



Pension Plan

Employees' Retirement System
of Milwaukee County
Monthly Update
March 31, 2019

Market Value: \$1,670.3 Million and 100.0% of Fund

Investment Manager	Asset Class	Status	Reason
NTGI Agg Bond Index	Core Fixed Income	In Compliance	---
Galliard	Core Fixed Income	In Compliance	---
Boston Partners	Large-Cap Value	In Compliance	---
NTGI S&P 500 Index	Large-Cap Core	In Compliance	---
NTGI S&P 400 Mid-Cap (Index)	Mid-Cap Core	In Compliance	---
Silvercrest Asset Management	Small-Cap Value	In Compliance	---
NTGI ACWI Ex-US IMI (Index)	Non-U.S. All-Cap Core	In Compliance	---
Segall Bryant & Hamill Intl Sm Cap	Non-U.S. Small-Cap Value	In Compliance	---
OFI Institutional Asset Management	Emerging Markets	Termination	Professional Turnover
QMA Emerging Markets Small Cap	Emerging Markets	In Compliance	---
ABS	Hedged Equity Hedge FoF	Alert	Performance
Parametric Defensive Equity	Long/Short Hedge Fund	In Compliance	---
American Realty Advisors	Core Real Estate	In Compliance	---
Morgan Stanley	Core Real Estate	In Compliance	---
UBS	Core Real Estate	In Compliance	---
IFM	Core Infrastructure	In Compliance	---
J.P. Morgan Infrastructure	Core Infrastructure	In Compliance	---
Siguler Guff III	Private Equity	In Compliance	---
Siguler Guff II	U.S. Private Equity FoF	In Compliance	---
Adams Street	U.S. Private Equity FoF	In Compliance	---
Mesirow VI	U.S. Private Equity FoF	In Compliance	---
Mesirow Private Equity Fund VII-A	U.S. Private Equity FoF	In Compliance	---

Investment Manager Evaluation Terminology

The following terminology has been developed by Marquette Associates to facilitate efficient communication among the Investment Manager, Investment Consultant, and the Plan Sponsor. Each term signifies a particular status with the Fund and any conditions that may require improvement. In each case, communication is made only after consultation with the Trustees and/or the Investment Committee of the Plan.

In Compliance – The investment manager states it is acting in accordance with the Investment Policy Guidelines.

Alert – The investment manager is notified of a problem in performance (usually related to a benchmark or volatility measure), a change in investment characteristics, an alteration in management style or key investment professionals, and/or any other irregularities.

On Notice – The investment manager is notified of continued concern with one or more Alert issues. Failure to improve upon stated issues within a specific time frame justifies termination.

Termination – The Trustees have decided to terminate the investment manager. The investment manager is notified and transition plans are in place.

Total Fund Composite

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Total Fund Composite		1,670,325,147	-46,674,091	100.0	100.0	0
Fixed Income Composite		315,386,175	-10,000,862	18.9	23.0	-68,788,609
NTGI Agg Bond Index	Core Fixed Income	109,343,260	-10,000,000	6.5		
Galliard	Core Fixed Income	206,034,194	-938	12.3		
U.S. Equity Composite		378,749,940	-685	22.7	23.0	-5,424,843
Boston Partners	Large-Cap Value	91,683,478	-533	5.5	5.5	-184,405
NTGI S&P 500 (Index)	Large-Cap Core	129,594,071	0	7.8	8.0	-4,031,941
NTGI S&P 400 Mid-Cap (Index)	Mid-Cap Core	115,764,959	0	6.9	7.0	-1,157,801
Silvercrest Asset Management	Small-Cap Value	41,707,432	-152	2.5	2.5	-50,696
International Equity Composite		263,341,064	-33,101,728	15.8	15.5	4,440,666
NTGI ACWI Ex-US IMI (Index)	Non-U.S. All-Cap Core	166,872,399	-15,000,000	10.0	12.0	-33,566,619
Segall Bryant & Hamill Intl Sm Cap	Non-U.S. Small-Cap Value	42,483,305	-18,000,000	2.5	2.5	725,176
OFI Institutional Asset Management	Emerging Markets	39,510,301	-74,782	2.4	1.5	14,455,424
QMA Emerging Markets Small Cap	Emerging Markets	14,475,059	-26,946	0.9	1.0	-2,228,193
Hedged Equity Composite		154,115,979	25,518	9.2	8.5	12,138,341
ABS	Hedged Equity Hedge FoF	71,962,904	25,518	4.3	4.0	5,149,898
Parametric Defensive Equity	Long/Short Hedge Fund	82,153,075	0	4.9	4.5	6,988,443
Real Estate Composite		184,173,214	-2,325,227	11.0	10.0	17,140,700
American Realty Advisors	Core Real Estate	42,735,683	-629,137	2.6		
Morgan Stanley	Core Real Estate	98,415,038	-1,258,920	5.9		
UBS	Core Real Estate	43,022,493	-437,170	2.6		
Infrastructure Composite		148,479,938	-449,805	8.9	10.0	-18,552,576
IFM	Core Infrastructure	78,916,062	-449,805	4.7		
J.P. Morgan Infrastructure	Core Infrastructure	69,563,876	0	4.2		

