Oklahoma Police Pension & Retirement System

Oklahoma Police Pension & Retirement System

Investment Performance Review

March 31, 2018

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Oklahoma Police Pension & Retirement System

Market Overview

Global Long-Only Equity

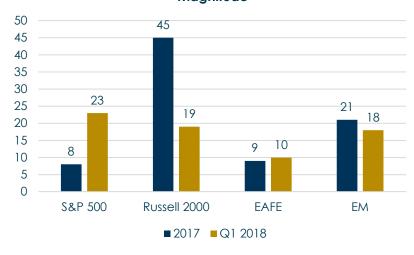
After an extended period of uncharacteristically low volatility in equity markets, the **current** year kicked off with a return to more unpredictability. The market lacked trading days where the equity indices returns exceeded a magnitude greater than +/-1% in 2017 outside of domestic small caps. Many indices surpassed the 2017 count in just the first quarter as rhetoric shifted from tax reform benefits to a potential trade war and fears of increased inflation, leading to consternation among investors.

US Large Caps started out the year with strong gains of 8% in the S&P 500 for the month of January (mainly from large gains in the IT sector). However, **investors' enthusiasm waned in February and March** causing the S&P 500 to end down 1% for the quarter with the bulk of the decline coming from the Consumer Staples, Energy, and Materials sectors.

After trailing in 2017, **US Small Caps outperformed** Large Cap peers and ended the quarter only slightly down at -0.1% as measured by the Russell 2000. This isn't to say small caps lacked volatility as the group had January gains erased in February and rebounded in March. Quarterly gains in excess of 6% in both the IT and Healthcare sectors along with a slight gain in Financials helped to offset declines in the remaining eight sectors.

Non-US equities had a strong start to the year, only to falter in February and March. Sector strength shifted from cyclical to more defensive names during the quarter in developed markets, with cyclicals ceding leadership to more defensive sectors such as Staples and Utilities. In emerging markets, the slowdown was more widespread, with almost all major sectors posting declines in March.

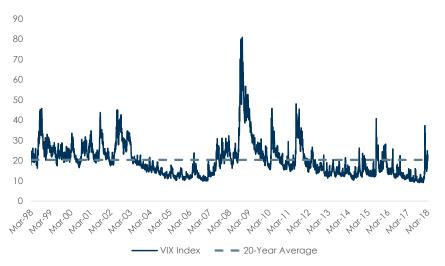
Count of Days with Daily Return Larger than +/- 1% Magnitude



Sources: Bloomberg, ACG Research

Global Long/Short Equity

Market Volatility Returns



Sources: Bloomberg, ACG Research

Market **volatility** has returned, spiking **from historical lows in 2017** up to levels seen only once since 2011 and well above the twenty year average. Volatility increased due to rising interest rates, concern about a trade war and uncertainty about mid-term elections. This coincided with negative performance in global equities in 1Q-18, providing equity long/short managers the chance to showcase their ability to **protect on the downside**. The increase in volatility should provide opportunities for managers to generate returns on both the long and the short side of their portfolios.

Managers are excited about the equity outlook, given the expectation that **sectors and companies** should experience an **increase in dispersion** and lower correlations in the coming year. The removal of free money should cause stocks to behave more rationally. These are key elements to a **positive opportunity set for equity long/short stock pickers**.

The volatility has not deterred managers from remaining invested. US **gross exposure** is at **post-crisis highs** both due to managers adding shorts as well as buying longs during recent market weakness. Net exposure remains near the historical average.

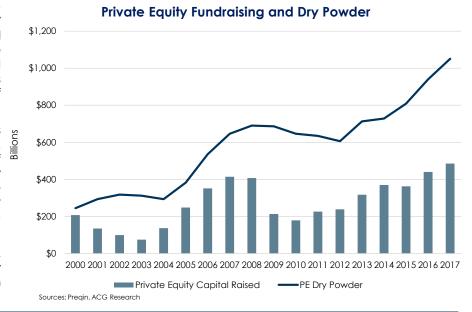
Long term growth opportunities continue **in Europe** driven by low rates, bank lending, corporate expansion and consumer confidence. We anticipate this to remain an area of opportunity for the foreseeable future. The outlook for **event driven** strategies is **less positive** as the ongoing involvement of the Trump administration has led to the postponement or **termination** of some **potential deals**.

Global Private Equity

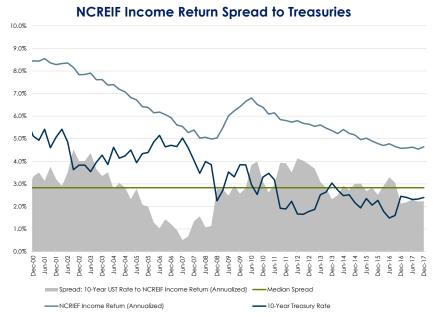
Much like public markets, valuations remain high for new deals in private markets. The **median acquisition price for a private equity-backed company purchased in 2017 was 10.7x EBITDA**, setting an all-time high. Although purchase price multiples are a full turn higher than 2007, the composition of the price is much different today. The average buyout in 2007 was financed with 69% debt compared to the 59% debt used in buyouts completed in 2017. Factoring in the much lower debt servicing costs (average 3-month LIBOR was 1.3% in 2017 compared to 5.3% in 2007), the buyouts of 2017 should be in better position to weather a downturn than the buyouts of 2007.

Strong investor appetite for private equity funds led to continued fundraising success for the industry in 2017. Private equity funds closed in 2017 raised \$485 billion, surpassing the previous high water mark of \$440 billion set in 2016. Several years of robust fundraising have led to a record level of "dry powder" within the private equity system. After reaching a post-financial crisis trough of \$606 billion in 2012, private equity funds are sitting on more than \$1.0 trillion of capital that has been raised but not yet deployed. The record amount of capital on the sideline could keep purchase price multiples high for the foreseeable future.

High purchase prices today are likely to translate into lower returns going forward. 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.



Global Real Assets



Sources: NCREIF, ACG Research

US real estate assets continue to benefit from a solid economic outlook and low levels of new supply. The NCREIF Property Index is expected to post its 32nd consecutive quarter of positive appreciation in 1Q-18. This is 10 quarters longer than the second longest winning streak since the benchmark's inception in 1978. In 4Q-17, NCREIF annualized income returns (a proxy for cap rates) increased 10 bps to end at 4.64%. The spread between NCREIF income returns and the 10-year UST yield ended the year at 224 bps, 59 bps tighter than the median spread since 2000.

As we enter the ninth calendar year of the real estate recovery and expansion, the potential for higher interest rates could put upward pressure on cap rates and lower future core real estate returns. Furthermore, tariffs and protectionist policies could cause ex-US investors to leave the market, dampening demand for core real estate assets. Given the current market dynamics, real estate funds which emphasize income, as opposed to appreciation, should outperform the broader market.

Although losing 0.4% during the quarter, the Bloomberg Commodity Index (BCOM) outperformed the Bloomberg Barclays US Aggregate Bond Index by 106 bps, the S&P 500 by 36 bps, and the MSCI ACWI by 51 bps. Commodities could be entering an attractive return environment for the remainder of 2018. Energy ended 1Q-18 at its highest level of backwardation in more than 10 years, indicating markets that are under-supplied. Synchronized global growth is generally bullish for commodities and precious metals should perform well during periods of high volatility. On the other hand, commodities could feel pressure during a "risk-off" period and the sector's reaction to potential tariffs will not be known for some time.

Global Traditional Bond Markets

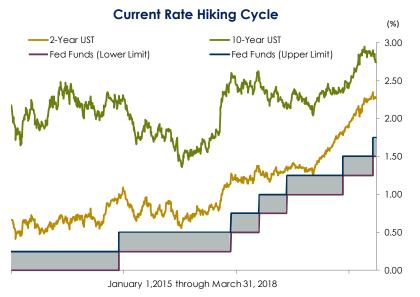
Amid escalating market volatility and concerns of an upside surprise to inflation, Jerome Powell assumed the role of Chairman at the **Federal Reserve**. The 25 bps hike in March supported the expectation of a seamless transition. Despite a more optimistic tone around growth, the "dot plot" that aggregates individual projections continues to suggest only two more quarter-point hikes in 2018. The **US Treasury market adjusted** throughout 1Q-18, with longer-term rates moving materially higher before softening late in the period as risk-off sentiment took hold. The domestic yield curve ultimately flattened further, as two-year rates continued their steady advance in conjunction with central bank action.

The **BloomBar Aggregate** suffered a notable loss, with government-related issues falling victim to rate sensitivity and IG corporates experiencing wider credit spreads. For the first time since April 2011, however, the yield-to-maturity for the index has moved beyond 3.0%.

High Yield traded down in sympathy with equities. Index spreads widened by 35 bps from January's tights, and CCC-rated issues underperformed as the credit curve steepened. Floating-rate bank loans have been a bright spot year-to-date.

Municipal Bonds posted mixed results relative to taxable counterparts, as the tax-exempt yield curve exhibited a contradictory steepening bias. As higher overall yields enhance the value of tax-exempt income, municipals historically outperform in rising rate periods.

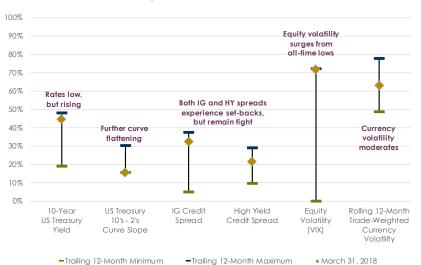
Unhedged Global government bonds outperformed domestic counterparts as the US dollar's decline aided returns. Local currency **Emerging Markets** remain particularly solid.



Sources: Bloomberg, ACG Research

Global Nontraditional Fixed Income

Percentile Rankings of Observations for Past 15-Years



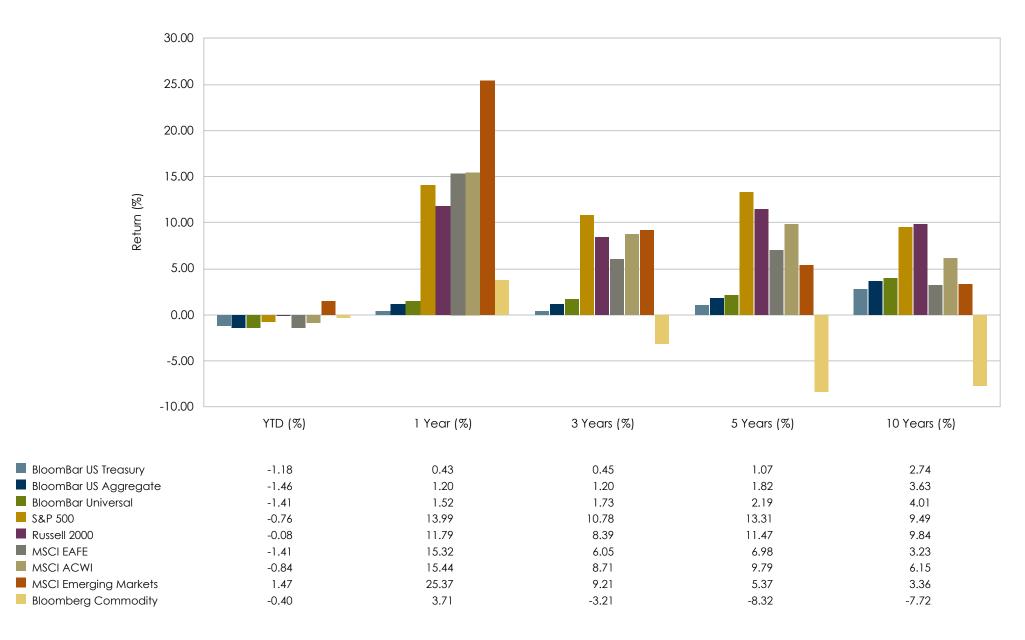
Sources: Bloomberg, ACG Research

Liquid Absolute Return strategies produced favorable results in 1Q-18, outperforming traditional bond benchmarks by ~200 bps. The diversification of risk factors within portfolios remains valuable, as this aids in downside protection and reduces key correlations. The commonly referenced 90-Day T-Bills +3% to +6% objective becomes more challenging as cash rates increase, but **enhanced volatility in rates, spreads, and currency should provide opportunities.**

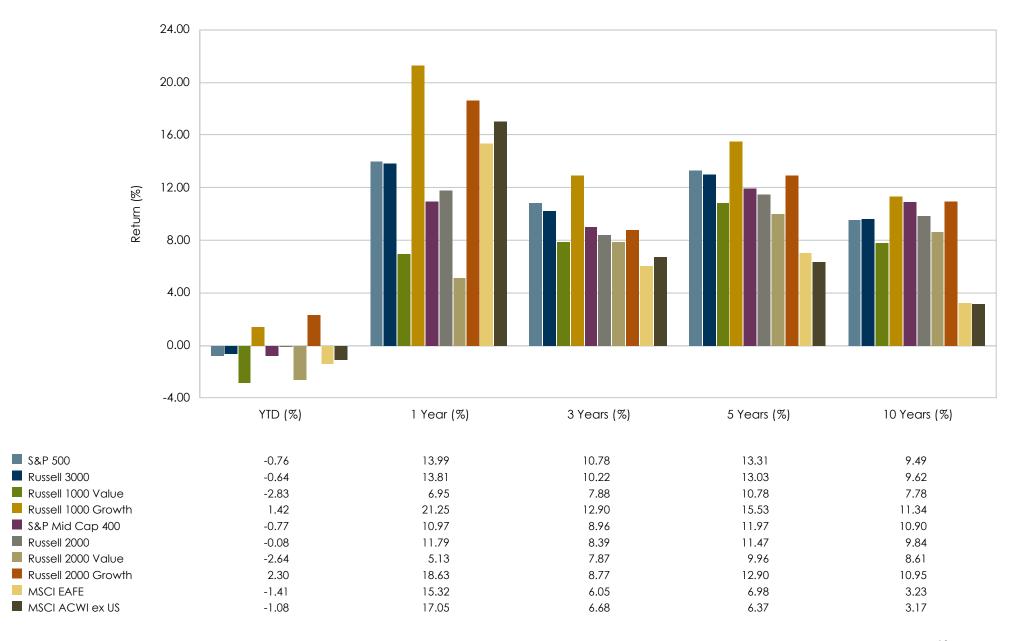
Alternative investment managers earn their keep when beta-driven investment opportunities become scarce. While rate-sensitive assets booked losses, fixed-income hedge funds tended toward flat to positive performance through the end of February. Cognizant of the risks of extended valuations, absolute return managers have communicated a willingness to remain invested, on the long side, but with attention to asset quality. If valuations continue to stretch higher, we expect absolute return managers will increasingly exploit idiosyncratic opportunities in challenged sectors of the market.

