

# Fresno County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2019



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SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

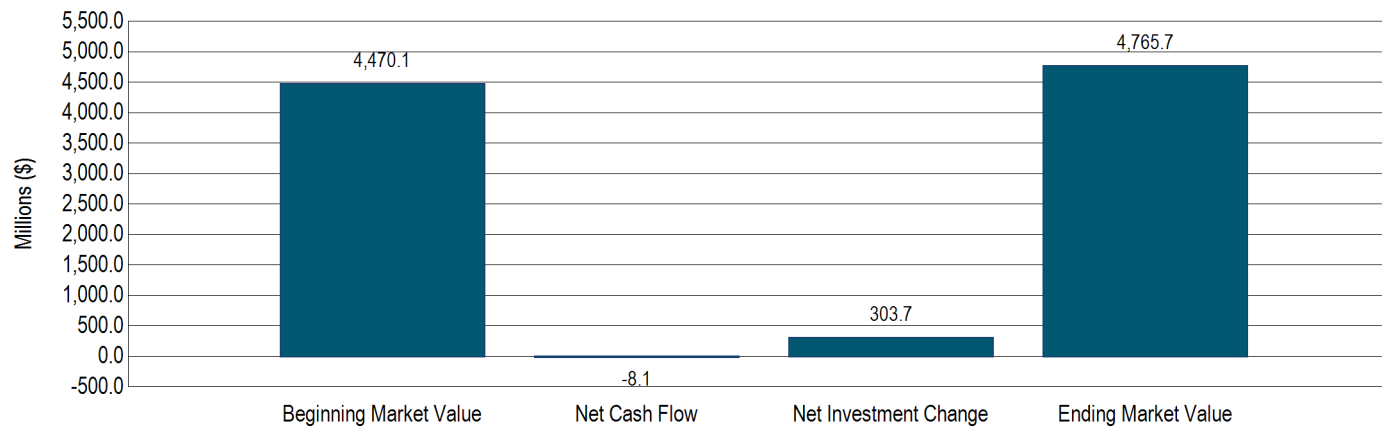
Total Fund  
Portfolio Reconciliation

Period Ending: March 31, 2019

Portfolio Reconciliation

	Last Three Months	Year-To-Date
Beginning Market Value	\$4,470,075,824	\$4,470,075,824
Net Cash Flow	-\$8,102,799	-\$8,102,799
Net Investment Change	\$303,725,967	\$303,725,967
Ending Market Value	\$4,765,698,992	\$4,765,698,992

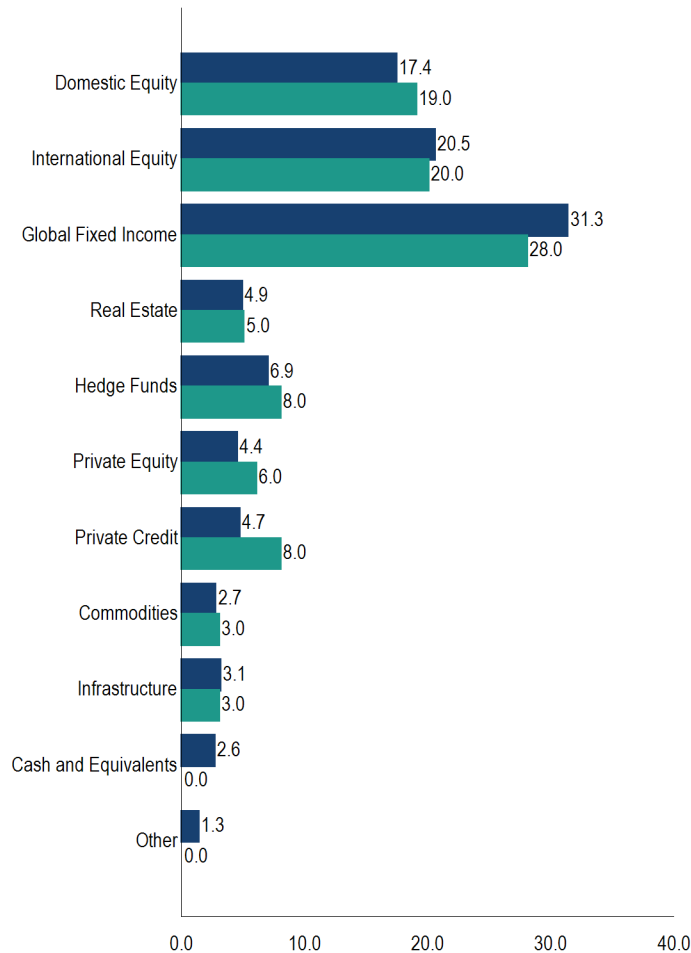
Change in Market Value  
Last Three Months



# Total Fund Asset Allocation

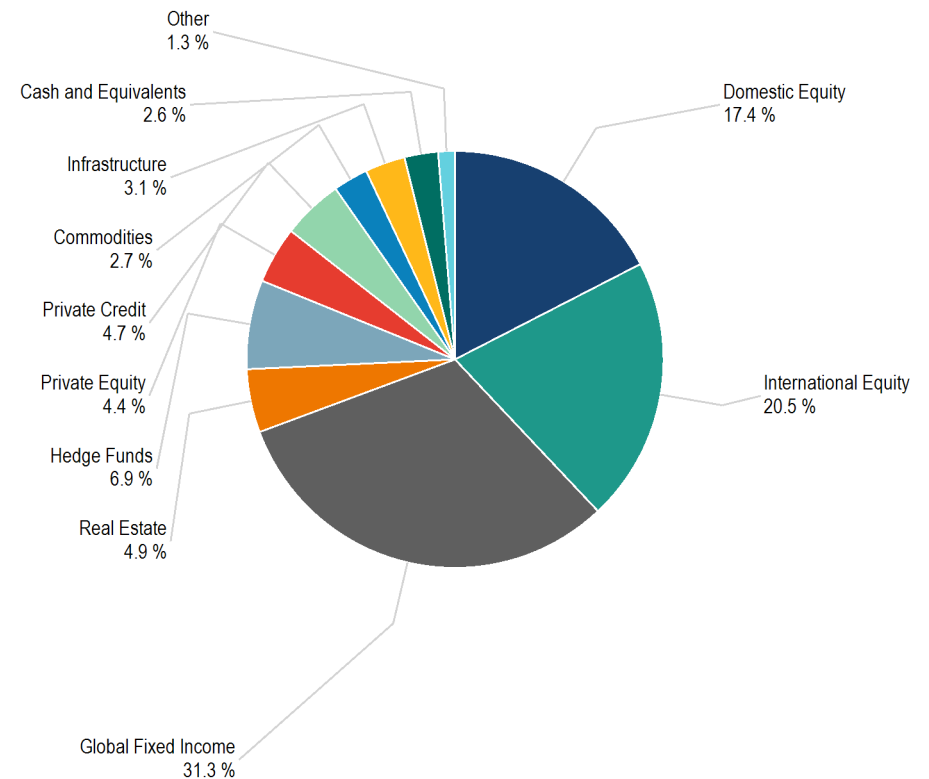
Period Ending: March 31, 2019

Actual vs Target Allocation (%)



Actual Policy

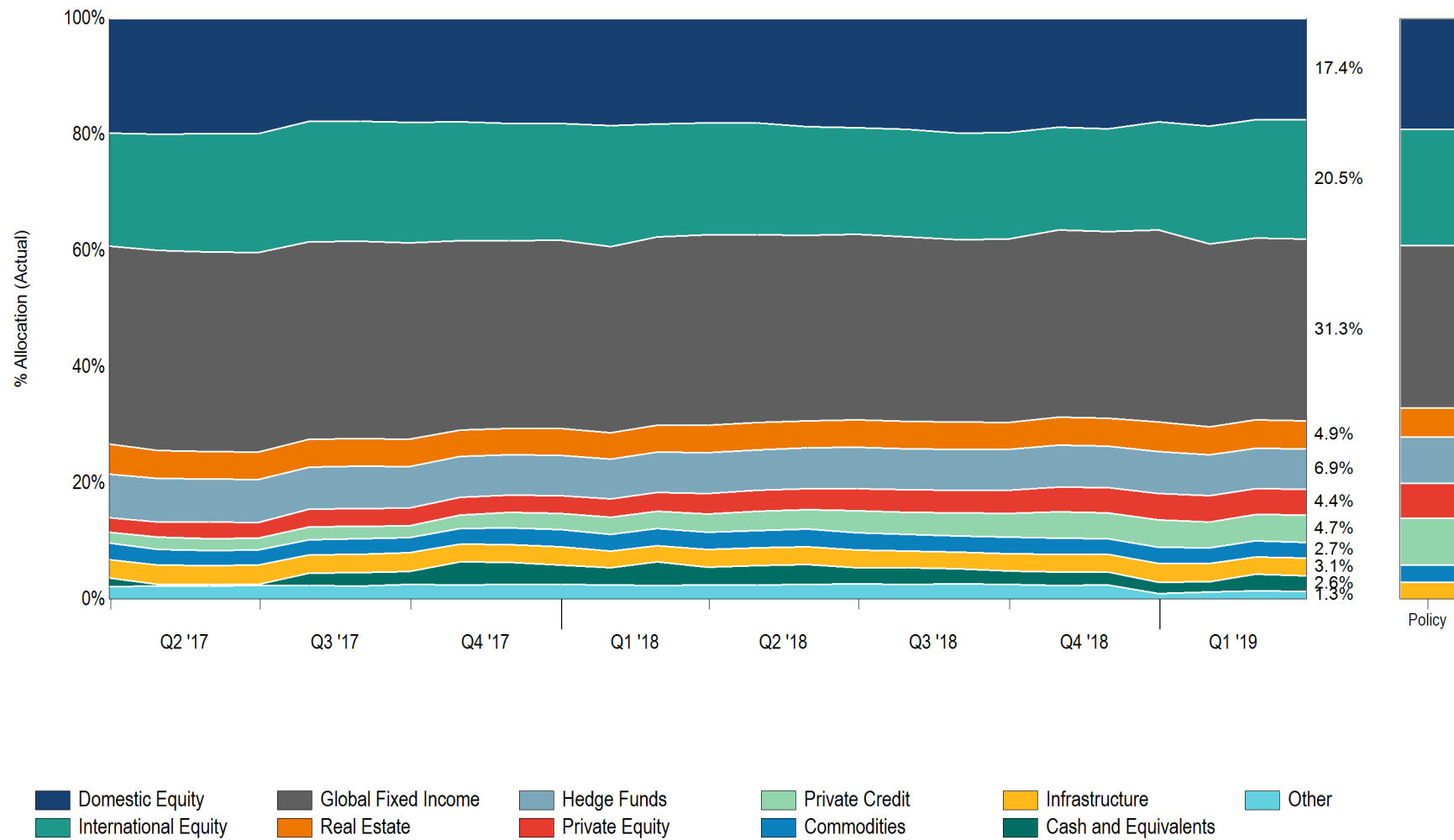
Current Allocation



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: March 31, 2019





# Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2018	2017	2016	2015	2014
<b>Total Fund</b>	<b>4,765,698,992</b>	<b>100.0</b>	<b>6.7</b>	<b>2.6</b>	<b>2.1</b>	<b>7.3</b>	<b>4.5</b>	<b>9.6</b>	<b>6.5</b>	<b>-3.6</b>	<b>14.6</b>	<b>6.7</b>	<b>-2.5</b>	<b>3.5</b>
Policy Index			5.5	1.8	1.5	6.4	4.2	9.0	5.7	-3.2	14.0	6.5	-1.7	2.6
InvestorForce Public DB > \$1B Net Rank			68	45	84	99	99	62	38	41	67	80	86	88
<b>Total Domestic Equity</b>	<b>830,166,261</b>	<b>17.4</b>	<b>13.2</b>	<b>3.2</b>	<b>7.3</b>	<b>12.6</b>	<b>9.2</b>	<b>15.7</b>	<b>--</b>	<b>-5.1</b>	<b>20.2</b>	<b>8.9</b>	<b>1.5</b>	<b>9.8</b>
Russell 3000			14.0	4.7	8.8	13.5	10.4	16.0	8.7	-5.2	21.1	12.7	0.5	12.6
<b>Total International Equity</b>	<b>978,409,686</b>	<b>20.5</b>	<b>10.7</b>	<b>0.7</b>	<b>-3.8</b>	<b>7.6</b>	<b>2.5</b>	<b>9.6</b>	<b>--</b>	<b>-13.6</b>	<b>28.5</b>	<b>3.0</b>	<b>-7.5</b>	<b>-2.5</b>
MSCI ACWI ex USA Gross			10.4	-1.4	-3.7	8.6	3.0	9.3	6.1	-13.8	27.8	5.0	-5.3	-3.4
<b>Total Fixed Income</b>	<b>1,492,359,804</b>	<b>31.3</b>	<b>4.4</b>	<b>3.1</b>	<b>0.1</b>	<b>3.7</b>	<b>2.7</b>	<b>5.7</b>	<b>--</b>	<b>-2.9</b>	<b>8.0</b>	<b>6.7</b>	<b>-4.5</b>	<b>5.0</b>
BBgBarc Global Aggregate*			2.2	2.5	-0.4	1.5	1.0	2.9	3.3	-1.2	7.4	2.1	-3.2	0.0
<b>Total Real Estate</b>	<b>232,884,830</b>	<b>4.9</b>	<b>1.6</b>	<b>6.5</b>	<b>8.5</b>	<b>8.4</b>	<b>10.0</b>	<b>7.2</b>	<b>--</b>	<b>9.2</b>	<b>6.8</b>	<b>8.5</b>	<b>13.9</b>	<b>11.8</b>
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	--	7.4	6.7	7.8	13.9	11.5
<b>Total Infrastructure</b>	<b>147,926,795</b>	<b>3.1</b>	<b>2.6</b>	<b>12.0</b>	<b>13.3</b>	<b>14.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>20.1</b>	<b>19.0</b>	<b>6.1</b>	<b>--</b>	<b>--</b>
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	--	7.4	6.7	7.8	13.9	11.5
<b>Total Hedge Funds</b>	<b>331,050,010</b>	<b>6.9</b>	<b>3.0</b>	<b>-0.5</b>	<b>1.0</b>	<b>4.7</b>	<b>2.3</b>	<b>3.7</b>	<b>3.4</b>	<b>-0.7</b>	<b>4.6</b>	<b>3.0</b>	<b>0.0</b>	<b>3.1</b>
HFRI Fund of Funds Composite Index			4.6	-0.3	0.1	3.9	2.2	3.5	2.8	-4.0	7.8	0.5	-0.3	3.4
<b>Total Commodities</b>	<b>129,651,002</b>	<b>2.7</b>	<b>5.0</b>	<b>-6.4</b>	<b>-6.9</b>	<b>3.0</b>	<b>-5.5</b>	<b>--</b>	<b>--</b>	<b>-11.7</b>	<b>5.8</b>	<b>13.8</b>	<b>-12.8</b>	<b>-16.9</b>
Bloomberg Commodity Index TR USD			6.3	-5.6	-5.3	2.2	-8.9	-2.6	-2.8	-11.2	1.7	11.8	-24.7	-17.0
<b>Total Private Equity 1 Qtr Lagged</b>	<b>211,778,263</b>	<b>4.4</b>	<b>0.6</b>	<b>6.1</b>	<b>11.0</b>	<b>11.4</b>	<b>8.5</b>	<b>13.2</b>	<b>11.6</b>	<b>12.0</b>	<b>13.9</b>	<b>10.7</b>	<b>3.8</b>	<b>4.8</b>
Russell 2000 1 Qtr Lagged			-20.2	-10.9	-11.0	7.9	4.2	13.8	7.1	15.2	10.9	21.3	-4.4	4.9
<b>Total Private Credit 1 Qtr Lagged</b>	<b>222,117,466</b>	<b>4.7</b>	<b>-0.8</b>	<b>3.7</b>	<b>5.1</b>	<b>7.0</b>	<b>4.5</b>	<b>16.6</b>	<b>13.2</b>	<b>7.6</b>	<b>8.1</b>	<b>7.4</b>	<b>-2.5</b>	<b>6.8</b>
BBgBarc US Corp. High Yield 1 Qtr Lagged			-4.5	-1.2	-2.1	6.1	3.2	10.5	6.8	3.0	7.0	17.1	-4.5	2.5
<b>Total Custodied Cash</b>	<b>32,423,985</b>	<b>0.7</b>	<b>0.7</b>	<b>1.9</b>	<b>2.5</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>--</b>	<b>1.9</b>	<b>0.1</b>	<b>0.8</b>	<b>0.0</b>	<b>0.5</b>
91 Day T-Bills			0.6	1.7	2.1	1.2	0.8	0.4	1.3	1.9	0.9	0.3	0.0	0.0
<b>Total County Cash</b>	<b>25,586,797</b>	<b>0.5</b>	<b>1.2</b>	<b>2.7</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
91 Day T-Bills			0.6	1.7	2.1	1.2	0.8	0.4	1.3	1.9	0.9	0.3	0.0	0.0

Policy Index (Floating policy weights updated as of 3/31/2019. See Data Sources and Methodology for monthly policy breakout): 19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.6% Russell 2000, 3.3% BBgBarc US Corp. High Yield, 4.4% Private Equity Neutralized, 4.7% 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: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs	2018	2017	2016	2015	2014
<b>Total Fund</b>	<b>4,765,698,992</b>	<b>100.0</b>	<b>6.8</b>	<b>2.8</b>	<b>2.4</b>	<b>7.6</b>	<b>4.9</b>	<b>10.0</b>	<b>6.9</b>	<b>6.5</b>	<b>-3.3</b>	<b>14.9</b>	<b>7.2</b>	<b>-2.1</b>	<b>3.8</b>
Policy Index			5.5	1.8	1.5	6.4	4.2	9.0	5.7	5.6	-3.2	14.0	6.5	-1.7	2.6
<b>Total Domestic Equity</b>	<b>830,166,261</b>	<b>17.4</b>	<b>13.2</b>	<b>3.3</b>	<b>7.5</b>	<b>12.8</b>	<b>9.4</b>	<b>15.9</b>	<b>8.6</b>	<b>7.4</b>	<b>-4.9</b>	<b>20.3</b>	<b>9.1</b>	<b>1.8</b>	<b>10.1</b>
Russell 3000			14.0	4.7	8.8	13.5	10.4	16.0	8.7	6.5	-5.2	21.1	12.7	0.5	12.6
<b>Total International Equity</b>	<b>978,409,686</b>	<b>20.5</b>	<b>10.8</b>	<b>1.0</b>	<b>-3.3</b>	<b>8.1</b>	<b>3.0</b>	<b>10.1</b>	<b>6.5</b>	<b>5.9</b>	<b>-13.2</b>	<b>29.1</b>	<b>3.5</b>	<b>-7.1</b>	<b>-2.1</b>
MSCI ACWI ex USA Gross			10.4	-1.4	-3.7	8.6	3.0	9.3	6.1	5.0	-13.8	27.8	5.0	-5.3	-3.4
<b>Total Fixed Income</b>	<b>1,492,359,804</b>	<b>31.3</b>	<b>4.5</b>	<b>3.4</b>	<b>0.5</b>	<b>4.0</b>	<b>3.0</b>	<b>6.0</b>	<b>--</b>	<b>--</b>	<b>-2.5</b>	<b>8.3</b>	<b>7.0</b>	<b>-4.2</b>	<b>5.1</b>
BBgBarc Global Aggregate*			2.2	2.5	-0.4	1.5	1.0	2.9	3.3	4.3	-1.2	7.4	2.1	-3.2	0.0
<b>Total Real Estate</b>	<b>232,884,830</b>	<b>4.9</b>	<b>1.6</b>	<b>6.5</b>	<b>8.5</b>	<b>8.6</b>	<b>10.6</b>	<b>7.7</b>	<b>9.2</b>	<b>9.6</b>	<b>9.2</b>	<b>6.8</b>	<b>9.9</b>	<b>14.8</b>	<b>12.9</b>
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	--	--	7.4	6.7	7.8	13.9	11.5
<b>Total Infrastructure</b>	<b>147,926,795</b>	<b>3.1</b>	<b>2.6</b>	<b>12.0</b>	<b>13.3</b>	<b>15.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>20.1</b>	<b>19.0</b>	<b>7.2</b>	<b>--</b>	<b>--</b>
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<b>Total Hedge Funds</b>	<b>331,050,010</b>	<b>6.9</b>	<b>3.0</b>	<b>-0.5</b>	<b>1.0</b>	<b>4.9</b>	<b>2.7</b>	<b>4.5</b>	<b>--</b>	<b>--</b>	<b>-0.7</b>	<b>4.6</b>	<b>3.8</b>	<b>0.9</b>	<b>4.2</b>
HFRI Fund of Funds Composite Index			4.6	-0.3	0.1	3.9	2.2	3.5	2.8	4.3	-4.0	7.8	0.5	-0.3	3.4
<b>Total Commodities</b>	<b>129,651,002</b>	<b>2.7</b>	<b>5.0</b>	<b>-6.4</b>	<b>-6.9</b>	<b>3.2</b>	<b>-5.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-11.7</b>	<b>5.8</b>	<b>14.4</b>	<b>-12.3</b>	<b>-16.7</b>
Bloomberg Commodity Index TR USD			6.3	-5.6	-5.3	2.2	-8.9	-2.6	-2.8	1.8	-11.2	1.7	11.8	-24.7	-17.0
<b>Total Private Equity 1 Qtr Lagged</b>	<b>211,778,263</b>	<b>4.4</b>	<b>0.6</b>	<b>6.1</b>	<b>11.0</b>	<b>11.8</b>	<b>8.8</b>	<b>13.4</b>	<b>11.7</b>	<b>--</b>	<b>12.0</b>	<b>13.9</b>	<b>11.8</b>	<b>3.9</b>	<b>4.8</b>
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BBgBarc US Corp. High Yield 1 Qtr Lagged			-4.5	-1.2	-2.1	6.1	3.2	10.5	6.8	--	3.0	7.0	17.1	-4.5	2.5
<b>Total Custodied Cash</b>	<b>32,423,985</b>	<b>0.7</b>	<b>0.7</b>	<b>1.9</b>	<b>2.5</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>1.6</b>	<b>1.9</b>	<b>1.9</b>	<b>0.1</b>	<b>0.8</b>	<b>0.0</b>	<b>0.5</b>
91 Day T-Bills			0.6	1.7	2.1	1.2	0.8	0.4	1.3	1.7	1.9	0.9	0.3	0.0	0.0
<b>Total County Cash</b>	<b>25,586,797</b>	<b>0.5</b>	<b>1.2</b>	<b>2.7</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
91 Day T-Bills			0.6	1.7	2.1	1.2	0.8	0.4	1.3	1.7	1.9	0.9	0.3	0.0	0.0

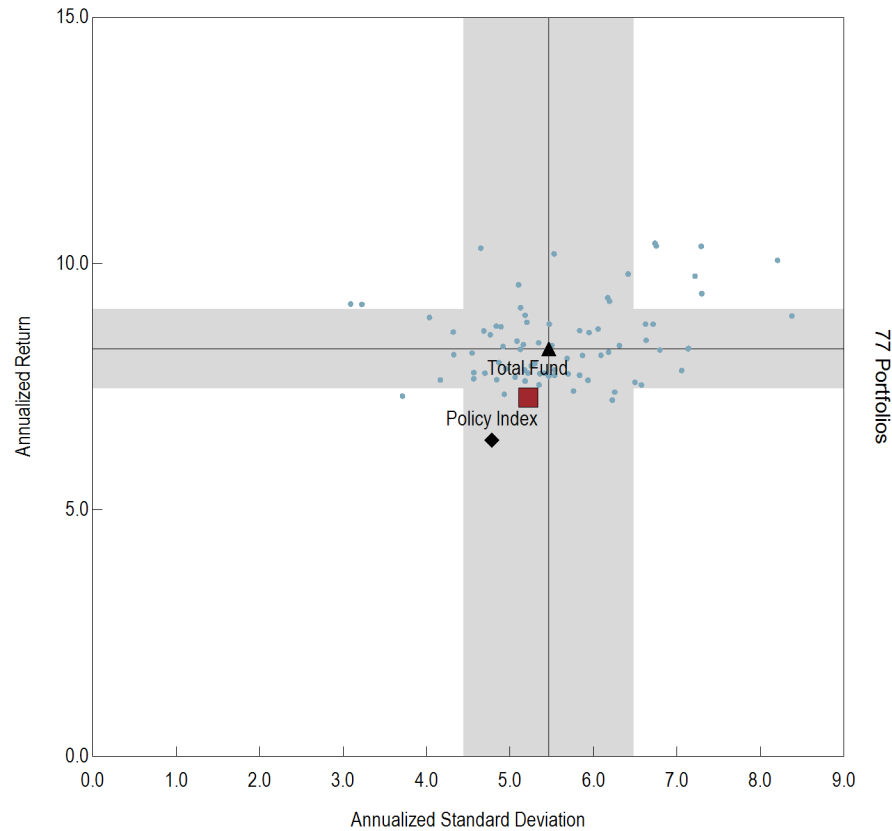
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\*Prior to 3/31/2014 BBgBarc U.S. Aggregate Index and as of 4/1/2014 BBgBarc Global Aggregate Index.

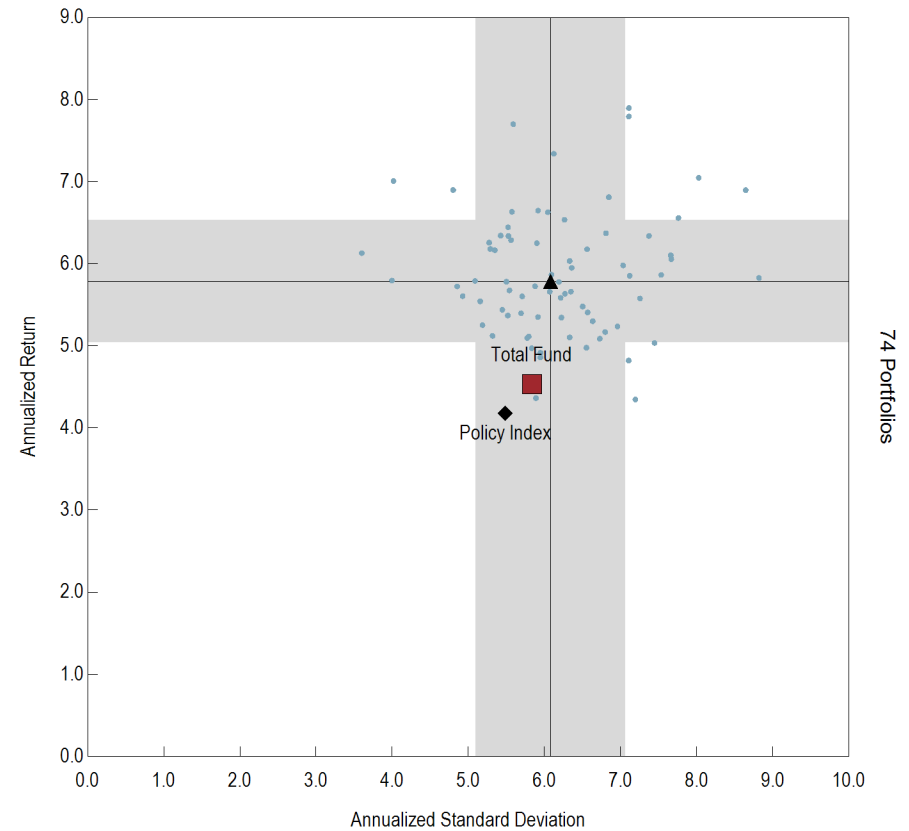
# Total Fund Risk Analysis (Net of Fees)

Period Ending: March 31, 2019

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	7.3%	5.2%	1.2
Policy Index	6.4%	4.8%	1.1
InvestorForce Public DB > \$1B Net Median	8.3%	5.5%	1.3

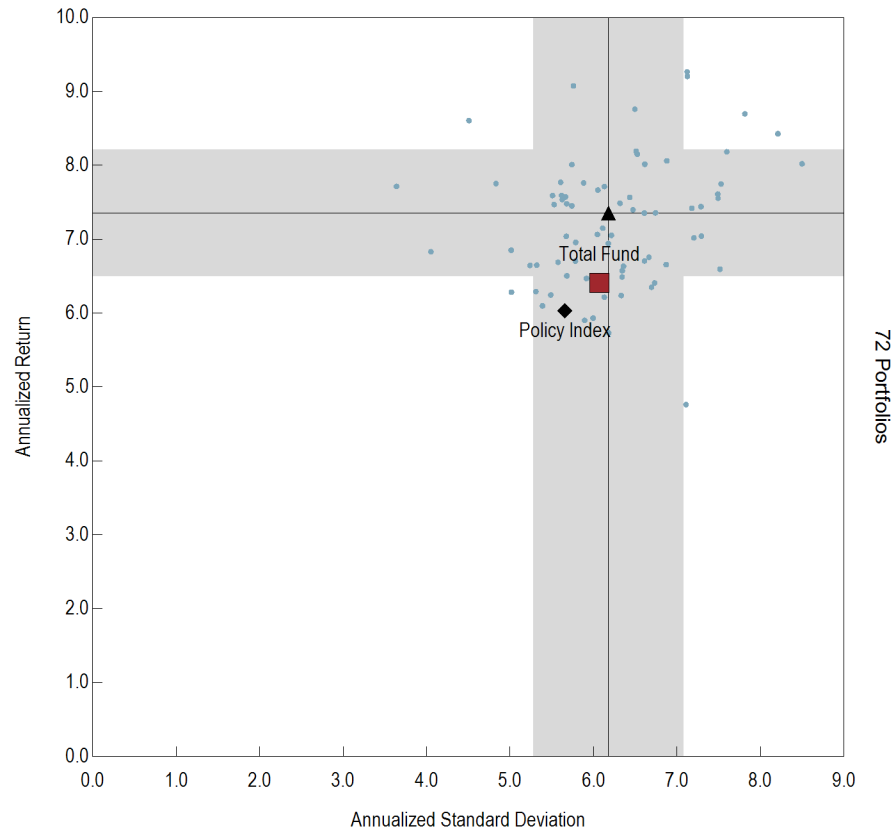
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	4.5%	5.8%	0.7
Policy Index	4.2%	5.5%	0.6
InvestorForce Public DB > \$1B Net Median	5.8%	6.1%	0.8

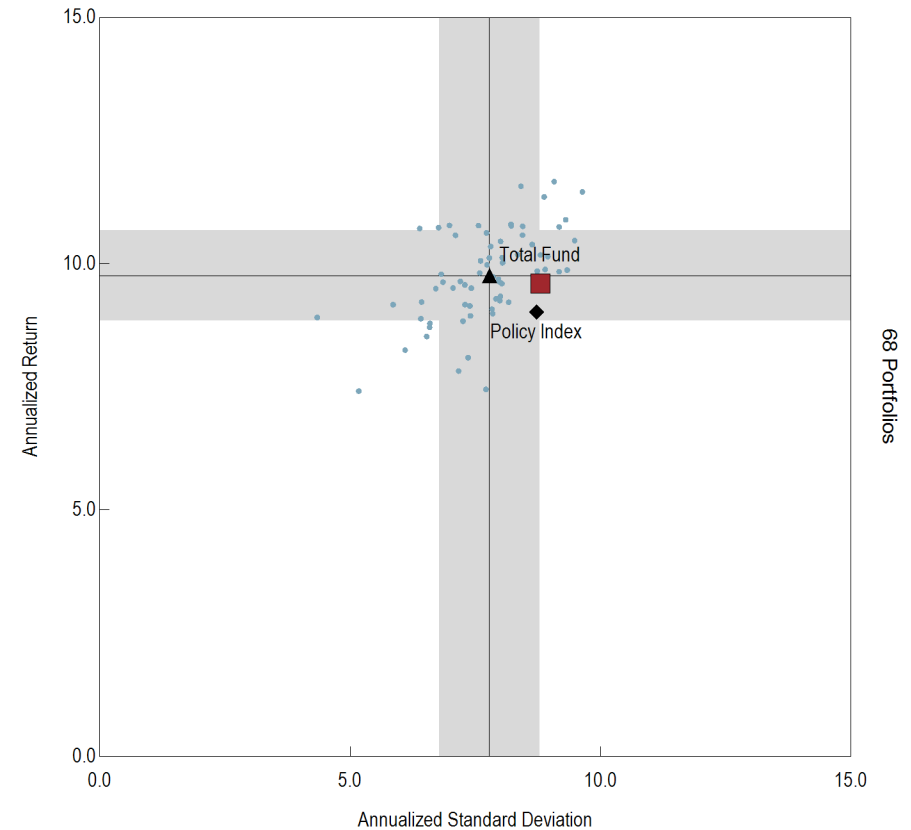
# Total Fund Risk Analysis (Net of Fees)

Period Ending: March 31, 2019

7 Years



10 Years



7 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	6.4%	6.1%	1.0
Policy Index	6.0%	5.7%	1.0
InvestorForce Public DB > \$1B Net Median	7.4%	6.2%	1.1

10 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	9.6%	8.8%	1.0
Policy Index	9.0%	8.7%	1.0
InvestorForce Public DB > \$1B Net Median	9.8%	7.8%	1.2

Total Fund  
Risk Analysis (Net of Fees)

Period Ending: March 31, 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	5.22%	0.46%	1.06	0.95	108.56%	98.29%	0.71	1.21%	1.17	1.73
Total Domestic Equity	11.29%	-0.98%	1.01	0.98	93.38%	97.10%	-0.55	1.59%	1.01	1.07
Total International Equity	10.40%	-0.75%	0.97	0.97	93.43%	99.77%	-0.53	1.90%	0.62	1.18
Total Domestic Fixed Income	2.64%	3.27%	0.51	0.33	95.20%	15.65%	0.87	2.62%	1.18	2.63
Total Real Estate	3.01%	1.90%	0.92	0.77	98.77%	--	0.91	1.47%	2.38	2,021.73
Total Hedge Funds	2.83%	2.09%	0.67	0.69	86.25%	44.83%	0.40	1.97%	1.26	1.95
Total Alternative Illiquids	4.60%	10.21%	-0.05	0.02	26.00%	-17.41%	-0.55	12.52%	1.79	99.08

5 Years

	Anlzd Standard Deviation	Anlzd Alpha	Beta	R-Squared	Up Mkt Capture Ratio	Down Mkt Capture Ratio	Information Ratio	Tracking Error	Sharpe Ratio	Sortino Ratio
Total Fund	5.84%	0.22%	1.03	0.94	102.96%	98.23%	0.25	1.42%	0.65	1.18
Total Domestic Equity	11.94%	-1.47%	1.03	0.98	93.88%	102.04%	-0.69	1.71%	0.71	1.00
Total International Equity	11.65%	-0.40%	0.95	0.97	90.91%	97.36%	-0.26	2.14%	0.15	0.34
Total Domestic Fixed Income	2.81%	1.91%	0.61	0.39	89.12%	49.75%	0.35	2.46%	1.02	2.54
Total Real Estate	4.30%	0.59%	1.03	0.88	102.38%	--	0.56	1.48%	2.16	1,564.97
Total Hedge Funds	3.22%	0.57%	0.78	0.79	81.85%	74.74%	0.05	1.67%	0.49	0.85
Total Alternative Illiquids	4.52%	6.62%	0.01	0.00	15.82%	-13.25%	-0.52	12.23%	1.34	1.53

Total Fund  
Risk Analysis (Net of Fees)

