

# City of Quincy Retirement System

September 30, 2022

Interim Update

## Agenda

1. Executive Summary
  - September Market Overview
  - Manager Highlights
2. Interim Update as of September 30, 2022
3. Disclaimer, Glossary & Notes

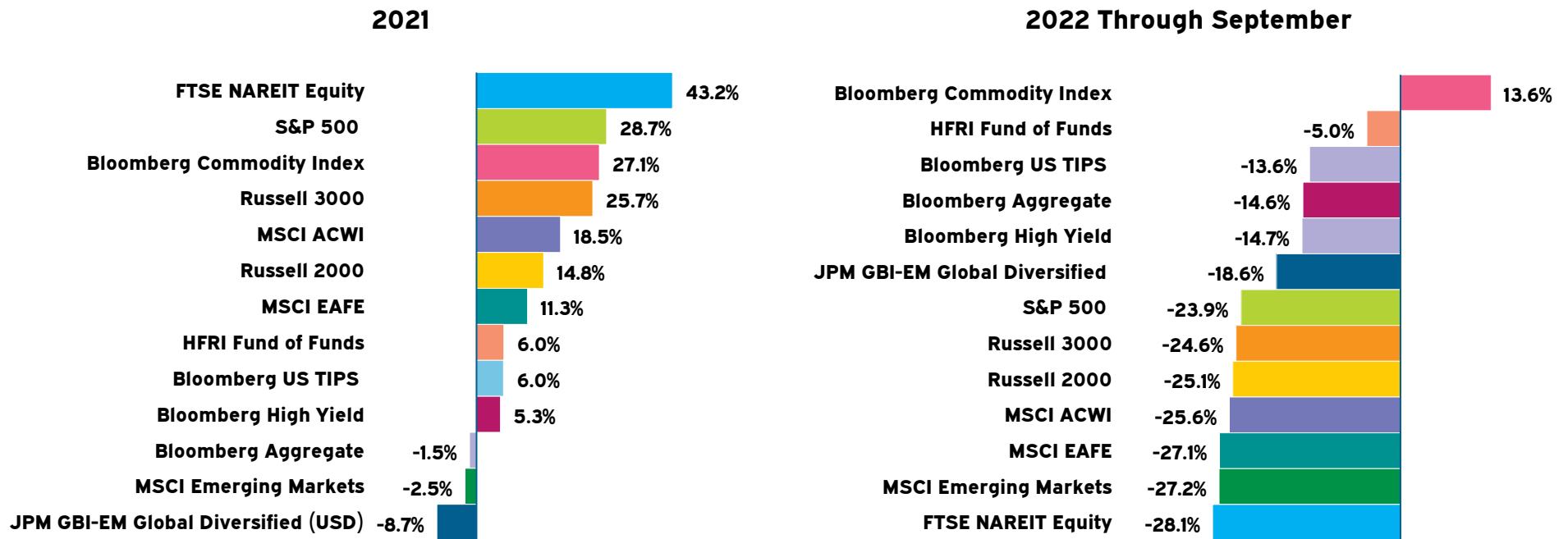
## **Executive Summary**

**Economic and Market Update**  
Data as of September 30, 2022

### Commentary

- After a strong July, global markets sold off in August and September, leading to quarterly declines as slower growth and higher inflation weighed on sentiment.
- The Federal Reserve maintained its aggressive tightening campaign with future hikes expected as US inflation continues to surprise to the upside and labor markets remain tight.
  - In Europe, inflation hit a multi-decade high on energy prices. In the UK, Liz Truss became the new prime minister with her government quickly announcing a fiscal package in September. The proposal was poorly received by markets, as it undermined efforts of the central bank to lower inflation.
  - Equity markets significantly declined for the month leading to quarterly losses with international markets declining the most. The war in Ukraine has elevated prices in Europe, while tight COVID-19 policies, slowing growth, and property market issues have weighed on China. Continued US dollar strength has been a further headwind.
  - For the quarter, in a reversal of the prior trend, growth outpaced value across the capitalization spectrum but continued to trail year-to-date.
  - Interest rates rose significantly across the US yield curve for the month and quarter with the curve remaining inverted (ten-year yield minus the two-year yield) by 44 basis points. This is by far the worst start to a calendar year for bond investors.
- Persistently high inflation and the likely increased pace of the policy response, the war in Ukraine, lingering COVID-19 issues, and lockdowns in China will all have considerable consequences for the global economy.

### Index Returns<sup>1</sup>



→ Except for emerging markets and the broad US investment grade bond market (Bloomberg Aggregate), most asset classes appreciated in 2021.

→ After a brief rally in July most asset classes declined significantly in August and September as it became clear further policy tightening would be taken to try to control inflation. Except for commodities, all major assets classes have experienced significant declines year-to-date.

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of September 30, 2022.

### Domestic Equity Returns<sup>1</sup>

Domestic Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-9.2	-4.9	-23.9	-15.5	8.2	9.2	11.7
Russell 3000	-9.3	-4.5	-24.6	-17.6	7.7	8.6	11.4
Russell 1000	-9.3	-4.6	-24.6	-17.2	7.9	9.0	11.6
Russell 1000 Growth	-9.7	-3.6	-30.7	-22.6	10.7	12.2	13.7
Russell 1000 Value	-8.8	-5.6	-17.8	-11.4	4.4	5.3	9.2
Russell MidCap	-9.3	-3.4	-24.3	-19.4	5.2	6.5	10.3
Russell MidCap Growth	-8.5	-0.7	-31.5	-29.5	4.3	7.6	10.8
Russell MidCap Value	-9.7	-4.9	-20.4	-13.6	4.5	4.7	9.4
Russell 2000	-9.6	-2.2	-25.1	-23.5	4.3	3.6	8.5
Russell 2000 Growth	-9.0	0.2	-29.3	-29.3	2.9	3.6	8.8
Russell 2000 Value	-10.2	-4.6	-21.1	-17.7	4.7	2.9	7.9

#### US Equities: Russell 3000 Index fell 9.3% for September and 4.5% for the quarter.

- US stocks fell sharply during September and finished down for the third quarter.
- Each of the 11 sectors declined in September with six sectors (Real Estate, Communication Services, Technology, Utilities, Materials, and Industrials) falling by 10% or more. Health Care stocks fared best and declined 3.1%. For the quarter all sectors were down except for consumer discretionary and energy.
- For the second straight month, value stocks outperformed growth stocks in the large cap segment of the market, while the reverse was true in the small cap segment. The underperformance of technology stocks, which account for 43% of the large cap growth market, drove this dynamic.

<sup>1</sup> Source: Bloomberg. Data is as of September 30, 2022.

### Foreign Equity Returns<sup>1</sup>

Foreign Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-10.0	-9.9	-26.5	-25.2	-1.5	-0.8	3.0
MSCI EAFE	-9.4	-9.4	-27.1	-25.1	-1.8	-0.8	3.7
MSCI EAFE (Local Currency)	-6.2	-3.6	-14.5	-11.1	2.5	2.8	7.4
MSCI EAFE Small Cap	-11.5	-9.8	-32.1	-32.1	-2.2	-1.8	5.3
MSCI Emerging Markets	-11.7	-11.6	-27.2	-28.1	-2.1	-1.8	1.0
MSCI Emerging Markets (Local Currency)	-9.4	-8.2	-20.8	-21.5	1.1	1.1	4.5
MSCI China	-14.6	-22.5	-31.2	-35.4	-7.2	-5.5	2.4

**International equities (MSCI EAFE) fell 9.4%, while emerging markets (MSCI EM) returned -11.7% in September leading to quarterly declines of similar amounts.**

- Non-US developed market stocks again broadly trailed the US for the month, leading to the steepest declines year-to-date. High inflation in Europe, particularly related to gas and electricity, the ongoing war in Ukraine, and relatively slower growth globally continue to weigh on sentiment.
- Emerging market equities were deep in the red for the month, driven by China’s (-14.6%) on-going property market issues and strict COVID-19 policies. The upcoming National Communist Party Congress in China in October is highly anticipated.
- The strength of the US dollar continued as a headwind to international equities for the month and year-to-date, both in developed and emerging markets.

<sup>1</sup> Source: Bloomberg. Data is as of September 30, 2022.



### Fixed Income Returns<sup>1</sup>

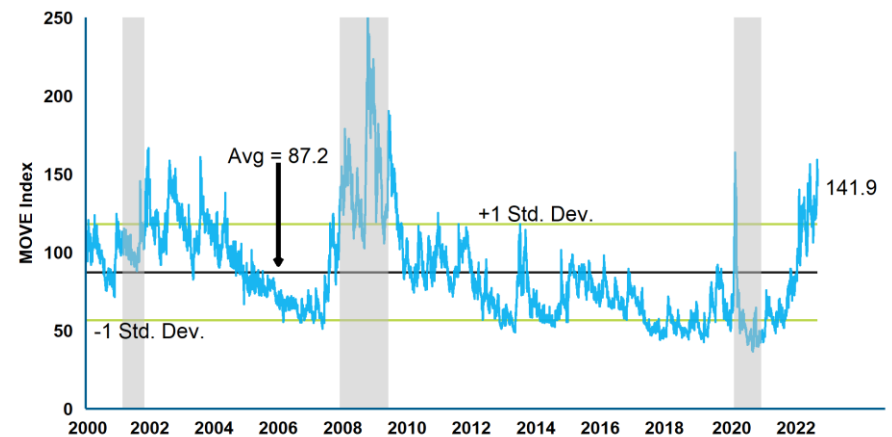
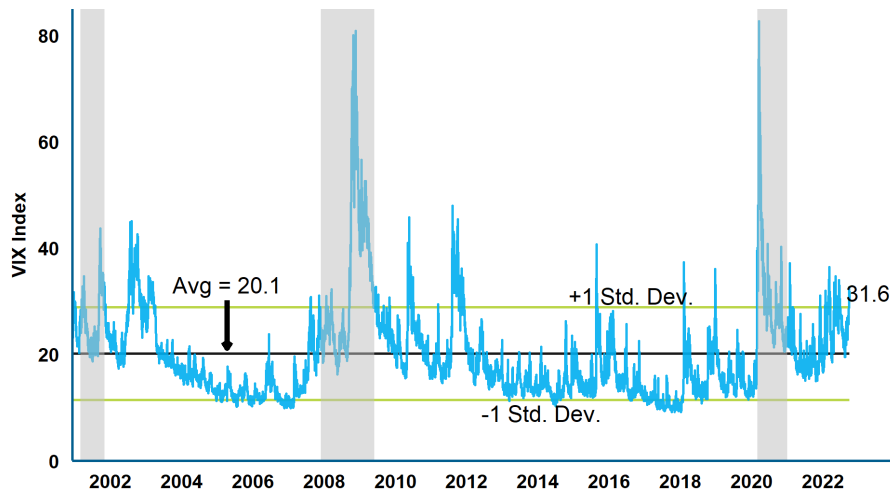
Fixed Income	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-4.3	-4.5	-14.9	-14.9	-3.1	-0.2	1.2	5.2	6.2
Bloomberg Aggregate	-4.3	-4.8	-14.6	-14.6	-3.3	-0.3	0.9	4.8	6.4
Bloomberg US TIPS	-6.6	-5.1	-13.6	-11.6	0.8	1.9	1.0	4.3	6.9
Bloomberg High Yield	-4.0	-0.6	-14.7	-14.1	-0.5	1.6	3.9	9.7	4.6
JPM GBI-EM Global Diversified (USD)	-4.9	-4.7	-18.6	-20.6	-7.1	-3.9	-2.4	7.6	4.8

#### Fixed Income: The Bloomberg Universal declined 4.3% in September and 4.5% for the quarter.

- A sharp rise in bond yields driven by central banks confirming commitments to fight inflation weighed on fixed income in September leading to declines for the quarter as well. Year-to-date the US bond market is off by far to its worst calendar year start on record.
- TIPS declined the most for the month and quarter as investors' confidence grew that tighter monetary policy would ultimately get inflation under control.
- Riskier US bonds declined the least with the high yield index falling slightly less than the broad US bond market (-4.0% versus -4.3%). Emerging market bonds finished down close to 5% for the month with significant declines year-to-date.

