MEKETA | 45 YEARS
CELEBRATING A MILESTONE

Merced County Employees' Retirement Association

October 26, 2023

August Performance

Table of Contents

Forward-Looking Calendar

Merced CERA

2023 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
	September	Performance Review-Consent (July)		
Current	**October**	Performance Review-Consent (August)		
Future	**November**	**Quarterly Performance Report (23Q3)**	**Macroeconomic Update**	
	December	Performance Report (October)		

Meketa **Corporate Update**

7
Offices

240+
Employees

240+
Clients

$1.8T
Assets Under Advisement

$200B
Assets in Alternative Investments

99%
Client Retention Rate

5:1
Client | Consultant Ratio

Meketa Investment Group is proud to work for over 15 million American families everyday!

UPCOMING EVENTS

Q4 Investment Perspectives Webcast
January 2024

Mission Driven Investing Manager Research Day
December 2023

Client and employee counts as of September 30, 2023; assets as of June 30, 2023.
Client retention rate is one minus the number of clients lost divided by the number of clients at prior year-end.

THOUGHT LEADERSHIP

Read our July Connectives "Your Plan is 100% Funded, Now What?"

Continuing in our newest series of "Meketa Connectives", our July issue covers the effect high interest rates are having on the funded status of plans. For well over a decade, low fixed income yields have suppressed discount rates and increased the value of liabilities on an accounting basis. As the Federal Reserve hikes interest rates to fight inflation, the corporate discount rate has started to rise. As a result, plans are finding that their funded status has improved on an accounting basis, which in turn broadens the range of options available to them.

Read more here:
https://meketa.com/news/meketa-connectives-your-plan-is-100-funded-now-what/

Read our recent white paper "Venture Capital Primer"

Venture capital has been an attention-grabbing, headline generating asset class from its very beginning. Many household names started out as (or still are) venture backed investments, including Apple, Microsoft, Google, Facebook, SpaceX, Uber, Airbnb, DoorDash, and Peloton. Recently, venture capital has become a dominating presence in the cryptocurrency and AI industries, driving innovation through investments in companies such as Coinbase and OpenAI.

The primary allure of venture capital is its risk/reward potential. Investors are drawn by possibly generating some of the highest returns of any asset class but should also be aware of the increased risks. This primer provides an overview of the venture capital asset class and contrasts it to other private markets strategies, particularly buyouts.

Read more here:
https://meketa.com/leadership/venture-capital-primer/

Watch our recent webinar "Navigating Investment Risks Through Modeling Climate Scenario Analysis"

Watch our fireside chat on using climate scenario analysis to navigate investment risks.

Moderated by research consultant, Alison Adams, and accompanied by Meketa's own climate scenario experts, Stephen MacLellan, consultant, and Zach Stevens, senior quantitative research analyst, the panel discussed how modeling climate scenarios to analyze the impact on portfolios may provide a deeper understanding of broad investment risks.

Read more here:
https://meketa.com/leadership/navigating-investment-risks-through-modeling-climate-scenario-analysis/

MEKETA VALUES COMMUNITY

Habitat Build Days

As part of Meketa's volunteer opportunities, each employee is given 8 hours to volunteer in their local communities. During the summer our Carlsbad office in San Diego and our Boston office in Westwood hosts Habitat for Humanity Build Days.

In Carlsbad, employees traveled to San Diego to help a homeowner with repairs and maintenance through a government program that pairs with Habitat for Humanity. In Boston, our employees traveled to Malden to help with the building of 3 homes for qualifying families.

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MEKETA IN THE NEWS

Pensions&Investments

Investors cooling on China ahead of Biden executive order

By Brian Croce & Arleen Jacobius
August 11, 2023

While Washington legislators cheered President Joe Biden's executive order restricting new U.S. private equity and venture capital investments in certain Chinese technology companies, investor sentiment on the country had already been starting to cool.

On Aug. 9, the president signed an executive order barring U.S. investment including joint ventures in Chinese companies focused on semiconductors and microelectronics, quantum information technologies and artificial intelligence. It also requires Americans to notify the Treasury Department of direct investments in those sectors.

"China is the second largest economy in the world and it is important to global supply chains and a major importer of commodities, which makes China an unavoidable presence in the global economy and global capital markets," said **Alison Adams**, Portland, Ore.-based managing principal and a research consultant on the capital markets research team at **Meketa Investment Group** in an emailed response to questions.

"But how U.S. investors think about how to allocate global capital appears to be changing," Ms. Adams said. Prior to the pandemic, investors were more willing to place a big bet on China and may have sought out direct investment, she said.

"Now the risk/return balance appears to be shifting to a more cautious approach where a big bet on direct China may be less likely" possibly due to the political risks of direct investment in China shifting inside China and in the U.S., Ms. Adams said.

Politics was less of a factor before the pandemic when China's GDP was growing 7% to 10% a year, and investors were interested in increasing their investment allocations to take advantage of China's rise, she said.

"Now that China's growth is only a couple of a percent above the U.S. — that risk/return analysis has shifted," Ms. Adams said.

Private Debt Investor

Yes, banks and private debt can co-exist

The maritime world is trying to figure out a new sustainable fuel mix, which ought to inspire elevator pitches *to private debt managers.*

By Christopher Faille | August 31, 2023

Private debt funds in the US have for years now made their case to potential investors with some version of the following narrative: "This fund relies upon strategy X. Strategy X is solid, but for various reasons (practical and/or regulatory) banks have largely withdrawn from the field of X lending. This has created an opportunity for private debt funds, which can step in and do the work the banks used to do."

Much the same risk spectrum is sometimes described as a distinction between "core" infrastructure and "non-core" or "core plus". As **Lisa Bacon**, of the private markets team at **Meketa Investment Group**, says: "Core includes low-risk assets that are operational and have predictable cashflows. Examples of non-core assets with higher risk-return profiles include those in the development, permitting, construction and early operations stages."

Meketa Research Insights

MEKETA

RESEARCH INSIGHTS

Real Estate | Retirement | Deglobalization | Funded Plans | Manager Alpha | TIPS | Securities Lending | LDI | Venture Capital | Government Debt | BRICS Summit

THIRD QUARTER 2023

Meketa Investment Group is excited to share its latest edition of Research Insights. In this publication, we provide some of our most recent thinking and research on topical and timely subjects.

Real Estate: Evaluating the Office Landscape

As part of the shift to hybrid work schedules, many companies are reevaluating their current office space needs. Perhaps unsurprisingly, many have begun or are planning to downsize their office footprint over the next few years. This means that office, one of the four main property types found in institutional real estate portfolios, is likely to experience a significant structural change. This may translate into a decline in future office construction projects, reductions in overall office utilization, as well as redevelopments and conversions of office spaces into other property types.

https://meketa.com/leadership/real-estate-evaluating-the-office-landscape/

Retirement Income

In this paper we discuss recent legislative initiatives that focus on retirement income, the benefits and constraints of several existing retirement income solutions, and considerations that plan sponsors should evaluate as they contemplate which strategies they can and might consider offering to plan participants. Since many public Defined Contribution ("DC") plans contain guaranteed income solutions in their structures, we focus our analysis primarily on the private DC sector.

https://meketa.com/leadership/retirement-income/

Deglobalization

Here we examine the current evidence for deglobalization by analyzing the current environment and historical effects of globalization, primarily during the post WWII era. We also study the costs and benefits of globalization to find potential impacts of its unraveling. Beyond the diminishment of the peace dividend, we find that deglobalization may have ramifications for price stability, interest rates, economic growth, and lower returns on investment in the US and beyond.

https://meketa.com/leadership/deglobalization/

Your Plan is 100% Funded, Now What?

For well over a decade, low fixed income yields have suppressed discount rates and increased the value of liabilities on an accounting basis. As the Federal Reserve hikes interest rates to fight inflation, the corporate discount rate has started to rise. As a result, plans are finding that their funded status has improved on an accounting basis, which in turn broadens the range of options available to them.

https://meketa.com/news/meketa-connectives-your-plan-is-100-funded-now-what/

In Search of Manager Alpha: Outperformance and Dispersion

The purpose of this paper is to measure and analyze the historical performance of actively managed strategies compared to market benchmarks. This topic has been discussed before in numerous platforms and contexts, but this paper aims to objectively create an accurate historical and quantitative picture of relative performance over time.

https://meketa.com/leadership/in-search-of-manager-alpha-outperformance-and-dispersion/

TIPS

TIPS may provide reliable income while also offering a long-term inflation hedge to investors where inflation is a substantial risk (e.g., pensions where benefits are indexed to inflation, and endowments and foundations). That said, a market-duration TIPS portfolio is as sensitive to changes in interest rates as it is to changes in inflation expectations. Being issued by the US Treasury, TIPS can also play the role of high-quality bonds, serving as a unique kind of ballast. As with other Treasury bonds, TIPS' modest level of returns means that substituting them for other, riskier investments in a portfolio comes with a potential opportunity cost.

https://meketa.com/leadership/tips-strategic-allocation/

Securities Lending

Securities lending programs have the ability to generate modest incremental revenue for investors. During most periods, risk of loss is minimal; however, during periods of market disruption, the potential for liquidity impairment or loss exists. Investors may find that controlled exposure to securities lending can provide added income with an acceptable risk level, especially in an environment of elevated interest rates. The amount of income, and risk, in any securities lending program is significantly determined by how the borrowing collateral is invested and the counterparties to which the lender is exposed.

https://meketa.com/leadership/securities-lending/

The Current Environment for Pension Plans: The LDI Perspective

Across the spectrum of pension plans, whether a fixed income or growth orientation, many plan sponsors find themselves in a rate environment that feels unfamiliar. In this short video, Meketa's Jonathan Camp explores the current environment for plan sponsors as they consider investment strategy changes and liability driven investing.

https://vimeo.com/858704115

Venture Capital Primer

The allure of investing in venture capital lies in its risk/reward potential. Investors are drawn by the potential to generate some of the highest returns of any asset class, but should also be aware of the increased risks. This primer provides an overview of the venture capital asset class and contrasts it to other private markets strategies, particularly buyouts.

https://meketa.com/leadership/venture-capital-primer/

The Impact of Government Debt

In this follow-up piece to a previous white paper, "Debt and the US Debt Ceiling," we explore the broader impact of government debt on the economy. We examine historical debt trends relative to economic growth, discuss what countries do to manage their level of debt when it has grown, and explore what could happen if debt continues to climb.

