

Fresno County Employees' Retirement Association

Investment Performance Review

Period Ending: June 30, 2020



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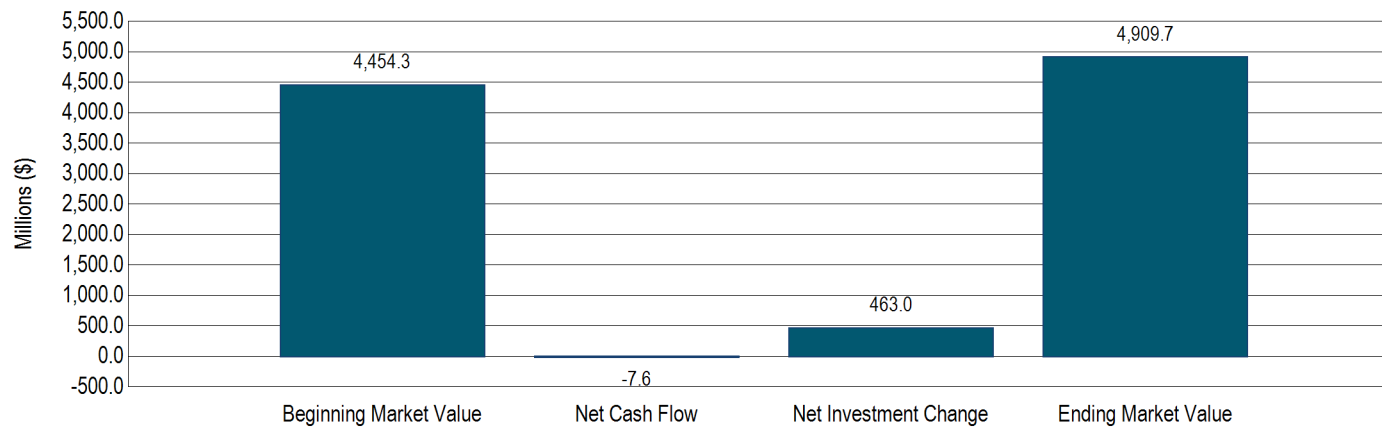
Total Fund
Portfolio Reconciliation

Period Ending: June 30, 2020

Portfolio Reconciliation

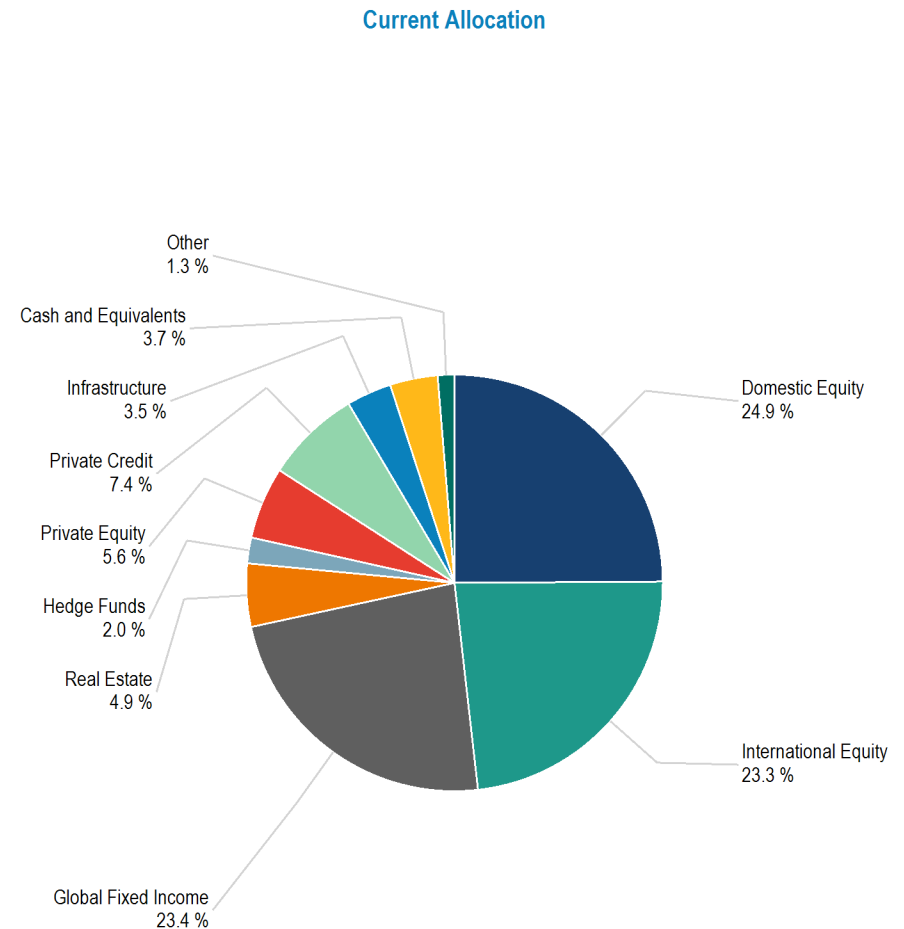
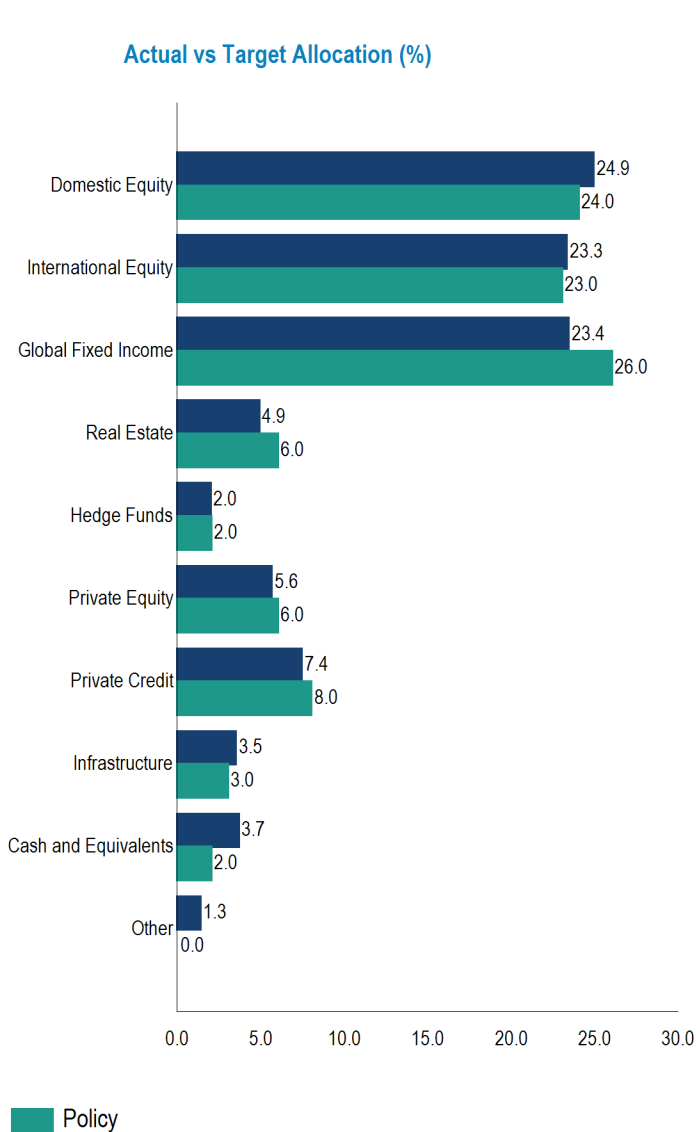
	Last Three Months	Year-To-Date
Beginning Market Value	\$4,454,281,358	\$5,190,912,717
Net Cash Flow	-\$7,613,352	-\$11,179,813
Net Investment Change	\$463,022,447	-\$270,042,451
Ending Market Value	\$4,909,690,453	\$4,909,690,453

Change in Market Value
Last Three Months



Total Fund Asset Allocation

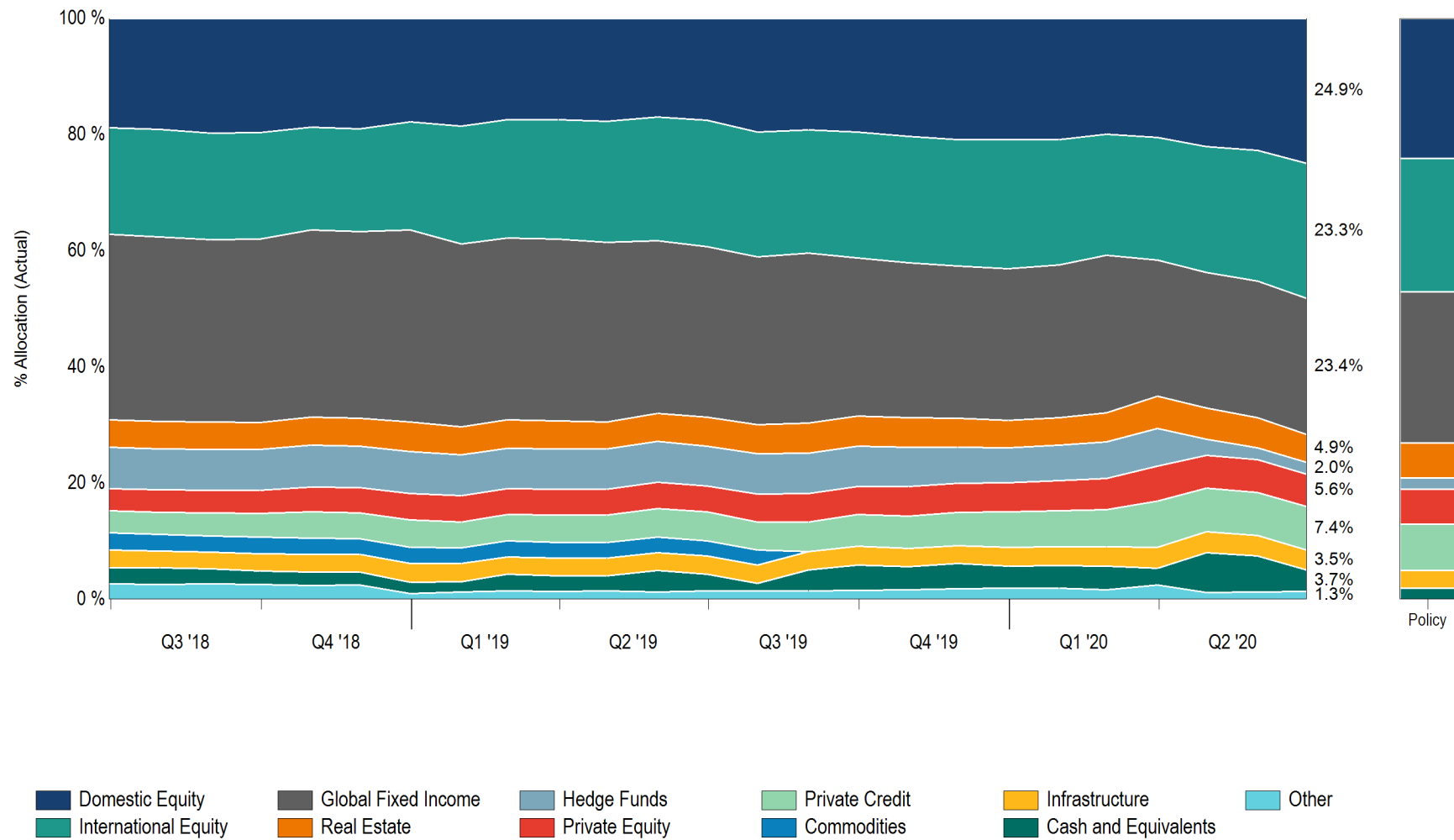
Period Ending: June 30, 2020



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

Total Fund Asset Allocation History

Period Ending: June 30, 2020



Total Fund

Executive Summary (Net of Fees)

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015
Total Fund	4,909,690,453	100.0	10.5	-4.9	1.0	4.6	4.7	7.2	6.1	16.7	-3.6	14.6	6.7	-2.5
Policy Index			8.9	-2.7	2.6	5.0	5.2	7.3	5.5	14.7	-2.9	14.0	6.5	-1.7
InvMetrics Public DB > \$1B Net Rank			36	70	57	69	89	75	41	54	41	67	80	86
Total Equity	2,366,685,355	48.2	19.8	-8.5	-0.6	5.1	5.4	9.6	--	26.0	-9.5	24.2	6.1	-2.6
MSCI ACWI IMI NR			19.8	-7.1	1.2	5.5	6.1	9.1	6.5	26.4	-10.1	23.9	8.4	-2.2
Total Domestic Equity	1,222,984,394	24.9	22.9	-4.7	4.2	9.0	8.3	13.0	--	28.0	-5.1	20.2	8.9	1.5
Russell 3000			22.0	-3.5	6.5	10.0	10.0	13.7	8.8	31.0	-5.2	21.1	12.7	0.5
Total International Equity	1,143,700,960	23.3	16.7	-12.0	-4.9	1.5	2.5	5.7	--	24.2	-13.6	28.5	3.0	-7.5
MSCI ACWI ex USA Gross			16.3	-10.8	-4.4	1.6	2.7	5.5	4.9	22.1	-13.8	27.8	5.0	-5.3
Total Fixed Income	1,149,207,448	23.4	8.7	-1.2	1.7	3.0	3.4	4.0	--	11.0	-2.9	8.0	6.7	-4.5
BBgBarc Global Aggregate*			3.3	3.0	4.2	3.8	3.6	2.5	3.5	6.8	-1.2	7.4	2.1	-3.2
Total Real Estate	239,149,237	4.9	-4.5	-3.0	0.5	5.2	6.6	9.0	--	6.4	9.2	6.8	8.5	13.9
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9
Total Infrastructure	171,285,263	3.5	7.9	3.7	11.5	15.3	13.1	--	--	14.6	20.1	19.0	6.1	--
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9
Total Hedge Funds	96,730,807	2.0	6.3	-2.8	-0.4	2.0	1.7	2.6	3.1	7.3	-0.7	4.6	3.0	0.0
HFRI Fund of Funds Composite Index			7.9	-1.6	0.4	2.2	1.5	2.8	2.6	8.4	-4.0	7.8	0.5	-0.3
Total Private Equity 1 Qtr Lagged	276,100,931	5.6	-2.1	-0.1	8.3	11.4	8.7	11.3	10.9	11.4	12.0	13.9	10.7	3.8
Russell 2000 1 Qtr Lagged			-30.6	-23.7	-24.0	-4.6	0.2	8.3	5.6	-8.9	15.2	13.7	21.3	-4.4
Total Private Credit 1 Qtr Lagged	364,911,590	7.4	-6.1	-4.4	-0.4	4.5	4.4	6.3	11.2	5.3	7.6	8.1	7.4	-2.5
BBgBarc US Corp. High Yield 1 Qtr Lagged			-12.7	-10.4	-6.9	0.8	2.8	5.7	6.2	6.4	3.0	7.0	17.1	-4.5
Total Custodied Cash	32,631,460	0.7	0.2	0.3	1.7	1.8	1.3	0.9	--	3.0	1.9	0.1	0.8	0.0
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0
Total County Cash	146,732,334	3.0	0.7	1.1	1.8	--	--	--	--	2.2	2.4	--	--	--
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0

Policy Index (Floating policy weights updated as of 6/30/2020. See Data Sources and Methodology for monthly policy breakout): 24% Russell 3000 Index, 26% BBgBarc Global Aggregate Index, 23% MSCI ACWI ex US, 0.19% Russell 2000, 0.77% BBgBarc US Corp. High Yield, 5.81% Private Equity Neutralized, 7.23% Private Credit Neutralized, 2% HFRI FoF Composite, 9% NCREIF ODCE Net and 2% 91 Day T-Bills. Composite total market values reflect manager exposures and any underlying cash balances. De-risking of the Plan commenced on April 30, 2014. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.

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

Total Fund Executive Summary (Gross of Fees)

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs	2019	2018	2017	2016	2015
Total Fund	4,909,690,453	100.0	10.6	-4.8	1.2	4.8	5.0	7.6	6.4	6.0	17.0	-3.3	14.9	7.2	-2.1
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Total Equity	2,366,685,355	48.2	19.9	-8.4	-0.3	5.4	5.7	9.8	--	--	26.4	-9.3	24.5	6.4	-2.2
MSCI ACWI IMI NR			19.8	-7.1	1.2	5.5	6.1	9.1	6.5	4.6	26.4	-10.1	23.9	8.4	-2.2
Total Domestic Equity	1,222,984,394	24.9	23.0	-4.7	4.4	9.2	8.5	13.3	8.3	7.3	28.3	-4.9	20.3	9.1	1.8
Russell 3000			22.0	-3.5	6.5	10.0	10.0	13.7	8.8	6.2	31.0	-5.2	21.1	12.7	0.5
Total International Equity	1,143,700,960	23.3	16.8	-11.8	-4.5	2.0	3.0	6.2	5.9	3.9	24.8	-13.2	29.1	3.5	-7.1
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Total Hedge Funds	96,730,807	2.0	6.3	-2.8	-0.4	2.0	2.0	3.3	--	--	7.3	-0.7	4.6	3.8	0.9
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Total Private Equity 1 Qtr Lagged	276,100,931	5.6	-2.1	-0.1	8.3	11.4	8.9	11.6	11.0	--	11.4	12.0	13.9	11.8	3.9
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Total Custodied Cash	32,631,460	0.7	0.2	0.3	1.7	1.8	1.3	0.9	1.7	1.8	3.0	1.9	0.1	0.8	0.0
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	1.5	2.1	1.9	0.9	0.3	0.0
Total County Cash	146,732,334	3.0	0.7	1.1	1.8	--	--	--	--	--	2.2	2.4	--	--	--
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	1.5	2.1	1.9	0.9	0.3	0.0

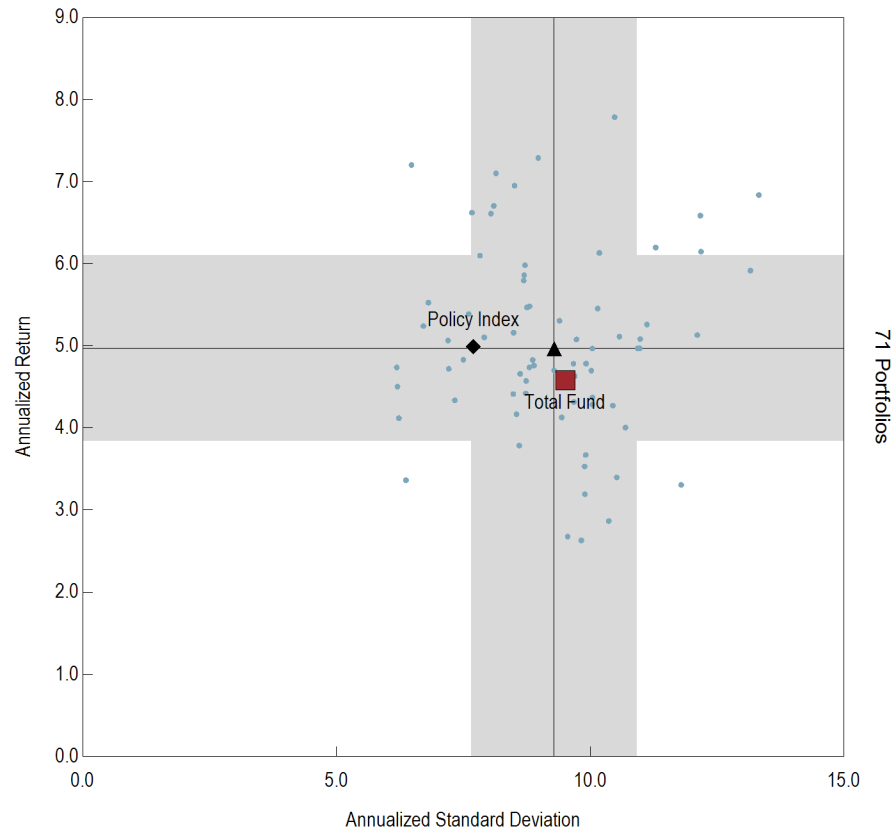
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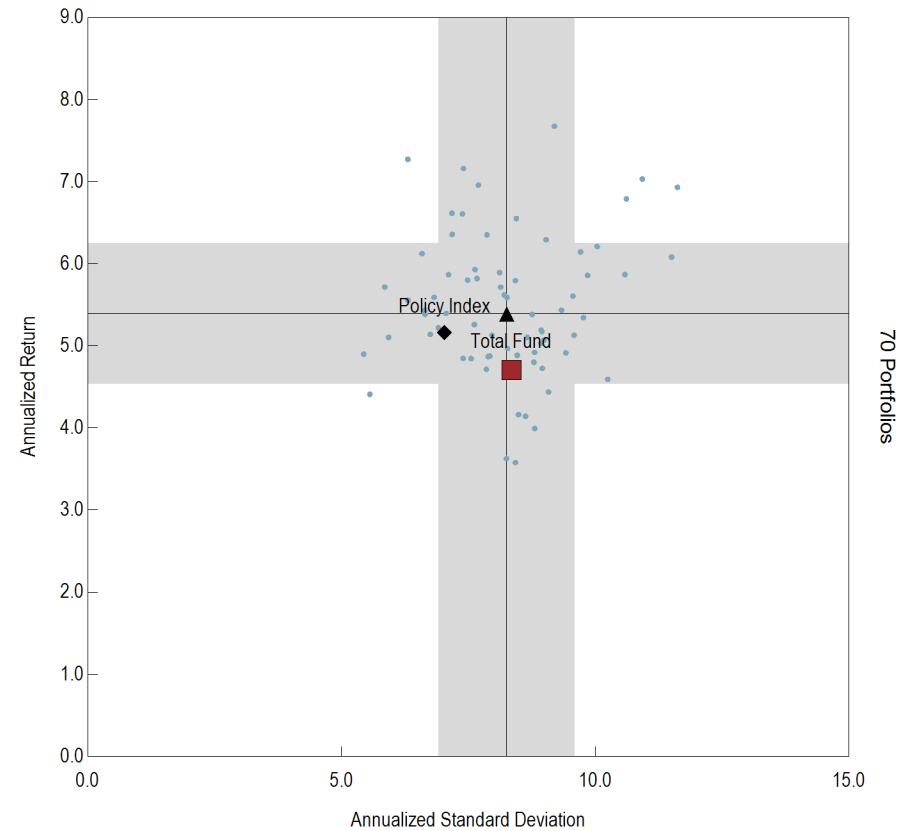
Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2020

3 Years



5 Years



3 Years

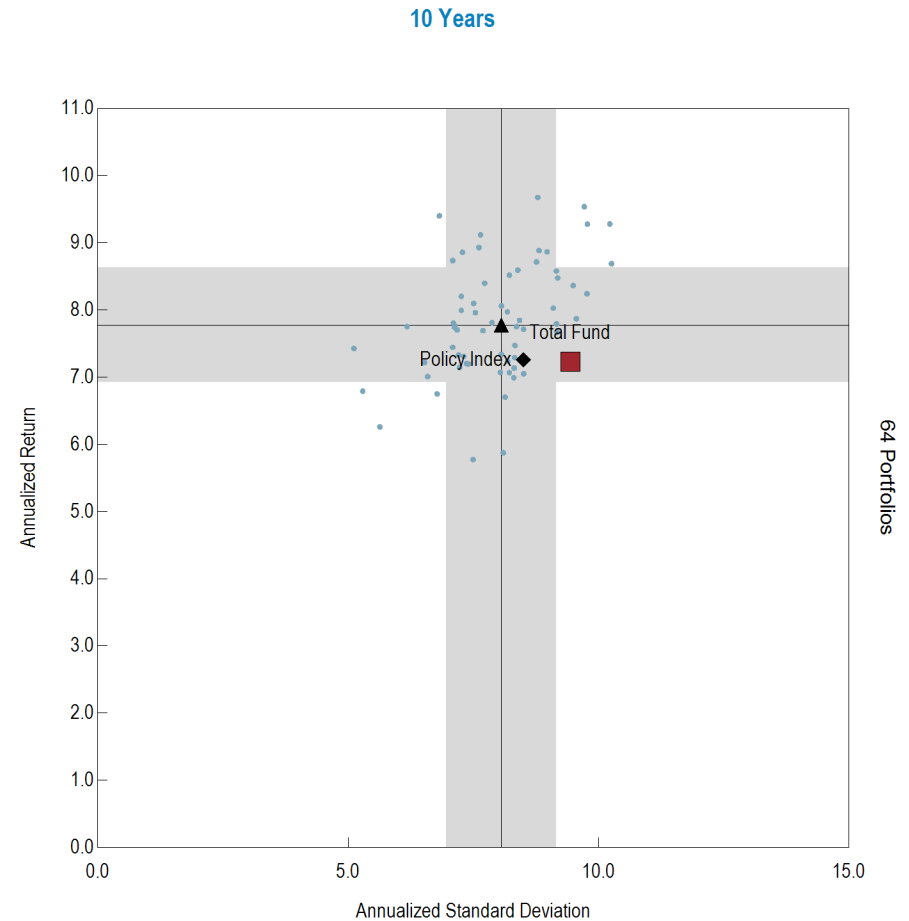
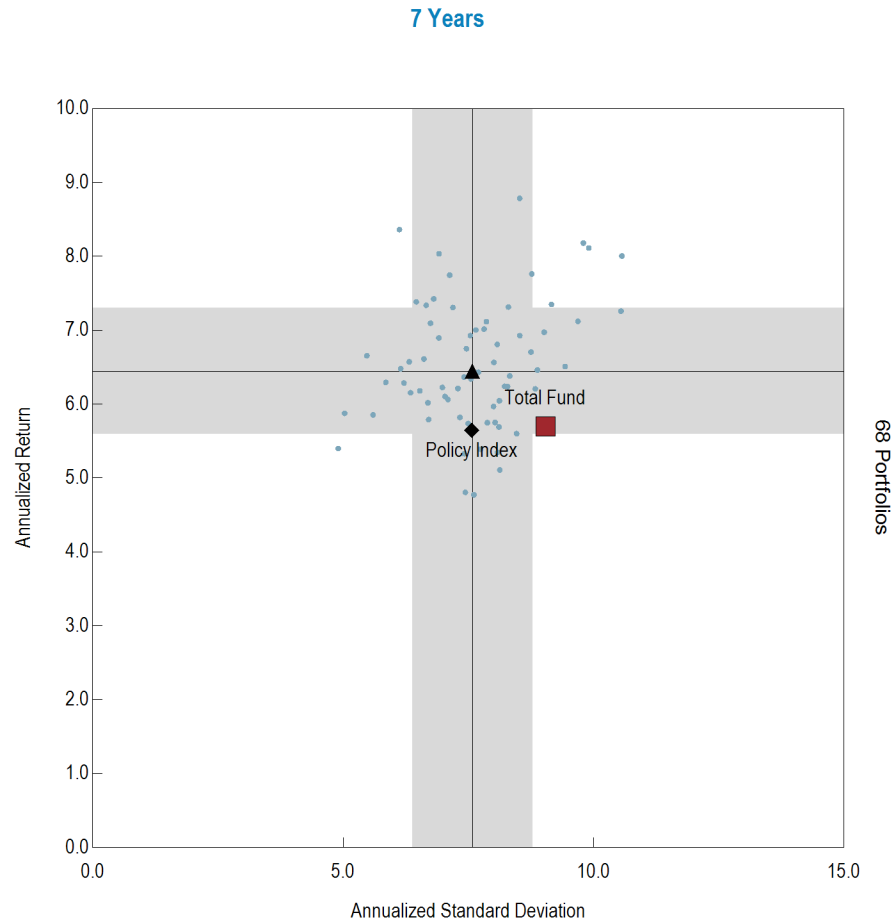
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	4.6%	9.5%	0.3
Policy Index	5.0%	7.7%	0.4
InvMetrics Public DB > \$1B Net Median	5.0%	9.3%	0.3

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	4.7%	8.4%	0.4
Policy Index	5.2%	7.0%	0.6
InvMetrics Public DB > \$1B Net Median	5.4%	8.3%	0.5

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2020



	7 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	5.7%	9.0%	0.5
Policy Index	5.6%	7.6%	0.6
InvMetrics Public DB > \$1B Net Median	6.4%	7.6%	0.7

	10 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Total Fund	7.2%	9.4%	0.7
Policy Index	7.3%	8.5%	0.8
InvMetrics Public DB > \$1B Net Median	7.8%	8.1%	0.9

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2020

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	9.51%	-1.53%	1.23	0.98	116.47%	123.93%	-0.19	2.13%	0.30	0.47
Total Equity	16.89%	-0.49%	1.01	0.99	98.87%	100.93%	-0.30	1.51%	0.20	0.33
Total Domestic Equity	18.20%	-1.27%	1.02	0.99	98.66%	102.74%	-0.57	1.81%	0.40	0.55
Total International Equity	16.33%	-0.09%	1.02	0.99	100.41%	100.45%	-0.03	1.85%	-0.01	0.11
Total Domestic Fixed Income	5.89%	0.66%	0.64	0.13	85.20%	109.99%	-0.22	5.63%	0.40	0.44
Total Real Estate	3.32%	0.40%	1.01	0.70	91.54%	208.87%	0.25	1.81%	1.04	0.81
Total Infrastructure	8.03%	8.34%	1.47	0.25	215.67%	-38.47%	1.50	7.05%	1.69	5.24
Total Hedge Funds	5.83%	0.02%	0.86	0.92	74.92%	75.66%	-0.15	1.88%	0.04	0.26
Total Alternative Illiquids	5.69%	8.73%	-0.06	0.04	14.64%	-8.88%	-0.25	19.63%	1.09	0.91

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	8.35%	-1.34%	1.17	0.97	110.52%	116.33%	-0.25	1.86%	0.43	0.60
Total Equity	14.99%	-0.76%	1.01	0.99	97.20%	101.20%	-0.55	1.28%	0.28	0.40
Total Domestic Equity	15.96%	-2.05%	1.03	0.99	96.32%	104.61%	-0.97	1.78%	0.45	0.60
Total International Equity	14.98%	-0.23%	1.00	0.98	96.57%	99.26%	-0.12	1.99%	0.09	0.21
Total Domestic Fixed Income	4.91%	1.20%	0.66	0.17	95.11%	99.17%	-0.06	4.59%	0.59	0.61
Total Real Estate	3.60%	0.33%	0.98	0.79	96.19%	208.87%	0.13	1.67%	1.51	2.03
Total Infrastructure	7.67%	5.67%	1.16	0.24	175.57%	-38.47%	1.00	6.69%	1.56	4.79
Total Hedge Funds	5.06%	0.43%	0.88	0.90	85.21%	81.85%	0.14	1.73%	0.12	0.29
Total Alternative Illiquids	5.16%	6.86%	-0.03	0.01	13.18%	-1.48%	-0.38	16.60%	1.04	0.92

Total Fund Risk Analysis (Net of Fees)

Period Ending: June 30, 2020

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	9.04%	-0.96%	1.18	0.97	109.28%	113.78%	0.02	1.98%	0.54	0.55
Total Equity	15.96%	-0.39%	1.02	0.99	99.75%	101.90%	-0.19	1.25%	0.41	0.44
Total Domestic Equity	16.39%	-1.51%	1.04	0.99	92.82%	102.48%	-0.53	2.03%	0.60	0.59
Total International Equity	16.29%	-0.25%	1.02	0.98	101.24%	101.82%	-0.07	2.18%	0.20	0.27
Total Domestic Fixed Income	5.16%	1.80%	0.57	0.12	87.19%	38.42%	0.02	5.03%	0.62	0.94
Total Real Estate	3.11%	-1.38%	1.19	0.71	109.39%	259.27%	0.10	1.74%	2.39	--
Total Hedge Funds	5.52%	0.18%	0.86	0.91	89.73%	91.48%	-0.11	1.90%	0.30	0.41
Total Alternative Illiquids	5.41%	8.41%	-0.02	0.00	21.99%	-10.27%	-0.37	16.98%	1.34	1.97

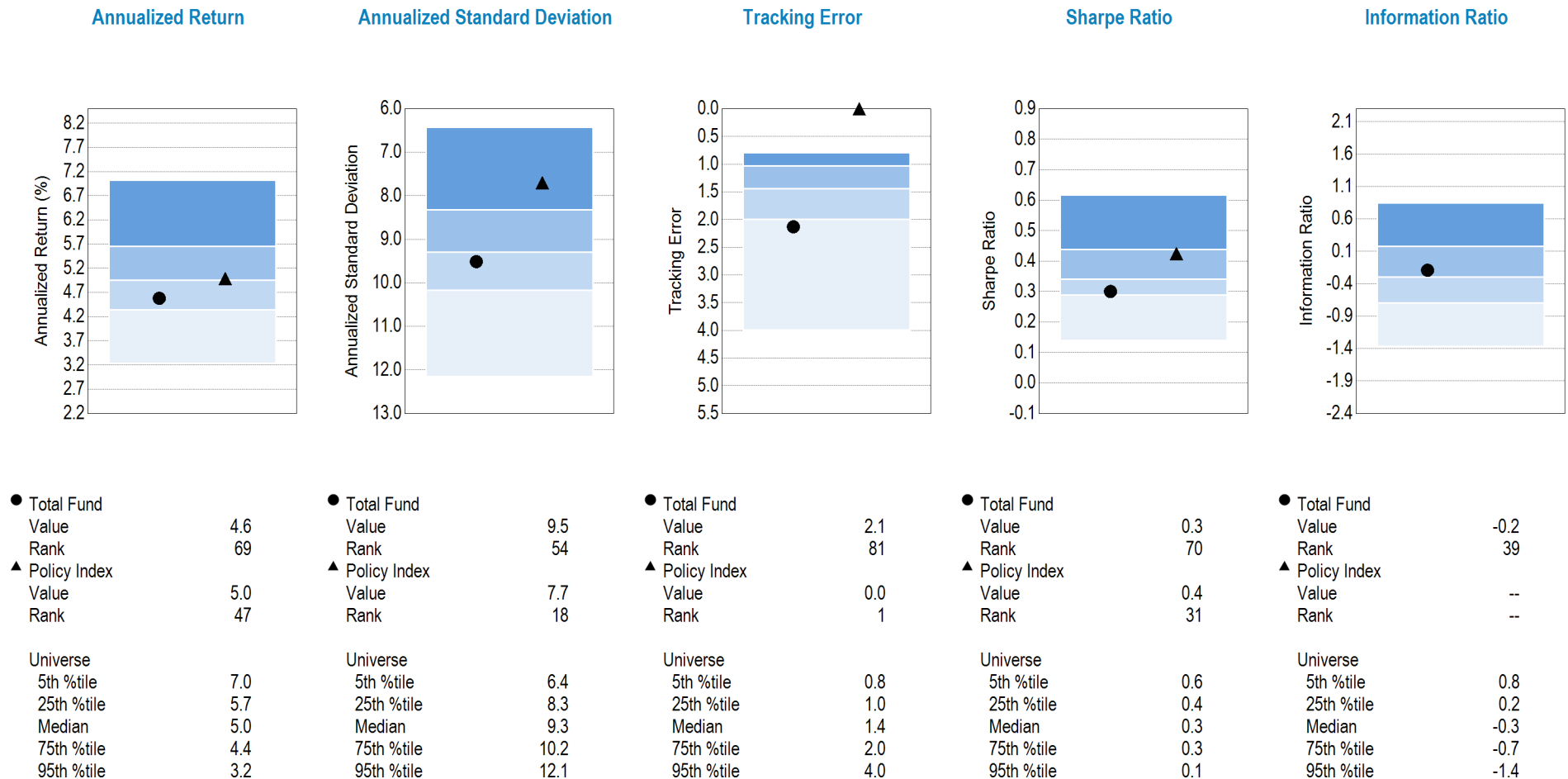
10 Years

	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	9.44%	-0.73%	1.10	0.97	106.64%	109.68%	-0.01	1.72%	0.70	0.75
Total Equity	16.23%	0.35%	1.01	0.99	104.74%	99.61%	0.34	1.36%	0.55	0.58
Total Domestic Equity	16.78%	-1.40%	1.05	0.99	98.33%	104.78%	-0.35	2.00%	0.74	0.78
Total International Equity	16.58%	0.26%	1.00	0.98	100.37%	98.83%	0.12	2.04%	0.31	0.38
Total Domestic Fixed Income	4.74%	2.28%	0.61	0.17	105.42%	49.64%	0.18	4.50%	0.85	1.15
Total Real Estate	3.12%	0.51%	0.87	0.47	93.06%	259.27%	-0.34	2.30%	2.69	1.72
Total Hedge Funds	4.77%	0.58%	0.72	0.79	75.22%	72.00%	-0.07	2.74%	0.42	0.49
Total Alternative Illiquids	5.47%	7.66%	0.06	0.03	17.35%	3.14%	-0.50	15.89%	1.47	1.84

