Oklahoma Police Pension & Retirement System

Investment Performance Review

June 30, 2019





This year, we at Asset Consulting Group celebrate our 30th anniversary in business. As we reach this exciting milestone, it is important that we recognize and thank those who have been a critical part of our success - our clients. We are grateful for the opportunity and privilege to serve you, and we appreciate the trust and confidence you have shown us. We are in the relationship business - and it is the partnerships we cultivate that fulfill us most and that best define our success as an organization.

We look forward to continuing to grow our relationship with you, and we enter our next decade with much anticipation and excitement!



We are proud to announce that ACG has been named a Greenwich Associates Quality Leader recognized as one of the top midsized consultants in the industry. This award is based on a number of factors, and a culmination of extensive nationwide interviews with institutional investors. We are appreciative of this honor, and we are grateful to all those who have helped us get to where we are.

Table of Contents

Tab 2 Total Portfolio Summary

Tab 3 Equity

Tab 4 Fixed Income

Tab 5 Real Assets

Appendix Definitions of Statistical Measures

Quality Rating Scale

Historical Benchmark Composition

Market Overview

Global Equity Update 2Q-2019

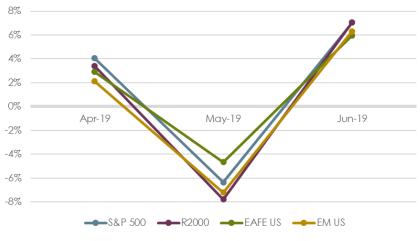
Global Long-Only Equity

Global equity markets ultimately advanced in 2Q-19, but with intra-quarter volatility in the backdrop of positive quarter-end performance. During the period, market advancements in April were erased by the May downdraft as ongoing trade disputes and the potential for expanded tariffs shook markets alongside fears of an impending global economic slowdown. Markets rebounded in June fueled in part by the Federal Reserve signaling no further rate hiking action in 2019, with the potential for policy easing if appropriate.

Domestic Large Caps led the group with a 4.3% gain for the S&P 500 with positive moves in all sectors except Energy. Small Caps posted half the gain, up 2.1% for the Russell 2000 with mixed sector performance. Small Caps posted the sharpest May decline as investors started to fear these companies that tend to have a more domestic footprint may not be as isolated as once thought from trade wars. Global slowdown fears, which have historically pressured higher-beta Small Caps more than Large Cap peers, also detracted.

Developed International markets advanced +4.0% on broad strength throughout the underlying countries, which largely avoided being a target of the Trump Administration's agenda. Meanwhile, Emerging Markets directionally moved in tandem with broader global markets, but posted a somewhat muted +0.7% gain on trade tensions highlighted by the roughly 4.0% decline for China. **The weakened US dollar provided a performance tailwind** of roughly 90 bps and 40 bps for the EAFE and EM indices, respectively.

Positive, but Volatile Equity Markets in 2Q-19



Sources: Bloomberg, ACG Research

Global Long/Short Equity

S&P Index Priced in Units of VIX



Sources: Bloomberg, ACG Research

Volatility (both positive and negative) returned to the market in 2Q-19. The S&P priced in units of volatility (VIX) more than doubled from the end of 2018 through April, then dropped 35% in May and increased 33% in June. We anticipate this **higher volatility to be the norm** for the foreseeable future. All else being equal, an increase in market **volatility helps generate opportunities** on both the long and short side so equity long/short managers stand to benefit.

Equity long/short managers have been optimistic about the outlook for company earnings performance, but seem to be taking a "wait and see" approach due to macro concerns surrounding interest rates, trade wars and geopolitical uncertainty around the world. This is reflected by gross exposure that is at average historical levels with net moving up to slightly above historical averages. The managers remain ready to deploy capital if there are any significant dislocations.

Global positioning has shifted more into the US as European exposures decreased due to Brexit concerns. Despite this decrease, European exposure remains above historical averages. Asia exposure is mixed as China Internet exposure hit all-time highs while Japan exposure is near historic lows. Health Care, typically a key sector of interest, has also seen a reversal as net exposure has decreased to the lowest level in a year. Event Driven exposure has increased from multi-year lows in 1Q-19 as corporate activity remains healthy and is expected to increase if there is any clarity on the trade war.

Global Private Equity

Valuations, if the trend thus far holds, will set new highs in 2019 as YTD purchase price multiples have exceeded 11x EBITDA. The median acquisition price for a private equity-backed company purchased in 2Q-19 was 11.3x EBITDA, up from 2018's 10.6x EBITDA mark. Leverage levels have held steady at approximately 5.7x EBITDA, leaving private equity sponsors to make up the difference with larger equity investments. Time will tell if the second quarter's elevated purchase price multiples are an aberration or a continuation of a 10-year trend.

The possibility of slowing economic growth continues to pose risks to private equity-backed companies, while the prospect of Federal Funds rate cuts may offset some effects of a potential downturn. High purchase prices are also likely to translate into lower returns for select vintages. The best managers recognize that high multiples are unlikely to continue indefinitely and that patience and asset selection is key to driving strong investment outcomes in this environment.

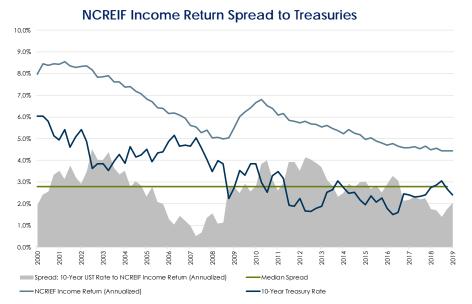
While post-IPO performance was not universally positive, 2Q-19 was the biggest second quarter for IPO volume since 2000 as several large venture-backed companies went public, including Uber, Pinterest, Beyond Meat, and a direct listing of Slack. The second half of the year looks to be similarly busy as businesses including WeWork and Peloton have signaled intentions to go public.

Purchase Multiples and Leverage Remain Elevated



Sources: S&P LCD, ACG Research

Global Real Assets



Sources: NCREIF, ACG Research

US real estate assets have seen slowing appreciation, though strong economic fundamentals and limited new supply have been supportive of Net Operating Income. The NCREIF Property Index is expected to post its 37th consecutive quarter of positive appreciation in 2Q-19. This is 15 quarters longer than the second longest winning streak since the benchmark's inception in 1978. In 1Q-19, NCREIF annualized income returns (a proxy for cap rates) were flat at 4.4%. As interest rates continued to tighten in the first quarter, the spread between NCREIF income returns and the 10-year US Treasury yield widened by 27 bps to end the quarter at 203 bps, approximately 75 bps tighter than the median spread since 2000.

Industrial assets continue to be the strongest performing asset class, while retail properties are struggling due to shifting consumer preferences for online shopping. Real estate market fundamentals remain relatively solid, with no imminent signs of a dramatic imbalance between supply and demand outside of the long-challenged retail sector. Industrial assets in key markets continue to enjoy above-trend appreciation. Cap rates remain near their all-time lows, and while further cap rate compression is possible, core real estate funds focused on income may outperform those focused on generating appreciation in the intermediate term.

The Bloomberg Commodity Index (BCOM) fell -1.2% in 2Q-19, underperforming the BloomBar US Aggregate Bond Index by 4.3%, the \$&P 500 by 5.5%, and the MSCI ACWI by 4.8%. Any signs of rising inflation may be positive for commodities broadly, though growing concerns regarding slowing global economic growth, the strength of the US dollar, and trade tensions may drive continued volatility in the near term.

Global Traditional Bond Markets

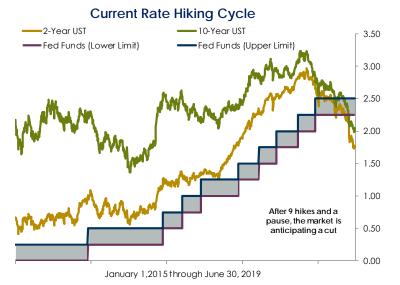
Building anticipation around monetary policy easing supported lower-quality credit, and prolonged the rally in risk-free rates throughout 2Q-19. While not yet taking action on short-term interest rates, the Federal Reserve's stated intent to "act as appropriate to sustain the expansion" supports the market view that insurance cut(s) are coming. The futures market is pricing in a remarkable 100% probability of a rate cut in July and at least three cuts over the next 12-months. US Treasury yields broke below 2%, and the yield curve steepened.

Given its high sensitivity to domestic interest rates, the **BloomBar US Aggregate** continued to rally. Total returns for the quarter were impressive at 3.1%, with modest spread tightening in IG corporate credit also aiding results. The benchmark's yield-to-worst contracted by nearly 45 bps during the period, settling back below 2.5% for the first time since mid-2017.

Despite a brief interruption in investor risk appetite in May, the **High Yield** bond category maintained its strong performance in 2Q-19. Spreads tightened by ~15 bps at the index level, but the focus on liquidity led to the ongoing underperformance of CCC-rated issues.

Municipal Bonds performed well, despite lagging taxable counterparts as US Treasury rates moved rapidly lower. Robust demand for income caused the tax-exempt yield curve to flatten modestly, but 10-year yield ratios of ~81% have improved from historically rich levels.

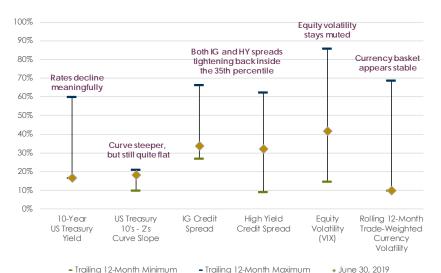
Unhedged Global government bonds outperformed with the combined benefit of lower-trending yields and a slightly weaker US Dollar. **Emerging Markets** were especially strong.



Sources: Bloomberg, ACG Research

Global Nontraditional Fixed Income

Percentile Rankings of Observations for Past 15-Years



Sources: Bloomberg, ACG Research

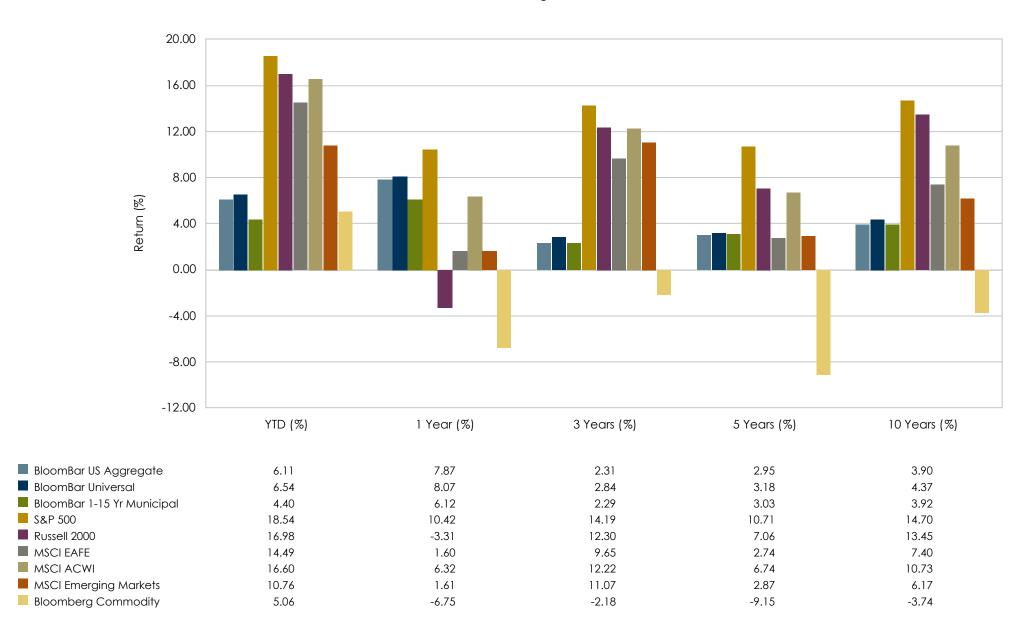
Liquid Absolute Return strategies produced respectable results in 2Q-19, with the willingness to tactically assume modest portfolio duration alongside diversified credit exposures defining outperformers. That said, the strong rally in US Treasuries prevented the category from keeping pace with traditional bond benchmarks. We continue to believe the diversification of risk factors within portfolios remains valuable, as this aids in downside protection and reduces key correlations. Achieving full-cycle alpha objectives remains a challenge, but enhanced volatility in rates, spreads, and currency should provide opportunities to outperform risk-free cash.

After trailing in the swift 1Q-19 rebound rally, **Long/Short Credit** strategies produced attractive relative results in April and May. Managers largely kept up with US high yield in April and provided meaningful downside protection in May. While most believe we are late in the market cycle, there is divergence in managers' willingness to get defensive in their portfolios. Many have positioned their books with a measure of caution, though some have gone further in expressing decidedly negative views. Broadly, we expect investors will see the most value-add from idiosyncratic relative value situations rather than big beta plays at this point.

Private Credit strategies (typically 5- to 10-year fund life) offer the opportunity to earn both a credit spread and an illiquidity premium versus publicly traded fixed income strategies. 2Q-19 saw continued demand for new issue levered loans as spreads tightened and volume increased in response to improved equity market conditions. Deal terms and pricing will need to be closely monitored going forward. Although default rates have remained low, the ongoing volatility in the market may indicate the beginnings of investor concern around the possibility of a coming distressed cycle. Due to the high-leverage, covenant-lite loans issued over the last several years, recoveries may be worse as companies are allowed to operate longer without previously customary capital preservation requirements.

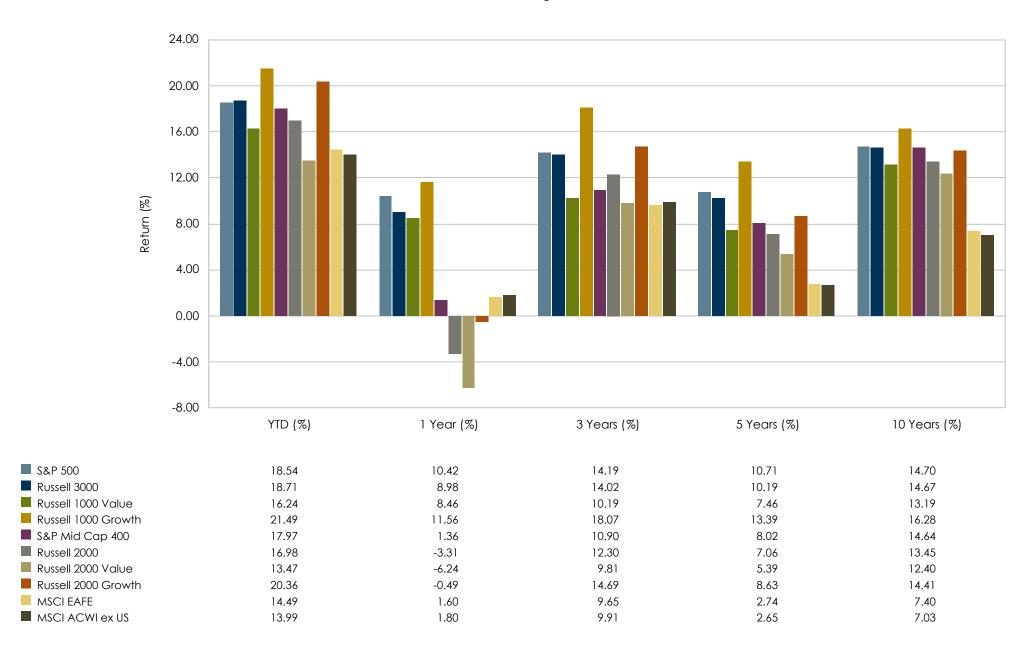
Market Environment

For the Periods Ending June 30, 2019



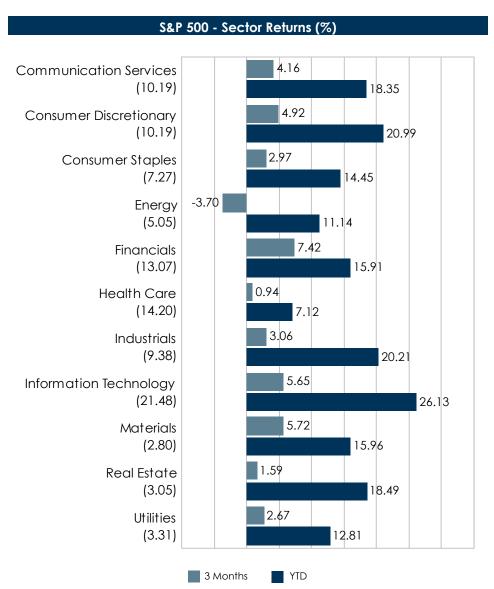
Equity Index Returns

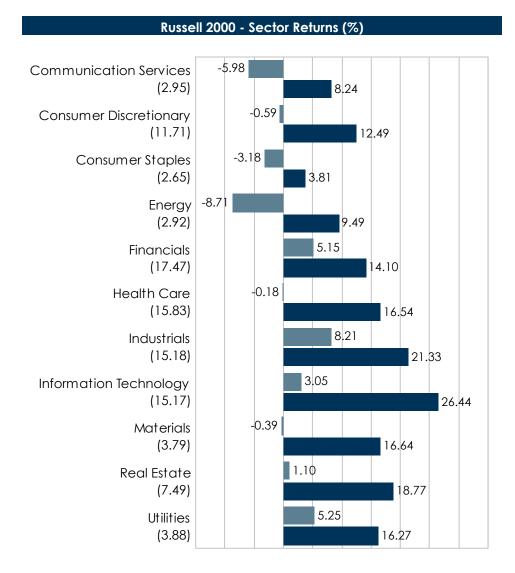
For the Periods Ending June 30, 2019



US Markets - Performance Breakdown

For the Periods Ending June 30, 2019

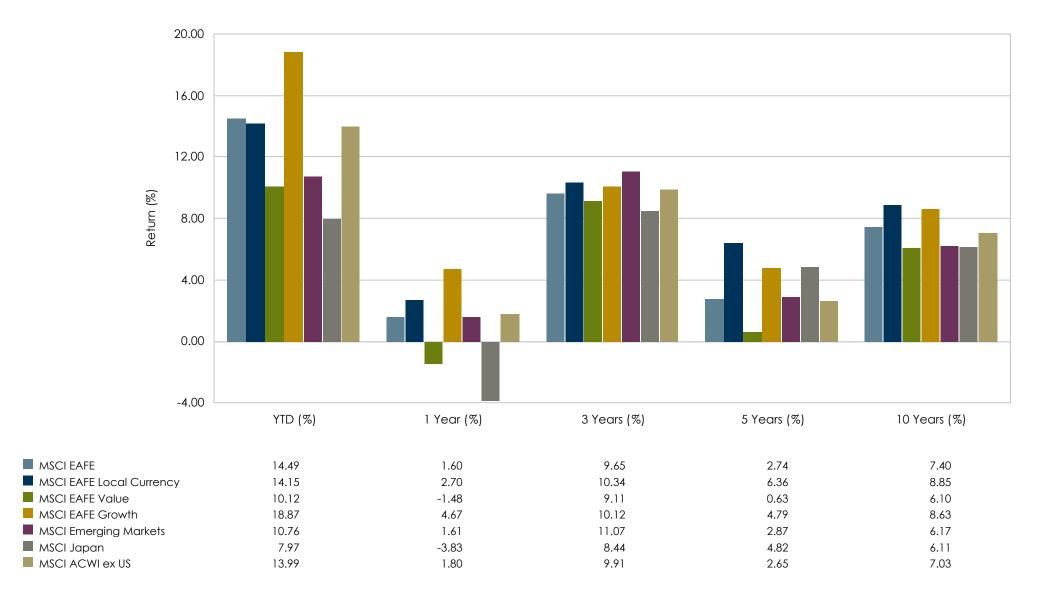




Numbers in parenthesis represent sector weightings of the index. Sector weights may not add to 100% due to rounding or securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

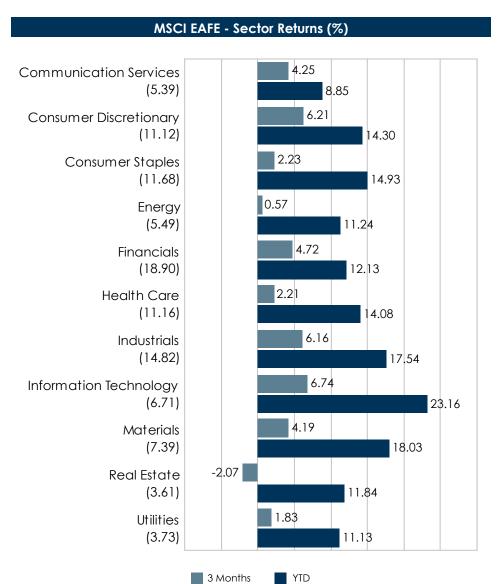
Non-US Equity Index Returns

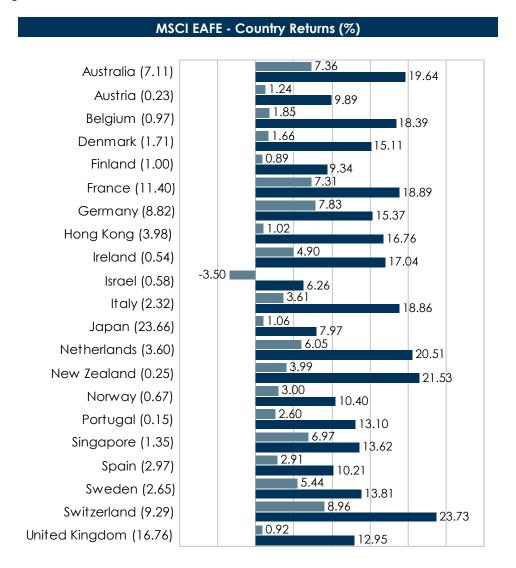
For the Periods Ending June 30, 2019



Non-US Equity - Performance Breakdown

For the Periods Ending June 30, 2019



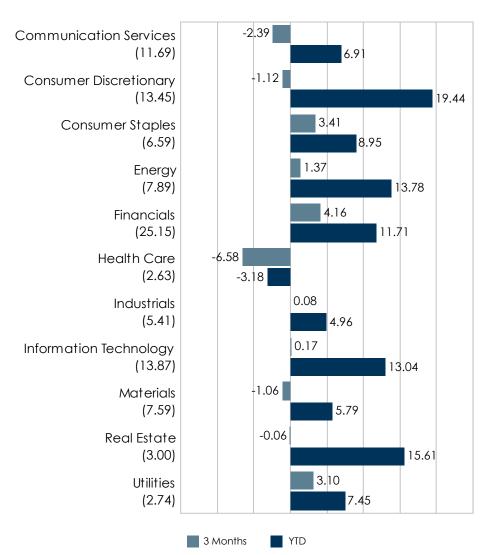


Numbers in parenthesis represent sector or country weights of the index. Sector or country weights may not add to 100% due to rounding.

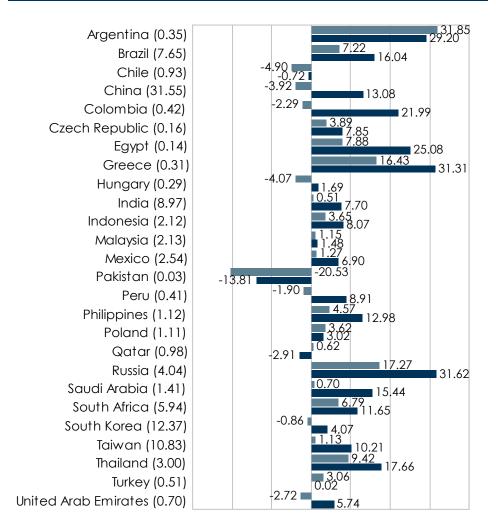
Emerging Markets - Performance Breakdown

For the Periods Ending June 30, 2019





MSCI Emerging Markets - Country Returns (%)

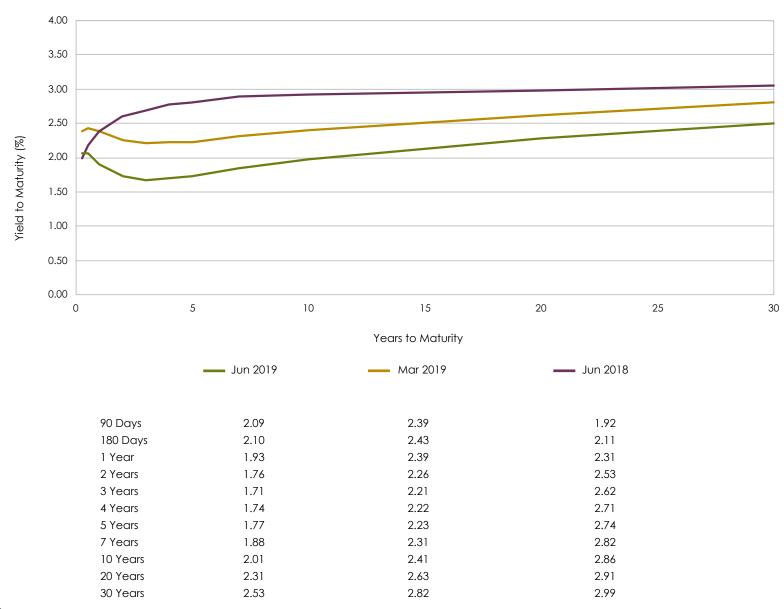


16

Numbers in parenthesis represent sector or country weights of the index. Sector or country weights may not add to 100% due to rounding.

