

(Preliminary Subject to Change)



Employees Retirement System

City of Philadelphia

Employees Retirement System

Executive Summary

February 28, 2019

Total Fund Composite

Market Value: \$5,039.7 Million and 100.0% of Fund

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	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)		
Total Fund Composite		5,039,749,339	-117,184,555	100.0	100.0	0		
Total Fund w/o Alternative Assets		3,700,607,825	-91,865,070	73.4	69.0	223,180,782		
Investment Grade Fixed Income Composite		659,762,840	229,285	13.1	10.0	155,787,906		
Brandywine Global Investment Management	Global Fixed Income	136,310,240	229,467	2.7				
Garcia Hamilton & Associates	Int. Govt. Fixed Income	168,463,783	0	3.3				
Logan Circle	Core Plus Fixed Income	44,891,175	-182	0.9				
Longfellow	Core Plus Fixed Income	159,495,578	0	3.2				
Rhumbline Core Bond Index	Core Fixed Income	150,602,065	0	3.0				
Opportunistic Fixed Income Composite		261,753,062	-18,049,820	5.2	4.0	60,163,088		
Apollo Franklin Partnership, L.P.	Opportunistic Fixed Income	12,397,201	-2,272,727	0.2				
Avenue Coppers Opportunity Fund LP	Opportunistic Fixed Income	20,015,775	-3,014,450	0.4				
KKR-PBPR Capital Partners LP	Opportunistic Fixed Income	54,099,823	-12,762,114	1.1				
Logan Circle - EMD	EM Fixed Income	73,078,838	0	1.5				
Strategic Income Management	High Yield Fixed Income	50,686,943	-50,000,529	1.0				
Lord Abbett High Yield	High Yield Fixed Income	51,066,538	50,000,000	1.0				
U.S. Equity Composite		1,521,764,907	0	30.2	30.0	9,840,105		
Rhumbline Russell 1000 Index	Large-Cap Core	1,038,571,377	0	20.6				
Aronson+Johnson+Ortiz LP	Large-Cap Value	44,501,629	0	0.9				
O'Shaughnessy Asset Management	Large-Cap Value	28,204,891	0	0.6				
Rhumbline MidCap Index	Mid-Cap Core	149,267,210	-5,685	3.0				
Rhumbline Russell 2000 Index	Small-Cap Core	41,559,943	-1,589	0.8				
Emerald Advisors	Small-Cap Growth	80,630,836	0	1.6				
Fisher Asset Management	Small-Cap Value	57,213,936	0	1.1				
Fiera Capital	Smid-Cap Growth	27,518,135	0	0.5				
Ariel	Smid-Cap Value	54,205,453	0	1.1				
Non-U.S. Equity Developed Composite		980,943,629	0	19.5	21.0	-77,403,732		
Causeway Capital Management	Non-U.S. Large-Cap Core	112,234,219	0	2.2				
Northern Trust MSCI EAFE+Canada	Non-U.S. Large-Cap Core	676,576,980	0	13.4				
Northern Trust International Small Cap	Non-U.S. Small-Cap Core	98,100,168	0	1.9				
Strategic Global Advisors	Non-U.S. Small-Cap Core	31,746,636	0	0.6				
Investors Group	Non-U.S. Small-Cap Core	58,368,883	0	1.2				
Non-U.S. Equity Emerging Composite		218,991,272	0	4.3	4.0	17,401,298		
Rhumbline Emerging Markets Index	Emerging Markets	218,986,902	0	4.3				

Total Fund Composite

Market Value: \$5,039.7 Million and 100.0% of Fund

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Cash Composite		57,392,115	-74,044,535	1.1	0.0	57,392,115
Cash	Cash & Equivalents	56,718,884	-74,015,114	1.1		
Directed Commissions	Cash & Equivalents	673,231	-29,422	0.0		
Absolute Return		30,182,226	0	0.6	0.0	30,182,226
Elizabeth Park Capital Management	Long/Short Hedge Fund	28,017,006	0	0.6		
Archview Offshore Fund. LTD	Credit Hedge Fund	2,165,220	0	0.0		
Real Assets Composite		843,118,057	-20,457,675	16.7	19.0	-114,434,318
Real Assets - Public Real Estate Composite		57,906,716	0	1.1	1.0	7,509,223
Rhumbline FTSE NAREIT	Real Assets	57,906,716	0	1.1		
Real Assets - Open-End Real Estate Composite		479,219,113	-4,000,354	9.5	11.0	-75,153,314
UBS Trumbull Fund	Core Real Estate	369,070,153	-3,776,052	7.3		
Clarion Lion Properties Fund	Core Real Estate	110,148,960	-224,302	2.2		
Real Assets - Infrastructure Composite		195,701,183	-29	3.9	5.0	-56,286,284
Rhumbline Infrastructure Index	Publicly-Traded Infrastructure	140,953,731	-29	2.8		
Rreef Global Infrastructure	Global Infrastructure	54,747,452	0	1.1		
Real Assets - Private Real Estate Composite		99,624,654	-17,247,341	2.0	2.0	-1,170,333
Real Assets - Private Energy/Infrastructure Composite		10,666,391	790,050	0.2		10,666,391
Private Assets Composite		465,841,231	-4,861,810	9.2	12.0	-138,928,690
Private Assets - Private Equity	U.S. Private Equity FoF	434,951,869	-4,813,996	8.6		
Private Assets - Private Debt	Mezz. Private Equity	30,889,362	-47,813	0.6		

