Oklahoma Police Pension & Retirement System

Investment Performance Review

March 31, 2019



314.862.4848



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.

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Market Overview

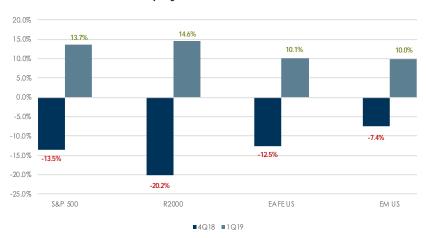
Global Long-Only Equity

Global equity markets came out of the gate hot this year following the sharp year-end 2018 sell-off with a 1Q-19 advance of 12.3% for the MSCI ACWI. On a style basis, Growth equity returns exceeded Value peers as a risk-on mentality re-entered the market on renewed hope for continued global expansion despite the ongoing lack of clarity regarding trade talks and Brexit.

Domestic Small Cap equities posted the strongest gain this year following the sharpest decline in the 2018 sell-off with a 14.6% increase in the quarter. Large cap equities trailed slightly with a gain of 13.7% for the S&P 500. Following the quarter's upside, one-year returns for these domestic indices have all reverted back to positive territory.

In International markets, Emerging Market pressures abated with a gain of 10.0% for the MSCI EM Index in 1Q-19. This return was relatively in-line with Developed Market returns of 10.1%. Currency impact was muted this quarter and somewhat of a mixed bag with EM experiencing a slight tailwind while Developed International markets continued to face a slight headwind. Following ongoing difficulties in International Markets and strong currency headwinds last year, one-year returns remain in the red in US dollar terms.

Global Equity Markets Rebound in 1Q19



Sources: Bloomberg, ACG Research

Global Long/Short Equity



Sources: Bloomberg, ACG Research

After a brief return in 4Q-18, **volatility has again sunk down below the 20 year average**. Buoyed by a strong equity rebound in 1Q-19 and supported by positive market indicators, investor consensus seems to agree that the potential for a recession has been pushed back into 2020.

Equity long/short managers are optimistic about the opportunity set and have a positive view on the economy. This is reflected by gross exposure that has rebounded from multi-year lows in 4Q-18 and is back above historical average levels. Much of this increase has been in non-US equities, as exposure to Europe has increased and exposure to China has reached multi-year highs. One exception to the increased exposure is Event Driven managers, as gross exposure to the strategy is at multi-year lows, partially due to concerns that investors are overpaying for acquisitions.

A positive sign for equity long/short managers (and for stock pickers in general) is that fundamentals have started to matter again. As stocks are rewarded or punished commensurate with the positive or negative news they report this creates an opportunity set with dispersion between top and bottom companies, creating potential for managers to make money on both longs and shorts. On the short side, despite a pause in interest rate increases, rates have reached a level where managers once again can earn rebates on their short portfolios (after not receiving a rebate on short sales for over a decade due to low rates).

Technology and Health Care remain key areas of interest as historically there has been a large amount of dispersion between winners and losers in these sectors.

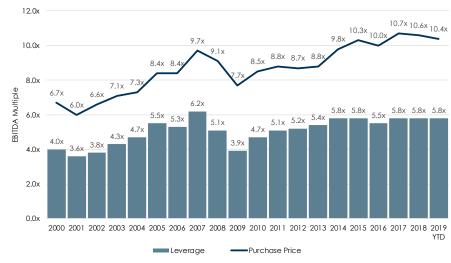
Global Private Equity

Valuations remain high for new deals in private markets, with an average purchase price multiple of 10.6x EBITDA and leverage of 5.8x, both of which are near historical highs. Private valuations appear to have held in much stronger than public markets in the aftermath of December's stock market weakness. The median acquisition price for a private equity-backed company purchased in 1Q-19 was 10.4x EBITDA, down from 2018's average, though leverage levels remain elevated.

Rising interest rates combined with the possibility of slowing economic growth continue to pose risks to private equity-backed companies. 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.

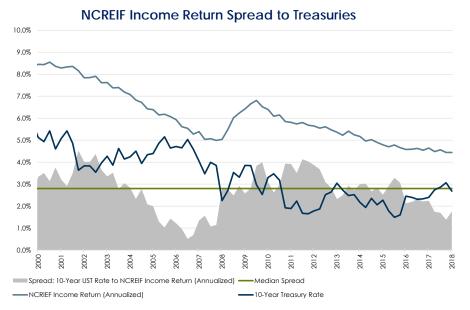
All eyes in venture capital were focused on the IPO of Lyft in late March, looking for indications of the market's receptiveness to a coming "unicorn stampede" as highly valued venture-backed companies seek to list publicly. Demand for the IPO was exceptionally strong as the listing was oversubscribed and priced above the original target range of \$62-68. Though initial trading was strong, the stock closed below its initial price of \$72 per share on its first full day of trading. If the next unicorn to go public also trades off following its IPO, investors may become sufficiently nervous to delay or even prematurely end the stampede.

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 36th consecutive quarter of positive appreciation in 1Q-19. This is 14 quarters longer than the second longest winning streak since the benchmark's inception in 1978. In 4Q-18, NCREIF annualized income returns (a proxy for cap rates) were flat at 4.4%. As interest rates reversed their recent rise, the spread between NCREIF income returns and the 10-year US Treasury yield widened by 38 bps to end the quarter at 176 bps, still approximately 104 bps tighter than the median spread since 2000.

Though there have been no significant impacts to real estate valuations so far, more prolonged periods of higher interest rates could put upward pressure on cap rates and lower future real estate returns. 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, while 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) rose 6.3% in 1Q-19, outperforming the Bloomberg Barclays US Aggregate Bond Index by 3.4% and underperforming the S&P 500 and MSCI ACWI by 7.4% and 5.9%, respectively. 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

From risk-free rates to lower-quality credit, everything across the fixed income landscape worked in 1Q-19. While taking no action on short-term interest rates, the more "patient" tone of Federal Reserve's communication completed the dovish pivot that had been foreshadowed in late-2018. The Committee's dot-plot removed previously anticipated rate hikes throughout 2019, with an even more cautious futures market actually pricing in policy easing by year-end. US Treasury yields continued lower, as the yield curve flattened further.

Even as general market volatility settled, the BloomBar Aggregate responded well to the decline in interest rates. Total returns for the augrter were impressive at 2.94%, and were further aided by ~35 bps of spread tightening in IG corporate credit. Notable declines in both rates and spreads caused the benchmark's yield-to-worst to fall back below 3.0%.

High Yield bonds participated in the generalized re-risking by investors, with strong inflows into the category causing spreads to tighten by ~135 bps during 1Q-19. A more notable focus on liquidity led to the ongoing underperformance of CCC-rated issues.

Municipal Bonds performed well, despite lagging taxable counterparts as rates moved rapidly lower in March. The tax-exempt yield curve remains somewhat steeper than that of US Treasuries, but yield ratios out to 10-years trade historically rich given robust demand.

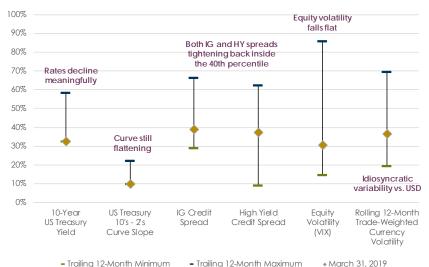
Unhedged Global government bonds underperformed as US dollar strength tempered the benefit of lower-trending yields. Emerging Market categories were solid, but differentiated.



Sources: Bloomberg, ACG Research

Global Nontraditional Fixed Income

Percentile Rankings of Observations for Past 15-Years



Sources: Bloomberg, ACG Research

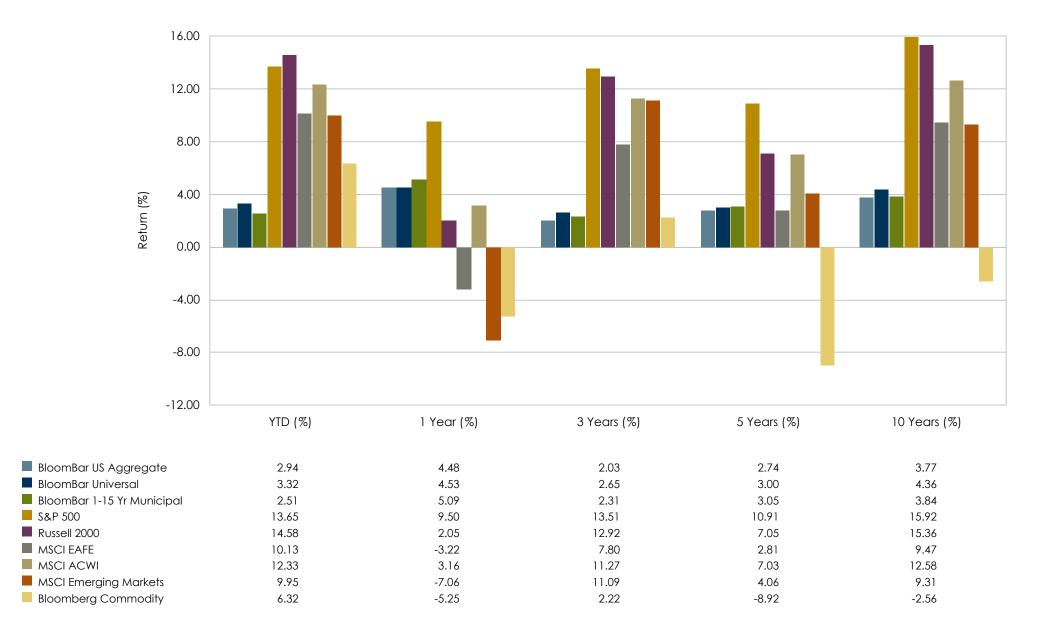
Liquid Absolute Return strategies produced steady results in 1Q-19, with relatively credit-heavy funds outperforming peers that have adopted a more conservative risk posture. Given typically modest duration exposures, and amid the late rally in US Treasuries, most within the category continued to fall short of traditional bond benchmarks. That said, the diversification of risk factors within portfolios remains valuable, as this aids in downside protection and reduces key correlations. Achieving full-cycle alpha objectives may be challenging, but enhanced volatility in rates, spreads, and currency should provide opportunities to outperform risk-free cash.

Following the 4Q-18 drawdown, Long/Short Credit strategies entered 1Q-19 with pared-down risk exposures. Some managers expressed frustration as the speed of the market rebound in early 2019 prevented them from deploying capital into assets that experienced meaningful, albeit short-lived valuation declines. Sentiment varies, but many credit hedge fund managers remain cautious. Despite the reduced level of risk on manager balance sheets, we expect talented managers will find opportunities to add value regardless of market directionality via relative-value trades and tactical trading opportunities.

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. 1Q-19 saw a recovery in market dynamics for new issue levered loans as spreads tightened and volume increased in response to improved equity market conditions. That said, the reduced likelihood of further short term interest rate increases may pressure spreads. 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.

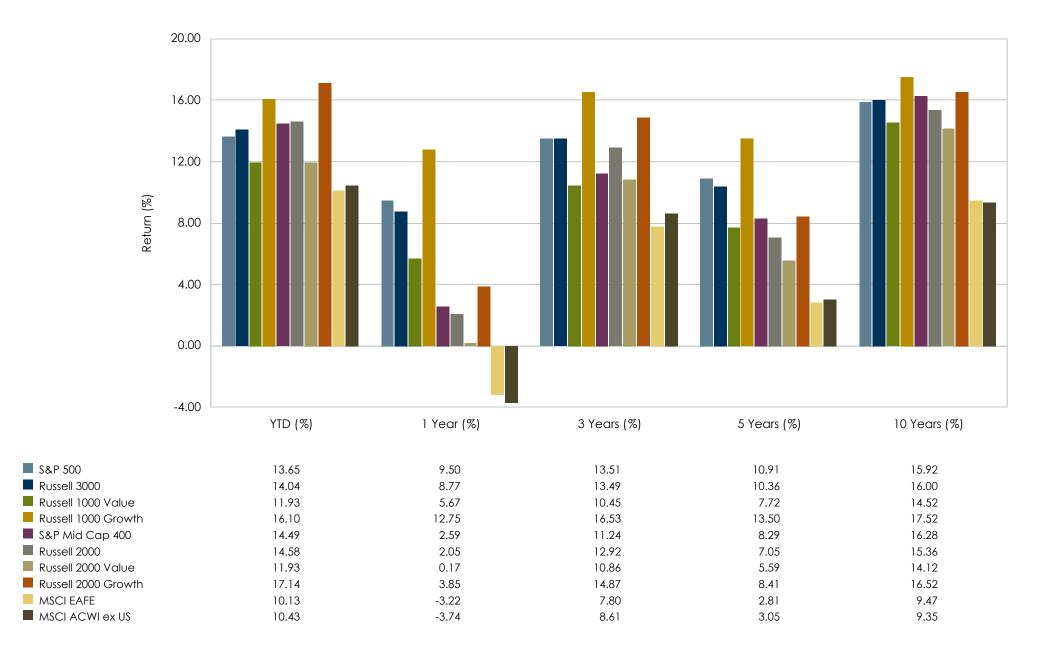
Market Environment

For the Periods Ending March 31, 2019



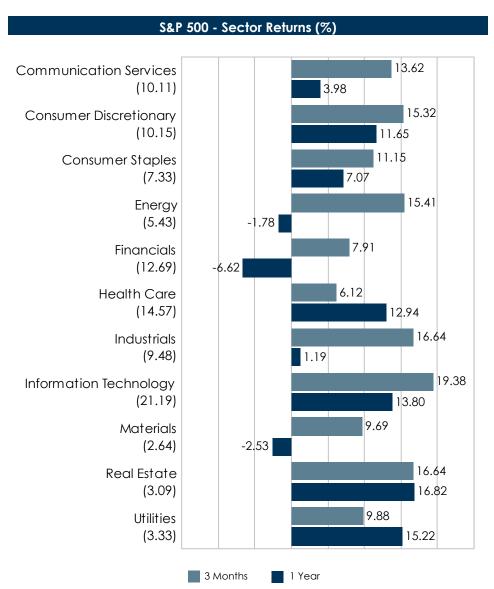
Equity Index Returns

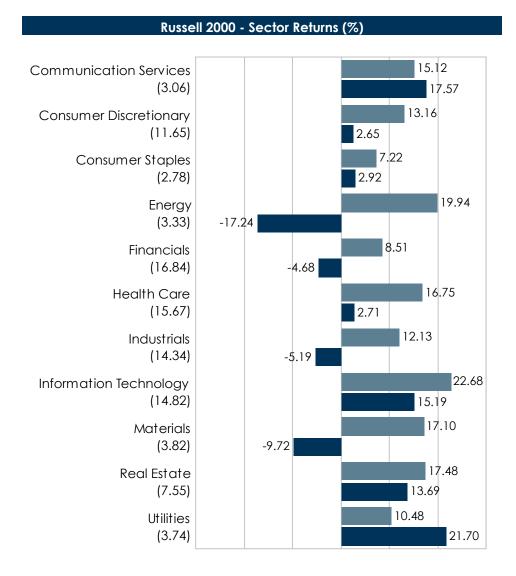
For the Periods Ending March 31, 2019



US Markets - Performance Breakdown

For the Periods Ending March 31, 2019

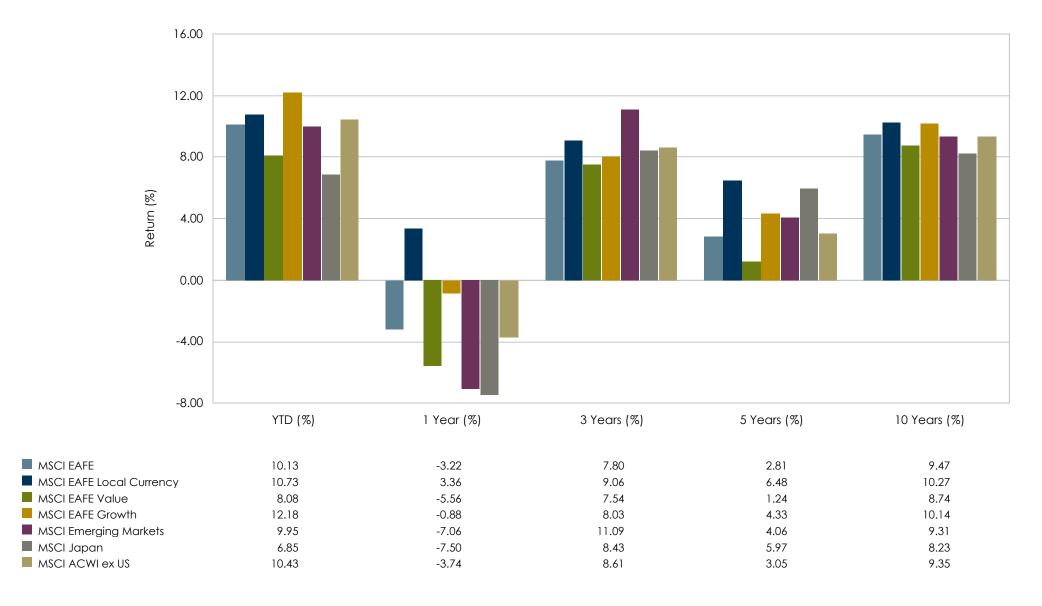




Numbers in parenthesis represent sector weightings of the index. Sector weights may not add to 100% due to rounding or securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

Non-US Equity Index Returns

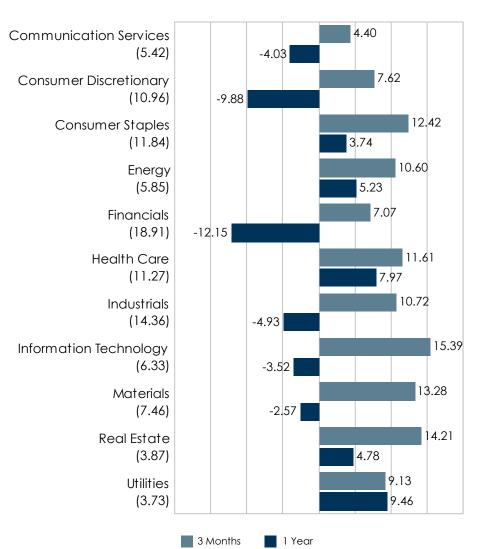
For the Periods Ending March 31, 2019



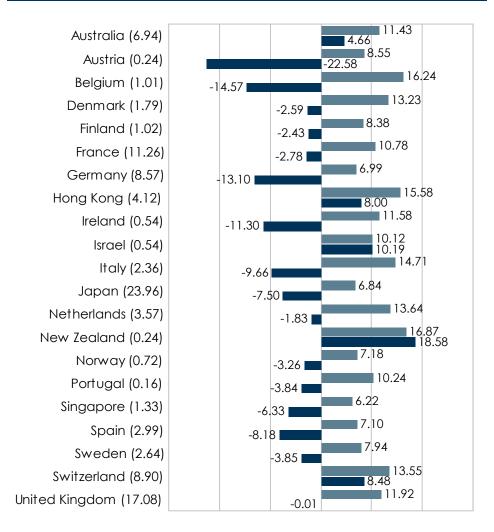
Non-US Equity - Performance Breakdown

For the Periods Ending March 31, 2019





MSCI EAFE - Country Returns (%)

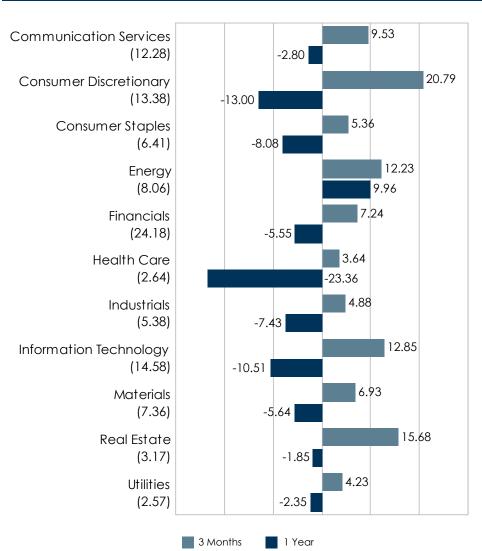


Numbers in parenthesis represent sector or country weights of the index. Sector or country weights may not add to 100% due to rounding.

