Plymouth County Retirement Association

March 28, 2023

Meeting Materials

Agenda

1. Estimated Retirement Association Performance As of February 28, 2023
2. Performance Update As of January 31, 2023
3. Current Issues
   - 2022 Year in Review
   - Insurance Linked Strategy Search Respondent Review
4. Appendix
   - Disclaimer, Glossary, and Notes

Estimated Retirement Association Performance
As of February 28, 2023

Estimated Aggregate Performance[1]

	February[2] (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Total Retirement Association	-2.8	0.5	-2.3	8.9	6.1	7.1

Benchmark Returns

	February (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Russell 3000	-2.3	4.4	-8.1	11.8	9.4	11.9
MSCI EAFE	-2.1	5.8	-3.1	6.8	2.6	4.8
MSCI Emerging Markets	-6.5	0.9	-15.3	1.0	-1.9	1.5
Bloomberg Aggregate	-2.6	0.4	-9.7	-3.8	0.5	1.1
Bloomberg TIPS	-1.4	0.4	-10.4	0.2	2.6	1.2
Bloomberg High Yield	-1.3	2.5	-5.5	1.3	2.9	4.1
JPM EMBI Global Diversified (Hard Currency)	-2.2	0.9	-8.6	-5.2	-0.7	1.9
S&P Global Natural Resources	-5.5	1.7	3.2	19.9	7.7	5.0

Estimated Total Assets

	Estimate
Total Retirement Association	$1,300,456,910

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

[2] As of February 2023

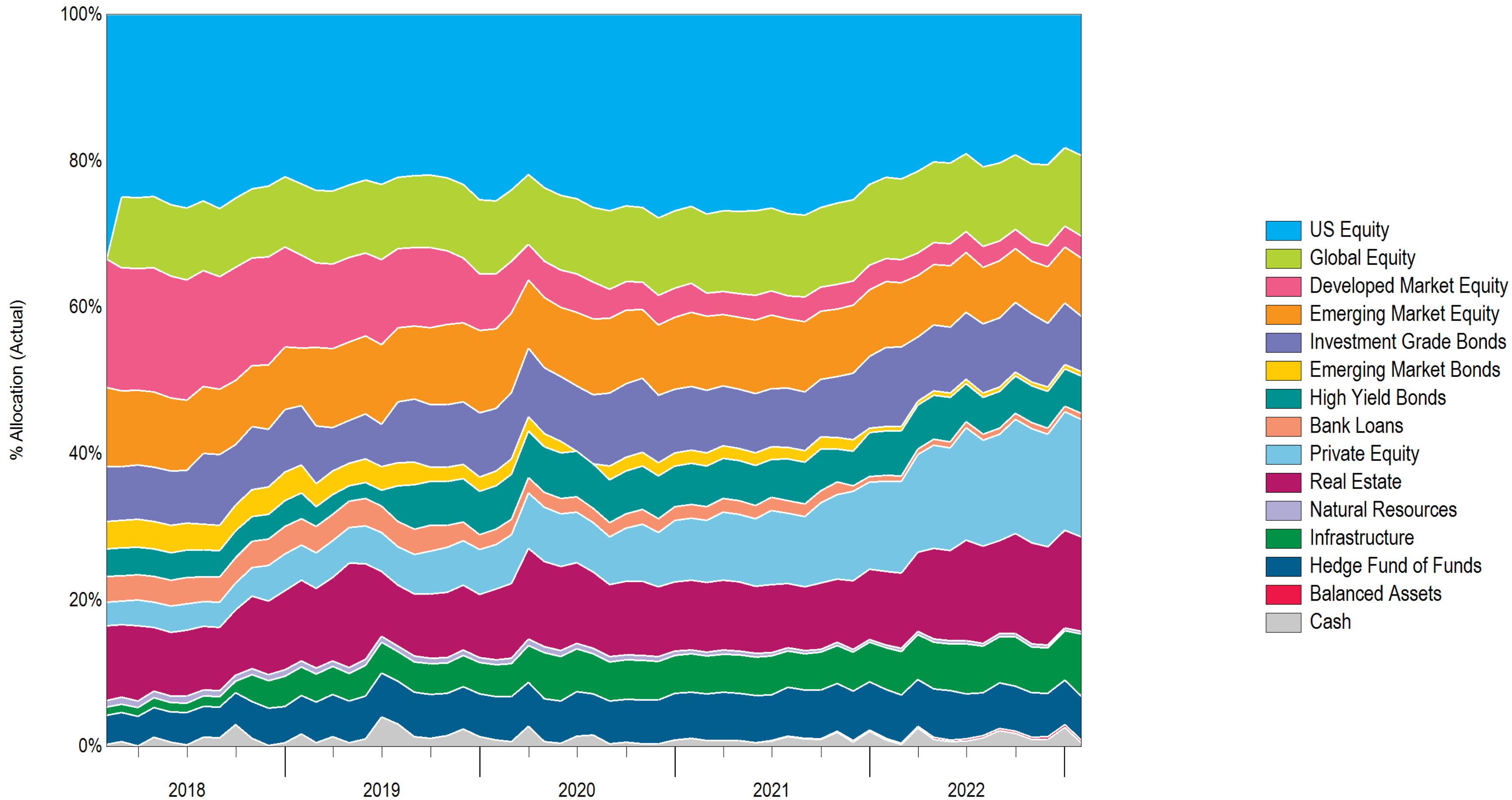
Performance Update
As of January 31, 2023

Allocation vs. Target

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Domestic Equity	$257,181,161	19%	26%	21% - 36%	No
International Developed Market Equity	$40,155,799	3%	6%	1% - 16%	Yes
International Emerging Market Equity	$105,950,939	8%	10%	5% - 20%	Yes
Global Equity	$148,237,404	11%	10%	5% - 20%	Yes
Core Bonds	$101,705,518	8%	9%	4% - 14%	Yes
Value-Added Fixed Income	$87,028,087	7%	6%	2% - 12%	Yes
Private Equity	$219,430,652	16%	13%	4% - 18%	Yes
Real Estate	$172,873,241	13%	10%	5% - 15%	Yes
Real Assets	$118,235,907	9%	6%	2% - 10%	Yes
Hedge Fund of Funds	$80,744,659	6%	4%	2% - 8%	Yes
Cash	$6,588,098	0%	0%	0% - 3%	Yes
Total	**$1,338,131,464**	**100%**	**100%**		

	Current Balance	Current Allocation	Policy	Policy Range	Within IPS Range?
Total Equity	$827,122,087	62%	69%	60% - 80%	Yes
Total Fixed Income	$188,733,605	14%	15%	5% - 25%	Yes
Total Real Assets and Real Estate	$315,687,675	24%	16%	7% - 25%	Yes
Cash	$6,588,098	0%	0%	0% - 3%	Yes

Asset Allocation History
5 Years Ending January 31, 2023



Asset Class Net Performance Summary

	Market Value ($)	% of Portfolio	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**1,338,131,464**	**100.0**	**3.4**	**-0.4**	**8.4**	**6.1**	**7.4**	**7.8**	**Nov-89**
Policy Benchmark (Net) (1)			*5.1*	*-6.9*	*5.8*	*5.2*	*7.0*	*--*	*Nov-89*
Actual Allocation (Net)			*4.5*	*-7.1*	*5.2*	*4.3*	*--*	*--*	*Nov-89*
Domestic Equity Assets	**257,181,161**	**19.2**	**8.7**	**-5.9**	**10.6**	**9.2**	**--**	**12.2**	**Jan-16**
Russell 3000			*6.9*	*-8.2*	*9.5*	*9.1*	*12.3*	*11.9*	*Jan-16*
International Developed Market Equity Assets	**40,155,799**	**3.0**	**8.0**	**-7.7**	**-0.8**	**-2.2**	**--**	**2.8**	**Jan-16**
MSCI EAFE			*8.1*	*-2.8*	*4.2*	*2.1*	*4.9*	*5.6*	*Jan-16*
International Emerging Market Equity Assets	**105,950,939**	**7.9**	**7.1**	**-13.6**	**2.2**	**-1.6**	**--**	**5.6**	**Jan-16**
MSCI Emerging Markets			*7.9*	*-12.1*	*1.4*	*-1.5*	*2.1*	*6.2*	*Jan-16*
Global Equity Assets	**148,237,404**	**11.1**	**5.9**	**-2.0**	**8.2**	**6.1**	**--**	**6.1**	**Feb-18**
MSCI ACWI			*7.2*	*-8.0*	*6.8*	*5.5*	*8.2*	*5.5*	*Feb-18*
Core Fixed Income	**101,705,518**	**7.6**	**2.2**	**-5.8**	**-0.8**	**1.6**	**--**	**2.0**	**Jan-16**
75% Bbg Aggregate/25% Bbg US TIPs 1-10 year			*2.6*	*-7.5*	*-1.3*	*1.4*	*1.4*	*1.7*	*Jan-16*
Value Added Fixed Income	**87,028,087**	**6.5**	**2.9**	**-4.8**	**0.7**	**2.1**	**--**	**4.3**	**Jan-16**
Custom Benchmark - Global Fixed Income (2)			*3.2*	*-7.1*	*-0.7*	*1.6*	*2.4*	*3.6*	*Jan-16*
Hedge Funds	**80,744,659**	**6.0**	**1.7**	**-16.3**	**-2.5**	**-0.5**	**2.9**	**3.1**	**Feb-10**
Custom Benchmark			*1.1*	*-3.0*	*4.1*	*3.1*	*3.5*	*3.2*	*Feb-10*
Real Estate (3)	**172,873,241**	**12.9**	**-0.1**	**14.0**	**15.3**	**12.5**	**--**	**9.9**	**Jan-16**
Custom Benchmark			*0.0*	*7.5*	*9.9*	*8.5*	*--*	*7.6*	*Jan-16*
Private Equity (4)	**219,430,652**	**16.4**	**0.0**	**18.9**	**25.7**	**17.4**	**--**	**13.6**	**Jan-16**
MSCI ACWI IMI (1Q Lagged) +2%			*6.3*	*-18.6*	*6.9*	*7.1*	*10.1*	*10.2*	*Jan-16*
Real Assets (5)	**118,235,907**	**8.8**	**0.0**	**11.3**	**10.8**	**7.5**	**--**	**4.2**	**Jan-16**
CPI + 3%			*1.0*	*9.6*	*8.2*	*6.9*	*5.7*	*6.5*	*Jan-16*
Cash and Cash Equivalent	**6,588,098**	**0.5**							

(1) The custom benchmark is comprised of 26% Russell 3000/ 6% MSCI EAFE/ 10% MSCI Emerging Markets/ 13% MSCI ACWI IMI (Lagged) + 2%/ 10% MSCI ACWI/ 4% Hedge Funds Custom Benchmark/ 9% (75/25 Barclays Aggregate and Barclays Tips 1-10yr)/ 6% Value Added FI Custom Benchmark/ 10% (80/20 NCREIF ODCE and Wilshire REIT)/ 6% CPI+3%

(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 market value and performance is one quarter lagged.

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

Trailing Net Performance

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Retirement Association	**1,338,131,464**	**100.0**	**--**	**3.4**	**-0.4**	**8.4**	**6.1**	**7.4**	**7.8**	**Nov-89**
Policy Benchmark (Net)				*5.1*	*-6.9*	*5.8*	*5.2*	*7.0*	*--*	*Nov-89*
Actual Allocation (Net)				*4.5*	*-7.1*	*5.2*	*4.3*	*--*	*--*	*Nov-89*
Domestic Equity Assets	**257,181,161**	**19.2**	**19.2**	**8.7**	**-5.9**	**10.6**	**9.2**	**--**	**12.2**	**Jan-16**
Russell 3000				*6.9*	*-8.2*	*9.5*	*9.1*	*12.3*	*11.9*	*Jan-16*
Rhumbline Russell 1000 Value	61,147,837	4.6	23.8	5.2	-0.4	8.5	6.9	--	9.6	Apr-13
Russell 1000 Value				*5.2*	*-0.4*	*8.5*	*6.9*	*10.2*	*9.7*	*Apr-13*
Rhumbline Russell 1000 Growth	40,259,139	3.0	15.7	8.3	-16.0	9.9	11.2	14.5	14.7	Jul-09
Russell 1000 Growth				*8.3*	*-16.0*	*9.9*	*11.2*	*14.5*	*14.8*	*Jul-09*
Fisher Midcap Value	62,193,281	4.6	24.2	11.4	0.7	15.9	11.1	12.3	9.4	Apr-07
Russell MidCap Value				*8.1*	*-0.7*	*9.3*	*6.9*	*10.2*	*7.5*	*Apr-07*
Russell MidCap				*8.3*	*-3.3*	*9.0*	*8.0*	*11.1*	*8.4*	*Apr-07*
Newton Small Cap Growth	47,698,362	3.6	18.5	10.2	-7.8	8.1	11.5	13.8	13.8	Aug-09
Russell 2000 Growth				*9.9*	*-6.5*	*4.3*	*4.7*	*9.5*	*11.3*	*Aug-09*
Vulcan Partners Small Cap Value	15,623,578	1.2	6.1	12.2	--	--	--	--	-19.7	Apr-22
Russell 2000 Value				*9.5*	*-0.5*	*9.9*	*5.8*	*8.8*	*-4.0*	*Apr-22*
Systematic Small Cap Free Cash Flow	30,258,964	2.3	11.8	7.3	--	--	--	--	4.6	Apr-22
Russell 2000 Value				*9.5*	*-0.5*	*9.9*	*5.8*	*8.8*	*-4.0*	*Apr-22*

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Plymouth County Retirement Association