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

Period Ending: June 30, 2020

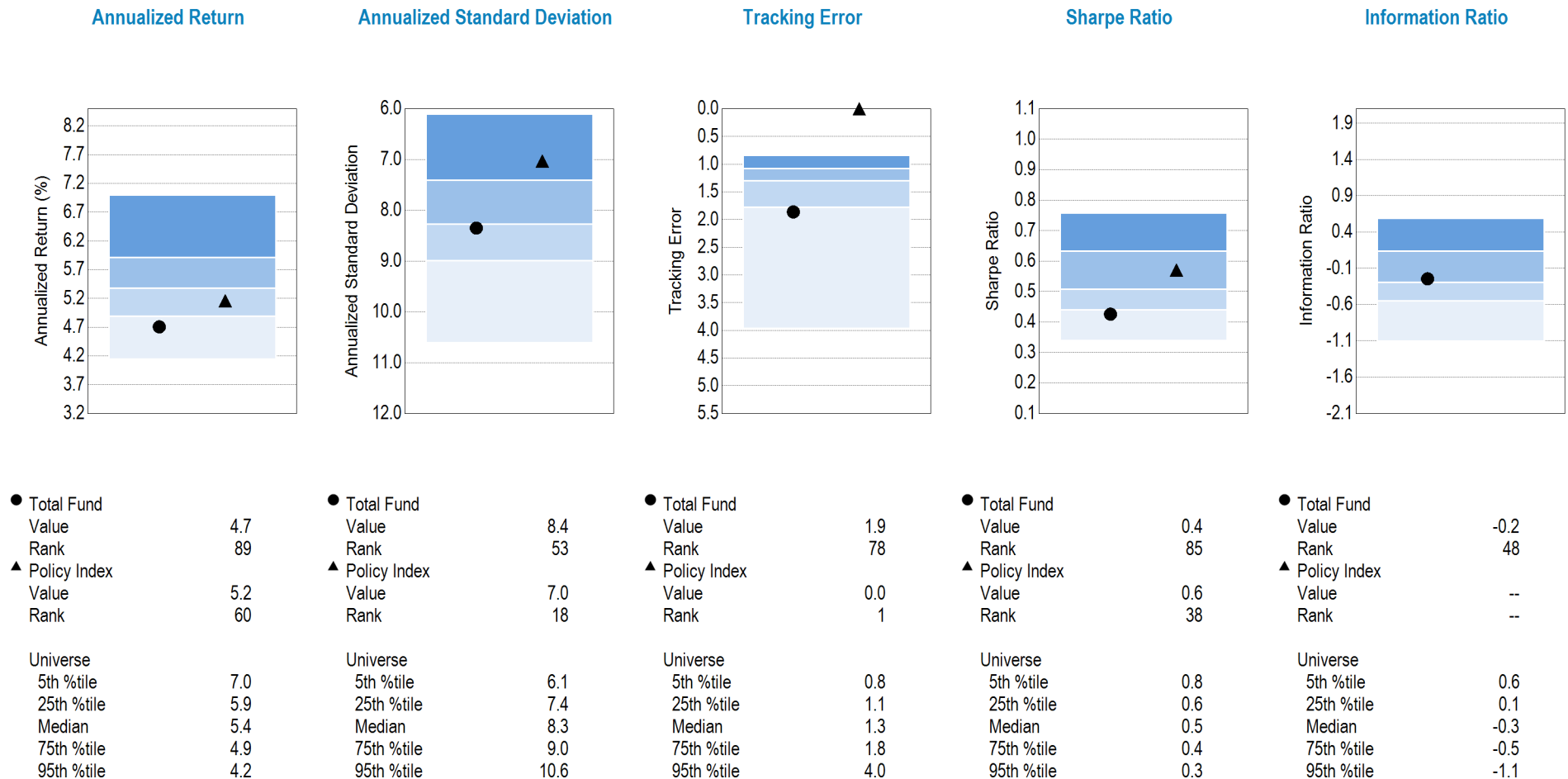
Total Fund vs. InvestorForce Public DB > \$1B Net Universe



Total Fund
Peer Universe Statistics - 5 Years (Net of Fees)

Period Ending: June 30, 2020

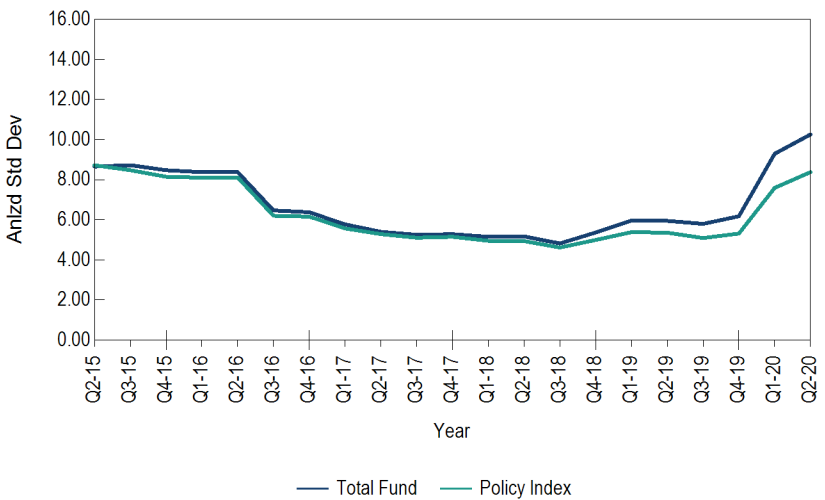
Total Fund vs. InvestorForce Public DB > \$1B Net Universe



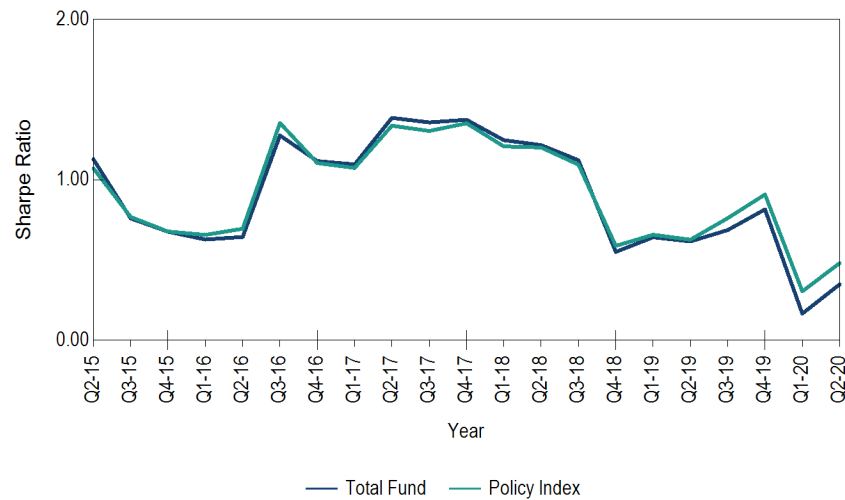
Total Fund
Risk Analysis - 5 Years (Net of Fees)

Period Ending: June 30, 2020

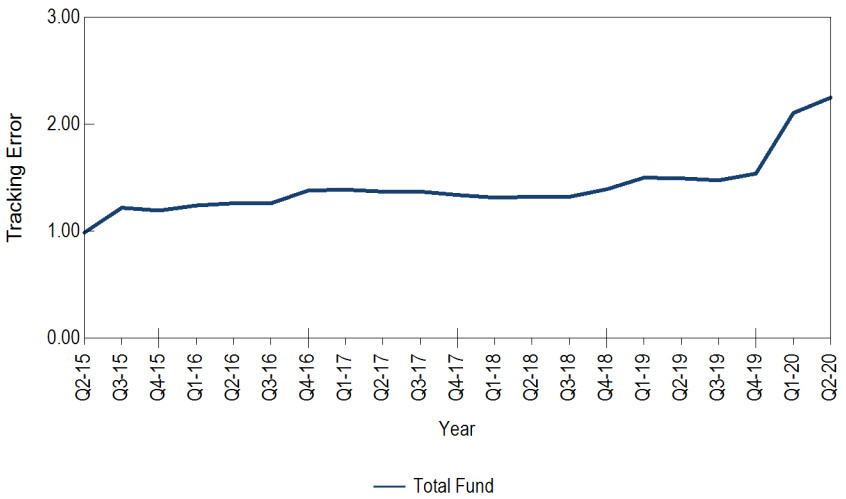
Rolling 5 Year Annualized Standard Deviation



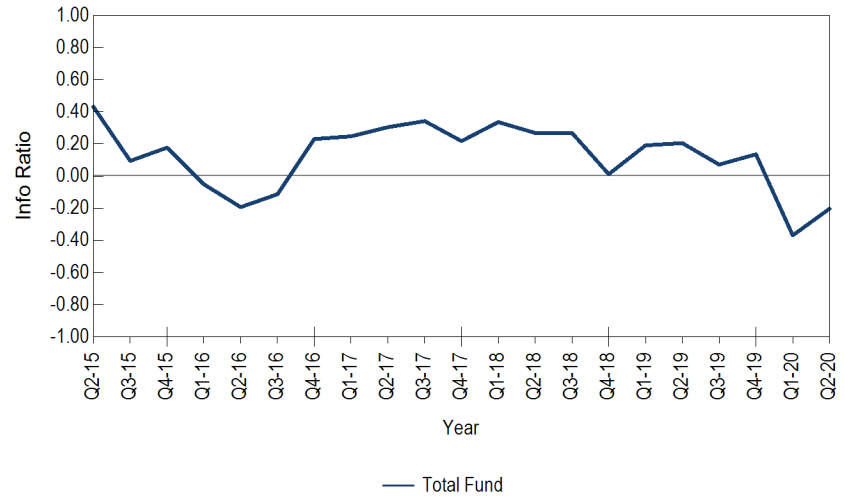
Rolling 5 Year Sharpe Ratio



Rolling 5 Year Tracking Error



Rolling 5 Year Information Ratio



Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Fund	4,909,690,453	100.0	10.5	-4.9	1.0	4.6	4.7	7.2	6.1	16.7	-3.6	14.6	6.7	-2.5	6.7	Jun-02
<i>Policy Index</i>			8.9	-2.7	2.6	5.0	5.2	7.3	5.5	14.7	-2.9	14.0	6.5	-1.7	6.2	Jun-02
Total Fund Ex Parametric	4,843,465,118	98.7	10.2	-4.3	1.2	4.5	--	--	--	15.7	-3.1	13.9	--	--	5.9	Dec-16
<i>Policy Index</i>			8.9	-2.7	2.6	5.0	5.2	7.3	5.5	14.7	-2.9	14.0	6.5	-1.7	6.2	Dec-16
Total Equity	2,366,685,355	48.2	19.8	-8.5	-0.6	5.1	5.4	9.6	--	26.0	-9.5	24.2	6.1	-2.6	--	--
<i>MSCI ACWI IMI NR</i>			19.8	-7.1	1.2	5.5	6.1	9.1	6.5	26.4	-10.1	23.9	8.4	-2.2	--	--
Total Domestic Equity	1,222,984,394	24.9	22.9	-4.7	4.2	9.0	8.3	13.0	--	28.0	-5.1	20.2	8.9	1.5	--	Mar-97
<i>Russell 3000</i>			22.0	-3.5	6.5	10.0	10.0	13.7	8.8	31.0	-5.2	21.1	12.7	0.5	8.4	Mar-97
NT MSCI US Index	714,083,097	14.5	--	--	--	--	--	--	--	--	--	--	--	--	2.3	Jun-20
<i>MSCI USA</i>			21.6	-2.5	7.8	10.4	10.1	13.4	8.3	30.9	-5.0	21.2	10.9	0.7	2.2	Jun-20
T. Rowe Price Large Cap Growth	153,063,701	3.1	28.7	12.0	22.3	--	--	--	--	29.5	--	--	--	--	23.9	Oct-18
<i>Russell 1000 Growth</i>			27.8	9.8	23.3	19.0	15.9	17.2	11.3	36.4	-1.5	30.2	7.1	5.7	25.7	Oct-18
Aronson Johnson Ortiz	108,117,973	2.2	15.9	-17.6	-12.4	0.0	2.0	9.6	5.8	21.7	-11.4	16.7	9.5	-0.1	9.0	Dec-95
<i>Russell 1000 Value</i>			14.3	-16.3	-8.8	1.8	4.6	10.4	6.2	26.5	-8.3	13.7	17.3	-3.8	8.0	Dec-95
PIMCO StocksPLUS Small Fund	247,680,812	5.0	30.9	-12.8	-4.7	--	--	--	--	29.3	--	--	--	--	0.2	Feb-18
<i>Russell 2000</i>			25.4	-13.0	-6.6	2.0	4.3	10.5	7.0	25.5	-11.0	14.6	21.3	-4.4	-0.6	Feb-18
Total International Equity	1,143,700,960	23.3	16.7	-12.0	-4.9	1.5	2.5	5.7	--	24.2	-13.6	28.5	3.0	-7.5	--	--
<i>MSCI ACWI ex USA Gross</i>			16.3	-10.8	-4.4	1.6	2.7	5.5	4.9	22.1	-13.8	27.8	5.0	-5.3	--	--
NT MSCI World Ex-US Index	387,226,359	7.9	--	--	--	--	--	--	--	--	--	--	--	--	2.6	May-20
<i>MSCI World ex USA</i>			15.3	-11.5	-5.4	0.8	2.0	5.4	4.1	22.5	-14.1	24.2	2.7	-3.0	7.8	May-20
Artisan International Growth	178,601,464	3.6	17.8	-7.0	1.2	6.4	4.3	--	--	31.3	-10.2	31.5	-9.0	-2.2	6.0	Apr-13
<i>MSCI EAFE</i>			14.9	-11.3	-5.1	0.8	2.1	5.7	4.1	22.0	-13.8	25.0	1.0	-0.8	3.7	Apr-13
Research Affiliates International Equity	156,938,862	3.2	12.8	-19.2	-13.5	-3.3	0.2	--	--	17.9	-15.5	25.7	9.3	-5.9	1.9	Apr-11
<i>MSCI EAFE</i>			14.9	-11.3	-5.1	0.8	2.1	5.7	4.1	22.0	-13.8	25.0	1.0	-0.8	2.8	Apr-11
Mondrian International Small Cap	142,963,681	2.9	18.2	-15.0	-7.2	0.6	3.1	7.3	--	25.1	-14.6	32.4	0.1	2.7	7.5	Nov-09
<i>S&P Developed Ex-U.S. SmallCap</i>			22.6	-12.5	-3.7	0.4	3.5	7.7	6.1	24.7	-18.4	32.4	3.8	5.9	6.7	Nov-09
Mondrian Emerging Markets	133,463,244	2.7	15.4	-14.8	-8.5	-1.5	0.4	2.2	--	18.3	-13.8	27.2	9.0	-16.3	4.4	Nov-05
<i>MSCI Emerging Markets</i>			18.1	-9.8	-3.4	1.9	2.9	3.3	6.3	18.4	-14.6	37.3	11.2	-14.9	5.2	Nov-05
Baillie Gifford Emerging Markets	144,507,134	2.9	24.5	-8.5	-0.3	--	--	--	--	28.0	--	--	--	--	11.1	Dec-18
<i>MSCI Emerging Markets</i>			18.1	-9.8	-3.4	1.9	2.9	3.3	6.3	18.4	-14.6	37.3	11.2	-14.9	4.5	Dec-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. Invesco Commodities liquidated 8/16/2019. SSgA S&P 500 Flagship Fund liquidated 12/2/2019. S&P 500 Index Fund transferred 6/1/2020 into NT MSCI US Index. MSCI EAFE liquidated into NT MSCI World Ex-US Index 5/28/2020.

Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Fixed Income	1,149,207,448	23.4	8.7	-1.2	1.7	3.0	3.4	4.0	--	11.0	-2.9	8.0	6.7	-4.5	--	
BBGBarc Global Aggregate*			3.3	3.0	4.2	3.8	3.6	2.5	3.5	6.8	-1.2	7.4	2.1	-3.2	--	
Western Asset Investment Grade Credit	198,299,019	4.0	11.6	5.4	9.5	6.7	6.2	--	--	14.9	-2.3	6.8	7.0	-0.5	5.6	Oct-14
BBGBarc US Credit TR			8.2	4.8	9.1	6.1	5.5	5.2	5.3	13.8	-2.1	6.2	5.6	-0.8	5.0	Oct-14
RBC Access Capital	58,524,603	1.2	0.4	3.4	5.5	--	--	--	--	6.4	--	--	--	--	7.6	Oct-18
BBGBarc US Securitized Index			0.9	3.7	5.8	4.0	3.3	3.2	4.1	6.4	1.0	2.5	1.8	1.5	7.8	Oct-18
Loomis Sayles High Yield	248,654,261	5.1	9.9	-3.4	-1.2	2.6	3.6	--	--	11.5	-2.3	7.1	14.4	-5.2	3.5	Oct-14
BBGBarc US High Yield TR			10.2	-3.8	0.0	3.3	4.8	6.7	6.8	14.3	-2.1	7.5	17.1	-4.5	4.4	Oct-14
Eaton Vance Senior Loan Fund	183,224,799	3.7	5.8	-5.0	-2.3	1.6	2.7	--	--	7.5	0.7	4.0	9.9	-0.8	2.7	Oct-14
S&P/LSTA Leveraged Loan Index			9.7	-4.6	-2.0	2.1	2.9	4.2	4.3	8.6	0.4	4.1	10.2	-0.7	2.9	Oct-14
Eaton Vance Institutional Senior Loan Plus Fund	21,360,511	0.4	7.2	-6.1	-2.2	1.7	--	--	--	11.3	-1.3	3.6	--	--	2.0	Jan-17
S&P/LSTA Leveraged Loan Index			9.7	-4.6	-2.0	2.1	2.9	4.2	4.3	8.6	0.4	4.1	10.2	-0.7	2.2	Jan-17
TCW TALF Opportunities Fund LP	4,000,000	0.1	--	--	--	--	--	--	--	--	--	--	--	--	0.0	Jun-20
BBGBarc US Aggregate TR			2.9	6.1	8.7	5.3	4.3	3.8	4.4	8.7	0.0	3.5	2.6	0.6	0.6	Jun-20
Brandywine Global Sovereign	255,172,077	5.2	7.9	-4.5	-2.5	0.4	1.8	--	--	8.7	-4.7	11.9	3.8	-9.8	0.6	Jan-15
FTSE WGBI TR			2.0	4.1	4.6	4.0	3.7	2.4	3.3	5.9	-0.8	7.5	1.6	-3.6	2.7	Jan-15
PIMCO Emerging Local Bond Ins	179,972,177	3.7	11.0	-7.3	-2.7	1.5	2.4	--	--	17.1	-7.7	15.4	10.7	-16.3	-0.1	Jul-13
JP Morgan GBI EM Global Diversified TR USD			9.8	-6.9	-2.8	1.1	2.3	1.6	4.7	13.5	-6.2	15.2	9.9	-14.9	-0.1	Jul-13
Total Real Estate	239,149,237	4.9	-4.5	-3.0	0.5	5.2	6.6	9.0	--	6.4	9.2	6.8	8.5	13.9	--	
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9	--	
Invesco Core Real Estate	174,666,564	3.6	-4.6	-3.3	0.5	4.6	6.3	10.0	--	5.7	8.5	7.5	8.3	13.7	4.4	Oct-07
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9	4.2	Oct-07
FCERA Realty Group LLC	2,820,268	0.1														
Closed End Real Estate 1 Qtr Lagged	61,662,405	1.3	-4.5	-2.2	0.6	8.4	8.4	--	--	10.8	14.1	4.3	9.0	14.9	--	
NCREIF ODCE Net 1 Qtr Lagged			0.8	2.0	3.9	5.9	6.7	10.0	6.1	4.6	7.7	4.7	7.8	13.9	--	
Total Infrastructure	171,285,263	3.5	7.9	3.7	11.5	15.3	13.1	--	--	14.6	20.1	19.0	6.1	--	--	
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9	--	
IFM Infrastructure	171,285,263	3.5	7.9	3.7	11.5	15.3	13.1	--	--	14.6	20.1	19.0	6.1	--	12.9	May-15
NCREIF ODCE Net			-1.8	-1.0	1.3	4.7	6.4	9.8	6.0	4.4	7.4	6.7	7.8	13.9	6.9	May-15
Total Hedge Funds	96,730,807	2.0	6.3	-2.8	-0.4	2.0	1.7	2.6	3.1	7.3	-0.7	4.6	3.0	0.0	--	
HFRI Fund of Funds Composite Index			7.9	-1.6	0.4	2.2	1.5	2.8	2.6	8.4	-4.0	7.8	0.5	-0.3	--	
GCM Better Futures Fund	96,730,807	2.0	6.3	-6.5	-4.3	0.6	--	--	--	8.3	-0.2	2.8	--	--	1.9	Sep-16
HFRI Fund of Funds Composite Index			7.9	-1.6	0.4	2.2	1.5	2.8	2.6	8.4	-4.0	7.8	0.5	-0.3	2.9	Sep-16

RBC Access Capital funded 10/10/2018. Invesco Commodities liquidated 8/16/2019. SSgA TIPS liquidated 12/16/2019. Northern Trust Collective TIPS Index Fund liquidated 3/25/2019. Grosvenor liquidated 4/1/2020. TCW TALF Opportunities Fund LP funded 6/12/2020.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015	Inception	Inception Date
Total Private Equity 1 Qtr Lagged	276,100,931	5.6	-2.1	-0.1	8.3	11.4	8.7	11.3	10.9	11.4	12.0	13.9	10.7	3.8	--	
Russell 2000 1 Qtr Lagged			-30.6	-23.7	-24.0	-4.6	0.2	8.3	5.6	-8.9	15.2	13.7	21.3	-4.4	--	
Total Private Credit 1 Qtr Lagged	364,911,590	7.4	-6.1	-4.4	-0.4	4.5	4.4	6.3	11.2	5.3	7.6	8.1	7.4	-2.5	--	
BBgBarc US Corp. High Yield 1 Qtr Lagged			-12.7	-10.4	-6.9	0.8	2.8	5.7	6.2	6.4	3.0	7.0	17.1	-4.5	--	
Total Custodied Cash	32,631,460	0.7	0.2	0.3	1.7	1.8	1.3	0.9	--	3.0	1.9	0.1	0.8	0.0	--	
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0	--	
Total County Cash	146,732,334	3.0	0.7	1.1	1.8	--	--	--	--	2.2	2.4	--	--	--	--	
91 Day T-Bills			0.0	0.4	1.3	1.7	1.1	0.6	1.2	2.1	1.9	0.9	0.3	0.0	--	
Total Parametric Overlay	66,225,335	1.3														

Real Estate Closed End Funds (Net of Fees)

Period Ending: June 30, 2020

Real Estate - Closed End Funds											
Fund	Inception Date	% of Portfolio	Total Commitment	Contributions	Distributions	Estimated Market Value	One Quarter Return	One Year Return	Three Years Return	Five Years Return	(IRR) Since Inception
Kennedy Wilson Real Estate Fund VI	2019	0.4%	\$30,000,000	\$19,134,259	\$1,984,520	\$19,399,373	9.8%	9.8%	N/A	N/A	12.0%
Invesco Value-Add Fund V	2017	0.3%	\$30,000,000	\$12,639,417	\$1,893,498	\$12,756,030	-4.3%	2.1%	N/A	N/A	N/A
Kennedy Wilson Real Estate Fund V	2016	0.2%	\$30,000,000	\$28,113,444	\$27,351,451	\$11,346,648	-1.6%	9.8%	14.1%	N/A	13.8%
Gerding Edlen Green Cities III	2016	0.4%	\$20,000,000	\$19,311,784	\$2,323,638	\$18,160,354	-17.5%	-13.9%	0.3%	N/A	8.5%
<hr/>											
Total		1.3%	\$ 110,000,000.00	\$ 79,198,904.26	\$ 33,553,107.11	\$ 61,662,404.75					

Private Equity Non Marketable Securities Overview

Period Ending: June 30, 2020

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	\$597,726	\$22,648,846	\$52,986,528	\$508,883	2.40x	29.61%
Hamilton Lane Private Equity Fund IX L.P.	2016	\$100,000,000	\$27,040,013	\$72,959,987	\$18,486,194	\$79,634,734	1.30x	13.57%
Hamilton Lane Private Equity Fund VI, LP	2007	\$70,000,000	\$7,388,235	\$62,611,765	\$84,460,367	\$16,634,271	1.60x	9.23%
Horsley Bridge XI Growth Buyout L.P.	2016	\$30,000,000	\$10,726,347	\$19,273,653	\$525,613	\$20,641,840	1.10x	4.76%
Landmark Equity Partners XIV, L.P.	2009	\$30,000,000	\$872,369	\$29,129,792	\$33,566,011	\$4,900,086	1.30x	9.86%
New Mountain Partners III, L.P.	2007	\$15,000,000	\$1,028,824	\$15,363,060	\$20,426,018	\$9,615,686	2.00x	12.87%
Warburg Pincus Equity Partners, L.P.	1998	\$20,000,000	\$0	\$20,000,000	\$33,046,892	\$78,796	1.70x	10.26%
Warburg Pincus Private Equity VIII, L.P.	2001	\$25,000,000	\$0	\$26,100,000	\$58,286,084	\$92,626	2.20x	14.50%
Warburg Pincus Private Equity X, L.P.	2007	\$25,000,000	\$0	\$25,046,896	\$36,364,445	\$3,345,200	1.70x	8.78%
Warburg Pincus Private Equity XII, L.P.	2015	\$34,000,000	\$1,343,000	\$32,674,364	\$3,054,346	\$35,730,276	1.20x	9.68%
Total Legacy Portfolio		\$369,000,000	\$48,996,514	\$325,808,363	\$341,202,498	\$171,182,398	1.60x	12.68%
Hamilton Lane Portfolio								
Aurora Equity Partners VI, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	\$0	N/A	0
Avista Capital Partners IV, L.P.	2018	\$10,000,000	\$1,168,090	\$11,049,069	\$5,026,564	\$8,269,867	1.20x	21.53%
Avista Capital Partners V, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	-\$217,052	N/A	0.00x
Cinven Seventh Fund	2019	\$8,428,579	\$8,428,579	\$0	\$0	\$797,213	N/A	0.00x
Gridiron Capital Fund IV, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	\$2,238,410	N/A	0.00x
H.I.G. Growth Buyouts & Equity Fund III, L.P.	2019	\$10,000,000	\$9,495,215	\$504,785	\$0	\$280,823	0.60x	(60.30%)
Hamilton Lane Secondary Fund IV, L.P.	2017	\$75,000,000	\$25,091,995	\$61,406,309	\$18,920,662	\$59,101,624	1.20x	17.58%
HGGC Fund IV, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	\$1,503,633	N/A	0.00%
Insight Partners XI, L.P.	2019	\$10,000,000	\$8,500,000	\$1,500,000	\$0	\$1,410,599	0.90x	(5.96%)
JFL Equity Investors V, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	-\$26,246	N/A	0.00%
K4 Private Investors, L.P.	2018	\$5,000,000	\$1,740,806	\$3,259,194	\$507	\$3,340,921	1.00x	2.86%
Kelso Investment Associates X, L.P.	2018	\$7,500,000	\$6,156,766	\$1,357,489	\$16,704	\$1,230,255	0.90x	(16.49%)
NewQuest Asia Fund IV, L.P.	2019	\$10,000,000	\$10,000,000	\$0	\$0	-\$174,949	N/A	0.00x
Platinum Equity Capital Partners V, L.P.	2019	\$10,000,000	\$8,859,110	\$1,140,890	\$0	\$933,775	0.80x	-0.40x
Platinum Equity Small Cap Fund, L.P.	2018	\$7,500,000	\$5,814,898	\$1,732,667	\$47,565	\$1,526,290	0.40x	(91.96%)
SK Capital Partners Fund V, L.P.	2018	\$10,000,000	\$7,186,367	\$2,813,633	\$3,497	\$2,497,530	0.90x	(12.21%)
Thomas H. Lee Equity Fund VIII, L.P.	2019	\$7,500,000	\$5,686,002	\$2,281,404	\$570,835	\$3,030,949	1.10x	41.77%
TPG Partners VIII, L.P.	2019	\$10,000,000	\$9,429,192	\$570,808	\$0	\$677,821	N/A	-0.84x
Verdane Capital X AB	2019	\$6,729,018	\$5,620,232	\$1,108,786	\$0	\$17,372,043	1.30x	39.35%
ZMC III, L.P.	2019	\$6,764,374	\$6,706,049	\$58,325	\$0	\$1,125,029	-0.40x	0.00%
Total Hamilton Lane Portfolio		\$244,421,971	\$169,883,301	\$88,783,359	\$24,586,334	\$104,918,533	1.10x	13.75%
Total Private Equity		\$613,421,971	\$218,879,815	\$414,591,722	\$365,788,832	\$276,100,931	1.50x	12.71%

*NAV provided by Hamilton Lane as of 3/31/2020 adjusted for cash flows that occurred during Q2 2020.

Private Credit Non Marketable Securities Overview

Period Ending: June 30, 2020

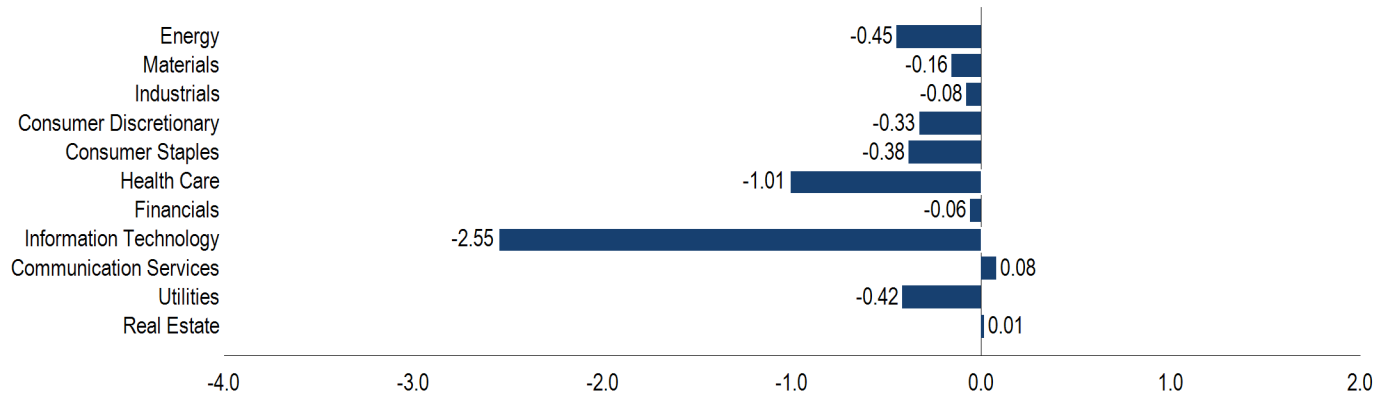
Private Credit								
Fund	Vintage Year	Commitment	Unfunded	Paid-In Capital	Capital Distributed	NAV	TVPI	Since Inception IRR
Legacy Portfolio								
EQT European Special Situations Debt	2017	\$40,000,000	\$17,234,051	\$24,240,041	\$2,601,179	\$24,437,586	1.12	11.00%
OHA Strategic Credit Fund II	2016	\$40,000,000	\$20,000,000	\$20,000,000	\$0	\$17,137,180	0.86	-8.60%
TSSP Adjacent Opportunities Partners	2016	\$30,000,000	\$9,029,433	\$41,467,138	\$21,556,089	\$23,605,594	1.09	8.00%
GSO European Senior Debt	2015	\$30,000,000	\$7,879,384	\$27,600,499	\$24,889,909	\$14,679,105	1.43	2.20%
CVI Credit Value Fund III	2015	\$30,000,000	\$1,500,000	\$28,500,000	\$21,917,240	\$12,916,671	1.22	7.29%
Colony Distressed Credit III	2014	\$20,000,000	\$2,734,614	\$21,939,049	\$20,711,825	\$7,012,700	1.26	9.00%
Oaktree Opportunities IX	2012	\$15,000,000	\$0	\$15,000,000	\$7,184,315	\$11,051,348	1.22	3.50%
KKR Mezzanine Partners	2010	\$30,000,000	\$2,982,882	\$36,266,238	\$43,582,700	\$7,174,087	1.40	7.55%
Angelo Gordon VII	2010	\$30,000,000	\$0	\$30,000,000	\$36,463,492	\$351,114	1.23	4.94%
Colony Distressed Credit I	2009	\$40,000,000	\$0	\$42,267,927	\$63,855,850	\$309,948	1.52	13.00%
Lone Star Fund IV	2002	\$20,000,000	\$954,801	\$19,045,199	\$44,404,793	\$63,294	2.33	30.71%
Total Legacy Portfolio		\$325,000,000	\$62,315,165	\$306,326,091	\$287,167,392	\$118,738,627	1.33	
Carlyle Portfolio								
TCG BDC II	2017	\$150,000,000	\$34,092,111	\$118,202,071	\$13,062,632	\$105,891,298	1.01	0.64%
CPC V	2017	\$150,000,000	\$37,846,980	\$139,326,710	\$32,115,101	\$115,863,127	1.06	3.48%
AlpInvest FC Credit Fund	2017	\$100,000,000	\$67,571,999	\$32,508,792	\$6,730,349	\$24,418,538	0.96	2.46%
Total Carlyle Portfolio		\$400,000,000	\$139,511,090	\$290,037,573	\$51,908,082	\$246,172,963	1.01	
Total Private Credit		\$725,000,000	\$201,826,255	\$596,363,664	\$339,075,474	\$364,911,590		

Data provided by Carlyle.

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

Period Ending: June 30, 2020

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	2.85%	2.46%	0.40%	25.36%	31.85%	-6.49%	-0.14%	-0.31%	-0.45%	0.25%	-0.20%
Materials	2.56%	2.60%	-0.04%	21.08%	26.17%	-5.10%	0.02%	-0.17%	-0.16%	0.11%	-0.04%
Industrials	8.18%	9.04%	-0.85%	16.35%	17.69%	-1.34%	0.04%	-0.12%	-0.08%	-0.38%	-0.46%
Consumer Discretionary	9.08%	10.02%	-0.94%	38.97%	37.46%	1.51%	-0.36%	0.03%	-0.33%	1.57%	1.24%
Consumer Staples	8.29%	7.06%	1.22%	8.23%	8.27%	-0.03%	-0.38%	-0.01%	-0.38%	-0.96%	-1.34%
Health Care	15.46%	15.64%	-0.18%	10.90%	16.50%	-5.59%	-0.07%	-0.94%	-1.01%	-0.84%	-1.85%
Financials	12.30%	11.44%	0.86%	15.45%	12.66%	2.79%	-0.55%	0.50%	-0.06%	-1.05%	-1.11%
Information Technology	22.65%	24.50%	-1.85%	18.31%	31.50%	-13.19%	-1.40%	-1.15%	-2.55%	2.37%	-0.19%
Communication Services	10.47%	9.84%	0.63%	22.01%	21.03%	0.99%	0.01%	0.07%	0.08%	-0.08%	0.00%
Utilities	4.11%	3.52%	0.58%	2.32%	2.71%	-0.39%	-0.36%	-0.05%	-0.42%	-0.67%	-1.09%
Real Estate	3.17%	3.87%	-0.70%	13.70%	13.57%	0.13%	0.02%	0.00%	0.01%	-0.32%	-0.31%
Unclassified	0.87%	0.00%	0.87%	25.57%	21.84%	3.73%	0.00%	0.12%	0.12%	0.00%	0.12%
Total				16.62%	21.84%	-5.22%	-3.18%	-2.04%	-5.22%	0.00%	-5.22%

Please note that attribution portfolio return is calculated based on portfolio holding returns and beginning of period portfolio weights, the effects of transactions during the period are not reflected in the return. The attribution portfolio return will vary from the composite return. Attribution analysis does not include T. Rowe Price Large Cap Growth and Pimco StocksPlus Small Fund.

Total Domestic Equity
Performance Attribution Summary (Net of Fees)

Period Ending: June 30, 2020

Portfolio: Total Domestic Equity Benchmark: Russell 3000	
Portfolio Total Return	22.93%
	Equity Only
Portfolio	16.62%
Benchmark	<u>21.84%</u>
Return From Active Mgmt	-5.22%
Local Returns	
Portfolio	16.62%
Benchmark	<u>21.82%</u>
Active Equity Return	-5.20%
Country Selection	0.00%
Stock Selection	-5.19%
Currency Contributions	
Portfolio	0.00%
Benchmark	<u>0.02%</u>
Active Currency Contributions	-0.02%

Chart uses return-based methodology. Attribution analysis does not include T. Rowe Price Large Cap Growth and Pimco StocksPlus Small Fund.

