



**Pittsburgh Comprehensive Municipal Pension**

Pittsburgh Comprehensive Municipal

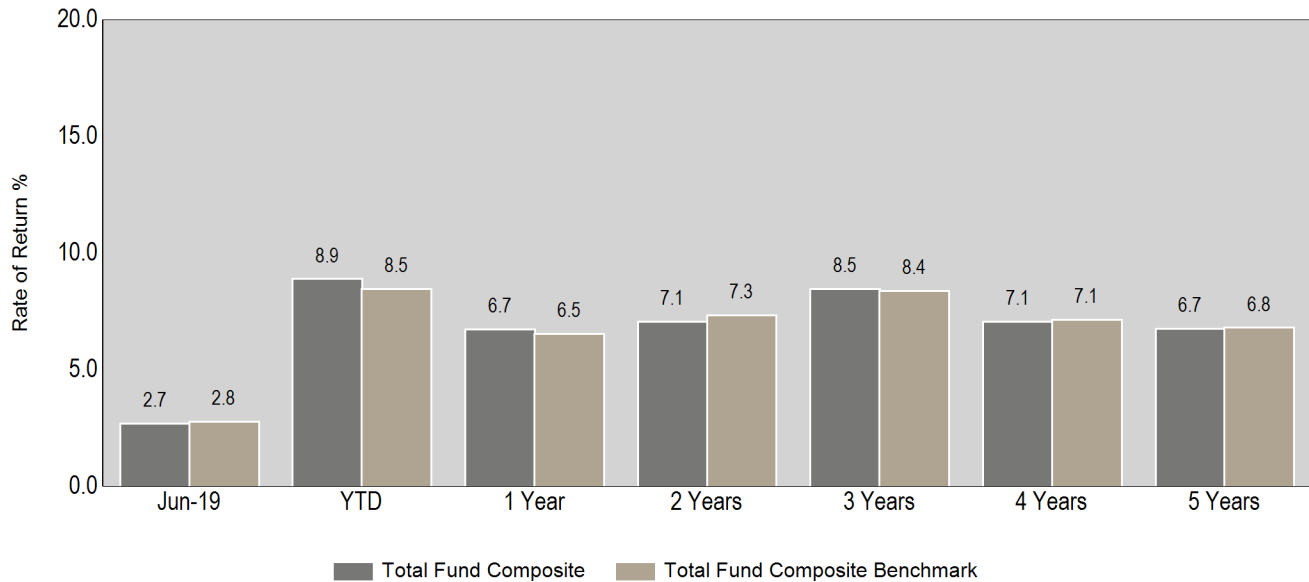
PRELIMINARY

Executive Summary

**June 30, 2019**



**Return Summary  
Ending June 30, 2019**



**Return Summary YTD**

**Asset Allocation vs. Target**

	Total Return	Current	Current	Policy	Difference*	%
Total Fund Composite	8.9%	94,573,546	12.0	13.0	-7,918,257	-1.0
Total Invested Portfolio	12.4%	189,634,865	24.1	22.0	16,187,199	2.1
Fixed Income Composite	6.8%	82,046,140	10.4	12.0	-12,561,678	-1.6
U.S. Equity Composite	18.9%	59,843,060	7.6	5.0	20,423,136	2.6
Non-U.S. Equity Composite	16.8%	45,657,504	5.8	5.0	6,237,580	0.8
Emerging Manager Composite	15.7%	9,735,015	1.2	3.0	-13,916,939	-1.8
Hedge Fund Composite	7.0%	306,908,351	38.9	40.0	-8,451,042	-1.1
		<b>788,398,482</b>	<b>100.0</b>	<b>100.0</b>		

\*Difference between Policy and Current Allocation

**Summary of Cash Flows**

	Last Month	Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	\$774,904,078	\$725,173,081	\$747,499,893	\$666,797,938	\$673,104,180
Net Cash Flow	-\$7,370,511	-\$1,711,149	-\$10,301,961	-\$59,214,047	-\$122,897,656
Net Investment Change	\$20,864,915	\$64,936,550	\$51,200,550	\$180,814,591	\$238,191,958
Ending Market Value	\$788,398,482	\$788,398,482	\$788,398,482	\$788,398,482	\$788,398,482

