



(Preliminary Subject to Change)



Employees Retirement System

City of Philadelphia
Employees Retirement System
Executive Summary
November 30, 2019

Total Fund Composite

Market Value: \$5,644.7 Million and 100.0% of Fund

Ending November 30, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		5,644,731,601	-11,837,141	100.0	100.0	0
Total Fund w/o Alternative Assets		4,152,722,939	1,284,615	73.6	69.0	257,858,134
Investment Grade Fixed Income Composite		701,001,328	4,417	12.4	10.0	136,528,167
Brandywine Global Investment Management	Global Fixed Income	140,808,859	0	2.5		
Garcia Hamilton & Associates	Int. Govt. Fixed Income	177,298,634	0	3.1		
MetLife Investment Management	Core Plus Fixed Income	48,675,534	4,417	0.9		
Longfellow	Core Plus Fixed Income	172,330,195	0	3.1		
RhumbLine Core Bond Index	Core Fixed Income	161,888,106	0	2.9		
Opportunistic Fixed Income Composite		256,254,370	-4,228,383	4.5	4.0	30,465,106
T - Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	9,431,060	0	0.2		
T - Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	16,576,927	-3,024,635	0.3		
T - KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	45,188,086	-863,670	0.8		
MetLife Investment Management - EMD	EM Fixed Income	76,346,793	-340,078	1.4		
Strategic Income Management	High Yield Fixed Income	53,313,265	0	0.9		
Lord Abbett High Yield	High Yield Fixed Income	54,972,245	0	1.0		
U.S. Equity Composite		1,740,479,173	-15,000,000	30.8	30.0	47,059,693
RhumbLine Russell 1000 Index	Large-Cap Core	1,268,491,705	-15,000,000	22.5		
O'Shaughnessy Asset Management	Large-Cap Value	31,422,145	0	0.6		
RhumbLine MidCap Index	Mid-Cap Core	164,980,334	-6,391	2.9		
RhumbLine Russell 2000 Index	Small-Cap Core	103,297,464	56,779,627	1.8		
Emerald Advisors	Small-Cap Growth	84,131,636	0	1.5		
Fiera Capital	Smid-Cap Growth	30,567,125	0	0.5		
Ariel	Smid-Cap Value	57,452,391	0	1.0		
Non-U.S. Equity Developed Composite		1,142,446,541	-10,000,000	20.2	21.0	-42,947,096
Causeway Capital Management	Non-U.S. Large-Cap Core	115,814,152	0	2.1		
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	818,742,374	-10,000,000	14.5		
Northern Trust International Small Cap	Non-U.S. Small-Cap Core	106,735,790	0	1.9		
Strategic Global Advisors	Non-U.S. Small-Cap Core	32,967,131	0	0.6		
Mackenzie Investments	Non-U.S. Small-Cap Core	64,289,278	0	1.1		
Non-U.S. Equity Emerging Composite		221,030,222	0	3.9	4.0	-4,759,042
RhumbLine Emerging Markets Index	Emerging Markets	221,026,104	0	3.9		

Total Fund Composite

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Ending November 30, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Cash Composite		91,511,306	30,508,581	1.6	0.0	91,511,306
Cash	Cash & Equivalents	90,847,264	30,509,733	1.6		
Directed Commissions	Cash & Equivalents	664,041	-1,152	0.0		
Absolute Return		29,600,017	0	0.5	0.0	29,600,017
Elizabeth Park Capital Management	Long/Short Hedge Fund	28,159,904	0	0.5		
T - Archview Offshore Fund. LTD	Credit Hedge Fund	1,440,113	0	0.0		
Real Assets Composite		975,187,423	-20,007,211	17.3	19.0	-97,311,581
Real Assets - Public Real Estate Composite		61,100,367	-5,000,000	1.1	1.0	4,653,051
RhumbLine FTSE NAREIT	Real Assets	61,100,367	-5,000,000	1.1		
Real Assets - Open-End Real Estate Composite		535,614,037	-4,711,610	9.5	11.0	-85,306,439
UBS Trumbull Fund	Core Real Estate	396,035,554	-4,428,096	7.0		
Clarion Lion Properties Fund	Core Real Estate	139,578,483	-283,514	2.5		
Real Assets - Infrastructure Composite		275,444,710	0	4.9	5.0	-6,791,870
RhumbLine Infrastructure Index	Publicly-Traded Infrastructure	184,121,723	0	3.3		
Rreef Global Infrastructure	Global Infrastructure	91,322,987	0	1.6		
Real Assets - Private Real Estate Composite		85,732,014	-12,898,607	1.5	2.0	-27,162,618
Real Assets - Private Energy/Infrastructure Composite		17,296,296	2,603,006	0.3	--	17,296,296
Private Assets Composite		487,221,222	6,885,455	8.6	12.0	-190,146,570
Private Assets - Private Equity	U.S. Private Equity FoF	461,011,243	9,943,263	8.2		
Private Assets - Private Debt	Mezz. Private Equity	26,209,979	-3,057,808	0.5		

