



## **Pittsburgh Comprehensive Municipal Pension**

Pittsburgh Comprehensive Municipal

Executive Summary

**September 30, 2017** 

## Manager Status

Market Value: \$732.5 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: \$732.5 Million and 100.0% of Fund

## Ending September 30, 2017

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	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio	Policy %	Policy Difference
Total Fund Composite		\$732,490,230	-\$8,994,347	100.0%	100.0%	\$0
Dedicated Funding for CMPTF	Fixed Income Annuity	\$299,709,686	-\$3,344,000	40.9%	40.0%	\$6,713,594
Total Invested Portfolio		\$432,780,544	-\$5,650,347	59.1%	60.0%	-\$6,713,594
Fixed Income Composite		\$74,342,779	-\$33,942	10.1%	13.0%	-\$20,880,951
Federated Investors	Core Fixed Income	\$54,375,799	-\$33,942	7.4%		
BlackRock Total Return Fund	Core Fixed Income	\$19,966,979	\$0	2.7%		
U.S. Equity Composite		\$162,891,814	-\$7,091,190	22.2%	22.0%	\$1,743,963
SSgA S&P 500 Index Fund	Large-Cap Core	\$99,558,697	-\$7,000,000	13.6%		
Twin Capital	Large-Cap Core	\$2,374,755	-\$1,188	0.3%		
Frontier Capital Management	Smid-Cap Core	\$30,429,451	-\$55,653	4.2%		
Guyasuta Investment Advisors	Small-Cap Core	\$28,146,832	-\$30,345	3.8%		
CIM Investment Management	Small-Cap Core	\$2,382,079	-\$4,003	0.3%		
Non-U.S. Equity Composite		\$85,118,435	\$0	11.6%	12.0%	-\$2,780,392
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$64,278,679	\$0	8.8%		
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,938,223	\$0	1.2%		
ABS Emerging Markets	Emerging Markets	\$9,697,759	\$0	1.3%		
Fusion Investment Group	Global Core Equity	\$2,203,774	\$0	0.3%		
Hedge Fund Composite		\$46,956,387	\$1,994,961	6.4%	5.0%	\$10,331,875
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$13,630,576	\$0	1.9%		
Entrust Diversified Select Equity Fund	Hedged Equity Hedge FoF	\$12,366,151	\$0	1.7%		
Entrust Special Opportunities Fund III	Multi-Strat. Hedge Fund	\$10,249,239	\$1,994,961	1.4%		
Parametric Defensive Equity	Defensive Equity	\$10,710,421	\$0	1.5%		
Real Estate Composite		\$41,830,180	-\$273,118	5.7%	5.0%	\$5,205,668
Rreef America II	Core Real Estate	\$21,587,274	-\$219,846	2.9%	2.5%	\$3,275,018
Barings Core Property Fund	Core Real Estate	\$20,242,906	-\$53,272	2.8%	2.5%	\$1,930,650
Private Equity Composite		\$10,939,848	-\$927,817	1.5%	3.0%	-\$11,034,859
Cash Composite		\$10,701,102	\$680,760	1.5%	0.0%	\$10,701,102

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



## Total Invested Portfolio

Market Value: \$432.8 Million and 59.1% of Fund

## Ending September 30, 2017

	Asset Class	Market Value	3 Mo Net Cash Flows	% of Portfolio
Total Invested Portfolio		\$432,780,544	-\$5,650,347	100.0%
Fixed Income Composite		\$74,342,779	-\$33,942	17.2%
Federated Investors	Core Fixed Income	\$54,375,799	-\$33,942	12.6%
BlackRock Total Return Fund	Core Fixed Income	\$19,966,979	\$0	4.6%
U.S. Equity Composite		\$162,891,814	-\$7,091,190	37.6%
SSgA S&P 500 Index Fund	Large-Cap Core	\$99,558,697	-\$7,000,000	23.0%
Twin Capital	Large-Cap Core	\$2,374,755	-\$1,188	0.5%
Frontier Capital Management	Smid-Cap Core	\$30,429,451	-\$55,653	7.0%
Guyasuta Investment Advisors	Small-Cap Core	\$28,146,832	-\$30,345	6.5%
CIM Investment Management	Small-Cap Core	\$2,382,079	-\$4,003	0.6%
Non-U.S. Equity Composite		\$85,118,435	\$0	19.7%
MFS International Equity Fund	Non-U.S. Large-Cap Core	\$64,278,679	\$0	14.9%
SSgA Active Emerging Markets Fund	Emerging Markets	\$8,938,223	\$0	2.1%
ABS Emerging Markets	Emerging Markets	\$9,697,759	\$0	2.2%
Fusion Investment Group	Global Core Equity	\$2,203,774	\$0	0.5%
Hedge Fund Composite		\$46,956,387	\$1,994,961	10.8%
ABS Offshore SPC Global	Hedged Equity Hedge FoF	\$13,630,576	\$0	3.1%
Entrust Diversified Select Equity Fund	Hedged Equity Hedge FoF	\$12,366,151	\$0	2.9%
Entrust Special Opportunities Fund III	Multi-Strat. Hedge Fund	\$10,249,239	\$1,994,961	2.4%
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Barings Core Property Fund	Core Real Estate	\$20,242,906	-\$53,272	4.7%
Private Equity Composite		\$10,939,848	-\$927,817	2.5%
Cash Composite		\$10,701,102	\$680,760	2.5%

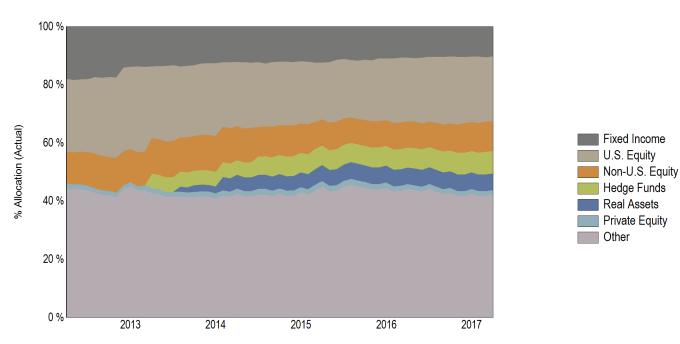
- Private Equity Composite may not include current performance, due to reporting cycle limitations.



## **Asset Allocation**

Market Value: \$732.5 Million and 100.0% of Fund

## **Historic Asset Allocation**

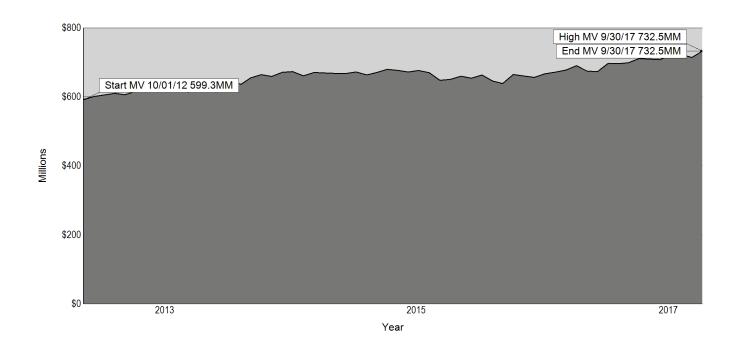


# Asset Allocation vs. Target As Of September 30, 2017

	Current	Policy	Difference	%
U.S. Equity	\$162,891,814	\$161,147,851	\$1,743,963	0.2%
Non-U.S. Equity	\$75,420,677	\$87,898,828	-\$12,478,151	-1.7%
Hedge Funds	\$56,654,146	\$36,624,511	\$20,029,634	2.7%
Real Assets	\$41,830,180	\$36,624,511	\$5,205,668	0.7%
Private Equity	\$10,939,848	\$21,974,707	-\$11,034,859	-1.5%
Other	\$310,410,788	\$292,996,092	\$17,414,696	2.4%
Total	\$732,490,230	\$732,490,230		

## Market Value History

Market Value: \$732.5 Million and 100.0% of Fund



## **Summary of Cash Flows**

	Third Quarter	Year-To-Date	One Year	Three Years
Beginning Market Value	\$424,290,747.14	\$403,523,054.83	\$401,703,150.69	\$392,354,355.74
Net Cash Flow	-\$5,369,385.87	-\$15,424,737.69	-\$19,695,514.89	-\$46,505,311.01
Net Investment Change	\$13,859,182.62	\$44,682,226.75	\$50,772,908.09	\$86,931,499.16
Ending Market Value	\$432,780,543.89	\$432,780,543.89	\$432,780,543.89	\$432,780,543.89

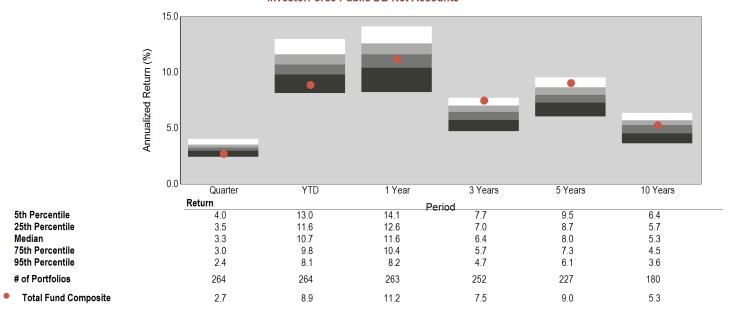
## Annualized Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

## **Ending September 30, 2017**

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	1.8%	2.7%	8.9%	11.2%	9.9%	7.5%	8.6%	9.0%	8.2%	5.3%
Total Fund Composite Benchmark	1.1%	2.9%	8.9%	10.6%	9.7%	7.4%	7.9%	8.6%	8.5%	5.4%
InvestorForce Public DB Net Rank	9	89	90	60	70	10	3	12	40	50
Total Invested Portfolio	1.8%	3.3%	11.3%	13.0%	11.7%	7.4%	8.0%	9.2%	7.8%	5.0%
Total Invested Portfolio Benchmark	1.5%	3.7%	11.6%	12.9%	11.6%	7.2%	8.2%	9.0%	8.9%	5.6%
InvestorForce Public DB Net Rank	10	47	33	16	11	12	12	9	53	55
Fixed Income Composite	-0.2%	1.1%	3.8%	1.6%	3.9%	3.1%	3.7%	3.0%	3.9%	
BBgBarc US Aggregate TR	-0.5%	0.8%	3.1%	0.1%	2.6%	2.7%	3.0%	2.1%	3.0%	4.3%
InvestorForce Public DB US Fix Inc Net Rank	33	29	35	36	36	33	27	23	34	
U.S. Equity Composite	3.3%	4.6%	13.5%	18.9%	18.8%	11.2%	12.5%	14.6%	13.5%	
Dow Jones U.S. Total Stock Market	2.4%	4.6%	14.0%	18.7%	16.8%	10.7%	12.4%	14.2%	14.3%	7.6%
InvestorForce Public DB US Eq Net Rank	22	33	39	31	1	12	8	6	66	
Non-U.S. Equity Composite	1.5%	4.8%	23.1%	20.3%	13.6%	6.1%	5.4%	7.7%		
MSCI ACWI ex USA	1.9%	6.2%	21.1%	19.6%	14.3%	4.7%	4.7%	7.0%	5.2%	1.3%
InvestorForce Public DB ex-US Eq Net Rank	76	92	43	38	82	37	43	48		
Hedge Fund Composite	1.0%	2.0%	7.2%	9.9%	4.6%	3.5%	4.9%			
HFRI Fund of Funds Composite Index	0.5%	2.3%	5.6%	6.5%	3.4%	2.2%	3.2%	3.8%	2.9%	1.1%
HFRX Equity Hedge Index	1.8%	3.2%	7.1%	7.9%	3.9%	1.6%	2.5%	3.6%	1.0%	-1.0%
InvestorForce Public DB Hedge Funds Net Rank	17	41	21	20	37	33	24			
Real Estate Composite	1.8%	1.8%	4.7%	7.0%	8.2%	9.8%				
NFI	0.5%	1.6%	4.7%	6.7%	7.9%	9.8%	10.2%	10.6%	11.5%	4.1%