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

Period Ending: June 30, 2020

Total International Equity vs. MSCI ACWI ex USA

Current Quarter

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Active Return	Allocation Effect (Local)	Selection Effect (Local)	Currency Effect
ARGENTINA	0.00%	0.04%	-0.04%	--	45.15%	-45.15%	-0.01%	-0.01%	0.00%	0.00%
AUSTRALIA	4.85%	3.89%	0.95%	30.77%	29.01%	1.76%	0.04%	0.02%	0.02%	0.00%
AUSTRIA	0.12%	0.11%	0.01%	19.61%	20.94%	-1.33%	0.00%	0.00%	0.00%	0.00%
BELGIUM	0.70%	0.58%	0.13%	12.96%	13.61%	-0.65%	0.01%	0.01%	0.00%	0.00%
BRAZIL	0.32%	1.36%	-1.04%	39.45%	23.11%	16.34%	0.01%	-0.16%	0.10%	0.08%
CANADA	3.70%	6.34%	-2.64%	20.17%	20.57%	-0.40%	-0.19%	-0.04%	-0.01%	-0.14%
CHILE	0.00%	0.17%	-0.17%	--	17.05%	-17.05%	-0.01%	0.00%	0.00%	-0.01%
CHINA	0.71%	11.01%	-10.30%	26.50%	14.77%	11.73%	0.14%	-0.04%	0.18%	0.00%
COLOMBIA	0.00%	0.07%	-0.07%	--	11.04%	-11.04%	0.00%	0.01%	0.00%	-0.01%
CZECH REPUBLIC	0.00%	0.03%	-0.03%	--	24.10%	-24.10%	0.00%	0.00%	0.00%	0.00%
DENMARK	1.91%	1.45%	0.46%	42.13%	19.12%	23.00%	0.60%	0.00%	0.55%	0.04%
EGYPT	0.00%	0.04%	-0.04%	--	7.33%	-7.33%	0.00%	0.00%	0.00%	0.00%
FINLAND	0.49%	0.66%	-0.17%	22.83%	21.39%	1.43%	-0.02%	-0.01%	0.00%	-0.01%
FRANCE	10.71%	7.10%	3.61%	16.90%	16.52%	0.37%	0.14%	-0.02%	0.05%	0.11%
GERMANY	10.97%	5.44%	5.53%	30.37%	27.86%	2.52%	1.29%	0.79%	0.26%	0.24%
GREECE	0.00%	0.06%	-0.06%	--	14.72%	-14.72%	0.00%	0.00%	0.00%	0.00%
HONG KONG	3.88%	2.48%	1.40%	9.67%	9.13%	0.54%	-0.06%	-0.10%	0.04%	0.00%
HUNGARY	0.00%	0.07%	-0.07%	--	14.29%	-14.29%	0.00%	0.00%	0.00%	0.00%
INDIA	0.00%	2.15%	-2.15%	21.12%	21.34%	-0.22%	-0.11%	-0.14%	0.04%	-0.01%
INDONESIA	0.00%	0.42%	-0.42%	--	24.96%	-24.96%	-0.05%	0.02%	0.00%	-0.07%
IRELAND	0.55%	0.37%	0.18%	5.67%	24.28%	-18.61%	-0.06%	0.00%	-0.06%	-0.01%
ISRAEL	0.57%	0.40%	0.17%	24.28%	19.97%	4.32%	0.06%	0.01%	0.05%	0.00%
ITALY	2.84%	1.43%	1.42%	16.82%	16.90%	-0.08%	0.03%	0.00%	-0.01%	0.04%
JAPAN	21.65%	17.43%	4.22%	9.11%	11.51%	-2.40%	-0.52%	-0.11%	-0.46%	0.04%
KOREA	0.00%	3.29%	-3.29%	--	19.27%	-19.27%	-0.17%	-0.12%	0.00%	-0.05%
LUXEMBOURG	0.25%	0.00%	0.25%	12.87%	16.37%	-3.50%	0.00%	0.00%	0.00%	0.00%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

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

Period Ending: June 30, 2020

	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Active Return	Allocation Effect (Local)	Selection Effect (Local)	Currency Effect
MALAYSIA	0.00%	0.53%	-0.53%	--	13.96%	-13.96%	0.00%	0.01%	0.00%	0.00%
MEXICO	0.00%	0.53%	-0.53%	--	10.99%	-10.99%	0.02%	0.03%	0.00%	-0.01%
NETHERLANDS	3.35%	2.75%	0.60%	18.64%	25.34%	-6.70%	-0.18%	0.01%	-0.20%	0.00%
NEW ZEALAND	0.32%	0.20%	0.12%	17.90%	27.86%	-9.96%	-0.01%	0.00%	-0.01%	0.00%
NORWAY	0.44%	0.36%	0.08%	21.39%	15.40%	5.99%	0.03%	0.00%	0.03%	0.00%
Other Countries	0.00%	0.00%	0.00%	18.73%	16.37%	2.36%	0.00%	0.00%	0.00%	0.00%
PAKISTAN	0.00%	0.01%	-0.01%	--	13.96%	-13.96%	0.00%	0.00%	0.00%	0.00%
PERU	0.00%	0.08%	-0.08%	--	10.45%	-10.45%	0.00%	0.00%	0.00%	0.00%
PHILIPPINES	0.00%	0.23%	-0.23%	--	20.16%	-20.16%	-0.01%	-0.01%	0.00%	-0.01%
POLAND	0.00%	0.20%	-0.20%	--	21.04%	-21.04%	-0.01%	0.00%	0.00%	-0.01%
PORTUGAL	0.32%	0.12%	0.20%	23.27%	13.15%	10.12%	0.07%	0.00%	0.06%	0.02%
QATAR	0.00%	0.27%	-0.27%	--	7.10%	-7.10%	0.02%	0.02%	0.00%	0.00%
RUSSIA	0.00%	0.89%	-0.89%	--	19.09%	-19.09%	-0.05%	0.04%	0.00%	-0.08%
SAUDI ARABIA	0.00%	0.72%	-0.72%	--	13.98%	-13.98%	0.00%	0.00%	0.00%	0.00%
SINGAPORE	1.77%	0.80%	0.97%	10.43%	10.15%	0.28%	0.06%	0.03%	0.03%	0.01%
SOUTH AFRICA	0.00%	1.01%	-1.01%	--	28.24%	-28.24%	-0.14%	-0.11%	0.00%	-0.03%
SPAIN	1.87%	1.72%	0.15%	6.85%	10.32%	-3.47%	-0.07%	-0.01%	-0.06%	0.00%
SWEDEN	2.14%	1.82%	0.32%	19.54%	20.61%	-1.06%	-0.04%	0.00%	0.00%	-0.04%
SWITZERLAND	9.14%	7.09%	2.04%	13.80%	11.50%	2.29%	0.16%	-0.17%	0.23%	0.09%
TAIWAN	0.00%	3.42%	-3.42%	--	21.44%	-21.44%	-0.25%	-0.15%	0.00%	-0.11%
THAILAND	0.00%	0.61%	-0.61%	--	24.05%	-24.05%	-0.06%	-0.02%	0.00%	-0.05%
TURKEY	0.00%	0.12%	-0.12%	--	19.43%	-19.43%	-0.01%	-0.01%	0.00%	0.01%
UNITED ARAB EMIRATES	0.00%	0.15%	-0.15%	--	16.18%	-16.18%	0.00%	0.00%	0.00%	0.00%
UNITED KINGDOM	11.75%	10.00%	1.74%	10.46%	8.55%	1.91%	0.30%	-0.01%	0.23%	0.08%
UNITED STATES	4.70%	0.00%	4.70%	19.15%	21.58%	-2.44%	0.19%	0.37%	-0.18%	0.00%
	100.00%	100.00%	0.00%	17.50%	16.37%	1.13%	1.13%	0.14%	0.89%	0.10%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

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

Period Ending: June 30, 2020

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
	0.00%	0.00%	0.00%	--	0.00%	2.15%	-2.15%	0.00%
Argentinian Nuevo Peso	0.00%	0.04%	-0.04%	-8.50%	0.00%	0.00%	0.00%	0.00%
Australian Dollar	4.85%	3.89%	0.95%	11.86%	14.52%	14.33%	0.20%	0.00%
Baht	0.00%	0.61%	-0.61%	5.73%	0.00%	7.22%	-7.22%	-0.05%
Canadian Dollar	3.70%	6.34%	-2.64%	4.00%	5.00%	5.19%	-0.19%	-0.14%
Chilean Peso	0.00%	0.17%	-0.17%	3.16%	0.00%	4.36%	-4.36%	-0.01%
Colombian Peso	0.00%	0.07%	-0.07%	9.23%	0.00%	8.77%	-8.77%	-0.01%
Cruzeiro Real	0.32%	1.36%	-1.04%	-6.25%	-4.93%	-7.22%	2.29%	0.08%
Czech Koruna	0.00%	0.03%	-0.03%	4.76%	0.00%	6.20%	-6.20%	0.00%
Danish Krone	1.91%	1.45%	0.46%	2.03%	3.45%	2.89%	0.56%	0.04%
Egyptian Pound	0.00%	0.04%	-0.04%	-2.26%	0.00%	-2.73%	2.73%	0.00%
Emirati dirham	0.00%	0.15%	-0.15%	0.00%	0.00%	0.00%	0.00%	0.00%
Euro	32.17%	20.34%	11.83%	1.83%	2.74%	2.73%	0.01%	0.38%
Forint	0.00%	0.07%	-0.07%	3.10%	0.00%	4.57%	-4.57%	0.00%
Hong Kong Dollar	3.88%	2.48%	1.40%	0.05%	0.01%	0.01%	0.00%	0.00%
Indian Rupee	0.00%	2.15%	-2.15%	0.15%	0.00%	0.24%	-0.24%	-0.01%
Mexican New Peso	0.00%	0.53%	-0.53%	4.81%	0.00%	1.67%	-1.67%	-0.01%
New Sol	0.00%	0.08%	-0.08%	-2.69%	0.00%	0.00%	0.00%	0.00%
New Taiwan Dollar	0.00%	3.42%	-3.42%	2.42%	0.00%	2.96%	-2.96%	-0.11%
New Zealand Dollar	0.32%	0.20%	0.12%	7.35%	9.32%	10.11%	-0.79%	0.00%
New Zloty	0.00%	0.20%	-0.20%	4.35%	0.00%	5.77%	-5.77%	-0.01%
Norwegian Krone	0.44%	0.36%	0.08%	9.85%	9.87%	9.39%	0.49%	0.00%
Pakistani Rupee	0.00%	0.01%	-0.01%	-1.44%	0.00%	-1.23%	1.23%	0.00%
Philippines Peso	0.00%	0.23%	-0.23%	2.36%	0.00%	2.45%	-2.45%	-0.01%
Pound Sterling	11.75%	10.00%	1.74%	-0.46%	-0.44%	-0.45%	0.00%	0.08%
Qatari rial	0.00%	0.27%	-0.27%	0.00%	0.00%	0.00%	0.00%	0.00%
Rand	0.00%	1.01%	-1.01%	3.43%	0.00%	3.48%	-3.48%	-0.03%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

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

Period Ending: June 30, 2020

Currency Name	Portfolio Weight	Index Weight	Excess Weight	Currency Return	Portfolio Contrib.	Index Contrib.	Active Contrib.	Currency Effect
Ringgit (Malaysian Dollar)	0.00%	0.53%	-0.53%	1.11%	0.00%	0.92%	-0.92%	0.00%
Rupiah	0.00%	0.42%	-0.42%	14.37%	0.00%	15.51%	-15.51%	-0.07%
Russian Federation Rouble	0.00%	0.89%	-0.89%	11.91%	0.00%	8.89%	-8.89%	-0.08%
Saudi Arabian Riyal	0.00%	0.72%	-0.72%	0.16%	0.00%	0.18%	-0.18%	0.00%
Shekel	0.57%	0.40%	0.17%	3.14%	0.94%	1.37%	-0.43%	0.00%
Singapore Dollar	1.77%	0.80%	0.97%	2.07%	2.08%	2.23%	-0.15%	0.01%
South Korean Won	0.00%	3.29%	-3.29%	1.79%	0.00%	1.42%	-1.42%	-0.05%
Swedish Krona	2.14%	1.82%	0.32%	7.84%	7.13%	7.20%	-0.07%	-0.04%
Swiss Franc	9.14%	7.09%	2.04%	1.30%	2.35%	2.30%	0.05%	0.09%
Turkish Lira	0.00%	0.12%	-0.12%	-3.99%	0.00%	-4.79%	4.79%	0.01%
US Dollar	4.70%	0.00%	4.70%	0.00%	-0.03%	2.15%	-2.18%	0.00%
Yen	21.65%	17.43%	4.22%	0.19%	0.07%	0.07%	0.00%	0.04%
Yuan Renminbi	0.71%	11.01%	-10.30%	0.31%	0.27%	0.03%	0.24%	0.00%
	100.00%	100.00%	0.00%		2.27%	2.15%	0.12%	0.10%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

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

Period Ending: June 30, 2020

Total International Equity vs. MSCI ACWI ex USA
Current Quarter

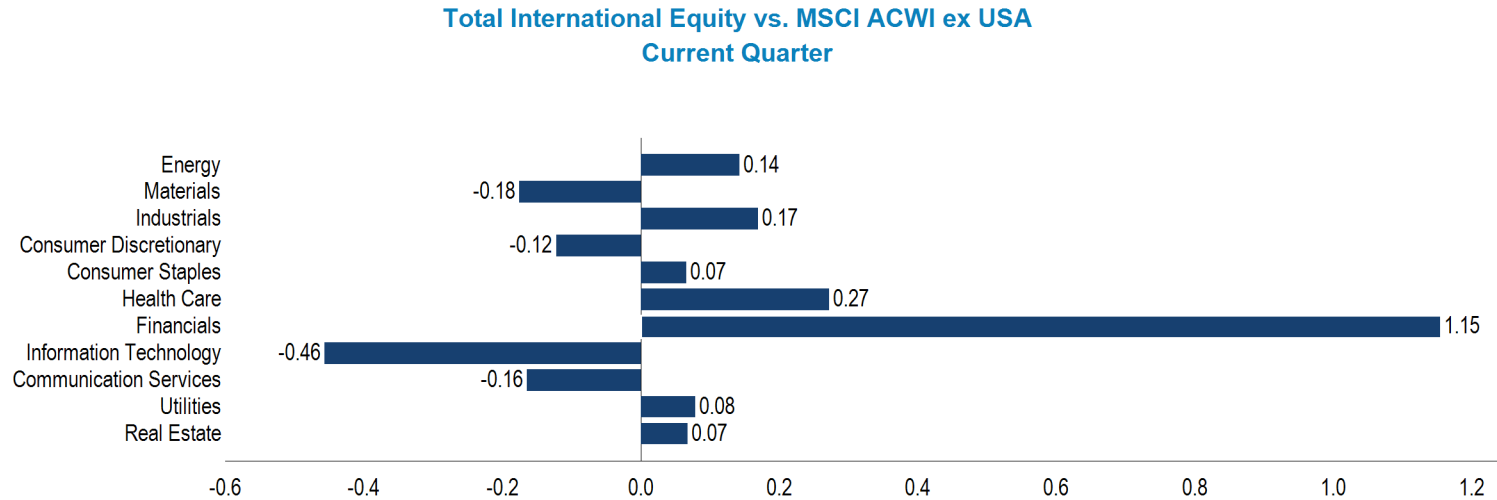
Region	Portfolio Weight	Index Weight	Excess Weight	Portfolio USD Return	Index USD Return	Excess USD Return	Allocation Effect (Local)	Selection Effect (Local)	Active Contrib.	Passive Contrib.	Total Contrib.
Americas	8.72%	8.58%	0.14%	20.50%	20.26%	0.24%	0.00%	0.02%	0.02%	0.33%	0.36%
Europe	57.53%	42.25%	15.28%	19.42%	16.03%	3.39%	-0.07%	2.26%	2.18%	-0.14%	2.04%
Asia/Pacific	33.18%	46.46%	-13.29%	13.27%	15.76%	-2.49%	0.07%	-1.08%	-1.01%	-0.28%	-1.29%
Other	0.58%	2.70%	-2.12%	24.27%	19.82%	4.45%	-0.10%	0.03%	-0.07%	0.09%	0.02%
Total				17.50%	16.37%	1.13%	-0.10%	1.23%	1.13%	0.00%	1.13%

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	8.72%	8.58%	0.14%	20.50%	20.26%	0.24%	0.00%	0.02%	0.02%	0.33%	0.36%
Europe	57.53%	42.25%	15.28%	19.42%	16.03%	3.39%	-0.07%	2.26%	2.18%	-0.14%	2.04%
Asia/Pacific	33.18%	46.46%	-13.29%	13.27%	15.76%	-2.49%	0.07%	-1.08%	-1.01%	-0.28%	-1.29%
Other	0.58%	2.70%	-2.12%	24.27%	19.82%	4.45%	-0.10%	0.03%	-0.07%	0.09%	0.02%
Total				17.50%	16.37%	1.13%	-0.10%	1.23%	1.13%	0.00%	1.13%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

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

Period Ending: June 30, 2020



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	3.12%	5.23%	-2.11%	9.47%	10.59%	-1.11%	0.19%	-0.15%	0.04%	-0.30%	-0.27%
Materials	6.74%	6.94%	-0.20%	22.61%	25.97%	-3.36%	0.02%	-0.18%	-0.16%	0.67%	0.51%
Industrials	16.23%	11.43%	4.80%	19.19%	17.73%	1.47%	-0.02%	0.30%	0.28%	0.16%	0.43%
Consumer Discretionary	9.97%	11.84%	-1.87%	18.73%	19.50%	-0.77%	-0.08%	-0.09%	-0.18%	0.37%	0.19%
Consumer Staples	10.64%	10.48%	0.15%	10.85%	10.45%	0.40%	0.05%	0.02%	0.07%	-0.62%	-0.55%
Health Care	11.58%	10.48%	1.11%	19.23%	16.60%	2.63%	-0.06%	0.36%	0.30%	0.02%	0.33%
Financials	19.08%	19.31%	-0.23%	16.98%	11.85%	5.13%	-0.22%	1.52%	1.30%	-0.87%	0.42%
Information Technology	7.64%	10.15%	-2.51%	21.24%	24.72%	-3.48%	-0.26%	-0.33%	-0.60%	0.85%	0.25%
Communication Services	5.26%	7.45%	-2.19%	16.80%	18.15%	-1.35%	-0.02%	-0.12%	-0.14%	0.13%	-0.01%
Utilities	5.64%	3.74%	1.90%	15.72%	11.86%	3.86%	-0.08%	0.23%	0.15%	-0.17%	-0.02%
Real Estate	3.08%	2.95%	0.14%	5.79%	8.48%	-2.69%	0.14%	-0.04%	0.10%	-0.23%	-0.14%
Unclassified	1.02%	0.00%	1.02%	4.88%	--	0.00%	-0.02%	0.00%	-0.02%	0.00%	-0.02%
Total				17.50%	16.37%	1.13%	-0.38%	1.51%	1.13%	0.00%	1.13%

Attribution analysis does not include Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

Total International Equity Performance Attribution Summary (Net of Fees)

Period Ending: June 30, 2020

Portfolio: Total International Equity
Benchmark: MSCI ACWI ex USA

Portfolio Total Return 16.72%

	Equity Only
Portfolio	17.50%
Benchmark	<u>16.37%</u>
Return From Active Mgmt	1.13%

Local Returns

Portfolio	15.21%
Benchmark	<u>14.20%</u>
Active Equity Return	1.01%

Country Selection	0.14%
Stock Selection	0.89%

Currency Contributions

Portfolio	2.27%
Benchmark	<u>2.15%</u>
Active Currency Contributions	0.12%

Chart uses return-based methodology. Attribution analysis does not include Mondrian Emerging Markets and Baillie Gifford Emerging Markets.

Total Fund Watch List (Net of Fees)

Period Ending: June 30, 2020

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
NT MSCI US Index	Domestic Equity Large Cap	No Issues	--	--	--	--	--	--
T. Rowe Price Large Cap Growth	Domestic Equity Large Cap Growth	No Issues	--	--	--	--	--	--
Aronson Johnson Ortiz	Domestic Equity Large Cap Value	Terminate	R	R	R	R	R	R
PIMCO StocksPLUS Small Fund	Domestic Equity Small Cap Core	No Issues	--	--	--	--	--	--
NT MSCI World Ex-US Index	International Equity	No Issues	--	--	--	--	--	--
Artisan International Growth	International Equity	No Issues	✓	✓	✓	✓	✓	--
Research Affiliates International Equity	International Equity	No Issues	R	R	R	R	R	--
Mondrian International Small Cap	International Equity Small Cap	No Issues	R	✓	✓	R	R	--
Mondrian Emerging Markets	Emerging Markets Equity	No Issues	R	R	R	R	R	--
Baillie Gifford Emerging Markets	Emerging Markets Equity	No Issues	--	--	--	--	--	R

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. Baillie Gifford Emerging Markets- Provisional: In 4Q2019, Baillie Gifford announced Co-PM Richard Sneller will be retiring in May 2020. Aronson Johnson Ortiz- Provisional: AJO announced the addition of Greg McIntire as CIO (newly created title) and the departure of Cesar Orosco (formerly co-head of portfolio management and research).

Total Fund Watch List (Net of Fees)

Period Ending: June 30, 2020

Name	Allocation Group	Status	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6
Brandywine Global Sovereign	Global Fixed Income	No Issues	✓	✗	✗	✗	✗	✗
RBC Access Capital	Domestic Fixed Income Mortgage	No Issues	--	--	--	--	--	--
Western Asset Investment Grade Credit	Domestic Fixed Income	No Issues	✓	✓	✓	✗	✓	--
Loomis Sayles High Yield	Domestic Fixed Income High Yield	No Issues	✗	✗	✗	✗	✗	--
Eaton Vance Senior Loan Fund	Domestic Fixed Income Bank Loans	No Issues	✓	✗	✓	✓	✓	--
PIMCO Emerging Local Bond Ins	Emerging Markets Fixed Income	Watch	✓	✓	✓	✓	✓	✗
Invesco Core Real Estate	Real Estate	No Issues	✗	✗	✗	--	--	--

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. Brandywine Global Sovereign- Provisional: Franklin announced in February 2020 their intention to acquire 100% of Legg Mason for \$4.5 billion at \$50 per share of common stock in an all-cash deal. Given the complexity and large-scale nature of this change, we will continue to monitor for developments relating to Franklin Templeton and the affiliates. We will place a provisional flag on Franklin and each of the affiliates at the firm level to signify that a change has occurred, although we do not have serious concerns with the announcement at this time. Pimco Emerging Local Bond Ins- Provisional: We view PIMCO's EMD team as robust and well-resourced but we retain a provisional watch rating to monitor for further turnover following the departure of senior team members Mike Gomez and Francesc Balcells.

Total Fund Manager Rankings Page

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015
Total Fund	4,909,690,453	100.0	10.5	-4.9	1.0	4.6	4.7	7.2	6.1	16.7	-3.6	14.6	6.7	-2.5
Policy Index			8.9	-2.7	2.6	5.0	5.2	7.3	5.5	14.7	-2.9	14.0	6.5	-1.7
InvMetrics Public DB > \$1B Net Rank			36	70	57	69	89	75	41	54	41	67	80	86
NT MSCI US Index	714,083,097	14.5	--	--	--	--	--	--	--	--	--	--	--	--
MSCI USA			21.6	-2.5	7.8	10.4	10.1	13.4	8.3	30.9	-5.0	21.2	10.9	0.7
eV US Large Cap Core Equity Net Rank			--	--	--	--	--	--	--	--	--	--	--	--
T. Rowe Price Large Cap Growth	153,063,701	3.1	28.7	12.0	22.3	--	--	--	--	29.5	--	--	--	--
Russell 1000 Growth			27.8	9.8	23.3	19.0	15.9	17.2	11.3	36.4	-1.5	30.2	7.1	5.7
eV US Large Cap Growth Equity Net Rank			32	29	37	--	--	--	--	82	--	--	--	--
Aronson Johnson Ortiz	108,117,973	2.2	15.9	-17.6	-12.4	0.0	2.0	9.6	5.8	21.7	-11.4	16.7	9.5	-0.1
Russell 1000 Value			14.3	-16.3	-8.8	1.8	4.6	10.4	6.2	26.5	-8.3	13.7	17.3	-3.8
eV US Large Cap Value Equity Net Rank			53	74	88	79	89	70	78	89	72	50	83	16
PIMCO StocksPLUS Small Fund	247,680,812	5.0	30.9	-12.8	-4.7	--	--	--	--	29.3	--	--	--	--
Russell 2000			25.4	-13.0	-6.6	2.0	4.3	10.5	7.0	25.5	-11.0	14.6	21.3	-4.4
eV US Small Cap Core Equity Net Rank			13	44	34	--	--	--	--	15	--	--	--	--
NT MSCI World Ex-US Index	387,226,359	7.9	--	--	--	--	--	--	--	--	--	--	--	--
MSCI World ex USA			15.3	-11.5	-5.4	0.8	2.0	5.4	4.1	22.5	-14.1	24.2	2.7	-3.0
eV Global All Cap Core Eq Net Rank			--	--	--	--	--	--	--	--	--	--	--	--
Artisan International Growth	178,601,464	3.6	17.8	-7.0	1.2	6.4	4.3	--	--	31.3	-10.2	31.5	-9.0	-2.2
MSCI EAFE			14.9	-11.3	-5.1	0.8	2.1	5.7	4.1	22.0	-13.8	25.0	1.0	-0.8
eV EAFE All Cap Growth Net Rank			96	95	75	47	60	--	--	32	7	45	97	85
Research Affiliates International Equity	156,938,862	3.2	12.8	-19.2	-13.5	-3.3	0.2	--	--	17.9	-15.5	25.7	9.3	-5.9
MSCI EAFE			14.9	-11.3	-5.1	0.8	2.1	5.7	4.1	22.0	-13.8	25.0	1.0	-0.8
eV EAFE All Cap Value Net Rank			63	71	71	55	33	--	--	56	50	28	1	96
Mondrian International Small Cap	142,963,681	2.9	18.2	-15.0	-7.2	0.6	3.1	7.3	--	25.1	-14.6	32.4	0.1	2.7
S&P Developed Ex-U.S. SmallCap			22.6	-12.5	-3.7	0.4	3.5	7.7	6.1	24.7	-18.4	32.4	3.8	5.9
eV EAFE Small Cap Value Net Rank			55	15	19	20	46	43	--	32	22	66	88	95
Mondrian Emerging Markets	133,463,244	2.7	15.4	-14.8	-8.5	-1.5	0.4	2.2	--	18.3	-13.8	27.2	9.0	-16.3
MSCI Emerging Markets			18.1	-9.8	-3.4	1.9	2.9	3.3	6.3	18.4	-14.6	37.3	11.2	-14.9
eV Emg Mkts All Cap Value Equity Net Rank			68	56	45	60	70	60	--	42	48	93	81	49
Baillie Gifford Emerging Markets	144,507,134	2.9	24.5	-8.5	-0.3	--	--	--	--	28.0	--	--	--	--
MSCI Emerging Markets			18.1	-9.8	-3.4	1.9	2.9	3.3	6.3	18.4	-14.6	37.3	11.2	-14.9
Diversified Emerging Mkts MStar MF Rank			28	40	33	--	--	--	--	14	--	--	--	--

Total Fund Manager Rankings Page

Period Ending: June 30, 2020

	Market Value	% of Portfolio	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	2019	2018	2017	2016	2015
Western Asset Investment Grade Credit	198,299,019	4.0	11.6	5.4	9.5	6.7	6.2	--	--	14.9	-2.3	6.8	7.0	-0.5
BBgBarc US Credit TR			8.2	4.8	9.1	6.1	5.5	5.2	5.3	13.8	-2.1	6.2	5.6	-0.8
eV US Corporate Fixed Inc Net Rank			8	33	43	25	16	--	--	31	34	39	40	40
RBC Access Capital	58,524,603	1.2	0.4	3.4	5.5	--	--	--	--	6.4	--	--	--	--
BBgBarc US Securitized Index			0.9	3.7	5.8	4.0	3.3	3.2	4.1	6.4	1.0	2.5	1.8	1.5
eV US Securitized Fixed Inc Net Rank			96	24	21	--	--	--	--	54	--	--	--	--
Loomis Sayles High Yield	248,654,261	5.1	9.9	-3.4	-1.2	2.6	3.6	--	--	11.5	-2.3	7.1	14.4	-5.2
BBgBarc US High Yield TR			10.2	-3.8	0.0	3.3	4.8	6.7	6.8	14.3	-2.1	7.5	17.1	-4.5
eV US High Yield Fixed Inc Net Rank			31	32	61	59	72	--	--	72	52	47	42	79
Eaton Vance Senior Loan Fund	183,224,799	3.7	5.8	-5.0	-2.3	1.6	2.7	--	--	7.5	0.7	4.0	9.9	-0.8
S&P/LSTA Leveraged Loan Index			9.7	-4.6	-2.0	2.1	2.9	4.2	4.3	8.6	0.4	4.1	10.2	-0.7
eV US Float-Rate Bank Loan Fixed Inc Net Rank			94	54	48	55	34	--	--	80	16	40	33	85
Eaton Vance Institutional Senior Loan Plus Fund	21,360,511	0.4	7.2	-6.1	-2.2	1.7	--	--	--	11.3	-1.3	3.6	--	--
S&P/LSTA Leveraged Loan Index			9.7	-4.6	-2.0	2.1	2.9	4.2	4.3	8.6	0.4	4.1	10.2	-0.7
eV US Float-Rate Bank Loan Fixed Inc Net Rank			78	77	43	49	--	--	--	2	97	64	--	--
TCW TALF Opportunities Fund LP	4,000,000	0.1	--	--	--	--	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR			2.9	6.1	8.7	5.3	4.3	3.8	4.4	8.7	0.0	3.5	2.6	0.6
eV US High Yield Fixed Inc Net Rank			--	--	--	--	--	--	--	--	--	--	--	--
Brandywine Global Sovereign	255,172,077	5.2	7.9	-4.5	-2.5	0.4	1.8	--	--	8.7	-4.7	11.9	3.8	-9.8
FTSE WGBI TR			2.0	4.1	4.6	4.0	3.7	2.4	3.3	5.9	-0.8	7.5	1.6	-3.6
eV Global Government Fixed Inc Net Rank			1	97	94	94	82	--	--	1	92	4	23	99
PIMCO Emerging Local Bond Ins	179,972,177	3.7	11.0	-7.3	-2.7	1.5	2.4	--	--	17.1	-7.7	15.4	10.7	-16.3
JP Morgan GBI EM Global Diversified TR USD			9.8	-6.9	-2.8	1.1	2.3	1.6	4.7	13.5	-6.2	15.2	9.9	-14.9
eV Emg Mkts Fixed Inc - Local Currency Net Rank			30	37	17	10	23	--	--	3	54	39	18	91

Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2020

Account	Fee Schedule	Market Value As of 6/30/2020	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
NT MSCI US Index	0.01% of Assets	\$714,083,097	\$71,408	0.01%
T. Rowe Price Large Cap Growth	0.35% of Assets	\$153,063,701	\$535,723	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	\$108,117,973	\$324,354	0.30%
PIMCO StocksPLUS Small Fund	0.50% of First 150.0 Mil, 0.45% Thereafter	\$247,680,812	\$1,189,564	0.48%
NT MSCI World Ex-US Index	0.25% of Assets	\$387,226,359	\$968,066	0.25%
Artisan International Growth	0.30% of Assets	\$178,601,464	\$535,804	0.30%
Research Affiliates International Equity	0.12% of Assets	\$156,938,862	\$188,327	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	\$142,963,681	\$957,782	0.67%
Mondrian Emerging Markets	1.00% of First 25.0 Mil, 0.75% of Next 50.0 Mil, 0.60% Thereafter	\$133,463,244	\$975,779	0.73%
Baillie Gifford Emerging Markets	0.85% of Assets	\$144,507,134	\$1,228,311	0.85%
Western Asset Investment Grade Credit	0.30% of First 100.0 Mil, 0.15% Thereafter	\$198,299,019	\$447,449	0.23%
RBC Access Capital	0.30% of First 100.0 Mil, 0.20% Thereafter	\$58,524,603	\$175,574	0.30%
Loomis Sayles High Yield	0.50% of Assets	\$248,654,261	\$1,243,271	0.50%

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

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

Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2020

Account	Fee Schedule	Market Value As of 6/30/2020	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Eaton Vance Senior Loan Fund	0.55% of First 50.0 Mil, 0.50% of Next 50.0 Mil, 0.40% Thereafter	\$183,224,799	\$857,899	0.47%
Eaton Vance Institutional Senior Loan Plus Fund	0.40% of Assets	\$21,360,511	\$85,442	0.40%
TCW TALF Opportunities Fund LP	0.50% of Assets	\$4,000,000	\$20,000	0.50%
Brandywine Global Sovereign	0.36% of Assets	\$255,172,077	\$918,619	0.36%
PIMCO Emerging Local Bond Ins	0.50% of First 100.0 Mil, 0.45% Thereafter	\$179,972,177	\$859,875	0.48%
Invesco Core Real Estate	0.90% of First 75.0 Mil, 0.80% Thereafter	\$174,666,564	\$1,472,333	0.84%
IFM Infrastructure	0.97% of Assets	\$171,285,263	\$1,661,467	0.97%
Parametric Overlay	0.15% of First 25.0 Mil, 0.10% of Next 75.0 Mil, 0.04% Thereafter	\$66,225,335	\$78,725	0.12%
Investment Management Fee		\$3,928,030,936	\$14,795,772	0.38%

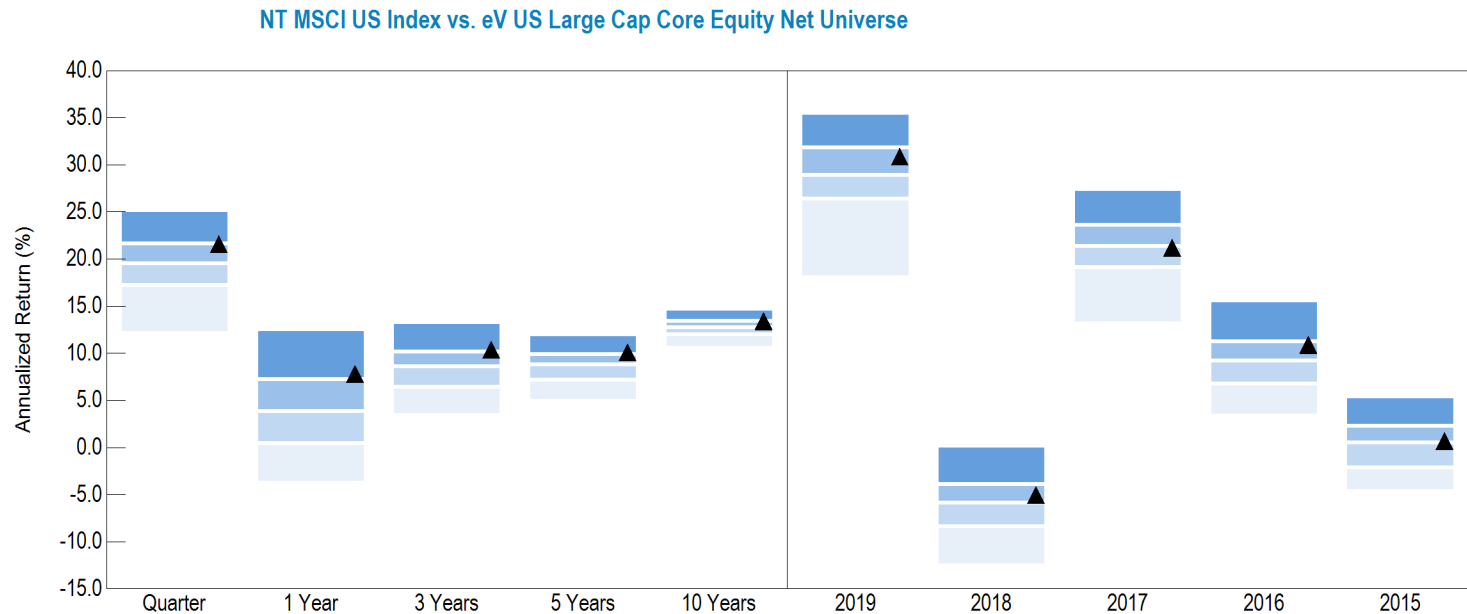
This fee analysis only reflects base fees for investment management, does not incorporate performance-based fees, and excludes fees paid to closed end real estate managers, private equity managers and GCM Better Futures Fund. Closed end real estate and private equity fees have other components which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

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

Domestic Equity Managers

NT MSCI US Index Manager Performance Comparisons (Net of Fees)