Interest Rate Term Structure

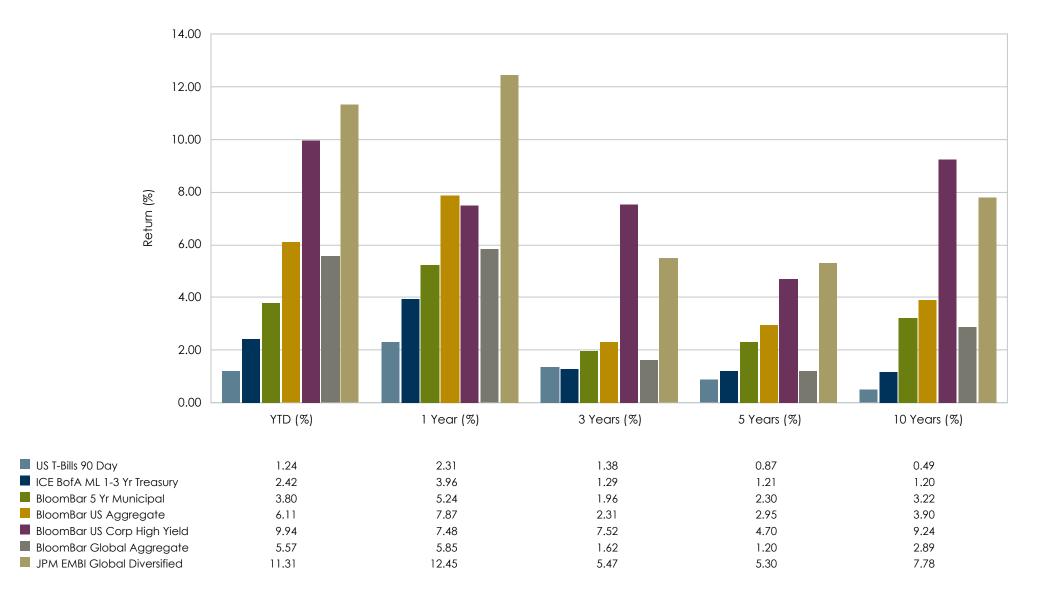
Government Issues - 3 Months to 30 Years Maturity



Source: Bloomberg

Fixed Income Index Returns

For the Periods Ending June 30, 2019



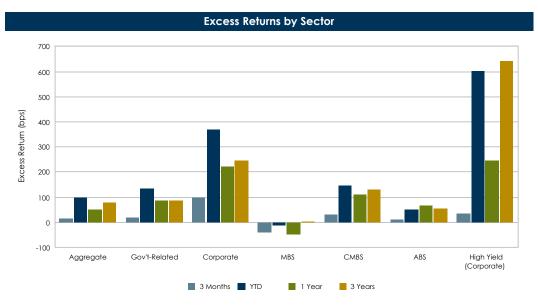
US Fixed Income Market Environment

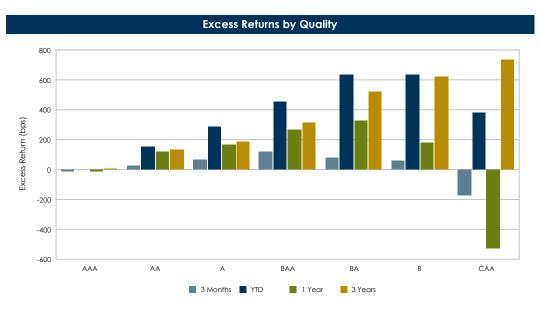
For the Periods Ending June 30, 2019

Nominal Returns By Sector (%)					
	3 Months	<u>YTD</u>	<u>1 Year</u>	3 Years	
US Aggregate	3.09	6.12	7.88	2.32	
US Treasury	3.00	5.18	7.23	1.33	
US Agg: Gov't-Related	2.97	6.19	7.89	2.54	
US Corporate IG	4.48	9.86	10.71	3.95	
MBS	1.96	4.17	6.21	2.07	
CMBS	3.28	6.62	8.96	2.70	
ABS	1.66	3.16	4.95	1.99	
US Corp High Yield	2.50	9.93	7.48	7.52	

Nominal Returns by Quality (%)						
	3 Months	YTD	1 Year	3 Years		
AAA	2.60	4.81	6.87	1.71		
AA	3.27	6.74	8.52	2.71		
A	4.16	8.98	10.12	3.30		
BAA	4.80	10.90	11.39	4.68		
BA	3.07	10.51	9.79	6.65		
В	2.67	10.06	7.69	7.65		
CAA	0.30	7.46	0.16	8.93		

	Nominal Returns by A	Naturity (%)		
	<u>3 Months</u>	<u>YTD</u>	1 Year	3 Years
1-3 Yr.	1.48	2.72	4.29	1.62
3-5 Yr.	2.24	4.43	6.50	1.97
5-7 Yr.	2.58	5.24	7.47	2.15
7-10 Yr.	3.64	6.84	8.98	2.10
10+ Yr.	6.59	13.46	13.94	3.73





Source: Bloomberg

Excess returns are relative to the duration-neutral Treasury.

Monthly Index Returns

For the Periods Ending June 30, 2019

Index Name	3 Months (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	4.30	18.54	10.42	14.19	10.71	13.98	14.70
Russell 1000	4.25	18.84	10.02	14.15	10.45	13.97	14.77
Russell 1000 Growth	4.64	21.49	11.56	18.07	13.39	15.76	16.28
Russell 1000 Value	3.84	16.24	8.46	10.19	7.46	12.09	13.19
Russell 2500	2.96	19.25	1.77	12.34	7.66	12.51	14.44
Russell 2000	2.10	16.98	-3.31	12.30	7.06	11.63	13.45
Russell 2000 Growth	2.75	20.36	-0.49	14.69	8.63	12.87	14.41
Russell 2000 Value	1.38	13.47	-6.24	9.81	5.39	10.31	12.40
Wilshire 5000 Cap Wtd	3.99	18.66	9.09	14.03	10.33	13.81	14.66
MSCI ACWI	3.80	16.60	6.32	12.22	6.74	10.46	10.73
MSCI ACWI ex US	3.22	13.99	1.80	9.91	2.65	6.85	7.03
MSCI EAFE	3.97	14.49	1.60	9.65	2.74	7.81	7.40
MSCI EAFE Local Currency	3.08	14.15	2.70	10.34	6.36	10.58	8.85
MSCI EAFE Growth	5.96	18.87	4.67	10.12	4.79	8.90	8.63
MSCI EAFE Value	1.89	10.12	-1.48	9.11	0.63	6.64	6.10
MSCI Emerging Markets	0.74	10.76	1.61	11.06	2.87	4.53	6.17
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	1.44	2.42	3.96	1.29	1.21	1.02	1.20
BloomBar 5 Yr Municipal	1.66	3.80	5.24	1.96	2.30	2.25	3.22
BloomBar US Aggregate	3.08	6.11	7.87	2.31	2.95	2.62	3.90
BloomBar Gov't Bond	2.99	5.15	7.21	1.39	2.48	1.84	2.97
BloomBar US Credit	4.27	9.35	10.34	3.74	3.92	3.97	5.77
BloomBar 10 Yr Municipal	2.15	5.36	7.63	2.63	3.81	3.63	4.95
BloomBar US Corp High Yield	2.50	9.94	7.48	7.52	4.70	6.35	9.24
FTSE World Govt Bond	3.57	5.38	5.48	1.00	0.85	0.89	2.21
BloomBar Global Aggregate	3.29	5.57	5.85	1.62	1.20	1.57	2.89
BloomBar Multiverse	3.31	5.78	6.01	1.95	1.35	1.79	3.13
JPM EMBI Global Diversified	4.08	11.31	12.45	5.47	5.30	5.57	7.78
Real Assets							
NCREIF Property	1.51	3.35	6.51	6.89	8.83	9.44	9.25
NFI ODCE Net	0.77	1.98	5.47	6.61	8.76	9.51	8.87
FTSE NAREIT US Real Estate		17.78	11.21	4.20	7.92	8.88	15.46
TIGE TO MEN GO NOGI ESTATO	1.24	17.70	11.21	1.20	, ,, <u>_</u>	0.00	10.70
Bloomberg Commodity	1.24 -1.19	5.06	-6.75	-2.18	-9.15	-6.68	-3.74

Monthly Index Returns

For the Periods Ending July 31, 2019

Index Name	1 Month (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	1.44	20.24	7.99	13.36	11.34	13.99	14.03
Russell 1000	1.55	20.69	8.00	13.31	11.15	14.03	14.10
Russell 1000 Growth	2.26	24.23	10.82	17.13	14.25	15.91	15.74
Russell 1000 Value	0.83	17.20	5.20	9.44	8.01	12.06	12.40
Russell 2500	1.04	20.49	0.87	10.83	8.98	12.78	13.57
Russell 2000	0.58	17.66	-4.42	10.36	8.53	11.95	12.47
Russell 2000 Growth	0.98	21.54	-1.22	12.66	10.21	13.31	13.67
Russell 2000 Value	0.16	13.65	-7.71	7.96	6.74	10.50	11.19
Wilshire 5000 Cap Wtd	1.49	20.43	7.01	13.14	11.07	13.88	13.98
MSCI ACWI	0.33	16.98	3.52	10.77	7.06	10.29	9.83
MSCI ACWI ex US	-1.18	12.65	-1.78	7.72	2.60	6.45	5.90
MSCI EAFE	-1.26	13.05	-2.09	7.40	2.88	7.44	6.33
MSCI EAFE Local Currency	0.72	14.96	0.77	8.91	6.55	10.46	8.13
MSCI EAFE Growth	-0.36	18.44	2.18	8.25	5.20	8.58	7.69
MSCI EAFE Value	-2.23	7.66	-6.38	6.45	0.50	6.20	4.89
MSCI Emerging Markets	-1.14	9.50	-1.80	8.83	2.22	4.06	4.92
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	-0.11	2.32	3.84	1.28	1.20	0.97	1.17
BloomBar Municipal	0.81	5.94	7.31	2.80	3.77	3.39	4.63
BloomBar US Aggregate	0.22	6.35	8.08	2.17	3.05	2.45	3.75
BloomBar Gov't Bond	-0.11	5.03	7.53	1.21	2.49	1.69	2.91
BloomBar US Credit	0.52	9.92	10.12	3.47	4.03	3.65	5.43
BloomBar 10 Yr Municipal	0.87	6.28	8.15	2.90	3.93	3.53	4.81
BloomBar US Corp High Yield	0.56	10.56	6.92	6.77	5.10	6.15	8.66
FTSE World Govt Bond	-0.47	4.88	5.42	0.67	0.94	0.69	1.98
BloomBar Global Aggregate	-0.28	5.28	5.73	1.28	1.33	1.36	2.63
BloomBar Multiverse	-0.23	5.54	5.83	1.58	1.49	1.59	2.87
Real Assets							
Bloomberg Commodity	-0.67	4.35	-5.36	-0.68	-8.34	-7.61	-4.11
Cash and Equivalents							
US T-Bills 90 Day	0.19	1.43	2.34	1.44	0.91	0.67	0.51



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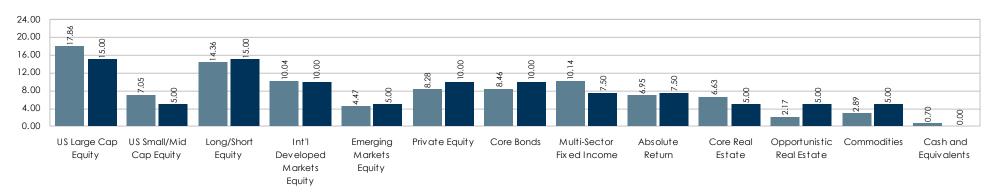
Total Portfolio Summary

Dollar Reconciliation (\$000s)

For the Periods Ending June 30, 2019

	3 Months	FYTD	5 Years	10 Years
Beginning Market Value	2,555,424	2,539,695	2,228,402	1,415,224
Net Additions	-12,661	-50,918	-273,731	-460,739
Return on Investment	63,399	117,386	651,491	1,651,678
Ending Market Value	2,606,162	2,606,162	2,606,162	2,606,162

For the Period Ending June 30, 2019



■ Actual Allocation ■ Target Allocation

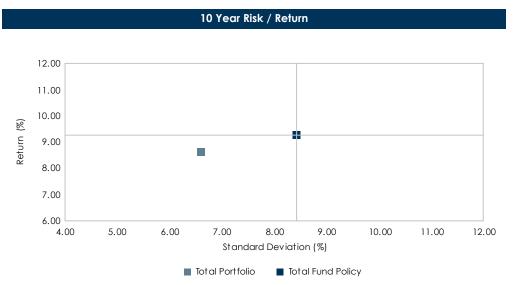
	Market Value (\$000s)	Actual Allocation (%)	Target Allocation (%)	Over/Under Target (%)	Range Min-Max (%)
Total Portfolio	2,606,162	100.00	100.00		
Equity	1,617,524	62.07	60.00	2.07	50.00 - 70.00
US Large Cap Equity	465,476	17.86	15.00	2.86	10.00 - 20.00
US Small/Mid Cap Equity	183,776	7.05	5.00	2.05	0.00 - 15.00
Long/Short Equity	374,278	14.36	15.00	-0.64	10.00 - 20.00
Int'l Developed Markets Equity	261,645	10.04	10.00	0.04	5.00 - 15.00
Emerging Markets Equity	116,436	4.47	5.00	-0.53	0.00 - 10.00
Private Equity	215,912	8.28	10.00	-1.72	5.00 - 15.00
Fixed Income	665,785	25.55	25.00	0.55	15.00 - 35.00
Core Bonds	220,459	8.46	10.00	-1.54	7.50 - 20.00
Multi-Sector Fixed Income	264,185	10.14	7.50	2.64	5.00 - 10.00
Absolute Return	181,141	6.95	7.50	-0.55	5.00 - 10.00
Real Assets	304,694	11.69	15.00	-3.31	0.00 - 20.00
Core Real Estate	172,800	6.63	5.00	1.63	0.00 - 10.00
Opportunistic Real Estate	56,503	2.17	5.00	-2.83	0.00 - 10.00
Commodities	75,391	2.89	5.00	-2.11	0.00 - 10.00
Cash and Equivalents	18,159	0.70	0.00	0.70	

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

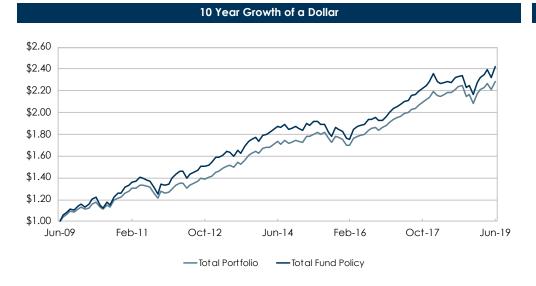
For the Periods Ending June 30, 2019



	Total	Total
	Portfolio	Fund Policy
Return (%)	8.61	9.26
Standard Deviation (%)	6.59	8.43
Sharpe Ratio	1.24	1.05

Benchmark Relative Statistics						
Beta	0.76					
Up Capture (%)	80.65					
Down Capture (%)	72.19					

10 Year Portfolio Statistics

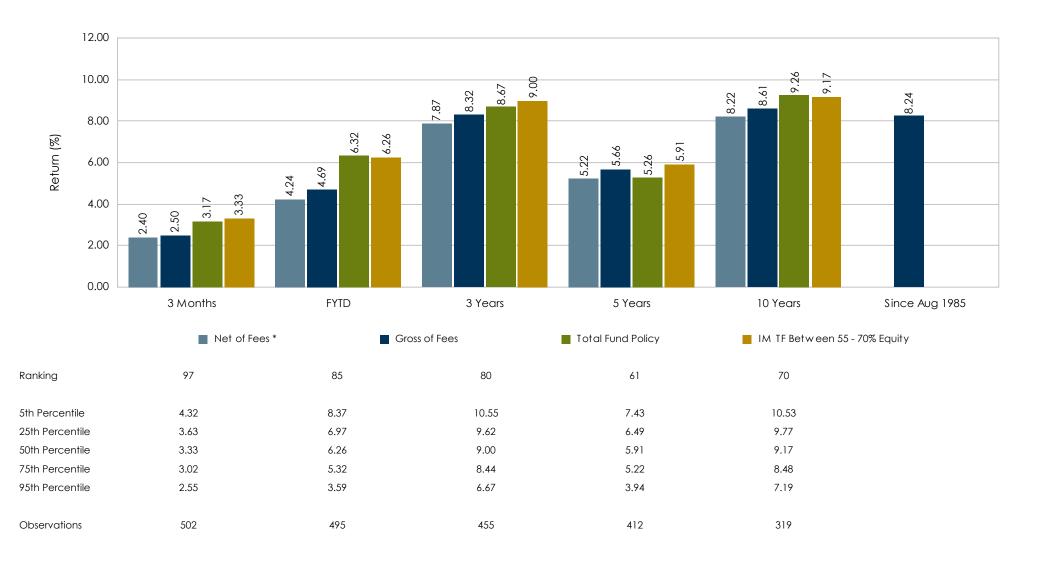


10 Year Return Analysis

	Total Portfolio	Total Fund Policy
Number of Months	120	120
Highest Monthly Return (%)	5.31	7.47
Lowest Monthly Return (%)	-4.27	-5.35
Number of Positive Months	85	80
Number of Negative Months	35	40
% of Positive Months	70.83	66.67

Total Portfolio

For the Periods Ending June 30, 2019

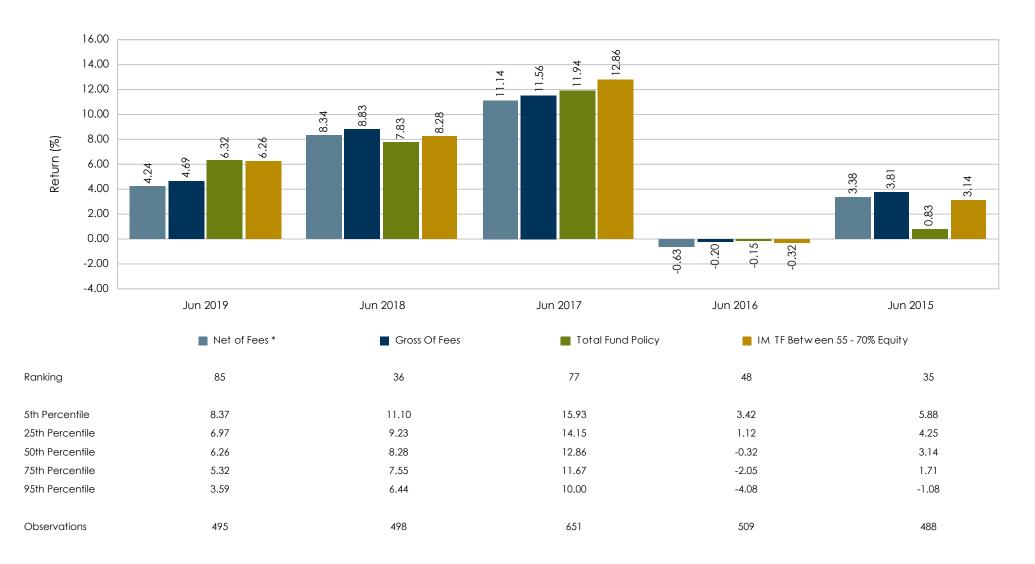


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

^{*} Performance is calculated using net of fee returns.
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Total Portfolio

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

^{*} Performance is calculated using net of fee returns.
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For the Periods Ending June 30, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	YTD (%)	Rank	FYTD (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Total Portfolio * (06/05) 1	2,606,162	100.00	2.40		9.42		4.24		7.87		5.22		8.22
Total Portfolio (08/85)			2.50	97	9.65	99	4.69	85	8.32	80	5.66	61	8.61
Total Fund Policy ²			3.17		12.07		6.32		8.67		5.26		9.26
IM TF Between 55 - 70% Equity			3.33		12.60		6.26		9.00		5.91		9.17
Equity (01/98)	1,617,524	62.07	3.03		13.25		5.03		10.97		7.29		10.54
M\$CI ACWI			3.80		16.60		6.32		12.22		6.74		10.73
US Large Cap Equity	465,476	17.86											
Northern Trust Russell 1000 Index (08/98) ³	465,476	17.86	4.24	48	18.85	37	10.04	44	14.15	39	10.46	39	14.78
Russell 1000			4.25		18.84		10.02		14.15		10.45		14.77
eA US Large Cap Core Equity			4.17		17.83		9.38		13.72		10.01		14.47
US Small/Mid Cap Equity	183,776	7.05											
Boston Partners (01/98)	88,741	3.41	4.97	20 / 12	19.42	34 / 13	-3.20	86 / 38	10.12	53 / 45	5.96	69 / 51	13.64
Russell 2500 Value			1.89		15.26		-1.92		8.98		5.55		13.28
eA US Mid Cap Value Equity			3.70		18.41		1.51		10.36		6.92		14.05
eA US Small Cap Value Equity			2.25		15.27		-4.72		9.74		6.01		14.04
Cortina (02/14)	95,035	3.65	1.07	91	16.23	88	-0.18	79	19.18	43	9.81	68	
Russell 2000 Growth			2.75		20.36		-0.49		14.69		8.63		14.41
eA US Small Cap Growth Equity			4.67		23.72		5.59		18.28		10.65		16.56
Long/Short Equity	374,278	14.36											
Grosvenor Long/Short Equity (11/03)	374,278	14.36	1.57		10.83		2.66		7.59		5.02		6.35
MSCI ACWI			3.80		16.60		6.32		12.22		6.74		10.73
HFRI FOF: Strategic			1.38		7.68		0.10		5.04		2.27		3.50

FYTD: Fiscal year ending June.

^{*} Net of fee return data.

