Aggregate, T-Bill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

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



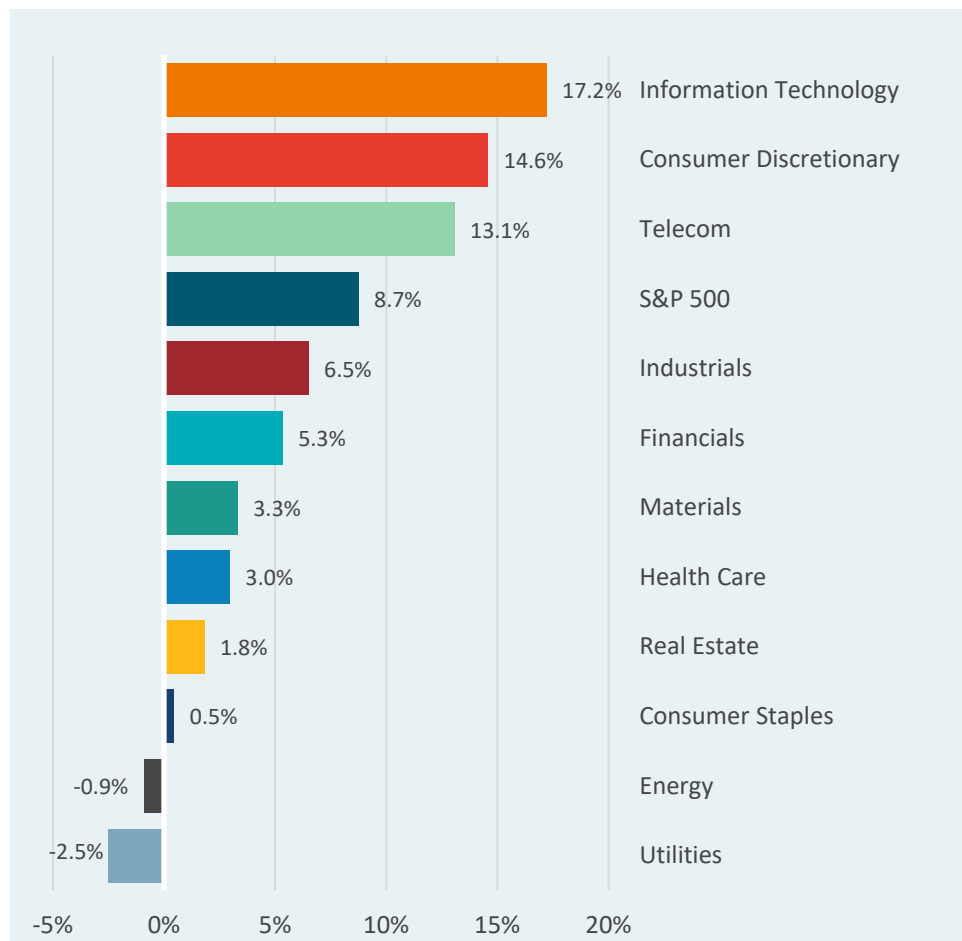
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/23

Source: Morningstar, as of 6/30/23

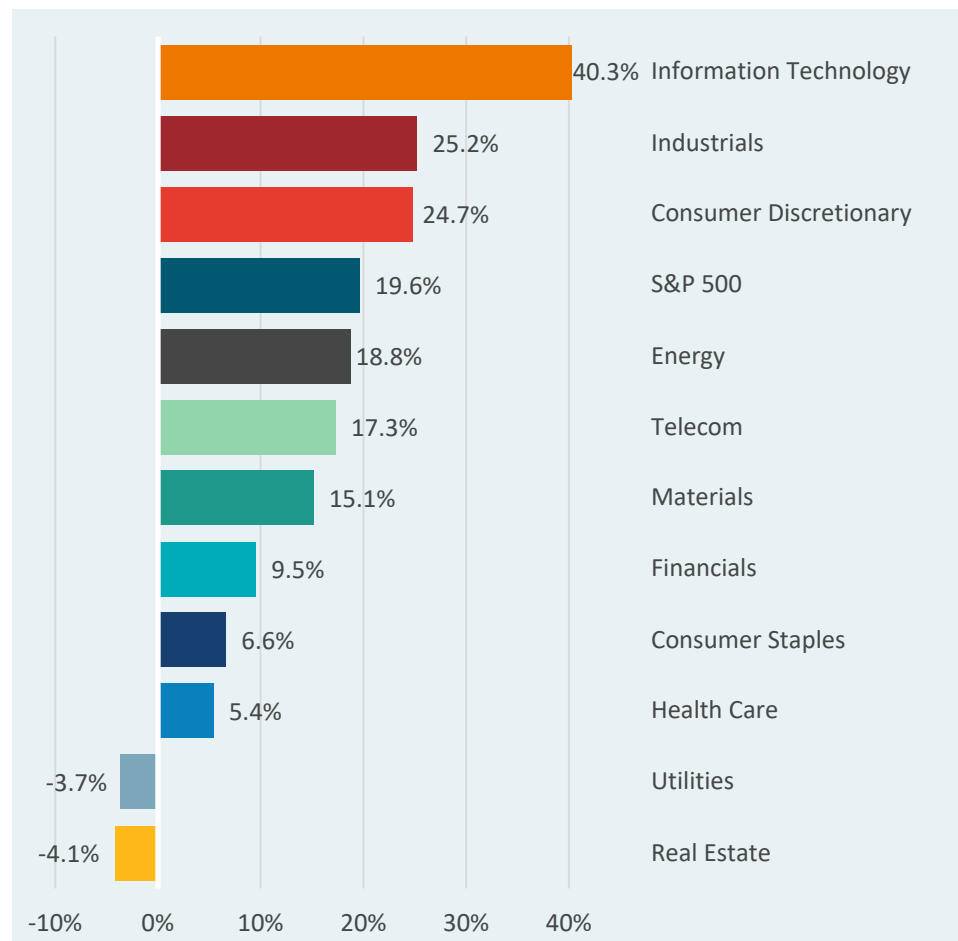
S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/23

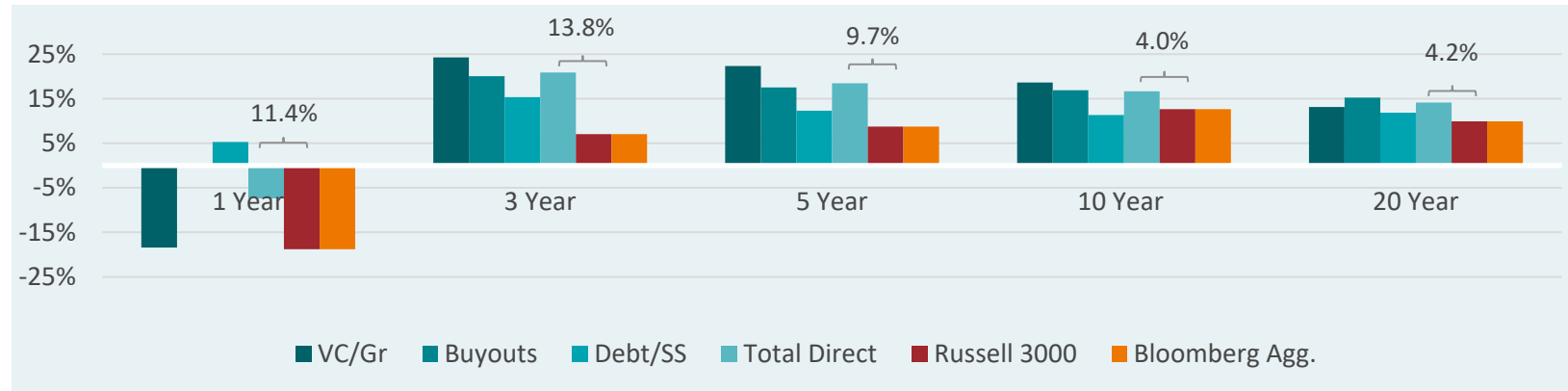
ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/23

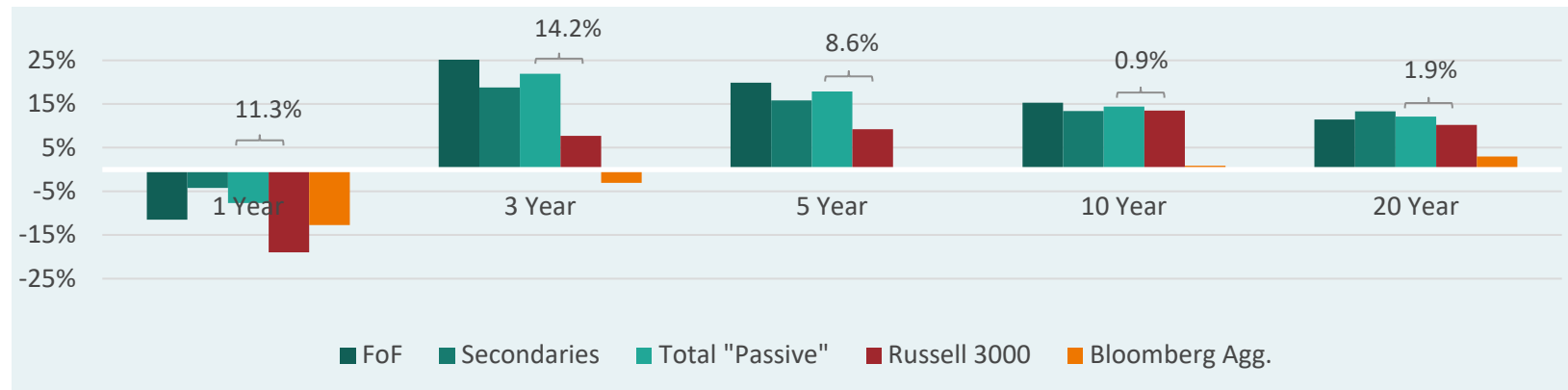
Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



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

"PASSIVE" STRATEGIES

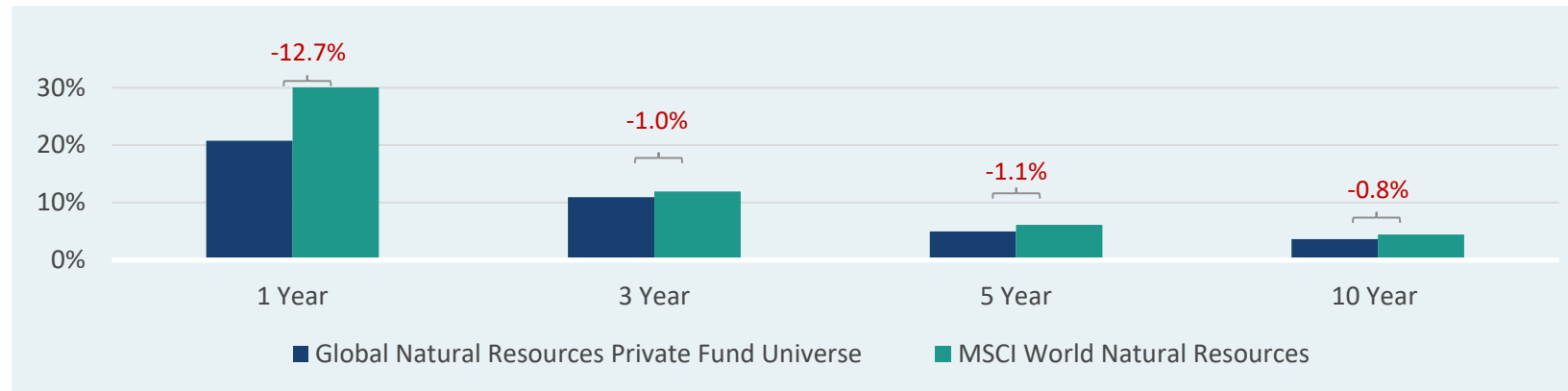


"Passive" strategies outperformed comparable public equities across all time periods.

Sources: Refinitiv PME: U.S. Private Equity Funds sub asset classes as of December 31, 2022. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

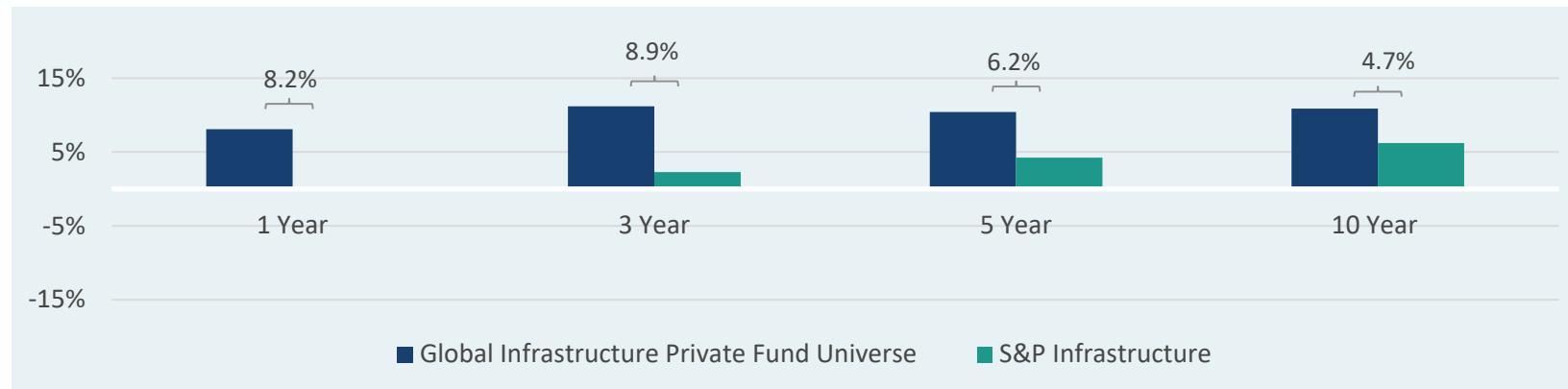
Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS

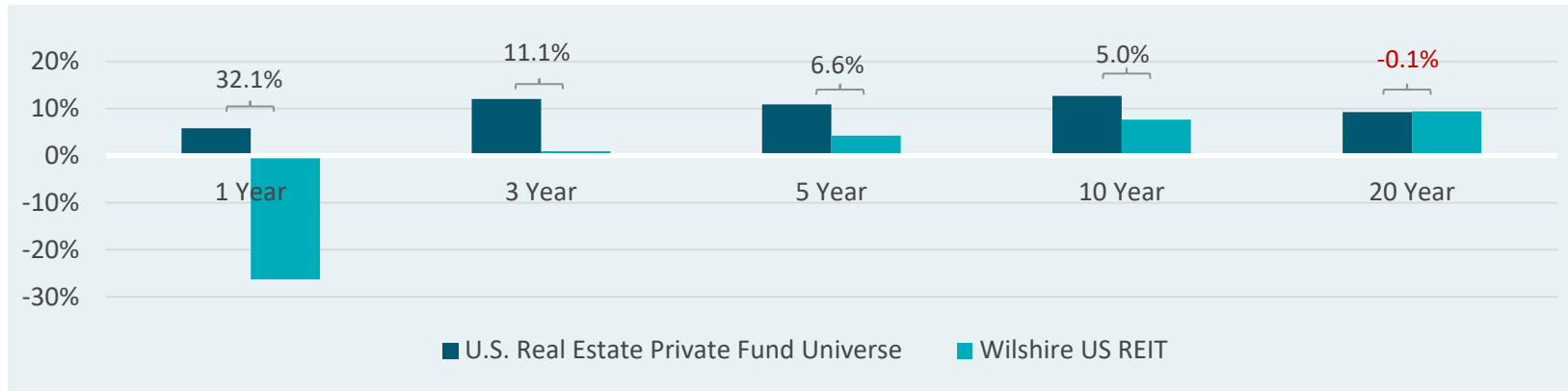


Infra. funds outperformed the S&P Infra. across all periods.

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 December 31, 2022. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

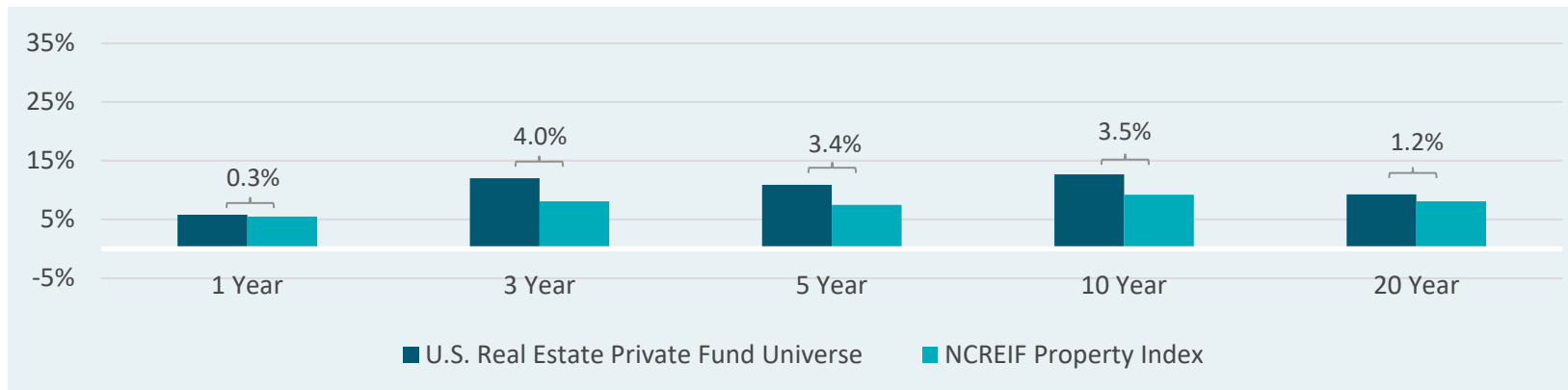
Private vs. liquid and core real estate performance

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



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index across all time periods, aside the 20-year

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



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

Sources: Refinitiv PME: U.S. Real Estate universes as of December 31, 2022. 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	6.6	8.7	16.9	19.6	14.6	12.3	12.9
S&P 500 Equal Weighted	7.7	4.0	7.0	13.8	15.8	10.2	11.5
DJ Industrial Average	4.7	4.0	4.9	14.2	12.3	9.6	11.3
Russell Top 200	6.2	9.9	19.4	20.9	14.6	13.2	13.5
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.3
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell Mid Cap	8.3	4.8	9.0	14.9	12.5	8.5	10.3
Style Index							
Russell 1000 Growth	6.8	12.8	29.0	27.1	13.7	15.1	15.7
Russell 1000 Value	6.6	4.1	5.1	11.5	14.3	8.1	9.2
Russell 2000 Growth	8.3	7.1	13.6	18.5	6.1	4.2	8.8
Russell 2000 Value	7.9	3.2	2.5	6.0	15.4	3.5	7.3

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	5.8	6.2	13.9	16.5	11.0	8.1	8.8
MSCI ACWI ex US	4.5	2.4	9.5	12.7	7.2	3.5	4.7
MSCI EAFE	4.6	3.0	11.7	18.8	8.9	4.4	5.4
MSCI EM	3.8	0.9	4.9	1.7	2.3	0.9	3.0
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
Style Index							
MSCI EAFE Growth	3.5	2.8	14.2	20.2	6.3	5.4	6.4
MSCI EAFE Value	5.6	3.2	9.3	17.4	11.3	2.9	4.1
Regional Index							
MSCI UK	3.9	2.2	8.4	13.2	12.6	2.8	3.9
MSCI Japan	4.1	6.4	13.0	18.1	5.7	3.1	5.2
MSCI Euro	6.4	3.8	19.9	32.7	11.7	5.2	6.2
MSCI EM Asia	2.7	(0.8)	4.0	(0.9)	1.2	1.2	4.7
MSCI EM Latin American	12.0	14.0	18.5	29.8	16.4	4.8	1.1

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
Bloomberg US TIPS	(0.3)	(1.4)	1.9	(1.4)	(0.1)	2.5	2.1
Bloomberg US Treasury Bills	0.4	1.2	2.3	3.6	1.2	1.5	1.0
Bloomberg US Agg Bond	(0.4)	(0.8)	2.1	(0.9)	(4.0)	0.8	1.5
Bloomberg US Universal	(0.2)	(0.6)	2.3	(0.0)	(3.4)	1.0	1.8
Duration							
Bloomberg US Treasury 1-3 Yr	(0.5)	(0.6)	1.0	0.1	(1.1)	0.9	0.8
Bloomberg US Treasury Long	(0.0)	(2.3)	3.7	(6.8)	(12.1)	(0.9)	1.8
Bloomberg US Treasury	(0.8)	(1.4)	1.6	(2.1)	(4.8)	0.4	1.0
Issuer							
Bloomberg US MBS	(0.4)	(0.6)	1.9	(1.5)	(3.7)	0.0	1.1
Bloomberg US Corp. High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4
Bloomberg US Agency Interm	(0.5)	(0.4)	1.5	(0.2)	(2.0)	0.7	0.9
Bloomberg US Credit	0.3	(0.3)	3.1	1.4	(3.4)	1.7	2.5

OTHER

Index							
Bloomberg Commodity	4.0	(2.6)	(7.8)	(9.6)	17.8	4.7	(1.0)
Wilshire US REIT	5.4	3.3	6.7	(0.3)	8.6	4.4	6.4
CS Leveraged Loans	2.2	3.1	6.3	10.1	6.2	4.0	4.1
S&P Global Infrastructure	3.0	(0.1)	3.8	4.2	10.6	5.3	6.7
Alerian MLP	4.5	6.2	9.8	31.5	31.2	5.9	0.8
Regional Index							
JPM EMBI Global Div	2.2	2.2	4.1	7.4	(3.1)	0.6	2.8
JPM GBI-EM Global Div	3.3	2.5	7.8	11.4	(1.4)	0.3	(0.6)
Hedge Funds							
HFRI Composite	2.2	2.2	3.5	5.1	8.2	5.0	4.7
HFRI FOF Composite	1.2	1.5	2.3	3.7	5.0	3.3	3.4
Currency (Spot)							
Euro	2.3	0.4	2.2	4.4	(1.0)	(1.4)	(1.7)
Pound Sterling	2.6	2.8	5.7	4.7	1.0	(0.8)	(1.8)
Yen	(3.3)	(7.9)	(8.7)	(6.0)	(9.3)	(5.2)	(3.7)

Source: Morningstar, HFRI, as of 6/30/23.

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 indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula $\frac{(\text{Good-Poor} + 100)}{2}$ to the present and future sales series and $\frac{(\text{High/Very High-Low/Very Low} + 100)}{2}$ to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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Tulare County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2023



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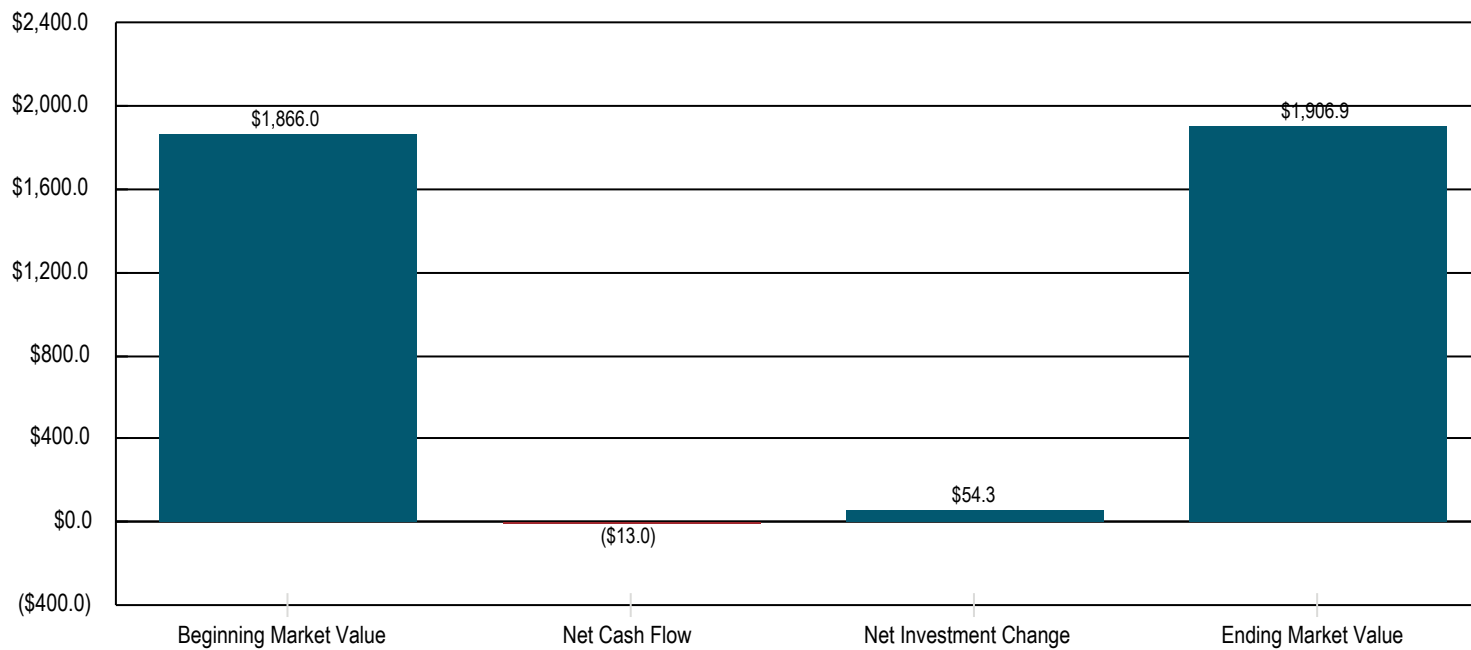
Total Fund
Portfolio Reconciliation

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Portfolio Reconciliation

	3 Mo	Fiscal YTD
Beginning Market Value	1,865,975,793	1,811,341,702
Net Cash Flow	-13,014,794	-29,844,711
Net Investment Change	54,348,731	125,826,349
Ending Market Value	1,906,924,119	1,906,924,119

Change in Market Value
Last Three Months



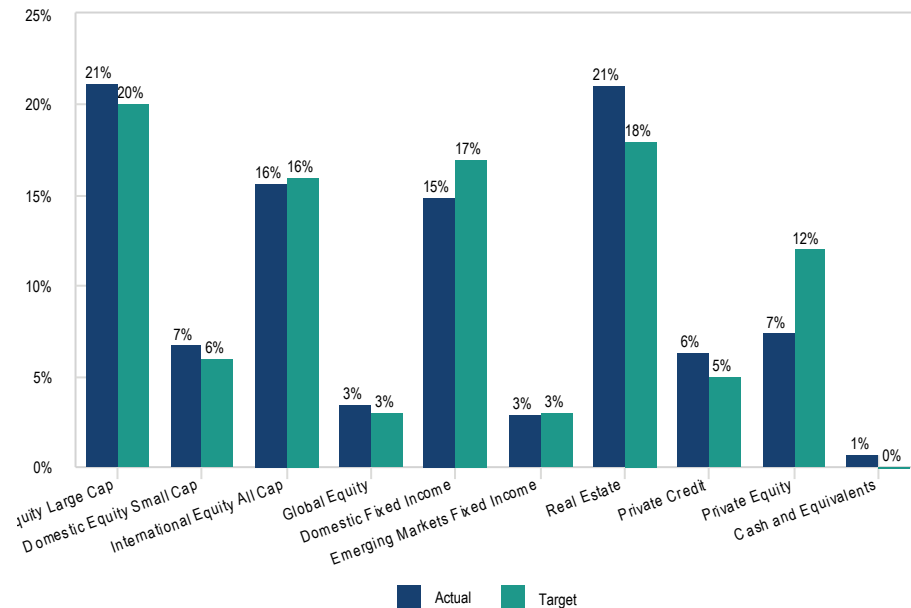
FY ends 6/30.

Total Fund Executive Summary (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Fund	2.9	5.6	6.7	7.9	6.0	6.4	5.4
Policy Index	2.8	6.6	6.9	7.1	6.2	6.6	5.8
All DB Public Plans >1B Rank	27	82	77	62	65	76	92
Total Domestic Equity	7.9	14.3	17.9	13.6	10.4	12.0	10.6
Russell 3000 Index	8.4	16.2	19.0	13.9	11.4	12.3	10.6
Total International Equity	3.9	11.2	16.1	9.3	5.4	5.7	2.6
MSCI AC World ex USA Index	2.7	9.9	13.3	7.7	4.0	5.2	3.3
Total Global Equity	3.3	11.0	19.2	16.3	9.1	-	-
MSCI AC World Index	6.3	14.3	17.1	11.5	8.6	-	-
Total Fixed Income	0.0	3.2	1.4	-3.1	0.1	1.2	3.1
Blmbg. U.S. Aggregate Index	-0.8	2.1	-0.9	-4.0	0.8	1.5	2.7
Total Domestic Fixed Income	-0.6	2.6	-0.4	-3.2	0.9	1.7	-
Blmbg. U.S. Aggregate Index	-0.8	2.1	-0.9	-4.0	0.8	1.5	2.7

Actual vs. Target Allocation (%)



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



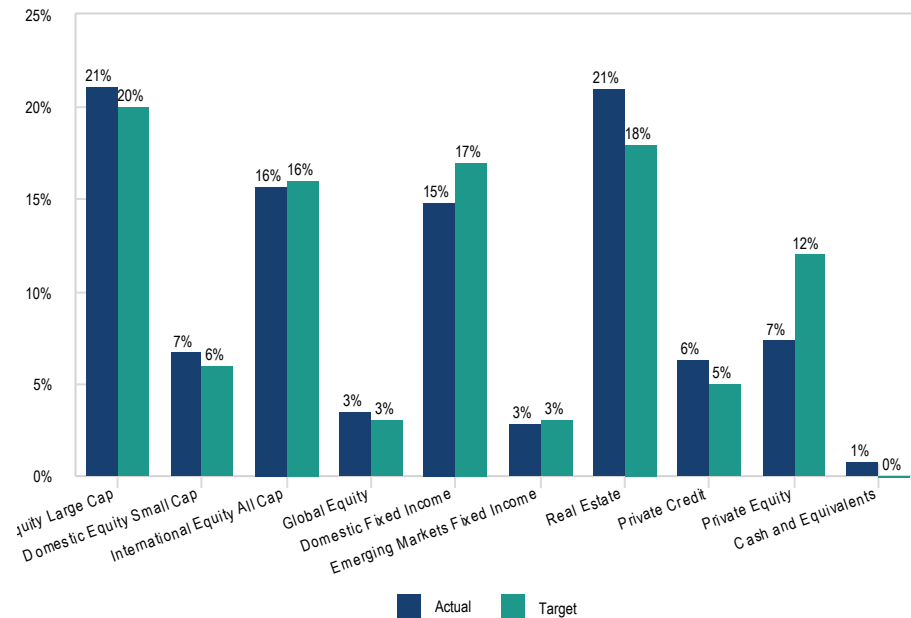
Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns.

Total Fund Executive Summary (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Emerging Markets Fixed Income	3.6	6.9	12.5	0.0	-	-	-
50% JPM EMBI Global Div/ 50% JPM GBI EM Global Div	2.3	5.9	9.4	-2.2	-	-	-
Total Real Estate	-1.6	-6.0	-8.2	5.4	5.6	7.8	4.2
NCREIF-ODCE	-2.7	-5.8	-10.0	8.0	6.5	8.7	5.7
Total Infrastructure	2.5	5.2	-	-	-	-	-
NCREIF-ODCE	-2.7	-5.8	-	-	-	-	-
Total Private Equity	-0.2	-1.0	1.1	23.5	18.5	15.0	11.6
Private Equity Benchmark	-0.2	-1.0	1.1	23.5	18.5	15.4	11.9
Total Private Credit	3.8	4.9	2.7	12.3	8.5	-	-
Private Credit Benchmark	3.8	4.9	2.7	12.3	8.5	-	-

Actual vs. Target Allocation (%)



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



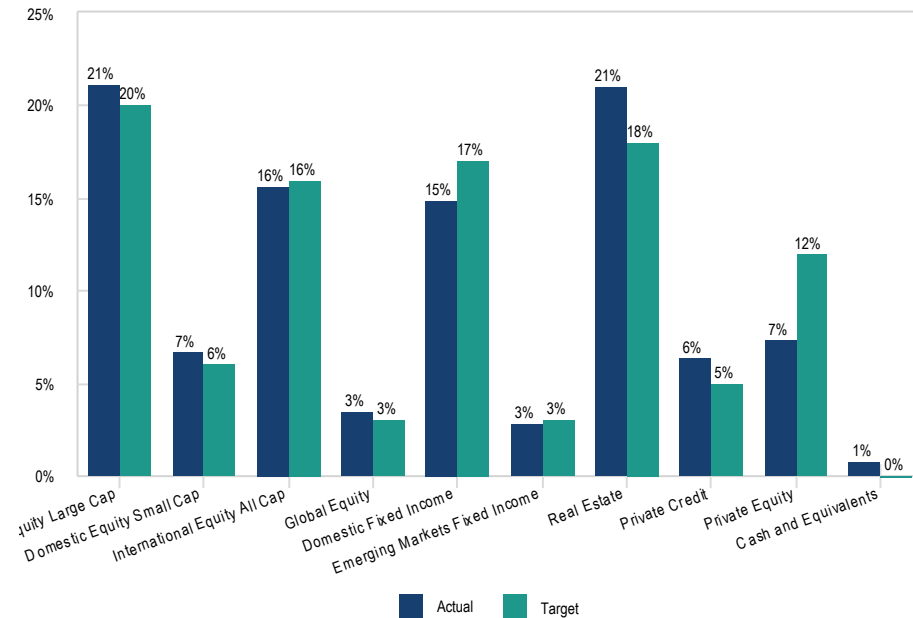
Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns.

Total Fund Executive Summary (Gross of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Fund	3.0	5.8	7.0	8.1	6.2	6.8	5.7
<i>Policy Index</i>	2.8	6.6	6.9	7.1	6.2	6.6	5.8
Total Domestic Equity	7.9	14.5	18.1	13.9	10.8	12.4	11.0
<i>Russell 3000 Index</i>	8.4	16.2	19.0	13.9	11.4	12.3	10.6
Total International Equity	4.0	11.4	16.5	9.7	5.7	6.0	3.0
<i>MSCI AC World ex USA Index</i>	2.7	9.9	13.3	7.7	4.0	5.2	3.3
Total Global Equity	3.5	11.4	20.1	17.2	9.9	-	-
<i>MSCI AC World Index</i>	6.3	14.3	17.1	11.5	8.6	-	-
Total Fixed Income	0.1	3.4	1.7	-2.8	0.4	1.6	3.4
<i>Bloomberg U.S. Aggregate Index</i>	-0.8	2.1	-0.9	-4.0	0.8	1.5	2.7
Total Domestic Fixed Income	-0.6	2.7	-0.1	-3.0	1.2	2.0	-
<i>Bloomberg U.S. Aggregate Index</i>	-0.8	2.1	-0.9	-4.0	0.8	1.5	2.7

Actual vs. Target Allocation (%)



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



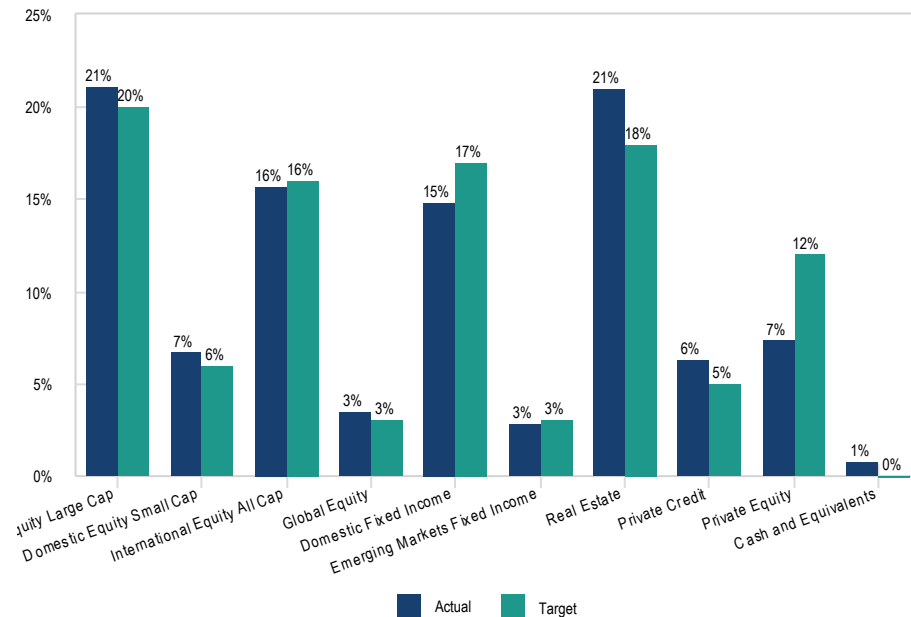
Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns.

Total Fund Executive Summary (Gross of Fees)

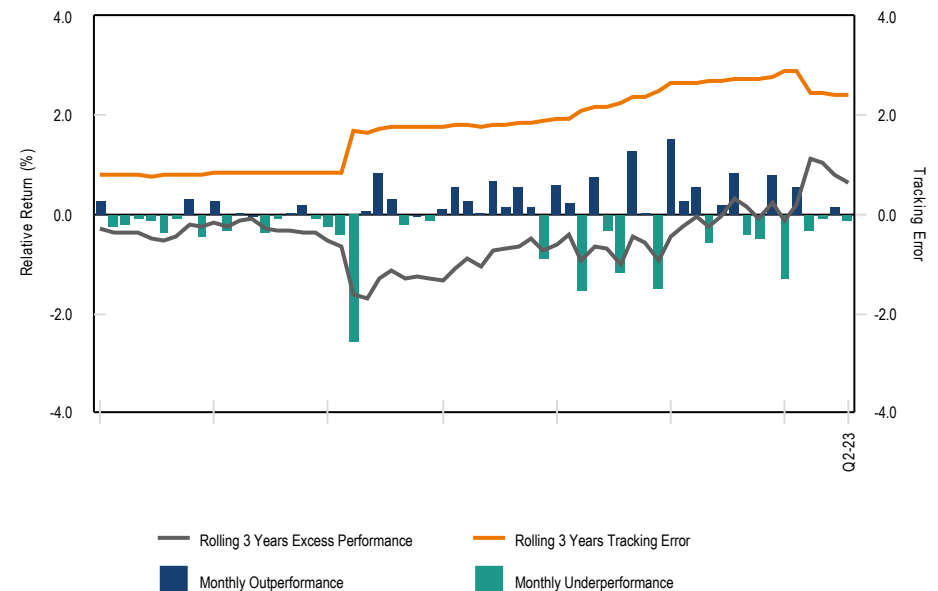
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs
Total Emerging Markets Fixed Income	3.7	7.2	13.0	0.4	-	-	-
50% JPM EMBI Global Div/ 50% JPM GBI EM Global Div	2.3	5.9	9.4	-2.2	-	-	-
Total Real Estate	-1.5	-5.9	-7.9	5.6	5.7	8.1	4.4
NCREIF ODCE	-2.7	-5.8	-10.0	8.0	6.5	8.7	5.7
Total Infrastructure	2.5	5.2	-	-	-	-	-
NCREIF ODCE	-2.7	-5.8	-	-	-	-	-
Total Private Equity	-0.2	-1.0	1.1	23.5	18.5	15.4	11.9
Private Equity Benchmark	-0.2	-1.0	1.1	23.5	18.5	15.4	11.9
Total Private Credit	3.8	4.9	2.7	12.3	8.5	-	-
Private Credit Benchmark	3.8	4.9	2.7	12.3	8.5	-	-

Actual vs. Target Allocation (%)



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

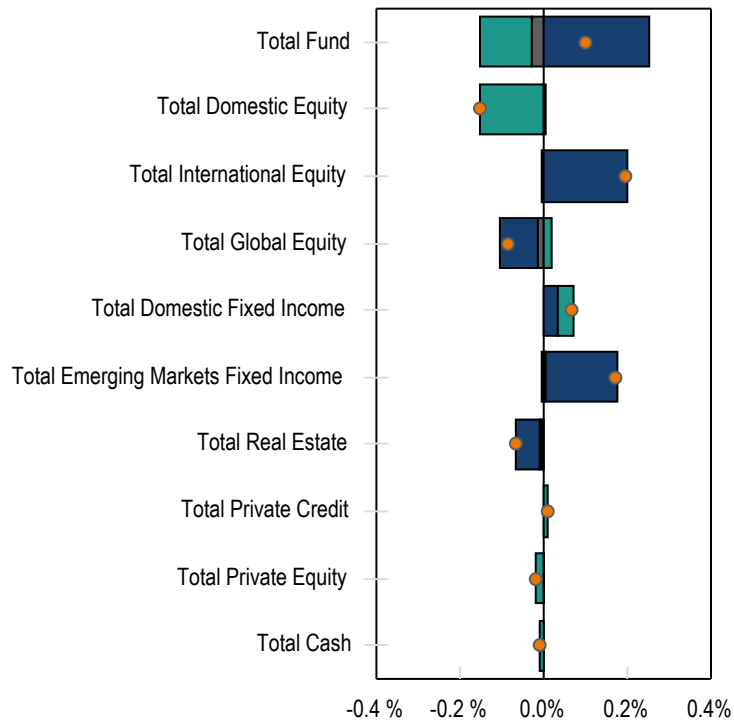


Policy Index as of 10/1/2021: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 5% Russell 2000, 4.6% MSCI REIT Index, 7% Private Equity Returns, 5% Private Credit Returns.

Total Fund Attribution Analysis (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Attribution Effects
3 Months Ending June 30, 2023



Selection Effect Allocation Effect
Interaction Effect Total Effects

Performance Attribution

	3 Mo
Wtd. Actual Return	2.9
Wtd. Index Return	2.8
Excess Return	0.1
Selection Effect	0.3
Allocation Effect	-0.1
Interaction Effect	0.0

Attribution Summary
3 Months Ending June 30, 2023

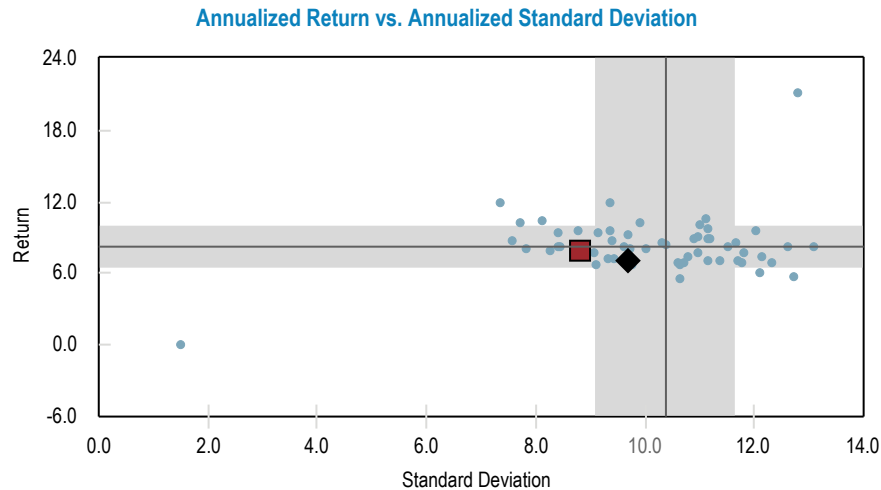
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	7.9	7.9	0.0	0.0	-0.2	0.0	-0.2
Total International Equity	3.9	2.7	1.3	0.2	0.0	0.0	0.2
Total Global Equity	3.3	6.3	-3.0	-0.1	0.0	0.0	-0.1
Total Domestic Fixed Income	-0.6	-0.8	0.2	0.0	0.0	0.0	0.1
Total Emerging Markets Fixed Income	3.6	-2.2	5.8	0.2	0.0	0.0	0.2
Total Real Estate	-1.6	-1.3	-0.3	-0.1	0.0	0.0	-0.1
Total Private Credit	3.8	3.8	0.0	0.0	0.0	0.0	0.0
Total Private Equity	-0.2	-0.2	0.0	0.0	0.0	0.0	0.0
Total Cash	1.3	1.2	0.1	0.0	0.0	0.0	0.0
Total Fund	2.9	2.8	0.1	0.3	-0.1	0.0	0.1

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

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

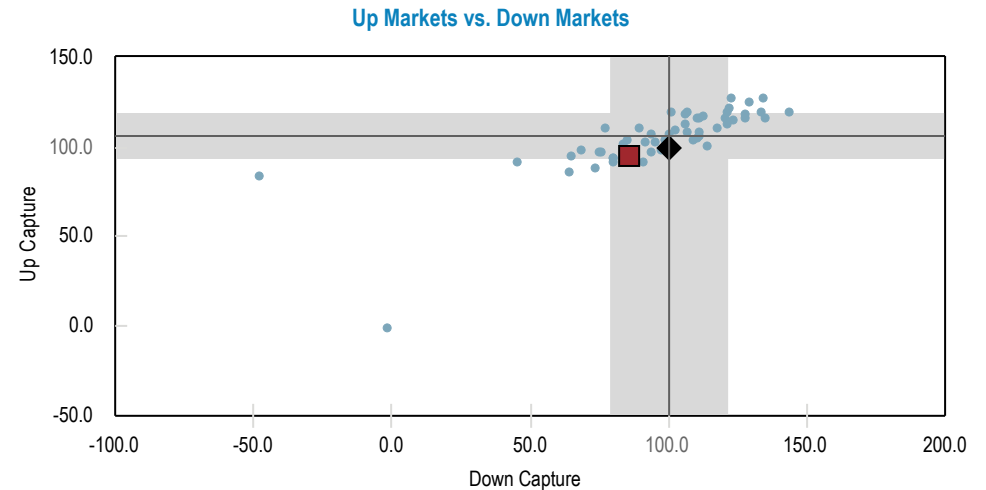
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
Total Fund	7.87	8.80	1.51	0.88	2.41	0.94	0.76	0.26	95.28	85.93



InvMetrics Public DB > \$1B

	Return	Standard Deviation
Total Fund	7.87	8.80
Policy Index	7.10	9.68
Median	8.27	10.37
Population	57	57



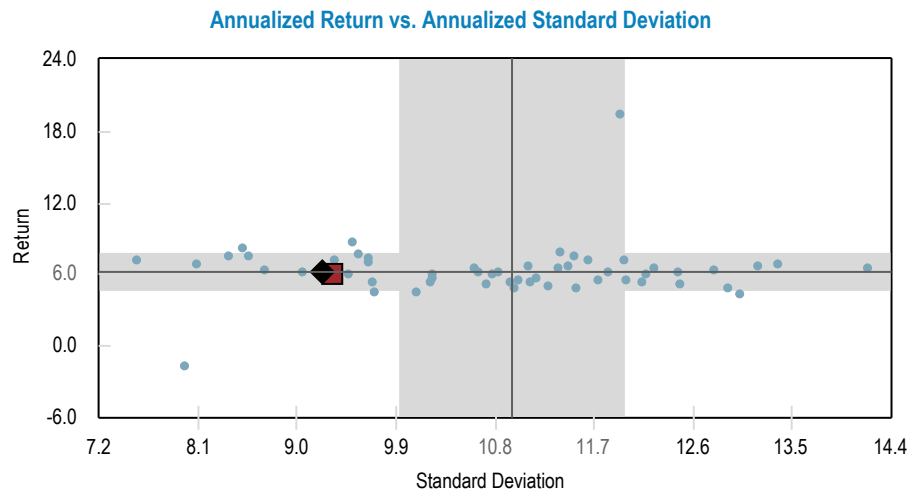
InvMetrics Public DB > \$1B

	Up Capture	Down Capture
Total Fund	95.28	85.93
Policy Index	100.00	100.00
Median	106.01	100.09
Population	57	57

Total Fund Risk Analysis - 5 Years (Net of Fees)

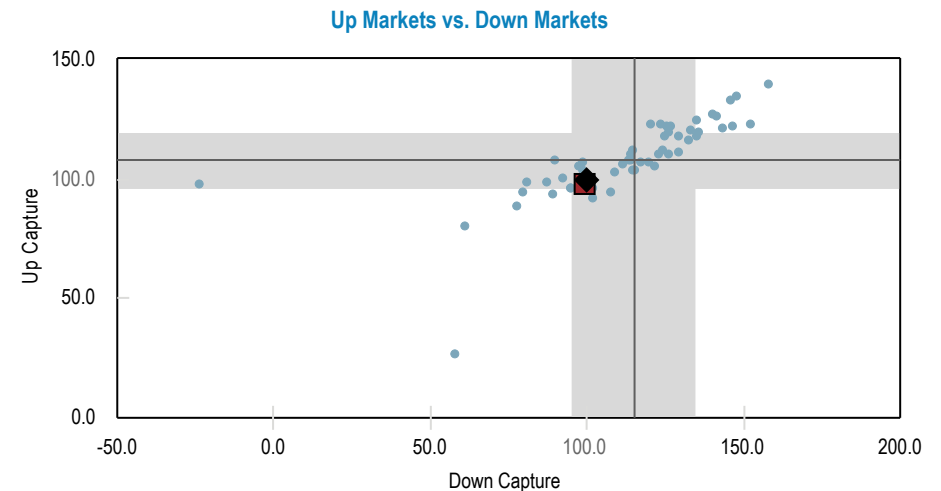
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Capture	Down Capture
Total Fund	5.98	9.33	-0.15	0.98	2.31	0.94	0.50	-0.13	97.79	99.28



InvMetrics Public DB > \$1B

	Return	Standard Deviation
Total Fund	5.98	9.33
Policy Index	6.31	9.24
Median	6.23	10.95
Population	56	56



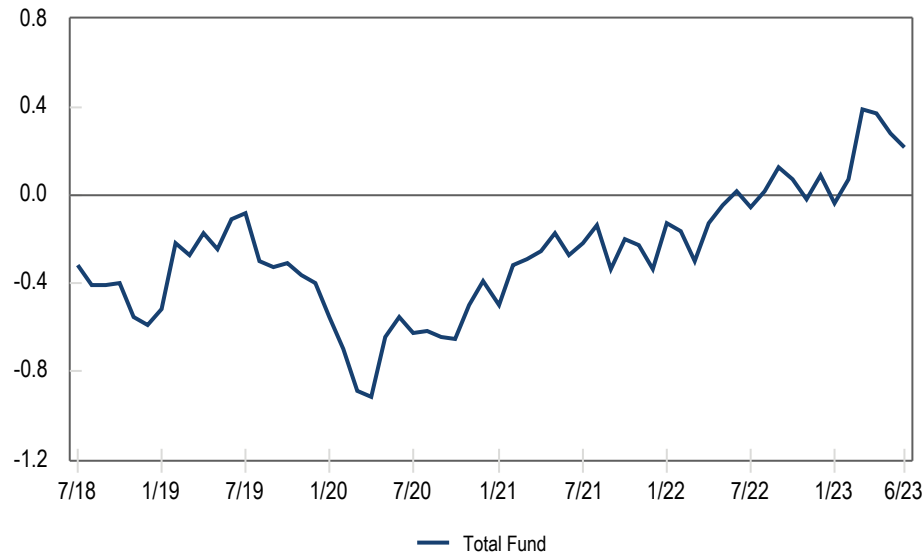
InvMetrics Public DB > \$1B

	Up Capture	Down Capture
Total Fund	97.79	99.28
Policy Index	100.00	100.00
Median	107.92	114.94
Population	56	56

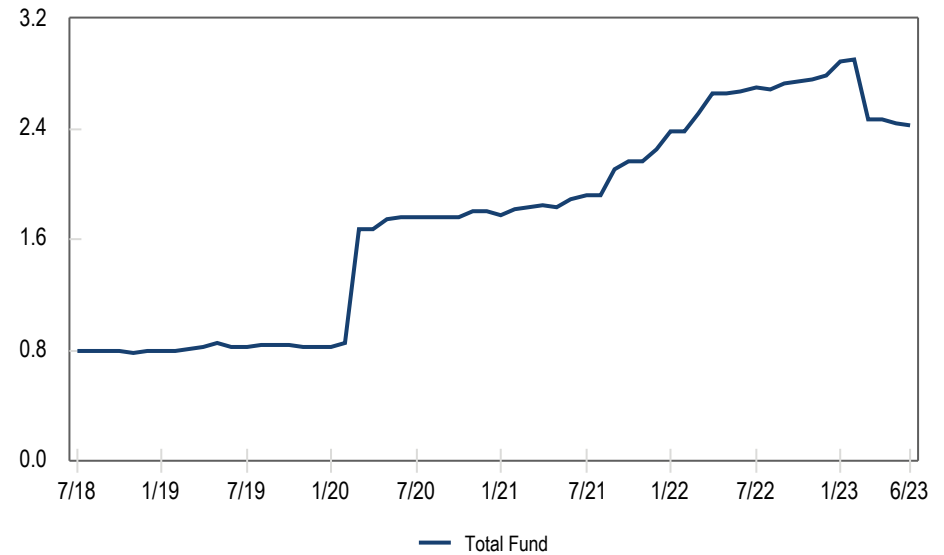
Total Fund Rolling Risk Statistics (Net of Fees) - 3 Year

