



(Preliminary Subject to Change)



**Employees Retirement System**

City of Philadelphia  
Employees Retirement System  
Executive Summary

**July 31, 2019**

# Total Fund Composite

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
<b>Total Fund Composite</b>		<b>5,506,230,315</b>	<b>-181,550,227</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Fund w/o Alternative Assets</b>		<b>4,056,423,752</b>	<b>-150,291,233</b>	<b>73.7</b>	<b>69.0</b>	<b>257,124,835</b>
<b>Investment Grade Fixed Income Composite</b>		<b>688,653,479</b>	<b>-759</b>	<b>12.5</b>	<b>10.0</b>	<b>138,030,447</b>
Brandywine Global Investment Management	Global Fixed Income	140,512,989	0	2.6		
Garcia Hamilton & Associates	Int. Govt. Fixed Income	174,417,998	0	3.2		
Logan Circle	Core Plus Fixed Income	47,441,876	-75	0.9		
Longfellow	Core Plus Fixed Income	168,112,946	0	3.1		
Rhumblin Core Bond Index	Core Fixed Income	158,167,670	-683	2.9		
<b>Opportunistic Fixed Income Composite</b>		<b>261,193,629</b>	<b>-5,763,833</b>	<b>4.7</b>	<b>4.0</b>	<b>40,944,416</b>
T - Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	10,619,959	-1,363,706	0.2		
T - Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	19,364,591	-465,328	0.4		
T - KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	46,561,630	-3,934,784	0.8		
Logan Circle - EMD	EM Fixed Income	77,514,262	0	1.4		
Strategic Income Management	High Yield Fixed Income	52,719,268	-15	1.0		
Lord Abbett High Yield	High Yield Fixed Income	53,981,635	0	1.0		
<b>U.S. Equity Composite</b>		<b>1,672,256,766</b>	<b>0</b>	<b>30.4</b>	<b>30.0</b>	<b>20,387,672</b>
Rhumblin Russell 1000 Index	Large-Cap Core	1,213,723,840	0	22.0		
O'Shaughnessy Asset Management	Large-Cap Value	29,817,702	0	0.5		
Rhumblin MidCap Index	Mid-Cap Core	159,175,718	-6,252	2.9		
Rhumblin Russell 2000 Index	Small-Cap Core	41,804,820	-1,664	0.8		
Emerald Advisors	Small-Cap Growth	84,640,878	0	1.5		
Fisher Asset Management	Small-Cap Value	58,049,030	0	1.1		
Fiera Capital	Smid-Cap Growth	29,485,554	0	0.5		
Ariel	Smid-Cap Value	55,450,550	0	1.0		
<b>Non-U.S. Equity Developed Composite</b>		<b>1,091,223,679</b>	<b>14</b>	<b>19.8</b>	<b>21.0</b>	<b>-65,084,687</b>
Causeway Capital Management	Non-U.S. Large-Cap Core	108,195,964	0	2.0		
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	788,267,539	0	14.3		
Northern Trust International Small Cap	Non-U.S. Small-Cap Core	99,567,193	0	1.8		
Strategic Global Advisors	Non-U.S. Small-Cap Core	31,565,458	14	0.6		
Mackenzie Investments	Non-U.S. Small-Cap Core	59,768,270	0	1.1		
<b>Non-U.S. Equity Emerging Composite</b>		<b>217,973,718</b>	<b>-35</b>	<b>4.0</b>	<b>4.0</b>	<b>-2,275,494</b>
Rhumblin Emerging Markets Index	Emerging Markets	217,969,460	-35	4.0		

