



(Preliminary Subject to Change)



**Employees Retirement System**

City of Philadelphia  
Employees Retirement System  
Executive Summary  
**December 31, 2019**

# Total Fund Composite

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
<b>Total Fund Composite</b>		<b>5,798,586,808</b>	<b>72,589,998</b>	<b>100.0</b>	<b>100.0</b>	<b>0</b>
<b>Total Fund w/o Alternative Assets</b>		<b>4,292,730,376</b>	<b>77,440,882</b>	<b>74.0</b>	<b>69.0</b>	<b>291,705,478</b>
<b>Investment Grade Fixed Income Composite</b>		<b>705,166,760</b>	<b>5,918</b>	<b>12.2</b>	<b>10.0</b>	<b>125,308,079</b>
Brandywine Global Investment Management	Global Fixed Income	145,558,967	0	2.5		
Garcia Hamilton & Associates	Int. Govt. Fixed Income	177,316,547	0	3.1		
MetLife Investment Management	Core Plus Fixed Income	48,670,145	5,918	0.8		
Longfellow	Core Plus Fixed Income	172,034,797	0	3.0		
RhumbLine Core Bond Index	Core Fixed Income	161,586,305	0	2.8		
<b>Opportunistic Fixed Income Composite</b>		<b>258,572,988</b>	<b>-3,290,896</b>	<b>4.5</b>	<b>4.0</b>	<b>26,629,516</b>
T - Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	9,402,580	0	0.2		
T - Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	16,519,249	0	0.3		
T - KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	42,670,818	-2,579,527	0.7		
MetLife Investment Management - EMD	EM Fixed Income	79,041,677	-340,103	1.4		
Strategic Income Management	High Yield Fixed Income	54,477,590	-371,266	0.9		
Lord Abbett High Yield	High Yield Fixed Income	56,023,966	0	1.0		
<b>U.S. Equity Composite</b>		<b>1,788,139,520</b>	<b>-271,106</b>	<b>30.8</b>	<b>30.0</b>	<b>48,563,478</b>
RhumbLine Russell 1000 Index	Large-Cap Core	1,305,541,466	0	22.5		
O'Shaughnessy Asset Management	Large-Cap Value	31,962,828	0	0.6		
RhumbLine MidCap Index	Mid-Cap Core	168,735,611	-6,391	2.9		
RhumbLine Russell 2000 Index	Small-Cap Core	106,207,867	56,508,521	1.8		
Emerald Advisors	Small-Cap Growth	86,018,559	0	1.5		
Fiera Capital	Smid-Cap Growth	30,729,608	0	0.5		
Ariel	Smid-Cap Value	58,807,362	0	1.0		
<b>Non-U.S. Equity Developed Composite</b>		<b>1,145,133,974</b>	<b>-35,000,000</b>	<b>19.7</b>	<b>21.0</b>	<b>-72,569,256</b>
Causeway Capital Management	Non-U.S. Large-Cap Core	84,053,087	-35,000,000	1.4		
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	844,316,672	0	14.6		
Northern Trust International Small Cap	Non-U.S. Small-Cap Core	111,365,217	0	1.9		
Strategic Global Advisors	Non-U.S. Small-Cap Core	34,451,508	0	0.6		
Mackenzie Investments	Non-U.S. Small-Cap Core	66,980,011	0	1.2		
<b>Non-U.S. Equity Emerging Composite</b>		<b>238,213,244</b>	<b>0</b>	<b>4.1</b>	<b>4.0</b>	<b>6,269,772</b>
RhumbLine Emerging Markets Index	Emerging Markets	238,209,044	0	4.1		

