# Western States Office & Professional Employees Pension Fund

**Investment Performance Review Period Ending: March 31, 2017** 



# 1st quarter summary

#### THE ECONOMIC CLIMATE

- Developed economies continued to experience steady, moderate expansion with fourth quarter real GDP growth in the U.S., the Eurozone, and Japan all between 1.5-2.0%. The base effect of lower oil prices led to higher year-over-year headline inflation in many countries.
- During the first quarter, the global economy exhibited a coordinated pick up in economic activity. Data generally exceeded expectations, especially in the U.S. and the Eurozone.

### MARKET PORTFOLIO IMPACTS

- The U.S. Treasury curve flattened in the first quarter. Short-term rates were driven higher by the Fed, while the long end of the curve remained unchanged. Even with Fed tightening, the U.S. may not be in a typical rising rate environment.
- A better outlook for commodity performance, as well as a flattening of the futures curve in some markets increases the attractiveness of commodities as an inflation hedge.

#### THE INVESTMENT CLIMATE

- While central banks are still accommodative outside of the U.S., most appear to be in later stages of the easing cycle. Developed central banks appear to be broadly entering a period of policy normalization.
- The market is expecting better earnings growth in U.S. equities. According to FactSet, the estimated Q1 earnings growth for the S&P 500 is 9.2% from the previous year. Higher earnings growth may help justify above average valuations.

#### **ASSET ALLOCATION ISSUES**

- Stabilizing currencies and commodity prices, as well as higher growth outlooks, may benefit emerging market equities.
- With U.S. Treasury yields still at historic lows and the expectation of additional tightening from the Fed, investors may not be adequately compensated for taking duration risk in the current environment.

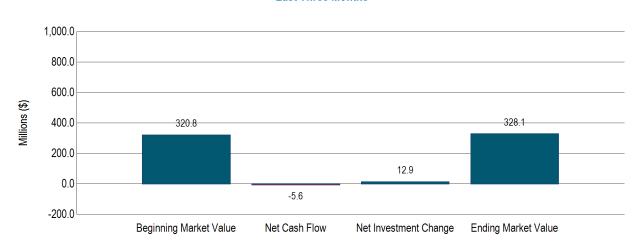
We continue to be neutral towards risk



## Portfolio Reconciliation

	Last Three Months	Year-To-Date
Beginning Market Value	\$320,787,221	\$320,787,221
Net Cash Flow	-\$5,576,272	-\$5,576,272
Net Investment Change	\$12,907,936	\$12,907,936
Ending Market Value	\$328,118,885	\$328,118,885

# Change in Market Value Last Three Months

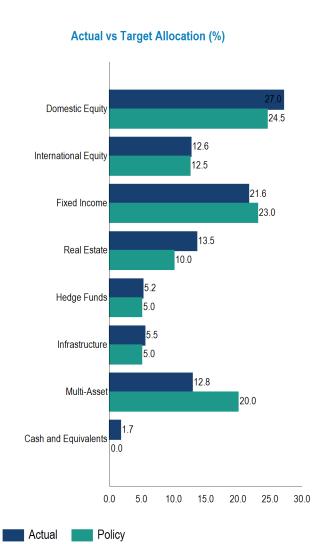


	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value
BlackRock Equity Index NL	\$41,523,915	\$0	\$0	\$0	\$2,517,910	\$44,041,825
INTECH US Managed Volatility LLC	\$25,837,268	\$0	\$0	\$0	\$1,795,801	\$27,633,069
PanAgora US Small Cap Core Stock Selector	\$16,589,936	\$0	\$0	\$0	\$450,126	\$17,040,062
WCM Focused International Growth Fund, L.P.	\$19,493,077	\$0	\$0	\$0	\$2,059,863	\$21,552,940
Causeway International Value Ins	\$12,748,047	\$0	-\$400,000	-\$400,000	\$981,359	\$13,329,406
Brandes International Small Cap Equity	\$6,217,350	\$0	-\$13,989	-\$13,989	\$413,511	\$6,616,872
Loomis Sayles Core Plus	\$0	\$70,506,892	\$0	\$70,506,892	\$400,323	\$70,907,215
Loomis Sayles Core Plus Full Discretion	\$71,532,207	\$0	-\$72,906,892	-\$72,906,892	\$1,374,685	\$0
ASB Allegiance Real Estate	\$31,710,599	\$0	\$0	\$0	\$341,638	\$32,052,237
Invesco Real Estate II	\$43,730	\$0	\$0	\$0	\$3,041	\$46,771
JPMorgan Special Situation Property	\$12,108,023	\$0	\$0	\$0	\$207,250	\$12,315,273
Grosvenor Institutional Partners LP	\$16,646,305	\$0	\$0	\$0	\$277,869	\$16,924,174
IFM Global Infrastructure (US) LP	\$9,172,161	\$0	-\$4,872	-\$4,872	\$546,635	\$9,713,925
JPMorgan IIF ERISA LP	\$8,158,293	\$0	-\$80,367	-\$80,367	\$181,239	\$8,259,165
Invesco Balanced-Risk Allocation	\$27,550,269	\$26,267	-\$2,900,000	-\$2,873,733	\$732,440	\$25,408,976
Mellon EB DV Dynamic Growth	\$16,226,952	\$26,977	\$0	\$26,977	\$470,007	\$16,723,935
Parametric Portfolio Overlay	\$5,034,377	\$0	\$0	\$0	\$154,239	\$5,188,616
US Bank Checking Account	\$186,644	\$234,457	-\$64,745	\$169,712	\$0	\$356,356
US Bank Clearing Account	\$8,068	\$0	\$0	\$0	\$0	\$8,068
Total	\$320,787,221	\$70,794,593	-\$76,370,865	-\$5,576,272	\$12,907,936	\$328,118,885

BlakcRock MSCI ACWI ex US IMI liquidated 7/21/2016. WCM Focused International Growth Fund funded 7/1/22016. Causeway International Value Fund funded 7/27/2016. Brandes International Small Cap II funded 8/1/2016. Loomis Sayles Full Discretion liquidated 3/21/2017. Loomis Sayles Core Plus funded 3/21/2017.



	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	328,118,885	100.0	4.0	4.0	10.0	5.2	7.1	3.6
Total Fund Policy Index			3.8	3.8	8.7	4.5	6.7	4.3
Target Asset Allocation Policy Index			3.8	3.8	9.3	5.8	7.5	5.5
InvestorForce Tft-Hrtly DB \$250mm-\$1B Net Rank			32	32	77	65	76	90
Total Domestic Equity	88,714,957	27.0	5.6	5.6	15.7	9.3	13.0	6.9
Dow Jones U.S. Total Stock Market			5.8	5.8	18.1	9.7	13.1	7.6
eA US All Cap Equity Net Rank			47	47	55	19	25	56
Total International Equity	41,499,218	12.6	9.0	9.0	11.1	0.3	4.4	-0.9
Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)			8.0	8.0	13.0	0.8	4.7	0.6
eA Non-US Diversified Core Eq Net Rank			19	19	46	70	83	99
Total Fixed Income	70,907,215	21.6	2.4	2.4	7.3	3.5	4.2	5.2
Total Fixed Income Benchmark (BBgBarc Aggregate)			0.8	0.8	0.4	2.7	2.3	4.3
eA US Core Plus Fixed Inc Net Rank			4	4	9	25	20	46
Total Real Estate	44,414,280	13.5	1.3	1.3	4.9	10.4	11.6	4.9
NCREIF-ODCE			1.8	1.8	8.3	11.8	12.0	5.6
Total Hedge Funds	16,924,174	5.2	1.7	1.7	8.4	2.4	3.6	
HFRI Fund of Funds Composite Index			2.4	2.4	6.2	1.8	3.2	
Total Infrastructure	17,973,090	5.5	4.2	4.2	5.3	3.5	5.1	
CPI + 5%			2.2	2.2	7.5	6.1	6.3	
Total Multi-Asset	42,132,912	12.8	2.8	2.8	9.5	5.3	5.7	3.4
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3	2.7	4.9	4.0
eA Global Balanced Net Rank			99	99	58	30	57	98
Total Cash & Overlay	5,553,040	1.7	2.8	2.8	0.8	-4.2	-2.3	



Policy Index: 51% MSCI World, 34% BBcBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI Fund of Funds Composite. Target Asset Allocation Policy Index: 24.5% Dow Jones US Total Stock, 12.5% MSCI ACWI ex US IMI, 23% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI FoF Composite, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). Data prior to 3Q 2015 is from previous consultant.



