

Merced County Employees' Retirement Association

August 24, 2023

Quarterly Performance

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Economic and Market Update

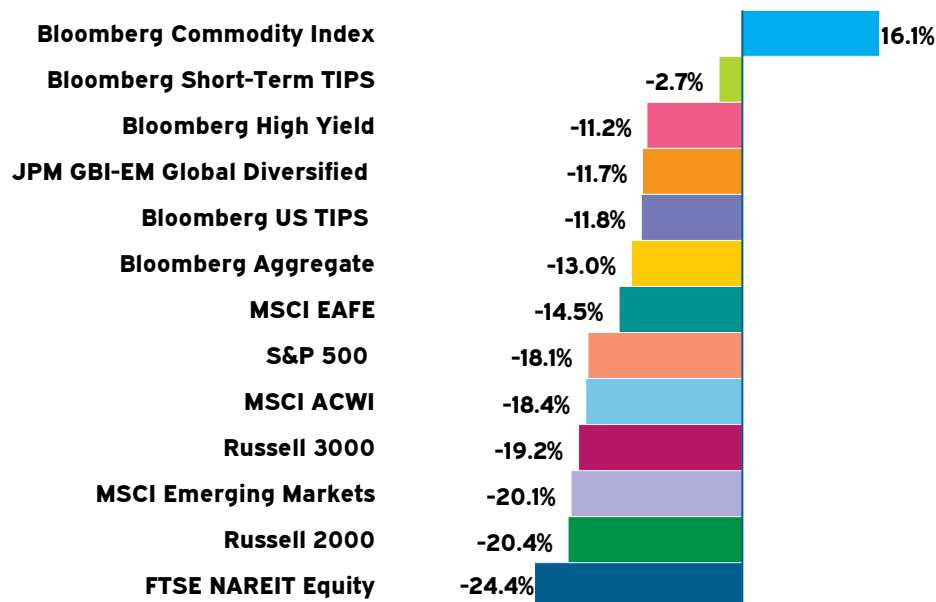
Data as of June 30, 2023

Market Summary

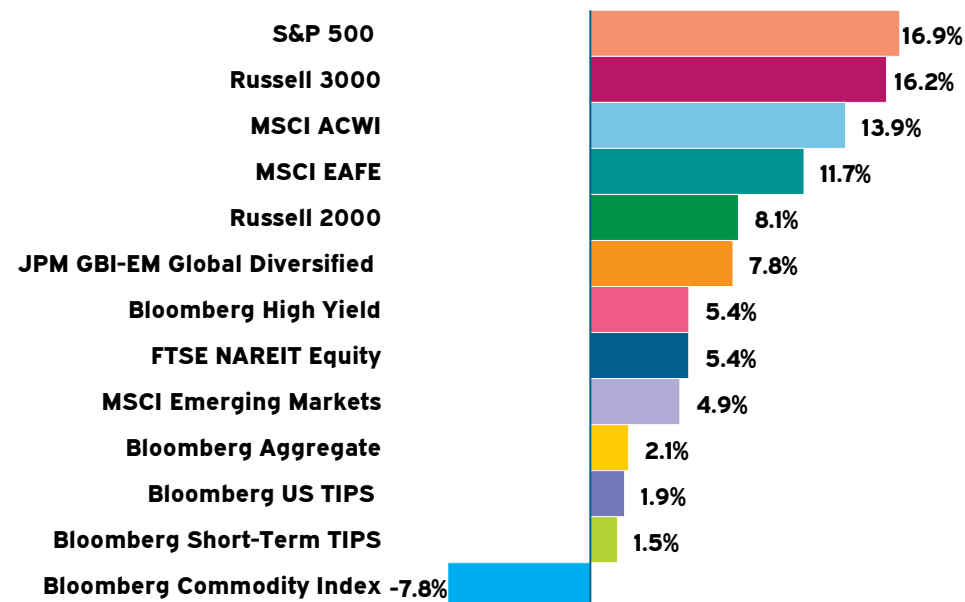
- Asset returns were positive in Q2 with US and Non-US equities posting gains, while most fixed income sectors sold-off on expectations for further interest rate hikes later this year. Except for commodities, most public market asset classes remain up for the year.
- Although the Fed skipped a rate-hike in June, Fed comments signaled further rate hikes in the second half of 2023; the US economy appears to be resilient supporting domestic demand and low unemployment.
 - US equity markets have posted YTD gains of +16.2%. Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
 - Non-US developed equity markets fell behind US equities in 2023 (MSCI EAFE: +11.7% vs. Russell 3000: +16.2%). A strengthening US dollar weighed on returns.
 - Emerging market equities have significantly trailed developed market equities YTD returning +4.9%, due partly to higher US-China tensions.
 - Rates generally rose in Q2 leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 0.8% for the quarter. It remains positive (+2.1%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.
- This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.

Index Returns¹

2022



YTD



- After a particularly difficult 2022, most public market assets are up thus far in 2023, building on gains from the fourth quarter of last year.
- Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, and growth has slowed.

¹ Source: Bloomberg and FactSet. Data is as of June 30, 2023.

Domestic Equity Returns¹

Domestic Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	6.6	8.7	16.9	19.6	14.6	12.3	12.8
Russell 3000	6.8	8.4	16.2	19.0	13.9	11.4	12.3
Russell 1000	6.8	8.6	16.7	19.4	14.1	11.9	12.6
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 MidCap	8.3	4.8	9.0	14.9	12.5	8.4	10.3
Russell MidCap Growth	7.7	6.2	15.9	23.1	7.6	9.7	11.5
Russell MidCap Value	8.7	3.9	5.2	10.5	15.0	6.8	9.0
Russell 2000	8.1	5.2	8.1	12.3	10.8	4.2	8.2
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

US Equities: Russell 3000 Index rose 8.4% in the second quarter and 16.2% YTD.

- US stocks rose sharply in the second quarter of 2023. Most of the gains came in the month of June when the Fed kept its target rate unchanged for the first time since early 2022. Investors are expressing optimism that the Fed can tame inflation without widespread disruptions to the equity markets.
- With the exception of energy and utilities, each sector of the Russell 3000 index appreciated during the second quarter. Technology led all sectors and was driven by enthusiasm for growth stocks, particularly those with exposure to artificial intelligence (e.g., NVIDIA).
- Large cap stocks continue to outperform small cap stocks, driven by technology and the underperformance of small cap biotechnology stocks. Growth stocks continue to broadly outperform value stocks.

¹ Source: Bloomberg. Data is as of June 30, 2023.

Foreign Equity Returns¹

Foreign Equity	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
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 EAFE (Local Currency)	3.6	4.3	12.1	17.5	11.7	6.4	7.7
MSCI EAFE Small Cap	2.9	0.6	5.5	10.2	5.7	1.3	6.2
MSCI Emerging Markets	3.8	0.9	4.9	1.8	2.3	0.9	2.9
MSCI Emerging Markets (Local Currency)	3.4	1.7	5.6	3.3	3.9	3.0	5.7
MSCI China	4.0	-9.7	-5.5	-16.8	-10.3	-5.3	3.0

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.0% in the second quarter bringing the YTD results to +11.7%. Emerging market equities (MSCI EM) rose 0.9% in the quarter, rising 4.9% YTD.

- Eurozone and Japan markets continued their strength in June, wrapping up a strong second quarter. In Europe, financials and IT led returns whereas energy and communication services lagged. Enthusiasm for AI helped company fundamentals and prices for semiconductor stocks. Headline inflation was down in June, although core inflation was up slightly month over month. Energy and materials were the main drivers for falling UK equities, along with Bank of England rate hikes. Optimism continues to build for Japanese investors, while the Yen remains weak and Bank of Japan remains dovish.
- Emerging markets were laggards as China equities struggled from weak export demands and rising negative sentiments. Brazil, India and Taiwan are bright spots in EM, the former due to good earnings and macro, the latter from AI and IT strength.

¹ Source: Bloomberg. Data is as of June 30, 2023.

Fixed Income Returns¹

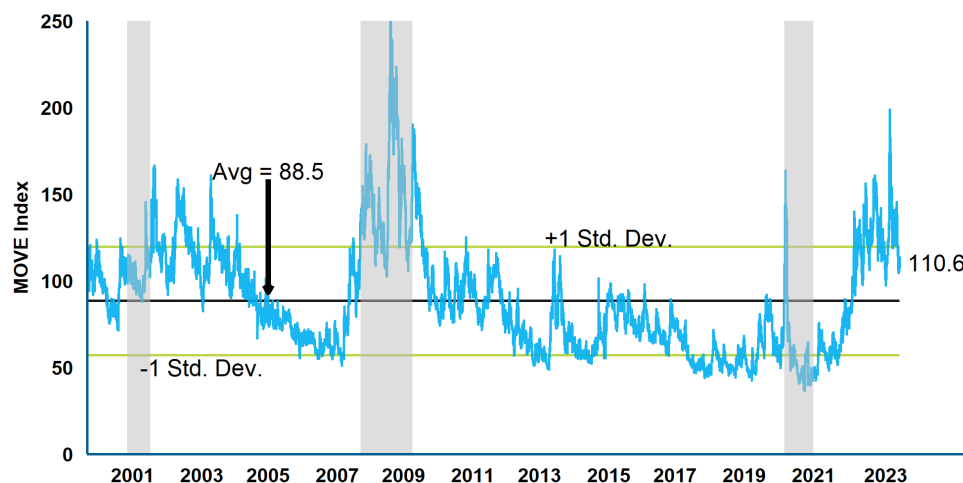
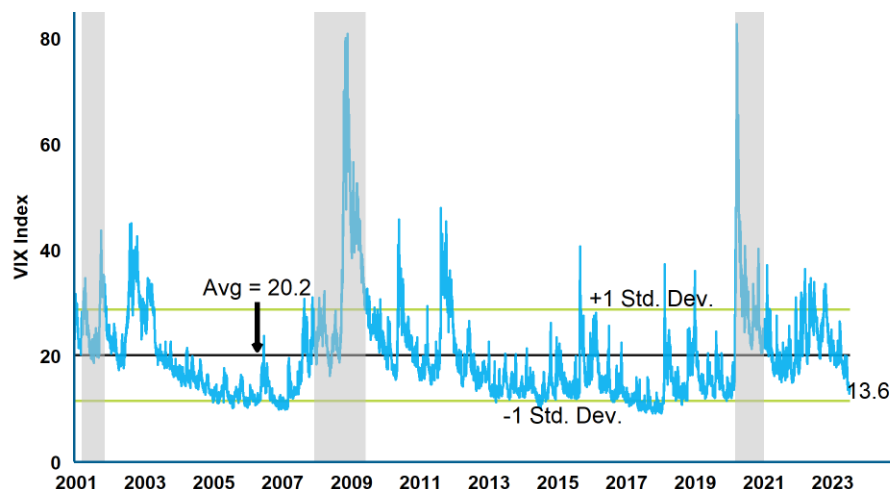
Fixed Income	June (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.2	-0.6	2.3	0.0	-3.4	1.0	1.8	5.2	6.3
Bloomberg Aggregate	-0.4	-0.8	2.1	-0.9	-4.0	0.8	1.5	4.8	6.5
Bloomberg US TIPS	-0.3	-1.4	1.9	-1.4	-0.1	2.5	2.1	4.6	6.8
Bloomberg Short-term TIPS	-0.2	-0.7	1.5	0.1	2.3	2.7	1.7	5.3	2.5
Bloomberg High Yield	1.7	1.7	5.4	9.1	3.1	3.4	4.4	8.5	4.1
JPM GBI-EM Global Diversified (USD)	3.3	2.5	7.8	11.4	-1.4	0.3	-0.6	6.6	5.0

Fixed Income: The Bloomberg Universal declined 0.6% in the second quarter as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.3% YTD) though as inflation continues to decline.

- US Treasury yields generally rose over the month, with 1-year to 10-year maturity sector rising the most due to higher policy expectations.
- The TIPS index and the short-term TIPS index posted negative returns for the month as inflation concerns continued to ease.
- Continued risk appetite drove high yield bond performance (1.7%) and outperformance versus the broad US bond market (Bloomberg Aggregate). Emerging market bonds (3.3%) also performed well on investor risk sentiment.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of June 30, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

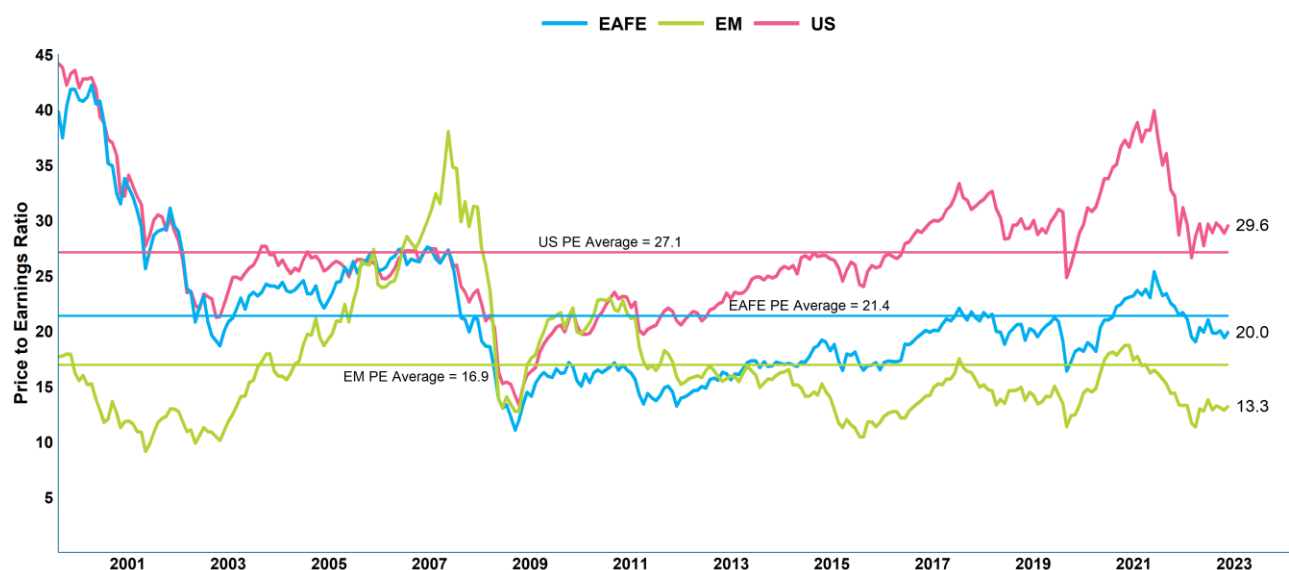
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) declined in June and remains low as investors continue to anticipate the end of the Fed's policy tightening.
- In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (110.6) its long-run average (88.4), but off its recent peak during the heart of the banking crisis.

