



Pittsburgh Comprehensive Municipal Pension

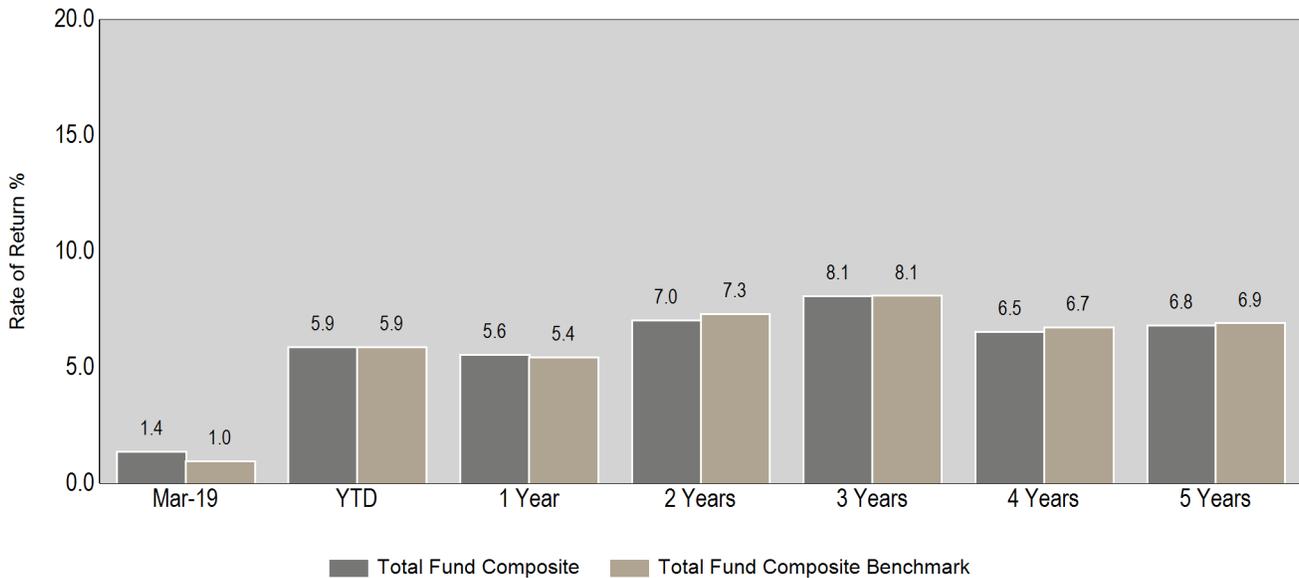
Pittsburgh Comprehensive Municipal

PRELIMINARY

Executive Summary

March 31, 2019

**Return Summary
Ending March 31, 2019**



Return Summary YTD

	Total Return
Total Fund Composite	5.9%
Total Invested Portfolio	8.7%
Fixed Income Composite	3.6%
U.S. Equity Composite	14.0%
Non-U.S. Equity Composite	10.8%
Emerging Manager Composite	12.8%
Hedge Fund Composite	5.6%

Asset Allocation vs. Target

	Current	Current	Policy	Difference*	%
Fixed Income	76,967,133	10.1	13.0	-21,684,744	-2.9
U.S. Equity	181,880,503	24.0	22.0	14,931,172	2.0
Non-U.S. Equity	77,497,103	10.2	12.0	-13,566,169	-1.8
Hedge Funds	59,078,141	7.8	5.0	21,135,111	2.8
Real Assets	45,138,276	5.9	5.0	7,195,246	0.9
Private Equity	8,629,239	1.1	3.0	-14,136,579	-1.9
Other	309,670,202	40.8	40.0	6,125,962	0.8
Total	758,860,599	100.0	100.0		

*Difference between Policy and Current Allocation

Summary of Cash Flows

	Last Month	Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	\$755,881,799	\$725,173,081	\$744,188,555	\$664,951,571	\$664,427,388
Net Cash Flow	-\$7,404,723	-\$8,964,582	-\$27,108,636	-\$76,300,443	-\$141,584,489
Net Investment Change	\$10,383,523	\$42,652,100	\$41,780,680	\$170,209,471	\$236,017,699
Ending Market Value	\$758,860,599	\$758,860,599	\$758,860,599	\$758,860,599	\$758,860,599

