

Merced County Employees' Retirement Association

September 28, 2023

July Performance

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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)		
	August	Quarterly Performance Review (23Q2)	Update on GQG Partners Understanding China	CIO Introductions
Current	September	Performance Review (July)	Macroeconomic Update	
Future	October	Performance Review (August)	Consultant Search	
	November	Quarterly Performance Report (23Q3)		
	December	Performance Report (October)		

Economic and Market Update

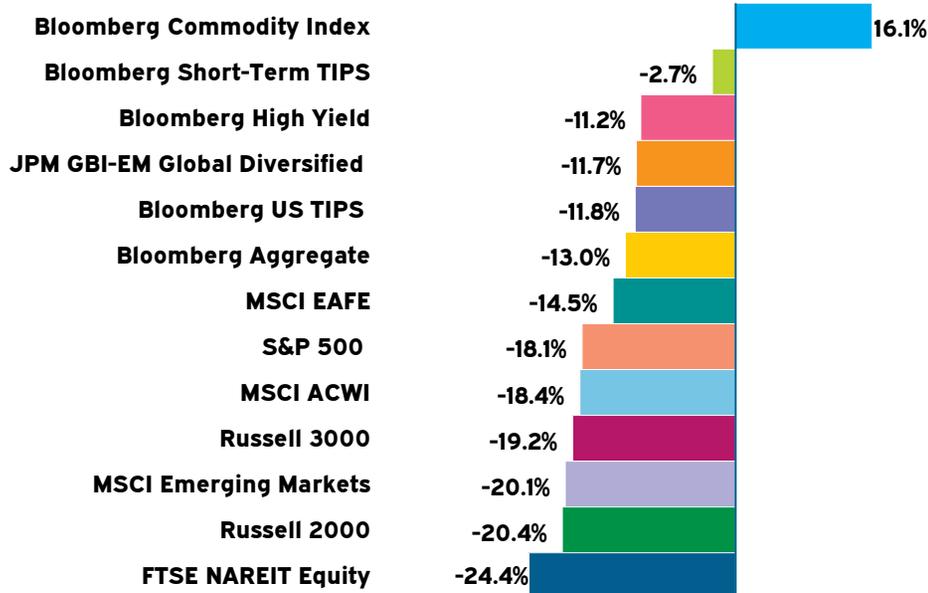
Data as of July 31, 2023

Commentary

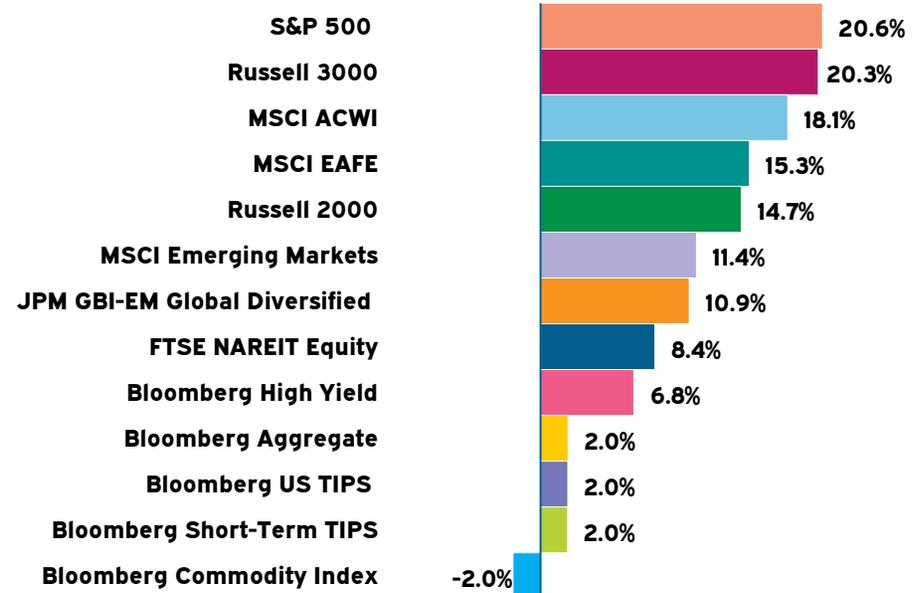
- Riskier assets continued to gain in July as economic data remained resilient while inflation receded. Except for commodities, most public market asset classes remained positive for the year, with US equities leading the way.
- After a pause in June, the Federal Reserve increased interest rates in July by 0.25% to a range of 5.25% - 5.5%, the highest level in over two decades. Markets are largely expecting that this will be the Fed's final rate increase.
 - US equity markets (Russell 3000 index) continued to rise in July (+3.6%), bringing the year-to-date gains to 20.3%. The technology sector remains the key driver of results this year, helped by artificial intelligence optimism.
 - Non-US developed equity markets also rose in July (MSCI EAFE +3.2%), but they continue to trail US markets year-to-date (15.3% versus 20.3%).
 - Emerging market equities had the strongest results in July, gaining 6.2%, driven by optimism over additional policy support in China. They continue to trail developed market equities year-to-date though, returning 11.4%, due partly to China's weak results for the period.
 - Generally, corporate bonds outperformed government bonds for the month on continued risk appetite. Overall, interest rates increased slightly in July, leading to a small decline in the broad US bond market (-0.1%). The index remains positive (+2.0%) year-to-date 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, led by developed market equities.

→ Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall, while growth has remained relatively resilient.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Domestic Equity Returns¹

Domestic Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	3.2	8.7	20.6	13.0	13.7	12.2	12.7
Russell 3000	3.6	8.4	20.3	12.6	13.1	11.4	12.1
Russell 1000	3.4	8.6	20.7	12.9	13.2	11.9	12.4
Russell 1000 Growth	3.4	12.8	33.4	17.3	12.2	15.2	15.5
Russell 1000 Value	3.5	4.1	8.8	8.3	14.1	8.0	9.0
Russell MidCap	4.0	4.8	13.3	8.7	11.8	8.8	10.1
Russell MidCap Growth	3.0	6.2	19.4	13.0	6.0	9.9	11.2
Russell MidCap Value	4.4	3.9	9.8	6.2	14.9	7.2	8.9
Russell 2000	6.1	5.2	14.7	7.9	12.0	5.1	8.2
Russell 2000 Growth	4.7	7.1	18.9	11.6	6.5	4.8	8.5
Russell 2000 Value	7.5	3.2	10.2	3.9	17.5	4.7	7.4

US Equities: Russell 3000 Index rose 3.6% in July and 20.3% YTD.

- Equity investors continue to express optimism that the Federal Reserve’s monetary tightening will not have serious impacts on earnings. Though corporate profits were down compared to a year ago, approximately 80% of S&P 500 companies that reported second quarter results in July exceeded earnings expectations.
- In contrast to the year-to-date trend, value stocks outperformed growth stocks in July, particularly in small cap, driven by outperformance in financials and energy. So far in 2023, growth has significantly outperformed value driven by optimism over artificial intelligence.
- Small cap stocks outperformed large cap stocks in July, but trail for the full year, again due to the strength of the technology sector. The July dynamic was driven partially by the outperformance of small cap banks after regulators announced higher capital requirements for larger banks.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Foreign Equity Returns¹

Foreign Equity	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	4.1	2.4	13.9	13.4	7.1	3.9	4.7
MSCI EAFE	3.2	3.0	15.3	16.8	9.3	4.5	5.2
MSCI EAFE (Local Currency)	1.7	4.3	14.0	13.6	13.0	6.2	7.4
MSCI EAFE Small Cap	4.4	0.6	10.2	7.9	6.1	2.1	6.0
MSCI Emerging Markets	6.2	0.9	11.4	8.3	1.5	1.7	3.5
MSCI Emerging Markets (Local Currency)	5.3	1.7	11.1	8.6	3.0	3.7	6.1
MSCI China	10.8	-9.7	4.7	1.8	-9.9	-2.8	3.7

Foreign Equity: Developed international equities (MSCI EAFE) rose 3.2% in July bringing the YTD gains to 15.3%. Emerging market equities (MSCI EM) rose 6.2% in July, rising 11.4% YTD.

- International equities also had strong results in July, led by China and emerging markets more broadly.
- Japanese equities continued their steady rise, especially in the mid- and small-cap sectors. Eurozone and UK equities were broadly supported by falling inflation and solid corporate fundamentals.
- After a disappointing reopening of the economy, China’s government announced additional support to stimulate consumption and bolster the real estate sector, leading to double-digit gains for the month (10.8%). India underperformed as higher food costs kept inflation elevated.

¹ Source: Bloomberg. Data is as of July 31, 2023.

