

# Plymouth County Retirement Association

June 27, 2023

Meeting Materials

## Agenda

1. Estimated Retirement Association Performance As of May 31, 2023
2. Performance Update As of April 30, 2023
3. Appendices
  - Economic and Market Update-Data As of April 30, 2023
  - Corporate Update
  - Disclaimer, Glossary, and Notes

**Estimated Total Retirement Assets  
As of May 31, 2023**

Estimated Total Retirement Assets  
As of May 31, 2023<sup>1</sup>

	May <sup>2</sup> (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	-0.8	-0.5	2.5	1.7	10.4	6.4	7.0

Benchmark Returns

	May (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Russell 3000	0.4	1.5	8.7	2.0	12.2	10.1	11.5
MSCI EAFE	-4.2	-1.5	6.8	3.1	8.5	3.2	4.6
MSCI Emerging Markets	-1.7	-2.8	1.1	-8.5	3.5	-0.7	1.9
Barclays Aggregate	-1.1	-0.5	2.5	-2.1	-3.6	0.8	1.4
Barclays TIPS	-1.2	-1.1	2.2	-4.2	0.4	2.6	1.8
Barclays High Yield	-0.9	0.1	3.6	0.1	2.9	3.1	4.0
JPM EMBI Global Diversified (Hard Currency)	-0.6	-0.1	1.8	-1.5	-2.7	-0.1	2.1
S&P Global Natural Resources	-9.4	-9.6	-9.1	-14.3	16.9	4.3	4.4

Estimated Total Retirement Assets As of May 31, 2023	\$1,302,901,912
Current Month Performance Estimate through June 16	2.8%

<sup>1</sup> The May performance estimates are calculated using index returns as of May 31, 2023 for each asset class. No performance estimate was included for private equity, real estate, infrastructure, and private natural resources asset classes.

<sup>2</sup> As of May, 31 2023.

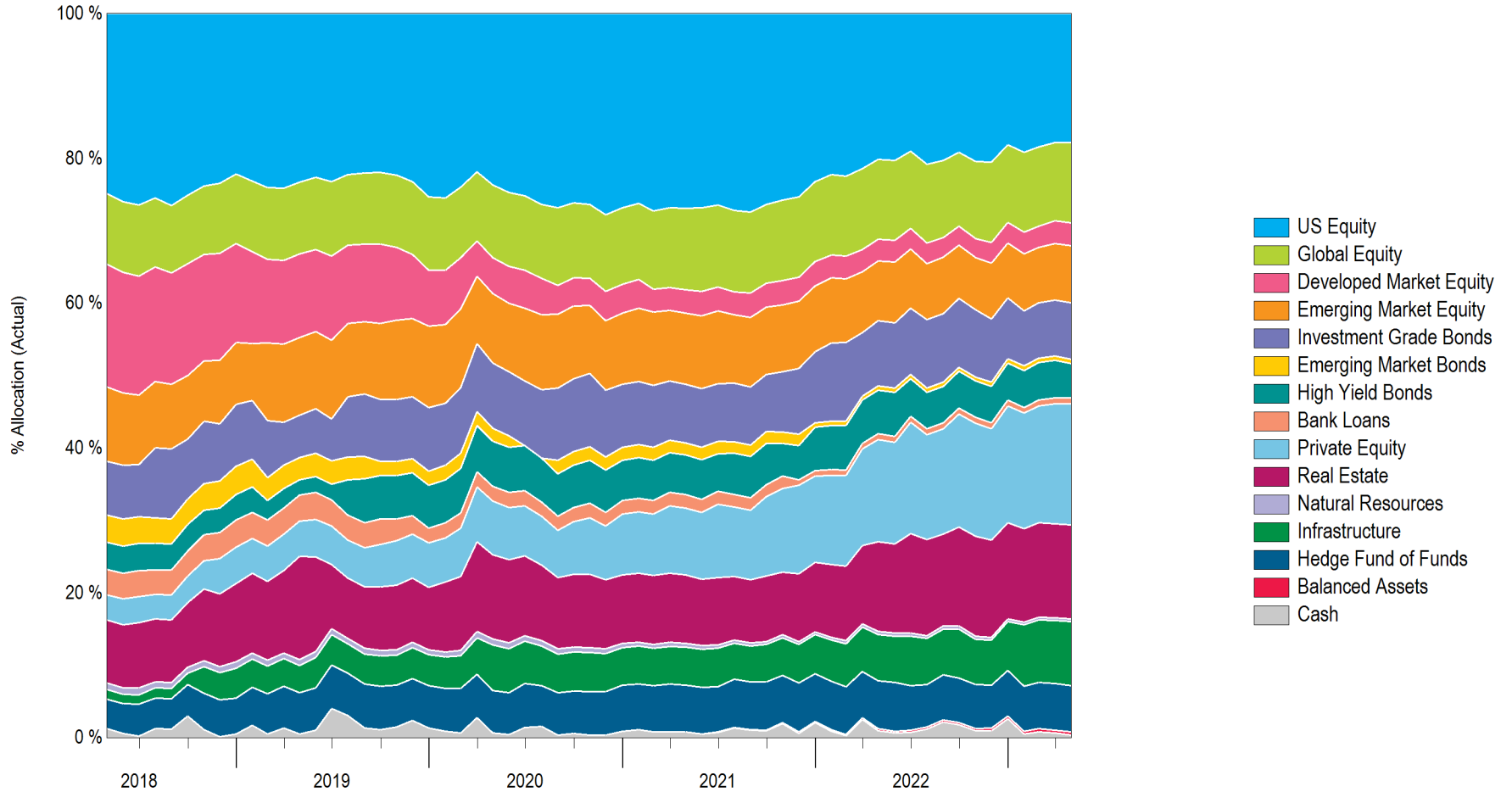
**Performance Update  
As of April 30, 2023**

DRAFT

	Allocation vs. Target		Policy	Policy Range	Within IPS Range?
	Current Balance	Current Allocation			
Domestic Equity	\$234,240,847	18%	26%	21% - 36%	No
International Developed Market Equity	\$41,777,651	3%	6%	1% - 16%	Yes
International Emerging Market Equity	\$102,709,055	8%	10%	5% - 20%	Yes
Global Equity	\$145,351,480	11%	10%	5% - 20%	Yes
Core Bonds	\$102,585,392	8%	9%	4% - 14%	Yes
Value-Added Fixed Income	\$81,262,483	6%	6%	2% - 12%	Yes
Private Equity	\$224,795,372	17%	13%	4% - 18%	Yes
Real Estate	\$170,102,382	13%	10%	5% - 15%	Yes
Real Assets	\$120,909,312	9%	6%	2% - 10%	Yes
Hedge Fund of Funds	\$84,267,339	6%	4%	2% - 8%	Yes
Cash	\$5,354,096	0%	0%	0% - 3%	Yes
<b>Total</b>	<b>\$1,313,355,408</b>	<b>100%</b>	<b>100%</b>		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	\$806,988,197	61%	69%	60% - 80%	Yes
Total Fixed Income	\$183,847,875	14%	15%	5% - 25%	Yes
Total Real Assets and Real Estate	\$317,165,240	24%	16%	7% - 25%	Yes
Cash	\$5,354,096	0%	0%	0% - 3%	Yes

#### Asset Allocation History 5 Years Ending April 30, 2023



Asset Class Net Performance Summary										
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement Association (1)</b>	<b>1,313,355,408</b>	<b>100.0</b>	<b>0.3</b>	<b>3.4</b>	<b>2.5</b>	<b>11.9</b>	<b>6.7</b>	<b>7.1</b>	<b>7.8</b>	<b>Nov-89</b>
<i>Policy Benchmark (Net) (2)</i>			0.6	5.6	-2.0	8.3	5.8	6.7	--	Nov-89
<i>Actual Allocation (Net)</i>			0.5	5.0	-3.2	8.3	5.1	--	--	Nov-89
<b>Domestic Equity Assets</b>	<b>234,240,847</b>	<b>17.8</b>	<b>-0.6</b>	<b>5.0</b>	<b>-0.5</b>	<b>14.2</b>	<b>9.3</b>	<b>--</b>	<b>11.2</b>	<b>Jan-16</b>
<i>Russell 3000</i>			1.1	8.3	1.5	14.1	10.6	11.7	11.7	Jan-16
<b>International Developed Market Equity Assets</b>	<b>41,777,651</b>	<b>3.2</b>	<b>2.7</b>	<b>12.3</b>	<b>6.8</b>	<b>8.4</b>	<b>-0.5</b>	<b>--</b>	<b>3.3</b>	<b>Jan-16</b>
<i>MSCI EAFE</i>			2.8	11.5	8.4	11.7	3.6	4.8	5.9	Jan-16
<b>International Emerging Market Equity Assets</b>	<b>102,709,055</b>	<b>7.8</b>	<b>-0.2</b>	<b>3.8</b>	<b>-5.1</b>	<b>6.0</b>	<b>-0.9</b>	<b>--</b>	<b>4.9</b>	<b>Jan-16</b>
<i>MSCI Emerging Markets</i>			-1.1	2.8	-6.5	4.3	-1.0	1.8	5.3	Jan-16
<b>Global Equity Assets</b>	<b>145,351,480</b>	<b>11.1</b>	<b>2.0</b>	<b>6.7</b>	<b>3.7</b>	<b>12.5</b>	<b>7.2</b>	<b>--</b>	<b>6.0</b>	<b>Feb-18</b>
<i>MSCI ACWI</i>			1.4	8.8	2.1	12.0	7.0	7.9	5.6	Feb-18
<b>Core Fixed Income</b>	<b>102,585,392</b>	<b>7.8</b>	<b>0.5</b>	<b>3.1</b>	<b>-0.6</b>	<b>-0.3</b>	<b>1.9</b>	<b>--</b>	<b>2.0</b>	<b>Jan-16</b>
<i>75% Bbg Aggregate/25% Bbg US TIPs 1-10 year</i>			0.5	3.5	-0.8	-1.8	1.7	1.4	1.7	Jan-16
<b>Value Added Fixed Income</b>	<b>81,262,483</b>	<b>6.2</b>	<b>0.7</b>	<b>4.1</b>	<b>1.5</b>	<b>4.7</b>	<b>2.5</b>	<b>--</b>	<b>4.4</b>	<b>Jan-16</b>
<i>Custom Benchmark - Global Fixed Income (3)</i>			0.7	3.7	0.4	3.2	1.9	2.4	3.6	Jan-16
<b>Hedge Funds</b>	<b>84,267,339</b>	<b>6.4</b>	<b>-0.4</b>	<b>1.6</b>	<b>-9.0</b>	<b>5.6</b>	<b>1.0</b>	<b>3.0</b>	<b>3.4</b>	<b>Feb-10</b>
<i>Custom Benchmark</i>			0.2	0.9	-1.2	6.7	3.2	3.3	3.1	Feb-10
<b>Real Estate (4)</b>	<b>170,102,382</b>	<b>13.0</b>	<b>-0.1</b>	<b>-1.2</b>	<b>4.2</b>	<b>14.0</b>	<b>12.0</b>	<b>--</b>	<b>9.4</b>	<b>Jan-16</b>
<i>Custom Benchmark</i>			0.0	-3.2	-3.1	8.4	7.6	--	6.9	Jan-16
<b>Private Equity (5)</b>	<b>224,795,372</b>	<b>17.1</b>	<b>0.0</b>	<b>1.8</b>	<b>11.6</b>	<b>25.1</b>	<b>16.4</b>	<b>--</b>	<b>13.4</b>	<b>Jan-16</b>
<i>MSCI ACWI IMI (1Q Lagged)+2%</i>			0.0	10.4	-16.7	6.0	7.1	10.1	10.4	Jan-16
<b>Real Assets (6)</b>	<b>120,909,312</b>	<b>9.2</b>	<b>0.2</b>	<b>4.0</b>	<b>11.1</b>	<b>12.6</b>	<b>9.0</b>	<b>--</b>	<b>4.6</b>	<b>Jan-16</b>
<i>CPI + 3%</i>			0.8	3.2	8.1	8.9	7.0	5.8	6.5	Jan-16
<b>Cash and Cash Equivalent</b>	<b>5,354,096</b>	<b>0.4</b>								

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

(2) The custom 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 Tips 1-10yr)/ 6% Value Added FI Custom Benchmark/ 10% (80/20 NCREIF ODCE and Wilshire REIT)/ 6% CPI+3%

(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

(4) The market value and performance is one quarter lagged.

(5) The market value and performance is one quarter lagged.

(6) The market value and performance is one quarter lagged.