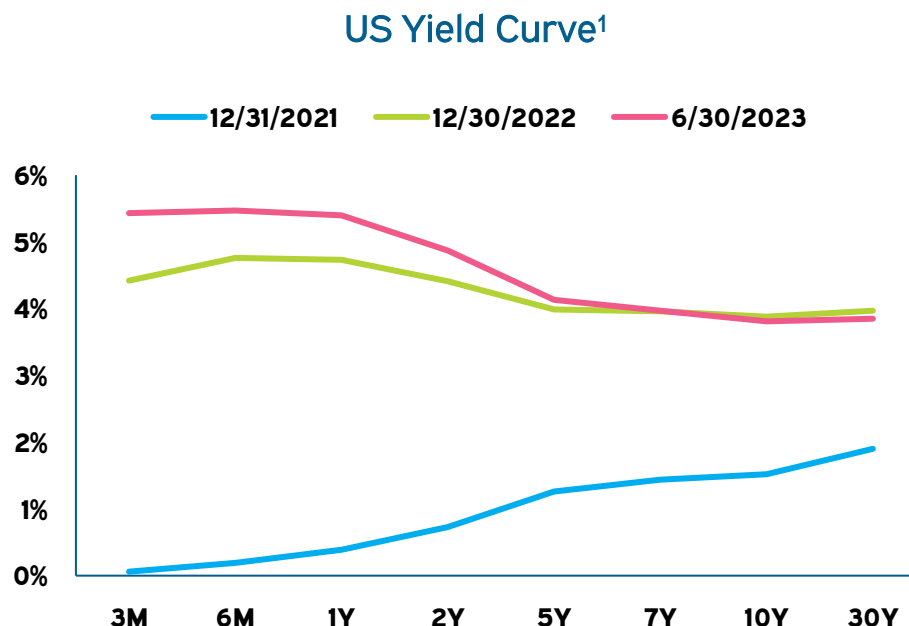
¹ Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of June 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and June 2023.

Equity Cyclically Adjusted P/E Ratios¹



- After its dramatic decline last year the US equity price-to-earnings ratio remains above its long-run (21st century) average.
- International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

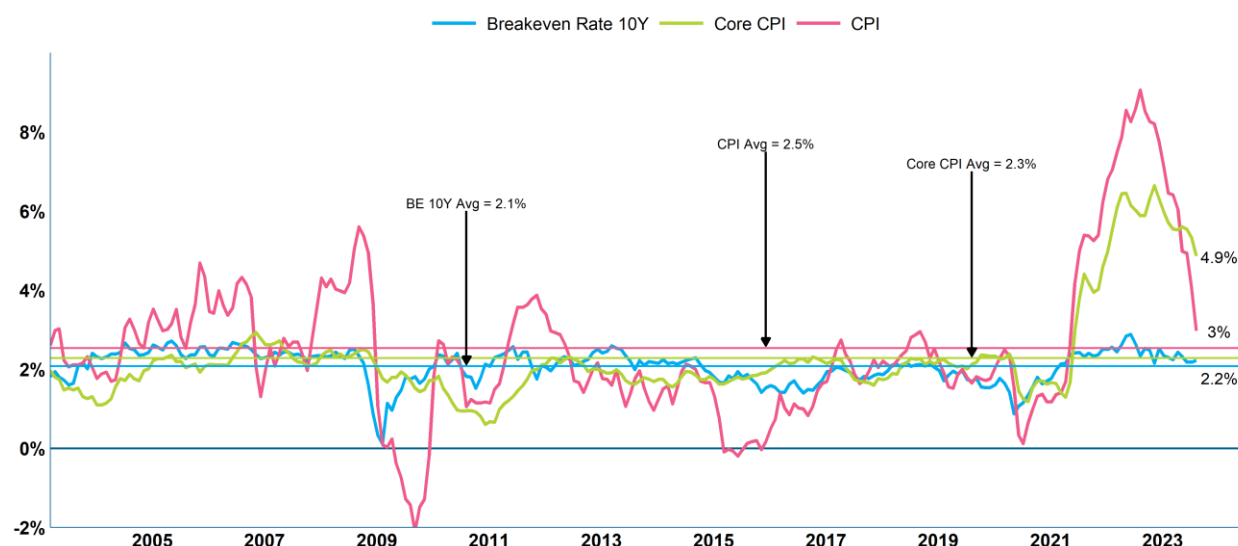
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of June 2023. The average line is the long-term average of the US, EM, and EAFE PE values from December 1999 to the recent month-end respectively.



- Interest rates have started rising again across the curve given policy maker guidance that policy rates are likely to rise further and potentially stay longer at the terminal rate than market participants expect. The rise in rates was particularly acute at the very front-end (< 1 year). Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data (mainly inflation and labor markets) remains strong.
- The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -1.06%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.62%. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of June 30, 2023.

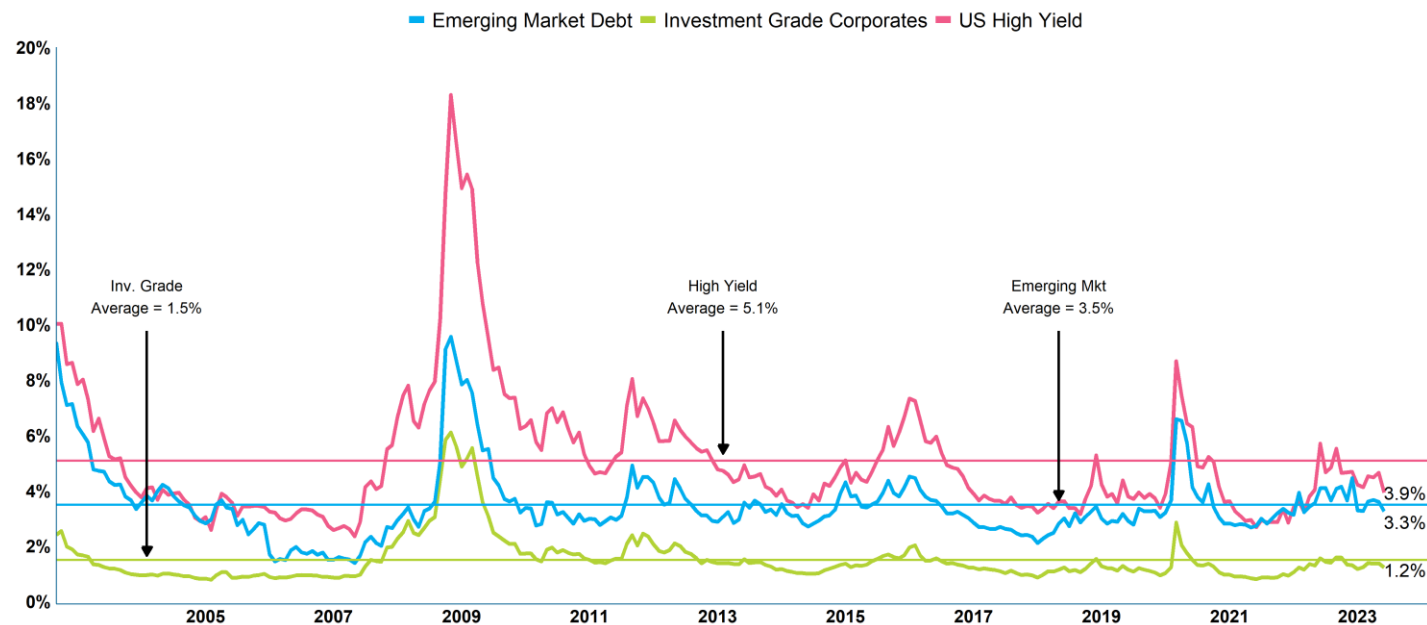
Ten-Year Breakeven Inflation and CPI¹



- Headline inflation continued to decline in June, with the year-over-year reading falling from 4.0% to 3.0% and coming in slightly below estimates. The month-over-month rate of price increases rose slightly (0.2% versus 0.1%), with food prices ticking up slightly (0.1%) and energy prices rose (0.6%).
- Core inflation – excluding food and energy – fell (5.3% to 4.9%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.
- Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

¹ Source: Bloomberg. Data is as June 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

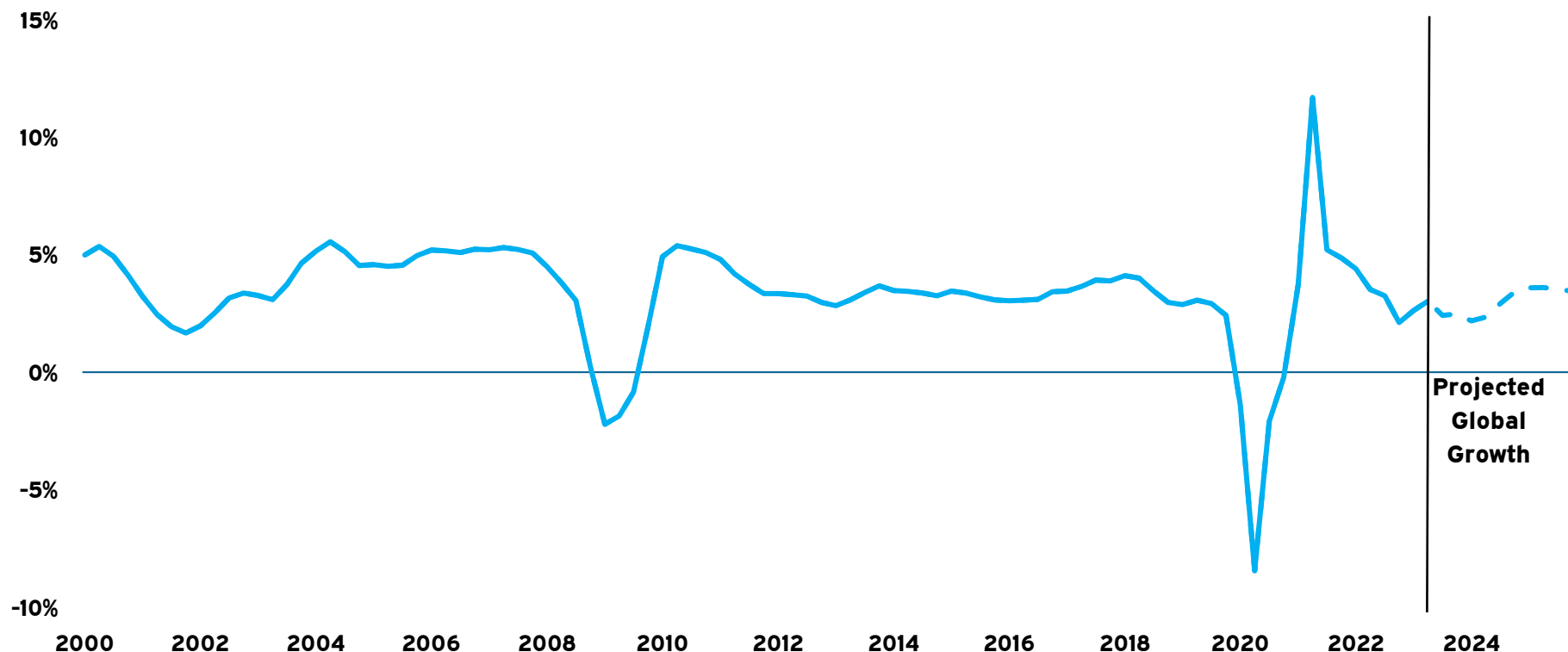
Credit Spreads vs. US Treasury Bonds¹



- Spreads (the added yield above a comparable maturity Treasury) declined in June as risk appetite remained robust for respective credit exposures.
- High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

¹ Sources: Bloomberg. Data is as of June 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth¹

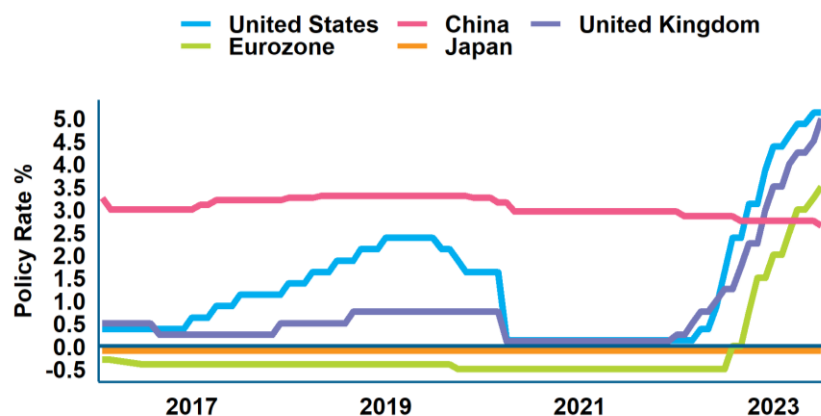


- Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers' aggressive tightening to fight inflation flow through economies.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

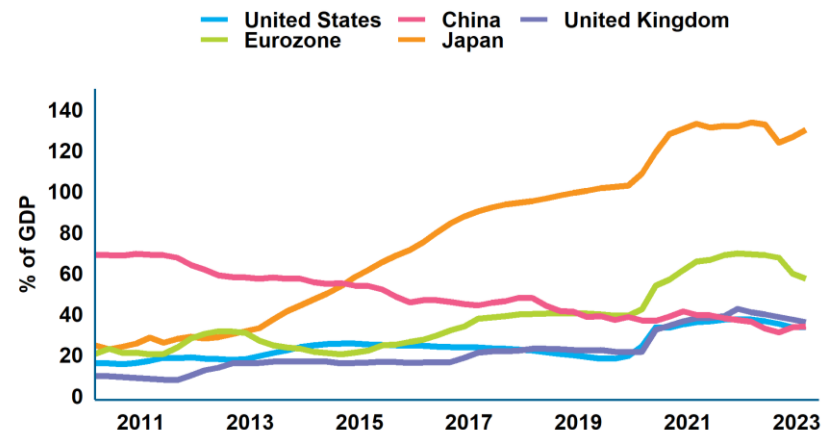
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated June 2023.

