



Pittsburgh Comprehensive Municipal Pension

Pittsburgh Comprehensive Municipal

Executive Summary

December 31, 2017

Manager Status

Market Value: \$750.8 Million and 100.0% of Fund

Investment Manager	Asset Class	Status	Reason
Federated Investors	Core Fixed Income	In Compliance	
BlackRock Total Return Fund	Core Fixed Income	In Compliance	
SSgA S&P 500 Index Fund	Large-Cap Core	In Compliance	
Twin Capital	Large-Cap Core	In Compliance	
Frontier Capital Management	Smid-Cap Core	In Compliance	
Guyasuta Investment Advisors	Small-Cap Core	In Compliance	
CIM Investment Management	Small-Cap Core	In Compliance	
MFS International Equity Fund	Non-U.S. Large-Cap Core	In Compliance	
Fusion Investment Group	Global Core Equity	In Compliance	
SSgA Active Emerging Markets Fund	Emerging Markets	In Compliance	
ABS Emerging Markets	Emerging Markets	In Compliance	
ABS Offshore SPC Global	Hedged Equity Hedge FoF	In Compliance	
Entrust Diversified Select Equity Fund	Hedged Equity Hedge FoF	In Compliance	
Entrust Special Opportunities Fund III	Multi-Strat. Hedge Fund	In Compliance	
Parametric Defensive Equity	Defensive Equity	In Compliance	
Rreef America II	Core Real Estate	In Compliance	
Barings Core Property Fund	Core Real Estate	In Compliance	
Birchmere Ventures III, LP	Venture Private Equity	In Compliance	
Draper Triangle Ventures II, LP	Venture Private Equity	In Compliance	
Draper Triangle Ventures III, LP	Venture Private Equity	In Compliance	
Novitas Capital Partners III, LP	Venture Private Equity	In Compliance	
Hirtle Callaghan Private Equity Fund III, LP	Global Divers. Private Equity FoF	In Compliance	
Hirtle Callaghan Private Equity Fund IV, LP	Global Divers. Private Equity FoF	In Compliance	
Hirtle Callaghan Private Equity Fund V, LP	Global Divers. Private Equity FoF	In Compliance	
Crescent Mezzanine Partners VIB, LP	Mezz. Private Equity	In Compliance	
Crescent Mezzanine Partners VIIB, L.P.	Mezzanine Debt	In Compliance	
Dedicated Funding for CMPTF	Fixed Income Annuity	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.

Market Value: \$750.8 Million and 100.0% of Fund

Ending December 31, 2017

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	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio	Policy %	Policy Difference
Total Fund Composite		\$750,803,194	-\$1,629,223	100.0%	100.0%	\$0
Dedicated Funding for CMPTF	Fixed Income Annuity	\$301,878,952	-\$3,344,000	40.2%	40.0%	\$1,557,675
Total Invested Portfolio		\$448,924,242	\$1,714,777	59.8%	60.0%	-\$1,557,675
Fixed Income Composite		\$74,763,647	-\$34,096	10.0%	13.0%	-\$22,840,768
Federated Investors	Core Fixed Income	\$54,741,659	-\$34,096	7.3%		
BlackRock Total Return Fund	Core Fixed Income	\$20,021,989	\$0	2.7%		
U.S. Equity Composite		\$171,471,574	-\$96,774	22.8%	22.0%	\$6,294,872
SSgA S&P 500 Index Fund	Large-Cap Core	\$106,183,341	\$0	14.1%		
Twin Capital	Large-Cap Core	\$2,542,715	-\$1,266	0.3%		
Frontier Capital Management	Smid-Cap Core	\$31,645,103	-\$58,975	4.2%		
Guyasuta Investment Advisors	Small-Cap Core	\$28,634,297	-\$32,297	3.8%		
CIM Investment Management	Small-Cap Core	\$2,466,118	-\$4,236	0.3%		
Non-U.S. Equity Composite		\$88,828,435	-\$3,971	11.8%	12.0%	-\$1,267,949
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$66,848,566	\$0	8.9%		
SSgA Active Emerging Markets Fund	Emerging Markets	\$9,411,710	\$0	1.3%		
ABS Emerging Markets	Emerging Markets	\$10,264,049	\$0	1.4%		
Fusion Investment Group	Global Core Equity	\$2,304,110	-\$3,971	0.3%		
Hedge Fund Composite		\$48,613,923	\$926,422	6.5%	5.0%	\$11,073,763
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$13,896,040	\$0	1.9%		
Entrust Diversified Select Equity Fund	Hedged Equity Hedge FoF	\$12,507,283	\$0	1.7%		
Entrust Special Opportunities Fund III	Multi-Strat. Hedge Fund	\$11,179,888	\$926,422	1.5%		
Parametric Defensive Equity	Defensive Equity	\$11,030,712	\$0	1.5%		
Real Estate Composite		\$42,377,618	-\$282,009	5.6%	5.0%	\$4,837,458
Rreef America II	Core Real Estate	\$21,842,314	-\$227,652	2.9%	2.5%	\$3,072,234
Barings Core Property Fund	Core Real Estate	\$20,535,304	-\$54,357	2.7%	2.5%	\$1,765,225
Private Equity Composite		\$11,375,837	\$455,691	1.5%	3.0%	-\$11,148,259
Cash Composite		\$11,493,207	\$749,513	1.5%	0.0%	\$11,493,207

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



Total Invested Portfolio

Market Value: \$448.9 Million and 59.8% of Fund

Ending December 31, 2017

	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio
Total Invested Portfolio		\$448,924,242	\$1,714,777	100.0%
Fixed Income Composite		\$74,763,647	-\$34,096	16.7%
Federated Investors	Core Fixed Income	\$54,741,659	-\$34,096	12.2%
BlackRock Total Return Fund	Core Fixed Income	\$20,021,989	\$0	4.5%
U.S. Equity Composite		\$171,471,574	-\$96,774	38.2%
SSgA S&P 500 Index Fund	Large-Cap Core	\$106,183,341	\$0	23.7%
Twin Capital	Large-Cap Core	\$2,542,715	-\$1,266	0.6%
Frontier Capital Management	Smid-Cap Core	\$31,645,103	-\$58,975	7.0%
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Hedge Fund Composite		\$48,613,923	\$926,422	10.8%
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Cash Composite		\$11,493,207	\$749,513	2.6%

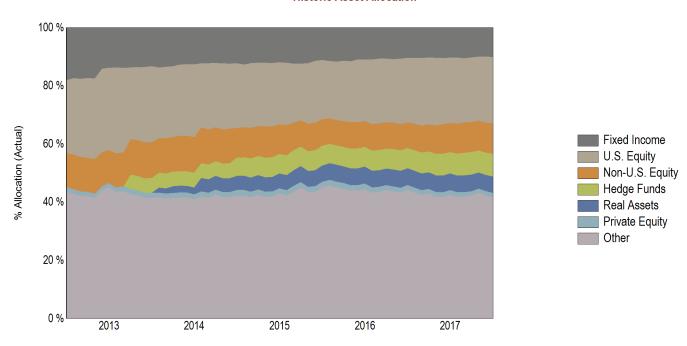
- Private Equity Composite may not include current performance, due to reporting cycle limitations.



Asset Allocation

Market Value: \$750.8 Million and 100.0% of Fund

Historic Asset Allocation

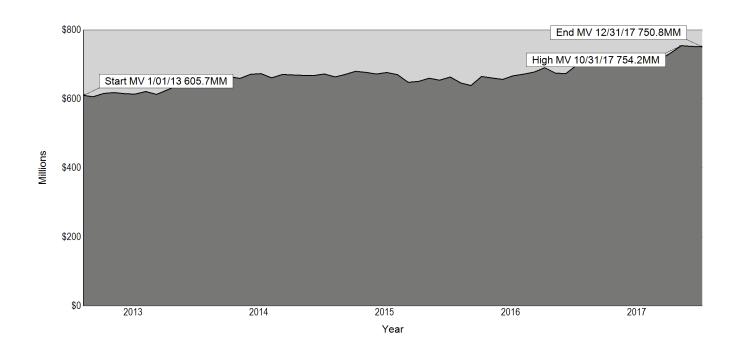


Asset Allocation vs. Target As Of December 31, 2017

	Current	Policy	Difference	%
U.S. Equity	\$171,471,574	\$165,176,703	\$6,294,872	0.8%
Non-U.S. Equity	\$78,564,386	\$90,096,383	-\$11,531,997	-1.5%
Hedge Funds	\$58,877,971	\$37,540,160	\$21,337,812	2.8%
Real Assets	\$42,377,618	\$37,540,160	\$4,837,458	0.6%
Private Equity	\$11,375,837	\$22,524,096	-\$11,148,259	-1.5%
Other	\$313,372,160	\$300,321,278	\$13,050,882	1.7%
Total	\$750,803,194	\$750,803,194		

Market Value History

Market Value: \$750.8 Million and 100.0% of Fund



Summary of Cash Flows

	Fourth Quarter	Year-To-Date	One Year	Three Years
Beginning Market Value	\$432,772,397.59	\$403,523,054.83	\$403,523,054.83	\$393,465,790.22
Net Cash Flow	\$1,955,203.92	-\$13,469,533.77	-\$13,469,533.77	-\$36,040,881.80
Net Investment Change	\$14,196,640.16	\$58,870,720.61	\$58,870,720.61	\$91,499,333.25
Ending Market Value	\$448,924,241.67	\$448,924,241.67	\$448,924,241.67	\$448,924,241.67

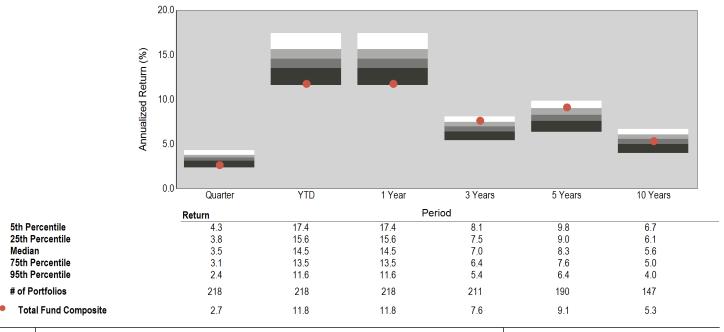
Annualized Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

Ending December 31, 2017

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	0.8%	2.7%	11.8%	9.9%	7.6%	8.0%	9.1%	8.5%	5.3%
Total Fund Composite Benchmark	0.9%	3.1%	12.3%	10.0%	7.8%	7.6%	8.9%	8.0%	5.8%
InvestorForce Public DB Net Rank	83	92	95	85	20	2	23	16	62
Total Invested Portfolio	0.8%	3.2%	14.8%	11.7%	7.6%	7.4%	9.3%	8.2%	5.2%
Total Invested Portfolio Benchmark	1.1%	4.1%	16.3%	11.9%	7.9%	7.7%	9.6%	8.6%	6.1%
InvestorForce Public DB Net Rank	78	70	42	23	20	16	12	23	68
Fixed Income Composite	0.5%	0.5%	4.3%	4.4%	2.9%	3.7%	2.9%	4.0%	3.9%
BBgBarc US Aggregate TR	0.5%	0.4%	3.5%	3.1%	2.2%	3.2%	2.1%	3.2%	4.0%
InvestorForce Public DB US Fix Inc Net Rank	13	34	37	36	31	28	19	34	54
U.S. Equity Composite	0.5%	5.2%	19.4%	18.0%	10.8%	11.2%	15.5%	13.6%	7.8%
Dow Jones U.S. Total Stock Market	1.0%	6.3%	21.2%	16.8%	11.1%	11.4%	15.5%	13.5%	8.7%
InvestorForce Public DB US Eq Net Rank	91	96	68	4	44	28	27	8	77
Non-U.S. Equity Composite	1.7%	4.4%	28.4%	14.4%	8.8%	5.4%	6.9%		
MSCI ACWI ex USA	2.2%	5.0%	27.2%	15.3%	7.8%	4.8%	6.8%	4.9%	1.8%
InvestorForce Public DB ex-US Eq Net Rank	85	73	49	81	48	49	75		
Hedge Fund Composite	0.5%	1.5%	8.9%	4.7%	3.1%	3.6%			
HFRI Fund of Funds Composite Index	0.8%	1.9%	7.6%	4.0%	2.6%	2.8%	4.0%	2.6%	1.1%
HFRX Equity Hedge Index	1.0%	2.7%	10.0%	4.9%	2.4%	2.2%	3.9%	0.4%	-0.6%
InvestorForce Public DB Hedge Funds Net Rank	62	56	20	39	40	40			
Real Estate Composite	1.7%	1.7%	6.5%	7.4%	9.7%	10.0%			
NFI	0.6%	1.8%	6.7%	7.2%	9.4%	9.9%	10.5%	11.0%	4.1%

InvestorForce Public DB Net Return Comparison



Calendar Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

Calendar Year

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Fund Composite	11.8%	8.1%	3.2%	9.2%	13.6%	12.3%	1.8%	5.6%	23.4%	-27.0%	11.6%
Total Fund Composite Benchmark	12.3%	7.7%	3.5%	7.2%	14.1%	10.5%	1.3%	12.6%	23.0%	-26.1%	8.5%
InvestorForce Public DB Net Rank	95	26	1	1	66	41	22	98	19	70	2
Total Invested Portfolio	14.8%	8.5%	0.0%	6.6%	17.6%	14.1%	-2.5%	5.6%	23.3%	-27.0%	11.6%
Total Invested Portfolio Benchmark	16.3%	7.7%	0.3%	6.9%	17.6%	12.2%	0.3%	12.4%	22.9%	-26.2%	8.2%
InvestorForce Public DB Net Rank	42	15	33	22	22	7	92	98	20	70	2
Fixed Income Composite	4.3%	4.5%	0.0%	6.1%	-0.4%	8.4%	5.4%	7.8%	13.8%	-9.3%	
BBgBarc US Aggregate TR	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%
InvestorForce Public DB US Fix Inc Net Rank	37	47	56	15	32	35	87	41	42	91	
U.S. Equity Composite	19.4%	16.7%	-2.3%	12.5%	34.2%	17.8%	0.6%	8.6%	25.8%	-36.1%	
Dow Jones U.S. Total Stock Market	21.2%	12.6%	0.4%	12.5%	33.5%	16.4%	1.1%	17.5%	28.6%	-37.2%	5.6%
InvestorForce Public DB US Eq Net Rank	68	2	84	14	50	4	48	99	86	29	
Non-U.S. Equity Composite	28.4%	1.9%	-1.7%	-4.1%	13.1%	21.5%		-			
MSCI ACWI ex USA	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%	16.7%
InvestorForce Public DB ex-US Eq Net Rank	49	83	21	59	82	7					
Hedge Fund Composite	8.9%	0.7%	0.0%	4.9%				-			
HFRI Fund of Funds Composite Index	7.6%	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%
HFRX Equity Hedge Index	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%
InvestorForce Public DB Hedge Funds Net Rank	20	74	45	35							
Real Estate Composite	6.5%	8.4%	14.4%	11.0%	-		-			-	
NFI	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%