Fixed Income Returns¹

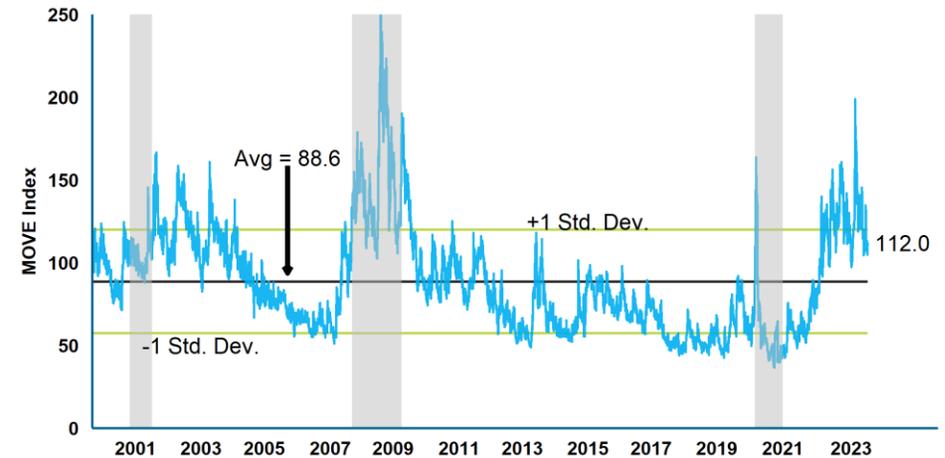
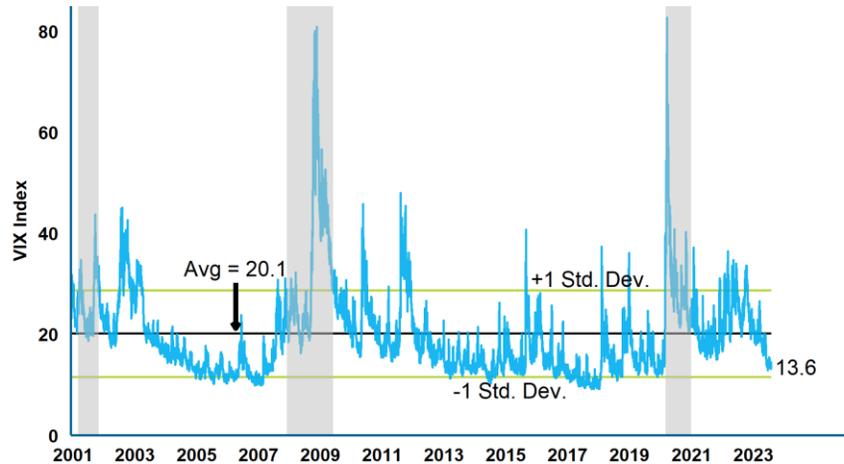
Fixed Income	July (%)	Q2 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.1	-0.6	2.4	-2.4	-4.0	1.0	1.8	5.2	6.2
Bloomberg Aggregate	-0.1	-0.8	2.0	-3.4	-4.5	0.7	1.5	4.9	6.5
Bloomberg US TIPS	0.1	-1.4	2.0	-5.4	-0.8	2.6	2.0	4.6	6.9
Bloomberg Short-term TIPS	0.5	-0.7	2.0	-1.2	2.3	2.9	1.7	5.3	2.7
Bloomberg High Yield	1.4	1.7	6.8	4.4	2.0	3.4	4.4	8.3	4.0
JPM GBI-EM Global Diversified (USD)	2.9	2.5	10.9	14.3	-1.5	0.5	-0.2	6.5	5.0

Fixed Income: The Bloomberg Universal rose 0.1% in July remaining positive YTD (+2.4%), as inflation continues to decline, and yields remain high.

- In July, riskier bonds continued to outperform government bonds on optimism over a potential soft landing of the economy.
- The broad US bond market (Bloomberg Aggregate) declined slightly for the month (-0.1%) while the TIPS index, and the short-term TIPS index both posted small gains. All three indexes now have the same results so far in 2023.
- In the risk-on environment, high yield bonds rose 1.4% for the month, while emerging market bonds were the top performer, up 2.9%. The two asset classes remain the top performers for the year.

¹ Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of July 31, 2023. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration respectively.

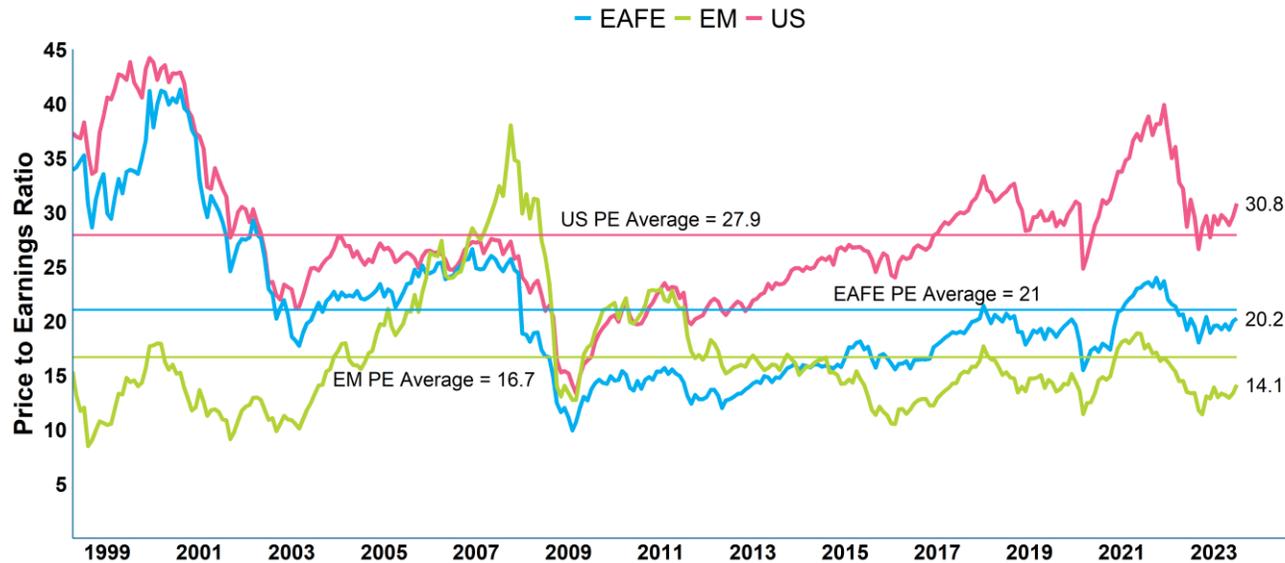
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) remains well below the historical average as investors continue to anticipate the end of the Fed’s policy tightening.
- The bond market continues to be volatile after last year’s historic losses and due to policy uncertainty and previous issues in the banking sector. The MOVE (fixed income volatility) remains well above (112.0) its long-run average (88.6), 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 July 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and July 2023.

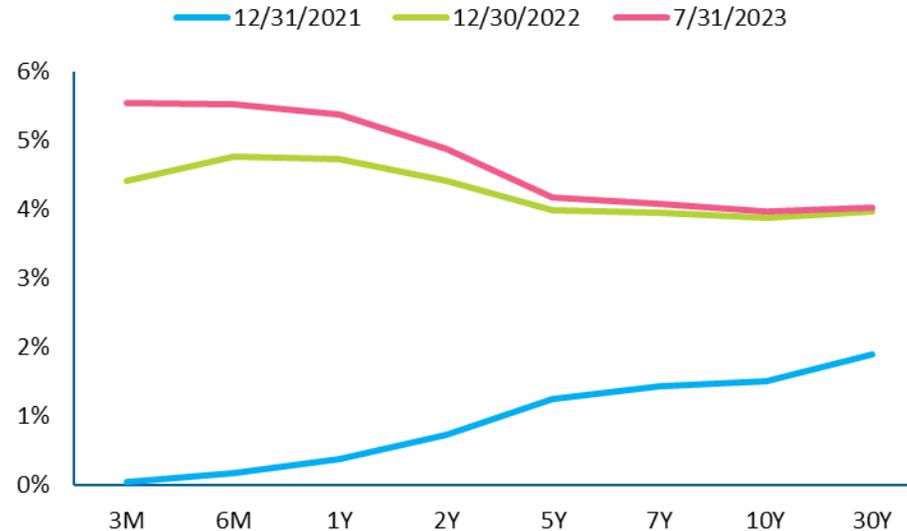
Equity Cyclically Adjusted P/E Ratios¹



- Given the strong technology-driven rally this year, the US equity price-to-earnings ratio increased 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 July 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.

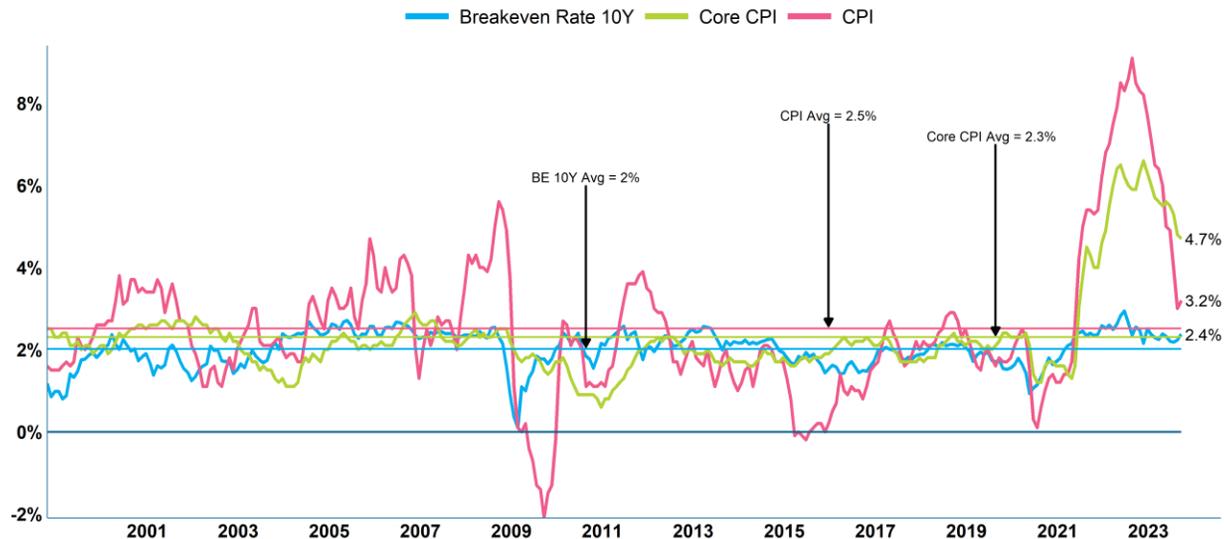
US Yield Curve¹



- In July, very short-term interest rates (6-months or less) fell as it appears interest rate hikes might be coming to an end. Longer dated maturities continued to drift higher, as economic data remains resilient. So far in 2023, rates overall remain higher, particularly the policy sensitive front-end of the yield curve.
- The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -0.91%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.60%. Inversions in the yield curve have often preceded recessions.