## Total Fund Composite

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
<b>Cash Composite</b>		<b>125,122,481</b>	<b>-144,526,620</b>	<b>2.3</b>	<b>0.0</b>	<b>125,122,481</b>
Cash	Cash & Equivalents	124,457,610	-144,522,249	2.3		
Directed Commissions	Cash & Equivalents	664,871	-4,371	0.0		
<b>Absolute Return</b>		<b>29,413,174</b>	<b>0</b>	<b>0.5</b>	<b>0.0</b>	<b>29,413,174</b>
Elizabeth Park Capital Management	Long/Short Hedge Fund	27,614,139	0	0.5		
T - Archview Offshore Fund. LTD	Credit Hedge Fund	1,799,035	0	0.0		
<b>Real Assets Composite</b>		<b>973,828,243</b>	<b>-10,746,960</b>	<b>17.7</b>	<b>19.0</b>	<b>-72,355,517</b>
<b>Real Assets - Public Real Estate Composite</b>		<b>62,575,631</b>	<b>0</b>	<b>1.1</b>	<b>1.0</b>	<b>7,513,327</b>
Rhumblin FTSE NAREIT	Real Assets	62,575,631	0	1.1		
<b>Real Assets - Open-End Real Estate Composite</b>		<b>534,455,545</b>	<b>-4,715,735</b>	<b>9.7</b>	<b>11.0</b>	<b>-71,229,790</b>
UBS Trumbull Fund	Core Real Estate	396,867,343	-4,428,096	7.2		
Clarion Lion Properties Fund	Core Real Estate	137,588,202	-287,639	2.5		
<b>Real Assets - Infrastructure Composite</b>		<b>269,438,351</b>	<b>0</b>	<b>4.9</b>	<b>5.0</b>	<b>-5,873,165</b>
Rhumblin Infrastructure Index	Publicly-Traded Infrastructure	180,744,604	0	3.3		
Rreef Global Infrastructure	Global Infrastructure	88,693,746	0	1.6		
<b>Real Assets - Private Real Estate Composite</b>		<b>95,100,812</b>	<b>-5,542,722</b>	<b>1.7</b>	<b>2.0</b>	<b>-15,023,794</b>
<b>Real Assets - Private Energy/Infrastructure Composite</b>		<b>12,257,905</b>	<b>-488,503</b>	<b>0.2</b>	<b>--</b>	<b>12,257,905</b>
<b>Private Assets Composite</b>		<b>446,565,146</b>	<b>-20,512,034</b>	<b>8.1</b>	<b>12.0</b>	<b>-214,182,492</b>
Private Assets - Private Equity	U.S. Private Equity FoF	417,307,695	-20,302,138	7.6		
Private Assets - Private Debt	Mezz. Private Equity	29,257,451	-209,896	0.5		