Private Credit strategies (typically 5-10-year terms) offer the opportunity to earn both a credit spread and an illiquidity premium versus publicly traded fixed income strategies. **Fundraising in the sector remains strong. Preqin reported 156 private debt funds held a final close on \$115 billion of commitments in 2017.** Distressed strategies have not seen much opportunity as the overall default environment remains well below crisis levels. However, economic expansions historically last five years and we are more than eight years into the current expansion. **The proliferation of covenant-lite leveraged loans, an aging economic expansion, and rising interest rates (3-month LIBOR increased 60 bps in 1Q-18) could lead to a robust opportunity set for distressed strategies in the coming quarters.**

Market Environment

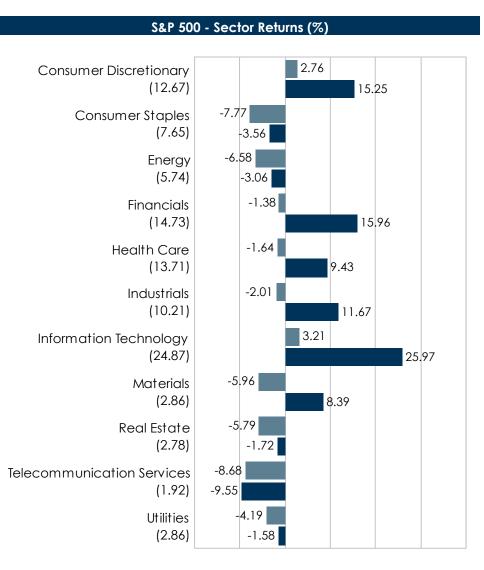


Equity Index Returns



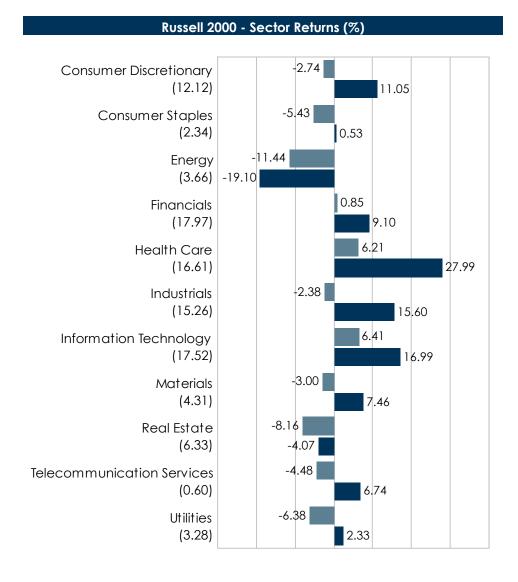
US Markets - Performance Breakdown

For the Periods Ending March 31, 2018



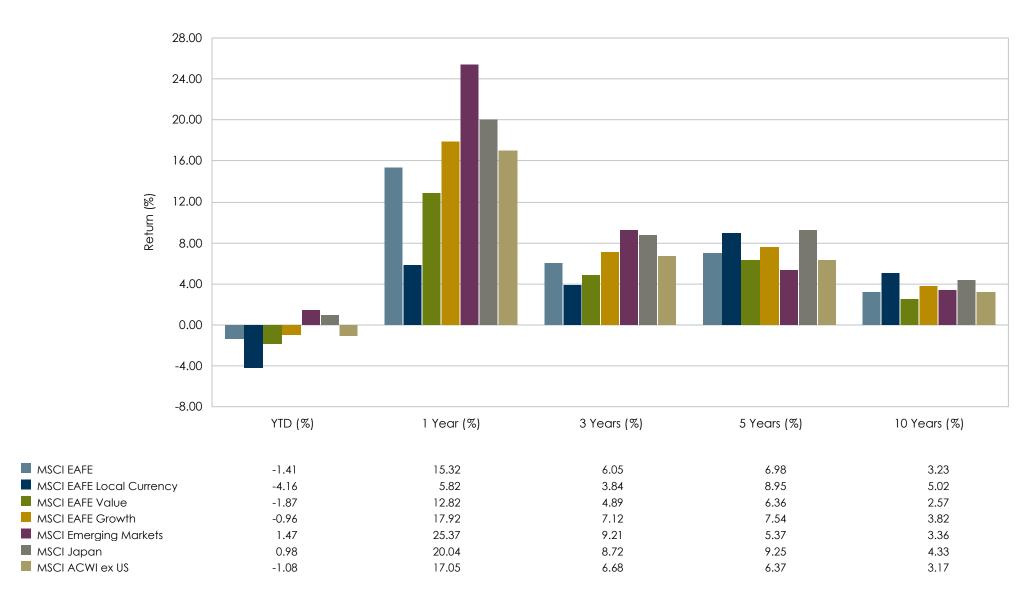
3 Months

1 Year



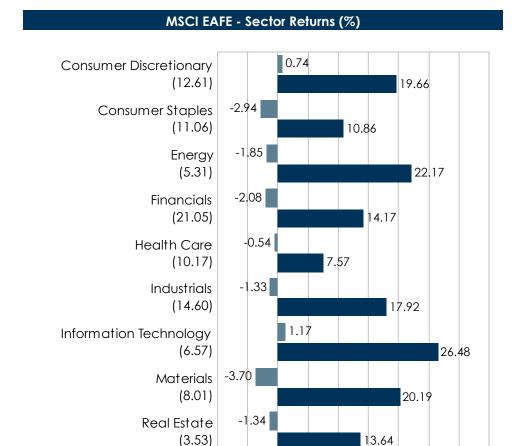
Numbers in parenthesis represent sector weightings of the index. Sector weights may not add to 100% due to rounding or securities that are not assigned to a Global Industry Classification Standard (GICS) sector.

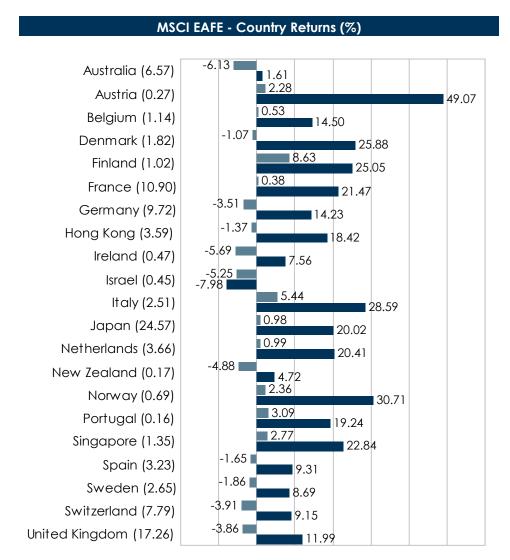
Non-US Equity Index Returns



Non-US Equity - Performance Breakdown

For the Periods Ending March 31, 2018





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

1 Year

12.80

3.54

1.46

Telecommunication Services

(3.83)

Utilities

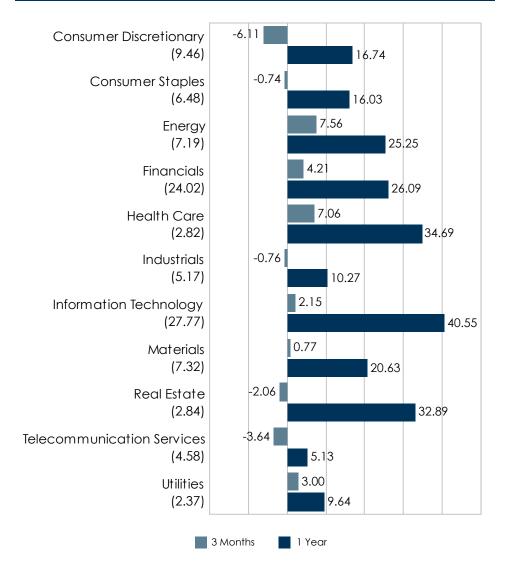
(3.27)

3 Months

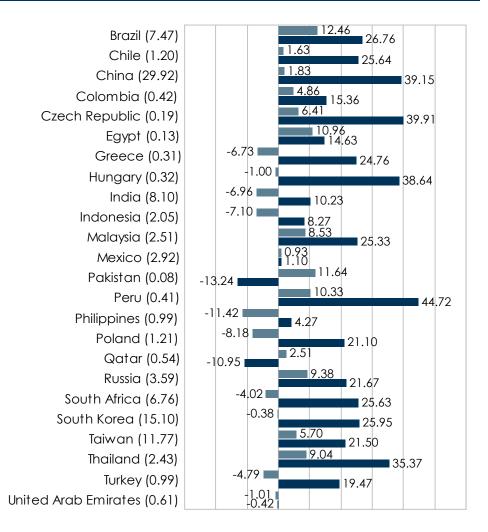
Emerging Markets - Performance Breakdown

For the Periods Ending March 31, 2018

MSCI Emerging Markets - Sector Returns (%)



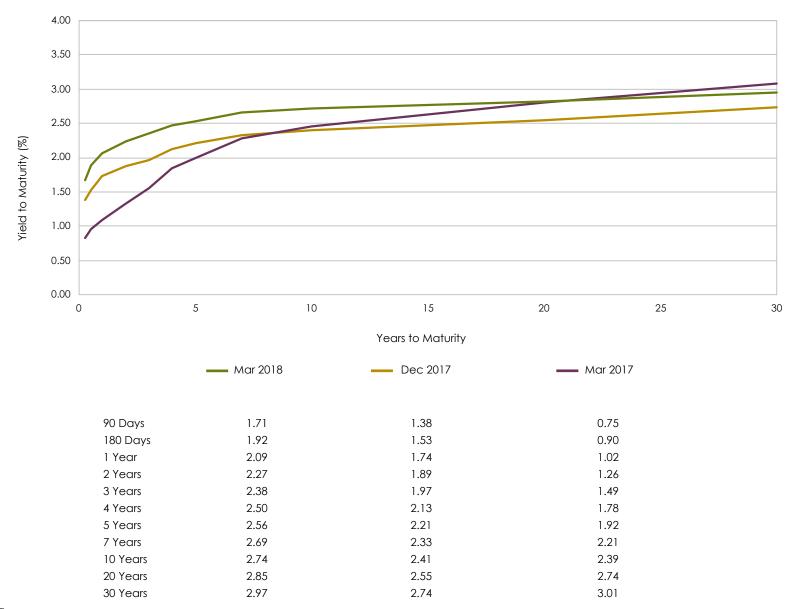
MSCI Emerging Markets - Country Returns (%)



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

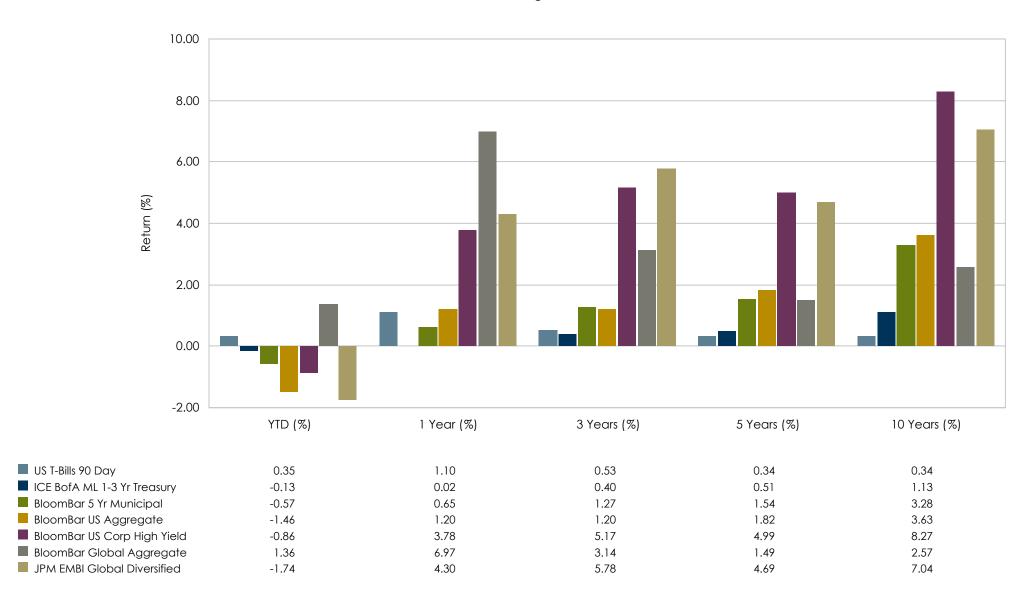
Interest Rate Term Structure

Government Issues - 3 Months to 30 Years Maturity



Source: Bloomberg

Fixed Income Index Returns



US Fixed Income Market Environment

For the Periods Ending March 31, 2018

Nominal Returns By Sector (%)						
	1 Month	3 Months	1 Year	3 Years		
US Aggregate	0.64	-1.46	1.20	1.21		
US Treasury	0.94	-1.18	0.42	0.44		
US Agg: Gov't-Related	0.57	-1.02	1.70	1.32		
US Corporate IG	0.25	-2.32	2.69	2.31		
MBS	0.64	-1.19	0.78	1.13		
CMBS	0.39	-1.32	1.12	1.50		
ABS	0.18	-0.38	0.63	1.17		
US Corp High Yield	-0.60	-0.85	3.78	5.18		

Nominal Returns by Quality (%)						
	<u>1 Month</u>	3 Months	1 Year	3 Years		
AAA	0.78	-1.18	0.60	0.77		
AA	0.51	-1.35	1.86	1.69		
A	0.32	-2.49	2.29	2.09		
BAA	0.20	-2.15	3.36	2.55		
BA	-0.54	-1.60	3.46	4.70		
В	-0.54	-0.55	3.31	4.43		
CAA	-0.84	0.29	5.78	7.85		

Nominal Returns by Maturity (%)						
	<u>1 Month</u>	3 Months	1 Year	3 Years		
1-3 Yr.	0.16	-0.20	0.25	0.69		
3-5 Yr.	0.37	-0.86	0.16	0.97		
5-7 Yr.	0.49	-1.21	0.57	1.04		
7-10 Yr.	0.69	-1.80	0.84	1.14		
10+ Yr.	1.65	-3.56	5.02	2.08		





Source: Bloomberg

Monthly Index Returns

Index Name	3 Months (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	-0.76	-0.76	13.99	10.78	13.31	12.71	9.49
Russell 1000	-0.69	-0.69	13.98	10.39	13.17	12.57	9.61
Russell 1000 Growth	1.42	1.42	21.25	12.90	15.53	14.09	11.34
Russell 1000 Value	-2.83	-2.83	6.95	7.88	10.78	11.00	7.78
Russell 2500	-0.24	-0.24	12.31	8.15	11.55	10.88	10.28
Russell 2000	-0.08	-0.08	11.79	8.39	11.47	10.39	9.84
Russell 2000 Growth	2.30	2.30	18.63	8.77	12.90	11.29	10.95
Russell 2000 Value	-2.64	-2.64	5.13	7.87	9.96	9.42	8.61
Wilshire 5000 Cap Wtd	-0.76	-0.76	13.69	10.48	13.13	12.41	9.65
MSCI ACWI	-0.84	-0.84	15.44	8.71	9.79	8.50	6.15
MSCI ACWI ex US	-1.08	-1.08	17.05	6.68	6.37	4.73	3.17
MSCI EAFE	-1.41	-1.41	15.32	6.05	6.98	5.80	3.23
MSCI EAFE Local Currency	-4.16	-4.16	5.82	3.84	8.95	8.19	5.02
MSCI EAFE Growth	-0.96	-0.96	17.92	7.12	7.54	6.49	3.82
MSCI EAFE Value	-1.87	-1.87	12.82	4.89	6.36	5.03	2.57
MSCI Emerging Markets	1.47	1.47	25.37	9.21	5.37	2.83	3.36
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	-0.13	-0.13	0.02	0.40	0.51	0.66	1.13
BloomBar 5 Yr Municipal	-0.57	-0.57	0.65	1.27	1.54	2.53	3.28
BloomBar US Aggregate	-1.46	-1.46	1.20	1.20	1.82	2.92	3.63
BloomBar Gov't Bond	-1.15	-1.15	0.44	0.48	1.07	2.30	2.70
BloomBar US Credit	-2.13	-2.13	2.59	2.16	2.83	4.36	5.15
BloomBar 10 Yr Municipal	-1.61	-1.61	2.31	2.14	2.72	4.41	4.66
BloomBar US Corp High Yield	-0.86	-0.86	3.78	5.17	4.99	6.33	8.27
Citigroup World Govt Bond	2.50	2.50	8.49	3.45	1.18	1.47	1.97
BloomBar Global Aggregate	1.36	1.36	6.97	3.14	1.49	1.99	2.57
BloomBar Multiverse	1.29	1.29	7.04	3.41	1.69	2.19	2.79
JPM EMBI Global Diversified	-1.74	-1.74	4.30	5.78	4.69	6.32	7.04
Real Assets							
NCREIF Property	1.70	1.70	7.13	8.73	10.00	10.56	6.09
NFI ODCE Net	1.97	1.97	7.11	9.00	10.41	10.75	4.16
FTSE NAREIT US Real Estate	-8.20	-8.20	-4.51	1.08	5.92	8.18	6.37
Bloomberg Commodity	-0.40	-0.40	3.71	-3.21	-8.32	-8.77	-7.71
Cash and Equivalents							
US T-Bills 90 Day	0.35	0.35	1.10	0.53	0.33	0.27	0.34