¹ Source: Bloomberg. Data is as of July 31, 2023.

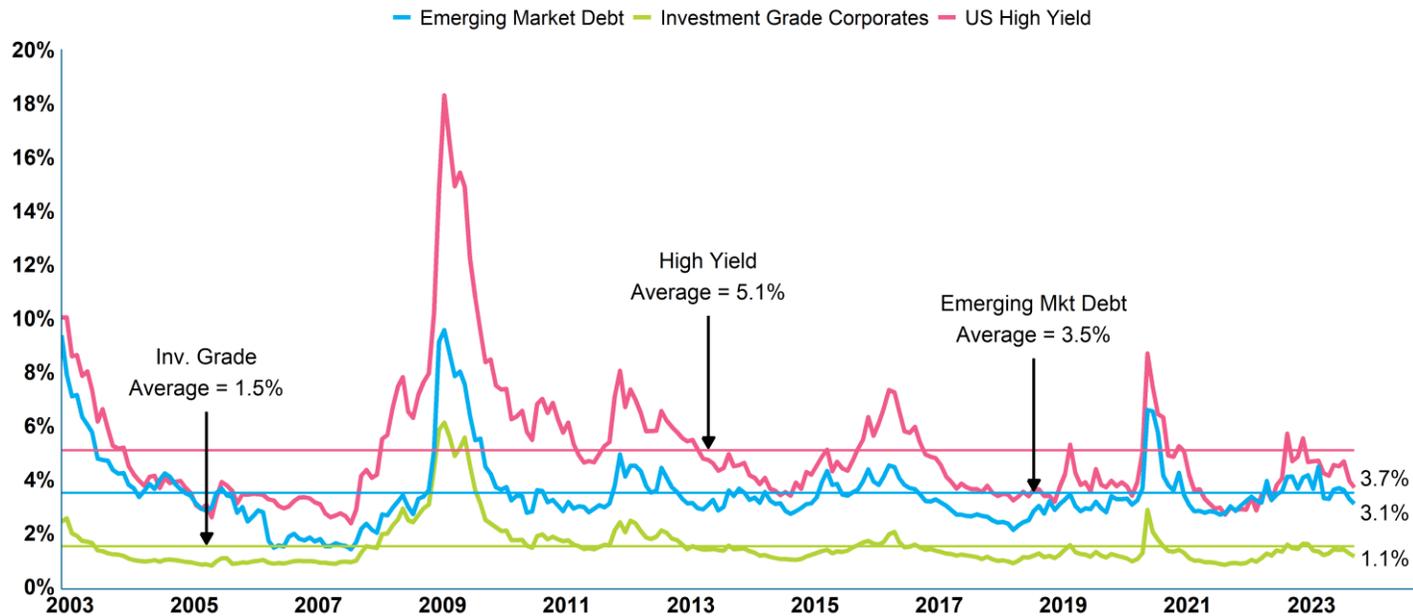
Ten-Year Breakeven Inflation and CPI¹



- Declines in inflation while other economic data remains strong has led to optimism over the Federal Reserve potentially achieving a rarely observed soft landing for the economy.
- Year-over-year headline inflation rose slightly in July (3.0% to 3.2%) but came in below expectations. The trend of lower month-over-month price increases continued with the rate staying steady at 0.2%.
- Core inflation – excluding food and energy - fell (4.8% to 4.7%) year-over-year. It remains stubbornly high though driven by shelter costs (+7.7%), particularly owners equivalent rent, and transportation services (+9.0%).
- 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: FRED, Federal Reserve Bank of St. Louis. Data is as August 1998. 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.

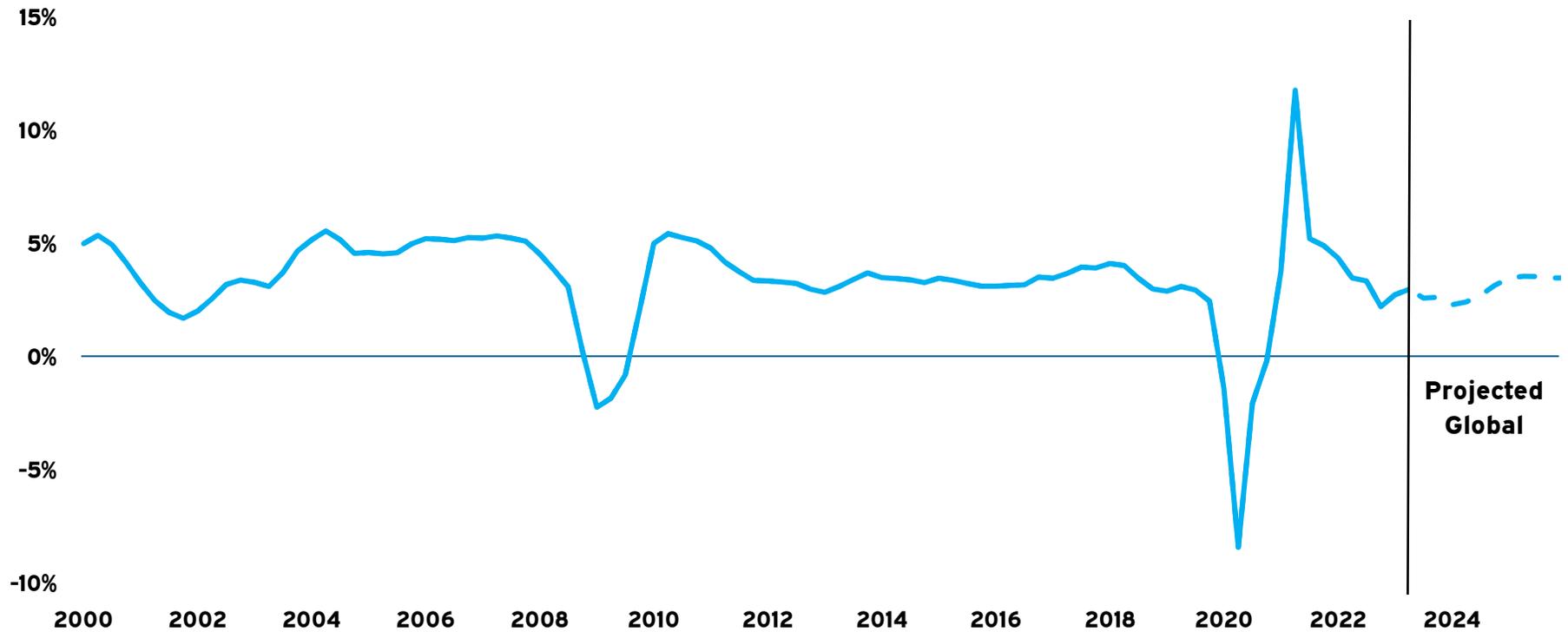
Credit Spreads vs. US Treasury Bonds¹



- Credit markets outperformed government bonds for the month with spreads (the added yield above a comparable maturity Treasury) declining. Risk appetite was strong as growth remains resilient, while inflation continues to decline.
- High yield spreads remain well below the long-term average. Investment grade and emerging market spreads are also below their respective long-term averages, but by smaller margins.