Summary | As of January 31, 2023

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
International Developed Market Equity Assets	**40,155,799**	**3.0**	**3.0**	**8.0**	**-7.7**	**-0.8**	**-2.2**	**--**	**2.8**	**Jan-16**
MSCI EAFE				*8.1*	*-2.8*	*4.2*	*2.1*	*4.9*	*5.6*	*Jan-16*
Aristotle International Equity	21,300,346	1.6	53.0	7.4	-8.5	--	--	--	-0.8	Mar-21
MSCI EAFE				*8.1*	*-2.8*	*4.2*	*2.1*	*4.9*	*0.9*	*Mar-21*
Walter Scott International Equity	18,855,453	1.4	47.0	8.7	-6.8	--	--	--	-1.8	Mar-21
MSCI EAFE				*8.1*	*-2.8*	*4.2*	*2.1*	*4.9*	*0.9*	*Mar-21*
International Emerging Market Equity Assets	**105,950,939**	**7.9**	**7.9**	**7.1**	**-13.6**	**2.2**	**-1.6**	**--**	**5.6**	**Jan-16**
MSCI Emerging Markets				*7.9*	*-12.1*	*1.4*	*-1.5*	*2.1*	*6.2*	*Jan-16*
ABS Emerging Markets	56,271,870	4.2	53.1	6.8	-14.2	3.4	--	--	6.2	Dec-18
MSCI Emerging Markets				*7.9*	*-12.1*	*1.4*	*-1.5*	*2.1*	*3.3*	*Dec-18*
Driehaus Emerging Markets Growth	49,679,069	3.7	46.9	7.5	-12.8	3.3	--	--	5.0	Mar-19
MSCI Emerging Markets				*7.9*	*-12.1*	*1.4*	*-1.5*	*2.1*	*2.0*	*Mar-19*
Global Equity Assets	**148,237,404**	**11.1**	**11.1**	**5.9**	**-2.0**	**8.2**	**6.1**	**--**	**6.1**	**Feb-18**
MSCI ACWI				*7.2*	*-8.0*	*6.8*	*5.5*	*8.2*	*5.5*	*Feb-18*
First Eagle Global Value Fund	25,458,826	1.9	17.2	6.7	0.1	7.2	4.9	--	4.9	Feb-18
MSCI ACWI Value NR USD				*4.9*	*-1.8*	*6.2*	*3.5*	*6.4*	*3.5*	*Feb-18*
Kopernik Global All Cap Fund	36,107,087	2.7	24.4	6.0	-1.7	17.7	8.1	--	8.1	Feb-18
MSCI ACWI Value NR USD				*4.9*	*-1.8*	*6.2*	*3.5*	*6.4*	*3.5*	*Feb-18*
Lee Munder Global Multi-Cap Strategy	41,560,878	3.1	28.0	7.2	-9.0	5.9	--	--	5.0	Mar-18
MSCI ACWI				*7.2*	*-8.0*	*6.8*	*5.5*	*8.2*	*6.6*	*Mar-18*
Wellington Durable Enterprises, L.P.	45,110,612	3.4	30.4	4.1	4.3	5.7	--	--	8.7	Mar-18
MSCI ACWI				*7.2*	*-8.0*	*6.8*	*5.5*	*8.2*	*6.6*	*Mar-18*

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Core Fixed Income	**101,705,518**	**7.6**	**7.6**	**2.2**	**-5.8**	**-0.8**	**1.6**	**--**	**2.0**	**Jan-16**
75% Bbg Aggregate/25% Bbg US TIPs 1-10 year				*2.6*	*-7.5*	*-1.3*	*1.4*	*1.4*	*1.7*	*Jan-16*
Lord Abbett Short Duration Credit Trust II	43,376,073	3.2	42.6	1.4	-2.5	0.1	--	--	0.7	Aug-19
Bloomberg US Credit 1-3 Yr TR				*1.0*	*-1.7*	*0.1*	*1.5*	*1.5*	*0.7*	*Aug-19*
Lord Abbett Core Fixed Income Trust II	41,186,589	3.1	40.5	3.3	-8.8	--	--	--	-9.0	Dec-21
Bloomberg US Aggregate TR				*3.1*	*-8.4*	*-2.3*	*0.9*	*1.4*	*-9.1*	*Dec-21*
Rhumbline TIPS Trust	17,142,856	1.3	16.9	1.9	-8.4	--	--	--	-1.5	Sep-20
Bloomberg US TIPS TR				*1.8*	*-8.4*	*1.1*	*2.7*	*1.4*	*-1.5*	*Sep-20*
Value Added Fixed Income	**87,028,087**	**6.5**	**6.5**	**2.9**	**-4.8**	**0.7**	**2.1**	**--**	**4.3**	**Jan-16**
Custom Benchmark - Global Fixed Income				*3.2*	*-7.1*	*-0.7*	*1.6*	*2.4*	*3.6*	*Jan-16*
Eaton Vance High Yield	12,038,877	0.9	13.8	3.5	-3.8	1.5	3.0	4.2	5.9	Apr-06
ICE BofA US High Yield TR				*3.9*	*-5.1*	*1.0*	*2.8*	*4.2*	*6.2*	*Apr-06*
First Eagle Bank Loan Select Fund	10,761,911	0.8	12.4	2.1	-1.3	2.4	3.0	4.0	4.6	Sep-10
Credit Suisse Leveraged Loans				*2.6*	*1.1*	*3.0*	*3.5*	*3.9*	*4.5*	*Sep-10*
Manulife Strategic Fixed Income	41,635,693	3.1	47.8	3.2	-4.6	0.3	--	--	1.2	Jul-19
Bloomberg Multiverse TR				*3.3*	*-11.4*	*-3.7*	*-1.2*	*0.1*	*-2.5*	*Jul-19*
Mesirow High Yield	14,692,471	1.1	16.9	3.5	-6.1	4.3	--	--	4.9	Aug-19
Bloomberg US Corporate High Yield TR				*3.8*	*-5.2*	*1.3*	*3.0*	*4.3*	*2.1*	*Aug-19*
Eaton Vance EMD Opportunities Fund	7,899,134	0.6	9.1	0.0	-10.1	--	--	--	-0.8	Aug-20
JP Morgan EMBI Global Diversified				*3.2*	*-12.7*	*-4.8*	*-0.7*	*2.0*	*-5.4*	*Aug-20*

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Hedge Funds	**80,744,659**	**6.0**	**6.0**	**1.7**	**-16.3**	**-2.5**	**-0.5**	**2.9**	**3.1**	**Feb-10**
Custom Benchmark				*1.1*	*-3.0*	*4.1*	*3.1*	*3.5*	*3.2*	*Feb-10*
ABS Offshore SPC - Global Segregated Portfolio	35,650,741	2.7	44.2	2.7	-2.7	3.4	3.0	4.9	5.0	Aug-10
HFRI Equity Hedge (Total) Index				*3.8*	*-2.8*	*7.5*	*4.8*	*5.6*	*5.6*	*Aug-10*
HFRI FOF: Strategic Index				*3.5*	*-4.0*	*3.7*	*2.2*	*3.5*	*3.4*	*Aug-10*
Entrust Special Opportunities Fund III, Ltd.	11,925,266	0.9	14.8	0.0	-34.0	-10.9	-5.9	--	0.3	Oct-16
HFRI Fund of Funds Composite Index (QTR)				*0.0*	*-5.3*	*3.7*	*3.0*	*3.5*	*3.7*	*Oct-16*
Old Farm Partners Master Fund, L.P.	15,711,343	1.2	19.5	2.5	-4.5	6.2	--	--	4.3	Oct-18
HFRI Fund of Funds Composite Index				*2.1*	*-0.7*	*4.3*	*3.0*	*3.5*	*3.8*	*Oct-18*
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	17,457,309	1.3	21.6	0.0	-29.3	-8.3	--	--	-0.4	Jan-19
HFRI Fund of Funds Composite Index (QTR)				*0.0*	*-5.3*	*3.7*	*3.0*	*3.5*	*4.7*	*Jan-19*
Real Estate	**172,873,241**	**12.9**	**12.9**	**-0.1**	**14.0**	**15.3**	**12.5**	**--**	**9.9**	**Jan-16**
Custom Benchmark				*0.0*	*7.5*	*9.9*	*8.5*	*--*	*7.6*	*Jan-16*
Core Real Estate	**111,803,064**	**8.4**	**64.7**	**-0.1**	**6.4**	**11.5**	**10.2**	**--**	**9.2**	**Jan-16**
NCREIF-ODCE				*0.0*	*7.5*	*9.9*	*8.7*	*10.1*	*8.4*	*Jan-16*
TA Realty Core Property Fund, L.P.	77,516,051	5.8	69.3	0.0	8.9	14.2	--	--	12.7	Apr-18
NCREIF ODCE Equal Weighted (Net)				*0.0*	*7.6*	*9.7*	*8.3*	*9.5*	*8.2*	*Apr-18*
JPMorgan Strategic Property	34,287,013	2.6	30.7	-0.4	2.1	7.3	--	--	6.6	Apr-19
NCREIF ODCE Equal Weighted (Net)				*0.0*	*7.6*	*9.7*	*8.3*	*9.5*	*8.5*	*Apr-19*
Non-Core Real Estate	**61,070,177**	**4.6**	**35.3**	**0.0**	**31.0**	**22.7**	**16.4**	**--**	**9.6**	**Jan-16**

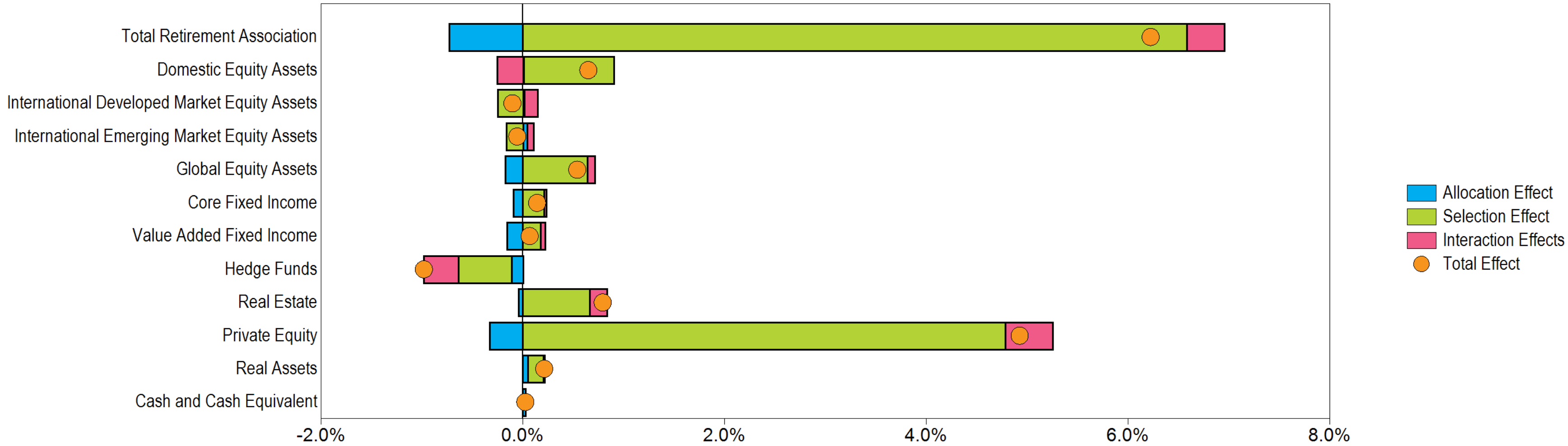
Entrust Special Opportunities Fund III and EntrustPermal Special Opportunities Evergreen Fund: Data is based on September 30, 2022 fair market value, adjusted for subsequent cash flows.
Note: The data for JPMorgan Strategic Property is as of January 31, 2023.
Note: The data for Real Estate is based on September 30, 2022 fair market value, adjusted for subsequent cash flows.
Note: TA Realty Core Property Fund is reported in real time.

Summary | As of January 31, 2023

	Market Value ($)	% of Portfolio	% of Sector	1 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Equity	**219,430,652**	**16.4**	**16.4**	**0.0**	**18.9**	**25.7**	**17.4**	**--**	**13.6**	**Jan-16**
MSCI ACWI IMI (1Q Lagged) +2%				*6.3*	*-18.6*	*6.9*	*7.1*	*10.1*	*10.2*	*Jan-16*
Private Equity	**204,848,100**	**15.3**	**93.4**	**0.0**	**20.4**	**26.8**	**18.0**	**--**	**13.3**	**Jan-16**
Venture Capital	**14,582,552**	**1.1**	**6.6**	**0.0**	**1.6**	**14.7**	**10.5**	**--**	**11.4**	**Jan-16**
Real Assets	**118,235,907**	**8.8**	**8.8**	**0.0**	**11.3**	**10.8**	**7.5**	**--**	**4.2**	**Jan-16**
CPI + 3%				*1.0*	*9.6*	*8.2*	*6.9*	*5.7*	*6.5*	*Jan-16*
Core Real Assets	**72,277,944**	**5.4**	**61.1**	**0.8**	**9.3**	**10.3**	**--**	**--**	**11.1**	**Oct-18**
CPI + 3%				*1.0*	*9.6*	*8.2*	*6.9*	*5.7*	*7.1*	*Oct-18*
IFM Global Infrastructure	72,277,944	5.4	100.0	0.8	9.3	10.3	--	--	11.1	Oct-18
CPI + 3%				*1.0*	*9.6*	*8.2*	*6.9*	*5.7*	*7.1*	*Oct-18*
Non-Core Real Assets	**45,957,962**	**3.4**	**38.9**	**-1.3**	**12.8**	**10.4**	**5.6**	**--**	**3.8**	**Jan-16**
CPI + 3%				*1.0*	*9.6*	*8.2*	*6.9*	*5.7*	*6.5*	*Jan-16*
Cash and Cash Equivalent	**6,588,098**	**0.5**	**0.5**							
Cash	6,588,098	0.5	100.0							

Note: The data for Real Estate, Private Equity, and Real Assets is based on September 30, 2022 fair market value, adjusted for subsequent cash flows.
Note: The data for IFM Global Infrastructure is as of January 31, 2023.