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,644.7 Million and 100.0% of Fund

Ending November 30, 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	1.4%	4.4%	15.5%	3.4%	11.1%	6.1%	9.3%	7.9%	5.7%	7.1%	7.6%	7.5%	Jul-88
<i>Total Fund Policy Benchmark</i>	<i>1.4%</i>	<i>4.2%</i>	<i>16.0%</i>	<i>3.4%</i>	<i>11.8%</i>	<i>7.1%</i>	<i>9.5%</i>	<i>8.5%</i>	<i>6.5%</i>	<i>7.9%</i>	<i>8.5%</i>	<i>8.4%</i>	<i>Jul-88</i>
Total Fund w/o Alternative Assets	1.9%	5.8%	17.9%	4.3%	11.7%	4.9%	9.1%	7.6%	5.4%	--	--	5.9%	Jan-14
Investment Grade Fixed Income Composite	-0.4%	-0.1%	7.5%	1.6%	9.1%	3.6%	4.1%	3.7%	2.3%	2.2%	3.5%	6.0%	Jul-88
<i>Fixed Income Custom Benchmark</i>	<i>-0.3%</i>	<i>-0.7%</i>	<i>8.0%</i>	<i>1.9%</i>	<i>10.0%</i>	<i>4.2%</i>	<i>3.8%</i>	<i>3.4%</i>	<i>2.9%</i>	<i>2.6%</i>	<i>3.5%</i>	<i>6.2%</i>	<i>Jul-88</i>
Brandywine Global Investment Management	-2.1%	0.4%	5.3%	-1.3%	7.4%	0.7%	4.4%	4.1%	1.6%	1.8%	4.4%	6.4%	Jan-09
<i>FTSE WGBI TR</i>	<i>-1.2%</i>	<i>-1.9%</i>	<i>5.6%</i>	<i>0.2%</i>	<i>8.1%</i>	<i>2.4%</i>	<i>3.8%</i>	<i>3.6%</i>	<i>1.8%</i>	<i>0.6%</i>	<i>1.3%</i>	<i>2.3%</i>	<i>Jan-09</i>
Garcia Hamilton & Associates	0.0%	0.0%	6.2%	1.8%	7.1%	3.8%	3.2%	3.1%	2.7%	2.8%	3.8%	5.1%	Aug-00
<i>BBgBarc US Govt/Credit Int TR</i>	<i>-0.1%</i>	<i>-0.1%</i>	<i>6.7%</i>	<i>1.6%</i>	<i>8.1%</i>	<i>3.8%</i>	<i>3.2%</i>	<i>2.8%</i>	<i>2.5%</i>	<i>2.1%</i>	<i>2.9%</i>	<i>4.4%</i>	<i>Aug-00</i>
MetLife Investment Management	0.0%	-0.2%	10.0%	2.9%	11.5%	5.0%	5.0%	4.5%	3.6%	--	--	3.7%	Oct-14
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>-0.3%</i>	<i>8.8%</i>	<i>2.5%</i>	<i>10.8%</i>	<i>4.5%</i>	<i>4.1%</i>	<i>3.6%</i>	<i>3.1%</i>	<i>2.7%</i>	<i>3.6%</i>	<i>3.2%</i>	<i>Oct-14</i>
Longfellow	0.0%	-0.2%	9.1%	2.7%	10.7%	4.7%	4.5%	3.9%	3.4%	--	--	3.5%	Sep-14
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>-0.3%</i>	<i>8.8%</i>	<i>2.5%</i>	<i>10.8%</i>	<i>4.5%</i>	<i>4.1%</i>	<i>3.6%</i>	<i>3.1%</i>	<i>2.7%</i>	<i>3.6%</i>	<i>3.3%</i>	<i>Sep-14</i>