<sup>1</sup> Source: Bloomberg. JPM GBI-EM is from InvestorForce. Data is as of September 30, 2022.

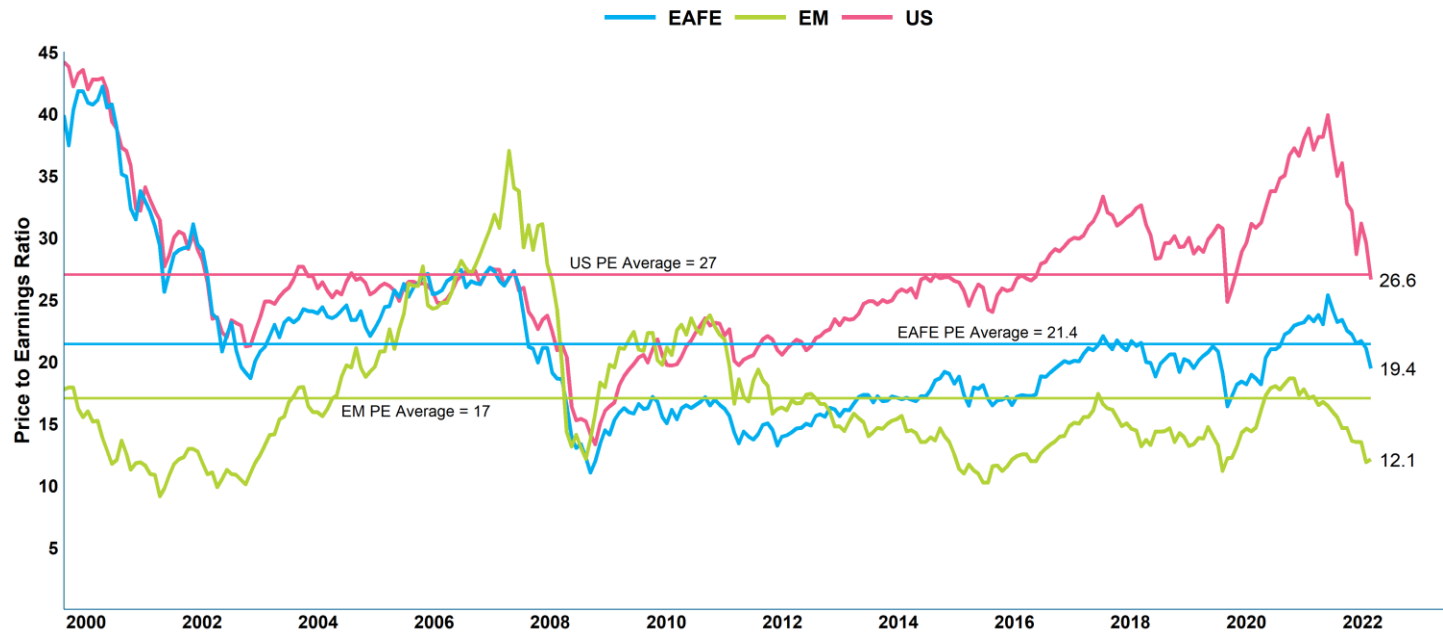
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in equities (VIX) and fixed income (MOVE) rose in September and finished higher overall for the quarter as the Federal Reserve and other central banks made it clear that they were committed to aggressively tightening monetary policy to fight high inflation.
- Fixed income volatility remains particularly high due to the uncertain path of short-term interest rates given stubbornly high inflation. Issues related to the UK's announcement to offer tax breaks despite the central bank's efforts to fight inflation also contributed to volatility in fixed income markets.

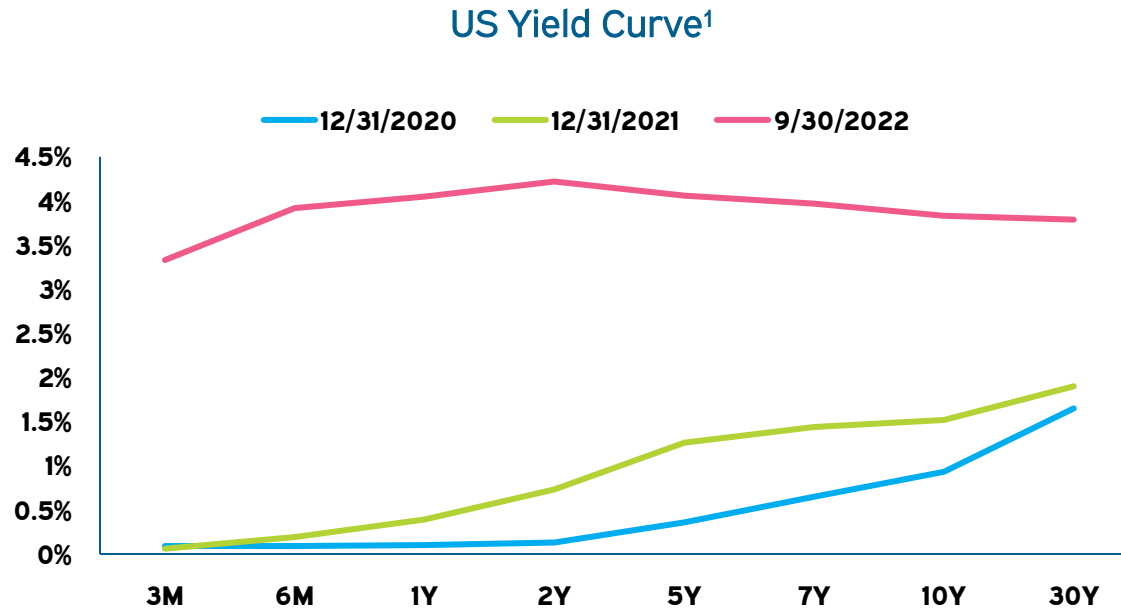
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of September 2022. The average line indicated is the average of the VIX and MOVE values between January 2000 and the recent month-end respectively.

**Equity Cyclically Adjusted P/E Ratios<sup>1</sup>**



- September price declines brought US equity price-to-earnings ratios slightly below the long-term (21<sup>st</sup> Century) average.
- International developed market valuations remain below the US and are below their own long-term average, with those for emerging markets the lowest and well under the long-term average.

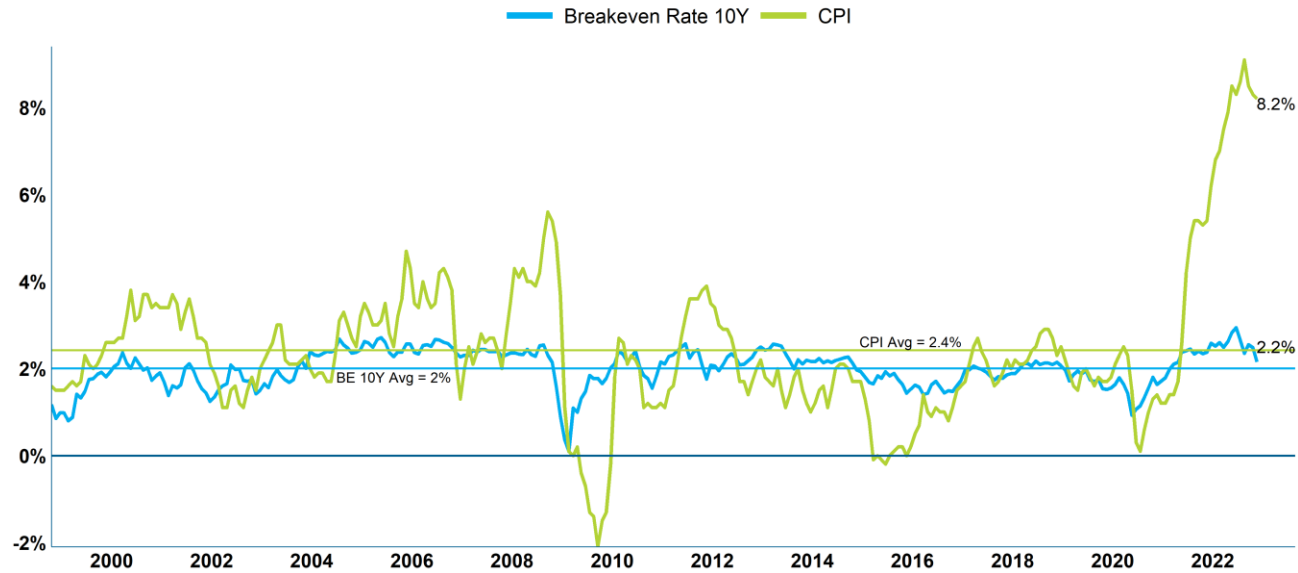
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of September 30, 2022. 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.



- Rates across the yield curve remain far higher than at the start of the year.
- In September, rates rose across the yield curve, finishing the quarter significantly higher. Yields on two-year Treasuries increased 0.79% just in the month of September bring the quarterly increase to 1.32%, while ten-year Treasuries rose 0.64% for the month and 0.82% for the quarter.
- The Fed remains strongly committed to fighting inflation, as it increased rates another 75 basis points to a range of 3.0% and 3.25%. This was the fifth increase this year and the third consecutive increase of this amount.
- The yield spread between two-year and ten-year Treasuries remained negative, finishing September at -0.44%. Inversions in the yield curve have historically often preceded recessions.

<sup>1</sup> Source: Bloomberg. Data is as of September 30, 2022.

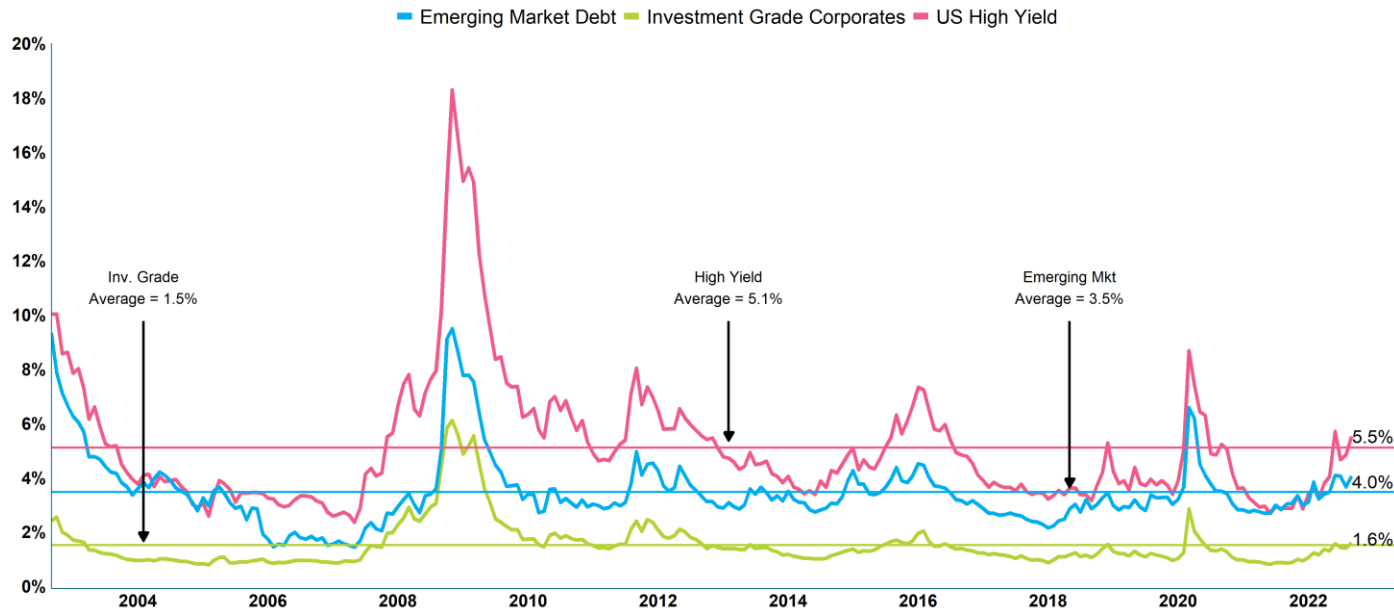
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation expectations (breakevens) declined for the month and finished the quarter slightly below the long-run average on the belief that tighter monetary policy would lower long-run inflation.
- Trailing twelve-month CPI declined in September (8.2% versus 8.3%) but surprised markets by coming in above expectations.
- Over the last year rising prices for energy (particularly oil), food, housing, and for new and used cars remain key drivers of inflation.