Central Bank Response¹

Policy Rates



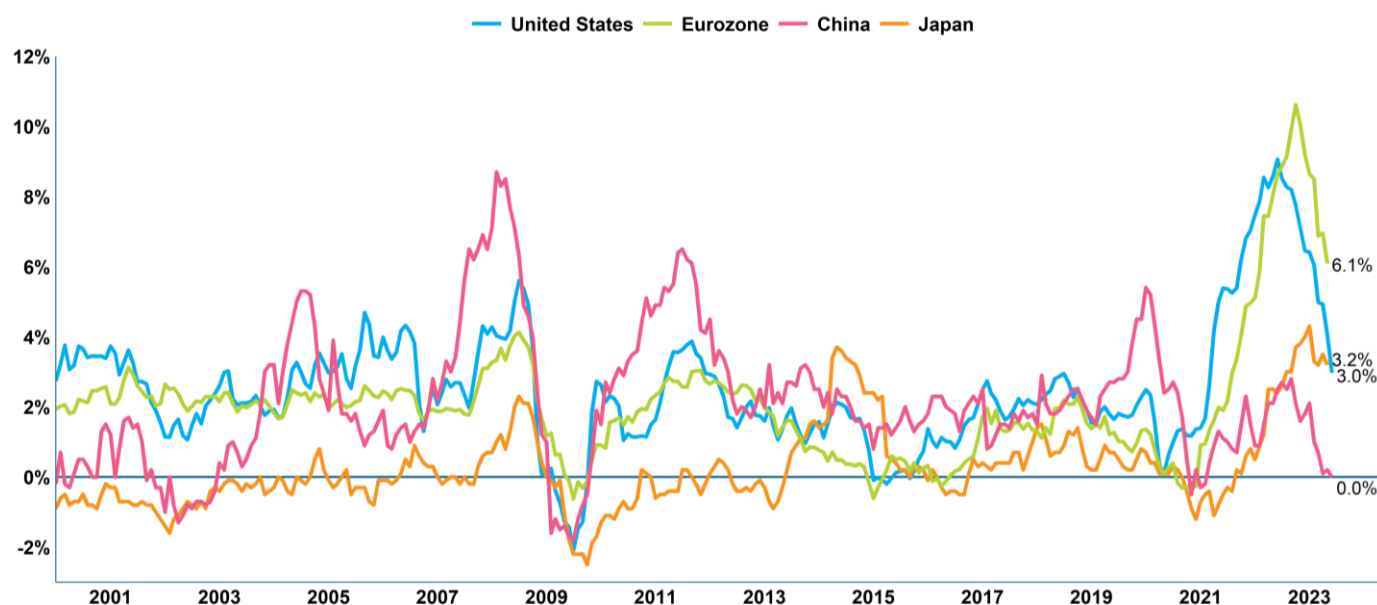
Balance Sheet as % of GDP



- In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- In May the Fed raised rates another 25 basis points to a range of 5.0% to 5.25%. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- Looking ahead, risks remain for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of June 30, 2023. China policy rate is defined as the medium-term lending facility 1 year interest rate. Balance sheet as % of GDP is based on quarterly data and is as of March 31, 2023.

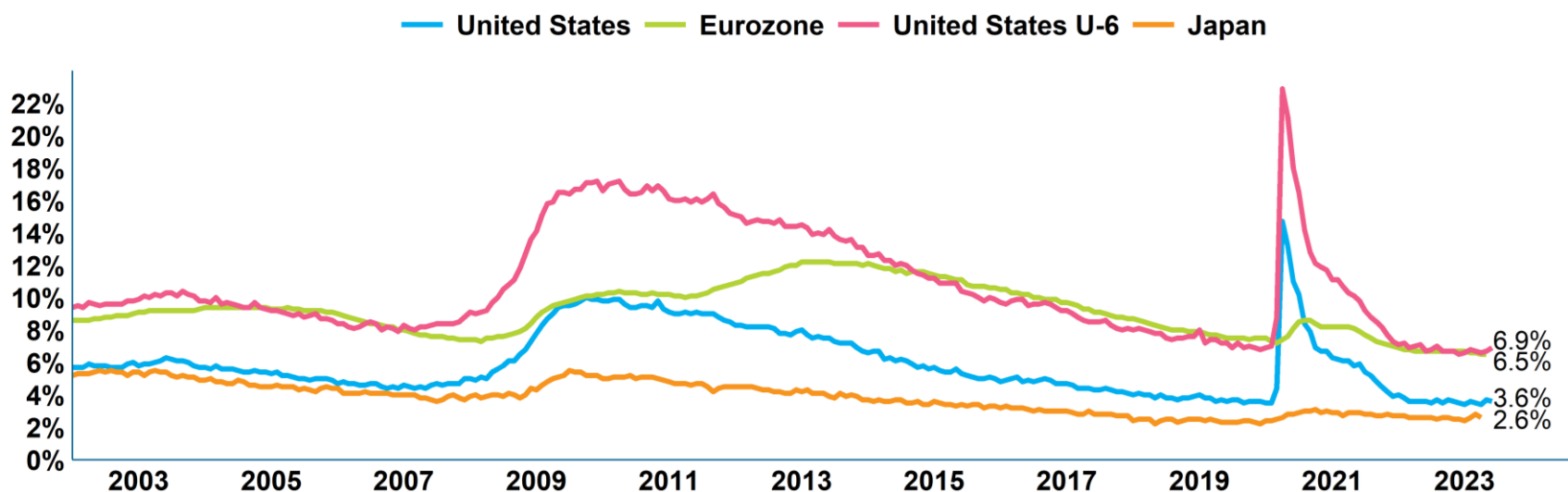
Inflation (CPI Trailing Twelve Months)¹



- Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- In the US, inflation fell to 3.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- Inflation remains lower in China and Japan. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

¹ Source: Bloomberg. Data is as June 30, 2023. The most recent Japanese inflation data is as of May 2023.

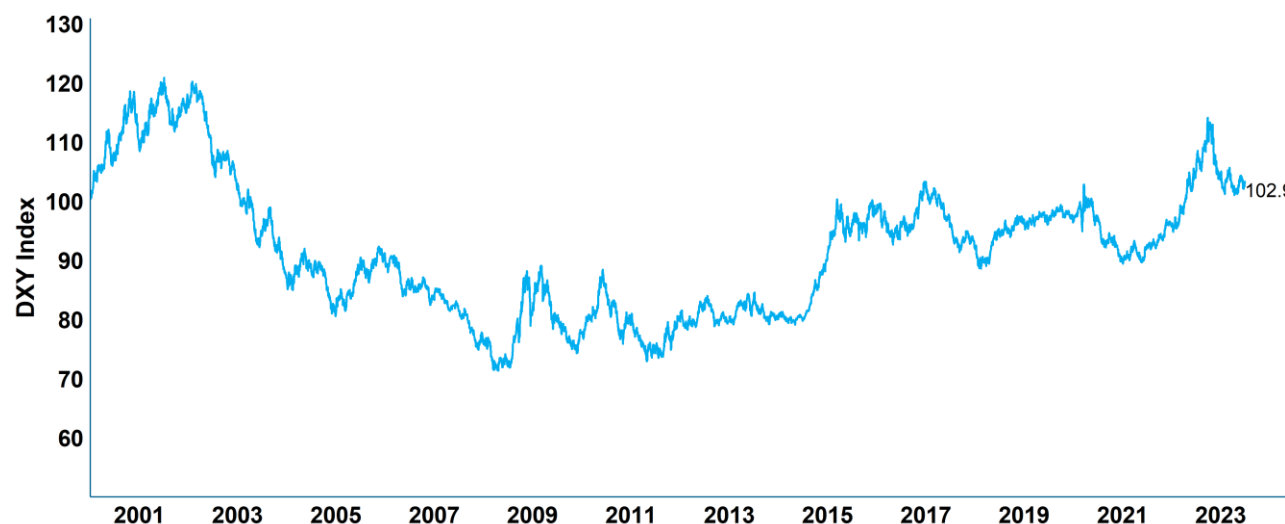
Unemployment¹



- Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.9% but also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Source: Bloomberg. Data is as June 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of May 2023.

US Dollar versus Broad Currencies¹



- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In June, we did see a slight decline in the dollar though.
- This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

¹ Source: Bloomberg. Data as of June 30, 2023.

Summary

Key Trends:

- The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

Q2 Executive Summary

Performance Overview – Q2 2023

Total Market Value		Q2 Results		5 Year Results	
Q2 2023	\$1,104,362,386	MercedCERA	2.6%	MercedCERA	7.2%
Q1 2023	\$1,107,313,962	Policy Benchmark	3.4%	Policy Benchmark	6.9%

As of June 30, 2023, the value of the Fund's assets was \$1,104 million.

- The MercedCERA portfolio returned 2.6% for the quarter, trailing its policy index by 80 basis points. This translates to annualized returns of 8.1%, 7.2% and 7.7% over the three, five and ten-year trailing periods. The portfolio's since inception annualized return is 7.9%.
- The portfolio ranks in the top quartile of its peer group over the 5 and 10-year trailing periods.
- Public Equities led performance in a strong quarter for most asset classes. US Equities led all asset classes over the period on an absolute performance basis at 8.2%, trailing index return of 8.4%. Developed International Equity returned 2.7% over the period, trailing its benchmark by 10 basis points. Emerging Markets Equity posted 0.9% over the period, matching the benchmark. US Fixed Income returned -0.8%, keeping pace with the index. Opportunistic Credit posted 3.4%, outpacing the blended benchmark by 260 basis points. Real Estate posted -1.6% for the quarter, though it outpaced the benchmarks by 160 basis points. Private Equity returned a modest 0.4%, compared to the (public market plus premium) index return of 7.9%. Real Assets returned 2.0%, outpacing the index by 3.9%.
- Private Equity results relative to the benchmark were the primary detractor from performance over the quarter, though strong performance from Real Assets partially offset this gap.

Public Manager Highlights Q2 2023

7 out of 13 Public Active Managers¹ either outperformed or matched their respective benchmarks for Q2 2023.

Total Equity (Active)

- US Equity, returning 8.2%, trailing the benchmark (Russell 3000) by 20 bps over the period. BNY Mellon Newton Dynamic US Equity, MercedCERA's active US large cap manager, returned 8.1%, trailing their benchmark by 60 basis points. Champlain Small Cap, the portfolio's small cap active manager, returned 5.3%, marginally outperforming the benchmark return of 5.2%.
- Developed International Equity returned 2.7%, trailing its benchmark by 10 basis points, as two of the four managers in the sleeve underperformed their respective benchmarks. GQG International returned 5.9%, outpacing its benchmark by 350 basis points. Portfolio overweight and stock selection in the Energy sector, as well as manager selection in the Information Technology sector contributed to the strong performance. First International Value returned 0.7%, trailing the benchmark by 230 basis points. Acadian returned 0.5%, trailing its benchmark by 150 basis points. Driehaus returned 1.8% matching its benchmark over the period.
- Artisan & RWC, the two managers in the Emerging Markets space posted returns of 1.6% & -0.7% respectively. Relative to their index (MSCI Emerging Markets) return of 0.9%, Artisan outpaced the index, whereas RWC trailed over the period. Artisan is a benchmark-agnostic strategy that invests in a small number of securities. Artisan cited positions in NVIDIA, Netflix and Latin American online bank Nu Holdings as top contributors to outperformance over the period.

¹ Excludes Public Managers that do not have a full quarter of performance, Private Markets and Hedge Fund Managers.

Public Manager Highlights Q2 2023 (continued)**Total Fixed Income (Active)**

- US Fixed Income returned -0.8%, matching the benchmark. Brandywine provided the weakest returns on both absolute (-1.9%) and relative to benchmark basis (trailed the Bloomberg US Aggregate by 1.1%), whereas Wellington Core Bond and Payden & Rygel Low Duration returned 0.0% and -0.2% respectively, each outperforming their respective benchmarks.
- Opportunistic Credit returned 3.4%, outpacing the blended benchmark return of 0.8%. All three funds posted positive absolute returns for the quarter, though GoldenTree trailed its index by 20 bps, returning 2.2%. PIMCO Income Fund returned 1.2%, outpacing its index by 2.0% and Sculptor posted strongest returns at 8.1%, outpacing the index by 5.7%. Sculptor was redeemed over the period and the remaining balance is a residual.

Active Manager Expectations

Manager	Strategy Description	Beta (High/Neutral/Low)	Tracking Error Range (basis points)	Environments Manager Underperforms
Domestic Equity				
Champlain Small Cap	Moderately diversified small cap portfolio.	Low	4.0% to 7.0%	In low quality rallies.
Newton/Mellon Capital MCM Dynamic US Equity	Very diversified, quantitative, large cap core portfolio. Also has exposure to fixed income assets.	Neutral (higher in more recent periods)	2.5% to 5.0%	When investors misprice forward looking return/risk characteristics; when returns are concentrated in one sector.
Developed Markets Equity (Non-US)				
Driehaus International Small Cap Growth	Diversified growth manager that seeks to invest in companies experiencing positive growth inflections, using a combination of fundamental and macroeconomic analysis.	Low	4.0% to 7.0%	At market inflection points, with abrupt leadership change. Deep value, low quality market environments.
Acadian ACWI ex US Small Cap Equity	Very diversified international small cap portfolio, employing highly adaptive quantitative models.	Neutral	2.5% to 4.5%	During narrow markets, abrupt changes in leadership. In "value" challenged periods.
First Eagle International Value Fund	Benchmark agnostic, diversified international value manager with strategic gold allocation and willingness to utilize cash when valuations are elevated across the market.	Low	5.0% to 10.0%	In growth- and momentum-led rallies, where value discipline and an allocation to cash will be headwinds, and if physical gold underperforms.
GQG International Equity	Benchmark agnostic, concentrated international quality-growth equity manager with valuation discipline and macro awareness. Willing to invest in US-listed companies.	Low	5.0% to 10.0%	In cyclical recoveries where deep value, asset-heavy, smaller cap stocks rally.

