



(Preliminary Subject to Change)



Employees Retirement System

City of Philadelphia
Employees Retirement System
Executive Summary
October 31, 2019

Total Fund Composite

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		5,589,200,898	-12,232,132	100.0	100.0	0
Total Fund w/o Alternative Assets		4,134,687,593	-3,171,368	74.0	69.0	278,138,974
Investment Grade Fixed Income Composite		703,917,667	4,417	12.6	10.0	144,997,577
Brandywine Global Investment Management	Global Fixed Income	143,725,222	0	2.6		
Garcia Hamilton & Associates	Int. Govt. Fixed Income	177,316,153	0	3.2		
MetLife Investment Management	Core Plus Fixed Income	48,685,811	4,417	0.9		
Longfellow	Core Plus Fixed Income	172,226,405	0	3.1		
RhumbLine Core Bond Index	Core Fixed Income	161,964,076	0	2.9		
Opportunistic Fixed Income Composite		256,013,071	-5,401,032	4.6	4.0	32,445,035
T - Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	9,374,603	-1,272,727	0.2		
T - Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	16,437,891	-3,024,635	0.3		
T - KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	45,145,110	-863,670	0.8		
Logan Circle - EMD	EM Fixed Income	76,677,280	-240,000	1.4		
Strategic Income Management	High Yield Fixed Income	53,323,544	0	1.0		
Lord Abbett High Yield	High Yield Fixed Income	54,619,471	0	1.0		
U.S. Equity Composite		1,675,487,204	-15,000,000	30.0	30.0	-1,273,065
RhumbLine Russell 1000 Index	Large-Cap Core	1,222,696,071	-15,000,000	21.9		
O'Shaughnessy Asset Management	Large-Cap Value	30,010,932	0	0.5		
RhumbLine MidCap Index	Mid-Cap Core	159,311,717	-6,391	2.9		
RhumbLine Russell 2000 Index	Small-Cap Core	99,208,203	56,779,627	1.8		
Emerald Advisors	Small-Cap Growth	80,553,513	0	1.4		
Fiera Capital	Smid-Cap Growth	28,341,807	0	0.5		
Ariel	Smid-Cap Value	55,229,366	0	1.0		
Non-U.S. Equity Developed Composite		1,125,547,984	-10,000,000	20.1	21.0	-48,184,204
Causeway Capital Management	Non-U.S. Large-Cap Core	112,600,739	0	2.0		
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	808,548,651	-10,000,000	14.5		
Northern Trust International Small Cap	Non-U.S. Small-Cap Core	104,454,102	0	1.9		
Strategic Global Advisors	Non-U.S. Small-Cap Core	32,256,113	0	0.6		
Mackenzie Investments	Non-U.S. Small-Cap Core	63,775,558	0	1.1		
Non-U.S. Equity Emerging Composite		220,852,389	0	4.0	4.0	-2,715,647
RhumbLine Emerging Markets Index	Emerging Markets	220,848,229	0	4.0		

Total Fund Composite

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Cash Composite		152,869,278	27,225,247	2.7	0.0	152,869,278
Cash	Cash & Equivalents	152,204,473	27,228,521	2.7		
Directed Commissions	Cash & Equivalents	664,804	-3,273	0.0		
Absolute Return		28,464,194	0	0.5	0.0	28,464,194
Elizabeth Park Capital Management	Long/Short Hedge Fund	27,024,081	0	0.5		
T - Archview Offshore Fund. LTD	Credit Hedge Fund	1,440,113	0	0.0		
Real Assets Composite		978,554,635	-16,964,761	17.5	19.0	-83,393,536
Real Assets - Public Real Estate Composite		62,049,248	-5,000,000	1.1	1.0	6,157,239
RhumbLine FTSE NAREIT	Real Assets	62,049,248	-5,000,000	1.1		
Real Assets - Open-End Real Estate Composite		535,614,037	-4,711,610	9.6	11.0	-79,198,062
UBS Trumbull Fund	Core Real Estate	396,035,554	-4,428,096	7.1		
Clarion Lion Properties Fund	Core Real Estate	139,578,483	-283,514	2.5		
Real Assets - Infrastructure Composite		278,590,277	0	5.0	5.0	-869,768
RhumbLine Infrastructure Index	Publicly-Traded Infrastructure	186,811,251	0	3.3		
Rreef Global Infrastructure	Global Infrastructure	91,779,026	0	1.6		
Real Assets - Private Real Estate Composite		85,180,390	-11,805,220	1.5	2.0	-26,603,628
Real Assets - Private Energy/Infrastructure Composite		17,120,683	4,552,070	0.3	--	17,120,683
Private Assets Composite		447,494,475	7,903,996	8.0	12.0	-223,209,632
Private Assets - Private Equity	U.S. Private Equity FoF	421,452,297	11,020,965	7.5		
Private Assets - Private Debt	Mezz. Private Equity	26,042,179	-3,116,969	0.5		