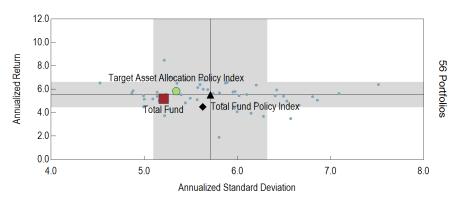
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	Anlzd Standard Deviation	Ann Excess BM Return	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	5.21%	0.70%	1.13%	0.90	0.95	98.31%	86.02%	0.55	1.26%	0.96
Total Fund Policy Index	5.63%	0.00%	0.00%	1.00	1.00	100.00%	100.00%		0.00%	0.77
Target Asset Allocation Policy Index	5.34%	1.34%	1.63%	0.94	0.97	101.99%	80.82%	1.37	0.98%	1.06

### 5 Year

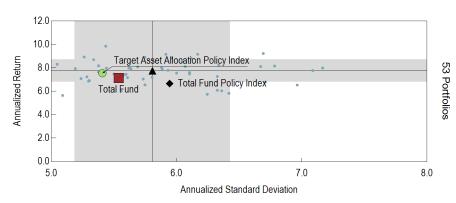
	Anlzd Standard Deviation	Ann Excess BM Return	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio
Total Fund	5.54%	0.46%	1.01%	0.92	0.97	97.49%	88.98%	0.42	1.10%	1.26
Total Fund Policy Index	5.95%	0.00%	0.00%	1.00	1.00	100.00%	100.00%		0.00%	1.10
Target Asset Allocation Policy Index	5.41%	0.88%	1.56%	0.90	0.97	97.11%	81.64%	0.82	1.07%	1.37

### 3 Year



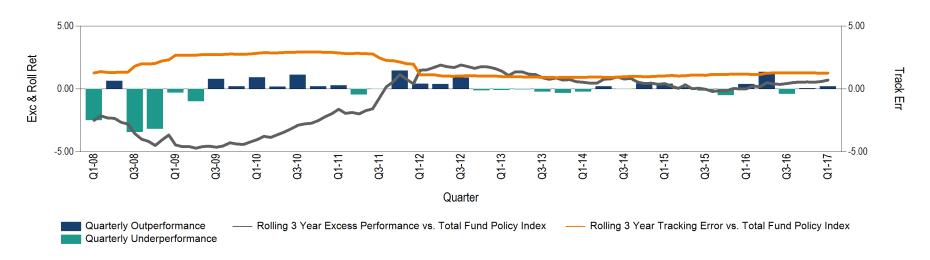
- Total Fund
- ◆ Total Fund Policy Index
- Target Asset Allocation Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvestorForce Tft-Hrtly DB \$250mm-\$1B Net

### 5 Year

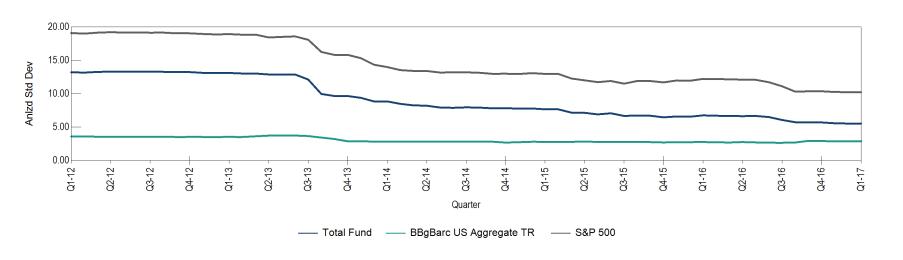


- Total Fund
- ◆ Total Fund Policy Index
- Target Asset Allocation Policy Index
- Universe Median
- 68% Confidence Interval
- InvestorForce Tft-Hrtly DB \$250mm-\$1B Net





**Rolling 5 Year Annualized Standard Deviation** 



	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Fund	328,118,885	100.0	4.0	4.0	10.0	5.2	7.1	3.6	7.2	0.9	5.1	13.5	12.1
Total Fund Policy Index			3.8	3.8	8.7	4.5	6.7	4.3	5.8	1.1	4.7	14.3	10.4
Target Asset Allocation Policy Index			3.8	3.8	9.3	5.8	7.5	5.5	7.2	1.3	7.1	14.6	10.8
InvestorForce Tft-Hrtly DB \$250mm-\$1B Net Rank			32	32	77	65	76	90	69	39	70	79	20
Domestic Equity	88,714,957	27.0											
BlackRock Equity Index NL	44,041,825	13.4	6.1	6.1	17.1	10.4	13.3		11.9	1.3	13.8	32.4	16.0
S&P 500			6.1	6.1	17.2	10.4	13.3		12.0	1.4	13.7	32.4	16.0
eA US Large Cap Core Equity Net Rank			41	41	27	12	15		21	37	33	43	31
INTECH US Managed Volatility LLC	27,633,069	8.4	7.0	7.0	9.4	9.2			5.7	3.2	15.5		
Russell 1000			6.0	6.0	17.4	10.0			12.1	0.9	13.2		
eA US Large Cap Core Equity Net Rank			17	17	95	36			84	18	14		
PanAgora US Small Cap Core Stock Selector	17,040,062	5.2	2.5	2.5	23.1			-	20.3				
Russell 2000			2.5	2.5	26.2				21.3				
eA US Small Cap Core Equity Net Rank			50	50	52				41				
International Equity	41,499,218	12.6											
WCM Focused International Growth Fund, L.P.	21,552,940	6.6	10.6	10.6									
MSCI ACWI ex USA			7.9	7.9									
eA ACWI ex-US All Cap Growth Eq Net Rank			18	18									
Causeway International Value Ins	13,329,406	4.1	7.8	7.8									
MSCI EAFE			7.2	7.2									
Foreign Large Value MStar MF Rank			20	20									
Brandes International Small Cap Equity	6,616,872	2.0	6.4	6.4				-					
S&P Developed Ex-U.S. SmallCap			7.8	7.8									
eA ACWI ex-US Small Cap Equity Net Rank			82	82									
Fixed Income	70,907,215	21.6											
Loomis Sayles Core Plus	70,907,215	21.6						-					
BBgBarc US Aggregate TR													
eA US Core Plus Fixed Inc Net Rank													

