

Plymouth County Retirement Association

October 31, 2023

Meeting Materials

Agenda

1. Estimated Retirement Association Performance As of September 30, 2023
2. Performance Update As of August 31, 2023
3. Current Issue
 - Private Infrastructure Search Finalist Review
4. Appendices
 - Economic Market Update As of September 30, 2023
 - Corporate Update
 - Disclaimer, Glossary, and Notes

**Estimated Retirement Association Performance
As of September 29, 2023**

Estimated Aggregate Performance¹

	September ² (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	-2.0	-1.7	3.8	8.5	8.4	6.4	6.7

Benchmark Returns

	September (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Russell 3000	-4.8	-3.3	12.4	20.5	9.4	9.1	11.3
MSCI EAFE	-3.4	-4.1	7.1	25.7	5.8	3.2	3.8
MSCI Emerging Markets	-2.6	-2.9	1.8	11.7	-1.7	0.6	2.1
Bloomberg Aggregate	-2.5	-3.2	-1.2	0.6	-5.2	0.1	1.1
Bloomberg TIPS	-1.9	-2.6	-0.8	1.3	-2.0	2.1	1.7
Bloomberg High Yield	-1.2	0.5	5.9	10.3	1.8	3.0	4.2
JPM EMBI Global Diversified (Hard Currency)	-2.6	-2.2	1.8	10.0	-4.6	-0.4	2.5
S&P Global Natural Resources	-0.4	3.7	0.5	17.8	19.2	6.4	5.3

Estimated Total Assets

Estimated Total Retirement Assets As of September 29, 2023	\$1,372,163,879
Current Month Performance Estimate through October 19, 2023	-1.0%

¹ The September performance estimates are calculated using index returns as of September 29, 2023 for each asset class. No performance estimate was included for private equity, real estate, infrastructure, and private natural resources asset classes.

² As of September 29, 2023.

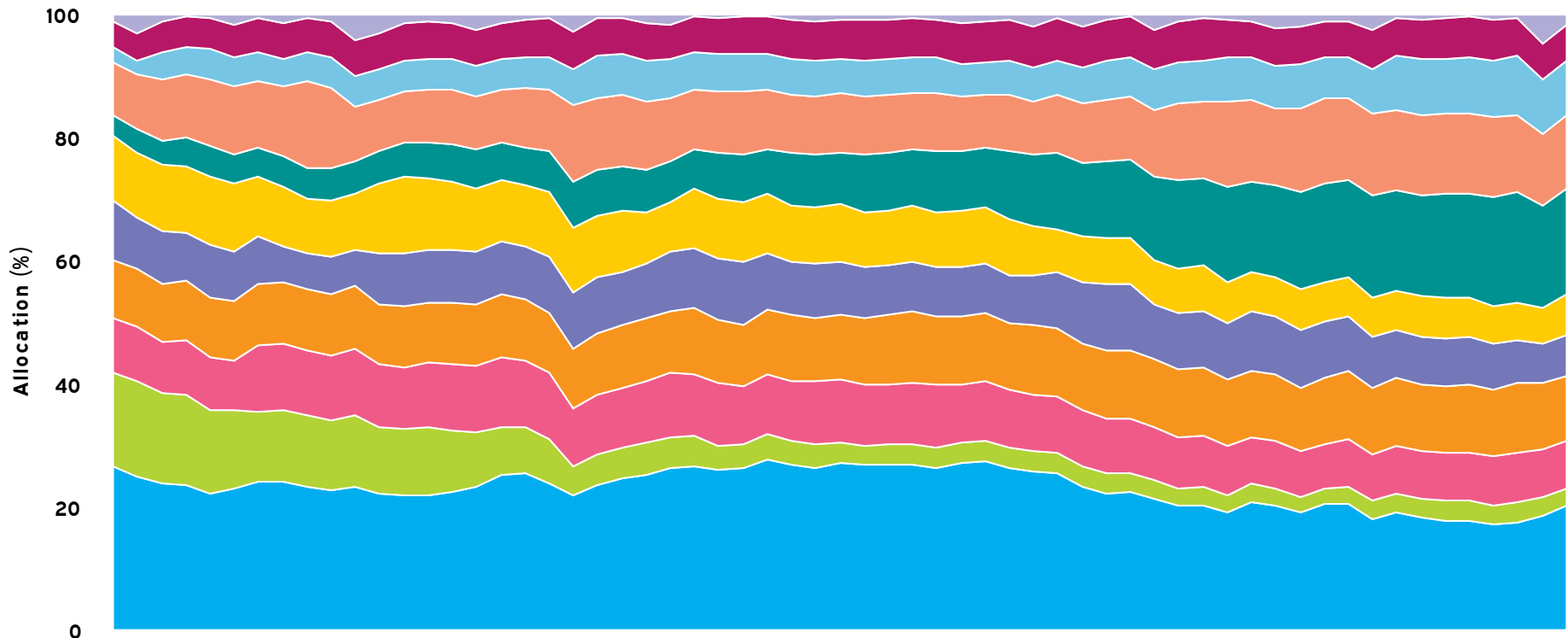
**Performance Update
As of August 31, 2023**

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Asset Allocation Compliance | As of August 31, 2023

	Current Balance (\$)	Current Allocation (%)	Policy (%)	Policy Range (%)	Within IPS Range?
Total Equity	908,091,328	64	69	60 - 80	Yes
Domestic Equity	283,885,598	20	26	21 - 36	No
International Developed Market Equity	41,326,932	3	6	1 - 16	Yes
International Emerging Market Equity	106,663,333	8	10	5 - 20	Yes
Global Equity	152,190,444	11	10	5 - 20	Yes
Private Equity	243,881,771	17	13	4 - 18	Yes
Hedge Fund of Funds	80,143,250	6	4	2 - 8	Yes
Total Fixed Income	185,508,505	13	15	5 - 25	Yes
Core Bonds	92,611,047	7	9	4 - 14	Yes
Value-Added Fixed Income	92,897,459	7	6	2 - 12	Yes
Total Real Assets and Real Estate	293,634,707	21	16	7 - 25	Yes
Real Estate	166,708,205	12	10	5 - 15	Yes
Real Assets	126,926,502	9	6	2 - 10	Yes
Cash	23,491,723	2	0	0 - 3	Yes
Cash	23,491,723	2	0	0 - 3	Yes
Total	1,410,726,263	100	100		

Asset Allocation History 5 Years Ending August 31, 2023



- Domestic Equity
- Global Equity
- Private Equity
- Hedge Fund of Funds
- International Developed Market Equity
- Core Bonds
- Real Estate
- Cash
- International Emerging Market Equity
- Value-Added Fixed Income
- Real Assets

Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	1,410,726,263	100.0	-1.3	0.3	5.8	6.3	8.8	6.8	7.3	7.8	Nov-89
<i>Policy Benchmark (Net)</i>			<i>-1.7</i>	<i>0.4</i>	<i>9.4</i>	<i>4.9</i>	<i>5.9</i>	<i>6.0</i>	<i>7.0</i>	<i>--</i>	
<i>Actual Allocation (Net)</i>			<i>-1.3</i>	<i>0.4</i>	<i>8.5</i>	<i>3.0</i>	<i>5.5</i>	<i>5.4</i>	<i>--</i>	<i>--</i>	
Domestic Equity Assets	283,885,598	20.1	-3.0	1.2	13.6	11.7	9.4	8.4	--	11.9	Jan-16
<i>Russell 3000 Index</i>			<i>-1.9</i>	<i>1.6</i>	<i>18.0</i>	<i>14.8</i>	<i>9.8</i>	<i>10.3</i>	<i>12.2</i>	<i>12.4</i>	
International Developed Market Equity Assets	41,326,932	2.9	-3.9	-2.4	11.1	15.3	1.9	0.1	--	3.0	Jan-16
<i>MSCI EAFE (Net)</i>			<i>-3.8</i>	<i>-0.7</i>	<i>10.9</i>	<i>17.9</i>	<i>6.1</i>	<i>4.1</i>	<i>4.9</i>	<i>5.5</i>	
International Emerging Market Equity Assets	106,663,333	7.6	-4.4	0.5	7.7	3.3	0.4	1.5	--	5.2	Jan-16
<i>MSCI Emerging Markets (Net)</i>			<i>-6.2</i>	<i>-0.3</i>	<i>4.6</i>	<i>1.3</i>	<i>-1.4</i>	<i>1.0</i>	<i>3.0</i>	<i>5.3</i>	
Global Equity Assets	152,190,444	10.8	-2.0	0.3	8.8	11.8	7.5	7.4	--	6.0	Feb-18
<i>MSCI AC World Index (Net)</i>			<i>-2.8</i>	<i>0.8</i>	<i>14.8</i>	<i>14.0</i>	<i>7.2</i>	<i>7.5</i>	<i>8.6</i>	<i>6.2</i>	
Core Fixed Income	92,611,047	6.6	-0.2	0.1	2.0	-0.1	-2.0	1.4	--	1.8	Jan-16
<i>75% Bbg Aggregate/25% Bbg US TIPs 1-10 year</i>			<i>-0.6</i>	<i>-0.5</i>	<i>1.4</i>	<i>-1.4</i>	<i>-3.3</i>	<i>1.0</i>	<i>1.6</i>	<i>1.4</i>	
Value Added Fixed Income	92,897,459	6.6	-0.1	1.1	6.2	6.0	2.1	2.9	--	4.5	Jan-16
<i>Custom Benchmark - Global Fixed Income</i>			<i>-0.4</i>	<i>1.0</i>	<i>5.4</i>	<i>5.6</i>	<i>0.1</i>	<i>2.1</i>	<i>3.3</i>	<i>3.6</i>	
Hedge Funds	80,143,250	5.7	-0.3	0.5	3.1	3.7	2.6	0.8	3.0	3.4	Mar-10
<i>Custom Benchmark</i>			<i>-0.1</i>	<i>0.5</i>	<i>2.8</i>	<i>3.5</i>	<i>4.5</i>	<i>3.4</i>	<i>3.5</i>	<i>3.2</i>	
Real Estate	166,708,205	11.8	-0.2	-0.2	-2.8	-4.1	14.7	11.1	--	8.7	Jan-16
<i>Custom Benchmark</i>			<i>0.0</i>	<i>0.0</i>	<i>-5.8</i>	<i>-10.0</i>	<i>8.0</i>	<i>6.3</i>	<i>--</i>	<i>6.2</i>	
Private Equity	243,881,771	17.3	0.0	0.0	3.9	8.9	28.3	17.7	--	13.0	Jan-16
<i>MSCI ACWI IMI (1Q Lagged)+2%</i>			<i>0.0</i>	<i>0.0</i>	<i>18.6</i>	<i>-5.8</i>	<i>17.9</i>	<i>8.7</i>	<i>10.1</i>	<i>11.0</i>	
Real Assets	126,926,502	9.0	-0.4	-0.4	5.9	9.7	14.0	8.9	--	4.6	Jan-16
<i>CPI +3% (Unadjusted)</i>			<i>0.7</i>	<i>1.1</i>	<i>5.5</i>	<i>6.8</i>	<i>8.9</i>	<i>7.1</i>	<i>5.8</i>	<i>6.6</i>	
Cash and Cash Equivalent	23,491,723	1.7									

Effective January 1, 2023, asset class and total plan performance is rolled up using a weighted average calculation.

The policy benchmark is comprised of 26% Russell 3000/ 6% MSCI EAFE/ 10% MSCI Emerging Markets/ 13% MSCI ACWI IMI (Lagged) + 2%/ 10% MSCI ACWI/ 4% Hedge Funds Custom Benchmark/ 9% (75/25 Barclays Aggregate and Barclays 10yr)/ 6% Value Added FI Custom Benchmark/ 10% (80/20 NCREIF ODCE and Wilshire REIT)/ 6% CPI+3%

The Custom Benchmark - Global Fixed Income is comprised of 25% BBgBarc/ US High Yield, 25% / Credit Suisse Leveraged Loans / 25% JP Morgan EMBI Global diversified / and 25% BBgBarc Multiverse TR

Real Estate, Private Equity, and Real Assets market values and performance are one quarter lagged. With the exception of JPM Strategic Property, IFM, and TA Realty.

Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	1,410,726,263	100.0	-1.3	0.3	5.8	6.3	8.8	6.8	7.3	7.8	Nov-89
<i>Policy Benchmark (Net)</i>			<i>-1.7</i>	<i>0.4</i>	<i>9.4</i>	<i>4.9</i>	<i>5.9</i>	<i>6.0</i>	<i>7.0</i>	<i>--</i>	
<i>Actual Allocation (Net)</i>			<i>-1.3</i>	<i>0.4</i>	<i>8.5</i>	<i>3.0</i>	<i>5.5</i>	<i>5.4</i>	<i>--</i>	<i>--</i>	
Domestic Equity Assets	283,885,598	20.1	-3.0	1.2	13.6	11.7	9.4	8.4	--	11.9	Jan-16
<i>Russell 3000 Index</i>			<i>-1.9</i>	<i>1.6</i>	<i>18.0</i>	<i>14.8</i>	<i>9.8</i>	<i>10.3</i>	<i>12.2</i>	<i>12.4</i>	
Rhumblin Russell 1000 Value	78,636,010	5.6	-2.7	0.7	5.9	8.6	11.6	7.1	9.1	9.1	May-13
<i>Russell 1000 Value Index</i>			<i>-2.7</i>	<i>0.7</i>	<i>5.9</i>	<i>8.6</i>	<i>11.6</i>	<i>7.1</i>	<i>9.1</i>	<i>9.2</i>	
Rhumblin Russell 1000 Growth	56,435,443	4.0	-0.9	2.4	32.1	21.9	8.3	13.8	15.6	15.7	Aug-09
<i>Russell 1000 Growth Index</i>			<i>-0.9</i>	<i>2.4</i>	<i>32.2</i>	<i>21.9</i>	<i>8.3</i>	<i>13.8</i>	<i>15.6</i>	<i>15.7</i>	
Fisher Midcap Value	53,840,125	3.8	-2.8	0.8	12.1	14.7	14.1	10.8	11.6	9.1	May-07
<i>Russell Midcap Value Index</i>			<i>-3.5</i>	<i>0.7</i>	<i>5.9</i>	<i>5.7</i>	<i>12.1</i>	<i>6.1</i>	<i>8.9</i>	<i>7.1</i>	
Newton Small Cap Growth	47,710,496	3.4	-5.2	-0.6	9.9	2.2	-1.4	6.9	11.7	13.2	Sep-09
<i>Russell 2000 Growth Index</i>			<i>-5.2</i>	<i>-0.8</i>	<i>12.7</i>	<i>6.8</i>	<i>2.7</i>	<i>2.5</i>	<i>8.2</i>	<i>11.0</i>	
Vulcan Partners Small Cap Value	16,130,050	1.1	-6.1	1.4	15.2	9.4	--	--	--	-12.7	Apr-22
<i>Russell 2000 Value Index</i>			<i>-4.8</i>	<i>2.4</i>	<i>4.9</i>	<i>2.2</i>	<i>13.5</i>	<i>3.2</i>	<i>7.4</i>	<i>-5.8</i>	
Systematic Small Cap Free Cash Flow	3,133,474	2.2	-2.1	3.3	10.4	13.8	--	--	--	5.3	Apr-22
<i>Russell 2000 Value Index</i>			<i>-4.8</i>	<i>2.4</i>	<i>4.9</i>	<i>2.2</i>	<i>13.5</i>	<i>3.2</i>	<i>7.4</i>	<i>-5.8</i>	

Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Developed Market Equity Assets	41,326,932	2.9	-3.9	-2.4	11.1	15.3	1.9	0.1	--	3.0	Jan-16
<i>MSCI EAFE (Net)</i>			<i>-3.8</i>	<i>-0.7</i>	<i>10.9</i>	<i>17.9</i>	<i>6.1</i>	<i>4.1</i>	<i>4.9</i>	<i>5.5</i>	
Aristotle International Equity	22,112,097	1.6	-3.5	-0.7	11.5	15.8	--	--	--	0.9	Mar-21
<i>MSCI EAFE (Net)</i>			<i>-3.8</i>	<i>-0.7</i>	<i>10.9</i>	<i>17.9</i>	<i>6.1</i>	<i>4.1</i>	<i>4.9</i>	<i>1.7</i>	
Walter Scott International Equity	19,214,835	1.4	-4.4	-4.3	10.7	14.8	--	--	--	-0.7	Mar-21
<i>MSCI EAFE (Net)</i>			<i>-3.8</i>	<i>-0.7</i>	<i>10.9</i>	<i>17.9</i>	<i>6.1</i>	<i>4.1</i>	<i>4.9</i>	<i>1.7</i>	
International Emerging Market Equity Assets	106,663,333	7.6	-4.4	0.5	7.7	3.3	0.4	1.5	--	5.2	Jan-16
<i>MSCI Emerging Markets (Net)</i>			<i>-6.2</i>	<i>-0.3</i>	<i>4.6</i>	<i>1.3</i>	<i>-1.4</i>	<i>1.0</i>	<i>3.0</i>	<i>5.3</i>	
ABS Emerging Markets	57,461,947	4.1	-4.4	1.2	9.1	5.4	1.4	--	--	5.9	Dec-18
<i>MSCI Emerging Markets (Net)</i>			<i>-6.2</i>	<i>-0.3</i>	<i>4.6</i>	<i>1.3</i>	<i>-1.4</i>	<i>1.0</i>	<i>3.0</i>	<i>2.2</i>	
Driehaus Emerging Markets Growth	49,201,386	3.5	-4.5	-0.4	6.1	0.9	-1.8	--	--	4.1	Mar-19
<i>MSCI Emerging Markets (Net)</i>			<i>-6.2</i>	<i>-0.3</i>	<i>4.6</i>	<i>1.3</i>	<i>-1.4</i>	<i>1.0</i>	<i>3.0</i>	<i>1.0</i>	
Global Equity Assets	152,190,444	10.8	-2.0	0.3	8.8	11.8	7.5	7.4	--	6.0	Feb-18
<i>MSCI AC World Index (Net)</i>			<i>-2.8</i>	<i>0.8</i>	<i>14.8</i>	<i>14.0</i>	<i>7.2</i>	<i>7.5</i>	<i>8.6</i>	<i>6.2</i>	
First Eagle Global Value Fund	26,034,894	1.8	-2.4	-0.1	9.1	14.0	7.4	6.3	--	4.8	Feb-18
<i>MSCI AC World Index Value (Net)</i>			<i>-3.1</i>	<i>0.9</i>	<i>5.2</i>	<i>9.7</i>	<i>9.6</i>	<i>4.7</i>	<i>6.0</i>	<i>3.2</i>	
Kopernik Global All Cap Fund	40,036,011	2.8	-0.7	2.8	5.8	9.6	7.8	11.5	--	7.2	Feb-18
<i>MSCI AC World Index Value (Net)</i>			<i>-3.1</i>	<i>0.9</i>	<i>5.2</i>	<i>9.7</i>	<i>9.6</i>	<i>4.7</i>	<i>6.0</i>	<i>3.2</i>	
Lee Munder Global Multi-Cap Strategy	40,015,407	2.8	-3.2	-0.3	14.1	11.6	7.1	5.6	--	5.6	Mar-18
<i>MSCI AC World Index (Net)</i>			<i>-2.8</i>	<i>0.8</i>	<i>14.8</i>	<i>14.0</i>	<i>7.2</i>	<i>7.5</i>	<i>8.6</i>	<i>7.2</i>	
Wellington Durable Enterprises, L.P.	46,104,132	3.3	-1.7	-1.0	6.4	13.2	7.9	7.5	--	8.1	Mar-18
<i>MSCI AC World Index (Net)</i>			<i>-2.8</i>	<i>0.8</i>	<i>14.8</i>	<i>14.0</i>	<i>7.2</i>	<i>7.5</i>	<i>8.6</i>	<i>7.2</i>	

Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Fixed Income	92,611,047	6.6	-0.2	0.1	2.0	-0.1	-2.0	1.4	--	1.8	Jan-16
<i>75% Bbg Aggregate/25% Bbg US TIPS 1-10 year</i>			-0.6	-0.5	1.4	-1.4	-3.3	1.0	1.6	1.4	
Lord Abbett Short Duration Credit Trust II <i>Blmbg. 1-3 Year Credit</i>	38,947,180	2.8	0.4	1.0	2.8	2.3	0.2	--	--	0.9	Aug-19
Lord Abbett Core Fixed Income Trust II <i>Blmbg. U.S. Aggregate Index</i>	40,597,648	2.9	-0.6	-0.5	1.8	-1.1	--	--	--	-6.9	Dec-21
Rhumblin TIPS Trust <i>Blmbg. U.S. TIPS</i>	13,066,218	0.9	-0.9	-0.8	1.1	-3.7	-1.5	--	--	-1.5	Sep-20
Value Added Fixed Income	92,897,459	6.6	-0.1	1.1	6.2	6.0	2.1	2.9	--	4.5	Jan-16
<i>Custom Benchmark - Global Fixed Income</i>			-0.4	1.0	5.4	5.6	0.1	2.1	3.3	3.6	
Eaton Vance High Yield <i>ICE BofA High Yield Master II</i>	12,366,486	0.9	0.3	1.7	6.3	6.6	2.0	3.3	4.4	5.9	May-06
First Eagle Bank Loan Select Fund <i>Credit Suisse Leveraged Loan Index</i>	11,420,580	0.8	0.9	2.3	8.4	7.0	5.2	3.8	4.2	4.9	Oct-10
Manulife Strategic Fixed Income <i>Blmbg. Global Multiverse</i>	34,786,234	2.5	-0.9	-0.2	3.4	2.8	-0.7	--	--	1.1	Aug-19
Mesirow High Yield <i>Blmbg. U.S. Corp: High Yield Index</i>	15,698,465	1.1	0.8	2.8	10.6	9.0	7.0	--	--	5.9	Aug-19
Eaton Vance EMD Opportunities Fund <i>JPM EMBI Global Diversified</i>	8,625,695	0.6	-1.0	0.6	6.7	13.0	1.8	--	--	2.3	Aug-20
Schroder All ILS Fund LTD	10,000,000	0.7									

Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Hedge Funds	80,143,250	5.7	-0.3	0.5	3.1	3.7	2.6	0.8	3.0	3.4	Mar-10
<i>Custom Benchmark</i>			<i>-0.1</i>	<i>0.5</i>	<i>2.8</i>	<i>3.5</i>	<i>4.5</i>	<i>3.4</i>	<i>3.5</i>	<i>3.2</i>	
ABS Offshore SPC - Global Segregated Portfolio	31,333,792	2.2	-0.4	1.1	4.8	6.1	3.4	3.5	4.6	4.9	Sep-10
<i>HFRI Equity Hedge (Total) Index</i>			<i>-1.5</i>	<i>0.9</i>	<i>6.6</i>	<i>6.4</i>	<i>6.7</i>	<i>5.5</i>	<i>5.6</i>	<i>5.5</i>	
Entrust Special Opportunities Fund III, Ltd.	13,695,097	1.0	0.0	0.0	2.7	7.2	0.6	-2.6	--	2.7	Oct-16
<i>HFRI Fund of Funds Composite Index (QTR)</i>			<i>-0.2</i>	<i>1.0</i>	<i>3.3</i>	<i>3.3</i>	<i>3.9</i>	<i>3.4</i>	<i>3.5</i>	<i>3.9</i>	
Old Farm Partners Master Fund, L.P.	16,224,406	1.2	-0.6	0.6	5.9	3.1	5.9	--	--	4.5	Oct-18
<i>HFRI Fund of Funds Composite Index</i>			<i>-0.2</i>	<i>1.0</i>	<i>3.3</i>	<i>3.3</i>	<i>3.9</i>	<i>3.4</i>	<i>3.5</i>	<i>3.5</i>	
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	18,889,955	1.3	0.0	0.0	-1.8	-2.2	0.1	--	--	1.3	Jan-19
<i>HFRI Fund of Funds Composite Index (QTR)</i>			<i>-0.2</i>	<i>1.0</i>	<i>3.3</i>	<i>3.3</i>	<i>3.9</i>	<i>3.4</i>	<i>3.5</i>	<i>4.9</i>	
Real Estate	166,708,205	11.8	-0.2	-0.2	-2.8	-4.1	14.7	11.1	--	8.7	Jan-16
<i>Custom Benchmark</i>			<i>0.0</i>	<i>0.0</i>	<i>-5.8</i>	<i>-10.0</i>	<i>8.0</i>	<i>6.3</i>	<i>--</i>	<i>6.2</i>	
Core Real Estate	106,240,852	7.5	-0.2	-0.3	-3.1	-7.9	10.3	8.5	--	8.1	Jan-16
<i>NCREIF Fund Index-ODCE (VW)</i>			<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	
TA Realty Core Property Fund, L.P.	74,558,902	5.3	0.0	0.0	-1.9	-6.1	13.1	11.3	--	10.9	Apr-18
<i>NCREIF Fund Index-ODCE (EW) (Net)</i>			<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	
JPMorgan Strategic Property	31,681,950	2.2	-0.8	-0.9	-5.9	-11.8	5.8	--	--	4.3	Apr-19
<i>NCREIF Fund Index-ODCE (EW) (Net)</i>			<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>	
Non-Core Real Estate	60,467,353	4.3	0.0	0.0	-2.3	4.0	23.0	15.9	--	8.5	Jan-16

Entrust Special Opportunities Fund III and Entrust Permal Special Opportunities Evergreen Fund: Data is based on June 30, 2023 fair market value, adjusted for subsequent cash flows.

Note: The data for JPMorgan Strategic Property is as of August 31, 2023.

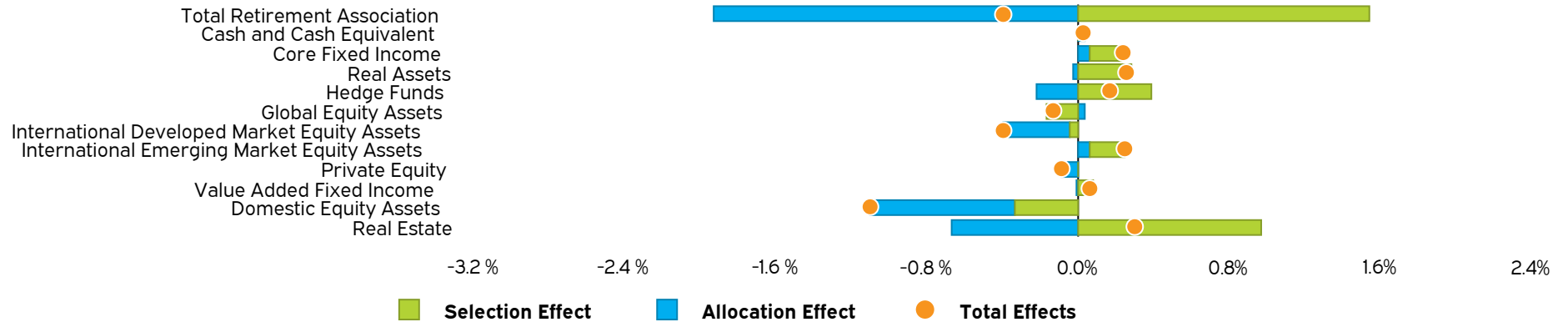
Asset Allocation & Performance | As of August 31, 2023

	Market Value \$	% of Portfolio	1 Mo (%)	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity	243,881,771	17.3	0.0	0.0	3.9	8.9	28.3	17.7	--	13.0	Jan-16
<i>MSCI ACWI IMI (1Q Lagged)+2%</i>			<i>0.0</i>	<i>0.0</i>	<i>18.6</i>	<i>-5.8</i>	<i>17.9</i>	<i>8.7</i>	<i>10.1</i>	<i>11.0</i>	
Private Equity	227,877,254	16.2	0.0	0.0	4.2	9.8	29.1	18.2	--	12.8	Feb-16
Venture Capital	16,004,518	1.1	0.0	0.0	0.4	-2.6	18.8	11.0	--	10.6	Feb-16
Real Assets	126,926,502	9.0	-0.4	-0.4	5.9	9.7	14.0	8.9	--	4.6	Jan-16
<i>CPI +3% (Unadjusted)</i>			<i>0.7</i>	<i>1.1</i>	<i>5.5</i>	<i>6.8</i>	<i>8.9</i>	<i>7.1</i>	<i>5.8</i>	<i>6.6</i>	
Core Real Assets	74,267,628	5.3	-0.6	-0.7	4.5	9.0	12.0	--	--	10.6	Oct-18
<i>CPI +3% (Unadjusted)</i>			<i>0.7</i>	<i>1.1</i>	<i>5.5</i>	<i>6.8</i>	<i>8.9</i>	<i>7.1</i>	<i>5.8</i>	<i>7.2</i>	
IFM Global Infrastructure	74,267,628	5.3	-0.6	-0.7	4.5	9.0	12.0	--	--	10.6	Oct-18
<i>CPI +3% (Unadjusted)</i>			<i>0.7</i>	<i>1.1</i>	<i>5.5</i>	<i>6.8</i>	<i>8.9</i>	<i>7.1</i>	<i>5.8</i>	<i>7.2</i>	
Non-Core Real Assets	52,658,874	3.7	0.0	0.0	8.1	11.1	16.3	7.6	--	4.8	Jan-16
<i>CPI +3% (Unadjusted)</i>			<i>0.7</i>	<i>1.1</i>	<i>5.5</i>	<i>6.8</i>	<i>8.9</i>	<i>7.1</i>	<i>5.8</i>	<i>6.6</i>	
Cash and Cash Equivalent	23,491,723	1.7									
Cash	23,491,723	1.7									

Note: The data for Real Estate, Private Equity, and Real Assets is based on March 31, 2023 fair market value, adjusted for subsequent cash flows.

Note: The data for IFM Global Infrastructure is as of August 31, 2023.