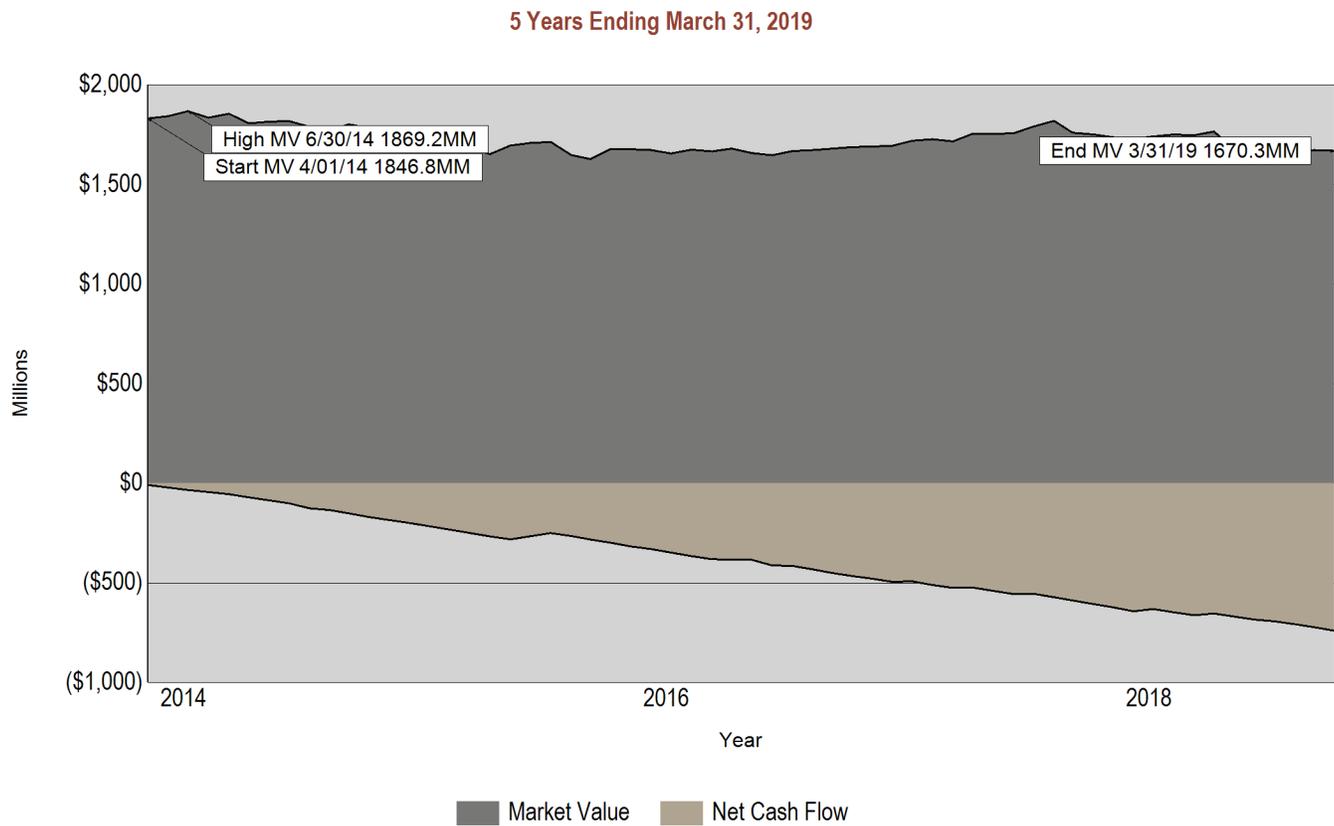
Total Fund Composite

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	Asset Class	Market Value (\$)	3 Mo Net Cash Flows (\$)	% of Portfolio	Policy %	Policy Difference (\$)
Private Equity Composite		186,348,189	2,790,134	11.2	10.0	19,315,674
Progress	U.S. Private Equity FoF	398	0	0.0		
Brinson 1998	U.S. Private Equity FoF	8,057	0	0.0		
Brinson 1999	U.S. Private Equity FoF	38,641	0	0.0		
Brinson 2000	U.S. Private Equity FoF	96,829	0	0.0		
Brinson 2001	U.S. Private Equity FoF	264,661	-147,854	0.0		
Brinson 2002	U.S. Private Equity FoF	117,431	0	0.0		
Brinson 2003	U.S. Private Equity FoF	232,122	-50,711	0.0		
Brinson 2004	U.S. Private Equity FoF	317,611	0	0.0		
Adams Street 2005	U.S. Private Equity FoF	2,228,094	0	0.1		
Adams Street 2009	U.S. Private Equity FoF	23,314,575	-865,235	1.4		
Adams Street 2012	Global Divers. Private Equity FoF	36,518,654	0	2.2		
Adams Street Co-Investment III	Private Equity Co- Investment	35,375,553	0	2.1		
Siguler Guff II	U.S. Private Equity FoF	30,934,829	-1,132,367	1.9		
Siguler Guff III	U.S. Private Equity FoF	23,434,669	2,786,301	1.4		
Mesirov VI	U.S. Private Equity FoF	25,824,881	600,000	1.5		
Mesirov Private Equity Fund VII-A	U.S. Private Equity FoF	7,641,184	1,600,000	0.5		
Total Cash Equivalents		39,730,647	-3,611,436	2.4	0.0	39,730,647

Market Value: \$1,670.3 Million and 100.0% of Fund



Summary of Cash Flows

	Last Month	Year-To-Date	One Year	Three Years	Five Years
Beginning Market Value	\$1,673,861,445	\$1,618,743,236	\$1,752,354,158	\$1,679,442,505	\$1,846,774,702
Net Cash Flow	-\$17,587,095	-\$46,674,091	-\$132,697,327	-\$437,027,551	-\$731,141,657
Net Investment Change	\$14,050,797	\$98,256,001	\$50,668,316	\$427,910,192	\$554,692,101
Ending Market Value	\$1,670,325,147	\$1,670,325,147	\$1,670,325,147	\$1,670,325,147	\$1,670,325,147