### **InvestorForce Public DB Net Accounts**



## Calendar Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

## **Calendar Year**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Total Fund Composite	8.1%	3.2%	9.2%	13.6%	12.3%	1.8%	5.6%	23.4%	-27.0%	11.6%	12.1%
Total Fund Composite Benchmark	7.7%	3.5%	7.2%	14.1%	10.5%	1.3%	12.6%	23.0%	-26.1%	8.5%	14.0%
InvestorForce Public DB Net Rank	26	1	1	66	41	22	98	19	70	2	51
Total Invested Portfolio	8.5%	0.0%	6.6%	17.6%	14.1%	-2.5%	5.6%	23.3%	-27.0%	11.6%	12.1%
Total Invested Portfolio Benchmark	7.7%	0.3%	6.9%	17.6%	12.2%	0.3%	12.4%	22.9%	-26.2%	8.2%	13.9%
InvestorForce Public DB Net Rank	15	33	22	22	7	92	98	20	70	2	52
Fixed Income Composite	4.5%	0.0%	6.1%	-0.4%	8.4%	5.4%	7.8%	13.8%	-9.3%	-	-
BBgBarc US Aggregate TR	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%
InvestorForce Public DB US Fix Inc Net Rank	47	56	15	32	35	87	41	42	91		
U.S. Equity Composite	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	12.6%	0.4%	12.5%	33.5%	16.4%	1.1%	17.5%	28.6%	-37.2%	5.6%	15.8%
InvestorForce Public DB US Eq Net Rank	2	84	14	50	4	48	99	86	29		
Non-U.S. Equity Composite	1.9%	-1.7%	-4.1%	13.1%	21.5%		-			-	
MSCI ACWI ex USA	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%	16.7%	26.6%
InvestorForce Public DB ex-US Eq Net Rank	83	21	59	82	7						
Hedge Fund Composite	0.7%	0.0%	4.9%		-		-				
HFRI Fund of Funds Composite Index	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%	10.4%
HFRX Equity Hedge Index	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%	9.2%
InvestorForce Public DB Hedge Funds Net Rank	74	45	35	-		-			-		
Real Estate Composite	8.4%	14.4%	11.0%			-				-	
NFI	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%	15.3%

## Annualized Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

## **Ending September 30, 2017**

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund Composite	1.8%	2.7%	8.9%	11.2%	9.9%	7.5%	8.6%	9.0%	8.2%	5.3%
Total Fund Composite Benchmark	1.1%	2.9%	8.9%	10.6%	9.7%	7.4%	7.9%	8.6%	8.5%	5.4%
InvestorForce Public DB Net Rank	9	89	90	60	70	10	3	12	40	50
Dedicated Funding for CMPTF	1.8%	1.8%	5.6%	8.7%	7.5%	7.5%	9.3%	8.8%	-	
Annual Return	0.6%	1.8%	5.6%	7.5%	7.5%	7.5%	7.5%	7.6%		
Total Invested Portfolio	1.8%	3.3%	11.3%	13.0%	11.7%	7.4%	8.0%	9.2%	7.8%	5.0%
Total Invested Portfolio Benchmark	1.5%	3.7%	11.6%	12.9%	11.6%	7.2%	8.2%	9.0%	8.9%	5.6%
InvestorForce Public DB Net Rank	10	47	33	16	11	12	12	9	53	55
Fixed Income Composite	-0.2%	1.1%	3.8%	1.6%	3.9%	3.1%	3.7%	3.0%	3.9%	
BBgBarc US Aggregate TR	-0.5%	0.8%	3.1%	0.1%	2.6%	2.7%	3.0%	2.1%	3.0%	4.3%
InvestorForce Public DB US Fix Inc Net Rank	33	29	35	36	36	33	27	23	34	
Federated Investors	-0.2%	1.1%	3.7%	1.7%	4.1%	3.1%	3.5%	2.6%	3.6%	4.5%
BBgBarc US Aggregate TR	-0.5%	0.8%	3.1%	0.1%	2.6%	2.7%	3.0%	2.1%	3.0%	4.3%
eA US Core Fixed Inc Net Rank	6	9	23	8	11	28	31	27	28	54
BlackRock Total Return Fund	-0.3%	1.1%	4.0%	1.6%	3.5%	3.3%	4.2%	3.5%	4.3%	4.6%
BBgBarc US Aggregate TR	-0.5%	0.8%	3.1%	0.1%	2.6%	2.7%	3.0%	2.1%	3.0%	4.3%
eA US Core Fixed Inc Net Rank	14	8	11	9	20	18	9	4	8	49
U.S. Equity Composite	3.3%	4.6%	13.5%	18.9%	18.8%	11.2%	12.5%	14.6%	13.5%	
Dow Jones U.S. Total Stock Market	2.4%	4.6%	14.0%	18.7%	16.8%	10.7%	12.4%	14.2%	14.3%	7.6%
InvestorForce Public DB US Eq Net Rank	22	33	39	31	1	12	8	6	66	
SSgA S&P 500 Index Fund	2.1%	4.5%	14.3%	18.7%	17.1%	10.9%	13.1%	-		
S&P 500	2.1%	4.5%	14.2%	18.6%	17.0%	10.8%	13.0%	14.2%	14.4%	7.4%
eA US Large Cap Core Equity Net Rank	58	49	45	42	13	17	16			
Twin Capital	2.1%	4.5%	13.0%	18.4%						
S&P 500	2.1%	4.5%	14.2%	18.6%	17.0%	10.8%	13.0%	14.2%	14.4%	7.4%
eA US Large Cap Core Equity Net Rank	55	49	64	44						
Frontier Capital Management	4.2%	5.0%	14.3%	19.0%	20.3%	11.6%	11.5%	16.0%	14.8%	9.4%
Russell 2500	4.5%	4.7%	11.0%	17.8%	16.1%	10.6%	10.2%	13.9%	13.7%	8.2%
eA US Small-Mid Cap Core Equity Net Rank	51	22	15	34	3	28	32	8	22	19
Guyasuta Investment Advisors	6.7%	4.7%	10.5%	19.4%	23.4%	11.7%	11.4%	15.1%	15.7%	10.6%
Russell 2000	6.2%	5.7%	10.9%	20.7%	18.1%	12.2%	10.1%	13.8%	13.5%	7.8%
eA US Small Cap Core Equity Net Rank	28	62	44	59	4	59	34	30	17	12
CIM Investment Management	6.4%	3.0%	7.5%	17.9%				-		
Russell 2000	6.2%	5.7%	10.9%	20.7%	18.1%	12.2%	10.1%	13.8%	13.5%	7.8%
eA US Small Cap Core Equity Net Rank	38	90	83	72						



## Annualized Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

## **Ending September 30, 2017**

	1 Mo	3 Mo	YTD	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	7 Yrs	10 Yrs
Non-U.S. Equity Composite	1.5%	4.8%	23.1%	20.3%	13.6%	6.1%	5.4%	7.7%		
MSCI ACWI ex USA	1.9%	6.2%	21.1%	19.6%	14.3%	4.7%	4.7%	7.0%	5.2%	1.3%
InvestorForce Public DB ex-US Eq Net Rank	76	92	43	38	82	37	43	48		
MFS International Equity Fund	1.9%	4.4%	23.1%	20.6%	12.7%	6.3%	5.7%	8.8%		
MSCI EAFE	2.5%	5.4%	20.0%	19.1%	12.6%	5.0%	4.8%	8.4%	6.4%	1.3%
Foreign Large Blend MStar MF Rank	63	83	19	24	48	28	35	33		
SSgA Active Emerging Markets Fund	-0.8%	7.4%	28.5%	24.5%	20.7%	6.5%	5.3%	4.7%		
MSCI Emerging Markets	-0.4%	7.9%	27.8%	22.5%	19.6%	4.9%	4.8%	4.0%	2.5%	1.3%
eA Emg Mkts Equity Net Rank	75	57	49	31	35	29	51	60		
ABS Emerging Markets	0.5%	5.2%	19.7%	15.9%	14.8%					
HFRI Emerging Markets (Total) Index	0.8%	5.0%	14.9%	13.9%	12.1%	4.5%	4.7%	5.1%	2.8%	1.7%
MSCI Emerging Markets	-0.4%	7.9%	27.8%	22.5%	19.6%	4.9%	4.8%	4.0%	2.5%	1.3%
Fusion Investment Group	1.8%	4.7%								
MSCI ACWI	1.9%	5.2%	17.3%	18.6%	15.3%	7.4%	8.4%	10.2%	9.2%	3.9%
eA Global All Cap Core Eq Net Rank	67	58								
Hedge Fund Composite	1.0%	2.0%	7.2%	9.9%	4.6%	3.5%	4.9%			
HFRI Fund of Funds Composite Index	0.5%	2.3%	5.6%	6.5%	3.4%	2.2%	3.2%	3.8%	2.9%	1.1%
HFRX Equity Hedge Index	1.8%	3.2%	7.1%	7.9%	3.9%	1.6%	2.5%	3.6%	1.0%	-1.0%
InvestorForce Public DB Hedge Funds Net Rank	17	41	21	20	37	33	24			
ABS Offshore SPC Global	0.6%	3.4%	10.2%	10.4%	4.1%	4.5%	5.3%			
HFRX Equity Hedge Index	1.8%	3.2%	7.1%	7.9%	3.9%	1.6%	2.5%	3.6%	1.0%	-1.0%
Entrust Diversified Select Equity Fund	1.0%	0.3%	4.8%	8.9%	3.4%	1.2%	3.4%	-		-
HFRX Equity Hedge Index	1.8%	3.2%	7.1%	7.9%	3.9%	1.6%	2.5%	3.6%	1.0%	-1.0%
Entrust Special Opportunities Fund III	1.3%	1.3%	5.4%	11.0%	12.3%					
HFRI Fund of Funds Composite Index	0.5%	2.3%	5.6%	6.5%	3.4%	2.2%	3.2%	3.8%	2.9%	1.1%
Parametric Defensive Equity	1.0%	2.9%								
50% S&P 500/50% 91 Day T-Bill	1.1%	2.4%	7.3%	9.4%	8.6%	5.6%	6.6%	7.1%	7.2%	4.1%
Real Estate Composite	1.8%	1.8%	4.7%	7.0%	8.2%	9.8%				
NFI	0.5%	1.6%	4.7%	6.7%	7.9%	9.8%	10.2%	10.6%	11.5%	4.1%
Rreef America II	1.5%	1.5%	4.3%	6.9%	8.0%	10.2%				
NFI	0.5%	1.6%	4.7%	6.7%	7.9%	9.8%	10.2%	10.6%	11.5%	4.1%
Barings Core Property Fund	2.2%	2.2%	5.1%	7.2%	8.4%	9.4%		-		
NFI	0.5%	1.6%	4.7%	6.7%	7.9%	9.8%	10.2%	10.6%	11.5%	4.1%