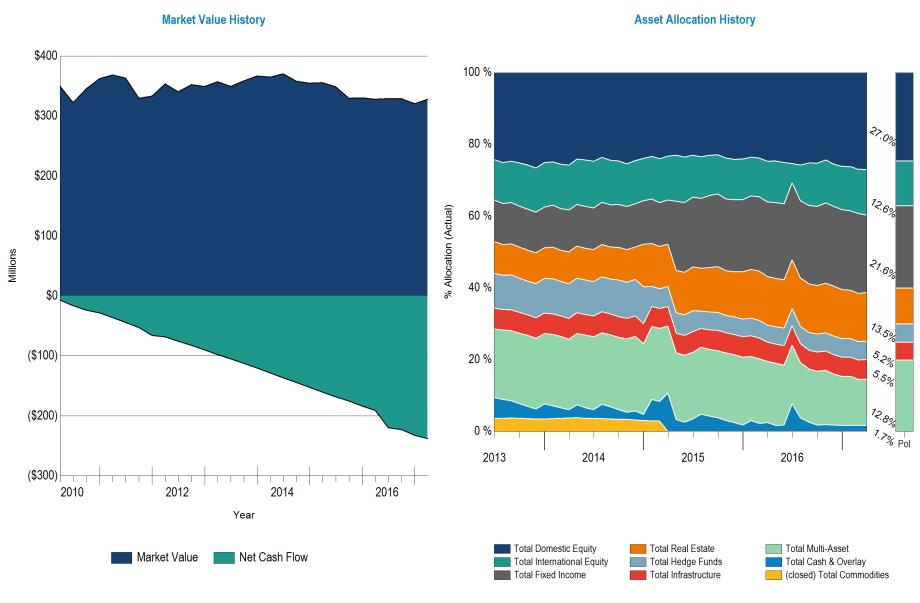
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	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Real Estate	44,414,280	13.5											
ASB Allegiance Real Estate	32,052,237	9.8	1.1	1.1	4.3				4.5				
NCREIF-ODCE			1.8	1.8	8.3				8.8				
Invesco Real Estate II	46,771	0.0	7.0	7.0	4.1	6.9	12.8		1.2	6.1	11.5	23.1	16.2
NCREIF-ODCE			1.8	1.8	8.3	11.8	12.0		8.8	15.0	12.5	13.9	10.9
JPMorgan Special Situation Property	12,315,273	3.8	1.7	1.7	7.7				8.7	18.9			
NCREIF-ODCE			1.8	1.8	8.3				8.8	15.0			
Hedge Funds	16,924,174	5.2											
Grosvenor Institutional Partners LP	16,924,174	5.2	1.7	1.7	8.4	1.8	5.0		2.3	-0.3	3.2	15.0	8.4
HFRI FOF Diversified Index			1.9	1.9	5.4	1.7	3.2		0.4	-0.2	3.4	9.0	4.8
Infrastructure	17,973,090	5.5											
IFM Global Infrastructure (US) LP	9,713,925	3.0	6.0	6.0	9.4	5.4	6.4		6.1	5.1	1.3	6.7	11.4
CPI + 5%			2.2	2.2	7.5	6.1	6.3		7.2	5.8	5.8	6.6	6.8
JPMorgan IIF ERISA LP	8,259,165	2.5	2.2	2.2	1.0	1.6	3.8		1.2	3.4	-1.6	6.8	10.3
CPI + 5%			2.2	2.2	7.5	6.1	6.3		7.2	5.8	5.8	6.6	6.8
Multi-Asset	42,132,912	12.8											
Invesco Balanced-Risk Allocation	25,408,976	7.7	2.6	2.6	12.5	5.1	5.0		12.2	-3.5	6.3	2.3	11.8
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3	2.7	4.9		5.5	-2.6	2.3	11.4	10.3
Citi 3-Month T-bill +6%			1.6	1.6	6.4	6.2	6.1		6.3	6.0	6.0	6.1	6.1
eA Global Balanced Net Rank			99	99	23	32	69		19	74	37	97	49
Mellon EB DV Dynamic Growth	16,723,935	5.1	2.9	2.9	4.9				0.2	3.1			
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3				5.5	-2.6			-
eA Global Balanced Net Rank			99	99	99				99	1			
Cash and Equivalents	5,553,040	1.7											
Parametric Portfolio Overlay	5,188,616	1.6											
US Bank Checking Account	356,356	0.1											
US Bank Clearing Account	8,068	0.0											

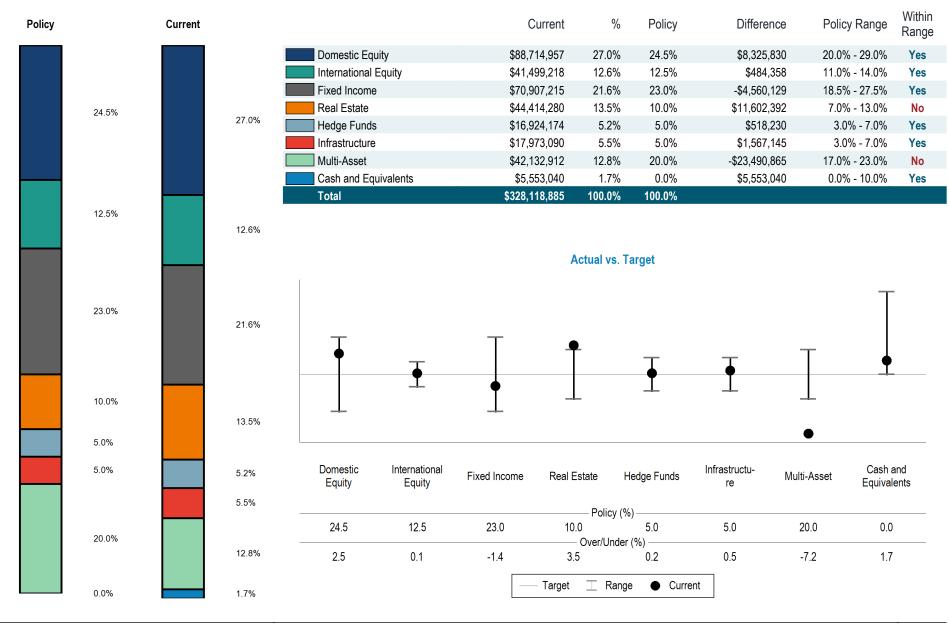
Policy Index: 51% MSCI World, 34% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI Fund of Funds Composite. Target Asset Allocation Policy Index: 24.5% Dow Jones US Total Stock, 12.5% MSCI ACWI ex US IMI, 23% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI For Composite, 5% CPI + 5%, and 20% (60% MSCI ACWI Net/40% CITI WGBI). BlackRock MSCI ACWI ex US IMI terminated 7/21/2016. WCM Focused International Growth Fund funded 7/1/2016. Causeway International Value Fund funded 7/27/2016. Brandes International Small Cap II funded 8/1/2016. Loomis Sayles Core Plus replaced Loomis Sayles Full Discretion 3/21/2017. Data prior to 3Q 2015 is from previous consultant.





Net cash flow is cumulative.





# Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2017

Name	Asset Class	Fee Schedule	Market Value	% of Portfolio	Estimated Fee Value	Estimated Fee
BlackRock Equity Index NL	Domestic Equity	0.03% of Assets	\$44,041,825	13.4%	\$13,213	0.03%
INTECH US Managed Volatility LLC	Domestic Equity	0.47% of First \$50.0 Mil, 0.44% of Next \$50.0 Mil, 0.40% of Next \$100.0 Mil, 0.36% Thereafter	\$27,633,069	8.4%	\$129,875	0.47%
PanAgora US Small Cap Core Stock Selector	Domestic Equity	0.85% of Assets	\$17,040,062	5.2%	\$144,841	0.85%
WCM Focused International Growth Fund, L.P.	International Equity	0.75% of Assets	\$21,552,940	6.6%	\$161,647	0.75%
Causeway International Value Ins	International Equity	0.91% of Assets	\$13,329,406	4.1%	\$121,298	0.91%
Brandes International Small Cap Equity	International Equity	0.90% of Assets	\$6,616,872	2.0%	\$59,552	0.90%
Loomis Sayles Core Plus	Fixed Income	0.35% of First \$20.0 Mil, 0.25% Thereafter	\$70,907,215	21.6%	\$197,268	0.28%
ASB Allegiance Real Estate	Real Estate	1.25% of First \$5.0 Mil, 1.00% of Next \$10.0 Mil, 0.90% of Next \$60.0 Mil, 0.75% Thereafter	\$32,052,237	9.8%	\$315,970	0.99%
Invesco Real Estate II	Real Estate	0.67% of Assets	\$46,771	0.0%	\$313	0.67%
JPMorgan Special Situation Property	Real Estate	1.60% of Assets	\$12,315,273	3.8%	\$197,044	1.60%
Grosvenor Institutional Partners LP	Hedge Funds	1.15% of First \$25.0 Mil, 1.00% of Next \$25.0 Mil, 0.80% of Next \$50.0 Mil, 0.60% Thereafter	\$16,924,174	5.2%	\$194,628	1.15%
IFM Global Infrastructure (US) LP	Infrastructure	0.97% of Assets	\$9,713,925	3.0%	\$94,225	0.97%
JPMorgan IIF ERISA LP	Infrastructure	1.25% of First \$50.0 Mil, 1.15% of Next \$50.0 Mil, 1.05% Thereafter	\$8,259,165	2.5%	\$103,240	1.25%
Invesco Balanced-Risk Allocation	Multi-Asset	0.40% of First \$100.0 Mil, 0.35% Thereafter	\$25,408,976	7.7%	\$101,636	0.40%
Mellon EB DV Dynamic Growth	Multi-Asset	0.65% of First \$100.0 Mil, 0.55% of Next \$100.0 Mil, 0.50% Thereafter	\$16,723,935	5.1%	\$108,706	0.65%
Parametric Portfolio Overlay	Cash and Equivalents	0.20% of First \$25.0 Mil, 0.10% of Next \$75.0 Mil, 0.05% Thereafter	\$5,188,616	1.6%	\$10,377	0.20%
US Bank Checking Account	Cash and Equivalents		\$356,356	0.1%		
US Bank Clearing Account	Cash and Equivalents		\$8,068	0.0%		
Total			\$328,118,885	100.0%	\$1,953,832	0.60%



# Total Fund Watch List (Net of Fees)

# Period Ending: March 31, 2017

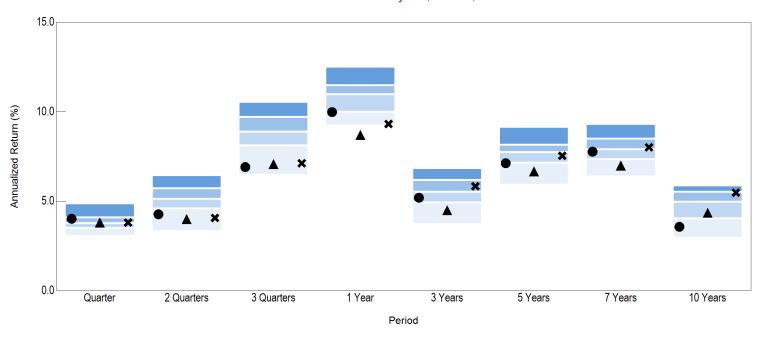
Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
BlackRock Equity Index NL	Domestic Equity	No Issues						$\checkmark$
INTECH US Managed Volatility LLC	Domestic Equity	No Issues	R	$\checkmark$			$\checkmark$	
PanAgora US Small Cap Core Stock Selector	Domestic Equity	No Issues					$\checkmark$	
WCM Focused International Growth Fund, L.P.	International Equity	No Issues					$\checkmark$	
Causeway International Value Ins	International Equity	No Issues					$\checkmark$	
Brandes International Small Cap Equity	International Equity	No Issues					R	
Loomis Sayles Core Plus	Fixed Income	No Issues					$\checkmark$	
ASB Allegiance Real Estate	Real Estate	No Issues					$\checkmark$	
Invesco Real Estate II	Real Estate	No Issues	R		$\checkmark$		$\checkmark$	
JPMorgan Special Situation Property	Real Estate	No Issues					R	
Grosvenor Institutional Partners LP	Hedge Funds	No Issues	$\checkmark$		$\checkmark$		$\checkmark$	
IFM Global Infrastructure (US) LP	Infrastructure	No Issues	R		$\checkmark$		$\checkmark$	
JPMorgan IIF ERISA LP	Infrastructure	No Issues	R		R		$\checkmark$	
Invesco Balanced-Risk Allocation	Multi-Asset	No Issues	$\checkmark$	$\checkmark$	$\checkmark$	R	$\checkmark$	
Mellon EB DV Dynamic Growth	Multi-Asset	No Issues					$\checkmark$	

- Rule 1 Manager has underperformed the benchmark index for the three year period.
- Rule 2 Manager has underperformed the 50th percentile in the appropriate style universe for the three year period.
- Rule 3 Manager has underperformed the benchmark index for the five year period.
- Rule 4 Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.
- Rule 5 Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.
- Rule 6 Index Fund Tracking Error exceeds 0.25% of the appropriate benchmark over the one year period.

Brandes: Making mid and back office cuts. They were discrete about profitability, but seem to be prepared to trim their non-investment personnel. JPMorgan Special Situation Property: Transitioning current PM Doug Schwartz to Deputy CIO and promoted Craig Their to PM.

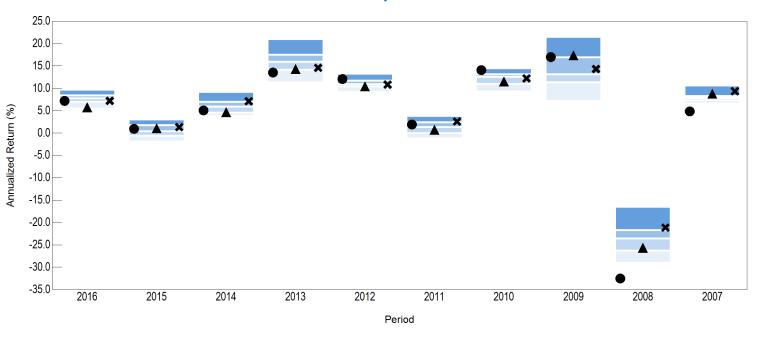


### Total Fund Cumulative Performance vs. InvestorForce Tft-Hrtly DB \$250mm-\$1B Net



		Return (Rai	ık)														
5tl	h Percentile	4.9		6.5		10.5		12.5		6.8		9.1		9.3		5.9	
25	th Percentile	4.1		5.7		9.7		11.5		6.2		8.2		8.5		5.5	
Me	edian	3.8		5.1		8.9		11.0		5.5		7.8		7.9		5.0	
75	th Percentile	3.5		4.6		8.1		10.0		4.9		7.2		7.4		4.0	
95	th Percentile	3.1		3.3		6.5		9.2		3.7		5.9		6.4		3.0	
# 0	of Portfolios	59		59		58		57		56		53		52		44	
•	Total Fund	4.0	(32)	4.3	(85)	6.9	(94)	10.0	(77)	5.2	(65)	7.1	(76)	7.8	(58)	3.6	(90)
	Total Fund Policy Index	3.8	(46)	4.0	(90)	7.1	(94)	8.7	(97)	4.5	(86)	6.7	(86)	7.0	(84)	4.3	(67)
×	Target Asset Allocation Policy Index	3.8	(46)	4.1	(89)	7.1	(92)	9.3	(95)	5.8	(34)	7.5	(58)	8.0	(47)	5.5	(29)