Trailing Net Performance											
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement Association</b>	<b>1,313,355,408</b>	<b>100.0</b>	<b>--</b>	<b>0.3</b>	<b>3.4</b>	<b>2.5</b>	<b>11.9</b>	<b>6.7</b>	<b>7.1</b>	<b>7.8</b>	<b>Nov-89</b>
<i>Policy Benchmark (Net)</i>				0.6	5.6	-2.0	8.3	5.8	6.7	--	Nov-89
<i>Actual Allocation (Net)</i>				0.5	5.0	-3.2	8.3	5.1	--	--	Nov-89
<b>Domestic Equity Assets</b>	<b>234,240,847</b>	<b>17.8</b>	<b>17.8</b>	<b>-0.6</b>	<b>5.0</b>	<b>-0.5</b>	<b>14.2</b>	<b>9.3</b>	<b>--</b>	<b>11.2</b>	<b>Jan-16</b>
<i>Russell 3000</i>				1.1	8.3	1.5	14.1	10.6	11.7	11.7	Jan-16
Rhumblin Russell 1000 Value	48,405,331	3.7	20.7	1.5	2.5	1.2	14.4	7.7	9.0	9.0	Apr-13
<i>Russell 1000 Value</i>				1.5	2.5	1.2	14.4	7.7	9.1	9.1	Apr-13
Rhumblin Russell 1000 Growth	42,911,817	3.3	18.3	1.0	15.5	2.3	13.6	13.8	14.4	14.9	Jul-09
<i>Russell 1000 Growth</i>				1.0	15.5	2.3	13.6	13.8	14.5	15.0	Jul-09
Fisher Midcap Value	54,762,563	4.2	23.4	-2.5	3.4	-1.3	19.0	10.7	11.0	8.7	Apr-07
<i>Russell MidCap Value</i>				0.0	1.3	-3.5	15.8	6.4	8.7	6.9	Apr-07
<i>Russell MidCap</i>				-0.5	3.5	-1.7	13.8	8.0	9.9	7.9	Apr-07
Newton Small Cap Growth	45,017,405	3.4	19.2	-0.7	3.9	-0.1	7.7	9.8	12.5	13.1	Aug-09
<i>Russell 2000 Growth</i>				-1.2	4.8	0.7	7.8	4.0	8.4	10.7	Aug-09
Vulcan Partners Small Cap Value	15,014,581	1.1	6.4	-0.8	7.6	-12.7	--	--	--	-21.4	Apr-22
<i>Russell 2000 Value</i>				-2.5	-3.1	-8.0	15.4	3.7	7.0	-14.1	Apr-22
Systematic Small Cap Free Cash Flow	28,129,151	2.1	12.0	-2.5	-0.3	1.2	--	--	--	-2.5	Apr-22
<i>Russell 2000 Value</i>				-2.5	-3.1	-8.0	15.4	3.7	7.0	-14.1	Apr-22

Summary | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>International Developed Market Equity Assets</b>	<b>41,777,651</b>	<b>3.2</b>	<b>3.2</b>	<b>2.7</b>	<b>12.3</b>	<b>6.8</b>	<b>8.4</b>	<b>-0.5</b>	<b>--</b>	<b>3.3</b>	<b>Jan-16</b>
<i>MSCI EAFE</i>				2.8	11.5	8.4	11.7	3.6	4.8	5.9	Jan-16
Aristotle International Equity	22,030,922	1.7	52.7	3.7	11.0	6.3	--	--	--	0.8	Mar-21
<i>MSCI EAFE</i>				2.8	11.5	8.4	11.7	3.6	4.8	2.3	Mar-21
Walter Scott International Equity	19,746,729	1.5	47.3	1.5	13.7	7.4	--	--	--	0.4	Mar-21
<i>MSCI EAFE</i>				2.8	11.5	8.4	11.7	3.6	4.8	2.3	Mar-21
<b>International Emerging Market Equity Assets</b>	<b>102,709,055</b>	<b>7.8</b>	<b>7.8</b>	<b>-0.2</b>	<b>3.8</b>	<b>-5.1</b>	<b>6.0</b>	<b>-0.9</b>	<b>--</b>	<b>4.9</b>	<b>Jan-16</b>
<i>MSCI Emerging Markets</i>				-1.1	2.8	-6.5	4.3	-1.0	1.8	5.3	Jan-16
ABS Emerging Markets	54,770,118	4.2	53.3	0.1	4.0	-4.7	7.4	--	--	5.2	Dec-18
<i>MSCI Emerging Markets</i>				-1.1	2.8	-6.5	4.3	-1.0	1.8	2.0	Dec-18
Driehaus Emerging Markets Growth	47,938,937	3.7	46.7	-0.6	3.6	-5.7	5.8	--	--	3.8	Mar-19
<i>MSCI Emerging Markets</i>				-1.1	2.8	-6.5	4.3	-1.0	1.8	0.7	Mar-19
<b>Global Equity Assets</b>	<b>145,351,480</b>	<b>11.1</b>	<b>11.1</b>	<b>2.0</b>	<b>6.7</b>	<b>3.7</b>	<b>12.5</b>	<b>7.2</b>	<b>--</b>	<b>6.0</b>	<b>Feb-18</b>
<i>MSCI ACWI</i>				1.4	8.8	2.1	12.0	7.0	7.9	5.6	Feb-18
First Eagle Global Value Fund	25,729,020	2.0	17.7	1.9	7.8	5.9	11.1	6.0	--	4.9	Feb-18
<i>MSCI ACWI Value NR USD</i>				1.7	3.0	1.3	12.7	4.4	5.7	3.0	Feb-18
Kopernik Global All Cap Fund	35,881,696	2.7	24.7	1.7	5.3	-0.7	15.8	8.6	--	7.6	Feb-18
<i>MSCI ACWI Value NR USD</i>				1.7	3.0	1.3	12.7	4.4	5.7	3.0	Feb-18
Lee Munder Global Multi-Cap Strategy	38,256,258	2.9	26.3	1.4	9.3	0.7	11.7	5.6	--	5.1	Mar-18
<i>MSCI ACWI</i>				1.4	8.8	2.1	12.0	7.0	7.9	6.5	Mar-18
Wellington Durable Enterprises, L.P.	45,484,507	3.5	31.3	3.0	5.0	9.5	12.1	8.4	--	8.4	Mar-18
<i>MSCI ACWI</i>				1.4	8.8	2.1	12.0	7.0	7.9	6.5	Mar-18

Summary | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>102,585,392</b>	<b>7.8</b>	<b>7.8</b>	<b>0.5</b>	<b>3.1</b>	<b>-0.6</b>	<b>-0.3</b>	<b>1.9</b>	<b>--</b>	<b>2.0</b>	<b>Jan-16</b>
<i>75% Bbg Aggregate/25% Bbg US TIPS 1-10 year</i>				0.5	3.5	-0.8	-1.8	1.7	1.4	1.7	Jan-16
Lord Abbett Short Duration Credit Trust II	43,790,758	3.3	42.7	0.6	2.4	1.3	1.6	--	--	0.9	Aug-19
<i>Bloomberg US Credit 1-3 Yr TR</i>				0.5	1.8	1.6	0.2	1.7	1.5	0.9	Aug-19
Lord Abbett Core Fixed Income Trust II	41,382,903	3.2	40.3	0.6	3.8	-1.4	--	--	--	-7.2	Dec-21
<i>Bloomberg US Aggregate TR</i>				0.6	3.6	-0.4	-3.1	1.2	1.3	-7.3	Dec-21
Rhumblin TIPS Trust	17,411,731	1.3	17.0	0.1	3.5	-4.0	--	--	--	-0.8	Sep-20
<i>Bloomberg US TIPS TR</i>				0.1	3.5	-4.0	0.9	3.0	1.4	-0.8	Sep-20
<b>Value Added Fixed Income</b>	<b>81,262,483</b>	<b>6.2</b>	<b>6.2</b>	<b>0.7</b>	<b>4.1</b>	<b>1.5</b>	<b>4.7</b>	<b>2.5</b>	<b>--</b>	<b>4.4</b>	<b>Jan-16</b>
<i>Custom Benchmark - Global Fixed Income</i>				0.7	3.7	0.4	3.2	1.9	2.4	3.6	Jan-16
Eaton Vance High Yield	12,123,511	0.9	14.9	0.7	4.2	1.6	4.5	3.3	4.0	5.9	Apr-06
<i>ICE BofA US High Yield TR</i>				0.9	4.7	1.0	4.8	3.1	3.9	6.1	Apr-06
First Eagle Bank Loan Select Fund	10,988,790	0.8	13.5	1.5	4.3	1.1	6.7	3.3	4.0	4.7	Sep-10
<i>Credit Suisse Leveraged Loans</i>				0.9	4.1	2.9	7.2	3.6	3.9	4.5	Sep-10
Manulife Strategic Fixed Income	34,881,738	2.7	42.9	0.3	3.7	1.4	1.7	--	--	1.3	Jul-19
<i>Bloomberg Multiverse TR</i>				0.4	3.5	-2.2	-3.6	-0.8	0.1	-2.3	Jul-19
Mesirow High Yield	15,077,481	1.1	18.6	1.8	6.2	0.5	11.6	--	--	5.3	Aug-19
<i>Bloomberg US Corporate High Yield TR</i>				1.0	4.6	1.2	4.7	3.3	4.0	2.2	Aug-19
Eaton Vance EMD Opportunities Fund	8,190,964	0.6	10.1	0.1	1.3	2.3	--	--	--	0.6	Aug-20
<i>JP Morgan EMBI Global Diversified</i>				0.5	2.4	-0.9	-0.6	-0.2	1.8	-5.2	Aug-20

Summary | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Hedge Funds</b>	<b>84,267,339</b>	<b>6.4</b>	<b>6.4</b>	<b>-0.4</b>	<b>1.6</b>	<b>-9.0</b>	<b>5.6</b>	<b>1.0</b>	<b>3.0</b>	<b>3.4</b>	<b>Feb-10</b>
<i>Custom Benchmark</i>				0.2	0.9	-1.2	6.7	3.2	3.3	3.1	Feb-10
ABS Offshore SPC - Global Segregated Portfolio	35,437,551	2.7	42.1	0.0	2.1	0.0	5.4	3.4	4.6	4.8	Aug-10
<i>HFRI Equity Hedge (Total) Index</i>				0.0	2.5	-0.3	9.9	4.9	5.3	5.4	Aug-10
<i>HFRI FOF: Strategic Index</i>				0.4	1.6	-1.4	5.7	2.3	3.1	3.2	Aug-10
Entrust Special Opportunities Fund III, Ltd.	14,429,772	1.1	17.1	0.0	5.6	-16.2	6.3	-1.5	--	3.3	Oct-16
<i>HFRI Fund of Funds Composite Index (QTR)</i>				0.0	0.7	-1.9	7.2	3.1	3.2	3.7	Oct-16
Old Farm Partners Master Fund, L.P.	15,460,049	1.2	18.3	-0.1	0.8	-3.6	6.7	--	--	3.7	Oct-18
<i>HFRI Fund of Funds Composite Index</i>				0.3	1.0	-0.4	6.1	3.1	3.2	3.3	Oct-18
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	18,939,967	1.4	22.5	-1.5	-1.5	-18.8	3.3	--	--	1.5	Jan-19
<i>HFRI Fund of Funds Composite Index (QTR)</i>				0.0	0.7	-1.9	7.2	3.1	3.2	4.6	Jan-19
<b>Real Estate</b>	<b>170,102,382</b>	<b>13.0</b>	<b>13.0</b>	<b>-0.1</b>	<b>-1.2</b>	<b>4.2</b>	<b>14.0</b>	<b>12.0</b>	<b>--</b>	<b>9.4</b>	<b>Jan-16</b>
<i>Custom Benchmark</i>				0.0	-3.2	-3.1	8.4	7.6	--	6.9	Jan-16
<b>Core Real Estate</b>	<b>109,532,644</b>	<b>8.3</b>	<b>64.4</b>	<b>-0.1</b>	<b>-1.1</b>	<b>-2.0</b>	<b>10.6</b>	<b>9.8</b>	<b>--</b>	<b>8.8</b>	<b>Jan-16</b>
<i>NCREIF-ODCE</i>				0.0	-3.2	-3.1	8.4	7.5	9.5	7.7	Jan-16
TA Realty Core Property Fund, L.P.	76,740,891	5.8	70.1	0.0	0.0	0.6	13.6	12.3	--	12.0	Apr-18
<i>NCREIF ODCE Equal Weighted (Net)</i>				0.0	-3.5	-3.7	8.2	7.1	8.8	7.0	Apr-18
JPMorgan Strategic Property	32,791,753	2.5	29.9	-0.4	-3.6	-7.6	5.8	--	--	5.3	Apr-19
<i>NCREIF ODCE Equal Weighted (Net)</i>				0.0	-3.5	-3.7	8.2	7.1	8.8	7.1	Apr-19

Entrust Special Opportunities Fund III and EntrustPermal Special Opportunities Evergreen Fund: Data is based on March 31, 2023 fair market value, adjusted for subsequent cash flows.

Note: The data for JPMorgan Strategic Property is as of April 30, 2023.

Note: The data for Real Estate is based on December 31, 2022 fair market value, adjusted for subsequent cash flows.

Note: TA Realty Core Property Fund is reported in real time.