¹ Sources: Bloomberg. Data is as of July 31, 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

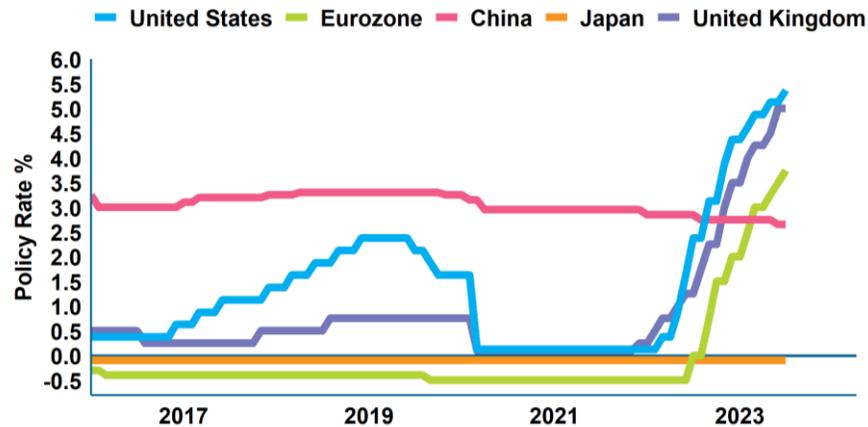


- Global economies are expected to slow this year compared to 2022. The risk of recession remains given policymakers’ aggressive tightening, but optimism has started to grow over some central banks potentially navigating a soft landing.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

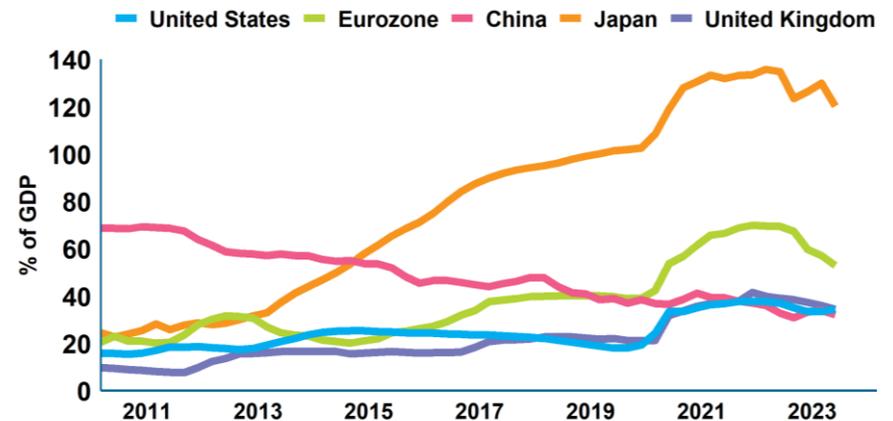
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated July 2023.

Central Bank Response¹

Policy Rates



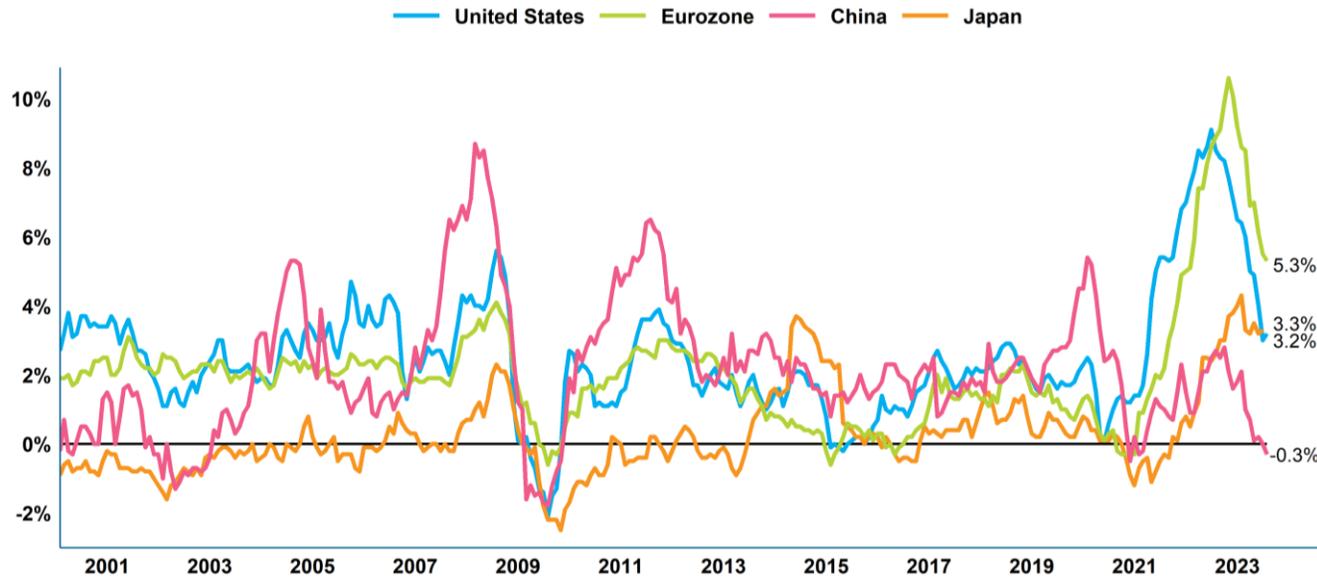
Balance Sheet as % of GDP



- Slowing inflation and growth have led to expectations for a reduction in the pace of aggressive policy tightening.
- In July the Fed raised rates another 25 basis points to a range of 5.25% to 5.50% with markets largely expecting this to be the last rate increase. After month-end, the FOMC paused its tightening campaign.
- The European Central Bank also increased rates in July, but they remain lower than in the US. In Japan the BOJ surprised markets by announcing they would be more flexible on their 10-year interest rate target.
- The central bank in China 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 July 31, 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 June 30, 2023.

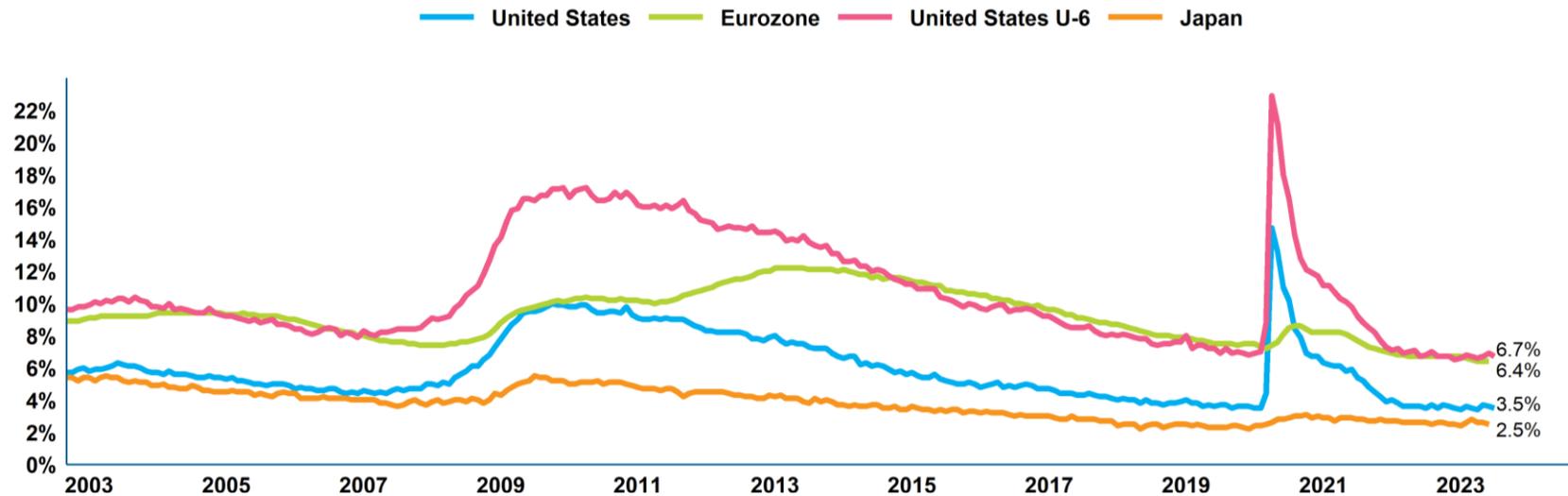
Inflation (CPI Trailing Twelve Months)¹



- The inflation picture remains mixed across the major economies.
- In the US, inflation rose slightly in July (3.0% to 3.2%), while eurozone inflation continued to fall (5.5% to 5.3%) 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 in Japan remains elevated at levels not seen in almost a decade largely driven by food and home related items. In China, deflationary pressures emerged in July due to falling food prices, but this is expected to be temporary as high base effects from last year work their way through.

¹ Source: Bloomberg. Data is as July 31, 2023. The most recent Japanese inflation data is as of June 2023.

Unemployment¹



- Despite slowing growth and relatively high inflation, the US labor market continues to show signs of resilience (3.5%). Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.7% 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, potentially 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 July 31, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of June 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 early this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. Since then, the dollar has largely been range-bound due to competing forces of safe-haven flows and monetary policy expectations.
- For the rest of 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 July 31, 2023.

Summary

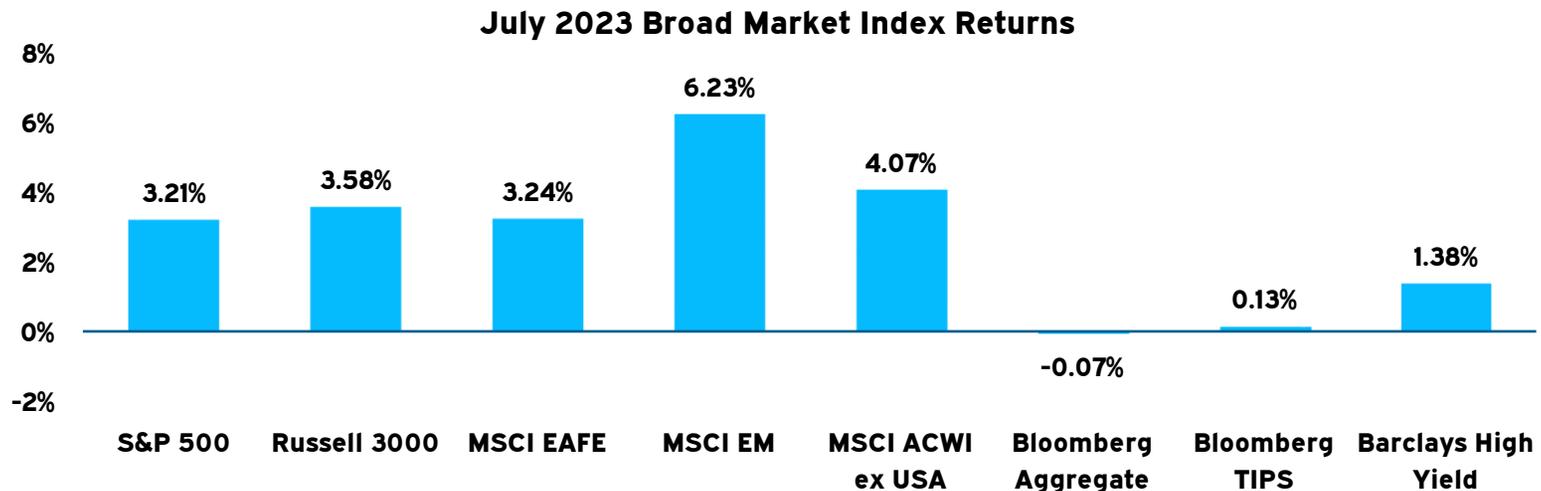
Key Trends:

- The impact of inflation still above policy targets will remain key, with bond market volatility likely to stay high.
- 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 forecasted to tip into recession. Optimism has been building though that some economies could experience a soft landing. 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. Also, the future path of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including potential for renewed 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. Japan's recent hint at potentially tightening monetary policy along with changes in corporate governance in the country could influence relative results.

Performance Highlights

As of July 31, 2023

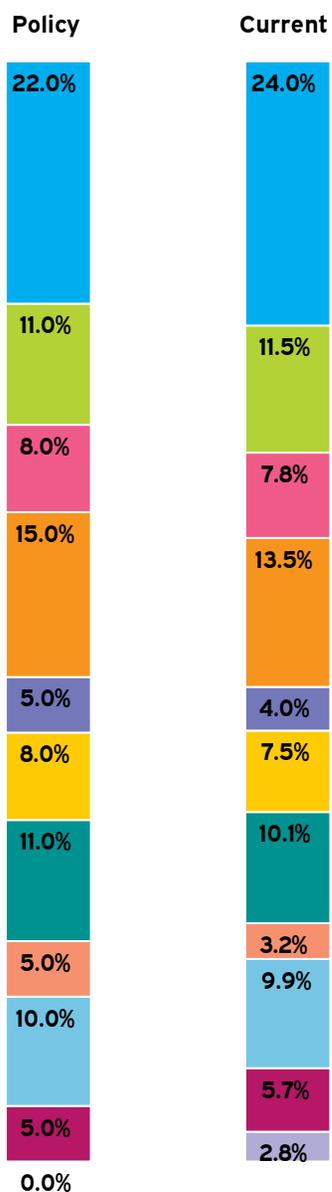
Market Review and Performance Summary for July 2023



- July saw returns for most equity markets, driven by resilient economic data and receding inflation concerns. Domestically, value outpaced growth stocks in a reversal of year-to-date trends, attributable to the outperformance in financials and energy. Developed International Equities also saw strong returns, though they trailed Emerging Markets as China announced stimulus to support their real estate sector, which served as a tailwind over the period. Broad US Fixed Income saw relatively flat returns over the period, while High Yield markets saw positive returns due to growing sentiment around a potential soft landing.
- Merced CERA reported a monthly return of 1.9% net of fees. US Equities saw positive returns over the period, returning 3.3%. Developed International Equities led public asset classes with absolute returns of 4.8%, driven by strong returns from both of their Emerging Markets Managers (Artisan Developing World, Redwheel). US Fixed Income returned -0.5%, trailing its benchmark by 50 basis points. Opportunistic Credit posted 1.5% for the month, primarily due to strong performance from the GoldenTree.
- As of July 31, 2023, total assets for the Merced CERA Portfolio are estimated at \$1.14 billion.

Performance Update
As of July 31, 2023

Total Fund | As of July 31, 2023



Allocation vs. Targets and Policy						
	Current Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
US Equity	274,566,063	24.0	22.0	2.0	16.0 - 27.0	Yes
International Equity	131,470,824	11.5	11.0	0.5	6.0 - 16.0	Yes
Emerging Markets Equity	89,538,126	7.8	8.0	-0.2	4.0 - 12.0	Yes
Private Equity	153,763,325	13.5	15.0	-1.5	5.0 - 20.0	Yes
Direct Lending	45,908,043	4.0	5.0	-1.0	0.0 - 10.0	Yes
Real Estate	85,194,820	7.5	8.0	-0.5	6.0 - 10.0	Yes
US Fixed Income	115,560,682	10.1	11.0	-0.9	6.0 - 16.0	Yes
Opportunistic Credit	36,710,613	3.2	5.0	-1.8	3.0 - 7.0	Yes
Hedge Funds	112,688,397	9.9	10.0	-0.1	5.0 - 15.0	Yes
Real Assets	65,506,957	5.7	5.0	0.7	3.0 - 7.0	Yes
Cash	31,883,344	2.8	0.0	2.8	0.0 - 5.0	Yes
Total	1,142,791,194	100.0	100.0	0.0		

Asset Allocation & Performance | As of July 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)	1,142,791,194	100.0	1.9	8.7	1.9	6.0	7.6	7.2	7.6	8.0	Jan-95
Total Fund (Gross)			1.9	8.9	1.9	6.3	8.0	7.5	7.9	8.1	Jan-95
<i>Policy Index</i>			2.4	10.9	2.4	7.3	8.7	7.1	7.7	6.3	
Total Fund w/o Alternatives (Net)	647,846,308	56.7	3.0	13.9	3.0	9.1	5.6	6.9	7.4	--	Jan-08
Total Fund w/o Alternatives (Gross)			3.1	14.1	3.1	9.5	6.0	7.2	7.7	--	Jan-08
<i>Policy Index w/o AI</i>			2.9	12.3	2.9	8.2	5.9	5.8	6.7	--	
US Equity (Net)	274,566,063	24.0	3.3	19.5	3.3	12.2	12.2	10.6	12.3	10.3	Jan-95
US Equity (Gross)			3.3	19.7	3.3	12.4	12.5	10.9	12.5	10.4	Jan-95
<i>Russell 3000</i>			3.6	20.3	3.6	12.6	13.1	11.1	11.9	10.3	
International Equity (Net)	221,008,950	19.3	4.8	16.4	4.8	13.0	4.4	6.6	6.0	5.7	Jan-99
International Equity (Gross)			4.9	16.9	4.9	13.9	5.2	7.3	6.7	6.0	Jan-99
<i>International Equity Custom</i>			4.6	14.0	4.6	13.8	6.4	3.8	5.0	4.4	
Developed International Equity (Net)	131,470,824	11.5	2.8	10.5	2.8	10.8	6.6	5.3	5.5	4.2	Feb-08
Developed International Equity (Gross)			2.9	10.9	2.9	11.6	7.4	5.9	6.1	4.8	Feb-08
<i>Custom Blended Developed International Equity BM</i>			3.6	14.7	3.6	15.5	9.1	4.5	5.2	3.3	
Emerging Markets Equity (Net)	89,538,126	7.8	8.0	26.5	8.0	16.2	-0.5	7.3	6.1	5.3	May-12
Emerging Markets Equity (Gross)			8.1	27.2	8.1	17.4	0.5	8.3	7.1	6.2	May-12
<i>MSCI EM</i>			6.2	11.4	6.2	8.3	1.5	1.8	3.7	2.9	
US Fixed Income (Net)	115,560,682	10.1	-0.5	1.0	-0.5	-5.1	-5.0	0.1	1.4	4.3	Jan-95
US Fixed Income (Gross)			-0.5	1.0	-0.5	-5.1	-4.9	0.2	1.5	4.5	Jan-95
<i>US Fixed Income Custom Benchmark</i>			0.0	2.0	0.0	-3.0	-4.1	0.6	1.6	4.5	

Data Prior to March 2018 provided by prior consultant.

