

# Plymouth County Retirement Association

May 31, 2023

Meeting Materials

## Agenda

1. Estimated Retirement Association Performance As of April 30, 2023
2. Performance Update As of March 31, 2023
  - Q1 Performance Update
  - Private Markets 2022 Q4 Performance Update
3. Current Issues
  - Insurance Linked Strategy Search Respondent Review
4. Appendices
  - Economic Market Update
  - Corporate Update
  - Disclaimer, Glossary, and Notes

**Estimated Retirement Association Performance  
As of April 30, 2023**

### Estimated Aggregate Performance<sup>1</sup>

	April (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	-1.0	2.0	1.1	11.4	6.5	6.9

### Benchmark Returns

	April (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Russell 3000	1.1	8.3	1.5	14.1	10.6	11.7
MSCI EAFE	2.8	11.5	8.4	11.7	3.6	4.8
MSCI Emerging Markets	-1.1	2.8	-6.5	4.3	-1.1	1.8
Bloomberg Aggregate	0.6	3.6	-0.4	03.2	1.2	1.3
Bloomberg TIPS	0.1	3.5	-4.0	0.9	3.0	1.4
Bloomberg High Yield	1.0	4.6	1.2	4.7	3.3	4.0
JPM EMBI Global Diversified (Hard Currency)	0.5	2.4	-0.9	-0.6	-0.2	1.8
S&P Global Natural Resources	-0.2	0.4	-0.9	22.3	6.7	5.2

### Estimated Total Assets

	Estimate
Total Retirement Association	1,307,159,306

<sup>1</sup> The April performance estimates are calculated using index returns as of April 28, 2023 for each asset class. No performance estimate was included for private equity, real estate, infrastructure, and private natural resources asset classes.

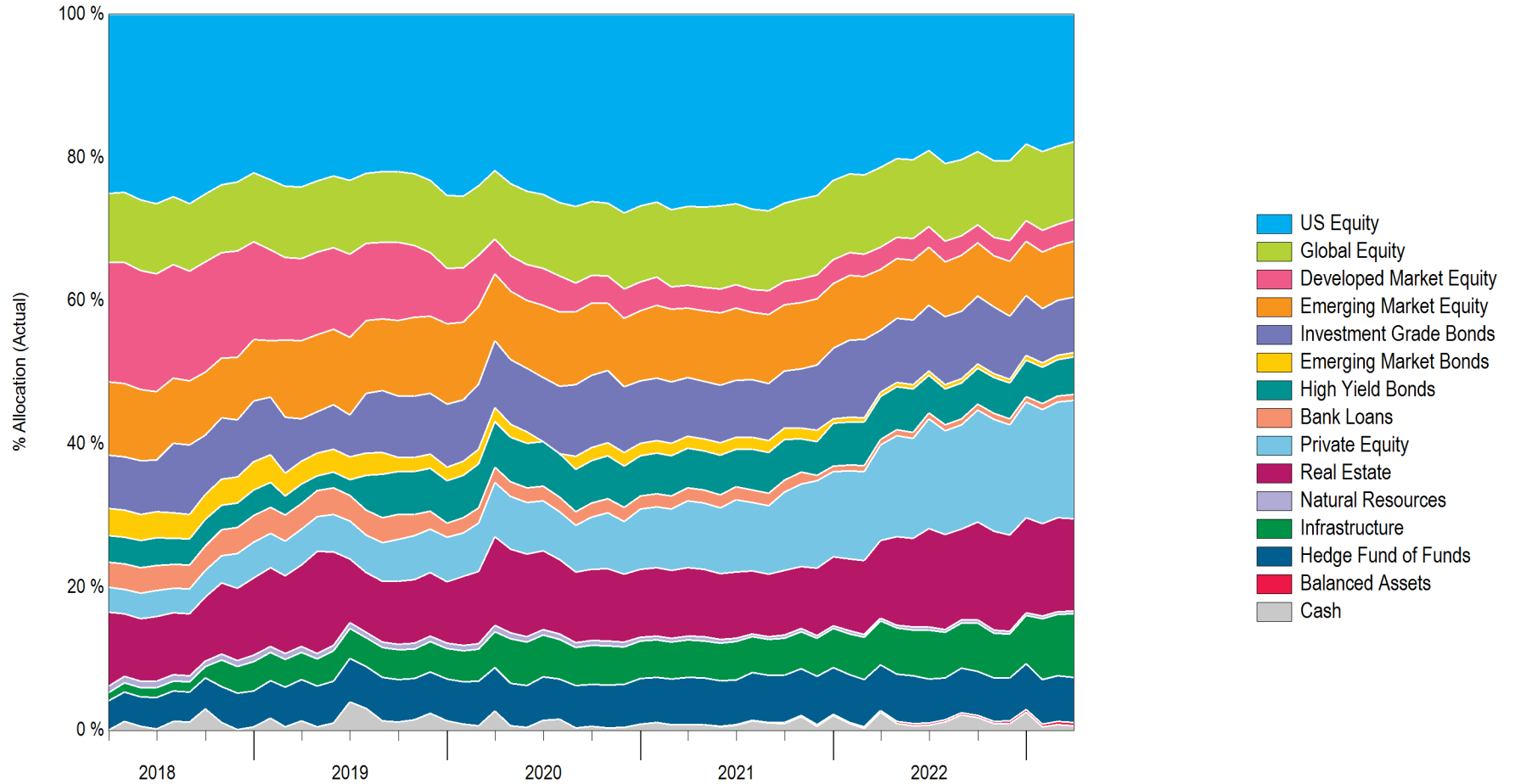
**Performance Update  
As of March 31, 2022**

DRAFT

	Allocation vs. Target		Policy	Policy Range	Within IPS Range?
	Current Balance	Current Allocation			
Domestic Equity	\$235,572,095	18%	26%	21% - 36%	No
International Developed Market Equity	\$40,670,872	3%	6%	1% - 16%	Yes
International Emerging Market Equity	\$102,939,303	8%	10%	5% - 20%	Yes
Global Equity	\$142,423,951	11%	10%	5% - 20%	Yes
Core Bonds	\$102,081,248	8%	9%	4% - 14%	Yes
Value-Added Fixed Income	\$87,629,022	7%	6%	2% - 12%	Yes
Private Equity	\$223,900,260	17%	13%	4% - 18%	Yes
Real Estate	\$170,684,820	13%	10%	5% - 15%	Yes
Real Assets	\$121,470,115	9%	6%	2% - 10%	Yes
Hedge Fund of Funds	\$83,797,978	6%	4%	2% - 8%	Yes
Cash	\$8,995,600	1%	0%	0% - 3%	Yes
<b>Total</b>	<b>\$1,320,165,263</b>	<b>100%</b>	<b>100%</b>		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	\$803,769,795	61%	69%	60% - 80%	Yes
Total Fixed Income	\$189,710,270	14%	15%	5% - 25%	Yes
Total Real Assets and Real Estate	\$317,689,598	24%	16%	7% - 25%	Yes
Cash	\$8,995,600	1%	0%	0% - 3%	Yes

Asset Allocation History  
5 Years Ending March 31, 2023



Asset Class Net Performance Summary

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement Association</b>	<b>1,320,165,263</b>	<b>100.0</b>	<b>1.0</b>	<b>3.0</b>	<b>-1.9</b>	<b>14.0</b>	<b>6.8</b>	<b>7.2</b>	<b>7.8</b>	<b>Nov-89</b>
Policy Benchmark (Net) (1)			2.8	5.0	-7.0	10.2	5.7	6.8	--	Nov-89
Actual Allocation (Net)			2.7	4.5	-7.6	10.3	5.0	--	--	Nov-89
<b>Domestic Equity Assets</b>	<b>235,572,095</b>	<b>17.8</b>	<b>-1.1</b>	<b>5.6</b>	<b>-9.8</b>	<b>19.9</b>	<b>9.6</b>	<b>--</b>	<b>11.4</b>	<b>Jan-16</b>
Russell 3000			2.7	7.2	-8.6	18.5	10.4	11.7	11.7	Jan-16
<b>International Developed Market Equity Assets</b>	<b>40,670,872</b>	<b>3.1</b>	<b>4.4</b>	<b>9.3</b>	<b>-3.8</b>	<b>10.2</b>	<b>-0.8</b>	<b>--</b>	<b>2.9</b>	<b>Jan-16</b>
MSCI EAFE			2.5	8.5	-1.4	13.0	3.5	5.0	5.5	Jan-16
<b>International Emerging Market Equity Assets</b>	<b>102,939,303</b>	<b>7.8</b>	<b>2.5</b>	<b>4.0</b>	<b>-11.0</b>	<b>9.3</b>	<b>-1.0</b>	<b>--</b>	<b>5.0</b>	<b>Jan-16</b>
MSCI Emerging Markets			3.0	4.0	-10.7	7.8	-0.9	2.0	5.5	Jan-16
<b>Global Equity Assets</b>	<b>142,423,951</b>	<b>10.8</b>	<b>2.0</b>	<b>4.6</b>	<b>-4.1</b>	<b>15.8</b>	<b>6.9</b>	<b>--</b>	<b>5.6</b>	<b>Feb-18</b>
MSCI ACWI			3.1	7.3	-7.4	15.4	6.9	8.1	5.4	Feb-18
<b>Core Fixed Income</b>	<b>102,081,248</b>	<b>7.7</b>	<b>1.8</b>	<b>2.6</b>	<b>-3.0</b>	<b>0.3</b>	<b>1.7</b>	<b>--</b>	<b>2.0</b>	<b>Jan-16</b>
75% Bbg Aggregate/25% Bbg US TIPs 1-10 year			2.6	3.0	-4.3	-1.4	1.5	1.4	1.7	Jan-16
<b>Value Added Fixed Income</b>	<b>87,629,022</b>	<b>6.6</b>	<b>1.4</b>	<b>3.3</b>	<b>-1.9</b>	<b>5.2</b>	<b>2.3</b>	<b>--</b>	<b>4.3</b>	<b>Jan-16</b>
Custom Benchmark - Global Fixed Income (2)			1.3	2.9	-3.9	4.2	1.7	2.5	3.5	Jan-16
<b>Hedge Funds</b>	<b>83,797,978</b>	<b>6.3</b>	<b>0.0</b>	<b>1.0</b>	<b>-10.6</b>	<b>6.1</b>	<b>0.9</b>	<b>3.1</b>	<b>3.3</b>	<b>Feb-10</b>
Custom Benchmark			0.0	0.7	-1.9	7.2	3.2	3.3	3.1	Feb-10
<b>Real Estate (3)</b>	<b>170,684,820</b>	<b>12.9</b>	<b>-0.8</b>	<b>-1.1</b>	<b>4.6</b>	<b>14.0</b>	<b>12.1</b>	<b>--</b>	<b>9.5</b>	<b>Jan-16</b>
Custom Benchmark (4)			-3.2	-3.2	-3.1	8.4	7.7	--	7.0	Jan-16
<b>Private Equity (5)</b>	<b>223,900,260</b>	<b>17.0</b>	<b>1.8</b>	<b>1.8</b>	<b>11.6</b>	<b>25.1</b>	<b>16.4</b>	<b>--</b>	<b>13.5</b>	<b>Jan-16</b>
MSCI ACWI IMI (1Q Lagged)+2%			10.4	10.4	-16.7	6.0	7.1	10.1	10.6	Jan-16
<b>Real Assets (6)</b>	<b>121,470,115</b>	<b>9.2</b>	<b>2.9</b>	<b>3.2</b>	<b>10.3</b>	<b>12.4</b>	<b>8.8</b>	<b>--</b>	<b>4.5</b>	<b>Jan-16</b>
CPI + 3%			0.6	2.4	8.1	8.5	7.0	5.7	6.5	Jan-16
<b>Cash and Cash Equivalent</b>	<b>8,995,600</b>	<b>0.7</b>								

(1) The custom benchmark is comprised of 26% Russell 3000/ 6% MSCI EAFE/ 10% MSCI Emerging Markets/ 13% MSCI ACWI IMI (1Q 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% NCREIF ODCE / 6% CPI+3%

(2) 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.

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

(4) The custom benchmark is comprised of 80% NCREIF ODCE/ 20% Wilshire Reit up until 12/31/2019 and since is comprised of NCREIF ODCE.

(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 (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Retirement Association</b>	<b>1,320,165,263</b>	<b>100.0</b>	<b>--</b>	<b>1.0</b>	<b>3.0</b>	<b>-1.9</b>	<b>14.0</b>	<b>6.8</b>	<b>7.2</b>	<b>7.8</b>	<b>Nov-89</b>
<i>Policy Benchmark (Net)</i>				2.8	5.0	-7.0	10.2	5.7	6.8	--	Nov-89
<i>Actual Allocation (Net)</i>				2.7	4.5	-7.6	10.3	5.0	--	--	Nov-89
<i>InvMetrics Public DB Net Median</i>				1.5	4.4	-5.5	10.7	6.0	6.8	7.8	Nov-89
<i>InvMetrics Public DB Net Rank</i>				75	92	3	1	19	34	57	Nov-89
<b>Domestic Equity Assets</b>	<b>235,572,095</b>	<b>17.8</b>	<b>17.8</b>	<b>-1.1</b>	<b>5.6</b>	<b>-9.8</b>	<b>19.9</b>	<b>9.6</b>	<b>--</b>	<b>11.4</b>	<b>Jan-16</b>
<i>Russell 3000</i>				2.7	7.2	-8.6	18.5	10.4	11.7	11.7	Jan-16
Rhumblin Russell 1000 Value	47,688,830	3.6	20.2	-0.5	1.0	-5.9	17.9	7.5	--	9.0	Apr-13
<i>Russell 1000 Value</i>				-0.5	1.0	-5.9	17.9	7.5	9.1	9.0	Apr-13
<i>eV US Large Cap Value Equity Net Median</i>				-1.0	0.5	-4.8	18.9	8.2	9.6	9.5	Apr-13
<i>eV US Large Cap Value Equity Net Rank</i>				38	43	65	62	65	--	66	Apr-13
Rhumblin Russell 1000 Growth	42,492,302	3.2	18.0	6.8	14.3	-10.9	18.6	13.7	14.5	15.0	Jul-09
<i>Russell 1000 Growth</i>				6.8	14.4	-10.9	18.6	13.7	14.6	15.0	Jul-09
<i>eV US Large Cap Growth Equity Net Median</i>				5.9	12.6	-11.7	15.5	11.2	12.8	13.4	Jul-09
<i>eV US Large Cap Growth Equity Net Rank</i>				31	30	43	18	15	11	8	Jul-09
Fisher Midcap Value	56,112,073	4.3	23.8	-3.0	6.0	-7.7	26.3	11.4	11.3	8.9	Apr-07
<i>Russell MidCap Value</i>				-3.1	1.3	-9.2	20.7	6.5	8.8	6.9	Apr-07
<i>Russell MidCap</i>				-1.5	4.1	-8.8	19.2	8.1	10.1	8.0	Apr-07
<i>eV US Mid Cap Value Equity Net Median</i>				-3.8	1.4	-5.7	22.1	6.8	9.0	7.4	Apr-07
<i>eV US Mid Cap Value Equity Net Rank</i>				33	7	69	15	1	6	10	Apr-07
Newton Small Cap Growth	45,322,353	3.4	19.2	-3.1	4.6	-13.5	14.2	10.5	12.5	13.2	Aug-09
<i>Russell 2000 Growth</i>				-2.5	6.1	-10.6	13.4	4.3	8.5	10.9	Aug-09
<i>eV US Small Cap Growth Equity Net Median</i>				-1.6	6.9	-11.3	16.6	8.4	10.4	12.8	Aug-09
<i>eV US Small Cap Growth Equity Net Rank</i>				84	78	65	70	23	15	34	Aug-09

### Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Vulcan Partners Small Cap Value	15,119,259	1.1	6.4	-4.6	8.4	-22.4	--	--	--	-22.4	Apr-22
<i>Russell 2000 Value</i>				-7.2	-0.7	-13.0	21.0	4.5	7.2	-13.0	Apr-22
<i>eV US Small Cap Value Equity Net Median</i>				-5.4	2.0	-6.9	23.1	5.6	8.0	-6.9	Apr-22
<i>eV US Small Cap Value Equity Net Rank</i>				35	4	99	--	--	--	99	Apr-22
Systematic Small Cap Free Cash Flow	28,837,278	2.2	12.2	-4.1	2.2	-0.3	--	--	--	-0.3	Apr-22
<i>Russell 2000 Value</i>				-7.2	-0.7	-13.0	21.0	4.5	7.2	-13.0	Apr-22
<i>eV US Small Cap Value Equity Net Median</i>				-5.4	2.0	-6.9	23.1	5.6	8.0	-6.9	Apr-22
<i>eV US Small Cap Value Equity Net Rank</i>				29	46	11	--	--	--	11	Apr-22
<b>International Developed Market Equity Assets</b>	<b>40,670,872</b>	<b>3.1</b>	<b>3.1</b>	<b>4.4</b>	<b>9.3</b>	<b>-3.8</b>	<b>10.2</b>	<b>-0.8</b>	<b>--</b>	<b>2.9</b>	<b>Jan-16</b>
<i>MSCI EAFE</i>				2.5	8.5	-1.4	13.0	3.5	5.0	5.5	Jan-16
Aristotle International Equity	21,235,406	1.6	52.2	2.7	7.0	-5.8	--	--	--	-0.9	Mar-21
<i>MSCI EAFE</i>				2.5	8.5	-1.4	13.0	3.5	5.0	1.0	Mar-21
<i>eV EAFE Core Equity Net Median</i>				2.0	7.6	-3.4	13.0	3.0	5.5	-0.5	Mar-21
<i>eV EAFE Core Equity Net Rank</i>				28	64	69	--	--	--	60	Mar-21
Walter Scott International Equity	19,435,466	1.5	47.8	6.3	11.9	-1.6	--	--	--	-0.3	Mar-21
<i>MSCI EAFE</i>				2.5	8.5	-1.4	13.0	3.5	5.0	1.0	Mar-21
<i>eV EAFE Core Equity Net Median</i>				2.0	7.6	-3.4	13.0	3.0	5.5	-0.5	Mar-21
<i>eV EAFE Core Equity Net Rank</i>				1	2	31	--	--	--	46	Mar-21
<b>International Emerging Market Equity Assets</b>	<b>102,939,303</b>	<b>7.8</b>	<b>7.8</b>	<b>2.5</b>	<b>4.0</b>	<b>-11.0</b>	<b>9.3</b>	<b>-1.0</b>	<b>--</b>	<b>5.0</b>	<b>Jan-16</b>
<i>MSCI Emerging Markets</i>				3.0	4.0	-10.7	7.8	-0.9	2.0	5.5	Jan-16
ABS Emerging Markets	54,727,404	4.1	53.2	1.8	3.9	-10.9	10.9	--	--	5.3	Dec-18
<i>MSCI Emerging Markets</i>				3.0	4.0	-10.7	7.8	-0.9	2.0	2.3	Dec-18
<i>eV Emg Mkts Equity Net Median</i>				2.7	4.9	-9.3	9.9	0.0	2.7	3.6	Dec-18
<i>eV Emg Mkts Equity Net Rank</i>				76	72	72	43	--	--	29	Dec-18

Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Driehaus Emerging Markets Growth	48,211,899	3.7	46.8	3.3	4.2	-11.1	9.2	--	--	4.0	Mar-19
<i>MSCI Emerging Markets</i>				3.0	4.0	-10.7	7.8	-0.9	2.0	1.0	Mar-19
<i>eV Emg Mkts Equity Net Median</i>				2.7	4.9	-9.3	9.9	0.0	2.7	2.4	Mar-19
<i>eV Emg Mkts Equity Net Rank</i>				24	65	75	57	--	--	29	Mar-19
<b>Global Equity Assets</b>	<b>142,423,951</b>	<b>10.8</b>	<b>10.8</b>	<b>2.0</b>	<b>4.6</b>	<b>-4.1</b>	<b>15.8</b>	<b>6.9</b>	<b>--</b>	<b>5.6</b>	<b>Feb-18</b>
<i>MSCI ACWI</i>				3.1	7.3	-7.4	15.4	6.9	8.1	5.4	Feb-18
First Eagle Global Value Fund	25,238,379	1.9	17.7	2.7	5.8	-1.7	13.7	5.8	--	4.6	Feb-18
<i>MSCI ACWI Value NR USD</i>				-0.3	1.2	-5.5	15.2	4.3	5.9	2.7	Feb-18
<i>eV Global Value Equity Net Median</i>				0.4	5.3	-2.9	16.8	5.4	6.9	3.9	Feb-18
<i>eV Global Value Equity Net Rank</i>				16	46	41	83	43	--	35	Feb-18
Kopernik Global All Cap Fund	35,288,872	2.7	24.8	2.7	3.6	-6.1	23.0	8.5	--	7.4	Feb-18
<i>MSCI ACWI Value NR USD</i>				-0.3	1.2	-5.5	15.2	4.3	5.9	2.7	Feb-18
<i>eV Global All Cap Value Eq Net Median</i>				0.4	6.1	-3.0	18.0	5.3	6.8	3.9	Feb-18
<i>eV Global All Cap Value Eq Net Rank</i>				18	83	81	21	14	--	10	Feb-18
Lee Munder Global Multi-Cap Strategy	37,729,431	2.9	26.5	3.3	7.8	-7.5	15.0	5.5	--	4.9	Mar-18
<i>MSCI ACWI</i>				3.1	7.3	-7.4	15.4	6.9	8.1	6.4	Mar-18
<i>eV All Global Equity Net Median</i>				2.2	6.6	-6.2	15.3	6.9	8.1	6.4	Mar-18
<i>eV All Global Equity Net Rank</i>				27	34	62	53	68	--	72	Mar-18
Wellington Durable Enterprises, L.P.	44,167,270	3.3	31.0	-0.1	1.9	0.0	13.9	8.0	--	7.9	Mar-18
<i>MSCI ACWI</i>				3.1	7.3	-7.4	15.4	6.9	8.1	6.4	Mar-18
<i>eV All Global Equity Net Median</i>				2.2	6.6	-6.2	15.3	6.9	8.1	6.4	Mar-18
<i>eV All Global Equity Net Rank</i>				78	90	6	64	33	--	29	Mar-18

Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>102,081,248</b>	<b>7.7</b>	<b>7.7</b>	<b>1.8</b>	<b>2.6</b>	<b>-3.0</b>	<b>0.3</b>	<b>1.7</b>	<b>--</b>	<b>2.0</b>	<b>Jan-16</b>
<i>75% Bbg Aggregate/25% Bbg US TIPS 1-10 year</i>				2.6	3.0	-4.3	-1.4	1.5	1.4	1.7	Jan-16
Lord Abbett Short Duration Credit Trust II	43,541,947	3.3	42.7	0.9	1.8	-0.1	2.3	--	--	0.8	Aug-19
<i>Bloomberg US Credit 1-3 Yr TR</i>				1.1	1.3	0.3	0.7	1.6	1.5	0.8	Aug-19
<i>eV US Short Duration - Credit Net Median</i>				1.0	1.6	-0.3	1.4	1.5	1.7	0.7	Aug-19
<i>eV US Short Duration - Credit Net Rank</i>				53	32	45	21	--	--	40	Aug-19
Lord Abbett Core Fixed Income Trust II	41,147,326	3.1	40.3	2.3	3.2	-5.1	--	--	--	-8.0	Dec-21
<i>Bloomberg US Aggregate TR</i>				2.5	3.0	-4.8	-2.8	0.9	1.4	-8.1	Dec-21
<i>eV US Core Fixed Inc Net Median</i>				2.4	3.1	-4.7	-2.0	1.1	1.6	-8.1	Dec-21
<i>eV US Core Fixed Inc Net Rank</i>				56	28	74	--	--	--	47	Dec-21
Rhumblin TIPS Trust	17,391,974	1.3	17.0	2.9	3.3	-6.1	--	--	--	-0.9	Sep-20
<i>Bloomberg US TIPS TR</i>				2.9	3.3	-6.1	1.8	2.9	1.5	-0.9	Sep-20
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>				2.8	3.3	-6.0	2.2	3.0	1.5	-0.6	Sep-20
<i>eV US TIPS / Inflation Fixed Inc Net Rank</i>				41	42	64	--	--	--	69	Sep-20
<b>Value Added Fixed Income</b>	<b>87,629,022</b>	<b>6.6</b>	<b>6.6</b>	<b>1.4</b>	<b>3.3</b>	<b>-1.9</b>	<b>5.2</b>	<b>2.3</b>	<b>--</b>	<b>4.3</b>	<b>Jan-16</b>
<i>Custom Benchmark - Global Fixed Income</i>				1.3	2.9	-3.9	4.2	1.7	2.5	3.5	Jan-16
Eaton Vance High Yield	12,044,384	0.9	13.7	1.6	3.5	-2.3	5.8	3.2	4.1	5.9	Apr-06
<i>ICE BofA US High Yield TR</i>				1.1	3.7	-3.6	5.8	3.1	4.0	6.1	Apr-06
<i>eV US High Yield Fixed Inc Net Median</i>				1.0	3.3	-2.8	5.7	3.0	3.8	5.7	Apr-06
<i>eV US High Yield Fixed Inc Net Rank</i>				19	36	36	47	39	31	31	Apr-06
First Eagle Bank Loan Select Fund	10,830,299	0.8	12.4	-0.4	2.8	-0.3	7.4	3.0	3.9	4.6	Sep-10
<i>Credit Suisse Leveraged Loans</i>				-0.1	3.1	2.1	8.4	3.5	3.9	4.4	Sep-10
<i>Bank Loan MStar MF Median</i>				0.0	3.1	1.4	7.3	2.8	3.2	3.8	Sep-10
<i>Bank Loan MStar MF Rank</i>				77	73	84	46	30	1	1	Sep-10

### Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Manulife Strategic Fixed Income	41,753,641	3.2	47.6	2.6	3.4	-2.5	2.6	--	--	1.2	Jul-19
<i>Bloomberg Multiverse TR</i>				3.1	3.0	-7.9	-3.1	-1.2	0.2	-2.4	Jul-19
<i>Multisector Bond MStar MF Median</i>				0.9	2.6	-3.2	3.7	2.1	2.7	1.1	Jul-19
<i>Multisector Bond MStar MF Rank</i>				1	13	33	77	--	--	39	Jul-19
Mesirow High Yield	14,816,668	1.1	16.9	0.4	4.4	-3.4	11.2	--	--	4.9	Aug-19
<i>Bloomberg US Corporate High Yield TR</i>				1.1	3.6	-3.3	5.9	3.2	4.1	1.9	Aug-19
<i>eV US High Yield Fixed Inc Net Median</i>				1.0	3.3	-2.8	5.7	3.0	3.8	2.0	Aug-19
<i>eV US High Yield Fixed Inc Net Rank</i>				80	2	61	3	--	--	2	Aug-19
Eaton Vance EMD Opportunities Fund	8,184,029	0.6	9.3	-0.3	1.3	1.8	--	--	--	0.6	Aug-20
<i>JP Morgan EMBI Global Diversified</i>				1.0	1.9	-6.9	0.0	-0.6	2.0	-5.6	Aug-20
<i>eV Emg Mkts Fixed Inc - Blended Currency Net Median</i>				1.7	2.7	-4.1	2.2	-0.9	0.8	-3.4	Aug-20
<i>eV Emg Mkts Fixed Inc - Blended Currency Net Rank</i>				91	91	2	--	--	--	9	Aug-20
<b>Hedge Funds</b>	<b>83,797,978</b>	<b>6.3</b>	<b>6.3</b>	<b>0.0</b>	<b>1.0</b>	<b>-10.6</b>	<b>6.1</b>	<b>0.9</b>	<b>3.1</b>	<b>3.3</b>	<b>Feb-10</b>
<i>Custom Benchmark</i>				0.0	0.7	-1.9	7.2	3.2	3.3	3.1	Feb-10
ABS Offshore SPC - Global Segregated Portfolio	35,424,688	2.7	42.3	0.4	2.0	-2.3	6.9	3.3	4.7	4.9	Aug-10
<i>HFRI Equity Hedge (Total) Index</i>				0.0	2.5	-3.7	12.4	5.0	5.3	5.4	Aug-10
<i>HFRI FOF: Strategic Index</i>				-0.5	1.2	-4.9	7.3	2.3	3.1	3.2	Aug-10
Entrust Special Opportunities Fund III, Ltd.	13,663,481	1.0	16.3	0.0	0.0	-20.6	4.4	-2.6	--	2.4	Oct-16
<i>HFRI Fund of Funds Composite Index (QTR)</i>				0.7	0.7	-1.9	7.2	3.1	3.2	3.7	Oct-16
Old Farm Partners Master Fund, L.P.	15,473,403	1.2	18.5	-0.9	0.9	-6.1	8.0	--	--	3.8	Oct-18
<i>HFRI Fund of Funds Composite Index</i>				-0.7	0.7	-1.9	7.2	3.1	3.2	3.3	Oct-18
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	19,236,406	1.5	23.0	0.0	0.0	-17.5	3.8	--	--	1.9	Jan-19
<i>HFRI Fund of Funds Composite Index (QTR)</i>				0.7	0.7	-1.9	7.2	3.1	3.2	4.7	Jan-19

Note: The data for Entrust Special Opportunities Fund III, Ltd and Entrust Permal Special Opportunities Evergreen Fund, Ltd is lagged based on December 31, 2022 values.

### Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Estate</b>	<b>170,684,820</b>	<b>12.9</b>	<b>12.9</b>	<b>-0.8</b>	<b>-1.1</b>	<b>4.6</b>	<b>14.0</b>	<b>12.1</b>	<b>--</b>	<b>9.5</b>	<b>Jan-16</b>
<i>Custom Benchmark</i>				<i>-3.2</i>	<i>-3.2</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.7</i>	<i>--</i>	<i>7.0</i>	<i>Jan-16</i>
<b>Core Real Estate</b>	<b>110,100,878</b>	<b>8.3</b>	<b>64.5</b>	<b>-0.4</b>	<b>-1.0</b>	<b>-1.3</b>	<b>10.7</b>	<b>9.9</b>	<b>--</b>	<b>8.9</b>	<b>Jan-16</b>
<i>NCREIF-ODCE</i>				<i>-3.2</i>	<i>-3.2</i>	<i>-3.1</i>	<i>8.4</i>	<i>7.5</i>	<i>9.5</i>	<i>7.8</i>	<i>Jan-16</i>
TA Realty Core Property Fund, L.P. <i>NCREIF ODCE Equal Weighted (Net)</i>	76,740,891	5.8	69.7	0.0	0.0	0.6	13.6	12.3	--	12.3	Apr-18
				<i>-3.5</i>	<i>-3.5</i>	<i>-3.7</i>	<i>8.2</i>	<i>7.1</i>	<i>8.8</i>	<i>7.1</i>	<i>Apr-18</i>
JPMorgan Strategic Property <i>NCREIF ODCE Equal Weighted (Net)</i>	33,359,987	2.5	30.3	-1.4	-3.2	-5.6	6.0	--	--	5.5	Apr-19
				<i>-3.5</i>	<i>-3.5</i>	<i>-3.7</i>	<i>8.2</i>	<i>7.1</i>	<i>8.8</i>	<i>7.2</i>	<i>Apr-19</i>
<b>Non-Core Real Estate</b>	<b>60,583,942</b>	<b>4.6</b>	<b>35.5</b>	<b>-1.4</b>	<b>-1.4</b>	<b>18.2</b>	<b>20.5</b>	<b>15.8</b>	<b>--</b>	<b>9.1</b>	<b>Jan-16</b>
<b>Private Equity</b>	<b>223,900,260</b>	<b>17.0</b>	<b>17.0</b>	<b>1.8</b>	<b>1.8</b>	<b>11.6</b>	<b>25.1</b>	<b>16.4</b>	<b>--</b>	<b>13.5</b>	<b>Jan-16</b>
<i>MSCI ACWI IMI (1Q Lagged)+2%</i>				<i>10.4</i>	<i>10.4</i>	<i>-16.7</i>	<i>6.0</i>	<i>7.1</i>	<i>10.1</i>	<i>10.6</i>	<i>Jan-16</i>
<b>Private Equity</b>	<b>208,205,076</b>	<b>15.8</b>	<b>93.0</b>	<b>2.1</b>	<b>2.1</b>	<b>13.1</b>	<b>26.1</b>	<b>17.7</b>	<b>--</b>	<b>13.3</b>	<b>Jan-16</b>
<b>Venture Capital</b>	<b>15,695,184</b>	<b>1.2</b>	<b>7.0</b>	<b>-2.0</b>	<b>-2.0</b>	<b>-6.2</b>	<b>14.4</b>	<b>7.7</b>	<b>--</b>	<b>10.8</b>	<b>Jan-16</b>

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 TA Core Property Fund is reported in real time.

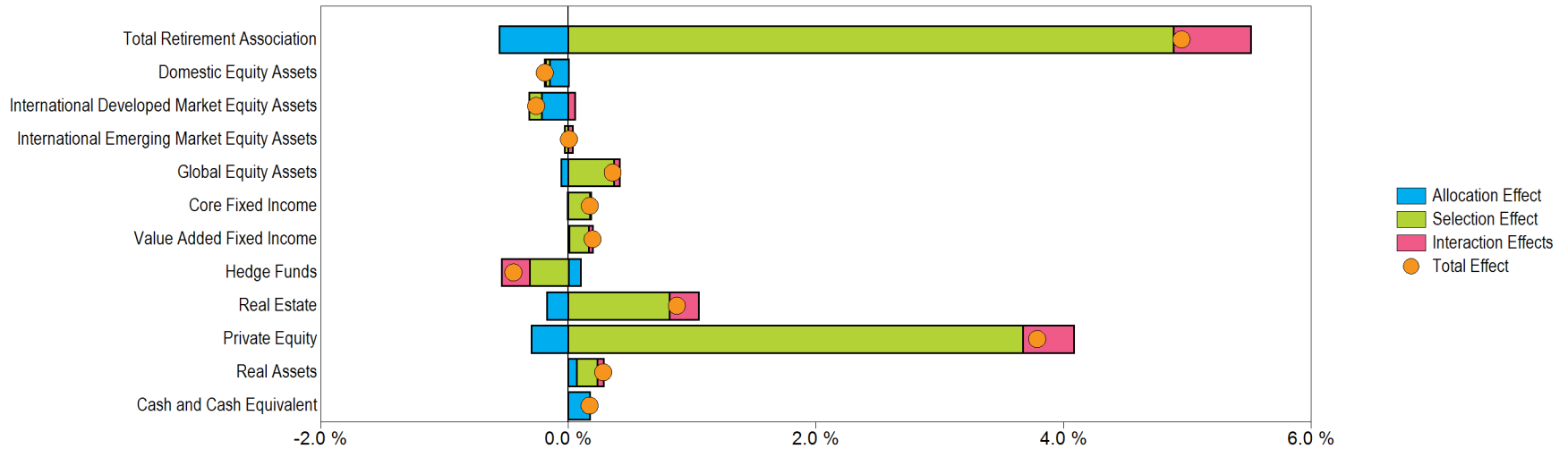
Note: The data for JPMorgan Strategic Property and IFM Global Infrastructure is as of March 31, 2023

Total Retirement Association | As of March 31, 2023

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Assets</b>	<b>121,470,115</b>	<b>9.2</b>	<b>9.2</b>	<b>2.9</b>	<b>3.2</b>	<b>10.3</b>	<b>12.4</b>	<b>8.8</b>	<b>--</b>	<b>4.5</b>	<b>Jan-16</b>
<i>CPI + 3%</i>				0.6	2.4	8.1	8.5	7.0	5.7	6.5	Jan-16
<b>Core Real Assets</b>	<b>73,563,508</b>	<b>5.6</b>	<b>60.6</b>	<b>2.0</b>	<b>2.6</b>	<b>9.6</b>	<b>12.4</b>	<b>--</b>	<b>--</b>	<b>11.1</b>	<b>Oct-18</b>
<i>CPI + 3%</i>				0.6	2.4	8.1	8.5	7.0	5.7	7.2	Oct-18
IFM Global Infrastructure	73,563,508	5.6	100.0	2.0	2.6	9.6	12.4	--	--	11.1	Oct-18
<i>CPI + 3%</i>				0.6	2.4	8.1	8.5	7.0	5.7	7.2	Oct-18
<b>Non-Core Real Assets</b>	<b>47,906,607</b>	<b>3.6</b>	<b>39.4</b>	<b>4.2</b>	<b>4.2</b>	<b>11.2</b>	<b>12.1</b>	<b>7.3</b>	<b>--</b>	<b>4.5</b>	<b>Jan-16</b>
<i>CPI + 3%</i>				0.6	2.4	8.1	8.5	7.0	5.7	6.5	Jan-16
<b>Cash and Cash Equivalent</b>	<b>8,995,600</b>	<b>0.7</b>	<b>0.7</b>								
Cash	8,995,600	0.7	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.