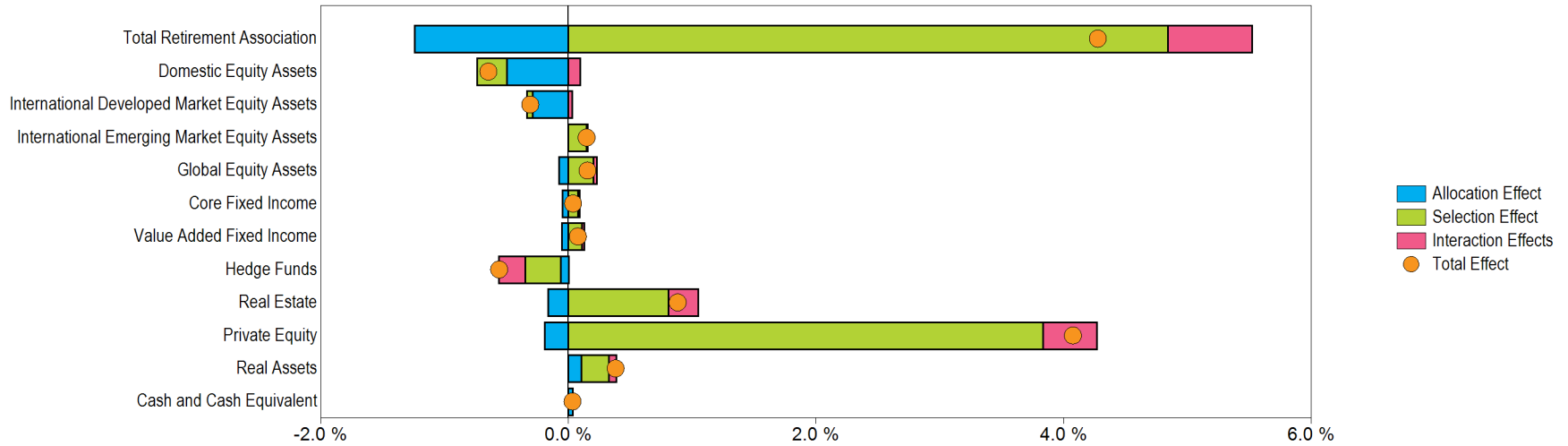
### Summary | As of April 30, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Non-Core Real Estate</b>	<b>60,569,738</b>	<b>4.6</b>	<b>35.6</b>	<b>0.0</b>	<b>-1.4</b>	<b>18.2</b>	<b>20.5</b>	<b>15.8</b>	--	<b>9.0</b>	<b>Jan-16</b>
<b>Private Equity</b>	<b>224,795,372</b>	<b>17.1</b>	<b>17.1</b>	<b>0.0</b>	<b>1.8</b>	<b>11.6</b>	<b>25.1</b>	<b>16.4</b>	--	<b>13.4</b>	<b>Jan-16</b>
<i>MSCI ACWI IMI (1Q Lagged)+2%</i>				<i>0.0</i>	<i>10.4</i>	<i>-16.7</i>	<i>6.0</i>	<i>7.1</i>	<i>10.1</i>	<i>10.4</i>	<i>Jan-16</i>
<b>Private Equity</b>	<b>208,588,839</b>	<b>15.9</b>	<b>92.8</b>	<b>0.0</b>	<b>2.1</b>	<b>13.1</b>	<b>26.1</b>	<b>17.7</b>	--	<b>13.1</b>	<b>Jan-16</b>
<b>Venture Capital</b>	<b>16,206,533</b>	<b>1.2</b>	<b>7.2</b>	<b>0.0</b>	<b>-2.0</b>	<b>-6.2</b>	<b>14.4</b>	<b>7.7</b>	--	<b>10.7</b>	<b>Jan-16</b>
<b>Real Assets</b>	<b>120,909,312</b>	<b>9.2</b>	<b>9.2</b>	<b>0.2</b>	<b>4.0</b>	<b>11.1</b>	<b>12.6</b>	<b>9.0</b>	--	<b>4.6</b>	<b>Jan-16</b>
<i>CPI + 3%</i>				<i>0.8</i>	<i>3.2</i>	<i>8.1</i>	<i>8.9</i>	<i>7.0</i>	<i>5.8</i>	<i>6.5</i>	<i>Jan-16</i>
<b>Core Real Assets</b>	<b>73,858,405</b>	<b>5.6</b>	<b>61.1</b>	<b>0.4</b>	<b>3.0</b>	<b>10.0</b>	<b>12.5</b>	--	--	<b>11.0</b>	<b>Oct-18</b>
<i>CPI + 3%</i>				<i>0.8</i>	<i>3.2</i>	<i>8.1</i>	<i>8.9</i>	<i>7.0</i>	<i>5.8</i>	<i>7.2</i>	<i>Oct-18</i>
IFM Global Infrastructure	73,858,405	5.6	100.0	0.4	3.0	10.0	12.5	--	--	11.0	Oct-18
<i>CPI + 3%</i>				<i>0.8</i>	<i>3.2</i>	<i>8.1</i>	<i>8.9</i>	<i>7.0</i>	<i>5.8</i>	<i>7.2</i>	<i>Oct-18</i>
<b>Non-Core Real Assets</b>	<b>47,050,907</b>	<b>3.6</b>	<b>38.9</b>	<b>0.0</b>	<b>5.6</b>	<b>12.7</b>	<b>12.6</b>	<b>7.6</b>	--	<b>4.6</b>	<b>Jan-16</b>
<i>CPI + 3%</i>				<i>0.8</i>	<i>3.2</i>	<i>8.1</i>	<i>8.9</i>	<i>7.0</i>	<i>5.8</i>	<i>6.5</i>	<i>Jan-16</i>
<b>Cash and Cash Equivalent</b>	<b>5,354,096</b>	<b>0.4</b>	<b>0.4</b>								
Cash	5,354,096	0.4	100.0								

Note: The data for Real Estate, Private Equity, and Real Assets is based on December 31, 2022 fair market value, adjusted for subsequent cash flows.

Note: The data for IFM Global Infrastructure is as of April 30, 2023.

#### Attribution Effects 1 Year Ending April 30, 2023



Attribution Summary 1 Year Ending April 30, 2023							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Domestic Equity Assets	-0.5%	0.8%	-1.3%	-0.2%	-0.5%	0.1%	-0.6%
International Developed Market Equity Assets	6.8%	7.6%	-0.9%	0.0%	-0.3%	0.0%	-0.3%
International Emerging Market Equity Assets	-5.1%	-7.2%	2.1%	0.1%	0.0%	0.0%	0.1%
Global Equity Assets	3.7%	1.3%	2.3%	0.2%	-0.1%	0.0%	0.2%
Core Fixed Income	-0.6%	-1.5%	0.9%	0.1%	0.0%	0.0%	0.0%
Value Added Fixed Income	1.5%	-0.3%	1.9%	0.1%	0.0%	0.0%	0.1%
Hedge Funds	-9.0%	-1.9%	-7.1%	-0.3%	-0.1%	-0.2%	-0.6%
Real Estate	4.2%	-3.8%	7.9%	0.8%	-0.2%	0.2%	0.9%
Private Equity	11.6%	-16.7%	28.3%	3.8%	-0.2%	0.4%	4.1%
Real Assets	11.1%	7.3%	3.8%	0.2%	0.1%	0.1%	0.4%
Cash and Cash Equivalent	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>2.4%</b>	<b>-1.9%</b>	<b>4.3%</b>	<b>4.8%</b>	<b>-1.2%</b>	<b>0.7%</b>	<b>4.3%</b>

Annual Investment Expense Analysis				
As Of April 30, 2023				
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Domestic Equity Assets</b>		<b>\$234,240,847</b>		
Rhumblin Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$48,405,331	\$21,862	0.05%
Rhumblin Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$42,911,817	\$19,665	0.05%
Fisher Midcap Value	0.65% of Assets	\$54,762,563	\$355,957	0.65%
Newton Small Cap Growth	0.45% of Assets	\$45,017,405	\$202,578	0.45%
Vulcan Partners Small Cap Value	0.83% of Assets	\$15,014,581	\$124,621	0.83%
Systematic Small Cap Free Cash Flow	0.76% of Assets	\$28,129,151	\$213,782	0.76%
<b>International Developed Market Equity Assets</b>		<b>\$41,777,651</b>		
Aristotle International Equity	0.49% of Assets	\$22,030,922	\$107,952	0.49%
Walter Scott International Equity	0.75% of Assets	\$19,746,729	\$148,100	0.75%
<b>International Emerging Market Equity Assets</b>		<b>\$102,709,055</b>		
ABS Emerging Markets	Performance-based 0.35 and 0.10	\$54,770,118	\$191,695	0.35%
Driehaus Emerging Markets Growth	0.55% of Assets	\$47,938,937	\$263,664	0.55%
<b>Global Equity Assets</b>		<b>\$145,351,480</b>		
First Eagle Global Value Fund	0.75% of Assets	\$25,729,020	\$192,968	0.75%
Kopernik Global All Cap Fund	0.80% of First 50.0 Mil, 0.75% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.65% of Next 350.0 Mil	\$35,881,696	\$287,054	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	\$38,256,258	\$172,153	0.45%
Wellington Durable Enterprises, L.P.	0.60% of Assets	\$45,484,507	\$272,907	0.60%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Core Fixed Income</b>		<b>\$102,585,392</b>		
Lord Abbett Short Duration Credit Trust II	0.17% of Assets	\$43,790,758	\$74,444	0.17%
Lord Abbett Core Fixed Income Trust II	0.15% of Assets	\$41,382,903	\$62,074	0.15%
Rhumblin TIPS Trust	0.04% of First 5.0 Mil, 0.03% Thereafter	\$17,411,731	\$5,724	0.03%
<b>Value Added Fixed Income</b>		<b>\$81,262,483</b>		
Eaton Vance High Yield	0.42% of Assets	\$12,123,511	\$50,919	0.42%
First Eagle Bank Loan Select Fund	0.40% of Assets	\$10,988,790	\$43,955	0.40%
Manulife Strategic Fixed Income	0.35% of Assets	\$34,881,738	\$122,086	0.35%
Mesirow High Yield	0.40% of Assets	\$15,077,481	\$60,310	0.40%
Eaton Vance EMD Opportunities Fund	0.30% of Assets	\$8,190,964	\$24,573	0.30%
Ridgemont Equity Partners IV, L.P.	2.00% of Assets	\$1,023,625	\$20,473	2.00%
<b>Core Real Assets</b>		<b>\$73,858,405</b>		
<b>Non-Core Real Assets</b>		<b>\$47,050,907</b>		

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



Note: The value is based on December 31, 2022 FMV.

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	3,154,566
Audax Mezzanine Fund IV, L.P.	10,000,000	8,708,513	7,572,894	3,079,085
Charlesbank Technology Opportunities Fund, L.P.	12,000,000	8,575,799	1,078,536	16,484,958
Ironsides Opportunities Fund II	20,000,000	1,683,961	50,751	1,498,946
Ironsides Co-Investment Fund VI, L.P.	13,000,000	12,672,172	339,337	14,151,794
DN Partners II, L.P.	5,000,000	2,375,841	23,571	2,426,338
Euro Choice V, L.P.	6,075,251	5,919,759	5,657,873	3,147,064
FS Equity Partners VIII, L.P.	12,000,000	8,894,976	324,324	14,535,687
Globespan Capital Partners V, L.P.	5,000,000	4,852,500	9,424,938	2,653,803
HarbourVest Partners Co-Investment Fund V, L.P.	12,000,000	9,300,000	1,912,808	14,837,536
HarbourVest Partners Co-Investment Fund VI, L.P.	13,000,000	3,250,000	0	3,001,949
Ironsides Direct Investment Fund V, L.P.	12,000,000	11,870,897	3,152,053	18,458,056
Kohlberg Investors IX	10,000,000	6,421,048	294,108	8,456,046
Landmark Equity Partners XIV, L.P.	6,000,000	5,841,745	7,396,243	466,628
Kohlberg Investors IX	10,000,000	6,421,048	294,108	8,456,046
Landmark Equity Partners XIV, L.P.	6,000,000	5,841,745	7,396,243	466,628
Leeds Equity Partners V, L.P.	2,500,000	3,525,207	5,594,639	251,649
Lexington Capital Partners VII, L.P.	10,000,000	8,958,787	13,230,488	1,349,951
LLR Equity Partners V, L.P.	12,000,000	11,640,000	3,790,818	16,277,259
Mesirow Financial Capital Partners IX, L.P.	4,000,000	3,840,731	2,021,056	78,800
Ridgmont Equity Partners III, L.P.	12,000,000	11,958,481	5,031,234	17,905,358
Ridgmont Equity Partners IV, L.P.	13,000,000	0	0	1
Rimco Production Company, Inc	2,000,000	2,000,000	7,651,066	0
Searchlight Capital III, L.P.	12,000,000	7,940,428	3,583,186	9,590,275
Siguler Guff Distressed Opportunities Fund III, L.P.	6,000,000	5,820,000	9,192,360	457,355
Summit Partners Growth Equity Fund IX, L.P.	10,000,000	11,704,000	12,558,753	14,759,796
Summit Partners Venture Capital Fund V	10,000,000	5,191,802	0	5,144,268
Summit Partners Growth Equity Fund XI, L.P.	13,000,000	1,472,596	0	1,549,442
TRG Growth Partnership II, L.P.	7,500,000	7,366,152	7,957,800	1,511,517
Trilantic Capital Partners VI (North America), L.P.	12,000,000	10,494,565	1,142,305	13,693,841

Note: The value is based on December 31, 2022 FMV.

Note: The value for IFM Global Infrastructure and JPMorgan Strategic Property is as of April 30, 2023. The Value for TA Realty Core Property Fund is based on 12/31/2022 FMV as this fund is reported in real time.

Private Equity	Commitment	Total Contributions	Total Distributions	Value
Waud Capital Partners V, L.P.	10,000,000	9,863,595	52,149	14,735,012
Wellspring Capital Partners VI, L.P.	12,000,000	11,625,319	2,497,169	16,043,001
<b>Total Plymouth County - PE</b>	<b>307,575,251</b>	<b>223,363,887</b>	<b>124,712,262</b>	<b>228,625,305</b>
Real Assets	Commitment	Total Contributions	Total Distributions	Value
Basalt Infrastructure Partners II	10,000,000	9,416,866	5,845,746	6,811,895
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	10,000,000	4,129,978	282,545	4,275,110
BTG Pactual Global Timberland Resources Fund, LLC	5,043,536	5,043,536	1,869,240	1,438,097
Climate Adaptive Infrastructure Fund I	10,000,000	3,435,549	248,035	3,609,092
Global Infrastructure Partners III, L.P.	10,000,000	10,185,468	4,648,462	10,341,039
Global Infrastructure Partners IV, L.P.	10,000,000	7,829,840	16,225	8,076,424
IFM Global Infrastructure (U.S.), L.P.	60,000,000	60,000,000	3,422,216	73,858,405
ISQ Global Infrastructure Fund III (USTE), L.P.	10,000,000	1,085,165	1,223	1,132,031
JPMorgan Global Maritime Investment	10,000,000	10,034,375	4,473,058	7,837,343
Domain Timbervest Partners III, L.P.	5,000,000	5,000,000	3,996,126	3,733,200
BlackRock Global Infrastructure Fund IV, SCSp	10,000,000	656,206	0	614,058
<b>Total Plymouth County - RA</b>	<b>140,043,536</b>	<b>107,400,117</b>	<b>18,957,129</b>	<b>114,914,800</b>
Real Estate	Commitment	Total Contributions	Total Distributions	Value
1921 Realty, Inc.	5,000,000	5,378,294	0	541,326
AEW Partners IX, L.P.	10,000,000	6,378,601	111	6,850,532
AEW Partners Real Estate Fund VIII, L.P.	25,000,000	23,989,589	29,026,736	6,330,592
Berkshire Value Fund V, L.P.	9,000,000	6,283,181	1,058,371	6,403,223
Carlyle Realty Partners VIII, L.P.	18,000,000	14,734,845	10,538,830	10,607,036
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	22,078,336	5,104,808
JPMorgan Strategic Property Fund	27,000,000	27,000,000	6,558,368	32,791,753
PCCP Equity IX, L.P.	10,000,000	5,119,943	0	5,447,254
Real Estate International Partnership Fund I, L.P.	15,000,000	12,677,141	11,372,161	661,586
Rockpoint Real Estate Fund VI, L.P.	9,000,000	7,248,677	1,091,059	7,649,360
TA Realty Core Property Fund, L.P.	60,000,000	60,749,705	6,701,738	76,740,891
TerraCap Partners V, L.P.	10,000,000	10,398,080	1,045,339	10,635,469
<b>Total Plymouth County - RE</b>	<b>218,000,000</b>	<b>200,037,773</b>	<b>96,877,599</b>	<b>169,763,830</b>

