

Fresno County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2017



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

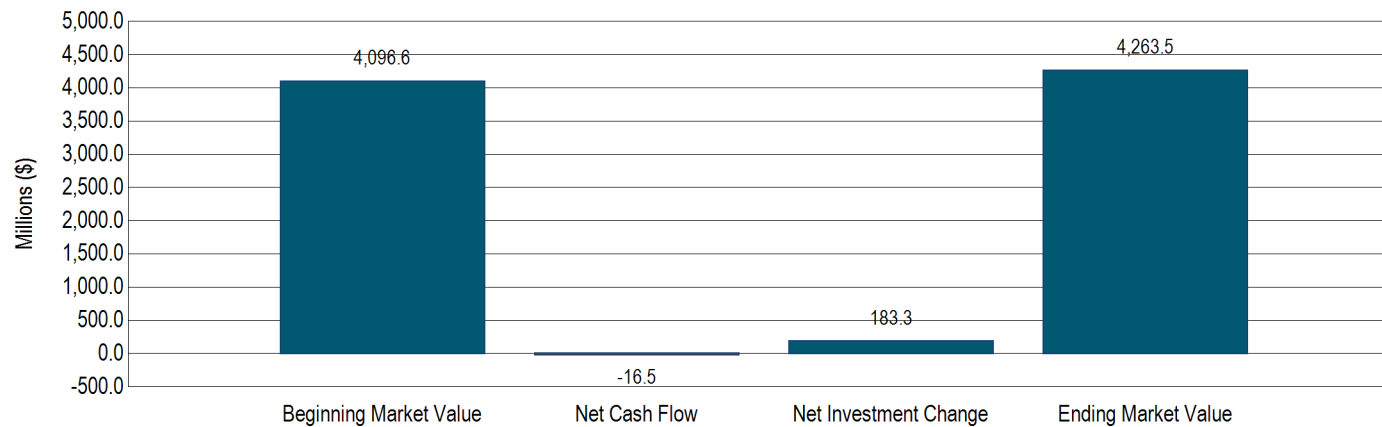
Total Fund Portfolio Reconciliation

Period Ending: March 31, 2017

Portfolio Reconciliation

	Last Three Months	Year-To-Date
Beginning Market Value	\$4,096,637,337	\$4,096,637,337
Net Cash Flow	-\$16,508,573	-\$16,508,573
Net Investment Change	\$183,349,499	\$183,349,499
Ending Market Value	\$4,263,478,263	\$4,263,478,263

Change in Market Value Last Three Months

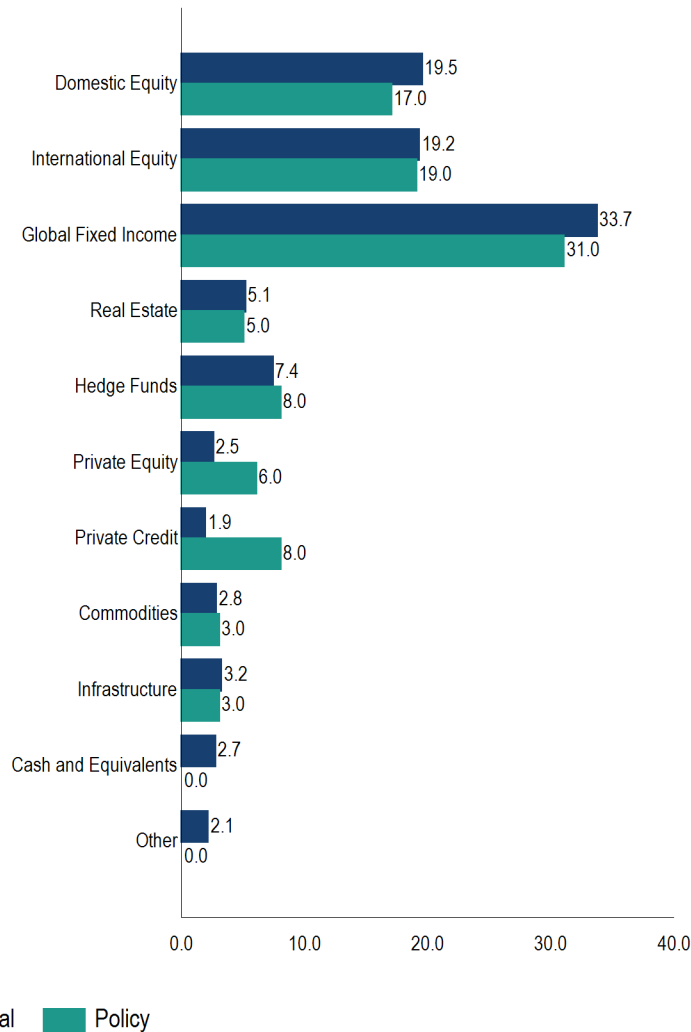


Contributions and withdrawals may include intra-account transfers between managers/funds.

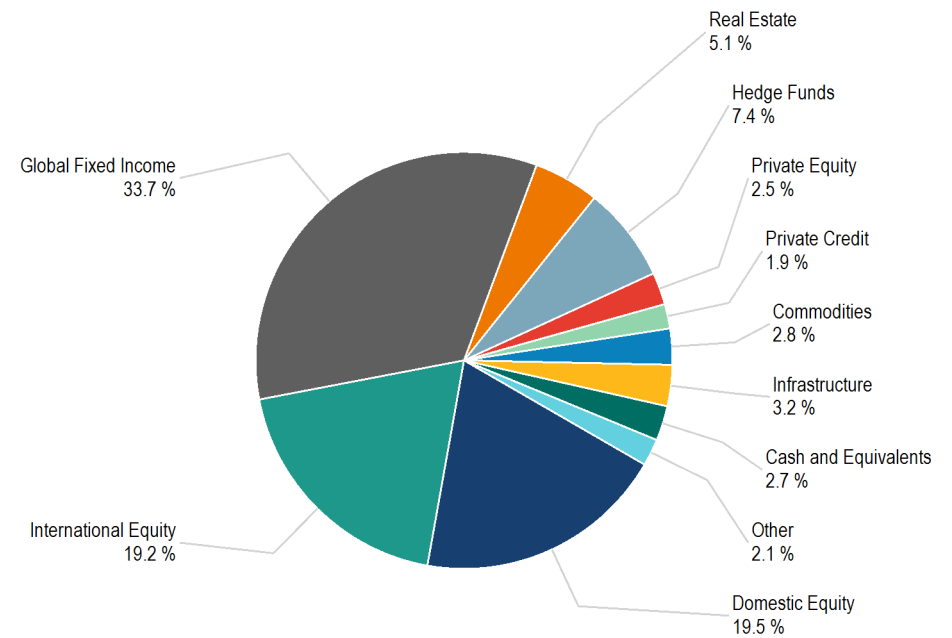
Total Fund Asset Allocation

Period Ending: March 31, 2017

Actual vs Target Allocation (%)



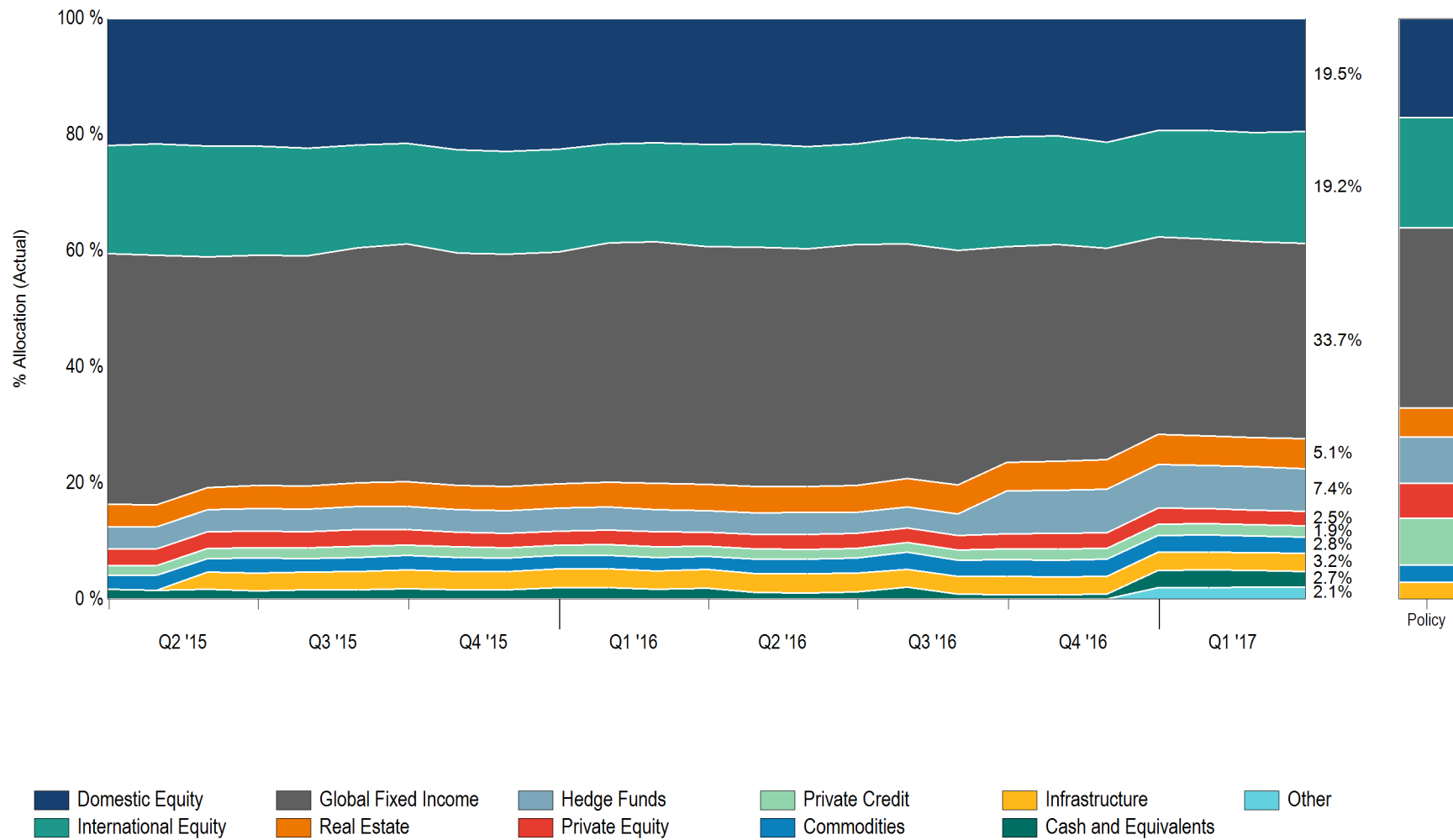
Current Allocation



Other consists of cash held for the overlay program.

Total Fund Asset Allocation History

Period Ending: March 31, 2017



Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Fund	4,263,478,263	100.0	4.4	7.4	9.3	3.4	6.4	5.1	6.7	-2.5	3.5	16.3	13.1
<i>Policy Index</i>			3.8	5.0	7.5	3.1	6.1	4.3	6.5	-1.7	2.6	15.6	12.3
Total Domestic Equity	830,221,434	19.5	5.2	15.6	16.3	8.1	12.1	--	8.9	1.5	9.8	36.8	15.8
<i>Russell 3000</i>			5.7	15.0	18.1	9.8	13.2	--	12.7	0.5	12.6	33.6	16.4
Total International Equity	820,360,817	19.2	9.2	10.9	10.6	0.2	5.1	--	3.0	-7.5	-2.5	18.7	19.0
<i>MSCI ACWI ex USA Gross</i>			8.0	14.2	13.7	1.0	4.8	--	5.0	-5.3	-3.4	15.8	17.4
Total Fixed Income	1,435,326,833	33.7	3.0	2.2	4.9	2.4	3.1	--	6.7	-4.5	5.0	-1.1	9.6
<i>BBgBarc Global Aggregate*</i>			1.8	-4.7	-1.9	-0.4	0.5	--	2.1	-3.2	0.0	-2.0	4.2
Total Real Estate	218,506,470	5.1	2.1	6.3	9.6	11.6	10.8	--	8.5	13.9	12.1	11.8	8.0
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	11.8	12.0	--	8.8	15.0	12.5	13.9	10.9
Total Infrastructure	135,644,748	3.2	5.8	7.3	9.2	--	--	--	6.1	--	--	--	--
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	--	--	--	8.8	--	--	--	--
Total Hedge Funds	314,222,350	7.4	1.6	7.4	9.0	2.1	3.3	1.9	3.0	0.0	3.1	7.8	2.2
<i>HFRI Fund of Funds Composite Index</i>			2.4	5.6	6.2	1.8	3.2	1.2	0.5	-0.3	3.4	9.0	4.8
Total Commodities	118,040,819	2.8	-0.3	-2.7	11.2	-8.4	-6.1	--	13.8	-12.8	-16.9	-9.4	-0.9
<i>Bloomberg Commodity Index TR USD</i>			-2.3	-3.6	8.7	-13.9	-9.5	--	11.8	-24.7	-17.0	-9.5	-1.1
Total Private Equity	107,346,992	2.5	2.7	9.4	9.5	6.0	--	--	9.6	3.8	4.8	--	--
<i>Russell 3000 + 2.5%</i>			6.4	17.2	21.0	12.5	--	--	15.5	3.0	15.3	--	--
Total Private Credit	80,266,186	1.9	1.4	5.8	7.8	3.1	--	--	7.4	-2.5	6.8	--	--
<i>BBgBarc US Aggregate Index + 250 bps</i>			1.4	0.1	3.0	5.2	--	--	5.2	3.1	8.6	--	--
Total Cash	114,291,089	2.7	0.1	0.2	0.2	0.2	0.2	--	0.2	0.1	0.1	0.4	0.1
<i>91 Day T-Bills</i>			0.1	0.3	0.4	0.2	0.1	--	0.3	0.0	0.0	0.0	0.1

Policy Index (effective 3/19/2014 Q2 floating policy until rebalance is complete, weights shown are as of 3/31/2017. See Data Sources and Methodology for monthly policy breakout): 20.6% Russell 3000 Index, 37.5% BBgBarc Global Aggregate Index, 19% MSCI ACWI ex US, 2.5% Russell 3000 Index + 250 BP, 1.9% BBgBarc Agg + 250 BP, 7.5% HFRI FoF Composite, 8% NCREIF ODCE, & 3% Bloomberg Commodity Index. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index.

