

(Preliminary Subject to Change)



Employees Retirement System

City of Philadelphia Employees Retirement System Executive Summary February 28, 2018

Total Fund Composite

		Ending February 28, 2018								
	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)				
Total Fund Composite		4,868,173,997	-123,172,124	100.0	100.0	0				
Total Fund w/o Alternative Assets		3,963,841,570	-115,599,800	81.4	79.4	98,511,416				
Investment Grade Fixed Income Composite		690,575,432	49,781	14.2	19.0	-234,377,628				
Brandywine Global Investment Management	Global Fixed Income	168,922,934	50,000	3.5						
Garcia Hamilton & Associates	Int. Govt. Fixed Income	162,952,594	0	3.3						
Logan Circle	Core Plus Fixed Income	43,478,881	-219	0.9						
Longfellow	Core Plus Fixed Income	154,383,535	0	3.2						
Rhumbline Core Bond Index	Core Fixed Income	160,837,488	0	3.3						
Opportunistic Fixed Income Composite		321,559,129	-15,303,015	6.6	7.5	-43,553,921				
Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	22,306,714	-4,181,818	0.5						
Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	36,889,166	-2,417,445	0.8						
KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	90,537,334	-8,653,752	1.9						
Logan Circle - EMD	EM Fixed Income	73,581,289	-50,000	1.5						
Strategic Income Management	High Yield Fixed Income	97,990,565	0	2.0						
U.S. Equity Composite		1,611,324,476	-12,000,000	33.1	29.8	160,608,624				
Rhumbline Russell 1000 Index	Large-Cap Core	1,125,414,437	-12,000,000	23.1						
Aronson+Johnson+Ortiz LP	Large-Cap Value	44,313,978	0	0.9						
O'Shaughnessy Asset Management	Large-Cap Value	28,306,296	0	0.6						
Rhumbline MidCap Index	Mid-Cap Core	165,047,836	0	3.4						
Rhumbline Russell 2000 Index	Small-Cap Core	39,297,546	0	0.8						
Emerald Advisors	Small-Cap Growth	72,798,778	0	1.5						
Fisher Asset Management	Small-Cap Value	54,425,177	0	1.1						
Fiera Capital	Smid-Cap Growth	26,214,467	0	0.5						
Ariel	Smid-Cap Value	55,463,916	0	1.1						
Non-U.S. Equity Developed Composite		1,022,924,619	-15,000,000	21.0	16.8	205,071,387				
Causeway Capital Management	Non-U.S. Large-Cap Core	190,754,332	0	3.9						
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	749,637,862	-15,000,000	15.4						
Strategic Global Advisors	Non-U.S. Small-Cap Core	25,880,688	0	0.5						
Investors Group	Non-U.S. Small-Cap Core	52,504,033	0	1.1						
Non-U.S. Equity Emerging Composite		282,663,443	-3,000,000	5.8	5.2	29,518,395				
Rhumbline Emerging Markets Index	Emerging Markets	282,660,245	-3,000,000	5.8						

Total Fund Composite

	Ending February 28, 2018											
	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)						
Cash Composite		34,794,472	-70,346,566	0.7	1.1	-18,755,442						
Cash	Cash & Equivalents	34,059,229	-70,331,733	0.7								
Directed Commissions	Cash & Equivalents	735,243	-14,833	0.0								
Absolute Return		39,572,802	-2,478,001	0.8	0.5	15,231,932						
400 Capital Credit Opportunity Fund	Relative Value Hedge Fund	2,834,858	0	0.1								
Elizabeth Park Capital Management	Long/Short Hedge Fund	30,508,793	0	0.6								
Archview Offshore Fund. LTD	Credit Hedge Fund	5,699,294	-2,478,001	0.1								
Real Assets Composite		457,347,160	16,097,902	9.4	9.1	14,343,327						
Real Assets - Public Real Estate Composite		88,129,003	0	1.8	1.4	19,974,567						
Rhumbline FTSE NAREIT	Real Assets	88,129,003	0	1.8								
Real Assets - Open-End Real Estate Composite		152,273,903	23,686,233	3.1	1.7	69,514,945						
UBS Trumbull Fund	Core Real Estate	127,273,903	-1,313,767	2.6								
Clarion Lion Properties Fund	Core Real Estate	25,000,000	25,000,000	0.5								
Real Assets - Infrastructure Composite		100,082,391	0	2.1	3.4	-65,435,525						
Rhumbline Infrastructure Index	Publicly-Traded Infrastructure	100,082,391	0	2.1								
Real Assets - Private Real Estate Composite		109,263,742	-8,917,592	2.2	2.6	-17,308,782						
Real Assets - Private Energy/Infrastructure Composite		7,598,122	1,329,261	0.2		7,598,122						
Private Assets Composite		407,412,464	-21,192,226	8.4	11.0	-128,086,675						
Private Assets - Private Equity	U.S. Private Equity FoF	396,731,731	-18,350,218	8.1								
Private Assets - Private Debt	Mezz. Private Equity	10,680,733	-2,842,008	0.2								