RhumbLine Core Bond Index	0.0%	-0.3%	8.4%	2.6%	10.3%	4.5%	4.0%	3.4%	2.8%	2.4%	3.4%	4.2%	Jun-07
<i>BBgBarc US Aggregate TR</i>	<i>-0.1%</i>	<i>-0.3%</i>	<i>8.8%</i>	<i>2.5%</i>	<i>10.8%</i>	<i>4.5%</i>	<i>4.1%</i>	<i>3.6%</i>	<i>3.1%</i>	<i>2.7%</i>	<i>3.6%</i>	<i>4.3%</i>	<i>Jun-07</i>
Opportunistic Fixed Income Composite	0.1%	1.3%	6.9%	0.8%	5.1%	1.8%	3.7%	3.9%	2.3%	--	--	3.3%	Dec-12
<i>Opportunistic FI Custom Benchmark</i>	<i>0.3%</i>	<i>0.6%</i>	<i>10.2%</i>	<i>1.5%</i>	<i>7.6%</i>	<i>4.7%</i>	<i>5.5%</i>	<i>6.6%</i>	<i>4.8%</i>	<i>5.0%</i>	<i>--</i>	<i>4.9%</i>	<i>Dec-12</i>
T - Apollo Franklin Partnership, L.P.	0.0%	0.5%	9.2%	0.8%	1.0%	2.5%	1.4%	-0.1%	-3.3%	--	--	-2.1%	May-13
<i>50% BarCap HY / 50% CSFB Lev Loans</i>	<i>0.4%</i>	<i>0.7%</i>	<i>9.2%</i>	<i>1.5%</i>	<i>6.8%</i>	<i>4.5%</i>	<i>5.3%</i>	<i>6.4%</i>	<i>4.7%</i>	<i>5.0%</i>	<i>6.5%</i>	<i>4.6%</i>	<i>May-13</i>
T - Avenue Coppers Opportunity Fund LP	0.0%	0.7%	0.3%	1.2%	0.3%	-5.2%	-1.5%	-0.6%	-0.5%	--	--	0.7%	Dec-13
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.8%</i>	<i>7.0%</i>	<i>3.1%</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%	-1.3%	-3.3%	-1.1%	-7.5%	-2.5%	0.3%	2.4%	1.7%	3.8%	--	4.1%	Jun-12
<i>Actuarial Rate</i>	<i>0.6%</i>	<i>1.8%</i>	<i>7.0%</i>	<i>3.1%</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	0.0%	2.8%	11.1%	0.2%	12.3%	2.7%	6.5%	7.3%	--	--	--	5.5%	Feb-15
<i>JP Morgan EMBI Global TR</i>	<i>-0.2%</i>	<i>-0.2%</i>	<i>12.3%</i>	<i>1.5%</i>	<i>14.0%</i>	<i>3.8%</i>	<i>5.9%</i>	<i>6.2%</i>	<i>4.9%</i>	<i>3.8%</i>	<i>6.4%</i>	<i>5.4%</i>	<i>Feb-15</i>
Strategic Income Management	-0.1%	1.2%	8.8%	1.3%	7.3%	4.4%	5.9%	--	--	--	--	8.0%	Mar-16
<i>ICE BofAML US High Yield TR</i>	<i>0.3%</i>	<i>0.8%</i>	<i>12.1%</i>	<i>1.8%</i>	<i>9.6%</i>	<i>4.8%</i>	<i>6.3%</i>	<i>7.8%</i>	<i>5.4%</i>	<i>5.7%</i>	<i>7.6%</i>	<i>8.3%</i>	<i>Mar-16</i>

Investment Manager

Annualized Performance (Net of Fees)