## Calendar Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

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	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Total Fund Composite	8.1%	3.2%	9.2%	13.6%	12.3%	1.8%	5.6%	23.4%	-27.0%	11.6%	12.1%
Total Fund Composite Benchmark	7.7%	3.5%	7.2%	14.1%	10.5%	1.3%	12.6%	23.0%	-26.1%	8.5%	14.0%
InvestorForce Public DB Net Rank	26	1	1	66	41	22	98	19	70	2	51
Dedicated Funding for CMPTF	7.6%	7.5%	13.2%	8.1%	9.8%	7.2%			-	-	
Annual Return	7.5%	7.5%	7.5%	8.0%	8.0%	8.0%					
Total Invested Portfolio	8.5%	0.0%	6.6%	17.6%	14.1%	-2.5%	5.6%	23.3%	-27.0%	11.6%	12.1%
Total Invested Portfolio Benchmark	7.7%	0.3%	6.9%	17.6%	12.2%	0.3%	12.4%	22.9%	-26.2%	8.2%	13.9%
InvestorForce Public DB Net Rank	15	33	22	22	7	92	98	20	70	2	52
Fixed Income Composite	4.5%	0.0%	6.1%	-0.4%	8.4%	5.4%	7.8%	13.8%	-9.3%		
BBgBarc US Aggregate TR	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%
InvestorForce Public DB US Fix Inc Net Rank	47	56	15	32	35	87	41	42	91		
Federated Investors	4.8%	-0.2%	5.0%	-0.8%	7.1%	6.5%	8.2%	11.2%	-2.7%	7.1%	4.3%
BBgBarc US Aggregate TR	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%
eA US Core Fixed Inc Net Rank	7	89	80	19	23	81	12	33	76	25	48
BlackRock Total Return Fund	3.5%	0.4%	8.2%	-0.1%	10.3%	4.7%	10.1%	16.3%	-11.1%	5.3%	4.3%
BBgBarc US Aggregate TR	2.6%	0.6%	6.0%	-2.0%	4.2%	7.8%	6.5%	5.9%	5.2%	7.0%	4.3%
eA US Core Fixed Inc Net Rank	33	64	4	8	2	96	2	14	95	87	49
U.S. Equity Composite	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	12.6%	0.4%	12.5%	33.5%	16.4%	1.1%	17.5%	28.6%	-37.2%	5.6%	15.8%
InvestorForce Public DB US Eq Net	_					40	00		29		
Rank	2	84	14	50	4	48	99	86			
	12.0%	1.5%	13.8%	50		48	99	86			
SSgA S&P 500 Index Fund S&P 500					 16.0%	48  2.1%		86  26.5%	 -37.0%	 5.5%	  15.8%
SSgA S&P 500 Index Fund	12.0%	1.5%	13.8%						 -37.0% 	 5.5% 	  15.8%
SSgA S&P 500 Index Fund S&P 500 eA US Large Cap Core Equity Net Rank	12.0% 12.0%	1.5% 1.4%	13.8% 13.7%						 -37.0% 	5.5% 	 15.8% 
SSgA S&P 500 Index Fund S&P 500 eA US Large Cap Core Equity Net	12.0% 12.0% 20	1.5% 1.4%	13.8% 13.7%						 -37.0%   -37.0%	5.5%  5.5%	 15.8%   15.8%
SSgA S&P 500 Index Fund S&P 500 eA US Large Cap Core Equity Net Rank Twin Capital	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% 			
SSgA S&P 500 Index Fund S&P 500 eA US Large Cap Core Equity Net Rank  Twin Capital S&P 500 eA US Large Cap Core Equity Net Rank	12.0% 12.0% 20  12.0%	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% 	  5.5% 	  15.8% 
SSgA S&P 500 Index Fund  S&P 500  eA US Large Cap Core Equity Net Rank  Twin Capital  S&P 500  eA US Large Cap Core Equity Net	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% 			
SSgA S&P 500 Index Fund  S&P 500  eA US Large Cap Core Equity Net Rank  Twin Capital  S&P 500  eA US Large Cap Core Equity Net Rank  Frontier Capital Management	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%	 -37.0% 	 5.5%  12.8%	 15.8%  18.2%
SSgA S&P 500 Index Fund  S&P 500  eA US Large Cap Core Equity Net Rank  Twin Capital  S&P 500  eA US Large Cap Core Equity Net Rank  Frontier Capital Management  Russell 2500  eA US Small-Mid Cap Core Equity	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%  2.1%  -6.5% -2.5%	 15.1%  15.1%  28.9% 26.7%	26.5%  26.5%  46.5% 34.4%	 -37.0%  -39.5% -36.8%	5.5%  12.8% 1.4%	 15.8%  18.2% 16.2%
SSgA S&P 500 Index Fund  S&P 500  eA US Large Cap Core Equity Net Rank  Twin Capital  S&P 500  eA US Large Cap Core Equity Net Rank  Frontier Capital Management  Russell 2500  eA US Small-Mid Cap Core Equity  Net Rank	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% 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% 25	26.5%  26.5%  46.5% 34.4%	 -37.0%  -39.5% -36.8% 75	 5.5%  12.8% 1.4%	 15.8%  18.2% 16.2%



## Calendar Performance (Net of Fees)

Market Value: \$732.5 Million and 100.0% of Fund

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	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
CIM Investment Management		_									
Russell 2000	21.3%	-4.4%	4.9%	38.8%	16.3%	-4.2%	26.9%	27.2%	-33.8%	-1.6%	18.4%
eA US Small Cap Core Equity Net											
Rank											
Non-U.S. Equity Composite	1.9%	-1.7%	-4.1%	13.1%	21.5%						
MSCI ACWI ex USA	4.5%	-5.7%	-3.9%	15.3%	16.8%	-13.7%	11.2%	41.4%	-45.5%	16.7%	26.6%
InvestorForce Public DB ex-US Eq Net	83	21	59	82	7						
Rank	00	2,	00	02	•						
MFS International Equity Fund	0.3%	0.0%	-4.2%	18.6%	22.5%	-		-		-	
MSCI EAFE	1.0%	-0.8%	-4.9%	22.8%	17.3%	-12.1%	7.8%	31.8%	-43.4%	11.2%	26.3%
Foreign Large Blend MStar MF	64	37	36	64	12						
Rank											
SSgA Active Emerging Markets Fund	12.5%	-13.1%	-2.6%	-4.8%	18.1%						
MSCI Emerging Markets	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%	39.4%	32.2%
eA Emg Mkts Equity Net Rank	26	53	67	87	66			-			
ABS Emerging Markets	4.9%	-3.4%				-					
HFRI Emerging Markets (Total) Index	7.0%	-3.3%	-2.6%	5.5%	10.4%	-14.0%	11.4%	40.3%	-37.3%	24.9%	24.3%
MSCI Emerging Markets	11.2%	-14.9%	-2.2%	-2.6%	18.2%	-18.4%	18.9%	78.5%	-53.3%	39.4%	32.2%
Fusion Investment Group											
MSCI ACWI	7.9%	-2.4%	4.2%	22.8%	16.1%	-7.3%	12.7%	34.6%	-42.2%	11.7%	21.0%
eA Global All Cap Core Eq Net											
Rank											
Hedge Fund Composite	0.7%	0.0%	4.9%	-						-	-
HFRI Fund of Funds Composite Index	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%	10.4%
HFRX Equity Hedge Index	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%	9.2%
InvestorForce Public DB Hedge Funds Net Rank	74	45	35								
IVELIVAIIK											
ABS Offshore SPC Global	-4.3%	4.0%	4.8%								
HFRX Equity Hedge Index	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%	9.2%
Entrust Diversified Select Equity Fund	2.5%	-4.9%	4.9%								-
HFRX Equity Hedge Index	0.1%	-2.3%	1.4%	11.1%	4.8%	-19.1%	8.9%	13.1%	-25.5%	3.2%	9.2%
Entrust Special Opportunities Fund III	16.1%										
HFRI Fund of Funds Composite Index	0.5%	-0.3%	3.4%	9.0%	4.8%	-5.7%	5.7%	11.5%	-21.4%	10.3%	10.4%
Parametric Defensive Equity			-	-						-	-
50% S&P 500/50% 91 Day T-Bill	6.1%	0.9%	6.7%	15.3%	7.9%	1.4%	7.8%	13.3%	-19.4%	5.1%	10.3%

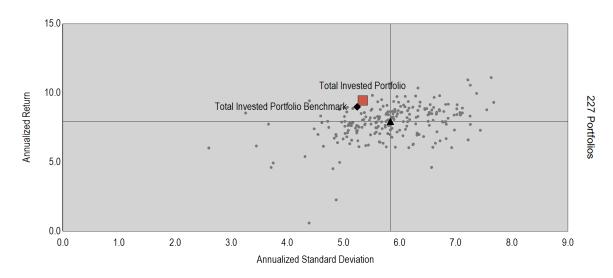
# Calendar Performance (Net of Fees) Calendar Year

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Real Estate Composite	8.4%	14.4%	11.0%								
NFI	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%	15.3%
Rreef America II	8.1%	15.6%	12.0%								
NFI	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%	15.3%
Barings Core Property Fund	8.6%	13.0%									
NFI	7.8%	13.9%	11.5%	12.9%	9.8%	15.0%	15.3%	-30.4%	-10.7%	14.8%	15.3%

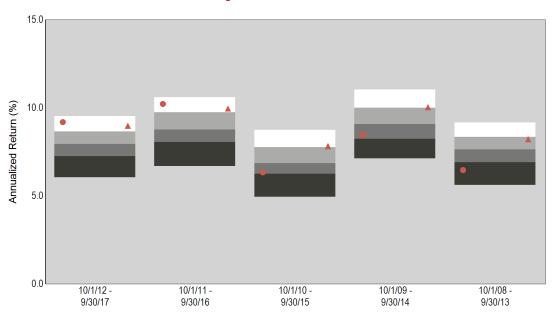
## Invested Portfolio vs. Peer Universe

Market Value: \$432.8 Million and 59.1% of Fund

# Annualized Return vs. Annualized Standard Deviation 5 Years Ending September 30, 2017



## **Rolling 5 Year Returns**



	Return (Rank)	)								
5th Percentile	9.5		10.6		8.8		11.0		9.2	
25th Percentile	8.7		9.7		7.8		10.0		8.3	
Median	8.0		8.8		6.9		9.1		7.6	
75th Percentile	7.3		8.1		6.3		8.2		6.9	
95th Percentile	6.1		6.7		5.0		7.1		5.6	
# of Portfolios	227		219		198		159		147	
Total Invested Portfolio	9.2	(9)	10.2	(11)	6.3	(72)	8.5	(68)	6.5	(87)
Total Invested Portfolio Benchmark	9.0	(13)	10.0	(19)	7.8	(24)	10.0	(24)	8.2	(29)

## Private Equity Composite

### **Annualized Performance**

Asset Class	Fund Company	Vintage Yr.	Perf. as of:	Net IRR
Venture	Birchmere Ventures III	2005	6/30/2017	-2.4%
Venture	Draper Triangle Venture II	2004	6/30/2017	5.2%
Venture	Draper Triangle Venture III	2013	6/30/2017	
Venture	Novitas Capital Partners III	2003	9/30/2016	-20.2%
Global Diversified FoFs	Hirtle Callaghan PEP III	2003	6/30/2017	17.1%
Global Diversified FoFs	Hirtle Callaghan PEP IV	2004	6/30/2017	9.5%
Global Diversified FoFs	Hirtle Callaghan PEP V	2006	6/30/2017	2.3%
Mezzanine	Crescent Mezz Partners VI	2013	6/30/2017	8.9%
Mezzanine	Crescent Mezz Partners VII	2016	6/30/2017	
Total Private Equity				

## **Since Inception Cash Flows**

Asset Class	Fund Company	Commitment	Capital Calls	Distributions	Remaining Callable Amt.	Ending Value	<sup>1</sup> Cash Multiple
Asset Olass	r und company	Communication	Capital Calls	Distributions	Callable Allit.	Litating value	ousii munipic
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	\$1,264,365	\$9,817	\$735,635	\$924,131	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	\$0	\$564,259	1.6
Global Diversified FoFs	Hirtle Callaghan PEP IV	\$8,000,000	\$7,418,650	\$10,394,005	\$0	\$685,511	1.5
Global Diversified FoFs	Hirtle Callaghan PEP V	\$3,000,000	\$2,481,360	\$1,983,158	\$0	\$887,351	1.2
Mezzanine	Crescent Mezz Partners VI	\$10,000,000	\$8,381,678	\$4,851,916	\$1,618,322	\$5,600,746	1.2
Mezzanine	Crescent Mezz Partners VII	\$10,000,000	\$1,899,357	\$266,763	\$8,100,643	\$1,757,066	
<b>Total Private Equity</b>		\$44,000,000	\$32,036,149	\$31,898,352	\$10,454,600	\$10,939,848	1.3

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



Investment Manager Statistics

Market Value: \$732.5 Million and 100.0% of Fund

## 3 Years Ending September 30, 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	1.3%	0.3%	0.8	0.9	0.5	1.5%	100.4%	68.0%
BBgBarc US Aggregate TR	0.7			-	-		1.7%		
BlackRock Total Return Fund	0.9	0.8%	0.2%	0.9	0.9	0.7	1.6%	108.7%	90.6%
BBgBarc US Aggregate TR	0.7						1.7%		
SSgA S&P 500 Index Fund	1.5	0.0%	0.0%	1.0	1.0	1.6	3.5%	100.4%	99.1%
S&P 500	1.5						3.5%		
Frontier Capital Management	0.9	6.0%	-0.5%	1.4	0.9	0.3	7.0%	130.5%	152.5%
Russell 2500	1.1						4.7%		
Guyasuta Investment Advisors	1.0	5.1%	0.1%	1.0	0.8	0.0	6.2%	92.1%	76.0%
Russell 2000	1.0						5.8%		
MFS International Equity Fund	0.6	2.6%	0.3%	1.0	0.9	0.5	5.4%	106.9%	92.5%
MSCI EAFE	0.4						5.3%		
SSgA Active Emerging Markets Fund	0.4	2.3%	0.4%	1.0	1.0	0.7	7.9%	106.2%	93.8%
MSCI Emerging Markets	0.3						7.9%		
ABS Offshore SPC Global	0.6	3.7%	0.7%	1.1	0.7	0.8	3.3%	177.9%	120.7%
HFRX Equity Hedge Index	0.2						2.6%		
Entrust Diversified Select Equity Fund	0.1	3.8%	-0.2%	1.2	0.8	-0.1	3.6%	116.1%	134.7%
HFRX Equity Hedge Index	0.2			-	-		2.6%	-	