# Total Fund Composite

Market Value: \$788.4 Million and 100.0% of Fund

Ending June 30, 2019

	Asset Class	Market Value	1 Mo Net Cash Flows	% of Portfolio	Policy %	Policy Difference
<b>Total Fund Composite</b>		<b>\$788,398,482</b>	<b>-\$7,427,543</b>	<b>100.0%</b>	<b>100.0%</b>	<b>\$0</b>
Dedicated Funding for CMPTF	Fixed Income Annuity	\$294,369,944	\$0	37.3%	40.0%	-\$20,989,449
<b>Total Invested Portfolio</b>		<b>\$494,028,538</b>	<b>-\$7,427,543</b>	<b>62.7%</b>	<b>60.0%</b>	<b>\$20,989,449</b>
<b>Fixed Income Composite</b>		<b>\$94,573,546</b>	<b>\$14,987,859</b>	<b>12.0%</b>	<b>13.0%</b>	<b>-\$7,918,257</b>
Federated Investors	Core Fixed Income	\$58,278,050	-\$12,141	7.4%		
BlackRock Total Return Fund	Core Fixed Income	\$21,254,574	\$0	2.7%		
Vanguard Ultra Short Duration	Short-Term Fixed Income	\$15,040,923	\$15,000,000	1.9%		
<b>U.S. Equity Composite</b>		<b>\$184,320,418</b>	<b>-\$36,155</b>	<b>23.4%</b>	<b>22.0%</b>	<b>\$10,872,752</b>
SSgA S&P 500 Index Fund	Large-Cap Core	\$120,378,914	-\$4,013	15.3%		
Frontier Capital Management	Smid-Cap Core	\$32,656,118	-\$20,410	4.1%		
Guyasuta Investment Advisors	Small-Cap Core	\$31,285,386	-\$11,732	4.0%		
<b>Non-U.S. Equity Composite</b>		<b>\$89,626,245</b>	<b>-\$5,431</b>	<b>11.4%</b>	<b>12.0%</b>	<b>-\$4,981,573</b>
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$70,976,901	\$0	9.0%		
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,689,220	-\$5,431	1.1%		
ABS Emerging Markets	Emerging Markets	\$9,960,124	\$0	1.3%		
<b>Emerging Manager Composite</b>		<b>\$7,694,467</b>	<b>-\$3,306</b>	<b>1.0%</b>	<b>--</b>	<b>\$7,694,467</b>
Twin Capital	Large-Cap Core	\$2,802,546	-\$473	0.4%		
CIM Investment Management	Small-Cap Core	\$2,511,901	-\$1,444	0.3%		
Fusion Investment Group	Global Core Equity	\$2,380,020	-\$1,388	0.3%		
<b>Hedge Fund Composite</b>		<b>\$49,882,936</b>	<b>\$0</b>	<b>6.3%</b>	<b>5.0%</b>	<b>\$10,463,012</b>
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$14,026,851	\$0	1.8%		
Entrust Three Rivers Partners	Multi-Strat. Hedge Fund	\$24,158,867	\$0	3.1%		
Parametric Defensive Equity	Defensive Equity	\$11,697,218	\$0	1.5%		
<b>Real Estate Composite</b>		<b>\$45,657,504</b>	<b>-\$107,103</b>	<b>5.8%</b>	<b>5.0%</b>	<b>\$6,237,580</b>
Rreef America II	Core Real Estate	\$23,075,646	-\$54,293	2.9%	2.5%	\$3,365,684
Barings Core Property Fund	Core Real Estate	\$22,581,859	-\$52,810	2.9%	2.5%	\$2,871,897
<b>Private Equity Composite</b>		<b>\$9,735,015</b>	<b>\$286,473</b>	<b>1.2%</b>	<b>3.0%</b>	<b>-\$13,916,939</b>
<b>Cash Composite</b>		<b>\$12,538,406</b>	<b>-\$22,549,881</b>	<b>1.6%</b>	<b>0.0%</b>	<b>\$12,538,406</b>

- Private Equity Composite may not include current performance, due to reporting cycle limitations.