#### Attribution Effects 1 Year Ending March 31, 2023



#### Attribution Summary 1 Year Ending March 31, 2023

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Domestic Equity Assets	-9.8%	-9.2%	-0.5%	0.0%	-0.2%	0.0%	-0.2%
International Developed Market Equity Assets	-3.8%	-2.1%	-1.7%	-0.1%	-0.2%	0.1%	-0.3%
International Emerging Market Equity Assets	-11.0%	-11.4%	0.4%	0.0%	0.0%	0.0%	0.0%
Global Equity Assets	-4.1%	-8.1%	4.0%	0.4%	-0.1%	0.0%	0.4%
Core Fixed Income	-3.0%	-5.0%	1.9%	0.2%	0.0%	0.0%	0.2%
Value Added Fixed Income	-1.9%	-4.6%	2.7%	0.2%	0.0%	0.0%	0.2%
Hedge Funds	-10.6%	-2.6%	-8.0%	-0.3%	0.1%	-0.2%	-0.4%
Real Estate	4.6%	-3.8%	8.4%	0.8%	-0.2%	0.2%	0.9%
Private Equity	11.6%	-16.7%	28.3%	3.7%	-0.3%	0.4%	3.8%
Real Assets	10.3%	7.4%	2.9%	0.2%	0.1%	0.0%	0.3%
Cash and Cash Equivalent	2.5%	2.5%	0.0%	0.0%	0.2%	0.0%	0.2%
<b>Total</b>	<b>-1.9%</b>	<b>-6.9%</b>	<b>5.0%</b>	<b>4.9%</b>	<b>-0.6%</b>	<b>0.6%</b>	<b>5.0%</b>



Statistics Summary						
5 Years Ending March 31, 2023						
	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Total Retirement Association	6.8%	10.5%	0.3	0.9	0.5	3.9%
Policy Benchmark (Net)	5.7%	10.7%	--	1.0	0.4	0.0%
Domestic Equity Assets	9.6%	21.6%	-0.2	1.1	0.4	4.8%
Russell 3000	10.4%	19.2%	--	1.0	0.5	0.0%
Rhumblin Russell 1000 Value	7.5%	18.8%	0.0	1.0	0.3	0.1%
Russell 1000 Value	7.5%	18.8%	--	1.0	0.3	0.0%
Rhumblin Russell 1000 Growth	13.7%	21.0%	-0.1	1.0	0.6	0.0%
Russell 1000 Growth	13.7%	21.0%	--	1.0	0.6	0.0%
Fisher Midcap Value	11.4%	23.7%	0.9	1.1	0.4	5.6%
Russell MidCap Value	6.5%	21.7%	--	1.0	0.2	0.0%
Newton Small Cap Growth	10.5%	26.3%	0.8	1.0	0.3	7.7%
Russell 2000 Growth	4.3%	24.3%	--	1.0	0.1	0.0%
Vulcan Partners Small Cap Value	--	--	--	--	--	--
Russell 2000 Value	4.5%	24.7%	--	1.0	0.1	0.0%
Systematic Small Cap Free Cash Flow	--	--	--	--	--	--
Russell 2000 Value	4.5%	24.7%	--	1.0	0.1	0.0%
International Equity	-0.8%	17.6%	-0.6	0.9	-0.1	5.4%
International Equity Custom Benchmark	2.2%	18.1%	--	1.0	0.0	0.0%
International Developed Market Equity Assets	-0.8%	19.5%	-0.9	1.1	-0.1	4.8%
MSCI EAFE	3.5%	17.6%	--	1.0	0.1	0.0%
Aristotle International Equity	--	--	--	--	--	--
MSCI EAFE	3.5%	17.6%	--	1.0	0.1	0.0%

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Walter Scott International Equity	--	--	--	--	--	--
MSCI EAFE	3.5%	17.6%	--	1.0	0.1	0.0%
International Emerging Market Equity Assets	-1.0%	17.8%	0.0	0.9	-0.1	3.7%
MSCI Emerging Markets	-0.9%	18.9%	--	1.0	-0.1	0.0%
ABS Emerging Markets	--	--	--	--	--	--
MSCI Emerging Markets	-0.9%	18.9%	--	1.0	-0.1	0.0%
Driehaus Emerging Markets Growth	--	--	--	--	--	--
MSCI Emerging Markets	-0.9%	18.9%	--	1.0	-0.1	0.0%
Global Equity Assets	6.9%	16.0%	0.0	0.9	0.4	4.1%
MSCI ACWI	6.9%	17.7%	--	1.0	0.3	0.0%
First Eagle Global Value Fund	5.8%	14.1%	0.3	0.8	0.3	5.7%
MSCI ACWI Value NR USD	4.3%	17.8%	--	1.0	0.2	0.0%
Kopernik Global All Cap Fund	8.5%	19.0%	0.3	0.8	0.4	12.9%
MSCI ACWI Value NR USD	4.3%	17.8%	--	1.0	0.2	0.0%
Lee Munder Global Multi-Cap Strategy	5.5%	18.4%	-0.6	1.0	0.2	2.3%
MSCI ACWI	6.9%	17.7%	--	1.0	0.3	0.0%
Wellington Durable Enterprises, L.P.	8.0%	16.1%	0.2	0.8	0.4	6.4%
MSCI ACWI	6.9%	17.7%	--	1.0	0.3	0.0%
Fixed Income Assets	1.8%	5.6%	0.2	0.7	0.1	4.7%
Bloomberg US Aggregate TR	0.9%	5.5%	--	1.0	-0.1	0.0%
Core Fixed Income	1.7%	4.4%	0.1	0.8	0.1	2.0%
75% Bbg Aggregate/25% Bbg US TIPs 1-10 year	1.5%	5.0%	--	1.0	0.0	0.0%
Lord Abbett Short Duration Credit Trust II	--	--	--	--	--	--
Bloomberg US Credit 1-3 Yr TR	1.6%	2.2%	--	1.0	0.1	0.0%

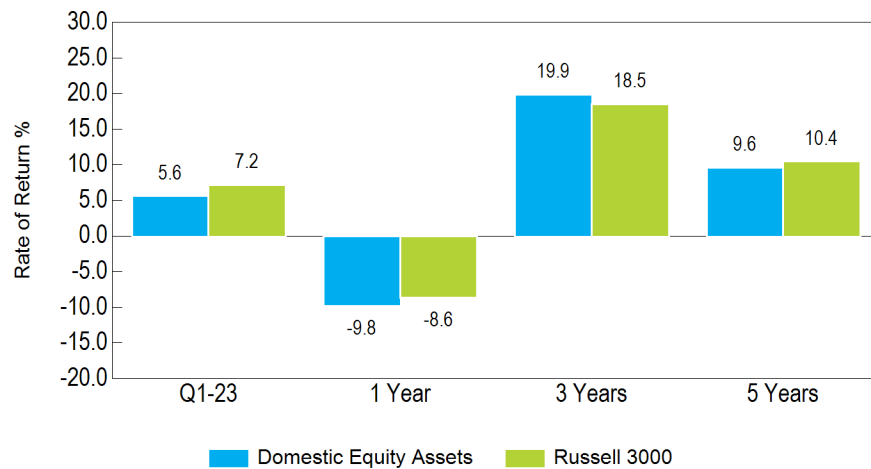
	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
Lord Abbett Core Fixed Income Trust II	--	--	--	--	--	--
Bloomberg US Aggregate TR	0.9%	5.5%	--	1.0	-0.1	0.0%
Rhumblin TIPS Trust	--	--	--	--	--	--
Bloomberg US TIPS TR	2.9%	6.0%	--	1.0	0.3	0.0%
Value Added Fixed Income	2.3%	7.4%	0.3	0.8	0.1	1.8%
Custom Benchmark - Global Fixed Income	1.7%	8.6%	--	1.0	0.0	0.0%
Eaton Vance High Yield	3.2%	8.6%	0.1	0.9	0.2	1.1%
ICE BofA US High Yield TR	3.1%	9.4%	--	1.0	0.2	0.0%
First Eagle Bank Loan Select Fund	3.0%	6.8%	-0.6	0.9	0.3	0.8%
Credit Suisse Leveraged Loans	3.5%	7.2%	--	1.0	0.3	0.0%
Manulife Strategic Fixed Income	--	--	--	--	--	--
Bloomberg Multiverse TR	-1.2%	6.8%	--	1.0	-0.4	0.0%
Mesirow High Yield	--	--	--	--	--	--
Bloomberg US Corporate High Yield TR	3.2%	9.3%	--	1.0	0.2	0.0%
Eaton Vance EMD Opportunities Fund	--	--	--	--	--	--
JP Morgan EMBI Global Diversified	-0.6%	11.2%	--	1.0	-0.2	0.0%
Hedge Funds	0.9%	13.9%	-0.3	2.1	0.0	8.4%
Custom Benchmark	3.2%	6.3%	--	1.0	0.3	0.0%
ABS Offshore SPC - Global Segregated Portfolio	3.3%	8.8%	-0.5	0.8	0.2	3.7%
HFRI Equity Hedge (Total) Index	5.0%	10.7%	--	1.0	0.3	0.0%
Entrust Special Opportunities Fund III, Ltd.	-2.6%	25.0%	-0.3	2.7	-0.2	18.5%
HFRI Fund of Funds Composite Index (QTR)	3.1%	8.0%	--	1.0	0.2	0.0%
Old Farm Partners Master Fund, L.P.	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	3.1%	6.2%	--	1.0	0.3	0.0%

	Anlzd Return	Anlzd Standard Deviation	Information Ratio	Beta	Sharpe Ratio	Tracking Error
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	--	--	--	--	--	--
HFRI Fund of Funds Composite Index (QTR)	3.1%	8.0%	--	1.0	0.2	0.0%
Real Estate	12.1%	7.6%	1.4	1.0	1.4	3.2%
Custom Benchmark	7.7%	7.0%	--	1.0	0.9	0.0%
Core Real Estate	9.9%	6.1%	0.9	0.8	1.4	2.7%
NCREIF-ODCE	7.5%	7.0%	--	1.0	0.9	0.0%
TA Realty Core Property Fund, L.P.	12.3%	8.6%	1.6	1.2	1.3	3.3%
NCREIF ODCE Equal Weighted (Net)	7.1%	7.0%	--	1.0	0.8	0.0%
JPMorgan Strategic Property	--	--	--	--	--	--
NCREIF ODCE Equal Weighted (Net)	7.1%	7.0%	--	1.0	0.8	0.0%
Private Equity	16.4%	11.5%	0.5	0.3	1.3	17.4%
MSCI ACWI IMI (1Q Lagged)+2%	7.1%	21.2%	--	1.0	0.3	0.0%
Summit Partners Growth Equity Fund XI	--	--	--	--	--	--
MSCI ACWI IMI (1Q Lagged)+2%	7.1%	21.2%	--	1.0	0.3	0.0%
Real Assets	8.8%	5.5%	0.3	0.6	1.4	5.5%
CPI + 3%	7.0%	1.4%	--	1.0	4.1	0.0%
Core Real Assets	--	--	--	--	--	--
CPI + 3%	7.0%	1.4%	--	1.0	4.1	0.0%
IFM Global Infrastructure	--	--	--	--	--	--
CPI + 3%	7.0%	1.4%	--	1.0	4.1	0.0%
Non-Core Real Assets	7.3%	7.8%	0.0	1.0	0.8	7.6%
CPI + 3%	7.0%	1.4%	--	1.0	4.1	0.0%
ISQ Global Infrastructure Fund III (USTE), L.P.	--	--	--	--	--	--
CPI + 3%	6.2%	1.4%	--	1.0	3.5	0.0%

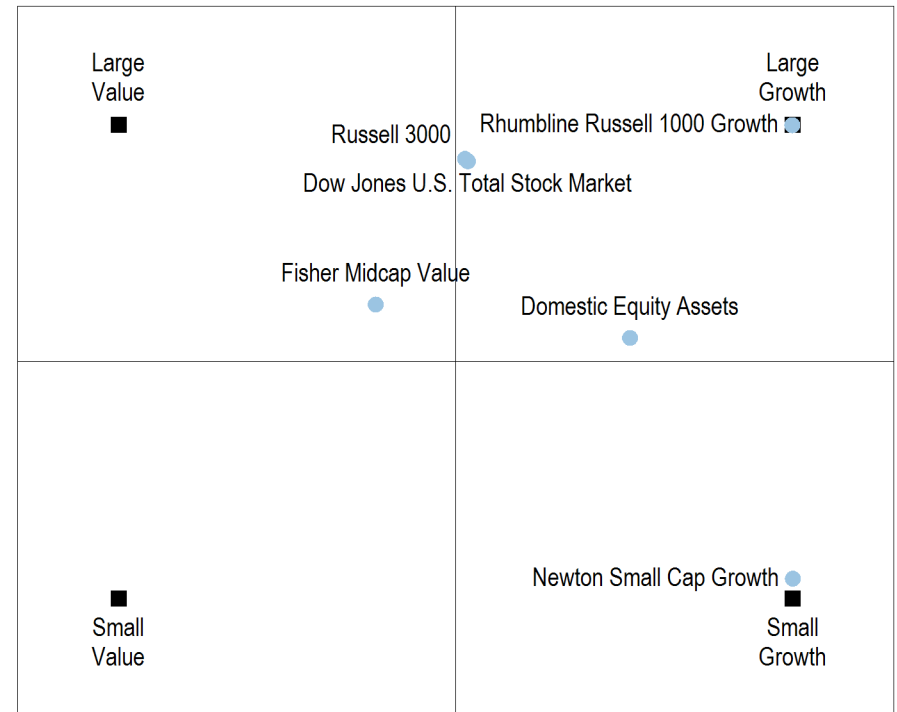
#### Asset Allocation on March 31, 2023

	Actual	Actual
Fisher Midcap Value	\$56,112,073	23.8%
Newton Small Cap Growth	\$45,322,353	19.2%
Rhumblin Russell 1000 Growth	\$42,492,302	18.0%
Rhumblin Russell 1000 Value	\$47,688,830	20.2%
Systematic Small Cap Free Cash Flow	\$28,837,278	12.2%
Vulcan Partners Small Cap Value	\$15,119,259	6.4%
<b>Total</b>	<b>\$235,572,095</b>	<b>100.0%</b>

#### Return Summary Ending March 31, 2023

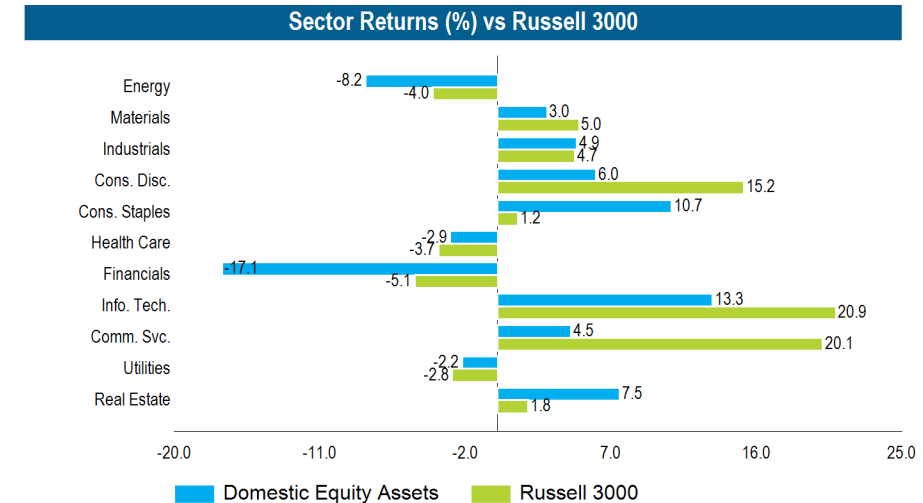
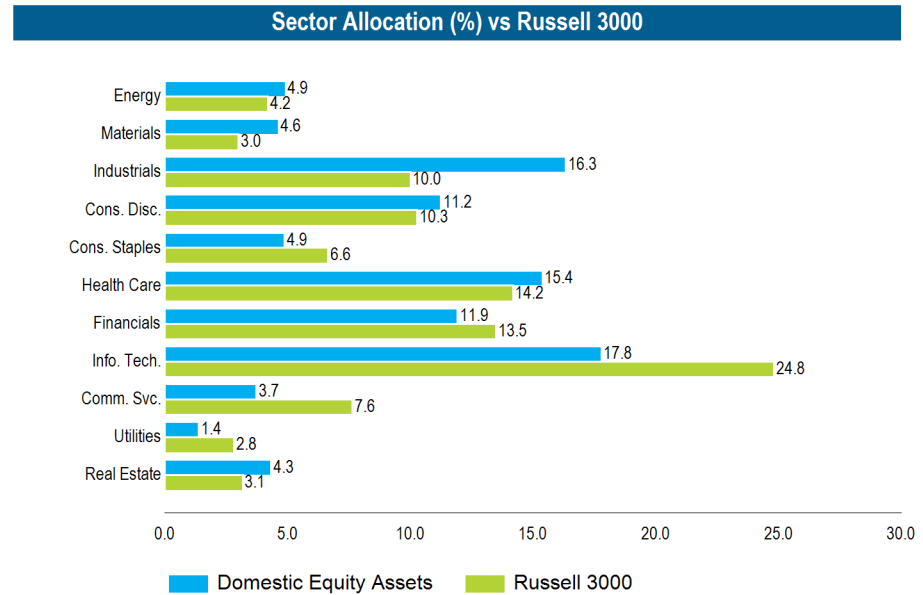


#### Domestic Equity Assets Style Map



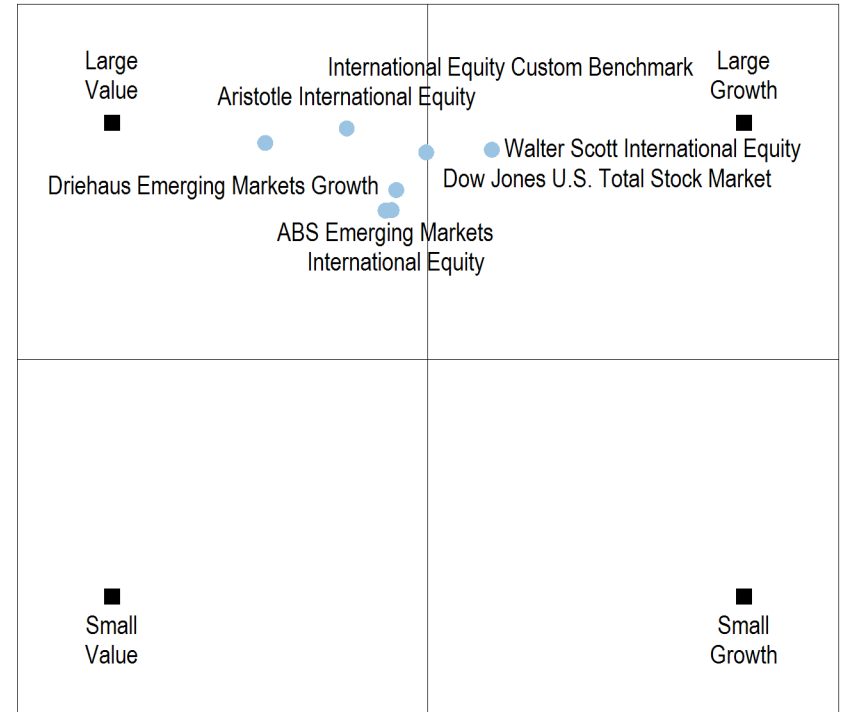
Domestic Equity Assets Equity Characteristics		
	Portfolio Q1-23	Index Q1-23
<b>Market Value</b>		
Market Value (\$M)	235.57	--
Number Of Holdings	1210	2923
<b>Characteristics</b>		
Weighted Avg. Market Cap. (\$B)	191.72	470.49
Median Market Cap (\$B)	11.15	2.52
P/E Ratio	16.89	20.22
Yield	1.37	1.64
EPS Growth - 5 Yrs.	17.02	18.00
Price to Book	3.00	3.90

Top 10 Holdings	
APPLE INC	2.3%
MICROSOFT CORP	2.0%
ISHARES RUSSELL 2000 GROWTH ETF	0.9%
SYNOPSIS INC	0.9%
AMAZON.COM INC	0.9%
UNITED RENTALS INC.	0.9%
FREEMPORT-MCMORAN INC	0.7%
REVVITY INC	0.7%
BERKSHIRE HATHAWAY INC	0.6%
PLANET FITNESS INC	0.6%
<b>Total</b>	<b>10.4%</b>

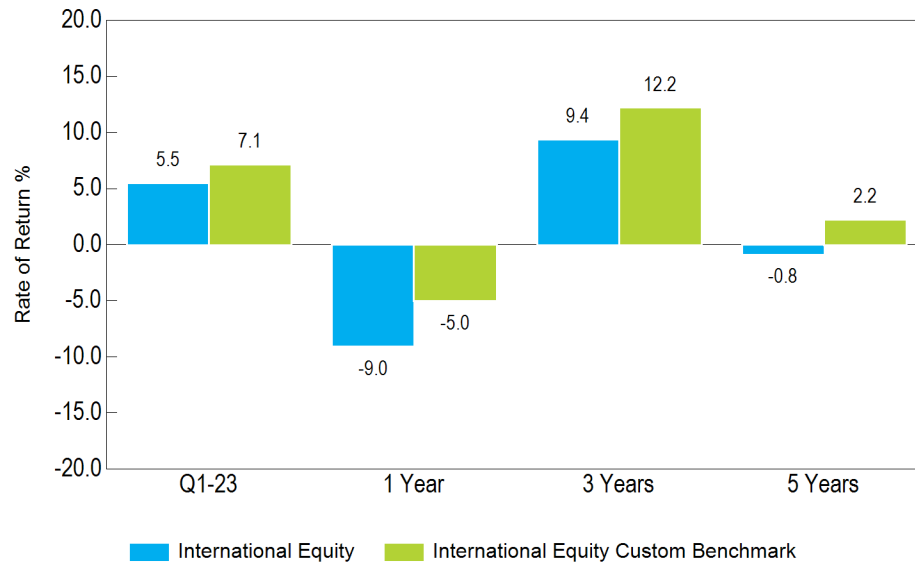


Asset Allocation on March 31, 2023		
	Actual	Actual
ABS Emerging Markets	\$54,727,404	38.1%
Aristotle International Equity	\$21,235,406	14.8%
Driehaus Emerging Markets Growth	\$48,211,899	33.6%
Walter Scott International Equity	\$19,435,466	13.5%
<b>Total</b>	<b>\$143,610,175</b>	<b>100.0%</b>

#### International Equity Style Map

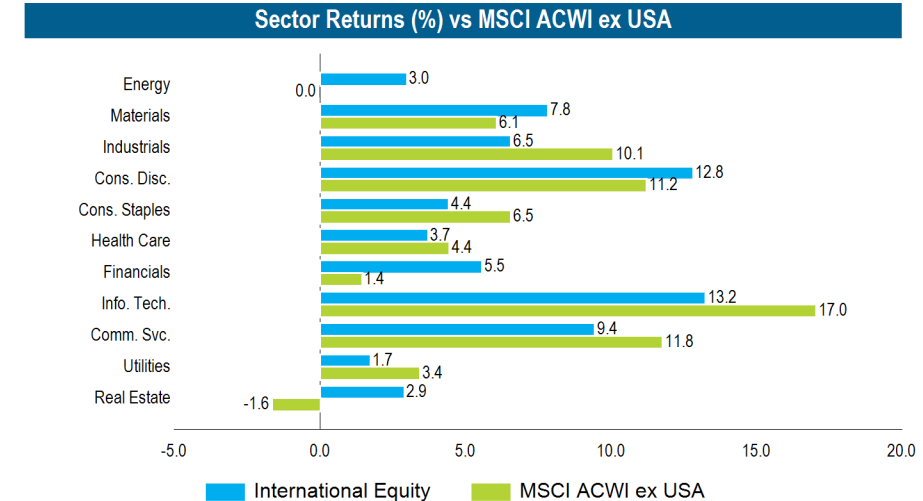
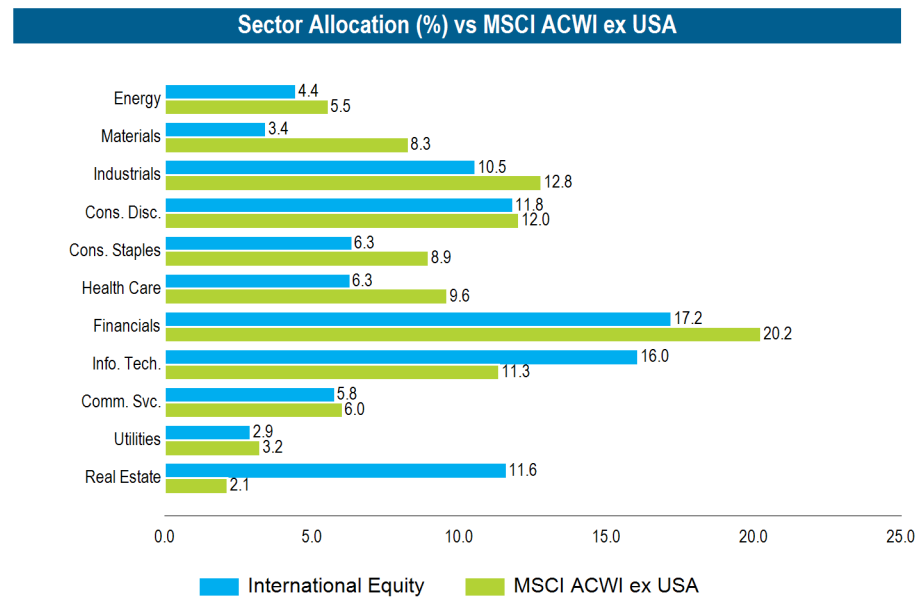


#### Return Summary Ending March 31, 2023



International Equity Equity Characteristics		
	Portfolio Q1-23	Index Q1-23
<b>Market Value</b>		
Market Value (\$M)	143.61	--
Number Of Holdings	193	2258
<b>Characteristics</b>		
Weighted Avg. Market Cap. (\$B)	107.77	89.83
Median Market Cap (\$B)	34.57	9.17
P/E Ratio	16.20	13.51
Yield	2.69	3.32
EPS Growth - 5 Yrs.	7.19	9.99
Price to Book	2.47	2.46

Top 10 Holdings	
CAPITALAND ASCENDAS REIT	6.3%
HANG LUNG PROPERTIES LTD	3.7%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	3.6%
SAMSUNG ELECTRONICS CO LTD	3.5%
AIA GROUP LTD	3.4%
TENCENT HOLDINGS LTD	3.1%
GPO FINANCE BANORTE	1.3%
ICICI BANK LTD	1.2%
DASSAULT SYSTEMES SA	1.1%
CLP HOLDINGS LTD	1.1%
<b>Total</b>	<b>28.3%</b>

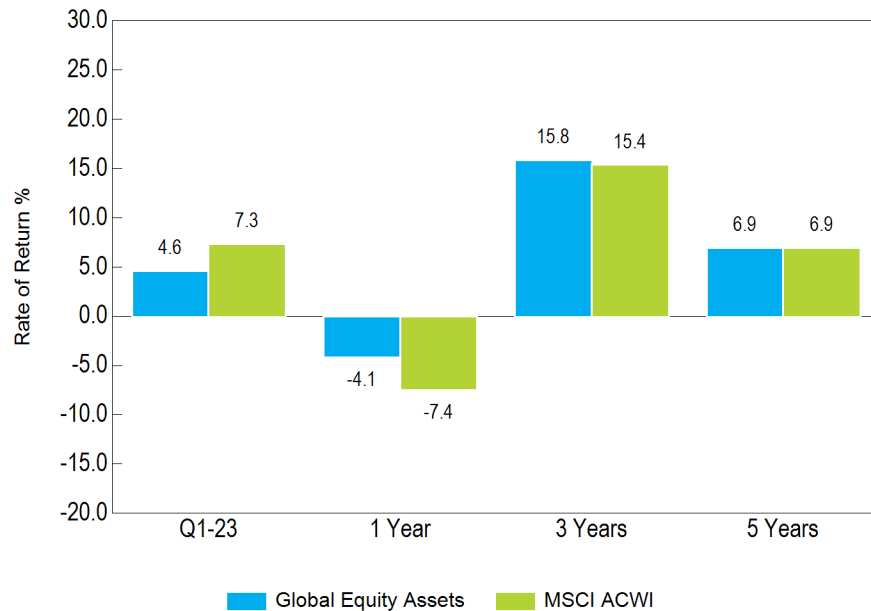




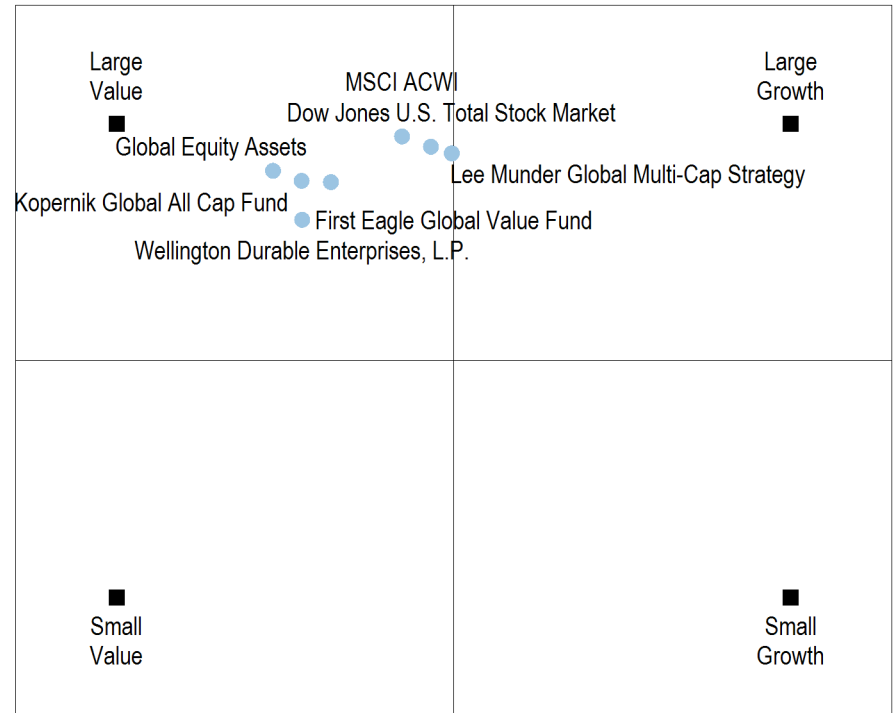
#### Asset Allocation on March 31, 2023

	Actual	Actual
First Eagle Global Value Fund	\$25,238,379	17.7%
Kopernik Global All Cap Fund	\$35,288,872	24.8%
Lee Munder Global Multi-Cap Strategy	\$37,729,431	26.5%
Wellington Durable Enterprises, L.P.	\$44,167,270	31.0%
<b>Total</b>	<b>\$142,423,951</b>	<b>100.0%</b>

#### Return Summary Ending March 31, 2023

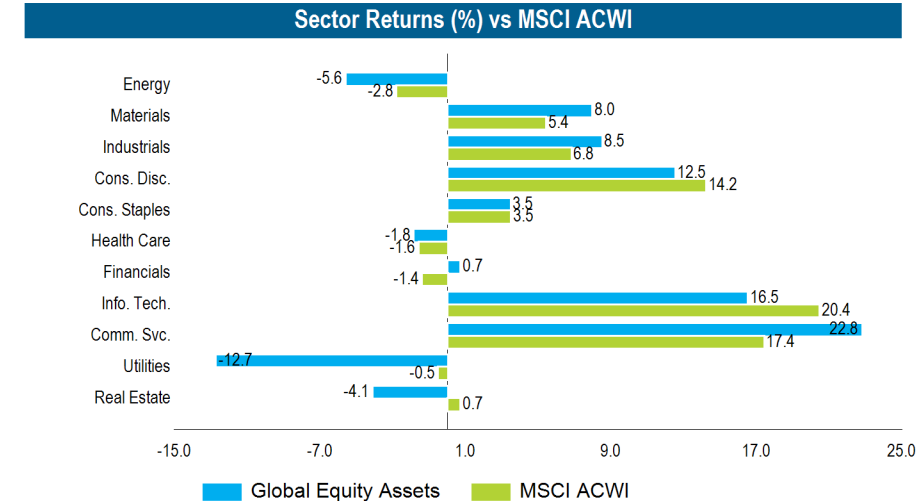
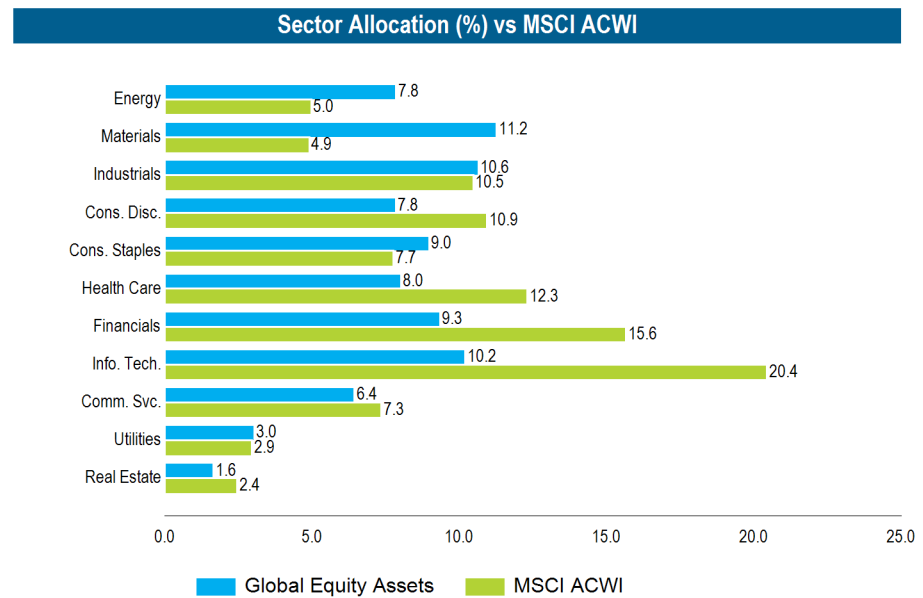


#### Global Equity Assets Style Map



Global Equity Assets Equity Characteristics		
	Portfolio Q1-23	Index Q1-23
<b>Market Value</b>		
Market Value (\$M)	142.42	--
Number Of Holdings	310	2884
<b>Characteristics</b>		
Weighted Avg. Market Cap. (\$B)	223.05	351.59
Median Market Cap (\$B)	22.30	12.28
P/E Ratio	13.67	17.34
Yield	2.93	2.30
EPS Growth - 5 Yrs.	13.90	14.88
Price to Book	2.86	3.38

Top 10 Holdings	
MICROSOFT CORP	2.1%
APPLE INC	2.0%
NEWCREST MINING LTD	1.9%
KT CORP	1.7%
ISHARES CORE MSCI EMERGING MARKETS ETF	1.6%
ALPHABET INC	1.6%
AMAZON.COM INC	1.4%
KAZATOMPROM JSC NAC	1.1%
META PLATFORMS INC	1.1%
GOLDEN AGRI-RESOURCES LTD	1.0%
<b>Total</b>	<b>15.6%</b>



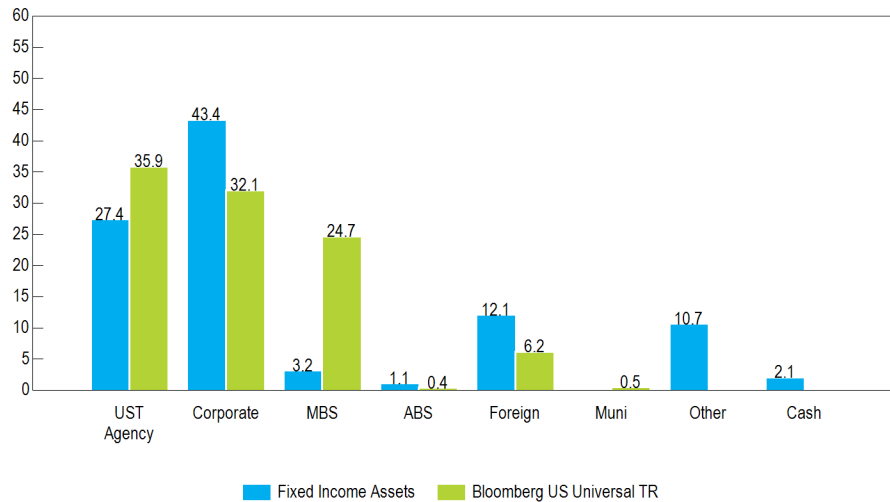
#### Asset Allocation on March 31, 2023

	Actual	Actual
Eaton Vance EMD Opportunities Fund	\$8,184,029	4.3%
Eaton Vance High Yield	\$12,044,384	6.3%
First Eagle Bank Loan Select Fund	\$10,830,299	5.7%
Lord Abbett Core Fixed Income Trust II	\$41,147,326	21.7%
Lord Abbett Short Duration Credit Trust II	\$43,541,947	23.0%
Manulife Strategic Fixed Income	\$41,753,641	22.0%
Mesirow High Yield	\$14,816,668	7.8%
Rhumblin TIPS Trust	\$17,391,974	9.2%
<b>Total</b>	<b>\$189,710,270</b>	<b>100.0%</b>

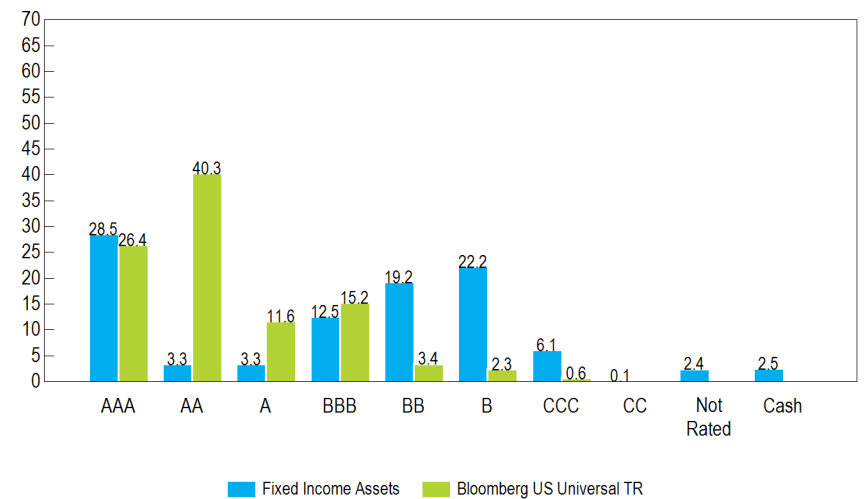
#### Fixed Income Assets Characteristics vs. Bloomberg US Universal TR

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Fixed Income Characteristics</b>			
Yield to Maturity	7.3	5.1	7.7
Average Duration	4.4	6.3	4.0
Average Quality	BBB	AA	BBB
Weighted Average Maturity	6.2	12.3	6.1

#### Sector Allocation



#### Credit Quality Allocation



### Rhumblin Russell 1000 Value | As of March 31, 2023

#### Account Information

Account Name	Rhumblin Russell 1000 Value
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	4/30/13
Account Type	US Equity
Benchmark	Russell 1000 Value
Universe	eV US Large Cap Value Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Rhumblin Russell 1000 Value	1.0	-5.9	17.9	7.5	--	9.0	Apr-13
<i>Russell 1000 Value</i>	1.0	-5.9	17.9	7.5	9.1	9.0	Apr-13
<i>eV US Large Cap Value Equity Net Median</i>	0.5	-4.8	18.9	8.2	9.6	9.5	Apr-13
<i>eV US Large Cap Value Equity Net Rank</i>	43	65	62	65	--	66	Apr-13

#### Top 10 Holdings

BERKSHIRE HATHAWAY INC	3.0%
EXXON MOBIL CORP	2.5%
JOHNSON & JOHNSON	2.2%
JPMORGAN CHASE & CO	2.1%
META PLATFORMS INC	2.0%
CHEVRON CORP	1.7%
PFIZER INC	1.3%
CISCO SYSTEMS INC	1.2%
WALMART INC	1.1%
PROCTER & GAMBLE CO (THE)	1.1%
<b>Total</b>	<b>18.1%</b>

#### Rhumblin Russell 1000 Value Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	47.7	--	58.1
Number Of Holdings	851	849	854
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	153.9	154.6	151.2
Median Market Cap (\$B)	12.2	12.1	11.9
P/E Ratio	16.2	16.5	15.3
Yield	2.3	2.3	2.3
EPS Growth - 5 Yrs.	12.5	12.3	12.6
Price to Book	2.5	2.5	2.5
<b>Sector Distribution</b>			
Energy	8.0	7.2	8.5
Materials	4.5	4.5	4.3
Industrials	10.9	11.0	10.5
Consumer Discretionary	6.0	5.7	6.0
Consumer Staples	7.7	7.6	7.4
Health Care	16.3	16.5	17.4
Financials	20.1	20.3	20.1
Information Technology	7.9	8.1	8.3
Communication Services	8.7	8.7	7.3
Utilities	5.5	5.7	5.7
Real Estate	4.5	4.5	4.5

### Rhumblin Russell 1000 Growth | As of March 31, 2023

Account Information	
Account Name	Rhumblin Russell 1000 Growth
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	7/31/09
Account Type	US Equity
Benchmark	Russell 1000 Growth
Universe	eV US Large Cap Growth Equity Net

Portfolio Performance Summary								
	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception	
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	Date
Rhumblin Russell 1000 Growth	14.3	-10.9	18.6	13.7	14.5	15.0		Jul-09
<i>Russell 1000 Growth</i>	14.4	-10.9	18.6	13.7	14.6	15.0		Jul-09
<i>eV US Large Cap Growth Equity Net Median</i>	12.6	-11.7	15.5	11.2	12.8	13.4		Jul-09
<i>eV US Large Cap Growth Equity Net Rank</i>	30	43	18	15	11	8		Jul-09

Top 10 Holdings	
APPLE INC	12.6%
MICROSOFT CORP	11.0%
AMAZON.COM INC	4.7%
NVIDIA CORPORATION	3.4%
ALPHABET INC	2.8%
TESLA INC	2.7%
ALPHABET INC	2.4%
UNITEDHEALTH GROUP INC	2.1%
VISA INC	1.9%
MASTERCARD INC	1.6%
<b>Total</b>	<b>45.1%</b>

Rhumblin Russell 1000 Growth Characteristics			
	Portfolio	Index	Portfolio
	Q1-23	Q1-23	Q4-22
<b>Market Value</b>			
Market Value (\$M)	42.5	--	37.2
Number Of Holdings	511	509	514
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	812.7	818.2	619.3
Median Market Cap (\$B)	17.0	17.0	16.1
P/E Ratio	27.8	28.0	24.6
Yield	1.0	1.0	1.1
EPS Growth - 5 Yrs.	23.2	23.2	22.1
Price to Book	9.4	9.5	8.5
<b>Sector Distribution</b>			
Energy	1.3	1.1	1.7
Materials	1.3	1.3	1.4
Industrials	8.1	8.2	8.0
Consumer Discretionary	14.1	14.4	14.0
Consumer Staples	5.9	6.0	6.0
Health Care	11.6	11.7	13.3
Financials	6.6	6.8	3.2
Information Technology	41.3	41.9	42.5
Communication Services	7.1	7.2	6.7
Utilities	0.0	0.0	0.1
Real Estate	1.4	1.5	1.6

### Fisher Midcap Value | As of March 31, 2023

#### Account Information

Account Name	Fisher Midcap Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	4/30/07
Account Type	US Equity
Benchmark	Russell MidCap Value
Universe	eV US Mid Cap Value Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Fisher Midcap Value	6.0	-7.7	26.3	11.4	11.3	8.9	Apr-07
Russell MidCap Value	1.3	-9.2	20.7	6.5	8.8	6.9	Apr-07
Russell MidCap	4.1	-8.8	19.2	8.1	10.1	8.0	Apr-07
eV US Mid Cap Value Equity Net Median	1.4	-5.7	22.1	6.8	9.0	7.4	Apr-07
eV US Mid Cap Value Equity Net Rank	7	69	15	1	6	10	Apr-07

#### Top 10 Holdings

UNITED RENTALS INC.	3.4%
SYNOPTIS INC	3.3%
REVVITY INC	2.7%
FREEMPORT-MCMORAN INC	2.5%
CHARLES RIVER LABORATORIES INTERNATIONAL INC	2.5%
FACTSET RESEARCH SYSTEMS INC.	2.5%
TERADYNE INC	2.4%
RAYMOND JAMES FINANCIAL INC.	2.4%
ROCKWELL AUTOMATION INC.	2.3%
COOPER COS INC (THE)	2.3%
<b>Total</b>	<b>26.4%</b>

#### Fisher Midcap Value Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	56.1	--	55.8
Number Of Holdings	75	695	77
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	21.0	20.4	19.7
Median Market Cap (\$B)	12.7	9.4	12.5
P/E Ratio	14.6	15.5	13.4
Yield	1.2	2.3	1.2
EPS Growth - 5 Yrs.	18.9	9.9	19.4
Price to Book	2.8	2.3	2.9
<b>Sector Distribution</b>			
Energy	5.0	4.9	5.6
Materials	8.3	7.9	8.1
Industrials	20.8	17.0	18.4
Consumer Discretionary	12.4	10.0	11.1
Consumer Staples	0.8	4.3	0.7
Health Care	16.3	7.4	16.9
Financials	13.9	17.1	15.6
Information Technology	17.1	8.7	18.5
Communication Services	0.2	3.3	0.2
Utilities	0.0	8.9	0.0
Real Estate	5.1	10.4	5.0

#### Account Information

Account Name	<b>Newton Small Cap Growth</b>
Account Structure	<b>Separate Account</b>
Investment Style	<b>Active</b>
Inception Date	<b>8/31/09</b>
Account Type	<b>US Equity</b>
Benchmark	<b>Russell 2000 Growth</b>
Universe	<b>eV US Small Cap Growth Equity Net</b>