Investment Manager

Annualized Performance (Net of Fees)

					Ending	g Febru	i <mark>ary 28</mark> ,	2018	,	,		Incep	otion
	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Return	Since
Total Fund Composite	-2.9%	1.1%	0.1%	7.4%	11.8%	13.7%	5.7%	5.5%	7.0%	6.7%	5.5%	7.6%	Jul-88
Total Fund Policy Benchmark	-2.4%	1.1%	0.2%	6.4%	10.1%	13.5%	6.0%	6.2%	7.4%	6.9%	6.6%	8.4%	Jul-88
Total Fund w/o Alternative Assets	-3.2%	1.7%	0.5%	9.0%	13.9%	15.1%	6.1%	5.8%				6.5%	Jan-14
Investment Grade Fixed Income Composite	-0.9%	-0.1%	-0.6%	0.9%	3.3%	3.0%	1.4%	2.1%	1.6%	3.1%	3.8%	6.1%	Jul-88
BBgBarc US Aggregate TR	-0.9%	-1.6%	-2.1%	-0.9%	0.5%	1.0%	1.1%	2.1%	1.7%	2.8%	3.6%	6.2%	Jul-88
Brandywine Global Investment Management	-1.7%	3.4%	2.5%	5.6%	11.6%	8.5%	3.2%	3.8%	2.8%	4.9%		7.9%	Jan-09
Citi WGBI	-0.7%	1.1%	0.9%	3.8%	7.0%	2.8%	2.5%	0.7%	0.8%	1.3%	2.1%	2.4%	Jan-09
Garcia Hamilton & Associates	-0.3%	-0.9%	-1.0%	-0.5%	0.4%	0.6%	1.5%	2.1%	2.1%	3.2%	4.4%	5.2%	Aug-00
BBgBarc US Govt/Credit Int TR	-0.5%	-1.2%	-1.3%	-0.9%	0.0%	0.6%	1.0%	1.4%	1.2%	2.2%	2.9%	4.3%	Aug-00
Logan Circle	-0.9%	-1.1%	-1.7%	0.1%	1.9%	3.0%	1.9%					2.3%	Oct-14
BBgBarc US Aggregate TR	-0.9%	-1.6%	-2.1%	-0.9%	0.5%	1.0%	1.1%	2.1%	1.7%	2.8%	3.6%	1.6%	Oct-14
Longfellow	-0.8%	-1.3%	-1.7%	-0.2%	1.3%	1.5%	1.7%					2.1%	Sep-14
BBgBarc US Aggregate TR	-0.9%	-1.6%	-2.1%	-0.9%	0.5%	1.0%	1.1%	2.1%	1.7%	2.8%	3.6%	1.9%	Sep-14
Rhumbline Core Bond Index	-0.8%	-1.5%	-1.9%	-0.9%	0.5%	0.7%	0.9%	1.8%	1.4%	2.5%	3.4%	3.9%	Jun-07
BBgBarc US Aggregate TR	-0.9%	-1.6%	-2.1%	-0.9%	0.5%	1.0%	1.1%	2.1%	1.7%	2.8%	3.6%	4.0%	Jun-07