Total Fund Composite

Market Value: \$758.9 Million and 100.0% of Fund

Ending March 31, 2019

	Asset Class	Market Value	1 Mo Net Cash Flows	% of Portfolio	Policy %	Policy Difference
Total Fund Composite		\$758,860,599	-\$7,450,665	100.0%	100.0%	\$0
Dedicated Funding for CMPTF	Fixed Income Annuity	\$295,678,324	-\$6,688,000	39.0%	40.0%	-\$7,865,915
Total Invested Portfolio		\$463,182,275	-\$762,665	61.0%	60.0%	\$7,865,915
Fixed Income Composite		\$76,967,133	-\$11,546	10.1%	13.0%	-\$21,684,744
Federated Investors	Core Fixed Income	\$56,430,350	-\$11,546	7.4%		
BlackRock Total Return Fund	Core Fixed Income	\$20,536,784	\$0	2.7%		
U.S. Equity Composite		\$176,739,371	-\$30,952	23.3%	22.0%	\$9,790,039
SSgA S&P 500 Index Fund	Large-Cap Core	\$115,402,603	\$0	15.2%		
Frontier Capital Management	Mid-Cap Core	\$31,804,322	-\$19,878	4.2%		
Guyasuta Investment Advisors	Small-Cap Core	\$29,532,446	-\$11,075	3.9%		
Non-U.S. Equity Composite		\$85,021,862	\$0	11.2%	12.0%	-\$6,041,410
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$66,495,834	\$0	8.8%		
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,654,166	\$0	1.1%		
ABS Emerging Markets	Emerging Markets	\$9,871,863	\$0	1.3%		
Emerging Manager Composite		\$7,488,236	-\$3,233	1.0%	--	\$7,488,236
Twin Capital	Large-Cap Core	\$2,694,448	-\$455	0.4%		
CIM Investment Management	Small-Cap Core	\$2,446,684	-\$1,409	0.3%		
Fusion Investment Group	Global Core Equity	\$2,347,104	-\$1,369	0.3%		
Hedge Fund Composite		\$49,206,279	\$0	6.5%	5.0%	\$11,263,249
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$13,749,069	\$0	1.8%		
Entrust Three Rivers Partners	Multi-Strat. Hedge Fund	\$23,992,552	\$0	3.2%		
Parametric Defensive Equity	Defensive Equity	\$11,464,657	\$0	1.5%		
Real Estate Composite		\$45,138,276	-\$105,722	5.9%	5.0%	\$7,195,246
Rreef America II	Core Real Estate	\$22,902,631	-\$53,865	3.0%	2.5%	\$3,931,117
Barings Core Property Fund	Core Real Estate	\$22,235,645	-\$51,857	2.9%	2.5%	\$3,264,130
Private Equity Composite		\$8,629,239	\$0	1.1%	3.0%	-\$14,136,579
Cash Composite		\$13,991,878	-\$611,210	1.8%	0.0%	\$13,991,878

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

Total Invested Portfolio

Market Value: \$463.2 Million and 61.0% of Fund

Ending March 31, 2019

	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio
Total Invested Portfolio		\$463,182,275	-\$2,413,616	100.0%
Fixed Income Composite		\$76,967,133	-\$34,609	16.6%
Federated Investors	Core Fixed Income	\$56,430,350	-\$34,609	12.2%
BlackRock Total Return Fund	Core Fixed Income	\$20,536,784	\$0	4.4%
U.S. Equity Composite		\$176,739,371	-\$92,595	38.2%
SSgA S&P 500 Index Fund	Large-Cap Core	\$115,402,603	\$0	24.9%
Frontier Capital Management	Smid-Cap Core	\$31,804,322	-\$59,619	6.9%
Guyasuta Investment Advisors	Small-Cap Core	\$29,532,446	-\$32,976	6.4%
Non-U.S. Equity Composite		\$85,021,862	\$0	18.4%
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$66,495,834	\$0	14.4%
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,654,166	\$0	1.9%
ABS Emerging Markets	Emerging Markets	\$9,871,863	\$0	2.1%
Emerging Manager Composite		\$7,488,236	-\$9,621	1.6%
Twin Capital	Large-Cap Core	\$2,694,448	-\$1,341	0.6%
CIM Investment Management	Small-Cap Core	\$2,446,684	-\$4,232	0.5%
Fusion Investment Group	Global Core Equity	\$2,347,104	-\$4,049	0.5%
Hedge Fund Composite		\$49,206,279	-\$14,973	10.6%
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$13,749,069	\$0	3.0%
Entrust Three Rivers Partners	Multi-Strat. Hedge Fund	\$23,992,552	-\$14,973	5.2%
Parametric Defensive Equity	Defensive Equity	\$11,464,657	\$0	2.5%
Real Estate Composite		\$45,138,276	-\$285,066	9.7%
Rreef America II	Core Real Estate	\$22,902,631	-\$233,209	4.9%
Barings Core Property Fund	Core Real Estate	\$22,235,645	-\$51,857	4.8%
Private Equity Composite		\$8,629,239	-\$321,676	1.9%
Cash Composite		\$13,991,878	-\$1,655,077	3.0%