Annualized Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

Ending December 31, 2017

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	0.8%	2.7%	11.8%	9.9%	7.6%	8.0%	9.1%	8.5%	5.3%
Total Fund Composite Benchmark	0.9%	3.1%	12.3%	10.0%	7.8%	7.6%	8.9%	8.0%	5.8%
InvestorForce Public DB Net Rank	83	92	95	85	20	2	23	16	62
Dedicated Funding for CMPTF	0.7%	1.9%	7.5%	7.6%	7.5%	8.9%	8.8%	8.7%	
Annual Return	0.6%	1.8%	7.5%	7.5%	7.5%	7.5%	7.6%	7.7%	
Total Invested Portfolio	0.8%	3.2%	14.8%	11.7%	7.6%	7.4%	9.3%	8.2%	5.2%
Total Invested Portfolio Benchmark	1.1%	4.1%	16.3%	11.9%	7.9%	7.7%	9.6%	8.6%	6.1%
InvestorForce Public DB Net Rank	78	70	42	23	20	16	12	23	68
Fixed Income Composite	0.5%	0.5%	4.3%	4.4%	2.9%	3.7%	2.9%	4.0%	3.9%
BBgBarc US Aggregate TR	0.5%	0.4%	3.5%	3.1%	2.2%	3.2%	2.1%	3.2%	4.0%
InvestorForce Public DB US Fix Inc Net Rank	13	34	37	36	31	28	19	34	54
Federated Investors	0.5%	0.6%	4.3%	4.6%	3.0%	3.5%	2.6%	3.8%	4.3%
BBgBarc US Aggregate TR	0.5%	0.4%	3.5%	3.1%	2.2%	3.2%	2.1%	3.2%	4.0%
eV US Core Fixed Inc Net Rank	16	20	19	10	15	35	25	32	58
BlackRock Total Return Fund	0.5%	0.3%	4.3%	3.9%	2.7%	4.1%	3.2%	4.4%	4.4%
BBgBarc US Aggregate TR	0.5%	0.4%	3.5%	3.1%	2.2%	3.2%	2.1%	3.2%	4.0%
eV US Core Fixed Inc Net Rank	56	79	20	24	30	10	6	8	46
U.S. Equity Composite	0.5%	5.2%	19.4%	18.0%	10.8%	11.2%	15.5%	13.6%	7.8%
Dow Jones U.S. Total Stock Market	1.0%	6.3%	21.2%	16.8%	11.1%	11.4%	15.5%	13.5%	8.7%
InvestorForce Public DB US Eq Net Rank	91	96	68	4	44	28	27	8	77
SSgA S&P 500 Index Fund	1.1%	6.7%	21.9%	16.8%	11.5%	12.1%			
S&P 500	1.1%	6.6%	21.8%	16.8%	11.4%	12.0%	15.8%	13.8%	8.5%
eV US Large Cap Core Equity Net Rank	49	48	46	24	17	15			
Twin Capital									
1 Will Gapital	1.3%	7.0%	20.9%		-				
S&P 500	1.3% 1.1%	7.0% 6.6%	20.9% 21.8%	 16.8%	 11.4%	 12.0%	 15.8%	 13.8%	8.5%
									8.5%
S&P 500	1.1%	6.6%	21.8%						8.5% 10.1%
S&P 500 eV US Large Cap Core Equity Net Rank	1.1% 38	6.6% 39	21.8% 56	16.8% 	11.4% 	12.0% 	15.8% 	13.8% 	
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management	1.1% 38 0.0%	6.6% 39 3.8%	21.8% 56 18.6%	16.8% 19.3%	11.4% 10.0%	12.0% 10.6%	15.8% 15.7%	13.8% 12.6%	10.1%
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net	1.1% 38 0.0% 0.3%	6.6% 39 3.8% 5.2%	21.8% 56 18.6% 16.8%	16.8% 19.3% 17.2%	11.4% 10.0% 10.1%	12.0% 10.6% 9.3%	15.8% 15.7% 14.3%	13.8% 12.6% 12.2%	10.1% 9.2%
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net Rank	1.1% 38 0.0% 0.3% 63	6.6% 39 3.8% 5.2% 92	21.8% 56 18.6% 16.8% 32	16.8% 19.3% 17.2%	11.4% 10.0% 10.1% 47	12.0% 10.6% 9.3% 29	15.8% 15.7% 14.3% 24	13.8% 12.6% 12.2% 43	10.1% 9.2% 30
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net Rank Guyasuta Investment Advisors	1.1% 38 0.0% 0.3% 63	6.6% 39 3.8% 5.2% 92	21.8% 56 18.6% 16.8% 32	16.8% 19.3% 17.2% 9	11.4% 10.0% 10.1% 47	12.0% 10.6% 9.3% 29 9.2%	15.8% 15.7% 14.3% 24 14.1%	13.8% 12.6% 12.2% 43 14.2%	10.1% 9.2% 30
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net Rank Guyasuta Investment Advisors Russell 2000	1.1% 38 0.0% 0.3% 63 -0.9% -0.4%	6.6% 39 3.8% 5.2% 92 1.6% 3.3%	21.8% 56 18.6% 16.8% 32 12.2% 14.6%	16.8% 19.3% 17.2% 9 20.5% 17.9%	11.4% 10.0% 10.1% 47 9.4% 10.0%	12.0% 10.6% 9.3% 29 9.2% 8.7%	15.8% 15.7% 14.3% 24 14.1%	13.8% 12.6% 12.2% 43 14.2% 11.6%	10.1% 9.2% 30 11.4% 8.7%
S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net Rank Guyasuta Investment Advisors Russell 2000 eV US Small Cap Core Equity Net Rank	1.1% 38 0.0% 0.3% 63 -0.9% -0.4% 83	6.6% 39 3.8% 5.2% 92 1.6% 3.3% 91	21.8% 56 18.6% 16.8% 32 12.2% 14.6% 71	16.8% 19.3% 17.2% 9 20.5% 17.9% 13	11.4% 10.0% 10.1% 47 9.4% 10.0% 69	12.0% 10.6% 9.3% 29 9.2% 8.7% 47	15.8% 15.7% 14.3% 24 14.1% 59	13.8% 12.6% 12.2% 43 14.2% 11.6%	10.1% 9.2% 30 11.4% 8.7% 13



Annualized Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

Ending December 31, 2017

	1 Mo	3 Mo	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Non-U.S. Equity Composite	1.7%	4.4%	28.4%	14.4%	8.8%	5.4%	6.9%		
MSCI ACWI ex USA	2.2%	5.0%	27.2%	15.3%	7.8%	4.8%	6.8%	4.9%	1.8%
InvestorForce Public DB ex-US Eq Net Rank	85	73	49	81	48	49	75		
MFS International Equity Fund	1.3%	4.0%	28.0%	13.3%	8.7%	5.3%	7.8%		
MSCI EAFE	1.6%	4.2%	25.0%	12.4%	7.8%	4.5%	7.9%	6.0%	1.9%
Foreign Large Blend MStar MF Rank	66	44	24	42	30	30	42		
SSgA Active Emerging Markets Fund	2.9%	5.3%	35.3%	23.4%	9.8%	6.6%	4.2%		
MSCI Emerging Markets	3.6%	7.4%	37.3%	23.5%	9.1%	6.2%	4.3%	2.6%	1.7%
eV Emg Mkts Equity Net Rank	78	82	64	40	39	48	77		
ABS Emerging Markets	3.0%	5.8%	26.7%	15.3%	8.7%				
HFRI Emerging Markets (Total) Index	1.8%	4.0%	19.5%	13.1%	7.4%	4.8%	4.9%	2.7%	1.7%
MSCI Emerging Markets	3.6%	7.4%	37.3%	23.5%	9.1%	6.2%	4.3%	2.6%	1.7%
Fusion Investment Group	1.8%	4.4%							
MSCI ACWI	1.6%	5.7%	24.0%	15.6%	9.3%	8.0%	10.8%	8.7%	4.7%
eV Global All Cap Core Eq Net Rank	21	66							
Hedge Fund Composite	0.5%	1.5%	8.9%	4.7%	3.1%	3.6%			
HFRI Fund of Funds Composite Index	0.8%	1.9%	7.6%	4.0%	2.6%	2.8%	4.0%	2.6%	1.1%
HFRX Equity Hedge Index	1.0%	2.7%	10.0%	4.9%	2.4%	2.2%	3.9%	0.4%	-0.6%
InvestorForce Public DB Hedge Funds Net Rank	62	56	20	39	40	40			
ABS Offshore SPC Global	0.2%	1.9%	12.3%	3.7%	3.8%	4.0%			
HFRX Equity Hedge Index	1.0%	2.7%	10.0%	4.9%	2.4%	2.2%	3.9%	0.4%	-0.6%
Entrust Diversified Select Equity Fund	0.9%	1.1%	6.0%	4.3%	1.1%	2.0%			
HFRX Equity Hedge Index	1.0%	2.7%	10.0%	4.9%	2.4%	2.2%	3.9%	0.4%	-0.6%
Entrust Special Opportunities Fund III	0.0%	0.0%	5.4%	10.6%					
HFRI Fund of Funds Composite Index	0.8%	1.9%	7.6%	4.0%	2.6%	2.8%	4.0%	2.6%	1.1%
Parametric Defensive Equity	0.7%	3.0%							
50% S&P 500/50% 91 Day T-Bill	0.6%	3.4%	10.9%	8.5%	5.9%	6.1%	7.9%	6.9%	4.6%
Real Estate Composite	1.7%	1.7%	6.5%	7.4%	9.7%	10.0%	-	-	
NFI	0.6%	1.8%	6.7%	7.2%	9.4%	9.9%	10.5%	11.0%	4.1%
Rreef America II	2.0%	2.0%	6.4%	7.3%	10.0%	10.5%			
NFI	0.6%	1.8%	6.7%	7.2%	9.4%	9.9%	10.5%	11.0%	4.1%
Barings Core Property Fund	1.4%	1.4%	6.6%	7.6%	9.4%				
NFI	0.6%	1.8%	6.7%	7.2%	9.4%	9.9%	10.5%	11.0%	4.1%

Calendar Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

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	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Fund Composite	11.8%	8.1%	3.2%	9.2%	13.6%	12.3%	1.8%	5.6%	23.4%	-27.0%	11.6%
Total Fund Composite Benchmark	12.3%	7.7%	3.5%	7.2%	14.1%	10.5%	1.3%	12.6%	23.0%	-26.1%	8.5%
InvestorForce Public DB Net Rank	95	26	1	1	66	41	22	98	19	70	2
Dedicated Funding for CMPTF	7.5%	7.6%	7.5%	13.2%	8.1%	9.8%	7.2%				
Annual Return	7.5%	7.5%	7.5%	7.5%	8.0%	8.0%	8.0%				
Total Invested Portfolio	14.8%	8.5%	0.0%	6.6%	17.6%	14.1%	-2.5%	5.6%	23.3%	-27.0%	11.6%
Total Invested Portfolio Benchmark	16.3%	7.7%	0.3%	6.9%	17.6%	12.2%	0.3%	12.4%	22.9%	-26.2%	8.2%
InvestorForce Public DB Net Rank	42	15	33	22	22	7	92	98	20	70	2
Fixed Income Composite	4.3%	4.5%	0.0%	6.1%	-0.4%	8.4%	5.4%	7.8%	13.8%	-9.3%	
BBgBarc US Aggregate TR	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%
InvestorForce Public DB US Fix Inc Net Rank	37	47	56	15	32	35	87	41	42	91	
Federated Investors	4.3%	4.8%	-0.2%	5.0%	-0.8%	7.1%	6.5%	8.2%	11.2%	-2.7%	7.1%
BBgBarc US Aggregate TR	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%
eV US Core Fixed Inc Net Rank	19	7	89	80	19	23	81	12	33	76	25
BlackRock Total Return Fund	4.3%	3.5%	0.4%	8.2%	-0.1%	10.3%	4.7%	10.1%	16.3%	-11.1%	5.3%
BBgBarc US Aggregate TR	3.5%	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%
eV US Core Fixed Inc Net Rank	20	33	64	4	8	2	96	2	14	95	87
U.S. Equity Composite	19.4%	16.7%	-2.3%	12.5%	34.2%	17.8%	0.6%	8.6%	25.8%	-36.1%	-
Dow Jones U.S. Total Stock Market	21.2%	12.6%	0.4%	12.5%	33.5%	16.4%	1.1%	17.5%	28.6%	-37.2%	5.6%
Investor Force Dublic DD LIC For Not							40				
InvestorForce Public DB US Eq Net Rank	68	2	84	14	50	4	48	99	86	29	
·	68 21.9%	2 12.0%	1.5%	14 13.8%	50		48 	99	86	29	
Rank									 26.5%	-37.0%	 5.5%
Rank SSgA S&P 500 Index Fund	21.9%	12.0%	1.5%	13.8%							 5.5%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank	21.9% 21.8%	12.0% 12.0%	1.5% 1.4%	13.8% 13.7%							5.5%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net	21.9% 21.8% 46	12.0% 12.0%	1.5% 1.4%	13.8% 13.7%							5.5% 5.5%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital	21.9% 21.8% 46 20.9%	12.0% 12.0% 20	1.5% 1.4% 36	13.8% 13.7% 33	 32.4% 	 16.0% 	 2.1% 	 15.1% 	26.5% 	 -37.0% 	
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital S&P 500 eV US Large Cap Core Equity Net Rank	21.9% 21.8% 46 20.9% 21.8%	12.0% 12.0% 20	1.5% 1.4% 36 1.4%	13.8% 13.7% 33 13.7%	 32.4% 32.4% 	 16.0% 16.0%	 2.1% 2.1%	 15.1% 15.1%	26.5% 26.5% 	 -37.0% -37.0%	 5.5%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital S&P 500 eV US Large Cap Core Equity Net	21.9% 21.8% 46 20.9% 21.8%	12.0% 12.0% 20 12.0%	1.5% 1.4% 36	13.8% 13.7% 33	 32.4% 	 16.0% 	 2.1% 	 15.1% 	26.5% 	 -37.0% 	
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management	21.9% 21.8% 46 20.9% 21.8% 56	12.0% 12.0% 20 12.0% 20.1%	1.5% 1.4% 36 1.4% 	13.8% 13.7% 33 13.7% 12.1%	 32.4% 32.4% 39.0%	 16.0% 16.0% 	 2.1% 2.1% -6.5%	 15.1% 15.1% 28.9%	 26.5% 26.5% 46.5%		 5.5% 12.8%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity	21.9% 21.8% 46 20.9% 21.8% 56 18.6% 16.8%	12.0% 12.0% 20 12.0% 20.1% 17.6%	1.5% 1.4% 36 1.4% -6.5% -2.9%	13.8% 13.7% 33 13.7% 12.1% 7.1%	32.4% 32.4% 32.4% 39.0% 36.8%	16.0% 16.0% 18.0% 17.9%	 2.1% 2.1% -6.5% -2.5%	15.1% 15.1% 28.9% 26.7% 25	26.5% 26.5% 46.5% 34.4%	 -37.0% -37.0% -39.5% -36.8%	5.5% 12.8% 1.4%
Rank SSgA S&P 500 Index Fund S&P 500 eV US Large Cap Core Equity Net Rank Twin Capital S&P 500 eV US Large Cap Core Equity Net Rank Frontier Capital Management Russell 2500 eV US Small-Mid Cap Core Equity Net Rank	21.9% 21.8% 46 20.9% 21.8% 56 18.6% 16.8%	12.0% 12.0% 20 12.0% 20.1% 17.6% 5	1.5% 1.4% 36 1.4% -6.5% -2.9%	13.8% 13.7% 33 13.7% 12.1% 7.1%	32.4% 32.4% 39.0% 36.8% 26	16.0% 16.0% 18.0% 17.9% 29	 2.1% 2.1% -6.5% -2.5%	 15.1% 15.1% 28.9% 26.7%	26.5% 26.5% 46.5% 34.4%		 5.5% 12.8% 1.4%