Monthly Index Returns

For the Periods Ending April 30, 2018

Index Name	1 Month (%)	YTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	7 Years (%)	10 Years (%)
Equity							
S&P 500	0.38	-0.38	13.27	10.57	12.96	12.30	9.02
Russell 1000	0.34	-0.35	13.17	10.25	12.84	12.15	9.10
Russell 1000 Growth	0.35	1.77	18.96	12.84	15.13	13.61	10.81
Russell 1000 Value	0.33	-2.51	7.50	7.66	10.52	10.64	7.30
Russell 2500	0.24	0.00	11.72	8.88	11.53	10.47	9.73
Russell 2000	0.86	0.78	11.54	9.64	11.74	10.12	9.48
Russell 2000 Growth	0.10	2.40	16.60	9.89	13.07	10.75	10.41
Russell 2000 Value	1.73	-0.95	6.53	9.27	10.36	9.44	8.46
Wilshire 5000 Cap Wtd	0.39	-0.37	12.95	10.43	12.83	12.02	9.16
MSCI ACWI	1.01	0.16	14.77	8.02	9.38	8.03	5.67
MSCI ACWI ex US	1.68	0.58	16.45	5.50	5.93	4.26	2.73
MSCI EAFE	2.39	0.94	15.07	5.44	6.38	5.26	2.91
MSCI EAFE Local Currency	4.61	0.25	9.09	4.99	8.95	8.58	4.73
MSCI EAFE Growth	1.61	0.64	16.22	6.35	6.97	5.82	3.47
MSCI EAFE Value	3.19	1.26	13.96	4.45	5.71	4.64	2.29
MSCI Emerging Markets	-0.42	1.04	22.14	6.39	5.11	2.31	2.51
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	-0.14	-0.28	-0.25	0.33	0.46	0.58	1.19
BloomBar Municipal	-0.36	-1.46	1.56	2.31	2.44	4.06	4.25
BloomBar US Aggregate	-0.74	-2.19	-0.32	1.07	1.47	2.63	3.57
BloomBar Gov't Bond	-0.80	-1.94	-1.04	0.37	0.74	2.02	2.77
BloomBar US Credit	-0.91	-3.02	0.65	2.05	2.27	3.97	4.99
BloomBar 10 Yr Municipal	-0.22	-1.83	1.11	2.27	2.41	4.06	4.57
BloomBar US Corp High Yield	0.65	-0.21	3.26	4.98	4.75	6.19	7.88
Citigroup World Govt Bond	-1.89	0.56	5.08	2.42	0.59	0.73	2.12
BloomBar Global Aggregate	-1.60	-0.26	4.09	2.23	0.89	1.31	2.60
BloomBar Multiverse	-1.55	-0.28	4.18	2.47	1.09	1.53	2.81
Real Assets							
Bloomberg Commodity	2.58	2.17	8.02	-4.18	-7.33	-8.88	-7.80
Cash and Equivalents							
US T-Bills 90 Day	0.14	0.49	1.18	0.57	0.36	0.28	0.34

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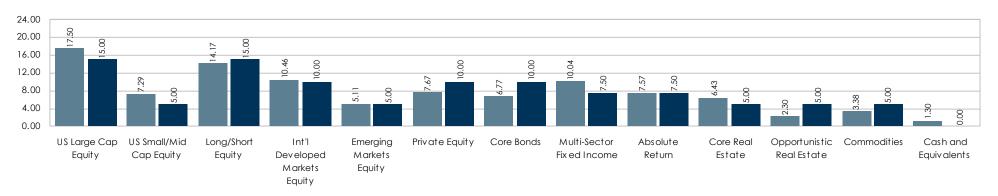
Oklahoma Police Pension & Retirement System

Total Portfolio Summary

Dollar Reconciliation (\$000s)

	3 Months	FYTD	1 Year	5 Years
Beginning Market Value	2,508,222	2,389,563	2,346,027	1,954,953
Net Additions	-12,332	-45,444	-63,568	-262,208
Return on Investment	14,467	166,239	227,898	817,612
Ending Market Value	2,510,357	2,510,357	2,510,357	2,510,357

For the Period Ending March 31, 2018



■ Actual Allocation ■ Target Allocation

	Market Value (\$000s)	Actual Allocation (%)	Target Allocation (%)	Over/Under Target (%)	Range Min-Max (%)
Total Portfolio	2,510,357	100.00	100.00		
Equity	1,561,733	62.21	60.00	2.21	50.00 - 70.00
US Large Cap Equity	439,357	17.50	15.00	2.50	10.00 - 20.00
US Small/Mid Cap Equity	182,960	7.29	5.00	2.29	0.00 - 15.00
Long/Short Equity	355,841	14.17	15.00	-0.83	10.00 - 20.00
Int'l Developed Markets Equity	262,619	10.46	10.00	0.46	5.00 - 15.00
Emerging Markets Equity	128,321	5.11	5.00	0.11	0.00 - 10.00
Private Equity	192,634	7.67	10.00	-2.33	5.00 - 15.00
Fixed Income	612,067	24.38	25.00	-0.62	15.00 - 35.00
Core Bonds	169,991	6.77	10.00	-3.23	7.50 - 20.00
Multi-Sector Fixed Income	252,076	10.04	7.50	2.54	5.00 - 10.00
Absolute Return	190,000	7.57	7.50	0.07	5.00 - 10.00
Real Assets	303,883	12.11	15.00	-2.89	0.00 - 20.00
Core Real Estate	161,323	6.43	5.00	1.43	0.00 - 10.00
Opportunistic Real Estate	57,653	2.30	5.00	-2.70	0.00 - 10.00
Commodities	84,907	3.38	5.00	-1.62	0.00 - 10.00
Cash and Equivalents	32,675	1.30	0.00	1.30	

For the Periods Ending March 31, 2018



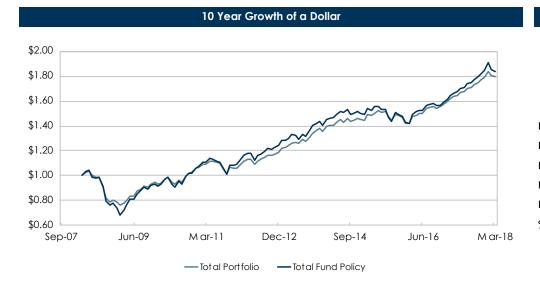
The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

For the Periods Ending March 31, 2018



	Total	Total
	Portfolio	Fund Policy
Return (%)	6.04	6.25
Standard Deviation (%)	7.92	10.49
Sharpe Ratio	0.73	0.57

	Benchmark Relative Statistics	
Beta	0.73	
Up Capture (%)	76.52	
Down Capture (%)	71.90	



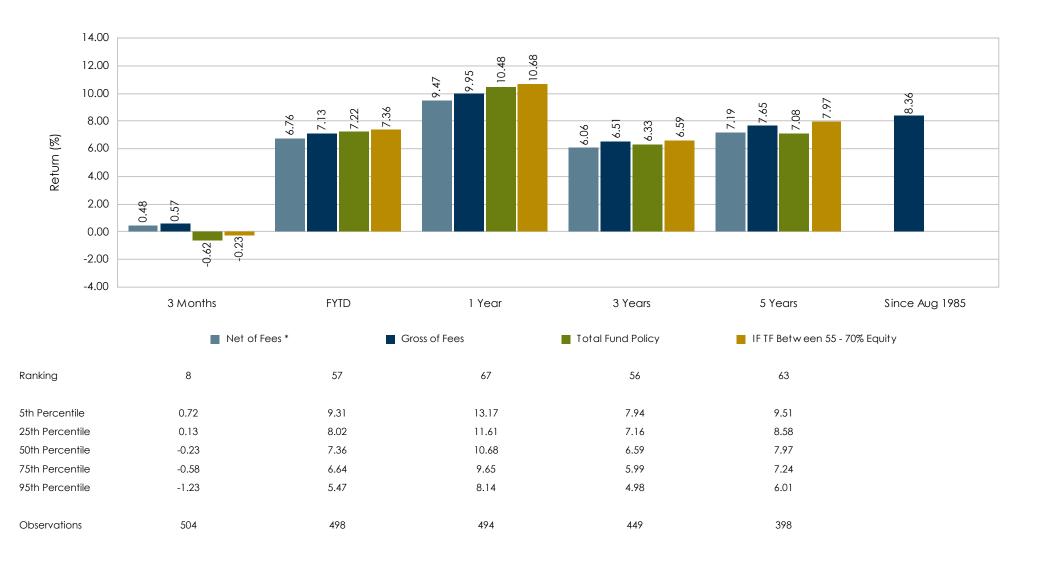
10 Year Return Analysis

10 Year Portfolio Statistics

	Total Portfolio	Total Fund Policy
Number of Months	120	120
Highest Monthly Return (%)	5.31	7.47
Lowest Monthly Return (%)	-9.92	-12.85
Number of Positive Months	81	76
Number of Negative Months	39	44
% of Positive Months	67.50	63.33

Total Portfolio

For the Periods Ending March 31, 2018

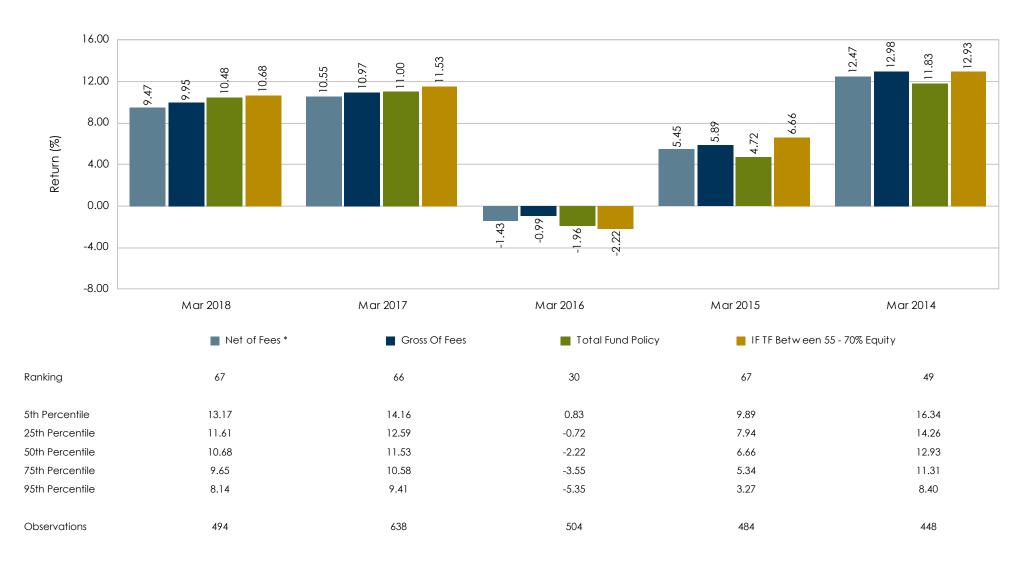


The rankings represent the portfolio's returns versus a peer universe. The rankings are on a scale of 1 to 100 with 1 being the best.

^{*} 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, 2018

	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	2,510,357	100.00	0.48		6.76		9.47		6.06		7.19		5.68
Total Portfolio (08/85)			0.57	8	7.13	57	9.95	67	6.51	56	7.65	63	6.04
Total Fund Policy ²			-0.62		7.22		10.48		6.33		7.08		6.25
IF TF Between 55 - 70% Equity			-0.23		7.36		10.68		6.59		7.97		6.66
Equity (01/98)	1,561,733	62.21	0.46		9.53		13.25		8.47		9.91		6.99
MSCI ACWI			-0.84		10.52		15.44		8.71		9.79		6.15
US Large Cap Equity	439,357	17.50											
Northern Trust Russell 1000 Index (08/98) ³	439,357	17.50	-0.70	54	10.58	56	13.96	55	10.39	39	13.18	48	9.62
Russell 1000			-0.69		10.59		13.98		10.39		13.17		9.61
eA US Large Cap Core Equity			-0.57		10.96		14.46		10.01		13.10		9.79
US Small/Mid Cap Equity	182,960	7.29											
Boston Partners (01/98)	90,155	3.59	-1.96	56 / 51	6.90	53 / 52	9.23	43 / 37	8.85	37 / 43	11.63	55 / 47	7 11.68
Russell 2500 Value			-2.65		5.38		5.72		7.26		9.88		9.34
eA US Mid Cap Value Equity			-1.74		7.27		8.79		8.32		11.86		10.64
eA US Small Cap Value Equity			-1.93		7.12		7.71		8.37		11.52		10.66
Cortina (02/14)	92,805	3.70	5.70	20	9.99	83	16.13	76	12.27	23			
Russell 2000 Growth			2.30		13.64		18.63		8.77		12.90		10.95
eA US Small Cap Growth Equity			3.03		14.40		20.89		10.01		13.79		12.03
Long/Short Equity	355,841	14.17											
Grosvenor Long/Short Equity (11/03)	355,841	14.17	0.74		6.38		8.67		3.97		6.54		4.33
MSCIACWI			-0.84		10.52		15.44		8.71		9.79		6.15
HFRI FOF: Strategic			0.37		5.73		7.56		2.64		4.01		1.74

FYTD: Fiscal year ending June.