Total Fund Composite

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	YTD	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	0.8%	6.1%	6.1%	2.8%	7.3%	8.4%	6.5%	6.3%	7.6%	9.5%
<i>Total Fund Benchmark</i>	0.8%	6.5%	6.5%	2.4%	6.3%	7.8%	5.6%	5.7%	7.1%	9.6%
Fixed Income Composite	2.0%	3.5%	3.5%	4.8%	2.6%	1.9%	2.0%	2.7%	2.5%	4.6%
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	2.9%	4.5%	2.8%	2.0%	2.0%	2.7%	2.5%	3.8%
U.S. Equity Composite	0.0%	12.6%	12.6%	4.4%	8.1%	11.4%	7.6%	8.0%	10.9%	14.9%
<i>Wilshire 5000 Total Market</i>	1.5%	14.1%	14.1%	8.9%	11.3%	13.6%	10.1%	10.5%	12.7%	16.0%
International Equity Composite	0.4%	10.1%	10.1%	-8.3%	4.6%	7.0%	4.3%	3.0%	5.4%	8.7%
<i>MSCI ACWI ex USA</i>	0.6%	10.3%	10.3%	-4.2%	5.6%	8.1%	3.5%	2.6%	4.7%	8.8%
Hedged Equity Composite	0.9%	6.4%	6.4%	2.3%	4.8%	5.9%	3.2%	4.2%	6.0%	--
<i>HFRX Equity Hedge Index</i>	0.8%	6.0%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
<i>Russell 3000</i>	1.5%	14.0%	14.0%	8.8%	11.3%	13.5%	9.9%	10.4%	12.6%	16.0%
<i>MSCI ACWI</i>	1.3%	12.2%	12.2%	2.6%	8.6%	10.7%	6.7%	6.5%	8.4%	12.0%
Real Estate Composite	1.2%	1.1%	1.1%	6.6%	7.2%	7.3%	8.7%	9.6%	10.5%	16.5%
<i>Custom Real Estate Benchmark</i>	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	16.6%
<i>NFI</i>	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
Infrastructure Composite	1.5%	1.4%	1.4%	7.4%	13.4%	10.6%	10.1%	7.2%	7.3%	--
<i>CPI +4%</i>	0.9%	2.2%	2.2%	5.9%	6.2%	6.3%	5.9%	5.5%	5.5%	5.9%
Private Equity Composite	0.0%	0.0%	0.0%	11.2%	14.4%	14.2%	12.2%	11.3%	10.8%	12.4%
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	YTD	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	0.8%	6.1%	6.1%	2.8%	7.3%	8.4%	6.5%	6.3%	7.6%	9.5%
<i>Total Fund Benchmark</i>	0.8%	6.5%	6.5%	2.4%	6.3%	7.8%	5.6%	5.7%	7.1%	9.6%
<i>InvestorForce Public DB Net Rank</i>	85	98	98	84	24	34	8	20	27	53
Fixed Income Composite	2.0%	3.5%	3.5%	4.8%	2.6%	1.9%	2.0%	2.7%	2.5%	4.6%
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	2.9%	4.5%	2.8%	2.0%	2.0%	2.7%	2.5%	3.8%
<i>InvestorForce Public DB Total Fix Inc Net Rank</i>	3	27	27	3	53	52	48	28	49	48
<i>NTGI Agg Bond Index</i>	1.9%	3.0%	3.0%	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	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>	50	69	69	--	--	--	--	--	--	--
<i>Galliard</i>	2.0%	3.7%	3.7%	5.1%	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	1.9%	2.9%	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>	28	12	12	6	--	--	--	--	--	--
U.S. Equity Composite	0.0%	12.6%	12.6%	4.4%	8.1%	11.4%	7.6%	8.0%	10.9%	14.9%
<i>Wilshire 5000 Total Market</i>	1.5%	14.1%	14.1%	8.9%	11.3%	13.6%	10.1%	10.5%	12.7%	16.0%
<i>InvestorForce Public DB US Eq Net Rank</i>	97	96	96	96	97	94	92	89	84	74
<i>Boston Partners</i>	-0.7%	9.4%	9.4%	1.4%	7.1%	11.1%	7.0%	7.3%	11.3%	14.9%
<i>Russell 1000 Value</i>	0.6%	11.9%	11.9%	5.7%	6.3%	10.5%	7.3%	7.7%	11.1%	14.5%
<i>eV US Large Cap Value Equity Net Rank</i>	83	95	95	73	41	29	47	53	33	25
<i>NTGI S&P 500 (Index)</i>	2.0%	13.7%	13.7%	--	--	--	--	--	--	--
<i>S&P 500</i>	1.9%	13.6%	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>	27	32	32	--	--	--	--	--	--	--
<i>NTGI S&P 400 Mid-Cap (Index)</i>	-0.6%	14.5%	14.5%	2.6%	--	--	--	--	--	--
<i>S&P 400 MidCap</i>	-0.6%	14.5%	14.5%	2.6%	6.7%	11.2%	7.3%	8.3%	11.4%	16.3%
<i>eV US Mid Cap Core Equity Net Rank</i>	69	58	58	60	--	--	--	--	--	--
<i>Silvercrest Asset Management</i>	-3.3%	11.3%	11.3%	-1.5%	2.3%	10.0%	5.9%	6.6%	--	--
<i>Russell 2000 Value</i>	-2.9%	11.9%	11.9%	0.2%	2.6%	10.9%	5.9%	5.6%	9.6%	14.1%
<i>eV US Small Cap Value Equity Net Rank</i>	69	77	77	46	49	33	36	24	--	--

Investment Manager

Annualized Performance (Net of Fees)