Calendar Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

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	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
CIM Investment Management	11.1%	-				-					
Russell 2000	14.6%	21.3%	-4.4%	4.9%	38.8%	16.3%	-4.2%	26.9%	27.2%	-33.8%	-1.6%
eV US Small Cap Core Equity Net Rank	79										-
Non-U.S. Equity Composite	28.4%	1.9%	-1.7%	-4.1%	13.1%	21.5%					
MSCI ACWI ex USA	27.2%	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%	16.7%
InvestorForce Public DB ex-US Eq Net Rank	49	83	21	59	82	7					
MFS International Equity Fund	28.0%	0.3%	0.0%	-4.2%	18.6%	22.5%	-			-	
MSCI EAFE	25.0%	1.0%	-0.8%	-4.9%	22.8%	17.3%	-12.1%	7.8%	31.8%	-43.4%	11.2%
Foreign Large Blend MStar MF Rank	24	64	37	36	64	12					
SSgA Active Emerging Markets Fund	35.3%	12.5%	-13.1%	-2.6%	-4.8%	18.1%	-			_	
MSCI Emerging Markets	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%	39.4%
eV Emg Mkts Equity Net Rank	64	26	53	67	87	66					
ABS Emerging Markets	26.7%	4.9%	-3.4%				_				
HFRI Emerging Markets (Total) Index	19.5%	7.0%	-3.3%	-2.6%	5.5%	10.4%	-14.0%	11.4%	40.3%	-37.3%	24.9%
MSCI Emerging Markets	37.3%	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%	39.4%
Fusion Investment Group											
MSCI ACWI	24.0%	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%	-42.2%	11.7%
eV Global All Cap Core Eq Net Rank			-								
ledge Fund Composite	8.9%	0.7%	0.0%	4.9%		-			-	-	
HFRI Fund of Funds Composite Index	7.6%	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%
HFRX Equity Hedge Index	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%
InvestorForce Public DB Hedge Funds Net Rank	20	74	45	35							-
ABS Offshore SPC Global	12.3%	-4.3%	4.0%	4.8%						_	
HFRX Equity Hedge Index	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%
Entrust Diversified Select Equity Fund	6.0%	2.5%	-4.9%	4.9%		-				-	
HFRX Equity Hedge Index	10.0%	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%
Entrust Special Opportunities Fund III	5.4%	16.1%									
HFRI Fund of Funds Composite Index	7.6%	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%
Parametric Defensive Equity		-		-		-				-	
50% S&P 500/50% 91 Day T-Bill	10.9%	6.1%	0.9%	6.7%	15.3%	7.9%	1.4%	7.8%	13.3%	-19.4%	5.1%

Calendar Performance (Net of Fees)

Market Value: \$750.8 Million and 100.0% of Fund

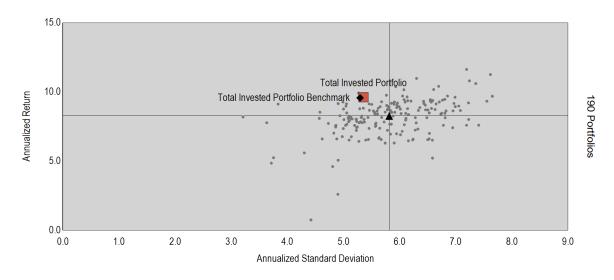
Calendar Year

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Real Estate Composite	6.5%	8.4%	14.4%	11.0%						-	
NFI	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%
Rreef America II	6.4%	8.1%	15.6%	12.0%							
NFI	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%
Barings Core Property Fund	6.6%	8.6%	13.0%								
NFI	6.7%	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%

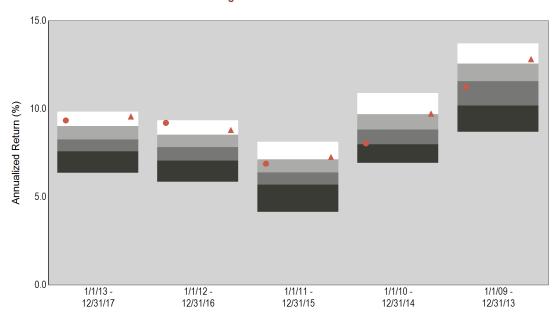
Invested Portfolio vs. Peer Universe

Market Value: \$448.9 Million and 59.8% of Fund

Annualized Return vs. Annualized Standard Deviation 5 Years Ending December 31, 2017



Rolling 5 Year Returns



	Return (Rank)									
5th Percentile	9.8		9.4		8.1		10.9		13.7	
25th Percentile	9.0		8.5		7.1		9.7		12.6	
Median	8.3		7.8		6.4		8.8		11.6	
75th Percentile	7.6		7.1		5.7		8.0		10.2	
95th Percentile	6.4		5.9		4.2		6.9		8.7	
# of Portfolios	190		232		210		168		148	
Total Invested Portfolio	9.3	(12)	9.2	(9)	6.9	(33)	8.0	(73)	11.2	(57)
Total Invested Portfolio Benchmark	9.6	`(9)	8.8	(16)	7.3	(22)	9.7	(25)	12.8	(19)

Private Equity Composite

Annualized Performance

Asset Class	Fund Company	Vintage Yr.	Perf. as of:	Net IRR
Venture	Birchmere Ventures III	2005	9/30/2017	-2.4%
Venture	Draper Triangle Venture II	2004	9/30/2017	5.2%
Venture	Draper Triangle Venture III	2013	9/30/2017	
Venture	Novitas Capital Partners III	2003	9/30/2016	-19.5%
Global Diversified FoFs	Hirtle Callaghan PEP III	2003	9/30/2017	17.0%
Global Diversified FoFs	Hirtle Callaghan PEP IV	2004	9/30/2017	9.5%
Global Diversified FoFs	Hirtle Callaghan PEP V	2006	9/30/2017	2.3%
Mezzanine	Crescent Mezz Partners VI	2013	9/30/2017	8.5%
Mezzanine	Crescent Mezz Partners VII	2016	9/30/2017	7.9%
Total Private Equity				

Since Inception Cash Flows

Asset Class	Fund Company	Commitment	Capital Calls	Distributions	Remaining Callable Amt.	Ending Value	¹ Cash Multiple
7.0000 0.000			- ap			9	
Venture	Birchmere Ventures III	\$1,000,000	\$1,000,000	\$893,272	\$0	\$69,740	1.0
Venture	Draper Triangle Venture II	\$1,000,000	\$1,000,000	\$1,139,804	\$0	\$410,730	1.6
Venture	Draper Triangle Venture III	\$2,000,000	\$1,314,913	\$28,929	\$0	\$955,567	0.7
Venture	Novitas Capital Partners III	\$1,000,000	\$989,904	\$423,678	\$0	\$40,314	0.5
Global Diversified FoFs	Hirtle Callaghan PEP III	\$8,000,000	\$7,600,835	\$11,935,939	\$399,165	\$527,858	1.6
Global Diversified FoFs	Hirtle Callaghan PEP IV	\$8,000,000	\$7,418,650	\$10,394,005	\$581,350	\$702,210	1.5
Global Diversified FoFs	Hirtle Callaghan PEP V	\$3,000,000	\$2,481,360	\$2,029,374	\$518,640	\$841,135	1.2
Mezzanine	Crescent Mezz Partners VI	\$10,000,000	\$8,780,541	\$5,615,184	\$1,219,459	\$5,236,341	1.2
Mezzanine	Crescent Mezz Partners VII	\$10,000,000	\$2,734,233	\$266,763	\$7,265,767	\$2,591,942	
Total Private Equity		\$44,000,000	\$33,320,436	\$32,726,948	\$9,984,381	\$11,375,837	1.3

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



Investment Manager Statistics

Market Value: \$750.8 Million and 100.0% of Fund

3 Years Ending December 31, 2017

	Sharpe Ratio	Tracking Error	Alpha	Beta	R-Squared	Information Ratio	Standard Deviation	Up Mkt Capture Ratio Anlzd	Down Mkt Capture Ratio Anlzd
Federated Investors	1.0	1.1%	0.3%	0.8	0.9	0.9	1.5%	110.0%	68.0%
BBgBarc US Aggregate TR	0.5						1.7%		
BlackRock Total Return Fund	0.7	0.8%	0.2%	0.9	0.9	0.6	1.6%	108.1%	90.6%
BBgBarc US Aggregate TR	0.5						1.7%		
SSgA S&P 500 Index Fund	1.5	0.0%	0.0%	1.0	1.0	1.5	3.6%	100.3%	99.1%
S&P 500	1.5						3.6%		
Frontier Capital Management	0.8	6.0%	-0.7%	1.4	0.9	0.1	6.8%	123.6%	152.5%
Russell 2500	1.1						4.6%		
Guyasuta Investment Advisors	0.8	5.1%	0.0%	1.0	0.8	0.0	6.0%	90.5%	76.0%
Russell 2000	0.9						5.5%		
MFS International Equity Fund	0.8	2.6%	0.2%	1.0	0.9	0.4	5.3%	105.5%	96.6%
MSCI EAFE	0.7						5.2%		
SSgA Active Emerging Markets Fund	0.6	2.7%	0.2%	1.0	1.0	0.3	7.7%	100.9%	94.3%
MSCI Emerging Markets	0.6						7.8%		
ABS Emerging Markets	0.8	3.5%	-0.1%	1.3	0.9	0.4	5.5%	129.4%	141.6%
HFRI Emerging Markets (Total) Index	0.8			-	-		4.2%		
ABS Offshore SPC Global	0.5	3.2%	0.3%	1.1	0.8	0.4	3.2%	137.8%	120.7%
HFRX Equity Hedge Index	0.4						2.6%		
Entrust Diversified Select Equity Fund	0.1	3.8%	-0.4%	1.2	0.7	-0.3	3.6%	97.3%	134.7%
HFRX Equity Hedge Index	0.4						2.6%		

Statistics

Market Value: \$750.8 Million and 100.0% of Fund

5 Years Ending December 31, 2017

	Sharpe Ratio	Tracking Error	Alpha	Beta	R-Squared	Information Ratio	Standard Deviation	Up Mkt Capture Ratio Anlzd	Down Mkt Capture Ratio Anlzd
Federated Investors	0.9	1.1%	0.2%	0.9	0.9	0.7	1.5%	106.2%	67.6%
BBgBarc US Aggregate TR	0.6						1.5%		
BlackRock Total Return Fund	0.9	0.9%	0.3%	1.0	0.9	1.3	1.6%	118.1%	71.9%
BBgBarc US Aggregate TR	0.6						1.5%		
Frontier Capital Management	1.3	5.0%	0.0%	1.2	0.9	0.5	6.3%	121.2%	131.9%
Russell 2500	1.4						5.0%		
Guyasuta Investment Advisors	1.2	4.8%	0.3%	1.0	0.8	0.1	6.2%	95.0%	74.3%
Russell 2000	1.2						5.9%		
MFS International Equity Fund	0.7	2.5%	0.1%	0.9	0.9	0.0	5.1%	95.4%	91.6%
MSCI EAFE	0.7						5.2%		
SSgA Active Emerging Markets Fund	0.3	2.3%	0.0%	1.0	1.0	-0.1	6.9%	98.8%	100.2%
MSCI Emerging Markets	0.3				-		6.9%		

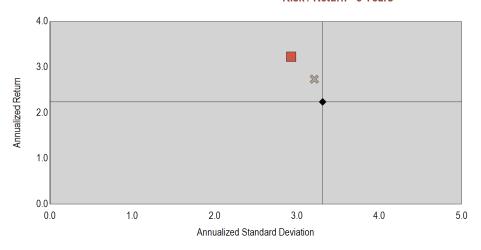
Fixed Income Composite

Characteristics

As of December 31, 2017

Market Value: \$74.8 Million and 10.0% of Fund

Risk / Return - 3 Years



25

- Federated Investors
- BlackRock Total Return Fund
- ◆ BBgBarc US Aggregate TR

Characteristics						
	Portfolio	Index				
	Q4-17	Q4-17				
Yield to Maturity	2.8%	2.7%				
Avg. Eff. Maturity	7.8 yrs.	8.3 yrs.				
Avg. Duration	5.7 yrs.	6.0 yrs.				
Avg. Quality	А					

Region	Number Of Assets
North America ex U.S.	9
United States	1,705
Europe Ex U.K.	100
United Kingdom	30
Pacific Basin Ex Japan	15

Japan

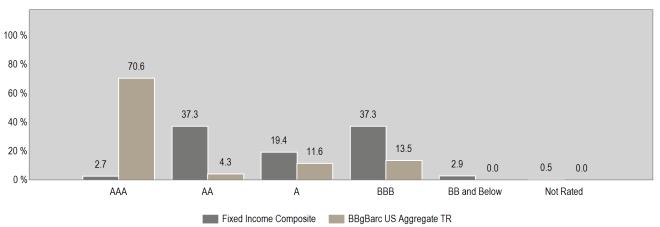
	Portfolio	Index
	Q4-17	Q4-17
UST/Agency	26.9%	43.9%
Corporate	47.0%	25.7%
MBS	18.5%	29.9%
ABS	2.0%	0.5%
Foreign	4.0%	
Muni	0.7%	
Other	0.7%	

Sector

	Q4-17
<1 Year	6.9%
1-3 Years	23.2%
3-5 Years	22.2%
5-7 Years	11.8%
7-10 Years	19.1%
10-15 Years	2.5%
15-20 Years	1.2%
>20 Years	13.1%
Not Rated/Cash	0.0%

Maturity

Quality Distribution

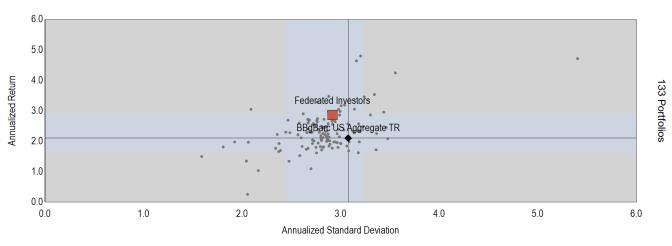


Federated Investors

Characteristics

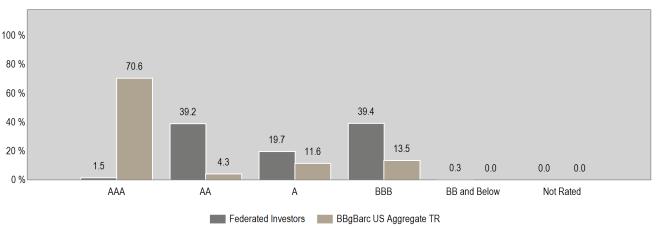
As of December 31, 2017 Market Value: \$54.7 Million and 7.3% of Fund





Cha	racteristics			Sector		N	Maturity
	Portfolio	Index		Portfolio	Index		Q4-17
	Q4-17	Q4-17		Q4-17	Q4-17	<1 Year	6.6%
Yield to Maturity	2.8%	2.7%	UST/Agency	22.1%	43.9%	1-3 Years	20.5%
Avg. Eff. Maturity	7.7 yrs.	8.3 yrs.	Corporate	52.4%	25.7%	3-5 Years	23.9%
Avg. Duration	5.6 yrs.	6.0 yrs.	MBS	22.0%	29.9%	5-7 Years	12.0%
Avg. Quality	Α	-	ABS	2.0%	0.5%	7-10 Years	21.0%
			Foreign	1.1%		10-15 Years	2.4%
		N 1 01	Muni			15-20 Years	0.5%
Region		Number Of Assets	Other	0.4%		>20 Years	13.1%
North America ex U.S.		2				Not Rated/Cash	0.0%
United States		264					
Europe Ex U.K.		2					

Quality Distribution



United Kingdom Other Total

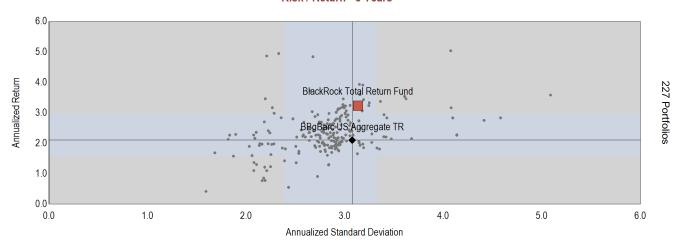
BlackRock Total Return Fund

Characteristics

As of December 31, 2017

Market Value: \$20.0 Million and 2.7% of Fund

Risk / Return - 5 Years



Ch	aracteristics			Sector		N	Naturity
	Portfolio	Index		Portfolio	Index		Q4-17
	Q4-17	Q4-17		Q4-17	Q4-17	<1 Year	7.7%
Yield to Maturity	2.9%	2.7%	UST/Agency	38.7%	43.9%	1-3 Years	30.7%
Avg. Eff. Maturity	8.1 yrs.	8.3 yrs.	Corporate	34.2%	25.7%	3-5 Years	17.5%
Avg. Duration	5.8 yrs.	6.0 yrs.	MBS	10.0%	29.9%	5-7 Years	11.3%
Avg. Quality	Α		ABS	2.1%	0.5%	7-10 Years	13.7%
			Foreign	11.0%		10-15 Years	2.8%
		November of	Muni	2.4%		15-20 Years	3.2%
Region		Number Of Assets	Other	1.5%		>20 Years	13.2%
North America ex U.S.		7				Not Rated/Cash	0.0%
United States		1,458					

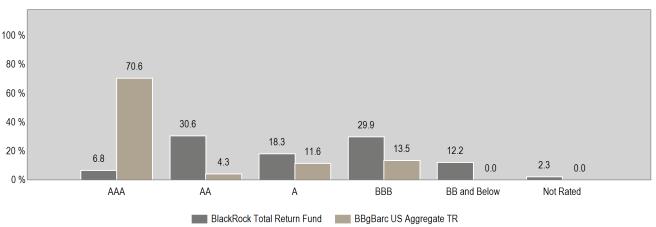
98

29

15

25

Quality Distribution



Europe Ex U.K.