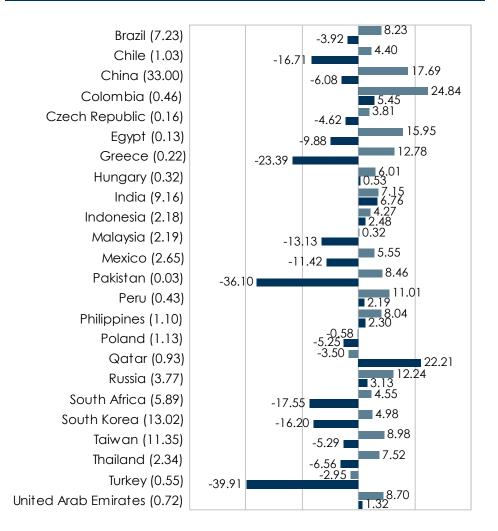
Emerging Markets - Performance Breakdown

For the Periods Ending March 31, 2019

MSCI Emerging Markets - Sector Returns (%)



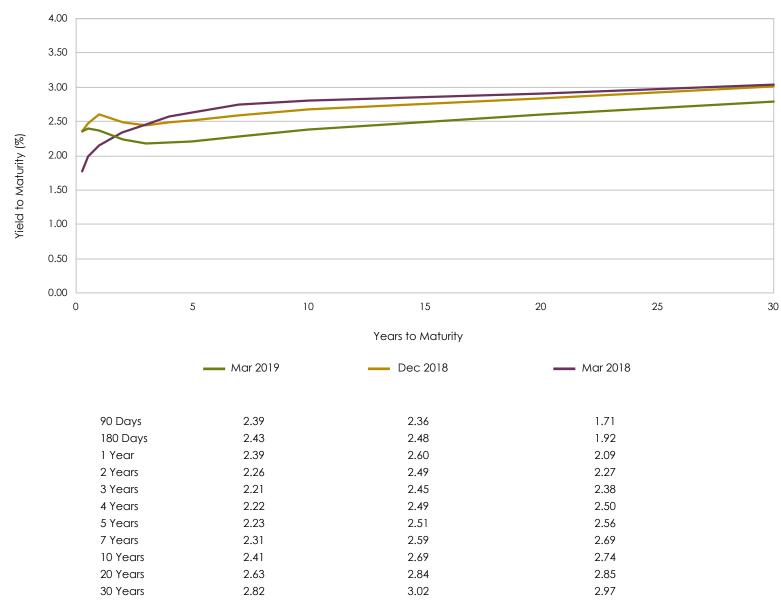
MSCI Emerging Markets - Country Returns (%)



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

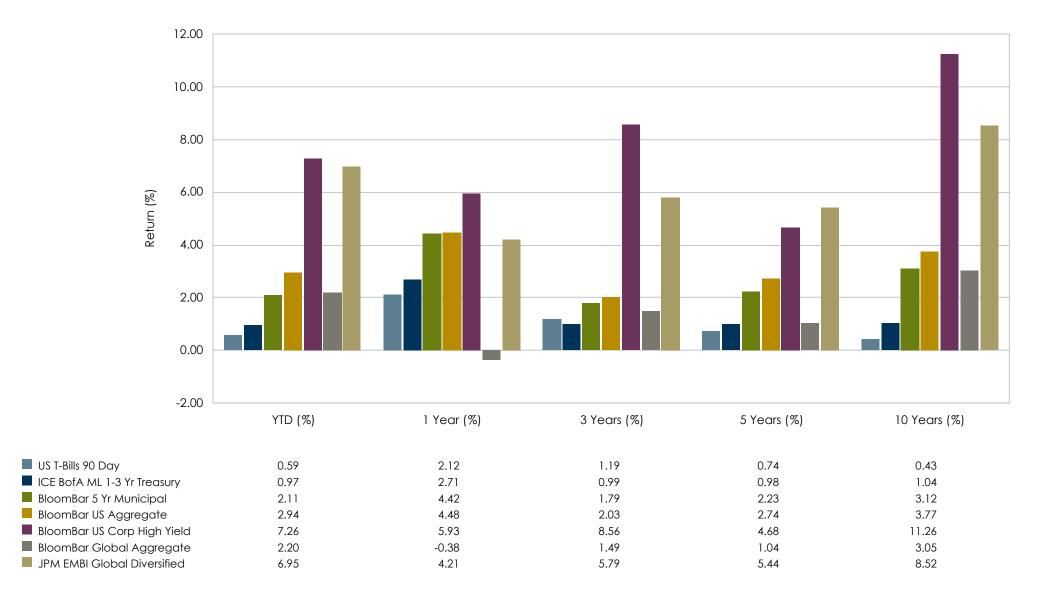
Government Issues - 3 Months to 30 Years Maturity



Source: Bloomberg

Fixed Income Index Returns

For the Periods Ending March 31, 2019



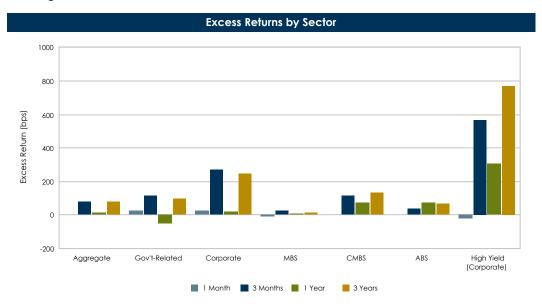
US Fixed Income Market Environment

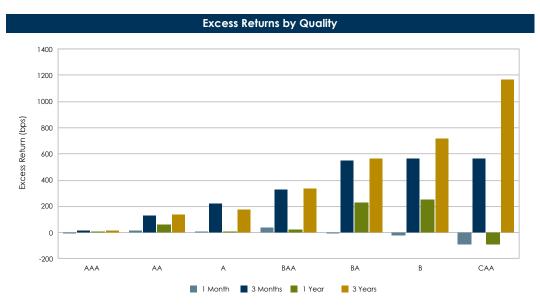
For the Periods Ending March 31, 2019

Nominal Returns By Sector (%)								
	1 Month	3 Months	1 Year	3 Years				
US Aggregate	1.92	2.94	4.48	2.03				
US Treasury	1.91	2.11	4.21	1.04				
US Agg: Gov't-Related	1.93	3.12	4.48	2.38				
US Corporate IG	2.51	5.15	4.94	3.65				
MBS	1.46	2.17	4.43	1.78				
CMBS	1.75	3.24	5.43	2.35				
ABS	0.72	1.48	3.68	1.82				
US Corp High Yield	0.94	7.25	5.93	8.57				

Nominal Returns by Quality (%)							
	<u>1 Month</u>	3 Months	1 Year	3 Years			
AAA	1.70	2.16	4.31	1.39			
AA	2.00	3.37	4.86	2.49			
A	2.32	4.64	4.81	2.95			
BAA	2.75	5.82	4.99	4.51			
BA	1.23	7.21	6.33	6.83			
В	0.87	7.20	6.38	8.40			
CAA	0.17	7.15	2.72	12.95			

Nominal Returns by Maturity (%)							
	<u>1 Month</u>	3 Months	1 Year	3 Years			
1-3 Yr.	0.66	1.22	3.07	1.35			
3-5 Yr.	1.27	2.14	4.21	1.62			
5-7 Yr.	1.54	2.60	4.79	1.81			
7-10 Yr.	2.01	3.09	5.14	1.80			
10+ Yr.	4.70	6.45	5.36	3.72			





Source: Bloomberg

Excess returns are relative to the duration-neutral Treasury.

Monthly Index Returns

For the Periods Ending March 31, 2019

Index Name	3 Months (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	13.65	13.65	9.50	13.51	10.91	12.85	15.92
Russell 1000	14.00	14.00	9.30	13.52	10.63	12.79	16.05
Russell 1000 Growth	16.10	16.10	12.75	16.53	13.50	14.34	17.52
Russell 1000 Value	11.93	11.93	5.67	10.45	7.72	11.14	14.52
Russell 2500	15.82	15.82	4.48	12.56	7.79	11.36	16.23
Russell 2000	14.58	14.58	2.05	12.92	7.05	10.74	15.36
Russell 2000 Growth	17.14	17.14	3.85	14.87	8.41	11.79	16.52
Russell 2000 Value	11.93	11.93	0.17	10.86	5.59	9.61	14.12
Wilshire 5000 Cap Wtd	14.11	14.11	8.93	13.59	10.52	12.66	16.00
MSCI ACWI	12.33	12.33	3.16	11.27	7.03	9.01	12.58
MSCI ACWI ex US	10.43	10.43	-3.74	8.61	3.05	5.21	9.35
MSCI EAFE	10.13	10.13	-3.22	7.80	2.81	6.13	9.47
MSCI EAFE Local Currency	10.73	10.73	3.36	9.06	6.48	9.28	10.27
MSCI EAFE Growth	12.18	12.18	-0.88	8.03	4.33	6.88	10.14
MSCI EAFE Value	8.08	8.08	-5.56	7.54	1.24	5.30	8.74
MSCI Emerging Markets	9.95	9.95	-7.06	11.09	4.06	3.06	9.31
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	0.97	0.97	2.71	0.99	0.98	0.84	1.04
BloomBar 5 Yr Municipal	2.11	2.11	4.42	1.79	2.23	2.19	3.12
BloomBar US Aggregate	2.94	2.94	4.48	2.03	2.74	2.48	3.77
BloomBar Gov't Bond	2.10	2.10	4.20	1.07	2.15	1.79	2.44
BloomBar US Credit	4.87	4.87	4.89	3.48	3.61	3.71	6.22
BloomBar 10 Yr Municipal	3.15	3.15	6.32	2.76	3.88	3.62	4.82
BloomBar US Corp High Yield	7.26	7.26	5.93	8.56	4.68	6.25	11.26
FTSE World Govt Bond	1.74	1.74	-1.57	0.95	0.59	0.52	2.20
BloomBar Global Aggregate	2.20	2.20	-0.38	1.49	1.04	1.19	3.05
BloomBar Multiverse	2.39	2.39	-0.29	1.85	1.19	1.40	3.33
JPM EMBI Global Diversified	6.95	6.95	4.21	5.79	5.44	5.38	8.52
Real Assets							
NCREIF Property	1.38	1.38	6.39	6.93	9.04	9.55	8.46
NFI ODCE Net	1.20	1.20	6.55	7.01	9.17	9.75	7.73
FTSE NAREIT US Real Estate	16.33	16.33	20.86	6.13	9.12	9.25	18.28
Bloomberg Commodity	6.32	6.32	-5.25	2.22	-8.92	-7.14	-2.56
Cash and Equivalents							
US T-Bills 90 Day	0.59	0.59	2.12	1.19	0.74	0.56	0.43

Monthly Index Returns

For the Periods Ending April 30, 2019

Index Name	1 Month (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	4.05	18.25	13.49	14.87	11.63	13.59	15.32
Russell 1000	4.04	18.60	13.33	14.82	11.41	13.52	15.39
Russell 1000 Growth	4.52	21.35	17.43	18.62	14.50	15.09	16.96
Russell 1000 Value	3.55	15.90	9.06	10.97	8.27	11.86	13.76
Russell 2500	3.50	19.88	7.89	13.31	9.04	12.03	14.97
Russell 2000	3.40	18.48	4.61	13.60	8.63	11.52	14.09
Russell 2000 Growth	3.05	20.71	6.91	15.64	10.22	12.53	15.24
Russell 2000 Value	3.78	16.16	2.19	11.46	6.94	10.43	12.87
Wilshire 5000 Cap Wtd	3.98	18.66	12.82	14.83	11.35	13.41	15.29
MSCI ACWI	3.43	16.18	5.63	11.96	7.54	9.71	11.70
MSCI ACWI ex US	2.72	13.44	-2.75	8.61	3.31	5.84	8.24
MSCI EAFE	2.91	13.33	-2.73	7.77	3.09	6.85	8.45
MSCI EAFE Local Currency	3.48	14.58	2.25	9.82	7.02	10.24	9.44
MSCI EAFE Growth	3.38	15.97	0.85	8.51	4.86	7.51	9.58
MSCI EAFE Value	2.42	10.69	-6.27	6.97	1.27	6.12	7.26
MSCI Emerging Markets	2.12	12.29	-4.68	11.66	4.42	3.54	7.87
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	0.22	1.19	3.08	1.05	0.99	0.84	1.07
BloomBar Municipal	0.38	3.28	6.16	2.59	3.56	3.35	4.55
BloomBar US Aggregate	0.03	2.97	5.29	1.90	2.57	2.32	3.72
BloomBar Gov't Bond	-0.27	1.83	4.76	1.02	1.98	1.56	2.55
BloomBar US Credit	0.49	5.39	6.38	3.23	3.46	3.58	5.98
BloomBar 10 Yr Municipal	0.26	3.42	6.84	2.58	3.64	3.43	4.66
BloomBar US Corp High Yield	1.42	8.78	6.74	7.69	4.84	6.31	10.15
FTSE World Govt Bond	-0.50	1.24	-0.18	0.37	0.27	0.24	2.15
BloomBar Global Aggregate	-0.30	1.90	0.94	0.94	0.75	0.98	2.93
BloomBar Multiverse	-0.25	2.14	1.03	1.28	0.92	1.20	3.19
Real Assets							
Bloomberg Commodity	-0.42	5.88	-8.03	-0.66	-9.43	-7.14	-2.67
Cash and Equivalents							
US T-Bills 90 Day	0.20	0.79	2.18	1.25	0.78	0.58	0.45

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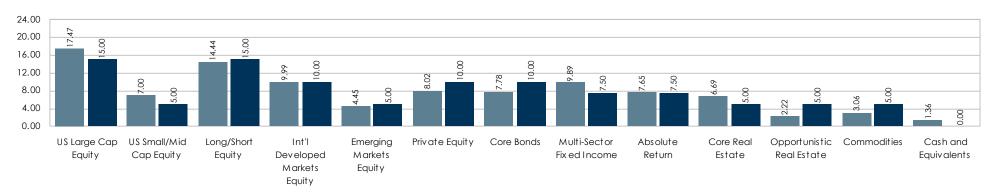
Total Portfolio Summary

Dollar Reconciliation (\$000s)

For the Periods Ending March 31, 2019

	FYTD	1 Year	5 Years	10 Years
Beginning Market Value	2,539,695	2,510,357	2,168,667	1,302,485
Net Additions	-38,257	-48,779	-272,962	-454,731
Return on Investment	53,986	93,845	659,719	1,707,670
Ending Market Value	2,555,424	2,555,424	2,555,424	2,555,424

For the Period Ending March 31, 2019



■ Actual Allocation ■ Target Allocation

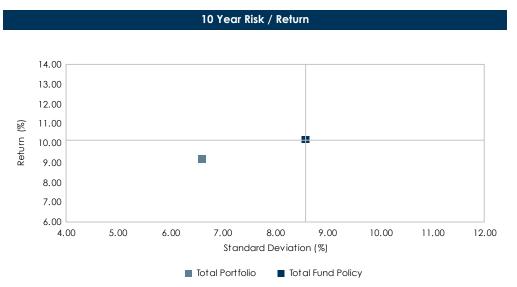
	Market Value (\$000s)	Actual Allocation (%)	Target Allocation (%)	Over/Under Target (%)	Range Min-Max (%)
Total Portfolio	2,555,424	100.00	100.00		
Equity	1,568,278	61.37	60.00	1.37	50.00 - 70.00
US Large Cap Equity	446,539	17.47	15.00	2.47	10.00 - 20.00
US Small/Mid Cap Equity	178,900	7.00	5.00	2.00	0.00 - 15.00
Long/Short Equity	368,885	14.44	15.00	-0.56	10.00 - 20.00
Int'l Developed Markets Equity	255,303	9.99	10.00	-0.01	5.00 - 15.00
Emerging Markets Equity	113,704	4.45	5.00	-0.55	0.00 - 10.00
Private Equity	204,948	8.02	10.00	-1.98	5.00 - 15.00
Fixed Income	646,719	25.31	25.00	0.31	15.00 - 35.00
Core Bonds	198,703	7.78	10.00	-2.22	7.50 - 20.00
Multi-Sector Fixed Income	252,647	9.89	7.50	2.39	5.00 - 10.00
Absolute Return	195,369	7.65	7.50	0.15	5.00 - 10.00
Real Assets	305,723	11.96	15.00	-3.04	0.00 - 20.00
Core Real Estate	170,905	6.69	5.00	1.69	0.00 - 10.00
Opportunistic Real Estate	56,661	2.22	5.00	-2.78	0.00 - 10.00
Commodities	78,156	3.06	5.00	-1.94	0.00 - 10.00
Cash and Equivalents	34,703	1.36	0.00	1.36	

For the Periods Ending March 31, 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.

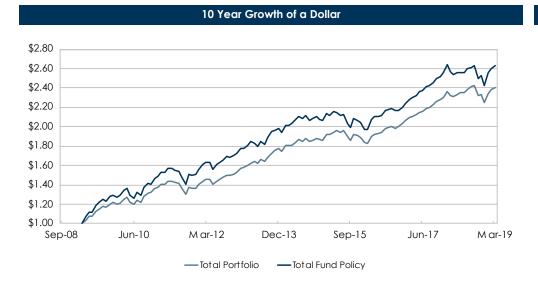
For the Periods Ending March 31, 2019



	Total Portfolio	Total Fund Policy
Return (%)	9.16	10.17
Standard Deviation (%)	6.59	8.58
Sharpe Ratio	1.33	1.14

Benchmark Relative Statistics			
Beta	0.75		
Up Capture (%)	79.25		
Down Capture (%)	71.13		

10 Year Portfolio Statistics

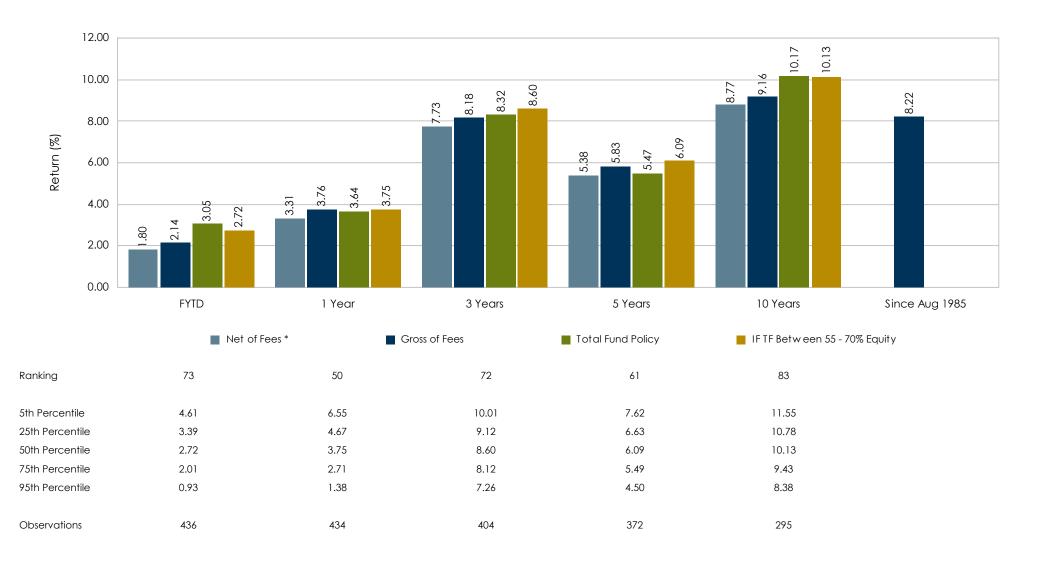


10 Year Return Analysis

	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	86	80
Number of Negative Months	34	40
% of Positive Months	71.67	66.67

Total Portfolio

For the Periods Ending March 31, 2019

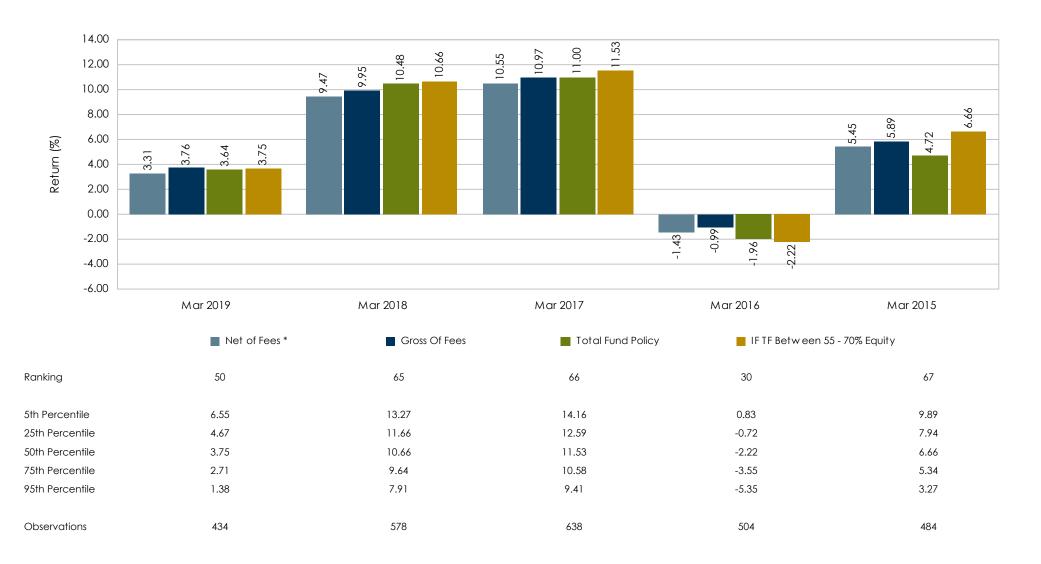


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

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

For the One Year Periods Ending March



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 March 31, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Total Portfolio * (06/05) ¹	2,555,424	100.00	6.85		1.80		3.31		7.73		5.38		8.77
Total Portfolio (08/85)			6.98	99	2.14	73	3.76	50	8.18	72	5.83	61	9.16
Total Fund Policy ²			8.63		3.05		3.64		8.32		5.47		10.17
IF TF Between 55 - 70% Equity			8.89		2.72		3.75		8.60		6.09		10.13
Equity (01/98)	1,568,278	61.37	9.92		1.94		4.04		10.48		7.49		11.16
MSCI ACWI			12.33		2.43		3.16		11.27		7.03		12.58
US Large Cap Equity	446,539	17.47											
Northern Trust Russell 1000 Index (08/98) ³	446,539	17.47	14.01	28	5.56	43	9.33	34	13.52	34	10.64	37	16.06
Russell 1000			14.00		5.54		9.30		13.52		10.63		16.05
eA US Large Cap Core Equity			13.22		4.92		7.99		12.88		10.24		15.54
US Small/Mid Cap Equity	178,900	7.00											
Boston Partners (01/98)	84,665	3.31	13.76	60 / 31	-7.78	94 / 59	-5.41	92 / 87	8.83	70 / 73	5.76	82 / 64	15.82
Russell 2500 Value			13.12		-3.75		1.84		9.85		6.02		15.03
eA US Mid Cap Value Equity			14.00		-1.63		1.01		9.75		7.31		15.85
eA US Small Cap Value Equity			12.72		-6.93		-0.86		9.69		6.24		16.12
Cortina (02/14)	94,235	3.69	15.00	77	-1.23	65	14.78	22	21.65	24	8.48	75	
Russell 2000 Growth			17.14		-3.15		3.85		14.87		8.41		16.52
eA US Small Cap Growth Equity			17.63		1.17		10.18		17.78		9.78		18.10
Long/Short Equity	368,885	14.44											
Grosvenor Long/Short Equity (11/03)	368,885	14.44	9.12		1.07		3.41		7.25		4.99		6.51
MSCI ACWI			12.33		2.43		3.16		11.27		7.03		12.58
HFRI FOF: Strategic			6.75		-0.77		-0.78		5.00		2.44		4.04

FYTD: Fiscal year ending June.

^{*} Net of fee return data.