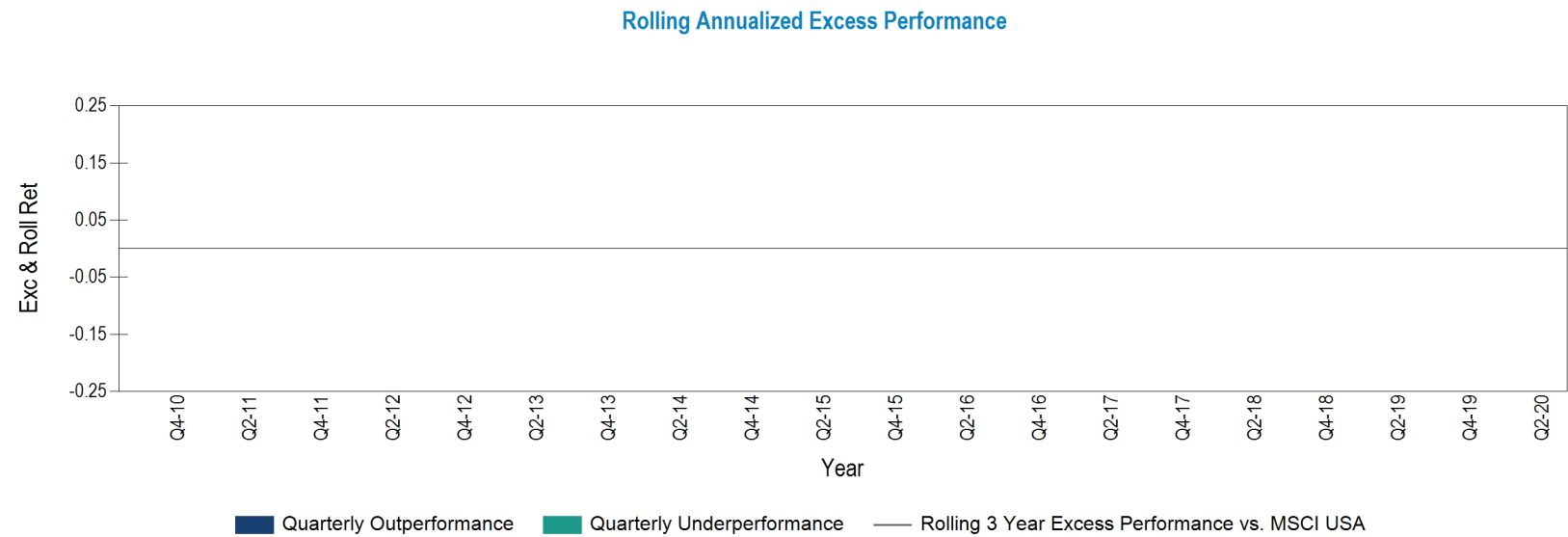
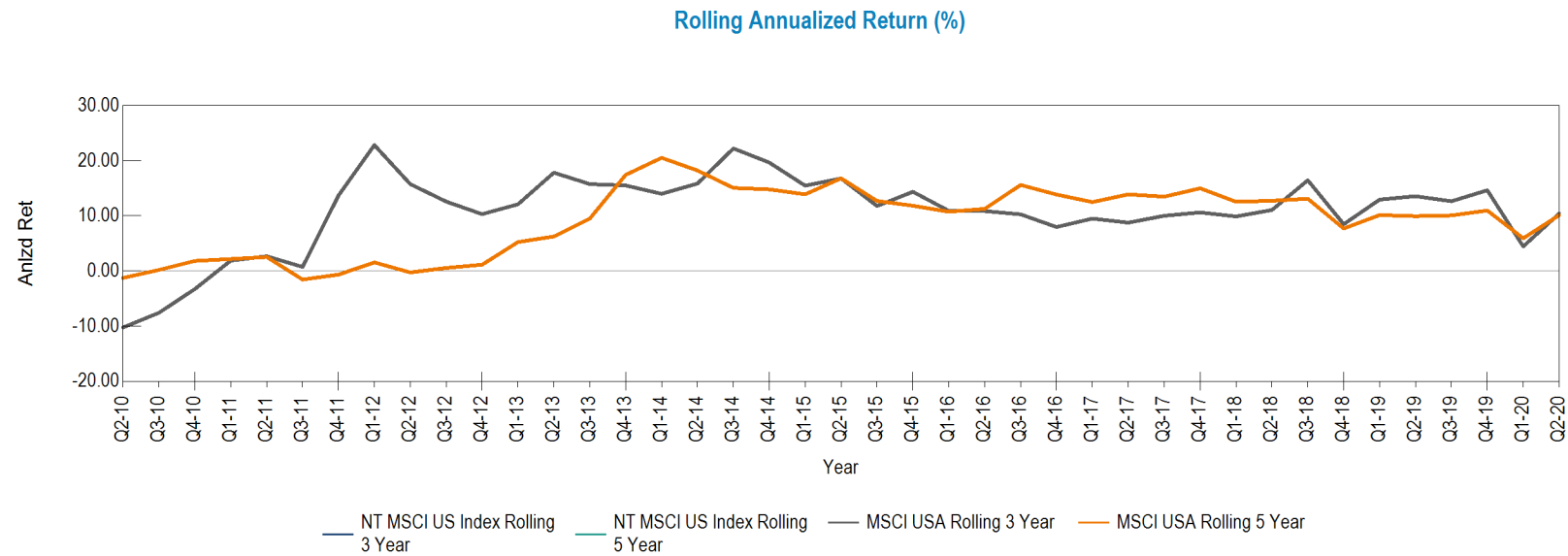
Period Ending: June 30, 2020



	Return (Rank)																			
5th Percentile	25.2	12.5	13.3	12.0	14.7	35.5	0.1	27.4	15.6	5.4										
25th Percentile	21.7	7.3	10.2	9.9	13.5	31.9	-3.8	23.7	11.3	2.4										
Median	19.6	3.9	8.7	8.8	12.8	28.9	-5.8	21.4	9.3	0.6										
75th Percentile	17.3	0.5	6.5	7.2	12.0	26.5	-8.3	19.2	6.9	-2.0										
95th Percentile	12.2	-3.7	3.5	5.0	10.6	18.1	-12.5	13.2	3.4	-4.6										
# of Portfolios	213	211	204	186	131	203	189	188	177	142										
● NT MSCI US Index	--	--	--	--	--	--	--	--	--	--										
▲ MSCI USA	21.6	7.8	10.4	10.1	13.4	30.9	-5.0	21.2	10.9	0.7	--	--	--	--	--	--	--	--	--	--
	(27)	(21)	(24)	(23)	(30)	(33)	(40)	(54)	(27)	(50)										

NT MSCI US Index
Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2020

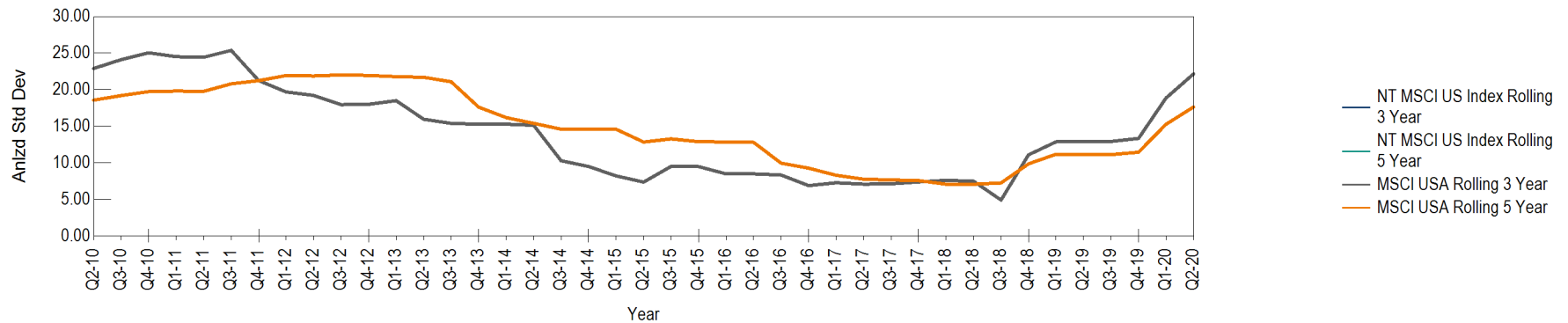


NT MSCI US Index

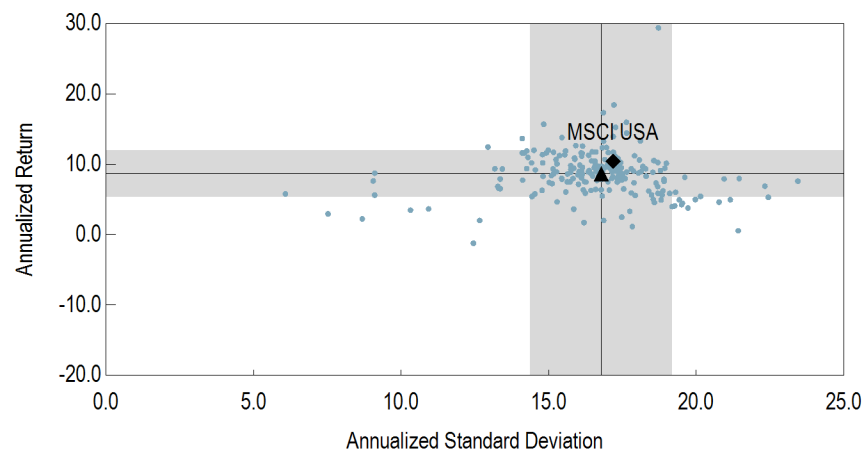
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

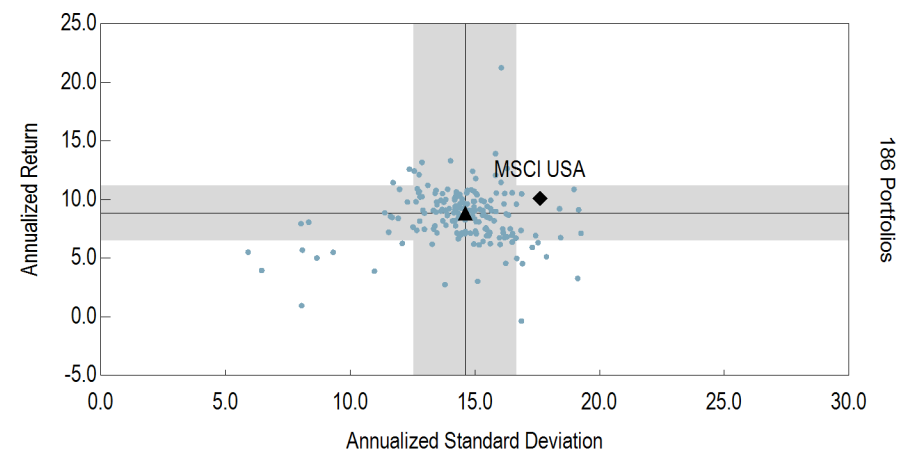
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
NT MSCI US Index	--	--	--
MSCI USA	10.4%	17.2%	0.5
eV US Large Cap Core Equity Net Median	8.7%	16.8%	0.4

5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
NT MSCI US Index	--	--	--
MSCI USA	10.1%	17.6%	0.5
eV US Large Cap Core Equity Net Median	8.8%	14.6%	0.5

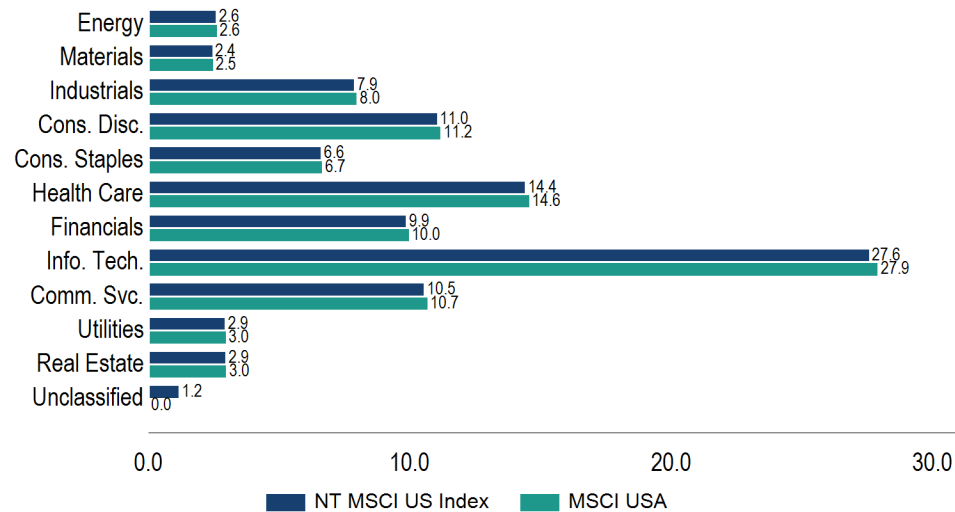
NT MSCI US Index Manager Portfolio Overview (Net of Fees)

Period Ending: June 30, 2020

Characteristics

	Portfolio	MSCI USA
Number of Holdings	619	616
Weighted Avg. Market Cap. (\$B)	343.10	347.00
Median Market Cap. (\$B)	18.81	18.99
Price To Earnings	23.14	23.14
Price To Book	4.25	4.25
Price To Sales	2.91	2.91
Return on Equity (%)	25.35	25.35
Yield (%)	1.78	1.78
Beta		1.00

Sector Allocation (%) vs MSCI USA



Largest Holdings

	End Weight	Return
APPLE INC	5.75	43.84
MICROSOFT CORP	5.30	29.40
AMAZON.COM INC	4.21	41.50
FACEBOOK INC	1.97	36.13
ALPHABET INC	1.56	21.57
ALPHABET INC	1.53	22.04
JOHNSON & JOHNSON	1.34	8.00
VISA INC	1.19	20.10
PROSHARES ULTRA SEMICONDUCTORS	1.06	58.27
PROCTER & GAMBLE CO (THE)	1.06	9.42

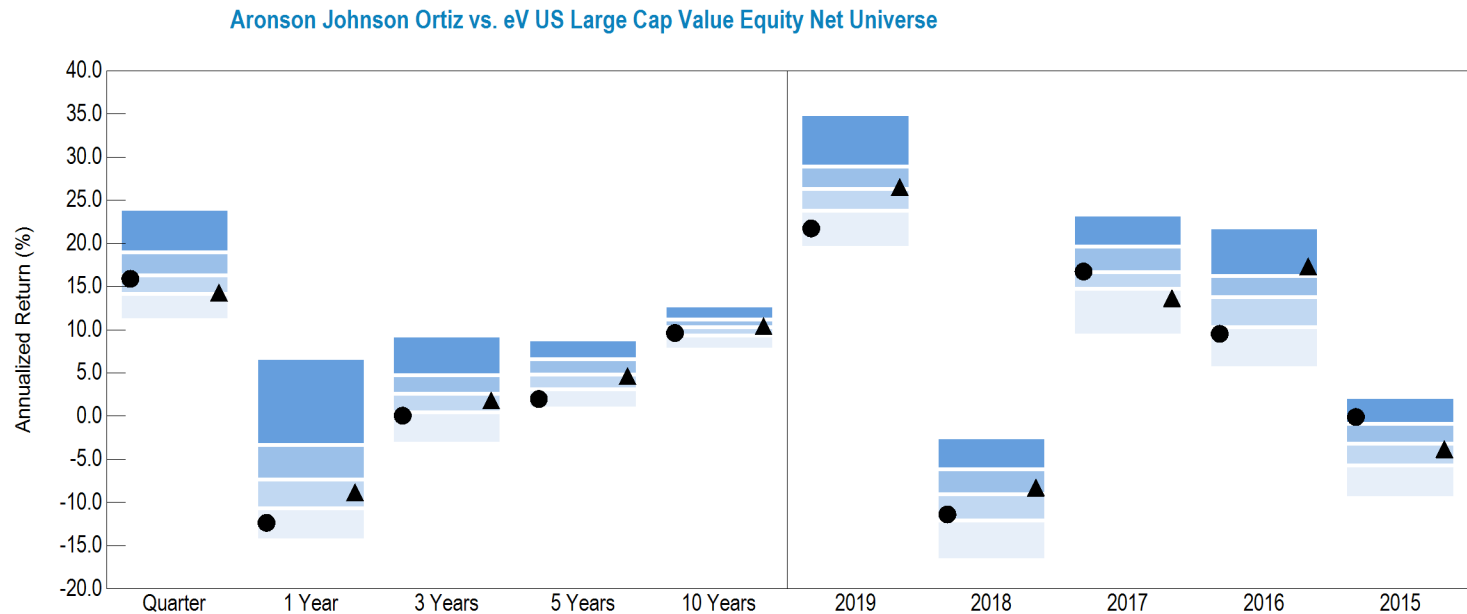
Top Contributors

	End Weight	Return	Contribution
APPLE INC	5.75	43.84	2.52
AMAZON.COM INC	4.21	41.50	1.75
MICROSOFT CORP	5.30	29.40	1.56
FACEBOOK INC	1.97	36.13	0.71
PROSHARES ULTRA SEMICONDUCTORS	1.06	58.27	0.62
TESLA INC	0.57	106.07	0.61
PAYPAL HOLDINGS INC	0.70	81.98	0.57
NVIDIA CORPORATION	0.84	44.19	0.37
HOME DEPOT INC. (THE)	0.98	34.97	0.34
ALPHABET INC	1.53	22.04	0.34

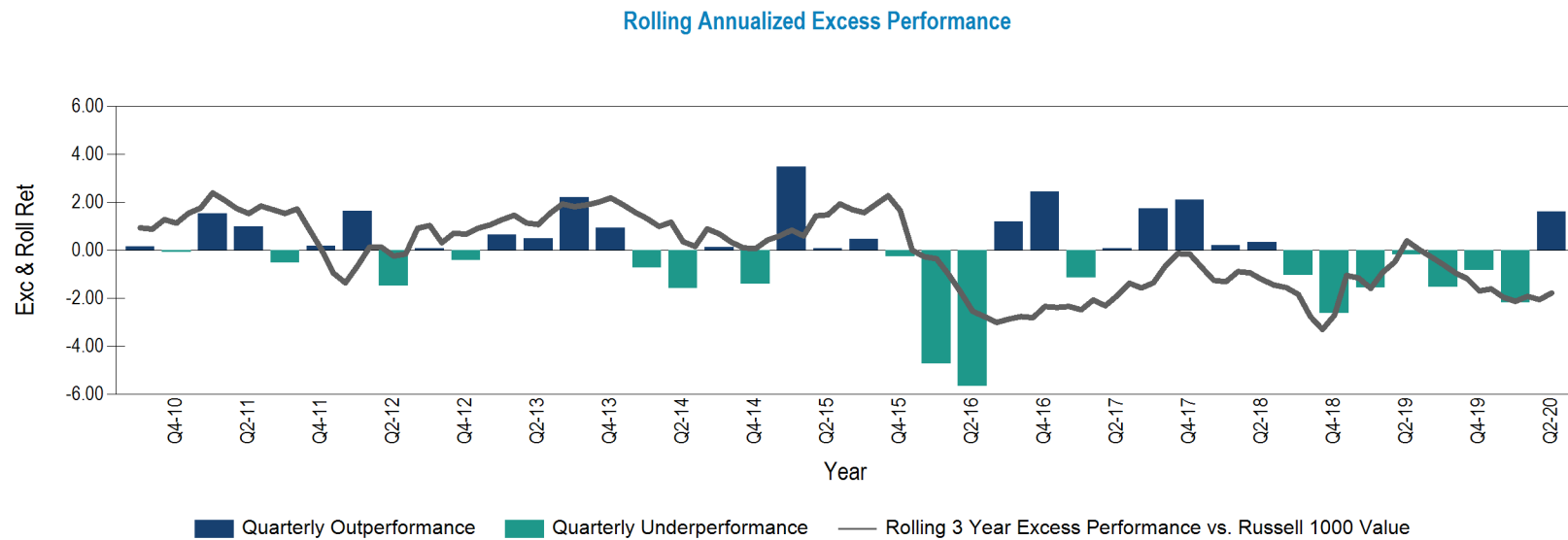
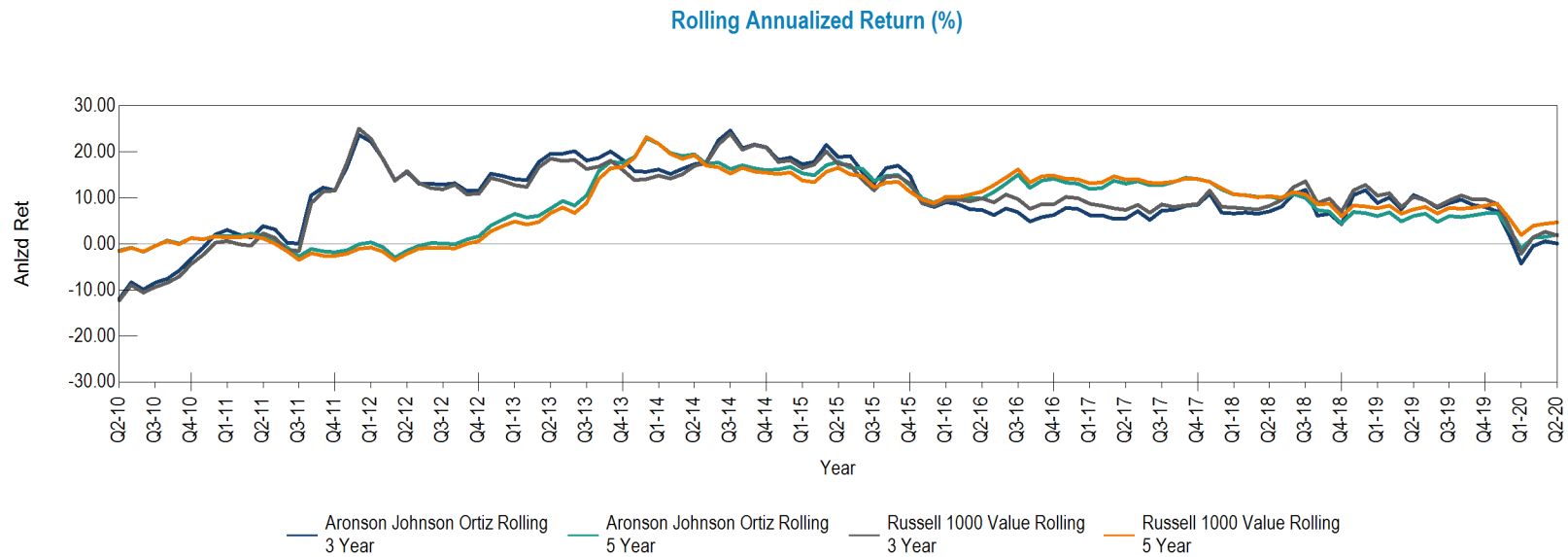
Bottom Contributors

	End Weight	Return	Contribution
WELLS FARGO & CO	0.36	-9.00	-0.03
GENERAL ELECTRIC CO	0.22	-13.85	-0.03
BIOGEN INC	0.17	-15.43	-0.03
BERKSHIRE HATHAWAY INC	0.89	-2.36	-0.02
CME GROUP INC	0.21	-5.58	-0.01
PHILIP MORRIS INTERNATIONAL INC	0.40	-2.42	-0.01
L3HARRIS TECHNOLOGIES INC	0.14	-5.39	-0.01
WALGREENS BOOTS ALLIANCE INC	0.12	-6.28	-0.01
SOUTHERN CO (THE)	0.20	-3.06	-0.01
CONSOLIDATED EDISON INC.	0.09	-6.80	-0.01

Unclassified sector allocation includes cash allocations.



	Return (Rank)									
5th Percentile	24.0	6.7	9.3	8.9	12.7	34.9	-2.5	23.3	21.8	2.2
25th Percentile	19.0	-3.3	4.8	6.6	11.2	28.9	-6.1	19.7	16.3	-0.8
Median	16.4	-7.3	2.6	4.9	10.3	26.3	-9.0	16.7	13.8	-3.1
75th Percentile	14.2	-10.6	0.5	3.2	9.4	23.8	-12.0	14.8	10.4	-5.7
95th Percentile	11.1	-14.3	-3.1	0.9	7.7	19.5	-16.7	9.4	5.6	-9.4
# of Portfolios	246	244	241	232	186	249	239	231	225	195
● Aronson Johnson Ortiz	15.9 (53)	-12.4 (88)	0.0 (79)	2.0 (89)	9.6 (70)	21.7 (89)	-11.4 (72)	16.7 (50)	9.5 (83)	-0.1 (16)
▲ Russell 1000 Value	14.3 (75)	-8.8 (65)	1.8 (58)	4.6 (53)	10.4 (47)	26.5 (49)	-8.3 (43)	13.7 (86)	17.3 (19)	-3.8 (59)

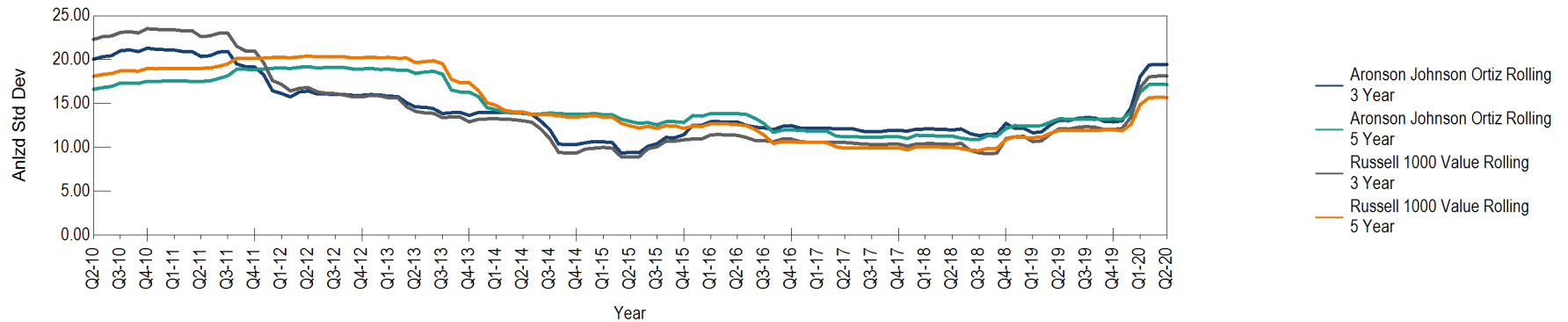


Aronson Johnson Ortiz

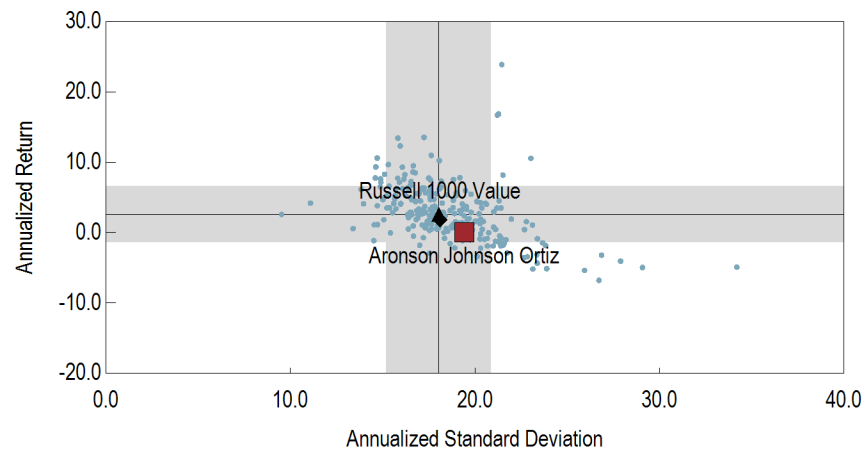
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

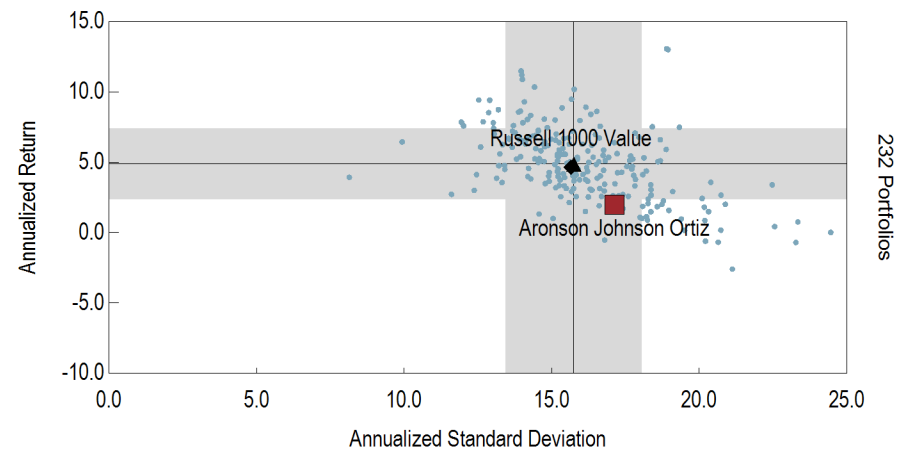
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	0.0%	19.4%	-0.1
Russell 1000 Value	1.8%	18.1%	0.0
eV US Large Cap Value Equity Net Median	2.6%	18.0%	0.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Aronson Johnson Ortiz	2.0%	17.1%	0.0
Russell 1000 Value	4.6%	15.6%	0.2
eV US Large Cap Value Equity Net Median	4.9%	15.7%	0.2

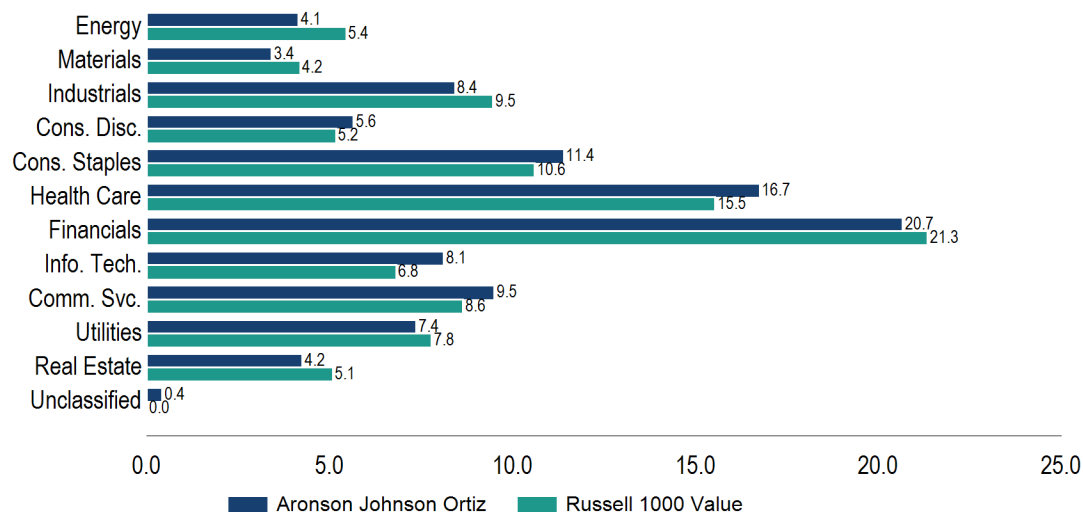
Aronson Johnson Ortiz Manager Portfolio Overview (Net of Fees)

Period Ending: June 30, 2020

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	165	839
Weighted Avg. Market Cap. (\$B)	100.43	102.44
Median Market Cap. (\$B)	9.11	8.38
Price To Earnings	12.57	17.33
Price To Book	2.65	2.41
Price To Sales	1.27	2.00
Return on Equity (%)	20.62	15.13
Yield (%)	2.68	2.61
Beta	1.07	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
INTEL CORP	2.97	11.17
VERIZON COMMUNICATIONS INC	2.90	3.70
PFIZER INC	2.46	1.21
PHILIP MORRIS INTERNATIONAL INC	2.07	-2.42
CITIGROUP INC	2.02	22.68
JOHNSON & JOHNSON	1.83	8.00
BRISTOL-MYERS SQUIBB CO	1.79	6.35
MORGAN STANLEY	1.68	43.28
ALTRIA GROUP INC	1.57	3.68
BANK OF NEW YORK MELLON CORP (THE)	1.54	15.72

Top Contributors

	Avg Wgt	Return	Contribution
EBAY INC.	1.26	75.10	0.95
MORGAN STANLEY	1.64	43.28	0.71
AMAZON.COM INC	1.24	41.50	0.51
CITIGROUP INC	2.10	22.68	0.48
ACTIVISION BLIZZARD INC	1.64	28.43	0.46
PHILLIPS 66	1.28	35.72	0.46
ELECTRONIC ARTS INC	1.28	31.83	0.41
HOLOGIC INC	0.63	62.39	0.40
MASCO CORP	0.80	45.73	0.36
HUMANA INC.	1.53	23.68	0.36

Bottom Contributors

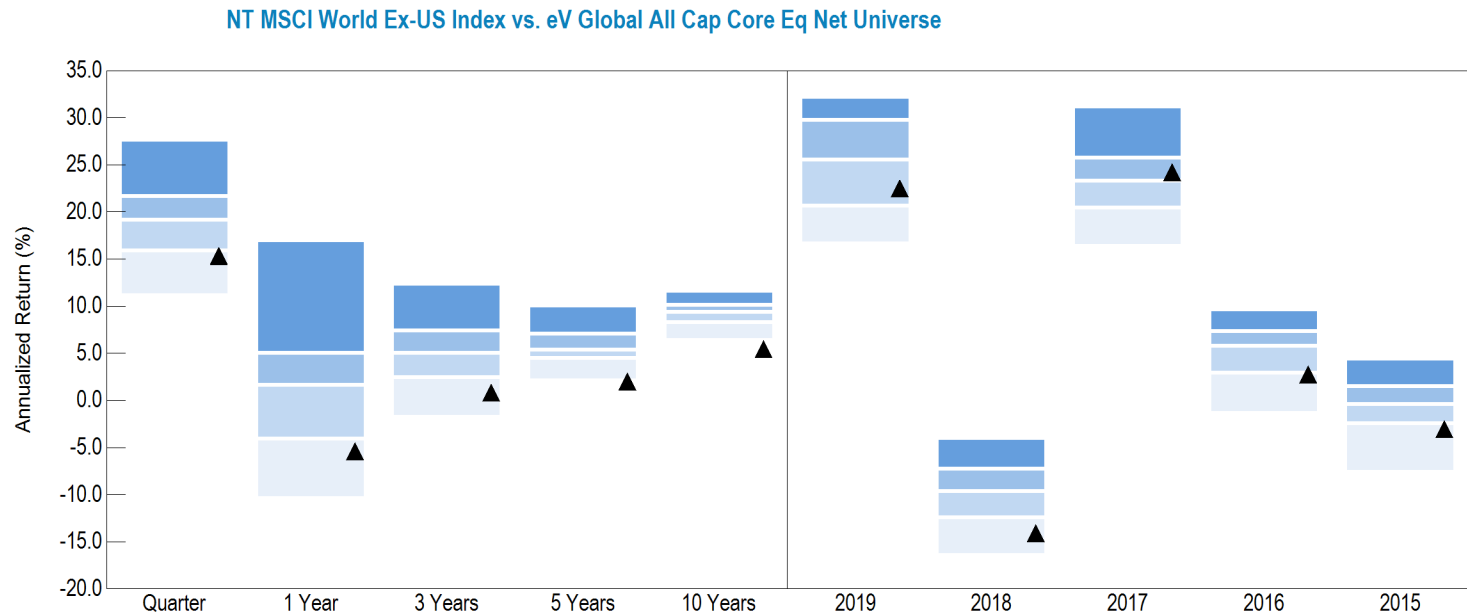
	Avg Wgt	Return	Contribution
PORTLAND GENERAL ELECTRIC CO	0.79	-11.98	-0.09
BIOGEN INC	0.61	-15.43	-0.09
ALLEGHANY CORP	0.52	-11.44	-0.06
PHILIP MORRIS INTERNATIONAL INC	2.24	-2.42	-0.05
REINSURANCE GROUP OF AMERICA INC.	0.89	-6.04	-0.05
PARAMOUNT GROUP INC	0.37	-11.25	-0.04
BERKSHIRE HATHAWAY INC	1.17	-2.36	-0.03
CURTISS-WRIGHT CORP	0.83	-3.21	-0.03
NAVIENT CORP	0.47	-5.45	-0.03
PILGRIM'S PRIDE CORP	0.20	-6.79	-0.01

Unclassified sector allocation includes cash allocations.