**Cash Flow Summary**  
**Month Ending April 30, 2023**

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	\$541,326	\$0	\$0	\$0	\$541,326
ABS Emerging Markets	\$54,727,404	\$0	\$0	\$0	\$54,770,118
ABS Offshore SPC - Global Segregated Portfolio	\$35,424,688	\$0	\$0	\$0	\$35,437,551
AEW Partners Real Estate Fund IX, L.P.	\$7,467,816	\$0	\$0	\$0	\$7,467,816
AEW Partners Real Estate VIII	\$6,330,592	\$0	\$0	\$0	\$6,330,592
Aristotle International Equity	\$21,235,406	\$0	\$0	\$0	\$22,030,922
Ascend Ventures II	\$0	\$0	\$0	\$0	\$0
Ascent Ventures IV	\$0	\$0	\$0	\$0	\$0
Ascent Ventures V	\$3,154,566	\$0	\$0	\$0	\$3,154,566
Audax Mezzanine Debt IV	\$3,051,590	\$45,755	-\$110,148	-\$64,394	\$2,987,196
Basalt Infrastructure Partners II	\$6,811,895	\$0	\$0	\$0	\$6,811,895
Berkshire Value Fund V	\$6,403,223	\$0	\$0	\$0	\$6,403,223
BlackRock Global Infrastructure Fund IV, L.P.	\$614,058	\$289,155	\$0	\$289,155	\$903,213
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	\$4,929,357	\$502,646	\$0	\$502,646	\$5,432,003
BTG Pactual Global Timberland Resources	\$1,438,097	\$0	\$0	\$0	\$1,438,097
Carlyle Realty Partners VIII	\$10,210,612	\$0	\$0	\$0	\$10,210,612
Cash	\$8,995,600	\$8,092,928	-\$11,734,432	-\$3,641,504	\$5,354,096
Charles River Partnership XI	\$0	\$0	\$0	\$0	\$0
Charlesbank Technology Opportunities Fund	\$15,643,537	\$0	\$0	\$0	\$15,643,537
Climate Adaptive Infrastructure Fund	\$3,609,092	\$0	\$0	\$0	\$3,609,092
DN Partners II, LP	\$2,426,338	\$0	\$0	\$0	\$2,426,338
Driehaus Emerging Markets Growth	\$48,211,899	\$0	\$0	\$0	\$47,938,937

Summary | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
DSF Multi-Family Real Estate Fund III	\$4,214,656	\$0	-\$14,205	-\$14,205	\$4,200,452
Eaton Vance EMD Opportunities Fund	\$8,184,029	\$0	\$0	\$0	\$8,190,964
Eaton Vance High Yield	\$12,044,384	\$0	\$0	\$0	\$12,123,511
Entrust Special Opportunities Fund III, Ltd.	\$14,429,772	\$0	\$0	\$0	\$14,429,772
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$19,236,406	\$0	\$0	\$0	\$18,939,967
Euro Choice V Programme	\$2,778,281	\$0	\$0	\$0	\$2,778,281
First Eagle Bank Loan Select Fund	\$10,830,299	\$0	\$0	\$0	\$10,988,790
First Eagle Global Value Fund	\$25,238,379	\$0	\$0	\$0	\$25,729,020
Fisher Midcap Value	\$56,112,073	\$0	\$0	\$0	\$54,762,563
FS Equity Partners VIII, L.P.	\$15,365,575	\$0	\$0	\$0	\$15,365,575
Global Infrastructure Partners III	\$10,232,408	\$38,063	-\$70,290	-\$32,227	\$10,200,181
Global Infrastructure Partners IV, L.P.	\$8,060,570	\$0	\$0	\$0	\$8,060,570
Globespan Capital V	\$2,653,803	\$0	\$0	\$0	\$2,653,803
HarbourVest Partners Co-Investment Fund VI, L.P.	\$4,301,949	\$0	\$0	\$0	\$4,301,949
HarbourVest Partners Co-Investment V	\$14,837,536	\$0	-\$460,488	-\$460,488	\$14,377,048
IFM Global Infrastructure	\$73,563,508	\$0	\$0	\$0	\$73,858,405
Ironsides Co-Investment Fund VI, L.P.	\$14,151,794	\$0	\$0	\$0	\$14,151,794
Ironsides Direct Investment Fund V, L.P.	\$18,458,056	\$0	\$0	\$0	\$18,458,056
Ironsides Opportunities Fund II, L.P.	\$2,971,086	\$0	\$0	\$0	\$2,971,086
ISQ Global Infrastructure Fund III (USTE), L.P.	\$2,326,494	\$0	\$0	\$0	\$2,326,494
JP Morgan Global Maritime Investment	\$4,621,161	\$0	\$0	\$0	\$4,621,161
JPMorgan Strategic Property	\$33,359,987	\$0	-\$476,604	-\$476,604	\$32,791,753
Kohlberg Investors IX	\$9,886,815	\$511,349	\$0	\$511,349	\$10,398,164
Kopernik Global All Cap Fund	\$35,288,872	\$0	\$0	\$0	\$35,881,696
Landmark Equity Partners XIV	\$442,942	\$0	\$0	\$0	\$442,942

Summary | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Lee Munder Global Multi-Cap Strategy	\$37,729,431	\$0	\$0	\$0	\$38,256,258
Leeds Equity Partners IV	\$0	\$0	\$0	\$0	\$0
Leeds Equity Partners V	\$251,649	\$0	\$0	\$0	\$251,649
Lexington Capital Partners VII	\$1,251,576	\$0	-\$35,251	-\$35,251	\$1,216,325
LLR Equity Partners V, LP.	\$16,081,297	\$0	\$0	\$0	\$16,081,297
Lord Abbett Core Fixed Income Trust II	\$41,147,326	\$0	\$0	\$0	\$41,382,903
Lord Abbett Short Duration Credit Trust II	\$43,541,947	\$0	\$0	\$0	\$43,790,758
Manulife Strategic Fixed Income	\$41,753,641	\$0	-\$7,000,000	-\$7,000,000	\$34,881,738
Mesirow Financial Capital Partners IX, LP	\$78,800	\$0	\$0	\$0	\$78,800
Mesirow Financial International Real Estate Fund I	\$661,586	\$0	\$0	\$0	\$661,586
Mesirow High Yield	\$14,816,668	\$0	\$0	\$0	\$15,077,481
Newton Small Cap Growth	\$45,322,353	\$0	\$0	\$0	\$45,017,405
Old Farm Partners Master Fund, L.P.	\$15,473,403	\$0	\$0	\$0	\$15,460,049
PCCP Equity IX, L.P.	\$6,447,254	\$0	\$0	\$0	\$6,447,254
Rhumblin Russell 1000 Growth	\$42,492,302	\$0	\$0	\$0	\$42,911,817
Rhumblin Russell 1000 Value	\$47,688,830	\$0	\$0	\$0	\$48,405,331
Rhumblin TIPS Trust	\$17,391,974	\$0	\$0	\$0	\$17,411,731
Ridgemont Equity Partners III, L.P.	\$16,867,336	\$0	\$0	\$0	\$16,867,336
RIMCO Royalty Partners, LP	\$1	\$0	\$0	\$0	\$1
Rockpoint Real Estate Fund VI, L.P.	\$7,671,408	\$0	\$0	\$0	\$7,671,408
Searchlight Capital III, L.P.	\$9,891,126	\$618,883	\$0	\$618,883	\$10,510,009
Siguler Guff Distressed Opportunities Fund III, LP	\$443,577	\$0	\$0	\$0	\$443,577
Summit Partners Growth Equity Fund IX	\$14,759,796	\$77,000	\$0	\$77,000	\$14,836,796
Summit Partners Growth Equity Fund XI	\$2,444,117	\$0	\$0	\$0	\$2,444,117
Summit Partners Venture Capital Fund V	\$5,315,412	\$75,086	\$0	\$75,086	\$5,390,498

Summary | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Systematic Small Cap Free Cash Flow	\$28,837,278	\$0	\$0	\$0	\$28,129,151
TA Realty Core Property Fund, L.P.	\$76,740,891	\$0	\$0	\$0	\$76,740,891
TerraCap Partners V, L.P.	\$10,635,469	\$0	\$0	\$0	\$10,635,469
Timbervest Partners III, LP	\$3,648,200	\$0	\$0	\$0	\$3,648,200
TRG Growth Partnership II	\$479,471	\$0	\$0	\$0	\$479,471
Trilantic Capital Partners VI, L.P.	\$14,207,445	\$0	\$0	\$0	\$14,207,445
Vulcan Partners Small Cap Value	\$15,119,259	\$0	\$0	\$0	\$15,014,581
Walter Scott International Equity	\$19,435,466	\$0	\$0	\$0	\$19,746,729
Waud Capital Partners V	\$14,735,012	\$234,744	-\$61,818	\$172,926	\$14,907,938
Wellington Durable Enterprises, L.P.	\$44,167,270	\$0	\$0	\$0	\$45,484,507
Wellspring Capital Partners VI	\$15,946,152	\$0	\$0	\$0	\$15,946,152
<b>Total</b>	<b>\$1,318,292,655</b>	<b>\$10,485,608</b>	<b>-\$19,963,235</b>	<b>-\$9,477,628</b>	<b>\$1,312,331,783</b>

Cash Flow Summary					
From January 01, 2023 through April 30, 2023					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	\$556,339	\$0	\$0	\$0	\$541,326
ABS Emerging Markets	\$52,685,835	\$0	\$0	\$0	\$54,770,118
ABS Offshore SPC - Global Segregated Portfolio	\$34,717,268	\$0	\$0	\$0	\$35,437,551
AEW Partners Real Estate Fund IX, L.P.	\$6,567,145	\$617,284	\$0	\$617,284	\$7,467,816
AEW Partners Real Estate VIII	\$6,278,348	\$0	\$0	\$0	\$6,330,592
Aristotle International Equity	\$19,839,194	\$0	\$0	\$0	\$22,030,922
Ascend Ventures II	\$0	\$0	\$0	\$0	\$0
Ascent Ventures IV	\$0	\$0	\$0	\$0	\$0
Ascent Ventures V	\$3,124,944	\$0	\$0	\$0	\$3,154,566
Audax Mezzanine Debt IV	\$2,935,145	\$45,755	-\$137,643	-\$91,889	\$2,987,196
Basalt Infrastructure Partners II	\$6,525,463	\$0	\$0	\$0	\$6,811,895
Berkshire Value Fund V	\$7,101,747	\$0	\$0	\$0	\$6,403,223
BlackRock Global Infrastructure Fund IV, L.P.	\$656,206	\$289,155	\$0	\$289,155	\$903,213
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	\$3,841,675	\$1,156,893	\$0	\$1,156,893	\$5,432,003
BTG Pactual Global Timberland Resources	\$1,377,651	\$0	\$0	\$0	\$1,438,097
Carlyle Realty Partners VIII	\$11,664,172	\$0	-\$396,424	-\$396,424	\$10,210,612
Cash	\$33,771,643	\$48,581,455	-\$76,998,255	-\$28,416,800	\$5,354,096
Charles River Partnership XI	\$0	\$0	\$0	\$0	\$0
Charlesbank Technology Opportunities Fund	\$14,960,556	\$79,746	-\$921,167	-\$841,421	\$15,643,537
Climate Adaptive Infrastructure Fund	\$3,187,514	\$0	\$0	\$0	\$3,609,092
DN Partners II, LP	\$2,426,338	\$0	\$0	\$0	\$2,426,338
Driehaus Emerging Markets Growth	\$46,198,805	\$0	\$0	\$0	\$47,938,937
DSF Multi-Family Real Estate Fund III	\$5,039,395	\$0	-\$904,356	-\$904,356	\$4,200,452