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For the Periods Ending March 31, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
International Developed Market	255,303	9.99							· ·		· ·		
Mondrian International (05/04)	138,944	5.44	9.01	39	0.43	14	-1.56	18	7.10	53	2.56	51	8.88
MSCI EAFE			10.13		-2.27		-3.22		7.80		2.81		9.47
eA EAFE All Cap Value Equity			8.55		-3.97		-4.11		7.32		2.56		10.21
Barings Focused EAFE Plus Equity (03/12)	116,359	4.55	10.43	48	-3.94	61	-3.33	37	8.84	28	5.06	21	
MSCI EAFE			10.13		-2.27		-3.22		7.80		2.81		9.47
eA EAFE All Cap Equity			10.36		-3.58		-4.55		7.63		3.68		10.22
Emerging Markets Equity	113,704	4.45											
Wasatch Emerging Markets (09/12)	34,971	1.37	10.47	46	-3.31	84	-9.17	68	7.41	90	3.58	76	
MSCI EM SC			7.79		-3.91		-12.11		6.27		2.07		10.69
eA Global Emerging Mkts Equity			10.20		0.41		-7.82		10.78		4.48		10.58
AB EM Strategic Core Equity Fund (11/16)	78,733	3.08	8.04	81	-2.92	82	-11.80	85					
MSCI Emerging Markets			9.95		0.86		-7.06		11.09		4.06		9.31
eA Global Emerging Mkts Equity			10.20		0.41		-7.82		10.78		4.48		10.58
Private Equity (07/03)	204,948	8.02	0.82		10.66		12.59		10.15		11.07		10.69
Fixed Income (01/98)	646,719	25.31	3.16		3.03		3.32		3.99		2.43		5.87
BloomBar Universal			3.32		4.81		4.53		2.65		3.00		4.36
Core Bonds	198,703	7.78											
Agincourt Core Fixed Income (10/99)	198,703	7.78	3.43	31	5.26	11	5.08	14	2.65	40	3.18	38	5.03
BloomBar US Aggregate			2.94		4.65		4.48		2.03		2.74		3.77
eA US Core Fixed Income			3.26		4.80		4.68		2.51		3.05		4.63

For the Periods Ending March 31, 2019

			2.44		EVED		1 V		2. ٧		5 V		
	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Multi Sector Fixed Income	252,647	9.89	(/0)		(/0)		(/0)		(/0)		(/0)		(/0)
Multi Sector Fixed Income													
Oaktree Global Credit Fund (02/98)	126,239	4.94	4.59		2.15		3.35		6.68		3.91		9.33
BloomBar US Aggregate			2.94		4.65		4.48		2.03		2.74		3.77
Loomis Sayles (06/08)	78,685	3.08	2.75	67	2.47	60	-1.71	72	2.69	59	1.38	64	4.76
FTSE World Govt Bond			1.74		1.85		-1.57		0.95		0.59		2.20
eA All Global Fixed Income			3.47		2.98		1.40		3.27		2.23		5.13
Private Credit (10/16)	47,723	1.87	1.27		2.86		5.50						
Absolute Return	195,369	7.65											
PAAMCO (10/02)	130,049	5.09	3.67		0.44		2.39		3.79		1.21		4.95
BloomBar US Aggregate			2.94		4.65		4.48		2.03		2.74		3.77
HFRI FOF: Conservative			3.95		1.37		2.47		3.74		2.23		3.43
Wellington Global Total Return (12/16)	65,320	2.56	0.77	86	4.09	23	6.68	3					
LIBOR 3 Month			0.65		1.90		2.46		1.54		1.04		0.70
eA Global Unconstrained Fixed Income			3.04		2.56		1.54		3.62		2.25		4.82
Real Assets (01/98)	305,723	11.96	1.97		2.10		4.10		6.71		5.47		5.02
Real Assets Blended Index 4			2.90		1.28		2.68		5.53		1.24		3.74
Core Real Estate	170,905	6.69											
JP Morgan Strategic Property (12/07)	128,241	5.02	0.45		4.15		6.19		7.36		9.55		8.95
NFI ODCE Net			1.20		4.66		6.55		7.01		9.17		7.73
NCREIF Property			1.38		4.50		6.39		6.93		9.04		8.46
Blackstone Property Partners (01/15)	42,664	1.67	1.66		7.40		10.23		11.06				
NFI ODCE Net			1.20		4.66		6.55		7.01		9.17		7.73
NCREIF Property			1.38		4.50		6.39		6.93		9.04		8.46

For the Periods Ending March 31, 2019

	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Opportunistic Real Estate	56,661	2.22											
Private Real Estate (08/11)	51,942	2.03	2.37		8.68		13.50		9.57		12.02		
Private Real Estate Direct													
Columbus Square (01/98)	4,720	0.18	1.68		7.08		10.38		9.26		8.75		10.71
NCREIF Property			1.38		4.50		6.39		6.93		9.04		8.46
NFI ODCE Net			1.20		4.66		6.55		7.01		9.17		7.73
Commodities	78,156	3.06											
Mount Lucas Peak Partners (01/98)	28,473	1.11	-0.19		-9.50	-	12.19		-0.54		3.57		0.99
CS Hedge - Global Macro			2.61		0.64		1.92		3.51		2.42		5.08
Gresham Tap Fund (08/14)	49,683	1.94	7.37		-6.53		-4.73		3.51				
Bloomberg Commodity			6.32		-5.63		-5.25		2.22		-8.92		-2.56
Cash and Equivalents	34,703	1.36											

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 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 March 31, 2019

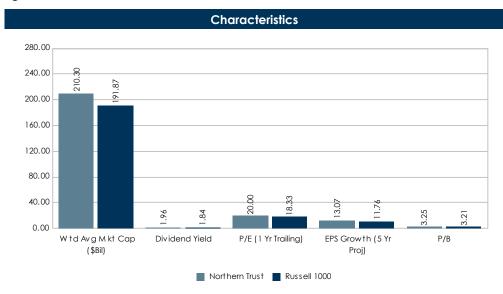
Account Description

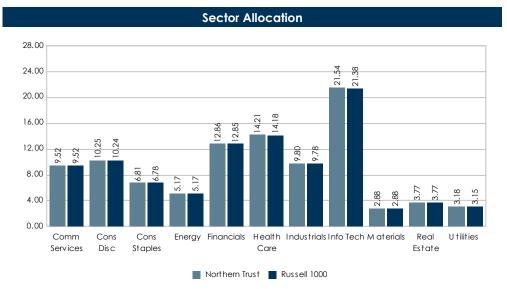
- Strategy US Large Cap Core
- Vehicle Non-Mutual Commingled
- Benchmark Russell 1000
- Performance Inception Date August 1998
- **Fees** 1 bps

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) FYTD 1 Year Beginning Market Value 455,018 439,357 Net Additions -30,035 -30,046 Return on Investment 21,556 37,228 Ending Market Value 446,539 446,539



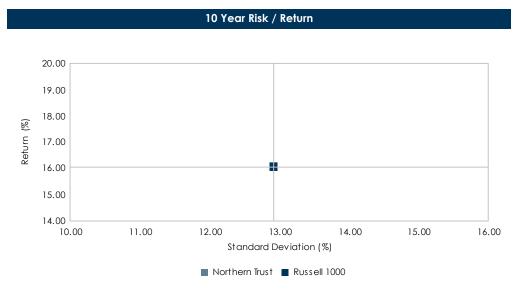


Characteristic and allocation charts represents data of the EB Daily Valued Large Cap Stock Index Fund (Non-Mutual Commingled).

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 March 31, 2019

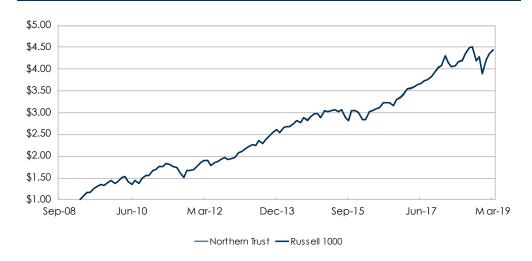


10 Year Portfolio Statistics

	Northern		
	Trust	Russell 1000	
Return (%)	16.06	16.05	
Standard Deviation (%)	12.91	12.92	
Sharpe Ratio	1.21	1.21	

Benchmark Relative Statistics			
Beta	1.00		
R Squared (%)	100.00		
Alpha (%)	0.02		
Tracking Error (%)	0.04		
Batting Average (%)	63.33		
Up Capture (%)	100.00		
Down Capture (%)	99.90		



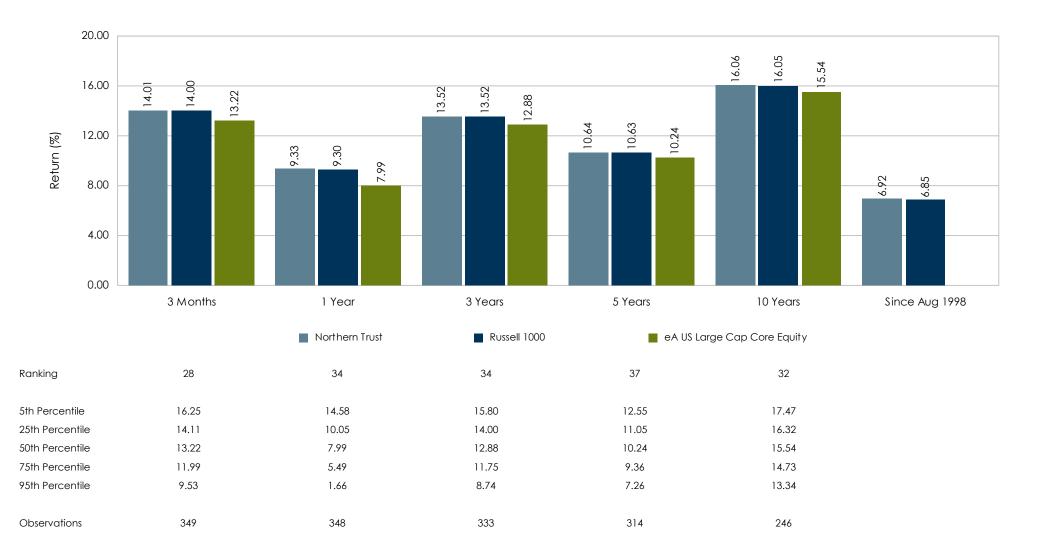


10 Year Return Analysis

	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	87	87
Number of Negative Months	33	33
% of Positive Months	72.50	72.50

Northern Trust Russell 1000 Index

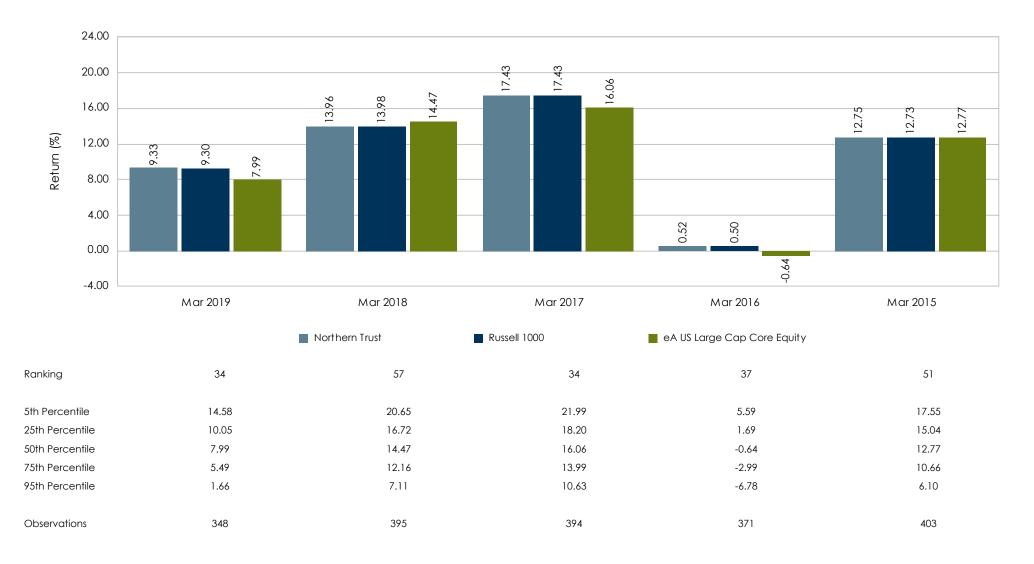
For the Periods Ending March 31, 2019



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 March



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 March 31, 2019

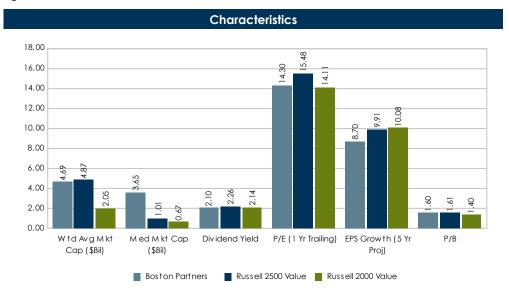
Account Description

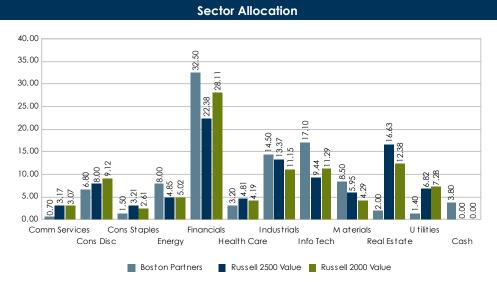
- Strategy US Small/Mid Cap Value
- Vehicle Separately Managed Account
- Benchmarks Russell 2500 Value and Russell 2000 Value
- Performance Inception Date January 1998
- Fees 60 bps base fee with annual performance fee

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) FYTD 1 Year **Beginning Market Value** 92,198 90,155 Net Additions -372 -650 Return on Investment -7,161 -4,841 1,266 Income 1.623 Gain/Loss -8,427 -6,463 **Ending Market Value** 84,665 84,665

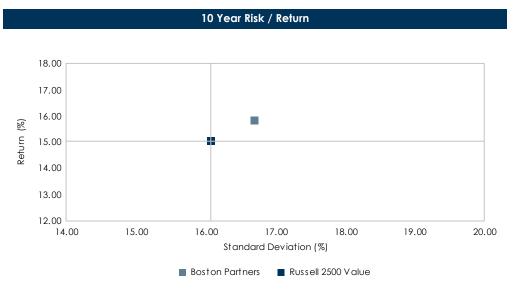




Sector weights may not add to 100% due to securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

For the Periods Ending March 31, 2019

Sharpe Ratio



	Boston Partners	Russell 2500 Value
Return (%)	15.82	15.03
Standard Deviation (%)	16.70	16.07

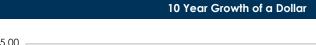
10 Year Portfolio Statistics

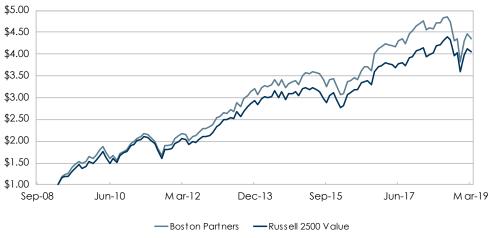
0.92

0.91

Benchmark Relative Statistics			
Beta	1.02		
R Squared (%)	95.77		
Alpha (%)	0.53		
Tracking Error (%)	3.45		
Batting Average (%)	52.50		
Up Capture (%)	100.38		
Down Capture (%)	96.80		

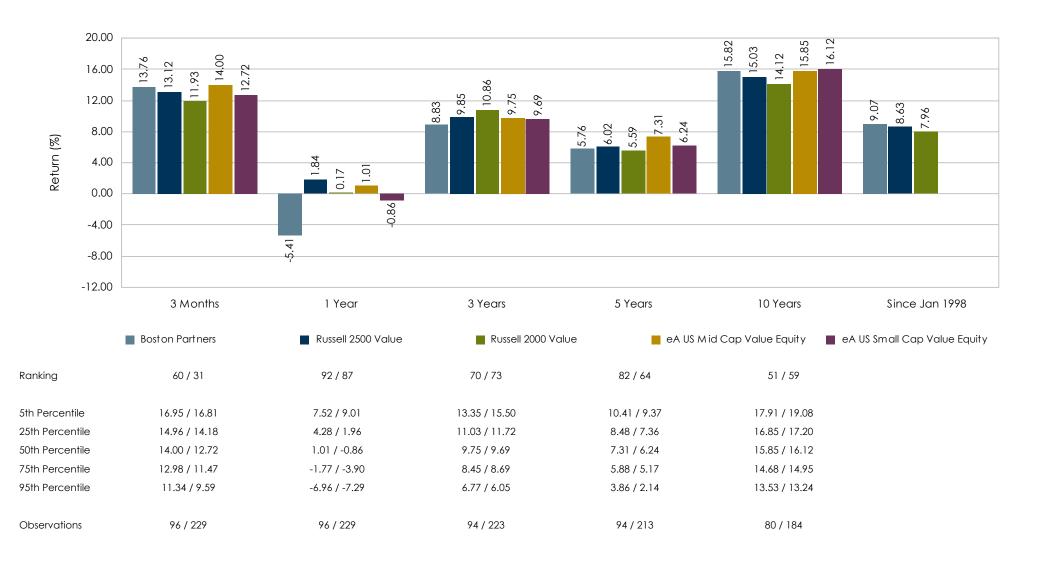
10 Year Return Analysis





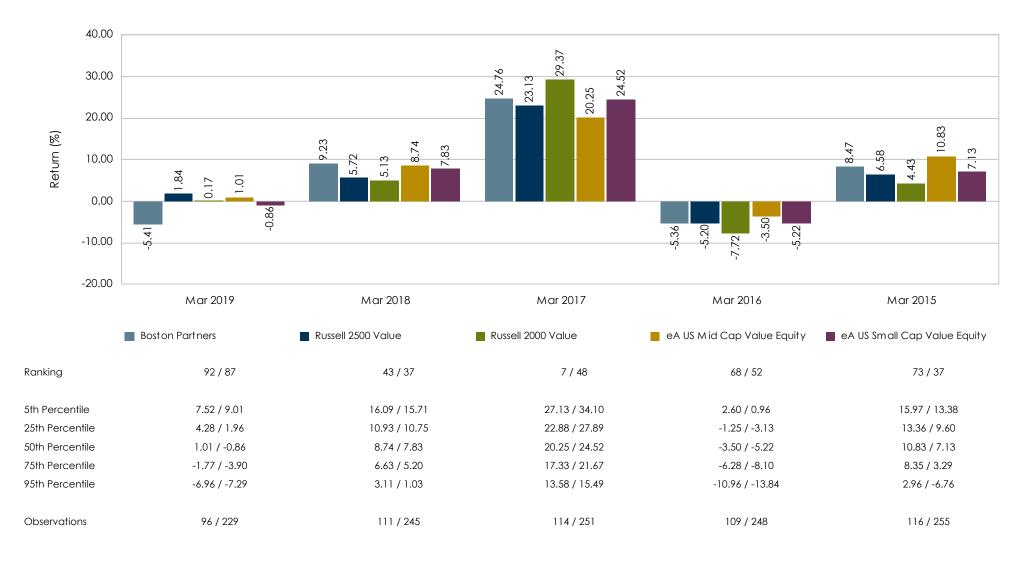
	Boston Partners	Russell 2500 Value
Number of Months	120	120
Highest Monthly Return (%)	19.35	15.95
Lowest Monthly Return (%)	-12.07	-11.05
Number of Positive Months	80	80
Number of Negative Months	40	40
% of Positive Months	66.67	66.67

For the Periods Ending March 31, 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 March



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 March 31, 2019

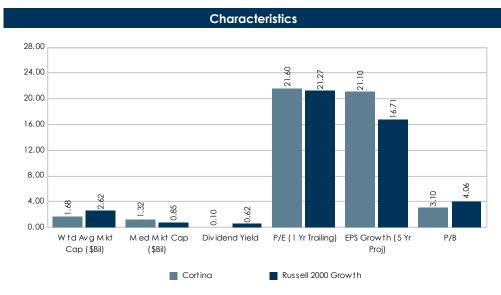
Account Description

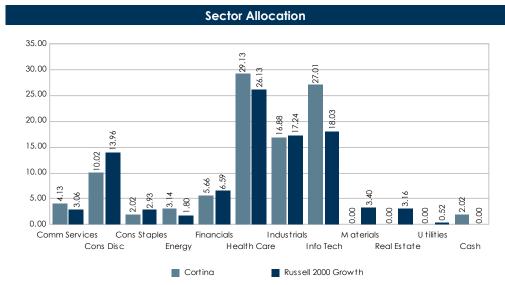
- Strategy US Small/Mid Cap Growth
- Vehicle Separately Managed Account
- Benchmark Russell 2000 Growth
- Performance Inception Date February 2014
- Fees First \$25M at 100 bps, next \$25M at 90 bps, balance at 80 bps

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) FYTD 1 Year **Beginning Market Value** 107,615 92,805 Net Additions -10,513 -10,717 Return on Investment -2,867 12,147 176 220 Income Gain/Loss -3.04311,927 **Ending Market Value** 94,235 94,235

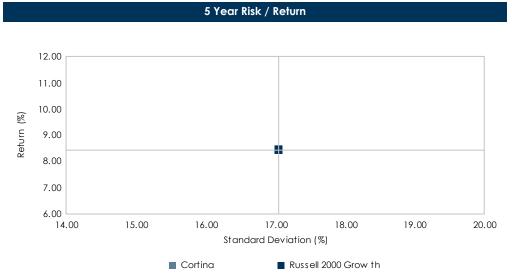




Sector weights may not add to 100% due to securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

Cortina

For the Periods Ending March 31, 2019

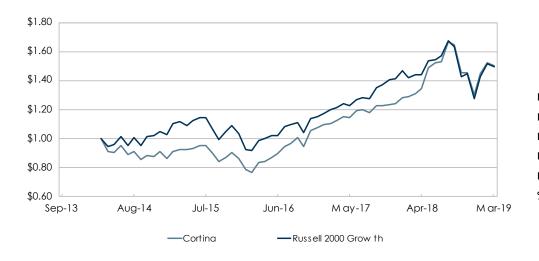


	Cortina	Russell 2000 Growth
Return (%)	8.48	8.41
Standard Deviation (%)	17.05	17.05
Sharpe Ratio	0.46	0.45

Benchmark Relative Statistics			
Beta	0.93		
R Squared (%)	87.23		
Alpha (%)	0.68		
Tracking Error (%)	6.20		
Batting Average (%)	53.33		
Up Capture (%)	93.39		
Down Capture (%)	93.85		