^{*} Net of fee return data.
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	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
International Developed Market	262,619	10.46											
Mondrian International (05/04)	141,144	5.62	-1.69	45	7.29	51	11.86	80	4.94	80	7.24	55	3.17
MSCI EAFE			-1.41		8.42		15.32		6.05		6.98		3.23
eA EAFE All Cap Value Equity			-1.86		7.30		13.72		6.40		7.47		4.88
Baring Focused International (03/12)	121,475	4.84	-1.45	59	9.32	53	17.53	43	9.36	18	7.74	67	
MSCI EAFE			-1.41		8.42		15.32		6.05		6.98		3.23
eA EAFE All Cap Equity			-0.99		9.43		17.03		7.53		8.37		4.33
Emerging Markets Equity	128,321	5.11											
Wasatch Emerging Markets (09/12)	39,058	1.56	1.25	59	16.97	56	27.64	29	7.34	88	3.78	90	
MSCI EM SC			0.20		15.85		18.97		7.54		4.89		4.66
eA Global Emerging Mkts Equity			1.54		17.29		24.47		10.28		6.04		4.68
AB EM Strategic Core Equity Fund (11/16)	89,263	3.56	2.65	25	13.17	85	19.63	79					
MSCI Emerging Markets			1.47		17.85		25.37		9.21		5.37		3.36
eA Global Emerging Mkts Equity			1.54		17.29		24.47		10.28		6.04		4.68
Private Equity (07/03)	192,634	7.67	3.17		9.80		11.43		10.53		10.94		8.58
Fixed Income (01/98)	612,067	24.38	0.08		2.45		4.21		2.25		3.08		4.35
BloomBar Universal			-1.41		0.00		1.52		1.73		2.19		4.01
Core Bonds	169,991	6.77											
Agincourt Core Fixed Income (10/99)	169,991	6.77	-1.53	79	0.09	48	1.75	43	1.66	45	2.25	46	4.19
BloomBar US Aggregate			-1.46		-0.24		1.20		1.20		1.82		3.63
eA US Core Fixed Income			-1.36		0.05		1.64		1.62		2.20		4.31

			2 Months		EVID		1 Voor		2 V o avo		E Vocare		10.4
	Market Value (\$000s)	Actual Allocation (%)	3 Months (%)	Kank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Multi Sector Fixed Income	252,076	10.04			_(/~/								(~)
Multi Sector Fixed Income													
Oaktree Capital Management (02/98)	122,353	4.87	-1.12		1.55		3.77		4.58		5.03		7.42
BloomBar US Aggregate			-1.46		-0.24		1.20		1.20		1.82		3.63
Loomis Sayles (06/08)	100,941	4.02	2.68	12	6.63	24	10.16	23	4.63	31	2.01	67	
Citigroup World Govt Bond			2.50		5.44		8.49		3.45		1.18		1.97
eA All Global Fixed Income			0.64		3.49		5.93		3.67		2.90		4.03
Private Credit (10/16)	28,781	1.15	2.19		9.82		12.59						
Absolute Return	190,000	7.57											
PAAMCO (10/02)	128,165	5.11	0.19		1.71		2.53		0.60		3.38		2.77
BloomBar US Aggregate			-1.46		-0.24		1.20		1.20		1.82		3.63
HFRI FOF: Conservative			0.56		3.07		3.46		1.65		2.96		1.28
Wellington Global Total Return (12/16)	61,835	2.46	1.73	31	3.46	49	3.72	68					
LIBOR 3 Month			0.41		1.08		1.36		0.84		0.60		0.69
eA Global Unconstrained Fixed Income			0.78		3.38		4.99		3.55		2.53		3.65
Real Assets (01/98)	303,883	12.11	2.18		7.01		8.10		6.37		7.17		3.54
Real Assets Blended Index ⁴			1.20		6.04		6.02		3.12		3.15		0.67
Core Real Estate	161,323	6.43											
JP Morgan Strategic Property (12/07)	121,848	4.85	2.20		5.83		7.50		9.59		11.26		5.75
NFI ODCE Net			1.97		5.56		7.11		9.00		10.41		4.16
NCREIF Property			1.70		5.29		7.13		8.73		10.00		6.09
Blackstone Property Partners (01/15)	39,475	1.57	2.25		7.54		10.41		15.17				
NFI ODCE Net			1.97		5.56		7.11		9.00		10.41		4.16
NCREIF Property			1.70		5.29		7.13		8.73		10.00		6.09

For the Periods Ending March 31, 2018

	Market Value (\$000s)	Actual Allocation (%)	3 Months	Rank	FYTD (%)	Rank	1 Year (%)	Rank	3 Years (%)	Rank	5 Years (%)	Rank	10 Years (%)
Opportunistic Real Estate	57,653	2.30			(/0)		(/0)		(/0)		(/0)		(/0)
Private Real Estate (08/11)	53,025	2.11	1.31		5.05		8.56		10.54		10.86		
Private Real Estate Direct													
Columbus Square (01/98)	4,628	0.18	-0.46		1.17		6.05		7.97		7.81		11.22
NCREIF Property			1.70		5.29		7.13		8.73		10.00		6.09
NFI ODCE Net			1.97		5.56		7.11		9.00		10.41		4.16
Commodities	84,907	3.38											
Mount Lucas Peak Partners (01/98)	32,760	1.31	7.89		11.73		10.50		0.49		8.82		3.18
CS Hedge - Global Macro			0.57		4.33		2.48		0.67		2.33		3.96
Gresham Tap Fund (08/14)	52,148	2.08	-0.07		10.25		6.76		-2.88				
Bloomberg Commodity			-0.40		6.92		3.71		-3.21		-8.32		-7.71
Cash and Equivalents	32,675	1.30											

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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Oklahoma Police Pension & Retirement System

Equity Manager Performance

Northern Trust Russell 1000 Index

For the Periods Ending March 31, 2018

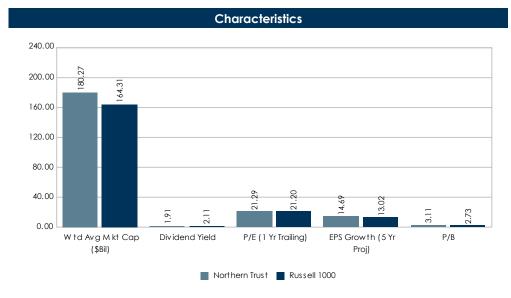
Account Description

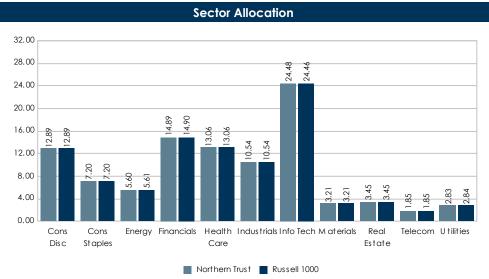
- Strategy US Large Cap Core
- Vehicle Non-Mutual Commingled
- Benchmark Russell 1000
- Performance Inception Date August 1998
- **Fees** 1 bps

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 412,054 399,847 Net Additions -15,040 -15,040 Return on Investment 42,343 54,550 Ending Market Value 439,357 439,357



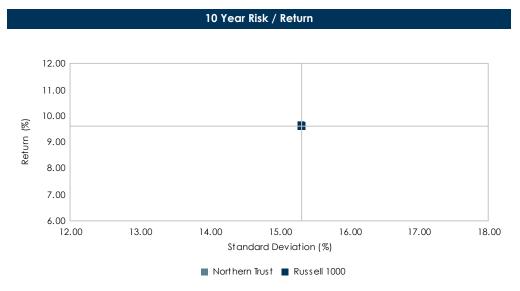


Characteristic and allocation charts represents data of the EB Daily Valued Large Cap Stock Index Fund (Non-Mutual Commingled).

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, 2018



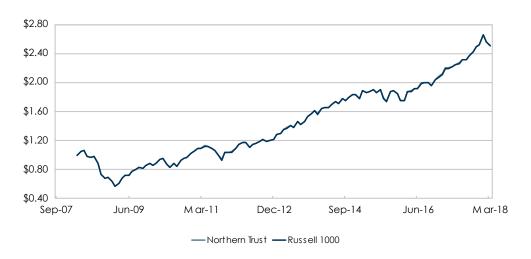
Northern Trust Russell 10

10 Year Portfolio Statistics

000
2

Benchmark Relative Statistics					
Beta	1.00				
R Squared (%)	100.00				
Alpha (%)	0.02				
Tracking Error (%)	0.05				
Batting Average (%)	64.17				
Up Capture (%)	99.99				
Down Capture (%)	99.91				



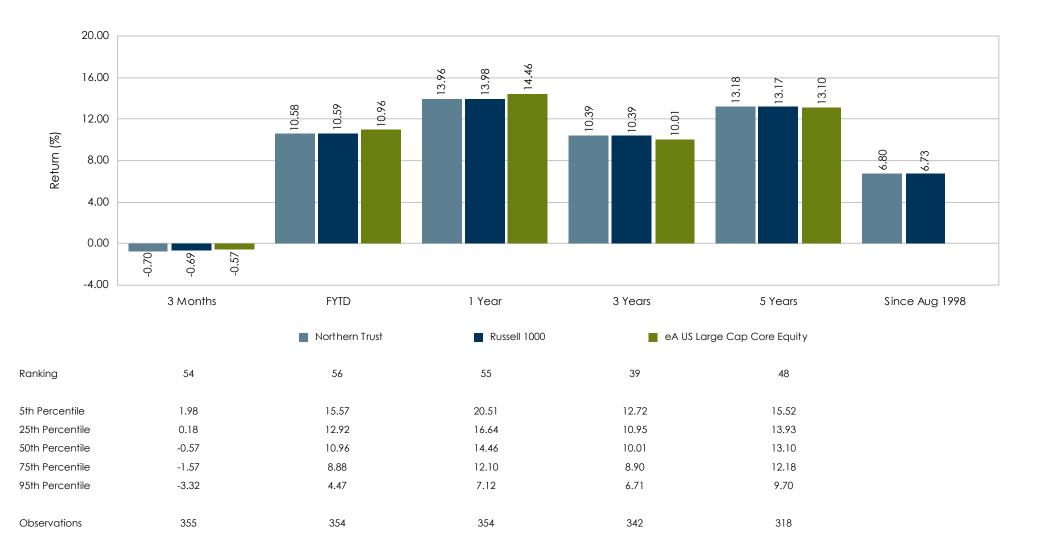


10 Year Return Analysis

	Northern Trust	Russell 1000
Number of Months	120	120
Highest Monthly Return (%)	11.20	11.21
Lowest Monthly Return (%)	-17.49	-17.46
Number of Positive Months	82	82
Number of Negative Months	38	38
% of Positive Months	68.33	68.33

Northern Trust Russell 1000 Index

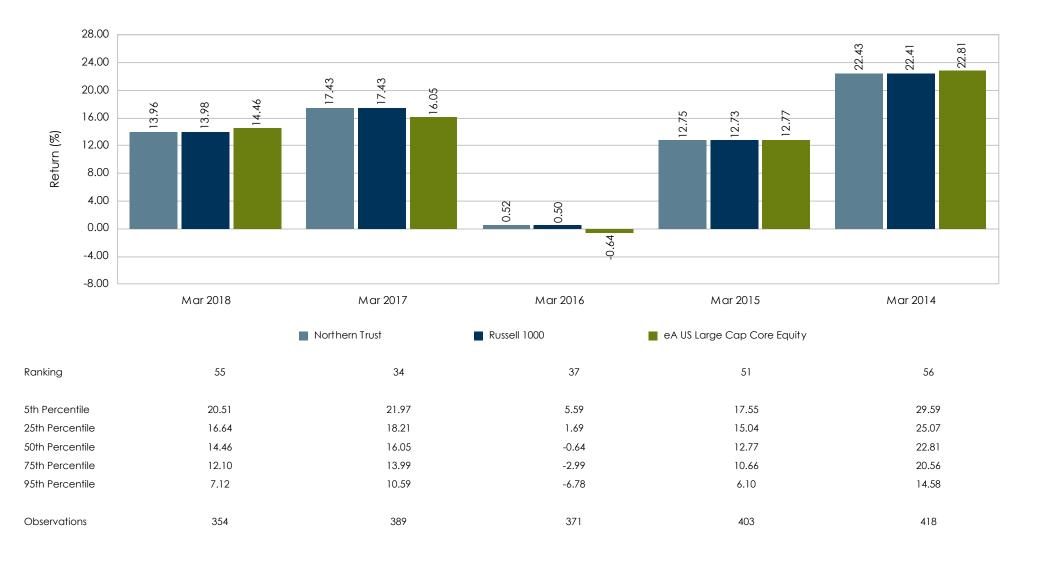
For the Periods Ending March 31, 2018



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



For the Periods Ending March 31, 2018

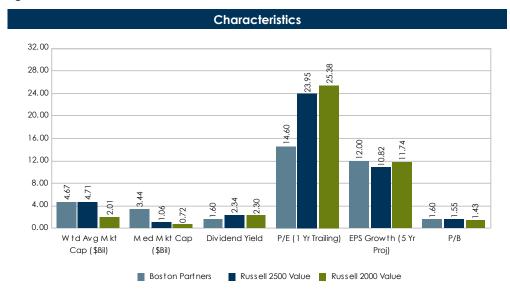
Account Description

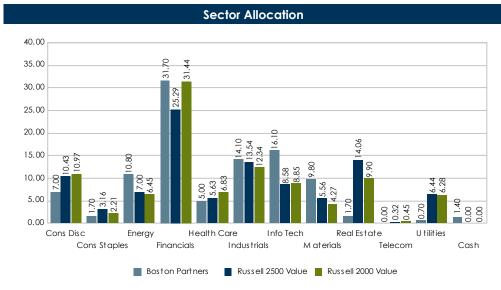
- Strategy US Small/Mid Cap Value
- Vehicle Separately Managed Account
- Benchmarks Russell 2500 Value and Russell 2000 Value
- Performance Inception Date January 1998
- Fees 60 bps base fee with annual performance fee

Performance Goals

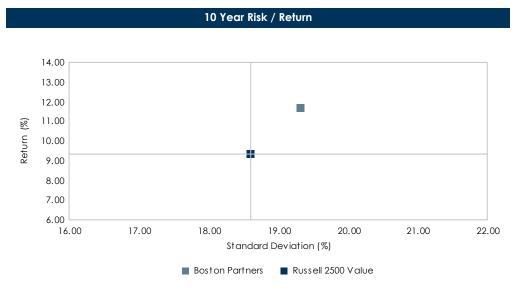
- Outperform the Russell 2500 Value and Russell 2000 Value.
- Over rolling three year periods, rank above the median in the eA US Mid Cap Value Equity universe.

Dollar Growth Summary (\$000s) FYTD 1 Year **Beginning Market Value** 108,226 110,411 Net Additions -25,435 -25,602 Return on Investment 5,179 7,531 1,107 1.741 Income Gain/Loss 4.073 5.790 **Ending Market Value** 90,155 90,155





For the Periods Ending March 31, 2018



	Boston	Russell 2500 Value
	Partners	
Return (%)	11.68	9.34
Standard Deviation (%)	19.32	18.61
Sharpe Ratio	0.59	0.49

Benchmark Relative Statistics			
Beta	1.02		
R Squared (%)	96.11		
Alpha (%)	2.09		
Tracking Error (%)	3.83		
Batting Average (%)	55.00		
Up Capture (%)	105.02		
Down Capture (%)	96.54		

