

Fresno County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2019



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

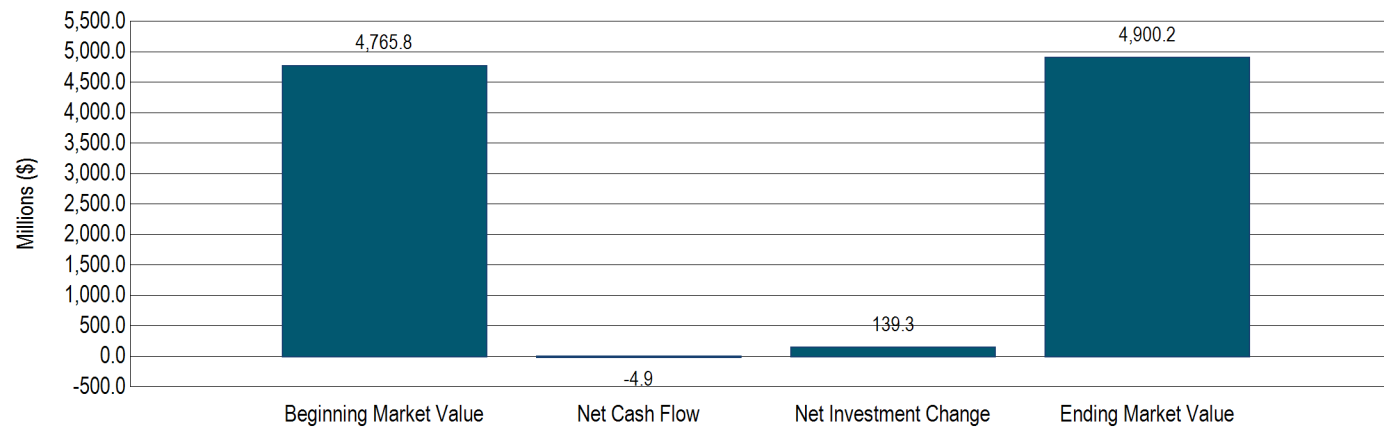
Total Fund
Portfolio Reconciliation

Period Ending: June 30, 2019

Portfolio Reconciliation

	Last Three Months	Year-To-Date
Beginning Market Value	\$4,765,770,434	\$4,470,075,824
Net Cash Flow	-\$4,883,533	-\$12,986,332
Net Investment Change	\$139,321,183	\$443,118,593
Ending Market Value	\$4,900,208,085	\$4,900,208,085

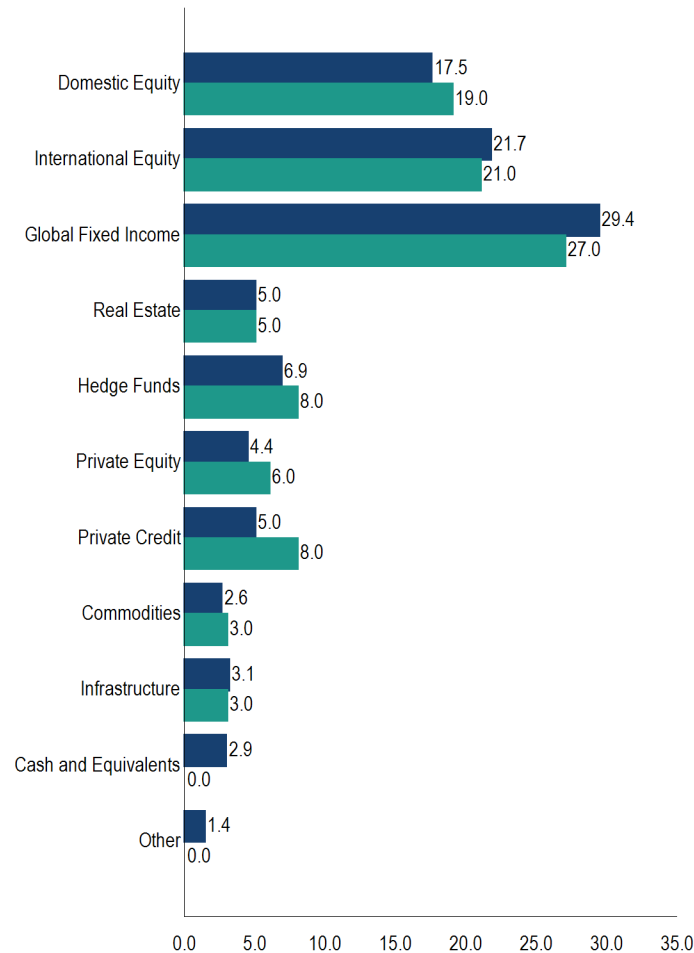
Change in Market Value
Last Three Months



Total Fund Asset Allocation

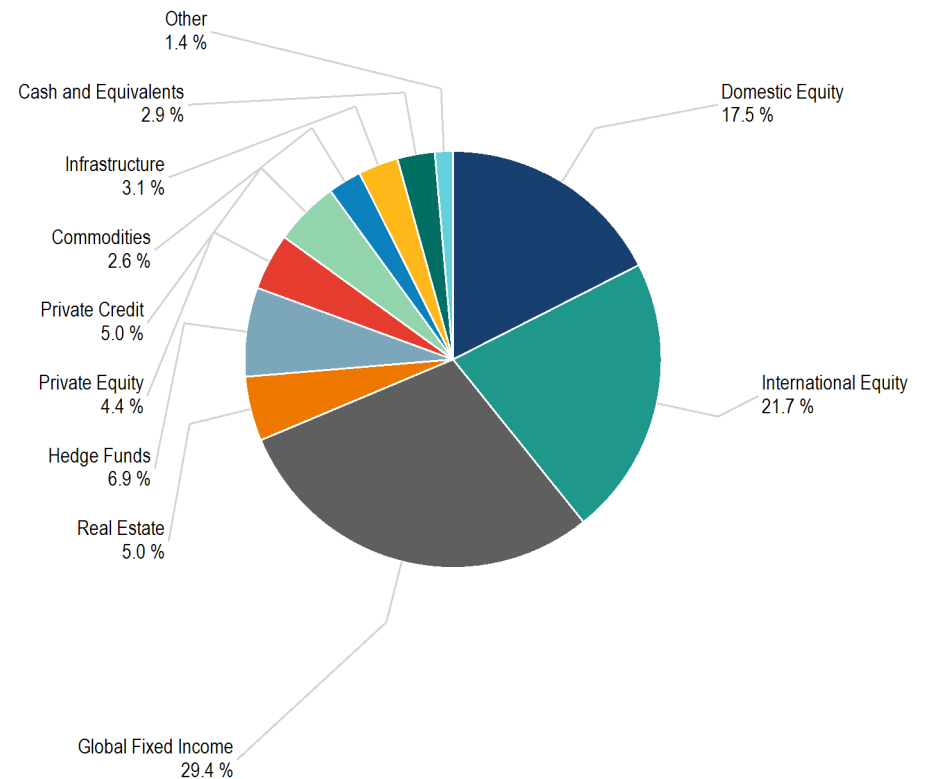
Period Ending: June 30, 2019

Actual vs Target Allocation (%)



Actual Policy

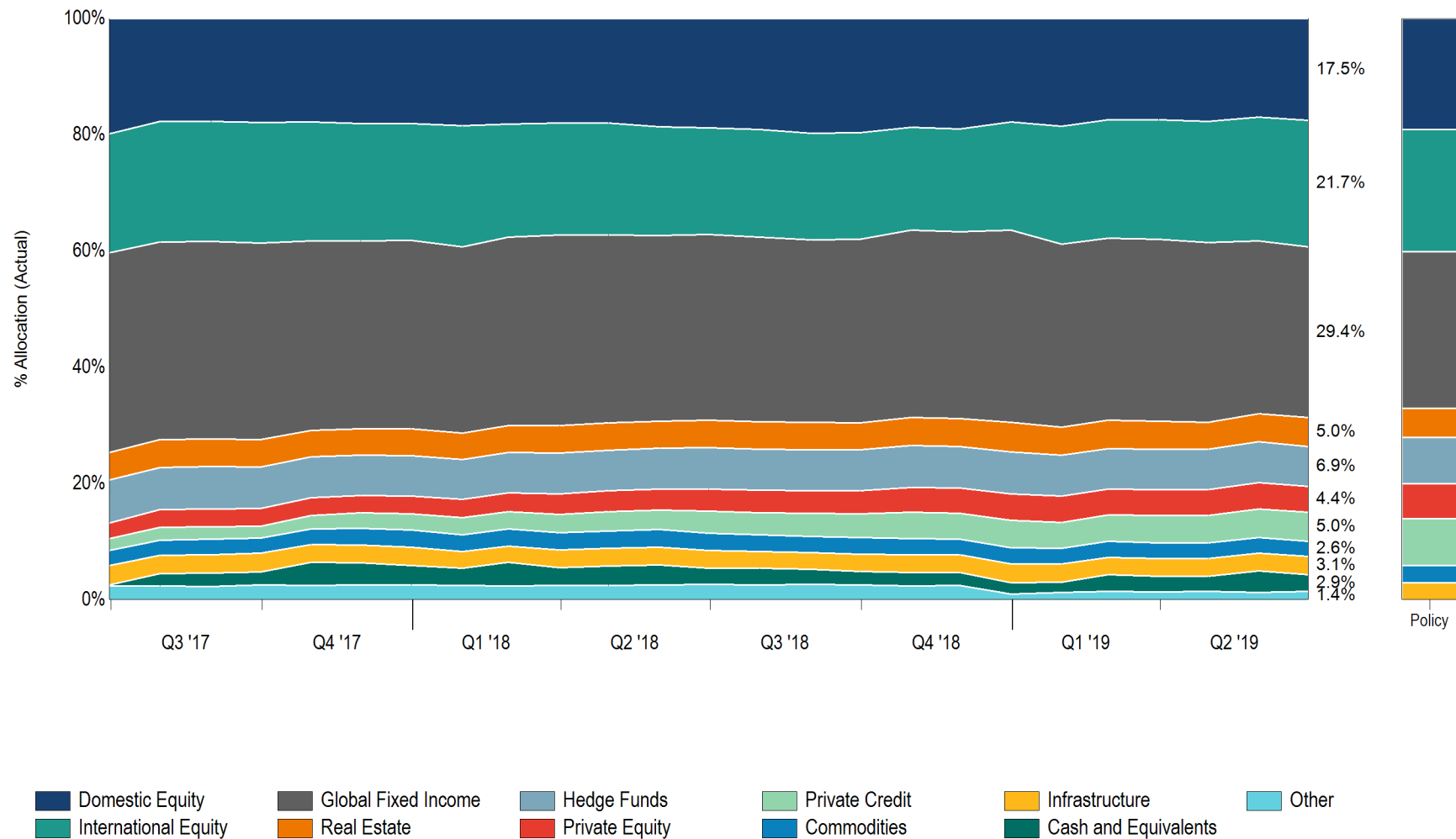
Current Allocation



Other consists of cash held for the overlay program. The target allocation reflects the most recent asset allocation targets per Asset Allocation Glidepath in IPS.

Total Fund Asset Allocation History

Period Ending: June 30, 2019



Total Fund Executive Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2018	2017	2016	2015	2014
Total Fund	4,900,208,085	100.0	2.9	9.8	5.6	7.7	4.5	8.7	6.8	-3.6	14.6	6.7	-2.5	3.5
Policy Index			3.2	8.9	5.1	6.7	4.1	8.1	5.9	-3.2	14.0	6.5	-1.7	2.6
InvMetrics Public DB > \$1B Net Rank			55	69	42	98	96	67	35	41	67	80	86	88
Total Domestic Equity	858,923,029	17.5	3.5	17.1	6.7	13.6	9.0	14.3	--	-5.1	20.2	8.9	1.5	9.8
Russell 3000			4.1	18.7	9.0	14.0	10.2	14.7	8.9	-5.2	21.1	12.7	0.5	12.6
Total International Equity	1,064,368,042	21.7	3.8	14.9	4.5	9.1	2.3	7.5	--	-13.6	28.5	3.0	-7.5	-2.5
MSCI ACWI ex USA Gross			3.2	14.0	1.8	9.9	2.6	7.0	6.3	-13.8	27.8	5.0	-5.3	-3.4
Total Fixed Income	1,441,957,954	29.4	3.2	7.7	6.4	3.9	2.8	--	--	-2.9	8.0	6.7	-4.5	5.0
BBgBarc Global Aggregate*			3.3	5.6	5.8	1.6	1.2	3.1	3.7	-1.2	7.4	2.1	-3.2	0.0
Total Real Estate	244,345,095	5.0	1.1	2.7	7.7	7.7	9.5	9.0	--	9.2	6.8	8.5	13.9	11.8
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	--	7.4	6.7	7.8	13.9	11.5
Total Infrastructure	153,619,238	3.1	3.8	6.6	16.3	15.6	--	--	--	20.1	19.0	6.1	--	--
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	--	7.4	6.7	7.8	13.9	11.5
Total Hedge Funds	336,589,806	6.9	1.7	4.7	1.1	4.8	2.4	3.3	3.5	-0.7	4.6	3.0	0.0	3.1
HFRI Fund of Funds Composite Index			1.5	6.2	1.2	4.2	2.2	3.2	3.0	-4.0	7.8	0.5	-0.3	3.4
Total Commodities	127,494,644	2.6	-1.7	3.2	-8.0	-2.0	-5.8	--	--	-11.7	5.8	13.8	-12.8	-16.9
Bloomberg Commodity Index TR USD			-1.2	5.1	-6.8	-2.2	-9.1	-3.7	-2.6	-11.2	1.7	11.8	-24.7	-17.0
Total Private Equity 1 Qtr Lagged	217,546,745	4.4	2.1	2.8	8.3	12.2	8.3	12.5	11.7	12.0	13.9	10.7	3.8	4.8
Russell 2000 1 Qtr Lagged			14.6	-8.6	2.0	11.5	6.6	13.2	8.0	15.2	10.9	21.3	-4.4	4.9
Total Private Credit 1 Qtr Lagged	244,312,004	5.0	1.8	1.0	5.5	7.0	4.3	16.4	13.1	7.6	8.1	7.4	-2.5	6.8
BBgBarc US Corp. High Yield 1 Qtr Lagged			7.3	2.4	5.9	6.6	4.2	9.0	7.4	3.0	7.0	17.1	-4.5	2.5
Total Custodied Cash	26,140,383	0.5	0.8	1.5	2.7	1.3	1.0	0.8	--	1.9	0.1	0.8	0.0	0.5
91 Day T-Bills			0.6	1.2	2.3	1.4	0.9	0.5	1.3	1.9	0.9	0.3	0.0	0.0
Total County Cash	25,438,221	0.5	0.8	1.5	3.0	--	--	--	--	2.4	--	--	--	--
91 Day T-Bills			0.6	1.2	2.3	1.4	0.9	0.5	1.3	1.9	0.9	0.3	0.0	0.0

Policy Index (Floating policy weights updated as of 6/30/2019. See Data Sources and Methodology for monthly policy breakout): 19% Russell 3000 Index, 27% BBgBarc Global Aggregate Index, 21% MSCI ACWI ex US, 1.6% Russell 2000, 3.0% BBgBarc US Corp. High Yield, 4.4% Private Equity Neutralized, 5.0% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 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: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs	2018	2017	2016	2015	2014
Total Fund	4,900,208,085	100.0	3.0	10.0	5.8	8.0	4.8	9.1	7.1	6.4	-3.3	14.9	7.2	-2.1	3.8
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Total Domestic Equity	858,923,029	17.5	3.5	17.2	6.9	13.8	9.2	14.6	8.8	7.1	-4.9	20.3	9.1	1.8	10.1
Russell 3000			4.1	18.7	9.0	14.0	10.2	14.7	8.9	6.3	-5.2	21.1	12.7	0.5	12.6
Total International Equity	1,064,368,042	21.7	4.0	15.2	5.0	9.5	2.7	8.0	7.2	5.6	-13.2	29.1	3.5	-7.1	-2.1
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Total Fixed Income	1,441,957,954	29.4	3.3	7.9	6.8	4.3	3.1	--	--	--	-2.5	8.3	7.0	-4.2	5.1
BBgBarc Global Aggregate*			3.3	5.6	5.8	1.6	1.2	3.1	3.7	4.5	-1.2	7.4	2.1	-3.2	0.0
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Total Hedge Funds	336,589,806	6.9	1.7	4.7	1.1	4.9	2.8	4.1	--	--	-0.7	4.6	3.8	0.9	4.2
HFRI Fund of Funds Composite Index			1.5	6.2	1.2	4.2	2.2	3.2	3.0	4.0	-4.0	7.8	0.5	-0.3	3.4
Total Commodities	127,494,644	2.6	-1.7	3.2	-8.0	-2.0	-5.6	--	--	--	-11.7	5.8	14.4	-12.3	-16.7
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Total Custodied Cash	26,140,383	0.5	0.8	1.5	2.7	1.3	1.0	0.8	1.7	1.9	1.9	0.1	0.8	0.0	0.5
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Total County Cash	25,438,221	0.5	0.8	1.5	3.0	--	--	--	--	--	2.4	--	--	--	--
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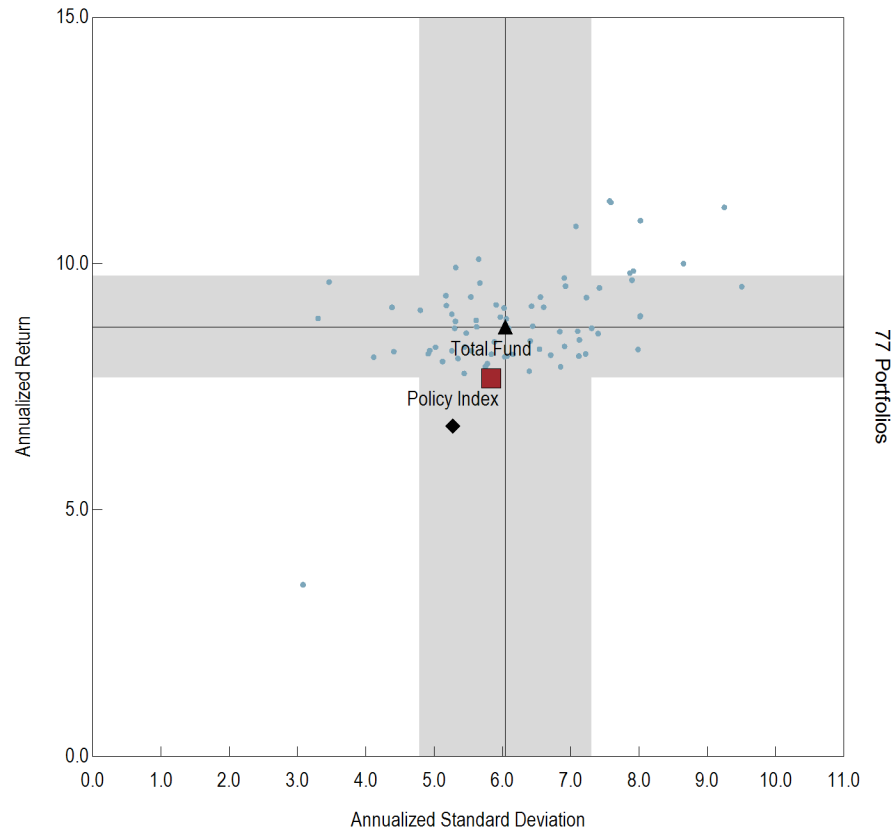
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*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index.

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2019

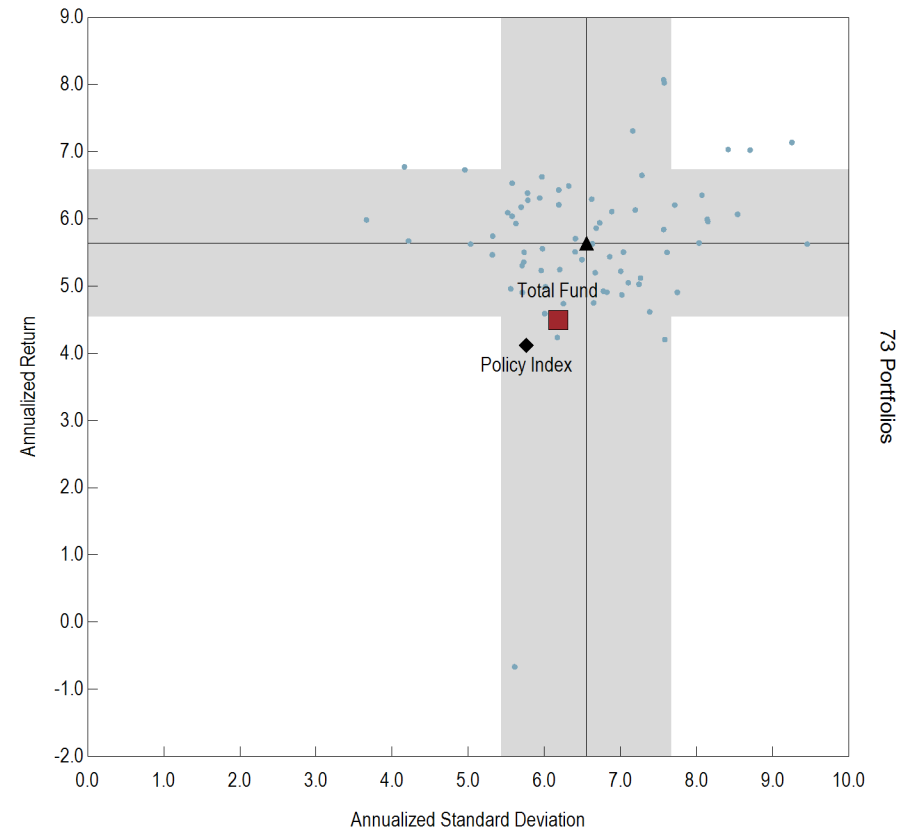
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	7.7%	5.8%	1.1
Policy Index	6.7%	5.3%	1.0
InvMetrics Public DB > \$1B Net Median	8.7%	6.0%	1.2

5 Years



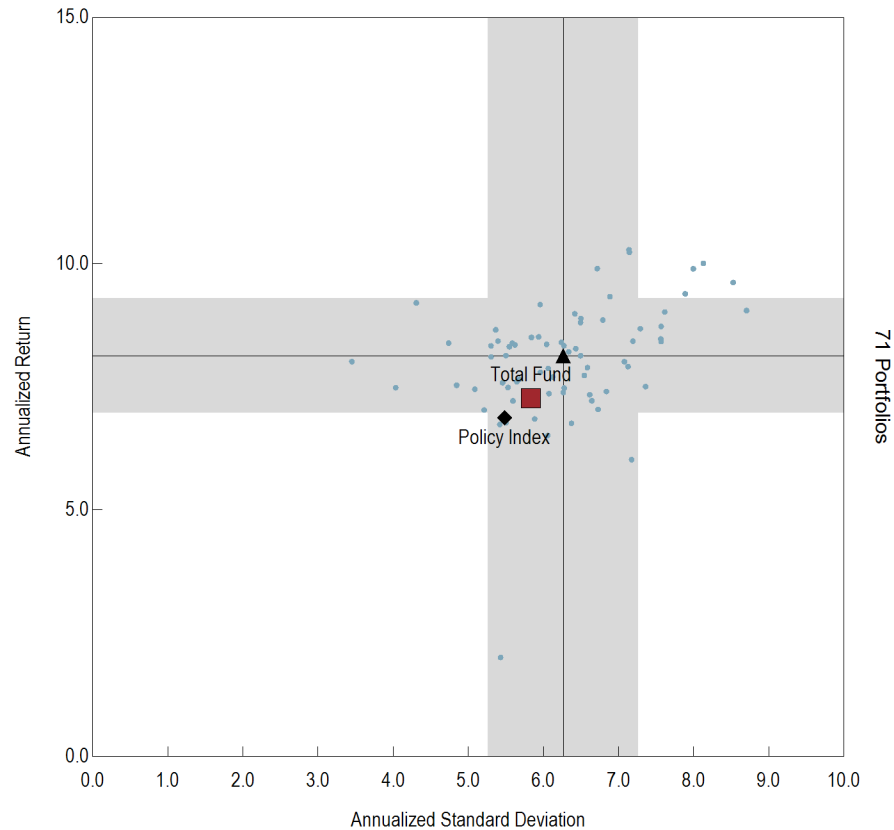
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	4.5%	6.2%	0.6
Policy Index	4.1%	5.8%	0.6
InvMetrics Public DB > \$1B Net Median	5.6%	6.6%	0.7

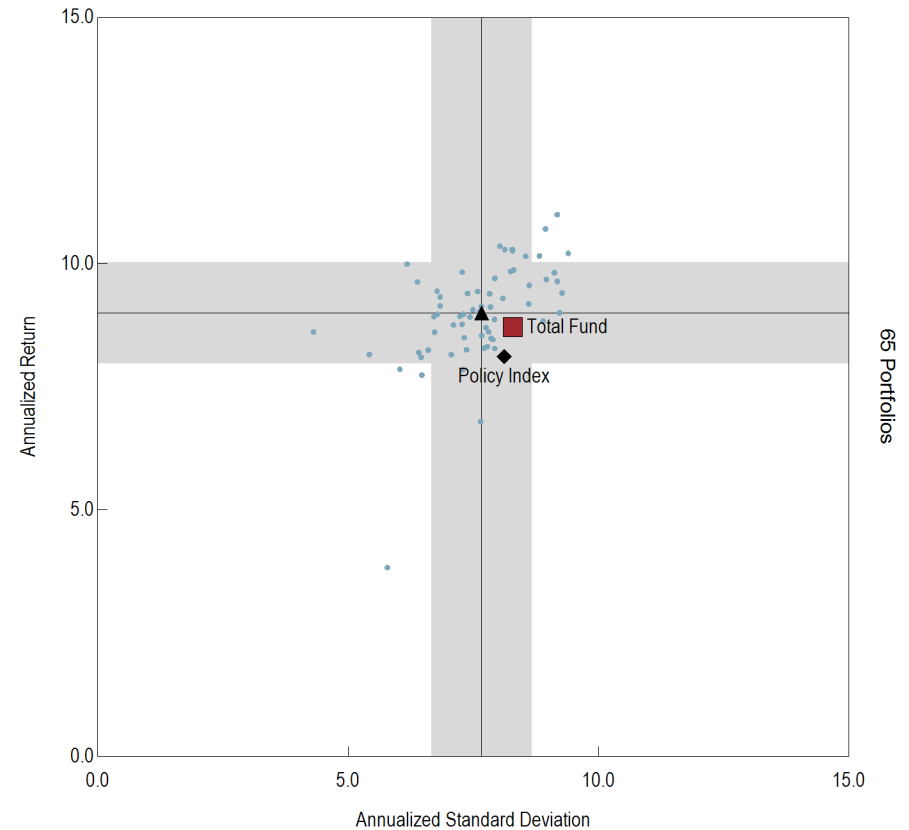
Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2019

7 Years



10 Years



7 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	7.3%	5.8%	1.1
Policy Index	6.9%	5.5%	1.1
InvMetrics Public DB > \$1B Net Median	8.1%	6.3%	1.2

10 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	8.7%	8.3%	1.0
Policy Index	8.1%	8.1%	0.9
InvMetrics Public DB > \$1B Net Median	9.0%	7.7%	1.1

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2019

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	5.84%	0.40%	1.09	0.96	111.37%	102.91%	0.79	1.23%	1.08	1.75
Total Domestic Equity	12.63%	-0.40%	1.00	0.99	96.78%	98.20%	-0.27	1.39%	0.97	1.12
Total International Equity	11.36%	-0.72%	0.99	0.98	97.02%	102.24%	-0.50	1.73%	0.68	1.49
Total Domestic Fixed Income	2.58%	3.12%	0.44	0.26	86.19%	15.65%	0.65	2.80%	1.07	2.53
Total Real Estate	2.58%	2.17%	0.83	0.78	91.65%	--	0.80	1.30%	2.44	1,571.63
Total Hedge Funds	2.85%	1.95%	0.67	0.72	80.92%	42.60%	0.28	1.93%	1.20	1.98
Total Alternative Illiquids	4.66%	10.31%	-0.03	0.01	23.60%	-14.18%	-0.51	13.71%	1.81	103.55

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	6.18%	0.19%	1.04	0.95	104.69%	100.09%	0.27	1.42%	0.59	1.16
Total Domestic Equity	12.69%	-1.37%	1.02	0.98	94.48%	101.94%	-0.70	1.65%	0.65	0.95
Total International Equity	12.19%	-0.25%	0.96	0.97	92.23%	97.47%	-0.17	2.15%	0.12	0.31
Total Domestic Fixed Income	2.82%	1.91%	0.56	0.35	85.10%	49.75%	0.24	2.61%	0.97	2.53
Total Real Estate	4.12%	0.73%	1.00	0.88	100.41%	--	0.53	1.45%	2.11	1,449.19
Total Hedge Funds	3.26%	0.67%	0.78	0.80	82.93%	74.03%	0.12	1.68%	0.47	0.89
Total Alternative Illiquids	4.43%	6.41%	0.01	0.00	13.94%	-12.06%	-0.49	12.96%	1.29	1.49

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2019

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	5.84%	0.13%	1.04	0.95	104.95%	97.42%	0.31	1.30%	1.14	1.42
Total Domestic Equity	10.79%	-0.63%	1.00	0.97	93.23%	97.86%	-0.36	1.86%	1.16	1.05
Total International Equity	11.43%	0.32%	1.00	0.96	101.51%	98.02%	0.13	2.21%	0.57	0.81
Total Domestic Fixed Income	3.51%	1.62%	0.85	0.55	115.71%	53.97%	0.51	2.40%	0.92	2.22
Total Real Estate	1.82%	2.11%	0.80	0.46	103.11%	--	0.17	1.37%	5.01	--
Total Hedge Funds	3.68%	0.53%	0.79	0.79	91.09%	90.01%	-0.12	1.90%	0.77	0.88
Total Alternative Illiquids	4.78%	7.77%	0.10	0.05	31.80%	-8.79%	-0.67	10.74%	1.83	2.92

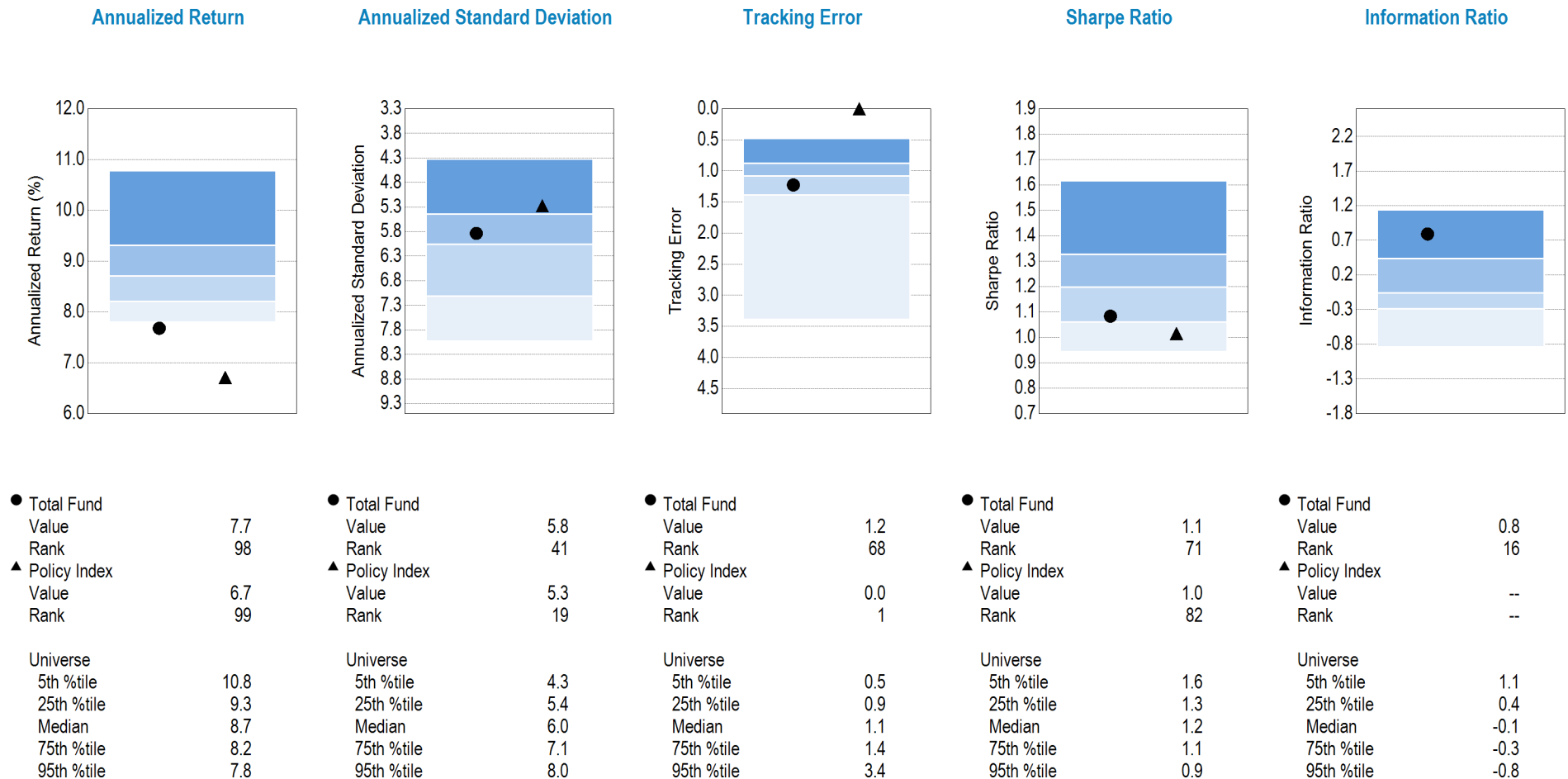
10 Years

	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	8.29%	0.54%	1.01	0.97	106.81%	97.30%	0.45	1.33%	1.00	1.34
Total Domestic Equity	14.28%	-0.70%	1.02	0.98	97.82%	101.77%	-0.19	1.90%	0.97	1.17
Total International Equity	14.58%	0.87%	0.94	0.98	96.24%	94.31%	0.20	2.35%	0.48	0.69
Total Domestic Fixed Income	3.90%	2.58%	0.85	0.49	137.34%	49.64%	0.71	2.81%	1.39	3.38
Total Real Estate	3.60%	2.93%	0.68	0.64	92.85%	55.48%	0.03	2.55%	2.36	1.18
Total Hedge Funds	3.51%	1.39%	0.61	0.65	78.87%	57.52%	0.05	2.76%	0.82	1.06
Total Alternative Illiquids	5.78%	7.05%	0.19	0.21	24.22%	9.46%	-0.58	12.37%	1.72	2.36

