

# City of Quincy Retirement System

April 30, 2023

Interim Update

## Agenda

1. Executive Summary
  - April Market Overview
  - Manager Highlights
2. Interim Update as of April 30, 2023
3. Private Equity RFP Finalist Review
4. Disclaimer, Glossary & Notes

## **Executive Summary**

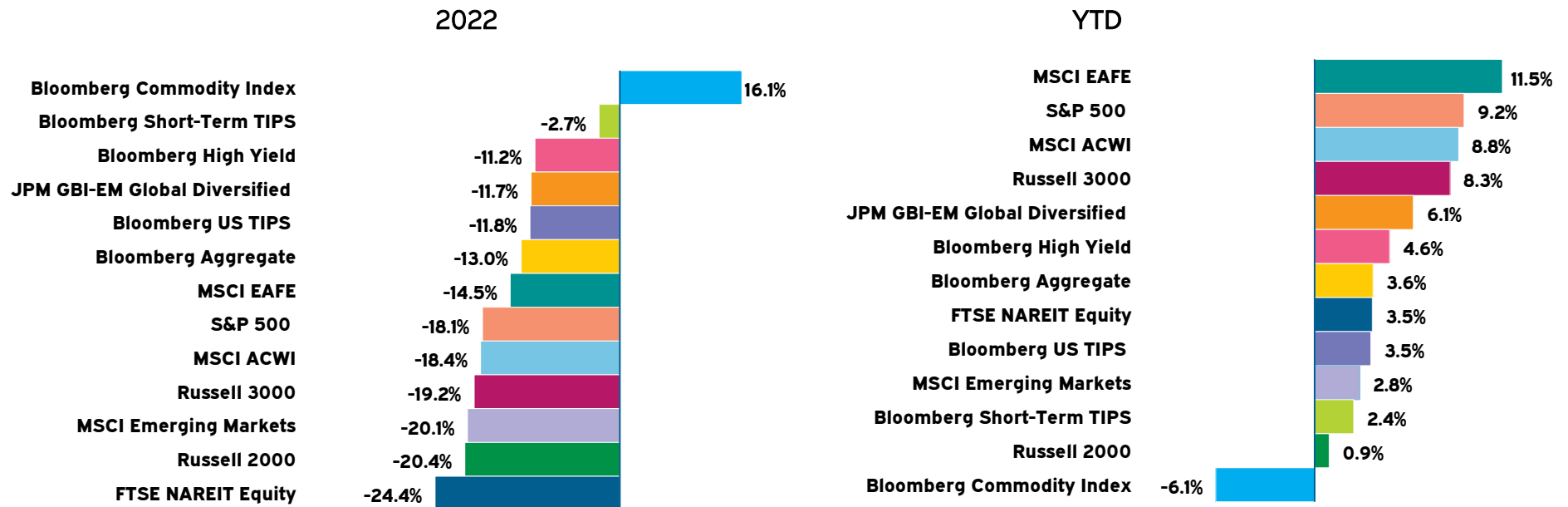
## **Economic and Market Update**

Data as of April 30, 2023

### Commentary

- Most asset classes added to first quarter gains in April as investors remained focused on slowing inflation and a potential end to rate hikes.
- The Fed increased interest rates for the tenth time after month-end, to a range of 5.0% - 5.25%, with this action largely expected to be their final hike.
  - Political struggles over the debt ceiling led to a significant increase in short-term rates and a historically high price of the cost to insure against defaults on US Treasuries.
  - US equity markets (Russell 3000) rose in April (+1.1%) adding to YTD gains (+8.3%). Some of the largest technology names drove positive results, with lingering issues in the banking sector (e.g., First Republic) weighing on parts of the equity markets.
  - Non-US developed equity markets also rallied in April (MSCI EAFE +2.8%) extending the outperformance relative to the US so far in 2023 (+11.5% versus +8.3%).
  - Emerging market equities fell in April (-1.1%) driven by declines in China (-5.2%). They significantly trail developed market equities YTD returning +2.8% partly due to higher US-China tensions.
  - After a strong March driven by the issues in the banking sector, bonds had more subdued gains in April, with the broad US bond market (Bloomberg Aggregate) gaining 0.6% for the month.
- This year, the path of inflation and monetary policy, slowing global growth, and the war in Ukraine, as well as recent pressures in regional banks and the looming debt ceiling breach in the US, will all be key.

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



→ After a particularly difficult 2022, most public market assets are up in 2023, building on gains from the fourth quarter of last year.

→ Risk sentiment has been supported by expectations that policy tightening could be ending soon, as inflation continues to fall and growth has slowed.

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of April 30, 2023.

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

Domestic Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	1.6	7.5	9.2	2.7	14.5	11.4	12.2
Russell 3000	1.1	7.2	8.3	1.5	14.1	10.6	11.7
Russell 1000	1.2	7.5	8.8	1.8	14.2	11.1	12.0
Russell 1000 Growth	1.0	14.4	15.5	2.3	13.6	13.8	14.5
Russell 1000 Value	1.5	1.0	2.5	1.2	14.4	7.7	9.1
Russell MidCap	-0.5	4.1	3.5	-1.7	13.8	8.0	9.9
Russell MidCap Growth	-1.4	9.1	7.6	1.6	9.2	9.0	10.8
Russell MidCap Value	0.0	1.3	1.3	-3.5	15.8	6.4	8.7
Russell 2000	-1.8	2.7	0.9	-3.6	11.9	4.1	7.9
Russell 2000 Growth	-1.2	6.1	4.8	0.7	7.8	4.0	8.4
Russell 2000 Value	-2.5	-0.7	-3.1	-8.0	15.5	3.7	7.0

#### US Equities: Russell 3000 Index rose 1.1% in April and 8.3% YTD.

- US stocks rose in April as optimism over the Fed potentially ending its rate hiking campaign was mitigated by lingering concerns in the banking sector and slowing growth. Year-to-date gains in the US equity market remain strong though.
- Most sectors in the Russell 3000 index rose during the month, led by consumer staples and communication services. Growth stocks have significantly outperformed value stocks across the market capitalization spectrum this year, particularly in the large cap space due to technology stocks.
- The resurgence of large cap technology stocks is also driving the outperformance of the large cap indices versus the small cap indices. Weakness in the performance of small cap bank stocks is also contributing to results.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2023.

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

Foreign Equity	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	1.7	6.9	8.7	3.0	9.8	2.5	4.0
MSCI EAFE	2.8	8.5	11.5	8.4	11.7	3.6	4.8
MSCI EAFE (Local Currency)	2.3	7.5	9.9	7.7	13.5	5.8	7.1
MSCI EAFE Small Cap	2.0	4.9	7.0	-1.2	9.2	1.0	5.7
MSCI Emerging Markets	-1.1	4.0	2.8	-6.5	4.3	-1.0	1.8
MSCI Emerging Markets (Local Currency)	-0.7	3.8	3.1	-3.9	5.5	1.5	5.0
MSCI China	-5.2	4.7	-0.7	-5.8	-6.3	-5.0	2.7

**Foreign Equity: Developed international equities (MSCI EAFE) rose 2.8% in April and 11.5% YTD. Emerging market equities (MSCI EM) fell -1.1% for the month but rose 2.8% YTD.**

- Non-US equities had mixed results in April with developed markets (MSCI EAFE) gaining and outpacing US equities (2.8% versus 1.1%) for the month, while emerging markets (MSCI Emerging Markets) were the one area that declined (-1.1%).
- Developed market equity gains were broad-based across European sectors, while financials and energy were strong in the UK. In Japan, further weakness in the yen continued to boost market sentiment.
- The decline in emerging market equities (-1.1%) was driven largely by China (-5.2%). An escalation in US-China tensions and mixed results from the reopening of their economy weighed on shares. Taiwan also experienced marked declines over geopolitical concerns and weakness in semiconductors, while India was a bright spot.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2023.



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

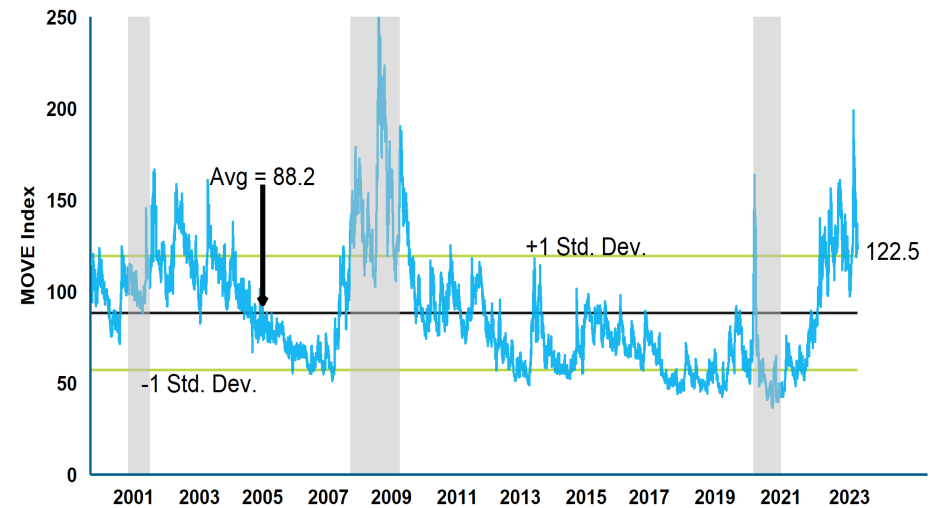
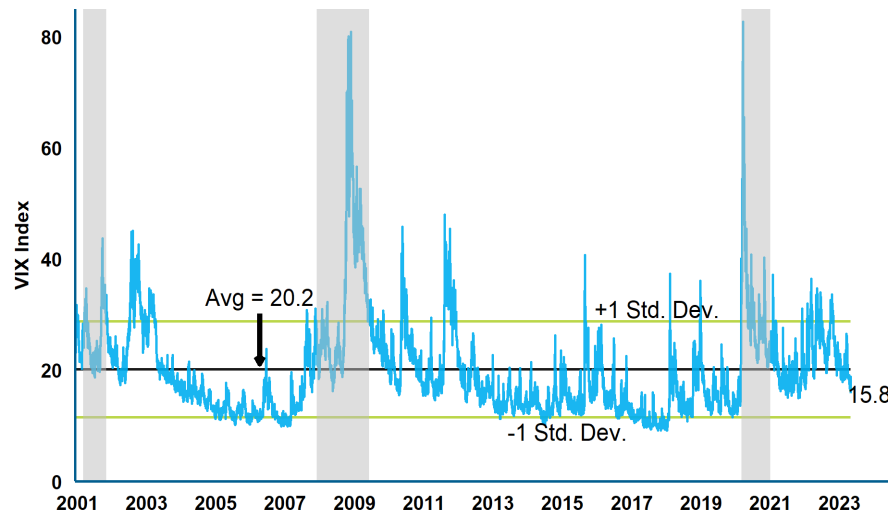
Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.6	2.9	3.6	-0.3	-2.5	1.3	1.6	4.8	6.3
Bloomberg Aggregate	0.6	3.0	3.6	-0.4	-3.2	1.2	1.3	4.4	6.5
Bloomberg US TIPS	0.1	3.3	3.5	-4.0	0.9	3.0	1.4	4.0	7.0
Bloomberg Short-term TIPS	0.2	2.2	2.4	-0.1	3.1	3.0	1.6	4.6	2.6
Bloomberg High Yield	1.0	3.6	4.6	1.2	4.7	3.3	4.0	8.5	4.2
JPM GBI-EM Global Diversified (USD)	0.9	5.2	6.1	6.6	-0.1	-1.6	-1.8	7.0	5.0

**Fixed Income: The Bloomberg Universal rose 0.6% in April and 3.6% YTD as global sovereign debt yields generally declined for major economies.**

- As issues in the banking sector from March eased, the US bond market had a calm April, with interest rates, outside of the very shortest maturities, remaining stable.
- The TIPS index and short-term TIPS index had gains for the month but trailed the broad US bond market (Bloomberg Aggregate).
- High yield bonds (+1.0%) had the best results for the month as they particularly benefited from support for the banking sector.