Summary | As of April 30, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Eaton Vance EMD Opportunities Fund	\$8,082,933	\$0	\$0	\$0	\$8,190,964
Eaton Vance High Yield	\$11,632,494	\$0	\$0	\$0	\$12,123,511
Entrust Special Opportunities Fund III, Ltd.	\$13,663,481	\$0	\$0	\$0	\$14,429,772
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$19,236,406	\$0	\$0	\$0	\$18,939,967
Euro Choice V Programme	\$2,986,491	\$0	-\$368,783	-\$368,783	\$2,778,281
First Eagle Bank Loan Select Fund	\$10,539,128	\$0	\$0	\$0	\$10,988,790
First Eagle Global Value Fund	\$23,862,955	\$0	\$0	\$0	\$25,729,020
Fisher Midcap Value	\$55,787,552	\$0	-\$3,000,000	-\$3,000,000	\$54,762,563
FS Equity Partners VIII, L.P.	\$14,436,439	\$829,888	\$0	\$829,888	\$15,365,575
Global Infrastructure Partners III	\$9,922,547	\$96,330	-\$237,188	-\$140,858	\$10,200,181
Global Infrastructure Partners IV, L.P.	\$7,987,674	\$13,355	-\$29,209	-\$15,854	\$8,060,570
Globespan Capital V	\$3,557,979	\$0	\$0	\$0	\$2,653,803
HarbourVest Partners Co-Investment Fund VI, L.P.	\$3,001,949	\$1,300,000	\$0	\$1,300,000	\$4,301,949
HarbourVest Partners Co-Investment V	\$13,632,677	\$0	-\$460,488	-\$460,488	\$14,377,048
IFM Global Infrastructure	\$47,130,351	\$25,000,000	-\$410,208	\$24,589,792	\$73,858,405
Ironsides Co-Investment Fund VI, L.P.	\$14,255,911	\$0	\$0	\$0	\$14,151,794
Ironsides Direct Investment Fund V, L.P.	\$18,327,411	\$0	\$0	\$0	\$18,458,056
Ironsides Opportunities Fund II, L.P.	\$1,633,210	\$1,472,140	\$0	\$1,472,140	\$2,971,086
ISQ Global Infrastructure Fund III (USTE), L.P.	\$971,137	\$1,194,463	\$0	\$1,194,463	\$2,326,494
JP Morgan Global Maritime Investment	\$7,222,785	\$0	-\$3,216,182	-\$3,216,182	\$4,621,161
JPMorgan Strategic Property	\$34,892,370	\$576	-\$979,576	-\$979,000	\$32,791,753
Kohlberg Investors IX	\$7,899,628	\$1,942,118	\$0	\$1,942,118	\$10,398,164
Kopernik Global All Cap Fund	\$34,061,261	\$0	\$0	\$0	\$35,881,696
Landmark Equity Partners XIV	\$460,357	\$0	-\$23,686	-\$23,686	\$442,942
Lee Munder Global Multi-Cap Strategy	\$38,740,800	\$0	-\$4,000,000	-\$4,000,000	\$38,256,258
Leeds Equity Partners IV	\$9,031	\$0	\$0	\$0	\$0



	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Leeds Equity Partners V	\$238,203	\$0	\$0	\$0	\$251,649
Lexington Capital Partners VII	\$1,390,888	\$0	-\$133,626	-\$133,626	\$1,216,325
LLR Equity Partners V, LP.	\$16,200,112	\$0	-\$195,962	-\$195,962	\$16,081,297
Lord Abbett Core Fixed Income Trust II	\$39,851,657	\$0	\$0	\$0	\$41,382,903
Lord Abbett Short Duration Credit Trust II	\$52,709,058	\$0	-\$10,000,000	-\$10,000,000	\$43,790,758
Manulife Strategic Fixed Income	\$40,372,490	\$0	-\$7,035,327	-\$7,035,327	\$34,881,738
Mesirow Financial Capital Partners IX, LP	\$78,637	\$0	\$0	\$0	\$78,800
Mesirow Financial International Real Estate Fund I	\$699,983	\$0	\$0	\$0	\$661,586
Mesirow High Yield	\$14,195,684	\$0	\$0	\$0	\$15,077,481
Newton Small Cap Growth	\$43,265,221	\$0	\$0	\$0	\$45,017,405
Old Farm Partners Master Fund, L.P.	\$15,330,488	\$0	-\$12,775	-\$12,775	\$15,460,049
PCCP Equity IX, L.P.	\$5,326,020	\$1,000,000	\$0	\$1,000,000	\$6,447,254
Rhumblin Russell 1000 Growth	\$37,167,306	\$0	\$0	\$0	\$42,911,817
Rhumblin Russell 1000 Value	\$58,144,941	\$0	-\$11,500,000	-\$11,500,000	\$48,405,331
Rhumblin TIPS Trust	\$16,828,767	\$0	\$0	\$0	\$17,411,731
Ridgemont Equity Partners III, L.P.	\$18,009,648	\$952,259	-\$1,990,280	-\$1,038,022	\$16,867,336
RIMCO Royalty Partners, LP	\$1	\$0	\$0	\$0	\$1
Rockpoint Real Estate Fund VI, L.P.	\$7,854,027	\$22,048	\$0	\$22,048	\$7,671,408
Searchlight Capital III, L.P.	\$9,317,120	\$919,734	\$0	\$919,734	\$10,510,009
Siguler Guff Distressed Opportunities Fund III, LP	\$496,843	\$0	-\$13,778	-\$13,778	\$443,577
Summit Partners Growth Equity Fund IX	\$15,085,855	\$77,000	\$0	\$77,000	\$14,836,796
Summit Partners Growth Equity Fund XI	\$1,367,501	\$894,675	\$0	\$894,675	\$2,444,117
Summit Partners Venture Capital Fund V	\$5,029,001	\$246,230	\$0	\$246,230	\$5,390,498

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Systematic Small Cap Free Cash Flow	\$28,203,474	\$0	\$0	\$0	\$28,129,151
TA Realty Core Property Fund, L.P.	\$77,516,051	\$135,653	-\$910,814	-\$775,161	\$76,740,891
TerraCap Partners V, L.P.	\$10,005,097	\$0	\$0	\$0	\$10,635,469
Timbervest Partners III, LP	\$3,611,063	\$0	-\$85,000	-\$85,000	\$3,648,200
TRG Growth Partnership II	\$1,313,508	-\$1,032,045	\$0	-\$1,032,045	\$479,471
Trilantic Capital Partners VI, L.P.	\$13,480,292	\$513,604	\$0	\$513,604	\$14,207,445
Vulcan Partners Small Cap Value	\$13,919,774	\$28,497	-\$28,497	\$0	\$15,014,581
Walter Scott International Equity	\$17,359,513	\$0	-\$31,563	-\$31,563	\$19,746,729
Waud Capital Partners V	\$14,428,940	\$234,744	-\$61,818	\$172,926	\$14,907,938
Wellington Durable Enterprises, L.P.	\$43,333,556	\$0	\$0	\$0	\$45,484,507
Wellspring Capital Partners VI	\$15,590,471	\$105,233	-\$202,082	-\$96,849	\$15,946,152
<b>Total</b>	<b>\$1,305,111,532</b>	<b>\$86,716,789</b>	<b>-\$124,284,687</b>	<b>-\$37,567,898</b>	<b>\$1,312,331,783</b>

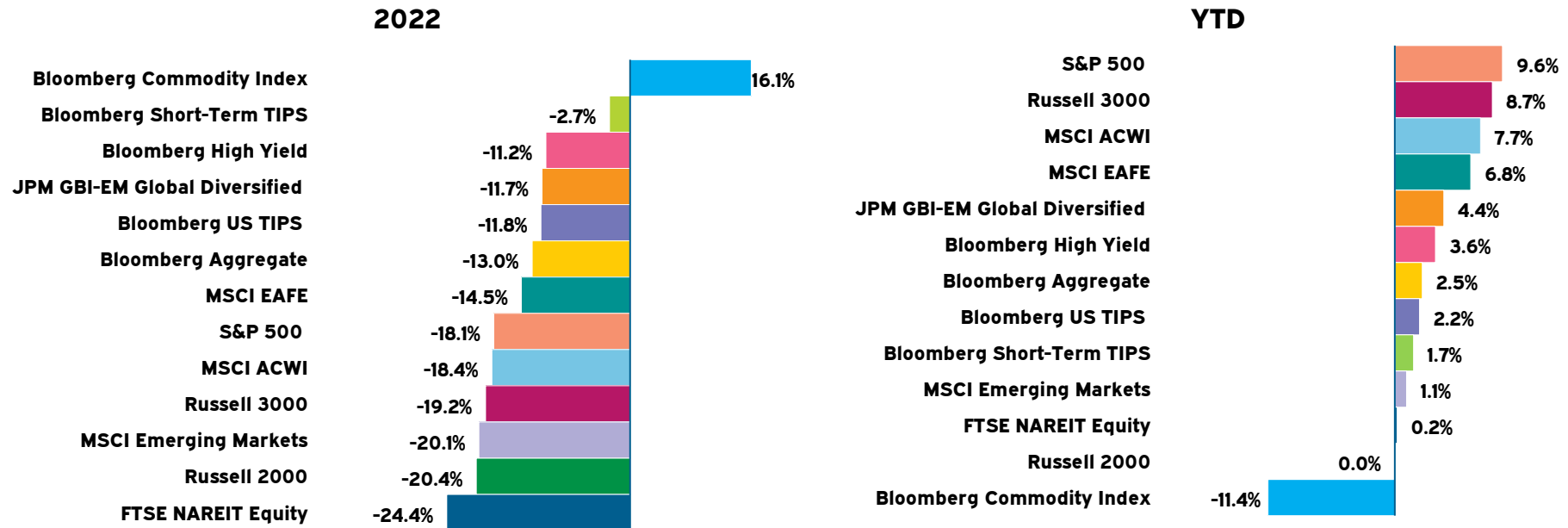
# Appendices

**Economic and Market Update**  
Data As of May 31, 2023

### Commentary

- Asset returns were mixed in May with US stocks posting modest gains, while non-US equity markets and fixed income declined. Except for commodities, most public market asset classes remain up for the year.
- Debt ceiling issues continued to hang over the markets in May particularly weighing on short-term interest rates. Shortly after the end of the month a deal was reached.
  - In May, the Fed increased interest rates for the tenth time, to a range of 5.0% - 5.25%. They decided to hold rates steady at the June meeting but hinted that further rate hikes could come at upcoming meetings.
  - US equity markets (Russell 3000) rose in May (+0.4%) adding to YTD gains (+8.7%). Some of the largest technology names drove positive results. Growth stocks continued to outpace value stocks, particularly in the large cap space.
  - Non-US developed equity markets declined in May (MSCI EAFE -4.2%) falling behind US equities in 2023 (+6.8% versus +8.7%). A strengthening US dollar weighed on results, as declines in local currency terms were better, at -1.6%.
  - Emerging market equities fell in May (-1.7%) driven by declines in China (-8.4%). They significantly trail developed market equities YTD returning +1.1%, due partly to higher US-China tensions.
  - Rates generally rose in May leading to bond markets declining, with the broad US bond market (Bloomberg Aggregate) falling 1.1% for the month. It remains positive (+2.5%) year-to-date, though, on declining inflation and expectations for the Fed to end their rate hikes soon.
- This year, the paths of inflation and monetary policy, slowing global growth and the war in Ukraine will all be key.

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



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

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

<sup>1</sup> Source: Bloomberg and FactSet. Data is as of May 31, 2023.

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

Domestic Equity	May (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	0.4	7.5	9.6	2.9	12.9	11.0	12.0
Russell 3000	0.4	7.2	8.7	2.0	12.2	10.1	11.4
Russell 1000	0.5	7.5	9.3	2.4	12.4	10.6	11.7
Russell 1000 Growth	4.6	14.4	20.8	9.5	12.8	13.8	14.8
Russell 1000 Value	-3.9	1.0	-1.4	-4.5	11.6	6.8	8.4
Russell MidCap	-2.8	4.1	0.6	-4.5	10.2	6.9	9.3
Russell MidCap Growth	0.1	9.1	7.6	5.8	5.8	8.2	10.6
Russell MidCap Value	-4.4	1.3	-3.2	-9.5	12.3	5.2	8.0
Russell 2000	-0.9	2.7	0.0	-4.7	9.2	2.7	7.4
Russell 2000 Growth	0.0	6.1	4.9	2.7	4.6	2.7	7.9
Russell 2000 Value	-2.0	-0.7	-5.0	-11.5	13.6	2.1	6.4

#### US Equities: Russell 3000 Index rose 0.4% in May and 8.7% YTD.

- US stocks rose slightly in May, as equity investors navigated Fed policy expectations and the debt ceiling debate, bringing year-to-date gains just shy of 9.0%.
- There was wide disparity in equity sector returns for the month, with artificial intelligence optimism fueling large gains in the technology sector and concerns over potentially weaker demand weighing on energy and materials.
- Large cap stocks continue to outperform small cap stocks. This dynamic has been driven by the heavily weighted growth names in the large cap index. Growth stocks also continue to outperform value stocks, which, in the small cap space, has been led by the outperformance of semiconductor-related stocks.

<sup>1</sup> Source: Bloomberg. Data is as of May 31, 2023.

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

Foreign Equity	May (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	-3.6	6.9	4.8	-1.4	7.2	2.2	3.8
MSCI EAFE	-4.2	8.5	6.8	3.1	8.5	3.2	4.6
MSCI EAFE (Local Currency)	-1.6	7.5	8.2	6.2	11.4	5.6	6.9
MSCI EAFE Small Cap	-4.2	4.9	2.6	-4.7	5.2	0.3	5.5
MSCI Emerging Markets	-1.7	4.0	1.1	-8.5	3.5	-0.7	1.9
MSCI Emerging Markets (Local Currency)	-1.0	3.8	2.0	-4.7	4.9	1.8	4.8
MSCI China	-8.4	4.7	-9.1	-14.7	-8.8	-7.0	1.9

**Foreign Equity: Developed international equities (MSCI EAFE) fell 4.2% in May bringing the YTD results down to +6.8%. Emerging market equities (MSCI EM) also declined 1.7% for the month, dropping the YTD results to +1.1%.**

- As US equities rose in May, non-US equities fell. This led to developed markets (MSCI EAFE) now trailing US equities for the year (6.8% versus 8.7%) and the gap between US and emerging market equities (MSCI Emerging Markets) widening (2.6% versus 8.7%).
- Euro and UK equity markets were weak after both the ECB and the Bank of England delivered rate hikes in May and continued to signal further tightening. Equities in Japan continued strong though, as investors remain optimistic that Japan may finally emerge from decades of stagflation. A strengthening US dollar also depressed results in developed market equities.
- China continued to weigh on emerging market equities, declining 8.4% in May, as the recovery showed signs of slowing and economic data came in weak including retail sales, industrial production, and exports.

<sup>1</sup> Source: Bloomberg. Data is as of May 31, 2023.