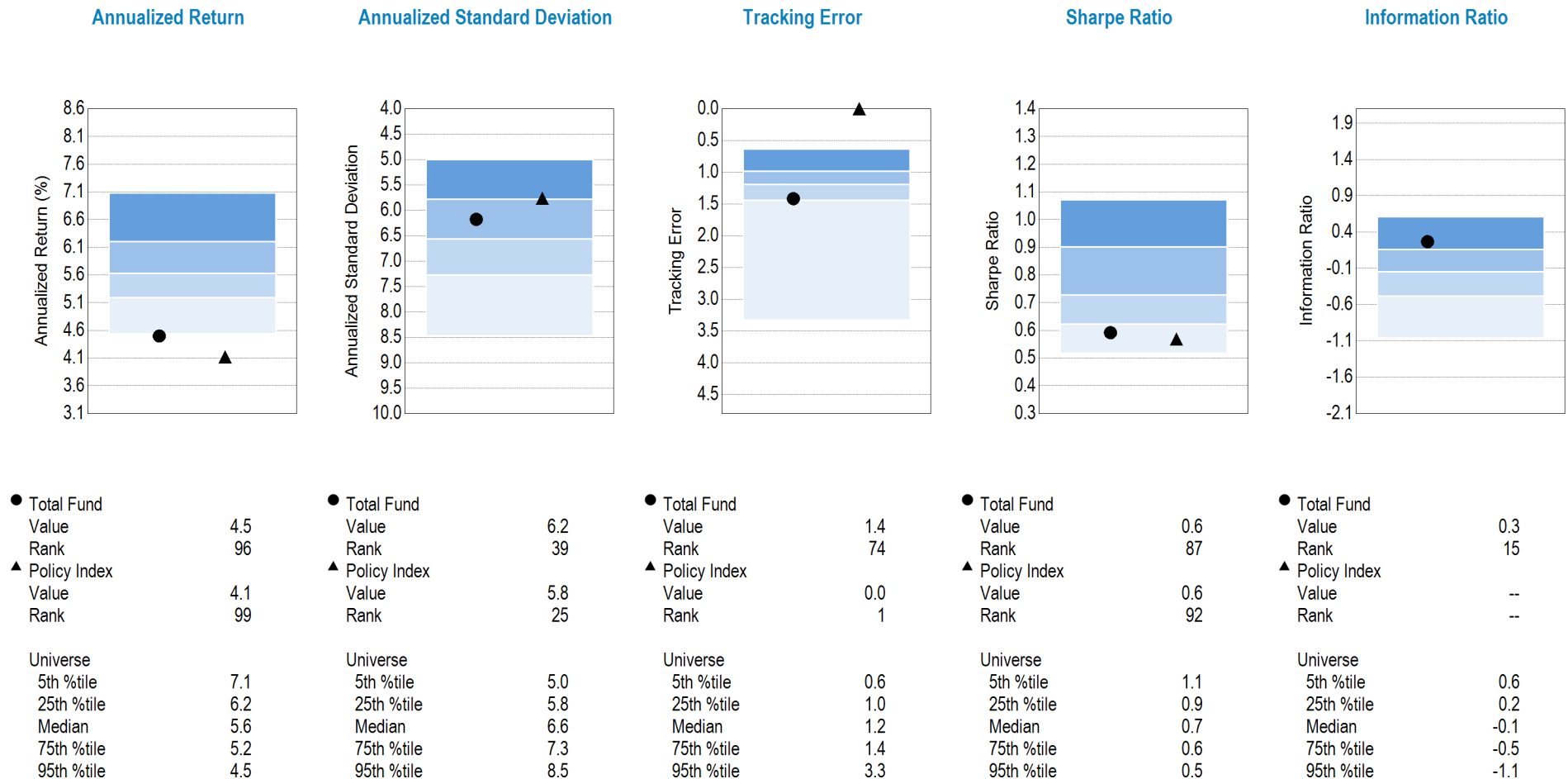
Total Fund
Peer Universe Statistics - 3 Years (Net of Fees)

Period Ending: June 30, 2019

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



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

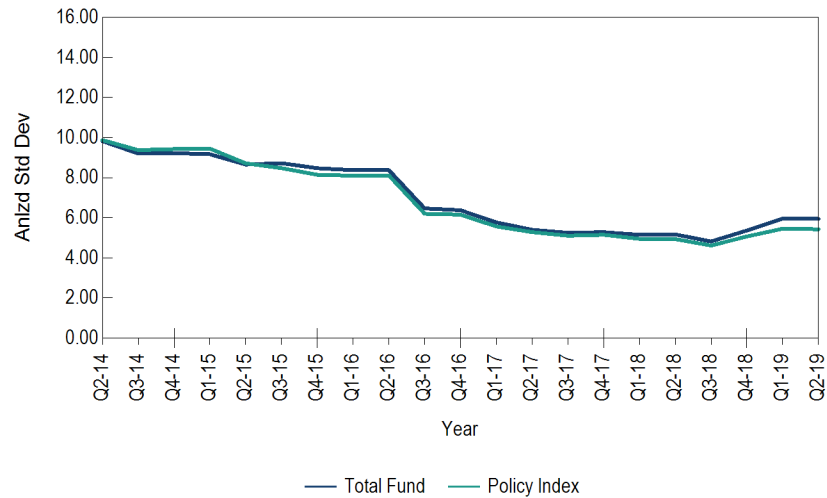


Total Fund

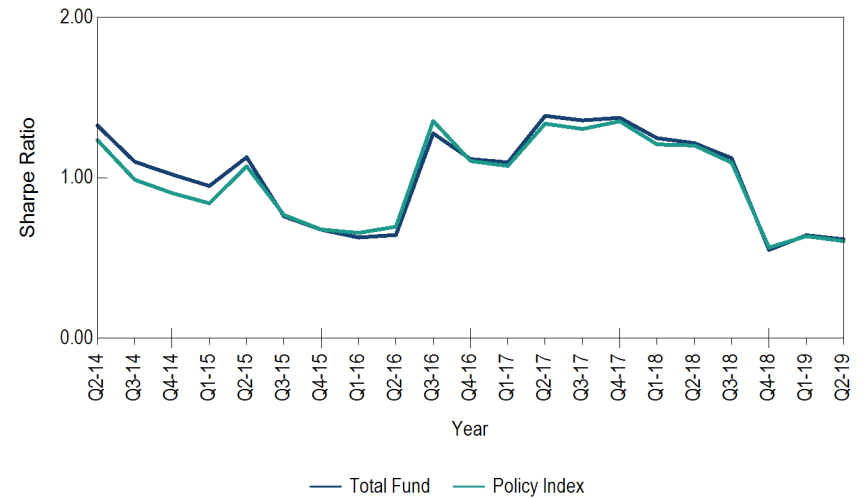
Risk Analysis - 5 Years (Net of Fees)

Period Ending: June 30, 2019

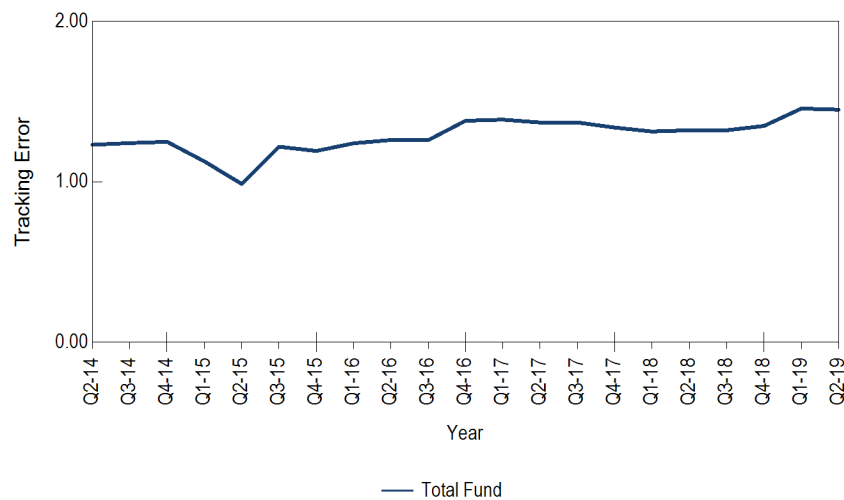
Rolling 5 Year Annualized Standard Deviation



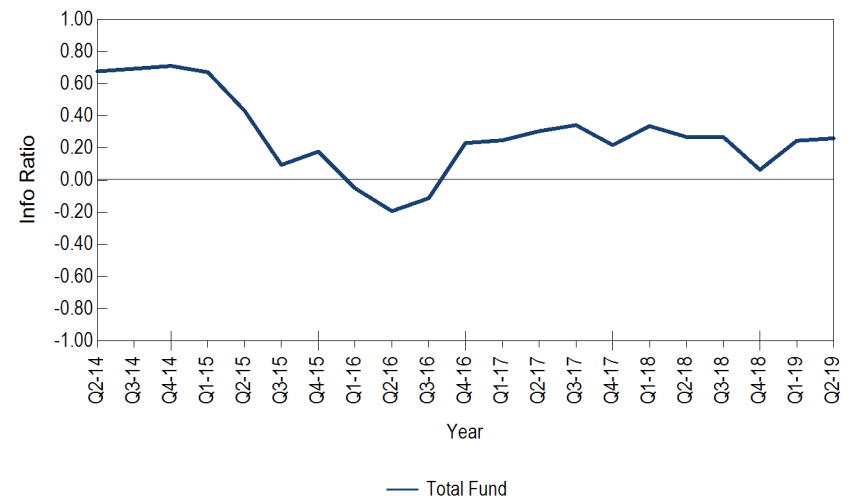
Rolling 5 Year Sharpe Ratio



Rolling 5 Year Tracking Error



Rolling 5 Year Information Ratio



Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Fund	4,900,208,085	100.0	2.9	9.8	5.6	7.7	4.5	8.7	-3.6	14.6	6.7	-2.5	3.5	7.1	Jun-02
<i>Policy Index</i>			3.2	8.9	5.1	6.7	4.1	8.1	-3.2	14.0	6.5	-1.7	2.6	6.4	Jun-02
Total Fund Ex Parametric	4,832,211,814	98.6	2.9	9.4	5.7	--	--	--	-3.1	13.9	--	--	--	7.8	Dec-16
<i>Policy Index</i>			3.2	8.9	5.1	6.7	4.1	8.1	-3.2	14.0	6.5	-1.7	2.6	7.6	Dec-16
Total Domestic Equity	858,923,029	17.5	3.5	17.1	6.7	13.6	9.0	14.3	-5.1	20.2	8.9	1.5	9.8	--	Mar-97
<i>Russell 3000</i>			4.1	18.7	9.0	14.0	10.2	14.7	-5.2	21.1	12.7	0.5	12.6	8.5	Mar-97
SSgA S&P 500 Flagship Fund	175,948,934	3.6	4.3	18.5	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7	8.7	Mar-04
<i>S&P 500</i>			4.3	18.5	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7	8.7	Mar-04
T. Rowe Price Large Cap Growth	308,176,312	6.3	3.2	18.7	--	--	--	--	--	--	--	--	--	16.9	Oct-18
<i>Russell 1000 Growth</i>			4.6	21.5	11.6	18.1	13.4	16.3	-1.5	30.2	7.1	5.7	13.0	18.8	Oct-18
Aronson Johnson Ortiz	278,001,120	5.7	3.7	14.4	2.6	10.6	6.0	12.5	-11.4	16.7	9.5	-0.1	9.6	10.1	Dec-95
<i>Russell 1000 Value</i>			3.8	16.2	8.5	10.2	7.5	13.2	-8.3	13.7	17.3	-3.8	13.5	8.8	Dec-95
PIMCO StocksPLUS Small Fund	96,773,612	2.0	1.3	18.2	-4.1	--	--	--	--	--	--	--	--	4.0	Feb-18
<i>Russell 2000</i>			2.1	17.0	-3.3	12.3	7.1	13.4	-11.0	14.6	21.3	-4.4	4.9	4.1	Feb-18
Total International Equity	1,064,368,042	21.7	3.8	14.9	4.5	9.1	2.3	7.5	-13.6	28.5	3.0	-7.5	-2.5	--	--
<i>MSCI ACWI ex USA Gross</i>			3.2	14.0	1.8	9.9	2.6	7.0	-13.8	27.8	5.0	-5.3	-3.4	--	--
Artisan International Growth	319,356,884	6.5	8.7	20.7	10.3	10.9	4.0	--	-10.2	31.5	-9.0	-2.2	-0.1	6.8	Apr-13
<i>MSCI EAFE</i>			3.7	14.0	1.1	9.1	2.2	6.9	-13.8	25.0	1.0	-0.8	-4.9	5.1	Apr-13
Research Affiliates International Equity	302,167,777	6.2	1.7	10.1	-2.2	9.0	1.4	--	-15.5	25.7	9.3	-5.9	-5.8	4.0	Apr-11
<i>MSCI EAFE</i>			3.7	14.0	1.1	9.1	2.2	6.9	-13.8	25.0	1.0	-0.8	-4.9	3.8	Apr-11
Mondrian International Small Cap	153,102,113	3.1	4.3	14.7	-2.4	9.1	4.1	--	-14.6	32.4	0.1	2.7	-4.9	9.1	Nov-09
<i>S&P Developed Ex-U.S. SmallCap</i>			2.6	13.3	-5.7	8.6	3.9	9.5	-18.4	32.4	3.8	5.9	-3.4	7.9	Nov-09
Mondrian Emerging Markets	144,859,295	3.0	0.1	10.2	4.9	6.6	0.2	5.1	-13.8	27.2	9.0	-16.3	0.0	5.4	Nov-05
<i>MSCI Emerging Markets</i>			0.6	10.6	1.2	10.7	2.5	5.8	-14.6	37.3	11.2	-14.9	-2.2	5.9	Nov-05
Baillie Gifford Emerging Markets	144,881,972	3.0	2.3	17.4	--	--	--	--	--	--	--	--	--	17.4	Dec-18
<i>MSCI Emerging Markets</i>			0.6	10.6	1.2	10.7	2.5	5.8	-14.6	37.3	11.2	-14.9	-2.2	10.6	Dec-18
Total Fixed Income	1,441,957,954	29.4	3.2	7.7	6.4	3.9	2.8	--	-2.9	8.0	6.7	-4.5	5.0	--	--
<i>BBgBarc Global Aggregate*</i>			3.3	5.6	5.8	1.6	1.2	3.1	-1.2	7.4	2.1	-3.2	0.0	--	--
Western Asset Investment Grade Credit	180,600,864	3.7	4.6	10.5	11.5	4.6	--	--	-2.3	6.8	7.0	-0.5	--	4.8	Oct-14
<i>BBgBarc US Credit TR</i>			4.3	9.4	10.3	3.7	3.9	5.8	-2.1	6.2	5.6	-0.8	7.5	4.1	Oct-14
RBC Access Capital	48,390,184	1.0	2.2	4.2	--	--	--	--	--	--	--	--	--	7.1	Oct-18
<i>BBgBarc US Securitized Index</i>			2.0	4.3	6.3	2.1	2.6	3.5	1.0	2.5	1.8	1.5	5.9	7.1	Oct-18

*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index. Baillie Gifford Emerging Markets funded 12/10/2018. T. Rowe Price replaced Ivy on 10/18/2018. Systematic liquidated on 2/4/2019.

Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Loomis Sayles High Yield	325,339,827	6.6	2.3	9.0	6.8	6.6	--	--	-2.3	7.1	14.4	-5.2	--	4.6	Oct-14
BBgBarc US High Yield TR			2.5	9.9	7.5	7.5	4.7	9.2	-2.1	7.5	17.1	-4.5	2.5	5.4	Oct-14
Eaton Vance Senior Loan Fund	235,347,703	4.8	1.0	4.5	2.9	4.8	--	--	0.7	4.0	9.9	-0.8	--	3.8	Oct-14
S&P/LSTA Leveraged Loan Index			1.7	5.7	4.0	5.2	3.7	6.2	0.4	4.1	10.2	-0.7	1.6	4.0	Oct-14
Eaton Vance Institutional Senior Loan Plus Fund	21,933,322	0.4	1.8	6.9	3.7	--	--	--	-1.3	3.6	--	--	--	3.7	Jan-17
S&P/LSTA Leveraged Loan Index			1.7	5.7	4.0	5.2	3.7	6.2	0.4	4.1	10.2	-0.7	1.6	4.0	Jan-17
SSgA TIPS	184,200,658	3.8	2.8	6.1	4.8	2.0	1.7	3.6	-1.3	3.0	4.6	-1.5	3.6	4.1	Feb-09
BBgBarc US TIPS TR			2.9	6.2	4.8	2.1	1.8	3.6	-1.3	3.0	4.7	-1.4	3.6	4.2	Feb-09
Brandywine Global Sovereign	260,680,069	5.3	3.5	6.4	4.4	2.5	--	--	-4.7	11.9	3.8	-9.8	--	1.3	Jan-15
FTSE WGBI TR			3.6	5.4	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5	2.3	Jan-15
PIMCO Emerging Local Bond Ins	185,465,327	3.8	6.8	11.6	10.5	4.8	-0.4	--	-7.7	15.4	10.7	-16.3	-5.4	0.4	Jul-13
JP Morgan GBI EM Global Diversified TR USD			5.6	8.7	9.0	4.2	-0.5	3.4	-6.2	15.2	9.9	-14.9	-5.7	0.4	Jul-13
Total Real Estate	244,345,095	5.0	1.1	2.7	7.7	7.7	9.5	9.0	9.2	6.8	8.5	13.9	11.8	--	
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	7.4	6.7	7.8	13.9	11.5	--	
Invesco Core Real Estate	178,490,385	3.6	0.8	1.7	6.2	7.0	9.2	9.0	8.5	7.5	8.3	13.7	11.4	4.7	Oct-07
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	7.4	6.7	7.8	13.9	11.5	4.4	Oct-07
FCERA Realty Group LLC	7,947,614	0.2													
Closed End Real Estate 1 Qtr Lagged	57,907,096	1.2	2.4	7.7	15.9	11.0	11.3	--	14.1	4.3	9.0	14.9	15.0	--	
NCREIF ODCE Net 1 Qtr Lagged			1.2	2.7	6.6	6.3	8.6	8.8	7.7	4.7	7.8	13.9	11.5	--	
Total Infrastructure	153,619,238	3.1	3.8	6.6	16.3	15.6	--	--	20.1	19.0	6.1	--	--	--	
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	7.4	6.7	7.8	13.9	11.5	--	
IFM Infrastructure	153,619,238	3.1	3.8	6.6	16.3	15.6	--	--	20.1	19.0	6.1	--	--	13.2	May-15
NCREIF ODCE Net			0.8	2.0	5.5	6.6	8.8	8.9	7.4	6.7	7.8	13.9	11.5	8.2	May-15
Total Hedge Funds	336,589,806	6.9	1.7	4.7	1.1	4.8	2.4	3.3	-0.7	4.6	3.0	0.0	3.1	--	
HFRI Fund of Funds Composite Index			1.5	6.2	1.2	4.2	2.2	3.2	-4.0	7.8	0.5	-0.3	3.4	--	
Grosvenor	168,538,282	3.4	0.9	3.7	-0.8	4.7	2.4	--	-1.2	6.4	2.6	0.0	3.5	4.4	Oct-09
HFRI Fund of Funds Composite Index			1.5	6.2	1.2	4.2	2.2	3.2	-4.0	7.8	0.5	-0.3	3.4	2.9	Oct-09
GCM Better Futures Fund	168,051,524	3.4	2.4	5.8	3.2	--	--	--	-0.2	2.8	--	--	--	4.2	Sep-16
HFRI Fund of Funds Composite Index			1.5	6.2	1.2	4.2	2.2	3.2	-4.0	7.8	0.5	-0.3	3.4	3.8	Sep-16

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Commodities	127,494,644	2.6	-1.7	3.2	-8.0	-2.0	-5.8	--	-11.7	5.8	13.8	-12.8	-16.9	--	
<i>Bloomberg Commodity Index TR USD</i>			-1.2	5.1	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0	--	
Invesco Commodities	127,494,644	2.6	-1.7	3.2	-8.0	-2.0	--	--	-11.7	5.8	13.8	--	--	-1.2	May-15
<i>Bloomberg Commodity Index TR USD</i>			-1.2	5.1	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0	-4.6	<i>May-15</i>
Total Private Equity 1 Qtr Lagged	217,546,745	4.4	2.1	2.8	8.3	12.2	8.3	12.5	12.0	13.9	10.7	3.8	4.8	--	
<i>Russell 2000 1 Qtr Lagged</i>			14.6	-8.6	2.0	11.5	6.6	13.2	15.2	10.9	21.3	-4.4	4.9	--	
Total Private Credit 1 Qtr Lagged	244,312,004	5.0	1.8	1.0	5.5	7.0	4.3	16.4	7.6	8.1	7.4	-2.5	6.8	--	
<i>BBgBarc US Corp. High Yield 1 Qtr Lagged</i>			7.3	2.4	5.9	6.6	4.2	9.0	3.0	7.0	17.1	-4.5	2.5	--	
Total Custodied Cash	26,140,383	0.5	0.8	1.5	2.7	1.3	1.0	0.8	1.9	0.1	0.8	0.0	0.5	--	
<i>91 Day T-Bills</i>			0.6	1.2	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0	--	
Total County Cash	25,438,221	0.5	0.8	1.5	3.0	--	--	--	2.4	--	--	--	--	--	
<i>91 Day T-Bills</i>			0.6	1.2	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0	--	
Total Parametric Overlay	67,996,270	1.4													

Real Estate Closed End Funds (Net of Fees)

Period Ending: June 30, 2019

Real Estate - Closed End Funds											
Fund	Inception Date	% of Portfolio	Total Commitment	Contributions	Distributions	Estimated Market Value	One Quarter Return	One Year Return	Three Years Return	Five Years Return	(IRR) Since Inception
Kennedy Wilson Real Estate Fund VI	2019	0.3%	\$30,000,000	\$13,134,259	\$0	\$13,134,259	N/A	N/A	N/A	N/A	N/A
Invesco Value-Add Fund V	2017	0.2%	\$30,000,000	\$7,207,494	\$0	\$7,397,449	5.4%	N/A	N/A	N/A	N/A
Kennedy Wilson Real Estate Fund V	2016	0.3%	\$30,000,000	\$28,113,444	\$22,542,766	\$14,951,124	3.0%	20.8%	14.4%	N/A	14.7%
Gerding Edlen Green Cities III	2016	0.5%	\$20,000,000	\$18,972,186	\$643,507	\$22,424,265	0.8%	10.6%	10.2%	N/A	10.1%
% of Total Fund (Market Value)						0.9%					

Private Equity Non Marketable Securities Overview

Period Ending: June 30, 2019

Private Equity								
Fund	Vintage Year	Commitment	Unfunded	Paid-In Capital	Capital Distributed	NAV*	TVPI	Since Inception IRR
Legacy Portfolio								
Blackstone Capital Partners IV, L.P.	2003	\$20,000,000	\$606,828	\$22,639,744	\$52,535,886	\$896,043	2.40x	29.62%
Hamilton Lane Private Equity Fund IX L.P.	2016	\$100,000,000	\$30,390,012	\$69,609,988	\$16,157,818	\$73,277,733	1.30x	17.02%
Hamilton Lane Private Equity Fund VI, LP	2007	\$70,000,000	\$7,388,235	\$62,611,765	\$80,208,404	\$21,907,312	1.60x	9.56%
Horsley Bridge XI Growth Buyout L.P.	2016	\$30,000,000	\$15,949,347	\$14,050,653	\$525,613	\$13,448,375	1.10x	5.40%
Landmark Equity Partners XIV, L.P.	2009	\$30,000,000	\$932,893	\$29,069,268	\$32,723,839	\$6,097,157	1.30x	9.91%
New Mountain Partners III, L.P.	2007	\$15,000,000	\$1,028,824	\$15,363,060	\$20,426,018	\$10,077,099	2.00x	13.32%
Warburg Pincus Equity Partners, L.P.	1998	\$20,000,000	\$0	\$20,000,000	\$33,046,892	\$77,306	1.70x	10.26%
Warburg Pincus Private Equity VIII, L.P.	2001	\$25,000,000	\$0	\$26,100,000	\$57,350,559	\$348,230	2.20x	14.52%
Warburg Pincus Private Equity X, L.P.	2007	\$25,000,000	\$0	\$25,046,896	\$29,703,703	\$9,494,898	1.60x	8.19%
Warburg Pincus Private Equity XII, L.P.	2015	\$34,000,000	\$9,265,000	\$24,752,364	\$1,337,346	\$29,592,792	1.20x	10.81%
Total Legacy Portfolio		\$369,000,000	\$65,561,139	\$309,243,738	\$324,016,078	\$165,216,945	1.60x	12.94%
Hamilton Lane Portfolio								
Avista Capital Partners IV, L.P.	2018	\$10,000,000	\$2,406,530	\$9,487,666	\$4,703,601	\$7,631,783	1.20x	55.50%
H.I.G. Growth Buyouts & Equity Fund III, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	\$246,193	N/A	0.00%
Hamilton Lane Secondary Fund IV, L.P.	2017	\$75,000,000	\$33,714,978	\$45,541,717	\$11,634,782	\$40,758,899	1.20x	28.05%
K4 Private Investors, L.P.	2018	\$5,000,000	\$3,260,662	\$1,739,338	\$283	\$2,168,518	0.90x	(12.85%)
Kelso Investment Associates X, L.P.	2018	\$7,500,000	\$6,780,202	\$728,718	\$9,074	\$654,296	1.00x	15.43%
Platinum Equity Small Cap Fund, L.P.	2018	\$7,500,000	\$6,929,443	\$599,357	\$28,800	\$448,577	0.80x	(32.59%)
SK Capital Partners Fund V, L.P.	2018	\$10,000,000	\$8,873,554	\$1,126,446	\$3,497	\$1,141,000	0.90x	(3.90%)
Thomas H. Lee Equity Fund VIII, L.P.	2019	\$7,500,000	\$7,304,595	\$195,405	\$0	\$85,293	0.40x	(56.35%)
TPG Partners VIII, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	\$0	N/A	0.00%
Verdane Capital X AB	2019	\$7,207,487	\$7,207,487	\$0	\$0	-\$804,759	N/A	0.00%
Total Hamilton Lane Portfolio		\$149,707,487	\$96,477,451	\$59,418,647	\$16,380,037	\$52,329,800	1.20x	28.56%
Total Private Equity		\$518,707,487	\$162,038,590	\$368,662,385	\$340,396,115	\$217,546,745	1.50x	13.10%

*NAV provided by Hamilton Lane as of 12/31/2018 adjusted for cash flows that occurred during Q1 2019.

Private Credit Non Marketable Securities Overview

Period Ending: June 30, 2019

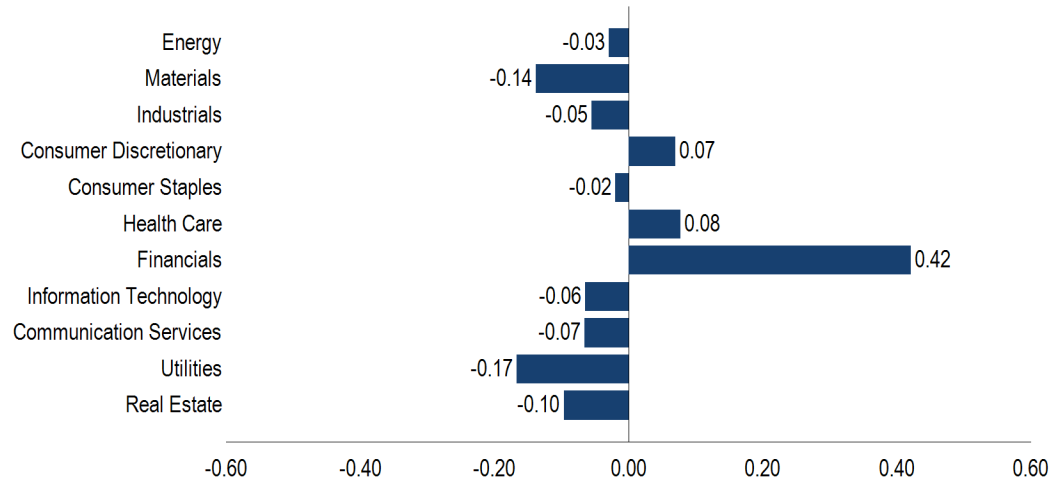
Private Credit								
Fund	Vintage Year	Commitment	Unfunded	Paid-In Capital	Capital Distributed	NAV	TVPI	Since Inception IRR
Legacy Portfolio								
EQT European Special Situations Debt	2017	\$40,000,000	\$32,114,750	\$12,736,257	\$1,446,757	\$7,349,582	0.69	1.00%
OHA Strategic Credit Fund II	2016	\$40,000,000	\$34,000,000	\$6,000,000	\$0	\$6,743,403	1.12	21.90%
TSSP Adjacent Opportunities Partners	2016	\$30,000,000	\$13,580,756	\$28,575,735	\$12,361,399	\$19,260,444	1.11	9.60%
GSO European Senior Debt	2015	\$30,000,000	\$8,480,920	\$23,905,716	\$13,582,769	\$16,555,877	1.26	9.70%
CVI Credit Value Fund III	2015	\$30,000,000	\$1,500,000	\$28,500,000	\$11,527,084	\$23,815,798	1.24	9.72%
Colony Distressed Credit III	2014	\$20,000,000	\$2,734,614	\$21,939,049	\$15,130,993	\$12,003,272	1.24	9.00%
Oaktree Opportunities IX	2012	\$15,000,000	\$0	\$15,000,000	\$6,434,315	\$11,017,616	1.16	3.50%
KKR Mezzanine Partners	2010	\$30,000,000	\$3,164,154	\$35,919,917	\$37,615,912	\$6,523,305	1.23	8.20%
Angelo Gordon VII	2010	\$30,000,000	\$0	\$30,000,000	\$35,875,672	\$871,319	1.22	4.92%
Colony Distressed Credit I	2009	\$40,000,000	\$2,219,487	\$42,267,927	\$63,855,850	\$412,291	1.52	13.00%
Lone Star Fund IV	2002	\$20,000,000	\$954,801	\$19,045,199	\$44,354,883	\$63,272	2.33	30.71%
Total Legacy Portfolio		\$325,000,000	\$98,749,482	\$263,889,799	\$242,185,634	\$104,616,179	1.28	
Carlyle Portfolio								
TCG BDC II	2017	\$150,000,000	\$91,632,810	\$58,367,190	\$4,664,136	\$57,707,603	1.07	9.10%
CPC V	2017	\$150,000,000	\$89,142,660	\$76,973,319	\$16,115,980	\$63,660,340	1.04	7.73%
AlpInvest FC Credit Fund	2017	\$100,000,000	\$79,285,024	\$20,714,976	\$2,704,797	\$18,327,882	1.02	3.33%
Total Carlyle Portfolio		\$400,000,000	\$260,060,495	\$156,055,484	\$23,484,913	\$139,695,825	1.04	
Total Private Credit		\$725,000,000	\$358,809,976	\$419,945,284	\$265,670,547	\$244,312,004		

Data provided by Carlyle.