## Total Invested Portfolio

Market Value: \$494.0 Million and 62.7% of Fund

Ending June 30, 2019

	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio
<b>Total Invested Portfolio</b>		<b>\$494,028,538</b>	<b>\$13,841,973</b>	<b>100.0%</b>
<b>Fixed Income Composite</b>		<b>\$94,573,546</b>	<b>\$29,964,088</b>	<b>19.1%</b>
Federated Investors	Core Fixed Income	\$58,278,050	-\$35,912	11.8%
BlackRock Total Return Fund	Core Fixed Income	\$21,254,574	\$0	4.3%
Vanguard Ultra Short Duration	Short-Term Fixed Income	\$15,040,923	\$15,000,000	3.0%
<b>U.S. Equity Composite</b>		<b>\$184,320,418</b>	<b>-\$105,186</b>	<b>37.3%</b>
SSgA S&P 500 Index Fund	Large-Cap Core	\$120,378,914	-\$11,764	24.4%
Frontier Capital Management	Smid-Cap Core	\$32,656,118	-\$59,622	6.6%
Guyasuta Investment Advisors	Small-Cap Core	\$31,285,386	-\$33,800	6.3%
<b>Non-U.S. Equity Composite</b>		<b>\$89,626,245</b>	<b>-\$16,068</b>	<b>18.1%</b>
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$70,976,901	\$0	14.4%
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,689,220	-\$16,068	1.8%
ABS Emerging Markets	Emerging Markets	\$9,960,124	\$0	2.0%
<b>Emerging Manager Composite</b>		<b>\$7,694,467</b>	<b>-\$9,760</b>	<b>1.6%</b>
Twin Capital	Large-Cap Core	\$2,802,546	-\$1,390	0.6%
CIM Investment Management	Small-Cap Core	\$2,511,901	-\$4,269	0.5%
Fusion Investment Group	Global Core Equity	\$2,380,020	-\$4,101	0.5%
<b>Hedge Fund Composite</b>		<b>\$49,882,936</b>	<b>\$0</b>	<b>10.1%</b>
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$14,026,851	\$0	2.8%
Entrust Three Rivers Partners	Multi-Strat. Hedge Fund	\$24,158,867	\$0	4.9%
Parametric Defensive Equity	Defensive Equity	\$11,697,218	\$0	2.4%
<b>Real Estate Composite</b>		<b>\$45,657,504</b>	<b>-\$287,133</b>	<b>9.2%</b>
Rreef America II	Core Real Estate	\$23,075,646	-\$234,323	4.7%
Barings Core Property Fund	Core Real Estate	\$22,581,859	-\$52,810	4.6%
<b>Private Equity Composite</b>		<b>\$9,735,015</b>	<b>\$868,256</b>	<b>2.0%</b>
<b>Cash Composite</b>		<b>\$12,538,406</b>	<b>-\$1,572,224</b>	<b>2.5%</b>

- Private Equity Composite may not include current performance, due to reporting cycle limitations.

# Investment Manager

# Annualized Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

Ending June 30, 2019

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
<b>Total Fund Composite</b>	<b>2.7%</b>	<b>2.8%</b>	<b>8.9%</b>	<b>6.7%</b>	<b>7.1%</b>	<b>8.5%</b>	<b>7.1%</b>	<b>6.7%</b>	<b>8.8%</b>	<b>9.1%</b>
<i>Total Fund Composite Benchmark</i>	2.8%	2.5%	8.5%	6.5%	7.3%	8.4%	7.1%	6.8%	8.3%	9.3%