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

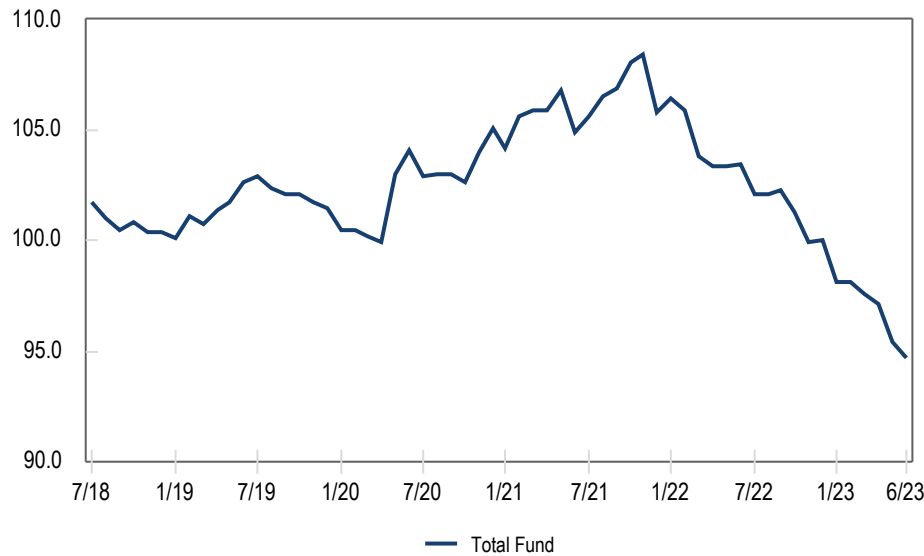
Rolling Information Ratio



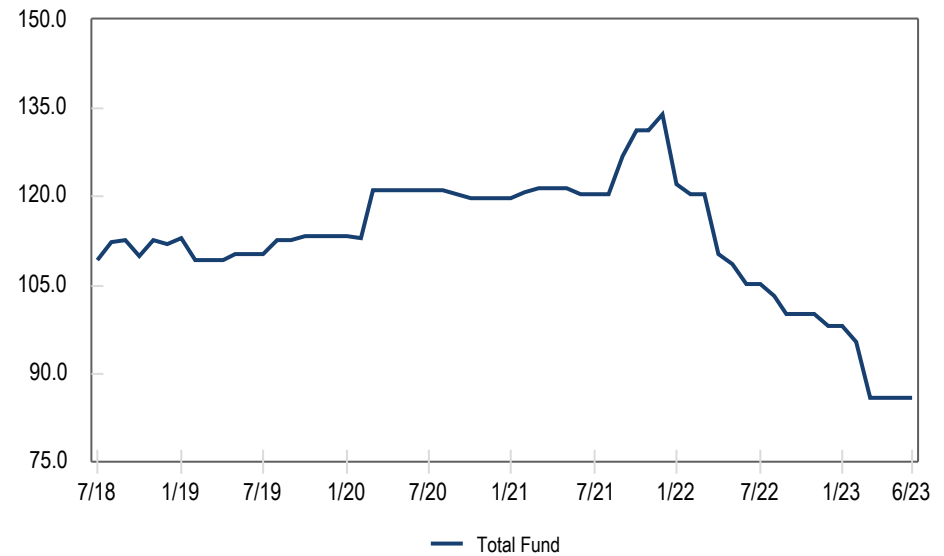
Rolling Tracking Error



Rolling Up Capture



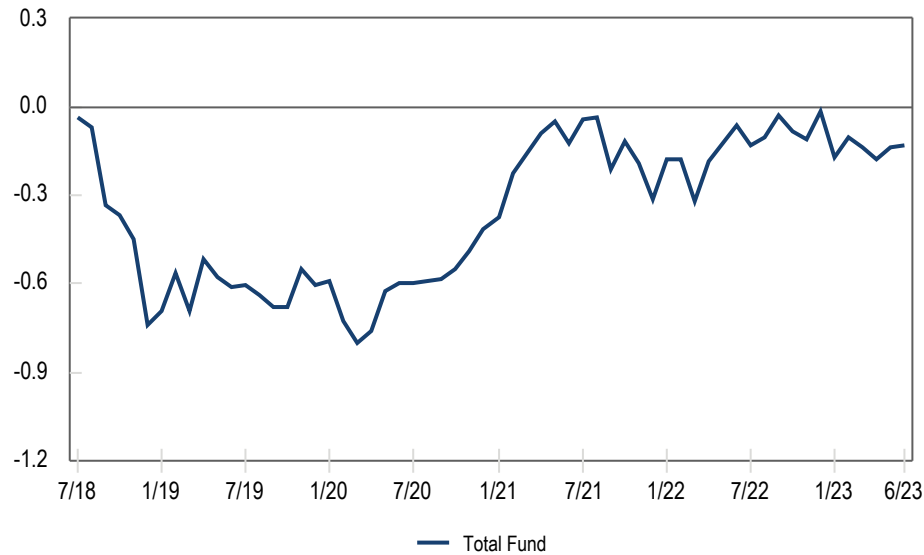
Rolling Down Capture



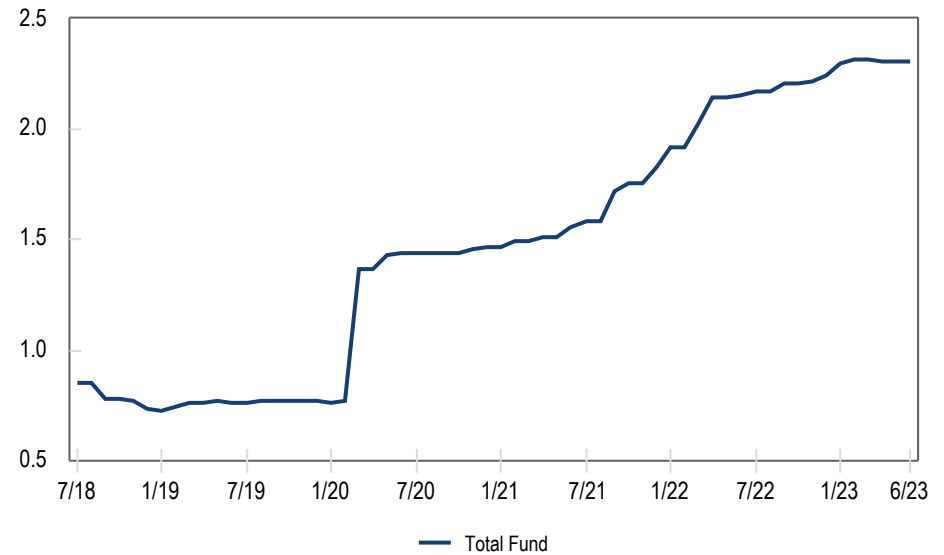
Total Fund Rolling Risk Statistics (Net of Fees) 5 Year

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

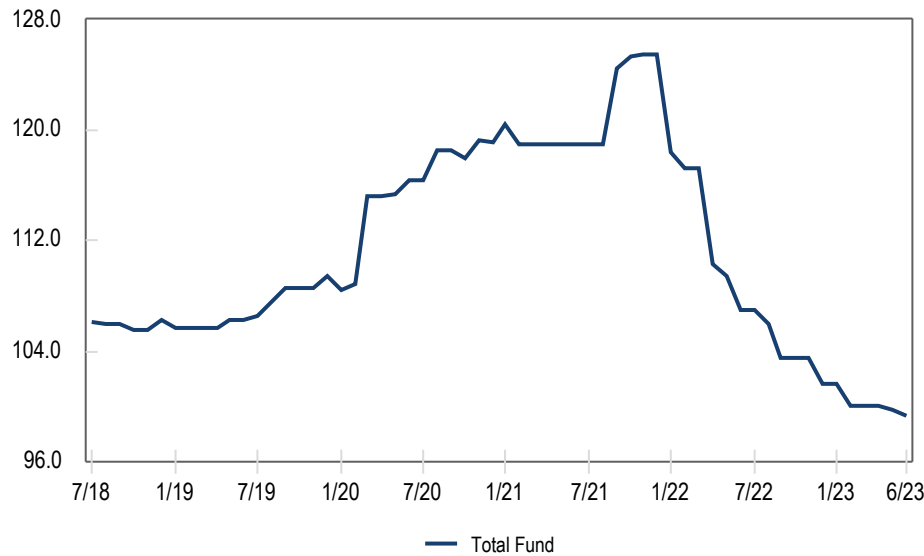
Rolling Information Ratio



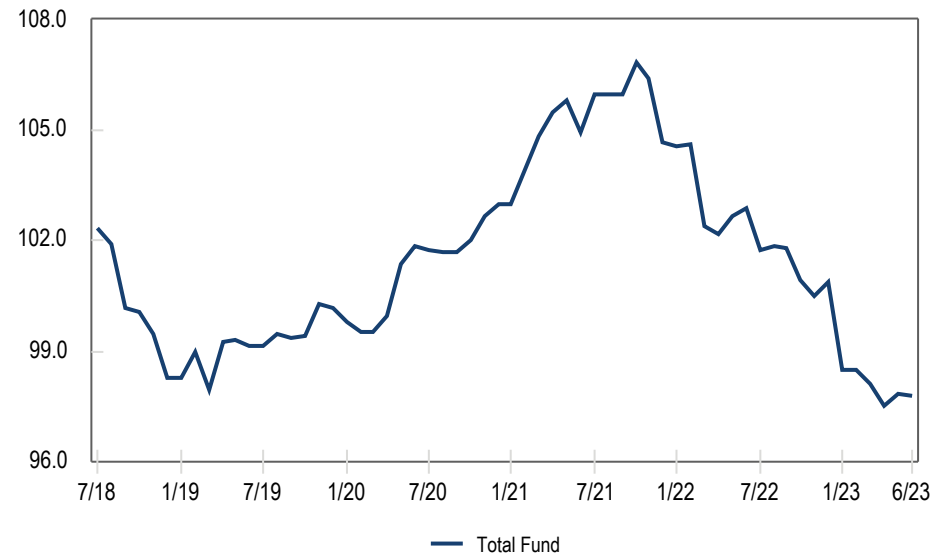
Rolling Tracking Error



Rolling Up Capture



Rolling Down Capture



Total Fund Performance Summary (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Fund	1,906,924,119	100.0	2.9	5.6	6.7	7.9	6.0	6.4	-8.0	13.4	8.9	15.4	-2.9
Policy Index			2.8	6.6	6.9	7.1	6.2	6.6	-10.7	14.2	10.6	15.9	-2.3
All DB Public Plans >1B Rank			27	82	77	62	65	76	19	74	82	79	36
Total Domestic Equity	531,282,578	27.9	7.9	14.3	17.9	13.6	10.4	12.0	-18.2	26.1	18.2	29.8	-5.4
Russell 3000 Index			8.4	16.2	19.0	13.9	11.4	12.3	-19.2	25.7	20.9	31.0	-5.2
SSGA S&P 500 Flagship Fund	177,369,809	9.3	8.7	16.9	19.5	14.6	12.3	12.9	-18.1	28.6	18.3	31.5	-4.4
S&P 500 Index			8.7	16.9	19.6	14.6	12.3	12.9	-18.1	28.7	18.4	31.5	-4.4
eV US Large Cap Core Equity Rank			24	21	26	29	24	16	65	32	38	30	39
PGIM QS US Core Equity	74,649,940	3.9	9.6	17.4	19.1	14.8	10.8	12.4	-16.3	29.8	12.0	28.6	-6.8
S&P 500 Index			8.7	16.9	19.6	14.6	12.3	12.9	-18.1	28.7	18.4	31.5	-4.4
eV US Large Cap Core Equity Rank			14	18	29	24	54	29	49	20	71	59	71
William Blair Large Cap Growth	76,023,146	4.0	12.2	25.6	24.8	-	-	-	-	-	-	-	-
Russell 1000 Growth Index			12.8	29.0	27.1	-	-	-	-	-	-	-	-
eV US Large Cap Growth Equity Rank			42	49	45	-	-	-	-	-	-	-	-
Boston Partners Large Cap Value	74,826,283	3.9	4.6	4.2	11.5	17.1	8.9	9.7	-4.3	30.4	2.4	23.8	-9.0
Russell 1000 Value Index			4.1	5.1	11.5	14.3	8.1	9.2	-7.5	25.2	2.8	26.5	-8.3
eV US Large Cap Value Equity Rank			37	54	52	21	47	45	34	17	60	76	55
SSGA US Extended Market Index	67,236,816	3.5	6.4	12.6	15.1	-	-	-	-26.4	-	-	-	-
Dow Jones U.S. Completion Total Stock Market Indx			6.4	12.6	15.0	-	-	-	-26.5	-	-	-	-
eV US Small-Mid Cap Growth Equity Rank			25	57	66	-	-	-	41	-	-	-	-
William Blair SMID Cap Growth	28,635,599	1.5	6.1	11.9	20.8	7.3	7.6	11.7	-22.7	8.7	32.6	31.1	-1.7
Russell 2500 Growth Index			6.4	13.4	18.6	6.6	7.0	10.4	-26.2	5.0	40.5	32.7	-7.5
eV US Small-Mid Cap Growth Equity Rank			33	61	23	52	57	26	19	75	63	48	36
Leeward Small Cap Value	32,540,985	1.7	2.6	3.0	11.0	18.6	6.3	8.6	-7.1	31.6	3.8	26.3	-15.5
Russell 2000 Value Index			3.2	2.5	6.0	15.4	3.5	7.3	-14.5	28.3	4.6	22.4	-12.9
eV US Small Cap Value Equity Rank			69	77	51	34	33	39	18	38	56	24	58

Policy Index: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 7% Private Equity Returns, 5% Private Credit Returns, 5% Russell 2000, 4.6% MSCI US REIT Index. IFM Global Infrastructure funded 1/1/2023. SSGA Russell Small Cap replaced with SSGA US Extended Market Index on 6/10/21. Invesco Commercial Mortgage funded 9/1/21. Franklin Templeton Global liquidated 12/28/2021. SSGA US REIT Index Funded 12/10/2021. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

Total Fund Performance Summary (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total International Equity	298,782,608	15.7	3.9	11.2	16.1	9.3	5.4	5.7	-14.2	9.6	13.4	22.7	-14.5
MSCI AC World ex USA Index			2.7	9.9	13.3	7.7	4.0	5.2	-15.6	8.3	11.1	22.1	-13.8
SSGA MSCI ACWI Ex US Index Fund	100,901,750	5.3	2.6	9.7	12.9	7.4	3.7	4.9	-15.8	7.9	10.9	21.8	-14.0
MSCI AC World ex USA (Net)			2.4	9.5	12.7	7.2	3.5	4.7	-16.0	7.8	10.7	21.5	-14.2
eV ACWI ex-US All Cap Equity Rank			54	69	73	56	58	77	36	64	66	71	40
PIMCO RAE Fundamental Global Ex US Fund	103,800,642	5.4	4.0	10.3	16.4	12.7	3.7	5.0	-8.9	12.3	1.7	16.1	-15.1
MSCI AC World ex USA Value (Net)			3.0	8.3	12.2	10.4	2.7	3.7	-8.6	10.5	-0.8	15.7	-14.0
eV ACWI ex-US All Cap Value Eq Rank			12	50	39	31	33	46	35	34	48	67	52
SGA International Growth	94,080,216	4.9	5.4	13.7	19.3	8.2	8.3	-	-17.8	9.1	26.0	30.5	-
MSCI AC World ex USA Growth (Net)			1.9	10.7	13.3	4.0	4.1	-	-23.1	5.1	22.2	27.3	-
eV ACWI ex-US Growth Equity Rank			6	33	27	18	7	-	14	44	51	42	-
Total Global Equity	65,746,813	3.4	3.3	11.0	19.2	16.3	9.1	-	-14.6	28.5	14.3	24.2	-15.9
MSCI AC World Index			6.3	14.3	17.1	11.5	8.6	-	-18.0	19.0	16.8	27.3	-8.9
Skellig Water Fund (aka KBI)	65,746,813	3.4	3.3	11.0	19.2	16.3	9.1	-	-14.6	28.5	14.3	24.2	-15.9
MSCI AC World Index (Net)			6.2	13.9	16.5	11.0	8.1	-	-18.4	18.5	16.3	26.6	-9.4
eV Global All Cap Equity Rank			68	58	28	8	29	-	35	2	59	65	89
Total Fixed Income	336,346,157	17.6	0.0	3.2	1.4	-3.1	0.1	1.2	-13.5	-2.2	4.7	8.1	0.1
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.5	8.7	0.0
Total Domestic Fixed Income	282,785,236	14.8	-0.6	2.6	-0.4	-3.2	0.9	1.7	-13.7	-0.7	7.9	9.0	-0.2
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.5	8.7	0.0
BlackRock Core Plus Fixed Income	78,020,823	4.1	-0.9	2.2	-0.8	-4.0	0.8	1.6	-13.8	-1.4	8.4	8.7	0.1
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.5	8.7	0.0
eV US Core Plus Fixed Inc Rank			83	85	79	95	87	92	63	88	57	81	22
Doubleline Core Plus	103,480,100	5.4	-0.3	3.1	0.2	-2.5	0.6	-	-12.7	-0.2	5.2	8.3	-0.3
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	-	-13.0	-1.5	7.5	8.7	0.0
eV US Core Plus Fixed Inc Rank			19	14	48	32	96	-	24	38	97	88	35
MacKay Shields Core Plus	101,284,312	5.3	-0.8	2.4	-0.5	-3.2	1.1	-	-14.6	-0.4	9.9	9.6	-1.0
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	-	-13.0	-1.5	7.5	8.7	0.0
eV US Core Plus Fixed Inc Rank			76	68	76	68	58	-	87	48	22	55	75

Policy Index: 26% Russell 3000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 7% Private Equity Returns, 5% Private Credit Returns, 5% Russell 2000, 4.6% MSCI US REIT Index. IFM Global Infrastructure funded 1/1/2023. SSGA Russell Small Cap replaced with SSGA US Extended Market Index on 6/10/21. Invesco Commercial Mortgage funded 9/1/21. Franklin Templeton Global liquidated 12/28/2021. SSGA US REIT Index Funded 12/10/2021. Macquarie Large Cap Growth liquidated 4/25/2022, proceeds funded William Blair Large Cap Growth.

Total Fund
Performance Summary (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	Fiscal YTD	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Emerging Markets Fixed Income	53,560,921	2.8	3.6	6.9	12.5	0.0	-	-	-12.4	-5.3	4.6	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			2.3	5.9	9.4	-2.2	-	-	-14.8	-5.3	4.0	-	-
PGIM Emerging Markets Debt	53,560,921	2.8	3.6	6.9	12.5	0.0	-	-	-12.4	-5.3	4.6	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			2.3	5.9	9.4	-2.2	-	-	-14.8	-5.3	4.0	-	-
eV Emg Mkts Fixed Inc - Blended Currency Rank			27	15	20	29	-	-	37	67	72	-	-
Total Real Estate	317,648,887	16.7	-1.6	-6.0	-8.2	5.4	5.6	7.8	11.0	12.8	1.8	5.2	8.8
NCREIF-ODCE			-2.7	-5.8	-10.0	8.0	6.5	8.7	7.5	22.2	1.2	5.3	8.3
RREEF America II	157,050,128	8.2	-2.7	-8.2	-12.3	6.8	6.5	8.6	18.4	12.8	1.8	5.3	8.6
NCREIF-ODCE			-2.7	-5.8	-10.0	8.0	6.5	8.7	7.5	22.2	1.2	5.3	8.3
American Realty Strategic Value Fund	85,445,911	4.5	-2.5	-6.0	-1.8	6.9	-	-	16.2	11.3	1.1	-	-
NCREIF-ODCE			-2.7	-5.8	-10.0	8.0	-	-	7.5	22.2	1.2	-	-
Invesco Commercial Mortgage Income Fund	73,513,116	3.9	1.9	-1.2	-1.7	-	-	-	2.7	-	-	-	-
NCREIF-ODCE			-2.7	-5.8	-10.0	-	-	-	7.5	-	-	-	-
SSGA US REIT Index Non-Lending Fund	729,063	0.0	2.9	5.8	-0.7	-	-	-	-26.0	-	-	-	-
Dow Jones U.S. REIT Index			1.4	3.3	-4.2	-	-	-	-24.8	-	-	-	-
eV US REIT Rank			33	39	31	-	-	-	58	-	-	-	-
Infrastructure	84,128,607	4.4	2.5	5.2	-	-	-	-	-	-	-	-	-
NCREIF-ODCE			-2.7	-5.8	-	-	-	-	-	-	-	-	-
IFM Global Infrastructure	84,128,607	4.4	2.5	5.2	-	-	-	-	-	-	-	-	-
NCREIF-ODCE			-2.7	-5.8	-	-	-	-	-	-	-	-	-

Total Fund
Risk Analysis - 5 Years (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	Anlzd Ret	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
SSGA S&P 500 Flagship Fund	12.27	18.64	-0.04	1.00	0.02	1.00	0.63	-1.50	99.94	100.07
PGIM QS US Core Equity	10.84	19.08	-1.44	1.02	2.29	0.99	0.56	-0.54	98.74	103.85
Boston Partners Large Cap Value	8.86	19.75	0.57	1.03	3.10	0.98	0.45	0.28	101.99	98.93
William Blair SMID Cap Growth	7.64	22.01	1.04	0.92	4.90	0.96	0.38	0.06	95.35	92.61
Leeward Small Cap Value	6.29	23.31	2.83	0.92	5.37	0.95	0.31	0.43	96.40	88.08
SSGA MSCI ACWI Ex US Index Fund	3.73	17.30	0.21	1.00	0.17	1.00	0.21	1.12	100.55	99.76
PIMCO RAE Fundamental Global Ex US Fund	3.67	19.56	1.01	1.04	2.83	0.98	0.21	0.42	105.23	100.90
Skellig Water Fund (aka KBI)	9.11	19.78	0.73	1.07	5.89	0.91	0.46	0.23	105.12	100.93
BlackRock Core Plus Fixed Income	0.85	5.69	0.06	1.04	0.80	0.98	-0.09	0.12	105.42	104.72
Doubleline Core Plus	0.61	5.53	-0.04	0.89	2.77	0.76	-0.14	-0.05	93.29	94.58
MacKay Shields Core Plus	1.14	6.15	0.34	1.08	1.87	0.91	-0.04	0.22	113.13	108.70
RREEF America II	6.49	7.56	-	-	-	-	0.65	-	-	-
SGA International Growth	8.31	16.74	4.40	0.93	4.67	0.93	0.47	0.84	102.54	84.63

Risk analysis excludes managers with less than 5 years history.

Total Fund Illiquid Alternative Investments

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

IRR Analysis as of IRR date												
Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 6/30/2023 ³	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Net IRR Since Inception ⁶	IRR Date
Private Equity												
2016	Ocean Avenue Fund III	\$20,462,093	\$20,000,000	\$18,600,000	93%	\$1,400,000	\$21,700,000	\$20,462,093	116.67%	226.68%	25.7%	03/31/23
2022	Ocean Avenue Fund IV	\$29,430,075	\$26,000,000	\$24,440,000	94%	\$1,560,000	\$14,342,451	\$29,820,075	58.68%	179.10%	40.3%	03/31/23
2023	Ocean Avenue Fund V	\$1,870,342	\$20,000,000	\$2,000,000	10%	\$18,000,000	\$0	N/M		93.52%	N/M	N/M
2004	Pantheon USA Fund VI	\$143,861	\$15,000,000	\$14,175,000	95%	\$825,000	\$21,695,924	\$143,861	153.06%	154.07%	6.7%	03/31/23
2016	Pathway Private Equity Fund Investors 8	\$30,711,930	\$20,000,000	\$18,175,966	91%	\$1,824,034	\$10,085,501	\$28,821,181	55.49%	224.46%	20.4%	12/31/22
2017	Pathway Private Equity Fund Investors 9	\$24,981,589	\$20,000,000	\$16,043,228	80%	\$3,956,772	\$2,340,492	\$25,712,023	14.59%	170.30%	21.0%	12/31/22
2020	Pathway Private Equity Fund Investors 10	\$24,661,961	\$30,000,000	\$21,829,855	73%	\$8,170,145	\$684,834	N/M		116.11%	N/M	N/M
2012	Stepstone Secondary Opportunities Fund II ⁸	\$4,082,083	\$27,500,000	\$23,605,864	86%	\$12,676,310	\$40,019,327	\$4,208,208	169.53%	186.82%	10.2%	03/31/23
2022	Audax Private Equity Fund VII-B	\$0	\$22,000,000	\$0	0%	\$22,000,000	\$0	N/M			N/M	N/M
2022	Altas Partners Holdings III	\$108,898	\$22,000,000	\$108,898	0.5%	\$21,891,102	\$0	N/M	0.00%	100.00%	N/M	N/M
2023	Clayton, Dubilier, & Rice Fund XII	\$0	\$20,000,000	\$0	0.0%	\$20,000,000	\$0	N/M			N/M	N/M
2023	Eclipse Fund V	\$0	\$10,000,000	\$0	0.0%	\$10,000,000	\$0	N/M			N/M	N/M
2023	Gridiron Fund V	\$0	\$20,000,000	\$0	0.0%	\$20,000,000	\$0	N/M			N/M	N/M
2023	Stockbridge Value Fund V	\$0	\$15,000,000	\$0	0.0%	\$15,000,000	\$0	N/M			N/M	N/M
Private Credit												
2016	Sixth Street Diversified Credit Program	\$85,372,549	\$160,000,000	\$109,481,338	68%	\$50,518,662	\$52,795,197	\$88,045,584	48.2%	126.2%	8.9%	03/31/23
Opportunistic												
2020	Sixth Street TAO	\$31,812,849	\$50,000,000	\$28,779,490	58%	\$21,220,510	\$4,645,870	\$30,067,297	16.1%	126.7%	9.7%	03/31/23
2010	KKR Mezzanine Partners	\$2,059,003	\$15,000,000	\$14,527,535	97%	\$472,465	\$20,894,047	\$2,399,604	143.8%	158.0%	5.9%	03/31/23
2011	PIMCO Bravo	\$0	\$15,000,000	\$15,000,000	100%	\$0	\$27,216,524	\$446,175	181.4%	181.4%	22.2%	12/31/18
2023	Charlesbank Technology Opportunities Fund II	\$0	\$20,000,000	\$0	0%	\$20,000,000	\$0	N/M			N/M	N/M
Private Real Estate												
2022	TA Realty Fund XIII	\$0	\$33,000,000	\$0	0%	\$33,000,000	\$0	N/M			N/M	N/M
2023	KSL Capital Partners Fund VI	\$910,669	\$14,000,000	\$910,669	7%	\$13,089,331	\$0	N/M	0.00%	100.00%	N/M	N/M
2023	Cerberus VI Institutional Feeder	\$0	\$29,000,000	\$0	0.0%	\$29,000,000	\$0	N/M			N/M	N/M

Total Private Markets **\$257,036,606** \$638,500,000 \$323,396,982 51% \$323,885,192 \$240,483,759 \$230,557,670 74.4% 153.8%

% of Portfolio (Market Value) **13.5%**

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Last known market value + capital calls - distributions

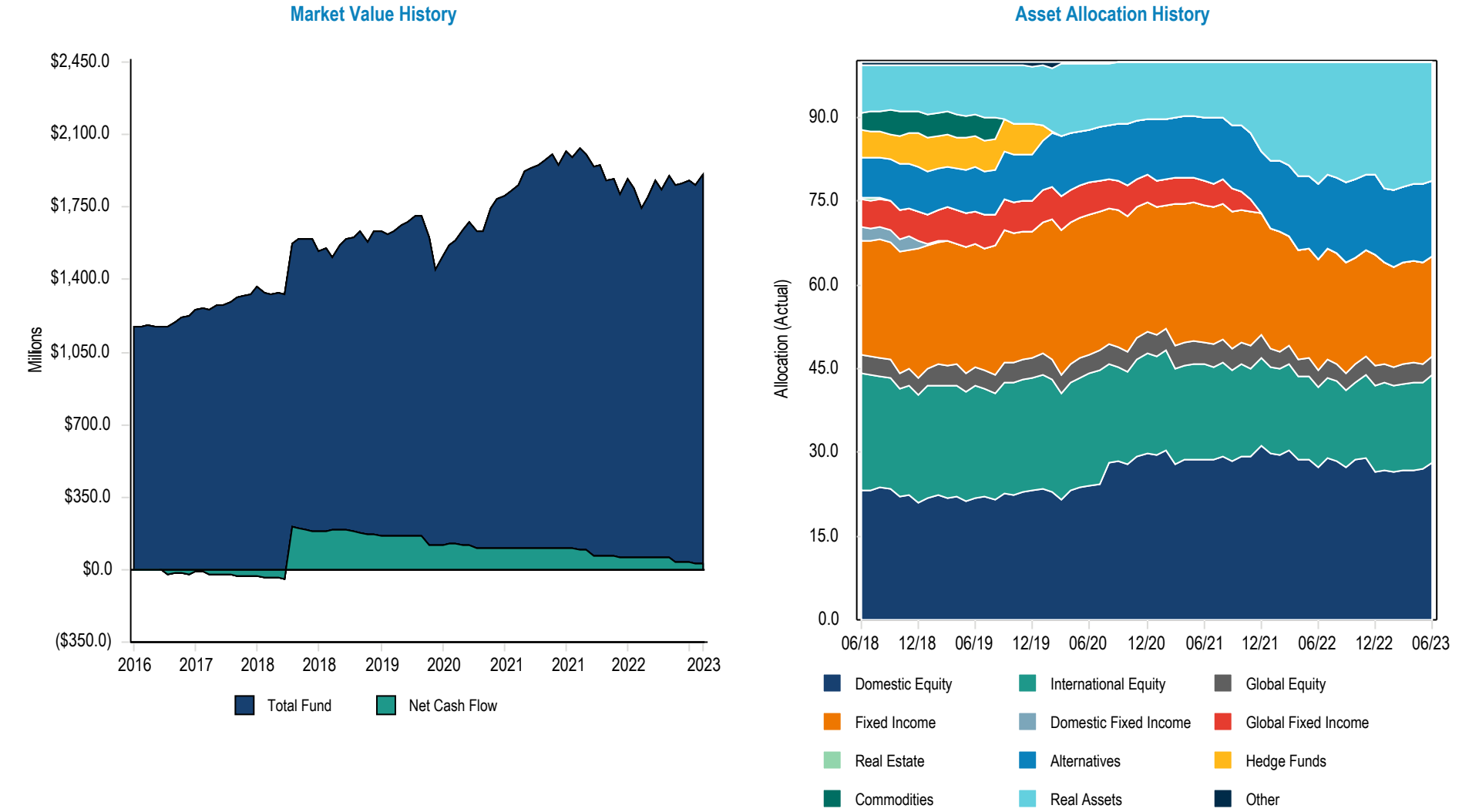
⁴IRR currently unavailable for these funds.

⁵Investment period ended, no further capital to be called.

⁶Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

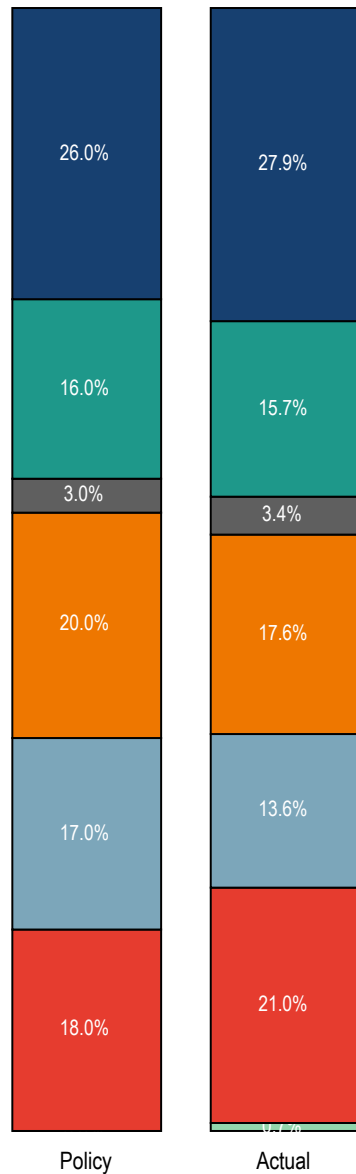
Total Fund Asset Allocation History

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



Total Fund Asset Allocation vs. Policy

Tulare County Employees' Retirement Association Period Ending: June 30, 2023



	Current Balance (\$)	Current Allocation (%)	Policy Allocation (%)	Excess Allocation (\$)	Policy Range (%)	Within IPS Range?
Domestic Equity	531,282,578	27.9	26.0	35,482,307	15.0 - 35.0	Yes
International Equity	298,782,608	15.7	16.0	-6,325,251	5.0 - 25.0	Yes
Global Equity	65,746,813	3.4	3.0	8,539,089	0.0 - 5.0	Yes
Fixed Income	336,346,157	17.6	20.0	-45,038,667	10.0 - 35.0	Yes
Alternatives	260,293,990	13.6	17.0	-63,883,110	10.0 - 30.0	Yes
Real Assets	400,866,825	21.0	18.0	57,620,483	10.0 - 30.0	Yes
Cash and Equivalents	13,605,149	0.7	0.0	13,605,149	0.0 - 10.0	Yes
Total	1,906,924,119	100.0	100.0			

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

Total Fund Investment Fund Fee Analysis

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

Account	Fee Schedule	Market Value As of June 30, 2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Altas Partners Holdings III	Performance Based 1.20 and 20.00	173,439	0.01	2,081	1.20
American Realty Strategic Value Fund	0.90 % of Assets	85,445,911	4.48	769,013	0.90
BlackRock Core Plus Fixed Income	0.25 % of First \$100 M 0.25 % of Next \$100 M 0.00 % Thereafter	78,020,823	4.09	195,052	0.25
Boston Partners Large Cap Value	0.45 % of First \$50 M 0.35 % of Next \$50 M 0.30 % Thereafter	74,826,283	3.92	311,892	0.42
Doubleline Core Plus	0.28 % of First \$100 M 0.25 % Thereafter	103,480,100	5.43	288,700	0.28
Invesco Commercial Mortgage Income Fund	1.00 % of First \$50 M 0.90 % Thereafter	73,513,116	3.86	711,618	0.97
IFM Global Infrastructure	0.77 % of Assets	84,128,607	4.41	647,790	0.77
KKR Mezzanine Partners I	0.38 % of Assets	2,399,604	0.13	8,999	0.38
KSL Capital Partners Fund VI	Performance Based 1.75 and 20.00	910,669	0.05	15,937	1.75
Leeward Small Cap Value	0.65 % of Assets	32,540,985	1.71	211,516	0.65
MacKay Shields Core Plus	0.30 % of Assets	101,284,312	5.31	303,853	0.30
Mellon Capital Cash Account		13,605,149	0.71	-	-
Ocean Avenue Fund III	0.85 % of Assets	20,462,093	1.07	173,928	0.85
Ocean Avenue Fund IV	1.25 % of Assets	29,430,075	1.54	367,876	1.25
Ocean Avenue Fund V	Performance Based 1.25 and 15.00	1,870,342	0.10	23,379	1.25
Pantheon Ventures	0.47 % of Assets	143,861	0.01	682	0.47
Pathway Private Equity Fund Investors 10	0.58 % of Assets	24,661,961	1.29	143,039	0.58
Pathway Private Equity Fund Investors 8	0.61 % of Assets	30,711,930	1.61	187,343	0.61
Pathway Private Equity Fund Investors 9	0.58 % of Assets	24,981,589	1.31	144,893	0.58
PGIM Emerging Markets Debt	0.44 % of Assets	53,560,921	2.81	235,668	0.44
PGIM QS US Core Equity	0.25% of 3-year excess return	74,649,940	3.91	41,057	0.06
PIMCO RAE Fundamental Global Ex US Fund	0.78 % of First \$25 M 0.43 % of Next \$75 M 0.38 % Thereafter	103,800,642	5.44	531,942	0.51
RREEF America II	0.95 % of Assets	157,050,128	8.24	1,491,976	0.95
SGA International Growth	0.45 % of Assets	94,080,216	4.93	423,361	0.45
Sixth Street DCP (fmrly TSSP DCP)	1.11 % of Assets	88,653,496	4.65	984,054	1.11
Sixth Street TAO Contingent (fmrly TSSP TAO Contingent)	1.35 % of Assets	31,812,849	1.67	429,473	1.35
Skellig Water Fund (aka KBI)	0.48 % of Assets	65,746,813	3.45	315,585	0.48
SSGA MSCI ACWI Ex US Index Fund	0.06 % of First \$50 M 0.05 % of Next \$50 M 0.04 % Thereafter	100,901,750	5.29	50,361	0.05

*The negotiated fee schedule for TCERA's investment in the ARA Strategic Value fund is 90 bps so long as assets remain above \$80,000,000. Sixth Street Partners fee schedule is as follows: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term investor designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions. TAO Contingent fee schedule is 65bps on unfunded commitments and 1.35% on remaining capital contributions. Fees shown for Pathway are estimated effective average fees over 15-year fund lifespan.

Total Fund Investment Fund Fee Analysis

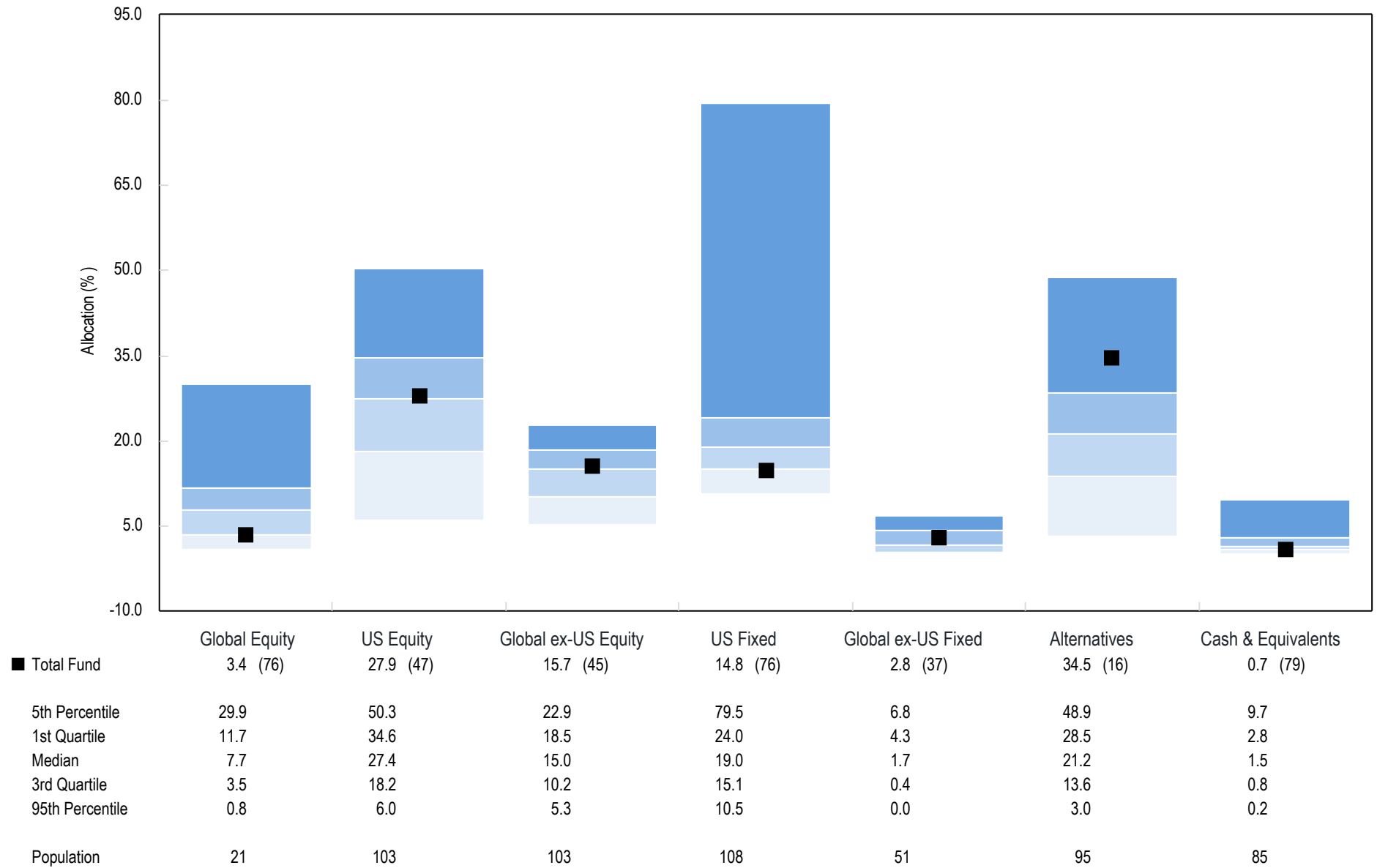
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

Account	Fee Schedule	Market Value As of June 30, 2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSGA S&P 500 Flagship Fund	0.02 % of First \$50 M 0.01 % Thereafter	177,369,809	9.30	26,558	0.01
SSGA US Extended Market Index	0.03 % of First \$50 M 0.03 % of Next \$50 M 0.02 % Thereafter	67,236,816	3.53	19,482	0.03
SSGA US REIT Index Non-Lending Fund	0.04 % of First \$50 M 0.03 % Thereafter	729,063	0.04	292	0.04
Stepstone Secondary Opportunities Fund II	Minimum Fee: \$343,750	4,082,083	0.21	343,750	8.42
William Blair Large Cap Growth	0.45 % of First \$50 M 0.32 % of Next \$50 M 0.27 % of Next \$150 M 0.27 % Thereafter	76,023,146	3.99	306,973	0.40
William Blair SMID Cap Growth	0.95 % of First \$10 M 0.80 % of Next \$20 M 0.75 % of Next \$20 M 0.70 % of Next \$50 M 0.65 % of Next \$100 M 0.60 % Thereafter	28,635,599	1.50	244,085	0.85
Investment Management Fee		1,906,924,119	100.00	9,952,209	0.52

Total Fund
Peer Universe Comparison: Asset Allocation

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

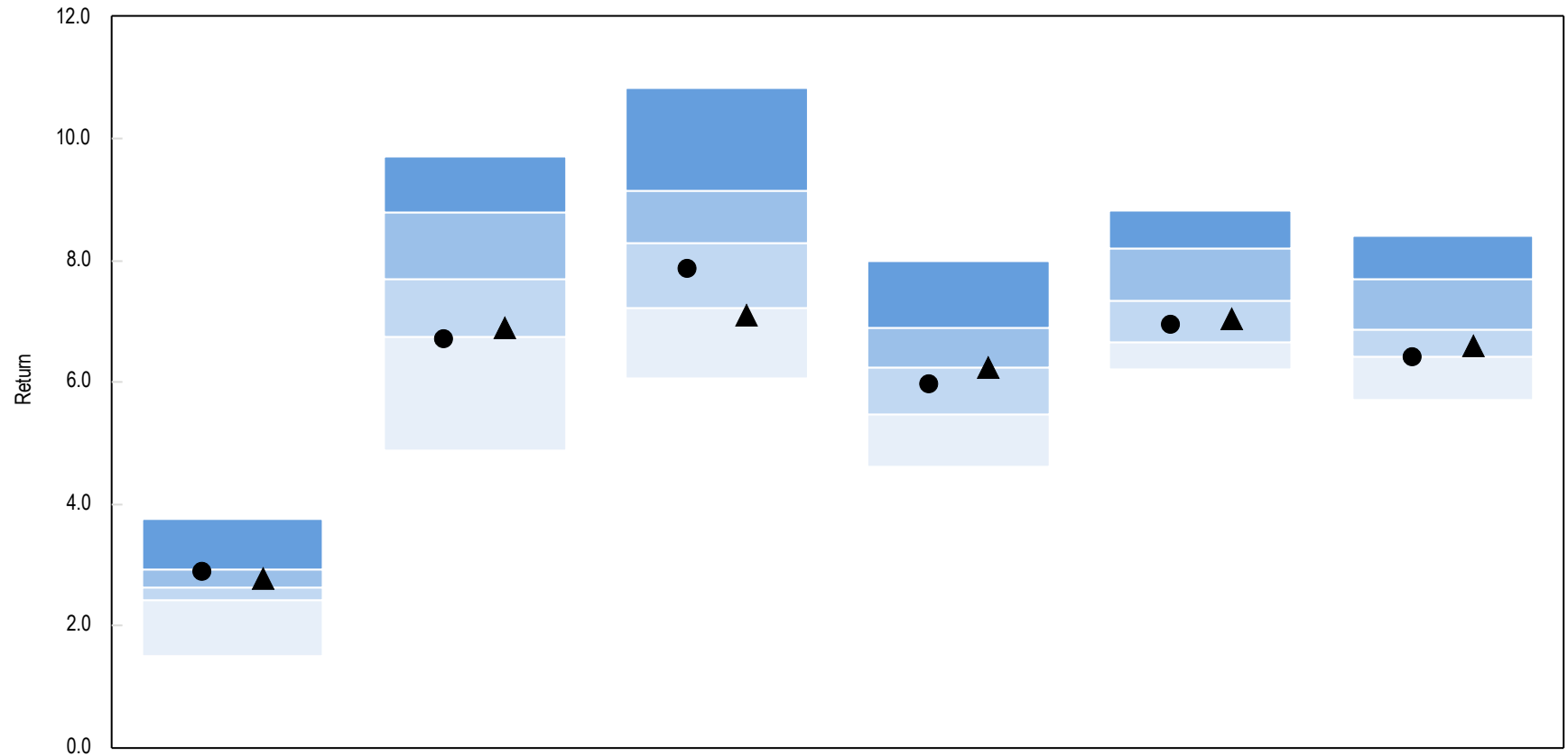
Total Plan Allocation vs. All DB Public Plans >1B
As of June 30, 2023



Total Fund
Peer Universe Comparison: Cumulative Perf (Net of Fees)

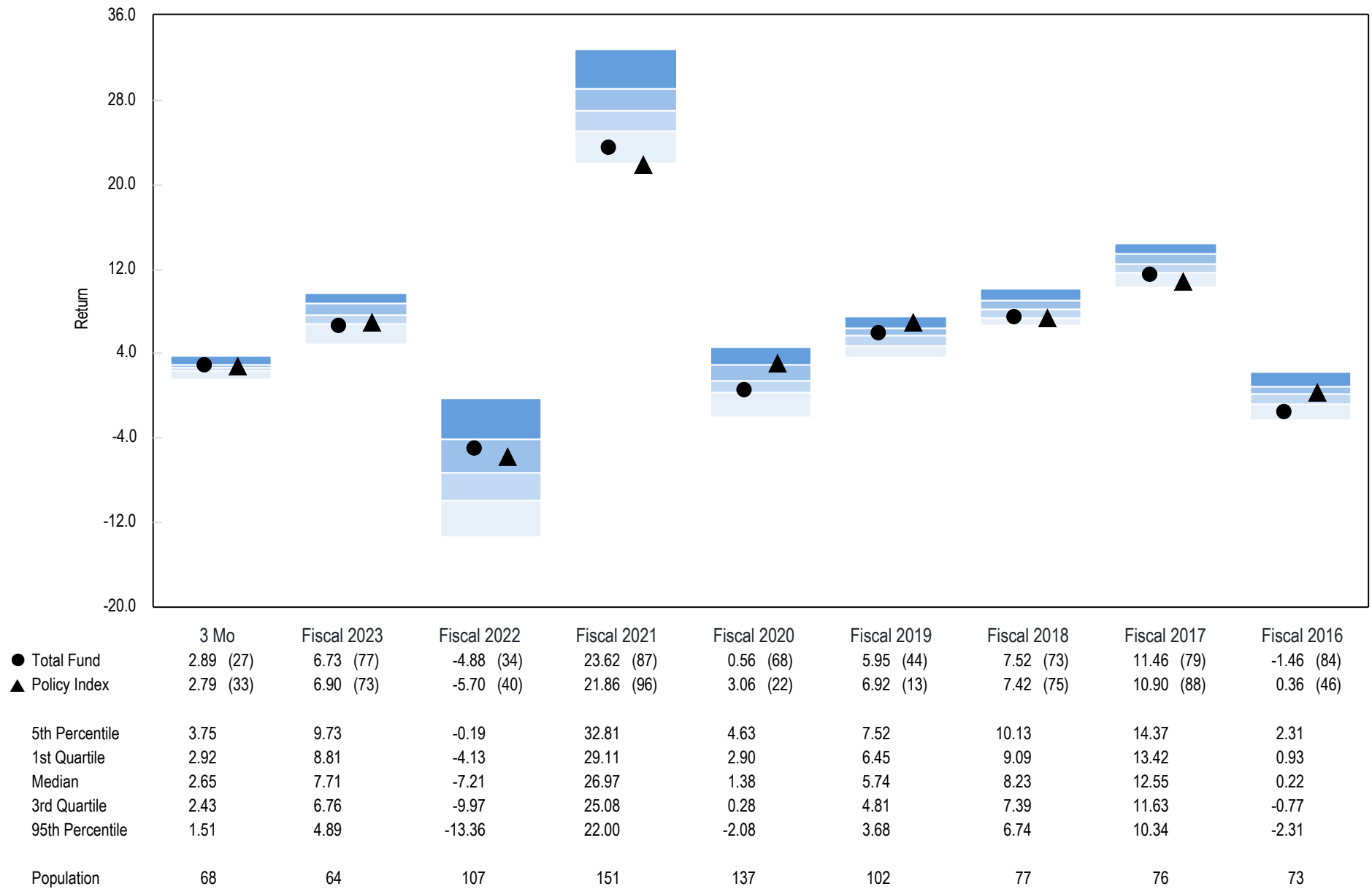
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Total Fund vs. All DB Public Plans >1B



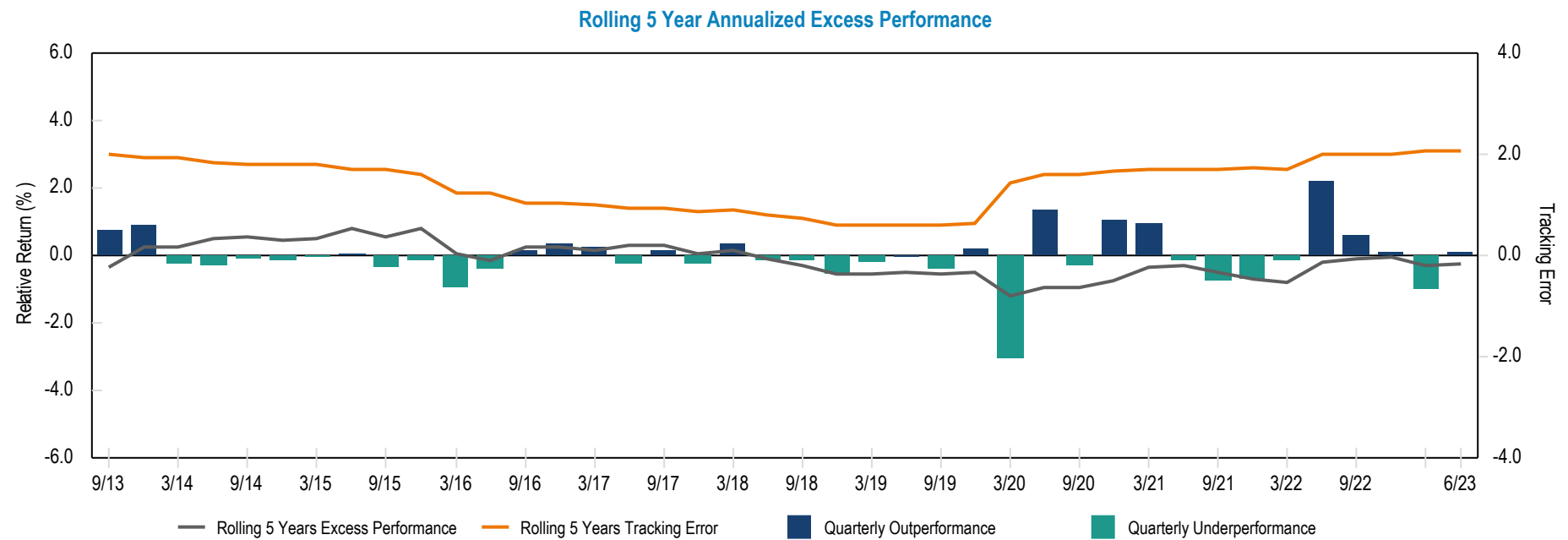
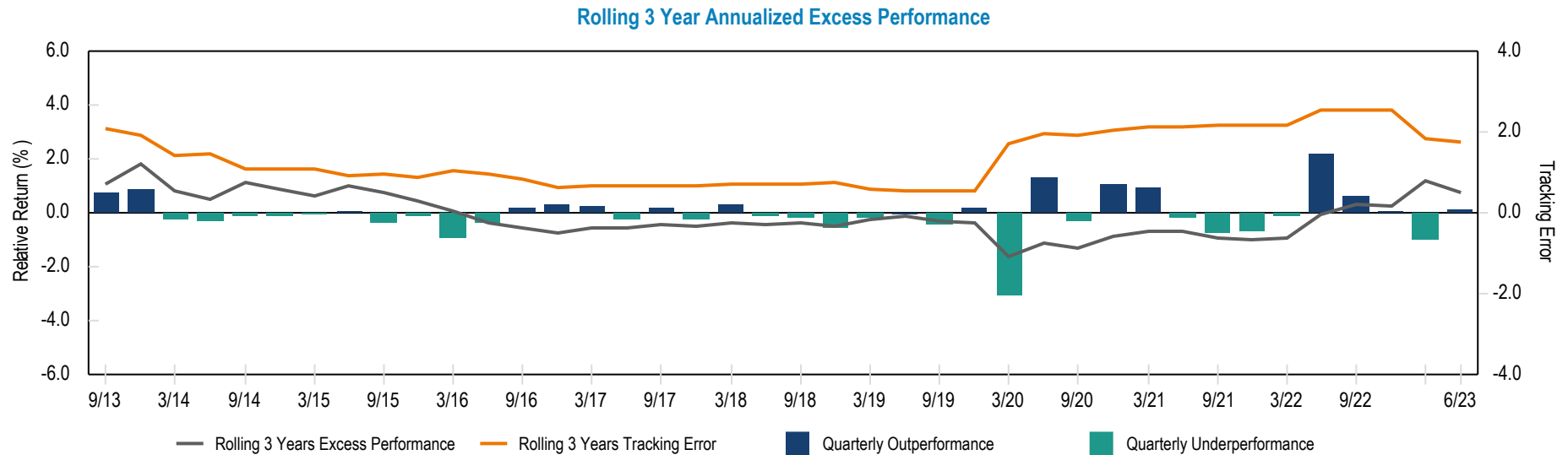
	3 Mo	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Total Fund	2.89 (27)	6.73 (77)	7.87 (62)	5.98 (65)	6.97 (63)	6.42 (76)
▲ Policy Index	2.79 (33)	6.90 (73)	7.10 (80)	6.24 (51)	7.06 (60)	6.60 (64)
5th Percentile	3.75	9.73	10.85	8.01	8.82	8.40
1st Quartile	2.92	8.81	9.15	6.89	8.19	7.69
Median	2.65	7.71	8.28	6.25	7.35	6.89
3rd Quartile	2.43	6.76	7.22	5.47	6.66	6.43
95th Percentile	1.51	4.89	6.07	4.61	6.22	5.72
Population	68	64	58	57	57	54