International Equity Managers

NT MSCI World Ex-US Index Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2020

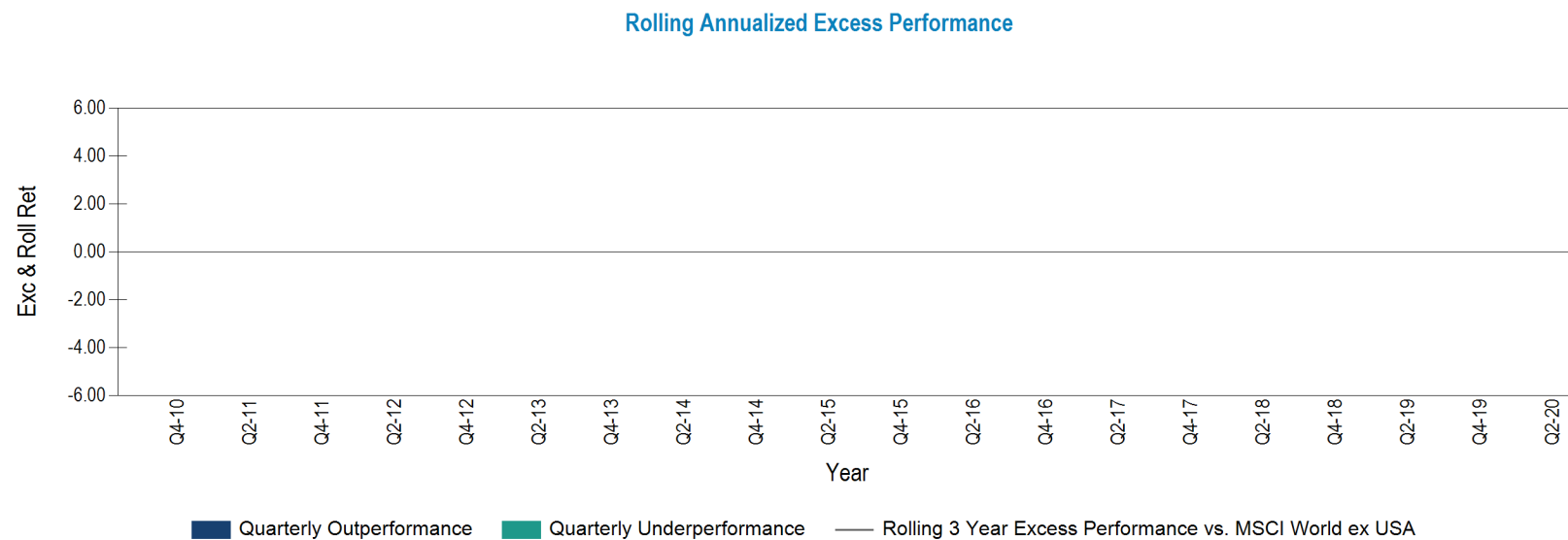
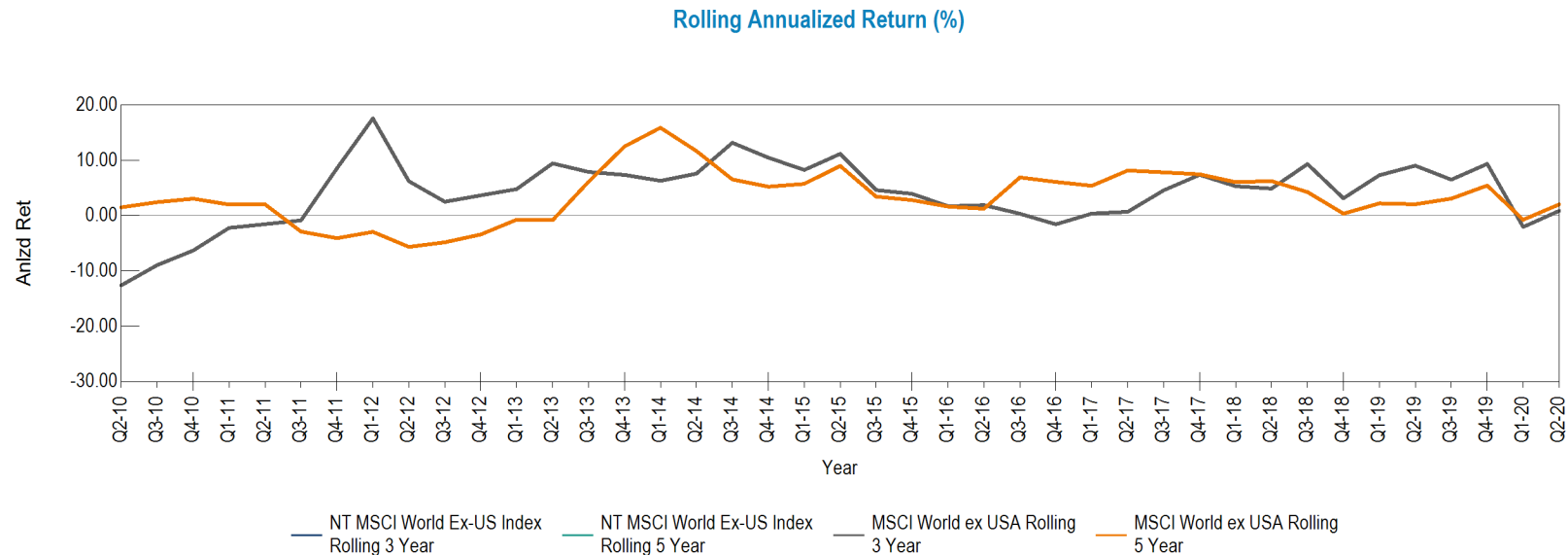


	Return (Rank)																			
5th Percentile	27.6	17.0	12.3	10.1	11.6	32.2	-4.0	31.2	9.6	4.4										
25th Percentile	21.7	5.1	7.5	7.1	10.2	29.8	-7.2	25.8	7.4	1.6										
Median	19.2	1.7	5.1	5.5	9.4	25.6	-9.6	23.3	5.8	-0.4										
75th Percentile	15.9	-4.0	2.5	4.5	8.4	20.7	-12.3	20.5	3.0	-2.4										
95th Percentile	11.2	-10.3	-1.7	2.1	6.4	16.7	-16.4	16.4	-1.3	-7.6										
# of Portfolios	89	87	80	70	41	83	73	66	59	48										
● NT MSCI World Ex-US Index	--	--	--	--	--	--	--	--	--	--										
▲ MSCI World ex USA	15.3	(77)	-5.4	(85)	0.8	(85)	2.0	(96)	5.4	(98)	22.5	(65)	-14.1	(91)	24.2	(46)	2.7	(78)	-3.0	(81)

Returns prior to inception date are composite returns.

NT MSCI World Ex-US Index Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2020

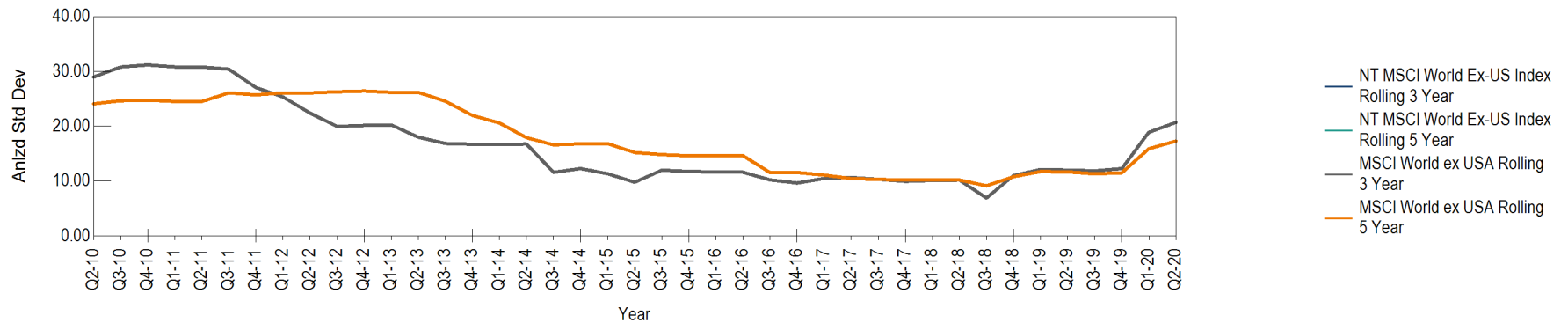


Returns prior to inception date are composite returns.

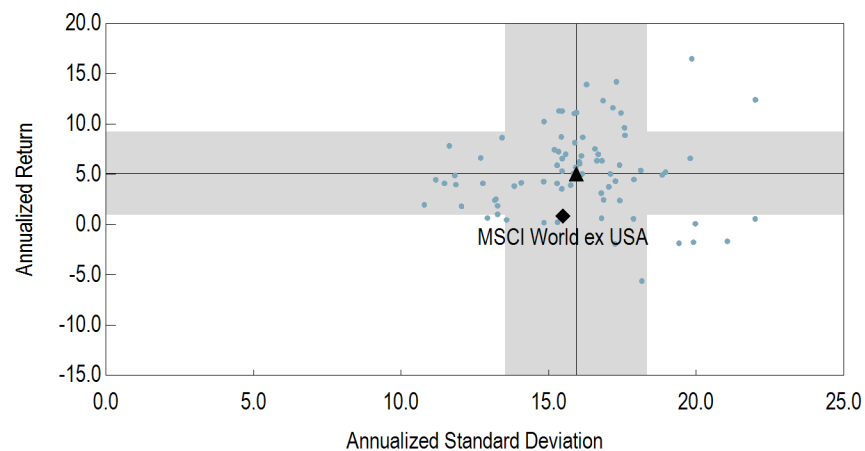
NT MSCI World Ex-US Index Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

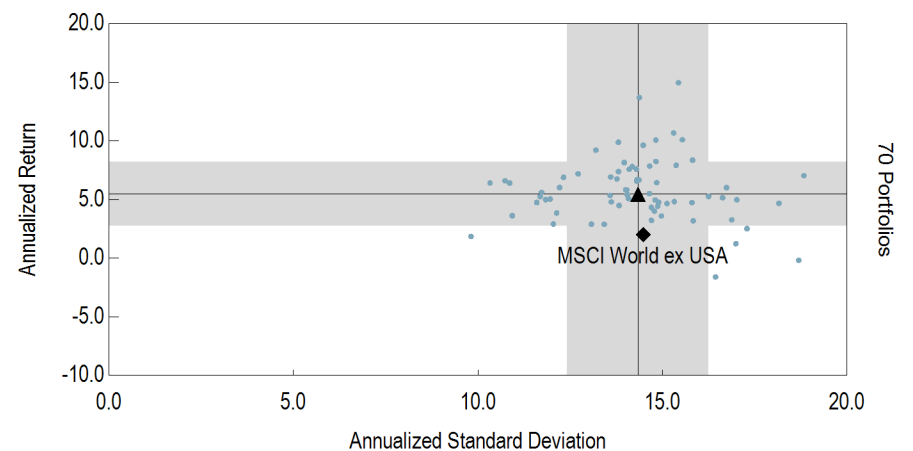
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
NT MSCI World Ex-US Index	--	--	--
MSCI World ex USA	0.8%	15.5%	-0.1
eV Global All Cap Core Eq Net Median	5.1%	15.9%	0.2

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
MSCI EAFE	2.1%	14.4%	0.1
eV EAFE All Cap Growth Net Median	6.2%	15.2%	0.3

Returns prior to inception date are composite returns.

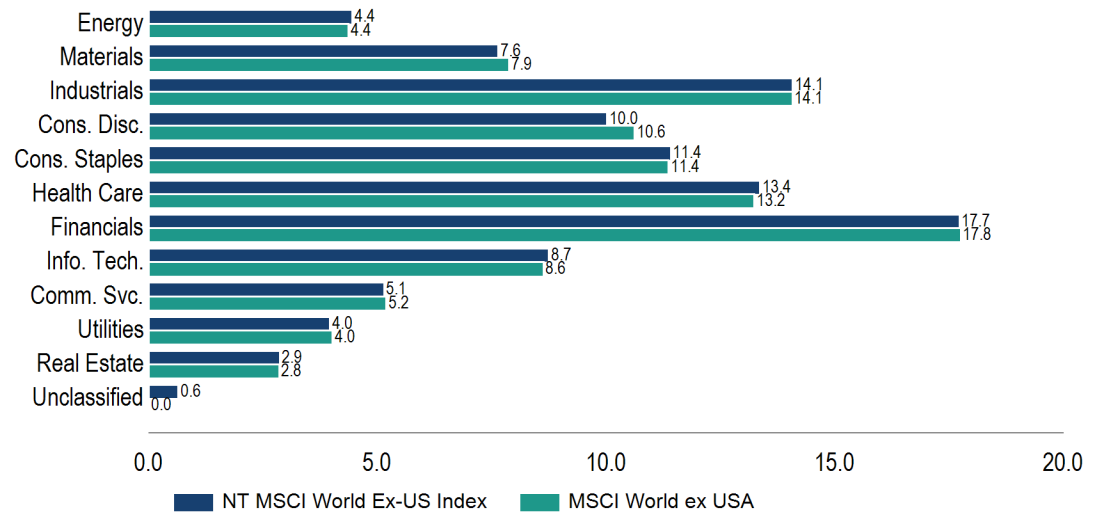
NT MSCI World Ex-US Index Manager Portfolio Overview (Net of Fees)

Period Ending: June 30, 2020

Characteristics

	Portfolio	MSCI World ex USA
Number of Holdings	996	987
Weighted Avg. Market Cap. (\$B)	59.57	59.00
Median Market Cap. (\$B)	9.32	9.54
Price To Earnings	16.87	16.90
Price To Book	2.61	2.63
Price To Sales	1.26	1.26
Return on Equity (%)	13.71	13.66
Yield (%)	3.06	2.95
Beta		1.00

Sector Allocation (%) vs MSCI World ex USA



Largest Holdings

	End Weight	Return
NESTLE SA/AG	2.34	9.40
ROCHE HOLDING AG	1.73	6.76
NOVARTIS AG	1.34	6.82
ASML HOLDING NV	1.09	38.72
SAP SE	1.03	26.88
ASTRAZENECA PLC	0.96	16.29
TOYOTA MOTOR CORP	0.93	4.08
LVMH MOET HENNESSY LOUIS VUITTON SE	0.85	18.11
NOVO NORDISK 'B'	0.82	7.56
SANOFI	0.80	19.91

Top Contributors

	End Weight	Return	Contribution
SHOPIFY INC	0.70	128.59	0.90
ASML HOLDING NV	1.09	38.72	0.42
SAP SE	1.03	26.88	0.28
SIEMENS	0.65	40.02	0.26
SOFTBANK GROUP	0.55	43.97	0.24
NESTLE SA/AG	2.34	9.40	0.22
BHP GROUP LTD	0.51	39.04	0.20
ALLIANZ SE	0.62	28.83	0.18
AFTERPAY LTD	0.07	264.94	0.17
BAYER AG	0.52	31.22	0.16

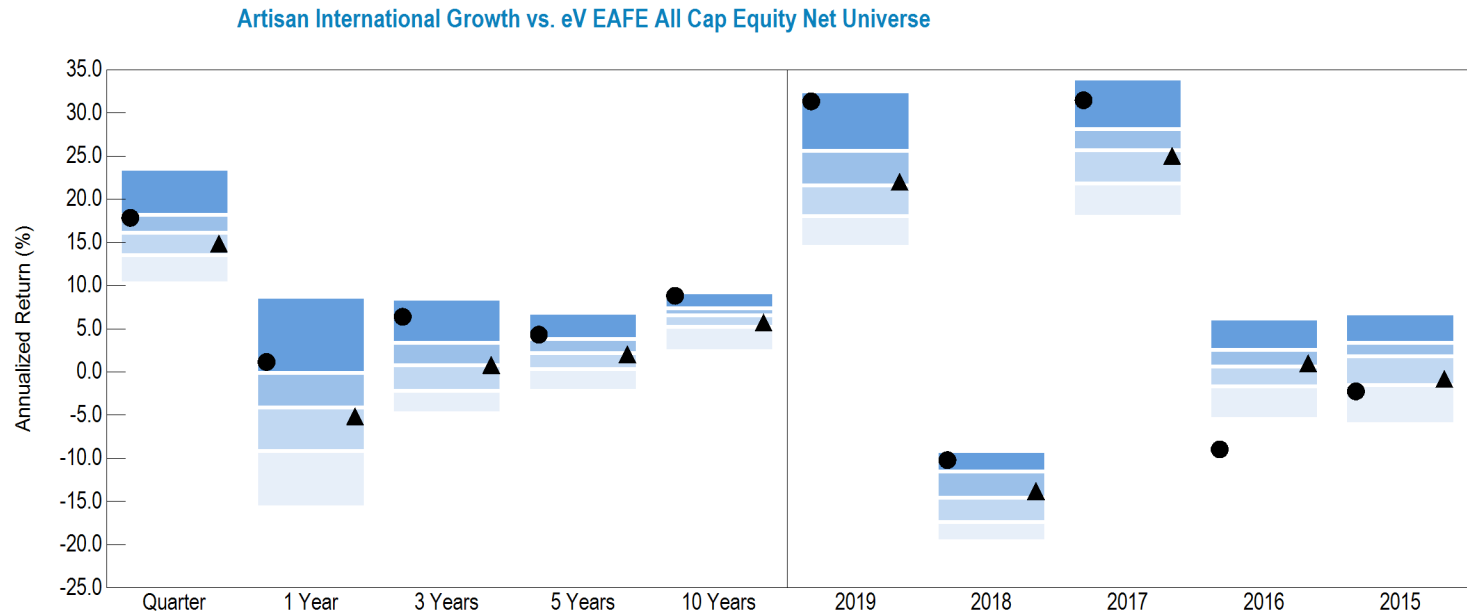
Bottom Contributors

	End Weight	Return	Contribution
HSBC HOLDINGS PLC	0.67	-18.00	-0.12
ROYAL DUTCH SHELL PLC	0.47	-8.60	-0.04
BP PLC	0.54	-6.20	-0.03
NTT DOCOMO INC	0.22	-14.60	-0.03
ROYAL DUTCH SHELL PLC	0.40	-7.76	-0.03
FUJIFILM HLDGS CORP	0.11	-20.54	-0.02
COMPASS GROUP PLC	0.17	-12.33	-0.02
BANCO SANTANDER SA	0.28	-6.24	-0.02
CANON INC	0.14	-9.46	-0.01
EAST JAPAN RAILWAY CO	0.15	-8.53	-0.01

Unclassified sector allocation includes cash allocations.

Artisan International Growth Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2020



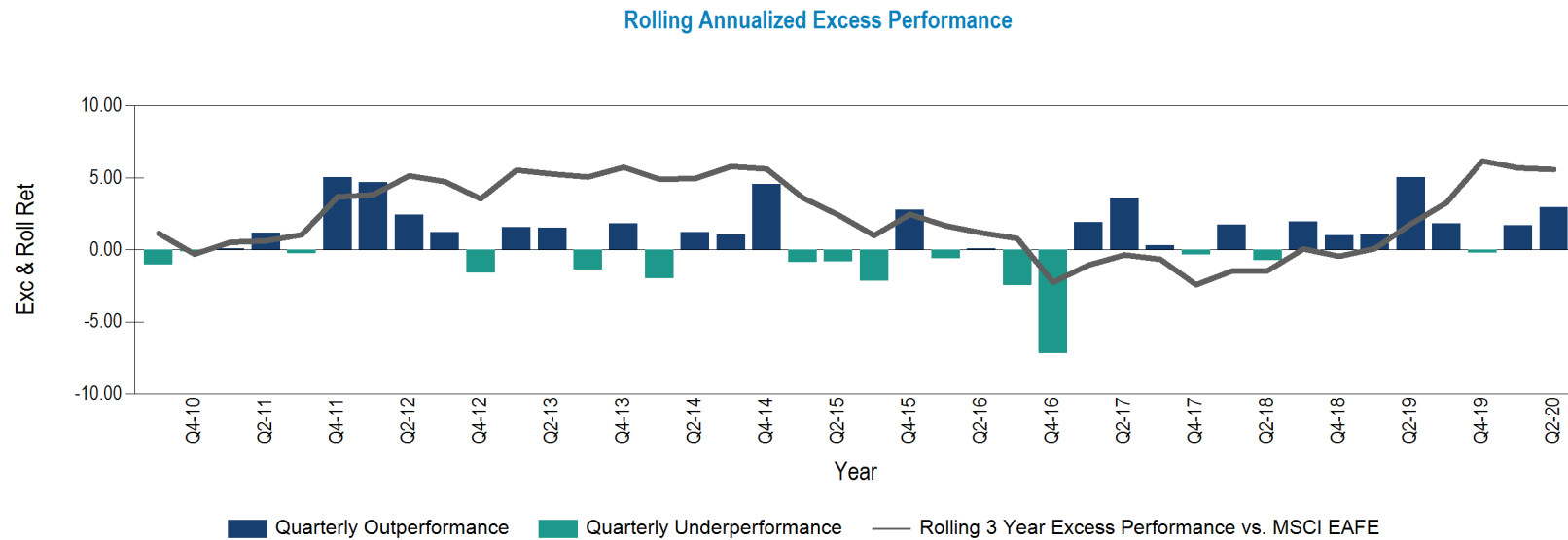
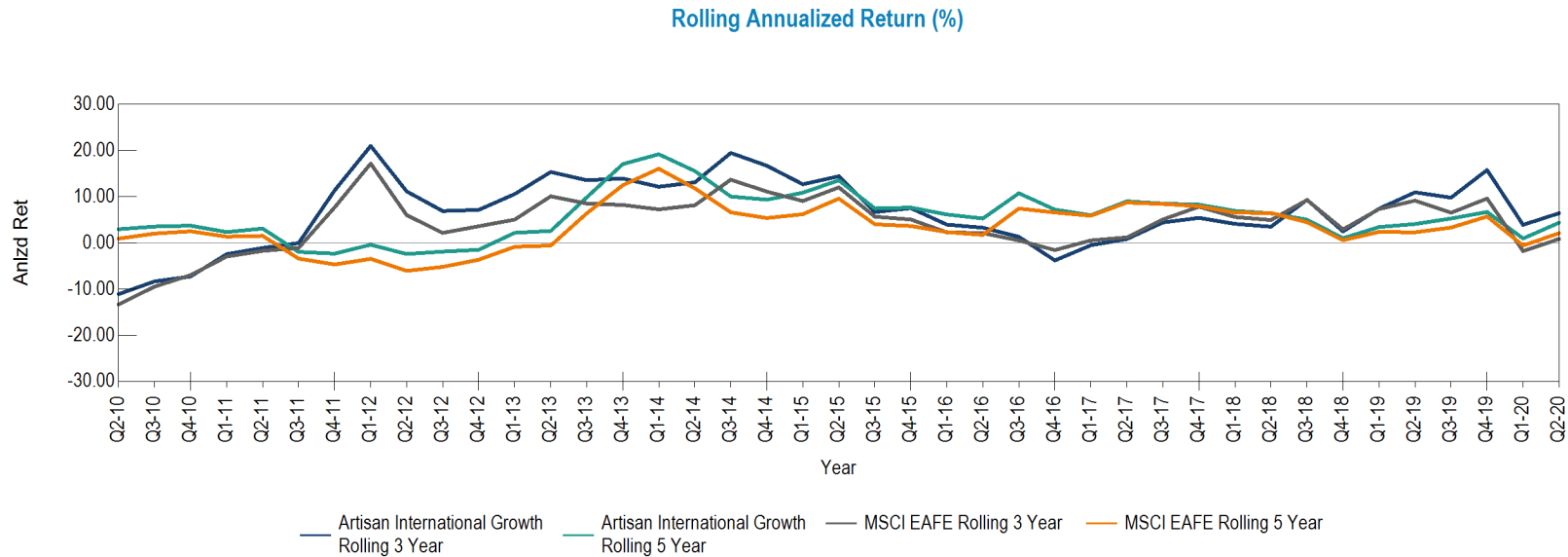
	Return (Rank)									
5th Percentile	23.5	8.7	8.4	6.8	9.2	32.5	-9.2	33.9	6.2	6.8
25th Percentile	18.2	-0.1	3.4	3.8	7.4	25.6	-11.5	28.1	2.6	3.4
Median	16.1	-4.1	0.8	2.2	6.6	21.6	-14.6	25.7	0.6	1.8
75th Percentile	13.6	-9.1	-2.1	0.4	5.2	18.1	-17.4	21.8	-1.7	-1.5
95th Percentile	10.3	-15.6	-4.8	-2.2	2.4	14.5	-19.6	18.0	-5.4	-6.0
# of Portfolios	78	78	76	68	50	77	72	70	64	58
● Artisan International Growth	17.8 (30)	1.2 (21)	6.4 (12)	4.3 (21)	8.8 (12)	31.3 (9)	-10.2 (13)	31.5 (13)	-9.0 (99)	-2.2 (80)
▲ MSCI EAFE	14.9 (67)	-5.1 (59)	0.8 (51)	2.1 (54)	5.7 (66)	22.0 (48)	-13.8 (47)	25.0 (59)	1.0 (46)	-0.8 (71)

Returns prior to inception date are composite returns.

Artisan International Growth

Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2020



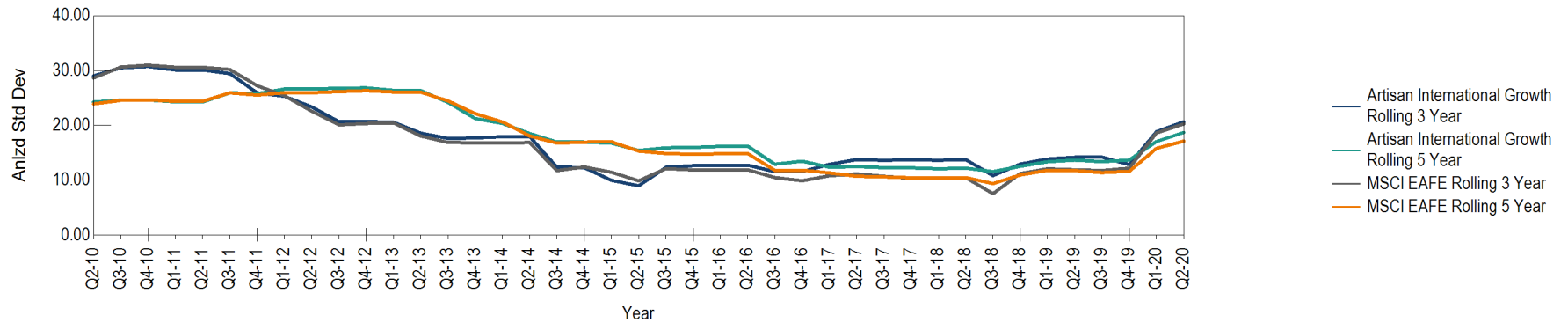
Returns prior to inception date are composite returns.

Artisan International Growth

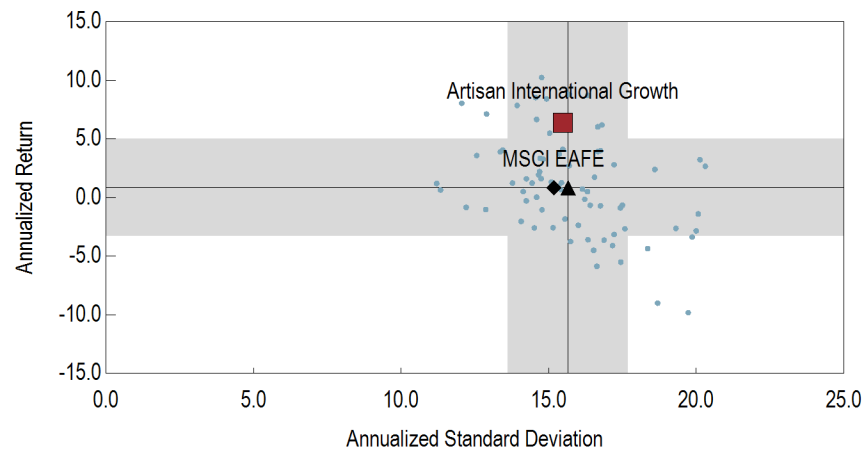
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

Rolling Annualized Standard Deviation



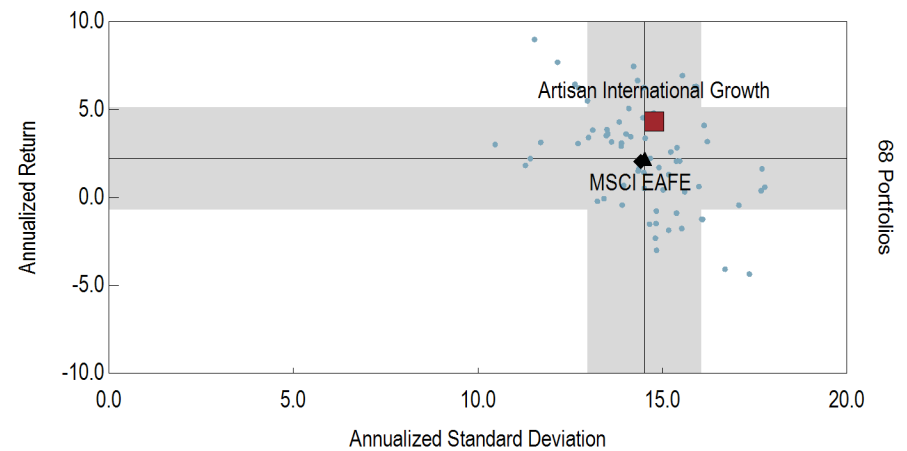
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan International Growth	6.4%	15.5%	0.3
MSCI EAFE	0.8%	15.2%	-0.1
eV EAFE All Cap Growth Net Median	6.2%	15.7%	0.3

5 Years



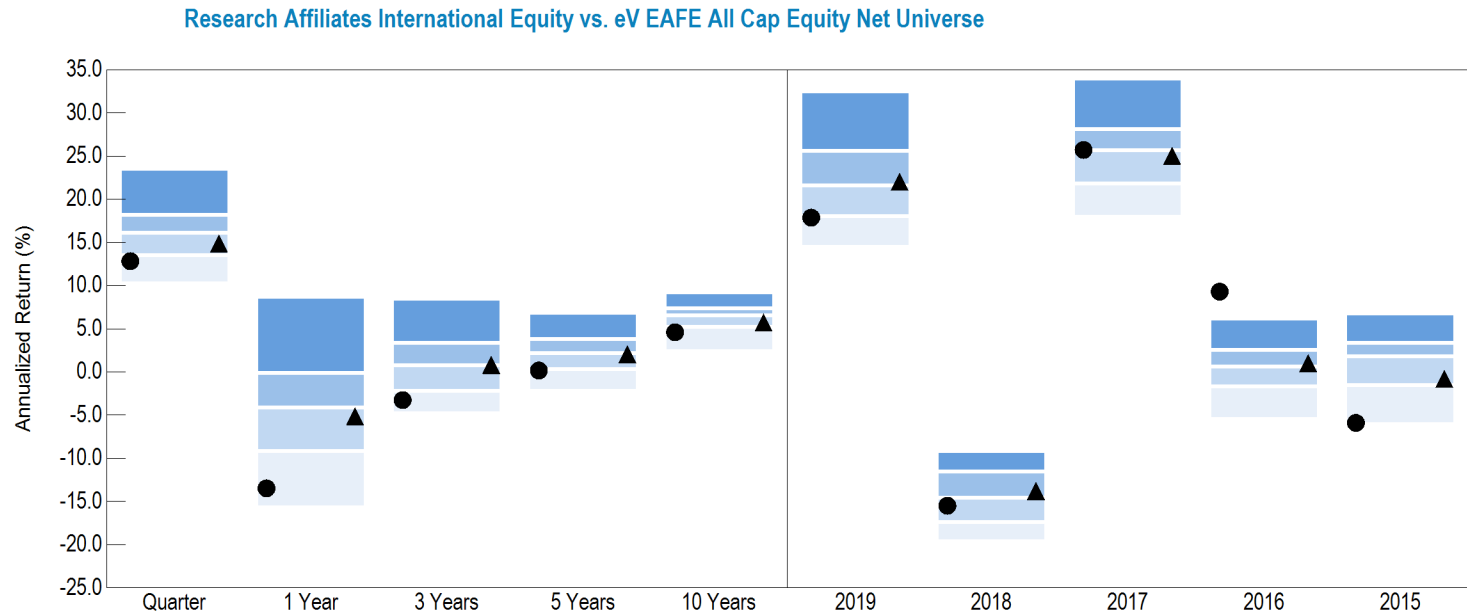
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Artisan International Growth	4.3%	14.8%	0.2
MSCI EAFE	2.1%	14.4%	0.1
eV EAFE All Cap Growth Net Median	6.2%	15.2%	0.3

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

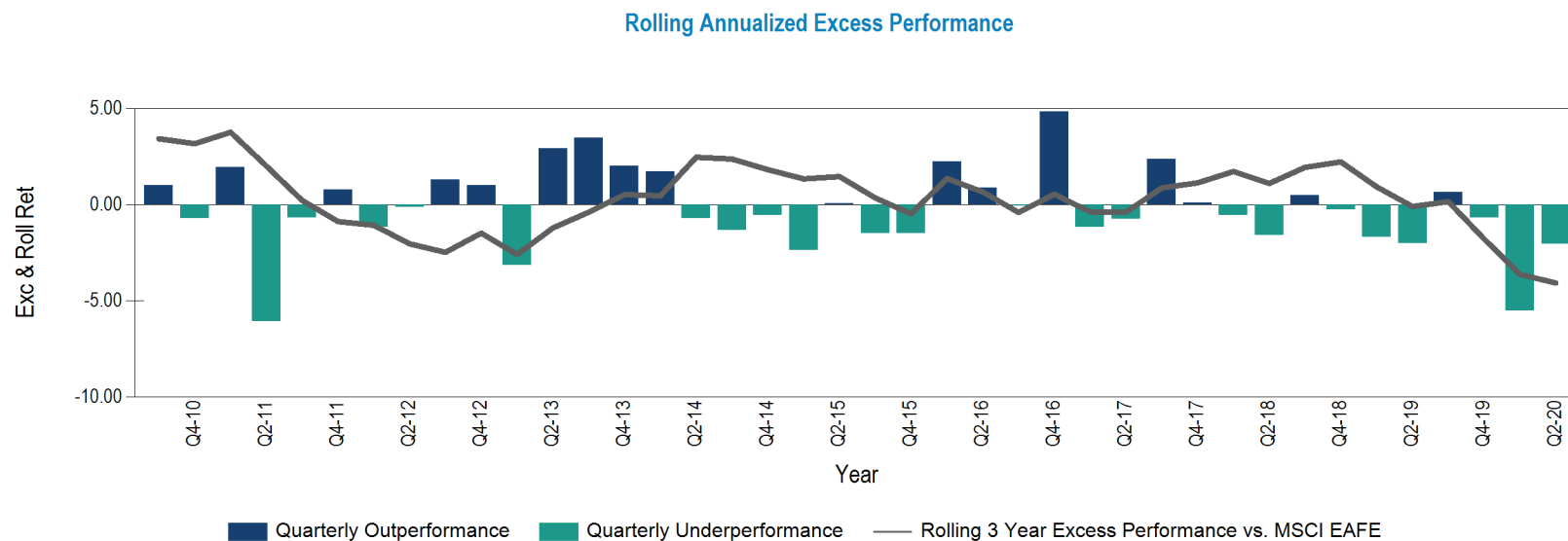
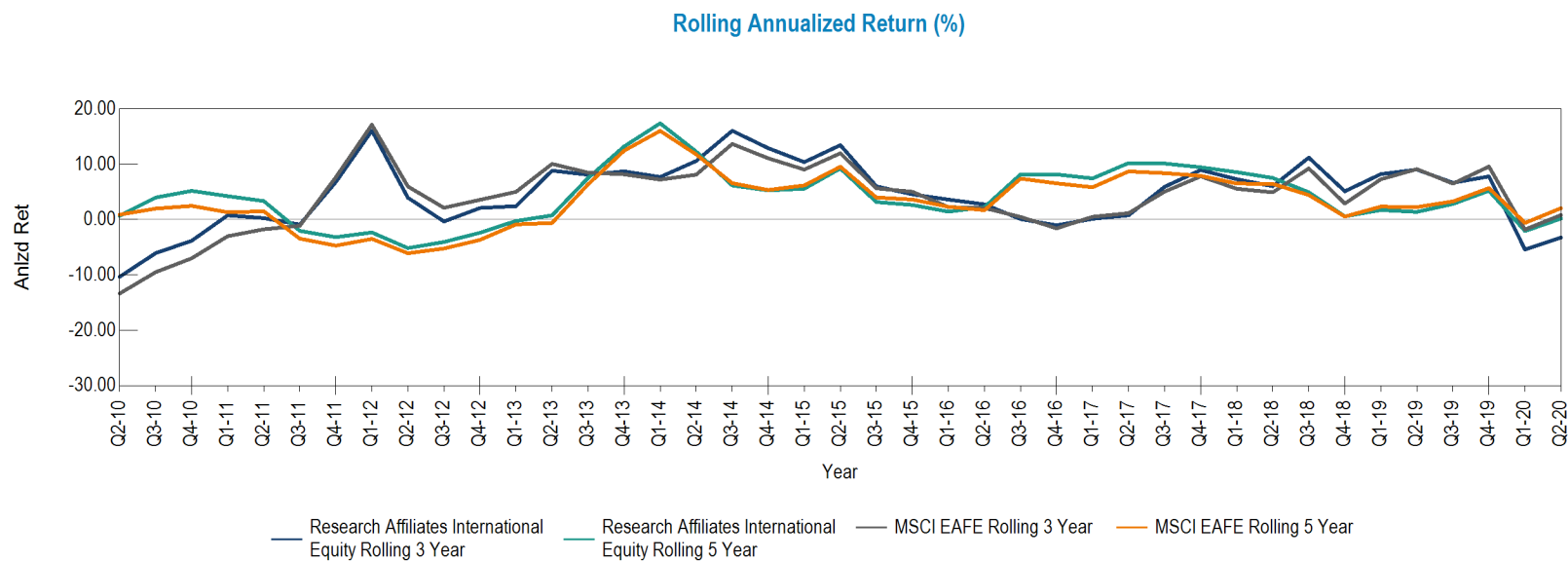


	Return (Rank)									
5th Percentile	23.5	8.7	8.4	6.8	9.2	32.5	-9.2	33.9	6.2	6.8
25th Percentile	18.2	-0.1	3.4	3.8	7.4	25.6	-11.5	28.1	2.6	3.4
Median	16.1	-4.1	0.8	2.2	6.6	21.6	-14.6	25.7	0.6	1.8
75th Percentile	13.6	-9.1	-2.1	0.4	5.2	18.1	-17.4	21.8	-1.7	-1.5
95th Percentile	10.3	-15.6	-4.8	-2.2	2.4	14.5	-19.6	18.0	-5.4	-6.0
# of Portfolios	78	78	76	68	50	77	72	70	64	58
● Research Affiliates International Equity	12.8 (81)	-13.5 (91)	-3.3 (85)	0.2 (77)	4.6 (86)	17.9 (79)	-15.5 (57)	25.7 (51)	9.3 (1)	-5.9 (95)
▲ MSCI EAFE	14.9 (67)	-5.1 (59)	0.8 (51)	2.1 (54)	5.7 (66)	22.0 (48)	-13.8 (47)	25.0 (59)	1.0 (46)	-0.8 (71)

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

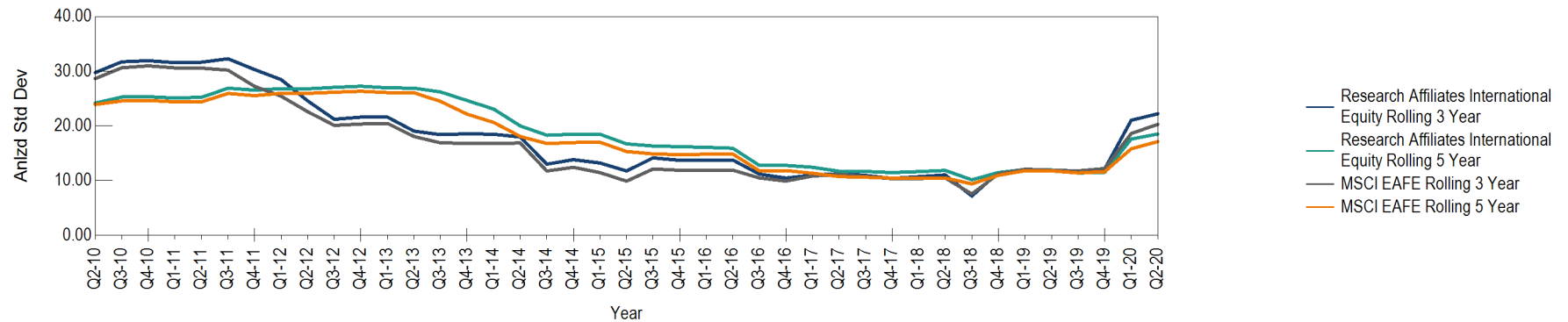


Returns prior to inception date are composite returns.