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

Period Ending: June 30, 2019

**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	7.43%	5.06%	2.37%	-1.63%	-3.86%	2.23%	-0.19%	0.16%	-0.03%	-0.40%	-0.43%
Materials	3.10%	2.95%	0.15%	-0.01%	4.99%	-5.00%	0.00%	-0.14%	-0.14%	0.03%	-0.11%
Industrials	8.63%	10.13%	-1.49%	3.89%	4.65%	-0.77%	-0.01%	-0.05%	-0.05%	0.06%	0.00%
Consumer Discretionary	7.74%	10.37%	-2.63%	5.67%	4.57%	1.10%	-0.02%	0.09%	0.07%	0.05%	0.12%
Consumer Staples	7.30%	6.53%	0.78%	3.03%	3.28%	-0.26%	0.00%	-0.02%	-0.02%	-0.05%	-0.07%
Health Care	15.50%	14.34%	1.16%	2.17%	1.46%	0.71%	-0.03%	0.11%	0.08%	-0.38%	-0.30%
Financials	17.75%	13.17%	4.58%	9.00%	7.63%	1.37%	0.17%	0.25%	0.42%	0.46%	0.89%
Information Technology	15.11%	21.11%	-6.00%	6.07%	5.68%	0.39%	-0.12%	0.05%	-0.06%	0.33%	0.27%
Communication Services	8.75%	9.08%	-0.33%	3.55%	4.34%	-0.78%	0.02%	-0.08%	-0.07%	0.02%	-0.04%
Utilities	4.75%	3.22%	1.52%	0.58%	3.58%	-3.00%	-0.02%	-0.14%	-0.17%	-0.02%	-0.18%
Real Estate	3.91%	4.04%	-0.13%	-0.99%	1.74%	-2.73%	0.02%	-0.11%	-0.10%	-0.10%	-0.19%
Unclassified	0.01%	0.00%	0.01%	2.72%	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total				4.04%	4.11%	-0.07%	-0.17%	0.10%	-0.07%	0.00%	-0.07%

Total Domestic Equity
Performance Attribution Summary (Net of Fees)

Period Ending: June 30, 2019

Portfolio: Total Domestic Equity
Benchmark: Russell 3000

Portfolio Total Return 3.46%

	Equity Only
Portfolio	4.04%
Benchmark	<u>4.11%</u>
Return From Active Mgmt	-0.07%

Local Returns	
Portfolio	4.04%
Benchmark	<u>4.11%</u>
Active Equity Return	-0.07%

Country Selection	-0.01%
Stock Selection	-0.06%

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: June 30, 2019

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
ARGENTINA	0.00%	0.00%	0.00%	--	26.74%	-26.74%	-0.02%	-0.02%	0.00%	0.00%
AUSTRALIA	4.33%	4.68%	-0.35%	6.99%	7.38%	-0.38%	-0.13%	-0.14%	0.00%	0.01%
AUSTRIA	0.14%	0.16%	-0.02%	2.37%	1.28%	1.09%	0.00%	0.00%	0.00%	0.00%
BELGIUM	0.59%	0.67%	-0.08%	2.43%	1.22%	1.21%	0.01%	0.01%	0.01%	-0.01%
BRAZIL	2.14%	1.84%	0.30%	0.21%	7.14%	-6.93%	-0.11%	0.03%	-0.14%	-0.01%
CANADA	6.69%	6.83%	-0.13%	4.56%	5.02%	-0.45%	-0.09%	0.01%	-0.02%	-0.08%
CHILE	0.00%	0.27%	-0.27%	--	-4.81%	4.81%	0.02%	0.02%	0.00%	0.00%
CHINA	0.23%	8.52%	-8.29%	14.40%	-3.66%	18.06%	0.52%	0.49%	0.06%	-0.03%
COLOMBIA	0.00%	0.12%	-0.12%	--	-2.23%	2.23%	0.01%	0.00%	0.00%	0.00%
CZECH REPUBLIC	0.00%	0.04%	-0.04%	--	3.87%	-3.87%	0.00%	0.00%	0.00%	0.00%
DENMARK	1.03%	1.21%	-0.17%	5.87%	1.75%	4.12%	0.07%	0.01%	0.06%	0.01%
EGYPT	0.00%	0.03%	-0.03%	--	7.30%	-7.30%	0.00%	0.00%	0.00%	0.00%
FINLAND	0.58%	0.69%	-0.11%	5.75%	0.90%	4.85%	0.03%	0.00%	0.03%	0.00%
FRANCE	11.32%	7.54%	3.78%	6.88%	7.34%	-0.46%	0.18%	0.16%	-0.06%	0.08%
GERMANY	13.61%	5.72%	7.89%	11.44%	7.81%	3.62%	1.02%	0.34%	0.51%	0.17%
GREECE	0.00%	0.06%	-0.06%	--	15.75%	-15.75%	-0.01%	-0.01%	0.00%	0.00%
HONG KONG	3.54%	2.75%	0.79%	6.02%	1.00%	5.03%	0.20%	-0.01%	0.20%	0.01%
HUNGARY	0.00%	0.08%	-0.08%	--	-4.00%	4.00%	0.01%	0.01%	0.00%	0.00%
INDIA	0.00%	2.40%	-2.40%	--	0.52%	-0.52%	0.06%	0.07%	0.00%	-0.01%
INDONESIA	0.27%	0.57%	-0.30%	10.30%	3.66%	6.65%	0.02%	0.00%	0.02%	0.00%
IRELAND	0.48%	0.36%	0.12%	-11.26%	4.48%	-15.74%	-0.05%	0.01%	-0.06%	-0.01%
ISRAEL	0.43%	0.37%	0.07%	-6.99%	-4.24%	-2.75%	-0.03%	-0.01%	-0.02%	0.00%
ITALY	2.70%	1.58%	1.12%	2.39%	3.56%	-1.17%	-0.02%	0.00%	-0.05%	0.03%
JAPAN	15.13%	16.13%	-1.00%	1.33%	0.99%	0.34%	0.05%	0.04%	0.04%	-0.03%
KOREA	0.00%	3.40%	-3.40%	--	-1.19%	1.19%	0.12%	0.06%	0.00%	0.06%
LUXEMBOURG	0.02%	0.00%	0.02%	4.89%	3.17%	1.72%	0.00%	0.00%	0.00%	0.00%

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

Period Ending: June 30, 2019

	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	0.00%	0.58%	-0.58%	--	1.19%	-1.19%	0.01%	0.00%	0.00%	0.01%
MEXICO	0.00%	0.69%	-0.69%	--	1.42%	-1.42%	0.01%	0.01%	0.00%	-0.01%
NETHERLANDS	3.96%	2.40%	1.57%	4.96%	6.06%	-1.10%	0.01%	0.04%	-0.05%	0.03%
NEW ZEALAND	1.15%	0.16%	0.99%	1.39%	3.98%	-2.59%	-0.09%	-0.01%	-0.06%	-0.02%
NORWAY	0.55%	0.49%	0.06%	7.01%	2.80%	4.22%	0.03%	0.00%	0.03%	0.00%
Other Countries	0.44%	0.00%	0.44%	-0.76%	3.17%	-3.93%	-0.02%	0.00%	-0.03%	0.01%
PAKISTAN	0.00%	0.01%	-0.01%	--	-20.55%	20.55%	0.00%	0.00%	0.00%	0.00%
PERU	0.00%	0.11%	-0.11%	--	-1.97%	1.97%	0.00%	0.00%	0.00%	0.00%
PHILIPPINES	0.00%	0.29%	-0.29%	--	4.58%	-4.58%	-0.01%	0.00%	0.00%	-0.01%
POLAND	0.00%	0.30%	-0.30%	--	3.60%	-3.60%	0.00%	0.01%	0.00%	-0.01%
PORTUGAL	0.13%	0.11%	0.02%	0.69%	2.56%	-1.87%	0.00%	0.00%	0.00%	0.00%
QATAR	0.00%	0.24%	-0.24%	--	1.98%	-1.98%	0.00%	0.00%	0.00%	0.00%
RUSSIA	0.51%	0.98%	-0.47%	13.41%	16.83%	-3.42%	-0.09%	-0.04%	-0.02%	-0.04%
SAUDI ARABIA	0.00%	0.00%	0.00%	--	3.41%	-3.41%	0.00%	0.00%	0.00%	0.00%
SINGAPORE	2.33%	0.89%	1.43%	0.03%	6.92%	-6.89%	-0.08%	0.05%	-0.12%	-0.01%
SOUTH AFRICA	0.02%	1.51%	-1.49%	-29.35%	6.71%	-36.06%	-0.08%	-0.03%	-0.01%	-0.04%
SPAIN	1.66%	2.01%	-0.35%	1.60%	2.49%	-0.89%	-0.02%	-0.01%	-0.02%	0.01%
SWEDEN	1.33%	1.79%	-0.46%	8.52%	5.44%	3.08%	0.02%	0.00%	0.03%	-0.01%
SWITZERLAND	6.05%	5.98%	0.07%	11.47%	8.75%	2.72%	0.21%	0.02%	0.16%	0.03%
TAIWAN	0.00%	2.95%	-2.95%	--	1.08%	-1.08%	0.03%	0.01%	0.00%	0.02%
THAILAND	0.00%	0.61%	-0.61%	--	9.55%	-9.55%	-0.05%	-0.02%	0.00%	-0.03%
TURKEY	0.00%	0.14%	-0.14%	--	3.05%	-3.05%	0.00%	0.00%	0.00%	0.00%
UNITED ARAB EMIRATES	0.00%	0.19%	-0.19%	--	-2.27%	2.27%	0.01%	0.01%	0.00%	0.00%
UNITED KINGDOM	12.09%	11.53%	0.56%	4.52%	0.88%	3.64%	0.45%	-0.01%	0.46%	0.00%
UNITED STATES	6.54%	0.00%	6.54%	7.08%	4.19%	2.88%	0.35%	0.16%	0.19%	0.00%
	100.00%	100.00%	0.00%	5.71%	3.17%	2.54%	2.54%	1.26%	1.17%	0.11%

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

Period Ending: June 30, 2019

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
	0.44%	0.00%	0.44%	--	0.00%	0.84%	-0.84%	0.01%
Australian Dollar	4.33%	4.68%	-0.35%	--	-1.31%	-1.32%	0.00%	0.01%
Baht	0.00%	0.61%	-0.61%	--	0.00%	3.69%	-3.69%	-0.03%
Canadian Dollar	6.69%	6.83%	-0.13%	--	1.86%	2.30%	-0.44%	-0.08%
Chilean Peso	0.00%	0.27%	-0.27%	--	0.00%	0.21%	-0.21%	0.00%
Colombian Peso	0.00%	0.12%	-0.12%	--	0.00%	-0.66%	0.66%	0.00%
Cruzeiro Real	2.14%	1.84%	0.30%	--	0.84%	1.63%	-0.79%	-0.01%
Czech Koruna	0.00%	0.04%	-0.04%	--	0.00%	2.99%	-2.99%	0.00%
Danish Krone	1.03%	1.21%	-0.17%	--	1.51%	1.45%	0.06%	0.01%
Egyptian Pound	0.00%	0.03%	-0.03%	--	0.00%	3.93%	-3.93%	0.00%
Emirati dirham	0.00%	0.19%	-0.19%	--	0.00%	0.00%	0.00%	0.00%
Euro	35.20%	21.30%	13.90%	--	1.50%	1.47%	0.02%	0.30%
Forint	0.00%	0.08%	-0.08%	--	0.00%	1.01%	-1.01%	0.00%
Hong Kong Dollar	3.54%	2.75%	0.79%	--	0.51%	0.44%	0.06%	0.01%
Indian Rupee	0.00%	2.40%	-2.40%	--	0.00%	0.36%	-0.36%	-0.01%
Mexican New Peso	0.00%	0.69%	-0.69%	--	0.00%	0.97%	-0.97%	-0.01%
New Sol	0.00%	0.11%	-0.11%	--	0.00%	0.00%	0.00%	0.00%
New Taiwan Dollar	0.00%	2.95%	-2.95%	--	0.00%	-0.78%	0.78%	0.02%
New Zealand Dollar	1.15%	0.16%	0.99%	--	-1.56%	-1.60%	0.04%	-0.02%
New Zloty	0.00%	0.30%	-0.30%	--	0.00%	2.83%	-2.83%	-0.01%
Norwegian Krone	0.55%	0.49%	0.06%	--	1.06%	1.02%	0.04%	0.00%
Pakistani Rupee	0.00%	0.01%	-0.01%	--	0.00%	-10.73%	10.73%	0.00%
Philippines Peso	0.00%	0.29%	-0.29%	--	0.00%	2.54%	-2.54%	-0.01%
Pound Sterling	12.09%	11.53%	0.56%	--	-2.49%	-2.41%	-0.09%	0.00%
Qatari rial	0.00%	0.24%	-0.24%	--	0.00%	-0.01%	0.01%	0.00%
Rand	0.02%	1.51%	-1.49%	--	0.99%	2.37%	-1.38%	-0.04%
Ringgit (Malaysian Dollar)	0.00%	0.58%	-0.58%	--	0.00%	-1.24%	1.24%	0.01%
Rupiah	0.27%	0.57%	-0.30%	--	0.87%	0.82%	0.05%	0.00%

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

Period Ending: June 30, 2019

Currency Name	Portfolio Weight	Index Weight	Excess Weight	Currency Return	Portfolio Contrib.	Index Contrib.	Active Contrib.	Currency Effect
Russian Federation Rouble	0.51%	0.98%	-0.47%	--	0.00%	3.95%	-3.95%	-0.04%
Shekel	0.43%	0.37%	0.07%	--	0.90%	0.88%	0.02%	0.00%
Singapore Dollar	2.33%	0.89%	1.43%	--	0.11%	0.12%	-0.02%	-0.01%
South Korean Won	0.00%	3.40%	-3.40%	--	0.00%	-1.70%	1.70%	0.06%
Swedish Krona	1.33%	1.79%	-0.46%	--	-0.03%	-0.03%	0.00%	-0.01%
Swiss Franc	6.05%	5.98%	0.07%	--	2.34%	2.28%	0.06%	0.03%
Turkish Lira	0.00%	0.14%	-0.14%	--	0.00%	-2.45%	2.45%	0.00%
US Dollar	6.54%	0.00%	6.54%	--	-0.02%	0.84%	-0.86%	0.00%
Yen	15.13%	16.13%	-1.00%	--	2.70%	2.69%	0.01%	-0.03%
Yuan Renminbi	0.23%	8.52%	-8.29%	--	-2.52%	0.28%	-2.80%	-0.03%
	100.00%	100.00%	0.00%		0.88%	0.84%	0.05%	0.11%

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

Period Ending: June 30, 2019

Total International Equity vs. MSCI ACWI ex USA
Current Quarter

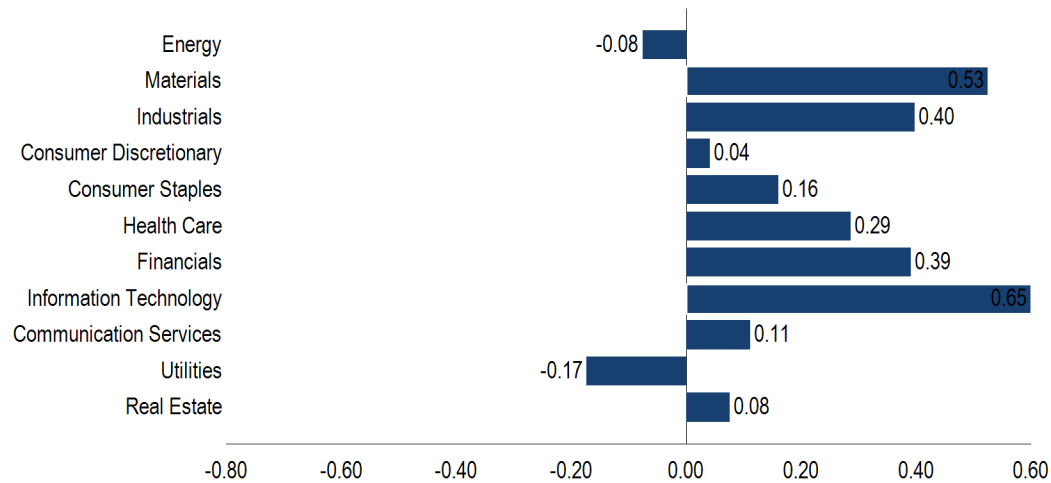
Region	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Americas	15.37%	9.86%	5.51%	5.19%	4.91%	0.28%	0.03%	0.14%	0.17%	0.17%	0.34%
Europe	56.76%	43.71%	13.06%	7.45%	5.08%	2.37%	0.34%	1.50%	1.84%	0.83%	2.67%
Asia/Pacific	26.98%	43.94%	-16.97%	2.70%	0.89%	1.81%	0.45%	0.20%	0.65%	-1.01%	-0.36%
Other	0.89%	2.49%	-1.60%	-3.95%	3.45%	-7.40%	0.00%	-0.11%	-0.12%	0.01%	-0.11%
Total				5.71%	3.17%	2.54%	0.81%	1.72%	2.54%	0.00%	2.54%

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.
Americas	15.37%	9.86%	5.51%	5.19%	4.91%	0.28%	0.03%	0.14%	0.17%	0.17%	0.34%
Europe	56.76%	43.71%	13.06%	7.45%	5.08%	2.37%	0.34%	1.50%	1.84%	0.83%	2.67%
Asia/Pacific	26.98%	43.94%	-16.97%	2.70%	0.89%	1.81%	0.45%	0.20%	0.65%	-1.01%	-0.36%
Other	0.89%	2.49%	-1.60%	-3.95%	3.45%	-7.40%	0.00%	-0.11%	-0.12%	0.01%	-0.11%
Total				5.71%	3.17%	2.54%	0.81%	1.72%	2.54%	0.00%	2.54%

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

Period Ending: June 30, 2019

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	5.39%	7.44%	-2.04%	-1.19%	0.74%	-1.93%	0.06%	-0.12%	-0.06%	-0.18%	-0.24%
Materials	6.32%	7.62%	-1.30%	11.55%	3.00%	8.55%	0.01%	0.56%	0.56%	-0.01%	0.55%
Industrials	19.28%	11.70%	7.59%	6.19%	5.42%	0.77%	0.15%	0.20%	0.35%	0.26%	0.61%
Consumer Discretionary	8.43%	11.08%	-2.66%	4.36%	4.02%	0.34%	-0.01%	0.01%	-0.01%	0.09%	0.09%
Consumer Staples	7.79%	9.93%	-2.13%	4.77%	2.39%	2.38%	0.02%	0.14%	0.17%	-0.08%	0.09%
Health Care	8.27%	8.40%	-0.13%	4.15%	1.12%	3.03%	0.02%	0.29%	0.31%	-0.17%	0.13%
Financials	22.48%	21.66%	0.82%	6.38%	4.77%	1.62%	0.00%	0.54%	0.53%	0.35%	0.88%
Information Technology	6.61%	8.36%	-1.75%	16.13%	4.07%	12.06%	-0.01%	0.71%	0.70%	0.08%	0.77%
Communication Services	5.04%	7.00%	-1.95%	2.52%	0.95%	1.57%	0.05%	0.05%	0.09%	-0.16%	-0.06%
Utilities	6.56%	3.36%	3.19%	0.75%	2.48%	-1.73%	-0.10%	-0.06%	-0.16%	-0.02%	-0.18%
Real Estate	2.58%	3.45%	-0.86%	-0.80%	-1.51%	0.70%	0.04%	0.01%	0.04%	-0.16%	-0.12%
Unclassified	1.24%	0.02%	1.23%	2.56%	-0.44%	3.00%	-0.04%	0.05%	0.01%	0.00%	0.01%

Total International Equity
Performance Attribution Summary (Net of Fees)

Period Ending: June 30, 2019

Portfolio: Total International Equity
Benchmark: MSCI ACWI ex USA

Portfolio Total Return 3.84%

	Equity Only
Portfolio	5.71%
Benchmark	<u>3.17%</u>
Return From Active Mgmt	2.54%

Local Returns	
Portfolio	4.74%
Benchmark	<u>2.35%</u>
Active Equity Return	2.39%

Country Selection	1.26%
Stock Selection	1.17%

Currency Contributions	
Portfolio	0.88%
Benchmark	<u>0.84%</u>
Active Currency Contributions	0.05%

Chart uses return-based methodology

Total Fund Watch List (Net of Fees)

Period Ending: June 30, 2019

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
T. Rowe Price Large Cap Growth	Domestic Equity Large Cap Growth	No Issues	--	--	--	--	--	--
Aronson Johnson Ortiz	Domestic Equity Large Cap Value	No Issues	✓	✗	✓	✗	✗	--
PIMCO StocksPLUS Small Fund	Domestic Equity Small Cap Core	No Issues	--	--	--	--	--	--
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	✗	✗	✗	✗	✗	--
Baillie Gifford 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: June 30, 2019

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
Brandywine Global Sovereign	Global Fixed Income	No Issues	✓	✓	✗	✗	✗	--
RBC Access Capital	Domestic Fixed Income Mortgage	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	Watch	✓	✓	✗	✗	✗	--
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 Manager Rankings Page

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Fund	4,900,208,085	100.0	2.9	9.8	5.6	7.7	4.5	8.7	-3.6	14.6	6.7	-2.5	3.5
Policy Index			3.2	8.9	5.1	6.7	4.1	8.1	-3.2	14.0	6.5	-1.7	2.6
InvMetrics Public DB > \$1B Net Rank			55	69	42	98	96	67	41	67	80	86	88
SSgA S&P 500 Flagship Fund	175,948,934	3.6	4.3	18.5	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7
S&P 500			4.3	18.5	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7
eV US Large Cap Equity Net Rank			46	43	38	35	28	28	38	45	32	40	24
T. Rowe Price Large Cap Growth	308,176,312	6.3	3.2	18.7	--	--	--	--	--	--	--	--	--
Russell 1000 Growth			4.6	21.5	11.6	18.1	13.4	16.3	-1.5	30.2	7.1	5.7	13.0
eV US Large Cap Growth Equity Net Rank			84	83	--	--	--	--	--	--	--	--	--
Aronson Johnson Ortiz	278,001,120	5.7	3.7	14.4	2.6	10.6	6.0	12.5	-11.4	16.7	9.5	-0.1	9.6
Russell 1000 Value			3.8	16.2	8.5	10.2	7.5	13.2	-8.3	13.7	17.3	-3.8	13.5
eV US Large Cap Value Equity Net Rank			51	65	78	48	71	57	72	50	83	16	78
PIMCO StocksPLUS Small Fund	96,773,612	2.0	1.3	18.2	-4.1	--	--	--	--	--	--	--	--
Russell 2000			2.1	17.0	-3.3	12.3	7.1	13.4	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Core Equity Net Rank			74	35	57	--	--	--	--	--	--	--	--
Artisan International Growth	319,356,884	6.5	8.7	20.7	10.3	10.9	4.0	--	-10.2	31.5	-9.0	-2.2	-0.1
MSCI EAFE			3.7	14.0	1.1	9.1	2.2	6.9	-13.8	25.0	1.0	-0.8	-4.9
eV EAFE All Cap Equity Net Rank			1	6	1	20	27	--	13	13	99	80	10
Research Affiliates International Equity	302,167,777	6.2	1.7	10.1	-2.2	9.0	1.4	--	-15.5	25.7	9.3	-5.9	-5.8
MSCI EAFE			3.7	14.0	1.1	9.1	2.2	6.9	-13.8	25.0	1.0	-0.8	-4.9
eV EAFE All Cap Equity Net Rank			80	86	64	42	77	--	57	51	1	95	75
Mondrian International Small Cap	153,102,113	3.1	4.3	14.7	-2.4	9.1	4.1	--	-14.6	32.4	0.1	2.7	-4.9
S&P Developed Ex-U.S. SmallCap			2.6	13.3	-5.7	8.6	3.9	9.5	-18.4	32.4	3.8	5.9	-3.4
eV EAFE Small Cap Equity Net Rank			22	32	12	48	55	--	11	74	50	94	67
Mondrian Emerging Markets	144,859,295	3.0	0.1	10.2	4.9	6.6	0.2	5.1	-13.8	27.2	9.0	-16.3	0.0
MSCI Emerging Markets			0.6	10.6	1.2	10.7	2.5	5.8	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Equity Net Rank			84	70	14	87	92	95	24	93	44	80	42
Baillie Gifford Emerging Markets	144,881,972	3.0	2.3	17.4	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			0.6	10.6	1.2	10.7	2.5	5.8	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Equity Net Rank			29	8	--	--	--	--	--	--	--	--	--
Western Asset Investment Grade Credit	180,600,864	3.7	4.6	10.5	11.5	4.6	--	--	-2.3	6.8	7.0	-0.5	--
BBgBarc US Credit TR			4.3	9.4	10.3	3.7	3.9	5.8	-2.1	6.2	5.6	-0.8	7.5
eV All US Fixed Inc Net Rank			9	13	8	25	--	--	81	23	26	70	--

Total Fund
Manager Rankings Page

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
RBC Access Capital	48,390,184	1.0	2.2	4.2	--	--	--	--	--	--	--	--	--
BBgBarc US Securitized Index			2.0	4.3	6.3	2.1	2.6	3.5	1.0	2.5	1.8	1.5	5.9
eV US Securitized Fixed Inc Net Rank			32	52	--	--	--	--	--	--	--	--	--
Loomis Sayles High Yield	325,339,827	6.6	2.3	9.0	6.8	6.6	--	--	-2.3	7.1	14.4	-5.2	--
BBgBarc US High Yield TR			2.5	9.9	7.5	7.5	4.7	9.2	-2.1	7.5	17.1	-4.5	2.5
eV US High Yield Fixed Inc Net Rank			59	61	49	62	--	--	52	47	42	79	--
Eaton Vance Senior Loan Fund	235,347,703	4.8	1.0	4.5	2.9	4.8	--	--	0.7	4.0	9.9	-0.8	--
S&P/LSTA Leveraged Loan Index			1.7	5.7	4.0	5.2	3.7	6.2	0.4	4.1	10.2	-0.7	1.6
eV US Float-Rate Bank Loan Fixed Inc Net Rank			89	82	84	32	--	--	16	40	33	85	--
Eaton Vance Institutional Senior Loan Plus Fund	21,933,322	0.4	1.8	6.9	3.7	--	--	--	-1.3	3.6	--	--	--
S&P/LSTA Leveraged Loan Index			1.7	5.7	4.0	5.2	3.7	6.2	0.4	4.1	10.2	-0.7	1.6
eV US Float-Rate Bank Loan Fixed Inc Net Rank			7	3	39	--	--	--	97	64	--	--	--
SSgA TIPS	184,200,658	3.8	2.8	6.1	4.8	2.0	1.7	3.6	-1.3	3.0	4.6	-1.5	3.6
BBgBarc US TIPS TR			2.9	6.2	4.8	2.1	1.8	3.6	-1.3	3.0	4.7	-1.4	3.6
eV US TIPS / Inflation Fixed Inc Net Rank			40	64	28	57	27	50	42	58	50	36	38
Brandywine Global Sovereign	260,680,069	5.3	3.5	6.4	4.4	2.5	--	--	-4.7	11.9	3.8	-9.8	--
FTSE WGBI TR			3.6	5.4	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5
eV All Global Fixed Inc Net Rank			29	59	75	76	--	--	87	6	63	95	--
PIMCO Emerging Local Bond Ins	185,465,327	3.8	6.8	11.6	10.5	4.8	-0.4	--	-7.7	15.4	10.7	-16.3	-5.4
JP Morgan GBI EM Global Diversified TR USD			5.6	8.7	9.0	4.2	-0.5	3.4	-6.2	15.2	9.9	-14.9	-5.7
eV Emg Mkt Fixed Inc Unhedged Net Rank			2	12	39	65	82	--	74	13	46	89	83

Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2019

Account	Fee Schedule	Market Value As of 6/30/2019	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSgA S&P 500 Flagship Fund	0.03% of First 150.0 Mil, 0.02% Thereafter	\$175,948,934	\$49,671	0.03%
T. Rowe Price Large Cap Growth	0.35% of Assets	\$308,176,312	\$1,078,617	0.35%
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	\$278,001,120	\$806,002	0.29%
PIMCO StocksPLUS Small Fund	0.50% of First 150.0 Mil, 0.45% Thereafter	\$96,773,612	\$483,868	0.50%
Artisan International Growth	0.30% of Assets	\$319,356,884	\$958,071	0.30%
Research Affiliates International Equity	0.12% of Assets	\$302,167,777	\$362,601	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	\$153,102,113	\$1,018,613	0.67%
Mondrian Emerging Markets	1.00% of First 25.0 Mil, 0.75% of Next 50.0 Mil, 0.60% Thereafter	\$144,859,295	\$1,044,156	0.72%
Baillie Gifford Emerging Markets	0.85% of Assets	\$144,881,972	\$1,231,497	0.85%
Western Asset Investment Grade Credit	0.30% of First 100.0 Mil, 0.15% Thereafter	\$180,600,864	\$420,901	0.23%
RBC Access Capital	0.30% of First 100.0 Mil, 0.20% Thereafter	\$48,390,184	\$145,171	0.30%
Loomis Sayles High Yield	0.50% of Assets	\$325,339,827	\$1,626,699	0.50%
Eaton Vance Senior Loan Fund	0.55% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.40% Thereafter	\$235,347,703	\$1,066,391	0.45%

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

** Managers with incentive fee include: Ivy, 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: June 30, 2019

Account	Fee Schedule	Market Value As of 6/30/2019	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Eaton Vance Institutional Senior Loan Plus Fund	0.40% of Assets	\$21,933,322	\$87,733	0.40%
SSgA TIPS	0.04% of Assets	\$184,200,658	\$73,680	0.04%
Brandywine Global Sovereign	0.36% of Assets	\$260,680,069	\$938,448	0.36%
PIMCO Emerging Local Bond Ins	0.50% of First 100.0 Mil, 0.45% Thereafter	\$185,465,327	\$884,594	0.48%
Invesco Core Real Estate	0.90% of First 75.0 Mil, 0.80% Thereafter	\$178,490,385	\$1,502,923	0.84%
Invesco US Value-Add Fund V	No Fee	\$7,397,449	--	--
Kennedy Wilson Real Estate Fund VI	No Fee	\$13,134,259	--	--
IFM Infrastructure	0.97% of Assets	\$153,619,238	\$1,490,107	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	\$168,538,282	\$1,348,730	0.80%
Invesco Commodities	0.30% of Assets	\$127,494,644	\$382,484	0.30%
Parametric Overlay	0.15% of First 25.0 Mil, 0.10% of Next 75.0 Mil, 0.04% Thereafter	\$67,996,270	\$80,496	0.12%
Investment Management Fee		\$4,081,896,501	\$17,081,453	0.42%

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

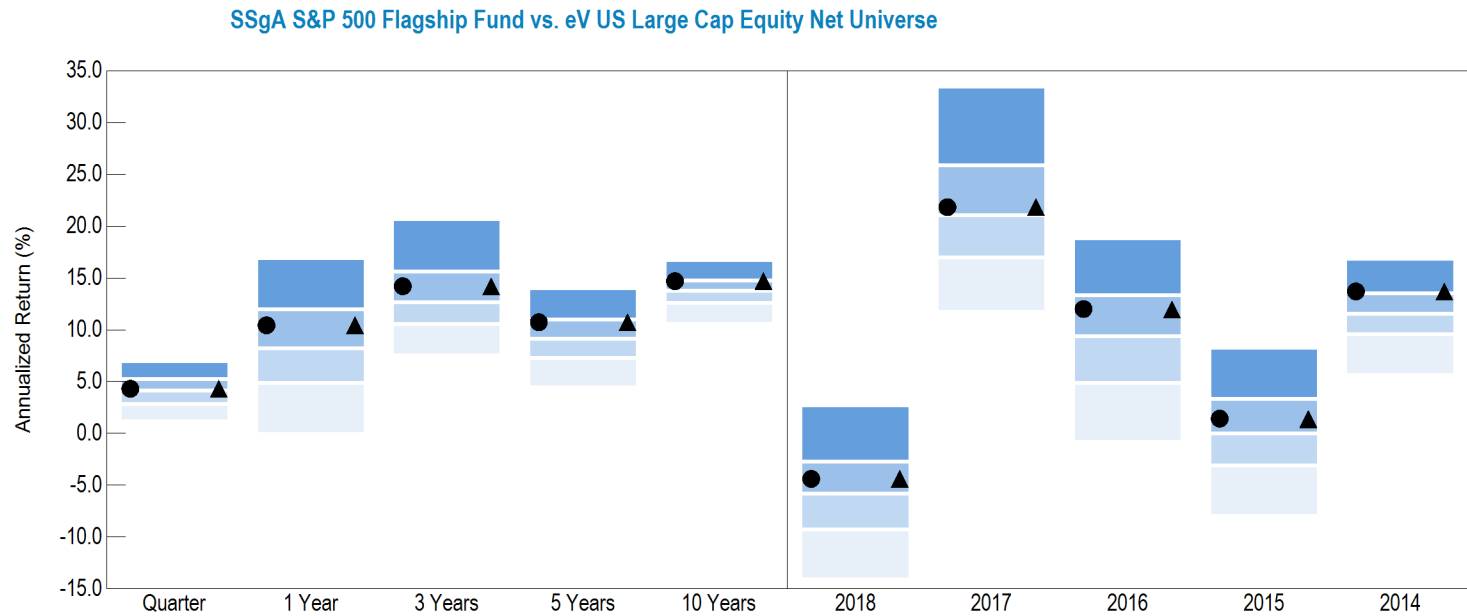
** Managers with incentive fee include: Ivy, Research Affiliates, Western Asset, Artisan, Brandywine, and Invesco Commodities. Performance based fees are not included in the fee analysis. AJO has performance based fees.*

Domestic Equity Managers

SSgA S&P 500 Flagship Fund

Manager Performance Comparisons (Net of Fees)

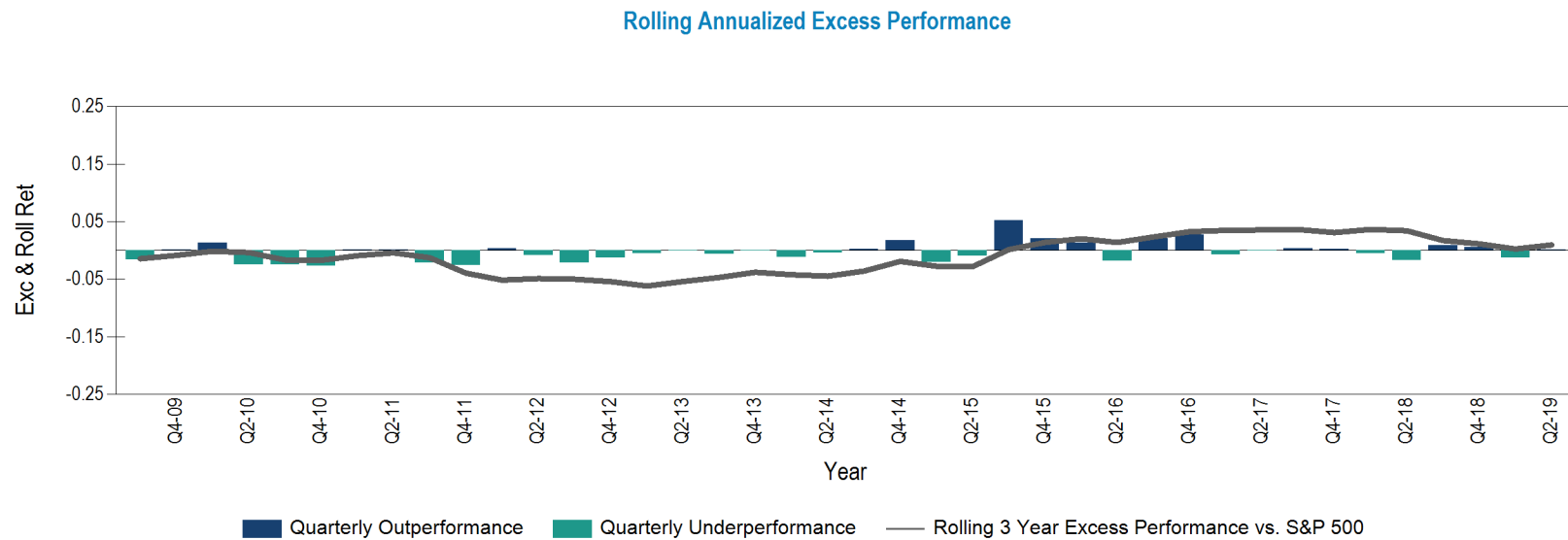
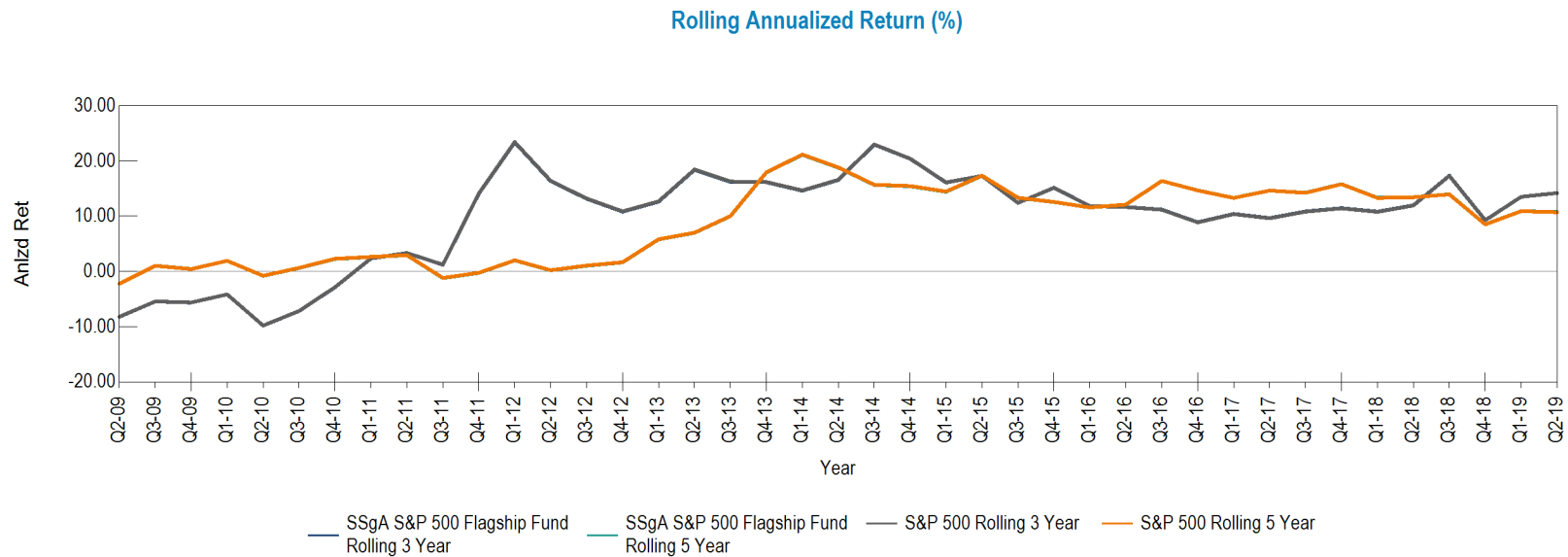
Period Ending: June 30, 2019