Period Ending: March 31, 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	6.07%	0.08%	1.05	0.96	105.86%	100.36%	0.29	1.30%	0.97	1.36
Total Domestic Equity	11.23%	-1.01%	1.01	0.97	93.98%	104.32%	-0.44	1.96%	1.00	1.08
Total International Equity	11.92%	0.23%	1.00	0.97	100.51%	98.37%	0.09	2.20%	0.41	0.64
Total Domestic Fixed Income	3.48%	1.62%	0.86	0.55	118.24%	53.97%	0.54	2.38%	0.93	2.18
Total Real Estate	1.76%	2.05%	0.80	0.42	101.47%	--	0.08	1.38%	5.29	--
Total Hedge Funds	3.71%	0.72%	0.76	0.78	90.13%	80.80%	-0.01	2.01%	0.69	0.84
Total Alternative Illiquids	4.84%	7.47%	0.11	0.06	32.48%	-9.68%	-0.58	10.87%	1.78	2.84

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	8.80%	0.60%	1.00	0.98	106.17%	97.30%	0.43	1.34%	1.04	1.48
Total Domestic Equity	14.84%	-0.64%	1.02	0.98	98.11%	101.77%	-0.18	1.90%	1.03	1.28
Total International Equity	16.39%	0.83%	0.94	0.98	93.75%	94.31%	0.09	2.45%	0.56	0.89
Total Domestic Fixed Income	4.12%	2.84%	0.90	0.48	151.53%	49.64%	0.82	3.00%	1.41	3.57
Total Real Estate	6.33%	-0.58%	1.00	0.77	92.31%	101.78%	-0.19	3.01%	1.07	0.53
Total Hedge Funds	3.82%	1.45%	0.65	0.67	81.01%	57.52%	0.07	2.77%	0.87	1.19
Total Alternative Illiquids	5.89%	7.10%	0.20	0.24	22.68%	9.46%	-0.63	12.72%	1.77	2.47

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

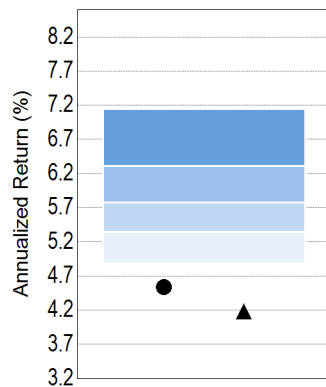
Period Ending: March 31, 2019

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

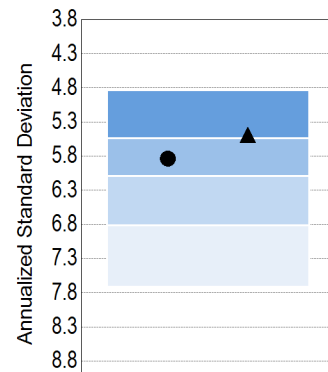


## Total Fund vs. InvestorForce Public DB &gt; \$1B Net Universe

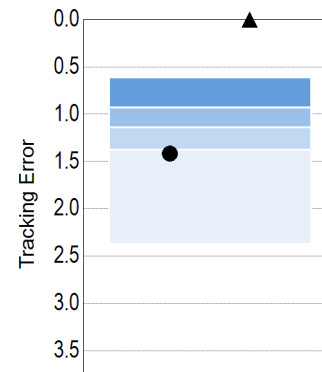
Annualized Return



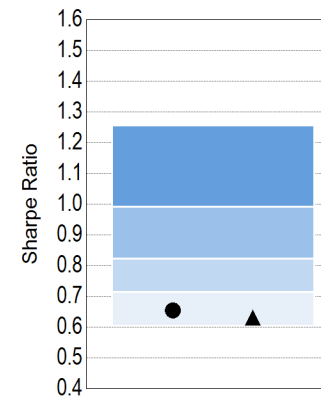
Annualized Standard Deviation



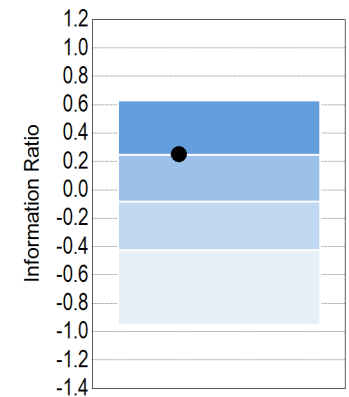
Tracking Error



Sharpe Ratio



Information Ratio



● Total Fund  
Value 4.5  
Rank 99  
▲ Policy Index  
Value 4.2  
Rank 99

● Total Fund  
Value 5.8  
Rank 38  
▲ Policy Index  
Value 5.5  
Rank 21

● Total Fund  
Value 1.4  
Rank 78  
▲ Policy Index  
Value 0.0  
Rank 1

● Total Fund  
Value 0.7  
Rank 90  
▲ Policy Index  
Value 0.6  
Rank 94

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

Universe  
5th %tile 7.1  
25th %tile 6.3  
Median 5.8  
75th %tile 5.4  
95th %tile 4.9

Universe  
5th %tile 4.8  
25th %tile 5.5  
Median 6.1  
75th %tile 6.8  
95th %tile 7.7

Universe  
5th %tile 0.6  
25th %tile 0.9  
Median 1.1  
75th %tile 1.4  
95th %tile 2.4

Universe  
5th %tile 1.3  
25th %tile 1.0  
Median 0.8  
75th %tile 0.7  
95th %tile 0.6

Universe  
5th %tile 0.6  
25th %tile 0.2  
Median -0.1  
75th %tile -0.4  
95th %tile -1.0

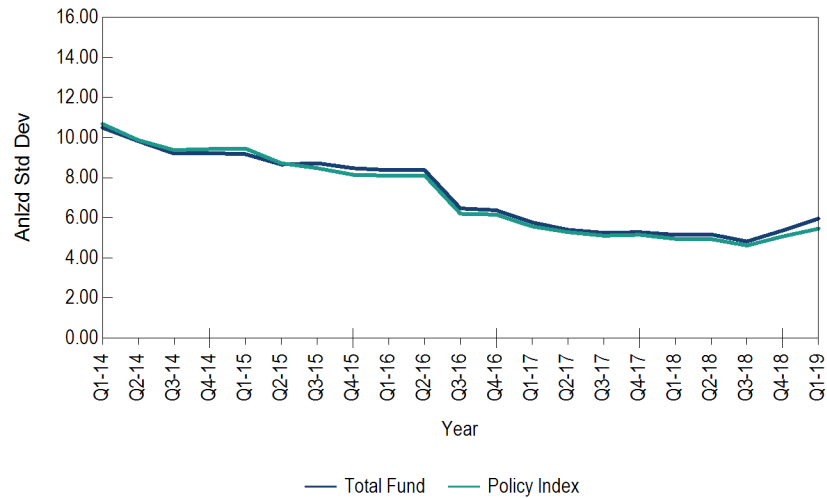


# Total Fund

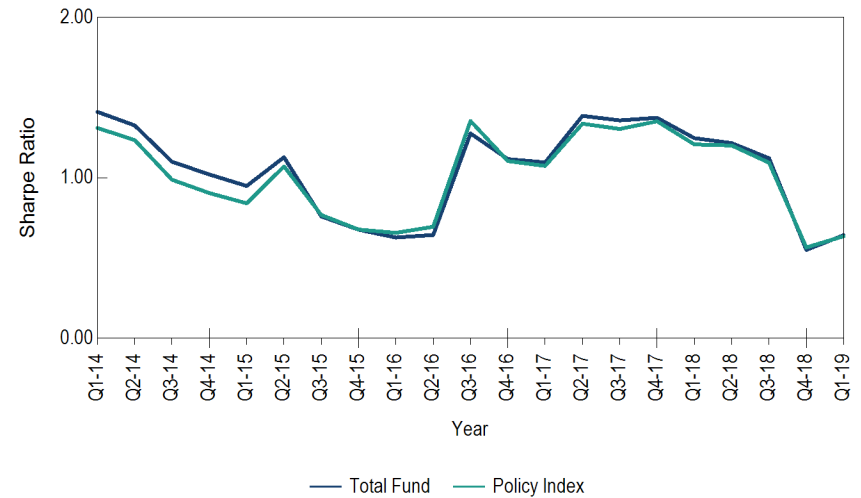
## Risk Analysis - 5 Years (Net of Fees)

Period Ending: March 31, 2019

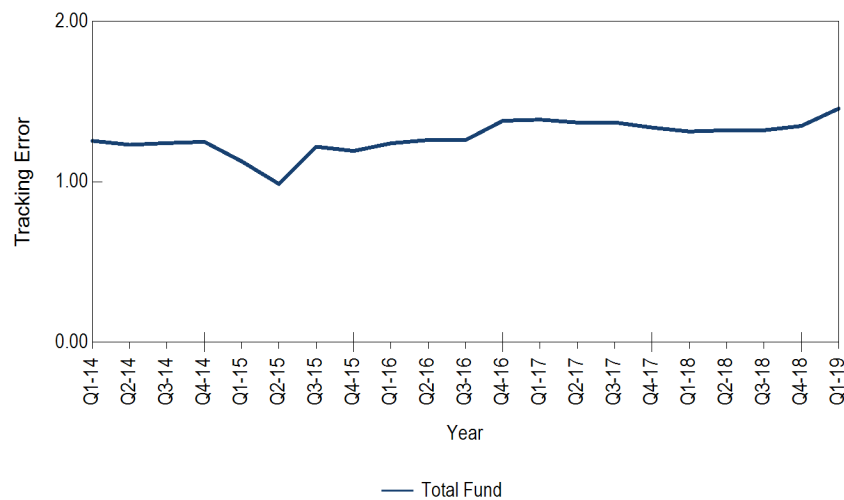
Rolling 5 Year Annualized Standard Deviation



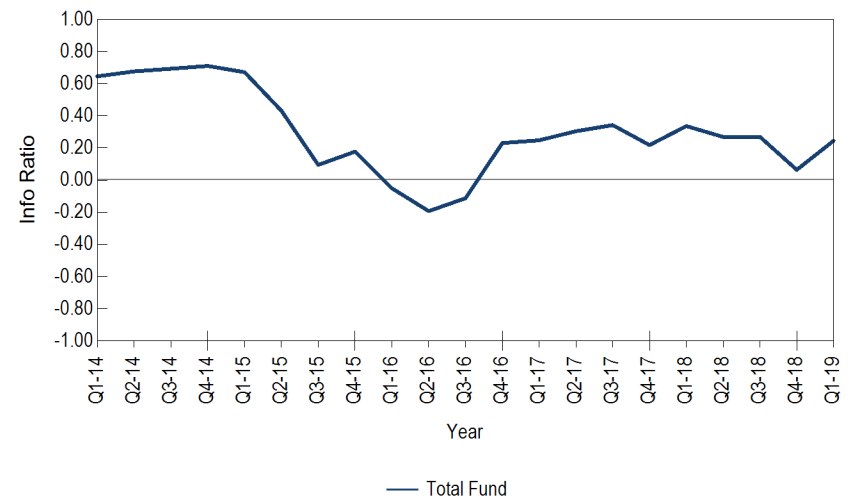
Rolling 5 Year Sharpe Ratio



Rolling 5 Year Tracking Error



Rolling 5 Year Information Ratio



# Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
<b>Total Fund</b>	<b>4,765,698,992</b>	<b>100.0</b>	<b>6.7</b>	<b>2.6</b>	<b>2.1</b>	<b>7.3</b>	<b>4.5</b>	<b>9.6</b>	<b>-3.6</b>	<b>14.6</b>	<b>6.7</b>	<b>-2.5</b>	<b>3.5</b>	<b>7.0</b>	<b>Jun-02</b>
<i>Policy Index</i>			5.5	1.8	1.5	6.4	4.2	9.0	-3.2	14.0	6.5	-1.7	2.6	6.3	Jun-02
<b>Total Fund Ex Parametric</b>	<b>4,701,482,186</b>	<b>98.7</b>	<b>6.4</b>	<b>2.8</b>	<b>2.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>-3.1</b>	<b>13.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>7.4</b>	<b>Dec-16</b>
<i>Policy Index</i>			5.5	1.8	1.5	6.4	4.2	9.0	-3.2	14.0	6.5	-1.7	2.6	7.0	Dec-16
<b>Total Domestic Equity</b>	<b>830,166,261</b>	<b>17.4</b>	<b>13.2</b>	<b>3.2</b>	<b>7.3</b>	<b>12.6</b>	<b>9.2</b>	<b>15.7</b>	<b>-5.1</b>	<b>20.2</b>	<b>8.9</b>	<b>1.5</b>	<b>9.8</b>	<b>--</b>	<b>Mar-97</b>
<i>Russell 3000</i>			14.0	4.7	8.8	13.5	10.4	16.0	-5.2	21.1	12.7	0.5	12.6	8.4	Mar-97
SSgA S&P 500 Flagship Fund	192,931,424	4.0	13.6	5.9	9.5	13.5	10.9	15.9	-4.4	21.8	12.0	1.4	13.7	8.6	Mar-04
<i>S&amp;P 500</i>			13.6	5.9	9.5	13.5	10.9	15.9	-4.4	21.8	12.0	1.4	13.7	8.6	Mar-04
T. Rowe Price Large Cap Growth	298,541,376	6.3	15.0	--	--	--	--	--	--	--	--	--	--	13.2	Oct-18
<i>Russell 1000 Growth</i>			16.1	6.6	12.7	16.5	13.5	17.5	-1.5	30.2	7.1	5.7	13.0	13.5	Oct-18
Aronson Johnson Ortiz	268,138,380	5.6	10.4	-1.1	0.4	8.9	6.0	13.6	-11.4	16.7	9.5	-0.1	9.6	10.0	Dec-95
<i>Russell 1000 Value</i>			11.9	4.4	5.7	10.5	7.7	14.5	-8.3	13.7	17.3	-3.8	13.5	8.7	Dec-95
PIMCO StocksPLUS Small Fund	70,405,116	1.5	16.7	-5.3	2.8	--	--	--	--	--	--	--	--	3.7	Feb-18
<i>Russell 2000</i>			14.6	-5.3	2.0	12.9	7.1	15.4	-11.0	14.6	21.3	-4.4	4.9	3.1	Feb-18
<b>Total International Equity</b>	<b>978,409,686</b>	<b>20.5</b>	<b>10.7</b>	<b>0.7</b>	<b>-3.8</b>	<b>7.6</b>	<b>2.5</b>	<b>9.6</b>	<b>-13.6</b>	<b>28.5</b>	<b>3.0</b>	<b>-7.5</b>	<b>-2.5</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex USA Gross</i>			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	--	--
Artisan International Growth	252,023,657	5.3	11.0	1.5	-0.5	7.4	3.4	--	-10.2	31.5	-9.0	-2.2	-0.1	5.6	Apr-13
<i>MSCI EAFE</i>			10.0	-2.5	-3.7	7.3	2.3	9.0	-13.8	25.0	1.0	-0.8	-4.9	4.7	Apr-13
Research Affiliates International Equity	243,726,011	5.1	8.3	-3.8	-6.5	8.2	1.7	--	-15.5	25.7	9.3	-5.9	-5.8	3.9	Apr-11
<i>MSCI EAFE</i>			10.0	-2.5	-3.7	7.3	2.3	9.0	-13.8	25.0	1.0	-0.8	-4.9	3.4	Apr-11
Mondrian International Small Cap	146,476,452	3.1	9.9	-6.5	-4.6	6.7	3.5	--	-14.6	32.4	0.1	2.7	-4.9	8.9	Nov-09
<i>S&amp;P Developed Ex-U.S. SmallCap</i>			10.4	-8.1	-9.2	7.2	4.1	12.3	-18.4	32.4	3.8	5.9	-3.4	7.8	Nov-09
Mondrian Emerging Markets	158,081,420	3.3	10.0	4.7	-5.3	7.2	1.7	8.3	-13.8	27.2	9.0	-16.3	0.0	5.5	Nov-05
<i>MSCI Emerging Markets</i>			9.9	0.6	-7.4	10.7	3.7	8.9	-14.6	37.3	11.2	-14.9	-2.2	6.0	Nov-05
Baillie Gifford Emerging Markets	178,102,146	3.7	14.7	--	--	--	--	--	--	--	--	--	--	14.7	Dec-18
<i>MSCI Emerging Markets</i>			9.9	0.6	-7.4	10.7	3.7	8.9	-14.6	37.3	11.2	-14.9	-2.2	9.9	Dec-18
<b>Total Fixed Income</b>	<b>1,492,359,804</b>	<b>31.3</b>	<b>4.4</b>	<b>3.1</b>	<b>0.1</b>	<b>3.7</b>	<b>2.7</b>	<b>5.7</b>	<b>-2.9</b>	<b>8.0</b>	<b>6.7</b>	<b>-4.5</b>	<b>5.0</b>	<b>--</b>	<b>--</b>
<i>BBgBarc Global Aggregate*</i>			2.2	2.5	-0.4	1.5	1.0	2.9	-1.2	7.4	2.1	-3.2	0.0	--	--
Western Asset Investment Grade Credit	220,232,924	4.6	5.6	6.6	5.5	4.3	--	--	-2.3	6.8	7.0	-0.5	--	4.0	Oct-14
<i>BBgBarc US Credit TR</i>			4.9	5.8	4.9	3.5	3.6	6.2	-2.1	6.2	5.6	-0.8	7.5	3.4	Oct-14
RBC Access Capital	47,334,249	1.0	2.0	--	--	--	--	--	--	--	--	--	--	4.8	Oct-18
<i>BBgBarc US Securitized Index</i>			2.2	4.2	4.5	1.8	2.6	3.5	1.0	2.5	1.8	1.5	5.9	4.9	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: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Loomis Sayles High Yield	317,478,393	6.7	6.5	4.3	4.8	7.5	--	--	-2.3	7.1	14.4	-5.2	--	4.3	Oct-14
BBgBarc US High Yield TR			7.3	4.9	5.9	8.6	4.7	11.3	-2.1	7.5	17.1	-4.5	2.5	5.1	Oct-14
Eaton Vance Senior Loan Fund	232,915,548	4.9	3.5	1.8	2.6	5.4	--	--	0.7	4.0	9.9	-0.8	--	3.8	Oct-14
S&P/LSTA Leveraged Loan Index			4.0	2.3	3.0	5.7	3.6	8.0	0.4	4.1	10.2	-0.7	1.6	3.8	Oct-14
Eaton Vance Institutional Senior Loan Plus Fund	21,534,989	0.5	5.0	1.8	2.3	--	--	--	-1.3	3.6	--	--	--	3.3	Jan-17
S&P/LSTA Leveraged Loan Index			4.0	2.3	3.0	5.7	3.6	8.0	0.4	4.1	10.2	-0.7	1.6	3.7	Jan-17
SSgA TIPS	179,093,188	3.8	3.2	1.9	2.7	1.7	1.9	3.3	-1.3	3.0	4.6	-1.5	3.6	3.9	Feb-09
BBgBarc US TIPS TR			3.2	1.9	2.7	1.7	1.9	3.4	-1.3	3.0	4.7	-1.4	3.6	4.0	Feb-09
Brandywine Global Sovereign	251,556,986	5.3	2.8	0.8	-5.8	1.5	--	--	-4.7	11.9	3.8	-9.8	--	0.5	Jan-15
FTSE WGBI TR			1.7	1.8	-1.6	1.0	0.6	2.2	-0.8	7.5	1.6	-3.6	-0.5	1.5	Jan-15
PIMCO Emerging Local Bond Ins	222,213,527	4.7	4.5	3.4	-8.1	3.5	-0.9	--	-7.7	15.4	10.7	-16.3	-5.4	-0.8	Jul-13
JP Morgan GBI EM Global Diversified TR USD			2.9	3.2	-7.6	3.3	-0.8	4.3	-6.2	15.2	9.9	-14.9	-5.7	-0.6	Jul-13
<b>Total Real Estate</b>	<b>232,884,830</b>	<b>4.9</b>	<b>1.6</b>	<b>6.5</b>	<b>8.5</b>	<b>8.4</b>	<b>10.0</b>	<b>7.2</b>	<b>9.2</b>	<b>6.8</b>	<b>8.5</b>	<b>13.9</b>	<b>11.8</b>	<b>--</b>	
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	7.4	6.7	7.8	13.9	11.5	--	
Invesco Core Real Estate	178,212,782	3.7	0.9	5.3	7.1	7.9	9.7	7.0	8.5	7.5	8.3	13.7	11.4	4.7	Oct-07
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	7.4	6.7	7.8	13.9	11.5	4.5	Oct-07
FCERA Realty Group LLC	7,947,614	0.2													
<b>Closed End Real Estate 1 Qtr Lagged</b>	<b>46,724,434</b>	<b>1.0</b>	<b>5.2</b>	<b>13.2</b>	<b>16.8</b>	<b>10.8</b>	<b>12.0</b>	<b>--</b>	<b>14.1</b>	<b>4.3</b>	<b>9.0</b>	<b>14.9</b>	<b>15.0</b>	<b>--</b>	
NCREIF ODCE Net 1 Qtr Lagged			1.5	5.3	7.4	6.6	8.9	7.6	7.7	4.7	7.8	13.9	11.5	--	
<b>Total Infrastructure</b>	<b>147,926,795</b>	<b>3.1</b>	<b>2.6</b>	<b>12.0</b>	<b>13.3</b>	<b>14.8</b>	<b>--</b>	<b>--</b>	<b>20.1</b>	<b>19.0</b>	<b>6.1</b>	<b>--</b>	<b>--</b>	<b>--</b>	
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	7.4	6.7	7.8	13.9	11.5	--	
IFM Infrastructure	147,926,795	3.1	2.6	12.0	13.3	14.8	--	--	20.1	19.0	6.1	--	--	13.0	May-15
NCREIF ODCE Net			1.2	4.7	6.6	7.0	9.2	7.7	7.4	6.7	7.8	13.9	11.5	8.6	May-15
<b>Total Hedge Funds</b>	<b>331,050,010</b>	<b>6.9</b>	<b>3.0</b>	<b>-0.5</b>	<b>1.0</b>	<b>4.7</b>	<b>2.3</b>	<b>3.7</b>	<b>-0.7</b>	<b>4.6</b>	<b>3.0</b>	<b>0.0</b>	<b>3.1</b>	<b>--</b>	
HFRI Fund of Funds Composite Index			4.6	-0.3	0.1	3.9	2.2	3.5	-4.0	7.8	0.5	-0.3	3.4	--	
Grosvenor	167,032,871	3.5	2.8	-1.7	-0.2	4.9	2.5	--	-1.2	6.4	2.6	0.0	3.5	4.4	Oct-09
HFRI Fund of Funds Composite Index			4.6	-0.3	0.1	3.9	2.2	3.5	-4.0	7.8	0.5	-0.3	3.4	2.8	Oct-09
GCM Better Futures Fund	164,017,139	3.4	3.2	0.7	2.3	--	--	--	-0.2	2.8	--	--	--	3.6	Sep-16
HFRI Fund of Funds Composite Index			4.6	-0.3	0.1	3.9	2.2	3.5	-4.0	7.8	0.5	-0.3	3.4	3.6	Sep-16

RBC Access Capital funded 10/10/2018.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
<b>Total Commodities</b>	<b>129,651,002</b>	<b>2.7</b>	<b>5.0</b>	<b>-6.4</b>	<b>-6.9</b>	<b>3.0</b>	<b>-5.5</b>	<b>--</b>	<b>-11.7</b>	<b>5.8</b>	<b>13.8</b>	<b>-12.8</b>	<b>-16.9</b>	<b>--</b>	
<i>Bloomberg Commodity Index TR USD</i>			6.3	-5.6	-5.3	2.2	-8.9	-2.6	-11.2	1.7	11.8	-24.7	-17.0	--	
<b>Invesco Commodities</b>	<b>129,651,002</b>	<b>2.7</b>	<b>5.0</b>	<b>-6.4</b>	<b>-6.9</b>	<b>3.0</b>	<b>--</b>	<b>--</b>	<b>-11.7</b>	<b>5.8</b>	<b>13.8</b>	<b>--</b>	<b>--</b>	<b>-0.9</b>	<b>May-15</b>
<i>Bloomberg Commodity Index TR USD</i>			6.3	-5.6	-5.3	2.2	-8.9	-2.6	-11.2	1.7	11.8	-24.7	-17.0	-4.6	<i>May-15</i>
<b>Total Private Equity 1 Qtr Lagged</b>	<b>211,778,263</b>	<b>4.4</b>	<b>0.6</b>	<b>6.1</b>	<b>11.0</b>	<b>11.4</b>	<b>8.5</b>	<b>13.2</b>	<b>12.0</b>	<b>13.9</b>	<b>10.7</b>	<b>3.8</b>	<b>4.8</b>	<b>--</b>	
<i>Russell 2000 1 Qtr Lagged</i>			-20.2	-10.9	-11.0	7.9	4.2	13.8	15.2	10.9	21.3	-4.4	4.9	--	
<b>Total Private Credit 1 Qtr Lagged</b>	<b>222,117,466</b>	<b>4.7</b>	<b>-0.8</b>	<b>3.7</b>	<b>5.1</b>	<b>7.0</b>	<b>4.5</b>	<b>16.6</b>	<b>7.6</b>	<b>8.1</b>	<b>7.4</b>	<b>-2.5</b>	<b>6.8</b>	<b>--</b>	
<i>BBgBarc US Corp. High Yield 1 Qtr Lagged</i>			-4.5	-1.2	-2.1	6.1	3.2	10.5	3.0	7.0	17.1	-4.5	2.5	--	
<b>Total Custodied Cash</b>	<b>32,423,985</b>	<b>0.7</b>	<b>0.7</b>	<b>1.9</b>	<b>2.5</b>	<b>1.0</b>	<b>0.8</b>	<b>0.7</b>	<b>1.9</b>	<b>0.1</b>	<b>0.8</b>	<b>0.0</b>	<b>0.5</b>	<b>--</b>	
<i>91 Day T-Bills</i>			0.6	1.7	2.1	1.2	0.8	0.4	1.9	0.9	0.3	0.0	0.0	--	
<b>Total County Cash</b>	<b>25,586,797</b>	<b>0.5</b>	<b>1.2</b>	<b>2.7</b>	<b>3.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2.4</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<i>91 Day T-Bills</i>			0.6	1.7	2.1	1.2	0.8	0.4	1.9	0.9	0.3	0.0	0.0	--	
<b>Total Parametric Overlay</b>	<b>64,216,806</b>	<b>1.3</b>													

# Real Estate Closed End Funds (Net of Fees)

Period Ending: March 31, 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
Invesco Value-Add Fund V	2017	0.1%	\$30,000,000	\$4,253,886	\$0	\$4,061,858	-4.5%	N/A	N/A	N/A	N/A
Kennedy Wilson Real Estate Fund V	2016	0.5%	\$30,000,000	\$28,113,444	\$15,078,766	\$21,756,312	5.1%	23.3%	14.3%	N/A	14.9%
Gerding Edlen Green Cities III	2016	0.4%	\$20,000,000	\$17,505,941	\$537,072	\$20,906,264	6.2%	10.1%	10.2%	N/A	11.0%
TA Realty IX	2009	0.0%	\$30,000,000	\$30,000,000	\$47,216,175	\$0	-7.7%	-15.8%	-4.0%	3.2%	10.4%

% of Total Fund (Market Value)

1.0%

# Private Equity Non Marketable Securities Overview

Period Ending: March 31, 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	\$615,766	\$22,630,806	\$51,582,529	\$649,172	2.35x	29.61%
Hamilton Lane Private Equity Fund IX L.P.	2016	\$100,000,000	\$32,140,012	\$67,859,988	\$16,157,818	\$68,868,337	1.23x	16.96%
Hamilton Lane Private Equity Fund VI, LP	2007	\$70,000,000	\$7,388,235	\$62,611,765	\$78,666,530	\$21,791,425	1.63x	9.55%
Horsley Bridge XI Growth Buyout L.P.	2016	\$30,000,000	\$17,137,347	\$12,862,653	\$525,613	\$14,152,701	1.04x	4.94%
Landmark Equity Partners XIV, L.P.	2009	\$30,000,000	\$932,893	\$29,069,268	\$32,002,796	\$5,631,355	1.32x	10.19%
New Mountain Partners III, L.P.	2007	\$15,000,000	\$1,028,824	\$15,363,060	\$20,426,018	\$9,889,506	1.97x	13.38%
Warburg Pincus Equity Partners, L.P.	1998	\$20,000,000	-	\$20,000,000	\$33,046,892	\$77,325	1.66x	10.26%
Warburg Pincus Private Equity VIII, L.P.	2001	\$25,000,000	-	\$26,100,000	\$57,011,010	\$823,271	2.23x	14.48%
Warburg Pincus Private Equity X, L.P.	2007	\$25,000,000	-	\$25,046,896	\$29,049,511	\$9,190,166	1.55x	8.00%
Warburg Pincus Private Equity XII, L.P.	2015	\$34,000,000	\$9,962,000	\$24,055,364	\$983,746	\$27,187,170	1.16x	11.14%
<b>Total Legacy Portfolio</b>		<b>\$369,000,000</b>	<b>\$69,205,077</b>	<b>\$305,599,800</b>	<b>\$319,452,463</b>	<b>\$158,260,428</b>	<b>1.57x</b>	<b>12.92%</b>
Hamilton Lane Portfolio								
Avista Capital Partners IV, L.P.	2018	\$10,000,000	\$2,406,530	\$9,487,666	\$4,703,601	\$6,840,914	1.22x	67.65%
H.I.G. Growth Buyouts & Equity Fund III, L.P.	2019	\$10,000,000	\$10,000,000	-	-	\$0	N/A	-
Hamilton Lane Secondary Fund IV, L.P.	2017	\$75,000,000	\$38,956,200	\$40,298,636	\$9,286,746	\$42,705,098	1.22x	37.50%
K4 Private Investors, L.P.	2018	\$5,000,000	\$4,552,375	\$447,625	-	\$1,630,594	0.76x	(24.23%)
Kelso Investment Associates X, L.P.	2018	\$7,500,000	\$7,460,765	\$39,235	-	\$736,406	1.43x	42.72%
Platinum Equity Small Cap Fund, L.P.	2018	\$7,500,000	\$7,134,193	\$394,607	\$28,800	\$467,431	0.74x	(30.63%)
SK Capital Partners Fund V, L.P.	2018	\$10,000,000	\$8,684,033	\$1,315,967	-	\$1,067,251	0.96x	(3.06%)
Thomas H. Lee Equity Fund VIII, L.P.	2019	\$7,500,000	\$7,500,000	-	-	\$70,141	N/A	-
TPG Partners VIII, L.P.	2019	\$10,000,000	\$10,000,000	-	-	\$0	N/A	-
Verdane Capital X AB	2019	\$7,503,970	\$7,503,970	-	-	\$0	N/A	-
<b>Total Hamilton Lane Portfolio</b>		<b>\$150,003,970</b>	<b>\$104,198,066</b>	<b>\$51,983,736</b>	<b>\$14,019,147</b>	<b>\$53,517,835</b>	<b>1.20x</b>	<b>38.89%</b>
<b>Total Private Equity</b>		<b>\$519,003,970</b>	<b>\$173,403,143</b>	<b>\$357,583,536</b>	<b>\$333,471,610</b>	<b>\$211,778,263</b>	<b>1.51x</b>	<b>13.12%</b>

\*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: March 31, 2019

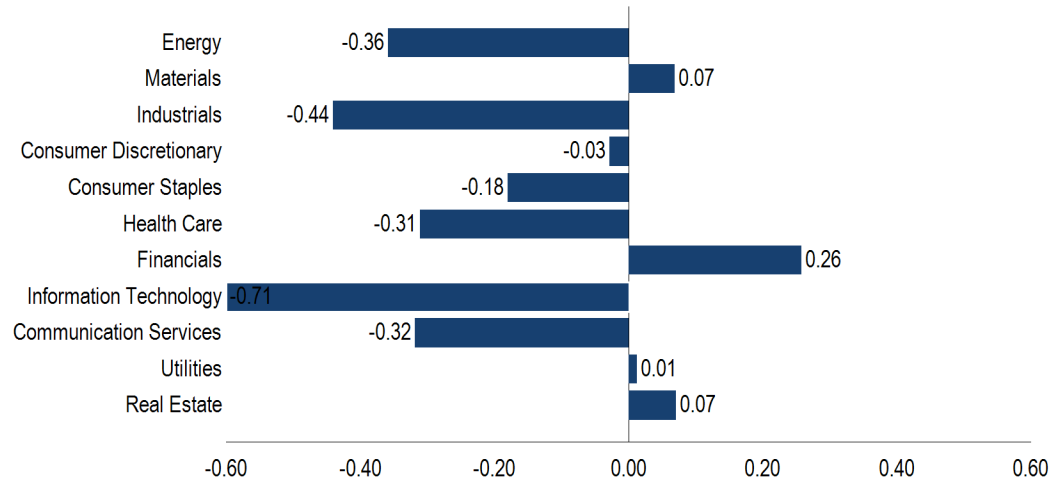
Private Credit								
Fund	Vintage Year	Commitment	Unfunded	Paid-In Capital	Capital Distributed	NAV	TVPI	Since Inception IRR
Legacy Portfolio								
EQT European Special Situations Debt	2017	\$40,000,000	\$35,148,346	\$8,853,619	\$743,320	\$6,473,726	0.82	3.00%
OHA Strategic Credit Fund II	2016	\$40,000,000	\$34,000,000	\$6,000,000	\$0	\$6,504,288	1.08	21.00%
TSSP Adjacent Opportunities Partners	2016	\$30,000,000	\$14,520,034	\$26,860,335	\$12,156,490	\$17,348,280	1.10	9.30%
GSO European Senior Debt	2015	\$30,000,000	\$7,786,851	\$23,168,917	\$13,170,156	\$15,597,115	1.24	9.40%
CVI Credit Value Fund III	2015	\$30,000,000	\$1,500,000	\$28,500,000	\$6,926,058	\$27,346,225	1.20	9.18%
Colony Distressed Credit III	2014	\$20,000,000	\$2,734,614	\$21,939,049	\$13,946,492	\$12,943,967	1.23	9.00%
Oaktree Opportunities IX	2012	\$15,000,000	\$0	\$15,000,000	\$6,434,315	\$10,396,736	1.12	2.80%
KKR Mezanine Partners	2010	\$30,000,000	\$3,164,154	\$35,919,917	\$37,615,912	\$6,745,900	1.24	8.50%
Angelo Gordon VII	2010	\$30,000,000	\$0	\$30,000,000	\$35,875,672	\$805,773	1.22	4.89%
Colony Distressed Credit I	2009	\$40,000,000	\$2,219,487	\$42,267,927	\$63,855,850	\$417,813	1.52	13.00%
Lone Star Fund IV	2002	\$20,000,000	\$954,801	\$19,045,199	\$44,354,883	\$62,921	2.33	30.23%
<b>Total Legacy Portfolio</b>		<b>\$325,000,000</b>	<b>\$102,028,287</b>	<b>\$257,554,963</b>	<b>\$235,079,147</b>	<b>\$104,642,744</b>	<b>1.28</b>	
Carlyle Portfolio								
TCG BDC II	2017	\$150,000,000	\$102,017,794	\$47,982,206	\$3,385,820	\$47,143,236	1.05	3.59%
CPC V	2017	\$150,000,000	\$97,116,083	\$67,707,245	\$14,823,329	\$54,477,432	1.02	6.39%
AlpInvest FC Credit Fund	2017	\$100,000,000	\$81,317,377	\$18,682,623	\$2,556,541	\$15,854,053	0.99	2.58%
<b>Total Carlyle Portfolio</b>		<b>\$400,000,000</b>	<b>\$280,451,254</b>	<b>\$134,372,074</b>	<b>\$20,765,690</b>	<b>\$117,474,721</b>	<b>1.02</b>	
<b>Total Private Credit</b>		<b>\$725,000,000</b>	<b>\$382,479,541</b>	<b>\$391,927,037</b>	<b>\$255,844,837</b>	<b>\$222,117,466</b>		

Data provided by Carlyle.