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

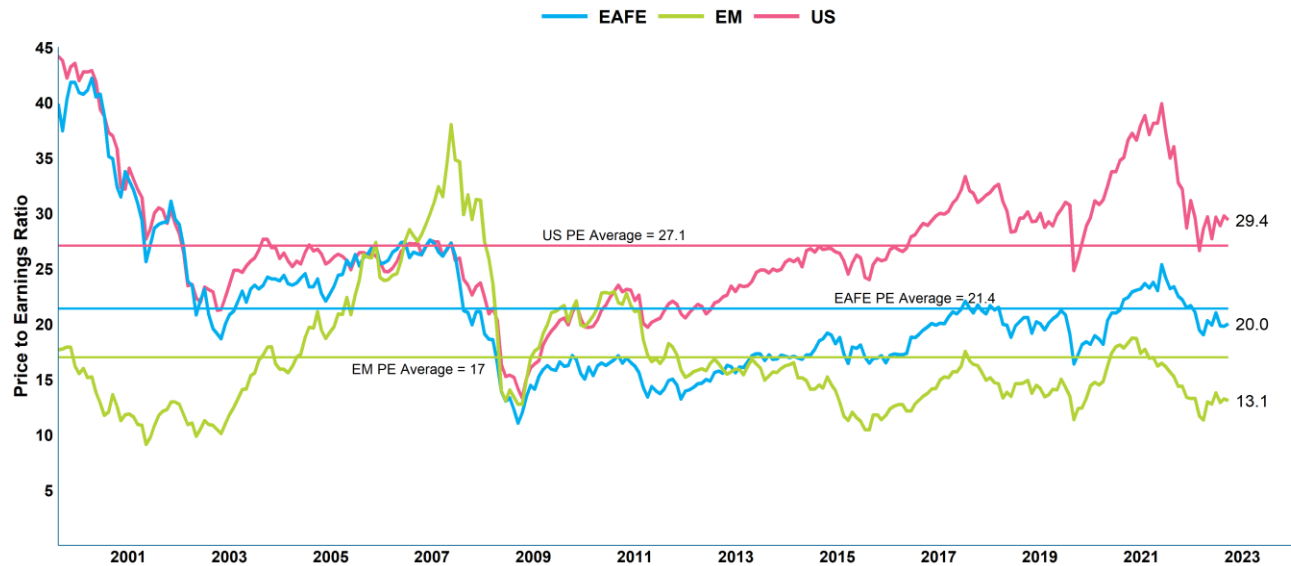
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in equities (VIX) continued to decline in April, reaching levels not seen since late 2021 as investors anticipate the end of the Fed’s policy tightening.
- In comparison, the bond market remains on edge after last year’s historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above its long-run average, but off its recent peak during the heart of the banking crises.

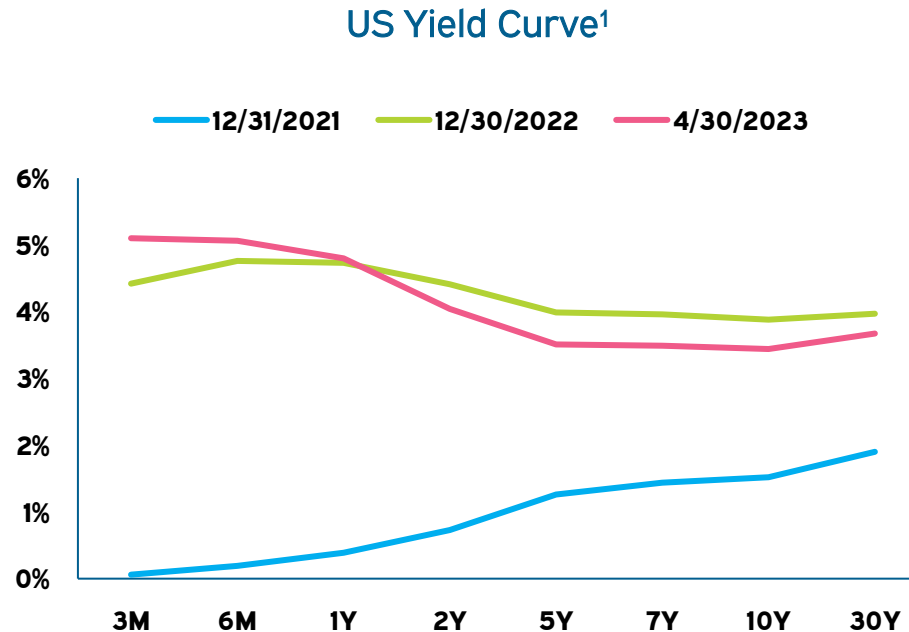
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2023. The average line indicated is the average of the VIX and MOVE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

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



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

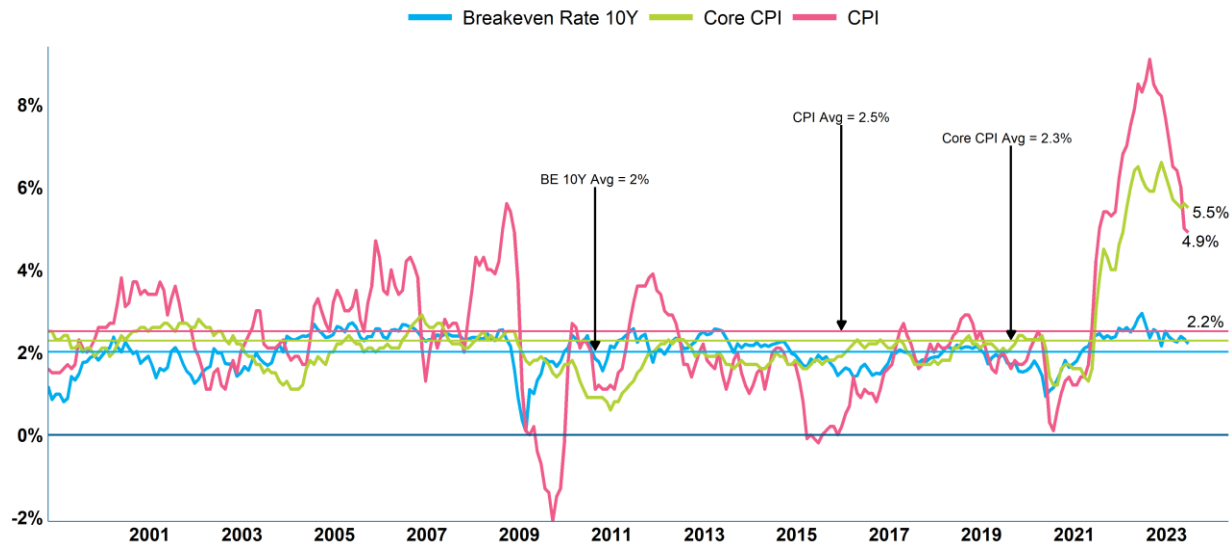
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly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



- Interest rates have declined this year for maturities two years and beyond, given expectations for peaking policy, while the rates on the very shortest maturities increased due to debt ceiling concerns.
- During April, interest rates at the very front-end of the yield curve rose significantly as the debt ceiling debate continued while other maturities remained largely flat.
- After hitting -1.07% in early March, the yield spread between two-year and ten-year Treasuries finished the month largely unchanged at -0.59%. The more closely watched measure (by the Fed) of three-month and ten-year Treasuries remained inverted. Inversions in the yield curve have often preceded recessions.

<sup>1</sup> Source: Bloomberg. Data is as of April 30, 2023.

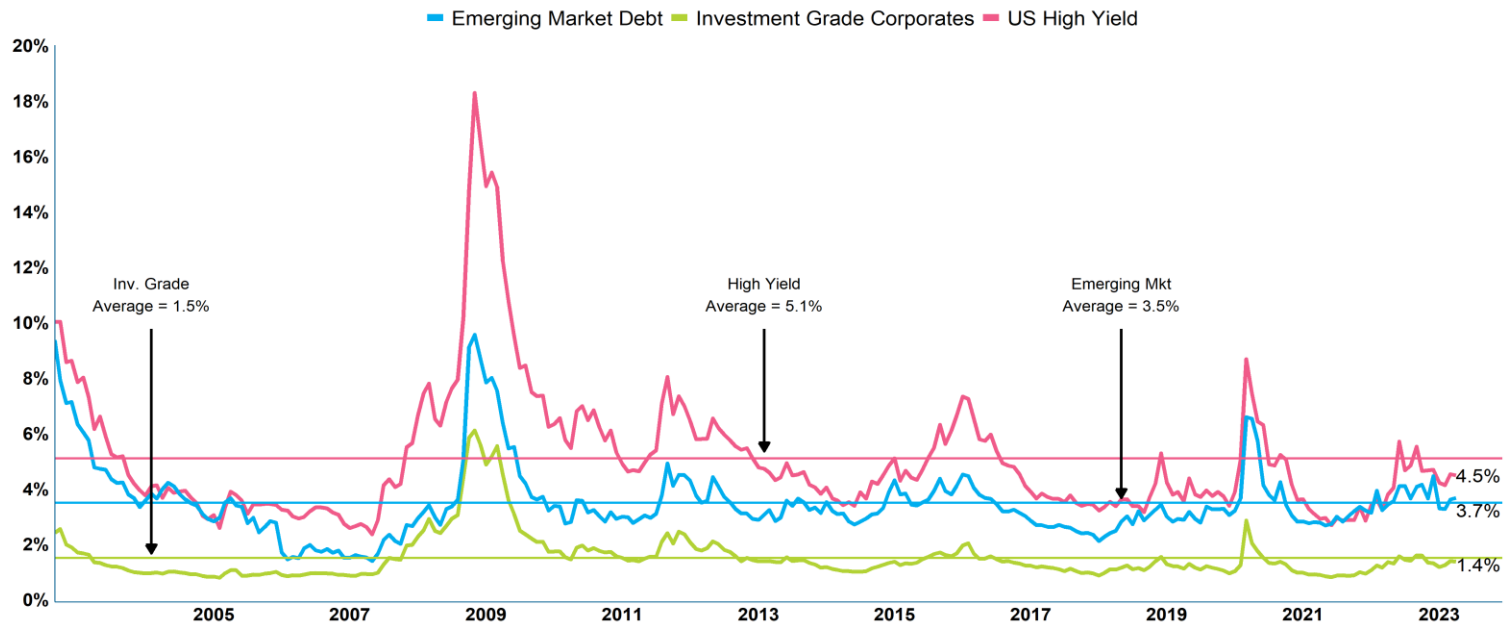
**Ten-Year Breakeven Inflation and CPI<sup>1</sup>**



- Inflation continued to decline in April, with the year-over-year reading falling from 5.0% to 4.9% (slightly below expectations). The month-over-month rate of price increases was 0.4% (matching expectations), with food prices remaining flat, energy prices slightly increasing (0.6%), and all other areas rising 0.4% in aggregate.
- Core inflation – excluding food and energy - fell slightly (5.6% to 5.5%) but remained stubbornly high as the cost for shelter continued to rise.
- Inflation expectations (breakevens) declined very slightly for the month as investors continue to expect inflation to track back toward the Fed’s 2% target.