Attribution Effects
1 Year Ending January 31, 2023



Attribution Summary
1 Year Ending January 31, 2023

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Domestic Equity Assets	-5.9%	-8.9%	3.0%	0.9%	0.0%	-0.3%	0.7%
International Developed Market Equity Assets	-7.7%	-3.5%	-4.2%	-0.2%	0.0%	0.1%	-0.1%
International Emerging Market Equity Assets	-13.6%	-12.8%	-0.8%	-0.2%	0.0%	0.1%	-0.1%
Global Equity Assets	-2.0%	-8.7%	6.7%	0.6%	-0.2%	0.1%	0.5%
Core Fixed Income	-5.8%	-8.2%	2.3%	0.2%	-0.1%	0.0%	0.1%
Value Added Fixed Income	-4.8%	-7.7%	2.9%	0.2%	-0.2%	0.0%	0.1%
Hedge Funds	-16.3%	-3.7%	-12.6%	-0.5%	-0.1%	-0.3%	-1.0%
Real Estate	14.0%	6.7%	7.3%	0.7%	0.0%	0.2%	0.8%
Private Equity	18.9%	-18.6%	37.4%	4.8%	-0.3%	0.5%	4.9%
Real Assets	11.3%	8.8%	2.5%	0.1%	0.1%	0.0%	0.2%
Cash and Cash Equivalent	1.8%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**-0.6%**	**-6.8%**	**6.2%**	**6.6%**	**-0.7%**	**0.4%**	**6.2%**

Annual Investment Expense Analysis
As Of January 31, 2023

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Domestic Equity Assets		**$257,181,161**		
Rhumbline Russell 1000 Value	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$61,147,837	$25,844	0.04%
Rhumbline Russell 1000 Growth	0.05% of First 25.0 Mil, 0.04% of Next 25.0 Mil, 0.03% Thereafter	$40,259,139	$18,604	0.05%
Fisher Midcap Value	0.65% of Assets	$62,193,281	$404,256	0.65%
Newton Small Cap Growth	0.45% of Assets	$47,698,362	$214,643	0.45%
Vulcan Partners Small Cap Value	0.83% of Assets	$15,623,578	$129,676	0.83%
Systematic Small Cap Free Cash Flow	0.76% of Assets	$30,258,964	$229,968	0.76%
International Developed Market Equity Assets		**$40,155,799**		
Aristotle International Equity	0.49% of Assets	$21,300,346	$104,372	0.49%
Walter Scott International Equity	0.75% of Assets	$18,855,453	$141,416	0.75%
International Emerging Market Equity Assets		**$105,950,939**		
ABS Emerging Markets	Performance-based 0.35 and 0.10	$56,271,870	$200,725	0.36%
Driehaus Emerging Markets Growth	0.55% of Assets	$49,679,069	$273,235	0.55%
Global Equity Assets		**$148,237,404**		
First Eagle Global Value Fund	0.75% of Assets	$25,458,826	$190,941	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	$36,107,087	$288,857	0.80%
Lee Munder Global Multi-Cap Strategy	0.45% of Assets	$41,560,878	$187,024	0.45%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Wellington Durable Enterprises, L.P.	0.60% of Assets	$45,110,612	$270,664	0.60%
Core Fixed Income		**$101,705,518**		
Lord Abbett Short Duration Credit Trust II	0.17% of Assets	$43,376,073	$73,739	0.17%
Lord Abbett Core Fixed Income Trust II	0.15% of Assets	$41,186,589	$61,780	0.15%
Rhumbline TIPS Trust	0.04% of First 5.0 Mil, 0.03% Thereafter	$17,142,856	$5,643	0.03%
Value Added Fixed Income		**$87,028,087**		
Eaton Vance High Yield	0.42% of Assets	$12,038,877	$50,563	0.42%
First Eagle Bank Loan Select Fund	0.40% of Assets	$10,761,911	$43,048	0.40%
Manulife Strategic Fixed Income	0.35% of Assets	$41,635,693	$145,725	0.35%
Mesirow High Yield	0.40% of Assets	$14,692,471	$58,770	0.40%
Eaton Vance EMD Opportunities Fund	0.30% of Assets	$7,899,134	$23,697	0.30%
Ridgemont Equity Partners IV, L.P.		$1,008,678		
Core Real Assets		**$72,277,944**		
Non-Core Real Assets		**$45,957,962**		

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

Note: The value is based on September 30, 2022 FMV.

Private Equity	Commitment	Total Contributions	Total Distributions	Value
Ascend Ventures II, L.P.	2,500,000	2,327,488	995,193	4,793
Ascent Venture Partners IV, L.P.	2,500,000	2,502,219	424,010	0
Ascent Venture Partners V, L.P.	5,000,000	5,004,731	4,054,562	3,564,498
Audax Mezzanine Fund IV, L.P.	10,000,000	8,665,022	7,526,720	2,937,829
Charles River Partnership XI, L.P.	1,839,000	1,820,323	2,532,884	0
Charlesbank Technology Opportunities Fund, L.P.	12,000,000	7,398,711	1,078,536	13,783,468
Ironsides Opportunities Fund II	20,000,000	0	0	0
Ironsides Co-Investment Fund VI, L.P.	13,000,000	13,150,994	288,017	14,786,052
DN Partners II, L.P.	5,000,000	2,375,841	23,571	2,426,338
Euro Choice V, L.P.	6,060,975	5,919,759	5,591,301	3,053,063
FS Equity Partners VIII, L.P.	12,000,000	7,581,269	324,324	13,122,732
Globespan Capital Partners V, L.P.	5,000,000	4,852,500	8,895,488	4,087,430
HarbourVest Partners Co-Investment Fund V, L.P.	12,000,000	9,300,000	1,440,447	14,105,038
HarbourVest Partners Co-Investment Fund VI, L.P.	13,000,000	1,950,000	0	1,701,949
Ironsides Direct Investment Fund V, L.P.	12,000,000	11,870,897	3,152,053	18,327,411
Kohlberg Investors IX	10,000,000	5,510,578	294,108	6,989,158
Landmark Equity Partners XIV, L.P.	6,000,000	5,841,745	7,356,228	500,373
Leeds Equity Partners IV, L.P.	5,000,000	5,093,100	9,709,704	13,385
Leeds Equity Partners V, L.P.	2,500,000	3,525,207	5,594,639	238,203
Lexington Capital Partners VII, L.P.	10,000,000	8,945,670	13,146,414	1,461,845
LLR Equity Partners V, L.P.	12,000,000	11,640,000	3,790,818	16,200,112
Mesirow Financial Capital Partners IX, L.P.	4,000,000	3,840,731	2,021,056	78,637
Ridgemont Equity Partners III, L.P.	12,000,000	11,201,957	4,813,137	17,471,222
Ridgemont Equity Partners IV, L.P.	13,000,000	0	0	0
Rimco Production Company, Inc	2,000,000	2,000,000	7,651,066	1
Searchlight Capital III, L.P.	12,000,000	7,940,428	3,583,186	9,317,120
Siguler Guff Distressed Opportunities Fund III, L.P.	6,000,000	5,820,000	9,151,887	537,317
Summit Partners Growth Equity Fund IX, L.P.	10,000,000	11,620,000	12,558,753	15,001,855
Summit Partners Venture Capital Fund V	10,000,000	4,104,913	0	3,942,112
Summit Partners Growth Equity Fund XI, L.P.	13,000,000	844,860	0	739,765
TRG Growth Partnership II, L.P.	7,500,000	7,366,152	7,957,800	1,313,508

Note: The value is based on September 30, 2022 FMV.

Note: The value for IFM Global Infrastructure and JPMorgan Strategic Property is as of January 31, 2023. The Value for TA Realty Core Property Fund is based on 9/30/2022 FMV as this fund is reported in real time.

Private Equity	Commitment	Total Contributions	Total Distributions	Value
Trilantic Capital Partners VI (North America), L.P.	12,000,000	10,218,707	1,142,305	13,204,434
Waud Capital Partners V, L.P.	10,000,000	8,859,640	0	13,477,134
Wellspring Capital Partners VI, L.P.	12,000,000	11,494,621	2,497,169	15,459,773
Total Plymouth County - PE	**300,899,975**	**210,588,064**	**127,595,373**	**207,846,556**

Real Assets	Commitment	Total Contributions	Total Distributions	Value
Basalt Infrastructure Partners II	10,000,000	9,416,866	2,439,089	9,932,120
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	10,000,000	2,946,235	258,108	2,682,368
BTG Pactual Global Timberland Resources Fund, LLC	5,043,536	5,043,536	1,869,240	1,377,651
Climate Adaptive Infrastructure Fund I	10,000,000	0	0	0
Global Infrastructure Partners III, L.P.	10,000,000	9,969,173	3,393,156	10,961,558
Global Infrastructure Partners IV, L.P.	10,000,000	6,552,307	4,747	6,721,619
IFM Global Infrastructure (U.S.), L.P.	60,000,000	60,000,000	3,832,424	72,277,944
ISQ Global Infrastructure Fund III (USTE), L.P.	10,000,000	1,085,165	1,223	971,137
JPMorgan Global Maritime Investment	10,000,000	10,034,375	2,578,840	9,731,561
Domain Timbervest Partners III, L.P.	5,000,000	5,000,000	3,646,126	3,961,063
Total Plymouth County - RA	**140,043,536**	**110,047,656**	**18,022,952**	**118,617,022**

Real Estate	Commitment	Total Contributions	Total Distributions	Value
1921 Realty, Inc.	5,000,000	5,378,294	0	556,339
AEW Partners IX, L.P.	10,000,000	5,761,317	111	5,949,861
AEW Partners Real Estate Fund VIII, L.P.	25,000,000	23,989,589	27,792,735	7,512,349
Berkshire Value Fund V, L.P.	9,000,000	5,134,454	1,058,371	5,953,020
Carlyle Realty Partners VIII, L.P.	18,000,000	13,029,418	9,073,505	11,424,070
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	22,005,735	5,111,996
JPMorgan Strategic Property Fund	27,000,000	27,000,000	1,057,812	34,287,013
PCCP Equity IX, L.P.	10,000,000	4,369,943	0	4,576,020
Real Estate International Partnership Fund I, L.P.	15,000,000	12,677,141	11,372,161	699,983
Rockpoint Real Estate Fund VI, L.P.	9,000,000	6,858,010	1,091,059	7,463,360
TA Realty Core Property Fund, L.P.	60,000,000	60,749,705	5,926,577	77,516,051
TerraCap Partners V, L.P.	5,000,000	4,992,904	85,609	5,559,651
Total Plymouth County - RE	**213,000,000**	**190,020,493**	**86,870,225**	**166,609,713**

Cash Flow Summary

Month Ending January 31, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	$556,339	$0	$0	$0	$556,339
ABS Emerging Markets	$52,685,835	$0	$0	$0	$56,271,870
ABS Offshore SPC - Global Segregated Portfolio	$34,717,268	$0	$0	$0	$35,650,741
AEW Partners Real Estate Fund IX, L.P.	$6,567,145	$0	$0	$0	$6,567,145
AEW Partners Real Estate VIII	$6,278,348	$0	$0	$0	$6,278,348
Aristotle International Equity	$19,839,194	$0	$0	$0	$21,300,346
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	$3,124,944
Audax Mezzanine Debt IV	$2,935,145	$0	-$27,495	-$27,495	$2,907,650
Basalt Infrastructure Partners II	$6,525,463	$0	$0	$0	$6,525,463
Berkshire Value Fund V	$7,101,747	$0	$0	$0	$7,101,747
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	$4,497,881	$654,247	$0	$654,247	$5,152,128
BTG Pactual Global Timberland Resources	$1,377,651	$0	$0	$0	$1,377,651
Carlyle Realty Partners VIII	$11,664,172	$0	$0	$0	$11,664,172
Cash	$33,771,643	$11,016,004	-$38,199,548	-$27,183,544	$6,588,098
Charles River Partnership XI	$0	$0	$0	$0	$0
Charlesbank Technology Opportunities Fund	$14,960,556	$0	$0	$0	$14,960,556
Climate Adaptive Infrastructure Fund	$3,187,514	$0	$0	$0	$3,187,514
DN Partners II, LP	$2,426,338	$0	$0	$0	$2,426,338
Driehaus Emerging Markets Growth	$46,198,805	$0	$0	$0	$49,679,069
DSF Multi-Family Real Estate Fund III	$5,039,395	$0	-$22,096	-$22,096	$5,017,299

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Eaton Vance EMD Opportunities Fund	$7,899,134	$0	$0	$0	$7,899,134
Eaton Vance High Yield	$11,632,494	$0	$0	$0	$12,038,877
Entrust Special Opportunities Fund III, Ltd.	$11,925,266	$0	$0	$0	$11,925,266
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	$17,457,309	$0	$0	$0	$17,457,309
Euro Choice V Programme	$2,986,491	$0	$0	$0	$2,986,491
First Eagle Bank Loan Select Fund	$10,539,128	$0	$0	$0	$10,761,911
First Eagle Global Value Fund	$23,862,955	$0	$0	$0	$25,458,826
Fisher Midcap Value	$55,787,552	$0	$0	$0	$62,193,281
FS Equity Partners VIII, L.P.	$14,436,439	$98,318	$0	$98,318	$14,534,757
Global Infrastructure Partners III	$9,922,547	$0	$0	$0	$9,922,547
Global Infrastructure Partners IV, L.P.	$7,987,674	$0	$0	$0	$7,987,674
Globespan Capital V	$3,557,979	$0	$0	$0	$3,557,979
HarbourVest Partners Co-Investment Fund VI, L.P.	$3,001,949	$0	$0	$0	$3,001,949
HarbourVest Partners Co-Investment V	$13,632,677	$0	$0	$0	$13,632,677
IFM Global Infrastructure	$47,130,351	$25,000,000	-$410,208	$24,589,792	$72,277,944
Ironsides Co-Investment Fund VI, L.P.	$14,255,911	$0	$0	$0	$14,255,911
Ironsides Direct Investment Fund V, L.P.	$18,327,411	$0	$0	$0	$18,327,411
Ironsides Opportunities Fund II, L.P.	$1,633,210	$1,472,140	$0	$1,472,140	$3,105,350
ISQ Global Infrastructure Fund III (USTE), L.P.	$971,137	$0	$0	$0	$971,137
JP Morgan Global Maritime Investment	$7,837,343	$0	$0	$0	--
JPMorgan Strategic Property	$34,892,370	$576	-$502,972	-$502,396	$34,287,013
Kohlberg Investors IX	$7,899,628	$0	$0	$0	$7,899,628
Kopernik Global All Cap Fund	$34,061,261	$0	$0	$0	$36,107,087
Landmark Equity Partners XIV	$460,357	$0	$0	$0	$460,357
Lee Munder Global Multi-Cap Strategy	$38,740,800	$0	$0	$0	$41,560,878