Total Fund vs. All DB Public Plans >1B



Total Fund
Rolling Return Analysis (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



Total Domestic Equity Asset Class Overview (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Domestic Equity	531,282,578	100.0	7.9	14.3	17.9	13.6	10.4	12.0	-18.2	26.1	18.2	29.8	-5.4
<i>Russell 3000 Index</i>			8.4	16.2	19.0	13.9	11.4	12.3	-19.2	25.7	20.9	31.0	-5.2
SSGA S&P 500 Flagship Fund	177,369,809	33.4	8.7	16.9	19.5	14.6	12.3	12.9	-18.1	28.6	18.3	31.5	-4.4
<i>S&P 500 Index</i>			8.7	16.9	19.6	14.6	12.3	12.9	-18.1	28.7	18.4	31.5	-4.4
<i>eV US Large Cap Core Equity Rank</i>			24	21	26	29	24	16	65	32	38	30	39
PGIM QS US Core Equity	74,649,940	14.1	9.6	17.4	19.1	14.8	10.8	12.4	-16.3	29.8	12.0	28.6	-6.8
<i>S&P 500 Index</i>			8.7	16.9	19.6	14.6	12.3	12.9	-18.1	28.7	18.4	31.5	-4.4
<i>eV US Large Cap Core Equity Rank</i>			14	18	29	24	54	29	49	20	71	59	71
William Blair Large Cap Growth	76,023,146	14.3	12.2	25.6	24.8	-	-	-	-	-	-	-	-
<i>Russell 1000 Growth Index</i>			12.8	29.0	27.1	-	-	-	-	-	-	-	-
<i>eV US Large Cap Growth Equity Rank</i>			42	49	45	-	-	-	-	-	-	-	-
Boston Partners Large Cap Value	74,826,283	14.1	4.6	4.2	11.5	17.1	8.9	9.7	-4.3	30.4	2.4	23.8	-9.0
<i>Russell 1000 Value Index</i>			4.1	5.1	11.5	14.3	8.1	9.2	-7.5	25.2	2.8	26.5	-8.3
<i>eV US Large Cap Value Equity Rank</i>			37	54	52	21	47	45	34	17	60	76	55

U.S. Effective Style Map
3 Years



■ SSGA S&P 500 Flagship Fund ● PGIM QS US Core Equity
▲ Boston Partners Large Cap Value

U.S. Effective Style Map
5 Years



■ SSGA S&P 500 Flagship Fund ● PGIM QS US Core Equity
▲ Boston Partners Large Cap Value

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

Total Domestic Equity

Asset Class Overview (Net of Fees)

Tulare County Employees' Retirement Association

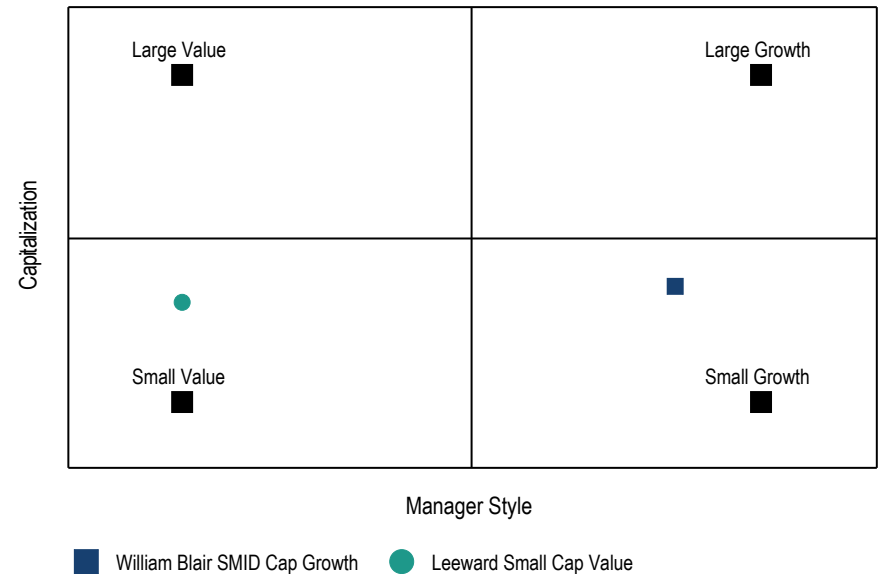
Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
SSGA US Extended Market Index	67,236,816	12.7	6.4	12.6	15.1	-	-	-	-26.4	-	-	-	-
Dow Jones U.S. Completion Total Stock Market Indx			6.4	12.6	15.0	-	-	-	-26.5	-	-	-	-
eV US Small-Mid Cap Equity Rank			21	28	49	-	-	-	80	-	-	-	-
William Blair SMID Cap Growth	28,635,599	5.4	6.1	11.9	20.8	7.3	7.6	11.7	-22.7	8.7	32.6	31.1	-1.7
Russell 2500 Growth Index			6.4	13.4	18.6	6.6	7.0	10.4	-26.2	5.0	40.5	32.7	-7.5
eV US Small-Mid Cap Growth Equity Rank			33	61	23	52	57	26	19	75	63	48	36
Leeward Small Cap Value	32,540,985	6.1	2.6	3.0	11.0	18.6	6.3	8.6	-7.1	31.6	3.8	26.3	-15.5
Russell 2000 Value Index			3.2	2.5	6.0	15.4	3.5	7.3	-14.5	28.3	4.6	22.4	-12.9
eV US Small Cap Value Equity Rank			69	77	51	34	33	39	18	38	56	24	58

U.S. Effective Style Map
3 Years



U.S. Effective Style Map
5 Years



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

Total Domestic Equity
Common Holdings Matrix

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	SSGA S&P 500 Flagship Fund		PGIM QS US Core Equity		William Blair Large Cap Growth		Boston Partners Large Cap Value		SSGA US Extended Market Index	
	#	%	#	%	#	%	#	%	#	%
SSGA S&P 500 Flagship Fund	0	0	157	93	54	94	69	83	0	0
PGIM QS US Core Equity	157	70	0	0	32	69	32	47	39	6
William Blair Large Cap Growth	54	39	32	41	0	0	8	13	6	2
Boston Partners Large Cap Value	69	17	32	17	8	18	0	0	8	1
SSGA US Extended Market Index	0	0	39	7	6	6	8	6	0	0
William Blair SMID Cap Growth	10	0	5	1	6	4	1	0	60	6
Lee Munder Small Value	0	0	1	0	0	0	0	0	87	5
William Blair Large Cap Growth	54	39	32	41	0	0	8	13	6	2

Total Domestic Equity Correlation Matrix

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Correlation Matrix 1 Year Ending June 30, 2023

	SSGA S&P 500 Flagship Fund	PGIM QS US Core Equity	William Blair Large Cap Growth	Boston Partners Large Cap Value	SSGA US Extended Market Index	William Blair SMID Cap Growth	Leeward Small Value	S&P 500 Index	William Blair Large Cap Growth
SSGA S&P 500 Flagship Fund	1.00								
PGIM QS US Core Equity	1.00	1.00							
William Blair Large Cap Growth	0.94	0.93	1.00						
Boston Partners Large Cap Value	0.91	0.92	0.74	1.00					
SSGA US Extended Market Index	0.91	0.92	0.81	0.91	1.00				
William Blair SMID Cap Growth	0.92	0.93	0.84	0.92	0.98	1.00			
Leeward Small Value	0.85	0.86	0.67	0.96	0.93	0.93	1.00		
S&P 500 Index	1.00	1.00	0.95	0.91	0.91	0.92	0.85	1.00	
William Blair Large Cap Growth	0.94	0.93	1.00	0.74	0.81	0.84	0.67	0.95	1.00

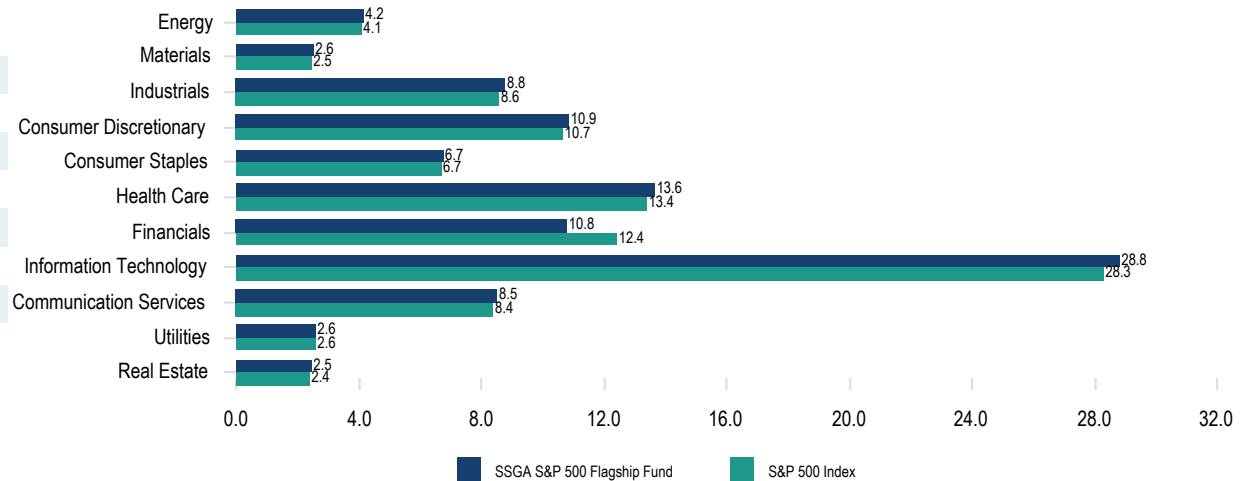
SSGA S&P 500 Flagship Fund Manager Portfolio Overview

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Characteristics

	Portfolio	Benchmark
Number of Stocks	503	503
Wtd. Avg. Mkt. Cap \$B	672.4	674.1
Median Mkt. Cap \$B	30.6	31.0
Price/Earnings ratio	23.30	23.62
Price/Book ratio	4.69	4.53
Return on Equity (%)	4.61	4.94
Current Yield (%)	1.59	1.57
Beta (5 Years, Monthly)	1.00	1.00
R-Squared (5 Years, Monthly)	1.00	1.00

Sector Allocation (%)



Largest Equity Holdings

	Wgt (%)	Return (%)
Apple Inc	7.85	17.79
Microsoft Corp	6.93	18.38
Amazon.com Inc	3.18	26.21
NVIDIA Corporation	2.86	52.31
Alphabet Inc	1.94	15.40
Tesla Inc	1.92	26.18
Meta Platforms Inc	1.73	35.41
Alphabet Inc	1.69	16.32
Unitedhealth Group Inc	1.22	1.70
Exxon Mobil Corp	1.19	-1.35

Top Contributors

	Wgt (%)	Return (%)	Contr (%)
Apple Inc	7.26	17.79	1.29
Microsoft Corp	6.35	18.38	1.17
NVIDIA Corporation	2.02	52.31	1.06
Amazon.com Inc	2.72	26.21	0.71
Meta Platforms Inc	1.40	35.41	0.50
Tesla Inc	1.65	26.18	0.43
Eli Lilly and Co	0.80	36.92	0.30
Broadcom Inc	0.80	35.94	0.29
Alphabet Inc	1.83	15.40	0.28
Alphabet Inc	1.60	16.32	0.26

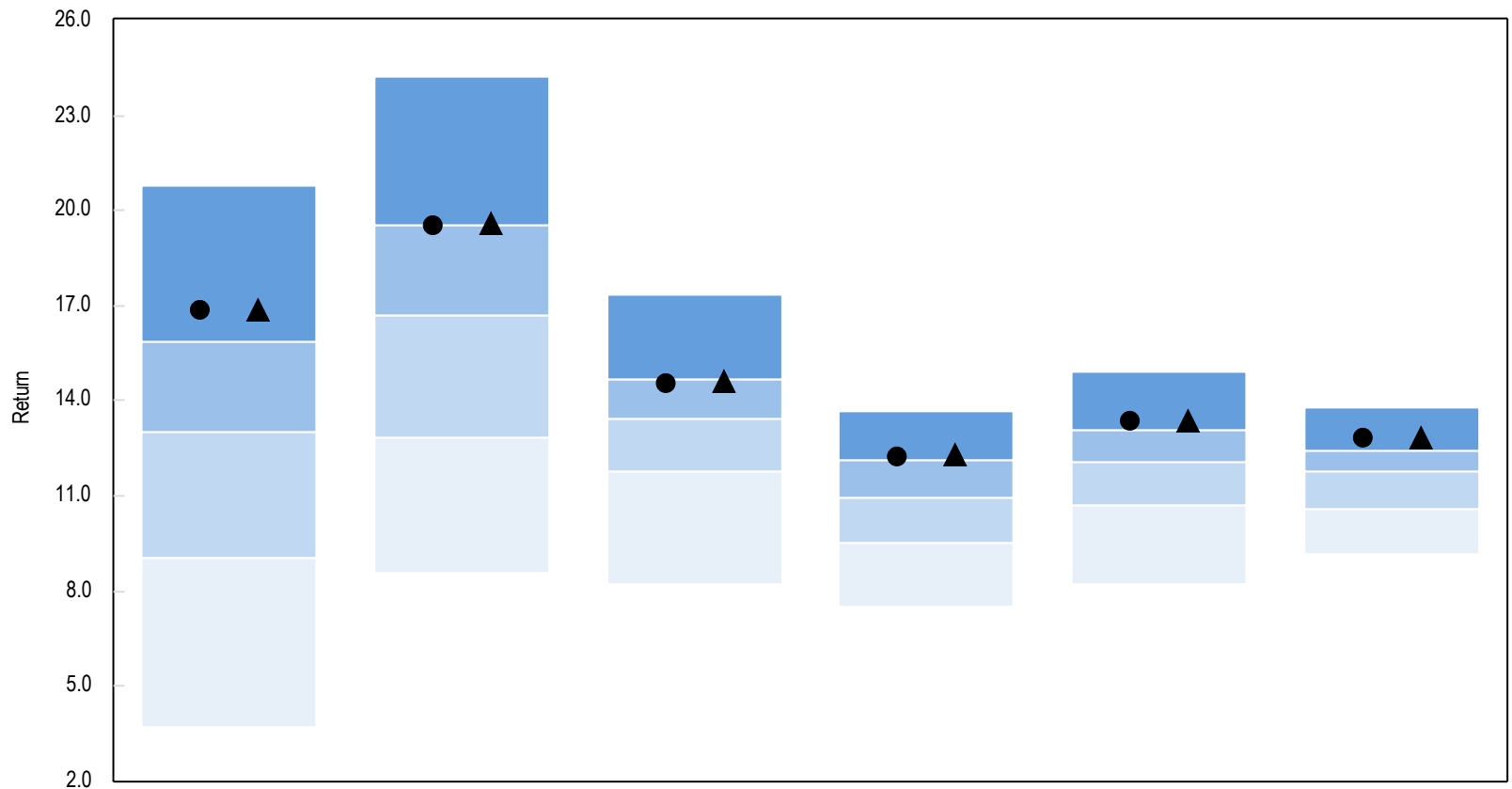
Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
AbbVie Inc	0.83	-14.69	-0.12
AT&T Inc	0.40	-15.97	-0.06
Thermo Fisher Scientific Inc	0.67	-9.42	-0.06
Pfizer Inc	0.68	-9.12	-0.06
Walt Disney Co (The)	0.54	-10.84	-0.06
Target Corp	0.23	-19.82	-0.05
Nike Inc	0.46	-9.72	-0.04
Estee Lauder Cos Inc (The)	0.17	-20.05	-0.03
Regeneron Pharmaceuticals Inc	0.26	-12.55	-0.03
Moderna Inc	0.15	-20.89	-0.03

SSGA S&P 500 Flagship Fund
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SSGA S&P 500 Flagship Fund vs. eV US Large Cap Core Equity

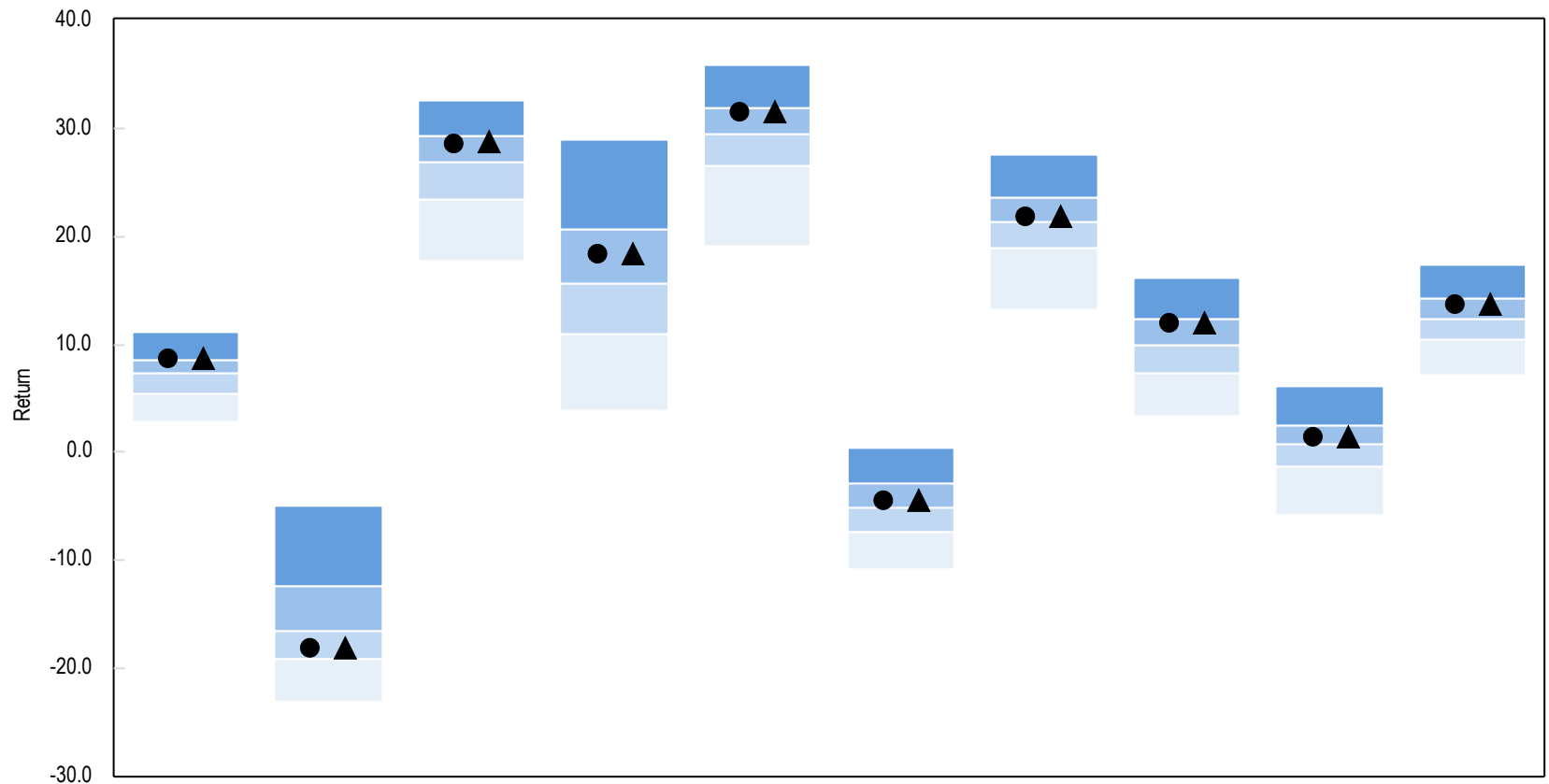


● SSGA S&P 500 Flagship Fund	YTD	16.85 (21)	1 Yr	19.54 (26)	3 Yrs	14.55 (29)	5 Yrs	12.27 (24)	7 Yrs	13.36 (21)	10 Yrs	12.85 (16)
▲ S&P 500 Index		16.89 (21)		19.59 (25)		14.60 (28)		12.31 (22)		13.38 (20)		12.86 (16)
5th Percentile		20.80		24.25		17.35		13.68		14.92		13.80
1st Quartile		15.84		19.56		14.71		12.11		13.09		12.46
Median		13.04		16.73		13.42		10.94		12.10		11.75
3rd Quartile		9.04		12.85		11.79		9.50		10.73		10.59
95th Percentile		3.69		8.60		8.25		7.51		8.22		9.17
Population		322		320		311		294		269		232

SSGA S&P 500 Flagship Fund
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SSGA S&P 500 Flagship Fund vs. eV US Large Cap Core Equity



	3 Mo	2022	2021	2020	2019	2018	2017	2016	2015	2014
● SSGA S&P 500 Flagship Fund	8.74 (24)	-18.13 (65)	28.63 (32)	18.34 (38)	31.46 (30)	-4.39 (39)	21.84 (44)	12.00 (29)	1.43 (41)	13.69 (31)
▲ S&P 500 Index	8.74 (23)	-18.11 (65)	28.71 (31)	18.40 (37)	31.49 (30)	-4.38 (39)	21.83 (44)	11.96 (29)	1.38 (41)	13.69 (31)
5th Percentile	11.05	-4.92	32.60	29.02	35.88	0.49	27.58	16.18	6.15	17.34
1st Quartile	8.55	-12.31	29.23	20.57	31.89	-2.87	23.58	12.36	2.57	14.23
Median	7.31	-16.48	26.94	15.55	29.45	-5.18	21.41	9.89	0.71	12.27
3rd Quartile	5.39	-19.15	23.49	10.93	26.59	-7.37	18.96	7.41	-1.36	10.52
95th Percentile	2.84	-23.17	17.76	3.82	19.11	-10.90	13.22	3.36	-5.72	7.09
Population	322	348	362	379	386	390	393	392	395	395

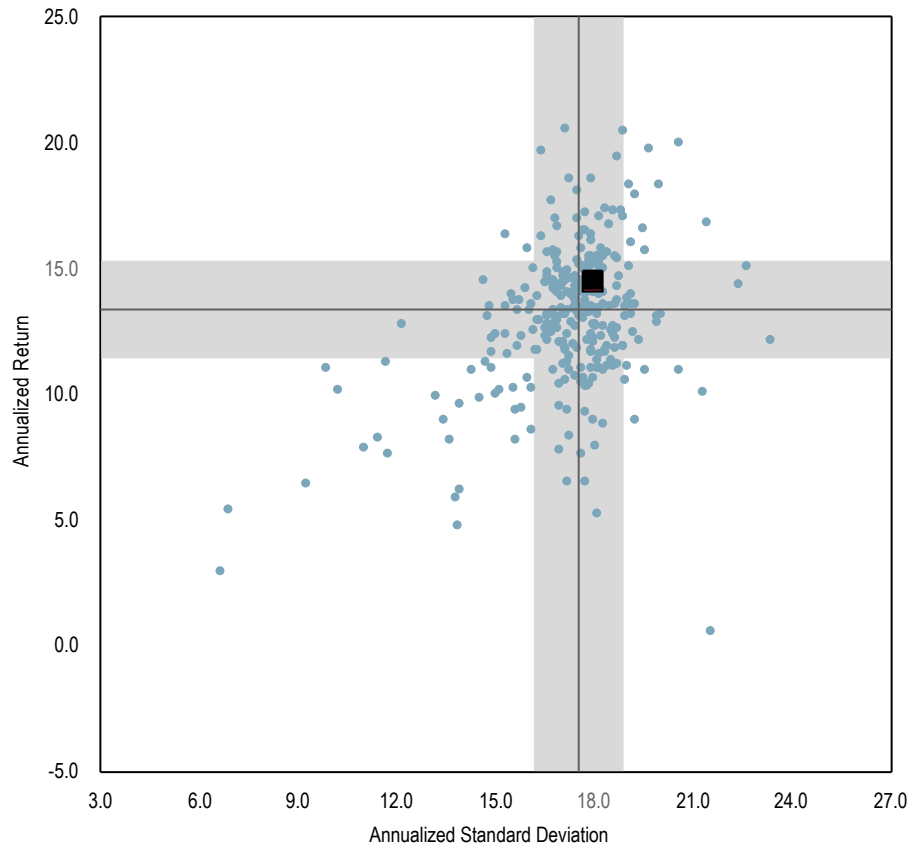
SSGA S&P 500 Flagship Fund

Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association

Period Ending: June 30, 2023

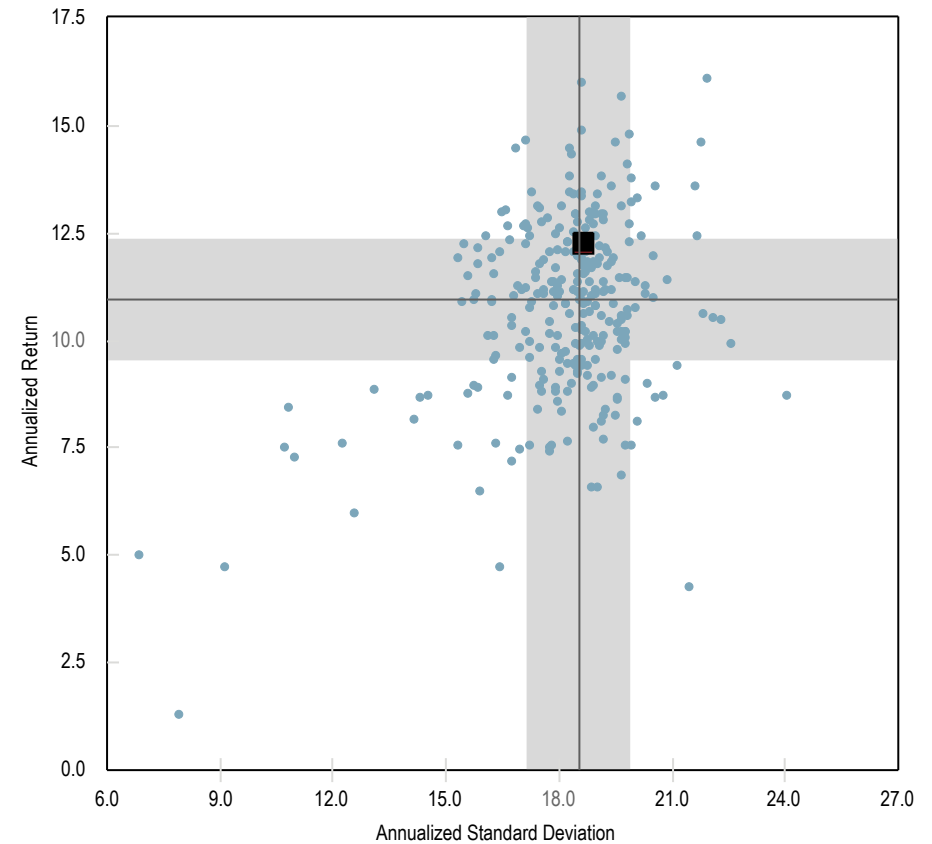
3 Years



3 Years

	Return	Standard Deviation	Sharpe Ratio
SSGA S&P 500 Flagship Fund	14.55	17.93	0.78
S&P 500 Index	14.60	17.93	0.78

5 Years



5 Years

	Return	Standard Deviation	Sharpe Ratio
SSGA S&P 500 Flagship Fund	12.27	18.64	0.63
S&P 500 Index	12.31	18.64	0.64

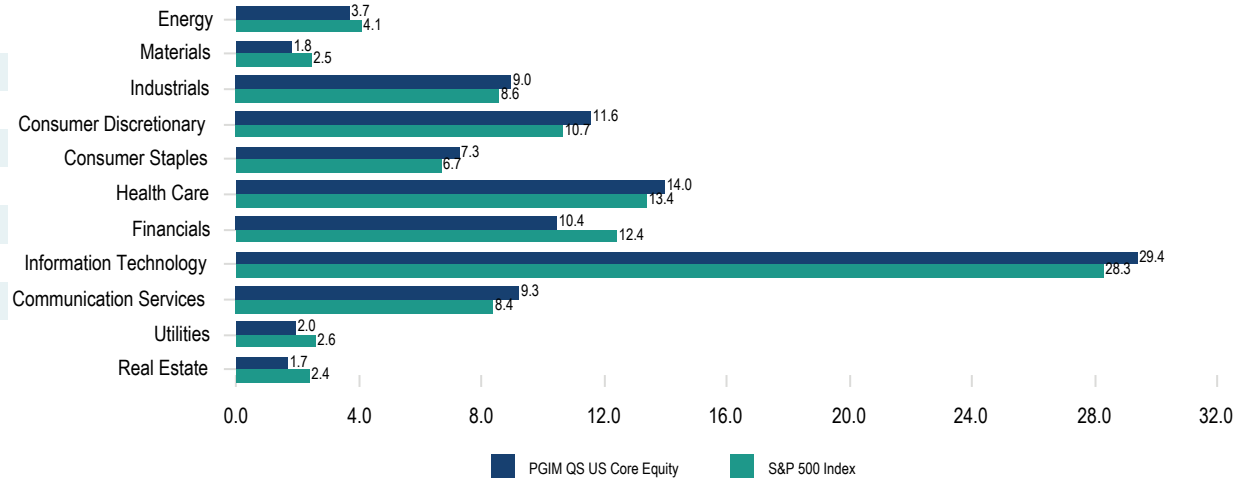
PGIM QS US Core Equity Manager Portfolio Overview

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Characteristics

	Portfolio	Benchmark
Number of Stocks	199	503
Wtd. Avg. Mkt. Cap \$B	696.3	674.1
Median Mkt. Cap \$B	51.3	31.0
Price/Earnings ratio	20.94	23.62
Price/Book ratio	4.76	4.53
Return on Equity (%)	-24.49	4.94
Current Yield (%)	1.55	1.57
Beta (5 Years, Monthly)	1.02	1.00
R-Squared (5 Years, Monthly)	0.99	1.00

Sector Allocation (%)



Largest Equity Holdings

	Wgt (%)	Return (%)
Apple Inc	8.28	17.79
Microsoft Corp	7.36	18.38
NVIDIA Corporation	3.58	52.31
Amazon.com Inc	2.68	26.21
Meta Platforms Inc	2.35	35.41
Alphabet Inc	1.92	15.40
Alphabet Inc	1.84	16.32
Tesla Inc	1.74	26.18
Johnson & Johnson	1.49	7.60
Visa Inc	1.49	5.54

Top Contributors

	Wgt (%)	Return (%)	Contr (%)
NVIDIA Corporation	2.63	52.31	1.38
Apple Inc	6.77	17.79	1.21
Microsoft Corp	6.27	18.38	1.15
Meta Platforms Inc	2.00	35.41	0.71
Amazon.com Inc	2.12	26.21	0.56
Tesla Inc	1.91	26.18	0.50
Broadcom Inc	1.27	35.94	0.46
Adobe Inc	1.08	26.89	0.29
Alphabet Inc	1.76	16.32	0.29
Alphabet Inc	1.82	15.40	0.28

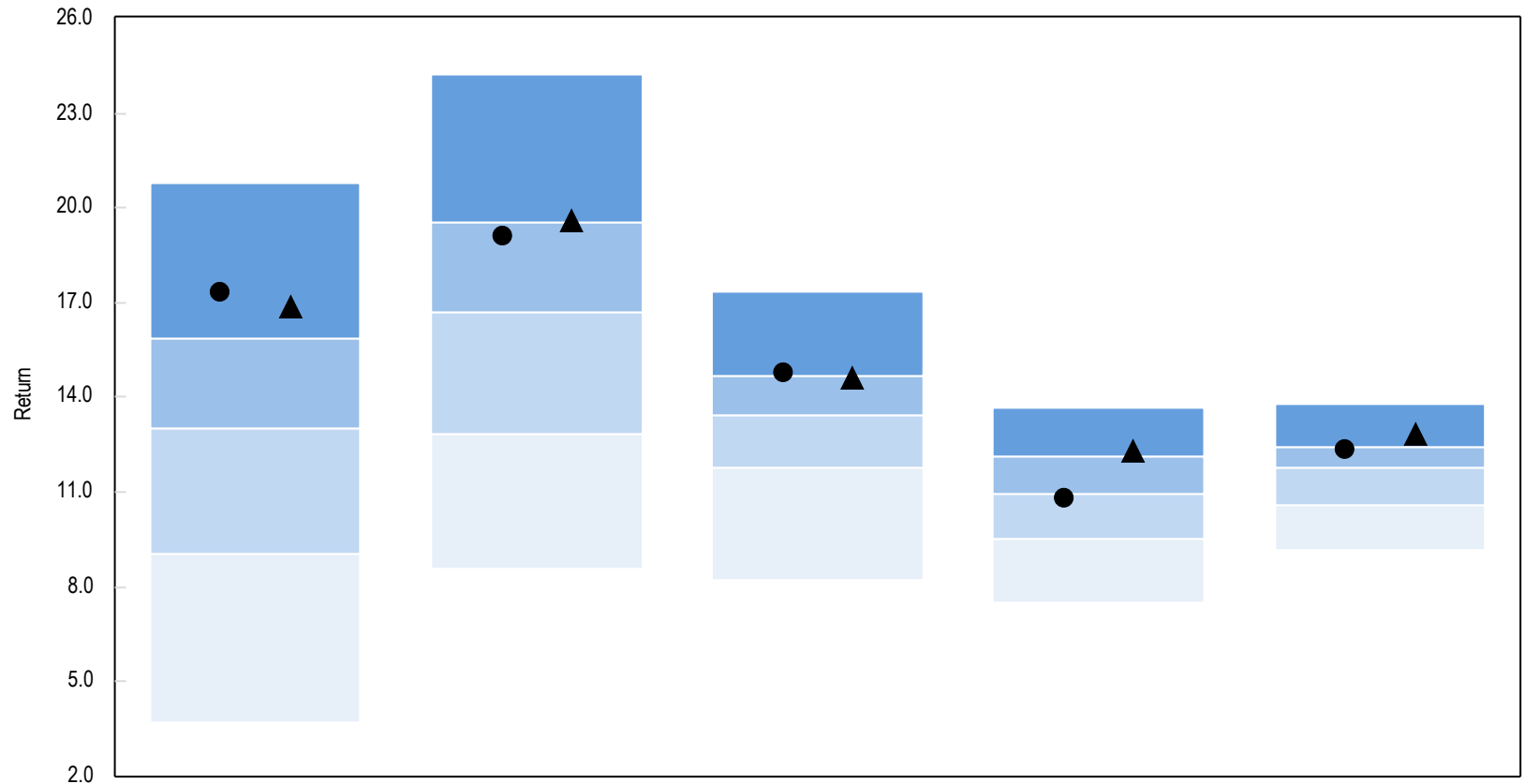
Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Valero Energy Corp	0.75	-15.21	-0.11
AT&T Inc	0.61	-15.97	-0.10
AbbVie Inc	0.64	-14.69	-0.09
PayPal Holdings Inc	0.76	-12.13	-0.09
Marathon Petroleum Corp	0.68	-12.91	-0.09
Ulta Beauty Inc	0.62	-13.76	-0.08
Pfizer Inc	0.92	-9.12	-0.08
MarketAxess Holdings Inc	0.24	-33.03	-0.08
Thermo Fisher Scientific Inc	0.82	-9.42	-0.08
Hudson Pacific Properties Inc	0.22	-34.91	-0.08

PGIM QS US Core Equity
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

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

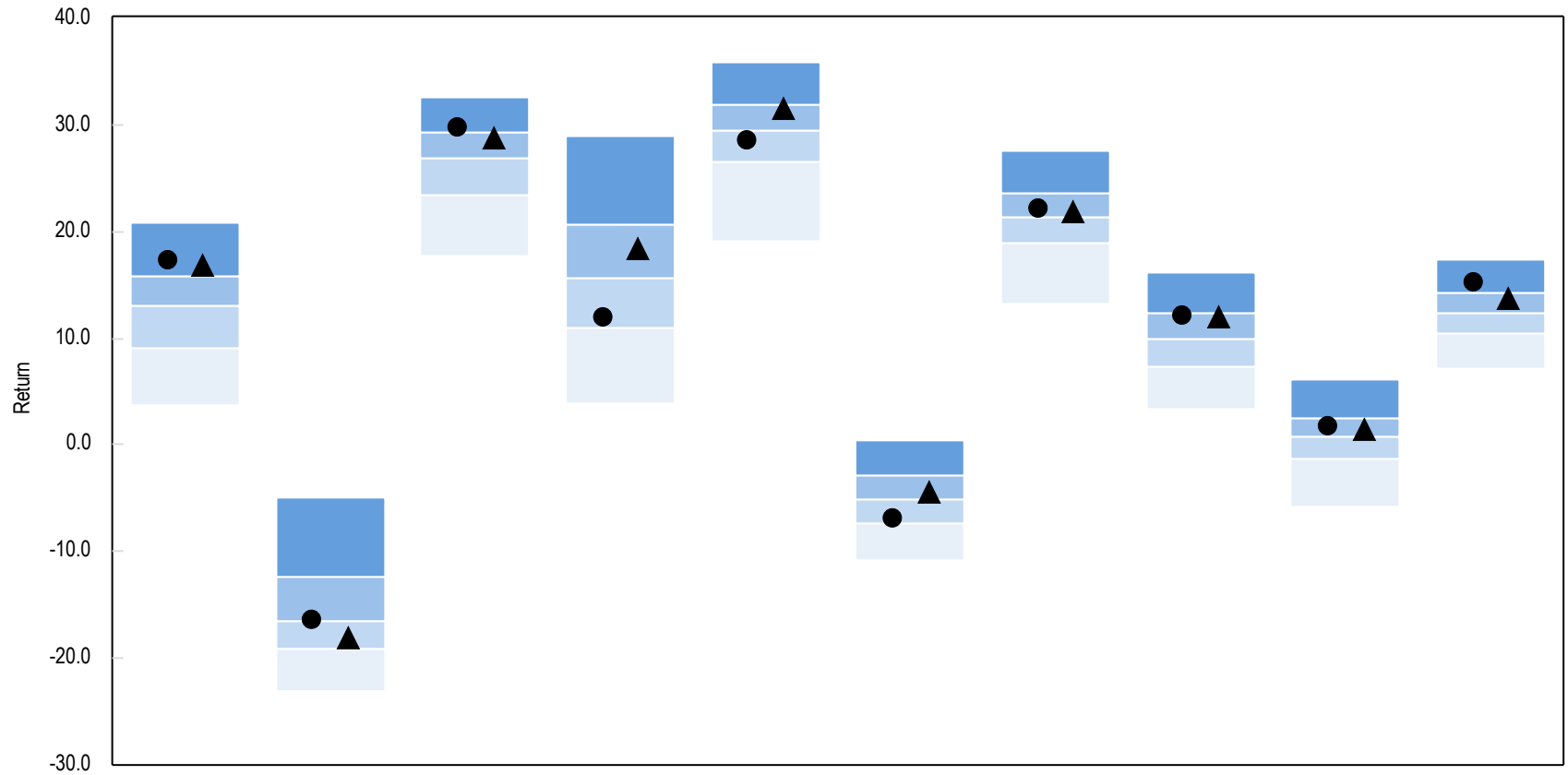


	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
● PGIM QS US Core Equity	17.36 (18)	19.12 (29)	14.79 (24)	10.84 (54)	12.37 (29)
▲ S&P 500 Index	16.89 (21)	19.59 (25)	14.60 (28)	12.31 (22)	12.86 (16)
5th Percentile	20.80	24.25	17.35	13.68	13.80
1st Quartile	15.84	19.56	14.71	12.11	12.46
Median	13.04	16.73	13.42	10.94	11.75
3rd Quartile	9.04	12.85	11.79	9.50	10.59
95th Percentile	3.69	8.60	8.25	7.51	9.17
Population	322	320	311	294	232

PGIM QS US Core Equity
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

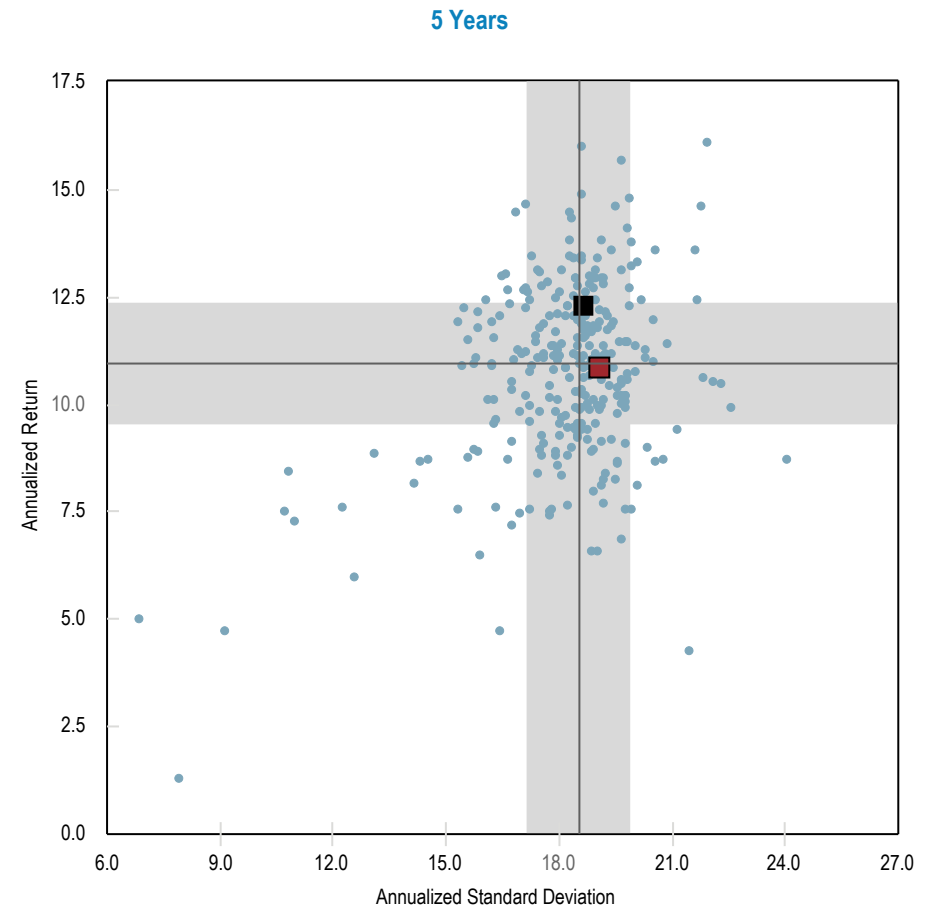
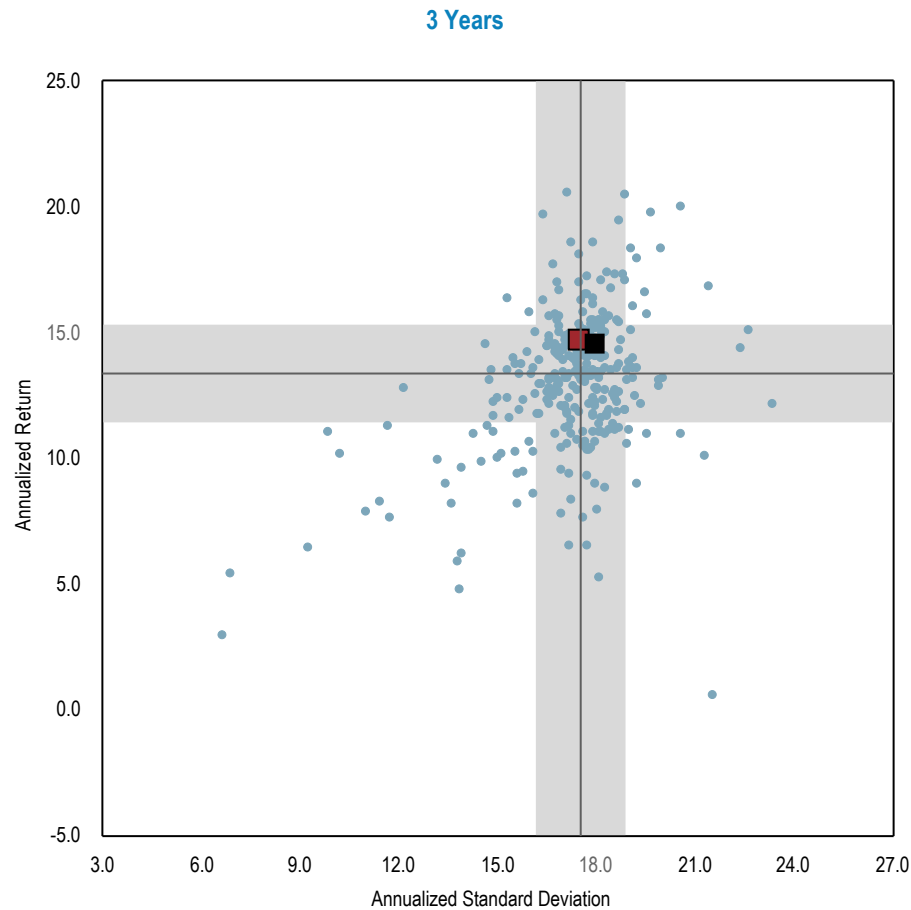
PGIM QS US Core Equity vs. eV US Large Cap Core Equity



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● PGIM QS US Core Equity	17.36 (18)	-16.30 (49)	29.78 (20)	11.96 (71)	28.55 (59)	-6.79 (71)	22.12 (40)	12.12 (27)	1.78 (34)	15.25 (15)
▲ S&P 500 Index	16.89 (21)	-18.11 (65)	28.71 (31)	18.40 (37)	31.49 (30)	-4.38 (39)	21.83 (44)	11.96 (29)	1.38 (41)	13.69 (31)
5th Percentile	20.80	-4.92	32.60	29.02	35.88	0.49	27.58	16.18	6.15	17.34
1st Quartile	15.84	-12.31	29.23	20.57	31.89	-2.87	23.58	12.36	2.57	14.23
Median	13.04	-16.48	26.94	15.55	29.45	-5.18	21.41	9.89	0.71	12.27
3rd Quartile	9.04	-19.15	23.49	10.93	26.59	-7.37	18.96	7.41	-1.36	10.52
95th Percentile	3.69	-23.17	17.76	3.82	19.11	-10.90	13.22	3.36	-5.72	7.09
Population	322	348	362	379	386	390	393	392	395	395

PGIM QS US Core Equity
Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



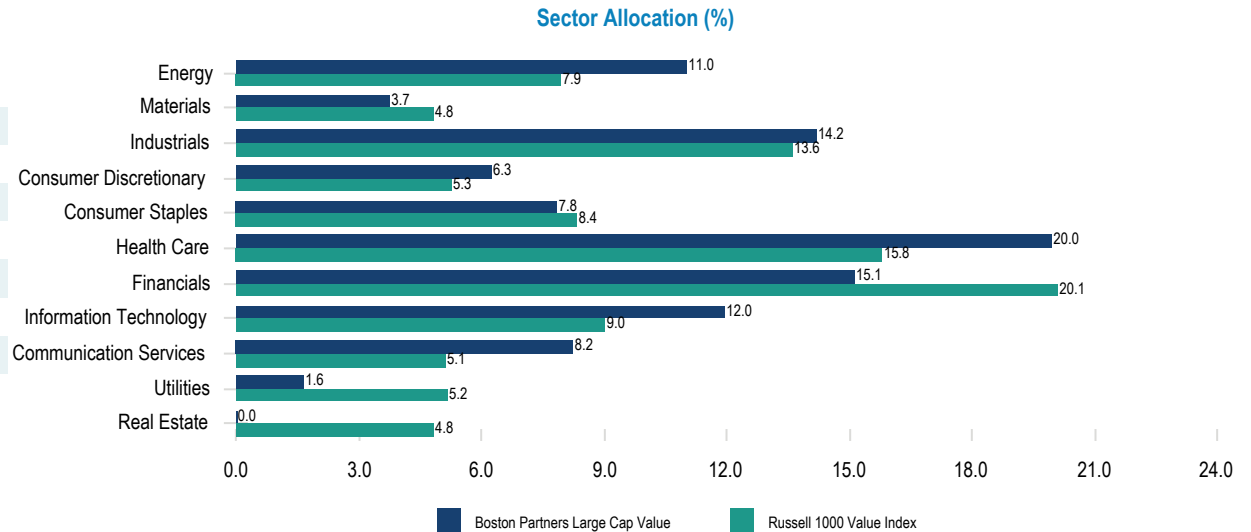
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ PGIM QS US Core Equity	14.79	17.42	0.81
■ S&P 500 Index	14.60	17.93	0.78

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ PGIM QS US Core Equity	10.84	19.08	0.56
■ S&P 500 Index	12.31	18.64	0.64

Boston Partners Large Cap Value Manager Portfolio Overview

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Characteristics		
	Portfolio	Benchmark
Number of Stocks	89	844
Wtd. Avg. Mkt. Cap \$B	153.7	138.0
Median Mkt. Cap \$B	45.3	11.6
Price/Earnings ratio	15.86	16.18
Price/Book ratio	2.71	2.53
Return on Equity (%)	-4.27	-20.92
Current Yield (%)	1.92	2.38
Beta (5 Years, Monthly)	1.03	1.00
R-Squared (5 Years, Monthly)	0.98	1.00



Largest Equity Holdings		
	Wgt (%)	Return (%)
JPMorgan Chase & Co	3.99	12.49
Alphabet Inc	3.27	15.40
Bristol-Myers Squibb Co	3.04	-6.99
Johnson & Johnson	2.91	7.60
Cisco Systems Inc	2.65	-0.28
Wells Fargo & Co	2.32	15.11
Activision Blizzard Inc	2.14	-1.51
Sanofi	2.03	2.78
AutoZone Inc	1.98	1.43
Walmart Inc	1.85	7.00

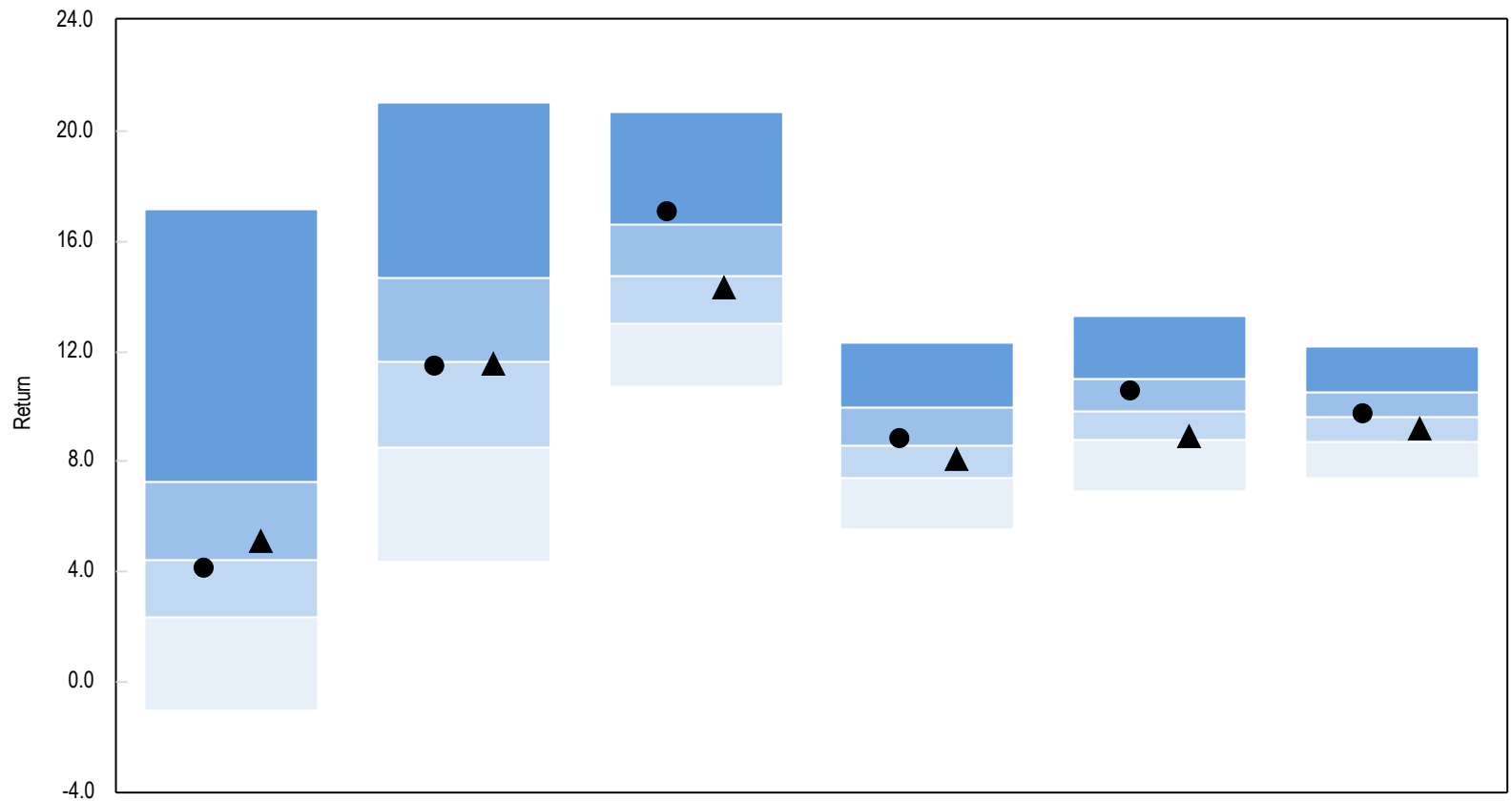
Top Contributors			
	Wgt (%)	Return (%)	Contr (%)
Alphabet Inc	3.47	15.40	0.53
JPMorgan Chase & Co	3.77	12.49	0.47
Wells Fargo & Co	2.15	15.11	0.32
AMERISOURCEBERGEN CORP	1.31	20.53	0.27
Applied Materials Inc	1.39	17.98	0.25
Johnson & Johnson	3.23	7.60	0.25
United Rentals Inc.	1.73	13.02	0.23
US Foods Holding Corp	1.12	19.11	0.21
Howmet Aerospace Inc	1.25	17.08	0.21
FleetCor Technologies Inc	1.08	19.08	0.21