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

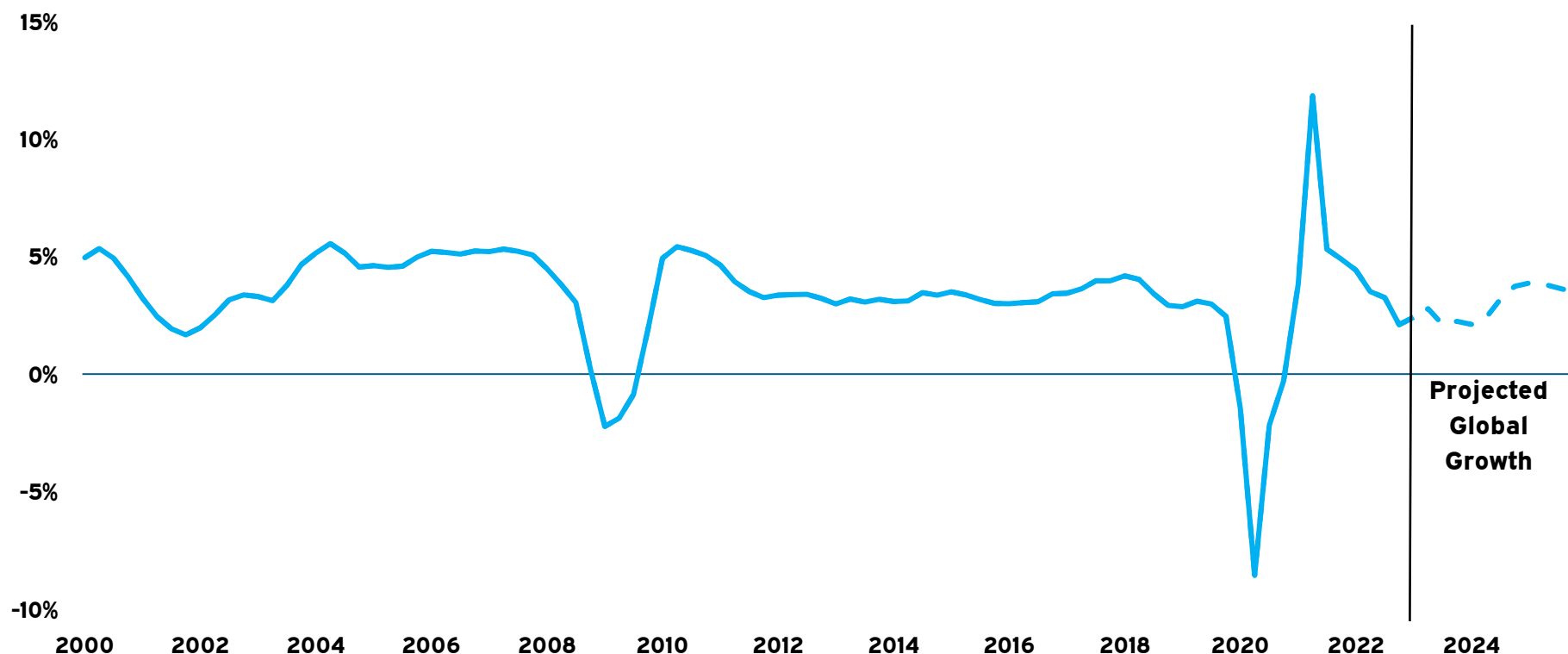
**Credit Spreads vs. US Treasury Bonds<sup>1</sup>**



- Spreads (the added yield above a comparable maturity Treasury) were stable in April as concerns over the banking sector subsided and government and corporate bonds had similar gains.
- High yield spreads remain below the long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

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

### Global Real Gross Domestic Product (GDP) Growth<sup>1</sup>

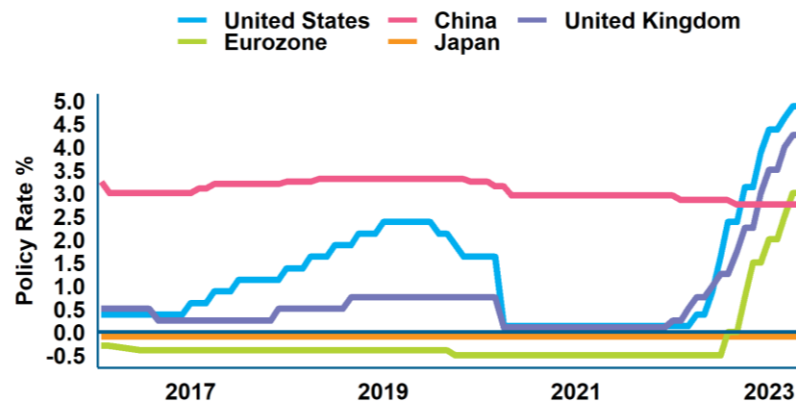


- Global economies are expected to slow this year compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

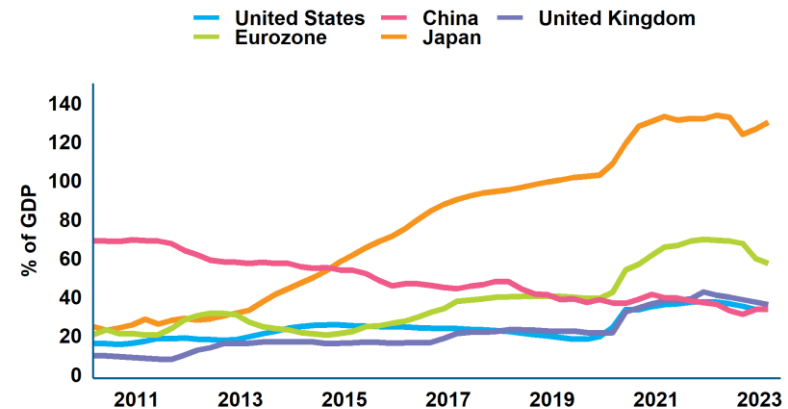
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated April 2023.

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

#### Policy Rates



#### Balance Sheet as % of GDP

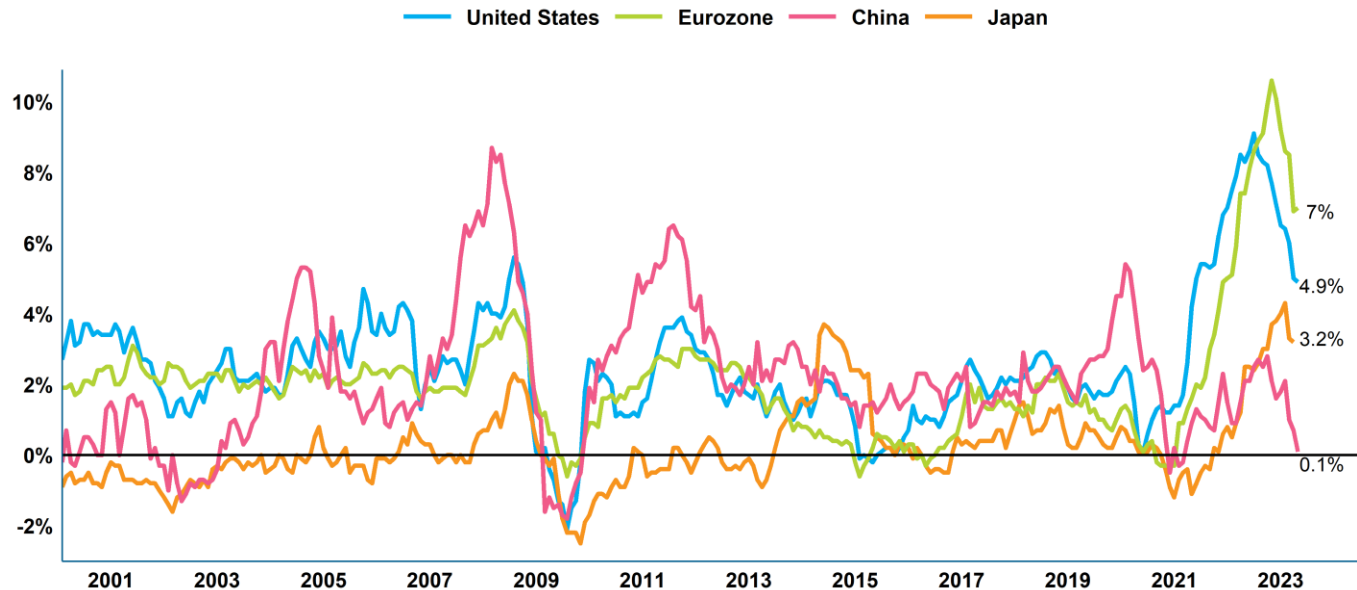


- In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and recent signs of instability in the banking sector have led to expectations for the slowing of policy tightening going forward.
- Since month-end, the Fed remained committed to fighting inflation despite pressures in the banking sector, raising rates another 25 basis points to a range of 5.0% to 5.25% at its early May meeting. This is largely expected to be the Fed's last rate hike in this cycle.
- China's central bank is a notable exception. They are expected to maintain an accommodative monetary stance to support the economy.
- Looking ahead the risk remains for a policy error as central banks attempt to balance bringing down inflation, maintaining financial stability, and growth.

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



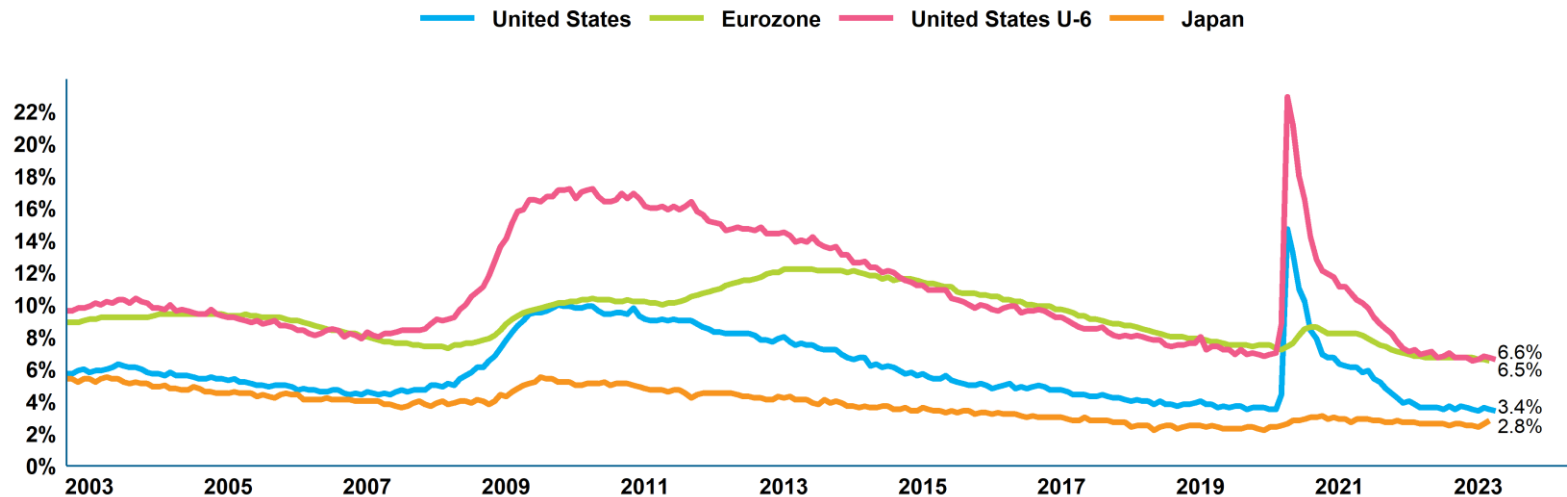
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



- Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- In the US, inflation fell to 4.9% at month-end, while eurozone inflation increased slightly (7.0% versus 6.9%) a level well off its peak. Despite 2023's declines in the US and Europe, inflation levels remain elevated.
- Inflation remains relatively lower in China and Japan and has also declined recently. In China, inflation levels approached 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

<sup>1</sup> Source: Bloomberg. Data is as April 30, 2023. The most recent Japanese inflation data is as of March 2023.