United Kingdom

Japan

Pacific Basin Ex Japan

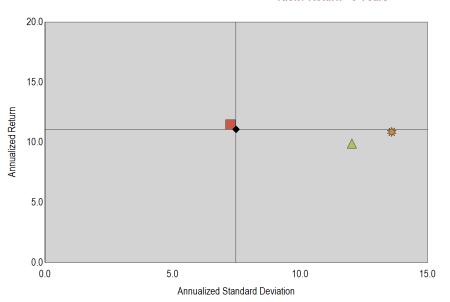
U.S. Equity Composite

As of December 31, 2017

Characteristics

Market Value: \$171.5 Million and 22.8% of Fund

Risk / Return - 3 Years



1.0

1.0

- SSgA S&P 500 Index Fund
- Frontier Capital Management
- ▲ Guyasuta Investment Advisors
- Dow Jones U.S. Total Stock Market

Characteristics

	Portfolio	Dow Jones U.S. Total Stock Market
Number of Holdings	828	3,782
Weighted Avg. Market Cap. (\$B)	116.9	149.6
Median Market Cap. (\$B)	14.0	0.9
Price To Earnings	25.5	24.9
Price To Book	5.1	4.5
Price To Sales	3.4	3.6
Return on Equity (%)	19.8	18.4
Yield (%)	1.6	1.7
Beta	1.2	1.0

Characteristics

Ondracteristics		
	Portfolio	Dow Jones U.S. Total Stock Market
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	4.5	5.8
Materials	9.1	3.4
Industrials	16.0	10.9
Consumer Discretionary	8.9	12.6
Consumer Staples	6.1	7.3
Health Care	13.4	13.3
Financials	11.4	15.2
Information Technology	22.2	22.8
Telecommunication Services	1.6	1.9
Utilities	1.9	3.0
Real Estate	3.4	3.9
Unclassified	0.1	0.0

Largest Holdings

	End Weight	Return
APPLE	2.4	10.2
MICROSOFT	1.8	15.4
AMAZON.COM	1.3	21.6
FACEBOOK CLASS A	1.2	3.3
BERKSHIRE HATHAWAY 'B'	1.0	8.1

Top Contributors

	Beg Wgt	Return	Contribution
MICROSOFT	1.7	15.4	0.3
AMAZON.COM	1.1	21.6	0.2
APPLE	2.3	10.2	0.2
JP MORGAN CHASE & CO.	1.0	12.6	0.1
BANK OF AMERICA	0.7	17.0	0.1

Bottom Contributors

	Beg Wgt	Return	Contribution
CECO ENV.	0.5	-39.4	-0.2
GENERAL ELECTRIC	0.6	-27.3	-0.2
AMER.VANGUARD	0.7	-14.1	-0.1
CELGENE	0.3	-28.4	-0.1
TIVO	0.4	-20.5	-0.1

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
U.S. Equity Composite	16.1%	14.6%	16.6%	21.0%	31.7%
Dow Jones U.S. Total Stock Market	6.0%	9.3%	16.4%	27.3%	40.9%
Weight Over/Under	10.1%	5.2%	0.1%	-6.3%	-9.2%

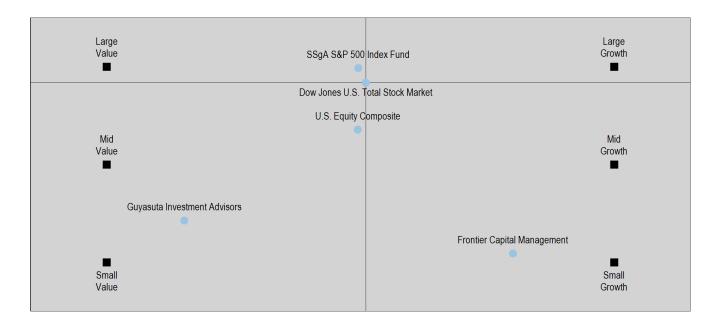


R-Squared

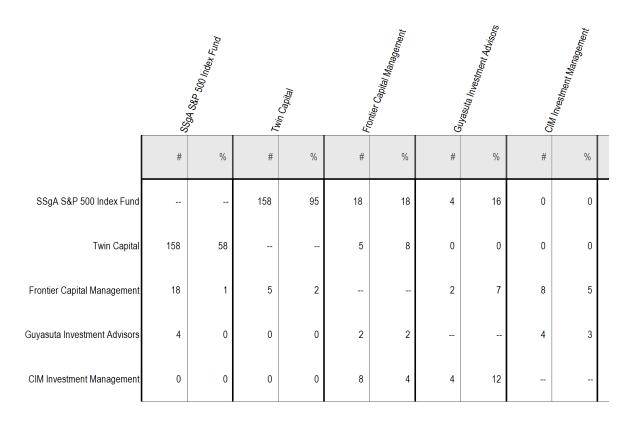
Market Value: \$171.5 Million and 22.8% of Fund

As of December 31, 2017

U.S. Equity Style Map 3 Years Ending December 31, 2017

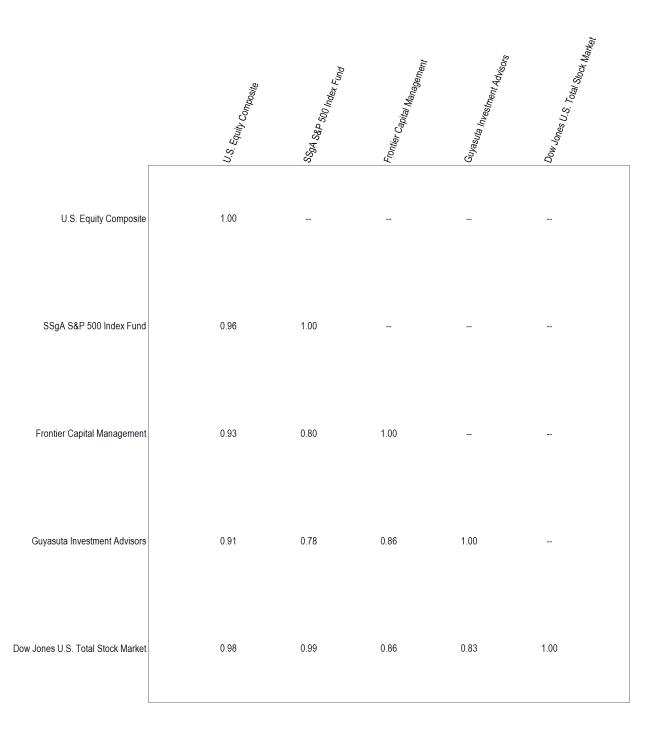


Common Holdings Matrix



As of December 31, 2017

Correlation Matrix 3 Years



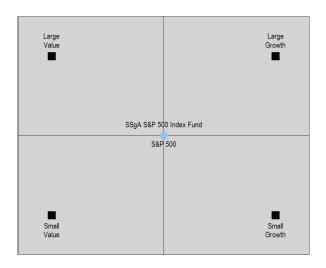
SSgA S&P 500 Index Fund

Characteristics

As of December 31, 2017

Market Value: \$106.2 Million and 14.1% of Fund

Style Drift - 1 Year



Characteristics

	Portfolio	S&P 500
Number of Holdings	505	505
Weighted Avg. Market Cap. (\$B)	180.2	180.1
Median Market Cap. (\$B)	21.6	21.6
Price To Earnings	27.5	24.8
Price To Book	6.1	4.9
Price To Sales	3.8	3.5
Return on Equity (%)	24.5	20.4
Yield (%)	1.9	1.9
Beta	1.0	1.0
R-Squared	1.0	1.0

	End Weight	Return
APPLE	3.8	10.2
MICROSOFT	2.9	15.4
AMAZON.COM	2.0	21.6
FACEBOOK CLASS A	1.8	3.3
BERKSHIRE HATHAWAY 'B'	1.7	8.1

Largest Holdings

Top Contributors

	Beg Wgt	Return	Contribution
MICROSOFT	2.6	15.4	0.4
AMAZON.COM	1.8	21.6	0.4
APPLE	3.7	10.2	0.4
JP MORGAN CHASE & CO.	1.5	12.6	0.2
BANK OF AMERICA	1.1	17.0	0.2

Bottom Contributors

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	1.0	-27.3	-0.3
CELGENE	0.5	-28.4	-0.1
MERCK & COMPANY	0.8	-11.4	-0.1
ALLERGAN	0.3	-19.9	-0.1
PG&E	0.2	-34.2	-0.1

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
SSgA S&P 500 Index Fund	0.0%	1.4%	16.2%	32.7%	49.7%
S&P 500	0.0%	1.3%	16.4%	32.6%	49.7%
Weight Over/Under	0.0%	0.0%	-0.1%	0.1%	0.1%

Characteristics

	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% Eq		
Energy	6.0	6.1
Materials	3.0	3.0
Industrials	10.2	10.3
Consumer Discretionary	12.1	12.2
Consumer Staples	8.1	8.2
Health Care	13.6	13.7
Financials	14.6	14.8
Information Technology	23.5	23.8
Telecommunication Services	2.0	2.1
Utilities	2.9	2.9
Real Estate	2.8	2.9
Unclassified	0.2	0.0

Attribution

As of December 31, 2017 Market Value: \$106.2 Million and 14.1% of Fund

Sector Attribution vs S&P 500

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	6.1%	6.1%	0.0%	6.1%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Materials	3.0%	3.0%	0.0%	6.9%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrials	10.2%	10.2%	-0.1%	6.1%	6.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Consumer Discretionary	11.8%	11.9%	-0.1%	9.9%	9.9%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%
Consumer Staples	8.2%	8.2%	0.0%	6.5%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health Care	14.3%	14.4%	-0.1%	1.5%	1.5%	0.0%	0.0%	0.0%	0.0%	-0.8%	-0.7%
Financials	14.6%	14.6%	-0.1%	8.6%	8.6%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
Information Technology	23.1%	23.3%	-0.1%	9.0%	9.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
Telecommunication Services	2.1%	2.1%	0.0%	3.8%	3.8%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Utilities	3.1%	3.1%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
Real Estate	3.0%	3.0%	0.0%	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Unclassified	0.6%	0.0%	0.6%	6.8%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

SSgA S&P 500 Index Fund Performance Attribution vs. S&P 500

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.0%	0.0%	0.0%	0.0%
Materials	0.0%	0.0%	0.0%	0.0%
Industrials	0.0%	0.0%	0.0%	0.0%
Consumer Discretionary	0.0%	0.0%	0.0%	0.0%
Consumer Staples	0.0%	0.0%	0.0%	0.0%
Health Care	0.0%	0.0%	0.0%	0.0%
Financials	0.0%	0.0%	0.0%	0.0%
Information Technology	0.0%	0.0%	0.0%	0.0%
Telecommunication Services	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%
Real Estate	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.0% =	0.0% +	0.0% +	0.0%

Market Cap Attribution vs. S&P 500

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 267.35	19.7%	19.8%	-0.1%	10.9%	10.9%	0.0%	0.0%	0.0%	0.0%	0.8%	0.8%
2) 152.14 - 267.35	20.1%	19.6%	0.4%	4.9%	4.9%	0.1%	0.0%	0.0%	0.0%	-0.4%	-0.3%
3) 66.20 - 152.14	20.5%	20.7%	-0.1%	5.4%	5.4%	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.3%
4) 27.80 - 66.20	19.9%	20.0%	-0.1%	6.1%	6.1%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
5) 0.00 - 27.80	19.8%	19.9%	-0.1%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Total				6.7%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Twin Capital

Characteristics

As of December 31, 2017 Market Value: \$2.5 Million and 0.3% of Fund

Characteristics

	Portfolio	S&P 500
Number of Holdings	164	505
Weighted Avg. Market Cap. (\$B)	166.5	180.1
Median Market Cap. (\$B)	39.1	21.6
Price To Earnings	25.4	24.8
Price To Book	5.4	4.9
Price To Sales	3.6	3.5
Return on Equity (%)	22.8	20.4
Yield (%)	1.9	1.9
Beta		1.0
R-Squared		1.0

Characteristics

	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% E		
Energy	5.9	6.1
Materials	2.9	3.0
Industrials	9.7	10.3
Consumer Discretionary	12.0	12.2
Consumer Staples	8.6	8.2
Health Care	13.5	13.7
Financials	15.0	14.8
Information Technology	23.4	23.8
Telecommunication Services	2.5	2.1
Utilities	3.3	2.9
Real Estate	2.4	2.9
Unclassified	0.0	0.0

Largest Holdings

	End Weight	Return
APPLE	3.9	10.2
ALPHABET A	2.1	8.2
FACEBOOK CLASS A	2.0	3.3
JOHNSON & JOHNSON	2.0	8.1
JP MORGAN CHASE & CO.	1.9	12.6

Top Contributors

	End Weight	Return	Contribution
AMAZON.COM	1.8	21.6	0.4
APPLE	3.9	10.2	0.4
BANK OF AMERICA	1.6	17.0	0.3
JP MORGAN CHASE & CO.	1.9	12.6	0.2
HOME DEPOT	1.2	16.5	0.2

Bottom Contributors

	End Weight	Return	Contribution
GENERAL ELECTRIC	0.7	-27.3	-0.2
CELGENE	0.4	-28.4	-0.1
AMGEN	1.0	-6.1	-0.1
GILEAD SCIENCES	0.5	-11.0	0.0
ELECTRONIC ARTS	0.3	-11.0	0.0

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Twin Capital	0.0%	1.3%	21.6%	30.2%	46.9%
S&P 500	0.0%	1.3%	16.4%	32.6%	49.7%
Weight Over/Under	0.0%	0.0%	5.2%	-2.4%	-2.8%

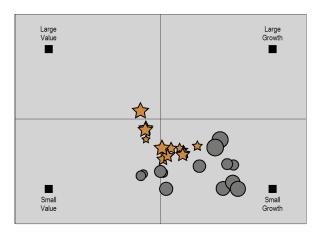
Frontier Capital Management

As of December 31, 2017

Characteristics

Market Value: \$31.6 Million and 4.2% of Fund

Style Drift - 5 Years



Frontier Capital Management

Russell 2500

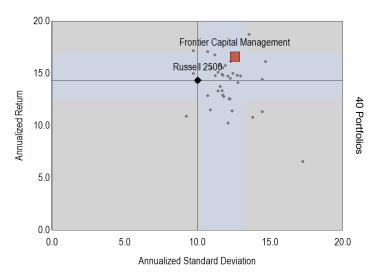
Characteristics

	Portfolio	Russell 2500
Number of Holdings	143	2,472
Weighted Avg. Market Cap. (\$B)	5.8	5.1
Median Market Cap. (\$B)	2.9	1.2
Price To Earnings	18.1	22.4
Price To Book	3.9	3.7
Price To Sales	2.8	3.2
Return on Equity (%)	9.9	10.6
Yield (%)	0.8	1.2
Beta	1.4	1.0
R-Squared	0.9	1.0