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

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$758.9 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	1.4%	5.9%	5.6%	7.0%	8.1%	6.5%	6.8%	8.2%	10.0%
<i>Total Fund Composite Benchmark</i>	1.0%	5.9%	5.4%	7.3%	8.1%	6.7%	6.9%	7.9%	10.4%
<i>InvestorForce Public DB Net Rank</i>	19	98	7	42	53	8	8	9	31
Dedicated Funding for CMPTF	1.8%	1.8%	7.6%	7.6%	7.6%	7.6%	7.6%	8.7%	--
<i>Annual Return</i>	0.6%	1.8%	7.5%	7.5%	7.5%	7.5%	7.5%	7.6%	--
Total Invested Portfolio	1.1%	8.7%	4.2%	6.7%	8.5%	5.8%	6.3%	7.8%	9.5%
<i>Total Invested Portfolio Benchmark</i>	1.3%	9.2%	4.2%	7.4%	8.7%	6.2%	6.5%	7.9%	10.6%
<i>InvestorForce Public DB Net Rank</i>	56	49	43	63	28	36	25	17	55
Fixed Income Composite	1.8%	3.6%	4.1%	3.0%	2.9%	2.4%	3.0%	3.3%	5.1%
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	4.5%	2.8%	2.0%	2.0%	2.7%	2.5%	3.8%
<i>InvestorForce Public DB US Fix Inc Net Rank</i>	15	3	55	24	16	20	20	12	25
Federated Investors	1.7%	3.7%	4.2%	3.0%	3.1%	2.5%	2.9%	3.0%	4.8%
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	4.5%	2.8%	2.0%	2.0%	2.7%	2.5%	3.8%
<i>eV US Core Fixed Inc Net Rank</i>	88	12	69	32	8	16	32	26	28
BlackRock Total Return Fund	2.0%	3.4%	4.0%	2.9%	2.6%	2.1%	3.2%	3.8%	5.9%
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	4.5%	2.8%	2.0%	2.0%	2.7%	2.5%	3.8%
<i>eV US Core Fixed Inc Net Rank</i>	35	20	85	48	25	46	12	4	6
U.S. Equity Composite	0.6%	14.0%	7.5%	9.7%	13.2%	9.1%	9.7%	12.4%	14.2%
<i>Dow Jones U.S. Total Stock Market</i>	1.4%	14.0%	8.7%	11.2%	13.5%	9.8%	10.3%	12.6%	16.0%
<i>InvestorForce Public DB US Eq Net Rank</i>	77	50	56	79	28	58	50	27	94
SSgA S&P 500 Index Fund	1.9%	13.6%	9.5%	11.7%	13.5%	10.5%	11.0%	--	--
<i>S&P 500</i>	1.9%	13.6%	9.5%	11.7%	13.5%	10.5%	10.9%	12.8%	15.9%
<i>eV US Large Cap Core Equity Net Rank</i>	28	33	25	24	19	12	16	--	--
Frontier Capital Management	-2.6%	15.1%	2.2%	5.6%	11.8%	5.7%	7.2%	11.5%	16.0%
<i>Russell 2500</i>	-0.8%	15.8%	4.5%	8.3%	12.6%	7.2%	7.8%	11.4%	16.2%
<i>eV US Small-Mid Cap Core Equity Net Rank</i>	93	49	49	76	45	76	62	46	44
Guyasuta Investment Advisors	-0.9%	14.5%	6.1%	6.4%	12.9%	7.4%	7.7%	11.5%	18.1%
<i>Russell 2000</i>	-2.1%	14.6%	2.0%	6.8%	12.9%	6.8%	7.1%	10.7%	15.4%
<i>eV US Small Cap Core Equity Net Rank</i>	17	35	22	43	25	42	36	35	8