<i>InvMetrics Public DB Net Rank</i>	98	82	97	34	54	60	23	13	19	42
Dedicated Funding for CMPTF	-0.4%	1.8%	3.7%	7.5%	7.6%	7.5%	7.6%	7.5%	8.9%	--
<i>Annual Return</i>	0.6%	1.8%	3.7%	7.5%	7.5%	7.5%	7.5%	7.5%	7.6%	--
<b>Total Invested Portfolio</b>	<b>4.6%</b>	<b>3.3%</b>	<b>12.4%</b>	<b>6.1%</b>	<b>6.7%</b>	<b>9.1%</b>	<b>6.7%</b>	<b>6.2%</b>	<b>8.7%</b>	<b>8.7%</b>
<i>Total Invested Portfolio Benchmark</i>	4.6%	3.2%	12.6%	6.3%	7.5%	9.3%	7.0%	6.4%	8.7%	9.5%
<i>InvMetrics Public DB Net Rank</i>	26	38	46	55	67	31	39	33	24	62
<b>Fixed Income Composite</b>	<b>1.3%</b>	<b>3.1%</b>	<b>6.8%</b>	<b>7.6%</b>	<b>3.7%</b>	<b>3.1%</b>	<b>3.6%</b>	<b>3.2%</b>	<b>3.5%</b>	<b>4.9%</b>
<i>BBgBarc US Aggregate TR</i>	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%
<i>InvMetrics Public DB US Fix Inc Net Rank</i>	19	11	6	17	27	29	22	22	17	28
Federated Investors	1.5%	3.2%	7.0%	7.8%	3.9%	3.2%	3.7%	3.2%	3.2%	4.8%
<i>BBgBarc US Aggregate TR</i>	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%
<i>eV US Core Fixed Inc Net Rank</i>	14	34	16	59	30	10	19	36	28	27
BlackRock Total Return Fund	1.6%	3.5%	7.0%	7.9%	3.8%	2.9%	3.5%	3.3%	4.0%	5.6%
<i>BBgBarc US Aggregate TR</i>	1.3%	3.1%	6.1%	7.9%	3.7%	2.3%	3.2%	2.9%	2.6%	3.9%
<i>eV US Core Fixed Inc Net Rank</i>	7	8	16	49	45	22	35	21	6	7
Vanguard Ultra Short Duration	0.3%	--	--	--	--	--	--	--	--	--
<i>BofA Merrill Lynch 1 Year Treasury</i>	0.4%	0.9%	1.7%	3.0%	2.0%	1.5%	1.3%	1.1%	0.9%	0.8%
<i>Ultrashort Bond MStar MF Rank</i>	54	--	--	--	--	--	--	--	--	--
<b>U.S. Equity Composite</b>	<b>7.8%</b>	<b>4.2%</b>	<b>18.9%</b>	<b>7.7%</b>	<b>10.2%</b>	<b>13.6%</b>	<b>10.3%</b>	<b>9.5%</b>	<b>13.6%</b>	<b>13.0%</b>
<i>Dow Jones U.S. Total Stock Market</i>	7.0%	4.1%	18.7%	8.9%	11.8%	14.0%	10.9%	10.1%	13.7%	14.7%
<i>InvMetrics Public DB US Eq Net Rank</i>	1	40	45	61	78	42	52	54	33	94
SSgA S&P 500 Index Fund	7.0%	4.3%	18.5%	10.4%	12.4%	14.2%	11.6%	10.7%	--	--
<i>S&amp;P 500</i>	7.0%	4.3%	18.5%	10.4%	12.4%	14.2%	11.5%	10.7%	14.0%	14.7%
<i>eV US Large Cap Core Equity Net Rank</i>	31	44	36	38	27	25	18	18	--	--
Frontier Capital Management	8.6%	2.5%	18.0%	0.3%	5.4%	12.5%	6.6%	6.9%	12.6%	14.1%
<i>Russell 2500</i>	7.1%	3.0%	19.2%	1.8%	8.8%	12.3%	8.1%	7.7%	12.5%	14.4%
<i>eV US Small-Mid Cap Core Equity Net Rank</i>	2	75	65	62	77	39	82	75	50	44
Guyasuta Investment Advisors	10.2%	5.8%	21.1%	5.9%	7.5%	12.7%	9.8%	7.8%	13.3%	16.1%
<i>Russell 2000</i>	7.1%	2.1%	17.0%	-3.3%	6.6%	12.3%	7.2%	7.1%	11.6%	13.4%
<i>eV US Small Cap Core Equity Net Rank</i>	1	4	12	6	37	29	15	35	23	7