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For the Periods Ending June 30, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	YTD (%)	Rank	FYTD (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
International Developed Market	261,645	10.04							· ·				
Mondrian International (05/04)	140,801	5.40	1.34	75	10.47	60	1.78	24	7.59	53	1.75	50	6.96
MSCI EAFE			3.97		14.49		1.60		9.65		2.74		7.40
eA EAFE All Cap Value Equity			2.32		11.03		-2.11		8.05		1.74		8.20
Barings Focused EAFE Plus Equity (03/12)	120,844	4.64	3.96	34	14.80	39	-0.14	48	10.12	34	5.17	16	
MSCI EAFE			3.97		14.49		1.60		9.65		2.74		7.40
eA EAFE All Cap Equity			3.04		13.69		-0.35		9.19		3.63		8.52
Emerging Markets Equity	116,436	4.47											
Wasatch Emerging Markets (09/12)	36,169	1.39	3.82	11	14.69	26	0.38	66	7.85	84	3.16	52	
MSCI EM SC			-0.89		6.83		-4.77		5.79		0.84		6.17
eA Global Emerging Mkts Equity			1.37		11.71		1.45		10.53		3.22		7.38
AB EM Strategic Core Equity Fund (11/16)	80,267	3.08	1.95	37	10.14	72	-1.03	76					
MSCI Emerging Markets			0.74		10.76		1.61		11.06		2.87		6.17
eA Global Emerging Mkts Equity			1.37		11.71		1.45		10.53		3.22		7.38
Private Equity (07/03)	215,912	8.28	4.00		4.85		15.09		10.78		10.63		12.12
Fixed Income (01/98)	665,785	25.55	2.32		5.56		5.42		3.99		2.49		5.30
BloomBar Universal			3.11		6.54		8.07		2.84		3.18		4.37
Core Bonds	220,459	8.46											
Agincourt Core Fixed Income (10/99)	220,459	8.46	3.19	47	6.73	39	8.62	18	2.92	38	3.39	41	4.80
BloomBar US Aggregate			3.08		6.11		7.87		2.31		2.95		3.90
eA US Core Fixed Income			3.17		6.51		8.18		2.77		3.29		4.62

For the Periods Ending June 30, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	YTD (%)	Rank	FYTD (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Multi Sector Fixed Income	264,185	10.14											
Multi Sector Fixed Income													
Oaktree Global Credit Fund (02/98)	129,151	4.96	2.47		7.18		4.68		6.36		4.04		8.21
Custom Blended Index	4		2.23		7.47		3.87		1.03		2.17		3.51
Loomis Sayles (06/08)	81,552	3.13	3.74	24	6.60	49	6.30	47	2.58	71	1.60	61	4.06
FTSE World Govt Bond			3.57		5.38		5.48		1.00		0.85		2.21
eA All Global Fixed Income			3.08		6.52		5.93		3.77		2.47		4.49
Private Credit (10/16)	53,482	2.05	2.36		3.66		5.29						
Absolute Return	181,141	6.95											
PAAMCO (10/02)	114,731	4.40	-0.06		3.61		0.38		3.53		0.86		4.39
BloomBar US Aggregate			3.08		6.11		7.87		2.31		2.95		3.90
HFRI FOF: Conservative			1.72		4.96		2.35		3.89		2.16		3.13
Wellington Global Total Return (12/16)	66,411	2.55	1.73	61	2.51	83	5.89	33					
US T-Bills 90 Day + 4%			1.63		3.24		6.39		5.43		4.90		4.51
eA Global Unconstrained Fixed Income			2.26		5.34		4.52		3.99		2.29		4.23
Real Assets (01/98)	304,694	11.69	0.18		2.15		2.28		5.60		4.92		5.23
Real Assets Blended Index ⁵			0.14		3.04		1.42		3.72		0.73		4.77
Core Real Estate	172,800	6.63											
JP Morgan Strategic Property (12/07)	129,424	4.97	1.15		1.61		5.35		7.06		9.10		9.74
NFI ODCE Net			0.77		1.98		5.47		6.61		8.76		8.87
NCREIF Property			1.51		3.35		6.51		6.89		8.83		9.25
Blackstone Property Partners (01/15)	43,376	1.66	2.01		3.70		9.55		10.57				
NFI ODCE Net			0.77		1.98		5.47		6.61		8.76		8.87
NCREIF Property			1.51		3.35		6.51		6.89		8.83		9.25

For the Periods Ending June 30, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months	Rank YTD (%)	Rank	FYTD (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Opportunistic Real Estate	56,503	2.17	(/0)	(/0)		(/•)		(/•)		(/0)		(70)
Private Real Estate (08/11)	·		1 70	4.1		10.54		0.77		11.05		
	51,729	1.98	1.73	4.14	•	10.56		9.77		11.35		
Private Real Estate Direct												
Columbus Square (01/98)	4,775	0.18	1.17	2.87	,	8.33		7.22		8.90		10.76
NCREIF Property			1.51	3.33	5	6.51		6.89		8.83		9.25
NFI ODCE Net			0.77	1.98	3	5.47		6.61		8.76		8.87
Commodities	75,391	2.89										
Mount Lucas Peak Partners (01/98)	26,764	1.03	-5.76	-5.94	ı	-14.71		-2.32		2.57		0.24
CS Hedge - Global Macro			4.55	7.28	3	5.22		4.81		3.01		5.22
Gresham Tap Fund (08/14)	48,627	1.87	-2.13	5.09	,	-8.52		-0.90				
Bloomberg Commodity			-1.19	5.00	, ,	-6.75		-2.18		-9.15		-3.74
Cash and Equivalents	18,159	0.70										

Notes:

¹ Total Fund Policy Index history available in appendix.

² Total Fund Policy: Effective April 2016, the index consists of 60.0% MSCI ACWI, 25.0% BloomBar Universal, 10.0% NFI ODCE Net, 5.0% Bloomberg Commodity.

³ Performance data prior to October 31, 2014 is reflective of the Mellon Capital Passive Index fund. Due to contributions and withdrawals in this account, the returns may differ from the performance of the fund.

⁴ Custom Blended Index: Effective November 2018, the index consists of 50.0% ICE BofA ML Global HY Const, 50.0% CSFB Leveraged Loan.

⁵ Real Assets Blended Index: Effective January 2016, the index consists of 67.0% NFI ODCE Net, 33.0% Bloomberg Commodity.



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Equity Manager Performance

Northern Trust Russell 1000 Index

For the Periods Ending June 30, 2019

Account Description

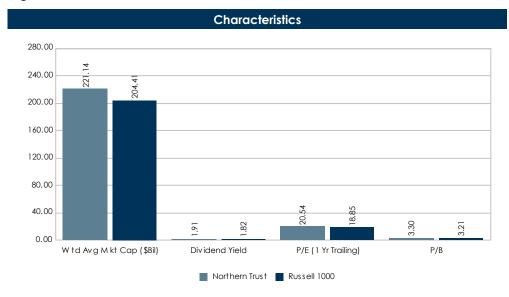
- Strategy US Large Cap Core
- Vehicle Non-Mutual Commingled
- Benchmark Russell 1000
- Performance Inception Date August 1998
- **Fees** 1 bps

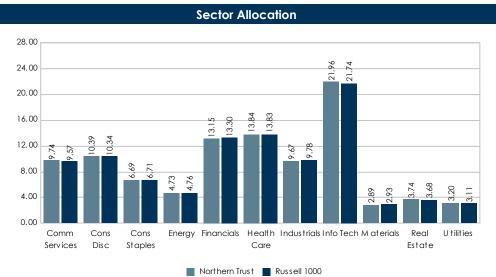
Performance Goals

- Mirror the risk/return profile of the Russell 1000.
- Over rolling three year periods, rank above the median in the eA US Large Cap Core Equity universe.

Dollar Growth Summary (\$000s)

	3 Months	FYTD
Beginning Market Value	446,539	455,018
Net Additions	-10	-30,044
Return on Investment	18,947	40,503
Ending Market Value	465,476	465,476



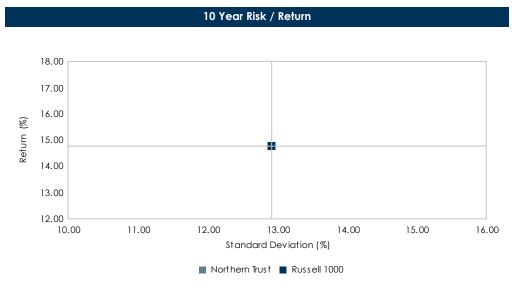


Characteristic and allocation charts represents data of the EB Daily Valued Large Cap Stock Index Fund (Non-Mutual Commingled).

Sector weights may not add to 100% due to securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

Northern Trust Russell 1000 Index

For the Periods Ending June 30, 2019



Northern Trust Russell 1000 Return (%) 14.78 14.77 Standard Deviation (%) 12.92 12.92 Sharpe Ratio 1.11 1.11

Benchmark Relative Statistics		
Beta	1.00	
R Squared (%)	100.00	
Alpha (%)	0.01	
Tracking Error (%)	0.04	
Batting Average (%)	61.67	
Up Capture (%)	99.98	
Down Capture (%)	99.91	

10 Year Return Analysis

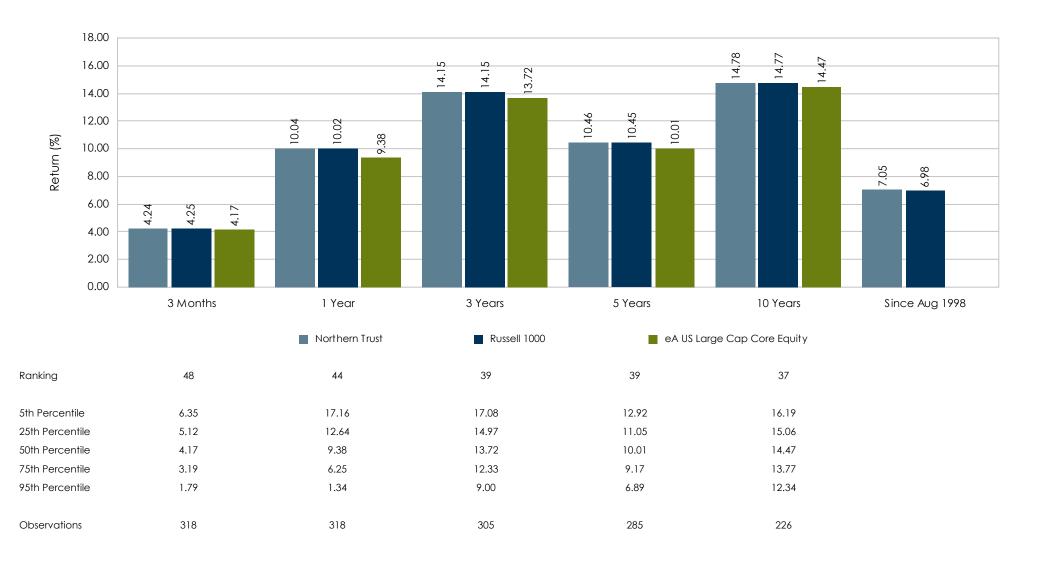
10 Year Portfolio Statistics



	Northern Trust	Russell 1000
Number of Months	120	120
Highest Monthly Return (%)	11.20	11.21
Lowest Monthly Return (%)	-9.09	-9.11
Number of Positive Months	86	86
Number of Negative Months	34	34
% of Positive Months	71.67	71.67

Northern Trust Russell 1000 Index

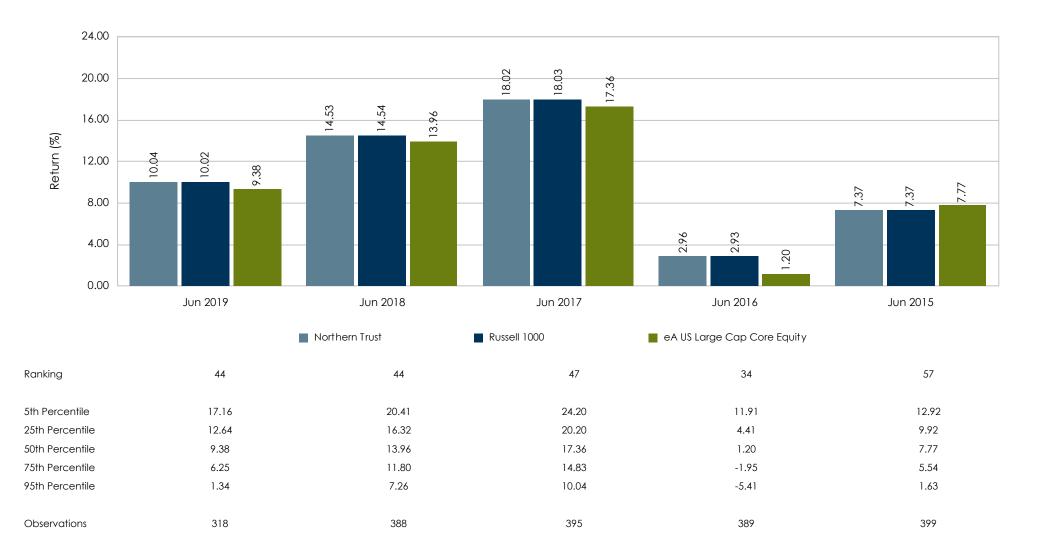
For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Northern Trust Russell 1000 Index

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending June 30, 2019

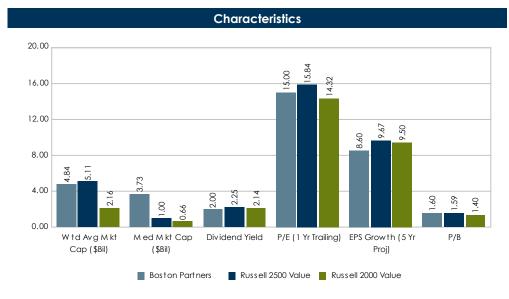
Account Description

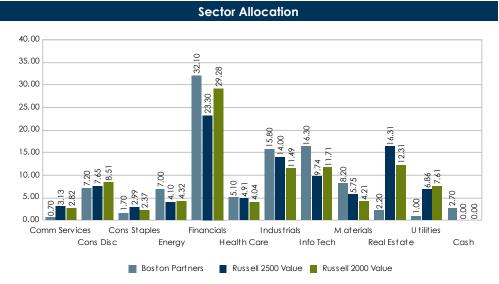
- Strategy US Small/Mid Cap Value
- Vehicle Separately Managed Account
- Benchmarks Russell 2500 Value and Russell 2000 Value
- Performance Inception Date January 1998
- Fees 60 bps base fee with annual performance fee

Performance Goals

- Outperform the Russell 2500 Value and Russell 2000 Value.
- Over rolling three year periods, rank above the median in the eA US Mid Cap Value Equity universe.

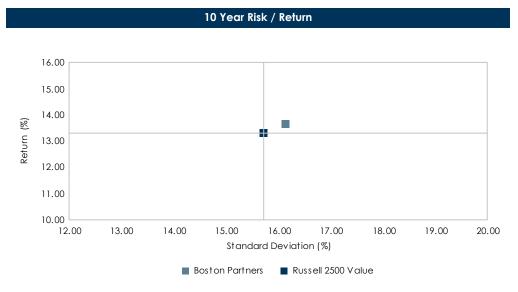
Dollar Growth Summary (\$000s) 3 Months **FYTD Beginning Market Value** 84,665 92,198 Net Additions -125 -498 Return on Investment 4,202 -2,959 437 1.703 Income Gain/Loss 3.765 -4,662 **Ending Market Value** 88,741 88,741





Sector weights may not add to 100% due to securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

For the Periods Ending June 30, 2019

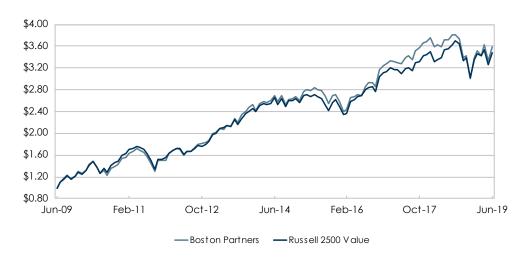


	Boston Partners	Russell 2500 Value
Return (%)	13.64	13.28
Standard Deviation (%)	16.14	15.72
Sharpe Ratio	0.82	0.82

Benchmark Relative Statistics		
1.01		
95.91		
0.31		
3.26		
51.67		
100.18		
98.63		
	1.01 95.91 0.31 3.26 51.67 100.18	

10 Year Portfolio Statistics

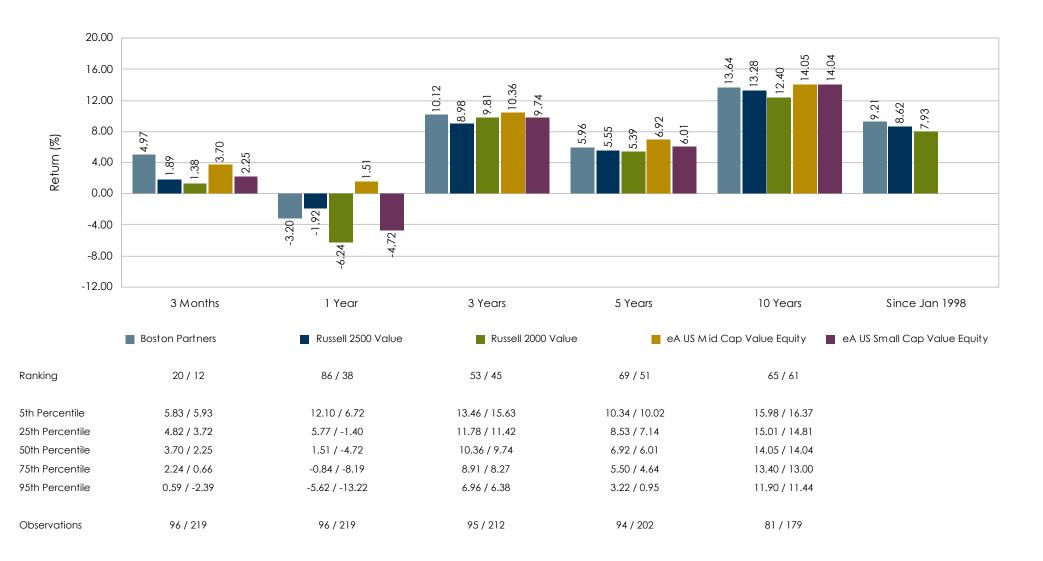
10 Year Growth of a Dollar



10 Year Return Analysis

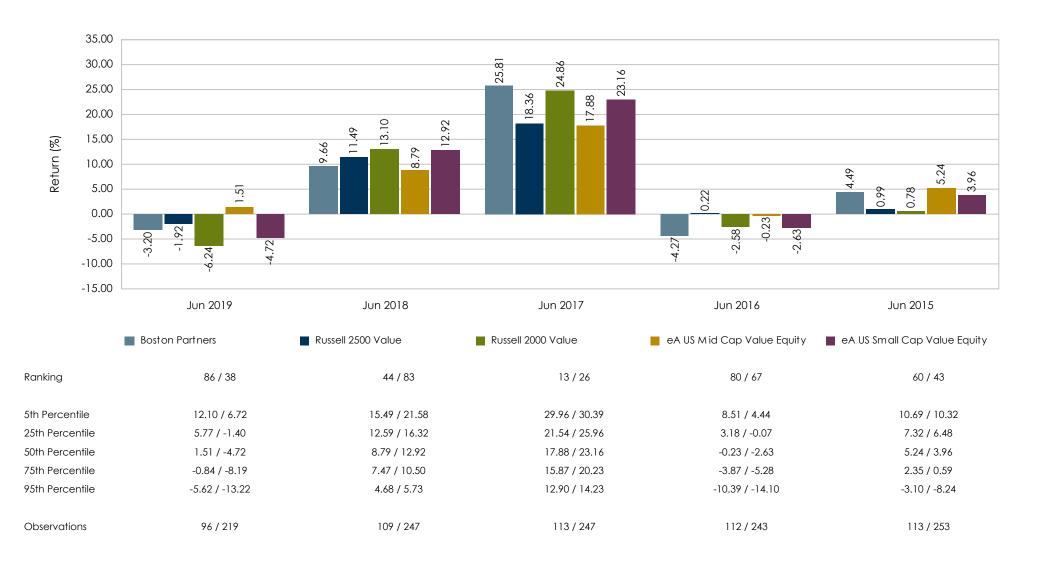
	Boston Partners	Russell 2500 Value
Number of Months	120	120
Highest Monthly Return (%)	14.23	13.92
Lowest Monthly Return (%)	-12.07	-11.05
Number of Positive Months	79	80
Number of Negative Months	41	40
% of Positive Months	65.83	66.67

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Cortina

For the Periods Ending June 30, 2019

Account Description

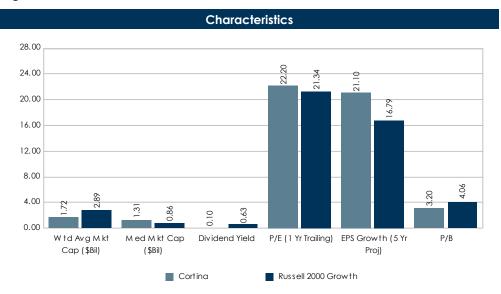
- Strategy US Small/Mid Cap Growth
- Vehicle Separately Managed Account
- Benchmark Russell 2000 Growth
- Performance Inception Date February 2014
- Fees First \$25M at 100 bps, next \$25M at 90 bps, balance at 80 bps

Performance Goals

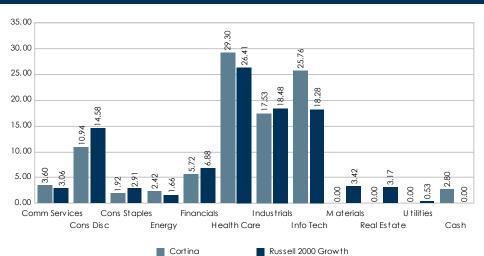
- Outperform the Russell 2000 Growth.
- Over rolling three year periods, rank above median in the eA US Small Cap Growth Equity universe.

Dollar Growth Summary (\$000s)

	3 Months	FYTD
Beginning Market Value	94,235	107,615
Net Additions	-208	-10,721
Return on Investment	1,007	-1,860
Income	151	327
Gain/Loss	856	-2,187
Endina Market Value	95.035	95.035



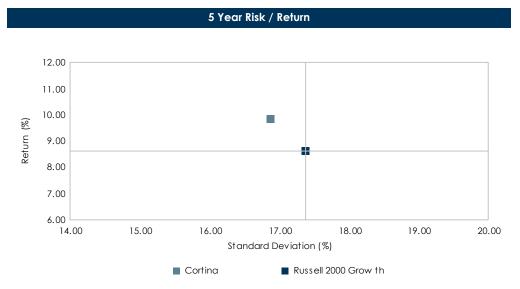




Sector weights may not add to 100% due to securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

Cortina

For the Periods Ending June 30, 2019



Return (%) 9.81 8.63 Standard Deviation (%) 16.87 17.38 Sharpe Ratio 0.53 0.45

Benchmark Relative Statistics		
Beta	0.91	
R Squared (%)	88.29	
Alpha (%)	1.87	
Tracking Error (%)	5.97	
Batting Average (%)	55.00	
Up Capture (%)	94.04	
Down Capture (%)	90.44	

5 Year Portfolio Statistics

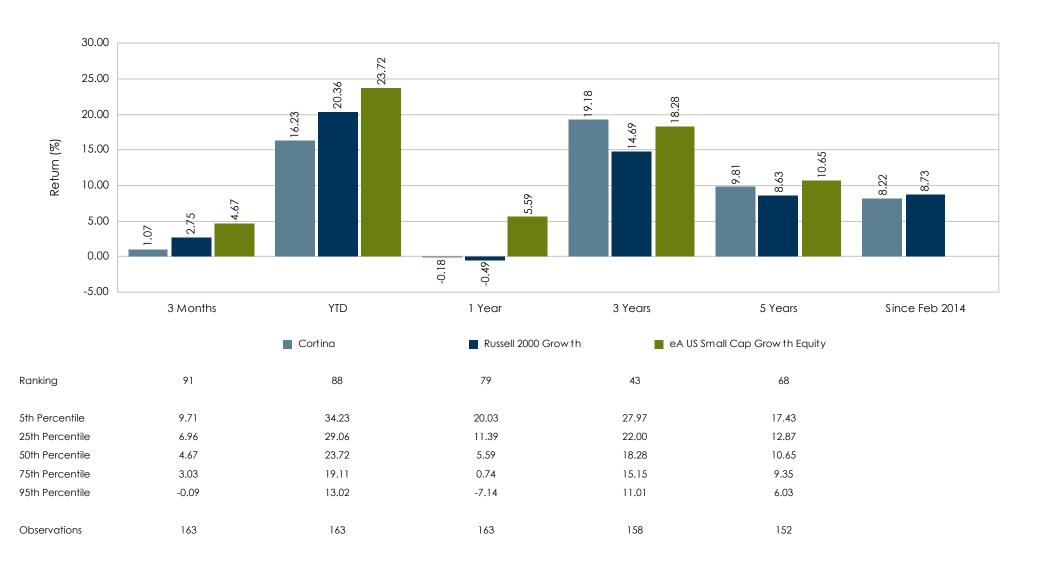
5 Year Growth of a Dollar



5	Y	ear	Rei	urn	An	aly	/sis

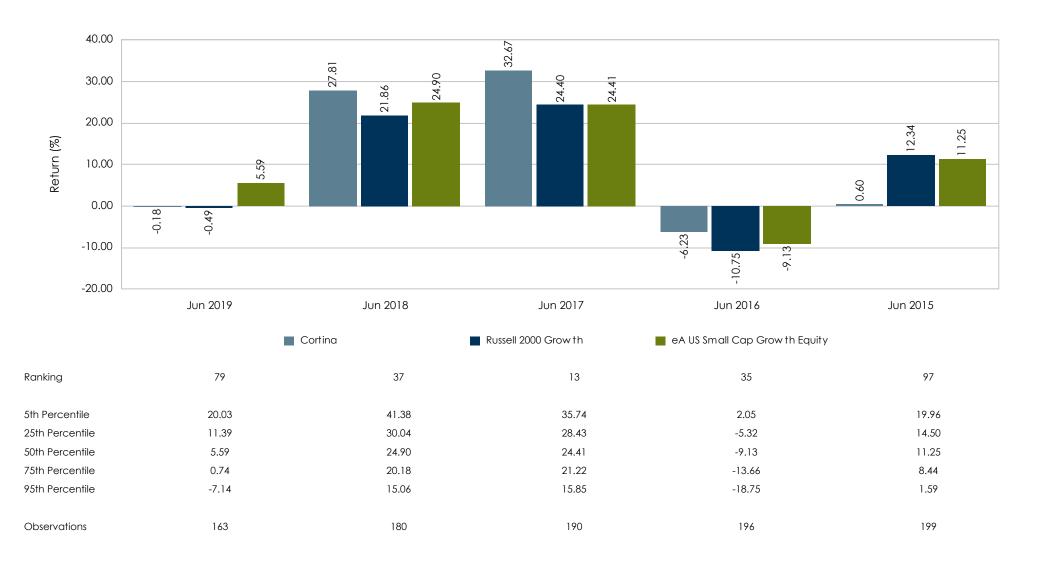
	Cortina	Russell 2000 Growth
Number of Months	60	60
Highest Monthly Return (%)	11.26	11.55
Lowest Monthly Return (%)	-11.40	-12.65
Number of Positive Months	41	41
Number of Negative Months	19	19
% of Positive Months	68.33	68.33

CortinaFor the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

CortinaFor the One Year Periods Ending June

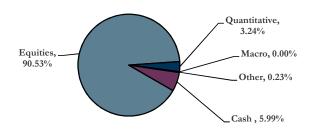


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending June 30, 2019

Strategy Allocation

Market Value: \$374,278,418



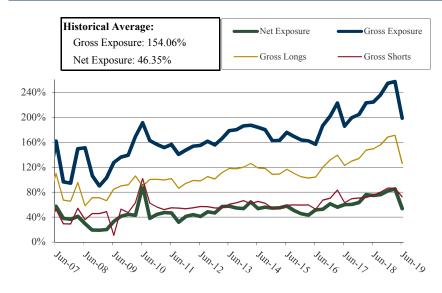
Strategy

- Equity Long/Short Hedge Fund of Funds
- Performance Inception Date: November 2003

Exposure

Net Exposure: 53.48%Gross Exposure: 198.42%

Historical Net & Gross Exposure



Performance Goals

- Meet or exceed the return of the MSCI All Country World, over extended time periods (5 to 10 years).
- The volatility (standard deviation) of the portfolio should be less than two-thirds the volatility of the MSCI All Country World.
- The Beta of the portfolio relative to the MSCI All Country World Index should be < 0.7.