### Total Fund Consecutive Periods vs. InvestorForce Tft-Hrtly DB \$250mm-\$1B Net



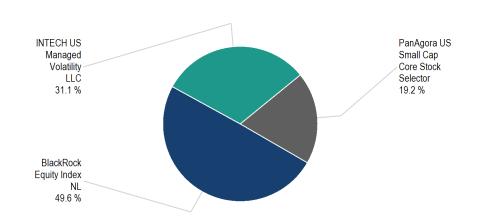
	Return (Rank)									
5th Percentile	9.7	3.0	9.1	21.0	13.2	3.8	14.5	21.5	-16.5	10.6
25th Percentile	8.4	1.8	7.0	17.5	11.8	2.4	13.2	16.9	-21.7	8.3
Median	7.8	0.4	6.0	15.9	11.0	1.4	12.6	13.1	-23.6	7.9
75th Percentile	7.0	-0.6	4.6	14.2	10.4	0.0	11.0	11.4	-26.3	7.4
95th Percentile	5.5	-1.9	3.9	11.4	9.3	-1.1	9.3	7.2	-28.9	6.6
# of Portfolios	56	58	55	49	37	34	32	31	30	27
Total Fund	7.2 (69)	0.9 (39)	5.1 (70)	13.5 (79)	12.1 (20)	1.9 (40)	14.1 (10)	17.0 (25)	-32.5 (99)	4.8 (99)
▲ Total Fund Policy Index	5.8 (93)	1.1 (37)	4.7 (75)	14.3 (70)	10.4 (79)	0.7 (60)	11.5 (66)	17.4 (24)	-25.7 (71)	8.8 (14)
★ Target Asset Allocation Policy Index	7.2 (69)	1.3 (36)	7.1 (21)	14.6 (66)	10.8 (63)	2.6 (20)	12.2 (58)	14.3 (44)	-21.2 (21)	9.4 (11)



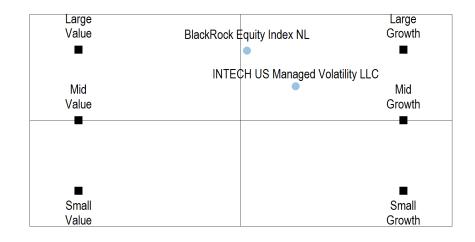


	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Domestic Equity	88,714,957	100.0	5.6	5.6	15.7	9.3	13.0	6.9	11.5	0.7	12.5	33.5	16.7
Dow Jones U.S. Total Stock Market			5.8	5.8	18.1	9.7	13.1	7.6	12.6	0.4	12.5	33.5	16.4
eA US All Cap Equity Net Rank			47	47	55	19	25	56	40	34	20	50	30
Domestic Equity	88,714,957	100.0											
BlackRock Equity Index NL	44,041,825	49.6	6.1	6.1	17.1	10.4	13.3		11.9	1.3	13.8	32.4	16.0
S&P 500			6.1	6.1	17.2	10.4	13.3		12.0	1.4	13.7	32.4	16.0
eA US Large Cap Core Equity Net Rank			41	41	27	12	15		21	37	33	43	31
INTECH US Managed Volatility LLC	27,633,069	31.1	7.0	7.0	9.4	9.2			5.7	3.2	15.5		
Russell 1000			6.0	6.0	17.4	10.0			12.1	0.9	13.2		
eA US Large Cap Core Equity Net Rank			17	17	95	36			84	18	14		
PanAgora US Small Cap Core Stock Selector	17,040,062	19.2	2.5	2.5	23.1				20.3				
Russell 2000			2.5	2.5	26.2				21.3				
eA US Small Cap Core Equity Net Rank			50	50	52				41				

Total Domestic Equity
Current Allocation

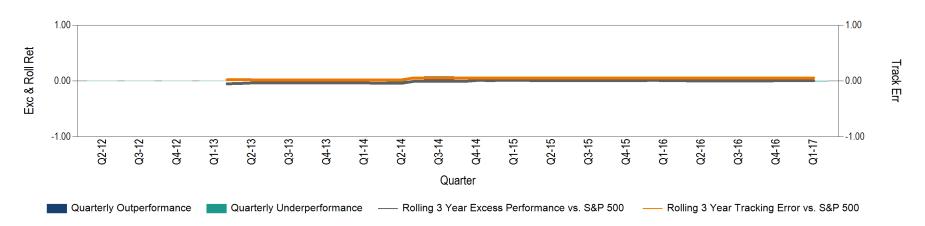


Domestic Effective Style Map 3 Years Ending March 31, 2017



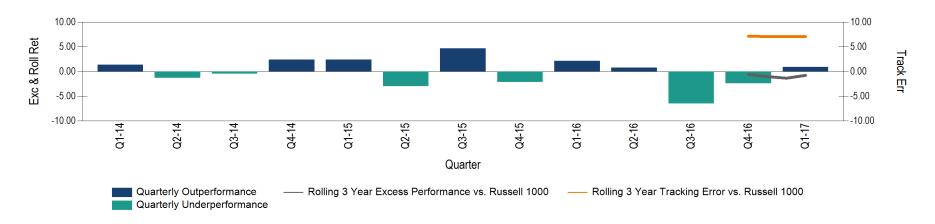
Style map requires 3 years of returns.



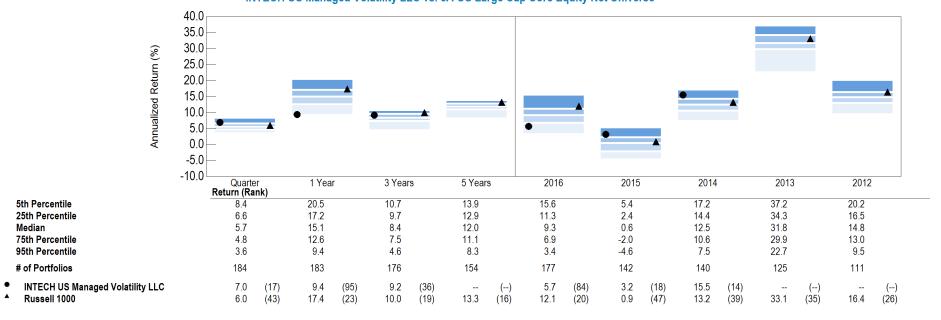


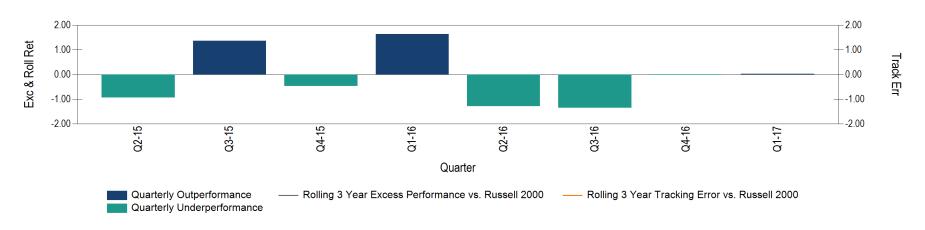
### BlackRock Equity Index NL vs. eA US Large Cap Core Equity Net Universe