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Leeds Equity Partners IV	$9,031	$0	$0	$0	$9,031
Leeds Equity Partners V	$238,203	$0	$0	$0	$238,203
Lexington Capital Partners VII	$1,390,888	$0	-$49,187	-$49,187	$1,341,701
LLR Equity Partners V, LP.	$16,200,112	$0	$0	$0	$16,200,112
Lord Abbett Core Fixed Income Trust II	$39,851,657	$0	$0	$0	$41,186,589
Lord Abbett Short Duration Credit Trust II	$52,709,058	$0	-$10,000,000	-$10,000,000	$43,376,073
Manulife Strategic Fixed Income	$40,372,490	$0	-$35,327	-$35,327	$41,635,693
Mesirow Financial Capital Partners IX, LP	$78,637	$0	$0	$0	$78,637
Mesirow Financial International Real Estate Fund I	$699,983	$0	$0	$0	$699,983
Mesirow High Yield	$14,195,684	$0	$0	$0	$14,692,471
Newton Small Cap Growth	$43,265,221	$0	$0	$0	$47,698,362
Old Farm Partners Master Fund, L.P.	$15,330,488	$0	-$6,388	-$6,388	$15,711,343
PCCP Equity IX, L.P.	$5,326,020	$0	$0	$0	$5,326,020
Rhumbline Russell 1000 Growth	$37,167,306	$0	$0	$0	$40,259,139
Rhumbline Russell 1000 Value	$58,144,941	$0	$0	$0	$61,147,837
Rhumbline TIPS Trust	$16,828,767	$0	$0	$0	$17,142,856
Ridgemont Equity Partners III, L.P.	$18,009,648	$952,259	$0	$952,259	$18,961,907
RIMCO Royalty Partners, LP	$1	$0	$0	$0	$1
Rockpoint Real Estate Fund VI, L.P.	$7,854,027	$0	$0	$0	$7,854,027
Searchlight Capital III, L.P.	$9,317,120	$300,851	$0	$300,851	$9,617,971
Siguler Guff Distressed Opportunities Fund III, LP	$496,843	$0	$0	$0	$496,843
Summit Partners Growth Equity Fund IX	$15,085,855	$0	$0	$0	$15,085,855
Summit Partners Growth Equity Fund XI	$1,367,501	$0	$0	$0	$1,367,501
Summit Partners Venture Capital Fund V	$5,029,001	$0	$0	$0	$5,029,001
Systematic Small Cap Free Cash Flow	$28,203,474	$0	$0	$0	$30,258,964

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
TA Realty Core Property Fund, L.P.	$77,516,051	$0	$0	$0	$77,516,051
TerraCap Partners V, L.P	$10,005,097	$0	$0	$0	$10,005,097
Timbervest Partners III, LP	$3,611,063	$0	$0	$0	$3,611,063
TRG Growth Partnership II	$1,313,508	$0	$0	$0	$1,313,508
Trilantic Capital Partners VI, L.P.	$13,480,292	$0	$0	$0	$13,480,292
Vulcan Partners Small Cap Value	$13,919,774	$28,497	-$28,497	$0	$15,623,578
Walter Scott International Equity	$17,359,513	$0	-$31,563	-$31,563	$18,855,453
Waud Capital Partners V	$14,428,940	$0	$0	$0	$14,428,940
Wellington Durable Enterprises, L.P.	$43,333,556	$0	$0	$0	$45,110,612
Wellspring Capital Partners VI	$15,590,471	$105,233	-$105,233	$0	$15,590,471
Total	**$1,302,024,980**	**$39,628,124**	**-$49,418,514**	**-$9,790,390**	**$1,329,900,001**

Cash Flow Summary

From January 01, 2022 through January 31, 2023

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
1921 Realty, Inc	$562,673	$0	$0	$0	$556,339
ABS Emerging Markets	$68,663,388	$0	$0	$0	$56,271,870
ABS Offshore SPC - Global Segregated Portfolio	$37,942,317	$0	$0	$0	$35,650,741
AEW Partners Real Estate Fund IX, L.P.	$2,891,020	$3,374,486	$0	$3,374,486	$6,567,145
AEW Partners Real Estate VIII	$8,804,981	$0	-$5,259,694	-$5,259,694	$6,278,348
Aristotle International Equity	$25,066,871	$0	$0	$0	$21,300,346
Ascend Ventures II	$52,310	$0	-$71,373	-$71,373	$0
Ascent Ventures IV	$7,998	$0	-$6,372	-$6,372	$0
Ascent Ventures V	$4,395,569	$0	-$439,554	-$439,554	$3,124,944
Audax Mezzanine Debt IV	$4,542,166	$312,468	-$2,384,511	-$2,072,043	$2,907,650
Basalt Infrastructure Partners II	$10,821,748	$0	-$5,356,870	-$5,356,870	$6,525,463
Berkshire Value Fund V	$2,342,293	$4,533,872	-$607,091	$3,926,781	$7,101,747
BlackRock Global Renewable Power Infrastructure Fund III, L.P.	$1,538,953	$3,656,289	-$165,399	$3,490,890	$5,152,128
BTG Pactual Global Timberland Resources	$1,447,752	$0	$0	$0	$1,377,651
Carlyle Realty Partners VIII	$6,917,427	$2,986,401	-$2,305,763	$680,638	$11,664,172
Cash	$29,246,527	$110,222,526	-$132,868,809	-$22,646,282	$6,588,098
Charles River Partnership XI	$9,492	$0	$0	$0	$0
Charlesbank Technology Opportunities Fund	$7,829,929	$3,397,335	$0	$3,397,335	$14,960,556
Climate Adaptive Infrastructure Fund	--	$3,187,514	$0	$3,187,514	$3,187,514
DN Partners II, LP	$1,851,617	$0	$0	$0	$2,426,338
Driehaus Emerging Markets Growth	$58,993,894	$0	$0	$0	$49,679,069
DSF Multi-Family Real Estate Fund III	$17,642,039	$0	-$17,692,636	-$17,692,636	$5,017,299
Eaton Vance EMD Opportunities Fund	$8,911,545	$0	$0	$0	$7,899,134

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Eaton Vance High Yield	$12,847,326	$0	$0	$0	$12,038,877
Entrust Special Opportunities Fund III, Ltd.	$20,568,582	$0	-$2,406,799	-$2,406,799	$11,925,266
EnTrustPermal Special Opportunities Evergreen Fund, Ltd.	$22,624,540	$1,942,823	-$42,036	$1,900,787	$17,457,309
Euro Choice V Programme	$4,574,127	$0	-$1,127,215	-$1,127,215	$2,986,491
First Eagle Bank Loan Select Fund	$10,865,798	$0	$0	$0	$10,761,911
First Eagle Global Value Fund	$25,561,076	$0	$0	$0	$25,458,826
Fisher Midcap Value	$72,958,849	$0	-$5,000,000	-$5,000,000	$62,193,281
FS Equity Partners VIII, L.P.	$7,606,254	$2,794,603	$0	$2,794,603	$14,534,757
Global Infrastructure Partners III	$9,155,729	$889,550	-$2,108,939	-$1,219,389	$9,922,547
Global Infrastructure Partners IV, L.P.	$1,797,169	$6,128,075	-$595,284	$5,532,792	$7,987,674
Globespan Capital V	$4,802,375	$0	-$1,346,866	-$1,346,866	$3,557,979
HarbourVest Partners Co-Investment Fund VI, L.P.	--	$3,250,000	$0	$3,250,000	$3,001,949
HarbourVest Partners Co-Investment V	$14,888,274	$2,761	-$1,292,537	-$1,289,776	$13,632,677
IFM Global Infrastructure	$43,799,912	$25,000,000	-$640,910	$24,359,090	$72,277,944
IR&M Core Bonds	$0	$311	$0	$311	--
Ironsides Co-Investment Fund VI, L.P.	$11,261,173	$5,030,467	-$3,958,804	$1,071,663	$14,255,911
Ironsides Direct Investment Fund V, L.P.	$18,211,807	$1,000,029	-$1,740,394	-$740,365	$18,327,411
Ironsides Opportunities Fund II, L.P.	--	$3,105,350	$0	$3,105,350	$3,105,350
ISQ Global Infrastructure Fund III (USTE), L.P.	$785,481	$325,497	-$27,036	$298,461	$971,137
JP Morgan Global Maritime Investment	$8,771,924	$0	-$3,277,683	-$3,277,683	$0
JPMorgan Strategic Property	$33,662,943	$576	-$843,254	-$842,678	$34,287,013
Kohlberg Investors IX	$5,316,531	$1,649,024	$0	$1,649,024	$7,899,628
Kopernik Global All Cap Fund	$37,504,072	$0	$0	$0	$36,107,087
Landmark Equity Partners XIV	$672,791	$0	-$169,407	-$169,407	$460,357
Lee Munder Global Multi-Cap Strategy	$47,411,539	$45,668	$0	$45,668	$41,560,878
Leeds Equity Partners IV	$13,621	$0	-$4,354	-$4,354	$9,031

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Leeds Equity Partners V	$417,949	$0	-$116,032	-$116,032	$238,203
Lexington Capital Partners VII	$1,799,856	$20,296	-$464,793	-$444,497	$1,341,701
LLR Equity Partners V, LP.	$12,506,785	$0	-$125,061	-$125,061	$16,200,112
LMCG Small Cap Value	$52,899,338	$0	-$48,712,099	-$48,712,099	--
Lord Abbett Core Fixed Income Trust II	$56,215,855	$0	-$10,000,000	-$10,000,000	$41,186,589
Lord Abbett Short Duration Credit Trust II	$62,146,678	$10,000,000	-$27,000,000	-$17,000,000	$43,376,073
Manulife Strategic Fixed Income	$55,733,231	$0	-$10,196,441	-$10,196,441	$41,635,693
Mesirow Financial Capital Partners IX, LP	$80,253	$0	$0	$0	$78,637
Mesirow Financial International Real Estate Fund I	$981,636	$0	-$149,754	-$149,754	$699,983
Mesirow High Yield	$15,772,983	$0	$0	$0	$14,692,471
Newton Small Cap Growth	$60,193,918	$0	$0	$0	$47,698,362
Old Farm Partners Master Fund, L.P.	$11,617,242	$4,997,917	-$29,378	$4,968,538	$15,711,343
PCCP Equity IX, L.P.	$0	$5,119,943	$0	$5,119,943	$5,326,020
Rhumbline Russell 1000 Growth	$72,771,143	$0	-$16,000,000	-$16,000,000	$40,259,139
Rhumbline Russell 1000 Value	$69,408,163	$15,000,000	-$22,000,000	-$7,000,000	$61,147,837
Rhumbline TIPS Trust	$20,904,338	$10,000,000	-$11,000,000	-$1,000,000	$17,142,856
Ridgemont Equity Partners III, L.P.	$9,662,064	$2,370,720	-$218,098	$2,152,622	$18,961,907
RIMCO Royalty Partners, LP	$1	$0	-$23,197	-$23,197	$1
Rockpoint Real Estate Fund VI, L.P.	$6,183,160	$1,743,521	-$1,000,718	$742,803	$7,854,027
Searchlight Capital III, L.P.	$8,350,676	$688,015	-$1,846,039	-$1,158,024	$9,617,971
Siguler Guff Distressed Opportunities Fund III, LP	$579,431	$0	-$119,860	-$119,860	$496,843
Summit Partners Growth Equity Fund IX	$15,936,379	$113,001	-$126,688	-$13,687	$15,085,855
Summit Partners Growth Equity Fund XI	--	$1,472,596	$0	$1,472,596	$1,367,501

	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Ending Market Value
Summit Partners Venture Capital Fund V	$2,554,079	$2,614,009	$0	$2,614,009	$5,029,001
Systematic Small Cap Free Cash Flow	--	$28,390,950	$0	$28,390,950	$30,258,964
TA Realty Core Property Fund, L.P.	$50,986,726	$25,145,135	-$3,100,548	$22,044,587	$77,516,051
TerraCap Partners V, L.P	$5,015,207	$5,486,176	-$1,089,161	$4,397,014	$10,005,097
Timbervest Partners III, LP	$3,852,123	$0	-$794,500	-$794,500	$3,611,063
TRG Growth Partnership II	$1,157,483	$0	-$85,686	-$85,686	$1,313,508
Trilantic Capital Partners VI, L.P.	$9,431,307	$1,860,957	-$1,085,785	$775,172	$13,480,292
Vulcan Partners Small Cap Value	--	$18,390,369	-$28,497	$18,361,872	$15,623,578
Walter Scott International Equity	$22,436,418	$0	-$175,671	-$175,671	$18,855,453
Waud Capital Partners V	$8,849,688	$2,280,042	-$50,314	$2,229,728	$14,428,940
Wellington Durable Enterprises, L.P.	$45,650,511	$0	$0	$0	$45,110,612
Wellspring Capital Partners VI	$13,431,564	-$4,247	-$105,233	-$109,480	$15,590,471
Total	**$1,413,670,585**	**$318,525,025**	**-$347,383,141**	**-$28,858,116**	**$1,329,900,001**

Current Issues

2022 Year in Review

Market Summary

→ Between the Russia-Ukraine War, inflation, and continued COVID-19 restrictions, 2022 was one of the worst years on record for the US equity market, and the worst year on record for the fixed income market.

→ The S&P 500 ended the year down just over -18%, the MSCI EAFE down -14.5%, and the MSCI Emerging Markets down over -20%.

→ Valuations have significantly declined in the US to around long-term averages, largely driven by price declines.