https://meketa.com/leadership/the-impact-of-government-debt/

China Dominates BRICS Summit

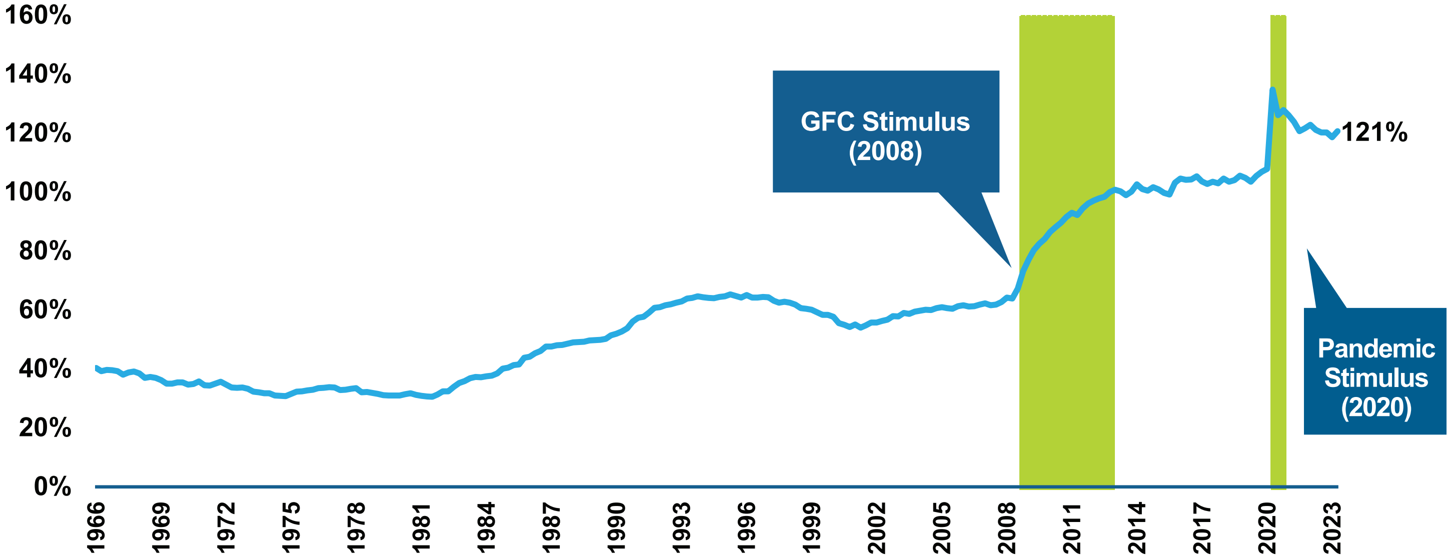
The BRICS (Brazil, Russia, India, China, and South Africa) intergovernmental organization recently met for its fifteenth annual summit in Johannesburg, South Africa from August 22nd to 24th. What created headline buzz this year was the invitation of six other countries to join the organization: Saudi Arabia, Ethiopia, Egypt, United Arab Emirates, Iran, and Argentina. Read more about the new BRICS members as well as China's ascent in the organization at the link below.

https://meketa.com/news/meketa-connectives-china-dominates-brics-summit/

Meketa Noteworthy Chart of the Month

NOTEWORTHY CHART | US DEBT TO GDP

OCTOBER 2023



SOURCE | Federal debt: total US public debt as percent of gross domestic product, as of September 1, 2023. https://fred.stlouisfed.org/series/GFDEGDQ188S

The debt level in the US compared to broad economic growth (GDP) now ranks in the top ten highest overall in the world. The only developed economies with higher debt-to-GDP ratios are Japan, Greece, and Italy. For much of the 1960s and 1970s, the debt-to-GDP ratio in the US was in the 35%-40% range. From the early 1980s, however, debt levels have steadily increased to the current level of 121% of GDP (around a 3X increase). Key drivers of the debt increase in the US have been spending on social programs and economic stimulus during the Global Financial Crisis and related to the COVID pandemic. In addition to higher overall borrowing in the US, the cost of borrowing has also increased due to the rapid rise in interest rates in recent years. For example, the cost of the government borrowing for ten years increased from around 0.5% at the low in 2020, to over 4.6% currently. This adds significant interest cost to service the growing debt burden.

In addition to the above, confidence in the government's ability to service the growing debt has declined, albeit modestly, due in part to gridlock in Washington related to increasing the debt ceiling. On August 1st, 2023, Fitch Ratings downgraded the US's long-term debt rating from AAA to AA+. This follows Standard & Poor's (S&P) similar downgrade in August 2011 during a prior debt ceiling crisis.

As we look ahead, the days of low-cost government borrowing in the US might be behind us. It is also likely that deficit spending will continue, given some of the recent fiscal initiatives (e.g., spending related to the Inflation Reduction Act and the CHIPS Act). This increased borrowing in the US will be coming at a time when one of the largest buyers of US Treasuries over the last 15 years, the Federal Reserve, will be winding down its purchases.

So, what does this mean for the markets? Historically, concerns related to the fiscal health of the US and issues related to increasing the debt ceiling have led to short-term volatility in the equity markets. For bonds, despite the downgrades, the US Treasury market remains one of the largest and most liquid in the world, and Treasuries will likely remain a safe haven investment. Although higher overall rates increase the debt servicing cost for the government, they also produce higher income for bondholders, which is a benefit to most investors.

Economic and Market Update

Data as of August 31, 2023

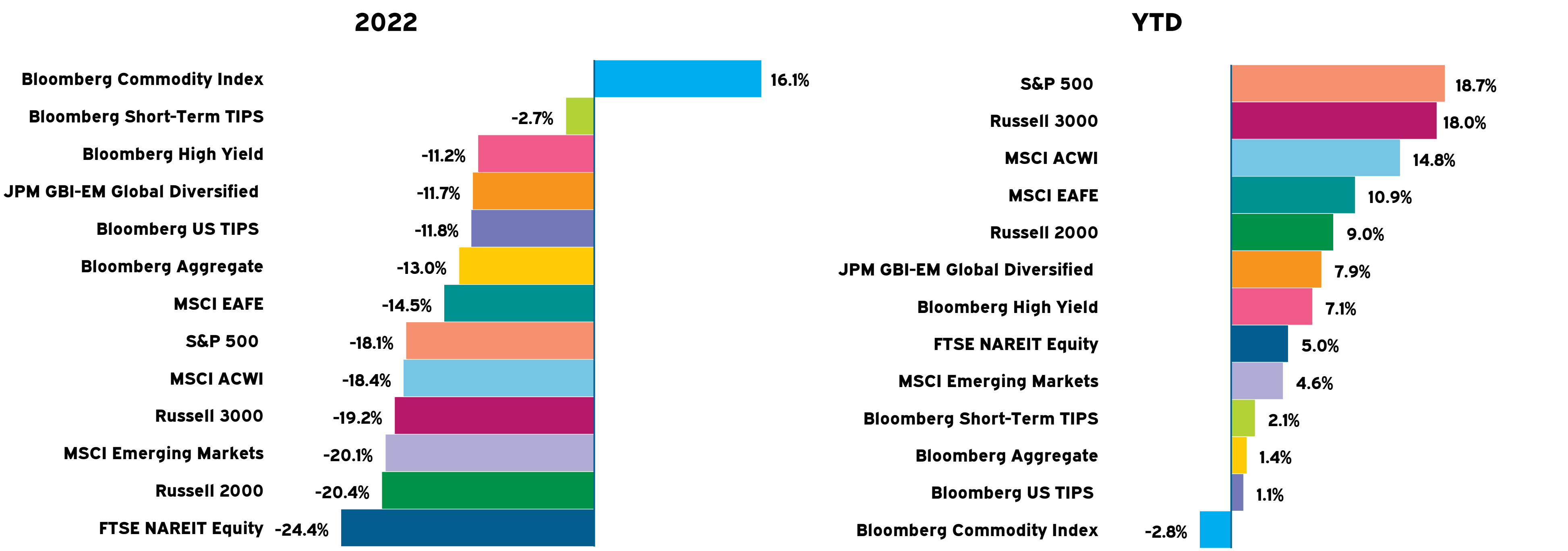
Commentary

→ Global assets turned negative in August as expectations shifted to the Fed keeping interest rates higher for longer and potentially increasing interest rates further later this year. Weakening economic data from Europe and China, as well as further instability in the Chinese real estate sector, weighed on results.

- The Federal Reserve increased interest rates in July by 0.25% to a range of 5.25% - 5.5%, and it is largely expected they will keep rates at that level at their September meeting. Given continued strong data and inflation levels above target markets are now expecting that the Fed could raise rates again later this year.
- US equity markets (Russell 3000 index) fell in August (-1.9%), bringing the year-to-date gains to 18.7%. The technology sector remains the key driver of results this year, helped by artificial intelligence optimism.
- Non-US developed equity markets declined more than the US in August (MSCI EAFE -3.8%) with the strength of the US dollar adding 2% to the monthly declines. This widened the gap between US and international developed equities for the year (18.0% versus 10.9%).
- Emerging market equities fell the most in August (-6.2%), driven by results in China and the strong US dollar. They continue to significantly trail developed market equities year-to-date, returning 4.6%, again driven by China.
- Interest rates generally rose in August, particularly for longer-dated maturities. The broad US bond market fell (-0.6%) but remains positive (+1.4%) year-to-date as higher income has offset capital losses from rising rates.

→ This year, the paths of inflation and monetary policy, slowing global growth, and the war in Ukraine will all be key.

Index Returns[1]



→ After a particularly difficult 2022, most public market assets are up thus far in 2023, led by developed market equities.

→ Despite declines in August, risk sentiment has been supported overall this year 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 August 31, 2023.

Domestic Equity Returns[1]

Domestic Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-1.6	1.6	18.7	15.9	10.5	11.1	12.8
Russell 3000	-1.9	1.6	18.0	14.8	9.8	10.2	12.2
Russell 1000	-1.7	1.6	18.6	15.4	9.9	10.8	12.5
Russell 1000 Growth	-0.9	2.4	32.2	21.9	8.3	13.8	15.6
Russell 1000 Value	-2.7	0.7	5.9	8.6	11.6	7.1	9.1
Russell MidCap	-3.5	0.4	9.4	8.4	9.2	7.3	10.0
Russell MidCap Growth	-3.3	-0.4	15.5	13.0	3.8	7.9	11.0
Russell MidCap Value	-3.5	0.7	5.9	5.7	12.1	6.1	8.9
Russell 2000	-5.0	0.8	9.0	4.7	8.1	3.1	8.0
Russell 2000 Growth	-5.2	-0.8	12.7	6.8	2.7	2.5	8.2
Russell 2000 Value	-4.8	2.4	4.9	2.2	13.5	3.2	7.4

US Equities: Russell 3000 Index fell 1.9% in August but is up 18.7% YTD.

→ Given strong economic data, investors questioned whether the Federal Reserve was done with its rate increases and expectations increased for rates to remain higher for longer. This overall weighed on the US equity markets.

→ Large cap stocks outperformed small cap stocks by a wide margin in August. Stocks in the health care sector drove this dynamic, in part due to the relative underperformance of small cap biotechnology stocks. Technology stocks, particularly those of software companies, also contributed to the outperformance of large cap stocks.

→ Energy was the only sector to post a gain during August. Oil prices rose partly due to investor expectations of an extension of Saudi Arabia's oil production cuts, which were confirmed in September.

[1] Source: Bloomberg. Data is as of August 31, 2023.

Foreign Equity Returns[1]

Foreign Equity	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-4.5	-0.6	8.8	11.9	4.0	3.3	4.4
MSCI EAFE	-3.8	-0.7	10.9	17.9	6.1	4.1	4.9
MSCI EAFE (Local Currency)	-1.8	-0.2	11.9	14.1	10.8	6.2	7.3
MSCI EAFE Small Cap	-3.3	1.0	6.5	9.2	2.4	1.5	5.7
MSCI Emerging Markets	-6.2	-0.3	4.6	1.3	-1.4	1.0	3.0
MSCI Emerging Markets (Local Currency)	-4.7	0.4	5.9	2.3	0.6	2.8	5.6
MSCI China	-9.0	0.8	-4.7	-7.5	-14.3	-3.9	2.5

Foreign Equity: Developed international equities (MSCI EAFE) fell 3.8% in August bringing the YTD gain to 10.9%. Emerging market equities (MSCI EM) fell 6.2% in August, rising 4.6% YTD.

→ International equities fell alongside US markets in August, with emerging markets experiencing the largest decline driven by losses in China. A major rally in the US dollar weighed further on results.

→ Japanese equities rose moderately, namely in the domestic-oriented mid- and small-cap sectors, while large cap growth names declined given the rise in Japanese government bond yields. Eurozone and UK equities both fell, with all sectors except energy and real estate declining.

→ As overall risk sentiment fell and weakness in China continued emerging market equities were weak across the board. China saw substantial declines in August, as signs of a slowdown continued and concerns surrounding the property sector grew. To support the economy the government announced additional stimulus in the form of reduced mortgage rates and lower down payment ratios. India declined but relatively outperformed other emerging markets, due in part to broad inflows from foreign investors.

[1] Source: Bloomberg. Data is as of August 31, 2023.