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Newton Small Cap Growth	4.6	-13.5	14.2	10.5	12.5	13.2	Aug-09
<i>Russell 2000 Growth</i>	6.1	-10.6	13.4	4.3	8.5	10.9	Aug-09
<i>eV US Small Cap Growth Equity Net Median</i>	6.9	-11.3	16.6	8.4	10.4	12.8	Aug-09
<i>eV US Small Cap Growth Equity Net Rank</i>	78	65	70	23	15	34	Aug-09

#### Top 10 Holdings

ISHARES RUSSELL 2000 GROWTH ETF	5.1%
PLANET FITNESS INC	3.3%
CONSTRUCTION PARTNERS INC	3.2%
OLLIE'S BARGAIN OUTLET HOLDINGS INC	3.1%
INTER PARFUMS INC	3.0%
SAREPTA THERAPEUTICS INC	2.9%
HUBSPOT INC	2.8%
GROCERY OUTLET INC	2.7%
CACTUS INC	2.6%
EQT CORP	2.4%
<b>Total</b>	<b>31.1%</b>

#### Boston Company Small Cap Growth Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	45.3	--	43.3
Number Of Holdings	86	1091	71
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	5.1	3.4	4.6
Median Market Cap (\$B)	3.1	1.4	2.8
P/E Ratio	18.5	15.9	18.2
Yield	0.3	0.9	0.3
EPS Growth - 5 Yrs.	13.3	21.8	12.7
Price to Book	3.1	3.6	3.1
<b>Sector Distribution</b>			
Energy	6.4	6.5	8.1
Materials	1.2	4.7	1.1
Industrials	15.2	19.6	15.5
Consumer Discretionary	14.1	11.5	13.1
Consumer Staples	7.7	4.7	7.4
Health Care	24.3	21.7	24.1
Financials	2.7	6.6	2.6
Information Technology	11.2	18.4	11.7
Communication Services	2.1	2.4	2.5
Utilities	0.0	1.7	0.0
Real Estate	1.7	2.1	1.8

### Vulcan Partners Small Cap Value | As of March 31, 2023

#### Account Information

Account Name	Vulcan Partners Small Cap Value
Account Structure	Separate Account
Investment Style	Active
Inception Date	4/01/22
Account Type	US Equity
Benchmark	Russell 2000 Value
Universe	eV US Small Cap Value Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Vulcan Partners Small Cap Value	8.4	-22.4	--	--	--	-22.4	Apr-22
Russell 2000 Value	-0.7	-13.0	21.0	4.5	7.2	-13.0	Apr-22
eV US Small Cap Value Equity Net Median	2.0	-6.9	23.1	5.6	8.0	-6.9	Apr-22
eV US Small Cap Value Equity Net Rank	4	99	--	--	--	99	Apr-22

#### Top 10 Holdings

LITTELFUSE INC	7.1%
IBSTOCK PLC	5.5%
MEDPACE HOLDINGS INC	5.3%
VIRTUS INVESTMENT PARTNERS INC	5.2%
PREMIUM BRANDS HOLDINGS CORP	5.1%
ITURAN LOCATION AND CONTROL LTD	5.1%
ENERSYS	5.0%
COLLIERS INTERNATIONAL GROUP INC	4.9%
ABM INDUSTRIES INC	4.7%
ISS A/S	4.4%
<b>Total</b>	<b>52.4%</b>

#### Vulcan Partners Small Cap Value Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	15.1	--	13.9
Number Of Holdings	28	1358	25
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	3.0	2.4	2.5
Median Market Cap (\$B)	2.8	0.9	2.1
P/E Ratio	14.8	10.5	14.8
Yield	1.9	2.5	2.1
EPS Growth - 5 Yrs.	10.8	12.3	8.4
Price to Book	2.4	1.6	2.1
<b>Sector Distribution</b>			
Energy	0.0	6.5	0.0
Materials	11.1	4.4	8.3
Industrials	32.2	14.0	27.5
Consumer Discretionary	4.0	11.0	6.3
Consumer Staples	5.0	2.8	4.5
Health Care	5.2	9.9	4.6
Financials	8.0	26.4	7.8
Information Technology	17.1	5.9	17.4
Communication Services	0.0	3.0	0.0
Utilities	0.0	5.1	0.0
Real Estate	15.6	10.9	16.4



### Systematic Small Cap Free Cash Flow | As of March 31, 2023

#### Account Information

Account Name	<b>Systematic Small Cap Free Cash Flow</b>
Account Structure	<b>Separate Account</b>
Investment Style	<b>Active</b>
Inception Date	<b>4/01/22</b>
Account Type	<b>US Equity</b>
Benchmark	<b>Russell 2000 Value</b>
Universe	<b>eV US Small Cap Value Equity Net</b>

#### Portfolio Performance Summary

	QTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	Inception	Inception
	(%)	(%)	(%)	(%)	(%)	(%)	Date
Systematic Small Cap Free Cash Flow	2.2	-0.3	--	--	--	-0.3	Apr-22
<i>Russell 2000 Value</i>	-0.7	-13.0	21.0	4.5	7.2	-13.0	Apr-22
<i>eV US Small Cap Value Equity Net Median</i>	2.0	-6.9	23.1	5.6	8.0	-6.9	Apr-22
<i>eV US Small Cap Value Equity Net Rank</i>	46	11	--	--	--	11	Apr-22

#### Top 10 Holdings

FIRST CITIZENS BANCSHARES INC	3.2%
MAGNOLIA OIL & GAS CORP	2.0%
EMCOR GROUP INC.	1.8%
NORTHWESTERN CORP	1.7%
KBR INC	1.6%
COMFORT SYSTEMS USA INC.	1.6%
CROSS COUNTRY HEALTHCARE INC	1.4%
MUELLER INDUSTRIES INC.	1.4%
ICF INTERNATIONAL INC	1.4%
CURTISS-WRIGHT CORP	1.3%
<b>Total</b>	<b>17.6%</b>

#### Systematic Small Cap Free Cash Flow Characteristics

	Portfolio	Index	Portfolio
	Q1-23	Q1-23	Q4-22
<b>Market Value</b>			
Market Value (\$M)	28.8	--	28.2
Number Of Holdings	148	1358	151
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	4.2	2.4	3.9
Median Market Cap (\$B)	2.5	0.9	2.3
P/E Ratio	12.3	10.5	11.5
Yield	1.8	2.5	1.8
EPS Growth - 5 Yrs.	16.6	12.3	17.4
Price to Book	1.9	1.6	1.8
<b>Sector Distribution</b>			
Energy	5.1	6.5	5.9
Materials	4.4	4.4	4.4
Industrials	22.4	14.0	21.0
Consumer Discretionary	12.8	11.0	12.1
Consumer Staples	2.0	2.8	2.1
Health Care	9.2	9.9	10.1
Financials	19.0	26.4	22.6
Information Technology	11.5	5.9	10.7
Communication Services	1.8	3.0	1.3
Utilities	2.0	5.1	2.0
Real Estate	4.9	10.9	5.0

#### Account Information

Account Name	<b>Aristotle International Equity</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Active</b>
Inception Date	<b>3/01/21</b>
Account Type	<b>Non-US Stock Developed</b>
Benchmark	<b>MSCI EAFE</b>
Universe	<b>eV EAFE Core Equity Net</b>

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Aristotle International Equity	7.0	-5.8	--	--	--	-0.9	Mar-21
MSCI EAFE	8.5	-1.4	13.0	3.5	5.0	1.0	Mar-21
eV EAFE Core Equity Net Median	7.6	-3.4	13.0	3.0	5.5	-0.5	Mar-21
eV EAFE Core Equity Net Rank	64	69	--	--	--	60	Mar-21

#### Top 10 Holdings

ACCENTURE PLC	4.6%
SONY GROUP CORPORATION	4.0%
LVMH MOET HENNESSY LOUIS VUITTON SE	3.9%
MUENCHENER RUCK.	3.7%
BROOKFIELD CORP	3.6%
ASHTAD GROUP PLC	3.6%
DASSAULT SYSTEMES SA	3.4%
PAN PACIFIC INTERNATIONAL HOLDINGS CORP	3.1%
RENTOKIL INITIAL PLC	2.9%
HALEON PLC ORD GBP1.25	2.9%
<b>Total</b>	<b>35.7%</b>

#### Aristotle International Equity Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	21.2	--	19.8
Number Of Holdings	48	795	49
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	79.4	85.5	71.3
Median Market Cap (\$B)	30.2	12.5	30.4
P/E Ratio	17.7	14.6	16.5
Yield	2.2	3.3	2.4
EPS Growth - 5 Yrs.	6.5	8.2	12.8
Price to Book	2.4	2.6	2.3
<b>Sector Distribution</b>			
Energy	4.9	4.5	5.1
Materials	6.4	7.7	6.7
Industrials	18.4	15.7	18.0
Consumer Discretionary	15.5	12.2	15.0
Consumer Staples	7.7	10.4	7.7
Health Care	8.4	13.2	8.9
Financials	18.6	18.1	18.8
Information Technology	12.6	7.9	11.8
Communication Services	2.5	4.5	2.7
Utilities	0.0	3.4	0.0
Real Estate	0.0	2.4	0.0

### Walter Scott International Equity | As of March 31, 2023

#### Account Information

Account Name	Walter Scott International Equity
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	3/01/21
Account Type	Non-US Stock Developed
Benchmark	MSCI EAFE
Universe	eV EAFE Core Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Walter Scott International Equity	11.9	-1.6	--	--	--	-0.3	Mar-21
MSCI EAFE	8.5	-1.4	13.0	3.5	5.0	1.0	Mar-21
eV EAFE Core Equity Net Median	7.6	-3.4	13.0	3.0	5.5	-0.5	Mar-21
eV EAFE Core Equity Net Rank	2	31	--	--	--	46	Mar-21

#### Top 10 Holdings

CAPITALAND ASCENDAS REIT	28.2%
HANG LUNG PROPERTIES LTD	16.3%
AIA GROUP LTD	8.6%
CLP HOLDINGS LTD	5.0%
PRUDENTIAL PLC	4.4%
COMPASS GROUP PLC	3.4%
ATLAS COPCO AB	3.0%
EXPERIAN PLC	2.1%
ALIMENTATION COUCHE-TARD INC	1.9%
INDUSTRIA DE DISENO TEXTIL INDITEX SA	1.7%
<b>Total</b>	<b>74.6%</b>

#### Walter Scott International Equity Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	19.4	--	17.4
Number Of Holdings	53	795	52
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	46.4	85.5	43.4
Median Market Cap (\$B)	40.9	12.5	36.9
P/E Ratio	21.8	14.6	17.6
Yield	3.6	3.3	3.8
EPS Growth - 5 Yrs.	-4.2	8.2	3.7
Price to Book	2.1	2.6	2.0
<b>Sector Distribution</b>			
Energy	0.9	4.5	0.9
Materials	3.5	7.7	2.8
Industrials	10.6	15.7	9.6
Consumer Discretionary	5.9	12.2	5.6
Consumer Staples	4.3	10.4	4.2
Health Care	6.7	13.2	6.2
Financials	13.0	18.1	12.5
Information Technology	5.6	7.9	5.0
Communication Services	0.0	4.5	0.0
Utilities	5.0	3.4	5.0
Real Estate	44.5	2.4	48.0

### Driehaus Emerging Markets Growth | As of March 31, 2023

#### Account Information

Account Name	Driehaus Emerging Markets Growth
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	3/01/19
Account Type	Non-US Stock Emerging
Benchmark	MSCI Emerging Markets
Universe	eV Emg Mkts Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Driehaus Emerging Markets Growth	4.2	-11.1	9.2	--	--	4.0	Mar-19
MSCI Emerging Markets	4.0	-10.7	7.8	-0.9	2.0	1.0	Mar-19
eV Emg Mkts Equity Net Median	4.9	-9.3	9.9	0.0	2.7	2.4	Mar-19
eV Emg Mkts Equity Net Rank	65	75	57	--	--	29	Mar-19

#### Top 10 Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	6.3%
TENCENT HOLDINGS LTD	5.9%
SAMSUNG ELECTRONICS CO LTD	5.4%
GPO FINANCE BANORTE	2.3%
ICICI BANK LTD	2.2%
ALIBABA GROUP HOLDING LTD	2.0%
PING AN INSURANCE GROUP	1.8%
INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED	1.8%
PROYA COSMETICS CO LTD	1.7%
RELIANCE INDUSTRIES LTD	1.6%
<b>Total</b>	<b>31.1%</b>

#### Driehaus Emerging Markets Growth Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	48.2	--	46.2
Number Of Holdings	104	1375	113
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	148.9	112.4	130.0
Median Market Cap (\$B)	20.8	6.6	18.4
P/E Ratio	13.2	11.7	13.7
Yield	2.5	3.5	2.3
EPS Growth - 5 Yrs.	15.1	14.2	13.3
Price to Book	2.7	2.4	2.8
<b>Sector Distribution</b>			
Energy	5.7	4.7	5.6
Materials	2.1	8.6	3.2
Industrials	7.1	6.0	9.4
Consumer Discretionary	12.5	13.8	13.9
Consumer Staples	6.6	6.5	6.6
Health Care	5.2	3.8	5.1
Financials	18.2	21.0	21.2
Information Technology	21.8	20.5	16.3
Communication Services	9.5	10.6	6.5
Utilities	3.3	2.6	3.4
Real Estate	3.4	1.9	3.1

### First Eagle Global Value Fund | As of March 31, 2023

#### Account Information

Account Name	First Eagle Global Value Fund
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/18
Account Type	Equity
Benchmark	MSCI ACWI Value NR USD
Universe	eV Global Value Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
First Eagle Global Value Fund	5.8	-1.7	13.7	5.8	--	4.6	Feb-18
MSCI ACWI Value NR USD	1.2	-5.5	15.2	4.3	5.9	2.7	Feb-18
eV Global Value Equity Net Median	5.3	-2.9	16.8	5.4	6.9	3.9	Feb-18
eV Global Value Equity Net Rank	46	41	83	43	--	35	Feb-18

#### Top 10 Holdings

ORACLE CORP	3.7%
EXXON MOBIL CORP	2.9%
SCHLUMBERGER LTD	2.7%
META PLATFORMS INC	2.4%
COMCAST CORP	2.3%
HCA HEALTHCARE INC	2.3%
CIE FINANCIERE RICHEMONT AG, ZUG	2.2%
C.H. ROBINSON WORLDWIDE INC.	1.9%
BRITISH AMERICAN TOBACCO PLC	1.9%
UNILEVER PLC COMMON STOCK GBP.0311	1.8%
<b>Total</b>	<b>24.0%</b>

#### First Eagle Global Value Fund Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	25.2	--	23.9
Number Of Holdings	129	2884	137
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	154.3	351.6	125.0
Median Market Cap (\$B)	26.0	12.3	26.3
P/E Ratio	17.3	17.3	16.2
Yield	2.5	2.3	2.5
EPS Growth - 5 Yrs.	9.3	14.9	11.0
Price to Book	2.3	3.4	2.1
<b>Sector Distribution</b>			
Energy	5.5	5.0	8.1
Materials	5.3	4.9	5.8
Industrials	10.8	10.5	11.7
Consumer Discretionary	7.2	10.9	7.8
Consumer Staples	12.9	7.7	14.6
Health Care	6.6	12.3	7.5
Financials	10.4	15.6	14.7
Information Technology	9.1	20.4	9.4
Communication Services	5.5	7.3	4.9
Utilities	0.4	2.9	0.6
Real Estate	3.4	2.4	4.1

### Kopernik Global All Cap Fund | As of March 31, 2023

#### Account Information

Account Name	<b>Kopernik Global All Cap Fund</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Active</b>
Inception Date	<b>2/01/18</b>
Account Type	<b>Equity</b>
Benchmark	<b>MSCI ACWI Value NR USD</b>
Universe	<b>eV Global All Cap Value Eq Net</b>

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Kopernik Global All Cap Fund	3.6	-6.1	23.0	8.5	--	7.4	Feb-18
MSCI ACWI Value NR USD	1.2	-5.5	15.2	4.3	5.9	2.7	Feb-18
eV Global All Cap Value Eq Net Median	6.1	-3.0	18.0	5.3	6.8	3.9	Feb-18
eV Global All Cap Value Eq Net Rank	83	81	21	14	--	10	Feb-18

#### Top 10 Holdings

NEWCREST MINING LTD	5.2%
KT CORP	4.7%
KAZATOMPROM JSC NAC	3.2%
GOLDEN AGRI-RESOURCES LTD	2.9%
SOUTHWESTERN ENERGY CO	2.7%
WHEATON PRECIOUS METALS CORP	2.6%
LG UPLUS CORP	2.5%
SPROTT PHYSICAL URANIUM TR UNIT	2.5%
RANGE RESOURCES CORP.	2.5%
CGN POWER CO LTD	2.4%
<b>Total</b>	<b>31.3%</b>

#### Kopernik Global All Cap Fund Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	35.3	--	34.1
Number Of Holdings	107	2884	113
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	9.5	351.6	8.2
Median Market Cap (\$B)	1.9	12.3	1.9
P/E Ratio	7.0	17.3	7.2
Yield	4.3	2.3	2.5
EPS Growth - 5 Yrs.	14.4	14.9	11.7
Price to Book	1.8	3.4	1.9
<b>Sector Distribution</b>			
Energy	13.2	5.0	12.9
Materials	25.3	4.9	25.3
Industrials	12.4	10.5	12.6
Consumer Discretionary	4.6	10.9	4.0
Consumer Staples	6.8	7.7	7.0
Health Care	3.9	12.3	4.1
Financials	4.3	15.6	4.4
Information Technology	0.4	20.4	1.4
Communication Services	6.3	7.3	5.8
Utilities	6.5	2.9	6.5
Real Estate	0.7	2.4	0.7

### Lee Munder Global Multi-Cap Strategy | As of March 31, 2023

#### Account Information

Account Name	Lee Munder Global Multi-Cap Strategy
Account Structure	Separate Account
Investment Style	Active
Inception Date	3/01/18
Account Type	Equity
Benchmark	MSCI ACWI
Universe	eV All Global Equity Net

#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Lee Munder Global Multi-Cap Strategy	7.8	-7.5	15.0	5.5	--	4.9	Mar-18
MSCI ACWI	7.3	-7.4	15.4	6.9	8.1	6.4	Mar-18
eV All Global Equity Net Median	6.6	-6.2	15.3	6.9	8.1	6.4	Mar-18
eV All Global Equity Net Rank	34	62	53	68	--	72	Mar-18

#### Top 10 Holdings

APPLE INC	4.8%
MICROSOFT CORP	4.2%
ISHARES CORE MSCI EMERGING MARKETS ETF	3.8%
ALPHABET INC	3.4%
AMAZON.COM INC	3.2%
ISHARES LATIN AMERICA 40 ETF	2.2%
LVMH MOET HENNESSY LOUIS VUITTON SE	2.0%
WASTE CONNECTIONS INC.	1.9%
PROCTER & GAMBLE CO (THE)	1.7%
ISHARES MSCI SOUTH KOREA ETF	1.7%
<b>Total</b>	<b>28.8%</b>

#### Lee Munder Global Multi-Cap Strategy Characteristics

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Market Value</b>			
Market Value (\$M)	37.7	--	38.7
Number Of Holdings	93	2884	97
<b>Characteristics</b>			
Weighted Avg. Market Cap. (\$B)	423.6	351.6	399.6
Median Market Cap (\$B)	90.7	12.3	83.1
P/E Ratio	19.4	17.3	18.7
Yield	2.1	2.3	1.8
EPS Growth - 5 Yrs.	16.8	14.9	18.8
Price to Book	4.1	3.4	3.9
<b>Sector Distribution</b>			
Energy	4.3	5.0	3.0
Materials	2.0	4.9	2.1
Industrials	8.9	10.5	5.9
Consumer Discretionary	11.2	10.9	7.1
Consumer Staples	8.4	7.7	5.2
Health Care	12.7	12.3	10.1
Financials	13.3	15.6	9.8
Information Technology	20.0	20.4	17.9
Communication Services	7.2	7.3	6.2
Utilities	1.5	2.9	1.0
Real Estate	1.3	2.4	1.6

#### Account Information

Account Name	<b>Rhumblin TIPS Trust</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Passive</b>
Inception Date	<b>9/01/20</b>
Account Type	<b>US Fixed Income Investment Grade</b>
Benchmark	<b>Bloomberg US TIPS TR</b>
Universe	<b>eV US TIPS / Inflation Fixed Inc Net</b>

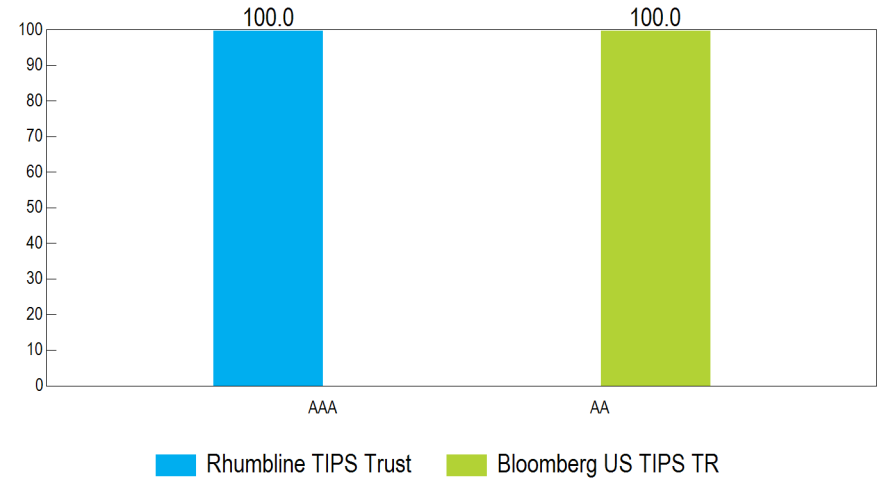
#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Rhumblin TIPS Trust	3.3	-6.1	--	--	--	-0.9	Sep-20
<i>Bloomberg US TIPS TR</i>	3.3	-6.1	1.8	2.9	1.5	-0.9	Sep-20
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>	3.3	-6.0	2.2	3.0	1.5	-0.6	Sep-20
<i>eV US TIPS / Inflation Fixed Inc Net Rank</i>	42	64	--	--	--	69	Sep-20

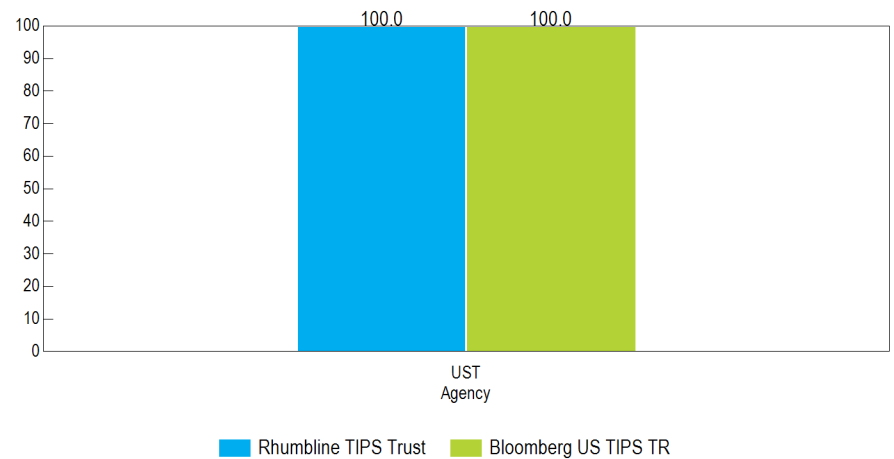
#### Rhumblin TIPS Trust Characteristics vs. Bloomberg US TIPS TR

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Fixed Income Characteristics</b>			
Yield to Maturity	4.2	4.1	4.2
Average Duration	6.9	6.9	6.6
Average Quality	AAA	AA	AAA
Weighted Average Maturity	7.4	7.4	7.2

#### Credit Quality Allocation



#### Sector Allocation





#### Account Information

Account Name	<b>Eaton Vance High Yield</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Active</b>
Inception Date	<b>4/30/06</b>
Account Type	<b>US Fixed Income High Yield</b>
Benchmark	<b>ICE BofA US High Yield TR</b>
Universe	<b>eV US High Yield Fixed Inc Net</b>

#### Portfolio Performance Summary

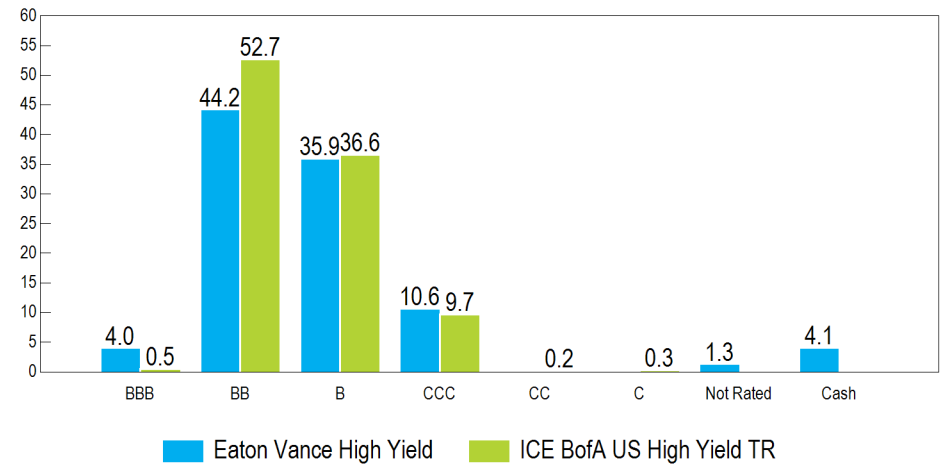
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Eaton Vance High Yield	3.5	-2.3	5.8	3.2	4.1	5.9	Apr-06
ICE BofA US High Yield TR	3.7	-3.6	5.8	3.1	4.0	6.1	Apr-06
eV US High Yield Fixed Inc Net Median	3.3	-2.8	5.7	3.0	3.8	5.7	Apr-06
eV US High Yield Fixed Inc Net Rank	36	36	47	39	31	31	Apr-06

#### Eaton Vance High Yield Characteristics

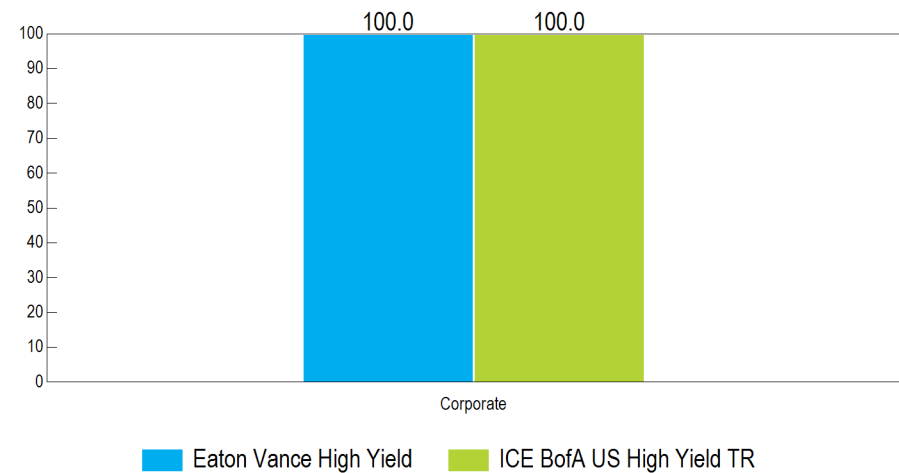
vs. ICE BofA US High Yield TR

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
<b>Fixed Income Characteristics</b>			
Yield to Maturity		7.9	8.9
Average Duration		3.9	4.3
Average Quality		B	B
Weighted Average Maturity		5.7	5.3

#### Credit Quality Allocation



#### Sector Allocation



### Eaton Vance EMD Opportunities Fund | As of March 31, 2023

#### Account Information

Account Name	Eaton Vance EMD Opportunities Fund
Account Structure	Commingled Fund
Investment Style	Passive
Inception Date	8/01/20
Account Type	Non-US Fixed Income
Benchmark	JP Morgan EMBI Global Diversified
Universe	eV Emg Mkts Fixed Inc - Blended Currency Net

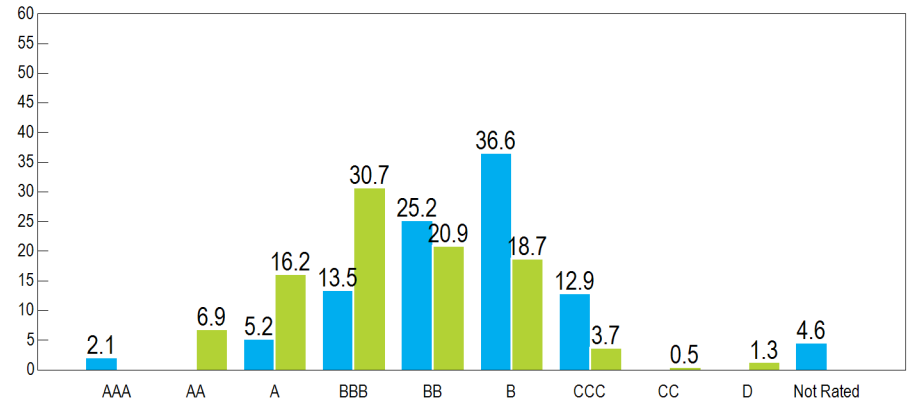
#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Eaton Vance EMD Opportunities Fund	1.3	1.8	--	--	--	0.6	Aug-20
JP Morgan EMBI Global Diversified	1.9	-6.9	0.0	-0.6	2.0	-5.6	Aug-20
eV Emg Mkts Fixed Inc - Blended Currency Net Median	2.7	-4.1	2.2	-0.9	0.8	-3.4	Aug-20
eV Emg Mkts Fixed Inc - Blended Currency Net Rank	91	2	--	--	--	9	Aug-20

#### Eaton Vance EMD Opportunities Fund Characteristics vs. JP Morgan EMBI Global Diversified

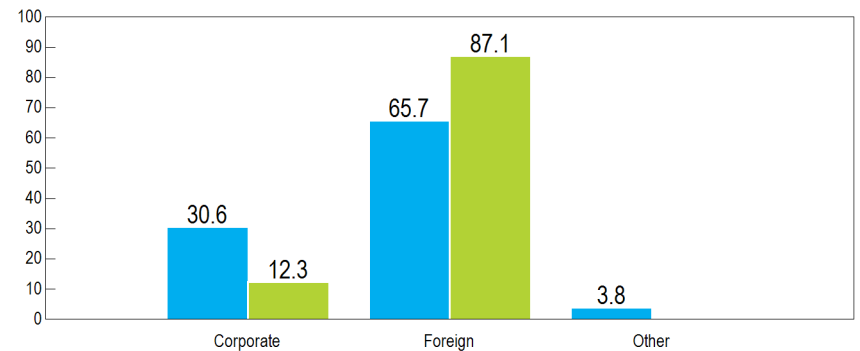
	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
Fixed Income Characteristics			
Yield to Maturity		11.8	7.8
Average Duration		4.1	6.9
Average Quality		BB	BBB
Weighted Average Maturity		8.1	11.7
			6.6

#### Credit Quality Allocation



Legend: Eaton Vance EMD Opportunities Fund (Blue), JP Morgan EMBI Global Diversified (Green)

#### Sector Allocation



Legend: Eaton Vance EMD Opportunities Fund (Blue), JP Morgan EMBI Global Diversified (Green)

#### Account Information

Account Name	First Eagle Bank Loan Select Fund
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	9/30/10
Account Type	US Fixed Income High Yield
Benchmark	Credit Suisse Leveraged Loans
Universe	Bank Loan MStar MF

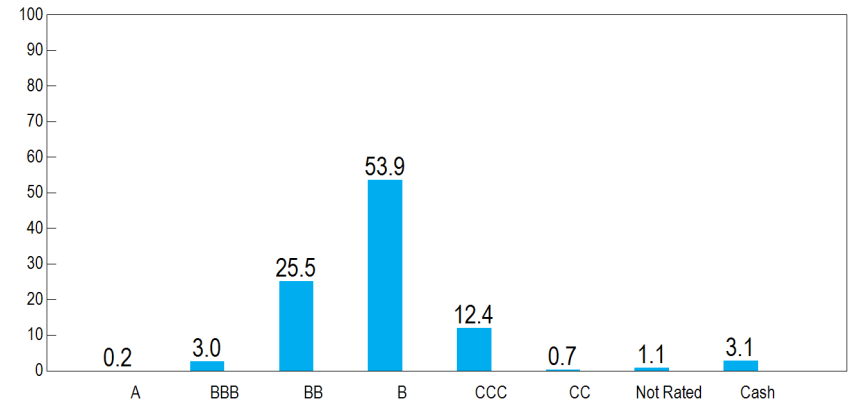
#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
First Eagle Bank Loan Select Fund	2.8	-0.3	7.4	3.0	3.9	4.6	Sep-10
Credit Suisse Leveraged Loans	3.1	2.1	8.4	3.5	3.9	4.4	Sep-10
Bank Loan MStar MF Median	3.1	1.4	7.3	2.8	3.2	3.8	Sep-10
Bank Loan MStar MF Rank	73	84	46	30	1	1	Sep-10

#### THL Bank Loan Select Fund Characteristics

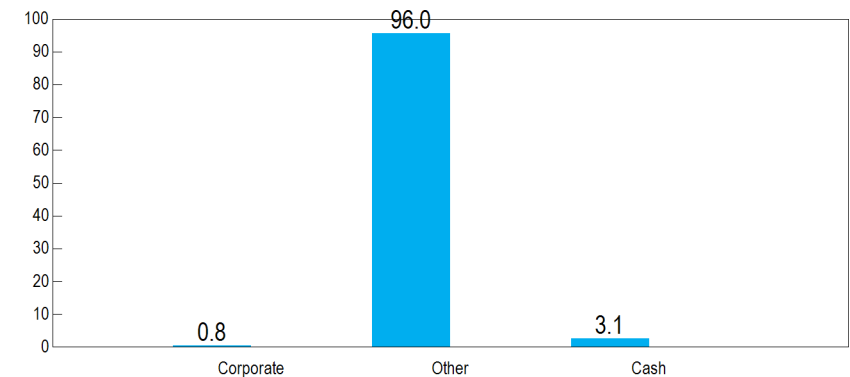
	Portfolio Q1-23	Portfolio Q4-22
Fixed Income Characteristics		
Yield to Maturity	11.4	11.8
Average Duration	0.2	0.2
Average Quality	B	B
Weighted Average Maturity	4.3	4.3

#### Credit Quality Allocation



First Eagle Bank Loan Select Fund

#### Sector Allocation



First Eagle Bank Loan Select Fund

#### Account Information

Account Name	<b>Manulife Strategic Fixed Income</b>
Account Structure	<b>Commingled Fund</b>
Investment Style	<b>Active</b>
Inception Date	<b>7/17/19</b>
Account Type	<b>US Fixed Income High Yield</b>
Benchmark	<b>Bloomberg Multiverse TR</b>
Universe	<b>Multisector Bond MStar MF</b>

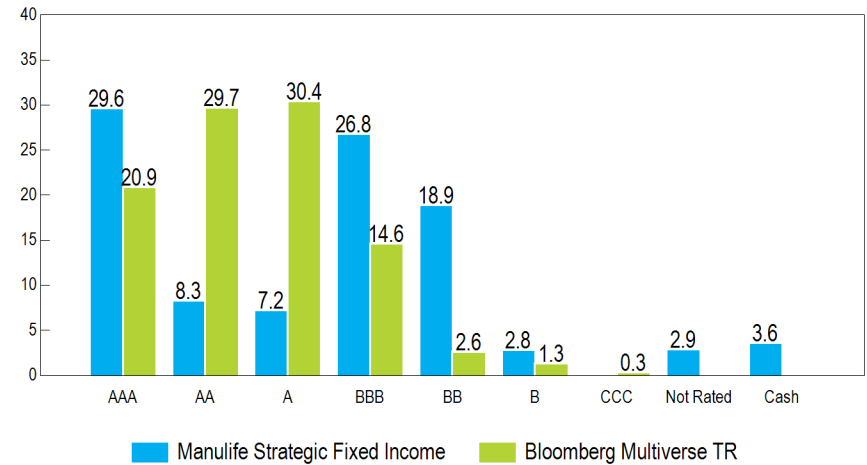
#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Manulife Strategic Fixed Income	3.4	-2.5	2.6	--	--	1.2	Jul-19
Bloomberg Multiverse TR	3.0	-7.9	-3.1	-1.2	0.2	-2.4	Jul-19
Multisector Bond MStar MF Median	2.6	-3.2	3.7	2.1	2.7	1.1	Jul-19
Multisector Bond MStar MF Rank	13	33	77	--	--	39	Jul-19

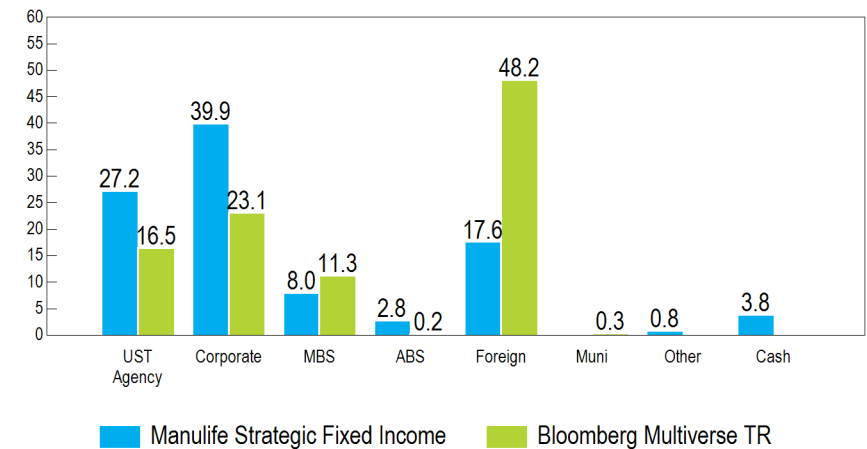
#### Manulife Strategic Fixed Income Characteristics vs. Bloomberg Multiverse TR

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
Fixed Income Characteristics			
Yield to Maturity	5.2	3.9	5.6
Average Duration	4.8	6.8	4.5
Average Quality	BBB	A	BBB
Weighted Average Maturity	6.6	10.3	6.5

#### Credit Quality Allocation



#### Sector Allocation



#### Account Information

Account Name	Mesirow High Yield
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	8/01/19
Account Type	US Fixed Income High Yield
Benchmark	Bloomberg US Corporate High Yield TR
Universe	eV US High Yield Fixed Inc Net

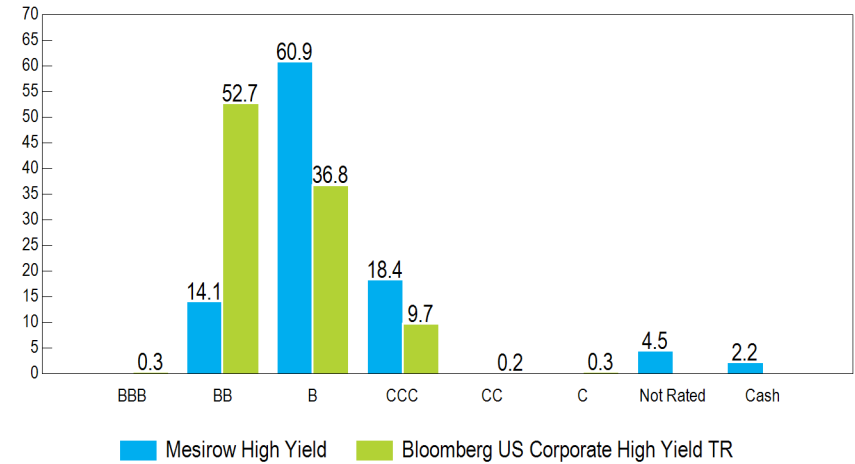
#### Portfolio Performance Summary

	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Mesirow High Yield	4.4	-3.4	11.2	--	--	4.9	Aug-19
Bloomberg US Corporate High Yield TR	3.6	-3.3	5.9	3.2	4.1	1.9	Aug-19
eV US High Yield Fixed Inc Net	3.3	-2.8	5.7	3.0	3.8	2.0	Aug-19
Median							
eV US High Yield Fixed Inc Net Rank	2	61	3	--	--	2	Aug-19

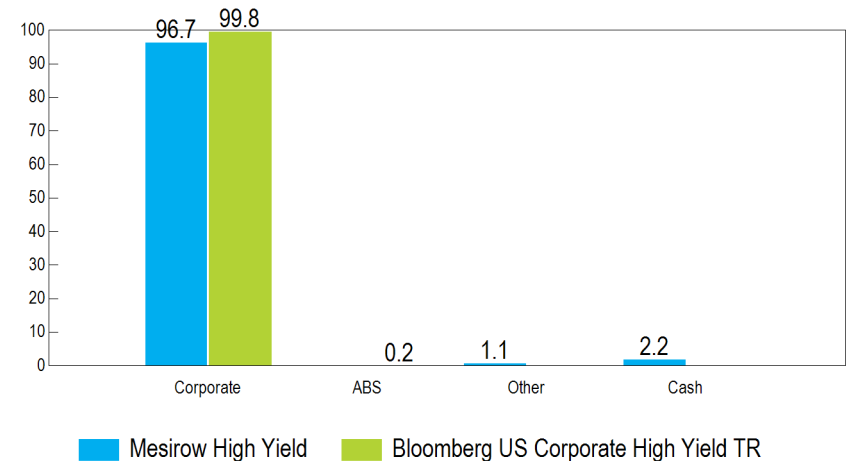
#### Mesirow High Yield Characteristics vs. Bloomberg US Corporate High Yield TR