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Total Fund Composite</b>	<b>0.2%</b>	<b>0.6%</b>	<b>11.2%</b>	<b>0.2%</b>	<b>3.7%</b>	<b>6.3%</b>	<b>8.2%</b>	<b>5.9%</b>	<b>5.1%</b>	<b>7.3%</b>	<b>8.0%</b>	<b>7.5%</b>	<b>Jul-88</b>
<i>Total Fund Policy Benchmark</i>	<i>0.2%</i>	<i>0.8%</i>	<i>11.4%</i>	<i>0.2%</i>	<i>4.8%</i>	<i>6.9%</i>	<i>8.4%</i>	<i>6.7%</i>	<i>6.0%</i>	<i>7.9%</i>	<i>8.9%</i>	<i>8.3%</i>	<i>Jul-88</i>
<b>Total Fund w/o Alternative Assets</b>	<b>0.3%</b>	<b>1.0%</b>	<b>13.5%</b>	<b>0.3%</b>	<b>2.7%</b>	<b>5.4%</b>	<b>7.9%</b>	<b>5.6%</b>	<b>4.8%</b>	<b>--</b>	<b>--</b>	<b>5.5%</b>	<b>Jan-14</b>
<b>Investment Grade Fixed Income Composite</b>	<b>-0.1%</b>	<b>3.0%</b>	<b>5.7%</b>	<b>-0.1%</b>	<b>6.1%</b>	<b>2.8%</b>	<b>2.2%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>3.7%</b>	<b>6.0%</b>	<b>Jul-88</b>
<i>Fixed Income Custom Benchmark</i>	<i>0.0%</i>	<i>3.4%</i>	<i>6.0%</i>	<i>0.0%</i>	<i>7.7%</i>	<i>3.4%</i>	<i>2.1%</i>	<i>3.0%</i>	<i>3.0%</i>	<i>2.4%</i>	<i>3.7%</i>	<i>6.2%</i>	<i>Jul-88</i>
Brandywine Global Investment Management	-1.3%	3.0%	5.2%	-1.3%	1.8%	0.4%	2.1%	3.3%	1.5%	2.4%	5.2%	6.6%	Jan-09
<i>FTSE WGBI TR</i>	<i>-0.5%</i>	<i>3.6%</i>	<i>4.9%</i>	<i>-0.5%</i>	<i>5.4%</i>	<i>2.5%</i>	<i>0.7%</i>	<i>3.2%</i>	<i>0.9%</i>	<i>0.7%</i>	<i>2.0%</i>	<i>2.3%</i>	<i>Jan-09</i>
Garcia Hamilton & Associates	0.2%	2.2%	4.5%	0.2%	6.1%	3.0%	2.0%	2.8%	2.7%	2.9%	4.1%	5.2%	Aug-00
<i>BBgBarc US Govt/Credit Int TR</i>	<i>0.0%</i>	<i>2.4%</i>	<i>4.9%</i>	<i>0.0%</i>	<i>6.9%</i>	<i>2.9%</i>	<i>1.9%</i>	<i>2.5%</i>	<i>2.4%</i>	<i>2.0%</i>	<i>3.1%</i>	<i>4.4%</i>	<i>Aug-00</i>
Logan Circle	0.3%	3.5%	7.3%	0.3%	8.2%	4.0%	3.1%	3.8%	--	--	--	3.4%	Oct-14
<i>BBgBarc US Aggregate TR</i>	<i>0.2%</i>	<i>3.3%</i>	<i>6.3%</i>	<i>0.2%</i>	<i>8.1%</i>	<i>3.5%</i>	<i>2.2%</i>	<i>3.1%</i>	<i>3.0%</i>	<i>2.5%</i>	<i>3.8%</i>	<i>2.9%</i>	<i>Oct-14</i>
Longfellow	0.3%	3.2%	6.5%	0.3%	8.0%	3.8%	2.7%	3.3%	--	--	--	3.2%	Sep-14
<i>BBgBarc US Aggregate TR</i>	<i>0.2%</i>	<i>3.3%</i>	<i>6.3%</i>	<i>0.2%</i>	<i>8.1%</i>	<i>3.5%</i>	<i>2.2%</i>	<i>3.1%</i>	<i>3.0%</i>	<i>2.5%</i>	<i>3.8%</i>	<i>3.1%</i>	<i>Sep-14</i>
Rhumblin Core Bond Index	0.2%	3.2%	6.0%	0.2%	7.8%	3.4%	2.0%	2.9%	2.8%	2.1%	3.6%	4.1%	Jun-07
<i>BBgBarc US Aggregate TR</i>	<i>0.2%</i>	<i>3.3%</i>	<i>6.3%</i>	<i>0.2%</i>	<i>8.1%</i>	<i>3.5%</i>	<i>2.2%</i>	<i>3.1%</i>	<i>3.0%</i>	<i>2.5%</i>	<i>3.8%</i>	<i>4.3%</i>	<i>Jun-07</i>
<b>Opportunistic Fixed Income Composite</b>	<b>0.5%</b>	<b>2.5%</b>	<b>6.6%</b>	<b>0.5%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>4.3%</b>	<b>3.0%</b>	<b>2.2%</b>	<b>--</b>	<b>--</b>	<b>3.4%</b>	<b>Dec-12</b>
<i>Opportunistic FI Custom Benchmark</i>	<i>0.8%</i>	<i>2.1%</i>	<i>9.4%</i>	<i>0.8%</i>	<i>6.3%</i>	<i>4.9%</i>	<i>6.2%</i>	<i>5.5%</i>	<i>4.6%</i>	<i>5.4%</i>	<i>--</i>	<i>5.0%</i>	<i>Dec-12</i>
T - Apollo Franklin Partnership, L.P.	0.0%	4.3%	8.3%	0.0%	5.0%	2.9%	1.1%	-1.9%	-4.4%	--	--	-2.3%	May-13
<i>50% BarCap HY / 50% CSFB Lev Loans</i>	<i>0.7%</i>	<i>1.2%</i>	<i>8.4%</i>	<i>0.7%</i>	<i>5.5%</i>	<i>4.6%</i>	<i>6.0%</i>	<i>5.4%</i>	<i>4.6%</i>	<i>5.4%</i>	<i>7.3%</i>	<i>4.7%</i>	<i>May-13</i>
T - Avenue Coppers Opportunity Fund LP	0.0%	0.1%	-0.9%	0.0%	-8.7%	-3.9%	-1.0%	-1.6%	-0.9%	--	--	0.5%	Dec-13
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.9%</i>	<i>4.4%</i>	<i>0.6%</i>	<i>7.6%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>Dec-13</i>
T - KKR-PBPR Capital Partners LP	0.0%	-0.1%	-2.2%	0.0%	-7.7%	-1.6%	1.8%	1.9%	1.6%	4.4%	--	4.4%	Jun-12
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.9%</i>	<i>4.4%</i>	<i>0.6%</i>	<i>7.6%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>7.7%</i>	<i>Jun-12</i>
Logan Circle - EMD	1.1%	5.6%	12.1%	1.1%	8.8%	4.3%	6.3%	7.0%	--	--	--	6.2%	Feb-15
<i>JP Morgan EMBI Global TR</i>	<i>1.2%</i>	<i>4.8%</i>	<i>11.9%</i>	<i>1.2%</i>	<i>10.3%</i>	<i>4.5%</i>	<i>4.5%</i>	<i>6.2%</i>	<i>4.7%</i>	<i>4.5%</i>	<i>7.2%</i>	<i>5.8%</i>	<i>Feb-15</i>
Strategic Income Management	0.3%	0.9%	7.8%	0.3%	4.9%	5.1%	6.8%	--	--	--	--	8.5%	Mar-16
<i>ICE BofAML US High Yield TR</i>	<i>0.5%</i>	<i>1.7%</i>	<i>10.8%</i>	<i>0.5%</i>	<i>7.0%</i>	<i>4.7%</i>	<i>6.9%</i>	<i>6.4%</i>	<i>5.1%</i>	<i>6.2%</i>	<i>8.6%</i>	<i>8.8%</i>	<i>Mar-16</i>