Bottom Contributors			
	Wgt (%)	Return (%)	Contr (%)
Marathon Petroleum Corp	2.28	-12.91	-0.29
Bristol-Myers Squibb Co	3.36	-6.99	-0.23
Keurig Dr Pepper Inc	2.18	-10.79	-0.23
AbbVie Inc	0.76	-14.69	-0.11
CVS Health Corp	1.60	-6.20	-0.10
QUALCOMM Inc.	1.63	-6.04	-0.10
Peabody Energy Corp	0.54	-15.12	-0.08
General Dynamics Corp	1.35	-5.18	-0.07
BP PLC	1.06	-5.96	-0.06
Amgen Inc	0.85	-7.29	-0.06

Boston Partners Large Cap Value
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

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

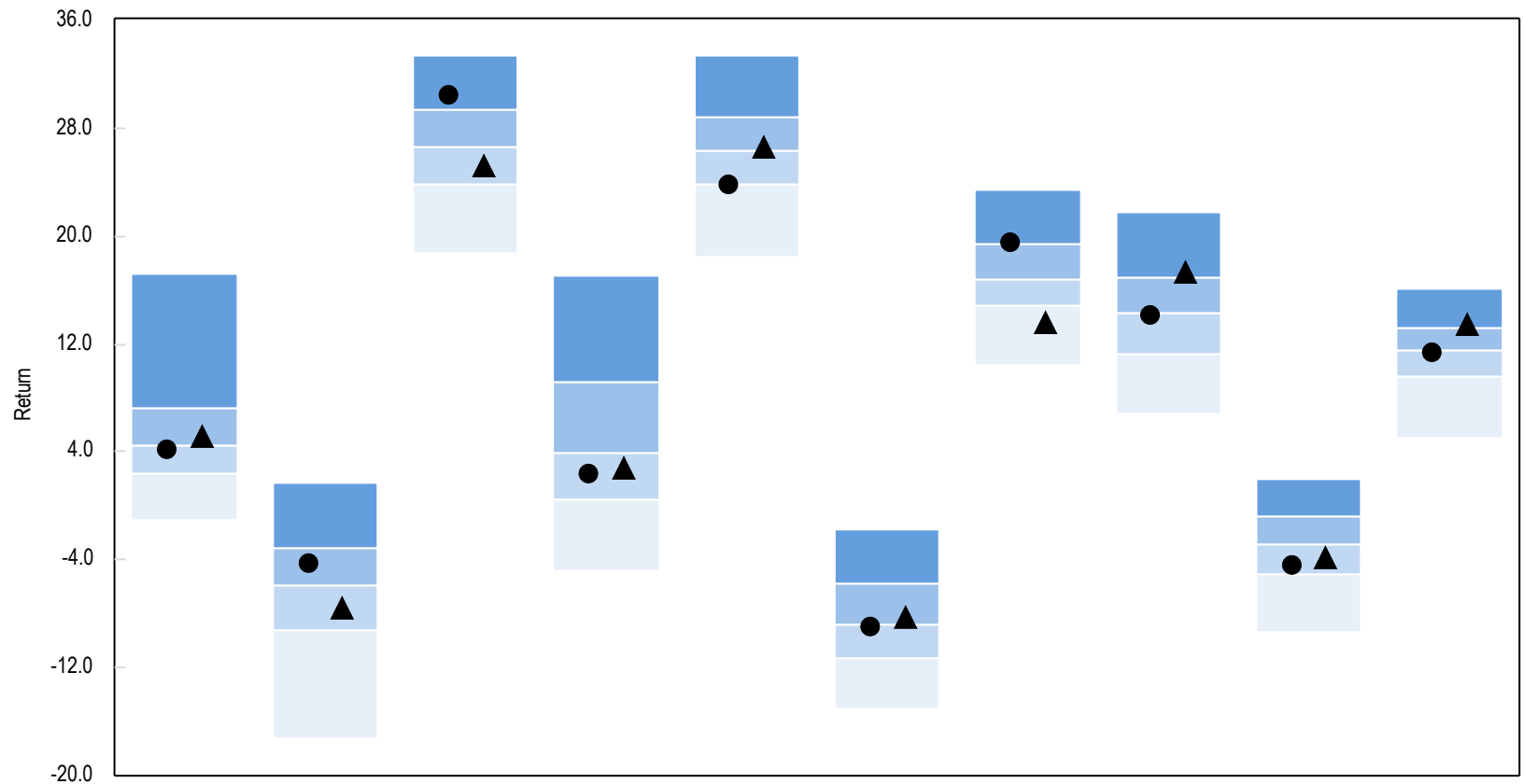


● Boston Partners Large Cap Value	YTD	4.18 (54)	1 Yr	11.47 (52)	3 Yrs	17.06 (21)	5 Yrs	8.86 (47)	7 Yrs	10.61 (32)	10 Yrs	9.74 (45)
▲ Russell 1000 Value Index		5.12 (45)		11.54 (51)		14.30 (59)		8.11 (63)		8.94 (72)		9.22 (62)
5th Percentile		17.16		21.02		20.66		12.35		13.31		12.14
1st Quartile		7.30		14.69		16.63		9.97		10.99		10.51
Median		4.46		11.60		14.72		8.55		9.82		9.59
3rd Quartile		2.35		8.52		13.02		7.41		8.81		8.74
95th Percentile		-1.04		4.36		10.70		5.51		6.91		7.39
Population		372		372		358		350		332		313

Boston Partners Large Cap Value
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

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



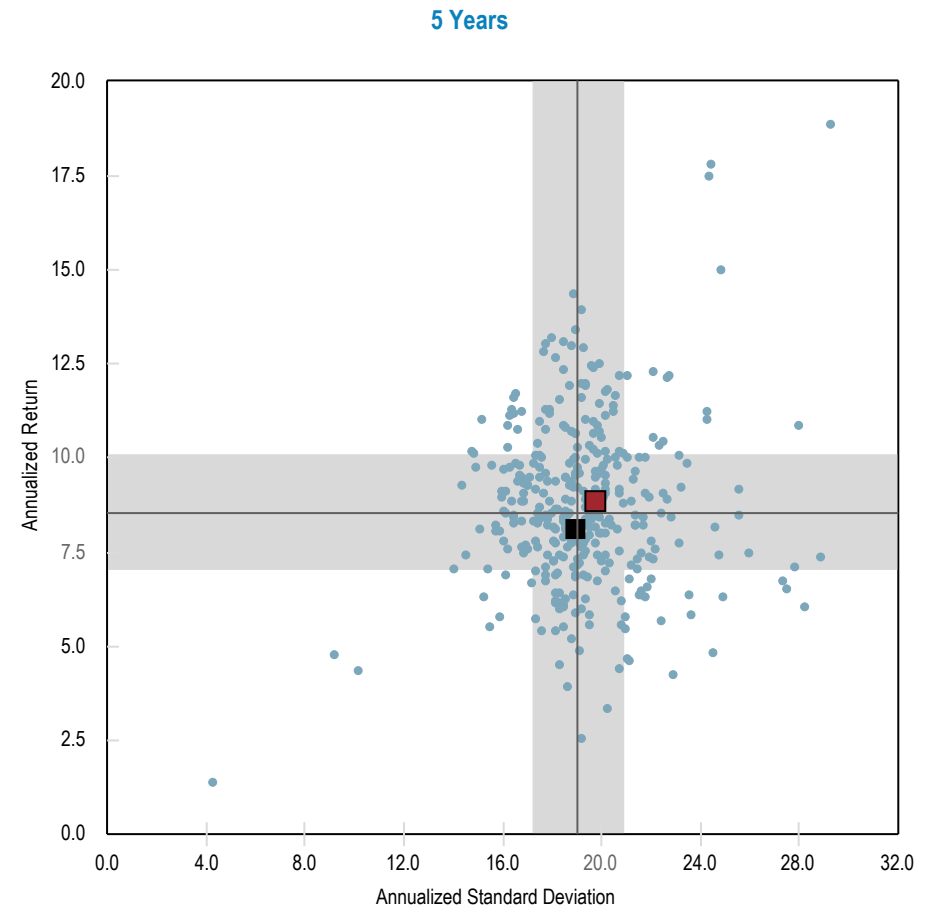
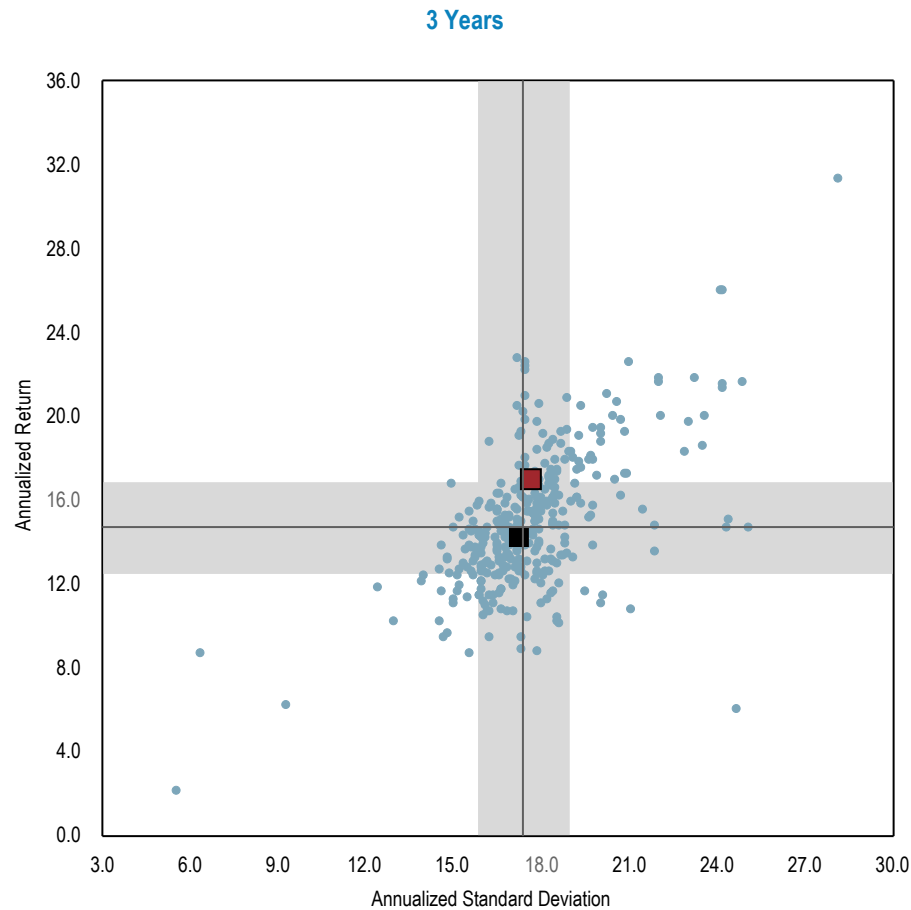
	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● Boston Partners Large Cap Value	4.18 (54)	-4.26 (34)	30.43 (17)	2.38 (60)	23.81 (76)	-9.00 (55)	19.58 (25)	14.19 (51)	-4.38 (70)	11.33 (52)
▲ Russell 1000 Value Index	5.12 (45)	-7.54 (65)	25.16 (66)	2.80 (58)	26.54 (48)	-8.27 (45)	13.66 (85)	17.34 (21)	-3.83 (65)	13.45 (23)
5th Percentile	17.16	1.71	33.40	17.13	33.38	-1.80	23.39	21.74	1.96	16.13
1st Quartile	7.30	-3.06	29.30	9.11	28.87	-5.71	19.47	16.93	-0.77	13.16
Median	4.46	-5.86	26.57	3.92	26.31	-8.77	16.79	14.28	-2.91	11.47
3rd Quartile	2.35	-9.27	23.77	0.48	23.90	-11.28	14.78	11.27	-5.03	9.59
95th Percentile	-1.04	-17.25	18.78	-4.73	18.41	-15.02	10.48	6.84	-9.32	5.06
Population	372	386	401	407	434	445	447	453	465	462

Boston Partners Large Cap Value

Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association

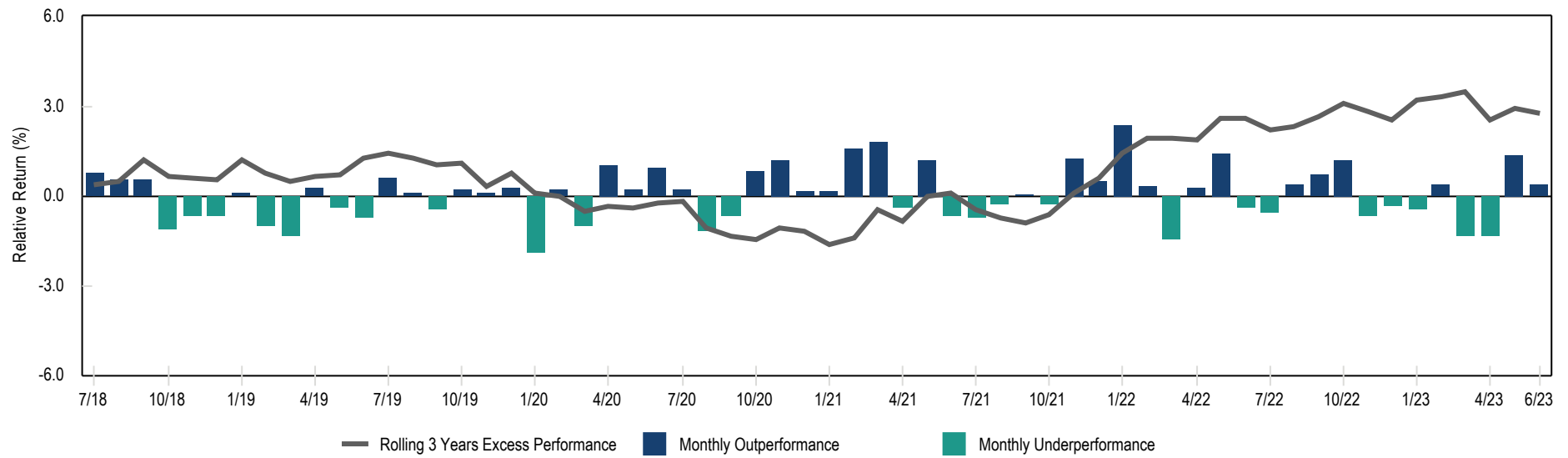
Period Ending: June 30, 2023



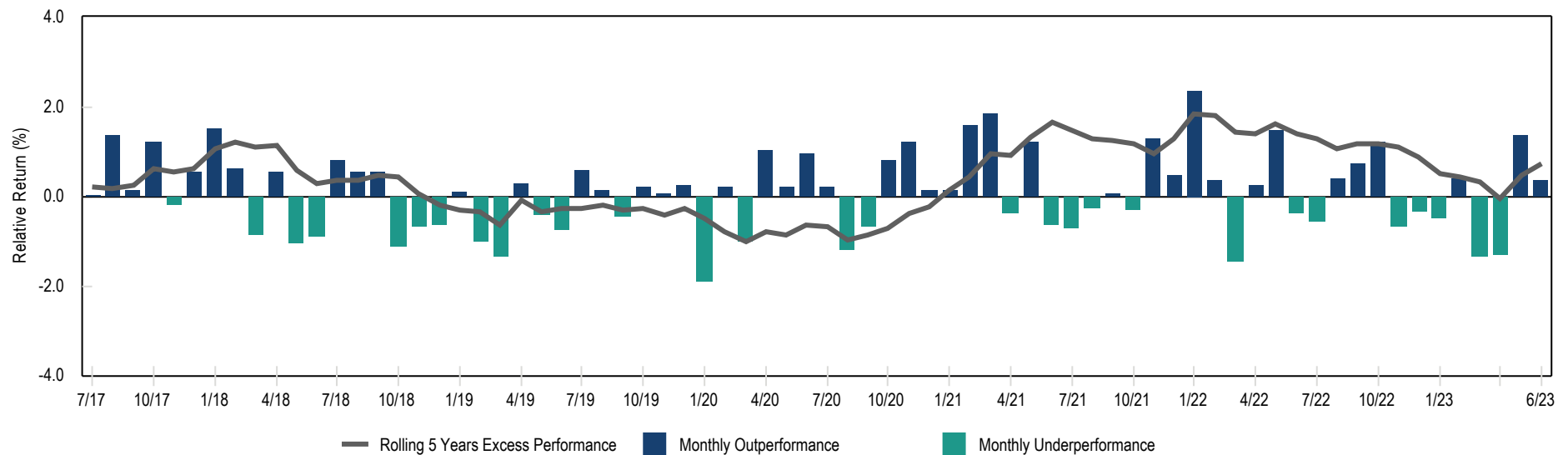
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Boston Partners Large Cap Value	17.06	17.65	0.91
■ Russell 1000 Value Index	14.30	17.20	0.79

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Boston Partners Large Cap Value	8.86	19.75	0.45
■ Russell 1000 Value Index	8.11	18.96	0.43

Rolling 3 Years Annualized Excess Performance

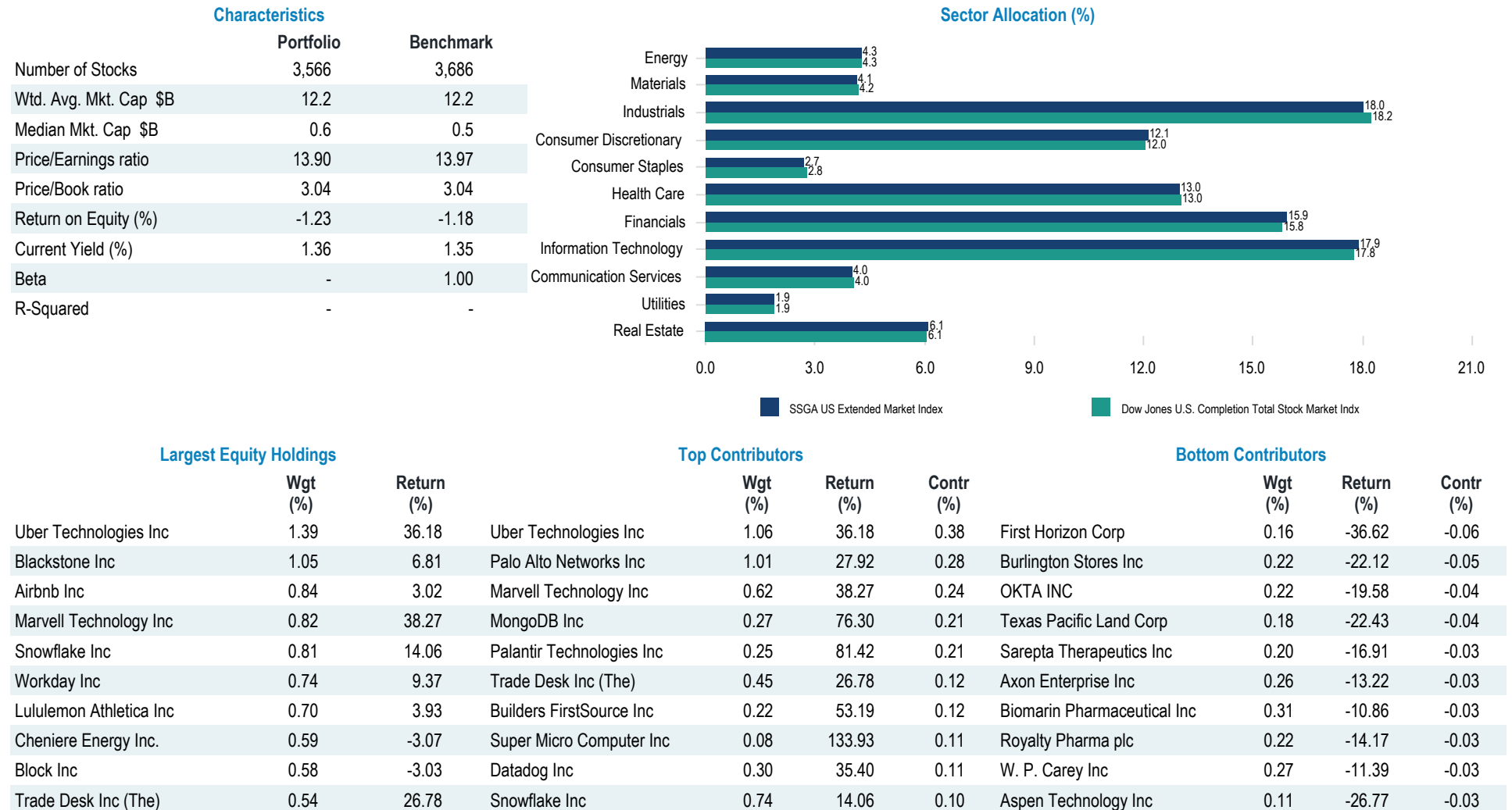


Rolling 5 Years Annualized Excess Performance



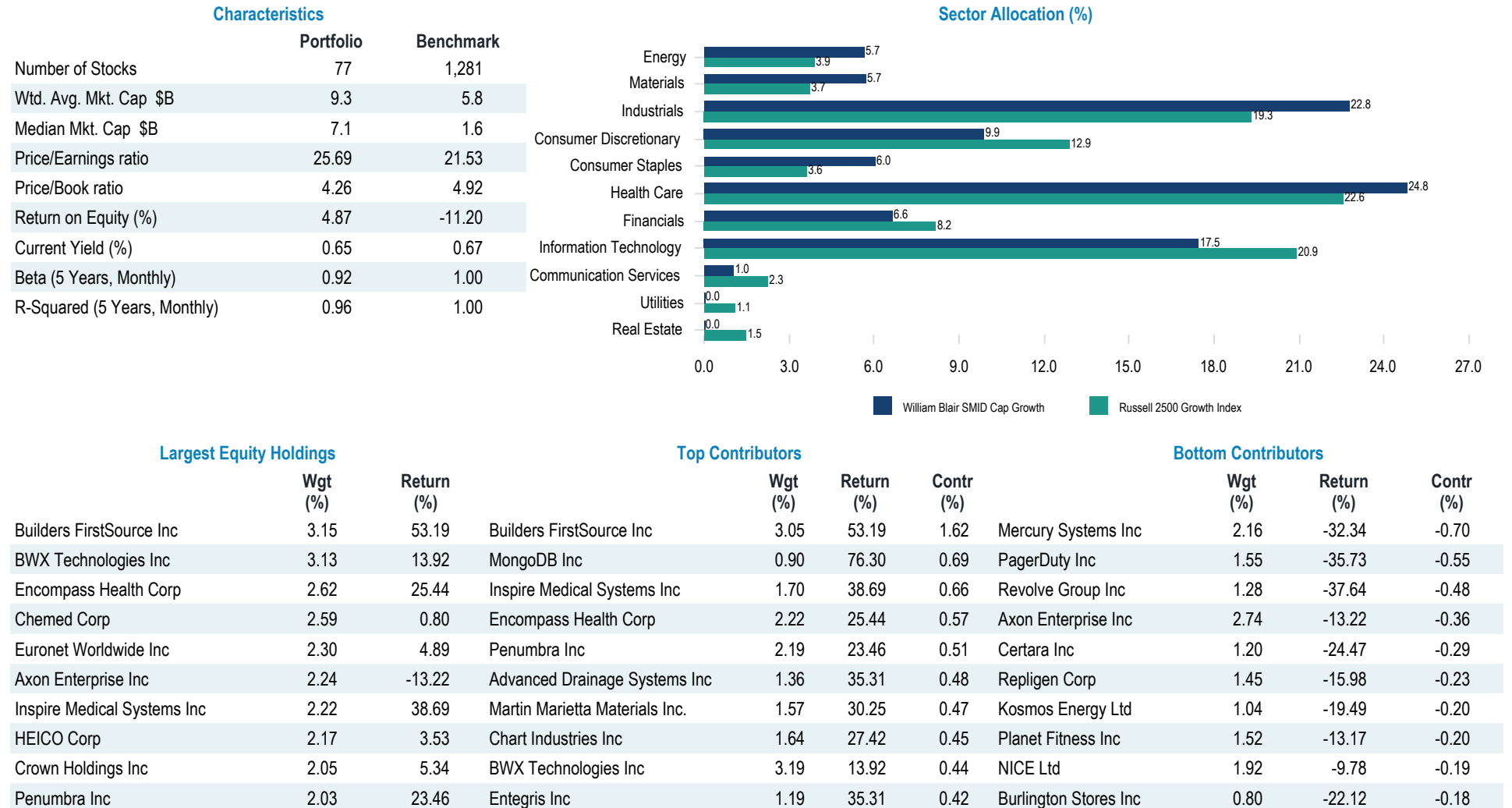
SSGA US Extended Market Index Manager Portfolio Overview

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



William Blair SMID Cap Growth Manager Portfolio Overview

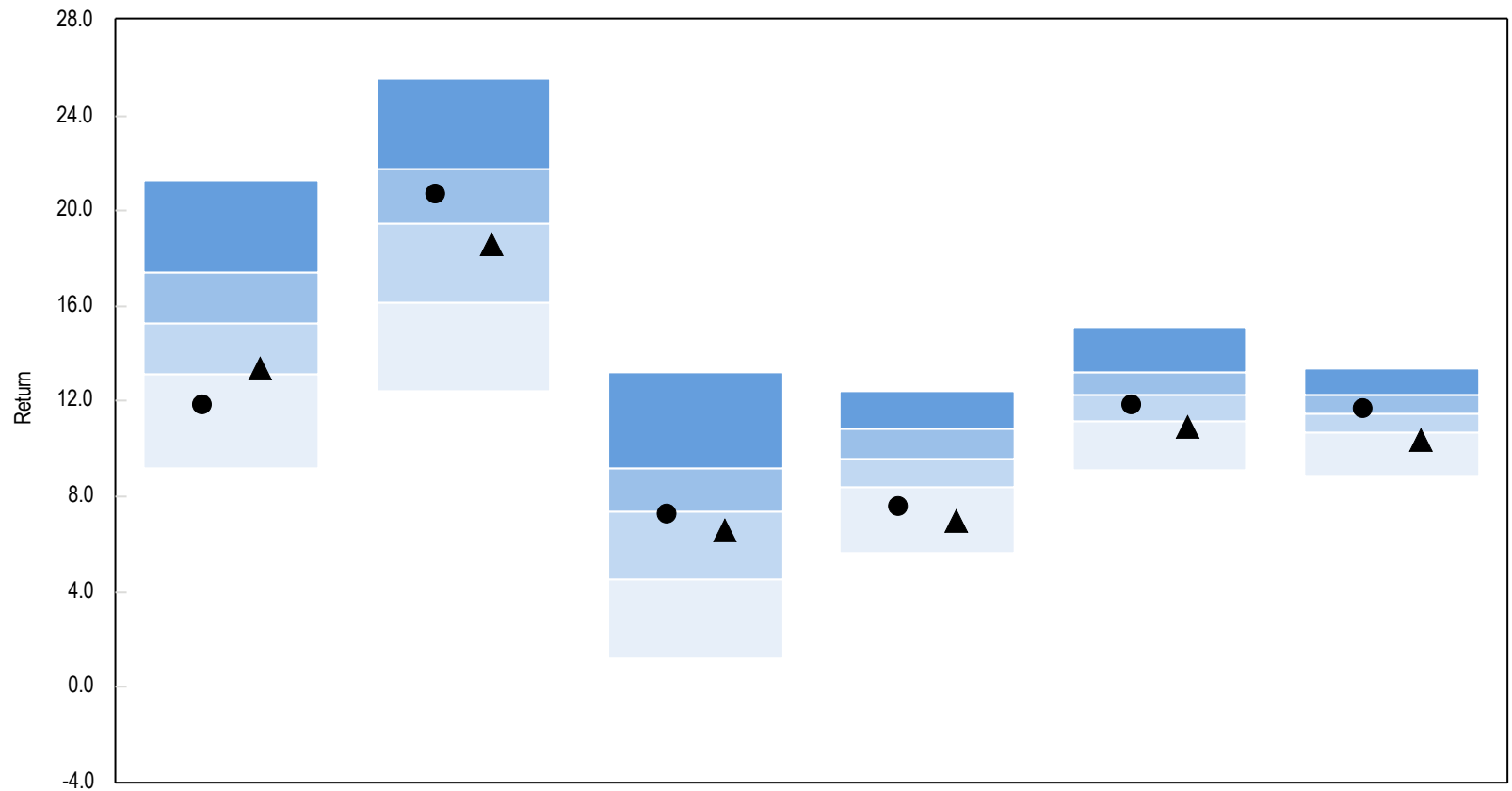
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



William Blair SMID Cap Growth
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

William Blair SMID Cap Growth vs. eV US Mid Cap Growth Equity

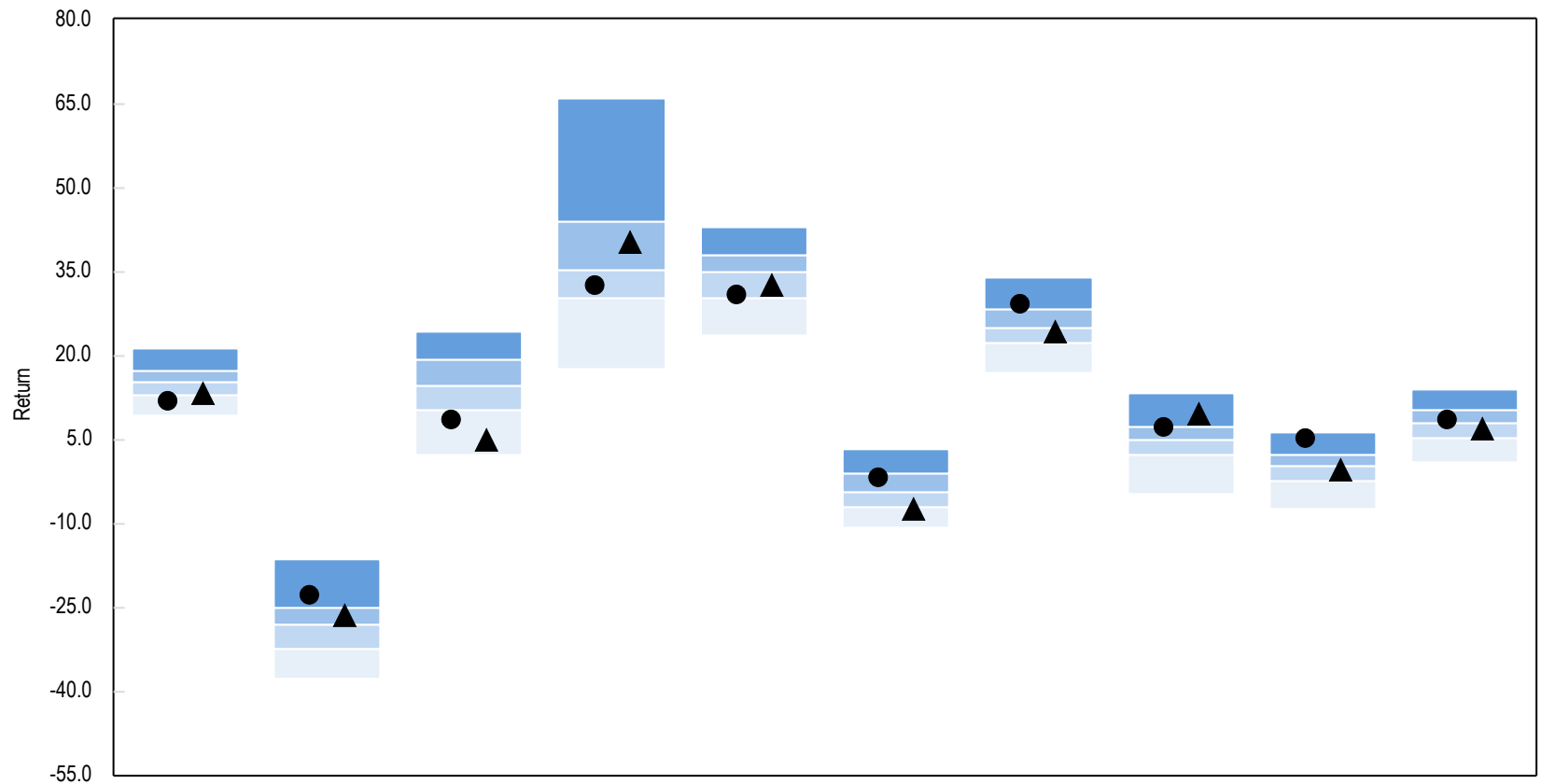


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● William Blair SMID Cap Growth	11.90 (86)	20.76 (37)	7.33 (51)	7.64 (83)	11.89 (60)	11.75 (40)
▲ Russell 2500 Growth Index	13.38 (75)	18.58 (58)	6.56 (60)	7.00 (92)	10.95 (77)	10.38 (80)
5th Percentile	21.25	25.55	13.23	12.42	15.12	13.34
1st Quartile	17.44	21.74	9.22	10.87	13.19	12.25
Median	15.25	19.47	7.40	9.59	12.28	11.45
3rd Quartile	13.17	16.17	4.53	8.43	11.20	10.66
95th Percentile	9.21	12.45	1.20	5.67	9.12	8.86
Population	101	101	97	90	85	80

William Blair SMID Cap Growth
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

William Blair SMID Cap Growth vs. eV US Mid Cap Growth Equity



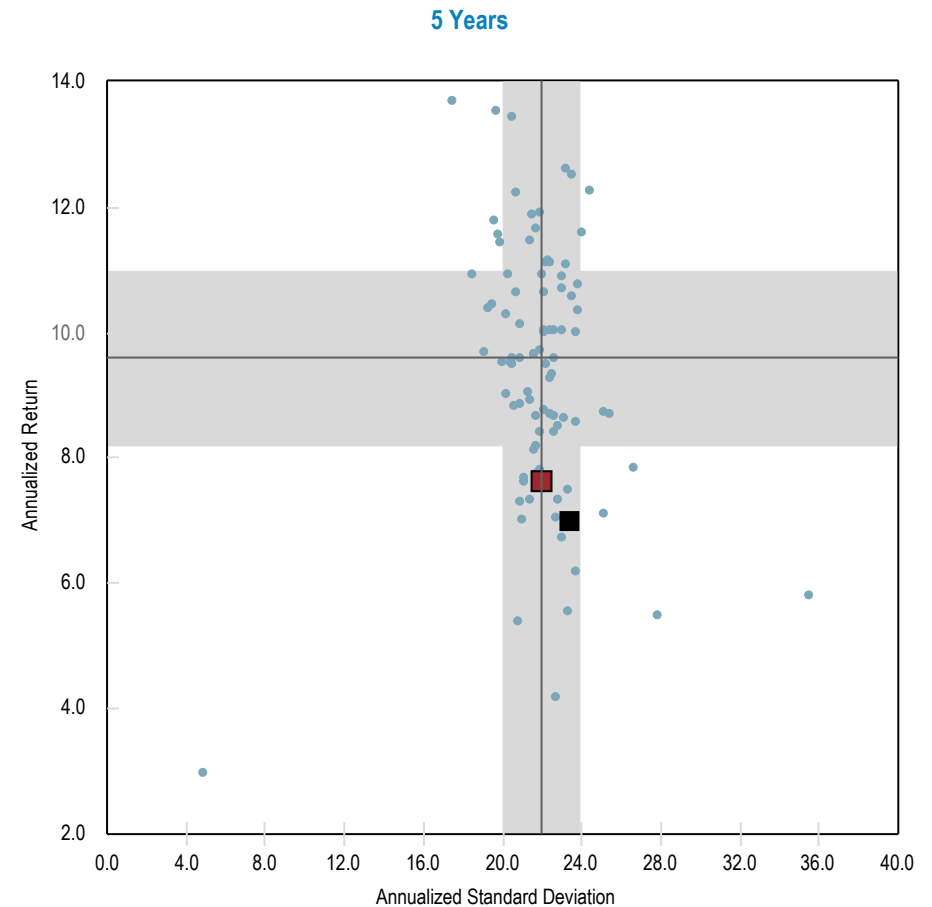
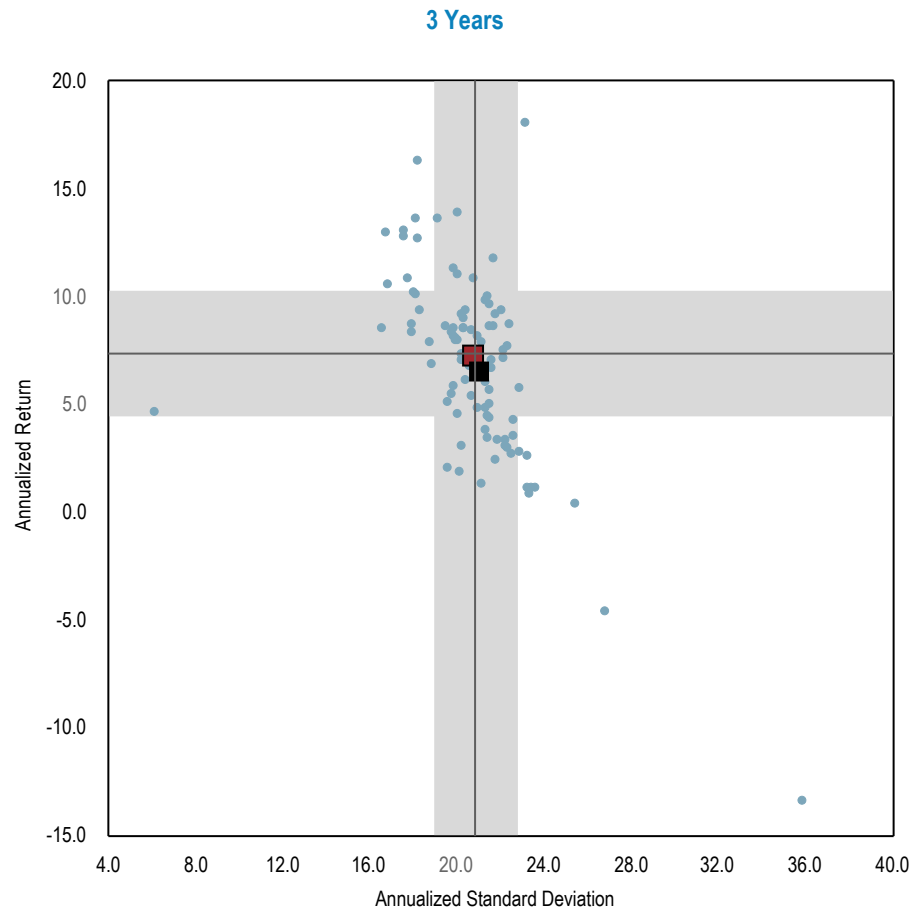
	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● William Blair SMID Cap Growth	11.90 (86)	-22.67 (18)	8.67 (79)	32.60 (64)	31.10 (73)	-1.74 (32)	29.31 (18)	7.24 (26)	5.19 (9)	8.78 (40)
▲ Russell 2500 Growth Index	13.38 (75)	-26.21 (32)	5.04 (92)	40.47 (37)	32.65 (62)	-7.47 (78)	24.46 (59)	9.73 (14)	-0.19 (56)	7.05 (63)
5th Percentile	21.25	-16.45	24.46	65.94	42.98	3.36	33.92	13.28	6.46	14.12
1st Quartile	17.44	-24.94	19.30	43.91	38.14	-0.84	28.34	7.29	2.37	10.34
Median	15.25	-28.11	14.63	35.25	34.87	-4.22	25.08	4.86	0.33	7.91
3rd Quartile	13.17	-32.40	10.29	30.33	30.45	-7.12	22.27	2.25	-2.28	5.35
95th Percentile	9.21	-37.72	2.46	17.56	23.55	-10.73	16.90	-4.67	-7.49	1.16
Population	101	102	104	109	109	113	116	122	129	129

William Blair SMID Cap Growth

Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association

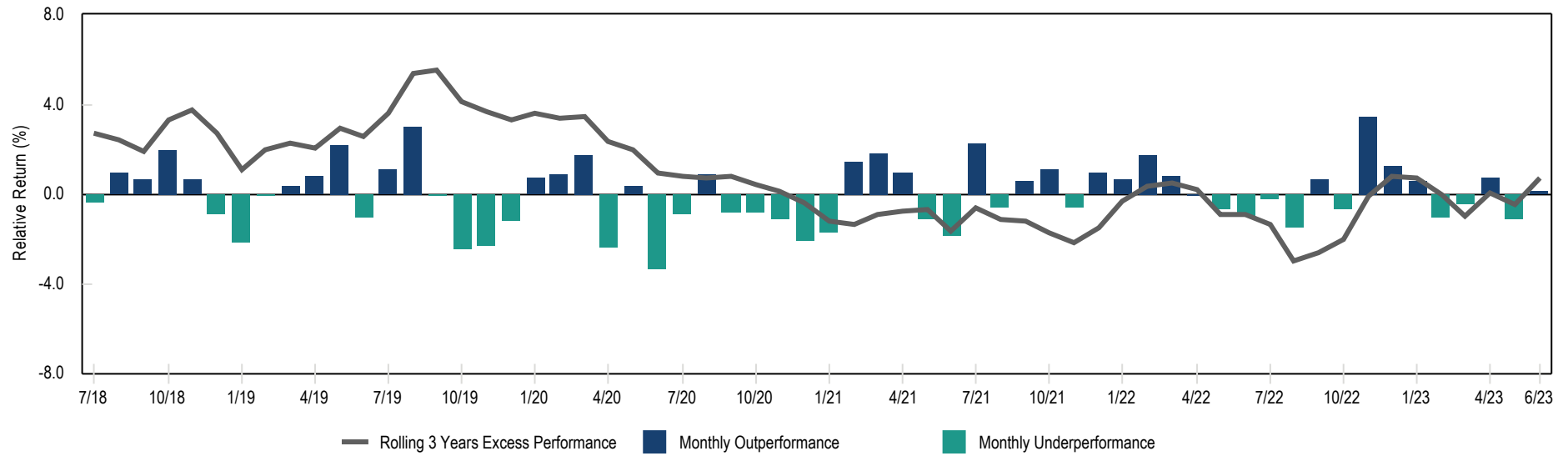
Period Ending: June 30, 2023



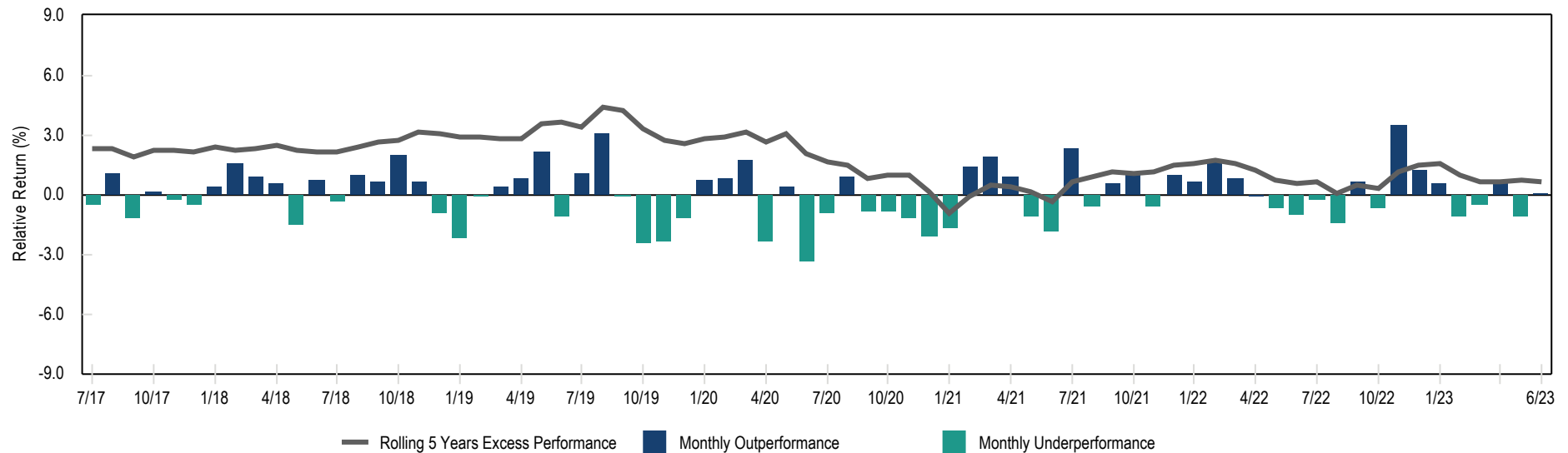
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ William Blair SMID Cap Growth	7.33	20.71	0.39
■ Russell 2500 Growth Index	6.56	21.00	0.35

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ William Blair SMID Cap Growth	7.64	22.01	0.38
■ Russell 2500 Growth Index	7.00	23.36	0.34

Rolling 3 Years Annualized Excess Performance



Rolling 5 Years Annualized Excess Performance



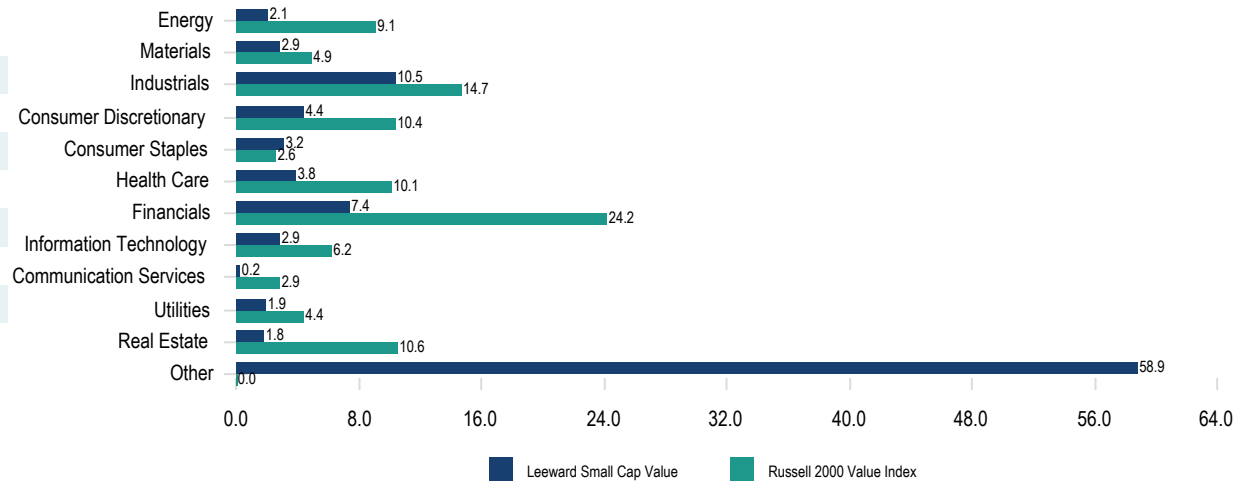
Leeward Small Cap Value Manager Portfolio Overview

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Characteristics

	Portfolio	Benchmark
Number of Stocks	88	1,458
Wtd. Avg. Mkt. Cap \$B	2.0	2.4
Median Mkt. Cap \$B	3.7	0.8
Price/Earnings ratio	15.25	8.90
Price/Book ratio	2.43	1.61
Return on Equity (%)	3.17	0.38
Current Yield (%)	0.70	2.48
Beta (5 Years, Monthly)	0.92	1.00
R-Squared (5 Years, Monthly)	0.95	1.00

Sector Allocation (%)



Largest Equity Holdings

	Wgt (%)	Return (%)
ProShares Ultra Semiconductors	58.76	46.07
Huron Consulting Group Inc	1.09	5.65
Murphy USA Inc	0.93	20.72
Prestige Consumer Healthcare Inc	0.86	-5.11
Primerica Inc	0.83	15.22
Clean Harbors Inc	0.82	15.34
Portland General Electric Co	0.79	-3.23
Encompass Health Corp	0.78	25.44
Livent Corp	0.73	26.29
EMCOR Group Inc.	0.72	13.78

Top Contributors

	Wgt (%)	Return (%)	Contr (%)
CIRCOR International Inc	0.93	81.40	0.75
Encompass Health Corp	1.75	25.44	0.44
EnPro Industries Inc.	1.45	28.89	0.42
Clean Harbors Inc	2.47	15.34	0.38
Murphy USA Inc	1.50	20.72	0.31
Livent Corp	1.11	26.29	0.29
AZEK Company Inc (The)	0.95	28.68	0.27
Regal Rexnord Corp	2.50	9.61	0.24
CACI International Inc	1.57	15.04	0.24
BWX Technologies Inc	1.64	13.92	0.23

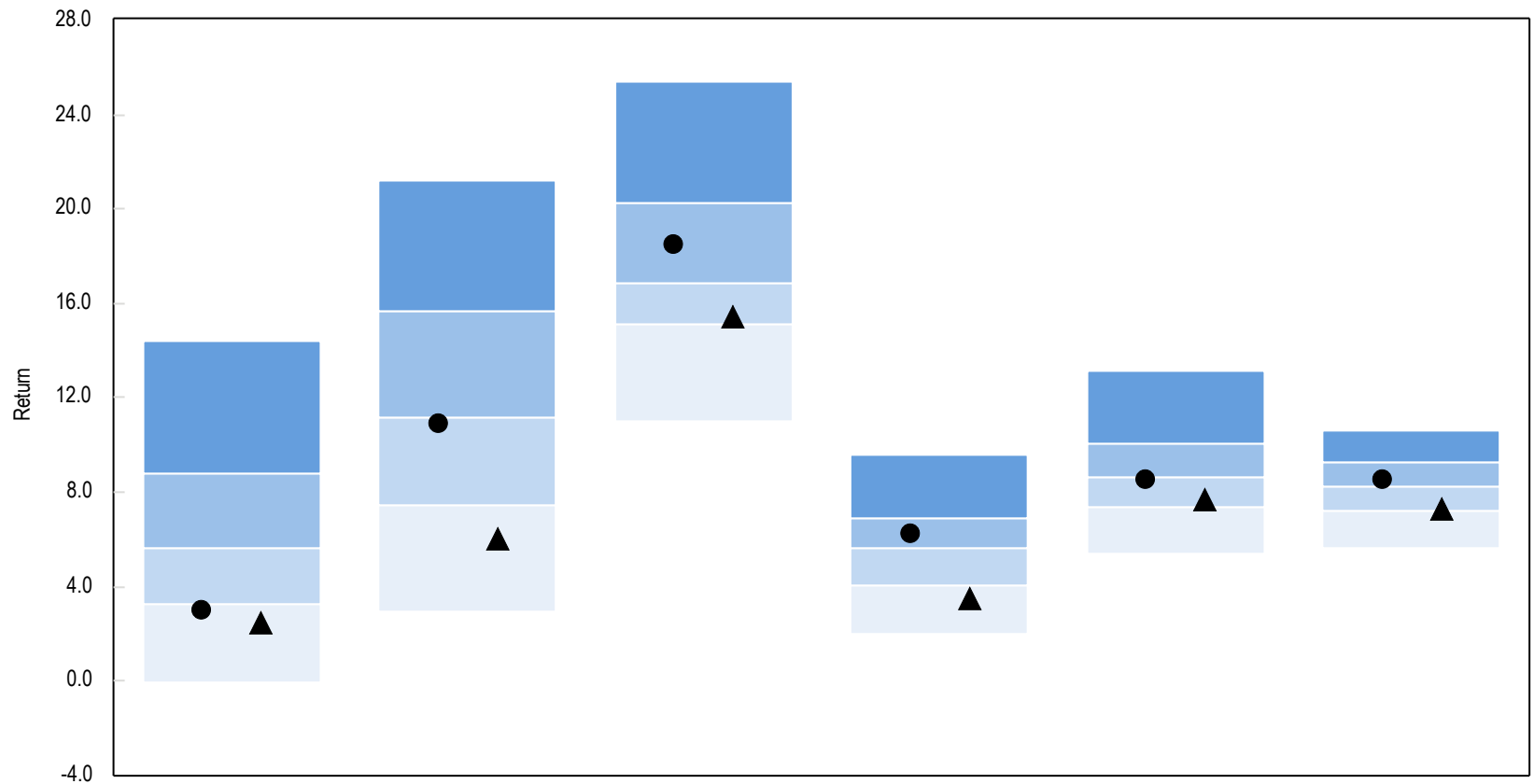
Bottom Contributors

	Wgt (%)	Return (%)	Contr (%)
Integra LifeSciences Holdings Corp	1.64	-28.36	-0.47
First Interstate BancSystem Inc	1.76	-18.59	-0.33
Envista Holdings Corp	1.34	-17.22	-0.23
Ingevity Corp	1.10	-18.68	-0.21
Univest Financial Corp	0.86	-22.89	-0.20
National Storage Affiliates Trust	1.25	-15.31	-0.19
O I Glass Inc	2.41	-6.08	-0.15
Valmont Industries Inc	1.69	-8.65	-0.15
Prestige Consumer Healthcare Inc	2.64	-5.11	-0.13
Cabot Corp	0.81	-12.22	-0.10