Annualized Performance (Net of Fees)

Market Value: \$5,039.7 Million and 100.0% of Fund

	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	1.8%	2.6%	7.0%	0.7%	2.1%	7.2%	9.9%	5.0%	5.0%	6.6%	9.4%	7.4%	Jul-88
Total Fund Policy Benchmark	1.7%	2.7%	6.7%	1.4%	3.1%	7.0%	10.3%	5.5%	5.8%	7.0%	11.0%	8.3%	Jul-88
Total Fund w/o Alternative Assets	2.2%	3.0%	8.8%	0.4%	-0.2%	6.6%	9.8%	4.5%	4.5%			5.1%	Jan-14
Investment Grade Fixed Income Composite	-0.2%	2.8%	1.3%	2.0%	1.2%	2.3%	2.4%	1.4%	2.0%	2.1%	3.8%	6.0%	Jul-88
Fixed Income Custom Benchmark	-0.3%	2.7%	0.9%	2.5%	3.0%	1.8%	1.6%	1.6%	2.3%	2.1%	3.7%	6.1%	Jul-88
Brandywine Global Investment Management	-1.3%	4.3%	2.2%	0.2%	-4.8%	3.1%	3.9%	1.2%	2.0%	2.5%	6.9%	6.6%	Jan-09
FTSE WGBI TR	-0.9%	2.9%	0.5%	0.6%	-1.3%	2.8%	1.4%	1.6%	0.3%	0.2%	2.3%	2.0%	Jan-09
Garcia Hamilton & Associates	0.1%	1.9%	1.0%	2.5%	3.3%	1.8%	1.5%	1.9%	2.3%	2.9%	4.5%	5.1%	Aug-00
BBgBarc US Govt/Credit Int TR	0.1%	2.3%	1.0%	2.8%	3.2%	1.6%	1.4%	1.5%	1.8%	1.7%	3.1%	4.2%	Aug-00
Logan Circle	0.1%	3.0%	1.6%	2.7%	3.0%	2.5%	3.0%	2.2%		-		2.5%	Oct-14
BBgBarc US Aggregate TR	-0.1%	2.9%	1.0%	2.7%	3.2%	1.8%	1.7%	1.6%	2.3%	2.1%	3.7%	2.0%	Oct-14
Longfellow	0.1%	2.6%	1.1%	2.6%	3.1%	2.2%	2.0%	2.1%				2.3%	Sep-14
BBgBarc US Aggregate TR	-0.1%	2.9%	1.0%	2.7%	3.2%	1.8%	1.7%	1.6%	2.3%	2.1%	3.7%	2.2%	Sep-14
Rhumbline Core Bond Index	0.0%	2.7%	0.9%	2.6%	3.1%	1.8%	1.5%	1.4%	2.1%	1.8%	3.6%	3.8%	Jun-07
BBgBarc US Aggregate TR	-0.1%	2.9%	1.0%	2.7%	3.2%	1.8%	1.7%	1.6%	2.3%	2.1%	3.7%	4.0%	Jun-07
Opportunistic Fixed Income Composite	0.7%	1.5%	3.2%	-0.2%	-0.4%	2.6%	5.7%	2.5%	2.2%	-		3.1%	Dec-12
Opportunistic FI Custom Benchmark	1.4%	2.7%	5.2%	3.1%	3.8%	4.0%	8.2%	4.5%	4.1%	5.3%		4.7%	Dec-12
Apollo Franklin Partnership, L.P.	0.0%	-5.6%	2.0%	-2.1%	0.2%	-1.2%	0.2%	-4.1%	-5.2%	-		-3.5%	May-13
50% BarCap HY / 50% CSFB Lev Loans	1.6%	2.8%	5.1%	3.3%	4.1%	4.2%	8.3%	4.6%	4.2%	5.4%	9.8%	4.5%	May-13
Avenue Coppers Opportunity Fund LP	0.0%	0.0%	0.0%	-11.1%	-10.8%	-3.4%	1.0%	0.0%	0.5%			0.8%	Dec-13
Actuarial Rate	0.6%	1.9%	1.2%	5.0%	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%	-4.3%	0.1%	-5.4%	-2.0%	2.1%	5.1%	3.1%	2.8%			5.1%	Jun-12
Actuarial Rate	0.6%	1.9%	1.2%	5.0%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	Jun-12
Logan Circle - EMD	0.4%	7.0%	5.9%	5.5%	-1.0%	3.9%	8.6%	5.3%				5.3%	Feb-15
JP Morgan EMBI Global TR	0.6%	6.6%	5.1%	5.8%	2.4%	2.9%	5.8%	4.7%	4.8%	4.5%	8.4%	4.7%	Feb-15
Strategic Income Management	1.4%	2.3%	3.8%	1.9%	3.4%	4.2%						8.3%	Mar-16
ICE BofAML US High Yield TR	1.7%	4.0%	6.4%	3.9%	4.3%	4.2%	9.9%	5.0%	4.5%	6.1%	11.5%	8.6%	Mar-16