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

Ending June 30, 2019

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
<b>Non-U.S. Equity Composite</b>	<b>6.3%</b>	<b>5.4%</b>	<b>16.8%</b>	<b>5.7%</b>	<b>6.3%</b>	<b>11.4%</b>	<b>5.7%</b>	<b>4.3%</b>	<b>7.4%</b>	<b>--</b>
MSCI ACWI ex USA	6.0%	3.0%	13.6%	1.3%	4.2%	9.4%	4.1%	2.2%	6.4%	6.5%
InvMetrics Public DB ex-US Eq Net Rank	19	3	5	4	9	6	10	11	29	--
MFS International Equity Fund	6.7%	6.7%	18.8%	7.5%	7.3%	12.2%	6.2%	4.8%	8.6%	--
MSCI EAFE	5.9%	3.7%	14.0%	1.1%	3.9%	9.1%	3.9%	2.2%	7.3%	6.9%
Foreign Large Blend MStar MF Rank	12	1	3	1	2	3	2	4	5	--
SSGa Active Emerging Markets Fund	5.5%	0.2%	6.9%	-3.1%	1.4%	9.2%	3.2%	1.8%	2.9%	--
MSCI Emerging Markets	6.2%	0.6%	10.6%	1.2%	4.6%	10.7%	4.5%	2.5%	4.2%	5.8%
eV Emg Mkts Equity Net Rank	71	82	94	84	82	59	77	69	91	--
ABS Emerging Markets	4.0%	0.9%	12.0%	1.4%	3.9%	7.8%	4.6%	--	--	--
HFR1 Emerging Markets (Total) Index	3.1%	1.2%	8.7%	0.5%	2.7%	6.4%	3.4%	2.6%	4.3%	4.3%
MSCI Emerging Markets	6.2%	0.6%	10.6%	1.2%	4.6%	10.7%	4.5%	2.5%	4.2%	5.8%
<b>Emerging Manager Composite</b>	<b>6.4%</b>	<b>2.6%</b>	<b>15.7%</b>	<b>0.9%</b>	<b>6.7%</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
Emerging Manager Benchmark	6.9%	3.3%	17.4%	4.0%	9.1%	--	--	--	--	--
Twin Capital	6.8%	4.0%	17.3%	7.9%	10.9%	--	--	--	--	--
S&P 500	7.0%	4.3%	18.5%	10.4%	12.4%	14.2%	11.5%	10.7%	14.0%	14.7%
Russell 1000	7.0%	4.2%	18.8%	10.0%	12.3%	14.1%	11.2%	10.5%	14.0%	14.8%
eV US Large Cap Core Equity Net Rank	48	53	50	54	51	--	--	--	--	--
CIM Investment Management	6.7%	2.5%	17.2%	-7.6%	3.6%	--	--	--	--	--
Russell 2000	7.1%	2.1%	17.0%	-3.3%	6.6%	12.3%	7.2%	7.1%	11.6%	13.4%
eV US Small Cap Core Equity Net Rank	63	52	46	81	74	--	--	--	--	--
Fusion Investment Group	5.7%	1.2%	12.4%	3.1%	5.6%	--	--	--	--	--
MSCI ACWI	6.5%	3.6%	16.2%	5.7%	8.2%	11.6%	7.6%	6.2%	9.9%	10.1%
eV Global All Cap Core Eq Net Rank	69	88	82	68	70	--	--	--	--	--
<b>Hedge Fund Composite</b>	<b>1.8%</b>	<b>1.1%</b>	<b>7.0%</b>	<b>3.3%</b>	<b>3.8%</b>	<b>6.5%</b>	<b>2.4%</b>	<b>3.0%</b>	<b>--</b>	<b>--</b>
HFR1 Fund of Funds Composite Index	1.6%	1.5%	6.1%	1.1%	3.1%	4.2%	1.7%	2.2%	3.7%	3.2%
HFRX Equity Hedge Index	1.4%	0.0%	6.0%	-4.2%	0.9%	3.2%	0.2%	0.7%	2.7%	1.4%
InvMetrics Public DB Hedge Funds Net Rank	38	72	21	28	49	10	44	43	--	--
ABS Offshore SPC Global	2.5%	2.0%	7.8%	-0.1%	3.1%	5.8%	2.0%	2.9%	--	--
HFRX Equity Hedge Index	1.4%	0.0%	6.0%	-4.2%	0.9%	3.2%	0.2%	0.7%	2.7%	1.4%
Entrust Three Rivers Partners	0.6%	0.1%	5.6%	--	--	--	--	--	--	--
HFR1 Fund of Funds Composite Index	1.6%	1.5%	6.1%	1.1%	3.1%	4.2%	1.7%	2.2%	3.7%	3.2%
Parametric Defensive Equity	3.6%	2.0%	9.2%	4.9%	6.0%	--	--	--	--	--
50% S&P 500/50% 91 Day T-Bill	3.6%	2.6%	9.7%	6.7%	7.3%	7.8%	6.4%	5.9%	7.3%	7.6%

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

Ending June 30, 2019

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
<b>Real Estate Composite</b>	<b>1.6%</b>	<b>1.6%</b>	<b>3.3%</b>	<b>6.4%</b>	<b>7.0%</b>	<b>7.0%</b>	<b>8.1%</b>	<b>9.0%</b>	--	--
<i>NFI</i>	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%
Rreef America II	1.6%	1.6%	3.2%	6.5%	7.1%	7.1%	8.2%	9.5%	--	--
<i>NFI</i>	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%
Barings Core Property Fund	1.6%	1.6%	3.4%	6.2%	6.8%	6.9%	8.0%	8.5%	--	--
<i>NFI</i>	0.3%	0.8%	2.0%	5.5%	6.5%	6.6%	7.6%	8.8%	9.5%	8.9%



## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

	Calendar Year										
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total Fund Composite</b>	<b>-0.1%</b>	<b>11.7%</b>	<b>8.1%</b>	<b>3.2%</b>	<b>9.2%</b>	<b>13.6%</b>	<b>12.3%</b>	<b>1.8%</b>	<b>5.6%</b>	<b>23.4%</b>	<b>-27.0%</b>
<i>Total Fund Composite Benchmark</i>	0.1%	12.2%	7.7%	3.5%	7.2%	14.1%	10.5%	1.3%	12.6%	23.0%	-26.1%
<i>InvMetrics Public DB Net Rank</i>	2	95	26	1	1	66	41	22	98	19	70
Dedicated Funding for CMPTF	7.5%	7.5%	7.6%	7.5%	13.2%	8.1%	9.8%	7.2%	--	--	--
<i>Annual Return</i>	7.5%	7.5%	7.5%	7.5%	7.5%	8.0%	8.0%	8.0%	--	--	--
<b>Total Invested Portfolio</b>	<b>-5.0%</b>	<b>14.7%</b>	<b>8.5%</b>	<b>0.0%</b>	<b>6.6%</b>	<b>17.6%</b>	<b>14.1%</b>	<b>-2.5%</b>	<b>5.6%</b>	<b>23.3%</b>	<b>-27.0%</b>
<i>Total Invested Portfolio Benchmark</i>	-5.0%	16.3%	7.7%	0.3%	6.9%	17.6%	12.2%	0.3%	12.4%	22.9%	-26.2%
<i>InvMetrics Public DB Net Rank</i>	68	49	16	34	22	22	7	92	98	20	70
<b>Fixed Income Composite</b>	<b>-0.9%</b>	<b>4.3%</b>	<b>4.5%</b>	<b>0.0%</b>	<b>6.1%</b>	<b>-0.4%</b>	<b>8.4%</b>	<b>5.4%</b>	<b>7.8%</b>	<b>13.8%</b>	<b>-9.3%</b>
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
<i>InvMetrics Public DB US Fix Inc Net Rank</i>	91	39	47	56	15	32	35	87	41	42	91
Federated Investors	-0.9%	4.3%	4.8%	-0.2%	5.0%	-0.8%	7.1%	6.5%	8.2%	11.2%	-2.7%
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
<i>eV US Core Fixed Inc Net Rank</i>	88	18	7	89	80	19	23	81	12	33	76
BlackRock Total Return Fund	-0.8%	4.3%	3.5%	0.4%	8.2%	-0.1%	10.3%	4.7%	10.1%	16.3%	-11.1%
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%
<i>eV US Core Fixed Inc Net Rank</i>	85	19	33	64	4	8	2	96	2	14	95
Vanguard Ultra Short Duration	--	--	--	--	--	--	--	--	--	--	--
<i>BofA Merrill Lynch 1 Year Treasury</i>	1.9%	0.6%	0.8%	0.3%	0.2%	0.3%	0.2%	0.5%	0.7%	0.8%	2.9%
<i>Ultrashort Bond MStar MF Rank</i>	--	--	--	--	--	--	--	--	--	--	--
<b>U.S. Equity Composite</b>	<b>-7.2%</b>	<b>19.5%</b>	<b>16.6%</b>	<b>-2.3%</b>	<b>12.5%</b>	<b>34.2%</b>	<b>17.8%</b>	<b>0.6%</b>	<b>8.6%</b>	<b>25.8%</b>	<b>-36.1%</b>
<i>Dow Jones U.S. Total Stock Market</i>	-5.3%	21.2%	12.6%	0.4%	12.5%	33.5%	16.4%	1.1%	17.5%	28.6%	-37.2%
<i>InvMetrics Public DB US Eq Net Rank</i>	73	70	2	84	14	50	4	48	99	86	29
SSgA S&P 500 Index Fund	-4.4%	21.8%	12.0%	1.4%	13.8%	--	--	--	--	--	--
<i>S&amp;P 500</i>	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.5%	-37.0%
<i>eV US Large Cap Core Equity Net Rank</i>	32	46	20	36	33	--	--	--	--	--	--
Frontier Capital Management	-13.5%	18.6%	20.1%	-6.5%	12.1%	39.0%	18.0%	-6.5%	28.9%	46.5%	-39.5%
<i>Russell 2500</i>	-10.0%	16.8%	17.6%	-2.9%	7.1%	36.8%	17.9%	-2.5%	26.7%	34.4%	-36.8%
<i>eV US Small-Mid Cap Core Equity Net Rank</i>	80	35	5	88	1	26	29	86	25	5	75
Guyasuta Investment Advisors	-10.4%	12.2%	29.4%	-9.9%	8.4%	36.2%	25.7%	4.1%	19.3%	40.8%	-30.6%
<i>Russell 2000</i>	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%	-4.2%	26.9%	27.2%	-33.8%
<i>eV US Small Cap Core Equity Net Rank</i>	46	71	3	88	15	73	1	17	97	9	18