<sup>1</sup> Source: Bloomberg. Data is as of September 30, 2022. 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 Bonds<sup>1</sup>**



- Credit spreads (the spread above a comparable maturity Treasury) widened in September, finishing the quarter above long-term averages. Fears related to the impact of tighter monetary policy on economic growth was a key driver of wider spreads.
- In the US, spreads for high yield increased sharply (5.5% versus 4.8%), with investment grade spreads rising more modestly (1.6% versus 1.4%). Emerging market spreads also increased (4.0% versus 3.6%).

<sup>1</sup> Sources: Bloomberg. Data is as of September 30, 2022. 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 Economic Outlook

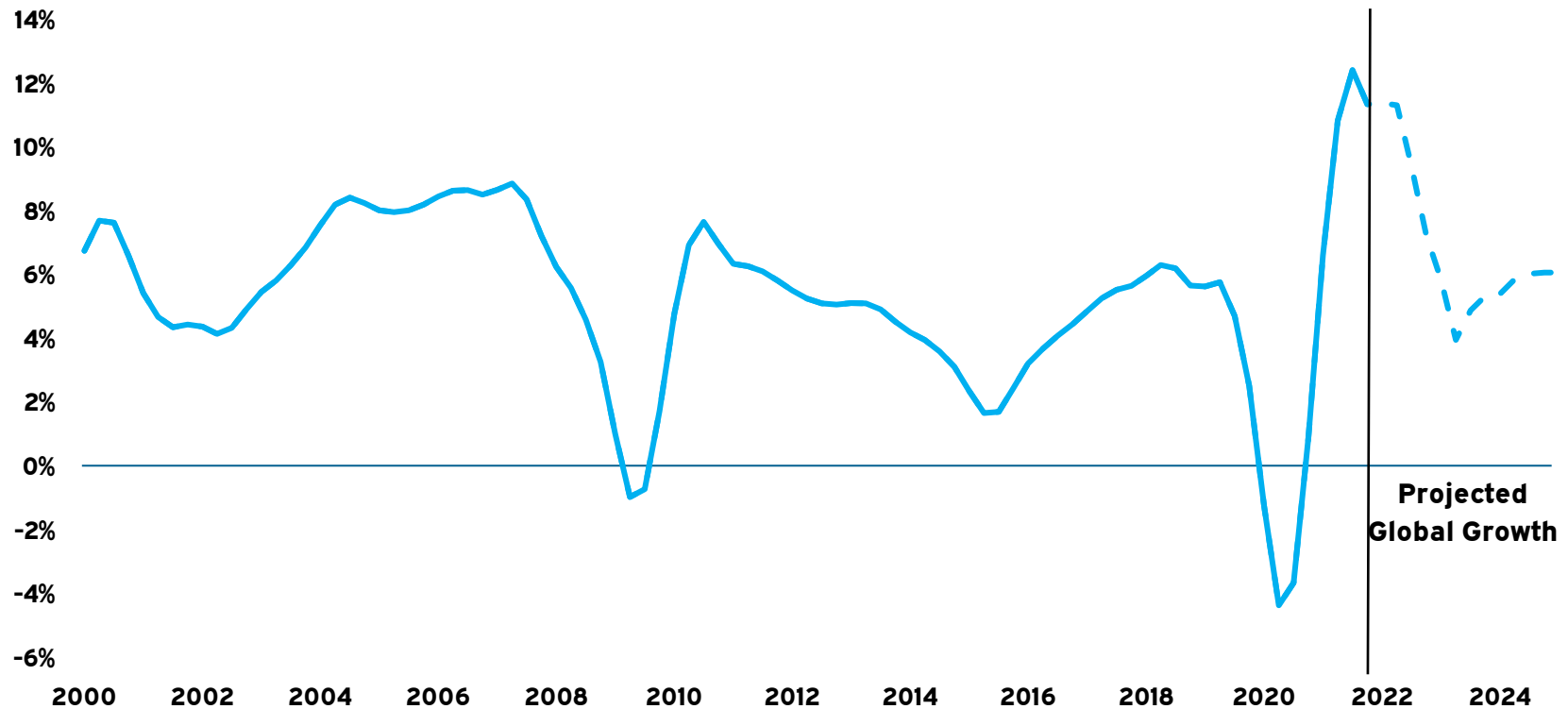
In their October update, the IMF maintained lowered global growth forecasts, driven by the economic impacts of persistent inflation and corresponding tighter policy, as well as issues related to the war in Ukraine and the lingering pandemic.

- The IMF forecasts global GDP growth to come in at 3.2% in 2022 (like the July estimate) and 2.7% in 2023 (0.2% below the prior estimate).
- In advanced economies, GDP is projected to grow 2.4% in 2022 and 1.1% in 2023. The US saw another downgrade in the 2022 (1.6% versus 2.3%) forecast largely due to accelerated policy tightening, given persistently high inflation. The euro area saw an upgrade in expected growth (3.1% versus 2.6%) on substantial fiscal stimulus in 2022 but a downgrade in 2023 (0.5% versus 1.2%) as rising energy prices weigh on the region that is a net importer of energy. The Japanese economy is expected to grow 1.7% this year and 1.6% in 2023.
- Growth projections for emerging markets are higher than developed markets, at 3.7% in 2022 and 2023. China's growth was downgraded for 2022 (3.2% versus 3.3%) and 2023 (4.4% versus 4.6%) given tight COVID-19 restrictions and continued property sector problems.
- The global inflation forecast was significantly increased for 2022 (8.8% versus 7.4%).

	Real GDP (%) <sup>1</sup>			Inflation (%) <sup>1</sup>		
	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average	IMF 2022 Forecast	IMF 2023 Forecast	Actual 10 Year Average
World	3.2	2.7	3.2	8.8	6.5	3.6
Advanced Economies	2.4	1.1	1.6	7.2	4.3	1.6
US	1.6	1.0	2.1	8.1	3.5	2.0
Euro Area	3.1	0.5	1.0	8.3	5.7	1.3
Japan	1.7	1.6	0.8	2.0	1.4	0.4
Emerging Economies	3.7	3.7	4.4	9.9	8.1	5.3
China	3.2	4.4	7.3	2.2	2.2	2.4

<sup>1</sup> Source: IMF World Economic Outlook. Real GDP and Inflation forecasts from October 2022 Update. "Actual 10 Year Average" represents data from 2012 to 2021.

**Global Nominal Gross Domestic Product (GDP) Growth<sup>1</sup>**



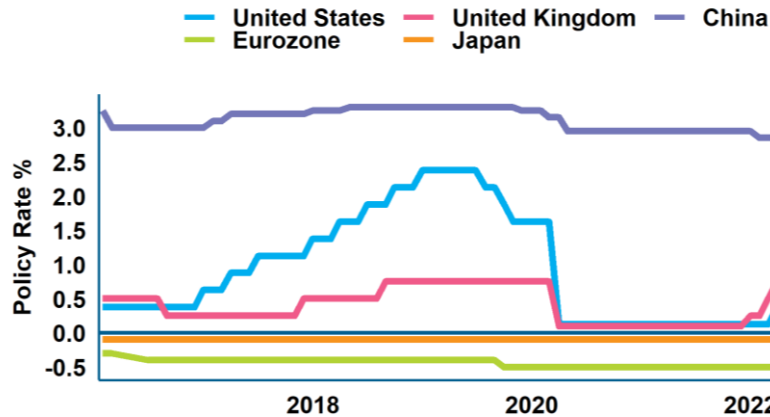
- Global economies are expected to slow in 2022 compared to 2021, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically impacting growth will remain key.

<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, nominal, % change YoY). Updated September 2022. Nominal expectations for GDP remain much higher than real GDP expectations given the elevated inflation levels.

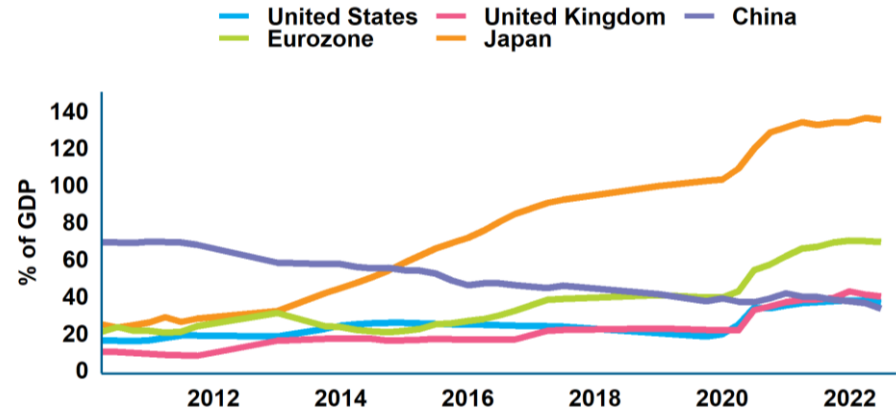


### Central Bank Response<sup>1</sup>

#### Policy Rates



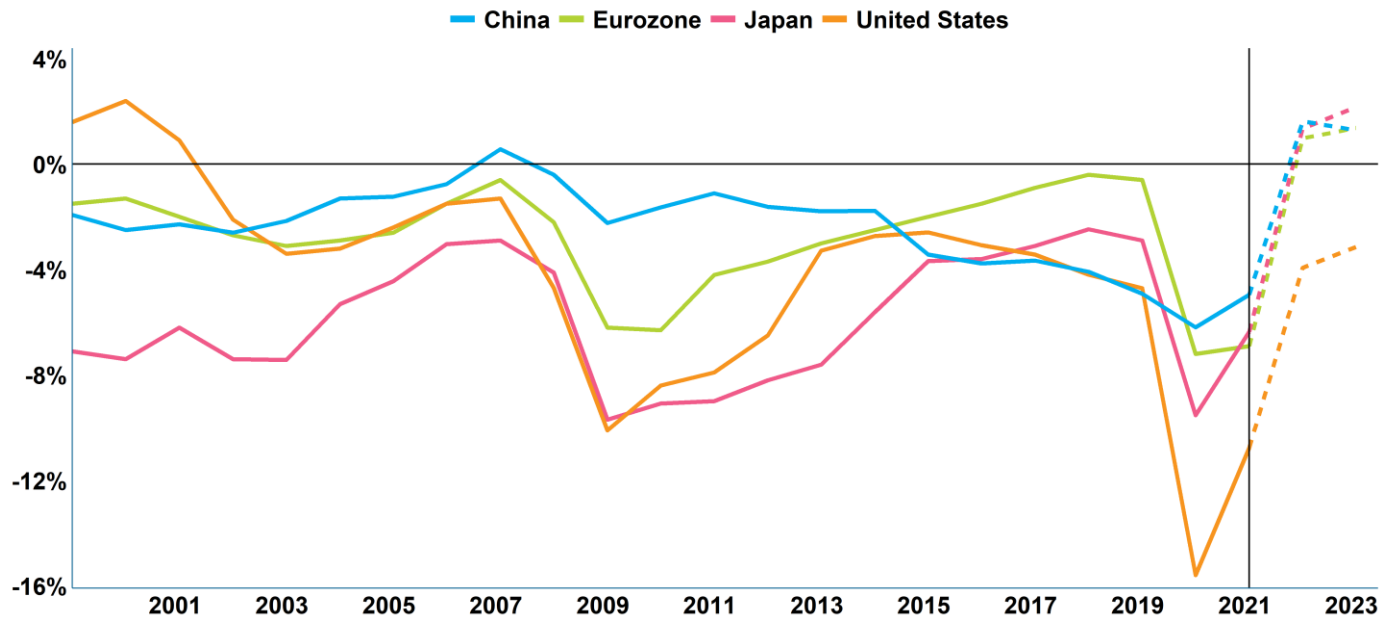
#### Balance Sheet as % of GDP



- After global central banks took extraordinary action to support economies during the pandemic, including policy rate cuts and emergency stimulus through quantitative easing (QE), many are now aggressively reducing support in the face of high inflation.
- The pace of withdrawing support varies across central banks with the US taking a more aggressive approach. The UK is also aggressively increasing rates, but recent talks of easing fiscal policy (this ultimately did not happen) created significant volatility that spilled over into other markets.
- The one notable central bank outlier is China, where the central bank has lowered rates and reserve requirements in response to slowing growth.
- The risk remains for a policy error, particularly overtightening, as record inflation, the war in Ukraine, and a tough COVID-19 policy in China could suppress global growth.