Annualized Performance (Net of Fees)

Market Value: \$5,039.7 Million and 100.0% of Fund

	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	1.6%											1.6%	Jan-19
ICE BofAML US High Yield TR	1.7%	4.0%	6.4%	3.9%	4.3%	4.2%	9.9%	5.0%	4.5%	6.1%	11.5%	1.7%	Jan-19
U.S. Equity Composite	3.9%	2.5%	13.5%	2.6%	4.8%	10.2%	15.3%	8.3%	9.0%	11.9%	16.4%	9.6%	Jul-88
U.S. Equity Custom Benchmark	3.8%	2.8%	13.4%	4.1%	6.0%	11.0%	15.9%	9.4%	10.3%	13.0%	16.9%	10.4%	Jul-88
Rhumbline Russell 1000 Index	3.4%	1.8%	12.1%	3.7%	5.1%	10.8%	15.6%	9.4%	10.4%	13.0%	16.7%	7.8%	May-07
Rhumbline Russell 1000 Custom Benchmark	3.4%	1.9%	12.1%	3.7%	5.1%	10.8%	15.6%	9.4%	10.4%	13.1%			<i>May-</i> 07
Aronson+Johnson+Ortiz LP	2.6%	0.3%	11.3%	-0.7%	0.1%	4.5%	11.1%	4.8%	6.3%	10.5%	14.2%	7.5%	May-01
Russell 1000 Value	3.2%	0.5%	11.2%	3.8%	3.2%	5.4%	12.8%	6.8%	8.1%	11.5%	15.4%	6.7%	May-01
O'Shaughnessy Asset Management	4.1%	1.2%	13.7%	-1.1%	-0.7%	9.6%	13.8%	5.9%	7.3%			13.1%	Jun-12
Russell 1000 Value	3.2%	0.5%	11.2%	3.8%	3.2%	5.4%	12.8%	6.8%	8.1%	11.5%	15.4%	12.0%	Jun-12
Rhumbline MidCap Index	4.3%	4.1%	15.5%	2.6%	5.6%	8.7%	-			-		10.6%	Dec-16
Rhumbline Russell Mid Cap Custom Benchmark	4.3%	4.2%	15.6%	2.7%	5.7%	8.8%						10.7%	Dec-16
Rhumbline Russell 2000 Index	5.2%	3.2%	17.0%	-3.0%	5.8%	8.3%						8.8%	Dec-16
Rhumbline Russell 2000 Custom Benchmark	5.2%	3.2%	17.0%	-3.2%	5.6%	8.1%						8.6%	Dec-16
Emerald Advisors	6.9%	10.0%	22.2%	1.6%	10.1%	16.2%	20.0%	10.3%	9.3%	14.3%	19.7%	10.1%	Dec-04
Russell 2000 Growth	6.5%	4.9%	18.8%	-1.8%	6.7%	12.4%	18.3%	8.4%	8.2%	12.3%	17.7%	8.7%	Dec-04
Fisher Asset Management	5.6%	2.7%	17.1%	-2.7%	4.3%	6.5%	16.2%	8.6%	8.5%	11.6%	17.9%	9.7%	May-08
Russell 2000 Value	3.9%	1.3%	15.2%	-4.8%	4.4%	3.7%	15.0%	7.1%	6.5%	10.6%	15.4%	7.9%	May-08
Fiera Capital	6.0%	5.5%	18.4%	1.7%	4.3%	13.3%	16.6%	7.4%	7.9%	12.0%		14.3%	Dec-09
Russell 2500 Growth	6.6%	6.3%	19.3%	2.2%	8.7%	14.1%	18.6%	9.2%	9.3%	12.9%	18.6%	14.0%	Dec-09
Ariel	4.9%	1.9%	16.4%	-1.5%	-2.7%	5.2%	12.2%					11.8%	Jan-16
Russell 2500 Value	3.1%	2.0%	14.6%	-2.4%	4.4%	4.1%	13.5%	6.5%	6.6%	10.8%	16.2%	13.5%	Jan-16
Non-U.S. Equity Developed Composite	2.7%	4.2%	10.3%	-3.7%	-5.9%	6.1%	9.2%	2.2%	1.4%	4.6%	9.1%	5.4%	Jan-89
Non-U.S. Equity Developed Custom Benchmark	2.5%	4.0%	9.9%	-4.0%	-6.4%	6.3%	9.6%	3.0%	2.3%	5.6%	10.2%	_	Jan-89
Causeway Capital Management	4.7%	4.8%	12.6%	-2.6%	-4.3%	7.2%	9.2%	2.5%	1.7%	6.3%		7.9%	Nov-11
MSCI EAFE	2.5%	4.0%	9.3%	-3.1%	-6.0%	6.2%	9.3%	2.6%	2.1%	5.5%	9.6%	6.7%	Nov-11
Northern Trust MSCI EAFE+Canada	2.6%	4.2%	10.0%	-2.3%	-4.7%	6.6%	9.8%	2.9%	2.3%	5.3%	10.4%	2.7%	Mar-07
Northern Trust MSCI EAFE + Canada Custom Benchmark	2.6%	4.2%	9.9%	-2.3%	-4.6%	6.7%	10.1%	3.1%	2.8%	6.2%	10.6%	2.3%	Mar-07