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

	Calendar Year										
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Non-U.S. Equity Composite</b>	<b>-11.4%</b>	<b>28.5%</b>	<b>1.9%</b>	<b>-1.7%</b>	<b>-4.2%</b>	<b>12.9%</b>	<b>21.3%</b>	--	--	--	--
MSCI ACWI ex USA	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%
InvMetrics Public DB ex-US Eq Net Rank	6	48	83	23	62	82	8	--	--	--	--
MFS International Equity Fund	-10.7%	28.0%	0.3%	0.0%	-4.2%	18.6%	22.5%	--	--	--	--
MSCI EAFE	-13.8%	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%	-12.1%	7.8%	31.8%	-43.4%
Foreign Large Blend MStar MF Rank	9	24	64	37	36	64	12	--	--	--	--
SSgA Active Emerging Markets Fund	-14.6%	34.3%	11.7%	-13.7%	-3.3%	-5.6%	17.2%	--	--	--	--
MSCI Emerging Markets	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%
eV Emg Mkts Equity Net Rank	30	69	32	59	74	91	69	--	--	--	--
ABS Emerging Markets	-13.3%	26.7%	4.9%	-3.4%	--	--	--	--	--	--	--
HFRI Emerging Markets (Total) Index	-10.9%	19.4%	7.0%	-3.3%	-2.6%	5.5%	10.4%	-14.0%	11.4%	40.3%	-37.3%
MSCI Emerging Markets	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%
<b>Emerging Manager Composite</b>	<b>-9.8%</b>	<b>16.9%</b>	--	--	--	--	--	--	--	--	--
Emerging Manager Benchmark	-8.4%	18.9%	--	--	--	--	--	--	--	--	--
Twin Capital	-6.3%	20.9%	--	--	--	--	--	--	--	--	--
S&P 500	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.5%	-37.0%
Russell 1000	-4.8%	21.7%	12.1%	0.9%	13.2%	33.1%	16.4%	1.5%	16.1%	28.4%	-37.6%
eV US Large Cap Core Equity Net Rank	56	56	--	--	--	--	--	--	--	--	--
CIM Investment Management	-14.0%	11.1%	--	--	--	--	--	--	--	--	--
Russell 2000	-11.0%	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%	-4.2%	26.9%	27.2%	-33.8%
eV US Small Cap Core Equity Net Rank	71	79	--	--	--	--	--	--	--	--	--
Fusion Investment Group	-9.1%	--	--	--	--	--	--	--	--	--	--
MSCI ACWI	-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%	-42.2%
eV Global All Cap Core Eq Net Rank	44	--	--	--	--	--	--	--	--	--	--

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: \$788.4 Million and 100.0% of Fund

	Calendar Year										
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Hedge Fund Composite</b>	<b>-2.9%</b>	<b>9.0%</b>	<b>0.7%</b>	<b>0.0%</b>	<b>4.9%</b>	--	--	--	--	--	--
<i>HFRI Fund of Funds Composite Index</i>	-4.0%	7.8%	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%
<i>HFRX Equity Hedge Index</i>	-9.4%	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%
<i>InvMetrics Public DB Hedge Funds Net Rank</i>	68	23	74	45	35	--	--	--	--	--	--
ABS Offshore SPC Global	-6.4%	12.3%	-4.3%	4.0%	4.8%	--	--	--	--	--	--
<i>HFRX Equity Hedge Index</i>	-9.4%	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%
Entrust Three Rivers Partners	--	--	--	--	--	--	--	--	--	--	--
<i>HFRI Fund of Funds Composite Index</i>	-4.0%	7.8%	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%
Parametric Defensive Equity	-2.9%	--	--	--	--	--	--	--	--	--	--
<i>50% S&amp;P 500/50% 91 Day T-Bill</i>	-1.0%	10.9%	6.1%	0.9%	6.7%	15.3%	7.9%	1.4%	7.8%	13.3%	-19.4%
<b>Real Estate Composite</b>	<b>6.9%</b>	<b>6.5%</b>	<b>8.4%</b>	<b>14.4%</b>	<b>11.0%</b>	--	--	--	--	--	--
<i>NFI</i>	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
Rreef America II	7.4%	6.4%	8.1%	15.6%	12.0%	--	--	--	--	--	--
<i>NFI</i>	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%
Barings Core Property Fund	6.3%	6.6%	8.6%	13.0%	--	--	--	--	--	--	--
<i>NFI</i>	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%

## Private Equity Composite

### Annualized Performance

Asset Class	Fund Company	Vintage Yr.	Perf. as of:	Net IRR
Venture	Draper Triangle Venture II	2004	3/31/2019	2.6%
Venture	Draper Triangle Venture III	2013	3/31/2019	-5.4%
Global Diversified FoFs	Hirtle Callaghan PEP V	2006	3/31/2019	1.9%
Mezzanine	Crescent Mezz Partners VI	2013	3/31/2019	8.5%
Mezzanine	Crescent Mezz Partners VII	2016	3/31/2019	5.8%
<b>Total Private Equity</b>				

### Since Inception Cash Flows

Asset Class	Fund Company	Commitment	<sup>2</sup> Capital Calls	Distributions	Remaining Callable Amt.	Ending Value	<sup>1</sup> Cash Multiple
Venture	Draper Triangle Venture II	\$1,000,000	\$1,000,000	\$1,272,598	\$0	\$36,008	1.3
Venture	Draper Triangle Venture III	\$2,000,000	\$1,862,910	\$82,133	\$0	\$1,519,202	0.9
Global Diversified FoFs	Hirtle Callaghan PEP V	\$3,000,000	\$2,481,360	\$2,625,556	\$518,640	\$191,481	1.1
Mezzanine	Crescent Mezz Partners VI	\$10,000,000	\$10,695,818	\$9,539,338	\$0	\$3,786,786	1.2
Mezzanine	Crescent Mezz Partners VII	\$10,000,000	\$5,126,738	\$1,325,630	\$4,873,262	\$4,132,206	1.1
<b>Total Private Equity</b>		<b>\$44,000,000</b>	<b>\$38,176,215</b>	<b>\$40,622,925</b>	<b>\$5,391,902</b>	<b>\$9,665,683</b>	<b>1.3</b>

<sup>1</sup> Calculated as the sum of the distributions and ending value divided by the amount of all capital calls.