Attribution Effects 1 Year Ending August 31, 2023



Attribution Summary 1 Year Ending August 31, 2023

	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Total Effect (%)
Cash and Cash Equivalent	3.8	4.3	-0.5	0.0	0.0	0.0
Core Fixed Income	-0.1	-2.1	2.0	0.2	0.1	0.3
Real Assets	9.7	6.0	3.7	0.3	0.0	0.3
Hedge Funds	3.7	-2.4	6.1	0.4	-0.2	0.2
Global Equity Assets	11.8	13.1	-1.3	-0.2	0.0	-0.2
International Developed Market Equity Assets	15.3	17.1	-1.8	0.0	-0.4	-0.4
International Emerging Market Equity Assets	3.3	0.5	2.8	0.2	0.1	0.3
Private Equity	8.9	8.9	0.0	0.0	-0.1	-0.1
Value Added Fixed Income	6.0	4.9	1.2	0.1	0.0	0.1
Domestic Equity Assets	11.7	13.9	-2.2	-0.3	-0.8	-1.1
Real Estate	-4.1	-10.6	6.5	1.0	-0.7	0.3
Total Retirement Association	6.3	6.7	-0.4	1.5	-1.9	-0.4

Risk Return Statistics		
	3 Yrs	5 Yrs
	Total Retirement Association	Total Retirement Association
RETURN SUMMARY STATISTICS		
Maximum Return	6.9	6.9
Minimum Return	-4.0	-10.5
Return	8.8	6.8
Excess Return	7.3	5.5
Excess Performance	2.9	0.9
RISK SUMMARY STATISTICS		
Beta	0.8	0.9
Upside Risk	7.7	8.0
Downside Risk	4.5	7.1
RISK/RETURN SUMMARY STATISTICS		
Standard Deviation	8.6	10.5
Sortino Ratio	1.5	0.8
Alpha	4.1	1.4
Sharpe Ratio	0.9	0.5
Excess Risk	8.6	10.6
Tracking Error	4.1	3.9
Information Ratio	0.6	0.2
CORRELATION STATISTICS		
R-Squared	0.9	0.9
Actual Correlation	0.9	0.9

Annual Investment Expense Analysis				
	Fee Schedule	Market Value	Estimated Expense	Expense Ratio (%)
Domestic Equity Assets				
Rhumblin Russell 1000 Value	0.05 % of First \$25 M 0.04 % of Next \$25 M 0.03 % Thereafter	78,636,010	31,091	0.04
Rhumblin Russell 1000 Growth	0.05 % of First \$25 M 0.04 % of Next \$25 M 0.03 % Thereafter	56,435,443	24,431	0.04
Fisher Midcap Value	0.65 % of Assets	53,840,125	349,961	0.65
Newton Small Cap Growth	0.45 % of Assets	47,710,496	214,697	0.45
Vulcan Partners Small Cap Value	0.83 % of Assets	16,130,050	133,879	0.83
Systematic Small Cap Free Cash Flow	0.76 % of Assets	31,133,474	236,614	0.76
International Developed Market Equity Assets		41,326,932	252,461	0.61
Aristotle International Equity	0.49 % of Assets	22,112,097	108,349	0.49
Walter Scott International Equity	0.75 % of Assets	19,214,835	144,111	0.75
International Emerging Market Equity Assets		106,663,333	471,724	0.44
ABS Emerging Markets	Performance Based 0.35 and 0.10	57,461,947	201,117	0.35
Driehaus Emerging Markets Growth	0.55 % of Assets	49,201,386	270,608	0.55
Global Equity Assets		152,190,444	972,244	0.64
First Eagle Global Value Fund	0.75 % of Assets	26,034,894	195,262	0.75
Kopernik Global All Cap Fund	0.80 % of First \$50 M 0.75 % of Next \$150 M 0.70 % of Next \$250 M 0.65 % of Next \$350 M 0.00 % Thereafter	40,036,011	320,288	0.80
Lee Munder Global Multi-Cap Strategy	0.45 % of Assets	40,015,407	180,069	0.45
Wellington Durable Enterprises, L.P.	0.60 % of Assets	46,104,132	276,625	0.60
Core Fixed Income		92,611,047	131,527	0.14
Lord Abbett Short Duration Credit Trust II	0.17 % of Assets	38,947,180	66,210	0.17
Lord Abbett Core Fixed Income Trust II	0.15 % of Assets	40,597,648	60,896	0.15
Rhumblin TIPS Trust	0.04 % of First \$5 M 0.03 % Thereafter	13,066,218	4,420	0.03
Value Added Fixed Income		92,897,459	308,044	0.33
Eaton Vance High Yield	0.42 % of Assets	12,366,486	51,939	0.42
First Eagle Bank Loan Select Fund	0.40 % of Assets	11,420,580	45,682	0.40
Manulife Strategic Fixed Income	0.35 % of Assets	34,786,234	121,752	0.35
Mesirow High Yield	0.40 % of Assets	15,698,465	62,794	0.40
Eaton Vance EMD Opportunities Fund	0.30 % of Assets	8,625,695	25,877	0.30
Total		759,574,813	3,126,673	

Eaton Vance EMD Opportunities Fund: Stated fee of 0.30% with other operating expenses capped at 0.15%.

Private Equity	Commitment	Total Contributions	Total Distributions	Value
Ascend Ventures II, L.P.	2,500,000	2,327,488	997,335	2,651
Ascent Venture Partners V, L.P.	5,000,000	5,004,731	4,494,116	3,172,565
Audax Mezzanine Fund IV, L.P.	10,000,000	8,749,944	7,641,821	3,152,896
Charlesbank Technology Opportunities Fund, L.P.	12,000,000	8,655,545	1,999,703	16,737,583
Ironsides Opportunities Fund II	20,000,000	3,233,141	127,791	3,184,230
Ironsides Co-Investment Fund VI, L.P.	13,000,000	12,672,172	339,337	14,428,648
DN Partners II, L.P.	5,000,000	2,375,841	23,571	2,602,733
Euro Choice V, L.P.	6,078,291	5,919,759	6,026,656	2,918,403
FS Equity Partners VIII, L.P.	12,000,000	9,724,864	324,324	15,696,222
Globespan Capital Partners V, L.P.	5,000,000	4,852,500	9,424,938	2,649,119
HarbourVest Partners Co-Investment Fund V, L.P.	12,000,000	9,300,000	1,912,808	14,608,915
HarbourVest Partners Co-Investment Fund VI, L.P.	13,000,000	4,550,000	0	4,720,972
Ironsides Direct Investment Fund V, L.P.	12,000,000	11,870,897	3,152,053	18,682,210
Kohlberg Investors IX	10,000,000	7,851,817	294,108	10,283,545
Landmark Equity Partners XIV, L.P.	6,000,000	5,841,745	7,419,929	449,881
Leeds Equity Partners V, L.P.	2,500,000	3,525,207	5,594,639	254,662
Lexington Capital Partners VII, L.P.	10,000,000	8,958,787	13,328,863	1,219,794
LLR Equity Partners V, L.P.	12,000,000	11,640,000	3,986,780	16,467,717
Mesirow Financial Capital Partners IX, L.P.	4,000,000	3,840,731	2,021,056	79,293
Ridgemont Equity Partners III, L.P.	12,000,000	12,910,739	7,021,515	16,516,097
Ridgemont Equity Partners IV, L.P.	13,000,000	1,008,678	0	1,116,479
Rimco Production Company, Inc	2,000,000	2,000,000	7,651,066	1
Searchlight Capital III, L.P.	12,000,000	8,643,353	3,985,260	10,498,998
Siguler Guff Distressed Opportunities Fund III, L.P.	6,000,000	5,820,000	9,206,138	467,329
Summit Partners Growth Equity Fund IX, L.P.	10,000,000	11,704,000	12,558,753	15,036,150
Summit Partners Venture Capital Fund V	10,000,000	5,362,946	0	5,250,936
Summit Partners Growth Equity Fund XI, L.P.	13,000,000	2,367,271	0	2,487,566
TRG Growth Partnership II, L.P.	7,500,000	7,366,152	8,989,845	495,617
Trilantic Capital Partners VI (North America), L.P.	12,000,000	11,049,876	1,184,012	14,188,442
Waud Capital Partners V, L.P.	10,000,000	9,863,595	52,149	15,064,698
Wellspring Capital Partners VI, L.P.	12,000,000	11,625,319	2,594,018	15,950,404
Total Plymouth County - PE	291,578,291	220,617,100	122,352,583	228,384,756

Real Assets	Commitment	Total Contributions	Total Distributions	Value
Basalt Infrastructure Partners II	10,000,000	9,416,866	5,845,746	7,097,180
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	10,000,000	4,784,225	282,545	5,107,594
BTG Pactual Global Timberland Resources Fund, LLC	5,043,536	5,043,536	1,869,240	1,439,495
Climate Adaptive Infrastructure Fund I	10,000,000	3,560,084	372,570	4,057,217
Global Infrastructure Partners III, L.P.	10,000,000	10,243,735	4,815,360	10,391,372
Global Infrastructure Partners IV, L.P.	10,000,000	7,843,195	45,433	8,153,921
IFM Global Infrastructure (U.S.), L.P.	60,000,000	60,000,000	4,082,232	74,735,224
ISQ Global Infrastructure Fund III (USTE), L.P.	10,000,000	2,279,628	1,223	2,363,977
JPMorgan Global Maritime Investment	10,000,000	10,034,375	5,459,408	3,319,035
Domain Timbervest Partners III, L.P.	5,000,000	5,000,000	4,081,126	3,655,553
BlackRock Global Infrastructure Fund IV	10,000,000	656,206	0	558,331
Total Plymouth County - RA	140,043,536	109,444,984	21,009,137	113,781,719

Real Estate	Commitment	Total Contributions	Total Distributions	Value
1921 Realty, Inc.	5,000,000	5,378,294	0	542,385
AEW Partners IX, L.P.	10,000,000	6,995,885	111	7,477,079
AEW Partners Real Estate Fund VIII, L.P.	25,000,000	23,989,589	29,026,736	6,372,926
Berkshire Value Fund V, L.P.	9,000,000	6,283,181	1,058,371	5,893,196
Carlyle Realty Partners VIII, L.P.	18,000,000	15,241,627	11,005,998	10,128,920
DSF Capital Partners IV, L.P.	5,000,000	5,000,000	7,406,550	0
DSF Multi-Family Real Estate Fund III, L.P.	15,000,000	15,079,717	22,968,488	4,332,975
JPMorgan Strategic Property Fund	27,000,000	27,000,000	7,006,337	31,681,950
PCCP Equity IX, L.P.	10,000,000	6,119,943	0	6,358,920
Real Estate International Partnership Fund I, L.P.	15,000,000	12,677,141	11,372,161	634,320
Rockpoint Real Estate Fund VI, L.P.	9,000,000	7,270,725	1,091,059	7,712,054
TA Realty Core Property Fund, L.P.	60,000,000	62,829,005	10,988,205	74,558,902
TerraCap Partners V, L.P.	10,000,000	10,398,080	1,045,339	10,583,174
Total Plymouth County - RE	218,000,000	204,263,187	102,969,354	166,276,801

Note: The value is based on March 31, 2023 FMV.

Note: The value for IFM Global Infrastructure and JPMorgan Strategic Property is as of August 31, 2023. The Value for TA Realty Core Property Fund is based on 3/31/2023 FMV as this fund is reported in real time.

Financial Reconciliation | 1 Month Ending August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Rhumblin Russell 1000 Value	61,566,725	18,750,000	-	18,750,000	78,636,010
Rhumblin Russell 1000 Growth	50,594,121	6,250,000	-	6,250,000	56,435,443
Fisher Midcap Value	55,333,108	-	-	-	53,840,125
Newton Small Cap Growth	50,331,861	-	-	-	47,710,496
Vulcan Partners Small Cap Value	17,156,441	-	-	-	16,130,050
Systematic Small Cap Free Cash Flow	31,802,201	-	-	-	31,133,474
Aristotle International Equity	22,923,848	-	-	-	22,112,097
Walter Scott International Equity	20,086,556	-	-	-	19,214,835
ABS Emerging Markets	60,080,896	-	-	-	57,461,947
Driehaus Emerging Markets Growth	51,521,562	-	-	-	49,201,386
First Eagle Global Value Fund	26,675,402	-	-	-	26,034,894
Kopernik Global All Cap Fund	36,309,688	4,000,000	-	4,000,000	40,036,011
Lee Munder Global Multi-Cap Strategy	41,328,018	-	-	-	40,015,407
Wellington Durable Enterprises, L.P.	46,888,619	-	-	-	46,104,132
Lord Abbett Short Duration Credit Trust II	38,800,210	-	-	-	38,947,180
Lord Abbett Core Fixed Income Trust II	40,833,225	-	-	-	40,597,648
Rhumblin TIPS Trust	13,184,220	-	-	-	13,066,218
Eaton Vance High Yield	12,326,218	-	-	-	12,366,486
First Eagle Bank Loan Select Fund	11,313,476	-	-	-	11,420,580
Manulife Strategic Fixed Income	35,080,478	-	-	-	34,786,234
Mesirow High Yield	15,574,268	-	-	-	15,698,465
Eaton Vance EMD Opportunities Fund	8,714,769	-	-	-	8,625,695
Schroder All ILS Fund LTD	-	10,000,000	-	10,000,000	10,000,000
ABS Offshore SPC - Global Segregated Portfolio	31,450,867	-	-	-	31,333,792
Entrust Special Opportunities Fund III, Ltd.	13,695,097	-	-	-	13,695,097
Old Farm Partners Master Fund, L.P.	16,325,649	-	-	-	16,224,406
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	18,889,955	-	-	-	18,889,955
TA Realty Core Property Fund, L.P.	74,558,902	-	-	-	74,558,902
JPMorgan Strategic Property	31,912,817	-	-	-	31,681,950