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

Period Ending: March 31, 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	7.83%	4.95%	2.88%	10.94%	16.68%	-5.74%	0.08%	-0.44%	-0.36%	0.13%	-0.23%
Materials	3.19%	3.02%	0.17%	13.55%	11.63%	1.92%	0.00%	0.07%	0.07%	-0.07%	0.00%
Industrials	8.42%	9.94%	-1.52%	12.22%	16.69%	-4.47%	-0.05%	-0.39%	-0.44%	0.26%	-0.18%
Consumer Discretionary	7.71%	10.28%	-2.57%	14.47%	14.68%	-0.21%	-0.01%	-0.02%	-0.03%	0.07%	0.04%
Consumer Staples	7.76%	6.65%	1.11%	9.68%	11.66%	-1.99%	-0.03%	-0.15%	-0.18%	-0.16%	-0.34%
Health Care	15.83%	15.06%	0.77%	6.66%	8.19%	-1.53%	-0.05%	-0.26%	-0.31%	-0.88%	-1.19%
Financials	18.31%	13.86%	4.45%	11.22%	8.84%	2.39%	-0.22%	0.48%	0.26%	-0.72%	-0.46%
Information Technology	14.43%	19.88%	-5.45%	18.38%	20.78%	-2.40%	-0.38%	-0.34%	-0.71%	1.34%	0.63%
Communication Services	8.15%	9.14%	-0.99%	10.42%	13.97%	-3.55%	-0.01%	-0.31%	-0.32%	-0.01%	-0.32%
Utilities	4.83%	3.31%	1.52%	12.48%	11.38%	1.10%	-0.04%	0.06%	0.01%	-0.09%	-0.08%
Real Estate	3.52%	3.90%	-0.38%	19.60%	17.30%	2.30%	-0.01%	0.08%	0.07%	0.13%	0.20%
Unclassified	0.00%	0.00%	0.00%	-1.02%	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total</b>				<b>12.10%</b>	<b>14.04%</b>	<b>-1.94%</b>	<b>-0.71%</b>	<b>-1.23%</b>	<b>-1.94%</b>	<b>0.00%</b>	<b>-1.94%</b>



Total Domestic Equity  
Performance Attribution Summary (Net of Fees)

Period Ending: March 31, 2019

Portfolio: Total Domestic Equity  
Benchmark: Russell 3000

Portfolio Total Return 13.16%

	Equity Only
Portfolio	12.10%
Benchmark	<u>14.04%</u>
Return From Active Mgmt	-1.94%

Local Returns	
Portfolio	12.10%
Benchmark	<u>14.04%</u>
Active Equity Return	-1.94%

Country Selection	0.00%
Stock Selection	-1.93%

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

Chart uses return-based methodology

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

Period Ending: March 31, 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
AUSTRALIA	4.47%	4.70%	-0.23%	12.30%	11.50%	0.80%	0.03%	-0.05%	0.03%	0.05%
AUSTRIA	0.15%	0.16%	-0.01%	8.92%	8.53%	0.39%	0.00%	0.00%	0.00%	0.00%
BELGIUM	1.07%	0.64%	0.43%	21.52%	16.23%	5.29%	0.07%	0.02%	0.05%	-0.01%
BRAZIL	1.89%	1.96%	-0.07%	22.58%	8.04%	14.54%	0.24%	-0.05%	0.33%	-0.04%
CANADA	6.50%	6.47%	0.03%	16.12%	15.62%	0.50%	0.10%	0.01%	0.07%	0.03%
CHILE	0.00%	0.29%	-0.29%	--	4.33%	-4.33%	0.02%	0.02%	0.00%	-0.01%
CHINA	0.00%	7.89%	-7.89%	--	17.92%	-17.92%	-0.58%	-0.59%	0.00%	0.01%
COLOMBIA	0.00%	0.11%	-0.11%	--	24.83%	-24.83%	-0.02%	-0.01%	0.00%	0.00%
CZECH REPUBLIC	0.00%	0.04%	-0.04%	--	3.82%	-3.82%	0.00%	0.00%	0.00%	0.00%
DENMARK	1.05%	1.19%	-0.14%	6.98%	13.22%	-6.23%	-0.03%	0.01%	-0.04%	0.00%
EGYPT	0.00%	0.03%	-0.03%	--	16.55%	-16.55%	0.00%	0.00%	0.00%	0.00%
FINLAND	0.61%	0.71%	-0.10%	1.48%	8.35%	-6.87%	-0.06%	0.00%	-0.05%	0.00%
FRANCE	11.05%	7.45%	3.60%	12.32%	10.83%	1.49%	0.17%	0.12%	0.16%	-0.11%
GERMANY	14.74%	5.94%	8.80%	4.38%	7.09%	-2.71%	-0.76%	-0.16%	-0.42%	-0.18%
GREECE	0.00%	0.06%	-0.06%	--	13.30%	-13.30%	0.00%	0.00%	0.00%	0.00%
HONG KONG	3.26%	2.63%	0.63%	15.86%	15.57%	0.29%	0.04%	0.03%	0.01%	0.00%
HUNGARY	0.00%	0.09%	-0.09%	--	6.05%	-6.05%	0.00%	0.00%	0.00%	0.00%
INDIA	0.00%	2.45%	-2.45%	--	7.13%	-7.13%	0.09%	0.11%	0.00%	-0.02%
INDONESIA	0.34%	0.60%	-0.26%	13.67%	4.20%	9.47%	0.05%	0.01%	0.04%	-0.01%
IRELAND	0.63%	0.37%	0.26%	0.85%	11.60%	-10.75%	-0.03%	-0.02%	-0.02%	0.01%
ISRAEL	0.40%	0.36%	0.03%	2.43%	10.71%	-8.28%	-0.05%	-0.01%	-0.05%	0.00%
ITALY	2.88%	1.53%	1.34%	11.16%	14.83%	-3.67%	-0.04%	0.11%	-0.11%	-0.04%
JAPAN	15.41%	16.59%	-1.18%	5.16%	6.74%	-1.59%	-0.21%	0.04%	-0.26%	0.00%
KOREA	0.00%	3.60%	-3.60%	--	4.71%	-4.71%	0.21%	0.14%	0.00%	0.06%
LUXEMBOURG	0.01%	0.00%	0.01%	-18.50%	10.44%	-28.94%	-0.01%	0.00%	-0.01%	0.00%
MALAYSIA	0.00%	0.63%	-0.63%	--	0.39%	-0.39%	0.07%	0.07%	0.00%	-0.01%

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

Period Ending: March 31, 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
MEXICO	0.00%	0.72%	-0.72%	--	5.62%	-5.62%	0.03%	0.05%	0.00%	-0.01%
NETHERLANDS	3.82%	2.31%	1.51%	14.83%	13.61%	1.22%	0.10%	0.11%	0.05%	-0.06%
NEW ZEALAND	1.35%	0.16%	1.20%	4.97%	16.72%	-11.75%	-0.04%	-0.06%	-0.03%	0.05%
NORWAY	0.67%	0.49%	0.17%	9.43%	7.22%	2.21%	0.02%	0.00%	0.02%	0.01%
Other Countries	0.02%	0.00%	0.02%	26.97%	10.44%	16.54%	0.00%	0.00%	0.00%	0.00%
PAKISTAN	0.00%	0.01%	-0.01%	--	8.49%	-8.49%	0.00%	0.00%	0.00%	0.00%
PERU	0.00%	0.11%	-0.11%	--	11.15%	-11.15%	0.00%	0.00%	0.00%	0.00%
PHILIPPINES	0.00%	0.29%	-0.29%	--	7.92%	-7.92%	0.01%	0.01%	0.00%	0.00%
POLAND	0.00%	0.33%	-0.33%	--	-0.60%	0.60%	0.04%	0.03%	0.00%	0.01%
PORTUGAL	0.13%	0.11%	0.02%	13.76%	10.19%	3.57%	0.00%	0.00%	0.00%	0.00%
QATAR	0.00%	0.29%	-0.29%	--	-3.57%	3.57%	0.04%	0.04%	0.00%	0.00%
RUSSIA	0.53%	0.95%	-0.42%	12.58%	12.51%	0.07%	-0.01%	0.01%	0.03%	-0.05%
SINGAPORE	2.60%	0.92%	1.68%	8.35%	6.25%	2.10%	0.04%	-0.02%	0.03%	0.03%
SOUTH AFRICA	0.01%	1.63%	-1.62%	13.90%	4.31%	9.59%	0.09%	0.10%	0.00%	-0.01%
SPAIN	1.58%	2.09%	-0.52%	6.43%	6.89%	-0.45%	-0.02%	0.00%	-0.01%	0.00%
SWEDEN	1.74%	1.82%	-0.08%	2.68%	7.92%	-5.24%	-0.06%	-0.01%	-0.08%	0.03%
SWITZERLAND	5.68%	5.88%	-0.20%	16.33%	13.56%	2.76%	0.19%	0.02%	0.17%	0.00%
TAIWAN	0.00%	2.97%	-2.97%	--	9.00%	-9.00%	0.05%	0.05%	0.00%	0.01%
THAILAND	0.00%	0.63%	-0.63%	--	7.52%	-7.52%	0.02%	0.04%	0.00%	-0.02%
TURKEY	0.00%	0.16%	-0.16%	--	-3.05%	3.05%	0.02%	0.01%	0.00%	0.01%
UNITED ARAB EMIRATES	0.00%	0.20%	-0.20%	--	8.68%	-8.68%	0.00%	0.00%	0.00%	0.00%
UNITED KINGDOM	12.54%	11.46%	1.08%	8.43%	11.94%	-3.51%	-0.40%	-0.04%	-0.42%	0.05%
UNITED STATES	4.89%	0.00%	4.89%	10.72%	2.85%	7.88%	0.04%	-0.57%	0.61%	0.00%
	<b>100.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>9.89%</b>	<b>10.44%</b>	<b>-0.55%</b>	<b>-0.55%</b>	<b>-0.43%</b>	<b>0.10%</b>	<b>-0.23%</b>

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

Period Ending: March 31, 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
	0.02%	0.00%	0.02%	--	0.00%	-0.25%	0.25%	0.00%
Australian Dollar	4.47%	4.70%	-0.23%	0.90%	1.01%	1.00%	0.01%	0.05%
Baht	0.00%	0.63%	-0.63%	2.60%	0.00%	2.72%	-2.72%	-0.02%
Canadian Dollar	6.50%	6.47%	0.03%	2.23%	2.40%	2.53%	-0.13%	0.03%
Chilean Peso	0.00%	0.29%	-0.29%	1.99%	0.00%	2.03%	-2.03%	-0.01%
Colombian Peso	0.00%	0.11%	-0.11%	1.95%	0.00%	2.38%	-2.38%	0.00%
Cruzeiro Real	1.89%	1.96%	-0.07%	-0.41%	-0.46%	-0.52%	0.06%	-0.04%
Czech Koruna	0.00%	0.04%	-0.04%	-2.13%	0.00%	-2.26%	2.26%	0.00%
Danish Krone	1.05%	1.19%	-0.14%	-1.82%	-1.98%	-2.09%	0.12%	0.00%
Egyptian Pound	0.00%	0.03%	-0.03%	3.40%	0.00%	3.84%	-3.84%	0.00%
Emirati dirham	0.00%	0.20%	-0.20%	0.00%	0.00%	0.00%	0.00%	0.00%
Euro	36.65%	21.36%	15.29%	-1.78%	-1.95%	-1.96%	0.01%	-0.39%
Forint	0.00%	0.09%	-0.09%	-2.03%	0.00%	-2.20%	2.20%	0.00%
Hong Kong Dollar	3.26%	2.63%	0.63%	-0.26%	-0.31%	-0.28%	-0.03%	0.00%
Indian Rupee	0.00%	2.45%	-2.45%	0.78%	0.00%	0.83%	-0.83%	-0.02%
Mexican New Peso	0.00%	0.72%	-0.72%	1.53%	0.00%	1.59%	-1.59%	-0.01%
New Sol	0.00%	0.11%	-0.11%	1.76%	0.00%	0.00%	0.00%	0.00%
New Taiwan Dollar	0.00%	2.97%	-2.97%	-0.27%	0.00%	-0.30%	0.30%	0.01%
New Zealand Dollar	1.35%	0.16%	1.20%	1.71%	1.76%	1.96%	-0.20%	0.05%
New Zloty	0.00%	0.33%	-0.33%	-2.01%	0.00%	-2.04%	2.04%	0.01%
Norwegian Krone	0.67%	0.49%	0.17%	0.55%	0.60%	0.59%	0.01%	0.01%
Pakistani Rupee	0.00%	0.01%	-0.01%	-1.39%	0.00%	-1.52%	1.52%	0.00%
Philippines Peso	0.00%	0.29%	-0.29%	0.14%	0.00%	0.15%	-0.15%	0.00%
Pound Sterling	12.54%	11.46%	1.08%	2.31%	2.45%	2.53%	-0.08%	0.05%
Qatari rial	0.00%	0.29%	-0.29%	0.01%	0.00%	0.01%	-0.01%	0.00%
Rand	0.01%	1.63%	-1.62%	-0.25%	-2.06%	-0.26%	-1.79%	-0.01%
Ringgit (Malaysian Dollar)	0.00%	0.63%	-0.63%	1.22%	0.00%	1.21%	-1.21%	-0.01%
Rupiah	0.34%	0.60%	-0.26%	0.98%	1.11%	1.01%	0.09%	-0.01%

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

Period Ending: March 31, 2019

Currency Name	Portfolio Weight	Index Weight	Excess Weight	Currency Return	Portfolio Contrib.	Index Contrib.	Active Contrib.	Currency Effect
Russian Federation Rouble	0.53%	0.95%	-0.42%	5.59%	0.00%	5.08%	-5.08%	-0.05%
Shekel	0.40%	0.36%	0.03%	2.96%	1.84%	1.57%	0.27%	0.00%
Singapore Dollar	2.60%	0.92%	1.68%	0.63%	0.72%	0.66%	0.06%	0.03%
South Korean Won	0.00%	3.60%	-3.60%	-1.70%	0.00%	-1.80%	1.80%	0.06%
Swedish Krona	1.74%	1.82%	-0.08%	-4.41%	-4.74%	-4.98%	0.24%	0.03%
Swiss Franc	5.68%	5.88%	-0.20%	-1.01%	-1.19%	-1.16%	-0.03%	0.00%
Turkish Lira	0.00%	0.16%	-0.16%	-5.84%	0.00%	-6.01%	6.01%	0.01%
US Dollar	4.89%	0.00%	4.89%	0.00%	0.06%	-0.25%	0.31%	0.00%
Yen	15.41%	16.59%	-1.18%	-0.88%	-0.93%	-0.94%	0.02%	0.00%
Yuan Renminbi	0.00%	7.89%	-7.89%	2.17%	0.00%	-0.17%	0.17%	0.01%
	<b>100.00%</b>	<b>100.00%</b>	<b>0.00%</b>		<b>-0.48%</b>	<b>-0.25%</b>	<b>-0.23%</b>	<b>-0.23%</b>

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

Period Ending: March 31, 2019

Total International Equity vs. MSCI ACWI ex USA  
Current Quarter

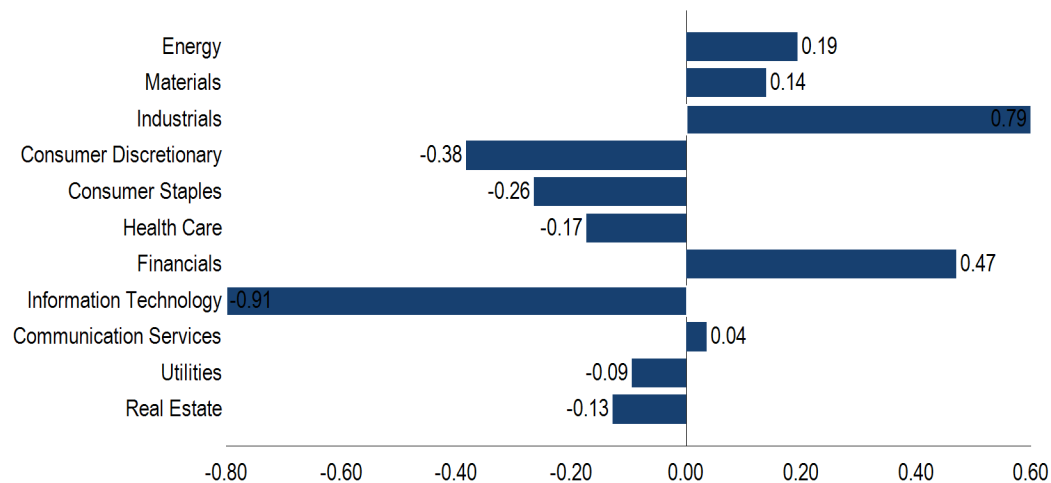
Region	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Americas	13.28%	9.66%	3.62%	15.69%	13.09%	2.60%	0.01%	0.40%	0.41%	0.26%	0.67%
Europe	58.85%	43.61%	15.25%	9.55%	10.96%	-1.41%	0.19%	-1.02%	-0.84%	0.23%	-0.61%
Asia/Pacific	27.44%	44.07%	-16.63%	7.68%	9.70%	-2.01%	0.14%	-0.37%	-0.24%	-0.32%	-0.56%
Other	0.43%	2.67%	-2.24%	3.76%	4.38%	-0.62%	0.13%	-0.02%	0.11%	-0.16%	-0.05%
<b>Total</b>				<b>9.89%</b>	<b>10.44%</b>	<b>-0.55%</b>	<b>0.46%</b>	<b>-1.02%</b>	<b>-0.55%</b>	<b>0.00%</b>	<b>-0.55%</b>

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	13.28%	9.66%	3.62%	15.69%	13.09%	2.60%	0.01%	0.40%	0.41%	0.26%	0.67%
Europe	58.85%	43.61%	15.25%	9.55%	10.96%	-1.41%	0.19%	-1.02%	-0.84%	0.23%	-0.61%
Asia/Pacific	27.44%	44.07%	-16.63%	7.68%	9.70%	-2.01%	0.14%	-0.37%	-0.24%	-0.32%	-0.56%
Other	0.43%	2.67%	-2.24%	3.76%	4.38%	-0.62%	0.13%	-0.02%	0.11%	-0.16%	-0.05%
<b>Total</b>				<b>9.89%</b>	<b>10.44%</b>	<b>-0.55%</b>	<b>0.46%</b>	<b>-1.02%</b>	<b>-0.55%</b>	<b>0.00%</b>	<b>-0.55%</b>

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

Period Ending: March 31, 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	4.79%	7.32%	-2.52%	15.35%	12.49%	2.86%	-0.02%	0.07%	0.05%	0.15%	0.20%
Materials	6.20%	7.67%	-1.46%	12.93%	11.41%	1.52%	0.00%	0.08%	0.08%	0.08%	0.16%
Industrials	19.17%	11.72%	7.44%	14.98%	10.33%	4.65%	0.03%	0.83%	0.86%	-0.01%	0.85%
Consumer Discretionary	7.83%	10.57%	-2.74%	6.77%	11.23%	-4.46%	-0.02%	-0.30%	-0.32%	0.08%	-0.24%
Consumer Staples	10.15%	9.84%	0.31%	8.58%	11.20%	-2.63%	-0.08%	-0.21%	-0.30%	0.08%	-0.22%
Health Care	8.78%	8.39%	0.40%	8.95%	11.37%	-2.42%	0.03%	-0.21%	-0.18%	0.08%	-0.11%
Financials	22.34%	22.18%	0.16%	9.60%	7.78%	1.82%	-0.19%	0.41%	0.22%	-0.59%	-0.37%
Information Technology	6.24%	8.02%	-1.78%	-1.95%	14.57%	-16.53%	-0.12%	-0.74%	-0.86%	0.33%	-0.53%
Communication Services	4.18%	7.60%	-3.42%	4.91%	7.02%	-2.11%	0.15%	-0.10%	0.04%	-0.26%	-0.22%
Utilities	6.67%	3.39%	3.28%	7.54%	8.36%	-0.82%	-0.04%	-0.01%	-0.05%	-0.07%	-0.12%
Real Estate	2.84%	3.32%	-0.48%	13.39%	14.82%	-1.43%	-0.05%	-0.03%	-0.08%	0.15%	0.07%
Unclassified	0.82%	0.00%	0.82%	6.11%	--	0.00%	-0.01%	0.00%	-0.01%	0.00%	-0.01%

Total International Equity  
Performance Attribution Summary (Net of Fees)

Period Ending: March 31, 2019

Portfolio: Total International Equity  
Benchmark: MSCI ACWI ex USA

Portfolio Total Return 10.69%

	Equity Only
Portfolio	9.89%
Benchmark	<u>10.44%</u>
Return From Active Mgmt	-0.55%

Local Returns	
Portfolio	10.34%
Benchmark	<u>10.67%</u>
Active Equity Return	-0.33%

Country Selection	-0.43%
Stock Selection	0.10%

Currency Contributions	
Portfolio	-0.48%
Benchmark	<u>-0.25%</u>
Active Currency Contributions	-0.23%

Chart uses return-based methodology



## Total Fund Watch List (Net of Fees)

Period Ending: March 31, 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: March 31, 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	No Issues	✓	✓	✗	✗	✗	--
Invesco Core Real Estate	Real Estate	No Issues	✗	✗	✗	--	--	--
Grosvenor	Hedge Funds	No Issues	✗	✓	✗	--	--	--
Invesco Commodities	Commodities	No Issues	✓	✓	✗	--	--	--

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

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

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

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

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

Rule 6 - Fund experiences non-performance related issues including personnel turnover, changes in investment philosophy or drift, excessive asset growth, change in ownership and any other reason that raises concern.

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

# Total Fund Manager Rankings Page

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
<b>Total Fund</b>	<b>4,765,698,992</b>	<b>100.0</b>	<b>6.7</b>	<b>2.6</b>	<b>2.1</b>	<b>7.3</b>	<b>4.5</b>	<b>9.6</b>	<b>-3.6</b>	<b>14.6</b>	<b>6.7</b>	<b>-2.5</b>	<b>3.5</b>
Policy Index			5.5	1.8	1.5	6.4	4.2	9.0	-3.2	14.0	6.5	-1.7	2.6
InvestorForce Public DB > \$1B Net Rank			68	45	84	99	99	62	41	67	80	86	88
SSgA S&P 500 Flagship Fund	192,931,424	4.0	13.6	5.9	9.5	13.5	10.9	15.9	-4.4	21.8	12.0	1.4	13.7
S&P 500			13.6	5.9	9.5	13.5	10.9	15.9	-4.4	21.8	12.0	1.4	13.7
eV US Large Cap Equity Net Rank			41	34	34	31	28	28	38	45	32	40	24
T. Rowe Price Large Cap Growth	298,541,376	6.3	15.0	--	--	--	--	--	--	--	--	--	--
Russell 1000 Growth			16.1	6.6	12.7	16.5	13.5	17.5	-1.5	30.2	7.1	5.7	13.0
eV US Large Cap Growth Equity Net Rank			72	--	--	--	--	--	--	--	--	--	--
Aronson Johnson Ortiz	268,138,380	5.6	10.4	-1.1	0.4	8.9	6.0	13.6	-11.4	16.7	9.5	-0.1	9.6
Russell 1000 Value			11.9	4.4	5.7	10.5	7.7	14.5	-8.3	13.7	17.3	-3.8	13.5
eV US Large Cap Value Equity Net Rank			78	79	81	80	80	63	72	50	83	16	78
PIMCO StocksPLUS Small Fund	70,405,116	1.5	16.7	-5.3	2.8	--	--	--	--	--	--	--	--
Russell 2000			14.6	-5.3	2.0	12.9	7.1	15.4	-11.0	14.6	21.3	-4.4	4.9
eV US Small Cap Core Equity Net Rank			17	48	38	--	--	--	--	--	--	--	--
Artisan International Growth	252,023,657	5.3	11.0	1.5	-0.5	7.4	3.4	--	-10.2	31.5	-9.0	-2.2	-0.1
MSCI EAFE			10.0	-2.5	-3.7	7.3	2.3	9.0	-13.8	25.0	1.0	-0.8	-4.9
eV EAFE All Cap Equity Net Rank			31	4	13	42	39	--	13	13	99	80	10
Research Affiliates International Equity	243,726,011	5.1	8.3	-3.8	-6.5	8.2	1.7	--	-15.5	25.7	9.3	-5.9	-5.8
MSCI EAFE			10.0	-2.5	-3.7	7.3	2.3	9.0	-13.8	25.0	1.0	-0.8	-4.9
eV EAFE All Cap Equity Net Rank			81	53	73	28	75	--	57	51	1	95	75
Mondrian International Small Cap	146,476,452	3.1	9.9	-6.5	-4.6	6.7	3.5	--	-14.6	32.4	0.1	2.7	-4.9
S&P Developed Ex-U.S. SmallCap			10.4	-8.1	-9.2	7.2	4.1	12.3	-18.4	32.4	3.8	5.9	-3.4
eV EAFE Small Cap Equity Net Rank			56	20	11	60	67	--	11	74	50	94	67
Mondrian Emerging Markets	158,081,420	3.3	10.0	4.7	-5.3	7.2	1.7	8.3	-13.8	27.2	9.0	-16.3	0.0
MSCI Emerging Markets			9.9	0.6	-7.4	10.7	3.7	8.9	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Equity Net Rank			54	6	19	85	89	91	24	93	44	80	42
Baillie Gifford Emerging Markets	178,102,146	3.7	14.7	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets			9.9	0.6	-7.4	10.7	3.7	8.9	-14.6	37.3	11.2	-14.9	-2.2
eV Emg Mkts Equity Net Rank			6	--	--	--	--	--	--	--	--	--	--
Western Asset Investment Grade Credit	220,232,924	4.6	5.6	6.6	5.5	4.3	--	--	-2.3	6.8	7.0	-0.5	--
BBgBarc US Credit TR			4.9	5.8	4.9	3.5	3.6	6.2	-2.1	6.2	5.6	-0.8	7.5
eV All US Fixed Inc Net Rank			20	7	10	28	--	--	81	23	26	70	--

Total Fund  
Manager Rankings Page

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
RBC Access Capital	47,334,249	1.0	2.0	--	--	--	--	--	--	--	--	--	--
BBgBarc US Securitized Index			2.2	4.2	4.5	1.8	2.6	3.5	1.0	2.5	1.8	1.5	5.9
eV US Securitized Fixed Inc Net Rank			67	--	--	--	--	--	--	--	--	--	--
Loomis Sayles High Yield	317,478,393	6.7	6.5	4.3	4.8	7.5	--	--	-2.3	7.1	14.4	-5.2	--
BBgBarc US High Yield TR			7.3	4.9	5.9	8.6	4.7	11.3	-2.1	7.5	17.1	-4.5	2.5
eV US High Yield Fixed Inc Net Rank			59	44	56	48	--	--	52	47	42	79	--
Eaton Vance Senior Loan Fund	232,915,548	4.9	3.5	1.8	2.6	5.4	--	--	0.7	4.0	9.9	-0.8	--
S&P/LSTA Leveraged Loan Index			4.0	2.3	3.0	5.7	3.6	8.0	0.4	4.1	10.2	-0.7	1.6
eV US Float-Rate Bank Loan Fixed Inc Net Rank			82	77	47	23	--	--	16	40	33	85	--
Eaton Vance Institutional Senior Loan Plus Fund	21,534,989	0.5	5.0	1.8	2.3	--	--	--	-1.3	3.6	--	--	--
S&P/LSTA Leveraged Loan Index			4.0	2.3	3.0	5.7	3.6	8.0	0.4	4.1	10.2	-0.7	1.6
eV US Float-Rate Bank Loan Fixed Inc Net Rank			3	77	79	--	--	--	97	64	--	--	--
SSgA TIPS	179,093,188	3.8	3.2	1.9	2.7	1.7	1.9	3.3	-1.3	3.0	4.6	-1.5	3.6
BBgBarc US TIPS TR			3.2	1.9	2.7	1.7	1.9	3.4	-1.3	3.0	4.7	-1.4	3.6
eV US TIPS / Inflation Fixed Inc Net Rank			62	37	23	44	27	51	42	58	50	36	38
Brandywine Global Sovereign	251,556,986	5.3	2.8	0.8	-5.8	1.5	--	--	-4.7	11.9	3.8	-9.8	--
FTSE WGBI TR			1.7	1.8	-1.6	1.0	0.6	2.2	-0.8	7.5	1.6	-3.6	-0.5
eV All Global Fixed Inc Net Rank			68	90	97	80	--	--	87	6	63	95	--
PIMCO Emerging Local Bond Ins	222,213,527	4.7	4.5	3.4	-8.1	3.5	-0.9	--	-7.7	15.4	10.7	-16.3	-5.4
JP Morgan GBI EM Global Diversified TR USD			2.9	3.2	-7.6	3.3	-0.8	4.3	-6.2	15.2	9.9	-14.9	-5.7
eV Emg Mkt Fixed Inc Unhedged Net Rank			64	74	84	80	83	--	74	13	46	89	83

# Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2019

Account	Fee Schedule	Market Value As of 3/31/2019	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
SSgA S&P 500 Flagship Fund	0.03% of First 150.0 Mil, 0.02% Thereafter	\$192,931,424	\$52,728	0.03%
T. Rowe Price Large Cap Growth	0.35% of Assets	\$298,541,376	\$1,044,895	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	\$268,138,380	\$786,277	0.29%
PIMCO StocksPLUS Small Fund	0.50% of First 150.0 Mil, 0.45% Thereafter	\$70,405,116	\$352,026	0.50%
Artisan International Growth	0.30% of Assets	\$252,023,657	\$756,071	0.30%
Research Affiliates International Equity	0.12% of Assets	\$243,726,011	\$292,471	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	\$146,476,452	\$978,859	0.67%
Mondrian Emerging Markets	1.00% of First 25.0 Mil, 0.75% of Next 50.0 Mil, 0.60% Thereafter	\$158,081,420	\$1,123,489	0.71%
Baillie Gifford Emerging Markets	0.85% of Assets	\$178,102,146	\$1,513,868	0.85%
Western Asset Investment Grade Credit	0.30% of First 100.0 Mil, 0.15% Thereafter	\$220,232,924	\$480,349	0.22%
RBC Access Capital	0.30% of First 100.0 Mil, 0.20% Thereafter	\$47,334,249	\$142,003	0.30%
Loomis Sayles High Yield	0.50% of Assets	\$317,478,393	\$1,587,392	0.50%
Eaton Vance Senior Loan Fund	0.55% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.40% Thereafter	\$232,915,548	\$1,056,662	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: March 31, 2019

Account	Fee Schedule	Market Value As of 3/31/2019	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Eaton Vance Institutional Senior Loan Plus Fund	0.40% of Assets	\$21,534,989	\$86,140	0.40%
SSgA TIPS	0.04% of Assets	\$179,093,188	\$71,637	0.04%
Brandywine Global Sovereign	0.36% of Assets	\$251,556,986	\$905,605	0.36%
PIMCO Emerging Local Bond Ins	0.50% of First 100.0 Mil, 0.45% Thereafter	\$222,213,527	\$1,049,961	0.47%
Invesco Core Real Estate	0.90% of First 75.0 Mil, 0.80% Thereafter	\$178,212,782	\$1,500,702	0.84%
Invesco US Value-Add Fund V	No Fee	\$4,061,858	--	--
IFM Infrastructure	0.97% of Assets	\$147,926,795	\$1,434,890	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	\$167,032,871	\$1,339,697	0.80%
Invesco Commodities	0.30% of Assets	\$129,651,002	\$388,953	0.30%
Parametric Overlay	0.15% of First 25.0 Mil, 0.10% of Next 75.0 Mil, 0.04% Thereafter	\$64,216,806	\$76,717	0.12%
<b>Investment Management Fee</b>		<b>\$3,991,887,900</b>	<b>\$17,021,391</b>	<b>0.43%</b>

*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.*

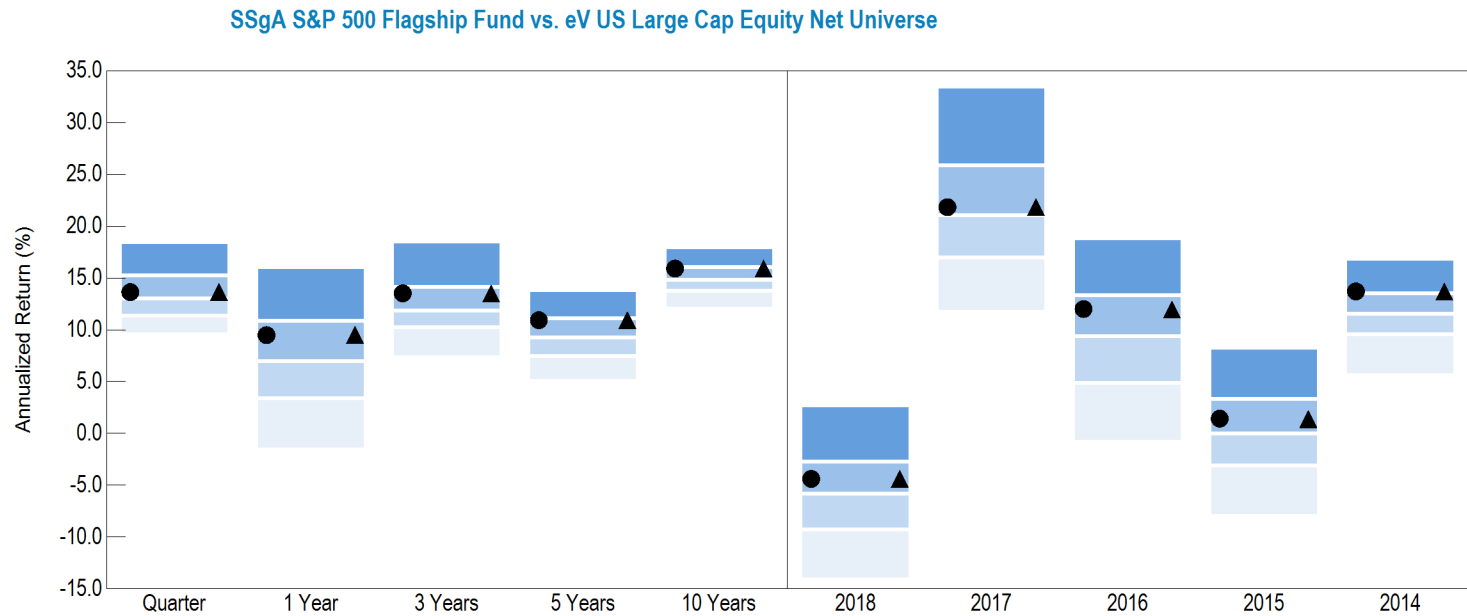
## Domestic Equity Managers

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# SSgA S&P 500 Flagship Fund