Characteristics provided by manager are the weighted average of GLSEF and GLSEF-B data.

For the Periods Ending June 30, 2019

Sharpe Ratio



Grosvenor MSCI ACWI HFRI FOF: Strategic Return (%) 6.35 10.73 3.50 Standard Deviation (%) 6.27 13.48 5.18

0.94

0.76

0.59

10 Year Portfolio Statistics

Benchmark Relative Statistics			
Beta	0.40	1.11	
R Squared (%)	73.31	83.72	
Alpha (%)	1.95	2.43	
Tracking Error (%)	8.73	2.59	
Batting Average (%)	45.83	65.00	
Up Capture (%)	42.91	128.18	
Down Capture (%)	41.87	92.88	

10 Year Return Analysis

\$2.80 \$2.60 \$2.40 \$2.20 \$2.00 \$1.80 \$1.60 \$1.40 \$1.20 \$1.00 Jun-09 Feb-11 Oct-12 Jun-14 Feb-16 Oct-17 Jun-19

-MSCI ACWI

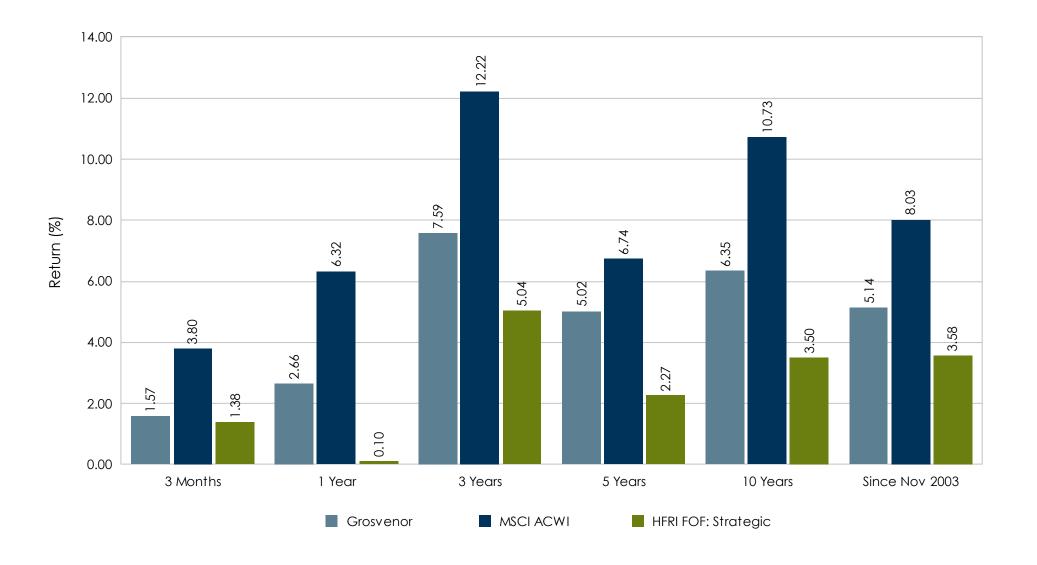
- HFRI FOF: Strategic

10 Year Growth of a Dollar

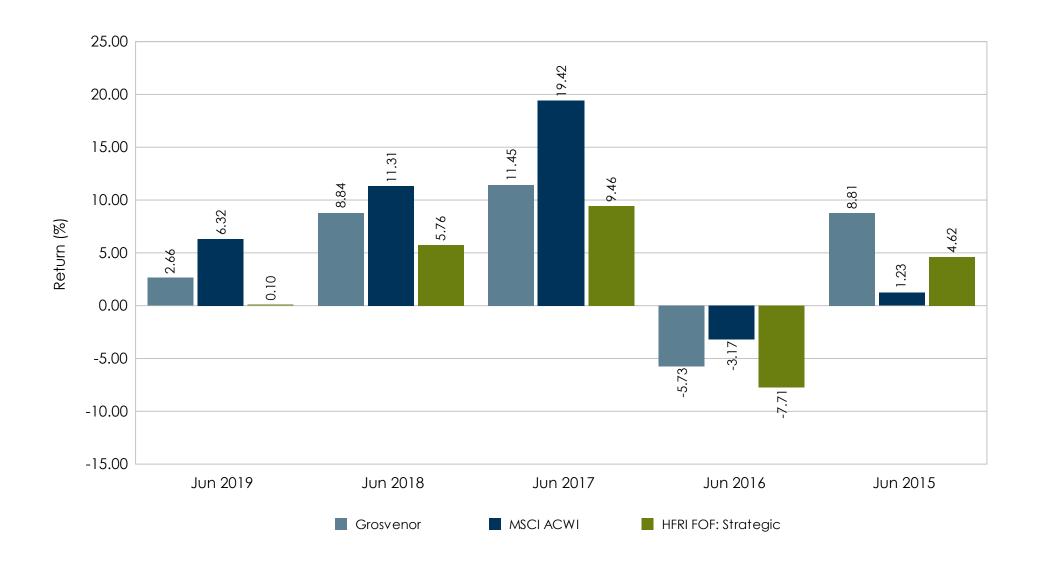
	Grosvenor	MSCI ACWI	HFRI FOF: Strategic
Number of Months	120	120	120
Highest Monthly Return (%)	5.18	10.74	3.33
Lowest Monthly Return (%)	-4.90	-9.40	-4.49
Number of Positive Months	80	78	74
Number of Negative Months	40	42	46
% of Positive Months	66.67	65.00	61.67

-Grosvenor

For the Periods Ending June 30, 2019



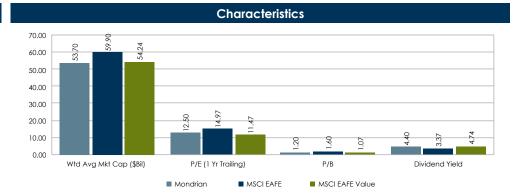
For the One Year Periods Ending June



For the Periods Ending June 30, 2019

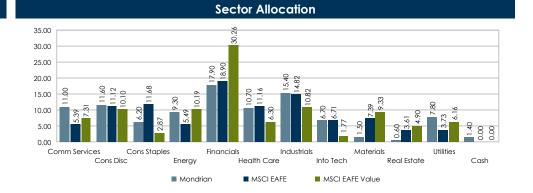
Account Description

- Strategy Int'l Developed Markets Equity
- Vehicle Limited Partnership
- Benchmarks MSCI EAFE and MSCI EAFE Value
- Performance Inception Date May 2004
- Fees 70 bps on the first \$20 million, 50 bps on the next \$30 million, 40 bps on the next \$50 million, 30 bps thereafter



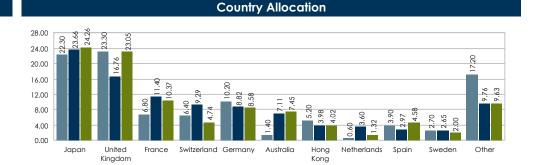
Performance Goals

- Outperform the MSCI EAFE and MSCI EAFE Value.
- Over rolling three year periods, rank above the median in the eA EAFE All Cap
 Value Equity universe.



Dollar Growth Summary (\$000s)

	3 Months	FYTD
Beginning Market Value	138,944	138,343
Net Additions	0	0
Return on Investment	1,857	2,457
Ending Market Value	140,801	140,801



■ MSCI EAFE

■ MSCI EAFE Value

■ Mondrian

Characteristic and allocation charts represents data of the Mondrian International Equity Fund, LP (Limited Partnership).

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For the Periods Ending June 30, 2019

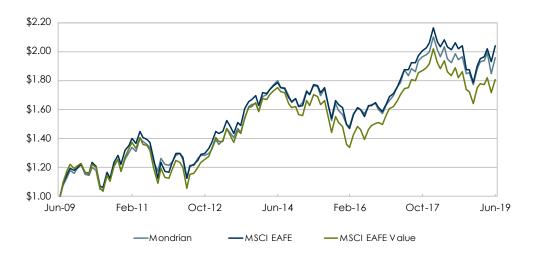


MSCI Mondrian **MSCI EAFE EAFE Value** 6.96 7.40 Return (%) 6.10 14.84 Standard Deviation (%) 14.00 15.75 **Sharpe Ratio** 0.47 0.47 0.36

10 Year Portfolio Statistics

Benchmark Relative Statistics		
Beta	0.91	0.86
R Squared (%)	93.34	93.22
Alpha (%)	0.20	1.58
Tracking Error (%)	3.84	4.27
Batting Average (%)	49.17	52.50
Up Capture (%)	94.56	86.88
Down Capture (%)	96.74	84.59

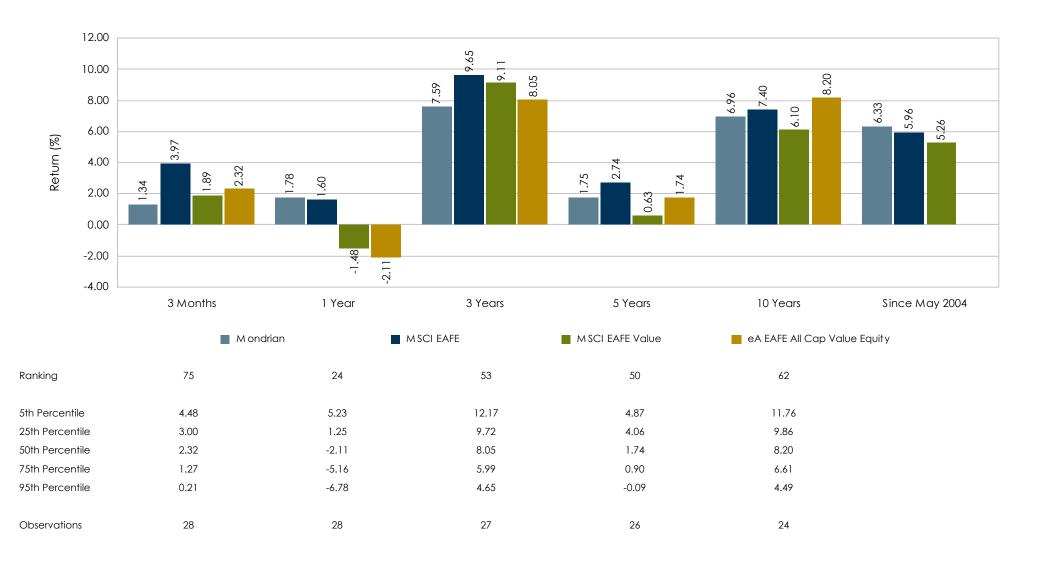
10 Year Growth of a Dollar



10 Year Return Analysis

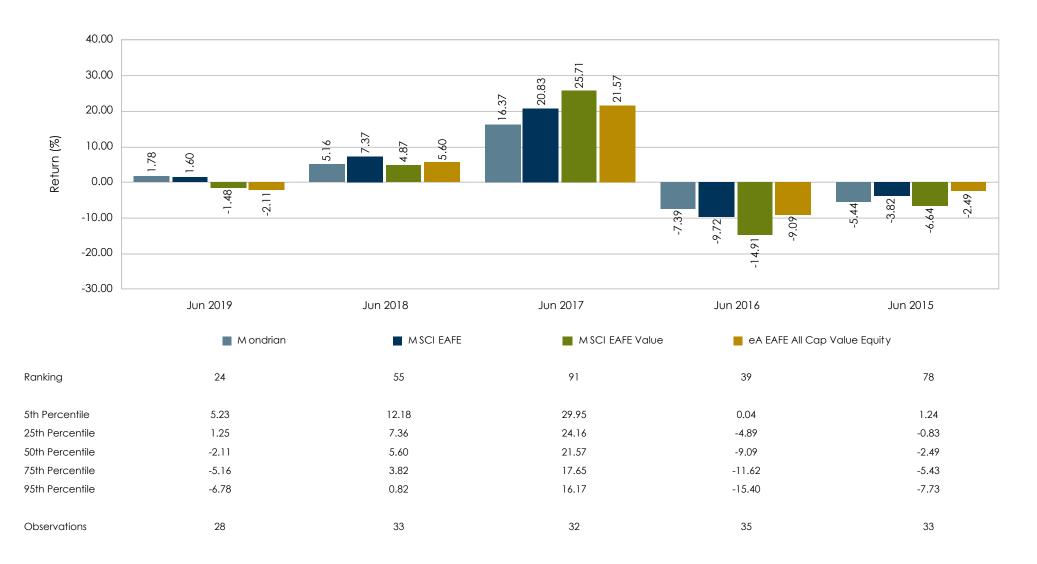
	Mondrian	MSCI EAFE	MSCI EAFE Value
Number of Months	120	120	120
Highest Monthly Return (%)	9.30	9.82	10.70
Lowest Monthly Return (%)	-10.81	-11.37	-11.86
Number of Positive Months	68	66	66
Number of Negative Months	52	54	54
% of Positive Months	56.67	55.00	55.00

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June

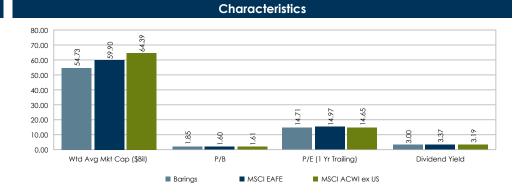


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For the Periods Ending June 30, 2019

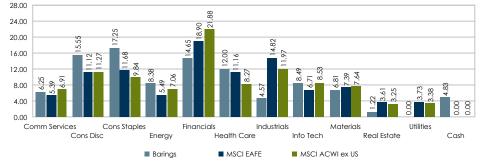
Account Description

- Strategy Int'l Developed Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmarks MSCI EAFE and MSCI ACWI ex US
- Performance Inception Date March 2012
- Fees 40 bps base fee plus performance based fee



Performance Goals

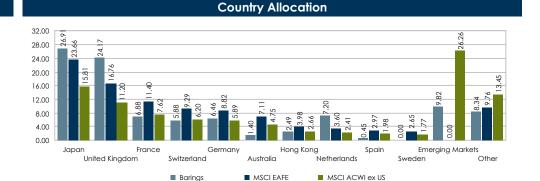
- Outperform the MSCI EAFE and MSCI ACWI ex US.
- Over rolling three year periods, rank above the median in the eA EAFE All Cap Equity universe.



Sector Allocation

Dollar Growth Summary (\$000s)

	3 Months	FYTD
Beginning Market Value	116,359	122,126
Net Additions	-114	-1,102
Return on Investment	4,599	-180
Ending Market Value	120,844	120,844



Characteristic and allocation charts represents data of the Baring Focused Int'l Equity (Non-Mutual Commingled). © 2019 Asset Consulting Group All Rights Reserved

For the Periods Ending June 30, 2019



MSCI Barings MSCI EAFE ACWI ex US 7.19 7.81 Return (%) 6.85 11.85 11.90 Standard Deviation (%) 11.80 **Sharpe Ratio** 0.56 0.61 0.53

7 Year Portfolio Statistics

Benchmark Relative Statistics		
Beta	0.94	0.92
R Squared (%)	89.53	86.06
Alpha (%)	-0.10	0.90
Tracking Error (%)	3.88	4.51
Batting Average (%)	53.57	51.19
Up Capture (%)	94.92	90.83
Down Capture (%)	97.93	87.78

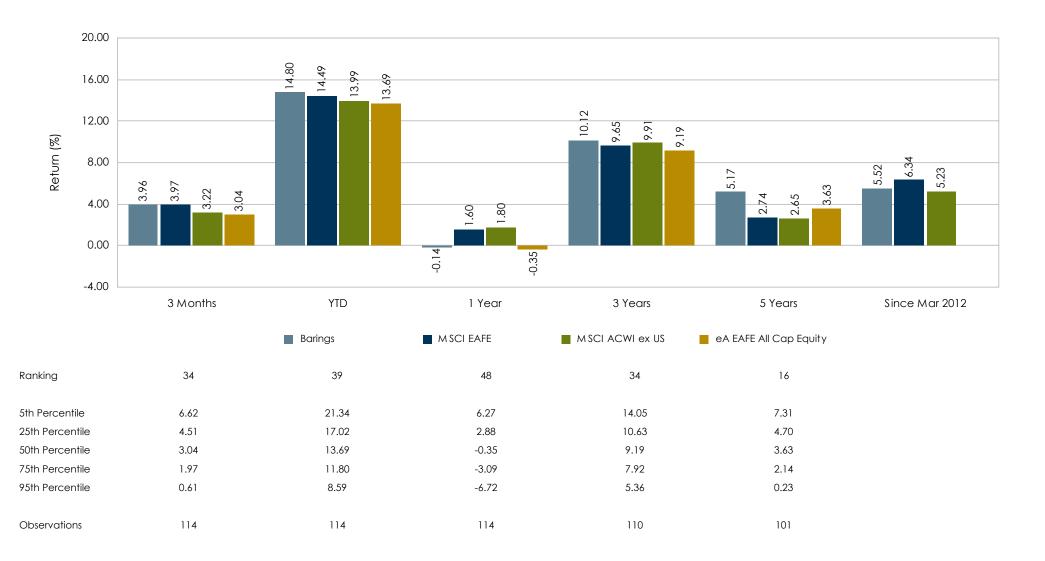
7 Year Growth of a Dollar



7 Year Return Analysis

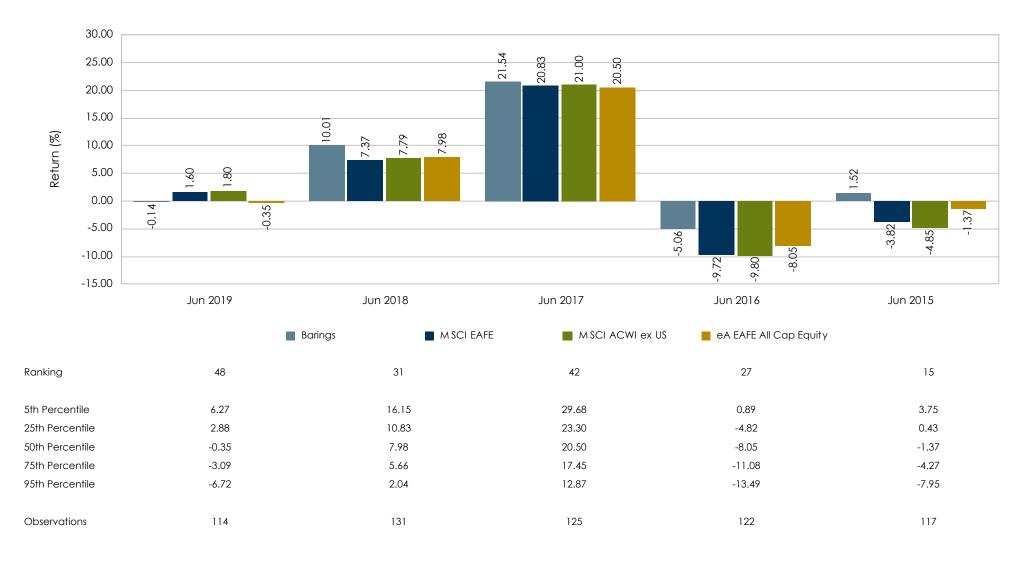
	Barings	MSCI EAFE	MSCI ACWI ex US
Number of Months	84	84	84
Highest Monthly Return (%)	8.31	7.82	8.21
Lowest Monthly Return (%)	-8.97	-7.95	-8.12
Number of Positive Months	49	49	52
Number of Negative Months	35	35	32
% of Positive Months	58.33	58.33	61.90

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June

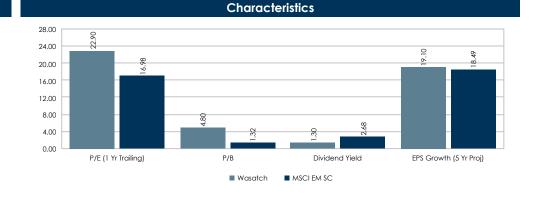


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending June 30, 2019

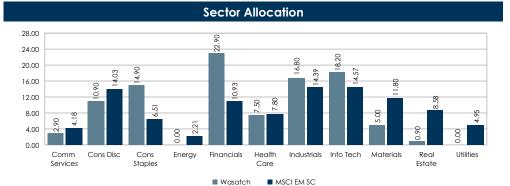
Account Description

- Strategy Emerging Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmark MSCI EM SC
- Performance Inception Date September 2012
- **Fees** 150 bps

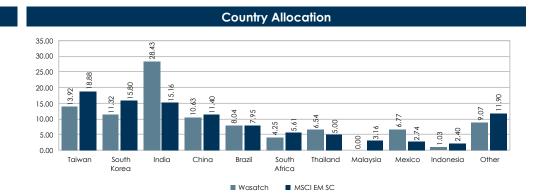


Performance Goals

- Outperform the MSCI EM SC over a market cycle.
- Rank above median in the eA Global Emerging Mkts Equity universe over a market cycle.



Beginning Market Value Net Additions Return on Investment Ending Market Value 34,971 36,569 133 -503 Return on Investment 1,332 103 Ending Market Value 36,169 36,169



60

Characteristic and allocation charts represents data of the Wasatch Emerging Markets Small Cap CIT (Non-Mutual Commingled).