Opportunistic Fixed Income Composite	-0.7%	0.6%	0.3%	3.4%	5.6%	8.9%	3.5%	2.8%	3.6%			3.8%	Dec-12
Opportunistic Fixed Income Benchmark	-0.3%	0.8%	0.5%	2.8%	4.2%	10.5%	4.7%	4.2%	4.7%	5.4%		4.8%	Dec-12
Apollo Franklin Partnership, L.P.	0.0%	-1.2%	2.8%	2.8%	-1.6%	0.6%	-5.2%	-6.3%				-4.0%	May-13
50% BarCap HY / 50% CSFB Lev Loans	-0.3%	0.8%	0.5%	2.9%	4.3%	10.5%	4.8%	4.3%	4.8%	5.5%	6.8%	4.6%	May-13
Avenue Coppers Opportunity Fund LP	0.0%	0.5%	0.0%	4.4%	4.7%	7.5%	3.9%	3.5%				3.8%	Dec-13
Actuarial Rate 7.70%	0.6%	1.9%	1.2%	5.1%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	Dec-13
KKR-PBPR Capital Partners LP	0.0%	0.3%	0.0%	1.2%	6.2%	8.8%	4.8%	4.0%	5.7%			6.4%	Jun-12
Actuarial Rate 7.70%	0.6%	1.9%	1.2%	5.1%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	Jun-12
Logan Circle - EMD	-1.5%	1.5%	0.5%	5.5%	9.1%	13.8%	7.5%					7.5%	Feb-15
JP Morgan EMBI Global TR	-2.0%	-1.5%	-2.2%	0.7%	3.3%	7.6%	5.5%	5.4%	3.6%	6.1%	6.8%	5.5%	Feb-15
Strategic Income Management	-1.1%	0.4%	-0.1%	3.9%	4.9%							11.0%	Mar-16
BofA Merrill Lynch US High Yield Master II TR	-0.9%	0.0%	-0.3%	2.1%	4.1%	12.8%	5.2%	4.6%	5.4%	6.4%	8.1%	10.9%	Mar-16
U.S. Equity Composite	-3.6%	2.1%	1.2%	12.3%	16.0%	21.0%	9.5%	10.1%	13.4%	11.9%	9.6%	9.8%	Jul-88
Russell 3000	-3.7%	2.4%	1.4%	12.7%	16.2%	21.2%	10.6%	11.5%	14.4%	12.8%	9.8%	10.5%	Jul-88
Rhumbline Russell 1000 Index	-3.5%	2.8%	1.8%	13.2%	16.8%	21.3%	10.8%	11.7%	14.5%	12.7%	9.7%	8.0%	May-07
Rhumbline Russell 1000 Custom Benchmark	-3.5%	2.8%	1.8%	13.3%	16.9%	21.2%	10.8%	11.8%	14.6%				May-07