## Manager Performance Comparisons (Net of Fees)

Period Ending: March 31, 2019

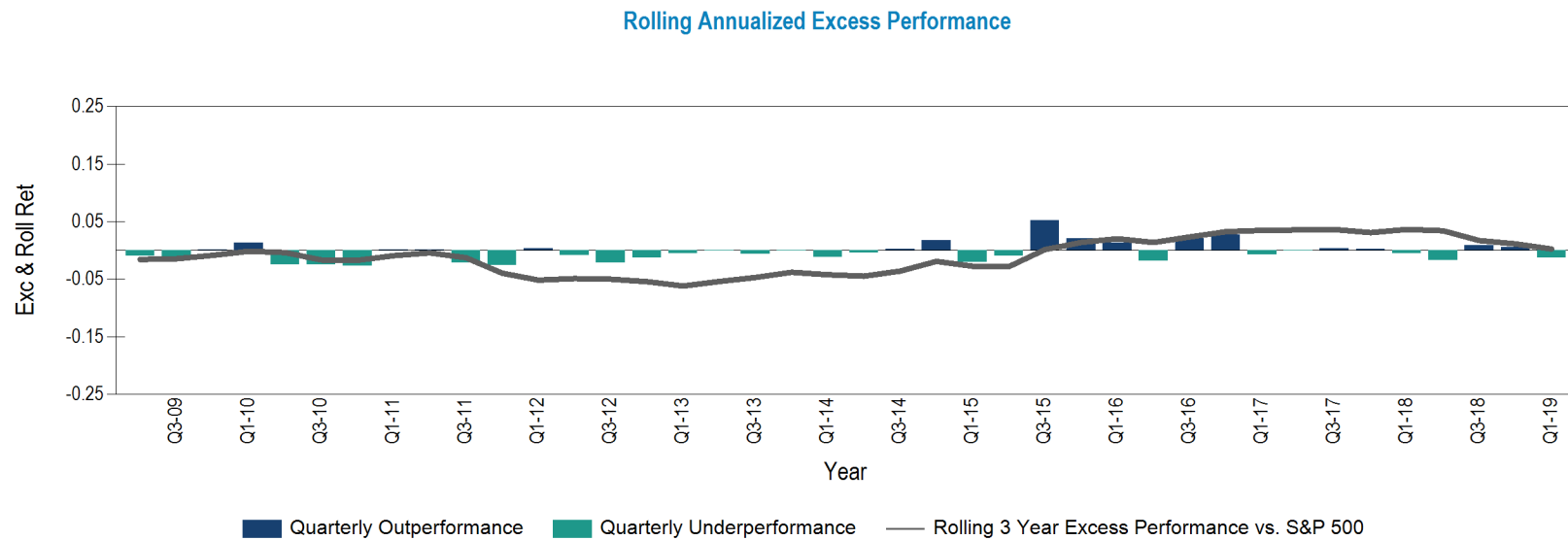
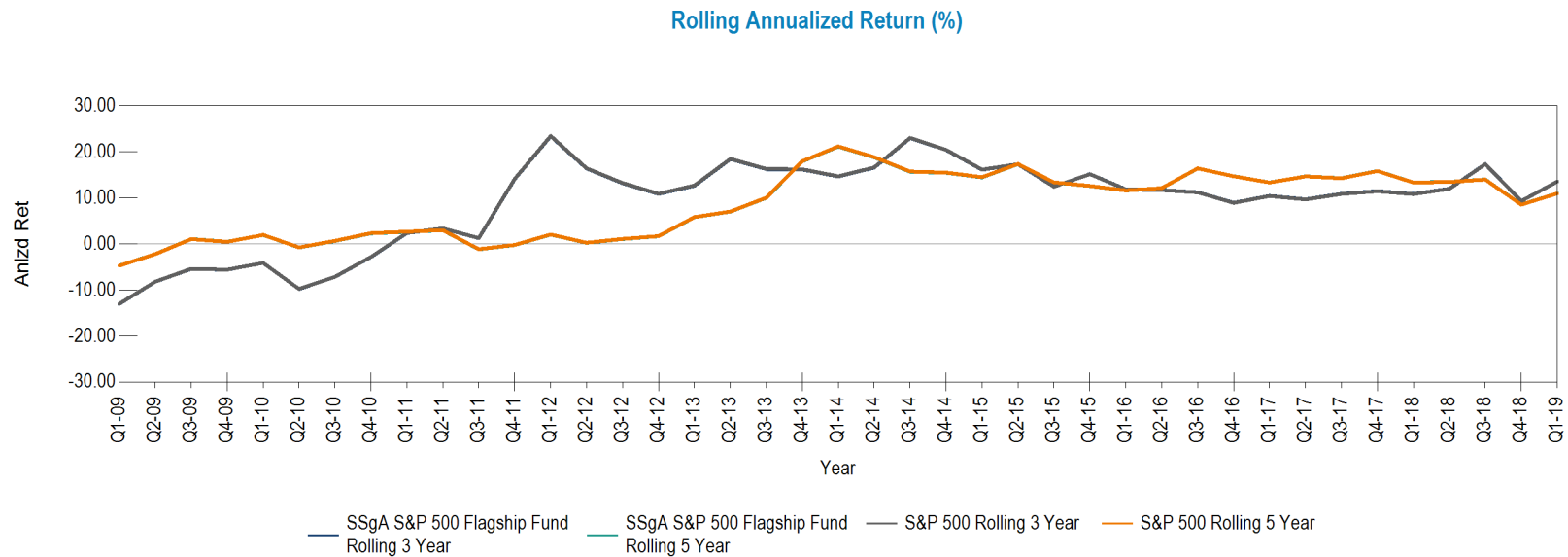


	Return (Rank)									
5th Percentile	18.4	16.0	18.5	13.8	17.9	2.7	33.5	18.8	8.3	16.8
25th Percentile	15.3	10.9	14.2	11.1	16.1	-2.7	25.9	13.4	3.4	13.5
Median	13.0	7.0	11.9	9.3	14.9	-5.8	21.1	9.4	0.0	11.6
75th Percentile	11.4	3.4	10.3	7.5	13.8	-9.2	17.0	4.9	-3.1	9.6
95th Percentile	9.6	-1.5	7.4	5.1	12.1	-14.0	11.8	-0.8	-7.9	5.7
# of Portfolios	626	613	594	569	458	607	601	584	511	518
● SSgA S&P 500 Flagship Fund	13.6 (41)	9.5 (34)	13.5 (31)	10.9 (28)	15.9 (28)	-4.4 (38)	21.8 (45)	12.0 (32)	1.4 (40)	13.7 (24)
▲ S&P 500	13.6 (41)	9.5 (34)	13.5 (31)	10.9 (28)	15.9 (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: March 31, 2019

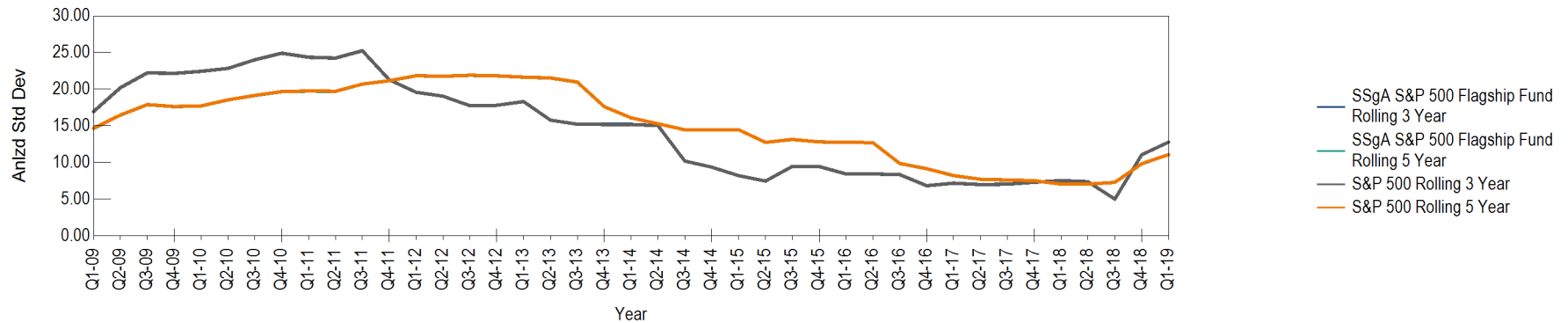


# SSgA S&P 500 Flagship Fund

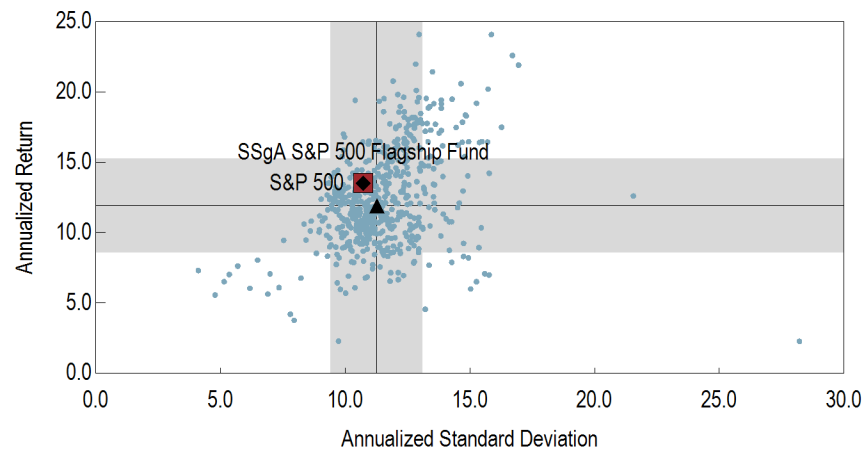
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

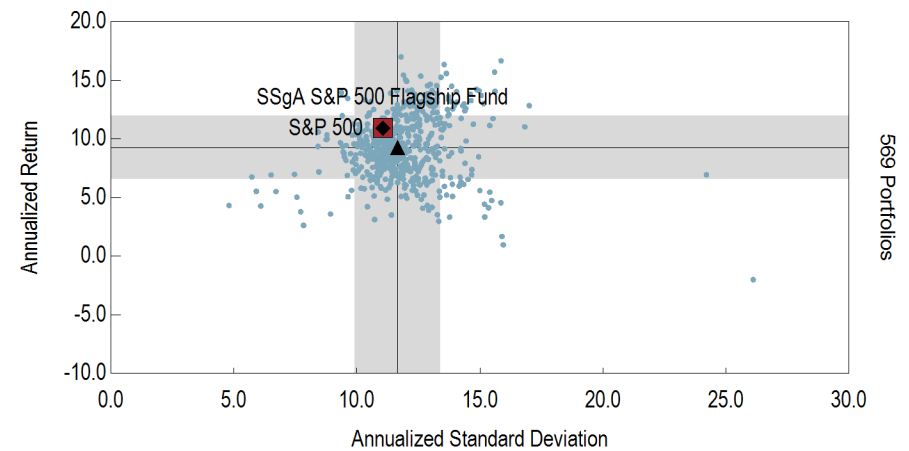
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA S&P 500 Flagship Fund	13.5%	10.7%	1.1
S&P 500	13.5%	10.7%	1.1
eV US Large Cap Equity Net Median	11.9%	11.3%	1.0

5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA S&P 500 Flagship Fund	10.9%	11.0%	0.9
S&P 500	10.9%	11.1%	0.9
eV US Large Cap Equity Net Median	9.3%	11.7%	0.8

# SSgA S&P 500 Flagship Fund

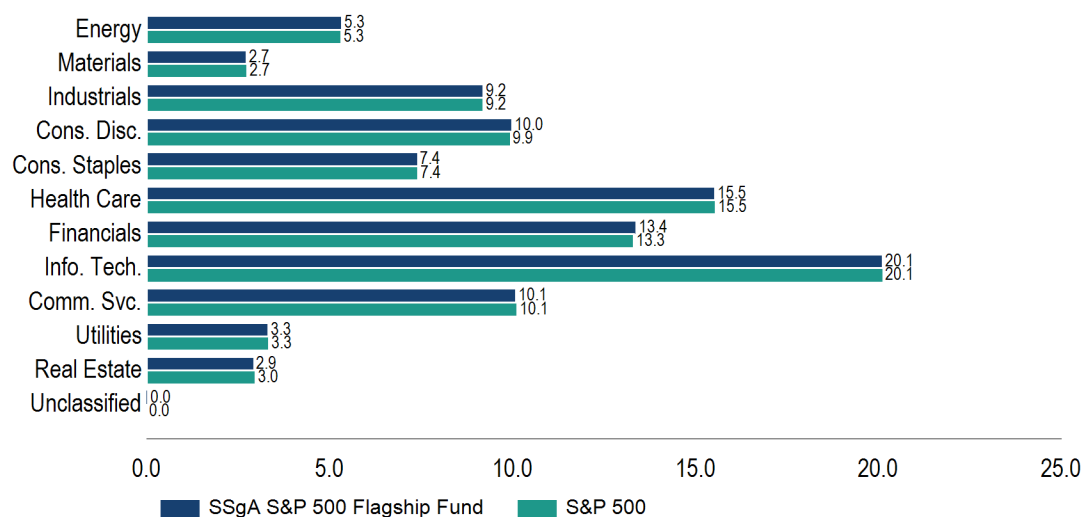
## Manager Portfolio Overview (Net of Fees)

Period Ending: March 31, 2019

### Characteristics

	Portfolio	S&P 500
Number of Holdings	505	505
Weighted Avg. Market Cap. (\$B)	212.38	211.45
Median Market Cap. (\$B)	21.17	21.17
Price To Earnings	20.25	20.23
Price To Book	3.49	3.48
Price To Sales	2.09	2.09
Return on Equity (%)	26.30	26.28
Yield (%)	2.00	2.00
Beta	1.00	1.00

### Sector Allocation (%) vs S&P 500



### Largest Holdings

	End Weight	Return
MICROSOFT	3.83	16.62
APPLE	3.60	20.94
AMAZON.COM	3.11	18.56
FACEBOOK CLASS A	1.68	27.16
BERKSHIRE HATHAWAY 'B'	1.65	-1.61
JOHNSON & JOHNSON	1.58	9.04
ALPHABET 'C'	1.53	13.30
ALPHABET A	1.49	12.63
EXXON MOBIL	1.45	19.81
JP MORGAN CHASE & CO.	1.41	4.55

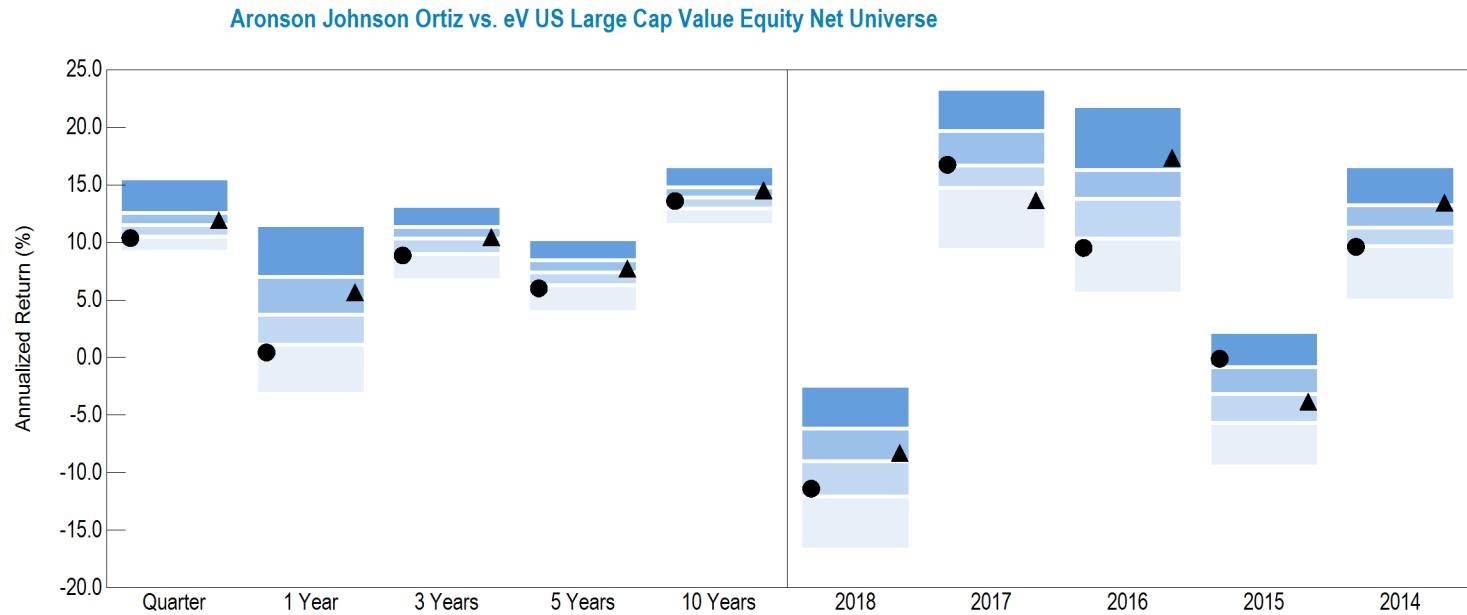
### Top Contributors

	Avg Wgt	Return	Contribution
APPLE	3.34	20.94	0.70
MICROSOFT	3.67	16.62	0.61
AMAZON.COM	2.97	18.56	0.55
FACEBOOK CLASS A	1.64	27.16	0.44
EXXON MOBIL	1.39	19.81	0.28
CISCO SYSTEMS	0.96	25.60	0.25
MASTERCARD	0.84	25.02	0.21
NETFLIX	0.63	33.21	0.21
VISA 'A'	1.09	18.59	0.20
ALPHABET 'C'	1.50	13.30	0.20

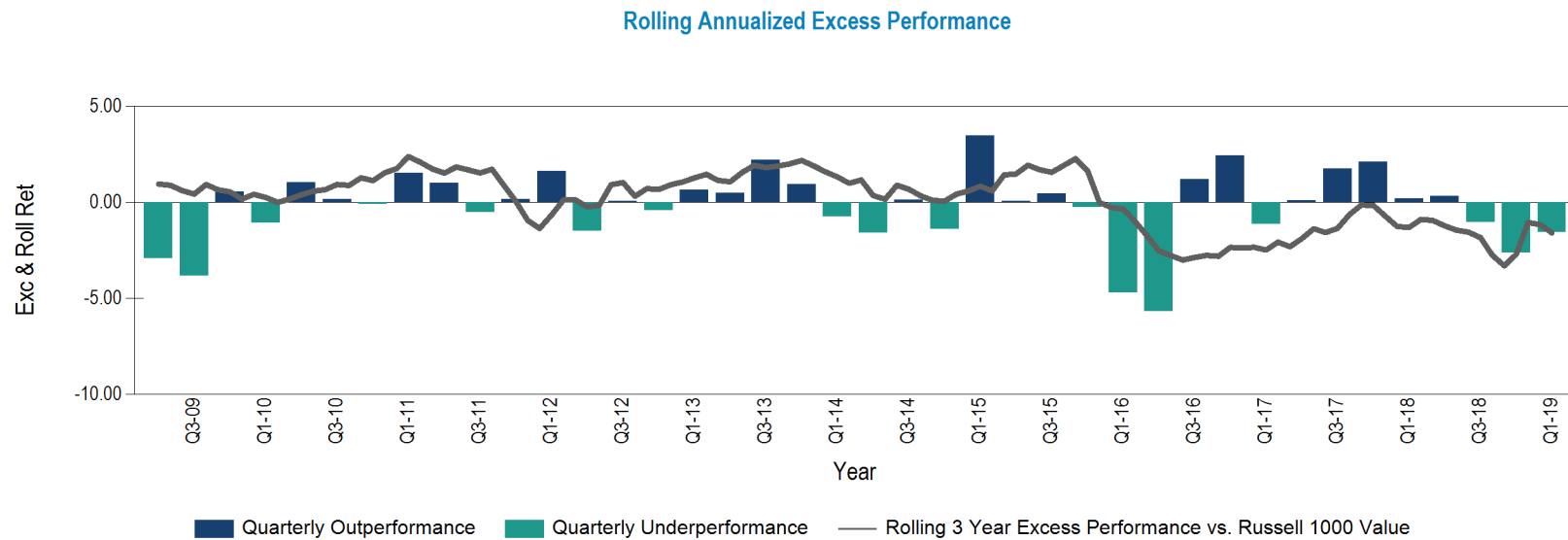
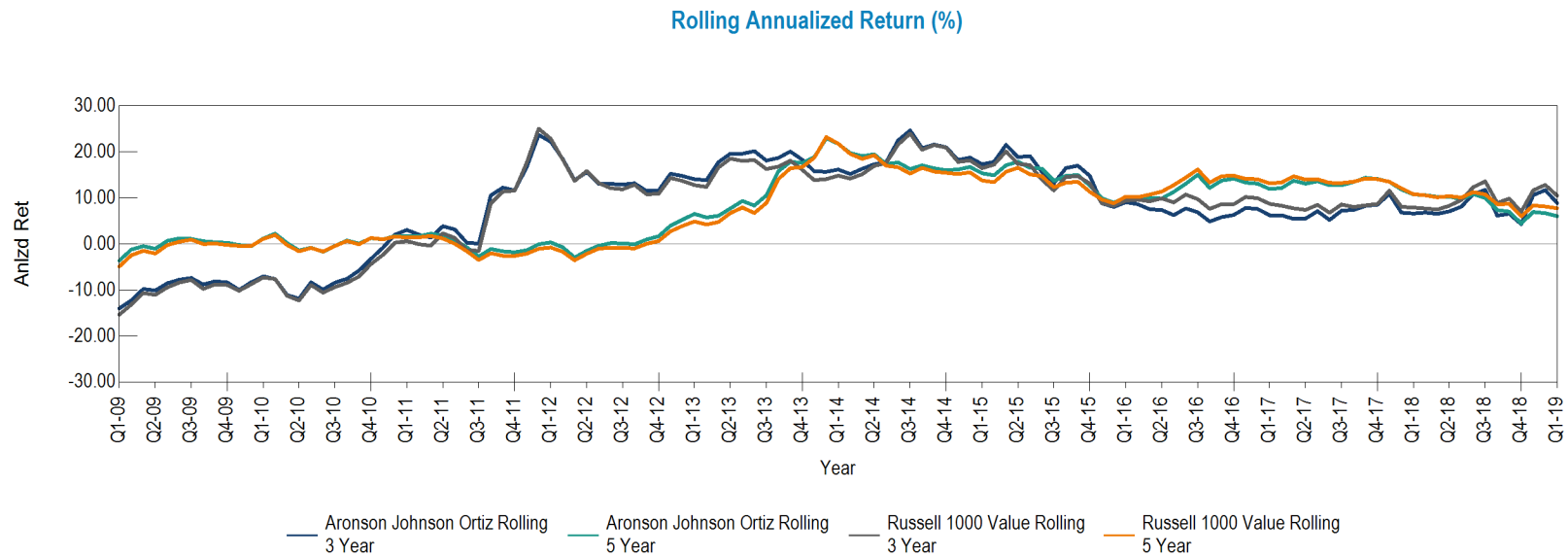
### Bottom Contributors

	Avg Wgt	Return	Contribution
ABBVIE	0.57	-11.48	-0.07
CVS HEALTH	0.37	-17.06	-0.06
BIOGEN	0.29	-21.45	-0.06
CIGNA	0.32	-15.30	-0.05
CME GROUP	0.29	-12.13	-0.04
BERKSHIRE HATHAWAY 'B'	1.77	-1.61	-0.03
BRISTOL MYERS SQUIBB	0.38	-7.38	-0.03
KRAFT HEINZ	0.11	-23.19	-0.03
PFIZER	1.13	-1.88	-0.02
WALGREENS BOOTS ALLIANCE	0.26	-6.84	-0.02

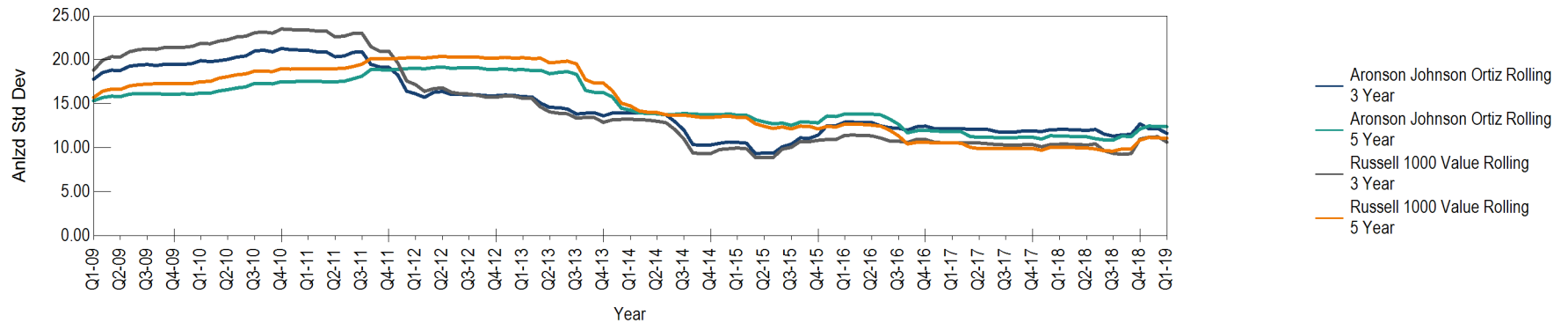
Unclassified sector allocation includes cash allocations.



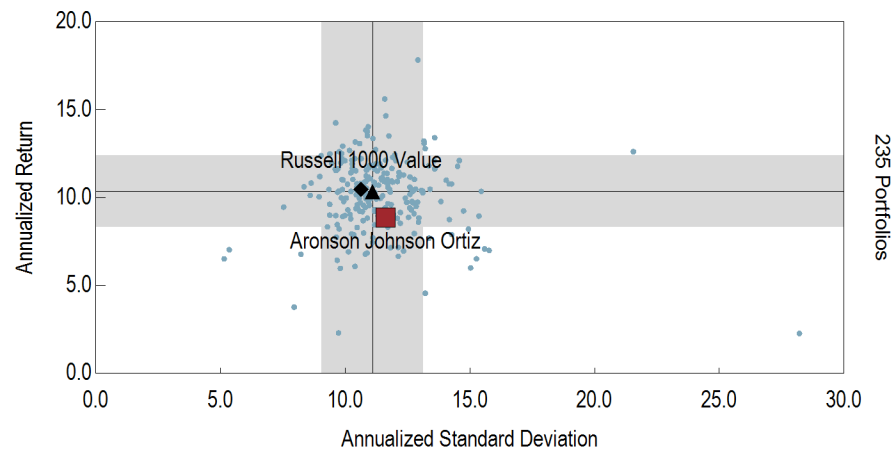
	Return (Rank)									
5th Percentile	15.5	11.5	13.2	10.2	16.6	-2.5	23.3	21.8	2.2	16.6
25th Percentile	12.6	7.0	11.4	8.5	14.8	-6.1	19.7	16.3	-0.8	13.3
Median	11.5	3.7	10.3	7.4	13.9	-9.0	16.7	13.8	-3.1	11.3
75th Percentile	10.5	1.1	9.0	6.3	13.0	-12.0	14.8	10.4	-5.7	9.7
95th Percentile	9.2	-3.1	6.8	3.9	11.5	-16.7	9.4	5.6	-9.4	5.0
# of Portfolios	244	239	235	226	183	239	231	225	195	197
● Aronson Johnson Ortiz	10.4 (78)	0.4 (81)	8.9 (80)	6.0 (80)	13.6 (63)	-11.4 (72)	16.7 (50)	9.5 (83)	-0.1 (16)	9.6 (78)
▲ Russell 1000 Value	11.9 (41)	5.7 (31)	10.5 (47)	7.7 (43)	14.5 (36)	-8.3 (43)	13.7 (86)	17.3 (19)	-3.8 (59)	13.5 (24)



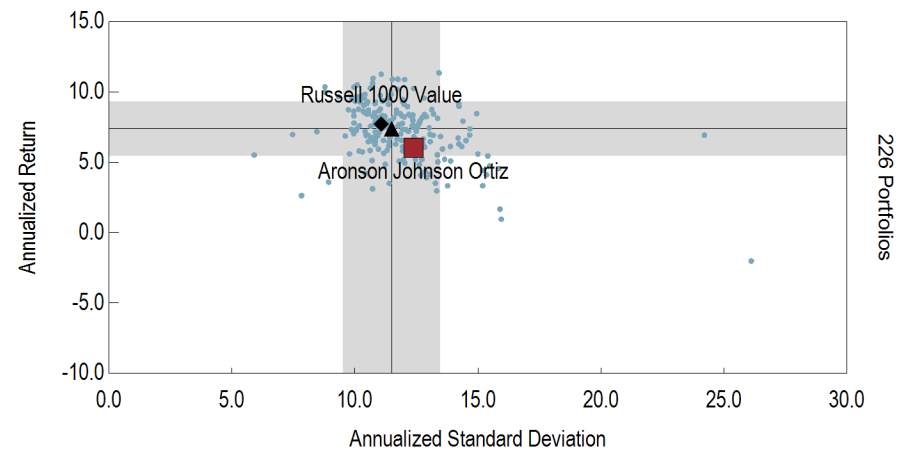
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	8.9%	11.6%	0.7
Russell 1000 Value	10.5%	10.6%	0.9
eV US Large Cap Value Equity Net Median	10.3%	11.1%	0.8

5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	6.0%	12.4%	0.4
Russell 1000 Value	7.7%	11.1%	0.6
eV US Large Cap Value Equity Net Median	7.4%	11.5%	0.6

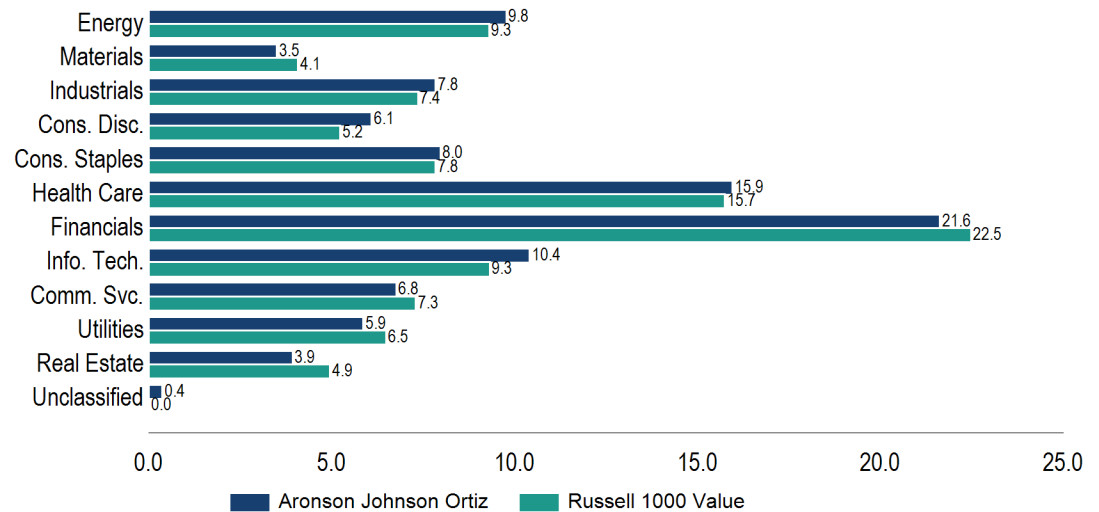
# Aronson Johnson Ortiz Manager Portfolio Overview (Net of Fees)

Period Ending: March 31, 2019

## Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	142	722
Weighted Avg. Market Cap. (\$B)	81.81	119.91
Median Market Cap. (\$B)	7.44	8.86
Price To Earnings	15.08	17.33
Price To Book	2.45	2.21
Price To Sales	1.05	1.53
Return on Equity (%)	22.12	14.19
Yield (%)	2.18	2.63
Beta	1.07	1.00

## Sector Allocation (%) vs Russell 1000 Value



## Largest Holdings

	End Weight	Return
JOHNSON & JOHNSON	3.12	9.04
VERIZON COMMUNICATIONS	3.02	6.29
PFIZER	2.98	-1.88
CHEVRON	2.91	14.37
MERCK & COMPANY	2.65	9.58
BANK OF AMERICA	2.26	12.55
CITIGROUP	1.85	20.36
CONOCOPHILLIPS	1.72	7.53
EXELON	1.64	11.99
YUM! BRANDS	1.44	9.07

## Top Contributors

	Avg Wgt	Return	Contribution
INTUIT	1.29	33.10	0.43
CITIGROUP	1.76	20.36	0.36
CBRE GROUP CLASS A	1.35	23.50	0.32
S&P GLOBAL	1.25	24.25	0.30
BANK OF AMERICA	2.41	12.55	0.30
TYSON FOODS 'A'	0.96	30.81	0.30
CADENCE DESIGN SYS.	0.62	46.07	0.29
ALLY FINANCIAL	1.21	22.11	0.27
PHILIP MORRIS INTL.	0.74	34.11	0.25
MERCK & COMPANY	2.51	9.58	0.24

## Bottom Contributors

	Avg Wgt	Return	Contribution
NU SKIN ENTERPRISES 'A'	0.51	-21.51	-0.11
HUMANA	1.18	-6.95	-0.08
USANA HEALTH SCIENCES	0.28	-28.76	-0.08
BRISTOL MYERS SQUIBB	0.83	-7.38	-0.06
PFIZER	3.17	-1.88	-0.06
HP	1.40	-4.24	-0.06
ENERSYS	0.37	-15.82	-0.06
UNITED CONTINENTAL HOLDINGS	1.14	-4.72	-0.05
HERBALIFE NUTRITION	0.42	-10.11	-0.04
KROGER	0.35	-10.11	-0.03

Unclassified sector allocation includes cash allocations.