Active Manager Expectations (continued)

Manager	Strategy Description	Beta (High/Neutral/Low)	Tracking Error Range (basis points)	Environments Manager Underperforms
Emerging Markets Equity				
Artisan Developing World	Concentrated, benchmark agnostic emerging markets strategy focused on high quality companies, overlaid with top-down macro (currency) awareness.	Neutral	5.0% to 10.0%	During cyclical rallies concentrated in deeper value, smaller cap stocks.
RWC Emerging Markets	Concentrated, growth-at-a-reasonable-price emerging markets equity strategy focused on mid cap stocks.	High	6.0% to 10.0%	Narrow rallies in large cap stocks where small and mid-caps lag, periods of heightened market volatility, deep drawdowns in asset-heavy cyclicals.
Investment Grade Bonds				
Brandywine	Top-down, macro, value-oriented strategy that invests with a benchmark agnostic philosophy	Neutral	2.0% to 7.0%	
Payden & Rygel	Short-term portfolios with emphasis on sector selection and yield curve management rather than relying on duration management	Low	0.2% to 0.7%	
Wellington	Benchmark-relative, diversified strategy with emphasis on individual security analysis, with Broad Markets teams' top-down sector views taken into consideration	Neutral	1.0 to 1.5%	
Opportunistic Credit				
PIMCO Income	Global multi-sector, benchmark agnostic approach, utilizing firm's resources to identify best income ideas while staying senior in the capital structure.	Low	1.5% to 3.5%	During periods of lower quality bond rallies and volatility in interest rates and certain currencies.
GoldenTree Multi-Sector Credit	Bottom-up security selection, managing risk and adding value through credit sector rotation.	Low	2.5% to 4.5%	During initial periods of economic recovery and rapid spread tightening.

Manager Monitor

Manager	Significant Events (Yes/No)	Last Meeting w Board of Retirement	Last Meeting with MIG	Comments
Domestic Equity Assets				
BNY Mellon Newton Dynamic US Equity Fund	No	-	June-22	Strategy Update and discussion on current market environment.
Champlain Small Cap	No	-	Sep-22	Review of strategy, no changes to conviction level
Developed Markets Equity (Non-US) Assets				
Driehaus International Small Cap Growth	No	-	Aug-22	Review of strategy, no changes to conviction level.
Acadian ACWI ex US Small Cap Equity	No	-	Feb- 23	Review of strategy, no changes to conviction level.
First Eagle International Value Fund	No	-	Mar-23	Review of strategy, no changes to conviction level
GQG International Equity	Yes	-	Jun-23	Discussion with management team regarding leadership turnover & non-US Equity strategies. Fund remains on Watch status.
Emerging Markets Equity Assets				
Artisan Developing World	No	-	Jun-23	Discussion around trend of increasing develop markets names exposure in portfolio. No major changes to conviction level.
RWC Emerging Markets	No	-	Nov-22	Review of strategy, no changes to conviction level.
US Fixed Income Assets				
Brandywine US Fixed Income	No	-	Mar-23	Review of strategy, no changes to conviction level
Payden & Rygel Low Duration	No	-	Aug-23	Review of strategy, no changes to conviction level
Wellington Core Bond	No	-	Mar-23	Review of strategy, no changes to conviction level
Opportunistic Credit				
PIMCO Income Fund	No	-	Dec-22	Discussion around impact of Portfolio Manager departure. No concerns after review.
GoldenTree Multi-Sector Credit	No	-	Sep-22	Review of strategy, no changes to conviction level.
Sculptor Opportunistic Credit	No	-	Dec-22	Review of strategy, no changes to conviction level
Private Equity Program	N/A	N/A	N/A	Oversight by Cliffwater.
Real Assets Program	N/A	N/A	N/A	Oversight by Cliffwater.
Hedge Fund Program	N/A	N/A	N/A	Oversight by Cliffwater.

Active Manager Peer Rankings¹

Investment Managers	Product	Peer Group	Market Value (\$M)					Client Inception	Years in Portfolio
				1YR	3YR	5YR	10YR		
Champlain	Small Cap Fund	US Small Cap Core	29	21	95	77	55	Nov-20	2.8
Mellon Capital	Dynamic US Equity Strategy	US Large Cap Core	55	46	63	23	4	Dec-12	10.7
Acadian	All-Country World ex US Small Cap	Non-US Div Small Cap	14	72	21	8	27	May-19	4.3
Driehaus	International Small Cap Growth	ACWI ex US Small Cap Growth	14	61	44	30	27	May-19	4.3
GQG	International Equity	All ACWI ex US Equity	49	85	50	5	-	Dec-19	3.7
First Eagle	International Value	EAFE Value Equity	50	86	97	62	81	Dec-19	3.7
Artisan	Developing World	Emerging Markets	57	5	94	3	-	Dec-19	3.7
RWC	Emerging Markets	Emerging Markets	25	90	54	91	11	Dec-19	3.7
Brandywine	US Fixed Income	US Fixed Income	33	99	8	1	1	Nov-22	0.8
Payden & Rygel	Low Duration	US Short Duration Gov/Cred Fixed Income	8	38	39	48	41	Nov-22	0.8
Wellington	Core Bond	US Fixed Income	50	40	93	89	68	Nov-22	0.8
PIMCO	Income Fund	Global Multi-Sector Fixed Income	12	22	17	40	16	May-19	4.3
GoldenTree	Multi-Sector Credit Strategy	Global Multi-Sector Fixed Income	24	9	11	28	17	Jun-19	4.2

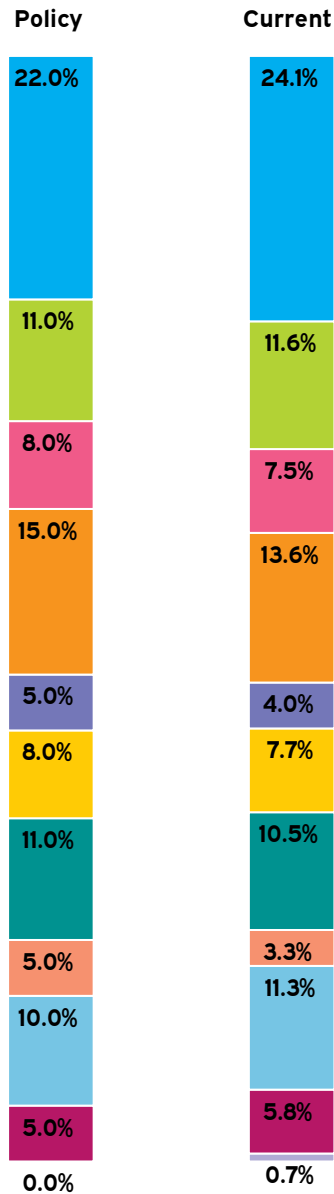
¹ Source: eVestment. Ranks are greyed out for periods before Merced CERA was invested.

Performance Update

As of June 30, 2023

Merced County Employees' Retirement Association

Total Fund | As of June 30, 2023



Allocation vs. Targets and Policy						
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
US Equity	265,740,289	24.1	22.0	2.1	16.0 - 27.0	Yes
International Equity	127,890,682	11.6	11.0	0.6	6.0 - 16.0	Yes
Emerging Markets Equity	82,906,250	7.5	8.0	-0.5	4.0 - 12.0	Yes
Private Equity	150,164,072	13.6	15.0	-1.4	5.0 - 20.0	Yes
Direct Lending	44,724,244	4.0	5.0	-1.0	0.0 - 10.0	Yes
Real Estate	84,919,962	7.7	8.0	-0.3	6.0 - 10.0	Yes
US Fixed Income	115,928,087	10.5	11.0	-0.5	6.0 - 16.0	Yes
Opportunistic Credit	36,218,334	3.3	5.0	-1.7	3.0 - 7.0	Yes
Hedge Funds	124,920,644	11.3	10.0	1.3	5.0 - 15.0	Yes
Real Assets	63,640,807	5.8	5.0	0.8	3.0 - 7.0	Yes
Cash	7,309,015	0.7	0.0	0.7	0.0 - 5.0	Yes
Total	1,104,362,386	100.0	100.0	0.0		

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)	1,104,362,386	100.0	2.8	2.6	6.7	7.6	7.6	8.1	7.2	7.7	7.9	Jan-95
Total Fund (Gross)			2.9	2.7	6.9	7.9	7.9	8.5	7.5	8.1	8.1	Jan-95
<i>Policy Index</i>			2.9	3.4	8.3	7.2	7.2	8.8	6.9	7.7	6.2	
Total Fund w/o Alternatives (Net)	628,683,642	56.9	4.5	4.1	10.5	11.3	11.3	6.1	6.6	7.4	--	Jan-08
Total Fund w/o Alternatives (Gross)			4.5	4.2	10.7	11.8	11.8	6.5	7.0	7.8	--	Jan-08
<i>Policy Index w/o AI</i>			3.9	3.4	9.1	10.4	10.4	6.2	5.6	6.7	--	
US Equity (Net)	265,740,289	24.1	6.8	8.2	15.7	18.6	18.6	12.9	10.6	12.5	10.2	Jan-95
US Equity (Gross)			6.8	8.2	15.8	18.9	18.9	13.2	10.9	12.8	10.3	Jan-95
<i>Russell 3000</i>			6.8	8.4	16.2	19.0	19.0	13.9	11.0	12.1	10.2	
International Equity (Net)	210,796,932	19.1	5.0	2.0	11.0	11.2	11.2	5.0	5.9	6.0	5.5	Jan-99
International Equity (Gross)			5.1	2.2	11.5	12.1	12.1	5.8	6.6	6.6	5.9	Jan-99
<i>International Equity Custom</i>			4.3	2.3	9.0	11.8	11.8	6.6	3.4	5.0	4.3	
Developed International Equity (Net)	127,890,682	11.6	4.1	2.7	7.5	10.4	10.4	7.5	5.1	5.8	4.1	Feb-08
Developed International Equity (Gross)			4.2	2.9	7.8	11.1	11.1	8.2	5.7	6.3	4.6	Feb-08
<i>Custom Blended Developed International Equity BM</i>			4.3	2.8	10.7	17.2	17.2	8.8	4.3	5.3	3.1	
Emerging Markets Equity (Net)	82,906,250	7.5	6.5	0.9	17.1	12.8	12.8	-0.4	5.8	5.4	4.6	May-12
Emerging Markets Equity (Gross)			6.5	1.1	17.7	14.0	14.0	0.5	6.8	6.4	5.5	May-12
<i>MSCI EM</i>			3.8	0.9	4.9	1.7	1.7	2.3	1.1	3.2	2.4	
US Fixed Income (Net)	115,928,087	10.5	-0.6	-0.8	1.5	-2.4	-2.4	-4.4	0.2	1.5	4.4	Jan-95
US Fixed Income (Gross)			-0.6	-0.8	1.5	-2.3	-2.3	-4.3	0.3	1.7	4.5	Jan-95
<i>US Fixed Income Custom Benchmark</i>			-0.4	-0.8	2.0	-0.8	-0.8	-3.7	0.6	1.6	4.5	

Data Prior to March 2018 provided by prior consultant.

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit (Net)	36,218,334	3.3	2.1	3.4	6.2	8.2	8.2	5.5	--	--	4.3	May-19
Opportunistic Credit (Gross)			2.2	3.6	6.6	8.8	8.8	6.1	--	--	4.7	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever</i>			0.8	0.8	4.0	4.3	4.3	0.3	--	--	1.6	
Real Estate (Net)	84,919,962	7.7	-0.9	-1.6	-2.7	-3.0	-3.0	4.6	3.6	5.8	6.8	Dec-10
Real Estate (Gross)			-0.9	-1.6	-2.7	-3.0	-3.0	4.6	3.6	6.3	7.7	Apr-99
<i>Custom Blended Real Estate Benchmark</i>			-3.2	-3.2	-8.0	-3.1	-3.1	8.4	7.1	8.6	7.4	
<i>CPI +5% (Seasonally Adjusted)</i>			0.6	1.9	4.1	8.2	8.2	11.0	9.1	7.9	7.7	
Private Real Estate (Net)	68,417,327	6.2	-2.4	-2.4	-4.1	-2.2	-2.2	5.9	4.3	6.2	7.1	Dec-10
Private Real Estate (Gross)			-2.4	-2.4	-4.1	-2.2	-2.2	5.9	4.4	6.7	7.8	Apr-99
<i>Custom Blended Real Estate Benchmark</i>			-3.2	-3.2	-8.0	-3.1	-3.1	8.4	7.1	8.6	7.4	
Private Equity (Net)	150,164,072	13.6	0.4	0.4	1.4	1.5	1.5	25.7	16.9	14.1	10.4	Jul-05
Private Equity (Gross)			0.4	0.4	1.4	1.5	1.5	25.7	16.9	14.1	10.5	Jul-05
<i>Custom Private Equity Benchmark</i>			2.9	7.9	18.8	-4.6	-4.6	20.0	14.5	15.5	--	
Direct Lending (Net)	44,724,244	4.0	2.9	2.9	4.6	6.4	6.4	9.8	--	--	9.8	Jul-20
Direct Lending (Gross)			2.9	2.9	4.6	6.4	6.4	9.8	--	--	9.8	Jul-20
<i>S&P LSTA Leveraged Loan +2%</i>			2.4	3.7	7.5	12.9	12.9	8.4	6.2	6.1	8.4	
Hedge Fund (Net)	124,920,644	11.3	0.2	0.9	2.0	3.7	3.7	6.8	3.9	--	4.2	Jul-14
Hedge Fund (Gross)			0.3	1.1	2.5	4.6	4.6	7.8	4.7	--	4.7	Jul-14
<i>Custom Blended Hedge Fund Benchmark</i>			1.2	1.5	2.3	3.7	3.7	5.0	3.3	--	3.3	
Real Assets (Net)	63,640,807	5.8	3.1	2.0	6.2	11.7	11.7	15.4	11.1	9.4	9.7	Dec-10
Real Assets (Gross)			3.1	2.0	6.2	11.8	11.8	15.6	11.2	9.9	10.2	Dec-10
<i>Custom Blended Real Assets Benchmark</i>			4.8	-1.9	0.4	6.4	6.4	9.9	6.1	7.6	--	
<i>CPI +5% (Seasonally Adjusted)</i>			0.6	1.9	4.1	8.2	8.2	11.0	9.1	7.9	7.7	

Real Assets includes State Street Real Assets NL Fund.