Investment Manager

Annualized Performance (Net of Fees)

					Ending	g Febru	ary 28,	2018				Incep	otion
	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Return	Since
Aronson+Johnson+Ortiz LP	-5.4%	-1.6%	-2.3%	9.4%	9.1%	17.0%	6.3%	7.9%	11.6%	11.1%	8.3%	8.0%	May-01
Russell 1000 Value	-4.8%	0.4%	-1.1%	7.4%	7.8%	18.0%	8.0%	9.4%	12.0%	11.3%	7.9%		May-01
O'Shaughnessy Asset Management	-4.1%	4.5%	1.6%	16.2%	21.0%	21.8%	8.2%	9.4%	15.5%			15.7%	Jun-12
Russell 1000 Value	-4.8%	0.4%	-1.1%	7.4%	7.8%	18.0%	8.0%	9.4%	12.0%	11.3%	7.9%	13.6%	Jun-12
Rhumbline MidCap Index	-4.1%	0.4%	-0.6%	9.2%	11.9%							15.1%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	-4.1%	0.4%	-0.5%	9.2%	11.9%							15.2%	Dec-16
Rhumbline Russell 2000 Index	-3.8%	-1.7%	-1.2%	7.8%	10.8%							11.4%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	-3.8%	-1.7%	-1.3%	7.9%	10.7%							11.3%	Dec-16
Emerald Advisors	-3.1%	0.7%	-1.1%	13.5%	22.6%	25.4%	10.3%	9.1%	16.5%	14.0%	12.8%	10.2%	Dec-04
Russell 2000 Growth	-2.8%	1.1%	0.9%	12.1%	18.4%	24.5%	8.9%	8.5%	13.7%	11.7%	10.7%	8.9%	Dec-04
Fisher Asset Management	-3.6%	-2.2%	-1.3%	6.2%	8.7%	22.7%	10.1%	9.6%	13.3%	10.7%		10.3%	May-08
Russell 2000 Value	-5.0%	-4.7%	-3.8%	3.2%	3.0%	20.6%	8.0%	7.0%	10.6%	9.4%	8.6%	8.3%	May-08
Fiera Capital	-1.9%	4.5%	3.0%	17.7%	23.0%	23.3%	8.5%	8.9%	13.6%	12.6%		15.6%	Dec-09
Russell 2500 Growth	-3.3%	1.8%	1.5%	14.2%	19.8%	23.9%	9.4%	9.5%	14.2%	12.2%	10.9%	14.7%	Dec-09
Ariel	-2.8%	3.4%	3.3%	11.2%	13.7%	20.5%						19.5%	Jan-16
Russell 2500 Value	-4.9%	-3.3%	-3.7%	4.2%	3.8%	18.4%	7.2%	7.2%	10.6%	10.0%	9.2%	18.2%	Jan-16
Non-U.S. Equity Developed Composite	-4.7%	1.4%	-0.5%	9.9%	19.5%	17.6%	5.1%	3.3%	6.3%	4.6%	2.6%	5.9%	Jan-89
MSCI EAFE	-4.5%	1.9%	0.3%	10.2%	20.1%	17.9%	5.7%	4.2%	7.1%	5.2%	2.8%	4.8%	Jan-89
Causeway Capital Management	-5.9%	-0.7%	-2.8%	9.6%	20.0%	16.7%	4.8%	3.2%	7.5%			10.0%	Nov-11
MSCI EAFE	-4.5%	1.9%	0.3%	10.2%	20.1%	17.9%	5.7%	4.2%	7.1%	5.2%	2.8%	8.9%	Nov-11
Northern Trust MSCI EAFE+Canada	-4.5%	1.6%	-0.1%	9.8%	19.1%	17.8%	5.5%	4.1%	6.6%	4.9%	3.4%	3.4%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	-4.6%	1.6%	-0.1%	9.7%	19.3%	18.2%	5.9%	4.7%	7.5%	5.7%	3.3%	3.0%	Mar-07
Strategic Global Advisors	-4.1%	2.5%	0.0%									2.5%	Nov-17
MSCI World ex USA Small Cap	-3.9%	3.5%	0.6%	14.2%	24.8%	21.7%	11.2%	7.2%	10.4%	7.4%	5.8%		Nov-17
Investors Group	-2.8%	5.0%	1.7%									5.0%	Nov-17
MSCI EAFE Small Cap	-3.5%	4.1%	1.4%	15.5%	27.4%	22.4%	12.3%	8.4%	11.8%	8.9%	6.6%	4.1%	Nov-17
Non-U.S. Equity Emerging Composite	-4.6%	7.8%	4.0%	21.2%	32.9%	30.2%	9.6%	7.9%	5.5%	2.5%		11.3%	Jan-09
MSCI Emerging Markets	-4.6%	7.0%	3.3%	19.8%	30.5%	30.0%	9.0%	8.0%	5.0%	3.6%	2.7%	12.0%	Jan-09
Rhumbline Emerging Markets Index	-4.6%	7.8%	4.0%	21.2%	32.9%	30.2%	9.5%	8.3%	5.2%			4.9%	Feb-13
MSCI Emerging Markets	-4.6%	7.0%	3.3%	19.8%	30.5%	30.0%	9.0%	8.0%	5.0%	3.6%	2.7%	4.7%	Feb-13

Investment Manager

Annualized Performance (Net of Fees)