5 Year Portfolio Statistics

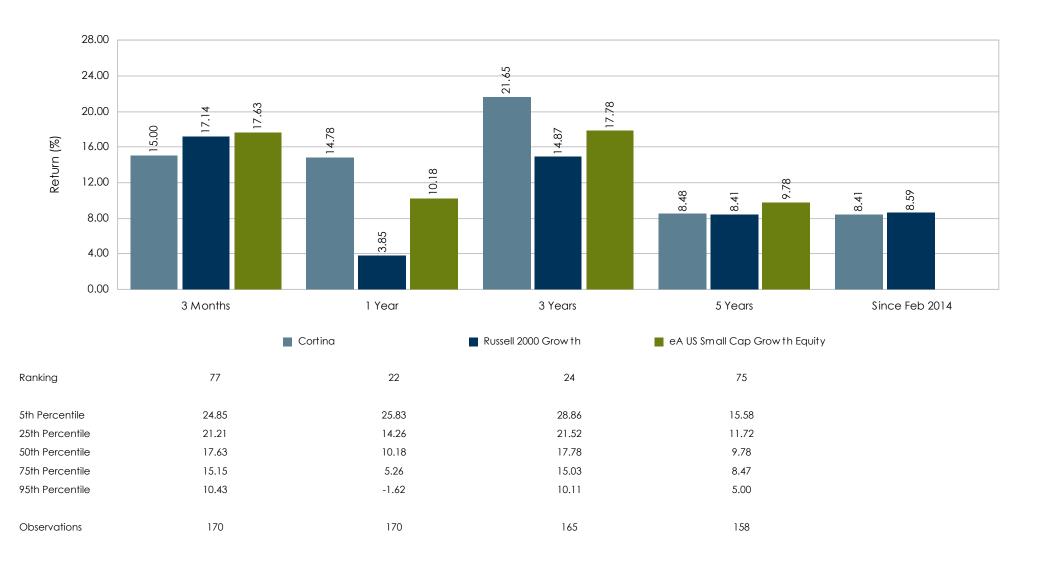




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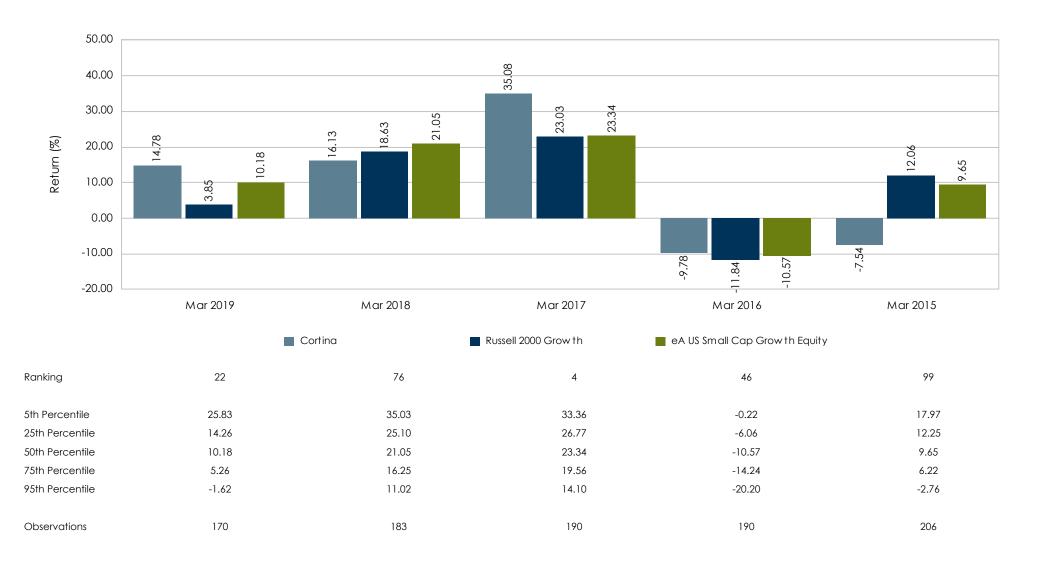
	Cortina	Russell 2000 Growth
Number of Months	60	60
Highest Monthly Return (%)	11.26	11.55
Lowest Monthly Return (%)	-11.40	-12.65
Number of Positive Months	40	41
Number of Negative Months	20	19
% of Positive Months	66.67	68.33

CortinaFor the Periods Ending March 31, 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 March

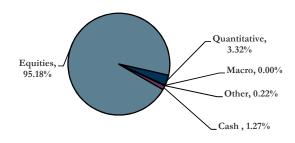


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending March 31, 2019

Strategy Allocation

Market Value: \$368,884,524



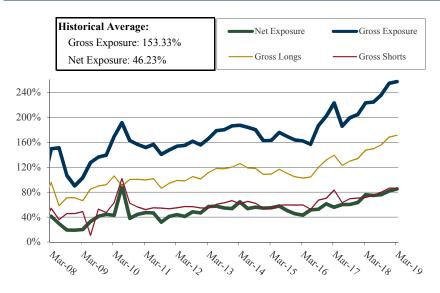
Strategy

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

Exposure

Net Exposure: 84.98%Gross Exposure: 257.12%

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.

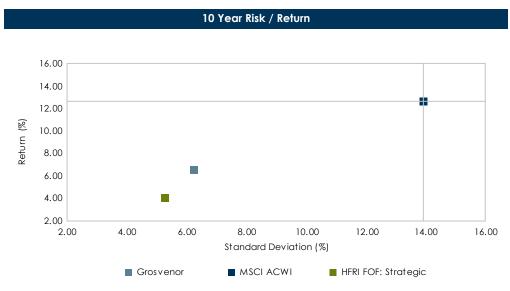
Characteristics provided by manager are the weighted average of GLSEF and GLSEF-B data.

For the Periods Ending March 31, 2019

Return (%)

Sharpe Ratio

Standard Deviation (%)



Grosvenor MSCI ACWI Strategic 6.51 12.58 4.04

13.92

0.88

5.28

0.69

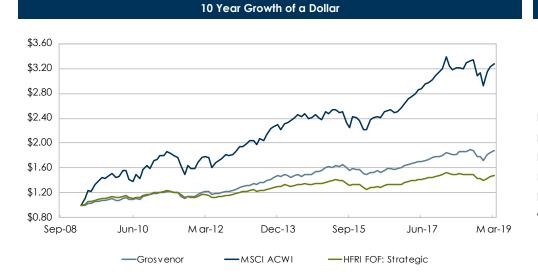
Benchmark Relative Statistics			
Beta	0.37	1.07	
R Squared (%)	67.38	81.62	
Alpha (%)	1.80	2.16	
Tracking Error (%)	9.49	2.69	
Batting Average (%)	45.83	65.00	
Up Capture (%)	40.27	122.64	
Down Capture (%)	41.46	92.46	

10 Year Return Analysis

10 Year Portfolio Statistics

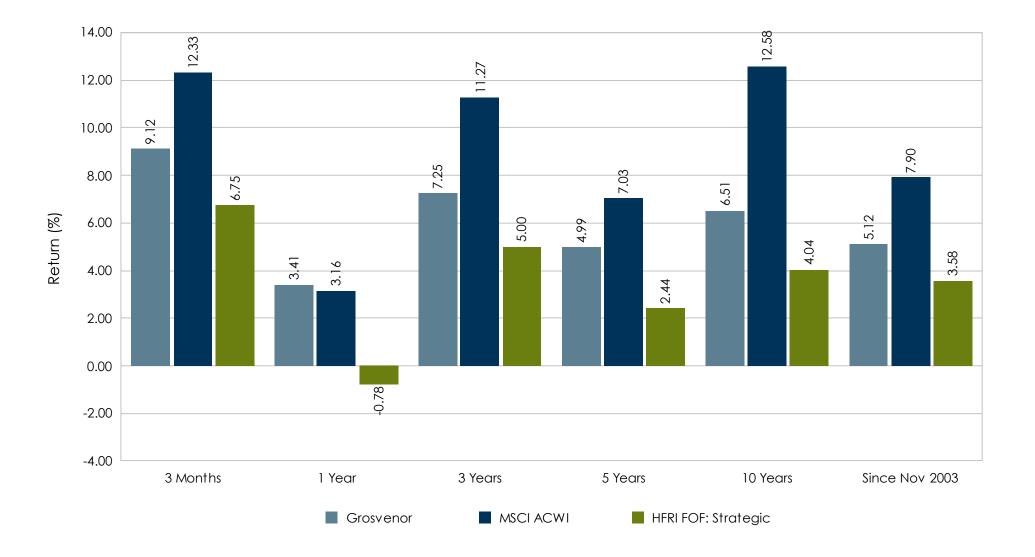
6.23

0.98

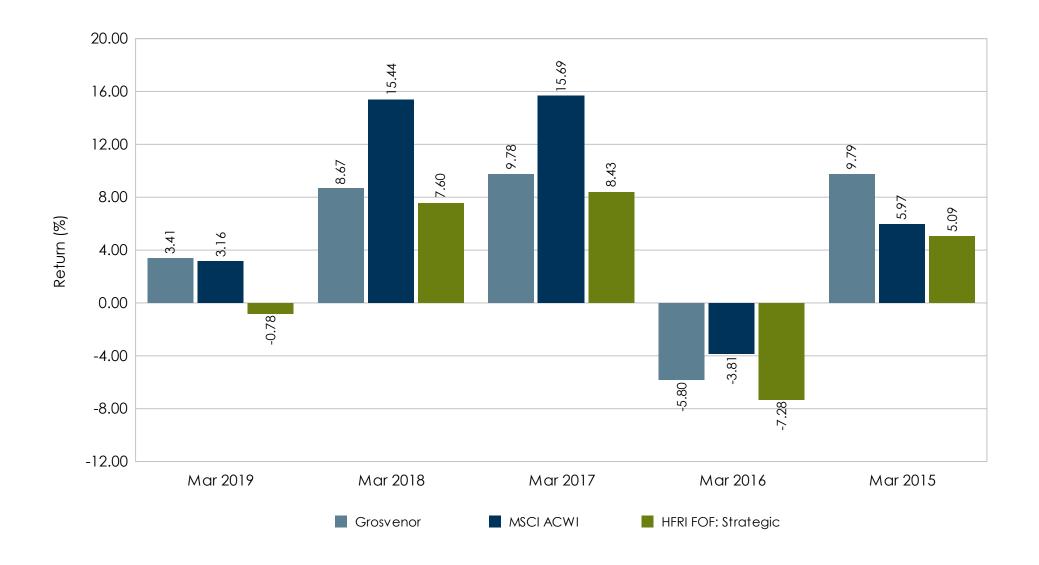


	Grosvenor	MSCI ACWI	HFRI FOF: Strategic
Number of Months	120	120	120
Highest Monthly Return (%)	5.18	11.90	4.25
Lowest Monthly Return (%)	-4.90	-9.40	-4.49
Number of Positive Months	81	78	75
Number of Negative Months	39	42	45
% of Positive Months	67.50	65.00	62.50

For the Periods Ending March 31, 2019



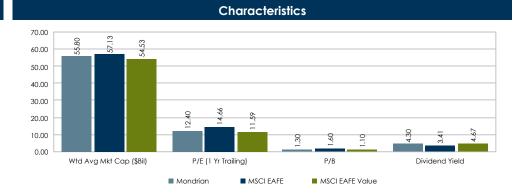
For the One Year Periods Ending March



For the Periods Ending March 31, 2019

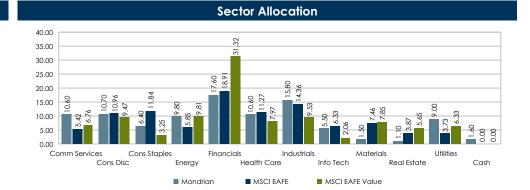
Account Description

- 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



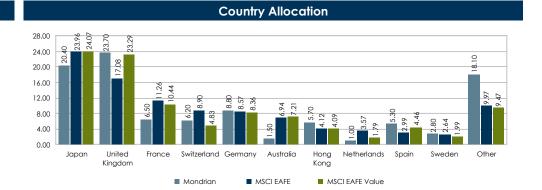
Performance Goals

- 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)

	FYTD	1 Year
Beginning Market Value	138,343	141,144
Net Additions	0	0
Return on Investment	601	-2,200
Ending Market Value	138,944	138,944



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

For the Periods Ending March 31, 2019

Sharpe Ratio



Mondrian MSCI EAFE MSCI EAFE EAFE Value Return (%) 8.88 9.47 8.74 Standard Deviation (%) 14.32 15.56 16.82

0.59

0.58

0.50

10 Year Portfolio Statistics

Benchmark Relative Statistics		
Beta	0.89	0.82
R Squared (%)	93.98	92.76
Alpha (%)	0.38	1.53
Tracking Error (%)	3.89	4.90
Batting Average (%)	47.50	51.67
Up Capture (%)	92.82	83.61
Down Capture (%)	95.21	83.05

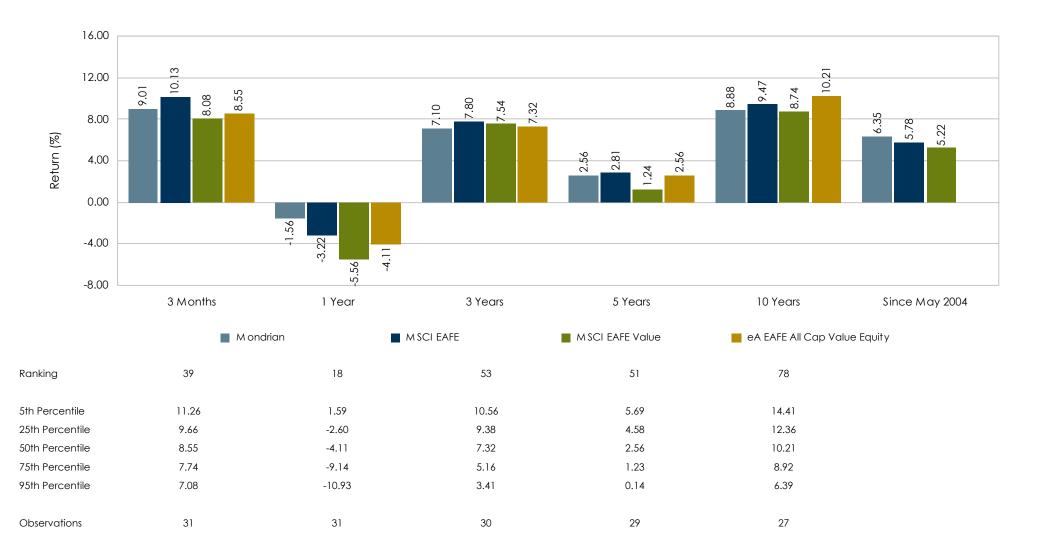
10 Year Growth of a Dollar



10 Year Return Analysis

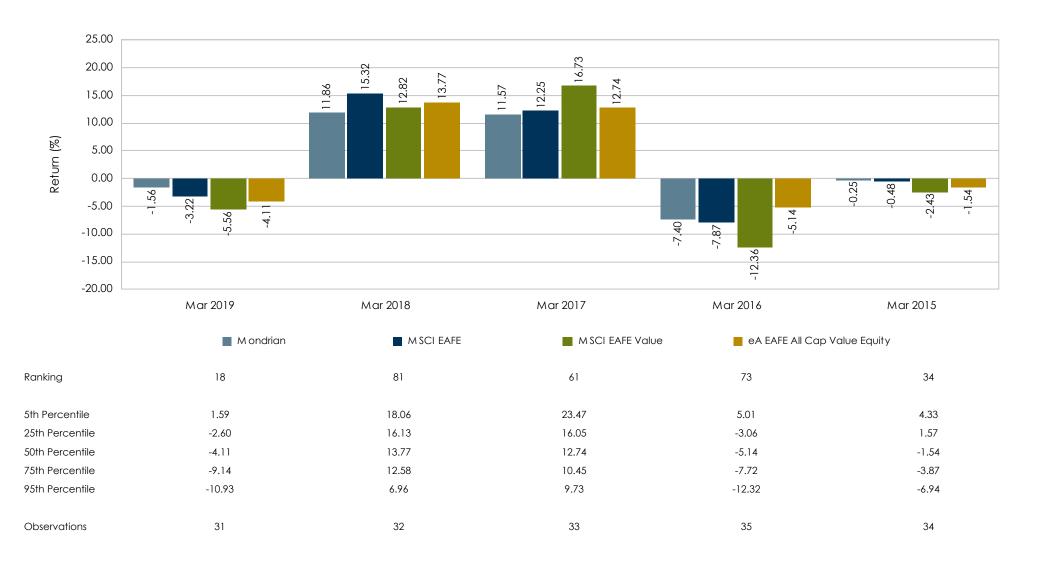
	Mondrian	MSCI EAFE	MSCI EAFE Value
Number of Months	120	120	120
Highest Monthly Return (%)	11.12	12.96	17.46
Lowest Monthly Return (%)	-10.81	-11.37	-11.86
Number of Positive Months	68	66	66
Number of Negative Months	52	54	54
% of Positive Months	56.67	55.00	55.00

For the Periods Ending March 31, 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 March

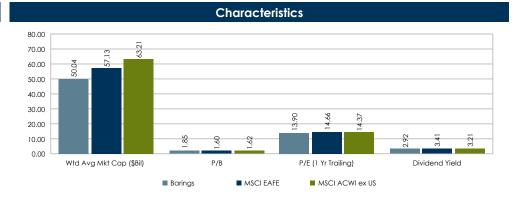


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending March 31, 2019

Account Description

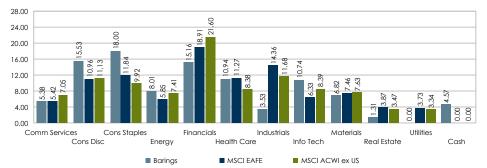
- Strategy Int'l Developed Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmarks MSCI EAFE and MSCI ACWI ex US
- Performance Inception Date March 2012
- Fees 40 bps base feel plus performance based fee



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.

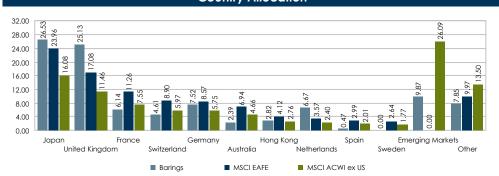
Sector Allocation



Dollar Growth Summary (\$000s)

	FYTD	1 Year
Beginning Market Value	122,126	121,475
Net Additions	-989	-1,111
Return on Investment	-4,779	-4,005
Ending Market Value	116,359	116,359

Country Allocation



Characteristic and allocation charts represents data of the Baring Focused Int'l Equity (Non-Mutual Commingled).

For the Periods Ending March 31, 2019

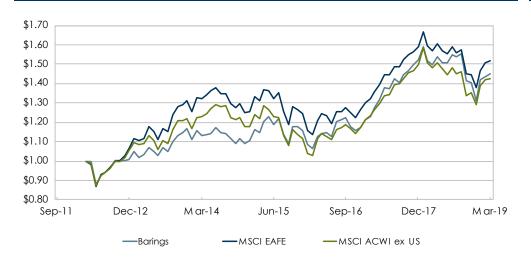


	Barings	MSCI EAFE	MSCI ACWI ex US
Return (%)	5.44	6.13	5.21
Standard Deviation (%)	12.36	12.62	12.51
Sharpe Ratio	0.40	0.45	0.38

7 Year Portfolio Statistics

Benchmark Relative Statistics		
Beta	0.93	0.92
R Squared (%)	90.37	87.37
Alpha (%)	-0.22	0.66
Tracking Error (%)	3.93	4.50
Batting Average (%)	53.57	51.19
Up Capture (%)	92.69	89.25
Down Capture (%)	96.36	88.00

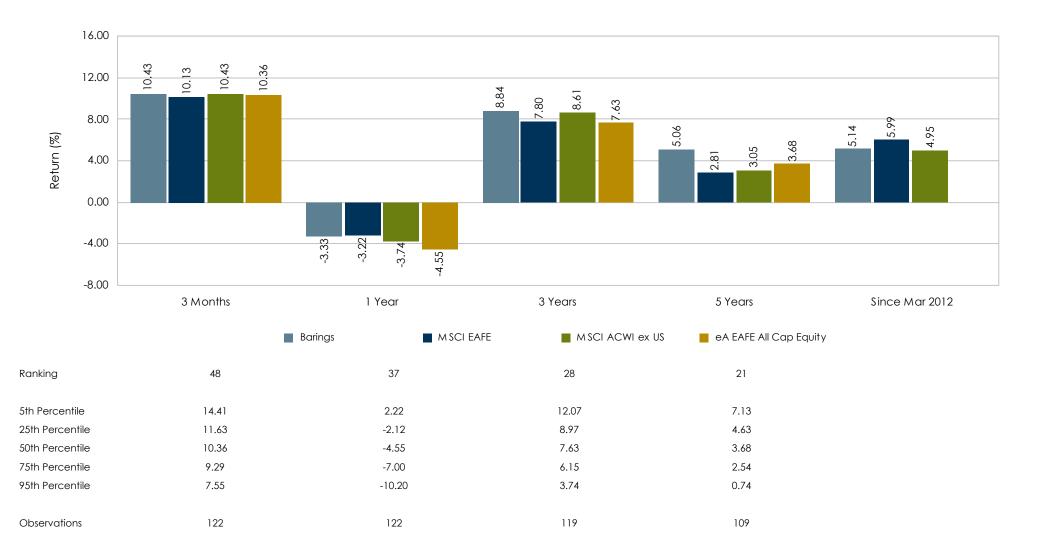
7 Year Growth of a Dollar



7 Year Return Analysis

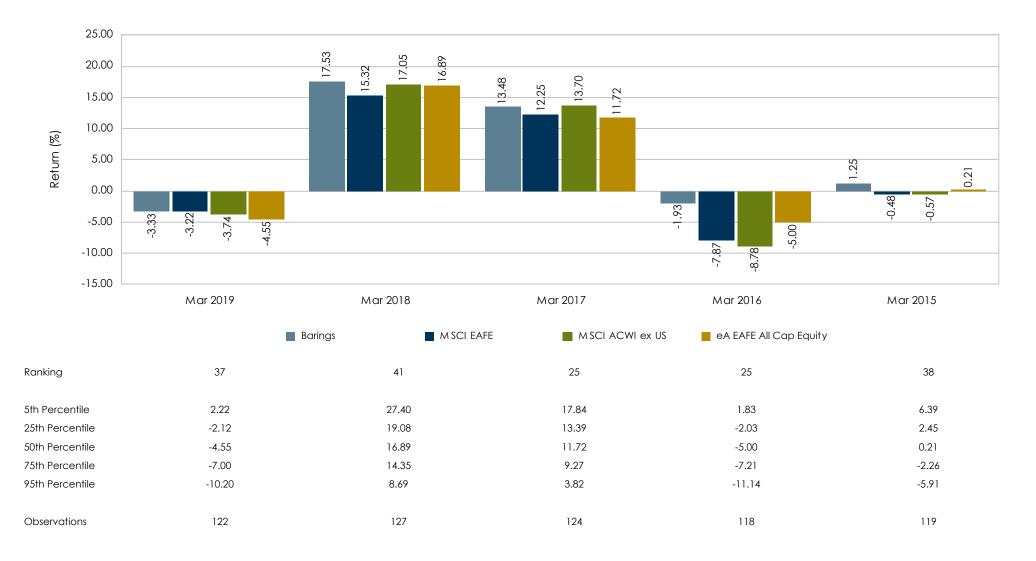
	Barings	MSCI EAF	MSCI E ACWI ex US
Number of Months	84	84	84
Highest Monthly Return (%)	8.31	7.82	8.21
Lowest Monthly Return (%)	-11.56	-11.35	-11.25
Number of Positive Months	48	48	51
Number of Negative Months	36	36	33
% of Positive Months	57.14	57.14	60.71

For the Periods Ending March 31, 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 March



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.