<sup>1</sup> Source: Bloomberg. Policy rate data is as of September 30, 2022. 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, 2022.

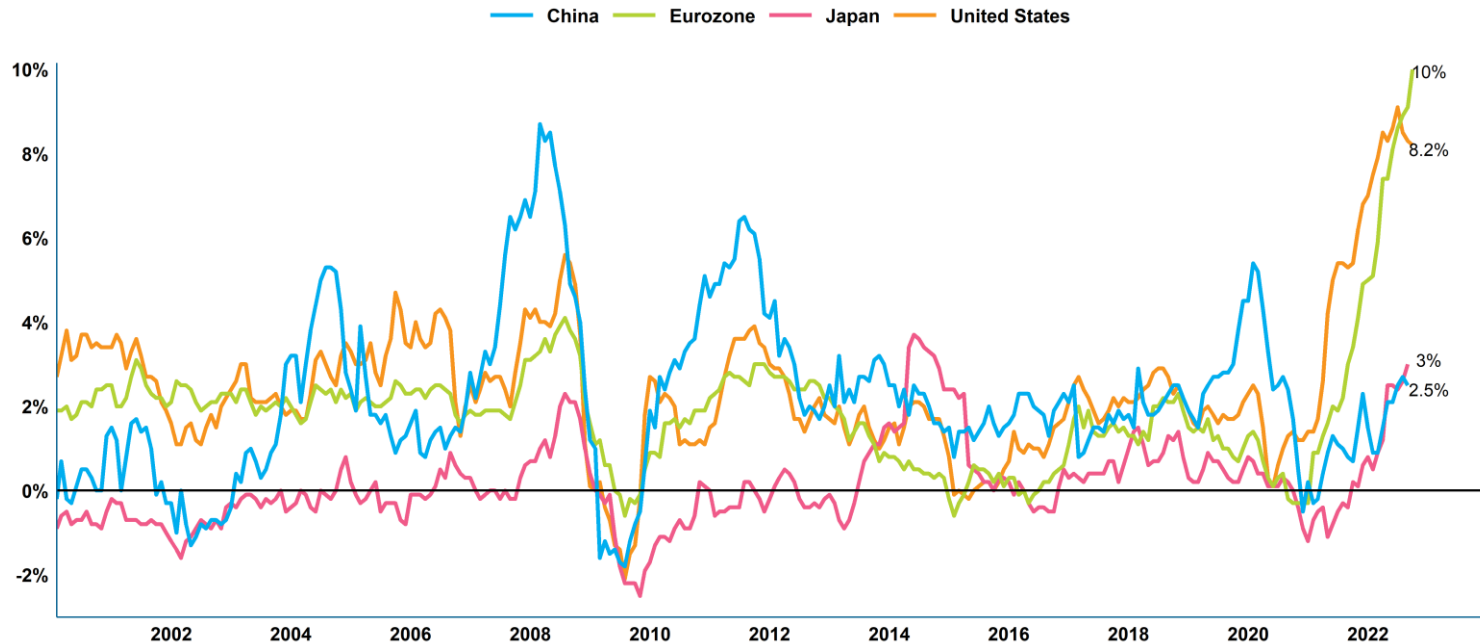
**Budget Surplus / Deficit as a Percentage of GDP<sup>1</sup>**



- Budget deficits as a percentage of GDP drastically increased for major world economies, particularly the US, due to massive fiscal support and the severe economic contraction’s effect on tax revenue in 2020 and 2021.
- As fiscal stimulus programs end, and economic recoveries continue, deficits should improve.
- Questions remain about how some countries will respond fiscally as inflation, particularly energy prices, weigh on consumers. Policies that undermine central banks’ efforts to fight inflation could lead to additional market volatility like was seen in the UK.

<sup>1</sup> Source: Bloomberg. Data is as of September 30, 2022. Projections via IMF Forecasts from October 2022 Report. Dotted lines represent 2022 and 2023 forecasts.

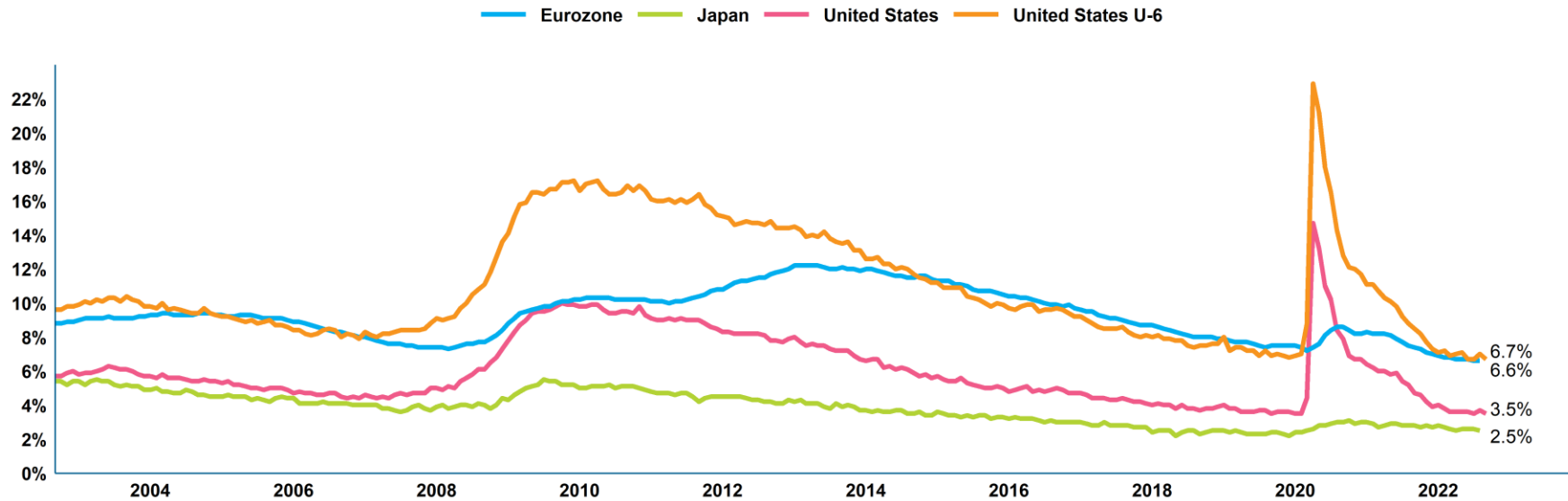
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



- Inflation increased dramatically from the lows of the pandemic, particularly in the US and Eurozone where it has reached levels not seen in many decades.
- Supply issues related to the pandemic, record monetary and fiscal stimulus, strict COVID-19 restrictions in China, and higher prices in many commodities driven by the war in Ukraine have been key global drivers of inflation.

<sup>1</sup> Source: Bloomberg. Data is as of September 2022. The most recent data for Japan and China is as of August 31, 2022.

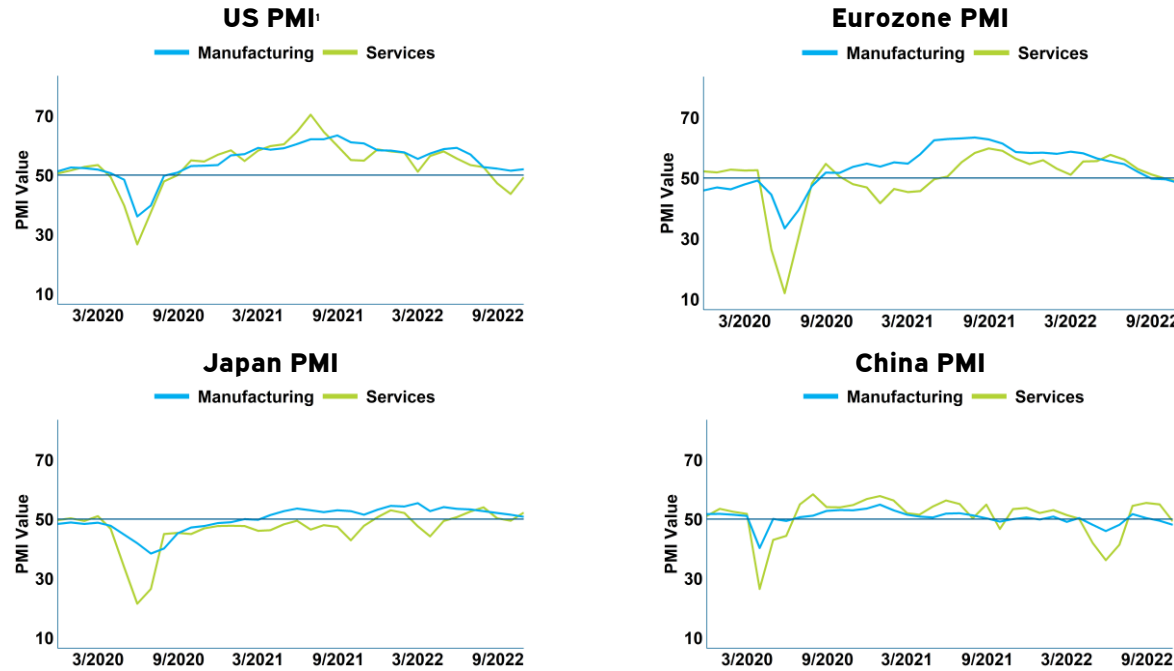
### Unemployment<sup>1</sup>



- As economies have largely reopened, helped by vaccines for the virus, improvements have been seen in the labor market.
- Despite slowing growth and high inflation the US labor market remains a bright spot. Unemployment in the US, which experienced the steepest rise from the pandemic, declined to pre-pandemic (3.5%) levels. The broader measure (U-6) that includes discouraged and underemployed workers declined but is much higher at 6.7%.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to eventually higher unemployment.

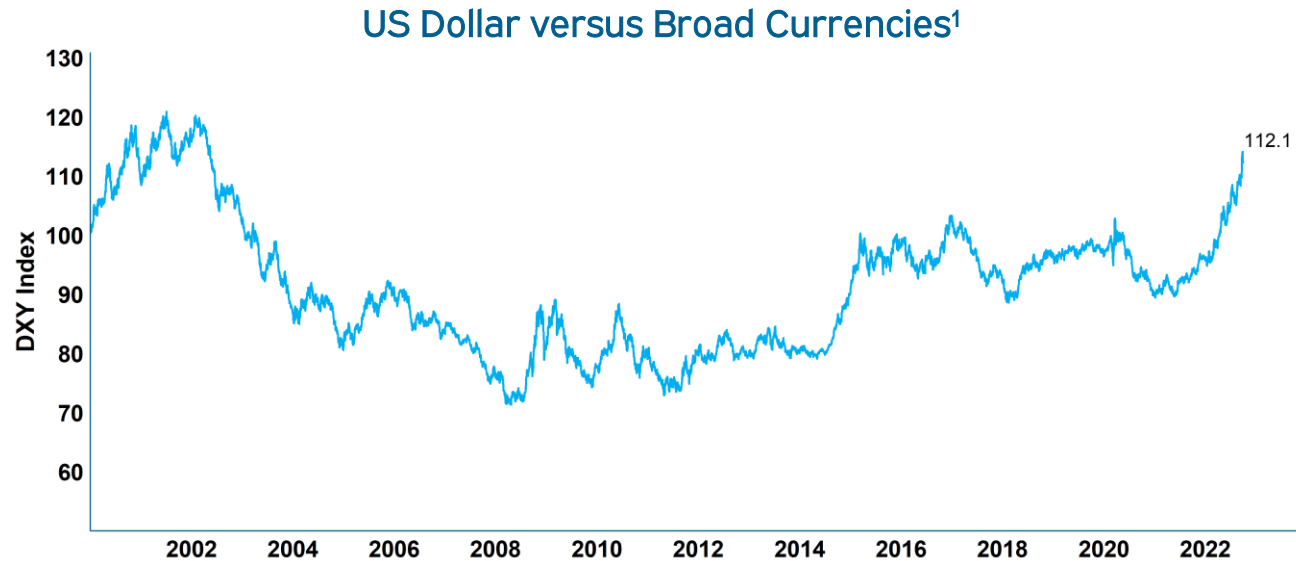
<sup>1</sup> Source: Bloomberg. Data is as of September 2022, for the US. The most recent data for Eurozone and Japanese unemployment is as of August 31, 2022.