## Total Fund Composite

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
<b>Cash Composite</b>		<b>157,503,889</b>	<b>115,996,966</b>	<b>2.7</b>	<b>0.0</b>	<b>157,503,889</b>
Cash	Cash & Equivalents	156,843,131	116,003,776	2.7		
Directed Commissions	Cash & Equivalents	660,758	-6,810	0.0		
<b>Absolute Return</b>		<b>30,114,255</b>	<b>0</b>	<b>0.5</b>	<b>0.0</b>	<b>30,114,255</b>
Elizabeth Park Capital Management	Long/Short Hedge Fund	28,685,873	0	0.5		
T - Archview Offshore Fund. LTD	Credit Hedge Fund	1,428,382	0	0.0		
<b>Real Assets Composite</b>		<b>988,520,956</b>	<b>-14,715,956</b>	<b>17.0</b>	<b>19.0</b>	<b>-113,210,538</b>
<b>Real Assets - Public Real Estate Composite</b>		<b>61,444,245</b>	<b>0</b>	<b>1.1</b>	<b>1.0</b>	<b>3,458,377</b>
RhumbLine FTSE NAREIT	Real Assets	61,444,245	0	1.1		
<b>Real Assets - Open-End Real Estate Composite</b>		<b>539,325,906</b>	<b>-3,744,033</b>	<b>9.3</b>	<b>11.0</b>	<b>-98,518,642</b>
UBS Trumbull Fund	Core Real Estate	397,025,643	-3,744,033	6.8		
Clarion Lion Properties Fund	Core Real Estate	142,300,263	0	2.5		
<b>Real Assets - Infrastructure Composite</b>		<b>290,074,277</b>	<b>0</b>	<b>5.0</b>	<b>5.0</b>	<b>144,937</b>
RhumbLine Infrastructure Index	Publicly-Traded Infrastructure	194,099,324	0	3.3		
Rreef Global Infrastructure	Global Infrastructure	95,974,953	0	1.7		
<b>Real Assets - Private Real Estate Composite</b>		<b>80,380,231</b>	<b>-10,910,833</b>	<b>1.4</b>	<b>2.0</b>	<b>-35,591,505</b>
<b>Real Assets - Private Energy/Infrastructure Composite</b>		<b>17,296,296</b>	<b>-61,089</b>	<b>0.3</b>	<b>--</b>	<b>17,296,296</b>
<b>Private Assets Composite</b>		<b>487,221,222</b>	<b>9,865,071</b>	<b>8.4</b>	<b>12.0</b>	<b>-208,609,195</b>
Private Assets - Private Equity	U.S. Private Equity FoF	461,011,243	9,943,263	8.0		
Private Assets - Private Debt	Mezz. Private Equity	26,209,979	-78,192	0.5		