Total Fund

Executive Summary (Gross of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012
Total Fund	4,263,478,263	100.0	4.5	7.6	9.7	3.7	6.8	5.4	7.2	-2.1	3.8	16.6	13.5
<i>Policy Index</i>			3.8	5.0	7.5	3.1	6.1	4.3	6.5	-1.7	2.6	15.6	12.3
Total Domestic Equity	830,221,434	19.5	5.2	15.7	16.5	8.3	12.4	7.5	9.1	1.8	10.1	37.2	16.1
<i>Russell 3000</i>			5.7	15.0	18.1	9.8	13.2	7.5	12.7	0.5	12.6	33.6	16.4
Total International Equity	820,360,817	19.2	9.3	11.3	11.1	0.6	5.6	3.0	3.5	-7.1	-2.1	19.3	19.5
<i>MSCI ACWI ex USA Gross</i>			8.0	14.2	13.7	1.0	4.8	1.8	5.0	-5.3	-3.4	15.8	17.4
Total Fixed Income	1,435,326,833	33.7	3.1	2.5	5.2	2.7	3.3	--	7.0	-4.2	5.1	-0.9	9.9
<i>BBgBarc Global Aggregate*</i>			1.8	-4.7	-1.9	-0.4	0.5	--	2.1	-3.2	0.0	-2.0	4.2
Total Real Estate	218,506,470	5.1	2.1	6.8	10.4	12.6	11.6	5.1	9.9	14.8	12.9	12.4	8.5
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	11.8	12.0	5.6	8.8	15.0	12.5	13.9	10.9
Total Infrastructure	135,644,748	3.2	5.8	7.8	10.0	--	--	--	7.2	--	--	--	--
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	--	--	--	8.8	--	--	--	--
Total Hedge Funds	314,222,350	7.4	1.6	7.7	9.6	2.8	4.2	--	3.8	0.9	4.2	9.0	3.5
<i>HFRI Fund of Funds Composite Index</i>			2.4	5.6	6.2	1.8	3.2	--	0.5	-0.3	3.4	9.0	4.8
Total Commodities	118,040,819	2.8	-0.3	-2.6	11.6	-8.0	-5.7	--	14.4	-12.3	-16.7	-9.0	-0.6
<i>Bloomberg Commodity Index TR USD</i>			-2.3	-3.6	8.7	-13.9	-9.5	--	11.8	-24.7	-17.0	-9.5	-1.1
Total Private Equity	107,346,992	2.5	2.7	10.2	10.6	6.4	--	--	10.7	3.9	4.8	--	--
<i>Russell 3000 + 2.5%</i>			6.4	17.2	21.0	12.5	--	--	15.5	3.0	15.3	--	--
Total Private Credit	80,266,186	1.9	1.4	6.6	8.8	3.9	--	--	8.8	-1.4	7.1	--	--
<i>BBgBarc US Aggregate Index + 250 bps</i>			1.4	0.1	3.0	5.2	--	--	5.2	3.1	8.6	--	--
Total Cash	114,291,089	2.7	0.1	0.2	0.2	0.2	0.2	1.1	0.2	0.1	0.1	0.4	0.1
<i>91 Day T-Bills</i>			0.1	0.3	0.4	0.2	0.1	0.5	0.3	0.0	0.0	0.0	0.1

Policy Index (effective 3/19/2014 Q2 floating policy until rebalance is complete, weights shown are as of 3/31/2017. See Data Sources and Methodology for monthly policy breakout): 20.6% Russell 3000 Index, 37.5% BBgBarc Global Aggregate Index, 19% MSCI ACWI ex US, 2.5% Russell 3000 Index + 250 BP, 1.9% BBgBarc Agg + 250 BP, 7.5% HFRI FoF Composite, 8% NCREIF ODCE, & 3% Bloomberg Commodity Index. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

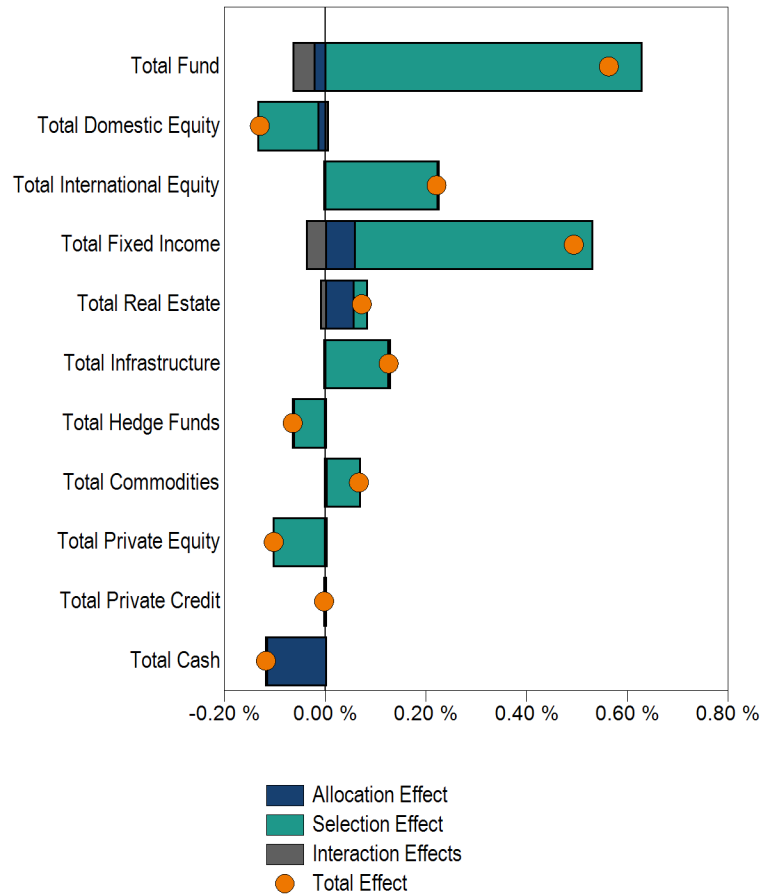
*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index.

Total Fund

Attribution Analysis - Asset Class Level (Net of Fees)

Period Ending: March 31, 2017

Attribution Effects
Ending March 31, 2017



Performance Attribution

	Quarter	1 Yr
Wtd. Actual Return	4.28%	9.12%
Wtd. Index Return *	3.84%	7.61%
Excess Return	0.44%	1.51%
Selection Effect	0.63%	2.04%
Allocation Effect	-0.02%	-0.24%
Interaction Effect	-0.04%	-0.13%

*Calculated from benchmark returns and weightings of each component.

Attribution Summary
Last Three Months

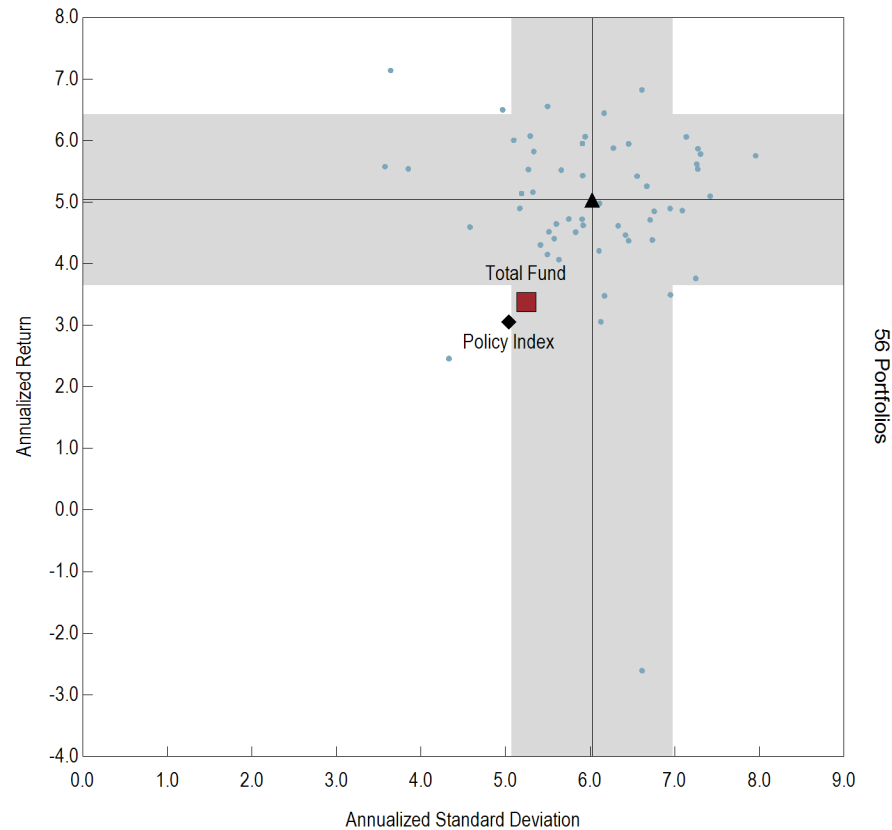
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	5.16%	5.74%	-0.58%	-0.12%	-0.01%	0.00%	-0.13%
Total International Equity	9.18%	7.98%	1.20%	0.22%	0.00%	0.00%	0.22%
Total Fixed Income	3.00%	1.76%	1.24%	0.47%	0.06%	-0.04%	0.49%
Total Real Estate	2.07%	1.77%	0.30%	0.02%	0.06%	-0.01%	0.07%
Total Infrastructure	5.76%	1.77%	3.99%	0.13%	0.00%	0.00%	0.13%
Total Hedge Funds	1.57%	2.38%	-0.81%	-0.06%	0.00%	0.00%	-0.06%
Total Commodities	-0.28%	-2.33%	2.04%	0.07%	0.00%	0.00%	0.07%
Total Private Equity	2.73%	6.39%	-3.66%	-0.10%	0.00%	0.00%	-0.10%
Total Private Credit	1.42%	1.44%	-0.02%	0.00%	0.00%	0.00%	0.00%
Total Cash	0.09%	0.14%	-0.06%	0.00%	-0.12%	0.00%	-0.12%
Total	4.28%	3.84%	0.44%	0.63%	-0.02%	-0.04%	0.56%

Total Fund attribution return is calculated based on the underlying composite returns and beginning of period portfolio weights, the effects of transactions during the period are not reflected in the return. The Total Fund attribution portfolio return will vary from the actual Total Fund return. The Policy Index attribution return is calculated based on the primary benchmarks for the underlying composites used in the attribution analysis and their respective beginning of month target weights. Weighted index returns shown in attribution analysis may differ from actual returns.