	Portfolio Q1-23	Index Q1-23	Portfolio Q4-22
Fixed Income Characteristics			
Yield to Maturity		11.1	8.9
Average Duration		3.7	4.3
Average Quality		B	B
Weighted Average Maturity		4.6	5.3

#### Credit Quality Allocation



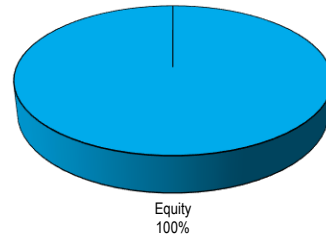
#### Sector Allocation



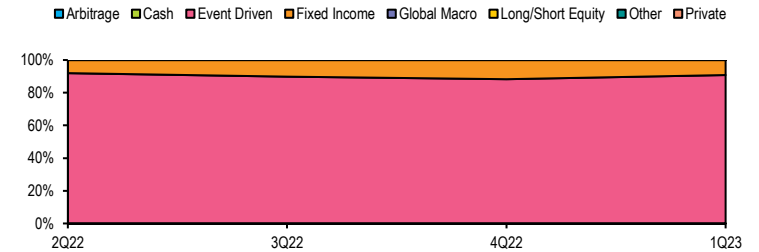
#### Account Information

<b>Mandate:</b>	Hedge Fund, Fund of Funds
<b>Market Value:</b>	\$13.7M
<b>Portfolio Manager:</b>	Team
<b>Location:</b>	New York, NY
<b>Inception Date:</b>	10/1/2016
<b>Account Type:</b>	Limited Partnership
<b># of Investments:</b>	21
<b>Fee Schedule:</b>	1.25% Management Fee; 10% Performance Fee; 7.5% Hurdle
<b>Liquidity Constraints:</b>	3 Year Lockup (4 years max) then quarterly with 95 days' notice

#### Instrument Allocation



#### Historical Strategy Allocations



#### Portfolio Performance Summary

	IQ23 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 10/2016 (%)
EnTrust Special Opportunities Fund III, Ltd.	0.0	-20.6	4.4	-2.6	2.4
HFRI Fund of Funds Composite Index (QTR)	1.7	-5.3	3.7	3.0	3.8

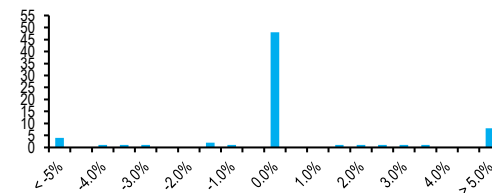
#### Top 5 Funds (%)

SeaWorld - Hill Path	20
MGM - Corvex	10
Deutsche Bank - Hudson Executive	9
J.G. Wentworth - Axar	8
Nestlé - EnTrust Global	7

Geographic Exposure Allocation (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
North America	60	58	59	56
Developed Europe	34	36	33	37
Developed Asia	2	1	1	1
Emerging Markets	5	5	7	6

Exposure Report (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Total Gross Exposure	97	96	98	98
Gross Long Exposure	97	96	98	98
Gross Short Exposure	0	0	0	0
Net Exposure	97	96	98	98

#### Return Distribution



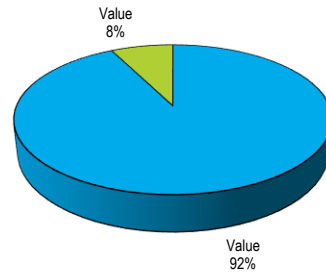
### EnTrustPermal Special Opportunities Evergreen Fund, Ltd. | As of March 31, 2023

#### Account Information

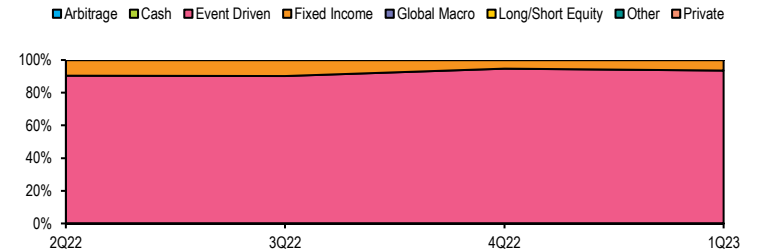
**Mandate:** Hedge Fund, Return Seeking  
**Market Value:** \$19.2 M  
**Portfolio Manager:** Team  
**Location:** New York, NY  
**Inception Date:** 1/1/2019  
**Account Type:** Limited Partnership  
**# of Investments:** 28  
**Fee Schedule:** 1.25% Management Fee, 10% Performance Fee

**Liquidity Constraints:** Distributions from monetized investments will be recycled into the Fund, unless otherwise noted by the investor. Investors who opt out of the Fund (in part or in whole) following expiration of the 3 year Commitment Period, and any applicable successive renewals, will receive their pro rata distributions of underlying investments in the Fund, net of fees and expenses, as they are realized by the Investment Manager

#### Instrument Allocation



#### Historical Strategy Allocations



Geographic Exposure Allocation (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
North America	73	75	76	73
Developed Europe	22	21	20	22
Developed Asia	4	3	3	3
Emerging Markets	1	1	2	2

Exposure Report (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Total Gross Exposure	97	104	96	94
Gross Long Exposure	93	97	95	94
Gross Short Exposure	4	7	2	0
Net Exposure	89	90	93	94

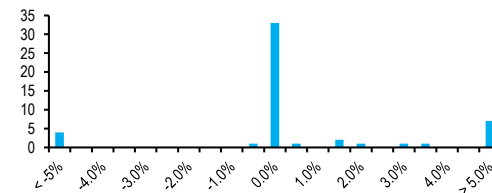
#### Portfolio Performance Summary

	1Q23 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 1/2019 (%)
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	0.0	-17.5	3.8	NA	1.9
HFRI Fund of Funds Composite Index (QTR)	NA	NA	NA	NA	NA

#### Top 5 Funds (%)

SeaWorld II - Hill Path	11
Masimo - Politan	8
StubHub - Declaration	7
Dollar Tree - Mantle Ridge	7
MGM - Corvex	7

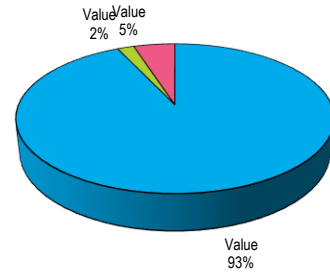
#### Return Distribution



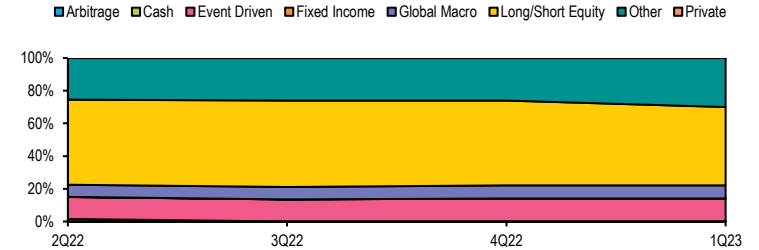
#### Account Information

<b>Mandate:</b>	Hedge Fund, Return Seeking
<b>Market Value:</b>	\$15.5 M
<b>Portfolio Manager:</b>	Team
<b>Location:</b>	
<b>Inception Date:</b>	10/1/2018
<b>Account Type:</b>	Limited Partnership
<b># of Investments:</b>	12
<b>Fee Schedule:</b>	0.5% Management Fee, 5% Performance Fee
<b>Liquidity Constraints:</b>	Quarterly with 65 days' notice

#### Instrument Allocation



#### Historical Strategy Allocations



#### Portfolio Performance Summary

	1Q23 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 10/2018 (%)
Old Farm Partners Master Fund, L.P.	0.9	-6.1	8.0	NA	3.8
HFRI Fund of Funds Composite Index	0.7	-1.9	7.2	3.1	3.3

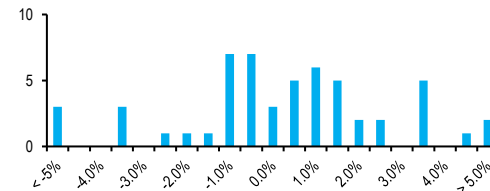
#### Top 5 Funds (%)

Divisar	9
Crake	8
Sio	8
Flat Footed	6
Prospect	6

Geographic Exposure Allocation (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
North America	74	72	75	67
Developed Europe	22	22	22	29
Developed Asia	2	3	1	1
Emerging Markets	2	3	2	3

Exposure Report (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Total Gross Exposure	127	101	113	107
Gross Long Exposure	88	68	74	71
Gross Short Exposure	39	33	39	36
Net Exposure	49	35	35	35

#### Return Distribution

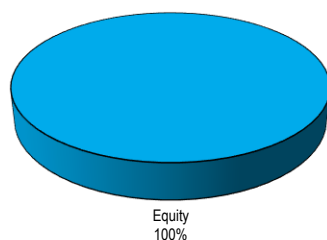




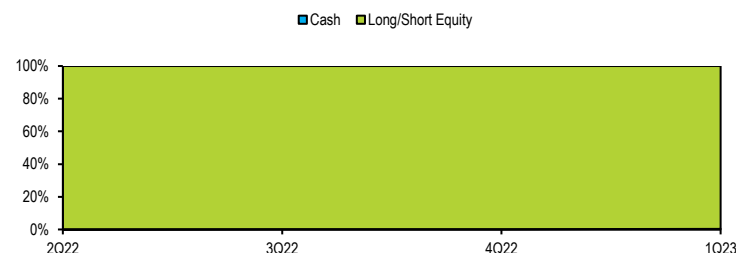
#### Account Information

<b>Mandate:</b>	Hedge Fund, Return Seeking
<b>Market Value:</b>	\$54.7 M
<b>Portfolio Manager:</b>	Team
<b>Location:</b>	
<b>Inception Date:</b>	12/1/2018
<b>Account Type:</b>	Limited Partnership
<b># of Investments:</b>	15
<b>Fee Schedule:</b>	0.35% Management Fee, 10% Performance Fee
<b>Liquidity Constraints:</b>	Quarterly with 45 days' notice

#### Instrument Allocation



#### Historical Strategy Allocations



#### Portfolio Performance Summary

	1Q23 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 12/2018 (%)
ABS Emerging Markets	3.9	-10.9	10.9	NA	5.3
MSCI Emerging Markets	4.0	-10.7	7.8	-0.9	2.3

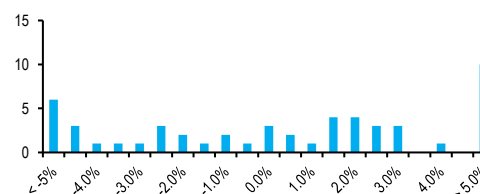
#### Top 5 Funds (%)

Not Provided

Geographic Exposure Allocation (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Emerging Markets	98	98	98	98
North America	0	0	1	0
Developed Europe	0	0	1	1
Developed Asia	0	0	1	1

Exposure Report (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Total Gross Exposure	98	95	95	95
Gross Long Exposure	98	95	95	95
Gross Short Exposure	0	0	0	0
Net Exposure	98	95	95	95

#### Return Distribution

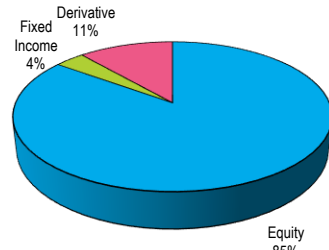


### ABS Offshore SPC - Global Segregated Portfolio | As of March 31, 2023

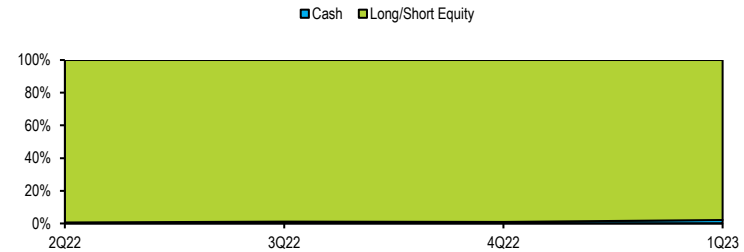
#### Account Information

<b>Mandate:</b>	Hedge Fund, Return Seeking
<b>Market Value:</b>	\$35.4 M
<b>Portfolio Manager:</b>	Team
<b>Location:</b>	Greenwich, CT
<b>Inception Date:</b>	8/31/2010
<b>Account Type:</b>	Limited Partnership
<b># of Investments:</b>	31
<b>Fee Schedule:</b>	1.00% Management Fee, 5% Performance Fee
<b>Liquidity Constraints:</b>	Quarterly with 45 days' notice

#### Instrument Allocation



#### Historical Strategy Allocations



#### Portfolio Performance Summary

	1Q23 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since 8/2010 (%)
ABS Offshore SPC - Global Segregated Portfolio	2.0	-2.3	6.9	3.3	5.0
HFRI Equity Hedge (Total) Index	2.5	-3.7	12.4	5.0	5.2

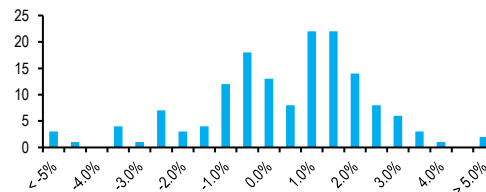
#### Top 5 Funds (%)

Energy Dynamics	5
Sagil	5
Seligman Tech	5
Azora	5
Medina	5

Geographic Exposure Allocation (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Emerging Markets	12	12	14	13
North America	73	73	71	71
Developed Europe	10	10	9	10
Developed Asia	5	6	6	6

Exposure Report (%)	3/31/2023	12/31/2022	9/30/2022	6/30/2022
Total Gross Exposure	145	130	130	135
Gross Long Exposure	95	84	84	86
Gross Short Exposure	50	45	47	49
Net Exposure	44	38	37	38

#### Return Distribution



Annual Investment Expense Analysis				
As Of March 31, 2023				
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Domestic Equity Assets</b>		<b>\$235,572,095</b>		
Rhumblin Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$47,688,830	\$21,576	0.05%
Rhumblin Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	\$42,492,302	\$19,497	0.05%
Fisher Midcap Value	0.65% of Assets	\$56,112,073	\$364,728	0.65%
Newton Small Cap Growth	0.45% of Assets	\$45,322,353	\$203,951	0.45%
Vulcan Partners Small Cap Value	0.83% of Assets	\$15,119,259	\$125,490	0.83%
Systematic Small Cap Free Cash Flow	0.76% of Assets	\$28,837,278	\$219,163	0.76%
<b>International Developed Market Equity Assets</b>		<b>\$40,670,872</b>		
Aristotle International Equity	0.49% of Assets	\$21,235,406	\$104,053	0.49%
Walter Scott International Equity	0.75% of Assets	\$19,435,466	\$145,766	0.75%
<b>International Emerging Market Equity Assets</b>		<b>\$102,939,303</b>		
ABS Emerging Markets	Performance-based 0.35 and 0.10	\$54,727,404	\$192,492	0.35%
Driehaus Emerging Markets Growth	0.55% of Assets	\$48,211,899	\$265,165	0.55%
<b>Global Equity Assets</b>		<b>\$142,423,951</b>		
First Eagle Global Value Fund	0.75% of Assets	\$25,238,379	\$189,288	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	\$35,288,872	\$282,311	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	\$37,729,431	\$169,782	0.45%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Wellington Durable Enterprises, L.P.	0.60% of Assets	\$44,167,270	\$265,004	0.60%
<b>Core Fixed Income</b>		<b>\$102,081,248</b>		
Lord Abbett Short Duration Credit Trust II	0.17% of Assets	\$43,541,947	\$74,021	0.17%
Lord Abbett Core Fixed Income Trust II	0.15% of Assets	\$41,147,326	\$61,721	0.15%
Rhumblin TIPS Trust	0.04% of First 5.0 Mil, 0.03% Thereafter	\$17,391,974	\$5,718	0.03%
<b>Value Added Fixed Income</b>		<b>\$87,629,022</b>		
Eaton Vance High Yield	0.42% of Assets	\$12,044,384	\$50,586	0.42%
First Eagle Bank Loan Select Fund	0.40% of Assets	\$10,830,299	\$43,321	0.40%
Manulife Strategic Fixed Income	0.35% of Assets	\$41,753,641	\$146,138	0.35%
Mesirow High Yield	0.40% of Assets	\$14,816,668	\$59,267	0.40%
Eaton Vance EMD Opportunities Fund	0.30% of Assets	\$8,184,029	\$24,552	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>\$73,563,508</b>		
<b>Non-Core Real Assets</b>		<b>\$47,906,607</b>		

### Total Retirement Association | As of March 31, 2023

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.

Total Retirement Association | As of March 31, 2023

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	73,563,508
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>114,619,903</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	6,081,764	33,359,987
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>96,400,995</b>	<b>170,332,064</b>

Note: The data for IFM Global Infrastructure & JPMorgan Strategic Property is as of March 31, 2023. All other values are based on December 31, 2022 FMV.

**Cash Flow Summary**  
**Month Ending March 31, 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	\$53,744,876	\$0	\$0	\$0	\$54,727,404
ABS Offshore SPC - Global Segregated Portfolio	\$35,272,218	\$0	-\$29,521	-\$29,521	\$35,424,688
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	\$20,667,180	\$0	-\$8,671	-\$8,671	\$21,235,406
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	\$2,907,650	\$0	\$0	\$0	\$3,051,590
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	\$0	\$0	\$0	\$614,058
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	\$4,495,922	\$0	\$0	\$0	\$4,929,357
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	\$11,032,272	\$11,473,753	-\$13,510,425	-\$2,036,672	\$8,995,600
Charles River Partnership XI	\$0	\$0	\$0	\$0	\$0
Charlesbank Technology Opportunities Fund	\$15,040,302	\$0	-\$921,167	-\$921,167	\$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	\$46,642,368	\$0	-\$22,097	-\$22,097	\$48,211,899

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
DSF Multi-Family Real Estate Fund III	\$4,149,243	\$0	\$0	\$0	\$4,214,656
Eaton Vance EMD Opportunities Fund	\$8,206,919	\$0	-\$2,046	-\$2,046	\$8,184,029
Eaton Vance High Yield	\$11,859,565	\$0	-\$4,216	-\$4,216	\$12,044,384
Entrust Special Opportunities Fund III, Ltd.	\$13,663,481	\$0	\$0	\$0	\$13,663,481
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$19,236,406	\$0	\$0	\$0	\$19,236,406
Euro Choice V Programme	\$2,838,139	\$0	-\$220,430	-\$220,430	\$2,778,281
First Eagle Bank Loan Select Fund	\$10,875,798	\$0	-\$3,610	-\$3,610	\$10,830,299
First Eagle Global Value Fund	\$24,581,262	\$0	-\$15,774	-\$15,774	\$25,238,379
Fisher Midcap Value	\$61,054,041	\$0	-\$3,030,394	-\$3,030,394	\$56,112,073
FS Equity Partners VIII, L.P.	\$14,534,757	\$731,570	\$0	\$731,570	\$15,365,575
Global Infrastructure Partners III	\$9,813,916	\$0	\$0	\$0	\$10,232,408
Global Infrastructure Partners IV, L.P.	\$7,971,821	\$0	\$0	\$0	\$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	\$0	\$0	\$14,837,536
IFM Global Infrastructure	\$72,115,890	\$0	\$0	\$0	\$73,563,508
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.	\$3,105,350	\$0	\$0	\$0	\$2,971,086
ISQ Global Infrastructure Fund III (USTE), L.P.	\$2,165,600	\$0	\$0	\$0	\$2,326,494
JP Morgan Global Maritime Investment	\$6,236,435	\$0	\$0	\$0	\$6,236,435
JPMorgan Strategic Property	\$33,811,222	\$0	-\$27,800	-\$27,800	\$33,359,987
Kohlberg Investors IX	\$7,899,628	\$1,430,769	\$0	\$1,430,769	\$9,886,815
Kopernik Global All Cap Fund	\$34,350,136	\$0	-\$23,526	-\$23,526	\$35,288,872



	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Landmark Equity Partners XIV	\$436,672	\$0	\$0	\$0	\$442,942
Lee Munder Global Multi-Cap Strategy	\$40,467,163	\$0	-\$4,014,149	-\$4,014,149	\$37,729,431
Leeds Equity Partners IV	\$9,031	\$0	\$0	\$0	\$0
Leeds Equity Partners V	\$238,203	\$0	\$0	\$0	\$251,649
Lexington Capital Partners VII	\$1,325,305	\$0	-\$32,792	-\$32,792	\$1,251,576
LLR Equity Partners V, LP.	\$16,004,150	\$0	\$0	\$0	\$16,081,297
Lord Abbett Core Fixed Income Trust II	\$40,205,021	\$0	-\$5,143	-\$5,143	\$41,147,326
Lord Abbett Short Duration Credit Trust II	\$43,127,262	\$0	-\$6,168	-\$6,168	\$43,541,947
Manulife Strategic Fixed Income	\$40,692,108	\$0	-\$12,178	-\$12,178	\$41,753,641
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	\$14,754,569	\$0	-\$4,939	-\$4,939	\$14,816,668
Newton Small Cap Growth	\$46,734,566	\$0	-\$16,996	-\$16,996	\$45,322,353
Old Farm Partners Master Fund, L.P.	\$15,620,463	\$0	\$0	\$0	\$15,473,403
PCCP Equity IX, L.P.	\$6,326,020	\$0	\$0	\$0	\$6,447,254
Rhumblin Russell 1000 Growth	\$39,780,187	\$0	-\$1,625	-\$1,625	\$42,492,302
Rhumblin Russell 1000 Value	\$47,906,316	\$0	-\$1,798	-\$1,798	\$47,688,830
Rhumblin TIPS Trust	\$16,909,465	\$0	-\$476	-\$476	\$17,391,974
Ridgemont Equity Partners III, L.P.	\$16,971,626	\$0	\$0	\$0	\$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.	\$9,617,971	\$0	\$0	\$0	\$9,891,126
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	\$0	\$0	\$0	\$14,759,796

Total Retirement Association | As of March 31, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Summit Partners Growth Equity Fund XI	\$1,367,501	\$894,675	\$0	\$894,675	\$2,444,117
Summit Partners Venture Capital Fund V	\$5,200,145	\$0	\$0	\$0	\$5,315,412
Systematic Small Cap Free Cash Flow	\$30,082,460	\$0	-\$18,264	-\$18,264	\$28,837,278
TA Realty Core Property Fund, L.P.	\$76,740,891	\$0	\$0	\$0	\$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	\$281,463	\$0	\$0	\$0	\$479,471
Trilantic Capital Partners VI, L.P.	\$13,993,896	\$0	\$0	\$0	\$14,207,445
Vulcan Partners Small Cap Value	\$15,843,002	\$0	-\$10,457	-\$10,457	\$15,119,259
Walter Scott International Equity	\$18,276,942	\$0	-\$12,147	-\$12,147	\$19,435,466
Waud Capital Partners V	\$14,428,940	\$0	\$0	\$0	\$14,735,012
Wellington Durable Enterprises, L.P.	\$44,230,107	\$0	-\$22,084	-\$22,084	\$44,167,270
Wellspring Capital Partners VI	\$15,590,471	\$0	-\$96,849	-\$96,849	\$15,946,152
<b>Total</b>	<b>\$1,311,507,614</b>	<b>\$16,470,099</b>	<b>-\$22,570,944</b>	<b>-\$6,100,845</b>	<b>\$1,319,141,638</b>

Cash Flow Summary

From January 01, 2023 through March 31, 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	\$54,727,404
ABS Offshore SPC - Global Segregated Portfolio	\$34,717,268	\$0	-\$88,623	-\$88,623	\$35,424,688
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	-\$25,808	-\$25,808	\$21,235,406
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	\$0	-\$27,495	-\$27,495	\$3,051,590
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	\$0	\$0	\$0	\$614,058
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	\$3,841,675	\$654,247	\$0	\$654,247	\$4,929,357
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	\$40,488,527	-\$65,263,824	-\$24,775,296	\$8,995,600
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

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Driehaus Emerging Markets Growth	\$46,198,805	\$0	-\$66,244	-\$66,244	\$48,211,899
DSF Multi-Family Real Estate Fund III	\$5,039,395	\$0	-\$890,152	-\$890,152	\$4,214,656
Eaton Vance EMD Opportunities Fund	\$8,082,933	\$0	-\$6,171	-\$6,171	\$8,184,029
Eaton Vance High Yield	\$11,632,494	\$0	-\$12,580	-\$12,580	\$12,044,384
Entrust Special Opportunities Fund III, Ltd.	\$13,663,481	\$0	\$0	\$0	\$13,663,481
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	\$19,236,406	\$0	\$0	\$0	\$19,236,406
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	-\$10,823	-\$10,823	\$10,830,299
First Eagle Global Value Fund	\$23,862,955	\$0	-\$47,049	-\$47,049	\$25,238,379
Fisher Midcap Value	\$55,787,552	\$0	-\$3,097,153	-\$3,097,153	\$56,112,073
FS Equity Partners VIII, L.P.	\$14,436,439	\$829,888	\$0	\$829,888	\$15,365,575
Global Infrastructure Partners III	\$9,922,547	\$58,267	-\$166,898	-\$108,631	\$10,232,408
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	\$0	\$0	\$14,837,536
IFM Global Infrastructure	\$47,130,351	\$25,000,000	-\$410,208	\$24,589,792	\$73,563,508
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	-\$986,350	-\$986,350	\$6,236,435
JPMorgan Strategic Property	\$34,892,370	\$576	-\$587,520	-\$586,944	\$33,359,987
Kohlberg Investors IX	\$7,899,628	\$1,430,769	\$0	\$1,430,769	\$9,886,815

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Kopernik Global All Cap Fund	\$34,061,261	\$0	-\$70,497	-\$70,497	\$35,288,872
Landmark Equity Partners XIV	\$460,357	\$0	-\$23,686	-\$23,686	\$442,942
Lee Munder Global Multi-Cap Strategy	\$38,740,800	\$0	-\$4,044,909	-\$4,044,909	\$37,729,431
Leeds Equity Partners IV	\$9,031	\$0	\$0	\$0	\$0
Leeds Equity Partners V	\$238,203	\$0	\$0	\$0	\$251,649
Lexington Capital Partners VII	\$1,390,888	\$0	-\$98,375	-\$98,375	\$1,251,576
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	-\$15,317	-\$15,317	\$41,147,326
Lord Abbett Short Duration Credit Trust II	\$52,709,058	\$0	-\$10,018,423	-\$10,018,423	\$43,541,947
Manulife Strategic Fixed Income	\$40,372,490	\$0	-\$71,517	-\$71,517	\$41,753,641
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	-\$14,755	-\$14,755	\$14,816,668
Newton Small Cap Growth	\$43,265,221	\$0	-\$52,408	-\$52,408	\$45,322,353
Old Farm Partners Master Fund, L.P.	\$15,330,488	\$0	-\$12,775	-\$12,775	\$15,473,403
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	-\$4,709	-\$4,709	\$42,492,302
Rhumblin Russell 1000 Value	\$58,144,941	\$0	-\$11,505,757	-\$11,505,757	\$47,688,830
Rhumblin TIPS Trust	\$16,828,767	\$0	-\$1,411	-\$1,411	\$17,391,974
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	\$300,851	\$0	\$300,851	\$9,891,126
Siguler Guff Distressed Opportunities Fund III, LP	\$496,843	\$0	-\$13,778	-\$13,778	\$443,577

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Summit Partners Growth Equity Fund IX	\$15,085,855	\$0	\$0	\$0	\$14,759,796
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	\$171,144	\$0	\$171,144	\$5,315,412
Systematic Small Cap Free Cash Flow	\$28,203,474	\$0	-\$56,480	-\$56,480	\$28,837,278
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	-\$60,719	-\$32,222	\$15,119,259
Walter Scott International Equity	\$17,359,513	\$0	-\$66,918	-\$66,918	\$19,435,466
Waud Capital Partners V	\$14,428,940	\$0	\$0	\$0	\$14,735,012
Wellington Durable Enterprises, L.P.	\$43,333,556	\$0	-\$66,754	-\$66,754	\$44,167,270
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>\$76,231,181</b>	<b>-\$102,985,808</b>	<b>-\$26,754,627</b>	<b>\$1,319,141,638</b>

**Private Markets 2022 Q4  
Performance Update**

The purpose of this document is to offer a review of the Plymouth County Retirement Association’s aggregate private market investments.

As of December 31, 2022 the Retirement Association had committed \$770.1 million to 71 partnerships. The reported fair market value of the program, in aggregate, was \$485.9 million at the end of the quarter.

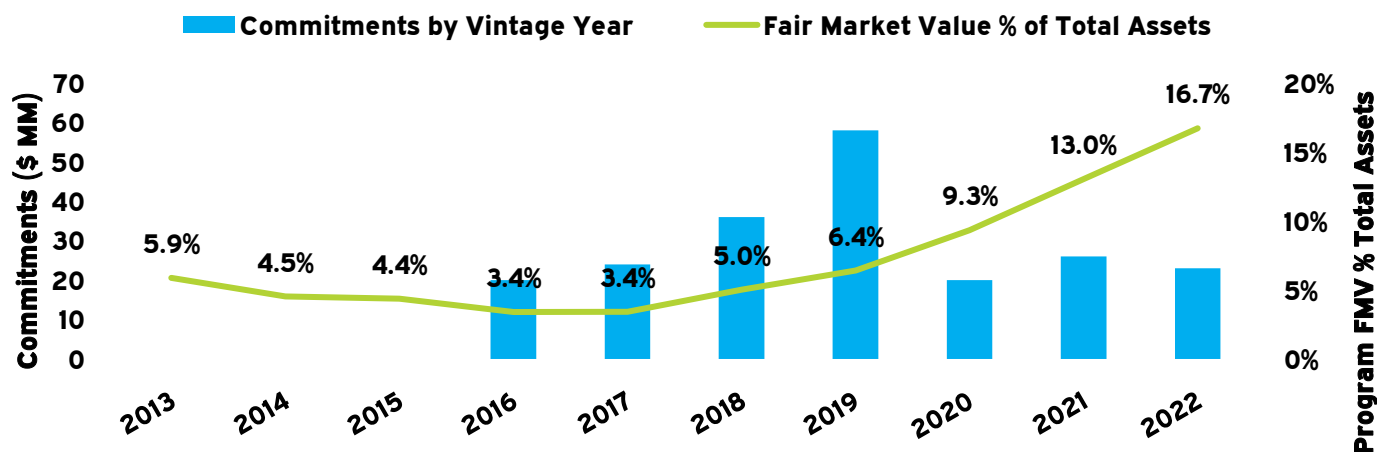
Private Equity Program		Real Assets Program		Real Estate Program	
No. of Funds	39	No of Funds	11	No of Funds	21
Committed	327.1	Committed	150.0	Committed	293.0
Contributed	238.1	Contributed	91.8	Contributed	278.6
Distributed	145.1	Distributed	24.8	Distributed	227.5
Fair Market Value	218.3	Fair Market Value	95.0	Fair Market Value	172.6
TVPI	1.52x	TVPI	1.30x	TVPI	1.43x
Since Inception IRR	9.4%	Since Inception IRR	6.4%	Since Inception IRR	6.8%
1-Quarter IRR	1.2%	1-Quarter IRR	4.3%	1-Quarter IRR	-4.1%
1-Year IRR	10.9%	1-Year IRR	9.7%	1-Year IRR	9.5%



## **Private Equity Program**

### Introduction

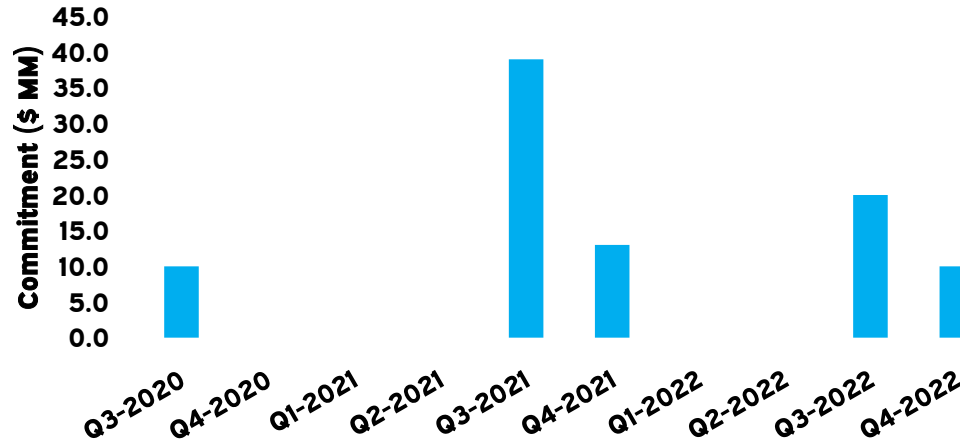
As of December 31, 2022, the Plymouth County Retirement Association (“PCRA”) had committed \$327.1 million to 39 partnerships. PCRA maintains a 13% allocation to private equity. As of year-end, the fair market value of PCRA’s private equity program was \$218.3 million, representing 16.7% of total assets.



Program Status	
No. of Investments	39
Committed (\$ MM)	327.1
Contributed (\$ MM)	238.1
Distributed (\$ MM)	145.1
Fair Market Value (\$ MM)	218.3

Performance Since Inception	
	Program
DPI	0.61x
TVPI	1.52x
IRR	9.4%

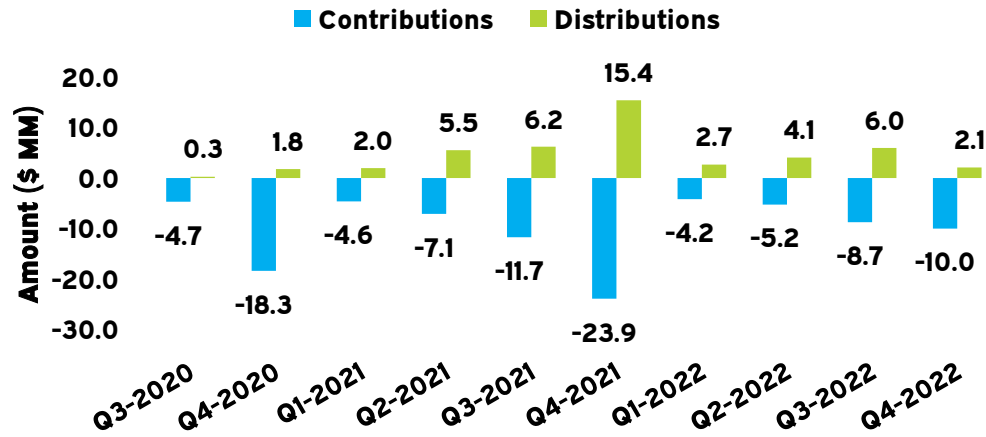
### Commitments Recent Quarterly Commitments



### Commitments This Quarter

Fund	Strategy	Region	Amount (MM)
Kohlberg X	Buyout	North America	10.00

### Cash Flows Recent Quarterly Cash Flows



Largest Contributions This Quarter				
Fund	Vintage	Strategy	Region	Amount (\$MM)
Ironsides Opps II	2020	Private Debt	North America	1.68
FS Equity VIII	2019	Buyout	North America	1.31
HV Co-Invest VI	2021	Buyout	Global: All	1.30

Largest Distributions This Quarter				
Fund	Vintage	Strategy	Region	Amount (\$MM)
Globespan V	2006	Venture Capital	North America	0.53
HV Co-Invest V	2018	Buyout	North America	0.47
Ascent Venture V	2011	Venture Capital	North America	0.44

## Significant Events

- During the fourth quarter of 2022, PCRA contributed \$10.0 million to its private equity partnerships and received \$2.1 million in distributions, representing a \$7.9 million cash outflow.
- Ironsides Opportunities Fund II, L.P. called \$1.68 million to fund new investments, as well as management fees and partnership expenses.
- FS Equity Partners VIII, L.P. called \$1.31 million during the fourth quarter, primarily to fund two new investments as well as partnership expenses.
- Harbourvest Partners Co-Investment Fund VI, L.P. called \$1.30 million during the fourth quarter to partially repay the credit facility used to fund new investments.
- Globespan Capital Partners V, L.P. distributed \$0.53 million during the fourth quarter. Proceeds stemmed from the sale of an existing investment.
- Harbourvest Partners Co-Investment Fund V, L.P. distributed \$0.47 million as proceeds from underlying fund investments.
- Ascent Venture Partners V, L.P. distributed \$0.44 million during the fourth quarter. Proceeds stemmed from the sale of an existing investment.
- Also during the fourth quarter of 2022, PCRA committed \$10.0 million to Kohlberg Investors X, L.P., representing diversified middle market buyout exposure.