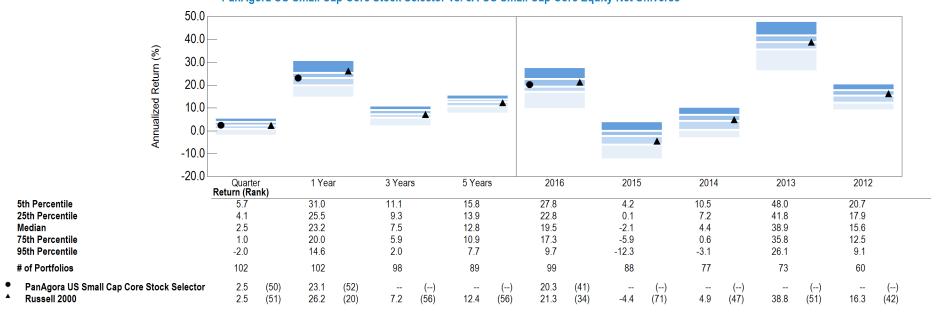


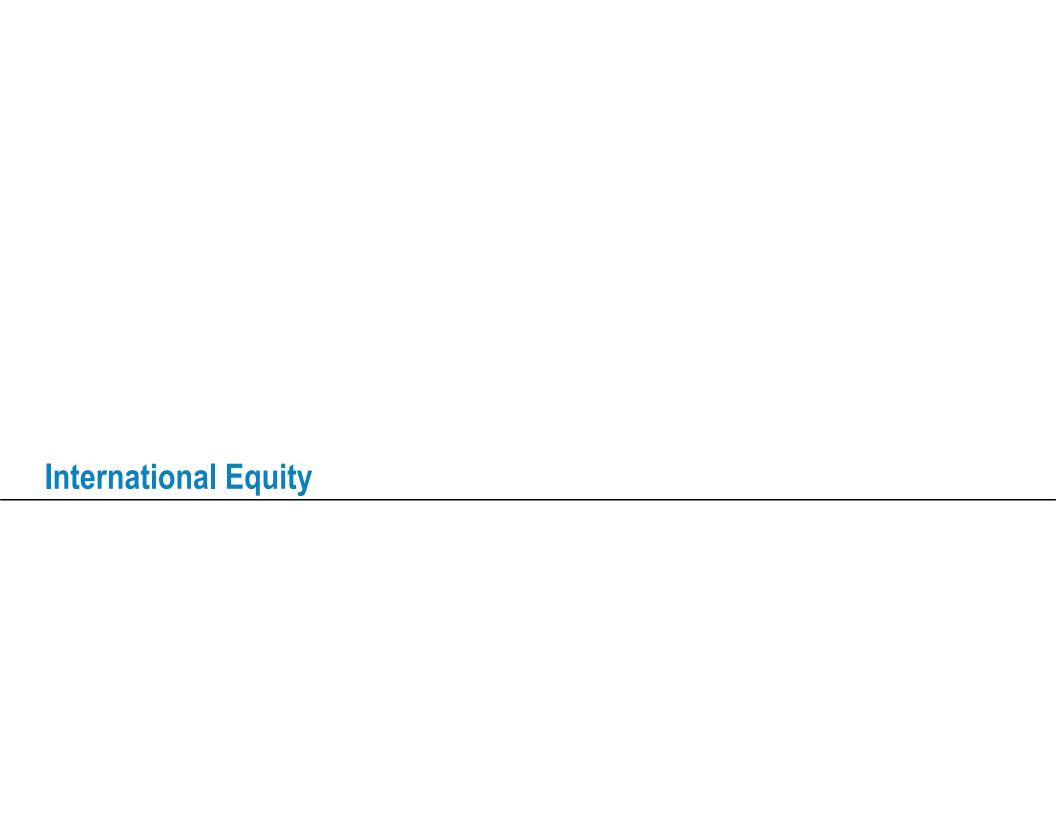
### INTECH US Managed Volatility LLC vs. eA US Large Cap Core Equity Net Universe





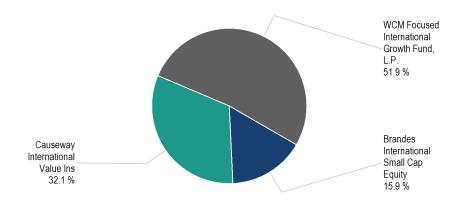
### PanAgora US Small Cap Core Stock Selector vs. eA US Small Cap Core Equity Net Universe





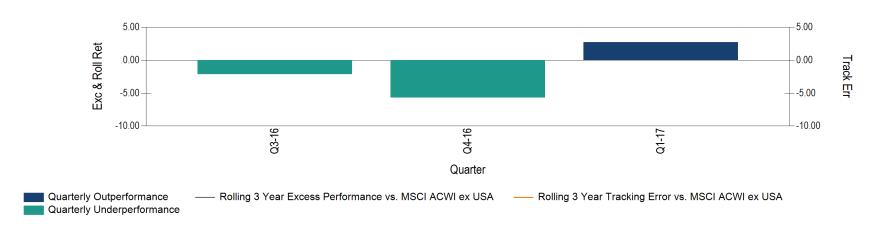
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total International Equity	41,499,218	100.0	9.0	9.0	11.1	0.3	4.4	-0.9	1.7	-4.5	-3.8	16.0	17.1
Total Public Int'l Equity Benchmark (MSCI ACWI ex US IMI)			8.0	8.0	13.0	0.8	4.7	0.6	4.4	-4.6	-3.9	15.8	17.0
eA Non-US Diversified Core Eq Net Rank			19	19	46	70	83	99	32	87	52	89	74
International Equity	41,499,218	100.0											
WCM Focused International Growth Fund, L.P.	21,552,940	51.9	10.6	10.6									
MSCI ACWI ex USA			7.9	7.9									
eA ACWI ex-US All Cap Growth Eq Net Rank			18	18									
Causeway International Value Ins	13,329,406	32.1	7.8	7.8								-	
MSCI EAFE			7.2	7.2									
Foreign Large Value MStar MF Rank			20	20									
Brandes International Small Cap Equity	6,616,872	15.9	6.4	6.4									
S&P Developed Ex-U.S. SmallCap			7.8	7.8									
eA ACWI ex-US Small Cap Equity Net Rank			82	82									

# Total International Equity Current Allocation



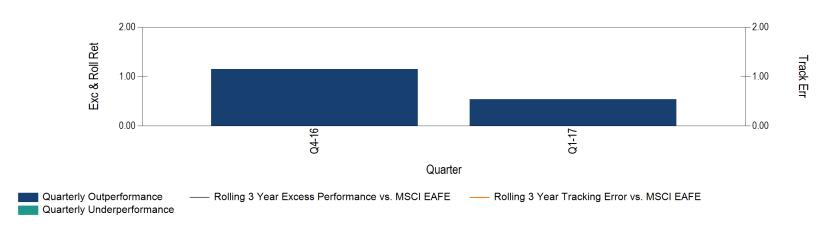
BlackRock MSCI ACWI ex US IMI terminated 7/21/2016. WCM Focused International Growth Fund funded 7/1/2016. Causeway International Value Fund funded 7/27/2016. Brandes International Small Cap II funded 8/1/2016.