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Lord Abbett High Yield	0.9%	2.8%	--	0.9%	--	--	--	--	--	--	--	7.4%	Jan-19
ICE BofAML US High Yield TR	0.5%	1.7%	10.8%	0.5%	7.0%	4.7%	6.9%	6.4%	5.1%	6.2%	8.6%	5.9%	Jan-19
<b>U.S. Equity Composite</b>	<b>1.5%</b>	<b>1.4%</b>	<b>21.2%</b>	<b>1.5%</b>	<b>6.4%</b>	<b>11.1%</b>	<b>13.0%</b>	<b>9.9%</b>	<b>10.1%</b>	<b>13.1%</b>	<b>13.7%</b>	<b>9.7%</b>	<b>Jul-88</b>
U.S. Equity Custom Benchmark	1.3%	1.3%	20.3%	1.3%	6.9%	11.6%	13.1%	10.8%	10.9%	13.9%	14.0%	10.4%	Jul-88
Rhumbline Russell 1000 Index	1.6%	1.7%	20.7%	1.6%	8.0%	12.1%	13.4%	11.2%	11.2%	14.1%	13.9%	8.2%	May-07
Rhumbline Russell 1000 Custom Benchmark	1.6%	1.7%	20.8%	1.6%	8.0%	12.1%	13.4%	11.2%	11.2%	14.1%	--	--	May-07
O'Shaughnessy Asset Management	1.5%	0.0%	20.0%	1.5%	0.2%	8.5%	12.8%	8.5%	7.7%	13.5%	--	13.1%	Jun-12
Russell 1000 Value	0.8%	1.1%	17.2%	0.8%	5.2%	7.3%	9.4%	8.4%	8.0%	12.1%	12.4%	12.1%	Jun-12
Rhumbline MidCap Index	1.4%	1.8%	23.1%	1.4%	6.8%	10.1%	--	--	--	--	--	11.6%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	1.4%	1.8%	23.3%	1.4%	6.9%	10.1%	--	--	--	--	--	11.6%	Dec-16
Rhumbline Russell 2000 Index	0.6%	-0.6%	17.7%	0.6%	-4.1%	6.7%	--	--	--	--	--	7.5%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	0.6%	-0.7%	17.7%	0.6%	-4.3%	6.6%	--	--	--	--	--	7.4%	Dec-16
Emerald Advisors	2.0%	2.3%	28.0%	2.0%	5.6%	14.2%	16.3%	8.5%	13.8%	16.0%	16.4%	10.2%	Dec-04
Russell 2000 Growth	1.0%	0.7%	21.5%	1.0%	-1.2%	10.2%	12.7%	7.9%	10.2%	13.3%	13.7%	8.7%	Dec-04
Fisher Asset Management	1.9%	-0.7%	18.4%	1.9%	-2.5%	5.2%	10.7%	8.1%	9.7%	12.5%	13.0%	9.4%	May-08
Russell 2000 Value	0.2%	-2.2%	13.6%	0.2%	-7.7%	2.7%	8.0%	7.4%	6.7%	10.5%	11.2%	7.5%	May-08
Fiera Capital	1.4%	2.6%	26.6%	1.4%	6.8%	13.4%	13.9%	7.8%	9.2%	14.0%	--	14.5%	Dec-09
Russell 2500 Growth	1.6%	2.2%	25.8%	1.6%	5.8%	13.7%	14.5%	9.8%	11.5%	14.5%	15.0%	14.0%	Dec-09
Ariel	0.6%	-3.0%	18.8%	0.6%	-1.9%	5.2%	9.0%	--	--	--	--	11.0%	Jan-16
Russell 2500 Value	0.7%	-0.9%	16.0%	0.7%	-3.2%	4.5%	7.6%	7.3%	6.7%	11.2%	12.3%	12.2%	Jan-16
<b>Non-U.S. Equity Developed Composite</b>	<b>-1.0%</b>	<b>-0.6%</b>	<b>12.9%</b>	<b>-1.0%</b>	<b>-3.4%</b>	<b>1.3%</b>	<b>6.6%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>5.8%</b>	<b>5.6%</b>	<b>5.4%</b>	<b>Jan-89</b>
Non-U.S. Equity Developed Custom Benchmark	-1.1%	-0.6%	12.9%	-1.1%	-3.4%	1.7%	6.8%	3.6%	2.5%	7.1%	6.2%	--	Jan-89
Causeway Capital Management	-2.3%	-4.5%	8.3%	-2.3%	-8.4%	-1.3%	5.5%	1.0%	1.1%	6.4%	--	6.9%	Nov-11
MSCI EAFE	-1.3%	-0.4%	12.6%	-1.3%	-2.6%	1.8%	6.9%	3.1%	2.4%	6.9%	5.8%	6.7%	Nov-11
Northern Trust MSCI EAFE+Canada	-1.0%	0.0%	13.9%	-1.0%	-1.3%	2.5%	7.3%	3.6%	2.6%	6.9%	6.3%	2.9%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	-1.0%	0.1%	14.0%	-1.0%	-1.1%	2.7%	7.4%	3.9%	2.9%	7.7%	6.6%	2.6%	Mar-07