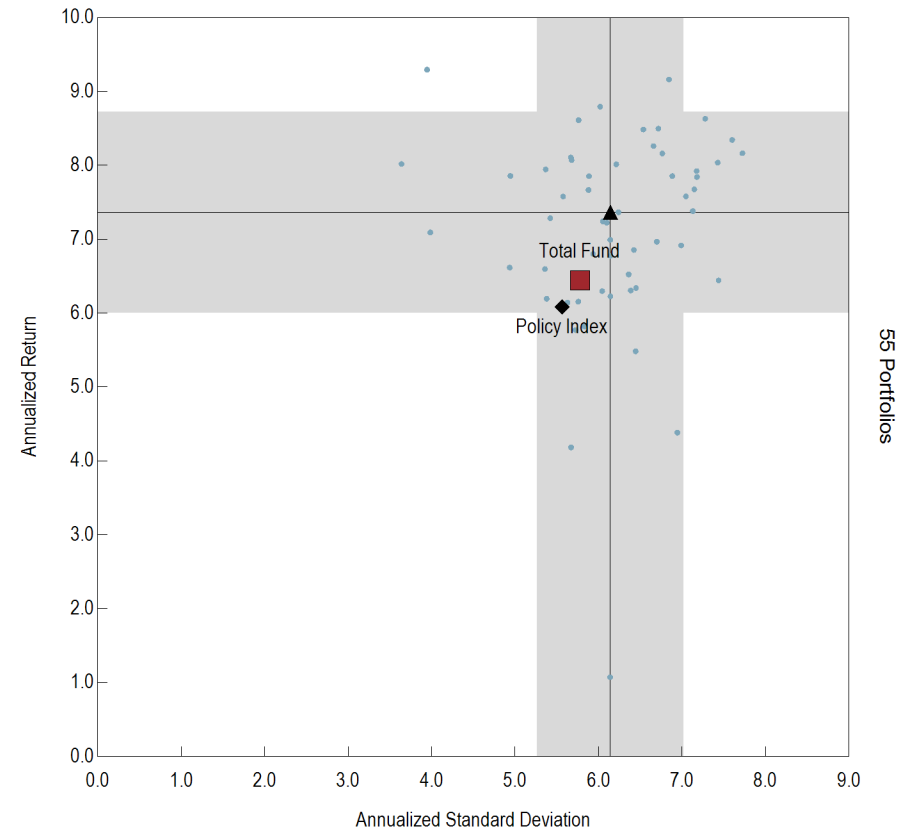
Total Fund Risk Analysis (Net of Fees)

Period Ending: March 31, 2017

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	3.4%	5.2%	0.6
Policy Index	3.1%	5.0%	0.6
InvestorForce Public DB > \$1B Net Median	5.0%	6.0%	0.8

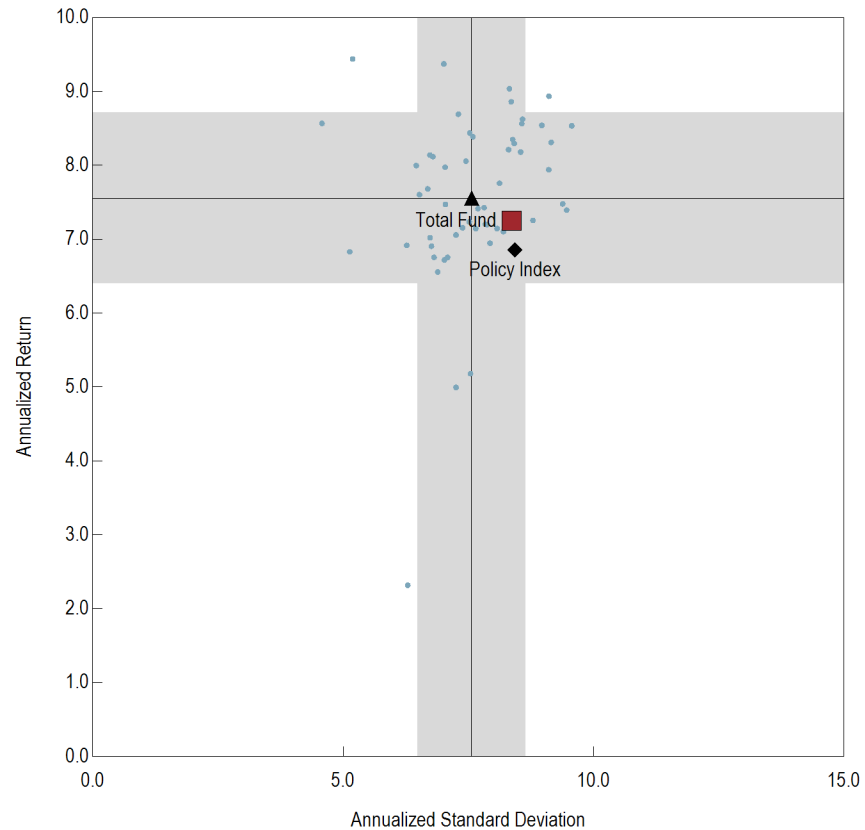
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	6.4%	5.8%	1.1
Policy Index	6.1%	5.6%	1.1
InvestorForce Public DB > \$1B Net Median	7.4%	6.1%	1.1

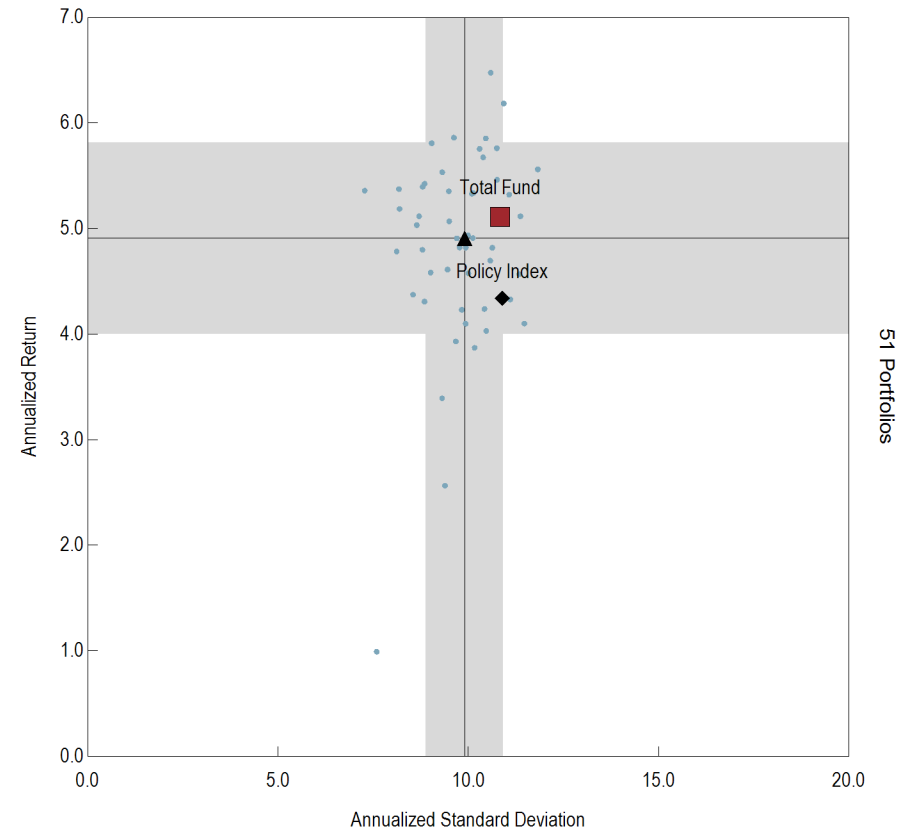
Total Fund Risk Analysis (Net of Fees)

Period Ending: March 31, 2017

7 Years



10 Years



7 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	7.2%	8.4%	0.9
Policy Index	6.9%	8.4%	0.8
InvestorForce Public DB > \$1B Net Median	7.6%	7.6%	1.0

10 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	5.1%	10.8%	0.4
Policy Index	4.3%	10.9%	0.3
InvestorForce Public DB > \$1B Net Median	4.9%	9.9%	0.4

Total Fund
Risk Analysis (Net of Fees)

Period Ending: March 31, 2017

3 Years

	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	5.25%	0.36%	0.99	0.90	98.65%	86.87%	0.19	1.68%	0.62	0.63
Total Domestic Equity	8.01%	-1.98%	1.03	0.93	86.34%	104.94%	-0.79	2.10%	0.99	1.06
Total International Equity	11.63%	-0.86%	1.00	0.94	89.54%	100.25%	-0.32	2.73%	0.00	0.02
Total Domestic Fixed Income	3.33%	1.56%	0.75	0.62	102.95%	58.06%	0.40	2.23%	1.03	4.43
Total Real Estate	2.04%	1.40%	0.95	0.45	108.67%	--	0.55	1.52%	5.62	--
Total Hedge Funds	4.04%	0.39%	0.93	0.80	104.30%	96.09%	0.14	1.81%	0.47	0.54
Total Alternative Illiquids	3.80%	0.94%	0.31	0.39	36.98%	51.24%	-1.28	5.94%	1.24	1.35

5 Years

	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	5.78%	0.31%	1.01	0.94	102.46%	92.62%	0.26	1.39%	1.10	1.48
Total Domestic Equity	9.38%	-2.09%	1.08	0.95	95.59%	120.00%	-0.48	2.17%	1.28	1.88
Total International Equity	11.66%	0.26%	1.01	0.96	100.07%	96.60%	0.13	2.33%	0.43	0.59
Total Domestic Fixed Income	3.41%	1.72%	0.90	0.69	124.24%	63.19%	0.77	1.93%	1.09	2.21
Total Real Estate	1.89%	1.53%	0.85	0.33	98.22%	--	-0.10	1.56%	5.63	--
Total Hedge Funds	3.66%	0.66%	0.81	0.74	92.43%	79.85%	0.02	1.99%	0.86	0.96
Total Alternative Illiquids	5.30%	2.54%	0.40	0.41	44.33%	33.87%	-1.08	6.55%	1.66	2.46

Total Fund
Risk Analysis (Net of Fees)

Period Ending: March 31, 2017

7 Years

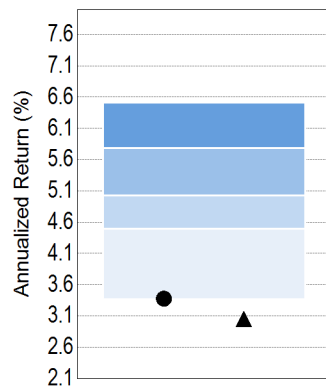
	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	8.36%	0.54%	0.98	0.97	101.14%	93.69%	0.29	1.35%	0.85	1.05
Total Domestic Equity	14.34%	-0.87%	1.05	0.98	101.59%	104.67%	-0.09	2.14%	0.88	1.06
Total International Equity	14.81%	1.18%	0.94	0.97	97.74%	92.04%	0.37	2.53%	0.35	0.45
Total Domestic Fixed Income	3.35%	2.51%	0.74	0.54	124.71%	56.76%	0.66	2.43%	1.49	2.94
Total Real Estate	2.50%	4.13%	0.56	0.17	85.97%	--	-0.54	2.42%	4.40	--
Total Hedge Funds	3.24%	1.34%	0.52	0.54	72.01%	49.81%	0.04	3.11%	0.78	0.99
Total Alternative Illiquids	5.79%	4.38%	0.28	0.42	32.24%	28.15%	-0.65	10.70%	1.49	1.90

10 Years

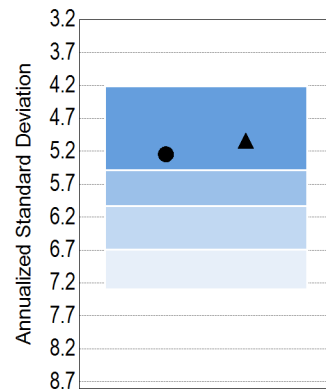
	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	10.84%	0.83%	0.99	0.98	105.43%	95.80%	0.53	1.47%	0.41	0.63
Total Domestic Equity	--	--	--	--	--	--	--	--	--	--
Total International Equity	--	--	--	--	--	--	--	--	--	--
Total Domestic Fixed Income	--	--	--	--	--	--	--	--	--	--
Total Real Estate	--	--	--	--	--	--	--	--	--	--
Total Hedge Funds	6.00%	0.92%	0.81	0.84	86.97%	76.17%	0.25	2.70%	0.22	0.28
Total Alternative Illiquids	9.66%	2.21%	0.44	0.61	33.11%	56.04%	-0.31	11.23%	0.63	0.69