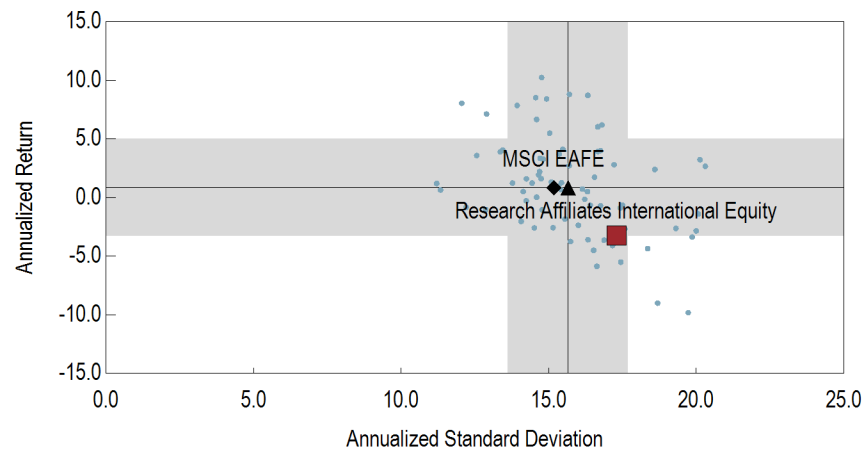
Research Affiliates International Equity Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

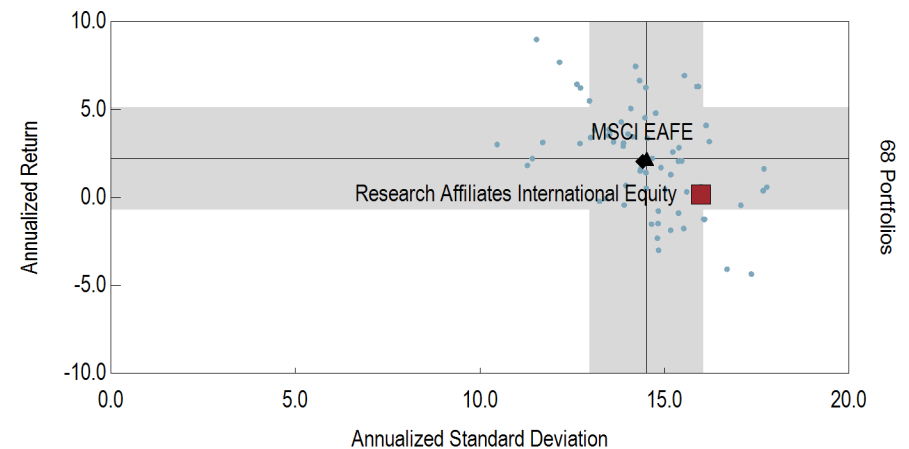
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	-3.3%	17.3%	-0.3
MSCI EAFE	0.8%	15.2%	-0.1
eV EAFE All Cap Equity Net Median	0.8%	15.7%	-0.1

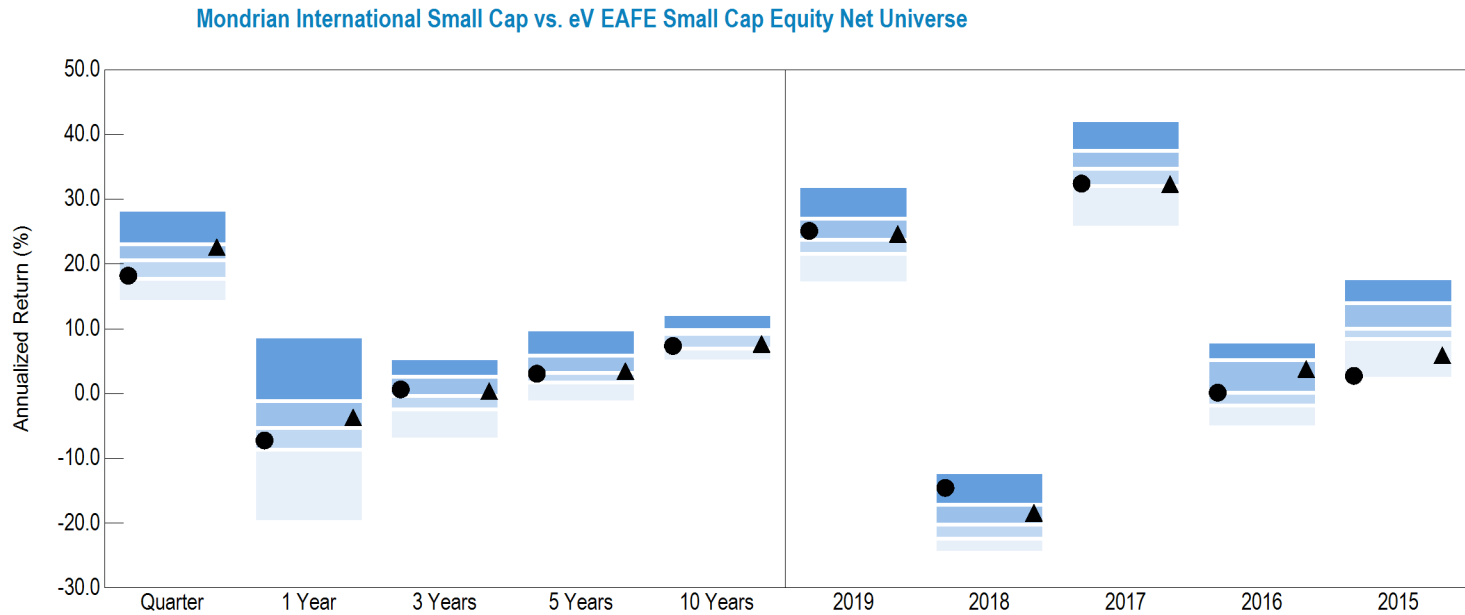
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Research Affiliates International Equity	0.2%	16.0%	-0.1
MSCI EAFE	2.1%	14.4%	0.1
eV EAFE All Cap Equity Net Median	2.2%	14.5%	0.1

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

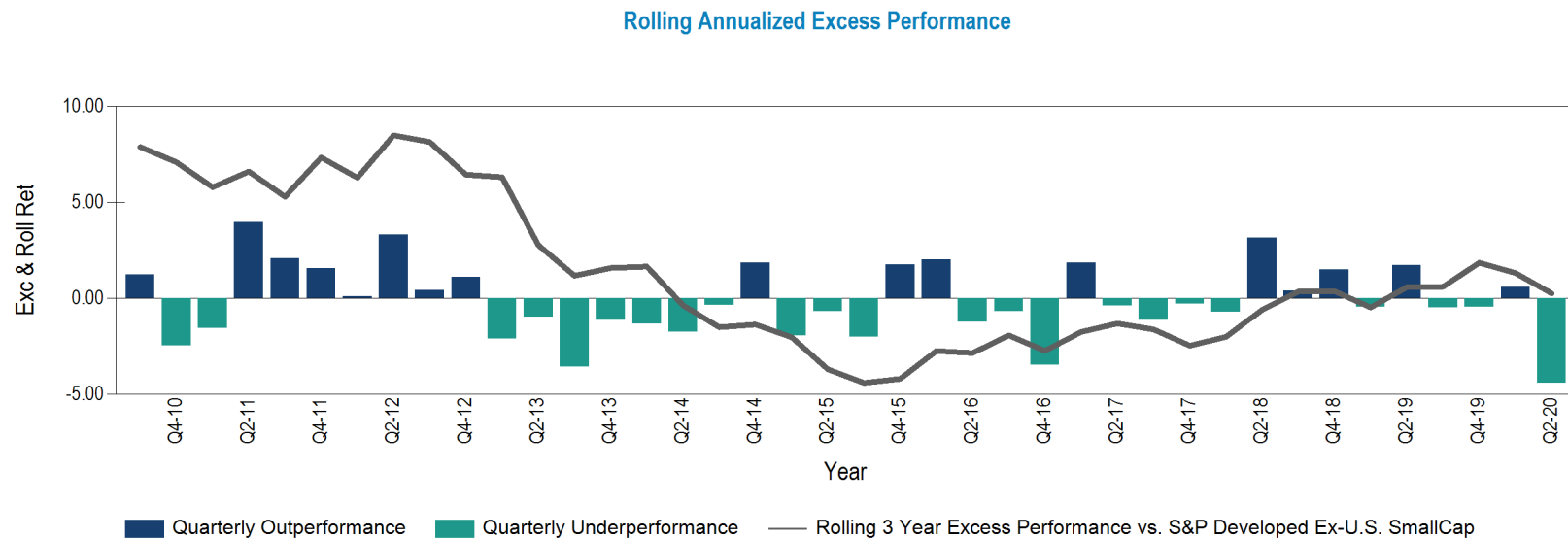
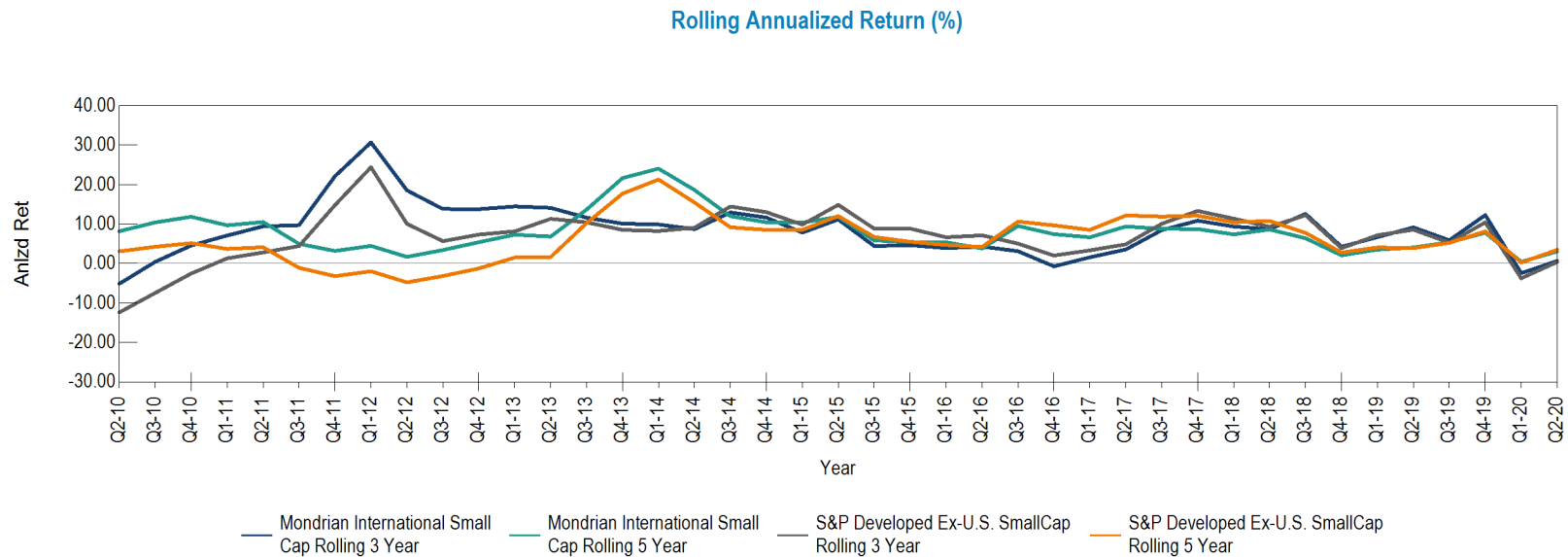


	Return (Rank)									
5th Percentile	28.3	8.7	5.4	9.8	12.2	32.0	-12.1	42.2	7.9	17.8
25th Percentile	23.1	-1.1	2.6	5.9	9.8	27.1	-17.1	37.6	5.2	14.0
Median	20.6	-5.3	-0.3	3.2	9.3	23.8	-20.2	34.8	0.1	10.1
75th Percentile	17.8	-8.6	-2.4	1.7	7.0	21.7	-22.3	32.1	-1.8	8.5
95th Percentile	14.2	-19.8	-7.0	-1.3	5.0	17.1	-24.6	25.7	-5.2	2.3
# of Portfolios	60	59	55	48	28	58	57	52	41	31
● Mondrian International Small Cap	18.2 (70)	-7.2 (66)	0.6 (43)	3.1 (55)	7.3 (72)	25.1 (40)	-14.6 (11)	32.4 (74)	0.1 (50)	2.7 (94)
▲ S&P Developed Ex-U.S. SmallCap	22.6 (28)	-3.7 (45)	0.4 (44)	3.5 (47)	7.7 (68)	24.7 (43)	-18.4 (29)	32.4 (74)	3.8 (29)	5.9 (84)

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

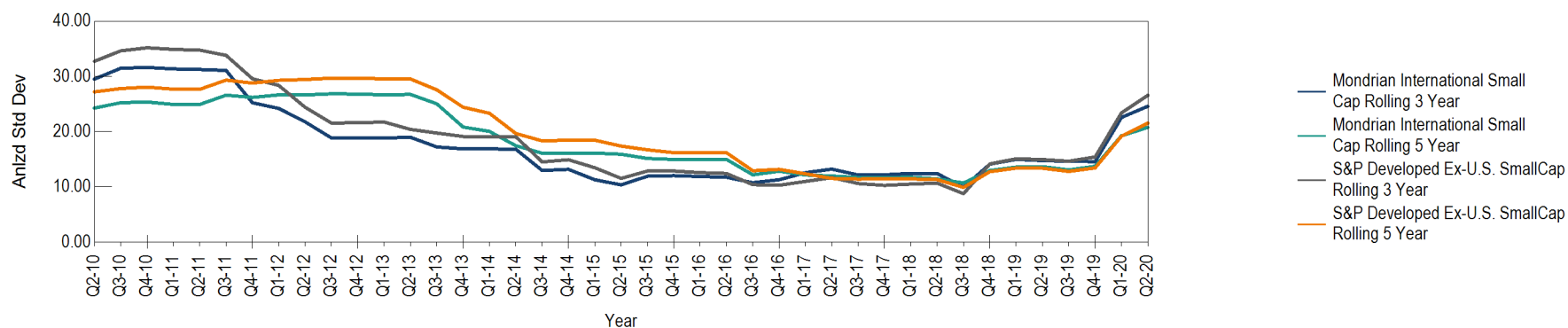


Returns prior to inception date are composite returns.

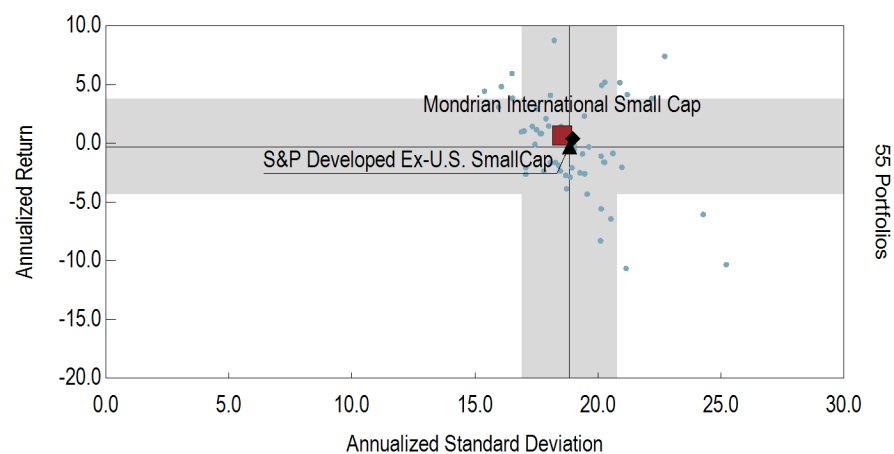
Mondrian International Small Cap Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

Rolling Annualized Standard Deviation



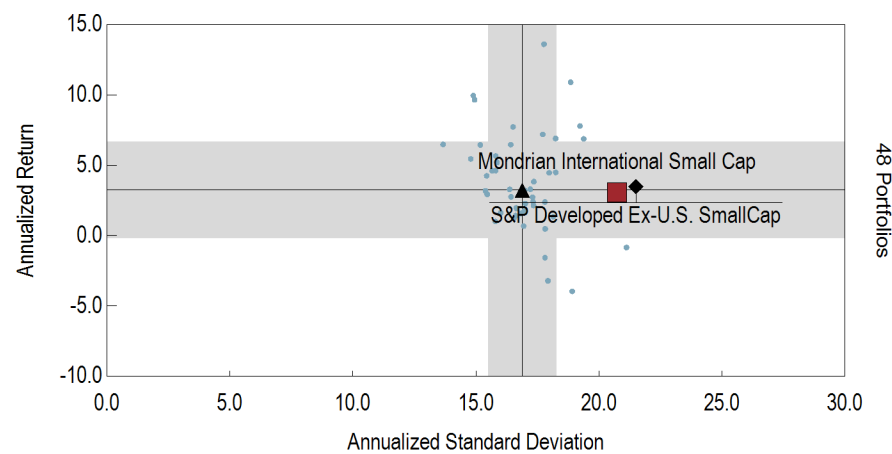
3 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	0.6%	18.6%	-0.1
S&P Developed Ex-U.S. SmallCap	0.4%	19.0%	-0.1
eV EAFE Small Cap Equity Net Median	-0.3%	18.8%	-0.1

5 Years



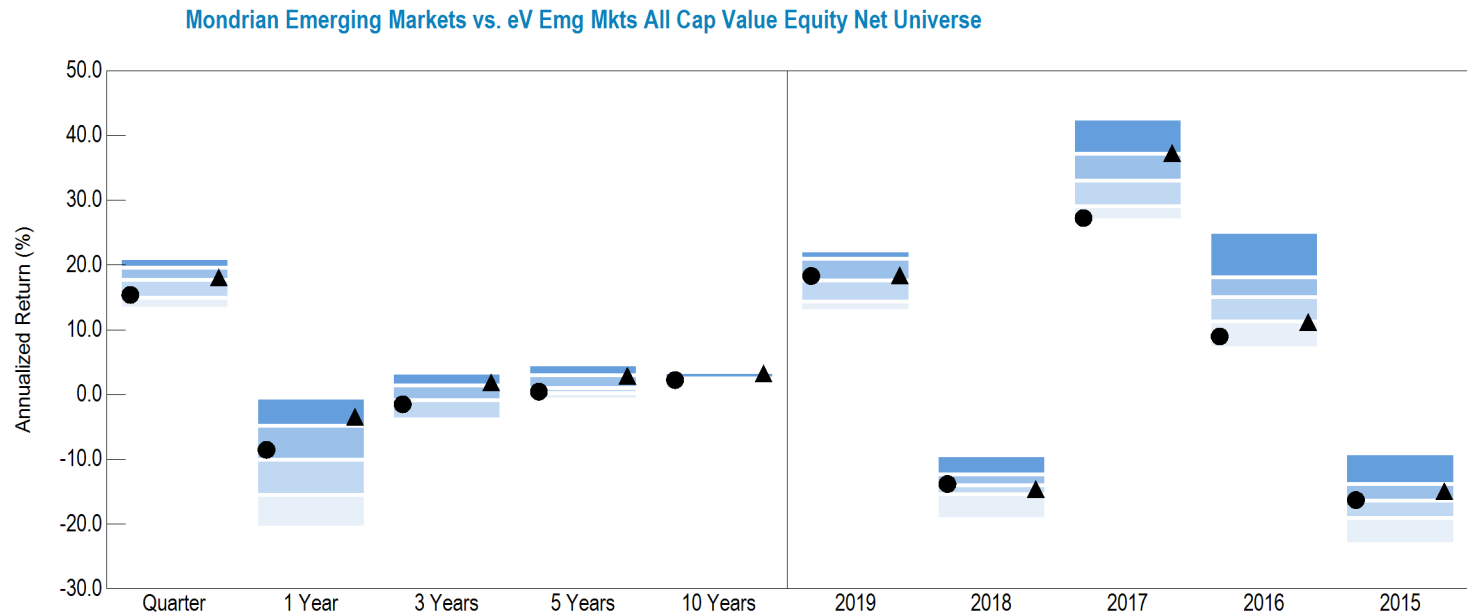
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian International Small Cap	3.1%	20.7%	0.1
S&P Developed Ex-U.S. SmallCap	3.5%	21.5%	0.1
eV EAFE Small Cap Equity Net Median	3.2%	16.9%	0.1

Returns prior to inception date are composite returns.

Mondrian Emerging Markets Manager Performance Comparisons (Net of Fees)

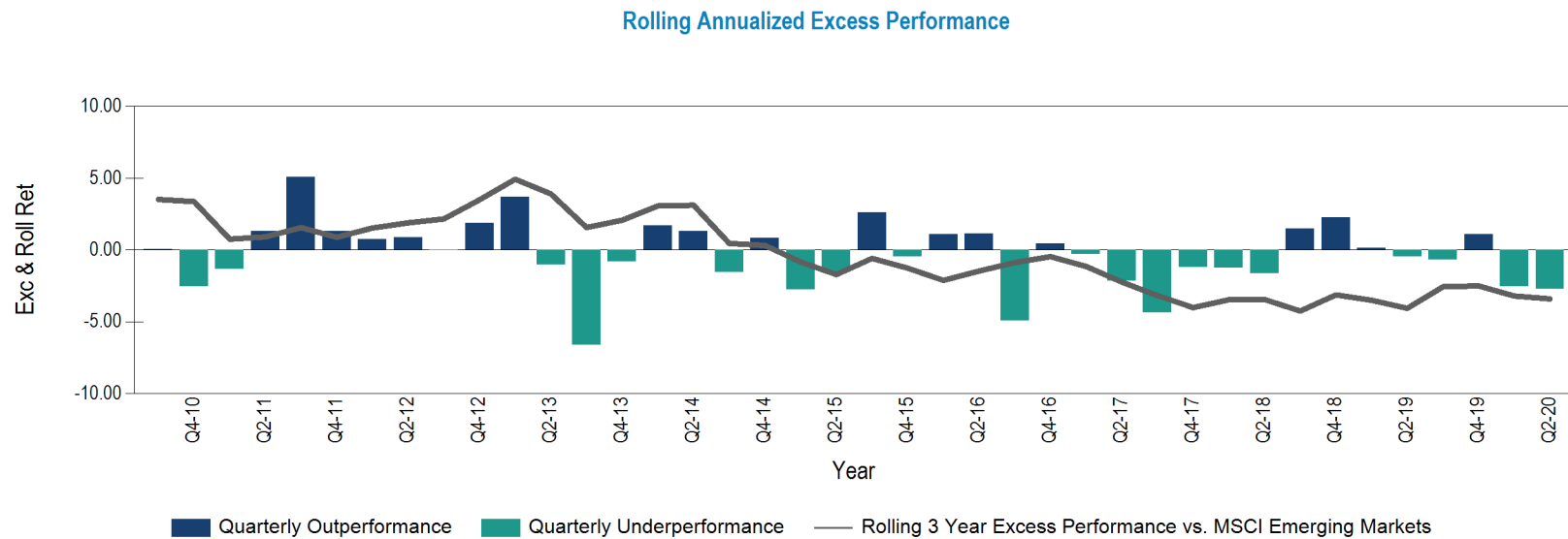
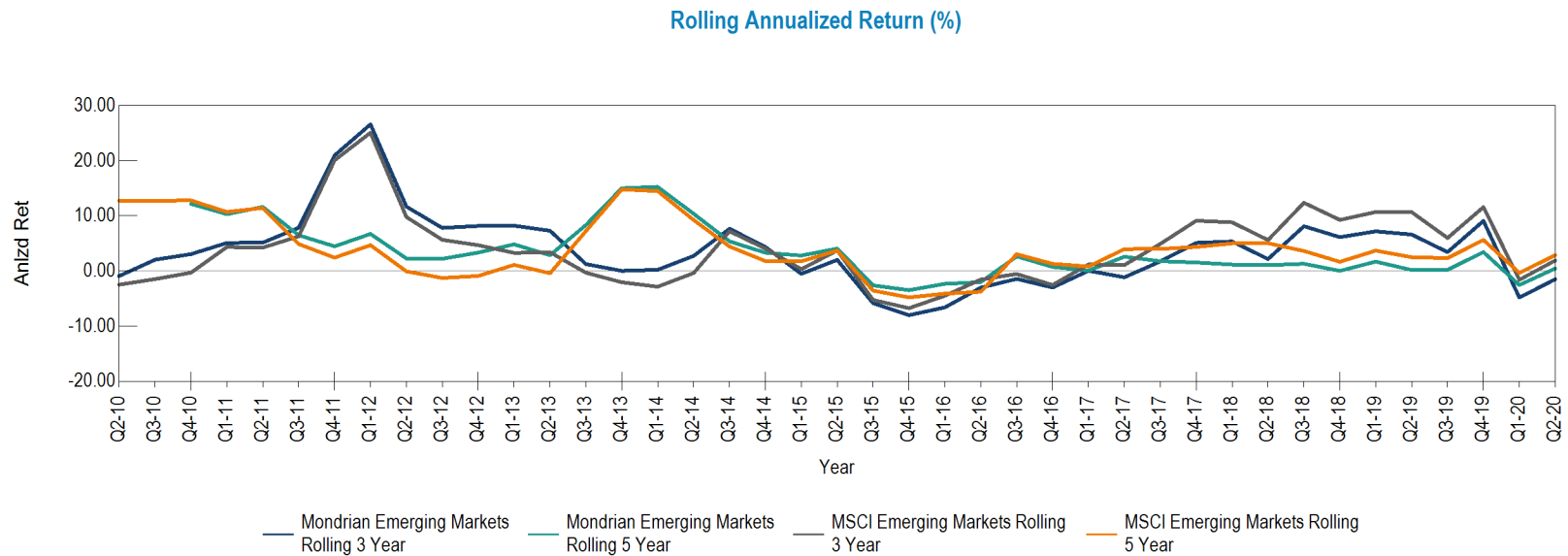
Period Ending: June 30, 2020



	Return (Rank)									
5th Percentile	21.0	-0.6	3.3	4.6	3.4	22.2	-9.4	42.6	25.1	-9.1
25th Percentile	19.7	-4.8	1.5	3.1	2.6	21.0	-12.3	37.2	18.2	-13.8
Median	17.7	-10.0	-0.8	1.1	2.4	17.7	-14.0	33.1	15.1	-16.4
75th Percentile	15.0	-15.5	-3.8	0.2	1.8	14.4	-15.3	29.1	11.4	-19.0
95th Percentile	13.3	-20.5	-4.3	-0.7	1.2	12.9	-19.2	26.9	7.2	-23.1
# of Portfolios	23	23	20	17	8	22	25	22	22	20
● Mondrian Emerging Markets	15.4 (68)	-8.5 (45)	-1.5 (60)	0.4 (70)	2.2 (60)	18.3 (42)	-13.8 (48)	27.2 (93)	9.0 (81)	-16.3 (49)
▲ MSCI Emerging Markets	18.1 (40)	-3.4 (18)	1.9 (14)	2.9 (30)	3.3 (7)	18.4 (42)	-14.6 (59)	37.3 (20)	11.2 (76)	-14.9 (32)

Mondrian Emerging Markets Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2020

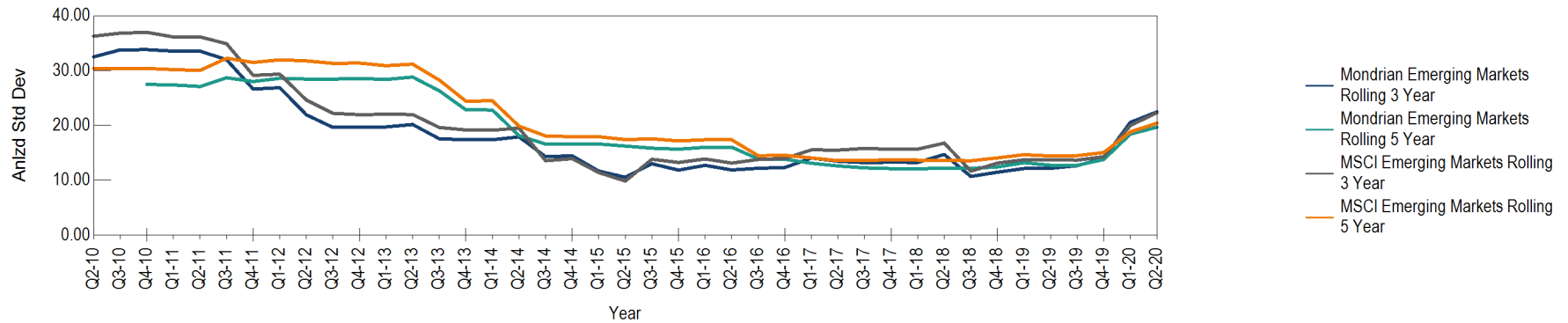


Mondrian Emerging Markets

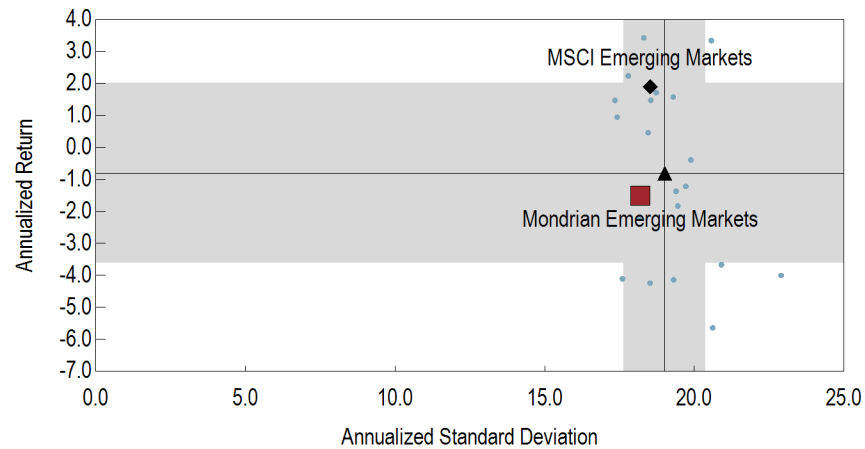
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

Rolling Annualized Standard Deviation



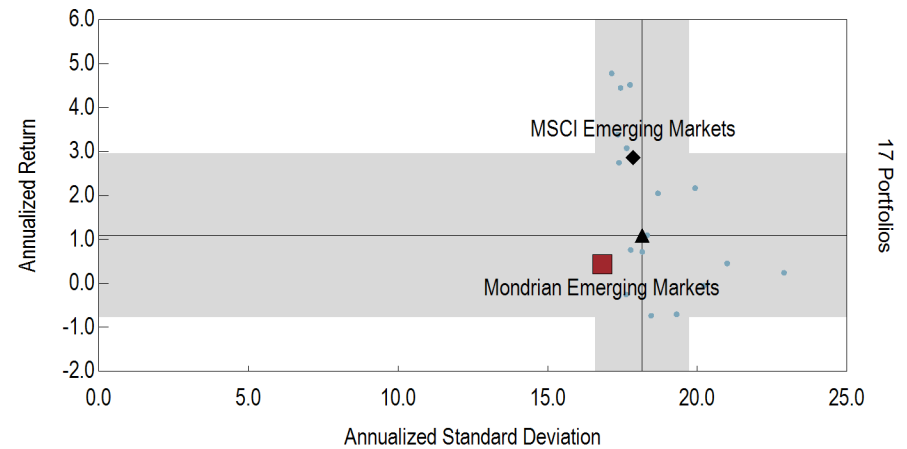
3 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	-1.5%	18.2%	-0.2
MSCI Emerging Markets	1.9%	18.5%	0.0
eV Emg Mkts All Cap Value Equity Net Median	-0.8%	19.0%	-0.1

5 Years



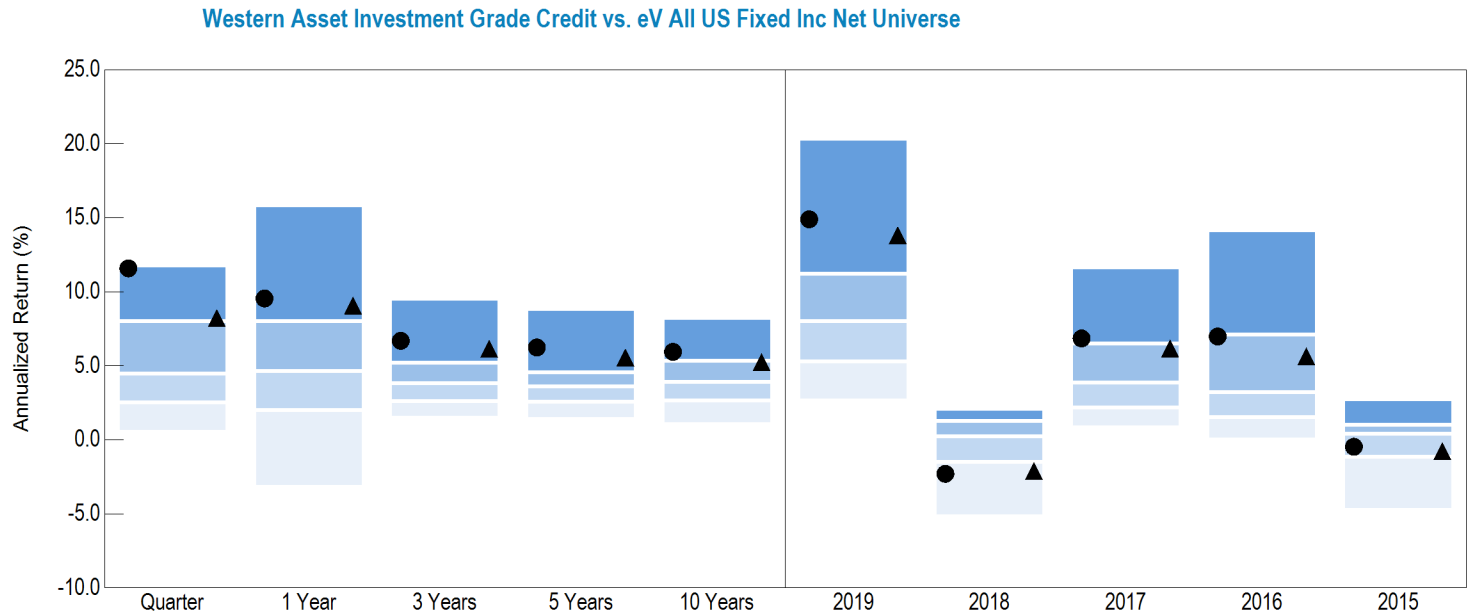
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Mondrian Emerging Markets	0.4%	16.8%	0.0
MSCI Emerging Markets	2.9%	17.9%	0.1
eV Emg Mkts All Cap Value Equity Net Median	1.1%	18.2%	0.0