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Northern Trust International Small Cap	-0.7%	-1.9%	11.9%	-0.7%	-7.3%	--	--	--	--	--	--	-7.1%	Mar-18
<i>Northern Trust EAFE Small Cap Custom Benchmark</i>	-0.7%	-1.8%	12.0%	-0.7%	-7.3%	--	--	--	--	--	--	-6.6%	Mar-18
Strategic Global Advisors	-0.7%	-1.5%	11.2%	-0.7%	-10.6%	--	--	--	--	--	--	-6.0%	Nov-17
<i>MSCI World ex USA Small Cap</i>	-0.4%	-1.4%	12.4%	-0.4%	-7.1%	0.5%	6.2%	5.2%	3.8%	8.6%	8.3%	-3.2%	Nov-17
Mackenzie Investments	1.2%	0.4%	10.8%	1.2%	-10.1%	--	--	--	--	--	--	-4.7%	Nov-17
<i>MSCI EAFE Small Cap</i>	-0.7%	-2.0%	11.7%	-0.7%	-7.6%	0.5%	6.7%	5.3%	4.7%	9.7%	8.8%	-3.5%	Nov-17
<b>Non-U.S. Equity Emerging Composite</b>	<b>-1.4%</b>	<b>-3.3%</b>	<b>8.7%</b>	<b>-1.4%</b>	<b>-2.0%</b>	<b>1.2%</b>	<b>8.3%</b>	<b>6.5%</b>	<b>2.2%</b>	<b>2.9%</b>	<b>3.9%</b>	<b>8.5%</b>	<b>Jan-09</b>
<i>MSCI Emerging Markets</i>	-1.2%	-2.7%	9.2%	-1.2%	-2.2%	1.0%	8.4%	6.1%	1.8%	3.7%	4.6%	9.2%	Jan-09
Rhumblin Emerging Markets Index	-1.4%	-3.3%	8.7%	-1.4%	-1.9%	1.2%	8.3%	6.5%	2.2%	--	--	2.0%	Feb-13
<i>MSCI Emerging Markets</i>	-1.2%	-2.7%	9.2%	-1.2%	-2.2%	1.0%	8.4%	6.1%	1.8%	3.7%	4.6%	2.0%	Feb-13