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Ending November 30, 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	0.6%	1.7%	--	2.7%	--	--	--	--	--	--	--	9.4%	Jan-19
ICE BofAML US High Yield TR	0.3%	0.8%	12.1%	1.8%	9.6%	4.8%	6.3%	7.8%	5.4%	5.7%	7.6%	7.2%	Jan-19
U.S. Equity Composite	3.9%	7.8%	27.3%	6.6%	15.0%	9.6%	13.5%	11.7%	9.7%	13.2%	13.1%	9.8%	Jul-88
U.S. Equity Custom Benchmark	3.8%	8.0%	26.6%	6.6%	14.8%	10.1%	14.0%	12.5%	10.5%	14.0%	13.3%	10.5%	Jul-88
RhumbLine Russell 1000 Index	3.7%	7.8%	27.8%	7.5%	16.1%	11.0%	14.8%	13.0%	10.9%	14.3%	13.3%	8.4%	May-07
Rhumbline Russell 1000 Custom Benchmark	3.8%	7.8%	27.8%	7.5%	16.1%	11.0%	14.8%	13.0%	10.9%	14.4%	--	--	May-07
O'Shaughnessy Asset Management	4.7%	11.5%	26.3%	6.8%	12.5%	7.3%	11.4%	10.6%	8.0%	13.4%	--	13.3%	Jun-12
Russell 1000 Value	3.1%	8.3%	23.2%	5.9%	11.3%	7.1%	9.6%	10.2%	7.8%	12.1%	11.7%	12.2%	Jun-12
RhumbLine MidCap Index	3.6%	6.7%	27.6%	5.1%	15.0%	8.2%	--	--	--	--	--	11.5%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	3.6%	6.7%	27.8%	5.2%	15.2%	8.3%	10.7%	--	--	--	--	11.6%	Dec-16
RhumbLine Russell 2000 Index	4.1%	8.0%	20.9%	3.3%	6.6%	3.6%	--	--	--	--	--	7.6%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	4.1%	8.0%	20.8%	3.3%	6.5%	3.5%	7.1%	--	--	--	--	7.5%	Dec-16
Emerald Advisors	4.4%	5.2%	26.9%	1.2%	14.2%	7.3%	13.5%	10.6%	11.4%	15.2%	15.7%	9.9%	Dec-04
Russell 2000 Growth	5.9%	8.0%	25.6%	4.4%	10.9%	6.8%	12.2%	10.2%	9.5%	13.2%	13.7%	8.7%	Dec-04
Fiera Capital	7.8%	8.6%	31.0%	4.9%	16.7%	9.8%	14.1%	10.6%	8.7%	13.1%	--	14.3%	Dec-09
Russell 2500 Growth	6.8%	7.5%	31.4%	6.1%	17.2%	10.4%	15.2%	12.5%	10.9%	14.3%	14.8%	14.0%	Dec-09
Ariel	4.0%	10.6%	22.9%	4.1%	7.7%	3.1%	7.7%	--	--	--	--	10.9%	Jan-16
Russell 2500 Value	2.5%	8.7%	19.9%	4.1%	6.7%	2.7%	6.1%	8.5%	6.8%	10.6%	11.6%	12.1%	Jan-16
Non-U.S. Equity Developed Composite	1.5%	8.1%	19.2%	4.5%	12.6%	1.5%	9.1%	6.0%	3.7%	5.4%	5.1%	5.6%	Jan-89
Non-U.S. Equity Developed Custom Benchmark	1.4%	8.0%	18.9%	4.1%	12.5%	1.6%	9.6%	6.6%	4.6%	6.6%	5.7%	--	Jan-89
Causeway Capital Management	2.8%	11.6%	15.7%	4.3%	7.7%	-1.2%	7.5%	4.7%	2.9%	5.8%	--	7.5%	Nov-11
MSCI EAFE	1.1%	7.8%	18.2%	3.6%	12.4%	1.7%	9.6%	6.1%	4.3%	6.3%	5.3%	7.1%	Nov-11
MSCI EAFE Value	0.4%	9.0%	12.0%	2.2%	6.5%	-1.6%	6.6%	4.5%	2.1%	4.8%	3.7%	5.7%	Nov-11
Northern Trust MSCI EAFE+Canada	1.3%	7.4%	19.8%	4.1%	13.5%	2.7%	10.0%	6.8%	4.5%	6.3%	5.7%	3.2%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	1.3%	7.5%	19.9%	4.1%	13.7%	2.9%	10.1%	7.0%	4.8%	7.0%	6.1%	2.9%	Mar-07

Investment Manager

Annualized Performance (Net of Fees)