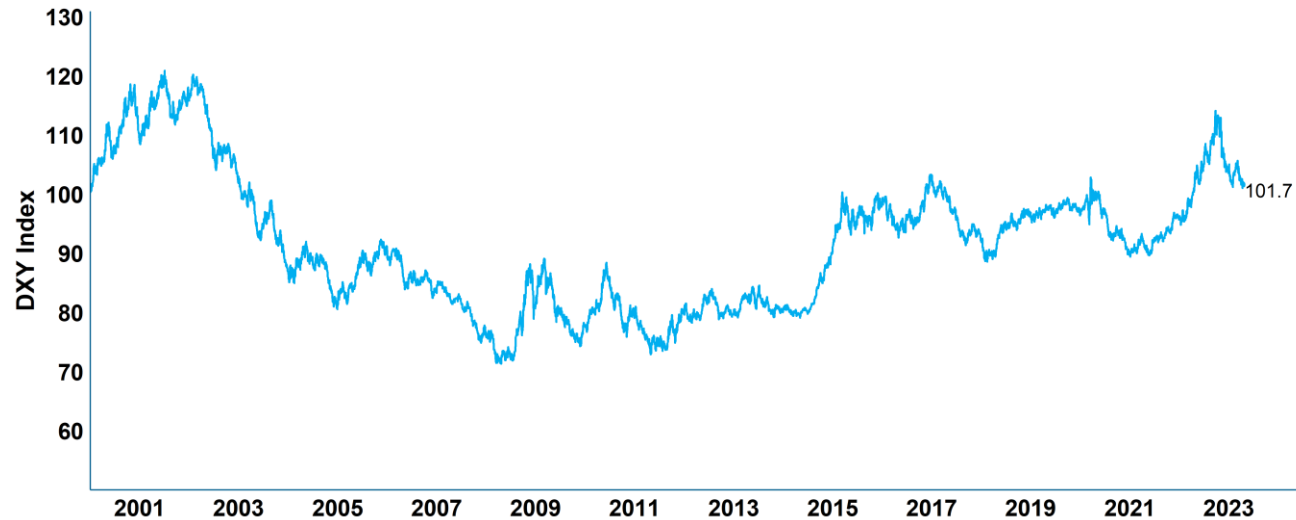
### Unemployment<sup>1</sup>



- Labor markets have significantly improved from the pandemic as economies have largely reopened.
- Despite slowing growth and high inflation, the US labor market remains a particular bright spot. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.6% but also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, likely leading to higher unemployment.
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been relatively flat through the pandemic given less layoffs.

<sup>1</sup> Source: Bloomberg. Data is as April 30, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of March 2023.

US Dollar versus Broad Currencies<sup>1</sup>



- 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 has fallen, as weaker economic data and declining inflation led to investors anticipating the end of Fed tightening.
- This year, the track of inflation across economies and the corresponding monetary policies will likely be key drivers of currency moves.

<sup>1</sup> Source: Bloomberg. Data as of April 30, 2023.

## Summary

### Key Trends:

- The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- Recent issues related to the banking sector have created a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- In the US, the end of many fiscal programs is expected to put the burden of continued growth on consumers. Costs for shelter, medical care, and education could continue to rise, keeping 'sticky price' inflation at elevated levels.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.

## Manager Highlights

#### Axiom International Small Cap Equity

→ Axiom lagged its benchmark in April, returning -0.3% vs. the benchmark 1.4%.

- From a sector perspective, industrials and information technology detracted from relative returns. Within industrials, Baycurrent, a Japanese IT consulting firm was the biggest detractor reversing its 1Q outperformance.
- Regionally, the Europe ex UK was the largest detractor, due to Melexis, Teleperformance and ASM International.

→ Since inception, Axiom has returned 8.0%, trailing the benchmark, which has returned 9.6% over that period.

#### Loomis Sayles High Yield

→ Loomis underperformed its benchmark by 0.6% in April, posting a return of 0.4% vs the benchmark's 1.0%.

- Underperformance was driven primarily by security selection. Convertibles, high yield credit, and emerging market credit sectors were the main detractors.
- On an absolute basis, the allocation to convertibles, as a sector, had the greatest negative impact. Exposure to securities issued by Dish Network detracted from performance.

→ Since inception, Loomis has returned 4.4%, lagging the benchmark by 0.7%, net of fees, over that period.

### Acadian Emerging Markets Small Cap

- Acadian outperformed its benchmark by 1.3% in April, posting a return of 2.0% vs the benchmark's 0.7%.
- Stock selection contributed the majority of excess return, while country allocations were also positive.
  - Key sources of positive active return included stock selection in India, stock selection in China, and stock selection in South Korea.
  - From a sector perspective, key sources of positive active return included stock selection in information technology, stock selection in communication services, and stock selection in utilities.
- Since inception, Acadian has returned 6.3%, well outpacing its benchmark, which has returned 3.2% over that period.

### Brown Small Cap Fundamental Value

- Brown beat its benchmark by 0.7% in April, posting a return of -1.8% vs the benchmark's -2.5%.
- The portfolio's IT, materials, and real estate holdings provided positive contribution relative to the benchmark, for the month. Among the top five contributors were CTS Corporation (CTS), Onto Innovation (ONTO), and La- Z-Boy Incorporated (LZB).
- Since inception, Brown has returned 6.7%, trailing the Russell 2000 Value index by 0.3%, net of fees.

**Interim Update  
As of April 30, 2023**



Allocation vs. Targets and Policy				
	Current Balance	Current Allocation	Policy	Policy Range
US Equity	\$180,139,634	22%	24%	19% - 29%
Developed Market Equity	\$98,764,787	12%	13%	8% - 18%
Emerging Market Equity	\$61,381,144	8%	12%	7% - 17%
Investment Grade Bonds	\$72,916,789	9%	5%	2% - 8%
Long-Term Government Bonds	\$25,887,098	3%	7%	2% - 12%
TIPS	\$16,112,514	2%	4%	1% - 7%
Emerging Market Bonds	--	--	2%	0% - 4%
High Yield Bonds	\$40,072,072	5%	6%	3% - 9%
Bank Loans	\$8,315,549	1%	2%	0% - 4%
Private Equity	\$130,617,385	16%	10%	5% - 15%
Real Estate	\$84,415,942	10%	10%	5% - 15%
Natural Resources	\$17,556,269	2%	3%	0% - 6%
Infrastructure	\$12,541,195	2%	2%	0% - 5%
Opportunistic	\$36,536,424	5%	0%	0% - 5%
Balanced Assets	\$16,176,241	2%	--	--
Cash	\$9,028,510	1%	0%	0% - 5%
<b>Total</b>	<b>\$810,461,555</b>	<b>100%</b>	<b>100%</b>	
	Current Balance	Current Allocation	Policy	Policy Range
Total Equity Including PE	\$470,902,950	58%	59%	--
Total Fixed Income	\$163,304,022	20%	26%	--
Real Assets	\$114,513,406	14%	15%	--
Other	\$61,741,175	8%	0%	--

Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement System (gross)</b>	<b>810,461,555</b>	<b>100.0</b>	<b>0.6</b>	<b>4.4</b>	<b>0.2</b>	<b>10.3</b>	<b>7.0</b>	<b>6.9</b>	<b>7.1</b>	<b>8.2</b>	<b>Jan-89</b>
<b>Total Retirement System</b>			<b>0.6</b>	<b>4.4</b>	<b>0.1</b>	<b>10.1</b>	<b>6.8</b>	<b>6.7</b>	<b>6.8</b>	<b>7.8</b>	
<b>Domestic Equity Assets</b>	<b>180,139,634</b>	<b>22.2</b>	<b>1.0</b>	<b>6.7</b>	<b>1.9</b>	<b>14.4</b>	<b>9.9</b>	<b>11.2</b>	<b>9.9</b>	<b>9.8</b>	<b>Jul-93</b>
<i>Russell 3000</i>			<i>1.1</i>	<i>8.3</i>	<i>1.5</i>	<i>14.1</i>	<i>10.6</i>	<i>11.7</i>	<i>10.1</i>	<i>9.7</i>	<i>Jul-93</i>
<b>International Developed Market Equity Assets</b>	<b>98,764,787</b>	<b>12.2</b>	<b>2.4</b>	<b>11.0</b>	<b>6.1</b>	<b>11.3</b>	<b>2.2</b>	<b>4.3</b>	<b>6.3</b>	<b>4.9</b>	<b>Feb-98</b>
<i>MSCI EAFE</i>			<i>2.8</i>	<i>11.5</i>	<i>8.4</i>	<i>11.7</i>	<i>3.6</i>	<i>4.8</i>	<i>7.0</i>	<i>4.7</i>	<i>Feb-98</i>
<b>International Emerging Market Equity Assets</b>	<b>61,381,144</b>	<b>7.6</b>	<b>-0.2</b>	<b>4.3</b>	<b>-5.0</b>	<b>8.7</b>	<b>3.2</b>	<b>3.0</b>	<b>--</b>	<b>5.7</b>	<b>Sep-08</b>
<i>MSCI Emerging Markets</i>			<i>-1.1</i>	<i>2.8</i>	<i>-6.5</i>	<i>4.3</i>	<i>-1.0</i>	<i>1.8</i>	<i>8.7</i>	<i>2.6</i>	<i>Sep-08</i>
<b>Investment Grade Bond Assets</b>	<b>72,916,789</b>	<b>9.0</b>	<b>0.4</b>	<b>4.3</b>	<b>-3.2</b>	<b>-4.4</b>	<b>0.4</b>	<b>0.9</b>	<b>3.0</b>	<b>4.2</b>	<b>Jul-93</b>
<i>Bloomberg US Aggregate TR</i>			<i>0.6</i>	<i>3.6</i>	<i>-0.4</i>	<i>-3.1</i>	<i>1.2</i>	<i>1.3</i>	<i>3.2</i>	<i>4.5</i>	<i>Jul-93</i>
<b>Long-Term Government Bond Assets</b>	<b>25,887,098</b>	<b>3.2</b>	<b>0.3</b>	<b>4.6</b>	<b>-4.2</b>	<b>-4.5</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>1.9</b>	<b>Dec-15</b>
<i>PRIT Core Fixed Income</i>			<i>0.3</i>	<i>4.8</i>	<i>-4.0</i>	<i>-4.4</i>	<i>1.6</i>	<i>2.3</i>	<i>3.7</i>	<i>2.0</i>	<i>Dec-15</i>
<b>TIPS Assets</b>	<b>16,112,514</b>	<b>2.0</b>	<b>0.1</b>	<b>3.6</b>	<b>-4.0</b>	<b>0.8</b>	<b>3.0</b>	<b>1.4</b>	<b>--</b>	<b>3.6</b>	<b>Mar-07</b>
<i>Bloomberg US TIPS TR</i>			<i>0.1</i>	<i>3.5</i>	<i>-4.0</i>	<i>0.9</i>	<i>3.0</i>	<i>1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>Mar-07</i>
<b>High Yield Bond Assets</b>	<b>40,072,072</b>	<b>4.9</b>	<b>0.7</b>	<b>3.8</b>	<b>0.8</b>	<b>5.2</b>	<b>3.5</b>	<b>3.5</b>	<b>--</b>	<b>5.4</b>	<b>Apr-07</b>
<i>Bloomberg US High Yield TR</i>			<i>1.0</i>	<i>4.6</i>	<i>1.2</i>	<i>4.7</i>	<i>3.3</i>	<i>4.0</i>	<i>6.8</i>	<i>5.9</i>	<i>Apr-07</i>
<b>Bank Loan Assets</b>	<b>8,315,549</b>	<b>1.0</b>	<b>1.1</b>	<b>4.9</b>	<b>3.2</b>	<b>6.6</b>	<b>3.4</b>	<b>--</b>	<b>--</b>	<b>3.4</b>	<b>Aug-14</b>
<i>Credit Suisse Leveraged Loans</i>			<i>0.9</i>	<i>4.1</i>	<i>2.9</i>	<i>7.2</i>	<i>3.6</i>	<i>3.9</i>	<i>4.7</i>	<i>3.8</i>	<i>Aug-14</i>
<b>Total Real Estate</b>	<b>84,415,942</b>	<b>10.4</b>	<b>-0.2</b>	<b>-2.2</b>	<b>-2.3</b>	<b>6.1</b>	<b>5.9</b>	<b>8.2</b>	<b>--</b>	<b>--</b>	<b>Jan-89</b>
<i>NCREIF ODCE</i>			<i>0.0</i>	<i>-3.2</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.5</i>	<i>9.5</i>	<i>8.1</i>	<i>7.4</i>	<i>Jan-89</i>

Some asset classes may show skewed performance relative to month over month changes in market value, this is due to PRIM General Allocation funds having their performance user entered while their market values are estimated using PRIM's current asset allocation.