Fixed Income Returns[1]

Fixed Income	August (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-0.6	-0.5	1.8	-0.4	-4.0	0.7	1.8	5.3	6.2
Bloomberg Aggregate	-0.6	-0.7	1.4	-1.2	-4.4	0.5	1.5	5.0	6.4
Bloomberg US TIPS	-0.9	-0.8	1.1	-3.7	-1.5	2.3	2.1	4.6	6.8
Bloomberg Short-term TIPS	0.1	0.6	2.1	0.5	1.9	2.8	1.8	5.1	2.6
Bloomberg High Yield	0.3	1.7	7.1	7.2	1.8	3.3	4.5	8.4	4.0
JPM GBI-EM Global Diversified (USD)	-2.7	0.1	7.9	11.3	-2.2	1.2	-0.1	6.6	5.0

Fixed Income: The Bloomberg Universal index fell 0.6% in August remaining positive YTD (+1.8%), as inflation continues to decline, and yields remain high.

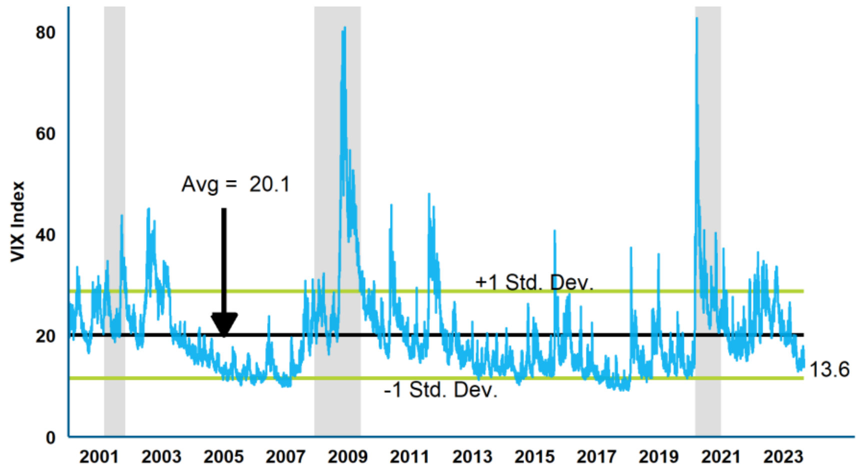
→ The downgrade of US government debt from AAA to AA+ by Fitch combined with expectations for higher borrowing put upward pressure on longer-term rates and weighed on overall results. Expectations for interest rates to remain higher for longer than previously expected also contributed to the decline in bonds.

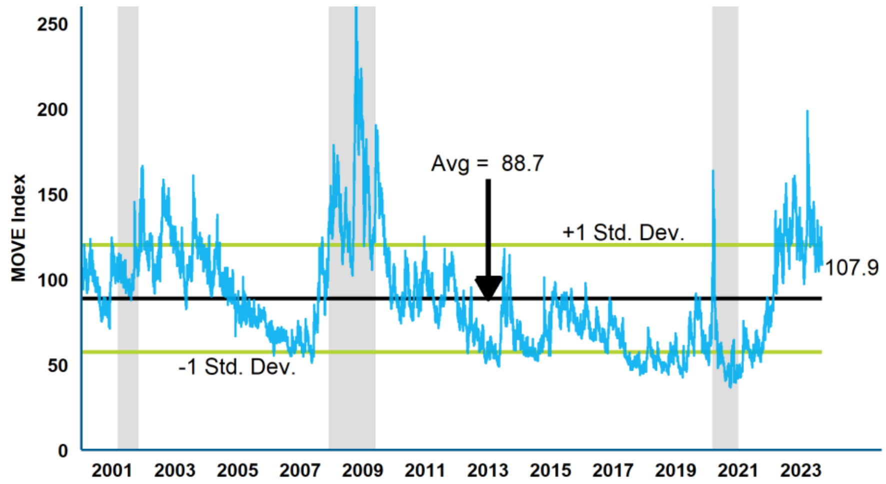
→ The broad US bond market (Bloomberg Aggregate) fell 0.6% for the month. The more interest rate sensitive broader TIPS index fell slightly more (-0.9%), while the short-term TIPS index eked out a small gain (+0.1%).

→ High yield bonds rose slightly (+0.3%) for the month, while emerging market bonds were the weakest performer, falling 2.7%. The two asset classes remain the top performers for the year by a wide margin.

[1] Source: Bloomberg. JPM GBI-EM data is from InvestorForce. Data is as of August 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 Volatility[1]



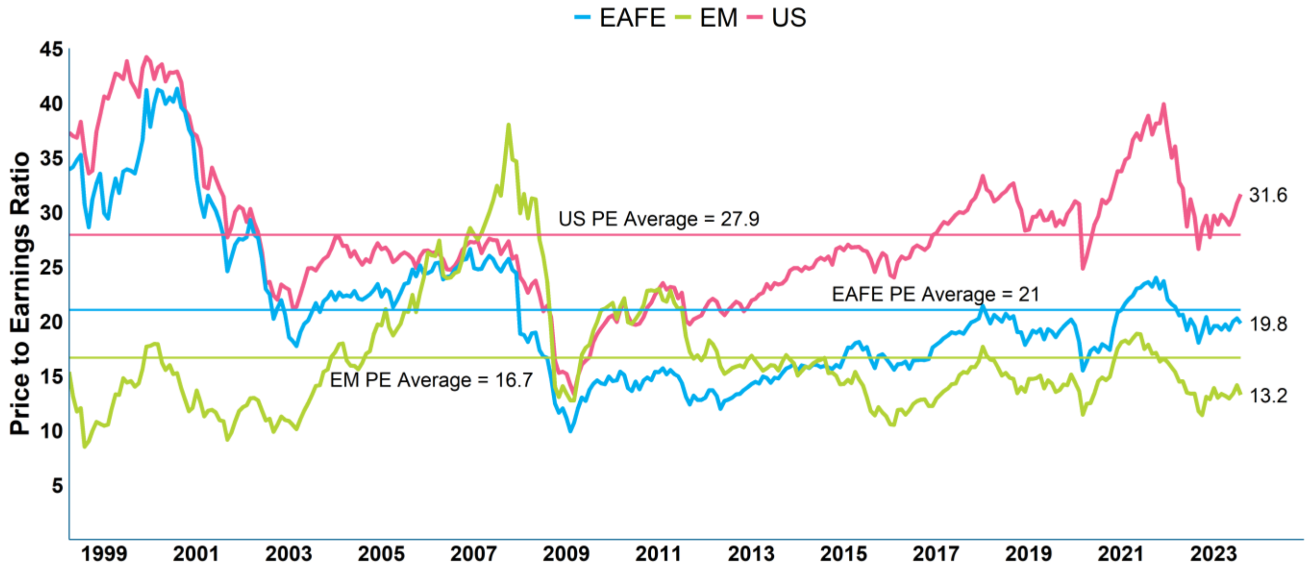


→ Volatility in equities (VIX) remains well below the historical average as investors continue to anticipate the end of the Fed's policy tightening and have become more optimistic about the potential for a "soft landing" of the economy.

→ In comparison, volatility in the bond market (MOVE) remains well above its long-run average (88.7) after last year's historic losses and due to continued policy uncertainty.

[1] Equity Volatility – Source: FRED. 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 August 2023. The average line indicated is the average of the VIX and MOVE values between January 2000 and August 2023.

Equity Cyclically Adjusted P/E Ratios[1]

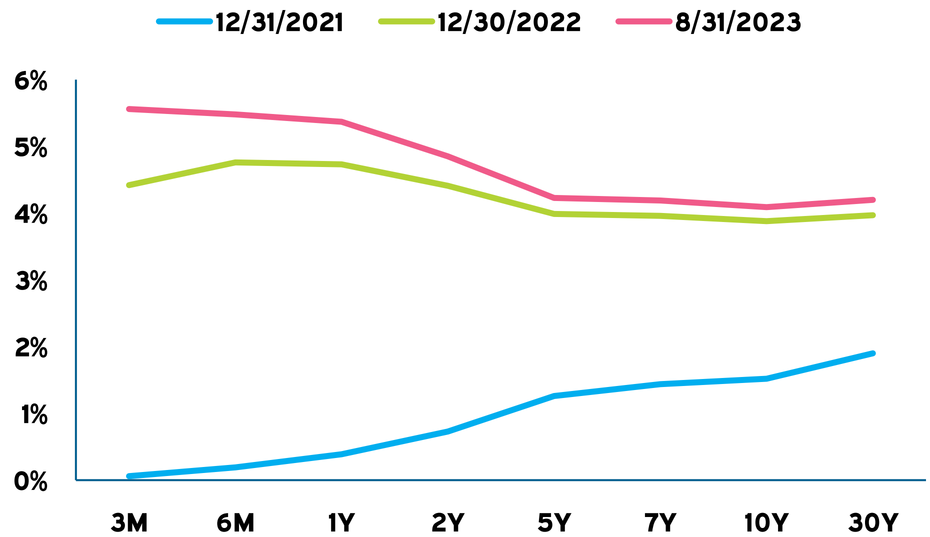


→ Given the strong technology-driven rally this year, the US equity price-to-earnings ratio increased above its long-run (21st century) average.

→ 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: Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of August 2023. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

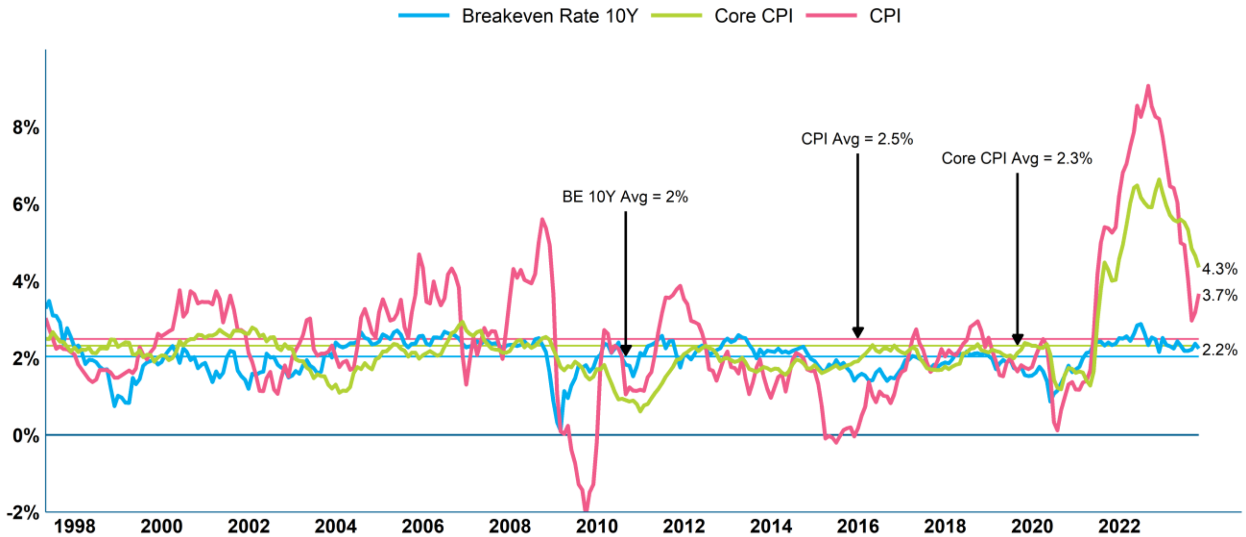
US Yield Curve[1]



- → Overall rates have continued to increase this year, particularly at the policy sensitive front-end of the yield curve, but at much slower pace compared to last year.
- → In August, very short-term interest rates (6-months or less) remained largely unchanged as monetary policy has likely reached the terminal rate for this cycle. A downgrade from Fitch Ratings of US debt, the Treasury's announcement of above expectations borrowing, and Chair Powell commenting that more work needs to be done on the inflation front all contributed to yields on longer dated maturities rising.
- → The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -0.75%, but the curve steepened over the month given the dynamics mentioned above.