Leeward Small Cap Value
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Leeward Small Cap Value vs. eV US Small Cap Value Equity

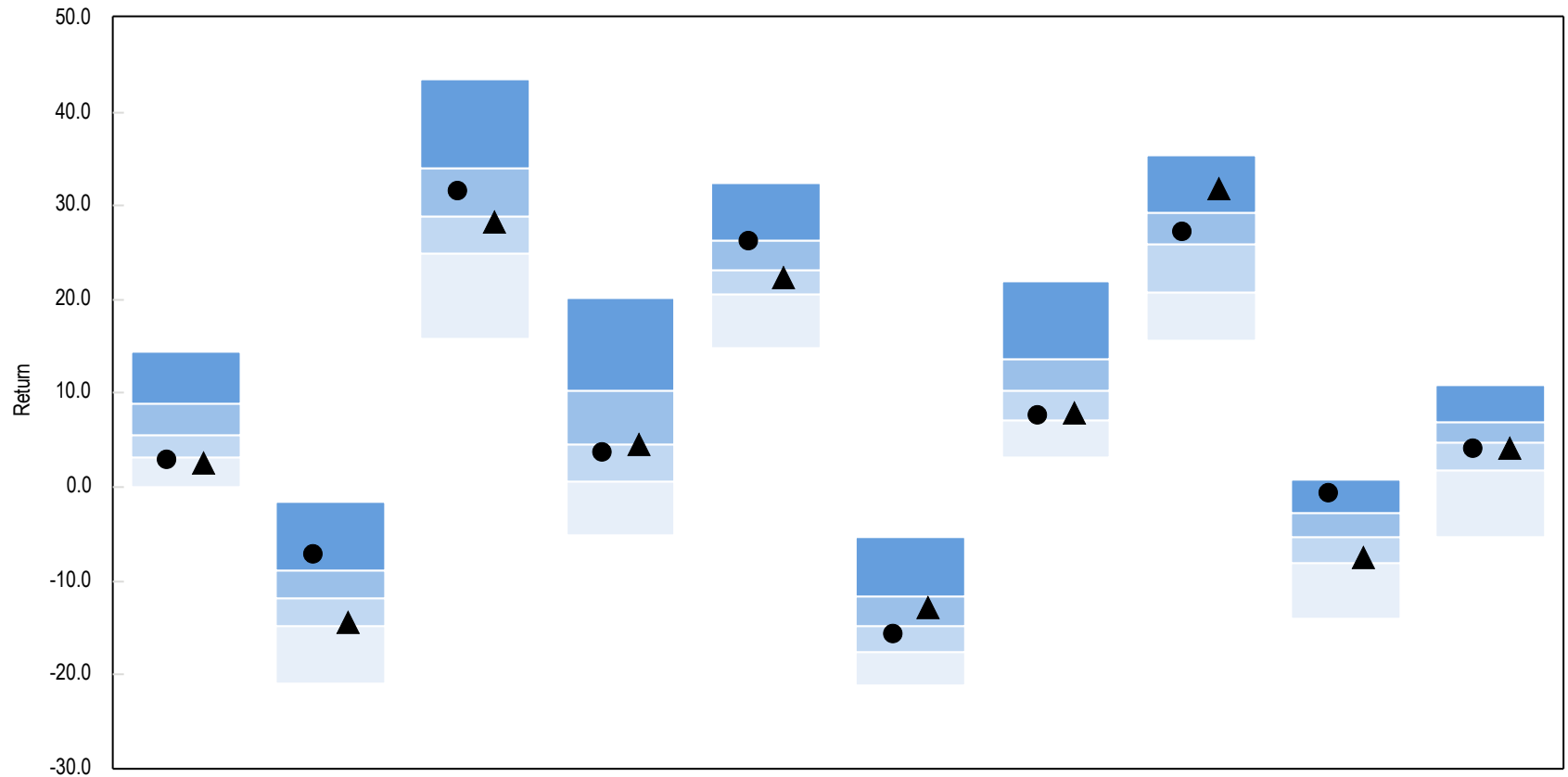


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Leeward Small Cap Value	3.04 (77)	10.95 (51)	18.55 (34)	6.29 (33)	8.57 (52)	8.56 (39)
▲ Russell 2000 Value Index	2.50 (81)	6.01 (85)	15.43 (72)	3.54 (81)	7.70 (72)	7.29 (75)
5th Percentile	14.38	21.20	25.37	9.62	13.13	10.61
1st Quartile	8.83	15.71	20.29	6.89	10.03	9.30
Median	5.62	11.18	16.86	5.63	8.64	8.21
3rd Quartile	3.26	7.50	15.13	4.07	7.38	7.24
95th Percentile	-0.02	2.95	11.00	2.02	5.42	5.66
Population	219	218	215	207	198	182

Leeward Small Cap Value
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

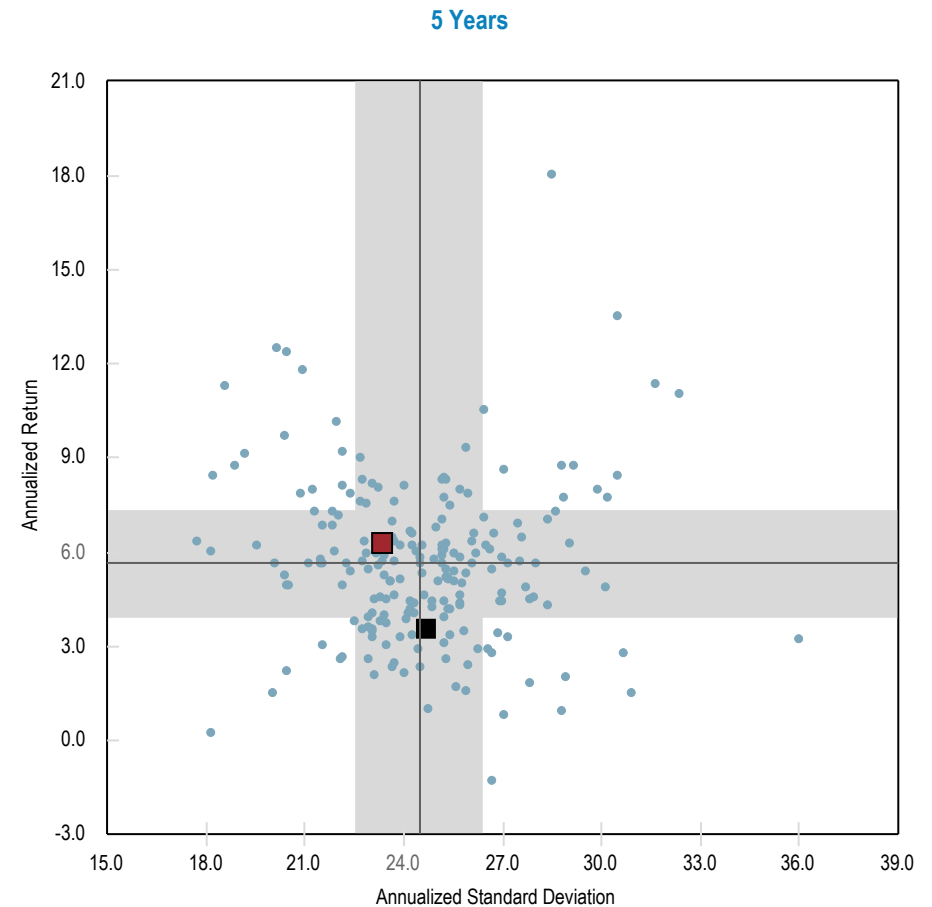
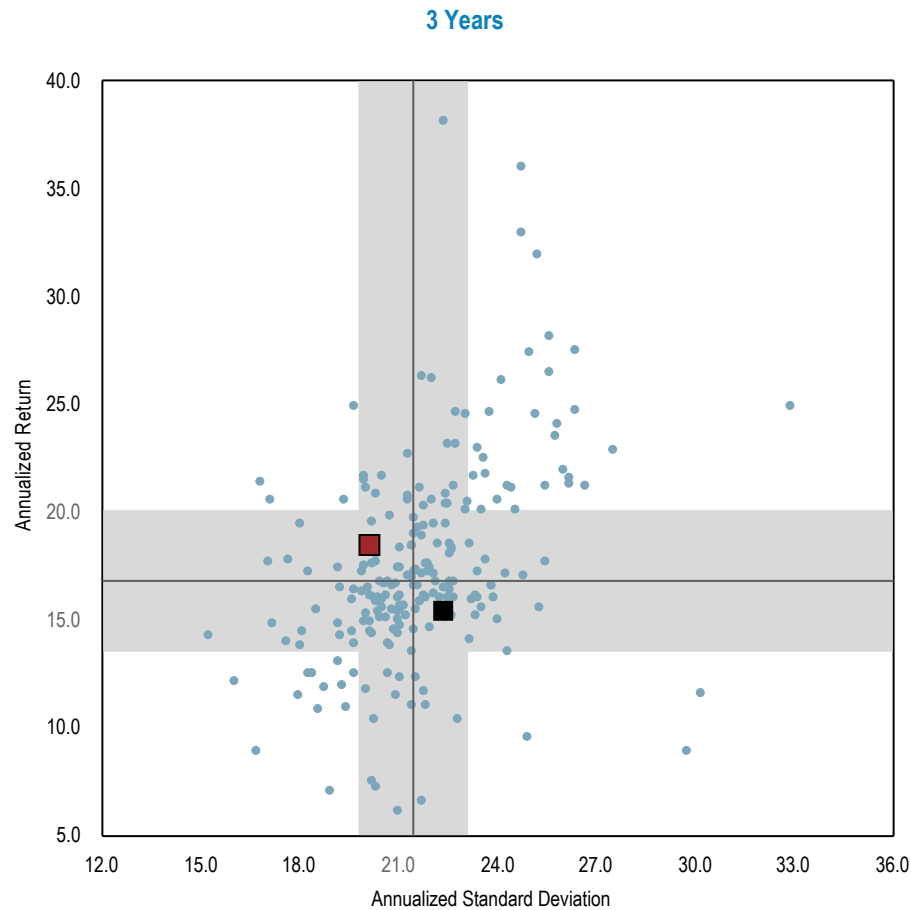
Leeward Small Cap Value vs. eV US Small Cap Value Equity



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● Leeward Small Cap Value	3.04 (77)	-7.09 (18)	31.60 (38)	3.78 (56)	26.32 (24)	-15.49 (58)	7.67 (70)	27.28 (38)	-0.52 (10)	4.12 (58)
▲ Russell 2000 Value Index	2.50 (81)	-14.48 (73)	28.27 (53)	4.63 (50)	22.39 (59)	-12.86 (35)	7.84 (70)	31.74 (14)	-7.47 (72)	4.22 (57)
5th Percentile	14.38	-1.46	43.54	20.15	32.40	-5.22	21.89	35.35	0.90	10.81
1st Quartile	8.83	-8.81	33.96	10.25	26.20	-11.66	13.62	29.32	-2.73	6.86
Median	5.62	-11.87	28.93	4.54	23.19	-14.85	10.21	25.91	-5.25	4.75
3rd Quartile	3.26	-14.78	24.95	0.68	20.50	-17.60	7.06	20.75	-8.13	1.86
95th Percentile	-0.02	-20.93	15.88	-5.11	14.78	-21.14	3.13	15.55	-13.95	-5.30
Population	219	227	237	249	255	261	271	270	272	278

Leeward Small Cap Value Risk vs. Return (Net of Fees)

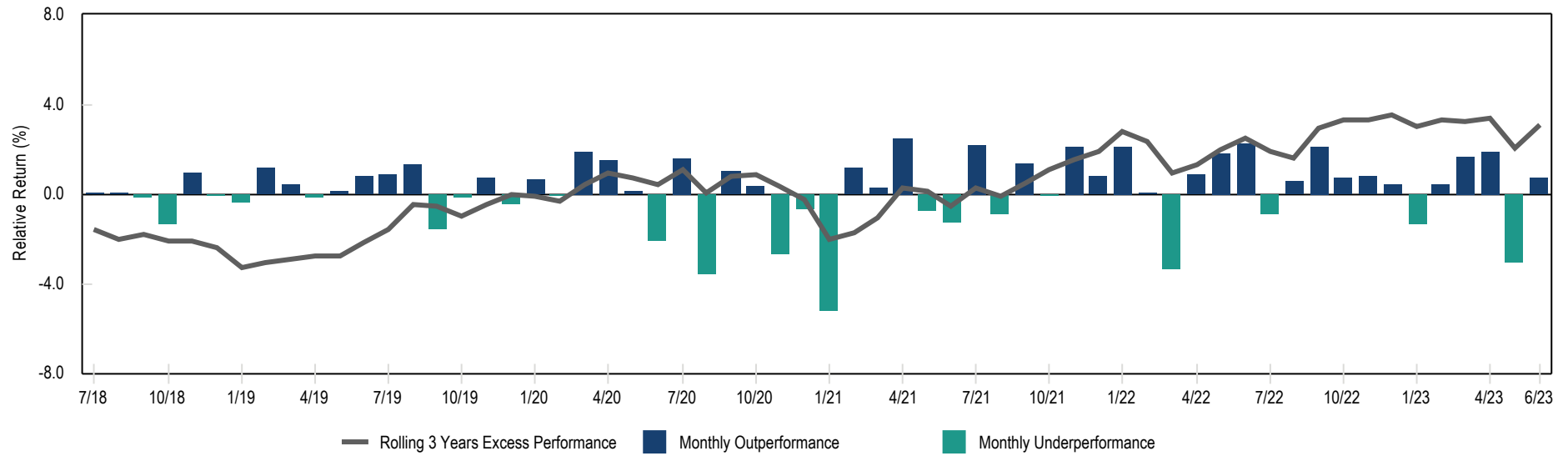
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



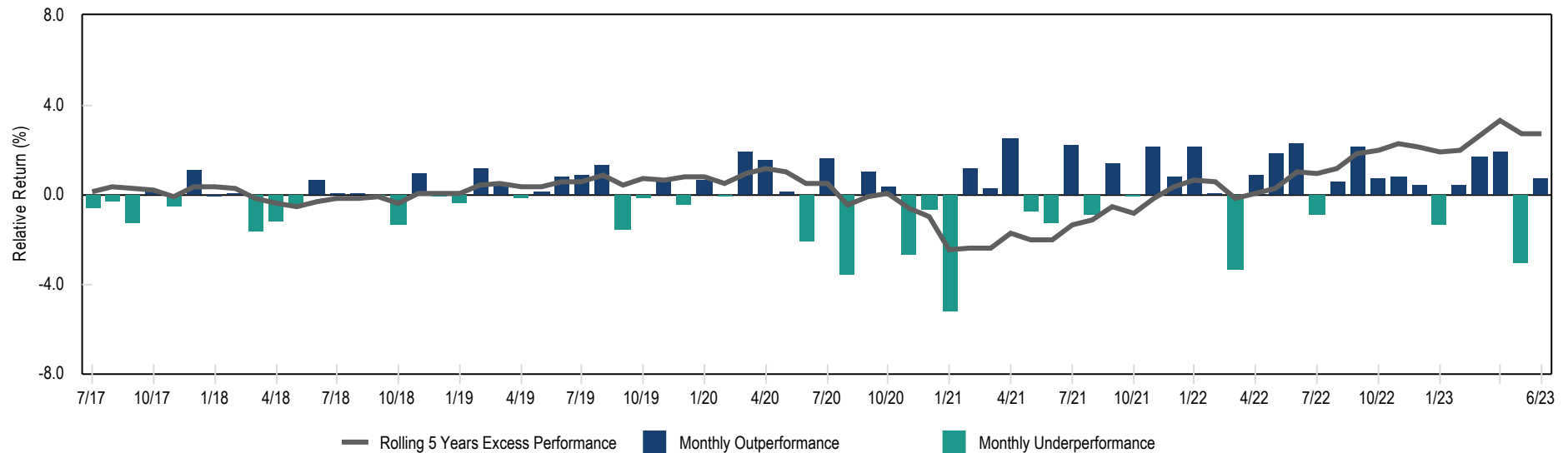
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Leeward Small Cap Value	18.55	20.13	0.88
■ Russell 2500 Value Index	15.43	22.34	0.70

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Leeward Small Cap Value	6.29	23.31	0.31
■ Russell 2500 Value Index	3.54	24.66	0.20

Rolling 3 Years Annualized Excess Performance



Rolling 5 Years Annualized Excess Performance

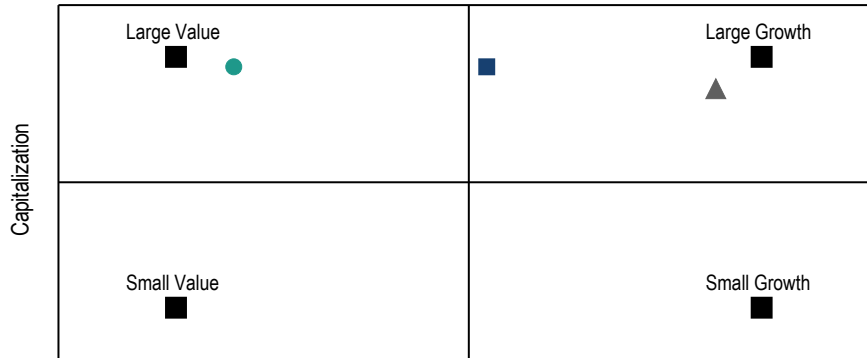


Total International Equity Asset Class Overview (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019
Total International Equity	298,782,608	100.0	3.9	11.2	16.1	9.3	5.4	5.7	-14.2	9.6	13.4	22.7
MSCI AC World ex USA Index			2.7	9.9	13.3	7.7	4.0	5.2	-15.6	8.3	11.1	22.1
SSGA MSCI ACWI Ex US Index Fund	100,901,750	33.8	2.6	9.7	12.9	7.4	3.7	4.9	-15.8	7.9	10.9	21.8
MSCI AC World ex USA (Net)			2.4	9.5	12.7	7.2	3.5	4.7	-16.0	7.8	10.7	21.5
eV ACWI ex-US All Cap Equity Rank			54	69	73	56	58	77	36	64	66	71
PIMCO RAE Fundamental Global Ex US Fund	103,800,642	34.7	4.0	10.3	16.4	12.7	3.7	5.0	-8.9	12.3	1.7	16.1
MSCI AC World ex USA Value (Net)			3.0	8.3	12.2	10.4	2.7	3.7	-8.6	10.5	-0.8	15.7
eV ACWI ex-US Value Equity Rank			16	51	37	36	51	50	35	45	56	70
SGA International Growth	94,080,216	31.5	5.4	13.7	19.3	8.2	8.3	-	-17.8	9.1	26.0	30.5
MSCI AC World ex USA Growth (Net)			1.9	10.7	13.3	4.0	4.1	-	-23.1	5.1	22.2	27.3
eV ACWI ex-US Growth Equity Rank			6	33	27	18	7	-	14	44	51	42

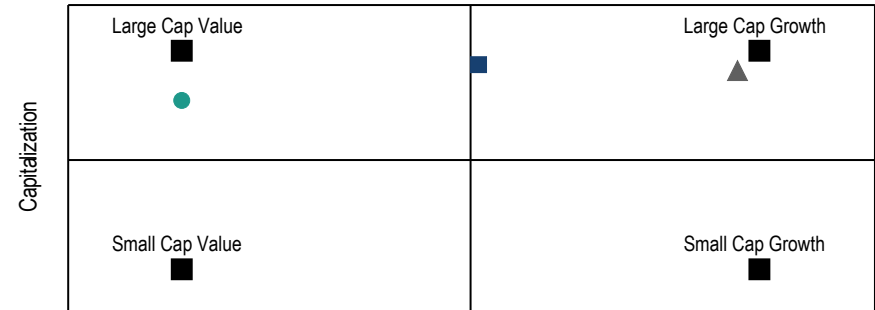
International Equity Effective Style Map
3 Years



Manager Style

- SSGA MSCI ACWI Ex US Index Fund
- PIMCO RAE Fundamental Global Ex US Fund
- SGA International Growth

International Equity Effective Style Map
5 Years



Manager Style

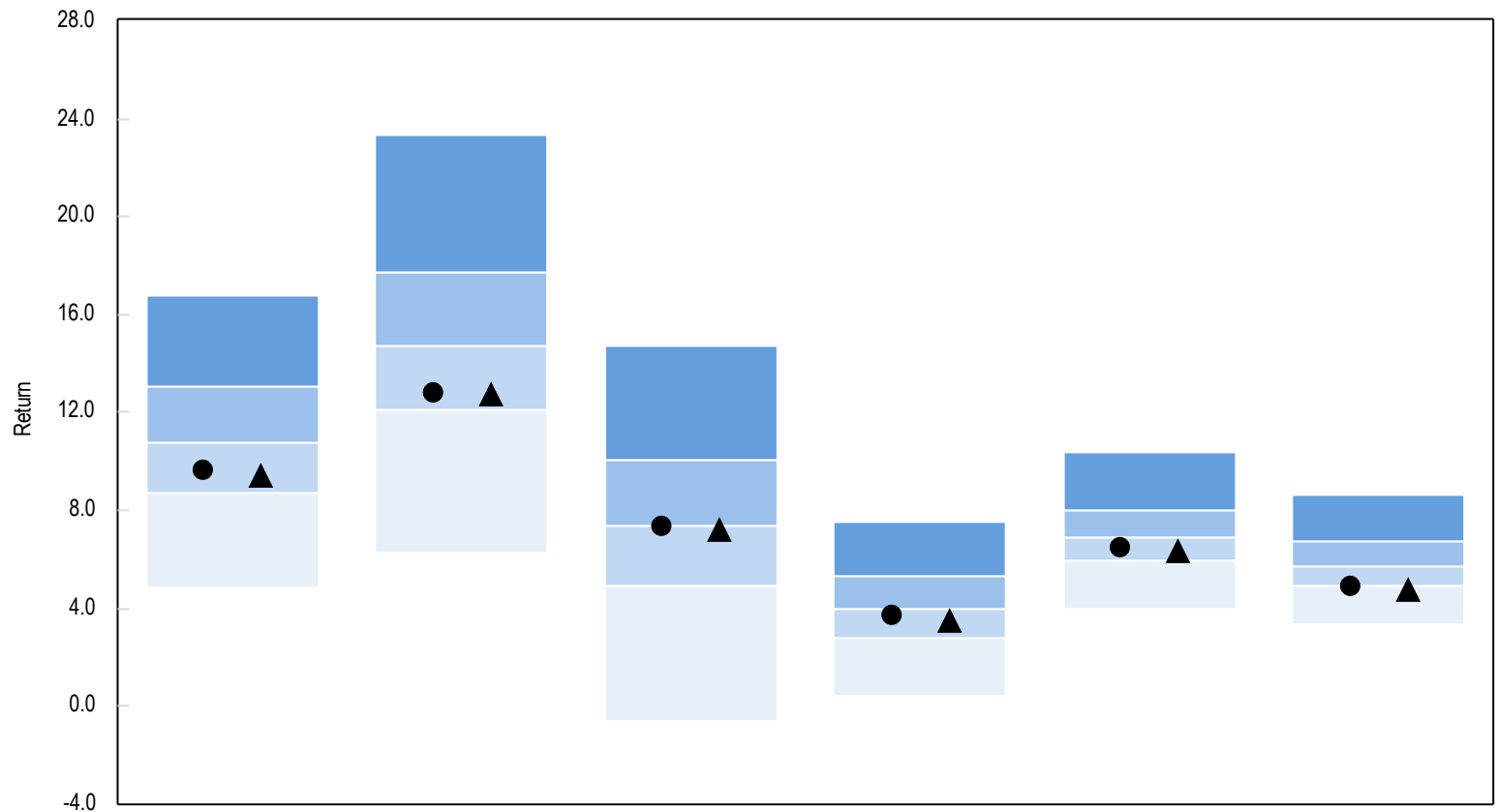
- SSGA MSCI ACWI Ex US Index Fund
- PIMCO RAE Fundamental Global Ex US Fund
- SGA International Growth

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

SSGA MSCI ACWI Ex US Index Fund
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SSGA MSCI ACWI Ex US Index Fund vs. eV All ACWI ex-US Equity

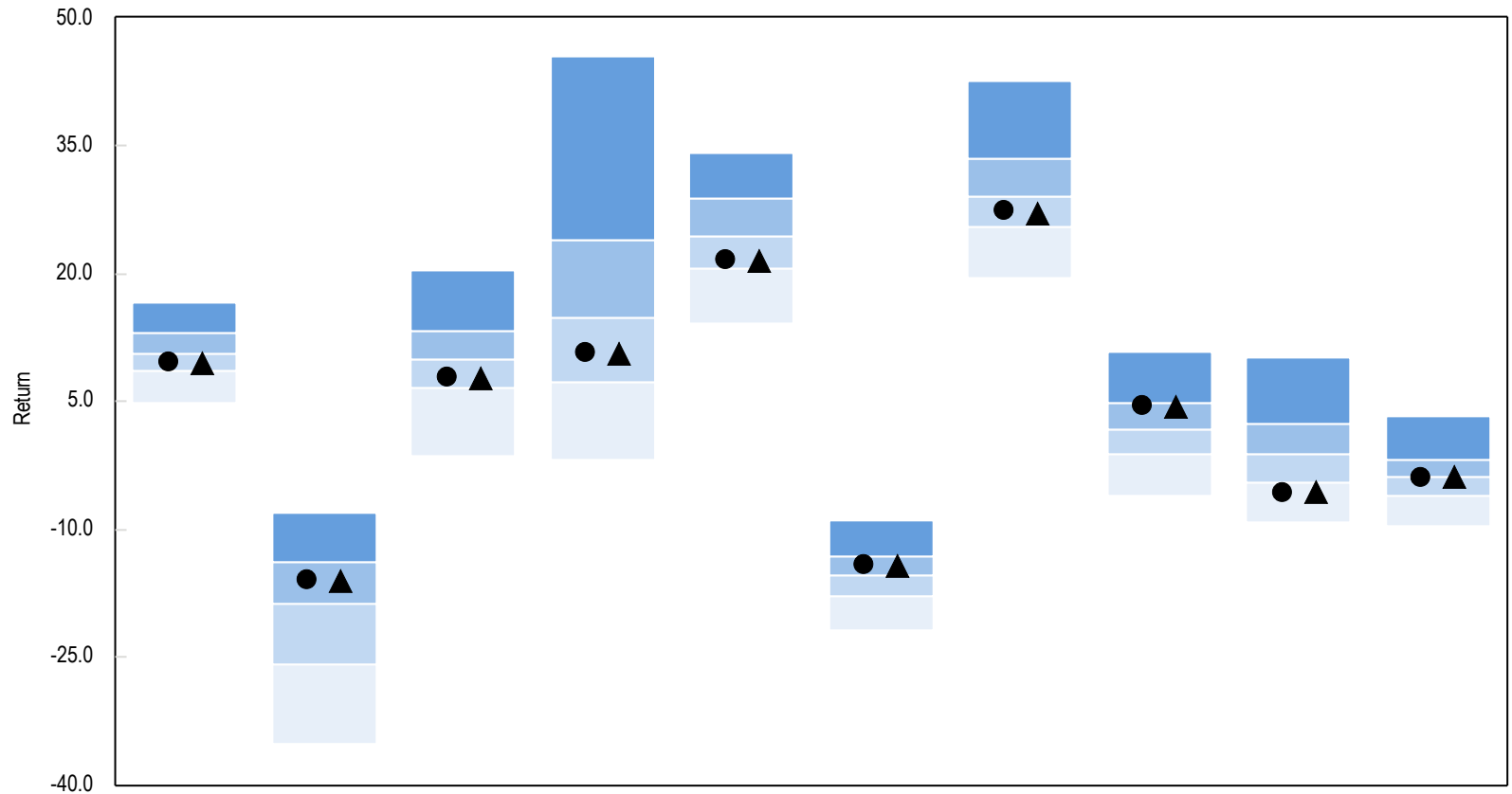


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● SSGA MSCI ACWI Ex US Index Fund	9.69 (64)	12.86 (67)	7.40 (51)	3.73 (58)	6.53 (62)	4.95 (75)
▲ MSCI AC World ex USA (Net)	9.47 (67)	12.72 (69)	7.22 (54)	3.52 (63)	6.32 (69)	4.75 (84)
5th Percentile	16.75	23.37	14.71	7.57	10.38	8.64
1st Quartile	13.10	17.71	10.03	5.34	8.04	6.77
Median	10.77	14.76	7.40	4.02	6.90	5.72
3rd Quartile	8.74	12.11	4.96	2.80	5.99	4.92
95th Percentile	4.83	6.26	-0.58	0.46	3.99	3.33
Population	347	347	326	294	271	218

SSGA MSCI ACWI Ex US Index Fund
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SSGA MSCI ACWI Ex US Index Fund vs. eV All ACWI ex-US Equity

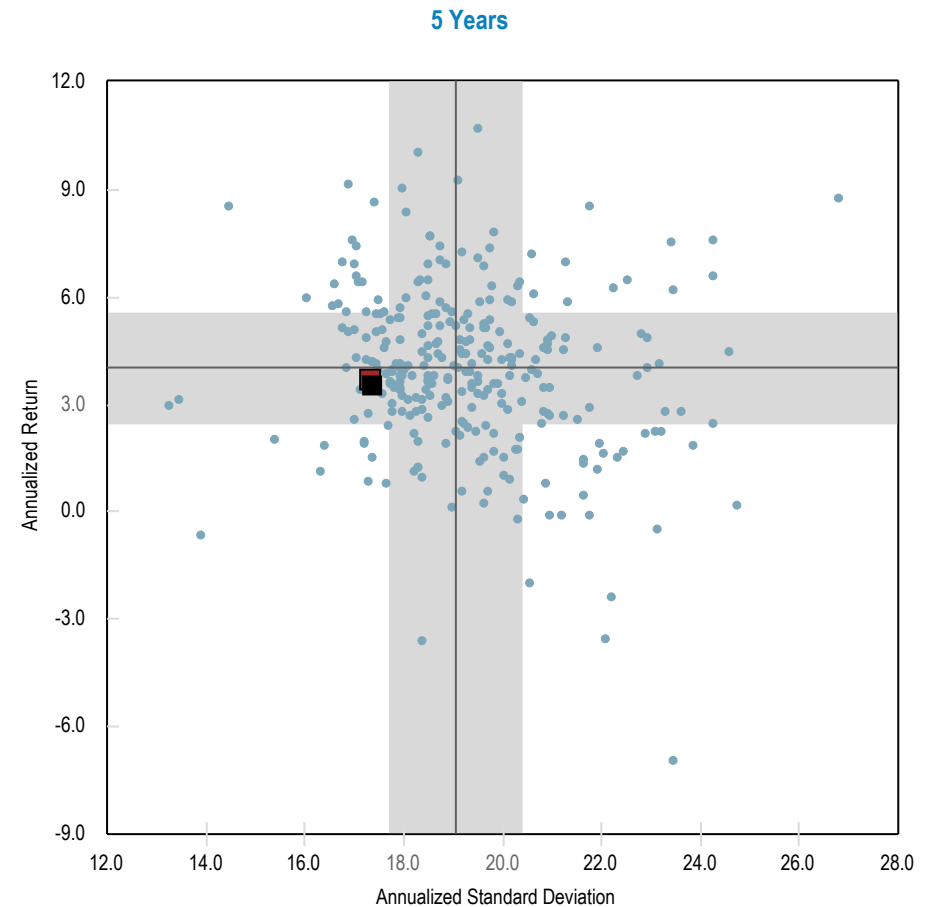
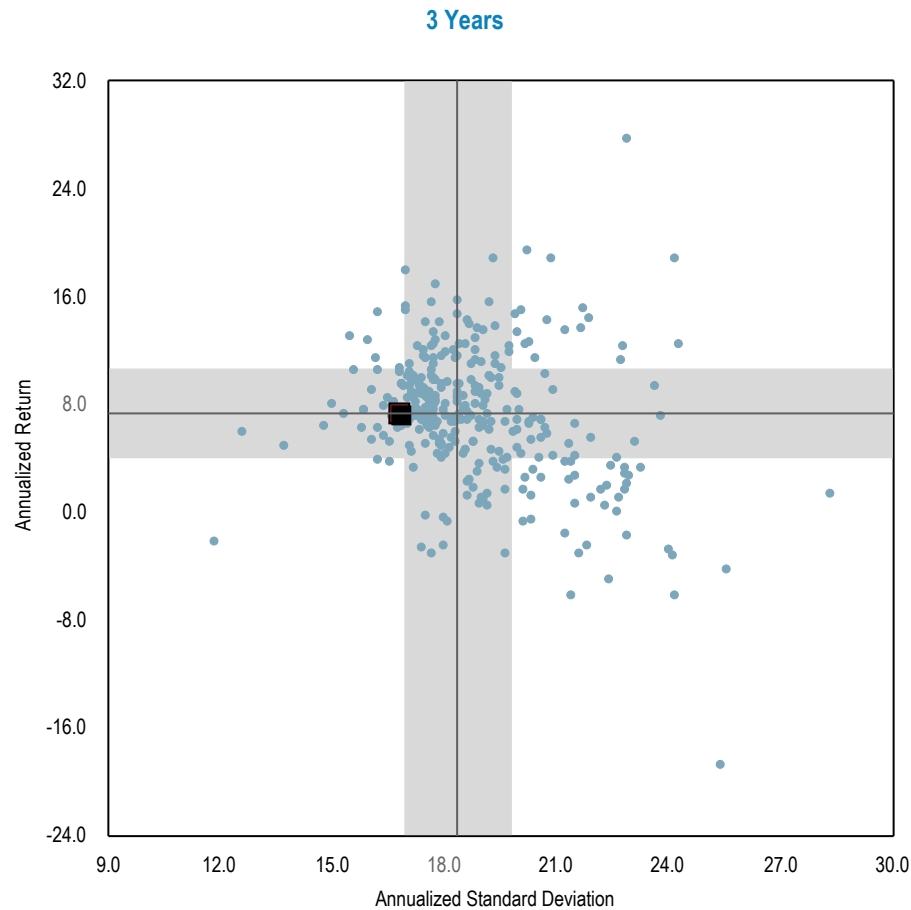


	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● SSGA MSCI ACWI Ex US Index Fund	9.69 (64)	-15.84 (34)	7.95 (66)	10.93 (62)	21.78 (66)	-14.04 (37)	27.46 (63)	4.69 (28)	-5.54 (82)	-3.68 (48)
▲ MSCI AC World ex USA (Net)	9.47 (67)	-16.00 (35)	7.82 (67)	10.65 (64)	21.51 (68)	-14.20 (38)	27.19 (65)	4.50 (30)	-5.66 (83)	-3.87 (52)
5th Percentile	16.75	-7.97	20.37	45.46	34.31	-8.86	42.62	10.99	10.12	3.24
1st Quartile	13.10	-13.84	13.37	23.93	28.87	-13.15	33.61	4.95	2.37	-1.70
Median	10.77	-18.72	10.11	14.90	24.37	-15.33	29.15	1.77	-1.06	-3.80
3rd Quartile	8.74	-25.77	6.69	7.44	20.57	-17.89	25.49	-1.06	-4.51	-5.91
95th Percentile	4.83	-35.21	-1.41	-1.71	14.29	-21.86	19.48	-5.99	-9.22	-9.57
Population	347	365	379	381	372	363	357	350	332	318

SSGA MSCI ACWI Ex US Index Fund

Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



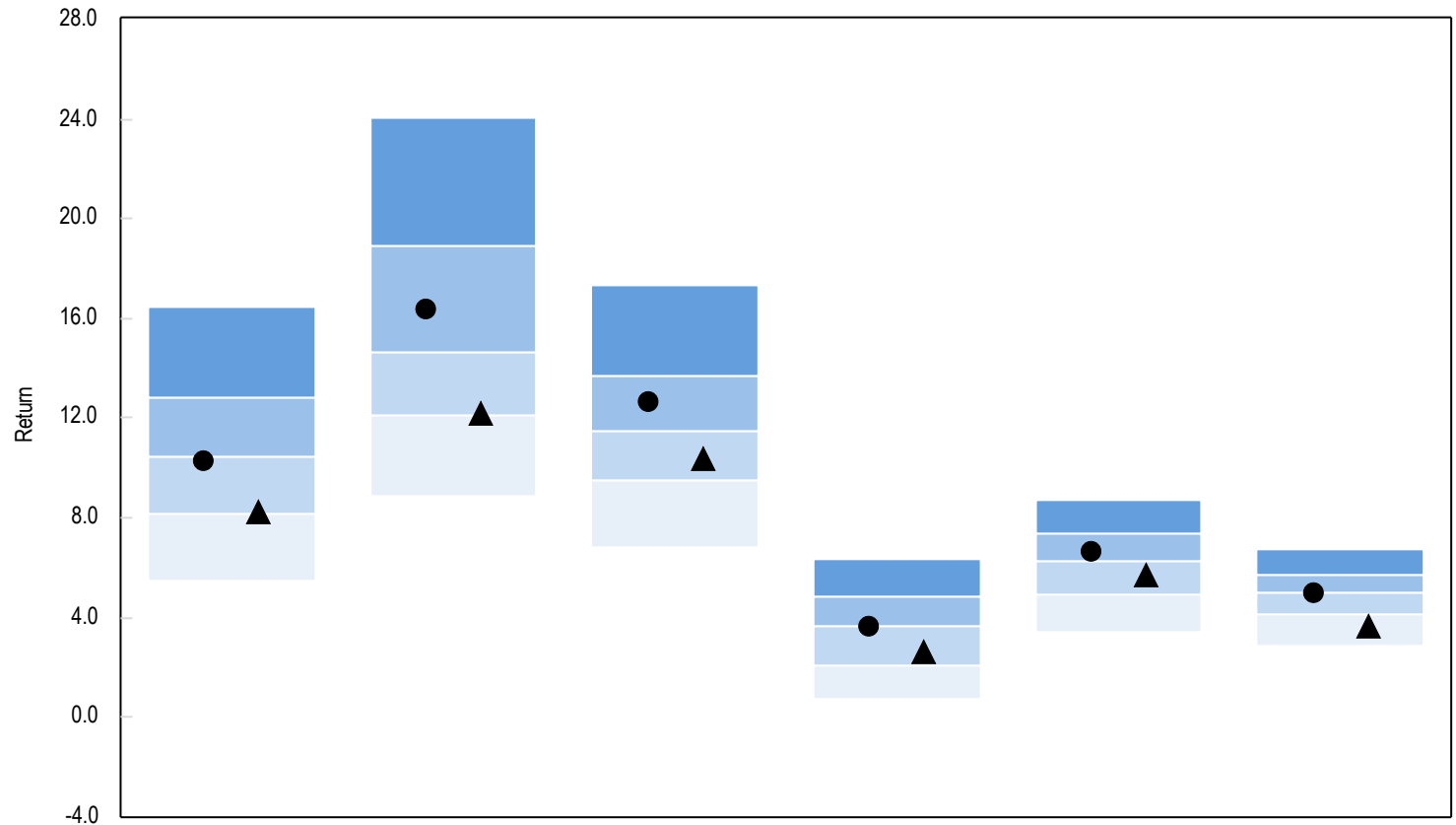
	Return	Standard Deviation	Sharpe Ratio
SSGA MSCI ACWI Ex US Index Fund	7.40	16.78	0.43
MSCI AC World ex US Index	7.22	16.81	0.42

	Return	Standard Deviation	Sharpe Ratio
SSGA MSCI ACWI Ex US Index Fund	3.73	17.30	0.21
MSCI AC World ex US Index	3.52	17.34	0.20

PIMCO RAE Fund Global Ex US
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

PIMCO RAE Fundamental Global Ex US Fund vs. eV ACWI ex-US Value Equity

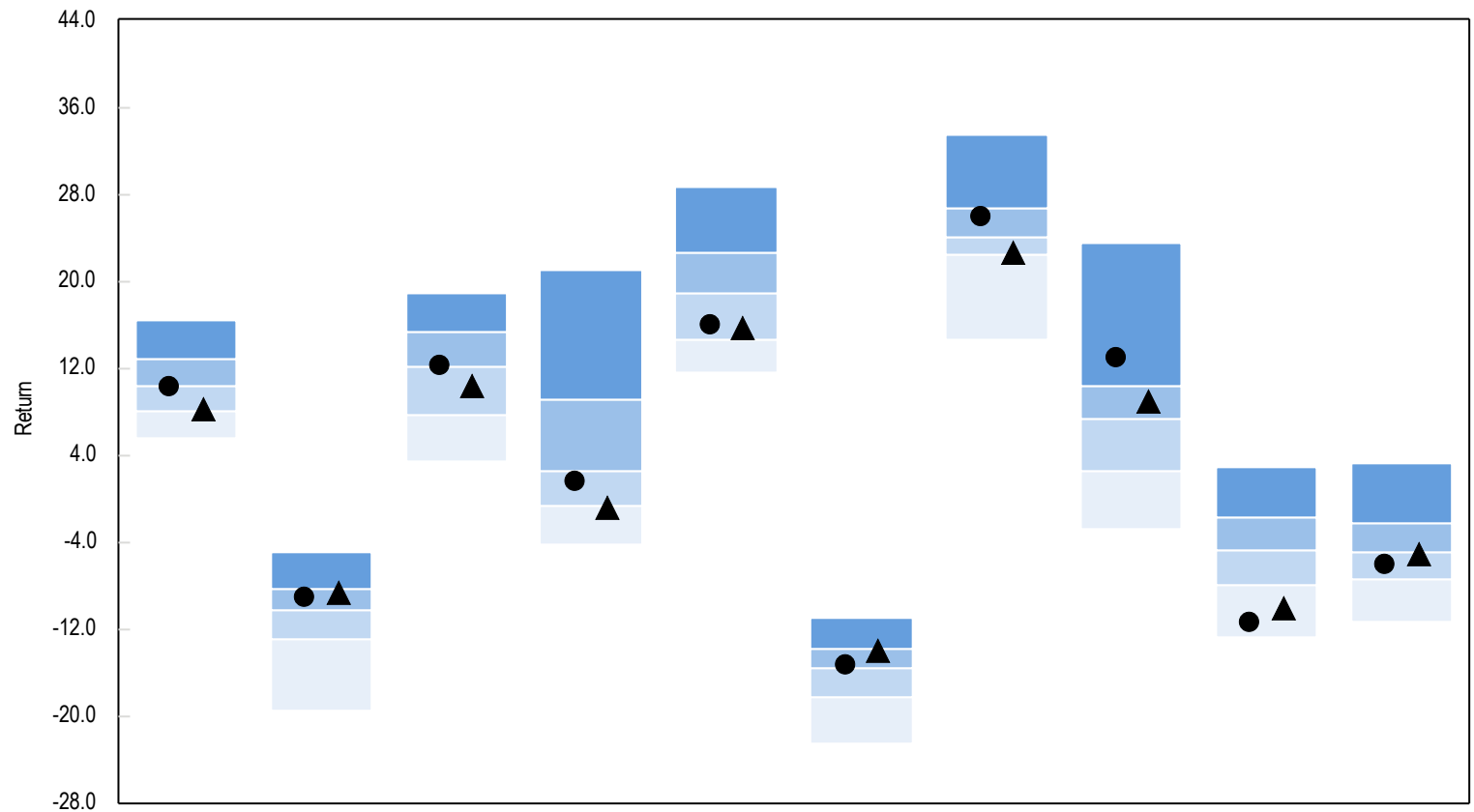


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● PIMCO RAE Fundamental Global Ex US Fund	10.33 (51)	16.40 (37)	12.66 (36)	3.67 (51)	6.70 (43)	5.03 (50)
▲ MSCI AC World ex USA Value (Net)	8.26 (74)	12.19 (74)	10.42 (61)	2.65 (67)	5.71 (55)	3.70 (81)
5th Percentile	16.49	24.08	17.36	6.36	8.72	6.75
1st Quartile	12.82	18.95	13.71	4.82	7.36	5.72
Median	10.47	14.65	11.51	3.69	6.30	5.01
3rd Quartile	8.14	12.09	9.47	2.05	4.96	4.17
95th Percentile	5.51	8.86	6.85	0.77	3.46	2.88
Population	62	62	57	54	48	39

PIMCO RAE Fund Global Ex US
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

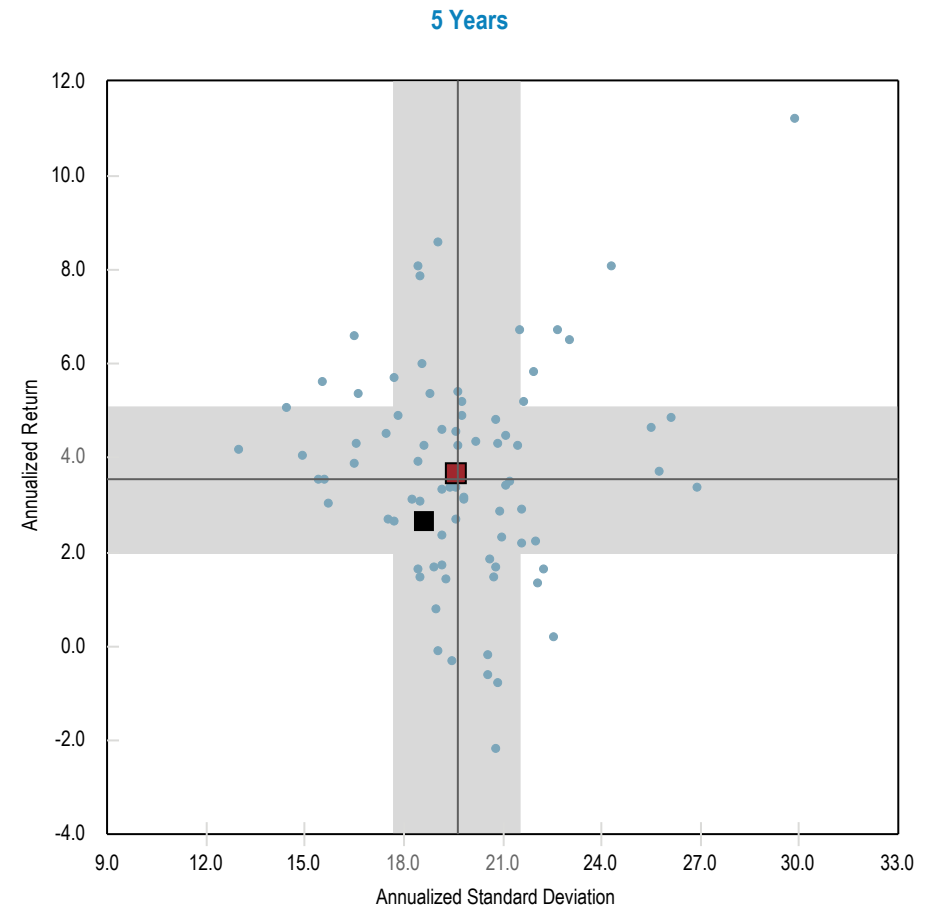
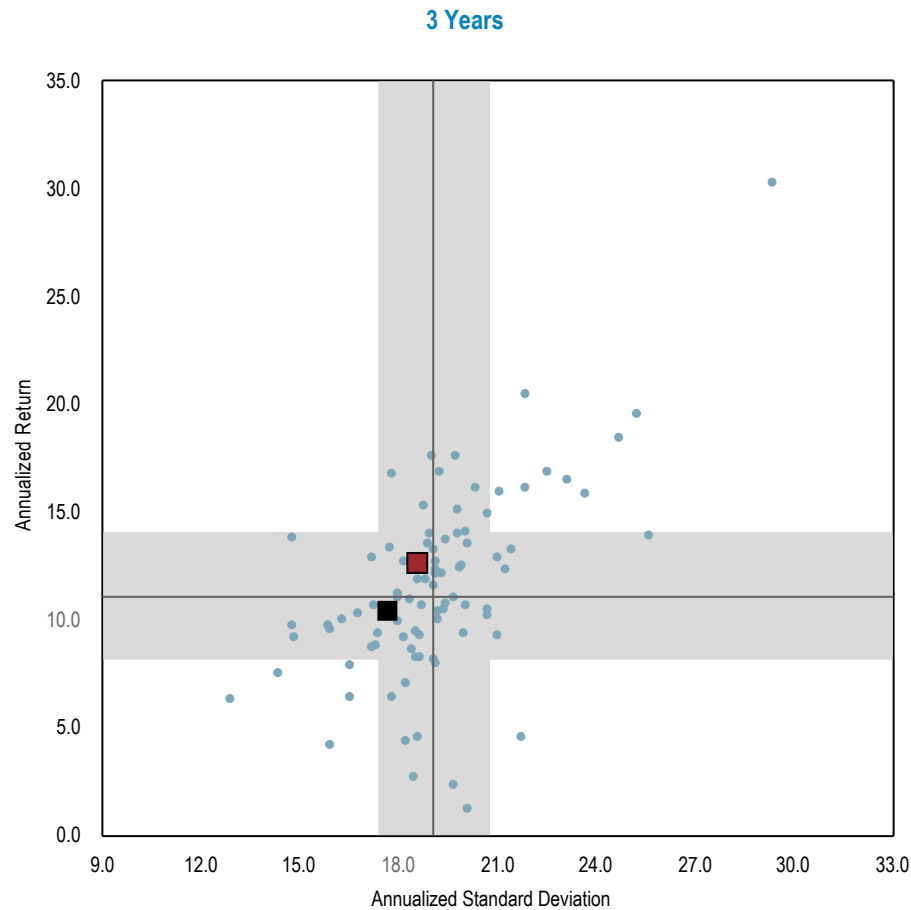
PIMCO RAE Fundamental Global Ex US Fund vs. eV ACWI ex-US Value Equity



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● PIMCO RAE Fundamental Global Ex US Fund	10.33 (51)	-8.91 (35)	12.30 (45)	1.69 (56)	16.05 (70)	-15.12 (43)	25.99 (35)	12.99 (13)	-11.36 (89)	-5.90 (58)
▲ MSCI AC World ex USA Value (Net)	8.26 (74)	-8.59 (29)	10.46 (62)	-0.77 (77)	15.72 (73)	-13.97 (27)	22.66 (70)	8.92 (36)	-10.06 (84)	-5.10 (54)
5th Percentile	16.49	-4.87	18.89	21.12	28.64	-10.86	33.58	23.64	2.90	3.27
1st Quartile	12.82	-8.30	15.38	9.13	22.68	-13.77	26.69	10.41	-1.73	-2.16
Median	10.47	-10.30	12.16	2.50	18.86	-15.59	24.10	7.46	-4.79	-4.80
3rd Quartile	8.14	-12.87	7.75	-0.70	14.74	-18.16	22.45	2.52	-7.83	-7.39
95th Percentile	5.51	-19.41	3.53	-4.15	11.68	-22.46	14.61	-2.75	-12.68	-11.33
Population	62	63	67	68	66	64	61	60	60	58

PIMCO RAE Fundamental Global Ex US Fund Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