	Return (Rank)									
5th Percentile	7.0	16.9	20.6	14.0	16.7	2.7	33.5	18.8	8.3	16.8
25th Percentile	5.3	12.0	15.7	11.0	14.8	-2.7	25.9	13.4	3.4	13.5
Median	4.1	8.2	12.7	9.1	13.8	-5.8	21.1	9.4	0.0	11.6
75th Percentile	2.9	4.9	10.6	7.3	12.6	-9.2	17.0	4.9	-3.1	9.6
95th Percentile	1.2	-0.1	7.6	4.5	10.6	-14.0	11.8	-0.8	-7.9	5.7
# of Portfolios	633	621	599	566	455	607	601	584	511	518
● SSgA S&P 500 Flagship Fund	4.3 (46)	10.4 (38)	14.2 (35)	10.7 (28)	14.7 (28)	-4.4 (38)	21.8 (45)	12.0 (32)	1.4 (40)	13.7 (24)
▲ S&P 500	4.3 (46)	10.4 (38)	14.2 (36)	10.7 (29)	14.7 (28)	-4.4 (38)	21.8 (45)	12.0 (33)	1.4 (40)	13.7 (24)

SSgA S&P 500 Flagship Fund Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

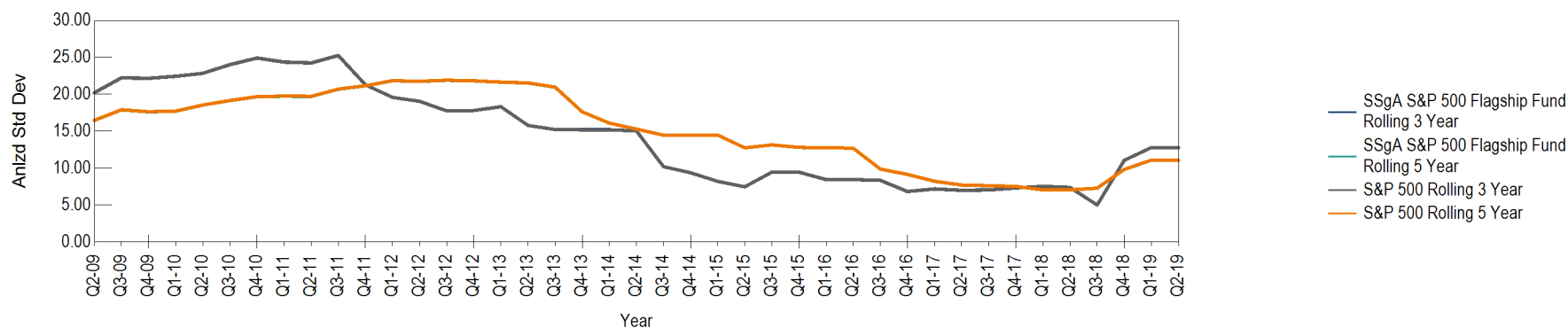


SSgA S&P 500 Flagship Fund

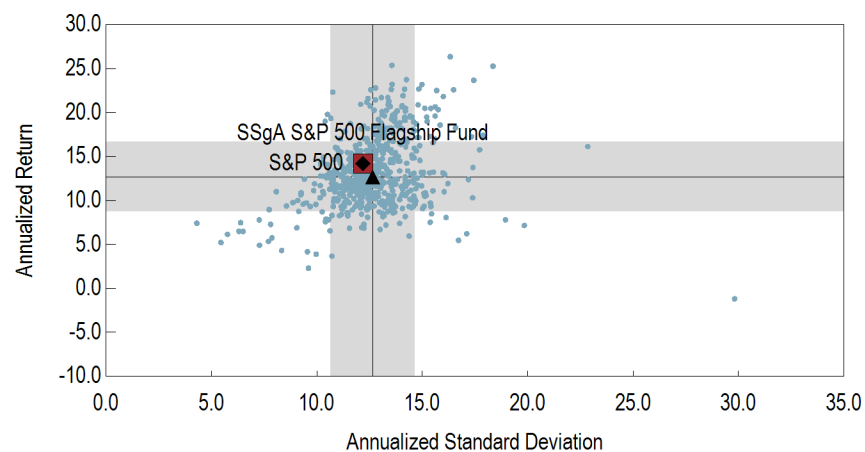
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

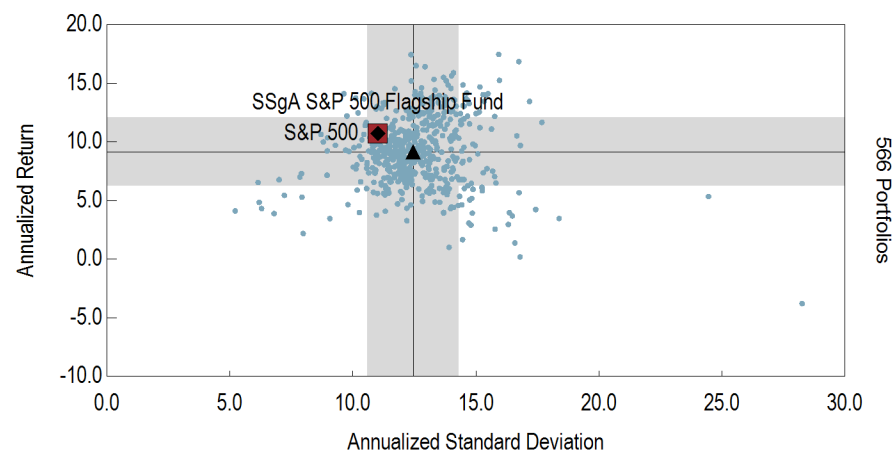
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA S&P 500 Flagship Fund	14.2%	12.2%	1.1
S&P 500	14.2%	12.2%	1.1
eV US Large Cap Equity Net Median	12.7%	12.6%	0.9

5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA S&P 500 Flagship Fund	10.7%	11.0%	0.9
S&P 500	10.7%	11.0%	0.9
eV US Large Cap Equity Net Median	9.1%	12.4%	0.7

SSgA S&P 500 Flagship Fund

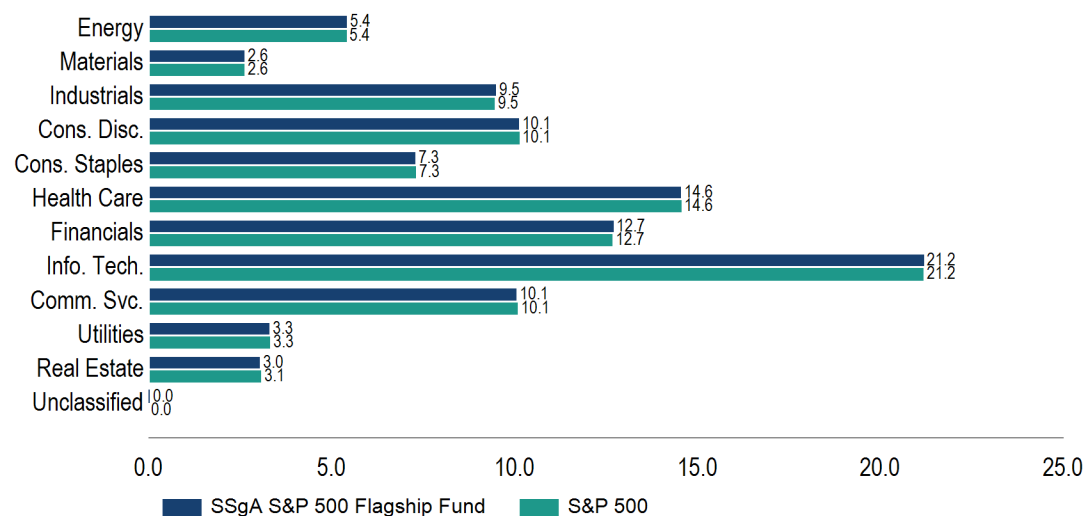
Manager Portfolio Overview (Net of Fees)

Period Ending: June 30, 2019

Characteristics

	Portfolio	S&P 500
Number of Holdings	507	505
Weighted Avg. Market Cap. (\$B)	226.33	225.01
Median Market Cap. (\$B)	21.96	22.14
Price To Earnings	20.59	20.58
Price To Book	3.61	3.60
Price To Sales	2.11	2.12
Return on Equity (%)	26.94	26.92
Yield (%)	1.96	1.96
Beta	1.00	1.00

Sector Allocation (%) vs S&P 500



Largest Holdings

	End Weight	Return
MICROSOFT	4.22	14.00
APPLE	3.54	4.60
AMAZON.COM	3.20	6.34
FACEBOOK CLASS A	1.90	15.78
BERKSHIRE HATHAWAY 'B'	1.69	6.11
JOHNSON & JOHNSON	1.52	0.32
JP MORGAN CHASE & CO.	1.49	11.28
ALPHABET 'C'	1.36	-7.88
EXXON MOBIL	1.33	-4.08
ALPHABET A	1.33	-7.99

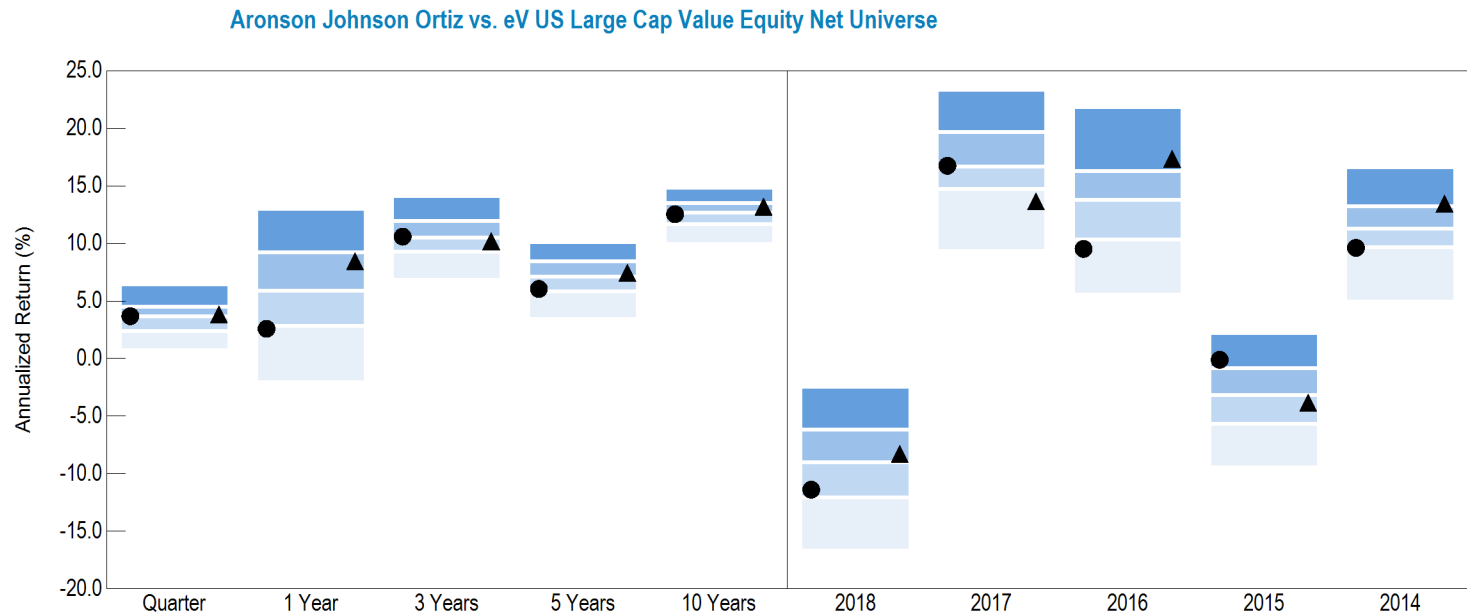
Top Contributors

	Avg Wgt	Return	Contribution
MICROSOFT	4.02	14.00	0.56
FACEBOOK CLASS A	1.81	15.78	0.29
WALT DISNEY	0.94	25.77	0.24
AMAZON.COM	3.19	6.34	0.20
JP MORGAN CHASE & CO.	1.49	11.28	0.17
APPLE	3.57	4.60	0.16
VISA 'A'	1.19	11.28	0.13
QUALCOMM	0.36	34.62	0.12
MASTERCARD	0.94	12.51	0.12
BERKSHIRE HATHAWAY 'B'	1.68	6.11	0.10

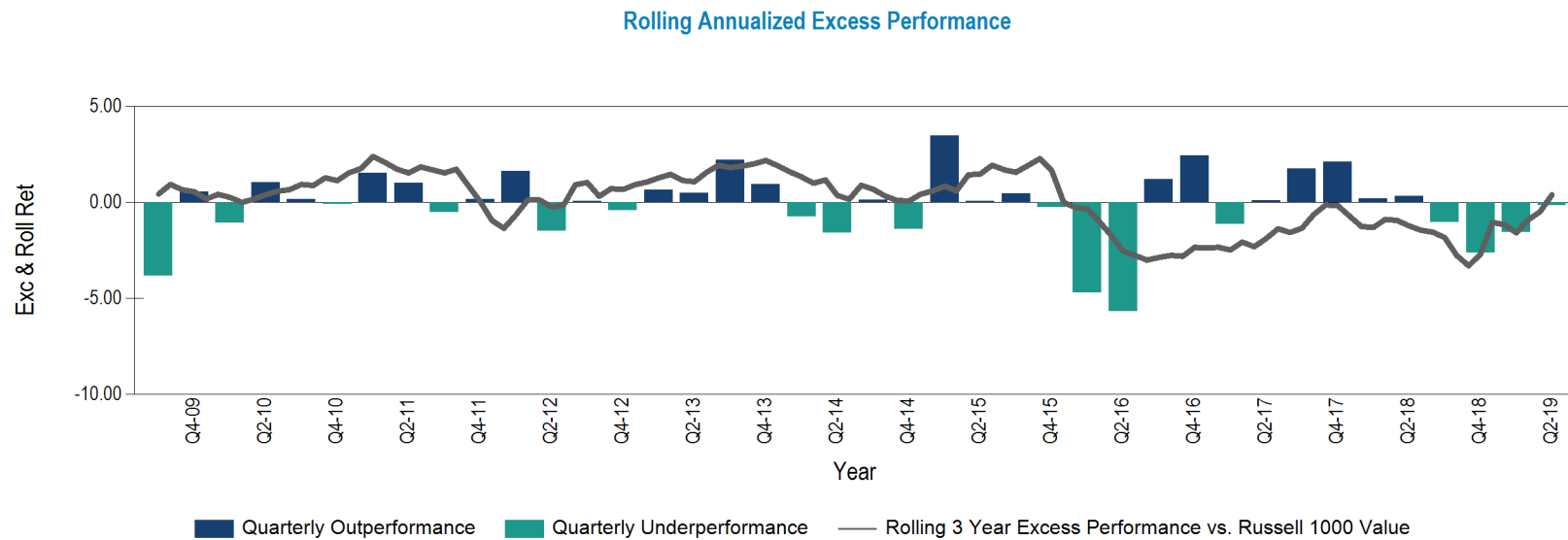
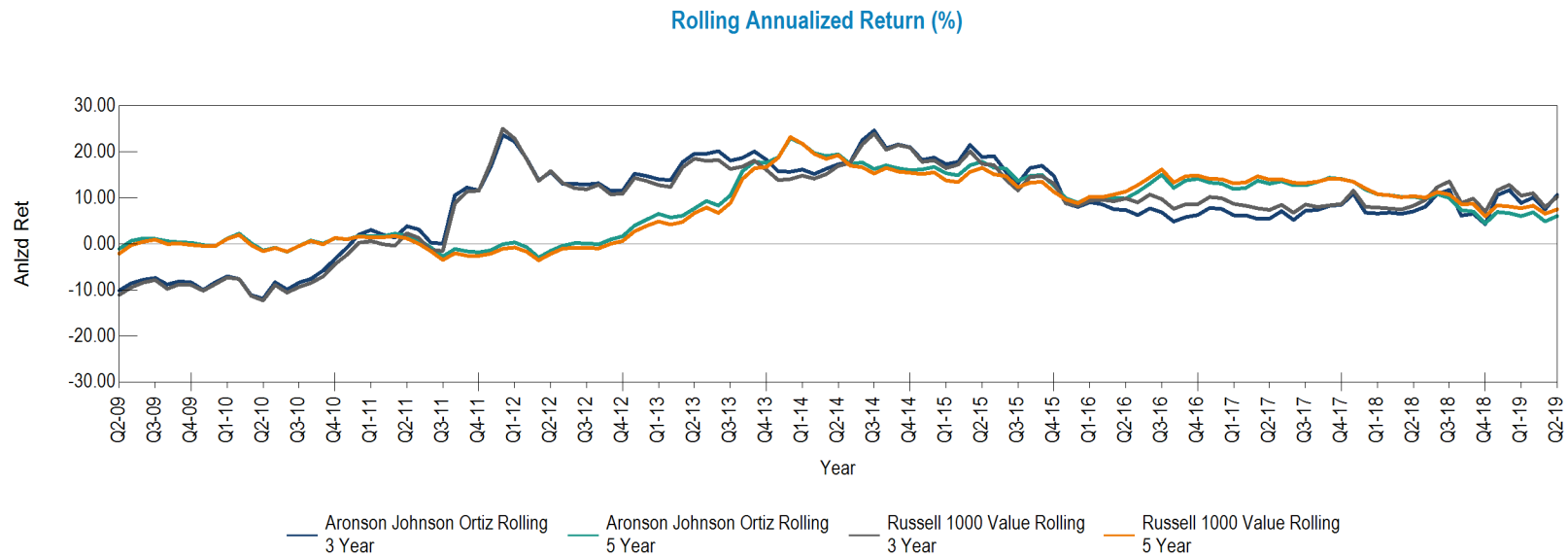
Bottom Contributors

	Avg Wgt	Return	Contribution
ALPHABET 'C'	1.50	-7.88	-0.12
ALPHABET A	1.47	-7.99	-0.12
INTEL	0.94	-10.31	-0.10
3M	0.46	-15.85	-0.07
ALTRIA GROUP	0.43	-16.26	-0.07
ELI LILLY	0.44	-14.15	-0.06
EXXON MOBIL	1.38	-4.08	-0.06
PHILIP MORRIS INTL.	0.55	-9.84	-0.05
ABBVIE	0.49	-8.57	-0.04
OCCIDENTAL PTL.	0.18	-22.81	-0.04

Unclassified sector allocation includes cash allocations.



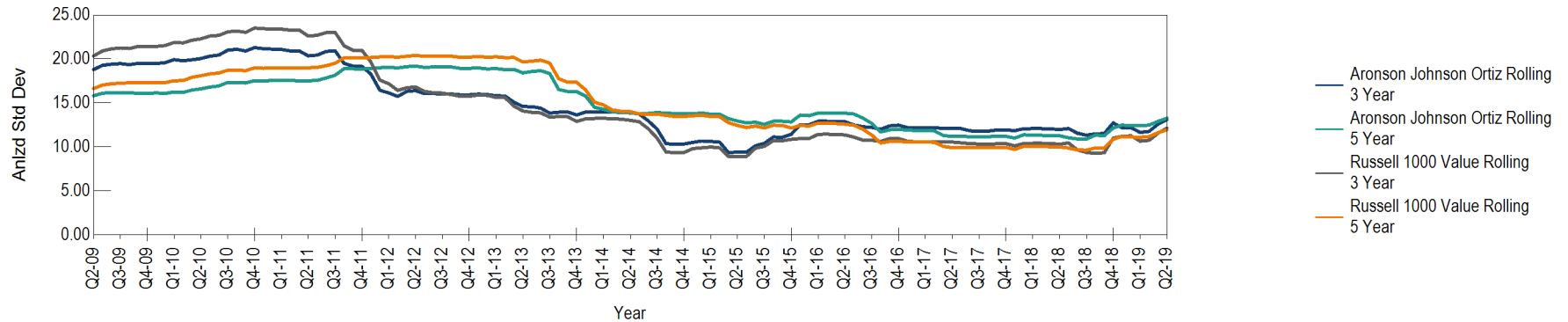
	Return (Rank)									
5th Percentile	6.4	13.0	14.1	10.1	14.8	-2.5	23.3	21.8	2.2	16.6
25th Percentile	4.5	9.3	12.0	8.4	13.5	-6.1	19.7	16.3	-0.8	13.3
Median	3.7	5.9	10.5	7.1	12.7	-9.0	16.7	13.8	-3.1	11.3
75th Percentile	2.4	2.8	9.3	5.9	11.7	-12.0	14.8	10.4	-5.7	9.7
95th Percentile	0.7	-2.1	6.9	3.5	10.0	-16.7	9.4	5.6	-9.4	5.0
# of Portfolios	246	241	236	224	182	239	231	225	195	197
● Aronson Johnson Ortiz	3.7 (51)	2.6 (78)	10.6 (48)	6.0 (71)	12.5 (57)	-11.4 (72)	16.7 (50)	9.5 (83)	-0.1 (16)	9.6 (78)
▲ Russell 1000 Value	3.8 (45)	8.5 (31)	10.2 (59)	7.5 (42)	13.2 (33)	-8.3 (43)	13.7 (86)	17.3 (19)	-3.8 (59)	13.5 (24)



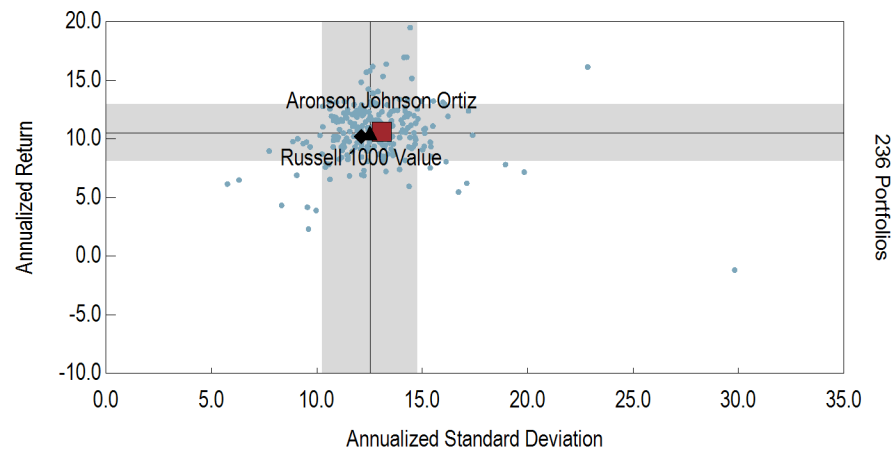
Aronson Johnson Ortiz Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

Rolling Annualized Standard Deviation



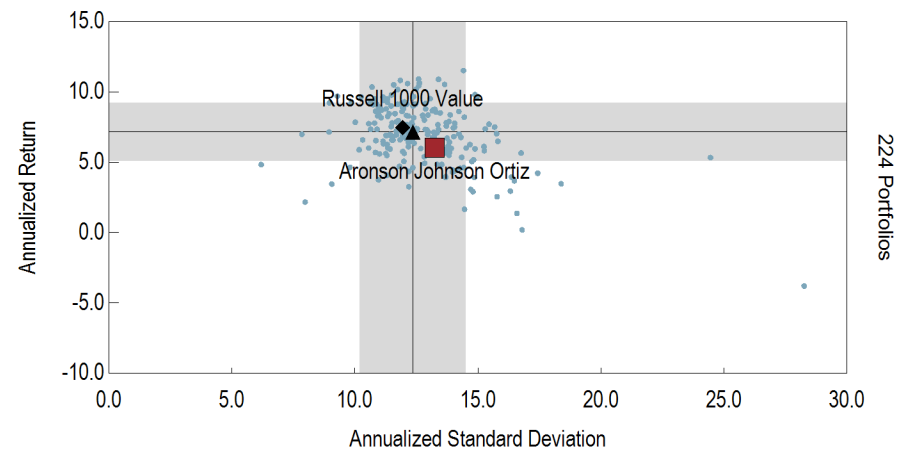
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	10.6%	13.1%	0.7
Russell 1000 Value	10.2%	12.1%	0.7
eV US Large Cap Value Equity Net Median	10.5%	12.5%	0.7

5 Years



5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	6.0%	13.2%	0.4
Russell 1000 Value	7.5%	11.9%	0.6
eV US Large Cap Value Equity Net Median	7.1%	12.4%	0.5

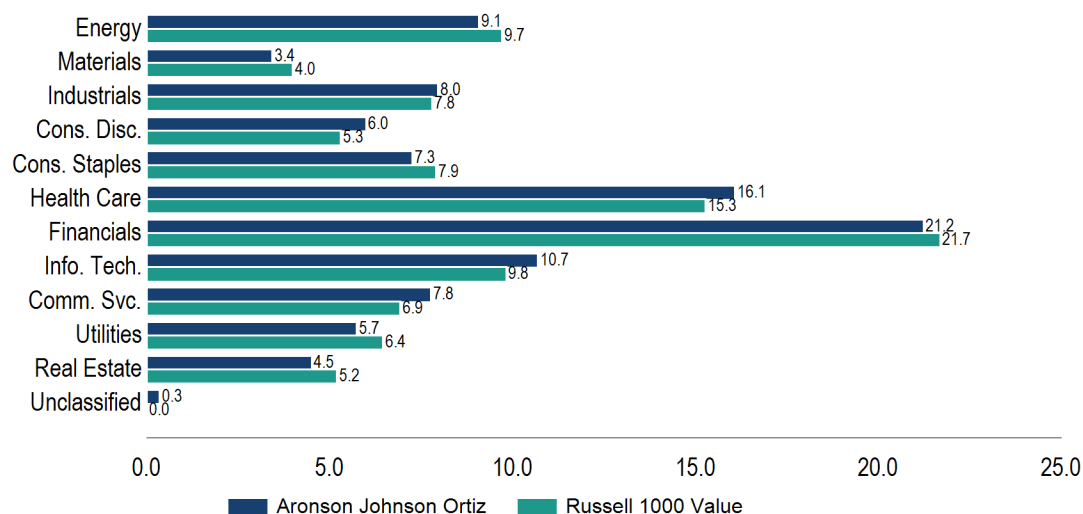
Aronson Johnson Ortiz Manager Portfolio Overview (Net of Fees)

Period Ending: June 30, 2019

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	152	722
Weighted Avg. Market Cap. (\$B)	73.45	123.11
Median Market Cap. (\$B)	9.88	9.18
Price To Earnings	14.68	17.41
Price To Book	2.33	2.28
Price To Sales	1.03	1.54
Return on Equity (%)	20.41	14.42
Yield (%)	2.33	2.58
Beta	1.10	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	2.97	0.32
PFIZER	2.94	2.90
VERIZON COMMUNICATIONS	2.92	-2.39
CHEVRON	2.68	2.02
CITIGROUP	2.13	13.27
PHILIP MORRIS INTL.	1.78	-9.84
EXELON	1.52	-3.66
CONOCOPHILLIPS	1.47	-8.15
HARTFORD FINL.SVS.GP.	1.43	12.71
HP	1.41	7.86

Top Contributors

	Avg Wgt	Return	Contribution
CITIGROUP	2.01	13.27	0.27
TYSON FOODS 'A'	1.29	16.86	0.22
HARTFORD FINL.SVS.GP.	1.44	12.71	0.18
ALLY FINANCIAL	1.36	13.38	0.18
VERISIGN	1.18	15.20	0.18
BRUKER	0.58	30.07	0.17
SINCLAIR BROADCAST 'A'	0.43	39.87	0.17
EMCOR GROUP	0.73	20.68	0.15
DECKERS OUTDOOR	0.74	19.72	0.15
STARBUCKS	1.07	13.29	0.14

Bottom Contributors

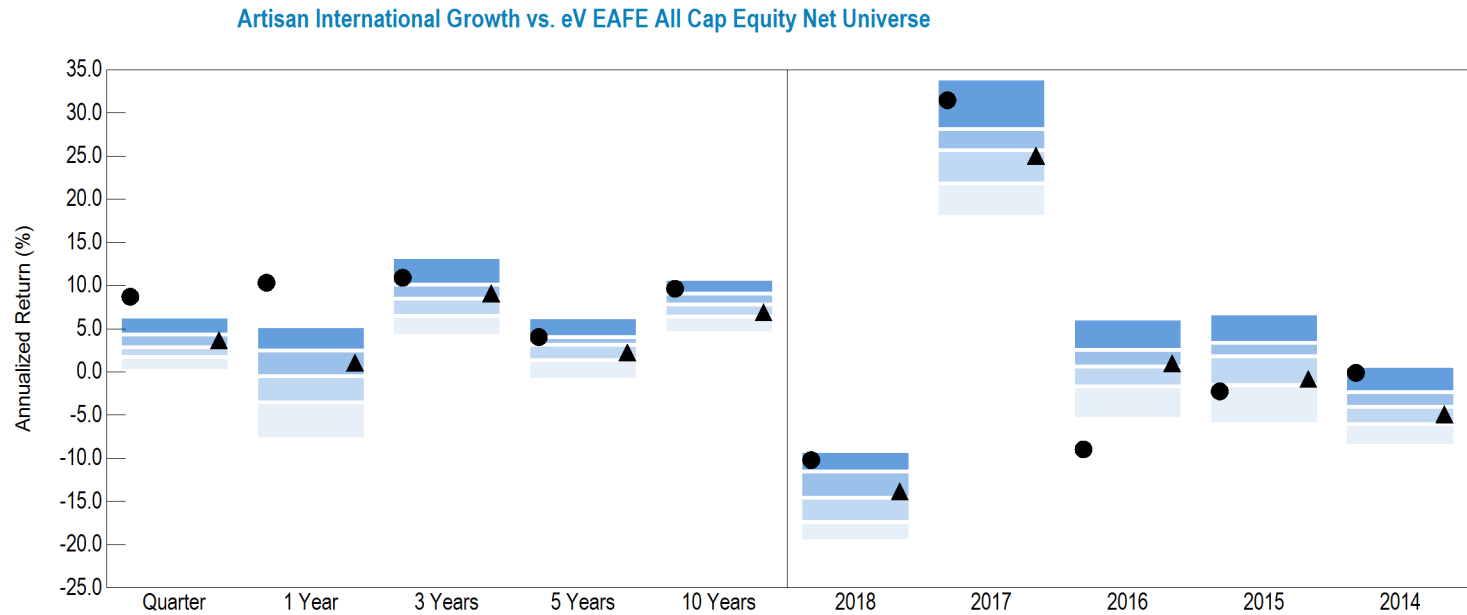
	Avg Wgt	Return	Contribution
PHILIP MORRIS INTL.	1.52	-9.84	-0.15
CONOCOPHILLIPS	1.68	-8.15	-0.14
PARK HOTELS & RESORTS	1.06	-9.87	-0.11
ROBERT HALF INTL.	0.82	-12.03	-0.10
STEEL DYNAMICS	0.65	-13.70	-0.09
JONES LANG LASALLE	1.00	-8.46	-0.08
FOOT LOCKER	0.26	-30.41	-0.08
INGREDION	0.64	-12.22	-0.08
TERADATA	0.41	-17.87	-0.07
AES	1.12	-6.56	-0.07

Unclassified sector allocation includes cash allocations.

International Equity Managers

Artisan International Growth Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019



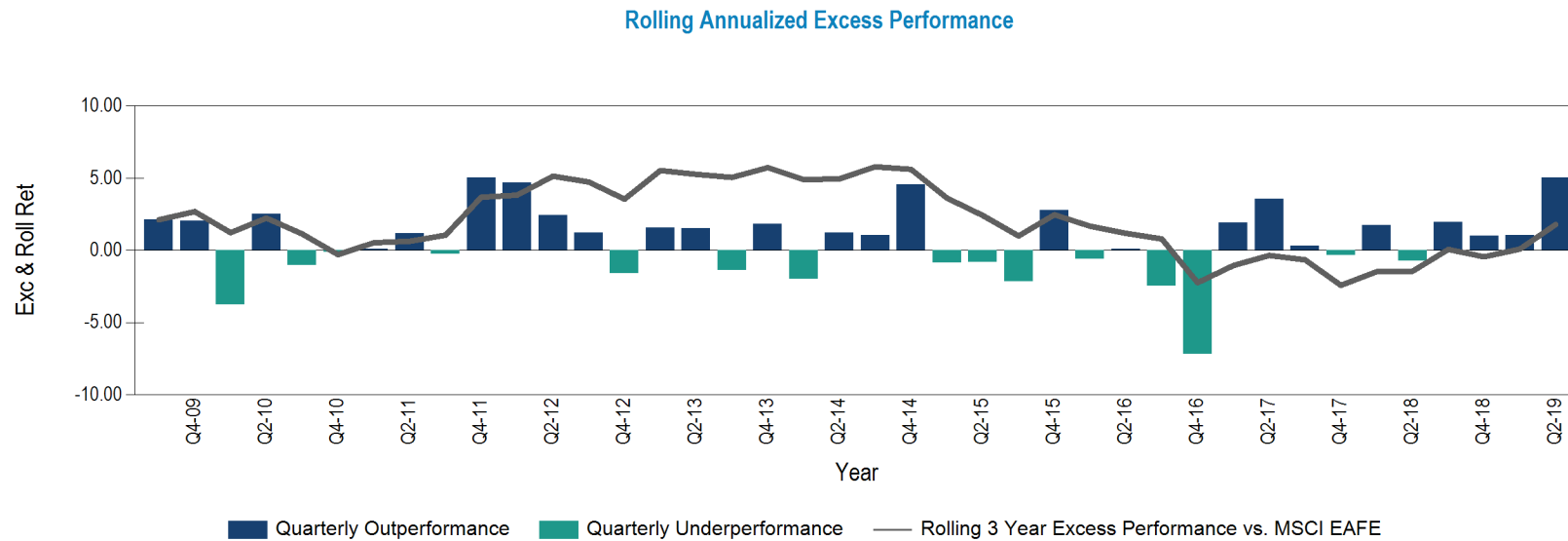
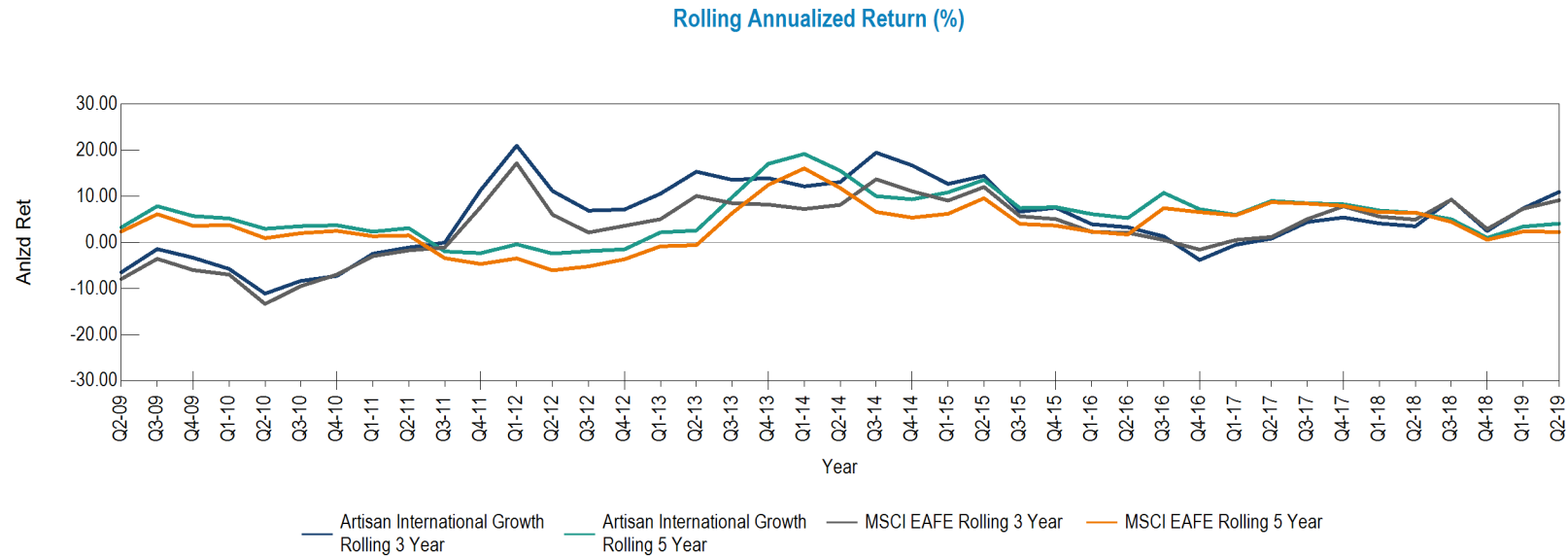
	Return (Rank)									
5th Percentile	6.4	5.3	13.3	6.3	10.7	-9.2	33.9	6.2	6.8	0.6
25th Percentile	4.3	2.6	10.1	4.1	9.1	-11.5	28.1	2.6	3.4	-2.3
Median	2.9	-0.4	8.5	3.1	7.8	-14.6	25.7	0.6	1.8	-4.0
75th Percentile	1.8	-3.5	6.5	1.4	6.4	-17.4	21.8	-1.7	-1.5	-6.0
95th Percentile	0.2	-7.8	4.3	-0.9	4.6	-19.6	18.0	-5.4	-6.0	-8.5
# of Portfolios	78	78	74	67	50	72	70	64	58	51
● Artisan International Growth	8.7 (1)	10.3 (1)	10.9 (20)	4.0 (27)	9.6 (16)	-10.2 (13)	31.5 (13)	-9.0 (99)	-2.2 (80)	-0.1 (10)
▲ MSCI EAFE	3.7 (42)	1.1 (38)	9.1 (40)	2.2 (64)	6.9 (66)	-13.8 (47)	25.0 (59)	1.0 (46)	-0.8 (71)	-4.9 (62)

Returns prior to inception date are composite returns.