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

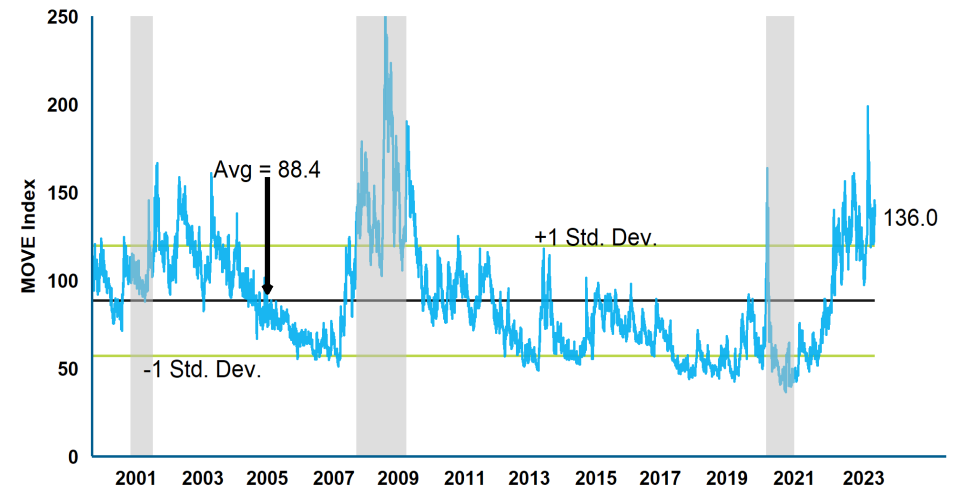
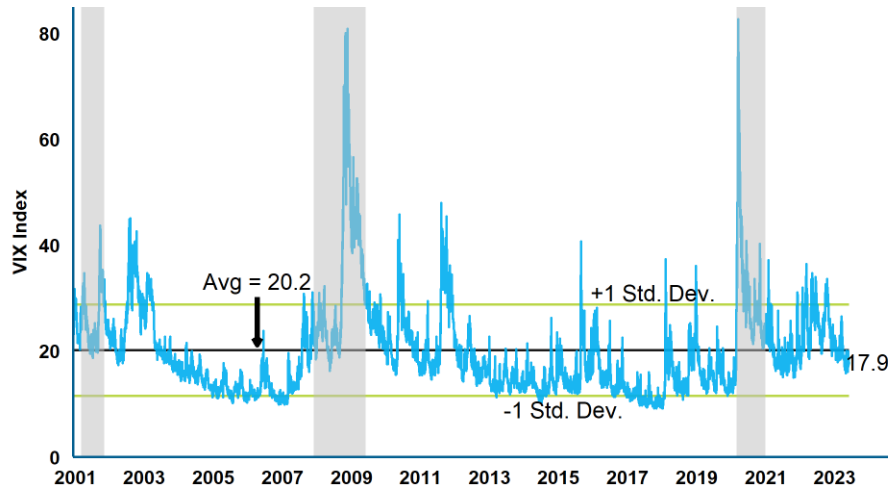
Fixed Income	May (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	-1.0	2.9	2.5	-1.9	-3.1	1.0	1.6	5.0	6.3
Bloomberg Aggregate	-1.1	3.0	2.5	-2.1	-3.6	0.8	1.4	4.6	6.5
Bloomberg US TIPS	-1.2	3.3	2.2	-4.2	0.4	2.6	1.7	4.3	6.9
Bloomberg Short-term TIPS	-0.7	2.2	1.7	-1.2	2.7	2.8	1.6	4.9	2.6
Bloomberg High Yield	-0.9	3.6	3.6	0.0	2.9	3.1	4.0	8.8	4.1
JPM GBI-EM Global Diversified (USD)	-1.6	5.2	4.4	3.1	-2.3	-0.9	-1.3	6.9	5.0

**Fixed Income: The Bloomberg Universal declined 1.0% in May as global sovereign debt yields generally rose. Bonds retained a positive start to the year (+2.5% YTD) though as inflation continues to decline.**

- Market uncertainty resumed in May, leading to fixed income declines as the debt ceiling deadline loomed and better-than-expected employment data pushed up policy rate expectations.
- The TIPS index and the short-term TIPS index posted negative returns for the month with the short-term TIPS index outperforming the overall US bond market (Bloomberg Aggregate) and the broader TIPS index slightly trailing.
- High yield bonds (-0.9%) sold off in May but also outperformed the broad US bond market (Bloomberg Aggregate). Emerging market bonds (-1.6%) were the worst performers for the month.

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

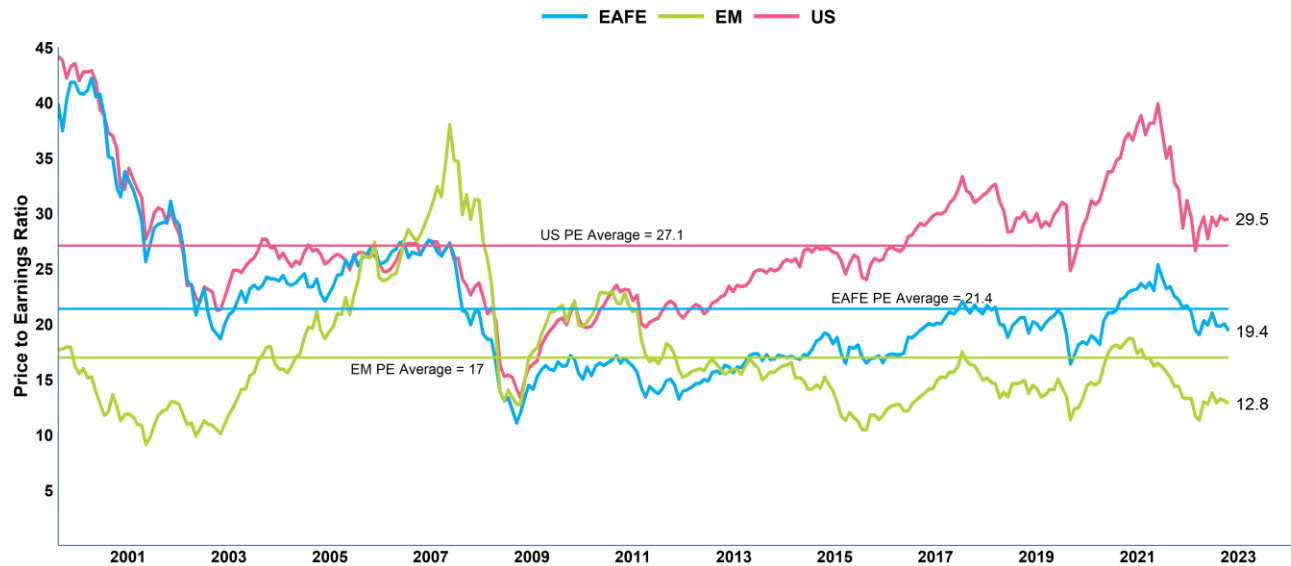
### Equity and Fixed Income Volatility<sup>1</sup>



- Volatility in equities (VIX) rose slightly in May but remains low as investors continue to anticipate the end of the Fed's policy tightening.
- In comparison, the bond market remains on edge after last year's historic losses and continued volatility in interest rates this year due to policy uncertainty and issues in the banking sector. The MOVE (fixed income volatility) remains well above (136.0) its long-run average (88.4), but off its recent peak during the heart of the banking crises.

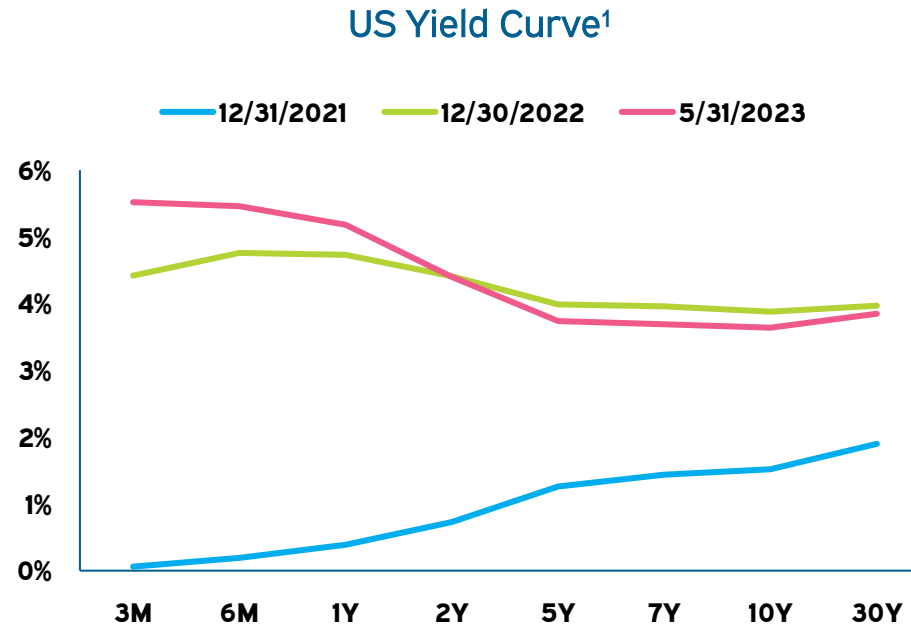
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of May 2023. The average line indicated is the average of the VIX and MOVE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

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



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

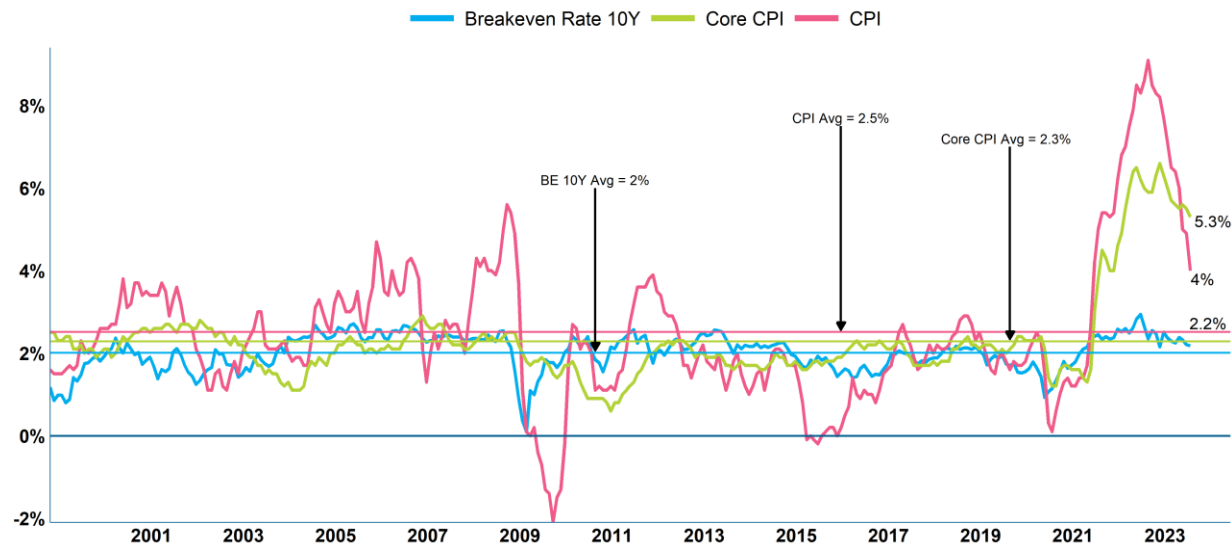
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly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



- Interest rates have declined this year for longer-dated maturities given ongoing improvements in inflation-related risks and signs policy makers are nearing their terminal policy rate for this cycle. Shorter-dated yields have increased though, driven by debt ceiling concerns.
- During May, interest rates rose across the yield curve particularly at the very front-end (< 3 months) as the debt ceiling debate continued. Maturities from two years out also drifted higher as market participants considered the possibility of additional policy rate increases as economic data remains strong.
- The yield curve remains inverted with the spread between two-year and ten-year Treasuries finishing the month at -0.75%. The more closely watched measure (by the Fed) of the three-month and ten-year Treasuries spread also remained inverted at -1.76%. Inversions in the yield curve have often preceded recessions.

<sup>1</sup> Source: Bloomberg. Data is as of May 31, 2023.

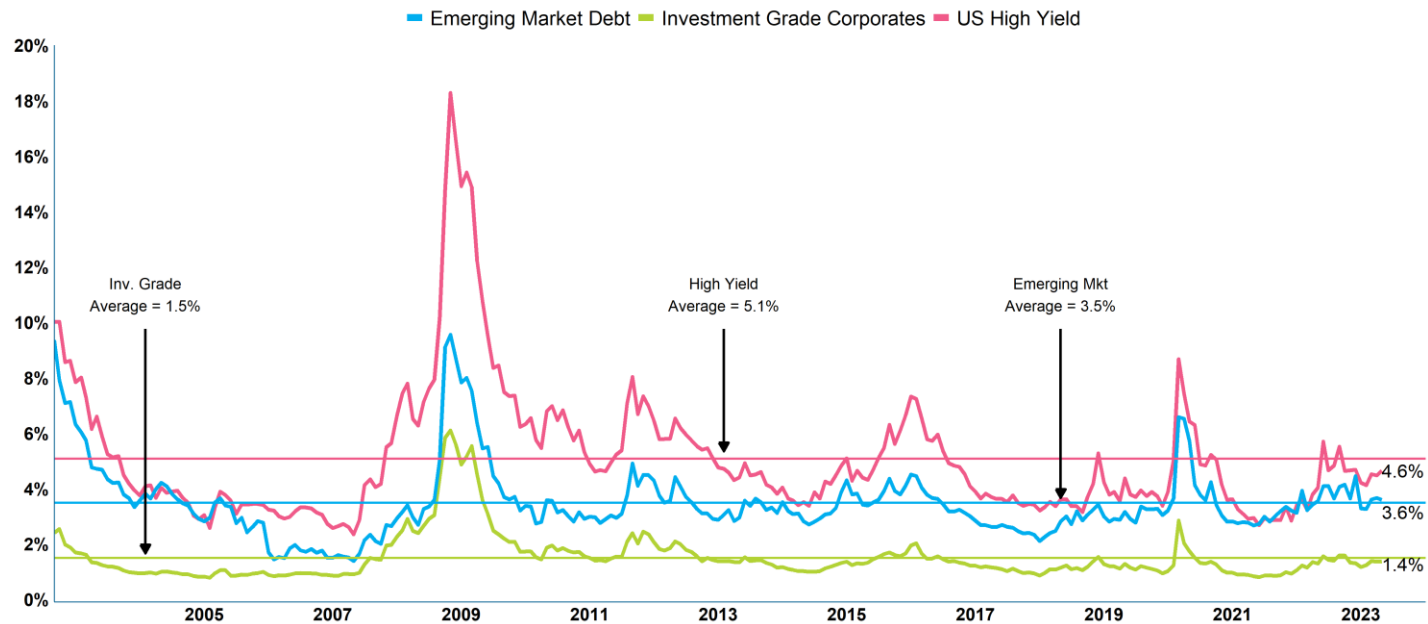
### Ten-Year Breakeven Inflation and CPI<sup>1</sup>



- Headline inflation continued to decline in May, with the year-over-year reading falling from 4.9% to 4.0% and coming in slightly below estimates. The month-over-month rate of price increases also fell (0.1% versus 0.4%), with food prices ticking up slightly (0.2%) and energy prices declining (-3.6%).
- Core inflation – excluding food and energy - fell (5.5% to 5.3%), coming in slightly above forecasts. It remains stubbornly high driven by shelter costs.
- Inflation expectations (breakevens) remain well below current inflation as investors continue to expect inflation to track back toward the Fed’s 2% average target.