Annualized Performance (Net of Fees)

Market Value: \$5,039.7 Million and 100.0% of Fund

	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	2.2%	3.3%	10.4%	-7.9%			-					-10.6%	Mar-18
Northern Trust EAFE Small Cap Custom Benchmark	2.2%	3.3%	10.4%	-8.0%	-10.0%							-10.0%	Mar-18
Strategic Global Advisors	3.0%	5.5%	12.4%	-8.8%	-10.9%							-7.0%	Nov-17
MSCI World ex USA Small Cap	2.3%	3.9%	11.0%	-7.7%	-9.6%	6.2%	10.2%	5.6%	3.6%	6.9%	13.0%	-5.2%	Nov-17
Investors Group	0.9%	3.0%	8.7%	-11.5%	-13.0%		-	-	-	-		-7.0%	Nov-17
MSCI EAFE Small Cap	2.2%	3.4%	10.5%	-8.1%	-10.5%	6.8%	10.2%	6.1%	4.3%	8.2%	13.5%	-5.5%	Nov-17
Non-U.S. Equity Emerging Composite	-0.4%	6.4%	9.2%	0.3%	-10.2%	9.2%	15.0%	4.2%	4.0%	1.2%	9.8%	9.0%	Jan-09
MSCI Emerging Markets	0.2%	6.1%	9.0%	-0.2%	-9.9%	8.4%	15.0%	3.9%	4.1%	2.1%	10.3%	9.6%	Jan-09
Rhumbline Emerging Markets Index	-0.4%	6.4%	9.2%	0.4%	-10.1%	9.3%	15.1%	4.2%	4.4%			2.3%	Feb-13
MSCI Emerging Markets	0.2%	6.1%	9.0%	-0.2%	-9.9%	8.4%	15.0%	3.9%	4.1%	2.1%	10.3%	2.1%	Feb-13

Annualized Performance (Net of Fees)