[1] Source: Bloomberg. Data is as of August 31, 2023.

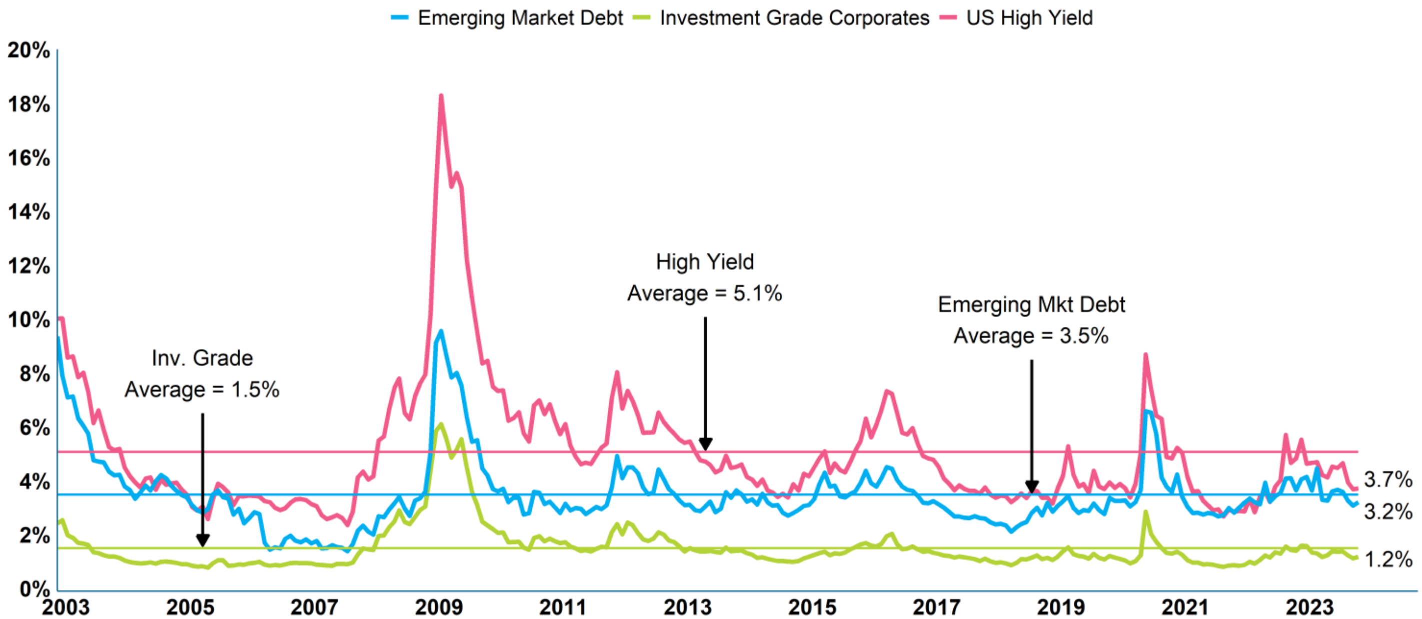
Ten-Year Breakeven Inflation and CPI[1]



- → 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 from 3.2% to 3.7%, coming in slightly above expectations largely driven by a double-digit increase in gasoline for the month. The trend of lower month-over-month price increases ended with the rate jumping from 0.2% to 0.6%.
- → Core inflation – excluding food and energy – continued its decline (4.7% to 4.3%) year-over-year. It remains stubbornly high, though, driven by shelter costs (+7.3%), particularly owners' equivalent rent, and transportation services (+10.3%).
- → 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. Data is as August 31, 2023. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

Credit Spreads vs. US Treasury Bonds[1]

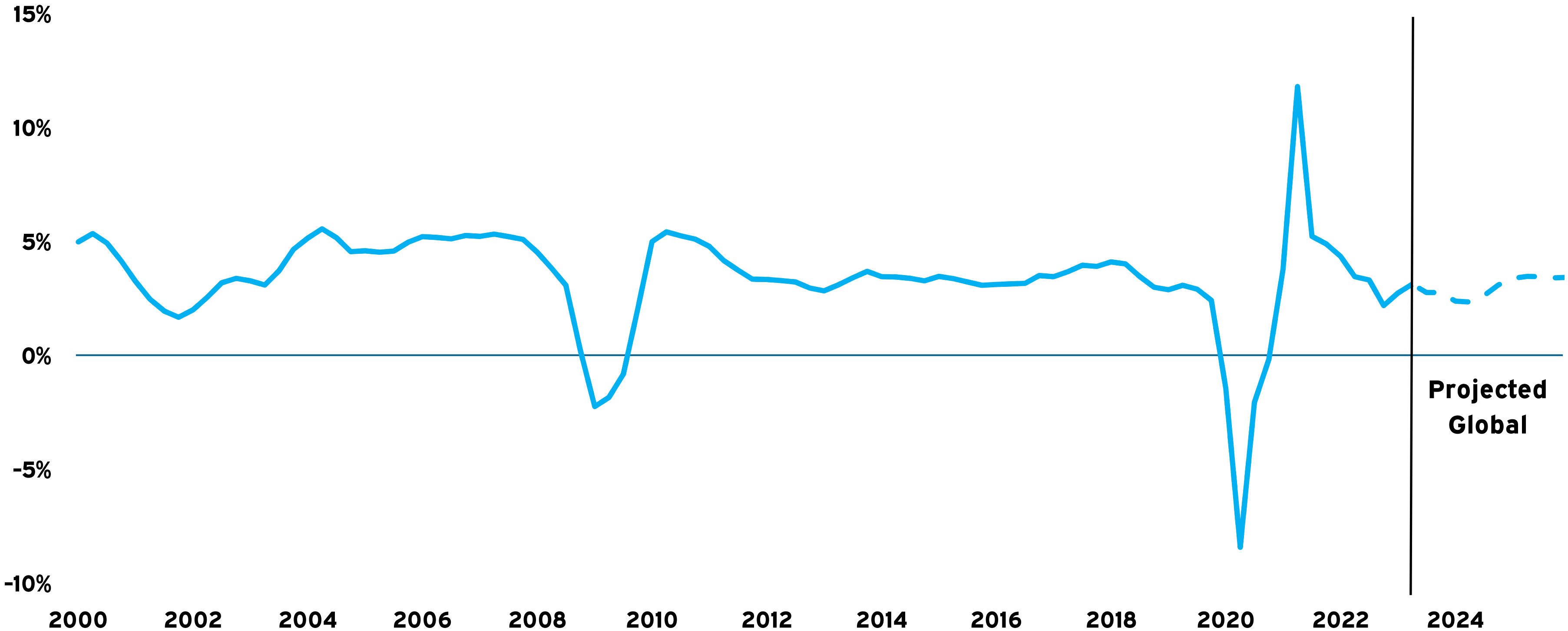


→ Credit spreads (the added yield above a comparable maturity Treasury) largely remained unchanged in August. In the US high yield bonds slightly outpaced government bonds for the month.

→ High yield spreads remain well below the long-term average given the overall risk appetite this year. 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 August 31, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth[1]

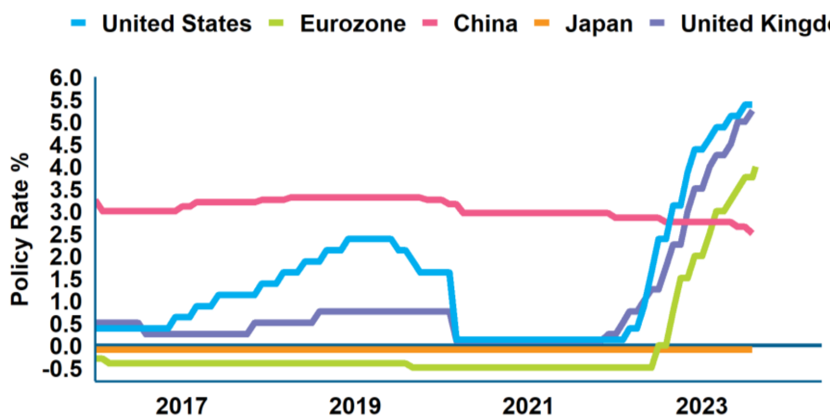


- → Global economies are expected to slow this year compared to 2022. The risk of recession remains given policymakers' aggressive tightening, but optimism has started to grow over some central banks potentially navigating a soft landing.
- → The delicate balancing act of central banks trying to reduce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

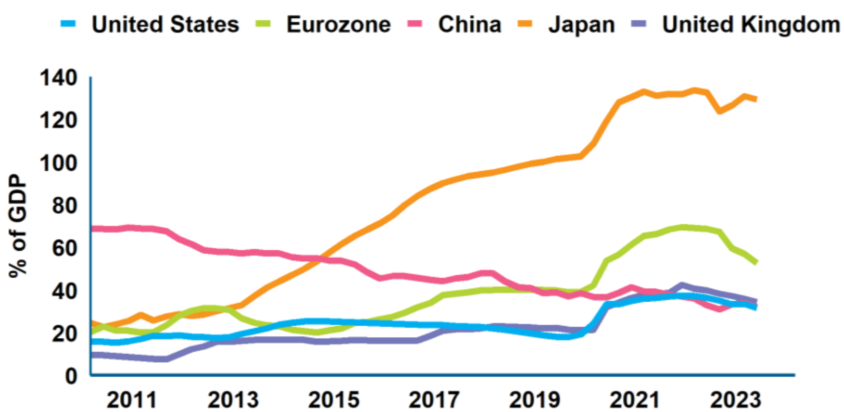
[1] Source: Oxford Economics (World GDP, US$ prices & PPP exchange rate, real, % change YoY). Updated August 2023.

Central Bank Response[1]

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 a pause in September but potentially one more hike later this year.

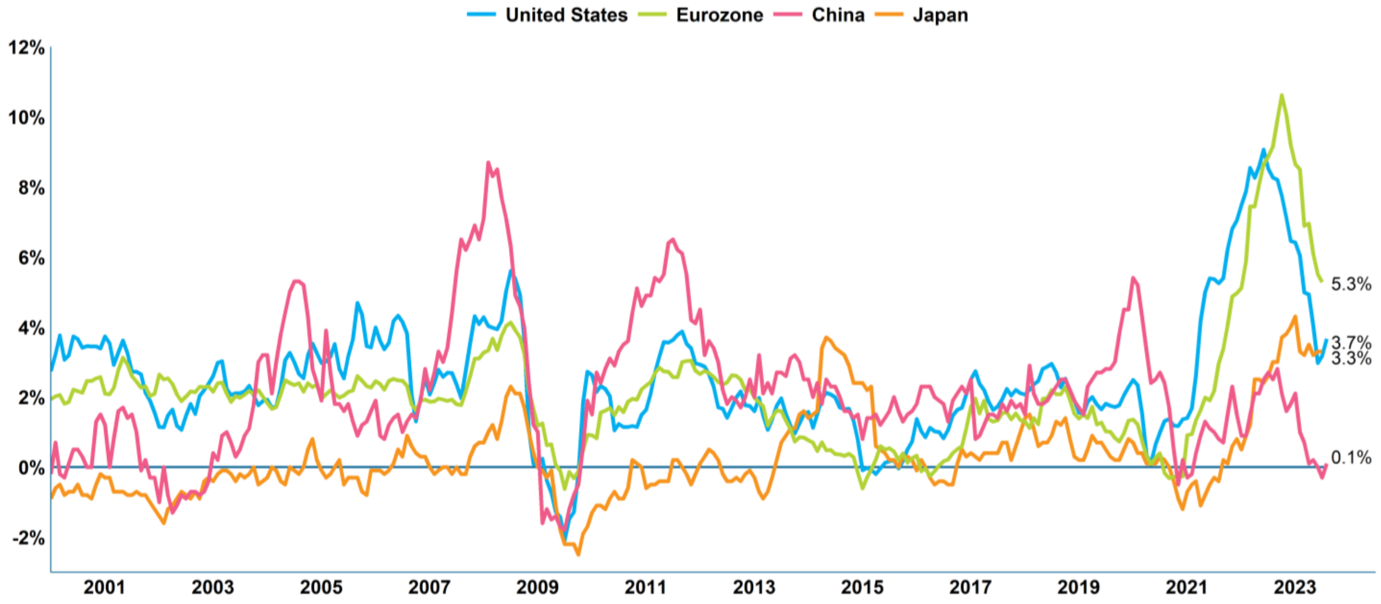
→ The European Central Bank also increased rates in July with an additional hike after August month-end, but they remain lower than in the US. In Japan expectations have increased that the BOJ will end its negative interest rate policy due to rising inflation.