Artisan International Growth

Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019



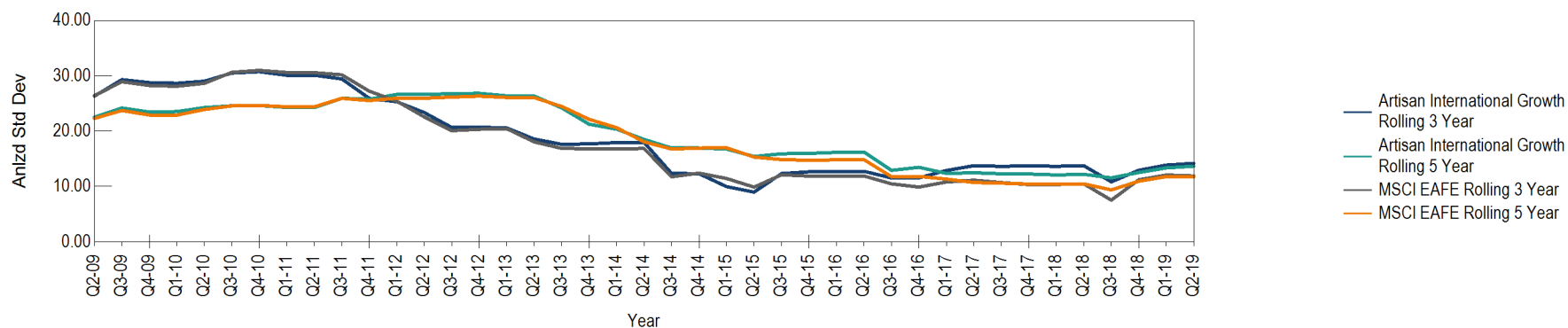
Returns prior to inception date are composite returns.

Artisan International Growth

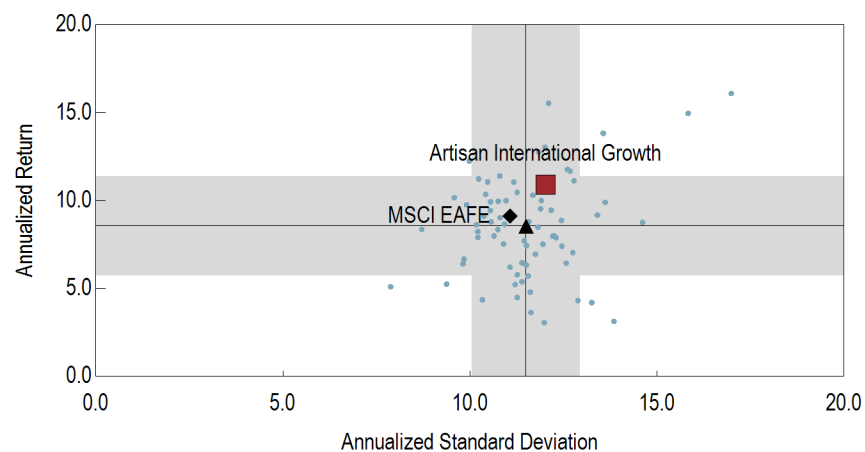
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

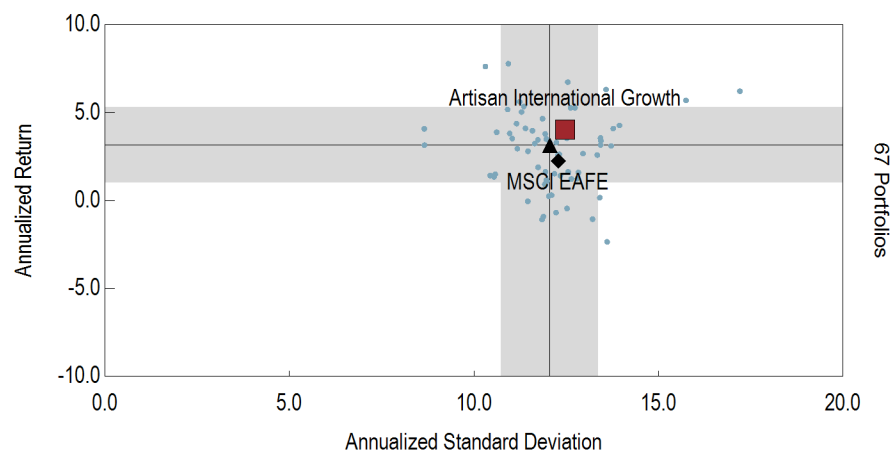
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Artisan International Growth	10.9%	12.0%	0.8
MSCI EAFE	9.1%	11.1%	0.7
eV EAFE All Cap Equity Net Median	8.5%	11.5%	0.6

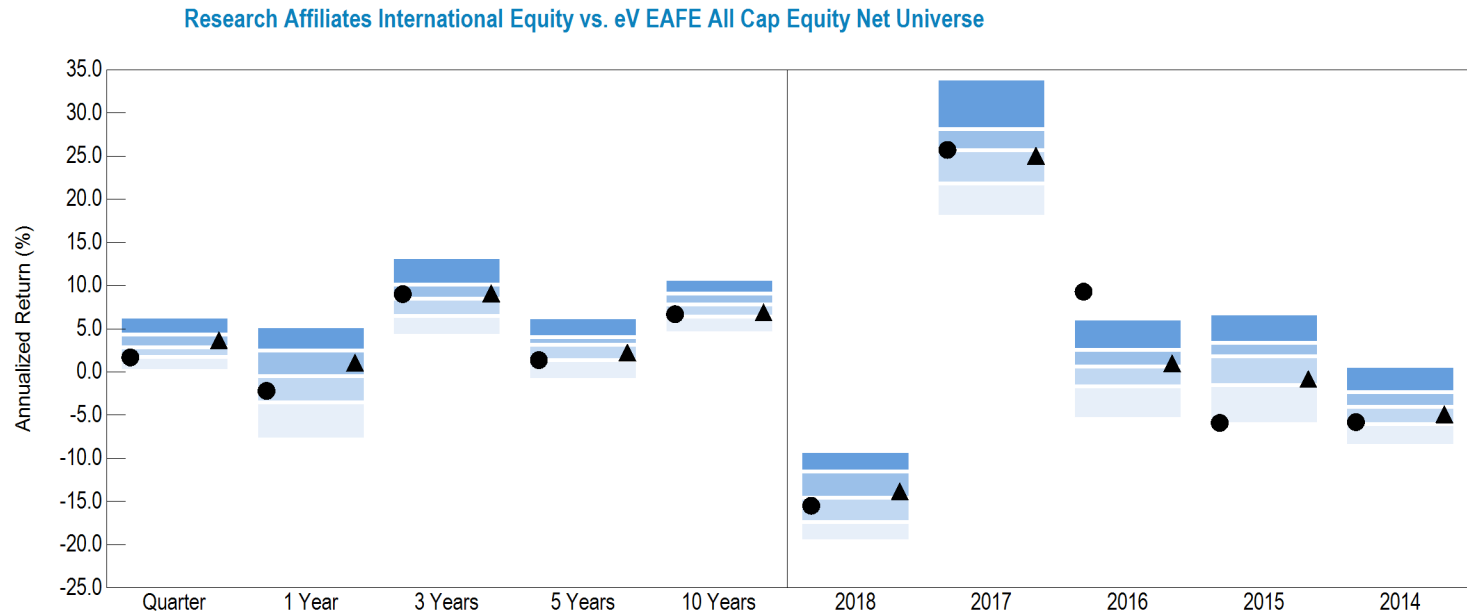
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Artisan International Growth	4.0%	12.5%	0.3
MSCI EAFE	2.2%	12.3%	0.1
eV EAFE All Cap Equity Net Median	3.1%	12.1%	0.2

Returns prior to inception date are composite returns.

Research Affiliates International Equity Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019

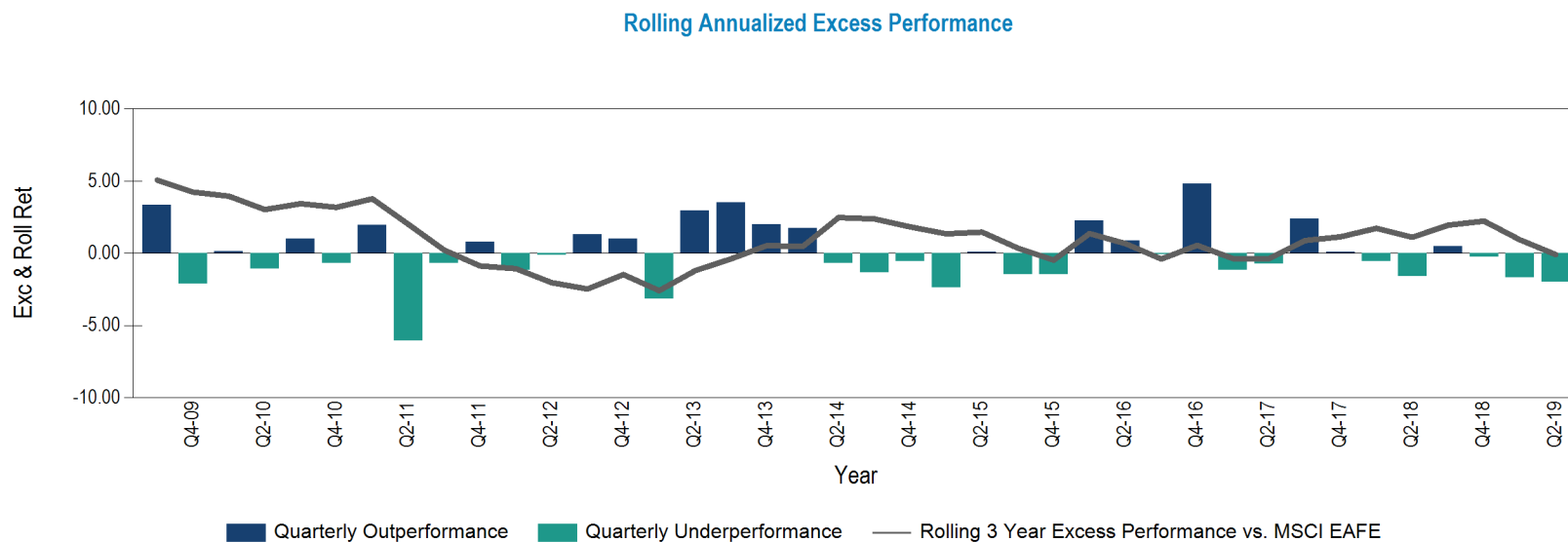
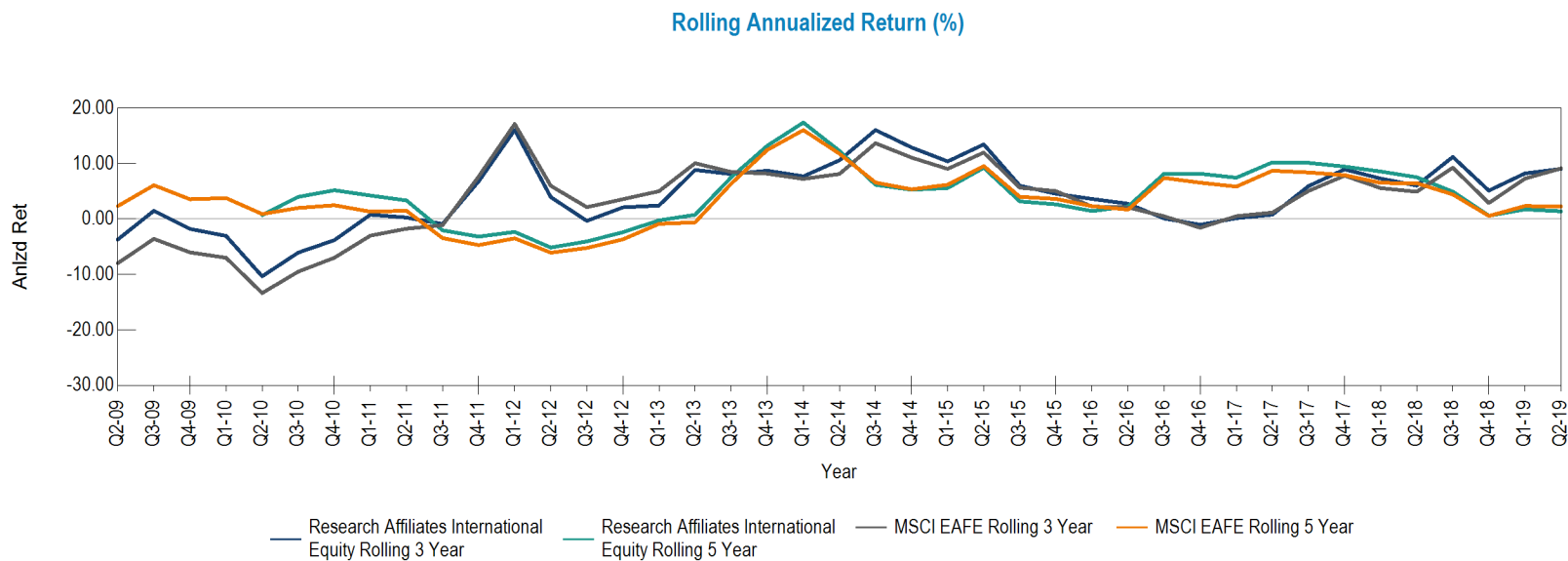


	Return (Rank)									
5th Percentile	6.4	5.3	13.3	6.3	10.7	-9.2	33.9	6.2	6.8	0.6
25th Percentile	4.3	2.6	10.1	4.1	9.1	-11.5	28.1	2.6	3.4	-2.3
Median	2.9	-0.4	8.5	3.1	7.8	-14.6	25.7	0.6	1.8	-4.0
75th Percentile	1.8	-3.5	6.5	1.4	6.4	-17.4	21.8	-1.7	-1.5	-6.0
95th Percentile	0.2	-7.8	4.3	-0.9	4.6	-19.6	18.0	-5.4	-6.0	-8.5
# of Portfolios	78	78	74	67	50	72	70	64	58	51
● Research Affiliates International Equity	1.7 (80)	-2.2 (64)	9.0 (42)	1.4 (77)	6.7 (69)	-15.5 (57)	25.7 (51)	9.3 (1)	-5.9 (95)	-5.8 (75)
▲ MSCI EAFE	3.7 (42)	1.1 (38)	9.1 (40)	2.2 (64)	6.9 (66)	-13.8 (47)	25.0 (59)	1.0 (46)	-0.8 (71)	-4.9 (62)

Returns prior to inception date are composite returns.

Research Affiliates International Equity Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

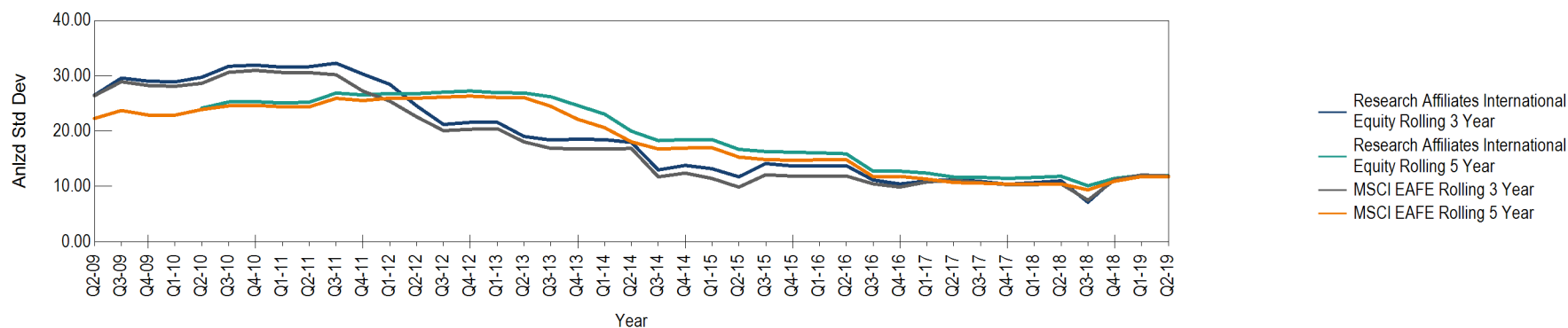


Returns prior to inception date are composite returns.

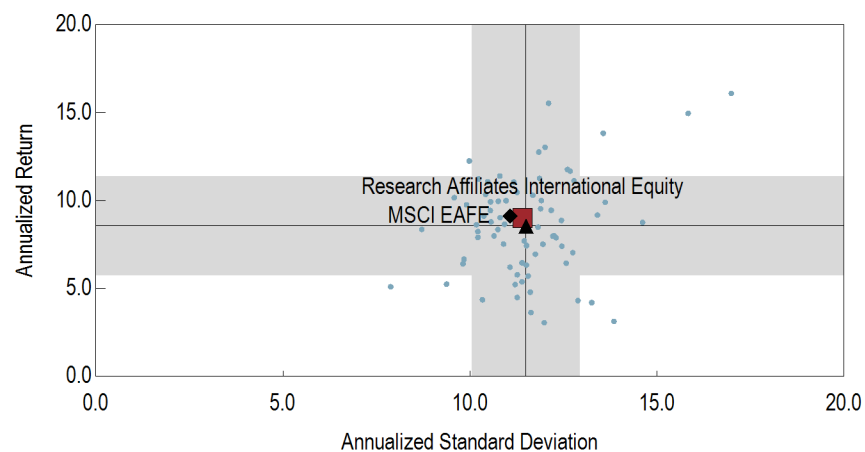
Research Affiliates International Equity Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

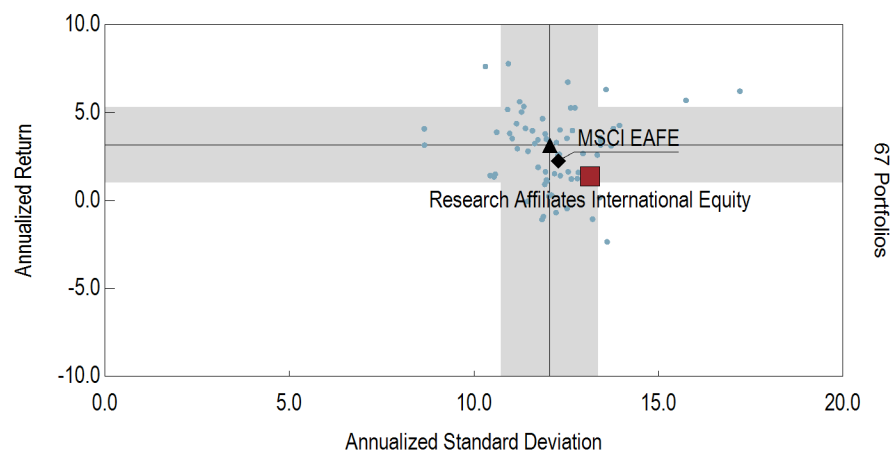
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	9.0%	11.4%	0.7
MSCI EAFE	9.1%	11.1%	0.7
eV EAFE All Cap Equity Net Median	8.5%	11.5%	0.6

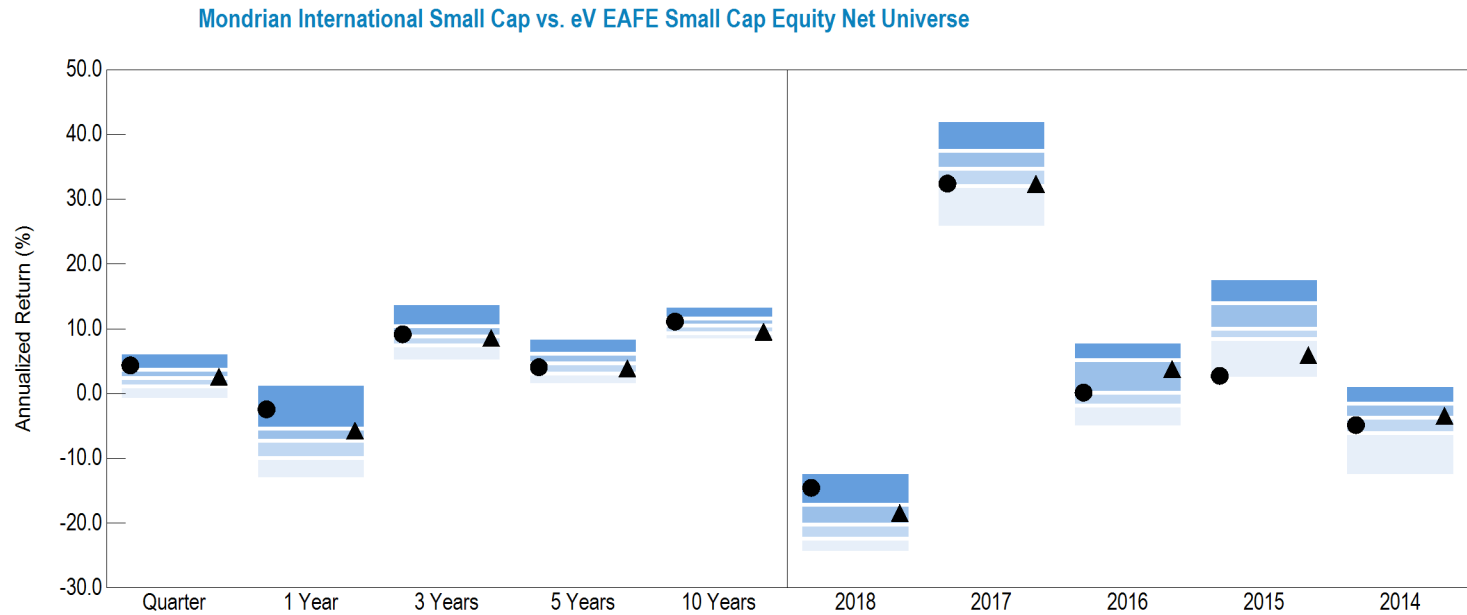
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	1.4%	13.2%	0.0
MSCI EAFE	2.2%	12.3%	0.1
eV EAFE All Cap Equity Net Median	3.1%	12.1%	0.2

Returns prior to inception date are composite returns.

Mondrian International Small Cap Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019

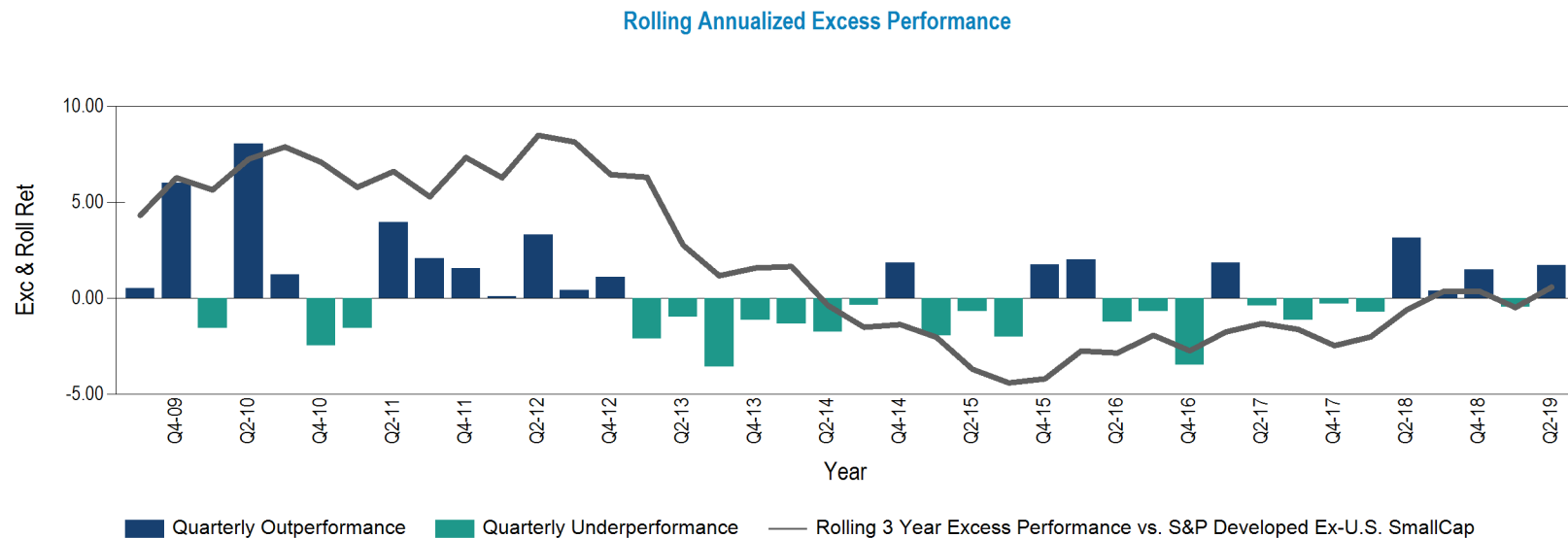
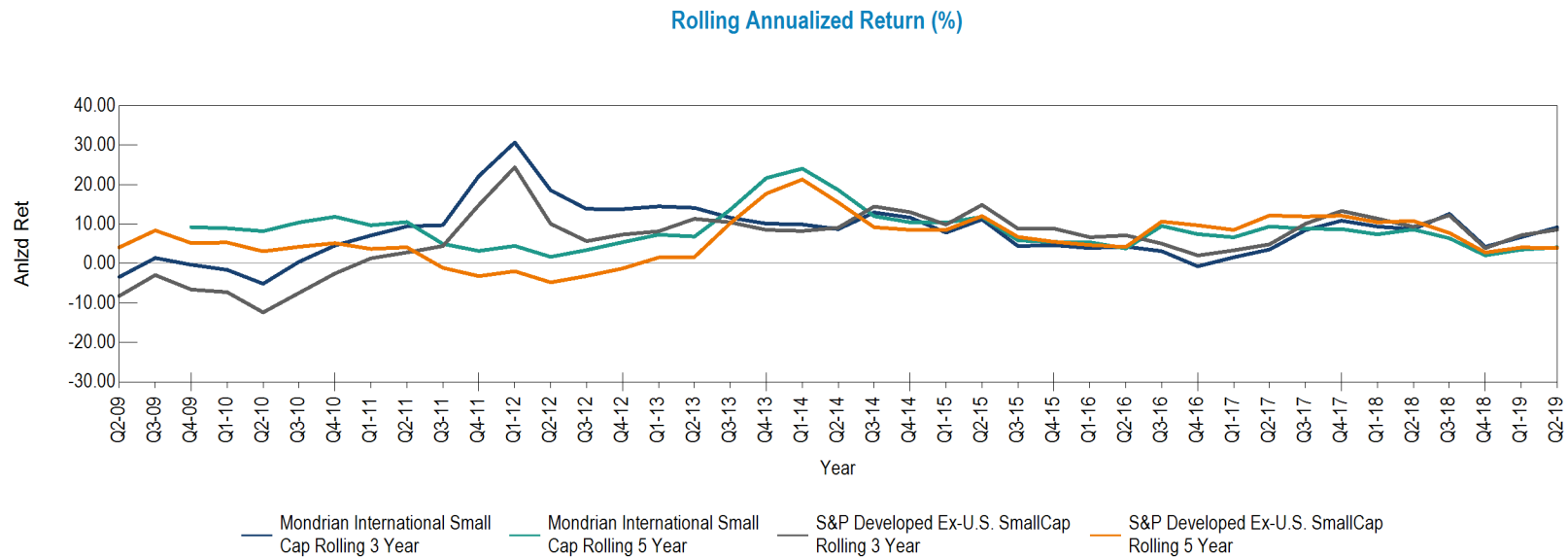


	Return (Rank)									
5th Percentile	6.3	1.5	13.9	8.6	13.6	-12.1	42.2	7.9	17.8	1.2
25th Percentile	3.8	-5.4	10.4	6.2	11.6	-17.1	37.6	5.2	14.0	-1.5
Median	2.5	-7.2	8.9	4.7	10.5	-20.2	34.8	0.1	10.1	-3.7
75th Percentile	1.1	-10.0	7.5	3.1	9.4	-22.3	32.1	-1.8	8.5	-6.1
95th Percentile	-0.9	-13.1	5.0	1.4	8.2	-24.6	25.7	-5.2	2.3	-12.7
# of Portfolios	60	60	58	47	27	57	52	41	31	32
● Mondrian International Small Cap	4.3 (22)	-2.4 (12)	9.1 (48)	4.1 (55)	11.1 (43)	-14.6 (11)	32.4 (74)	0.1 (50)	2.7 (94)	-4.9 (67)
▲ S&P Developed Ex-U.S. SmallCap	2.6 (48)	-5.7 (30)	8.6 (60)	3.9 (58)	9.5 (73)	-18.4 (29)	32.4 (74)	3.8 (29)	5.9 (84)	-3.4 (48)

Returns prior to inception date are composite returns.

Mondrian International Small Cap Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

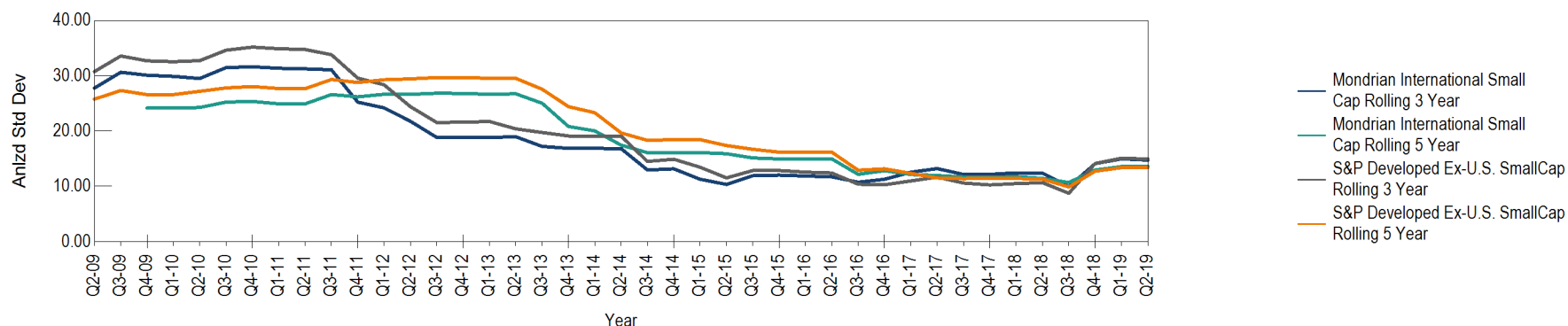


Returns prior to inception date are composite returns.