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Infrastructure (Net)	28,922,140	2.6	3.6	3.6	8.6	12.6	12.6	12.3	12.7	--	10.2	Jan-15
Private Infrastructure (Gross)			3.6	3.6	8.6	12.6	12.6	12.5	12.9	--	10.2	Jan-15
<i>S&P Global Infrastructure</i>			3.0	-0.1	3.8	4.2	4.2	10.6	5.3	6.7	4.9	
Private Natural Resources (Net)	21,527,118	1.9	2.4	2.4	8.7	20.8	20.8	25.6	14.2	--	16.0	Oct-15
Private Natural Resources (Gross)			2.4	2.4	8.7	20.8	20.8	25.6	14.2	--	16.0	Oct-15
<i>S&P Global Natural Resources Sector Index (TR)</i>			6.5	-3.7	-3.1	8.4	8.4	18.6	5.9	5.8	11.1	
Cash (Net)	7,309,015	0.7	0.4	1.2	3.9	1.8	1.8	0.7	0.9	--	--	Dec-10
Cash (Gross)			0.4	1.2	3.9	1.8	1.8	0.7	0.9	--	--	Dec-10

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	1,104,362,386	100.0	2.8	2.6	6.7	7.6	7.6	8.1	7.2	7.7	7.9	Jan-95
<i>Policy Index</i>			2.9	3.4	8.3	7.2	7.2	8.8	6.9	7.7	6.2	
<i>InvMetrics All Public DB Plans > \$1B Median</i>			2.9	2.6	6.5	7.6	7.6	8.3	6.2	7.0	7.7	
<i>InvMetrics All Public DB Plans > \$1B</i>			57	52	42	51	51	57	19	23	26	
Total Fund w/o Alternatives	628,683,642	56.9	4.5	4.1	10.5	11.3	11.3	6.1	6.6	7.4	--	Jan-08
<i>Policy Index w/o AI</i>			3.9	3.4	9.1	10.4	10.4	6.2	5.6	6.7	--	
<i>InvMetrics All Public DB Plans > \$1B Median</i>			2.9	2.6	6.5	7.6	7.6	8.3	6.2	7.0	5.7	
<i>InvMetrics All Public DB Plans > \$1B</i>			1	1	1	2	2	97	39	36	--	
US Equity	265,740,289	24.1	6.8	8.2	15.7	18.6	18.6	12.9	10.6	12.5	10.2	Jan-95
<i>Russell 3000</i>			6.8	8.4	16.2	19.0	19.0	13.9	11.0	12.1	10.2	
BNY Mellon Newton Dynamic US Equity	54,649,724	4.9	6.3	8.1	15.6	17.2	17.2	12.6	12.2	14.4	15.3	Jan-13
<i>S&P 500 Index</i>			6.6	8.7	16.9	19.6	19.6	14.6	12.3	12.9	13.6	
<i>eV US Large Cap Core Equity Median</i>			6.3	7.3	12.9	16.6	16.6	13.4	10.9	11.7	12.5	
<i>eV US Large Cap Core Equity</i>			52	34	28	46	46	63	23	4	3	
BNY Mellon Large Cap	182,482,151	16.5	6.8	8.7	16.7	19.1	19.1	14.1	11.9	--	13.1	Apr-16
<i>Russell 1000 Index</i>			6.8	8.6	16.7	19.4	19.4	14.1	11.9	12.6	13.1	
<i>eV US Large Cap Core Equity Median</i>			6.3	7.3	12.9	16.6	16.6	13.4	10.9	11.7	11.9	
<i>eV US Large Cap Core Equity</i>			29	24	22	28	28	38	30	--	22	
Champlain Small Cap	28,608,415	2.6	7.6	5.3	10.0	18.2	18.2	--	--	--	8.0	Nov-20
<i>Russell 2000 Index</i>			8.1	5.2	8.1	12.3	12.3	10.8	4.2	8.3	9.4	
<i>eV US Small Cap Core Equity Median</i>			8.6	4.7	8.9	14.3	14.3	14.2	6.5	9.4	13.1	
<i>eV US Small Cap Core Equity</i>			83	35	36	21	21	--	--	--	91	

Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only.

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Equity	210,796,932	19.1	5.0	2.0	11.0	11.2	11.2	5.0	5.9	6.0	5.5	Jan-99
<i>International Equity Custom</i>			4.3	2.3	9.0	11.8	11.8	6.6	3.4	5.0	4.3	
Developed International Equity	127,890,682	11.6	4.1	2.7	7.5	10.4	10.4	7.5	5.1	5.8	4.1	Feb-08
<i>Custom Blended Developed International Equity BM</i>			4.3	2.8	10.7	17.2	17.2	8.8	4.3	5.3	3.1	
Acadian ACWI ex U.S. Small Cap Equity	14,338,282	1.3	4.4	0.5	5.6	9.6	9.6	11.8	--	--	8.3	May-19
<i>MSCI AC World ex USA Small Cap (Net)</i>			3.4	2.0	6.8	10.9	10.9	8.1	2.6	5.8	4.4	
eV ACWI ex-US Small Cap Equity Median			4.0	1.6	8.4	12.0	12.0	5.8	2.7	6.6	4.8	
eV ACWI ex-US Small Cap Equity			36	77	82	72	72	21	--	--	6	
Driehaus International Small Cap Growth	14,067,264	1.3	4.4	1.8	5.3	11.3	11.3	7.1	--	--	7.4	May-19
<i>MSCI AC World ex USA Small Growth Index (Net)</i>			3.3	1.8	7.6	10.6	10.6	5.2	2.4	6.0	4.3	
eV ACWI ex-US Small Cap Equity Median			4.0	1.6	8.4	12.0	12.0	5.8	2.7	6.6	4.8	
eV ACWI ex-US Small Cap Equity			33	46	86	61	61	44	--	--	12	
GQG International Equity	49,157,770	4.5	5.3	5.9	8.8	10.9	10.9	7.8	--	--	6.8	Dec-19
<i>MSCI AC World ex USA (Net)</i>			4.5	2.4	9.5	12.7	12.7	7.2	3.5	4.7	3.8	
eV Global Growth Equity Median			5.3	5.8	14.9	17.1	17.1	7.7	8.9	10.2	8.4	
eV Global Growth Equity			52	49	82	85	85	50	--	--	70	
First Eagle International Value Fund	50,327,366	4.6	2.8	0.7	6.9	9.6	9.6	6.3	--	--	3.2	Dec-19
<i>MSCI EAFE (Net)</i>			4.6	3.0	11.7	18.8	18.8	8.9	4.4	5.4	4.8	
eV Global Value Equity Median			5.6	3.5	9.7	14.9	14.9	12.6	6.1	7.2	6.9	
eV Global Value Equity			99	89	70	86	86	97	--	--	94	

Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Emerging Markets Equity	82,906,250	7.5	6.5	0.9	17.1	12.8	12.8	-0.4	5.8	5.4	4.6	May-12
<i>MSCI EM</i>			<i>3.8</i>	<i>0.9</i>	<i>4.9</i>	<i>1.7</i>	<i>1.7</i>	<i>2.3</i>	<i>1.1</i>	<i>3.2</i>	<i>2.4</i>	
Artisan Developing World TR	57,499,772	5.2	6.8	1.6	24.6	20.3	20.3	-1.8	--	--	5.3	Dec-19
<i>MSCI Emerging Markets (Net)</i>			<i>3.8</i>	<i>0.9</i>	<i>4.9</i>	<i>1.7</i>	<i>1.7</i>	<i>2.3</i>	<i>0.9</i>	<i>3.0</i>	<i>1.1</i>	
eV Emg Mkts Equity Median			4.5	2.2	7.1	6.1	6.1	3.9	2.2	3.6	2.4	
eV Emg Mkts Equity			5	60	1	5	5	94	--	--	24	
RWC	25,406,478	2.3	5.8	-0.7	3.1	-0.6	-0.6	3.4	--	--	0.1	Dec-19
<i>MSCI Emerging Markets (Net)</i>			<i>3.8</i>	<i>0.9</i>	<i>4.9</i>	<i>1.7</i>	<i>1.7</i>	<i>2.3</i>	<i>0.9</i>	<i>3.0</i>	<i>1.1</i>	
eV Emg Mkts Equity Median			4.5	2.2	7.1	6.1	6.1	3.9	2.2	3.6	2.4	
eV Emg Mkts Equity			14	91	91	90	90	54	--	--	79	
US Fixed Income	115,928,087	10.5	-0.6	-0.8	1.5	-2.4	-2.4	-4.4	0.2	1.5	4.4	Jan-95
<i>US Fixed Income Custom Benchmark</i>			<i>-0.4</i>	<i>-0.8</i>	<i>2.0</i>	<i>-0.8</i>	<i>-0.8</i>	<i>-3.7</i>	<i>0.6</i>	<i>1.6</i>	<i>4.5</i>	
Vanguard Short-Term Treasury Index Fund	6,507,713	0.6	-0.5	-0.6	1.0	0.1	0.1	-1.2	0.9	--	0.9	Mar-18
<i>Blmbg. 1-3 Govt</i>			<i>-0.5</i>	<i>-0.6</i>	<i>1.0</i>	<i>0.2</i>	<i>0.2</i>	<i>-1.1</i>	<i>0.9</i>	<i>0.8</i>	<i>1.0</i>	
eV US Short Duration Fixed Inc Median			-0.2	-0.1	1.5	1.3	1.3	-0.5	1.3	1.2	1.3	
eV US Short Duration Fixed Inc			88	94	92	89	89	78	86	--	87	
Vanguard Total Bond Market Index Fund	17,735,031	1.6	-0.4	-0.9	2.2	-0.9	-0.9	-4.0	--	--	-0.2	May-19
<i>Blmbg. U.S. Aggregate Index</i>			<i>-0.4</i>	<i>-0.8</i>	<i>2.1</i>	<i>-0.9</i>	<i>-0.9</i>	<i>-4.0</i>	<i>0.8</i>	<i>1.5</i>	<i>-0.2</i>	
eV US Core Fixed Inc Median			-0.3	-0.7	2.3	-0.5	-0.5	-3.6	1.0	1.7	0.1	
eV US Core Fixed Inc			77	80	60	73	73	86	--	--	77	
Payden & Rygel Low Duration Fund	8,042,150	0.7	-0.2	-0.2	0.7	--	--	--	--	--	4.4	Nov-22
<i>Blmbg. U.S. Treasury: 1-3 Year</i>			<i>-0.5</i>	<i>-0.6</i>	<i>1.0</i>	<i>0.1</i>	<i>0.1</i>	<i>-1.1</i>	<i>0.9</i>	<i>0.8</i>	<i>1.8</i>	
Brandywine US Fixed Income	33,379,565	3.0	-0.7	-1.9	3.1	--	--	--	--	--	0.2	Nov-22
<i>Blmbg. U.S. Aggregate Index</i>			<i>-0.4</i>	<i>-0.8</i>	<i>2.1</i>	<i>-0.9</i>	<i>-0.9</i>	<i>-4.0</i>	<i>0.8</i>	<i>1.5</i>	<i>5.4</i>	

Historical returns for the US Fixed Income Composite prior to December 2010 are gross only.