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 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>2.3%</b>	<b>5.5%</b>	<b>18.2%</b>	<b>5.8%</b>	<b>18.2%</b>	<b>6.4%</b>	<b>9.6%</b>	<b>8.9%</b>	<b>6.4%</b>	<b>7.3%</b>	<b>7.7%</b>	<b>7.6%</b>	<b>Jul-88</b>
<i>Total Fund Policy Benchmark</i>	<i>2.1%</i>	<i>5.2%</i>	<i>18.4%</i>	<i>5.5%</i>	<i>18.4%</i>	<i>7.2%</i>	<i>9.6%</i>	<i>9.5%</i>	<i>7.2%</i>	<i>8.0%</i>	<i>8.6%</i>	<i>8.4%</i>	<i>Jul-88</i>
<b>Total Fund w/o Alternative Assets</b>	<b>2.7%</b>	<b>7.0%</b>	<b>21.1%</b>	<b>7.1%</b>	<b>21.1%</b>	<b>5.6%</b>	<b>9.6%</b>	<b>8.8%</b>	<b>6.2%</b>	<b>--</b>	<b>--</b>	<b>6.3%</b>	<b>Jan-14</b>
<b>Investment Grade Fixed Income Composite</b>	<b>0.6%</b>	<b>0.9%</b>	<b>8.1%</b>	<b>2.2%</b>	<b>8.1%</b>	<b>3.6%</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.6%</b>	<b>2.3%</b>	<b>3.7%</b>	<b>6.0%</b>	<b>Jul-88</b>
<i>Fixed Income Custom Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>8.0%</i>	<i>2.0%</i>	<i>8.0%</i>	<i>3.9%</i>	<i>3.8%</i>	<i>3.5%</i>	<i>2.9%</i>	<i>2.6%</i>	<i>3.7%</i>	<i>6.2%</i>	<i>Jul-88</i>
Brandywine Global Investment Management	3.3%	3.8%	8.8%	2.0%	8.8%	1.9%	5.4%	5.2%	2.5%	2.1%	5.0%	6.7%	Jan-09
<i>FTSE WGBI TR</i>	<i>0.3%</i>	<i>-0.4%</i>	<i>5.9%</i>	<i>0.5%</i>	<i>5.9%</i>	<i>2.5%</i>	<i>4.1%</i>	<i>3.5%</i>	<i>2.0%</i>	<i>0.8%</i>	<i>1.9%</i>	<i>2.3%</i>	<i>Jan-09</i>
Garcia Hamilton & Associates	0.0%	0.3%	6.2%	1.8%	6.2%	3.7%	3.2%	3.1%	2.8%	2.7%	3.9%	5.1%	Aug-00
<i>BBgBarc US Govt/Credit Int TR</i>	<i>0.1%</i>	<i>0.4%</i>	<i>6.8%</i>	<i>1.7%</i>	<i>6.8%</i>	<i>3.8%</i>	<i>3.2%</i>	<i>2.9%</i>	<i>2.6%</i>	<i>2.2%</i>	<i>3.1%</i>	<i>4.4%</i>	<i>Aug-00</i>
MetLife Investment Management	0.0%	0.2%	9.9%	2.8%	9.9%	4.7%	4.8%	4.6%	3.6%	--	--	3.6%	Oct-14
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>0.2%</i>	<i>8.7%</i>	<i>2.5%</i>	<i>8.7%</i>	<i>4.3%</i>	<i>4.0%</i>	<i>3.7%</i>	<i>3.0%</i>	<i>2.7%</i>	<i>3.7%</i>	<i>3.1%</i>	<i>Oct-14</i>
Longfellow	-0.2%	0.1%	8.9%	2.5%	8.9%	4.4%	4.3%	3.9%	3.4%	--	--	3.4%	Sep-14
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>0.2%</i>	<i>8.7%</i>	<i>2.5%</i>	<i>8.7%</i>	<i>4.3%</i>	<i>4.0%</i>	<i>3.7%</i>	<i>3.0%</i>	<i>2.7%</i>	<i>3.7%</i>	<i>3.2%</i>	<i>Sep-14</i>
RhumbLine Core Bond Index	-0.2%	0.0%	8.2%	2.4%	8.2%	4.1%	3.9%	3.4%	2.8%	2.4%	3.5%	4.1%	Jun-07
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>0.2%</i>	<i>8.7%</i>	<i>2.5%</i>	<i>8.7%</i>	<i>4.3%</i>	<i>4.0%</i>	<i>3.7%</i>	<i>3.0%</i>	<i>2.7%</i>	<i>3.7%</i>	<i>4.3%</i>	<i>Jun-07</i>
<b>Opportunistic Fixed Income Composite</b>	<b>2.1%</b>	<b>2.9%</b>	<b>9.1%</b>	<b>2.9%</b>	<b>9.1%</b>	<b>2.7%</b>	<b>4.1%</b>	<b>5.0%</b>	<b>3.0%</b>	<b>3.5%</b>	<b>--</b>	<b>3.5%</b>	<b>Dec-12</b>
<i>Opportunistic FI Custom Benchmark</i>	<i>1.8%</i>	<i>2.2%</i>	<i>12.2%</i>	<i>3.4%</i>	<i>12.2%</i>	<i>5.5%</i>	<i>5.6%</i>	<i>7.5%</i>	<i>5.4%</i>	<i>5.1%</i>	<i>6.4%</i>	<i>5.1%</i>	<i>Dec-12</i>
T - Apollo Franklin Partnership, L.P.	0.0%	0.3%	8.9%	0.5%	8.9%	4.3%	1.5%	1.2%	-2.5%	--	--	-2.1%	May-13
<i>50% BarCap HY / 50% CSFB Lev Loans</i>	<i>1.8%</i>	<i>2.1%</i>	<i>11.2%</i>	<i>3.3%</i>	<i>11.2%</i>	<i>5.2%</i>	<i>5.4%</i>	<i>7.4%</i>	<i>5.3%</i>	<i>5.1%</i>	<i>6.4%</i>	<i>4.9%</i>	<i>May-13</i>
T - Avenue Coppers Opportunity Fund LP	0.0%	-0.4%	0.0%	0.9%	0.0%	-5.6%	-2.1%	-0.4%	-0.3%	--	--	0.6%	Dec-13
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.8%</i>	<i>7.6%</i>	<i>3.7%</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%	0.2%	-3.2%	-1.0%	-3.2%	-2.5%	0.6%	2.7%	1.8%	3.7%	--	4.1%	Jun-12
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.8%</i>	<i>7.6%</i>	<i>3.7%</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>
MetLife Investment Management - EMD	3.5%	5.3%	15.0%	3.7%	15.0%	4.0%	7.0%	8.8%	--	--	--	6.2%	Feb-15
<i>JP Morgan EMBI Global TR</i>	<i>1.9%</i>	<i>2.1%</i>	<i>14.4%</i>	<i>3.5%</i>	<i>14.4%</i>	<i>4.5%</i>	<i>6.1%</i>	<i>7.1%</i>	<i>5.9%</i>	<i>4.0%</i>	<i>6.6%</i>	<i>5.7%</i>	<i>Feb-15</i>
Strategic Income Management	2.9%	3.3%	12.0%	4.2%	12.0%	5.6%	6.2%	--	--	--	--	8.6%	Mar-16
<i>ICE BofAML US High Yield TR</i>	<i>2.1%</i>	<i>2.6%</i>	<i>14.4%</i>	<i>3.9%</i>	<i>14.4%</i>	<i>5.8%</i>	<i>6.3%</i>	<i>9.0%</i>	<i>6.1%</i>	<i>5.8%</i>	<i>7.5%</i>	<i>8.7%</i>	<i>Mar-16</i>