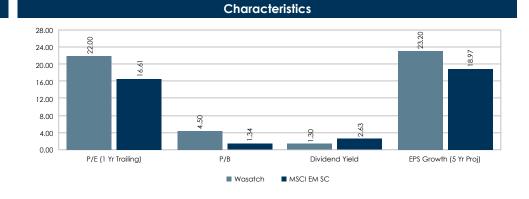
For the Periods Ending March 31, 2019

24.00

20.00

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.

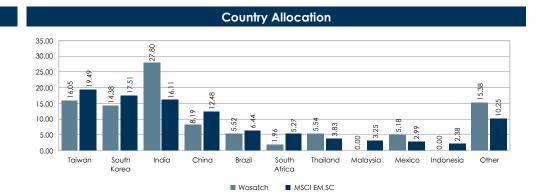
17.39

56



Sector Allocation

Dollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 36,569 39,058 Net Additions -370 -495 Return on Investment -1,228 -3,592 Ending Market Value 34,971 34,971



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

For the Periods Ending March 31, 2019



6 Year Portfolio Statistics

	Wasatch	MSCI EM SC
Return (%)	1.50	1.84
Standard Deviation (%)	13.76	14.00
Sharpe Ratio	0.07	0.09

Benchmark Relative Statistics		
Beta	0.87	
R Squared (%)	78.71	
Alpha (%)	-0.01	
Tracking Error (%)	6.60	
Batting Average (%)	44.44	
Up Capture (%)	93.25	
Down Capture (%)	96.38	

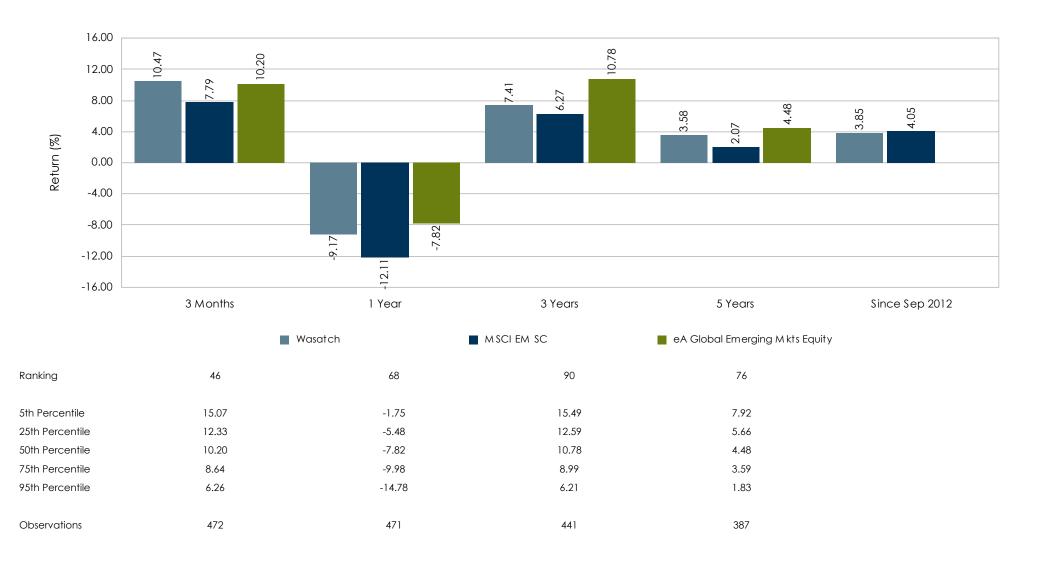
6 Year Growth of a Dollar



6 Year Return Analysis

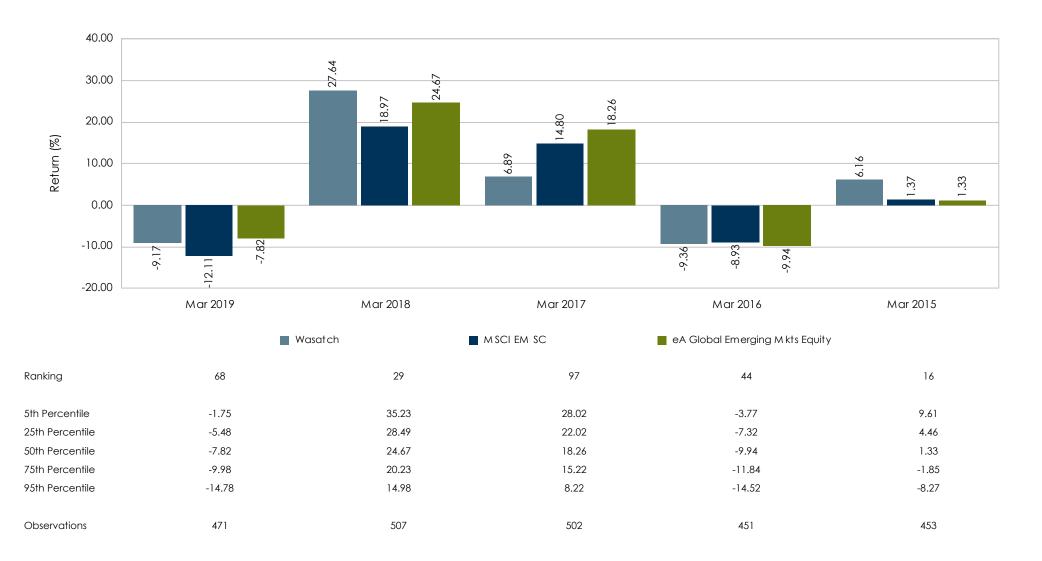
	Wasatch	MSCI EM SC
Number of Months	72	72
Highest Monthly Return (%)	8.10	10.01
Lowest Monthly Return (%)	-12.45	-10.53
Number of Positive Months	39	42
Number of Negative Months	33	30
% of Positive Months	54.17	58.33

For the Periods Ending March 31, 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 March

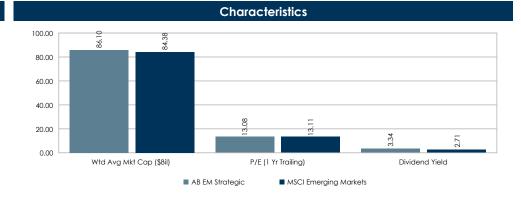


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending March 31, 2019

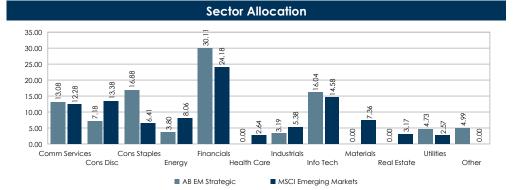
Account Description

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

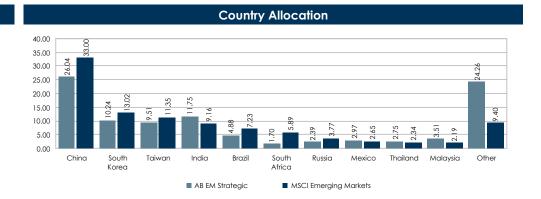


Performance Goals

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



Dollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 81,104 89,263 Net Additions 0 0 Return on Investment -2,371 -10,530 Ending Market Value 78,733 78,733



For the Periods Ending March 31, 2019



AB Emerging EM Strategic Markets Return (%) 2.72 7.94 Standard Deviation (%) 12.81 14.14 Sharpe Ratio 0.09 0.45

Benchmark Relative Statistics		
0.87		
91.72		
-3.93		
4.13		
33.33		
71.68		
96.45		
	0.87 91.72 -3.93 4.13 33.33 71.68	

2 Year Portfolio Statistics

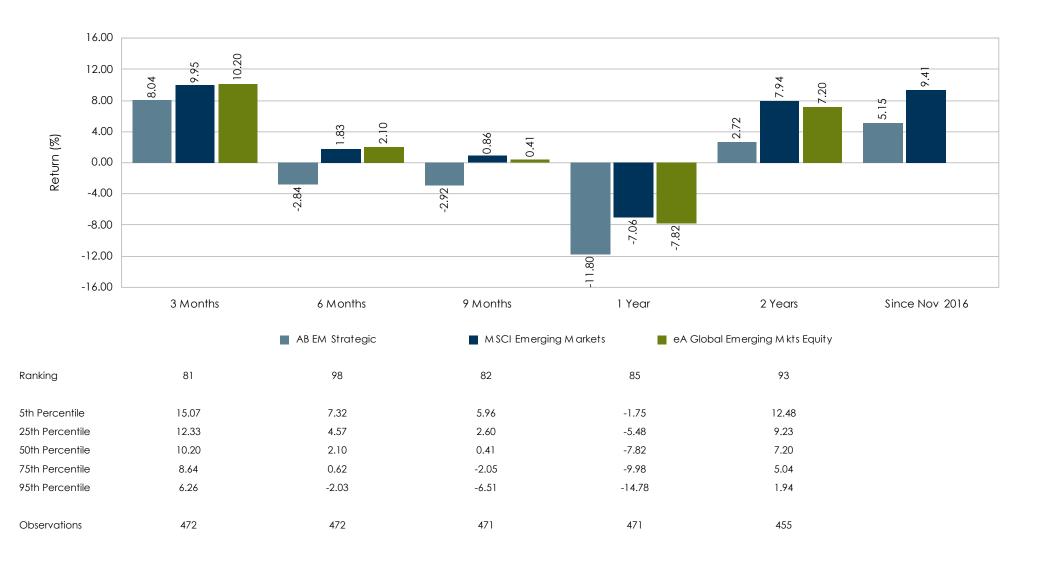
2 Year Growth of a Dollar



2 Year Return Analysis

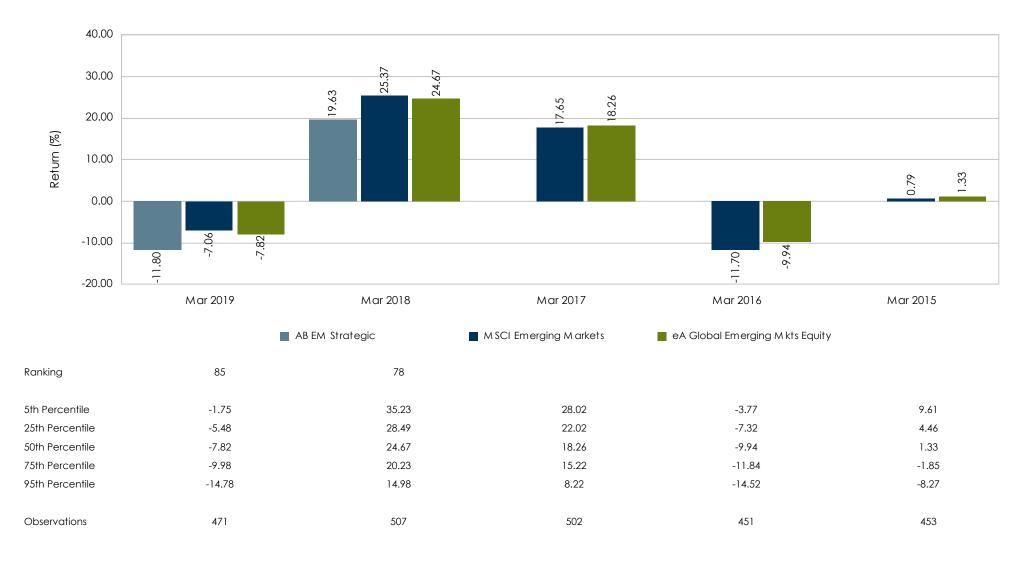
	AB EM Strategic	MSCI Emerging Markets
Number of Months	24	24
Highest Monthly Return (%)	7.70	8.76
Lowest Monthly Return (%)	-9.21	-8.70
Number of Positive Months	15	14
Number of Negative Months	9	10
% of Positive Months	62.50	58.33

For the Periods Ending March 31, 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 March



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 March 31, 2019

Summary of Cash Flows for 6 Months

Cash Outflows	Cash Inflows	Net Cash Flows
-16,381,162	17,711,758	1,330,596

Summary of Portfolio Inception to Date

	Inception Date	Committed	Drawn to Date	Remaining Commitment	Distributions to Date	Adjusted	Total Value	Total Value to Paid-in
						Ending Value		
Total	Feb-98	670,700,000	556,861,853	137,422,094	625,710,913	204,948,786	830,659,699	1. 49 x
Buyout	Apr-99	228,200,000	195,188,413	48,274,354	247,767,815	55,955,442	303,723,257	1.56x
Levine Leichtman	Feb-03	10,000,000	10,612,096	439,719	18,254,382	76,410	18,330,792	1.73x
Thompson Street C.P. II	Dec-06	10,000,000	10,596,453	952,882	19,089,442	1,861,863	20,951,305	1.98x
Arsenal Capital Partners II	Dec-06	15,000,000	14,991,977	668,860	29,926,943	4,652,024	34,578,967	2.31x
Sun Capital Partners V	May-07	12,500,000	12,857,638	1,913,057	11,018,100	3,719,930	14,738,030	1.15x
Calera Capital Fund IV	Apr-08	10,000,000	8,754,812	1,245,188	13,026,094	513,546	13,539,640	1.55x
Levine Leichtman IV	Sep-08	10,000,000	9,284,222	1,065,574	15,354,090	1,220,504	16,574,594	1.79x
Thompson Street Capital III	Oct-11	7,500,000	7,769,956	440,250	7,273,466	4,629,898	11,903,364	1.53x
Arsenal Capital Partners III	Apr-12	7,500,000	7,625,862	2,012,595	14,425,141	2,906,033	17,331,174	2.27x
Apollo Investment Fund VIII	Feb-14	7,500,000	7,195,413	1,359,612	2,544,052	6,177,249	8,721,301	1.21x
Francisco Partners Fund IV	Apr-15	8,000,000	7,796,000	204,000	3,204,000	9,820,395	13,024,395	1.67x
CenterOak Equity Fund I	Dec-15	7,500,000	5,217,579	2,722,629	533,733	5,496,425	6,030,158	1.16x
Thompson Street Capital Partners IV	Jan-16	7,500,000	6,496,000	1,004,000	1,357,461	6,160,350	7,517,811	1.16x
Leonard Green Equity Investors VII	May-17	7,500,000	3,818,580	3,713,427	32,007	4,048,202	4,080,209	1.07x
Francisco Partners Fund V	Jul-18	10,000,000	2,975,000	7,025,000	-	3,044,835	3,044,835	1.02x
Thompson Street Capital V	Aug-18	12,700,000	948,033	11,751,967	-	764,073	764,073	0.81x
Apollo Investment Fund IX	Mar-19	13,000,000	1,244,406	11,755,594	-	863,705	863,705	0.69x

Private Equity - Active Funds

For the Period Ending March 31, 2019

Summary of Portfolio Inception to Date

	Inception	Committed	Drawn to Date	Remaining	Distributions to Date	Adjusted Ending Value	Total Value	Total Value t Paid-in
	Date			Commitment				
Distressed	Feb-98	143,500,000	125,358,095	18,555,587	162,668,210	20,894,038	183,562,248	1.46x
Oaktree Opportunities Fund V	Jun-04	4,000,000	4,000,000	-	6,505,696	47,376	6,553,072	1.64x
Oaktree Opportunities Fund VI	Aug-05	4,000,000	4,000,000	-	6,317,103	484	6,317,587	1.58x
Siguler Guff Dist Opp II	Sep-05	20,000,000	20,005,669	-	28,037,432	434,684	28,472,116	1.42x
Oaktree Opportunities VII A	Mar-07	7,500,000	7,500,000	-	10,028,864	364,169	10,393,033	1.39x
Oaktree Opportunities VII B	Jun-08	7,500,000	6,750,000	750,000	11,534,560	183,197	11,717,757	1.74x
Siguler Guff Dist Opp III	Sep-08	15,000,000	14,480,311	600,000	20,685,326	2,526,966	23,212,292	1.60x
Oaktree Opportunities VIII	Dec-09	7,500,000	7,500,000	-	10,323,767	444,127	10,767,894	1.44x
Oaktree Opportunities IX	Mar-13	7,500,000	7,500,000	-	3,217,158	5,198,368	8,415,526	1.12x
Oaktree European Dislocation Fund	Nov-13	7,500,000	4,293,000	3,207,000	4,570,399	290,699	4,861,098	1.13x
Oaktree Opportunities Fund X	Jul-15	7,500,000	6,975,000	1,275,000	1,125,000	7,374,664	8,499,664	1.22x
Apollo EPF III	Jan-18	10,000,000	3,848,199	6,161,087	465,353	3,147,476	3,612,829	0.94x
Oaktree Opportunities Fund Xb	Jun-18	7,500,000	937,500	6,562,500	-	881,828	881,828	0.94x
merging Markets Focused	Mar-12	7,500,000	7,609,575	626,820	2,042,390	6,737,273	8,779,663	1.15x
Actis EM IV	Mar-12	7,500,000	7,609,575	626,820	2,042,390	6,737,273	8,779,663	1.15x
Mezzanine	Mar-99	49,500,000	49,858,693	5,045,675	70,174,581	1,667,978	71,842,559	1.44x
TCW Crescent IV	Jun-06	10,000,000	9,873,180	1,921,076	11,226,828	25,042	11,251,870	1.14x
Newstone Capital Partners	Nov-06	5,000,000	5,697,863	116,709	7,070,952	15,209	7,086,161	1.24x
TCW Mezzanine Fund V	Mar-08	10,000,000	7,336,349	2,663,651	9,958,042	537,434	10,495,476	1.43x
Newstone Capital Partners II	Dec-10	7,500,000	10,036,257	344,239	11,264,585	1,090,293	12,354,878	1.23x
Other	Feb-13	46,500,000	22,414,849	25,952,620	8,451,809	19,019,385	27,471,194	1.23x
EnCap Energy Fund IX	Feb-13	6,500,000	7,196,354	410,084	4,566,694	4,698,953	9,265,647	1.29x
EnCap Energy Fund X	Apr-15	7,500,000	6,370,780	1,695,368	1,780,207	5,919,497	7,699,704	1.21x
ArcLight Energy Partners VI	Aug-15	7,500,000	7,404,236	290,647	2,104,908	7,206,976	9,311,884	1.26x
EnCap Energy Fund XI	Jul-17	10,000,000	1,443,479	8,556,521	-	1,193,959	1,193,959	0.83x
ArcLight Energy Partners Fund VII, L.P		15,000,000	-	15,000,000	-	-	-	-
Secondary Fund of Funds	Dec-05	20,000,000	21,439,062	-	27,582,034	1,999,078	29,581,112	1.38x
Lexington VI	Dec-05	20,000,000	21,439,062	-	27,582,034	1,999,078	29,581,112	1.38x

Private Equity - Active Funds

For the Period Ending March 31, 2019

Summary of Portfolio Inception to Date

	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	175,500,000	134,993,166	38,967,038	107,024,074	98,675,592	205,699,666	1.52x
Lightspeed Venture Partners VI (WPG)	Oct-00	12,000,000	11,010,270	989,730	10,396,934	97,019	10,493,953	0.95x
Accel Europe	May-01	10,000,000	10,000,000	-	12,403,731	920,293	13,324,024	1.33x
Knightsbridge Fund VI	Dec-04	12,000,000	11,232,000	768,000	10,052,368	6,597,372	16,649,740	1.48x
Firstmark I (Pequot, Firstmark IV)	Nov-05	5,000,000	4,950,000	50,000	15,380,412	20,191,262	35,571,674	7.19x
Weathergage Venture Capital	Mar-07	7,500,000	6,862,500	637,500	8,652,343	5,300,689	13,953,032	2.03x
Warburg Pincus	Oct-07	15,000,000	15,000,000	-	17,451,013	5,816,735	23,267,748	1.55x
Weathergage Venture Cap II	Apr-11	7,500,000	6,975,000	525,000	3,751,532	10,657,333	14,408,865	2.07x
Firstmark II (Firstmark V)	Aug-11	5,000,000	5,072,365	-	497,531	8,847,385	9,344,916	1.84x
Warburg Pincus XI	Nov-12	7,500,000	7,500,000	-	4,850,391	6,782,811	11,633,202	1.55x
Firstmark Capital Fund III	Feb-14	5,000,000	4,825,000	175,000	141,977	6,811,592	6,953,569	1.44x
Firstmark Capital Opportunity Fund I	Jun-14	5,000,000	5,075,000	186,808	441,498	6,604,259	7,045,757	1.39x
Warburg Pincus XII	Dec-15	10,000,000	7,275,000	2,725,000	438,230	7,953,132	8,391,362	1.15x
Weathergage Venture Capital IV	Dec-16	10,000,000	4,800,000	5,200,000	-	4,854,521	4,854,521	1.01x
FirstMark Capital Fund IV	Apr-17	7,500,000	2,625,000	4,875,000	-	2,599,811	2,599,811	0.99x
FirstMark Capital Opportunity Fund II	Jan-18	7,500,000	4,425,000	3,075,000	-	4,401,378	4,401,378	0.99x
Warburg Pincus Global Growth	Mar-19	20,000,000	240,000	19,760,000	-	240,000	240,000	1.00x