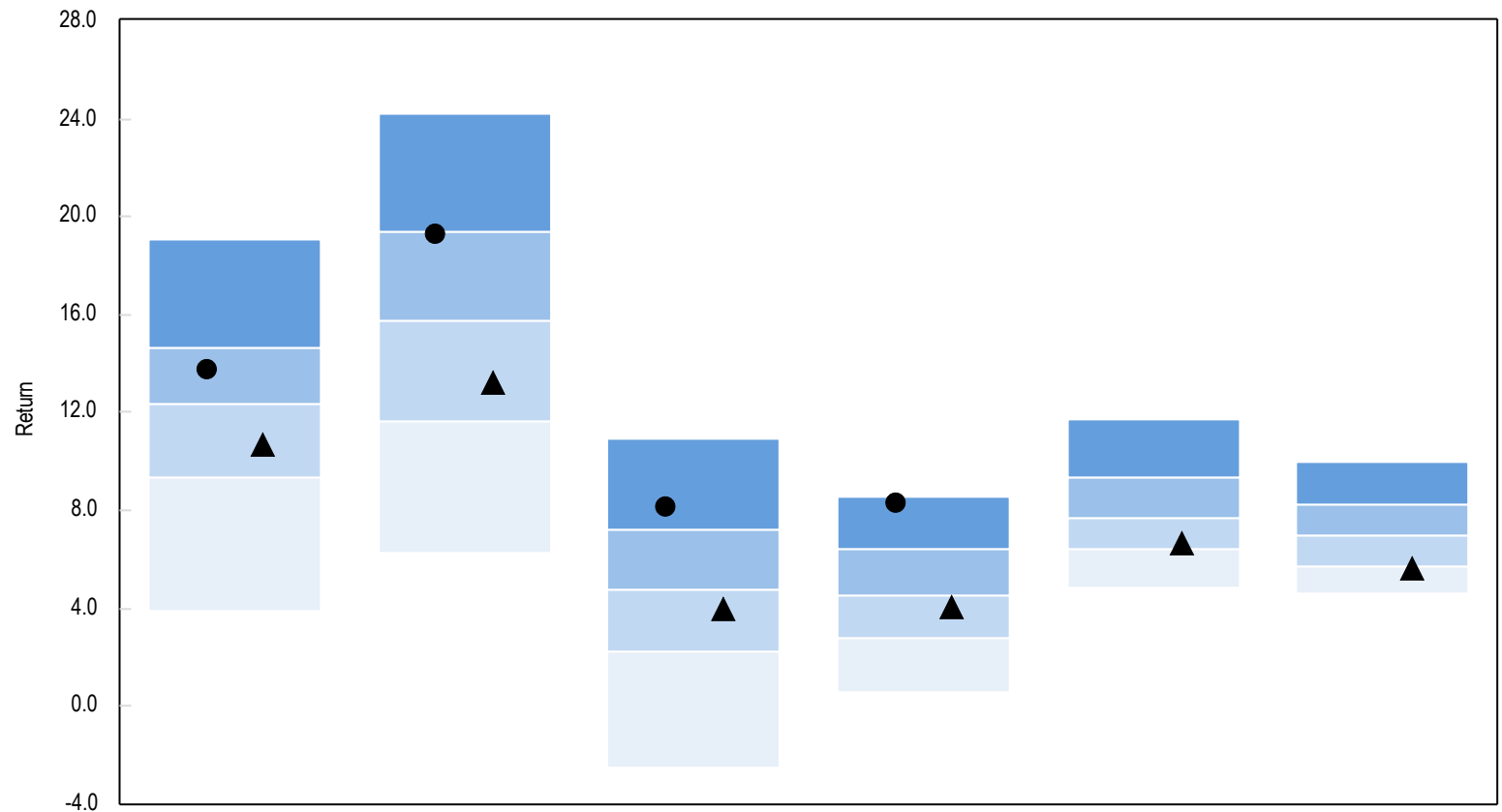
	3 Years			
	Return	Standard Deviation	Sharpe Ratio	
■ PIMCO RAE Fundamental Global Ex US Fund	12.66	18.57	0.67	
■ MSCI AC World ex USA Value (Net)	10.42	17.63	0.58	

	5 Years			
	Return	Standard Deviation	Sharpe Ratio	
■ PIMCO RAE Fundamental Global Ex US Fund	3.67	19.56	0.21	
■ MSCI AC World ex USA Value (Net)	2.65	18.60	0.15	

SGA International Growth
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SGA International Growth vs. eV ACWI ex-US Growth Equity



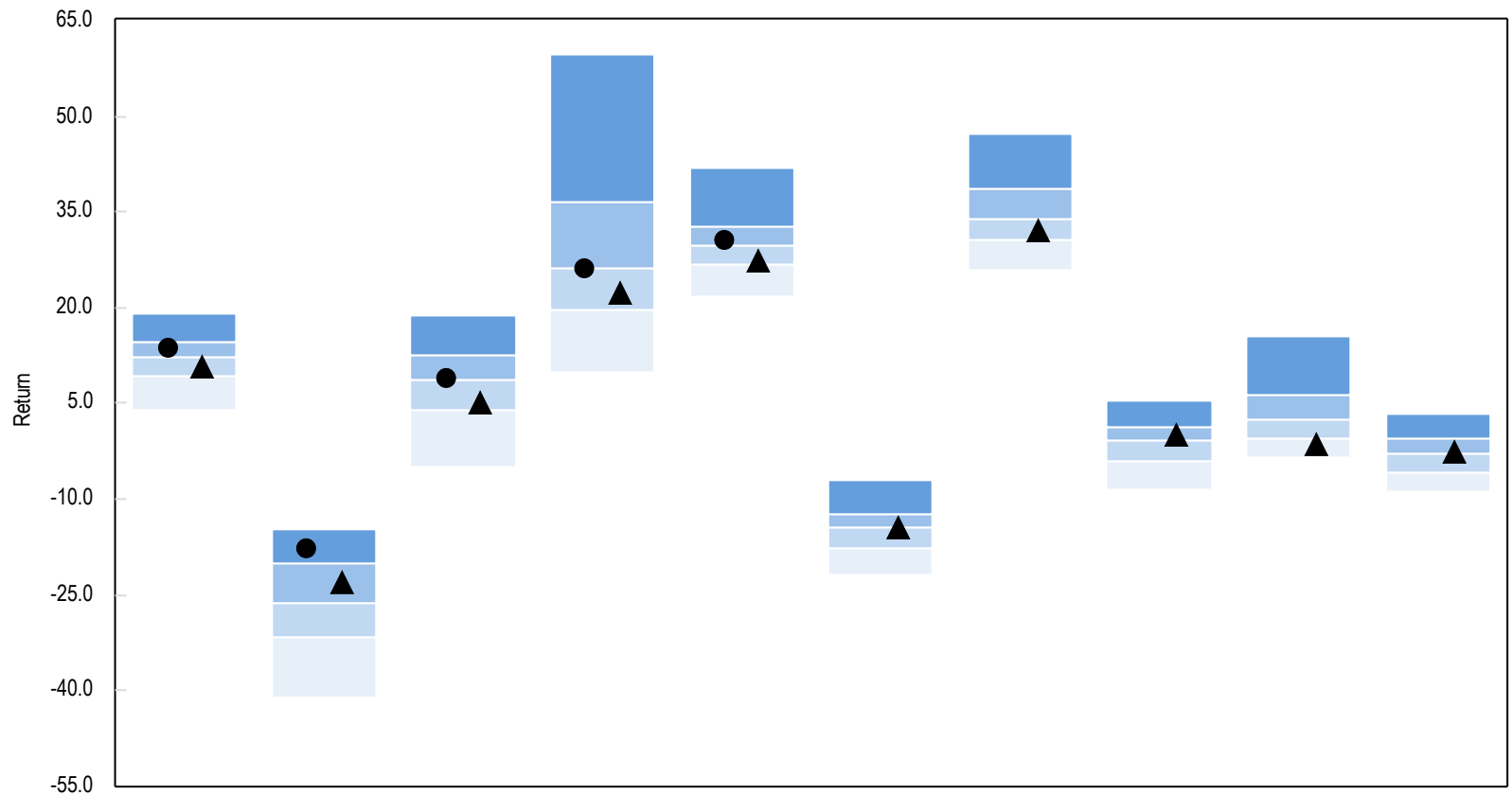
	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● SGA International Growth	13.75 (33)	19.28 (27)	8.15 (18)	8.31 (7)	-	-
▲ MSCI AC World ex USA Growth (Net)	10.70 (62)	13.26 (68)	3.96 (62)	4.06 (58)	6.69 (74)	5.61 (77)
5th Percentile	19.07	24.25	10.96	8.59	11.72	9.95
1st Quartile	14.65	19.39	7.23	6.41	9.35	8.26
Median	12.37	15.74	4.79	4.52	7.66	6.97
3rd Quartile	9.32	11.61	2.24	2.77	6.47	5.68
95th Percentile	3.93	6.28	-2.47	0.58	4.83	4.64
Population	111	111	105	95	86	66

SGA International Growth

Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

SGA International Growth vs. eV ACWI ex-US Growth Equity



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● SGA International Growth	13.75 (33)	-17.76 (14)	9.11 (44)	26.04 (51)	30.52 (42)	-	-	-	-	-
▲ MSCI AC World ex USA Growth (Net)	10.70 (62)	-23.05 (35)	5.09 (73)	22.20 (69)	27.34 (74)	-14.43 (52)	32.01 (69)	0.12 (41)	-1.25 (85)	-2.65 (50)
5th Percentile	19.07	-14.62	18.87	59.75	41.93	-7.07	47.26	5.48	15.52	3.26
1st Quartile	14.65	-20.16	12.66	36.49	32.70	-12.36	38.73	1.44	6.19	-0.45
Median	12.37	-26.25	8.61	26.08	29.82	-14.26	34.00	-0.71	2.61	-2.84
3rd Quartile	9.32	-31.54	4.02	19.79	26.79	-17.71	30.70	-4.01	-0.39	-5.75
95th Percentile	3.93	-41.11	-4.78	10.01	21.74	-21.68	25.81	-8.59	-3.46	-8.65
Population	111	118	119	115	112	106	106	103	95	88

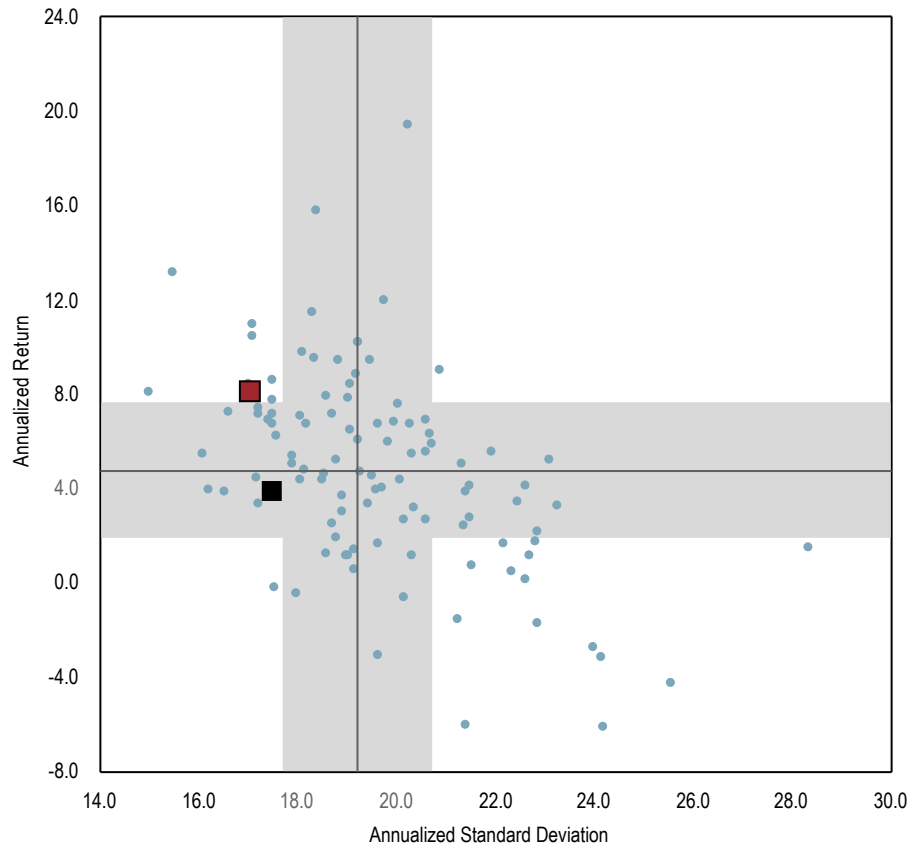
SGA International Growth

Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association

Period Ending: June 30, 2023

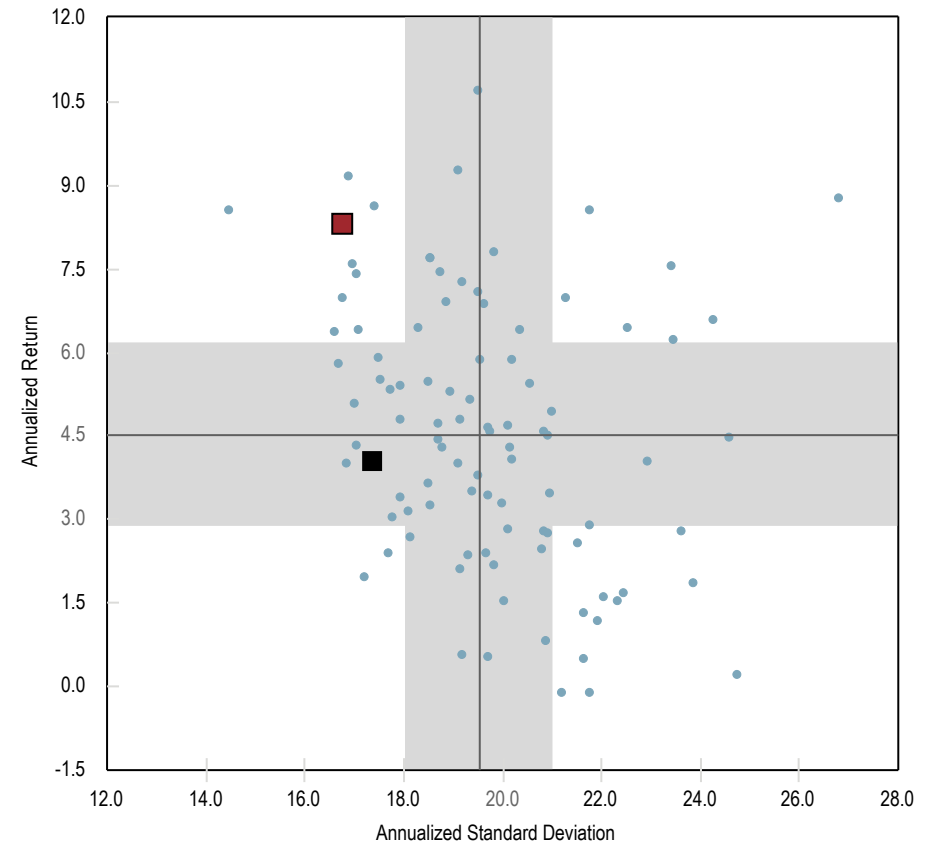
3 Years



3 Years

	Return	Standard Deviation	Sharpe Ratio
SGA International Growth	8.15	17.01	0.47
MSCI AC World ex USA Growth (Net)	3.96	17.48	0.24

5 Years



5 Years

	Return	Standard Deviation	Sharpe Ratio
SGA International Growth	8.31	16.74	0.47
MSCI AC World ex USA Growth (Net)	4.06	17.35	0.23

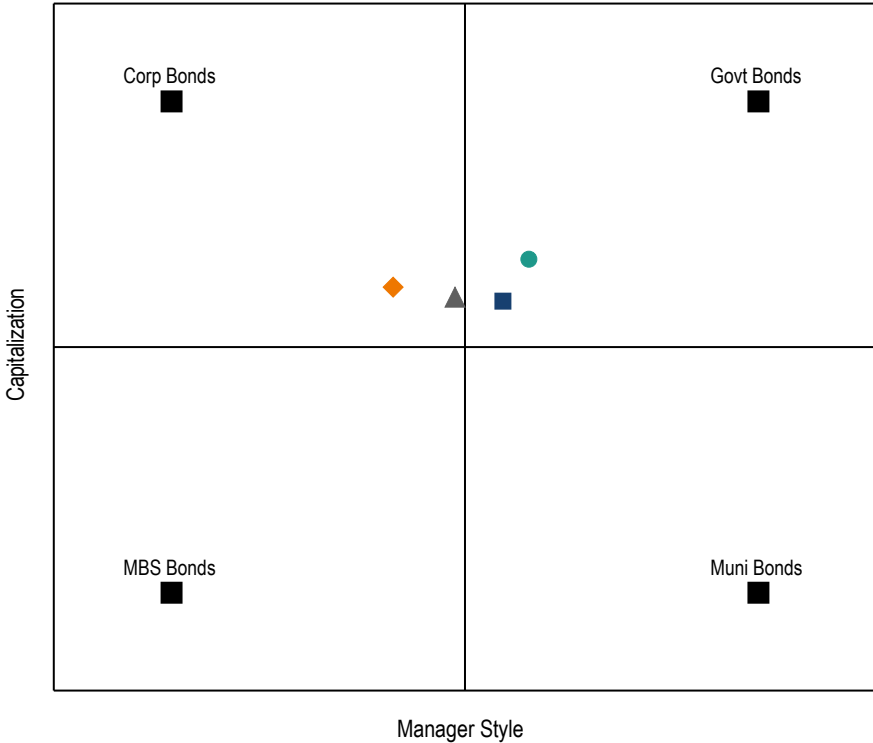
Total Fixed Income
Asset Class Overview (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020
Total Fixed Income	336,346,157	100.0	0.0	3.2	1.4	-3.1	0.1	1.2	-13.5	-2.2	4.7
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.1
Total Domestic Fixed Income	282,785,236	84.1	-0.6	2.6	-0.4	-3.2	0.9	1.7	-13.7	-0.7	7.9
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.1
BlackRock Core Plus Fixed Income	78,020,823	23.2	-0.9	2.2	-0.8	-4.0	0.8	1.6	-13.8	-1.4	8.4
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	1.5	-13.0	-1.5	7.1
eV US Core Plus Fixed Inc Rank			83	85	79	95	87	92	63	88	51
Doubleline Core Plus	103,480,100	30.8	-0.3	3.1	0.2	-2.5	0.6	-	-12.7	-0.2	5.2
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	-	-13.0	-1.5	7.1
eV US Core Plus Fixed Inc Rank			19	14	48	32	96	-	24	38	91
Mackay Shields Core Plus	101,284,312	30.1	-0.8	2.4	-0.5	-3.2	1.1	-	-14.6	-0.4	9.9
Blmbg. U.S. Aggregate Index			-0.8	2.1	-0.9	-4.0	0.8	-	-13.0	-1.5	7.1
eV US Core Plus Fixed Inc Rank			76	68	76	68	58	-	87	48	22
Total Emerging Markets Fixed Income	53,560,921	15.9	3.6	6.9	12.5	0.0	-	-	-12.4	-5.3	4.6
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			2.3	5.9	9.4	-2.2	-	-	-14.8	-5.3	4.0
PGIM Emerging Markets Debt	53,560,921	15.9	3.6	6.9	12.5	0.0	-	-	-12.4	-5.3	4.6
50% JPM EMBI Global Div/50% JPM GBI EM Global Div			2.3	5.9	9.4	-2.2	-	-	-14.8	-5.3	4.0
eV Emg Mkts Fixed Inc - Blended Currency Rank			27	15	20	29	-	-	37	67	72

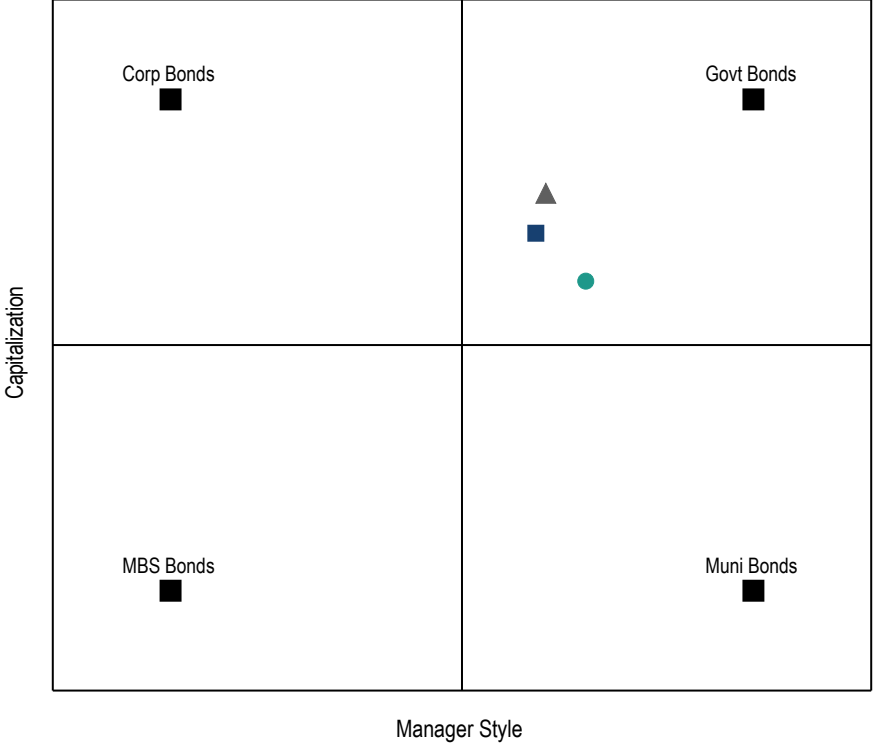
Franklin Templeton Global Bond Plus liquidated 12/28/2021.

Fixed Income Style Map (3 Years)



- BlackRock Core Plus Fixed Income
- Doubleline Core Plus
- MacKay Shields Core Plus
- PGIM Emerging Markets Debt

Fixed Income Style Map (5 Years)

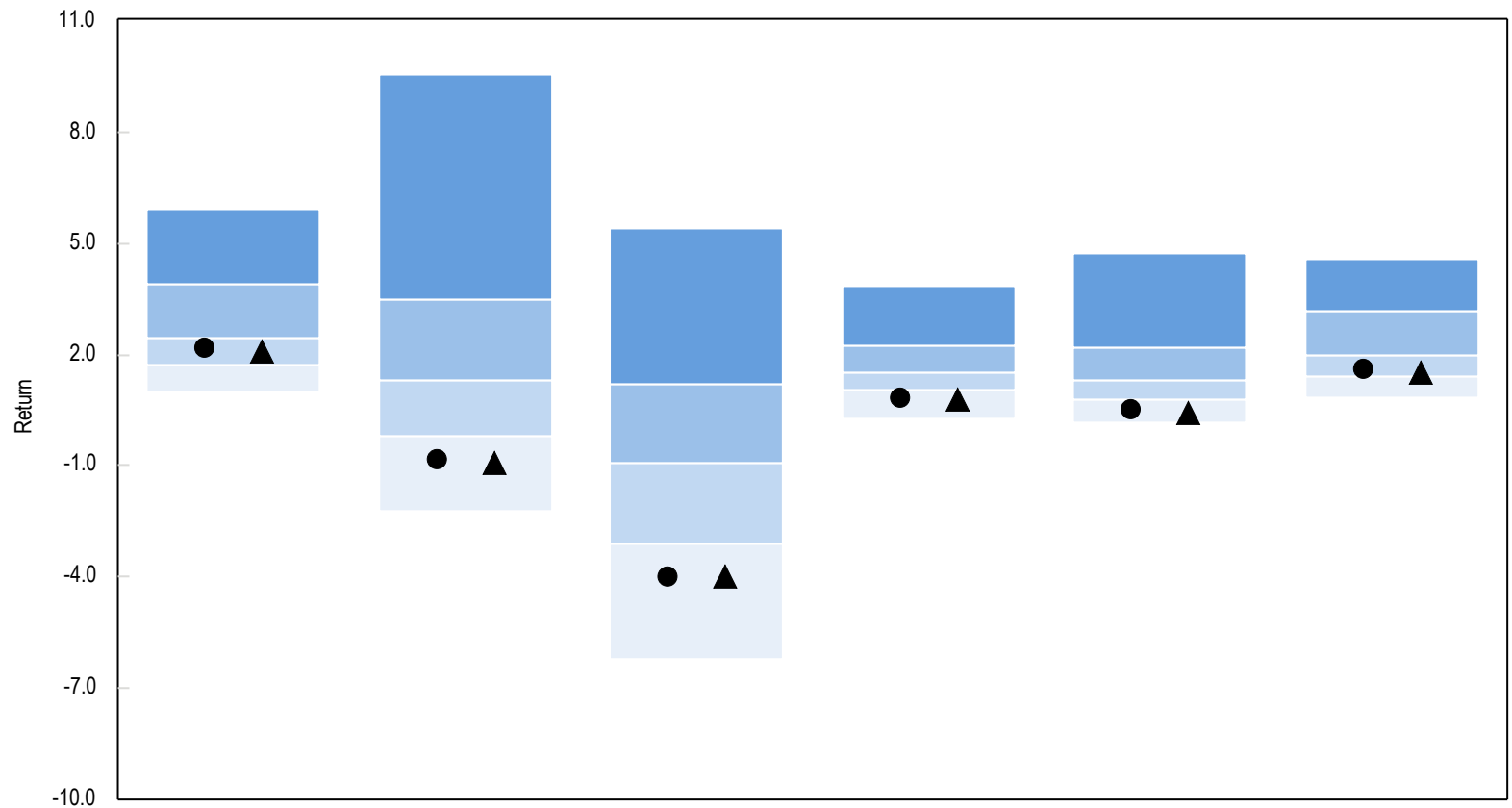


- BlackRock Core Plus Fixed Income
- Doubleline Core Plus
- MacKay Shields Core Plus

BlackRock Core Plus Fixed Income
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

BlackRock Core Plus Fixed Income vs. eV All US Fixed Inc

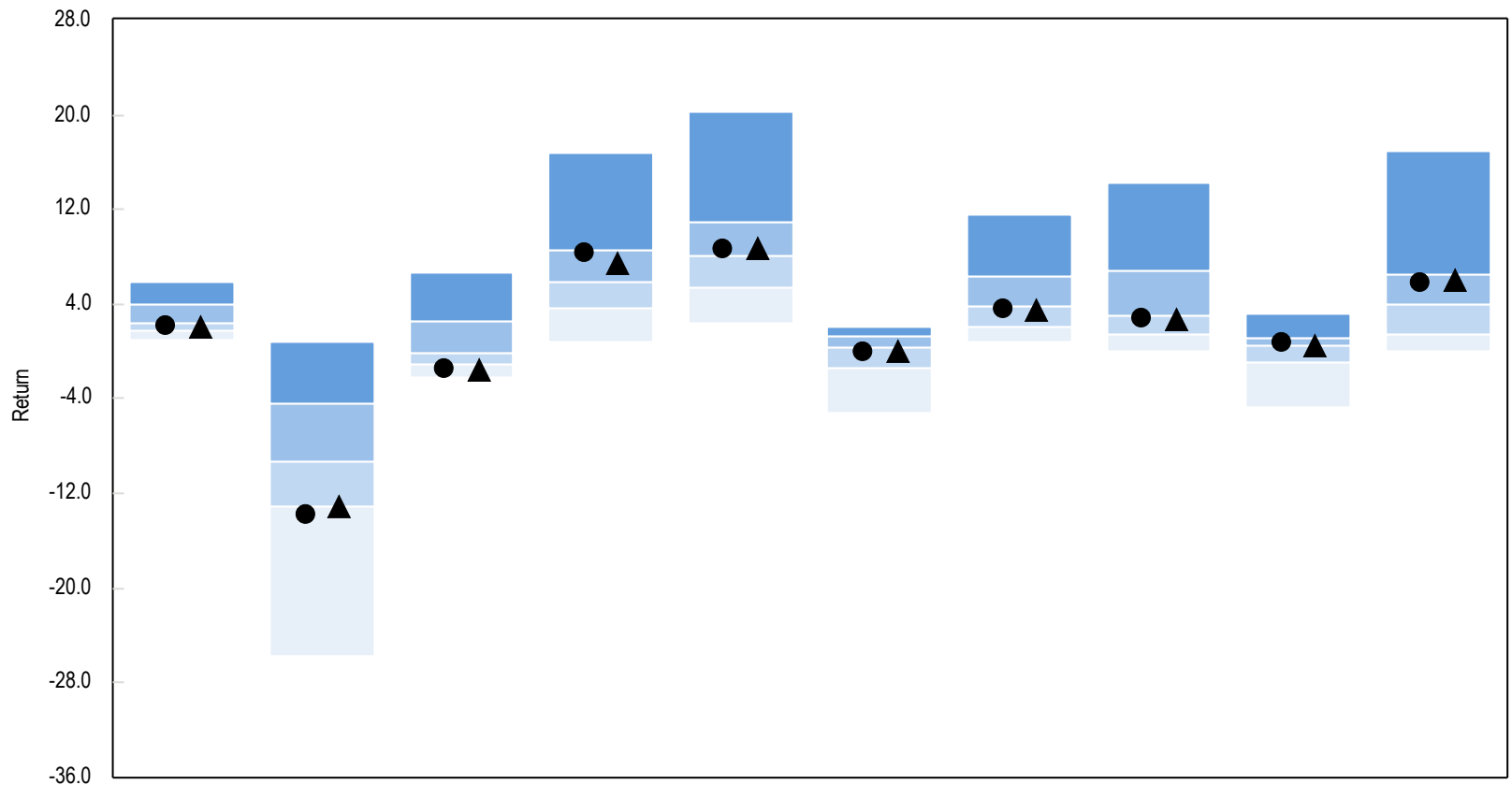


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● BlackRock Core Plus Fixed Income	2.18 (61)	-0.82 (84)	-3.97 (89)	0.85 (85)	0.52 (89)	1.63 (65)
▲ Blmbg. U.S. Aggregate Index	2.09 (63)	-0.94 (86)	-3.97 (89)	0.77 (88)	0.44 (90)	1.52 (70)
5th Percentile	5.94	9.54	5.40	3.86	4.73	4.57
1st Quartile	3.92	3.47	1.22	2.25	2.18	3.18
Median	2.43	1.31	-0.94	1.50	1.30	1.98
3rd Quartile	1.73	-0.22	-3.11	1.05	0.80	1.38
95th Percentile	0.99	-2.23	-6.23	0.29	0.17	0.84
Population	2,047	2,036	1,970	1,875	1,740	1,545

BlackRock Core Plus Fixed Income
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

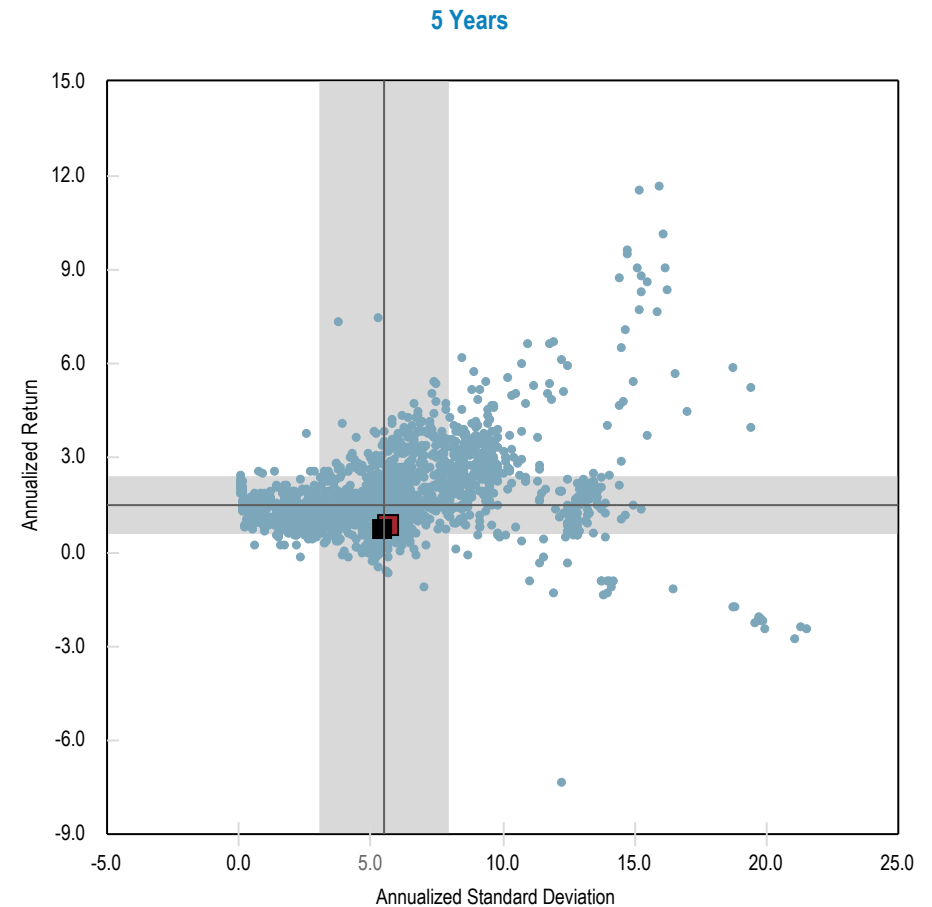
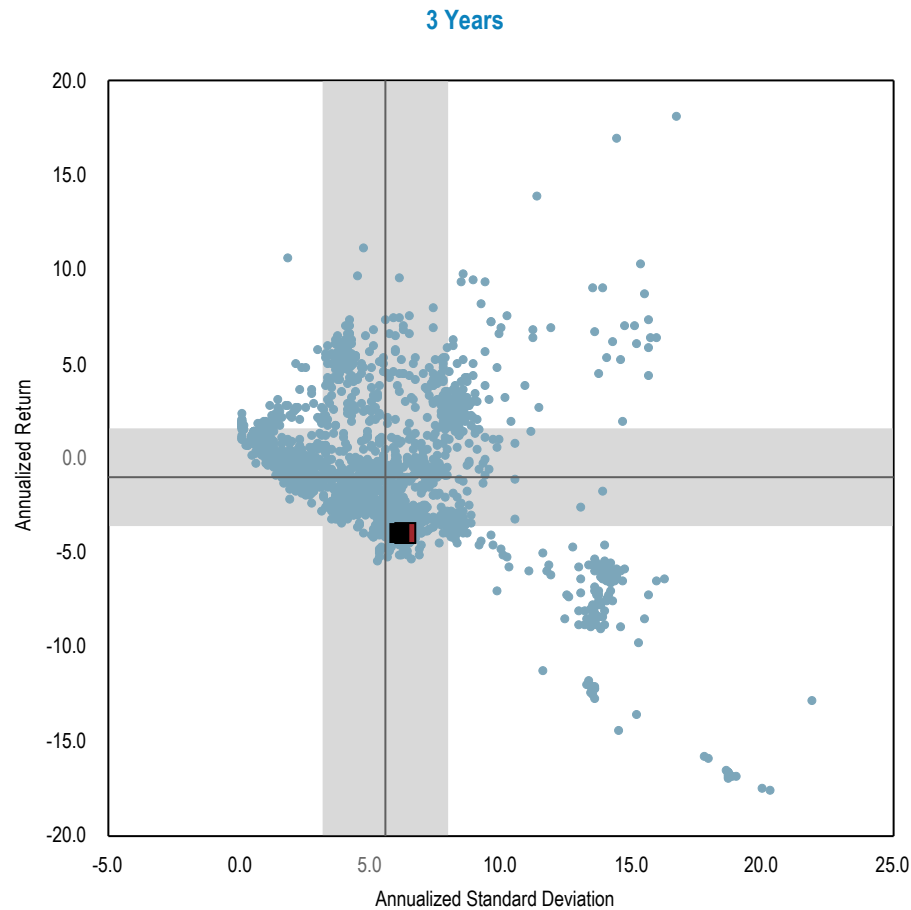
BlackRock Core Plus Fixed Income vs. eV All US Fixed Inc



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● BlackRock Core Plus Fixed Income	2.18 (61)	-13.78 (82)	-1.41 (82)	8.40 (27)	8.75 (43)	0.10 (54)	3.61 (54)	2.87 (53)	0.81 (37)	5.95 (32)
▲ Blmbg. U.S. Aggregate Index	2.09 (63)	-13.01 (74)	-1.55 (85)	7.51 (36)	8.72 (44)	0.01 (56)	3.54 (55)	2.65 (56)	0.55 (47)	5.97 (31)
5th Percentile	5.94	0.74	6.65	16.71	20.19	2.09	11.60	14.24	3.26	16.88
1st Quartile	3.92	-4.45	2.57	8.59	10.90	1.29	6.35	6.77	1.18	6.45
Median	2.43	-9.28	-0.10	5.91	8.13	0.33	3.82	3.09	0.48	3.91
3rd Quartile	1.73	-13.10	-1.14	3.59	5.35	-1.35	2.13	1.41	-0.86	1.45
95th Percentile	0.99	-25.72	-2.26	0.75	2.43	-5.14	0.84	0.00	-4.72	0.09
Population	2,047	2,242	2,315	2,354	2,372	2,387	2,357	2,336	2,322	2,281

BlackRock Core Plus Fixed Income Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



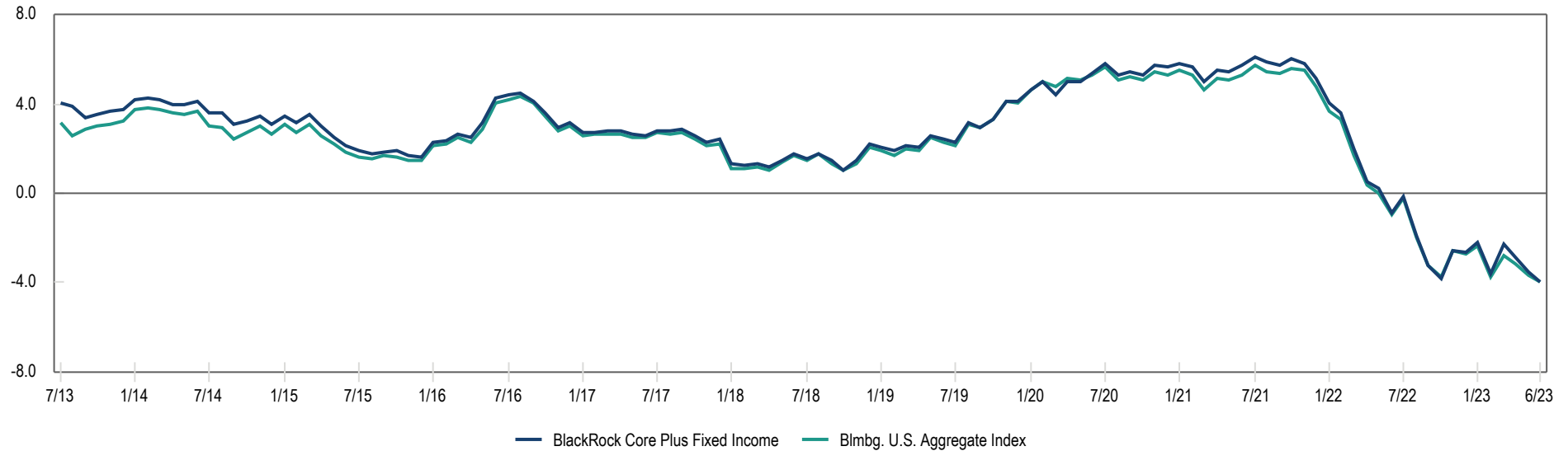
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ BlackRock Core Plus Fixed Income	-3.97	6.37	-0.81
■ Blmbg. U.S. Aggregate Index	-3.97	6.09	-0.85

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ BlackRock Core Plus Fixed Income	0.85	5.69	-0.09
■ Blmbg. U.S. Aggregate Index	0.77	5.43	-0.12

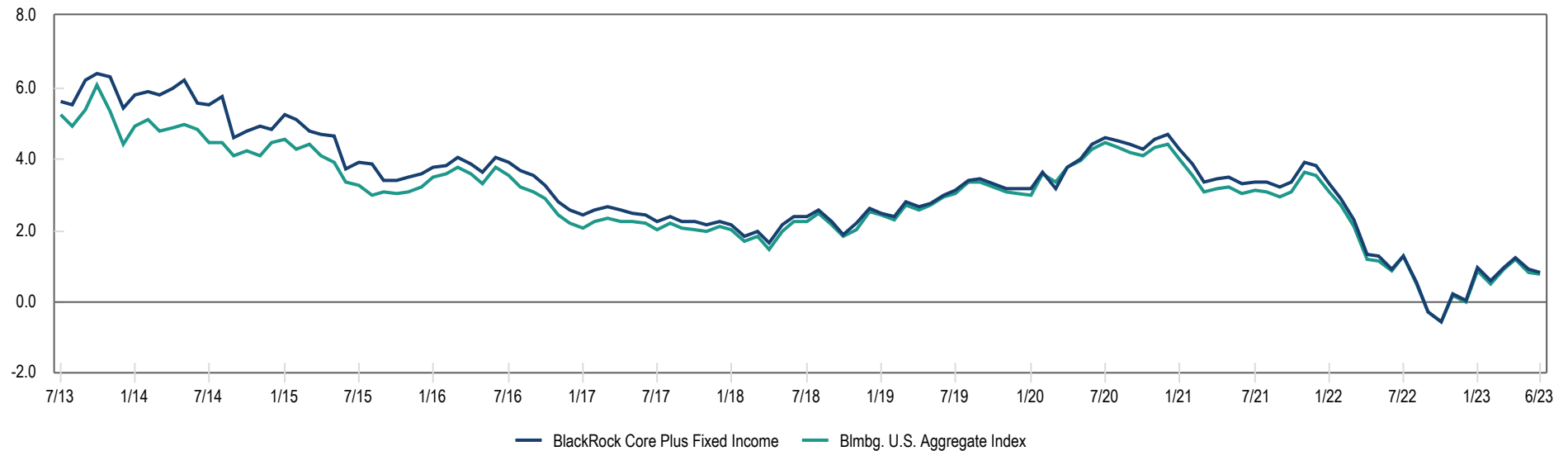
BlackRock Core Plus Fixed Income
Manager Performance - Rolling Annualized Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Rolling 3 Years Annualized Return



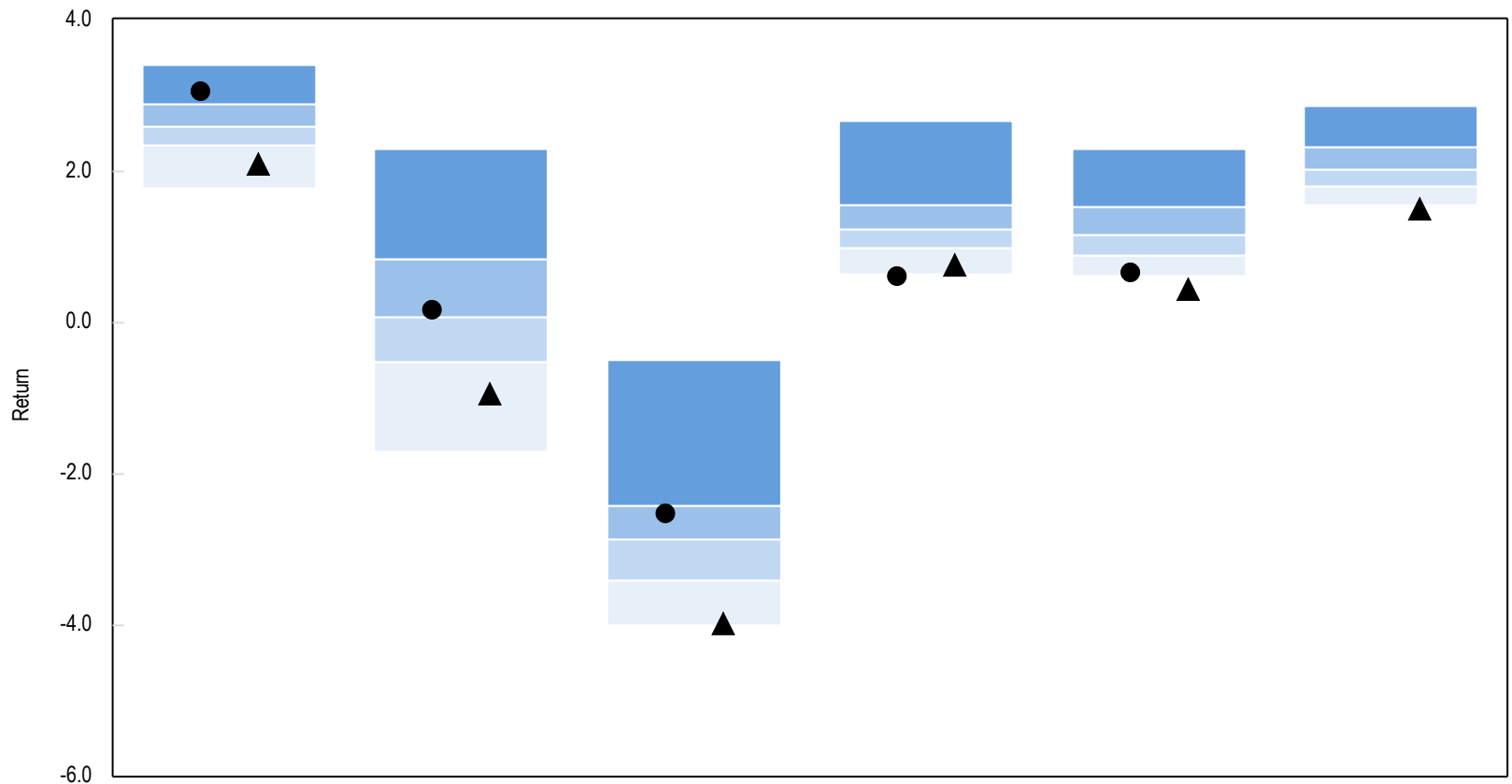
Rolling 5 Years Annualized Return



Doubleline Core Plus
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Doubleline Core Plus vs. eV US Core Plus Fixed Inc

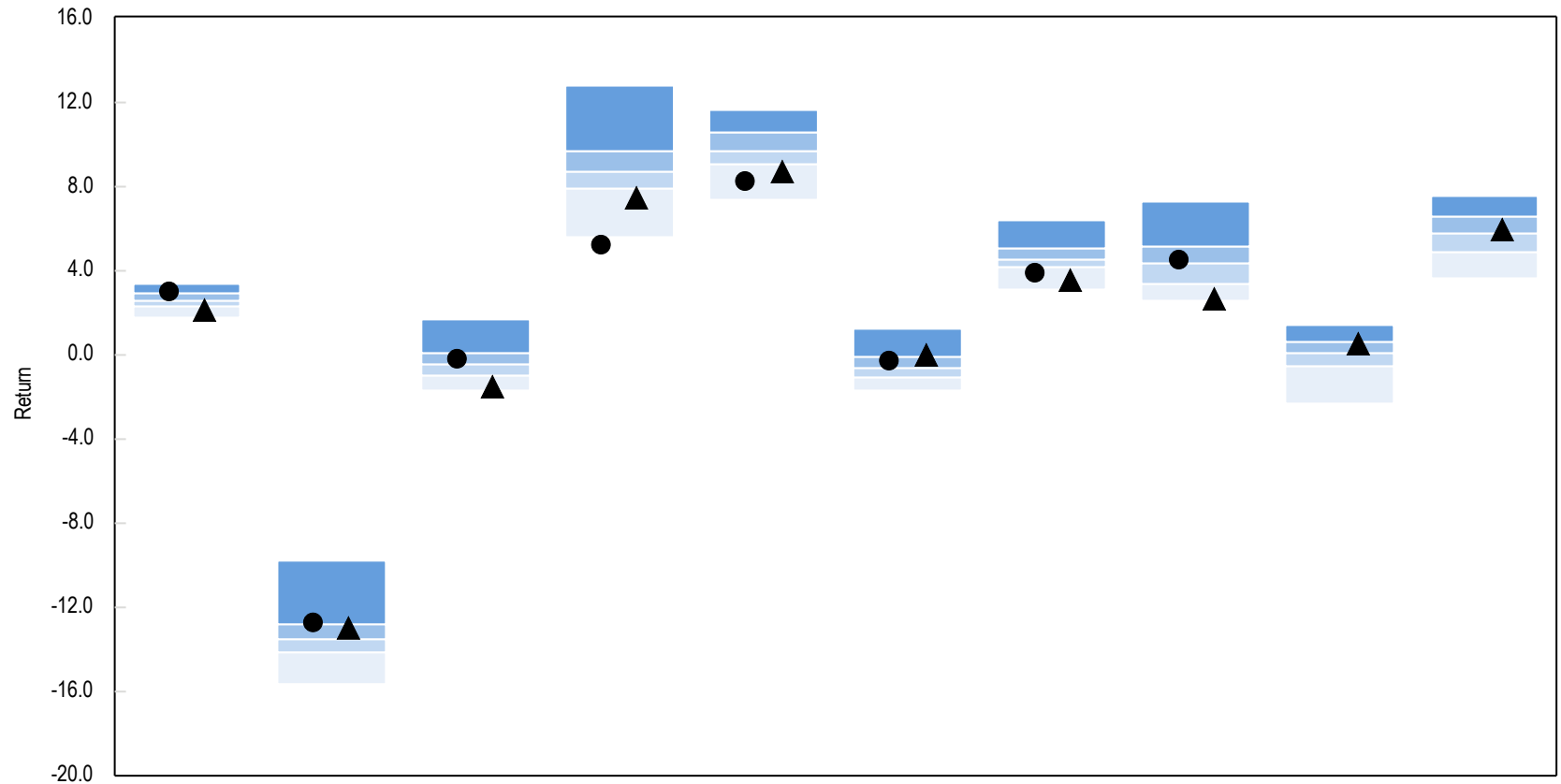


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● Doubleline Core Plus	3.05 (14)	0.16 (48)	-2.52 (32)	0.61 (96)	0.67 (92)	-
▲ Blmbg. U.S. Aggregate Index	2.09 (87)	-0.94 (83)	-3.97 (95)	0.77 (89)	0.44 (100)	1.52 (97)
5th Percentile	3.40	2.29	-0.48	2.66	2.31	2.86
1st Quartile	2.89	0.83	-2.42	1.56	1.53	2.32
Median	2.58	0.08	-2.87	1.23	1.17	2.03
3rd Quartile	2.34	-0.53	-3.40	1.00	0.88	1.81
95th Percentile	1.77	-1.69	-4.00	0.64	0.61	1.56
Population	130	130	123	117	110	100

Doubleline Core Plus Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

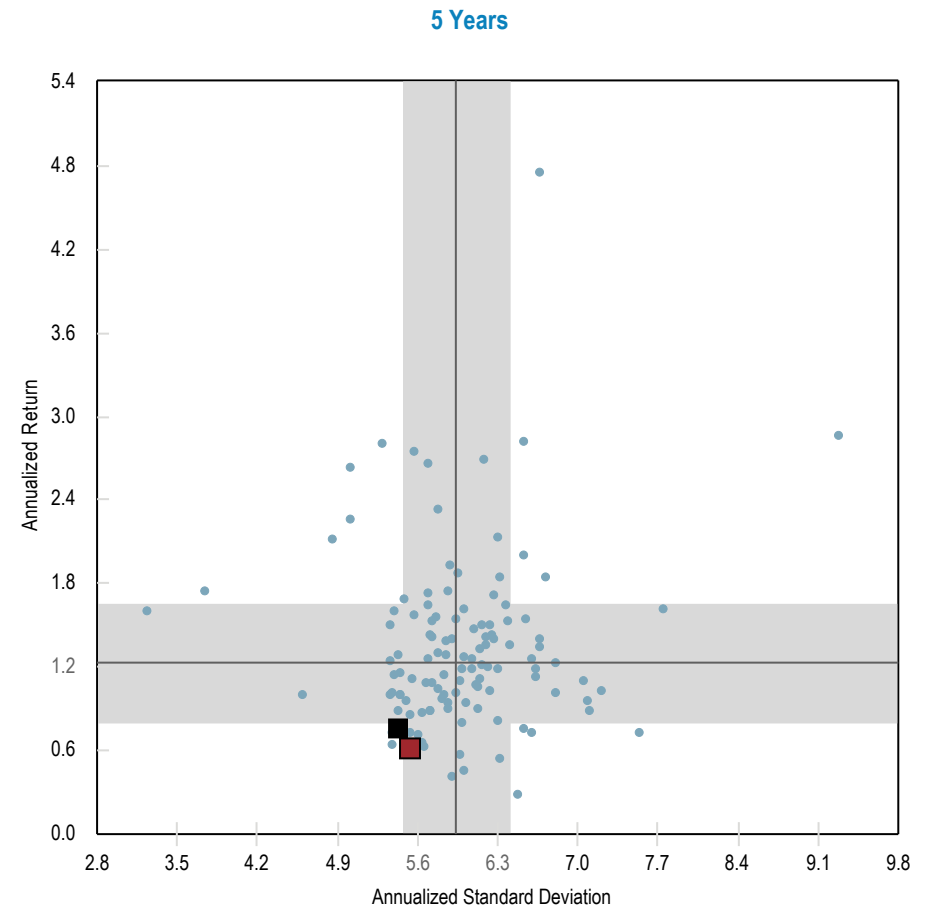
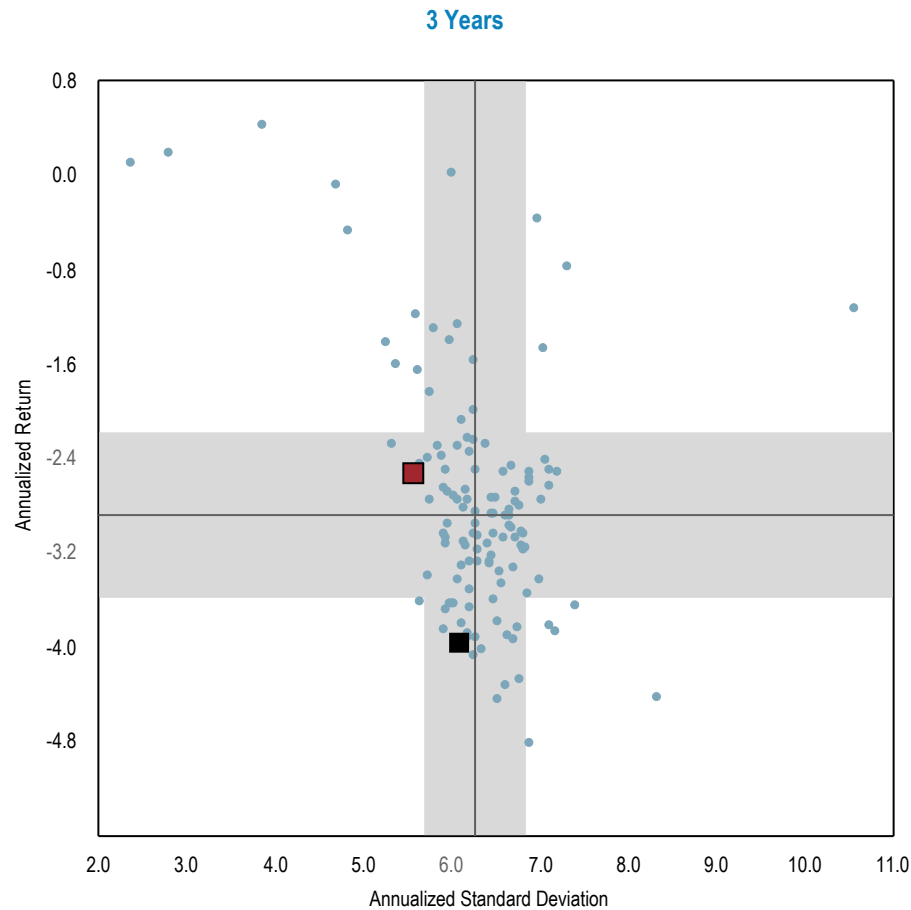
Doubleline Core Plus vs. eV US Core Plus Fixed Inc