Total Fund vs. InvestorForce Public DB > \$1B Net Universe

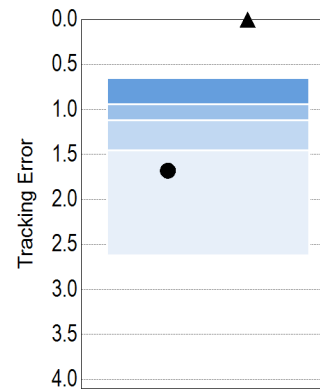
Annualized Return



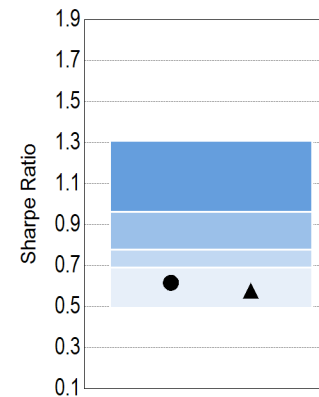
Annualized Standard Deviation



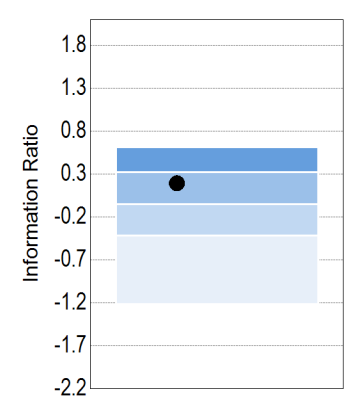
Tracking Error



Sharpe Ratio



Information Ratio



● Total Fund
Value 3.4
Rank 95
▲ Policy Index
Value 3.1
Rank 97

● Total Fund
Value 5.2
Rank 16
▲ Policy Index
Value 5.0
Rank 11

● Total Fund
Value 1.7
Rank 84
▲ Policy Index
Value 0.0
Rank 1

● Total Fund
Value 0.6
Rank 90
▲ Policy Index
Value 0.6
Rank 91

● Total Fund
Value 0.2
Rank 34
▲ Policy Index
Value --
Rank --

Universe
5th %tile 6.5
25th %tile 5.8
Median 5.0
75th %tile 4.5
95th %tile 3.4

Universe
5th %tile 4.2
25th %tile 5.5
Median 6.0
75th %tile 6.7
95th %tile 7.3

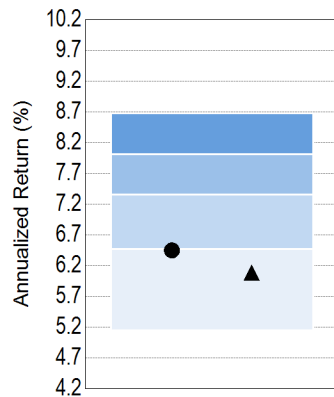
Universe
5th %tile 0.6
25th %tile 0.9
Median 1.1
75th %tile 1.4
95th %tile 2.6

Universe
5th %tile 1.3
25th %tile 1.0
Median 0.8
75th %tile 0.7
95th %tile 0.5

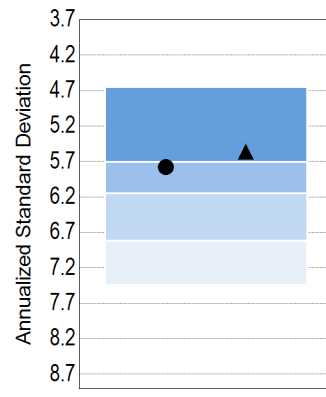
Universe
5th %tile 0.6
25th %tile 0.3
Median 0.0
75th %tile -0.4
95th %tile -1.2

Total Fund vs. InvestorForce Public DB > \$1B Net Universe

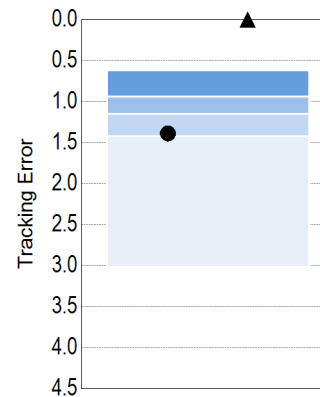
Annualized Return



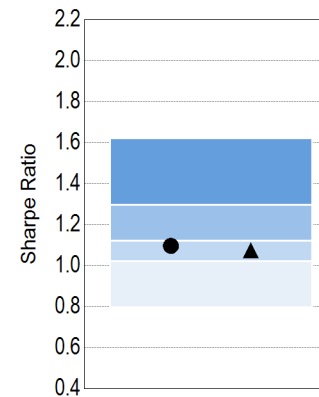
Annualized Standard Deviation



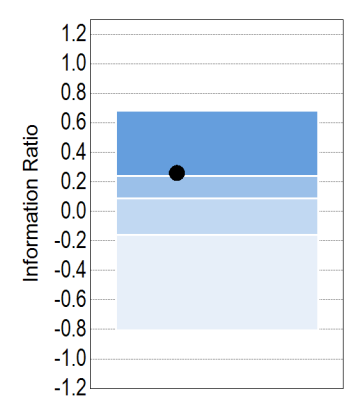
Tracking Error



Sharpe Ratio



Information Ratio



● Total Fund
Value 6.4
Rank 76
▲ Policy Index
Value 6.1
Rank 90

● Total Fund
Value 5.8
Rank 31
▲ Policy Index
Value 5.6
Rank 17

● Total Fund
Value 1.4
Rank 74
▲ Policy Index
Value 0.0
Rank 1

● Total Fund
Value 1.1
Rank 54
▲ Policy Index
Value 1.1
Rank 61

● Total Fund
Value 0.3
Rank 24
▲ Policy Index
Value --
Rank --

Universe
5th %tile 8.7
25th %tile 8.0
Median 7.4
75th %tile 6.5
95th %tile 5.2

Universe
5th %tile 4.7
25th %tile 5.7
Median 6.1
75th %tile 6.8
95th %tile 7.4

Universe
5th %tile 0.6
25th %tile 0.9
Median 1.1
75th %tile 1.4
95th %tile 3.0

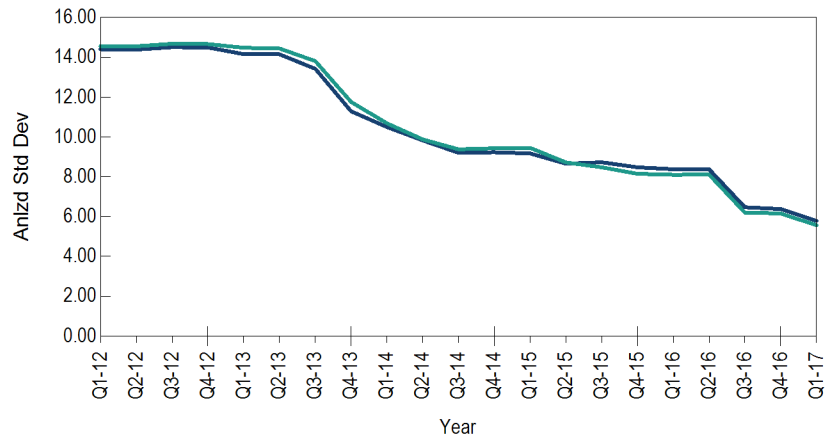
Universe
5th %tile 1.6
25th %tile 1.3
Median 1.1
75th %tile 1.0
95th %tile 0.8

Universe
5th %tile 0.7
25th %tile 0.2
Median 0.1
75th %tile -0.2
95th %tile -0.8

Total Fund Risk Analysis - 5 Years (Net of Fees)