Asset Allocation & Performance | As of July 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit (Net)	36,710,613	3.2	1.5	7.8	1.5	7.3	5.3	--	--	4.5	May-19
Opportunistic Credit (Gross)			1.6	8.3	1.6	8.0	5.9	--	--	5.0	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever</i>			<i>0.6</i>	<i>4.6</i>	<i>0.6</i>	<i>1.7</i>	<i>-0.3</i>	--	--	<i>1.7</i>	
Real Estate (Net)	85,194,820	7.5	0.4	-2.3	0.4	-4.7	4.7	3.2	5.8	6.8	Dec-10
Real Estate (Gross)			0.4	-2.3	0.4	-4.7	4.8	3.3	6.3	7.7	Apr-99
<i>Custom Blended Real Estate Benchmark</i>			<i>0.0</i>	<i>-8.0</i>	<i>0.0</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.1</i>	<i>8.6</i>	<i>7.4</i>	
<i>CPI +5% (Seasonally Adjusted)</i>			<i>0.6</i>	<i>4.7</i>	<i>0.6</i>	<i>8.5</i>	<i>10.9</i>	<i>9.1</i>	<i>7.8</i>	<i>7.7</i>	
Private Real Estate (Net)	68,349,881	6.0	0.0	-4.1	0.0	-2.2	5.9	3.9	6.2	7.1	Dec-10
Private Real Estate (Gross)			0.0	-4.1	0.0	-2.2	5.9	3.9	6.6	7.8	Apr-99
<i>Custom Blended Real Estate Benchmark</i>			<i>0.0</i>	<i>-8.0</i>	<i>0.0</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.1</i>	<i>8.6</i>	<i>7.4</i>	
Private Equity (Net)	153,763,325	13.5	0.0	1.4	0.0	1.5	25.7	16.1	13.9	10.3	Jul-05
Private Equity (Gross)			0.0	1.4	0.0	1.5	25.7	16.1	13.9	10.5	Jul-05
<i>Custom Private Equity Benchmark</i>			<i>1.5</i>	<i>20.6</i>	<i>1.5</i>	<i>5.2</i>	<i>20.6</i>	<i>14.8</i>	<i>15.5</i>	--	
Direct Lending (Net)	45,908,043	4.0	0.0	4.6	0.0	6.4	9.8	--	--	9.6	Jul-20
Direct Lending (Gross)			0.0	4.6	0.0	6.4	9.8	--	--	9.6	Jul-20
<i>S&P LSTA Leveraged Loan +2%</i>			<i>1.5</i>	<i>9.1</i>	<i>1.5</i>	<i>12.0</i>	<i>8.2</i>	<i>6.3</i>	<i>6.2</i>	<i>8.7</i>	
Hedge Fund (Net)	112,688,397	9.9	0.5	2.5	0.5	4.1	6.5	4.0	--	4.2	Jul-14
Hedge Fund (Gross)			0.6	3.1	0.6	5.1	7.5	4.8	--	4.7	Jul-14
<i>Custom Blended Hedge Fund Benchmark</i>			<i>1.1</i>	<i>3.3</i>	<i>1.1</i>	<i>4.0</i>	<i>4.6</i>	<i>3.5</i>	--	<i>3.3</i>	
Real Assets (Net)	65,506,957	5.7	0.8	7.0	0.8	11.4	15.2	10.9	9.5	9.7	Dec-10
Real Assets (Gross)			0.8	7.1	0.8	11.5	15.4	11.1	10.0	10.2	Dec-10
<i>Custom Blended Real Assets Benchmark</i>			<i>4.9</i>	<i>5.3</i>	<i>4.9</i>	<i>7.5</i>	<i>11.7</i>	<i>7.0</i>	<i>7.9</i>	--	
<i>CPI +5% (Seasonally Adjusted)</i>			<i>0.6</i>	<i>4.7</i>	<i>0.6</i>	<i>8.5</i>	<i>10.9</i>	<i>9.1</i>	<i>7.8</i>	<i>7.7</i>	

Real Assets includes State Street Real Assets NL Fund.

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Infrastructure (Net)	30,373,475	2.7	0.0	8.6	0.0	12.6	12.3	12.5	--	10.0	Jan-15
Private Infrastructure (Gross)			0.0	8.6	0.0	12.6	12.5	12.7	--	10.1	Jan-15
<i>S&P Global Infrastructure</i>			2.0	5.9	2.0	2.2	10.3	5.4	6.4	5.1	
Private Natural Resources (Net)	21,414,776	1.9	0.0	8.7	0.0	20.8	25.6	13.0	--	15.8	Oct-15
Private Natural Resources (Gross)			0.0	8.7	0.0	20.8	25.6	13.0	--	15.8	Oct-15
<i>S&P Global Natural Resources Sector Index (TR)</i>			7.7	4.3	7.7	12.7	20.2	7.2	6.2	12.0	
Cash (Net)	31,883,344	2.8	0.9	4.8	0.9	2.7	1.0	1.1	--	--	Dec-10
Cash (Gross)			0.9	4.8	0.9	2.7	1.0	1.1	--	--	Dec-10

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	1,142,791,194	100.0	1.9	8.7	1.9	6.0	7.6	7.2	7.6	8.0	Jan-95
<i>Policy Index</i>			<i>2.4</i>	<i>10.9</i>	<i>2.4</i>	<i>7.3</i>	<i>8.7</i>	<i>7.1</i>	<i>7.7</i>	<i>6.3</i>	
Total Fund w/o Alternatives	647,846,308	56.7	3.0	13.9	3.0	9.1	5.6	6.9	7.4	--	Jan-08
<i>Policy Index w/o AI</i>			<i>2.9</i>	<i>12.3</i>	<i>2.9</i>	<i>8.2</i>	<i>5.9</i>	<i>5.8</i>	<i>6.7</i>	<i>--</i>	
US Equity	274,566,063	24.0	3.3	19.5	3.3	12.2	12.2	10.6	12.3	10.3	Jan-95
<i>Russell 3000</i>			<i>3.6</i>	<i>20.3</i>	<i>3.6</i>	<i>12.6</i>	<i>13.1</i>	<i>11.1</i>	<i>11.9</i>	<i>10.3</i>	
BNY Mellon Newton Dynamic US Equity	56,395,120	4.9	3.2	19.3	3.2	10.4	11.8	12.0	14.1	15.6	Jan-13
<i>S&P 500 Index</i>			<i>3.2</i>	<i>20.6</i>	<i>3.2</i>	<i>13.0</i>	<i>13.7</i>	<i>12.2</i>	<i>12.7</i>	<i>13.8</i>	
BNY Mellon Large Cap	188,758,055	16.5	3.4	20.7	3.4	12.7	13.2	11.9	--	13.4	Apr-16
<i>Russell 1000 Index</i>			<i>3.4</i>	<i>20.7</i>	<i>3.4</i>	<i>12.9</i>	<i>13.2</i>	<i>11.9</i>	<i>12.4</i>	<i>13.4</i>	
Champlain Small Cap	29,412,888	2.6	2.8	13.1	2.8	12.6	--	--	--	8.8	Nov-20
<i>Russell 2000 Index</i>			<i>6.1</i>	<i>14.7</i>	<i>6.1</i>	<i>7.9</i>	<i>12.0</i>	<i>5.1</i>	<i>8.2</i>	<i>11.5</i>	
International Equity	221,008,950	19.3	4.8	16.4	4.8	13.0	4.4	6.6	6.0	5.7	Jan-99
<i>International Equity Custom</i>			<i>4.6</i>	<i>14.0</i>	<i>4.6</i>	<i>13.8</i>	<i>6.4</i>	<i>3.8</i>	<i>5.0</i>	<i>4.4</i>	
Developed International Equity	131,470,824	11.5	2.8	10.5	2.8	10.8	6.6	5.3	5.5	4.2	Feb-08
<i>Custom Blended Developed International Equity BM</i>			<i>3.6</i>	<i>14.7</i>	<i>3.6</i>	<i>15.5</i>	<i>9.1</i>	<i>4.5</i>	<i>5.2</i>	<i>3.3</i>	
Acadian ACWI ex U.S. Small Cap Equity	14,932,461	1.3	4.3	10.1	4.3	8.0	11.0	--	--	9.2	May-19
<i>MSCI AC World ex USA Small Cap (Net)</i>			<i>5.1</i>	<i>12.3</i>	<i>5.1</i>	<i>10.2</i>	<i>8.2</i>	<i>3.5</i>	<i>5.8</i>	<i>5.6</i>	
Driehaus International Small Cap Growth	14,476,132	1.3	2.8	8.3	2.8	7.8	5.8	--	--	7.9	May-19
<i>MSCI AC World ex USA Small Growth Index (Net)</i>			<i>4.4</i>	<i>12.2</i>	<i>4.4</i>	<i>7.9</i>	<i>4.4</i>	<i>3.3</i>	<i>5.9</i>	<i>5.3</i>	
GQG International Equity	50,812,334	4.4	3.4	12.5	3.4	13.4	6.6	--	--	7.6	Dec-19
<i>MSCI AC World ex USA (Net)</i>			<i>4.1</i>	<i>13.9</i>	<i>4.1</i>	<i>13.4</i>	<i>7.1</i>	<i>3.9</i>	<i>4.7</i>	<i>4.9</i>	

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

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
First Eagle International Value Fund <i>MSCI EAFE (Net)</i>	51,249,898	4.5	1.8	8.9	1.8	9.4	5.9	--	--	3.6	Dec-19
			3.2	15.3	3.2	16.8	9.3	4.5	5.2	5.6	
Emerging Markets Equity <i>MSCI EM</i>	89,538,126	7.8	8.0	26.5	8.0	16.2	-0.5	7.3	6.1	5.3	May-12
			6.2	11.4	6.2	8.3	1.5	1.8	3.7	2.9	
Artisan Developing World TR <i>MSCI Emerging Markets (Net)</i>	61,809,177	5.4	7.5	33.9	7.5	20.8	-2.1	--	--	7.3	Dec-19
			6.2	11.4	6.2	8.3	1.5	1.7	3.5	2.7	
RWC <i>MSCI Emerging Markets (Net)</i>	27,728,949	2.4	9.1	12.5	9.1	7.5	3.8	--	--	2.5	Dec-19
			6.2	11.4	6.2	8.3	1.5	1.7	3.5	2.7	
US Fixed Income <i>US Fixed Income Custom Benchmark</i>	115,560,682	10.1	-0.5	1.0	-0.5	-5.1	-5.0	0.1	1.4	4.3	Jan-95
			0.0	2.0	0.0	-3.0	-4.1	0.6	1.6	4.5	
Vanguard Short-Term Treasury Index Fund <i>Blmbg. 1-3 Govt</i>	6,529,684	0.6	0.3	1.3	0.3	0.0	-1.1	1.0	--	0.9	Mar-18
			0.3	1.4	0.3	0.1	-1.0	1.0	0.8	1.0	
Vanguard Total Bond Market Index Fund <i>Blmbg. U.S. Aggregate Index</i>	17,679,319	1.5	0.0	2.2	0.0	-3.2	-4.5	--	--	-0.2	May-19
			-0.1	2.0	-0.1	-3.4	-4.5	0.7	1.5	-0.2	
Payden & Rygel Low Duration Fund <i>Blmbg. U.S. Treasury: 1-3 Year</i>	8,059,009	0.7	0.5	1.2	0.5	--	--	--	--	4.9	Nov-22
			0.3	1.3	0.3	0.1	-1.0	1.0	0.8	2.2	
Brandywine US Fixed Income <i>Blmbg. U.S. Aggregate Index</i>	33,204,119	2.9	-0.5	2.6	-0.5	--	--	--	--	-0.3	Nov-22
			-0.1	2.0	-0.1	-3.4	-4.5	0.7	1.5	5.3	
Wellington Core Bond <i>Blmbg. U.S. Aggregate Index</i>	50,088,550	4.4	0.0	0.9	0.0	--	--	--	--	3.2	Nov-22
			-0.1	2.0	-0.1	-3.4	-4.5	0.7	1.5	5.3	