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Ending March 31, 2019

	1 Mo	YTD	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
International Equity Composite	0.4%	10.1%	10.1%	-8.3%	4.6%	7.0%	4.3%	3.0%	5.4%	8.7%
MSCI ACWI ex USA	0.6%	10.3%	10.3%	-4.2%	5.6%	8.1%	3.5%	2.6%	4.7%	8.8%
InvestorForce Public DB ex-US Eq Net Rank	78	75	75	89	69	78	35	41	46	70
NTGI ACWI Ex-US IMI (Index)	0.7%	10.3%	10.3%	-5.1%	5.7%	8.2%	3.9%	2.9%	--	--
MSCI ACWI ex USA IMI	0.5%	10.3%	10.3%	-5.0%	5.5%	7.9%	3.7%	2.7%	4.9%	9.2%
eV Non-US Diversified Eq Gross Rank	51	58	58	51	52	41	63	68	--	--
Segall Bryant & Hamill Intl Sm Cap	-1.0%	8.2%	8.2%	-16.9%	-0.8%	--	--	--	--	--
MSCI EAFE Small Cap	0.2%	10.7%	10.7%	-9.4%	5.8%	7.5%	6.4%	4.5%	8.2%	12.8%
eV EAFE Small Cap Value Net Rank	36	59	59	99	99	--	--	--	--	--
OFI Institutional Asset Management	1.6%	12.7%	12.7%	-3.8%	9.9%	11.7%	5.9%	3.8%	--	--
MSCI Emerging Markets	0.8%	9.9%	9.9%	-7.4%	7.6%	10.7%	4.5%	3.7%	2.7%	8.9%
Diversified Emerging Mkts MStar MF Rank	43	26	26	8	12	21	18	36	--	--
QMA Emerging Markets Small Cap	1.5%	9.5%	9.5%	--	--	--	--	--	--	--
MSCI Emerging Markets Small Cap	0.9%	7.8%	7.8%	-12.4%	1.9%	5.9%	1.9%	1.8%	2.6%	10.4%
eV Emg Mkts Small Cap Equity Net Rank	52	51	51	--	--	--	--	--	--	--
Hedged Equity Composite	0.9%	6.4%	6.4%	2.3%	4.8%	5.9%	3.2%	4.2%	6.0%	--
HFRX Equity Hedge Index	0.8%	6.0%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
Russell 3000	1.5%	14.0%	14.0%	8.8%	11.3%	13.5%	9.9%	10.4%	12.6%	16.0%
MSCI ACWI	1.3%	12.2%	12.2%	2.6%	8.6%	10.7%	6.7%	6.5%	8.4%	12.0%
InvestorForce Public DB Hedge Funds Net Rank	20	15	15	16	1	6	12	12	1	--
ABS	0.3%	5.7%	5.7%	-1.7%	3.5%	4.4%	1.7%	3.0%	5.1%	--
HFRX Equity Hedge Index	0.8%	6.0%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
Russell 3000	1.5%	14.0%	14.0%	8.8%	11.3%	13.5%	9.9%	10.4%	12.6%	16.0%
MSCI ACWI	1.3%	12.2%	12.2%	2.6%	8.6%	10.7%	6.7%	6.5%	8.4%	12.0%
Parametric Defensive Equity	1.4%	7.0%	7.0%	6.0%	6.2%	7.6%	--	--	--	--
HFRX Equity Hedge Index	0.8%	6.0%	6.0%	-5.1%	1.4%	2.9%	0.2%	0.7%	2.3%	1.9%
S&P 500	1.9%	13.6%	13.6%	9.5%	11.7%	13.5%	10.5%	10.9%	12.8%	15.9%