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Ending November 30, 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	2.1%	10.0%	19.8%	6.3%	12.1%	--	--	--	--	--	--	-1.8%	Mar-18
<i>Northern Trust EAFE Small Cap Custom Benchmark</i>	2.2%	10.1%	20.4%	6.8%	12.7%	--	--	--	--	--	--	-1.1%	Mar-18
Strategic Global Advisors	2.1%	8.4%	15.8%	3.4%	8.6%	-3.1%	--	--	--	--	--	-3.1%	Nov-17
<i>MSCI World ex USA Small Cap</i>	2.3%	9.2%	19.9%	6.2%	12.2%	0.5%	9.8%	7.7%	7.0%	8.3%	7.7%	0.5%	Nov-17
Mackenzie Investments	0.7%	8.1%	18.9%	8.6%	12.5%	-0.5%	--	--	--	--	--	-0.5%	Nov-17
<i>MSCI EAFE Small Cap</i>	2.2%	9.9%	19.7%	6.4%	12.0%	0.5%	10.4%	7.7%	7.8%	9.4%	8.4%	0.5%	Nov-17
Non-U.S. Equity Emerging Composite	0.1%	6.5%	10.2%	-0.1%	7.4%	-1.2%	9.3%	9.0%	3.4%	2.2%	2.6%	8.4%	Jan-09
<i>MSCI Emerging Markets</i>	-0.1%	6.1%	10.2%	-0.3%	7.3%	-1.2%	9.0%	8.9%	3.1%	2.9%	3.3%	9.0%	Jan-09
RhumbLine Emerging Markets Index	0.1%	6.5%	10.2%	-0.1%	7.4%	-1.2%	9.3%	9.0%	3.4%	--	--	2.1%	Feb-13
<i>MSCI Emerging Markets</i>	-0.1%	6.1%	10.2%	-0.3%	7.3%	-1.2%	9.0%	8.9%	3.1%	2.9%	3.3%	2.1%	Feb-13

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,644.7 Million and 100.0% of Fund

Ending November 30, 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	4.0%	6.9%	7.9%	1.7%	-2.7%	-3.8%	1.2%	1.8%	0.7%	2.3%	2.4%	2.4%	Sep-05
<i>HFRI Fund of Funds Composite Index</i>	0.5%	0.6%	6.2%	0.1%	4.5%	1.4%	3.5%	2.4%	2.0%	3.3%	2.7%	2.5%	Sep-05
Elizabeth Park Capital Management	4.2%	8.8%	10.5%	3.2%	-0.5%	-2.5%	3.7%	5.5%	6.9%	--	--	6.4%	May-14
<i>HFRI Event Driven Index</i>	2.1%	4.4%	7.8%	5.1%	6.5%	-2.2%	1.1%	2.8%	0.8%	2.1%	1.7%	-0.4%	May-14
T - Archview Offshore Fund. LTD	0.0%	-19.9%	-26.1%	-21.0%	-32.0%	-20.4%	-12.3%	-8.9%	-8.3%	--	--	-6.8%	Mar-14
<i>HFRI ED: Distressed/Restructuring Index</i>	-0.3%	-0.8%	2.3%	-2.4%	-0.2%	0.9%	3.2%	4.8%	2.2%	3.8%	4.7%	1.5%	Mar-14
Real Assets Composite	-0.4%	0.9%	7.0%	1.7%	6.6%	5.1%	6.4%	6.5%	2.4%	--	--	6.1%	Dec-12
<i>Real Assets Benchmark</i>	-0.4%	0.6%	8.8%	1.6%	7.8%	5.6%	5.8%	5.5%	-0.7%	2.8%	--	2.9%	Dec-12
Real Assets - Public Real Estate Composite	-1.5%	1.4%	27.9%	7.3%	17.9%	10.5%	11.6%	10.1%	8.5%	--	--	9.9%	Jan-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	-1.5%	1.5%	20.6%	1.1%	11.1%	7.4%	9.5%	8.5%	7.3%	--	--	--	Jan-13
RhumbLine FTSE NAREIT	-1.5%	1.4%	27.9%	7.3%	17.9%	10.5%	11.6%	10.1%	8.5%	--	--	8.6%	May-13
<i>FTSE NAREIT All Equity REIT Custom Benchmark</i>	-1.5%	1.5%	20.6%	1.1%	11.1%	7.4%	9.5%	8.5%	7.3%	--	--	7.6%	May-13
Real Assets - Open-End Real Estate Composite	0.0%	0.9%	-1.0%	0.9%	0.6%	3.9%	--	--	--	--	--	3.9%	Jan-17
<i>NFI</i>	0.0%	0.4%	3.1%	1.1%	3.6%	5.5%	5.9%	6.5%	7.9%	9.1%	10.1%	5.8%	Jan-17
UBS Trumbull Fund	0.0%	0.7%	-2.7%	0.7%	-1.1%	2.8%	--	--	--	--	--	3.1%	Jan-17
<i>NFI</i>	0.0%	0.4%	3.1%	1.1%	3.6%	5.5%	5.9%	6.5%	7.9%	9.1%	10.1%	5.8%	Jan-17
Clarion Lion Properties Fund	0.0%	1.4%	4.4%	1.4%	6.3%	--	--	--	--	--	--	7.3%	Feb-18
<i>NFI</i>	0.0%	0.4%	3.1%	1.1%	3.6%	5.5%	5.9%	6.5%	7.9%	9.1%	10.1%	5.3%	Feb-18
Real Assets - Infrastructure Composite	-1.1%	0.4%	23.2%	1.9%	17.4%	6.4%	--	--	--	--	--	8.3%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-1.5%	-0.2%	22.2%	1.2%	16.3%	5.5%	10.1%	8.9%	4.5%	8.1%	10.2%	7.5%	Mar-17
RhumbLine Infrastructure Index	-1.4%	0.0%	22.8%	1.5%	17.0%	6.2%	--	--	--	--	--	8.2%	Mar-17
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-1.5%	-0.2%	22.2%	1.2%	16.3%	5.5%	10.1%	8.9%	4.5%	8.1%	10.2%	7.5%	Mar-17
Rreef Global Infrastructure	-0.5%	1.2%	24.8%	2.7%	18.7%	--	--	--	--	--	--	12.9%	Mar-18
<i>Dow Jones Brookfield Global Infrastructure Index</i>	-1.5%	-0.2%	22.2%	1.2%	16.3%	5.5%	10.1%	8.9%	4.5%	8.1%	10.2%	10.9%	Mar-18