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 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	1.9%	3.1%	--	4.7%	--	--	--	--	--	--	--	11.4%	Jan-19
ICE BofAML US High Yield TR	2.1%	2.6%	14.4%	3.9%	14.4%	5.8%	6.3%	9.0%	6.1%	5.8%	7.5%	9.4%	Jan-19
<b>U.S. Equity Composite</b>	<b>2.7%</b>	<b>9.0%</b>	<b>30.8%</b>	<b>9.5%</b>	<b>30.8%</b>	<b>10.5%</b>	<b>13.9%</b>	<b>13.3%</b>	<b>10.3%</b>	<b>13.4%</b>	<b>12.9%</b>	<b>9.8%</b>	<b>Jul-88</b>
U.S. Equity Custom Benchmark	2.8%	9.0%	30.2%	9.6%	30.2%	11.1%	14.3%	13.9%	11.1%	14.3%	13.3%	10.5%	Jul-88
RhumbLine Russell 1000 Index	2.9%	9.0%	31.5%	10.6%	31.5%	12.0%	15.2%	14.4%	11.6%	14.6%	13.4%	8.6%	May-07
Rhumbline Russell 1000 Custom Benchmark	2.9%	9.1%	31.5%	10.6%	31.5%	12.0%	15.1%	14.3%	11.5%	14.7%	--	--	May-07
O'Shaughnessy Asset Management	1.7%	8.3%	28.4%	8.6%	28.4%	6.7%	12.1%	12.6%	8.3%	13.5%	--	13.4%	Jun-12
Russell 1000 Value	2.8%	7.4%	26.5%	8.9%	26.5%	7.7%	9.7%	11.5%	8.3%	12.2%	11.8%	12.5%	Jun-12
RhumbLine MidCap Index	2.3%	7.0%	30.5%	7.5%	30.5%	9.0%	12.0%	--	--	--	--	12.0%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	2.3%	7.0%	30.7%	7.6%	30.7%	9.0%	12.1%	--	--	--	--	12.1%	Dec-16
RhumbLine Russell 2000 Index	2.8%	9.9%	25.6%	7.3%	25.6%	5.9%	8.8%	--	--	--	--	8.8%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	2.8%	8.7%	24.2%	6.2%	24.2%	5.2%	8.3%	--	--	--	--	8.3%	Dec-16
Emerald Advisors	2.2%	11.2%	29.7%	3.4%	29.7%	7.5%	14.0%	12.8%	10.9%	15.2%	14.9%	10.0%	Dec-04
Russell 2000 Growth	2.3%	11.4%	28.5%	6.7%	28.5%	7.9%	12.5%	12.2%	9.3%	13.1%	13.0%	8.8%	Dec-04
Fiera Capital	0.5%	11.4%	31.6%	5.5%	31.6%	9.3%	14.9%	11.8%	9.0%	13.0%	14.3%	14.3%	Dec-09
Russell 2500 Growth	0.9%	10.6%	32.7%	7.1%	32.7%	10.8%	15.2%	13.8%	10.8%	14.1%	14.0%	14.0%	Dec-09
Ariel	2.3%	9.2%	25.8%	6.5%	25.8%	4.2%	8.0%	--	--	--	--	11.4%	Jan-16
Russell 2500 Value	3.0%	7.1%	23.6%	7.2%	23.6%	4.1%	6.1%	10.6%	7.2%	10.6%	11.3%	12.6%	Jan-16
<b>Non-U.S. Equity Developed Composite</b>	<b>3.4%</b>	<b>8.7%</b>	<b>23.2%</b>	<b>8.0%</b>	<b>23.2%</b>	<b>2.2%</b>	<b>9.3%</b>	<b>7.4%</b>	<b>5.2%</b>	<b>5.6%</b>	<b>5.2%</b>	<b>5.7%</b>	<b>Jan-89</b>
Non-U.S. Equity Developed Custom Benchmark	3.4%	8.6%	22.9%	7.7%	22.9%	2.3%	9.7%	7.8%	5.9%	6.6%	5.9%	--	Jan-89
Causeway Capital Management	4.0%	11.4%	20.2%	8.5%	20.2%	-0.3%	8.2%	6.0%	4.3%	6.0%	--	8.0%	Nov-11
MSCI EAFE	3.2%	8.2%	22.0%	7.0%	22.0%	2.6%	9.6%	7.4%	5.7%	6.3%	5.5%	7.5%	Nov-11
MSCI EAFE Value	3.7%	7.8%	16.1%	5.9%	16.1%	-0.5%	6.3%	6.0%	3.5%	4.8%	4.0%	6.1%	Nov-11
Northern Trust MSCI EAFE+Canada	3.1%	7.9%	23.5%	7.3%	23.5%	3.4%	9.9%	8.1%	5.9%	6.3%	5.9%	3.5%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	3.1%	7.9%	23.7%	7.3%	23.7%	3.5%	10.1%	8.3%	6.1%	7.0%	6.2%	3.1%	Mar-07