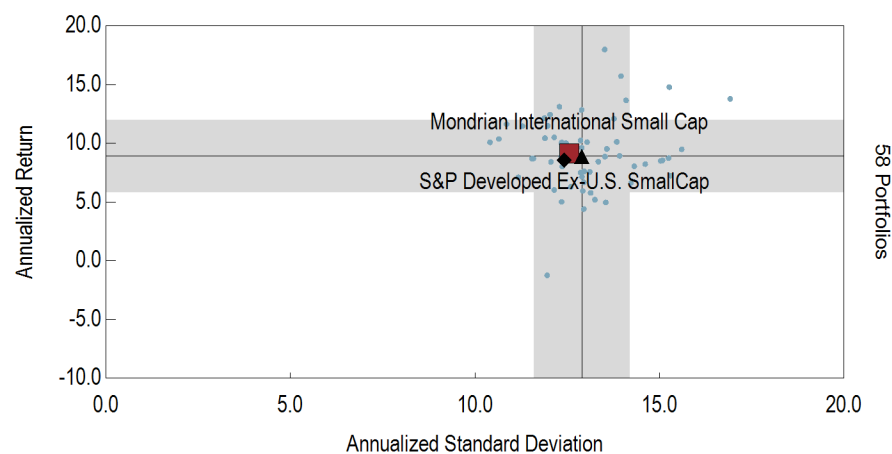
Mondrian International Small Cap Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

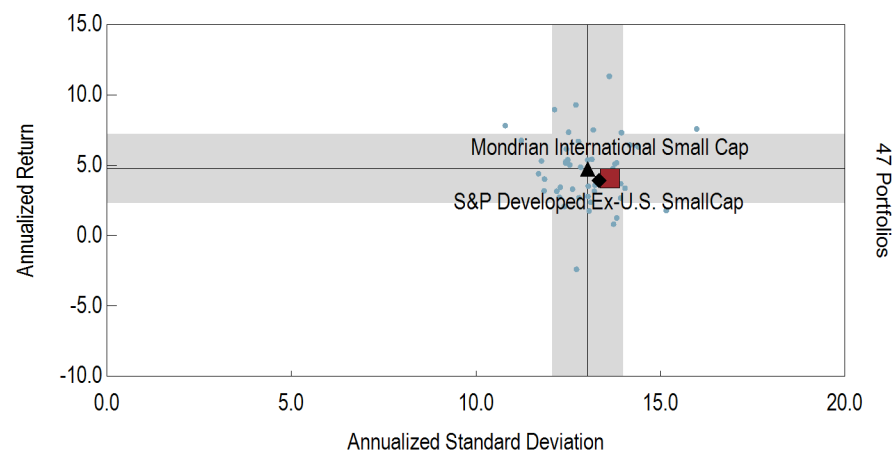
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	9.1%	12.6%	0.6
S&P Developed Ex-U.S. SmallCap	8.6%	12.4%	0.6
eV EAFE Small Cap Equity Net Median	8.9%	12.9%	0.6

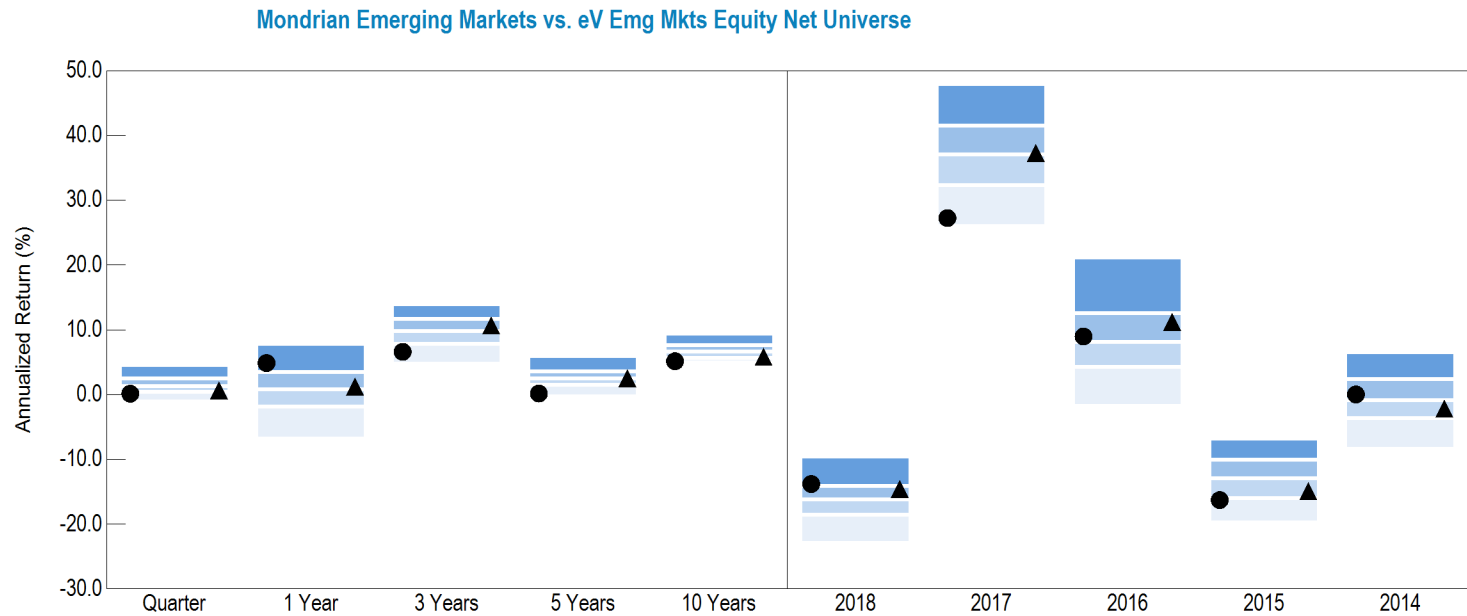
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	4.1%	13.6%	0.2
S&P Developed Ex-U.S. SmallCap	3.9%	13.3%	0.2
eV EAFE Small Cap Equity Net Median	4.7%	13.0%	0.3

Returns prior to inception date are composite returns.

Mondrian Emerging Markets Manager Performance Comparisons (Net of Fees)

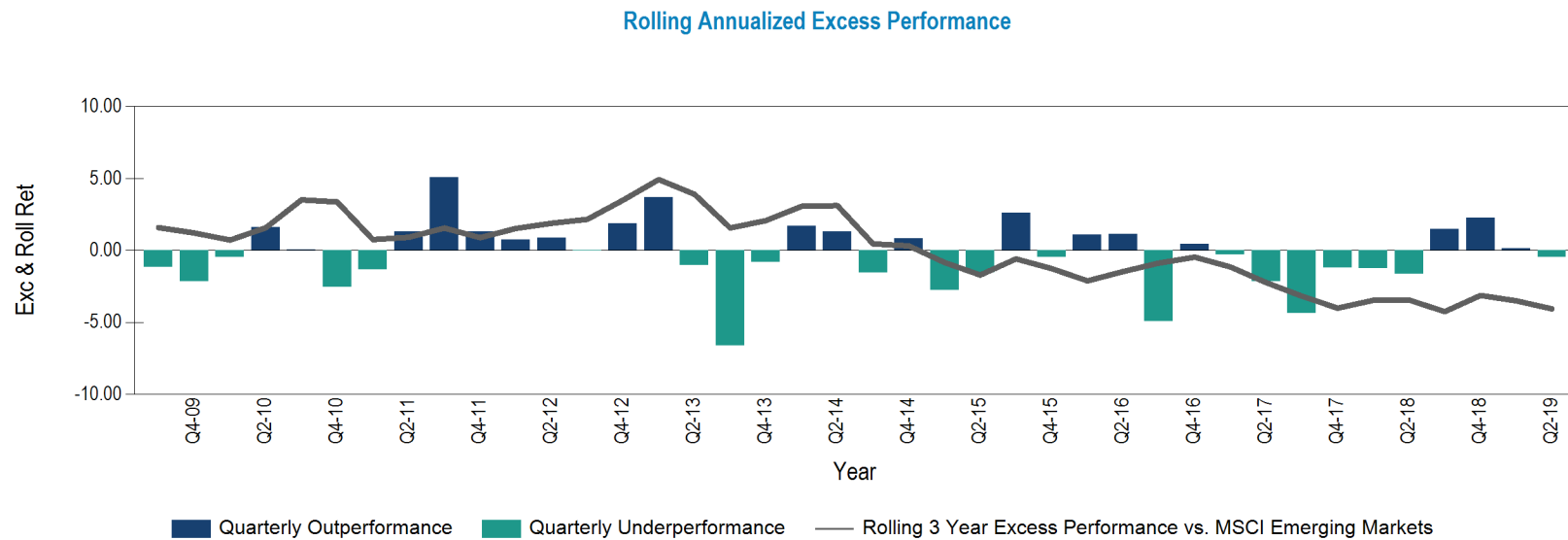
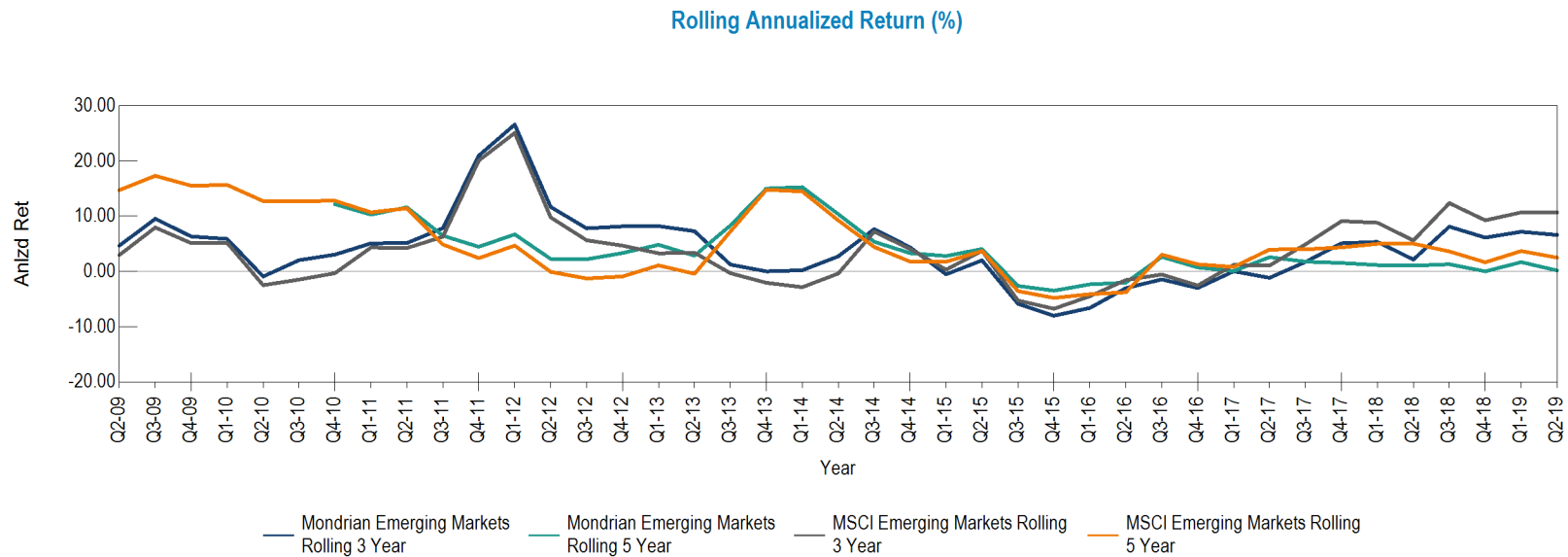
Period Ending: June 30, 2019



	Return (Rank)									
5th Percentile	4.5	7.8	13.9	5.9	9.4	-9.6	47.9	21.1	-6.9	6.5
25th Percentile	2.5	3.5	11.7	3.7	7.6	-14.1	41.5	12.7	-10.0	2.4
Median	1.4	0.9	9.9	2.5	6.7	-16.2	37.1	8.2	-12.9	-0.8
75th Percentile	0.5	-1.8	7.9	1.5	5.7	-18.5	32.4	4.4	-15.9	-3.6
95th Percentile	-1.0	-6.7	4.8	-0.2	5.0	-22.9	26.1	-1.7	-19.7	-8.3
# of Portfolios	214	206	191	165	74	200	184	181	143	126
● Mondrian Emerging Markets	0.1 (84)	4.9 (14)	6.6 (87)	0.2 (92)	5.1 (95)	-13.8 (24)	27.2 (93)	9.0 (44)	-16.3 (80)	0.0 (42)
▲ MSCI Emerging Markets	0.6 (72)	1.2 (47)	10.7 (38)	2.5 (52)	5.8 (74)	-14.6 (30)	37.3 (48)	11.2 (34)	-14.9 (68)	-2.2 (62)

Mondrian Emerging Markets Rolling Manager Performance (Net of Fees)

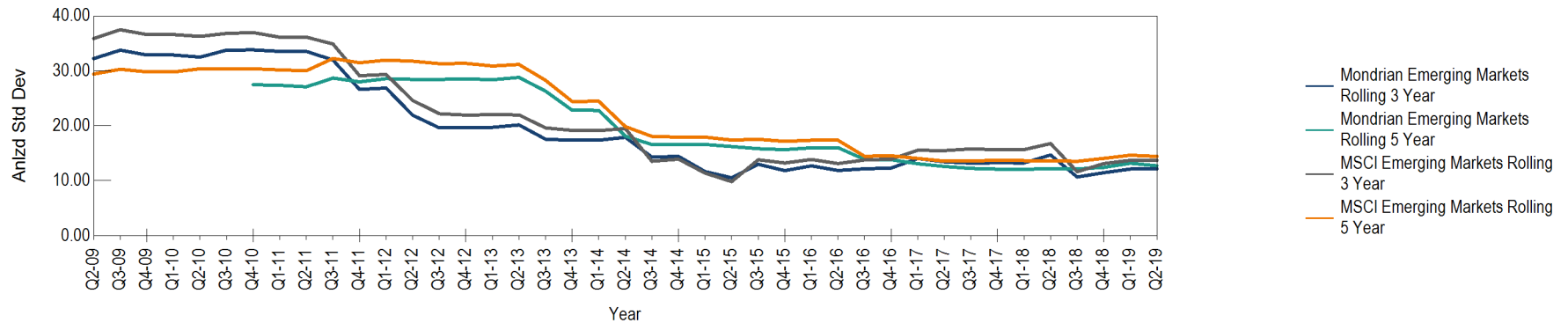
Period Ending: June 30, 2019



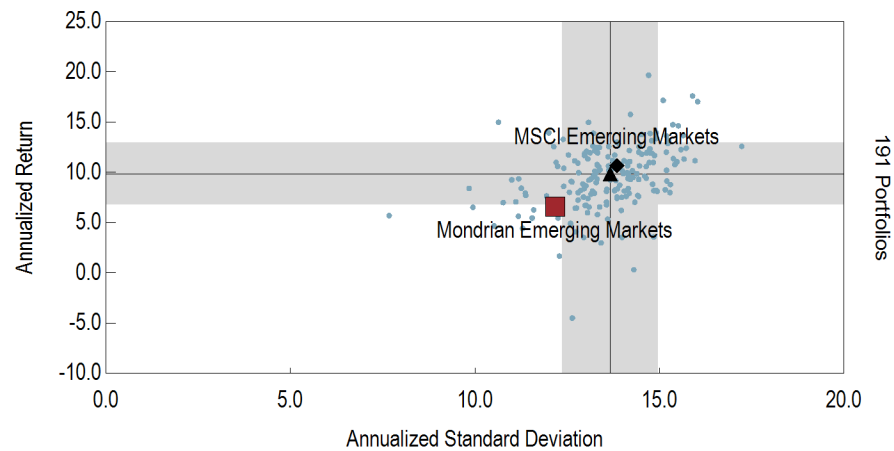
Mondrian Emerging Markets Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

Rolling Annualized Standard Deviation



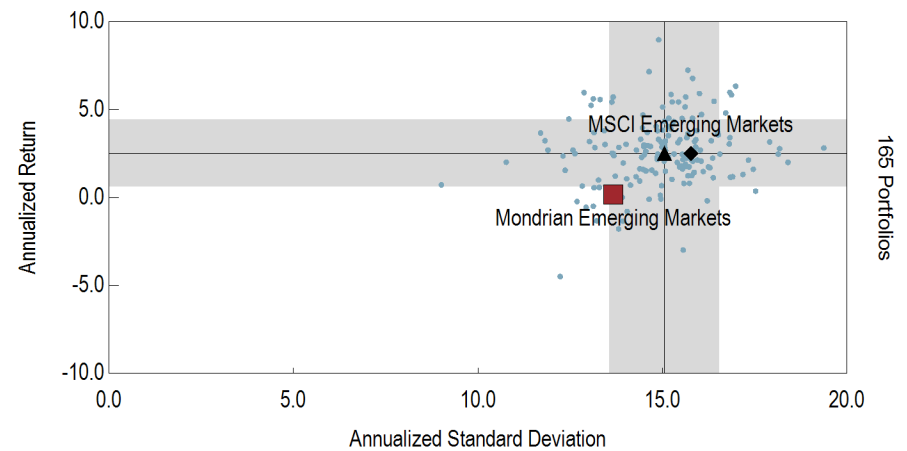
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	6.6%	12.2%	0.4
MSCI Emerging Markets	10.7%	13.9%	0.7
eV Emg Mkts Equity Net Median	9.9%	13.7%	0.6

5 Years



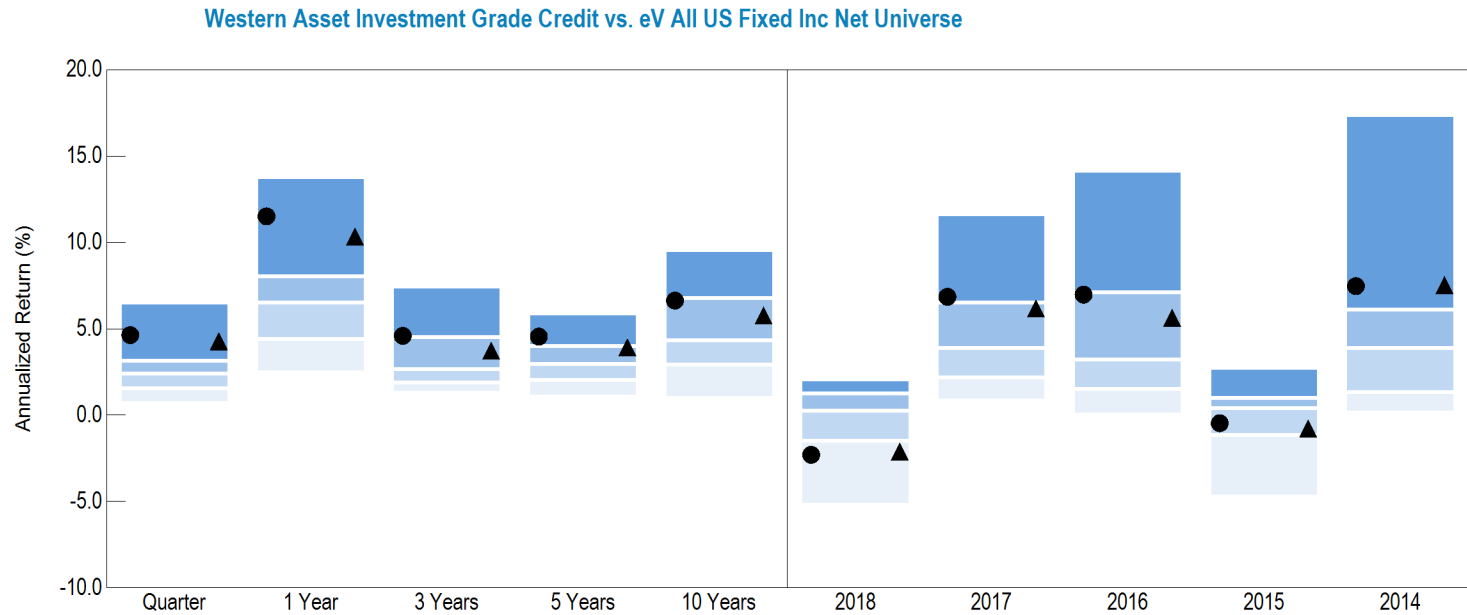
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	0.2%	13.7%	0.0
MSCI Emerging Markets	2.5%	15.8%	0.1
eV Emg Mkts Equity Net Median	2.5%	15.1%	0.1

Fixed Income Managers

Western Asset Investment Grade Credit Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019

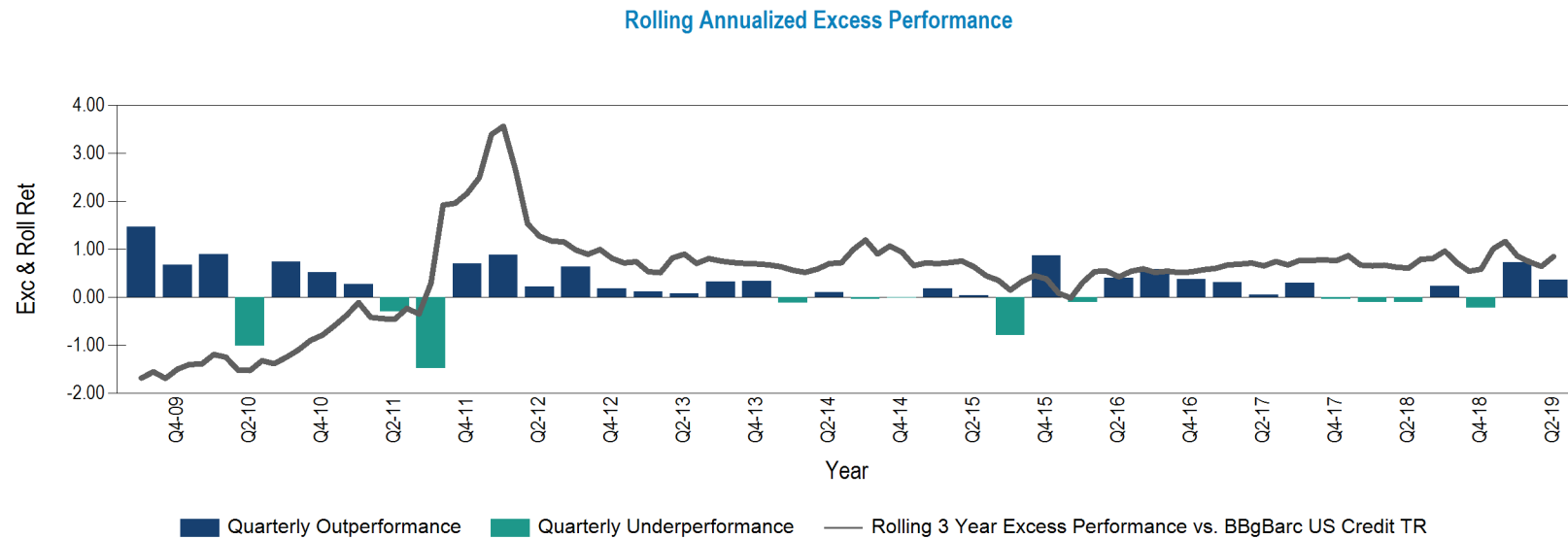
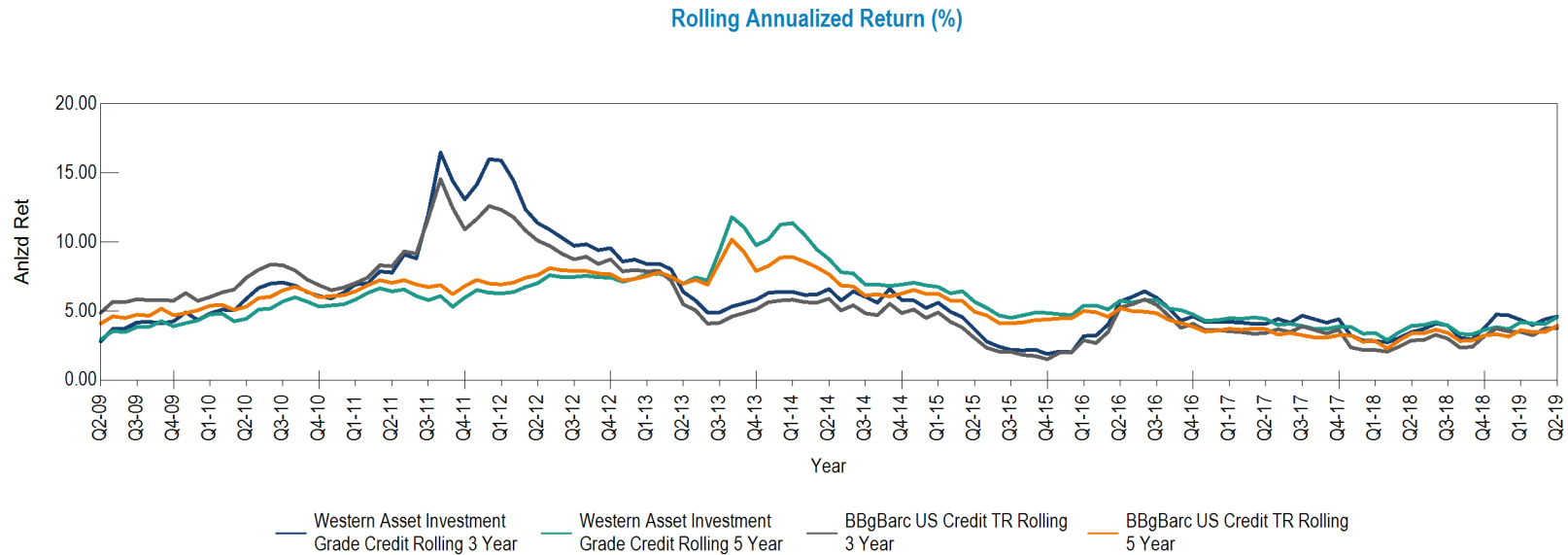


	Return (Rank)									
5th Percentile	6.5	13.8	7.4	5.9	9.5	2.1	11.6	14.1	2.7	17.4
25th Percentile	3.2	8.1	4.5	4.0	6.8	1.3	6.5	7.1	1.0	6.1
Median	2.4	6.5	2.7	3.0	4.4	0.3	3.9	3.3	0.4	3.9
75th Percentile	1.6	4.4	1.9	2.0	2.9	-1.5	2.2	1.6	-1.1	1.4
95th Percentile	0.7	2.5	1.3	1.1	1.0	-5.2	0.9	0.0	-4.7	0.2
# of Portfolios	1,176	1,161	1,111	1,040	805	1,173	1,135	1,033	827	758
● Western Asset Investment Grade Credit	4.6 (9)	11.5 (8)	4.6 (25)	4.5 (18)	6.6 (27)	-2.3 (81)	6.8 (23)	7.0 (26)	-0.5 (70)	7.5 (15)
▲ BBgBarc US Credit TR	4.3 (12)	10.3 (11)	3.7 (36)	3.9 (27)	5.8 (34)	-2.1 (79)	6.2 (28)	5.6 (33)	-0.8 (74)	7.5 (15)

Returns prior to inception date are composite returns.

Western Asset Investment Grade Credit Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

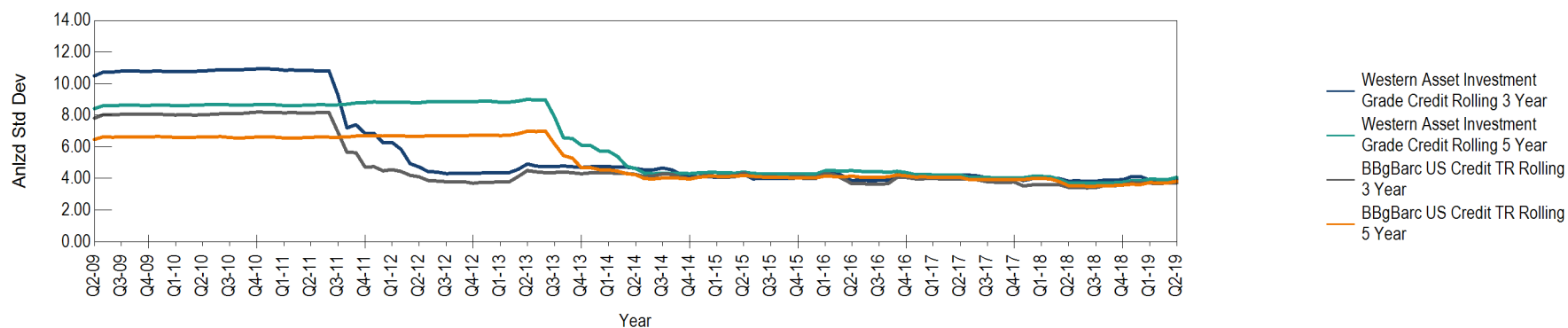


Returns prior to inception date are composite returns.

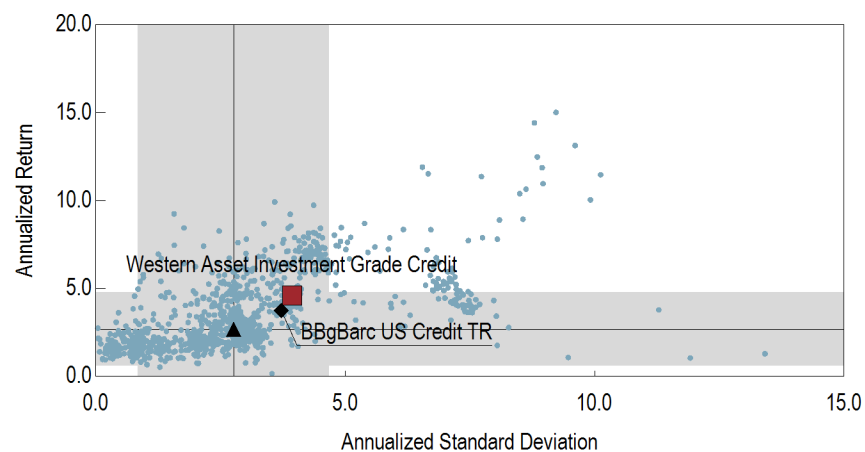
Western Asset Investment Grade Credit Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

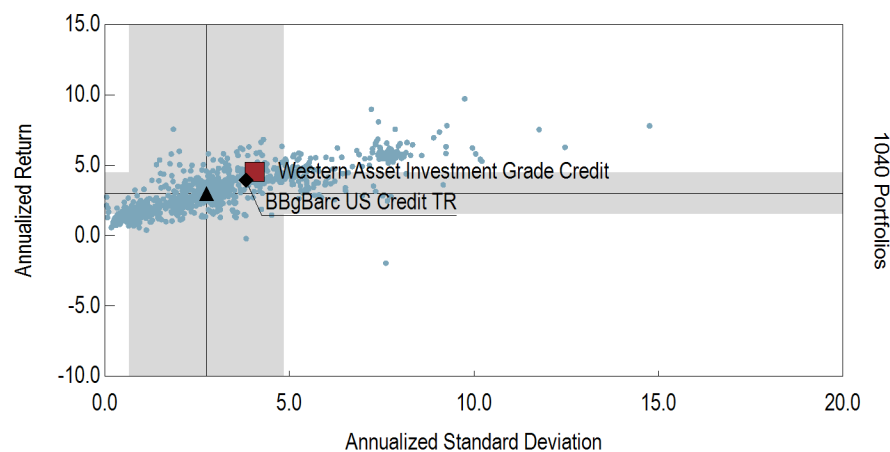
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	4.6%	3.9%	0.8
BBgBarc US Credit TR	3.7%	3.7%	0.6
eV All US Fixed Inc Net Median	2.7%	2.8%	0.5

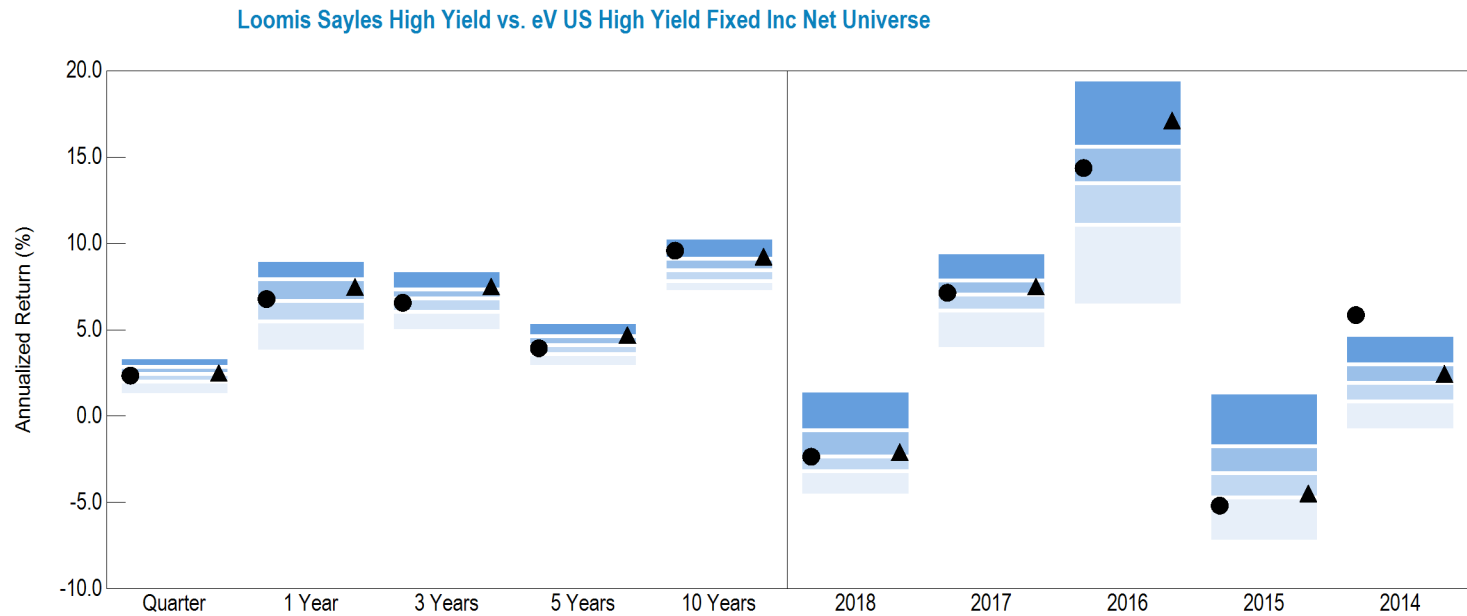
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	4.5%	4.1%	0.9
BBgBarc US Credit TR	3.9%	3.8%	0.8
eV All US Fixed Inc Net Median	3.0%	2.8%	0.8

Returns prior to inception date are composite returns.