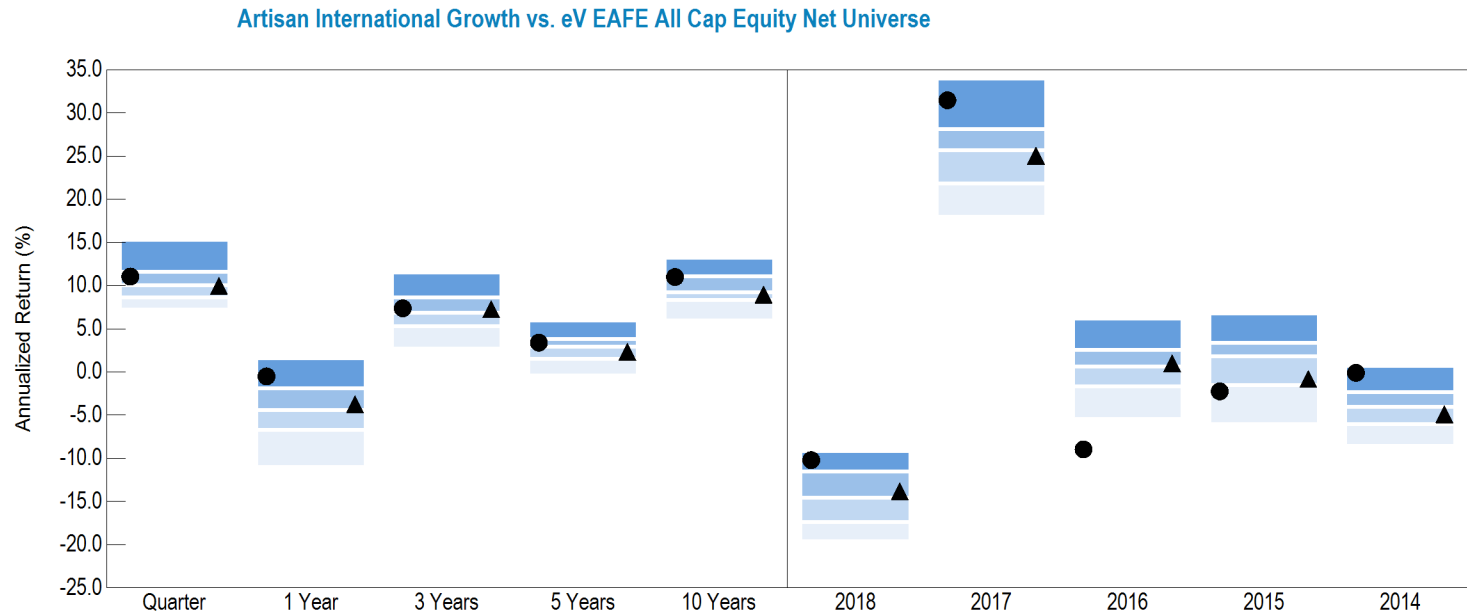
## International Equity Managers

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# Artisan International Growth Manager Performance Comparisons (Net of Fees)

Period Ending: March 31, 2019



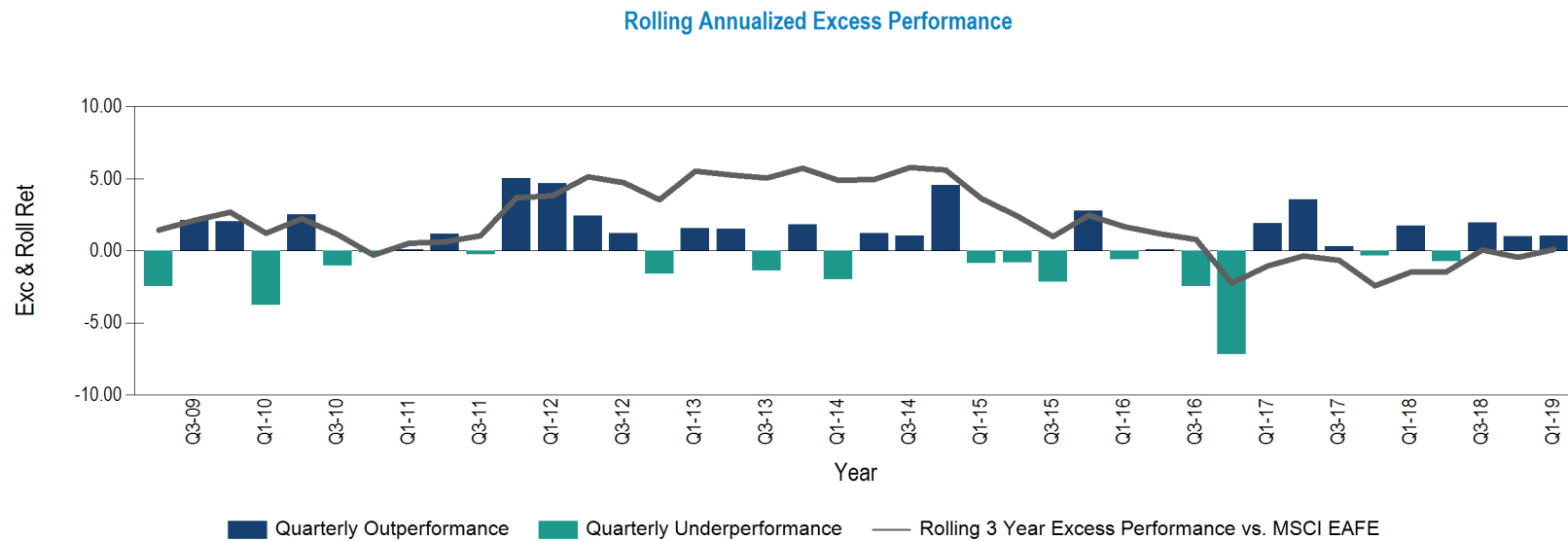
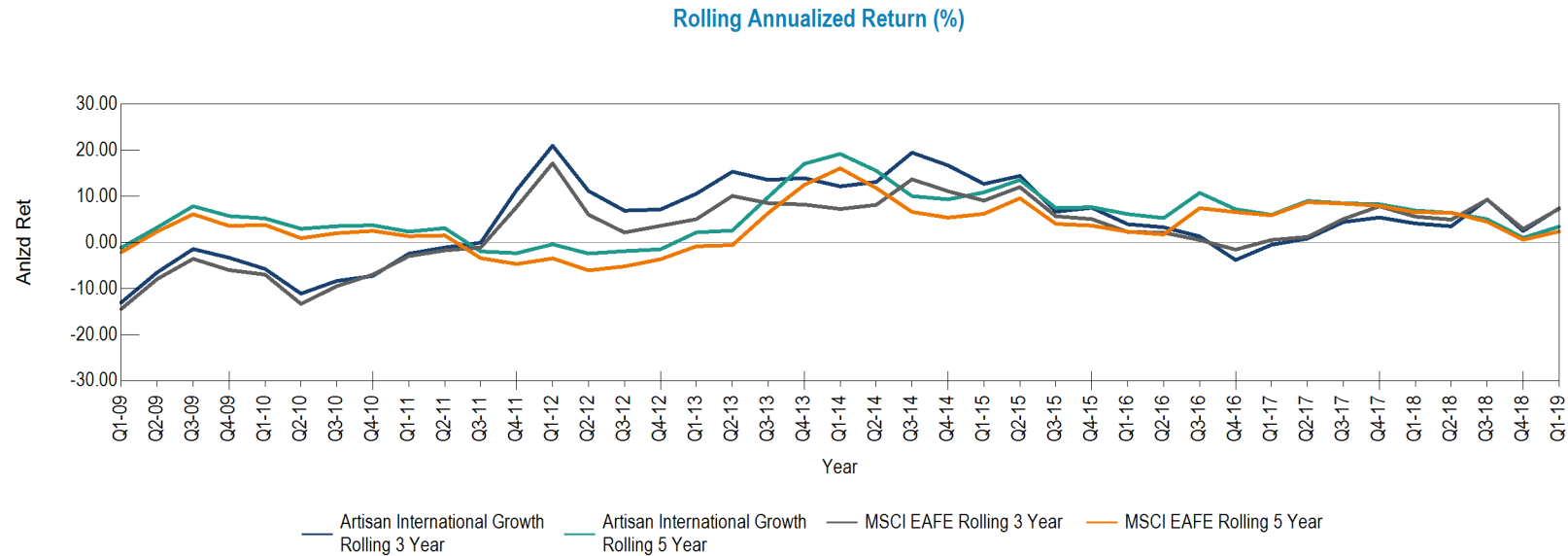
	Return (Rank)									
5th Percentile	15.3	1.6	11.5	5.9	13.2	-9.2	33.9	6.2	6.8	0.6
25th Percentile	11.6	-1.9	8.7	3.9	11.1	-11.5	28.1	2.6	3.4	-2.3
Median	10.1	-4.3	6.9	3.0	9.3	-14.6	25.7	0.6	1.8	-4.0
75th Percentile	8.7	-6.7	5.4	1.6	8.4	-17.4	21.8	-1.7	-1.5	-6.0
95th Percentile	7.3	-11.0	2.7	-0.3	6.0	-19.6	18.0	-5.4	-6.0	-8.5
# of Portfolios	72	71	70	62	46	72	70	64	58	51
● Artisan International Growth	11.0 (31)	-0.5 (13)	7.4 (42)	3.4 (39)	11.0 (30)	-10.2 (13)	31.5 (13)	-9.0 (99)	-2.2 (80)	-0.1 (10)
▲ MSCI EAFE	10.0 (54)	-3.7 (45)	7.3 (42)	2.3 (64)	9.0 (53)	-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: March 31, 2019



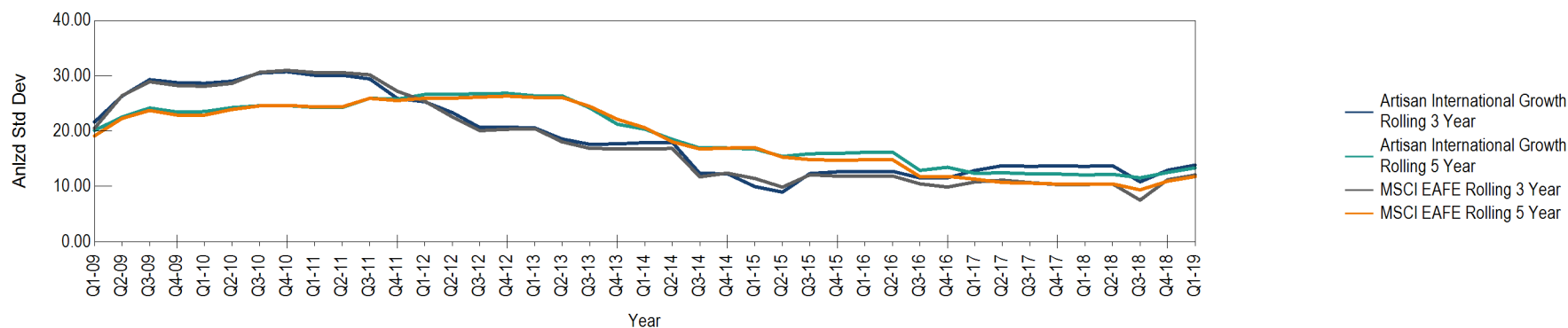
Returns prior to inception date are composite returns.

# Artisan International Growth

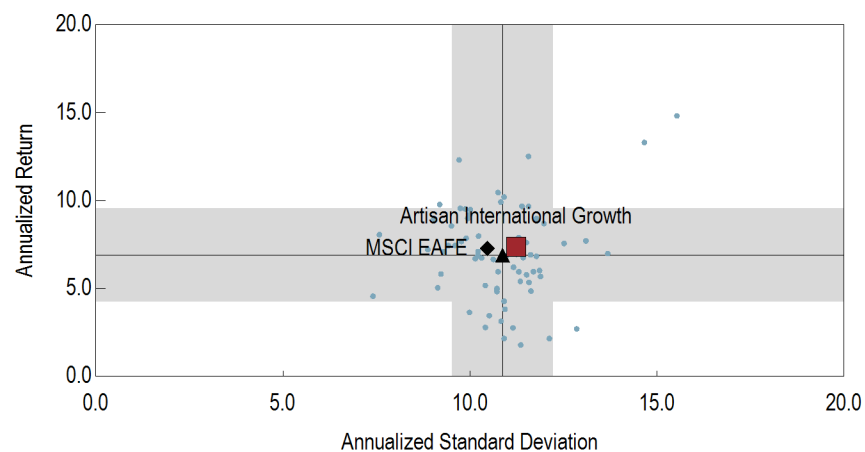
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

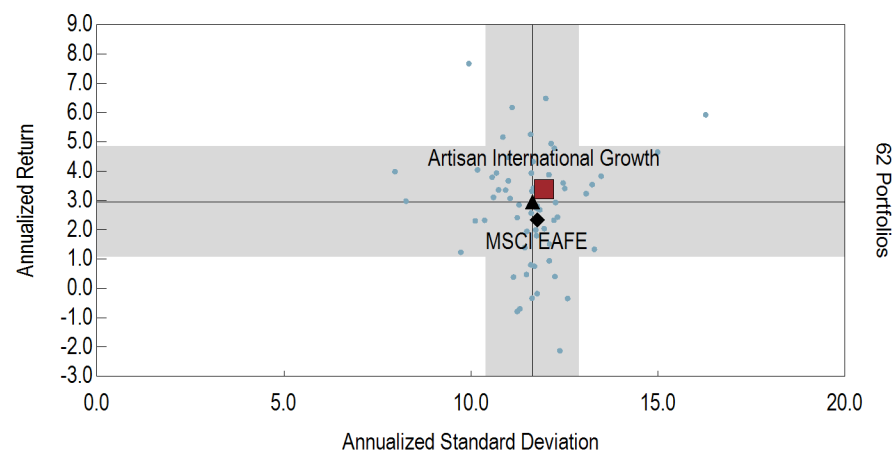
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Artisan International Growth	7.4%	11.2%	0.5
MSCI EAFE	7.3%	10.5%	0.6
eV EAFE All Cap Equity Net Median	6.9%	10.9%	0.5

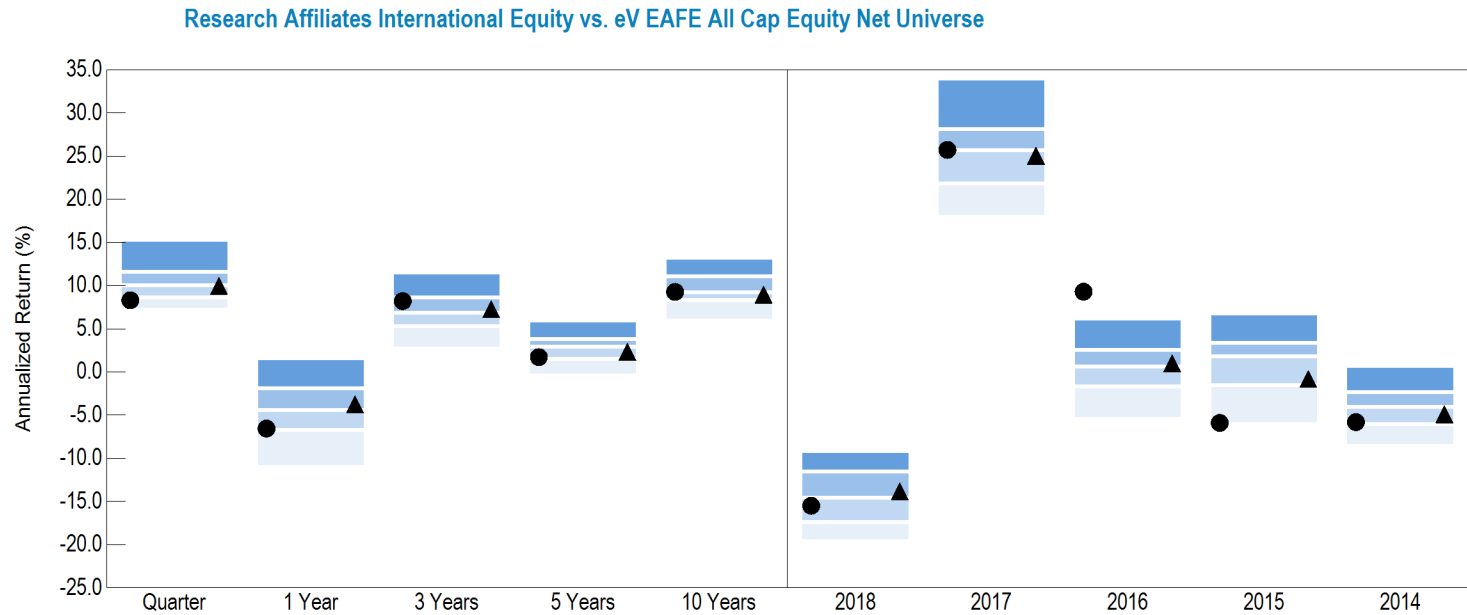
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Artisan International Growth	3.4%	11.9%	0.2
MSCI EAFE	2.3%	11.8%	0.1
eV EAFE All Cap Equity Net Median	3.0%	11.6%	0.2

Returns prior to inception date are composite returns.

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

Period Ending: March 31, 2019

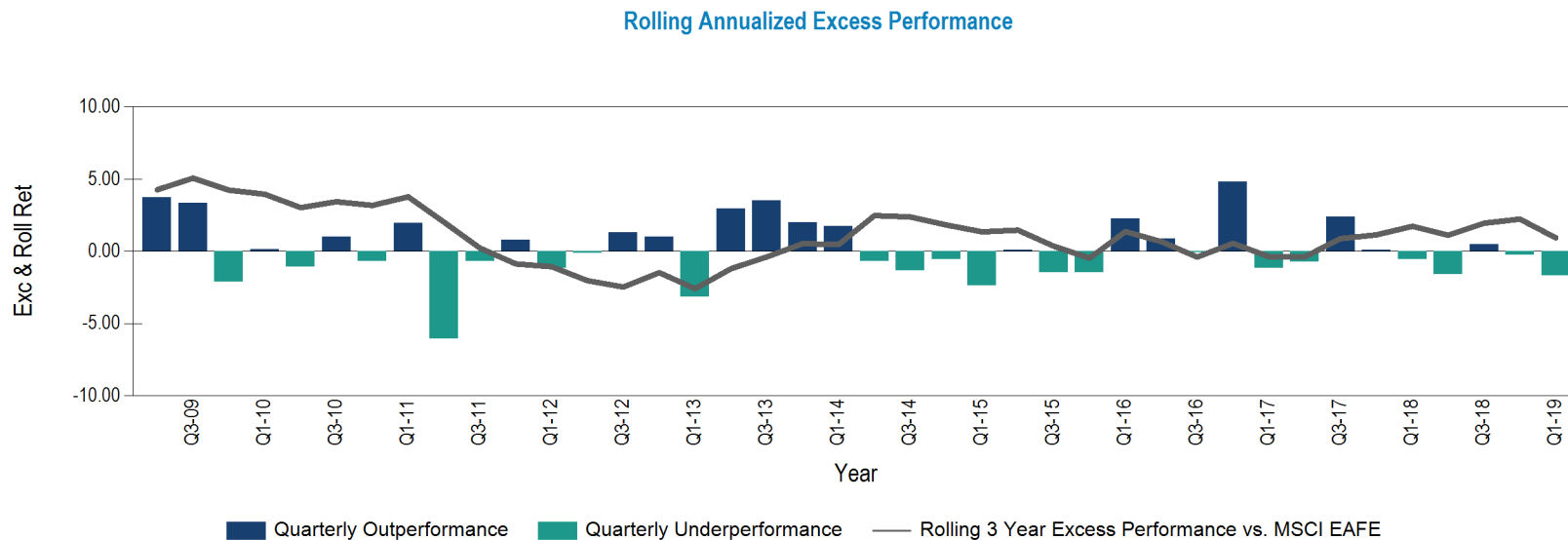
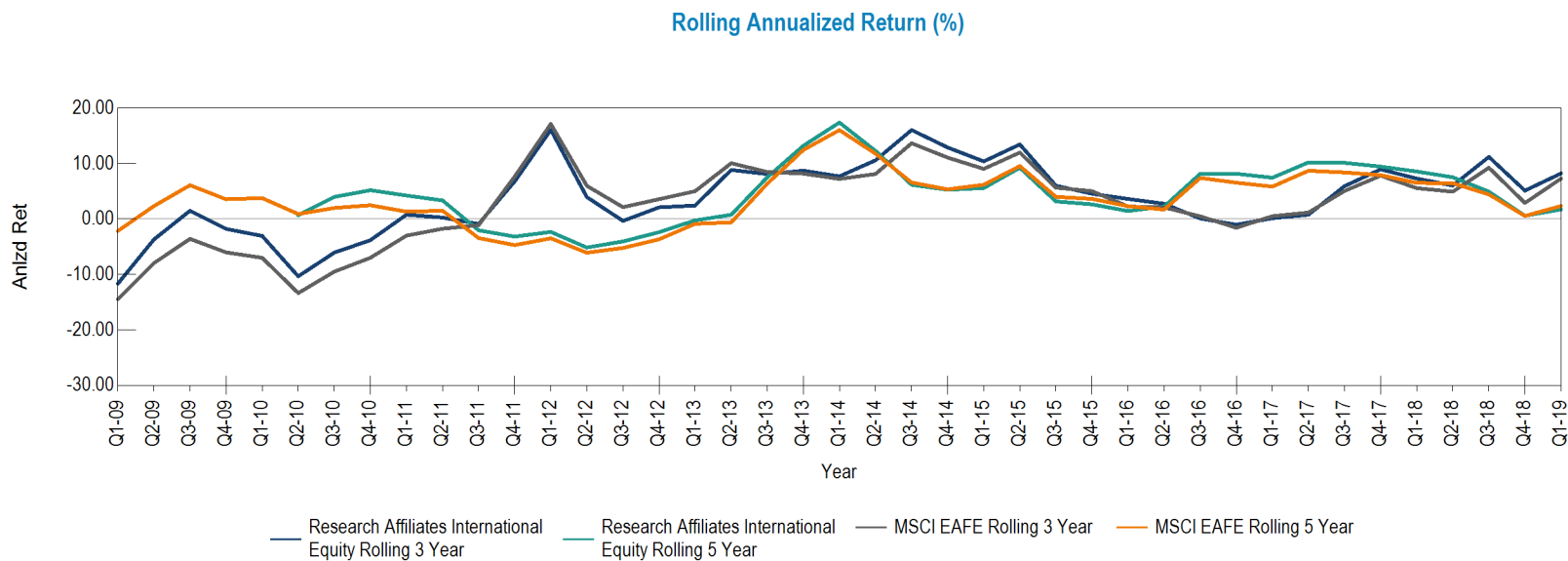


	Return (Rank)									
5th Percentile	15.3	1.6	11.5	5.9	13.2	-9.2	33.9	6.2	6.8	0.6
25th Percentile	11.6	-1.9	8.7	3.9	11.1	-11.5	28.1	2.6	3.4	-2.3
Median	10.1	-4.3	6.9	3.0	9.3	-14.6	25.7	0.6	1.8	-4.0
75th Percentile	8.7	-6.7	5.4	1.6	8.4	-17.4	21.8	-1.7	-1.5	-6.0
95th Percentile	7.3	-11.0	2.7	-0.3	6.0	-19.6	18.0	-5.4	-6.0	-8.5
# of Portfolios	72	71	70	62	46	72	70	64	58	51
● Research Affiliates International Equity	8.3 (81)	-6.5 (73)	8.2 (28)	1.7 (75)	9.3 (51)	-15.5 (57)	25.7 (51)	9.3 (1)	-5.9 (95)	-5.8 (75)
▲ MSCI EAFE	10.0 (54)	-3.7 (45)	7.3 (42)	2.3 (64)	9.0 (53)	-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: March 31, 2019

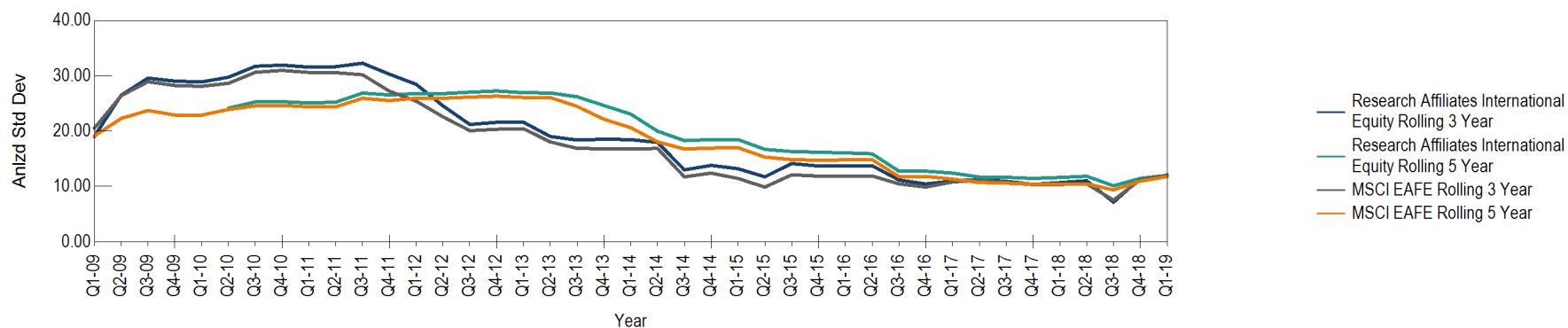


Returns prior to inception date are composite returns.

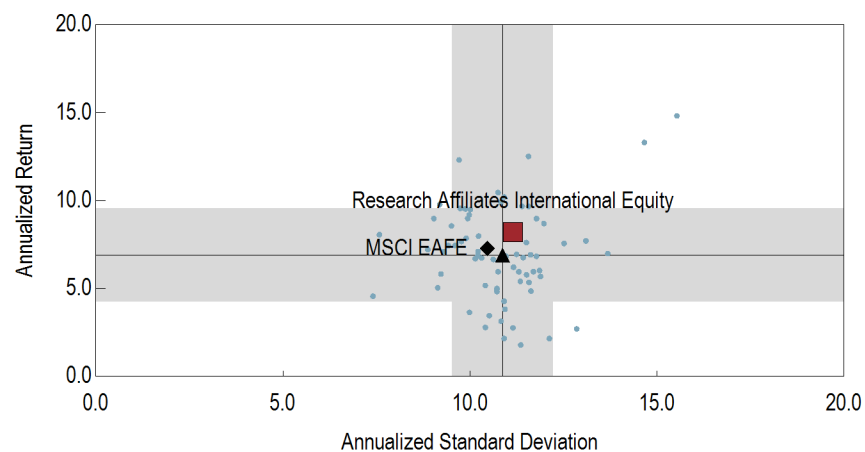
# Research Affiliates International Equity Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

Rolling Annualized Standard Deviation



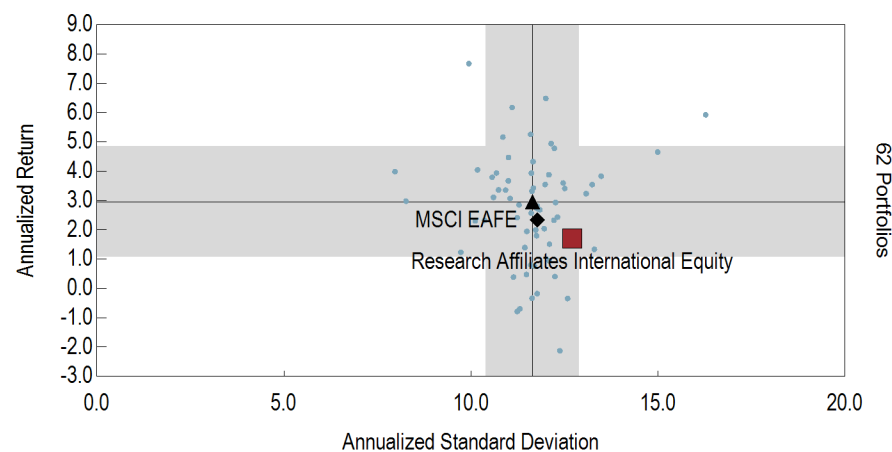
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	8.2%	11.2%	0.6
MSCI EAFE	7.3%	10.5%	0.6
eV EAFE All Cap Equity Net Median	6.9%	10.9%	0.5

5 Years



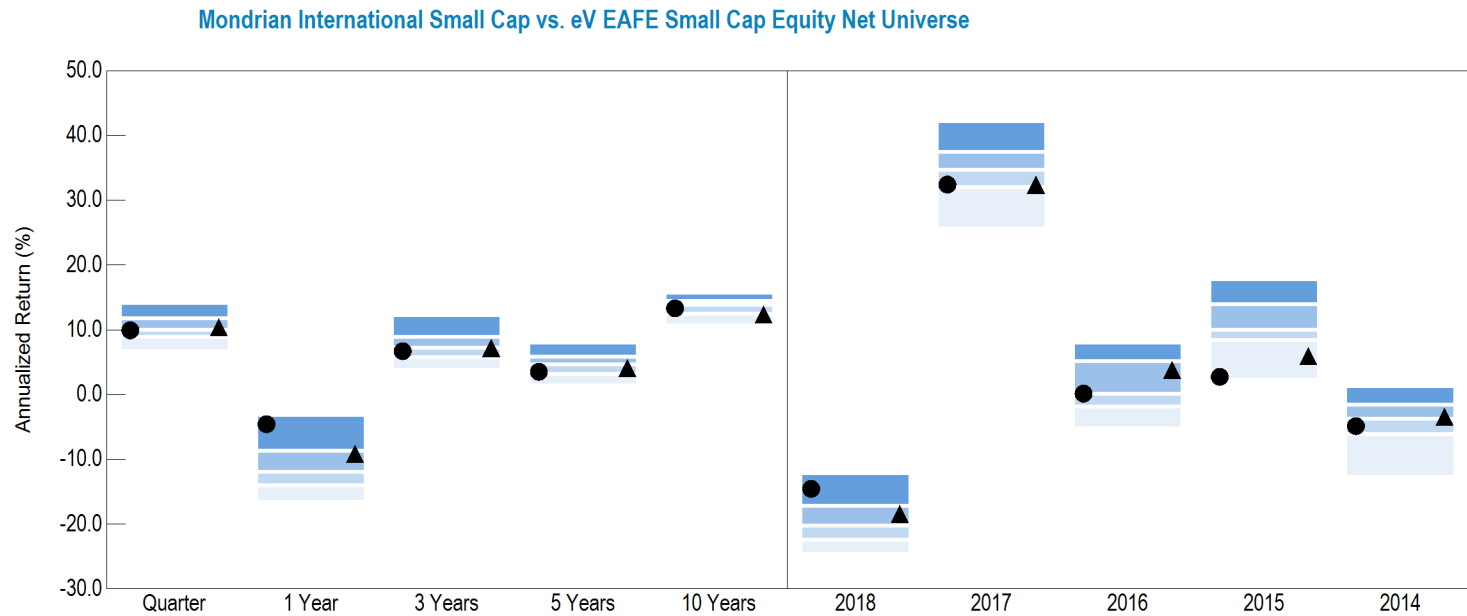
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	1.7%	12.7%	0.1
MSCI EAFE	2.3%	11.8%	0.1
eV EAFE All Cap Equity Net Median	3.0%	11.6%	0.2

Returns prior to inception date are composite returns.

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

Period Ending: March 31, 2019

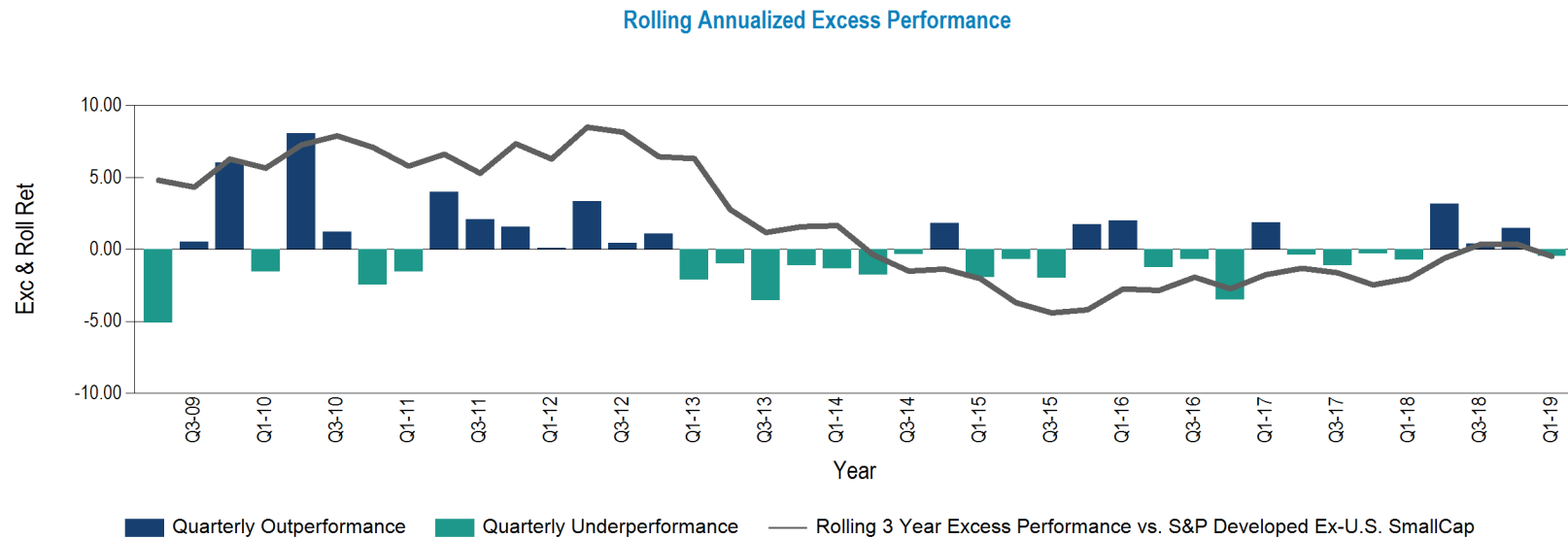
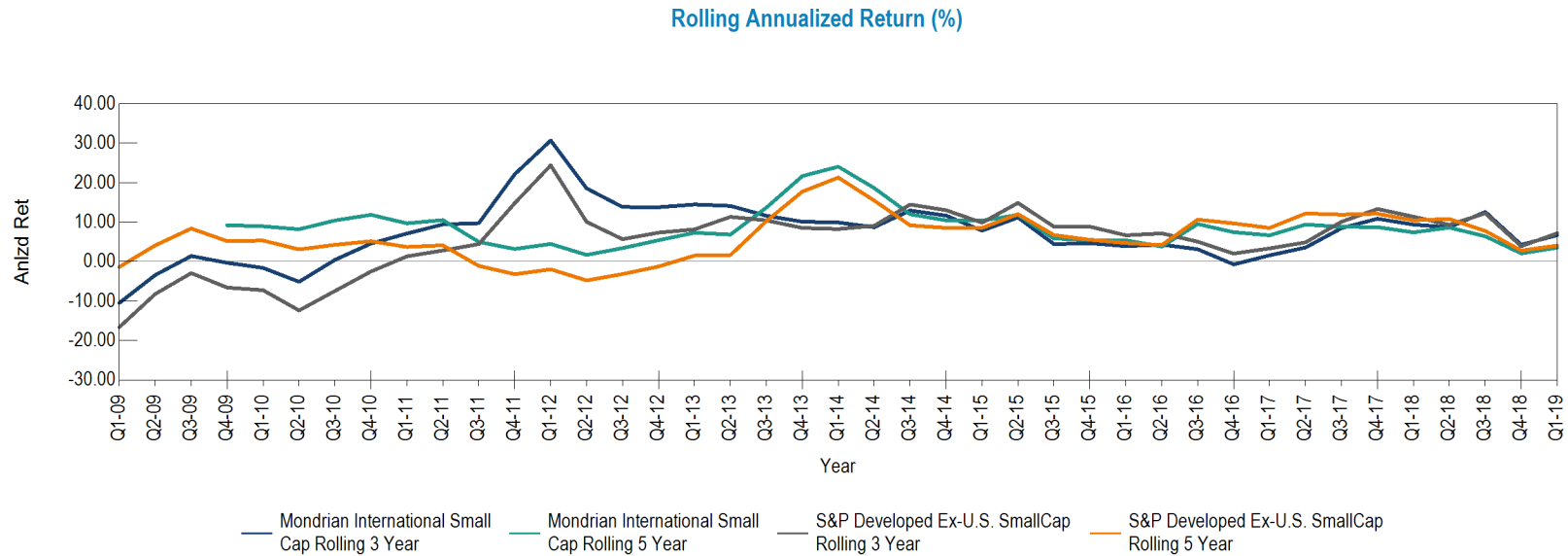


	Return (Rank)									
5th Percentile	14.1	-3.2	12.2	7.9	15.7	-12.1	42.2	7.9	17.8	1.2
25th Percentile	11.9	-8.6	9.0	5.9	14.5	-17.1	37.6	5.2	14.0	-1.5
Median	10.1	-11.9	7.3	4.7	13.9	-20.2	34.8	0.1	10.1	-3.7
75th Percentile	8.9	-14.0	5.8	3.3	12.5	-22.3	32.1	-1.8	8.5	-6.1
95th Percentile	6.8	-16.6	3.8	1.4	10.7	-24.6	25.7	-5.2	2.3	-12.7
# of Portfolios	59	59	57	47	26	57	52	41	31	32
● Mondrian International Small Cap	9.9 (56)	-4.6 (11)	6.7 (60)	3.5 (67)	13.3 (56)	-14.6 (11)	32.4 (74)	0.1 (50)	2.7 (94)	-4.9 (67)
▲ S&P Developed Ex-U.S. SmallCap	10.4 (49)	-9.2 (28)	7.2 (52)	4.1 (58)	12.3 (78)	-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: March 31, 2019



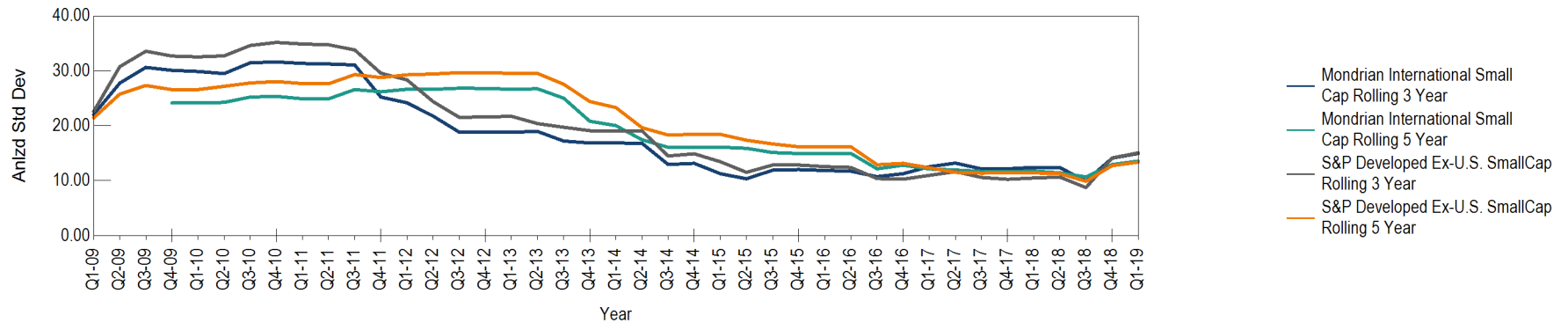
Returns prior to inception date are composite returns.