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

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit	36,710,613	3.2	1.5	7.8	1.5	7.3	5.3	--	--	4.5	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever</i>			0.6	4.6	0.6	1.7	-0.3	--	--	1.7	
PIMCO Income Fund	11,846,623	1.0	1.2	5.0	1.2	3.3	1.8	--	--	2.1	May-19
<i>Blmbg. U.S. Aggregate Index</i>			-0.1	2.0	-0.1	-3.4	-4.5	0.7	1.5	-0.2	
GoldenTree Multi-Sector Credit	24,469,815	2.1	1.7	7.0	1.7	8.0	5.1	--	--	4.4	Jun-19
<i>50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans</i>			1.3	7.3	1.3	7.0	4.0	3.8	4.3	3.7	
Sculptor Credit Opportunities Domestic Partners, LP	394,175	0.0	0.4	11.5	0.4	10.2	10.7	--	--	11.0	Jul-20
<i>50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans</i>			1.3	7.3	1.3	7.0	4.0	3.8	4.3	5.0	
Real Estate	85,194,820	7.5	0.4	-2.3	0.4	-4.7	4.7	3.2	5.8	6.8	Dec-10
<i>Custom Blended Real Estate Benchmark</i>			0.0	-8.0	0.0	-3.1	8.4	7.1	8.6	9.6	
<i>CPI +5% (Seasonally Adjusted)</i>			0.6	4.7	0.6	8.5	10.9	9.1	7.8	7.7	
Vanguard REIT Index	16,844,939	1.5	2.1	5.6	2.1	-9.7	--	--	--	5.4	Sep-20
<i>Spliced Vanguard REIT Benchmark</i>			2.1	5.7	2.1	-9.7	5.5	4.8	6.4	5.5	
Private Real Estate	68,349,881	6.0	0.0	-4.1	0.0	-2.2	5.9	3.9	6.2	7.1	Dec-10
<i>Custom Blended Real Estate Benchmark</i>			0.0	-8.0	0.0	-3.1	8.4	7.1	8.6	9.6	
Greenfield Gap VII	937,589	0.1	0.0	-11.7	0.0	0.2	22.6	16.9	--	15.9	Jan-15
Patron Capital V	6,082,691	0.5	0.0	11.8	0.0	-8.0	-4.5	-5.5	--	1.3	Feb-16
UBS Trumbull Property	24,967,168	2.2	0.0	-12.0	0.0	-8.3	3.2	2.0	5.1	6.3	Apr-99
Carlyle Realty VIII	2,703,431	0.2	0.0	-7.7	0.0	1.3	38.0	19.2	--	10.6	Jan-18
Taconic CRE Dislocation Fund II	3,043,633	0.3	0.0	15.0	0.0	19.1	10.2	--	--	9.6	Nov-18
Carmel Partners Investment Fund VII	3,310,132	0.3	0.0	-1.3	0.0	6.0	-6.5	--	--	-21.1	Apr-19

Sculptor 7/31 MV is an estimate using manager reported returns.

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 (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
AG Realty Value Fund X, L.P.	3,649,287	0.3	0.0	-0.9	0.0	6.0	16.3	--	--	6.4	Jun-19
Rockpoint Real Estate Fund VI, L.P.	4,496,129	0.4	0.0	-2.1	0.0	-2.3	13.5	--	--	11.3	May-20
Cerberus Real Estate Debt Fund, L.P.	5,060,821	0.4	0.0	1.9	0.0	4.0	10.2	--	--	9.9	Jul-20
Taconic CRE Dislocation Onshore Fund III	5,426,453	0.5	0.0	1.7	0.0	7.6	--	--	--	6.6	Jun-21
Starwood Distressed Opportunity Fund XII Global	1,798,718	0.2	0.0	-4.0	0.0	0.4	--	--	--	128.3	Jun-21
Carlyle Realty Partners IX	936,530	0.1	0.0	-32.5	0.0	-90.2	--	--	--	-146.0	Dec-21
Carmel Partners Investment Fund VIII	3,226,681	0.3	0.0	-2.6	0.0	-7.5	--	--	--	-11.9	Apr-22
Rockpoint Real Estate Fund VII L.P.	2,710,618	0.2	0.0	9.6	0.0	13.6	--	--	--	13.6	Aug-22
Private Equity	153,763,325	13.5	0.0	1.4	0.0	1.5	25.7	16.1	13.9	10.3	Jul-05
<i>Custom Private Equity Benchmark</i>			<i>1.5</i>	<i>20.6</i>	<i>1.5</i>	<i>5.2</i>	<i>20.6</i>	<i>14.8</i>	<i>15.5</i>	<i>--</i>	
Taconic Credit Dislocation Fund IV L.P.	800,000	0.1	--	--	--	--	--	--	--	--	Jul-23
Khosla Ventures Seed F, L.P.	390,000	0.0	--	--	--	--	--	--	--	--	Jul-23
Adams Street	4,110,531	0.4	0.0	-2.5	0.0	-14.0	19.1	11.2	12.7	8.2	Oct-05
Invesco VI	603,938	0.1	0.0	-21.5	0.0	-48.0	31.1	19.2	16.3	16.1	Jul-13
Ocean Avenue II	8,762,791	0.8	0.0	-8.5	0.0	3.9	46.0	31.6	--	22.2	Jul-14
Pantheon I	62,645	0.0	0.0	1.8	0.0	-13.8	-9.7	-13.8	-3.7	-1.5	Jan-06
Pantheon II	2,961,649	0.3	0.0	0.2	0.0	-8.7	19.2	12.4	13.9	12.4	Jan-12
Pantheon Secondary	110,622	0.0	0.0	-0.1	0.0	-2.5	-5.2	-6.6	-1.4	0.6	Jul-07
Davidson Kempner Long-Term Distressed Opportunities Fund IV	2,862,912	0.3	0.0	22.5	0.0	36.9	31.9	18.1	--	18.8	Apr-18

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 (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XII	5,387,569	0.5	0.0	-0.7	0.0	-4.2	30.5	15.9	--	15.4	Jun-18
Carrick Capital Partners III	6,345,972	0.6	0.0	1.7	0.0	-2.6	19.3	11.1	--	11.1	Aug-18
Cressey & Company Fund VI	5,322,105	0.5	0.0	3.6	0.0	-3.7	27.8	--	--	16.5	Jan-19
TCV X	6,677,511	0.6	0.0	1.9	0.0	-25.8	30.5	--	--	17.2	Apr-19
Accel-KKR Growth Capital Partners III	4,502,216	0.4	0.0	4.7	0.0	1.3	21.2	--	--	10.2	Jul-19
Genstar Capital Partners IX	9,216,088	0.8	0.0	4.7	0.0	30.5	37.4	--	--	26.7	Aug-19
Cortec Group Fund VII	8,436,446	0.7	0.0	17.9	0.0	24.9	36.0	--	--	27.1	Dec-19
Spark Capital Growth Fund III	8,782,200	0.8	0.0	-25.2	0.0	-2.2	19.4	--	--	16.8	Mar-20
Spark Capital VI	2,461,482	0.2	0.0	-3.0	0.0	1.2	-3.0	--	--	-2.6	Mar-20
Summit Partners Growth Equity Fund X-A	8,115,104	0.7	0.0	10.9	0.0	11.9	8.0	--	--	6.5	Mar-20
Taconic Market Dislocation Fund III L.P.	7,317,525	0.6	0.0	1.7	0.0	-2.5	14.2	--	--	13.8	Jul-20
Marlin Heritage Europe II, L.P.	7,473,657	0.7	0.0	14.5	0.0	11.6	--	--	--	-0.2	Oct-20
Khosla Ventures VII	4,685,223	0.4	0.0	5.6	0.0	6.0	--	--	--	5.4	Jan-21
Accel-KKR Capital Partners VI	3,199,154	0.3	0.0	0.0	0.0	0.0	--	--	--	-5.5	Feb-21
Khosla Ventures Seed E	1,917,122	0.2	0.0	7.2	0.0	9.9	--	--	--	136.0	Feb-21
TCV XI	3,719,636	0.3	0.0	-4.3	0.0	-16.8	--	--	--	-4.9	Feb-21
Thoma Bravo Discover Fund III	8,552,081	0.7	0.0	3.7	0.0	-0.3	--	--	--	6.2	Jun-21
Summit Partners Venture Capital Fund V-A	3,048,142	0.3	0.0	1.0	0.0	-5.0	--	--	--	-6.1	May-21