### Global PMIs



- After improvements from the lows of the pandemic, Purchasing Managers Indices (PMI), based on surveys of private sector companies, have largely experienced downward pressure recently.
- Service sector PMIs, except Japan, are all in contraction territory. The US service sector recovered somewhat but remains in negative territory due to weak demand, a sharp decline in new orders, and softening employment.
- Manufacturing PMIs are also slowing across China and developed markets given declines in demand and inflationary pressures with the Eurozone and China in contraction territory.

<sup>1</sup> Source: Bloomberg. US Markit Services and Manufacturing PMI, Caixin Services and Manufacturing PMI, Eurozone Markit Services and Manufacturing PMI, Jibun Bank Services and Manufacturing PMI. Data is as of September 2022. Readings below 50 represent economic contractions.



- The US dollar continued to strengthen in September, increasing 7.1% overall for the quarter and reaching levels not seen in two decades.
- The increased pace of policy tightening, stronger relative growth, and safe-haven flows all contributed to the dollar’s strength this year.
- The euro, yen, pound, and yuan have all experienced significant declines versus the dollar this year, adding to inflation.

<sup>1</sup> Source: Bloomberg. Data as of September 30, 2022.

## Summary

### Key Trends in 2022:

- The impacts of record high inflation will remain key, with market volatility likely to remain high.
- The pace of monetary tightening globally will be faster than previously expected, with the risk of overtightening.
- Expect growth to slow globally in 2022 and into 2023 to the long-term trend or below. Inflation, monetary policy, and the war will all be key.
- In the US the end of many fiscal programs is expected to put the burden of continued growth on consumers. Higher energy and food prices will depress consumers' spending in other areas.
- Valuations have significantly declined in the US to below long-term averages.
- Outside the US, equity valuations remain lower in both emerging and developed markets, but major risks remain, including continued strength in the US dollar, higher inflation particularly weighing on Europe, and China maintaining its restrictive COVID-19 policies.

## Manager Highlights



### Driehaus Emerging Markets Growth

- Driehaus beat its benchmark by 3.4% in September, posting a return of -8.3% vs the benchmark's -11.7%.
- Outperformance relative to the index was broad-based, but with the single biggest contributor being the portfolio's underweight position in China. At the sector level, outperformance was also broad-based, with underweights in communication services and tech hardware helping returns.
- Since inception, Driehaus has returned 3.0%, well outpacing the benchmark, which has returned -2.5% over that same period.

### Axiom International Small Cap Equity

- Axiom beat its benchmark by 2.0% in September, posting a return of -10.0% vs the benchmark's -12.0%.
- Stock selection in the Financials, Consumer Discretionary, and Real Estate (due to underweight exposure) Sectors were the biggest tailwinds to relative performance. Mexico was the largest contributor to MTD relative performance followed by Denmark and Korea.
- Since inception, Axiom has returned 2.9%, beating the benchmark's 1.9% return over that same period.

### Beach Point Loan Fund

- Beach Point underperformed its benchmark by -0.7% in September, posting a return of -2.9% vs the benchmark's -2.2%.
- Leveraged loan prices declined in September as recession concerns outweighed the benefits of a surge in interest rate expectations. The loan asset class also endured significant decompression among rating and accelerating retail withdrawals, whereas light issuance and resilience in CLO origination (\$13.3bn) were technical supports. Leveraged loans (-2.2%) posted their worst monthly total return since March 2020, bringing YTD returns to -3.3%. Despite recent weakness, loans are still significant outperformers versus fixed-rate credit, with HY total returns down double digits year-to-date (-14.7%).
- Since inception, Bench Point has returned 2.6%, lagging the benchmark, which has returned 3.3% over that same period. However, the portfolio continues to rank in the top half of its peer group.

**Interim Update**  
**As of September 30, 2022**

Total Retirement System | As of September 30, 2022

Allocation vs. Targets and Policy				
	Current Balance	Current Allocation	Policy	Policy Range
US Equity	\$160,169,617	21%	24%	19% - 29%
Developed Market Equity	\$81,835,240	11%	13%	8% - 18%
Emerging Market Equity	\$57,030,222	7%	12%	7% - 17%
Investment Grade Bonds	\$71,900,292	9%	5%	2% - 8%
Long-Term Government Bonds	\$24,593,081	3%	7%	2% - 12%
TIPS	\$15,267,014	2%	4%	1% - 7%
Emerging Market Bonds	--	--	2%	0% - 4%
High Yield Bonds	\$37,827,658	5%	6%	3% - 9%
Bank Loans	\$7,683,435	1%	2%	0% - 4%
Private Equity	\$129,423,424	17%	10%	5% - 15%
Real Estate	\$86,266,251	11%	10%	5% - 15%
Natural Resources	\$17,596,339	2%	3%	0% - 6%
Infrastructure	\$11,309,652	1%	2%	0% - 5%
Opportunistic	\$38,037,835	5%	0%	0% - 5%
Balanced Assets	\$17,452,158	2%	--	--
Cash	\$11,960,579	2%	0%	0% - 5%
<b>Total</b>	<b>\$768,352,796</b>	<b>100%</b>	<b>100%</b>	

	Current Balance	Current Allocation	Policy	Policy Range
Total Equity Including PE	\$428,458,503	56%	59%	--
Total Fixed Income	\$157,271,480	21%	26%	--
Real Assets	\$115,172,242	15%	15%	--
Other	\$67,450,572	9%	0%	--

Asset Class Performance Summary												
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement System (gross)</b>	<b>768,352,796</b>	<b>100.0</b>	<b>-5.0</b>	<b>-4.0</b>	<b>-13.9</b>	<b>-9.3</b>	<b>6.3</b>	<b>6.1</b>	<b>7.0</b>	<b>7.0</b>	<b>8.0</b>	<b>Jan-89</b>
<b>Total Retirement System</b>			<b>-5.0</b>	<b>-4.0</b>	<b>-13.9</b>	<b>-9.3</b>	<b>6.1</b>	<b>5.9</b>	<b>6.7</b>	<b>6.7</b>	<b>7.7</b>	
<b>Domestic Equity Assets</b>	<b>160,169,617</b>	<b>20.8</b>	<b>-9.0</b>	<b>-4.4</b>	<b>-23.2</b>	<b>-15.1</b>	<b>6.4</b>	<b>8.1</b>	<b>11.0</b>	<b>9.7</b>	<b>9.4</b>	<b>Jul-93</b>
<i>Russell 3000</i>			<i>-9.3</i>	<i>-4.5</i>	<i>-24.6</i>	<i>-17.6</i>	<i>7.7</i>	<i>8.6</i>	<i>11.4</i>	<i>9.9</i>	<i>9.4</i>	<i>Jul-93</i>
<b>International Developed Market Equity Assets</b>	<b>81,835,240</b>	<b>10.7</b>	<b>-9.7</b>	<b>-9.2</b>	<b>-29.2</b>	<b>-27.7</b>	<b>-2.6</b>	<b>-1.9</b>	<b>3.2</b>	<b>5.3</b>	<b>3.9</b>	<b>Feb-98</b>
<i>MSCI EAFE</i>			<i>-9.4</i>	<i>-9.4</i>	<i>-27.1</i>	<i>-25.1</i>	<i>-1.8</i>	<i>-0.8</i>	<i>3.7</i>	<i>5.9</i>	<i>3.7</i>	<i>Feb-98</i>
<b>International Emerging Market Equity Assets</b>	<b>57,030,222</b>	<b>7.4</b>	<b>-9.2</b>	<b>-7.8</b>	<b>-24.6</b>	<b>-24.7</b>	<b>3.3</b>	<b>1.9</b>	<b>2.7</b>	<b>--</b>	<b>5.2</b>	<b>Sep-08</b>
<i>MSCI Emerging Markets</i>			<i>-11.7</i>	<i>-11.6</i>	<i>-27.2</i>	<i>-28.1</i>	<i>-2.1</i>	<i>-1.8</i>	<i>1.0</i>	<i>8.7</i>	<i>1.8</i>	<i>Sep-08</i>
<b>Investment Grade Bond Assets</b>	<b>71,900,292</b>	<b>9.4</b>	<b>-5.4</b>	<b>-5.8</b>	<b>-17.7</b>	<b>-17.6</b>	<b>-4.4</b>	<b>-1.0</b>	<b>0.5</b>	<b>3.0</b>	<b>4.1</b>	<b>Jul-93</b>
<i>Bloomberg US Aggregate TR</i>			<i>-4.3</i>	<i>-4.8</i>	<i>-14.6</i>	<i>-14.6</i>	<i>-3.3</i>	<i>-0.3</i>	<i>0.9</i>	<i>3.1</i>	<i>4.4</i>	<i>Jul-93</i>
<b>Long-Term Government Bond Assets</b>	<b>24,593,081</b>	<b>3.2</b>	<b>-5.8</b>	<b>-6.2</b>	<b>-18.9</b>	<b>-17.6</b>	<b>-3.5</b>	<b>0.4</b>	<b>--</b>	<b>--</b>	<b>1.3</b>	<b>Dec-15</b>
<i>PRIT Core Fixed Income</i>			<i>-5.8</i>	<i>-6.2</i>	<i>-18.9</i>	<i>-17.6</i>	<i>-3.5</i>	<i>0.4</i>	<i>1.9</i>	<i>3.7</i>	<i>1.3</i>	<i>Dec-15</i>
<b>TIPS Assets</b>	<b>15,267,014</b>	<b>2.0</b>	<b>-6.6</b>	<b>-5.1</b>	<b>-13.6</b>	<b>-11.6</b>	<b>0.8</b>	<b>1.9</b>	<b>1.0</b>	<b>--</b>	<b>3.4</b>	<b>Mar-07</b>
<i>Bloomberg US TIPS TR</i>			<i>-6.6</i>	<i>-5.1</i>	<i>-13.6</i>	<i>-11.6</i>	<i>0.8</i>	<i>2.0</i>	<i>1.0</i>	<i>3.8</i>	<i>3.4</i>	<i>Mar-07</i>
<b>High Yield Bond Assets</b>	<b>37,827,658</b>	<b>4.9</b>	<b>-3.4</b>	<b>-0.5</b>	<b>-12.3</b>	<b>-11.9</b>	<b>0.6</b>	<b>1.9</b>	<b>3.8</b>	<b>--</b>	<b>5.1</b>	<b>Apr-07</b>
<i>Bloomberg US High Yield TR</i>			<i>-4.0</i>	<i>-0.6</i>	<i>-14.7</i>	<i>-14.1</i>	<i>-0.5</i>	<i>1.6</i>	<i>3.9</i>	<i>7.4</i>	<i>5.6</i>	<i>Apr-07</i>
<b>Bank Loan Assets</b>	<b>7,683,435</b>	<b>1.0</b>	<b>-2.9</b>	<b>0.6</b>	<b>-4.8</b>	<b>-4.2</b>	<b>1.1</b>	<b>2.2</b>	<b>--</b>	<b>--</b>	<b>2.6</b>	<b>Aug-14</b>
<i>Credit Suisse Leveraged Loans</i>			<i>-2.2</i>	<i>1.2</i>	<i>-3.3</i>	<i>-2.6</i>	<i>2.1</i>	<i>3.0</i>	<i>3.7</i>	<i>4.6</i>	<i>3.3</i>	<i>Aug-14</i>
<b>Total Real Estate</b>	<b>86,266,251</b>	<b>11.2</b>	<b>-0.6</b>	<b>0.1</b>	<b>8.0</b>	<b>13.9</b>	<b>8.9</b>	<b>7.6</b>	<b>9.0</b>	<b>--</b>	<b>--</b>	<b>Jan-89</b>
<i>NCREIF-ODCE</i>			<i>0.5</i>	<i>0.5</i>	<i>13.1</i>	<i>22.1</i>	<i>12.4</i>	<i>10.2</i>	<i>10.9</i>	<i>8.8</i>	<i>7.8</i>	<i>Jan-89</i>