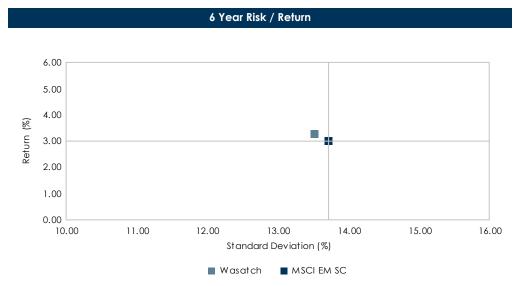
For the Periods Ending June 30, 2019

Return (%)

Sharpe Ratio

Standard Deviation (%)

Down Capture (%)



Wasatch	MSCI EM SC
3.26	3.00

13.51

0.19

13.72

0.17

94.64

6 Year Portfolio Statistics

	Boundary and Bolother Challetter	
Benchmark Relative Statistics		
n - 1	0.07	
Beta	0.87	
R Squared (%)	77.73	
Alpha (%)	0.74	
Tracking Error (%)	6.63	
Batting Average (%)	45.83	
Up Capture (%)	94.97	

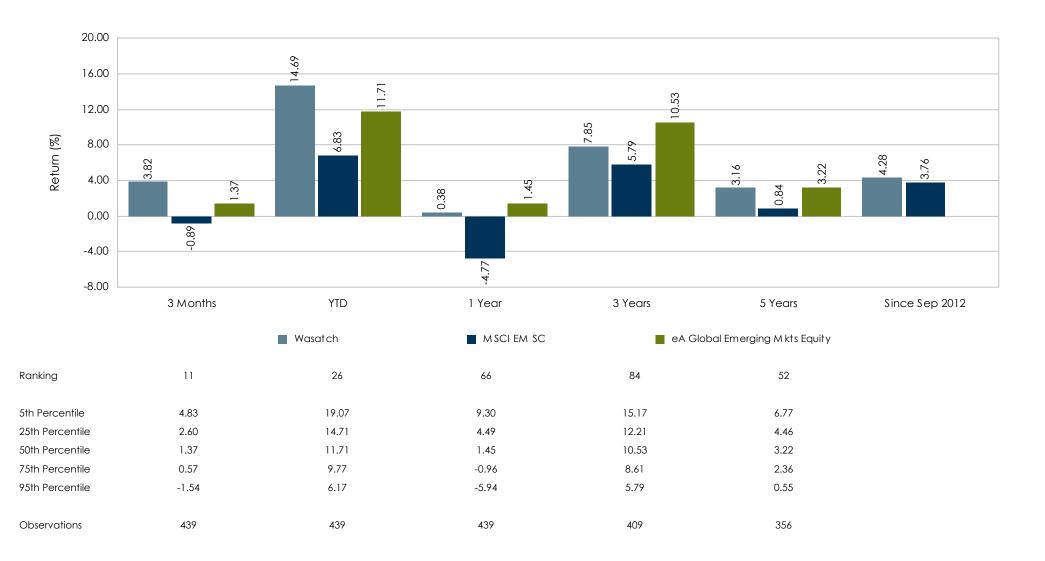
6 Year Growth of a Dollar



6 Year Return Analysis

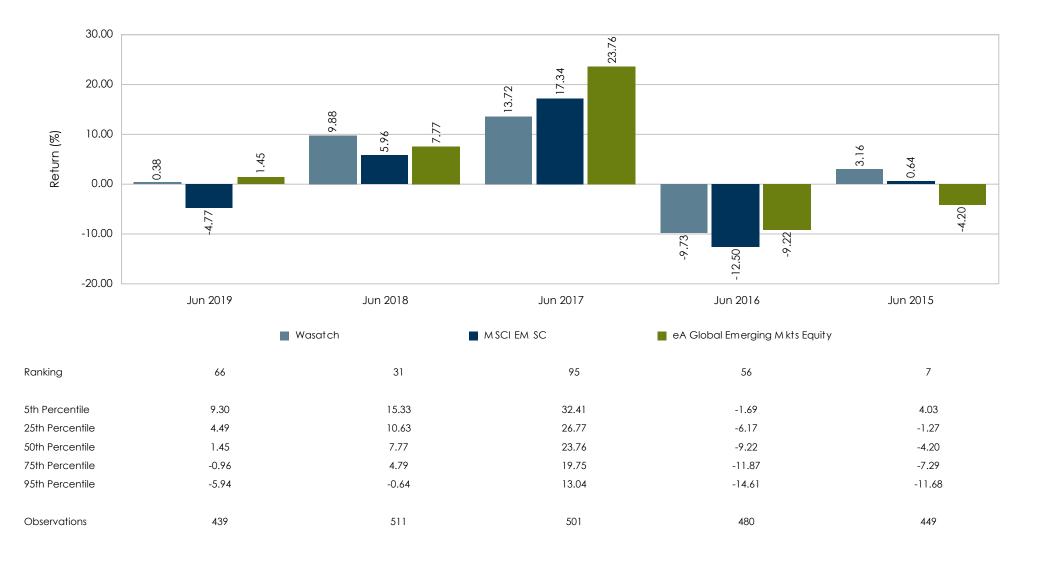
	Wasatch	MSCI EM SC
Number of Months	72	72
Highest Monthly Return (%)	8.10	10.01
Lowest Monthly Return (%)	-12.45	-10.53
Number of Positive Months	40	43
Number of Negative Months	32	29
% of Positive Months	55.56	59.72

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June

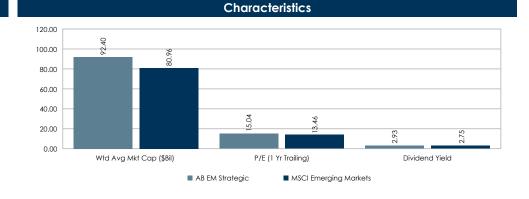


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending June 30, 2019

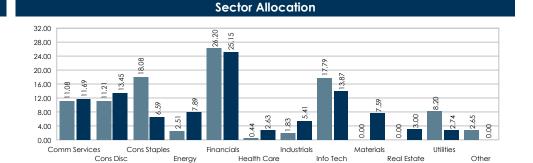
Account Description

- Strategy Emerging Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmark MSCI Emerging Markets
- Performance Inception Date November 2016
- **Fees** 65 bps (preferred fee)



Performance Goals

- Outperform the MSCI Emerging Markets.
- Over rolling three year periods, rank above the median in the eA Global Emerging Mkts Equity universe.

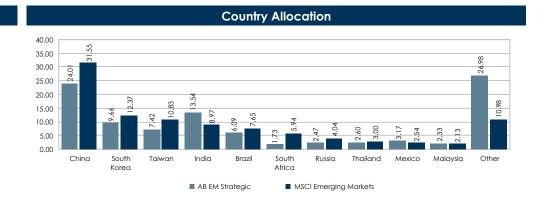


■ MSCI Emerging Markets

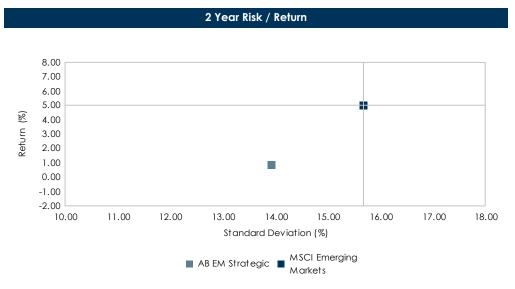
■ AB EM Strategic

3 Months FYTD Beginning Market Value 78,733 81,104 Net Additions 0 0 Return on Investment 1,534 -837 Ending Market Value 80,267 80,267

Dollar Growth Summary (\$000s)



For the Periods Ending June 30, 2019



	AB EM Strategic	MSCI Emerging Markets
Return (%)	0.88	5.04
Standard Deviation (%)	13.94	15.67
Sharpe Ratio	-0.06	0.21

Benchmark Relative Statistics		
Beta	0.86	
R Squared (%)	93.13	
Alpha (%)	-3.37	
Tracking Error (%)	4.28	
Batting Average (%)	33.33	
Up Capture (%)	72.13	
Down Capture (%)	92.90	

2 Year Portfolio Statistics

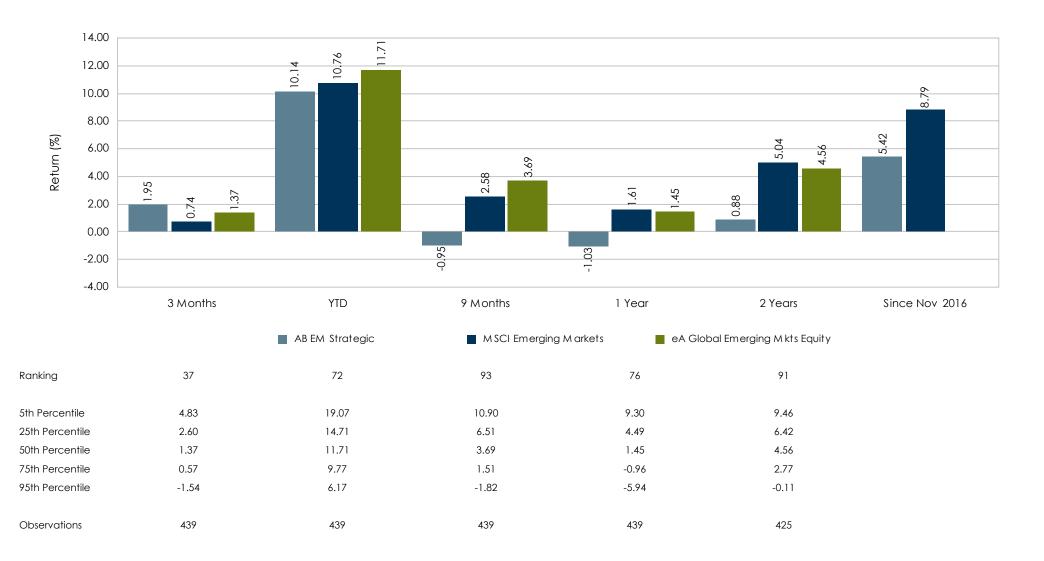
2 Year Growth of a Dollar



2 Year Return Analysis

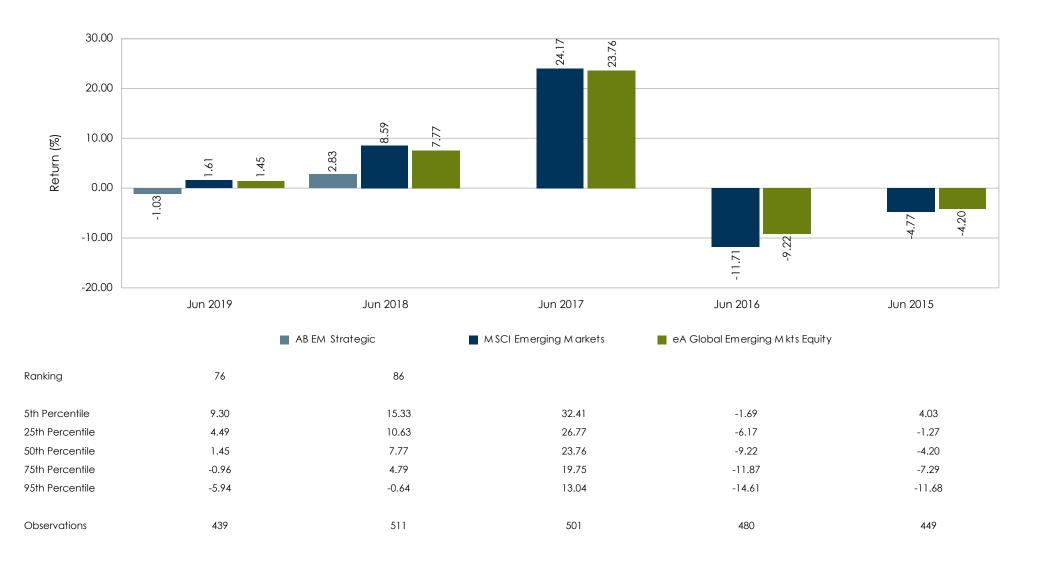
	AB EM Strategic	MSCI Emerging Markets
Number of Months	24	24
Highest Monthly Return (%)	7.70	8.76
Lowest Monthly Return (%)	-9.21	-8.70
Number of Positive Months	14	13
Number of Negative Months	10	11
% of Positive Months	58.33	54.17

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Private Equity - Active Funds

For the Period Ending June 30, 2019

Summary of Cash Flows for 6 Months

Cash Outflows	Cash Inflows	Net Cash Flows
-15,540,413	14,880,574	-659,839

Summary of Portfolio Inception to Date (Category totals include active and closed funds)

	Inception Date	Committed	Drawn to Date	Remaining Commitment	Distributions to Date	Adjusted Ending Value	Total Value	Total Value to Paid-in
Total	Feb-98	750,700,000	566,026,023	205,347,881	635,169,885	215,912,163	851,082,048	1.50x
Buyout	Apr-99	253,200,000	198,890,127	64,056,041	250,021,851	60,823,532	310,845,383	1.56x
Levine Leichtman	Feb-03	10,000,000	10,612,096	-	18,254,382	74,788	18,329,170	1.73x
Thompson Street C.P. II	Dec-06	10,000,000	9,998,027	1,973	19,089,442	1,904,902	20,994,344	2.10x
Arsenal Capital Partners II	Dec-06	15,000,000	14,991,977	668,860	29,926,943	4,889,830	34,816,773	2.32x
Sun Capital Partners V	May-07	12,500,000	12,500,000	-	11,216,347	3,713,269	14,929,616	1.19x
Calera Capital Fund IV	Apr-08	10,000,000	8,835,037	1,236,975	13,709,533	-	13,709,533	1.55x
Levine Leichtman IV	Sep-08	10,000,000	9,284,222	1,065,574	15,354,090	1,133,896	16,487,986	1.78x
Thompson Street Capital III	Oct-11	7,500,000	7,481,991	18,009	7,273,466	4,621,738	11,895,204	1.59x
Arsenal Capital Partners III	Apr-12	7,500,000	7,625,862	1,270,818	14,425,141	2,746,312	17,171,453	2.25x
Apollo Investment Fund VIII	Feb-14	7,500,000	7,443,943	1,236,511	2,713,829	6,477,633	9,191,462	1.23x
Francisco Partners Fund IV	Apr-15	8,000,000	7,796,000	204,000	4,220,000	9,354,665	13,574,665	1.74x
CenterOak Equity Fund I	Dec-15	7,500,000	6,216,138	1,724,070	533,733	6,685,204	7,218,937	1.16x
Thompson Street Capital Partners IV	Jan-16	7,500,000	6,641,500	858,500	1,546,342	6,542,636	8,088,978	1.22x
Leonard Green Equity Investors VII	May-17	7,500,000	4,430,812	3,098,887	29,699	4,792,796	4,822,495	1.09x
Francisco Partners Fund V	Jul-18	10,000,000	5,125,000	4,875,000	-	5,378,932	5,378,932	1.05x
Thompson Street Capital V	Aug-18	12,700,000	1,658,730	11,041,270	-	1,474,451	1,474,451	0.89x
Apollo Investment Fund IX	Mar-19	13,000,000	1,244,406	11,755,594	-	1,032,480	1,032,480	0.83x
Leonard Green VIII		15,000,000	-	15,000,000	-	-	-	-
Leonard Green Jade		10,000,000	-	10,000,000	-	-	-	-

Private Equity - Active Funds

For the Period Ending June 30, 2019

Summary of Portfolio Inception to Date (Category totals include active and closed funds)

sommary of romain inception to bate (category to	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Distressed	Feb-98	143,500,000	126,712,509	17,602,815	163,730,562	22,155,545	185,886,107	1.47x
Oaktree Opportunities Fund V	Jun-04	4,000,000	4,000,000	-	6,608,433	1,413	6,609,846	1.65x
Oaktree Opportunities Fund VI	Aug-05	4,000,000	4,000,000	-	6,326,002	387	6,326,389	1.58x
Siguler Guff Dist Opp II	Sep-05	20,000,000	20,000,000	-	27,922,854	374,870	28,297,724	1.41x
Oaktree Opportunities VII A	Mar-07	7,500,000	7,500,000	-	10,045,026	369,007	10,414,033	1.39x
Oaktree Opportunities VII B	Jun-08	7,500,000	6,750,000	750,000	11,529,006	167,682	11,696,688	1.73x
Siguler Guff Dist Opp III	Sep-08	15,000,000	14,550,000	450,000	20,971,655	2,289,604	23,261,259	1.60x
Oaktree Opportunities VIII	Dec-09	7,500,000	7,500,000	-	10,515,897	352,951	10,868,848	1.45x
Oaktree Opportunities IX	Mar-13	7,500,000	7,500,000	-	3,217,158	5,508,808	8,725,966	1.16x
Oaktree European Dislocation Fund	Nov-13	7,500,000	4,293,000	3,207,000	4,570,399	284,034	4,854,433	1.13x
Oaktree Opportunities Fund X	Jul-15	7,500,000	6,975,000	1,275,000	1,667,949	7,092,512	8,760,461	1.26x
Apollo EPF III	Jan-18	10,000,000	5,138,593	5,358,315	498,631	4,785,608	5,284,239	1.03x
Oaktree Opportunities Fund Xb	Jun-18	7,500,000	937,500	6,562,500	-	928,669	928,669	0.99x
Emerging Markets Focused	Mar-12	7,500,000	7,606,402	1,350,693	2,489,908	7,569,769	10,059,677	1.32x
Actis EM IV	Mar-12	7,500,000	7,606,402	1,350,693	2,489,908	7,569,769	10,059,677	1.32x
Mezzanine	Mar-99	49,500,000	51,446,479	4,929,384	72,708,093	1,317,057	74,025,150	1.44x
TCW Crescent IV	Jun-06	10,000,000	9,873,180	1,921,076	11,226,828	21,704	11,248,532	1.14x
Newstone Capital Partners	Nov-06	5,000,000	7,114,989	203,377	9,068,235	1,557	9,069,792	1.27x
TCW Mezzanine Fund V	Mar-08	10,000,000	7,507,009	2,492,991	10,456,648	191,912	10,648,560	1.42x
Newstone Capital Partners II	Dec-10	7,500,000	10,036,257	311,940	11,302,208	1,101,884	12,404,092	1.24x
Other	Feb-13	71,500,000	22,832,809	51,699,640	8,914,227	19,337,236	28,251,463	1.24x
EnCap Energy Fund IX	Feb-13	6,500,000	7,295,677	409,995	4,933,361	4,599,423	9,532,784	1.31x
EnCap Energy Fund X	Apr-15	7,500,000	6,319,653	1,656,769	1,217,051	6,441,886	7,658,937	1.21x
ArcLight Energy Partners VI	Aug-15	7,500,000	7,404,236	1,446,119	2,763,815	6,778,758	9,542,573	1.29x
EnCap Energy Fund XI	Jul-17	10,000,000	1,813,243	8,186,757	-	1,517,169	1,517,169	0.84x
ArcLight Energy Partners Fund VII, L.P		15,000,000	-	15,000,000	-	-	-	-
North Sky Clean Growth V		25,000,000	-	25,000,000	-	-	-	
Secondary Fund of Funds	Dec-05	20,000,000	21,226,531	-	27,684,314	1,875,956	29,560,270	1.39x
Lexington VI	Dec-05	20,000,000	21,226,531	-	27,684,314	1,875,956	29,560,270	1.39x

Private Equity - Active Funds

For the Period Ending June 30, 2019

Summary of Portfolio Inception to Date (Category totals include active and closed funds)

	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Venture Capital	Jul-99	205,500,000	137,311,166	65,709,308	109,620,930	102,833,068	212,453,998	1.55x
Lightspeed Venture Partners VI (WPG)	Oct-00	12,000,000	11,010,270	-	10,396,934	97,300	10,494,234	0.95x
Accel Europe	May-01	10,000,000	10,000,000	-	12,403,731	915,601	13,319,332	1.33x
Knightsbridge Fund VI	Dec-04	12,000,000	10,960,000	1,040,000	11,256,368	6,252,784	17,509,152	1.60x
Firstmark I (Pequot, Firstmark IV)	Nov-05	5,000,000	4,950,000	50,000	15,380,412	19,561,211	34,941,623	7.06x
Weathergage Venture Capital	Mar-07	7,500,000	6,862,500	637,500	8,952,343	5,277,687	14,230,030	2.07x
Warburg Pincus	Oct-07	15,000,000	15,000,000	-	17,687,443	5,696,823	23,384,266	1.56x
Weathergage Venture Cap II	Apr-11	7,500,000	6,975,000	525,000	4,120,825	11,187,807	15,308,632	2.19x
Firstmark II (Firstmark V)	Aug-11	5,000,000	5,122,365	-	497,531	8,880,202	9,377,733	1.83x
Warburg Pincus XI	Nov-12	7,500,000	7,500,000	-	5,337,524	6,648,853	11,986,377	1.60x
Firstmark Capital Fund III	Feb-14	5,000,000	4,900,000	100,000	141,977	7,367,829	7,509,806	1.53x
Firstmark Capital Opportunity Fund I	Jun-14	5,000,000	5,075,000	186,808	441,498	7,169,767	7,611,265	1.50x
Warburg Pincus XII	Dec-15	10,000,000	7,815,000	2,185,000	438,230	8,653,860	9,092,090	1.16x
Weathergage Venture Capital IV	Dec-16	10,000,000	5,600,000	4,400,000	-	6,150,274	6,150,274	1.10x
FirstMark Capital Fund IV	Apr-17	7,500,000	3,187,500	4,312,500	-	3,475,675	3,475,675	1.09x
FirstMark Capital Opportunity Fund II	Jan-18	7,500,000	4,987,500	2,512,500	-	5,322,820	5,322,820	1.07x
Warburg Pincus Global Growth	Mar-19	40,000,000	240,000	39,760,000	-	174,575	174,575	0.73x
TA XIII		10,000,000	-	10,000,000	-	-	-	-



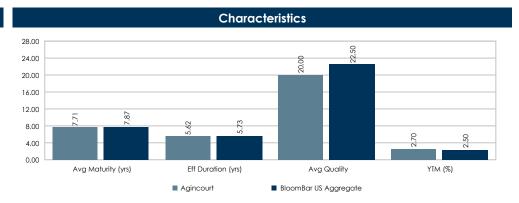
Fixed Income Manager Performance

Agincourt Core Fixed Income

For the Periods Ending June 30, 2019

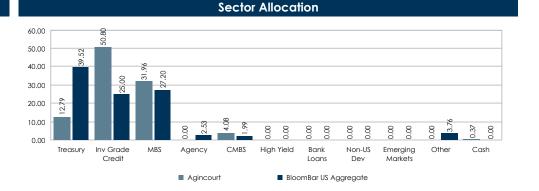
Account Description

- Strategy Core Bonds
- Vehicle Separately Managed Account
- Benchmark BloomBar US Aggregate
- Performance Inception Date October 1999
- **Fees** 25 bps on the first \$25 million, 20 bps on the next \$75 million, 15 bps on the next \$50 million, and 10 bps on the next \$50 million

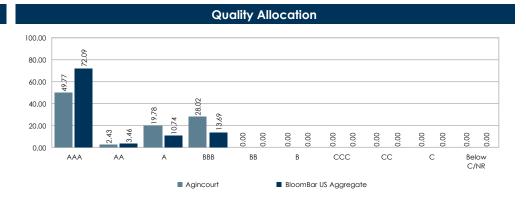


Performance Goals

- Outperform the BloomBar US Aggregate.
- Over rolling three year periods, rank above the median in the eA US Core
 Fixed Income universe.



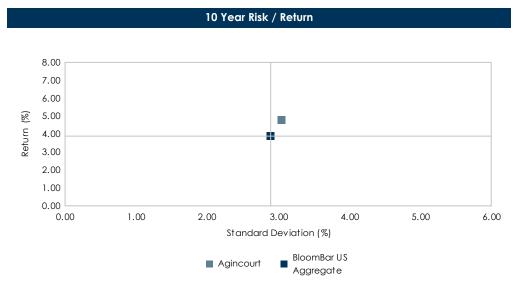
Dollar Growth Summary (\$000s) 3 Months **FYTD Beginning Market Value** 198.703 169,624 Net Additions 14.918 34,674 Return on Investment 6,838 16,160 Income 1,496 6,454 9,706 Gain/Loss 5,341 **Ending Market Value** 220,459 220,459



The Other sector consists of ABS, CMO, Convertibles, Municipals, Private Placements/144As and TIPS.