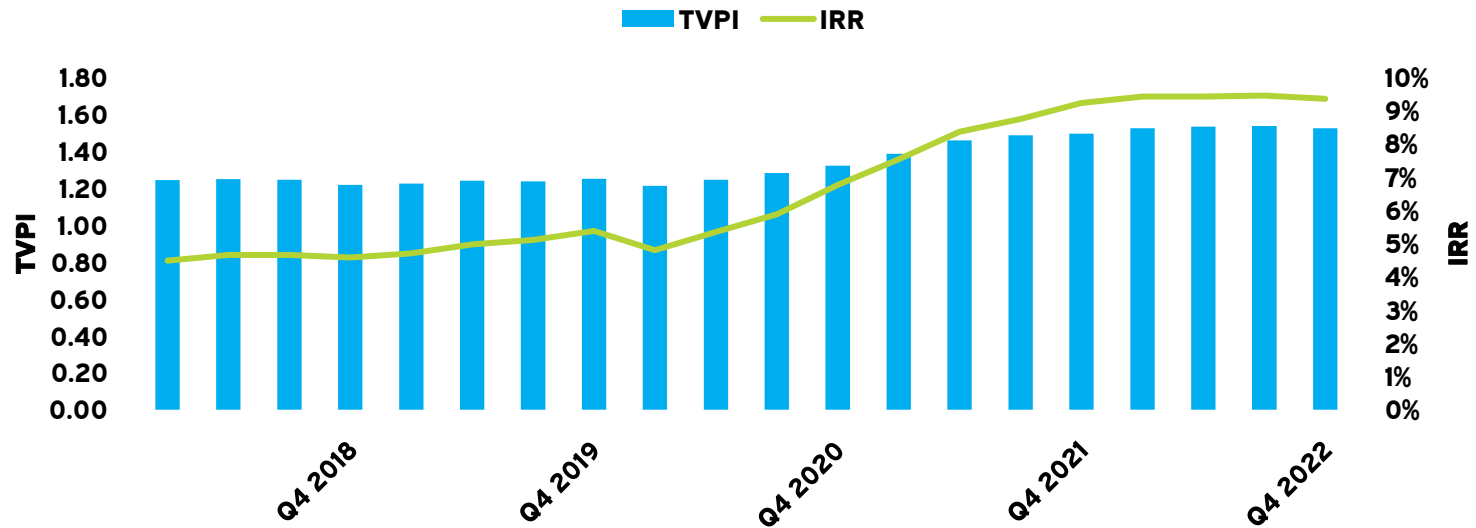
#### By Strategy

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)
Buyout	21	198.1	144.1	66.3	48.3	179.5	245.8	0.34	1.58	11.9
Fund of Funds	3	17.6	17.3	1.9	22.9	3.6	5.5	1.33	1.54	8.5
Growth Equity	3	30.5	20.5	30.1	20.5	17.8	47.9	1.00	1.87	12.8
Private Debt	2	30.0	10.4	21.2	7.6	4.6	25.8	0.73	1.17	10.1
Secondary	2	16.0	14.8	1.3	20.6	1.8	3.1	1.39	1.52	12.4
Special Situations	1	3.0	4.9	0.0	5.1	0.0	0.0	1.04	1.04	1.3
Venture Capital	7	31.8	26.1	5.9	20.0	11.0	16.9	0.77	1.19	2.4
<b>Total</b>	<b>39</b>	<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>345.0</b>	<b>0.61</b>	<b>1.52</b>	<b>9.4</b>

### By Vintage

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market		DPI (X)	TVPI (X)	IRR (%)
						Value (\$M)	Exposure (\$M)			
1998	1	2.6	2.7	0.0	0.1	0.0	0.0	0.04	0.04	-25.5
1999	1	5.0	4.4	0.6	2.2	0.0	0.6	0.49	0.49	-14.9
2000	1	1.8	1.8	0.0	2.5	0.0	0.0	1.39	1.39	5.5
2001	1	2.0	2.0	0.0	7.7	0.0	0.0	3.83	3.83	29.1
2004	3	13.0	13.1	0.5	18.2	0.0	0.5	1.39	1.39	4.8
2005	3	9.5	11.0	0.3	8.1	0.2	0.5	0.73	0.75	-5.2
2006	1	5.0	4.9	0.1	9.4	2.7	2.8	1.94	2.49	13.0
2007	2	12.5	9.7	2.8	8.0	3.9	6.7	0.82	1.22	2.9
2008	2	12.0	11.7	0.3	16.6	0.9	1.3	1.42	1.50	10.3
2009	1	10.0	9.0	1.1	13.2	1.3	2.5	1.48	1.63	13.7
2010	1	2.5	3.5	0.0	5.6	0.0	0.0	1.59	1.59	11.7
2011	1	5.0	5.0	0.2	4.5	3.2	3.3	0.90	1.53	6.6
2012	1	6.1	5.9	1.4	5.7	3.1	4.5	0.96	1.49	7.9
2016	2	20.0	20.4	21.3	20.1	17.8	39.1	0.99	1.86	26.6
2017	2	24.0	23.3	3.2	6.3	32.3	35.5	0.27	1.66	21.5
2018	3	36.0	31.7	7.4	6.2	45.8	53.2	0.20	1.64	19.9
2019	5	58.0	47.2	15.5	10.1	73.3	88.8	0.21	1.76	41.3
2020	3	40.0	13.3	27.0	0.3	15.1	42.1	0.03	1.16	NM
2021	3	39.0	17.4	21.9	0.3	18.7	40.6	0.02	1.09	NM
2022	2	23.0	0.0	23.0	0.0	0.0	23.0	0.00	NA	NA
<b>Total</b>	<b>39</b>	<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>345.0</b>	<b>0.61</b>	<b>1.52</b>	<b>9.4</b>

#### Since Inception Performance Over Time

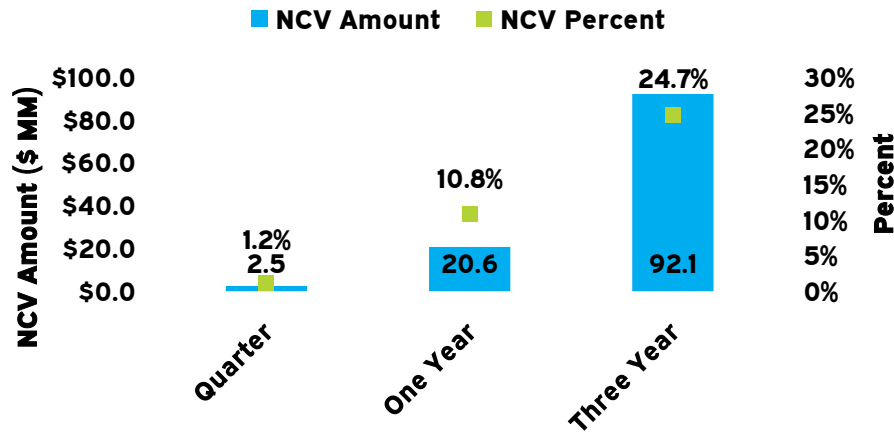


#### Horizon IRRs

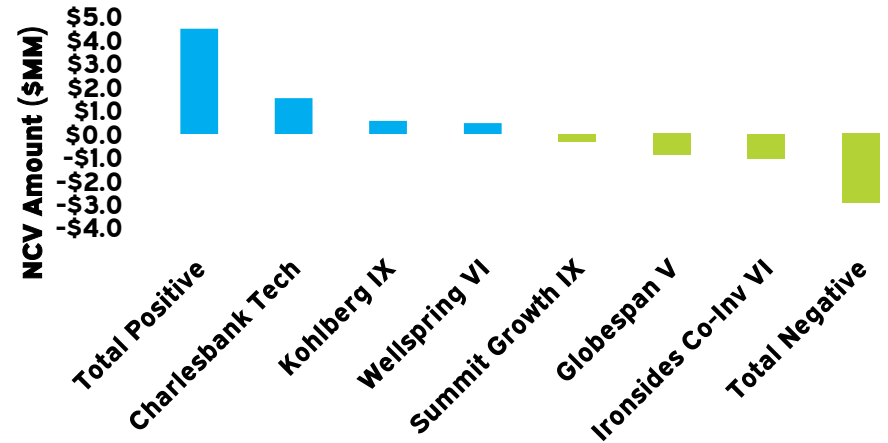
	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	10.9	25.4	21.0	14.5	9.4
Public Market Equivalent	-17.9	-0.2	2.7	6.3	5.9



#### Periodic NCV



#### 1 Quarter Drivers Of NCV



### Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Senior Tour Players	1998	Buyout	2.6	2.7	0.0	0.1	0.0	0.04	1.38	-25.5	8.0
Charles River X	1999	Venture Capital	5.0	4.4	0.6	2.2	0.0	0.49	1.30	-14.9	7.1
Chales River XI	2000	Venture Capital	1.8	1.8	0.0	2.5	0.0	1.39	1.44	5.5	8.5
Rimco	2001	Buyout	2.0	2.0	0.0	7.7	0.0	3.83	1.64	29.1	13.0
Leeds IV	2004	Buyout	5.0	5.1	0.1	9.7	<0.1	1.91	1.58	8.0	9.1
Euro Choice II	2004	Fund of Funds	5.5	5.5	0.3	8.0	0.0	1.46	1.58	7.0	9.1
Ascent Venture IV	2004	Venture Capital	2.5	2.5	0.0	0.4	0.0	0.17	1.58	-27.2	9.1
Mesirow IX	2005	Buyout	4.0	3.8	0.2	2.0	0.1 <sup>2</sup>	0.55	1.46	-7.0	8.2
Levine Lichtman DV	2005	Special Situations	3.0	4.9	0.0	5.1	0.0	1.04	1.46	1.3	8.2
Ascend Ventures II	2005	Venture Capital	2.5	2.3	0.2	1.0	0.1	0.46	1.46	-8.4	8.2
Globespan V	2006	Venture Capital	5.0	4.9	0.1	9.4	2.7	2.49	1.44	13.0	7.4
DN Partners II	2007	Buyout	5.0	2.4	2.6	0.0	2.4 <sup>3</sup>	1.03	1.70	0.3	11.1
TRG II	2007	Growth Equity	7.5	7.4	0.2	8.0	1.5	1.29	1.70	4.4	11.1

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

<sup>2</sup> The fair market value of Mesirow Financial Capital Partners IX, L.P. is an estimate provided by the GP due to the timing of the report.

<sup>3</sup> The fair market value of DN Partners II, L.P. is a cash adjusted estimate due to the timing of the report.

### Fund Performance: Sorted By Vintage And Strategy (con't)

By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Siguler Guff III	2008	Fund of Funds	6.0	5.8	0.2	9.2	0.5	1.66	1.63	10.6	12.3
Landmark XIV	2008	Secondary	6.0	5.8	0.2	7.4	0.5	1.35	1.63	9.7	12.3
Lexington VII	2009	Secondary	10.0	9.0	1.1	13.2	1.3	1.63	1.79	13.7	17.9
Leeds V	2010	Buyout	2.5	3.5	0.0	5.6	0.0	1.59	1.92	11.7	16.7
Ascent Venture V	2011	Venture Capital	5.0	5.0	0.2	4.5	3.2	1.53	1.80	6.6	16.0
Euro Choice V	2012	Fund of Funds	6.1	5.9	1.4	5.7	3.1	1.49	1.80	7.9	15.3
Summit Growth IX	2016	Growth Equity	10.0	11.7	18.4	12.6	14.8	2.33	1.98	33.5	20.3
Audax Mezz IV	2016	Private Debt	10.0	8.7	2.9	7.6	3.1	1.22	1.30	10.8	9.76
LLR V	2017	Buyout	12.0	11.6	1.9	3.8	16.3	1.72	1.75	20.7	21.2
Wellspring VI	2017	Buyout	12.0	11.6	1.3	2.5	16.0	1.59	1.75	22.5	21.2
HV Co-Invest V	2018	Buyout	12.0	9.3	2.7	1.9	13.6	1.67	1.62	23.6	24.1
Ironsides Direct V	2018	Buyout	12.0	11.9	2.1	3.2	18.5	1.82	1.62	19.1	24.1
Trilantic VI	2018	Buyout	12.0	10.5	2.6	1.1	13.7	1.41	1.62	17.7	24.1

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

### Fund Performance: Sorted By Vintage And Strategy (con't)

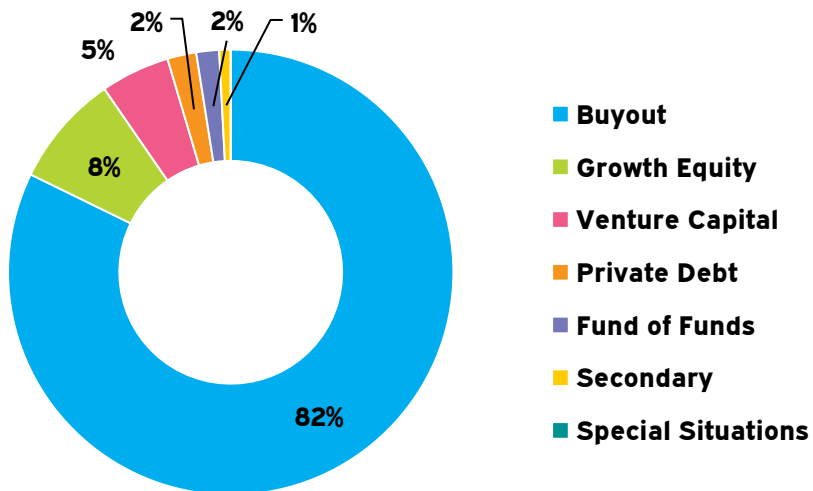
By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Charlesbank Tech	2019	Buyout	12.0	8.6	4.1	1.1	16.5	2.05	1.35	72.6	19.8
FS Equity VIII	2019	Buyout	12.0	8.9	3.1	0.3	14.5	1.67	1.35	30.0	19.8
Ridgemont III	2019	Buyout	12.0	12.0	2.4	5.0	17.9	1.92	1.35	46.2	19.8
Searchlight III	2019	Buyout	12.0	7.9	5.7	3.6	9.6	1.66	1.35	35.4	19.8
Waud V	2019	Buyout	10.0	9.9	0.2	0.1	14.7	1.50	1.35	30.6	19.8
Kohlberg IX	2020	Buyout	10.0	6.4	3.8	0.3	8.5	1.36	1.25	NM	NM
Ironsides Opps II	2020	Private Debt	20.0	1.7	18.4	0.1	1.5	0.92	1.15 <sup>2</sup>	NM	NM
Summit Venture V	2020	Venture Capital	10.0	5.2	4.8	0.0	5.1	0.99	1.25	NM	NM
HV Co-Invest VI	2021	Buyout	13.0	3.3	9.8	0.0	3.0 <sup>2</sup>	0.92	1.02	NM	NM
Ironsides Co-Inv VI	2021	Buyout	13.0	12.7	0.7	0.3	14.2	1.14	1.02	NM	NM
Summit Growth XI	2021	Growth Equity	13.0	1.5	11.5	0.0	1.5	1.05	1.02	NM	NM
Kohlberg X	2022	Buyout	10.0	0.0	10.0	0.0	0.0	NA	NA	NA	NA
Ridgemont IV	2022	Buyout	13.0	0.0	13.0	0.0	0.0	NA	NA	NA	NA
<b>Total</b>			<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>1.52</b>		<b>9.4</b>	

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

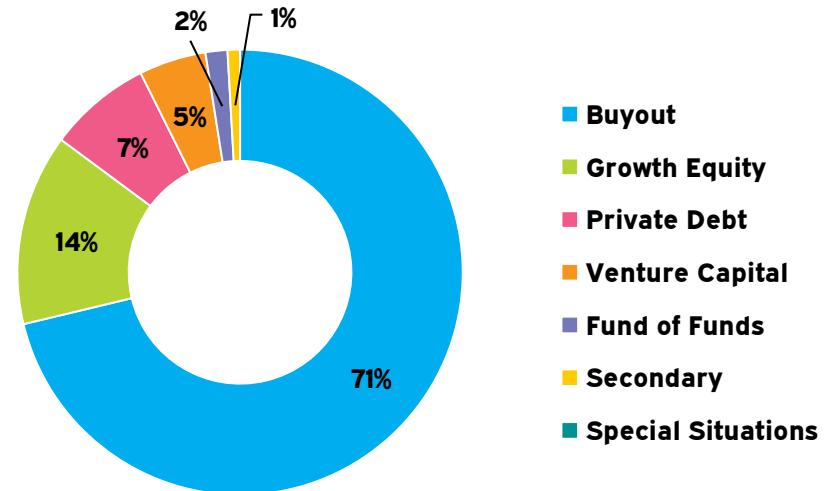
<sup>2</sup> The fair market value of Harbourvest Partners Co-Investment Fund Vi, L.P. is a cash adjusted estimate due to the timing of the report.

#### By Strategy

Percent of FMV

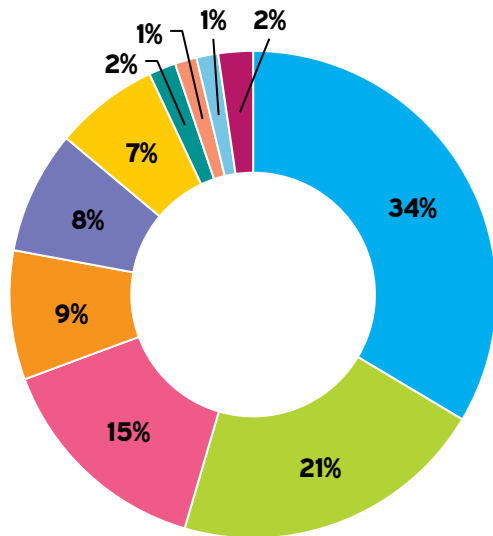


Percent of Exposure

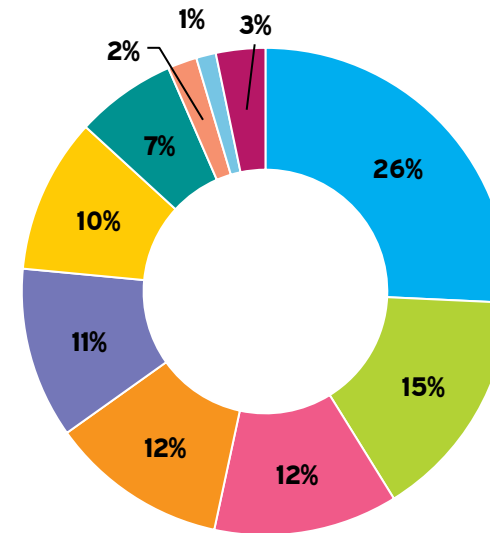


#### By Vintage

#### Percent of FMV

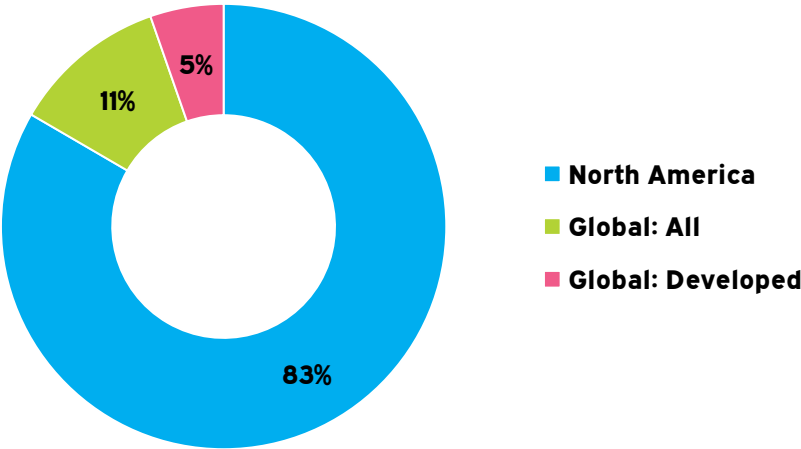


#### Percent of Exposure

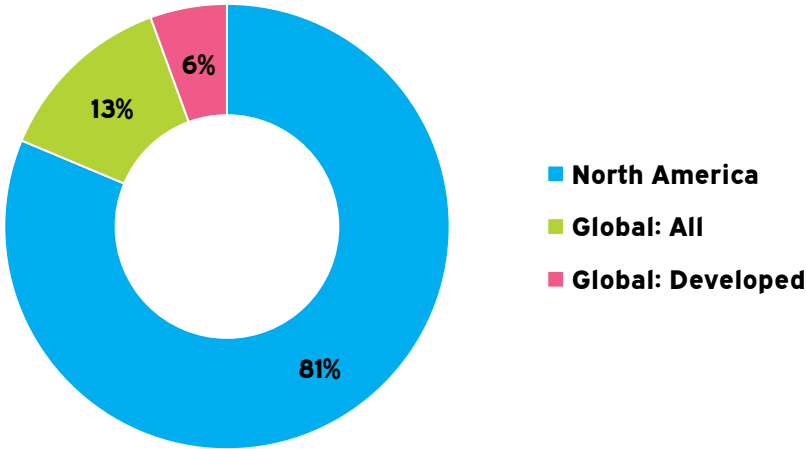


#### By Geographic Focus

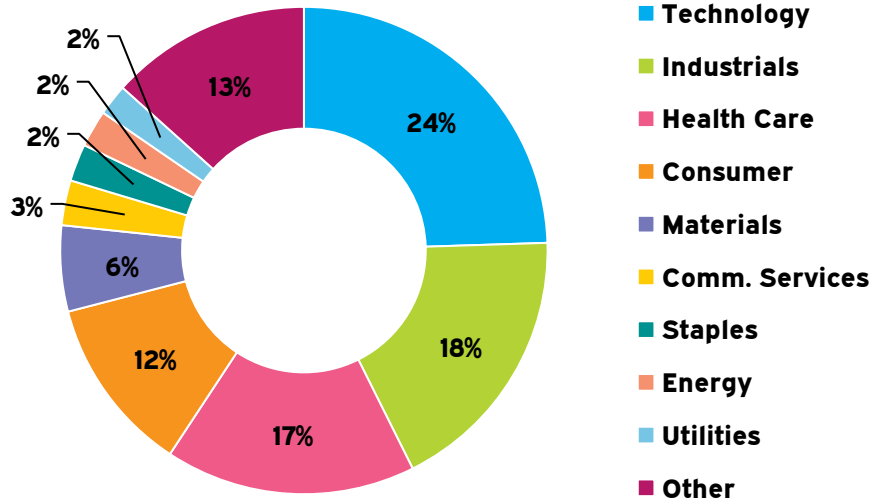
Percent of FMV



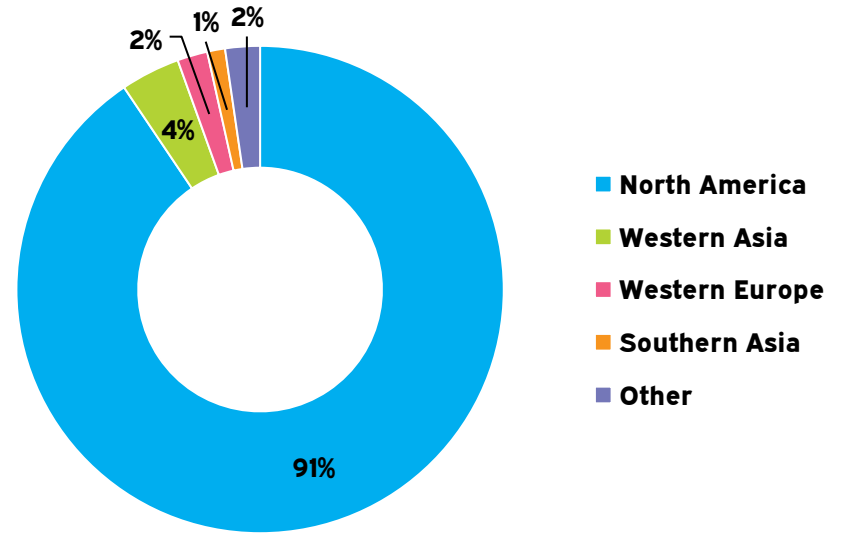
Percent of Exposure



By Sector  
Percent of FMV



By Geography  
Percent of FMV

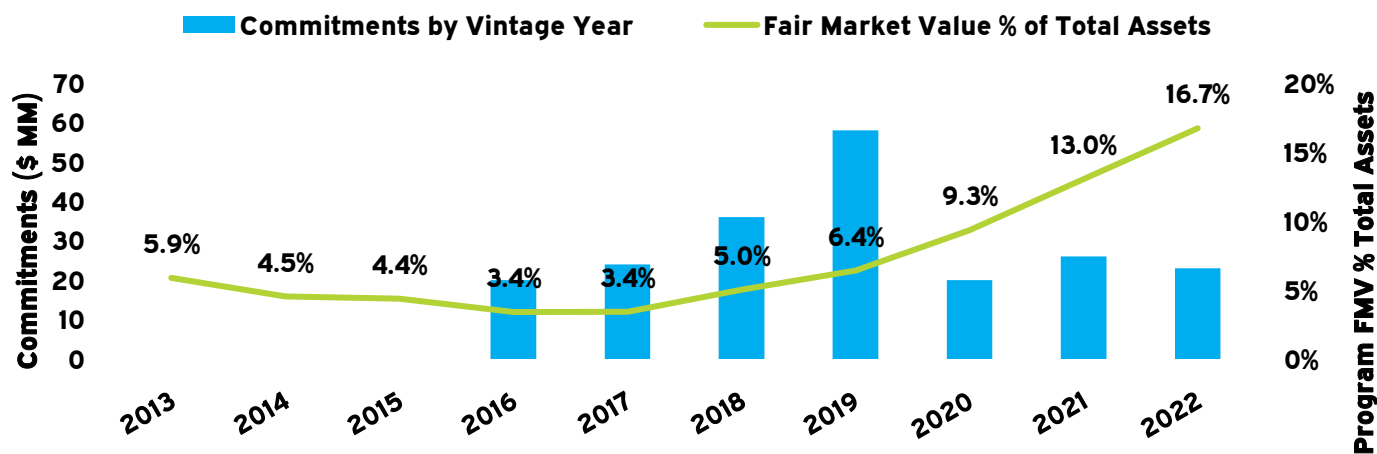




## **Private Equity Program**

### Introduction

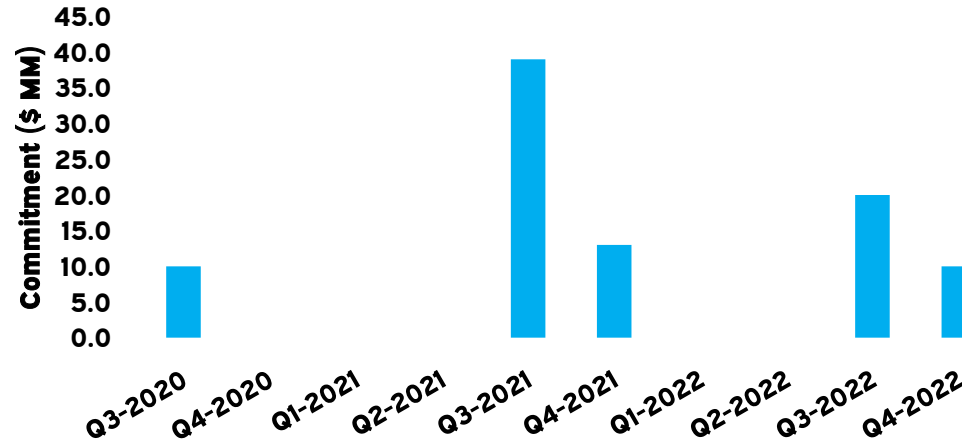
As of December 31, 2022, the Plymouth County Retirement Association (“PCRA”) had committed \$327.1 million to 39 partnerships. PCRA maintains a 13% allocation to private equity. As of year-end, the fair market value of PCRA’s private equity program was \$218.3 million, representing 16.7% of total assets.



Program Status	
No. of Investments	39
Committed (\$ MM)	327.1
Contributed (\$ MM)	238.1
Distributed (\$ MM)	145.1
Fair Market Value (\$ MM)	218.3

Performance Since Inception	
	Program
DPI	0.61x
TVPI	1.52x
IRR	9.4%

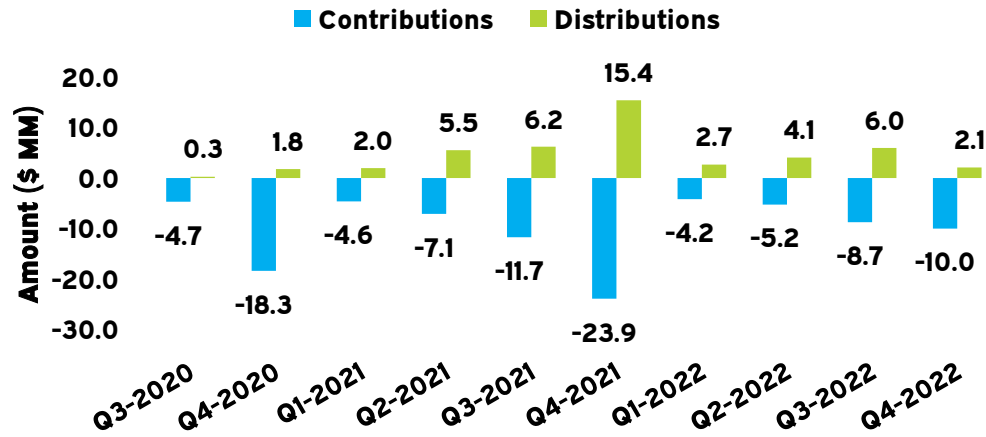
### Commitments Recent Quarterly Commitments



### Commitments This Quarter

Fund	Strategy	Region	Amount (MM)
Kohlberg X	Buyout	North America	10.00

### Cash Flows Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$MM)
Ironsides Opps II	2020	Private Debt	North America	1.68
FS Equity VIII	2019	Buyout	North America	1.31
HV Co-Invest VI	2021	Buyout	Global: All	1.30

#### Largest Distributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$MM)
Globespan V	2006	Venture Capital	North America	0.53
HV Co-Invest V	2018	Buyout	North America	0.47
Ascent Venture V	2011	Venture Capital	North America	0.44

## Significant Events

- During the fourth quarter of 2022, PCRA contributed \$10.0 million to its private equity partnerships and received \$2.1 million in distributions, representing a \$7.9 million cash outflow.
- Ironsides Opportunities Fund II, L.P. called \$1.68 million to fund new investments, as well as management fees and partnership expenses.
- FS Equity Partners VIII, L.P. called \$1.31 million during the fourth quarter, primarily to fund two new investments as well as partnership expenses.
- Harbourvest Partners Co-Investment Fund VI, L.P. called \$1.30 million during the fourth quarter to partially repay the credit facility used to fund new investments.
- Globespan Capital Partners V, L.P. distributed \$0.53 million during the fourth quarter. Proceeds stemmed from the sale of an existing investment.
- Harbourvest Partners Co-Investment Fund V, L.P. distributed \$0.47 million as proceeds from underlying fund investments.
- Ascent Venture Partners V, L.P. distributed \$0.44 million during the fourth quarter. Proceeds stemmed from the sale of an existing investment.
- Also during the fourth quarter of 2022, PCRA committed \$10.0 million to Kohlberg Investors X, L.P., representing diversified middle market buyout exposure.

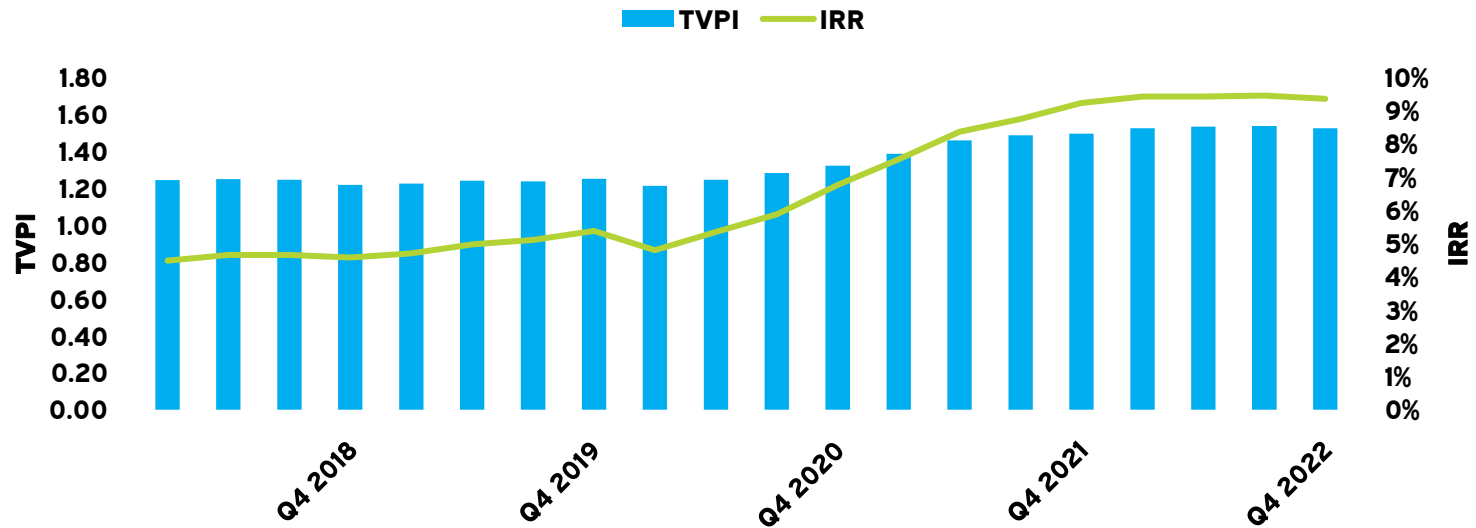
#### By Strategy

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	Exposure (\$M)	DPI (X)	TVPI (X)	IRR (%)
Buyout	21	198.1	144.1	66.3	48.3	179.5	245.8	0.34	1.58	11.9
Fund of Funds	3	17.6	17.3	1.9	22.9	3.6	5.5	1.33	1.54	8.5
Growth Equity	3	30.5	20.5	30.1	20.5	17.8	47.9	1.00	1.87	12.8
Private Debt	2	30.0	10.4	21.2	7.6	4.6	25.8	0.73	1.17	10.1
Secondary	2	16.0	14.8	1.3	20.6	1.8	3.1	1.39	1.52	12.4
Special Situations	1	3.0	4.9	0.0	5.1	0.0	0.0	1.04	1.04	1.3
Venture Capital	7	31.8	26.1	5.9	20.0	11.0	16.9	0.77	1.19	2.4
<b>Total</b>	<b>39</b>	<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>345.0</b>	<b>0.61</b>	<b>1.52</b>	<b>9.4</b>

### By Vintage

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market		DPI (X)	TVPI (X)	IRR (%)
						Value (\$M)	Exposure (\$M)			
1998	1	2.6	2.7	0.0	0.1	0.0	0.0	0.04	0.04	-25.5
1999	1	5.0	4.4	0.6	2.2	0.0	0.6	0.49	0.49	-14.9
2000	1	1.8	1.8	0.0	2.5	0.0	0.0	1.39	1.39	5.5
2001	1	2.0	2.0	0.0	7.7	0.0	0.0	3.83	3.83	29.1
2004	3	13.0	13.1	0.5	18.2	0.0	0.5	1.39	1.39	4.8
2005	3	9.5	11.0	0.3	8.1	0.2	0.5	0.73	0.75	-5.2
2006	1	5.0	4.9	0.1	9.4	2.7	2.8	1.94	2.49	13.0
2007	2	12.5	9.7	2.8	8.0	3.9	6.7	0.82	1.22	2.9
2008	2	12.0	11.7	0.3	16.6	0.9	1.3	1.42	1.50	10.3
2009	1	10.0	9.0	1.1	13.2	1.3	2.5	1.48	1.63	13.7
2010	1	2.5	3.5	0.0	5.6	0.0	0.0	1.59	1.59	11.7
2011	1	5.0	5.0	0.2	4.5	3.2	3.3	0.90	1.53	6.6
2012	1	6.1	5.9	1.4	5.7	3.1	4.5	0.96	1.49	7.9
2016	2	20.0	20.4	21.3	20.1	17.8	39.1	0.99	1.86	26.6
2017	2	24.0	23.3	3.2	6.3	32.3	35.5	0.27	1.66	21.5
2018	3	36.0	31.7	7.4	6.2	45.8	53.2	0.20	1.64	19.9
2019	5	58.0	47.2	15.5	10.1	73.3	88.8	0.21	1.76	41.3
2020	3	40.0	13.3	27.0	0.3	15.1	42.1	0.03	1.16	NM
2021	3	39.0	17.4	21.9	0.3	18.7	40.6	0.02	1.09	NM
2022	2	23.0	0.0	23.0	0.0	0.0	23.0	0.00	NA	NA
<b>Total</b>	<b>39</b>	<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>345.0</b>	<b>0.61</b>	<b>1.52</b>	<b>9.4</b>

#### Since Inception Performance Over Time

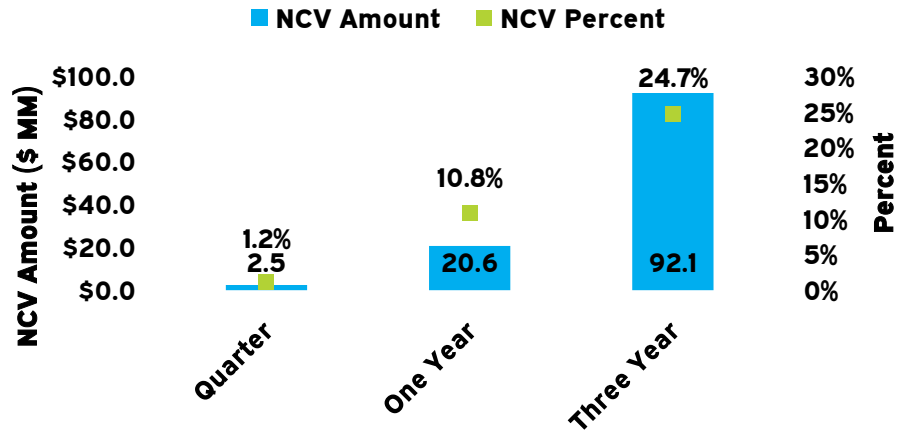


#### Horizon IRRs

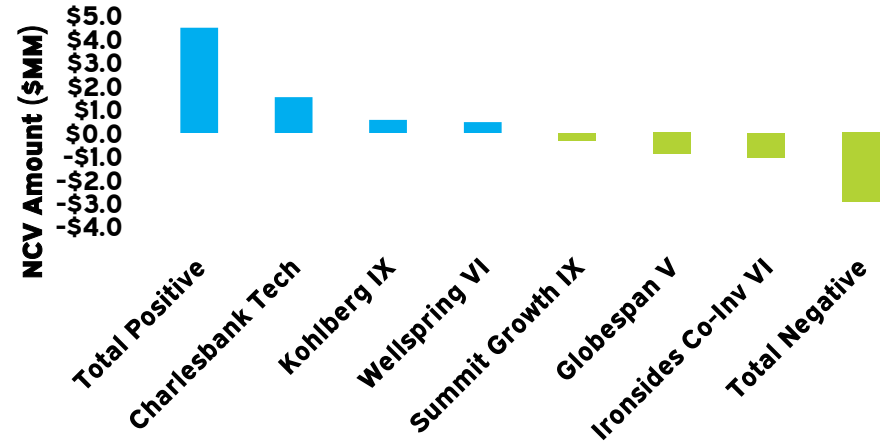
	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	10.9	25.4	21.0	14.5	9.4
Public Market Equivalent	-17.9	-0.2	2.7	6.3	5.9



#### Periodic NCV



#### 1 Quarter Drivers Of NCV



### Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Senior Tour Players	1998	Buyout	2.6	2.7	0.0	0.1	0.0	0.04	1.38	-25.5	8.0
Charles River X	1999	Venture Capital	5.0	4.4	0.6	2.2	0.0	0.49	1.30	-14.9	7.1
Chales River XI	2000	Venture Capital	1.8	1.8	0.0	2.5	0.0	1.39	1.44	5.5	8.5
Rimco	2001	Buyout	2.0	2.0	0.0	7.7	0.0	3.83	1.64	29.1	13.0
Leeds IV	2004	Buyout	5.0	5.1	0.1	9.7	<0.1	1.91	1.58	8.0	9.1
Euro Choice II	2004	Fund of Funds	5.5	5.5	0.3	8.0	0.0	1.46	1.58	7.0	9.1
Ascent Venture IV	2004	Venture Capital	2.5	2.5	0.0	0.4	0.0	0.17	1.58	-27.2	9.1
Mesirow IX	2005	Buyout	4.0	3.8	0.2	2.0	0.1 <sup>2</sup>	0.55	1.46	-7.0	8.2
Levine Leichtman DV	2005	Special Situations	3.0	4.9	0.0	5.1	0.0	1.04	1.46	1.3	8.2
Ascend Ventures II	2005	Venture Capital	2.5	2.3	0.2	1.0	0.1	0.46	1.46	-8.4	8.2
Globespan V	2006	Venture Capital	5.0	4.9	0.1	9.4	2.7	2.49	1.44	13.0	7.4
DN Partners II	2007	Buyout	5.0	2.4	2.6	0.0	2.4 <sup>3</sup>	1.03	1.70	0.3	11.1
TRG II	2007	Growth Equity	7.5	7.4	0.2	8.0	1.5	1.29	1.70	4.4	11.1

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

<sup>2</sup> The fair market value of Mesirow Financial Capital Partners IX, L.P. is an estimate provided by the GP due to the timing of the report.

<sup>3</sup> The fair market value of DN Partners II, L.P. is a cash adjusted estimate due to the timing of the report.

### Fund Performance: Sorted By Vintage And Strategy (con't)

By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Siguler Guff III	2008	Fund of Funds	6.0	5.8	0.2	9.2	0.5	1.66	1.63	10.6	12.3
Landmark XIV	2008	Secondary	6.0	5.8	0.2	7.4	0.5	1.35	1.63	9.7	12.3
Lexington VII	2009	Secondary	10.0	9.0	1.1	13.2	1.3	1.63	1.79	13.7	17.9
Leeds V	2010	Buyout	2.5	3.5	0.0	5.6	0.0	1.59	1.92	11.7	16.7
Ascent Venture V	2011	Venture Capital	5.0	5.0	0.2	4.5	3.2	1.53	1.80	6.6	16.0
Euro Choice V	2012	Fund of Funds	6.1	5.9	1.4	5.7	3.1	1.49	1.80	7.9	15.3
Summit Growth IX	2016	Growth Equity	10.0	11.7	18.4	12.6	14.8	2.33	1.98	33.5	20.3
Audax Mezz IV	2016	Private Debt	10.0	8.7	2.9	7.6	3.1	1.22	1.30	10.8	9.76
LLR V	2017	Buyout	12.0	11.6	1.9	3.8	16.3	1.72	1.75	20.7	21.2
Wellspring VI	2017	Buyout	12.0	11.6	1.3	2.5	16.0	1.59	1.75	22.5	21.2
HV Co-Invest V	2018	Buyout	12.0	9.3	2.7	1.9	13.6	1.67	1.62	23.6	24.1
Ironsides Direct V	2018	Buyout	12.0	11.9	2.1	3.2	18.5	1.82	1.62	19.1	24.1
Trilantic VI	2018	Buyout	12.0	10.5	2.6	1.1	13.7	1.41	1.62	17.7	24.1

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

### Fund Performance: Sorted By Vintage And Strategy (con't)

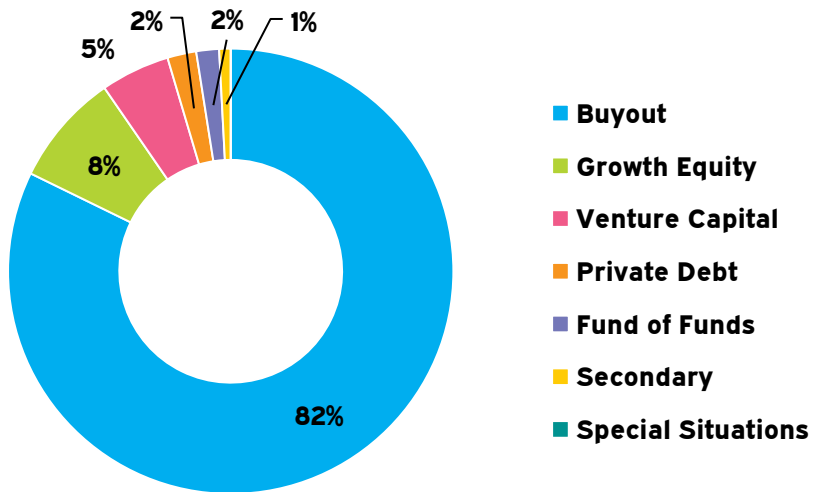
By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	TVPI (X)	Peer TVPI (X) <sup>1</sup>	IRR (%)	Peer IRR (%) <sup>1</sup>
Charlesbank Tech	2019	Buyout	12.0	8.6	4.1	1.1	16.5	2.05	1.35	72.6	19.8
FS Equity VIII	2019	Buyout	12.0	8.9	3.1	0.3	14.5	1.67	1.35	30.0	19.8
Ridgemont III	2019	Buyout	12.0	12.0	2.4	5.0	17.9	1.92	1.35	46.2	19.8
Searchlight III	2019	Buyout	12.0	7.9	5.7	3.6	9.6	1.66	1.35	35.4	19.8
Waud V	2019	Buyout	10.0	9.9	0.2	0.1	14.7	1.50	1.35	30.6	19.8
Kohlberg IX	2020	Buyout	10.0	6.4	3.8	0.3	8.5	1.36	1.25	NM	NM
Ironsides Opps II	2020	Private Debt	20.0	1.7	18.4	0.1	1.5	0.92	1.15 <sup>2</sup>	NM	NM
Summit Venture V	2020	Venture Capital	10.0	5.2	4.8	0.0	5.1	0.99	1.25	NM	NM
HV Co-Invest VI	2021	Buyout	13.0	3.3	9.8	0.0	3.0 <sup>2</sup>	0.92	1.02	NM	NM
Ironsides Co-Inv VI	2021	Buyout	13.0	12.7	0.7	0.3	14.2	1.14	1.02	NM	NM
Summit Growth XI	2021	Growth Equity	13.0	1.5	11.5	0.0	1.5	1.05	1.02	NM	NM
Kohlberg X	2022	Buyout	10.0	0.0	10.0	0.0	0.0	NA	NA	NA	NA
Ridgemont IV	2022	Buyout	13.0	0.0	13.0	0.0	0.0	NA	NA	NA	NA
<b>Total</b>			<b>327.1</b>	<b>238.1</b>	<b>126.6</b>	<b>145.1</b>	<b>218.3</b>	<b>1.52</b>		<b>9.4</b>	

<sup>1</sup> Preqin, Private Equity – All, Net Median as of December 31, 2022 (unless otherwise noted).