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 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
Total Fund Composite	1.7%	1.8%	13.2%	2.0%	9.8%	5.8%	8.8%	7.1%	5.5%	6.9%	7.7%	7.5%	Jul-88
<i>Total Fund Policy Benchmark</i>	1.6%	1.8%	13.5%	2.0%	10.4%	6.5%	8.8%	7.6%	6.3%	7.7%	8.6%	8.3%	Jul-88
Total Fund w/o Alternative Assets	2.3%	2.0%	15.7%	2.3%	10.8%	4.7%	8.7%	6.9%	5.2%	--	--	5.7%	Jan-14
Investment Grade Fixed Income Composite	0.7%	2.2%	7.9%	2.1%	10.2%	3.9%	3.2%	3.7%	2.5%	2.3%	3.7%	6.1%	Jul-88
<i>Fixed Income Custom Benchmark</i>	0.4%	2.2%	8.3%	2.3%	11.0%	4.3%	3.1%	3.4%	3.1%	2.7%	3.7%	6.2%	Jul-88
Brandywine Global Investment Management	2.6%	2.2%	7.5%	0.8%	10.3%	2.4%	3.3%	4.3%	2.0%	2.3%	4.8%	6.6%	Jan-09
<i>FTSE WGBI TR</i>	0.5%	1.9%	6.8%	1.4%	9.9%	3.7%	2.6%	3.4%	2.0%	0.8%	1.7%	2.5%	Jan-09
Garcia Hamilton & Associates	0.3%	1.6%	6.2%	1.8%	7.7%	3.7%	2.7%	3.0%	2.9%	2.8%	3.9%	5.2%	Aug-00
<i>BBgBarc US Govt/Credit Int TR</i>	0.4%	1.8%	6.8%	1.8%	8.7%	3.7%	2.7%	2.8%	2.6%	2.2%	3.0%	4.4%	Aug-00
MetLife Investment Management	0.3%	2.5%	10.0%	2.9%	11.9%	5.0%	4.1%	4.4%	3.8%	--	--	3.8%	Oct-14
<i>BBgBarc US Aggregate TR</i>	0.3%	2.4%	8.8%	2.6%	11.5%	4.5%	3.3%	3.6%	3.2%	2.7%	3.7%	3.2%	Oct-14
Longfellow	0.3%	2.4%	9.1%	2.7%	11.2%	4.7%	3.7%	3.8%	3.5%	--	--	3.6%	Sep-14
<i>BBgBarc US Aggregate TR</i>	0.3%	2.4%	8.8%	2.6%	11.5%	4.5%	3.3%	3.6%	3.2%	2.7%	3.7%	3.4%	Sep-14
RhumbLine Core Bond Index	0.2%	2.4%	8.5%	2.6%	11.2%	4.4%	3.2%	3.4%	3.0%	2.4%	3.5%	4.2%	Jun-07
<i>BBgBarc US Aggregate TR</i>	0.3%	2.4%	8.8%	2.6%	11.5%	4.5%	3.3%	3.6%	3.2%	2.7%	3.7%	4.4%	Jun-07
Opportunistic Fixed Income Composite	0.7%	0.0%	6.7%	0.6%	4.0%	2.0%	3.5%	3.8%	2.2%	--	--	3.3%	Dec-12
<i>Opportunistic FI Custom Benchmark</i>	0.0%	0.4%	9.9%	1.2%	6.4%	4.5%	5.3%	6.1%	4.7%	5.0%	--	4.9%	Dec-12
T - Apollo Franklin Partnership, L.P.	0.0%	0.1%	8.6%	0.2%	-0.9%	3.0%	0.8%	-0.8%	-3.9%	--	--	-2.2%	May-13
<i>50% BarCap HY / 50% CSFB Lev Loans</i>	-0.1%	0.3%	8.8%	1.0%	5.5%	4.2%	5.1%	5.9%	4.6%	5.0%	6.5%	4.6%	May-13
T - Avenue Coppers Opportunity Fund LP	0.0%	0.4%	-0.4%	0.5%	-3.7%	-5.1%	-1.7%	-1.2%	-0.8%	--	--	0.6%	Dec-13
<i>Actuarial Rate</i>	0.6%	1.8%	6.3%	2.5%	7.6%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	Dec-13
T - KKR-PBPR Capital Partners LP	0.0%	-1.3%	-3.4%	-1.2%	-7.5%	-2.4%	0.4%	2.3%	1.5%	3.8%	--	4.1%	Jun-12
<i>Actuarial Rate</i>	0.6%	1.8%	6.3%	2.5%	7.6%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	Jun-12
Logan Circle - EMD	1.7%	-0.9%	11.2%	0.2%	12.1%	2.8%	5.2%	7.1%	--	--	--	5.6%	Feb-15
<i>JP Morgan EMBI Global TR</i>	0.4%	0.6%	12.5%	1.7%	13.7%	3.8%	4.5%	6.2%	4.8%	4.1%	6.5%	5.6%	Feb-15
Strategic Income Management	0.5%	1.1%	8.9%	1.4%	6.1%	4.6%	6.1%	--	--	--	--	8.2%	Mar-16
<i>ICE BofAML US High Yield TR</i>	0.2%	0.9%	11.8%	1.5%	8.4%	4.6%	6.1%	7.1%	5.2%	5.8%	7.7%	8.4%	Mar-16