Characteristics

	Portfolio	Russell 2500
INDUSTRY SECTOR DISTRIBUTION (%	Equity)	
Energy	3.4	4.4
Materials	16.2	6.0
Industrials	20.1	16.5
Consumer Discretionary	6.1	12.8
Consumer Staples	0.8	2.9
Health Care	11.2	11.3
Financials	9.7	16.2
Information Technology	28.7	16.4
Telecommunication Services	1.5	0.5
Utilities	0.0	3.7
Real Estate	0.0	9.3
Unclassified	0.0	0.0

Risk / Return - 5 Years



Largest Holdings

End Weight	Return
3.6	10.7
2.2	25.3
2.0	1.0
1.9	23.1
1.8	3.6
	3.6 2.2 2.0 1.9

Top Contributors

Beg Wgt	Return	Contribution
0.5	129.4	0.6
1.9	25.3	0.5
0.3	146.7	0.4
1.2	34.0	0.4
1.6	23.1	0.4
	0.5 1.9 0.3 1.2	0.5 129.4 1.9 25.3 0.3 146.7 1.2 34.0

Bottom Contributors

	Beg Wgt	Return	Contribution
TIVO	2.3	-20.5	-0.5
VEECO INSTRUMENTS	1.0	-30.6	-0.3
CONTROLADORA VUELA ADR 1:10	1.0	-32.4	-0.3
ACADIA HEALTHCARE CO.	0.8	-31.7	-0.3
VISTA OUTDOOR	0.6	-36.5	-0.2

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Frontier Capital Management	44.1%	35.3%	19.6%	1.0%	0.0%
Russell 2500	32.7%	49.8%	17.5%	0.0%	0.0%
Weight Over/Under	11.3%	-14.4%	2.1%	1.0%	0.0%



Frontier Capital Management

Attribution

As of December 31, 2017 Market Value: \$31.6 Million and 4.2% of Fund

Sector Attribution vs Russell 2500

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	2.8%	4.3%	-1.5%	22.2%	7.8%	14.4%	0.0%	0.4%	0.4%	0.1%	0.5%
Materials	17.6%	5.9%	11.6%	11.1%	7.2%	3.9%	0.2%	0.7%	0.9%	0.1%	1.0%
Industrials	19.8%	16.1%	3.6%	3.4%	8.1%	-4.7%	0.1%	-0.9%	-0.8%	0.5%	-0.4%
Consumer Discretionary	4.6%	12.5%	-7.9%	-3.3%	8.0%	-11.3%	-0.2%	-0.5%	-0.7%	0.4%	-0.4%
Consumer Staples	0.3%	2.9%	-2.6%	21.6%	6.0%	15.6%	0.0%	0.0%	0.0%	0.0%	0.1%
Health Care	12.3%	11.6%	0.7%	0.4%	2.1%	-1.7%	0.0%	-0.2%	-0.2%	-0.4%	-0.6%
Financials	9.7%	16.4%	-6.7%	8.7%	4.3%	4.4%	0.1%	0.4%	0.5%	-0.2%	0.3%
Information Technology	31.2%	16.3%	14.9%	0.2%	4.7%	-4.5%	-0.1%	-1.4%	-1.5%	-0.1%	-1.6%
Telecommunication Services	1.7%	0.6%	1.2%	-6.4%	-0.7%	-5.7%	-0.1%	-0.1%	-0.2%	0.0%	-0.2%
Utilities	0.0%	3.8%	-3.8%		2.6%		0.1%	0.0%	0.1%	-0.1%	0.0%
Real Estate	0.0%	9.6%	-9.6%		2.0%		0.3%	0.0%	0.3%	-0.3%	0.0%
Total				4.0%	5.2%	-1.2%	0.4%	-1.6%	-1.2%	0.0%	-1.2%

Performance Attribution vs. Russell 2500

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	0.3%	0.6%	-0.1%	-0.2%
Materials	1.5%	0.2%	0.8%	0.4%
Industrials	-0.7%	-0.8%	0.3%	-0.1%
Consumer Discretionary	-1.2%	-1.4%	-0.6%	0.9%
Consumer Staples	-0.1%	0.4%	-0.2%	-0.4%
Health Care	-0.2%	-0.2%	0.0%	0.0%
Financials	0.1%	0.7%	-0.3%	-0.3%
Information Technology	-0.7%	-0.7%	0.7%	-0.6%
Telecommunication Services	-0.1%	0.0%	0.0%	-0.1%
Utilities	-0.1%		-0.1%	
Real Estate	-0.2%		-0.2%	
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	-1.3%	= -1.1%	+ 0.2%	+ -0.4%

Market Cap Attribution vs. Russell 2500

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 7.53	24.8%	20.1%	4.7%	3.8%	8.2%	-4.4%	0.1%	-1.1%	-0.9%	0.6%	-0.3%
2) 5.04 - 7.53	8.7%	20.2%	-11.5%	6.9%	7.0%	-0.1%	-0.2%	0.0%	-0.2%	0.4%	0.1%
3) 3.36 - 5.04	15.2%	19.8%	-4.6%	3.8%	4.8%	-1.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%
4) 1.81 - 3.36	24.8%	20.1%	4.8%	5.8%	4.2%	1.6%	0.0%	0.4%	0.3%	-0.2%	0.1%
5) 0.00 - 1.81	26.5%	19.8%	6.7%	1.6%	1.9%	-0.3%	-0.2%	-0.1%	-0.3%	-0.7%	-1.0%
Total				4.0%	5.2%	-1.2%	-0.3%	-0.9%	-1.2%	0.0%	-1.2%

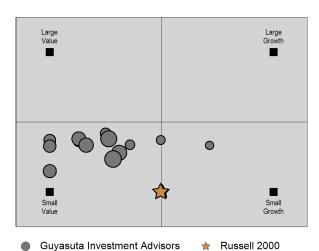
Guyasuta Investment Advisors

As of December 31, 2017

Characteristics

Market Value: \$28.6 Million and 3.8% of Fund

Style Drift - 5 Years



Russell 2000

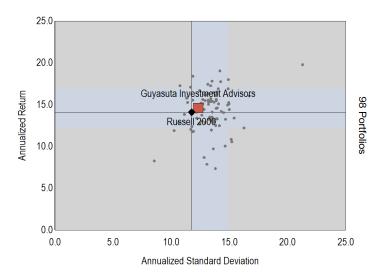
Characteristics

	Portfolio	Russell 2000
Number of Holdings	29	1,983
Weighted Avg. Market Cap. (\$B)	4.8	2.4
Median Market Cap. (\$B)	3.3	0.8
Price To Earnings	26.2	18.4
Price To Book	4.0	3.3
Price To Sales	2.4	3.1
Return on Equity (%)	14.0	7.8
Yield (%)	1.4	1.0
Beta	1.0	1.0
R-Squared	0.8	1.0

Characteristics

	Portfolio	Russell 2000
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	0.0	3.8
Materials	24.8	4.6
Industrials	33.2	15.4
Consumer Discretionary	0.0	12.6
Consumer Staples	4.5	2.8
Health Care	14.9	15.4
Financials	0.0	17.8
Information Technology	10.4	16.7
Telecommunication Services	0.0	0.8
Utilities	0.0	3.5
Real Estate	9.2	6.7
Unclassified	0.0	0.1

Risk / Return - 5 Years



Largest Holdings

	End Weight	Return
REGENCY CENTERS	4.8	12.4
LAMB WESTON HOLDINGS	4.5	20.8
LIBERTY PROPERTY TST.	4.4	5.7
APPLIED INDL.TECHS.	4.3	4.0
NN	4.2	-4.6

Top Contributors

Beg Wgt	Return	Contribution
3.5	15.2	0.5
4.0	12.4	0.5
3.5	9.7	0.3
3.0	11.3	0.3
3.5	9.0	0.3
	4.0 3.5 3.0	3.5 15.2 4.0 12.4 3.5 9.7 3.0 11.3

Bottom Contributors

	Beg Wgt	Return	Contribution
CECO ENV.	3.0	-39.4	-1.2
AMER.VANGUARD	3.8	-14.1	-0.5
MATTHEWS INTL.'A'	2.7	-14.9	-0.4
FULLER 'H' 'B'	3.5	-7.0	-0.2
PATTERSON COMPANIES	3.8	-5.9	-0.2

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Guyasuta Investment Advisors	43.9%	40.6%	15.4%	0.0%	0.0%
Russell 2000	70.1%	29.3%	0.5%	0.0%	0.0%
Weight Over/Under	-26.2%	11.3%	14.9%	0.0%	0.0%



Guyasuta Investment Advisors

Attribution

As of December 31, 2017 Market Value: \$28.6 Million and 3.8% of Fund

Sector Attribution vs Russell 2000

GICS Sector	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Energy	0.0%	3.6%	-3.6%		6.8%		-0.1%	0.0%	-0.1%	0.1%	0.0%
Materials	29.9%	4.5%	25.3%	2.6%	4.2%	-1.6%	0.2%	-0.5%	-0.3%	0.0%	-0.2%
Industrials	34.6%	14.9%	19.6%	-1.8%	6.4%	-8.2%	0.6%	-2.8%	-2.2%	0.5%	-1.8%
Consumer Discretionary	0.0%	12.1%	-12.1%		7.9%		-0.5%	0.0%	-0.5%	0.5%	0.0%
Consumer Staples	0.0%	2.7%	-2.7%		7.1%		-0.1%	0.0%	-0.1%	0.1%	0.0%
Health Care	18.2%	15.4%	2.8%	0.7%	2.4%	-1.7%	0.0%	-0.3%	-0.3%	-0.1%	-0.5%
Financials	0.0%	18.1%	-18.1%		1.7%		0.3%	0.0%	0.3%	-0.3%	0.0%
Information Technology	8.6%	17.1%	-8.4%	-1.6%	1.0%	-2.5%	0.2%	-0.2%	0.0%	-0.4%	-0.4%
Telecommunication Services	0.0%	0.8%	-0.8%		-4.0%		0.1%	0.0%	0.1%	-0.1%	0.0%
Utilities	0.0%	3.7%	-3.7%		1.0%		0.1%	0.0%	0.1%	-0.1%	0.0%
Real Estate	8.8%	7.1%	1.7%	9.1%	-0.4%	9.5%	-0.1%	0.8%	0.8%	-0.3%	0.5%
Total				1.0%	3.3%	-2.4%	0.6%	-3.0%	-2.4%	0.0%	-2.4%

Performance Attribution vs. Russell 2000

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	-0.2%		-0.2%	
Materials	0.6%	-0.1%	1.0%	-0.4%
Industrials	-1.5%	-1.2%	1.1%	-1.5%
Consumer Discretionary	-0.9%		-0.9%	
Consumer Staples	-0.2%		-0.2%	
Health Care	-0.2%	-0.3%	0.0%	0.0%
Financials	-0.3%		-0.3%	
Information Technology	-0.3%	-0.4%	-0.1%	0.2%
Telecommunication Services	0.0%		0.0%	
Utilities	0.0%		0.0%	
Real Estate	0.8%	0.7%	0.0%	0.1%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	-2.4% =	-1.3% +	0.4% +	-1.5%

Market Cap Attribution vs. Russell 2000

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 3.34	52.7%	19.5%	33.2%	3.8%	4.8%	-1.0%	0.5%	-0.5%	0.0%	0.3%	0.3%
2) 2.40 - 3.34	8.7%	20.5%	-11.8%	-1.0%	3.2%	-4.2%	0.0%	-0.4%	-0.4%	0.0%	-0.4%
3) 1.64 - 2.40	9.9%	20.1%	-10.2%	-1.8%	4.4%	-6.1%	-0.1%	-0.6%	-0.7%	0.2%	-0.5%
4) 0.96 - 1.64	11.9%	20.3%	-8.5%	11.0%	2.6%	8.4%	0.1%	1.0%	1.1%	-0.2%	0.9%
5) 0.00 - 0.96	16.9%	19.6%	-2.7%	-12.6%	1.7%	-14.3%	0.0%	-2.4%	-2.4%	-0.3%	-2.7%
Total				1.0%	3.3%	-2.4%	0.5%	-2.9%	-2.4%	0.0%	-2.4%

CIM Investment Management

As of December 31, 2017

Characteristics

Market Value: \$2.5 Million and 0.3% of Fund

Characteristics

	Portfolio	Russell 2000
Number of Holdings	167	1,983
Weighted Avg. Market Cap. (\$B)	2.7	2.4
Median Market Cap. (\$B)	2.5	0.8
Price To Earnings	21.7	18.4
Price To Book	3.3	3.3
Price To Sales	2.9	3.1
Return on Equity (%)	4.5	7.8
Yield (%)	1.1	1.0
Beta		1.0
R-Squared		1.0

Characteristics

	Portfolio	Russell 2000
INDUSTRY SECTOR DISTRIBUTION (% E	Equity)	
Energy	4.8	3.8
Materials	5.3	4.6
Industrials	17.7	15.4
Consumer Discretionary	10.5	12.6
Consumer Staples	4.9	2.8
Health Care	12.7	15.4
Financials	18.2	17.8
Information Technology	16.8	16.7
Telecommunication Services	0.0	0.8
Utilities	2.1	3.5
Real Estate	6.3	6.7
Unclassified	0.0	0.1

Largest Holdings

	End Weight	Return
DYCOM INDS.	1.4	29.8
RLJ LODGING TRUST	1.4	1.3
EDITAS MEDICINE	1.2	28.0
SELECTIVE IN.GP.	1.2	9.3
CALAMP	1.2	-7.8

Top Contributors

	End Weight	Return	Contribution
DYCOM INDS.	1.4	29.8	0.4
EDITAS MEDICINE	1.2	28.0	0.3
BOYD GAMING	0.9	34.7	0.3
CARRIZO O&G.	0.9	24.2	0.2
PROTO LABS	0.8	28.3	0.2

Bottom Contributors

	End Weight	Return	Contribution
DIEBOLD NIXDORF	0.7	-28.0	-0.2
MEDICINES COMPANY	0.7	-26.2	-0.2
AMER.VANGUARD	1.0	-14.1	-0.1
AMERICAN OUTDOOR BRANDS	0.8	-15.8	-0.1
GOPRO CL.A	0.4	-31.2	-0.1

Market Capitalization

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
CIM Investment Management	58.3%	41.7%	0.0%	0.0%	0.0%
Russell 2000	70.1%	29.3%	0.5%	0.0%	0.0%
Weight Over/Under	-11.8%	12.4%	-0.5%	0.0%	0.0%

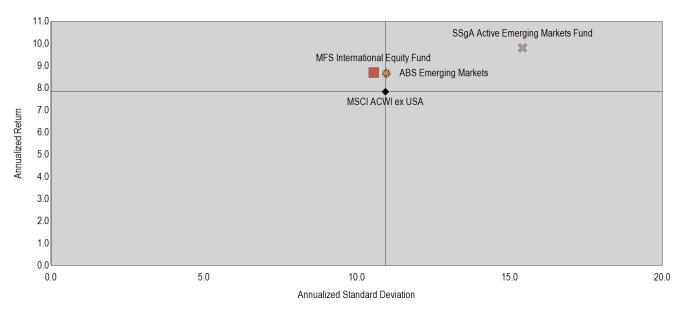
Non-U.S. Equity Composite

Characteristics

As of December 31, 2017

Market Value: \$88.8 Million and 11.8% of Fund

Risk / Return - 3 Years



Characteristics

	Portfolio	MSCI ACWI ex USA
Number of Holdings	299	1,866
Weighted Avg. Market Cap. (\$B)	74.3	66.3
Median Market Cap. (\$B)	10.1	8.6
Price To Earnings	20.0	20.8
Price To Book	4.2	2.8
Price To Sales	2.9	2.2
Return on Equity (%)	19.4	15.0
Yield (%)	2.4	2.7
Beta	1.0	1.0
R-Squared	0.9	1.0