Investment Manager **Statistics** 

Market Value: \$732.5 Million and 100.0% of Fund

## 5 Years Ending September 30, 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%	0.3%	0.9	0.9	0.7	1.5%	108.1%	67.6%
BBgBarc US Aggregate TR	0.6					-	1.5%		
BlackRock Total Return Fund	1.1	1.0%	0.4%	1.0	0.9	1.5	1.6%	127.6%	71.9%
BBgBarc US Aggregate TR	0.6					-	1.5%		
Frontier Capital Management	1.3	4.9%	0.2%	1.2	0.9	0.6	6.3%	126.1%	131.9%
Russell 2500	1.4					-	5.0%		
Guyasuta Investment Advisors	1.2	5.1%	0.6%	1.0	0.8	0.4	6.2%	102.3%	74.3%
Russell 2000	1.2					-	5.9%		
MFS International Equity Fund	0.8	2.6%	0.2%	1.0	0.9	0.1	5.2%	98.9%	91.6%
MSCI EAFE	0.8					-	5.3%		
SSgA Active Emerging Markets Fund	0.3	2.3%	0.2%	1.0	1.0	0.3	7.0%	106.4%	100.2%
MSCI Emerging Markets	0.3	-		-	-	-	6.8%		

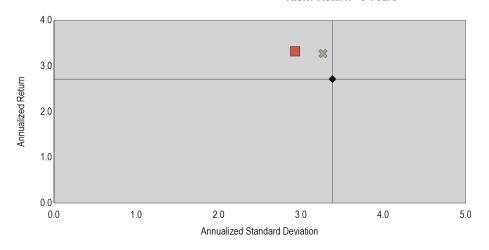
## Fixed Income Composite

## Characteristics

As of September 30, 2017

Market Value: \$74.3 Million and 10.1% of Fund

### Risk / Return - 3 Years



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

Characteristics							
	Portfolio	Index					
	Q3-17	Q3-17					
Yield to Maturity	2.7%	2.6%					
Avg. Eff. Maturity	8.3 yrs.	8.3 yrs.					
Avg. Duration	5.8 yrs.	6.0 yrs.					
Avg. Quality	Α						

Avg. Duration	J.0 yrs.	0.0 yrs.
Avg. Quality	А	
Region		Number Of Assets
North America ex U.S.		5
United States		1,455
Europe Ex U.K.		66
United Kingdom		25
Pacific Basin Ex Japan		20

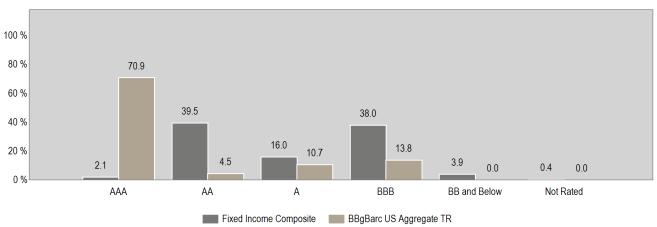
Japan

Sector						
	Portfolio	Index				
	Q3-17	Q3-17				
UST/Agency	25.4%	44.0%				
Corporate	45.7%	25.5%				
MBS	18.7%	30.0%				
ABS	2.1%	0.5%				
Foreign	3.1%					
Muni	0.7%					
Other	4.2%	-				

	Q3-17
<1 Year	6.3%
1-3 Years	21.5%
3-5 Years	22.5%
5-7 Years	12.0%
7-10 Years	21.2%
10-15 Years	1.8%
15-20 Years	1.1%
>20 Years	13.6%
Not Rated/Cash	0.0%

**Maturity** 

## **Quality Distribution**

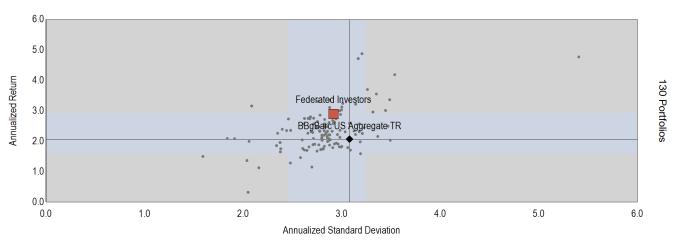


## **Federated Investors**

## Characteristics

As of September 30, 2017 Market Value: \$54.4 Million and 7.4% of Fund

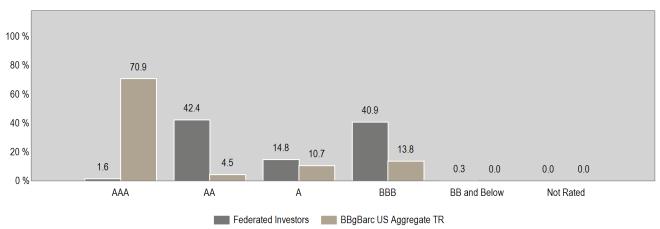




	Characteristics			Sector		Ma	turity
	Portfolio	Index		Portfolio	Index		Q3-17
	Q3-17	Q3-17		Q3-17	Q3-17	<1 Year	7.6%
Yield to Maturity	2.6%	2.6%	UST/Agency	22.1%	44.0%	1-3 Years	23.2%
Avg. Eff. Maturity	7.5 yrs.	8.3 yrs.	Corporate	51.1%	25.5%	3-5 Years	22.9%
Avg. Duration	5.4 yrs.	6.0 yrs.	MBS	22.3%	30.0%	5-7 Years	10.7%
Avg. Quality	Α		ABS	2.1%	0.5%	7-10 Years	21.5%
			Foreign	1.1%		10-15 Years	1.2%
		Normale and Of	Muni			15-20 Years	0.5%
Region		Number Of Assets	Other	1.3%		>20 Years	12.4%
United States		265				Not Rated/Cash	0.0%
Europe Ex U.K.		2					

## **Quality Distribution**

0 **268** 



United Kingdom Other

Total

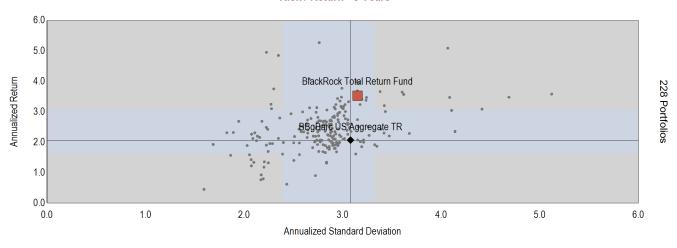
## BlackRock Total Return Fund

## Characteristics

As of September 30, 2017

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

### Risk / Return - 5 Years



	Characteristics	
	Portfolio	Index
	Q3-17	Q3-17
Yield to Maturity	3.1%	2.6%
Avg. Eff. Maturity	10.7 yrs.	8.3 yrs.
Avg. Duration	6.9 yrs.	6.0 yrs.
Avg. Quality	A	

Region	Number Of Assets
North America ex U.S.	5
United States	1,202
Europe Ex U.K.	64
United Kingdom	24
Pacific Basin Ex Japan	20
Japan	23

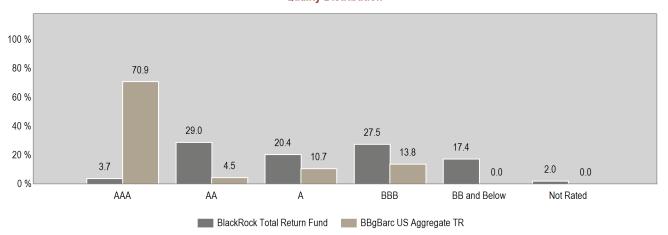
	Portfolio	Index
	Q3-17	Q3-17
UST/Agency	33.2%	44.0%
Corporate	33.1%	25.5%
MBS	10.2%	30.0%
ABS	2.2%	0.5%
Foreign	7.8%	
Muni	2.3%	
Other	11.2%	

**Sector** 

	Q3-17
<1 Year	2.7%
1-3 Years	16.5%
3-5 Years	21.4%
5-7 Years	15.9%
7-10 Years	20.3%
10-15 Years	3.6%
15-20 Years	2.6%
>20 Years	17.1%
Not Rated/Cash	0.0%

**Maturity** 

## **Quality Distribution**



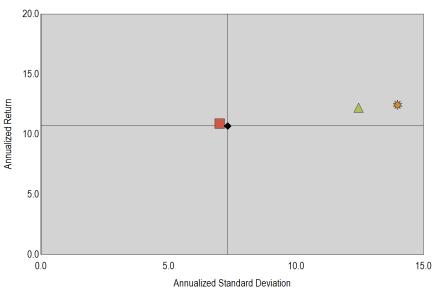
## U.S. Equity Composite

As of September 30, 2017

## Characteristics

Market Value: \$162.9 Million and 22.2% of Fund

### Risk / Return - 3 Years



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

-							
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	Portfolio	Dow Jones U.S. Total Stock Market
Number of Holdings	832	3,811
Weighted Avg. Market Cap. (\$B)	107.2	135.1
Median Market Cap. (\$B)	13.1	0.9
Price To Earnings	26.2	25.5
Price To Book	4.8	4.3
Price To Sales	3.3	3.6
Return on Equity (%)	18.8	17.1
Yield (%)	1.7	1.8
Beta	1.2	1.0
R-Squared	1.0	1.0

#### Characteristics

Ollaracteristics		
	Portfolio	Dow Jones U.S. Total Stock Market
INDUSTRY SECTOR DISTRIBUTION (% Equity)		
Energy	4.3	5.7
Materials	9.7	3.4
Industrials	15.4	10.8
Consumer Discretionary	8.6	12.3
Consumer Staples	5.2	7.3
Health Care	14.2	14.0
Financials	11.1	15.1
Information Technology	21.6	22.3
Telecommunication Services	1.7	2.0
Utilities	2.0	3.1
Real Estate	3.3	4.0
Unclassified	1.7	0.0

## **Largest Holdings**

	End Weight	Return
APPLE	2.3	7.4
MICROSOFT	1.7	8.6
FACEBOOK CLASS A	1.2	13.2
AMAZON.COM	1.1	-0.7
JOHNSON & JOHNSON	1.0	-1.1

### **Top Contributors**

	Beg Wgt	Return	Contribution
AMER.VANGUARD	0.6	32.8	0.2
APPLE	2.3	7.4	0.2
FACEBOOK CLASS A	1.1	13.2	0.1
MICROSOFT	1.6	8.6	0.1
ALLEGHENY TECHS.	0.3	40.5	0.1

### **Bottom Contributors**

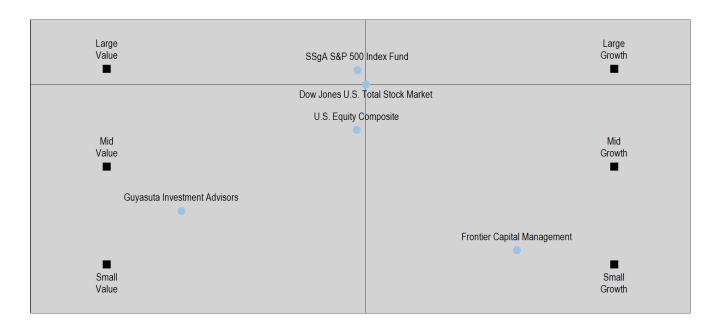
	Beg Wgt	Return	Contribution
UNITED CONTINENTAL HDG.	0.9	-19.1	-0.2
PATTERSON COMPANIES	0.7	-17.2	-0.1
GENERAL ELECTRIC	0.7	-9.6	-0.1
ALTRIA GROUP	0.4	-13.9	-0.1
VEECO INSTRUMENTS	0.3	-23.2	-0.1

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
U.S. Equity Composite	17.1%	12.7%	16.9%	21.3%	32.0%
Dow Jones U.S. Total Stock Market	6.9%	9.5%	16.1%	27.5%	40.0%
Weight Over/Under	10.3%	3.2%	0.8%	-6.3%	-8.0%