→ 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 September 15, 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.

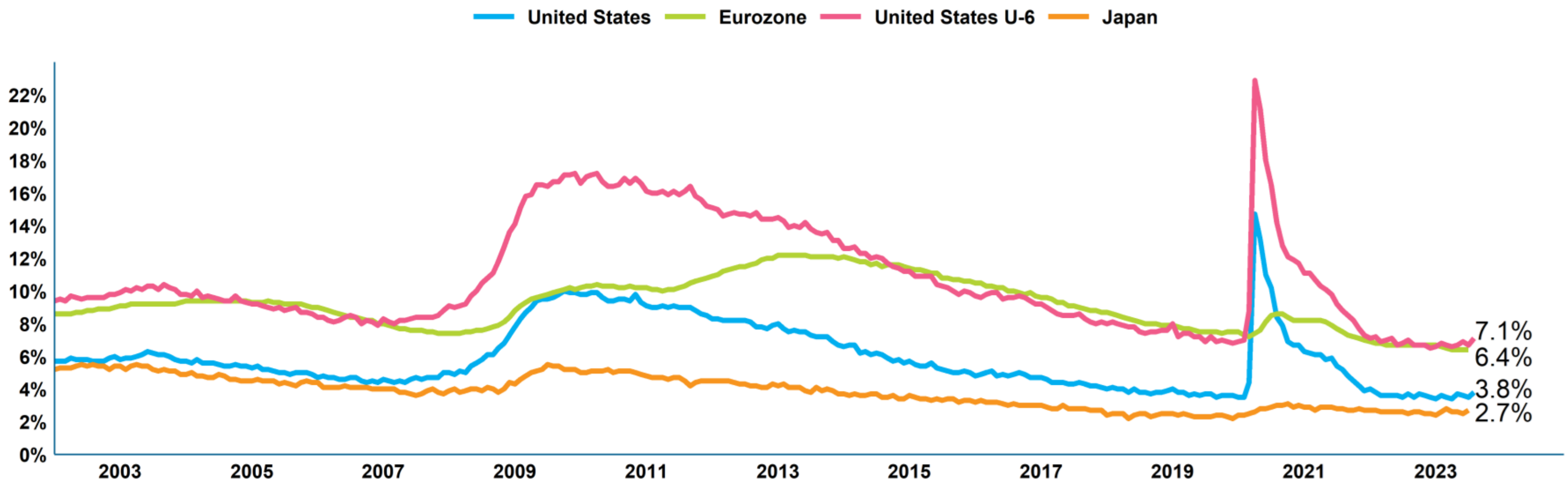
Inflation (CPI Trailing Twelve Months)[1]



- → The inflation picture remains mixed across the major economies.
- → In the US, inflation increased from 3.2% to 3.7%, influenced by rising fuel costs, while eurozone inflation remained higher than the US at 5.3%, a level well off its peak, however. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- → Inflation in Japan has increased to levels not seen in almost a decade largely driven by food and home related items. In China, deflationary pressures eased in August but only to a slightly positive level (+0.1%).

[1] United States CPI and Eurozone CPI – Source: FRED. Japan CPI and China CPI - Source: Bloomberg. Data is as August 31, 2023. The most recent data for Japanese and Eurozone inflation is as of July 2023.

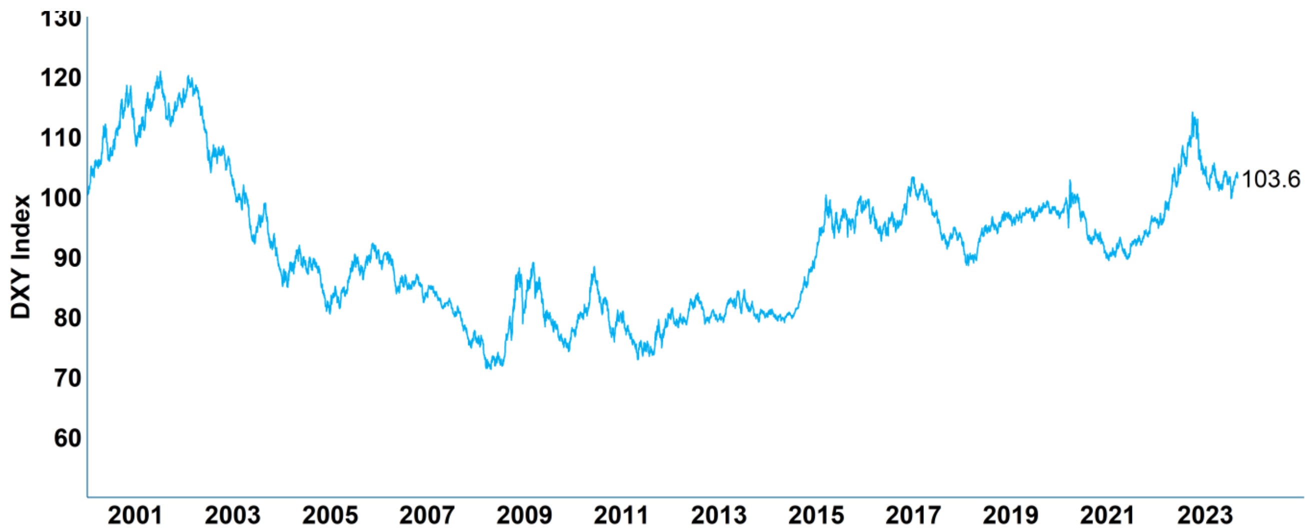
Unemployment[1]



- → Overall, the US labor market remains healthy with the unemployment rate relatively low, wage growth now positive in real terms, and initial claims for unemployment staying subdued. The pace of wage growth has slowed though, and despite remaining elevated, the number of job openings has declined.
- → In August, unemployment ticked-up from 3.5% to 3.8% largely driven by an increase in the labor force participation rate. Broader measures of unemployment (U-6) also increased for the month (6.7% to 7.1%).
- → 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] Eurozone Unemployment - Source: Bloomberg. Japan, United States, United States U-6 Unemployment – Source: FRED. Data is as August 31, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of July 2023.

US Dollar versus Broad Currencies[1]



→ 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. Recently though, the dollar has reversed course and is appreciating against major currencies as relative growth remains strong and investors anticipate the Fed keeping interest rates higher for longer.

→ 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 August 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 going forward. 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 costs are elevated, and the job market may weaken.

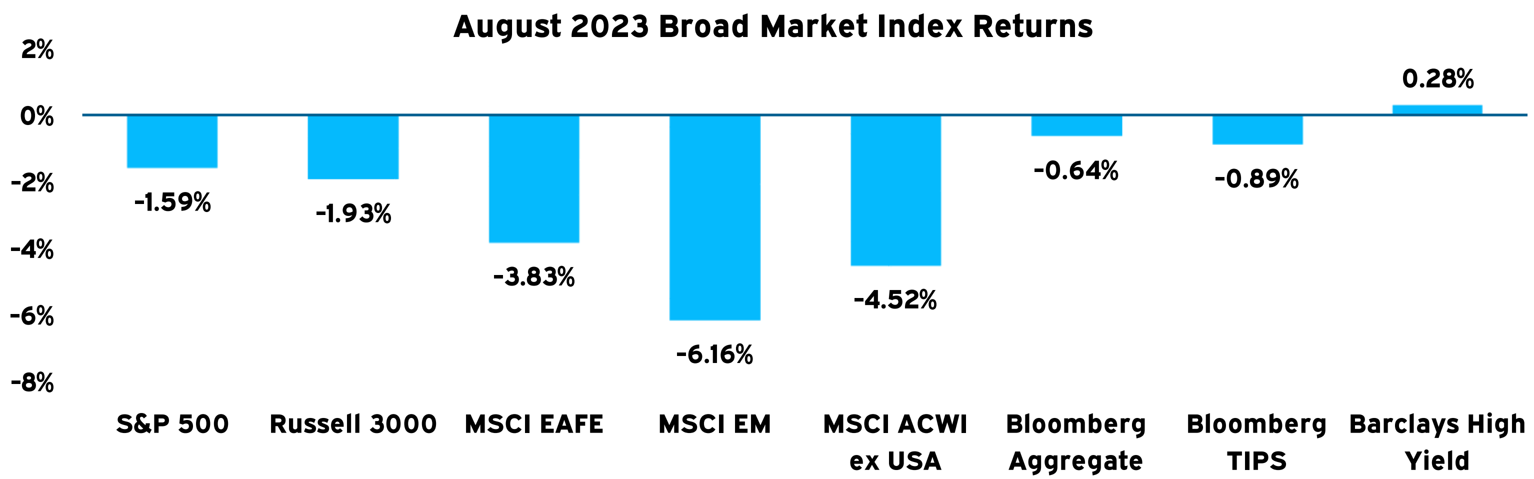
→ The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow. Also, the future path of the large technology companies that have driven market gains will be important.

→ Equity valuations remain lower in emerging and developed markets, but risks remain, including potential for recent strength in the US dollar to persist, 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 August 31, 2023

Market Review and Performance Summary for August 2023



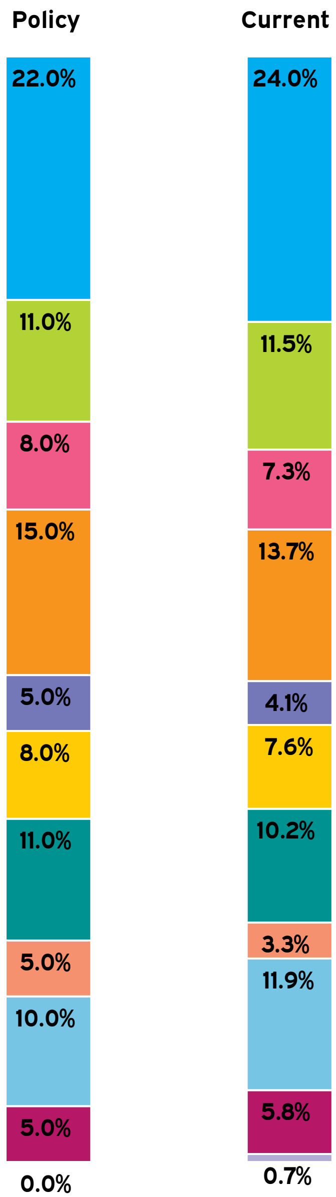
→ August saw declines across markets, driven by weakened economic data and expectations shifting toward the Fed keeping interest rates higher for longer. Domestically, large cap outperformed small cap stocks, attributable to the continued strong performance of mega-cap Technology stocks. Developed International Equities trailed the US market, as a rally in the dollar and deteriorating sentiment around China's economic outlook weighed on markets over the period. Broad US Fixed Income fell over the period, while High Yield saw positive returns.

→ Merced CERA reported a monthly return of -1.4% net of fees, outpacing the Policy Index return of -1.6%. US Equities saw net returns over the period of -2.0%, marginally trailing the index by 10 bps. Developed International Equities posted -2.1%, outpacing the index by 1.5% due to strong relative returns within Driehaus, GQG and First Eagle. Emerging Markets was the worst performing asset class over the period at -8.1%, primarily due to Artisan Developing World. US Fixed Income returned -0.6%, trailing its benchmark by 10 basis points. Opportunistic Credit posted 0.1% for the month, marginally outpacing the index by 10 basis points.