	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity Assets</b>	<b>130,617,385</b>	<b>16.1</b>									
<b>Natural Resources Assets</b>	<b>17,556,269</b>	<b>2.2</b>									
<b>Infrastructure Assets</b>	<b>12,541,195</b>	<b>1.5</b>									
<b>Opportunistic Assets</b>	<b>36,536,424</b>	<b>4.5</b>									
<b>Balanced Assets (PRIT General Allocation Fund)</b>	<b>16,176,241</b>	<b>2.0</b>	<b>0.7</b>	<b>4.4</b>	<b>-0.7</b>	<b>10.1</b>	<b>7.2</b>	<b>7.8</b>	<b>8.2</b>	<b>8.3</b>	<b>Apr-90</b>
<i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>			<i>0.9</i>	<i>6.5</i>	<i>1.0</i>	<i>7.3</i>	<i>7.3</i>	<i>7.8</i>	<i>7.6</i>	<i>8.4</i>	<i>Apr-90</i>
<b>Cash</b>	<b>9,028,510</b>	<b>1.1</b>									

	Trailing Net Performance											Inception (%)	Inception Date
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)			
<b>Total Retirement System (gross)</b>	<b>810,461,555</b>	<b>100.0</b>	<b>--</b>	<b>0.6</b>	<b>4.4</b>	<b>0.2</b>	<b>10.3</b>	<b>7.0</b>	<b>6.9</b>	<b>7.1</b>	<b>8.2</b>	<b>Jan-89</b>	
<b>Total Retirement System</b>				<b>0.6</b>	<b>4.4</b>	<b>0.1</b>	<b>10.1</b>	<b>6.8</b>	<b>6.7</b>	<b>6.8</b>	<b>7.8</b>		
<b>Domestic Equity Assets</b>	<b>180,139,634</b>	<b>22.2</b>	<b>22.2</b>	<b>1.0</b>	<b>6.7</b>	<b>1.9</b>	<b>14.4</b>	<b>9.9</b>	<b>11.2</b>	<b>9.9</b>	<b>9.8</b>	<b>Jul-93</b>	
<i>Russell 3000</i>				<i>1.1</i>	<i>8.3</i>	<i>1.5</i>	<i>14.1</i>	<i>10.6</i>	<i>11.7</i>	<i>10.1</i>	<i>9.7</i>	<i>Jul-93</i>	
RhumbLine Russell 1000 Growth Index	23,320,311	2.9	12.9	1.0	15.5	2.3	13.6	13.8	14.4	--	11.0	Jun-05	
<i>Russell 1000 Growth</i>				<i>1.0</i>	<i>15.5</i>	<i>2.3</i>	<i>13.6</i>	<i>13.8</i>	<i>14.5</i>	<i>11.2</i>	<i>11.1</i>	<i>Jun-05</i>	
RhumbLine Russell 1000 Value Index	26,959,455	3.3	15.0	1.5	2.5	1.2	14.3	7.8	9.1	--	7.4	Jun-05	
<i>Russell 1000 Value</i>				<i>1.5</i>	<i>2.5</i>	<i>1.2</i>	<i>14.4</i>	<i>7.7</i>	<i>9.1</i>	<i>8.8</i>	<i>7.5</i>	<i>Jun-05</i>	
Rhumbline QSI Index	31,092,309	3.8	17.3	1.6	5.8	2.6	14.1	10.3	--	--	11.1	Aug-13	
<i>QSI Index</i>				<i>1.6</i>	<i>5.8</i>	<i>2.6</i>	<i>14.1</i>	<i>10.3</i>	<i>11.6</i>	<i>10.4</i>	<i>11.2</i>	<i>Aug-13</i>	
<i>Russell 3000</i>				<i>1.1</i>	<i>8.3</i>	<i>1.5</i>	<i>14.1</i>	<i>10.6</i>	<i>11.7</i>	<i>10.1</i>	<i>11.3</i>	<i>Aug-13</i>	
Brown Small Cap Fundamental Value	16,011,379	2.0	8.9	-1.8	-2.6	1.0	16.7	4.2	--	--	6.7	Jul-16	
<i>Russell 2000 Value</i>				<i>-2.5</i>	<i>-3.1</i>	<i>-8.0</i>	<i>15.4</i>	<i>3.7</i>	<i>7.0</i>	<i>8.6</i>	<i>7.0</i>	<i>Jul-16</i>	
PRIT General Allocation Domestic Equity	82,756,180	10.2	45.9	1.1	8.2	2.0	--	--	--	--	-8.9	Jan-22	
<i>PRIT Domestic Equity Benchmark</i>				<i>1.1</i>	<i>8.0</i>	<i>1.6</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-9.3</i>	<i>Jan-22</i>	
<b>International Developed Market Equity Assets</b>	<b>98,764,787</b>	<b>12.2</b>	<b>12.2</b>	<b>2.4</b>	<b>11.0</b>	<b>6.1</b>	<b>11.3</b>	<b>2.2</b>	<b>4.3</b>	<b>6.3</b>	<b>4.9</b>	<b>Feb-98</b>	
<i>MSCI EAFE</i>				<i>2.8</i>	<i>11.5</i>	<i>8.4</i>	<i>11.7</i>	<i>3.6</i>	<i>4.8</i>	<i>7.0</i>	<i>4.7</i>	<i>Feb-98</i>	
SSgA MSCI EAFE Index	41,794,344	5.2	42.3	2.9	11.7	8.8	12.0	4.0	5.0	--	5.5	Oct-09	
<i>MSCI EAFE</i>				<i>2.8</i>	<i>11.5</i>	<i>8.4</i>	<i>11.7</i>	<i>3.6</i>	<i>4.8</i>	<i>7.0</i>	<i>5.2</i>	<i>Oct-09</i>	
Axiom International Small Cap Equity	11,051,976	1.4	11.2	-0.3	7.0	-5.8	--	--	--	--	8.0	May-20	
<i>S&amp;P Developed Ex-U.S. SmallCap</i>				<i>1.4</i>	<i>8.1</i>	<i>-0.6</i>	<i>9.6</i>	<i>1.2</i>	<i>5.6</i>	<i>9.1</i>	<i>9.6</i>	<i>May-20</i>	
<i>MSCI EAFE Small Cap</i>				<i>2.0</i>	<i>7.0</i>	<i>-1.2</i>	<i>9.2</i>	<i>1.0</i>	<i>5.7</i>	<i>9.1</i>	<i>9.2</i>	<i>May-20</i>	
PRIT General Allocation Int. Equity	45,918,467	5.7	46.5	2.5	11.2	6.9	--	--	--	--	-5.8	Jan-22	
<i>Custom MSCI World Ex-US IMI Net Divs</i>				<i>2.7</i>	<i>10.5</i>	<i>5.5</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-4.9</i>	<i>Jan-22</i>	

### Total Retirement System | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>International Emerging Market Equity Assets</b>	<b>61,381,144</b>	<b>7.6</b>	<b>7.6</b>	<b>-0.2</b>	<b>4.3</b>	<b>-5.0</b>	<b>8.7</b>	<b>3.2</b>	<b>3.0</b>	<b>--</b>	<b>5.7</b>	<b>Sep-08</b>
<i>MSCI Emerging Markets</i>				<i>-1.1</i>	<i>2.8</i>	<i>-6.5</i>	<i>4.3</i>	<i>-1.0</i>	<i>1.8</i>	<i>8.7</i>	<i>2.6</i>	<i>Sep-08</i>
Driehaus Emerging Markets Growth	35,950,233	4.4	58.6	-0.6	3.8	-5.2	6.4	--	--	--	4.5	Mar-19
<i>MSCI Emerging Markets</i>				<i>-1.1</i>	<i>2.8</i>	<i>-6.5</i>	<i>4.3</i>	<i>-1.0</i>	<i>1.8</i>	<i>8.7</i>	<i>0.7</i>	<i>Mar-19</i>
Acadian Emerging Markets Small Cap	9,364,962	1.2	15.3	2.0	5.7	-5.4	17.0	3.8	--	--	6.3	Jun-14
<i>MSCI Emerging Markets Small Cap</i>				<i>0.7</i>	<i>4.6</i>	<i>-5.7</i>	<i>15.8</i>	<i>2.0</i>	<i>3.0</i>	<i>10.1</i>	<i>3.2</i>	<i>Jun-14</i>
PRIT General Allocation EME	16,065,949	2.0	26.2	-0.5	4.6	-4.4	--	--	--	--	-11.4	Jan-22
<i>Custom MSCI Emerging Market IMI Net Divs</i>				<i>-1.0</i>	<i>2.4</i>	<i>-6.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-13.6</i>	<i>Jan-22</i>
<b>Investment Grade Bond Assets</b>	<b>72,916,789</b>	<b>9.0</b>	<b>9.0</b>	<b>0.4</b>	<b>4.3</b>	<b>-3.2</b>	<b>-4.4</b>	<b>0.4</b>	<b>0.9</b>	<b>3.0</b>	<b>4.2</b>	<b>Jul-93</b>
<i>Bloomberg US Aggregate TR</i>				<i>0.6</i>	<i>3.6</i>	<i>-0.4</i>	<i>-3.1</i>	<i>1.2</i>	<i>1.3</i>	<i>3.2</i>	<i>4.5</i>	<i>Jul-93</i>
SSgA U.S. Aggregate Bond Index-NL	21,005,760	2.6	28.8	0.6	3.8	-0.4	-3.1	1.2	1.3	--	3.1	Apr-04
<i>Bloomberg US Aggregate TR</i>				<i>0.6</i>	<i>3.6</i>	<i>-0.4</i>	<i>-3.1</i>	<i>1.2</i>	<i>1.3</i>	<i>3.2</i>	<i>3.1</i>	<i>Apr-04</i>
PRIT General Allocation Core FI	51,911,029	6.4	71.2	0.3	4.6	-4.2	--	--	--	--	-11.2	Jan-22
<i>PRIT Core Fixed Income</i>				<i>0.3</i>	<i>4.8</i>	<i>-4.0</i>	<i>-4.4</i>	<i>1.6</i>	<i>2.3</i>	<i>3.7</i>	<i>-11.0</i>	<i>Jan-22</i>
<b>Long-Term Government Bond Assets</b>	<b>25,887,098</b>	<b>3.2</b>	<b>3.2</b>	<b>0.3</b>	<b>4.6</b>	<b>-4.2</b>	<b>-4.5</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>1.9</b>	<b>Dec-15</b>
<i>PRIT Core Fixed Income</i>				<i>0.3</i>	<i>4.8</i>	<i>-4.0</i>	<i>-4.4</i>	<i>1.6</i>	<i>2.3</i>	<i>3.7</i>	<i>2.0</i>	<i>Dec-15</i>
PRIT Core Fixed Income	25,887,098	3.2	100.0	0.3	4.6	-4.2	-4.5	1.5	--	--	1.9	Dec-15
<i>PRIT Core Fixed Income</i>				<i>0.3</i>	<i>4.8</i>	<i>-4.0</i>	<i>-4.4</i>	<i>1.6</i>	<i>2.3</i>	<i>3.7</i>	<i>2.0</i>	<i>Dec-15</i>
<b>TIPS Assets</b>	<b>16,112,514</b>	<b>2.0</b>	<b>2.0</b>	<b>0.1</b>	<b>3.6</b>	<b>-4.0</b>	<b>0.8</b>	<b>3.0</b>	<b>1.4</b>	<b>--</b>	<b>3.6</b>	<b>Mar-07</b>
<i>Bloomberg US TIPS TR</i>				<i>0.1</i>	<i>3.5</i>	<i>-4.0</i>	<i>0.9</i>	<i>3.0</i>	<i>1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>Mar-07</i>
SSgA TIPS Index	16,112,514	2.0	100.0	0.1	3.6	-4.0	0.8	3.0	1.4	--	3.6	Mar-07
<i>Bloomberg US TIPS TR</i>				<i>0.1</i>	<i>3.5</i>	<i>-4.0</i>	<i>0.9</i>	<i>3.0</i>	<i>1.4</i>	<i>3.9</i>	<i>3.6</i>	<i>Mar-07</i>