### WCM Focused International Growth Fund, L.P. vs. eA ACWI ex-US All Cap Growth Eq Net Universe





### Causeway International Value Ins vs. Foreign Large Value MStar MF Universe



5th Percentile

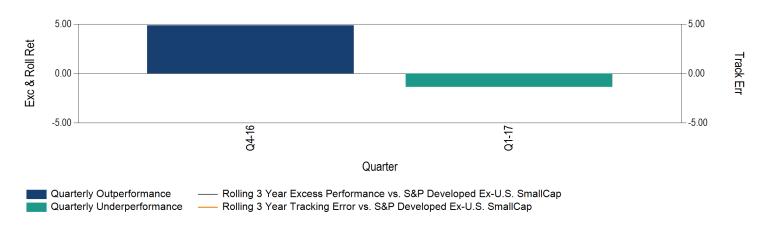
25th Percentile

95th Percentile

# of Portfolios

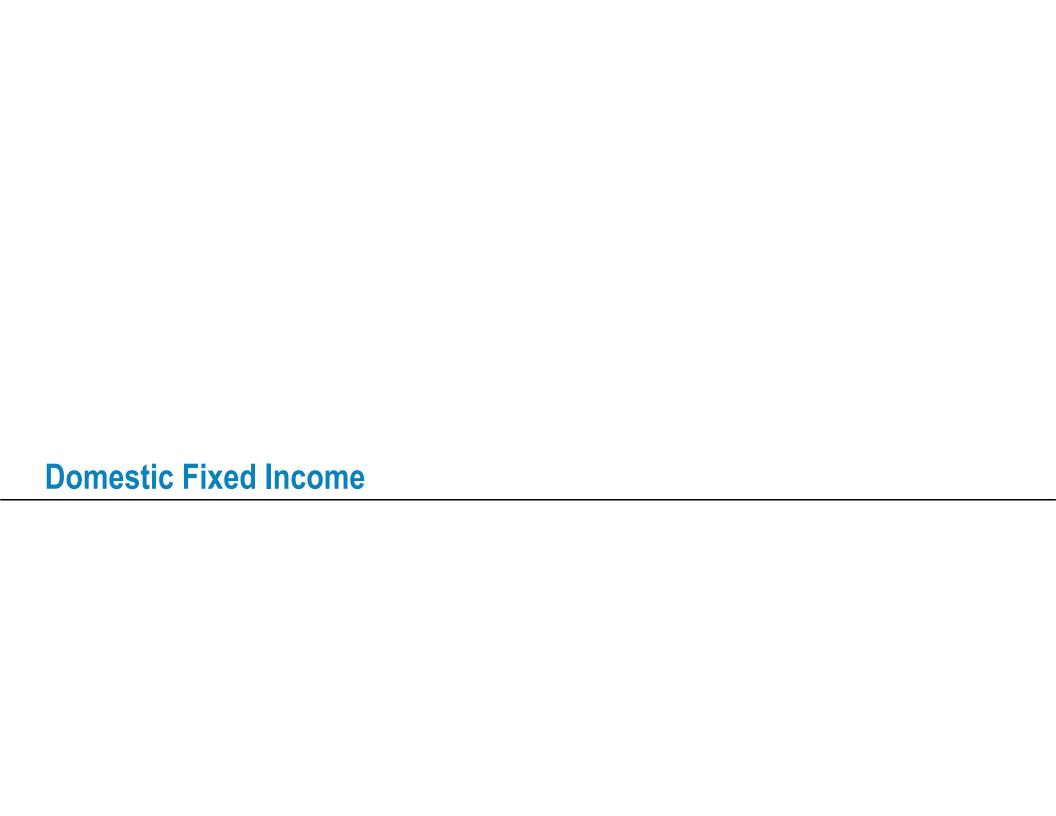
MSCI EAFE

Median 75th Percentile



### Brandes International Small Cap Equity vs. eA ACWI ex-US Small Cap Equity Net Universe





	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Fixed Income	70,907,215	100.0	2.4	2.4	7.3	3.5	4.2	5.2	7.5	-2.1	5.9	0.2	10.5
Total Fixed Income Benchmark (BBgBarc Aggregate)			0.8	0.8	0.4	2.7	2.3	4.3	2.6	0.5	6.0	-2.0	4.2
eA US Core Plus Fixed Inc Net Rank			4	4	9	25	20	46	14	93	37	27	20
Fixed Income	70,907,215	100.0											
Loomis Sayles Core Plus	70,907,215	100.0											
BBgBarc US Aggregate TR													-
eA US Core Plus Fixed Inc Net Rank													

Fixed Income Style Map 3 Years Ending March 31, 2017



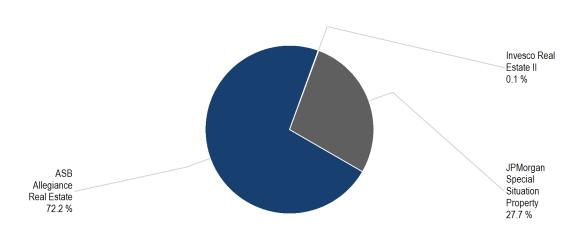
Loomis Sayles Core Plus replaced Loomis Sayles Full Discretion 3/21/2017.





	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Real Estate	44,414,280	100.0	1.3	1.3	4.9	10.4	11.6	4.9	5.4	16.9	11.2	14.1	11.6
NCREIF-ODCE			1.8	1.8	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
Real Estate	44,414,280	100.0											
ASB Allegiance Real Estate	32,052,237	72.2	1.1	1.1	4.3				4.5				
NCREIF-ODCE			1.8	1.8	8.3				8.8				-
Invesco Real Estate II	46,771	0.1	7.0	7.0	4.1	6.9	12.8		1.2	6.1	11.5	23.1	16.2
NCREIF-ODCE			1.8	1.8	8.3	11.8	12.0		8.8	15.0	12.5	13.9	10.9
JPMorgan Special Situation Property	12,315,273	27.7	1.7	1.7	7.7			-	8.7	18.9			
NCREIF-ODCE			1.8	1.8	8.3				8.8	15.0			

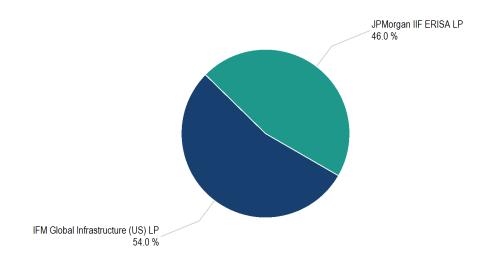
# Total Real Estate Current Allocation



	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Hedge Funds	16,924,174	100.0	1.7	1.7	8.4	2.4	3.6		2.3	-0.3	3.9	7.7	5.9
HFRI Fund of Funds Composite Index			2.4	2.4	6.2	1.8	3.2		0.5	-0.3	3.4	9.0	4.8
Hedge Funds	16,924,174	100.0											
Grosvenor Institutional Partners LP	16,924,174	100.0	1.7	1.7	8.4	1.8	5.0		2.3	-0.3	3.2	15.0	8.4
HERI FOE Diversified Index			19	19	5.4	17	32		0.4	-0.2	34	9.0	4.8

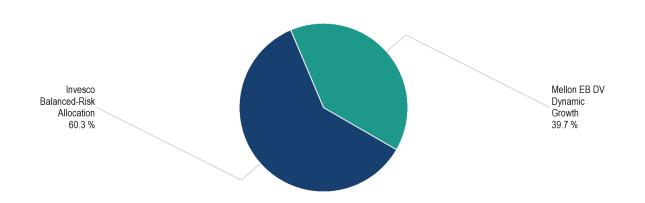
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Infrastructure	17,973,090	100.0	4.2	4.2	5.3	3.5	5.1		3.8	4.2	-0.3	6.7	11.0
CPI + 5%			2.2	2.2	7.5	6.1	6.3		7.2	5.8	5.8	6.6	6.8
Infrastructure	17,973,090	100.0											
IFM Global Infrastructure (US) LP	9,713,925	54.0	6.0	6.0	9.4	5.4	6.4		6.1	5.1	1.3	6.7	11.4
CPI + 5%			2.2	2.2	7.5	6.1	6.3		7.2	5.8	5.8	6.6	6.8
JPMorgan IIF ERISA LP	8,259,165	46.0	2.2	2.2	1.0	1.6	3.8		1.2	3.4	-1.6	6.8	10.3
CPI + 5%			2.2	2.2	7.5	6.1	6.3		7.2	5.8	5.8	6.6	6.8