Total	100.0%	100.0%
Other	0.0%	0.5%
Emerging Markets	16.1%	24.5%
Japan	12.7%	16.6%
Pacific Basin Ex Japan	6.1%	8.3%
United Kingdom	11.5%	12.1%
Europe Ex U.K.	48.0%	31.6%
United States	2.2%	0.0%
North America ex U.S.	3.4%	6.6%
Region	% of Total	% of Bench

Characteristics

	Portfolio	MSCI ACWI ex USA
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	3.6	6.7
Materials	7.1	8.1
Industrials	13.3	11.9
Consumer Discretionary	9.7	11.3
Consumer Staples	16.6	9.5
Health Care	14.8	7.6
Financials	16.7	23.1
Information Technology	14.1	11.5
Telecommunication Services	0.6	4.0
Utilities	1.2	2.9
Real Estate	0.5	3.2
Unclassified	0.0	0.0

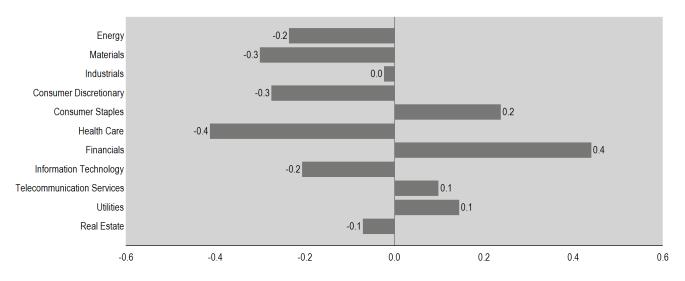
Market Capitalization

	Small Cap	Mid Cap	Large Cap
Non-U.S. Equity Composite	4.8%	8.0%	87.2%
MSCI ACWI ex USA	4.8%	19.2%	76.0%
Weight Over/Under	0.1%	-11.2%	11.2%

Market Value: \$88.8 Million and 11.8% of Fund

As of December 31, 2017

Active Contribution vs. MSCI ACWI ex USA



Non-U.S. Equity Composite

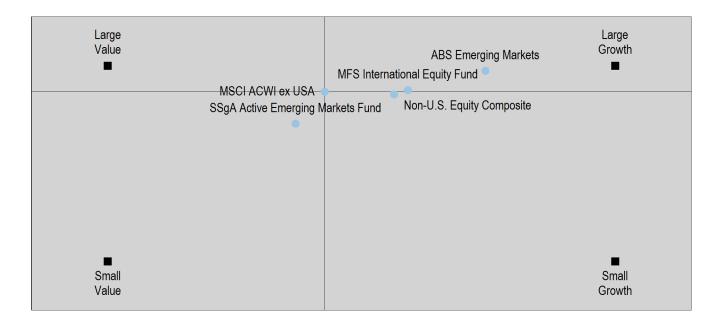
Market Cap Attribution vs. MSCI ACWI ex USA

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 97.39	21.1%	20.0%	1.1%	1.4%	3.8%	-2.4%	0.0%	-0.5%	-0.5%	-0.2%	-0.7%
2) 46.60 - 97.39	26.7%	20.0%	6.7%	5.8%	4.7%	1.2%	0.0%	0.4%	0.3%	-0.1%	0.3%
3) 23.74 - 46.60	22.9%	20.1%	2.8%	8.5%	5.2%	3.3%	0.0%	0.8%	0.8%	0.0%	0.8%
4) 11.16 - 23.74	21.9%	20.0%	1.9%	2.1%	5.2%	-3.1%	0.0%	-0.7%	-0.7%	0.0%	-0.6%
5) 0.00 - 11.16	7.4%	20.0%	-12.6%	2.5%	6.2%	-3.7%	-0.1%	-0.4%	-0.5%	0.2%	-0.3%
Total				4.5%	5.0%	-0.6%	-0.2%	-0.4%	-0.6%	0.0%	-0.6%

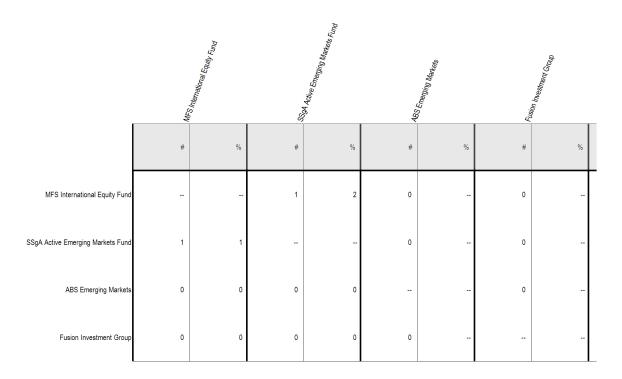
Market Value: \$88.8 Million and 11.8% of Fund

As of December 31, 2017

Equity Style Map 3 Years Ending December 31, 2017



Common Holdings Matrix



MFS International Equity Fund

Characteristics

As of December 31, 2017

Market Value: \$66.8 Million and 8.9% of Fund

Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	74	928
Weighted Avg. Market Cap. (\$B)	73.2	59.8
Median Market Cap. (\$B)	42.4	11.5
Price To Earnings	20.7	20.4
Price To Book	4.1	2.7
Price To Sales	2.9	2.1
Return on Equity (%)	19.3	13.8
Yield (%)	2.2	2.9
Beta	1.0	1.0
R-Squared	0.9	1.0

Region	% of Total	% of Bench
North America ex U.S.	3.8%	0.0%
United States	2.5%	0.0%
Europe Ex U.K.	54.5%	45.8%
United Kingdom	13.1%	17.6%
Pacific Basin Ex Japan	4.8%	12.0%
Japan	14.5%	24.1%
Emerging Markets	6.8%	0.0%
Other	0.0%	0.5%
Total	100.0%	100.0%

Characteristics

	Portfolio	MSCI EAFE
INDUSTRY SECTOR DISTRIBUTION ((% Equity)	
Energy	2.8	5.3
Materials	6.8	8.2
Industrials	14.7	14.7
Consumer Discretionary	10.0	12.3
Consumer Staples	18.4	11.1
Health Care	16.8	10.1
Financials	15.8	21.2
Information Technology	12.0	6.5
Telecommunication Services	0.0	3.9
Utilities	1.2	3.2
Real Estate	0.0	3.5
Unclassified	0.0	0.1

Market Capitalization

	Small Cap	Mid Cap	Large Cap
MFS International Equity Fund	0.4%	8.0%	91.6%
MSCI EAFE	4.4%	19.7%	75.9%
Weight Over/Under	-4.0%	-11.7%	15.7%



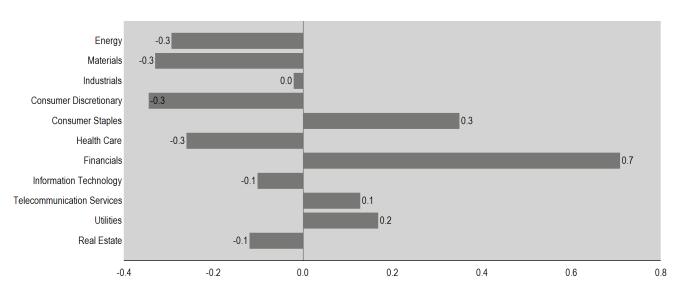
MFS International Equity Fund

As of December 31, 2017

Attribution

Market Value: \$66.8 Million and 8.9% of Fund

Active Contribution



MFS International Equity Fund

Performance By Characteristic

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 98.22	21.2%	19.7%	1.5%	0.5%	2.0%	-1.5%	0.0%	-0.3%	-0.3%	-0.5%	-0.8%
2) 51.75 - 98.22	29.1%	20.2%	8.8%	5.9%	4.2%	1.7%	0.0%	0.6%	0.5%	0.0%	0.5%
3) 27.70 - 51.75	21.0%	19.9%	1.1%	8.8%	4.0%	4.7%	0.0%	1.0%	1.0%	-0.1%	0.9%
4) 13.01 - 27.70	24.6%	20.1%	4.5%	2.8%	5.0%	-2.2%	0.0%	-0.5%	-0.5%	0.1%	-0.3%
5) 0.00 - 13.01	4.2%	20.0%	-15.9%	0.0%	6.3%	-6.3%	-0.3%	-0.3%	-0.7%	0.4%	-0.3%

SSgA Active Emerging Markets Index Fund

Characteristics

As of December 31, 2017

Market Value: \$9.4 Million and 1.3% of Fund

Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	227	846
Weighted Avg. Market Cap. (\$B)	82.2	89.8
Median Market Cap. (\$B)	4.4	6.0
Price To Earnings	14.7	22.1
Price To Book	3.3	3.3
Price To Sales	2.2	2.7
Return on Equity (%)	20.2	18.1
Yield (%)	3.2	2.1
Beta	1.0	1.0
R-Squared	1.0	1.0

Region	% of Total	% of Bench
EM Asia		8.6%
EM Latin America		1.4%
EM Europe & Middle East	-	0.7%
EM Africa		0.8%
Other		88.4%
Total		100.0%

Characteristics

	Portfolio	MSCI Emerging Markets
INDUSTRY SECTOR DISTRIBUTION (%	Equity)	
Energy	9.5	6.8
Materials	9.8	7.3
Industrials	3.1	5.3
Consumer Discretionary	7.7	10.2
Consumer Staples	3.4	6.5
Health Care	0.5	2.7
Financials	23.0	23.5
Information Technology	29.0	27.7
Telecommunication Services	5.1	4.8
Utilities	0.7	2.4
Real Estate	4.3	2.8
Unclassified	0.0	0.0

Market Capitalization

	Small Cap	Mid Cap	Large Cap
SSgA Active Emerging Markets Fund	16.6%	14.2%	69.2%
MSCI Emerging Markets	3.7%	15.5%	80.8%
Weight Over/Under	12.9%	-1.3%	-11.6%

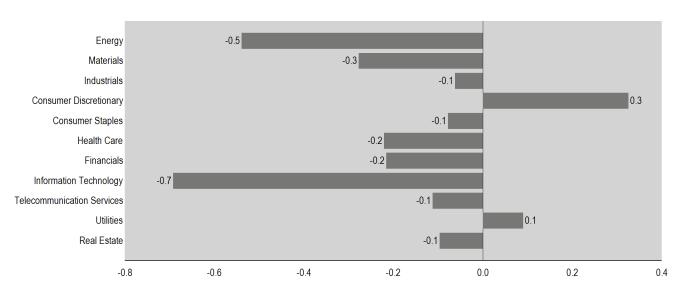


SSgA Active Emerging Markets Index Fund

Attribution

As of December 31, 2017 Market Value: \$9.4 Million and 1.3% of Fund

Active Contribution



SSgA Active Emerging Markets Fund

Performance By Characteristic

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Market Cap. Quintile (\$Bil)											
1) Above 104.55	20.5%	20.0%	0.5%	9.0%	8.5%	0.5%	0.0%	0.1%	0.1%	0.2%	0.4%
2) 33.04 - 104.55	16.4%	20.0%	-3.5%	5.4%	8.5%	-3.1%	-0.1%	-0.5%	-0.6%	0.2%	-0.4%
3) 15.32 - 33.04	14.5%	20.1%	-5.6%	6.3%	6.0%	0.3%	0.1%	-0.1%	0.0%	-0.3%	-0.2%
4) 6.89 - 15.32	15.9%	20.1%	-4.1%	5.2%	7.1%	-1.9%	0.0%	-0.4%	-0.4%	0.0%	-0.4%
5) 0.00 - 6.89	32.7%	19.9%	12.7%	2.8%	6.4%	-3.6%	-0.1%	-0.9%	-1.1%	-0.2%	-1.2%

Fusion Investment Group

Characteristics

As of December 31, 2017 Market Value: \$2.3 Million and 0.3% of Fund

Characteristics

	Portfolio	MSCI ACWI
Number of Holdings	0	2,491
Weighted Avg. Market Cap. (\$B)		111.2
Median Market Cap. (\$B)		10.0
Price To Earnings		23.0
Price To Book		3.7
Price To Sales		2.9
Return on Equity (%)		16.3
Yield (%)		2.3
Beta		1.0
R-Squared		1.0

Region	% of	% of
Region	Total	Bench

Characteristics

	-	
	Portfolio	MSCI ACWI
INDUSTRY SECTOR DISTRIBUTION (%	6 Equity)	
Energy	0.0	6.4
Materials	0.0	5.5
Industrials	0.0	10.9
Consumer Discretionary	0.0	12.0
Consumer Staples	0.0	8.7
Health Care	0.0	10.7
Financials	0.0	18.7
Information Technology	0.0	18.1
Telecommunication Services	0.0	3.0
Utilities	0.0	2.9
Real Estate	0.0	3.1
Unclassified	0.0	0.0

Market Capitalization

	Small Cap	Mid Cap	Large Cap
Fusion Investment Group	0.0%	0.0%	0.0%
MSCI ACWI	2.5%	15.6%	81.9%
Weight Over/Under	-2.5%	-15.6%	-81.9%



ABS Emerging Markets

Characteristics

As of September 30, 2017

Market Value: \$9.7 Million and 1.3% of Fund

Characteristics

Strategy Breakdown

	ABS Investment Management
Product Assets	\$298,009,802
# Underlying Managers	21
% of Portfolio in Top 3 Funds	27.5%
Aggregate Portfolio Leverage	104.4%
Best Performing Manager Return	21.8%
Worst Performing Manager Return	-3.3%
# Managers Hired Over Quarter	0
# Managers Fired Over Quarter	0
Total Outflows from the Fund	-\$4
Pending Outflows	\$0
Total Inflows to the Fund	\$0
% of Fund Liquid in 6 Months	98.4%
% of Fund Liquid in 12 Months	99.5%
% of Fund Liquid in 24 Months	100.0%
Client Percent of Fund	

	Weight (%)	Attribution (%)
Credit	0.0%	0.0%
Event Driven	0.0%	0.0%
Global Macro/CTA	0.0%	0.0%
Multi-Strategy	0.0%	0.0%
Hedged Equity	29.4%	0.0%
Relative Value	0.0%	0.0%
Short Selling	0.0%	0.0%
Other*	65.8%	0.0%
Cash	4.8%	0.0%
Total	100.0%	0.0%

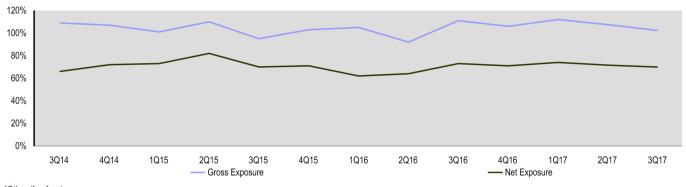
Security Geographic Exposure	Weight (%)
U.S. Exposure	2.0%
International Exposure	93.2%
Cash	4.8%

Top Ten Holdings Investment Detail

			Fair Market		Quarter
Fund	Туре	Cost (\$M)	Value (\$M)	Weight (%)	Return
WF Asian Smaller Companies Fund Limited	Other	\$0.0	\$31.1	10.3%	10.3%
Sagil Latin American Opportunities	Hedged Equity	\$0.0	\$28.1	9.3%	6.7%
ANDA SMA	Other	\$0.0	\$24.2	8.0%	-3.4%
One North Capital Asia Value Fund	Other	\$0.0	\$21.1	6.9%	3.2%
Green Fund LLC	Hedged Equity	\$0.0	\$19.9	6.6%	1.0%
RWC Emerging Markets	Other	\$0.0	\$17.8	5.9%	11.9%
THE RUSSIAN PROSPERITY FUND	Other	\$0.0	\$16.8	5.5%	21.8%
Cadence Asia Fund	Other	\$0.0	\$16.7	5.5%	2.2%
ENAM India Growth Fund (Cayman) Ltd	Other	\$0.0	\$15.2	5.0%	5.0%
Sino Vision Taiwan Fund	Hedged Equity	\$0.0	\$14.0	4.6%	7.4%