→ **As of August 31, 2023, total assets for the Merced CERA Portfolio are estimated at $1.12 billion.**

Performance Update

As of August 31, 2023



Allocation vs. Targets and Policy

	Current Balance ($)	Current Allocation (%)	Policy (%)	Difference (%)	Policy Range (%)	Within IPS Range?
US Equity	269,221,477	24.0	22.0	2.0	16.0 - 27.0	Yes
International Equity	128,682,821	11.5	11.0	0.5	6.0 - 16.0	Yes
Emerging Markets Equity	82,255,675	7.3	8.0	-0.7	4.0 - 12.0	Yes
Private Equity	153,201,859	13.7	15.0	-1.3	5.0 - 20.0	Yes
Direct Lending	45,869,561	4.1	5.0	-0.9	0.0 - 10.0	Yes
Real Estate	84,829,732	7.6	8.0	-0.4	6.0 - 10.0	Yes
US Fixed Income	114,658,027	10.2	11.0	-0.8	6.0 - 16.0	Yes
Opportunistic Credit	36,741,902	3.3	5.0	-1.7	3.0 - 7.0	Yes
Hedge Funds	133,989,949	11.9	10.0	1.9	5.0 - 15.0	Yes
Real Assets	64,496,928	5.8	5.0	0.8	3.0 - 7.0	Yes
Cash	7,693,767	0.7	0.0	0.7	0.0 - 5.0	Yes
Total	**1,121,641,699**	**100.0**	**100.0**	**0.0**		

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)	1,121,641,699	100.0	-1.4	0.5	7.2	0.5	6.5	5.9	6.8	7.6	7.9	Jan-95
Total Fund (Gross)			-1.4	0.5	7.4	0.5	6.8	6.3	7.1	7.9	8.1	Jan-95
Policy Index			-1.6	0.7	9.1	0.7	7.2	7.3	6.7	7.6	6.2	
Total Fund w/o Alternatives (Net)	631,559,902	56.3	-2.5	0.5	11.1	0.5	9.7	3.2	6.1	7.3	--	Jan-08
Total Fund w/o Alternatives (Gross)			-2.5	0.6	11.4	0.6	10.1	3.6	6.5	7.7	--	Jan-08
Policy Index w/o Al			-2.6	0.3	9.4	0.3	8.5	3.7	5.1	6.6	--	
US Equity (Net)	269,221,477	24.0	-2.0	1.3	17.2	1.3	14.6	9.2	9.4	12.4	10.2	Jan-95
US Equity (Gross)			-1.9	1.3	17.4	1.3	14.8	9.4	9.6	12.6	10.3	Jan-95
Russell 3000			-1.9	1.6	18.0	1.6	14.8	9.8	9.8	12.0	10.2	
International Equity (Net)	210,938,496	18.8	-4.6	0.1	11.1	0.1	10.8	0.6	6.1	5.7	5.5	Jan-99
International Equity (Gross)			-4.5	0.2	11.7	0.2	11.7	1.4	6.8	6.3	5.8	Jan-99
International Equity Custom			-4.8	-0.5	8.5	-0.5	11.0	3.3	3.2	4.7	4.2	
Developed International Equity (Net)	128,682,821	11.5	-2.1	0.6	8.1	0.6	12.2	4.5	5.2	5.5	4.1	Feb-08
Developed International Equity (Gross)			-2.1	0.7	8.6	0.7	13.0	5.2	5.8	6.0	4.6	Feb-08
Custom Blended Developed International Equity BM			-3.6	-0.1	10.5	-0.1	16.3	5.8	4.1	4.9	3.0	
Emerging Markets Equity (Net)	82,255,675	7.3	-8.1	-0.8	16.2	-0.8	8.6	-6.3	6.3	5.5	4.4	May-12
Emerging Markets Equity (Gross)			-8.1	-0.6	16.9	-0.6	9.6	-5.3	7.3	6.5	5.4	May-12
MSCI EM			-6.2	-0.3	4.6	-0.3	1.3	-1.4	1.1	3.2	2.4	
US Fixed Income (Net)	114,658,027	10.2	-0.6	-0.7	0.8	-0.7	-2.6	-4.8	-0.1	1.4	4.3	Jan-95
US Fixed Income (Gross)			-0.6	-0.7	0.8	-0.7	-2.6	-4.7	0.0	1.6	4.4	Jan-95
US Fixed Income Custom Benchmark			-0.5	-0.6	1.4	-0.6	-0.9	-4.1	0.4	1.6	4.5	

Data Prior to March 2018 provided by prior consultant.

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit (Net)	36,741,902	3.3	0.1	1.6	7.9	1.6	7.3	4.8	--	--	4.5	May-19
Opportunistic Credit (Gross)			0.1	1.7	8.4	1.7	7.9	5.4	--	--	4.9	May-19
50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever			*0.0*	*0.7*	*4.7*	*0.7*	*3.4*	*-0.3*	--	--	*1.7*	
Real Estate (Net)	84,829,732	7.6	-0.6	-0.2	-2.9	-0.2	-3.7	4.5	3.1	5.9	6.7	Dec-10
Real Estate (Gross)			-0.6	-0.2	-2.9	-0.2	-3.7	4.6	3.1	6.3	7.6	Apr-99
Custom Blended Real Estate Benchmark			*0.0*	*0.0*	*-8.0*	*0.0*	*-3.1*	*8.4*	*7.1*	*8.6*	*7.4*	
CPI +5% (Seasonally Adjusted)			*1.0*	*1.6*	*5.8*	*1.6*	*8.9*	*11.0*	*9.2*	*7.9*	*7.7*	
Private Real Estate (Net)	68,534,281	6.1	0.0	0.0	-4.1	0.0	-2.2	5.9	3.9	6.3	7.0	Dec-10
Private Real Estate (Gross)			0.0	0.0	-4.1	0.0	-2.2	5.9	3.9	6.7	7.8	Apr-99
Custom Blended Real Estate Benchmark			*0.0*	*0.0*	*-8.0*	*0.0*	*-3.1*	*8.4*	*7.1*	*8.6*	*7.4*	
Private Equity (Net)	153,201,859	13.7	0.0	0.0	1.4	0.0	1.5	25.7	16.1	13.9	10.3	Jul-05
Private Equity (Gross)			0.0	0.0	1.4	0.0	1.5	25.7	16.1	13.9	10.4	Jul-05
Custom Private Equity Benchmark			*-0.6*	*0.9*	*19.9*	*0.9*	*4.2*	*20.4*	*14.7*	*15.1*	--	
Direct Lending (Net)	45,869,561	4.1	0.0	0.0	4.6	0.0	6.4	9.8	--	--	9.3	Jul-20
Direct Lending (Gross)			0.0	0.0	4.6	0.0	6.4	9.8	--	--	9.3	Jul-20
S&P LSTA Leveraged Loan +2%			*1.3*	*2.8*	*10.6*	*2.8*	*11.6*	*8.1*	*6.5*	*6.3*	*8.9*	
Hedge Fund (Net)	133,989,949	11.9	0.9	1.4	3.4	1.4	3.6	6.2	4.2	--	4.3	Jul-14
Hedge Fund (Gross)			1.0	1.6	4.1	1.6	4.5	7.2	5.1	--	4.8	Jul-14
Custom Blended Hedge Fund Benchmark			*-0.2*	*1.0*	*3.3*	*1.0*	*3.3*	*3.9*	*3.4*	--	*3.3*	
Real Assets (Net)	64,496,928	5.8	-0.6	0.3	6.4	0.3	11.0	14.6	10.8	9.5	9.6	Dec-10
Real Assets (Gross)			-0.5	0.3	6.5	0.3	11.1	14.8	11.0	10.0	10.1	Dec-10
Custom Blended Real Assets Benchmark			*-4.0*	*0.6*	*1.0*	*0.6*	*3.6*	*10.2*	*6.4*	*7.5*	--	
CPI +5% (Seasonally Adjusted)			*1.0*	*1.6*	*5.8*	*1.6*	*8.9*	*11.0*	*9.2*	*7.9*	*7.8*	

Real Assets includes State Street Real Assets NL Fund.

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Infrastructure (Net)	29,887,637	2.7	0.0	0.0	8.6	0.0	12.6	12.3	12.5	--	9.9	Jan-15
Private Infrastructure (Gross)			0.0	0.0	8.6	0.0	12.6	12.5	12.7	--	10.0	Jan-15
S&P Global Infrastructure			*-4.7*	*-2.7*	*1.0*	*-2.7*	*-1.1*	*8.0*	*4.9*	*6.3*	*4.5*	
Private Natural Resources (Net)	21,245,706	1.9	0.0	0.0	8.7	0.0	20.8	25.6	13.0	--	15.6	Oct-15
Private Natural Resources (Gross)			0.0	0.0	8.7	0.0	20.8	25.6	13.0	--	15.6	Oct-15
S&P Global Natural Resources Sector Index (TR)			*-3.4*	*4.1*	*0.8*	*4.1*	*8.2*	*17.3*	*7.2*	*5.8*	*11.4*	
Cash (Net)	7,693,767	0.7	0.6	0.9	4.8	0.9	2.6	1.0	1.0	--	--	Dec-10
Cash (Gross)			0.6	0.9	4.8	0.9	2.6	1.0	1.0	--	--	Dec-10

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund	**1,121,641,699**	**100.0**	**-1.4**	**0.5**	**7.2**	**0.5**	**6.5**	**5.9**	**6.8**	**7.6**	**7.9**	**Jan-95**
Policy Index			*-1.6*	*0.7*	*9.1*	*0.7*	*7.2*	*7.3*	*6.7*	*7.6*	*6.2*	
Total Fund w/o Alternatives	**631,559,902**	**56.3**	**-2.5**	**0.5**	**11.1**	**0.5**	**9.7**	**3.2**	**6.1**	**7.3**	**--**	**Jan-08**
Policy Index w/o Al			*-2.6*	*0.3*	*9.4*	*0.3*	*8.5*	*3.7*	*5.1*	*6.6*	*--*	
US Equity	**269,221,477**	**24.0**	**-2.0**	**1.3**	**17.2**	**1.3**	**14.6**	**9.2**	**9.4**	**12.4**	**10.2**	**Jan-95**
Russell 3000			*-1.9*	*1.6*	*18.0*	*1.6*	*14.8*	*9.8*	*9.8*	*12.0*	*10.2*	
BNY Mellon Newton Dynamic US Equity	55,443,359	4.9	-1.7	1.4	17.3	1.4	14.3	8.8	10.8	14.3	15.2	Jan-13
S&P 500 Index			*-1.6*	*1.6*	*18.7*	*1.6*	*15.9*	*10.5*	*11.1*	*12.8*	*13.5*	
BNY Mellon Large Cap	185,472,374	16.5	-1.7	1.6	18.6	1.6	15.2	9.9	10.8	--	13.0	Apr-16
Russell 1000 Index			*-1.7*	*1.6*	*18.6*	*1.6*	*15.4*	*9.9*	*10.8*	*12.6*	*13.0*	
Champlain Small Cap	28,305,744	2.5	-3.8	-1.1	8.8	-1.1	11.1	--	--	--	7.1	Nov-20
Russell 2000 Index			*-5.0*	*0.8*	*9.0*	*0.8*	*4.7*	*8.1*	*3.1*	*8.0*	*9.1*	
International Equity	**210,938,496**	**18.8**	**-4.6**	**0.1**	**11.1**	**0.1**	**10.8**	**0.6**	**6.1**	**5.7**	**5.5**	**Jan-99**
International Equity Custom			*-4.8*	*-0.5*	*8.5*	*-0.5*	*11.0*	*3.3*	*3.2*	*4.7*	*4.2*	
Developed International Equity	**128,682,821**	**11.5**	**-2.1**	**0.6**	**8.1**	**0.6**	**12.2**	**4.5**	**5.2**	**5.5**	**4.1**	**Feb-08**
Custom Blended Developed International Equity BM			*-3.6*	*-0.1*	*10.5*	*-0.1*	*16.3*	*5.8*	*4.1*	*4.9*	*3.0*	
Acadian ACWI ex U.S. Small Cap Equity	14,530,157	1.3	-2.8	1.4	7.1	1.4	7.2	8.1	--	--	8.3	May-19
MSCI AC World ex USA Small Cap (Net)			*-2.8*	*2.1*	*9.1*	*2.1*	*10.0*	*4.9*	*3.1*	*5.6*	*4.8*	
Driehaus International Small Cap Growth	14,454,031	1.3	-0.2	2.6	8.1	2.6	13.0	3.6	--	--	7.7	May-19
MSCI AC World ex USA Small Growth Index (Net)			*-2.9*	*1.3*	*9.0*	*1.3*	*8.0*	*1.3*	*2.7*	*5.7*	*4.5*	
GQG International Equity	49,738,475	4.4	-2.1	1.2	10.1	1.2	14.6	4.3	--	--	6.8	Dec-19
MSCI AC World ex USA (Net)			*-4.5*	*-0.6*	*8.8*	*-0.6*	*11.9*	*4.0*	*3.3*	*4.4*	*3.5*	