Total Retirement System | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>High Yield Bond Assets</b>	<b>40,072,072</b>	<b>4.9</b>	<b>4.9</b>	<b>0.7</b>	<b>3.8</b>	<b>0.8</b>	<b>5.2</b>	<b>3.5</b>	<b>3.5</b>	<b>--</b>	<b>5.4</b>	<b>Apr-07</b>
<i>Bloomberg US High Yield TR</i>				<i>1.0</i>	<i>4.6</i>	<i>1.2</i>	<i>4.7</i>	<i>3.3</i>	<i>4.0</i>	<i>6.8</i>	<i>5.9</i>	<i>Apr-07</i>
Loomis Sayles High Yield Conservative	11,716,402	1.4	29.2	0.4	3.0	-1.3	3.6	2.1	3.1	--	4.4	Feb-12
<i>Bloomberg US High Yield TR</i>				<i>1.0</i>	<i>4.6</i>	<i>1.2</i>	<i>4.7</i>	<i>3.3</i>	<i>4.0</i>	<i>6.8</i>	<i>5.1</i>	<i>Feb-12</i>
Columbia High Yield	11,811,787	1.5	29.5	0.9	4.7	2.0	4.8	3.7	--	--	3.9	Dec-16
<i>Bloomberg US High Yield TR</i>				<i>1.0</i>	<i>4.6</i>	<i>1.2</i>	<i>4.7</i>	<i>3.3</i>	<i>4.0</i>	<i>6.8</i>	<i>4.0</i>	<i>Dec-16</i>
PRIT General Allocation Value Added FI	16,543,883	2.0	41.3	0.8	3.7	1.5	--	--	--	--	-1.5	Jan-22
<i>PRIT Public Value-Added Fixed Income</i>				<i>0.7</i>	<i>3.9</i>	<i>1.6</i>	<i>5.0</i>	<i>2.1</i>	<i>1.9</i>	<i>5.5</i>	<i>-3.1</i>	<i>Jan-22</i>
<b>Bank Loan Assets</b>	<b>8,315,549</b>	<b>1.0</b>	<b>1.0</b>	<b>1.1</b>	<b>4.9</b>	<b>3.2</b>	<b>6.6</b>	<b>3.4</b>	<b>--</b>	<b>--</b>	<b>3.4</b>	<b>Aug-14</b>
<i>Credit Suisse Leveraged Loans</i>				<i>0.9</i>	<i>4.1</i>	<i>2.9</i>	<i>7.2</i>	<i>3.6</i>	<i>3.9</i>	<i>4.7</i>	<i>3.8</i>	<i>Aug-14</i>
Beach Point Loan Fund	8,315,549	1.0	100.0	1.1	4.9	3.2	6.6	3.4	--	--	3.4	Aug-14
<i>Credit Suisse Leveraged Loans</i>				<i>0.9</i>	<i>4.1</i>	<i>2.9</i>	<i>7.2</i>	<i>3.6</i>	<i>3.9</i>	<i>4.7</i>	<i>3.8</i>	<i>Aug-14</i>

Total Retirement System | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Total Real Estate</b>	<b>84,415,942</b>	<b>10.4</b>	<b>10.4</b>	<b>-0.2</b>	<b>-2.2</b>	<b>-2.3</b>	<b>6.1</b>	<b>5.9</b>	<b>8.2</b>	<b>--</b>	<b>--</b>	<b>Jan-89</b>
<i>NCREIF ODCE</i>				<i>0.0</i>	<i>-3.2</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.5</i>	<i>9.5</i>	<i>8.1</i>	<i>7.4</i>	<i>Jan-89</i>
UBS Trumbull Property Income Fund	10,912,024	1.3	12.9	0.0	-2.2	-2.7	5.1	5.1	6.7	7.1	7.2	Jan-89
<i>NCREIF ODCE (net)</i>				<i>0.0</i>	<i>-3.4</i>	<i>-3.9</i>	<i>7.5</i>	<i>6.6</i>	<i>8.5</i>	<i>7.1</i>	<i>6.4</i>	<i>Jan-89</i>
UBS Trumbull Property Fund	2,672,098	0.3	3.2	0.0	-7.2	-15.8	-0.4	0.0	4.2	5.5	6.1	Jan-89
<i>NCREIF ODCE (net)</i>				<i>0.0</i>	<i>-3.4</i>	<i>-3.9</i>	<i>7.5</i>	<i>6.6</i>	<i>8.5</i>	<i>7.1</i>	<i>6.4</i>	<i>Jan-89</i>
JPMCB Strategic Property Fund	10,977,398	1.4	13.0	-0.3	-3.3	-6.7	7.1	--	--	--	6.4	Jan-19
<i>NCREIF ODCE (net)</i>				<i>0.0</i>	<i>-3.4</i>	<i>-3.9</i>	<i>7.5</i>	<i>6.6</i>	<i>8.5</i>	<i>7.1</i>	<i>6.3</i>	<i>Jan-19</i>
AEW Partners VII	449,065	0.1	0.5									
Rockwood X	6,121,187	0.8	7.3									
Torchlight Debt Opportunity Fund VI	3,679,287	0.5	4.4									
TerraCap Partners IV (Institutional), L.P.	4,586,956	0.6	5.4									
Rockwood Capital Real Estate Partners Fund XI, L.P.	6,194,948	0.8	7.3									
PRIT General Allocation Real Estate	38,822,979	4.8	46.0	-0.4	-1.8	-0.7	--	--	--	--	5.1	Jan-22
<i>PRIT Real Estate Benchmark</i>				<i>0.2</i>	<i>-4.2</i>	<i>8.3</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>9.8</i>	<i>Jan-22</i>

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity Assets</b>	<b>130,617,385</b>	<b>16.1</b>	<b>16.1</b>									
Adams Street Partners 2010	5,589,344	0.7	4.3									
Goldman Sachs Private Equity Partners 2005	459,043	0.1	0.4									
North American Strategic Partners 2006	28,181	0.0	0.0									
Brookfield Capital Partners IV	3,767,811	0.5	2.9									
PRIT Vintage Year 2001	62,938	0.0	0.0									
PRIT Vintage Year 2002	10,035	0.0	0.0									
Ridgemont Equity Partners II	6,189,254	0.8	4.7									
TA XII	3,052,668	0.4	2.3									
LLR Equity Partners V	6,700,541	0.8	5.1									
Wellspring Capital Partners VI	6,403,291	0.8	4.9									
Trilantic Capital Partners VI	5,919,769	0.7	4.5									
Brookfield Capital Partners V, L.P.	4,329,688	0.5	3.3									
FS Equity Partners VIII L.P.	6,402,330	0.8	4.9									
Ridgemont Equity Partners III	8,577,864	1.1	6.6									
Searchlight Capital III	4,379,487	0.5	3.4									
Charlesbank Technology Opportunities Fund	5,303,801	0.7	4.1									
LLR Equity Partners VI, L.P.	2,670,143	0.3	2.0									
PRIT General Allocation Private Equity	60,771,198	7.5	46.5	-0.1	2.1	-6.3	--	--	--	--	-2.1	Jan-22
<i>State Street PE Index (SSPEI) All PE Excluding PD</i>				0.0	1.3	-6.1	--	--	--	--	-0.7	Jan-22



	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>Natural Resources Assets</b>	<b>17,556,269</b>	<b>2.2</b>	<b>2.2</b>									
Hancock Timberland IX	3,924,183	0.5	22.4									
PRIT General Allocation Timberland <i>NCREIF Timberland</i>	11,801,303	1.5	67.2	0.0 0.0	0.5 1.7	0.3 11.3	-- 8.1	-- 5.5	-- 5.8	-- 7.0	1.1 11.0	Jan-22 Jan-22
Oppenheimer Natural Resources	1,830,783	0.2	10.4									
<b>Infrastructure Assets</b>	<b>12,541,195</b>	<b>1.5</b>	<b>1.5</b>									
IFM Global Infrastructure (U.S.), L.P. <i>CPI+5%</i>	8,510,833	1.1	67.9	0.4 0.9	3.0 3.9	10.0 10.2	11.9 11.0	-- 9.1	-- 7.8	-- 7.7	10.6 9.3	Oct-18 Oct-18
Global Infrastructure Partners IV	4,030,362	0.5	32.1									
<b>Opportunistic Assets</b>	<b>36,536,424</b>	<b>4.5</b>	<b>4.5</b>									
HarbourVest Co-Investment Fund V, L.P.	4,786,715	0.6	13.1									
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	4,875,090	0.6	13.3									
PRIT General Allocation Hedge Funds <i>HFRI FOF Composite Index</i>	26,874,619	3.3	73.6	0.3 0.3	2.0 1.0	0.3 -0.4	-- 6.0	-- 3.0	-- 3.1	-- 3.5	0.1 -3.5	Jan-22 Jan-22
<b>Balanced Assets (PRIT General Allocation Fund)</b>	<b>16,176,241</b>	<b>2.0</b>	<b>2.0</b>	<b>0.7</b>	<b>4.4</b>	<b>-0.7</b>	<b>10.1</b>	<b>7.2</b>	<b>7.8</b>	<b>8.2</b>	<b>8.3</b>	<b>Apr-90</b>
<i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>				0.9	6.5	1.0	7.3	7.3	7.8	7.6	8.4	Apr-90
PRIT General Allocation <i>60% Wilshire 5000 &amp; 40% Barclays Aggregate</i>	16,176,241	2.0	100.0	0.7 0.9	4.4 6.5	-0.7 1.0	10.1 7.3	7.2 7.3	7.8 7.8	8.2 7.6	8.3 8.4	Apr-90 Apr-90
<b>Cash</b>	<b>9,028,510</b>	<b>1.1</b>	<b>1.1</b>									
Cash Account <i>91 Day T-Bills</i>	7,011,762	0.9	77.7									
				0.3	1.4	2.8	1.0	1.4	0.9	1.2	1.3	Jan-02
PRIM Cash Account	2,016,749	0.2	22.3									

Cash Flow Summary

	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	Month Return
Acadian Emerging Markets Small Cap	\$9,171,172	\$0	-\$9,755	\$203,545	\$9,364,962	2.01%
Adams Street Partners 2010	\$5,756,845	\$0	-\$167,501	\$0	\$5,589,344	0.00%
AEW Partners VII	\$449,065	\$0	\$0	\$0	\$449,065	0.00%
Axiom International Small Cap Equity	\$11,081,080	\$0	-\$7,368	-\$21,735	\$11,051,976	-0.26%
Beach Point Loan Fund	\$8,224,535	\$0	-\$3,465	\$94,479	\$8,315,549	1.11%
Brookfield Capital Partners IV	\$3,767,811	\$0	\$0	\$0	\$3,767,811	0.00%
Brookfield Capital Partners V, L.P.	\$4,329,688	\$0	\$0	\$0	\$4,329,688	0.00%
Brown Small Cap Fundamental Value	\$16,292,639	\$0	-\$14,677	-\$266,583	\$16,011,379	-1.82%
Cash Account	\$7,533,739	\$0	-\$521,977	\$0	\$7,011,762	0.00%
Charlesbank Technology Opportunities Fund	\$5,303,801	\$0	\$0	\$0	\$5,303,801	0.00%
Columbia High Yield	\$11,709,076	\$0	-\$4,036	\$106,747	\$11,811,787	0.88%
Driehaus Emerging Markets Growth	\$36,154,854	\$0	\$0	-\$204,621	\$35,950,233	-0.57%
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$4,875,090	\$0	\$0	\$0	\$4,875,090	0.00%
FS Equity Partners VIII L.P.	\$6,402,330	\$0	\$0	\$0	\$6,402,330	0.00%
Global Infrastructure Partners IV	\$4,030,362	\$0	\$0	\$0	\$4,030,362	0.00%
Goldman Sachs Private Equity Partners 2005	\$459,043	\$0	\$0	\$0	\$459,043	0.00%
Hancock Timberland IX	\$3,924,183	\$0	\$0	\$0	\$3,924,183	0.00%
HarbourVest Co-Investment Fund V, L.P.	\$4,940,198	\$0	-\$153,483	\$0	\$4,786,715	0.00%
IFM Global Infrastructure (U.S.), L.P.	\$8,476,852	\$0	\$0	\$33,982	\$8,510,833	0.40%
JPMCB Strategic Property Fund	\$11,036,565	\$0	-\$28,493	-\$30,674	\$10,977,398	-0.28%
LLR Equity Partners V	\$6,700,541	\$0	\$0	\$0	\$6,700,541	0.00%
LLR Equity Partners VI, L.P.	\$2,670,143	\$0	\$0	\$0	\$2,670,143	0.00%
Loomis Sayles High Yield Conservative	\$11,662,054	\$0	-\$4,394	\$58,742	\$11,716,402	0.43%
North American Strategic Partners 2006	\$28,181	\$0	\$0	\$0	\$28,181	0.00%