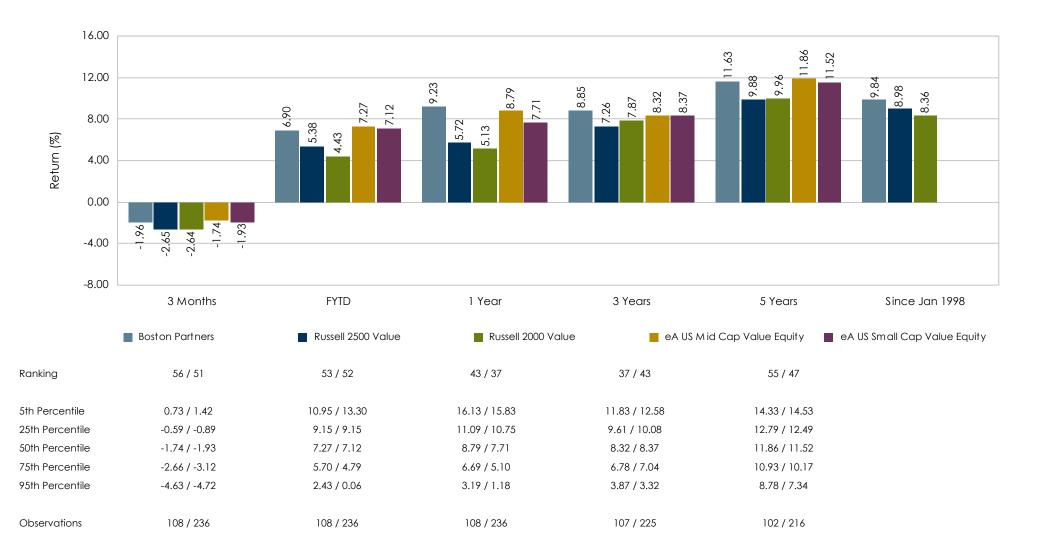
10 Year Return Analysis

10 Year Portfolio Statistics

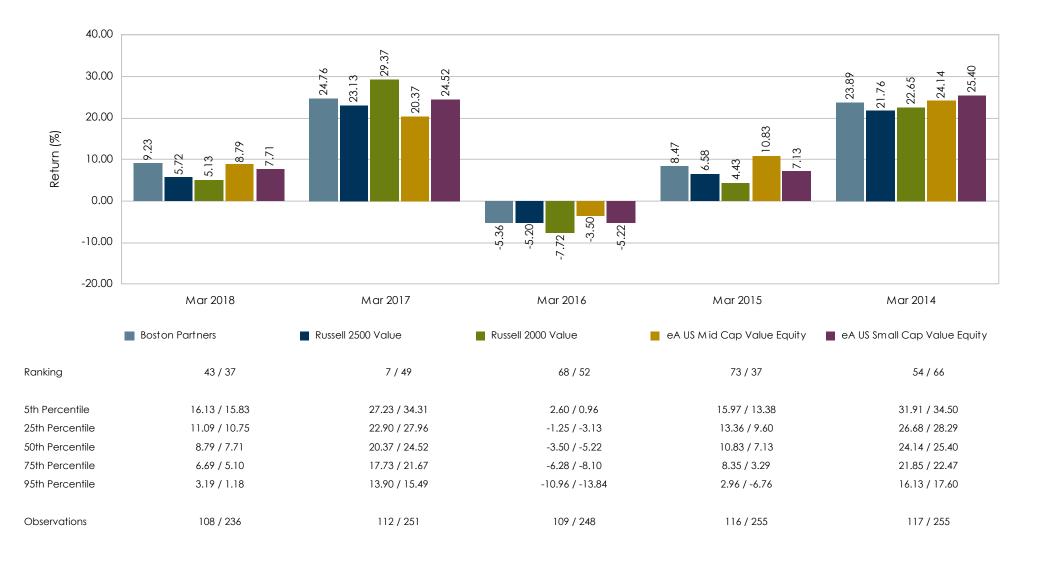


	Boston Partners	Russell 2500 Value
Number of Months	120	120
Highest Monthly Return (%)	19.35	15.95
Lowest Monthly Return (%)	-22.79	-20.65
Number of Positive Months	80	78
Number of Negative Months	40	42
% of Positive Months	66.67	65.00

For the Periods Ending March 31, 2018



For the One Year Periods Ending March



Cortina

For the Periods Ending March 31, 2018

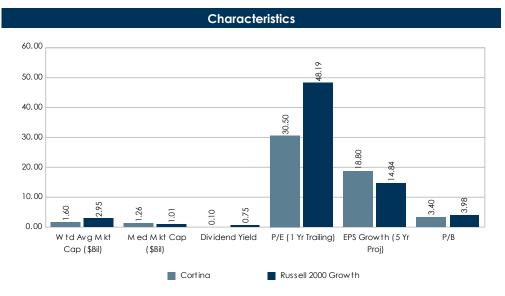
Account Description

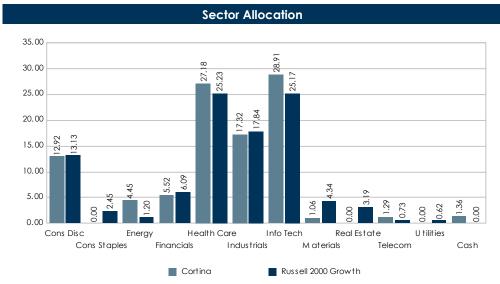
- Strategy US Small/Mid Cap Growth
- Vehicle Separately Managed Account
- Benchmark Russell 2000 Growth
- Performance Inception Date February 2014
- Fees First \$25M at 100 bps, next \$25M at 90 bps, balance at 80 bps

Performance Goals

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

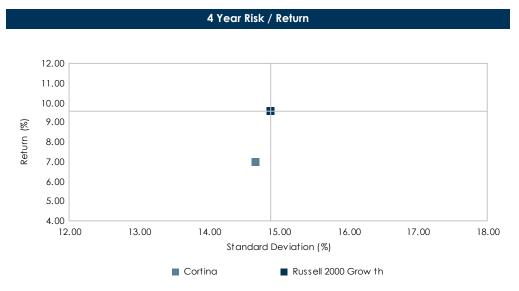
Dollar Growth Summary (\$000s) FYTD 1 Year **Beginning Market Value** 84,927 80,616 Net Additions -566 -753 Return on Investment 8,444 12,943 165 181 Income Gain/Loss 8,279 12,762 **Ending Market Value** 92,805 92,805





Cortina

For the Periods Ending March 31, 2018



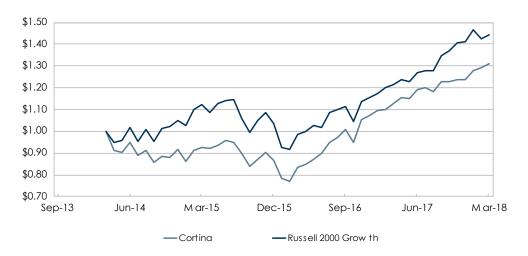
Russell Cortina 2000 Growth

4 Year Portfolio Statistics

	Commu	2000 010 1111
Return (%)	6.95	9.58
Standard Deviation (%)	14.67	14.89
Sharpe Ratio	0.45	0.62

Benchmark Relative Statistics		
Beta	0.91	
R Squared (%)	84.57	
Alpha (%)	-1.50	
Tracking Error (%)	5.93	
Batting Average (%)	52.08	
Up Capture (%)	84.15	
Down Capture (%)	95.12	

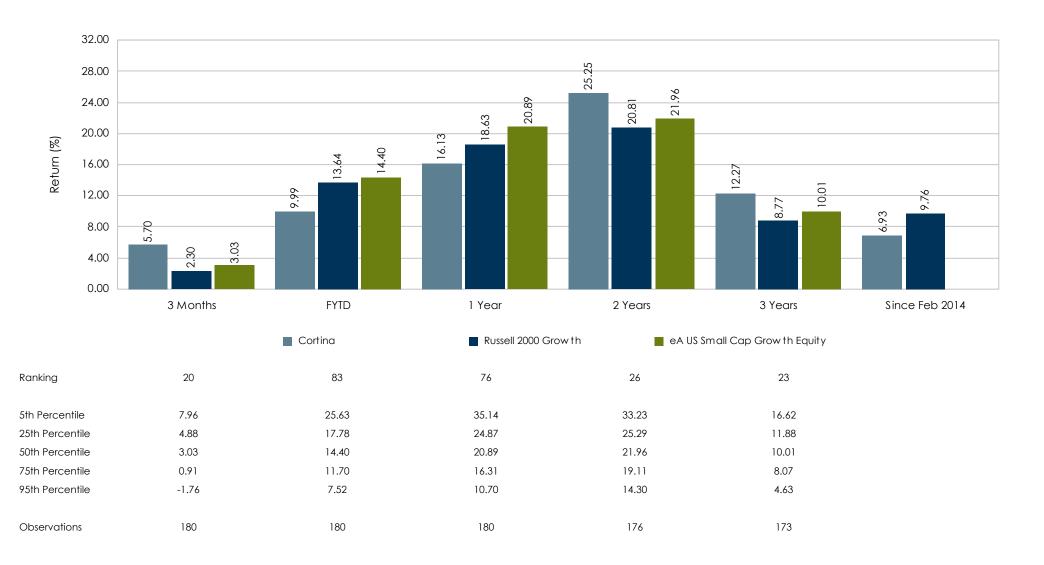




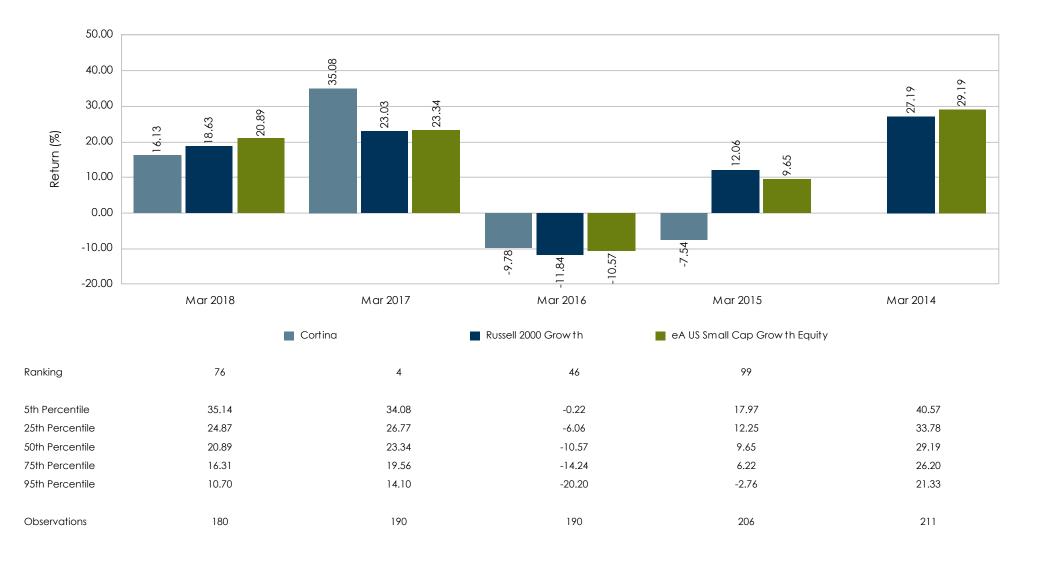
4 Year Return Analysis

	Cortina	Russell 2000 Growth
Number of Months	48	48
Highest Monthly Return (%)	11.26	8.95
Lowest Monthly Return (%)	-9.33	-10.83
Number of Positive Months	32	33
Number of Negative Months	16	15
% of Positive Months	66.67	68.75

CortinaFor the Periods Ending March 31, 2018



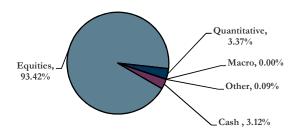
CortinaFor the One Year Periods Ending March



For the Periods Ending March 31, 2018

Strategy Allocation

Market Value: \$355,840,929



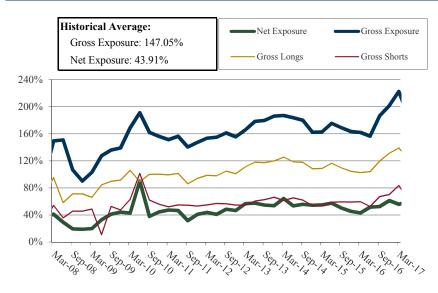
Strategy

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

Exposure

Net Exposure: 71.46%Gross Exposure: 223.11%

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, 2018

Sharpe Ratio



Grosvenor MSCI ACWI HFRI FOF: Strategic Return (%) 4.33 6.15 1.74 Standard Deviation (%) 7.03 16.72 6.28

0.58

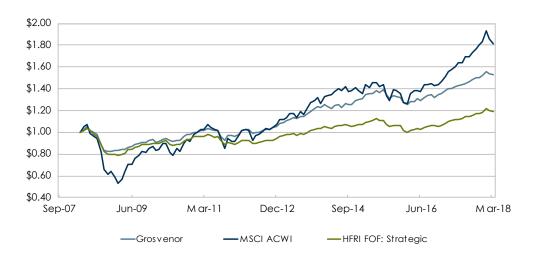
0.35

0.24

10 Year Portfolio Statistics

Benchmark Relative Statistics			
Beta	0.33	1.02	
R Squared (%)	61.62	82.33	
Alpha (%)	2.07	2.56	
Tracking Error (%)	12.02	2.96	
Batting Average (%)	48.33	65.00	
Up Capture (%)	37.13	122.87	
Down Capture (%)	38.04	91.53	

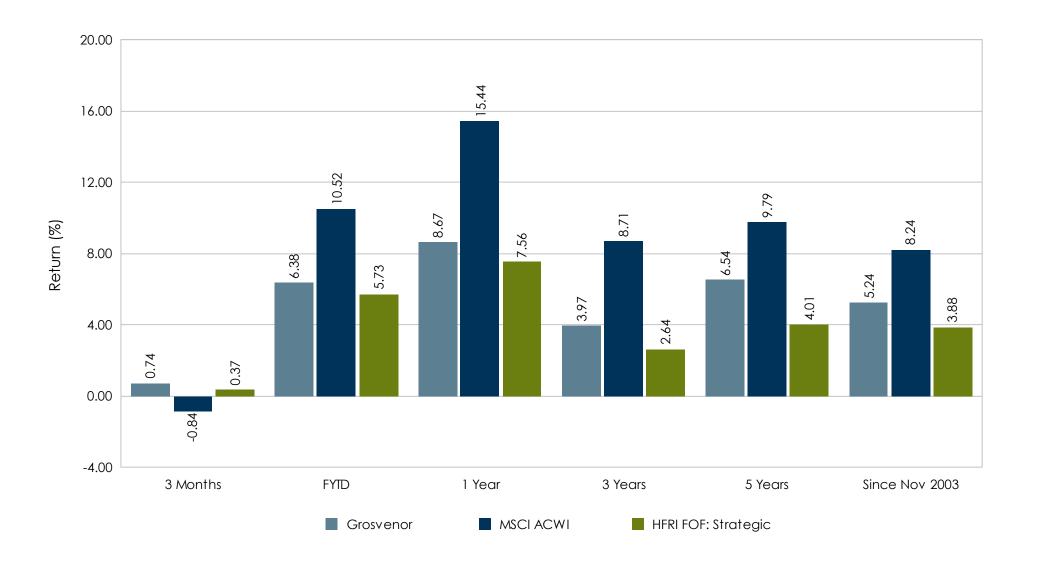
10 Year Growth of a Dollar



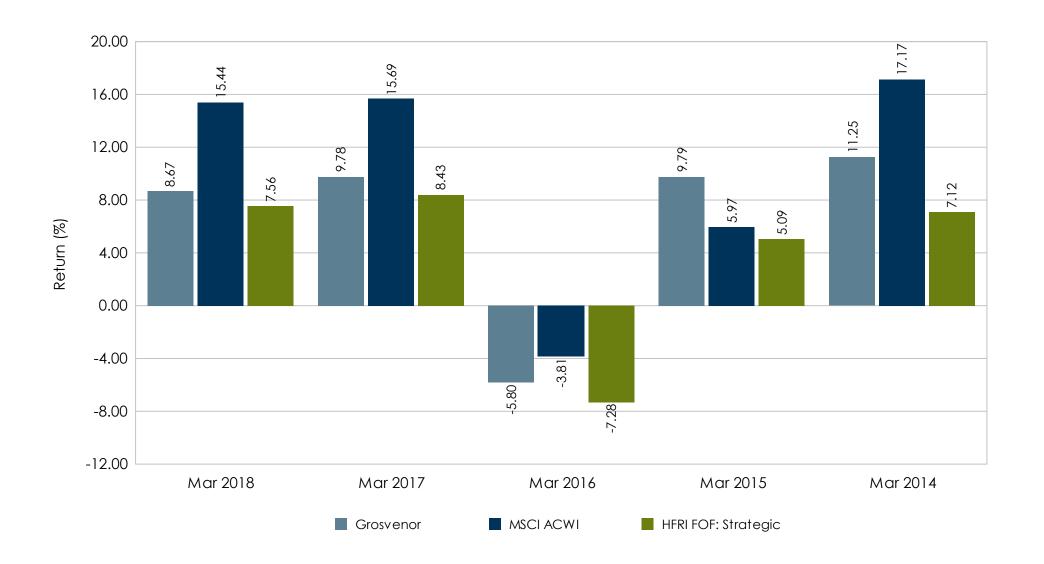
10 Year Return Analysis

	Grosvenor	MSCI ACWI	HFRI FOF: Strategic
Number of Months	120	120	120
Highest Monthly Return (%)	4.12	11.90	4.25
Lowest Monthly Return (%)	-10.06	-19.79	-7.66
Number of Positive Months	79	73	72
Number of Negative Months	41	47	48
% of Positive Months	65.83	60.83	60.00

For the Periods Ending March 31, 2018



For the One Year Periods Ending March



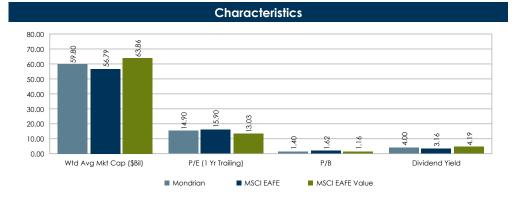
For the Periods Ending March 31, 2018

Account Description

- Strategy Int'l Developed Markets Equity
- Vehicle Limited Partnership

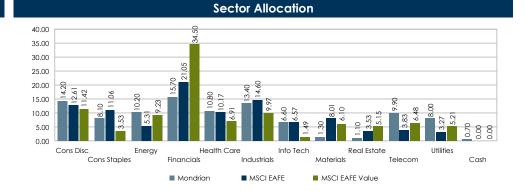
Ending Market Value

- 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



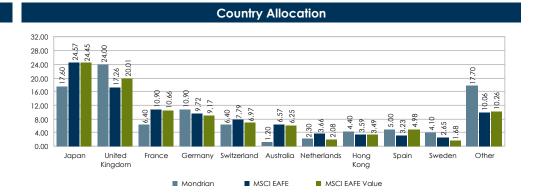
Performance Goals

- 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.