Investment Manager

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Ending March 31, 2019

	1 Mo	YTD	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Real Estate Composite	1.2%	1.1%	1.1%	6.6%	7.2%	7.3%	8.7%	9.6%	10.5%	16.5%
Custom Real Estate Benchmark	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	16.6%
NFI	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
InvestorForce All DB Real Estate Priv Net Rank	40	60	60	61	43	42	44	35	15	1
American Realty Advisors	1.5%	1.5%	1.5%	7.1%	7.1%	6.6%	8.0%	8.8%	9.4%	--
NFI	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
Morgan Stanley	1.3%	1.3%	1.3%	7.2%	8.0%	8.4%	9.7%	10.6%	11.6%	--
NFI	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
UBS	0.7%	0.5%	0.5%	4.8%	5.4%	5.3%	6.7%	7.5%	7.9%	--
NFI	0.4%	1.2%	1.2%	6.6%	6.8%	7.0%	8.4%	9.2%	9.8%	7.7%
Infrastructure Composite	1.5%	1.4%	1.4%	7.4%	13.4%	10.6%	10.1%	7.2%	7.3%	--
CPI +4%	0.9%	2.2%	2.2%	5.9%	6.2%	6.3%	5.9%	5.5%	5.5%	5.9%
IFM	2.9%	2.6%	2.6%	13.3%	18.7%	15.5%	14.2%	10.5%	9.8%	--
CPI +4%	0.9%	2.2%	2.2%	5.9%	6.2%	6.3%	5.9%	5.5%	5.5%	5.9%
J.P. Morgan Infrastructure	0.0%	0.0%	0.0%	1.5%	8.1%	5.8%	6.1%	4.0%	4.9%	--
CPI +4%	0.9%	2.2%	2.2%	5.9%	6.2%	6.3%	5.9%	5.5%	5.5%	5.9%
Private Equity Composite	0.0%	0.0%	0.0%	11.2%	14.4%	14.2%	12.2%	11.3%	10.8%	12.4%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Progress	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	0.6%	-1.4%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 1998	0.0%	0.0%	0.0%	3.3%	2.3%	1.1%	2.1%	1.5%	1.9%	1.8%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 1999	0.0%	0.0%	0.0%	2.7%	1.4%	-0.2%	3.3%	-1.2%	1.5%	3.8%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 2000	0.0%	0.0%	0.0%	3.8%	7.7%	4.7%	3.6%	0.9%	1.8%	5.2%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 2001	0.0%	0.0%	0.0%	0.4%	2.9%	3.3%	-0.3%	-0.1%	3.2%	6.1%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 2002	0.0%	0.0%	0.0%	-10.2%	-6.2%	-1.8%	0.2%	-2.7%	0.4%	6.1%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 2003	0.0%	0.0%	0.0%	-0.7%	5.6%	6.7%	4.6%	6.2%	7.9%	8.2%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Brinson 2004	0.0%	0.0%	0.0%	15.3%	11.8%	11.0%	7.2%	6.0%	7.9%	11.2%
Cambridge Associates All PE	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	1 Mo	YTD	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Adams Street 2005	0.0%	0.0%	0.0%	-1.1%	5.3%	6.6%	5.3%	5.7%	7.2%	9.9%
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Adams Street 2009	0.0%	0.0%	0.0%	8.2%	13.5%	13.1%	11.9%	12.2%	11.9%	15.9%
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Adams Street 2012	0.0%	0.0%	0.0%	12.0%	14.3%	13.1%	11.5%	10.3%	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Adams Street Co-Investment III	0.0%	0.0%	0.0%	13.9%	18.7%	21.7%	14.9%	--	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Siguler Guff II	0.0%	0.0%	0.0%	9.5%	13.0%	14.0%	12.6%	12.0%	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Siguler Guff III	0.0%	0.0%	0.0%	17.7%	15.3%	14.4%	--	--	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Mesirow VI	0.0%	0.0%	0.0%	11.7%	15.9%	14.5%	10.2%	--	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%
Mesirow Private Equity Fund VII-A	0.0%	0.0%	0.0%	-8.2%	--	--	--	--	--	--
<i>Cambridge Associates All PE</i>	0.0%	0.0%	0.0%	8.3%	13.1%	13.2%	11.4%	11.0%	12.2%	13.8%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Fund Composite	-2.5%	16.1%	7.0%	2.3%	5.4%	15.4%	11.2%	0.3%	12.2%	18.4%
<i>Total Fund Benchmark</i>	-3.7%	14.3%	7.6%	1.1%	5.3%	15.0%	10.8%	1.0%	12.5%	20.0%
<i>InvestorForce Public DB Net Rank</i>	10	21	63	2	53	45	61	57	50	54
Fixed Income Composite	-0.1%	2.9%	2.5%	1.1%	5.6%	-1.4%	4.7%	7.3%	6.8%	15.3%
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%
<i>InvestorForce Public DB Total Fix Inc Net Rank</i>	46	75	70	20	17	51	61	27	67	35
<i>NTGI Agg Bond Index</i>	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%
<i>eV US Core Fixed Inc Net Rank</i>	--	--	--	--	--	--	--	--	--	--
<i>Galliard</i>	-0.1%	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.0%	3.5%	2.6%	0.5%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%
<i>eV US Core Fixed Inc Net Rank</i>	42	--	--	--	--	--	--	--	--	--
U.S. Equity Composite	-8.4%	18.5%	12.9%	-0.7%	9.5%	34.4%	16.2%	-1.4%	19.2%	32.0%
<i>Wilshire 5000 Total Market</i>	-5.3%	21.0%	13.4%	0.7%	12.7%	33.1%	16.1%	1.0%	17.2%	28.3%
<i>InvestorForce Public DB US Eq Net Rank</i>	88	85	45	64	73	44	40	82	31	22
<i>Boston Partners</i>	-8.8%	19.7%	14.5%	-4.1%	11.6%	36.8%	21.0%	1.1%	13.4%	26.7%
<i>Russell 1000 Value</i>	-8.3%	13.7%	17.3%	-3.8%	13.5%	32.5%	17.5%	0.4%	15.5%	19.7%
<i>eV US Large Cap Value Equity Net Rank</i>	48	25	43	61	48	27	7	40	52	39
<i>NTGI S&P 500 (Index)</i>	--	--	--	--	--	--	--	--	--	--
<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%
<i>eV US Large Cap Core Equity Net Rank</i>	--	--	--	--	--	--	--	--	--	--
<i>NTGI S&P 400 Mid-Cap (Index)</i>	-11.0%	--	--	--	--	--	--	--	--	--
<i>S&P 400 MidCap</i>	-11.1%	16.2%	20.7%	-2.2%	9.8%	33.5%	17.9%	-1.7%	26.6%	37.4%
<i>eV US Mid Cap Core Equity Net Rank</i>	51	--	--	--	--	--	--	--	--	--
<i>Silvercrest Asset Management</i>	-15.8%	11.9%	29.1%	-2.4%	5.1%	--	--	--	--	--
<i>Russell 2000 Value</i>	-12.9%	7.8%	31.7%	-7.5%	4.2%	34.5%	18.0%	-5.5%	24.5%	20.6%
<i>eV US Small Cap Value Equity Net Rank</i>	59	38	27	20	50	--	--	--	--	--