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

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
First Eagle International Value Fund	49,960,159	4.5	-2.5	-0.7	6.2	-0.7	10.7	4.1	--	--	2.8	Dec-19
MSCI EAFE (Net)			*-3.8*	*-0.7*	*10.9*	*-0.7*	*17.9*	*6.1*	*4.1*	*4.9*	*4.4*	
Emerging Markets Equity	**82,255,675**	**7.3**	**-8.1**	**-0.8**	**16.2**	**-0.8**	**8.6**	**-6.3**	**6.3**	**5.5**	**4.4**	**May-12**
MSCI EM			*-6.2*	*-0.3*	*4.6*	*-0.3*	*1.3*	*-1.4*	*1.1*	*3.2*	*2.4*	
Artisan Developing World TR	55,973,011	5.0	-9.4	-2.7	21.3	-2.7	12.4	-8.4	--	--	4.3	Dec-19
MSCI Emerging Markets (Net)			*-6.2*	*-0.3*	*4.6*	*-0.3*	*1.3*	*-1.4*	*1.0*	*3.0*	*0.9*	
RWC	26,282,663	2.3	-5.2	3.4	6.6	3.4	1.2	0.0	--	--	1.0	Dec-19
MSCI Emerging Markets (Net)			*-6.2*	*-0.3*	*4.6*	*-0.3*	*1.3*	*-1.4*	*1.0*	*3.0*	*0.9*	
US Fixed Income	**114,658,027**	**10.2**	**-0.6**	**-0.7**	**0.8**	**-0.7**	**-2.6**	**-4.8**	**-0.1**	**1.4**	**4.3**	**Jan-95**
US Fixed Income Custom Benchmark			*-0.5*	*-0.6*	*1.4*	*-0.6*	*-0.9*	*-4.1*	*0.4*	*1.6*	*4.5*	
Vanguard Short-Term Treasury Index Fund	6,554,780	0.6	0.4	0.7	1.7	0.7	1.2	-0.9	1.0	--	1.0	Mar-18
Blmbg. 1-3 Govt			*0.4*	*0.7*	*1.7*	*0.7*	*1.3*	*-0.9*	*1.0*	*0.8*	*1.1*	
Vanguard Total Bond Market Index Fund	17,578,776	1.6	-0.6	-0.6	1.6	-0.6	-1.0	-4.4	--	--	-0.3	May-19
Blmbg. U.S. Aggregate Index			*-0.6*	*-0.7*	*1.4*	*-0.7*	*-1.2*	*-4.4*	*0.5*	*1.5*	*-0.3*	
Payden & Rygel Low Duration Fund	8,094,035	0.7	0.4	0.9	1.6	0.9	--	--	--	--	5.3	Nov-22
Blmbg. U.S. Treasury: 1-3 Year			*0.4*	*0.7*	*1.7*	*0.7*	*1.3*	*-0.9*	*1.0*	*0.8*	*2.6*	
Brandywine US Fixed Income	32,825,445	2.9	-1.1	-1.7	1.4	-1.7	--	--	--	--	-1.5	Nov-22
Blmbg. U.S. Aggregate Index			*-0.6*	*-0.7*	*1.4*	*-0.7*	*-1.2*	*-4.4*	*0.5*	*1.5*	*4.6*	
Wellington Core Bond	49,604,992	4.4	-0.6	-0.6	0.3	-0.6	--	--	--	--	2.5	Nov-22
Blmbg. U.S. Aggregate Index			*-0.6*	*-0.7*	*1.4*	*-0.7*	*-1.2*	*-4.4*	*0.5*	*1.5*	*4.6*	

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

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit	**36,741,902**	**3.3**	**0.1**	**1.6**	**7.9**	**1.6**	**7.3**	**4.8**	**--**	**--**	**4.5**	**May-19**
50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Lever			*0.0*	*0.7*	*4.7*	*0.7*	*3.4*	*-0.3*	*--*	*--*	*1.7*	
PIMCO Income Fund	11,744,887	1.0	-0.3	0.9	4.7	0.9	4.2	1.2	--	--	2.0	May-19
Blmbg. U.S. Aggregate Index			*-0.6*	*-0.7*	*1.4*	*-0.7*	*-1.2*	*-4.4*	*0.5*	*1.5*	*-0.3*	
GoldenTree Multi-Sector Credit	24,604,450	2.2	0.6	2.3	7.6	2.3	8.6	4.8	--	--	4.4	Jun-19
50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans			*0.7*	*2.1*	*8.0*	*2.1*	*8.1*	*3.9*	*3.8*	*4.4*	*3.8*	
Sculptor Credit Opportunities Domestic Partners, LP	392,565	0.0	0.0	0.0	11.0	0.0	8.1	10.1	--	--	10.5	Jul-20
50% BBg US High Yield TR/50% Credit Suisse Leveraged Loans			*0.7*	*2.1*	*8.0*	*2.1*	*8.1*	*3.9*	*3.8*	*4.4*	*5.1*	
Real Estate	**84,829,732**	**7.6**	**-0.6**	**-0.2**	**-2.9**	**-0.2**	**-3.7**	**4.5**	**3.1**	**5.9**	**6.7**	**Dec-10**
Custom Blended Real Estate Benchmark			*0.0*	*0.0*	*-8.0*	*0.0*	*-3.1*	*8.4*	*7.1*	*8.6*	*9.5*	
CPI +5% (Seasonally Adjusted)			*1.0*	*1.6*	*5.8*	*1.6*	*8.9*	*11.0*	*9.2*	*7.9*	*7.8*	
Vanguard REIT Index	16,295,451	1.5	-3.3	-1.3	2.2	-1.3	-7.1	4.0	--	--	4.0	Sep-20
Spliced Vanguard REIT Benchmark			*-3.3*	*-1.3*	*2.2*	*-1.3*	*-7.0*	*4.1*	*3.6*	*6.8*	*4.1*	
Private Real Estate	**68,534,281**	**6.1**	**0.0**	**0.0**	**-4.1**	**0.0**	**-2.2**	**5.9**	**3.9**	**6.3**	**7.0**	**Dec-10**
Custom Blended Real Estate Benchmark			*0.0*	*0.0*	*-8.0*	*0.0*	*-3.1*	*8.4*	*7.1*	*8.6*	*9.5*	
Greenfield Gap VII	937,589	0.1	0.0	0.0	-11.7	0.0	0.2	22.6	16.9	--	15.7	Jan-15
Patron Capital V	5,941,200	0.5	0.0	0.0	11.8	0.0	-8.0	-4.5	-5.5	--	1.3	Feb-16
UBS Trumbull Property	25,022,082	2.2	0.0	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	0.0	-7.7	0.0	1.3	38.0	19.2	--	10.5	Jan-18
Taconic CRE Dislocation Fund II	3,260,825	0.3	0.0	0.0	15.0	0.0	19.1	10.2	--	--	9.4	Nov-18
Carmel Partners Investment Fund VII	3,310,132	0.3	0.0	0.0	-1.3	0.0	6.0	-6.5	--	--	-20.8	Apr-19

Sculptor market value reflects holdback from June liquidation.
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.

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	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	0.0	-0.9	0.0	6.0	16.3	--	--	6.3	Jun-19
Rockpoint Real Estate Fund VI, L.P.	4,496,129	0.4	0.0	0.0	-2.1	0.0	-2.3	13.5	--	--	11.0	May-20
Cerberus Real Estate Debt Fund, L.P.	5,060,821	0.5	0.0	0.0	1.9	0.0	4.0	10.2	--	--	9.6	Jul-20
Taconic CRE Dislocation Onshore Fund III	5,426,453	0.5	0.0	0.0	1.7	0.0	7.6	--	--	--	6.4	Jun-21
Starwood Distressed Opportunity Fund XII Global	1,798,718	0.2	0.0	0.0	-4.0	0.0	0.4	--	--	--	121.5	Jun-21
Carlyle Realty Partners IX	936,530	0.1	0.0	0.0	-32.5	0.0	-90.2	--	--	--	-147.7	Dec-21
Carmel Partners Investment Fund VIII	3,280,466	0.3	0.0	0.0	-2.6	0.0	-7.5	--	--	--	-11.3	Apr-22
Rockpoint Real Estate Fund VII L.P.	2,710,618	0.2	0.0	0.0	9.6	0.0	13.6	--	--	--	12.5	Aug-22
Private Equity	**153,201,859**	**13.7**	**0.0**	**0.0**	**1.4**	**0.0**	**1.5**	**25.7**	**16.1**	**13.9**	**10.3**	**Jul-05**
Custom Private Equity Benchmark			*-0.6*	*0.9*	*19.9*	*0.9*	*4.2*	*20.4*	*14.7*	*15.1*	*--*	
Taconic Credit Dislocation Fund IV L.P.	800,000	0.1	0.0	--	--	--	--	--	--	--	--	Jul-23
Khosla Ventures Seed F, L.P.	390,000	0.0	0.0	--	--	--	--	--	--	--	--	Jul-23
Adams Street	4,010,511	0.4	0.0	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	0.0	-21.5	0.0	-48.0	31.1	19.2	16.3	16.0	Jul-13
Ocean Avenue II	8,670,290	0.8	0.0	0.0	-8.5	0.0	3.9	46.0	31.6	--	21.9	Jul-14
Pantheon I	62,645	0.0	0.0	0.0	1.8	0.0	-13.8	-9.7	-13.8	-3.7	-1.5	Jan-06
Pantheon II	2,902,649	0.3	0.0	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	0.0	-0.1	0.0	-2.5	-5.2	-6.6	-1.4	0.6	Jul-07
Davidson Kempner Long-Term Distressed Opportunities Fund IV	2,625,258	0.2	0.0	0.0	22.5	0.0	36.9	31.9	18.1	--	18.5	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 Panthron 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.