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 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	0.5%	1.2%	--	2.0%	--	--	--	--	--	--	--	8.7%	Jan-19
ICE BofAML US High Yield TR	0.2%	0.9%	11.8%	1.5%	8.4%	4.6%	6.1%	7.1%	5.2%	5.8%	7.7%	6.9%	Jan-19
U.S. Equity Composite	2.2%	1.1%	22.6%	2.6%	13.0%	9.2%	14.0%	10.9%	9.4%	12.7%	13.2%	9.7%	Jul-88
U.S. Equity Custom Benchmark	2.1%	1.3%	21.9%	2.7%	12.8%	9.7%	14.2%	11.7%	10.2%	13.5%	13.5%	10.4%	Jul-88
RhumbLine Russell 1000 Index	2.1%	2.0%	23.2%	3.6%	14.3%	10.6%	14.8%	12.1%	10.6%	13.9%	13.5%	8.2%	May-07
Rhumbline Russell 1000 Custom Benchmark	2.1%	2.0%	23.2%	3.6%	14.3%	10.5%	14.8%	12.0%	10.6%	13.9%	--	--	May-07
O'Shaughnessy Asset Management	1.8%	0.5%	20.6%	2.0%	8.5%	7.1%	12.4%	9.1%	7.3%	12.6%	--	12.8%	Jun-12
Russell 1000 Value	1.4%	1.9%	19.5%	2.8%	11.2%	7.0%	10.5%	9.5%	7.6%	11.6%	12.0%	11.9%	Jun-12
RhumbLine MidCap Index	1.1%	0.1%	23.2%	1.5%	13.8%	8.2%	--	--	--	--	--	10.5%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	1.1%	0.1%	23.4%	1.5%	14.0%	8.2%	--	--	--	--	--	10.6%	Dec-16
RhumbLine Russell 2000 Index	1.6%	-1.4%	16.1%	-0.8%	4.0%	3.1%	--	--	--	--	--	6.3%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	1.6%	-1.4%	16.0%	-0.8%	3.9%	2.9%	--	--	--	--	--	6.2%	Dec-16
Emerald Advisors	4.3%	-5.0%	21.6%	-3.1%	9.0%	7.1%	15.6%	10.2%	10.8%	14.6%	15.7%	9.6%	Dec-04
Russell 2000 Growth	2.8%	-2.4%	18.6%	-1.4%	6.4%	5.3%	13.2%	9.6%	8.4%	12.4%	13.4%	8.3%	Dec-04
Fiera Capital	2.8%	-4.0%	21.5%	-2.7%	10.8%	7.5%	14.0%	9.2%	7.3%	12.4%	--	13.6%	Dec-09
Russell 2500 Growth	2.6%	-2.2%	23.1%	-0.7%	11.8%	8.6%	15.3%	11.3%	9.8%	13.5%	14.4%	13.4%	Dec-09
Ariel	2.7%	-0.5%	18.2%	0.1%	7.0%	4.5%	9.5%	--	--	--	--	10.0%	Jan-16
Russell 2500 Value	1.4%	0.9%	17.1%	1.6%	6.1%	3.1%	8.5%	8.3%	6.4%	10.4%	11.9%	11.6%	Jan-16
Non-U.S. Equity Developed Composite	3.6%	4.0%	17.4%	3.0%	10.9%	1.3%	8.2%	5.1%	3.7%	5.3%	5.3%	5.5%	Jan-89
Non-U.S. Equity Developed Custom Benchmark	3.5%	3.8%	17.2%	2.7%	10.6%	1.4%	8.4%	5.9%	4.5%	6.6%	5.8%	--	Jan-89
Causeway Capital Management	4.3%	3.9%	12.5%	1.5%	4.1%	-1.9%	6.6%	3.4%	2.6%	5.6%	--	7.2%	Nov-11
MSCI EAFE	3.6%	3.8%	16.9%	2.5%	11.0%	1.7%	8.5%	5.4%	4.3%	6.5%	5.4%	7.0%	Nov-11
Northern Trust MSCI EAFE+Canada	3.3%	3.9%	18.3%	2.8%	12.5%	2.6%	8.9%	6.0%	4.5%	6.4%	6.0%	3.2%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	3.3%	3.9%	18.4%	2.8%	12.6%	2.7%	9.1%	6.3%	4.8%	7.2%	6.2%	2.8%	Mar-07
Northern Trust International Small Cap	4.5%	4.8%	17.3%	4.1%	9.0%	--	--	--	--	--	--	-3.2%	Mar-18
Northern Trust EAFE Small Cap Custom Benchmark	4.5%	5.1%	17.8%	4.4%	9.4%	--	--	--	--	--	--	-2.5%	Mar-18