Agincourt Core Fixed Income

For the Periods Ending June 30, 2019



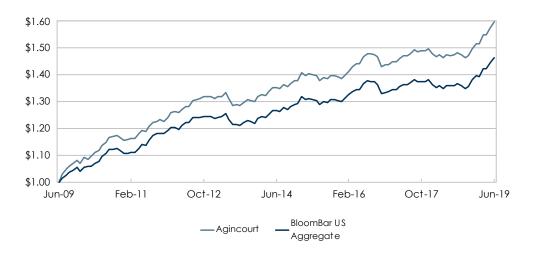
BloomBar US Agincourt Aggregate

10 Year Portfolio Statistics

	Agilicoon	Aggregale
Return (%)	4.80	3.90
Standard Deviation (%)	3.04	2.89
Sharpe Ratio	1.43	1.20

Beta 1.00 R Squared (%) 91.19 Alpha (%) 0.86 Tracking Error (%) 0.90 Batting Average (%) 65.00 Up Capture (%) 110.09 Down Capture (%) 88.21

10 Year Growth of a Dollar

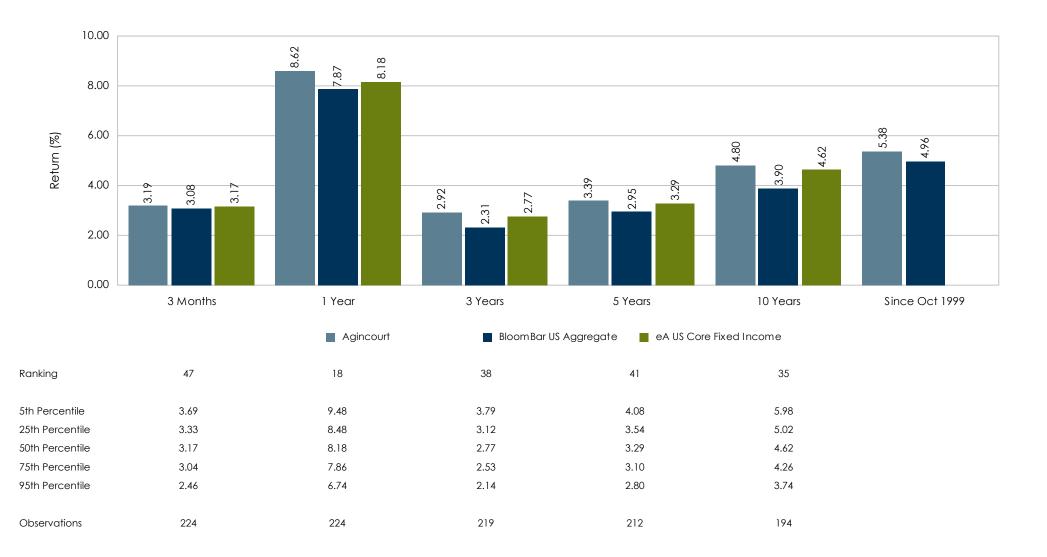


10 Year Return Analysis

	Agincourt	BloomBar US Aggregate
Number of Months	120	120
Highest Monthly Return (%)	3.11	2.10
Lowest Monthly Return (%)	-2.37	-2.37
Number of Positive Months	81	80
Number of Negative Months	39	40
% of Positive Months	67.50	66.67

Agincourt Core Fixed Income

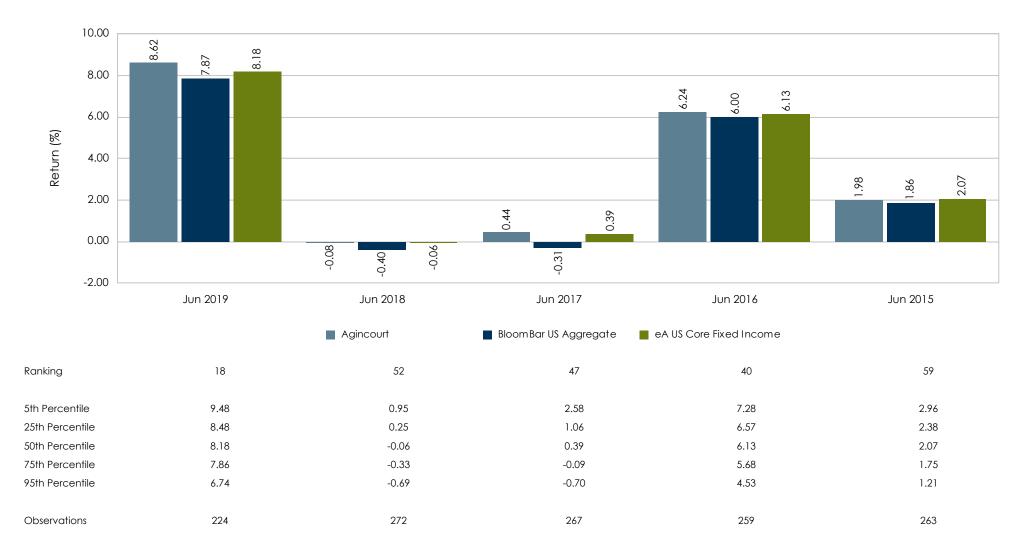
For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Agincourt Core Fixed Income

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending June 30, 2019

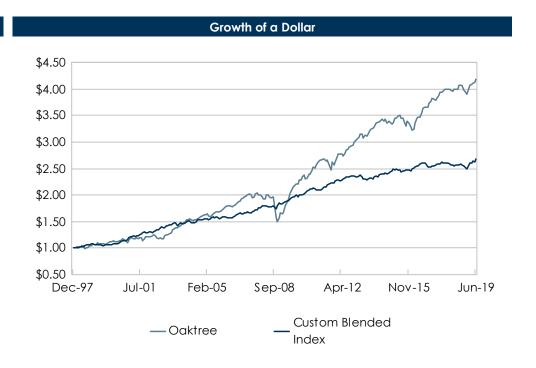
Account Description

Performance Goals

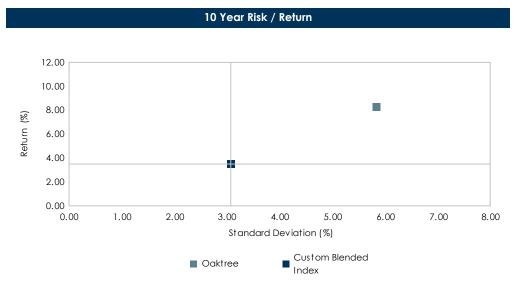
Outperform the Custom Blended Index.

- Strategy Multi-Sector Fixed Income
- Vehicle Limited Partnership
- Benchmark Custom Blended Index
- **Performance Inception Date** February 1998
- **Fees** 50 bps plus operating expenses

Dollar Growth Summary (\$000s)			
	3 Months	FYTD	
Beginning Market Value	126,239	123,596	
Net Additions	-210	-217	
Return on Investment	3,122	5,772	
Ending Market Value	129,151	129,151	



For the Periods Ending June 30, 2019

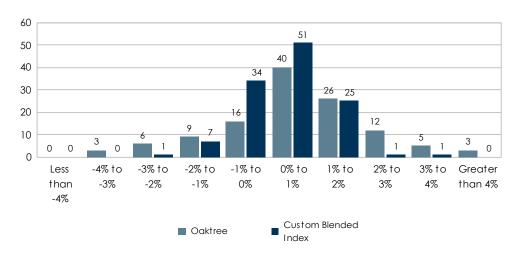


Custom Blended Deviation (%) Name of Standard Deviation (%) Standard Deviation (%) Second St

	Benchmark Relative Statistics				
Beta	0.47				
R Squared (%)	6.10				
Alpha (%)	6.64				
Tracking Error (%)	5.88				
Batting Average (%)	60.83				
Up Capture (%)	131.40				
Down Capture (%)	-0.78				

10 Year Portfolio Statistics

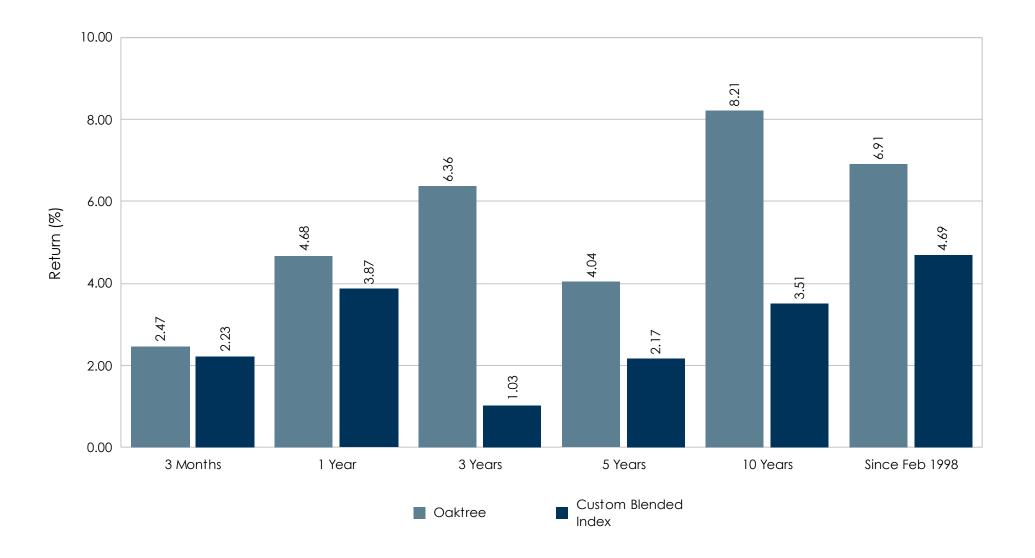
10 Year Return Histogram



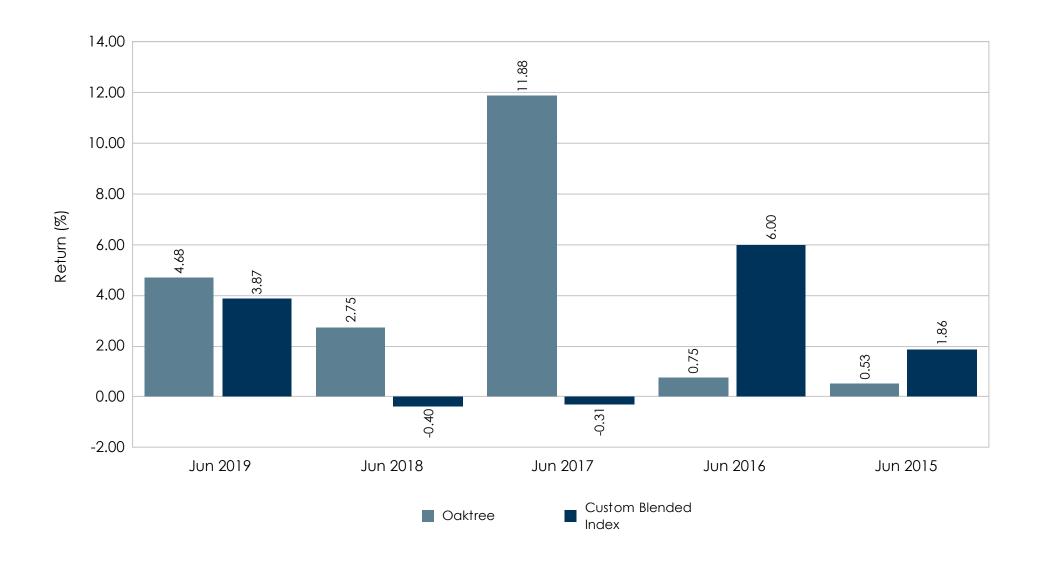
10 Year	Return	Analysis

		Custom Blended
	Oaktree	Index
Number of Months	120	120
Highest Monthly Return (%)	7.02	3.21
Lowest Monthly Return (%)	-3.96	-2.37
Number of Positive Months	86	78
Number of Negative Months	34	42
% of Positive Months	71.67	65.00

For the Periods Ending June 30, 2019



For the One Year Periods Ending June

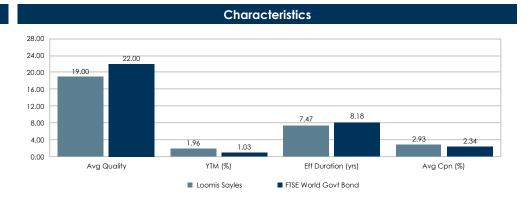


Loomis Sayles

For the Periods Ending June 30, 2019

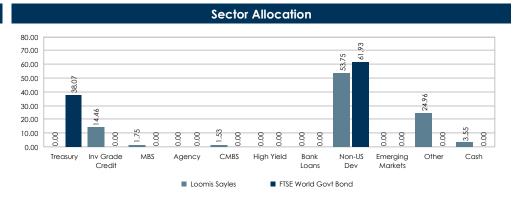
Account Description

- Strategy Multi-Sector Fixed Income
- Vehicle Non-Mutual Commingled
- Benchmark FTSE World Govt Bond
- Performance Inception Date June 2008
- Fees First \$75M at 35 bps, balance at 25 bps



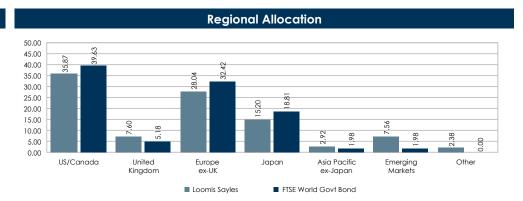
Performance Goals

- Outperform the FTSE World Govt Bond.
- Over rolling three year periods, rank above the median in the eA All Global Fixed Income universe.



3 Months FYTD Beginning Market Value 78,685 96,749 Net Additions -74 -20,313 Return on Investment 2,941 5,116 Ending Market Value 81,552 81,552

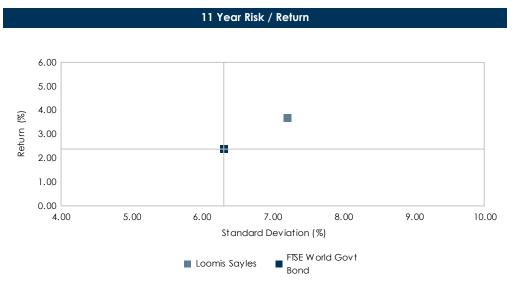
Dollar Growth Summary (\$000s)



Characteristic and allocation charts represents data of the Loomis World Bond NH Trust (Non-Mutual Commingled). The Other sector consists of ABS, CMO, Convertibles, Municipals, Private Placements/144As and TIPS.

Loomis Sayles

For the Periods Ending June 30, 2019

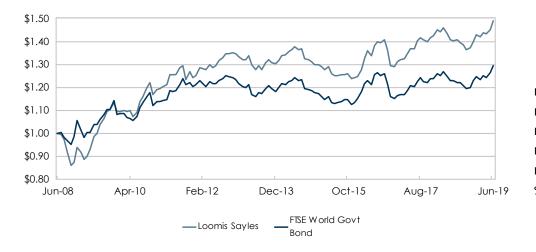


	Loomis Sayles	FTSE World Govt Bond
Return (%)	3.69	2.37
Standard Deviation (%)	7.21	6.30
Sharpe Ratio	0.45	0.31

Benchmark Relative Statistics			
Beta	1.02		
R Squared (%)	79.38		
Alpha (%)	1.30		
Tracking Error (%)	3.28		
Batting Average (%)	62.88		
Up Capture (%)	117.66		
Down Capture (%)	103.06		

11 Year Portfolio Statistics

11 Year Growth of a Dollar

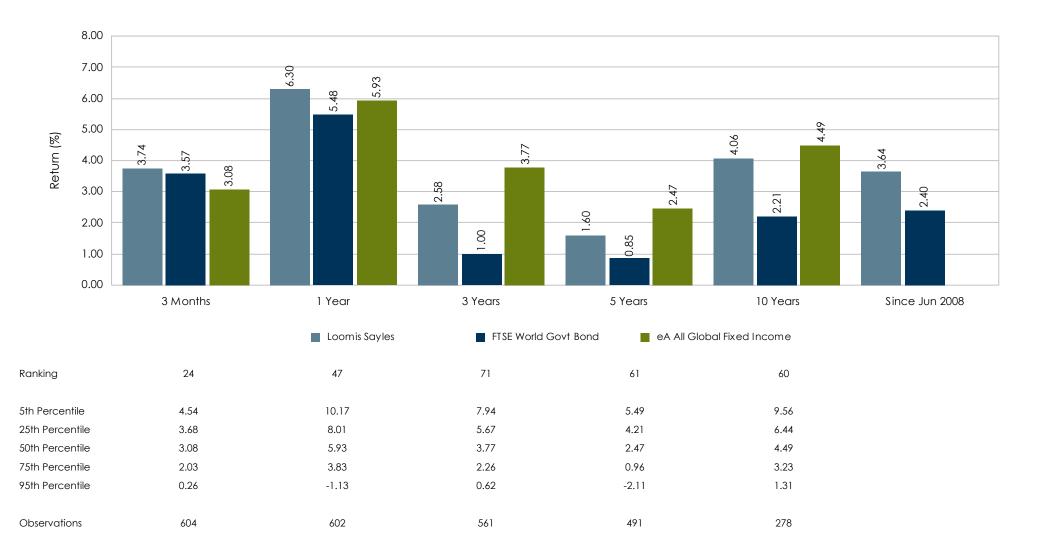


11 Year Return Analysis

	Loomis Sayles	FTSE World Govt Bond
Number of Months	132	132
Highest Monthly Return (%)	7.16	7.11
Lowest Monthly Return (%)	-6.59	-5.03
Number of Positive Months	80	73
Number of Negative Months	52	59
% of Positive Months	60.61	55.30

Loomis Sayles

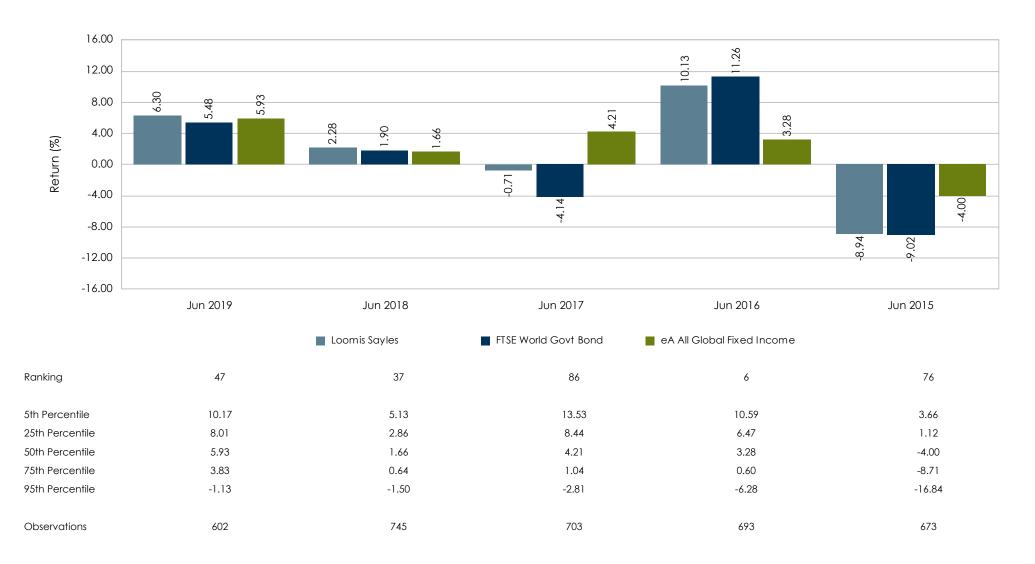
For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Loomis Sayles

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

Private Credit - Active Funds

For the Period Ending June 30, 2019

Summary of Cash Flows for 6 Months

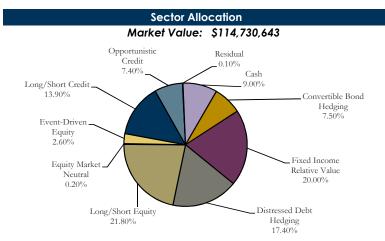
Cash Outflows	Cash Inflows	Net Cash Flows
-17,119,055	6,121,088	-10,997,967

Summary of Portfolio Inception to Date (Category totals include active and closed funds)

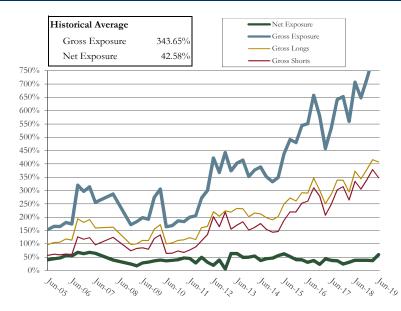
	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Sep-16	90,000,000	62,773,110	35,002,108	15,770,179	53,482,315	69,252,494	1.10x
Mezzanine	Jan-17	20,000,000	18,273,110	3,186,744	5,828,614	15,389,000	21,217,614	1.16x
Newstone Capital Partners III	Jan-17	20,000,000	18,273,110	3,186,744	5,828,614	15,389,000	21,217,614	1.16x
Other	Sep-16	70,000,000	44,500,000	31,815,364	9,941,565	38,093,315	48,034,880	1.08x
LBC Credit Partners Fund IV	Sep-16	40,000,000	34,000,000	12,315,364	9,941,565	27,122,907	37,064,472	1.09x
Apollo Accord II	Oct-18	30,000,000	10,500,000	19,500,000	-	10,970,408	10,970,408	1.04x

PAAMCO

For the Periods Ending June 30, 2019



Historical Net & Gross Exposure



Characteristic data provided by manager.