Total Retirement System | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	Month Return
Oppenheimer Natural Resources	\$1,830,783	\$0	\$0	\$0	\$1,830,783	0.00%
PRIM Cash Account	\$515,499	\$4,484,501	-\$3,000,000	\$16,748	\$2,016,749	2.96%
PRIT Core Fixed Income	\$25,808,290	\$0	-\$2,373	\$81,181	\$25,887,098	0.31%
PRIT General Allocation	\$14,638,479	\$0	-\$4,484,504	\$6,022,267	\$16,176,241	0.68%
PRIT General Allocation Core FI	\$52,269,720	\$0	\$0	-\$358,691	\$51,911,029	0.31%
PRIT General Allocation Domestic Equity	\$83,505,869	\$0	\$0	-\$749,688	\$82,756,180	1.07%
PRIT General Allocation EME	\$16,523,738	\$0	\$0	-\$457,789	\$16,065,949	-0.47%
PRIT General Allocation Hedge Funds	\$27,132,938	\$0	\$0	-\$258,319	\$26,874,619	0.34%
PRIT General Allocation Int. Equity	\$46,244,286	\$0	\$0	-\$325,819	\$45,918,467	2.53%
PRIT General Allocation Private Equity	\$61,806,911	\$0	\$0	-\$1,035,713	\$60,771,198	-0.12%
PRIT General Allocation Real Estate	\$38,962,012	\$0	\$0	-\$139,033	\$38,822,979	-0.36%
PRIT General Allocation Timberland	\$11,976,937	\$0	\$0	-\$175,634	\$11,801,303	0.02%
PRIT General Allocation Value Added FI	\$16,597,669	\$0	\$0	-\$53,786	\$16,543,883	0.81%
PRIT Vintage Year 2001	\$62,598	\$3	\$0	\$337	\$62,938	0.54%
PRIT Vintage Year 2002	\$10,023	\$0	\$0	\$12	\$10,035	0.12%
Rhumblin QSI Index	\$30,591,761	\$0	-\$1,814	\$502,362	\$31,092,309	1.64%
Rhumblin Russell 1000 Growth Index	\$23,092,328	\$0	-\$1,312	\$229,296	\$23,320,311	0.99%
Rhumblin Russell 1000 Value Index	\$26,560,397	\$0	-\$1,516	\$400,574	\$26,959,455	1.50%
Ridgemont Equity Partners II	\$6,120,659	\$68,595	\$0	\$0	\$6,189,254	0.00%
Ridgemont Equity Partners III	\$8,577,864	\$0	\$0	\$0	\$8,577,864	0.00%
Rockwood Capital Real Estate Partners Fund XI, L.P.	\$6,194,948	\$0	\$0	\$0	\$6,194,948	0.00%
Rockwood X	\$6,121,187	\$0	\$0	\$0	\$6,121,187	0.00%
Searchlight Capital III	\$4,121,619	\$257,868	\$0	\$0	\$4,379,487	0.00%
SSgA MSCI EAFE Index	\$40,605,015	\$0	-\$3,483	\$1,192,812	\$41,794,344	2.93%
SSgA TIPS Index	\$16,094,302	\$0	-\$806	\$19,018	\$16,112,514	0.11%

Total Retirement System | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Investment Change	Ending Market Value	Month Return
SSgA U.S. Aggregate Bond Index-NL	\$20,878,148	\$0	-\$1,050	\$128,663	\$21,005,760	0.61%
TA XII	\$3,052,668	\$0	\$0	\$0	\$3,052,668	0.00%
TerraCap Partners IV (Institutional), L.P.	\$4,586,956	\$0	\$0	\$0	\$4,586,956	0.00%
Torchlight Debt Opportunity Fund VI	\$3,679,287	\$0	\$0	\$0	\$3,679,287	0.00%
Trilantic Capital Partners VI	\$5,919,769	\$0	\$0	\$0	\$5,919,769	0.00%
UBS Trumbull Property Fund	\$2,672,098	\$0	\$0	\$0	\$2,672,098	0.00%
UBS Trumbull Property Income Fund	\$10,912,024	\$0	\$0	\$0	\$10,912,024	0.00%
Wellspring Capital Partners VI	\$6,403,291	\$0	\$0	\$0	\$6,403,291	0.00%
<b>Total</b>	<b>\$809,049,917</b>	<b>\$4,810,967</b>	<b>-\$8,412,006</b>	<b>\$5,012,677</b>	<b>\$810,461,555</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	2013	5.0	93%	12.2	4	10.5%	NA
Rockwood X	Value-Added	2016	10.0	94%	12.5	3	8.3%	1.3x
Torchlight Debt Opportunity Fund VI	Opportunistic	2017	5.0	100%	11.8	3	8.6%	1.3x
TerraCap Partners IV	Value-Added	2017	5.0	100%	17.0	3	12.0%	NA
Rockwood XI	Value-Added	2019	8.0	55%	19.4	3	15.0%	1.2x
<b>Private Equity Managers</b>								
Adams Street Partners	Fund of Funds	2010	10.0	94%	13.8	2	14.9	2.3x
Goldman Sachs PE Partners	Fund of Funds	2005	10.0	100%	7.2	NA	NA	NA
North American Strategic Partners	Fund of Funds	2006	9.1	88%	8.5	NA	NA	NA
PRIT Vintage Year 2001	Fund of Funds	2001	2.5	NA	9.7	NA	NA	NA
PRIT Vintage Year 2002	Fund of Funds	2002	0.5	NA	8.6	NA	NA	NA
Brookfield Capital Partners IV	Buyout	2015	4.0	100%	19.2	1	42.5%	2.5x
LLR Equity Partners V	Buyout	2017	5.0	97%	21.6	2	22.1%	1.7x
Ridgemont Equity Partners II	Buyout	2015	6.0	96%	19.2	2	22.1%	2.1x

<sup>1</sup> As of 9/30/2022.

<sup>2</sup> NM indicates that a fund is early in its investment period; therefore, the return is not yet meaningful. NA indicates that the relevant data is not available at the time of report generation.

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

Managers	Strategy	Vintage Year	Commitment Amount (\$mm)	% called	Median Peer IRR	Quartile Rank	Net IRR	Net Multiple
TA XII	Growth Equity	2016	4.0	100%	18.7	1	37.9%	2.9x
Wellspring VI	Buyout	2017	5.0	96%	21.6	2	23.6%	1.6x
Trilantic Capital Partners VI	Buyout	2018	5.0	96%	20.7	2	21.2%	1.5x
Brookfield Capital Partners V	Buyout	2019	4.0	92%	21.6	3	14.3%	1.2x
FS Equity Partners VIII	Buyout	2019	5.0	71%	21.6	2	24.5%	1.6x
Ridgemont Equity Partners III	Buyout	2019	6.0	93%	21.6	1	52.3%	2.0x
Searchlight Capital III	Special Situations	2020	5.0	66%	24.0	1	38.1%	1.6x
Charlesbank Technology Opportunities	Buyout	2019	5.0	61%	21.6	1	76.7%	2.0x
LLR Equity Partners VI	Buyout	2020	4.0	54%	NM	NM	NM	NM
<b>Opportunistic Managers</b>								
HarbourVest Co-Investment Fund V	Opportunistic	2019	4.0	78%	NA	NA	26.3%	1.7x
EnTrustPermal Spec. Opps. Evergreen Fund	Opportunistic	2020	6.0	87%	NM	NM	NM	NM
<b>Infrastructure Managers</b>								
Global Infrastructure Partners IV	Value-Added	2019	5.0	60%	--	--	--	--
<b>Natural Resources Managers</b>								
Hancock Timberland	Timber	2008	8.0	100%	--	--	-1.5%	1.0x
Oppenheimer Natural Resources	Natural Resources	2010	7.0	100%	--	--	-2.1%	0.7x

<sup>1</sup> As of 9/30/2022.

<sup>2</sup> NM indicates that a fund is early in its investment period; therefore, the return is not yet meaningful. NA indicates that the relevant data is not available at the time of report generation.

## **Private Equity RFP Finalist Review**

### Search Overview

- To maintain a 10% target to private equity, the Retirement System should make annual commitments to closed-end private equity funds.
  - Meketa recommends the Retirement System commit \$12 million in 2023 to private equity managers
- To help execute this strategy, Meketa issued an RFP for private equity managers with responses due back on March 24, 2023.
- After reviewing all of the respondents, the Board voted to interview five finalists for evaluation in today's meeting: Baleon Capital Fund II, Charlesbank Technology Opportunities Fund II, Kohlberg Investors X, LLR Equity Partners VII, and Mesirow Private Equity Co-Investment Fund IX.



## **Baleon Capital Fund II**

### Firm Overview

Baleon Capital Management	
Firm Location (Headquarters)	Boca Raton, FL
Firm Inception	2020
Strategy Inception	2020
Firm AUM	N/A

- Baleon Capital (“Baleon” or “the Firm”) is a private equity firm focused on early-growth equity investing in business-to-business (“B2B”) growth technology companies in healthcare and tech-enabled business services.
- The Firm was founded in 2020 by Jon Kaiden, who previously co-founded a family office which he led as President for 17 years.
- Mr. Kaiden is joined as a co-managing member by Shane Kim, with whom he has invested with for more than 15 years. Prior to Baleon, Mr. Kim co-founded Island Peak Capital, an advisory firm focused on optimizing growth through a proven operating approach.

### Investment Team

- Messrs. Kaiden and Kim are supported by one Associate on the investment team, as well as Strategic Advisor Bill Weld, former Governor of Massachusetts from 1991-1997.
- The balance of the team includes a CFO and COO/Chief of Staff.

### Investment Terms

Partnership Name	Baleon Capital Fund II
Partnership Type	Limited Partnership
Investment Strategy/Focus	Early-Growth technology
Geographic Focus	North America
Vintage Year	2022
Fund Size	\$125 million
<b>Fees / Expenses:</b>	
Management Fee	2.0% of committed capital over the entire fund term
Preferred Return	8.0%
Carried Interest	20.0%

### Investment Strategy

- Baleon Capital Fund II (“the Fund”) will focus on early-growth investing in B2B growth technology companies in the healthcare and tech-enabled business services sectors.
- The Fund will target businesses that have established product-market fit (\$1 million - \$10 million of revenue), high growth rates (50%-100%+) and are capital efficient.
- Baleon will focus on highly structured investments, typically through preferred stock with accruing dividends, liquidation preference, board seats, and protective provisions that require Baleon’s consent before the company can make certain substantial decisions.
- The Firm aims to be the first and sole institutional investor in its deals and aims to stage capital deployment across its portfolio companies over time.
- Baleon will utilize its network of advisors to assist the Firm in due diligence pre-investment, as well as post-close to provide strategic and operational guidance.

Historical Track Record  
As of December 31, 2022

	Vintage Year	Committed Capital (\$ mm)	Invested Capital (\$ mm)	Net MOIC (x)	Net IRR (x)
Sopris Capital <sup>1</sup>	N/A	159.2	125.2	5.7	30.9
Baleon SPV	2021	9.0	8.7	1.3	19.6
Baleon Capital Fund II <sup>2</sup>	2022	32.9	8.2	1.0	NM

<sup>1</sup> Sopris Capital is a professionally managed family office led by Jon Kaiden from 2002 until 2019. Total commitments include \$125.2 million on an investment basis, and Baleon has calculated \$34 million of hypothetical management fees that would have been charged on that basis. Sopris Capital net IRR and net multiple are calculated based on a hypothetical fee structure of 2.0% management fee and 20% carried interest.

<sup>2</sup> Baleon Capital Fund II had an initial closing in May 2022 and the first capital call was in October 2022 when the first investment was closed.