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● Doubleline Core Plus	3.05 (14)	-12.74 (24)	-0.18 (38)	5.23 (97)	8.28 (88)	-0.28 (35)	3.93 (84)	4.55 (41)	-	-
▲ Blmbg. U.S. Aggregate Index	2.09 (87)	-13.01 (35)	-1.55 (92)	7.51 (82)	8.72 (81)	0.01 (25)	3.54 (91)	2.65 (93)	0.55 (29)	5.97 (41)
5th Percentile	3.40	-9.80	1.71	12.82	11.63	1.24	6.44	7.28	1.44	7.54
1st Quartile	2.89	-12.77	0.09	9.65	10.61	-0.07	5.11	5.16	0.65	6.59
Median	2.58	-13.47	-0.43	8.71	9.73	-0.60	4.57	4.35	0.12	5.80
3rd Quartile	2.34	-14.13	-1.02	7.89	9.03	-1.03	4.14	3.40	-0.51	4.87
95th Percentile	1.77	-15.64	-1.70	5.64	7.39	-1.66	3.14	2.58	-2.27	3.68
Population	130	140	141	144	145	143	145	142	141	139

Doubleline Core Plus Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



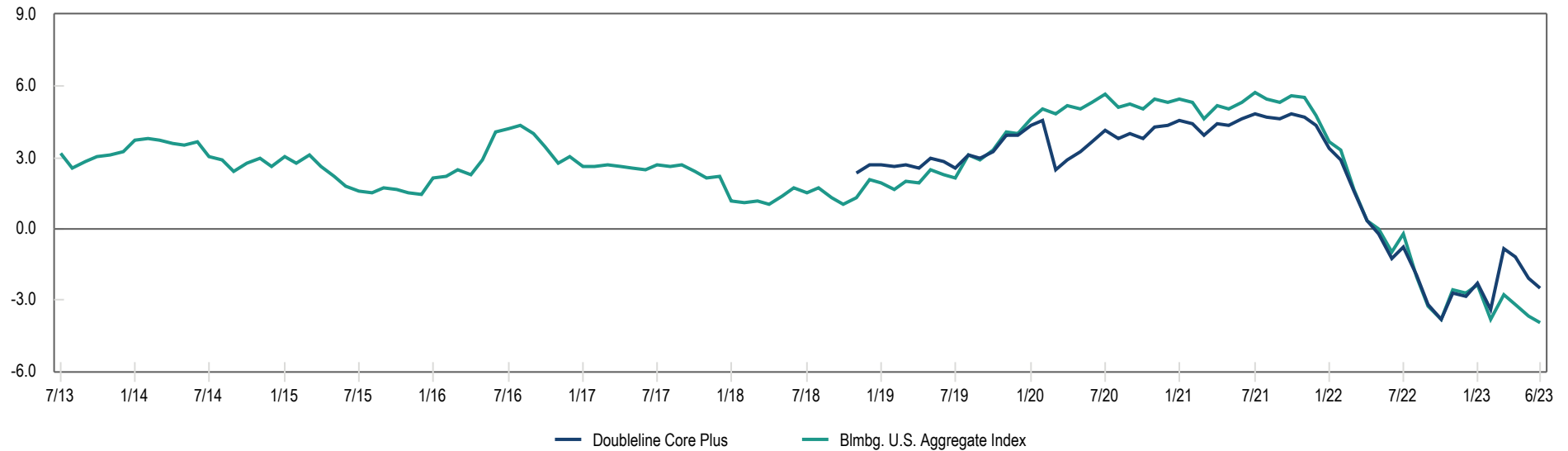
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Doubleline Core Plus	-2.52	5.57	-0.66
■ Blmbg. U.S. Aggregate Index	-3.97	6.09	-0.85

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ Doubleline Core Plus	0.61	5.53	-0.14
■ Blmbg. U.S. Aggregate Index	0.77	5.43	-0.12

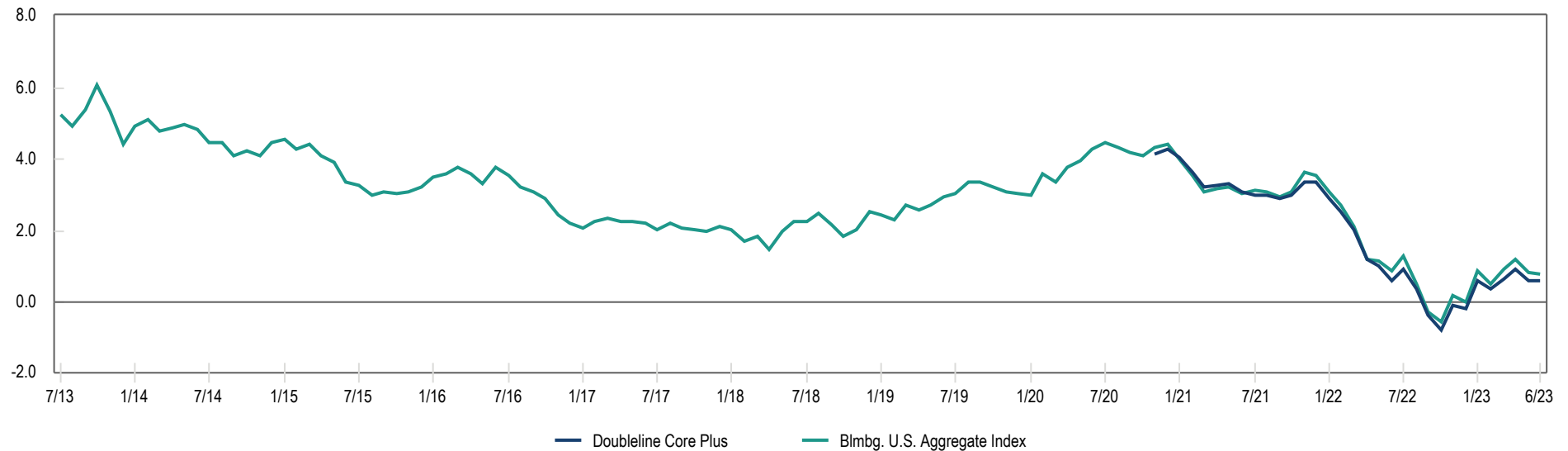
Doubleline Core Plus
Manager Performance - Rolling Annualized Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Rolling 3 Years Annualized Return



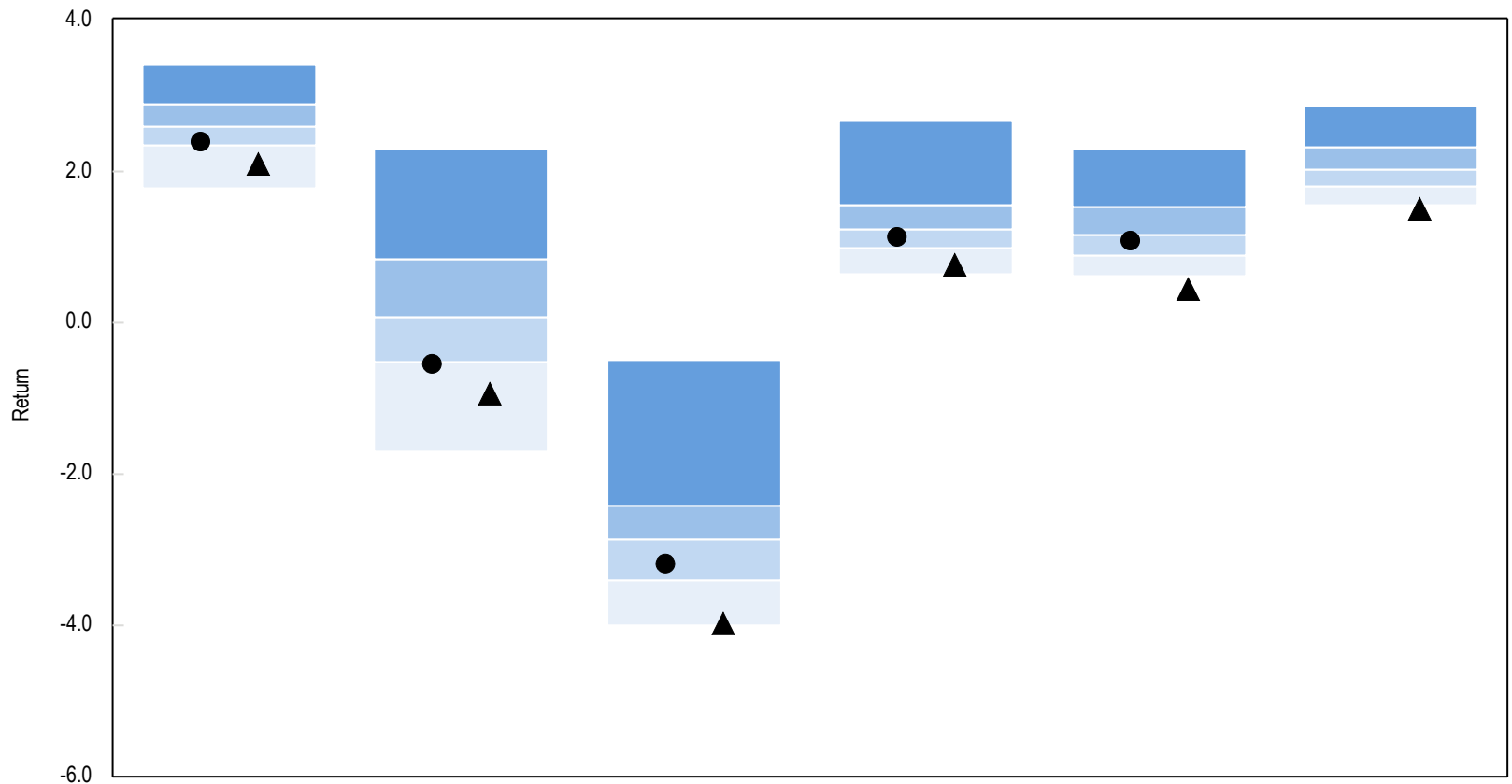
Rolling 5 Years Annualized Return



MacKay Shields Core Plus
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

MacKay Shields Core Plus vs. eV US Core Plus Fixed Inc

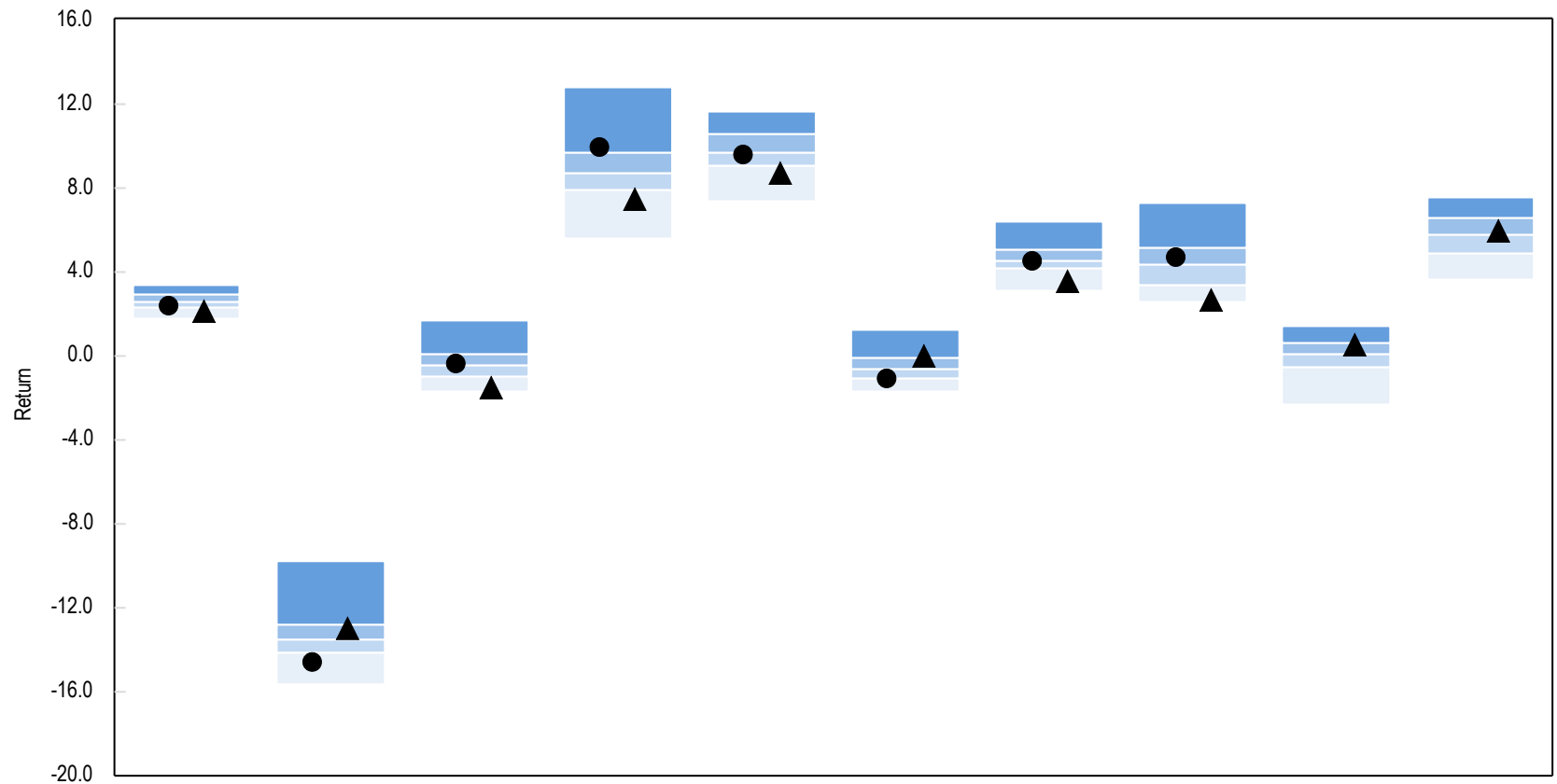


	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
● MacKay Shields Core Plus	2.40 (68)	-0.54 (76)	-3.17 (68)	1.14 (58)	1.08 (58)	-
▲ Blmbg. U.S. Aggregate Index	2.09 (87)	-0.94 (83)	-3.97 (95)	0.77 (89)	0.44 (100)	1.52 (97)
5th Percentile	3.40	2.29	-0.48	2.66	2.31	2.86
1st Quartile	2.89	0.83	-2.42	1.56	1.53	2.32
Median	2.58	0.08	-2.87	1.23	1.17	2.03
3rd Quartile	2.34	-0.53	-3.40	1.00	0.88	1.81
95th Percentile	1.77	-1.69	-4.00	0.64	0.61	1.56
Population	130	130	123	117	110	100

MacKay Shields Core Plus
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

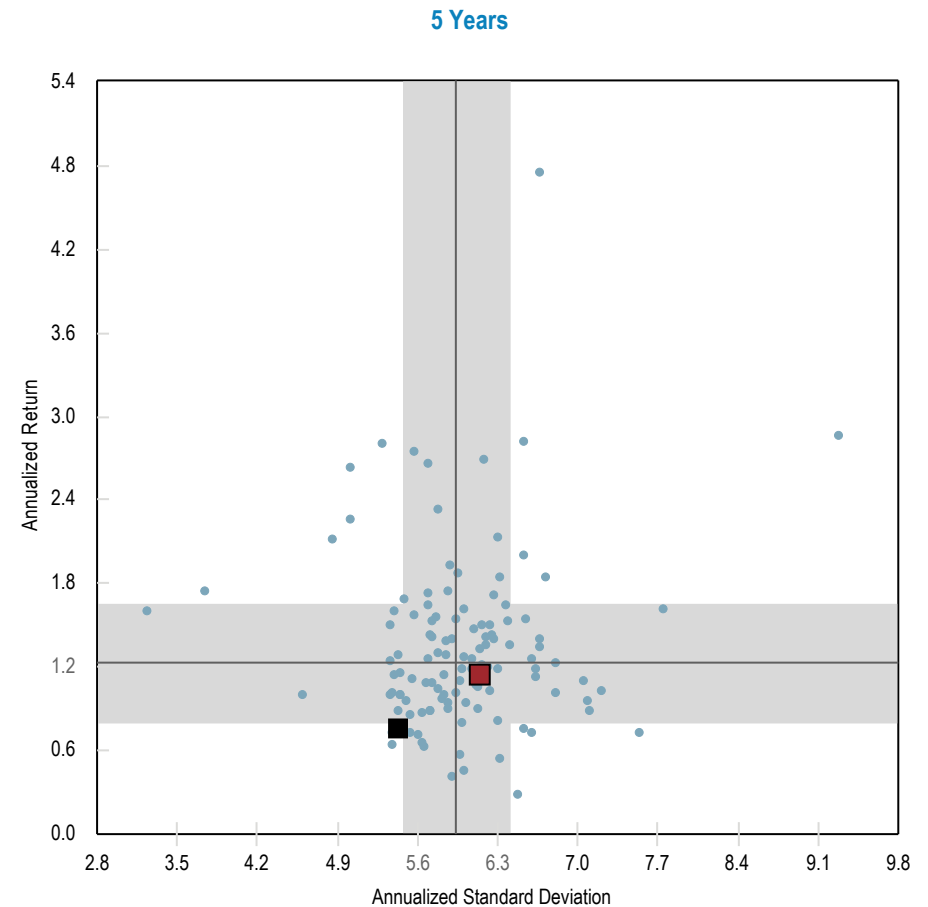
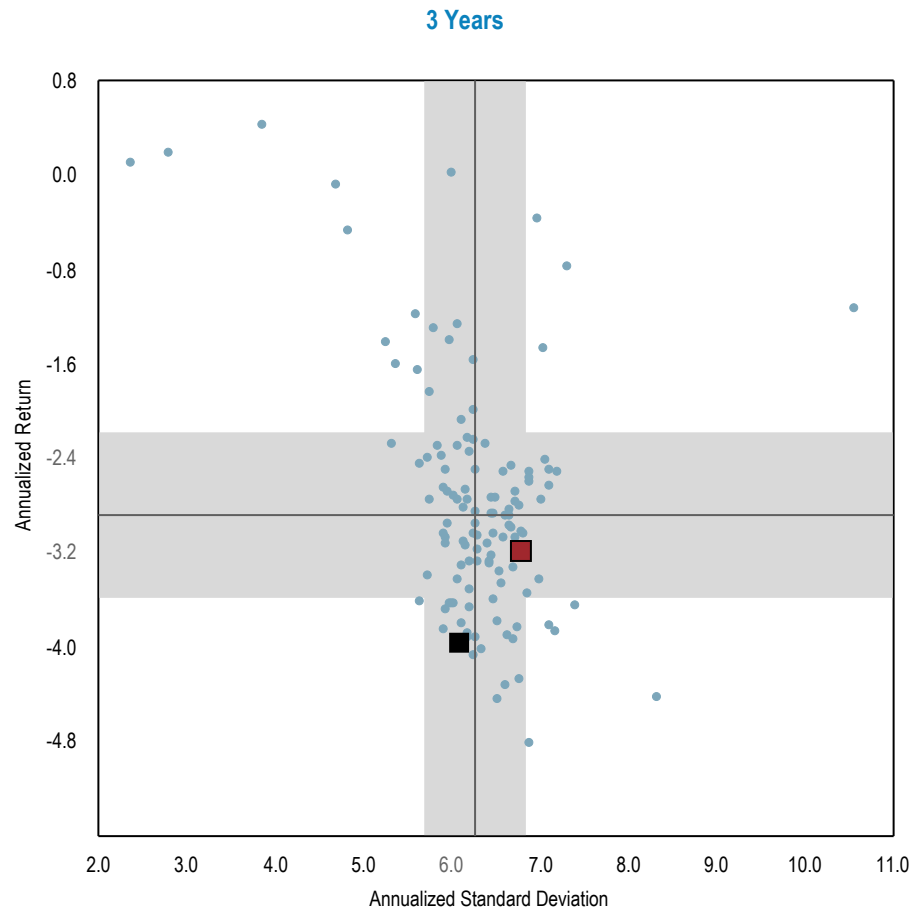
MacKay Shields Core Plus vs. eV US Core Plus Fixed Inc



	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● MacKay Shields Core Plus	2.40 (68)	-14.59 (87)	-0.36 (48)	9.92 (22)	9.60 (55)	-1.02 (75)	4.53 (53)	4.70 (37)	-	-
▲ Blmbg. U.S. Aggregate Index	2.09 (87)	-13.01 (35)	-1.55 (92)	7.51 (82)	8.72 (81)	0.01 (25)	3.54 (91)	2.65 (93)	0.55 (29)	5.97 (41)
5th Percentile	3.40	-9.80	1.71	12.82	11.63	1.24	6.44	7.28	1.44	7.54
1st Quartile	2.89	-12.77	0.09	9.65	10.61	-0.07	5.11	5.16	0.65	6.59
Median	2.58	-13.47	-0.43	8.71	9.73	-0.60	4.57	4.35	0.12	5.80
3rd Quartile	2.34	-14.13	-1.02	7.89	9.03	-1.03	4.14	3.40	-0.51	4.87
95th Percentile	1.77	-15.64	-1.70	5.64	7.39	-1.66	3.14	2.58	-2.27	3.68
Population	130	140	141	144	145	143	145	142	141	139

MacKay Shields Core Plus
Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023



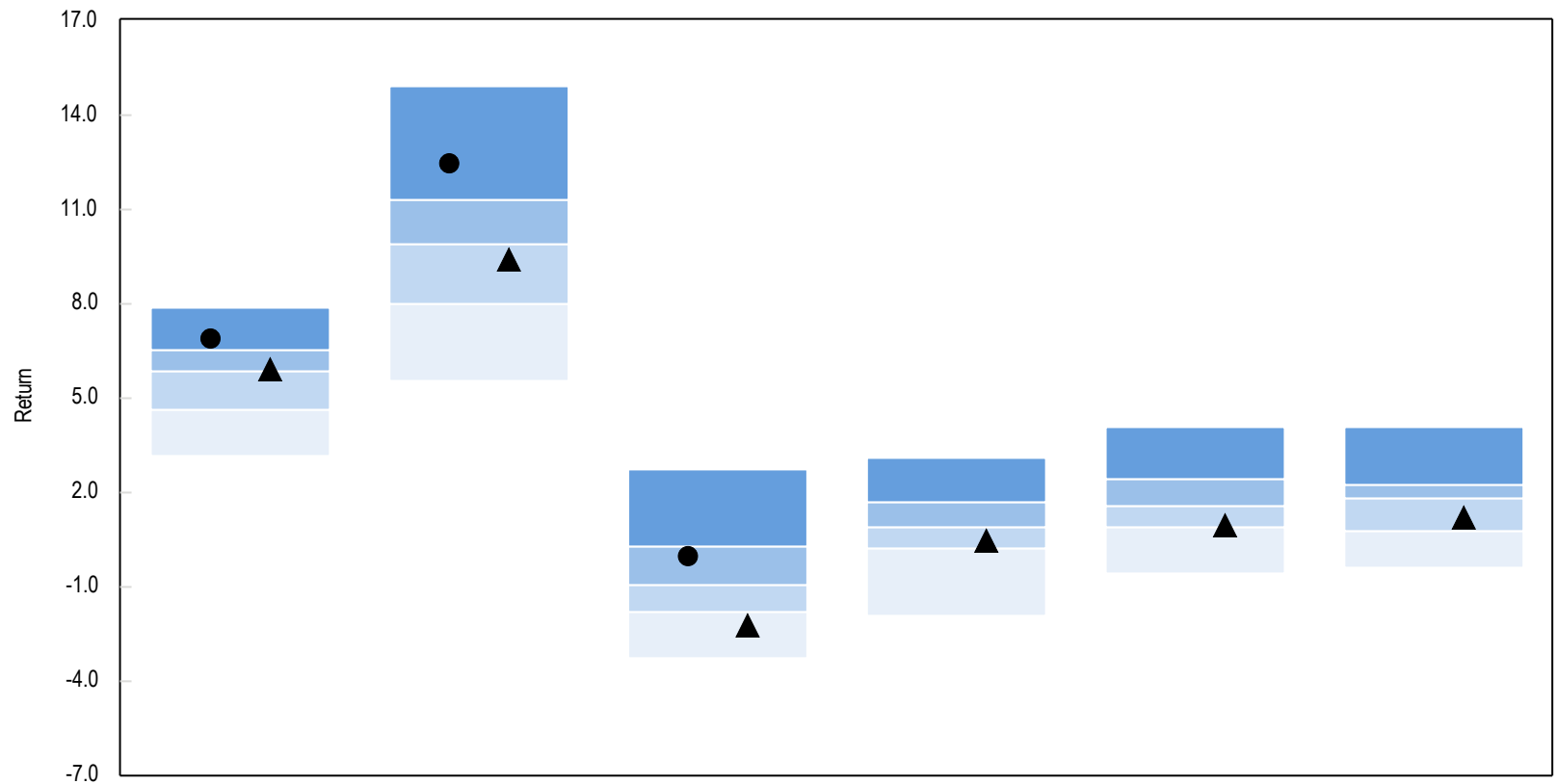
	3 Years		
	Return	Standard Deviation	Sharpe Ratio
■ MacKay Shields Core Plus	-3.17	6.78	-0.63
■ Blmbg. U.S. Aggregate Index	-3.97	6.09	-0.85

	5 Years		
	Return	Standard Deviation	Sharpe Ratio
■ MacKay Shields Core Plus	1.14	6.15	-0.04
■ Blmbg. U.S. Aggregate Index	0.77	5.43	-0.12

PGIM Emerging Markets Debt
Manager Performance Comparisons (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

PGIM Emerging Markets Debt vs. eV Emg Mkts Fixed Inc - Blended Currency

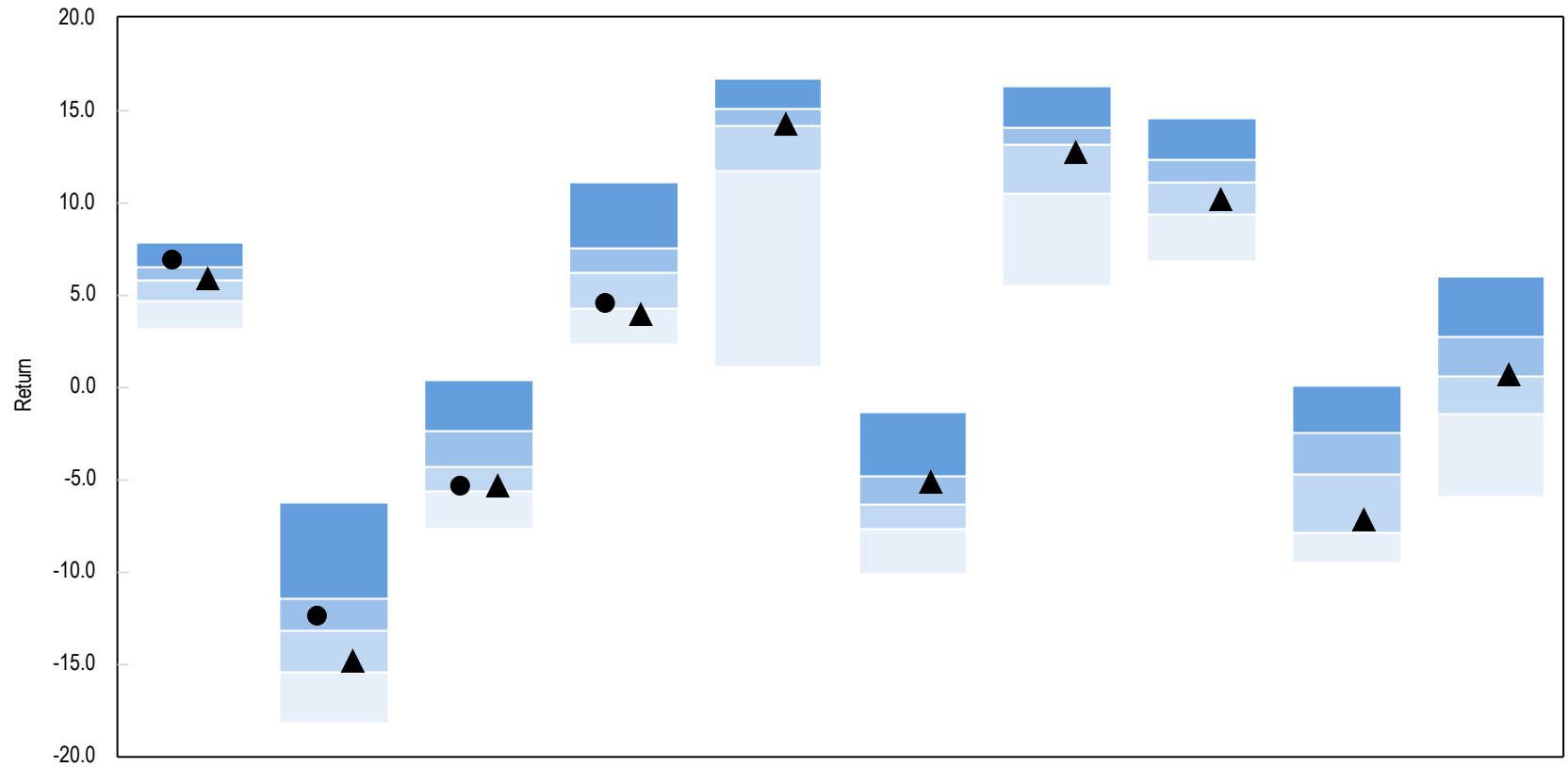


● PGIM Emerging Markets Debt	YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
▲ 50% JPM EMBI Global Div / 50% JPM GBI EM Global Div	6.92 (15)	12.46 (20)	-0.01 (29)	-	-	-
	5.94 (48)	9.41 (62)	-2.24 (81)	0.47 (69)	0.93 (72)	1.18 (69)
5th Percentile	7.89	14.93	2.74	3.09	4.06	4.08
1st Quartile	6.55	11.32	0.27	1.70	2.40	2.23
Median	5.85	9.92	-0.93	0.91	1.57	1.82
3rd Quartile	4.64	8.02	-1.81	0.20	0.87	0.79
95th Percentile	3.14	5.56	-3.26	-1.94	-0.57	-0.39
Population	68	68	66	59	48	34

PGIM Emerging Markets Debt
Consecutive Performance Comparison (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

PGIM Emerging Markets Debt vs. eV Emg Mkts Fixed Inc - Blended Currency

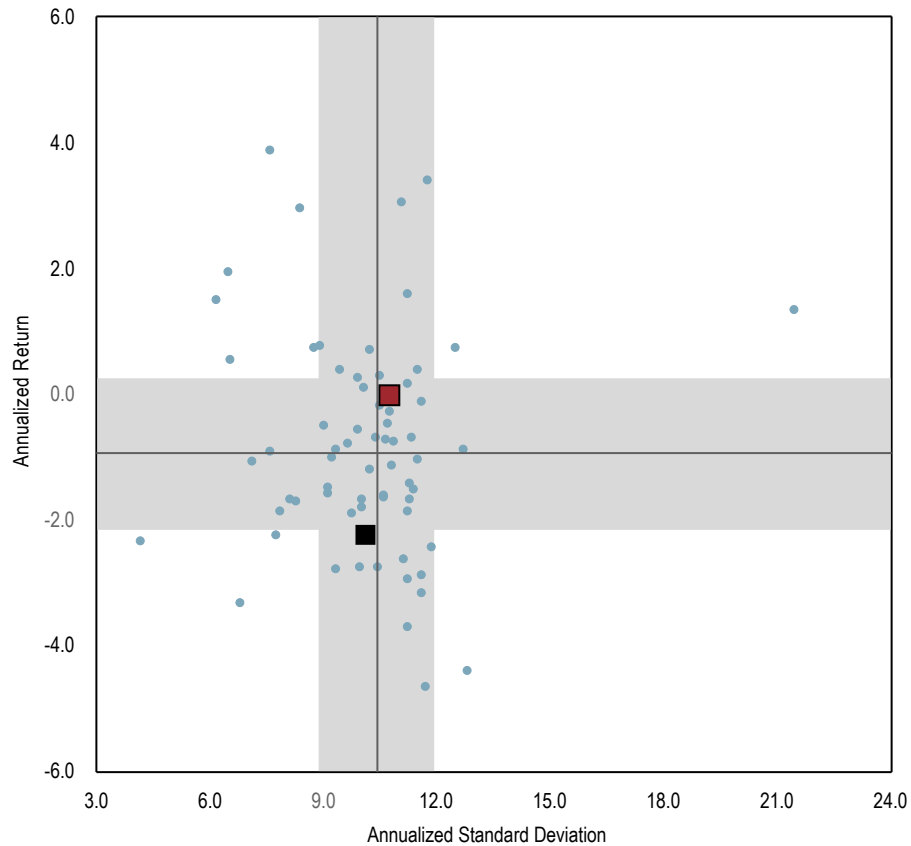


	YTD	2022	2021	2020	2019	2018	2017	2016	2015	2014
● PGIM Emerging Markets Debt	6.92 (15)	-12.37 (37)	-5.30 (67)	4.56 (72)	-	-	-	-	-	-
▲ 50% JPM EMBI Global Div / 50% JPM GBI EM Global Div	5.94 (48)	-14.75 (70)	-5.32 (67)	4.02 (80)	14.31 (44)	-5.15 (30)	12.74 (53)	10.16 (67)	-7.14 (67)	0.71 (48)
5th Percentile	7.89	-6.22	0.43	11.07	16.69	-1.36	16.32	14.58	0.06	6.07
1st Quartile	6.55	-11.42	-2.38	7.57	15.12	-4.79	14.07	12.34	-2.44	2.80
Median	5.85	-13.12	-4.26	6.26	14.13	-6.28	13.16	11.17	-4.74	0.58
3rd Quartile	4.64	-15.41	-5.60	4.27	11.74	-7.66	10.55	9.39	-7.81	-1.47
95th Percentile	3.14	-18.13	-7.64	2.30	1.10	-10.08	5.54	6.88	-9.49	-5.97
Population	68	70	79	79	74	74	69	63	58	52

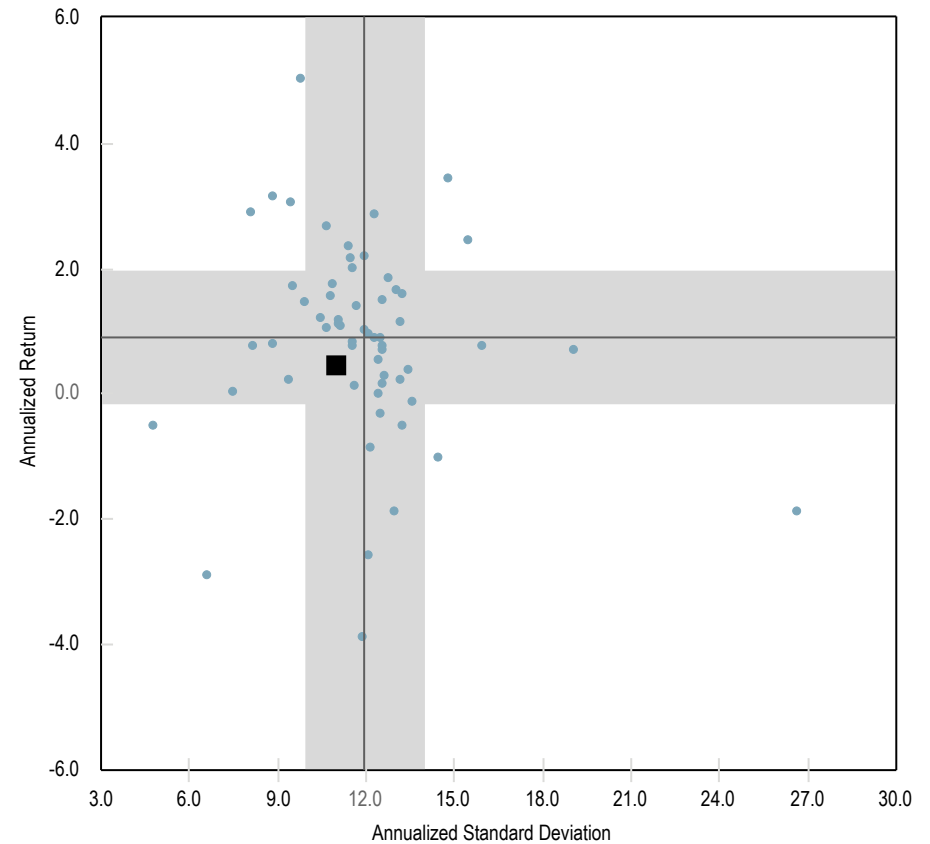
PGIM Emerging Markets Debt Risk vs. Return (Net of Fees)

Tulare County Employees' Retirement Association Period Ending: June 30, 2023

3 Years



5 Years



3 Years

	Return	Standard Deviation	Sharpe Ratio
PGIM Emerging Markets Debt	-0.01	10.73	-0.07
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	-2.24	10.11	-0.30

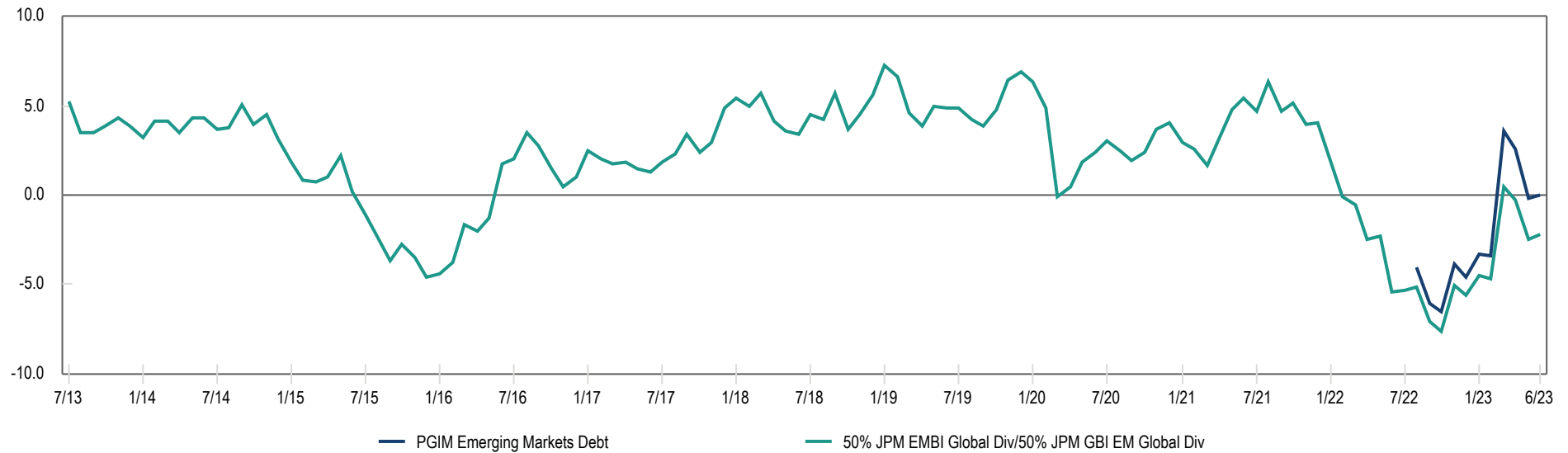
5 Years

	Return	Standard Deviation	Sharpe Ratio
PGIM Emerging Markets Debt	-	-	-
50% JPM EMBI Global Div/50% JPM GBI EM Global Div	0.47	10.99	-0.04

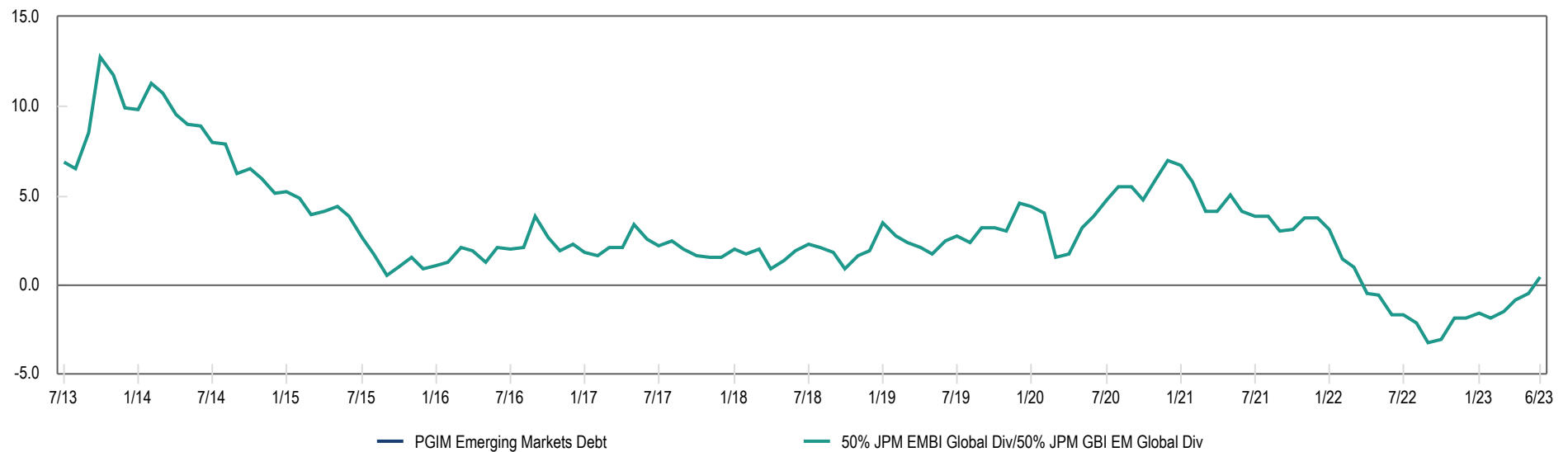
PGIM Emerging Markets Debt
Manager Performance - Rolling Annualized Return (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

Rolling 3 Years Annualized Return



Rolling 5 Years Annualized Return



Total Real Estate
Asset Class Overview (Net of Fees)

Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

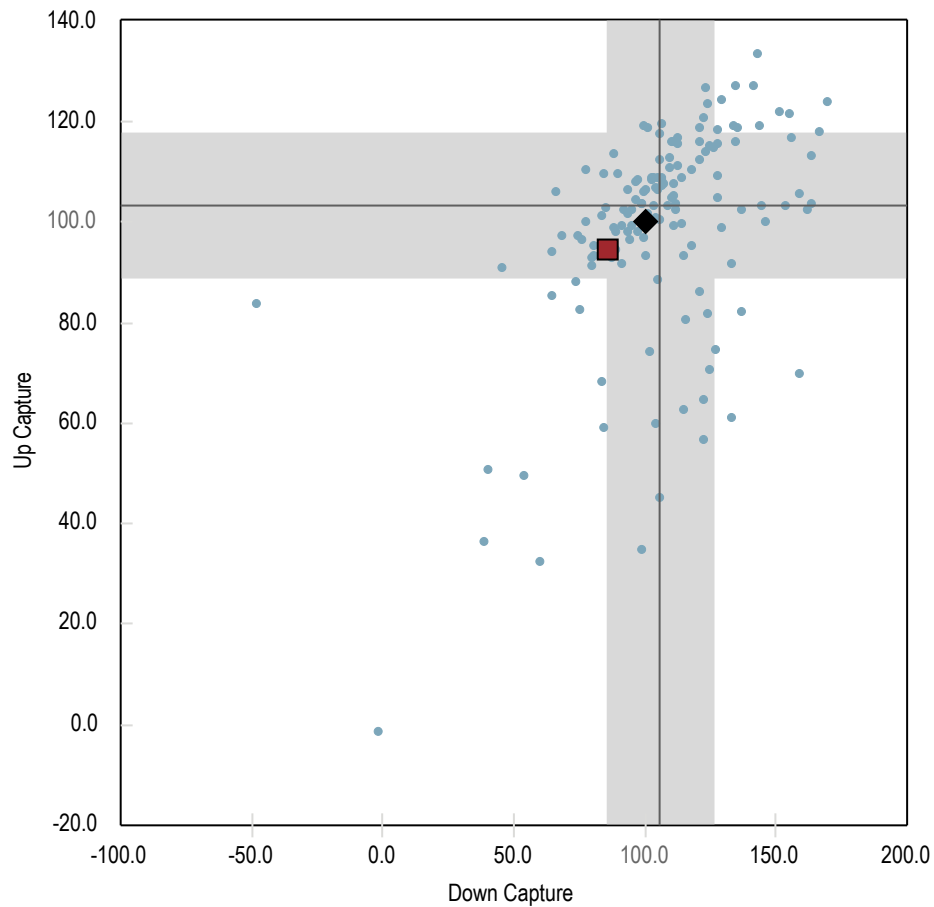
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2022	2021	2020	2019	2018
Total Real Estate	317,648,887	100.0	-1.6	-6.0	-8.2	5.4	5.6	7.8	11.0	12.8	1.8	5.2	8.8
<i>NCREIF-ODCE</i>			-2.7	-5.8	-10.0	8.0	6.5	8.7	7.5	22.2	1.2	5.3	8.3
RREEF America II	157,050,128	49.4	-2.7	-8.2	-12.3	6.8	6.5	8.6	18.4	12.8	1.8	5.3	8.6
<i>NCREIF-ODCE</i>			-2.7	-5.8	-10.0	8.0	6.5	8.7	7.5	22.2	1.2	5.3	8.3
American Realty Strategic Value Fund	85,445,911	26.9	-2.5	-6.0	-1.8	6.9	-	-	16.2	11.3	1.1	-	-
<i>NCREIF-ODCE</i>			-2.7	-5.8	-10.0	8.0	-	-	7.5	22.2	1.2	-	-
Invesco Commercial Mortgage Income Fund	73,513,116	23.1	1.9	-1.2	-1.7	-	-	-	2.7	-	-	-	-
<i>NCREIF-ODCE</i>			-2.7	-5.8	-10.0	-	-	-	7.5	-	-	-	-
SSGA US REIT Index Non-Lending Fund	729,063	0.2	2.9	5.8	-0.7	-	-	-	-26.0	-	-	-	-
<i>Dow Jones U.S. REIT Index</i>			1.4	3.3	-4.2	-	-	-	-24.8	-	-	-	-

American Realty funded 4Q 2019. Invesco Commercial Mortgage Income Fund was funded 9/1/2021. SSGA US REIT Index was funded 12/10/2021.