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XII	5,387,569	0.5	0.0	0.0	-0.7	0.0	-4.2	30.5	15.9	--	15.1	Jun-18
Carrick Capital Partners III	6,345,972	0.6	0.0	0.0	1.7	0.0	-2.6	19.3	11.1	--	10.9	Aug-18
Cressey & Company Fund VI	5,322,105	0.5	0.0	0.0	3.6	0.0	-3.7	27.8	--	--	16.2	Jan-19
TCV X	6,223,214	0.6	0.0	0.0	1.9	0.0	-25.8	30.5	--	--	16.8	Apr-19
Accel-KKR Growth Capital Partners III	4,502,216	0.4	0.0	0.0	4.7	0.0	1.3	21.2	--	--	10.0	Jul-19
Genstar Capital Partners IX	9,194,065	0.8	0.0	0.0	4.7	0.0	30.5	37.4	--	--	26.1	Aug-19
Cortec Group Fund VII	8,436,446	0.8	0.0	0.0	17.9	0.0	24.9	36.0	--	--	26.4	Dec-19
Spark Capital Growth Fund III	8,782,200	0.8	0.0	0.0	-25.2	0.0	-2.2	19.4	--	--	16.4	Mar-20
Spark Capital VI	2,461,482	0.2	0.0	0.0	-3.0	0.0	1.2	-3.0	--	--	-2.6	Mar-20
Summit Partners Growth Equity Fund X-A	8,157,504	0.7	0.0	0.0	10.9	0.0	11.9	8.0	--	--	6.4	Mar-20
Taconic Market Dislocation Fund III L.P.	6,960,477	0.6	0.0	0.0	1.7	0.0	-2.5	14.2	--	--	13.4	Jul-20
Marlin Heritage Europe II, L.P.	7,473,657	0.7	0.0	0.0	14.5	0.0	11.6	--	--	--	-0.2	Oct-20
Khosla Ventures VII	4,685,223	0.4	0.0	0.0	5.6	0.0	6.0	--	--	--	5.3	Jan-21
Accel-KKR Capital Partners VI	3,199,154	0.3	0.0	0.0	0.0	0.0	0.0	--	--	--	-5.3	Feb-21
Khosla Ventures Seed E	1,917,122	0.2	0.0	0.0	7.2	0.0	9.9	--	--	--	129.5	Feb-21
TCV XI	3,719,636	0.3	0.0	0.0	-4.3	0.0	-16.8	--	--	--	-4.7	Feb-21
Thoma Bravo Discover Fund III	8,552,081	0.8	0.0	0.0	3.7	0.0	-0.3	--	--	--	5.9	Jun-21
Summit Partners Venture Capital Fund V-A	3,048,142	0.3	0.0	0.0	1.0	0.0	-5.0	--	--	--	-5.9	May-21

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GTCR Fund XIII/A & B	3,945,540	0.4	0.0	0.0	-4.2	0.0	-3.6	--	--	--	93.7	Jun-21
Genstar Capital Partners X	5,899,627	0.5	0.0	0.0	2.7	0.0	3.0	--	--	--	6.2	Oct-21
Nautic Partners X	2,832,191	0.3	0.0	0.0	6.5	0.0	6.0	--	--	--	0.6	Jan-22
Spark Capital Growth Fund IV	1,688,038	0.2	0.0	0.0	51.3	0.0	36.5	--	--	--	18.0	Jan-22
Spark Capital VII	961,328	0.1	0.0	0.0	-4.3	0.0	-8.9	--	--	--	-6.9	Feb-22
TCV Velocity Fund I	1,820,759	0.2	0.0	0.0	-9.3	0.0	-19.8	--	--	--	-25.8	Feb-22
Accel-KKR Growth Capital Partners IV	1,426,056	0.1	0.0	0.0	1.2	0.0	-6.7	--	--	--	-19.5	Apr-22
Summit Partners Growth Equity Fund XI-A	2,116,166	0.2	0.0	0.0	11.4	0.0	1.2	--	--	--	-48.8	Apr-22
GTCR Strategic Growth Fund I/A&B LP	1,422,241	0.1	0.0	0.0	-15.2	0.0	-50.4	--	--	--	-45.1	Jul-22
Threshold Ventures IV LP	672,612	0.1	0.0	0.0	-12.7	0.0	-24.2	--	--	--	-22.6	Aug-22
Thoma Bravo Discovery Fund IV	3,432,974	0.3	0.0	0.0	8.9	0.0	--	--	--	--	8.9	Jan-23
Marlin Heritage III	982,092	0.1	0.0	0.0	-83.2	0.0	--	--	--	--	-83.2	Jan-23
Cortec Group Fund VIII, L.P.	1,458,058	0.1	0.0	0.0	--	0.0	--	--	--	--	-1.1	Apr-23
Direct Lending	**45,869,561**	**4.1**	**0.0**	**0.0**	**4.6**	**0.0**	**6.4**	**9.8**	**--**	**--**	**9.3**	**Jul-20**
S&P LSTA Leveraged Loan +2%			*1.3*	*2.8*	*10.6*	*2.8*	*11.6*	*8.1*	*6.5*	*6.3*	*8.9*	
Silver Point Specialty Credit Fund II, L.P.	6,067,830	0.5	0.0	0.0	6.5	0.0	7.2	10.2	--	--	9.7	Jul-20
Ares Senior Direct Lending Fund II	10,566,108	0.9	0.0	0.0	4.7	0.0	7.4	--	--	--	7.8	Jan-22
Varagon Capital Direct Lending Fund	9,981,483	0.9	0.0	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	0.0	5.5	0.0	9.5	--	--	--	7.0	May-22

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	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	0.0	5.8	0.0	7.5	--	--	--	6.9	Aug-22
Accel-KKR Credit Partners II LP	833,144	0.1	0.0	0.0	--	0.0	--	--	--	--	30.2	Mar-23
Silver Point Specialty Credit Fund III	4,410,240	0.4	0.0	0.0	--	0.0	--	--	--	--	-1.7	Mar-23
Hedge Fund	**133,989,949**	**11.9**	**0.9**	**1.4**	**3.4**	**1.4**	**3.6**	**6.2**	**4.2**	**--**	**4.3**	**Jul-14**
Custom Blended Hedge Fund Benchmark			*-0.2*	*1.0*	*3.3*	*1.0*	*3.3*	*3.9*	*3.4*	*--*	*3.3*	
OWS Credit Opportunity Fund LP	20,160,000	1.8	--	--	--	--	--	--	--	--	--	Aug-23
Hudson Bay Fund	15,269,656	1.4	0.9	1.5	--	1.5	--	--	--	--	--	Jun-23
Sculptor (OZ) Domestic II	264,914	0.0	-0.1	-0.1	7.2	-0.1	4.4	1.1	4.7	--	5.3	Jul-14
Graham Absolute Return	9,968,628	0.9	2.2	4.1	2.2	4.1	2.1	8.8	5.2	--	4.7	Sep-17
Wellington-Archipelago	15,759,211	1.4	0.2	0.9	7.2	0.9	9.6	5.8	5.3	--	5.5	Sep-17
Marshall Wace Eureka	4,531,430	0.4	0.9	1.0	1.5	1.0	1.6	6.5	5.4	--	5.7	Dec-17
Silver Point Capital	18,717,711	1.7	0.7	0.4	4.4	0.4	3.5	13.8	8.3	--	8.1	Dec-17
Laurion Capital	13,529,045	1.2	1.2	1.2	2.9	1.2	2.1	5.6	9.4	--	9.3	Aug-18
Taconic Opportunity Fund	13,990,655	1.2	1.0	2.0	2.5	2.0	2.2	4.7	--	--	3.2	Jan-19
Marshall Wace Global Opportunities	10,867,023	1.0	1.0	1.8	5.8	1.8	6.6	4.3	--	--	5.7	May-20
Caxton Global Investments	10,931,675	1.0	0.5	1.0	-6.9	1.0	-4.2	--	--	--	3.7	May-21

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Assets	**64,496,928**	**5.8**	**-0.6**	**0.3**	**6.4**	**0.3**	**11.0**	**14.6**	**10.8**	**9.5**	**9.6**	**Dec-10**
Custom Blended Real Assets Benchmark			*-4.0*	*0.6*	*1.0*	*0.6*	*3.6*	*10.2*	*6.4*	*7.5*	*--*	
SSgA	13,363,585	1.2	-2.6	1.3	-0.7	1.3	-2.6	9.6	5.8	--	5.6	May-17
Real Asset NL Custom Blended Index			*-2.4*	*1.4*	*-0.3*	*1.4*	*-2.8*	*9.8*	*5.9*	*--*	*5.7*	
Private Infrastructure	**29,887,637**	**2.7**	**0.0**	**0.0**	**8.6**	**0.0**	**12.6**	**12.3**	**12.5**	**--**	**9.9**	**Jan-15**
S&P Global Infrastructure			*-4.7*	*-2.7*	*1.0*	*-2.7*	*-1.1*	*8.0*	*4.9*	*6.3*	*4.5*	
KKR Global II	5,067,887	0.5	0.0	0.0	17.2	0.0	18.6	23.8	22.2	--	17.0	Jan-15
North Haven Infrastructure II	2,735,821	0.2	0.0	0.0	-0.5	0.0	12.2	9.3	9.4	--	8.3	Jun-15
ISQ Global Infrastructure Fund II	5,169,996	0.5	0.0	0.0	5.4	0.0	9.9	13.8	13.0	--	4.0	Jul-18
KKR Global Infrastructure Investors III	4,316,449	0.4	0.0	0.0	10.5	0.0	12.9	3.6	--	--	-2.2	Jan-19
Ardian Infrastructure Fund V	3,683,046	0.3	0.0	0.0	16.9	0.0	16.6	-8.3	--	--	-8.8	Nov-19
ISQ Global Infrastructure Fund III	1,461,403	0.1	0.0	0.0	8.9	0.0	13.2	--	--	--	-575.9	Jun-21
KKR Global Infrastructure Investors IV	4,619,992	0.4	0.0	0.0	4.9	0.0	0.3	--	--	--	-219.8	Sep-21
BlackRock Global Infrastructure Fund IV	2,833,043	0.3	0.0	0.0	-12.3	0.0	--	--	--	--	-12.3	Dec-22
Private Natural Resources	**21,245,706**	**1.9**	**0.0**	**0.0**	**8.7**	**0.0**	**20.8**	**25.6**	**13.0**	**--**	**15.6**	**Oct-15**
S&P Global Natural Resources Sector Index (TR)			*-3.4*	*4.1*	*0.8*	*4.1*	*8.2*	*17.3*	*7.2*	*5.8*	*11.4*	
EnCap Flatrock Midstream Fund V	2,131,333	0.2	0.0	0.0	--	0.0	--	--	--	--	0.0	Jun-23
EnCap XI	4,741,100	0.4	0.0	0.0	10.0	0.0	33.4	26.3	3.0	--	-7.5	Aug-17
EnCap IV	1,697,060	0.2	0.0	0.0	2.4	0.0	5.7	51.0	31.2	--	24.0	Mar-18
GSO Energy Opportunities	650,592	0.1	0.0	0.0	14.0	0.0	61.2	49.2	17.7	--	18.8	Dec-15

	Market Value $	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	Fiscal YTD	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Taurus Mining	376,734	0.0	0.0	0.0	8.2	0.0	36.9	51.8	29.8	--	25.8	Oct-15
Taurus Mining Annex	190,903	0.0	0.0	0.0	7.3	0.0	19.1	23.5	21.4	--	25.0	Feb-17
BlackRock Global Energy and Power Infrastructure Fund III LP	4,453,577	0.4	0.0	0.0	7.6	0.0	12.9	18.3	--	--	13.9	Aug-19
Tailwater Energy Fund IV, LP	3,614,461	0.3	0.0	0.0	16.1	0.0	30.2	27.3	--	--	6.6	Oct-19
Carnelian Energy Capital IV	3,389,945	0.3	0.0	0.0	2.5	0.0	-8.0	--	--	--	-6.1	May-22
Cash	**7,693,767**	**0.7**	**0.6**	**0.9**	**4.8**	**0.9**	**2.6**	**1.0**	**1.0**	**--**	**--**	**Dec-10**
Cash	7,172,177	0.6	0.6	1.0	5.2	1.0	2.7	1.0	1.2	1.0	-1.4	Dec-10
Treasury Cash	521,590	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.1	Sep-17

Treasury Cash reflects July balance.

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. Portfolio Return- [Risk Free Rate+Beta*(market return-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 is 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%.

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

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: <u>Investment Terminology</u>, International Foundation of Employee Benefit Plans, 1999.
<u>The Handbook of Fixed Income Securities</u>, Fabozzi, Frank J., 1991

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.