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$758.9 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Non-U.S. Equity Composite	1.4%	10.8%	-1.2%	7.7%	9.4%	4.7%	4.2%	5.6%	--
MSCI ACWI ex USA	0.6%	10.3%	-4.2%	5.6%	8.1%	3.5%	2.6%	4.7%	8.8%
InvestorForce Public DB ex-US Eq Net Rank	8	30	4	7	12	24	13	42	--
MFS International Equity Fund	1.6%	11.3%	0.9%	8.5%	9.4%	4.7%	4.3%	6.5%	--
MSCI EAFE	0.6%	10.0%	-3.7%	5.1%	7.3%	3.2%	2.3%	5.6%	9.0%
Foreign Large Blend MStar MF Rank	13	21	5	3	5	5	5	10	--
SSgA Active Emerging Markets Fund	-0.9%	6.9%	-10.8%	4.8%	10.4%	4.7%	3.7%	2.4%	--
MSCI Emerging Markets	0.8%	9.9%	-7.4%	7.6%	10.7%	4.5%	3.7%	2.7%	8.9%
eV Emg Mkts Equity Net Rank	97	92	71	71	46	46	49	77	--
ABS Emerging Markets	2.3%	11.0%	-5.2%	5.4%	8.8%	5.0%	--	--	--
HFRI Emerging Markets (Total) Index	1.4%	7.5%	-5.2%	3.7%	7.1%	4.0%	3.0%	3.2%	6.0%
MSCI Emerging Markets	0.8%	9.9%	-7.4%	7.6%	10.7%	4.5%	3.7%	2.7%	8.9%
Emerging Manager Composite	0.1%	12.8%	1.4%	6.5%	--	--	--	--	--
Emerging Manager Benchmark	0.3%	13.6%	4.7%	9.0%	--	--	--	--	--
Twin Capital	1.4%	12.9%	6.9%	10.2%	--	--	--	--	--
S&P 500	1.9%	13.6%	9.5%	11.7%	13.5%	10.5%	10.9%	12.8%	15.9%
Russell 1000	1.7%	14.0%	9.3%	11.6%	13.5%	10.1%	10.6%	12.8%	16.0%
eV US Large Cap Core Equity Net Rank	47	53	51	50	--	--	--	--	--
CIM Investment Management	-2.1%	14.3%	-2.8%	2.9%	--	--	--	--	--
Russell 2000	-2.1%	14.6%	2.0%	6.8%	12.9%	6.8%	7.1%	10.7%	15.4%
eV US Small Cap Core Equity Net Rank	48	37	79	81	--	--	--	--	--
Fusion Investment Group	1.1%	11.1%	-0.1%	6.4%	--	--	--	--	--
MSCI ACWI	1.3%	12.2%	2.6%	8.6%	10.7%	6.7%	6.5%	8.4%	12.0%
eV Global All Cap Core Eq Net Rank	33	68	71	73	--	--	--	--	--
Hedge Fund Composite	0.8%	5.6%	3.7%	4.3%	5.9%	2.0%	3.1%	--	--
HFRI Fund of Funds Composite Index	0.9%	4.6%	0.1%	2.8%	3.9%	1.4%	2.2%	3.1%	3.5%
HFRX Equity Hedge Index	0.8%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
InvestorForce Public DB Hedge Funds Net Rank	42	34	19	23	8	44	42	--	--
ABS Offshore SPC Global	0.3%	5.7%	-1.7%	3.5%	4.3%	1.6%	2.9%	--	--
HFRX Equity Hedge Index	0.8%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
Entrust Three Rivers Partners	0.9%	4.9%	--	--	--	--	--	--	--
HFRI Fund of Funds Composite Index	0.9%	4.6%	0.1%	2.8%	3.9%	1.4%	2.2%	3.1%	3.5%
Parametric Defensive Equity	1.4%	7.0%	6.0%	6.2%	--	--	--	--	--
50% S&P 500/50% 91 Day T-Bill	1.1%	7.0%	6.1%	6.8%	7.4%	5.8%	5.9%	6.7%	8.1%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$758.9 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Real Estate Composite	1.7%	1.7%	6.7%	6.9%	7.1%	8.6%	9.2%	--	--
<i>NFI</i>	0.4%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
Rreef America II	1.6%	1.6%	6.9%	7.1%	7.3%	8.7%	9.6%	--	--
<i>NFI</i>	0.4%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
Barings Core Property Fund	1.8%	1.8%	6.6%	6.8%	6.9%	8.4%	--	--	--
<i>NFI</i>	0.4%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%