→ Outside the US, equity valuations remain lower in both emerging and developed markets, but risks remain, including potential continued strength in the US dollar, higher inflation particularly weighing on Europe, and China's rushed exit from COVID-19 restrictions and on-going weakness in the real estate sector.

→ The broad Fixed Income market, represented by the Bloomberg US Universal and the Bloomberg Aggregate, both fell -13% in 2022. TIPS and High Yield didn't fare much better, returning -11.8% and -11.2% respectively. Foreign bonds also suffered, returning -11.7% for the year.

→ The Fed has raised interest rates 7 times in 2022 to a high of 4.50% in order to combat inflation, which at its highest point was running at 9% year-over-year. Inflation has since cooled to 6.5% in December.

→ Private equity and real asset returns were high during the year but have since begun to cool as valuations declined in the third and fourth quarter of the year.

→ Growth will continue to slow globally next year, with many economies likely falling into recessions. Inflation, monetary policy, and the war will all be key.

World Markets in 2022[1]

	4Q22 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity					
S&P 500	7.6	-18.1	7.7	9.4	12.6
Russell 3000	7.2	-19.2	7.1	8.8	12.1
Russell 1000	7.2	-19.1	7.3	9.1	12.4
Russell 1000 Growth	2.2	-29.1	7.8	11.0	14.1
Russell 1000 Value	12.4	-7.5	6.0	6.7	10.3
Russell MidCap	9.2	-17.3	5.9	7.1	11.0
Russell MidCap Growth	6.9	-26.7	3.9	7.6	11.4
Russell MidCap Value	10.5	-12.0	5.8	5.7	10.1
Russell 2000	6.2	-20.4	3.1	4.1	9.0
Russell 2000 Growth	4.1	-26.4	0.6	3.5	9.2
Russell 2000 Value	8.4	-14.5	4.7	4.1	8.5
Foreign Equity					
MSCI ACWI	9.8	-18.4	4.0	5.2	8.0
MSCI ACWI (ex. US)	14.3	-16.0	0.1	0.9	3.8
MSCI EAFE	17.3	-14.5	0.9	1.5	4.7
MSCI EAFE (Local Currency)	8.7	-7.0	3.6	3.8	7.6
MSCI EAFE Small Cap	15.8	-21.4	-0.9	0.0	6.2
MSCI Emerging Markets	9.7	-20.1	-2.7	-1.4	1.4
MSCI Emerging Markets (Local Currency)	6.6	-15.5	0.1	1.3	4.6
Fixed Income					
Bloomberg Barclays Universal	2.2	-13.0	-2.5	0.2	1.3
Bloomberg Barclays Aggregate	1.9	-13.0	-2.7	0.0	1.1
Bloomberg Barclays US TIPS	2.0	-11.8	1.2	2.1	1.1
Bloomberg Barclays High Yield	4.2	-11.2	0.0	2.3	4.0
JPM GBI-EM Global Diversified	8.5	-11.7	-6.1	-2.5	-2.0
Other					
FTSE NAREIT Equity	4.1	-24.9	0.2	4.4	7.1
Bloomberg Commodity Index	2.2	16.1	12.7	6.4	-1.3

[1] Source Investor Force

2022 Performance Review vs PRIT

	PCRA Allocation[1] (%)	PRIT Allocation (%)	Index Performance[2] (%)	PCRA Allocation Effect	PCRA Performance (%)	PRIT Performance (%)	Manager Effect
Total Aggregate Performance[3]					**-6.7**	**-11.3[4]**	
US Equity	21	21	-19.2	NM	-20.0	-18.5	-
International Equity	3	12	-14.5	+	-21.7	-17.0	--
Emerging Markets Equity	8	5	-20.1	-	-22.7	-18.6	--
Global Equity	11	-	-18.4	-	-10.6	N/A	N/A
Core Fixed Income	9	14	-11.6	+	-9.1	-18.3	++
Value-Added Fixed Income	7	7	-11.6	NM	-8.9	-5.4	--
Private Equity	14	18	-19.6	+	18.9	-4.7	++
Real Estate	12	11	7.5	+	14.4	7.8	++
Timber/Real Assets	7	3	9.6	+	11.2	8.2	++
Portfolio Completion[5]	6	9	-5.3	+	-19.2	-2.1	--
Overlay / Cash	2	< 1	1.5	NM	N/A	-10.4	N/A

→ The Association significantly outperformed PRIT in 2022, returning -6.7% net of fees vs. an estimated -11.3% net of fees for PRIT.

→ Overall, the allocation positioning and manager performance had concentrated areas of strength (e.g., private equity, real assets, core fixed income) and weakness (e.g., international equity).

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[1] Represent Average allocations during 2022, may not sum to 100 due to rounding

[2] Indexes used in descending order: Russell 3000, MSCI EAFE, MSCI EM, MSCI ACWI, 75% Bbg Aggregate / 25% Bbg US TIPs 1-10 year, 25% BBgBarc/ US High Yield, 25% / Credit Suisse Leveraged Loans / 25% JP Morgan EMBI Global diversified / and 25% BBgBarc Multiverse TR, MSCI ACWI IMI (1Q Lagged) +2%, NCREIF ODCE, CPI + 3%, Custom Hedge Fund Benchmark, and Barclays 3 Month T-Bill.

[3] PCRA returns are Net of Fees, PRIT returns are Gross of Fees. Categories as follows: Core fixed income: TIPS + Investment Grade Bonds; Value added bonds: High yield bonds + emerging market bonds; Timber/Real assets: Infrastructure

[4] PRIT Reported a Gross return of -10.8%, We've adjusted that down by 0.50% to estimate the impact of fees. The resulting -11.3% return is an estimated Net PRIT return.

[5] Custom Hedge Fund Benchmark used - 26% Russell 3k, 6% MSCI EAFE, 10% MSCI EM, 13% MSCI ACWI IMI, 10% MSCI ACWI World, 4% of a Custom BM, 9% 75% Barclays Agg & 25% Barclays US TUPS 1-10 yr, 6% Custom Benchmark, 10% PCRA RE, 6% CPI +3%

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.
- → Meketa Investment Group received 13 responses in total, however some were excluded for failing to meet minimum requirements. Below are summaries of the nine remaining qualified respondents. In totality, the respondents all have experience and capabilities to fulfill an insurance linked strategy mandate.
- → Meketa is happy to facilitate interviews with any managers the Board has interest in.

Manager Search Respondent Reviews

Manager Respondents Composite Rating Overview

Manager	Overall Rating	Rationale
GAM FCM	Highly Advantageous	GAM FCM Cat Bond strategy is a strong approach with a highly tenured and cohesive team. The strategy is managed by Fermat Capital Management while marketing and distribution is managed by GAM Investments. While the strategy is catastrophe bond centric, the performance has been impressive over its tenure compared to other funds that utilize a broader investment universe. Reliance of this strategy on the catastrophe bond market may prove less than optimal when bond placement activity is slow.
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 modelling developments and has a strong, tenured 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.
Neuberger Berman Group	Highly Advantageous	Neuberger Berman's Insurance-Linked Strategies Fund is a strong strategy that focuses on the usage of industry loss warranties as its main vehicle of investment. The strategy is likely more U.S. centric than others here, meaning that multiple U.S. based natural disasters (hurricane, earthquake) in any year may result in poor performance. The team, led by Peter DiFiore and Cedric Drui, is strong and has been working together for several years. Each senior investment team member has years of diverse experience in the space.
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.
Schroder 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.

Manager Respondents Composite Rating Overview (con't)

Manager	Overall Rating	Rationale
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 and Campbell Brown lead the strategy and are both knowledgeable investors within the ILS space. The proposed fee schedule is attractive.
AlphaCat Managers	Advantageous	AlphaCat is a dedicated ILS manager that incorporates a strong research team at Validus Research. The Diversified Fund II is a continuation of a previous iteration (Diversified I) and will follow the same mandate. The investment team has had some turnover in recent years. AlphaCat is 100% owned by global insurer AIG. AlphaCat maintains its decision-making autonomy in the arrangement.
K2 Advisors	Advantageous	K2 Advisors' Pyxis Fund is a rules-based strategy that seeks to build a portfolio of liquid catastrophe bonds. The Pyxis Fund's team has longevity together and the firm's ownership by Franklin Templeton may provide strong research, counterparty and operational efficiencies.
Resolute Global Partners	Advantageous	Resolute Global is a multi-dimensional organization that has its own insurance outfit, reinsurance group and Lloyd's Syndicate. Most of this strategy's risk will stem from traditional insurance in personal/commercial auto with some specialty risk as well. Equity investments in the fund related to Resolute's insurance outfit (Producer's National) provide economic benefits to the strategy through underwriting income but also add a little equity risk. This strategy has a different risk dynamic than the others and may not be as affected by global natural catastrophe.

GAM - GAM FCM Cat Bond

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	→ GAM FCM Cat Bond strategy is a strong approach with a highly tenured and cohesive team. The strategy is managed by Fermat Capital Management while marketing and distribution is managed by GAM Investments. While the strategy is catastrophe bond centric, the performance has been impressive over its tenure compared to other funds that utilize a broader investment universe. Reliance of this strategy on the catastrophe bond market may prove less than optimal when bond placement activity is slow.
Organization	Highly Advantageous	→ GAM Investments is a large European asset manager. The firm does not have a Chief Investment Officer or house view but is instead made up of 20 independent investment teams across traditional and alternatives. Each of those teams are autonomous but share ideas with each other. → The investment manager for this strategy is Fermat Capital Management (FCM), which is based in Westport, CT. FCM utilizes GAM for marketing and distribution. This relationship began in 2004. → FCM is a minority owned firm and is co-owned by brothers John and Nelson Seo. FCM was founded in 2001. → It may be a benefit to FCM that the investment team is able to focus on investments and not marketing or distribution.
Team	Highly Advantageous	→ The Fermat team is impressive up and down the roster and has had impressively low turnover. Brothers John and Nelson Seo help co-lead the investment operation with Brett Houghton • Dr. John Seo has over 30 years' experience fixed income, FX options, and interest-rate-derivatives structuring. • Nelson Seo has 27 years' experience in commodities, derivatives, bond trading and investment banking experience and has been in the ILS markets for 18 years • Brett Houghton also helps lead the investment team and joined Fermat in 2010. → The three individuals mentioned above are supported by a strong, tenured team. The portfolio management team has been together in totality since 2015. → Overall, the team has an impressive lack of turnover. No member of senior investment team has left the firm in its history. → Fermat utilizes external consultants including climatologists, seismologists, atmospheric scientists, and political advisors.

GAM - GAM FCM Cat Bond (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy → GAM FCM Cat Bond seeks attractive levels of yield, while maintaining focus on peak peril and catastrophe risk. → The Fermat team believes that collateralized reinsurance and catastrophe bonds are the most transparent and easily modeled types of insurance linked securities Process → FCM's Investment committee reviews all liquid catastrophe bonds that come to market when they are announced. (about 30-40 a year). When an offering comes in, it goes to Tony Pham, director of modeling and analytics. Mr. Pham will apply vendor modeling (Verisk, RMS, and KCC) as well as internal adjustments to create a "FCM View of Risk". o Underwriting adjustments are made to risk profile to the output from the models, including meeting with the sponsors. o Reporting goes to portfolio managers who look at the bond in isolation as well as its fit within the existing portfolio as well as the weighting. → FCM claims its size, experience and market share of the cat bond market (~15-25%) gives the team very strong transparency into the pipeline. → Modeling incorporates three distinct measurements: an insurance linked securities exceedance curve, a market exceedance curve and an implied yield curve. Together, FCM believes this allows the team to have a strong idea of market pricing and if any security they model is over- or undervalued. This modeling is constantly monitored to maintain and ensure its efficacy. → Portfolio construction includes optimization to show team the impact of individual bonds on the existing portfolio. → Portfolio statistics are rerun daily to review whether its investments are providing adequate compensation for risk or if the team should be tactical in trading the portfolio
Performance	Advantageous	→ The strategy's performance has been strong, especially given that for a catastrophe bond fund, but most of the strong performance was earned more than 10 years ago. Over the past several trailing periods, the fund has had more modest risk/return numbers, albeit better than the EH ILS Advisers Index, and likely more in line with what we would expect from a catastrophe bond fund.
Fees	Advantageous	→ Management Fee: 0.95% → Incentive Allocation: 10% over a hurdle of the Secured Overnight Financing Rate (SOFR). Subject to a high-water mark. → Subscription frequency: Monthly → Redemption frequency: Monthly → Gate: 10% fund-level → Lock-up: None

GAM FCM Cat Bond
Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Common Period (1/2006)	Since Inception (12/2004)
GAM FCM	-3.0	0.7	2.1	3.2	3.1	4.0	6.5	6.0
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*3.6*	*---*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*6.7*	*7.1*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*3.0*	*3.0*

Trailing Risk Metrics
(January 2006-December 2022)

	GAM FCM	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	7.8	*3.6*	*6.7*	*3.0*
Annualized Standard Deviation (%)	3.7	*3.5*	*16.3*	*3.8*
Omega Ratio	0.21	*0.02*	*0.75*	*0.11*
Beta - MSCI ACWI	0.07	*0.04*	*1.00*	*0.05*
Beta - Bloomberg US Aggregate	0.27	*0.21*	*0.87*	*1.00*
Correlation - MSCI ACWI	0.29	*0.18*	*1.00*	*0.21*
Correlation - Bloomberg US Aggregate	0.28	*0.23*	*0.21*	*1.00*
Skewness	-3.01	*-5.61*	*-0.68*	*-0.47*
Kurtosis	22.43	*41.30*	*1.79*	*2.48*

Nephila - Iron Catastrophe Fund

Rating Criteria	Score	Rationale
Overall	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 modelling developments and has a strong, tenured 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 allocations relative to peers
Organization	Highly Advantageous	→ 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. → 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. → Nephila is a huge investment manager in the ILS space. $7.8b 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. → The proposed strategy was launched in May 2009 and holds approximately $1.2B in assets across 14 clients.
Team	Highly Advantageous	→ 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. → Jessica Laird is the firm's Head of Risk, Origination and Underwriting teams. Ms. Laird is responsible for the overall strategy, trading and execution of the business and has been with Nephila for 12 years. → Bert Ji is the Head of Portfolio Management and leads initiatives for improve portfolio optimization and construction process. Mr. Ji joined Nephila in 2015 after spending five years at Validus Re. → The firm has strong corporate culture and senior management has had little turnover. → Nephila is a leader in research in catastrophe modeling, and portfolio construction in the ILS space.