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Absolute Return</b>	<b>1.2%</b>	<b>1.2%</b>	<b>7.2%</b>	<b>1.2%</b>	<b>-12.4%</b>	<b>-1.8%</b>	<b>3.3%</b>	<b>0.5%</b>	<b>0.2%</b>	<b>2.6%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>Sep-05</b>
<i>HFRI Fund of Funds Composite Index</i>	0.7%	1.3%	6.9%	0.7%	1.7%	3.0%	4.0%	1.9%	2.4%	3.7%	3.1%	2.6%	Sep-05
Elizabeth Park Capital Management	1.2%	1.9%	8.3%	1.2%	-11.5%	-0.7%	7.4%	6.0%	6.9%	--	--	6.4%	May-14
<i>HFRX Event Driven Index</i>	0.2%	1.4%	2.7%	0.2%	-4.5%	-4.4%	0.5%	0.0%	-1.5%	1.6%	1.7%	-1.4%	May-14
T - Archview Offshore Fund. LTD	0.0%	-8.4%	-7.7%	0.0%	-23.6%	-9.1%	-3.6%	-5.0%	-4.2%	--	--	-3.4%	Mar-14
<i>HFRI ED: Distressed/Restructuring Index</i>	0.0%	0.2%	4.7%	0.0%	-1.0%	2.6%	5.9%	3.8%	1.7%	4.8%	6.0%	2.1%	Mar-14
<b>Real Assets Composite</b>	<b>0.0%</b>	<b>-0.3%</b>	<b>5.0%</b>	<b>0.0%</b>	<b>5.1%</b>	<b>4.9%</b>	<b>5.3%</b>	<b>3.5%</b>	<b>2.4%</b>	<b>--</b>	<b>--</b>	<b>6.2%</b>	<b>Dec-12</b>
<i>Real Assets Benchmark</i>	0.0%	1.0%	6.5%	0.0%	6.5%	5.3%	4.6%	2.0%	-0.9%	--	--	2.7%	Dec-12
<b>Real Assets - Public Real Estate Composite</b>	<b>1.6%</b>	<b>3.6%</b>	<b>21.1%</b>	<b>1.6%</b>	<b>14.1%</b>	<b>9.0%</b>	<b>5.1%</b>	<b>9.2%</b>	<b>9.8%</b>	<b>--</b>	<b>--</b>	<b>9.5%</b>	<b>Jan-13</b>
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	1.6%	3.6%	21.2%	1.6%	14.3%	9.1%	5.2%	9.2%	9.2%	--	--	--	Jan-13
Rhumblin FTSE NAREIT	1.6%	3.6%	21.1%	1.6%	14.1%	9.0%	5.1%	9.2%	9.2%	--	--	8.1%	May-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	1.6%	3.6%	21.2%	1.6%	14.3%	9.1%	5.2%	9.2%	9.2%	--	--	8.1%	May-13
<b>Real Assets - Open-End Real Estate Composite</b>	<b>0.0%</b>	<b>-2.6%</b>	<b>-1.9%</b>	<b>0.0%</b>	<b>1.2%</b>	<b>4.1%</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.1%</b>	<b>Jan-17</b>
<i>NFI</i>	0.0%	0.5%	2.0%	0.0%	4.8%	6.2%	6.4%	7.3%	8.6%	9.4%	9.2%	6.2%	Jan-17
UBS Trumbull Fund	0.0%	-3.9%	-3.4%	0.0%	-0.6%	3.0%	--	--	--	--	--	3.2%	Jan-17
<i>NFI</i>	0.0%	0.5%	2.0%	0.0%	4.8%	6.2%	6.4%	7.3%	8.6%	9.4%	9.2%	6.2%	Jan-17
Clarion Lion Properties Fund	0.0%	1.1%	2.9%	0.0%	7.0%	--	--	--	--	--	--	8.0%	Feb-18
<i>NFI</i>	0.0%	0.5%	2.0%	0.0%	4.8%	6.2%	6.4%	7.3%	8.6%	9.4%	9.2%	5.8%	Feb-18
<b>Real Assets - Infrastructure Composite</b>	<b>-0.3%</b>	<b>3.5%</b>	<b>20.6%</b>	<b>-0.3%</b>	<b>11.2%</b>	<b>6.3%</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>8.6%</b>	<b>Mar-17</b>
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-0.4%	2.1%	19.0%	-0.4%	9.1%	5.0%	6.7%	6.2%	4.4%	8.2%	11.3%	7.4%	Mar-17
Rhumblin Infrastructure Index	-0.4%	3.3%	20.6%	-0.4%	10.9%	6.3%	--	--	--	--	--	8.5%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-0.4%	2.1%	19.0%	-0.4%	9.1%	5.0%	6.7%	6.2%	4.4%	8.2%	11.3%	7.4%	Mar-17
Rreef Global Infrastructure	-0.3%	3.9%	21.2%	-0.3%	12.4%	--	--	--	--	--	--	13.9%	Mar-18
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-0.4%	2.1%	19.0%	-0.4%	9.1%	5.0%	6.7%	6.2%	4.4%	8.2%	11.3%	11.6%	Mar-18