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 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	4.3%	11.3%	25.0%	10.9%	25.0%	--	--	--	--	--	--	0.7%	Mar-18
<i>Northern Trust EAFE Small Cap Custom Benchmark</i>	4.3%	11.5%	25.7%	11.4%	25.7%	--	--	--	--	--	--	1.4%	Mar-18
Strategic Global Advisors	4.4%	10.3%	20.9%	8.0%	20.9%	-2.2%	--	--	--	--	--	-0.9%	Nov-17
<i>MSCI World ex USA Small Cap</i>	4.6%	11.4%	25.4%	11.1%	25.4%	1.4%	10.4%	8.9%	8.2%	8.4%	8.0%	2.7%	Nov-17
Mackenzie Investments	4.1%	11.0%	23.8%	13.0%	23.8%	0.0%	--	--	--	--	--	1.5%	Nov-17
<i>MSCI EAFE Small Cap</i>	4.4%	11.5%	25.0%	11.0%	25.0%	1.3%	10.9%	8.7%	8.9%	9.4%	8.7%	2.5%	Nov-17
<b>Non-U.S. Equity Emerging Composite</b>	<b>7.8%</b>	<b>12.6%</b>	<b>18.8%</b>	<b>7.7%</b>	<b>18.8%</b>	<b>0.8%</b>	<b>12.2%</b>	<b>11.8%</b>	<b>5.7%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>9.1%</b>	<b>Jan-09</b>
<i>MSCI Emerging Markets</i>	7.5%	11.8%	18.4%	7.1%	18.4%	0.6%	11.6%	11.5%	5.6%	3.3%	3.7%	9.7%	Jan-09
RhumbLine Emerging Markets Index	7.8%	12.6%	18.8%	7.7%	18.8%	0.8%	12.2%	11.8%	6.0%	--	--	3.2%	Feb-13
<i>MSCI Emerging Markets</i>	7.5%	11.8%	18.4%	7.1%	18.4%	0.6%	11.6%	11.5%	5.6%	3.3%	3.7%	3.1%	Feb-13