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 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
Strategic Global Advisors	3.5%	1.8%	13.4%	1.3%	4.9%	--	--	--	--	--	--	-4.3%	Nov-17
<i>MSCI World ex USA Small Cap</i>	4.1%	4.3%	17.2%	3.8%	8.6%	0.1%	8.0%	7.0%	6.5%	8.0%	7.5%	-0.6%	Nov-17
Mackenzie Investments	5.9%	6.5%	18.0%	7.8%	10.5%	--	--	--	--	--	--	-0.9%	Nov-17
<i>MSCI EAFE Small Cap</i>	4.5%	4.8%	17.1%	4.1%	8.8%	0.2%	8.6%	7.1%	7.4%	9.2%	8.1%	-0.7%	Nov-17
Non-U.S. Equity Emerging Composite	4.4%	1.3%	10.1%	-0.1%	11.9%	-1.0%	7.4%	8.0%	3.3%	2.2%	3.0%	8.5%	Jan-09
<i>MSCI Emerging Markets</i>	4.2%	1.0%	10.4%	-0.2%	11.9%	-1.1%	7.4%	7.8%	2.9%	3.1%	3.8%	9.1%	Jan-09
RhumbLine Emerging Markets Index	4.4%	1.3%	10.1%	-0.1%	11.9%	-1.0%	7.4%	8.1%	3.2%	--	--	2.2%	Feb-13
<i>MSCI Emerging Markets</i>	4.2%	1.0%	10.4%	-0.2%	11.9%	-1.1%	7.4%	7.8%	2.9%	3.1%	3.8%	2.1%	Feb-13