Financial Reconciliation | 1 Month Ending August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Mesirow Financial International Real Estate Fund I	634,320	-	-	-	634,320
DSF Multi-Family Real Estate Fund III	4,304,566	-	-	-	4,304,566
AEW Partners Real Estate VIII	6,047,171	-	-	-	6,047,171
1921 Realty, Inc	542,385	-	-	-	542,385
Carlyle Realty Partners VIII	9,820,655	-	-	-	9,820,655
Berkshire Value Fund V	5,893,196	-	-	-	5,893,196
Rockpoint Real Estate Fund VI, L.P.	8,141,514	-	-	-	8,141,514
TerraCap Partners V, L.P.	10,583,174	-	-	-	10,583,174
AEW Partners Real Estate Fund IX, L.P.	7,541,452	-	-	-	7,541,452
PCCP Equity IX, L.P.	6,958,920	-	-	-	6,958,920
Euro Choice V Programme	2,918,403	-	-	-	2,918,403
Lexington Capital Partners VII	1,133,716	-	-19,571	-19,571	1,114,145
TRG Growth Partnership II	495,617	-	-	-	495,617
Landmark Equity Partners XIV	425,195	-	-57,583	-57,583	367,612
Summit Partners Growth Equity Fund IX	15,113,150	-	-	-	15,113,150
Leeds Equity Partners V	254,662	-	-	-	254,662
Audax Mezzanine Debt IV	3,251,043	-	-	-	3,251,043
Siguler Guff Distressed Opportunities Fund III, LP	433,763	-	-	-	433,763
Mesirow Financial Capital Partners IX, LP	79,293	-	-	-	79,293
DN Partners II, LP	2,502,220	-	-	-	2,502,220
LLR Equity Partners V, LP.	16,467,717	-	-117,577	-117,577	16,350,140
Wellspring Capital Partners VI	16,126,204	1,206,218	-	1,206,218	17,332,422
Trilantic Capital Partners VI, L.P.	14,984,590	87,273	-	87,273	15,071,863
HarbourVest Partners Co-Investment V	14,148,427	-	-	-	14,148,427
Ironsides Direct Investment Fund V, L.P.	18,682,210	1,151,490	-	1,151,490	19,833,700
Ridgemont Equity Partners III, L.P.	16,465,561	-	-	-	16,465,561
FS Equity Partners VIII, L.P.	15,813,194	-	-	-	15,813,194
Charlesbank Technology Opportunities Fund	16,841,704	2,391,173	-	2,391,173	19,232,877
Searchlight Capital III, L.P.	11,982,990	-	-	-	11,982,990

Financial Reconciliation | 1 Month Ending August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Waud Capital Partners V	15,237,624	-	-	-	15,237,624
Summit Partners Venture Capital Fund V	5,072,160	-	-	-	5,072,160
Ironsides Co-Investment Fund VI, L.P.	13,404,658	-	-	-	13,404,658
HarbourVest Partners Co-Investment Fund VI, L.P.	6,670,972	-	-	-	6,670,972
Ridgemont Equity Partners IV, L.P.	3,992,647	-	-	-	3,992,647
Summit Partners Growth Equity Fund XI	3,166,171	145,609	-	145,609	3,311,780
Ironsides Opportunities Fund II, L.P.	6,220,112	-	-	-	6,220,112
Ascent Ventures V	3,172,565	-	-	-	3,172,565
Globespan Capital V	2,558,038	-	-520,979	-520,979	2,037,059
Kohlberg Investors IX	10,794,894	-	-	-	10,794,894
Waud Capital Partners VI	-	1,206,218	-	1,206,218	1,206,218
IFM Global Infrastructure	74,735,224	-	-	-	74,267,628
JP Morgan Global Maritime Investment	4,621,161	-	-	-	4,621,161
Timbervest Partners III, LP	3,585,553	-	-	-	3,585,553
BTG Pactual Global Timberland Resources	1,439,495	-	-	-	1,439,495
Global Infrastructure Partners III	10,359,145	-	-62,130	-62,130	10,297,014
Basalt Infrastructure Partners II	7,097,180	-	-	-	7,097,180
Global Infrastructure Partners IV, L.P.	8,125,601	-	-	-	8,125,601
ISQ Global Infrastructure Fund III (USTE), L.P.	2,899,636	-	-	-	2,899,636
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	6,150,906	463,861	-	463,861	6,614,767
Climate Adaptive Infrastructure Fund	5,126,959	-	-	-	5,126,959
BlackRock Global Infrastructure Fund IV, L.P.	2,851,508	-	-	-	2,851,508
Cash	68,502,348	1,670,937	-46,681,563	-45,010,625	23,491,723
Total	1,429,630,766	47,322,779	-47,459,405	-136,626	1,410,726,263

Financial Reconciliation | April 1, 2023 To August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Rhumblin Russell 1000 Value	47,688,830	37,500,000	-8,000,000	29,500,000	78,636,010
Rhumblin Russell 1000 Growth	42,492,302	12,500,000	-5,000,000	7,500,000	56,435,443
Fisher Midcap Value	56,112,073	-	-5,000,000	-5,000,000	53,840,125
Newton Small Cap Growth	45,322,353	-	-	-	47,710,496
Vulcan Partners Small Cap Value	15,119,259	-	-	-	16,130,050
Systematic Small Cap Free Cash Flow	28,837,278	-	-	-	31,133,474
Aristotle International Equity	21,235,406	-	-	-	22,112,097
Walter Scott International Equity	19,435,466	-	-71,585	-71,585	19,214,835
ABS Emerging Markets	54,727,404	-	-	-	57,461,947
Driehaus Emerging Markets Growth	48,211,899	-	-	-	49,201,386
First Eagle Global Value Fund	25,238,379	-	-	-	26,034,894
Kopernik Global All Cap Fund	35,288,872	4,000,000	-	4,000,000	40,036,011
Lee Munder Global Multi-Cap Strategy	37,729,431	-	-	-	40,015,407
Wellington Durable Enterprises, L.P.	44,167,270	-	-	-	46,104,132
Lord Abbett Short Duration Credit Trust II	43,541,947	-	-5,000,000	-5,000,000	38,947,180
Lord Abbett Core Fixed Income Trust II	41,147,326	-	-	-	40,597,648
Rhumblin TIPS Trust	17,391,974	-	-4,000,000	-4,000,000	13,066,218
Eaton Vance High Yield	12,044,384	-	-	-	12,366,486
First Eagle Bank Loan Select Fund	10,830,299	-	-	-	11,420,580
Manulife Strategic Fixed Income	41,753,641	-	-7,030,343	-7,030,343	34,786,234
Mesirow High Yield	14,816,668	-	-	-	15,698,465
Eaton Vance EMD Opportunities Fund	8,184,029	-	-	-	8,625,695
Schroder All ILS Fund LTD	-	10,000,000	-	10,000,000	10,000,000
ABS Offshore SPC - Global Segregated Portfolio	35,424,688	-	-5,000,000	-5,000,000	31,333,792
Entrust Special Opportunities Fund III, Ltd.	14,429,772	-	-335,366	-335,366	13,695,097
Old Farm Partners Master Fund, L.P.	15,473,403	-	-	-30,558	16,224,406
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	18,939,967	-	-	-	18,889,955
TA Realty Core Property Fund, L.P.	76,217,008	-	-762,170	-762,170	74,558,902
JPMorgan Strategic Property	33,359,987	-	-924,573	-924,573	31,681,950

Financial Reconciliation | April 1, 2023 To August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Mesirow Financial International Real Estate Fund I	661,586	-	-	-	634,320
DSF Multi-Family Real Estate Fund III	4,214,656	-	-28,409	-28,409	4,304,566
AEW Partners Real Estate VIII	6,330,592	-	-325,755	-325,755	6,047,171
1921 Realty, Inc	541,326	-	-	-	542,385
Carlyle Realty Partners VIII	10,210,612	-	-308,265	-308,265	9,820,655
Berkshire Value Fund V	6,403,223	-	-	-	5,893,196
Rockpoint Real Estate Fund VI, L.P.	7,671,408	429,460	-	429,460	8,141,514
TerraCap Partners V, L.P.	10,635,469	-	-	-	10,583,174
AEW Partners Real Estate Fund IX, L.P.	7,467,816	64,373	-	64,373	7,541,452
PCCP Equity IX, L.P.	6,447,254	600,000	-	600,000	6,958,920
Euro Choice V Programme	2,778,281	-	-	-	2,918,403
Lexington Capital Partners VII	1,251,576	-	-105,649	-105,649	1,114,145
TRG Growth Partnership II	479,471	-	-	-	495,617
Landmark Equity Partners XIV	442,942	-	-82,270	-82,270	367,612
Summit Partners Growth Equity Fund IX	14,759,796	77,000	-	77,000	15,113,150
Leeds Equity Partners V	251,649	-	-	-	254,662
Audax Mezzanine Debt IV	3,051,590	253,655	-155,507	98,147	3,251,043
Siguler Guff Distressed Opportunities Fund III, LP	443,577	-	-33,566	-33,566	433,763
Mesirow Financial Capital Partners IX, LP	78,800	-	-	-	79,293
DN Partners II, LP	2,426,338	-	-100,513	-100,513	2,502,220
LLR Equity Partners V, LP.	16,081,297	-	-117,577	-117,577	16,350,140
Wellspring Capital Partners VI	15,946,152	1,206,218	-	1,206,218	17,332,422
Trilantic Capital Partners VI, L.P.	14,207,445	883,421	-	883,421	15,071,863
HarbourVest Partners Co-Investment V	14,837,536	-	-460,488	-460,488	14,148,427
Ironsides Direct Investment Fund V, L.P.	18,458,056	1,151,490	-	1,151,490	19,833,700
Ridgemont Equity Partners III, L.P.	16,867,336	-	-50,536	-50,536	16,465,561
FS Equity Partners VIII, L.P.	15,365,575	116,972	-	116,972	15,813,194
Charlesbank Technology Opportunities Fund	15,643,537	2,495,294	-	2,495,294	19,232,877
Searchlight Capital III, L.P.	9,891,126	1,483,992	-	1,483,992	11,982,990

Financial Reconciliation | April 1, 2023 To August 31, 2023

	Beginning Market Value	Contributions	Distributions	Net Cash Flow	Ending Market Value
Waud Capital Partners V	14,735,012	234,744	-61,818	172,926	15,237,624
Summit Partners Venture Capital Fund V	5,315,412	265,402	-444,178	-178,776	5,072,160
Ironsides Co-Investment Fund VI, L.P.	14,151,794	-	-1,023,990	-1,023,990	13,404,658
HarbourVest Partners Co-Investment Fund VI, L.P.	4,301,949	1,950,000	-	1,950,000	6,670,972
Ridgemont Equity Partners IV, L.P.	1,023,625	2,876,168	-	2,876,168	3,992,647
Summit Partners Growth Equity Fund XI	2,444,117	824,214	-	824,214	3,311,780
Ironsides Opportunities Fund II, L.P.	2,971,086	3,035,883	-	3,035,883	6,220,112
Ascent Ventures V	3,154,566	-	-	-	3,172,565
Globespan Capital V	2,653,803	-	-612,060	-612,060	2,037,059
Kohlberg Investors IX	9,886,815	511,349	-	511,349	10,794,894
Waud Capital Partners VI	-	1,206,218	-	1,206,218	1,206,218
IFM Global Infrastructure	73,563,508	-	-660,016	-660,016	74,267,628
JP Morgan Global Maritime Investment	4,621,161	-	-	-	4,621,161
Timbervest Partners III, LP	3,648,200	-	-70,000	-70,000	3,585,553
BTG Pactual Global Timberland Resources	1,438,097	-	-	-	1,439,495
Global Infrastructure Partners III	10,232,408	38,063	-132,421	-94,358	10,297,014
Basalt Infrastructure Partners II	6,811,895	-	-	-	7,097,180
Global Infrastructure Partners IV, L.P.	8,060,570	96,230	-124,550	-28,320	8,125,601
ISQ Global Infrastructure Fund III (USTE), L.P.	2,326,494	535,659	-	535,659	2,899,636
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	4,929,357	1,507,173	-	1,507,173	6,614,767
Climate Adaptive Infrastructure Fund	3,609,092	1,149,789	-80,047	1,069,742	5,126,959
BlackRock Global Infrastructure Fund IV, L.P.	614,058	2,293,177	-	2,293,177	2,851,508
Cash	8,995,600	132,156,679	-117,660,556	14,496,123	23,491,723
Total	1,318,495,958	221,442,621	-163,762,208	57,649,855	1,410,726,263

Current Issue

**Private Infrastructure Search
Finalist Review**

Background

- In July, Meketa issued a private infrastructure RFP for both a close-end mandate and an open-end mandate.
- At the August meeting, the board voted to interview GIP and IFM as a finalist for this mandate.
 - GIP are being considered for a potential \$10 million commitment to a closed-end infrastructure fund.
 - As of August 31, 2023, IFM manages around \$74.3 million in a core open-end infrastructure fund, on behalf of the Association.

Manager Search Finalists

Global Infrastructure Partners V

Firm

Global Infrastructure Partners	
Firm Location (Headquarters)	New York, NY
Firm Inception	2006
Strategy Inception	2006
Firm AUM (As of 03/31/23)	~\$100B

- Global Infrastructure Partners (the “GIP” or the “Firm”) was founded in New York City in 2006 by a team of former senior executives from Credit Suisse (“CS”) and General Electric (“GE”) as an independent infrastructure fund manager.
- Over the years, GIP has expanded its global offerings for institutional and retail clients across infrastructure equity and credit, with vehicles focused on specific geographies, asset types, and investors.
- The Firm’s infrastructure equity strategies include GIP Core, GIP Australia, GIP India, GIP Emerging Markets, and ATLAS (listed infrastructure), as well as SMAs and two single-asset continuation vehicles.
- The Firm’s infrastructure credit strategies include GIP Capital Solutions (“GIP CAPS”) and GIP Spectrum, which target debt and structured/preferred equity investments across the energy, transport, and water/waste sectors.
- GIP IV held its final close in December 2019 with \$22.1 billion in aggregate commitments.

Investment & Business Improvement Teams

- GIP employs 170 investment professionals, a 39-person Business Improvement Team (“BIT”), nine professionals focused on ESG, 17 legal, tax and compliance professionals, and 64 business operations professionals located across offices in New York, London, Stamford, Australia, India, Hong Kong, and South Korea.
- The investment team is led by Michael McGhee (Partner & Deputy Chairman) and Raj Rao (Partner, President & COO), who are based in London and New York, respectively.
- The Firm’s 15 Partners have significant experience working together, with 12 having been at the Firm for over 10 years.
- The BIT is led by Tom Horton (Partner) and includes seven portfolio company Senior Executives, five Partners, one Managing Director, 20 Principals, three Vice Presidents, and three Associates.
- The BIT works closely with investment teams throughout all stages of the investment process to design and implement solutions around procurement efficiency, IT and digital innovation, capex optimization, and human capital management.

Investment Terms

Partnership Name	Global Infrastructure Partners V
Partnership Type	Delaware
Investment Strategy/Focus	Infrastructure
Geographic Focus	Global
Vintage Year	2023
Fund Size	\$25.0 billion target size
Final Closing	TBD
Term	10 years from the final closing date (w/two possible 1-year extensions)
Management Fee ¹	Fees are on aggregate commitments during the commitment period; thereafter, fees are on invested capital. The management fee is a blended rate dependent on the Limited Partner’s commitment level as follows: 1.75% on commitments up to \$75 million; 1.50% on commitments greater than \$75 million up to \$150 million; 1.25% on commitments greater than \$150 million up to \$225 million; 1.00% on commitments greater than \$225 million.
Preferred Return	8% compounded annually
Carried Interest	Performance fee is 20% above the preferred return, calculated on a whole-fund basis.
General Partner Commitment	1.5% of non-affiliated commitments.

¹ First Close Fee Discount: 10 basis points for commitments made in the first closing.