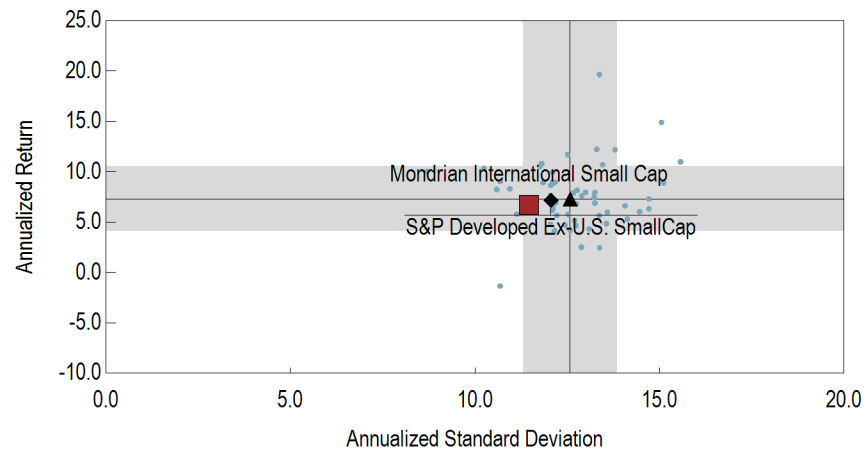
# Mondrian International Small Cap Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

Rolling Annualized Standard Deviation



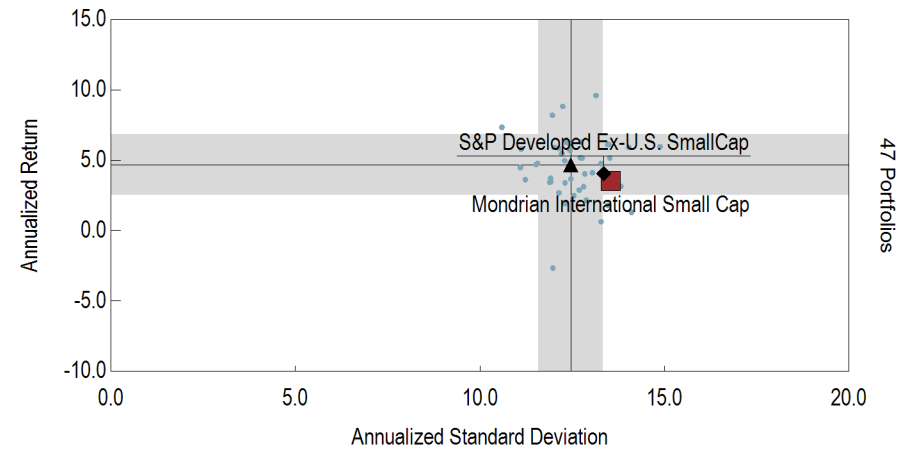
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	6.7%	11.5%	0.5
S&P Developed Ex-U.S. SmallCap	7.2%	12.1%	0.5
eV EAFE Small Cap Equity Net Median	7.3%	12.6%	0.5

5 Years



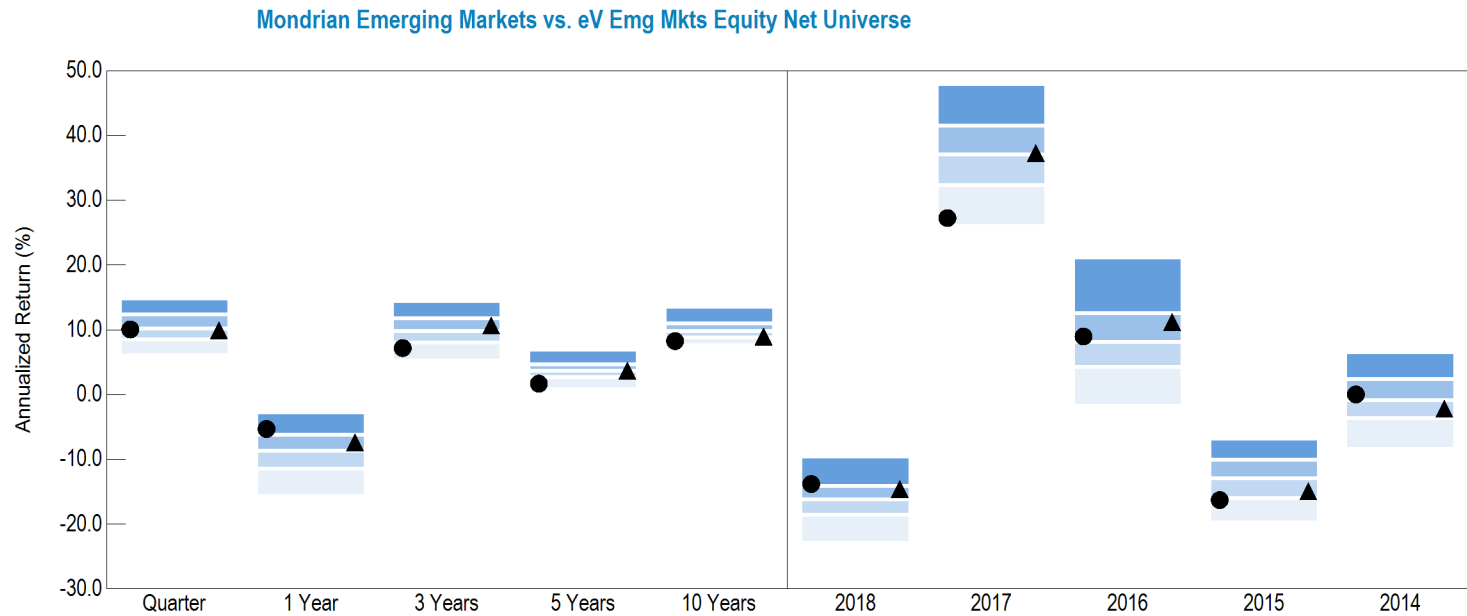
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	3.5%	13.6%	0.2
S&P Developed Ex-U.S. SmallCap	4.1%	13.4%	0.2
eV EAFE Small Cap Equity Net Median	4.7%	12.5%	0.3

Returns prior to inception date are composite returns.

# Mondrian Emerging Markets Manager Performance Comparisons (Net of Fees)

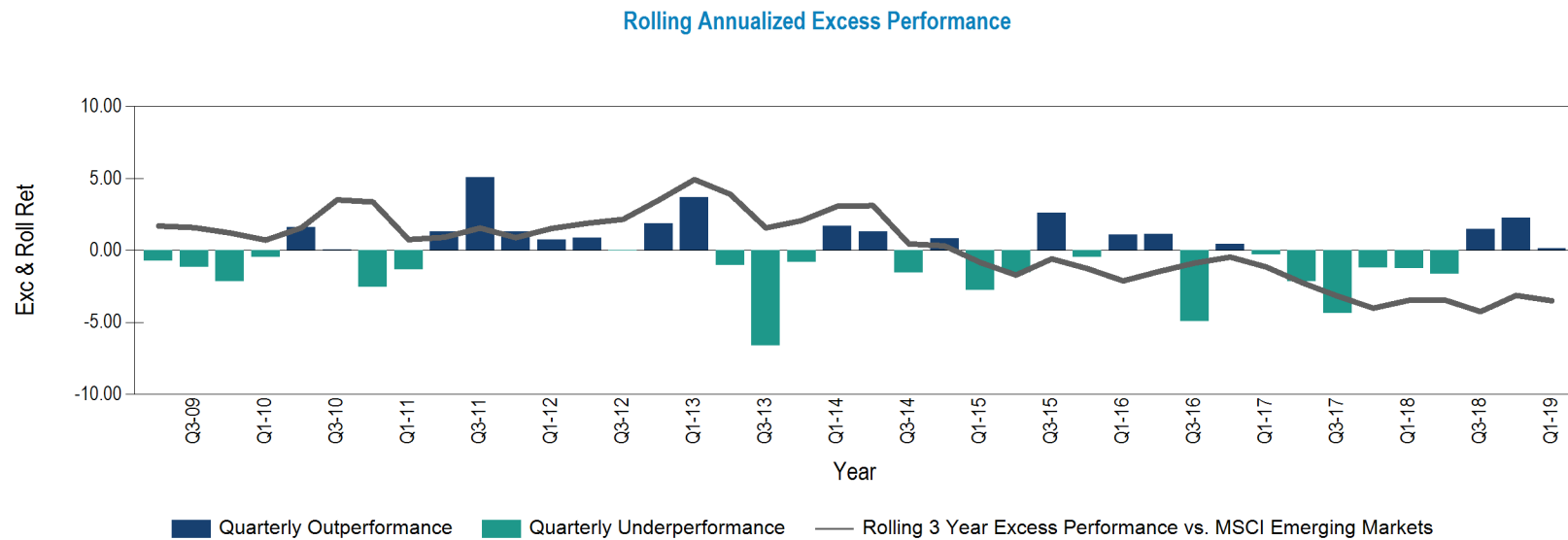
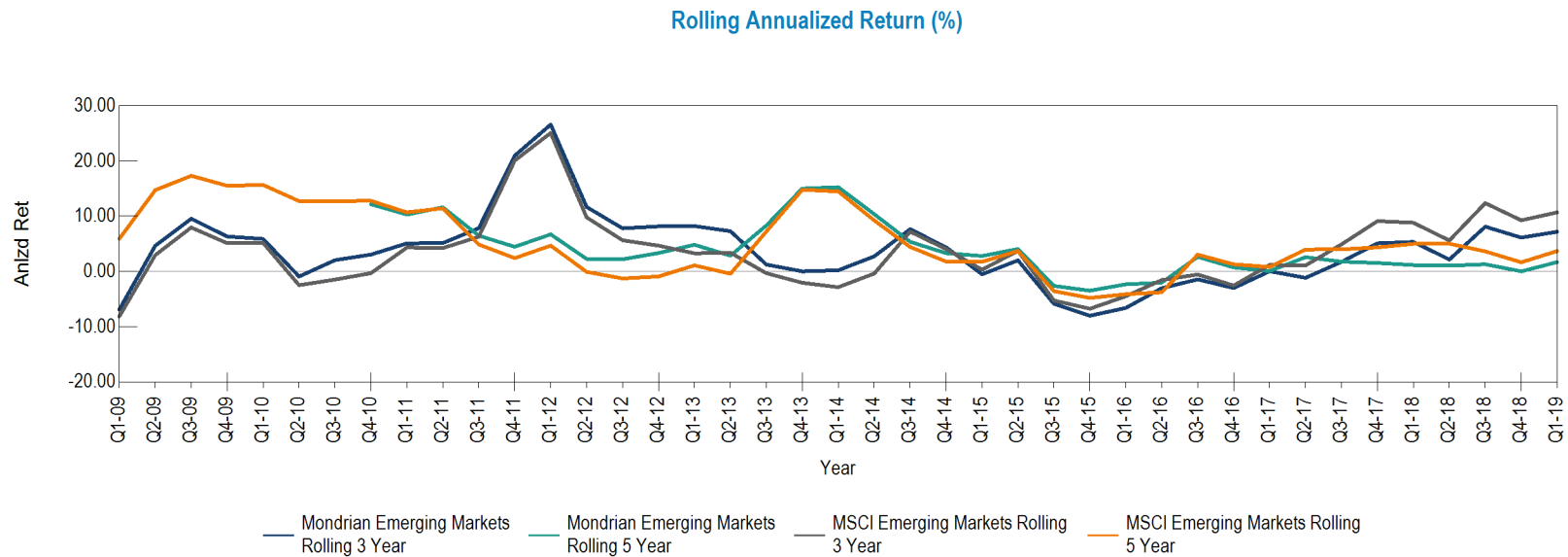
Period Ending: March 31, 2019



	Return (Rank)									
5th Percentile	14.8	-2.8	14.4	6.9	13.5	-9.6	47.9	21.1	-6.9	6.5
25th Percentile	12.4	-6.2	11.8	4.7	11.0	-14.1	41.5	12.7	-10.0	2.4
Median	10.3	-8.6	9.9	3.7	9.8	-16.2	37.1	8.2	-12.9	-0.8
75th Percentile	8.6	-11.4	8.0	2.7	8.9	-18.5	32.4	4.4	-15.9	-3.6
95th Percentile	6.1	-15.7	5.3	0.9	7.7	-22.9	26.1	-1.7	-19.7	-8.3
# of Portfolios	216	205	189	163	75	200	184	181	143	126
● Mondrian Emerging Markets	10.0 (54)	-5.3 (19)	7.2 (85)	1.7 (89)	8.3 (91)	-13.8 (24)	27.2 (93)	9.0 (44)	-16.3 (80)	0.0 (42)
▲ MSCI Emerging Markets	9.9 (57)	-7.4 (36)	10.7 (40)	3.7 (51)	8.9 (72)	-14.6 (30)	37.3 (48)	11.2 (34)	-14.9 (68)	-2.2 (62)

# Mondrian Emerging Markets Rolling Manager Performance (Net of Fees)

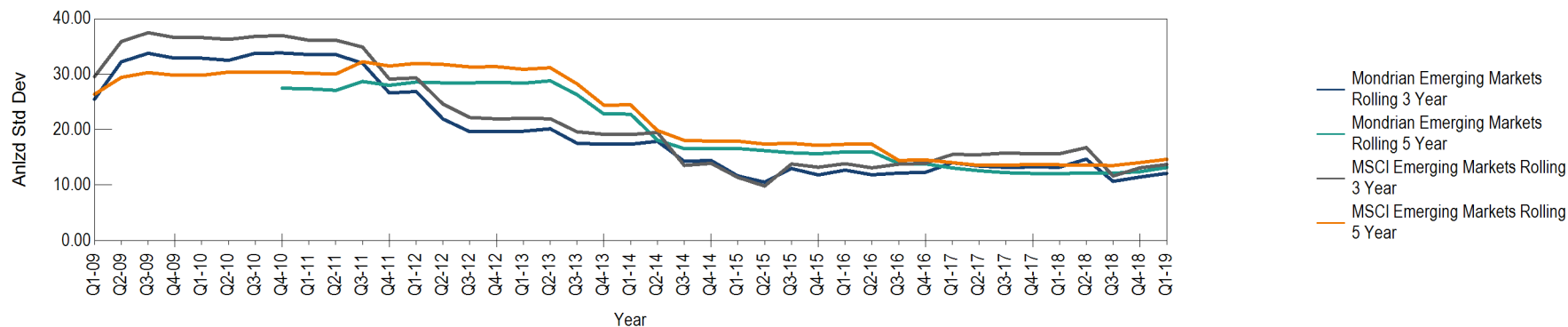
Period Ending: March 31, 2019



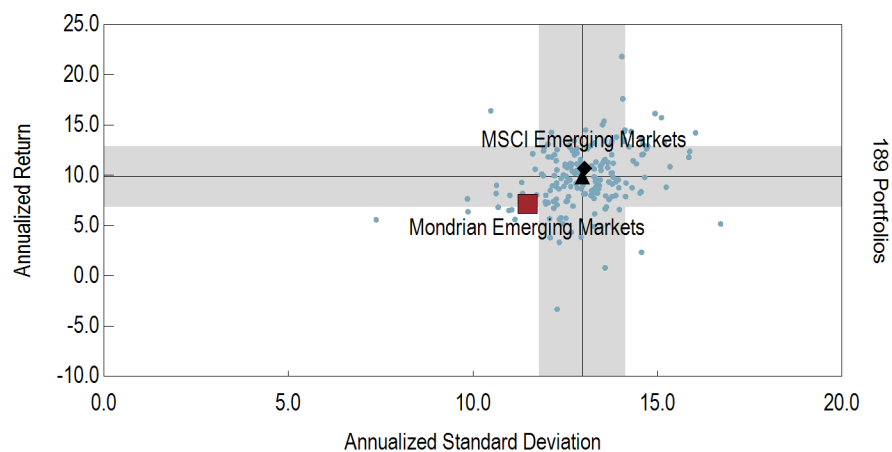
# Mondrian Emerging Markets Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

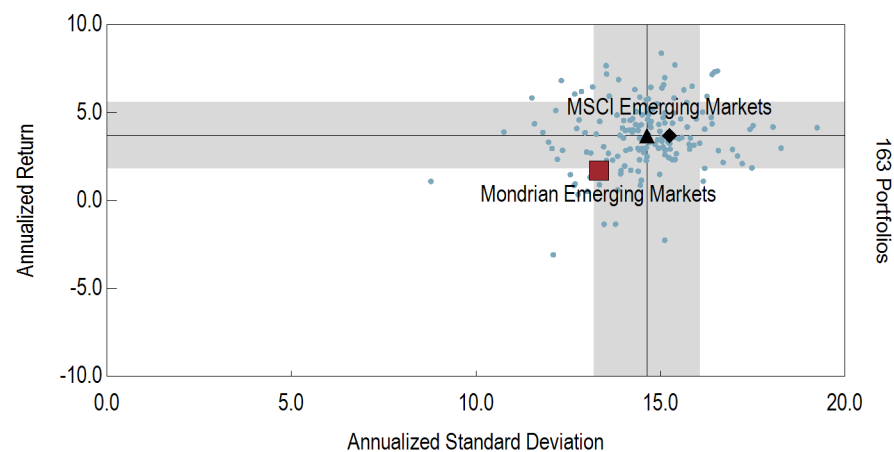
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	7.2%	11.5%	0.5
MSCI Emerging Markets	10.7%	13.0%	0.7
eV Emg Mkts Equity Net Median	9.9%	13.0%	0.7

5 Years

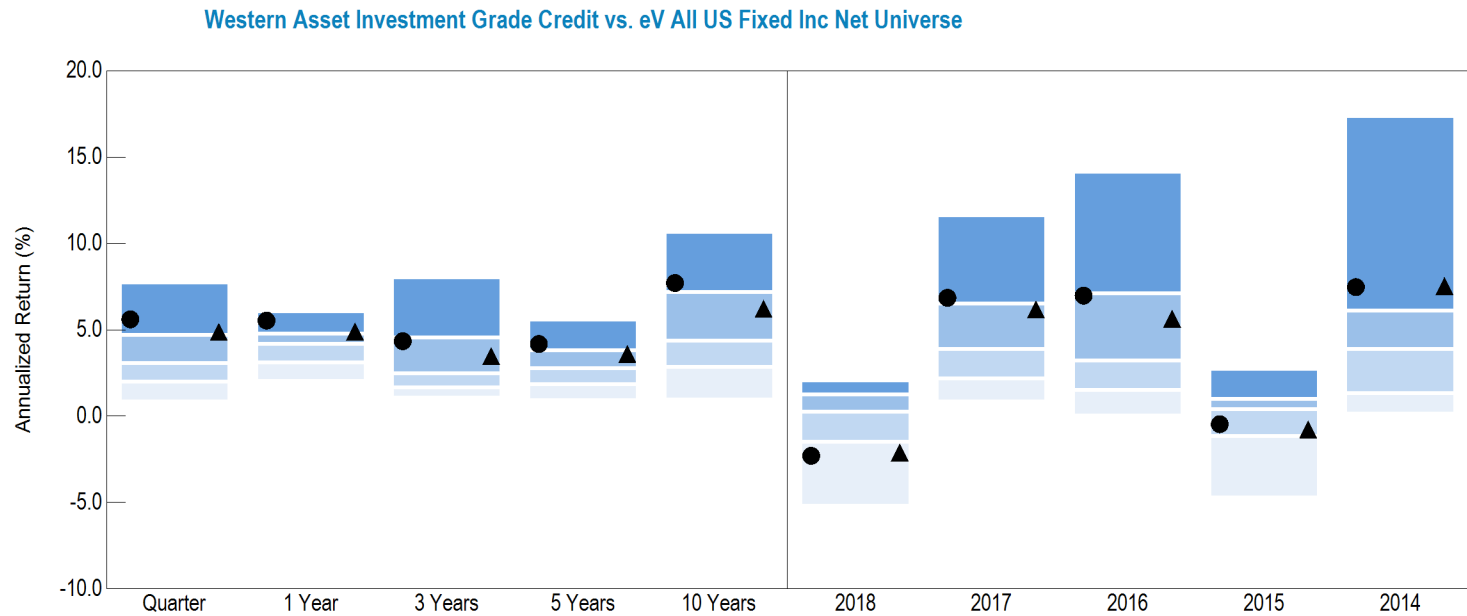
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	1.7%	13.3%	0.1
MSCI Emerging Markets	3.7%	15.3%	0.2
eV Emg Mkts Equity Net Median	3.7%	14.6%	0.2

## Fixed Income Managers

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

Period Ending: March 31, 2019

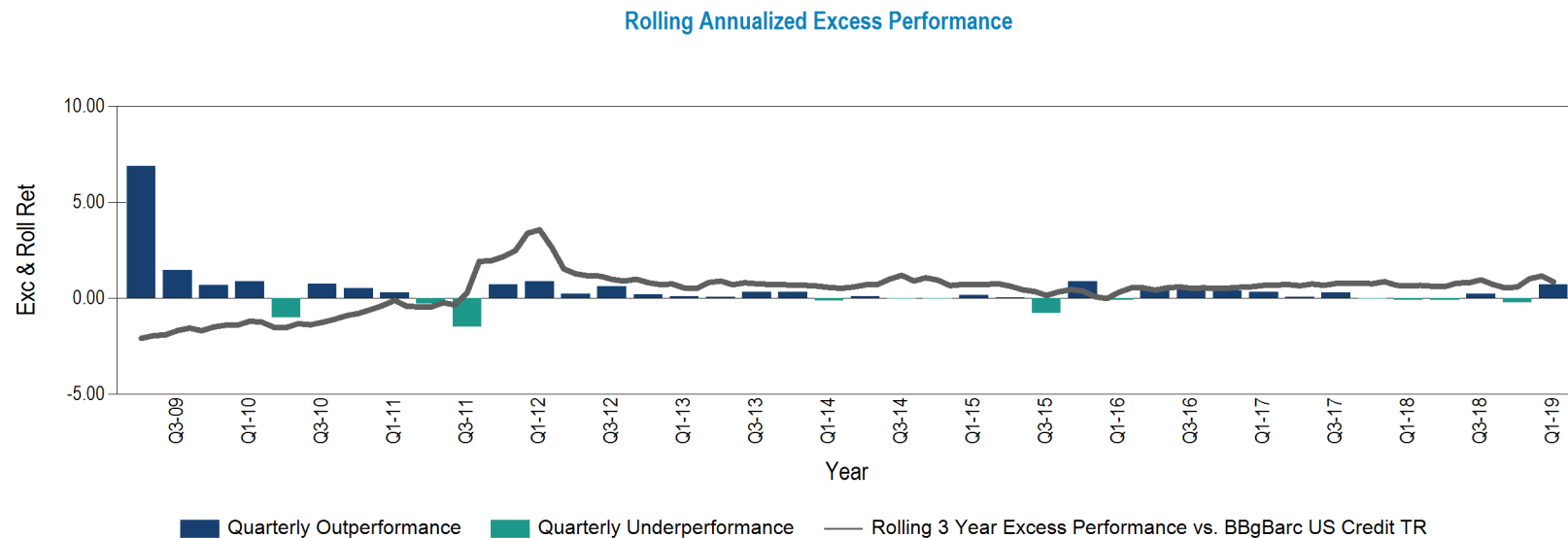
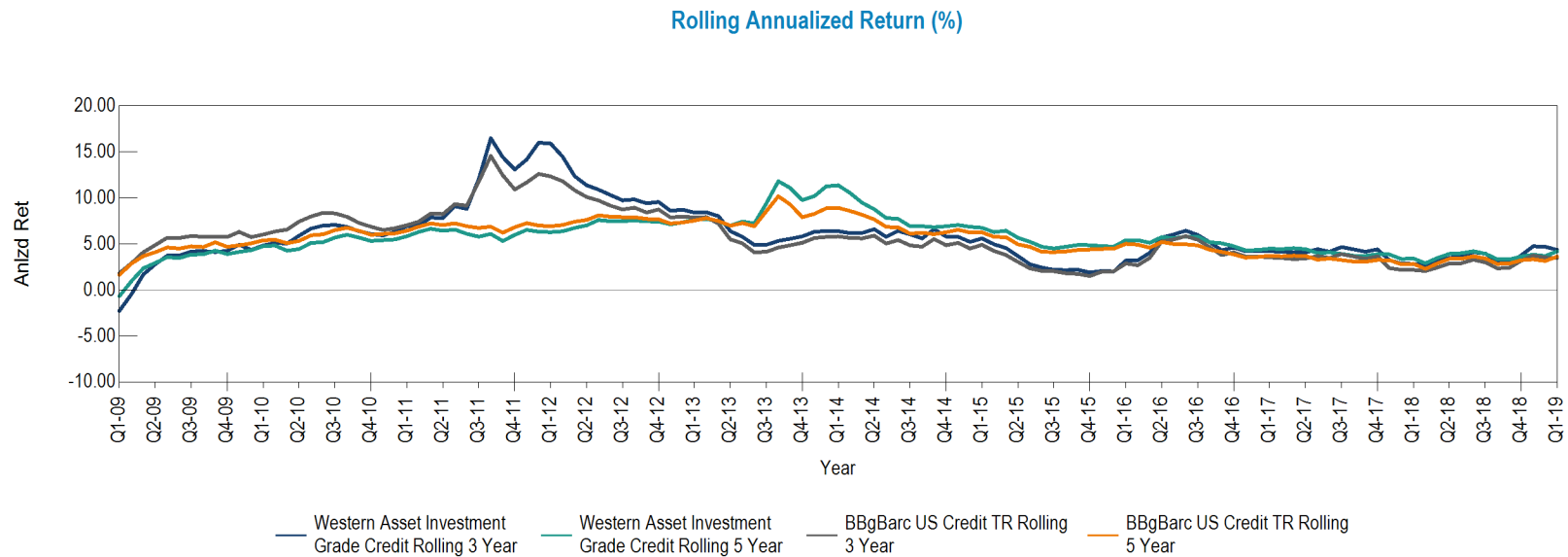


	Return (Rank)									
5th Percentile	7.7	6.1	8.0	5.6	10.6	2.1	11.6	14.1	2.7	17.4
25th Percentile	4.7	4.8	4.6	3.9	7.2	1.3	6.5	7.1	1.0	6.1
Median	3.1	4.2	2.5	2.8	4.4	0.3	3.9	3.3	0.4	3.9
75th Percentile	2.0	3.1	1.7	1.9	2.9	-1.5	2.2	1.6	-1.1	1.4
95th Percentile	0.9	2.1	1.1	0.9	1.0	-5.2	0.9	0.0	-4.7	0.2
# of Portfolios	1,205	1,187	1,133	1,056	802	1,173	1,135	1,033	827	758
● Western Asset Investment Grade Credit	5.6 (20)	5.5 (10)	4.3 (28)	4.2 (20)	7.7 (22)	-2.3 (81)	6.8 (23)	7.0 (26)	-0.5 (70)	7.5 (15)
▲ BBgBarc US Credit TR	4.9 (25)	4.9 (22)	3.5 (37)	3.6 (31)	6.2 (33)	-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: March 31, 2019

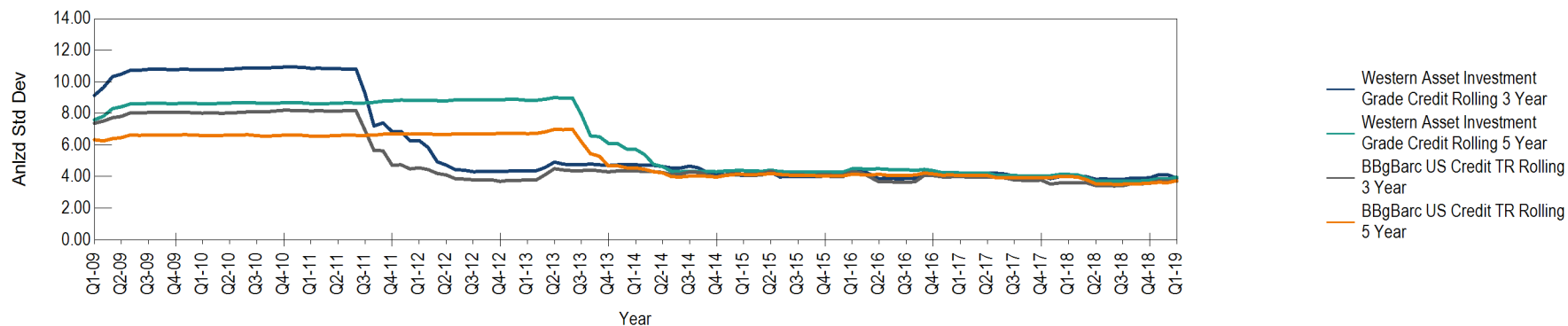


Returns prior to inception date are composite returns.

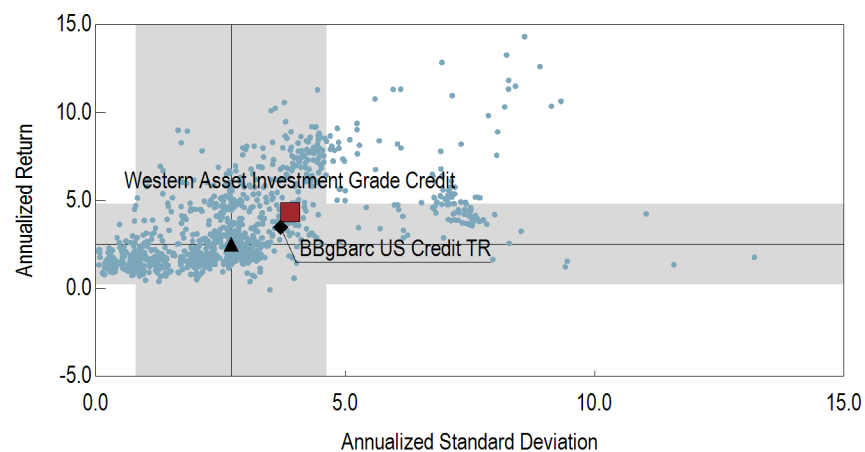
# Western Asset Investment Grade Credit Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

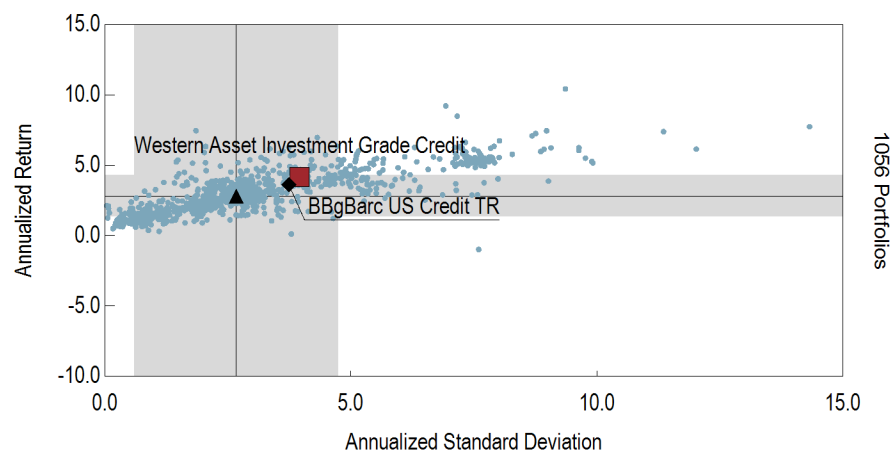
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	4.3%	3.9%	0.8
BBgBarc US Credit TR	3.5%	3.7%	0.6
eV All US Fixed Inc Net Median	2.5%	2.7%	0.5

5 Years

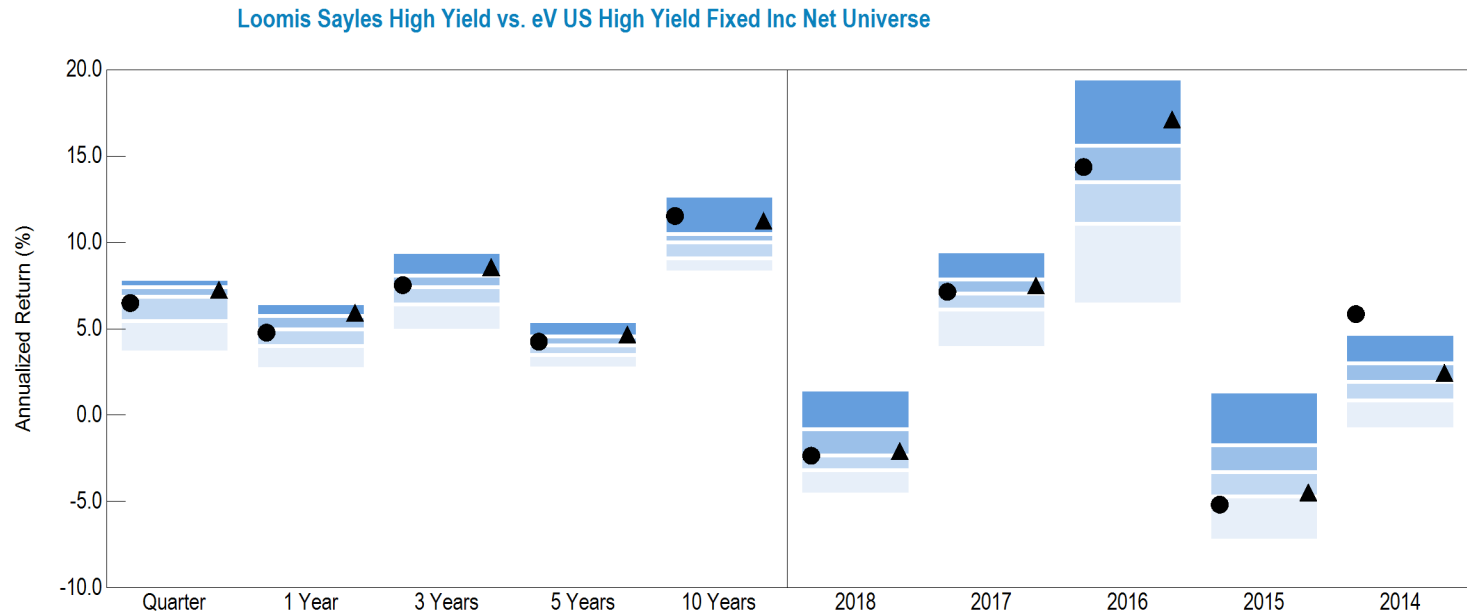
	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	4.2%	4.0%	0.9
BBgBarc US Credit TR	3.6%	3.7%	0.8
eV All US Fixed Inc Net Median	2.8%	2.7%	0.7

Returns prior to inception date are composite returns.