Nephila - Iron Catastrophe Fund (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy: → Nephila's Iron Catastrophe Fund is a lower-risk strategy that is managed around limiting a 1 in 100-year loss to 30%. → The strategy is diversified across regions and perils and seeks senior tranche, more risk remote exposure. → 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). → 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. Process: → 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%. → 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. → Developments in internal modelling capabilities have allowed the firm to better evaluate factors affecting expected loss amongst other pieces that go into risk management. • Material adjustments include adjustments for climate change, Improving data quality from counterparties and adding unmodeled risks like Covid-19, impact of levees breaking, and fraud in Florida for example. → Risk management includes stress testing as well as the increased accuracy in data modeling. If risks can be modeled more accurately, a firm should be able to forecast its expected loss and understand its loss distribution and portfolio construction much better. → Among other stress tests, two of note includes stressing for30-100% increases in major hurricane activities as well as 50-100% increases in non-climate factors (inflation, etc)
Performance	Advantageous	→ Performance has been underwhelming in recent periods. The firm has underperformed over the last 4-5 years mainly due to being overweight higher risk securities. → The investment team has felt that the compensation was far more than commensurate for the risk (4x) while many other firms in the industry shifted towards more risk remote exposure due to concerns about the increasing risks of climate change.
Fees	Advantageous	→ Management Fee: 1.50% → Incentive Allocation: 0% → Subscription frequency: Monthly → Redemption frequency: Semi-Annual (6/30, 12/31) → Gate: 25% Fund Level → Lock-up: 1 year

Nephila Iron Catastrophe Fund

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (5/2009)
Nephila	-2.8	-2.3	-0.4	0.4	0.6	1.6	2.5
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*2.5*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*10.2*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*2.5*

Trailing Risk Metrics
(May 2009-December 2022)

	Nephila	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	2.5	*2.5*	*10.2*	*2.5*
Annualized Standard Deviation (%)	3.6	*3.8*	*15.1*	*3.8*
Omega Ratio	0.22	*0.19*	*1.20*	*0.40*
Beta - MSCI ACWI	0.06	*0.04*	*1.00*	*0.05*
Beta - Bloomberg US Aggregate	0.30	*0.22*	*0.75*	*1.00*
Correlation - MSCI ACWI	0.25	*0.18*	*1.00*	*0.19*
Correlation - Bloomberg US Aggregate	0.31	*0.22*	*0.19*	*1.00*
Skewness	-6.27	*-5.53*	*-0.33*	*-0.76*
Kurtosis	59.87	*37.62*	*0.67*	*2.62*

Neuberger Berman - NB Insurance-Linked Strategies Fund LP

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	→ Neuberger Berman's Insurance-Linked Strategies Fund is a strong strategy that focuses on the usage of industry loss warranties as its main vehicle of investment. The strategy is likely more US centric than others here, meaning that multiple US based natural disasters (hurricane, earthquake) in any year may result in poor performance. The team, led by Peter DiFiore and Cedric Drui, is strong and has been working together for several years. Each senior investment team member has years of diverse experience in the space.
Organization	Highly Advantageous	→ NB is a global asset manager headquartered in New York City. The firm is 100% employee owned. → This strategy was initially founded by Cartesian Capital in 2009. In November 2018, Neuberger Berman acquired the group, and it became part of the Neuberger Berman platform. → Having the greater resources of Neuberger Berman may be helpful for counterparty, brokerage and research capabilities of the NB ILS team. ILS team can focus solely on investment function with the operational infrastructure of NB platform.
Team	Highly Advantageous	→ Investment team has had strong cohesion with much of the personnel having worked together for 10+ years. → The NB ILS team consists of nine individuals. Peter DiFiore, who co-leads the business, is an impressive individual with a variety of ILS experience ranging from working from vendor modeling firm, RMS to management team of Cartesian Re ILS strategy. Cedric Drui, another industry veteran, who spent time at both previously mentioned companies, co-leads the business with Mr. DiFiore. → The NB ILS team is split between NYC, Hamilton, Bermuda, and London. → The underwriting team will be speaking with counterparties constantly and will propose structures with counterparties and then run numbers and then some iteration of structuring and pricing. When they arrive at an opportunity, they think makes sense, it gets kicked to the underwriting committee to deliberate sizing and inclusion in the portfolio. → Team utilizes numerous consultants on retainer for advising on topics related to meteorology, climatology and seismology

Neuberger Berman - NB Insurance-Linked Strategies Fund LP (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy: → The strategy will primarily focus on industry loss warranties as its main investment. The team prefers these because of the flexibility and transparency they feel these instruments offer. Depending on market environment, the fund may allocate to catastrophe bonds as well. → NB ILS believes that industry loss warranties have more favorable competitive dynamics than catastrophe bonds or collateralized reinsurance because they are privately sourced and structured. → The strategy's exposure is US centric. Reasons the team believes this is the right approach include: • The data for US risk is easier to understand and more transparent. • Third party agents are better at helping facilitate the structure of ILW deals in the US. • Structure of risk for ILW deals in the US provides better pricing for NB. Process: → NB ILS structures its portfolio around a risk target, and then looks for opportunities that provide the best compensation around that risk budget. → The team has developed what it calls a strong network of counterparties that it can trade with. The firm is counterparty agnostic since all investments are fully collateralized. Counterparties may include insurers, reinsurers, capital markets participants and operating companies. → NB uses a framework in its modeling that asks and seeks answers for the following questions: • What is the probability of an event occurrence? • How severe is the event? • How does the event impact property? • What is the resulting insured loss? → The strategy sticks to securities, regions, perils and structures it feels like it can accurately model and interpret. More esoteric types of risk become harder to model, meaning there is less confidence that in what expected loss truly could be. → NB ILS targets diversification across perils, severity and structure. Even within one type of security type (ILW), there exists possibility to diversify exposure. Being able to narrow peril scope, raise attachment points, and focus on single events instead of aggregate can help the team with its risk management of the portfolio.
Performance	Highly Advantageous	→ On both a rolling period and trailing period basis, the strategy has outperformed peers as well as demonstrated a strong risk- adjusted return as evidenced by the high Omega ratio. The strategy will be more US-centric meaning that multiple US based natural disasters (hurricane, earthquake) in any year may result in poor performance.

Neuberger Berman - NB Insurance-Linked Strategies Fund LP (con't)

Rating Criteria	Score	Rationale
Fees	Advantageous	→ Management Fee: 1.25% → Incentive Allocation: 15%, subject to a high-water mark. → Subscription frequency: Monthly → Redemption frequency: Quarterly → Gate: 25% investor-level → Lock-up: 1 year

NB Insurance-Linked Strategies Fund LP

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (6/2009)
Neuberger Berman	2.4	4.9	5.5	5.9	5.3	6.2	7.5
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*2.5*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*9.5*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*2.5*

Trailing Risk Metrics
(June 2009-December 2022)

	NB	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	7.5	*2.5*	*9.5*	*2.5*
Annualized Standard Deviation (%)	3.6	*3.8*	*14.9*	*3.8*
Omega Ratio	1.07	*0.18*	*1.16*	*0.39*
Beta - MSCI ACWI	0.01	*0.05*	*1.00*	*0.05*
Beta - Bloomberg US Aggregate	0.06	*0.22*	*0.73*	*1.00*
Correlation - MSCI ACWI	0.03	*0.18*	*1.00*	*0.19*
Correlation - Bloomberg US Aggregate	0.07	*0.22*	*0.19*	*1.00*
Skewness	0.92	*-5.51*	*-0.37*	*-0.75*
Kurtosis	2.09	*37.37*	*0.71*	*2.60*

Pillar - Juniperus Insurance Linked Opportunity Fund Limited

Rating Criteria	Score	Rationale
Overall	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. 2022 was a tough year for the fund's performance, dropping 12.9% in September 2022 from Hurricane Ian.
Organization	Highly Advantageous	→ 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. → 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 traditional reinsurance subsidiary of Alleghany Corporation and is headquartered in New York City. In October 2022, Trans Re was purchased by Berkshire Hathaway Inc. and Trans Re is now 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. → All owners are required to invest in the strategy at the same LP terms, with the actual amount determined by their net worth and/or financial position. Additionally, all shareholders are required to invest 20% of any firm dividends back into the strategy. → Pillar is a Bermuda exempted company and licensed as an insurance manager. Additionally, the firm is an SEC registered investment advisor. To transact in private collateralized reinsurance markets, Pillar also operates JC Re Limited as a Class 3 insurer under the Bermuda Insurance Act of 1978. This is a segregated accounts company that Pillar's funds utilize to obtain exposure to specific segments of the ILS market (i.e., everything but catastrophe bonds).
Team	Highly Advantageous	→ Pillar employs nine investment professionals led by Stephen Velotti, Tom Cosenza, Jeff Franklin and Stewart Foster. → Mr. Velotti is a highly capable investment manager for the fund and a strong communicator and educator in the insurance linked securities space. → As an ILS/reinsurance manager, the entire team operates in an analogous fashion as an insurance company would. The key areas are sourcing, underwriting/modeling, and portfolio management. The concepts of pricing and risk management are embedded in all functions.

Pillar - Juniperus Insurance Linked Opportunity Fund Limited (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy: → Pillar seeks to create a portfolio of reinsurance-related securities/contracts that provide the optimal risk/reward posture given the market environment. → Pillar believes that success in the ILS market comes down to deal-flow, team experience and insight, simplicity over complexity, and pragmatic portfolio construction. → The goal of the portfolio is to optimize around its Omega Score subject to expected return targets. → An additional element of their philosophy is their focus on smaller insurance companies. Process: → Pillar excels with broker access and moderately incorporates direct cedant interactions. The firm's partnership arrangements and direct insurance underwriting has been steadily improving since a more focused effort was place on these areas in 2017. 2017. → Pillar works with a small managing general agent (~40 people) in New York for gaining access to more granular exposures (e.g., individual buildings) across the country. → 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. These metrics incorporate event loss tables and simulation data from the AIR Catastrophe Modeling software. Pillar maintains an internally developed portfolio management system called the "Pillar Risk Optimization System," or "PROS," that accomplishes the following: • Incorporates Pillar's risk modifications (e.g., litigation risk, data quality, non-modeled risks, etc.). • Calculates expected returns/risks for individual trades. • Calculates marginal impact on the total portfolio. • Re-prices trades as the portfolio develops (i.e., as events occur or as time passes). • Efficient frontier analysis. • Portfolio reporting.
Performance	Advantageous	→ While the fund has struggled in more recent periods, the long-term performance of the fund has been impressive, outpacing the peer index. Recent trailing periods have seen larger losses due in-part to Hurricane Ian in September 2022. This strategy is higher volatility meaning possibly higher earning (and loss) potential than other respondents.

Pillar - Juniperus Insurance Linked Opportunity Fund Limited (con't)

Rating Criteria	Score	Rationale
Fees	Advantageous	→ Management Fee: 1.50% → Incentive Allocation: 15% over a hurdle of the 1-month t-bill rate + 0.25%. Subject to a high-water mark. → Subscription frequency: Monthly → Redemption frequency: Semi-Annual (6/30, 12/31) → Gate: Slow-pay provision[1] → Lock-up: 1 year

[1] Redemptions are paid out on a pro-rata basis as policies/contracts expire, subject to any outstanding claims/side pocket procedures.

Pillar Juniperus Insurance Linked Opportunity Fund Limited

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (6/2008)
Pillar	-9.4	-6.6	-1.9	-0.1	0.3	3.8	6.1
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*2.5*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*5.7*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*2.7*

Trailing Risk Metrics
(June 2008-December 2022)

	Pillar	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	6.1	*2.5*	*5.7*	*2.7*
Annualized Standard Deviation (%)	7.2	*3.7*	*17.1*	*4.0*
Omega Ratio	0.82	*0.16*	*0.98*	*0.41*
Beta - MSCI ACWI	0.05	*0.04*	*1.00*	*0.06*
Beta - Bloomberg US Aggregate	0.55	*0.20*	*1.03*	*1.00*
Correlation - MSCI ACWI	0.11	*0.18*	*1.00*	*0.24*
Correlation - Bloomberg US Aggregate	0.31	*0.22*	*0.24*	*1.00*
Skewness	-3.17	*-5.62*	*-0.64*	*-0.45*
Kurtosis	16.68	*39.35*	*1.53*	*2.34*

Schroders - Schroders Capital All-ILS Fund Ltd.

Rating Criteria	Score	Rationale
Overall	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.
Organization	Advantageous	→ 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. → 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. → 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.
Team	Highly Advantageous	→ Schroders Capital ILS team is based in Zurich and London. Team of 32, most of which is investment staff dedicated to the ILS space. → 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. → Daniel Ineichen serves as the Head of Portfolio Management and joined the group in 2007. → Dr. Christoph Hummel is the Head of Analytics and is supported by a team of five, including actuaries and natural catastrophe specialists. Dr. Hummel has 21 years of experience in the industry. → 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. Mr. Mitchell is supported by a portfolio manager, two actuaries and an investment analyst. Mr. Mitchell has been at Schroders Capital ILS for five years and has 22 years of life insurance experience.