## Charlesbank Technology Opportunities Fund II

### Firm Overview

Charlesbank Capital Partners	
Firm Location (Headquarters)	Boston, MA
Firm Inception	1998
Strategy Inception	2020
Firm AUM (As of 9/30/2022)	\$14 billion

- Charlesbank Capital Partners (“Charlesbank” or “the Firm”) was founded in 1998 by the principals of Harvard Private Capital Group, the former private equity investment unit of Harvard University’s endowment manager.
- The Firm focuses on investments across three principal strategies: multi-sector, middle market private equity in its flagship equity funds, middle market opportunistic credit in its credit funds, and lower middle market technology opportunities in its technology fund.
- Charlesbank is headquartered in Boston, MA, with an additional office in New York, NY. The Firm is led by Managing Director and CEO Michael Choe.



### Investment Team

- Charlesbank employs a dedicated investment team for its technology opportunities fund series.
- The technology opportunities funds are led by Co-Heads of Technology Opportunities Hiren Mankodi and Darren Battistoni, along with Managing Director Mayur Desai.
- Messrs. Mankodi, Battistoni, and Desai are supported by one Principal and two Senior Vice Presidents who are also dedicated to the strategy. The team will also benefit from the support of junior investment professionals that also work on the Firm's flagship private equity fund series.

### Investment Terms

Partnership Name	Charlesbank Technology Opportunities Fund II
Partnership Type	Limited Partnership
Investment Strategy/Focus	Lower middle market buyout
Geographic Focus	North America
Vintage Year	2023
Fund Size	\$1.1 billion
<b>Fees / Expenses:</b>	
Management Fee	2.0% on committed capital during the investment period; thereafter 2.0% on invested capital
Preferred Return	8.0%
Carried Interest	20.0%

### Investment Strategy

- Charlesbank Technology Opportunities Fund II (“the Fund”) will continue the strategy of its predecessor fund, making primarily control-oriented equity investments in lower middle market technology companies with enterprise values between \$50 million and \$400 million.
- The Fund will target investments ranging from \$50 million to \$125 million and focus on companies principally headquartered in North America.
- The Firm anticipates constructing a portfolio of 12 to 15 investments across application software, infrastructure software, healthcare IT, cybersecurity, cloud computing, and financial technology.
- Charlesbank will target companies with proven business models, established product-market fit, stable or rapid revenue growth, and are at or near profitability.

Historical Track Record  
As of December 31, 2022

	Vintage Year	Committed Capital (\$ mm)	Invested Capital (\$ mm)	Net MOIC (x)	Net IRR (%)
Charlesbank TOF I	2019	845	775	2.1	73

→ The Retirement System is an investor in the Charlesbank TOF I with a \$5.0 million commitment.

## **Kohlberg Investors X**

### Firm Overview

Kohlberg & Co.	
Firm Location (Headquarters)	Mount Kisco, NY
Firm Inception	1987
Strategy Inception	2001
Firm AUM (As of 12/31/2022)	\$10.1 billion

- Kohlberg & Company, LLC (“Kohlberg”, or “the Firm”) was founded in 1987 by Jerome Kohlberg Jr., the senior founding partner of KKR, as the family office for the Kohlberg family.
- After primarily investing Kohlberg family capital in its first several funds, the Firm transitioned to raising third party institutional capital in 2001.
- In 2007, Kohlberg underwent its first leadership succession, and is now led by Managing Partner Samuel Frieder and Chief Investment Officer Gordon Woodward.
- Since its leadership transition, Kohlberg has invested approximately \$8.3 billion.

### Investment Team

- Kohlberg employs 75 professionals and is led by Managing Partner Samuel Frieder and Chief Investment Officer Gordon Woodward.
- Messrs. Frieder and Woodward are joined in leadership by six Partners who each lead the investment activities across one of the Firm's six core sectors of focus.
- The Firm's investment partners are supported by five Managing Directors, five Vice Presidents, one Senior Associate, and eight Associates.
- The Firm also leverages the expertise of nine exclusive Operating Partners, all former CEO's and sector experts that remain fully engaged with each portfolio company.
- The investment team is supported by more than 20 finance, operations, and investor relations professionals.

## Investment Terms

Partnership Name	Kohlberg Investors X
Partnership Type	Limited Partnership
Investment Strategy/Focus	Middle market buyout
Geographic Focus	North America
Vintage Year	2023
Fund Size	\$5.0 billion
<b>Fees / Expenses:</b>	
Management Fee	2.0% of committed capital during the investment period; thereafter, 1.0% of net invested capital
Preferred Return	8.0%
Carried Interest	20.0%



### Investment Strategy

- Kohlberg Investors X, L.P. (“Fund X” or “the Fund”) will continue the Firm’s strategy of executing control buyout investments of North American, middle market businesses.
- The Fund anticipates making 13 platform investments, with average equity checks of \$350 million.
- The Firm will continue to invest across its six core sectors of focus: pharmaceutical/medical products & services, infrastructure services, financial & information services, business services, healthcare services, and food & consumer.
- Kohlberg takes a thesis-driven approach to investing, and through its white paper process, identifies attractive sub-sectors and investment themes within each core sector of focus.
- Post investment, the Firm intends to partner with portfolio companies to implement strategies that will accelerate revenue and EBITDA growth, add scale, and drive operational excellence.
- Value creation opportunities have historically included management team enhancements, organic and inorganic growth initiatives, and business repositioning opportunities.

Historical Track Record  
As of December 31, 2022

	Vintage Year	Invested (\$ mm)	Realized (\$ mm)	Total Value (\$ mm)	Net MOIC (x)	Net IRR (%)
Fund VI	2007	1,291	2,712	2,712	1.7	16.2
Fund VII	2012	1,640	3,150	3,150	1.7	15.8
Fund VIII	2017	2,396	1,959	5,009	1.9	23.0
Fund IX	2020	3,109	311	4,395	1.3	33.1

## LLR Equity Partners VII

### Firm Overview

LLR Partners	
Firm Location (Headquarters)	Philadelphia, PA
Firm Inception	1999
Strategy Inception	1999
Firm AUM (As of 12/31/2022)	\$5.4 billion <sup>3</sup>

- Founded in 1999, LLR Partners (“LLR” or “the Firm”) invests in lower middle market growth companies primarily focused on the healthcare and technology sectors in the United States.
- The three founders had previously built successful careers counselling privately owned businesses and believed a private equity firm would be a natural extension of their careers.
- While the Firm’s focus has always been on privately owned, growth companies under \$100 million in annual revenue, the investment strategy evolved from the opportunistic approach used in Funds I and II, to a focus in Fund III and subsequent funds on technology and healthcare companies.
- Since 1999, LLR has raised approximately \$5.4 billion of capital across six private equity funds.

<sup>3</sup> Representative of total capital raised since inception

### Investment Team

- LLR's investment team is led by 12 Partners, 10 of whom have been with the firm for over 10 years (average Firm tenure of 16 years).
- The Firm's 12 investment Partners are supported by 39 investment professionals, 19 deal sourcing professionals, 20 value creation professionals, and 21 finance and operations professionals.
- Investment teams are bifurcated by sector focus (technology, healthcare), and further organized into dedicated sub-sectors of focus.

### Investment Terms

Partnership Name	LLR Equity Partners VII
Partnership Type	Limited Partnership
Investment Strategy/Focus	Lower middle market buyout
Geographic Focus	North America
Vintage Year	2023
Fund Size	\$2.25 billion
<b>Fees / Expenses:</b>	
Management Fee	2.0% of committed capital during the investment period; thereafter, 2.0% of invested capital
Preferred Return	7.0%
Carried Interest	20.0%

### Investment Strategy

- LLR Equity Partners VII (“the Fund”), aims to execute a consistent, repeatable, and scalable investment strategy focused on lower middle market growth companies in the technology and healthcare sectors.
- The Firm will target private companies with \$10 million-\$100 million of revenue.
- LLR defines technology to include software and tech-enabled services businesses.
- The Firm defines healthcare to include healthcare information technology and healthcare services businesses.

Historical Track Record  
As of December 31, 2022

	Vintage Year	Fund Size (\$ mm)	Invested (\$ mm)	Realized (\$ mm)	Total Value (\$ mm)	Net TVPI (x)	Net IRR (%)
Fund I	1999	260	233.5	642.8	642.8	2.1	21.8
Fund II	2004	360	358.0	781.4	781.4	1.8	12.3
Fund III	2008	803	732.1	2,087.8	2,119.0	2.3	16.6
Fund IV	2014	950	859.4	2,173.9	2,634.8	2.5	26.4
Fund V	2018	1,200	1,131.4	464.9	2,365.1	1.7	20.7
Fund VI	2021	1,800	1,250.9	2.7	1,365.0	1.0	1.3

→ The Retirement System made its initial investment in LLR V and subsequently invested in LLR VI as well.



## Mesirow Private Equity Co-Investment Fund IX

### Firm Overview

Mesirow Private Equity	
Firm Location (Headquarters)	Chicago, IL
Firm Inception	1982
Strategy Inception	2001
Firm AUM (As of 12/31/2022)	\$7.0 billion

- Mesirow Private Equity (“Mesirow” or “the Firm”), founded in 1982, initially focused on investing in lower middle market buyout opportunities in the US.
- In 1999, the Firm developed its partnership investment strategy and established its first private equity fund-of-funds. In 2001, the Firm began leveraging its general partner network, developed through its partnership investment activities, to begin co-investing alongside a diversified base of top performing managers.
- Mesirow Private Equity is a wholly owned subsidiary of Mesirow Financial Services, inc., and headquartered in Chicago, IL.

### Investment Team

- Mesirow's investment team is led by Chief Investment Officer Robert DeBolt and President Thomas Galuhn.
- Messrs. Galuhn and Debolt are supported by two Managing Directors, one Vice President, one Associate, and one Analyst, all dedicated to the co-investment and primary partnerships strategies.
- In addition, the investment team benefits from the support of a rotational analyst.

### Investment Terms

Partnership Name	Mesirow Private Equity Co-Investment Fund IX
Partnership Type	Limited Partnership
Investment Strategy/Focus	Co-investment
Geographic Focus	North America
Vintage Year	2023
Fund Size	\$500 million
<b>Fees / Expenses:</b>	
Management Fee	0.82% average annual management fee <sup>4</sup>
Preferred Return	8.0%
Carried Interest	10.0%, increasing to 15.0% after achieving a 2.25x gross MOIC

<sup>4</sup> Management fees will commence on a date selected by Mesirow as the Fund's commencement date. The commencement date is expected to be approximately one year from the initial drawdown date. The Fund will charge a 0% management fee for the twelve months prior to the commencement date. The 1% initial annual management fee on committed capital will be reduced by 10% of the prior year's fee after the seventh anniversary of the commencement date. The average annual management fee is calculated over 13 years and assumes the Fund's term is extended for three one-year extensions.

### Investment Strategy

- Mesirow Private Equity Co-Investment Fund IX (“the Fund”) is a continuation of the Firm’s co-investment program, which seeks to assemble a well-diversified portfolio of company investments along historically top performing managers.
- The Firm anticipates investing in 20-30 companies over four to five years, with exposure to middle market buyout (70%-75%), growth equity (15%-20%) and late-stage venture capital (5%-10%) strategies.
- The Fund will pursue a predominantly North American focused strategy (85%-90%) and will opportunistically review non-US domiciled businesses.
- 100% of co-investments are expected to be alongside general partners where there is an existing relationship with Mesirow.

Historical Track Record  
As of September 30, 2022

	Vintage Year	Invested (\$ mm)	Realized (\$ mm)	Total Value (\$ mm)	Net MOIC (x)	Net IRR (%)
MCP VIII	2001	59.8	120.8	120.8	2.0	22.3
MCP IX	2005	139.2	72.8	75.6	0.5	-7.1
MCP X	2009	233.7	623.9	668.9	2.9	25.7
Fund VII-B	2017	396.2	286.6	1,072.6	2.7	39.3
Fund VIII-B	2021	352.3	0.0	347.0	1.0	NM

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**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.