<sup>1</sup> Source: Bloomberg. Data is as May 31, 2023. The CPI and 10 Year Breakeven average lines denote the average values from August 1998 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

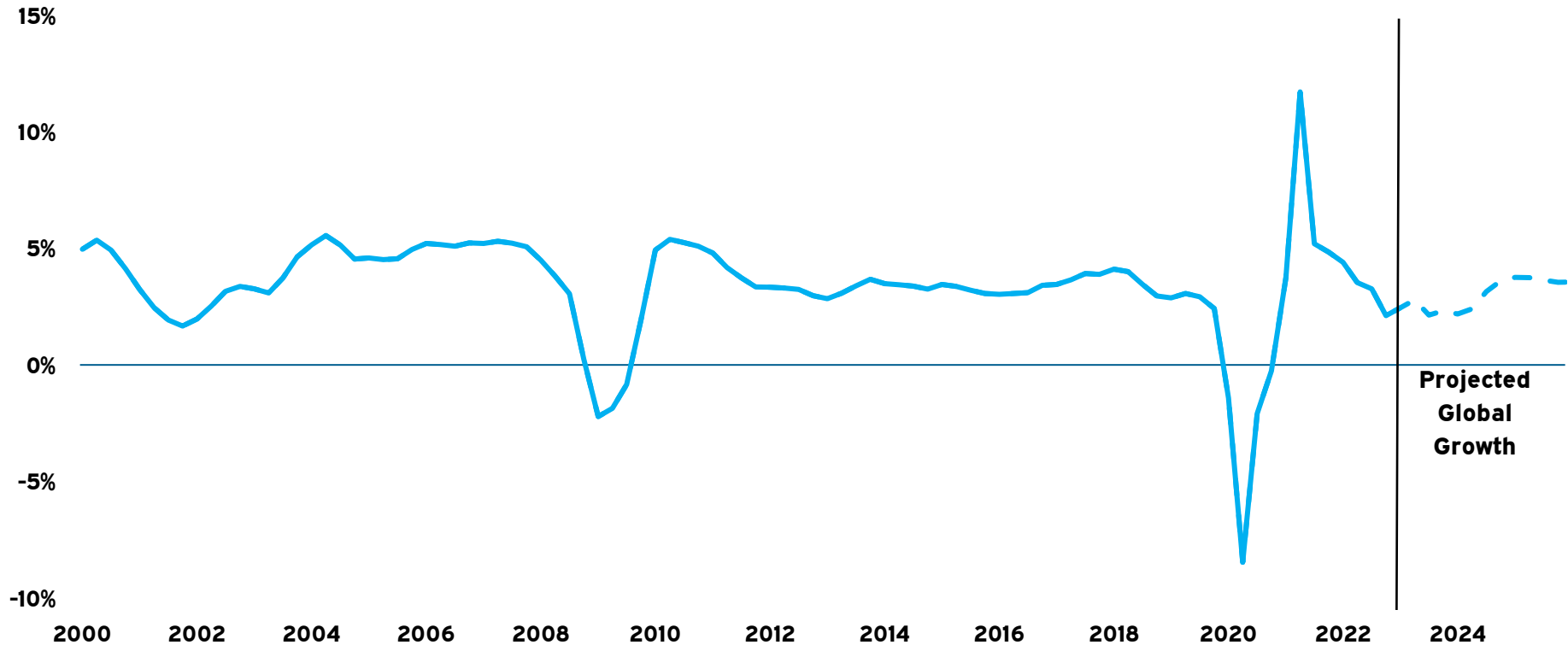
**Credit Spreads vs. US Treasury Bonds<sup>1</sup>**



- Spreads (the added yield above a comparable maturity Treasury) were relatively stable in May as government and corporate bonds both declined.
- High yield spreads remain below their long-term average. Investment grade spreads and emerging market spreads are narrower than high yield spreads and close to their respective long-term averages.

<sup>1</sup> Sources: Bloomberg. Data is as of May 31, 2023. Average lines denote the average of the investment grade, high yield, and emerging market spread values from August 2000 to the recent month-end, respectively.

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

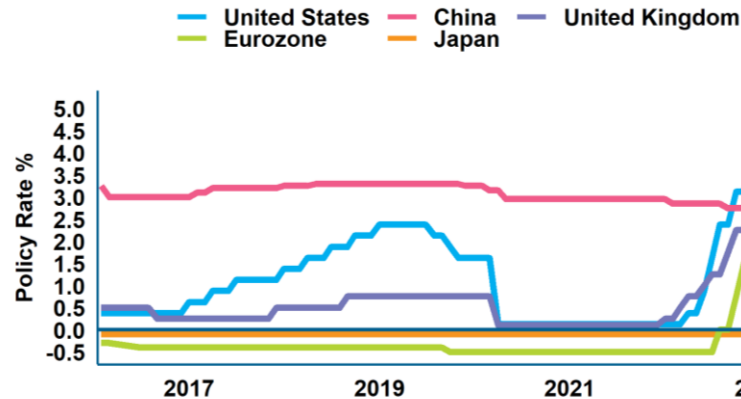


- Global economies are expected to slow this year compared to 2022, with risks of recession as the impacts of policymakers’ aggressive tightening to fight inflation flow through economies.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

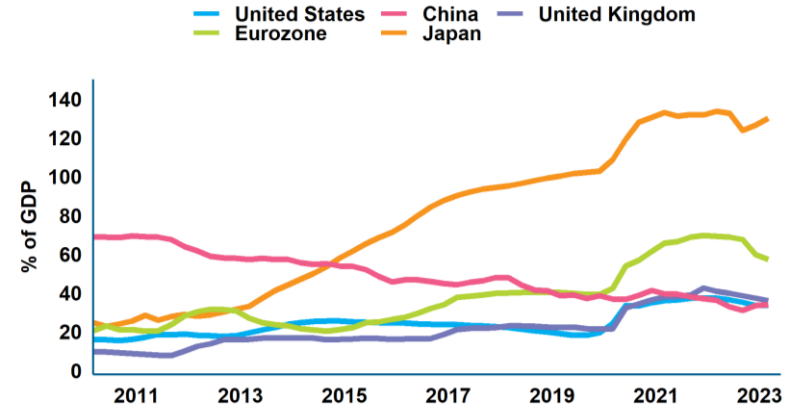
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated May 2023.

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

#### Policy Rates



#### Balance Sheet as % of GDP

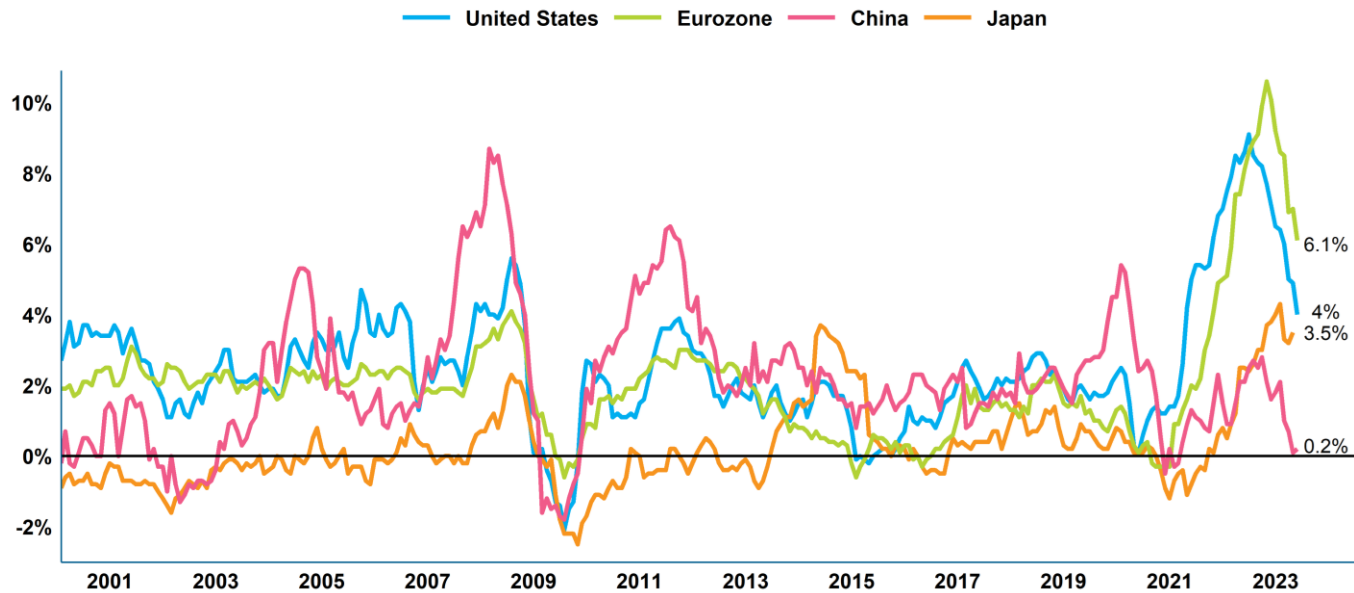


- In 2022, many central banks aggressively reduced pandemic-era policy support in the face of high inflation, with the US taking the most aggressive approach. Slowing inflation and growth have led to expectations for reductions in policy tightening going forward.
- The Fed remained committed to fighting inflation despite pressures in the banking sector, raising rates another 25 basis points to a range of 5.0% to 5.25% at its May meeting. After month-end, the FOMC paused its tightening campaign but hinted that one or two additional rate hikes could come later this year.
- In China, the central bank has continued to cut interest rates and inject liquidity into the banking system, as weaker than expected economic data appears to indicate a widespread slowdown.
- Looking ahead, the risk remains for a policy error as central banks attempt to balance multiple goals, bringing down inflation, maintaining financial stability, and supporting growth.

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



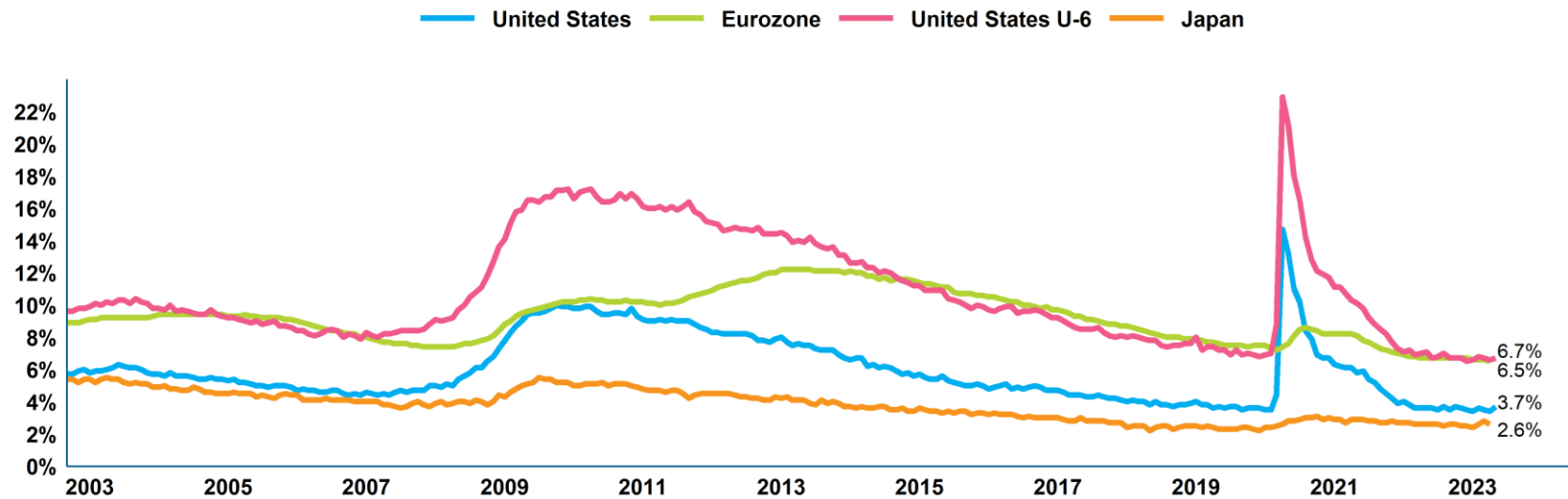
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



- Inflation pressures continued to decline globally due to the easing of supply chain issues from the pandemic, declining energy prices, and tighter monetary policy.
- In the US, inflation fell to 4.0% at month-end, while eurozone inflation also fell (6.1% from 7.0%) a level well off its peak. Despite 2023's significant declines in the US and Europe, inflation levels remain elevated compared to central bank targets.
- Inflation remains lower in China and Japan. In Japan inflation reaccelerated in April. In China, inflation levels were only slightly above 0% at month-end as the reopening of their economy has led to an uneven economic recovery.