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	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity Assets</b>	<b>129,423,424</b>	<b>16.8</b>										
<b>Natural Resources Assets</b>	<b>17,596,339</b>	<b>2.3</b>										
<b>Infrastructure Assets</b>	<b>11,309,652</b>	<b>1.5</b>										
<b>Opportunistic Assets</b>	<b>38,037,835</b>	<b>5.0</b>										
<b>Balanced Assets</b>	<b>17,452,158</b>	<b>2.3</b>	<b>-5.0</b>	<b>-4.6</b>	<b>-14.3</b>	<b>-9.7</b>	<b>6.5</b>	<b>6.4</b>	<b>7.9</b>	<b>8.2</b>	<b>8.1</b>	<b>Apr-90</b>
<i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>			<i>-7.3</i>	<i>-4.5</i>	<i>-20.4</i>	<i>-15.9</i>	<i>3.8</i>	<i>5.5</i>	<i>7.4</i>	<i>7.5</i>	<i>8.2</i>	<i>Apr-90</i>
<b>Cash</b>	<b>11,960,579</b>	<b>1.6</b>										

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	Trailing Net Performance												Inception (%)	Inception Date
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)			
<b>Total Retirement System (gross)</b>	<b>768,352,796</b>	<b>100.0</b>	<b>--</b>	<b>-5.0</b>	<b>-4.0</b>	<b>-13.9</b>	<b>-9.3</b>	<b>6.3</b>	<b>6.1</b>	<b>7.0</b>	<b>7.0</b>	<b>8.0</b>	<b>Jan-89</b>	
<b>Total Retirement System</b>				<b>-5.0</b>	<b>-4.0</b>	<b>-13.9</b>	<b>-9.3</b>	<b>6.1</b>	<b>5.9</b>	<b>6.7</b>	<b>6.7</b>	<b>7.7</b>		
<b>Domestic Equity Assets</b>	<b>160,169,617</b>	<b>20.8</b>	<b>20.8</b>	<b>-9.0</b>	<b>-4.4</b>	<b>-23.2</b>	<b>-15.1</b>	<b>6.4</b>	<b>8.1</b>	<b>11.0</b>	<b>9.7</b>	<b>9.4</b>	<b>Jul-93</b>	
<i>Russell 3000</i>				-9.3	-4.5	-24.6	-17.6	7.7	8.6	11.4	9.9	9.4	Jul-93	
RhumbLine Russell 1000 Growth Index	19,762,850	2.6	12.3	-9.7	-3.6	-30.6	-22.6	10.7	12.2	13.7	--	10.3	Jun-05	
<i>Russell 1000 Growth</i>				-9.7	-3.6	-30.7	-22.6	10.7	12.2	13.7	11.0	10.4	Jun-05	
<i>Large Growth MStar MF Median</i>				-9.7	-4.2	-32.4	-26.6	6.9	9.3	11.8	9.9	9.1	Jun-05	
<i>Large Growth MStar MF Rank</i>				49	33	38	32	9	9	8	--	17	Jun-05	
RhumbLine Russell 1000 Value Index	23,392,435	3.0	14.6	-8.7	-5.6	-17.7	-11.3	4.4	5.3	9.1	--	6.8	Jun-05	
<i>Russell 1000 Value</i>				-8.8	-5.6	-17.8	-11.4	4.4	5.3	9.2	8.7	6.9	Jun-05	
<i>Large Value MStar MF Median</i>				-8.4	-5.5	-16.3	-9.3	5.7	6.1	9.4	8.6	7.2	Jun-05	
<i>Large Value MStar MF Rank</i>				69	53	68	72	78	71	65	--	64	Jun-05	
Rhumbline QSI Index	27,008,321	3.5	16.9	-8.6	-5.1	-21.8	-12.3	6.0	8.8	--	--	10.1	Aug-13	
<i>QSI Index</i>				-8.6	-5.1	-21.9	-12.3	6.0	8.9	11.5	10.2	10.2	Aug-13	
<i>Russell 3000</i>				-9.3	-4.5	-24.6	-17.6	7.7	8.6	11.4	9.9	10.2	Aug-13	
<i>Large Cap MStar MF Median</i>				-9.1	-4.9	-23.9	-16.0	6.7	7.8	10.7	9.5	9.5	Aug-13	
<i>Large Cap MStar MF Rank</i>				32	54	40	33	61	35	--	--	38	Aug-13	
Brown Small Cap Fundamental Value	14,595,451	1.9	9.1	-8.6	-2.1	-18.4	-10.6	2.6	2.8	--	--	5.9	Jul-16	
<i>Russell 2000 Value</i>				-10.2	-4.6	-21.1	-17.7	4.7	2.9	7.9	8.8	6.8	Jul-16	
<i>Small Value MStar MF Median</i>				-9.6	-4.8	-19.6	-14.8	5.7	3.5	8.4	9.3	6.9	Jul-16	
<i>Small Value MStar MF Rank</i>				14	9	36	18	91	69	--	--	78	Jul-16	
PRIT General Allocation Domestic Equity	75,410,560	9.8	47.1	-9.1	-4.5	-24.0	--	--	--	--	--	-24.0	Jan-22	
<i>PRIT Domestic Equity Benchmark</i>				-9.2	-4.5	-24.1	--	--	--	--	--	-24.1	Jan-22	

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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>International Developed Market Equity Assets</b>	<b>81,835,240</b>	<b>10.7</b>	<b>10.7</b>	<b>-9.7</b>	<b>-9.2</b>	<b>-29.2</b>	<b>-27.7</b>	<b>-2.6</b>	<b>-1.9</b>	<b>3.2</b>	<b>5.3</b>	<b>3.9</b>	<b>Feb-98</b>
<i>MSCI EAFE</i>				-9.4	-9.4	-27.1	-25.1	-1.8	-0.8	3.7	5.9	3.7	Feb-98
SSgA MSCI EAFE Index	31,878,171	4.1	39.0	-9.3	-9.3	-26.8	-24.8	-1.5	-0.5	4.0	--	3.6	Oct-09
<i>MSCI EAFE</i>				-9.4	-9.4	-27.1	-25.1	-1.8	-0.8	3.7	5.9	3.3	Oct-09
<i>Foreign MStar MF Median</i>				-9.6	-10.3	-28.8	-27.3	-1.4	-1.1	3.6	6.3	3.8	Oct-09
<i>Foreign MStar MF Rank</i>				36	27	32	28	52	38	40	--	57	Oct-09
Axiom International Small Cap Equity	9,414,916	1.2	11.5	-10.0	-7.9	-38.7	-38.4	--	--	--	--	2.9	May-20
<i>S&amp;P Developed Ex-U.S. SmallCap</i>				-12.0	-10.7	-32.5	-32.7	-2.3	-2.0	4.7	8.3	1.9	May-20
<i>MSCI EAFE Small Cap</i>				-11.5	-9.8	-32.1	-32.1	-2.2	-1.8	5.3	8.2	2.0	May-20
PRIT General Allocation Int. Equity	40,542,153	5.3	49.5	-9.9	-9.5	-28.7	--	--	--	--	--	-28.7	Jan-22
<i>Custom MSCI World Ex-US IMI Net Divs</i>				-9.7	-9.3	-27.0	--	--	--	--	--	-27.0	Jan-22
<b>International Emerging Market Equity Assets</b>	<b>57,030,222</b>	<b>7.4</b>	<b>7.4</b>	<b>-9.2</b>	<b>-7.8</b>	<b>-24.6</b>	<b>-24.7</b>	<b>3.3</b>	<b>1.9</b>	<b>2.7</b>	<b>--</b>	<b>5.2</b>	<b>Sep-08</b>
<i>MSCI Emerging Markets</i>				-11.7	-11.6	-27.2	-28.1	-2.1	-1.8	1.0	8.7	1.8	Sep-08
Driehaus Emerging Markets Growth	33,339,494	4.3	58.5	-8.3	-7.6	-24.6	-25.2	2.5	--	--	--	3.0	Mar-19
<i>MSCI Emerging Markets</i>				-11.7	-11.6	-27.2	-28.1	-2.1	-1.8	1.0	8.7	-2.5	Mar-19
<i>Diversified Emerging Mkts MStar MF Median</i>				-10.6	-10.9	-29.0	-29.6	-2.4	-2.2	1.4	8.6	-2.1	Mar-19
<i>Diversified Emerging Mkts MStar MF Rank</i>				9	22	22	23	12	--	--	--	10	Mar-19
Acadian Emerging Markets Small Cap	7,962,239	1.0	14.0	-10.2	-5.9	-21.9	-20.0	6.4	2.1	--	--	4.8	Jun-14
<i>MSCI Emerging Markets Small Cap</i>				-10.0	-5.3	-24.2	-23.2	5.5	1.3	2.9	10.1	1.9	Jun-14
<i>Diversified Emerging Mkts MStar MF Median</i>				-10.6	-10.9	-29.0	-29.6	-2.4	-2.2	1.4	8.6	0.6	Jun-14
<i>Diversified Emerging Mkts MStar MF Rank</i>				43	10	10	6	4	7	--	--	1	Jun-14
PRIT General Allocation EME	15,728,488	2.0	27.6	-10.4	-9.3	-25.7	--	--	--	--	--	-25.7	Jan-22
<i>Custom MSCI Emerging Market IMI Net Divs</i>				-11.6	-11.4	-26.7	--	--	--	--	--	-26.7	Jan-22