FYTD 1 Year Beginning Market Value 131,552 126,182 Net Additions 0 0 Return on Investment 9,593 14,962

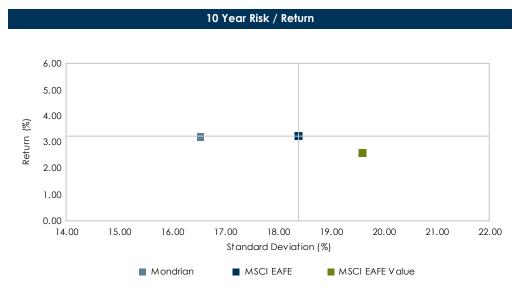
Dollar Growth Summary (\$000s)



141,144

141,144

For the Periods Ending March 31, 2018

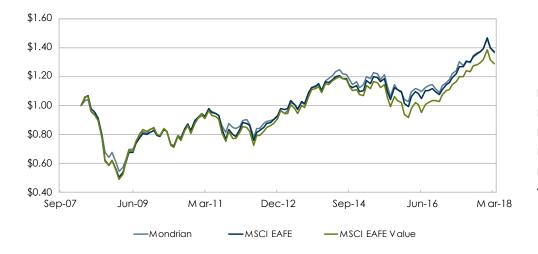


	Mondrian	MSCI EAFE	MSCI EAFE Value
Return (%)	3.17	3.23	2.57
Standard Deviation (%)	16.54	18.39	19.60
Sharpe Ratio	0.18	0.16	0.12

10 Year Portfolio Statistics

Benchmark Relative Statistics			
0.82			
94.25			
0.83			
5.32			
50.83			
81.52			
84.85			

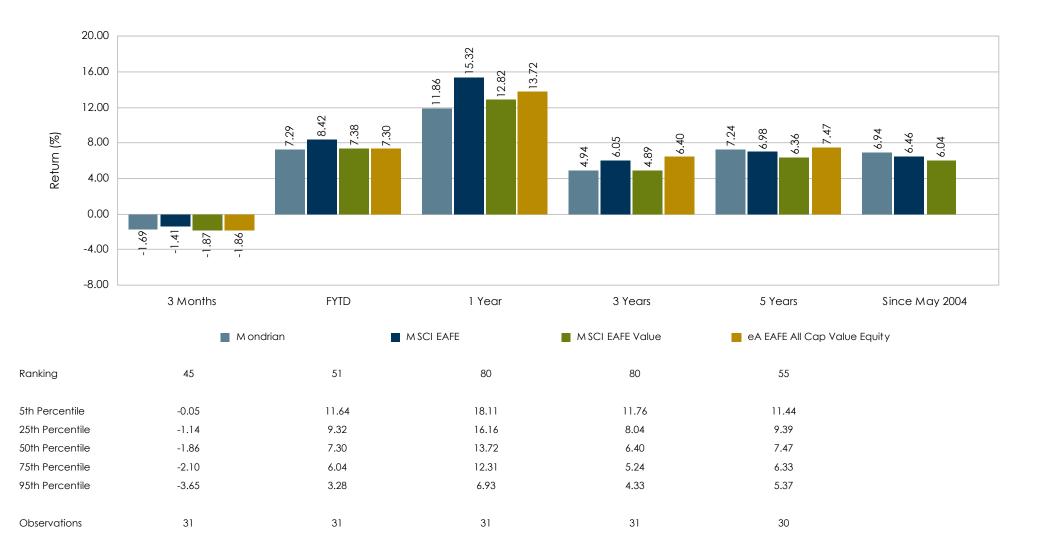
10 Year Growth of a Dollar



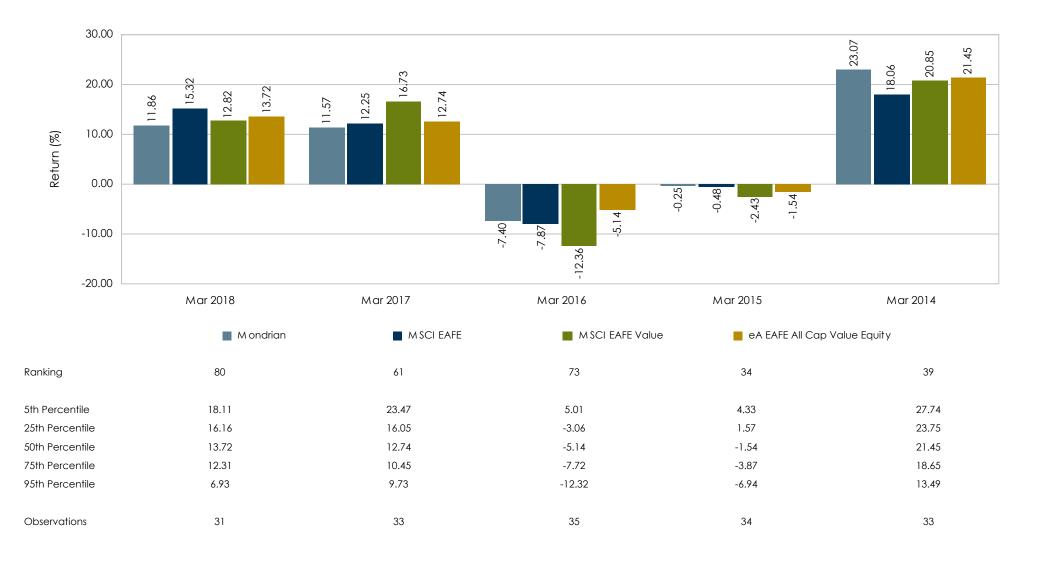
10 Year Return Analysis

	Mondrian	MSCI EAFE	MSCI EAFE Value
Number of Months	120	120	120
Highest Monthly Return (%)	11.12	12.96	17.46
Lowest Monthly Return (%)	-15.52	-20.17	-20.56
Number of Positive Months	65	64	64
Number of Negative Months	55	56	56
% of Positive Months	54.17	53.33	53.33

For the Periods Ending March 31, 2018



For the One Year Periods Ending March



For the Periods Ending March 31, 2018

28.00

24.00

20.00

12.00 8.00 4.00

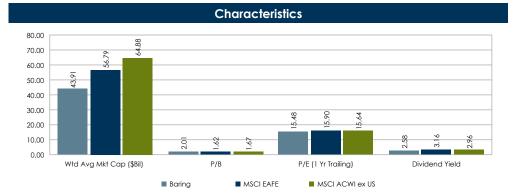
Cons Disc

Energy

Cons Staples

Account Description

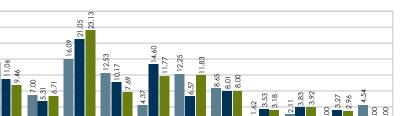
- Strategy Int'l Developed Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmarks MSCI EAFE and MSCI ACWI ex US
- Performance Inception Date March 2012
- Fees 40 bps base feel plus performance based fee



Sector Allocation

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.



Materials

■ MSCI ACWI ex US

Real Estate

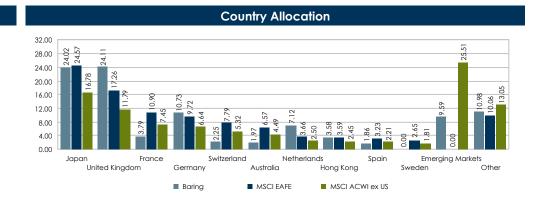
Telecom

Cash

Info Tech

FYTD 1 Year Beginning Market Value 112,010 104,276 Net Additions -928 -1,028 Return on Investment 10,393 18,227 Ending Market Value 121,475 121,475

Dollar Growth Summary (\$000s)



Industrials

■ MSCI EAFE

Health Care

Financials

■ Baring

For the Periods Ending March 31, 2018

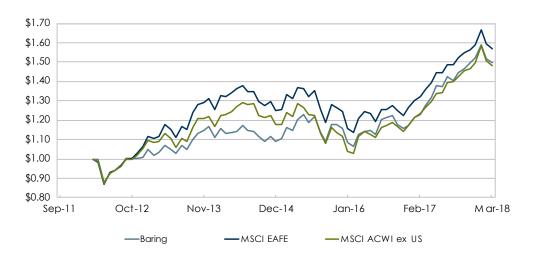


	Baring	MSCI EAFE	MSCI ACWI ex US
Return (%)	6.98	7.77	6.78
Standard Deviation (%)	11.89	12.56	12.38
Sharpe Ratio	0.57	0.60	0.53

6 Year Portfolio Statistics

Benchmark Relative Statistics				
Beta	0.90	0.89		
R Squared (%)	89.83	86.35		
Alpha (%)	0.03	0.92		
Tracking Error (%)	4.01	4.59		
Batting Average (%)	51.39	48.61		
Up Capture (%)	90.98	87.83		
Down Capture (%)	94.45	85.39		

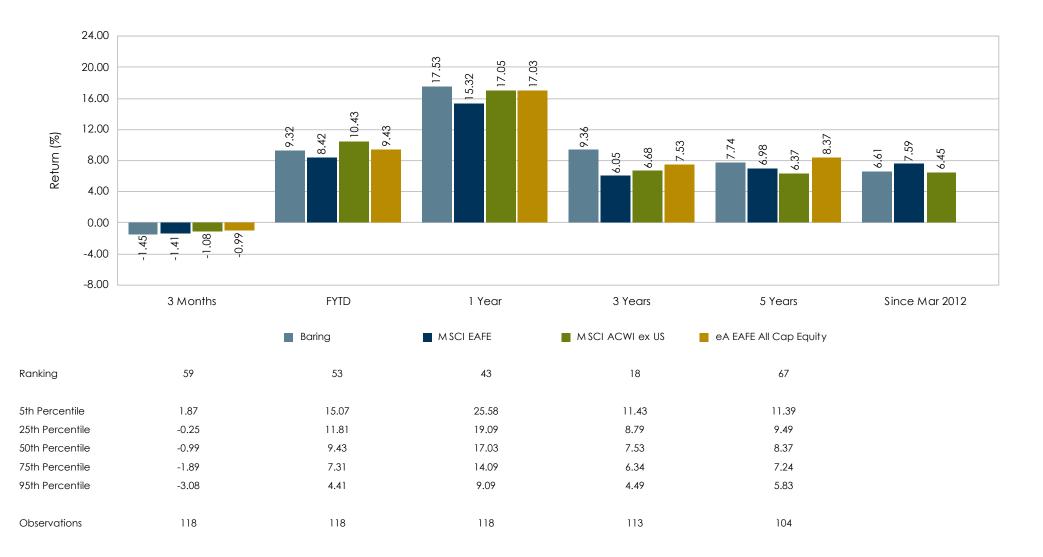




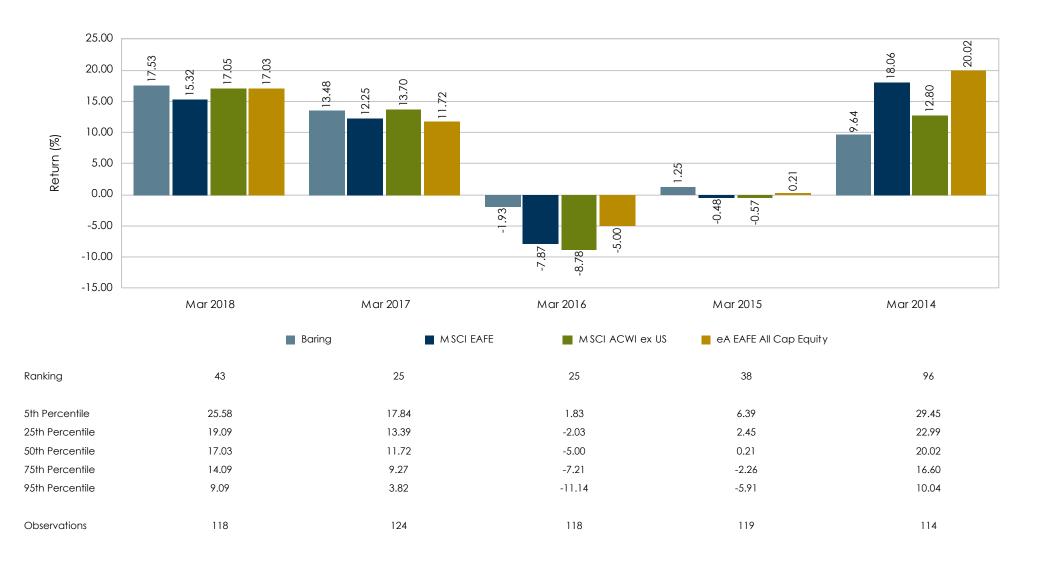
6 Year Return Analysis

	Baring	MSCI EAF	MSCI E ACWI ex US
Number of Months	72	72	72
Highest Monthly Return (%)	8.27	7.82	8.21
Lowest Monthly Return (%)	-11.56	-11.35	-11.25
Number of Positive Months	42	42	44
Number of Negative Months	30	30	28
% of Positive Months	58.33	58.33	61.11

For the Periods Ending March 31, 2018



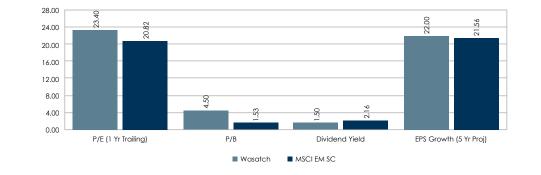
For the One Year Periods Ending March



For the Periods Ending March 31, 2018

Account Description

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

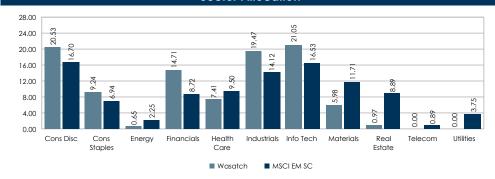


Characteristics

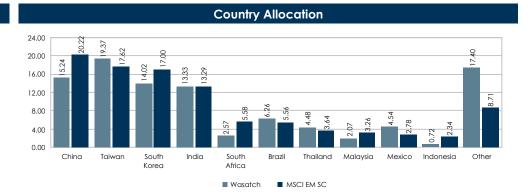
Performance Goals

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

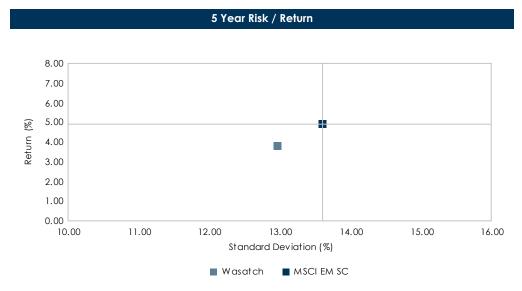
Sector Allocation



Dollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 33,773 31,068 Net Additions -422 -547 Return on Investment 5,708 8,537 Ending Market Value 39,058 39,058