Strategy

- Low Volatility Hedge Fund of Funds
- Performance Inception Date: October 2002
- Redemption: Quarterly with 60 days written notice

Objectives and Constraints

- Target annualized return: 10-12%
- Target annualized standard deviation: approximate the standard deviation of the Barclays Capital Aggregate
- Maximum number of managers: 55
- Allocation to any manager: not to exceed 5% at cost or 7% at market value
- Allocation to Convertible Bond Hedging: 20-40%
- Allocation to Sovereign Debt & Mortgage Hedging: 0-10%
- Allocation to Credit Hedging & Distressed Debt Hedging: 0-25%
- Allocation to Merger Arbitrage: 0-20%
- Allocation to Equity Market Neutral & Long/Short Equity: 20-45%
- Allocation to Short Biased: 0-5%
- Allocation to Cash: 0-5%

Exposure

Net Exposure: 59.30%Gross Exposure: 755.70%

PAAMCO

For the Periods Ending June 30, 2019

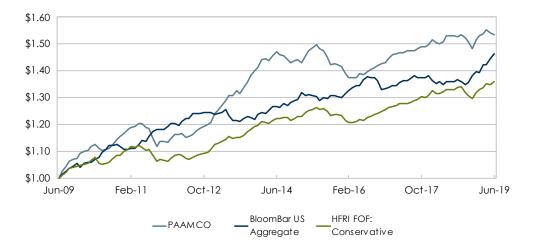


BloomBar US HFRI FOF: **PAAMCO** Aggregate Conservative 4.39 3.90 3.13 Return (%) 2.89 2.61 Standard Deviation (%) 3.58 **Sharpe Ratio** 1.10 1.20 1.03

10 Year Portfolio Statistics

Benchmark Relative Statistics					
Beta	-0.24	1.20			
R Squared (%)	3.75	76.30			
Alpha (%)	5.42	0.61			
Tracking Error (%)	5.02	1.82			
Batting Average (%)	60.00	59.17			
Up Capture (%)	43.06	126.06			
Down Capture (%)	-73.02	106.26			

10 Year Growth of a Dollar

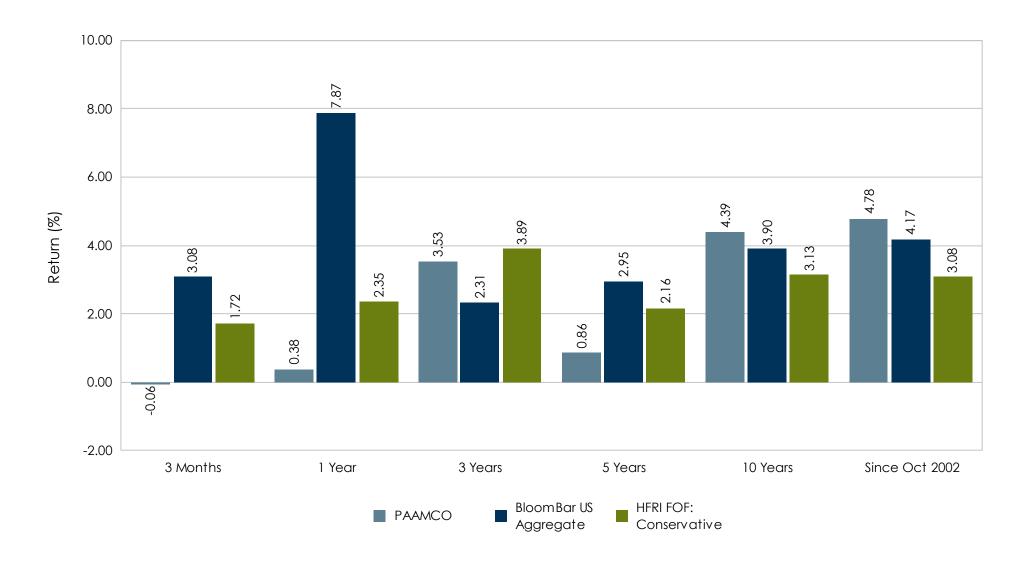


10 Year Return Analysis

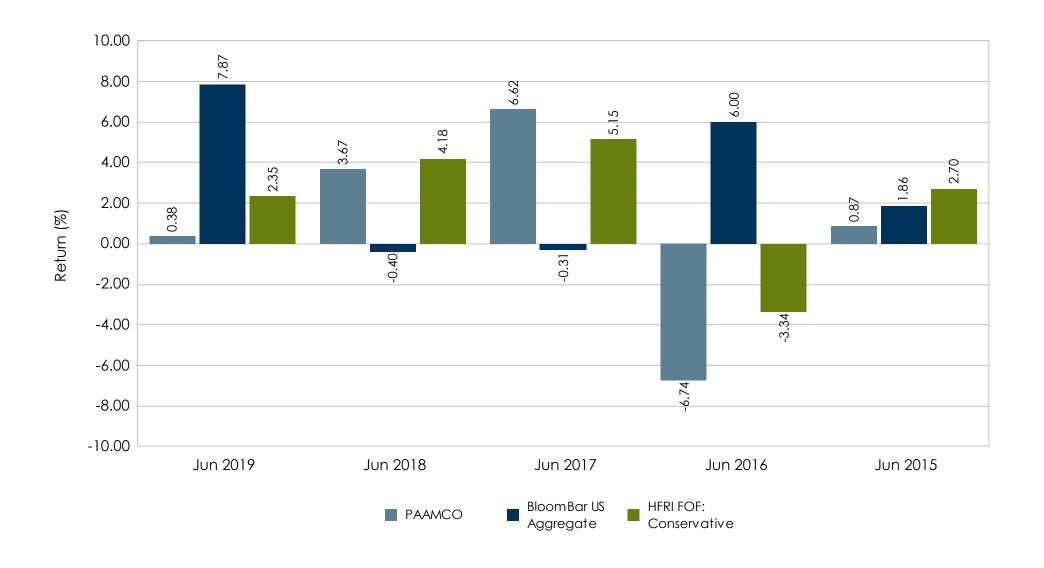
	PAAMCO	BloomBar US Aggregate	HFRI FOF: Conservative
Number of Months	120	120	120
Highest Monthly Return (%)	2.84	2.10	1.84
Lowest Monthly Return (%)	-2.99	-2.37	-2.13
Number of Positive Months	81	80	87
Number of Negative Months	39	40	33
% of Positive Months	67.50	66.67	72.50

PAAMCO

For the Periods Ending June 30, 2019



PAAMCOFor the One Year Periods Ending June



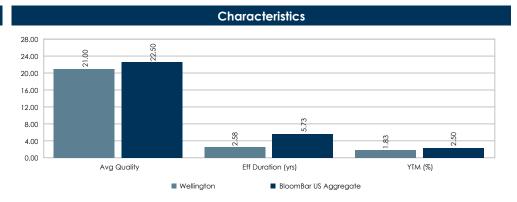
For the Periods Ending June 30, 2019

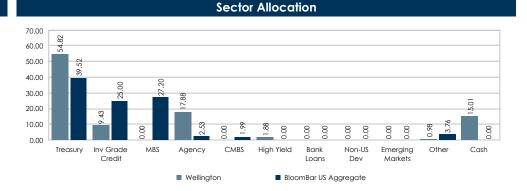
Account Description

- Strategy Absolute Return
- Vehicle Non-Mutual Commingled
- Benchmarks US T-Bills 90 Day + 4% and BloomBar US Aggregate
- Performance Inception Date December 2016
- Fees 25 bps, plus 20% of excess return beyond cash + 1%

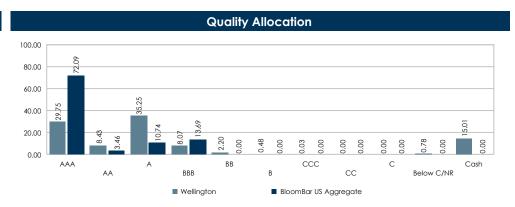
Performance Goals

- Outperform the US T-Bills 90 Day + 4%.
- Over rolling three year periods, rank above the median in the eA Global Unconstrained Fixed Income universe.





Beginning Market Value 65,320 63,335 Net Additions -41 -639 Return on Investment 1,131 3,715 Ending Market Value 66,411 66,411



The Other sector consists of ABS, CMO, Convertibles, Municipals, Private Placements/144As and TIPS.

For the Periods Ending June 30, 2019

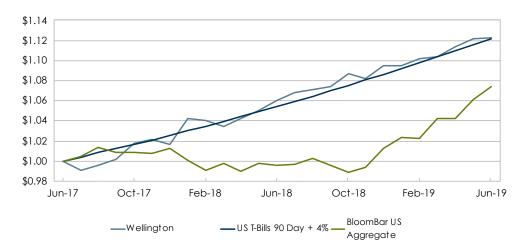


US T-Bills BloomBar US Wellington 90 Day + 4% Aggregate 5.96 5.90 3.65 Return (%) 2.57 0.16 3.04 Standard Deviation (%) **Sharpe Ratio** 1.63 25.13 0.62

2 Year Portfolio Statistics

Benchmark Relative Statistics					
Beta	0.52	-0.26			
R Squared (%)	0.11	9.15			
Alpha (%)	2.87	6.98			
Tracking Error (%)	2.57	4.54			
Batting Average (%)	58.33	50.00			
Up Capture (%)	101.12	34.75			
Down Capture (%)		-150.39			

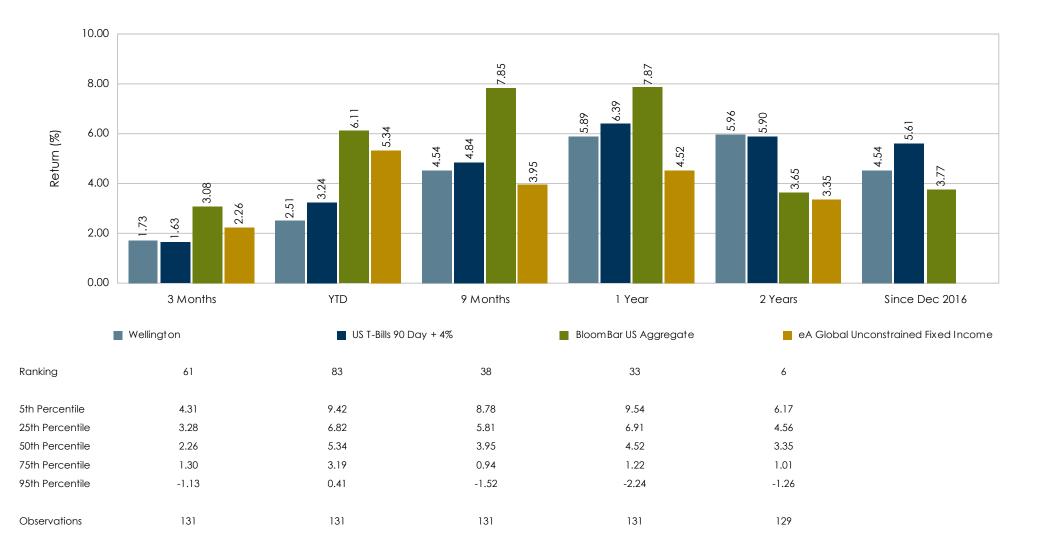
2 Year Growth of a Dollar



2 Year Return Analysis

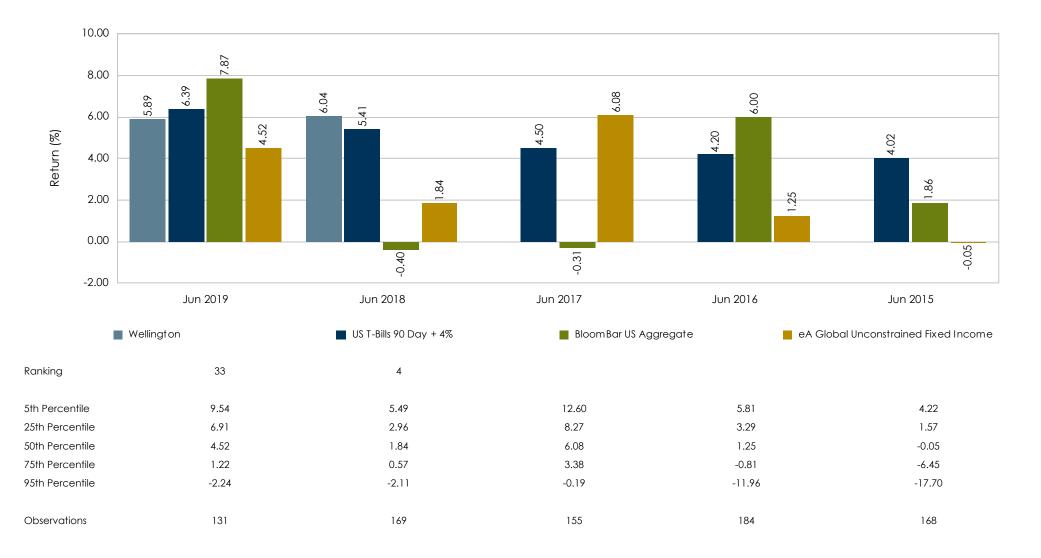
	Wellington	US T-Bills 90 Day + 4%	BloomBar US Aggregate
Number of Months	24	24	24
Highest Monthly Return (%)	2.45	0.56	1.92
Lowest Monthly Return (%)	-0.87	0.41	-1.15
Number of Positive Months	18	24	15
Number of Negative Months	6	0	9
% of Positive Months	75.00	100.00	62.50

For the Periods Ending June 30, 2019



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the One Year Periods Ending June



The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.



Real Assets Manager Performance

JP Morgan Strategic Property

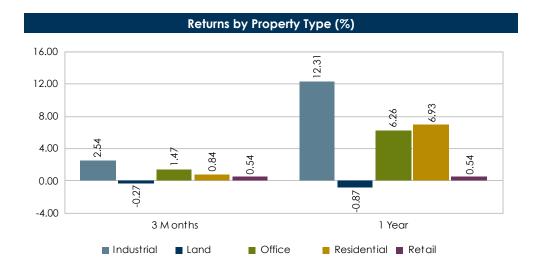
For the Periods Ending June 30, 2019

Account Description

- **Strategy** Core Real Estate
- Vehicle Non-Mutual Commingled
- Benchmarks NFI ODCE Net and NCREIF Property
- Performance Inception Date December 2007
- Fees First \$100M at 92 bps, next \$150M at 85 bps, next \$250M at 80 bps, balance at 75 bps

Performance Goals

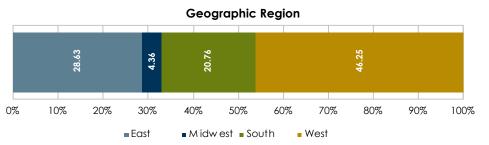
Outperform the NFI ODCE Net.





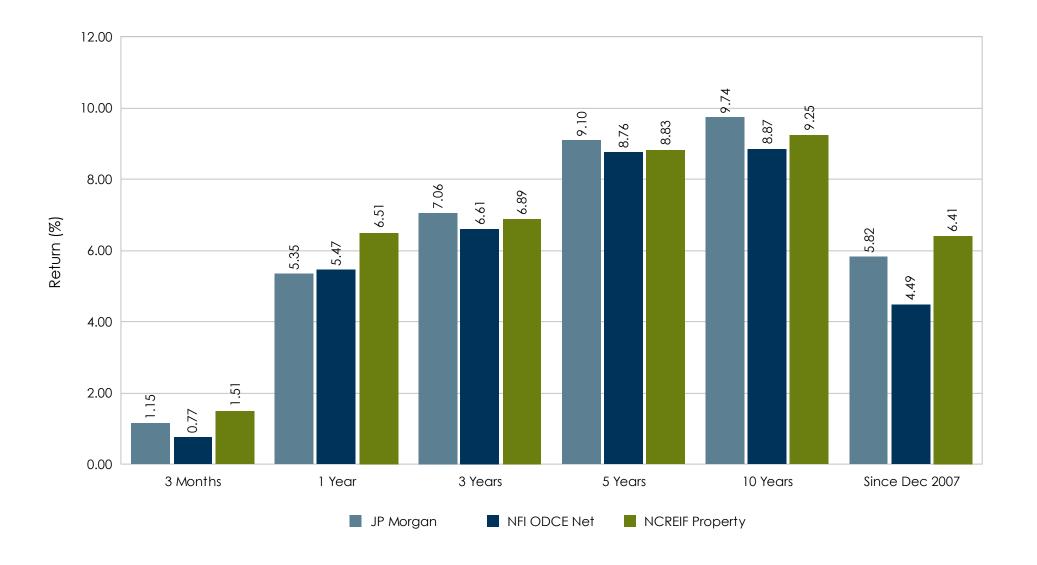
Fund Information	
■ Gross Market Value	\$42,731,987,303
■ Net Market Value	\$32,661,887,615
Cash Balance of Fund	\$1,106,342,492
# of Properties	167
# of Participants	428





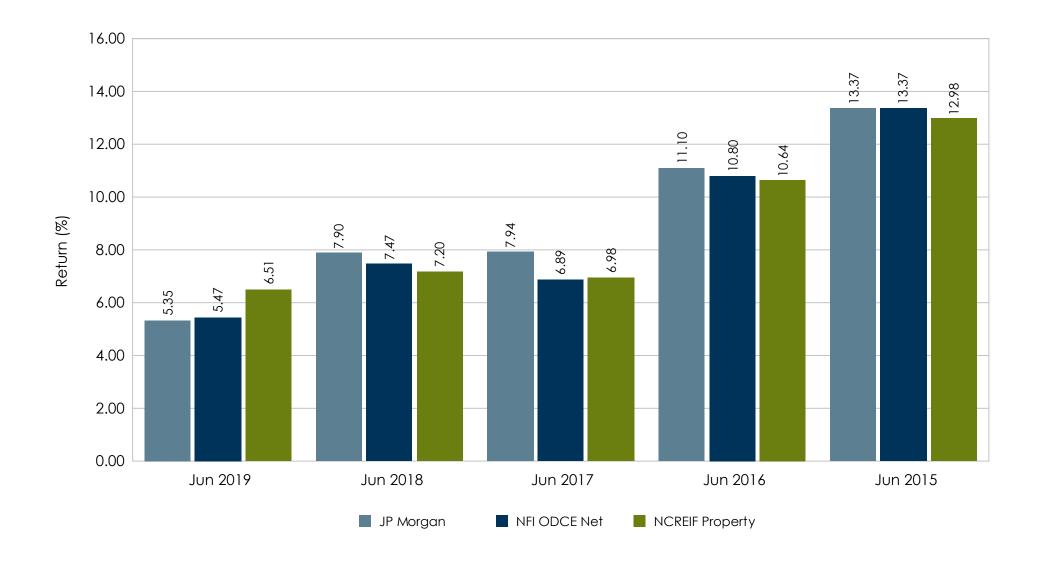
JP Morgan Strategic Property

For the Periods Ending June 30, 2019



JP Morgan Strategic Property

For the One Year Periods Ending June



Blackstone Property Partners

For the Periods Ending June 30, 2019

Account Description

- **Strategy** Core Real Estate
- Vehicle Limited Partnership
- Benchmarks NFI ODCE Net and NCREIF Property
- **Performance Inception Date** January 2015

Fund Information

Account Information

of Properties

Ending Market Value

Net Market Value

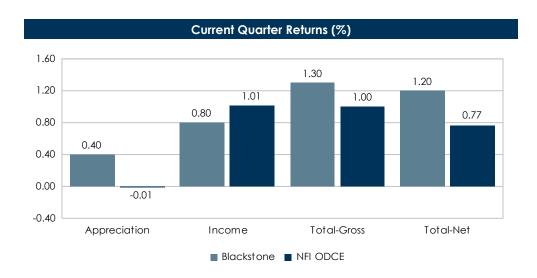
39

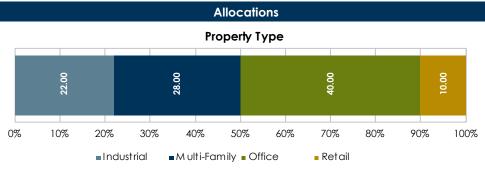
\$43,375,749

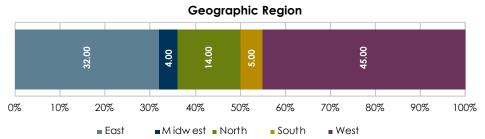
\$10,700,000,000

Performance Goals

Outperform the NFI ODCE Net and NCREIF Property.

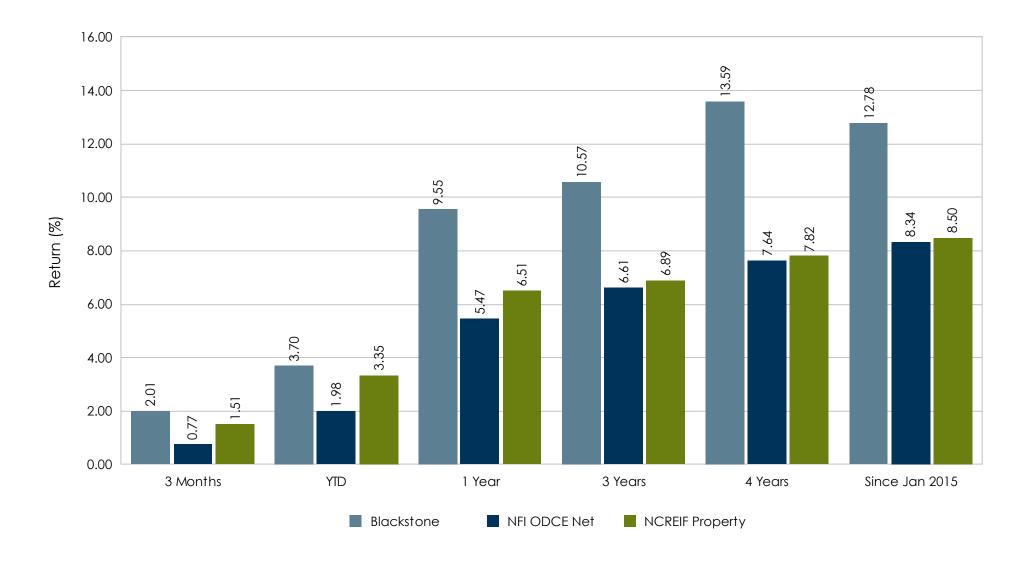






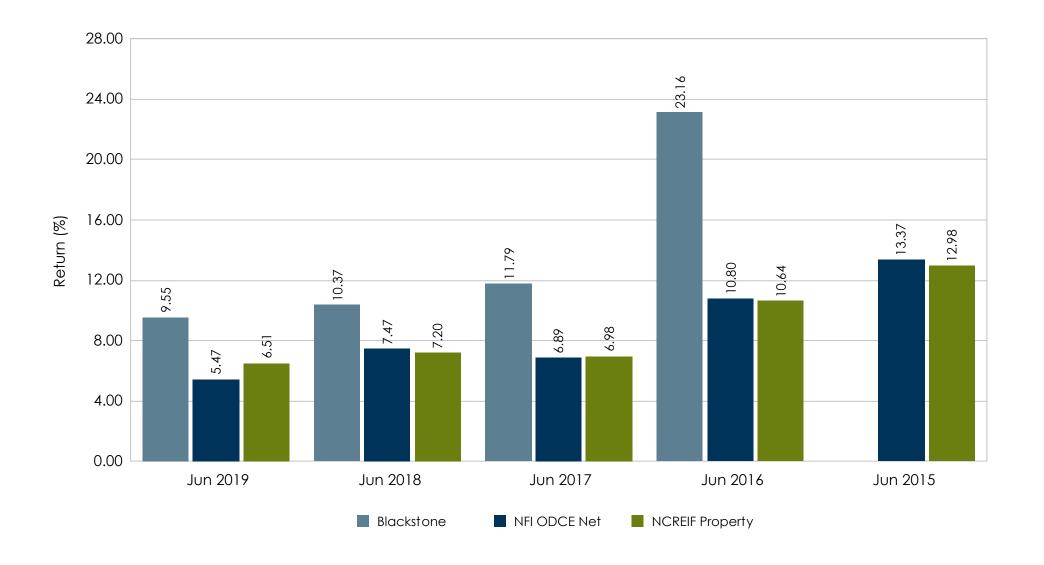
Blackstone Property Partners

For the Periods Ending June 30, 2019



Blackstone Property Partners

For the One Year Periods Ending June



Private Real Estate - Active Funds

For the Period Ending June 30, 2019

Summary of Cash Flows for 6 Months

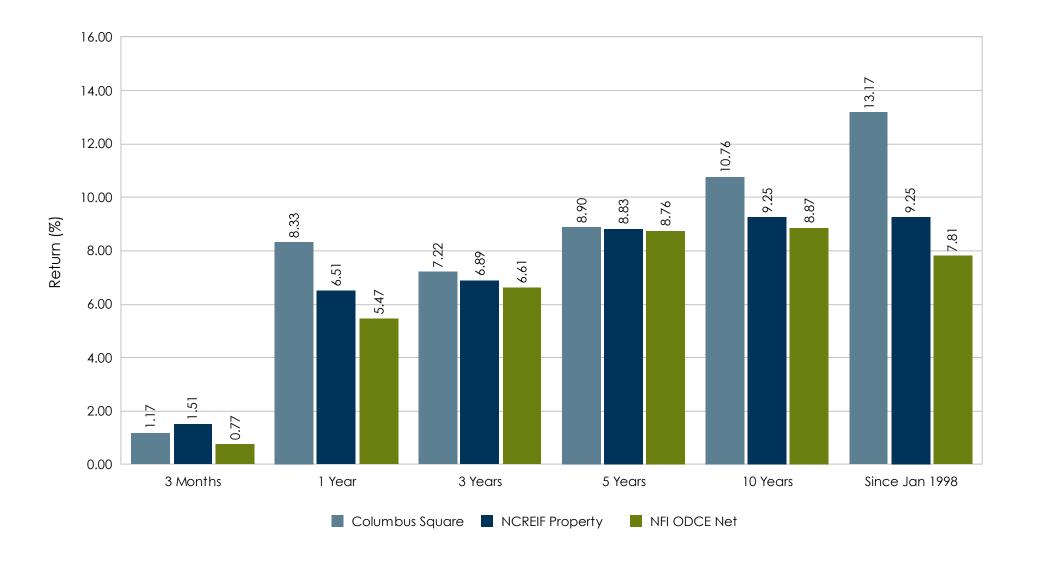
Cash Outflows	Cash Inflows	Net Cash Flows
-5,112,240	9,204,824	4,092,584

Summary of Portfolio Inception to Date (Category totals include active and closed funds)