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

Period Ending: March 31, 2019

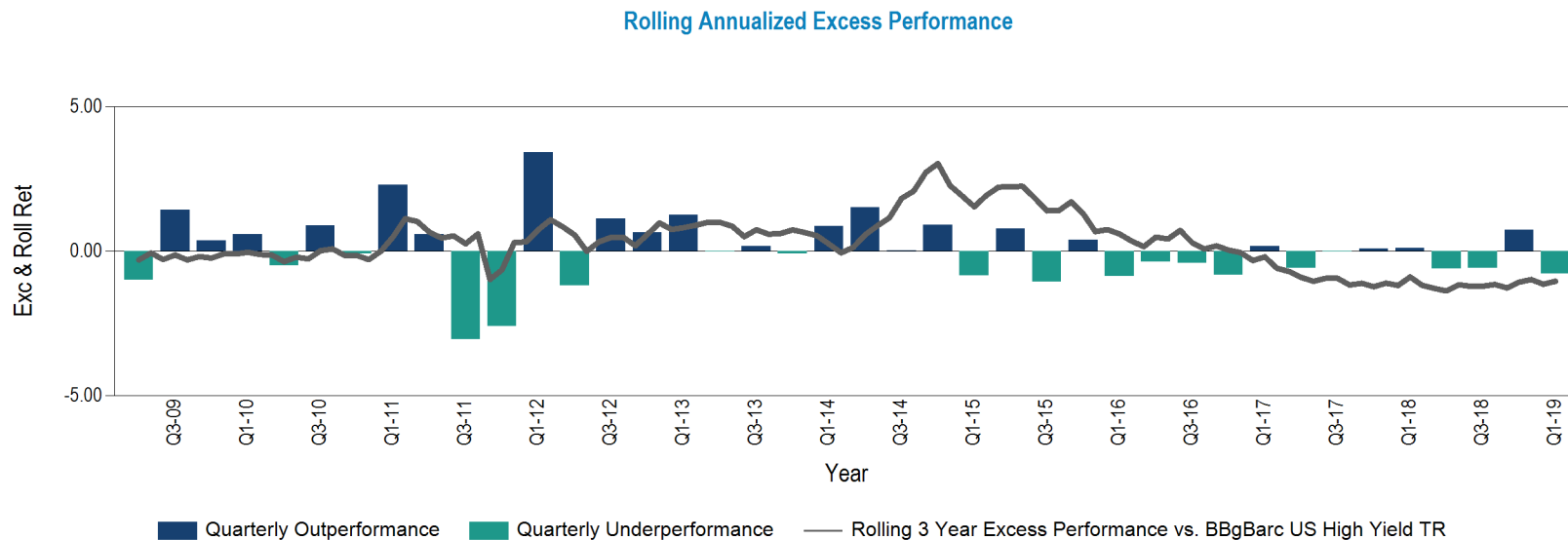
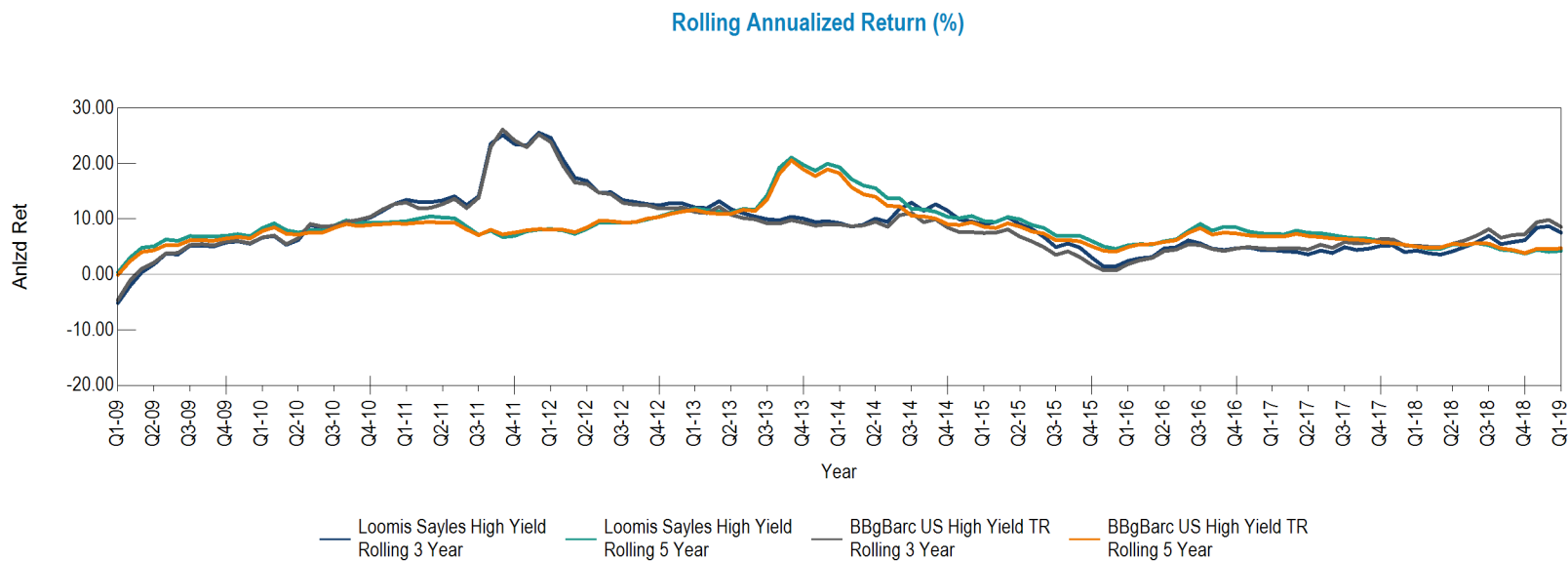


	Return (Rank)									
5th Percentile	7.9	6.5	9.4	5.4	12.7	1.4	9.5	19.5	1.4	4.7
25th Percentile	7.4	5.8	8.1	4.6	10.5	-0.8	7.9	15.6	-1.7	3.0
Median	6.9	5.0	7.4	4.1	10.0	-2.3	7.1	13.5	-3.3	1.9
75th Percentile	5.5	4.0	6.4	3.5	9.1	-3.2	6.1	11.1	-4.7	0.9
95th Percentile	3.6	2.7	4.9	2.7	8.3	-4.6	3.9	6.4	-7.2	-0.8
# of Portfolios	138	138	129	114	72	136	129	114	88	77
● Loomis Sayles High Yield	6.5 (59)	4.8 (56)	7.5 (48)	4.2 (40)	11.5 (10)	-2.3 (52)	7.1 (47)	14.4 (42)	-5.2 (79)	5.8 (1)
▲ BBgBarc US High Yield TR	7.3 (34)	5.9 (20)	8.6 (17)	4.7 (22)	11.3 (13)	-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: March 31, 2019

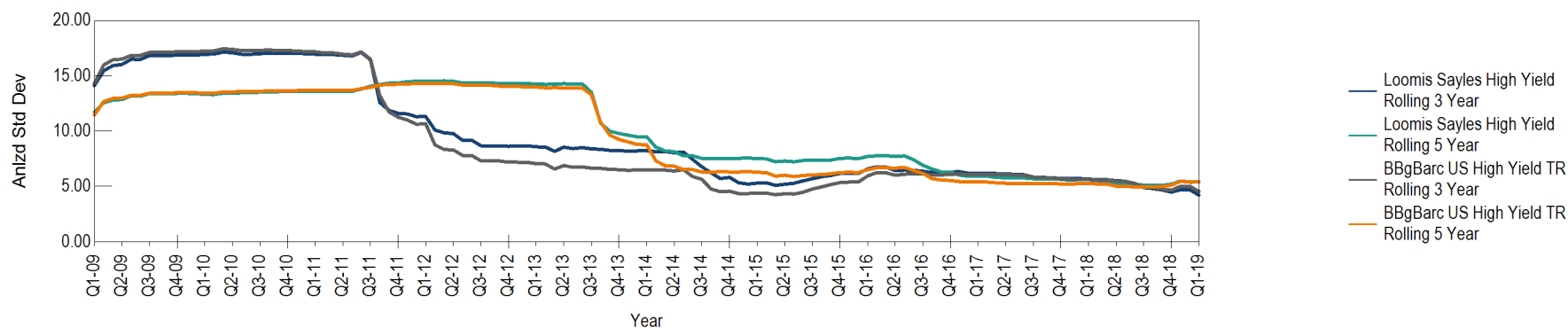


Returns prior to inception date are composite returns.

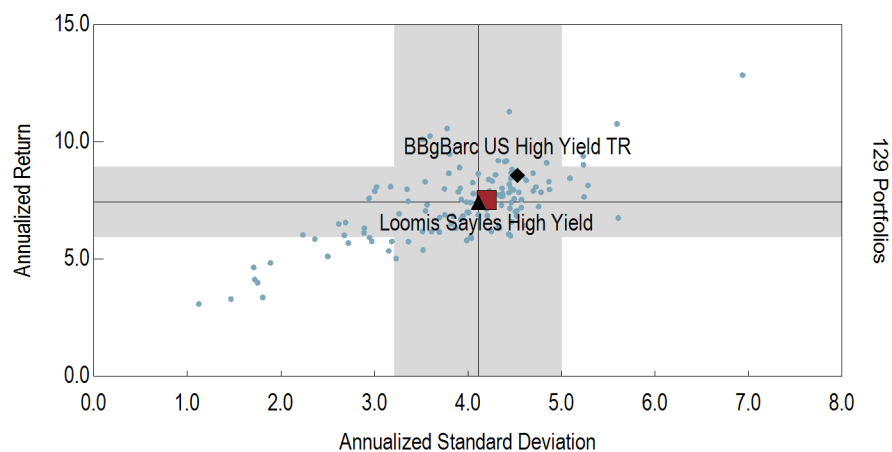
# Loomis Sayles High Yield Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

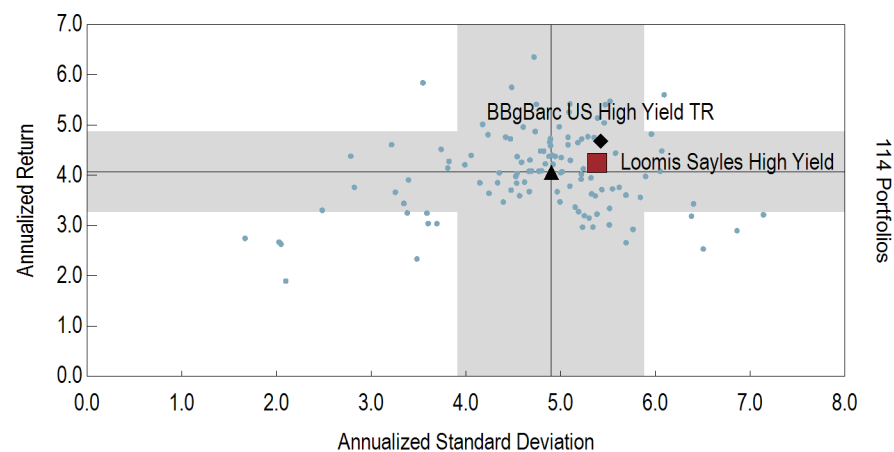
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	7.5%	4.2%	1.5
BBgBarc US High Yield TR	8.6%	4.5%	1.6
eV US High Yield Fixed Inc Net Median	7.4%	4.1%	1.5

5 Years

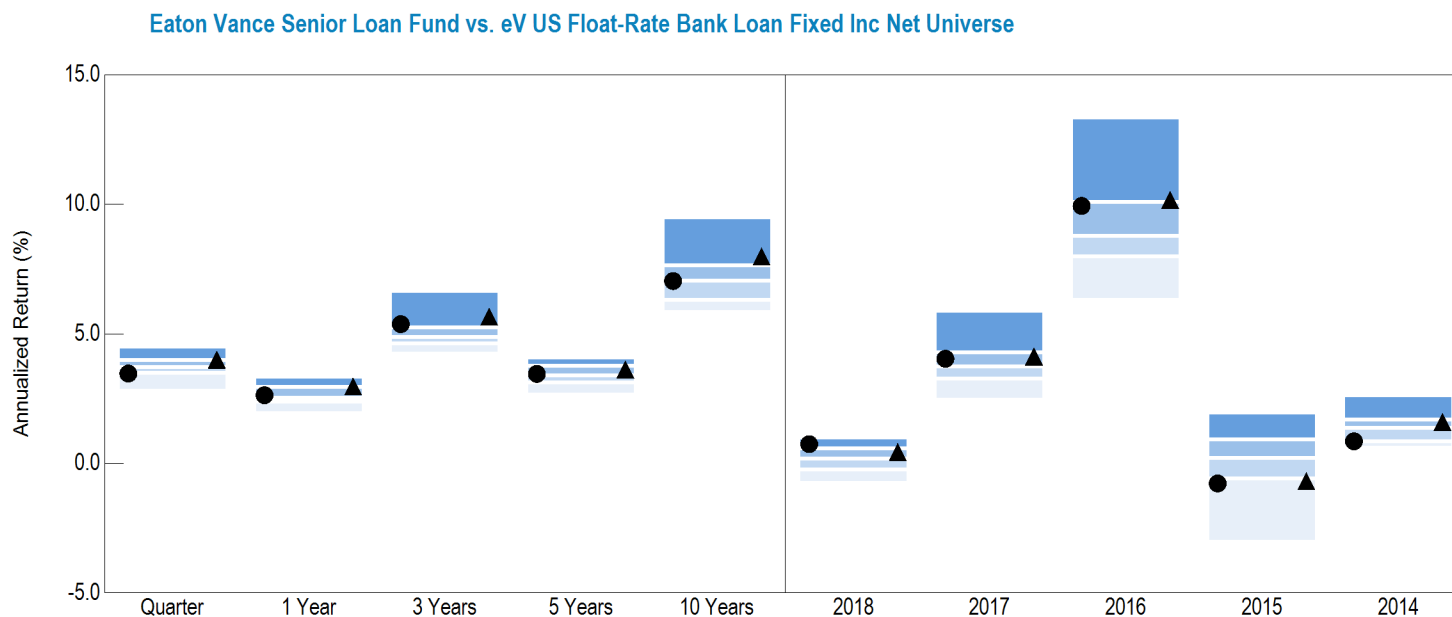
	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	4.2%	5.4%	0.6
BBgBarc US High Yield TR	4.7%	5.4%	0.7
eV US High Yield Fixed Inc Net Median	4.1%	4.9%	0.7

Returns prior to inception date are composite returns.

# Eaton Vance Senior Loan Fund

## Manager Performance Comparisons (Net of Fees)

Period Ending: March 31, 2019



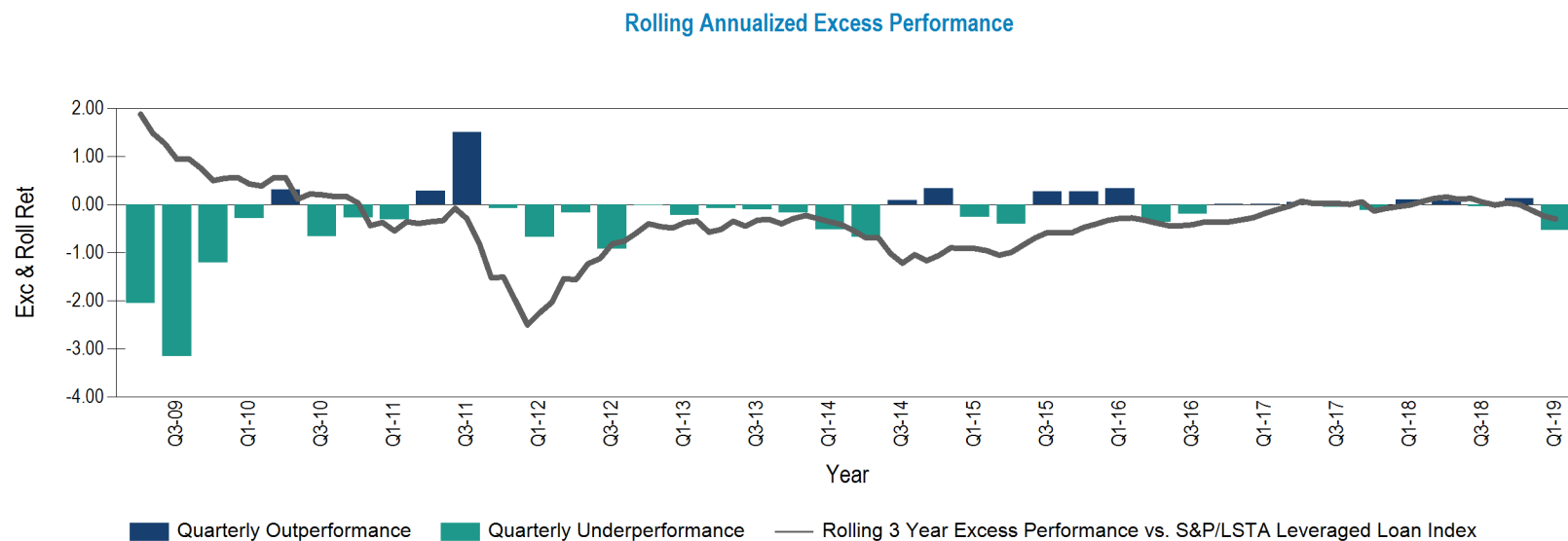
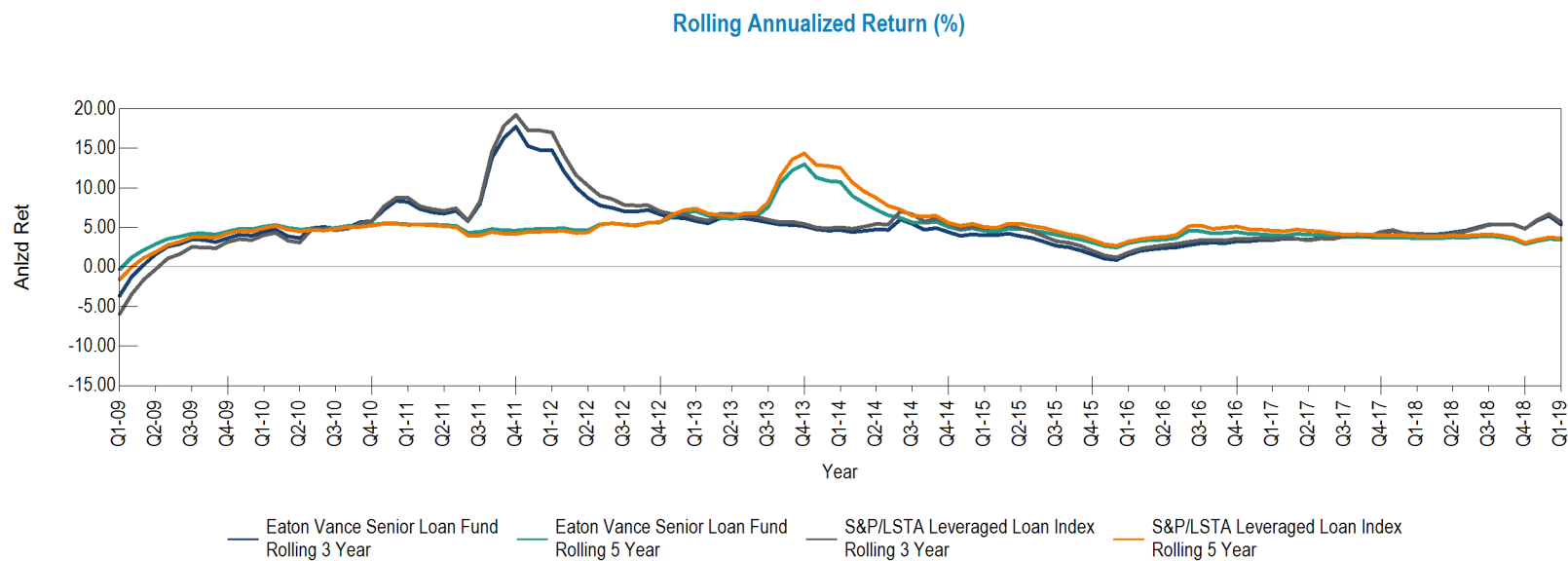
	Return (Rank)									
5th Percentile	4.5	3.3	6.7	4.1	9.5	1.0	5.9	13.3	2.0	2.6
25th Percentile	4.0	3.0	5.3	3.8	7.6	0.6	4.3	10.1	0.9	1.7
Median	3.7	2.5	4.9	3.4	7.1	0.2	3.8	8.8	0.2	1.4
75th Percentile	3.5	2.4	4.7	3.1	6.3	-0.2	3.3	8.0	-0.6	0.9
95th Percentile	2.8	2.0	4.3	2.7	5.9	-0.8	2.5	6.3	-3.0	0.6
# of Portfolios	46	45	44	43	28	47	48	45	30	26
● Eaton Vance Senior Loan Fund	3.5 (82)	2.6 (47)	5.4 (23)	3.4 (50)	7.0 (54)	0.7 (16)	4.0 (40)	9.9 (33)	-0.8 (85)	0.8 (78)
▲ S&P/LSTA Leveraged Loan Index	4.0 (27)	3.0 (25)	5.7 (18)	3.6 (41)	8.0 (19)	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: March 31, 2019



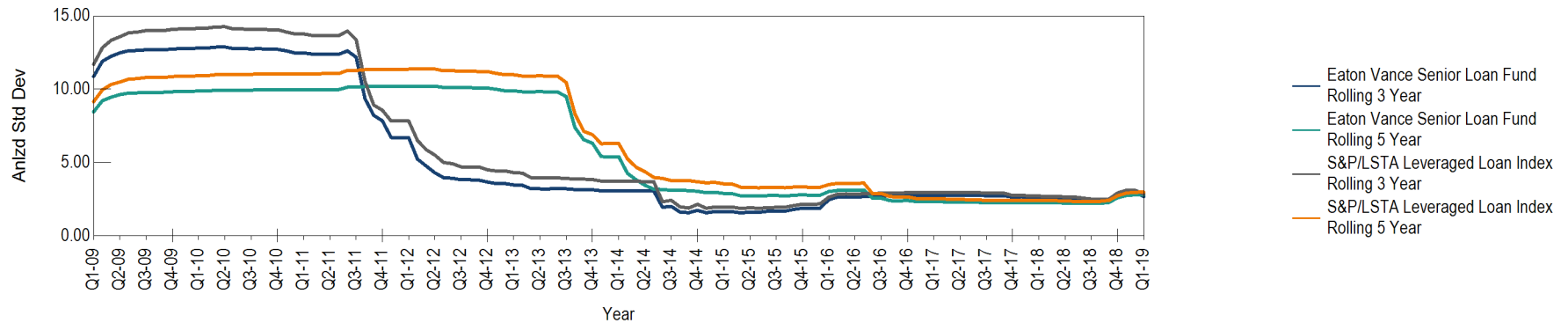
Returns prior to inception date are composite returns.

# Eaton Vance Senior Loan Fund

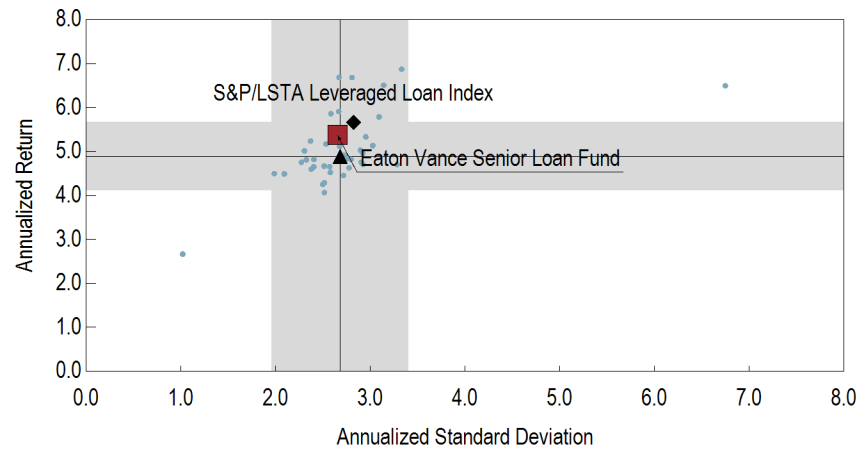
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

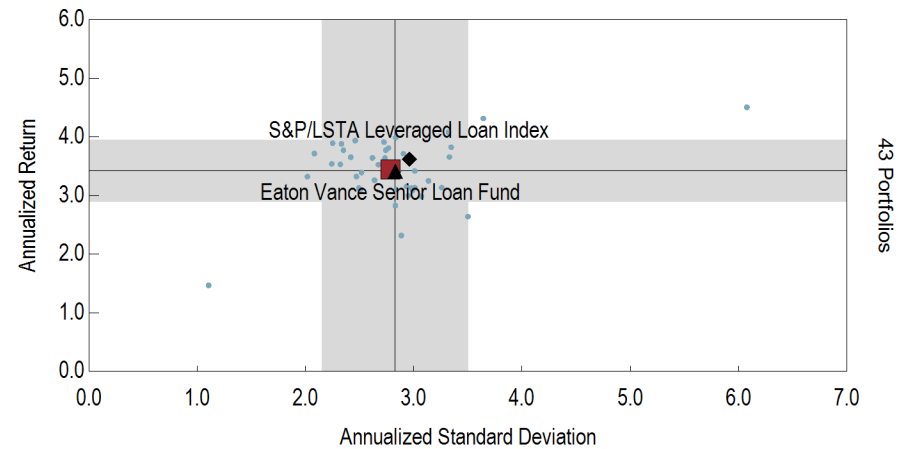
Rolling Annualized Standard Deviation



3 Years



5 Years



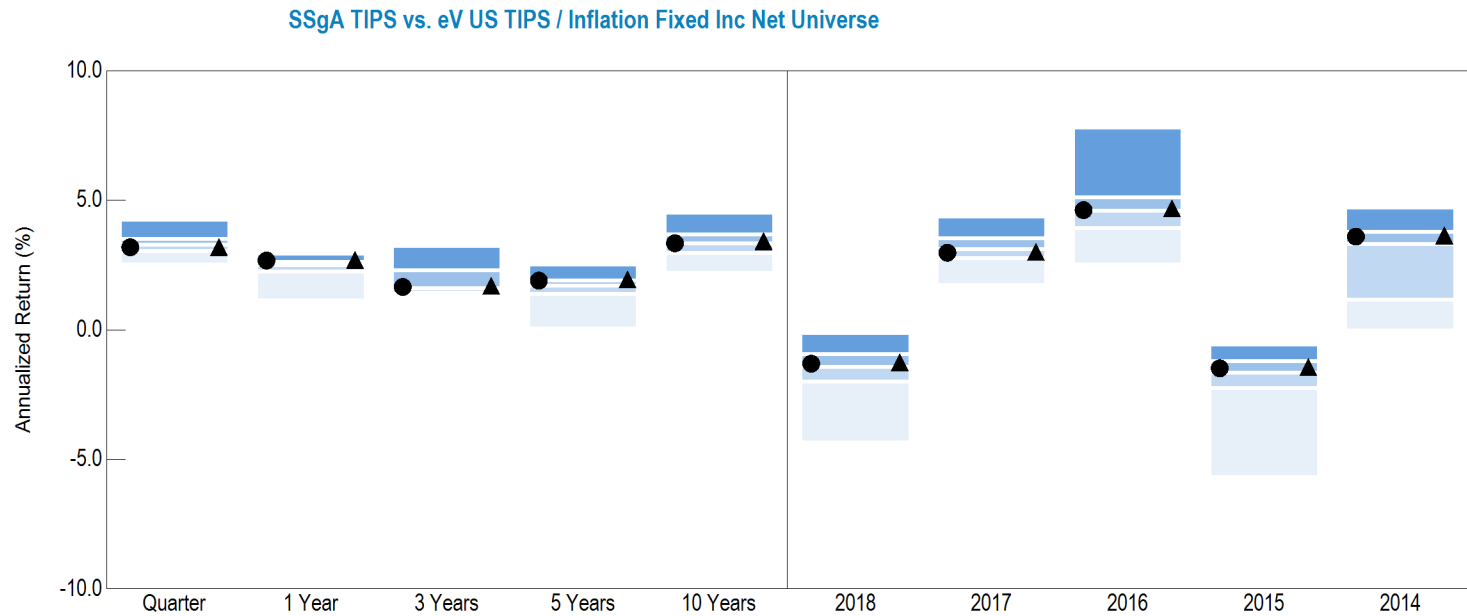
3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	5.4%	2.7%	1.6
S&P/LSTA Leveraged Loan Index	5.7%	2.8%	1.6
eV US Float-Rate Bank Loan Fixed Inc Net Median	4.9%	2.7%	1.4

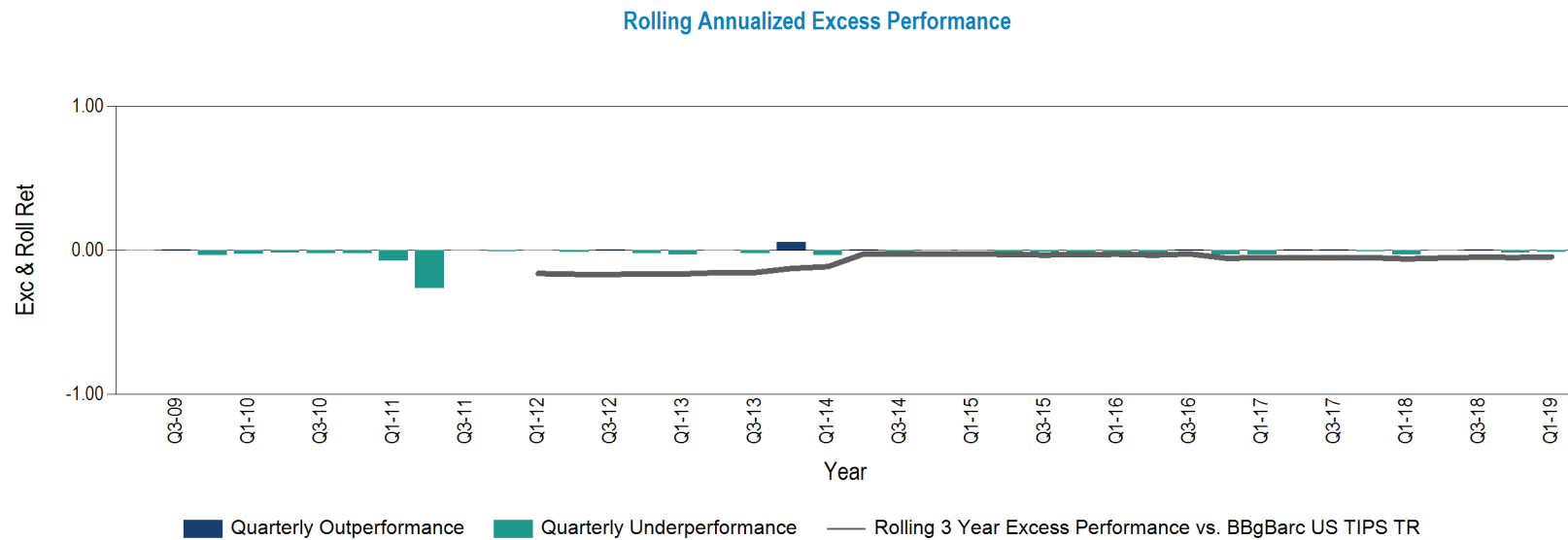
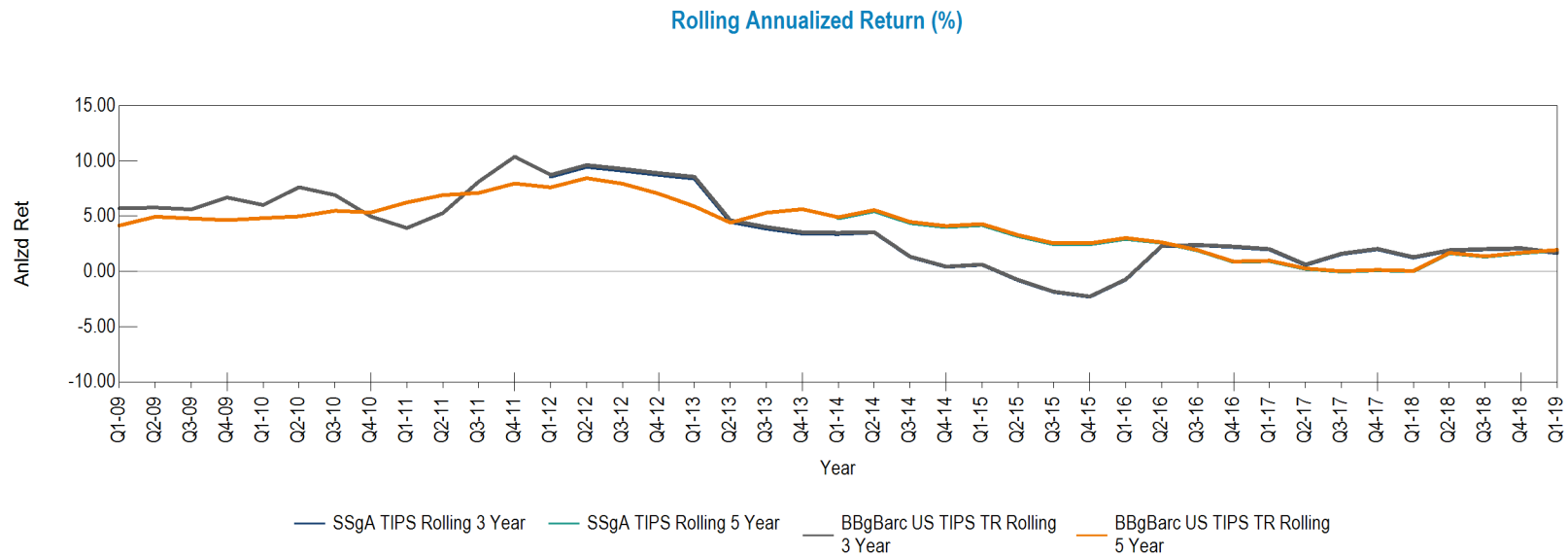
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	3.4%	2.8%	1.0
S&P/LSTA Leveraged Loan Index	3.6%	3.0%	1.0
eV US Float-Rate Bank Loan Fixed Inc Net Median	3.4%	2.8%	0.9

Returns prior to inception date are composite returns.