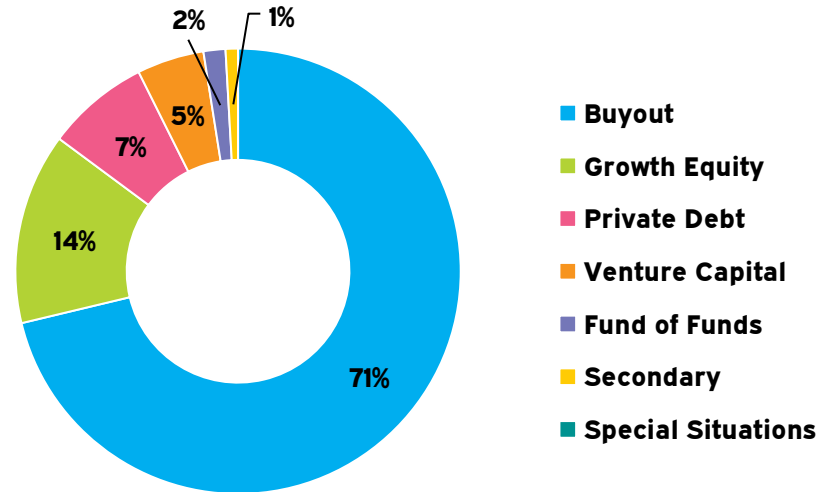
<sup>2</sup> The fair market value of Harbourvest Partners Co-Investment Fund Vi, L.P. is a cash adjusted estimate due to the timing of the report.

#### By Strategy

Percent of FMV

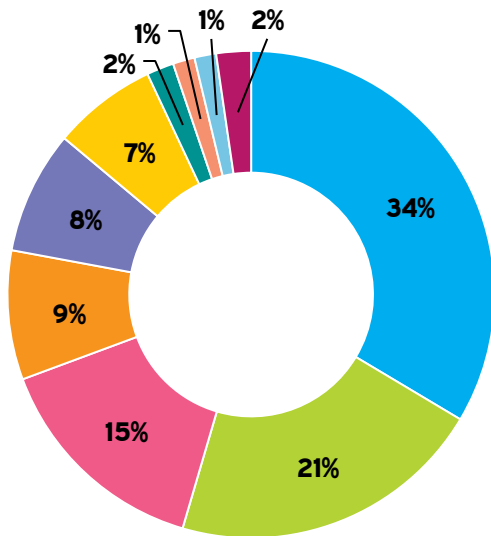


Percent of Exposure

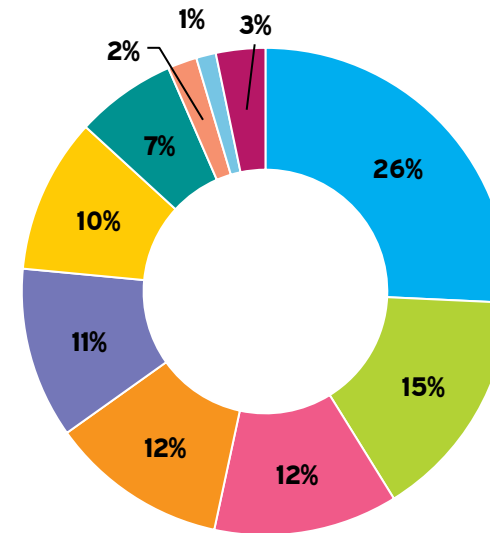


#### By Vintage

#### Percent of FMV

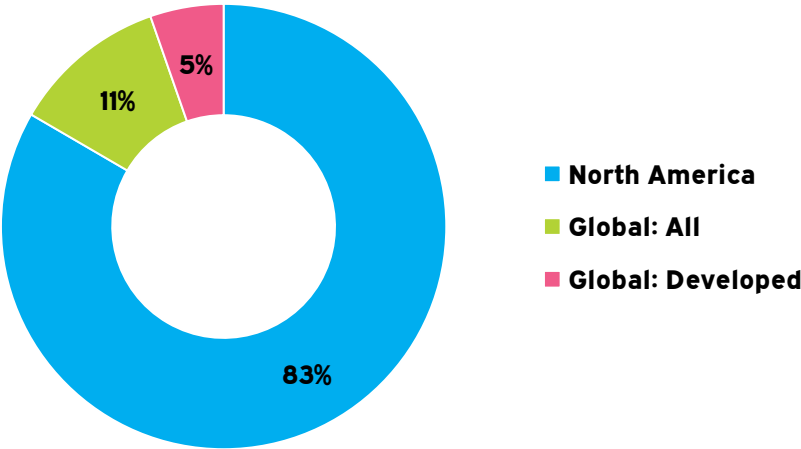


#### Percent of Exposure

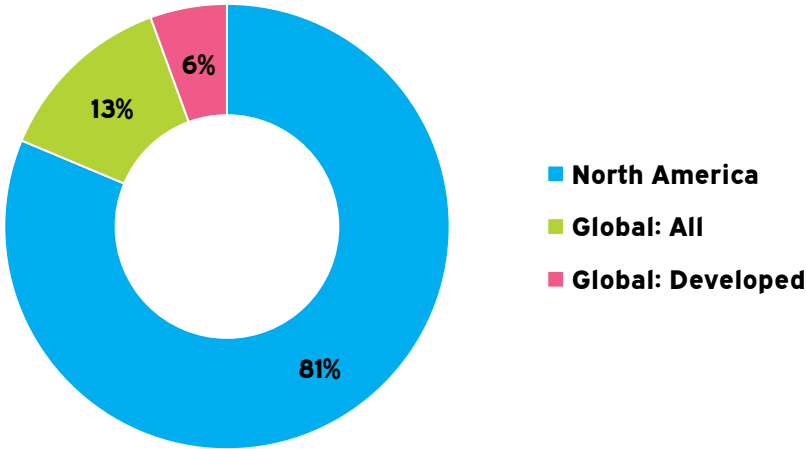


### By Geographic Focus

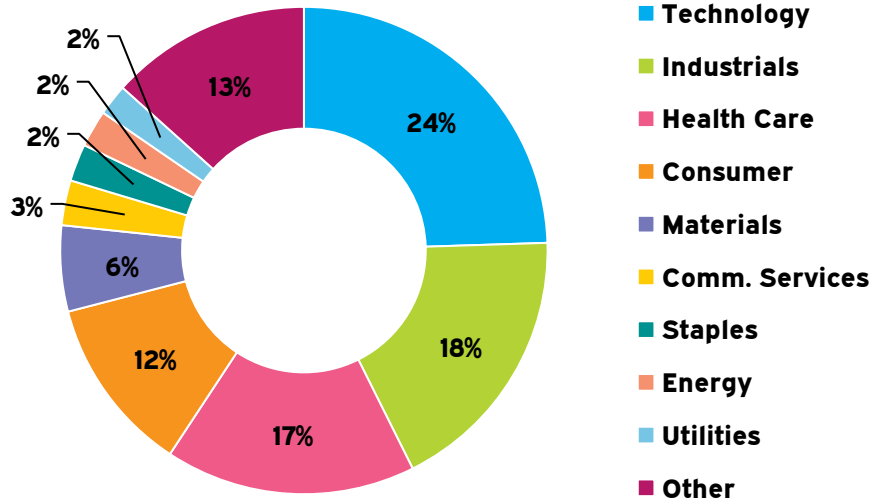
Percent of FMV



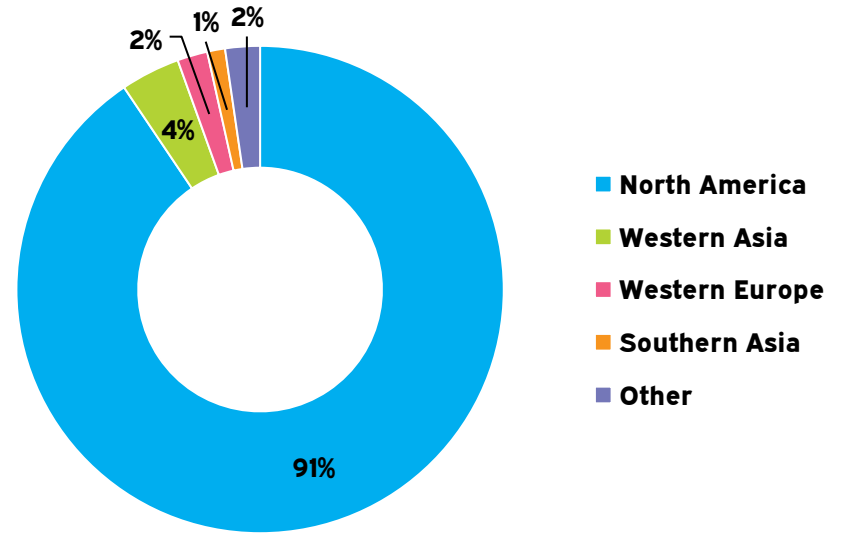
Percent of Exposure



By Sector  
Percent of FMV



By Geography  
Percent of FMV

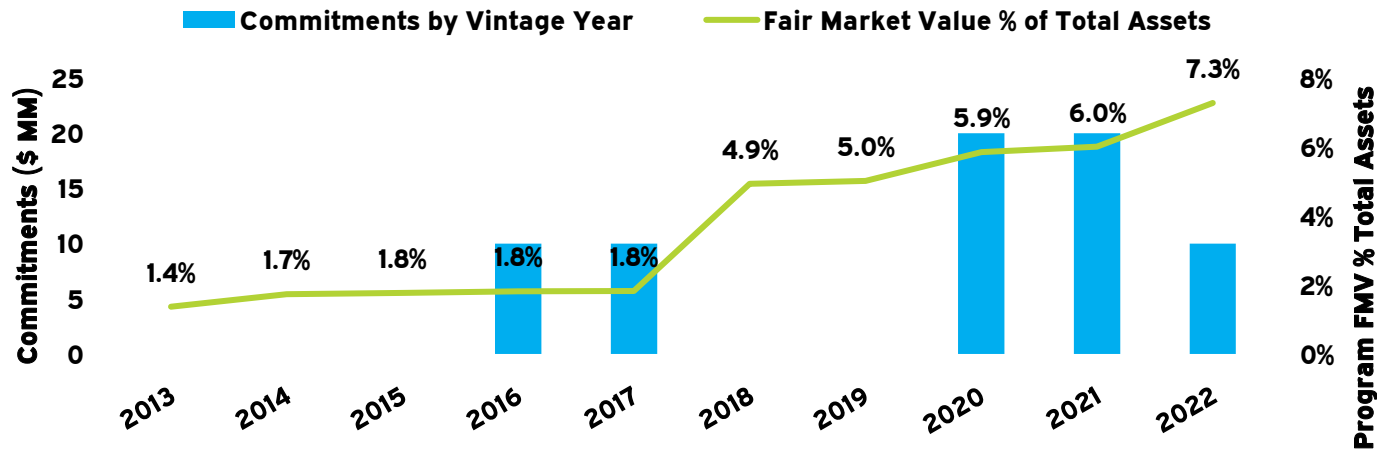




# Real Assets Program

### Introduction

As of December 31, 2022, the Plymouth County Retirement Association (“PCRA”) had committed \$150.0 million to 11 partnerships. No new commitments were made during the fourth quarter of 2022. The fair market value of PCRA’s Real Assets program was \$95.0 million, representing 7.3% of total assets, exceeding the program’s 6.0% target.



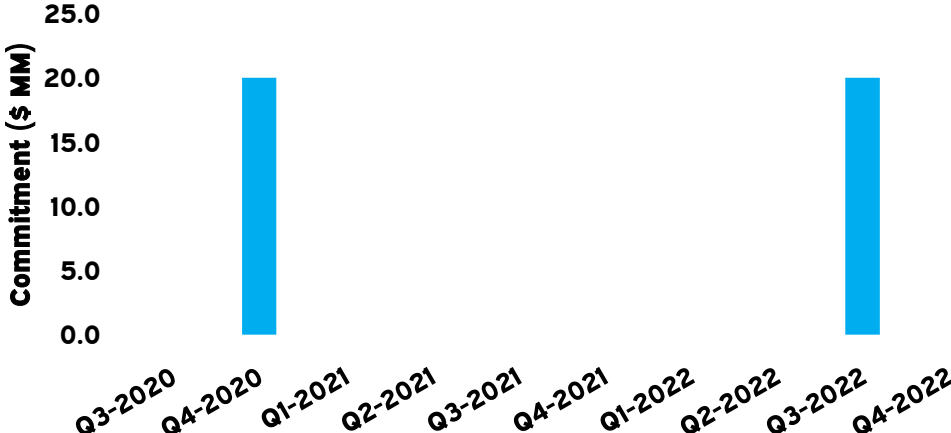
#### Program Status

No. of Investments	11
Committed (\$ MM)	150.0
Contributed (\$ MM)	91.8
Distributed (\$ MM)	24.8
Fair Market Value (\$ MM)	95.0

#### Performance Since Inception

	Program
DPI	0.27x
TVPI	1.30x
IRR	6.4%

**Commitments**  
Recent Quarterly Commitments

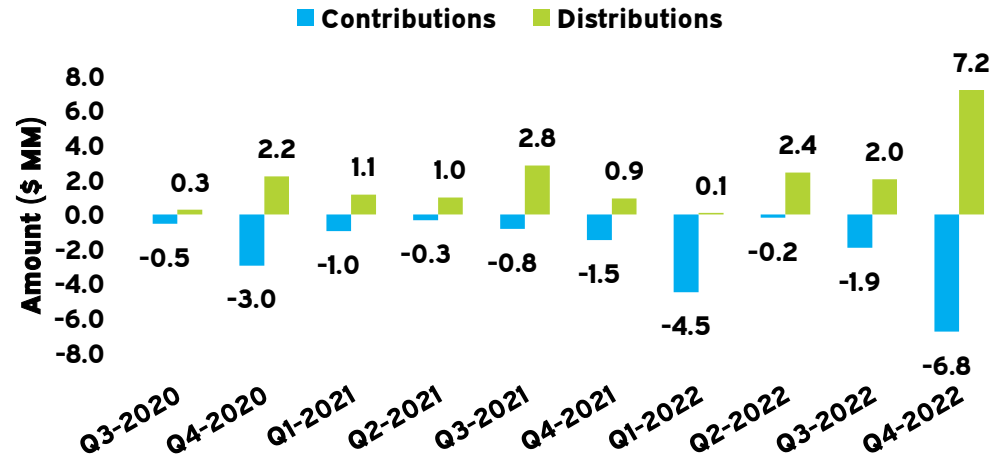


**Commitments This Quarter**

Fund	Strategy	Region	Amount (MM)
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No new commitments made during the quarter.

### Cash Flows Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$MM)
Climate Adaptive IS	2021	Value Added	North America	3.44
GIP IV	2020	Value Added	Global: Developed	1.28
BlackRock GRPIF III	2020	Value Added	Global: All	1.18

#### Largest Distributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$MM)
Basalt IS II	2017	Core	Global: Developed	3.41
JPMorgan Maritime	2010	Opportunistic	Global: Developed	1.89
GIP III	2016	Value-Added	Global: Developed	1.26

### Significant Events

- During the fourth quarter of 2022, the Retirement Association contributed \$6.8 million to its private real assets partnerships and received \$7.2 million in distributions, representing a \$0.4 million net cash inflow.
- Climate Adaptive Infrastructure Fund I, L.P. called \$3.44 million during the fourth quarter, primarily to fund investments, as well as management fees, partnership expenses, and late closing interest. The capital call was offset by a \$0.25 million distribution stemming from interest received from existing investments, \$0.18 million of which was a recallable return of capital.
- Global Infrastructure Partners IV, L.P. called \$1.30 million during the fourth quarter, primarily to fund investments as well as management fees and partnership expenses. The capital call was offset by a \$0.02 million return of excess contributions previously called, resulting in a \$1.28 million net capital call.
- BlackRock Global Renewable Power Infrastructure Fund III, L.P. called \$1.18 million, primarily to fund the acquisition of a new project as well as existing investments.
- Basalt Infrastructure Partners Fund II, L.P. distributed \$3.41 million during the fourth quarter. Proceeds stemmed from the sale of two existing assets. Of the total distribution, \$0.06 million was a recallable return of capital, thereby increasing the Retirement Association's unfunded commitment.
- JPMorgan Global Maritime Investment Fund, L.P. distributed \$1.89 million during the fourth quarter. Proceeds stemmed from the sale of six vessel investments and from the refinancing of other vessel investments.
- Global Infrastructure Partners III, L.P. distributed \$1.26 million during the quarter. Proceeds stemmed from dividend proceeds from existing investments.

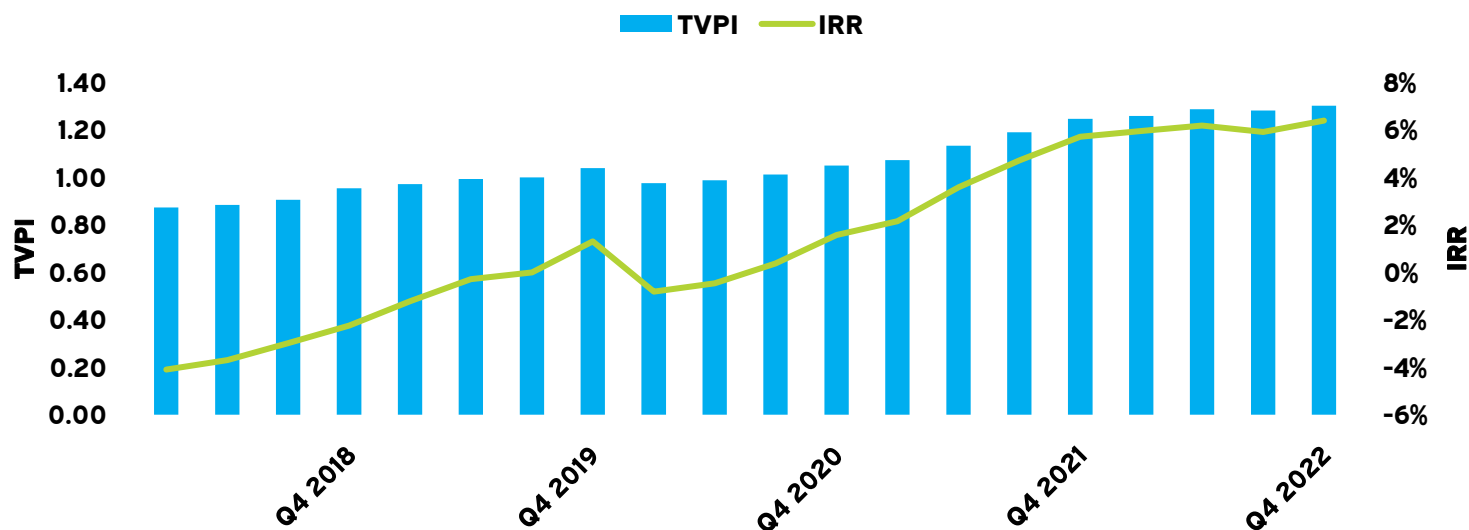
### By Strategy

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining		DPI (X)	TVPI (X)	IRR (%)
						Value (\$M)	Exposure (\$M)			
Core	2	70.0	44.4	28.1	9.3	53.9	82.0	0.21	1.42	10.6
Natural Resources	2	10.0	10.0	0.0	5.9	5.2	5.2	0.58	1.10	1.1
Opportunistic	1	10.0	10.0	0.3	4.5	7.8	8.1	0.45	1.23	2.8
Value-Added	6	60.0	27.3	35.1	5.2	28.0	63.2	0.19	1.22	10.3
<b>Total</b>	<b>11</b>	<b>150.0</b>	<b>91.8</b>	<b>63.5</b>	<b>24.8</b>	<b>95.0</b>	<b>158.5</b>	<b>0.27</b>	<b>1.30</b>	<b>6.4</b>

### By Vintage

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining		DPI (X)	TVPI (X)	IRR (%)
						Value (\$M)	Exposure (\$M)			
Open-end Fund	1	60.0	35.0	25.0	3.4	47.1	72.1	0.10	1.44	11.0
2010	2	15.0	15.0	0.3	8.5	11.6	11.8	0.56	1.33	3.7
2011	1	5.0	5.0	0.0	1.9	1.4	1.4	0.37	0.66	-4.9
2016	1	10.0	10.2	1.1	4.6	10.3	11.4	0.46	1.47	10.6
2017	1	10.0	9.4	3.1	5.8	6.8	9.9	0.62	1.34	9.1
2020	2	20.0	12.0	8.9	0.3	12.4	21.2	0.02	1.06	NM
2021	2	20.0	4.5	15.8	0.2	4.7	20.5	0.06	1.10	NM
2022	1	10.0	0.7	9.3	0.0	0.6	10.0	0.00	0.94	NM
<b>Total</b>	<b>11</b>	<b>150.0</b>	<b>91.8</b>	<b>63.5</b>	<b>24.8</b>	<b>95.0</b>	<b>158.5</b>	<b>0.27</b>	<b>1.30</b>	<b>6.4</b>

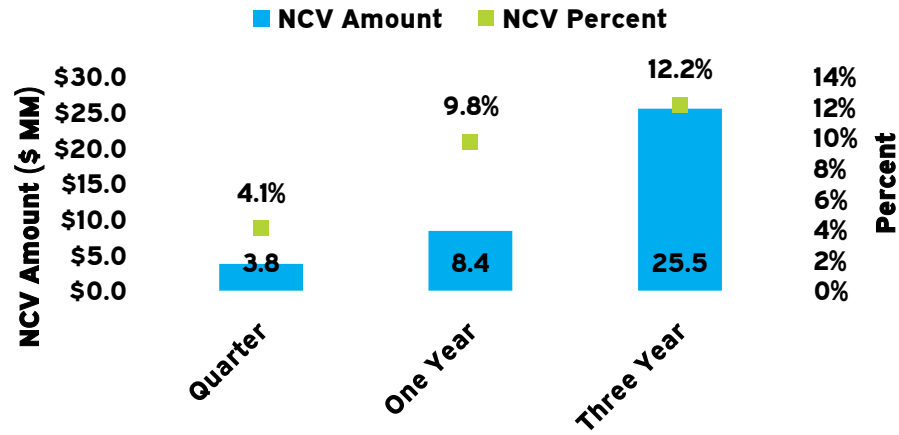
#### Since Inception Performance Over Time



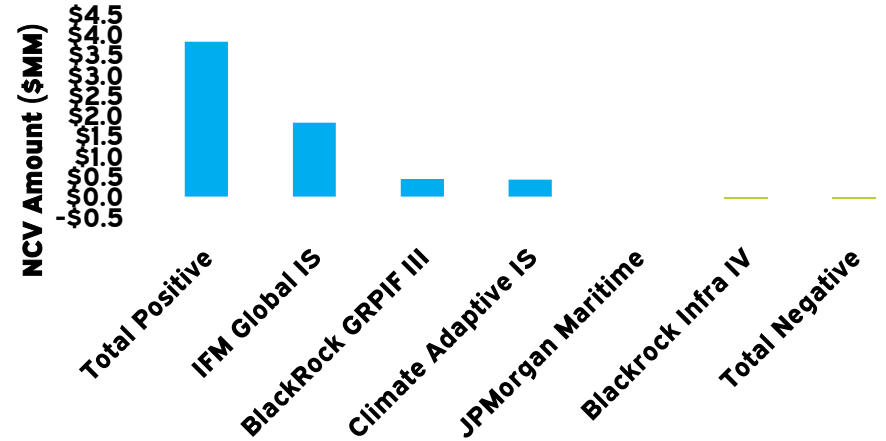
#### Horizon IRRs

	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	9.7	11.2	10.2	6.9	6.4
Public Market Equivalent	-2.2	8.5	7.9	7.4	7.4

#### Periodic NCV



#### 1 Quarter Drivers Of NCV





	4Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Since Inception (%)	Inception Date
IFM Global Infrastructure	4.0	8.2	9.3	NA	NA	10.7	10/01/2018
<i>CPI+3%</i>	0.7	9.6	8.1	NA	NA	7.0	

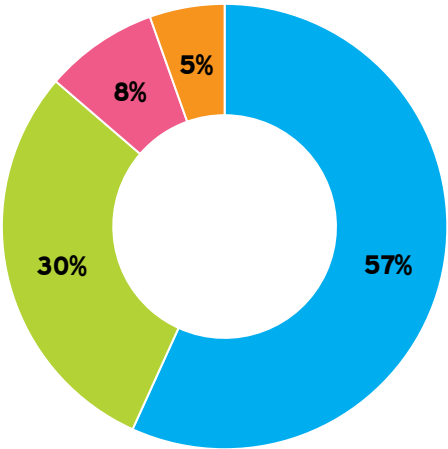
Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Strategy	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Remaining Value (\$M)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
IFM Global IS	Open-end	Core	60.0	35.0	25.0	3.4	47.1	1.44	NA	11.0	NA
Timbervest III	2010	Natural Resources	5.0	5.0	0.0	4.0	3.7	1.55	1.40	5.1	13.2
JPMorgan Maritime	2010	Opportunistic	10.0	10.0	0.3	4.5	7.8 <sup>1</sup>	1.23	1.40	2.8	13.2
BTG Global Timber	2011	Natural Resources	5.0	5.0	0.0	1.9	1.4	0.66	1.26	-4.9	8.0
GIP III	2016	Value-Added	10.0	10.2	1.1	4.6	10.3	1.47	1.49	10.6	12.1
Basalt IS II	2017	Core	10.0	9.4	3.1	5.8	6.8	1.34	1.43	9.1	14.3
BlackRock GRPIF III	2020	Value-Added	10.0	4.1	6.1	0.3	4.3	1.10	1.17	NM	NM
GIP IV	2020	Value-Added	10.0	7.8	2.8	0.0	8.1	1.03	1.17	NM	NM
Climate Adaptive IS	2021	Value-Added	10.0	3.4	6.9	0.2	3.6	1.12	1.14	NM	NM
ISQ IS III	2021	Value-Added	10.0	1.1	8.9	0.0	1.1	1.04	1.14	NM	NM
Blackrock Infra IV	2022	Value-Added	10.0	0.7	9.3	0.0	0.6	0.94	1.09	NM	NM
<b>Total</b>			<b>150.0</b>	<b>91.8</b>	<b>63.5</b>	<b>24.8</b>	<b>95.0</b>	<b>1.30</b>		<b>6.4</b>	

<sup>1</sup> The fair market value of JPMorgan Global Maritime Investment Fund, L.P. is a cash adjusted estimate due to the timing of the report.

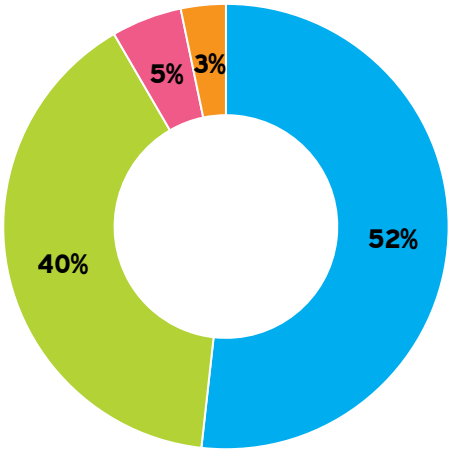
### By Strategy

Percent of FMV



- Core
- Value-Added
- Opportunistic
- Natural Resources

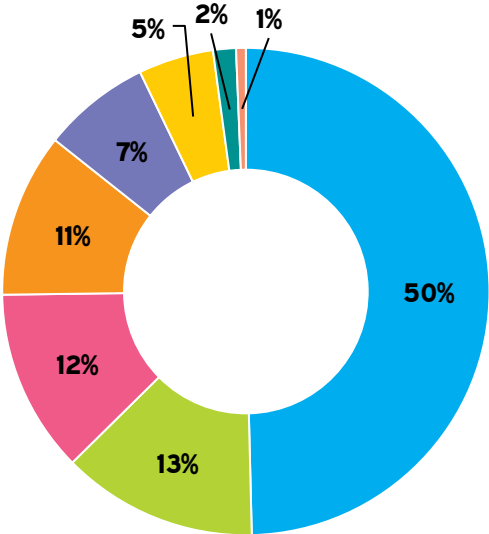
Percent of Exposure



- Core
- Value-Added
- Opportunistic
- Natural Resources

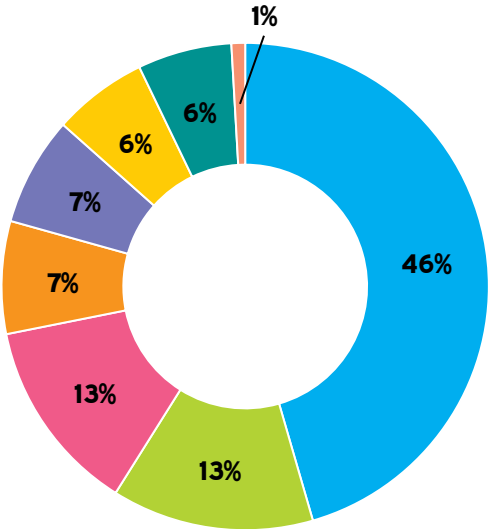
#### By Vintage

Percent of FMV



- Open-end
- 2020
- 2010
- 2016
- 2017
- 2021
- 2011
- 2022

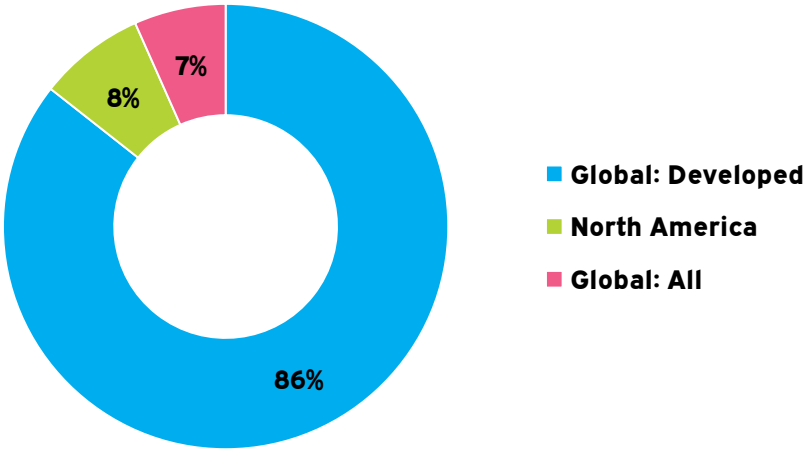
Percent of Exposure



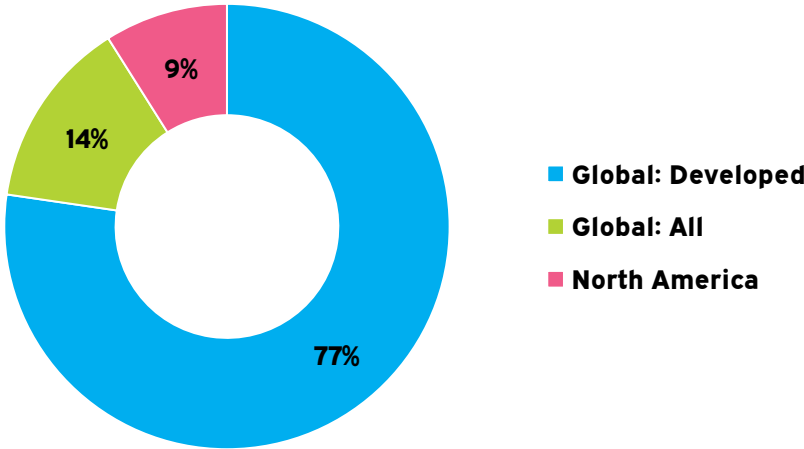
- Open-end
- 2020
- 2021
- 2010
- 2016
- 2022
- 2017
- 2011

**By Geographic Focus**

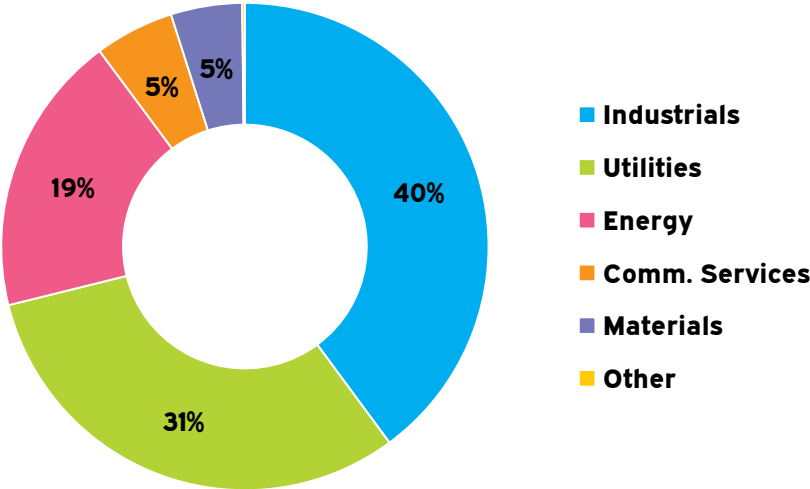
**Percent of FMV**



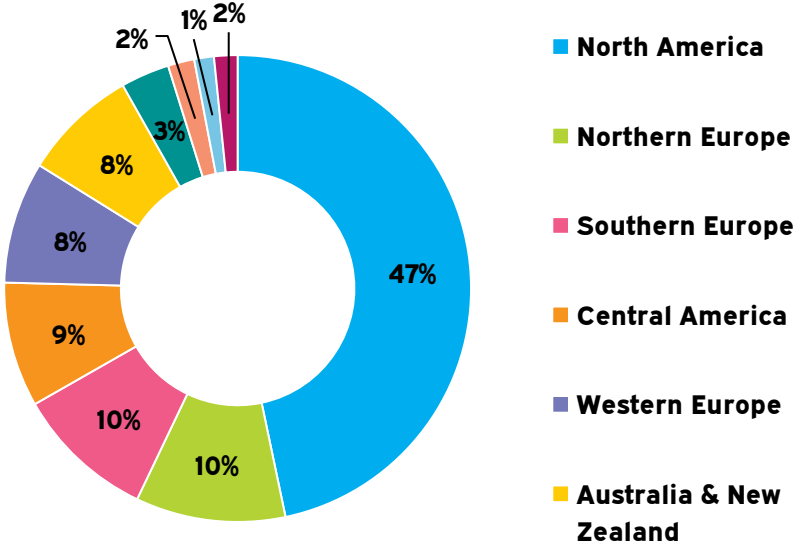
**Percent of Exposure**



By Sector  
Percent of FMV



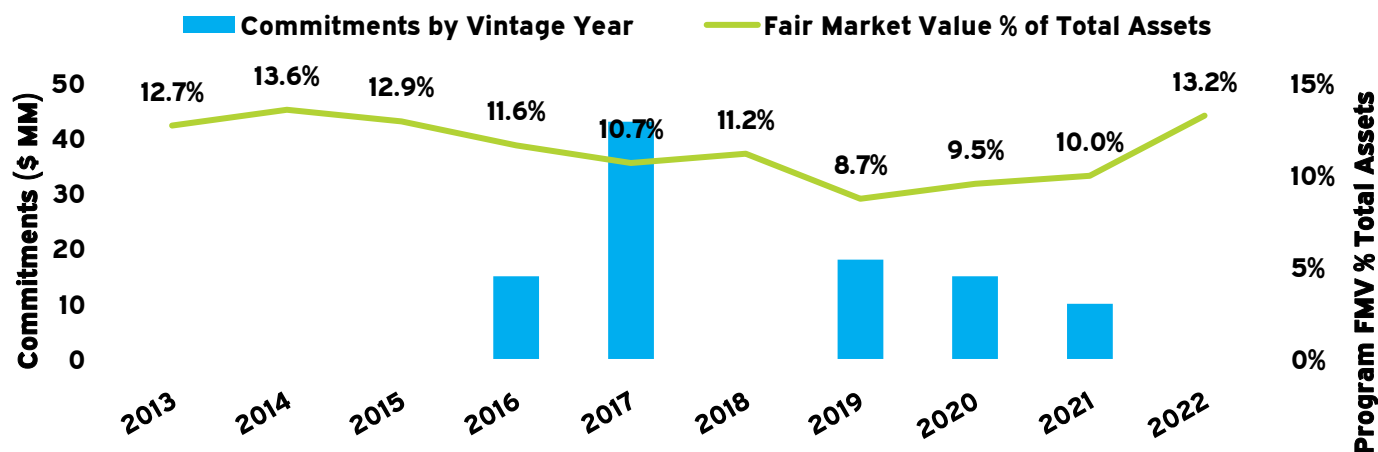
By Geography  
Percent of FMV



## **Real Estate Program**

### Introduction

As of December 31, 2022, the Plymouth County Retirement Association (“PCRA”) had committed \$293.0 million to 21 partnerships. As of year end, the fair market value of PCRA’s private Real Estate partnerships, in aggregate, was \$172.6 million. The fair market value of PCRA’s Real Estate program represents 13.2% of total assets.



#### Program Status

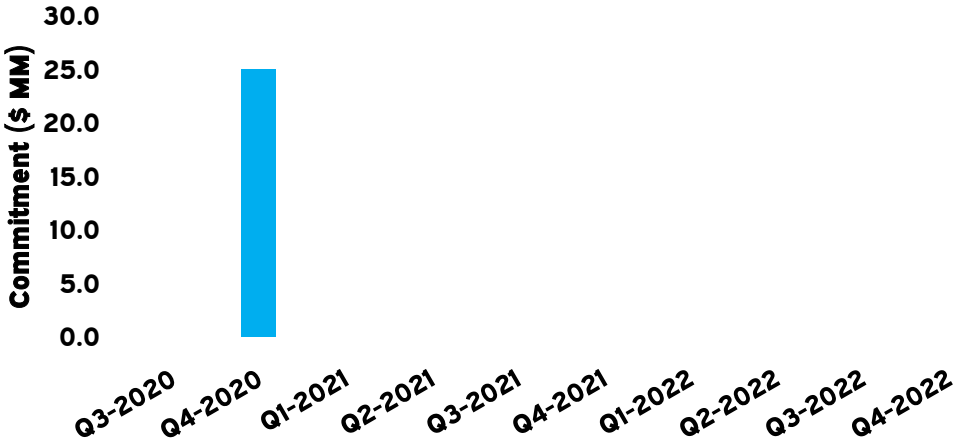
No. of Investments	21
Committed (\$ MM)	293.0
Contributed (\$ MM)	278.6
Distributed (\$ MM)	227.5
Fair Market Value (\$ MM)	172.6

#### Performance Since Inception

	Program
DPI	0.82x
TVPI	1.43x
IRR	6.8%



Commitments  
Recent Quarterly Commitments

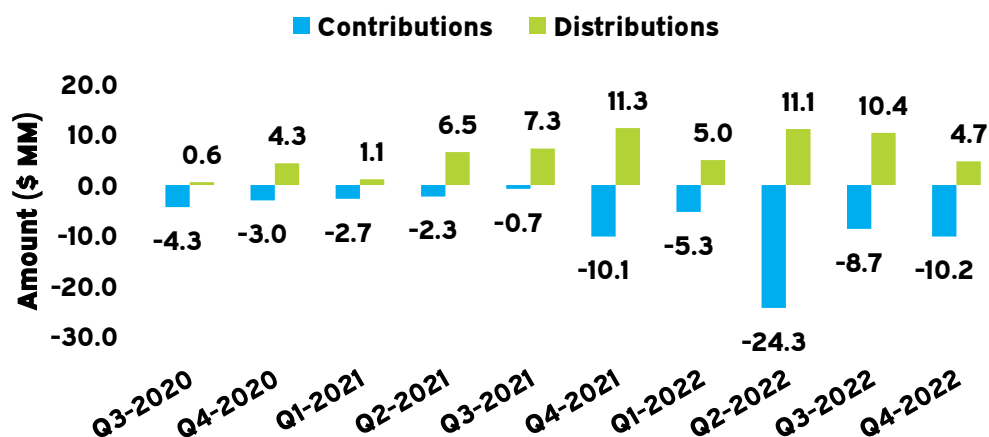


Commitments This Quarter

Fund	Strategy	Region	Amount (MM)
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No new commitments made during the quarter

### Cash Flows Recent Quarterly Cash Flows



#### Largest Contributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$M)
TerraCap V	2020	Value-Added	North America	5.41
Carlyle Realty VIII	2017	Opportunistic	North America	1.71
Berkshire Value V	2019	Value-Added	North America	1.15

#### Largest Distributions This Quarter

Fund	Vintage	Strategy	Region	Amount (\$MM)
Carlyle Realty VIII	2017	Opportunistic	North America	1.47
AEW Partners VIII	2017	Opportunistic	North America	1.23
TA Realty Core	2018	Core	North America	0.97

### Significant Events

- During the fourth quarter of 2022, the Retirement Association contributed \$10.2 million to its private real estate partnerships and received \$4.7 million in distributions, representing a \$5.5 million net cash outflow.
- TerraCap Partners V, L.P. called \$5.41 million during the fourth quarter, primarily to fund investments and late closing interest.
- Carlyle Realty Partners VIII, L.P. called \$1.71 million primarily to fund investments, as well as management fees and partnership expenses. The Fund distributed \$1.47 million as proceeds from existing investments.
- Berkshire Value Fund V, L.P. called \$1.15 million to partially repay the Fund's credit facility utilized for deal acquisitions, capital needs for existing investments, and operating expenses.
- AEW Partners Real Estate Fund VIII, L.P. distributed \$1.23 million during the fourth quarter. Proceeds stemmed from the sale of two industrial buildings in the portfolio.
- TA Realty Core Property Fund, L.P. distributed \$0.97 million during the fourth quarter. Proceeds stemmed from cash flow proceeds from existing investments.