Asset Allocation & Performance | As of July 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XIII/A & B	3,945,540	0.3	0.0	-4.2	0.0	-3.6	--	--	--	98.7	Jun-21
Genstar Capital Partners X	5,899,627	0.5	0.0	2.7	0.0	3.0	--	--	--	6.5	Oct-21
Nautic Partners X	2,832,191	0.2	0.0	6.5	0.0	6.0	--	--	--	0.6	Jan-22
Spark Capital Growth Fund IV	1,508,038	0.1	0.0	51.3	0.0	36.5	--	--	--	19.0	Jan-22
Spark Capital VII	871,328	0.1	0.0	-4.3	0.0	-8.9	--	--	--	-7.3	Feb-22
TCV Velocity Fund I	1,820,759	0.2	0.0	-9.3	0.0	-19.8	--	--	--	-27.1	Feb-22
Accel-KKR Growth Capital Partners IV	1,426,056	0.1	0.0	1.2	0.0	-6.7	--	--	--	-20.5	Apr-22
Summit Partners Growth Equity Fund XI-A	2,026,560	0.2	0.0	11.4	0.0	1.2	--	--	--	-50.9	Apr-22
GTCR Strategic Growth Fund I/A&B LP	1,422,241	0.1	0.0	-15.2	0.0	-50.4	--	--	--	-47.6	Jul-22
Threshold Ventures IV LP	672,612	0.1	0.0	-12.7	0.0	-24.2	--	--	--	-24.2	Aug-22
Thoma Bravo Discovery Fund IV	3,432,974	0.3	0.0	8.9	0.0	--	--	--	--	8.9	Jan-23
Marlin Heritage III	982,092	0.1	0.0	-83.2	0.0	--	--	--	--	-83.2	Jan-23
Cortec Group Fund VIII, L.P.	1,098,986	0.1	0.0	--	0.0	--	--	--	--	-1.1	Apr-23
Direct Lending	45,908,043	4.0	0.0	4.6	0.0	6.4	9.8	--	--	9.6	Jul-20
<i>S&P LSTA Leveraged Loan +2%</i>			<i>1.5</i>	<i>9.1</i>	<i>1.5</i>	<i>12.0</i>	<i>8.2</i>	<i>6.3</i>	<i>6.2</i>	<i>8.7</i>	
Silver Point Specialty Credit Fund II, L.P.	6,128,753	0.5	0.0	6.5	0.0	7.2	10.2	--	--	9.9	Jul-20
Ares Senior Direct Lending Fund II	10,955,540	1.0	0.0	4.7	0.0	7.4	--	--	--	8.2	Jan-22
Varagon Capital Direct Lending Fund	9,981,483	0.9	0.0	0.8	0.0	0.2	--	--	--	-0.1	Jan-22
AG Direct Lending Fund IV Annex	9,443,483	0.8	0.0	5.5	0.0	9.5	--	--	--	7.5	May-22

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
AG Direct Lending Fund V	4,567,273	0.4	0.0	5.8	0.0	7.5	--	--	--	7.5	Aug-22
Accel-KKR Credit Partners II LP	833,144	0.1	0.0	--	0.0	--	--	--	--	30.2	Mar-23
Silver Point Specialty Credit Fund III	3,998,366	0.3	0.0	--	0.0	--	--	--	--	-1.7	Mar-23
Hedge Fund	112,688,397	9.9	0.5	2.5	0.5	4.1	6.5	4.0	--	4.2	Jul-14
<i>Custom Blended Hedge Fund Benchmark</i>			<i>1.1</i>	<i>3.3</i>	<i>1.1</i>	<i>4.0</i>	<i>4.6</i>	<i>3.5</i>	<i>--</i>	<i>3.3</i>	
Hudson Bay Fund	15,128,957	1.3	0.6	--	0.6	--	--	--	--	--	Jun-23
Sculptor (OZ) Domestic II	264,914	0.0	0.0	7.4	0.0	5.2	2.5	4.7	--	5.3	Jul-14
Graham Absolute Return	9,744,505	0.9	1.9	0.0	1.9	3.2	8.6	4.7	--	4.4	Sep-17
Wellington-Archipelago	15,721,184	1.4	0.7	7.1	0.7	9.7	6.5	5.3	--	5.6	Sep-17
Marshall Wace Eureka	4,482,127	0.4	0.1	0.5	0.1	2.2	6.6	5.2	--	5.6	Dec-17
Silver Point Capital	18,569,157	1.6	-0.2	3.7	-0.2	6.7	14.7	8.1	--	8.1	Dec-17
Laurion Capital	13,342,254	1.2	0.0	1.7	0.0	1.4	4.9	9.1	--	9.1	Aug-18
Taconic Opportunity Fund	13,837,064	1.2	1.0	1.5	1.0	-0.1	4.7	--	--	3.0	Jan-19
Marshall Wace Global Opportunities	10,742,551	0.9	0.8	4.8	0.8	9.5	5.1	--	--	5.5	May-20
Caxton Global Investments	10,855,686	0.9	0.5	-7.4	0.5	-3.4	--	--	--	3.6	May-21

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Assets	65,506,957	5.7	0.8	7.0	0.8	11.4	15.2	10.9	9.5	9.7	Dec-10
<i>Custom Blended Real Assets Benchmark</i>			4.9	5.3	4.9	7.5	11.7	7.0	7.9	--	
SSgA	13,718,706	1.2	4.0	1.9	4.0	-0.8	11.5	6.1	--	6.2	May-17
<i>Real Asset NL Custom Blended Index</i>			3.9	2.2	3.9	-1.4	11.7	6.2	--	6.2	
Private Infrastructure	30,373,475	2.7	0.0	8.6	0.0	12.6	12.3	12.5	--	10.0	Jan-15
<i>S&P Global Infrastructure</i>			2.0	5.9	2.0	2.2	10.3	5.4	6.4	5.1	
KKR Global II	5,055,833	0.4	0.0	17.2	0.0	18.6	23.8	22.2	--	17.1	Jan-15
North Haven Infrastructure II	2,735,821	0.2	0.0	-0.5	0.0	12.2	9.3	9.4	--	8.4	Jun-15
ISQ Global Infrastructure Fund II	5,169,996	0.5	0.0	5.4	0.0	9.9	13.8	13.0	--	4.1	Jul-18
KKR Global Infrastructure Investors III	4,342,735	0.4	0.0	10.5	0.0	12.9	3.6	--	--	-2.2	Jan-19
Ardian Infrastructure Fund V	4,104,774	0.4	0.0	16.9	0.0	16.6	-8.3	--	--	-9.0	Nov-19
ISQ Global Infrastructure Fund III	1,461,403	0.1	0.0	8.9	0.0	13.2	--	--	--	-605.3	Jun-21
KKR Global Infrastructure Investors IV	4,669,870	0.4	0.0	4.9	0.0	0.3	--	--	--	-220.7	Sep-21
BlackRock Global Infrastructure Fund IV	2,833,043	0.2	0.0	-12.3	0.0	--	--	--	--	-12.3	Dec-22
Private Natural Resources	21,414,776	1.9	0.0	8.7	0.0	20.8	25.6	13.0	--	15.8	Oct-15
<i>S&P Global Natural Resources Sector Index (TR)</i>			7.7	4.3	7.7	12.7	20.2	7.2	6.2	12.0	
EnCap Flatrock Midstream Fund V	1,811,333	0.2	0.0	--	0.0	--	--	--	--	0.0	Jun-23
EnCap XI	4,766,484	0.4	0.0	10.0	0.0	33.4	26.3	3.0	--	-7.6	Aug-17
EnCap IV	1,803,569	0.2	0.0	2.4	0.0	5.7	51.0	31.2	--	24.4	Mar-18
GSO Energy Opportunities	650,592	0.1	0.0	14.0	0.0	61.2	49.2	17.7	--	19.0	Dec-15

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	Market Value \$	% of Portfolio	1 Mo (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Taurus Mining	376,734	0.0	0.0	8.2	0.0	36.9	51.8	29.8	--	26.1	Oct-15
Taurus Mining Annex	190,903	0.0	0.0	7.3	0.0	19.1	23.5	21.4	--	25.3	Feb-17
BlackRock Global Energy and Power Infrastructure Fund III LP	4,579,491	0.4	0.0	7.6	0.0	12.9	18.3	--	--	14.2	Aug-19
Tailwater Energy Fund IV, LP	3,614,461	0.3	0.0	16.1	0.0	30.2	27.3	--	--	6.7	Oct-19
Carnelian Energy Capital IV	3,621,209	0.3	0.0	2.5	0.0	-8.0	--	--	--	-6.5	May-22
Cash	31,883,344	2.8	0.9	4.8	0.9	2.7	1.0	1.1	--	--	Dec-10
Cash	31,361,754	2.7	0.9	5.2	0.9	2.8	1.0	1.3	1.0	-1.4	Dec-10
Treasury Cash	521,590	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1	Sep-17

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

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)

Disclaimer, Glossary, and Notes

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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. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

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.