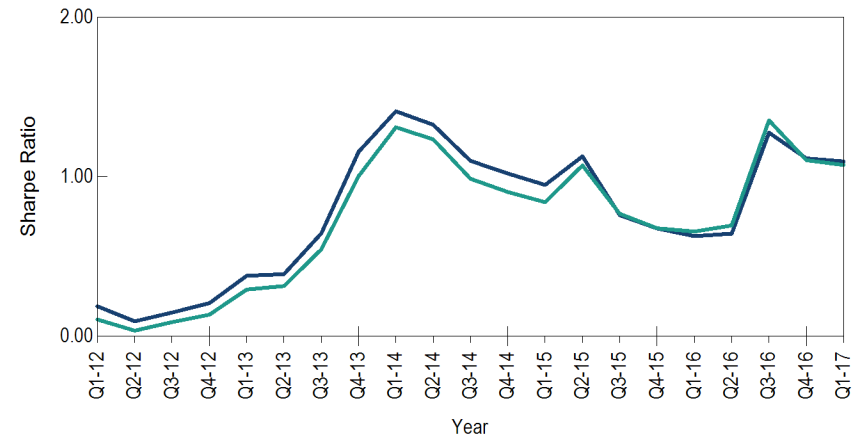
Period Ending: March 31, 2017

Rolling 5 Year Annualized Standard Deviation



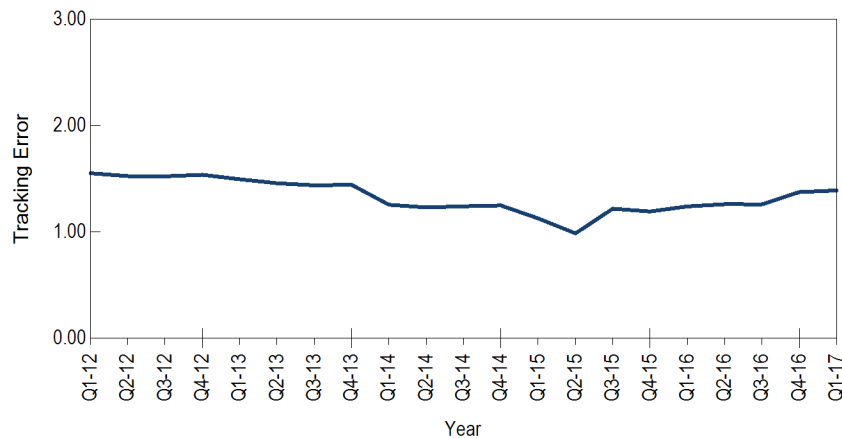
— Total Fund — Policy Index

Rolling 5 Year Sharpe Ratio



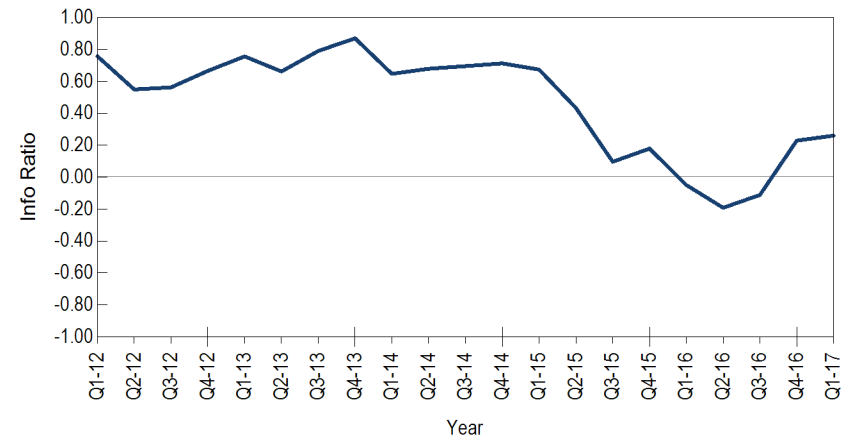
— Total Fund — Policy Index

Rolling 5 Year Tracking Error



— Total Fund

Rolling 5 Year Information Ratio



— Total Fund

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
Total Fund	4,263,478,263	100.0	4.4	7.4	9.3	3.4	6.4	5.1	6.7	-2.5	3.5	16.3	13.1		
<i>Policy Index</i>			3.8	5.0	7.5	3.1	6.1	4.3	6.5	-1.7	2.6	15.6	12.3		
Total Fund Ex Parametric	4,174,227,737	97.9	4.3	--	--	--	--	--	--	--	--	--	--		
<i>Policy Index</i>			3.8	--	--	--	--	--	--	--	--	--	--		
Total Domestic Equity	830,221,434	19.5	5.2	15.6	16.3	8.1	12.1	--	8.9	1.5	9.8	36.8	15.8		
<i>Russell 3000</i>			5.7	15.0	18.1	9.8	13.2	--	12.7	0.5	12.6	33.6	16.4		
SSgA S&P 500 Flagship Fund	246,793,196	5.8	6.1	14.4	17.2	10.4	13.3	7.5	12.0	1.4	13.7	32.4	16.0	8.1	Mar-04
<i>S&P 500</i>			6.1	14.4	17.2	10.4	13.3	7.5	12.0	1.4	13.7	32.4	16.0	8.1	Mar-04
Ivy	220,616,277	5.2	9.0	14.8	14.4	9.9	12.4	--	1.4	6.7	12.7	36.6	12.3	12.6	Dec-10
<i>Russell 1000 Growth</i>			8.9	15.0	15.8	11.3	13.3	--	7.1	5.7	13.0	33.5	15.3	13.5	Dec-10
Aronson Johnson Ortiz	225,059,857	5.3	2.1	16.7	15.4	6.2	11.9	5.9	9.5	-0.1	9.6	38.0	17.0	10.4	Dec-95
<i>Russell 1000 Value</i>			3.3	14.0	19.2	8.7	13.1	5.9	17.3	-3.8	13.5	32.5	17.5	9.0	Dec-95
Systematic Small/Mid Cap Value	68,656,366	1.6	0.5	21.2	22.5	7.2	12.4	--	22.0	-1.1	4.0	37.2	17.6	12.6	Oct-10
<i>Russell 2500 Value</i>			1.6	18.0	23.1	7.6	12.9	--	25.2	-5.5	7.1	33.3	19.2	13.1	Oct-10
Kalmar Investments Management	69,095,737	1.6	5.1	13.5	17.8	2.3	8.5	8.0	11.5	-6.6	-5.3	43.9	13.9	8.0	Nov-04
<i>Russell 2000 Growth</i>			5.3	19.2	23.0	6.7	12.1	8.1	11.3	-1.4	5.6	43.3	14.6	8.4	Nov-04
Total International Equity	820,360,817	19.2	9.2	10.9	10.6	0.2	5.1	--	3.0	-7.5	-2.5	18.7	19.0		
<i>MSCI ACWI ex USA Gross</i>			8.0	14.2	13.7	1.0	4.8	--	5.0	-5.3	-3.4	15.8	17.4		
Artisan International Growth	179,519,481	4.2	9.1	4.5	3.1	-0.6	--	--	-9.0	-2.2	-0.1	--	--	3.7	Apr-13
<i>MSCI EAFE</i>			7.2	13.3	11.7	0.5	--	--	1.0	-0.8	-4.9	--	--	4.5	Apr-13
Research Affiliates International Equity	203,086,634	4.8	6.1	17.5	16.8	0.1	7.4	--	9.3	-5.9	-5.8	28.9	18.5	3.8	Apr-11
<i>MSCI EAFE</i>			7.2	13.3	11.7	0.5	5.8	--	1.0	-0.8	-4.9	22.8	17.3	2.8	Apr-11
Mondrian International Small Cap	127,428,586	3.0	9.6	9.9	7.1	1.6	6.6	--	0.1	2.7	-4.9	17.3	24.7	9.5	Nov-09
<i>S&P Developed Ex-U.S. SmallCap</i>			7.8	12.7	11.3	3.3	8.5	--	3.8	5.9	-3.4	26.1	18.6	8.5	Nov-09
Mondrian Emerging Markets	310,326,116	7.3	11.1	11.4	13.4	0.0	0.1	3.3	9.0	-16.3	0.0	-7.1	22.3	5.7	Nov-05
<i>MSCI Emerging Markets</i>			11.4	16.4	17.2	1.2	0.8	2.7	11.2	-14.9	-2.2	-2.6	18.2	5.7	Nov-05
Total Fixed Income	1,435,326,833	33.7	3.0	2.2	4.9	2.4	3.1	--	6.7	-4.5	5.0	-1.1	9.6		
<i>BBgBarc Global Aggregate*</i>			1.8	-4.7	-1.9	-0.4	0.5	--	2.1	-3.2	0.0	-2.0	4.2		
Western Asset Investment Grade Credit	202,486,634	4.7	1.6	0.8	4.7	--	--	--	7.0	-0.5	--	--	--	3.9	Oct-14
<i>BBgBarc US Credit TR</i>			1.3	-0.5	3.0	--	--	--	5.6	-0.8	--	--	--	3.1	Oct-14
Loomis Sayles High Yield	217,656,170	5.1	2.9	9.2	14.8	--	--	--	14.4	-5.2	--	--	--	4.4	Oct-14
<i>BBgBarc US High Yield TR</i>			2.7	10.3	16.4	--	--	--	17.1	-4.5	--	--	--	5.3	Oct-14
Eaton Vance Senior Loan Fund	189,938,023	4.5	1.2	6.4	9.1	--	--	--	9.9	-0.8	--	--	--	3.9	Oct-14
<i>S&P/LSTA Leveraged Loan Index</i>			1.1	6.6	9.7	--	--	--	10.2	-0.7	--	--	--	3.9	Oct-14

*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index. Kalmar Investment Management was terminated in April 2017.

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2017

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2016	2015	2014	2013	2012	Return	Since
Eaton Vance Institutional Senior Loan Plus Fund	20,117,707	0.5	--	--	--	--	--	--	--	--	--	--	--	0.6	Jan-17
<i>S&P/LSTA Leveraged Loan Index</i>			--	--	--	--	--	--	--	--	--	--	--	0.7	Jan-17
SSgA TIPS	160,413,478	3.8	1.2	-0.3	1.4	2.0	0.9	--	4.6	-1.5	3.6	-8.6	6.9	4.4	Feb-09
<i>BBgBarc US TIPS TR</i>			1.3	-0.2	1.5	2.0	1.0	--	4.7	-1.4	3.6	-8.6	7.0	4.5	Feb-09
Barclays U.S. Aggregate Index Fund	148,852,091	3.5	0.8	-1.8	0.4	2.4	--	--	2.6	0.6	--	--	--	2.5	Apr-14
<i>BBgBarc US Aggregate TR</i>			0.8	-1.7	0.4	2.7	--	--	2.6	0.6	--	--	--	2.5	Apr-14
Brandywine Global Sovereign	283,893,786	6.7	5.0	-0.4	0.4	--	--	--	3.8	-9.8	--	--	--	-1.0	Jan-15
<i>Citi WGBI</i>			1.6	-6.8	-3.7	--	--	--	1.6	-3.6	--	--	--	-0.1	Jan-15
PIMCO Emerging Local Bond Ins	211,968,944	5.0	6.9	3.6	6.6	-2.8	--	--	10.7	-16.3	-5.4	--	--	-2.3	Jul-13
<i>JP Morgan GBI EM Global Diversified TR USD</i>			6.5	2.7	5.5	-2.7	--	--	9.9	-14.9	-5.7	--	--	-2.1	Jul-13
Total Real Estate	218,506,470	5.1	2.1	6.3	9.6	11.6	10.8	--	8.5	13.9	12.1	11.8	8.0		
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	11.8	12.0	--	8.8	15.0	12.5	13.9	10.9		
Invesco Core Real Estate	162,911,800	3.8	2.3	5.8	9.4	11.4	11.0	--	8.3	13.7	11.4	13.4	7.7	4.2	Oct-07
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	11.8	12.0	--	8.8	15.0	12.5	13.9	10.9	4.9	Oct-07
Total Infrastructure	135,644,748	3.2	5.8	7.3	9.2	--	--	--	6.1	--	--	--	--		
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	--	--	--	8.8	--	--	--	--		
IFM Infrastructure	135,644,748	3.2	5.8	7.3	9.2	--	--	--	6.1	--	--	--	--	8.3	May-15
<i>NCREIF-ODCE</i>			1.8	6.1	8.3	--	--	--	8.8	--	--	--	--	11.5	May-15
Total Hedge Funds	314,222,350	7.4	1.6	7.4	9.0	2.1	3.3	1.9	3.0	0.0	3.1	7.8	2.2		
<i>HFRI Fund of Funds Composite Index</i>			2.4	5.6	6.2	1.8	3.2	1.2	0.5	-0.3	3.4	9.0	4.8		
Grosvenor	157,303,451	3.7	1.8	7.2	8.8	2.1	5.3	--	2.6	0.0	3.5	15.2	8.6	4.8	Oct-09
<i>HFRI Fund of Funds Composite Index</i>			2.4	5.6	6.2	1.8	3.2	--	0.5	-0.3	3.4	9.0	4.8	2.8	Oct-09
GCM Better Futures Fund	156,918,899	3.7	1.4	--	--	--	--	--	--	--	--	--	--	4.5	Sep-16
<i>HFRI Fund of Funds Composite Index</i>			2.4	--	--	--	--	--	--	--	--	--	--	3.3	Sep-16
Total Commodities	118,040,819	2.8	-0.3	-2.7	11.2	-8.4	-6.1	--	13.8	-12.8	-16.9	-9.4	-0.9		
<i>Bloomberg Commodity Index TR USD</i>			-2.3	-3.6	8.7	-13.9	-9.5	--	11.8	-24.7	-17.0	-9.5	-1.1		
Invesco Commodities	118,040,819	2.8	-0.3	-2.7	11.2	--	--	--	13.8	--	--	--	--	-1.0	May-15
<i>Bloomberg Commodity Index TR USD</i>			-2.3	-3.6	8.7	--	--	--	11.8	--	--	--	--	-8.5	May-15
Total Parametric Overlay	89,250,526	2.1													

Closed end Real Estate funds not shown on this page.

Real Estate
Closed End Funds (Net of Fees)

Period Ending: March 31, 2017

Real Estate - Closed End Funds

Inception Date	Manager Name/Fund Name	% of Portfolio	Total Commitment	Contributions	Distributions	Estimated Market Value	One Quarter Return	One Year Return	Three Years Return	Five Years Return	(IRR) Since Inception
2016	Kennedy Wilson Real Estate Fund V	0.5%	\$30,000,000	\$21,900,000	\$1,296,000	\$23,032,299	4.5%	14.2%	N/A	N/A	13.2%
2016	Gerding Edlen Green Cities III	0.3%	\$20,000,000	\$11,719,570	\$102,508	\$12,906,769	-1.5%	15.0%	N/A	N/A	14.6%
2009	TA Realty IX	0.5%	\$30,000,000	\$30,000,000	\$27,591,277	\$19,655,602	-0.3%	4.0%	11.1%	10.8%	10.6%

% of Total Fund (Market Value)

1.3%

Total Alternative Illiquids Non Marketable Securities Overview

Period Ending: March 31, 2017

Verus Internal Analysis										Manager Reported		
Vintage Year	Manager Name/Fund Name	Estimated Market Value as of 3/31/17 ³	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Market Value as of IRR Date	Net IRR Since Inception ⁶	IRR Date
Private Equity												
2016	Horsley Bridge XI Growth Buyout L.P.	\$1,117,689	\$30,000,000	\$1,437,000	5%	\$28,563,000	\$0	0.0%	77.8%	N/A	N/A	N/A ⁴
2016	Hamilton Lane IX L.P.	\$24,919,130	\$100,000,000	\$23,630,000	24%	\$76,370,000	\$2,004,483	8.5%	113.9%	\$24,919,130	16.2%	03/31/17
2015	Warburg Pincus XII	\$7,803,601	\$34,000,000	\$8,126,000	24%	\$25,874,000	\$0	0.0%	96.0%	\$7,803,601	-8.7%	03/31/17
2008	Landmark Equity XIV, L.P.	\$11,901,463	\$30,000,000	\$28,219,695	94%	\$1,780,305	\$24,844,605	88.0%	130.2%	\$12,833,659	11.2%	09/30/16
2007	New Mountain Partners III	\$10,580,224	\$15,000,000	\$15,270,869	102%	\$1,121,057 ⁷	\$16,702,370	109.4%	178.7%	\$10,580,224	12.9%	03/31/17
2007	Hamilton Lane VI	\$31,303,508	\$70,000,000	\$62,607,682	89%	\$7,392,318	\$66,018,050	105.4%	155.4%	\$36,839,845	9.3%	09/30/16
2007	WP Private Equity X, L.P.	\$13,166,843	\$25,000,000	\$25,000,000	100%	\$0	\$24,173,388	96.7%	149.4%	\$13,166,843	8.0%	03/31/17
2002	Blackstone IV	\$2,906,402	\$20,000,000	\$22,354,099	112%	\$0 ⁸	\$50,121,651	224.2%	237.2%	\$2,906,402	29.6%	03/31/17
2001	WP Private Equity VIII, L.P.	\$3,569,939	\$25,000,000	\$25,000,000	100%	\$0	\$55,106,463	220.4%	234.7%	\$3,569,939	14.7%	03/31/17
1998	WPEquity Partners, L.P. ⁹	\$78,193	\$20,000,000	\$20,000,000	100%	\$0	\$32,982,907	164.9%	165.3%	\$78,193	10.3%	12/31/16
Total Private Equity		\$107,346,992	\$369,000,000	\$231,645,344	63%	\$141,100,680	\$271,953,917	117.4%	163.7%			
% of Portfolio (Market Value)		2.5%										
Private Credit												
2017	EQT European Special Situations Debt	N/A	\$40,000,000	\$0	0%	\$40,000,000	\$0	N/A	N/A	N/A	N/A	N/A ⁴
2016	OHA Strategic Credit Fund II, L.P.	N/A	\$40,000,000	\$0	0%	\$40,000,000	\$0	N/A	N/A	N/A	N/A	N/A ⁴
2016	TSSP Adjacent Opportunities Partners	\$7,115,613	\$30,000,000	\$8,674,617	29%	\$21,325,383	\$1,961,242 ¹³	22.6%	104.6%	\$6,991,974	9.0%	12/31/16
2015	GSO European Senior Debt	\$4,712,421	\$30,000,000	\$4,912,227	16%	\$25,087,773	\$47,782	1.0%	96.9%	\$4,712,421	-3.6%	03/31/17
2015	CVI Credit Value Fund III	\$17,591,709	\$30,000,000	\$15,000,000	50%	\$15,000,000	\$0	0.0%	117.3%	\$17,591,709	14.5%	03/31/17
2014	Colony Distressed Credit III, L.P.	\$15,403,132	\$20,000,000	\$19,911,030	100%	\$4,762,633 ¹⁰	\$6,543,365	32.9%	110.2%	\$15,669,800	10.0%	12/31/16
2012	Oaktree Opportunities IX, L.P.	\$14,353,619	\$15,000,000	\$15,000,000	100%	\$0	\$1,195,174	8.0%	103.7%	\$14,353,619	1.3%	03/31/17
2010	KKR Mezzanine Partners	\$12,717,748	\$30,000,000	\$33,168,708	111%	\$3,164,154 ¹¹	\$29,242,843	88.2%	126.5%	\$12,717,748	8.0%	03/31/17
2010	Angelo Gordon VII	\$3,481,849	\$30,000,000	\$30,000,000	100%	\$0	\$33,253,950	110.8%	122.5%	\$3,481,849	5.0%	03/31/17
2009	Colony Distressed Credit I, L.P. ¹²	\$4,734,584	\$40,000,000	\$42,267,900	106%	\$0	\$60,304,994	142.7%	153.9%	\$5,911,900	13.0%	09/30/16
2002	Lone Star Fund IV	\$120,239	\$20,000,000	\$19,045,199	95%	\$954,801	\$43,786,403	229.9%	230.5%	\$120,239	30.7%	03/31/17
1998	TCW Shop III	\$35,273	\$15,000,000	\$15,000,000	100%	\$0	\$18,664,813	124.4%	124.7%	\$437,407	3.4%	12/31/15
Total Private Credit		\$80,266,186	\$340,000,000	\$202,979,681	60%	\$150,294,744	\$195,000,566	96.1%	135.6%			
% of Portfolio (Market Value)		1.9%										

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Last known market value + capital calls - distributions

⁴IRR currently unavailable for these funds.