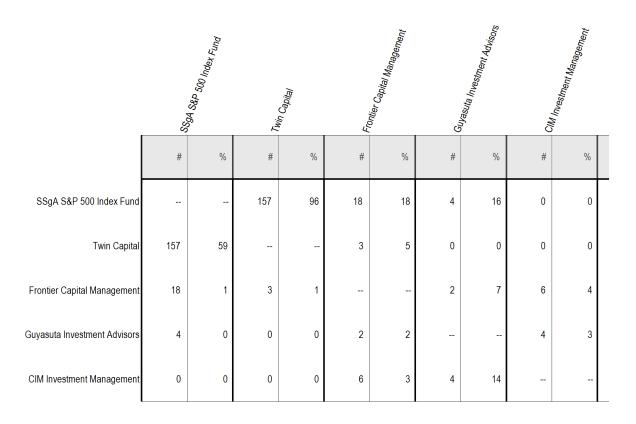


As of September 30, 2017

U.S. Equity Style Map 3 Years Ending September 30, 2017

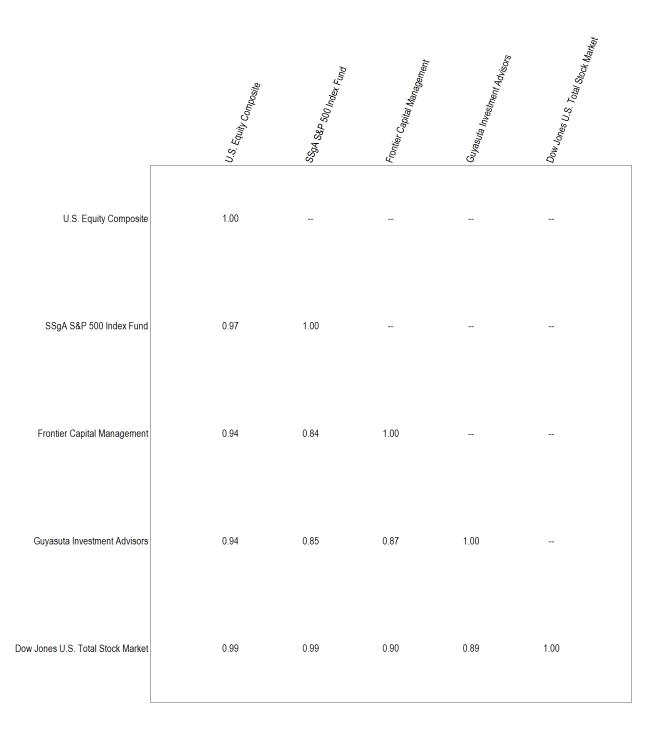


### **Common Holdings Matrix**



As of September 30, 2017

Correlation Matrix 3 Years



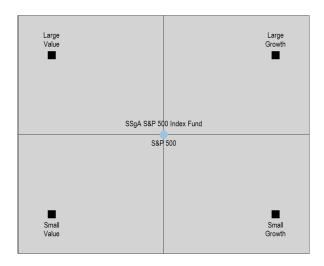
## SSgA S&P 500 Index Fund

## Characteristics

As of September 30, 2017

Market Value: \$99.6 Million and 13.6% of Fund

## Style Drift - 1 Year



### Characteristics

	Portfolio	S&P 500
Number of Holdings	507	505
Weighted Avg. Market Cap. (\$B)	163.6	163.1
Median Market Cap. (\$B)	20.7	20.7
Price To Earnings	25.2	24.6
Price To Book	5.3	4.8
Price To Sales	3.7	3.4
Return on Equity (%)	21.1	20.0
Yield (%)	2.0	2.0
Beta	1.0	1.0
R-Squared	1.0	1.0

	End Weight	Return
APPLE	3.7	7.4
MICROSOFT	2.6	8.6
FACEBOOK CLASS A	1.9	13.2
AMAZON.COM	1.8	-0.7
BERKSHIRE HATHAWAY 'B'	1.6	8.2

**Largest Holdings** 

## **Top Contributors**

	Beg Wgt	Return	Contribution
APPLE	3.6	7.4	0.3
FACEBOOK CLASS A	1.7	13.2	0.2
MICROSOFT	2.5	8.6	0.2
BOEING	0.5	29.3	0.2
ABBVIE	0.6	23.6	0.1

### **Bottom Contributors**

	Beg Wgt	Return	Contribution
GENERAL ELECTRIC	1.1	-9.6	-0.1
ALTRIA GROUP	0.7	-13.9	-0.1
MEDTRONIC	0.6	-11.4	-0.1
ALLERGAN	0.4	-15.4	-0.1
WALT DISNEY	0.7	-6.5	0.0

## **Market Capitalization**

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
SSgA S&P 500 Index Fund	0.0%	1.5%	16.1%	32.7%	49.7%
S&P 500	0.7%	1.5%	16.2%	32.9%	48.7%
Weight Over/Under	-0.7%	0.0%	-0.1%	-0.2%	1.0%

### Characteristics

	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% E	Equity)	
Energy	6.1	6.1
Materials	3.0	3.0
Industrials	10.2	10.2
Consumer Discretionary	11.8	11.8
Consumer Staples	8.2	8.2
Health Care	14.4	14.5
Financials	14.5	14.6
Information Technology	23.1	23.2
Telecommunication Services	2.2	2.2
Utilities	3.1	3.1
Real Estate	3.0	3.0
Unclassified	0.6	0.0

## Attribution

As of September 30, 2017 Market Value: \$99.6 Million and 13.6% 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%	6.8%	6.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Materials	2.2%	2.2%	0.0%	5.0%	4.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Industrials	10.2%	10.4%	-0.2%	4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Consumer Discretionary	12.3%	12.4%	-0.1%	0.9%	0.9%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%
Consumer Staples	8.8%	8.8%	0.0%	-1.4%	-1.4%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.5%
Health Care	14.6%	14.7%	-0.1%	3.6%	3.6%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Financials	14.7%	14.7%	0.0%	5.3%	5.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Information Technology	22.4%	22.5%	-0.1%	8.6%	8.6%	0.0%	0.0%	0.0%	0.0%	0.9%	0.9%
Telecommunication Services	2.2%	2.2%	0.0%	6.8%	6.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Utilities	3.2%	3.2%	0.0%	2.9%	2.9%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Real Estate	2.9%	3.0%	0.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Unclassified	0.4%	0.0%	0.4%	4.4%		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 241.43	19.8%	19.9%	-0.1%	5.1%	5.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
2) 143.85 - 241.43	20.7%	20.4%	0.3%	3.4%	3.3%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%
3) 63.31 - 143.85	19.3%	19.3%	-0.1%	6.3%	6.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%
4) 26.94 - 63.31	20.1%	20.2%	-0.1%	5.2%	5.2%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%
5) 0.00 - 26.94	20.1%	20.2%	0.0%	2.4%	2.4%	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.4%
Total				4.5%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

## Twin Capital

Characteristics As of September 30, 2017

Market Value: \$2.4 Million and 0.3% of Fund

#### **Characteristics**

	Portfolio	S&P 500
Number of Holdings	164	505
Weighted Avg. Market Cap. (\$B)	164.2	163.1
Median Market Cap. (\$B)	36.3	20.7
Price To Earnings	23.9	24.6
Price To Book	5.1	4.8
Price To Sales	3.5	3.4
Return on Equity (%)	21.2	20.0
Yield (%)	2.0	2.0
Beta		1.0
R-Squared		1.0

### Characteristics

	Portfolio	S&P 500
INDUSTRY SECTOR DISTRIBUTION (% I		
Energy	5.7	6.1
Materials	2.3	3.0
Industrials	9.7	10.2
Consumer Discretionary	11.5	11.8
Consumer Staples	8.3	8.2
Health Care	14.2	14.5
Financials	14.3	14.6
Information Technology	23.5	23.2
Telecommunication Services	2.6	2.2
Utilities	3.7	3.1
Real Estate	2.4	3.0
Unclassified	0.9	0.0

## **Largest Holdings**

	End Weight	Return
APPLE	3.8	7.4
MICROSOFT	2.5	8.6
FACEBOOK CLASS A	2.1	13.2
ALPHABET 'A'	2.1	4.7
JOHNSON & JOHNSON	2.0	-1.1

## **Top Contributors**

	End Weight	Return	Contribution
APPLE	3.8	7.4	0.3
FACEBOOK CLASS A	2.1	13.2	0.3
MICROSOFT	2.5	8.6	0.2
LAM RESEARCH	0.7	31.2	0.2
APPLIED MATS.	0.7	26.4	0.2

### **Bottom Contributors**

	End Weight	Return	Contribution
GENERAL ELECTRIC	1.1	-9.6	-0.1
ALTRIA GROUP	0.6	-13.9	-0.1
WALT DISNEY	1.0	-6.5	-0.1
QUEST DIAGNOSTICS	0.4	-15.4	-0.1
UNITED CONTINENTAL HDG.	0.3	-19.1	0.0

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Twin Capital	0.0%	1.6%	22.0%	27.9%	48.5%
S&P 500	0.7%	1.5%	16.2%	32.9%	48.7%
Weight Over/Under	-0.7%	0.1%	5.8%	-4.9%	-0.2%

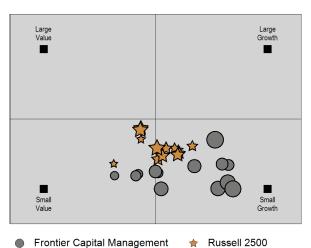
## Frontier Capital Management

Characteristics

Market Value: \$30.4 Million and 4.2% of Fund

As of September 30, 2017

## Style Drift - 5 Years



#### Russell 2500

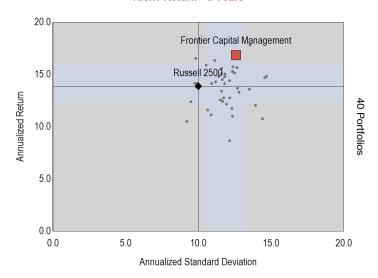
#### **Characteristics**

	Portfolio	Russell 2500
Number of Holdings	148	2,491
Weighted Avg. Market Cap. (\$B)	5.7	4.7
Median Market Cap. (\$B)	2.6	1.2
Price To Earnings	27.6	25.9
Price To Book	4.1	3.5
Price To Sales	2.8	3.1
Return on Equity (%)	13.3	12.4
Yield (%)	0.8	1.3
Beta	1.4	1.0
R-Squared	0.9	1.0

#### **Characteristics**

	Portfolio	Russell 2500
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	2.6	4.3
Materials	17.0	5.8
Industrials	18.8	16.1
Consumer Discretionary	5.6	12.4
Consumer Staples	0.3	2.8
Health Care	11.7	11.9
Financials	9.2	16.5
Information Technology	29.7	16.3
Telecommunication Services	1.7	0.6
Utilities	0.0	3.8
Real Estate	0.0	9.5
Unclassified	0.8	0.0

## Risk / Return - 5 Years



## **Largest Holdings**

End Weight	Return
3.4	-19.1
2.3	7.5
2.1	40.5
1.9	2.8
1.9	7.3
	3.4 2.3 2.1 1.9

## **Top Contributors**

	Beg Wgt	Return	Contribution
ALLEGHENY TECHS.	1.6	40.5	0.6
MERITOR	0.7	56.6	0.4
CONTROL4	0.8	50.2	0.4
COGENT COMMS.HOLDINGS	1.4	23.2	0.3
DIPLOMAT PHARMACY	0.8	39.9	0.3

#### **Bottom Contributors**

	Beg Wgt	Return	Contribution
UNITED CONTINENTAL HDG.	4.4	-19.1	-0.8
VEECO INSTRUMENTS	1.4	-23.2	-0.3
DEXCOM	0.9	-33.1	-0.3
CONTROLADORA VUELA ADR 1:10	1.2	-18.4	-0.2
ELLIE MAE	0.8	-25.3	-0.2

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Frontier Capital Management	47.7%	30.2%	20.5%	1.6%	0.0%
Russell 2500	34.6%	50.7%	14.7%	0.0%	0.0%
Weight Over/Under	13.1%	-20.5%	5.8%	1.6%	0.0%



## Frontier Capital Management

## Attribution

As of September 30, 2017 Market Value: \$30.4 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	1.8%	4.3%	-2.4%	4.5%	6.2%	-1.6%	0.0%	0.0%	-0.1%	0.1%	0.0%
Materials	16.4%	5.8%	10.6%	14.8%	5.9%	8.9%	0.1%	1.5%	1.6%	0.1%	1.7%
Industrials	21.7%	15.7%	6.0%	-2.1%	7.4%	-9.5%	0.2%	-2.1%	-1.9%	0.4%	-1.5%
Consumer Discretionary	5.0%	12.6%	-7.6%	5.0%	3.8%	1.2%	0.1%	0.1%	0.1%	-0.1%	0.0%
Consumer Staples	0.3%	2.9%	-2.6%	-1.4%	0.5%	-1.9%	0.1%	0.0%	0.1%	-0.1%	0.0%
Health Care	12.5%	11.9%	0.6%	4.8%	3.5%	1.3%	0.0%	0.2%	0.2%	-0.1%	0.0%
Financials	9.3%	16.6%	-7.2%	3.4%	4.4%	-1.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.1%
Information Technology	31.3%	16.1%	15.3%	6.0%	6.0%	0.0%	0.2%	0.0%	0.2%	0.2%	0.4%
Telecommunication Services	1.5%	0.6%	0.9%	23.2%	3.0%	20.2%	0.0%	0.3%	0.3%	0.0%	0.3%
Utilities	0.0%	3.8%	-3.8%		5.1%		0.0%	0.0%	0.0%	0.0%	0.0%
Real Estate	0.0%	9.7%	-9.7%		1.3%		0.3%	0.0%	0.3%	-0.3%	0.0%
Total				5.5%	4.7%	0.8%	1.0%	-0.2%	0.8%	0.0%	0.8%