Investment Manager

Calendar Performance (Net of Fees)

Market Value: \$758.9 Million and 100.0% of Fund

Calendar Year

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total Fund Composite	-0.1%	11.7%	8.1%	3.2%	9.2%	13.6%	12.3%	1.8%	5.6%	23.4%	-27.0%
<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>InvestorForce 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%	--	--	--
Total Invested Portfolio	-4.9%	14.8%	8.5%	0.0%	6.6%	17.6%	14.1%	-2.5%	5.6%	23.3%	-27.0%
<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>InvestorForce Public DB Net Rank</i>	68	49	15	33	22	22	7	92	98	20	70
Fixed Income Composite	-0.9%	4.3%	4.5%	0.0%	6.1%	-0.4%	8.4%	5.4%	7.8%	13.8%	-9.3%
<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>InvestorForce 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
U.S. Equity Composite	-7.1%	19.5%	16.6%	-2.3%	12.5%	34.2%	17.8%	0.6%	8.6%	25.8%	-36.1%
<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>InvestorForce 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%	21.9%	12.0%	1.5%	13.8%	--	--	--	--	--	--
<i>S&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>	31	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: \$758.9 Million and 100.0% of Fund

	Calendar Year										
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Non-U.S. Equity Composite	-11.3%	28.6%	1.9%	-1.7%	-4.1%	13.1%	21.5%	--	--	--	--
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%
InvestorForce Public DB ex-US Eq Net Rank	5	47	83	21	59	82	7	--	--	--	--
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	-14.0%	35.3%	12.5%	-13.1%	-2.6%	-4.8%	18.1%	--	--	--	--
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	25	63	26	53	67	87	66	--	--	--	--
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%
Emerging Manager Composite	-9.8%	16.9%	--	--	--	--	--	--	--	--	--
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: \$758.9 Million and 100.0% of Fund

	Calendar Year										
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Hedge Fund Composite	-2.9%	9.0%	0.7%	0.0%	4.9%	--	--	--	--	--	--
<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>InvestorForce 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&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%
Real Estate Composite	6.9%	6.5%	8.4%	14.4%	11.0%	--	--	--	--	--	--
<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%
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	Birchmere Ventures III	2005	12/31/2018	-1.0%
Venture	Draper Triangle Venture II	2004	12/31/2018	2.6%
Venture	Draper Triangle Venture III	2013	12/31/2018	-6.3%
Venture	Novitas Capital Partners III	2003	12/31/2018	-35.6%
Global Diversified FoFs	Hirtle Callaghan PEP III	2003	12/31/2018	16.9%
Global Diversified FoFs	Hirtle Callaghan PEP IV	2004	12/31/2018	9.1%
Global Diversified FoFs	Hirtle Callaghan PEP V	2006	12/31/2018	1.9%
Mezzanine	Crescent Mezz Partners VI	2013	12/31/2018	8.7%
Mezzanine	Crescent Mezz Partners VII	2016	12/31/2018	4.6%
Total Private Equity				