Merced County Employees' Retirement Association

Asset Allocation & Performance | As of June 30, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Wellington Core Bond	50,263,629	4.6	-0.6	0.0	0.9	--	--	--	--	--	3.1	Nov-22
<i>Blmbg. U.S. Aggregate Index</i>			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	5.4	
Opportunistic Credit	36,218,334	3.3	2.1	3.4	6.2	8.2	8.2	5.5	--	--	4.3	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever</i>			0.8	0.8	4.0	4.3	4.3	0.3	--	--	1.6	
PIMCO Income Fund	11,767,495	1.1	1.0	1.2	3.8	5.3	5.3	1.8	--	--	1.9	May-19
<i>Blmbg. U.S. Aggregate Index</i>			-0.4	-0.8	2.1	-0.9	-0.9	-4.0	0.8	1.5	-0.2	
<i>Multisector Bond Median</i>			0.6	0.6	3.2	4.0	4.0	0.7	2.0	2.8	1.3	
<i>Multisector Bond</i>			25	20	25	22	22	17	--	--	26	
GoldenTree Multi-Sector Credit	24,058,274	2.2	1.1	2.2	5.2	9.9	9.9	5.7	--	--	4.0	Jun-19
<i>50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans</i>			2.0	2.4	5.9	9.6	9.6	4.7	3.7	4.3	3.5	
<i>eV US High Yield Fixed Inc Median</i>			1.5	1.5	4.8	8.3	8.3	3.2	3.2	4.1	2.8	
<i>eV US High Yield Fixed Inc</i>			82	13	34	10	10	11	--	--	13	
Sculptor Credit Opportunities Domestic Partners, LP	392,565	0.0	5.8	8.1	11.0	9.8	9.8	11.1	--	--	11.1	Jul-20
<i>50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans</i>			2.0	2.4	5.9	9.6	9.6	4.7	3.7	4.3	4.7	
Real Estate	84,919,962	7.7	-0.9	-1.6	-2.7	-3.0	-3.0	4.6	3.6	5.8	6.8	Dec-10
<i>Custom Blended Real Estate Benchmark</i>			-3.2	-3.2	-8.0	-3.1	-3.1	8.4	7.1	8.6	9.7	
<i>CPI +5% (Seasonally Adjusted)</i>			0.6	1.9	4.1	8.2	8.2	11.0	9.1	7.9	7.7	
<i>InvMetrics All DB Real Estate Pub+Priv Net Median</i>			-0.3	-1.5	-3.7	-4.6	-4.6	7.4	5.8	8.1	--	
<i>InvMetrics All DB Real Estate Pub+Priv Net</i>			58	55	38	43	43	82	83	93	--	
Vanguard REIT Index	16,502,635	1.5	5.6	1.6	3.5	-3.9	-3.9	--	--	--	4.8	Sep-20
<i>Spliced Vanguard REIT Benchmark</i>			5.6	1.7	3.5	-3.8	-3.8	6.0	4.5	6.2	4.9	

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	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Estate	68,417,327	6.2	-2.4	-2.4	-4.1	-2.2	-2.2	5.9	4.3	6.2	7.1	Dec-10
<i>Custom Blended Real Estate Benchmark</i>			-3.2	-3.2	-8.0	-3.1	-3.1	8.4	7.1	8.6	9.7	
<i>InvMetrics All DB Real Estate Pub+Priv Net Median</i>			-0.3	-1.5	-3.7	-4.6	-4.6	7.4	5.8	8.1	--	
<i>InvMetrics All DB Real Estate Pub+Priv Net</i>			81	72	52	38	38	70	77	91	--	
Greenfield Gap VII	937,589	0.1	3.3	3.3	-11.7	0.2	0.2	22.6	18.0	--	16.0	Jan-15
Patron Capital V	6,025,011	0.5	5.0	5.0	11.8	-8.0	-8.0	-4.5	-6.0	--	1.4	Feb-16
UBS Trumbull Property	25,593,987	2.3	-7.1	-7.1	-12.0	-8.3	-8.3	3.2	2.4	5.1	6.3	Apr-99
Carlyle Realty VIII	2,703,431	0.2	-0.5	-0.5	-7.7	1.3	1.3	38.0	19.2	--	10.8	Jan-18
Taconic CRE Dislocation Fund II	3,043,633	0.3	0.3	0.3	15.0	19.1	19.1	10.2	--	--	9.7	Nov-18
Carmel Partners Investment Fund VII	3,333,039	0.3	0.9	0.9	-1.3	6.0	6.0	-6.5	--	--	-21.5	Apr-19
AG Realty Value Fund X, L.P.	3,649,287	0.3	-0.9	-0.9	-0.9	6.0	6.0	16.3	--	--	6.5	Jun-19
Rockpoint Real Estate Fund VI, L.P.	4,245,194	0.4	0.5	0.5	-2.1	-2.3	-2.3	13.5	--	--	11.7	May-20
Cerberus Real Estate Debt Fund, L.P.	5,185,707	0.5	1.4	1.4	1.9	4.0	4.0	10.2	--	--	10.2	Jul-20
Taconic CRE Dislocation Onshore Fund III	5,426,453	0.5	-0.8	-0.8	1.7	7.6	7.6	--	--	--	6.9	Jun-21
Starwood Distressed Opportunity Fund XII Global	1,798,718	0.2	-4.3	-4.3	-4.0	0.4	0.4	--	--	--	136.0	Jun-21
Carlyle Realty Partners IX	562,489	0.1	-8.4	-8.4	-32.5	-90.2	-90.2	--	--	--	-144.2	Dec-21
Carmel Partners Investment Fund VIII	3,202,171	0.3	-0.7	-0.7	-2.6	-7.5	-7.5	--	--	--	-12.7	Apr-22
Rockpoint Real Estate Fund VII L.P.	2,710,618	0.2	3.8	3.8	9.6	--	--	--	--	--	13.6	Aug-22

All private markets performance and market values reflect a 3/31/2023 capital account balance unless otherwise noted.

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.

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	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity	150,164,072	13.6	0.4	0.4	1.4	1.5	1.5	25.7	16.9	14.1	10.4	Jul-05
<i>Custom Private Equity Benchmark</i>			2.9	7.9	18.8	-4.6	-4.6	20.0	14.5	15.5	--	
<i>InvMetrics Public DB Private Eq Net[1] Median</i>			1.3	1.3	3.4	4.2	4.2	6.4	4.2	4.5	4.1	
<i>InvMetrics Public DB Private Eq Net[1]</i>			67	67	83	73	73	2	2	3	1	
Adams Street	4,127,182	0.4	-0.8	-0.8	-2.5	-14.0	-14.0	19.1	12.2	12.8	8.2	Oct-05
Invesco VI	603,938	0.1	-21.5	-21.5	-21.5	-48.0	-48.0	31.1	20.0	16.3	16.3	Jul-13
Ocean Avenue II	8,762,791	0.8	-4.2	-4.2	-8.5	3.9	3.9	46.0	32.0	--	22.4	Jul-14
Pantheon I	62,645	0.0	-3.5	-3.5	1.8	-13.8	-13.8	-9.7	-13.1	-3.4	-1.5	Jan-06
Pantheon II	2,961,649	0.3	-0.7	-0.6	0.2	-8.7	-8.7	19.2	14.0	14.0	12.5	Jan-12
Pantheon Secondary	110,622	0.0	-0.2	-0.2	-0.1	-2.5	-2.5	-5.2	-4.3	-1.2	0.6	Jul-07
Davidson Kempner Long-Term Distressed Opportunities Fund IV	3,147,382	0.3	10.4	10.4	22.5	36.9	36.9	31.9	20.0	--	19.2	Apr-18
GTCR Fund XII	5,338,569	0.5	-2.4	-2.4	-0.7	-4.2	-4.2	30.5	15.9	--	15.7	Jun-18
Carrick Capital Partners III	6,345,972	0.6	0.8	0.8	1.7	-2.6	-2.6	19.3	--	--	11.3	Aug-18
Cressey & Company Fund VI	5,322,105	0.5	0.9	0.9	3.6	-3.7	-3.7	27.8	--	--	16.8	Jan-19
TCV X	6,677,511	0.6	2.5	2.5	1.9	-25.8	-25.8	30.5	--	--	17.5	Apr-19
Accel-KKR Growth Capital Partners III	4,502,216	0.4	1.0	1.0	4.7	1.3	1.3	21.2	--	--	10.4	Jul-19
Genstar Capital Partners IX	9,188,817	0.8	1.6	1.6	4.7	30.5	30.5	37.4	--	--	27.3	Aug-19
Cortec Group Fund VII	8,422,537	0.8	-5.6	-5.6	17.9	24.9	24.9	36.0	--	--	27.8	Dec-19
Spark Capital Growth Fund III	8,782,200	0.8	0.5	0.5	-25.2	-2.2	-2.2	19.4	--	--	17.3	Mar-20
Spark Capital VI	2,386,482	0.2	-3.1	-3.1	-3.0	1.2	1.2	-3.0	--	--	-2.7	Mar-20

Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV. Pantheon Europe Fund IV is adjusting from the 12/31/2022 NAV.

Pantheon II includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.

Pantheon Secondary includes Pantheon GLO SEC III B.

Adams Street includes Adams street 2005, Adams Street 2007, and Adams Street 2011.

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	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Summit Partners Growth Equity Fund X-A	8,115,104	0.7	6.9	6.9	10.9	11.9	11.9	8.0	--	--	6.7	Mar-20
Taconic Market Dislocation Fund III L.P.	7,317,525	0.7	-0.4	-0.4	1.7	-2.5	-2.5	14.2	--	--	14.2	Jul-20
Marlin Heritage Europe II, L.P.	7,473,657	0.7	3.7	3.7	14.5	11.6	11.6	--	--	--	-0.2	Oct-20
Khosla Ventures VII	4,685,223	0.4	1.3	1.3	5.6	6.0	6.0	--	--	--	5.6	Jan-21
Accel-KKR Capital Partners VI	2,892,906	0.3	0.0	0.0	0.0	0.0	0.0	--	--	--	-5.7	Feb-21
Khosla Ventures Seed E	1,917,122	0.2	7.8	7.8	7.2	9.9	9.9	--	--	--	143.1	Feb-21
TCV XI	3,719,636	0.3	0.6	0.6	-4.3	-16.8	-16.8	--	--	--	-5.1	Feb-21
Thoma Bravo Discover Fund III	8,552,081	0.8	0.7	0.7	3.7	-0.3	-0.3	--	--	--	6.4	Jun-21
Summit Partners Venture Capital Fund V-A	3,000,269	0.3	-1.2	-1.2	1.0	-5.0	-5.0	--	--	--	-6.3	May-21
GTCR Fund XIII/A & B	3,880,740	0.4	-1.7	-1.7	-4.2	-3.6	-3.6	--	--	--	104.2	Jun-21
Genstar Capital Partners X	5,343,345	0.5	1.5	1.5	2.7	3.0	3.0	--	--	--	6.8	Oct-21
Nautic Partners X	2,785,037	0.3	1.7	1.7	6.5	6.0	6.0	--	--	--	0.6	Jan-22
Spark Capital Growth Fund IV	1,508,038	0.1	-2.6	-2.6	51.3	36.5	36.5	--	--	--	20.2	Jan-22
Spark Capital VII	871,328	0.1	-2.0	-2.0	-4.3	-8.9	-8.9	--	--	--	-7.7	Feb-22
TCV Velocity Fund I	1,820,759	0.2	-4.8	-4.8	-9.3	-19.8	-19.8	--	--	--	-28.4	Feb-22
Accel-KKR Growth Capital Partners IV	1,426,056	0.1	0.5	0.5	1.2	-6.7	-6.7	--	--	--	-21.8	Apr-22
Summit Partners Growth Equity Fund XI-A	2,026,560	0.2	1.4	1.4	11.4	1.2	1.2	--	--	--	-53.2	Apr-22
GTCR Strategic Growth Fund I/A&B LP	686,641	0.1	-0.5	-0.5	-15.2	-50.4	-50.4	--	--	--	-50.4	Jul-22

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Threshold Ventures IV LP	672,612	0.1	-4.4	-4.4	-12.7	--	--	--	--	--	-24.2	Aug-22
Thoma Bravo Discovery Fund IV	2,745,737	0.2	5.0	5.0	8.9	--	--	--	--	--	8.9	Jan-23
Marlin Heritage III	982,092	0.1	5.2	5.2	-83.2	--	--	--	--	--	-83.2	Jan-23
Cortec Group Fund VIII, L.P.	998,986	0.1	-1.1	-1.1	--	--	--	--	--	--	-1.1	Apr-23
Direct Lending	44,724,244	4.0	2.9	2.9	4.6	6.4	6.4	9.8	--	--	9.8	Jul-20
<i>S&P LSTA Leveraged Loan +2%</i>			<i>2.4</i>	<i>3.7</i>	<i>7.5</i>	<i>12.9</i>	<i>12.9</i>	<i>8.4</i>	<i>6.2</i>	<i>6.1</i>	<i>8.4</i>	
Silver Point Specialty Credit Fund II, L.P.	6,128,753	0.6	3.4	3.4	6.5	7.2	7.2	10.2	--	--	10.2	Jul-20
Ares Senior Direct Lending Fund II	10,495,540	1.0	3.4	3.4	4.7	7.4	7.4	--	--	--	8.7	Jan-22
Varagon Capital Direct Lending Fund	9,981,483	0.9	2.1	2.1	0.8	0.2	0.2	--	--	--	-0.1	Jan-22
AG Direct Lending Fund IV Annex	9,707,623	0.9	2.4	2.4	5.5	9.5	9.5	--	--	--	8.1	May-22
AG Direct Lending Fund V	4,567,273	0.4	2.1	2.1	5.8	--	--	--	--	--	7.5	Aug-22
Accel-KKR Credit Partners II LP	833,144	0.1	30.2	30.2	--	--	--	--	--	--	30.2	Mar-23
Silver Point Specialty Credit Fund III	3,010,427	0.3	-1.7	-1.7	--	--	--	--	--	--	-1.7	Mar-23
Hedge Fund	124,920,644	11.3	0.2	0.9	2.0	3.7	3.7	6.8	3.9	--	4.2	Jul-14
<i>Custom Blended Hedge Fund Benchmark</i>			<i>1.2</i>	<i>1.5</i>	<i>2.3</i>	<i>3.7</i>	<i>3.7</i>	<i>5.0</i>	<i>3.3</i>	<i>--</i>	<i>3.3</i>	
<i>InvMetrics All DB Hedge Funds Net Median</i>			<i>1.1</i>	<i>1.2</i>	<i>3.1</i>	<i>4.9</i>	<i>4.9</i>	<i>6.6</i>	<i>3.9</i>	<i>3.7</i>	<i>3.0</i>	
<i>InvMetrics All DB Hedge Funds Net</i>			<i>79</i>	<i>66</i>	<i>68</i>	<i>65</i>	<i>65</i>	<i>46</i>	<i>51</i>	<i>--</i>	<i>20</i>	
Hudson Bay Fund	15,042,034	1.4	--	--	--	--	--	--	--	--	--	Jun-23
Sculptor (OZ) Domestic II	13,245,680	1.2	2.1	2.7	7.4	7.4	7.4	2.9	4.6	--	5.4	Jul-14
Graham Absolute Return	9,544,620	0.9	0.4	-1.3	-1.9	1.1	1.1	9.3	3.9	--	4.1	Sep-17