⁵Investment period ended, no further capital to be called.

⁶Gross IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest.

⁷Net IRR is calculated on the cash flows of all the limited partners of the fund and is net of all fees. Each IRR figure is provided by its respective manager.

⁸\$1,366,953 capital returned but subject to recall

⁹\$2,996,127 capital returned but subject to recall

¹⁰On June 11, 2012 \$1,029,076 was transferred from the Partnership to a Liquidation Trust.

¹¹\$4,673,663 capital returned but subject to recall

¹²\$5,277,489 capital returned but subject to recall and \$1,055,373 return of unused capital subject to recall

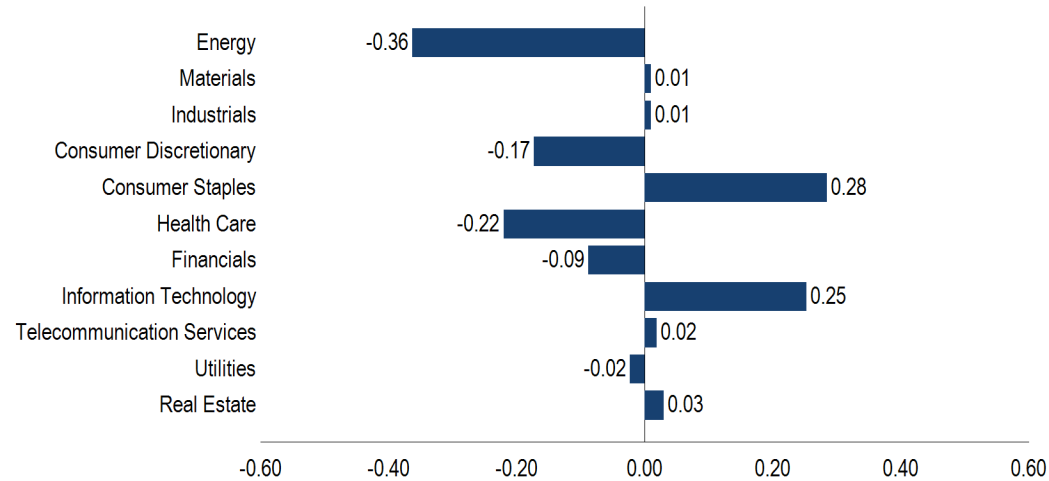
¹³Colony Capital reflects a FCERA-specific IRR.

¹⁴Distributions, Including Deemed

Total Domestic Equity Performance Attribution by Sector (Net of Fees)

Period Ending: March 31, 2017

Total Domestic Equity vs. Russell 3000
Current Quarter



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	8.85%	7.00%	1.85%	-8.03%	-6.76%	-1.27%	-0.26%	-0.11%	-0.36%	-0.88%	-1.24%
Materials	2.65%	3.38%	-0.74%	7.20%	6.53%	0.67%	-0.01%	0.02%	0.01%	0.03%	0.04%
Industrials	10.13%	10.84%	-0.71%	4.06%	4.07%	-0.01%	0.01%	0.00%	0.01%	-0.18%	-0.17%
Consumer Discretionary	11.32%	12.47%	-1.15%	6.55%	7.82%	-1.27%	-0.03%	-0.14%	-0.17%	0.26%	0.08%
Consumer Staples	6.44%	8.30%	-1.87%	10.35%	5.90%	4.45%	0.00%	0.29%	0.28%	0.01%	0.30%
Health Care	12.85%	13.00%	-0.15%	7.29%	8.93%	-1.65%	-0.01%	-0.21%	-0.22%	0.41%	0.19%
Financials	17.13%	15.50%	1.63%	1.97%	2.19%	-0.22%	-0.05%	-0.03%	-0.09%	-0.55%	-0.64%
Information Technology	22.81%	19.92%	2.89%	12.14%	11.88%	0.26%	0.19%	0.06%	0.25%	1.22%	1.47%
Telecommunication Services	2.00%	2.44%	-0.44%	-4.30%	-3.16%	-1.14%	0.04%	-0.02%	0.02%	-0.22%	-0.20%
Utilities	2.83%	3.14%	-0.31%	5.33%	6.12%	-0.78%	0.00%	-0.02%	-0.02%	0.01%	-0.01%
Real Estate	3.00%	4.00%	-1.01%	2.78%	2.80%	-0.02%	0.03%	0.00%	0.03%	-0.12%	-0.09%
Total				5.50%	5.76%	-0.26%	-0.09%	-0.17%	-0.26%	0.00%	-0.26%

Total Domestic Equity
Performance Attribution Summary (Net of Fees)

Period Ending: March 31, 2017

Portfolio: Total Domestic Equity
Benchmark: Russell 3000

Portfolio Total Return 5.16%

	Equity Only
Portfolio	5.50%
Benchmark	<u>5.76%</u>
Return From Active Mgmt	-0.26%

Local Returns	
Portfolio	5.50%
Benchmark	<u>5.76%</u>
Active Equity Return	-0.26%

Country Selection	-0.04%
Stock Selection	-0.22%

Currency Contributions	
Portfolio	0.00%
Benchmark	<u>0.00%</u>
Active Currency Contributions	0.00%

Chart uses return-based methodology

Total International Equity
Performance Attribution by Country (Net of Fees)

Period Ending: March 31, 2017

Total International Equity vs. MSCI ACWI ex USA

Current Quarter

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Active Return	Allocation Effect (Local)	Selection Effect (Local)	Currency Effect
AUSTRALIA	3.56%	5.24%	-1.68%	11.39%	10.98%	0.41%	-0.08%	0.00%	0.02%	-0.09%
AUSTRIA	0.20%	0.14%	0.06%	11.76%	9.07%	2.68%	0.01%	0.00%	0.01%	0.00%
BELGIUM	0.40%	0.83%	-0.43%	5.17%	5.17%	0.00%	0.00%	0.01%	0.00%	-0.01%
BRAZIL	2.35%	1.76%	0.59%	5.91%	10.33%	-4.42%	-0.09%	0.00%	-0.08%	-0.01%
CANADA	5.08%	7.11%	-2.03%	2.91%	2.75%	0.16%	0.06%	0.06%	0.02%	-0.03%
CHILE	0.23%	0.27%	-0.05%	14.68%	16.10%	-1.43%	-0.01%	-0.01%	0.00%	0.00%
CHINA	2.33%	6.00%	-3.67%	12.52%	12.97%	-0.45%	-0.30%	-0.29%	-0.01%	0.01%
COLOMBIA	0.00%	0.10%	-0.10%	--	5.70%	-5.70%	0.00%	0.00%	0.00%	0.00%
CZECH REPUBLIC	0.00%	0.04%	-0.04%	--	5.63%	-5.63%	0.00%	0.00%	0.00%	0.00%
DENMARK	0.63%	1.16%	-0.53%	12.82%	6.59%	6.23%	0.03%	0.00%	0.04%	-0.01%
EGYPT	0.00%	0.03%	-0.03%	--	1.00%	-1.00%	0.00%	0.00%	0.00%	0.00%
FINLAND	0.17%	0.68%	-0.51%	4.25%	7.75%	-3.51%	-0.02%	-0.01%	-0.01%	-0.01%
FRANCE	5.34%	7.11%	-1.77%	8.54%	7.35%	1.19%	0.03%	-0.01%	0.06%	-0.02%
GERMANY	8.57%	6.51%	2.06%	10.69%	8.53%	2.17%	0.26%	0.04%	0.19%	0.03%
GREECE	0.00%	0.08%	-0.08%	--	-3.33%	3.33%	0.01%	0.01%	0.00%	0.00%
HONG KONG	7.40%	2.27%	5.13%	11.31%	13.18%	-1.87%	0.27%	0.42%	-0.14%	-0.01%
HUNGARY	0.00%	0.07%	-0.07%	--	-0.10%	0.10%	0.00%	0.00%	0.00%	0.00%
INDIA	4.81%	1.87%	2.94%	23.25%	17.17%	6.08%	0.66%	0.21%	0.29%	0.16%
INDONESIA	0.90%	0.60%	0.31%	11.58%	7.09%	4.49%	0.05%	0.00%	0.04%	0.00%
IRELAND	0.32%	0.33%	-0.01%	16.44%	3.88%	12.56%	0.04%	0.00%	0.04%	0.00%
ISRAEL	0.17%	0.48%	-0.31%	-2.12%	5.72%	-7.83%	-0.01%	0.01%	-0.02%	0.00%
ITALY	1.94%	1.46%	0.49%	7.53%	6.45%	1.08%	0.02%	0.00%	0.02%	0.00%
JAPAN	9.67%	17.06%	-7.39%	4.38%	4.48%	-0.10%	0.02%	0.39%	-0.01%	-0.36%
KAZAKHSTAN	0.15%	0.00%	0.15%	30.04%	27.85%	2.19%	0.04%	0.03%	0.00%	0.00%
KOREA	3.62%	3.29%	0.33%	14.64%	16.70%	-2.06%	0.00%	0.02%	-0.07%	0.05%
LUXEMBOURG	0.25%	0.00%	0.25%	0.31%	7.94%	-7.64%	-0.01%	0.00%	-0.01%	0.00%

Total International Equity
Performance Attribution by Country (Net of Fees)

Period Ending: March 31, 2017

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Active Return	Allocation Effect (Local)	Selection Effect (Local)	Currency Effect
MALAYSIA	1.88%	0.57%	1.31%	9.87%	8.29%	1.59%	0.07%	0.02%	0.03%	0.02%
MEXICO	1.91%	0.81%	1.10%	16.58%	16.03%	0.55%	0.12%	0.01%	0.03%	0.08%
NETHERLANDS	2.84%	2.32%	0.52%	8.25%	11.34%	-3.09%	-0.06%	0.03%	-0.09%	0.01%
NEW ZEALAND	0.96%	0.13%	0.84%	9.26%	2.42%	6.84%	0.04%	-0.03%	0.07%	0.00%
NORWAY	0.36%	0.47%	-0.11%	-1.74%	1.49%	-3.23%	-0.01%	0.01%	-0.01%	0.00%
PERU	0.55%	0.09%	0.46%	3.45%	5.67%	-2.23%	-0.01%	0.00%	-0.01%	0.00%
PHILIPPINES	0.56%	0.28%	0.28%	18.88%	6.27%	12.62%	0.07%	0.01%	0.07%	0.00%
POLAND	0.00%	0.26%	-0.26%	--	17.75%	-17.75%	-0.03%	-0.02%	0.00%	-0.02%
PORTUGAL	0.04%	0.11%	-0.06%	10.60%	8.19%	2.41%	0.00%	0.00%	0.00%	0.00%
QATAR	1.09%	0.20%	0.88%	-0.47%	1.38%	-1.85%	-0.05%	-0.03%	-0.02%	0.00%
ROMANIA	0.13%	0.00%	0.13%	23.63%	14.25%	9.38%	0.02%	0.01%	0.01%	0.00%
RUSSIA	1.56%	1.02%	0.53%	-8.93%	-4.75%	-4.18%	-0.12%	-0.09%	0.03%	-0.07%
SINGAPORE	1.65%	0.87%	0.77%	11.14%	13.50%	-2.36%	0.03%	0.04%	-0.04%	0.03%
SOUTH AFRICA	2.24%	1.63%	0.61%	1.25%	4.58%	-3.33%	-0.08%	-0.02%	-0.07%	0.01%
SPAIN	1.34%	2.20%	-0.86%	17.21%	14.74%	2.47%	-0.04%	-0.06%	0.03%	-0.02%
SWEDEN	1.55%	2.00%	-0.45%	6.57%	10.01%	-3.44%	-0.08%	-0.01%	-0.05%	-0.01%
SWITZERLAND	3.31%	6.09%	-2.78%	9.77%	8.83%	0.95%	-0.07%	-0.06%	0.04%	-0.05%
TAIWAN	5.55%	2.74%	2.80%	12.51%	11.78%	0.73%	0.22%	0.00%	0.04%	0.18%
THAILAND	0.99%	0.53%	0.47%	8.09%	8.71%	-0.61%	0.01%	0.00%	-0.01%	0.02%
TURKEY	0.61%	0.24%	0.37%	13.91%	10.86%	3.05%	0.04%	0.03%	0.02%	-0.02%
UNITED ARAB EMIRATES	0.74%	0.20%	0.54%	8.35%	1.65%	6.70%	0.03%	-0.02%	0.05%	0.00%
UNITED KINGDOM	8.22%	12.77%	-4.55%	7.74%	5.08%	2.66%	0.22%	0.07%	0.20%	-0.05%
UNITED STATES	3.84%	0.00%	3.84%	13.94%	6.08%	7.86%	0.33%	0.04%	0.29%	0.00%
	100.00%	100.00%	0.00%	9.58%	7.94%	1.63%	1.63%	0.80%	0.99%	-0.16%