### Performance Attribution vs. Russell 2500

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	-0.2%	-0.1%	-0.2%	0.0%
Materials	2.0%	0.5%	0.6%	0.9%
Industrials	-1.6%	-1.5%	0.4%	-0.5%
Consumer Discretionary	-0.2%	0.2%	-0.3%	-0.1%
Consumer Staples	0.0%	-0.1%	0.0%	0.0%
Health Care	0.2%	0.2%	0.0%	0.0%
Financials	-0.4%	-0.2%	-0.3%	0.1%
Information Technology	0.9%	0.0%	0.9%	0.0%
Telecommunication Services	0.3%	0.1%	0.0%	0.2%
Utilities	-0.2%		-0.2%	
Real Estate	-0.1%		-0.1%	-
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	0.6% =	-0.8% +	0.8% +	0.6%

## 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 7.20	28.0%	20.0%	8.0%	-0.9%	4.2%	-5.1%	0.0%	-1.4%	-1.5%	-0.1%	-1.6%
2) 4.86 - 7.20	7.6%	19.9%	-12.3%	3.6%	4.6%	-1.0%	0.0%	-0.1%	-0.1%	0.0%	-0.1%
3) 3.23 - 4.86	14.1%	20.1%	-6.0%	1.8%	4.1%	-2.2%	0.0%	-0.3%	-0.3%	-0.1%	-0.4%
4) 1.74 - 3.23	22.5%	20.0%	2.5%	16.7%	4.7%	12.1%	0.0%	2.7%	2.7%	0.0%	2.7%
5) 0.00 - 1.74	27.8%	19.9%	7.9%	5.1%	6.0%	-0.9%	0.1%	-0.3%	-0.2%	0.3%	0.1%
Total				5.5%	4.7%	0.8%	0.1%	0.7%	0.8%	0.0%	0.8%

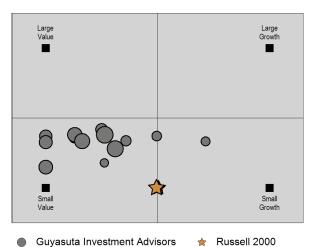
## Guyasuta Investment Advisors

Characteristics

Market Value: \$28.1 Million and 3.8% of Fund

As of September 30, 2017

## Style Drift - 5 Years



#### Russell 2000

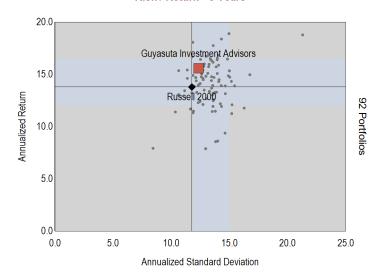
#### **Characteristics**

	Portfolio	2000
Number of Holdings	28	2,000
Weighted Avg. Market Cap. (\$B)	4.6	2.2
Median Market Cap. (\$B)	3.4	0.8
Price To Earnings	29.1	24.6
Price To Book	4.2	3.2
Price To Sales	2.4	3.0
Return on Equity (%)	15.8	10.4
Yield (%)	1.5	1.1
Beta	1.0	1.0
R-Squared	0.8	1.0

#### **Characteristics**

	Portfolio	Russell 2000
INDUSTRY SECTOR DISTRIBUTION (% E	quity)	
Energy	0.0	3.5
Materials	26.5	4.4
Industrials	30.7	15.1
Consumer Discretionary	0.0	11.9
Consumer Staples	0.0	2.7
Health Care	16.1	15.7
Financials	0.0	18.3
Information Technology	7.7	16.8
Telecommunication Services	0.0	0.8
Utilities	0.0	3.6
Real Estate	7.8	7.0
Unclassified	6.7	0.1

## Risk / Return - 5 Years



## **Largest Holdings**

End Weight	Return
4.4	1.3
4.3	5.9
4.2	12.0
4.0	6.4
4.0	-0.2
	4.4 4.3 4.2 4.0

### **Top Contributors**

	Beg wgt	Return	Contribution
AMER.VANGUARD	3.4	32.8	1.1
TELEFLEX	3.9	16.7	0.6
FULLER 'H' 'B'	3.4	13.9	0.5
APPLIED INDL.TECHS.	3.3	12.0	0.4
CONTINENTAL BLDG.PRDS.	3.3	11.6	0.4

#### **Bottom Contributors**

	Beg Wgt	Return	Contribution
PATTERSON COMPANIES	4.4	-17.2	-0.8
CECO ENV.	3.4	-7.0	-0.2
INNOSPEC	3.4	-5.9	-0.2
RPM INTERNATIONAL	3.5	-5.4	-0.2
SONOCO PRODUCTS	2.9	-1.1	0.0

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
Guyasuta Investment Advisors	47.3%	35.5%	17.2%	0.0%	0.0%
Russell 2000	72.7%	26.7%	0.5%	0.0%	0.0%
Weight Over/Under	-25.5%	8.8%	16.7%	0.0%	0.0%



## Guyasuta Investment Advisors

## Attribution

As of September 30, 2017 Market Value: \$28.1 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%	3.4%	-3.4%		6.5%		0.0%	0.0%	0.0%	0.0%	0.0%
Materials	29.4%	4.4%	24.9%	5.6%	6.8%	-1.2%	0.3%	-0.3%	-0.1%	0.1%	0.0%
Industrials	30.4%	14.6%	15.8%	6.6%	8.6%	-2.0%	0.5%	-0.6%	-0.1%	0.4%	0.3%
Consumer Discretionary	0.0%	12.5%	-12.5%		3.5%		0.3%	0.0%	0.3%	-0.3%	0.0%
Consumer Staples	0.0%	2.7%	-2.7%		2.7%		0.1%	0.0%	0.1%	-0.1%	0.0%
Health Care	18.7%	15.1%	3.6%	1.4%	7.8%	-6.5%	0.1%	-1.2%	-1.1%	0.3%	-0.8%
Financials	0.0%	18.5%	-18.5%		5.5%		0.0%	0.0%	0.0%	0.0%	0.0%
Information Technology	8.1%	17.1%	-8.9%	5.3%	4.9%	0.5%	0.1%	0.0%	0.1%	-0.1%	0.0%
Telecommunication Services	0.0%	0.9%	-0.9%		0.7%		0.0%	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	3.7%	-3.7%		5.2%		0.0%	0.0%	0.0%	0.0%	0.0%
Real Estate	13.4%	7.1%	6.3%	0.6%	1.7%	-1.0%	-0.2%	-0.1%	-0.4%	-0.3%	-0.7%
Total				4.4%	5.6%	-1.2%	1.1%	-2.3%	-1.2%	0.0%	-1.2%

### Performance Attribution vs. Russell 2000

	Total	Selection	Allocation	Interaction
	Effects	Effect	Effect	Effects
Energy	-0.2%		-0.2%	-
Materials	1.3%	-0.1%	1.7%	-0.3%
Industrials	0.7%	-0.3%	1.3%	-0.3%
Consumer Discretionary	-0.4%		-0.4%	
Consumer Staples	-0.1%		-0.1%	-
Health Care	-0.9%	-1.0%	0.3%	-0.2%
Financials	-1.0%		-1.0%	
Information Technology	-0.4%	0.1%	-0.4%	0.0%
Telecommunication Services	0.0%		0.0%	
Utilities	-0.2%		-0.2%	
Real Estate	0.0%	-0.1%	0.1%	-0.1%
Cash	0.0%	0.0%	0.0%	0.0%
Portfolio	-1.3% =	-1.3% +	1.0% +	-0.9%

## 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 3.12	52.9%	20.3%	32.7%	1.9%	4.8%	-2.9%	-0.3%	-1.5%	-1.8%	-0.2%	-2.0%
2) 2.21 - 3.12	7.3%	19.8%	-12.5%	13.0%	5.4%	7.6%	0.0%	0.6%	0.6%	0.0%	0.5%
3) 1.55 - 2.21	11.8%	20.0%	-8.2%	3.2%	5.3%	-2.1%	0.0%	-0.2%	-0.2%	-0.1%	-0.3%
4) 0.88 - 1.55	7.9%	20.2%	-12.3%	9.3%	6.8%	2.6%	-0.1%	0.2%	0.1%	0.2%	0.3%
5) 0.00 - 0.88	20.1%	19.8%	0.3%	6.8%	5.8%	1.0%	0.0%	0.2%	0.2%	0.0%	0.2%
Total				4.4%	5.6%	-1.2%	-0.4%	-0.8%	-1.2%	0.0%	-1.2%

## **CIM Investment Management**

Characteristics

Market Value: \$2.4 Million and 0.3% of Fund

As of September 30, 2017

## Characteristics

	Portfolio	Russell 2000
Number of Holdings	167	2,000
Weighted Avg. Market Cap. (\$B)	2.6	2.2
Median Market Cap. (\$B)	2.5	0.8
Price To Earnings	26.0	24.6
Price To Book	2.9	3.2
Price To Sales	3.0	3.0
Return on Equity (%)	11.4	10.4
Yield (%)	1.1	1.1
Beta		1.0
R-Squared		1.0

### Characteristics

	Portfolio	Russell 2000
INDUSTRY SECTOR DISTRIBUTION (% I	Equity)	
Energy	4.2	3.5
Materials	6.2	4.4
Industrials	17.2	15.1
Consumer Discretionary	9.6	11.9
Consumer Staples	4.0	2.7
Health Care	11.9	15.7
Financials	17.6	18.3
Information Technology	17.2	16.8
Telecommunication Services	0.0	0.8
Utilities	3.7	3.6
Real Estate	5.9	7.0
Unclassified	0.9	0.1

## **Largest Holdings**

	End Weight	Return
RLJ LODGING TRUST	1.4	12.5
CALGON CARBON	1.3	42.3
AMER.VANGUARD	1.2	32.8
SELECTIVE IN.GP.	1.2	7.9
PORTLAND GEN.ELEC.	1.1	0.6

## **Top Contributors**

	End Weight	Return	Contribution
CALGON CARBON	1.3	42.3	0.5
EDITAS MEDICINE	1.0	43.1	0.4
AMER.VANGUARD	1.2	32.8	0.4
GOPRO CL.A	0.6	35.4	0.2
RLJ LODGING TRUST	1.4	12.5	0.2

### **Bottom Contributors**

	<b>End Weight</b>	Return	Contribution
SURGERY PARTNERS	1.0	-54.5	-0.5
AMC ENTERTAINMENT HDG. CL.A	0.5	-34.4	-0.2
AMERICAN OUTDOOR BRANDS	0.5	-31.2	-0.2
DIEBOLD NIXDORF	8.0	-18.0	-0.1
NUVASIVE	0.5	-27.9	-0.1

	Small Cap	Small/ Mid	Mid Cap	Mid/ Large	Large Cap
CIM Investment Management	59.9%	40.1%	0.0%	0.0%	0.0%
Russell 2000	72.7%	26.7%	0.5%	0.0%	0.0%
Weight Over/Under	-12.8%	13.4%	-0.5%	0.0%	0.0%

## Non-U.S. Equity Composite

## Characteristics

As of September 30, 2017

Market Value: \$85.1 Million and 11.6% of Fund

### Risk / Return - 3 Years



### Characteristics

	Portfolio	MSCI ACWI ex USA
Number of Holdings	973	1,859
Weighted Avg. Market Cap. (\$B)	73.6	62.9
Median Market Cap. (\$B)	6.2	8.0
Price To Earnings	23.4	21.1
Price To Book	4.2	2.6
Price To Sales	3.1	2.2
Return on Equity (%)	19.5	14.6
Yield (%)	2.3	2.8
Beta	1.0	1.0
R-Squared	1.0	1.0

Region	% of Total	% of Bench
North America ex U.S.	3.7%	6.7%
United States	2.9%	0.0%
Europe Ex U.K.	46.6%	32.5%
United Kingdom	11.7%	12.3%
Pacific Basin Ex Japan	6.3%	8.1%
Japan	11.8%	16.0%
Emerging Markets	16.9%	23.8%
Other	0.1%	0.5%
Total	100.0%	100.0%

### Characteristics

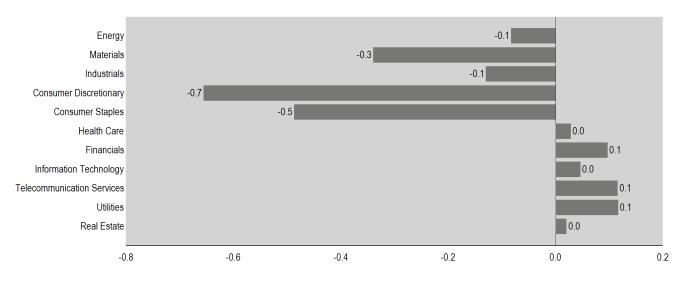
INDUSTRY SECTOR DISTRIBUTION (% Equity)	Portfolio	MSCI ACWI ex USA
Energy	3.0	6.7
Materials	6.7	7.8
Industrials	13.1	11.8
Consumer Discretionary	11.9	11.3
Consumer Staples	17.4	9.6
Health Care	14.1	7.9
Financials	15.8	23.3
Information Technology	14.2	11.2
Telecommunication Services	1.0	4.2
Utilities	1.4	3.1
Real Estate	0.4	3.2
Unclassified	0.0	0.0