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Wellington-Archipelago	15,595,622	1.4	1.1	4.4	6.3	8.7	8.7	7.1	5.2	--	5.5	Sep-17
Marshall Wace Eureka	4,472,270	0.4	-0.4	2.3	0.5	1.6	1.6	7.7	5.1	--	5.7	Dec-17
Silver Point Capital	18,591,078	1.7	0.5	2.4	3.9	6.9	6.9	15.0	8.3	--	8.2	Dec-17
Laurion Capital	13,320,480	1.2	-1.4	-1.4	1.7	0.2	0.2	5.1	--	--	9.3	Aug-18
Taconic Opportunity Fund	13,688,363	1.2	0.6	0.8	0.5	0.2	0.2	4.4	--	--	2.9	Jan-19
Marshall Wace Global Opportunities	10,635,381	1.0	-1.6	1.3	3.9	8.2	8.2	5.2	--	--	5.4	May-20
Caxton Global Investments	10,785,116	1.0	-1.0	-4.9	-7.9	-4.3	-4.3	--	--	--	3.5	May-21
Real Assets	63,640,807	5.8	3.1	2.0	6.2	11.7	11.7	15.4	11.1	9.4	9.7	Dec-10
<i>Custom Blended Real Assets Benchmark</i>			<i>4.8</i>	<i>-1.9</i>	<i>0.4</i>	<i>6.4</i>	<i>6.4</i>	<i>9.9</i>	<i>6.1</i>	<i>7.6</i>	<i>--</i>	
SSgA	13,191,549	1.2	3.2	-2.0	-2.0	-1.0	-1.0	11.6	5.3	--	5.6	May-17
<i>Real Asset NL Custom Blended Index</i>			<i>3.3</i>	<i>-1.7</i>	<i>-1.7</i>	<i>-1.0</i>	<i>-1.0</i>	<i>11.8</i>	<i>5.3</i>	<i>--</i>	<i>5.6</i>	
Private Infrastructure	28,922,140	2.6	3.6	3.6	8.6	12.6	12.6	12.3	12.7	--	10.2	Jan-15
<i>S&P Global Infrastructure</i>			<i>3.0</i>	<i>-0.1</i>	<i>3.8</i>	<i>4.2</i>	<i>4.2</i>	<i>10.6</i>	<i>5.3</i>	<i>6.7</i>	<i>4.9</i>	
KKR Global II	5,055,833	0.5	12.0	12.0	17.2	18.6	18.6	23.8	22.5	--	17.3	Jan-15
North Haven Infrastructure II	2,735,821	0.2	-2.5	-2.5	-0.5	12.2	12.2	9.3	10.0	--	8.4	Jun-15
ISQ Global Infrastructure Fund II	5,169,996	0.5	-0.9	-0.9	5.4	9.9	9.9	13.8	4.1	--	4.1	Jul-18
KKR Global Infrastructure Investors III	4,275,467	0.4	8.1	8.1	10.5	12.9	12.9	3.6	--	--	-2.3	Jan-19
Ardian Infrastructure Fund V	4,104,774	0.4	4.0	4.0	16.9	16.6	16.6	-8.3	--	--	-9.2	Nov-19
ISQ Global Infrastructure Fund III	1,461,403	0.1	1.4	1.4	8.9	13.2	13.2	--	--	--	-639.2	Jun-21
KKR Global Infrastructure Investors IV	4,363,211	0.4	3.1	3.1	4.9	0.3	0.3	--	--	--	-221.8	Sep-21

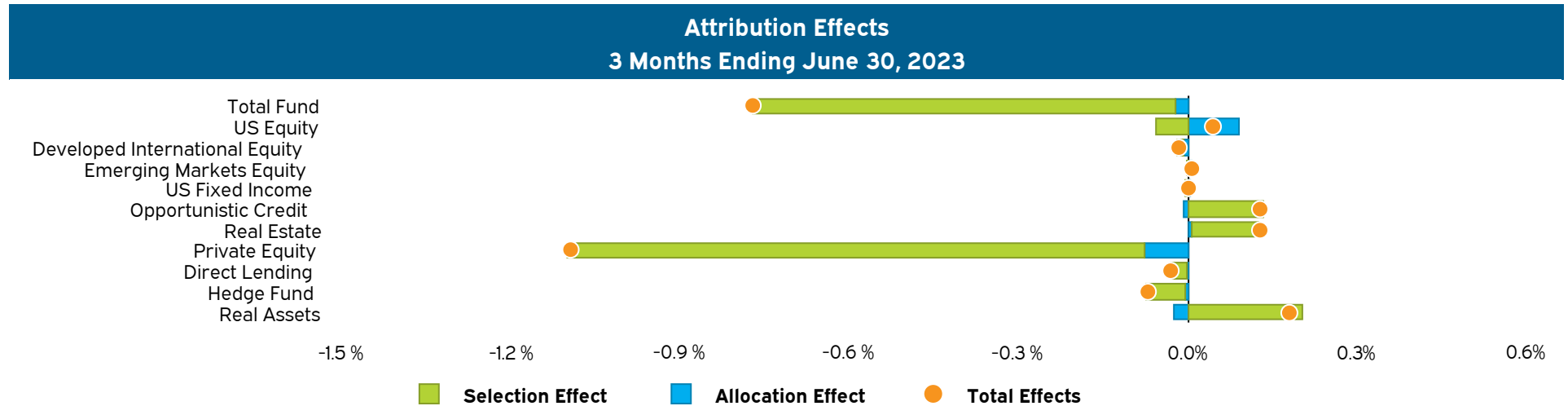
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BlackRock Global Infrastructure Fund IV	1,755,635	0.2	-4.6	-4.6	-12.3	--	--	--	--	--	-12.3	Dec-22
Private Natural Resources	21,527,118	1.9	2.4	2.4	8.7	20.8	20.8	25.6	14.2	--	16.0	Oct-15
<i>S&P Global Natural Resources Sector Index (TR)</i>			<i>6.5</i>	<i>-3.7</i>	<i>-3.1</i>	<i>8.4</i>	<i>8.4</i>	<i>18.6</i>	<i>5.9</i>	<i>5.8</i>	<i>11.1</i>	
EnCap Flatrock Midstream Fund V	1,721,333	0.2	0.0	--	--	--	--	--	--	--	0.0	Jun-23
EnCap XI	5,079,025	0.5	3.2	3.2	10.0	33.4	33.4	26.3	1.9	--	-7.7	Aug-17
EnCap IV	1,853,806	0.2	1.2	1.2	2.4	5.7	5.7	51.0	28.9	--	24.8	Mar-18
GSO Energy Opportunities	650,592	0.1	6.4	6.4	14.0	61.2	61.2	49.2	18.5	--	19.2	Dec-15
Taurus Mining	406,024	0.0	4.7	4.7	8.2	36.9	36.9	51.8	31.7	--	26.4	Oct-15
Taurus Mining Annex	203,869	0.0	2.8	2.8	7.3	19.1	19.1	23.5	24.3	--	25.7	Feb-17
BlackRock Global Energy and Power Infrastructure Fund III LP	4,579,491	0.4	2.8	2.8	7.6	12.9	12.9	18.3	--	--	14.5	Aug-19
Tailwater Energy Fund IV, LP	3,411,769	0.3	-0.6	-0.6	16.1	30.2	30.2	27.3	--	--	6.9	Oct-19
Carnelian Energy Capital IV	3,621,209	0.3	4.7	4.7	2.5	-8.0	-8.0	--	--	--	-6.9	May-22
Cash	7,309,015	0.7	0.4	1.2	3.9	1.8	1.8	0.7	0.9	--	--	Dec-10
Cash	6,766,148	0.6	0.4	1.3	4.2	1.9	1.9	0.7	1.1	0.9	-1.5	Dec-10
Treasury Cash	542,867	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1	Sep-17

Merced County Employees' Retirement Association

Total Fund Attribution | As of June 30, 2023

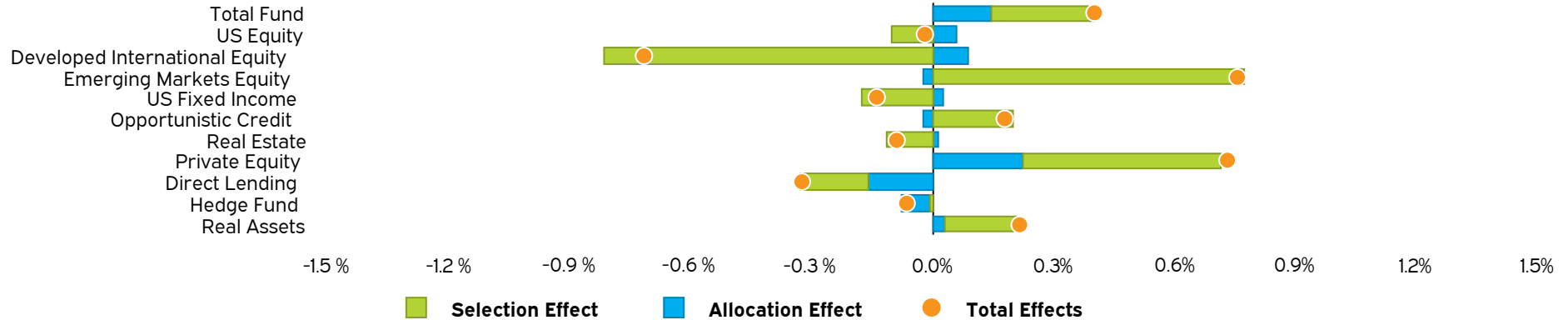


Attribution Summary 3 Months Ending June 30, 2023						
	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Total Effect (%)
US Equity	8.2	8.4	-0.2	-0.1	0.1	0.0
Developed International Equity	2.7	2.8	0.0	0.0	0.0	0.0
Emerging Markets Equity	0.9	0.9	0.0	0.0	0.0	0.0
US Fixed Income	-0.8	-0.8	0.0	0.0	0.0	0.0
Opportunistic Credit	3.4	0.8	2.6	0.1	0.0	0.1
Real Estate	-1.6	-3.2	1.6	0.1	0.0	0.1
Private Equity	0.4	7.9	-7.5	-1.0	-0.1	-1.1
Direct Lending	2.9	3.7	-0.8	0.0	0.0	0.0
Hedge Fund	0.9	1.5	-0.7	-0.1	0.0	-0.1
Real Assets	2.0	-1.9	3.8	0.2	0.0	0.2
Total Fund	2.6	3.4	-0.8	-0.8	0.0	-0.8

Merced County Employees' Retirement Association

Total Fund Attribution | As of June 30, 2023

Attribution Effects 1 Year Ending June 30, 2023



Attribution Summary 1 Year Ending June 30, 2023

	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Total Effect (%)
US Equity	18.6	19.0	-0.3	-0.1	0.1	0.0
Developed International Equity	10.4	17.2	-6.8	-0.8	0.1	-0.7
Emerging Markets Equity	12.8	1.7	11.1	0.8	0.0	0.8
US Fixed Income	-2.4	-0.8	-1.5	-0.2	0.0	-0.1
Opportunistic Credit	8.2	4.3	3.9	0.2	0.0	0.2
Real Estate	-3.0	-3.1	0.1	-0.1	0.0	-0.1
Private Equity	1.5	-4.6	6.1	0.5	0.2	0.7
Direct Lending	6.4	12.9	-6.5	-0.2	-0.2	-0.3
Hedge Fund	3.7	3.7	0.0	0.0	-0.1	-0.1
Real Assets	11.7	6.4	5.4	0.2	0.0	0.2
Total Fund	7.6	7.2	0.4	0.3	0.1	0.4

Merced County Employees' Retirement Association

Benchmark History | As of June 30, 2023

Benchmark History

From Date	To Date	Benchmark
Total Fund		
01/01/2022	Present	22.0% Russell 3000, 11.0% Custom Blended Developed International Equity BM, 8.0% MSCI EM, 11.0% US Fixed Income Custom Benchmark, 10.0% Custom Blended Hedge Fund Benchmark, 15.0% Custom Private Equity Benchmark, 5.0% S&P LSTA Leveraged Loan +2%, 5.0% Custom Blended Real Assets Benchmark, 8.0% Custom Blended Real Estate Benchmark, 5.0% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever
01/01/2020	01/01/2022	21.0% Russell 3000, 10.0% Custom Blended Developed International Equity BM, 8.0% MSCI EM, 18.0% BBgBarc US Aggregate TR, 10.0% Custom Blended Hedge Fund Benchmark, 15.0% Custom Private Equity Benchmark, 5.0% Custom Blended Real Assets Benchmark, 8.0% Custom Blended Real Estate Benchmark, 5.0% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever
07/01/2019	01/01/2020	21.0% US Equity Custom, 18.0% International Equity Custom, 18.0% US Fixed Custom, 10.0% Custom Blended Hedge Fund Benchmark, 15.0% Thomson Reuters Cambridge Private Equity Index, 5.0% Real Asset Custom, 8.0% NCREIF ODCE (net), 5.0% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever
01/01/2019	07/01/2019	21.0% US Equity Custom, 23.0% US Fixed Custom, 18.0% International Equity Custom, 10.0% Custom Blended Hedge Fund Benchmark, 15.0% Thomson Reuters Cambridge Private Equity Index, 5.0% Real Asset Custom, 8.0% NCREIF ODCE (net)
01/01/2017	01/01/2019	27.0% US Equity Custom, 22.0% US Fixed Custom, 23.0% International Equity Custom, 5.0% Custom Blended Hedge Fund Benchmark, 9.0% Thomson Reuters Cambridge Private Equity Index, 14.0% Real Asset Custom
07/01/2014	01/01/2017	22.7% Russell 1000 Index, 5.7% Russell 2000 Index, 23.6% International Equity Custom, 28.5% US Fixed Custom, 4.5% Custom Blended Hedge Fund Benchmark, 8.0% NCREIF ODCE (net), 7.0% Thomson Reuters Cambridge Private Equity Index
US Equity		
01/01/2020	Present	100.0% Russell 3000 Index
12/31/1994	01/01/2020	100.0% Russell 3000
International Equity		
01/01/2019	Present	56.0% MSCI EAFE Index, 44.0% MSCI Emerging Markets Index
01/01/2017	01/01/2019	69.6% MSCI EAFE Index, 30.4% MSCI Emerging Markets Index
07/01/2013	01/01/2017	100.0% MSCI AC World ex USA index
US Fixed Income		
12/01/1994	Present	10.0% Blmbg. U.S. Treasury: 1-3 Year, 90.0% BBgBarc US Aggregate TR