For the Periods Ending March 31, 2018



5 Year Portfolio Statistics

	Wasatch	MSCI EM SC
Return (%)	3.78	4.89
Standard Deviation (%)	12.97	13.61
Sharpe Ratio	0.27	0.34

Benchmark Relative Statistics					
Beta	0.84				
R Squared (%)	76.82				
Alpha (%)	-0.21				
Tracking Error (%)	6.64				
Batting Average (%)	43.33				
Up Capture (%)	88.78				
Down Capture (%)	95.21				

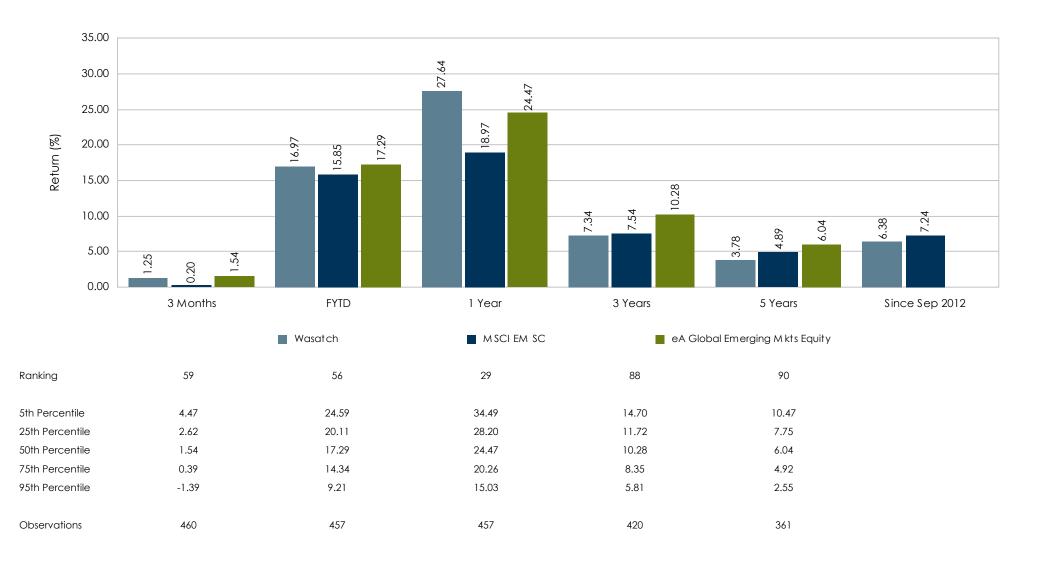




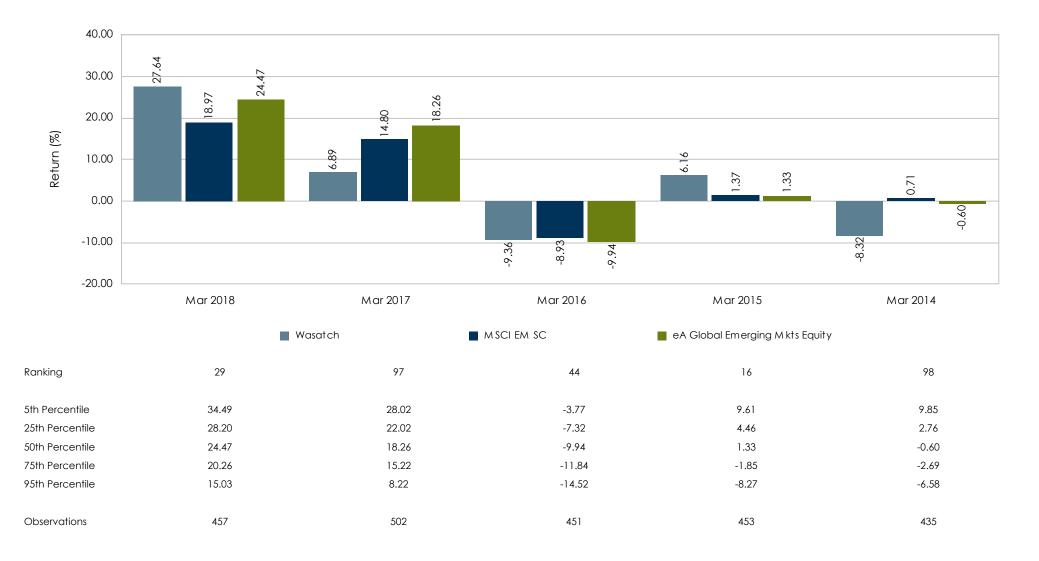
5 Year Return Analysis

	Wasatch	MSCI EM SC
Number of Months	60	60
Highest Monthly Return (%)	8.10	10.01
Lowest Monthly Return (%)	-9.57	-9.60
Number of Positive Months	35	37
Number of Negative Months	25	23
% of Positive Months	58.33	61.67

For the Periods Ending March 31, 2018



For the One Year Periods Ending March



AB EM Strategic Core Equity Fund

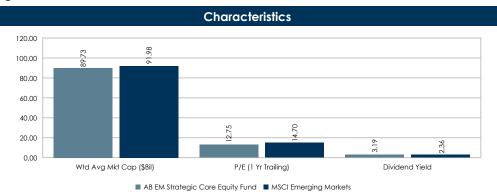
For the Periods Ending March 31, 2018

Account Description

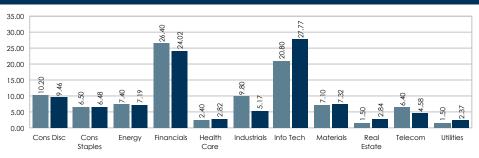
- Strategy Emerging Markets Equity
- Vehicle Non-Mutual Commingled
- Benchmark MSCI Emerging Markets
- Performance Inception Date November 2016
- Fees 65 bps (preferred fee)

Performance Goals

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

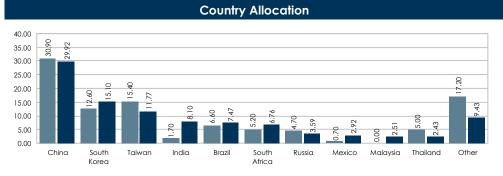


Sector Allocation



■ AB EM Strategic Core Equity Fund ■ MSCI Emerging Markets

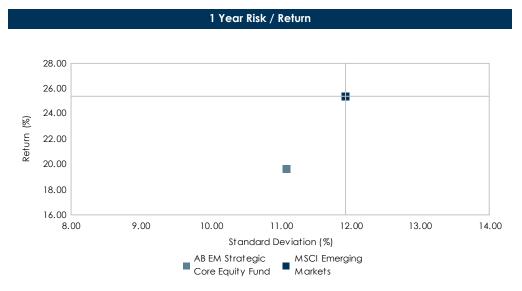
Dollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 78,872 74,618 Net Additions 0 0 Return on Investment 10,391 14,645 Ending Market Value 89,263 89,263



■ AB EM Strategic Core Equity Fund ■ MSCI Emerging Markets

AB EM Strategic Core Equity Fund

For the Periods Ending March 31, 2018

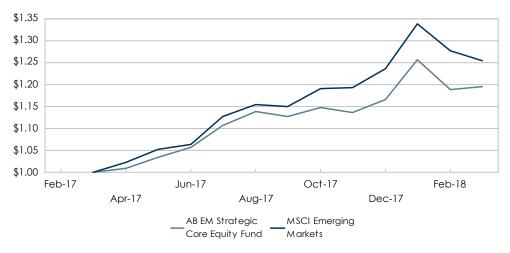


	AB EM Strategic Core	MSCI Emerging Markets
Return (%)	19.63	25.37
Standard Deviation (%)	11.09	11.93
Sharpe Ratio	1.68	2.04

	Benchmark Relative Statistics	
Beta	0.87	
R Squared (%)	88.09	
Alpha (%)	-1.84	
Tracking Error (%)	4.12	
Batting Average (%)	25.00	
Up Capture (%)	77.86	
Down Capture (%)	84.05	

1 Year Portfolio Statistics



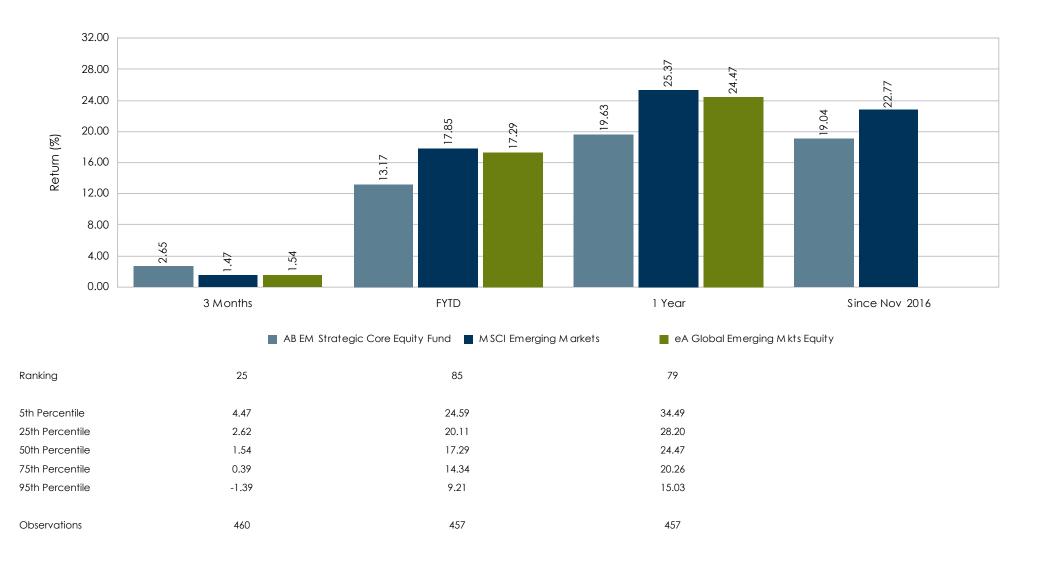


1 Year Return Analysis

	AB EM Strategic Core	MSCI Emerging Markets
Number of Months	12	12
Highest Monthly Return (%)	7.70	8.34
Lowest Monthly Return (%)	-5.29	-4.60
Number of Positive Months	9	9
Number of Negative Months	3	3
% of Positive Months	75.00	75.00

AB EM Strategic Core Equity Fund

For the Periods Ending March 31, 2018



Private Equity

For the Period Ending March 31, 2018

Summary of Cash Flows for 6 Months

Cash Outflows	Cash Inflows	Net Cash Flows
-20,084,141	19,267,160	-816,981

Summary of Portfolio Inception to Date

sommary of Formano incopilation bale	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Feb-98	623,000,000	527,540,834	119,557,467	586,176,392	192,634,189	778,810,581	1.48x
Buyout	Apr-99	215,500,000	185,361,575	45,911,705	228,032,409	58,425,033	286,457,442	1.55x
Marathon IV	Apr-99	7,000,000	7,462,426	-	10,188,872	-	10,188,872	1.37x
Hicks, Muse	Oct-01	15,000,000	16,211,210	-	28,272,306	-	28,272,306	1.74x
Calera Capital (Fremont III)	Jan-02	10,000,000	10,998,419	271,104	10,299,220	1,777	10,300,997	0.94x
Levine Leichtman	Jan-03	10,000,000	10,612,096	439,719	18,254,382	90,935	18,345,317	1.73x
Arsenal Capital Partners	Jan-03	15,000,000	16,154,576	-	28,622,510	-	28,622,510	1.77x
Marathon Fund Limited Partnership V	Dec-04	10,000,000	10,557,584	-	19,631,139	-	19,631,139	1.86x
Arsenal Capital Partners II	Sep-06	15,000,000	14,898,996	668,860	25,056,057	7,011,118	32,067,175	2.15x
Thompson Street C.P. II	Dec-06	10,000,000	10,579,171	970,164	19,089,442	1,799,974	20,889,416	1.97x
Sun Capital Partners V	Apr-07	12,500,000	12,712,473	2,058,222	10,091,479	6,650,759	16,742,238	1.32x
HM Capital Sector Performance Fund	May-07	15,000,000	15,604,226	647,720	14,690,140	-	14,690,140	0.94x
Calera Capital Fund IV	Jan-08	10,000,000	8,750,484	1,249,516	12,660,178	1,142,975	13,803,153	1.58x
Levine Leichtman IV	Aug-08	10,000,000	9,257,658	1,092,138	13,508,516	3,748,800	17,257,316	1.86x
Thompson Street Capital III	Aug-11	7,500,000	7,686,282	523,924	7,152,961	4,806,277	11,959,238	1.56x
Arsenal Capital Partners III	Apr-12	7,500,000	7,920,224	1,803,995	8,399,887	5,415,540	13,815,427	1.74x
Apollo Investment Fund VIII	Oct-13	7,500,000	6,442,951	2,085,820	1,974,660	6,625,349	8,600,009	1.33x
Francisco Partners Fund IV	Nov-14	8,000,000	7,796,000	204,000	-	9,575,020	9,575,020	1.23x
CenterOak Equity Fund I	Aug-15	7,500,000	3,848,800	3,651,200	27,338	3,310,360	3,337,698	0.87x
Thompson Street Capital Partners IV	Jan-16	7,500,000	5,552,145	2,029,170	81,315	6,083,102	6,164,417	1.11x
Leonard Green Equity Investors VII	Feb-16	7,500,000	2,315,854	5,216,153	32,007	2,163,047	2,195,054	0.95x
Apollo Investment Fund IX	May-17	13,000,000	-	13,000,000	-	-	-	-
Francisco Partners Fund V	Sep-17	10,000,000	-	10,000,000	-	-	-	-
•	,				-	-	-	-