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$5,644.7 Million and 100.0% of Fund

Ending November 30, 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%	1.7%	5.0%	1.7%	6.5%	7.1%	6.9%	7.8%	7.8%	9.8%	9.1%	4.1%	May-06
<i>Real Assets - Private Real Estate Benchmark</i>	<i>0.0%</i>	<i>1.7%</i>	<i>5.0%</i>	<i>1.7%</i>	<i>6.5%</i>	<i>7.1%</i>	<i>6.9%</i>	<i>7.8%</i>	<i>7.8%</i>	<i>9.8%</i>	<i>--</i>	<i>--</i>	<i>May-06</i>
Real Assets - Private Energy/Infrastructure Composite	0.0%	1.1%	10.8%	1.1%	18.5%	26.0%	19.9%	9.6%	-2.1%	9.8%	--	8.3%	May-12
<i>Real Assets - Private Energy/Infrastructure Benchmark</i>	<i>0.0%</i>	<i>1.1%</i>	<i>10.8%</i>	<i>1.1%</i>	<i>18.5%</i>	<i>26.0%</i>	<i>19.9%</i>	<i>9.6%</i>	<i>-2.1%</i>	<i>9.8%</i>	<i>--</i>	<i>8.3%</i>	<i>May-12</i>
Private Assets Composite	0.0%	0.0%	14.2%	0.0%	16.1%	19.1%	15.4%	13.8%	12.8%	12.9%	13.6%	8.9%	Mar-87
<i>Private Assets Composite Benchmark</i>	<i>0.0%</i>	<i>0.0%</i>	<i>14.2%</i>	<i>0.0%</i>	<i>16.1%</i>	<i>19.1%</i>	<i>15.4%</i>	<i>13.8%</i>	<i>12.8%</i>	<i>12.9%</i>	<i>13.6%</i>	<i>8.9%</i>	<i>Mar-87</i>
<i>CPI +5%</i>	<i>0.4%</i>	<i>1.5%</i>	<i>7.1%</i>	<i>2.5%</i>	<i>7.2%</i>	<i>7.2%</i>	<i>7.3%</i>	<i>7.1%</i>	<i>6.8%</i>	<i>6.7%</i>	<i>6.8%</i>	<i>--</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.