	Return (Rank)									
5th Percentile	4.2	2.9	3.2	2.5	4.5	-0.1	4.4	7.8	-0.6	4.7
25th Percentile	3.5	2.6	2.3	1.9	3.7	-0.9	3.5	5.1	-1.2	3.8
Median	3.3	2.5	1.6	1.7	3.4	-1.4	3.1	4.6	-1.6	3.3
75th Percentile	3.1	2.3	1.4	1.4	3.0	-2.0	2.8	3.9	-2.2	1.2
95th Percentile	2.5	1.1	1.4	0.1	2.2	-4.3	1.7	2.5	-5.7	0.0
# of Portfolios	23	22	22	20	15	21	20	22	22	24
● SSgA TIPS	3.2 (62)	2.7 (23)	1.7 (44)	1.9 (27)	3.3 (51)	-1.3 (42)	3.0 (58)	4.6 (50)	-1.5 (36)	3.6 (38)
▲ BBgBarc US TIPS TR	3.2 (61)	2.7 (22)	1.7 (41)	1.9 (16)	3.4 (46)	-1.3 (39)	3.0 (57)	4.7 (49)	-1.4 (33)	3.6 (37)



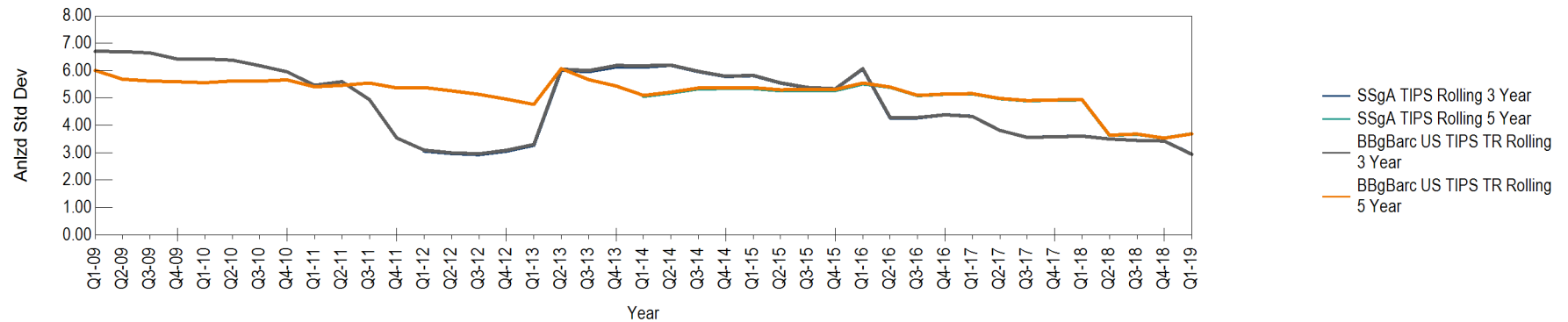


# SSgA TIPS

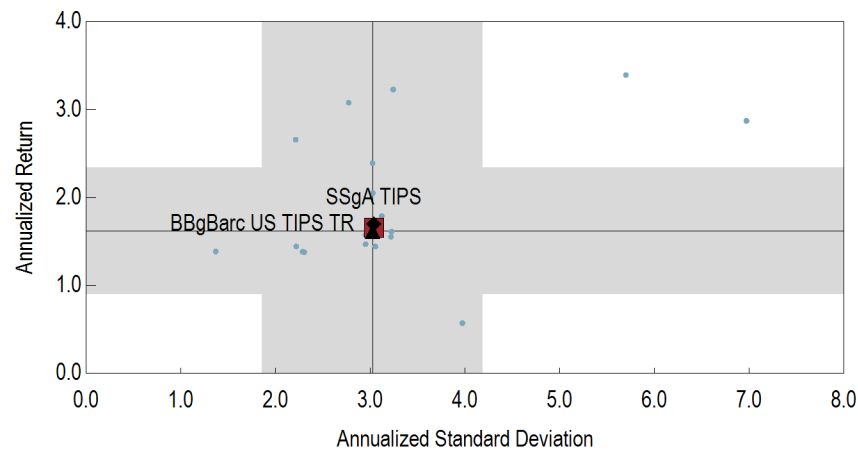
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

Rolling Annualized Standard Deviation



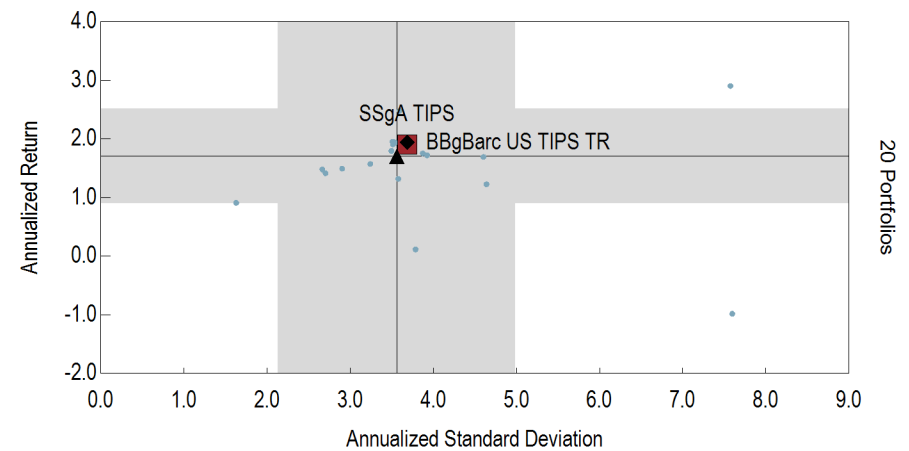
3 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA TIPS	1.7%	3.0%	0.1
BBgBarc US TIPS TR	1.7%	3.0%	0.2
eV US TIPS / Inflation Fixed Inc Net Median	1.6%	3.0%	0.1

5 Years

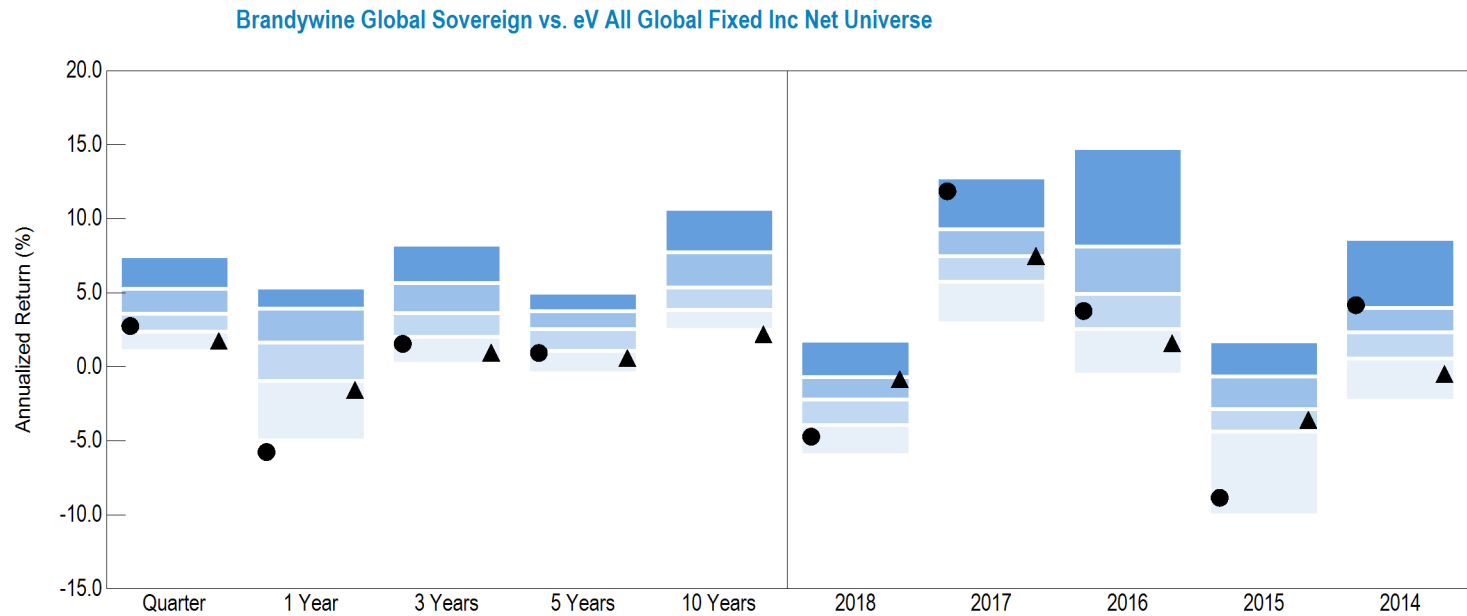


5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
SSgA TIPS	1.9%	3.7%	0.3
BBgBarc US TIPS TR	1.9%	3.7%	0.3
eV US TIPS / Inflation Fixed Inc Net Median	1.7%	3.6%	0.3

Brandywine Global Sovereign  
Manager Performance Comparisons (Net of Fees)

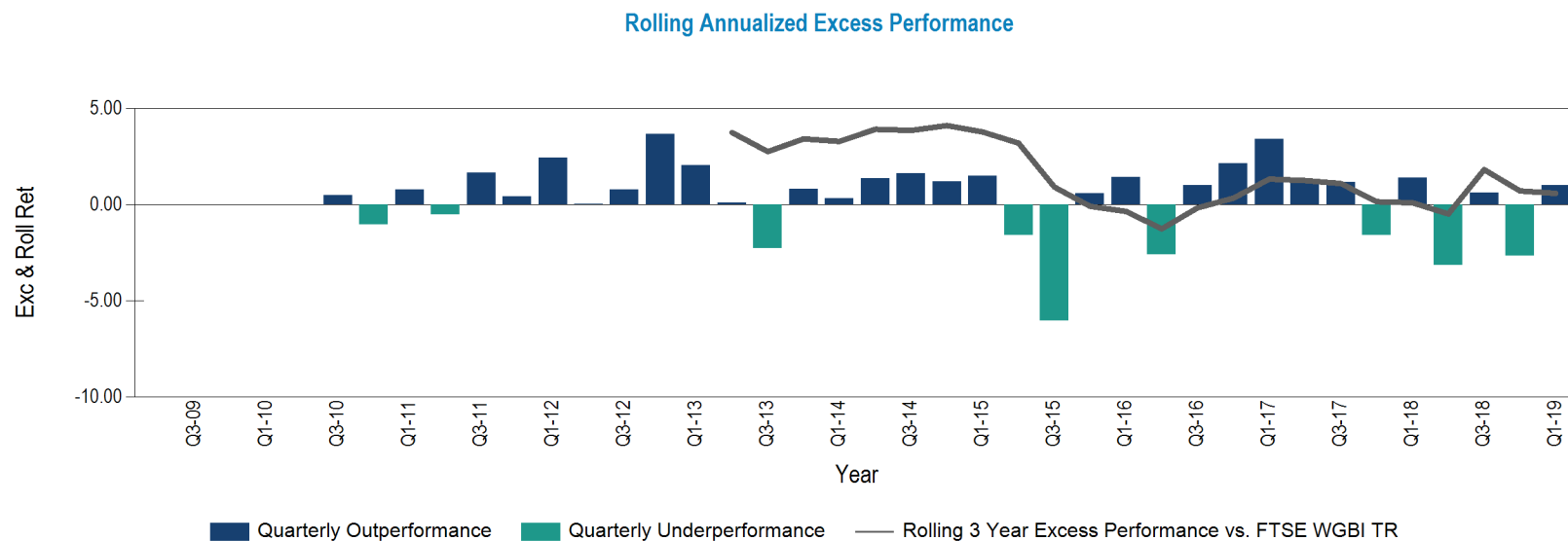
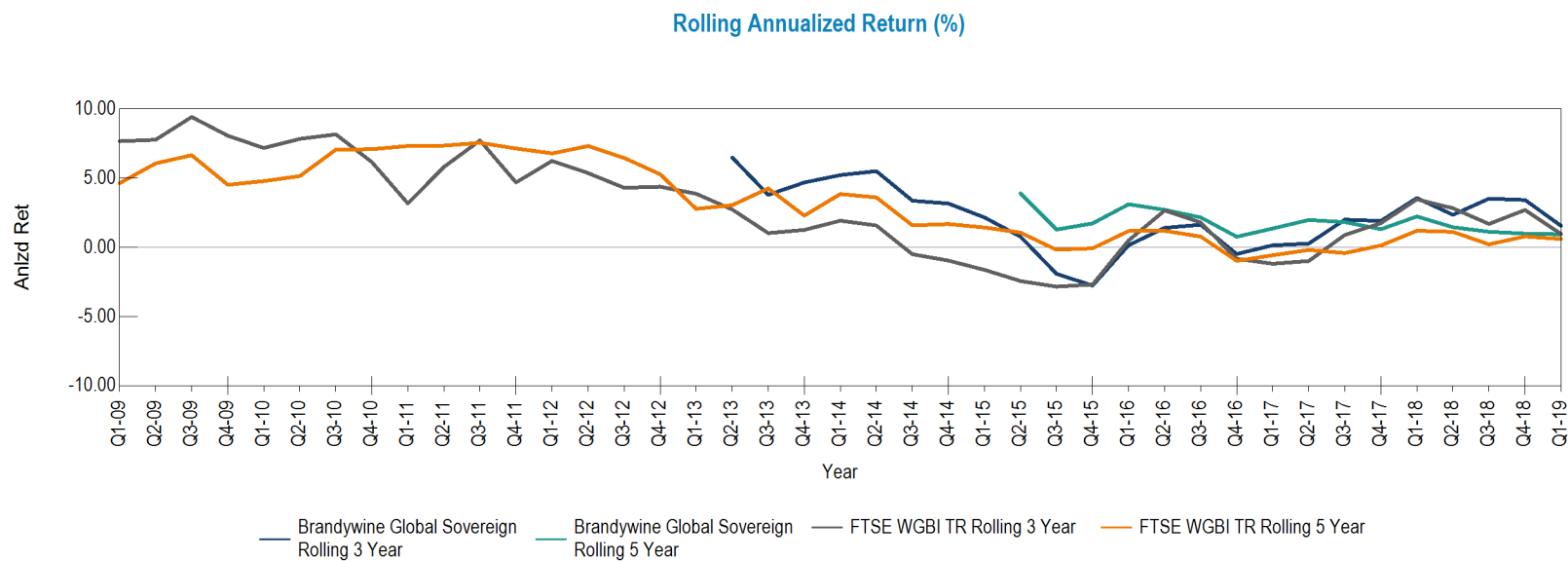
Period Ending: March 31, 2019



	Return (Rank)									
5th Percentile	7.5	5.3	8.2	5.0	10.6	1.7	12.8	14.7	1.7	8.6
25th Percentile	5.3	4.0	5.7	3.8	7.8	-0.7	9.3	8.1	-0.6	4.0
Median	3.6	1.7	3.7	2.6	5.4	-2.2	7.5	5.0	-2.9	2.3
75th Percentile	2.4	-0.9	2.0	1.1	3.9	-3.9	5.8	2.6	-4.4	0.6
95th Percentile	1.1	-5.0	0.2	-0.4	2.5	-6.0	2.9	-0.5	-10.0	-2.3
# of Portfolios	235	222	211	186	107	218	214	209	175	136
● Brandywine Global Sovereign	2.8 (68)	-5.8 (97)	1.5 (80)	0.9 (80)	-- (--)	-4.7 (87)	11.9 (6)	3.8 (63)	-8.8 (93)	4.2 (24)
▲ FTSE WGBI TR	1.7 (90)	-1.6 (80)	1.0 (90)	0.6 (89)	2.2 (97)	-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: March 31, 2019

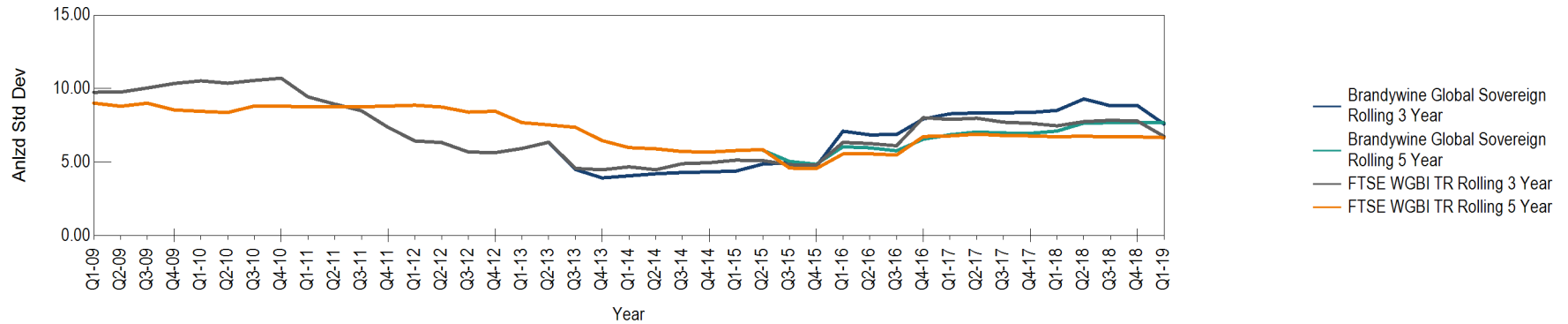


# Brandywine Global Sovereign

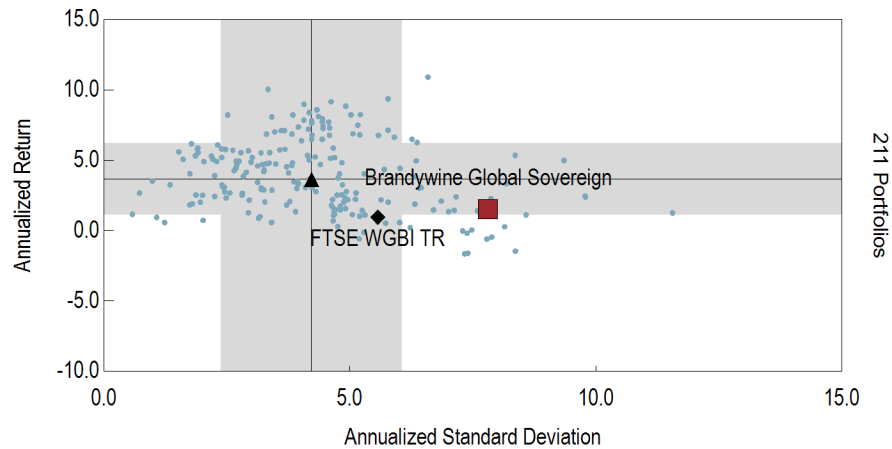
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

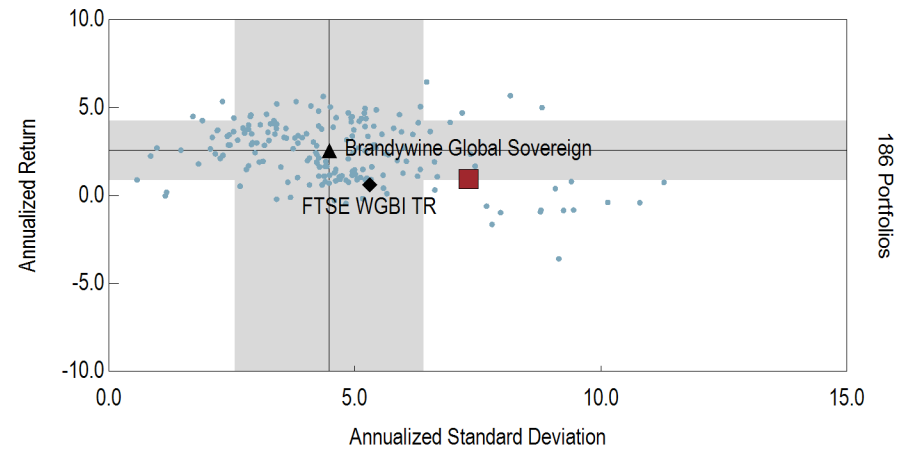
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Brandywine Global Sovereign	1.5%	7.8%	0.0
FTSE WGBI TR	1.0%	5.6%	0.0
eV All Global Fixed Inc Net Median	3.7%	4.2%	0.6

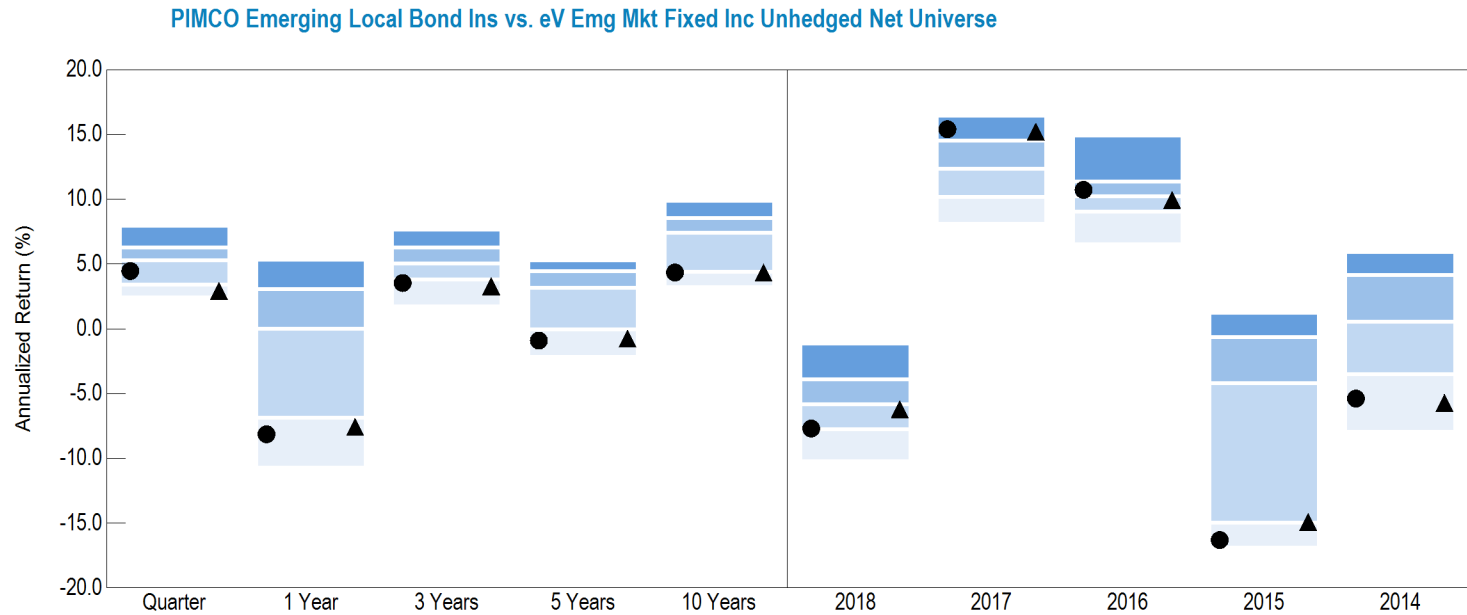
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Brandywine Global Sovereign	0.9%	7.3%	0.0
FTSE WGBI TR	0.6%	5.3%	0.0
eV All Global Fixed Inc Net Median	2.6%	4.5%	0.5

Returns prior to inception date are composite returns.

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

Period Ending: March 31, 2019

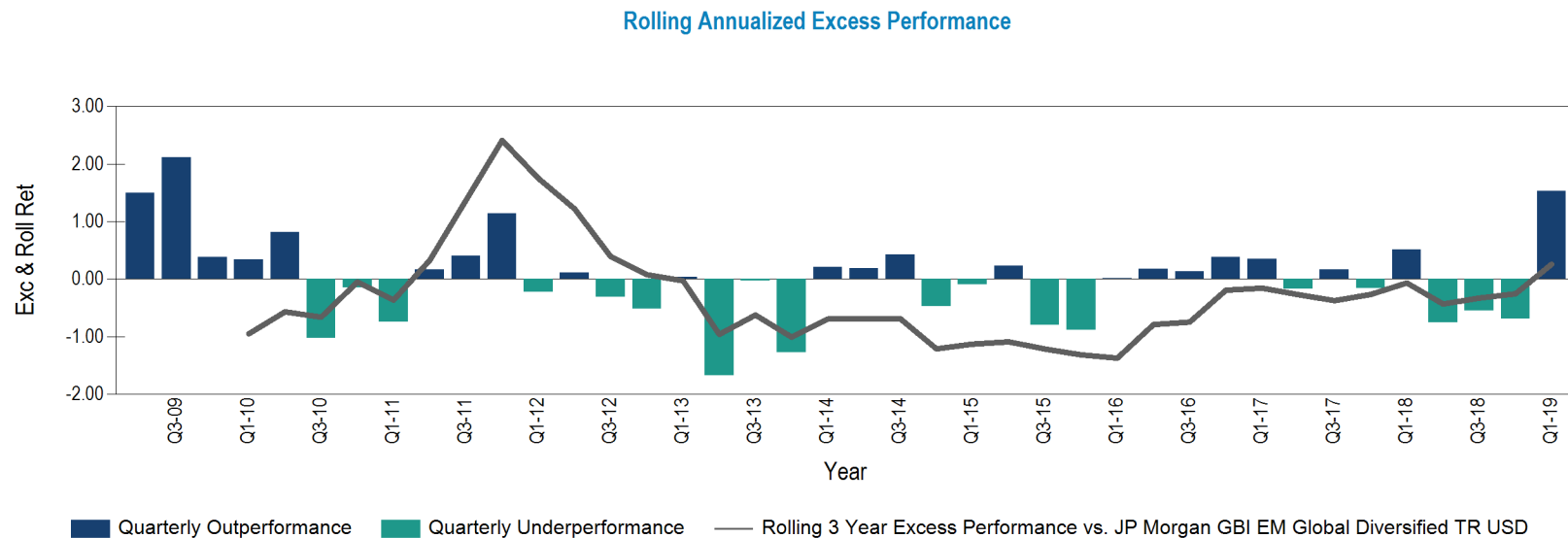
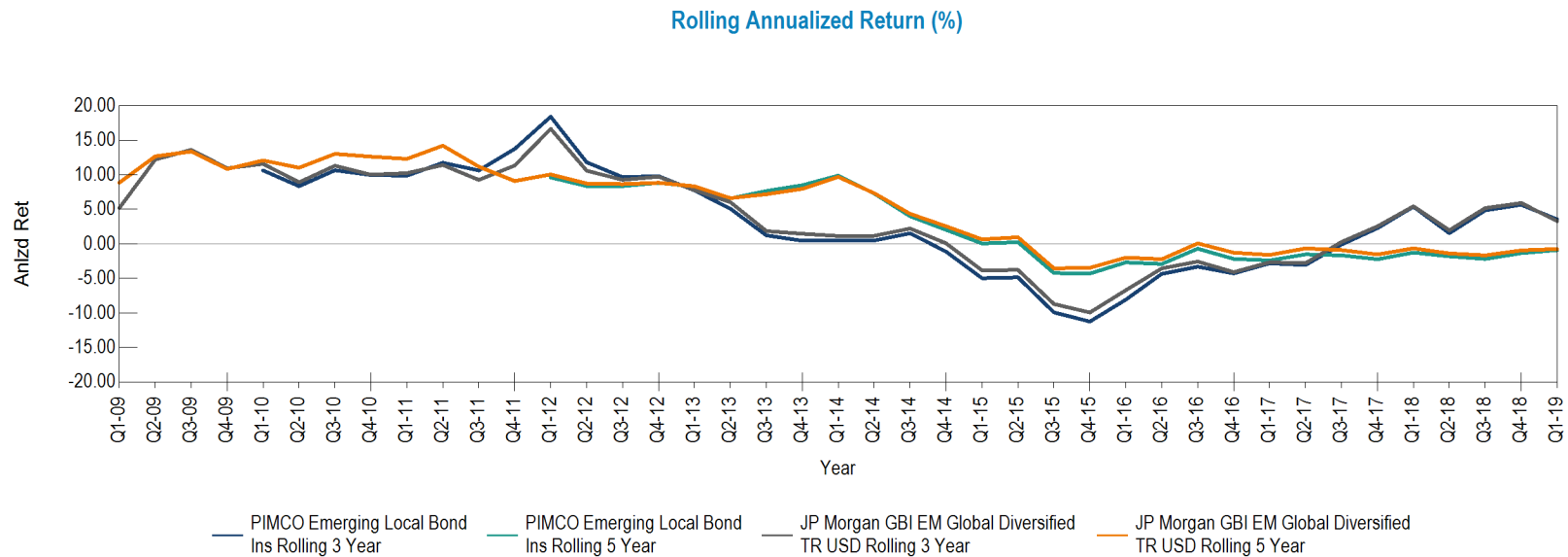


	Return (Rank)									
5th Percentile	7.9	5.3	7.6	5.3	9.9	-1.2	16.5	14.9	1.2	5.9
25th Percentile	6.3	3.1	6.3	4.5	8.6	-3.9	14.5	11.4	-0.6	4.2
Median	5.3	0.0	5.1	3.2	7.4	-5.8	12.4	10.2	-4.2	0.6
75th Percentile	3.4	-6.8	3.8	0.0	4.4	-7.7	10.2	9.1	-15.0	-3.5
95th Percentile	2.4	-10.7	1.7	-2.1	3.2	-10.2	8.1	6.5	-16.9	-7.9
# of Portfolios	95	90	84	74	34	86	77	58	40	39
● PIMCO Emerging Local Bond Ins	4.5 (64)	-8.1 (84)	3.5 (80)	-0.9 (83)	4.3 (77)	-7.7 (74)	15.4 (13)	10.7 (46)	-16.3 (89)	-5.4 (83)
▲ JP Morgan GBI EM Global Diversified TR USD	2.9 (91)	-7.6 (81)	3.3 (83)	-0.8 (81)	4.3 (78)	-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: March 31, 2019



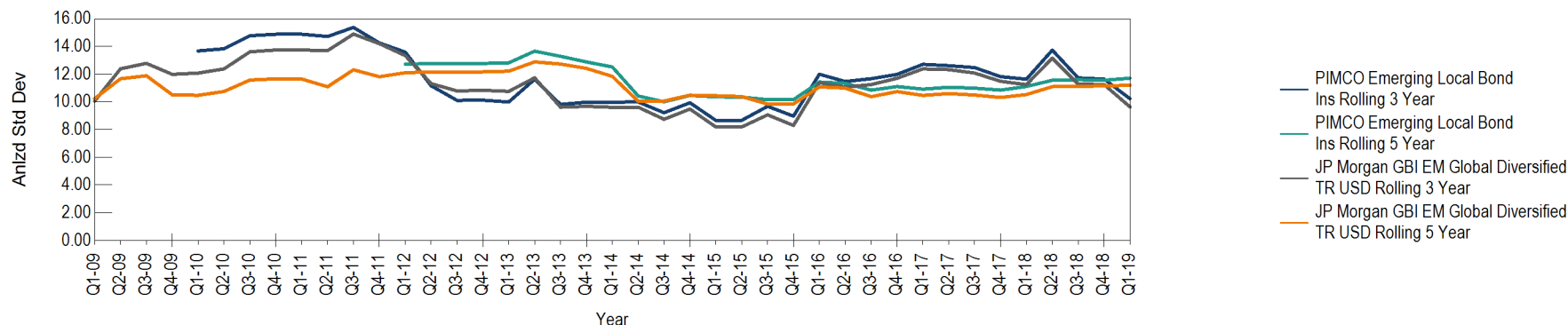
Returns prior to inception date are composite returns.

# PIMCO Emerging Local Bond Ins

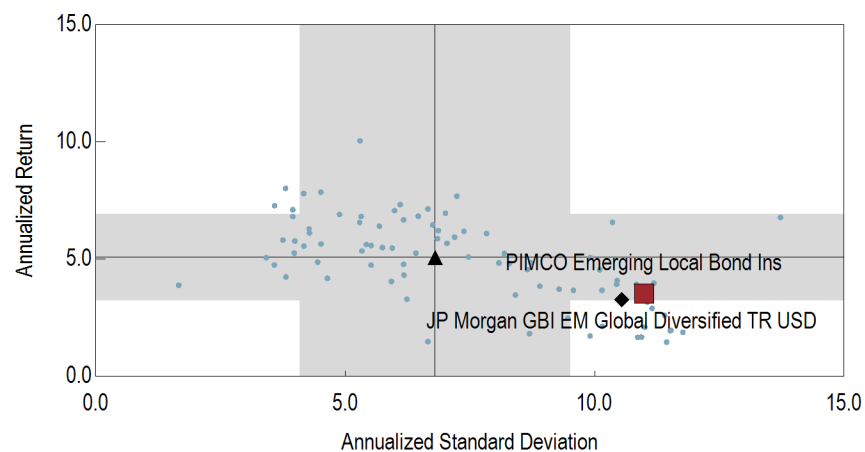
## Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: March 31, 2019

Rolling Annualized Standard Deviation



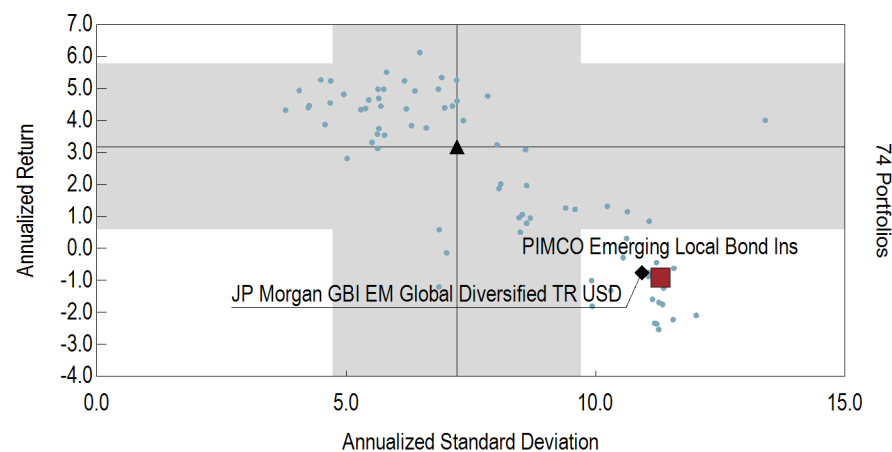
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	3.5%	11.0%	0.2
JP Morgan GBI EM Global Diversified TR USD	3.3%	10.5%	0.2
eV Emg Mkt Fixed Inc Hedged Net Median	5.9%	7.1%	0.7

5 Years



5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	-0.9%	11.3%	-0.1
JP Morgan GBI EM Global Diversified TR USD	-0.8%	10.9%	-0.1
eV Emg Mkt Fixed Inc Unhedged Net Median	3.2%	7.2%	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 (1/1/2019-1/31/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.5% Russell 2000, 3.5% BBgBarc US Corp. High Yield, 4.5% Private Equity Neutralized, 4.5% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 3% Bloomberg Commodity Index.
(2/1/2019-2/28/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.6% Russell 2000, 3.5% BBgBarc US Corp. High Yield, 4.4% Private Equity Neutralized, 4.5% Private Credit Neutralized, 8% HFRI FoF Composite, 8% NCREIF ODCE Net, & 3% Bloomberg Commodity Index.
(3/1/2019-3/31/2019)	19% Russell 3000 Index, 28% BBgBarc Global Aggregate Index, 20% MSCI ACWI ex US, 1.6% Russell 2000, 3.3% BBgBarc US Corp. High Yield, 4.4% Private Equity Neutralized, 4.7% 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

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**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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