Schroders - Schroders Capital All-ILS Fund Ltd. (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy: → 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. → 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). Process: → 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. • Life ILS are structured transactions that include mortality and morbidity transactions. These are lower yielding and lower volatility than most catastrophe-based transactions. Reasonable expectations are that these would diversify natural catastrophe exposure and dampen volatility. → In addition to vendor models, the team utilizes a proprietary tool called SPOT which is used to help understand the portfolio's risk profile, particularly on tail risk. The tool will also help optimize the portfolio and can also be used as portfolio construction tool. → Proprietary models account for adjustments not considered in the vendor models. • These includes El Niño and La Niña, climate change, improvement of building codes and inflation. → Once modeling is concluded, the team will have a view of relative attractiveness of a deal based on it being under- or overvalued to market price. → 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.
Performance	Advantageous	→ Strategy performance has been solid. On a trailing basis, the strategy has performed slightly better in most trailing periods than the peer index. The strategy's negative skew and large kurtosis indicate that the fund has had some periods of larger negative performance (larger kurtosis indicates more outliers).
Fees	Highly Advantageous	→ Management Fee: Option 1: 0.95%, Option 2: 0.75% → Incentive Allocation: Option 1: 0%, Option 2: 15% over an 8% hurdle → Subscription frequency: Monthly → Redemption frequency: Semi-Annual (6/30, 12/31) → Gate: None → Lock-up: None

Schroders Capital All-ILS Fund Ltd.

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (6/2008)
Schroders	-0.5	0.1	0.4	1.0	0.5	1.7	3.1
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*2.5*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*5.7*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*2.7*

Trailing Risk Metrics
(June 2008-December 2022)

	Schroder	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	3.1	*2.5*	*5.7*	*2.7*
Annualized Standard Deviation (%)	3.7	*3.7*	*17.1*	*4.0*
Omega Ratio	0.24	*0.16*	*0.98*	*0.41*
Beta - MSCI ACWI	0.03	*0.04*	*1.00*	*0.06*
Beta - Bloomberg US Aggregate	0.20	*0.20*	*1.03*	*1.00*
Correlation - MSCI ACWI	0.16	*0.18*	*1.00*	*0.24*
Correlation - Bloomberg US Aggregate	0.21	*0.22*	*0.24*	*1.00*
Skewness	-5.60	*-5.62*	*-0.64*	*-0.45*
Kurtosis	44.81	*39.35*	*1.53*	*2.34*

Amundi - Amundi Insurance Linked Securities Strategies

Rating Criteria	Score	Rationale
Overall	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 and Campbell Brown lead the strategy and are both knowledgeable investors within the ILS space. The proposed fee schedule is attractive.
Organization	Highly Advantageous	→ Amundi Asset Management US, Inc. is the US asset management business of Amundi, Europe's largest asset manager by AUM. Amundi is publicly traded and manages $1.85T in assets, $832M of which are within insurance linked strategies. → This strategy was originally managed by Pioneer Investments starting in 2014. Amundi acquired Pioneer Investments in 2017. → Benefits of a large asset manager may include being able to leverage equity and credit team research to evaluate sponsors and other companies in the ILS space. → There are currently 3 clients in the proposed commingled strategy, but most of Amundi ILS client relationships are separately managed
Team	Advantageous	→ 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 fixed income investment solutions at Amundi US. → Campbell Brown is a Portfolio Manager on the team and joined Amundi in 2018. Prior to Amundi, Mr. Brown worked as a Property Treaty Underwriter for Odyssey Reinsurance Company. Within the ILS team, Mr. Brown is responsible for catastrophe modeling, risk analysis, securities analysis, underwriting and portfolio construction. → Mei Li rounds out the senior investment staff. Ms. Li is an Associate Portfolio Manager and has been with Amundi US since 2012. Ms. Li responsibilities include catastrophe modeling, risk analysis, security evaluation and portfolio construction. → The rest of the investment team includes eight members and are split between Boston, Dublin and London. → Mr. Liu and Mr. Campbell share final authority and responsibility for all decisions.

Amundi - Amundi Insurance Linked Securities Strategies (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Advantageous	Philosophy → Amundi takes an active approach to portfolio construction but 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. → 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. → Amundi's stated target portfolio will be diversified from both a regional and peril perspective. • Targeted allocation ranges in the portfolio are as follows: – Quota Shares (sidecars): 40-80% – Industry Loss Warranties (ILW): 0-30% – Collateralized re-insurance: 0-30% – Catastrophe Bonds: 5-25% Process → Amundi's deal flow is not tied to a specific reinsurer, and the team says that it is "sponsor agnostic". → 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. → Modeling is done using third-party vendor Verisk as well as proprietary quantitative and qualitative tools. → In addition to Verisk, the team focuses on different analyses to understand quality and accuracy of modeling • For example, the team compares modeled loss and actual loss and then reflects exposures accordingly for what the model has missed. → Security selection also includes both quantitative and qualitative inputs. • Quantitative inputs include analysis of the property type as well as an assessment of the loss curves of individual securities. • Qualitative inputs include underwriting, pricing, alignment of interests and cycle management
Performance	Advantageous	→ The proposed strategy has had a decent track record since 2015. Since inception, the strategy has been highly correlated to the peer index, which is unsurprising given the philosophy of the strategy not making active region or peril bets.
Fees	Highly Advantageous	→ Management Fee: 0.75% → Incentive Allocation: 0% → Subscription frequency: Semi-Annual (12/15, 5/1) → Redemption frequency: Semi-Annual (3/31, 10/31). 30% of redeemed assets available within 90 days written notice, 100% available within 180 days written notice. → Gate: None → Lock-up: Rolling One-Year lock from date of subscription.

Amundi Insurance Linked Securities Strategies

Trailing Annualized Returns

(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	Since Inception (1/2015)
Amundi	2.4	1.2	3.7	2.9	2.6	3.7
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*0.2*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*7.3*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*0.8*

Trailing Risk Metrics

(January 2015-December 2022)

	Amundi	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	3.7	*0.2*	*7.3*	*0.8*
Annualized Standard Deviation (%)	4.6	*4.5*	*15.4*	*4.4*
Omega Ratio	0.13	*0.01*	*0.84*	*0.15*
Beta - MSCI ACWI	0.00	*0.05*	*1.00*	*0.09*
Beta - Bloomberg US Aggregate	0.09	*0.23*	*1.06*	*1.00*
Correlation - MSCI ACWI	0.02	*0.19*	*1.00*	*0.30*
Correlation - Bloomberg US Aggregate	0.09	*0.22*	*0.30*	*1.00*
Skewness	-3.88	*-5.11*	*-0.39*	*-0.57*
Kurtosis	21.23	*29.66*	*0.82*	*2.08*

AlphaCat - AlphaCat Diversified Fund II Ltd.

Rating Criteria	Score	Rationale
Overall	Advantageous	→ AlphaCat is a dedicated ILS manager that incorporates a strong research team at Validus Research. The Diversified Fund II is a continuation of a previous iteration (Diversified I) and will follow the same mandate. The investment team has had some turnover in recent years. AlphaCat is 100% owned by global insurer AIG. AlphaCat maintains its decision-making autonomy in the arrangement.
Organization	Advantageous	→ AlphaCat was founded in 2008 through Validus Re and is based in Hamilton, Bermuda. As of September 2022, the firm manages $3.3B in assets. → In July 2018, AlphaCat Managers was 100% acquired by AIG, a global insurance organization based in New York City. Despite being owned by AIG, AlphaCat operates as distinct business unit and retains autonomy for its investment process. The backing of AIG may be beneficial for balance sheet efficiency. → AlphaCat Diversified Fund II has been seeded by AIG with $50m. The fund currently has this sole investor, but it should be noted that the mandate is a continuation of AlphaCat Diversified I, which has track record going back to 2009. → AlphaCat utilizes Validus Re for research and modeling capabilities through a shared service model. Prior to AlphaCat being 100% owned by AIG, it was 100% owned by Validus. AIG's acquisition of Validus Holding Companies included AlphaCat Managers Ltd. → Validus Reserves as a fronting facility[2] for traditional property catastrophe insurance. This exists because AlphaCat is unable to write insurance due to regulations and registration requirements. • In these types of relationships, there exists the possibility of conflicts of interest. To help mitigate this, an allocation policy exists between Validus Re and AlphaCat.

[2] Fronting facilities are bi-party agreements where one company (Validus) writes insurance/reinsurance, and the underlying risk is transferred to the second party (AlphaCat) via the agreement.

AlphaCat - AlphaCat Diversified Fund II Ltd. (con't)

Rating Criteria	Score	Rationale
Team	Advantageous	→ AlphaCat has a service level agreement with Validus Research (also owned by AIG) for scientific, catastrophe modeling and associated software technology. → AlphaCat is fully responsible for investment decisions including underwriting, trading and portfolio management, while Validus provides relevant research on securities in the strategy's investable universe. The Validus has an impressive research operation with over 60 employees, 8 PhDs and advisors in meteorology and seismology. → AlphaCat Investment Committee oversees setting of investment parameters within fund investment guidelines and are responsible for approving individual investments that are not within the Investment Parameters. → The AlphaCat Investment team has six members and is led by the portfolio manager, Adam Szakmary. Mr. Szakmary has been with AlphaCat for close to two years. He replaces Alex Winfield who left the firm to relocate to London. Mr. Szakmary's prior experience includes Hiscox Re and Blue Capital Management. → The AlphaCat team had several founding members depart the organization following the acquisition by AIG. → The rest of the senior team includes Ed Sweeney, SVP, Underwriter who has been at AlphaCat for close to two years and has ten years of experience in the field. Sun Siang Liew is the most tenured member of the team with 16 years at AlphaCat. Ms. Liew is the Head of Portfolio Analytics.

AlphaCat - AlphaCat Diversified Fund II Ltd. (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Highly Advantageous	Philosophy: → The fund's mandate is to target high quality natural catastrophe focused reinsurance and catastrophe bond transactions. AlphaCat refers to the risk/return profile as remote risk and moderate return, with a focus on tail management. The team expects a 5-7% net return annually. → The team prefers to work with small and medium sized insurance companies where possible as they find those parties' buying behaviors more consistent and less opportunistic. Process: → AlphaCat estimates that between 1000-1500 reinsurance transactions are modeled annually as well as all property focused catastrophe bonds that come to market. In part due to its relationships with AIG and Validus Re, the firm estimates it sees over 90% of estimated transaction flow. → The team blends top-down and bottom-up research. Broad market opportunity dictates risk appetite to geography, perils and cedants. Actual securities are selected by market pricing adequacy, terms and conditions, exposure quality and transparency, and other market factors. → Bottom-up research starts with the modeling done through Validus' Research and its Validus View of Risk system. This is a proprietary tool that is applied to transactions in the market. The tool allows for analysis of key perils to those deals as well as continuous research and implementation of new models that may impact portfolio construction. For example, a new earthquake model was created having in-house modeling technology that is separate than third-party vendor models may be a distinguishing factor in a firm's ability to build a portfolio that mirrors its stated mandate. → The team also employs a multi-step underwriting scoring process that includes analysis of the counterparty as well as the deal itself. → For any major event potentially causing a valuation impact to the Fund, AlphaCat will issue pre and post event reporting and commentary to investors typically every 24-48 hours.
Performance	Highly Advantageous	→ The strategy has had a successful run of earning bond+ returns at less than bond volatility. Protection in heavy natural catastrophe has been impressive with the strategy's worst month at only -2.5% (September 2017). The strategy's risk and return record appears to be in line with the more risk remote universe that the strategy is targeting for investment.
Fees	Advantageous	→ Management Fee: 1.00% → Incentive Allocation: 10%, subject to a high-water mark. → Subscription frequency: Monthly → Redemption frequency: Semi-Annual (1/1, 7/1) → Gate: 25% fund-level → Lock-up: None

AlphaCat Diversified Fund II Ltd

Trailing Annualized Returns

(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	10 YR	Since Inception (1/2009)
AlphaCat	4.8	3.0	2.9	4.3	3.6	3.9	4.7
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*1.4*	*2.6*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*8.5*	*10.0*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.1*	*2.5*

Trailing Risk Metrics

(January 2009-December 2022)

	AlphaCat	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	4.7	*2.6*	*10.0*	*2.5*
Annualized Standard Deviation (%)	2.1	*3.7*	*15.8*	*3.8*
Omega Ratio	0.46	*0.19*	*1.19*	*0.41*
Beta - MSCI ACWI	0.00	*0.04*	*1.00*	*0.05*
Beta - Bloomberg US Aggregate	0.06	*0.22*	*0.88*	*1.00*
Correlation - MSCI ACWI	0.03	*0.17*	*1.00*	*0.21*
Correlation - Bloomberg US Aggregate	0.10	*0.22*	*0.21*	*1.00*
Skewness	0.10	*-5.60*	*-0.30*	*-0.74*
Kurtosis	4.34	*38.58*	*0.52*	*2.60*

K2 Advisors - K2 Pyxis Fund Ltd.

Rating Criteria	Score	Rationale
Overall	Advantageous	→ K2 Advisors' Pyxis Fund is a rules-based strategy that seeks to build a portfolio of liquid catastrophe bonds. The Pyxis Fund's team has longevity together and the firm's ownership by Franklin Templeton may provide strong research, counterparty and operational efficiencies.
Organization	Advantageous	→ K2 was founded in 1994 and has primarily been a solutions provider, doing both commingled fund of fund strategies as well as bespoke solutions for institutional clients. The firm is headquartered in Stamford, CT. → K2 Advisors is a wholly owned subsidiary of Franklin Templeton, a global investment management organization. Franklin Templeton manages approximately $1.3 trillion in assets. → K2 Advisors operates as an investment group within the Franklin Templeton Alternatives platform and manages about $10.4 billion in assets as of September 2022. → The ILS team below manages a variety of products including custom funds as well. → K2 Pyxis fund was incepted on 1/1/2018 and is one of the newer funds of the respondents.
Team	Advantageous	→ The investment team is led by Michael Rich, the portfolio manager of the Pyxis Fund. He has been with K2 for 11 years. → The rest of the team includes: • Jordan Strah – Research Analyst (6 years of experience, 1 w K2) • Anthony Zanolla – Co-Head of Investment Management (29 years of experience, 8 with K2) • Brian Barrett – VP / Head Trader (20 years of experience, all with K2) → The team does not utilize any third-party consultants for investment research.