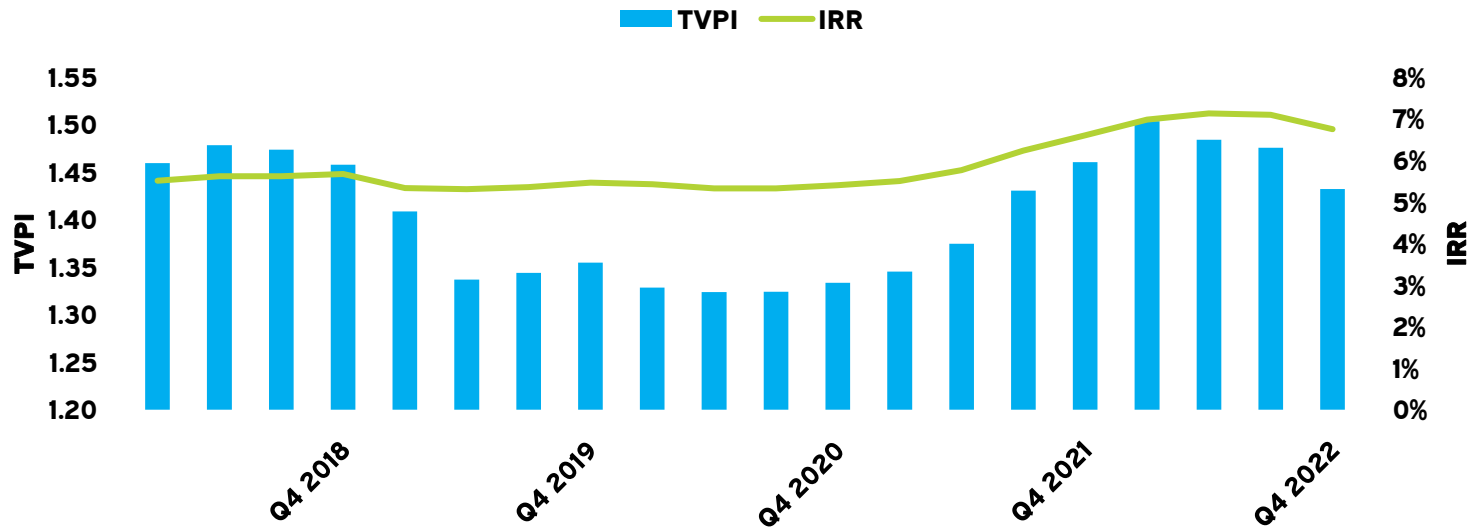
### By Strategy

Group	Number	Committed (\$M)	Contributed (\$M)	Unfunded (\$M)	Distributed (\$M)	Fair Market Value (\$M)	Exposure (\$ MM)	DPI (X)	TVPI (X)	IRR (%)
Core	5	129.0	133.9	0.0	102.2	112.4	112.4	0.76	1.60	7.2
Fund of Funds	1	15.0	12.7	2.3	11.4	0.7	3.0	0.90	0.95	-0.9
Opportunistic	6	77.0	62.8	25.9	40.7	37.4	63.3	0.65	1.24	7.3
Value-Added	9	72.0	69.1	7.2	73.3	22.1	29.3	1.06	1.38	6.8
<b>Total</b>	<b>21</b>	<b>293.0</b>	<b>278.6</b>	<b>35.4</b>	<b>227.5</b>	<b>172.6</b>	<b>208.0</b>	<b>0.82</b>	<b>1.43</b>	<b>6.8</b>

By Vintage

Group	Number	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Fair Market		DPI (X)	TVPI (X)	IRR (%)
						Value (\$ MM)	Exposure (\$ MM)			
Open-end Fund	5	129.0	133.9	0.0	102.2	112.4	112.4	0.76	1.60	7.2
2001	1	4.0	4.6	0.0	5.7	0.0	0.0	1.23	1.23	2.4
2003	1	10.0	9.0	1.9	11.7	0.0	1.9	1.31	1.31	5.1
2004	1	4.0	4.6	0.0	2.4	0.0	0.0	0.54	0.54	-8.0
2007	3	30.0	26.9	4.3	33.3	0.7	5.0	1.24	1.26	4.7
2008	1	5.0	5.4	0.0	0.0	0.5	0.5	0.00	0.10	-14.6
2011	1	5.0	5.0	0.0	7.4	0.0	0.0	1.48	1.48	11.6
2016	1	15.0	15.1	0.0	22.1	5.1	5.1	1.46	1.80	15.4
2017	2	43.0	38.7	15.2	39.6	16.9	32.2	1.02	1.46	22.2
2019	2	18.0	13.5	5.5	2.1	14.1	19.6	0.16	1.20	13.5
2020	2	20.0	16.8	3.6	1.0	17.5	21.1	0.06	1.10	NM
2021	1	10.0	5.1	4.9	0.0	5.4	10.3	0.00	1.06	NM
<b>Total</b>	<b>21</b>	<b>293.0</b>	<b>278.6</b>	<b>35.4</b>	<b>227.5</b>	<b>172.6</b>	<b>208.0</b>	<b>0.82</b>	<b>1.43</b>	<b>6.8</b>

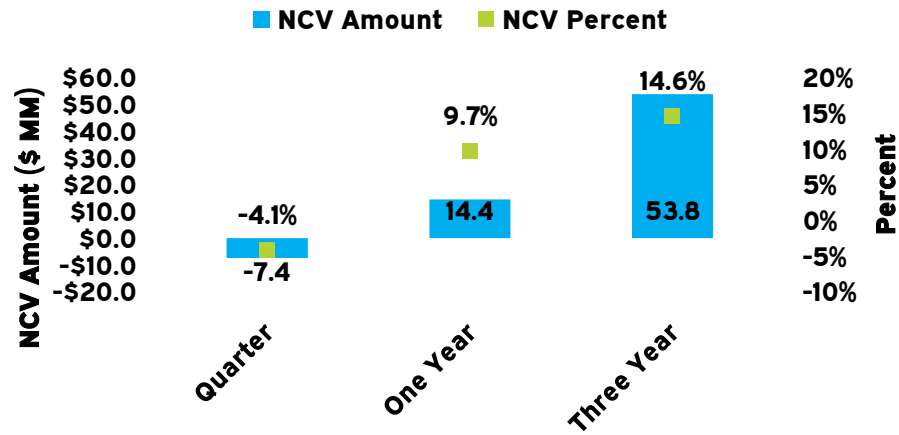
#### Since Inception Performance Over Time



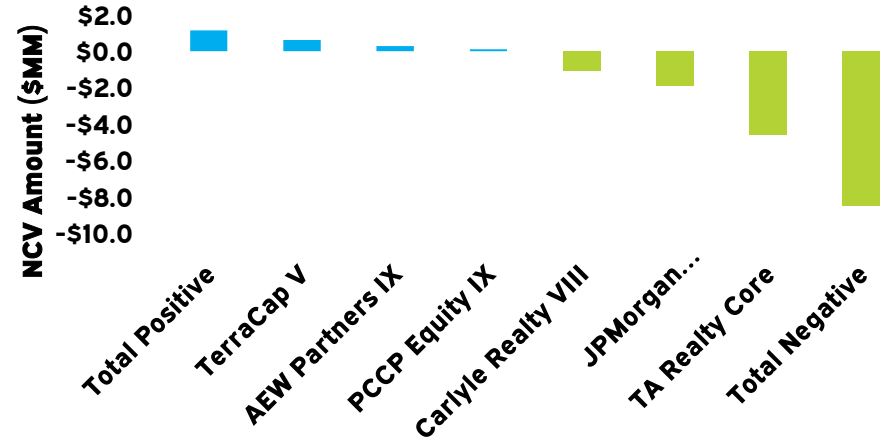
#### Horizon IRRs

	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)	Since Inception (%)
Aggregate Portfolio	9.5	14.2	10.3	8.7	6.8
Public Market Equivalent	-30.4	-7.2	-2.4	1.0	3.4

#### Periodic NCV



#### 1 Quarter Drivers Of NCV



	4Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Since Inception (%)	Inception Date
JPMorgan Strategic Property	-5.2	3.7	7.8	NA	NA	7.1	4/01/2019
<i>NCREIF ODCE Equal Weighted (Net)</i>	-5.1	7.6	9.7	NA	NA	8.7	
TA Realty Core Property Fund, L.P.	-5.6	9.1	14.2	NA	NA	13.3	3/21/2018
<i>NCREIF ODCE Equal Weighted (Net)</i>	-5.1	7.6	9.7	NA	NA	8.6	



Fund Performance: Sorted By Vintage And Strategy

By Investment	Vintage	Strategy	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Fair Market Value (\$ MM)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
Invesco RE	Open-end	Core	22.0	23.9	0.0	44.8	0.0	1.87	NA	8.3	NA
JPMorgan Strategic	Open-end	Core	27.0	27.0	0.0	0.1	34.9	1.29	NA	7.1	NA
MEPT	Open-end	Core	5.0	5.0	0.0	15.9	0.0	3.18	NA	6.5	NA
PRISA I	Open-end	Core	15.0	17.2	0.0	35.5	0.0	2.06	NA	5.3	NA
TA Realty Core	Open-end	Core	60.0	60.7	0.0	5.9	77.5	1.37	NA	12.3	NA
Intercontinental III	2001	Value-Added	4.0	4.6	0.0	5.7	0.0	1.23	1.60	2.4	19.5
Hunt Redevelopment	2003	Value-Added	10.0	9.0	1.9	11.7	0.0	1.31	1.61	5.1	16.7
Intercontinental IV	2004	Value-Added	4.0	4.6	0.0	2.4	0.0	0.54	1.23	-8.0	9.3
Mesirow RE Intl	2007	Fund of Funds	15.0	12.7	2.3	11.4	0.7 <sup>1</sup>	0.95	1.23	-0.9	6.4
Berkshire Multi II	2007	Value-Added	10.0	11.3	0.0	17.9	0.0	1.59	1.23	11.0	6.4
New Boston VII	2007	Value-Added	5.0	3.0	2.0	4.0	0.0	1.33	1.23	5.6	6.4
1921 Realty	2008	Opportunistic	5.0	5.4	0.0	0.0	0.5	0.10	1.37	-14.6	9.0

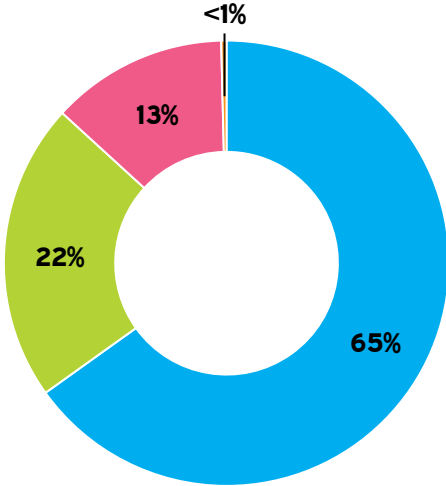
<sup>1</sup> The fair market value of Mesirow Real Estate International Partnership Fund I, L.P. is a cash adjusted estimate due to the timing of the report.

Fund Performance: Sorted By Vintage And Strategy (con't)

By Investment	Vintage	Strategy	Committed (\$ MM)	Contributed (\$ MM)	Unfunded (\$ MM)	Distributed (\$ MM)	Fair Market Value (\$ MM)	TVPI (X)	Peer TVPI (X)	IRR (%)	Peer IRR (%)
DSF IV	2011	Value-Added	5.0	5.0	0.0	7.4	0.0	1.48	1.66	11.6	19.0
DSF III	2016	Value-Added	15.0	15.1	0.0	22.1	5.1	1.80	1.41	15.4	12.4
AEW Partners VIII	2017	Opportunistic	25.0	24.0	4.5	29.0	6.3	1.47	1.33	20.7	13.4
Carlyle Realty VIII	2017	Opportunistic	18.0	14.7	10.8	10.5	10.6	1.44	1.33	25.9	11.4
Rockpoint VI	2019	Opportunistic	9.0	7.2	2.1	1.1	7.6	1.21	1.27	15.2	13.7
Berkshire Value V	2019	Value-Added	9.0	6.3	3.4	1.1	6.4	1.19	1.27	11.9	13.7
AEW Partners IX	2020	Opportunistic	10.0	6.4	3.6	0.0	6.9	1.07	1.14	NM	NM
TerraCap V	2020	Value-Added	10.0	10.4	0.0	1.0	10.6	1.12	1.14	NM	NM
PCCP Equity IX	2021	Opportunistic	10.0	5.1	4.9	0.0	5.4	1.06	1.07	NM	NM
<b>Total</b>			<b>293.0</b>	<b>278.6</b>	<b>35.4</b>	<b>227.5</b>	<b>172.6</b>	<b>1.43</b>		<b>6.8</b>	

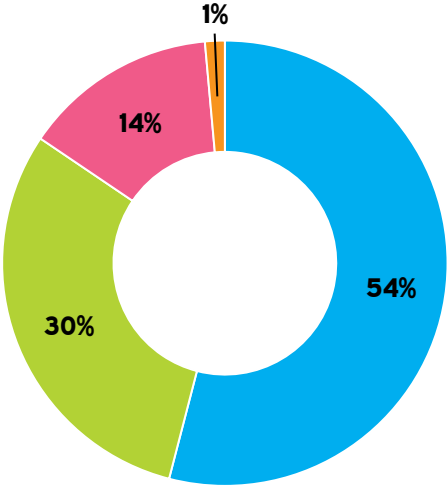
By Strategy

Percent of FMV



- Core
- Opportunistic
- Value-Added
- Fund of Funds

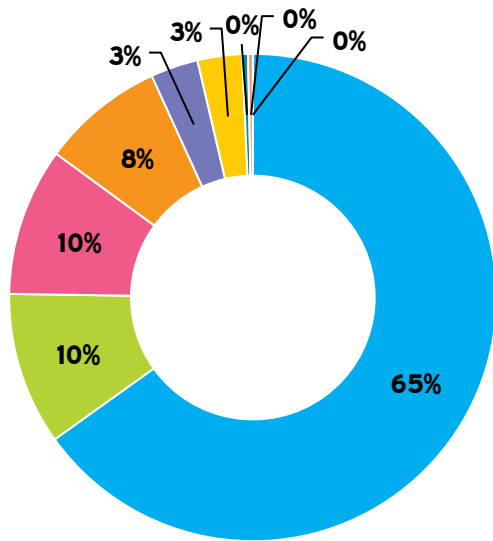
Percent of Exposure



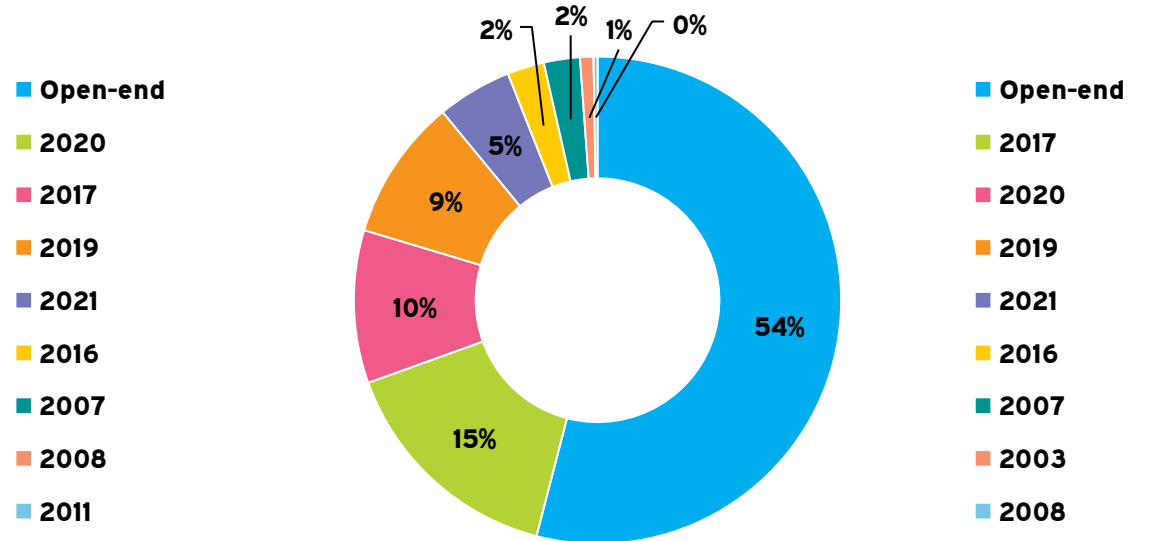
- Core
- Opportunistic
- Value-Added
- Fund of Funds

#### By Vintage

Percent of FMV

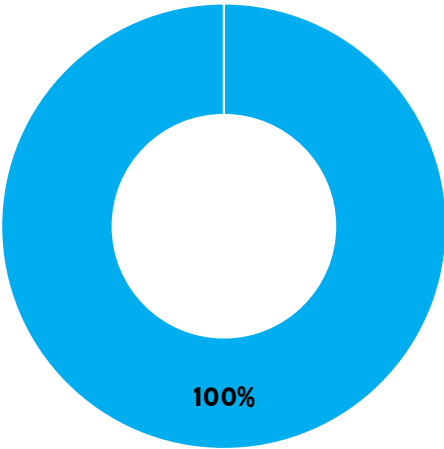


Percent of Exposure



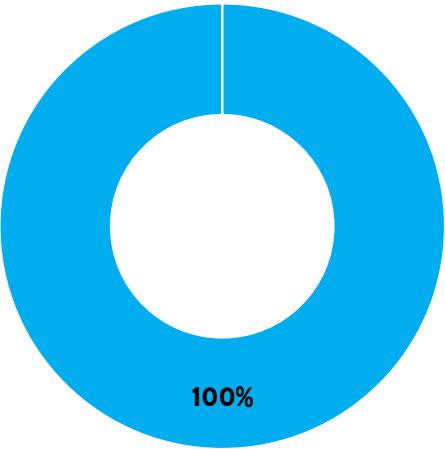
By Geographic Focus

Percent of FMV



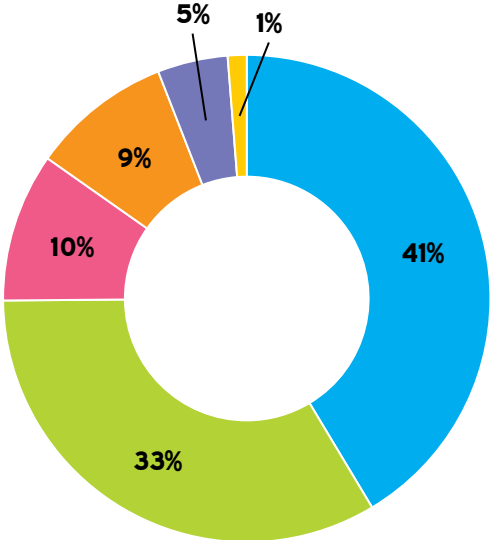
■ North America

Percent of Exposure



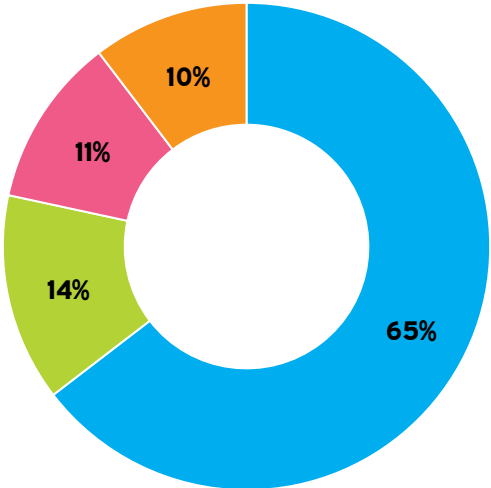
■ North America

By Sector  
Percent of FMV



- Residential RE
- Industrial RE
- Office RE
- Retail RE
- Other RE
- Other

By Geography  
Percent of FMV



- South U.S.
- West U.S.
- Midwest U.S.
- Northeast U.S.

## Current Issues

## **Insurance Linked Strategy Search Respondent Review**



## Background

- At the September 16, 2022, meeting, the Board voted to conduct a search for an Insurance Linked Strategies manager.
- Shortly after that meeting, Meketa issued the RFP, targeting a \$10 million mandate.
- This would represent the first investment of this nature for the Plymouth County Retirement Association.
- RFP responses were due on November 23, 2022.
- During the March Board meeting, Meketa discussed the respondent summary with the Board. From that discussion, the Board voted to have four finalists present: Schroders Investment Management, Nephila Capital, Pillar Capital, and Amundi Asset Management
- On the next page, we provide an outline of transaction types the four managers may include in their strategies for reference.

ILS Segment Descriptions

Transaction Type	Description	Pros	Cons
Catastrophe Bonds	These securities are publicly traded debt instruments that are typically created by insurance/reinsurance companies to cover certain risks. The collateral and premiums are held at a separate entity and invested in money market-like investments through an SPV structure. The cat bond investor receives a coupon payment (typically a floating rate) and will receive the principal back when the bonds expire. If there are claims, the collateral account will decline, and the principal value will decrease. The bonds are commonly three years in maturity.	Liquid, easiest access point, cheapest.	No information edge or negotiating ability as they are public securities, the market size is variable and can be of insufficient size (currently around \$30 billion in aggregate), dedicated offerings are relatively scarce. Potential for adverse selection as private entities offload risks to public markets. Higher level of correlation to public markets.
Private collateralized Reinsurance	This is the most common security type and what most practitioners refer to when discussing the asset class. These privately negotiated contracts are similarly structured to catastrophe bonds (SPV) but are typically only one year in maturity. The ability to privately negotiate allows for greater flexibility for each party involved.	Customizable, larger marketplace.	Lower liquidity; higher possibility of trapped capital
ILW	These are derivative contracts that provide payoffs based on losses across the entire insurance industry, although they are customized to specific regions and perils. The contracts contain specific parameters (i.e., triggers) that are then measured by widely accepted third-party entities. Like all reinsurance, these can be highly customized and can include payoffs during and/or after events have occurred.	Highly customizable; parametric event linked. Can mitigate trapped capital with special provisions negotiated up front. Efficient implementation for broad coverages.	US Centric, market may be less diversifying during periods of US heavy activity
Sidecars	These legal structures allow insurers/reinsurers to separate specific exposures into a separate entity. This separate entity can be used to aggregate risk capital from different entities or simply isolate certain exposures (e.g., impaired policies).	Risk management tool	Generally not customized

ILS Segment Descriptions

Transaction Type	Description	Pros	Cons
Quota Shares	An agreement in which risk is potentially shared across multiple entities. This is a form of proportional reinsurance where the parties share premiums, losses, and costs of a specific reinsurance portfolio. Quota shares are commonly used in funds that want to gain quick access to an existing portfolio or hard-to-access exposures.	Potential alignment of interests /sharing of risk; economic capital efficiency – investors can invest in the space as if they owned a property catastrophe business without the infrastructure cost.	Lower liquidity. Largely dependent on relationships. Providers that have trouble establishing good counterparty relationship may struggle for activity and transparency.  If cedant does not retain any exposure, adverse selection is likely.
Retrocessional Reinsurance	This is simply reinsurance for reinsurance companies. Retro represents an additional transfer of risk from the second cedant to a third reinsurer.	Possible to find attractive priced deals (dislocation opportunities). Allows reinsurers to diversify their own portfolios.	Data transparency can get significantly worse as risk transfer gets traded from party to party.  Cedants are typically the most knowledgeable players in ILS, which increases risk of adverse selection.

## **Manager Search Finalists**

### Manager Search Finalists Composite Rating Overview

Manager	Overall Rating	Rationale
Schroders Investment Management	Highly Advantageous	Schroders Capital All-ILS Fund is supported by a strong, tenured team and comprehensive process. The strategy utilizes pieces of life insurance in addition to natural catastrophe exposure through a mix that targets 60-70% private transactions. The strategy has historically had a return and volatility profile closer to that of bonds.
Nephila Capital	Highly Advantageous	Nephila Capital is a highly capable investment manager in the insurance linked strategies space. The firm has strong counterparty relationships, is on the cutting edge of modeling developments and has a stout, experienced investment team. The firm is owned by Markel Corporation, an insurance holding company which provides Nephila with balance sheet efficiency it can pass along to investors. The firm has had relatively weak performance in the past several years, largely due to a strategic shift in investments relative to peers.
Pillar Capital	Highly Advantageous	Pillar is one of the longest standing ILS managers with a firm inception of 2008. Over the long-term, the strategy has generated strong returns relative to peers and benchmarks, including protecting capital in the challenging 2017-2018 ILS market. Firm founder Steve Velotti is impressive, and his leadership of the investment operation is a large plus. Pillar maintains strong relationships with counterparties and a strong risk management framework, critical for large loss prevention.
Amundi Asset Management	Advantageous	Amundi ILS is a capable strategy and seeks to provide best in class security selection without making active geographic or peril bets. The firm's approach is differentiated to other respondents. Chin Liu leads the strategy and has been directing this strategy since 2007. The proposed fee schedule is attractive.

### Schroders Capital All-ILS Fund Ltd.

Rating Criteria	Score	Rationale
Organization	Advantageous	<ul style="list-style-type: none"> <li>→ Schroders is a large European asset manager that has existed since the early 1800s, originally as a commercial credit provider. The firm is publicly traded on the London Stock Exchange.</li> <li>→ As of September 2022, the firm managed about \$839.9B across multi-asset and private / public investments. There is approximately \$315m in proposed All-ILS strategy.</li> <li>→ Schroders Capital ILS was originally an independent company, Secquaero Advisors, which was established in February 2007. In 2013, Secquaero entered into a joint-venture agreement with Schroders and became a fully integrated business unit into Schroders in 2019.</li> </ul>
Team	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Schroders Capital ILS team is based in Zurich and London and is comprised of 32 individuals, most of whom are investment staff dedicated to the ILS space.</li> <li>→ Stephan Ruoff serves as the Global Head of ILS. Mr. Ruoff has 27 years of experience, most recently as the CEO of Tokio Millennium Re. He is supported by Daniel Ineichen, Head of Portfolio Management, Dr. Christoph Hummel, Head of Analytics and an additional five individuals, including actuaries and natural catastrophe specialists.</li> <li>→ Flavio Matter is the Head of Origination and is supported by five underwriters. He has been with Schroders for eight years and has 17 years of experience. Scott Mitchell is the group's Head of Life ILS.</li> </ul>
Investment Philosophy & Process	Highly Advantageous	<p><u>Philosophy:</u></p> <ul style="list-style-type: none"> <li>→ The All-ILS fund focuses on managing tail risk and drawdown in single events, while targeting a long-term asset mix of 60- 70% private transactions.</li> <li>→ Schroders believes that its use of life insurance linked securities and Lloyd's syndicates is a differentiating diversifying tool away from peak peril natural catastrophe (US/Japan/Europe wind, and US/Japan earthquake).</li> </ul> <p><u>Process:</u></p> <ul style="list-style-type: none"> <li>→ The All-ILS Fund's investment universe encompasses a wide variety of investments including catastrophe bonds, collateralized reinsurance, private reinsurance, derivatives, life insurance and Lloyd's syndicates.</li> <li>→ In addition to vendor models, the team utilizes a proprietary tool to help understand the portfolio's risk profile, particularly on tail risk. The tool accounts for adjustments not considered in the vendor models including El Niño and La Niña, climate change, improvement of building codes and inflation.</li> <li>→ Once modeling is concluded, the team will have a view on relative attractiveness of a deal based on it being under- or overvalued to market price.</li> <li>→ Quantitative factors that are considered in position sizing include quality of input data, contribution to tail risk and relative compensation for risk taken. Most positions will be sized somewhere between 0.5% and 1.5% of the portfolio.</li> </ul>

**Schroders Capital All-ILS Fund Ltd.**  
**Trailing Annualized Returns**  
 (As of February 28, 2023)

	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (6/2008)
Schroders	2.0	1.0	0.8	1.3	0.6	1.8	3.3
<i>EurekaHedge ILS Advisers</i>	2.0	-0.6	1.1	0.1	0.0	1.6	2.7
<i>MSCI ACWI</i>	4.2	-7.8	9.3	6.3	10.4	8.5	6.0
<i>Bloomberg Aggregate</i>	0.4	-9.7	-3.8	0.5	0.7	1.1	2.7

**Trailing Risk Metrics**  
 (June 2008-February 2023)

	Schroders	<i>EH ILS Advisers Index</i>	<i>MSCI ACWI</i>	<i>Bloomberg US Agg</i>
Annualized Returns (%)	3.2	2.7	6.0	2.7
Annualized Standard Deviation (%)	3.7	3.7	17.1	4.1
Omega Ratio	0.21	0.15	0.97	0.38
Correlation - MSCI ACWI	0.21	0.22	0.26	1.00
Correlation - Bloomberg US Aggregate	0.16	0.18	1.00	0.26
Skewness	-5.59	-5.56	-0.63	-0.41
Kurtosis	44.87	38.95	1.50	2.10
Max Drawdown (%)	-9.3	-12.5	-50.8	-17.2
Max Drawdown Recovery (months)	59	<i>Ongoing</i>	47	<i>Ongoing</i>

→ The strategy has operated with a risk and return profile like the ILS index. The max drawdown, while smaller compared to other funds, took almost five years to recover from.

### Nephila Iron Catastrophe Fund

Rating Criteria	Score	Rationale
Organization	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Nephila Capital is wholly owned by Markel Corporation (NYSE: MKL). Markel is a holding company for insurance, reinsurance, and investment operations headquartered in VA. Markel helps provide Nephila with sourcing capabilities, infrastructure support and provides the benefit of balance sheet efficiency.</li> <li>→ The firm is the longest standing private player in the ILS market, founded in 1997. The firm has offices in Bermuda, San Francisco, Nashville, and London.</li> <li>→ Nephila is a huge investment manager in the ILS space with approximately \$7.8b AUM across 123 clients. Nephila entered the direct insurance business in 2017. Co-Founder Greg Hagood estimates that 80% of the firm’s AUM is in reinsurance, while 20% is in direct insurance.</li> <li>→ The proposed strategy was launched in May 2009 and holds approximately \$1.2B in assets across 14 clients.</li> </ul>
Team	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Nephila Capital was co-founded by Frank Majors and Greg Hagood, both of whom are still with the firm today. Both Mr. Majors and Mr. Hagood focus on risk management and firm strategy while Mr. Majors also spends his time focusing on counterparty relations, while Mr. Hagood focuses on investor relations.</li> <li>→ The firm has strong corporate culture and senior management has had little turnover.</li> </ul>
Investment Philosophy & Process	Highly Advantageous	<p><u>Philosophy:</u></p> <ul style="list-style-type: none"> <li>→ Nephila’s Iron Catastrophe Fund is a lower-risk strategy that is managed around limiting a 1 in 100-year loss to 30%.</li> <li>→ The strategy is diversified across regions and perils and seeks senior tranche, more risk remote exposure.</li> <li>→ Iron Catastrophe fund can invest across syndicated and non-syndicated reinsurance, primary insurance, catastrophe bonds and catastrophe derivatives including industry loss warranties (ILW) and country weighted industry loss (CWIL).</li> <li>→ Nephila claims it has the broadest investible universe with its inclusion of direct insurance and non-syndicated reinsurance, which comes with the scale of the organization.</li> </ul> <p><u>Process:</u></p> <ul style="list-style-type: none"> <li>→ The strategy uses price signals from the market to help determine exposures and risks that create the optimal portfolio to maximize return for the mandate, in this case a 1 in 100-year loss limit of 30%.</li> <li>→ The firm does its baseline modeling using third-party vendor models, Verisk and RMS and then makes several adjustments using in-house research capabilities that have been in development since 2003.</li> <li>→ Advances in internal modeling capabilities have allowed the firm to better evaluate factors affecting expected loss amongst other pieces that go into risk management.</li> </ul>



**Nephila Iron Catastrophe Fund**  
**Trailing Annualized Returns**  
 (As of February 28, 2023)

	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (5/2009)
Nephila	2.3	-1.2	-0.1	0.8	0.9	1.9	2.7
<i>EurekaHedge ILS Advisers</i>	2.0	-0.6	1.1	0.1	0.0	1.6	2.7
<i>MSCI ACWI</i>	4.2	-7.8	9.3	6.3	10.4	8.5	10.4
<i>Bloomberg Aggregate</i>	0.4	-9.7	-3.8	0.5	0.7	1.1	2.5

**Trailing Risk Metrics**  
 (May 2009–February 2023)

	Nephila	<i>EH ILS Advisers Index</i>	<i>MSCI ACWI</i>	<i>Bloomberg US Agg</i>
Annualized Returns (%)	2.7	2.7	10.4	2.5
Annualized Standard Deviation (%)	3.6	3.8	15.2	3.9
Omega Ratio	0.20	0.17	1.18	0.37
Correlation - MSCI ACWI	0.30	0.22	0.22	1.00
Correlation - Bloomberg US Aggregate	0.24	0.18	1.00	0.22
Skewness	-6.24	-5.47	-0.32	-0.67
Kurtosis	59.69	37.27	0.62	2.34
Max Drawdown (%)	-10.2	-12.5	-25.3	-17.2
Max Drawdown Recovery (Months)	Ongoing	Ongoing	Ongoing	Ongoing

→ The Iron Catastrophe Fund has held a risk and return profile like the index. The strategy has more concentration in the Southeast United States than peers.

### Pillar Juniperus Insurance Linked Opportunity Fund Limited

Rating Criteria	Score	Rationale
Organization	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Pillar was originally founded in April 2008 as Juniperus Capital Limited and is headquartered in Bermuda. The firm was renamed in June 2012 to Pillar Capital Management Limited.</li> <li>→ The firm is currently 50% owned by members of the management team and 50% by Transatlantic Holdings (i.e., Trans Re). Trans Re is a wholly owned subsidiary of Berkshire Hathaway. Trans Re maintains two of the five board seats at Pillar but is not involved in portfolio management nor day-to-day decisions.</li> <li>→ All owners are required to invest in the strategy at the same limited partner terms.</li> </ul>
Team	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Pillar employs nine investment professionals led by Stephen Velotti, Tom Cosenza, Jeff Franklin, and Stewart Foster.</li> <li>→ Mr. Velotti is a highly capable investment manager for the fund and a strong communicator and educator in the insurance linked securities space.</li> <li>→ The entire team operates in an analogous fashion to an insurance company. The key areas are sourcing, underwriting/modeling, and portfolio management. The concepts of pricing and risk management are embedded in all functions.</li> </ul>
Investment Philosophy & Process	Highly Advantageous	<p><u>Philosophy:</u></p> <ul style="list-style-type: none"> <li>→ Pillar seeks to create a portfolio of reinsurance-related securities/contracts that provide the optimal risk/reward posture given the market environment.</li> <li>→ Pillar believes that success in the ILS market comes down to deal-flow, team experience and insight, simplicity over complexity, and pragmatic portfolio construction.</li> </ul> <p><u>Process:</u></p> <ul style="list-style-type: none"> <li>→ Pillar excels with broker access and moderately incorporates direct cedant interactions.</li> <li>→ Portfolio construction is iterative and involves both systematic and discretionary components. Each opportunity/deal that is reviewed is analyzed in isolation as well as in the context of being added to the portfolio. The firm utilizes third party modeling as well as its own proprietary software. The depth of the firm's tools and modeling is impressive and adjusts for much of what the standard third-party software available to the industry omits (inflation, climate change, etc.).</li> </ul>

### Pillar Juniperus Insurance Linked Opportunity Fund Limited

#### Trailing Annualized Returns

(As of February 28, 2023)

	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (6/2008)
Pillar	2.1	-8.1	-1.8	0.2	0.5	3.9	6.1
<i>EurekaHedge ILS Advisers</i>	2.0	-0.6	1.1	0.1	0.0	1.6	2.7
<i>MSCI ACWI</i>	4.2	-7.8	9.3	6.3	10.4	8.5	6.0
<i>Bloomberg Aggregate</i>	0.4	-9.7	-3.8	0.5	0.7	1.1	2.7

#### Trailing Risk Metrics

(June 2008-February 2023)

	Pillar	<i>EH ILS Advisers Index</i>	<i>MSCI ACWI</i>	<i>Bloomberg US Agg</i>
Annualized Returns (%)	6.1	2.7	6.0	2.7
Annualized Standard Deviation (%)	7.2	3.7	17.1	4.1
Omega Ratio	0.76	0.15	0.97	0.38
Correlation - MSCI ACWI	0.30	0.22	0.26	1.00
Correlation - Bloomberg US Aggregate	0.11	0.18	1.00	0.26
Skewness	-3.19	-5.56	-0.63	-0.41
Kurtosis	16.90	38.95	1.50	2.10
Max Drawdown (%)	-21.8	-12.5	-50.8	-17.2
Max Drawdown Recovery (Months)	18	<i>Ongoing</i>	47	<i>Ongoing</i>

→ The strategy has historically provided a strong risk-adjusted return along with strong risk management. The team does not have a target return for the strategy and instead looks to allocate to the best priced opportunities while maintaining a level of diversification across peril and region. The strategy particularly struggled in September 2022 because of Hurricane Ian. The max drawdown recovery period is impressive given the depth of drawdown.