Investment Manager

Annualized Performance (Net of Fees)

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Ending October 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
Absolute Return	0.6%	-3.2%	3.7%	-2.2%	-6.9%	-4.8%	0.7%	0.7%	-0.2%	1.7%	2.1%	2.2%	Sep-05
<i>HFRI Fund of Funds Composite Index</i>	<i>0.5%</i>	<i>-0.7%</i>	<i>5.7%</i>	<i>-0.4%</i>	<i>3.5%</i>	<i>1.2%</i>	<i>3.4%</i>	<i>2.4%</i>	<i>2.2%</i>	<i>3.3%</i>	<i>2.7%</i>	<i>2.4%</i>	<i>Sep-05</i>
Elizabeth Park Capital Management	0.6%	-2.0%	6.0%	-0.9%	-4.6%	-3.6%	5.2%	5.6%	5.9%	--	--	5.7%	May-14
<i>HFRI Event Driven Index</i>	<i>1.3%</i>	<i>2.8%</i>	<i>5.6%</i>	<i>3.0%</i>	<i>3.4%</i>	<i>-3.4%</i>	<i>1.0%</i>	<i>1.8%</i>	<i>0.4%</i>	<i>1.9%</i>	<i>1.6%</i>	<i>-0.8%</i>	<i>May-14</i>
T - Archview Offshore Fund. LTD	0.0%	-20.8%	-26.1%	-21.0%	-35.5%	-19.5%	-12.1%	-9.0%	-8.2%	--	--	-6.9%	Mar-14
<i>HFRI ED: Distressed/Restructuring Index</i>	<i>-0.3%</i>	<i>-1.7%</i>	<i>2.7%</i>	<i>-2.0%</i>	<i>-1.5%</i>	<i>1.2%</i>	<i>3.8%</i>	<i>4.5%</i>	<i>2.2%</i>	<i>4.0%</i>	<i>4.9%</i>	<i>1.6%</i>	<i>Mar-14</i>
Real Assets Composite	0.1%	1.9%	7.2%	1.9%	7.5%	5.8%	6.7%	5.8%	2.5%	--	--	6.3%	Dec-12
<i>Real Assets Benchmark</i>	<i>0.1%</i>	<i>1.5%</i>	<i>9.0%</i>	<i>1.8%</i>	<i>8.9%</i>	<i>6.3%</i>	<i>6.3%</i>	<i>4.7%</i>	<i>-0.8%</i>	<i>--</i>	<i>--</i>	<i>2.9%</i>	<i>Dec-12</i>
Real Assets - Public Real Estate Composite	1.1%	7.3%	29.9%	9.0%	25.5%	12.9%	11.3%	10.4%	9.4%	--	--	10.3%	Jan-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	<i>1.1%</i>	<i>1.0%</i>	<i>22.5%</i>	<i>2.7%</i>	<i>18.2%</i>	<i>9.7%</i>	<i>9.2%</i>	<i>8.8%</i>	<i>8.1%</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>Jan-13</i>
RhumbLine FTSE NAREIT	1.1%	7.2%	29.9%	9.0%	25.4%	12.9%	11.3%	10.4%	9.4%	--	--	8.9%	May-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	<i>1.1%</i>	<i>1.0%</i>	<i>22.5%</i>	<i>2.7%</i>	<i>18.2%</i>	<i>9.7%</i>	<i>9.2%</i>	<i>8.8%</i>	<i>8.1%</i>	<i>--</i>	<i>--</i>	<i>8.0%</i>	<i>May-13</i>
Real Assets - Open-End Real Estate Composite	0.0%	0.9%	-1.0%	0.9%	0.6%	3.9%	--	--	--	--	--	4.0%	Jan-17
<i>NFI</i>	<i>0.0%</i>	<i>0.7%</i>	<i>3.1%</i>	<i>1.1%</i>	<i>4.1%</i>	<i>5.8%</i>	<i>6.1%</i>	<i>6.8%</i>	<i>8.1%</i>	<i>9.2%</i>	<i>10.0%</i>	<i>6.0%</i>	<i>Jan-17</i>
UBS Trumbull Fund	0.0%	0.7%	-2.7%	0.7%	-1.1%	2.8%	--	--	--	--	--	3.2%	Jan-17
<i>NFI</i>	<i>0.0%</i>	<i>0.7%</i>	<i>3.1%</i>	<i>1.1%</i>	<i>4.1%</i>	<i>5.8%</i>	<i>6.1%</i>	<i>6.8%</i>	<i>8.1%</i>	<i>9.2%</i>	<i>10.0%</i>	<i>6.0%</i>	<i>Jan-17</i>
Clarion Lion Properties Fund	0.0%	1.4%	4.4%	1.4%	6.3%	--	--	--	--	--	--	7.7%	Feb-18
<i>NFI</i>	<i>0.0%</i>	<i>0.7%</i>	<i>3.1%</i>	<i>1.1%</i>	<i>4.1%</i>	<i>5.8%</i>	<i>6.1%</i>	<i>6.8%</i>	<i>8.1%</i>	<i>9.2%</i>	<i>10.0%</i>	<i>5.6%</i>	<i>Feb-18</i>
Real Assets - Infrastructure Composite	0.2%	3.4%	24.6%	3.0%	20.6%	8.0%	--	--	--	--	--	9.1%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	<i>0.2%</i>	<i>3.2%</i>	<i>24.1%</i>	<i>2.8%</i>	<i>19.8%</i>	<i>7.3%</i>	<i>9.0%</i>	<i>8.0%</i>	<i>4.9%</i>	<i>8.3%</i>	<i>11.0%</i>	<i>8.4%</i>	<i>Mar-17</i>
RhumbLine Infrastructure Index	0.2%	3.3%	24.6%	2.9%	20.5%	8.0%	--	--	--	--	--	9.1%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	<i>0.2%</i>	<i>3.2%</i>	<i>24.1%</i>	<i>2.8%</i>	<i>19.8%</i>	<i>7.3%</i>	<i>9.0%</i>	<i>8.0%</i>	<i>4.9%</i>	<i>8.3%</i>	<i>11.0%</i>	<i>8.4%</i>	<i>Mar-17</i>
Rreef Global Infrastructure	0.1%	3.5%	25.4%	3.2%	21.5%	--	--	--	--	--	--	14.0%	Mar-18
<i>Dow Jones Brookfield Global Infrastructure Index</i>	<i>0.2%</i>	<i>3.2%</i>	<i>24.1%</i>	<i>2.8%</i>	<i>19.8%</i>	<i>7.3%</i>	<i>9.0%</i>	<i>8.0%</i>	<i>4.9%</i>	<i>8.3%</i>	<i>11.0%</i>	<i>12.6%</i>	<i>Mar-18</i>