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,506.2 Million and 100.0% of Fund

Ending July 31, 2019

	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
<b>Real Assets - Private Real Estate Composite</b>	<b>0.0%</b>	<b>0.0%</b>	<b>1.3%</b>	<b>0.0%</b>	<b>4.3%</b>	<b>5.2%</b>	<b>6.6%</b>	<b>7.2%</b>	<b>7.5%</b>	<b>9.9%</b>	<b>7.9%</b>	<b>3.9%</b>	<b>May-06</b>
<i>Real Assets - Private Real Estate Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>1.3%</i>	<i>0.0%</i>	<i>4.3%</i>	<i>5.2%</i>	<i>6.6%</i>	<i>7.2%</i>	<i>7.5%</i>	<i>9.9%</i>	<i>--</i>	<i>--</i>	<i>May-06</i>
<b>Real Assets - Private Energy/Infrastructure Composite</b>	<b>0.0%</b>	<b>0.0%</b>	<b>7.0%</b>	<b>0.0%</b>	<b>18.3%</b>	<b>25.1%</b>	<b>16.9%</b>	<b>6.9%</b>	<b>-3.2%</b>	<b>8.5%</b>	<b>--</b>	<b>8.2%</b>	<b>May-12</b>
<i>Real Assets - Private Energy/Infrastructure Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>7.0%</i>	<i>0.0%</i>	<i>18.3%</i>	<i>25.1%</i>	<i>16.9%</i>	<i>6.9%</i>	<i>-3.2%</i>	<i>8.5%</i>	<i>--</i>	<i>8.2%</i>	<i>May-12</i>
<b>Private Assets Composite</b>	<b>0.0%</b>	<b>-0.6%</b>	<b>5.8%</b>	<b>0.0%</b>	<b>10.5%</b>	<b>15.6%</b>	<b>13.8%</b>	<b>11.6%</b>	<b>11.2%</b>	<b>12.4%</b>	<b>13.3%</b>	<b>8.7%</b>	<b>Mar-87</b>

Please note: As of January 1, 2019, the total fund policy index incorporates the adjustments as approved by the Board of Trustees to reflect the fundamental changes adopted as a result of the approved asset allocation. T represents any investment terminated by the Board of Trustees.