Since Inception Cash Flows

Asset Class	Fund Company	Commitment	Capital Calls	Distributions	Remaining Callable Amt.	Ending Value	¹ Cash Multiple
Venture	Birchmere Ventures III	\$1,000,000	\$1,000,000	\$2,271,948	\$0	\$0	2.3
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	\$1,652,414	\$82,133	\$0	\$1,315,146	0.8
Venture	Novitas Capital Partners III	\$1,000,000	\$989,904	\$425,899	\$0	\$0	0.4
Global Diversified FoFs	Hirtle Callaghan PEP III	\$8,000,000	\$7,600,835	\$12,277,293	\$0	\$0	1.6
Global Diversified FoFs	Hirtle Callaghan PEP IV	\$8,000,000	\$7,418,650	\$10,802,530	\$0	\$0	1.5
Global Diversified FoFs	Hirtle Callaghan PEP V	\$3,000,000	\$2,481,360	\$2,186,507	\$518,640	\$630,530	1.1
Mezzanine	Crescent Mezz Partners VI	\$10,000,000	\$10,546,818	\$8,810,017	\$0	\$4,264,306	1.2
Mezzanine	Crescent Mezz Partners VII	\$10,000,000	\$3,623,490	\$1,177,836	\$6,376,510	\$2,635,461	1.1
Total Private Equity		\$44,000,000	\$36,313,471	\$39,306,761	\$6,895,150	\$8,881,451	1.3

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

Total Fund Composite

Fee Schedule

Market Value: \$758.9 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee ¹	Industry Average ²
Core Fixed Income	Federated Investors	0.25% on the Balance	0.25% \$141,076	0.26%
Core Fixed Income	BlackRock Total Return Fund	0.40% on the Balance	0.40% \$82,147	0.50%
Large-Cap Core	SSgA S&P 500 Index Fund	0.04% on the Balance	0.04% \$46,161	0.05%
Large-Cap Core	Twin Capital	0.35% on the first \$50 million 0.20% on the Balance	0.35% \$9,431	0.60%
Smid-Cap Core	Frontier Capital Management	0.75% on the Balance	0.75% \$238,532	0.84%
Small-Cap Core	Guyasuta Investment Advisors	0.45% on the Balance	0.45% \$132,896	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% \$16,903	0.88%
Non-U.S. Large-Cap Core	MFS International Equity Fund	0.75% on the Balance	0.75% \$498,719	0.97%
Global Core Equity	Fusion Investment Group	0.70% on the Balance	0.70% \$16,430	0.40%
Emerging Markets	SSgA Active Emerging Markets Fund	0.75% on the Balance	0.75% \$64,906	0.95%
Emerging Markets	ABS Emerging Markets	0.80% on the Balance	0.80% \$78,975	1.00%
Hedged Equity Hedge FoF	ABS Offshore SPC Global	1.00% on the Balance	1.00% \$137,491	1.00%
Multi-Strat. Hedge Fund	Entrust Three Rivers Partners	1.30% on the Balance	1.30% \$311,903	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% \$37,260	1.00%
Core Real Estate	Rreef America II	0.95% on the Balance	0.95% \$217,575	1.01%

Total Fund Composite

Fee Schedule

Market Value: \$758.9 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee ¹	Industry Average ²
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% \$237,356	1.01%
Venture Private Equity	Birchmere Ventures III, LP	2.50% on total commitments plus 20% carried interest after 8% preferred return	--- \$25,000	---
Venture Private Equity	Draper Triangle Ventures II, LP	1.00% on total commitments plus 20% carried interest	--- \$10,000	---
Global Divers. Private Equity FoF	Hirtle Callaghan Private Equity Fund V, LP	0.00% on the Balance	--- \$0	1.25%
Mezz. Private Equity	Crescent Mezzanine Partners VIB, LP	1.50% on total commitments plus 20% carried interest after 8% preferred return	3.73% \$150,000	4.35%
Mezzanine Debt	Crescent Mezzanine Partners VIIB, L.P.	0.75% on total commitments 0.75% on invested capital plus 20% carried interest	3.50% \$95,436	4.09%
Fixed Income Annuity	Dedicated Funding for CMPTF	0.00% on the Balance	0.00% \$0	0.00%
Total Investment Management Fees			0.34% \$2,548,198	0.39%
Custodian	PNC Bank	0.03% on the all assets, excluding Dedicated Funding for CMPTF	0.02% \$145,234	
Total Fund			0.35% \$2,693,431	

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

² Source: 2016 Marquette Associates Investment Management Fee Study.