Investment Strategy

- GIP V will continue the strategy deployed by prior flagship funds, targeting value-added infrastructure investments across four sectors, and associated subsectors:
- **Energy** – Including renewables and new energies, LNG, and utilities.
 - **Transport** – Focusing on ports, rail, and air transport.
 - **Digital** – Including towers, fiber, and data centers.
 - **Water/Waste** – Targeting concentrated water networks, water treatment and desalination, and energy-from-waste.
- The Fund does not have specific target allocations pertaining to each sector; generally, GIP expects the majority of capital to be allocated to the energy sector, with the next largest allocations to the transport, digital, and water/waste sectors, respectively.
- The Fund will primarily target control investments in brownfield assets, adding value through technical, operational, and financial expertise as provided by investment and BIT professionals.
- Geographically, the portfolio is expected to be global with a primary focus on the OECD markets of North America, Europe, Australia, and Asia.
- The portfolio is expected to comprise 10 to 15 investments ranging in equity from \$1.0 billion to \$2.5 billion.
- The Fund will target a gross return of 15% to 20% with mid-single digit average annual cash yields.

Historical Track Record
(As of March 31, 2023)

Fund	Vintage Year	Commitments (\$M)	Gross IRR (%)	Net IRR (%)
GIP I	2006	5.6	23	17
GIP II	2012	8.3	24	16
GIP III	2016	15.8	17	12
GIP IV	2019	22.1	13	5

- GIP I exceeded target net returns of 11% to 15%. Fund I has realized all 12 investments, with one realization made below cost.
- GIP II made 12 investments, of which nine have been fully realized, with net returns to date above target.
- GIP III has one realization to date out of 10 total investments. GIP III is currently tracking within the targeted returns despite one investment tracking below cost and one investment still marked at cost.
- GIP IV is still in its value creation stage and has invested over 75% of its capital to date.

Strengths

- **Strong Consistent Historical Returns** – Since its inception, GIP’s flagship product has achieved at, or above target returns on their first three funds through March 31, 2023. GIP IV is still in development stage but has a gross return of 13% as the net IRR continues to emerge from its J-curve.
- **Differentiated Business Improvement Team** – GIP has rebranded its operations team as BIT with 39 professionals. The expertise has expanded from its technical and operational skills to include team management, process improvement, commercial and strategy, information technology and cyber, and human capital. The BIT remains actively involved throughout the life of an investment and focuses on driving improvements in areas such as capital spending, process improvements, procurement, customer service, pricing, and cost control.
- **Independent Risk Management Function** – GIP has a strong, independent risk management function that is woven into origination, diligence, and transaction process, carrying over into ongoing portfolio management. The Chief Risk Officer ensures all investments are underwritten properly and consistently with respect to overall risk/return profile, risk mitigations, and downside protections. The Risk Officer also ensures that fully vetted exit strategies are analyzed from initial investment and reassessed constantly during portfolio management.
- **Stable and Experienced Investment Team** – There have been limited Partner level departures from the flagship investment team in the 16 years of firm history primarily due to planned retirements with successors already in place.

Considerations

- **Mega Fund Size** – GIP is targeting \$25 billion for GIP V with no hard cap currently stated which will limit exit opportunities as assets continue to grow decreasing the buyer universe.
 - Mitigating factor(s): Over the past year, several firms have launched core infrastructure products which are expected to ramp up in the coming years. As these platforms increase dry powder, there could be further buying opportunities after GIP completes operational improvements. GIP also tends to partner with investors that may have the ability to buy GIP out of their ownership.
- **Expanding Platform Offering** – GIP is currently fundraising for a new core fund, its second Australia fund, an emerging markets fund, and also has a credit program. The Australian team is primarily focused on the country product, but also will support the flagship fund with crossover deals such as Sydney Airport. It is still unclear how many dedicated professionals will be on the core product or if the flagship team will spend time on both.
 - Mitigating factor(s): GIP continues to grow their senior team from within, promoting long tenured and proven professionals.
- **Limited Realizations with Larger Fund Size** – GIP III has fully realized just one investment since its inception and GIP IV does not have realizations to date. GIP continues to raise larger funds, which they have been able to deploy, but the mega cap deals limit the number of buyers who could acquire these assets.
 - Mitigating factor(s): Although GIP III has just one full exit, the fund has returned one third of invested capital through yield and partial exits. GIP IV has deployed its capital to date in the past 18 months, so the portfolio is still in development stage. GIP typically partners with strategic investors who may have the ability to acquire GIP's stake when it's time for GIP IV to exit.

IFM Global Infrastructure Fund

Manager Overview

- IFM Investors (IFM) is a privately-owned, global asset management firm founded in 2004 with various financial products across infrastructure, debt, listed equity, and private equity strategies. IFM is a leading core infrastructure manager with a long history and robust track record.
- IFM is a subsidiary of Industry Super Holdings Pty. Ltd, which is wholly owned by a group of Australian pension funds. Over the years, that ownership group has expanded from the original four to now 17 not-for profit Australian pension funds.
- The Firm is based out of 11 international offices in Australia, Europe, North America, and Asia.
- IFM's infrastructure platform has three open-end products: IFM Australian Infrastructure Fund ("AIF"); IFM Global Infrastructure Fund ("GIF"); and a newly formed Net Zero Infrastructure Fund ("NZIF"), with an initial target of \$3 billion that includes a \$500 million investment from GIF.
- GIF launched in 2004 and seeks investment opportunities globally, focusing primarily on countries with investment-grade long-term credit ratings. GIF focuses primarily on OECD member countries, with an opportunistic approach to other regions.
- GIF's NAV as of June 30, 2023, is \$54 billion, representing 24 active portfolio investments.

Investment Team

- IFM's Infrastructure Team consists of over 120 investment and asset management professionals, 40 of which are based in North America, 40 in Europe, seven in Asia, and 37 in Australia, including the Global Head of Infrastructure.
- IFM also currently retains 19 senior advisors on an exclusive basis pertaining to anything infrastructure related. The Advisors will assist on a range of asset management, commercial, and investment issues.
- The Australian team primarily focuses on AIF, but is also responsible for Sydney Airport, which is in both AIF there be a reason Contrand GIF. They may also source NZIF renewable and energy transition opportunities. Meanwhile, the North American, Europe, and Asia teams are responsible for sourcing opportunities for GIF and NZIF.

Investment Strategy

- GIF pursues global investments in core infrastructure assets that display monopoly-like characteristics, strong market positions, reliable regulatory environments, and high barriers to entry, limited demand-elasticity, exposure to inflation and economic growth, and long lives.
- The Fund is focused on four broad infrastructure sectors – transportation, energy midstream communications, and utilities – but does not have sector limitations. The current portfolio of assets includes airports, ports, marine terminals, toll roads, pipelines, an LNG terminal, fiber-to-the-home, district heating systems, and water and wastewater assets.
- While the team continues to actively look for new opportunities, they also remain heavily focused on using existing investments as platforms for growth, through expansionary capex or acquiring additional equity stakes.
- The Fund will look to invest enough equity to ensure control, or at least, to secure meaningful oversight of each infrastructure asset.
- Most existing investments have ranged between \$700 million and \$3 billion in size, but the Fund can go larger, including with co-investment capital from Limited Partners and third parties.
- The Fund will target net returns of 10% over the long term (10+ years), which IFM expects to range from 8% to 12% per year, depending on the stage of the market cycle.

Investment Terms

Partnership Name	IFM Global Infrastructure Fund
Partnership Type	Limited Partnership
Investment Strategy/Focus	Core Infrastructure
Vintage Year	2004
Geographic Focus	Global
Fund NAV	\$54 billion ¹
Final Closing	Open-end structure
Total Term	Perpetual life Fund
	Quarterly queues to invest (currently estimated queue of 6 to 12 months)
Fees/Expenses:	
Management Fee	0.77% annual management fee based on NAV
Preferred Return	8% (in local currency)
Carried Interest	10%

¹ As of June 30, 2023.

Historical Track Record
(As of March 31, 2023)

	One Year (%)	Three Year (%)	Five Year (%)	Ten Year (%)	Since Inception (%)
Net Time Weighted Returns	9.7	12.1	10.7	11.0	9.2

- IFM continues to generate strong total returns consistently producing at or above target returns.
- The portfolio is diversified across 24 platform investments diversified across nine sectors and more than 20 countries.

Strengths

- **Strong returns that are within or above targeted range:** The GIF Master Fund's portfolio performance, is 10.2% gross IRR since inception (December 2004). The Fund's returns are within IFM's long-term target range of 8% to 12% per annum net to investors.
- **Diversified geographic, regulatory, and contractual exposure:** The Fund offers exposure to 24 investments in over 20 countries in North America, Europe, South America, and Asia Pacific. These assets have revenues that are regulated/contracted as well as revenues that are linked to GDP growth, with exposures to a variety of regulatory and political regimes.
- **Asset-management capabilities:** Through its proactive asset management approach implemented by its 120+ investment professionals and 19 C-suite senior advisors, IFM is able to make incremental improvements as well as fund large capex projects to better position the assets for growth and operational efficiency.
- **Strong opportunistic exits:** Back in 2017 and 2018, the utilities sector was attractive for sellers and IFM saw an opportunity to exit several of its utility assets, including selling Duquesne Light in 2017 for a 2.3x gross multiple and 50Hertz in 2018 for an 11.0x multiple.
- **Alignment of Firm ownership:** The Fund's ownership by 17 Australian pension funds offers strong alignment with similarly situated investors who have retirement funding liabilities or other long-term funding obligations (e.g., pension funds, sovereign wealth funds, and endowments and foundations).

Considerations

- **Heavy transportation sector concentration:** The Fund has nearly 50% of its NAV in transportation assets, including 33% in four toll roads. This represents significant GDP exposure.
 - Mitigating Factor(s): IFM has diversification within transportation with airports, marine terminals, ports, and toll roads, and almost half of the toll roads are regulated. Additionally, with a more recent large transactions in utilities and digital, the overall exposure to transportation is being mitigated.
- **Large single asset concentration exposure:** Three assets account for 45% of the Fund's exposure, Aleática, Buckeye Partners, and Indiana Toll Roads (ITR), which account for 16%, 15%, and 14% of the Fund's NAV, respectively.
 - Mitigating Factor(s): Aleática, a diversified portfolio of toll roads, ports, light rail system and airport across five countries, has a majority of its revenues contracted with governments. Buckeye has a coverage area comprising approximately 130 million people across the northeast and Midwest US, representing 5,500 miles of pipeline and 135 liquid petroleum products terminals. Meanwhile, ITR is a core asset with a strong competitive position serving as a critical part of the US freight distribution network.
- **Increasing risk-return profile:** Recently acquired assets seem to be moving higher on the risk-return spectrum, with more emerging market exposure, less contracted cash flows, shorter term contracts, and large capex plans.
 - Mitigating Factor(s): IFM has purposely shifted its portfolio to what it considers economic infrastructure, which has more GDP-linked exposure as it believes there are more attractive risk-return opportunities in this sector. These assets continue to display the hallmarks of a core asset, including monopolistic characteristics and high barriers to entry.
- **Significant growth of IFM's fund size and additional products:** At Meketa's initial underwrite of IFM in August 2012, the Fund had approximately \$4 billion and now stands at \$54 billion in value. On the private side, in addition to an existing private equity business and an infrastructure debt practice, IFM recently launched IFM Net Zero Infrastructure Fund, an open-end vehicle targeting the energy transition sector that will be invested by the same infrastructure team as GIF.

Summary

→ Meketa recommends the Board consider retaining IFM as the Fund's open-end IS manager; and make a \$10 million commitment to GIP Fund V.

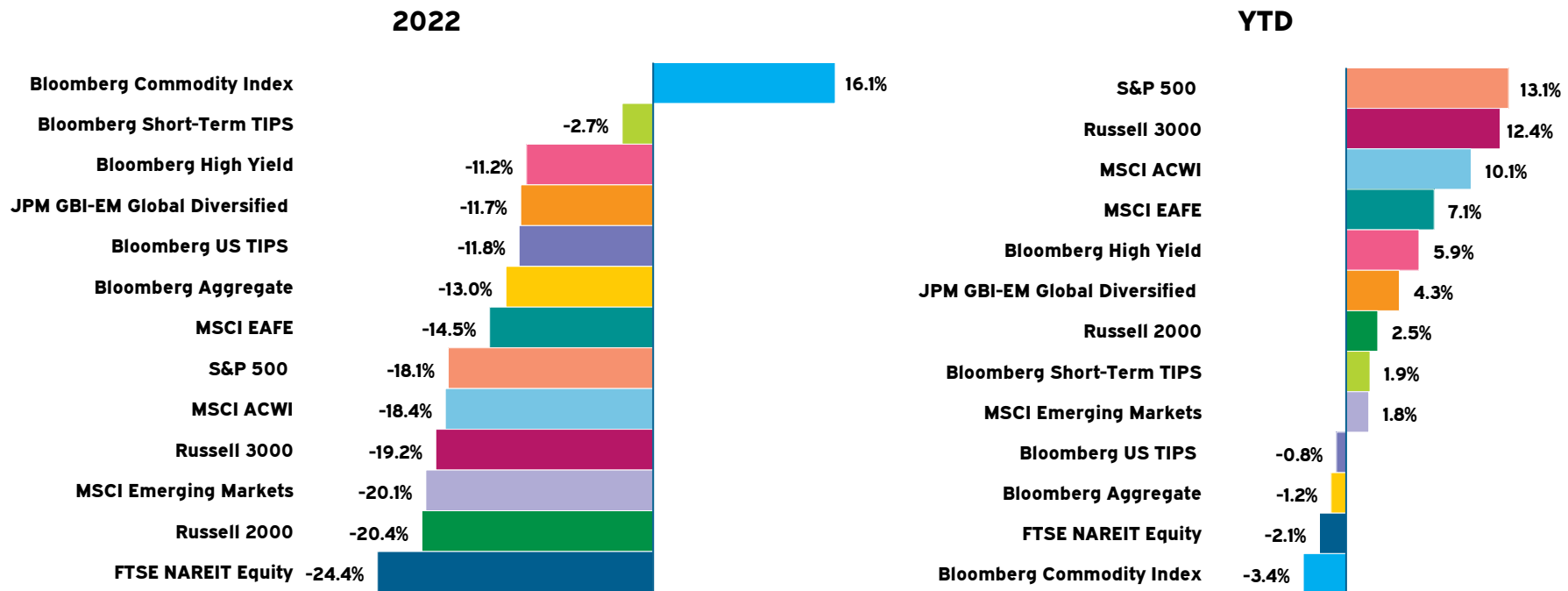
Appendices

Economic and Market Update
Data As of September 30, 2023

Commentary

- After a strong July, global assets turned negative in August and September as expectations shifted to the Fed keeping interest rates higher for longer. Weakening economic data from Europe and China, as well as further instability in the Chinese real estate sector and a strong US dollar, weighed on results.
- The Federal Open Markets Committee (FOMC) increased policy rates in July by 0.25% to a range of 5.25% - 5.5% and kept rates at that level at their September meeting. Markets are now largely expecting the FOMC to maintain interest rates at this level through the first half of next year.
 - US equity markets (Russell 3000 index) fell in the third quarter (-3.3%), bringing the year-to-date gains to 12.4%. The technology sector remains the key driver of results this year, helped by artificial intelligence optimism.
 - Non-US developed equity markets declined more than the US in the third quarter (MSCI EAFE -4.1%) with the strength of the US dollar adding 2.8% to the quarterly declines. This widened the gap between US and international developed equities for the year (12.4% versus 7.1%).
 - Emerging market equities experienced the smallest declines in the third quarter (-2.9%). Negative results were driven by China and again the strong US dollar. Emerging markets continue to significantly trail developed market equities year-to-date, returning just 1.8%, again driven by China.
 - Interest rates generally rose over the quarter, particularly for longer-dated maturities. The broad US bond market fell (-3.2%) for the quarter and turned negative (-1.2%) year-to-date, as higher income has offset capital losses from rising rates.
- For the rest of this year, the paths of inflation and monetary policy, slowing global growth, and the wars in Ukraine and Israel will all be key.