<sup>2</sup> Capital Calls may display higher than Commitment amount due to recallable capital

# Total Fund Composite

# Fee Schedule

Market Value: \$788.4 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Core Fixed Income	Federated Investors	0.25% on the Balance	0.25% \$145,695	0.31%
Core Fixed Income	BlackRock Total Return Fund	0.40% on the Balance	0.40% \$85,018	0.50%
Large-Cap Core	SSgA S&P 500 Index Fund	0.04% on the Balance	0.04% \$48,152	0.05%
Large-Cap Core	Twin Capital	0.35% on the first \$50 million 0.20% on the Balance	0.35% \$9,809	0.60%
Smid-Cap Core	Frontier Capital Management	0.75% on the Balance	0.75% \$244,921	0.84%
Small-Cap Core	Guyasuta Investment Advisors	0.45% on the Balance	0.45% \$140,784	0.88%
Small-Cap Core	CIM Investment Management	0.75% on the first \$1 million 0.65% on the next \$3 million 0.60% on the Balance	0.69% \$17,327	0.88%
Non-U.S. Large-Cap Core	MFS International Equity Fund	0.75% on the Balance	0.75% \$532,327	0.97%
Global Core Equity	Fusion Investment Group	0.70% on the Balance	0.70% \$16,660	0.40%
Emerging Markets	SSgA Active Emerging Markets Fund	0.75% on the Balance	0.75% \$65,169	0.95%
Emerging Markets	ABS Emerging Markets	0.80% on the Balance	0.80% \$79,681	1.00%
Hedged Equity Hedge FoF	ABS Offshore SPC Global	1.00% on the Balance	1.00% \$140,269	1.00%
Multi-Strat. Hedge Fund	Entrust Three Rivers Partners	1.25% on the Balance	1.25% \$301,986	1.00%
Defensive Equity	Parametric Defensive Equity	0.325% on the first \$50 million 0.30% on the next \$50 million 0.275% on the Balance	0.32% \$38,016	1.00%
Core Real Estate	Rreef America II	0.95% on the Balance	0.95% \$219,219	1.01%
Core Real Estate	Barings Core Property Fund	1.10% on the first \$15 million 1.00% on the next \$10 million 0.80% on the Balance	1.07% \$240,819	1.01%

## Total Fund Composite

## Fee Schedule

Market Value: \$788.4 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Core Real Estate	Barings Core Property Fund	1.10% on the first \$15 million 1.00% on the next \$10 million 0.80% on the Balance	1.07% \$240,819	1.01%
Venture Private Equity	Draper Triangle Ventures II, LP	1.00% on total commitments plus 20% carried interest	27.87% \$10,000	55.75%
Venture Private Equity	Draper Triangle Ventures III, LP	2.50% on total commitments plus 20% carried interest	3.29% \$50,000	2.63%
Global Divers. Private Equity FoF	Hirtle Callaghan Private Equity Fund V, LP	0.00% on the Balance	0.00% \$0	1.25%
Mezz. Private Equity	Crescent Mezzanine Partners VIB, LP	1.50% on total commitments plus 20% carried interest after 8% preferred return	3.96% \$150,000	4.62%
Mezzanine Debt	Crescent Mezzanine Partners VIIB, L.P.	0.75% on total commitments 0.75% on invested capital plus 20% carried interest	2.57% \$105,992	2.99%
Fixed Income Annuity	Dedicated Funding for CMPTF	0.00% on the Balance	0.00% \$0	0.00%
<b>Total Investment Management Fees</b>			<b>0.34%</b> <b>\$2,641,842</b>	<b>0.40%</b>
Custodian	PNC Bank	0.03% on the all assets, excluding Dedicated Funding for CMPTF	0.02% \$150,538	
<b>Total Fund</b>			<b>0.35%</b> <b>\$2,792,380</b>	

<sup>1</sup> Expense Ratio & Estimated Annual Fee are Based on Market Value at Month End.

<sup>2</sup> Source: 2016 Marquette Associates Investment Management Fee Study.