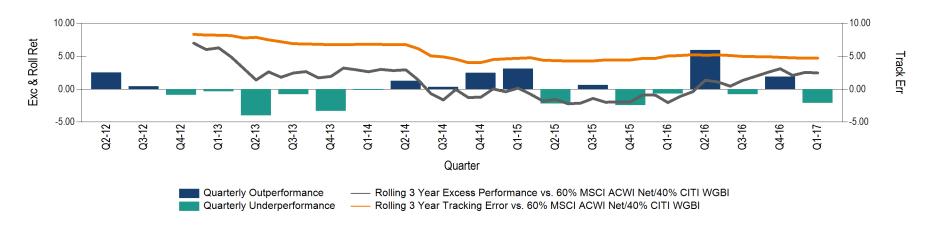
### Total Infrastructure Current Allocation



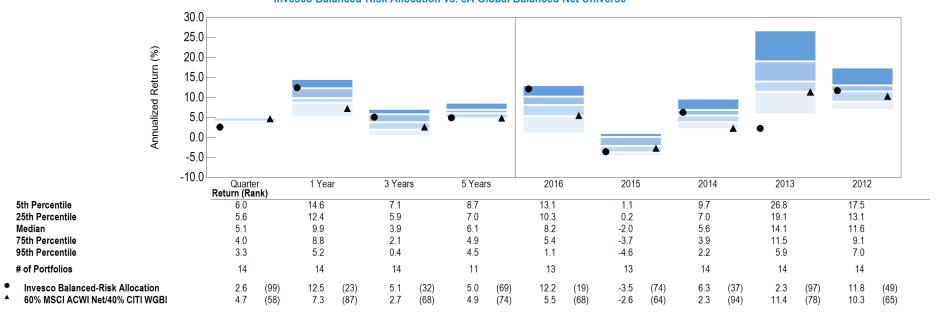
	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Multi-Asset	42,132,912	100.0	2.8	2.8	9.5	5.3	5.7	3.4	7.1	-1.0	6.7	7.9	11.1
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3	2.7	4.9	4.0	5.5	-2.6	2.3	11.4	10.3
eA Global Balanced Net Rank			99	99	58	30	57	98	55	38	31	94	54
Multi-Asset	42,132,912	100.0											
Invesco Balanced-Risk Allocation	25,408,976	60.3	2.6	2.6	12.5	5.1	5.0		12.2	-3.5	6.3	2.3	11.8
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3	2.7	4.9		5.5	-2.6	2.3	11.4	10.3
Citi 3-Month T-bill +6%			1.6	1.6	6.4	6.2	6.1		6.3	6.0	6.0	6.1	6.1
eA Global Balanced Net Rank			99	99	23	32	69		19	74	37	97	49
Mellon EB DV Dynamic Growth	16,723,935	39.7	2.9	2.9	4.9				0.2	3.1			
60% MSCI ACWI Net/40% CITI WGBI			4.7	4.7	7.3				5.5	-2.6			
eA Global Balanced Net Rank			99	99	99				99	1			

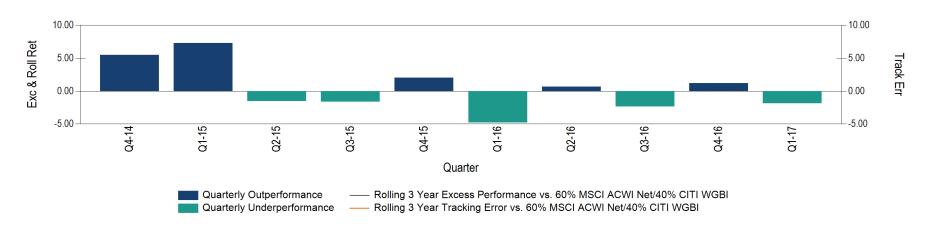
### Total Multi-Asset Current Allocation



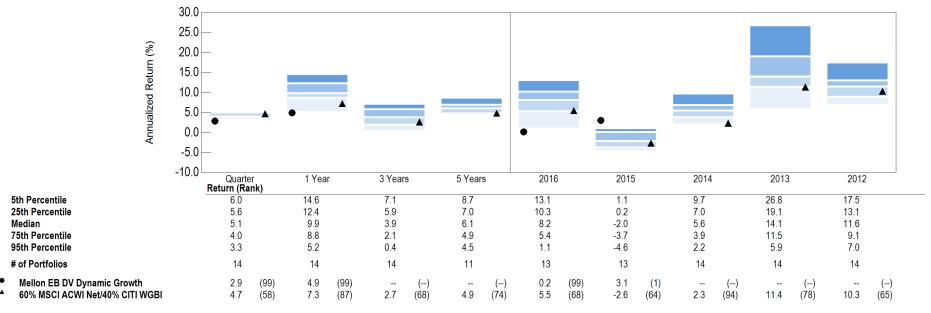


### Invesco Balanced-Risk Allocation vs. eA Global Balanced Net Universe





### Mellon EB DV Dynamic Growth vs. eA Global Balanced Net Universe



### Performance Return Calculations

Performance is calculated using Modified Dietz and for time periods with large cash flow (generally greater than 10% of portfolio value), Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

#### Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

### Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Manager Line Up					
<u>Manager</u>	Fund Incepted	Data Source	<u>Manager</u>	Fund Incepted	Data Source
BlackRock Equity Index NL	04/30/2010	BlackRock	JPMorgan SSP	12/31/2014	JP Morgan
INTECH US Managed Volatility	12/31/2013	INTECH	Grosvenor Instl Partners LP	10/31/2009	Grosvenor
PanAgora US Small Cap	01/31/2015	PanAgora	IFM Global Infrastructure (US) LP	01/31/2009	IFM
WCM Focused International Growth	07/01/2016	WCM	JPMorgan IIF ERISA LP	09/30/2010	JP Morgan
Causeway International Value	07/27/2016	US Bank	Invesco Balanced-Risk Allocation	01/31/2010	Invesco
Brandes International Small Cap II	08/01/2016	Brandes	Mellon EB DV Dynamic Growth	07/31/2014	Mellon Capital
Loomis Sayles Core Plus	03/21/2017	Loomis Sayles	Parametric Portfolio Overlay	10/31/2010	Parametric
ASB Allegiance Real Estate	03/31/2015	ASB	US Bank Checking Account	N/A	US Bank
Invesco Real Estate II	06/30/2008	Invesco	US Bank Clearing Account	N/A	US Bank

### Policy & Custom Index Composition

Policy Index: 51% MSCI World, 34% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI Fund of Funds Composite.

Target Asset Allocation Policy: 24.5% Dow Jones US Total Stock, 12.5% MSCI ACWI ex US IMI, 23% BBgBarc Aggregate, 10% NCREIF-ODCE, 5% HFRI FoF

Composite, 5% CPI + 5%, and 20% (60%MSCI ACWI Net/40% CITI WGBI).



# Glossary

Allocation Effect: An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

Alpha: The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - Risk-free Rate)].

**Beachmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager. **Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios. Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

Correlation: A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

Excess Return: A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

Information Ratio: A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

Selection Effect: An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as: Portfolio Excess Return / Portfolio Standard Deviation.

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

Style Analysis: A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

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