Loomis Sayles High Yield Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019

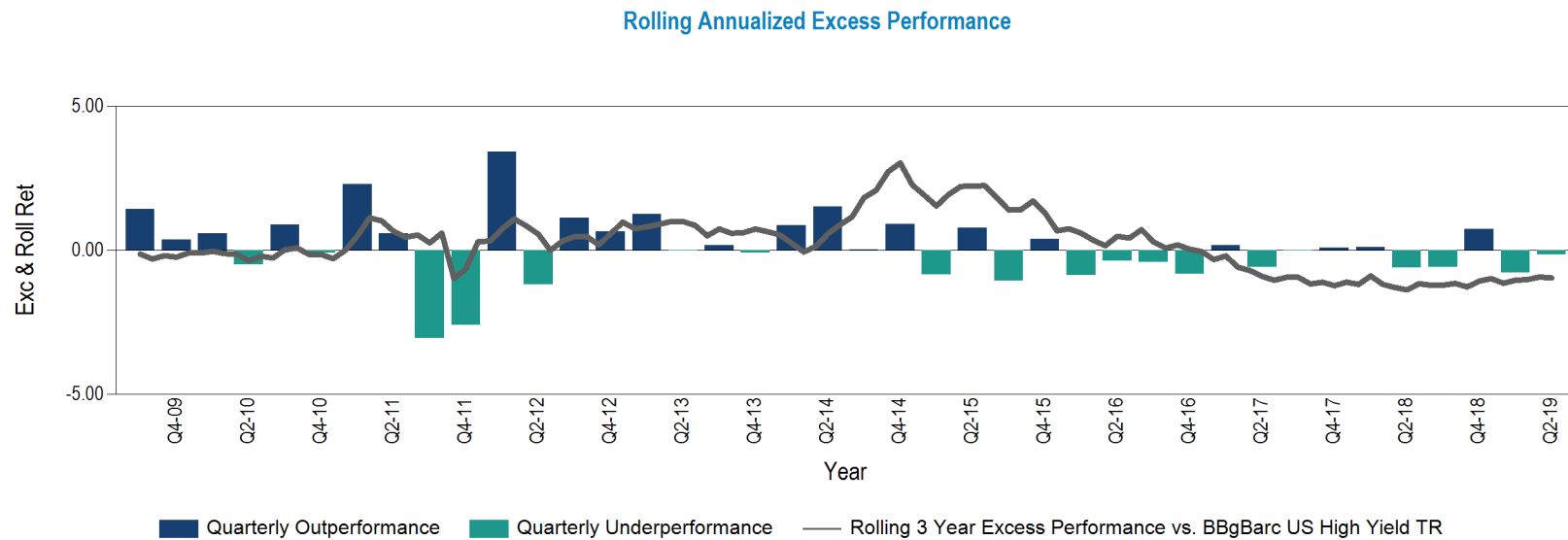
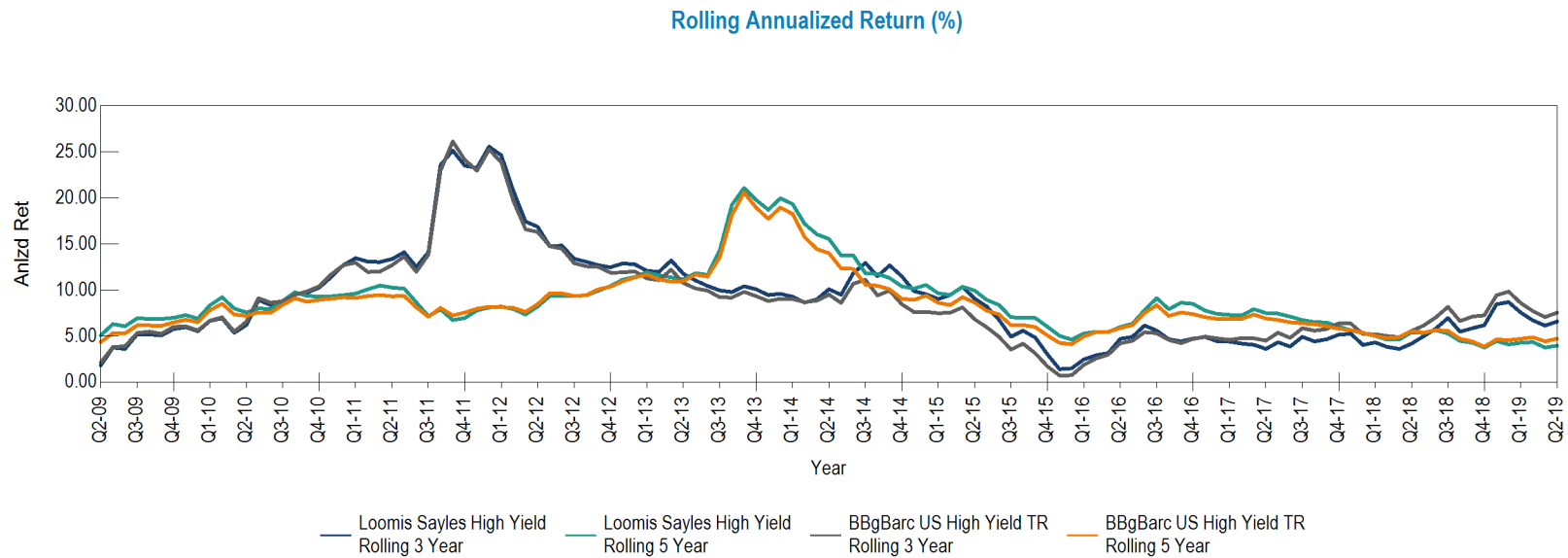


	Return (Rank)									
5th Percentile	3.4	9.0	8.4	5.4	10.3	1.4	9.5	19.5	1.4	4.7
25th Percentile	2.9	8.0	7.4	4.6	9.1	-0.8	7.9	15.6	-1.7	3.0
Median	2.5	6.7	6.8	4.1	8.5	-2.3	7.1	13.5	-3.3	1.9
75th Percentile	2.0	5.5	6.1	3.6	7.8	-3.2	6.1	11.1	-4.7	0.9
95th Percentile	1.2	3.8	5.0	2.9	7.2	-4.6	3.9	6.4	-7.2	-0.8
# of Portfolios	133	133	129	117	78	136	129	114	88	77
● Loomis Sayles High Yield	2.3 (59)	6.8 (49)	6.6 (62)	3.9 (60)	9.6 (11)	-2.3 (52)	7.1 (47)	14.4 (42)	-5.2 (79)	5.8 (1)
▲ BBgBarc US High Yield TR	2.5 (47)	7.5 (35)	7.5 (22)	4.7 (24)	9.2 (19)	-2.1 (46)	7.5 (39)	17.1 (12)	-4.5 (73)	2.5 (40)

Returns prior to inception date are composite returns.

Loomis Sayles High Yield Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

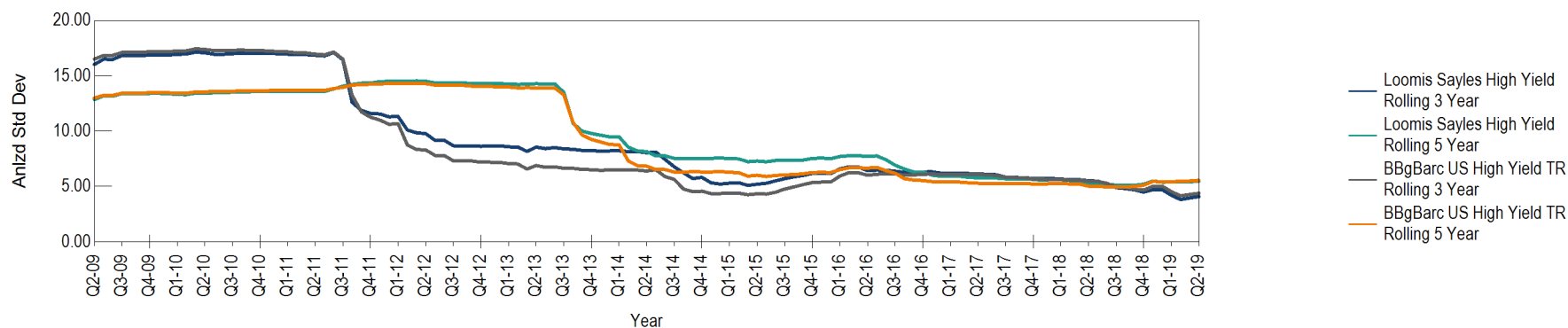


Returns prior to inception date are composite returns.

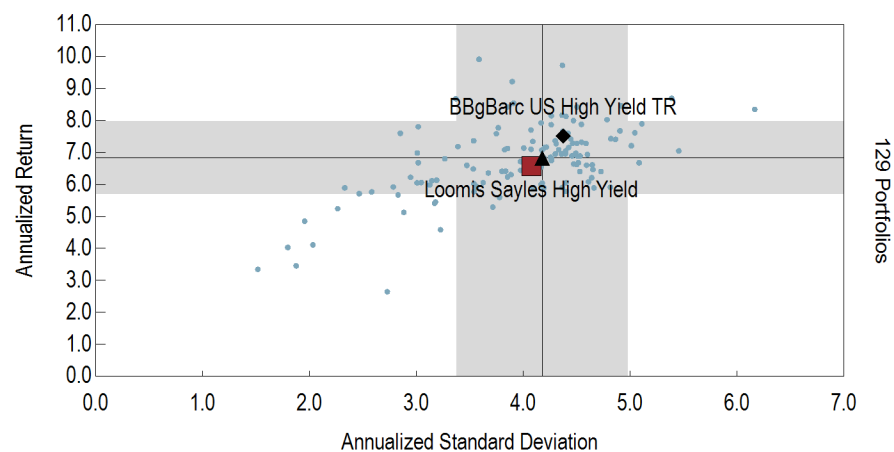
Loomis Sayles High Yield Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

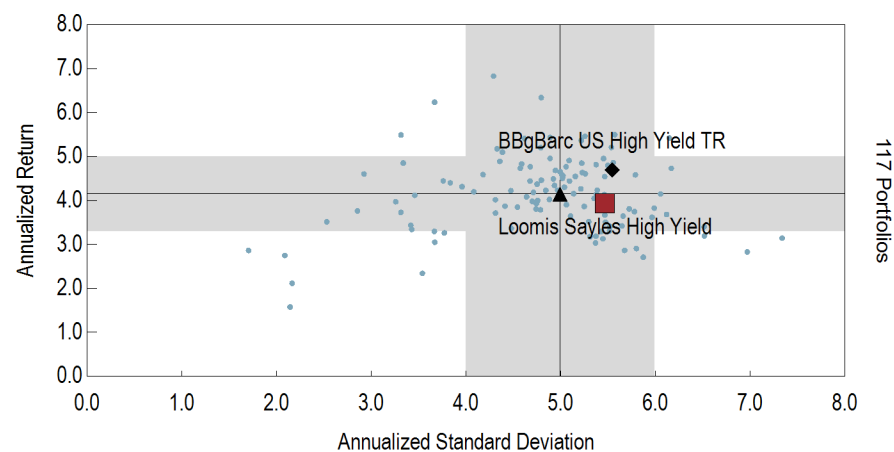
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	6.6%	4.1%	1.3
BBgBarc US High Yield TR	7.5%	4.4%	1.4
eV US High Yield Fixed Inc Net Median	6.8%	4.2%	1.3

5 Years

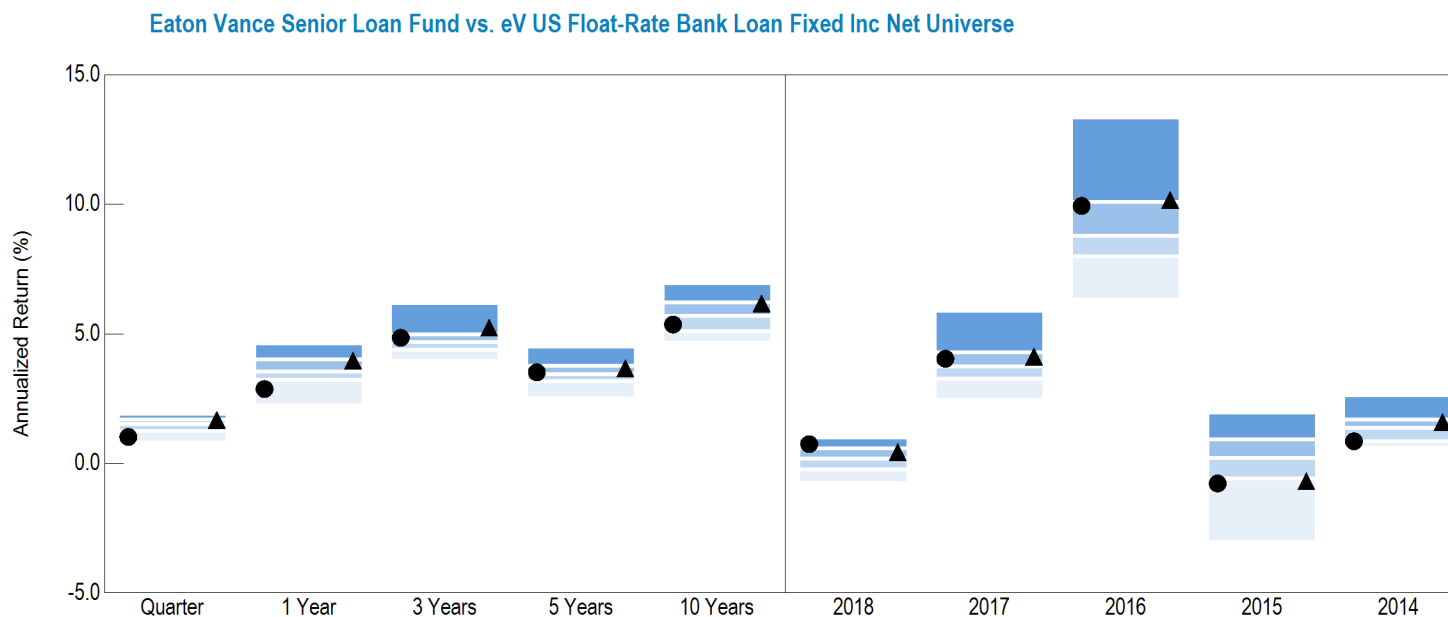
	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	3.9%	5.5%	0.6
BBgBarc US High Yield TR	4.7%	5.5%	0.7
eV US High Yield Fixed Inc Net Median	4.1%	5.0%	0.7

Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019



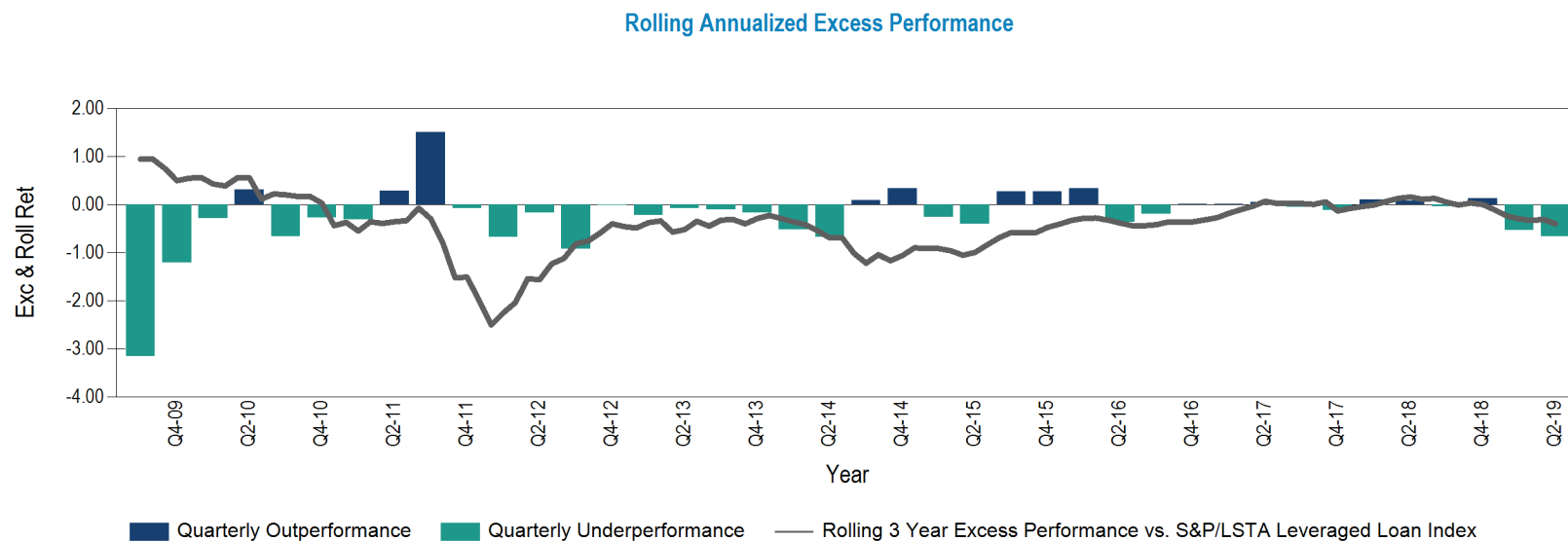
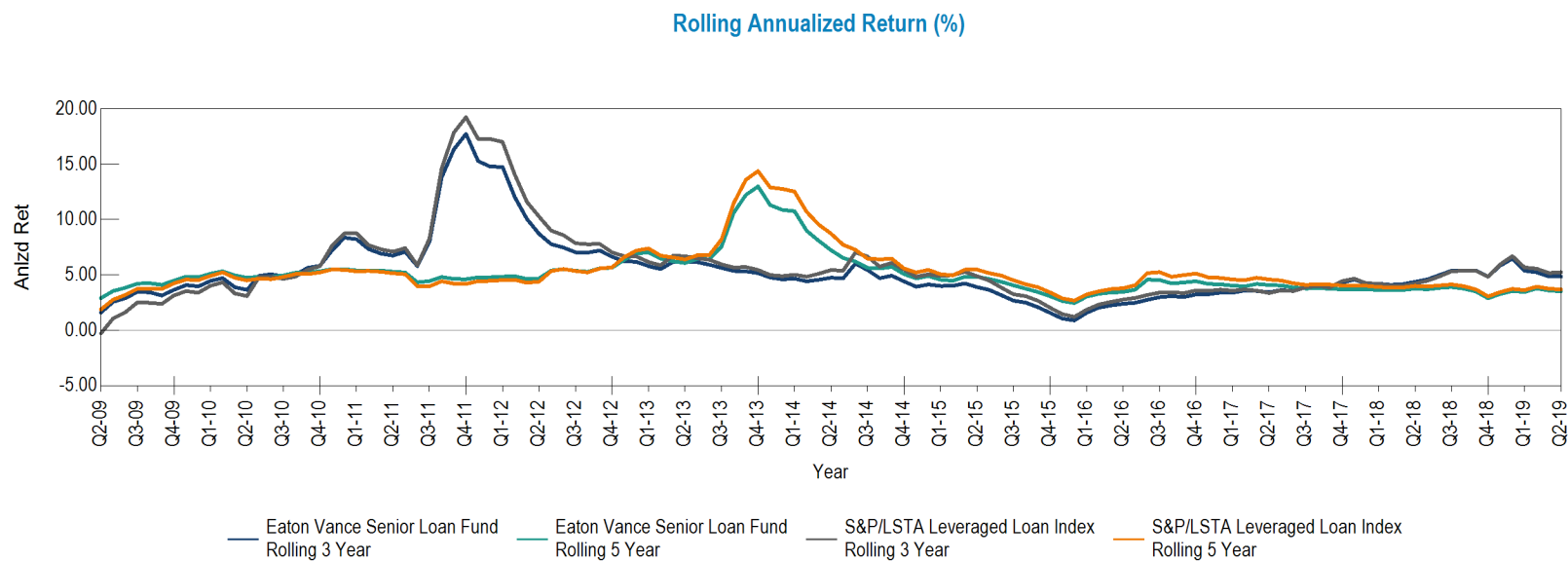
	Return (Rank)									
5th Percentile	1.9	4.6	6.2	4.5	7.0	1.0	5.9	13.3	2.0	2.6
25th Percentile	1.7	4.0	5.0	3.8	6.2	0.6	4.3	10.1	0.9	1.7
Median	1.5	3.6	4.7	3.5	5.7	0.2	3.8	8.8	0.2	1.4
75th Percentile	1.3	3.2	4.4	3.2	5.1	-0.2	3.3	8.0	-0.6	0.9
95th Percentile	0.8	2.2	4.0	2.5	4.7	-0.8	2.5	6.3	-3.0	0.6
# of Portfolios	48	48	46	45	30	47	48	45	30	26
● Eaton Vance Senior Loan Fund	1.0 (89)	2.9 (84)	4.8 (32)	3.5 (46)	5.4 (66)	0.7 (16)	4.0 (40)	9.9 (33)	-0.8 (85)	0.8 (78)
▲ S&P/LSTA Leveraged Loan Index	1.7 (32)	4.0 (29)	5.2 (18)	3.7 (36)	6.2 (26)	0.4 (36)	4.1 (35)	10.2 (25)	-0.7 (81)	1.6 (31)

Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019



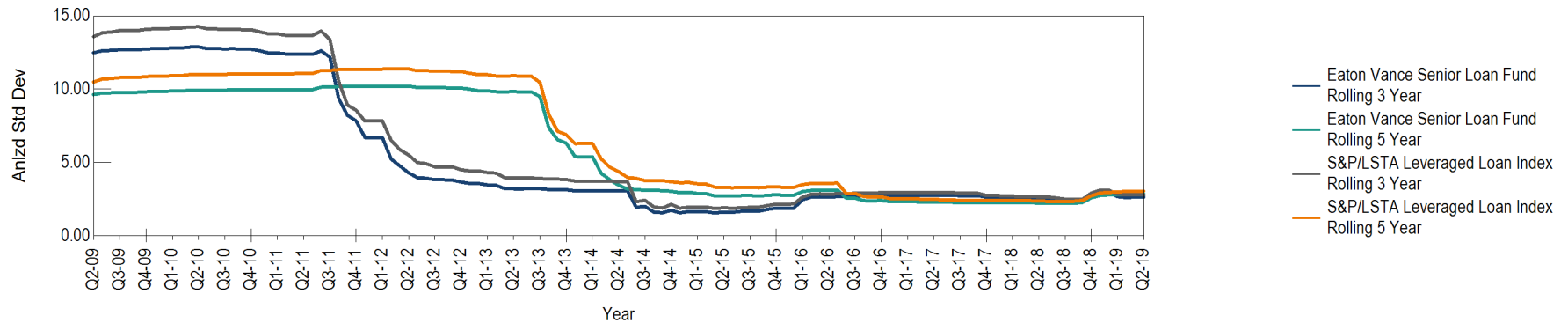
Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

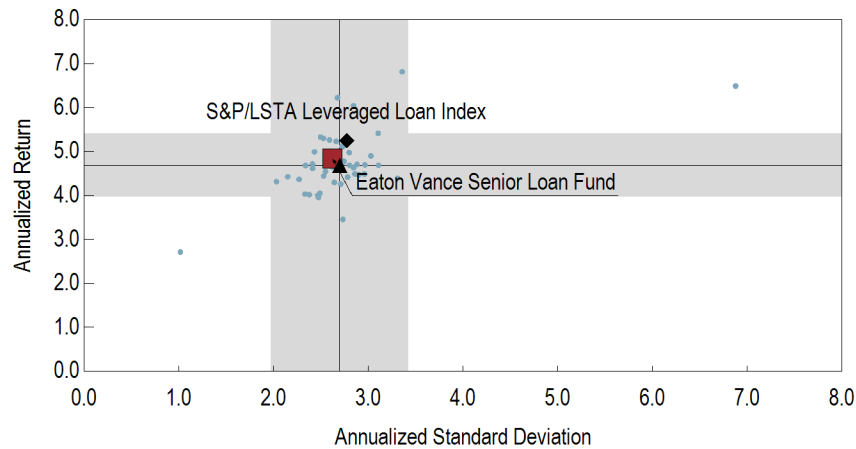
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

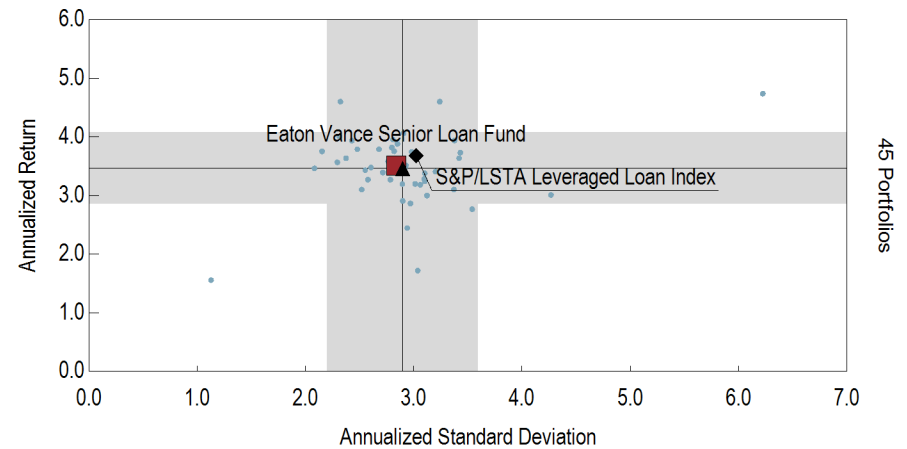
Rolling Annualized Standard Deviation



3 Years



5 Years



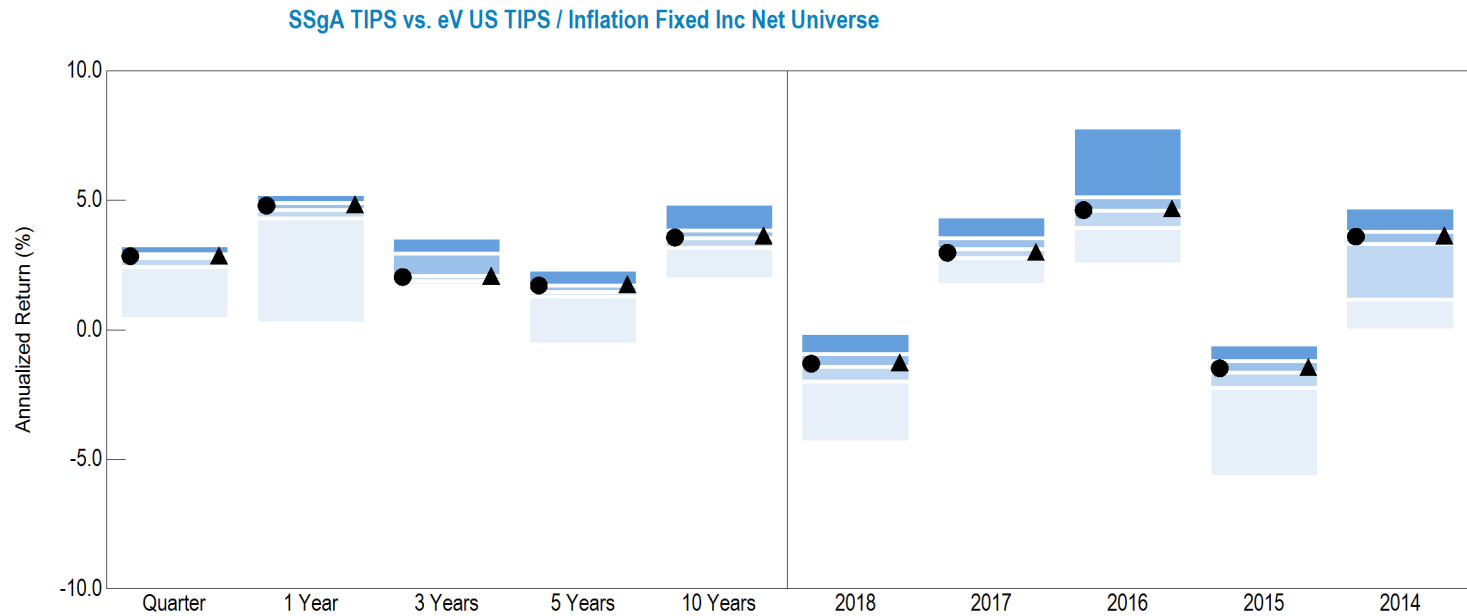
3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	4.8%	2.6%	1.3
S&P/LSTA Leveraged Loan Index	5.2%	2.8%	1.4
eV US Float-Rate Bank Loan Fixed Inc Net Median	4.7%	2.7%	1.2

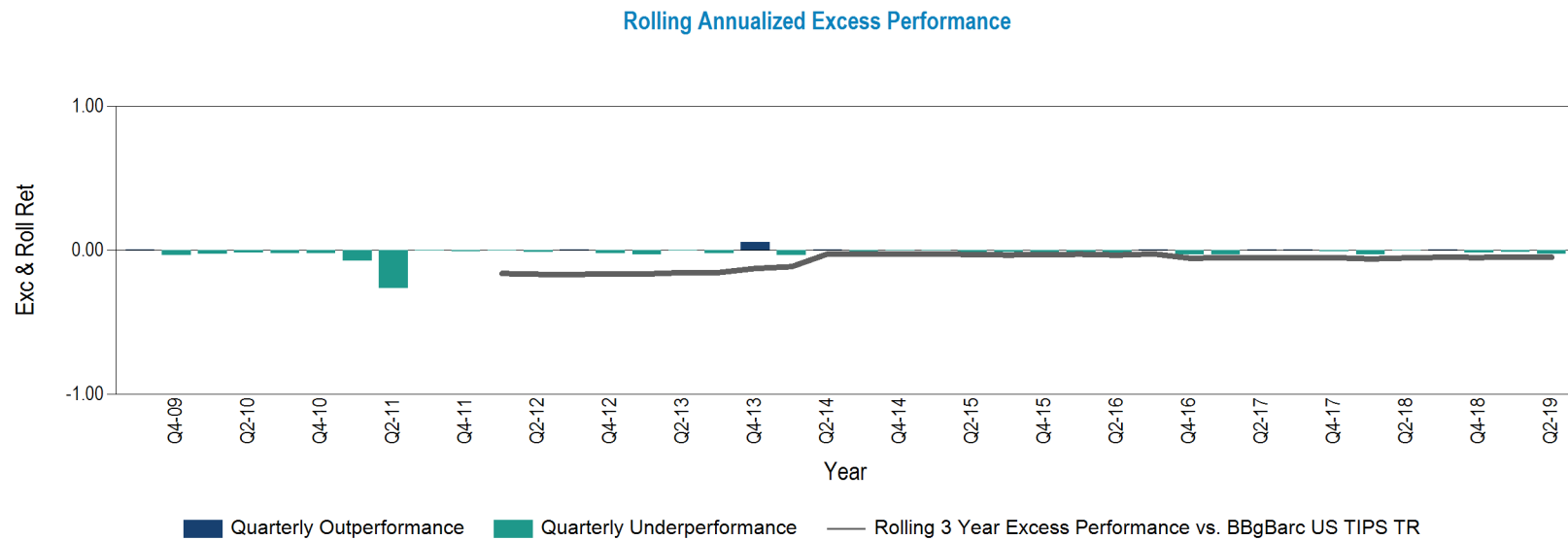
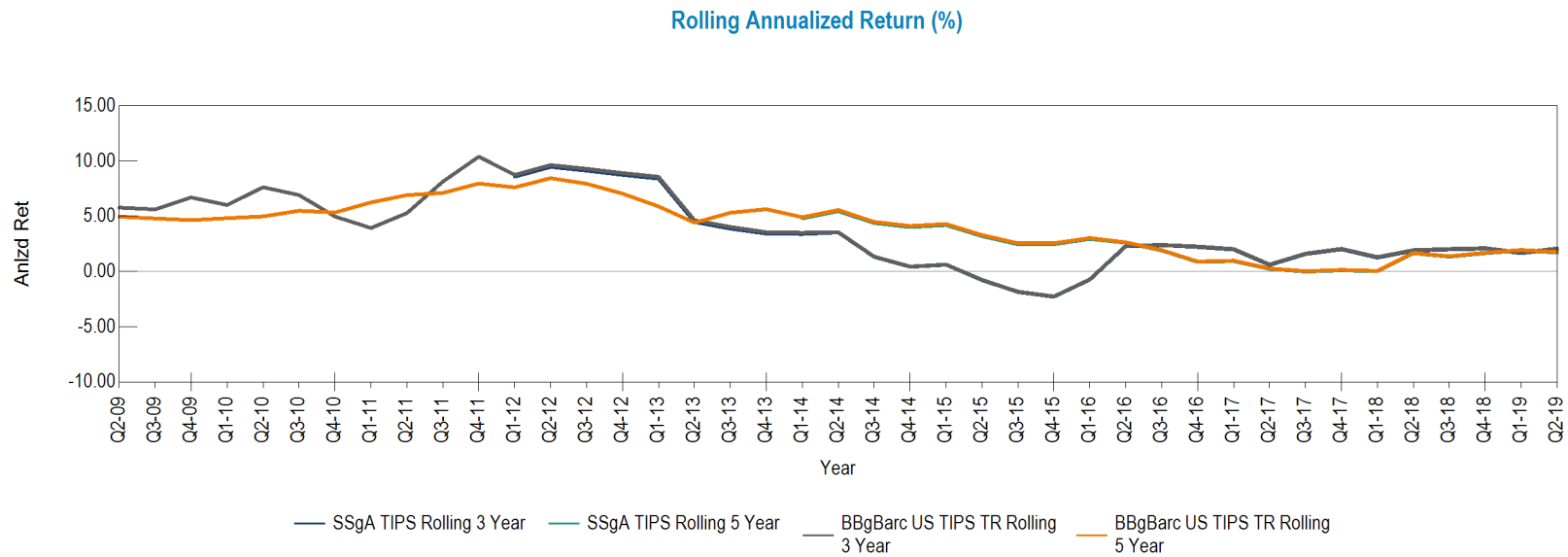
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	3.5%	2.8%	0.9
S&P/LSTA Leveraged Loan Index	3.7%	3.0%	0.9
eV US Float-Rate Bank Loan Fixed Inc Net Median	3.5%	2.9%	0.9

Returns prior to inception date are composite returns.