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
International Equity Composite	-16.7%	29.6%	4.1%	-2.0%	-2.2%	16.0%	16.5%	-13.0%	12.5%	29.1%
MSCI ACWI ex USA	-14.2%	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%
InvestorForce Public DB ex-US Eq Net Rank	79	30	54	27	24	58	84	39	41	84
NTGI ACWI Ex-US IMI (Index)	-14.3%	27.8%	4.7%	-4.4%	-3.7%	16.1%	--	--	--	--
MSCI ACWI ex USA IMI	-14.8%	27.8%	4.4%	-4.6%	-3.9%	15.8%	17.0%	-14.3%	12.7%	43.6%
eV Non-US Diversified Eq Gross Rank	44	56	23	89	54	86	--	--	--	--
Segall Bryant & Hamill Intl Sm Cap	-24.7%	30.7%	--	--	--	--	--	--	--	--
MSCI EAFE Small Cap	-17.9%	33.0%	2.2%	9.6%	-4.9%	29.3%	20.0%	-15.9%	22.0%	46.8%
eV EAFE Small Cap Value Net Rank	99	70	--	--	--	--	--	--	--	--
OFI Institutional Asset Management	-12.1%	35.4%	7.1%	-13.6%	-4.6%	--	--	--	--	--
MSCI Emerging Markets	-14.6%	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%
Diversified Emerging Mkts MStar MF Rank	11	57	56	48	76	--	--	--	--	--
QMA Emerging Markets Small Cap	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets Small Cap	-18.6%	33.8%	2.3%	-6.8%	1.0%	1.0%	22.2%	-27.2%	27.2%	113.8%
eV Emg Mkts Small Cap Equity Net Rank	--	--	--	--	--	--	--	--	--	--
Hedged Equity Composite	-4.6%	12.0%	1.7%	2.1%	5.2%	19.1%	6.9%	-4.3%	--	--
HFRX Equity Hedge Index	-9.4%	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%
Russell 3000	-5.2%	21.1%	12.7%	0.5%	12.6%	33.6%	16.4%	1.0%	16.9%	28.3%
MSCI ACWI	-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%
InvestorForce Public DB Hedge Funds Net Rank	81	2	55	22	28	1	56	90	--	--
ABS	-6.4%	12.7%	-4.3%	4.0%	4.9%	20.6%	5.2%	-3.0%	--	--
HFRX Equity Hedge Index	-9.4%	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%
Russell 3000	-5.2%	21.1%	12.7%	0.5%	12.6%	33.6%	16.4%	1.0%	16.9%	28.3%
MSCI ACWI	-9.4%	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%
Parametric Defensive Equity	-2.9%	11.7%	8.2%	--	--	--	--	--	--	--
HFRX Equity Hedge Index	-9.4%	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%
S&P 500	-4.4%	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.5%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Real Estate Composite	7.5%	7.5%	7.8%	14.2%	13.0%	14.2%	11.0%	13.0%	14.4%	34.9%
Custom Real Estate Benchmark	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.1%	33.7%
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%
InvestorForce All DB Real Estate Priv Net Rank	42	28	50	36	19	22	30	60	43	2
American Realty Advisors	7.7%	7.1%	6.1%	14.3%	10.6%	11.3%	10.2%	13.8%	--	--
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%
Morgan Stanley	8.0%	8.8%	9.2%	14.6%	14.2%	16.2%	11.7%	16.5%	--	--
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%
UBS	6.1%	5.3%	6.2%	11.7%	10.4%	9.2%	--	--	--	--
NFI	7.4%	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%
Infrastructure Composite	12.3%	17.7%	3.5%	3.6%	-0.4%	6.6%	10.9%	7.6%	--	--
CPI +4%	6.0%	6.2%	6.2%	4.8%	4.8%	5.6%	5.8%	7.1%	5.6%	6.8%
IFM	20.2%	21.1%	6.1%	5.4%	1.1%	6.5%	11.5%	6.7%	--	--
CPI +4%	6.0%	6.2%	6.2%	4.8%	4.8%	5.6%	5.8%	7.1%	5.6%	6.8%
J.P. Morgan Infrastructure	4.8%	14.3%	1.1%	2.2%	-1.5%	6.9%	10.1%	6.7%	--	--
CPI +4%	6.0%	6.2%	6.2%	4.8%	4.8%	5.6%	5.8%	7.1%	5.6%	6.8%
Private Equity Composite	15.4%	16.0%	10.8%	6.7%	11.2%	9.8%	11.6%	8.6%	18.0%	12.1%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Progress	0.0%	0.0%	0.0%	0.0%	13.0%	-7.0%	44.1%	-28.4%	2.7%	-22.3%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 1998	3.6%	1.0%	-0.8%	3.8%	0.7%	1.0%	5.2%	-12.4%	5.7%	6.1%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 1999	3.2%	1.1%	-2.0%	7.5%	-13.5%	14.7%	5.8%	3.3%	8.1%	5.5%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 2000	6.4%	8.4%	-2.9%	1.0%	-7.3%	7.1%	5.2%	8.3%	10.7%	14.8%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 2001	0.5%	7.5%	-5.3%	-4.4%	6.5%	16.5%	9.2%	5.6%	11.9%	13.2%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 2002	-14.9%	3.3%	11.1%	-0.3%	-8.6%	17.2%	7.1%	8.4%	23.5%	14.5%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 2003	1.7%	12.2%	2.7%	5.4%	15.3%	21.3%	2.6%	-3.2%	11.0%	12.0%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Brinson 2004	15.4%	11.4%	4.4%	-0.8%	4.3%	18.4%	7.2%	13.8%	24.5%	11.4%
Cambridge Associates All PE	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%

Investment Manager

Annualized Performance (Net of Fees)

Market Value: \$1,670.3 Million and 100.0% of Fund

Ending March 31, 2019

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Adams Street 2005	0.5%	13.2%	4.9%	5.2%	7.9%	15.8%	10.2%	8.3%	17.8%	11.5%
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Adams Street 2009	12.4%	18.6%	8.2%	9.9%	16.3%	16.1%	7.0%	14.2%	29.6%	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Adams Street 2012	16.1%	16.8%	5.9%	6.3%	11.0%	0.9%	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Adams Street Co-Investment III	22.5%	15.5%	28.9%	-2.8%	--	--	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Siguler Guff II	12.9%	15.5%	13.9%	6.9%	13.1%	-0.2%	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Siguler Guff III	19.1%	10.9%	--	--	--	--	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Mesirow VI	16.3%	19.9%	7.4%	-2.6%	--	--	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%
Mesirow Private Equity Fund VII-A	--	--	--	--	--	--	--	--	--	--
<i>Cambridge Associates All PE</i>	11.5%	19.2%	9.8%	7.3%	11.2%	20.7%	12.6%	8.0%	19.6%	14.2%