	Small Cap	Mid Cap	Large Cap
Non-U.S. Equity Composite	2.0%	8.8%	89.3%
MSCI ACWI ex USA	4.3%	18.1%	77.5%
Weight Over/Under	-2.4%	-9.4%	11.8%

Market Value: \$85.1 Million and 11.6% of Fund

As of September 30, 2017

#### Active Contribution vs. MSCI ACWI ex USA



Non-U.S. Equity Composite

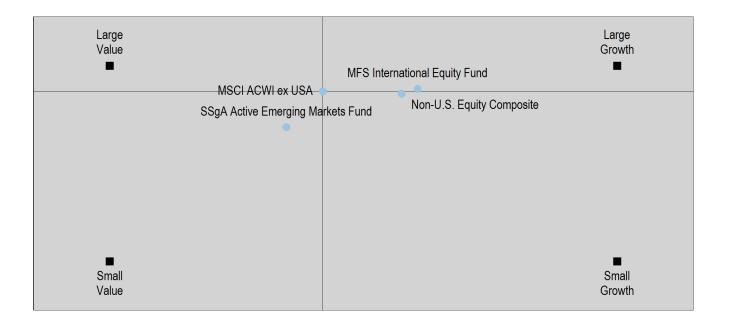
## Market Cap Attribution vs. MSCI ACWI ex USA

	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 89.11	20.7%	19.8%	0.9%	4.9%	6.4%	-1.5%	0.0%	-0.3%	-0.3%	0.0%	-0.3%
2) 43.06 - 89.11	28.5%	20.1%	8.3%	6.5%	8.1%	-1.6%	0.1%	-0.3%	-0.2%	0.4%	0.2%
3) 21.95 - 43.06	24.2%	20.0%	4.2%	4.5%	5.6%	-1.1%	0.0%	-0.2%	-0.2%	-0.1%	-0.3%
4) 10.30 - 21.95	20.2%	20.0%	0.1%	4.1%	5.9%	-1.8%	0.0%	-0.4%	-0.4%	-0.1%	-0.4%
5) 0.00 - 10.30	6.5%	20.0%	-13.5%	2.4%	5.2%	-2.8%	0.1%	-0.4%	-0.3%	-0.2%	-0.5%
Total				4.9%	6.2%	-1.3%	0.1%	-1.5%	-1.3%	0.0%	-1.3%

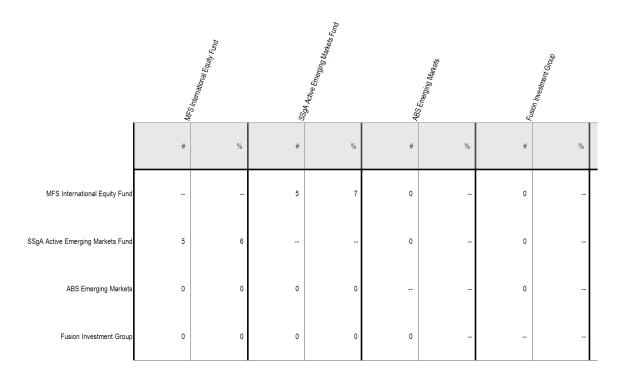
Market Value: \$85.1 Million and 11.6% of Fund

As of September 30, 2017

Equity Style Map 3 Years Ending September 30, 2017



## **Common Holdings Matrix**



## MFS International Equity Fund

## Characteristics

As of September 30, 2017

Market Value: \$64.3 Million and 8.8% of Fund

### Characteristics

	Portfolio	MSCI EAFE
Number of Holdings	75	926
Weighted Avg. Market Cap. (\$B)	72.6	58.7
Median Market Cap. (\$B)	39.0	10.9
Price To Earnings	23.5	20.9
Price To Book	4.1	2.6
Price To Sales	2.9	2.1
Return on Equity (%)	19.7	13.6
Yield (%)	2.3	3.0
Beta	1.0	1.0
R-Squared	0.9	1.0

Region	% of Total	% of Bench
North America ex U.S.	4.2%	0.0%
United States	3.2%	0.0%
Europe Ex U.K.	53.1%	46.8%
United Kingdom	13.3%	17.8%
Pacific Basin Ex Japan	5.5%	11.7%
Japan	13.4%	23.2%
Emerging Markets	7.3%	0.0%
Other	0.0%	0.5%
Total	100.0%	100.0%

## Characteristics

	Portfolio	MSCI EAFE
INDUSTRY SECTOR DISTRIBUTION (	(% Equity)	
Energy	2.5	5.1
Materials	6.6	7.8
Industrials	14.2	14.5
Consumer Discretionary	12.1	12.2
Consumer Staples	18.9	11.2
Health Care	15.7	10.6
Financials	14.8	21.4
Information Technology	12.4	6.3
Telecommunication Services	0.4	4.1
Utilities	1.2	3.3
Real Estate	0.0	3.5
Unclassified	0.0	0.0

	Small Cap	Mid Cap	Large Cap
MFS International Equity Fund	0.1%	7.9%	92.0%
MSCI EAFE	3.9%	18.8%	77.3%
Weight Over/Under	-3.8%	-10.9%	14.7%

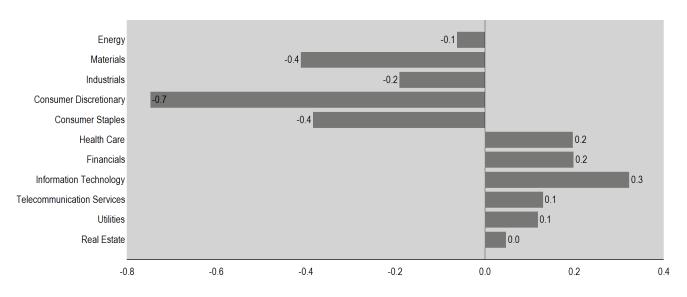
# MFS International Equity Fund

Attribution

Market Value: \$64.3 Million and 8.8% of Fund

As of September 30, 2017

#### **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 92.04	20.9%	19.5%	1.4%	4.0%	4.2%	-0.2%	0.0%	0.0%	0.0%	-0.2%	-0.3%
2) 48.22 - 92.04	24.2%	20.3%	3.9%	5.8%	7.5%	-1.7%	0.1%	-0.3%	-0.3%	0.4%	0.2%
3) 26.20 - 48.22	30.3%	20.2%	10.1%	4.8%	5.2%	-0.4%	0.0%	0.1%	0.1%	0.0%	0.0%
4) 12.36 - 26.20	19.3%	20.0%	-0.7%	3.7%	5.3%	-1.6%	0.0%	-0.3%	-0.3%	0.0%	-0.4%
5) 0.00 - 12.36	5.3%	20.0%	-14.7%	2.7%	4.9%	-2.2%	0.0%	-0.4%	-0.3%	-0.1%	-0.4%

# SSgA Active Emerging Markets Index Fund

## Characteristics

As of September 30, 2017

Market Value: \$8.9 Million and 1.2% of Fund

#### Characteristics

	Portfolio	MSCI Emerging Markets
Number of Holdings	904	839
Weighted Avg. Market Cap. (\$B)	81.3	80.6
Median Market Cap. (\$B)	5.5	5.5
Price To Earnings	22.6	21.5
Price To Book	4.1	2.8
Price To Sales	3.5	2.2
Return on Equity (%)	17.7	17.4
Yield (%)	2.2	2.3
Beta	1.0	1.0
R-Squared	1.0	1.0

Region	% of Total	% of Bench
EM Asia		8.3%
EM Latin America		1.5%
EM Europe & Middle East	-	0.7%
EM Africa		0.7%
Other		88.7%
Total		100.0%

#### Characteristics

	Portfolio	MSCI Emerging Markets
INDUSTRY SECTOR DISTRIBUTION (9	% Equity)	
Energy	6.5	6.8
Materials	7.3	7.2
Industrials	5.4	5.4
Consumer Discretionary	10.3	10.3
Consumer Staples	6.5	6.5
Health Care	2.3	2.3
Financials	22.9	23.4
Information Technology	27.7	27.6
Telecommunication Services	5.1	5.1
Utilities	2.5	2.6
Real Estate	2.9	2.9
Unclassified	0.2	0.0

#### **Market Capitalization**

	Small Cap	Mid Cap	Large Cap
SSgA Active Emerging Markets Fund	3.8%	14.1%	82.1%
MSCI Emerging Markets	3.7%	13.9%	82.4%
Weight Over/Under	0.1%	0.2%	-0.3%

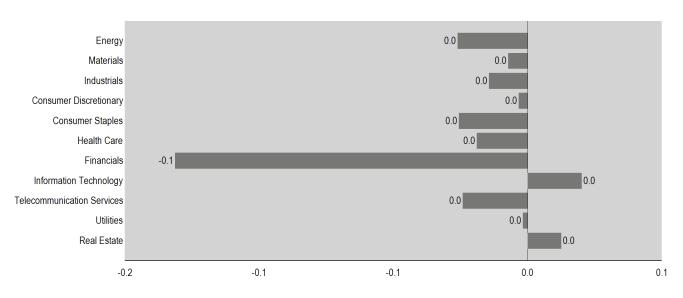


# SSgA Active Emerging Markets Index Fund

Attribution

As of September 30, 2017 Market Value: \$8.9 Million and 1.2% 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 86.86	19.5%	19.2%	0.3%	12.4%	12.4%	0.0%	0.0%	0.0%	0.0%	0.8%	0.9%
2) 27.64 - 86.86	19.9%	20.8%	-0.9%	8.6%	9.5%	-0.9%	0.0%	-0.2%	-0.2%	0.3%	0.1%
3) 13.57 - 27.64	19.9%	20.0%	-0.1%	6.2%	6.5%	-0.3%	0.0%	-0.1%	-0.1%	-0.3%	-0.4%
4) 6.32 - 13.57	20.4%	20.1%	0.3%	7.4%	7.5%	-0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%
5) 0.00 - 6.32	20.4%	20.0%	0.3%	4.0%	4.2%	-0.2%	0.0%	0.0%	0.0%	-0.8%	-0.8%

# Fusion Investment Group

# Characteristics

As of September 30, 2017 Market Value: \$2.2 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 (	% Equity)	
Energy	0.0	6.4
Materials	0.0	5.3
Industrials	0.0	10.8
Consumer Discretionary	0.0	11.9
Consumer Staples	0.0	8.8
Health Care	0.0	11.2
Financials	0.0	18.7
Information Technology	0.0	17.5
Telecommunication Services	0.0	3.2
Utilities	0.0	3.1
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	2.8%	14.6%	82.6%
Weight Over/Under	-2.8%	-14.6%	-82.6%



# **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%

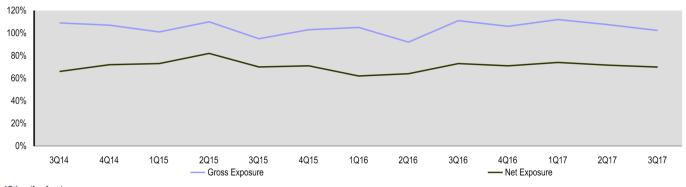
Security Geographic Exposure	Weight (%)
U.S. Exposure	2.0%
International Exposure	93.2%
Cash	4.8%

#### **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%

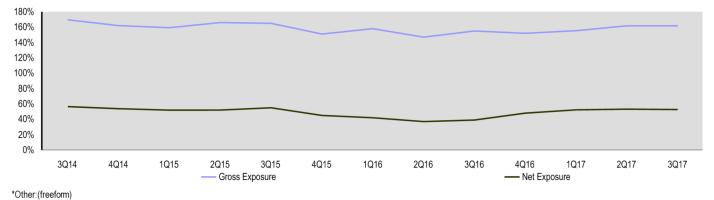
Security Geographic Exposure	Weight (%)
U.S. Exposure	51.9%
International Exposure	46.7%
Cash	1.5%

#### **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%

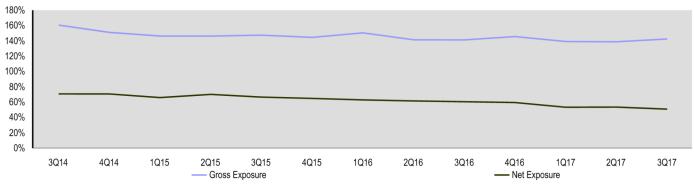
Security Geographic Exposure	Weight (%)
U.S. Exposure	81.7%
International Exposure	18.3%
Cash	0.0%