Fixed Income Managers

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

Period Ending: June 30, 2020

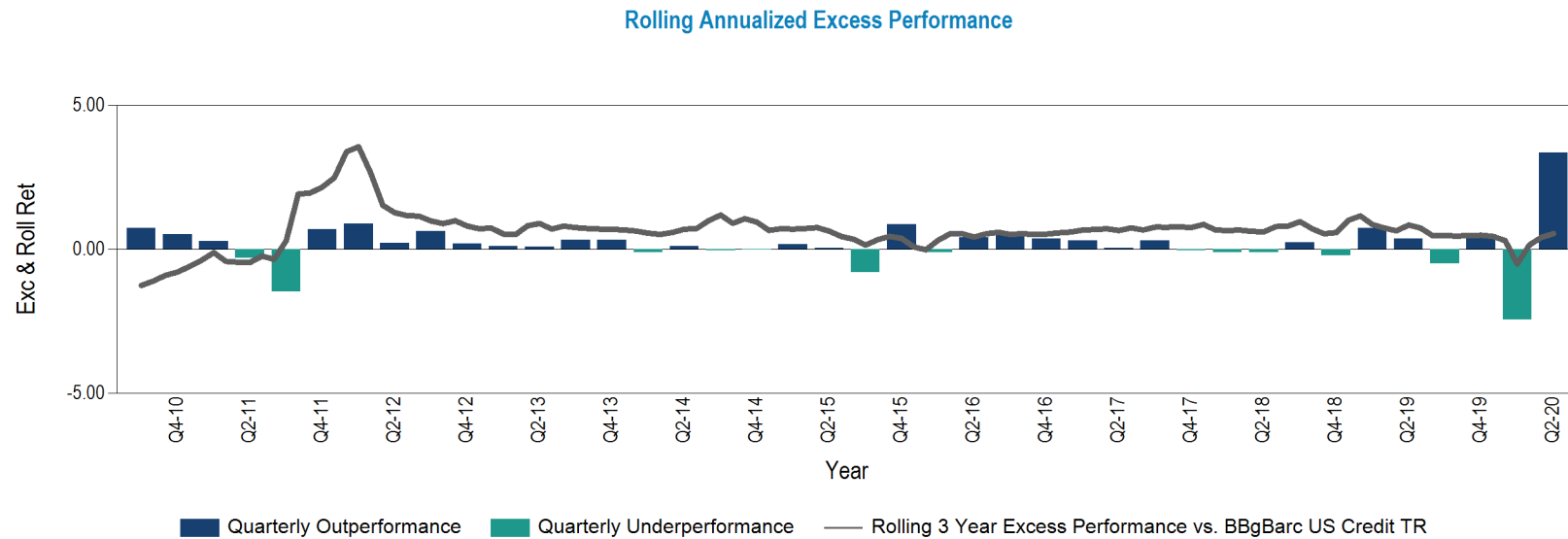
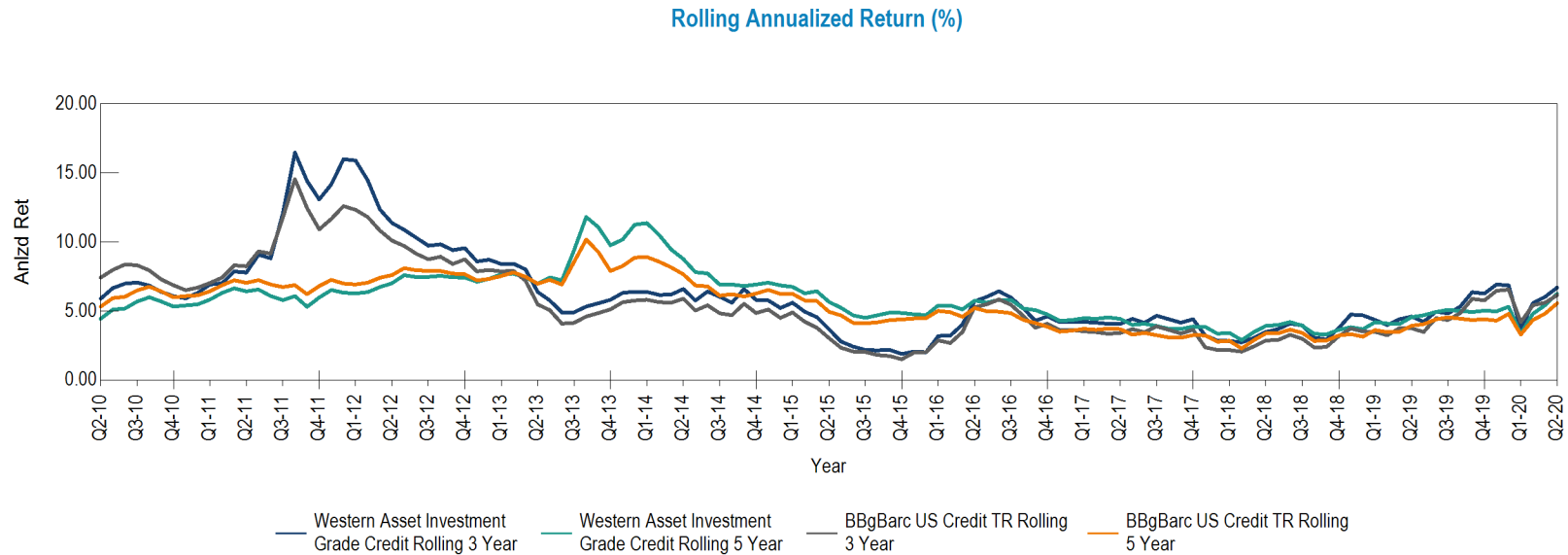


	Return (Rank)									
5th Percentile	11.7	15.8	9.5	8.8	8.2	20.3	2.1	11.6	14.1	2.7
25th Percentile	8.1	8.1	5.2	4.6	5.3	11.2	1.3	6.5	7.1	1.0
Median	4.5	4.7	3.8	3.6	3.9	8.1	0.3	3.9	3.3	0.4
75th Percentile	2.5	2.0	2.6	2.6	2.7	5.3	-1.5	2.2	1.6	-1.1
95th Percentile	0.6	-3.2	1.5	1.4	1.1	2.7	-5.2	0.9	0.0	-4.7
# of Portfolios	1,282	1,272	1,226	1,138	907	1,248	1,173	1,135	1,033	827
● Western Asset Investment Grade Credit	11.6 (6)	9.5 (14)	6.7 (11)	6.2 (10)	5.9 (19)	14.9 (14)	-2.3 (81)	6.8 (23)	7.0 (26)	-0.5 (70)
▲ BBgBarc US Credit TR	8.2 (24)	9.1 (17)	6.1 (13)	5.5 (14)	5.2 (28)	13.8 (19)	-2.1 (79)	6.2 (28)	5.6 (33)	-0.8 (74)

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

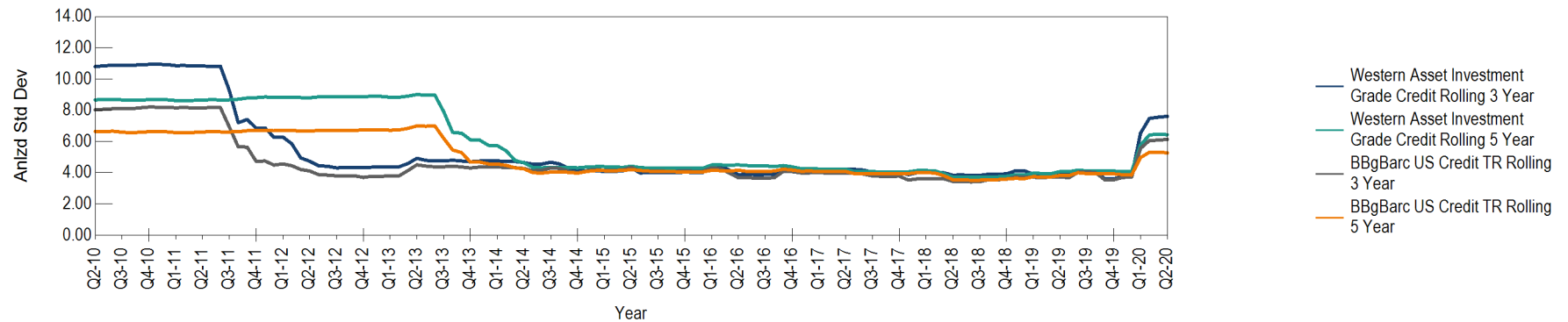


Returns prior to inception date are composite returns.

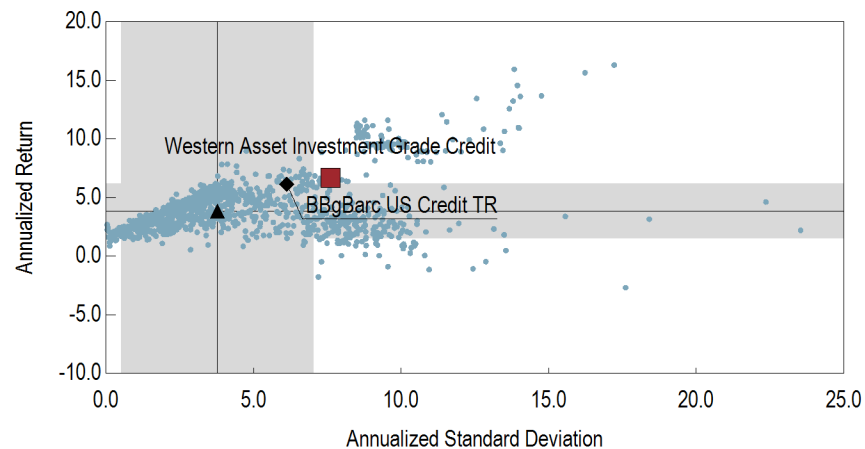
Western Asset Investment Grade Credit Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

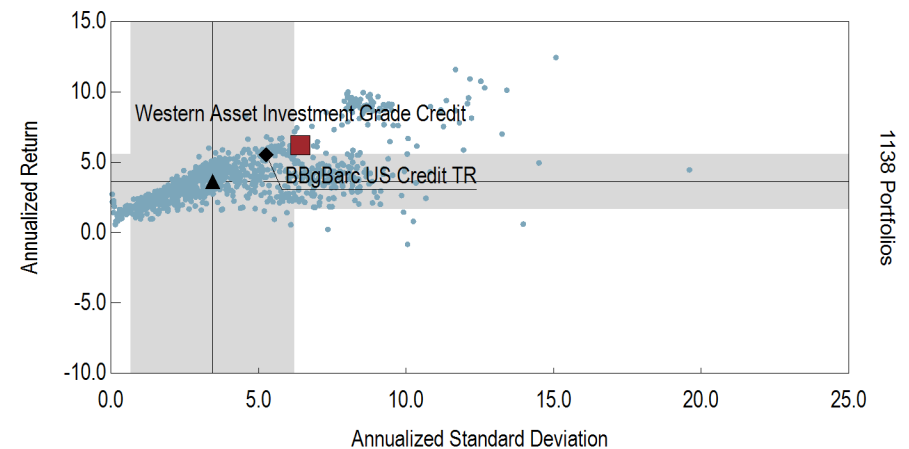
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	6.7%	7.6%	0.7
BBgBarc US Credit TR	6.1%	6.1%	0.7
eV All US Fixed Inc Net Median	3.8%	3.8%	0.7

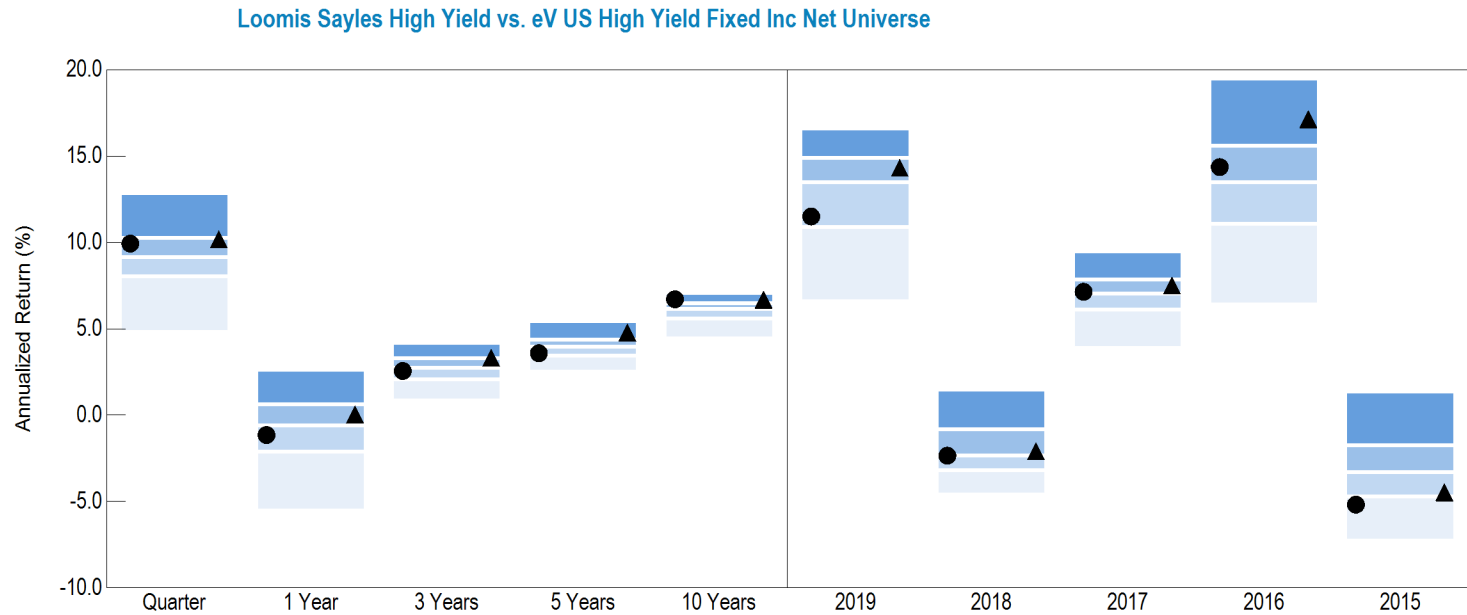
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Western Asset Investment Grade Credit	6.2%	6.4%	0.8
BBgBarc US Credit TR	5.5%	5.3%	0.8
eV All US Fixed Inc Net Median	3.6%	3.4%	0.8

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

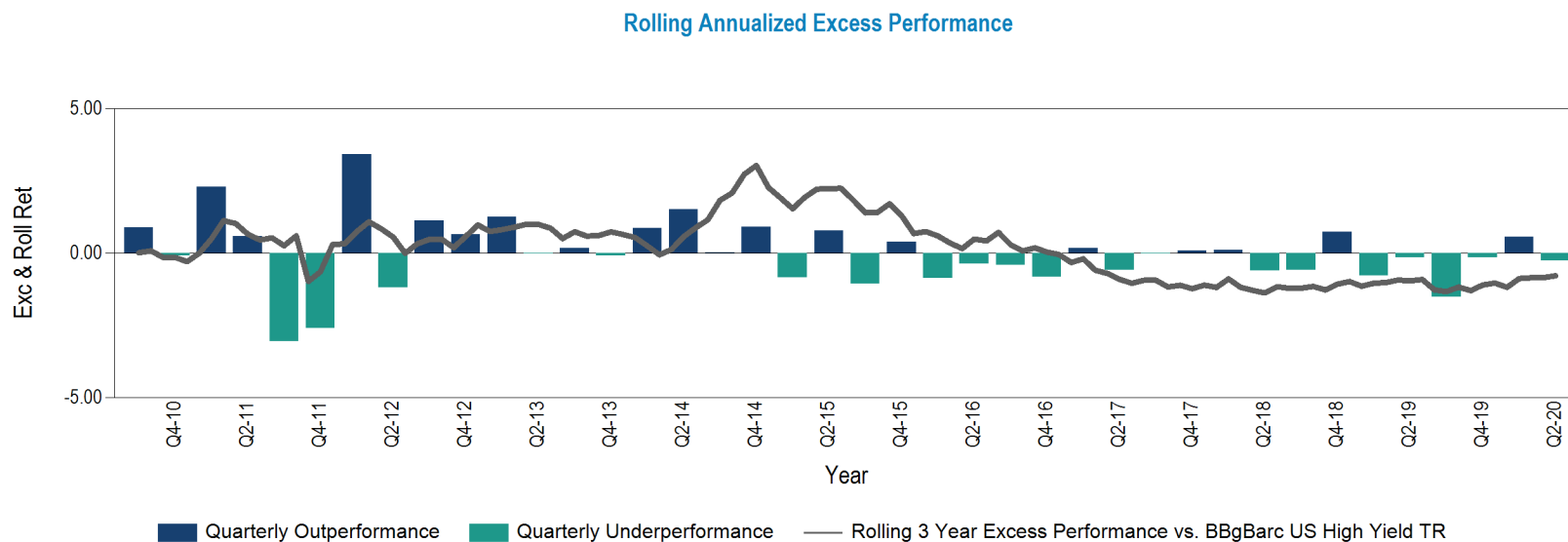
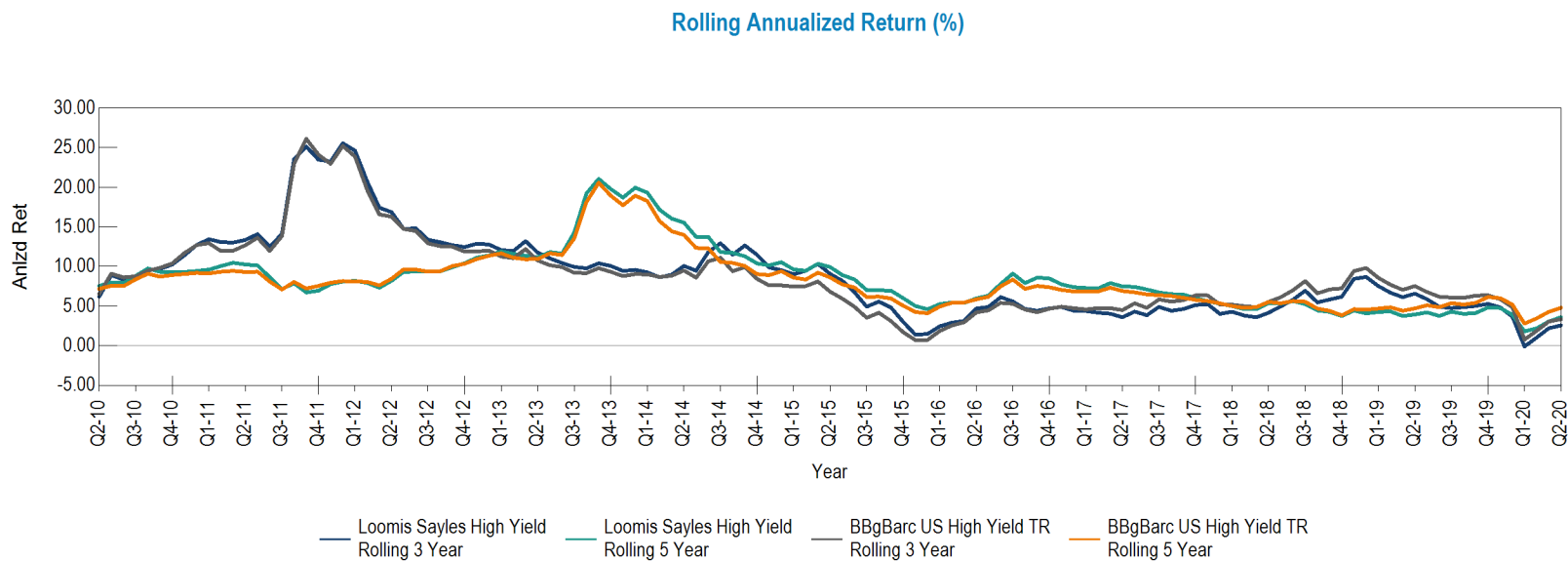


	Return (Rank)									
5th Percentile	12.8	2.6	4.2	5.4	7.0	16.6	1.4	9.5	19.5	1.4
25th Percentile	10.3	0.7	3.3	4.4	6.5	14.9	-0.8	7.9	15.6	-1.7
Median	9.2	-0.6	2.8	4.0	6.2	13.5	-2.3	7.1	13.5	-3.3
75th Percentile	8.1	-2.1	2.1	3.5	5.6	10.9	-3.2	6.1	11.1	-4.7
95th Percentile	4.8	-5.5	0.9	2.6	4.5	6.6	-4.6	3.9	6.4	-7.2
# of Portfolios	143	141	135	125	86	144	136	129	114	88
● Loomis Sayles High Yield	9.9 (31)	-1.2 (61)	2.6 (59)	3.6 (72)	6.7 (13)	11.5 (72)	-2.3 (52)	7.1 (47)	14.4 (42)	-5.2 (79)
▲ BBgBarc US High Yield TR	10.2 (28)	0.0 (37)	3.3 (25)	4.8 (14)	6.7 (13)	14.3 (37)	-2.1 (46)	7.5 (39)	17.1 (12)	-4.5 (73)

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

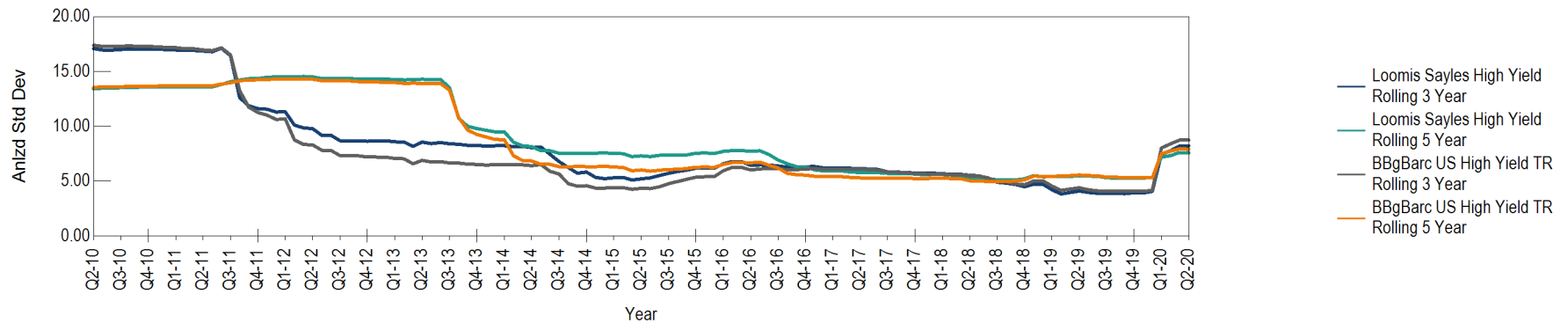


Returns prior to inception date are composite returns.

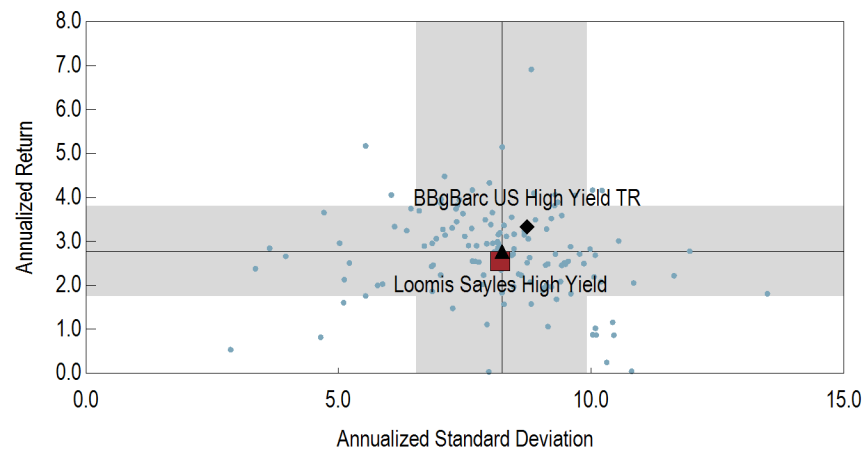
Loomis Sayles High Yield Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

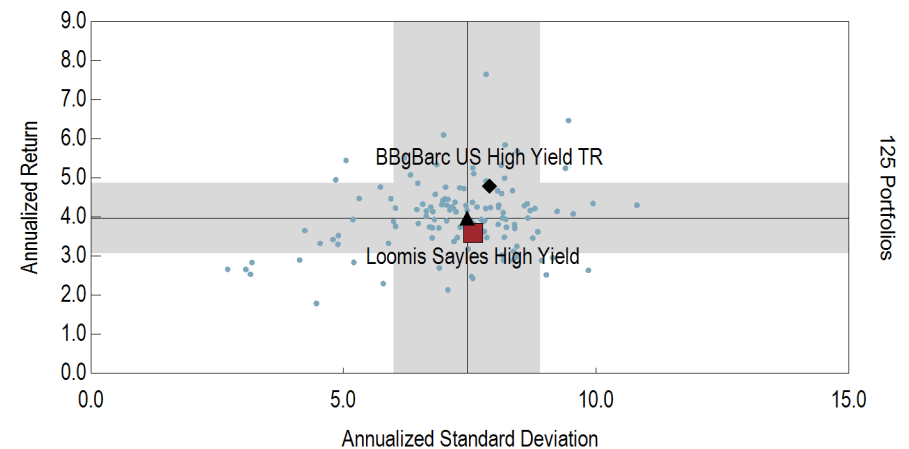
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	2.6%	8.2%	0.1
BBGBarc US High Yield TR	3.3%	8.7%	0.2
eV US High Yield Fixed Inc Net Median	2.8%	8.2%	0.1

5 Years

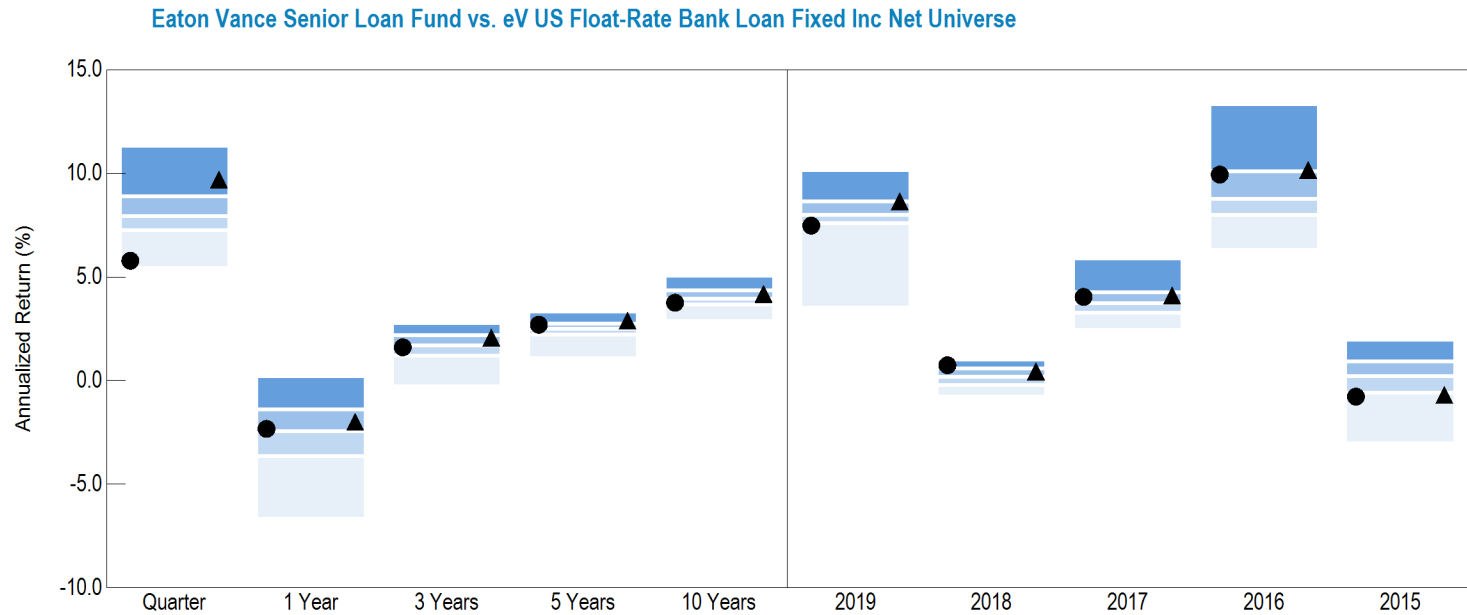
	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Loomis Sayles High Yield	3.6%	7.6%	0.3
BBGBarc US High Yield TR	4.8%	7.9%	0.5
eV US High Yield Fixed Inc Net Median	4.0%	7.4%	0.4

Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2020



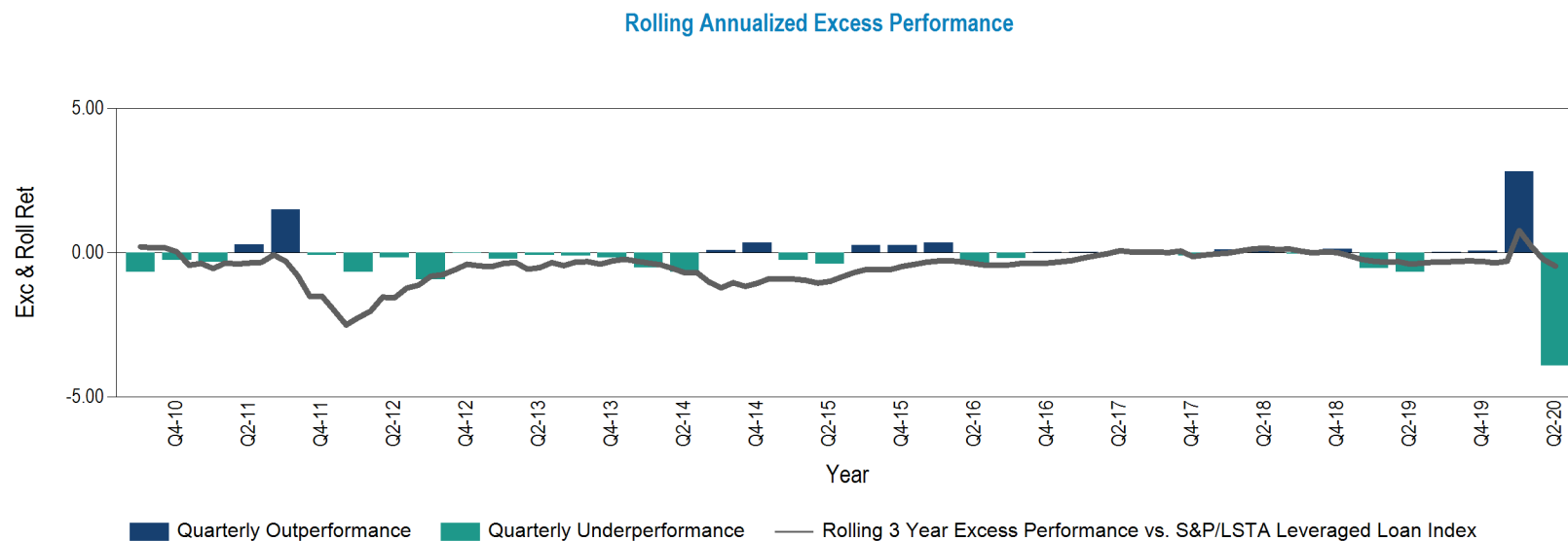
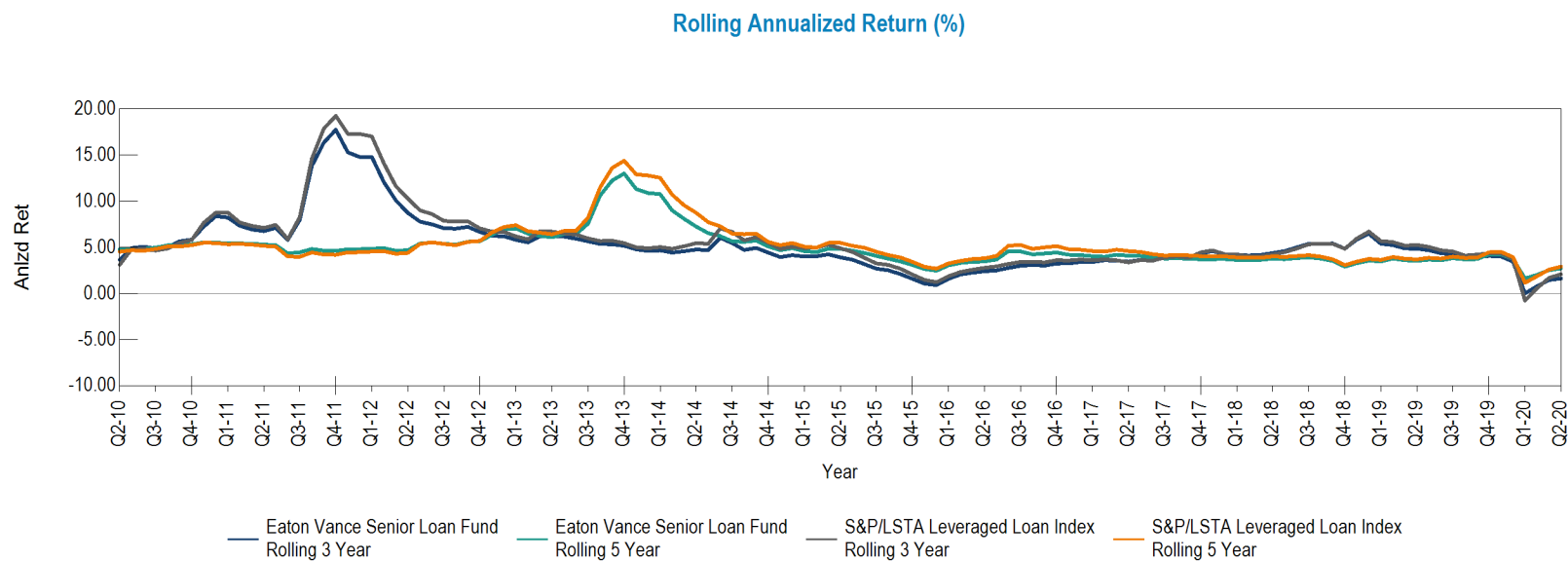
	Return (Rank)									
5th Percentile	11.3	0.2	2.8	3.3	5.0	10.1	1.0	5.9	13.3	2.0
25th Percentile	8.9	-1.4	2.2	2.8	4.4	8.7	0.6	4.3	10.1	0.9
Median	8.0	-2.4	1.7	2.5	4.0	8.0	0.2	3.8	8.8	0.2
75th Percentile	7.3	-3.6	1.2	2.2	3.7	7.6	-0.2	3.3	8.0	-0.6
95th Percentile	5.5	-6.6	-0.3	1.1	2.9	3.5	-0.8	2.5	6.3	-3.0
# of Portfolios	52	52	50	47	31	50	47	48	45	30
● Eaton Vance Senior Loan Fund	5.8 (94)	-2.3 (48)	1.6 (55)	2.7 (34)	3.8 (68)	7.5 (80)	0.7 (16)	4.0 (40)	9.9 (33)	-0.8 (85)
▲ S&P/LSTA Leveraged Loan Index	9.7 (16)	-2.0 (41)	2.1 (29)	2.9 (21)	4.2 (33)	8.6 (26)	0.4 (36)	4.1 (35)	10.2 (25)	-0.7 (81)

Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

Rolling Manager Performance (Net of Fees)

Period Ending: June 30, 2020



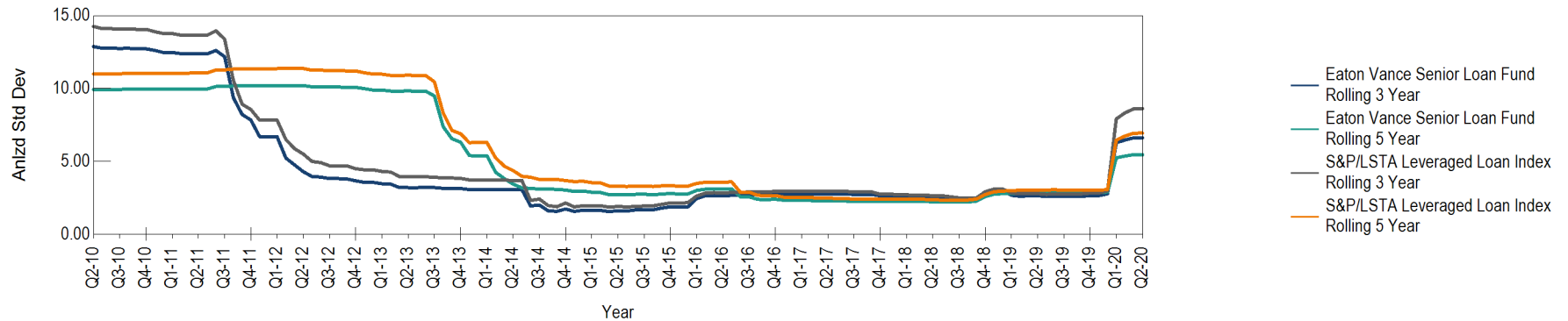
Returns prior to inception date are composite returns.