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 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>1.8%</b>	<b>6.4%</b>	<b>9.8%</b>	<b>3.5%</b>	<b>9.8%</b>	<b>-3.2%</b>	<b>1.1%</b>	<b>2.5%</b>	<b>1.0%</b>	<b>2.5%</b>	<b>2.5%</b>	<b>2.5%</b>	<b>Sep-05</b>
<i>HFRI Fund of Funds Composite Index</i>	1.3%	2.5%	7.8%	1.5%	7.8%	1.7%	3.7%	2.9%	2.2%	3.3%	2.8%	2.6%	Sep-05
Elizabeth Park Capital Management	1.9%	6.8%	12.5%	5.2%	12.5%	-1.7%	2.5%	6.4%	6.5%	--	--	6.6%	May-14
<i>HFRX Event Driven Index</i>	2.0%	5.4%	10.0%	7.3%	10.0%	-1.4%	1.1%	3.5%	1.3%	2.2%	1.8%	0.0%	May-14
T - Archview Offshore Fund. LTD	0.0%	-0.8%	-26.7%	-21.7%	-26.7%	-21.1%	-12.9%	-8.4%	-8.5%	--	--	-6.9%	Mar-14
<i>HFRI ED: Distressed/Restructuring Index</i>	1.2%	-0.1%	2.9%	-1.8%	2.9%	0.6%	2.4%	5.5%	2.6%	3.6%	4.5%	1.6%	Mar-14
<b>Real Assets Composite</b>	<b>1.9%</b>	<b>1.6%</b>	<b>9.0%</b>	<b>3.6%</b>	<b>9.0%</b>	<b>5.5%</b>	<b>6.0%</b>	<b>7.1%</b>	<b>3.1%</b>	<b>6.4%</b>	<b>--</b>	<b>6.4%</b>	<b>Dec-12</b>
<i>Real Assets Benchmark</i>	1.1%	0.8%	10.1%	2.8%	10.1%	5.7%	4.9%	7.1%	-0.1%	3.0%	--	3.0%	Dec-12
<b>Real Assets - Public Real Estate Composite</b>	<b>0.6%</b>	<b>0.1%</b>	<b>28.6%</b>	<b>7.9%</b>	<b>28.6%</b>	<b>11.0%</b>	<b>10.2%</b>	<b>9.9%</b>	<b>8.4%</b>	<b>--</b>	<b>--</b>	<b>9.9%</b>	<b>Jan-13</b>
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	0.6%	0.1%	21.3%	1.7%	21.3%	7.9%	8.1%	8.3%	7.2%	--	--	--	Jan-13
RhumbLine FTSE NAREIT	0.6%	0.1%	28.6%	7.9%	28.6%	11.0%	10.2%	9.9%	8.4%	--	--	8.5%	May-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	0.6%	0.1%	21.3%	1.7%	21.3%	7.9%	8.1%	8.3%	7.2%	--	--	7.6%	May-13
<b>Real Assets - Open-End Real Estate Composite</b>	<b>0.7%</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>1.6%</b>	<b>-0.3%</b>	<b>3.2%</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>4.0%</b>	<b>Jan-17</b>
<i>NFI</i>	0.0%	0.0%	3.1%	1.1%	3.1%	5.2%	5.7%	6.2%	7.7%	9.0%	10.3%	5.7%	Jan-17
UBS Trumbull Fund	0.3%	0.3%	-2.4%	1.0%	-2.4%	1.8%	--	--	--	--	--	3.1%	Jan-17
<i>NFI</i>	0.0%	0.0%	3.1%	1.1%	3.1%	5.2%	5.7%	6.2%	7.7%	9.0%	10.3%	5.7%	Jan-17
Clarion Lion Properties Fund	2.0%	2.0%	6.4%	3.4%	6.4%	--	--	--	--	--	--	8.1%	Feb-18
<i>NFI</i>	0.0%	0.0%	3.1%	1.1%	3.1%	5.2%	5.7%	6.2%	7.7%	9.0%	10.3%	5.1%	Feb-18
<b>Real Assets - Infrastructure Composite</b>	<b>5.3%</b>	<b>4.3%</b>	<b>29.8%</b>	<b>7.3%</b>	<b>29.8%</b>	<b>9.8%</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>10.1%</b>	<b>Mar-17</b>
<i>Dow Jones Brookfield Global Infrastructure Index</i>	5.3%	4.0%	28.7%	6.6%	28.7%	8.9%	11.1%	11.5%	5.7%	8.6%	10.2%	9.3%	Mar-17
RhumbLine Infrastructure Index	5.4%	4.1%	29.4%	6.9%	29.4%	9.6%	--	--	--	--	--	10.0%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	5.3%	4.0%	28.7%	6.6%	28.7%	8.9%	11.1%	11.5%	5.7%	8.6%	10.2%	9.3%	Mar-17
Rreef Global Infrastructure	5.1%	4.7%	31.2%	7.9%	31.2%	--	--	--	--	--	--	15.5%	Mar-18
<i>Dow Jones Brookfield Global Infrastructure Index</i>	5.3%	4.0%	28.7%	6.6%	28.7%	8.9%	11.1%	11.5%	5.7%	8.6%	10.2%	13.7%	Mar-18