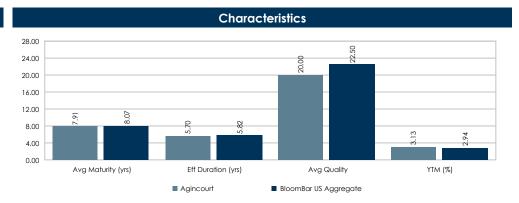
Fixed Income Manager Performance

Agincourt Core Fixed Income

For the Periods Ending March 31, 2019

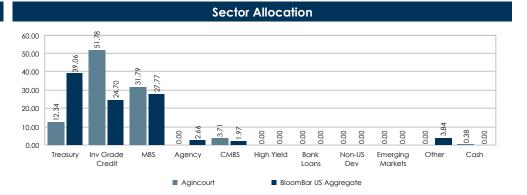
Account Description

- 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

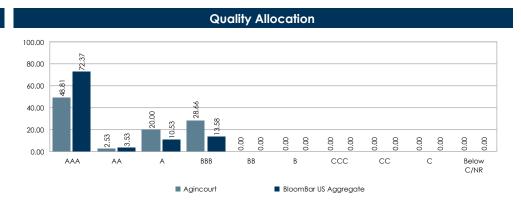


Performance Goals

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



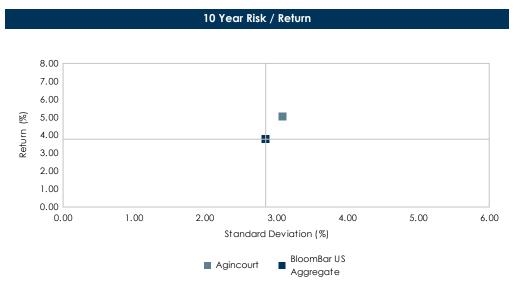
Dollar Growth Summary (\$000s) FYTD 1 Year **Beginning Market Value** 169,991 169,624 Net Additions 19,757 19,681 Return on Investment 9,322 9,031 Income 4,957 6,425 4,365 2,606 Gain/Loss **Ending Market Value** 198,703 198,703



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

Agincourt Core Fixed Income

For the Periods Ending March 31, 2019

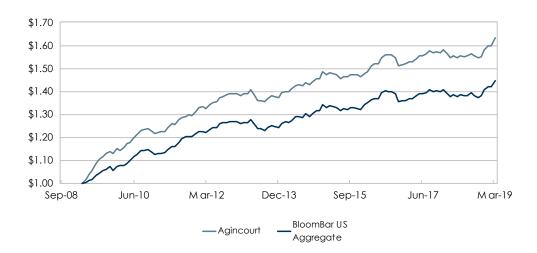


10 Year Portfolio Statistics

	BloomBar US	
	Agincourt	Aggregate
Return (%)	5.03	3.77
Standard Deviation (%)	3.09	2.84
Sharpe Ratio	1.50	1.19

Benchmark Relative Statistics			
1.02			
87.54			
1.16			
1.09			
65.83			
116.34			
88.21			
	1.02 87.54 1.16 1.09 65.83 116.34		

10 Year Growth of a Dollar

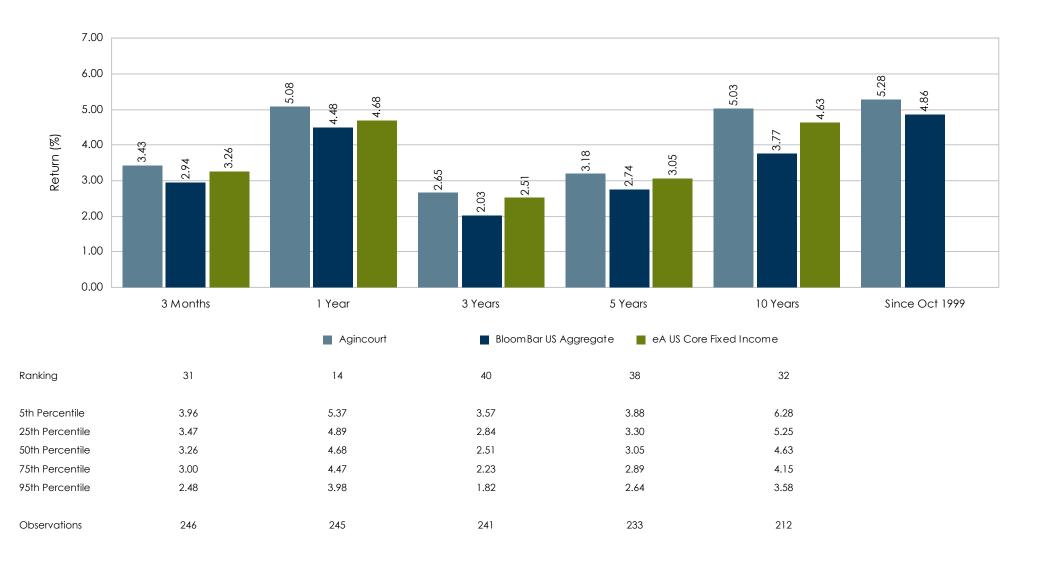


10 Year Return Analysis

	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

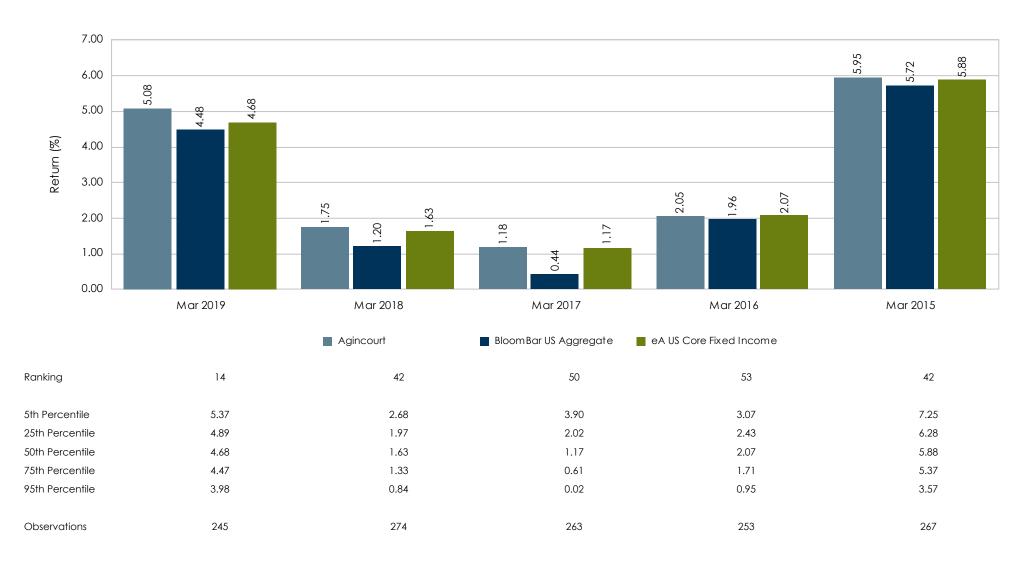
For the Periods Ending March 31, 2019



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 March



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 March 31, 2019

Account Description

Performance Goals

Outperform the BloomBar US Aggregate.

- Strategy Multi-Sector Fixed Income
- Vehicle Limited Partnership

Ending Market Value

Return on Investment

- Benchmark BloomBar US Aggregate
- **Performance Inception Date** February 1998
- **Fees** 50 bps plus operating expenses

Dollar Growth Summary (\$000s)			
	FYTD	1 Year	
Beginning Market Value	123,596	122,353	
Net Additions	-7	-202	

2,650

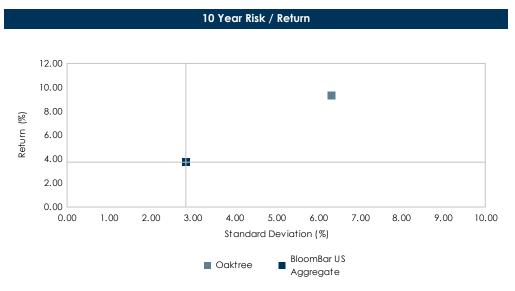
126,239

		Grow	h of a Doll	ar		
\$4.40						
\$4.00						~~
\$3.60						
\$3.20					~~ W	
\$2.80				~~		
\$2.40						~~~
\$2.00			my for			
\$1.60		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
\$1.20						
\$0.80	I	l	1	l	l	
Sep-97	Apr-01	Nov-04	Jun-08	Jan-12	Aug-15	Mar-19
		— Oaktree		oomBar US ggregate		

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4,088 126,239

For the Periods Ending March 31, 2019

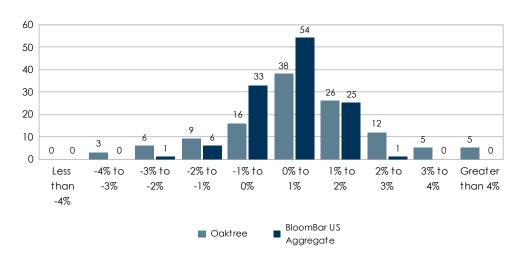


10 Year Portfolio Statistics

	BloomBar US	
	Oaktree	Aggregate
Return (%)	9.33	3.77
Standard Deviation (%)	6.32	2.84
Sharpe Ratio	1.42	1.19

Benchmark Relative Statistics			
Beta	0.38		
R Squared (%)	2.85		
Alpha (%)	8.03		
Tracking Error (%)	6.48		
Batting Average (%)	60.83		
Up Capture (%)	145.83		
Down Capture (%)	-15.63		

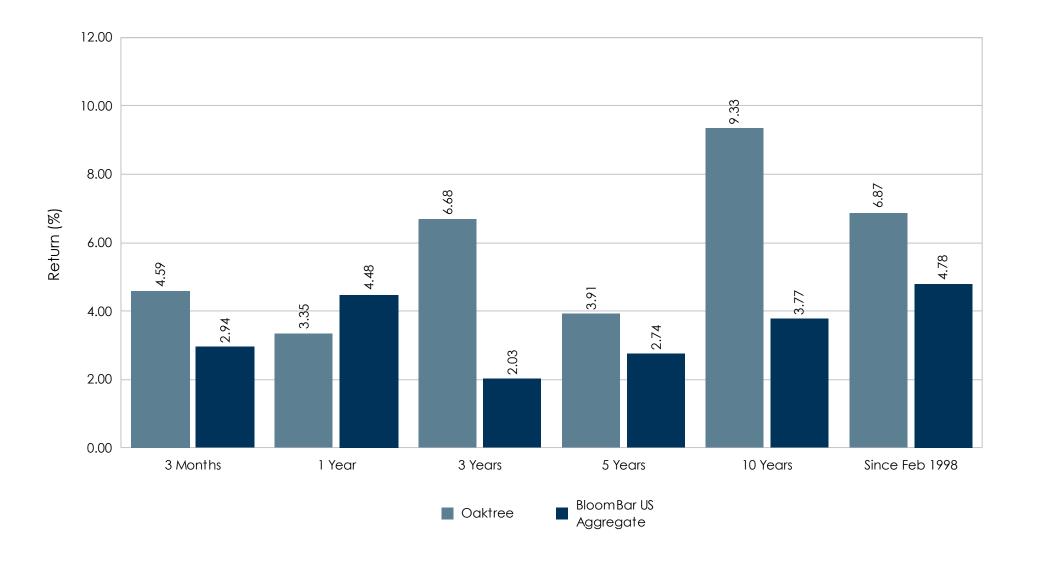
10 Year Return Histogram



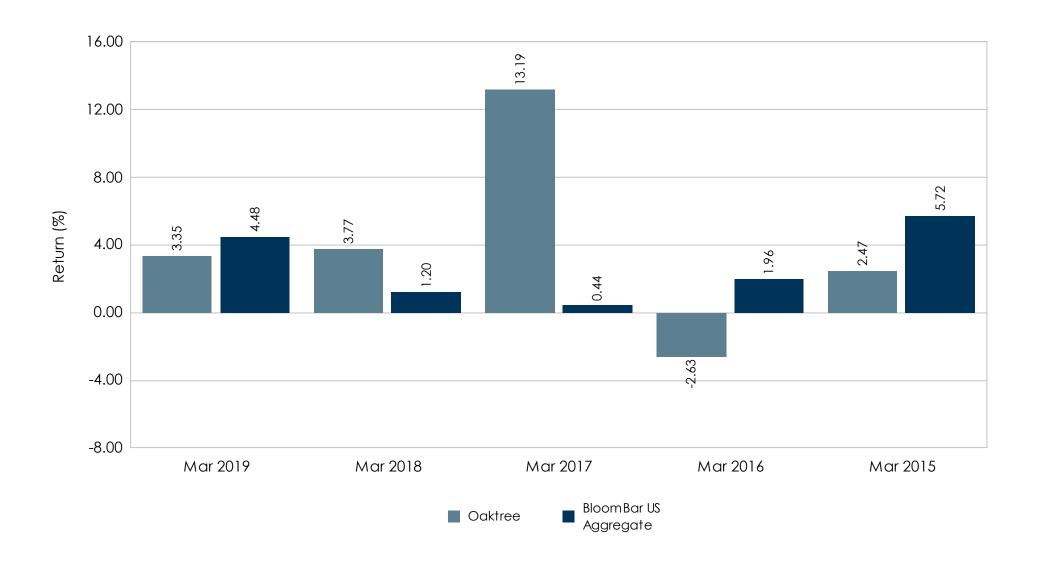
10 Year Return Analysis

	Oaktree	BloomBar US Aggregate
Number of Months	120	120
Highest Monthly Return (%)	7.58	2.10
Lowest Monthly Return (%)	-3.96	-2.37
Number of Positive Months	86	80
Number of Negative Months	34	40
% of Positive Months	71.67	66.67

For the Periods Ending March 31, 2019



For the One Year Periods Ending March

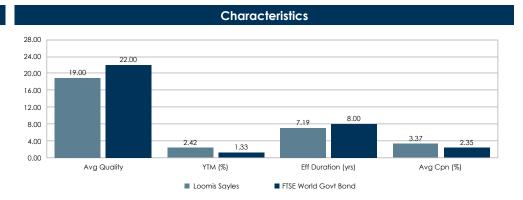


Loomis Sayles

For the Periods Ending March 31, 2019

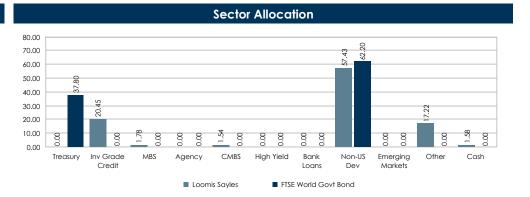
Account Description

- 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



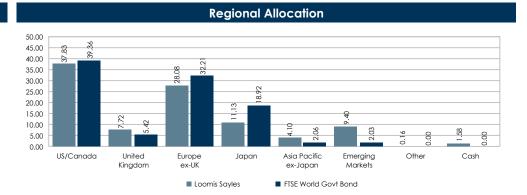
Performance Goals

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



Dollar Growth Summary (\$000s)

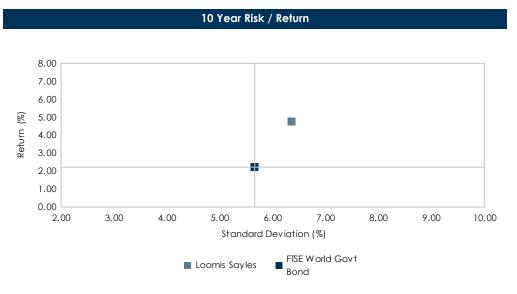
	FYTD	1 Year
Beginning Market Value	96,749	100,941
Net Additions	-20,238	-20,318
Return on Investment	2,175	-1,938
Ending Market Value	78,685	78,685



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 March 31, 2019



	Loomis Sayles	FTSE World Govt Bond
Return (%)	4.76	2.20
Standard Deviation (%)	6.36	5.66
Sharpe Ratio	0.69	0.32

Bench	Benchmark Relative Statistics			
Beta	1.03			
R Squared (%)	84.11			
Alpha (%)	2.48			
Tracking Error (%)	2.54			
Batting Average (%)	65.83			
Up Capture (%)	125.57			
Down Capture (%)	93.32			

10 Year Portfolio Statistics

10 Year Growth of a Dollar

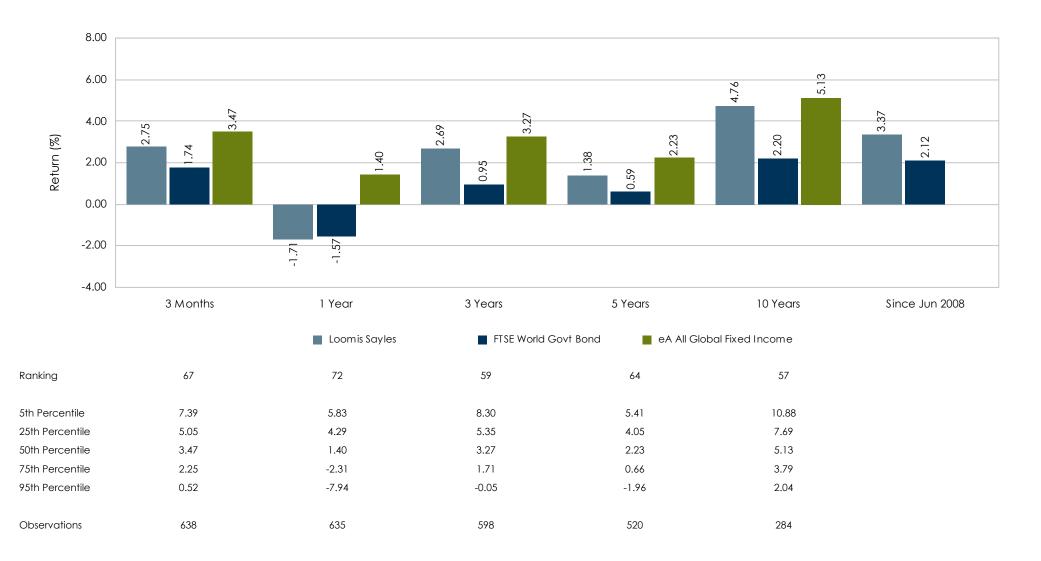


10 Y	'ear	Return	Ana	ysi	8

	Loomis Sayles	FTSE World Govt Bond
Number of Months	120	120
Highest Monthly Return (%)	6.12	3.69
Lowest Monthly Return (%)	-4.95	-5.03
Number of Positive Months	75	67
Number of Negative Months	45	53
% of Positive Months	62.50	55.83

Loomis Sayles

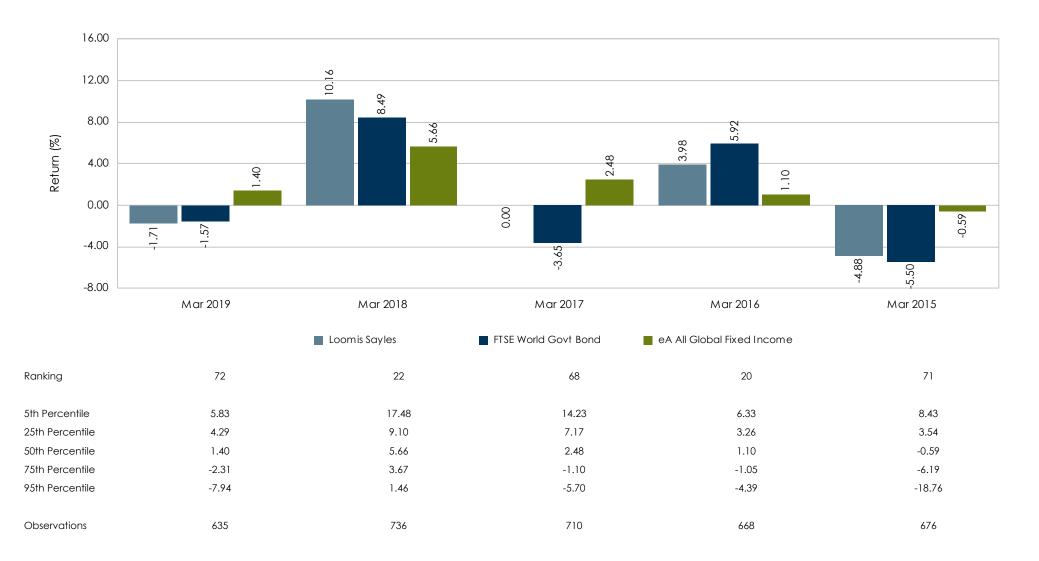
For the Periods Ending March 31, 2019



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 March



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 March 31, 2019

Summary of Cash Flows for 6 Months

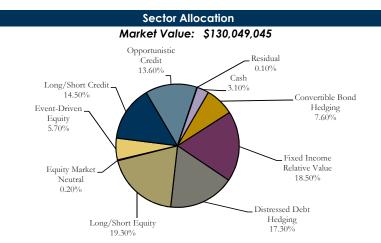
Cash Outflows	Cash Inflows	Net Cash Flows
-21,771,763	6,277,682	-15,494,081

Summary of Portfolio Inception to Date

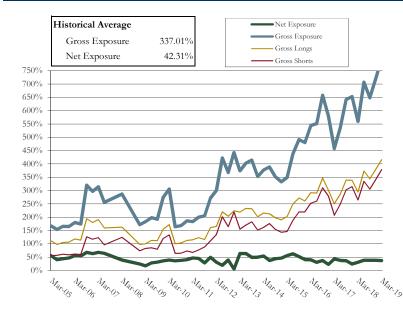
	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Sep-16	90,000,000	55,654,055	40,053,916	13,296,579	47,722,757	61,019,336	1.10x
Mezzanine	Jan-17	20,000,000	17,154,055	3,179,742	5,506,998	14,167,227	19,674,225	1.15x
Newstone Capital Partners III	Jan-17	20,000,000	17,154,055	3,179,742	5,506,998	14,167,227	19,674,225	1.15x
Other	Sep-16	70,000,000	38,500,000	36,874,174	7,789,581	33,555,530	41,345,111	1.07x
LBC Credit Partners Fund IV	Sep-16	40,000,000	28,000,000	17,374,174	7,789,581	23,156,048	30,945,629	1.11x
Apollo Accord II	Oct-18	30,000,000	10,500,000	19,500,000	-	10,399,482	10,399,482	0.99x

PAAMCO

For the Periods Ending March 31, 2019







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: 37.30%Gross Exposure: 794.50%