										,			
					Ending	g Febru	ary 28,	2018				Incep	otion
	1 Mo	3 Mo	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Return	Since
Absolute Return	-0.7%	2.9%	2.6%	8.5%	11.2%	11.8%	5.5%	4.0%	5.0%	3.7%	2.8%	3.7%	Sep-05
HFRI Fund of Funds Composite Index	-1.6%	1.7%	0.7%	5.2%	6.5%	6.5%	2.2%	2.7%	3.7%	2.6%	1.3%	2.7%	Sep-05
400 Capital Credit Opportunity Fund	0.0%	0.0%	0.0%	0.0%	4.7%	7.6%	1.8%	4.1%				4.7%	Jun-13
HFRI ED: Distressed/Restructuring Index	0.2%	2.9%	1.5%	5.0%	5.6%	13.9%	4.5%	2.5%	4.6%	4.4%	4.4%	3.7%	Jun-13
HFRX Distressed Securities Index	-1.1%	1.3%	0.4%	0.9%	0.9%	14.6%	3.1%	1.9%	2.9%	0.8%	-2.5%	2.4%	Jun-13
Elizabeth Park Capital Management	-1.1%	2.9%	2.8%	9.5%	10.8%	22.7%	14.1%					11.9%	May-14
HFRX Event Driven Index	-4.4%	-2.3%	-2.7%	-1.0%	1.0%	9.4%	1.9%	-0.1%	2.4%	2.1%	1.1%	0.0%	May-14
Archview Offshore Fund. LTD	0.9%	4.4%	3.3%	10.0%	9.7%	11.4%	2.1%	2.3%				2.3%	Mar-14
HFRI ED: Distressed/Restructuring Index	0.2%	2.9%	1.5%	5.0%	5.6%	13.9%	4.5%	2.5%	4.6%	4.4%	4.4%	2.5%	Mar-14
Real Assets Composite	-2.9%	-3.0%	-3.5%	-0.9%	0.5%	10.0%	0.4%	2.6%	4.9%			5.6%	Dec-12
Real Assets - Public Real Estate Composite	-7.3%	-10.3%	-10.0%	-6.7%	-6.1%	5.2%	2.0%	7.0%	6.3%			6.9%	Jan-13
FTSE NAREIT All Equity REIT	-7.3%	-10.3%	-10.0%	-6.7%	-6.1%	5.2%	2.0%	6.6%	6.5%	8.0%	7.1%	6.7%	Jan-13
Rhumbline FTSE NAREIT	-7.3%	-10.3%	-10.0%	-6.7%	-6.1%	5.2%	2.0%	6.6%				4.9%	May-13
FTSE NAREIT All Equity REIT	-7.3%	-10.3%	-10.0%	-6.7%	-6.1%	5.2%	2.0%	6.6%	6.5%	8.0%	7.1%	4.8%	May-13
Real Assets - Open-End Real Estate Composite	0.0%	2.2%	0.0%	3.2%	5.5%							5.0%	Jan-17
NFI	0.0%	0.6%	0.0%	3.5%	5.6%	6.5%	8.7%	9.5%	10.2%	10.6%	4.0%	5.6%	Jan-17
UBS Trumbull Fund	0.0%	2.2%	0.0%	3.2%	5.5%							5.0%	Jan-17
NFI	0.0%	0.6%	0.0%	3.5%	5.6%	6.5%	8.7%	9.5%	10.2%	10.6%	4.0%	5.6%	Jan-17
Clarion Lion Properties Fund	0.0%											0.0%	Feb-18
NFI	0.0%	0.6%	0.0%	3.5%	5.6%	6.5%	8.7%	9.5%	10.2%	10.6%	4.0%	0.0%	Feb-18
Real Assets - Infrastructure Composite	-6.2%	-7.2%	-6.2%	-2.3%								1.5%	Mar-17
Dow Jones Brookfield Global Infrastructure Index	-6.3%	-7.4%	-6.3%	-2.7%	3.9%	10.3%	1.7%	4.1%	6.2%	8.5%	6.7%	0.9%	Mar-17
Rhumbline Infrastructure Index	-6.2%	-7.2%	-6.2%	-2.3%								1.5%	Mar-17
Dow Jones Brookfield Global Infrastructure Index	-6.3%	-7.4%	-6.3%	-2.7%	3.9%	10.3%	1.7%	4.1%	6.2%	8.5%	6.7%	0.9%	Mar-17
Real Assets - Private Real Estate Composite	0.0%	0.7%	0.0%	0.8%	5.2%	6.1%	8.5%	9.5%	10.7%	10.3%	1.5%	3.5%	May-06
Real Assets - Private Real Estate Benchmark	0.0%	0.7%	0.0%	0.8%	5.2%	6.1%	8.5%	9.5%	10.7%				May-06
Real Assets - Private Energy/Infrastructure Composite	0.0%	2.4%	0.0%	4.5%	7.0%	6.5%	-6.2%	-5.4%	3.7%			2.8%	May-12
Real Assets - Private Energy/Infrastructure Benchmark	0.0%	2.4%	0.0%	4.5%	7.0%	6.5%	-6.2%	-5.4%	3.7%			2.8%	May-12
Private Assets Composite	0.0%	0.0%	0.0%	1.6%	6.0%	8.0%	7.4%						Mar-87