#### **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**



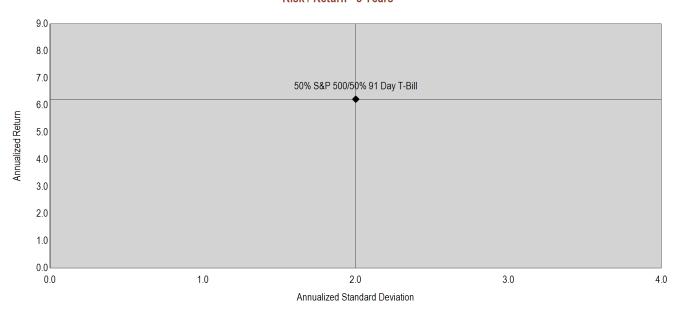
\*Other:(freeform)

# Parametric Defensive Equity

Characteristics

As of September 30, 2017

Risk / Return - 3 Years



#### **Characteristics**

#### Parametric Defensive Equity

Portfolio Value	\$4.17 billion
Total Outflows from the Fund	\$105.9 million
Total Inflows to the Fund	\$639.9 million

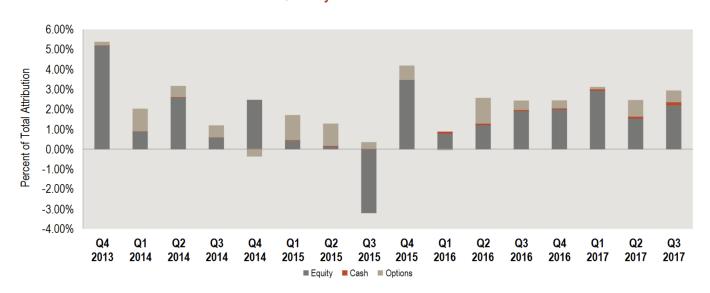
#### **Strategy Breakdown**

#### 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 June 30, 2017

#### Market Value: \$21.4 Million and 3.0% 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 Metro Areas	% of NAV
Pre-Dvp/Fwd Comm.	0.0%	New York	11.7%
Development	0.8%	San Francisco	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 & Other	0.0%		
		Queue %	
Fund GAV	\$11,988,565,300	3.6%	
Fund NAV	\$9,837,325,249	4.4%	
Queue	+\$429,048,000		

#### **Top Ten Holdings Investment Detail**

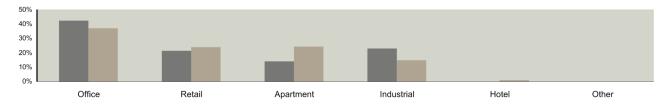
Queue Length October 2017 capital call

			<b>Total Cost</b>	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%

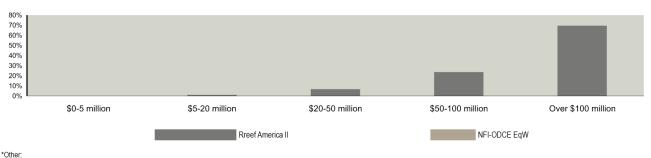
#### Regional Breakdown by NAV (Excluding Cash & Debt)



#### Property Type Breakdown by NAV (Excluding Cash & Debt)



#### Property Size Breakdown by NAV (Excluding Cash & Debt)



# Barings Core Property Fund

## Characteristics

As of June 30, 2017

#### Characteristics

## Strategy Breakdown

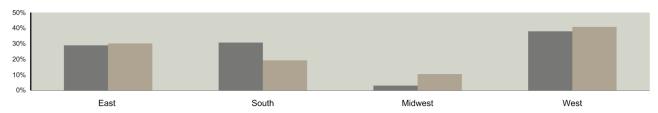
Barings Core Property Fund (Corners	stone Patriot Fund)
Number of Properties	56
Total Square Feet	9,403,224
% in Top Ten	37.6%
% Leased (By Square Feet)	93.0%
% Leverage	19.8%
% Equity	80.2%
% Joint Ventures	9.7%
1-Year Dividend Yield	4.6%
1-Year Net Income Return	3.7%
1-Year Gross Appreciation Return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

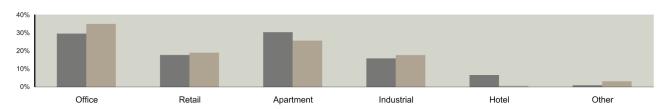
#### Top Ten Holdings Investment Detail

			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%

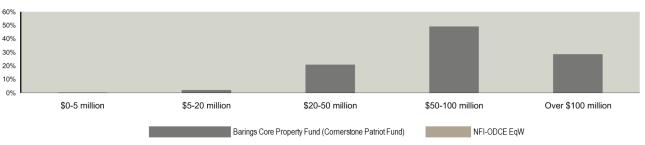
#### Regional Breakdown by NAV (Excluding Cash & Debt)



#### Property Type Breakdown by NAV (Excluding Cash & Debt)



#### Property Size Breakdown by NAV (Excluding Cash & Debt)



\*Other:

# Draper Triangle Ventures II, LP

## Characteristics

As of September 30, 2017

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

#### Characteristics

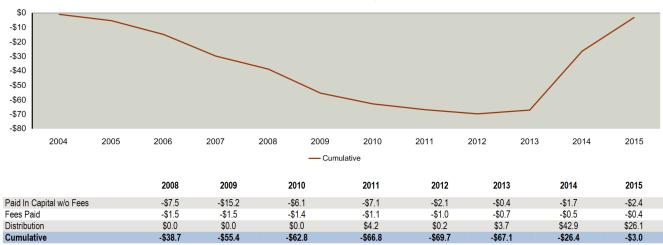
	Draper Triangle Ventures
Fund Vintage Year	2004
Total Size of Fund (\$M)	\$72.6
% of Capital Called	109.97%
Capital Distributed (\$M)	\$76.4
Current Fund NAV (\$M)	\$47.5
Client Commitment (\$M)	\$1.0
Client % Ownership of Fund	1.16%
Net IRR	6.2%
Net Multiple	1.6

	# 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	of 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

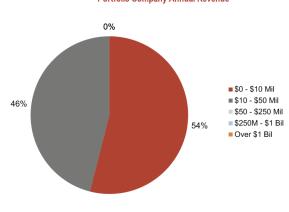
#### Annual Cash Flow Summary (\$M)





# 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 September 30, 2017

Market Value: \$0.9 Million and 0.1% of Fund

#### Characteristics

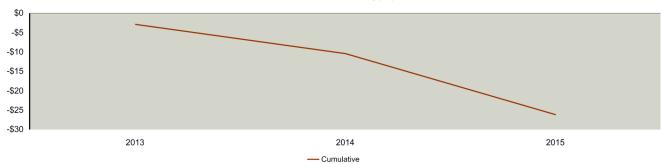
	Draper Triangle Ventures
Fund Vintage Year	2013
Total Size of Fund (\$M)	\$78.8
% of Capital Called	33.19%
Capital Distributed (\$M)	\$0.0
Current Fund NAV (\$M)	\$21.0
Client Commitment (\$M)	\$2.0
Client % Ownership of Fund	2.54%
Net IRR	-19.6%
Net Multiple	

	# 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

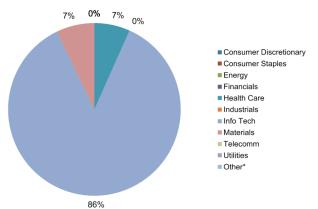
		Initial Investment		Total Investment	Fair Market	Total
Holding	Туре	Date	% of Portfolio	(\$M)	Value (\$M)	Distribution (\$M)
Bjond	Information Technology	December-13	10.07%	\$2.05	\$2.05	\$0.00
Amplifinity	Information Technology	February-14	14.71%	\$3.00	\$2.88	\$0.00
Rhiza	Information Technology	June-14	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)

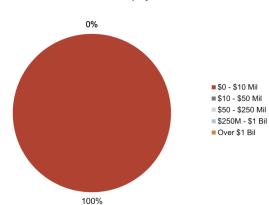


	2013	2014	2015
Paid In Capital w/o Fees	-\$1.7	-\$6.0	-\$13.0
Fees Paid	-\$1.2	-\$1.5	-\$2.8
Distribution	\$0.0	\$0.0	\$0.0
Cumulative	-\$2.9	-\$10.4	-\$26.2





#### Portfolio Company Annual Revenue





# Crescent Mezzanine Partners VIB, LP

## Characteristics

As of September 30, 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%

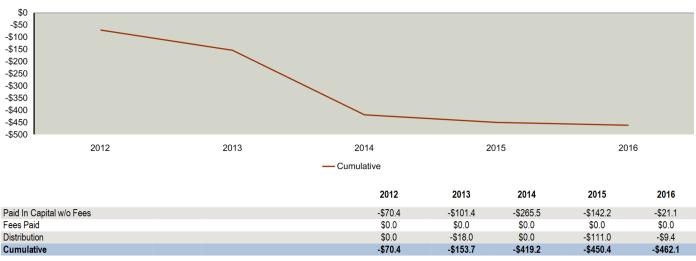
8.3% 0.2 Market Value: \$5.6 Million and 0.8% of Fund

	# 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	Total Investment f Portfolio (\$M	

#### Annual Cash Flow Summary (\$M)



#### Portfolio Company Sector Exposure Portfolio Company Annual Revenue 0% 0% ■ Consumer Discretionary ■ Consumer Staples Energy ■ Financials ■\$0 - \$10 Mil ■\$10 - \$50 Mil ■ Health Care ■\$50 - \$250 Mil Industrials ■\$250M - \$1 Bil ■ Info Tech Over \$1 Bil Materials ■ Telecomm Utilities Other\*

## Pittsburgh Comprehensive Municipal Pension

## **Report Items**

- 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 transferred 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.
- On December 2, 2016, \$136,789 was transferred from cash to Draper Triangle Ventures III.
- On November 21, 2016, \$3,000,000 was transferred from the SSqA S&P 500 Flagship Fund to the Operating account.
- On October 26, 2016, \$10,000,000 was committed to Crescent Mezzanine Fund VII.
- On October 7, 2016, \$367,116 was transferred from cash to EnTrust Special Opportunities III.

### **Action Items**

None.



# **Total Fund Composite**

# Fee Schedule

Market Value: \$732.5 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
Core Fixed Income	Federated Investors	0.25% on the Balance	0.25% \$135,939	0.26%
Core Fixed Income	BlackRock Total Return Fund	0.40% on the Balance	0.40% \$79,868	0.50%
Large-Cap Core	SSgA S&P 500 Index Fund	0.04% on the Balance	0.04% \$39,823	0.05%
Large-Cap Core	Twin Capital	0.35% on the first \$50 million 0.20% on the Balance	0.35% \$8,312	0.60%
Smid-Cap Core	Frontier Capital Management	0.75% on the Balance	0.75% \$228,221	0.84%
Small-Cap Core	Guyasuta Investment Advisors	0.45% on the Balance	0.45% \$126,661	0.88%
Small-Cap Core	CIM Investment Management	0.75% on the first \$1 million 0.65% on the next \$3 million 0.60% on the Balance	0.69% \$16,484	0.88%
Non-U.S. Large-Cap Core	MFS International Equity Fund	0.75% on the Balance	0.75% \$482,090	0.97%
Global Core Equity	Fusion Investment Group	0.70% on the Balance	0.70% \$15,426	0.40%
Emerging Markets	SSgA Active Emerging Markets Fund	0.75% on the Balance	0.75% \$67,037	0.95%
Emerging Markets	ABS Emerging Markets	0.80% on the Balance	0.80% \$77,582	1.00%
Hedged Equity Hedge FoF	ABS Offshore SPC Global	1.00% on the Balance	1.00% \$136,306	1.00%
Hedged Equity Hedge FoF	Entrust Diversified Select Equity Fund	1.30% on the Balance	1.30% \$160,760	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% \$128,115	1.00%
Defensive Equity	Parametric Defensive Equity	0.35% on the Balance	0.35% \$37,486	1.00%
Core Real Estate	Rreef America II	0.95% on the Balance	0.95% \$205,079	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% \$217,429	1.01%

# **Total Fund Composite**

# Fee Schedule

Market Value: \$732.5 Million and 100.0% of Fund

Asset Class	Investment Manager	Fee Schedule	Expense Ratio & Estimated Annual Fee <sup>1</sup>	Industry Average <sup>2</sup>
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	2.68% \$150,000	3.12%
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	5.02% \$88,178	5.85%
Fixed Income Annuity	Dedicated Funding for CMPTF	0.00% on the Balance	0.00% \$0	0.00%
Total Investment Management Fe	es		0.34% \$2,455,797	0.39%
Custodian	PNC Bank	0.03% on the all assets, excluding Dedicated Funding for CMPTF	0.02% \$140,723	
Total Fund			0.35% \$2.596.520	

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

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