PAAMCO

For the Periods Ending March 31, 2019



BloomBar US HFRI FOF: **PAAMCO** Aggregate Conservative 4.95 3.77 3.43 Return (%) 2.84 2.70 Standard Deviation (%) 3.66 **Sharpe Ratio** 1.25 1.19 1.13

10 Year Portfolio Statistics

Benchmark	c Relative Statistics	
Beta	-0.20	1.20
R Squared (%)	2.37	78.00
Alpha (%)	5.80	0.83
Tracking Error (%)	4.97	1.80
Batting Average (%)	61.67	60.83
Up Capture (%)	53.07	128.61
Down Capture (%)	-73.02	103.97

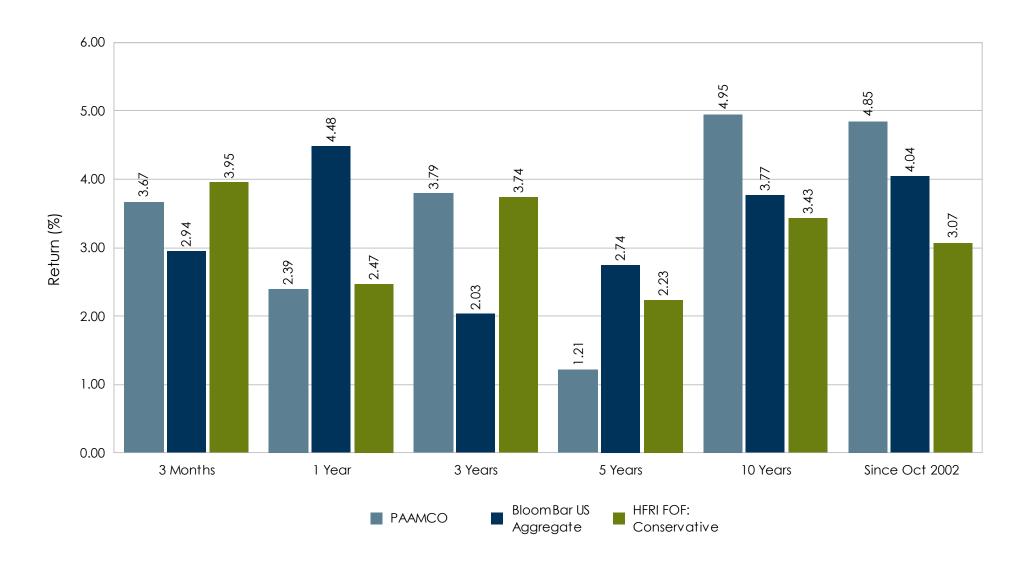
10 Year Growth of a Dollar

\$1.70 \$1.60 \$1.50 \$1.40 \$1.30 \$1.20 \$1.10 \$1.00 Sep-08 Jun-10 M ar-12 Jun-17 M ar-19 Dec-13 Sep-15 HFRI FOF: BloomBar US -PAAMCO Aggregate Conservative

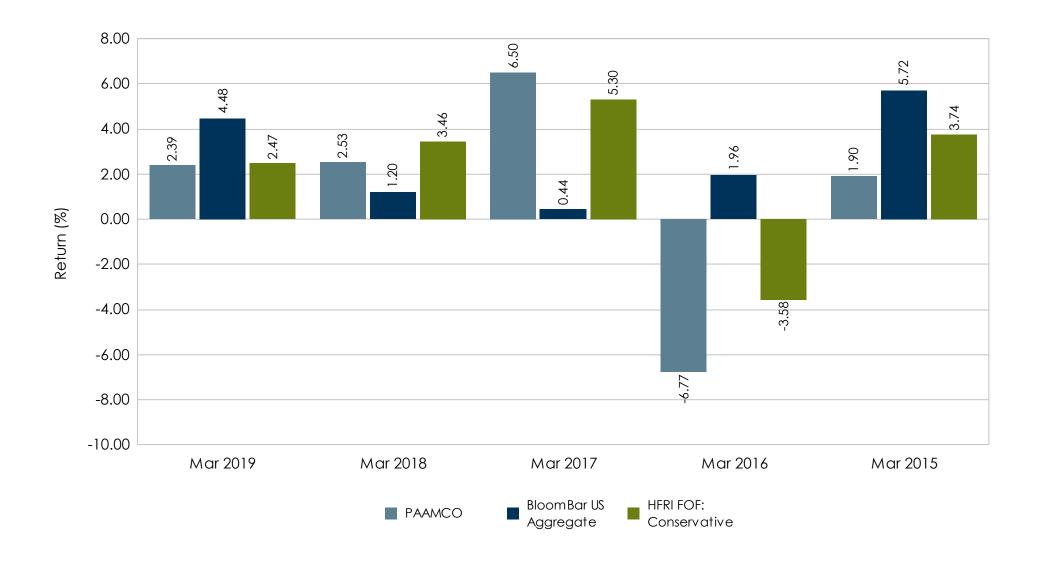
10 Year Return Analysis

	PAAMCO	BloomBar US Aggregate	HFRI FOF: Conservative
Number of Months	120	120	120
Highest Monthly Return (%)	2.84	2.10	2.42
Lowest Monthly Return (%)	-2.99	-2.37	-2.13
Number of Positive Months	83	80	88
Number of Negative Months	37	40	32
% of Positive Months	69.17	66.67	73.33

PAAMCOFor the Periods Ending March 31, 2019



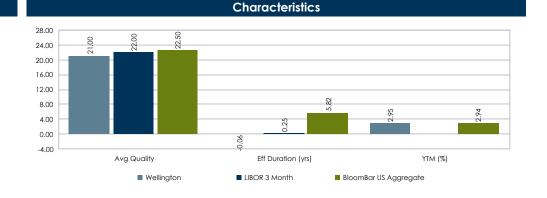
PAAMCOFor the One Year Periods Ending March



For the Periods Ending March 31, 2019

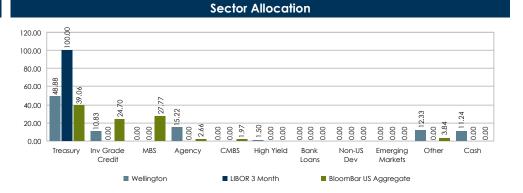
Account Description

- Strategy Absolute Return
- Vehicle Non-Mutual Commingled
- Benchmarks LIBOR 3 Month and BloomBar US Aggregate
- Performance Inception Date December 2016
- Fees 25 bps, plus 20% of excess return beyond cash + 1%

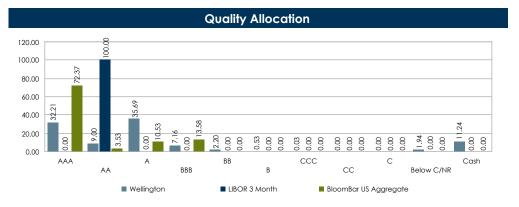


Performance Goals

- Outperform the LIBOR 3 Month.
- Over rolling three year periods, rank above the median in the eA Global Unconstrained Fixed Income universe.



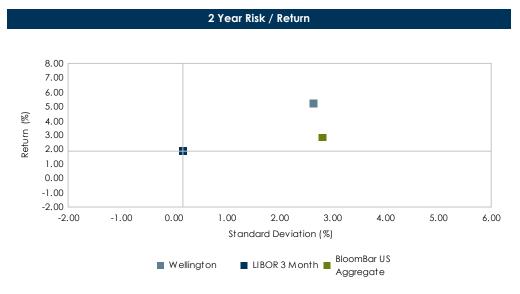
Dollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 63,335 61,835 Net Additions -599 -637 Return on Investment 2,584 4,123 Ending Market Value 65,320 65,320



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

For the Periods Ending March 31, 2019

Sharpe Ratio



Wellington LIBOR 3 Month 3 Month Aggregate BloomBar US Aggregate Return (%) 5.19 1.91 2.83 Standard Deviation (%) 2.64 0.17 2.80

1.37

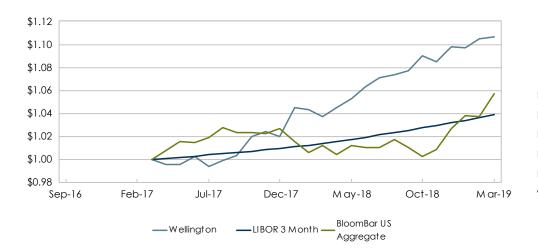
2.04

0.45

2 Year Portfolio Statistics

Benchmark Relative Statistics				
Beta	2.40	-0.35		
R Squared (%)	2.41	13.72		
Alpha (%)	0.56	6.27		
Tracking Error (%)	2.62	4.50		
Batting Average (%)	62.50	50.00		
Up Capture (%)	271.72	20.11		
Down Capture (%)		-162.18		

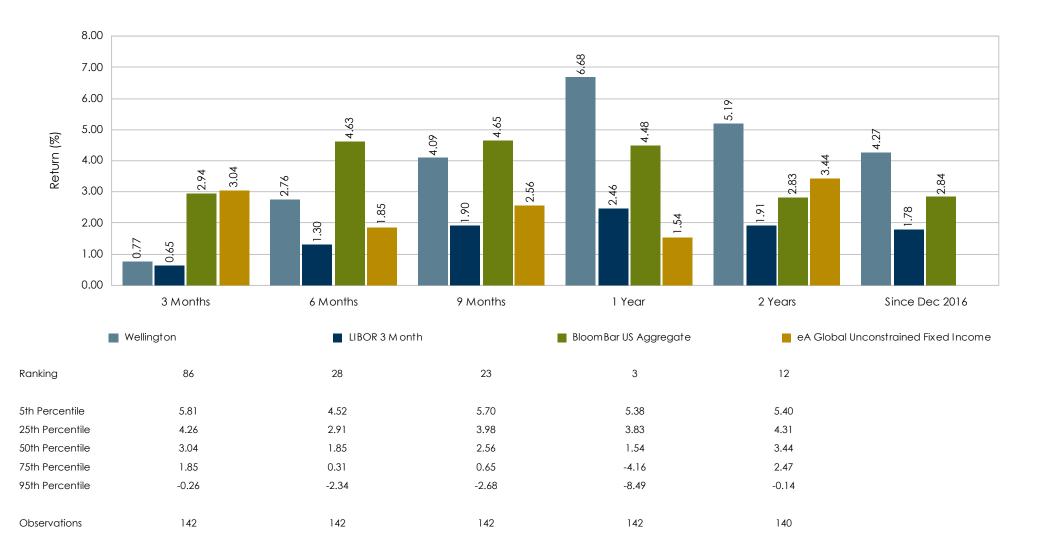
2 Year Growth of a Dollar



2 Year Return Analysis

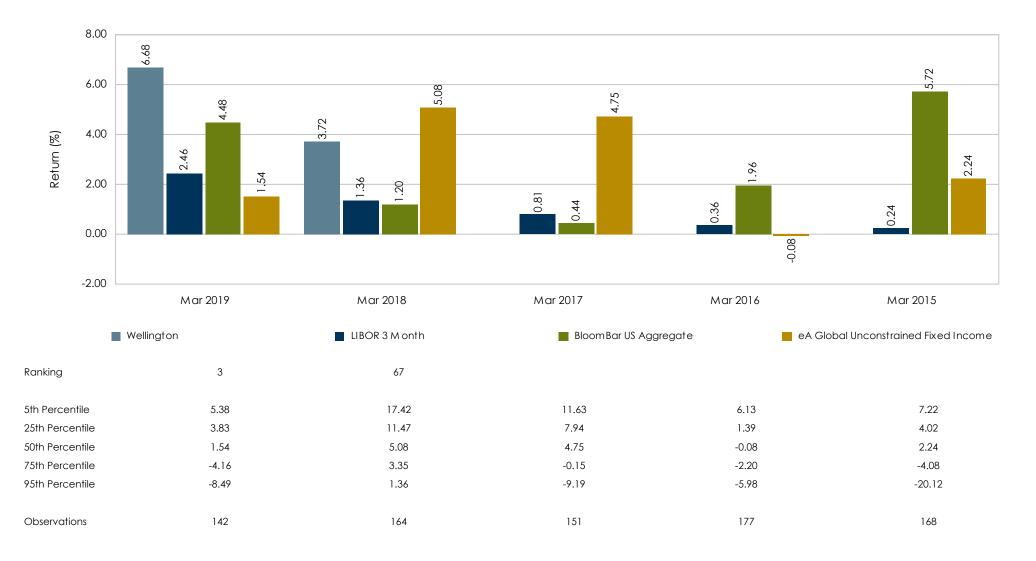
	Wellington	LIBOR 3 Month	BloomBar US Aggregate
Number of Months	24	24	24
Highest Monthly Return (%)	2.45	0.22	1.92
Lowest Monthly Return (%)	-0.87	0.08	-1.15
Number of Positive Months	16	24	14
Number of Negative Months	8	0	10
% of Positive Months	66.67	100.00	58.33

For the Periods Ending March 31, 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 March



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

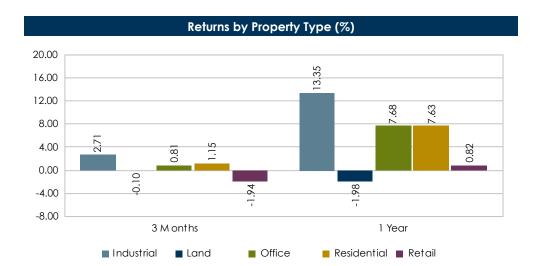
For the Periods Ending March 31, 2019

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

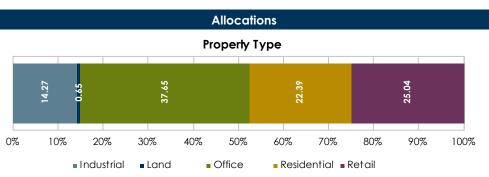
Performance Goals

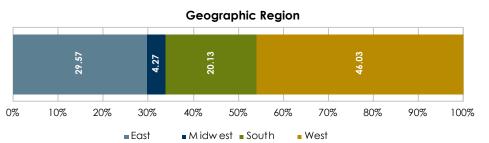
Outperform the NFI ODCE Net.



Account Information • Ending Market Value \$128,241,416

Fund Information	
Gross Market Value	\$42,756,764,126
■ Net Market Value	\$32,550,244,532
Cash Balance of Fund	\$560,970,467
# of Properties	167
# of Participants	427

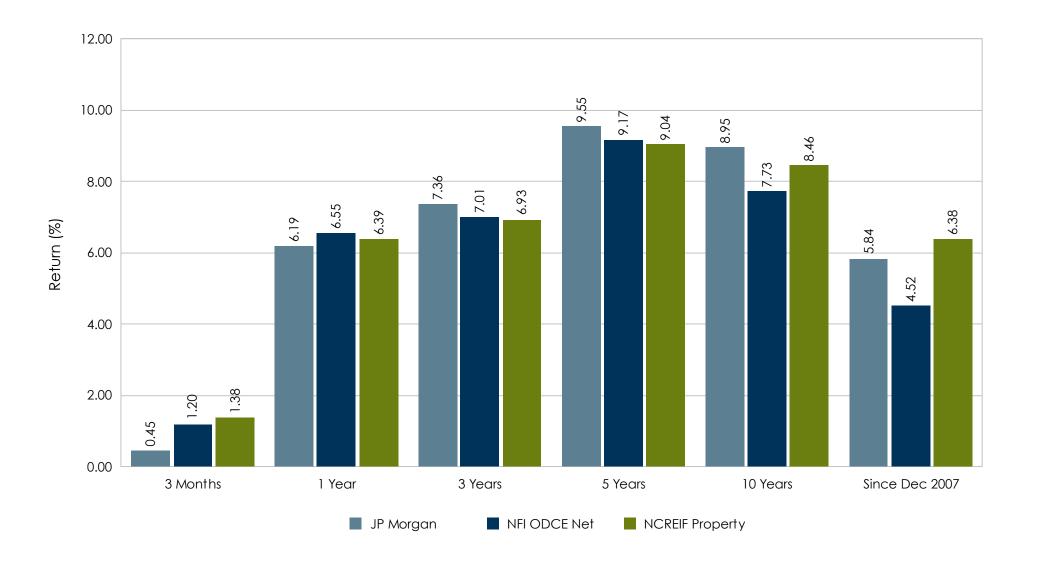




Characteristic and allocation charts represents data of the Strategic Property Fund (Non-Mutual Commingled). © 2019 Asset Consulting Group All Rights Reserved

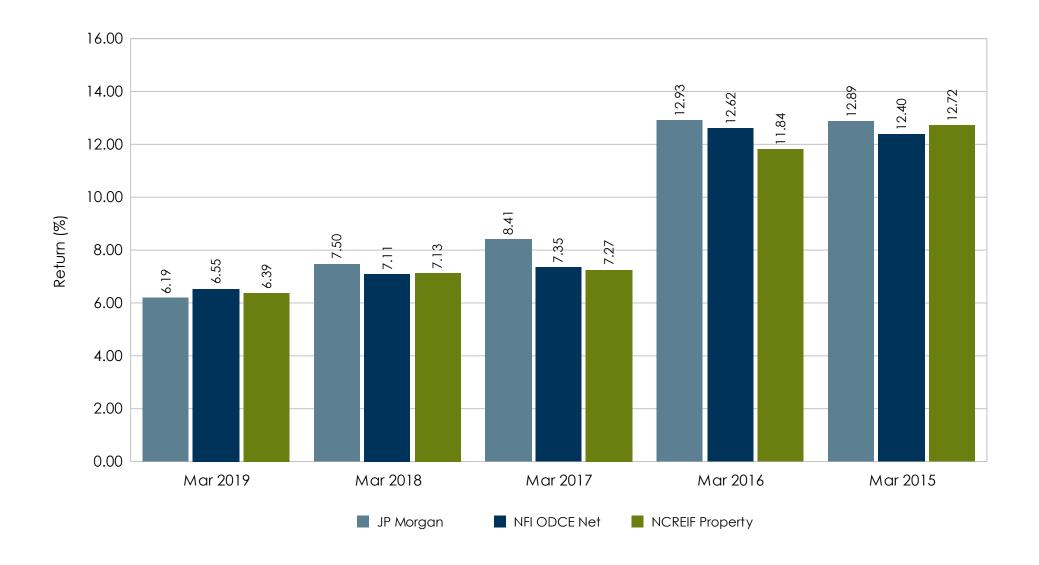
JP Morgan Strategic Property

For the Periods Ending March 31, 2019



JP Morgan Strategic Property

For the One Year Periods Ending March



Blackstone Property Partners

For the Periods Ending March 31, 2019

Account Description

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

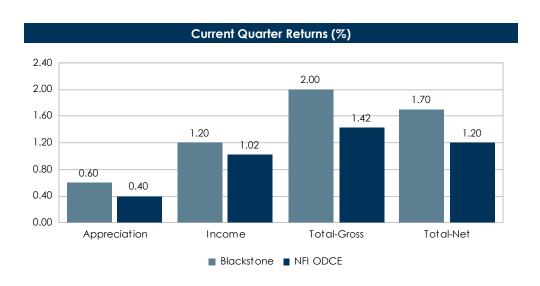
■ Ending Market Value	\$42,663,881

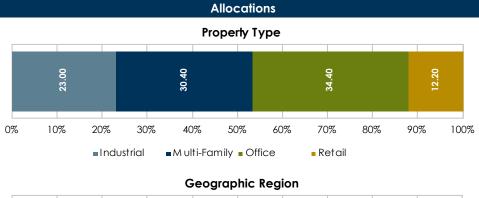
Account Information

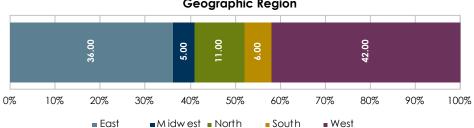
Fund Inform	ation
■ Net Market Value	\$9,400,000,000
# of Properties	36

Performance Goals

Outperform the NFI ODCE Net and NCREIF Property.