Total Fund Composite

Fee Schedule

Market Value: \$1,670.3 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee ¹	Industry Average ²
Core Fixed Income	NTGI Agg Bond Index	0.0175% on the Balance	0.0175% \$19,135	0.28%
Core Fixed Income	Gallard	0.20% on the first \$50 million 0.15% on the next \$50 million 0.10% on the Balance	0.14% \$281,034	0.23%
Large-Cap Value	Boston Partners	0.40% on the first \$15 million 0.30% on the next \$25 million 0.20% on the next \$25 million 0.15% on the next \$35 million 0.10% on the Balance	0.25% \$225,025	0.51%
Large-Cap Core	NTGI S&P 500 (Index)	0.005% on the Balance	0.005% \$6,480	0.05%
Mid-Cap Core	NTGI S&P 400 Mid-Cap (Index)	0.01% on the Balance	0.01% \$11,576	0.22%
Small-Cap Value	Silvercrest Asset Management	0.65% on the first \$50 million 0.55% on the Balance	0.65% \$271,098	0.96%
Non-U.S. All-Cap Core	NTGI ACWI Ex-US IMI (Index)	0.04% on the Balance	0.04% \$66,749	0.10%
Non-U.S. Small-Cap Value	Segall Bryant & Hamill Intl Sm Cap	0.85% on the Balance	0.85% \$361,108	1.08%
Emerging Markets	OFI Institutional Asset Management	0.85% on the first \$50 million 0.80% on the next \$50 million 0.70% on the Balance	0.85% \$335,838	0.95%
Emerging Markets	QMA Emerging Markets Small Cap	0.80% on the Balance	0.80% \$115,800	1.25%
Hedged Equity Hedge FoF	ABS	0.85% on the Balance *redemptions quarterly with 45 days notice	0.85% \$611,685	1.00%
Long/Short Hedge Fund	Parametric Defensive Equity	0.325% on the first \$50 million 0.30% on the next \$50 million 0.275% on the Balance	0.32% \$258,959	1.69%
Core Real Estate	American Realty Advisors	0.95% on the Balance	0.95% \$405,989	1.01%
Core Real Estate	Morgan Stanley	0.90% on the Balance	0.90% \$885,735	1.01%

Total Fund Composite

Fee Schedule

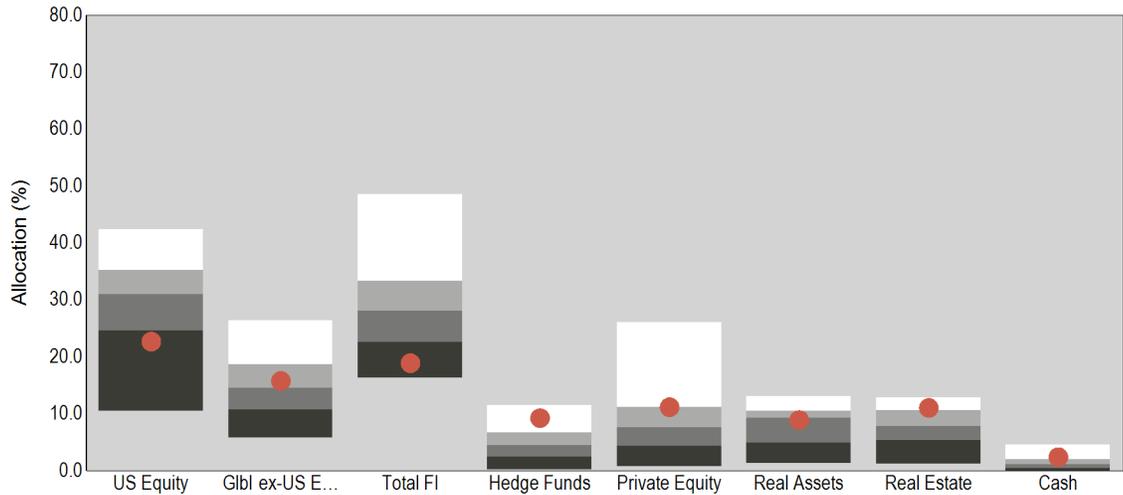
Market Value: \$1,670.3 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee ¹	Industry Average ²
Core Real Estate	UBS	0.955% on the first \$10 million 0.825% on the next \$15 million 0.805% on the next \$25 million	0.85% \$364,331	1.01%
Core Infrastructure	IFM	0.97% on the Balance Performance Fee: 20% of return above 8% on a rolling three year basis	0.97% \$765,486	2.00%
Core Infrastructure	J.P. Morgan Infrastructure	1.00% on the Balance Performance Fee: 15% with 7% Hurdle	1.00% \$695,639	2.00%
Private Equity	Siguler Guff III	0.67% on the first \$50 million 0.60% on the Balance 10% carry on secondaries and co-invest	0.64% \$626,073	1.25%
U.S. Private Equity FoF	Siguler Guff II	0.69% on commitment	0.89% \$276,000	1.62%
U.S. Private Equity FoF	Adams Street	0.89% on commitment	1.52% \$355,200	2.13%
U.S. Private Equity FoF	Mesirow VI	0.70% on commitment	0.81% \$210,000	1.45%
U.S. Private Equity FoF	Mesirow Private Equity Fund VII-A	0.70% on commitment	3.66% \$280,000	6.54%
Cash Overlay	Northern Trust - Cash Overlay	0.07% on the first \$100 million 0.06% on the next \$150 million 0.05% on the Balance	0.07% \$20,542	0.16%
Total Investment Management Fees			0.45% \$7,449,484	0.79%
Custodian	Northern Trust	\$150,000 Annual Fee (approximate)	\$150,000	N/A
Total Fund			0.45% \$7,599,484	