Total Fund Up Markets v. Down Markets (Net of Fees)

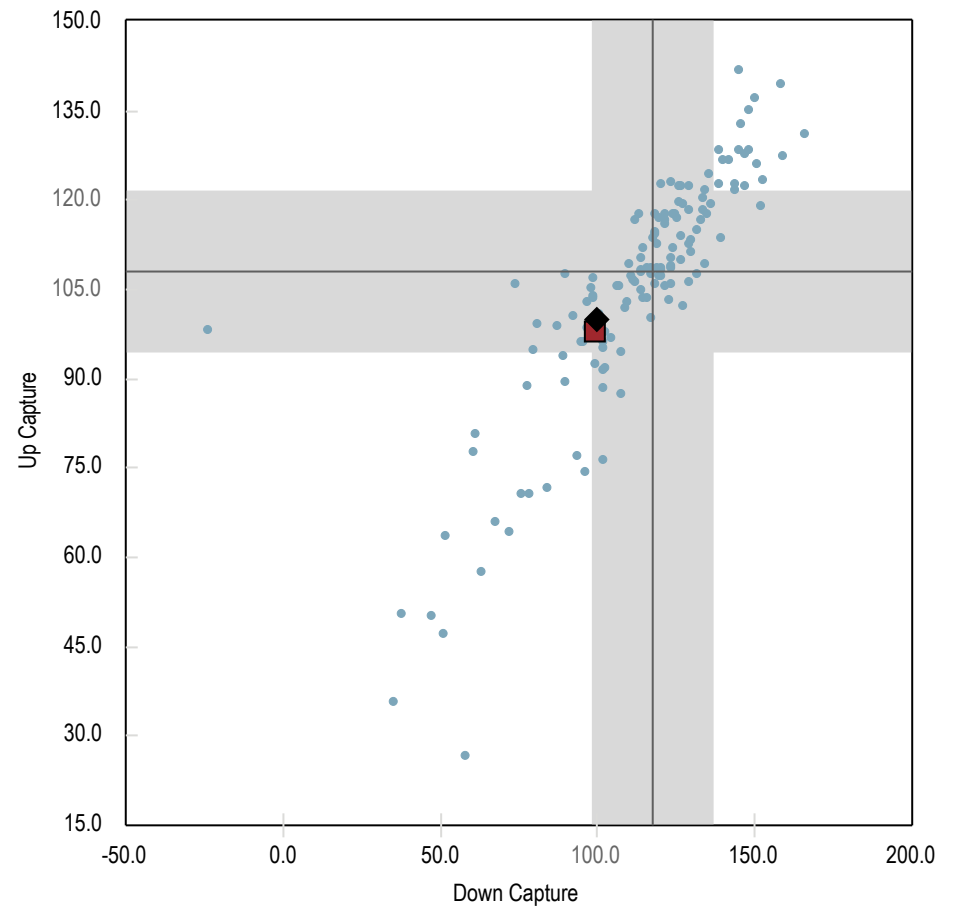
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
Total Fund	94.71	85.91
Policy Index	100.00	100.00
Median	103.46	105.88
Population	144	144

5 Years Up Capture vs. Down Capture

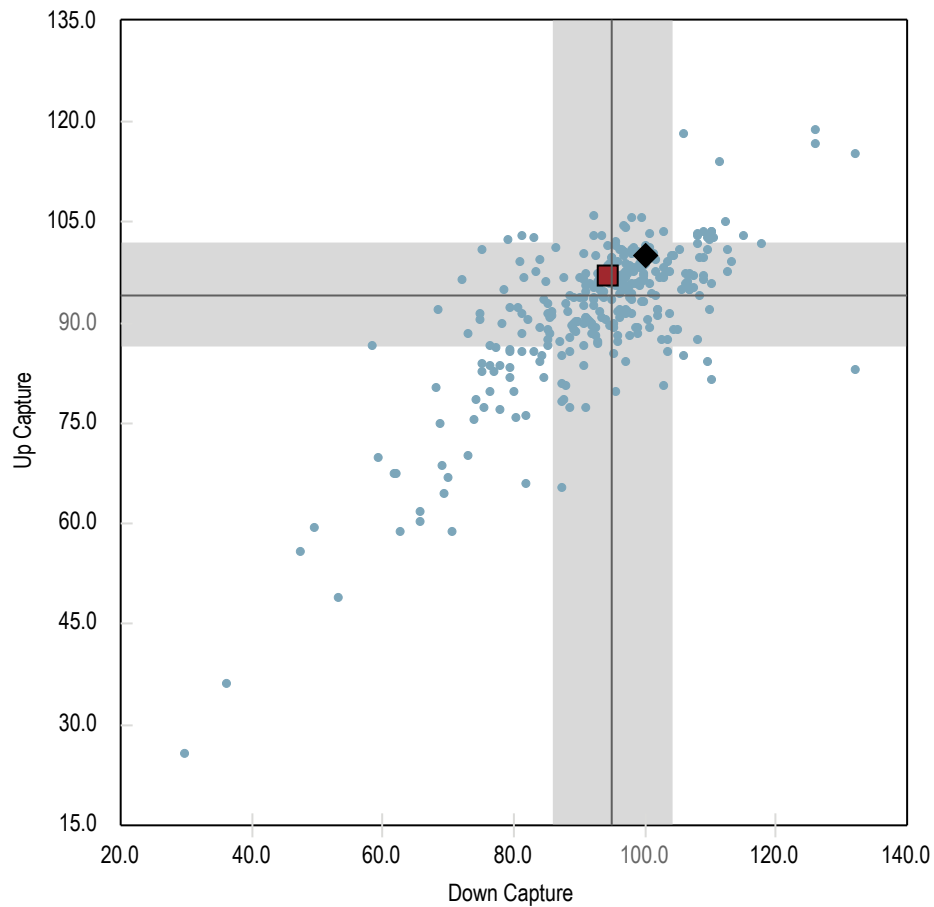


	Up Capture	Down Capture
Total Fund	97.79	99.28
Policy Index	100.00	100.00
Median	108.00	117.41
Population	141	141

PGIM QS US Core Equity
Up Markets v. Down Markets (Net of Fees)

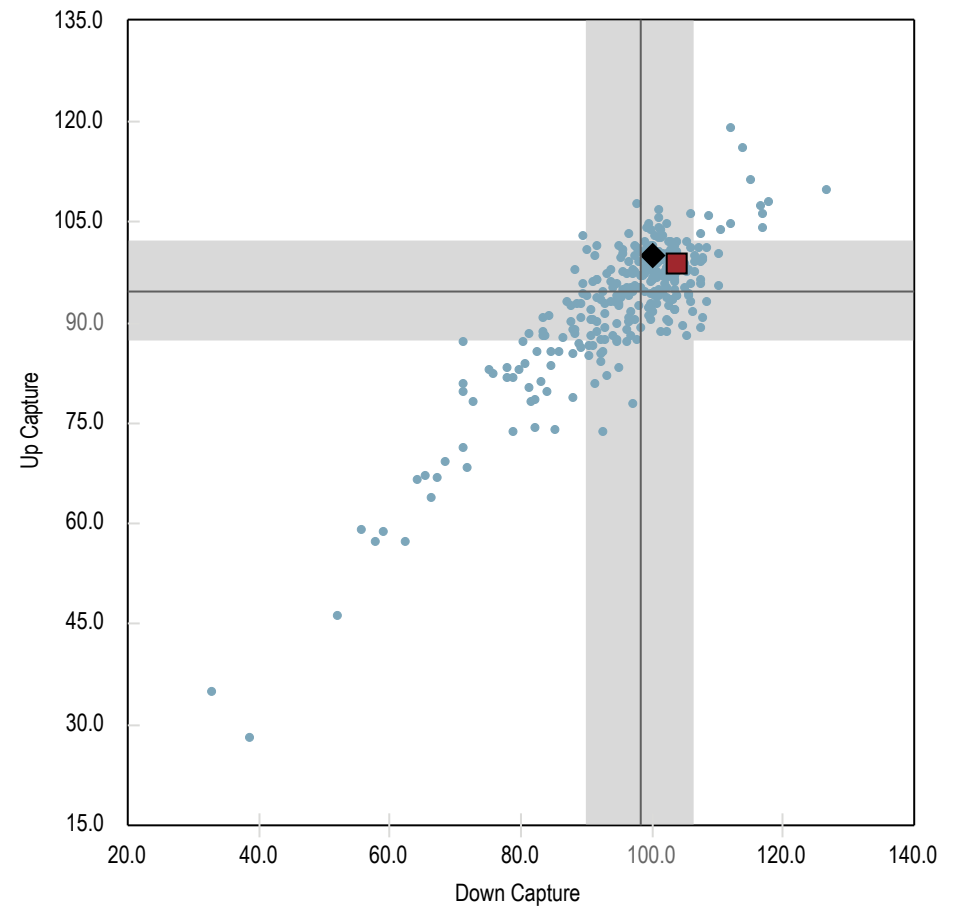
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
PGIM QS US Core Equity	97.09	94.42
S&P 500 Index	100.00	100.00
Median	94.25	94.96
Population	311	311

5 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
PGIM QS US Core Equity	98.74	103.85
S&P 500 Index	100.00	100.00
Median	94.77	98.13
Population	294	294

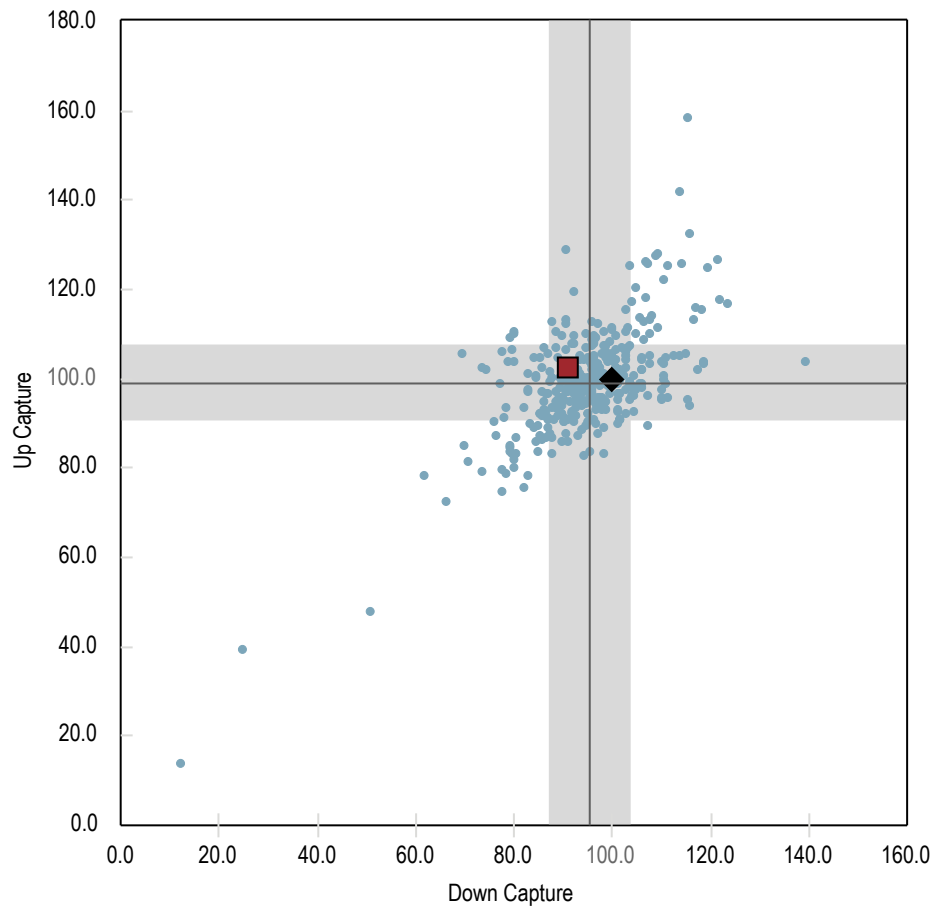
Boston Partners Large Cap Value

Up Markets v. Down Markets (Net of Fees)

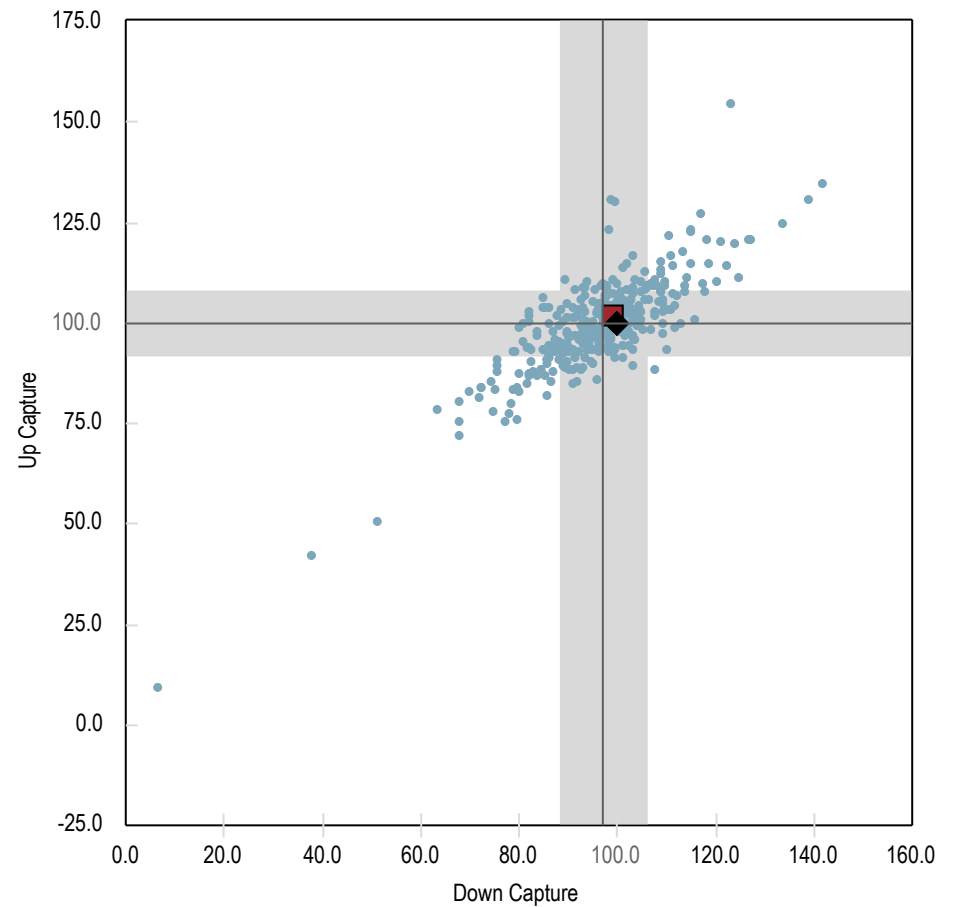
Tulare County Employees' Retirement Association

Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



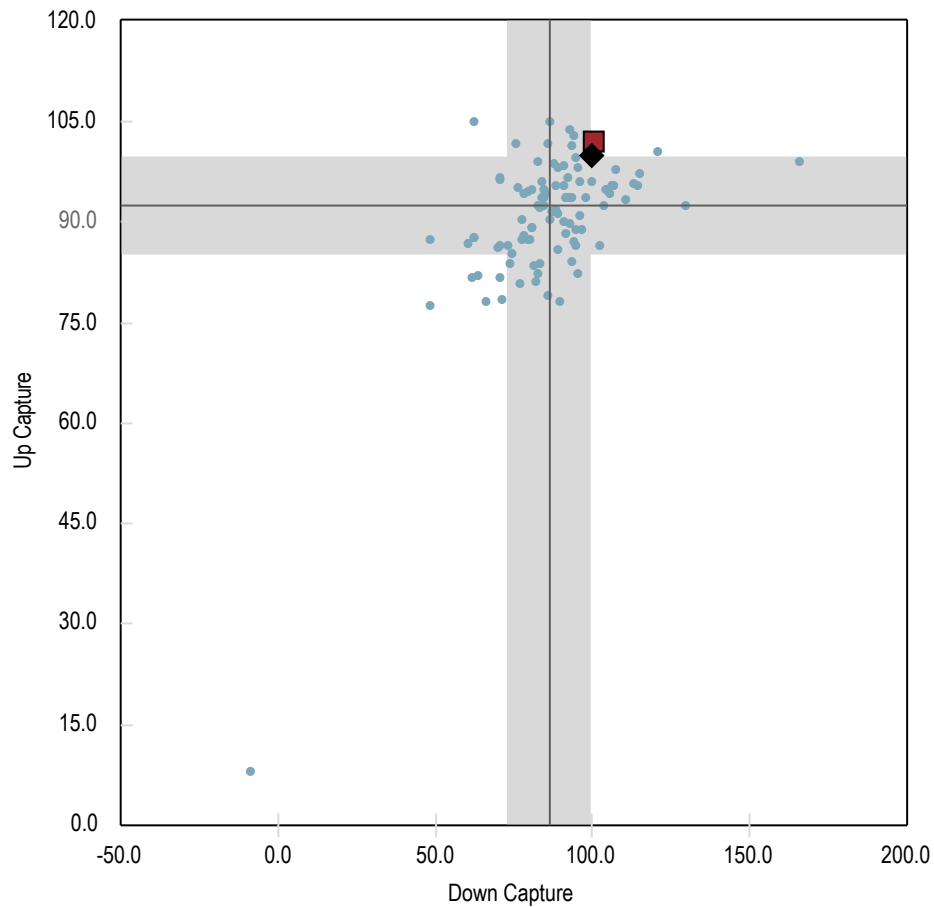
5 Years Up Capture vs. Down Capture



William Blair SMID Cap Growth Up Markets v. Down Markets (Net of Fees)

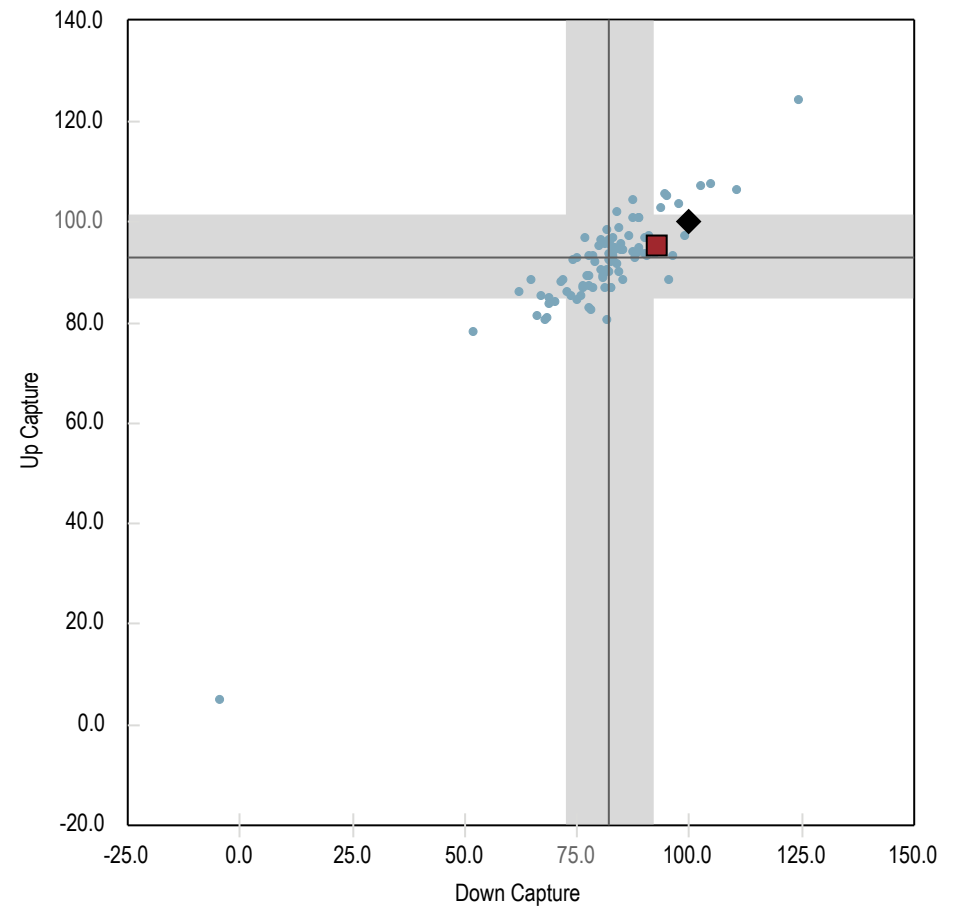
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
■ William Blair SMID Cap Growth	102.12	100.14
◆ Russell 2500 Growth Index	100.00	100.00
— Median	92.45	86.26
Population	97	97

5 Years Up Capture vs. Down Capture

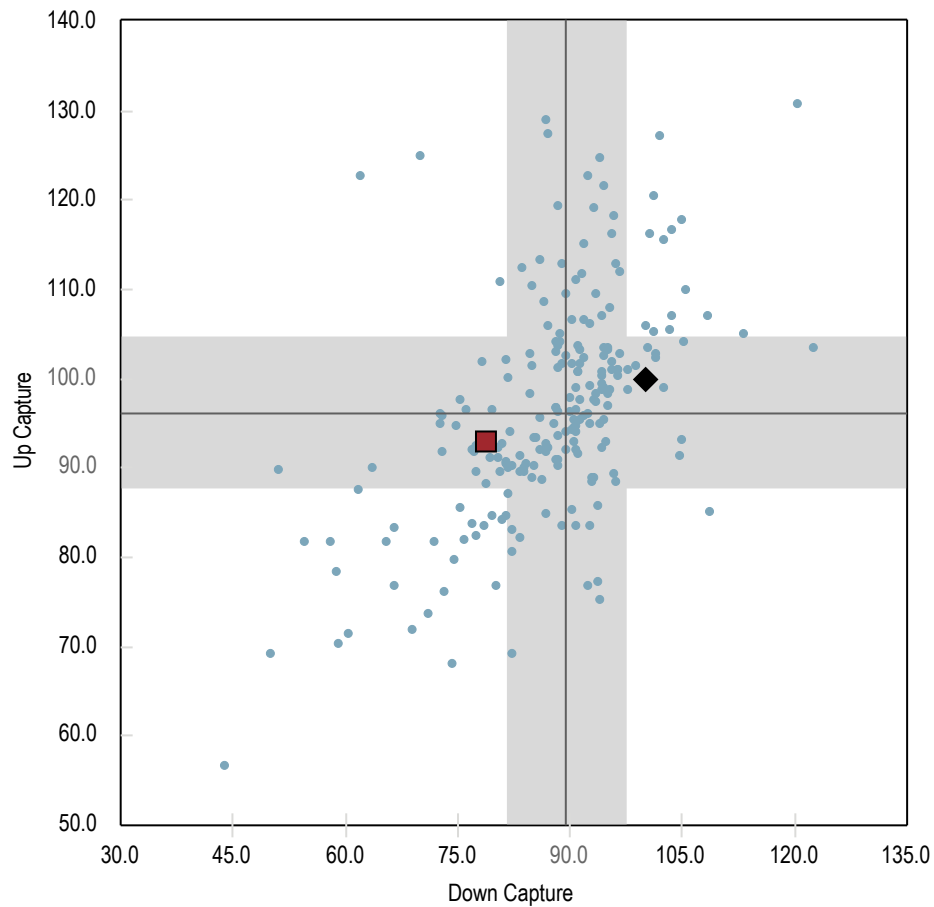


	Up Capture	Down Capture
■ William Blair SMID Cap Growth	95.35	92.61
◆ Russell 2500 Growth Index	100.00	100.00
— Median	93.20	82.24
Population	90	90

Leeward Small Cap Value Up Markets v. Down Markets (Net of Fees)

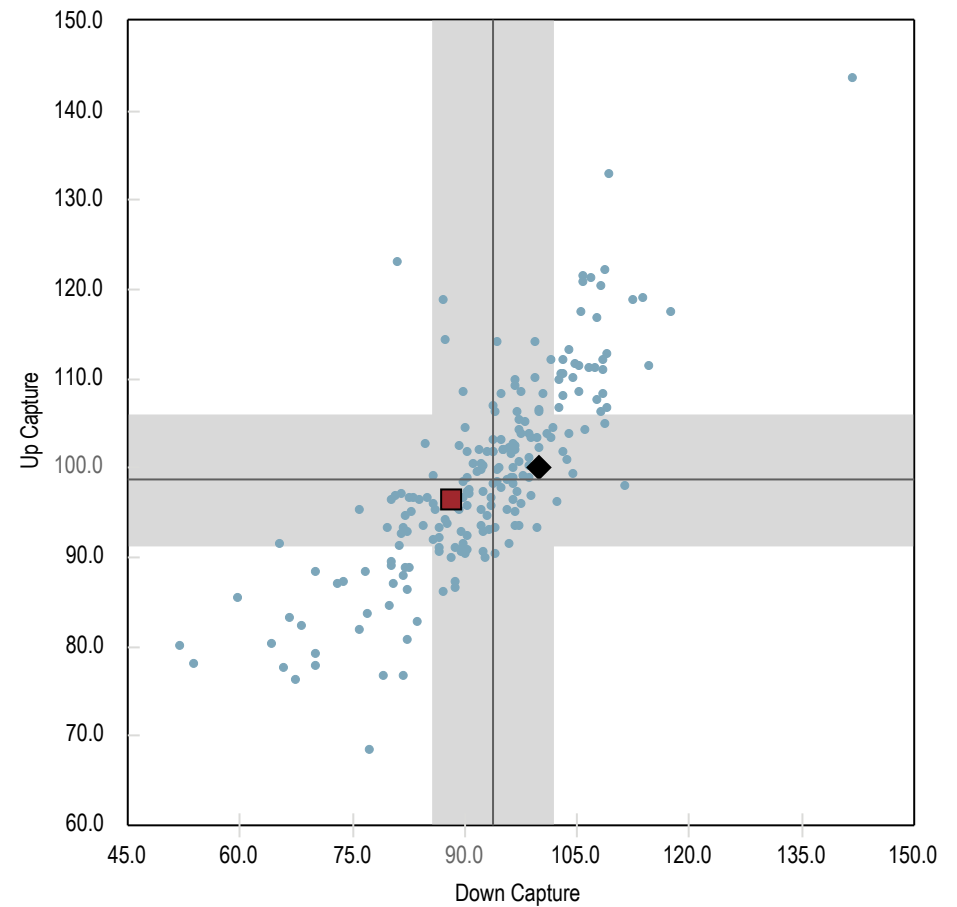
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
■ Leeward Small Cap Value	93.09	78.82
◆ Russell 2000 Value Index	100.00	100.00
— Median	96.22	89.45
Population	215	215

5 Years Up Capture vs. Down Capture

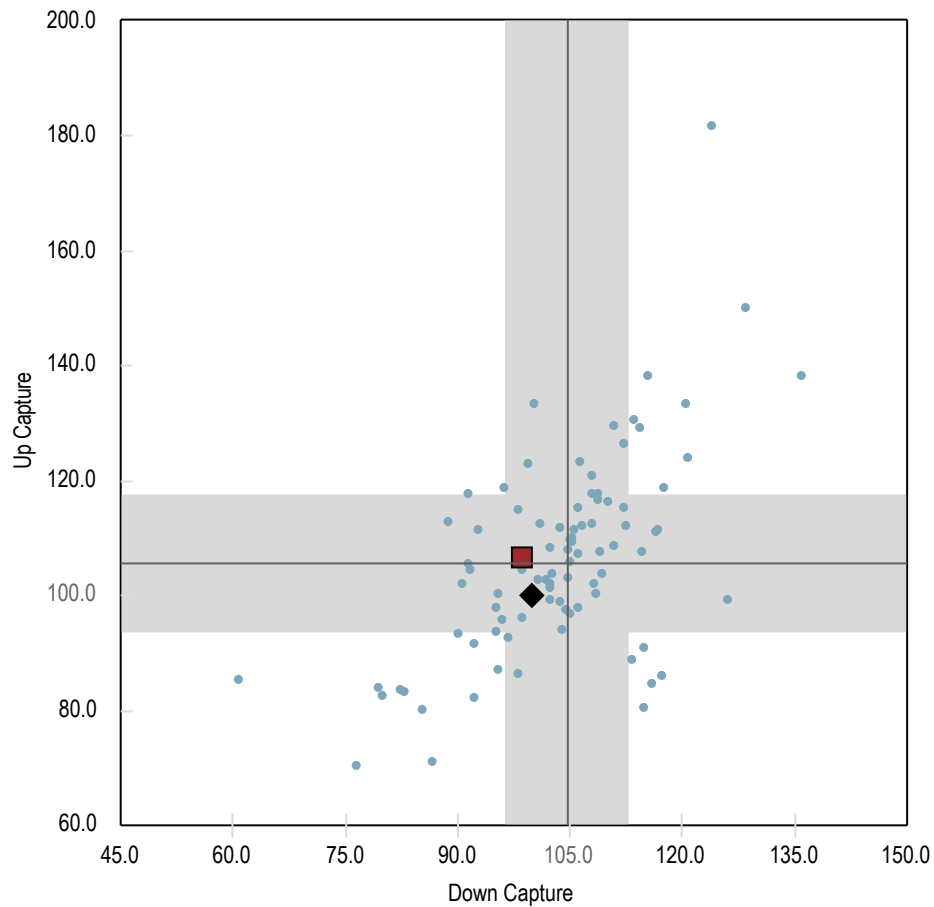


	Up Capture	Down Capture
■ Leeward Small Cap Value	96.40	88.08
◆ Russell 2000 Value Index	100.00	100.00
— Median	98.62	93.80
Population	207	207

PIMCO RAE Fund Global Ex US Up Markets v. Down Markets (Net of Fees)

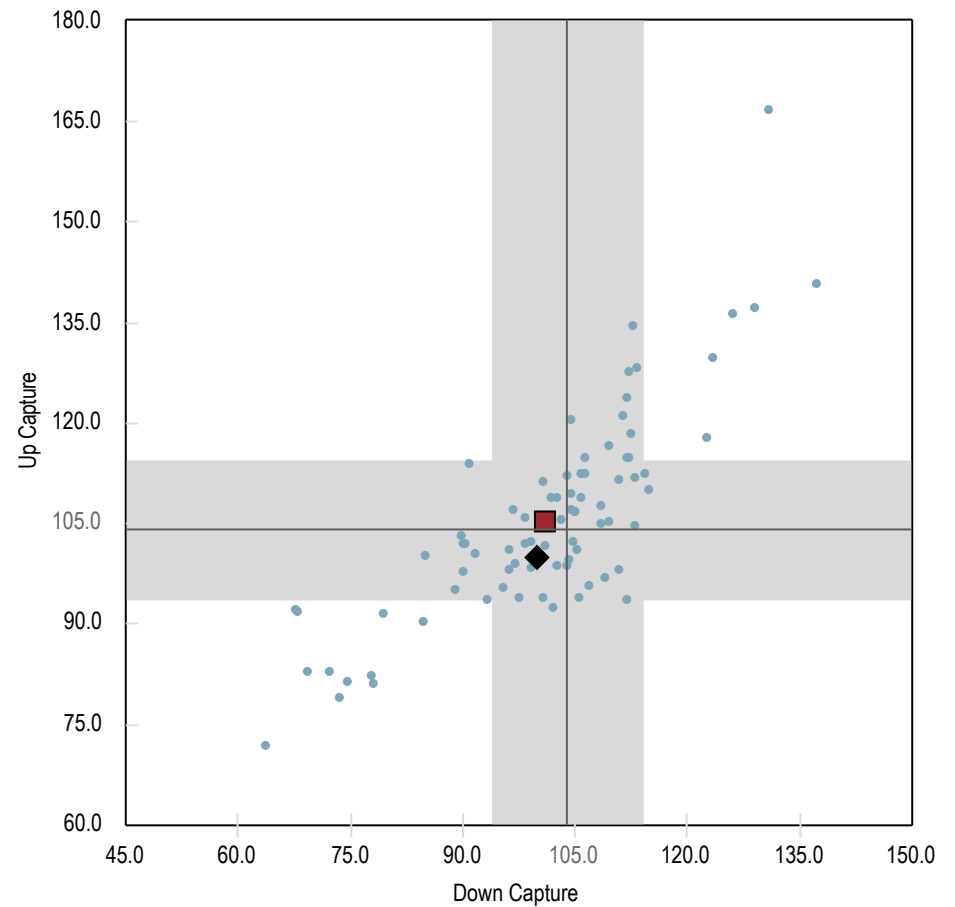
Tulare County Employees' Retirement Association Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
■ PIMCO RAE Fundamental Global Ex US Fund	106.73	98.62
◆ MSCI AC World ex USA Value (Net)	100.00	100.00
— Median	105.62	104.66
Population	89	89

5 Years Up Capture vs. Down Capture

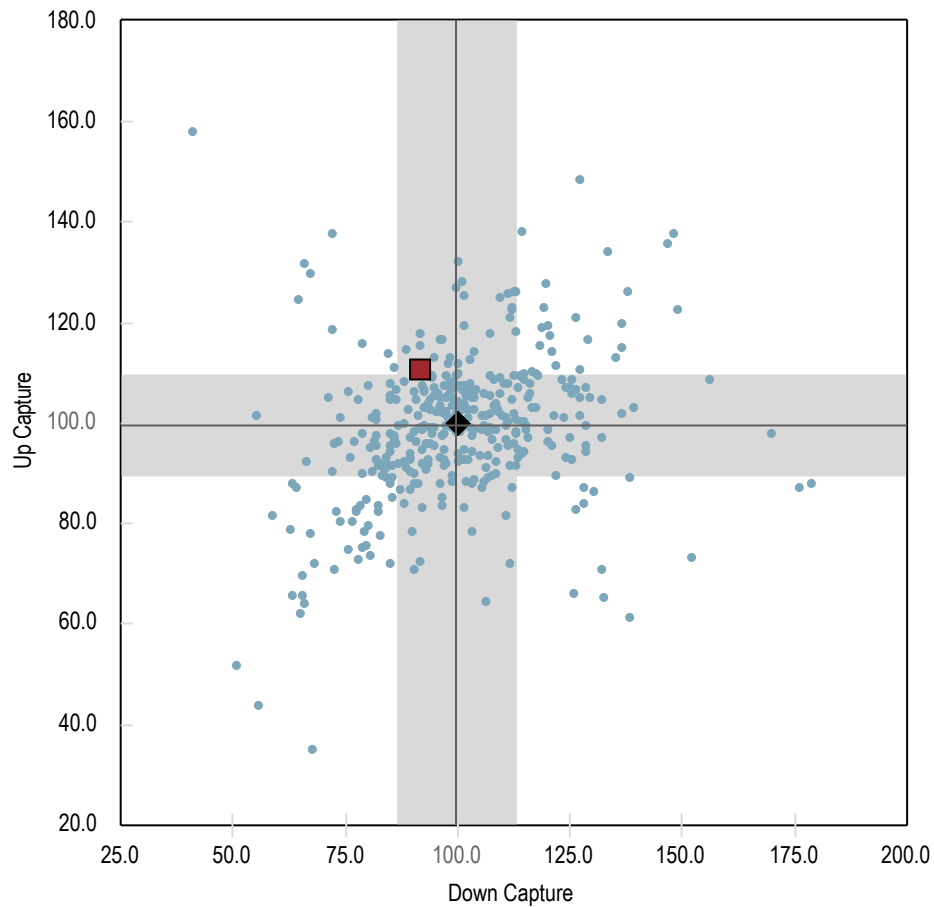


	Up Capture	Down Capture
■ PIMCO RAE Fundamental Global Ex US Fund	105.23	100.90
◆ MSCI AC World ex USA Value (Net)	100.00	100.00
— Median	104.12	104.01
Population	80	80

Skellig Water Fund (aka KBI)
Up Markets v. Down Markets (Net of Fees)

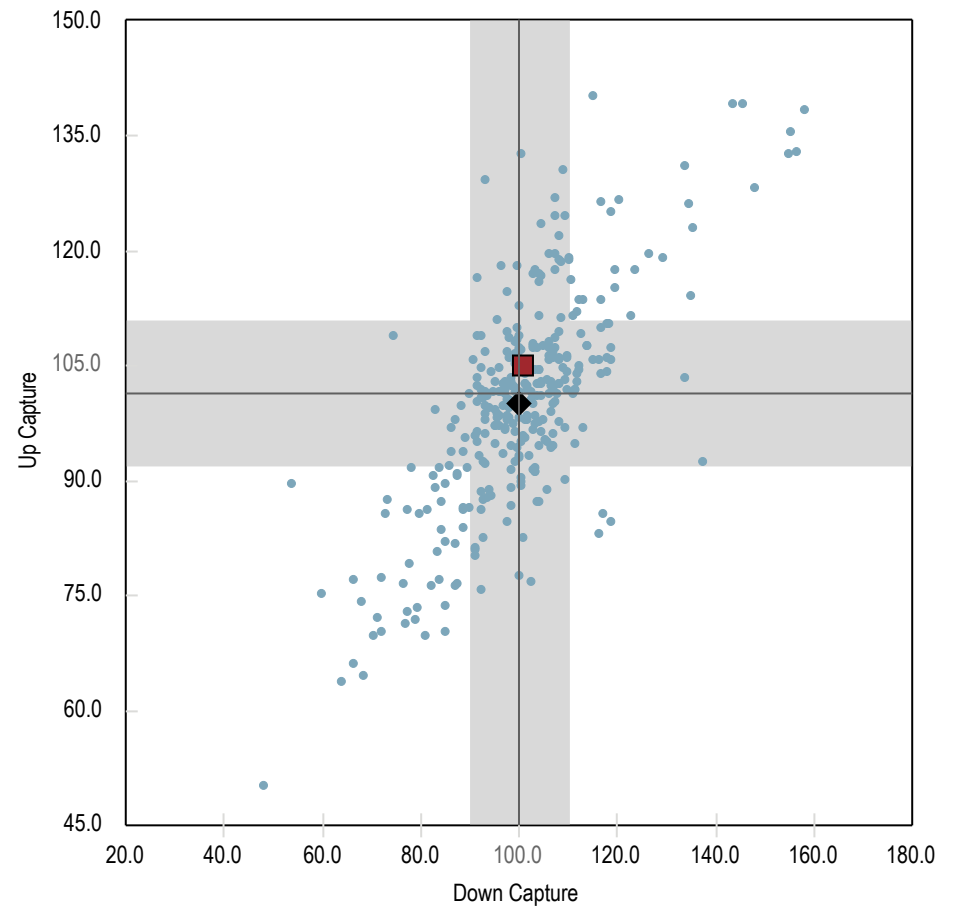
Tulare County Employees' Retirement Association
Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
■ Skellig Water Fund (aka KBI)	110.66	91.50
◆ MSCI AC World Index (Net)	100.00	100.00
— Median	99.60	99.84
Population	387	387

5 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
■ Skellig Water Fund (aka KBI)	105.12	100.93
◆ MSCI AC World Index (Net)	100.00	100.00
— Median	101.39	100.19
Population	338	338

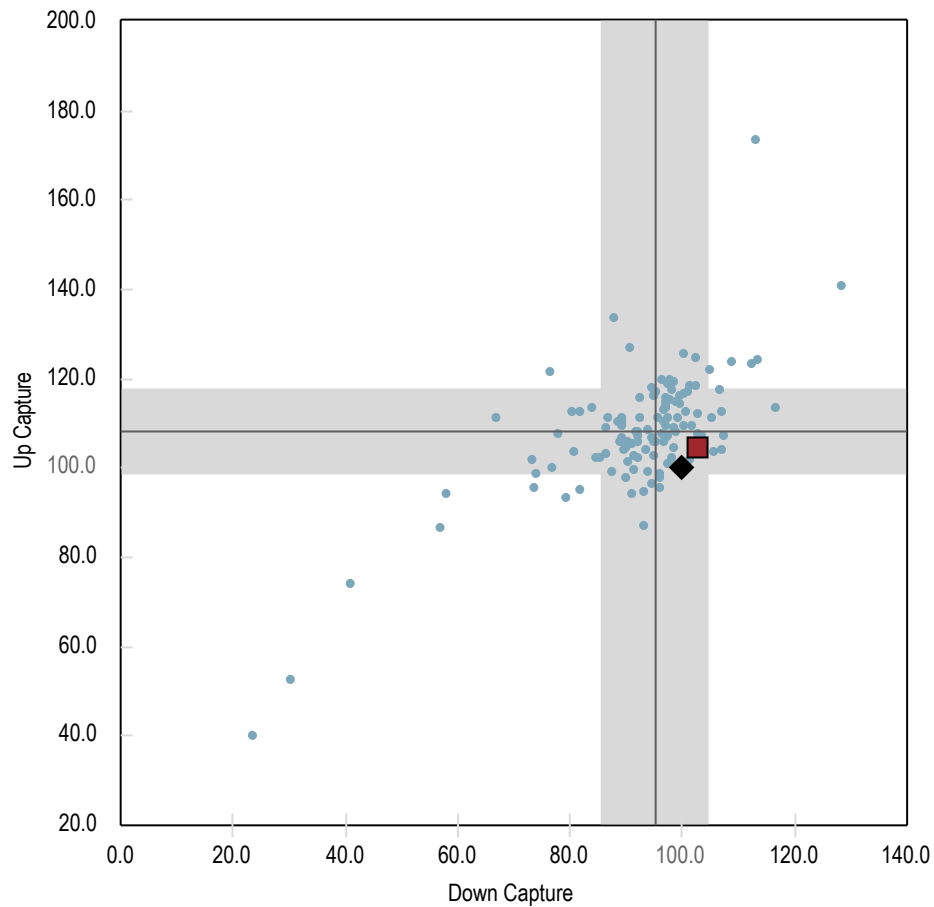
BlackRock Core Plus Fixed Income

Up Markets v. Down Markets (Net of Fees)

Tulare County Employees' Retirement Association

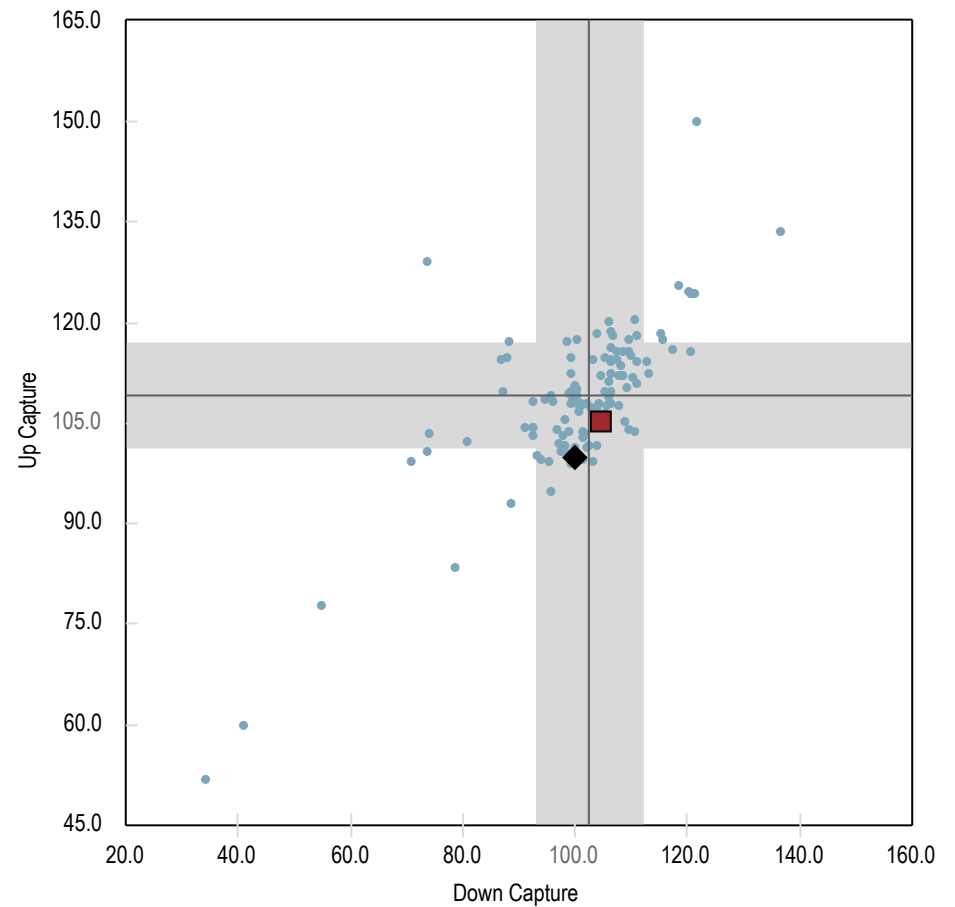
Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
BlackRock Core Plus Fixed Income	104.66	102.72
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	108.15	95.11
Population	123	123

5 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
BlackRock Core Plus Fixed Income	105.42	104.72
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.10	102.50
Population	117	117

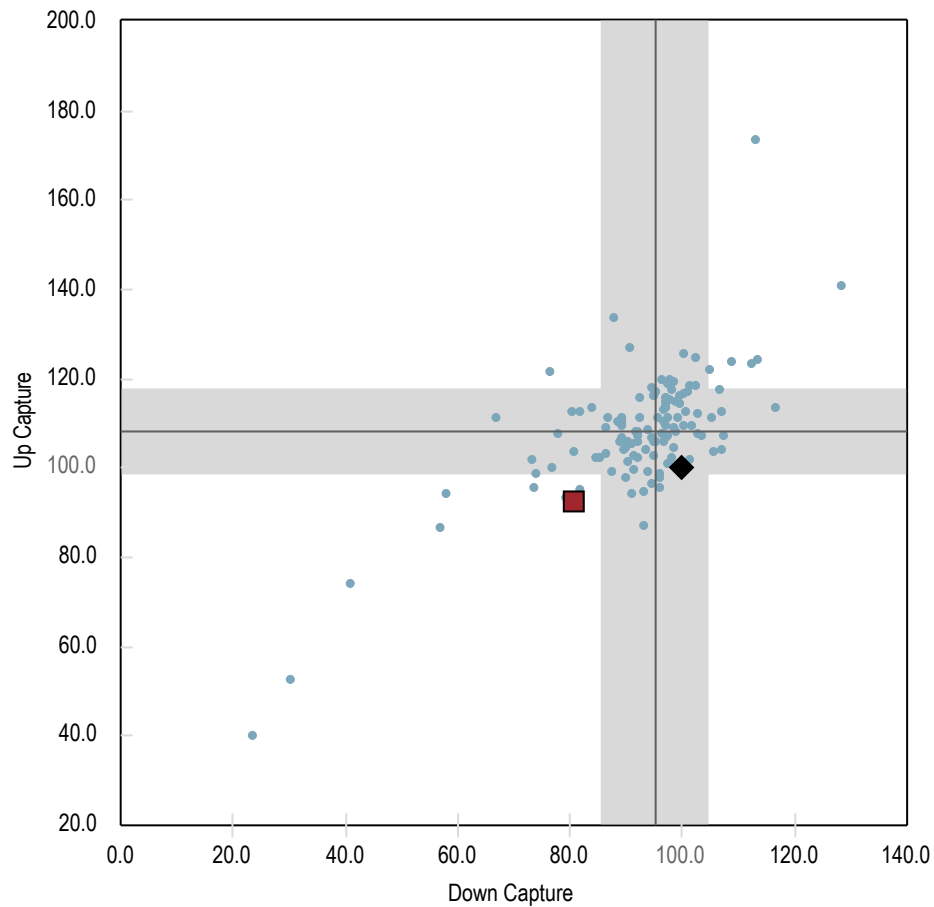
Doubleline Core Plus

Up Markets v. Down Markets (Net of Fees)

Tulare County Employees' Retirement Association

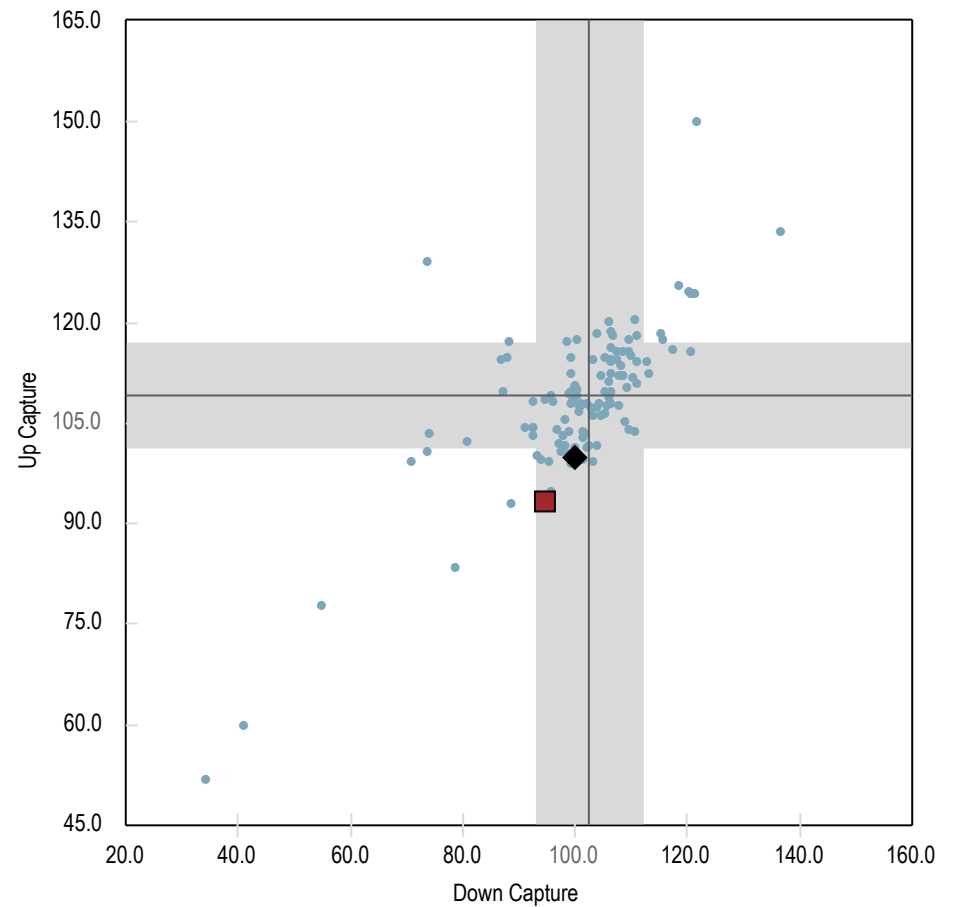
Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
Doubleline Core Plus	92.31	80.83
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	108.15	95.11
Population	123	123

5 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
Doubleline Core Plus	93.29	94.58
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.10	102.50
Population	117	117

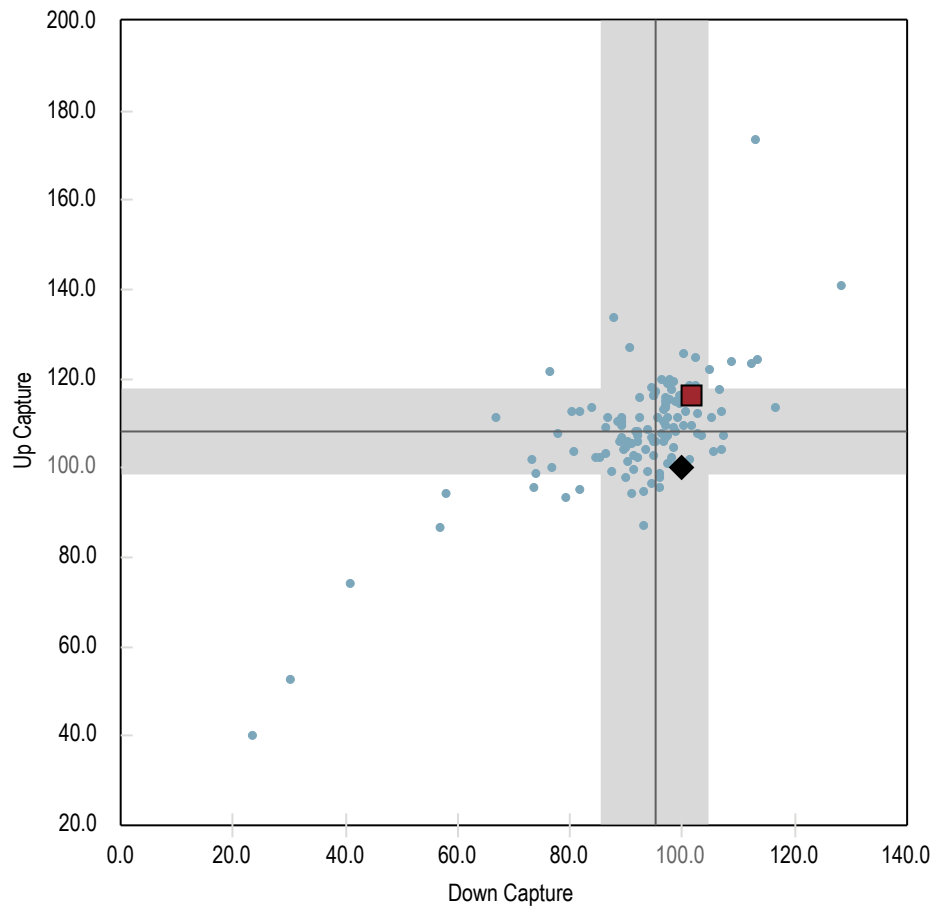
MacKay Shields Core Plus

Up Markets v. Down Markets (Net of Fees)

Tulare County Employees' Retirement Association

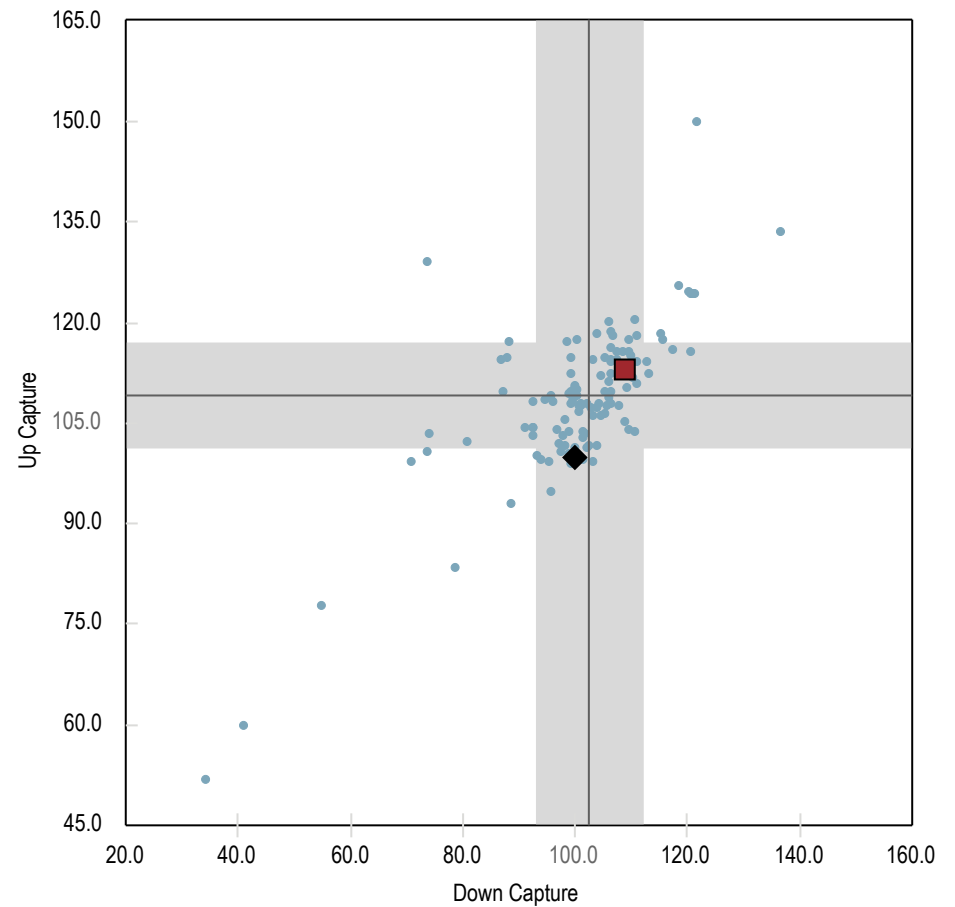
Period Ending: June 30, 2023

3 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
MacKay Shields Core Plus	116.26	101.54
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	108.15	95.11
Population	123	123

5 Years Up Capture vs. Down Capture



	Up Capture	Down Capture
MacKay Shields Core Plus	113.13	108.70
Blmbg. U.S. Aggregate Index	100.00	100.00
Median	109.10	102.50
Population	117	117

Total Fund

Data Sources and Methodology

Tulare County Employees' Retirement Association

Period Ending: June 30, 2023

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are linked geometrically and annualized for periods longer than one year.

Data Source

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

Illiquid Alternatives

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

Manager Line Up

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
SSGA S&P 500 Flagship Fund	7/27/2011	SSGA	Pantheon USA Fund VI	7/26/2005	Pantheon
PGIM QS US Core Equity	12/1/2008	BNY	PIMCO BRAVO	1/14/2011	PIMCO
Boston Partners Large Cap Value	2/1/1999	BNY	KKR Mezzanine Partners	7/8/2011	KKR
William Blair Large Cap Growth	4/25/2022	BNY	Stepstone Secondary Opps II	5/10/2013	Stepstone
SSGA US Extended Market Index	6/10/2021	SSGA	Ocean Avenue Fund III	5/27/2016	Ocean Ave
William Blair SMID Cap Growth	6/30/2006	BNY	Ocean Avenue Fund IV	9/16/2019	Ocean Ave
Leeward Small Cap Value	8/26/2009	BNY	Ocean Avenue Fund V	3/31/2023	Ocean Ave
SSGA MSCI ACWI ex US	1/1/2010	SSGA	Pathway Fund 8	4/12/2016	Pathway
PIMCO RAE	8/14/2012	PIMCO	Pathway Fund 9	5/31/2018	Pathway
SGA Global Growth	6/4/2018	SGA	Pathway Fund 10	3/31/2020	Pathway
Skellig DST Water Fund	10/28/2014	KBI	Sixth Street Partners Diversified Credit	11/21/2016	Sixth Street
BlackRock Fixed Income	12/1/1995	BNY	Sixth Stree TAO Contingent	4/16/2020	Sixth Street
Doubleline Core Plus	12/1/2015	BNY	American Realty	12/20/2019	American Realty
MacKay Shields Core Plus	12/1/2015	MacKay	Invesco Commercial Mortgage	9/1/2021	Invesco
PGIM Emerging Markets Debt	8/26/2019	BNY	IFM Global Infrastructure	1/1/2023	IFM Investors
SSGA US REIT Index Non-Lending Fund	12/10/2021	BNY	Altas Partners Holdings III	1/31/2023	ALTAS
RREEF America II	3/1/2003	Deutsche	KSL Capital Partners Fund VI	4/23/2023	KSL Capital Partners

Policy & Custom Index Composition

Policy Index: (10/1/2021 - current)	26% Russell 3000, 5% Russell 2000, 16% MSCI ACWI ex US, 3% MSCI ACWI, 17% Bloomberg US Aggregate, 3% JPM EMBI Global/ JPM GBI EM Index, 13.4% NCREIF-ODCE, 7% Private Equity Returns, 5% Private Credit Returns, and 4.6% MSCI US REIT Index.
Policy Index (9/30/2020 - 9/23/2021)	25% Russell 3000, 15% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns.
Policy Index (10/23/2019 - 7/22/2020)	20% Russell 3000, 20% MSCI ACWI ex US, 3% MSCI ACWI, 17% BBgBarc US Aggregate, 5% JPM GBI Global, 5% (50% JPM EMBI Global Div/50% JPM GBI EM Global Div), 20% NCREIF-ODCE, 5% Private Equity Returns, 5% Private Credit Returns

Other Disclosures

Glossary

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

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

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

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

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

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

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

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

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: $\text{excess return} / \text{tracking error}$.

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

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

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

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

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

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

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

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

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

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

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