### Amundi Insurance Linked Securities Strategies

Rating Criteria	Score	Rationale
Organization	Highly Advantageous	<ul style="list-style-type: none"> <li>→ Amundi Asset Management US, Inc. is the US asset management business of Amundi, Europe’s largest asset manager by AUM. Amundi is publicly traded.</li> <li>→ This strategy was originally managed by Pioneer Investments starting in 2014. Amundi acquired Pioneer Investments in 2017.</li> <li>→ There are currently 3 clients in the proposed commingled strategy. Most of Amundi ILS client relationships are separately managed. We would recommend a best ideas portfolio if using Amundi.</li> </ul>
Team	Advantageous	<ul style="list-style-type: none"> <li>→ The team is led by Chin Liu, a Managing Director of Insurance Linked Strategies and Portfolio Manager. Mr. Liu has been with the group since 2007. Mr. Liu is responsible for structuring and implementing custom ILS strategies for the firm’s diversified fixed income portfolios. He is also responsible for the firm’s fixed income investment solutions.</li> <li>→ Mr. Liu senior team currently includes Mei Li, Associate Portfolio Manager. Ms. Lei has been with the firm since 2012. Currently, Mr. Liu has final authority and responsibility for all decisions.</li> <li>→ Campbell Brown, Portfolio Manager of the group recently left the firm to pursue a different opportunity. Mr. Brown’s main responsibilities included modeling and managing relationships with brokers and counterparties. Mr. Liu believes the team will be able to navigate the upcoming months while they find a replacement. Ms. Li and analyst Jing Chen will assume Mr. Brown’s coverage for the time being.</li> </ul>
Investment Philosophy & Process	Advantageous	<p><u>Philosophy</u></p> <ul style="list-style-type: none"> <li>→ Amundi does not make active region or peril decisions. The team’s goal is to allocate the portfolio to mimic underwriting exposures of the global reinsurance industry. The team’s access point to the market is mainly through the usage of quota shares.</li> <li>→ Investors can expect Amundi’s approach to move towards less risk remote opportunities should the team feel it is being appropriately compensated for that risk. Less risk remote means that it is tied to an event that is more likely to occur and require claims being paid out instead of just earning yield.</li> </ul> <p><u>Process</u></p> <ul style="list-style-type: none"> <li>→ Amundi’s deal flow is not tied to a specific reinsurer, and the team says that it is “sponsor agnostic”.</li> <li>→ To develop a target portfolio, Amundi performs a quantitative evaluation of the global reinsurance market and uses an optimization process to help arrive at target weights for different securities.</li> <li>→ Modeling is done using third-party vendor Verisk. The team does not believe that proprietary modeling software at other firms creates a sustainable advantage.</li> </ul>

**Amundi Insurance Linked Securities Strategies**  
**Trailing Annualized Returns**  
 (As of February 28, 2023)

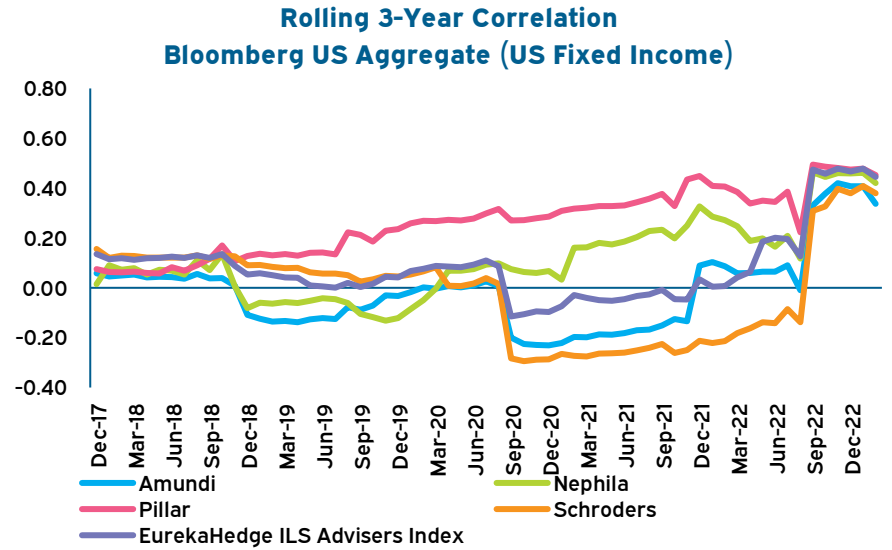
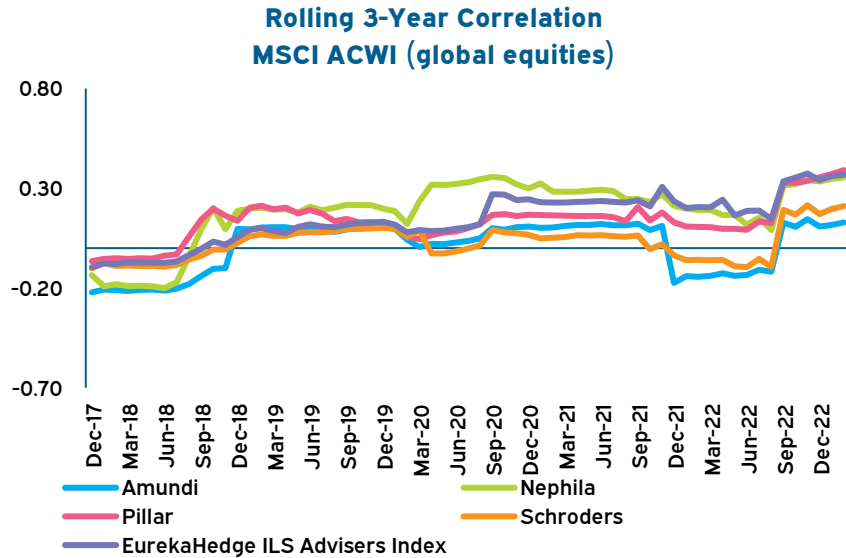
	YTD	1 YR	3 YR	5 YR	7 YR	Since Inception (1/2015)
Amundi	1.9	3.4	3.8	3.0	2.6	3.8
<i>EurekaHedge ILS Advisers</i>	2.0	-0.6	1.1	0.1	0.0	1.6
<i>MSCI ACWI</i>	4.2	-7.8	9.3	6.3	10.4	8.5
<i>Bloomberg Aggregate</i>	0.4	-9.7	-3.8	0.5	0.7	1.1

**Trailing Risk Metrics**  
 (January 2015-February 2023)

	Amundi	<i>EH ILS Advisers Index</i>	<i>MSCI ACWI</i>	<i>Bloomberg US Agg</i>
Annualized Returns (%)	3.8	0.6	7.7	0.9
Annualized Standard Deviation (%)	4.6	4.5	15.4	4.5
Omega Ratio <sup>1</sup>	0.11	0.01	0.82	0.15
Correlation - MSCI ACWI	0.07	0.22	0.33	1.00
Correlation - Bloomberg US Aggregate	0.01	0.19	1.00	0.33
Skewness	-3.90	-5.03	-0.38	-0.47
Kurtosis	21.58	29.28	0.74	1.71
Max Drawdown (%)	-10.8	-12.5	-25.3	-17.2
Max Drawdown Recovery (months)	21	<i>Ongoing</i>	<i>Ongoing</i>	<i>Ongoing</i>

<sup>1</sup> Omega Ratio is the upside probability divided by the downside probability over a specified hurdle rate (zero here) to produce a quality rating for the investment based on all return data in the period. Source: eVestment

## **Comparative Risk and Returns**



→ Correlations to equity and fixed income for the proposed funds have remained low to negative on both a rolling and trailing analysis. The spike in September 2022 was coincidental as Hurricane Ian occurred days after the 2022 UK Sterling Crisis, which caused a sell-off across traditional financial markets.

Correlation Table (1/2015-2/2023)	Amundi	Nephila	Pillar	Schrodgers	EH ILS Advisers	MSCI ACWI	Bbg US Agg
Amundi	1.00	---	---	---	---	---	---
Nephila	0.47	1.00	---	---	---	---	---
Pillar	0.54	0.85	1.00	---	---	---	---
Schrodgers	0.79	0.54	0.61	1.00	---	---	---
EurekaHedge ILS Advisers Index	0.83	0.68	0.74	0.89	1.00	---	---
MSCI ACWI	0.01	0.26	0.27	0.11	0.19	1.00	---
Bloomberg US Aggregate	0.07	0.32	0.39	0.22	0.22	0.33	1.00

Trailing Returns  
(As of 2/2023)

	YTD	1 YR	3 YR	5 YR	7 YR	Common Period (1/2015-2/2023)
Amundi	1.9	3.4	3.8	3.0	2.6	3.8
Nephila	2.3	-1.2	-0.1	0.8	0.9	1.2
Pillar	2.1	-8.1	-1.8	0.2	0.5	1.7
Schroders	2.0	1.0	0.8	1.3	0.6	1.1
<i>EurekaHedge ILS Advisers Index</i>	<i>2.0</i>	<i>-0.6</i>	<i>1.1</i>	<i>0.1</i>	<i>0.0</i>	<i>0.6</i>
<i>MSCI ACWI (global equities)</i>	<i>4.2</i>	<i>-7.8</i>	<i>9.3</i>	<i>6.3</i>	<i>10.4</i>	<i>7.7</i>
<i>Bloomberg US Aggregate (US Fixed Income)</i>	<i>0.4</i>	<i>-9.7</i>	<i>-3.8</i>	<i>0.5</i>	<i>0.7</i>	<i>0.9</i>

Trailing Risk Metrics  
Common Period (1/2015 – 2/2023)

	Amundi	Nephila	Pillar	Schroders	<i>EH ILS Index</i>	<i>MSCI ACWI</i>	<i>BBg US AGG</i>
Annualized Returns (%)	3.8	1.2	1.7	1.1	<i>0.6</i>	<i>7.7</i>	<i>0.9</i>
Annualized Standard Deviation (%)	4.6	4.3	5.9	4.6	<i>4.5</i>	<i>15.4</i>	<i>4.5</i>
Omega Ratio	0.11	0.04	0.06	0.04	<i>0.01</i>	<i>0.82</i>	<i>0.15</i>
Correlation - MSCI ACWI	0.07	0.32	0.39	0.22	<i>0.22</i>	<i>0.33</i>	<i>1.00</i>
Correlation - Bloomberg US Aggregate	0.01	0.26	0.27	0.11	<i>0.19</i>	<i>1.00</i>	<i>0.33</i>
Skewness	-3.90	-6.04	-5.14	-4.85	<i>-5.03</i>	<i>-0.38</i>	<i>-0.47</i>
Kurtosis	21.58	48.37	35.34	30.05	<i>29.28</i>	<i>0.74</i>	<i>1.71</i>
Max Drawdown (%)	-10.8	-10.2	-14.6	-9.3	<i>-12.5</i>	<i>-25.3</i>	<i>-17.2</i>



## **Fee and Terms Summary**

Fee and Terms Summary

Manager	Rating	Subscription	Management Fee	Incentive Fee	Hurdle / HWM	Redemption	Gate	Lock
Schroders	Highly Advantageous	Monthly	Option 1: 0.95% flat. Option 2: 0.75%	Option 1: 0.0%. Option 2: 15.0%	Option 1: N/A. Option 2: 8%	Semi-Annual (6/30, 12/31)	Fund reserves right to gate at any amount	None
Nephila	Advantageous	Monthly	1.30%	0.0%	N/A	Semi-Annual	25% fund level	1 YR
Pillar	Advantageous	Monthly	1.50%	15.0%	1 mo. T-bill + 0.20%	Semi-Annual (6/30, 12/31)	Slow Pay	1 YR
Amundi	Highly Advantageous	Semi-Annual	0.75%	0.0%	N/A	Semi-Annual (3/31, 10/31)	None	Rolling 1 YR

## Summary

### Summary

	Schroders	Nephila	Pillar	Amundi
Overall	Highly Advantageous	Highly Advantageous	Highly Advantageous	Advantageous
Organization	Advantageous	Highly Advantageous	Highly Advantageous	Highly Advantageous
Team	Highly Advantageous	Highly Advantageous	Highly Advantageous	Advantageous
Philosophy/Process	Highly Advantageous	Highly Advantageous	Highly Advantageous	Advantageous
Performance	Advantageous	Advantageous	Advantageous	Advantageous
Fees	Highly Advantageous	Advantageous	Advantageous	Highly Advantageous

- Insurance linked strategies (ILS) may be worth considering for PCRA, as these strategies have historically been an uncorrelated source of return to traditional financial markets, especially equity markets.
- While ILS may provide uncorrelated sources of return, many strategies in the space are negatively skewed. When insured events require claims, the fund must meet those obligations. In some cases (hurricanes, earthquakes, or other large natural disasters), this can result in large negative losses in a fund.

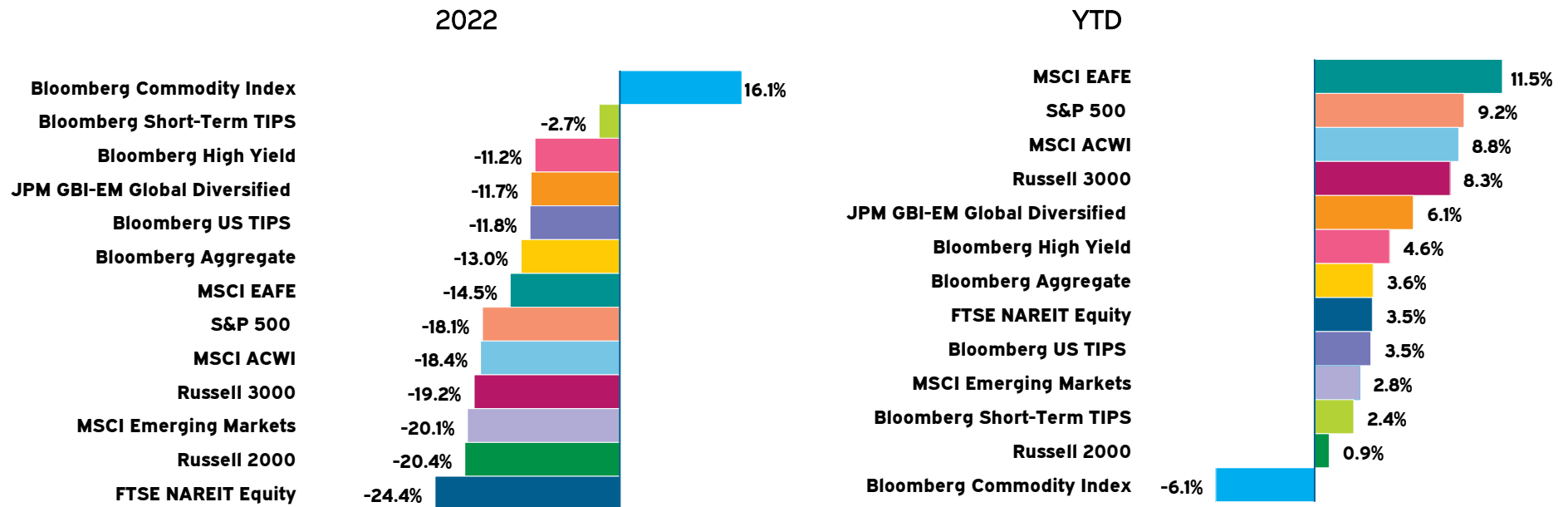
# Appendices

**Economic and Market Update**  
**Data As of April 30, 2023**

## Commentary

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

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



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

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

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



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

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

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

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

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

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

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

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

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

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

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

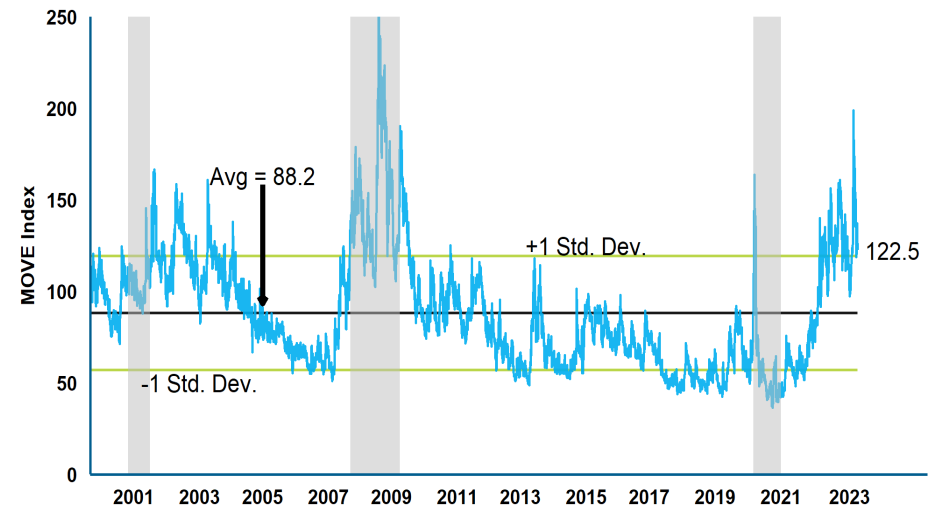
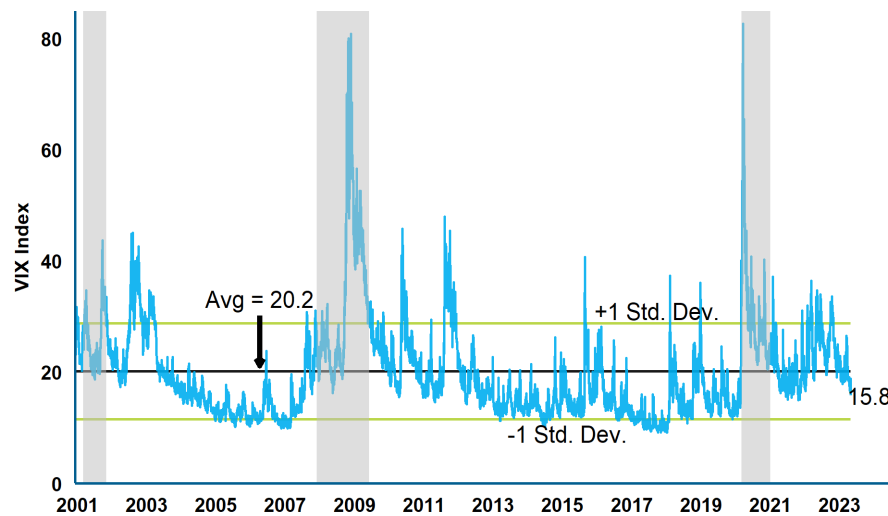
Fixed Income	April (%)	Q1 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	0.6	2.9	3.6	-0.3	-2.5	1.3	1.6	4.8	6.3
Bloomberg Aggregate	0.6	3.0	3.6	-0.4	-3.2	1.2	1.3	4.4	6.5
Bloomberg US TIPS	0.1	3.3	3.5	-4.0	0.9	3.0	1.4	4.0	7.0
Bloomberg Short-term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

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

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

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

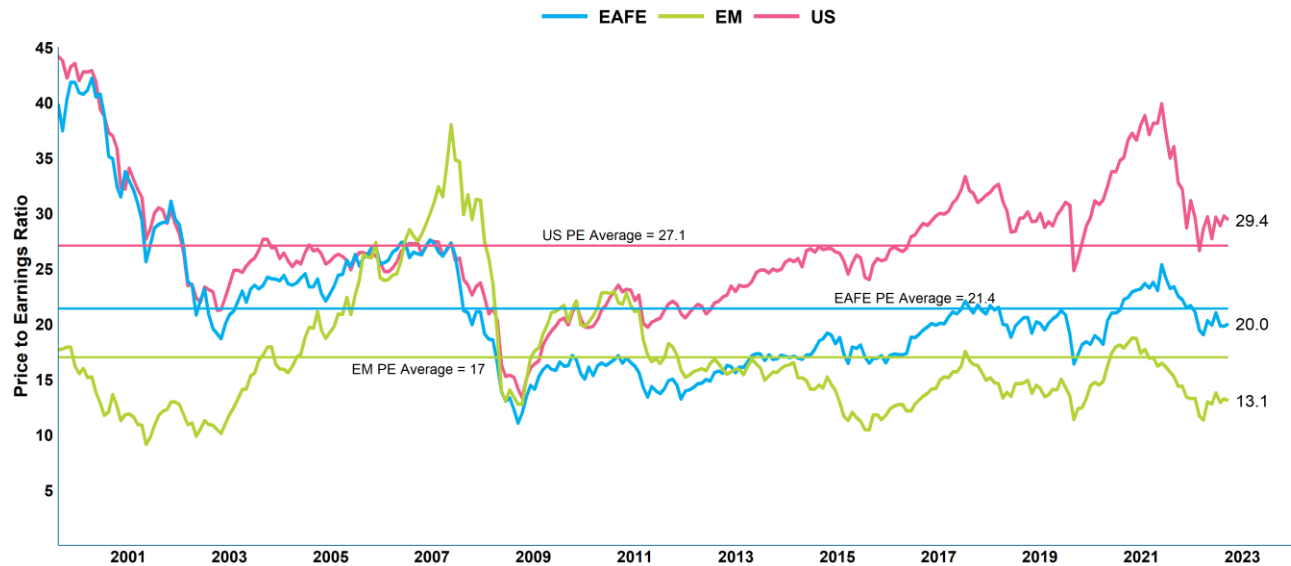
### Equity and Fixed Income Volatility<sup>1</sup>



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

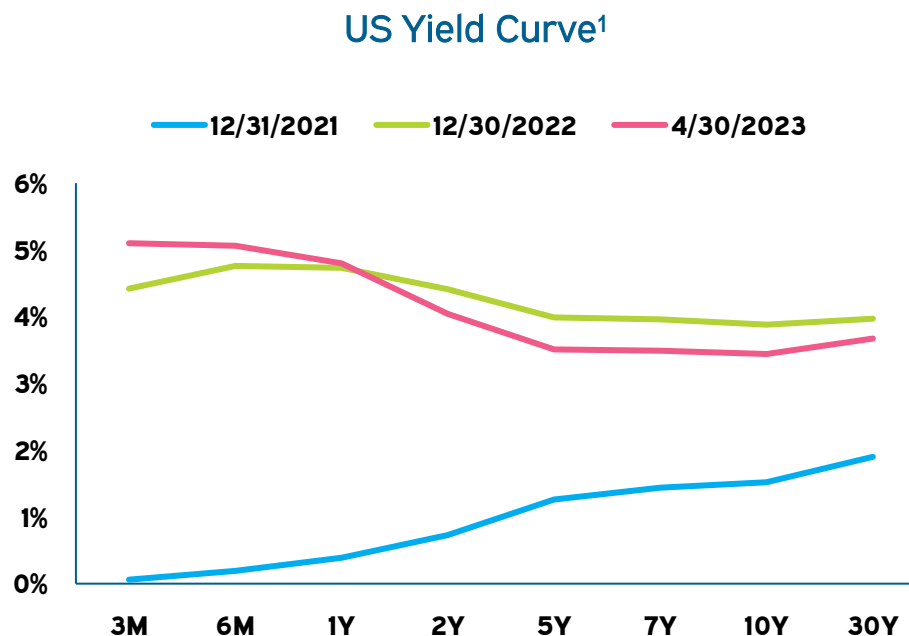
<sup>1</sup> Equity and Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of April 2023. The average line indicated is the average of the VIX and MOVE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

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



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

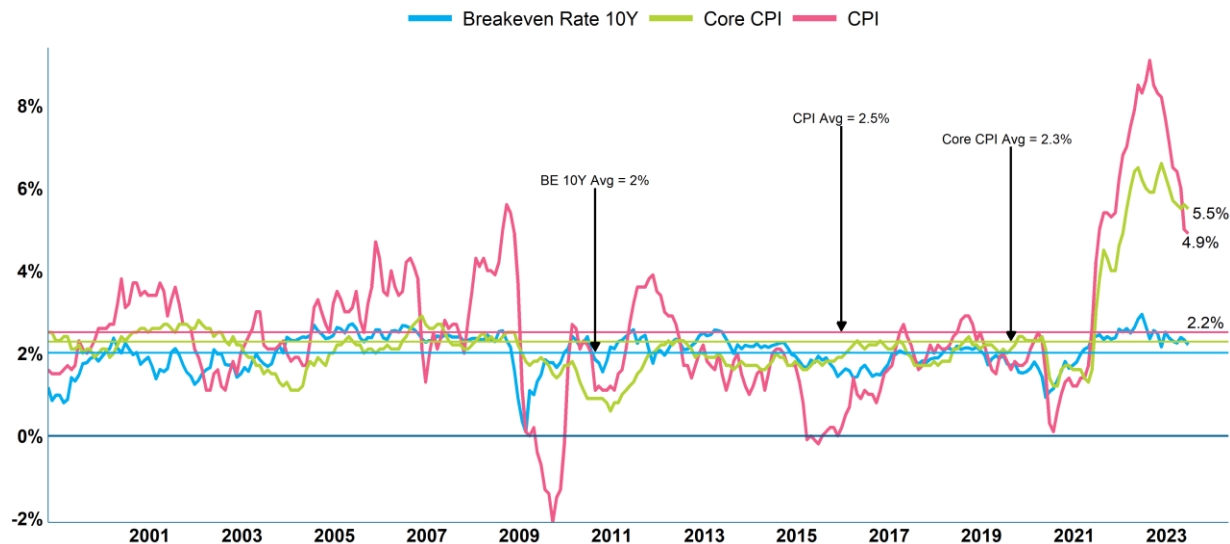
<sup>1</sup> US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly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



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

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

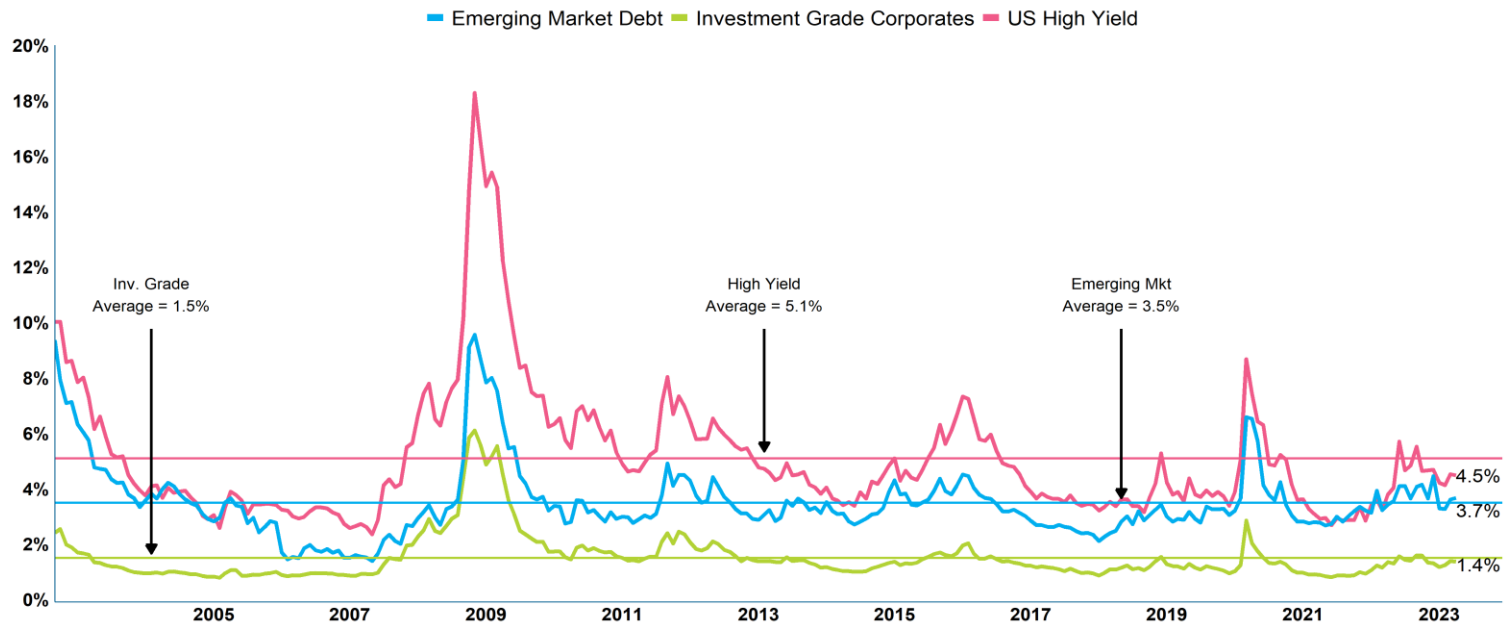
### Ten-Year Breakeven Inflation and CPI<sup>1</sup>



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

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

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

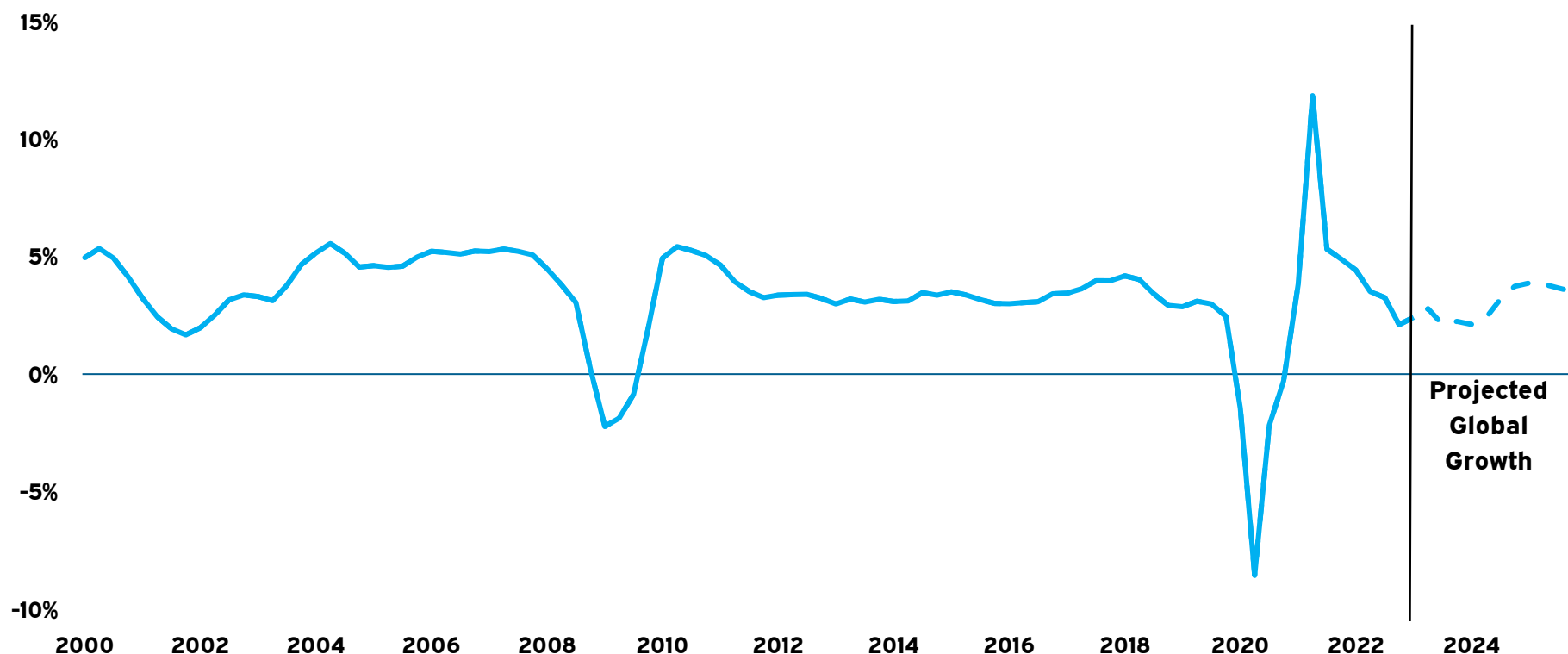


- Spreads (the added yield above a comparable maturity Treasury) were stable in April as concerns over the banking sector subsided and government and corporate bonds had similar gains.
- High yield spreads remain below the long-term average. Investment grade spreads and emerging market spreads are narrower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

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



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

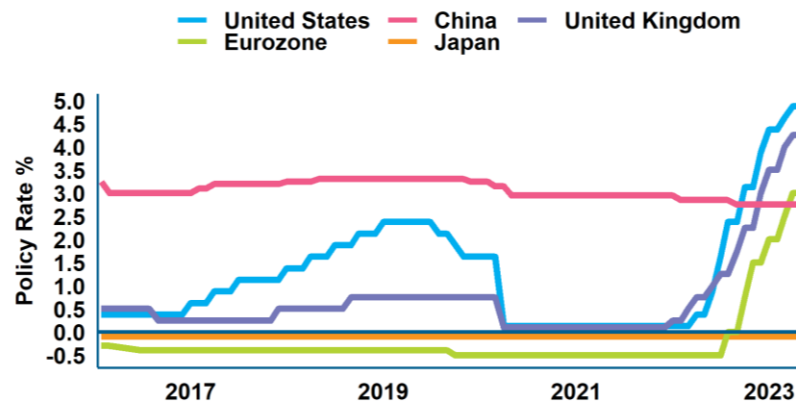


- Global economies are expected to slow this year compared to 2022, with risks of recession increasing given persistently high inflation and related tighter monetary policy.
- The delicate balancing act of central banks trying to reduce inflation without dramatically depressing growth will remain key.

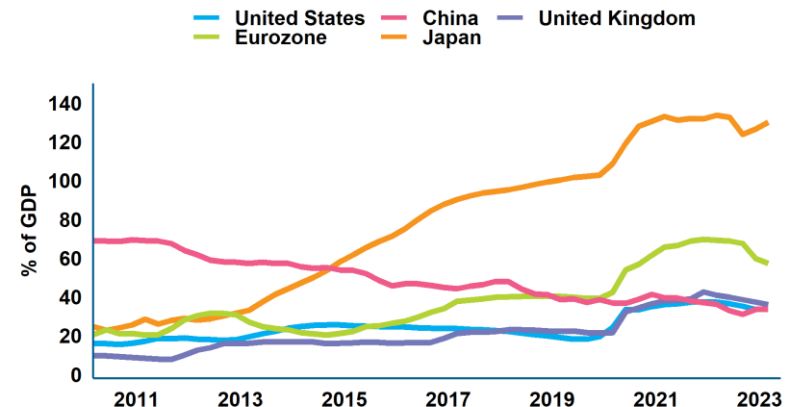
<sup>1</sup> Source: Oxford Economics (World GDP, US\$ prices & PPP exchange rate, real, % change YoY). Updated April 2023.

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

#### Policy Rates



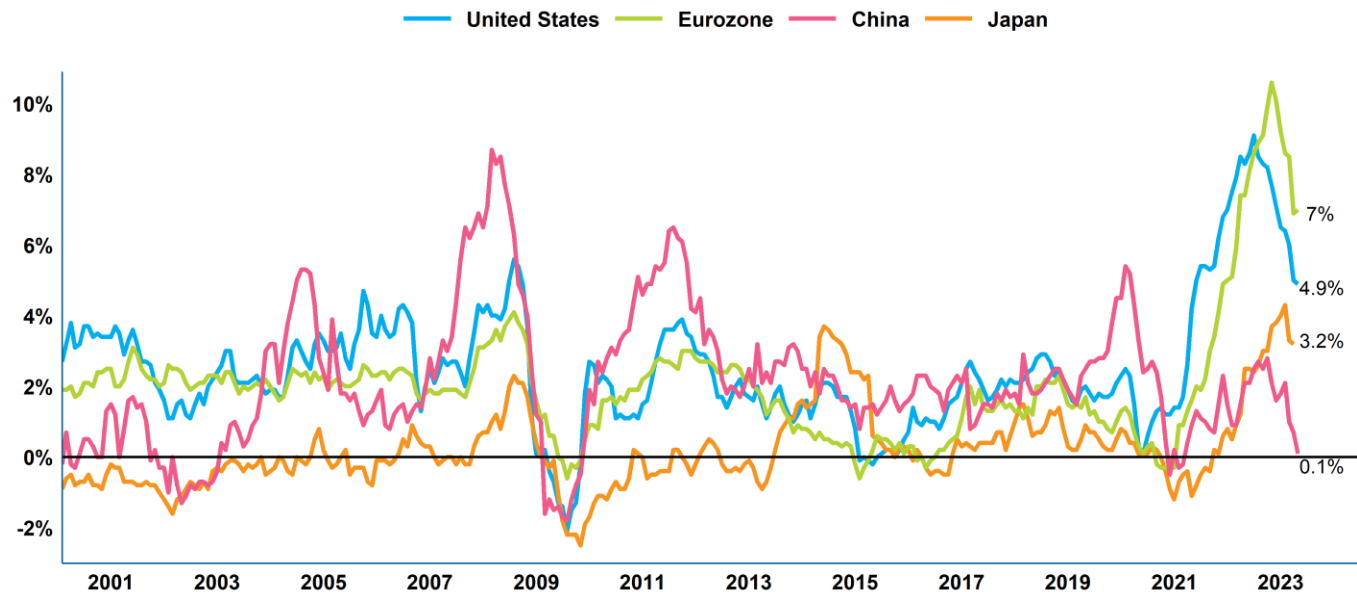
#### Balance Sheet as % of GDP



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

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

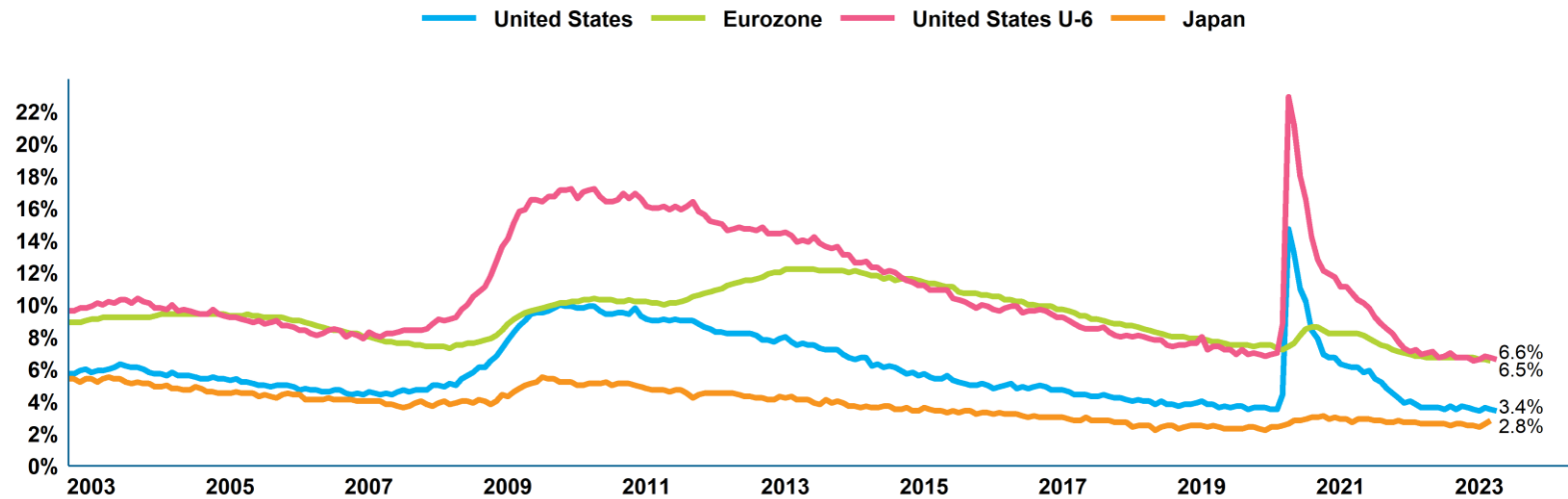
**Inflation (CPI Trailing Twelve Months)<sup>1</sup>**



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

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

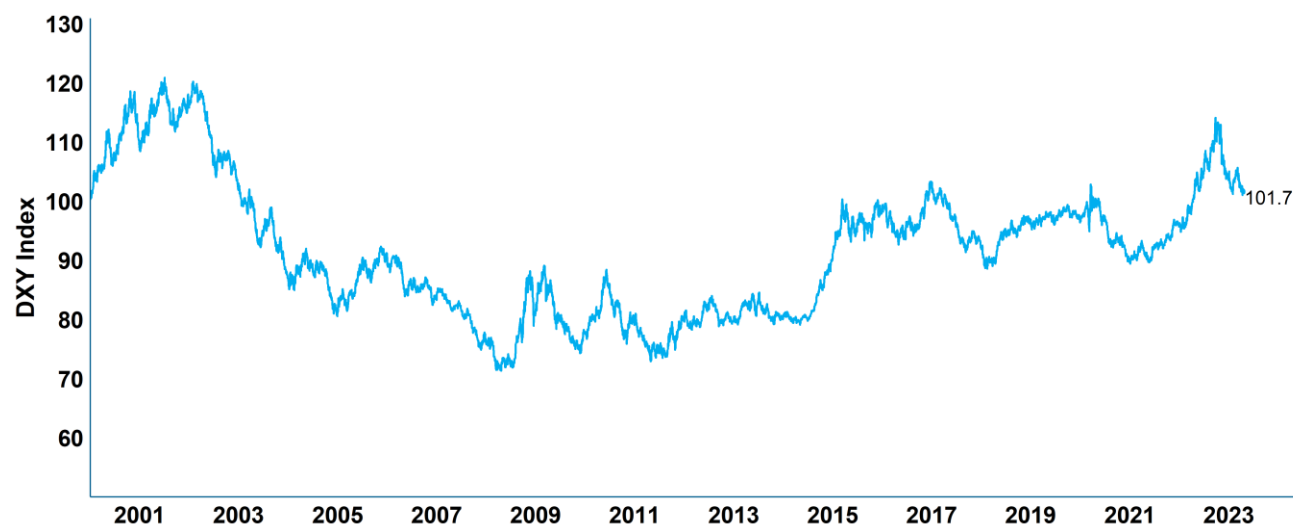
### Unemployment<sup>1</sup>



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

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

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



- The dollar finished 2022 much higher than it started, due to the increased pace of policy tightening, stronger relative growth, and safe-haven flows.
- Late last year and into early this year, the dollar has fallen, as weaker economic data and declining inflation led to investors anticipating the end of Fed tightening.
- This year, the track of inflation across economies and the corresponding monetary policies will likely be key drivers of currency moves.

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

## Summary

### Key Trends:

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

**Corporate Update**



**7**  
Offices



**245+**  
Employees



**240+**  
Clients



**1.7T**  
Assets Under Advisement



**150B**  
Assets in Alternative Investments



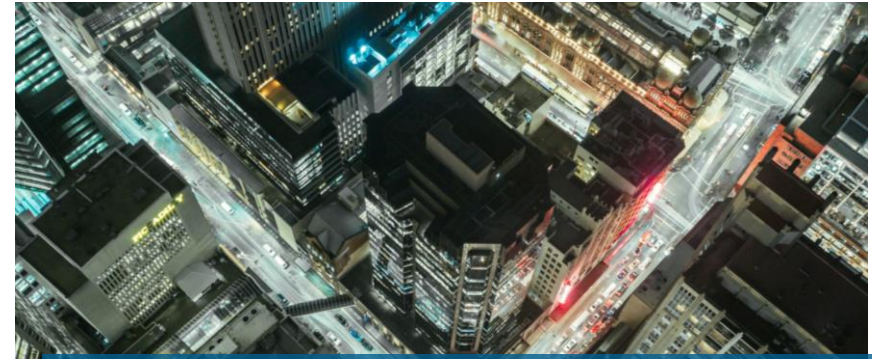
**99%**  
Client Retention Rate



**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

CELEBRATING A MILESTONE | YEARS

#### 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/>

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**Credit Risk:** Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

**Duration:** Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

**Information Ratio:** This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

**Jensen's Alpha:** A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk.  $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$ .

**Market Capitalization:** For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

**Market Weighted:** Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

**Maturity:** The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

**Prepayment Risk:** The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

**Price-Book Value (P/B) Ratio:** The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

**Price-Earnings (P/E) Ratio:** A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

**Quality Rating:** The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

**Sharpe Ratio:** A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk-free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

**SI:** Since Inception

**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.