Index Returns¹



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

→ While hopes for a soft landing remain in place, the prospect of higher interest rates for longer weighed on market sentiment in August and September.

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

Domestic Equity Returns¹

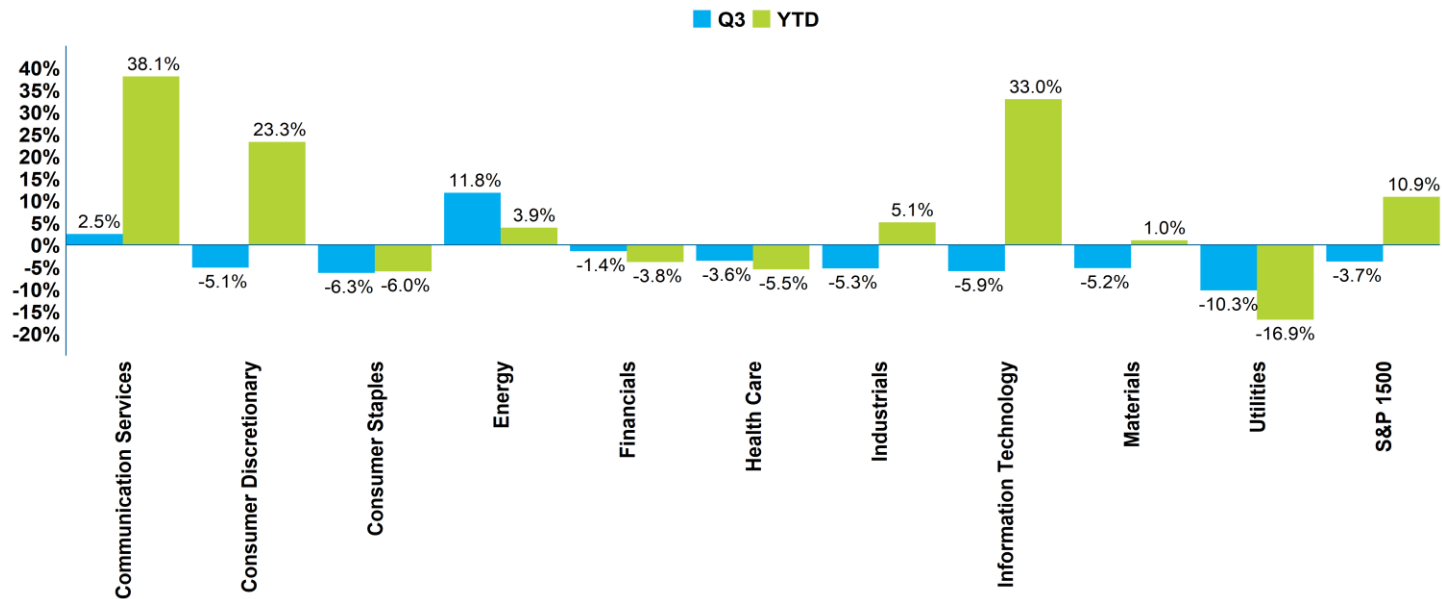
Domestic Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	-4.8	-3.3	13.1	21.6	10.2	9.9	11.9
Russell 3000	-4.8	-3.3	12.4	20.5	9.4	9.1	11.3
Russell 1000	-4.7	-3.1	13.0	21.2	9.5	9.6	11.6
Russell 1000 Growth	-5.4	-3.1	25.0	27.7	8.0	12.4	14.5
Russell 1000 Value	-3.9	-3.2	1.8	14.4	11.1	6.2	8.4
Russell MidCap	-5.0	-4.7	3.9	13.4	8.1	6.4	9.0
Russell MidCap Growth	-4.9	-5.2	9.9	17.5	2.6	7.0	9.9
Russell MidCap Value	-5.1	-4.5	0.5	11.0	11.0	5.2	7.9
Russell 2000	-5.9	-5.1	2.5	8.9	7.2	2.4	6.6
Russell 2000 Growth	-6.6	-7.3	5.2	9.6	1.1	1.6	6.7
Russell 2000 Value	-5.2	-3.0	-0.5	7.8	13.3	2.6	6.2

US Equities: The Russell 3000 Index fell 3.3% in the third quarter but is up 12.4% YTD.

- US stocks fell 3.3% in the third quarter as healthy economic data and comments from the Fed caused investors to expect interest rates to remain higher for longer.
- Large cap stocks outperformed small cap stocks during the quarter, bringing their year-to-date outperformance to over 10%. The so called “Magnificent Seven” within the large cap market drove most of this outperformance despite a weak third quarter.
- Energy strongly led the way during the quarter posting double-digit gains while most other sectors declined. Oil prices rose after Saudi Arabia and Russia extended output cuts.

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

S&P 1500 Sector Returns¹



→ Except for energy, which benefited from rising oil prices, all sectors were down in the third quarter.

→ So far in 2023, the communication services (+38.1%) and technology (+33.0%) sectors had the best results on artificial intelligence optimism. Given the continued strength in the US consumer the consumer discretionary sector followed (+23.3%), while more defensive sectors like utilities (-16.9%) and consumer staples (-6.0%) have trailed.

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

Foreign Equity Returns¹

Foreign Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-3.2	-3.8	5.3	20.4	3.7	2.6	3.3
MSCI EAFE	-3.4	-4.1	7.1	25.6	5.8	3.2	3.8
MSCI EAFE (Local Currency)	-1.1	-1.3	10.7	20.3	10.8	5.7	6.8
MSCI EAFE Small Cap	-4.4	-3.5	1.8	17.9	1.1	0.8	4.3
MSCI Emerging Markets	-2.6	-2.9	1.8	11.7	-1.7	0.6	2.1
MSCI Emerging Markets (Local Currency)	-1.8	-1.4	4.0	10.9	0.6	2.7	4.9
MSCI China	-2.8	-1.9	-7.3	5.2	-14.3	-4.2	1.7

Foreign Equity: Developed international equities (MSCI EAFE) fell 4.1% in the third quarter bringing the YTD gain to 7.1%. Emerging market equities (MSCI EM) fell 2.9% in the period, rising 1.8% YTD.

- Outside of the US, equities were also weak during the third quarter with the continued strength of the US dollar being a key driver.
- Eurozone shares felt pressure from slowing GDP growth and an interest rate hike by the ECB, although inflation continued to ease. By contrast, the UK saw modest gains amid promising economic data including slowing inflation and GDP back around pre-pandemic levels. Japan outperformed regional peers for the quarter due in part to strong earnings.
- Emerging market performance, while negative, outpaced developed peers. Chinese markets saw losses in-line with other emerging market countries, driven largely by unease surrounding property company Evergrande and a continued lackluster reopening of the economy.

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

Fixed Income Returns¹

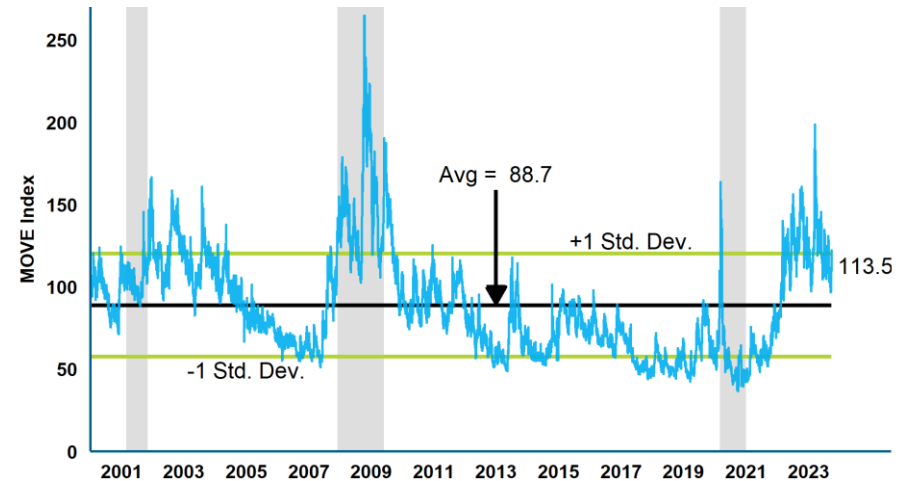
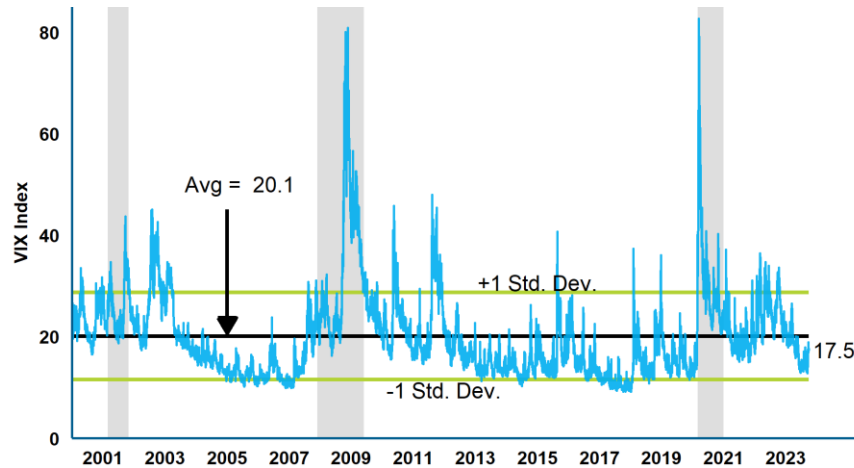
Fixed Income	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-2.4	-2.9	-0.6	1.6	-4.7	0.3	1.4	5.7	6.0
Bloomberg Aggregate	-2.5	-3.2	-1.2	0.6	-5.2	0.1	1.1	5.4	6.2
Bloomberg US TIPS	-1.8	-2.6	-0.8	1.2	-2.0	2.1	1.7	5.0	6.6
Bloomberg Short-term TIPS	-0.2	0.4	1.9	3.2	1.9	2.8	1.7	5.4	2.5
Bloomberg High Yield	-1.2	0.5	5.9	10.3	1.8	3.0	4.2	8.9	4.0
JPM GBI-EM Global Diversified (USD)	-3.4	-3.3	4.3	13.1	-2.7	0.0	-0.8	6.9	4.9

Fixed Income: The Bloomberg Universal index declined 2.9% in the third quarter and -0.6% YTD.

- The downgrade of US government debt from AAA to AA+ by Fitch combined with expectations for higher borrowing put upward pressure on longer-term rates for the quarter and weighed on overall results. Expectations for policy rates to remain higher for longer than previously expected also contributed to the decline in bonds.
- The broad US bond market (Bloomberg Aggregate) fell 3.2% for the quarter bringing YTD results into negative territory. The broader TIPS index fell by 2.6%, while the less interest-rate-sensitive short-term TIPS index outperformed most sectors, up 0.4%.
- High yield bonds were the strongest quarterly performers, up 0.5%, while emerging market bonds were the weakest performer, falling 3.3%. The two asset classes remain the top performers for the year as risk appetite in credit markets remains robust.

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

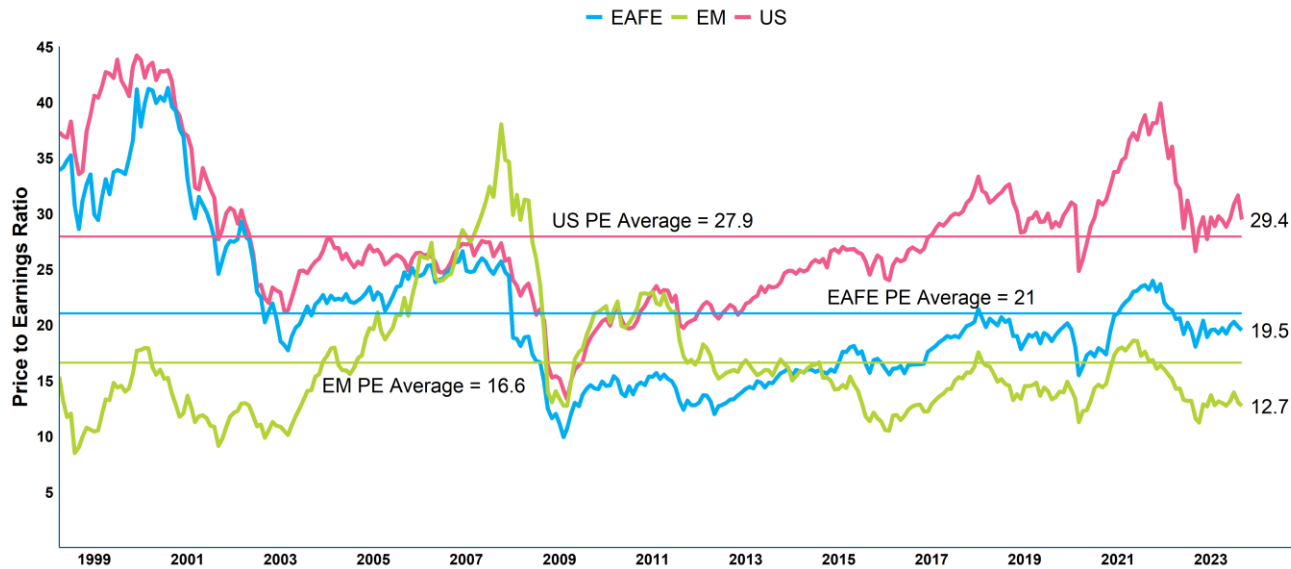
Equity and Fixed Income Volatility¹



- Volatility in equities (VIX) increased over the quarter but finished at a level below the long-term average. The recent increase in equity volatility has largely been driven by investors coming to terms that interest rates might remain higher for a longer period.
- In comparison, volatility in the bond market (MOVE) remains well above its long-run average (88.7) after last year's historic losses and due to continued policy uncertainty. Over the quarter, fixed income volatility finished slightly higher compared to where it started, like equities, driven by expectations for rates to stay higher for longer.