Total Fund Allocation

Market Value: \$1,670.3 Million and 100.0% of Fund

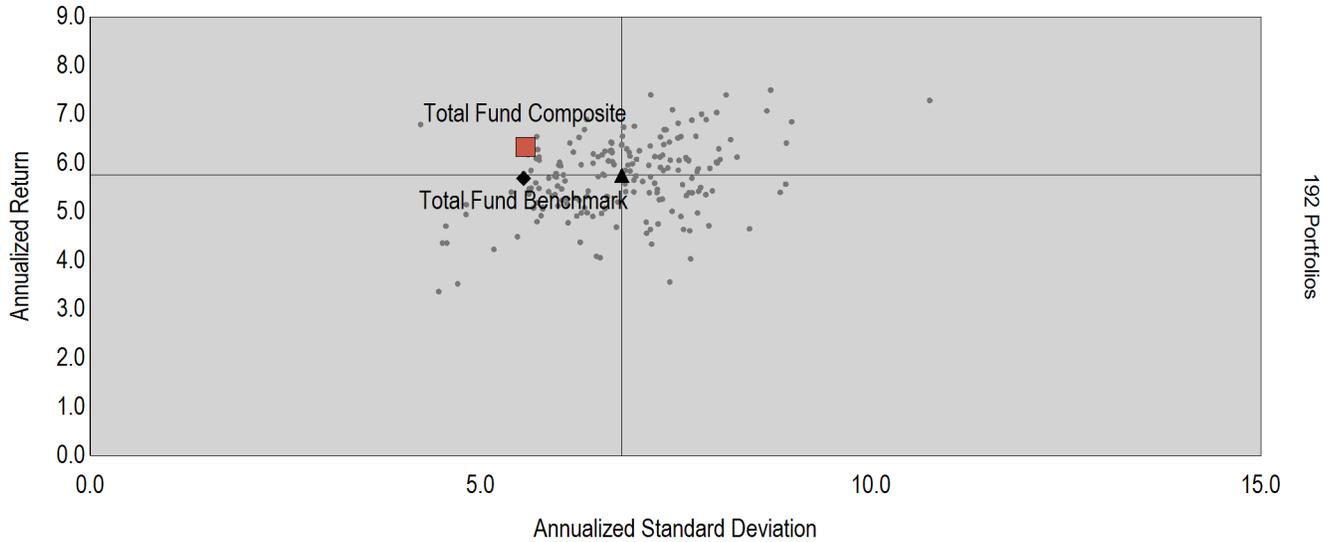
Total Plan Allocation vs. InvestorForce Public DB Net
As of March 31, 2019



	Allocation (Rank)															
5th Percentile	42.4	26.4	48.5	11.5	26.0	13.0	12.8	4.6								
25th Percentile	35.2	18.6	33.3	6.7	11.2	10.5	10.6	2.0								
Median	30.9	14.5	28.1	4.4	7.6	9.3	7.8	1.0								
75th Percentile	24.5	10.8	22.6	2.4	4.4	4.9	5.4	0.4								
95th Percentile	10.5	5.8	16.3	0.2	0.7	1.3	1.3	0.0								
# of Portfolios	88	121	137	25	56	29	92	132								
● Total Fund Composite	22.7	(83)	15.8	(42)	18.9	(88)	9.2	(16)	11.2	(26)	8.9	(54)	11.0	(21)	2.4	(19)

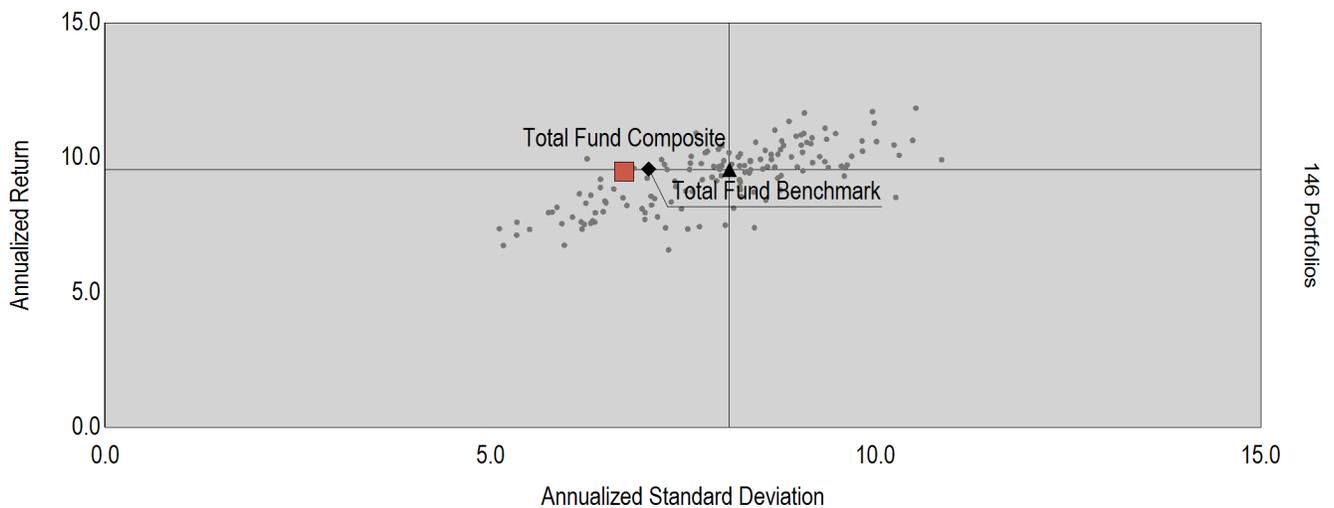
Market Value: \$1,670.3 Million and 100.0% of Fund

Annualized Return vs. Annualized Standard Deviation
5 Years Ending March 31, 2019



	Anlzd Return	Anlzd Standard Deviation
Total Fund Composite	6.3%	5.6%
Total Fund Benchmark	5.7%	5.6%

Annualized Return vs. Annualized Standard Deviation
10 Years Ending March 31, 2019



	Anlzd Return	Anlzd Standard Deviation
Total Fund Composite	9.5%	6.7%
Total Fund Benchmark	9.6%	7.1%