	Return (Rank)									
5th Percentile	3.2	5.2	3.5	2.3	4.9	-0.1	4.4	7.8	-0.6	4.7
25th Percentile	2.9	4.9	2.9	1.7	3.9	-0.9	3.5	5.1	-1.2	3.8
Median	2.8	4.6	2.1	1.5	3.5	-1.4	3.1	4.6	-1.6	3.3
75th Percentile	2.4	4.3	1.9	1.3	3.2	-2.0	2.8	3.9	-2.2	1.2
95th Percentile	0.4	0.3	1.7	-0.6	2.0	-4.3	1.7	2.5	-5.7	0.0
# of Portfolios	20	19	19	17	12	21	20	22	22	24
● SSgA TIPS	2.8 (40)	4.8 (28)	2.0 (57)	1.7 (27)	3.6 (50)	-1.3 (42)	3.0 (58)	4.6 (50)	-1.5 (36)	3.6 (38)
▲ BBgBarc US TIPS TR	2.9 (39)	4.8 (27)	2.1 (51)	1.8 (19)	3.6 (46)	-1.3 (39)	3.0 (57)	4.7 (49)	-1.4 (33)	3.6 (37)

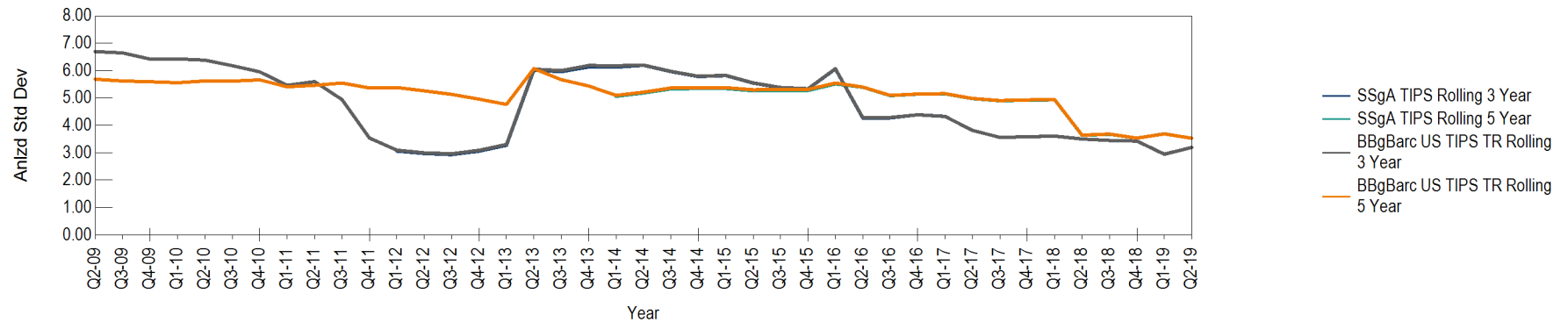


SSgA TIPS

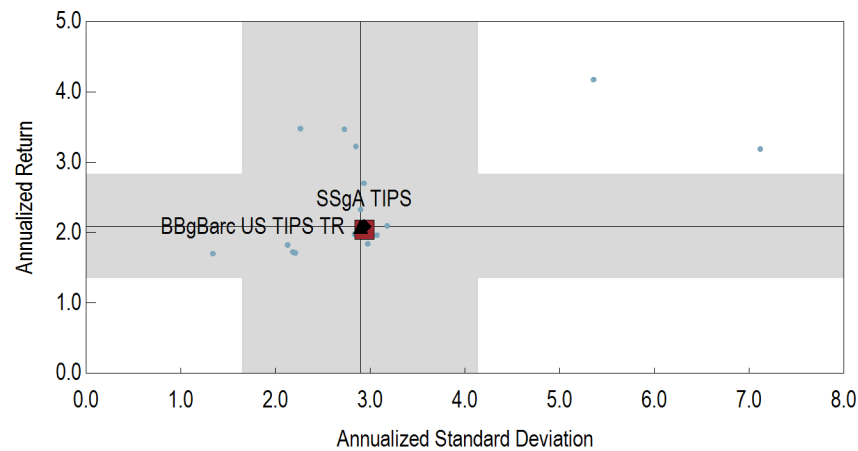
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

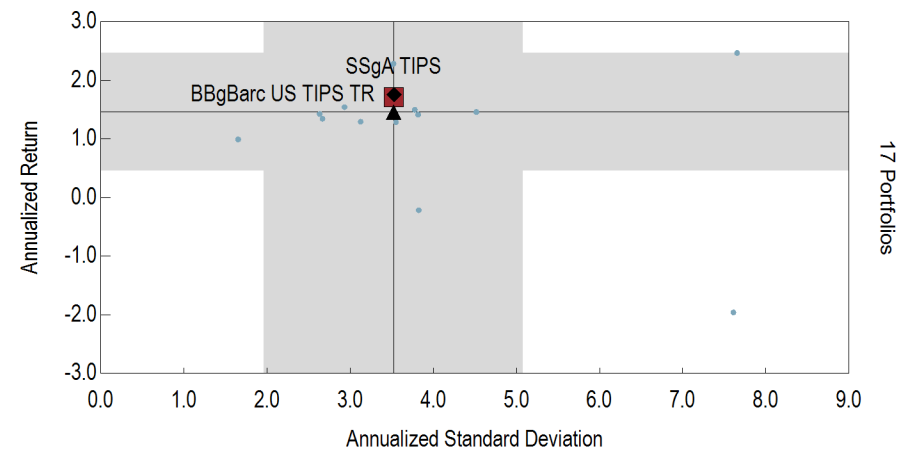
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

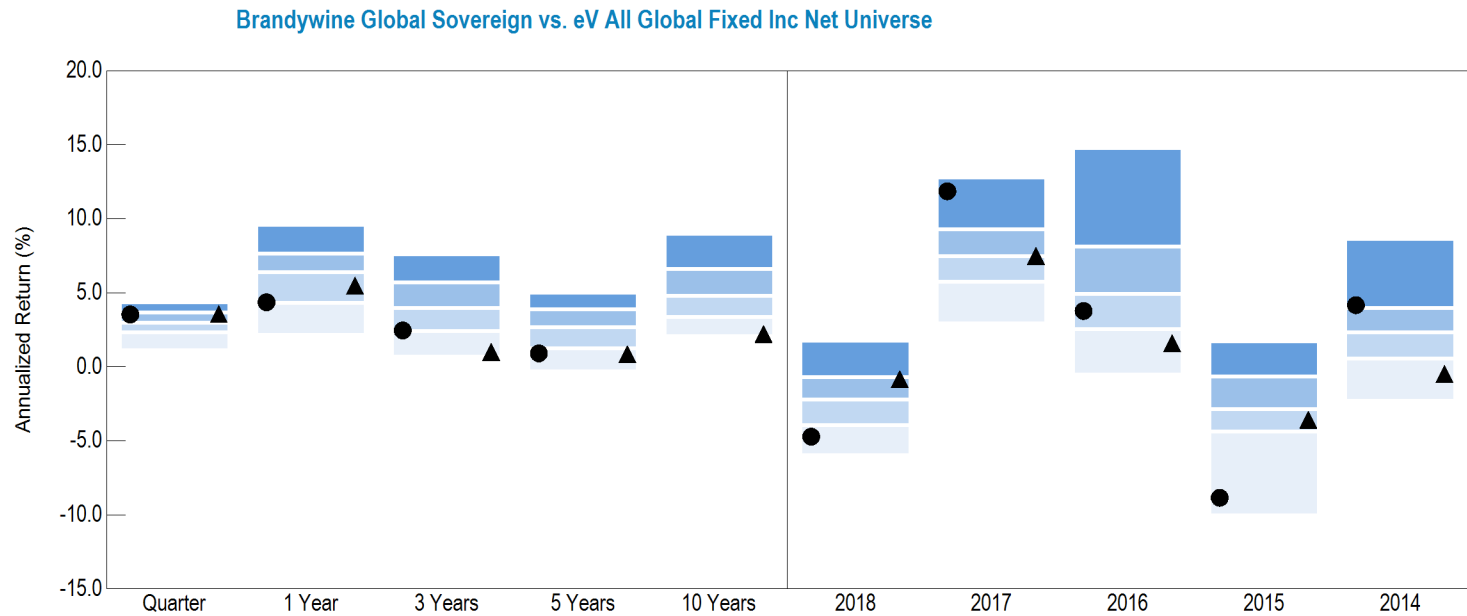
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
SSgA TIPS	2.0%	2.9%	0.2
BBgBarc US TIPS TR	2.1%	2.9%	0.2
eV US TIPS / Inflation Fixed Inc Net Median	2.1%	2.9%	0.2

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
SSgA TIPS	1.7%	3.5%	0.2
BBgBarc US TIPS TR	1.8%	3.5%	0.3
eV US TIPS / Inflation Fixed Inc Net Median	1.5%	3.5%	0.2

Brandywine Global Sovereign
Manager Performance Comparisons (Net of Fees)

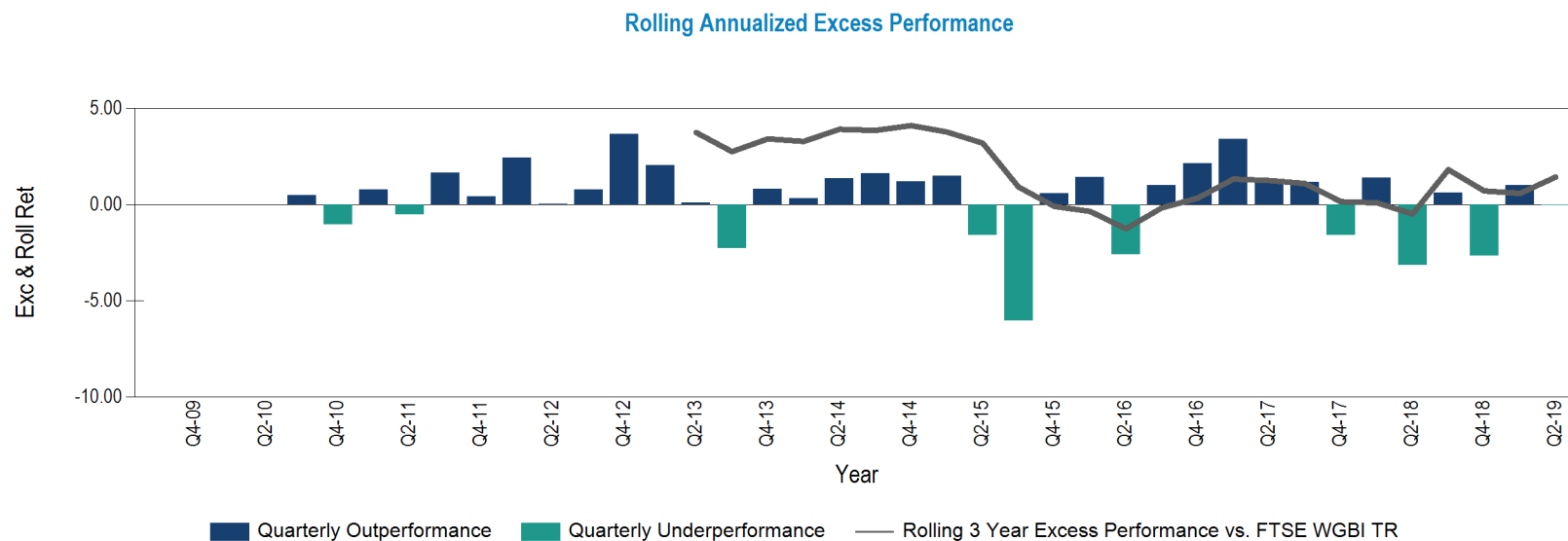
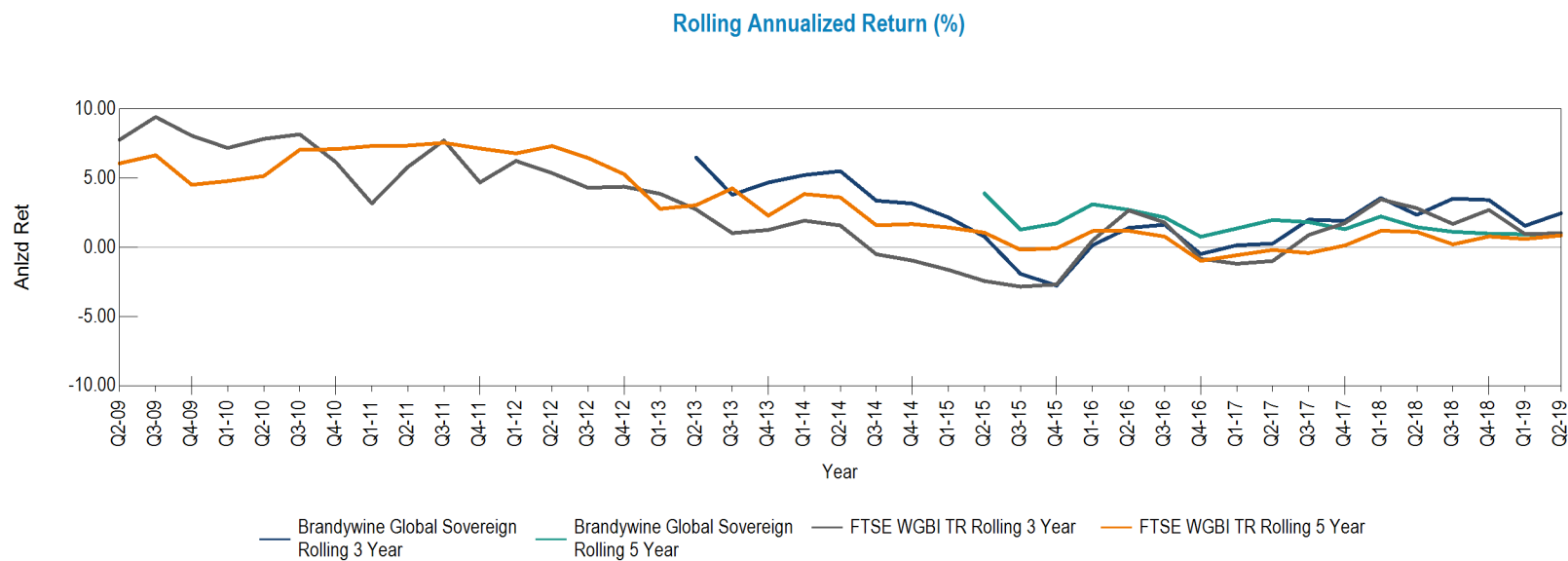
Period Ending: June 30, 2019



	Return (Rank)									
5th Percentile	4.3	9.6	7.6	5.0	8.9	1.7	12.8	14.7	1.7	8.6
25th Percentile	3.7	7.7	5.7	3.9	6.6	-0.7	9.3	8.1	-0.6	4.0
Median	3.0	6.4	4.0	2.7	4.8	-2.2	7.5	5.0	-2.9	2.3
75th Percentile	2.3	4.3	2.5	1.3	3.4	-3.9	5.8	2.6	-4.4	0.6
95th Percentile	1.1	2.2	0.7	-0.3	2.1	-6.0	2.9	-0.5	-10.0	-2.3
# of Portfolios	234	224	214	190	114	218	214	209	175	136
● Brandywine Global Sovereign	3.5 (29)	4.4 (75)	2.5 (76)	0.9 (86)	-- (--)	-4.7 (87)	11.9 (6)	3.8 (63)	-8.8 (93)	4.2 (24)
▲ FTSE WGBI TR	3.6 (28)	5.5 (65)	1.0 (93)	0.8 (88)	2.2 (95)	-0.8 (27)	7.5 (51)	1.6 (81)	-3.6 (63)	-0.5 (85)

Brandywine Global Sovereign Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019

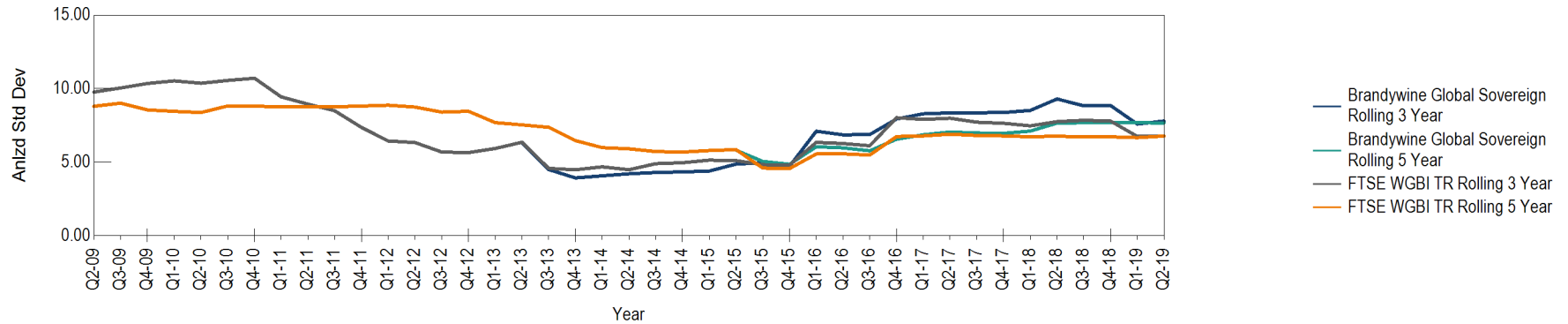


Brandywine Global Sovereign

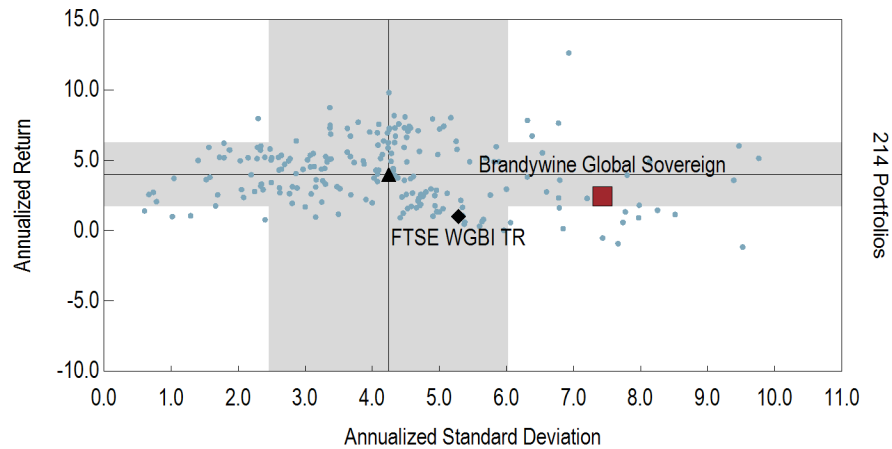
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

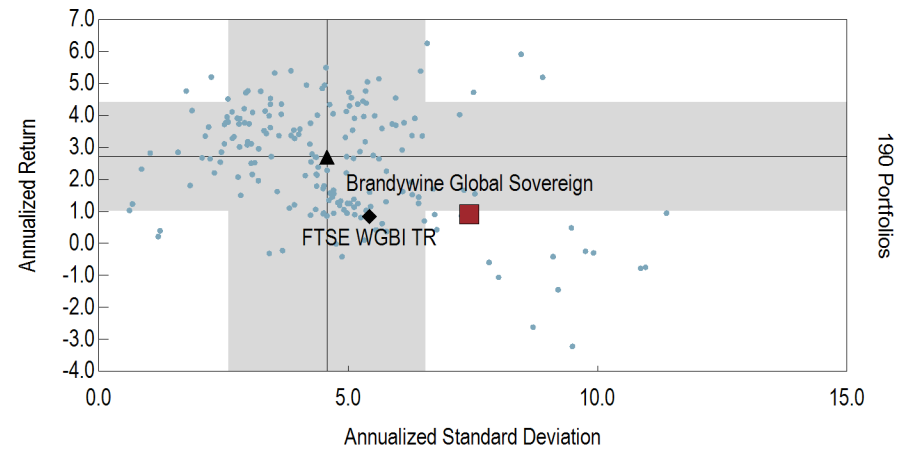
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Brandywine Global Sovereign	2.5%	7.4%	0.1
FTSE WGBI TR	1.0%	5.3%	-0.1
eV All Global Fixed Inc Net Median	4.0%	4.2%	0.7

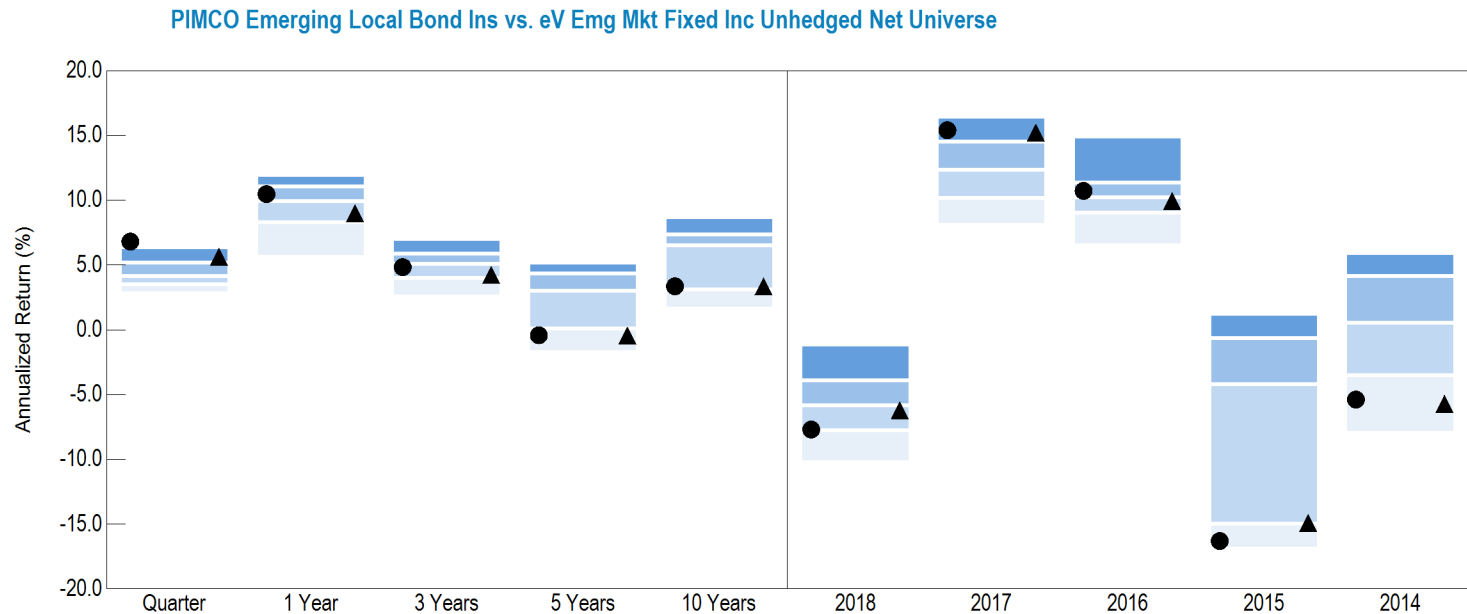
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Brandywine Global Sovereign	0.9%	7.4%	0.0
FTSE WGBI TR	0.8%	5.4%	0.0
eV All Global Fixed Inc Net Median	2.7%	4.6%	0.5

Returns prior to inception date are composite returns.

PIMCO Emerging Local Bond Ins Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2019

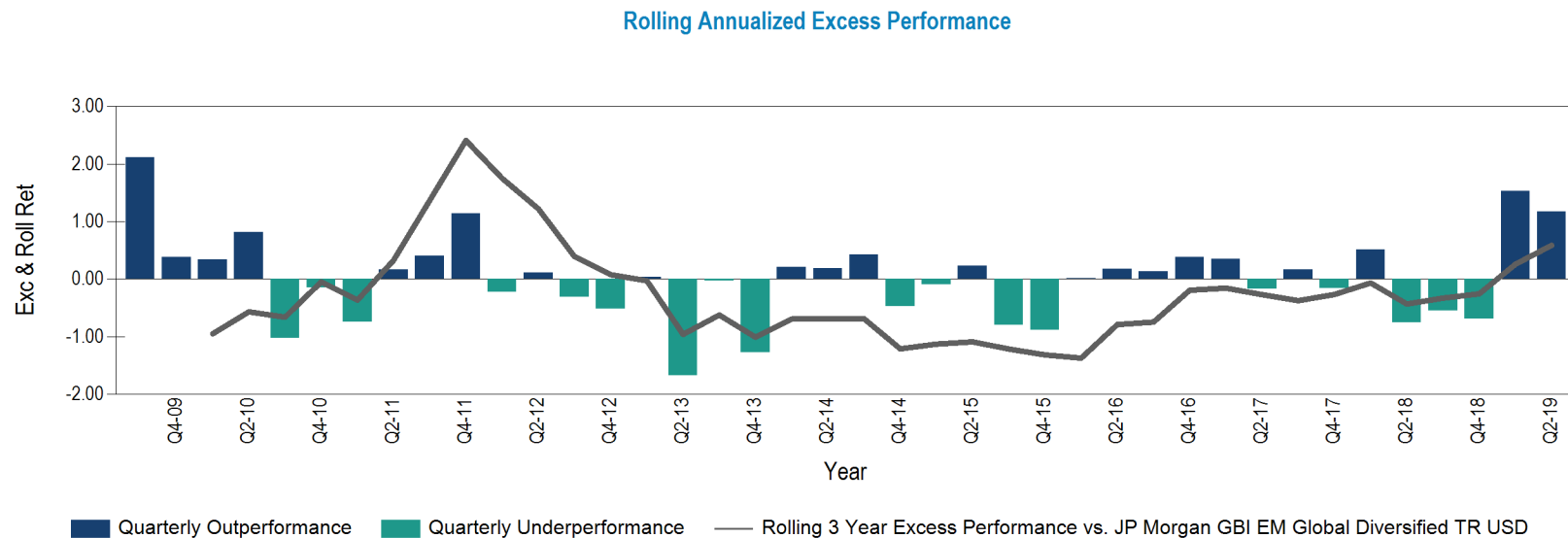
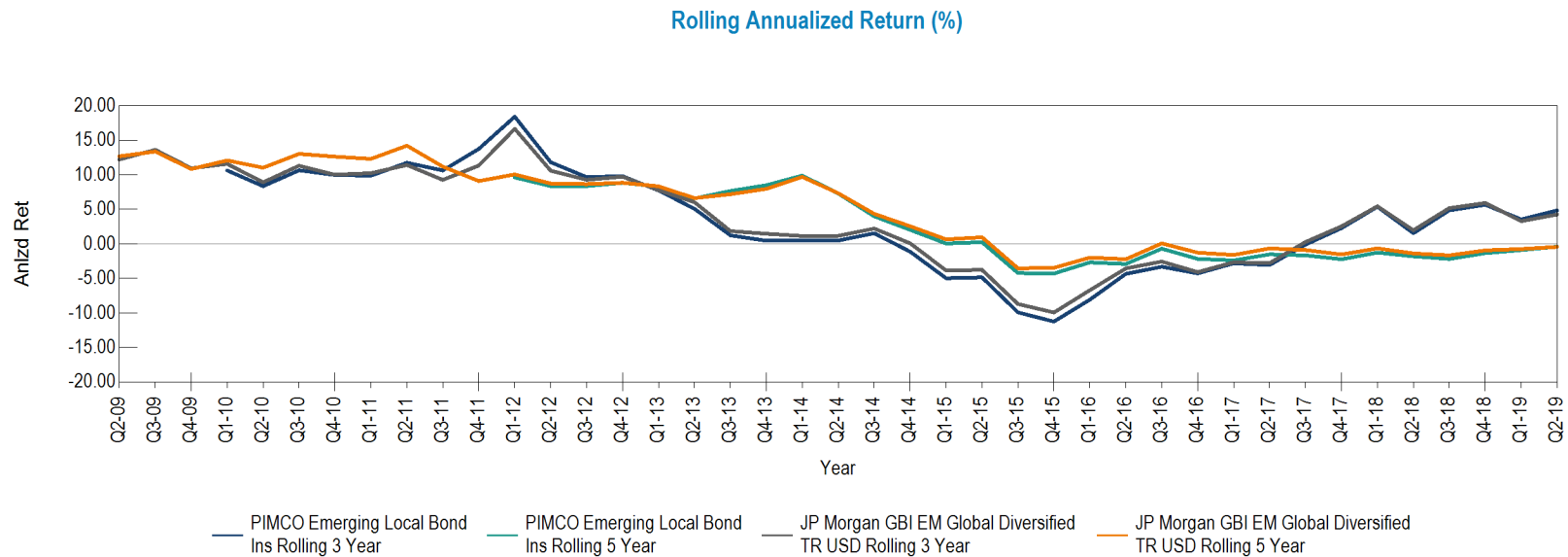


	Return (Rank)									
5th Percentile	6.4	11.9	7.0	5.2	8.7	-1.2	16.5	14.9	1.2	5.9
25th Percentile	5.2	11.1	5.9	4.4	7.4	-3.9	14.5	11.4	-0.6	4.2
Median	4.2	10.0	5.1	3.1	6.5	-5.8	12.4	10.2	-4.2	0.6
75th Percentile	3.6	8.3	4.0	0.1	3.1	-7.7	10.2	9.1	-15.0	-3.5
95th Percentile	2.9	5.7	2.6	-1.7	1.6	-10.2	8.1	6.5	-16.9	-7.9
# of Portfolios	96	89	85	77	36	86	77	58	40	39
● PIMCO Emerging Local Bond Ins	6.8 (2)	10.5 (39)	4.8 (65)	-0.4 (82)	3.4 (71)	-7.7 (74)	15.4 (13)	10.7 (46)	-16.3 (89)	-5.4 (83)
▲ JP Morgan GBI EM Global Diversified TR USD	5.6 (14)	9.0 (68)	4.2 (73)	-0.5 (82)	3.4 (71)	-6.2 (57)	15.2 (17)	9.9 (57)	-14.9 (75)	-5.7 (87)

Returns prior to inception date are composite returns.

PIMCO Emerging Local Bond Ins Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2019



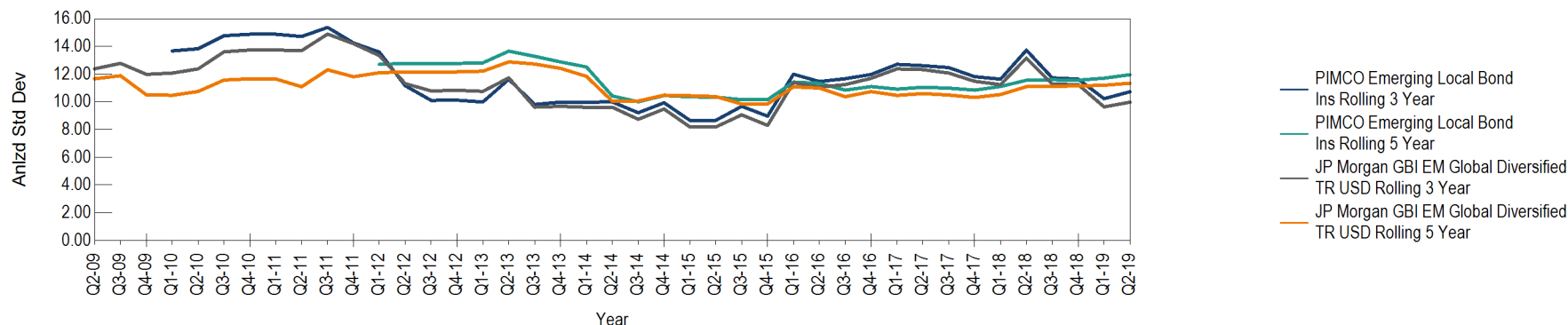
Returns prior to inception date are composite returns.

PIMCO Emerging Local Bond Ins

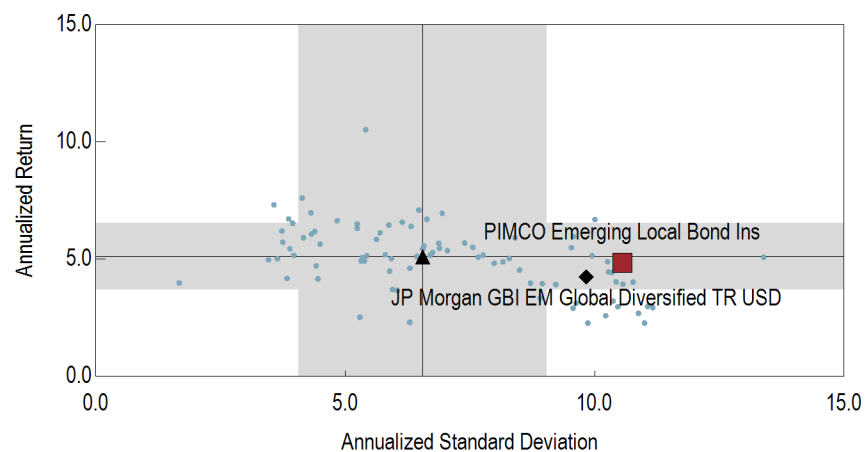
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2019

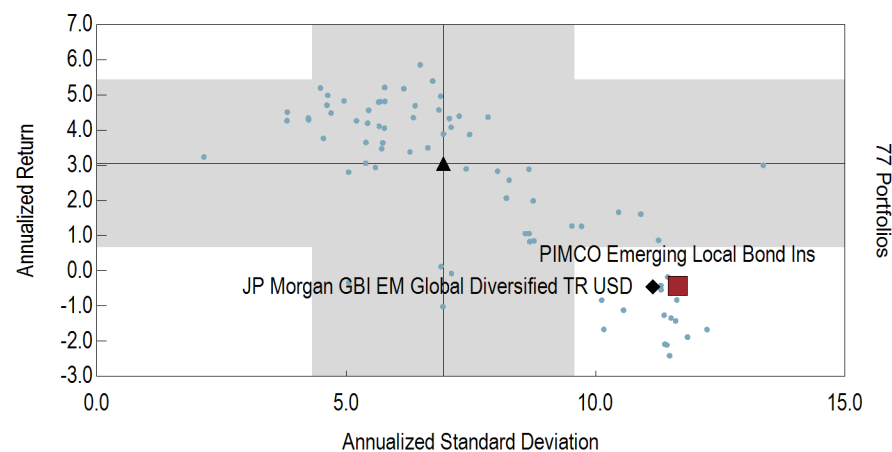
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	4.8%	10.6%	0.3
JP Morgan GBI EM Global Diversified TR USD	4.2%	9.8%	0.3
eV Emg Mkt Fixed Inc Hedged Net Median	5.6%	7.1%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	-0.4%	11.6%	-0.1
JP Morgan GBI EM Global Diversified TR USD	-0.5%	11.2%	-0.1
eV Emg Mkt Fixed Inc Unhedged Net Median	3.1%	6.9%	0.4

Returns prior to inception date are composite returns.

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>	<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	Brandywine Global Sovereign	1/31/2015	Northern Trust
Custodied	N/A	Northern Trust	IFM Global Infrastructure	5/13/2015	IFM
County Cash	N/A	FCERA	Invesco Commodities	5/27/2015	Invesco
Aronson Johnson Ortiz	12/4/1995	Northern Trust	GSO European Senior Debt	7/7/1905	Carlyle
Warburg Pincus	1998	Hamilton Lane	CVI Credit Value Fund III	2015	Carlyle
TCW Shop III	1998	Carlyle	Warburg Pincus XII	2015	Hamilton Lane
Warburg Pincus VIII	2001	Hamilton Lane	Gerding Edlen Green Cities III	2016	Gerding Edlen
Blackstone IV	2002	Hamilton Lane	Hamilton Lane PE Fund IX	2016	Hamilton Lane
Lonestar IV	2002	Carlyle	Kennedy Wilson Real Estate V	2016	Kennedy Wilson
TCW Shop IV	2002	Carlyle	TSSP Adjacent Opportunities	2016	Carlyle
SSgA S&P 500 Flagship Fund	4/1/2004	State Street	OHA Strategic Credit Fund II, L.P.	7/8/1905	Carlyle
Mondrian Emerging Markets	11/17/2005	Mondrian	Horsley Bridge XI GBO	7/8/1905	Hamilton Lane
Invesco Core Real Estate	10/1/2007	Invesco	GCM Better Futures Fund	7/8/1905	Grosvenor
New Mountain III	2007	Hamilton Lane	Parametric Overlay	2016	Northern Trust
Hamilton Lane VI	2007	Hamilton Lane	EQT European S. Situations Debt	2017	Carlyle
Warburg Pincus X	2007	Hamilton Lane	Eaton Vance Ins. Sr Loan Plus	2017	Eaton Vance
Landmark Equity Partners XIV	2008	Hamilton Lane	PIMCO StocksPLUS Small Fund	4/31/2018	PIMCO
SSgA TIPS	2/27/2009	State Street	Hamilton Lane Secondary Fund IV	7/9/1905	Hamilton Lane
Grosvenor	10/31/2009	Grosvenor	TCG BDC II	7/9/1905	Carlyle
Mondrian Int'l Small Cap	11/2/2009	Mondrian	AlpInvest FC Credit Fund, L.P.	7/9/1905	Carlyle
Colony Distressed Credit I	2009	Carlyle	CPC V, L.P.	2017	Carlyle
TA Associates Realty 9	2009	TA Associates	Kelso Investment Associates X, L.P	2018	Hamilton Lane
Systematic Small/Mid Value	10/8/2010	Northern Trust	Avista Capital Partners IV	7/10/1905	Hamilton Lane
KKR Mezzanine Partners I	7/2/1905	Carlyle	Platinum Equity Small Cap Fund	7/10/1905	Hamilton Lane
Angelo Gordon Cap. Recov. VII	7/2/1905	Carlyle	T. Rowe Price Large Cap Growth	10/23/2018	Northern Trust
RAFI International Equity	4/30/2011	Northern Trust	Baillie Gifford Emerging Markets	12/10/2018	Baillie Gifford
Oaktree Opportunities Fund IX	7/4/1905	Carlyle	K4 Private Investors, L.P.	7/10/1905	Hamilton Lane
Artisan International Growth	4/1/2013	Northern Trust	SK Capital Partners Fund V, L.P.	7/10/1905	Hamilton Lane
PIMCO Emerging Local Bond	7/31/2013	Northern Trust	Thomas H. Lee Equity Fund VIII, L.P.	7/11/1905	Hamilton Lane
WAMCO Credit Index	10/1/2014	Northern Trust	H.I.G. Growth Buyouts & Equity Fund III	7/11/1905	Hamilton Lane
Loomis Sayles High Yield	10/1/2014	Northern Trust	RBC Access Capital	10/10/2018	Northern Trust
Eaton Vance Senior Loan	10/1/2014	Eaton Vance	Invesco US Value-Add Fund V	2/20/2019	Invesco
Colony Distressed Credit III	2014	Carlyle			

Policy & Custom Index Composition	
Floating Policy Index (4/1/2019-4/30/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.5% Russell 2000, 3.3% BBgBarc US Corp. High Yield, 4.5% Private Equity Neutralized, 4.7% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 3% Bloomberg Commodity Index.
(5/1/2019-5/31/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.4% Russell 2000, 3.1% BBgBarc US Corp. High Yield, 4.6% Private Equity Neutralized, 4.9% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 3% Bloomberg Commodity Index.
(6/1/2019-6/30/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.6% Russell 2000, 3.0% BBgBarc US Corp. High Yield, 4.4% Private Equity Neutralized, 5.0% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 3% 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.

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.

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