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

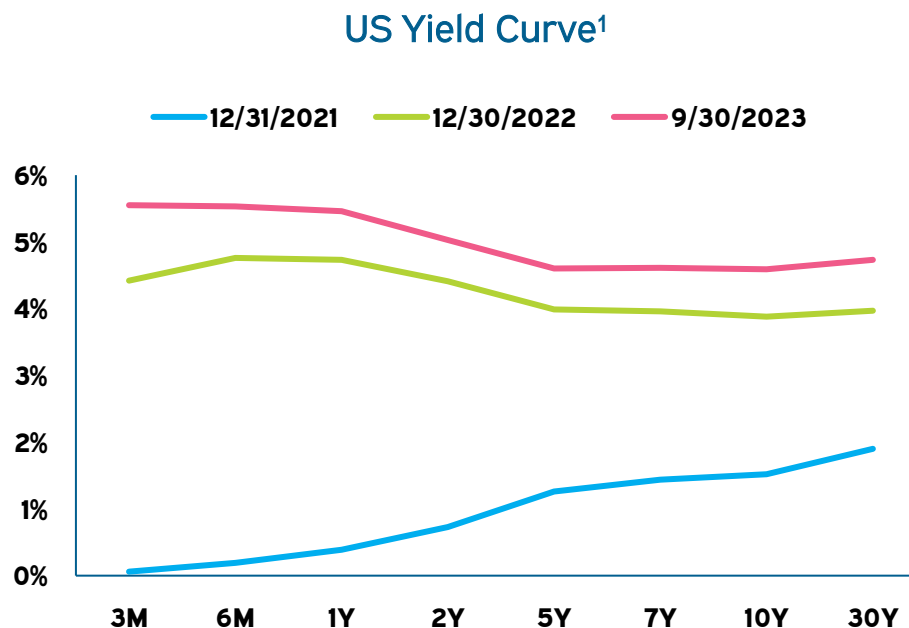
Equity Cyclically Adjusted P/E Ratios¹



→ Given the strong technology-driven rally this year, the US equity price-to-earnings ratio increased above its long-run (21st century) average. With the equity market decline in August and September the P/E ratio fell from its recent peak.

→ International developed market valuations are below their own long-term average, with those for emerging markets the lowest and well under the long-term average (close to one standard deviation below).

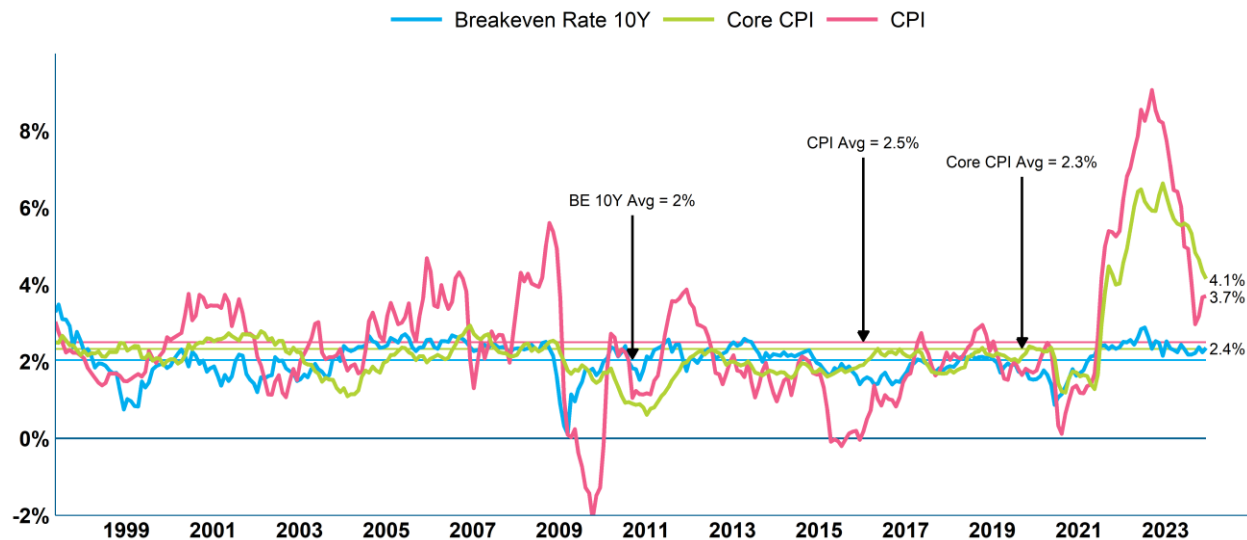
¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: Bloomberg. Earnings figures represent the average of monthly “as reported” earnings over the previous ten years. Data is as of September 2023. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.



- Overall rates have continued to increase this year, particularly at the policy sensitive front-end of the yield curve, but at much slower pace compared to last year.
- Over the quarter, very short-term interest rates (two years or less) increased only slightly as monetary policy has likely reached close to its terminal rate for this cycle. By contrast, longer-term rates rose dramatically as US debt was downgraded and investors came to terms with rates remaining higher for longer. The ten-year Treasury yield increased from 3.8% to 4.6% over the quarter.
- Because of the dynamic above, the yield curve's inversion decreased with the spread between two-year and ten-year Treasuries finishing the quarter at -0.47% (it started the quarter at -1.05%).

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

Ten-Year Breakeven Inflation and CPI¹

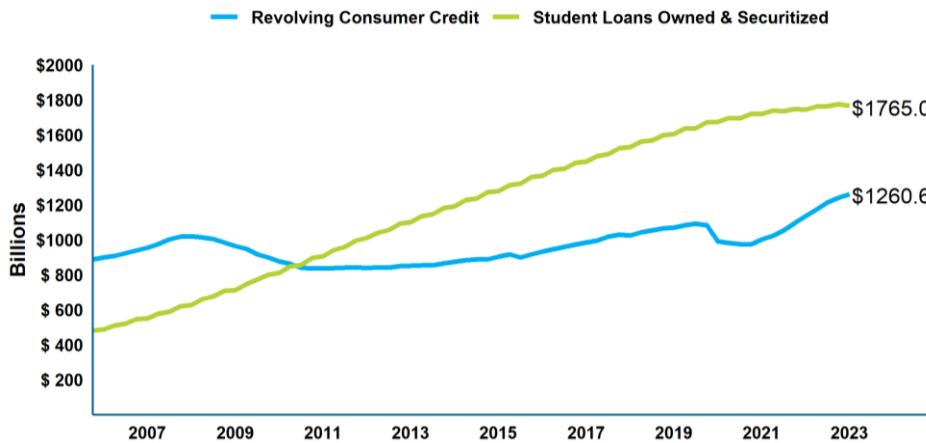


- After the steady decline in inflation from the June 2022 peak, consumer prices recently increased driven by energy prices.
- Year-over-year headline inflation was flat at 3.7% coming in slightly higher than expectations as improvements in energy prices were offset by higher shelter costs.
- Core inflation – excluding food and energy – continued its decline (4.3% to 4.1%) year-over-year. It remains stubbornly high, though, driven by shelter costs (+7.2%), particularly owners' equivalent rent, and transportation services (+9.1%).
- Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed's 2% average target.

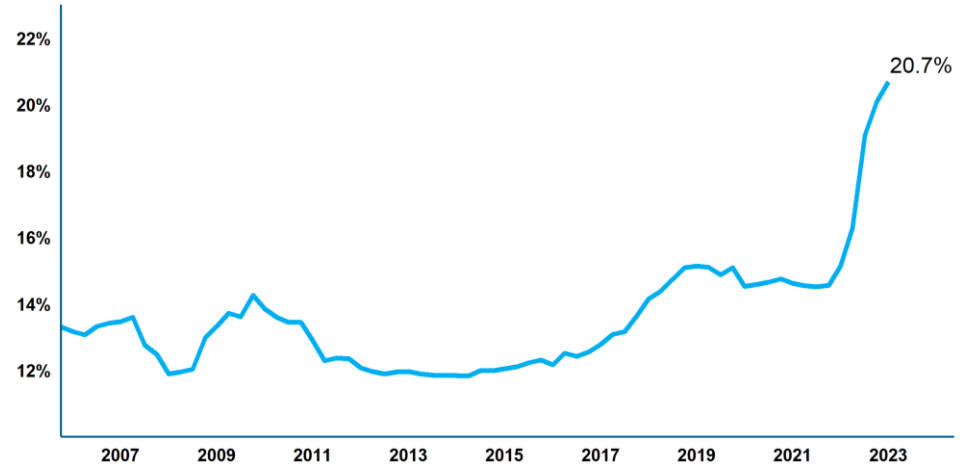
¹ Source: FRED. Data is as September 30, 2023. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

US Consumer Under Stress¹

Revolving Consumer Credit & Student Loans (\$B)



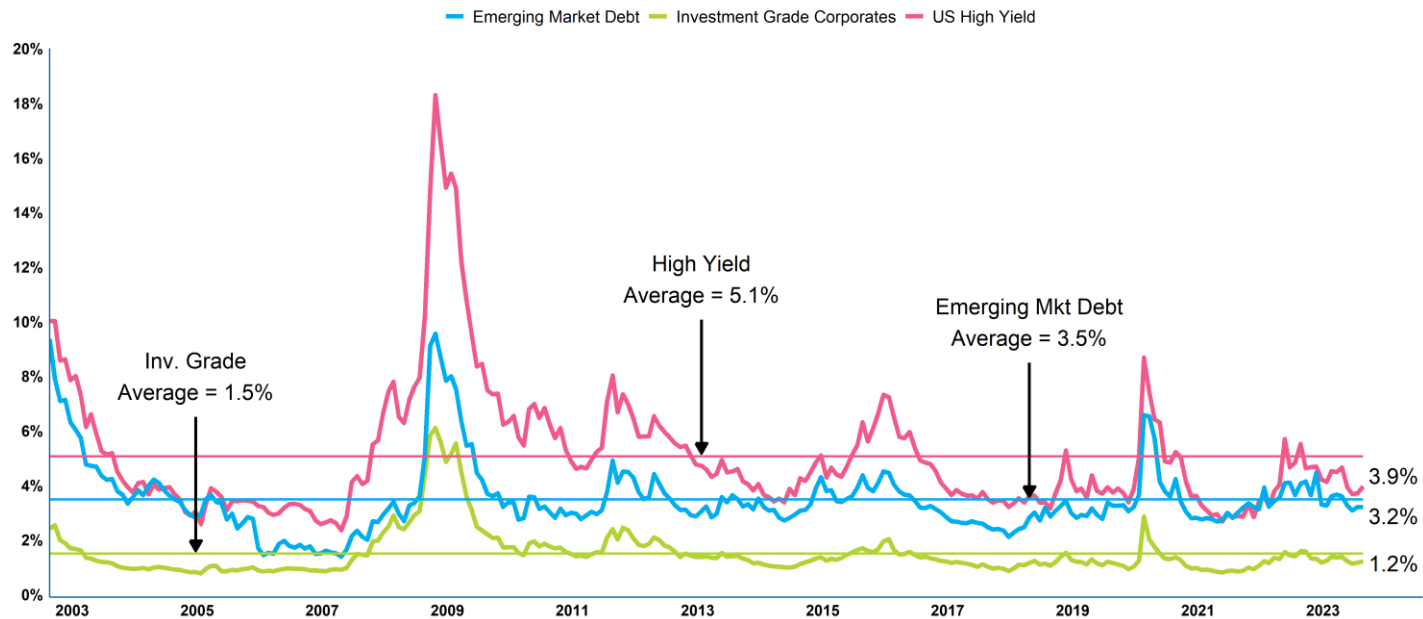
Consumer Credit Card Interest Rates (%)



- Despite the strong labor market and higher wages, pressures have started to build on the US consumer. This is an important consideration as consumer spending has been an important driver of economic growth.
- Revolving consumer credit surged to new highs in 2023 even as credit card interest rates hit levels not seen before (the prior peak was around 19% in the 1980s).
- The return of student loan repayments after a three-year pandemic-related reprieve could add to pressures on consumers' budgets. This might be partially balanced by recently initiated repayment and forgiveness programs.
- As we look ahead, the strength of the US consumers will remain key as they make up most of domestic growth (GDP).

¹ Source: FRED. The most recent data is as June 30, 2023. Revolving Consumer Credit data is seasonally adjusted to remove distortions during the holiday season.

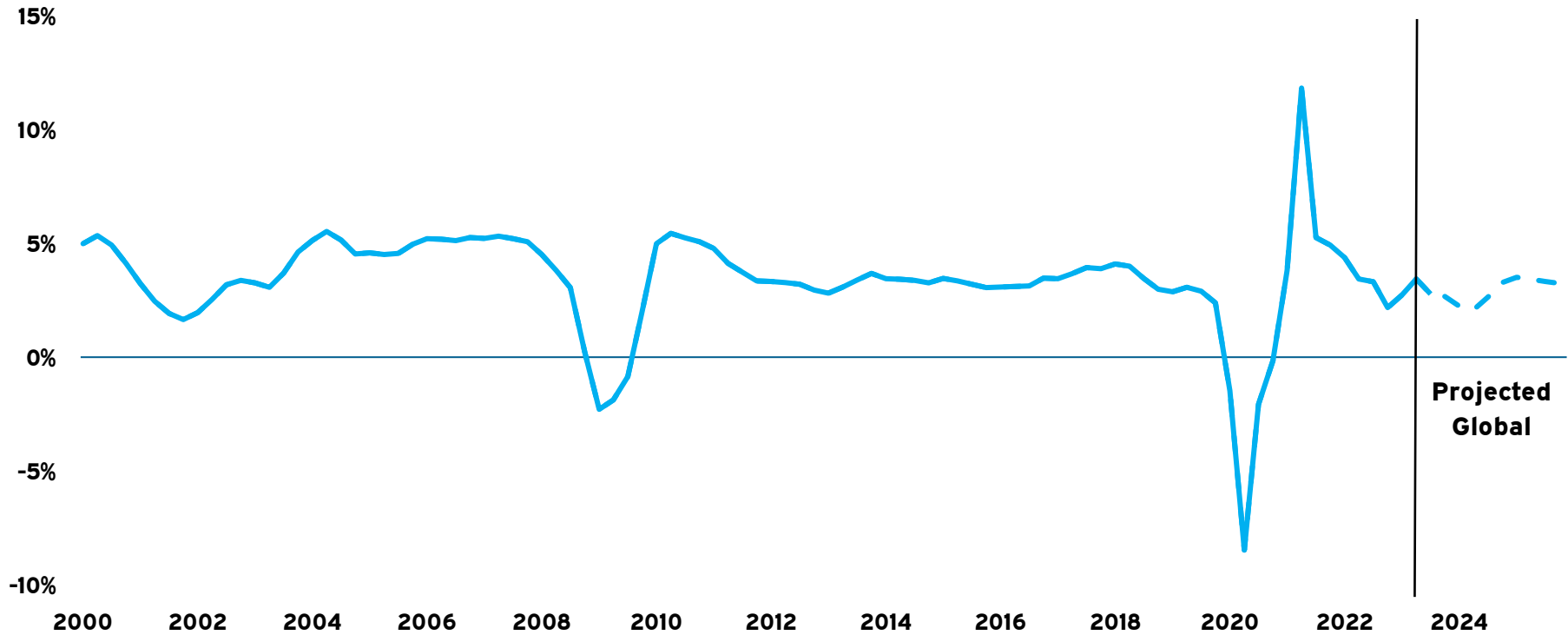
Credit Spreads vs. US Treasury Bonds¹



- Credit spreads (the added yield above a comparable maturity Treasury) largely remained unchanged over the quarter.
- High yield spreads remain well below the long-term average given the overall risk appetite this year. Investment grade and emerging market spreads are also below their respective long-term averages, but by smaller margins.