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,589.2 Million and 100.0% of Fund

Ending October 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
Real Assets - Private Real Estate Composite	0.0%	0.0%	3.3%	0.0%	4.8%	6.2%	6.3%	7.4%	7.8%	9.7%	8.7%	4.0%	May-06
<i>Real Assets - Private Real Estate Benchmark</i>	0.0%	0.0%	3.3%	0.0%	4.8%	6.2%	6.3%	7.4%	7.8%	9.7%	--	--	May-06
Real Assets - Private Energy/Infrastructure Composite	0.0%	0.0%	9.6%	0.0%	17.2%	25.4%	19.4%	9.3%	-2.7%	9.3%	--	8.3%	May-12
<i>Real Assets - Private Energy/Infrastructure Benchmark</i>	0.0%	0.0%	9.6%	0.0%	17.2%	25.4%	19.4%	9.3%	-2.7%	9.3%	--	8.3%	May-12
Private Assets Composite	0.0%	0.0%	5.8%	0.0%	7.5%	14.7%	12.5%	11.6%	11.1%	11.6%	12.8%	8.7%	Mar-87
<i>Private Assets Composite Benchmark</i>	0.0%	0.0%	5.8%	0.0%	7.5%	14.7%	12.5%	11.6%	11.1%	11.6%	12.8%	8.7%	Mar-87
<i>CPI +5%</i>	0.4%	1.3%	6.4%	1.9%	6.6%	7.1%	7.1%	7.0%	6.6%	6.6%	6.8%	--	Mar-87

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.