Eaton Vance Senior Loan Fund

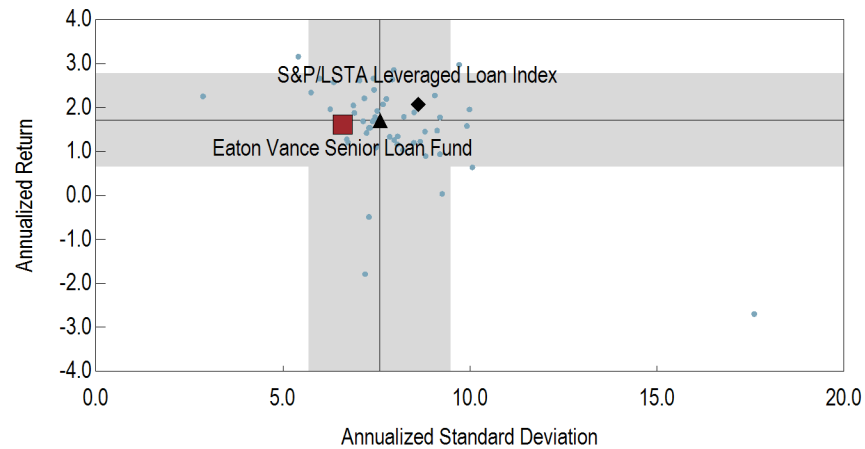
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

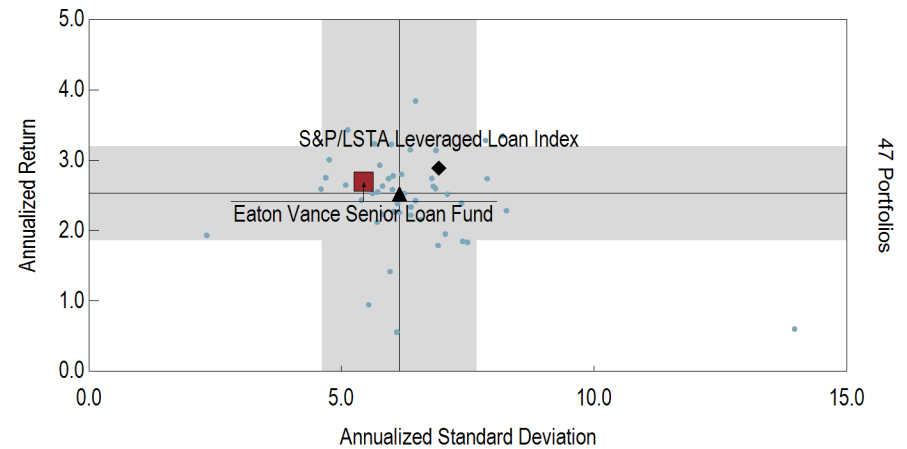
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	1.6%	6.6%	0.0
S&P/LSTA Leveraged Loan Index	2.1%	8.6%	0.0
eV US Float-Rate Bank Loan Fixed Inc Net Median	1.7%	7.6%	0.0

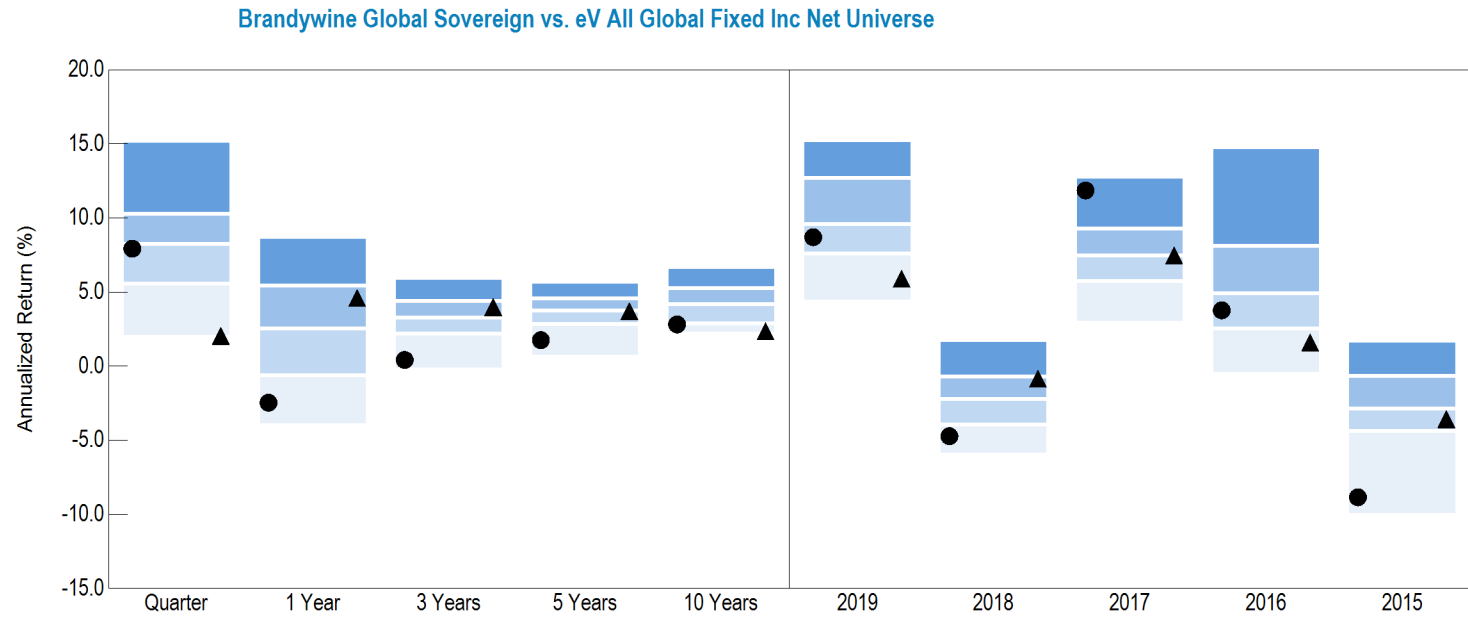
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
Eaton Vance Senior Loan Fund	2.7%	5.4%	0.3
S&P/LSTA Leveraged Loan Index	2.9%	6.9%	0.3
eV US Float-Rate Bank Loan Fixed Inc Net Median	2.5%	6.1%	0.2

Returns prior to inception date are composite returns.

Brandywine Global Sovereign Manager Performance Comparisons (Net of Fees)

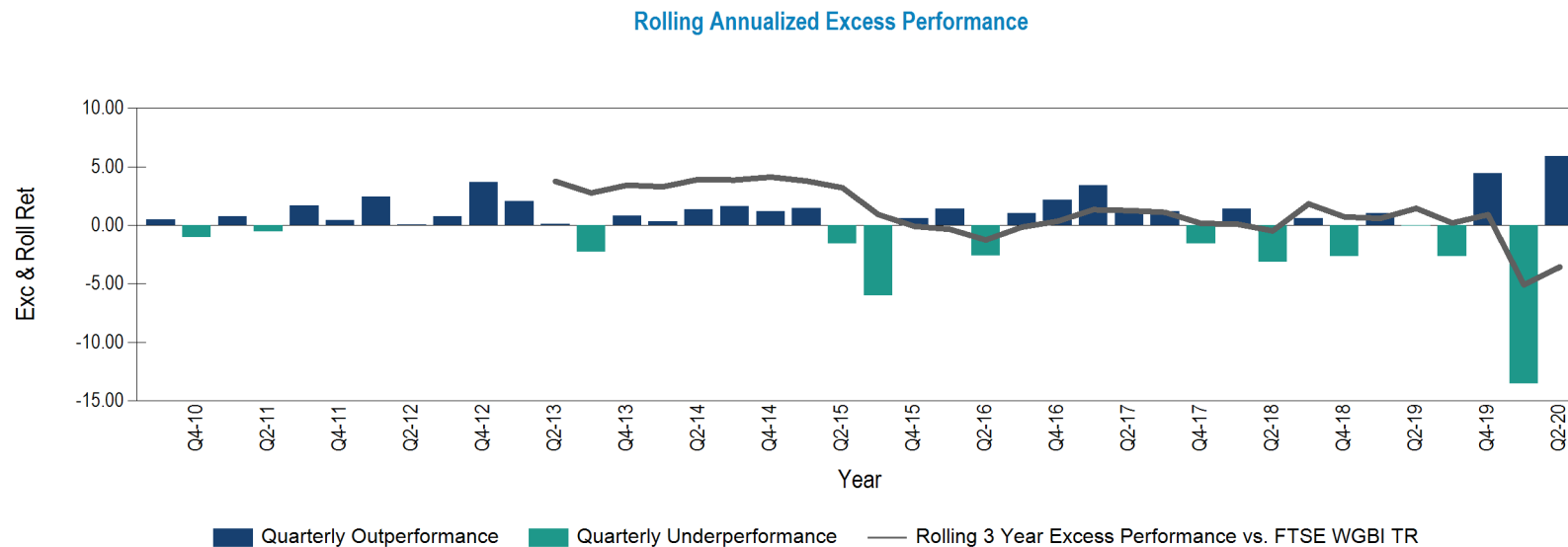
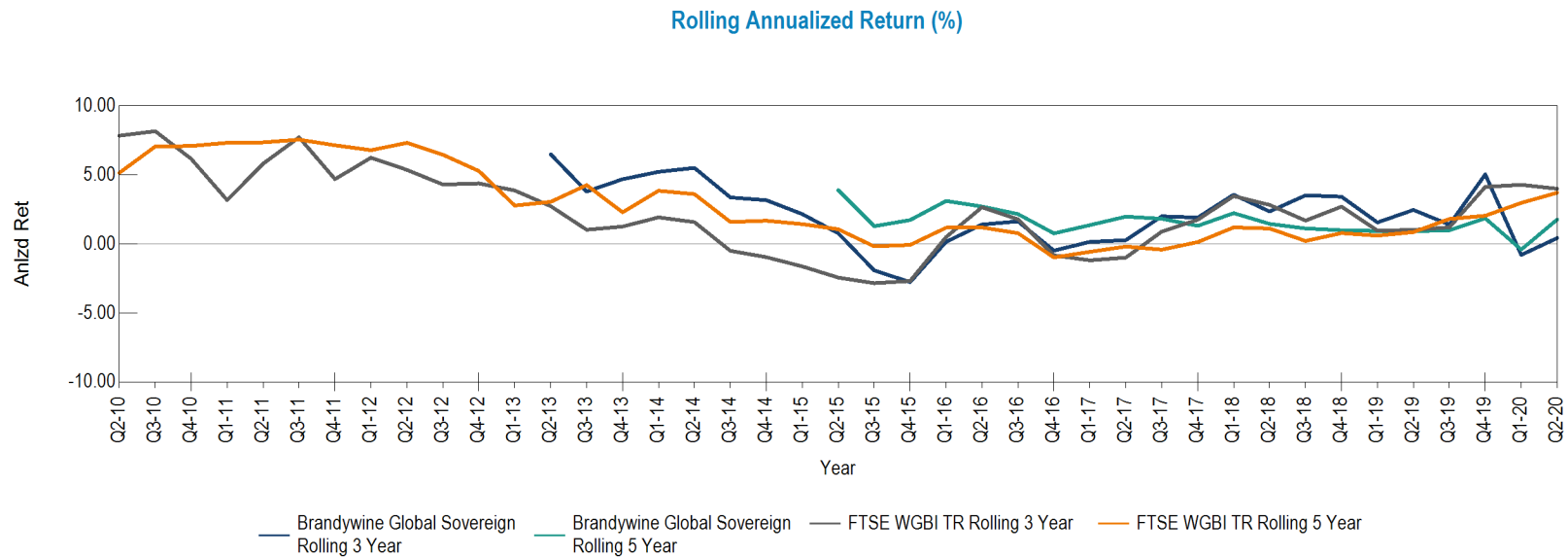
Period Ending: June 30, 2020



	Return (Rank)									
5th Percentile	15.2	8.7	5.9	5.7	6.7	15.2	1.7	12.8	14.7	1.7
25th Percentile	10.3	5.5	4.4	4.6	5.3	12.7	-0.7	9.3	8.1	-0.6
Median	8.3	2.6	3.3	3.8	4.2	9.6	-2.2	7.5	5.0	-2.9
75th Percentile	5.6	-0.6	2.2	2.9	2.9	7.6	-3.9	5.8	2.6	-4.4
95th Percentile	2.0	-4.0	-0.2	0.7	2.2	4.4	-6.0	2.9	-0.5	-10.0
# of Portfolios	252	239	227	207	126	239	218	214	209	175
● Brandywine Global Sovereign	7.9 (53)	-2.5 (89)	0.4 (93)	1.8 (90)	2.8 (78)	8.7 (60)	-4.7 (87)	11.9 (6)	3.8 (63)	-8.8 (93)
▲ FTSE WGBI TR	2.0 (95)	4.6 (34)	4.0 (39)	3.7 (52)	2.4 (92)	5.9 (87)	-0.8 (27)	7.5 (51)	1.6 (81)	-3.6 (63)

Brandywine Global Sovereign Manager Performance Comparisons (Net of Fees)

Period Ending: June 30, 2020

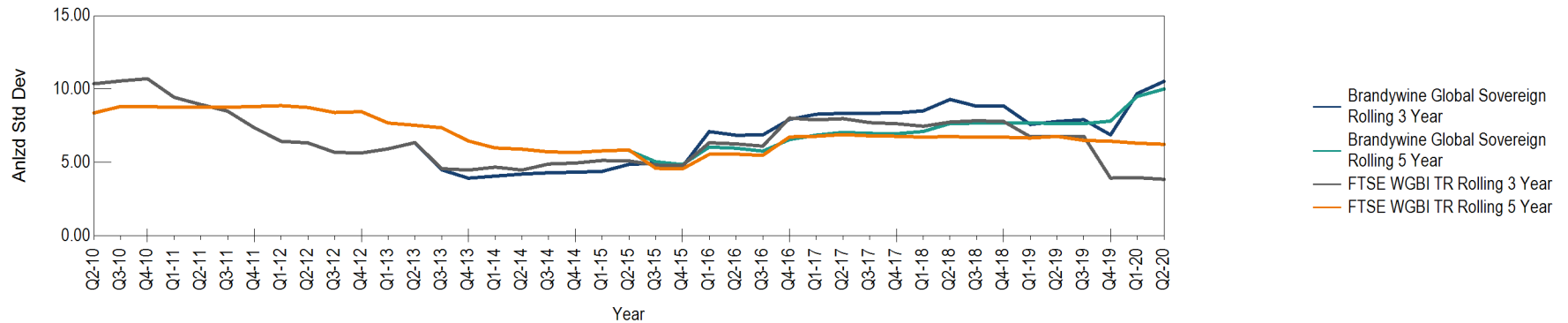


Brandywine Global Sovereign

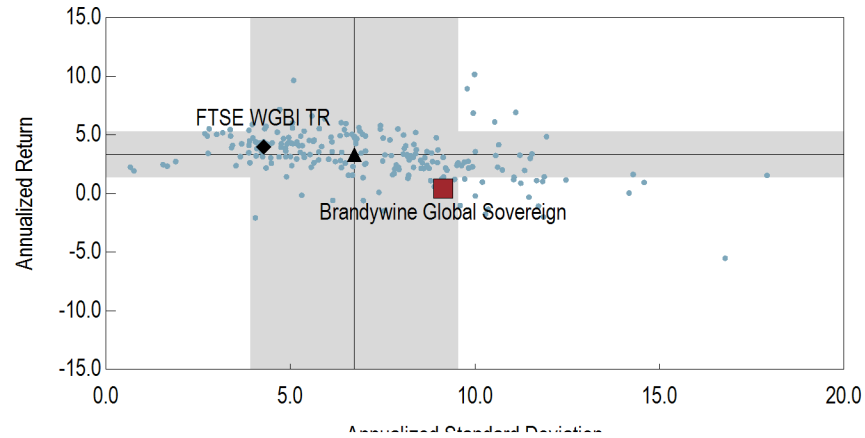
Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

Rolling Annualized Standard Deviation



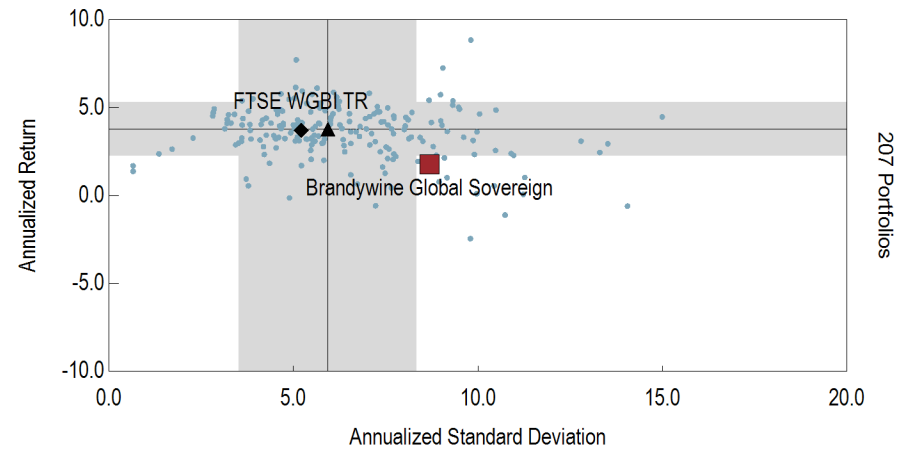
3 Years



3 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
BBgBarc US TIPS TR	5.0%	3.7%	0.9
eV US TIPS / Inflation Fixed Inc Net Median	4.9%	3.8%	0.8

5 Years



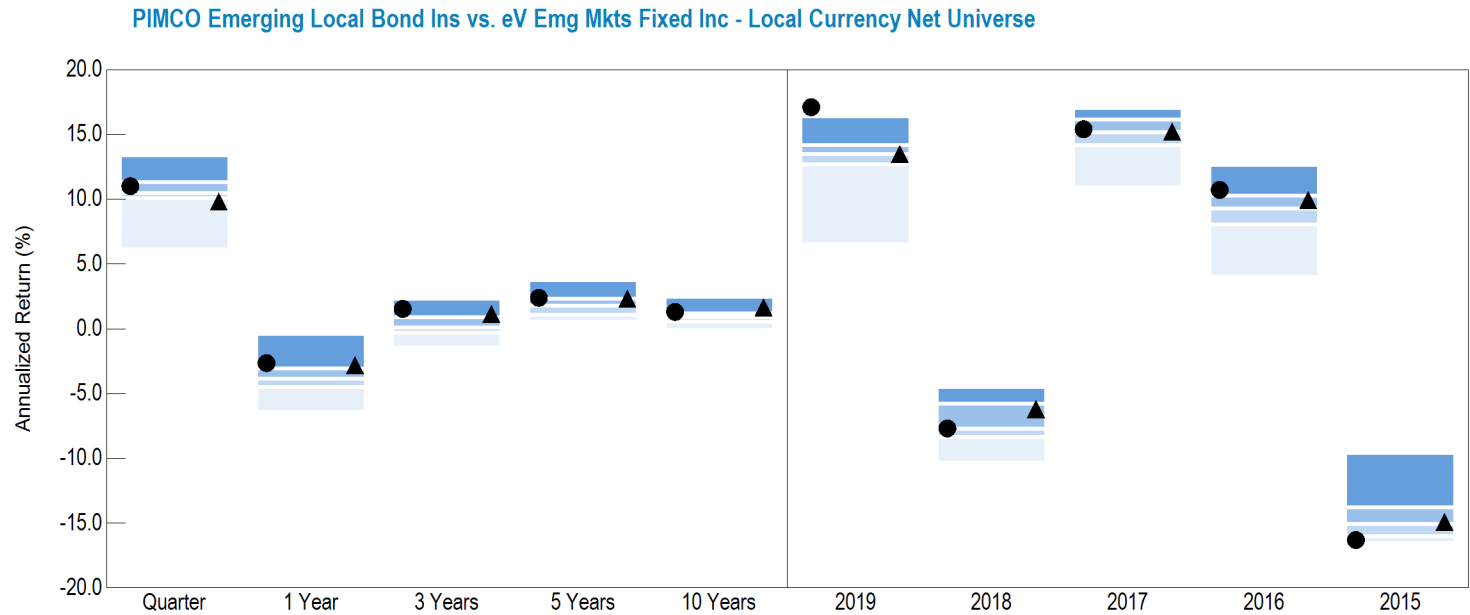
5 Years

	Annualized Return	Annualized Standard Deviation	Sharpe Ratio
BBgBarc US TIPS TR	3.7%	3.5%	0.7
eV US TIPS / Inflation Fixed Inc Net Median	3.6%	3.7%	0.7

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

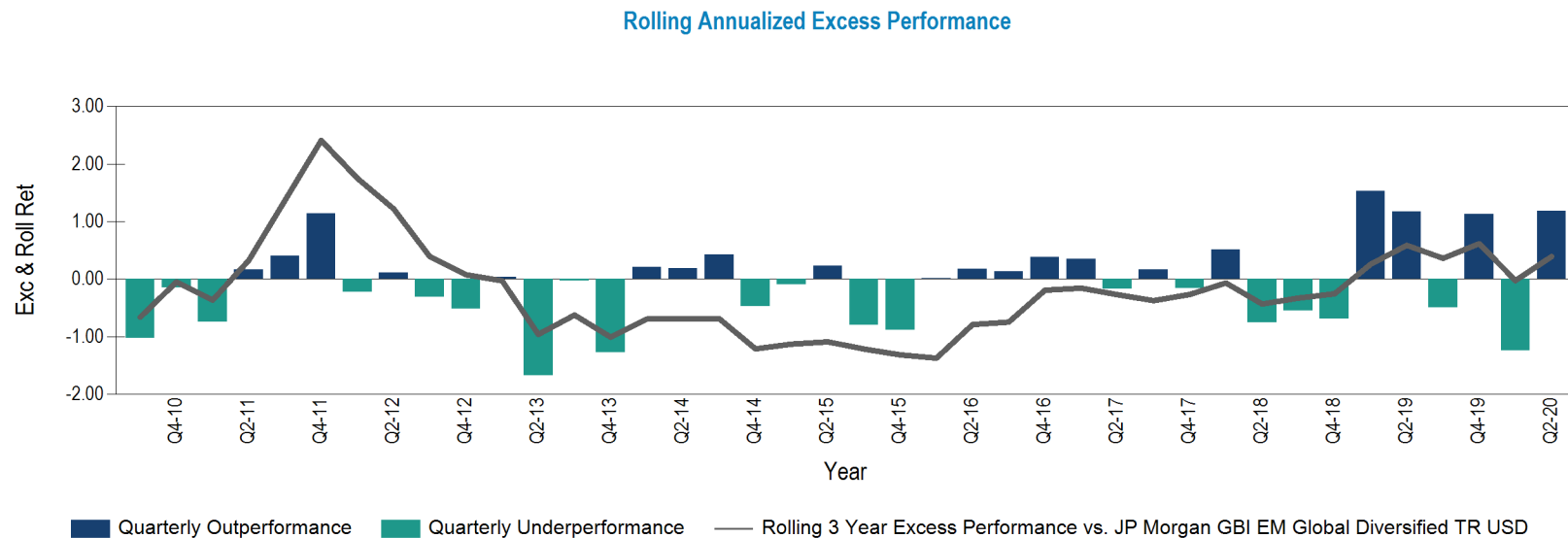
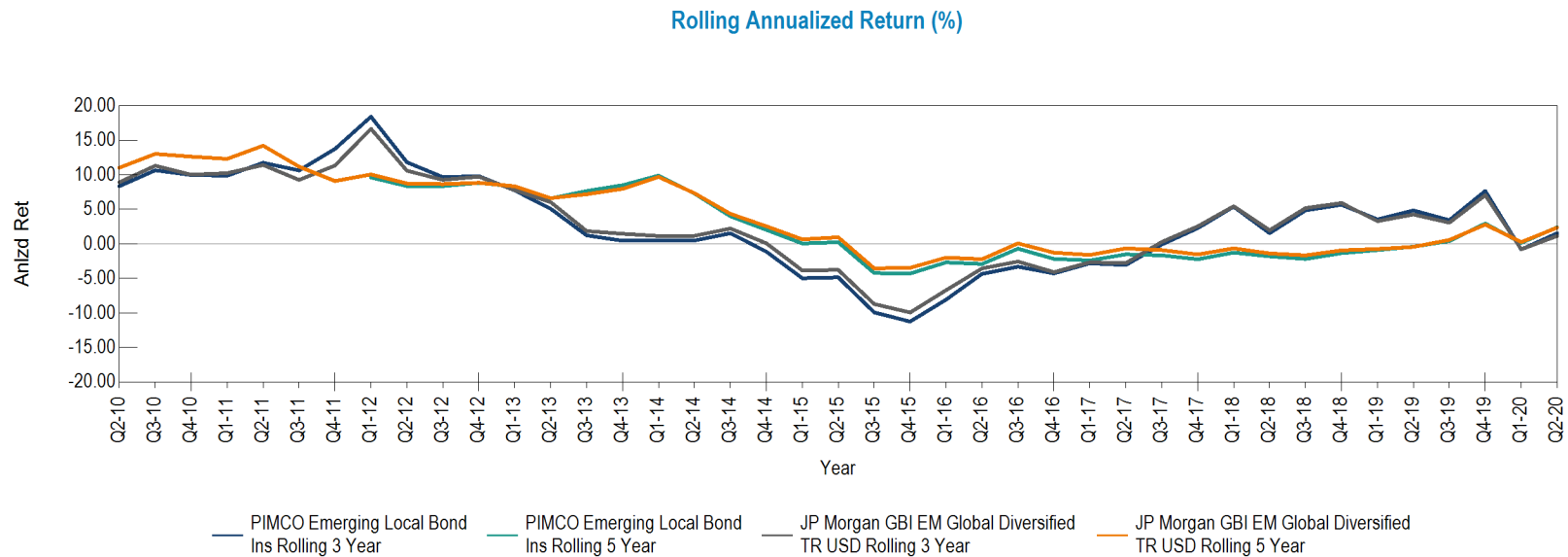


	Return (Rank)									
5th Percentile	13.3	-0.4	2.3	3.7	2.5	16.4	-4.5	17.0	12.6	-9.6
25th Percentile	11.3	-3.0	0.9	2.4	1.2	14.2	-5.8	16.2	10.3	-13.7
Median	10.5	-3.8	0.1	1.8	0.9	13.5	-7.7	15.2	9.3	-15.0
75th Percentile	10.1	-4.5	-0.3	1.1	0.6	12.7	-8.3	14.2	8.1	-16.0
95th Percentile	6.2	-6.4	-1.4	0.6	-0.1	6.5	-10.3	11.0	4.0	-16.5
# of Portfolios	34	33	33	32	17	35	33	31	30	29
● PIMCO Emerging Local Bond Ins	11.0 (30)	-2.7 (17)	1.5 (10)	2.4 (23)	1.3 (24)	17.1 (3)	-7.7 (54)	15.4 (39)	10.7 (18)	-16.3 (91)
▲ JP Morgan GBI EM Global Diversified TR USD	9.8 (80)	-2.8 (18)	1.1 (18)	2.3 (26)	1.6 (19)	13.5 (51)	-6.2 (33)	15.2 (47)	9.9 (33)	-14.9 (47)

Returns prior to inception date are composite returns.

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

Period Ending: June 30, 2020

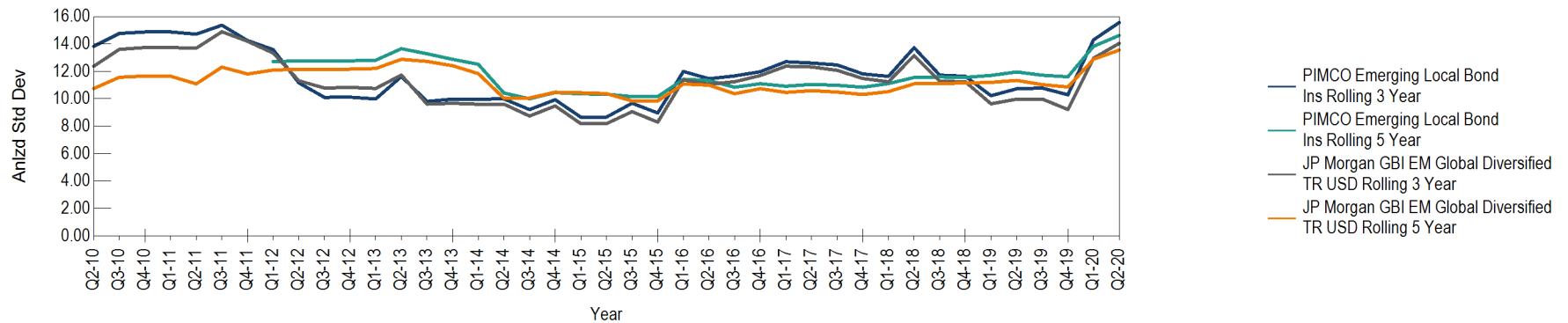


Returns prior to inception date are composite returns.

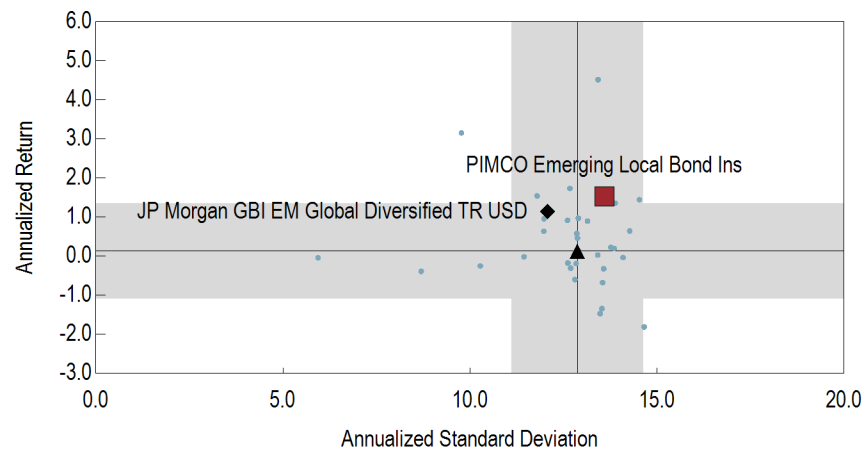
PIMCO Emerging Local Bond Ins Risk vs. Return 3 & 5 Year (Net of Fees)

Period Ending: June 30, 2020

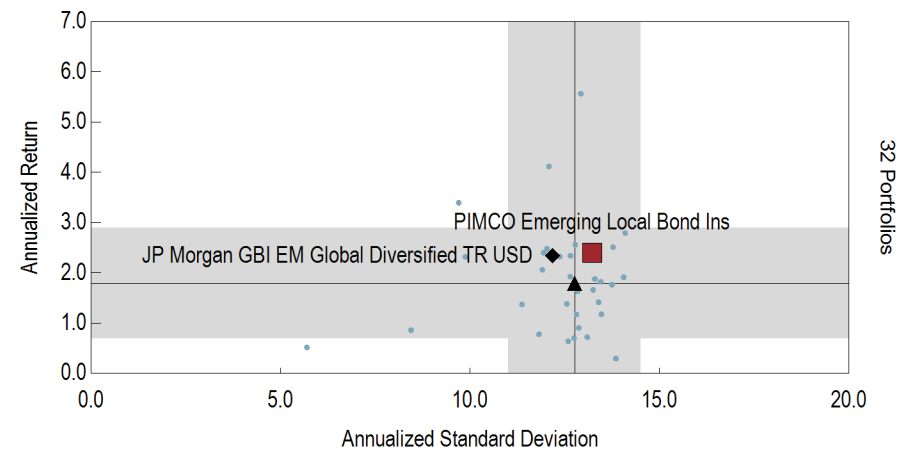
Rolling Annualized Standard Deviation



3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	1.5%	13.6%	0.0
JP Morgan GBI EM Global Diversified TR USD	1.1%	12.1%	0.0
eV Emg Mkts Fixed Inc - Local Currency Net Median	0.1%	12.9%	-0.1

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
PIMCO Emerging Local Bond Ins	2.4%	13.2%	0.1
JP Morgan GBI EM Global Diversified TR USD	2.3%	12.2%	0.1
eV Emg Mkts Fixed Inc - Local Currency Net Median	1.8%	12.8%	0.0

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	Warburg Pincus XII	2015	Hamilton Lane
Custodied	N/A	Northern Trust	Gerding Edlen Green Cities III	2016	Gerding Edlen
County Cash	N/A	FCERA	Hamilton Lane PE Fund IX	2016	Hamilton Lane
Aronson Johnson Ortiz	12/4/1995	Northern Trust	Kennedy Wilson Real Estate V	2016	Kennedy Wilson
Warburg Pincus	1998	Hamilton Lane	TSSP Adjacent Opportunities	2016	Carlyle
TCW Shop III	1998	Carlyle	OHA Strategic Credit Fund II, L.P.	2016	Carlyle
Warburg Pincus VIII	2001	Hamilton Lane	Horsley Bridge XI GBO	2016	Hamilton Lane
Blackstone IV	2002	Hamilton Lane	GCM Better Futures Fund	2016	Grosvenor
Lonestar IV	2002	Carlyle	Parametric Overlay	2016	Northern Trust
TCW Shop IV	2002	Carlyle	EQT European S. Situations Debt	2017	Carlyle
Mondrian Emerging Markets	11/17/2005	Mondrian	Eaton Vance Ins. Sr Loan Plus	2017	Eaton Vance
Invesco Core Real Estate	10/1/2007	Invesco	PIMCO StocksPLUS Small Fund	4/31/2018	PIMCO
New Mountain III	2007	Hamilton Lane	Hamilton Lane Secondary Fund IV	2017	Hamilton Lane
Hamilton Lane VI	2007	Hamilton Lane	TCG BDC II	2017	Carlyle
Warburg Pincus X	2007	Hamilton Lane	AlInvest FC Credit Fund, L.P.	2017	Carlyle
Landmark Equity Partners XIV	2008	Hamilton Lane	CPC V, L.P.	2017	Carlyle
Mondrian Int'l Small Cap	11/2/2009	Mondrian	Kelso Investment Associates X, L.P.	2018	Hamilton Lane
Colony Distressed Credit I	2009	Carlyle	Avista Capital Partners IV	2018	Hamilton Lane
TA Associates Realty 9	2009	TA Associates	Platinum Equity Small Cap Fund	2018	Hamilton Lane
Systematic Small/Mid Value	10/8/2010	Northern Trust	T. Rowe Price Large Cap Growth	10/23/2018	Northern Trust
KKR Mezzanine Partners I	2010	Carlyle	Baillie Gifford Emerging Markets	12/10/2018	Baillie Gifford
Angelo Gordon Cap. Recov. VII	2010	Carlyle	K4 Private Investors, L.P.	2018	Hamilton Lane
RAFI International Equity	4/30/2011	Northern Trust	SK Capital Partners Fund V, L.P.	2018	Hamilton Lane
Oaktree Opportunities Fund IX	2012	Carlyle	Thomas H. Lee Equity Fund VIII, L.P.	2019	Hamilton Lane
Artisan International Growth	4/1/2013	Northern Trust	H.I.G. Growth Buyouts & Equity Fund III	2019	Hamilton Lane
PIMCO Emerging Local Bond	7/31/2013	Northern Trust	RBC Access Capital	10/10/2018	Northern Trust
WAMCO Credit Index	10/1/2014	Northern Trust	Invesco US Value-Add Fund V	2/20/2019	Invesco
Loomis Sayles High Yield	10/1/2014	Northern Trust	NT MSCI US Index	6/2/2020	Northern Trust
Eaton Vance Senior Loan	10/1/2014	Eaton Vance	NT MSCI World Ex-US Index Fund	5/28/2020	Northern Trust
Colony Distressed Credit III	2014	Carlyle	JFL Equity Investors V, L.P.	2019	Hamilton Lane
Brandywine Global Sovereign	1/31/2015	Northern Trust	Insight Partners XI, L.P.	2019	Hamilton Lane
IFM Global Infrastructure	5/1/2015	IFM	HGGC Fund IV, L.P.	2019	Hamilton Lane
GSO European Senior Debt	2015	Carlyle	TCW TALF Opportunities Fund LP	6/12/2020	Northern Trust
CVI Credit Value Fund III	2015	Carlyle			

Policy & Custom Index Composition

Floating Policy Index (6/1/2020-6/30/2020)	24% Russell 3000 Index, 26% BBgBarc Global Aggregate Index, 23% MSCI ACWI ex US, 0.19% Russell 2000, 0.77% BBgBarc US Corp. High Yield, 5.81% Private Equity Neutralized, 7.23% Private Credit Neutralized, 2% HFRI FoF Composite, 9% NCREIF ODCE Net, & 2% 91 Day T-Bills.
(5/1/2020-5/31/2020)	24% Russell 3000 Index, 26% BBgBarc Global Aggregate Index, 23% MSCI ACWI ex US, 0.14% Russell 2000, 0.63% BBgBarc US Corp. High Yield, 5.86% Private Equity Neutralized, 7.37% Private Credit Neutralized, 2% HFRI FoF Composite, 9% NCREIF ODCE Net, & 2% 91 Day T-Bills.
(4/1/2020-4/31/2020)	24% Russell 3000 Index, 26% BBgBarc Global Aggregate Index, 23% MSCI ACWI ex US, 0.1% Russell 2000, 0.39% BBgBarc US Corp. High Yield, 5.9% Private Equity Neutralized, 7.61% Private Credit Neutralized, 2% HFRI FoF Composite, 9% NCREIF ODCE Net, & 2% 91 Day T-Bills.

BBgBarc Global Aggregate*

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

**The term neutralized indicates that the benchmark performance was set equal to the asset class composite.

Other Disclosures

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

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

Glossary

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

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

Benchmark R-squared: Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

Beta: A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

Book-to-Market: The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

Capture Ratio: A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

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

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

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

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

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

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

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

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

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

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

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

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

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

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