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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Investment Grade Bond Assets</b>	<b>71,900,292</b>	<b>9.4</b>	<b>9.4</b>	<b>-5.4</b>	<b>-5.8</b>	<b>-17.7</b>	<b>-17.6</b>	<b>-4.4</b>	<b>-1.0</b>	<b>0.5</b>	<b>3.0</b>	<b>4.1</b>	<b>Jul-93</b>
<i>Bloomberg US Aggregate TR</i>				-4.3	-4.8	-14.6	-14.6	-3.3	-0.3	0.9	3.1	4.4	Jul-93
SSgA U.S. Aggregate Bond Index-NL	19,902,916	2.6	27.7	-4.3	-4.7	-14.6	-14.5	-3.2	-0.3	0.9	--	2.9	Apr-04
<i>Bloomberg US Aggregate TR</i>				-4.3	-4.8	-14.6	-14.6	-3.3	-0.3	0.9	3.1	2.9	Apr-04
<i>Intermediate Core Bond MStar MF Median</i>				-4.3	-4.7	-14.7	-14.9	-3.1	-0.2	1.0	3.2	3.0	Apr-04
<i>Intermediate Core Bond MStar MF Rank</i>				49	58	41	32	58	61	62	--	64	Apr-04
PRIT General Allocation Core FI	51,997,376	6.8	72.3	-5.8	-6.2	-18.9	--	--	--	--	--	-18.9	Jan-22
<i>PRIT Core Fixed Income</i>				-5.8	-6.2	-18.9	-17.6	-3.5	0.4	1.9	3.7	-18.9	Jan-22
<b>Long-Term Government Bond Assets</b>	<b>24,593,081</b>	<b>3.2</b>	<b>3.2</b>	<b>-5.8</b>	<b>-6.2</b>	<b>-18.9</b>	<b>-17.6</b>	<b>-3.5</b>	<b>0.4</b>	<b>--</b>	<b>--</b>	<b>1.3</b>	<b>Dec-15</b>
<i>PRIT Core Fixed Income</i>				-5.8	-6.2	-18.9	-17.6	-3.5	0.4	1.9	3.7	1.3	Dec-15
PRIT Core Fixed Income	24,593,081	3.2	100.0	-5.8	-6.2	-18.9	-17.6	-3.5	0.4	--	--	1.3	Dec-15
<i>PRIT Core Fixed Income</i>				-5.8	-6.2	-18.9	-17.6	-3.5	0.4	1.9	3.7	1.3	Dec-15
<b>TIPS Assets</b>	<b>15,267,014</b>	<b>2.0</b>	<b>2.0</b>	<b>-6.6</b>	<b>-5.1</b>	<b>-13.6</b>	<b>-11.6</b>	<b>0.8</b>	<b>1.9</b>	<b>1.0</b>	<b>--</b>	<b>3.4</b>	<b>Mar-07</b>
<i>Bloomberg US TIPS TR</i>				-6.6	-5.1	-13.6	-11.6	0.8	2.0	1.0	3.8	3.4	Mar-07
SSgA TIPS Index	15,267,014	2.0	100.0	-6.6	-5.1	-13.6	-11.6	0.8	1.9	1.0	--	3.4	Mar-07
<i>Bloomberg US TIPS TR</i>				-6.6	-5.1	-13.6	-11.6	0.8	2.0	1.0	3.8	3.4	Mar-07
<i>Inflation-Protected Bond MStar MF Median</i>				-6.3	-5.0	-13.4	-11.5	0.9	1.9	0.8	3.5	3.2	Mar-07
<i>Inflation-Protected Bond MStar MF Rank</i>				53	56	62	54	53	39	29	--	20	Mar-07

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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>High Yield Bond Assets</b>	<b>37,827,658</b>	<b>4.9</b>	<b>4.9</b>	<b>-3.4</b>	<b>-0.5</b>	<b>-12.3</b>	<b>-11.9</b>	<b>0.6</b>	<b>1.9</b>	<b>3.8</b>	<b>--</b>	<b>5.1</b>	<b>Apr-07</b>
<i>Bloomberg US High Yield TR</i>				-4.0	-0.6	-14.7	-14.1	-0.5	1.6	3.9	7.4	5.6	Apr-07
Loomis Sayles High Yield Conservative	10,896,662	1.4	28.8	-4.1	-0.4	-16.5	-16.6	-0.7	0.7	3.4	--	4.0	Feb-12
<i>Bloomberg US High Yield TR</i>				-4.0	-0.6	-14.7	-14.1	-0.5	1.6	3.9	7.4	4.5	Feb-12
<i>High Yield Bond MStar MF Median</i>				-4.0	-0.7	-14.1	-13.5	-0.7	1.3	3.4	6.5	3.9	Feb-12
<i>High Yield Bond MStar MF Rank</i>				54	35	93	94	54	78	50	--	48	Feb-12
Columbia High Yield	10,807,500	1.4	28.6	-4.0	-0.2	-14.0	-13.1	-0.5	1.6	--	--	2.8	Dec-16
<i>Bloomberg US High Yield TR</i>				-4.0	-0.6	-14.7	-14.1	-0.5	1.6	3.9	7.4	2.9	Dec-16
<i>High Yield Bond MStar MF Median</i>				-4.0	-0.7	-14.1	-13.5	-0.7	1.3	3.4	6.5	2.5	Dec-16
<i>High Yield Bond MStar MF Rank</i>				45	24	46	42	43	32	--	--	33	Dec-16
PRIT General Allocation Value Added FI	16,123,496	2.1	42.6	-2.5	-0.8	-8.1	--	--	--	--	--	-8.1	Jan-22
<i>PRIT Public Value-Added Fixed Income</i>				-2.8	0.2	-11.5	-11.7	-0.8	0.8	1.7	6.2	-11.5	Jan-22
<b>Bank Loan Assets</b>	<b>7,683,435</b>	<b>1.0</b>	<b>1.0</b>	<b>-2.9</b>	<b>0.6</b>	<b>-4.8</b>	<b>-4.2</b>	<b>1.1</b>	<b>2.2</b>	<b>--</b>	<b>--</b>	<b>2.6</b>	<b>Aug-14</b>
<i>Credit Suisse Leveraged Loans</i>				-2.2	1.2	-3.3	-2.6	2.1	3.0	3.7	4.6	3.3	Aug-14
Beach Point Loan Fund	7,683,435	1.0	100.0	-2.9	0.6	-4.8	-4.2	1.1	2.2	--	--	2.6	Aug-14
<i>Credit Suisse Leveraged Loans</i>				-2.2	1.2	-3.3	-2.6	2.1	3.0	3.7	4.6	3.3	Aug-14
<i>Bank Loan MStar MF Median</i>				-2.3	1.2	-4.3	-3.9	1.1	2.1	3.0	4.2	2.6	Aug-14
<i>Bank Loan MStar MF Rank</i>				85	79	62	61	49	40	--	--	46	Aug-14

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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Total Real Estate</b>	<b>86,266,251</b>	<b>11.2</b>	<b>11.2</b>	<b>-0.6</b>	<b>0.1</b>	<b>8.0</b>	<b>13.9</b>	<b>8.9</b>	<b>7.6</b>	<b>9.0</b>	<b>--</b>	<b>--</b>	<b>Jan-89</b>
<i>NCREIF-ODCE</i>				<i>0.5</i>	<i>0.5</i>	<i>13.1</i>	<i>22.1</i>	<i>12.4</i>	<i>10.2</i>	<i>10.9</i>	<i>8.8</i>	<i>7.8</i>	<i>Jan-89</i>
UBS Trumbull Property Income Fund	11,481,039	1.5	13.3	0.3	0.3	6.8	12.3	7.5	6.9	7.7	7.6	7.5	Jan-89
<i>NCREIF ODCE (net)</i>				<i>0.3</i>	<i>0.3</i>	<i>12.4</i>	<i>21.0</i>	<i>11.4</i>	<i>9.3</i>	<i>9.9</i>	<i>7.8</i>	<i>6.7</i>	<i>Jan-89</i>
UBS Trumbull Property Fund	3,152,569	0.4	3.7	-0.2	-0.2	2.4	7.3	4.0	3.4	5.9	6.3	6.6	Jan-89
<i>NCREIF ODCE (net)</i>				<i>0.3</i>	<i>0.3</i>	<i>12.4</i>	<i>21.0</i>	<i>11.4</i>	<i>9.3</i>	<i>9.9</i>	<i>7.8</i>	<i>6.7</i>	<i>Jan-89</i>
JPMCB Strategic Property Fund	12,024,100	1.6	13.9	-1.1	-1.3	11.5	20.3	11.5	--	--	--	9.8	Jan-19
<i>NCREIF ODCE (net)</i>				<i>0.3</i>	<i>0.3</i>	<i>12.4</i>	<i>21.0</i>	<i>11.4</i>	<i>9.3</i>	<i>9.9</i>	<i>7.8</i>	<i>9.9</i>	<i>Jan-19</i>
AEW Partners VII	521,639	0.1	0.6										
Rockwood X	6,727,457	0.9	7.8										
Torchlight Debt Opportunity Fund VI	3,714,708	0.5	4.3										
TerraCap Partners IV (Institutional), L.P.	4,327,530	0.6	5.0										
Rockwood Capital Real Estate Partners Fund XI, L.P.	5,139,627	0.7	6.0										
PRIT General Allocation Real Estate	39,177,581	5.1	45.4	-0.8	0.8	9.6	--	--	--	--	--	9.6	Jan-22
<i>PRIT Real Estate Benchmark</i>				<i>2.3</i>	<i>2.4</i>	<i>11.5</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>11.5</i>	<i>Jan-22</i>

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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity Assets</b>	<b>129,423,424</b>	<b>16.8</b>	<b>16.8</b>										
Adams Street Partners 2010	6,577,905	0.9	5.1										
Goldman Sachs Private Equity Partners 2005	481,149	0.1	0.4										
North American Strategic Partners 2006	65,081	0.0	0.1										
Brookfield Capital Partners IV	3,848,617	0.5	3.0										
PRIT Vintage Year 2001	63,881	0.0	0.0										
PRIT Vintage Year 2002	9,347	0.0	0.0										
Ridgemont Equity Partners II	5,389,252	0.7	4.2										
TA XII	3,353,781	0.4	2.6										
LLR Equity Partners V	6,400,494	0.8	4.9										
Wellspring Capital Partners VI	6,238,065	0.8	4.8										
Trilantic Capital Partners VI	5,275,967	0.7	4.1										
Brookfield Capital Partners V, L.P.	4,161,934	0.5	3.2										
FS Equity Partners VIII L.P.	5,108,882	0.7	3.9										
Ridgemont Equity Partners III	8,101,670	1.1	6.3										
Searchlight Capital III	3,927,941	0.5	3.0										
Charlesbank Technology Opportunities Fund	5,163,940	0.7	4.0										
LLR Equity Partners VI, L.P.	2,126,108	0.3	1.6										
PRIT General Allocation Private Equity	63,129,411	8.2	48.8	-0.5	-5.7	-4.3	--	--	--	--	--	-4.3	Jan-22
<i>State Street PE Index (SSPEI) All PE Excluding PD</i>				-5.0	-5.0	-0.6	--	--	--	--	--	-0.6	Jan-22

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	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Natural Resources Assets</b>	<b>17,596,339</b>	<b>2.3</b>	<b>2.3</b>										
Hancock Timberland IX	3,549,954	0.5	20.2										
PRIT General Allocation Timberland <i>NCREIF Timberland</i>	12,137,509	1.6	69.0	-7.0 2.4	-6.8 2.4	-2.4 7.6	-- 12.5	-- 5.8	-- 4.7	-- 5.9	-- 6.8	-2.4 7.6	Jan-22 Jan-22
Oppenheimer Natural Resources	1,908,876	0.2	10.8										
<b>Infrastructure Assets</b>	<b>11,309,652</b>	<b>1.5</b>	<b>1.5</b>										
IFM Global Infrastructure (U.S.), L.P. <i>CPI+5%</i>	8,014,734	1.0	70.9	0.3 0.8	0.2 1.7	4.0 9.6	7.8 13.2	9.8 10.0	-- 8.8	-- 7.5	-- 7.5	10.4 9.2	Oct-18 Oct-18
Global Infrastructure Partners IV	3,294,917	0.4	29.1										
<b>Opportunistic Assets</b>	<b>38,037,835</b>	<b>5.0</b>	<b>5.0</b>										
HarbourVest Co-Investment Fund V, L.P.	4,745,161	0.6	12.5										
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	5,893,504	0.8	15.5										
PRIT General Allocation Hedge Funds <i>HFRI FOF Composite Index</i>	27,399,170	3.6	72.0	-1.8 -1.7	-0.6 -0.4	-3.4 -7.3	-- -6.9	-- 4.0	-- 3.0	-- 3.4	-- 3.5	-3.4 -7.3	Jan-22 Jan-22
<b>Balanced Assets</b>	<b>17,452,158</b>	<b>2.3</b>	<b>2.3</b>	<b>-5.0</b>	<b>-4.6</b>	<b>-14.3</b>	<b>-9.7</b>	<b>6.5</b>	<b>6.4</b>	<b>7.9</b>	<b>8.2</b>	<b>8.1</b>	<b>Apr-90</b>
<i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>				-7.3	-4.5	-20.4	-15.9	3.8	5.5	7.4	7.5	8.2	Apr-90
PRIT General Allocation <i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>	17,452,158	2.3	100.0	-5.0 -7.3	-4.6 -4.5	-14.3 -20.4	-9.7 -15.9	6.5 3.8	6.4 5.5	7.9 7.4	8.2 7.5	8.1 8.2	Apr-90 Apr-90
<b>Cash</b>	<b>11,960,579</b>	<b>1.6</b>	<b>1.6</b>										
Cash Account <i>91 Day T-Bills</i>	10,953,117	1.4	91.6	0.2	0.5	0.6	0.6	0.5	1.1	0.6	1.2	1.2	Jan-02
PRIM Cash Account	1,007,462	0.1	8.4										