Market Value: \$5,039.7 Million and 100.0% of Fund

	1 Mo	3 Мо	YTD	Fiscal YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Absolute Return	4.5%	-1.8%	8.8%	-11.1%	-9.4%	0.4%	4.3%	1.5%	1.2%	2.9%	3.5%	2.6%	Sep-05
HFRI Fund of Funds Composite Index	0.8%	1.5%	3.3%	-1.7%	-1.7%	2.3%	3.7%	1.2%	1.8%	2.9%	3.4%	2.4%	Sep-05
Elizabeth Park Capital Management	4.9%	-1.0%	9.9%	-10.2%	-8.2%	0.9%	11.4%	8.1%				7.3%	May-14
HFRX Event Driven Index	-0.2%	1.1%	2.4%	-5.3%	-7.1%	-3.2%	3.6%	-0.4%	-1.5%	1.3%	2.5%	-1.6%	May-14
Archview Offshore Fund. LTD	-0.4%	-11.1%	-3.4%	-20.9%	-20.7%	-6.7%	-0.5%	-4.1%	-2.7%	-		-2.7%	Mar-14
HFRI ED: Distressed/Restructuring Index	2.0%	2.1%	5.0%	0.0%	2.1%	3.3%	9.4%	3.6%	2.2%	4.7%	7.3%	2.2%	Mar-14
Real Assets Composite	0.6%	2.6%	3.3%	3.6%	8.9%	5.1%	9.9%	2.6%	4.0%			6.3%	Dec-12
Real Assets Benchmark	0.5%	1.9%	3.2%	3.6%	8.2%	2.4%	9.5%	-1.9%	-0.1%			2.3%	Dec-12
Real Assets - Public Real Estate Composite	0.5%	3.4%	12.1%	5.8%	18.9%	5.6%	9.6%	6.0%	9.3%	-		8.8%	Jan-13
FTSE NAREIT All Equity REIT Custom Benchmark	0.5%	3.4%	12.2%	6.4%	19.6%	6.0%	9.8%	6.1%	9.1%				Jan-13
Rhumbline FTSE NAREIT	0.5%	3.4%	12.1%	6.2%	19.4%	5.9%	9.7%	6.1%	9.1%			7.3%	May-13
FTSE NAREIT All Equity REIT Custom Benchmark	0.5%	3.4%	12.2%	6.4%	19.6%	6.0%	9.8%	6.1%	9.1%			7.3%	May-13
Real Assets - Open-End Real Estate Composite	0.0%	1.6%	0.0%	3.1%	6.7%	6.1%	-	-	-	-		5.8%	Jan-17
NFI	0.0%	0.5%	0.0%	3.4%	6.0%	6.5%	6.8%	8.3%	9.1%	9.7%	7.1%	6.5%	Jan-17
UBS Trumbull Fund	0.0%	1.6%	0.0%	2.8%	6.2%	5.8%						5.6%	Jan-17
NFI	0.0%	0.5%	0.0%	3.4%	6.0%	6.5%	6.8%	8.3%	9.1%	9.7%	7.1%	6.5%	Jan-17
Clarion Lion Properties Fund	0.0%	1.8%	0.0%	4.0%	9.0%	-			-	-		8.3%	Feb-18
NFI	0.0%	0.5%	0.0%	3.4%	6.0%	6.5%	6.8%	8.3%	9.1%	9.7%	7.1%	6.1%	Feb-18
Real Assets - Infrastructure Composite	2.5%	6.7%	12.1%	5.1%	11.0%	-	-	-	-	-		6.4%	Mar-17
Dow Jones Brookfield Global Infrastructure Index	2.6%	6.7%	12.2%	4.7%	10.3%	7.0%	10.3%	3.8%	5.3%	8.1%	13.4%	5.7%	Mar-17
Rhumbline Infrastructure Index	2.6%	6.9%	12.2%	5.2%	11.1%	-	-	-		-		6.4%	Mar-17
Dow Jones Brookfield Global Infrastructure Index	2.6%	6.7%	12.2%	4.7%	10.3%	7.0%	10.3%	3.8%	5.3%	8.1%	13.4%	5.7%	Mar-17
Rreef Global Infrastructure	2.3%	6.2%	11.6%	5.0%								9.5%	Mar-18
Dow Jones Brookfield Global Infrastructure Index	2.6%	6.7%	12.2%	4.7%	10.3%	7.0%	10.3%	3.8%	5.3%	8.1%	13.4%	9.1%	Mar-18



Annualized Performance (Net of Fees)

Market Value: \$5,039.7 Million and 100.0% of Fund

Ending February 28, 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%	-0.5%	0.0%	1.0%	3.5%	5.7%	6.2%	7.9%	8.8%	9.7%	3.8%	3.7%	May-06
Real Assets - Private Real Estate Benchmark	0.0%	-0.5%	0.0%	1.0%	3.5%	5.7%	6.2%	7.9%	8.8%				May-06
Real Assets - Private Energy/Infrastructure Composite	0.0%	0.7%	0.0%	4.1%	23.3%	18.7%	14.3%	2.1%	1.1%			6.7%	May-12
Real Assets - Private Energy/Infrastructure Benchmark	0.0%	0.7%	0.0%	4.1%	23.3%	18.7%	14.3%	2.1%	1.1%			6.7%	<i>May-</i> 12
Private Assets Composite	0.0%	0.0%	0.0%	-2.0%	13.2%	13.0%	12.0%	10.5%		-		-	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.