				SEC
Fund	Size of Fund (\$M)	Fund Inception	Investment Inception	Registered
WF Asian Smaller Companies Fund Limited	\$1,139.0	January-03	July-12	Yes
Sagil Latin American Opportunities	\$444.0	July-09	August-14	Yes
ANDA SMA	\$26.0	July-17	July-17	Yes
One North Capital Asia Value Fund	\$136.3	March-09	October-12	Yes
Green Fund LLC	\$694.5	February-01	January-15	Yes
RWC Emerging Markets	\$1,079.0	August-12	August-16	Yes
THE RUSSIAN PROSPERITY FUND	\$1,000.0	September-96	January-15	Yes
Cadence Asia Fund	\$17.8	August-17	August-17	Yes
ENAM India Growth Fund (Cayman) Ltd	\$111.0	August-11	January-15	Yes
Sino Vision Taiwan Fund	\$244.0	September-17	September-17	Yes

Gross/Net Positioning



ABS Offshore SPC Global

Characteristics

As of September 30, 2017

Characteristics

Market Value: \$13.6 Million and 1.9% of Fund Strategy Breakdown

	ABS Investment Management
Product Assets	\$1,339,601,972
# Underlying Managers	25
% of Portfolio in Top 3 Funds	19.5%
Aggregate Portfolio Leverage	156.7%
Best Performing Manager Return	17.5%
Worst Performing Manager Return	-2.3%
# Managers Hired Over Quarter	2
# Managers Fired Over Quarter	0
Total Outflows from the Fund	-\$33
Pending Outflows	\$0
Total Inflows to the Fund	\$22
% of Fund Liquid in 6 Months	90.6%
% of Fund Liquid in 12 Months	99.7%
% of Fund Liquid in 24 Months	100.0%
Client Percent of Fund	

	Weight (%)	Attribution (%)
Credit	0.0%	0.0%
Event Driven	0.0%	0.0%
Global Macro/CTA	0.0%	0.0%
Multi-Strategy	0.0%	0.0%
Hedged Equity	98.6%	0.0%
Relative Value	0.0%	0.0%
Short Selling	0.0%	0.0%
Other*	0.0%	0.0%
Cash	1.5%	0.0%
Total	100.0%	0.0%

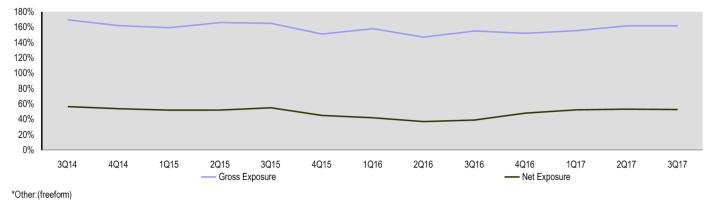
Security Geographic Exposure	Weight (%)
U.S. Exposure	51.9%
International Exposure	46.7%
Cash	1.5%

Top Ten Holdings Investment Detail

Fund	Туре	Cost (\$M)	Fair Market Value (\$M)	Weight (%)	Quarter Return
i diid	Турс	Cost (viii)	Value (VIVI)	Weight (70)	
Suvretta Offshore Fund, Ltd.	Hedged Equity	\$0.0	\$94.2	6.9%	7.9%
Seligman Tech Spectrum Fund	Hedged Equity	\$0.0	\$87.5	6.4%	8.3%
Lansdowne Developed Markets Fund Limited	Hedged Equity	\$0.0	\$85.7	6.2%	-2.3%
Long Pond Offshore Ltd	Hedged Equity	\$0.0	\$77.8	5.7%	3.7%
Soroban Cayman Fund Ltd	Hedged Equity	\$0.0	\$74.7	5.4%	2.0%
TPG Public Equity Partners B, Ltd	Hedged Equity	\$0.0	\$74.4	5.4%	1.3%
Lakewood Capital Offshore Fund, Ltd.	Hedged Equity	\$0.0	\$64.8	4.7%	3.9%
Camber Capital Offshore Fund, Ltd.	Hedged Equity	\$0.0	\$63.7	4.6%	-2.3%
Kylin Offshore Fund Ltd	Hedged Equity	\$0.0	\$58.6	4.3%	8.7%
Pelham Long/Short Fund Ltd.	Hedged Equity	\$0.0	\$57.8	4.2%	4.7%

Fund	Size of Fund (\$M)	Fund Inception	Investment Inception	SEC Registered
Suvretta Offshore Fund, Ltd.	\$3,448.0	September-12	January-12	Yes
Seligman Tech Spectrum Fund	\$393.0	July-01	July-01	Yes
Lansdowne Developed Markets Fund Limited	\$9,485.6	August-01	August-01	Yes
Long Pond Offshore Ltd	\$2,385.0	October-10	October-10	Yes
Soroban Cayman Fund Ltd	\$6,235.5	November-10	October-10	Yes
TPG Public Equity Partners B, Ltd	\$1,630.0	September-13	September-13	Yes
Lakewood Capital Offshore Fund, Ltd.	\$4,740.0	July-07	April-11	Yes
Camber Capital Offshore Fund, Ltd.	\$1,526.0	April-06	April-06	Yes
Kylin Offshore Fund Ltd	\$1,945.0	April-06	August-06	Yes
Pelham Long/Short Fund Ltd	\$4 531 5	November-07	November-07	Yes

Gross/Net Positioning



Marquette Associates, Inc.

Marquette Associates

Entrust Diversified Select Equity Fund

Characteristics

As of September 30, 2017

Characteristics

Market Value: \$12.4 Million and 1.7% of Fund Strategy Breakdown

	EnTrustPermal
Product Assets	\$41,380,727
# Underlying Managers	15
% of Portfolio in Top 3 Funds	30.0%
Aggregate Portfolio Leverage	142.5%
Best Performing Manager Return	0.8%
Worst Performing Manager Return	-1.3%
# Managers Hired Over Quarter	0
# Managers Fired Over Quarter	0
Total Outflows from the Fund	-\$1
Pending Outflows	\$0
Total Inflows to the Fund	\$0
% of Fund Liquid in 6 Months	69.3%
% of Fund Liquid in 12 Months	89.4%
% of Fund Liquid in 24 Months	97.0%
Client Percent of Fund	29.9%

	Weight (%)	Attribution (%)
Credit	4.9%	0.0%
Event Driven	1.4%	0.0%
Global Macro/CTA	0.0%	0.4%
Multi-Strategy	18.8%	0.0%
Hedged Equity	16.9%	0.0%
Relative Value	0.0%	0.0%
Short Selling	0.0%	-0.8%
Other*	58.0%	0.0%
Cash	0.0%	0.0%
Total	100.0%	-0.3%

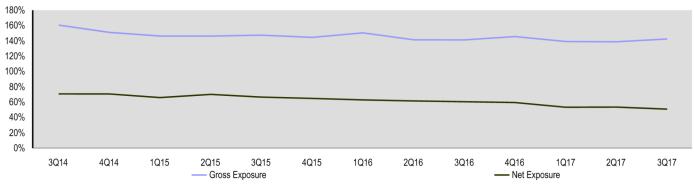
Security Geographic Exposure	Weight (%)
U.S. Exposure	81.7%
International Exposure	18.3%
Cash	0.0%

Top Ten Holdings Investment Detail

			Fair Market		Quarter
Fund	Туре	Cost (\$M)	Value (\$M)	Weight (%)	Return
Tosca (Plan Assets)	Other	\$2.6	\$4.5	11.5%	0.8%
Pershing Square International Ltd	Other	\$2.4	\$3.6	9.3%	-0.4%
Trian Partners Ltd	Other	\$2.6	\$3.6	9.2%	0.0%
Third Point Offshore Fund Ltd	Multi-Strategy	\$5.3	\$3.5	9.1%	0.3%
Long Pond Offshore, Ltd.	Hedged Equity	\$2.9	\$3.5	9.0%	0.3%
JANA Offshore Partners, Ltd	Other	\$2.7	\$3.5	9.0%	0.0%
Corvex Offshore II Ltd.	Hedged Equity	\$4.9	\$3.5	8.8%	-0.6%
Redmile Capital Offshore Fund (ERISA) Ltd	Hedged Equity	\$2.2	\$2.9	7.5%	0.8%
Quentec Fund, Ltd	Hedged Equity	\$2.0	\$2.5	6.4%	-1.3%
Empyrean Capital Overseas Fund Ltd	Multi-Strategy	\$1.8	\$2.4	6.1%	0.2%

				SEC
Fund	Size of Fund (\$M)	Fund Inception	Investment Inception	Registered
Tosca (Plan Assets)	\$0.0	October-00	August-08	Yes
Pershing Square International Ltd	\$0.0	January-04	August-08	Yes
Trian Partners Ltd	\$0.0	November-05	August-08	Yes
Third Point Offshore Fund Ltd	\$0.0	June-95	September-08	Yes
Long Pond Offshore, Ltd.	\$0.0	October-10	September-13	Yes
JANA Offshore Partners, Ltd	\$0.0	April-01	September-13	Yes
Corvex Offshore II Ltd.	\$0.0	March-11	January-12	Yes
Redmile Capital Offshore Fund (ERISA) Ltd	\$0.0	March-07	August-16	Yes
Quentec Fund, Ltd	\$0.0	July-17	June-12	Yes
Empyrean Capital Overseas Fund Ltd	\$0.0	February-04	May-11	Yes

Gross/Net Positioning



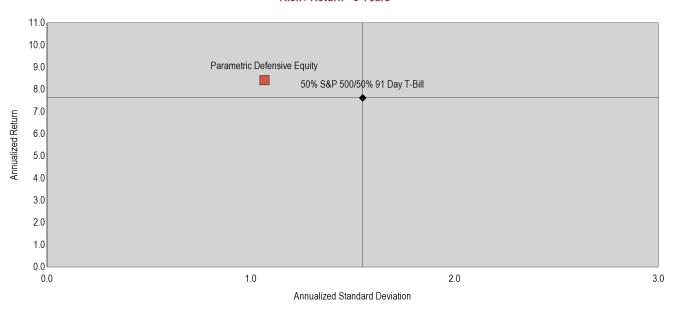
*Other:(freeform)

Parametric Defensive Equity

Characteristics

As of December 31, 2017

Risk / Return - 3 Years



Characteristics

Parametric Defensive Equity

Portfolio Value	\$4.77 billion
Total Outflows from the Fund	\$12.8 million
Total Inflows to the Fund	\$485.1 million

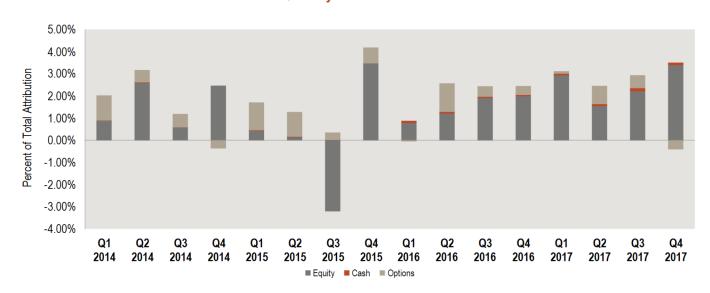
Strategy Breakdown

Fully Funded Base Portfolio with Option Overlay

S&P 500 Index	50.0%
Sells covered puts below current market price	
U.S. Treasury Bills	50.0%

Sells covered calls above current market price

Quarterly Performance Attribution



Rreef America II Characteristics

As of September 30, 2017

Market Value: \$21.6 Million and 2.9% of Fund

Strategy Breakdown

Characteristics

	Rreef America II
Number of Properties	100
Total Square Feet	41,932,077
% in Top Ten	31.8%
% Leased (By Square Feet)	91.3%
% Leverage	20.1%
% Equity	82.5%
% Joint Ventures	17.5%
1-Year Dividend Yield	3.3%
1-Year Net Income Return	3.3%
1-Year Gross Appreciation Return	3.5%
1-Year Gross Total Return	7.9%
% of Portfolio Owned by Client	0.2%

	% of Portfolio	Top Five Me	etro Areas % of NA\
Pre-Dvp/Fwd Con	nm. 0.0%	New York	11.7%
Development	0.8%	San Francis	00 11.4%
Re-Development	0.0%	Los Angeles	9.2%
Initial Leasing	0.0%	Boston	9.2%
Operating	99.2%	Chicago	8.0%
Cash, Debt & Oth	er 0.0%		
		Queue %	
Fund GAV	\$11,988,565,300	3.6%	
Fund NAV	\$9,837,325,249	4.4%	
Queue	+\$429,048,000		
Queue Length Oc	tober 2017 capital call		

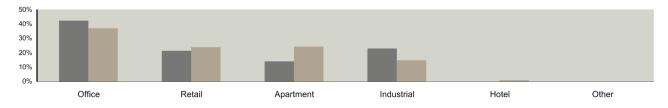
Top Ten Holdings Investment Detail

			Total Cost	Fair Market Value	
Property	Type	Location	(\$M)	(\$M)	% of Fund
Riverfront Office Park	Office	Cambridge, MA	\$242.2	\$700.0	6.4%
222 Broadway	Office	New York, NY	\$505.4	\$594.0	5.4%
222 South Riverside	Office	Chicago, IL	\$367.0	\$426.8	3.9%
West 8th	Office	Seattle, WA	\$369.2	\$253.8	2.3%
Manhattan Village	Retail	Manhattan Beach, CA	\$190.6	\$325.0	3.0%
Las Olas Centre	Office	Ft. Lauderdale, FL	\$217.5	\$274.5	2.5%
Villa Marina Marketplace	Retail	Marina Del Rey, CA	\$233.6	\$269.0	2.4%
San Francisco Design Center	Retail	San Francisco, CA	\$134.6	\$264.4	2.4%
Sharon Green Apartments	Apartment	Menlo Park, CA	\$251.1	\$129.7	1.2%
St. Johns Town Center JV	Retail	Jacksonville, FL	\$208.9	\$251.3	2.3%
Total			\$2,720.2	\$3,488.5	31.8%

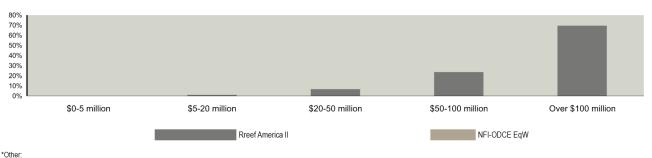
Regional Breakdown by NAV (Excluding Cash & Debt)



Property Type Breakdown by NAV (Excluding Cash & Debt)



Property Size Breakdown by NAV (Excluding Cash & Debt)



Barings Core Property Fund

Characteristics

As of September 30, 2017

Characteristics

Strategy Breakdown

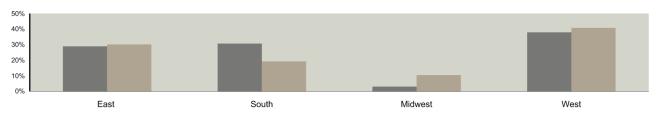
Barings Core Property Fund (Corr	nerstone Patriot Fund)
Number of Properties	56
Total Square Feet	9,403,224
% in Top Ten	37.6%
% Leased (By Square Feet)	93.0%
% Leverage	19.8%
% Equity	80.2%
% Joint Ventures	9.7%
1-Year Dividend Yield	4.6%
1-Year Net Income Return	3.7%
1-Year Gross Appreciation Return	3.7%
1-Year Gross Total Return	8.3%
% of Portfolio Owned by Client	0.6%

	% of Portfolio	Top Five Metro Areas % of NAV
Pre-Dvp/Fwd Comm.	0.8%	Los Angeles, CA 15.8%
Development	1.6%	New York - Northern NJ 10.1%
Re-Development	0.6%	Dallas-Ft Worth, TX 8.9%
Initial Leasing	2.3%	West Palm Beach, FL 8.1%
Operating	94.8%	Boston, MA 6.8%
Cash, Debt & Other	0.0%	
Fund GAV	\$4,177,742,664	
Fund NAV	\$3,272,474,134	

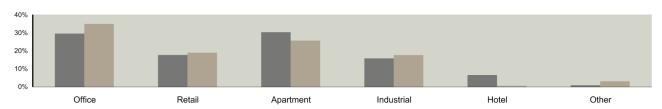
Top Ten Holdings Investment Detail

			Total Cost	Fair Market Value	
Property	Type	Location	(\$M)	(\$M)	% of Fund
100 Wall Street	Office	New York, NY	\$277.2	\$162.7	5.2%
Boca Office	Office	Boca Raton, FL	\$127.9	\$144.4	4.6%
Hamilton Crowne Plaza	Hotel	Washington, DC	\$76.2	\$125.2	4.0%
801 South Figueroa	Office	Los Angeles, CA	\$207.7	\$124.2	4.0%
33 New Montgomery	Office	San Francisco, CA	\$159.3	\$120.6	3.8%
Atrium	Office	Irvine, CA	\$95.1	\$112.0	3.6%
San Fernando Business Center	Industrial	San Fernando, CA	\$72.8	\$102.3	3.3%
Alamo Crossing	Industrial	Houston, TX	\$88.1	\$97.6	3.1%
Ridge	Apartment	Waltham, MA	\$76.9	\$96.1	3.1%
Promenade at Town Center	Retail	Valencia, CA	\$68.9	\$94.2	3.0%
Total			\$1,250.2	\$1,179.2	37.6%

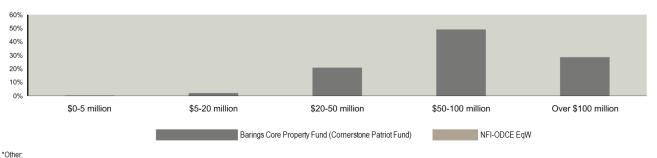
Regional Breakdown by NAV (Excluding Cash & Debt)



Property Type Breakdown by NAV (Excluding Cash & Debt)



Property Size Breakdown by NAV (Excluding Cash & Debt)



Marquette Associates, Inc.