Total Retirement System | As of September 30, 2022

	Cash Flow Summary					Month Return
	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	
Acadian Emerging Markets Small Cap	\$8,859,370	\$0	-\$8,294	-\$888,837	\$7,962,239	-10.22%
Adams Street Partners 2010	\$7,398,071	\$0	-\$219,145	-\$601,021	\$6,577,905	-8.13%
AEW Partners VII	\$509,400	\$0	\$0	\$12,239	\$521,639	2.40%
Axiom International Small Cap Equity	\$10,455,359	\$0	-\$6,277	-\$1,034,166	\$9,414,916	-9.95%
Beach Point Loan Fund	\$7,913,264	\$0	-\$3,201	-\$226,628	\$7,683,435	-2.90%
Brookfield Capital Partners IV	\$4,039,181	\$0	\$0	-\$190,564	\$3,848,617	-4.72%
Brookfield Capital Partners V, L.P.	\$3,934,194	\$251,161	\$0	-\$23,421	\$4,161,934	-0.59%
Brown Small Cap Fundamental Value	\$15,945,605	\$0	-\$13,379	-\$1,336,775	\$14,595,451	-8.55%
Cash Account	\$4,178,184	\$6,774,933	\$0	\$0	\$10,953,117	0.00%
Charlesbank Technology Opportunities Fund	\$4,617,826	\$380,371	\$0	\$165,743	\$5,163,940	3.58%
Columbia High Yield	\$11,252,582	\$0	-\$3,693	-\$441,389	\$10,807,500	-3.96%
Driehaus Emerging Markets Growth	\$36,358,885	\$0	\$0	-\$3,019,391	\$33,339,494	-8.30%
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$5,893,504	\$0	\$0	\$0	\$5,893,504	0.00%
FS Equity Partners VIII L.P.	\$4,700,771	\$0	\$0	\$408,111	\$5,108,882	8.68%
Global Infrastructure Partners IV	\$2,686,691	\$568,621	\$0	\$39,605	\$3,294,917	1.46%
Goldman Sachs Private Equity Partners 2005	\$478,031	\$0	\$0	\$3,118	\$481,149	0.65%
Hancock Timberland IX	\$3,549,358	\$0	\$0	\$596	\$3,549,954	0.02%
HarbourVest Co-Investment Fund V, L.P.	\$4,946,576	\$0	\$0	-\$201,415	\$4,745,161	-4.07%
IFM Global Infrastructure (U.S.), L.P.	\$7,991,097	\$0	\$0	\$23,637	\$8,014,734	0.30%
JPMCB Strategic Property Fund	\$12,162,262	\$0	\$0	-\$138,162	\$12,024,100	-1.14%
LLR Equity Partners V	\$6,025,134	\$0	\$0	\$375,360	\$6,400,494	6.23%
LLR Equity Partners VI, L.P.	\$2,084,606	\$0	\$0	\$41,502	\$2,126,108	1.99%
Loomis Sayles High Yield Conservative	\$11,354,086	\$0	-\$4,086	-\$453,338	\$10,896,662	-4.06%
North American Strategic Partners 2006	\$65,081	\$0	\$0	\$0	\$65,081	0.00%

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	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	Month Return
Oppenheimer Natural Resources	\$1,908,876	\$0	\$0	\$0	\$1,908,876	0.00%
PRIM Cash Account	\$1,006,939	\$3,993,061	-\$4,000,000	\$7,462	\$1,007,462	0.74%
PRIT Core Fixed Income	\$26,113,293	\$0	-\$2,254	-\$1,517,957	\$24,593,081	-5.82%
PRIT General Allocation	\$22,639,552	\$0	-\$3,993,062	-\$1,194,331	\$17,452,158	-4.98%
PRIT General Allocation Core FI	\$55,681,059	\$0	\$0	-\$3,683,683	\$51,997,376	-5.81%
PRIT General Allocation Domestic Equity	\$81,685,950	\$0	\$0	-\$6,275,390	\$75,410,560	-9.08%
PRIT General Allocation EME	\$16,826,694	\$0	\$0	-\$1,098,206	\$15,728,488	-10.40%
PRIT General Allocation Hedge Funds	\$28,146,470	\$0	\$0	-\$747,300	\$27,399,170	-1.77%
PRIT General Allocation Int. Equity	\$44,131,829	\$0	\$0	-\$3,589,675	\$40,542,153	-9.89%
PRIT General Allocation Private Equity	\$64,170,891	\$0	\$0	-\$1,041,480	\$63,129,411	-0.45%
PRIT General Allocation Real Estate	\$40,001,640	\$0	\$0	-\$824,059	\$39,177,581	-0.83%
PRIT General Allocation Timberland	\$12,237,595	\$0	\$0	-\$100,086	\$12,137,509	-7.00%
PRIT General Allocation Value Added FI	\$16,903,179	\$0	\$0	-\$779,683	\$16,123,496	-2.47%
PRIT Vintage Year 2001	\$64,396	\$1	\$0	-\$516	\$63,881	-0.80%
PRIT Vintage Year 2002	\$9,364	\$0	\$0	-\$18	\$9,347	-0.19%
Rhumblin QSI Index	\$29,538,086	\$0	-\$1,575	-\$2,528,189	\$27,008,321	-8.56%
RhumbLine Russell 1000 Growth Index	\$21,888,569	\$0	-\$1,112	-\$2,124,607	\$19,762,850	-9.71%
RhumbLine Russell 1000 Value Index	\$25,635,523	\$0	-\$1,316	-\$2,241,772	\$23,392,435	-8.75%
Ridgemont Equity Partners II	\$4,910,111	\$0	\$0	\$479,141	\$5,389,252	9.76%
Ridgemont Equity Partners III	\$7,419,905	\$0	\$0	\$681,765	\$8,101,670	9.19%
Rockwood Capital Real Estate Partners Fund XI, L.P.	\$4,595,081	\$475,388	\$0	\$69,158	\$5,139,627	1.50%
Rockwood X	\$6,908,635	\$0	\$0	-\$181,178	\$6,727,457	-2.62%
Searchlight Capital III	\$4,095,287	\$0	\$0	-\$167,346	\$3,927,941	-4.09%
SSgA MSCI EAFE Index	\$35,152,648	\$0	-\$2,657	-\$3,271,820	\$31,878,171	-9.32%
SSgA TIPS Index	\$16,342,102	\$0	-\$763	-\$1,074,325	\$15,267,014	-6.58%

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	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	Month Return
SSgA U.S. Aggregate Bond Index-NL	\$20,798,222	\$0	-\$995	-\$894,311	\$19,902,916	-4.30%
TA XII	\$3,320,203	\$0	\$0	\$33,578	\$3,353,781	1.01%
TerraCap Partners IV (Institutional), L.P.	\$4,529,131	\$0	-\$80,386	-\$121,215	\$4,327,530	-2.68%
Torchlight Debt Opportunity Fund VI	\$3,898,320	\$0	-\$286,318	\$102,706	\$3,714,708	2.64%
Trilantic Capital Partners VI	\$4,659,152	\$232,492	\$0	\$384,323	\$5,275,967	8.24%
UBS Trumbull Property Fund	\$3,269,954	\$0	-\$110,606	-\$6,778	\$3,152,569	-0.21%
UBS Trumbull Property Income Fund	\$11,444,446	\$0	\$0	\$36,593	\$11,481,039	0.32%
Wellspring Capital Partners VI	\$6,048,908	\$0	\$0	\$189,157	\$6,238,065	3.13%
<b>Total</b>	<b>\$803,381,123</b>	<b>\$12,676,028</b>	<b>-\$8,739,119</b>	<b>-\$38,965,236</b>	<b>\$768,352,796</b>	<b>--</b>



Private Market Managers' Performance Overview<sup>1</sup>

Managers	Strategy	Vintage Year	Commitment Amount (\$mm)	% called	Median Peer IRR	Quartile Rank	Net IRR	Net Multiple
<b>Real Estate Managers</b>								
AEW Partners VII	Opportunistic	2014	5.0	91%	9.9	2	11.1%	1.4x
Rockwood X	Value-Added	2016	10.0	85%	11.9	4	7.6%	1.2x
Torchlight Debt Opportunity Fund VI	Opportunistic	2019	5.0	100%	NM <sup>2</sup>	NM	NM	NM
TerraCap Partners IV	Value-Added	2019	5.0	100%	NM	NM	NM	NM
Rockwood XI	Value-Added	2019	8.0	47%	NM	NM	NM	NM
<b>Private Equity Managers</b>								
Adams Street Partners	Fund of Funds	2010	10.0	89%	13.0	3	12.9%	1.8x
Goldman Sachs PE Partners	Fund of Funds	2005	10.0	100%	8.0	3	4.6%	1.4x
North American Strategic Partners <sup>3</sup>	Fund of Funds	2006	9.1	88%	7.2	3	6.4%	1.4x
PRIT Vintage Year 2001	Fund of Funds	2001	2.5	NA	8.5	NA	NA	NA
PRIT Vintage Year 2002	Fund of Funds	2002	0.5	NA	8.1	NA	NA	NA
Brookfield Capital Partners IV	Buyout	2015	4.0	80%	21.1	1	46.9%	2.6x
LLR Equity Partners V	Buyout	2017	5.0	80%	29.5	3	19.1%	1.4x
Ridgemont Equity Partners II	Buyout	2015	6.0	70%	21.1	2	16.1%	1.6x

<sup>1</sup> As of 06/30/2021.

<sup>2</sup> NM" indicates that a fund is early in its investment period; therefore, the return is not yet meaningful. A not meaningful return is generated by funds with less than 24 months of activity.

<sup>3</sup> IRR and multiple are as of 12/31/2020.

Private Market Managers' Performance Overview (continued)<sup>1</sup>

Managers	Strategy	Vintage Year	Commitment		Median Peer IRR	Quartile Rank	Net IRR	Net Multiple
			Amount (\$mm)	% called				
TA XII	Growth Equity	2016	4.0	100%	23.0	1	41.7%	2.8x
Wellspring VI	Buyout	2017	5.0	77%	29.5	3	21.3%	1.3x
Trilantic Capital Partners VI	Buyout	2018	5.0	36%	29.7	4	6.2%	1.1x
Brookfield Capital Partners V	Buyout	2019	4.0	54%	NM <sup>2</sup>	NM	NM	NM
FS Equity Partners VIII	Buyout	2019	5.0	52%	NM	NM	NM	NM
Ridgemont Equity Partners III	Buyout	2019	6.0	60%	NM	NM	NM	NM
Searchlight Capital III	Special Situations	2020	5.0	45%	NM	NM	NM	NM
Charlesbank Technology Opportunities	Buyout	2019	5.0	31%	NM	NM	NM	NM
LLR Equity Partners VI	Buyout	2020	4.0	24%	NM	NM	NM	NM
<b>Opportunistic Managers</b>								
HarbourVest Co-Investment Fund IV	Opportunistic	2019	4.0	48%	NM	NM	NM	NM
EnTrustPermal Spec. Opps. Evergreen Fund	Opportunistic	2020	6.0	55%	NM	NM	NM	NM
<b>Infrastructure Managers</b>								
Global Infrastructure Partners IV	Value-Added	2019	5.0	11%	NM	NM	NM	NM
<b>Natural Resources Managers</b>								
Hancock Timberland	Timber	2008	8.0	100%	--	--	-0.3%	1.0x
Oppenheimer Natural Resources	Natural Resources	2010	7.0	100%	--	--	-4.3%	0.7x

<sup>1</sup> As of 06/30/2021.

<sup>2</sup> NM<sup>2</sup> indicates that a fund is early in its investment period; therefore, the return is not yet meaningful. A not meaningful return is generated by funds with less than 24 months of activity.

## **Disclaimer, Glossary, and Notes**

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

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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.