¹ Sources: Bloomberg. Data is as of September 30, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

Global Real Gross Domestic Product (GDP) Growth¹

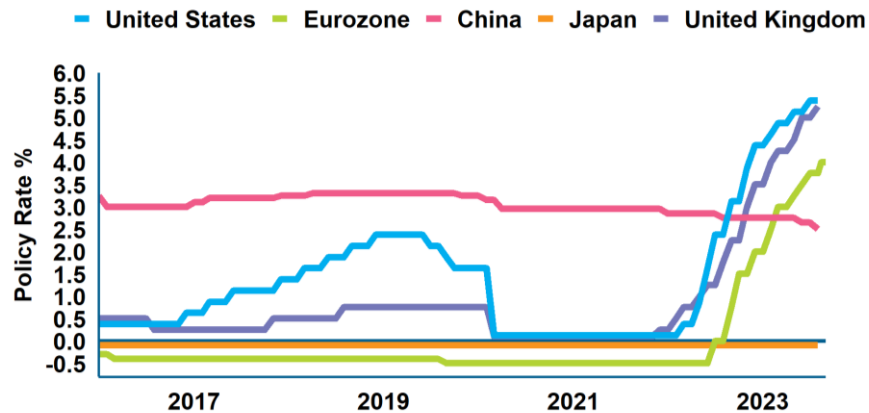


- Global economies are expected to slow this year compared to 2022. The risk of recession remains elevated given policymakers' aggressive tightening, but optimism has started to grow over some central banks potentially navigating a soft landing.
- The delicate balancing act of central banks trying to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

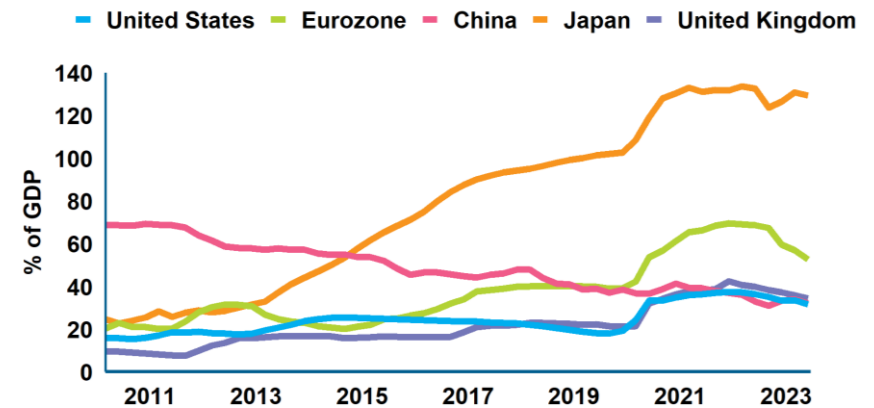
¹ Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated September 2023.

Central Bank Response¹

Policy Rates



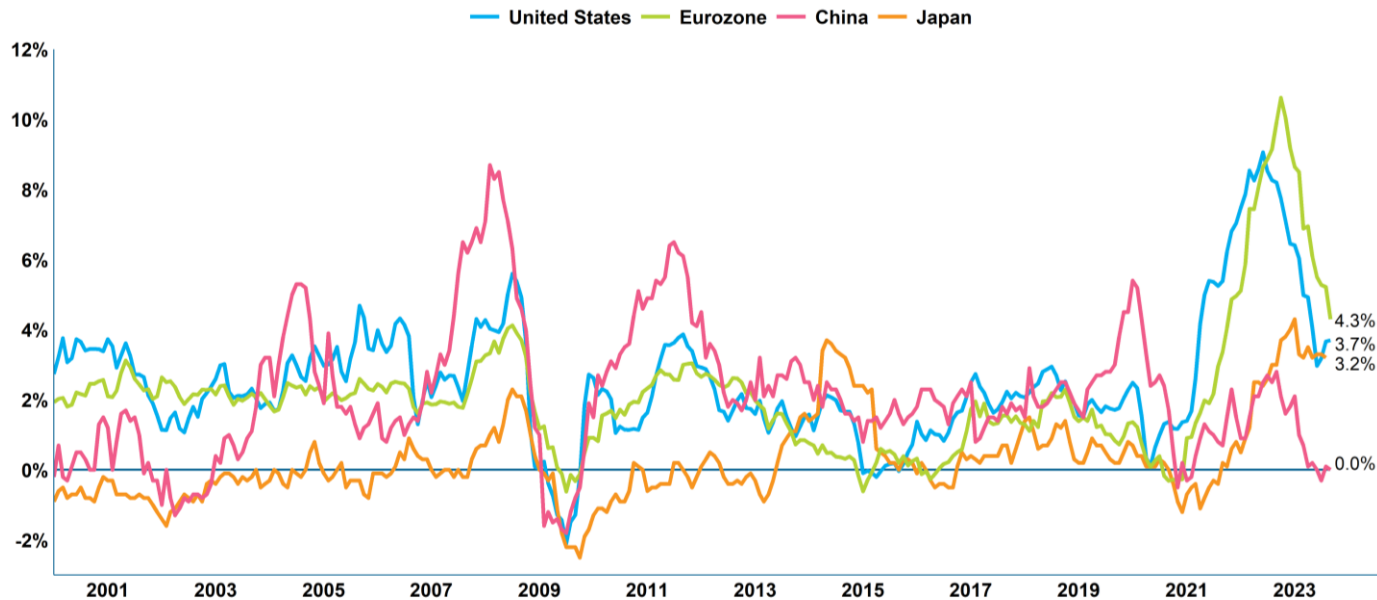
Balance Sheet as % of GDP



- Slowing inflation and growth have led to expectations for a reduction in the pace of aggressive policy tightening.
- In July the Fed raised rates another 25 basis points to a range of 5.25% to 5.50% and then kept rates at this level at their September meeting. Markets are expecting at most one more hike later this year.
- The European Central Bank also increased rates in July, with an additional hike in September, but rates remain lower than in the US. In Japan, expectations have increased that the BOJ will end its negative interest rate policy due to rising inflation.
- The central bank in China has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- Risks remain for a policy error as central banks attempt to balance bringing down inflation, maintaining financial stability, and supporting growth.

¹ Source: Bloomberg. Policy rate data is as of September 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 June 30, 2023.

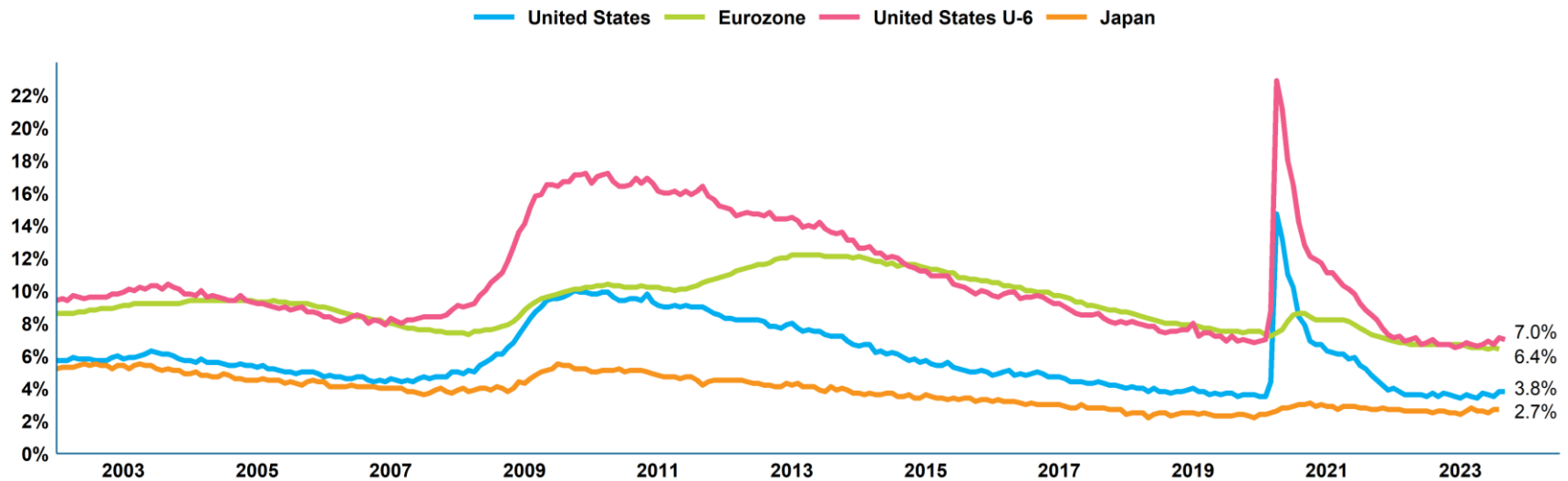
Inflation (CPI Trailing Twelve Months)¹



- The inflation picture remains mixed across the major economies.
- In the US, inflation was flat at 3.7%, influenced by rising shelter costs, while eurozone inflation remained higher than the US at 4.3%, a level well off its peak, however. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- Inflation in Japan has increased to levels not seen in almost a decade largely driven by food and home related items. In China, deflationary pressures eased but prices were flat from a year prior.

¹ United States CPI and Eurozone CPI – Source: FRED. Japan CPI and China CPI - Source: Bloomberg. Data is as September 30, 2023. The most recent data for Japanese and Eurozone inflation is as of August 2023.

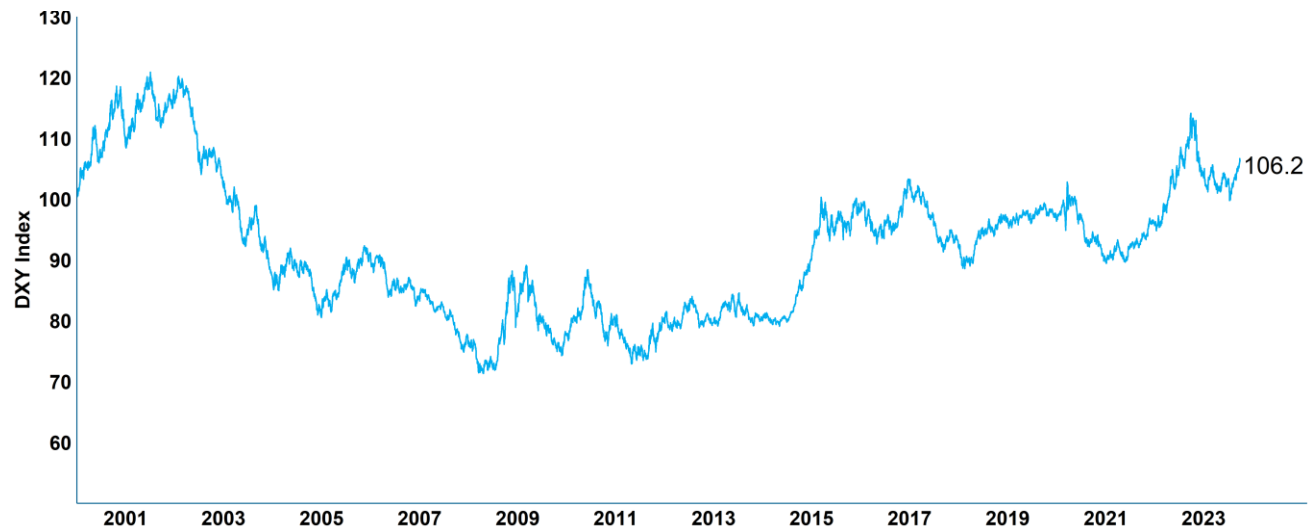
Unemployment¹



- Overall, the US labor market remains healthy with the unemployment rate relatively low, wage growth now positive in real terms, and initial claims for unemployment staying subdued. The pace of wage growth has slowed though, and despite remaining elevated, the number of job openings has declined from recent highs.
- In September, unemployment remained at 3.8%, a level only 0.2% higher than the start of the quarter. The labor force participation rate remained at 62.8% well off the lows of the pandemic (60.1%) but not back to pre-pandemic levels (63.3%). Broader measures of unemployment (U-6) finished the quarter at 7.0% up only slightly from the end of June (6.9%).
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

¹ Eurozone Unemployment - Source: Bloomberg. Japan, United States, United States U-6 Unemployment – Source: FRED. Data is as September 30, 2023, for the US. The most recent data for Eurozone unemployment is as of August 2023 and Japanese unemployment is as of August 2023.

US Dollar versus Broad Currencies¹



- After a strong 2022, the US dollar declined late last year and into early this year as weaker economic data and lower inflation led to investors anticipating the end of FOMC tightening.
- Recently though, the dollar reversed course and appreciated against major currencies as relative growth remains strong and investors anticipate the FOMC keeping interest rates higher for longer.
- For the rest of this year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

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

Summary

Key Trends:

- The impact of inflation still above policy targets will remain key, with bond market volatility likely to stay high.
- Global monetary policies could diverge going forward. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecasted to tip into recession. However, optimism has been building that some economies could experience a soft landing. Inflation, monetary policy, and the war will all be key.
- In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing costs are elevated, and the job market may weaken.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow. Also, the future paths of the large technology companies that have driven market gains will be important.
- Equity valuations remain lower in emerging and developed markets, but risks remain, including the potential for recent strength in the US dollar to persist, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector. Japan's recent hint at potentially tightening monetary policy along with changes in corporate governance in the country could influence relative results.
- After month-end, heightened tensions in Israel could add to overall uncertainty and drive safe haven flows.

Corporate Update



7
Offices



240+
Employees



240+
Clients



\$1.8T
Assets Under Advisement



\$200B
Assets in Alternative Investments



99%
Client Retention Rate



5:1
Client | Consultant Ratio

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

UPCOMING EVENTS



Q4 Investment Perspectives Webcast
January 2024



Mission Driven Investing Manager Research Day
December 2023

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

THOUGHT LEADERSHIP



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

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

Read more here:

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



Read our recent white paper “Venture Capital Primer”

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

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

Read more here:

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



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

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

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

Read more here:

<https://meketa.com/leadership/navigating-investment-risks-through-modeling-climate-scenario-analysis/>

MEKETA VALUES COMMUNITY

Habitat Build Days

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

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



MEKETA IN THE NEWS

Pensions&Investments

Investors cooling on China ahead of Biden executive order

By Brian Croce & Arleen Jacobius
August 11, 2023

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

On Aug. 9, the president signed an executive order barring U.S. investment including joint ventures in

Chinese companies focused on semiconductors and microelectronics, quantum information technologies and artificial intelligence. It also requires Americans to notify the Treasury Department of direct investments in those sectors.

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

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

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

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

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

Private Debt Investor

Yes, banks and private debt can co-exist

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

By Christopher Faille | August 31, 2023

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

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

Disclaimer, Glossary, and Notes

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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.

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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.