	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Aug-11	130,500,000	86,263,981	55,362,725	67,750,021	51,728,531	119,478,552	1.39x
Real Estate	Aug-11	130,500,000	86,263,981	55,362,725	67,750,021	51,728,531	119,478,552	1.39x
Siguler Guff Dist. Real Estate Opp.	Aug-11	10,000,000	9,430,000	570,000	11,930,505	4,387,502	16,318,007	1.73x
TA Associates Realty X	Jan-13	20,000,000	20,000,000	-	22,021,228	9,353,290	31,374,518	1.57x
Cerberus Real Estate Fund III	Jul-13	20,000,000	25,185,319	4,871,659	25,285,178	9,862,249	35,147,427	1.40x
Hall Capital Fund III	Nov-14	7,500,000	7,016,483	483,517	2,716,798	5,391,733	8,108,531	1.16x
Siguler Guff Dist. Real Estate Opp. II	Dec-14	10,000,000	8,480,000	1,520,000	4,726,474	6,694,249	11,420,723	1.35x
Cerberus Institutional Real Estate Partners 4	Jun-16	15,000,000	10,512,179	5,557,549	1,069,838	10,094,174	11,164,012	1.06x
Siguler Guff Dist. Real Estate Opp. II B	Dec-17	10,000,000	4,140,000	5,860,000	-	4,445,334	4,445,334	1.07x
Angelo Gordon Realty Value Fund X	Jun-19	20,000,000	1,500,000	18,500,000	-	1,500,000	1,500,000	1.00x
Blackstone Real Estate Partners Fund IX, L.P		18,000,000	-	18,000,000	-	-	-	-

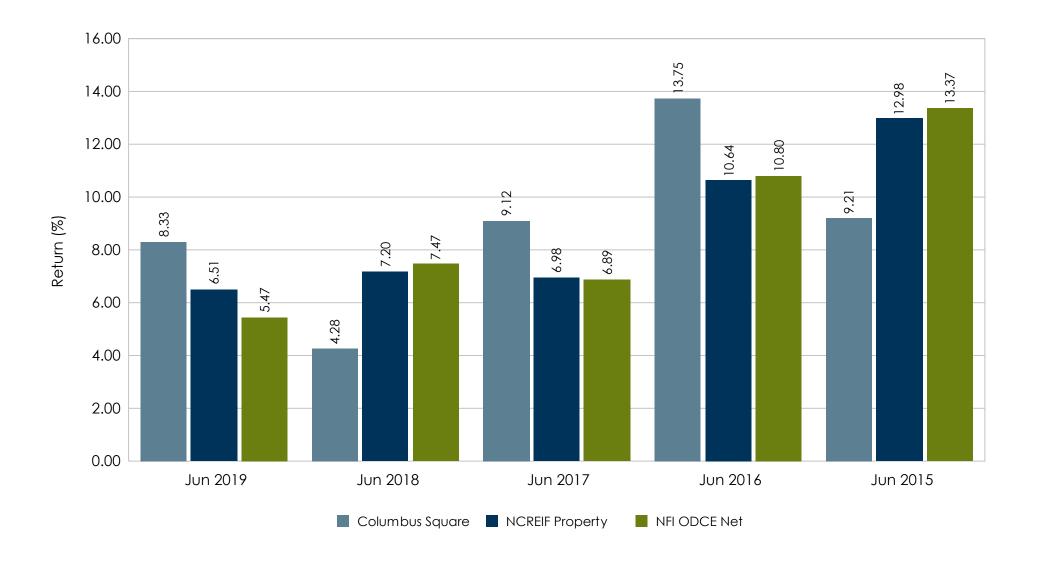
Columbus Square

For the Periods Ending June 30, 2019



Columbus Square

For the One Year Periods Ending June



Mount Lucas Peak Partners

For the Periods Ending June 30, 2019

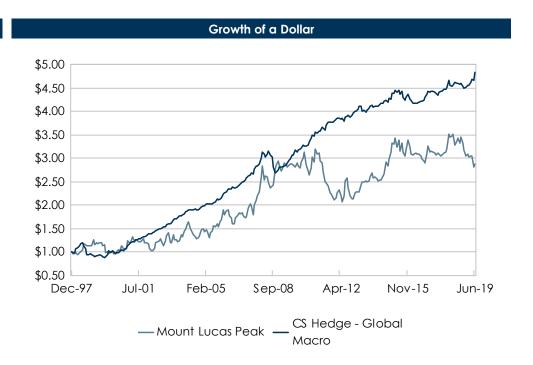
Account Description

Performance Goals

• Outperform the CS Hedge - Global Macro.

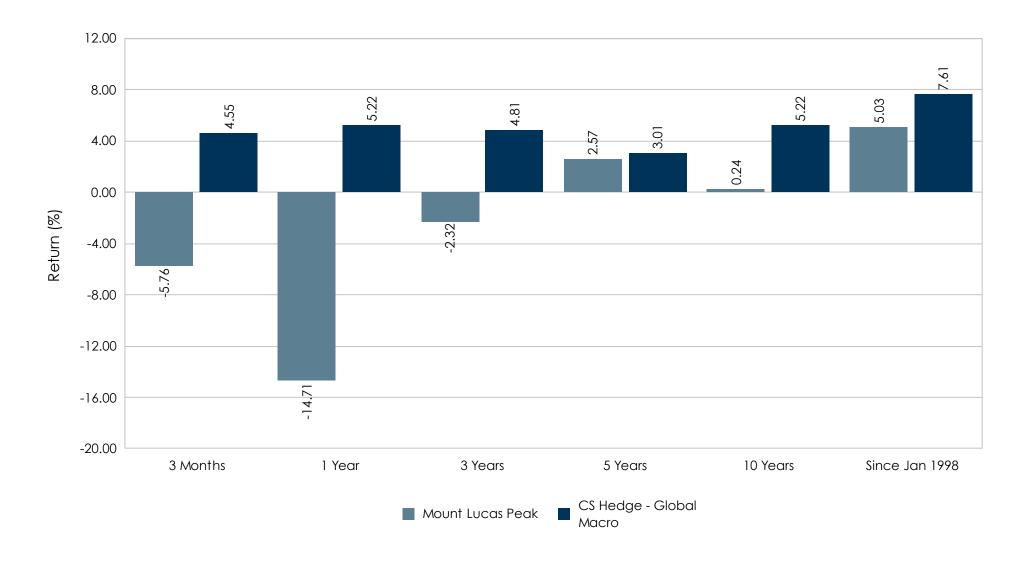
- Strategy Commodities
- Vehicle Non-Mutual Commingled
- Benchmark CS Hedge Global Macro
- Performance Inception Date January 1998
- Fees 100 bps and an annual incentive fee

Dollar Growth Summary (\$000s)					
	3 Months	FYTD			
Beginning Market Value	28,473	31,700			
Net Additions	-70	-300			
Return on Investment	-1,638	-4,636			
Ending Market Value	26,764	26,764			



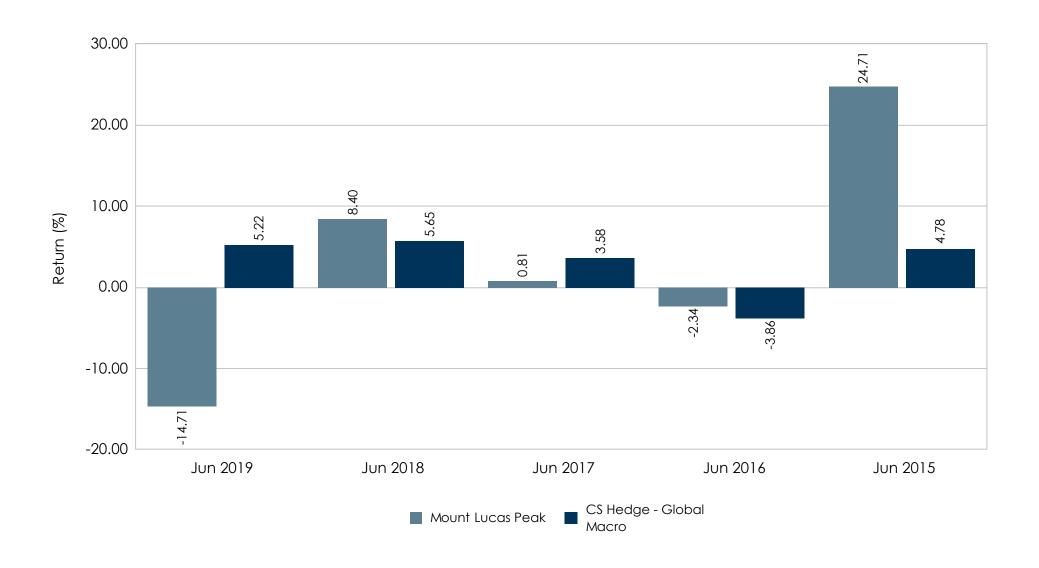
Mount Lucas Peak Partners

For the Periods Ending June 30, 2019



Mount Lucas Peak Partners

For the One Year Periods Ending June



Gresham Tap Fund

For the Periods Ending June 30, 2019

Account Description

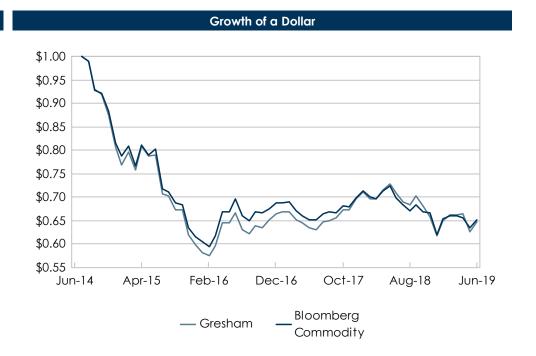
Performance Goals

• Outperform the Bloomberg Commodity over a complete market cycle.

- **Strategy** Commodities
- Vehicle Non-Mutual Commingled
- **Benchmark** Bloomberg Commodity
- Performance Inception Date August 2014

Fees 75 bps			

Dollar Growth Summary (\$000s)					
	3 Months	FYTD			
Beginning Market Value	49,683	53,155			
Net Additions	0	0			
Return on Investment	-1,057	-4,528			
Ending Market Value	48,627	48,627			



Gresham TAP CommodityBuilder Fund

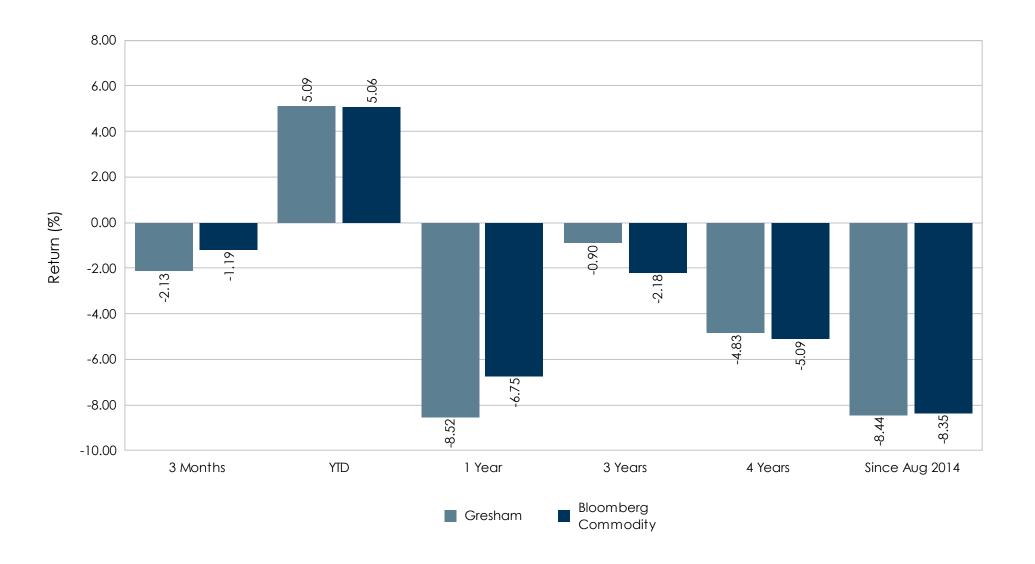
For the Periods Ending June 30, 2019

			Att	ribution Analy	sis and Bloomber	g Commodity	Index Compar	ison			
		Period End	Period Ending Weights % QTD ROI % ROI DIFF)I DIFF	YTD	ROI %	RC)I DIFF
		TCBA	Bloomberg	TCBA	Bloomberg	Diff Es	t. Wgtd 1	TCBA	Bloomberg	Diff Es	t. Wgtd 1
Agriculture											
Corn		4.70	6.30	13.80	14.20	-0.08	-0.41	6.00	6.40	0.10	-0.33
Soybean		5.70	5.80	-0.30	-0.30	-0.01	-0.05	-3.00	-3.00	0.03	-0.05
Sovbean Oil		1.20	3.00	-1.80	-1.80	0.00	-0.07	-1.10	-1.00	0.08	-0.08
Soybean Meal		2.80	3.30	1.50	1.40	-0.11	0.09	-0.90	-1.00	-0.04	0.06
Wheat (Chicago)		2.60	3.10	11.80	13.40	-0.12	-1.51	0.30	2.60	-0.06	-2.21
Wheat (Kansas City	·)	0.80	1.10	3.00	2.70	-0.01	0.31	-11.20	-10.80	0.04	-0.42
Wheat (Minneapolis		0.20	0.00	-2.20		0.00		-2.00		-0.01	
(Group SubTotal	18.00	22.60	5.90	5.40	-0.33	0.50	0.00	0.40	0.14	-0.36
Energy					****				****		
WTI Crude Oil		10.40	8.80	-3.40	-3.40	-0.10	-0.03	24.30	25.00	0.19	-0.74
Brent Crude		10.40	8.00	-2.30	-1.50	-0.10 -0.09	-0.85	20.90	22.70	0.19	-0.74 -1.73
Heating Oil (ULSD)		2.60	2.30	-2.20	-2.40	-0.06	0.14	16.10	15.80	-0.16	0.28
Gas Oil		3.20	2.80	-2.20	-2.70	0.03	0.52	16.80	16.00	0.23	0.28
RBOB Gasoline		4.30	3.00	2.90	4.60	0.02	-1.69	28.20	31.70	0.23	-3.50
Natural Gas		4.80	6.40	-17.60	-16.70	0.06	-0.96	-20.40	-23.70	0.59	3.28
Natural Gas	Group SubTotal	35.40	31.30	-4.80	-5.10	-0.14	0.32	12.30	9.30	1.02	2.95
F I - 0 F!!	Group Subrotai	35.40	31.30	-4.00	-5.10	-0.14	0.32	12.30	7.30	1.02	2.93
Foods & Fibers											
Coffee		1.50	2.50	10.10	10.00	-0.11	0.10	-0.80	-1.00	0.03	0.20
Coffee (Robusta)		0.20	0.00	-3.40		0.00		-9.00		-0.03	
Cotton		1.60	1.20	-14.60	-14.70	-0.03	0.15	-9.90	-9.90	-0.05	0.06
Sugar		1.80	3.00	-2.30	-2.30	0.01	-0.02	1.80	2.80	-0.01	-0.90
Sugar (White)		0.20	0.00	-2.10		0.00		-7.90		-0.03	
Cocoa		0.90	0.00	7.30		0.06		-1.20		-0.06	
	Group SubTotal	6.20	6.70	-2.10	-0.90	-0.08	-1.28	-3.30	-1.00	-0.14	-2.27
Industrial Metals											
Allumnium		3.50	4.10	-7.20	-7.30	0.03	0.15	-4.80	-5.00	0.02	0.16
Copper (COMES)		3.40	7.20	-7.80	-7.90	0.26	0.04	2.90	2.60	0.02	0.28
Copper (LME)		5.20	0.00	-7.70		-0.33		0.30		-0.19	
Nickel		0.40	3.00	-2.70	-2.70%	0.02	0.00	15.90	17.40	-0.19	-1.48
Zinc		2.30	3.10	-12.80	-12.50%	0.10	-0.39	4.30	5.00	-0.09	-0.70
Lead		0.70	0.00	-4.50		-0.02		-5.00		-0.07	
	Group SubTotal	15.50	17.40	-8.10	-7.80	0.07	-0.33	0.60	3.50	-0.50	-2.90
Livestock											
Lean Hoas		1.60	2.20	-14.60	-14.40	0.06	-0.17	-8.70	-9.10	0.18	0.41
Live Cattle		5.40	3.30	-9.10	-9.50	-0.17	0.33	-7.00	-7.90	-0.22	0.90
Fedder Cattle		1.40	0.00	-12.30		-0.16	****	-13.00		-0.29	****
	Group SubTotal	8.40	5.50	-10.70	-11.50	-0.28	0.86	-6.80	-7.90	-0.33	1.14
Precious Metals	2.2up out.otal	55	0.00					0.00	, , , ,		
Gold		12.40	12.90	8.40	8.40	-0.16	0.01	8.70	8.70	-0.09	0.00
Silver		2.60	3.60	0.40	0.40	-0.16 -0.02	-0.02	-3.00	-3.00	0.06	-0.03
Platinum		2.60 0.70	0.00	-2.20	0.40	-0.02 -0.01	-0.02	-3.00 3.60	-3.00		-0.03
Palladium		1.10	0.00	-2.20 14.70		-0.01 0.16		29.40		-0.01 0.23	
i diludiotti	Croup Cultate				/ 50	-0.04	0.20		E 00	0.23	1 40
	Group SubTotal	16.80	16.50	6.70	6.50		0.20	7.40	5.90		1.48
Gross	Excess Return	100.00	100.00	-2.60	-1.80	-0.80	-0.80	4.20	3.80	0.38	0.38

Data provided by manager. Manager Footnotes: All returns are estimates. QTD ROI % and YTD ROI% columns show TAP and BCOM individual commodity returns. Abs' is the absolute difference in ROI between TAP and BCOM for each commodity. Est. Wgtd is the portfolio effect. Gross Excess Return is gross of fees and excludes collateral returns. All indicated TAP returns are net of commissions and gross of management fees. A client's return will be reduced by the advisory fees and other expenses that may be incurred in the management of an account. It is not possible to invest directly in an index. Figures in grey above, represent data on commodity contracts the portfolio holds that do not appear in the BCOM. Commodity and sector level returns exclude tilt, program, and intraday flow trade related P&L where applicable. Est. Wgtd calculation does not fully reflect certain intra-month changes in the Fund or Bloomberg Commodity weightings. Accordingly, Est. Wgtd values may be materially different than those presented above.

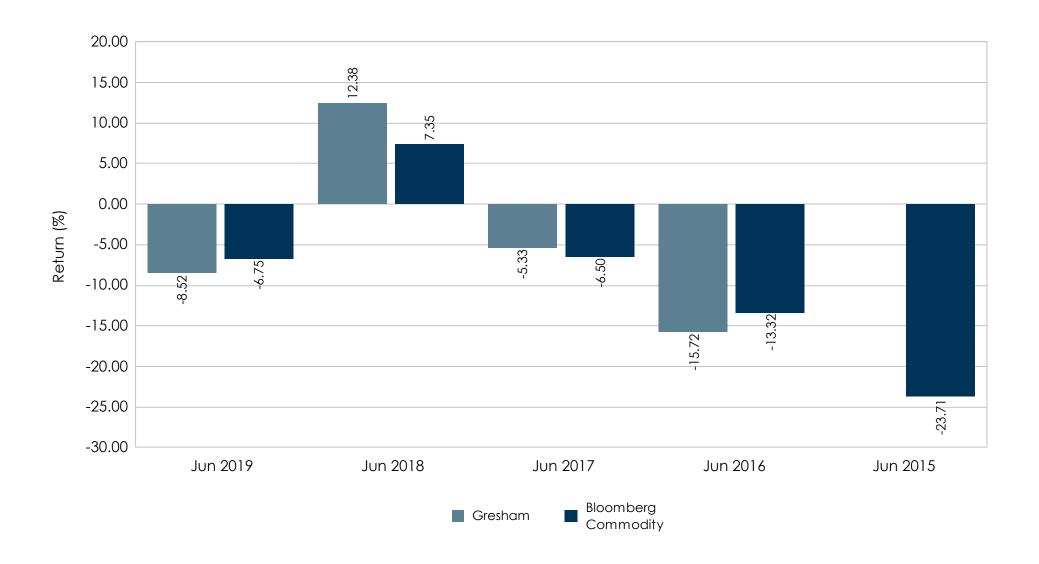
Gresham Tap Fund

For the Periods Ending June 30, 2019



Gresham Tap Fund

For the One Year Periods Ending June





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Appendix

Definitions of Statistical Measures

Alpha - the annualized difference between the manager's actual return and the manager's expected return given its relative risk vs. the benchmark (which is represented by beta, a measure that tracks volatility to an index).

Batting Average - a measure used to quantify a manager's ability to meet or beat a benchmark. A manager who outperforms the benchmark 20 out of a possible 40 times has a batting average of 50.

Beta - measures the portfolio's sensitivity of returns to market movements represented by the primary benchmark.

Down Capture - demonstrates the ratio of the portfolio's average returns relative to the benchmark in periods in which the benchmark had a negative return. For instance, a down-capture of 96% indicates that, on average, the portfolio is down 96% when the benchmark is down 100%. Lower portfolio down-capture is preferred.

R Squared - the amount of the manager's return that can be explained by the benchmark. A R Squared of 100 indicates a perfect correlation, while a R Squared of 0 indicates no correlation at all.

Sharpe Ratio - a measure of return per unit of risk. Higher sharpe ratios are preferred while negative ratios are generally meaningless and cannot be used for comparison purposes.

Standard Deviation - a measure of the portfolio's volatility. A large standard deviation relative to the benchmark represents volatile portfolio returns.

Tracking Error - a measure that reports the difference between the return of a manager that is received and that of a benchmark that the manager is attempting to track.

Up Capture - demonstrates the ratio of the portfolio's average returns relative to the benchmark in periods in which the benchmark had a positive return. For instance, an up-capture of 96% indicates that, on average, the portfolio is up 96% when the benchmark is up 100%. Higher portfolio up-capture is preferred.

Quality Rating Scale

Moody's Rating	S&P Rating	Prior to 1Q09	Beginning 1Q09	Beginning 3Q11	Moody's Rating	S&P Rating	Prior to 1Q09	Beginning 1Q09	Beginning 3Q11
TSY	TSY	10	26	24	Ba2	ВВ	6	13	13
AGY	AGY	10	25	24	Ва	ВВ		13	13
Aaa	AAA	10	24	24	MIG4		6	13	13
Aal	AA+	9.3	23	23	ВаЗ	BB-	5.7	12	12
Aa2	AA		22	22	В1	B+	5.3	11	11
Aa	AA	9	22	22	B2	В	5	10	10
MIG1		9	22	22	В	В		10	10
Aa3	AA-	8.7	21	21	В3	B-	4.7	9	9
A1	A+	8.3	20	20	Caal	CCC+	4.3	8	8
A-1			20	20	Caa2	CCC	4	7	7
A2	Α	8	19	19	Caa	CCC		7	7
Α	Α		19	19	Caa3	CCC-	3.7	6	6
MIG2		8	19	19	Ca	CC	3	5	5
A3	A-		18	18	С	С	2	4	4
Baal	BBB+	7.7	17	17		DDD	1	3	3
Baa2	BBB	7.3	16	16		DD		2	2
Baa	BBB	7	16	16		D		1	1
MIG3			16	16	NR	NR	N/A	-1	-1
Baa3	BBB-	7	15	15	NA	NA	N/A		
Bal	BB+	6.7	14	14	N/A	N/A			

Historical Benchmark Composition

Total Fund Policy

10/31/1990	The index consists of 55.0% Russell 3000, 35.0% BloomBar US Aggregate, 10.0% MSCI EAFE.
06/30/2007	The index consists of 55.0% Russell 3000, 35.0% BloomBar Universal, 10.0% MSCI EAFE.
11/30/2007	The index consists of 55.0% Russell 3000, 10.0% MSCI EAFE, 30.0% BloomBar Universal, 5.0% NFI ODCE Net.
08/31/2012	The index consists of 65.0% MSCI ACWI, 30.0% BloomBar Universal, 5.0% NFI ODCE Net.
08/31/2014	The index consists of 60.0% MSCI ACWI, 30.0% BloomBar Universal, 5.0% NFI ODCE Net, 5.0% Bloomberg Commodity.
04/30/2016	The index consists of 60.0% MSCI ACWI, 25.0% BloomBar Universal, 10.0% NFI ODCE Net, 5.0% Bloomberg Commodity.

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