Total International Equity
Performance Attribution by Currency (Net of Fees)

Period Ending: March 31, 2017

Total International Equity vs. MSCI ACWI ex USA

Current Quarter

Currency Name	Portfolio Weight	Index Weight	Excess Weight	Currency Return	Portfolio Contrib.	Index Contrib.	Active Contrib.	Currency Effect
Australian Dollar	3.56%	5.24%	-1.68%	5.35%	5.66%	5.64%	0.02%	-0.09%
Baht	0.99%	0.53%	0.47%	4.21%	4.37%	4.40%	-0.02%	0.02%
Canadian Dollar	5.08%	7.11%	-2.03%	0.55%	0.34%	0.57%	-0.23%	-0.03%
Chilean Peso	0.23%	0.27%	-0.05%	1.16%	0.00%	1.33%	-1.33%	0.00%
Colombian Peso	0.00%	0.10%	-0.10%	3.74%	0.00%	3.81%	-3.81%	0.00%
Cruzeiro Real	2.35%	1.76%	0.59%	2.51%	2.16%	2.73%	-0.57%	-0.01%
Czech Koruna	0.00%	0.04%	-0.04%	1.39%	0.00%	1.45%	-1.45%	0.00%
Danish Krone	0.63%	1.16%	-0.53%	1.39%	1.55%	1.46%	0.09%	-0.01%
Egyptian Pound	0.00%	0.03%	-0.03%	0.44%	0.00%	0.45%	-0.45%	0.00%
Emirati dirham	0.74%	0.20%	0.54%	0.00%	0.00%	0.00%	0.00%	0.00%
Euro	21.43%	21.76%	-0.34%	1.40%	1.46%	1.48%	-0.02%	-0.01%
Forint	0.00%	0.07%	-0.07%	1.42%	0.00%	1.40%	-1.40%	0.00%
Hong Kong Dollar	7.40%	2.27%	5.13%	-0.24%	-0.26%	-0.25%	-0.01%	-0.01%
Indian Rupee	4.81%	1.87%	2.94%	4.52%	5.33%	5.07%	0.26%	0.16%
Mexican New Peso	1.91%	0.81%	1.10%	9.38%	8.69%	9.95%	-1.27%	0.08%
New Sol	0.55%	0.09%	0.46%	3.15%	0.00%	0.00%	0.00%	0.00%
New Taiwan Dollar	5.55%	2.74%	2.80%	6.22%	6.59%	6.54%	0.04%	0.18%
New Zealand Dollar	0.96%	0.13%	0.84%	0.25%	0.27%	0.26%	0.02%	0.00%
New Zloty	0.00%	0.26%	-0.26%	5.36%	0.00%	5.99%	-5.99%	-0.02%
Norwegian Krone	0.36%	0.47%	-0.11%	0.22%	0.21%	0.22%	-0.01%	0.00%
Philippines Peso	0.56%	0.28%	0.28%	-0.92%	0.00%	-0.99%	0.99%	0.00%
Pound Sterling	8.22%	12.77%	-4.55%	1.20%	1.28%	1.24%	0.03%	-0.05%
Qatari rial	1.09%	0.20%	0.88%	0.01%	0.01%	0.01%	0.00%	0.00%
Rand	2.24%	1.63%	0.61%	1.99%	1.97%	2.04%	-0.06%	0.01%
Ringgit (Malaysian Dollar)	1.88%	0.57%	1.31%	1.37%	1.48%	1.46%	0.02%	0.02%

Total International Equity
Performance Attribution by Currency (Net of Fees)

Period Ending: March 31, 2017

Currency Name	Portfolio Weight	Index Weight	Excess Weight	Currency Return	Portfolio Contrib.	Index Contrib.	Active Contrib.	Currency Effect
Romanian New Leu	0.13%	0.00%	0.13%	1.18%	0.00%	2.63%	-2.63%	0.00%
Rupiah	0.90%	0.60%	0.31%	1.10%	1.22%	1.17%	0.05%	0.00%
Russian Federation Rouble	1.56%	1.02%	0.53%	8.35%	0.00%	6.02%	-6.02%	-0.07%
Shekel	0.17%	0.48%	-0.31%	6.01%	3.77%	2.23%	1.54%	0.00%
Singapore Dollar	1.65%	0.87%	0.77%	3.39%	3.60%	3.67%	-0.07%	0.03%
South Korean Won	3.62%	3.29%	0.33%	8.00%	8.49%	8.65%	-0.15%	0.05%
Swedish Krona	1.55%	2.00%	-0.45%	1.75%	1.83%	1.89%	-0.06%	-0.01%
Swiss Franc	3.31%	6.09%	-2.78%	1.54%	1.55%	1.65%	-0.10%	-0.05%
Tenge	0.15%	0.00%	0.15%	6.37%	0.00%	2.63%	-2.63%	0.00%
Turkish Lira	0.61%	0.24%	0.37%	-3.41%	-4.02%	-3.91%	-0.11%	-0.02%
US Dollar	3.84%	0.00%	3.84%	0.00%	0.00%	2.63%	-2.63%	0.00%
Yen	9.67%	17.06%	-7.39%	4.67%	4.66%	4.66%	0.00%	-0.36%
Yuan Renminbi	2.33%	6.00%	-3.67%	0.84%	-0.19%	-0.21%	0.02%	0.01%
	100.00%	100.00%	0.00%		2.47%	2.63%	-0.16%	-0.16%

Total International Equity
Performance Attribution by Region (Net of Fees)

Period Ending: March 31, 2017

Total International Equity vs. MSCI ACWI ex USA
Current Quarter

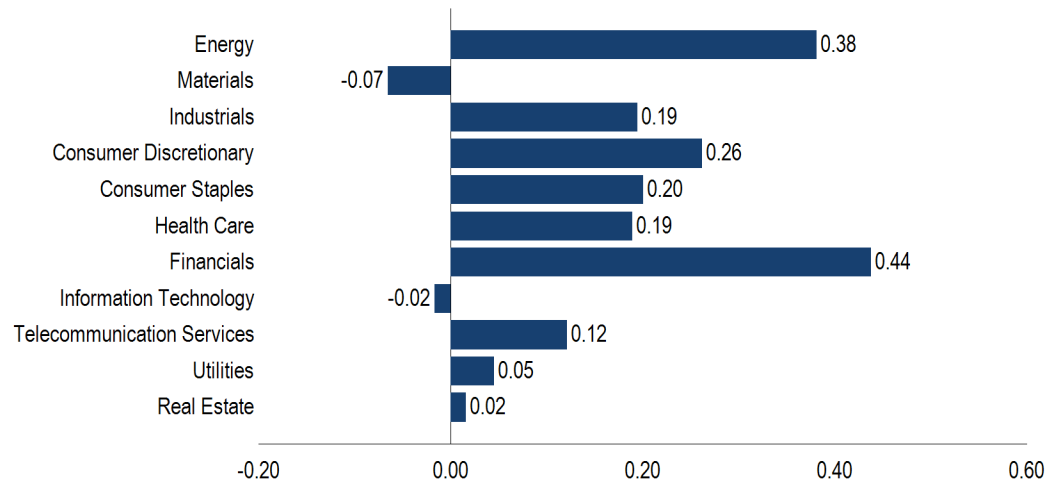
Region	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
North America ex U.S.	5.08%	7.11%	-2.03%	2.91%	2.75%	0.16%	0.06%	-0.01%	0.06%	-0.37%	-0.31%
United States	3.84%	0.00%	3.84%	13.94%	--	--	0.00%	0.33%	0.33%	0.00%	0.33%
Europe Ex U.K.	27.27%	31.48%	-4.20%	9.54%	8.61%	0.93%	-0.08%	0.19%	0.11%	0.21%	0.32%
United Kingdom	8.22%	12.77%	-4.55%	7.74%	5.08%	2.66%	0.07%	0.16%	0.22%	-0.37%	-0.14%
Pacific Basin Ex Japan	13.57%	8.51%	5.06%	11.08%	11.70%	-0.62%	0.13%	0.12%	0.25%	0.32%	0.57%
Japan	9.67%	17.06%	-7.39%	4.38%	4.48%	-0.10%	0.39%	-0.37%	0.02%	-0.59%	-0.57%
Emerging Markets	30.81%	22.39%	8.42%	11.78%	11.58%	0.20%	0.22%	0.43%	0.64%	0.82%	1.46%
Other	1.53%	0.68%	0.85%	4.32%	4.41%	-0.10%	-0.02%	0.01%	-0.01%	-0.02%	-0.03%
Total				9.58%	7.94%	1.63%	0.77%	0.86%	1.63%	0.00%	1.63%

Region	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.
EM Asia	20.63%	15.87%	4.76%	15.08%	13.37%	1.71%	0.22%	0.57%	0.79%	0.86%	1.65%
EM Latin America	5.04%	3.04%	2.00%	9.42%	12.13%	-2.70%	0.05%	-0.03%	0.02%	0.13%	0.14%
EM Europe & Middle East	2.16%	1.63%	0.53%	-2.42%	1.48%	-3.91%	-0.05%	-0.06%	-0.11%	-0.11%	-0.22%
EM Africa	2.24%	1.66%	0.58%	1.25%	4.51%	-3.27%	-0.02%	-0.06%	-0.08%	-0.06%	-0.13%
Other	69.93%	77.80%	-7.87%	8.51%	6.88%	1.63%	0.06%	0.96%	1.02%	-0.83%	0.19%
Total				9.58%	7.94%	1.63%	0.26%	1.38%	1.63%	0.00%	1.63%

Total International Equity Performance Attribution by Sector (Net of Fees)

Period Ending: March 31, 2017

**Total International Equity vs. MSCI ACWI ex USA
Current Quarter**



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	6.57%	7.26%	-0.69%	3.91%	-0.76%	4.67%	0.05%	0.30%	0.35%	-0.63%	-0.29%
Materials	6.80%	7.99%	-1.20%	6.37%	8.42%	-2.05%	0.03%	-0.19%	-0.16%	0.04%	-0.12%
Industrials	14.16%	11.67%	2.49%	9.75%	9.56%	0.20%	0.04%	0.10%	0.14%	0.19%	0.33%
Consumer Discretionary	11.00%	11.48%	-0.48%	9.13%	6.87%	2.26%	0.01%	0.23%	0.24%	-0.12%	0.12%
Consumer Staples	10.24%	9.77%	0.47%	10.47%	8.63%	1.84%	0.00%	0.19%	0.19%	0.07%	0.26%
Health Care	4.42%	8.07%	-3.64%	12.63%	8.32%	4.31%	-0.03%	0.10%	0.07%	0.03%	0.10%
Financials	22.00%	23.39%	-1.38%	9.37%	7.64%	1.73%	0.00%	0.38%	0.38%	-0.07%	0.31%
Information Technology	9.59%	9.30%	0.29%	15.16%	14.60%	0.55%	0.02%	0.06%	0.08%	0.62%	0.70%
Telecommunication Services	7.41%	4.66%	2.76%	8.80%	5.95%	2.86%	-0.05%	0.28%	0.22%	-0.09%	0.13%
Utilities	4.49%	3.16%	1.33%	8.12%	8.34%	-0.21%	0.01%	0.02%	0.03%	0.01%	0.04%
Real Estate	3.32%	3.25%	0.06%	9.94%	6.84%	3.10%	0.00%	0.10%	0.10%	-0.04%	0.07%
Total				9.58%	7.95%	1.63%	0.07%	1.57%	1.63%	0.00%	1.63%

Total International Equity
Performance Attribution Summary (Net of Fees)

Period Ending: March 31, 2017

Portfolio: Total International Equity
Benchmark: MSCI ACWI ex USA

Portfolio Total Return 9.18%

Equity Only

Portfolio 9.58%

Benchmark 7.94%

Return From Active Mgmt 1.63%

Local Returns

Portfolio 7.06%

Benchmark 5.29%

Active Equity Return 1.77%

Country Selection 0.80%

Stock Selection 0.99%

Currency Contributions

Portfolio 2.47%

Benchmark 2.63%

Active Currency Contributions -0.16%

Chart uses return-based methodology

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
Ivy	Domestic Equity Large Cap Growth	Watch	⌘	⌘	⌘	✓	✓	⌘
Aronson Johnson Ortiz	Domestic Equity Large Cap Value	No Issues	✓	⌘	✓	✓	⌘	✓
Systematic Small/Mid Cap Value	Domestic Equity Small/Mid Cap Value	No Issues	✓	⌘	✓	✓	✓	✓
Kalmar Investments Management	Domestic Equity Small/Mid Cap Growth	Terminate	⌘	⌘	⌘	⌘	⌘	⌘
Artisan International Growth	International Equity	No Issues	✓	⌘	⌘	⌘	⌘	⌘
Research Affiliates International Equity	International Equity	No Issues	✓	⌘	⌘	✓	✓	⌘
Mondrian International Small Cap	International Equity Small Cap	No Issues	⌘	⌘	⌘	⌘	⌘	✓
Mondrian Emerging Markets	Emerging Markets Equity	No Issues	✓	⌘	⌘	⌘	⌘	✓

Rule 1 - Manager has underperformed the benchmark index more than half the time over the last 20 quarters

Rule 2 - Equity manager has returned less than 110% of the benchmark index for the three year period.