K2 Advisors - K2 Pyxis Fund Ltd. (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Advantageous	Philosophy → The K2 Pyxis Fund is a catastrophe bond strategy that seeks liquid catastrophe bonds through a rules-based screening approach. Process → The team utilizes Moody's RMS as its third-party vendor modeling software. → The initial investment universe starts with about 190 catastrophe bonds and 20% of this universe is initially removed through two screens: • Screen one removes securities with the highest and lowest spreads, and private bonds based on liquidity and transparency considerations. Highest spreads out to reduce drawdown risk Lowest spreads because they don't provide commensurate return for modeled risk • The second screen scores the remaining bonds (about 80% of initial universe) on 13 risk factors including valuation, structure, risk modeling, duration, currency, liquidity, collateral and sponsor's credit rating. • Each factor is weighted, and a prospective bond is assigned a score. → Portfolio construction: • Target portfolio weights determine by relative scoring of bonds clearing the threshold described previously. Actual fund weights may not mirror the exact model portfolio because of liquidity constraints. • The strategy does not hedge non-US currency exposures and favors USD-denominated securities. → Risk management guidelines include: • 35% max contribution to expected loss by region or peril • 99% value at risk: -40%
Performance	Advantageous	→ K2 Pyxis Fund has had similar return and risk to the EurekaHedge ILS Advisers index. The strategy has the benefit of starting in 2018, having avoided a bad industry year in 2017 and the resulting overhang associated with exposure to 2017 events. This fund has the shortest track record of respondents.
Fees	Highly Advantageous	→ Management Fee: 0.75% → Incentive Allocation: 0% → Subscription frequency: Bi-weekly → Redemption frequency: Bi-weekly → Gate: 10% fund-level → Lock-up: None

K2 Pyxis Fund Ltd.

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	Since Inception (1/2018)
K2	-1.7	1.3	2.1	2.0
EurekaHedge ILS Advisers	-3.1	-1.1	0.4	-0.4
MSCI ACWI	-18.0	-1.2	4.5	5.8
Bloomberg Aggregate	-13.0	-7.5	-2.7	0.0

Trailing Risk Metrics
(January 2018-December 2022)

	K2 Pyxis	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	2.0	*-0.4*	*5.8*	*0.0*
Annualized Standard Deviation (%)	2.5	*3.9*	*17.7*	*5.1*
Omega Ratio	0.02	*0.00*	*0.69*	*0.10*
Beta - MSCI ACWI	0.05	*0.07*	*1.00*	*0.11*
Beta - Bloomberg US Aggregate	0.06	*0.22*	*1.30*	*1.00*
Correlation - MSCI ACWI	0.39	*0.34*	*1.00*	*0.37*
Correlation - Bloomberg US Aggregate	0.13	*0.29*	*0.37*	*1.00*
Skewness	-0.51	*-4.34*	*-0.37*	*-0.45*
Kurtosis	5.29	*23.67*	*0.20*	*1.17*

Resolute - The 1609 Fund Ltd.

Rating Criteria	Score	Rationale
Overall	Advantageous	→ Resolute Global is a multi-dimensional organization that has its own insurance outfit, reinsurance group and Lloyd's Syndicate. Most of this strategy's risk will stem from traditional insurance in personal/commercial auto with some specialty risk as well. Equity investments in the fund related to Resolute's insurance outfit (Producer's National) provide economic benefits to the strategy through underwriting income but also add a little equity risk. This strategy has a different risk dynamic than the others and may not be as affected by global natural catastrophe.
Organization	Advantageous	→ Resolute Global was founded in 2011. The team is headquartered in Hamilton, Bermuda with additional offices in Stamford, CT and London, UK. → Resolute owns several entities that contribute to the strategy's deal flow. This includes an insurance company called Producer's National Corporation (PNC), a Bermuda reinsurer called Prospero Re, and a Lloyd's Corporate Member. There is organizational complexity but having it all under one roof could serve to be advantageous from an economic standpoint. → The firm is employee owned. The three partners have large stakes: Tom Libassi and Paul Nealon own controlling stakes at 25.5%, followed by Don Kramer (19.6) and then Resolute's employees make up the rest (29.4).
Team	Highly Advantageous	→ The firm's senior management and managing partners are Don Kramer, Paul Nealon and Tom Libassi. Resolute's direct insurance company (Producer's National Corporation) and Bermuda reinsurer (Prospero Re) both have their owns teams that Resolute senior management oversee as directors of those two entities. Partners have experience in both reinsurance as well as direct insurance and have strong knowledge of the dynamics in both marketplaces. → Senior leadership covers a variety of responsibilities including risk management, modelling, property reinsurance, specialty reinsurance as well as oversight of the firm's ownership of Prospero Re, PNC and other holdings. → The 1609 Fund is Resolute's sole fund and sole investment focus of the team. → An investment committee is responsible for determining sector allocations and risk budgets.

Resolute - The 1609 Fund Ltd. (con't)

Rating Criteria	Score	Rationale
Investment Philosophy & Process	Advantageous	Philosophy: → Resolute will Invest in niche insurance and reinsurance opportunities globally. This includes specialty risk (marine & energy, event cancelation, travel, space, aviation) and writing direct insurance (personal/commercial auto, for example) as well as a smaller percentage of risk to catastrophe. Specialty risk may be more difficult to accurately model than traditional sources of risk. → The fund includes equity exposure to both Producer's National Corporation and Helios. The benefit of both is underwriting income to the fund as well as pure investment income, but likely will make the fund more correlated to economic risk. Resolute says that the transparency they receive from having these in-house makes their ability to underwrite direct opportunities into the fund that much better → The inclusion of direct insurance, specifically in traditional and non-traditional auto will likely truncate both left tail and right tail of the return distribution for the strategy. Insurance risk and return profile is based on high frequency and low severity events (auto accidents), while reinsurance is based on low frequency and high severity events (hurricanes, tornadoes, etc.). → This strategy may be less affected by natural catastrophe than others here due to its allocations in personal and commercial auto insurance, and marine & energy. Process: → Each of the entities owned by Resolute provide opportunities in that specific line of business. → After the team determines if a contract is profitable, it is entered into a proprietary program called ReSolution to quantify its impact on the existing portfolio. → ReSolution monitors correlation across the portfolio and provides "real-time" view of risk, which is tracked probabilistically and on an absolute basis by region and peril. → Risk management / portfolio construction → The 1609 Fund targets a median return of 10% with a 1 in 20-year tail risk of less than 15%. → The strategy can pursue up to 30% leverage

Resolute - The 1609 Fund Ltd. (con't)

Rating Criteria	Score	Rationale
Performance	Advantageous	→ Since inception, the fund has struggled, largely due to a poor 2017 with Hurricanes Harvey, Irma and Maria causing losses and trapping investable capital. → To Resolute's credit, the team changed much of the fund's scope including making many of the acquisitions listed above and gaining more ability to invest in a variety of opportunities, not just reinsurance. Since the change in the fund's investable universe (12/2018), an investor entering the fund in January 2019 would have earned 3.9% annualized, compared to the peer universe return of 0.6%. It is likely that the strategy's equity position and insurance profits and loss related to Producer's National will be correlated.
Fees	Advantageous	→ Management Fee: 1.50% → Incentive Allocation: 20% over a 5% hurdle. Subject to a high-water mark. → Subscription frequency: Monthly → Redemption frequency: Monthly → Gate: None → Lock-up: 1 year

Resolute The 1609 Fund Ltd

Trailing Annualized Returns
(As of December 31, 2022)

	2022	2 YR	3 YR	5 YR	7 YR	Since Inception (1/2014)
Resolute	-4.7	-2.8	-1.0	-3.6	-3.0	0.1
EurekaHedge ILS Advisers	*-3.1*	*-1.1*	*0.4*	*-0.4*	*-0.4*	*0.8*
MSCI ACWI	*-18.0*	*-1.2*	*4.5*	*5.8*	*8.7*	*7.0*
Bloomberg Aggregate	*-13.0*	*-7.5*	*-2.7*	*0.0*	*0.9*	*1.4*

Trailing Risk Metrics
(January 2014-December 2022)

	Resolute	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
Annualized Returns (%)	0.04	*0.77*	*7.00*	*1.40*
Annualized Standard Deviation (%)	6.32	*4.24*	*14.74*	*4.20*
Omega Ratio	0.18	*0.02*	*0.87*	*0.19*
Beta - MSCI ACWI	-0.01	*0.05*	*1.00*	*0.08*
Beta - Bloomberg US Aggregate	0.19	*0.23*	*1.03*	*1.00*
Correlation - MSCI ACWI	-0.02	*0.18*	*1.00*	*0.30*
Correlation - Bloomberg US Aggregate	0.13	*0.23*	*0.30*	*1.00*
Skewness	-3.65	*-5.39*	*-0.39*	*-0.65*
Kurtosis	23.44	*33.27*	*1.00*	*2.35*

Summary

→ 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.

→ PCRA may consider interviewing managers at the next meeting to learn more about the respondents that were favorably rated.

Appendix

Calendar Year Returns

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
AlphaCat	4.8	1.2	2.7	8.3	4.5	0.5	3.3	3.7	4.6	5.5	5.0	6.1	6.2	10.3
Amundi	2.4	0.1	8.7	4.1	-0.7	-6.0	10.5	11.4	---	---	---	---	---	---
GAM FCM	-3.0	4.6	4.9	6.7	3.0	0.5	5.6	3.3	5.1	9.9	9.6	9.3	14.0	9.6
Pillar	-9.4	-3.7	8.3	8.7	-2.8	-3.4	6.4	9.8	12.6	15.0	17.2	-7.2	3.5	31.6
Resolute	-4.7	-0.9	2.9	-6.4	-8.5	-8.1	5.8	6.1	16.9	---	---	---	---	---
Neuberger Berman	2.4	7.4	6.6	5.8	7.1	0.3	7.4	8.8	8.6	8.0	9.6	10.4	8.2	---
Schroders	-0.5	0.8	1.0	3.2	0.8	-5.8	4.1	4.0	4.1	6.0	6.2	3.4	7.2	11.0
Nephila	-2.8	-1.7	3.3	4.1	-0.9	-0.5	2.6	3.9	4.4	4.4	6.9	0.5	4.8	---
K2	-1.7	4.3	4.0	5.7	-1.8	---	---	---	---	---	---	---	---	---
EH ILS Advisers Index	*-3.1*	*1.0*	*3.5*	*0.9*	*-3.9*	*-5.6*	*5.2*	*4.2*	*5.4*	*7.6*	*5.9*	*-0.1*	*7.5*	*9.0*
MSCI ACWI	*-18.0*	*19.0*	*16.8*	*27.3*	*-8.9*	*24.6*	*8.5*	*-1.8*	*4.7*	*23.4*	*16.8*	*-6.9*	*13.2*	*35.4*
Bloomberg US Agg	*-13.0*	*-1.5*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*	*0.5*	*6.0*	*-2.0*	*4.2*	*7.8*	*6.5*	*5.9*

Correlation Matrix – Common Period (5 Years)

	AlphaCat	Amundi	GAM FCM	Pillar	Resolute	Neuberger Berman	Schroders	Nephila	K2	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
AlphaCat	1.00	---	---	---	---	---	---	---	---	---	---	---
Amundi	0.22	1.00	---	---	---	---	---	---	---	---	---	---
GAM FCM	0.31	0.51	1.00	---	---	---	---	---	---	---	---	---
Pillar	0.36	0.53	0.81	1.00	---	---	---	---	---	---	---	---
Resolute	-0.03	0.36	0.08	0.11	1.00	---	---	---	---	---	---	---
Neuberger Berman	0.39	0.27	0.59	0.34	-0.06	1.00	---	---	---	---	---	---
Schroders	0.30	0.63	0.80	0.67	0.12	0.46	1.00	---	---	---	---	---
Nephila	0.36	0.62	0.91	0.87	0.14	0.50	0.74	1.00		---	---	---
K2	0.24	0.52	0.59	0.45	0.26	0.52	0.49	0.55	1.00	---	---	---
EH ILS Adviser Index	0.30	0.71	0.88	0.83	0.14	0.49	0.78	0.90	0.70	1.00	---	---
MSCI ACWI	-0.03	0.14	0.39	0.32	0.08	0.10	0.22	0.31	0.39	0.34	1.00	---
Bloomberg US Agg	0.11	0.11	0.39	0.45	0.14	0.04	0.27	0.37	0.13	0.29	0.37	1.00

Correlation Matrix – 8 Years (excludes K2 due to shorter track record)

	AlphaCat	Amundi	GAM FCM	Pillar	Resolute	Neuberger Berman	Schroders	Nephila	*EH ILS Advisers Index*	*MSCI ACWI*	*Bloomberg US Agg*
AlphaCat	1.00	---	---	---	---	---	---	---	---	---	---
Amundi	0.44	1.00	---	---	---	---	---	---	---	---	---
GAM FCM	0.45	0.61	1.00	---	---	---	---	---	---	---	---
Pillar	0.40	0.54	0.78	1.00	---	---	---	---	---	---	---
Resolute	0.34	0.69	0.41	0.29	1.00	---	---	---	---	---	---
Neuberger	0.44	0.36	0.56	0.40	0.23	1.00	---	---	---	---	---
Schroders	0.49	0.79	0.82	0.61	0.60	0.42	1.00	---	---	---	---
Nephila	0.33	0.47	0.82	0.85	0.16	0.48	0.54	1.00	---	---	---
EH IL Advisers Index	*0.49*	*0.83*	*0.88*	*0.75*	*0.61*	*0.48*	*0.89*	*0.68*	*1.00*	---	---
MSCI ACWI	*-0.07*	*0.02*	*0.30*	*0.26*	*0.00*	*0.02*	*0.10*	*0.27*	*0.19*	*1.00*	---
Bloomberg US Agg	*0.10*	*0.09*	*0.34*	*0.40*	*0.12*	*0.00*	*0.22*	*0.34*	*0.22*	*0.30*	*1.00*

Appendix

Disclaimer, Glossary, and Notes

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

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

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

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

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

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

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

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

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

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = \begin{matrix}1\% \text{ pro rata, plus} \\ 5.26\% \text{ (current yield)}\end{matrix} = 6.26\% \text{ (yield to maturity)}$$

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

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.