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$5,798.6 Million and 100.0% of Fund

Ending December 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>5.2%</b>	<b>1.8%</b>	<b>5.2%</b>	<b>5.4%</b>	<b>6.2%</b>	<b>6.4%</b>	<b>7.9%</b>	<b>9.7%</b>	<b>9.2%</b>	<b>4.0%</b>	<b>May-06</b>
<i>Real Assets - Private Real Estate Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>5.2%</i>	<i>1.8%</i>	<i>5.2%</i>	<i>5.4%</i>	<i>6.2%</i>	<i>6.4%</i>	<i>7.9%</i>	<i>9.7%</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>10.8%</b>	<b>1.1%</b>	<b>10.8%</b>	<b>20.5%</b>	<b>18.4%</b>	<b>15.2%</b>	<b>-2.0%</b>	<b>9.9%</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>10.8%</i>	<i>1.1%</i>	<i>10.8%</i>	<i>20.5%</i>	<i>18.4%</i>	<i>15.2%</i>	<i>-2.0%</i>	<i>9.9%</i>	<i>--</i>	<i>8.2%</i>	<i>May-12</i>
<b>Private Assets Composite</b>	<b>0.0%</b>	<b>0.0%</b>	<b>14.2%</b>	<b>0.0%</b>	<b>14.2%</b>	<b>15.4%</b>	<b>15.0%</b>	<b>13.4%</b>	<b>12.2%</b>	<b>12.2%</b>	<b>13.1%</b>	<b>8.9%</b>	<b>Mar-87</b>
<i>Private Assets Composite Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>14.2%</i>	<i>0.0%</i>	<i>14.2%</i>	<i>15.4%</i>	<i>15.0%</i>	<i>13.4%</i>	<i>12.2%</i>	<i>12.2%</i>	<i>13.1%</i>	<i>8.9%</i>	<i>Mar-87</i>

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.