Rule 3 - Manager has underperformed the 50th percentile in the appropriate style universe in more than two of the last five years of consecutive returns.

Rule 4 - Manager's Sharpe Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period $([\text{five year return minus five year risk free rate}]/[\text{standard deviation}])$.

Rule 5 - Manager's Information Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period $([\text{excess return over benchmark}]/[\text{tracking error}])$.

Rule 6 - 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.

Watch List standards are run against historical composite returns prior to manager since inception.

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
Brandywine Global Sovereign	Global Fixed Income	No Issues	✓	✓	✗	✗	✗	✗
Western Asset Investment Grade Credit	Domestic Fixed Income	No Issues	✓	✓	✓	✗	✓	✓
Loomis Sayles High Yield	Domestic Fixed Income High Yield	No Issues	✓	✗	✓	✗	✓	✓
Eaton Vance Senior Loan Fund	Domestic Fixed Income Bank Loans	No Issues	✗	✗	✗	✗	✗	✗
PIMCO Emerging Local Bond Ins	Emerging Markets Fixed Income	No Issues	✓	✗	✗	✗	✗	✓
Invesco Core Real Estate	Real Estate	No Issues	✗	✗	✗	--	--	✓
Grosvenor	Hedge Funds	No Issues	✓	✓	✗	--	--	✓
Invesco Commodities	Commodities	No Issues	✓	✓	✗	--	--	✓

Rule 1 - Manager has underperformed the benchmark index more than half the time over the last 20 quarters

Rule 2 - Fixed Income manager has returned less than 105% of the benchmark index for the three year period.

Rule 3 - Manager has underperformed the 50th percentile in the appropriate style universe in more than two of the last five years of consecutive returns.

Rule 4 - Manager's Sharpe Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period $(\text{five year return minus five year risk free rate})/(\text{standard deviation})$.

Rule 5 - Manager's Information Ratio is worse than the 50th Percentile in an appropriate style universe for the five year period $(\text{excess return over benchmark})/(\text{tracking error})$.

Rule 6 - 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.

Watch List standards are run against historical composite returns prior to manager since inception.

Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2017

Account	Fee Schedule	Market Value As of 3/31/2017	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSgA S&P 500 Flagship Fund	0.03% of First \$150.0 Mil, 0.02% Thereafter	\$246,793,196	\$62,423	0.03%
Ivy	0.25% of Assets	\$220,616,277	\$551,541	0.25%
Aronson Johnson Ortiz	0.30% of First \$250.0 Mil, 0.20% of Next \$250.0 Mil, 0.15% of Next \$500.0 Mil, 0.13% Thereafter	\$225,059,857	\$675,180	0.30%
Systematic Small/Mid Cap Value	0.35% of Assets	\$68,656,366	\$240,297	0.35%
Kalmar Investments Management	1.00% of First \$10.0 Mil, 0.88% of Next \$10.0 Mil, 0.75% Thereafter	\$69,095,737	\$555,718	0.80%
Artisan International Growth	0.30% of Assets	\$179,519,481	\$538,558	0.30%
Research Affiliates International Equity	0.12% of Assets	\$203,086,634	\$243,704	0.12%
Mondrian International Small Cap	0.85% of First \$25.0 Mil, 0.65% of Next \$50.0 Mil, 0.63% of Next \$50.0 Mil, 0.60% Thereafter	\$127,428,586	\$864,572	0.68%
Mondrian Emerging Markets	1.00% of First \$25.0 Mil, 0.75% of Next \$50.0 Mil, 0.60% Thereafter	\$310,326,116	\$2,036,957	0.66%
Western Asset Investment Grade Credit	0.30% of First \$100.0 Mil, 0.15% Thereafter	\$202,486,634	\$453,730	0.22%
Loomis Sayles High Yield	0.50% of Assets	\$217,656,170	\$1,088,281	0.50%
Eaton Vance Senior Loan Fund	0.55% of First \$50.0 Mil, 0.50% of Next \$50.0 Mil, 0.40% Thereafter	\$189,938,023	\$884,752	0.47%
Eaton Vance Institutional Senior Loan Plus Fund	0.40% of Assets	\$20,117,707	\$80,471	0.40%

This fee analysis only reflects base fees for investment management, does not incorporate performance-based fees, and excludes fees paid to real estate managers, private equity managers and GCM Better Futures Fund. Real estate and private equity fees have other components which cannot be easily captured in this simplified format.

** Managers with incentive fee include: Waddell, Systematic, Research Affiliates, Western Asset, Artisan, Brandywine, and Invesco Commodities. Performance based fees are not included in the fee analysis. AJO has performance based fees.*

Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2017

Account	Fee Schedule	Market Value As of 3/31/2017	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSgA TIPS	0.04% of Assets	\$160,413,478	\$64,165	0.04%
Barclays U.S. Aggregate Index Fund	0.02% of Assets	\$148,852,091	\$29,770	0.02%
Brandywine Global Sovereign	0.36% of Assets	\$283,893,786	\$1,022,018	0.36%
PIMCO Emerging Local Bond Ins	0.50% of First \$100.0 Mil, 0.45% Thereafter	\$211,968,944	\$1,003,860	0.47%
IFM Infrastructure	0.97% of Assets	\$135,644,748	\$1,315,754	0.97%
Grosvenor	1.15% of First \$25.0 Mil, 1.00% of Next \$25.0 Mil, 0.80% of Next \$50.0 Mil, 0.60% Thereafter	\$157,303,451	\$1,281,321	0.81%
Invesco Commodities	0.30% of Assets	\$118,040,819	\$354,122	0.30%
Parametric Overlay	0.15% of First \$25.0 Mil, 0.10% of Next \$75.0 Mil, 0.04% Thereafter	\$89,250,526	\$101,751	0.11%
Investment Management Fee		\$3,586,148,627	\$13,448,944	0.38%

This fee analysis only reflects base fees for investment management, does not incorporate performance-based fees, and excludes fees paid to real estate managers, private equity managers and GCM Better Futures Fund. Real estate and private equity fees have other components which cannot be easily captured in this simplified format.

** Managers with incentive fee include: Waddell, Systematic, Research Affiliates, Western Asset, Artisan, Brandywine, and Invesco Commodities. Performance based fees are not included in the fee analysis. AJO has performance based fees.*

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

Closed end funds including but not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit may lag performance and market value data due to delayed reporting. Verus will show market values for closed end funds as of the most recent reported performance adjusted for capital calls and distributions. Closed end fund managers report performance using an internal rate of return (IRR), which differs from the TWRR calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Manager Line Up

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
Benefits Payment Cash	N/A	Northern Trust	RAFI International Equity	04/30/2011	Northern Trust
Custodied	N/A	Northern Trust	Oaktree Opportunities Fund IX	2012	Oaktree
Internal	N/A	FCERA	Artisan International Growth	04/01/2013	Northern Trust
Transition	N/A	Northern Trust	PIMCO Emerging Local Bond	07/31/2013	Northern Trust
Aronson Johnson Ortiz	12/04/1995	Northern Trust	Barclays U.S. Aggregate Bond	04/30/2014	Northern Trust
Warburg Pincus	1998	Warburg Pincus	WAMCO Credit Index	10/01/2014	Northern Trust
TCW Shop III	1998	TCW	Loomis Sayles High Yield	10/01/2014	Northern Trust
Warburg Pincus VIII	2001	Warburg Pincus	Eaton Vance Senior Loan	10/01/2014	Eaton Vance
Blackstone IV	2002	Blackstone	Colony Distressed Credit III	2014	Colony
Lonestar IV	2002	Lonestar	Brandywine Global Sovereign	01/31/2015	Northern Trust
TCW Shop IV	2002	TCW	IFM Global Infrastructure	05/13/2015	IFM
SSgA S&P 500 Flagship Fund	04/01/2004	State Street	Invesco Commodities	05/27/2015	Invesco
Kalmar Investments	11/18/2004	Northern Trust	GSO European Senior Debt	2015	GSO
Mondrian Emerging Markets	11/17/2005	Mondrian	CVI Credit Value Fund III	2015	CarVal
Invesco Core Real Estate	10/01/2007	Invesco	Warburg Pincus XII	2015	Warburg Pincus
New Mountain III	2007	New Mountain	Gerding Edlen Green Cities III	2016	Gerding Edlen
Hamilton Lane VI	2007	Hamilton Lane	Hamilton Lane PE Fund IX	2016	Hamilton Lane
Warburg Pincus X	2007	Warburg Pincus	Kennedy Wilson Real Estate V	2016	Kennedy Wilson
Landmark Equity Partners XIV	2008	Landmark	TSSP Adjacent Opportunities	2016	TSSP
SSgA TIPS	02/27/2009	State Street	OHA Strategic Credit Fund II, L.P.	2016	OHA
Grosvenor	10/31/2009	Grosvenor	Horsley Bridge XI GBO	2016	Horsley Bridge
Mondrian Int'l Small Cap	11/02/2009	Mondrian	GCM Better Futures Fund	09/28/2016	Grosvenor
Colony Distressed Credit I	2009	Colony	Parametric Overlay	12/27/2016	Northern Trust
TA Associates Realty 9	2009	TA Associates	EQT European S. Situations Debt	2017	EQT
Systematic Small/Mid Value	10/08/2010	Northern Trust	Eaton Vance Ins. Sr Loan Plus	01/25/2017	Eaton Vance
Ivy	12/20/2010	Northern Trust			
KKR Mezzanine Partners I	2010	KKR			
Angelo Gordon Cap. Recov. VII	2010	Angelo Gordon			

Policy & Custom Index Composition

Floating Policy Index (1/1/2017-1/31/2017)	20.3% Russell 3000 Index, 37.4% BBgBarc Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.7% Russell 3000 Index + 250 bps, 2% BBgBarc Aggregate Index + 250 bps, 7.6% HFRI Fund of Funds Composite, 8.0% NCREIF ODCE, 3.0% Bloomberg Commodity Index.
(2/1/2017-2/28/2017)	20.5% Russell 3000 Index, 37.5% BBgBarc Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.6% Russell 3000 Index + 250 bps, 1.9% BBgBarc Aggregate Index + 250 bps, 7.5% HFRI Fund of Funds Composite, 8.0% NCREIF ODCE, 3.0% Bloomberg Commodity Index.
(3/1/2017-3/31/2017)	20.6% Russell 3000 Index, 37.5% BBgBarc Global Aggregate Index, 19.0% MSCI ACWI ex U.S., 2.5% Russell 3000 Index + 250 bps, 1.9% BBgBarc Aggregate Index + 250 bps, 7.5% HFRI Fund of Funds Composite, 8.0% NCREIF ODCE, 3.0% Bloomberg Commodity Index.
BBgBarc Global Aggregate*	Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index.

Other Disclosures

A non-cash contribution was made matching the investment manager fee for Invesco Real Estate and non-cash contributions were made estimating the investment manager fee for Invesco Commodities.

Fresno County Employees' Retirement Association fiscal year end is June 30.

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: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

Benchmark 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: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

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.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

Verus receives universe data from InvestorForce, eVestment Alliance, and Morningstar. We believe this data to be robust and appropriate for peer comparison. Nevertheless, these universes may not be comprehensive of all peer investors/managers but rather of the investors/managers that comprise that database. The resulting universe composition is not static and will change over time. Returns are annualized when they cover more than one year. Investment managers may revise their data after report distribution. Verus will make the appropriate correction to the client account but may or may not disclose the change to the client based on the materiality of the change.