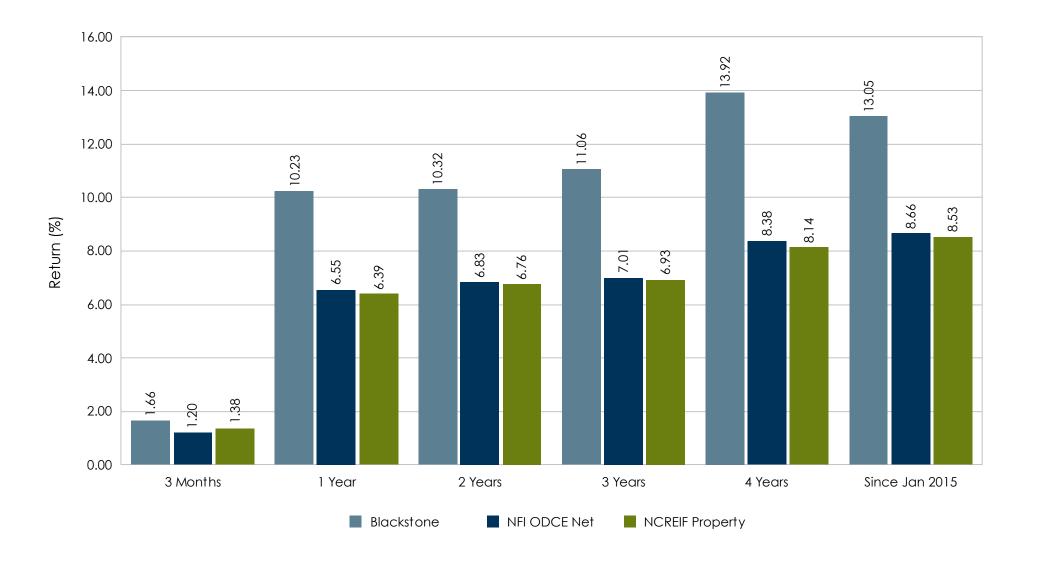






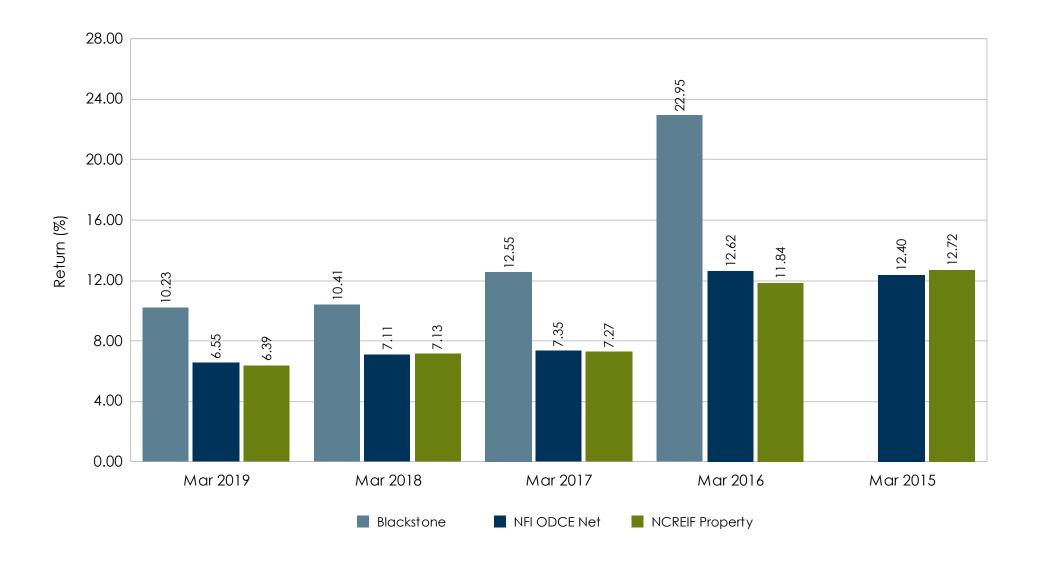
Blackstone Property Partners

For the Periods Ending March 31, 2019



Blackstone Property Partners

For the One Year Periods Ending March



Private Real Estate - Active Funds

For the Period Ending March 31, 2019

Summary of Cash Flows for 6 Months

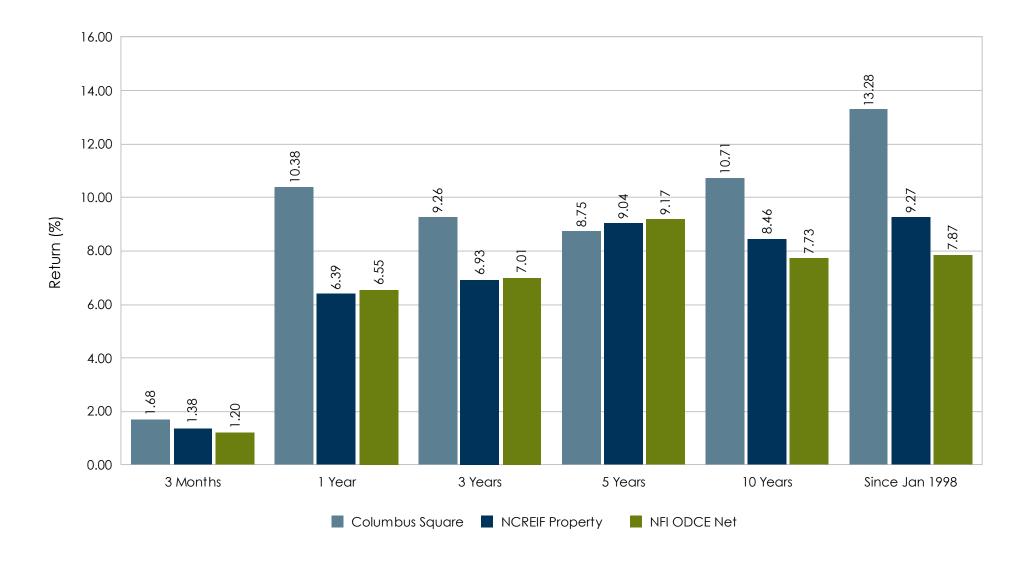
Cash Outflows	Cash Inflows	Net Cash Flows
-4,477,193	9,633,044	5,155,851

Summary of Portfolio Inception to Date

	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Aug-11	92,500,000	83,041,413	20,844,653	63,446,038	51,941,662	115,387,700	1.39x
Real Estate	Aug-11	92,500,000	83,041,413	20,844,653	63,446,038	51,941,662	115,387,700	1.39x
Siguler Guff Dist. Real Estate Opp.	Aug-11	10,000,000	8,788,587	1,470,773	11,065,802	4,573,711	15,639,513	1.78x
TA Associates Realty X	Jan-13	20,000,000	20,000,000	-	20,458,120	10,313,028	30,771,148	1.54x
Cerberus Real Estate Fund III	Jul-13	20,000,000	25,185,319	4,871,659	23,894,698	11,149,923	35,044,621	1.39x
Hall Capital Fund III	Nov-14	7,500,000	6,962,175	537,825	2,561,106	5,228,395	7,789,501	1.12x
Siguler Guff Dist. Real Estate Opp. II	Dec-14	10,000,000	8,557,577	1,442,423	4,396,474	7,150,931	11,547,405	1.35x
Cerberus Institutional Real Estate Partners 4	Jun-16	15,000,000	8,697,755	7,371,973	1,069,838	7,965,222	9,035,060	1.04x
Siguler Guff Dist. Real Estate Opp. II B	Dec-17	10,000,000	4,850,000	5,150,000	-	5,560,452	5,560,452	1.15x

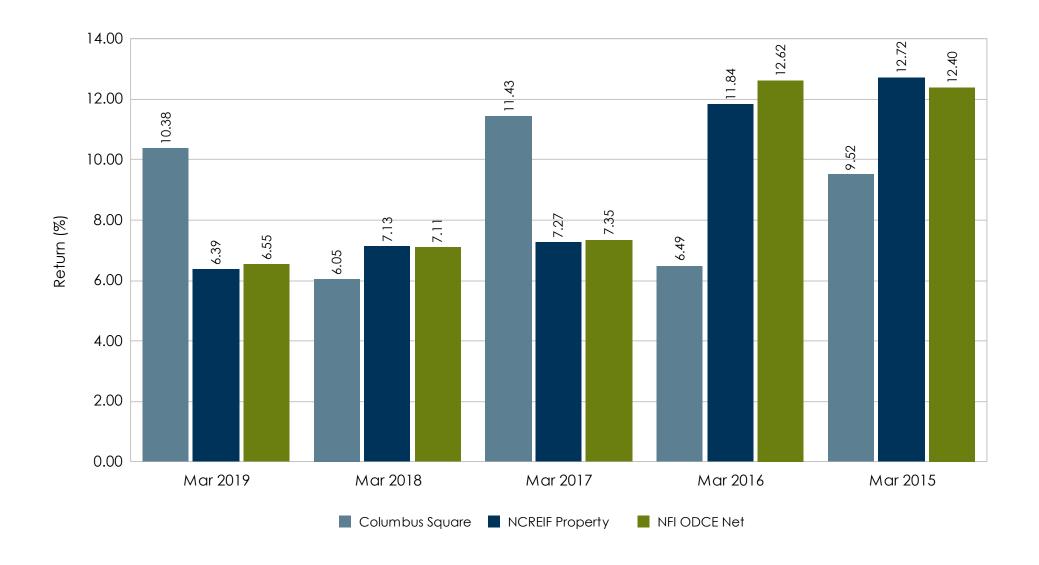
Columbus Square

For the Periods Ending March 31, 2019



Columbus Square

For the One Year Periods Ending March



Mount Lucas Peak Partners

For the Periods Ending March 31, 2019

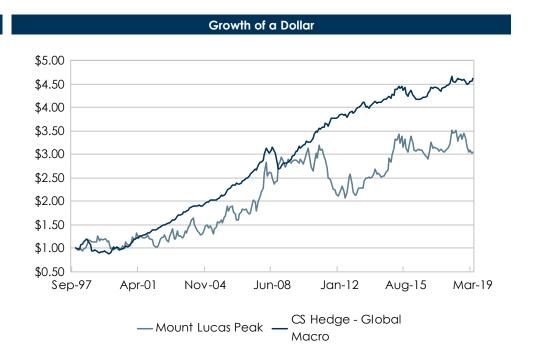
Account Description

Performance Goals

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

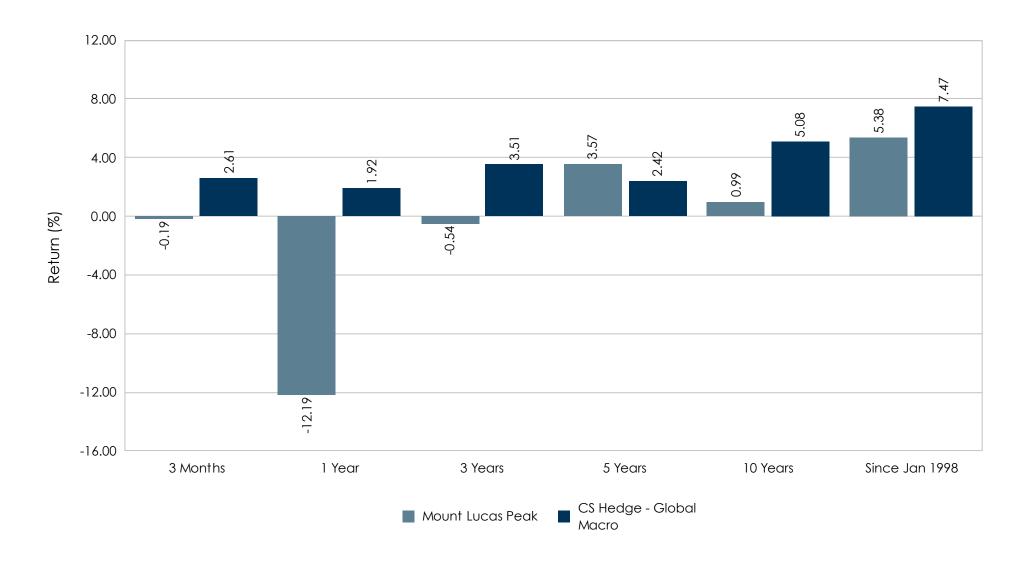
Oulperform the	Cs neage -	Global Macro.

Dollar Growth Summary (\$000s)					
	FYTD	1 Year			
Beginning Market Value	31,700	32,760			
Net Additions	-230	-316			
Return on Investment	-2,997	-3,970			
Ending Market Value	28,473	28,473			



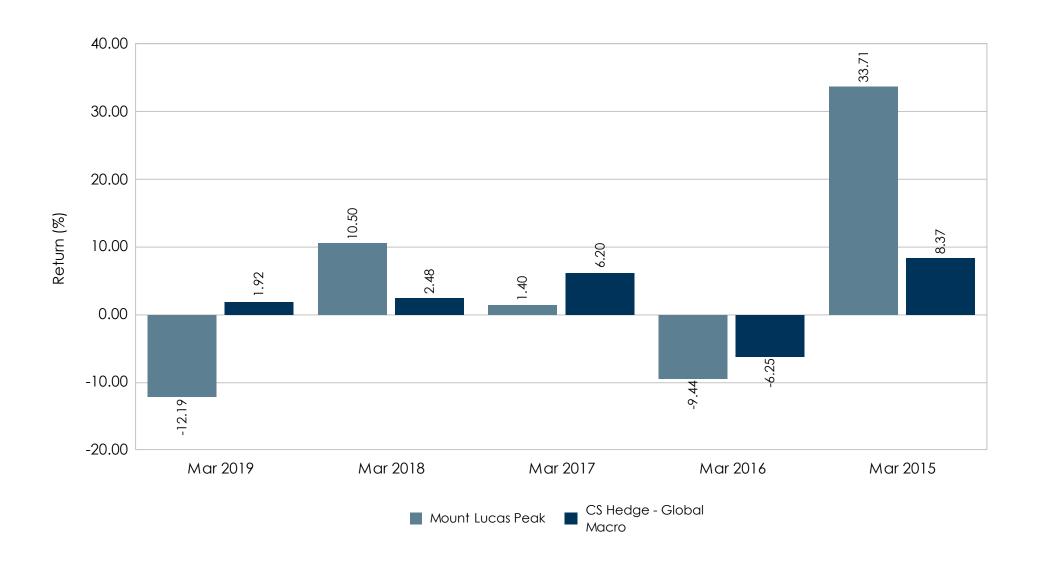
Mount Lucas Peak Partners

For the Periods Ending March 31, 2019



Mount Lucas Peak Partners

For the One Year Periods Ending March



Gresham Tap Fund

For the Periods Ending March 31, 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)					
	FYTD	1 Year			
Beginning Market Value	53,155	52,148			
Net Additions	0	0			
Return on Investment	-3,471	-2,464			
Ending Market Value	49,683	49,683			

Grov	wth of a Dollar	
\$1.00		
\$0.95		_
\$0.90		
\$0.85		
\$0.80		
\$0.75	*	
\$0.70		
\$0.65		_
\$0.60)	
\$0.55	1 1	
Mar-14 Jan-15 Nov-15	Sep-16 Jul-17 May-18 Ma	ar-19
— Gresho	am — Bloomberg Commodity	

Gresham TAP Fund

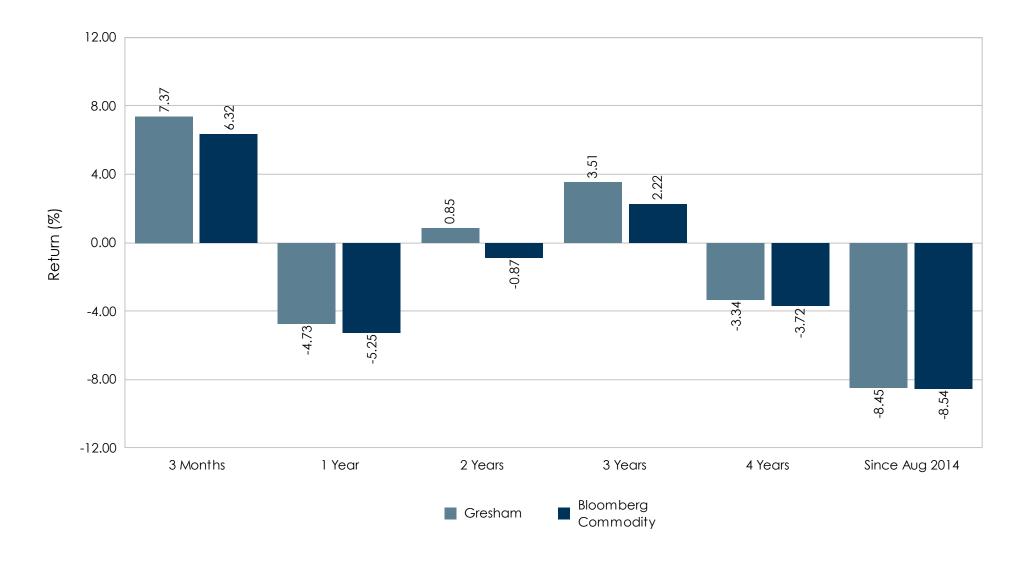
For the Periods Ending March 31, 2019

		Pariod En			sis and Bloomberg		<u>-</u>		POL 97	POI	DIEE	
		Period Ending Weights TCBA Bloombera		TCBA	QTD ROI % TCBA Bloomberg		ROI DIFF Diff Est. Watd ¹		YTD ROI % TCBA Bloomberg		ROI DIFF Diff Est. Wgtd ¹	
		ICDA	biodifibeig	ICBA	biodifibeig	DIII ESI.	wyiu	ICBA	biodifibeig	DIII ESI.	wyiu	
Agriculture												
Corn		4.31%	5.24%	-6.90	-69.90	0.19	0.05	-6.90	-6.90	0.19	0.05	
Soybean		5.19%	5.50%	-2.70	-2.71	0.04	-0.01	-2.70	-2.71	0.04	-0.01	
Soybean Oil		1.18%	2.94%	0.70	0.74	0.08	-0.01	0.70	0.74	0.08	-0.01	
Soybean Meal		1.15%	3.12%	-2.40	-2.37	0.08	-0.03	-2.40	-2.37	0.08	-0.03	
Wheat (Chicago)		2.09%	2.65%	-10.30	-9.52	0.07	-0.76	-10.30	-9.52	0.07	-0.76	
Wheat (Kansas Cit	/)	0.76%	1.05%	-13.80	-13.14	0.05	-0.68	-13.80	-13.14	0.05	-0.68	
Wheat (Minneapo	is)	0.15%	0.00%	0.20		-0.01		0.20		-0.01		
(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Group SubTotal	14.83%	20.50%	-5.59	-4.80	0.50	-0.79	-5.59	-4.80	0.50	-0.79	
inergy												
WTI Crude Oil		11.49%	8.99%	28.70	29.40	0.30	-0.72	28.70	29.40	0.30	-0.72	
Brent Crude		10.27%	8.21%	23.80	24.50	0.23	-0.69	23.80	24.50	0.23	-0.72	
		2.72%	8.21% 2.29%	18.70	24.50 18.60		-0.09 0.12	23.80 18.70		-0.10	-0.69 0.12	
Heating Oil (ULSD)						-0.10			18.60			
Gas Oil		3.27%	2.80%	19.40	19.27	0.20	0.16	19.40	19.27	0.20	0.16	
RBOB Gasoline		3.96%	3.04%	24.60	25.92	0.01	-1.34	24.60	25.92	0.01	-1.34	
Natural Gas		6.65%	7.36%	-3.40	-8.49	0.55	5.05	-3.40	-8.49	0.55	5.05	
	Group SubTotal	38.36%	32.69%	17.96	15.25	1.20	2.71	17.96	15.25	1.20	2.71	
oods & Fibers												
Coffee		1.36%	2.17%	-9.90	-9.99	0.15	0.01	-9.90	-9.99	0.15	0.10	
Coffee (Robusta)		0.20%	0.00%	-5.70		-0.03		-5.70		-0.03		
Cotton		1.82%	1.44%	5.50	5.61	-0.01	-0.11	5.50	5.61	-0.01	-0.11	
Sugar		2.05%	2.97%	4.30	5.18	-0.02	-0.90	4.30	5.18	-0.02	-0.90	
Sugar (White)		0.21%	0.00%	-5.90		-0.03		-5.90		-0.03		
Cocoa		0.69%	0.00%	-8.00		-0.12		-8.00		-0.12		
00000	Group SubTotal	6.33%	6.58%	-1.19	-0.17	-0.06	-1.02	-1.19	-0.17	-0.06	-1.02	
ndustrial Metals	0.00p 002.0.d.	0.0070	0.0070	,	0117			,	0117			
Allumnium		27/07	4.24%	2.60	2.58	-0.02	0.01	0.70	2.58	-0.20	0.01	
		3.76%					0.01	2.60				
Copper (COMES)		3.67%	7.77%	11.60	11.33	-0.26	0.25	11.60	11.33	-0.26	0.25	
Copper (LME)		5.93%	0.00%	8.60		0.16		8.60		0.16		
Nickel		0.47%	3.00%	19.20	20.74%	-0.21	-1.53	19.20	20.74%	-0.21	-1.53	
Zinc		2.44%	3.60%	19.60	19.88%	-0.21	-0.28	19.60	19.88%	-0.21	-0.28	
Lead		0.75%	0.00%	-0.50		-0.06		-0.50		-0.06		
	Group SubTotal	17.02%	18.61%	9.44	12.19	-0.59	-2.74	9.44	12.19	-0.59	-2.74	
Livestock												
Lean Hogs		1.98%	2.52%	6.90	6.21	0.13	0.69	6.90	6.21	0.13	0.69	
Live Cattle		6.16%	3.77%	2.40	1.77	-0.04	0.62	2.40	1.77	-0.04	0.62	
Fedder Cattle		1.61%	0.00%	-0.90		-0.13		-0.90		-0.13		
	Group SubTotal	9.75%	6.29%	4.35	4.07	-0.04	0.27	4.35	4.07	-0.04	0.27	
Precious Metals	2.20p 202.01di	• / •	4.2. / 4							••••	3.27	
Gold		9.47%	11.75%	0.30	0.32	0.08	-0.01	0.30	0.32	0.08	-0.01	
Silver			3.55%									
		2.56%		-3.40	-3.37	0.09	-0.01	-3.40	-3.37	0.09	-0.01	
Platinum		0.78%	0.00%	6.00		0.00		6.00		0.00		
Palladium		0.92%	0.00%	12.80		0.06		12.80		0.06		
	Group SubTotal	13.73%	15.30%	0.64	-0.57	0.24	1.20	0.64	-0.57	0.24	1.20	
	s Excess Return	100.00%	100.00%	6.95	5.70	1.25	1.25	6.95	5.70	1.25	1.25	

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.

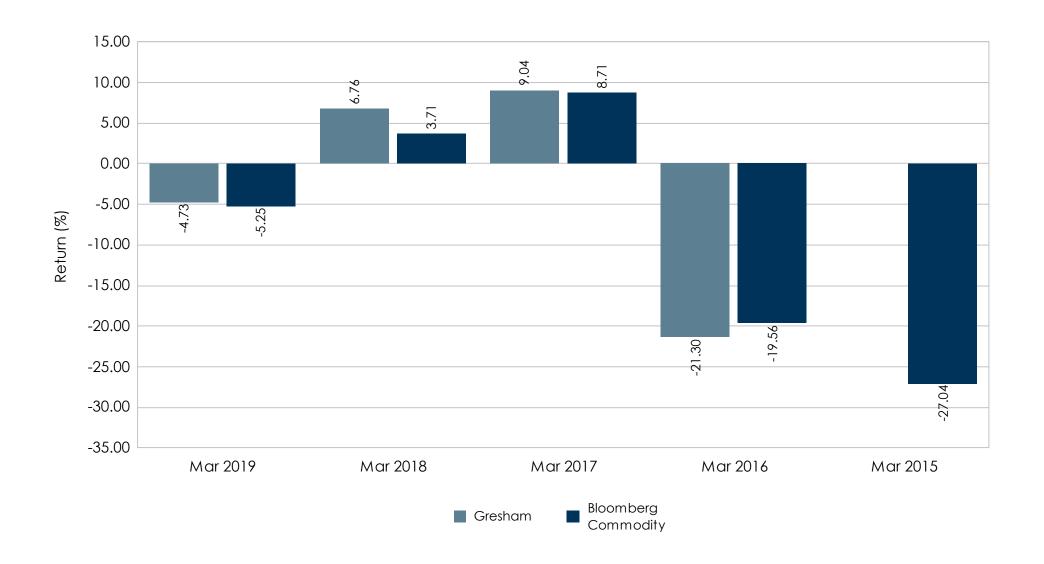
Gresham Tap Fund

For the Periods Ending March 31, 2019



Gresham Tap Fund

For the One Year Periods Ending March



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Appendix

Definitions of Statistical Measures

Alpha - the annualized difference between the manager's actual return and the managers'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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