<sup>1</sup> Source: Bloomberg. Data is as May 31, 2023. The most recent Japanese inflation data is as of April 2023.

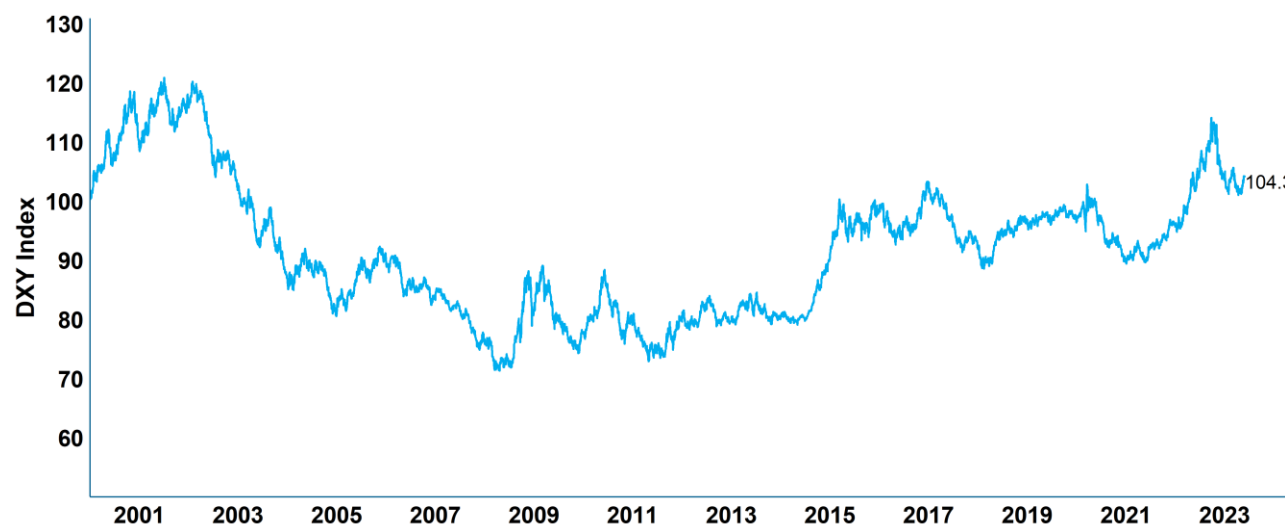
### Unemployment<sup>1</sup>



- Despite slowing growth and high inflation, the US labor market still shows signs of resiliency. Unemployment in the US, which experienced the steepest rise, recently returned to pre-pandemic levels. Broader measures of unemployment (U-6) remain higher at 6.7% but also declined dramatically from their peak.
- The strong labor market and higher wages, although beneficial for workers, motivates the Fed's efforts to fight inflation, leading to higher unemployment.
- Unemployment in Europe has also declined but remains higher than the US, while levels in Japan have been flat through the pandemic given less layoffs.

<sup>1</sup> Source: Bloomberg. Data is as May 31, 2023, for the US. The most recent data for Eurozone and Japanese unemployment is as of April 2023.

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



- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- Late last year and into this year, the dollar declined, as weaker economic data and lower inflation led to investors anticipating the end of Fed tightening. In May, we did see a slight strengthening in the dollar though.
- This year, the track of inflation across economies and the corresponding monetary policies will be key drivers of currency moves.

<sup>1</sup> Source: Bloomberg. Data as of May 31, 2023.

## Summary

### Key Trends:

- The impacts of still relatively high inflation will remain key, with bond market volatility likely to stay high.
- Recent issues related to the banking sector seem to have subsided for now but are a reminder that there is a delicate balance for central banks to continue to fight inflation but also to try to maintain financial stability.
- Global monetary policies could diverge in 2023. The risk of policy errors remains elevated as central banks try to reduce persistent inflation while not tipping their economies into recession.
- Growth is expected to slow globally this year, with many economies forecast to tip into recession. Inflation, monetary policy, and the war will all be key.
- In the US, consumers could feel pressure as certain components of inflation remain high (e.g., shelter), borrowing cost are elevated, and the job market may weaken.
- The key for US equities going forward will be whether earnings can remain resilient if growth continues to slow.
- Equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation weighing particularly on Europe, and China's sluggish economic reopening and on-going weakness in the real estate sector.

**Corporate Update**



**7**  
Offices



**245+**  
Employees



**240+**  
Clients



**1.7T**  
Assets Under Advisement



**150B**  
Assets in Alternative Investments



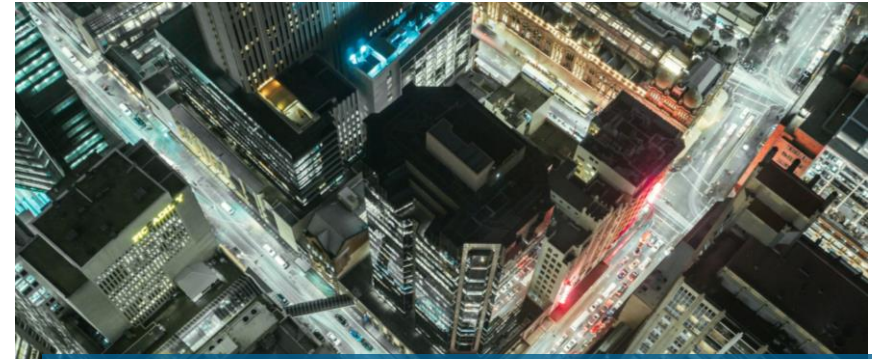
**99%**  
Client Retention Rate



**4:1**  
Client | Consultant Ratio

Meketa Investment Group is proud to work for over 5 million American families everyday!

## Upcoming Events



Q2 Investment Perspectives Webcast  
July 2023



Emerging and Diverse Manager Research Day  
October 2023

Client and employee counts as of March 31, 2023; assets as of December 31, 2022.  
Client retention rate is one minus the number of clients lost divided by the number of clients at prior year-end.

### Meketa in the News

# fin | news

Nonprofit News Special Report:  
2023 Alternative Investments Outlook  
**TRENDS 01.19.23** By **JUSTIN SLAUGHTER**

“A restrictive policy from the Fed always comes with the risk of a hard landing. In a recession, the highest risk markets such as venture may be most vulnerable,” said **John Haggerty**, managing principal and director of private market investments at **Meketa Investment Group**.

In this environment, Meketa “advocates for identifying partners in venture that have shown skill protecting capital in market conditions and trusting them to navigate more challenging economic conditions,” Haggerty said.

Meketa is also focused on building diversified infrastructure portfolios for clients, including high-growth asset like communications or logistics that will benefit from the 2021 Infrastructure Investment and Jobs Act, according to **Lisa Bacon**, managing principal, private markets consultant and infrastructure program lead at the consulting firm.

“The shear breadth and variety of sector and geographic exposures accessible via infrastructure also is a draw. The asset class’s overall performance during COVID demonstrated these attributes, performance resiliency, and spotlighted important growth sectors e.g., communications, logistics,” Bacon said.

**Mary Bates**, managing principal and private markets consultant at Meketa, found that “the benefits of private credit – attractive absolute and risk-adjusted returns, diversification and low volatility – were evident this year as private credit investors benefitted from the structural benefits of floating rate instruments and the ability to be liquidity providers to dislocated markets.”

The increases in rates and a “frozen broadly syndicated [loan] market” provided new opportunities for return to investors, with some “top of the capital structure” private credit strategies now offering the “potential for returns historically associated with mezzanine risk” and other strategies even offering “returns previously offered by private equity,” Bates added.

The unpredictability of hedge fund performance is not necessarily a reason to not include the strategies in a diversified portfolio as there are many strategies that can benefit from an inflationary environment, Meketa Senior V.P. and Research Consultant **Jason Josephiac** said.

“There are some strategies that may have a higher probability of positive outcomes when the market’s expectations for inflation are materially different than realized inflation. The magnitude of this difference is what drives dispersion and the ability for some hedge fund strategies, and perhaps specific sub-strategies, to perform well in such an environment. The degree of protection from hedge funds depends on inflation surprises, inflation persistence relative to expectations and how quickly market participants are able to adjust to a different future macro environment,” Josephiac said. Accordingly, the Westwood, Mass.-based consultant is recommending “multi-asset long volatility and trend following strategies as well as a disperse set of relative value/market neutral oriented strategies,” he noted.



**These Days, Institutional Investors Eye China Warily US and Canadian allocators no longer pile into Chinese assets.** By Larry Light | January 24, 2022

#### The Last Word

All right, is China a worthwhile destination for investments?

True, it remains an economic powerhouse. “The world still needs China’s goods,” says Alison Adams, executive vice president at Meketa Investment Group.

Yet those other worrisome factors intrude. Investors in its securities, she goes on, can be “optimistic over the short term, but there are questions over the long term.”

The upshot is that many institutional investors are well aware of these realities as they plan for the future. They may not be bailing out, but the thrill is gone.

### WSJ PRO PRIVATE EQUITY

By **JENNIFER ROSSA** | 01/11/23

“Both Covid-19 and the GFC were trying periods for companies of all types,” said Steven Hartt, managing principal with Meketa Investment Group. “Those are different muscles than dealing with inflation. But at least being quick to respond, trying to make timely decisions and being able to make strategic shifts in a well-thought through and rapid fashion are exercises that a number of GPs have been through recently.” ■

## Celebrating this Quarter



Alison Adams, PhD

### Meketa has expanded its employee ownership to include four new shareholders.

Principals Alison Adams, William Duryea, Colin Hill, and Hayley Tran have joined the firm's ownership group, bringing the total number of Meketa shareholders to 75.



William Duryea

"It is a pleasure to further expand our ownership team and to welcome these accomplished professionals as Meketa shareholders," said Stephen McCourt, Managing Principal and Co-Chief Executive Officer, Meketa. "Each has proven to be a valuable contributor, serving our clients with the integrity, excellence and personal attention that have been the hallmarks of Meketa for 45 years."



Colin Hill

"Our sincere congratulations to Alison, Will, Colin and Hayley for their well-deserved appointment as shareholders," said Peter Woolley, Managing Principal and Co-Chief Executive Officer, Meketa. "As a 100 percent employee-owned firm, adding to our ownership group on an annual basis demonstrates our commitment to fully invest in our employees, recognize their contributions, and create a thriving workforce that provides the highest level of service to our clients."



Hayley Tran, CFA, CAIA

Read the full article here:

<https://meketa.com/news/meketa-investment-group-expands-employee-ownership-team/>

# MEKETA | 45 YEARS

CELEBRATING A MILESTONE

## Meketa announces they are celebrating 45 years as an investment consulting firm.

Since its founding in Boston in 1978, Meketa has continually evolved to meet the ever-changing needs of the marketplace and its institutional investor clients. In most respects, from the size of its client roster, to the number of employees and employee shareholders, number of offices, and assets under advisement, Meketa has seen continuous and meaningful growth. Among the notable milestones was the firm's 2019 merger with Pension Consulting Alliance (PCA), which combined two of the industry's most experienced and highly-regarded investment consulting firms.

In founding Meketa 45 years ago, we sought to fill a clear market need for a consulting firm dedicated to providing a broad range of customized, strategic investment advisory services to institutional clients," said Jim Meketa, Managing Principal and Chairman, Meketa Investment Group. "Our considerable growth since then, in breadth and depth, is due in no small part to our dedicated staff and to remaining true to our client-first business model. I am immensely proud of our accomplishments and extend a sincere thank you to all those who helped us realize that success."

Read the full article here:

<https://meketa.com/news/meketa-investment-group-marks-45th-year/>



### Thought Leadership



#### Watch our recent webinar on Risk Mitigating Strategies: Diversifiers

Risk Mitigating Strategies (RMS) is a strategic investment framework designed to provide investors diversification relative to the single largest risk factor in most portfolios: equity risk. Jason Josephiac, a member of Meketa's Marketable Alternatives research team, provides an overview of "Diversifiers", one of the three main building blocks of RMS. Diversifiers are meant to provide uncorrelated returns to stabilize 1st and 2nd responders (or lines of protection in an equity drawdown and/or market shocks across or within multiple asset classes). Given the headwinds facing investors in this current market environment, as well as the potential of future outcomes to be more variable, exposure to RMS may be an attractive allocation for investors' portfolios.

Watch the webinar here:

<https://meketa.com/leadership/risk-mitigating-strategies-rms-diversifiers/>



#### Read our 2023 Diversity, Equity, and Inclusion (DEI) Questionnaire Results Summary

In 2020 as a next step in our commitment to DEI, Meketa launched a formal initiative to gather data from public and private market asset management firms within our proprietary database, which focused on evaluating their efforts towards DEI within their own organizations. 2022 marked the third year in a row we have asked firms to complete our questionnaire to report on their work in this area. As the asset management industry continues its focus on improving DEI, we believe an increase in transparency and reporting, more clarity on DEI policies and internal initiatives, and a deeper understanding of employee conduct provide the industry with better information to monitor, improve, and create enduring changes.

Read the report here:

<https://meketa.com/leadership/2023-diversity-equity-and-inclusion-annual-questionnaire-results-summary/>



#### Read our 2023 Annual Newsletter Dedicated to Endowment and Foundation Investing

In this issue, we take a look at the challenges and opportunities presented during the course of 2022, share return data over the past year, examine the results of the NACUBO-TIAA Study of Endowments, dive into a few initiatives of Meketa and one of its clients, and highlight some of our recent research, including the latest iteration of our Annual E&F Survey.

Read the report here:

<https://meketa.com/leadership/endowment-and-foundation-2022-annual-newsletter/>

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

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

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

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

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

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

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

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

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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

The Russell Indices®, TM, SM are trademarks/service marks of the Frank Russell Company.

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.