Marquette Associates

Draper Triangle Ventures II, LP

Characteristics

As of December 31, 2017

Market Value: \$0.4 Million and 0.1% of Fund

Characteristics

	Draper Triangle Ventures
Fund Vintage Year	2004
Total Size of Fund (\$M)	\$72.6
% of Capital Called	109.97%
Capital Distributed (\$M)	\$76.4
Current Fund NAV (\$M)	\$47.5
Client Commitment (\$M)	\$1.0
Client % Ownership of Fund	1.16%
Net IRR	6.2%
Net Multiple	1.6

	# of Companies	Current + Realized MV (\$M)	% of Portfolio
Total Companies in Portfolio	15	\$123.0	
Companies Written Off	2	\$0.0	
Companies Realized	9	\$84.9	
Active Companies in Portfolio	7	\$13.5	
Companies Written Down	5	\$3.5	
Companies Written Up	2	\$9.9	

Top Ten Holdings Detail

Holding	Туре	Initial Investment Date % o	f Portfolio	Total Investment (\$M)	Fair Market Value (\$M)	Total Distribution (\$M)
Ayalogic	Information Technology	October-04	1.81%	\$5.94	\$0.24	\$0.00
Co-eXprise	Information Technology	December-09	27.61%	\$3.61	\$3.72	\$0.00
ThinkVine	Information Technology	January-08	17.70%	\$2.38	\$2.38	\$0.00
OnShift	Health Care	November-10	46.04%	\$1.75	\$6.20	\$0.00
Commuter Advertising	Information Technology	March-11	6.84%	\$1.00	\$0.92	\$0.00
Unitask	Information Technology	April-05	0.00%	\$2.98	\$0.00	\$0.00

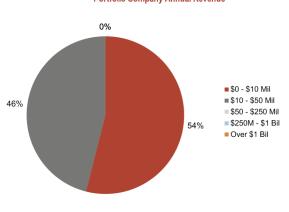
Annual Cash Flow Summary (\$M)





Consumer Discretionary Consumer Staples Energy Financials Health Care Industrials Info Tech Materials Telecomm Utilities Other*

Portfolio Company Annual Revenue



100%

Draper Triangle Ventures III, LP

Characteristics

As of December 31, 2017

Market Value: \$1.0 Million and 0.1% of Fund

Characteristics

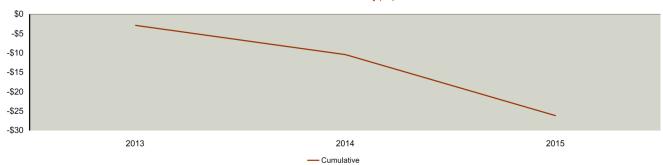
	Draper Triangle Ventures
Fund Vintage Year	2013
Total Size of Fund (\$M)	\$78.8
% of Capital Called	33.19%
Capital Distributed (\$M)	\$0.0
Current Fund NAV (\$M)	\$21.0
Client Commitment (\$M)	\$2.0
Client % Ownership of Fund	2.54%
Net IRR	-19.6%
Net Multiple	

	# of Companies	Current + Realized MV (\$M)	% of Portfolio
Total Companies in Portfolio	9	\$21.0	100.0%
Companies Written Off	0	\$0.0	0.0%
Companies Realized	0	\$0.0	0.0%
Active Companies in Portfolio	9	\$21.0	100.0%
Companies Written Down	1	\$2.9	13.7%
Companies Written Up	2	\$0.7	3.3%

Top Ten Holdings Detail

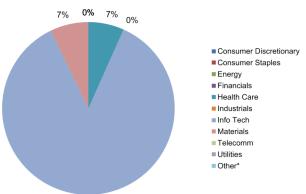
		Initial Investment		Total Investment	Fair Market	Total
Holding	Туре	Date	% of Portfolio	(\$M)	Value (\$M)	Distribution (\$M)
Bjond	Information Technology	December-13	10.07%	\$2.05	\$2.05	\$0.00
Amplifinity	Information Technology	February-14	14.71%	\$3.00	\$2.88	\$0.00
Rhiza	Information Technology	June-14	23.49%	\$4.79	\$5.20	\$0.00
re2	Information Technology	July-14	9.81%	\$2.00	\$2.28	\$0.00
Pixel Velocity	Information Technology	February-15	9.81%	\$2.00	\$2.00	\$0.00
Thread International	Materials	June-15	7.36%	\$1.50	\$1.50	\$0.00
Acrobatiq	Information Technology	July-15	14.71%	\$3.00	\$3.00	\$0.00
Ninespot	Information Technology	October-15	3.16%	\$0.64	\$0.64	\$0.00
Stimdia	Health Care	December-15	6.87%	\$1.40	\$1.40	\$0.00

Annual Cash Flow Summary (\$M)

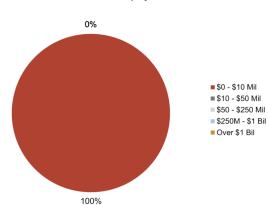


	2013	2014	2015
Paid In Capital w/o Fees	-\$1.7	-\$6.0	-\$13.0
Fees Paid	-\$1.2	-\$1.5	-\$2.8
Distribution	\$0.0	\$0.0	\$0.0
Cumulative	-\$2.9	-\$10.4	-\$26.2





Portfolio Company Annual Revenue



86%

Crescent Mezzanine Partners VIB, LP

Characteristics

As of December 31, 2017

Fund Vintage Year Total Size of Fund (\$M)

% of Capital Called

Net IRR

Net Multiple

Capital Distributed (\$M)

Current Fund NAV (\$M)

Client Commitment (\$M)

Client % Ownership of Fund

Characteristics

Crescent Capital Group

\$667.6

89.96%

\$138.5

\$553.3

\$10.0

1.50%

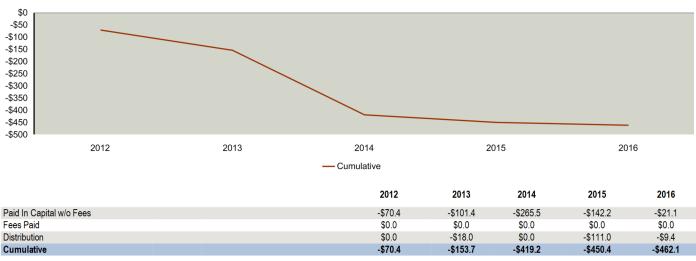
8.3% 0.2 Market Value: \$5.2 Million and 0.7% of Fund

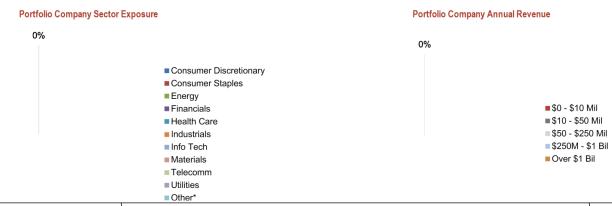
	# of Companies	Current + Realized MV (\$M)	% of Portfolio
Total Companies in Portfolio			
Companies Written Off			
Companies Realized			
Active Companies in Portfolio			
Companies Written Down			
Companies Written Up			

Top Ten Holdings Detail

Holding	Туре	Initial Investment Date % of Portfoli	Total Investment Fair Mar io (\$M) Value (\$	ket Total \$M) Distribution (\$M)

Annual Cash Flow Summary (\$M)





Pittsburgh Comprehensive Municipal Pension

Report Items

- On January 24, 2018, \$122,843 was transferred from the Operating Account to Draper Triangle Ventures III, L.P. to cover a capital call.
- On December 11, 2017, \$454,917 was transferred from the Operating Account to Crescent Mezzanine Partners VIIB, L.P. to cover a capital call.
- On November 27, 2017, \$31,436 was transferred from the Operating Account to Draper Triangle Ventures III.
- On November 16, 2017, \$405,660 was wired from the Operating Account to fund EnTrust Special Opportunities III.
- On October 30, 2017, \$379,959 from the Operating Account was wired to cover the Crescent Mezzanine Partners VIIB capital call.
- On September 25, 2017, \$602,089 was wired from the Operating Account to fund EnTrust Special Opportunities III.
- On September 5, 2017, \$202,040 from the Operating Account was used to fund Crescent Mezzanine Partners VIIB capital call.
- On August 9, 2017, \$7,000,000 was redeemed from SSGA S&P 500 Index and transferred to the Operating Account.
- In the month of August, \$1,013,469 was wired from the Operating Account to fund EnTrust Special Opportunities III.
- On July 25, 2017, \$111,301 was tranferred from the Operating Account to fund Draper Triangle III.
- On July 19, 2017, \$60,000 from Crescent Mezzanine Partners VII, \$325,000 from Hirtle Callaghan was transferred to the Operating Account; \$379,403 was transferred from the Operating Account to fund EnTrust Special Opportunities Fund III.
- On May 25, 2017, \$3,000,000 from Frontier Capital Management and \$3,000,000 from Guyasuta Small Cap Equity was transferred to the Operating Account.
- On April 24, 2017, \$259,692 was committed to Crescent Mezzanine Partners VII.
- On April 21, 2017, \$100,000 from Crescent Mezzanine Partners VII, \$150,000 from Hirtle Callaghan and \$50,000 from Draper Triangle was transferred to the Operating Account; \$1,047,886 was transferred from the Operating Account to fund EnTrust Special Opportunities Fund III.
- On March 3, 2017, \$2,000,000 was transferred from MFS International Equity Fund to fund Fusion Global Core Equity.
- On February 22, 2017, \$317,000 from Crescent Mezzanie Partners VIIB and \$370,000 from Hirtle Callaghan was transferred to the Operating Account; \$586,673 was transferred from the Operating Account to EnTrust Special Opportunities Fund III.
- On January 31, 2017, \$5,000,000 was transferred from Entrust Diversified Select Equity Fund to the Operating Account.
- On January 30, 2017, \$10,000,000 was transferred from cash to fund Parametric Defensive Equity.
- On January 27, a redemption request was submitted for \$5,000,000 from ABS Alpha Fund and was transferred to the Operating Account.
- On January 20, 2017, \$634,327 was transferred from cash to Crescent Mezzanine Fund VII.
- On December 16, 2016, \$4,541 was transferred from cash to Birchmere Ventures III.
- On December 8, 2016, \$825,207 was transferred from cash to Crescent Mezzanine Fund VII.

Action Items

None.



Total Fund Composite

Fee Schedule

Market Value: \$750.8 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% \$136,854	0.26%
Core Fixed Income	BlackRock Total Return Fund	0.40% on the Balance	0.40% \$80,088	0.50%
Large-Cap Core	SSgA S&P 500 Index Fund	0.04% on the Balance	0.04% \$42,473	0.05%
Large-Cap Core	Twin Capital	0.35% on the first \$50 million 0.20% on the Balance	0.35% \$8,900	0.60%
Smid-Cap Core	Frontier Capital Management	0.75% on the Balance	0.75% \$237,338	0.84%
Small-Cap Core	Guyasuta Investment Advisors	0.45% on the Balance	0.45% \$128,854	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% \$17,030	0.88%
Non-U.S. Large-Cap Core	MFS International Equity Fund	0.75% on the Balance	0.75% \$501,364	0.97%
Global Core Equity	Fusion Investment Group	0.70% on the Balance	0.70% \$16,129	0.40%
Emerging Markets	SSgA Active Emerging Markets Fund	0.75% on the Balance	0.75% \$70,588	0.95%
Emerging Markets	ABS Emerging Markets	0.80% on the Balance	0.80% \$82,112	1.00%
Hedged Equity Hedge FoF	ABS Offshore SPC Global	1.00% on the Balance	1.00% \$138,960	1.00%
Hedged Equity Hedge FoF	Entrust Diversified Select Equity Fund	1.30% on the Balance	1.30% \$162,595	1.00%
Multi-Strat. Hedge Fund	Entrust Special Opportunities Fund III	1.25% on the Balance Plus 10% incentive fee after 7.5% preferred return	1.25% \$139,749	1.00%
Defensive Equity	Parametric Defensive Equity	0.35% on the Balance	0.35% \$38,607	1.00%
Core Real Estate	Rreef America II	0.95% on the Balance	0.95% \$207,502	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% \$220,353	1.01%

Total Fund Composite

Fee Schedule

Market Value: \$750.8 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee ¹	Industry Average ²
Venture Private Equity	Birchmere Ventures III, LP	2.50% on total commitments plus 20% carried interest after 8% preferred return	 \$25,000	28.68%
Venture Private Equity	Draper Triangle Ventures II, LP	1.00% on total commitments plus 20% carried interest	2.43% \$10,000	4.87%
Venture Private Equity	Novitas Capital Partners III, LP	2.00% on total commitments plus 20% carried interest after 8% preferred return	 \$20,000	49.61%
Global Divers. Private Equity FoF	Hirtle Callaghan Private Equity Fund III, LP	0.00% on the Balance	0.00% \$0	1.25%
Global Divers. Private Equity FoF	Hirtle Callaghan Private Equity Fund IV, LP	0.00% on the Balance	0.00% \$0	1.25%
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	2.86% \$150,000	3.34%
Mezzanine Debt	Crescent Mezzanine Partners VIIB, L.P.	0.75% on total commitments 0.75% on invested capital plus 20% carried interest after 8% preferred return	3.64% \$94,440	4.25%
Fixed Income Annuity	Dedicated Funding for CMPTF	0.00% on the Balance	0.00% \$0	0.00%
Total Investment Management Fe	es		0.34% \$2,528,936	0.39%
Custodian	PNC Bank	0.03% on the all assets, excluding Dedicated Funding for CMPTF	0.02% \$141,912	
Total Fund			0.36% \$2,670,848	

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

² Source: 2016 Marquette Associates Investment Management Fee Study.