Merced County Employees' Retirement Association

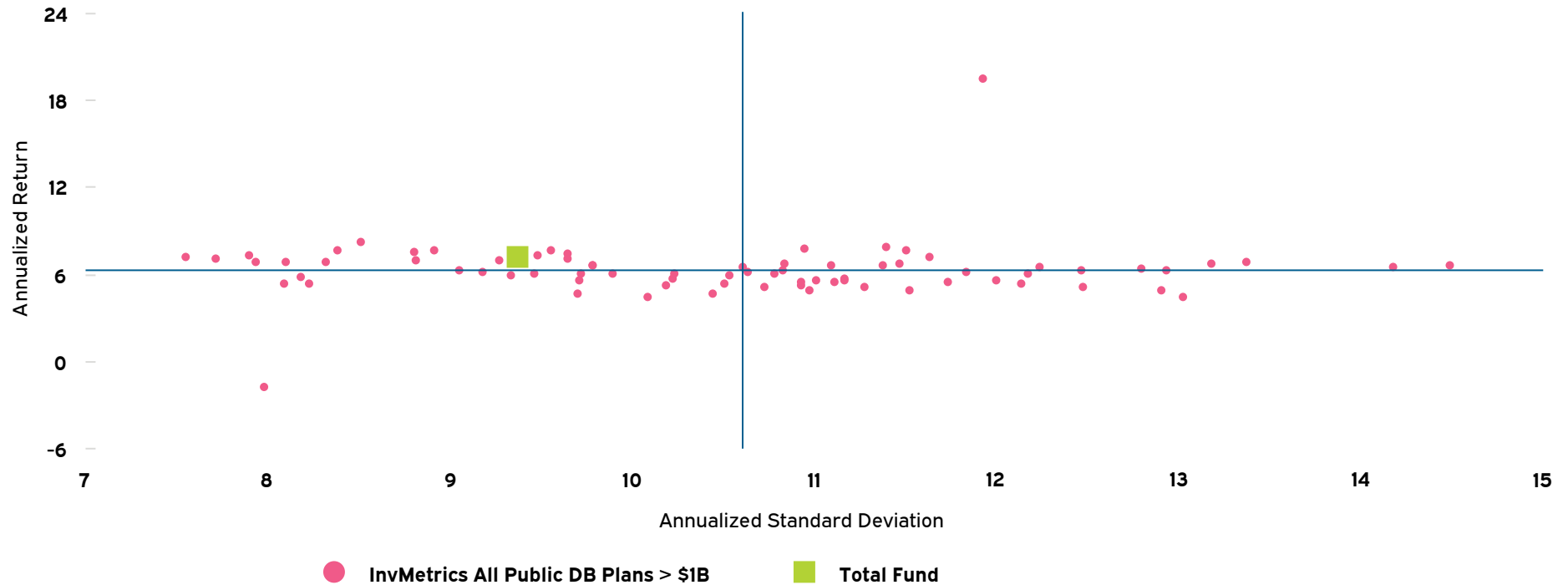
Benchmark History | As of June 30, 2023

From Date	To Date	Benchmark
Hedge Fund		
07/01/2017	Present	100.0% HFRI Fund of Funds Composite Index
01/01/2015	07/01/2017	50.0% HFRI Fund of Funds Composite Index, 50.0% HFRI RV: Multi-Strategy Index
Real Assets		
01/01/2022	Present	50.0% S&P Global Infrastructure, 50.0% S&P Global Natural Resources Sector Index (TR)
01/01/2020	01/01/2022	50.0% Cambridge Energy Upstream & Royalties & Private Energy (1 Quarter Lagged), 50.0% Cambridge Infrastructure (1 Quarter Lagged)
03/01/1999	01/01/2020	100.0% Real Asset Custom
SSgA		
04/01/2017	Present	10.0% S&P Global Infrastructure, 15.0% Dow Jones U.S. Select RESI, 25.0% Bloomberg Roll Select Commodity TR Index, 25.0% S&P Global LargeMidcap Resources & Commodities Ind, 25.0% Blmbg. U.S. TIPS
Private Real Estate		
01/01/2020	Present	100.0% NCREIF ODCE 1Q Lagged
03/01/1999	01/01/2020	100.0% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net)

Merced County Employees' Retirement Association

Total Fund | As of June 30, 2023

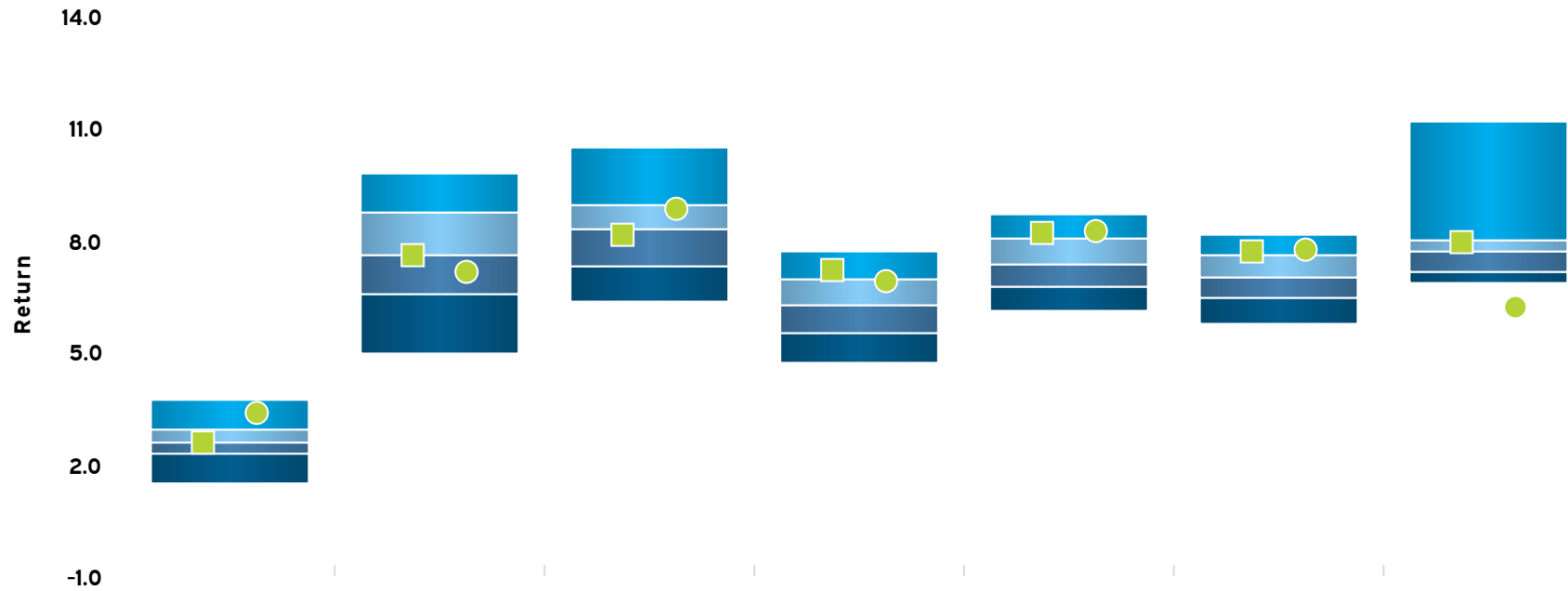
Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



	5 Years Return	5 Years Standard Deviation	5 Years Information Ratio	5 Years Beta	5 Years Sharpe Ratio	5 Years Tracking Error
Total Fund	7.2 (19)	9.4 (25)	0.1 (17)	1.0 (73)	0.6 (20)	3.0 (7)
Policy Index	6.9 (26)	9.1 (20)	-	1.0	0.6 (21)	0.0
InvMetrics All Public DB Plans > \$1B Median	6.2	10.6	-0.1	1.1	0.5	3.8

Merced County Employees' Retirement Association

Plan Sponsor Peer Group Analysis | As of June 30, 2023

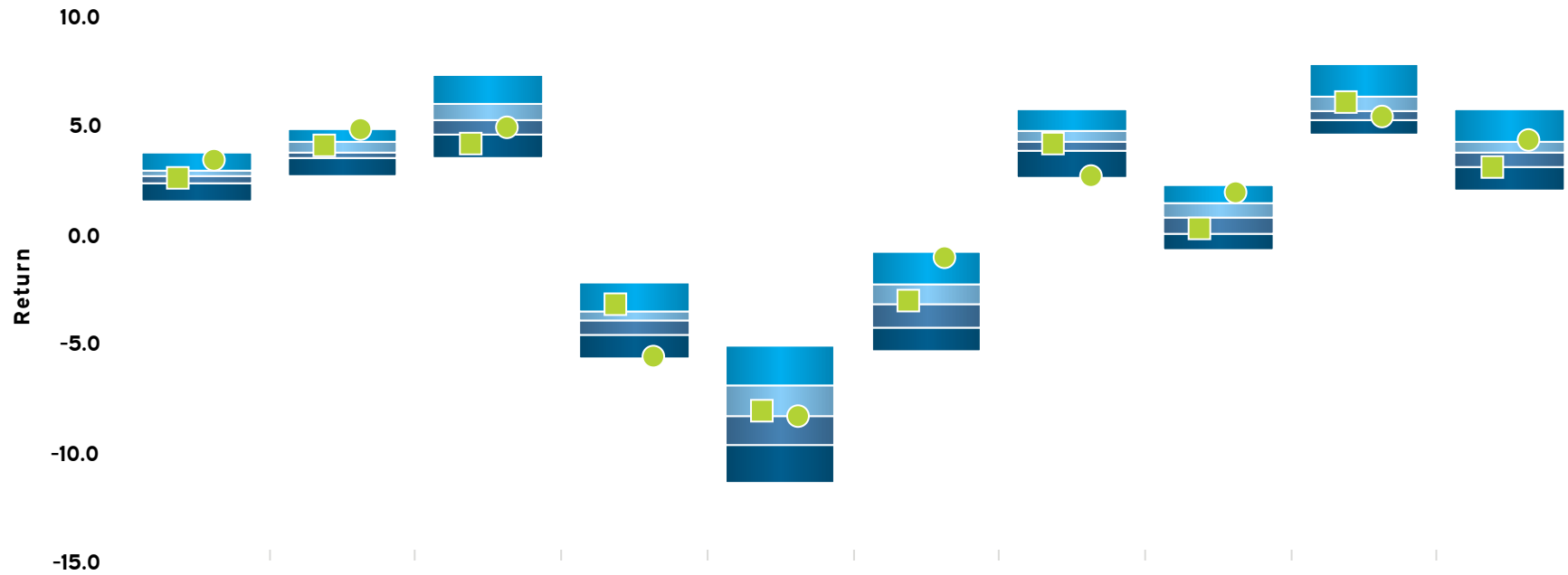


	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)	Since Inception
■ Total Fund	2.6 (52)	7.6 (51)	8.1 (57)	7.2 (19)	8.2 (19)	7.7 (23)	7.9 (26)
● Policy Index	3.4 (13)	7.2 (59)	8.8 (28)	6.9 (26)	8.2 (17)	7.7 (22)	6.2 (100)
5th Percentile	3.7	9.8	10.5	7.7	8.7	8.2	11.2
1st Quartile	2.9	8.8	8.9	6.9	8.1	7.6	8.0
Median	2.6	7.6	8.3	6.2	7.4	7.0	7.7
3rd Quartile	2.3	6.5	7.3	5.5	6.7	6.5	7.2
95th Percentile	1.5	4.9	6.3	4.7	6.1	5.8	6.8
Population	92	90	78	77	76	72	28

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Merced County Employees' Retirement Association

Plan Sponsor Peer Group Analysis | As of June 30, 2023



	QTD (%)	1Q23	4Q22	3Q22	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21
■ Total Fund	2.6 (52)	4.0 (31)	4.1 (83)	-3.2 (16)	-8.2 (44)	-3.1 (46)	4.1 (56)	0.2 (64)	6.0 (32)	3.1 (76)
● Policy Index	3.4 (13)	4.8 (6)	4.9 (65)	-5.6 (94)	-8.3 (48)	-1.1 (9)	2.7 (95)	1.9 (11)	5.3 (68)	4.3 (21)
5th Percentile	3.7	4.8	7.3	-2.3	-5.2	-0.8	5.7	2.2	7.8	5.7
1st Quartile	2.9	4.2	5.9	-3.5	-7.0	-2.4	4.7	1.4	6.3	4.2
Median	2.6	3.7	5.2	-4.0	-8.4	-3.2	4.2	0.7	5.6	3.7
3rd Quartile	2.3	3.4	4.5	-4.6	-9.7	-4.3	3.8	0.0	5.2	3.1
95th Percentile	1.5	2.6	3.5	-5.7	-11.4	-5.4	2.6	-0.7	4.6	1.9
Population	92	110	108	107	108	122	136	154	151	157

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Forward-Looking Calendar

Status	Meeting	Topic 1	Topic 2	Topic 3
Completed	January	Performance Review (November)	GQG International Watch Memo	
	February	Quarterly Performance Review (22Q4)	Meketa's Capital Market Expectations	
	March	Performance Review-Consent (January)	Silicon Valley Bank Memo	
	April	Performance Review-Consent (February)		
	May	Quarterly Performance Review (23Q1)	US Fixed Income Manager Update	
	June	Performance Review-Consent (April)		
	July	Performance Review-Consent (May)		
Current	August	Quarterly Performance Review (23Q2)	Update on GQG Partners Understanding China	CIO Introductions
Future	September	Performance Review (July)	Macroeconomic Update	
	October	Performance Review (August)	Consultant Search	
	November	Quarterly Performance Report (23Q3)		
	December	Performance Report (October)		

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CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} \times (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.

The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.