Private Equity

For the Period Ending March 31, 2018

Summary of Portfolio Inception to Date

	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value t
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
istressed	Feb-98	143,500,000	119,105,443	24,853,547	157,798,134	18,614,002	176,412,136	1.48x
Oaktree Opportunities Fund II	Feb-98	3,000,000	3,000,000	-	4,525,923	-	4,525,923	1.51x
Oaktree Opportunities Fund III	Sep-99	5,000,000	5,000,000	-	7,535,740	-	7,535,740	1.51x
Oaktree Opportunities Fund IV	Dec-01	10,000,000	10,000,000	-	16,804,559	-	16,804,559	1.68x
Siguler Guff Dist Opp I	Jan-03	20,000,000	19,568,416	-	30,991,330	-	30,991,330	1.58x
Oaktree Opportunities Fund V	Jun-04	4,000,000	4,000,000	-	6,485,537	84,312	6,569,849	1.64x
Oaktree Opportunities Fund VI	Aug-05	4,000,000	4,000,000	-	6,317,103	112	6,317,215	1.58x
Siguler Guff Dist Opp II	Sep-05	20,000,000	20,006,044	-	27,832,909	603,317	28,436,226	1.42x
Oaktree Opportunities VII A	Mar-07	7,500,000	7,554,219	-	9,687,042	678,784	10,365,826	1.37x
Oaktree Opportunities VII B	May-08	7,500,000	6,750,000	750,000	11,155,789	530,999	11,686,788	1.73x
Siguler Guff Dist Opp III	Aug-08	15,000,000	14,480,311	600,000	20,220,163	2,721,985	22,942,148	1.58x
Oaktree Opportunities VIII	Nov-09	7,500,000	6,750,000	750,000	8,940,326	974,975	9,915,301	1.47x
Oaktree Opportunities IX	Jun-12	7,500,000	7,500,000	-	2,388,312	5,830,697	8,219,009	1.10x
Oaktree European Dislocation Fund	Oct-13	7,500,000	4,285,544	3,214,456	4,163,401	714,273	4,877,674	1.14x
Oaktree Opportunities Fund X	Mar-15	7,500,000	5,250,000	3,000,000	750,000	5,513,639	6,263,639	1.19x
Oaktree Opportunities Fund Xb	Jun-15	7,500,000	-	7,500,000	-	-	-	-
Apollo EPF III	Jan-18	10,000,000	960,909	9,039,091	-	960,909	960,909	1.00x
nerging Markets Focused	Jan-12	7,500,000	6,818,669	1,242,118	1,024,686	6,496,949	7,521,635	1.10x
Actis EM IV	Jan-12	7,500,000	6,818,669	1,242,118	1,024,686	6,496,949	7,521,635	1.10x
zzanine	Mar-99	49,500,000	49,770,963	5,377,905	68,457,114	3,110,887	71,568,001	1.44x
TCW Crescent II	Mar-99	7,000,000	6,726,192	-	9,793,612	-	9,793,612	1.46x
TCW Crescent Mezzanine Partner III	Jul-01	10,000,000	10,188,852	200,324	20,545,737	321,127	20,866,864	2.05x
TCW Crescent IV	Jun-06	10,000,000	9,873,180	1,921,076	11,064,296	99,272	11,163,568	1.13x
Newstone Capital Partners	Oct-06	5,000,000	5,697,863	116,709	7,070,952	26,083	7,097,035	1.25x
TCW Mezzanine Fund V	Jan-08	10,000,000	7,336,349	2,663,651	9,470,804	1,136,143	10,606,947	1.45x
Newstone Capital Partners II	Jan-10	7,500,000	9,948,527	476,145	10,511,713	1,528,262	12,039,975	1.21x
ner	Jan-13	31,500,000	20,215,706	12,719,236	6,692,082	17,094,576	23,786,658	1.18x
EnCap Energy Fund IX	Jan-13	6,500,000	6,839,752	334,159	3,758,349	5,116,035	8,874,384	1.30x
EnCap Energy Fund X	Mar-15	7,500,000	5,643,281	2,422,867	1,643,987	5,102,418	6,746,405	1.20x
ArcLight Energy Partners VI	Mar-15	7,500,000	7,025,706	669,177	1,289,746	6,259,529	7,549,275	1.07x
EnCap Energy Fund XI	Dec-16	10,000,000	706,967	9,293,033	-	616,594	616,594	0.87x
condary Fund of Funds	Dec-05	20,000,000	21,439,062	326,939	26,644,063	2,553,412	29,197,475	1.36x
Lexington VI	Dec-05	20,000,000	21,439,062	326,939	26,644,063	2,553,412	29,197,475	1.36x

Private Equity

For the Period Ending March 31, 2018

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	155,500,000	124,829,416	29,126,017	97,527,904	86,339,330	183,867,234	1.47x
Weiss, Peck & Greer V, LLC	Jul-99	7,000,000	6,932,406	67,594	4,507,097	-	4,507,097	0.65x
Firstmark Venture Partners II (Pequot)	Feb-00	1,000,000	955,000	-	322,553	-	322,553	0.34x
Midtown Fund III (Firstmark III,Pequot)	Oct-00	15,000,000	14,738,625	-	12,141,249	-	12,141,249	0.82x
Lightspeed Venture Partners VI (WPG)	Oct-00	12,000,000	11,010,270	989,730	10,396,934	132,761	10,529,695	0.96x
Venture Lending & Leasing Fund	May-01	6,000,000	4,500,000	-	5,595,215	-	5,595,215	1.24x
Accel Europe	Jun-01	10,000,000	10,000,000	-	12,403,731	1,008,620	13,412,351	1.34x
Knightsbridge Fund VI	Dec-04	12,000,000	11,232,000	768,000	8,372,368	7,154,241	15,526,609	1.38x
Firstmark I (Pequot, Firstmark IV)	Nov-05	5,000,000	4,950,000	50,000	13,247,395	21,190,625	34,438,020	6.96x
Weathergage Venture Capital	Mar-07	7,500,000	6,862,500	637,500	7,581,343	5,743,903	13,325,246	1.94x
Warburg Pincus	Sep-07	15,000,000	15,000,000	-	15,641,118	7,125,886	22,767,004	1.52x
Weathergage Venture Cap II	Mar-11	7,500,000	6,975,000	525,000	2,113,216	9,674,501	11,787,717	1.69x
Firstmark II (Firstmark V)	Jul-11	5,000,000	4,822,365	177,635	497,531	6,888,476	7,386,007	1.53x
Warburg Pincus XI	Oct-12	7,500,000	7,338,750	161,250	4,047,679	6,518,420	10,566,099	1.44x
Firstmark Capital Fund III	Oct-13	5,000,000	4,475,000	525,000	141,977	5,550,508	5,692,485	1.27x
Firstmark Capital Opportunity Fund I	May-14	5,000,000	5,075,000	186,808	441,498	5,599,079	6,040,577	1.19x
Warburg Pincus XII	Dec-15	10,000,000	5,325,000	4,675,000	77,000	5,487,208	5,564,208	1.04x
FirstMark Capital Fund IV	May-16	7,500,000	1,462,500	6,037,500	-	1,334,747	1,334,747	0.91x
Weathergage Venture Capital IV	Dec-16	10,000,000	2,500,000	7,500,000	-	2,255,355	2,255,355	0.90x
FirstMark Capital Opportunity Fund II	Jan-18	7,500,000	675,000	6,825,000	-	675,000	675,000	1.00x

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Oklahoma Police Pension & Retirement System

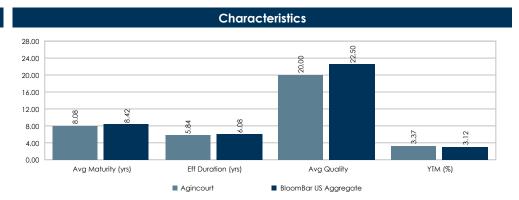
Fixed Income Manager Performance

Agincourt Core Fixed Income

For the Periods Ending March 31, 2018

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.

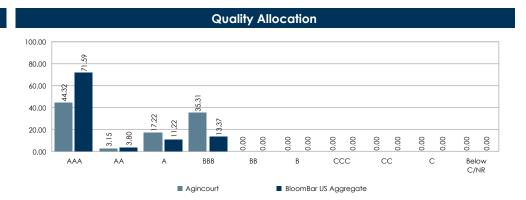


FYTD 1 Year **Beginning Market Value** 167,350 170.040 **Net Additions** -208 -284 Return on Investment 2,926 160 Income 5,074 6,568 -4,914 -3,643 Gain/Loss

169,991

169,991

Dollar Growth Summary (\$000s)

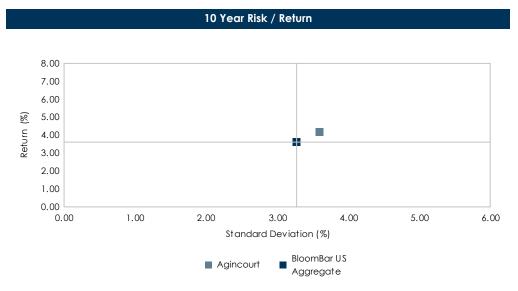


The Other sector consists of ABS, CMO, Convertibles, Municipals, Private Placements/144As and TIPS.

Ending Market Value

Agincourt Core Fixed Income

For the Periods Ending March 31, 2018

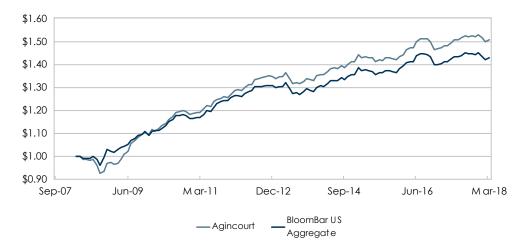


10 Year Portfolio Statistics

		BloomBar US
	Agincourt	Aggregate
Return (%)	4.19	3.63
Standard Deviation (%)	3.59	3.27
Sharpe Ratio	1.09	1.03

Benchmark Relative Statistics		
Beta	0.99	
R Squared (%)	81.94	
Alpha (%)	0.57	
Tracking Error (%)	1.53	
Batting Average (%)	62.50	
Up Capture (%)	109.43	
Down Capture (%)	100.83	

10 Year Growth of a Dollar

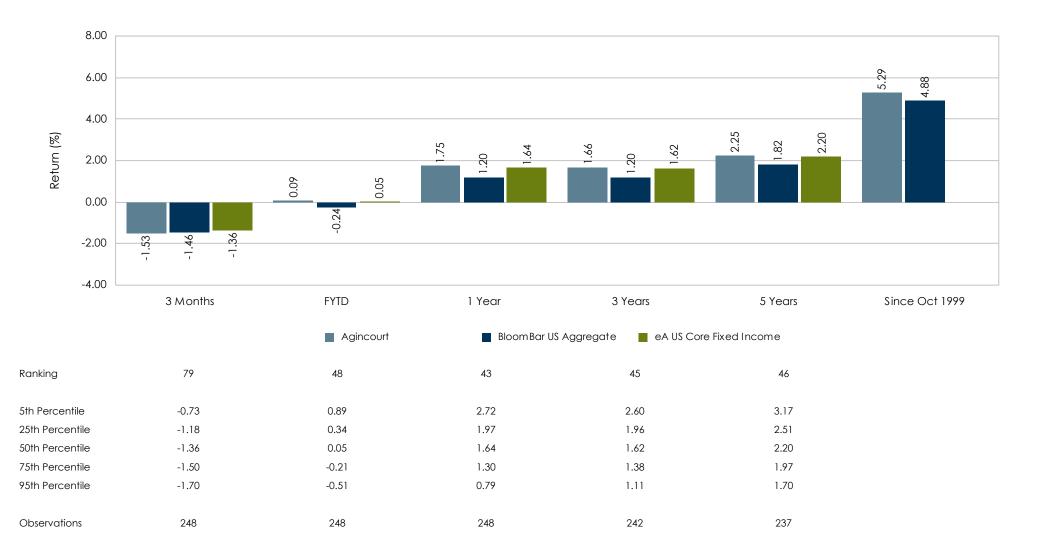


10 Year Return Analysis

	Agincourt	BloomBar US Aggregate
Number of Months	120	120
Highest Monthly Return (%)	3.80	3.73
Lowest Monthly Return (%)	-3.54	-2.37
Number of Positive Months	79	77
Number of Negative Months	41	43
% of Positive Months	65.83	64.17

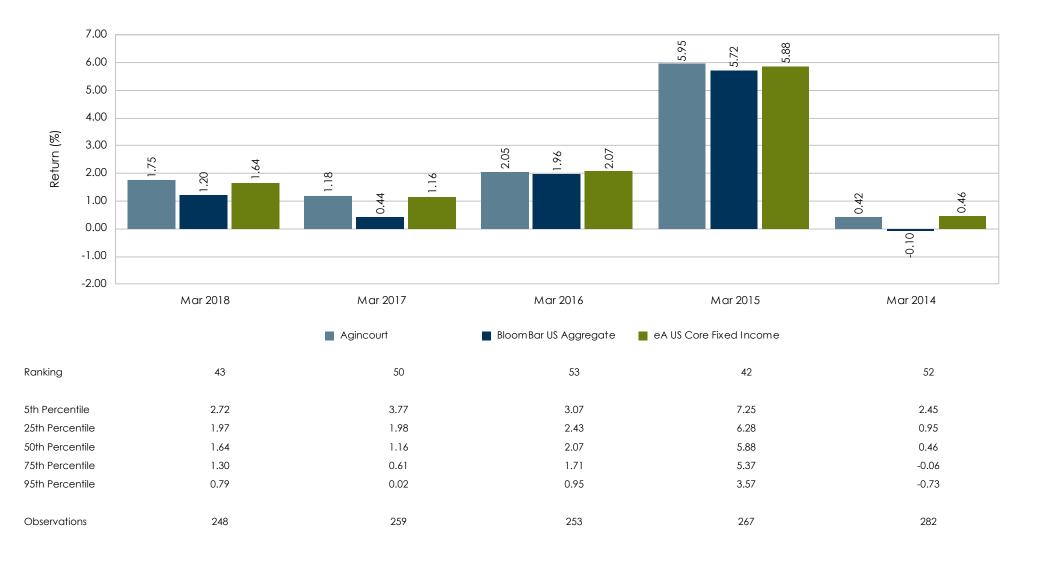
Agincourt Core Fixed Income

For the Periods Ending March 31, 2018



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, 2018

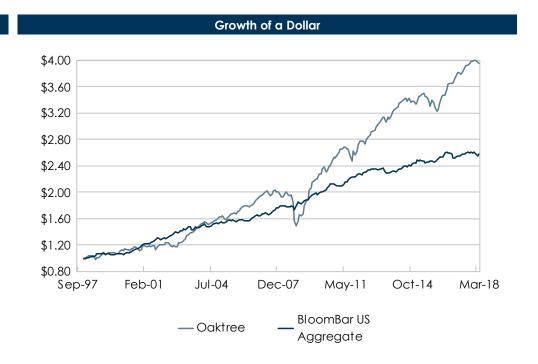
Account Description

- Strategy Multi-Sector Fixed Income
- Vehicle Non-Mutual Commingled
- Benchmark BloomBar US Aggregate
- **Performance Inception Date** February 1998
- **Fees** 50 bps plus operating expenses

Performance Goals

- Outperform the BloomBar US Aggregate.
- Each underlying strategy should outperform its relevant benchmark.

Dollar Growth Summary (\$000s)		
	FYTD	1 Year
Beginning Market Value	120,555	118,130
Net Additions	-69	-234
Return on Investment	1,867	4,457
Ending Market Value	122,353	122,353



For the Periods Ending March 31, 2018

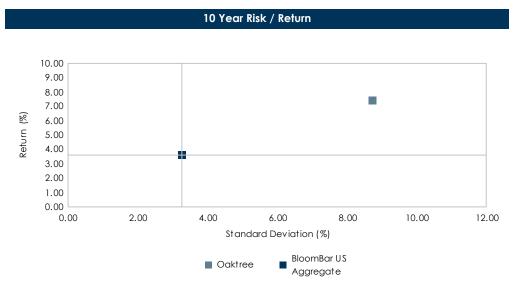
Return (%)

Sharpe Ratio

Up Capture (%)

Down Capture (%)

Standard Deviation (%)



BloomBar US Oaktree Aggregate 7.42 3.63

8.72

0.82

3.27

1.03

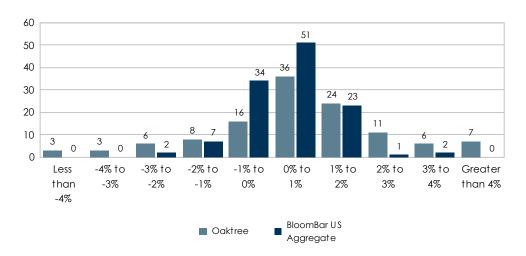
139.81

53.56

10 Year Portfolio Statistics

Benchmo	ırk Relative Statistics
Beta	0.74
R Squared (%)	7.67
Alpha (%)	5.00
Tracking Error (%)	8.43
Battina Average (%)	60.00

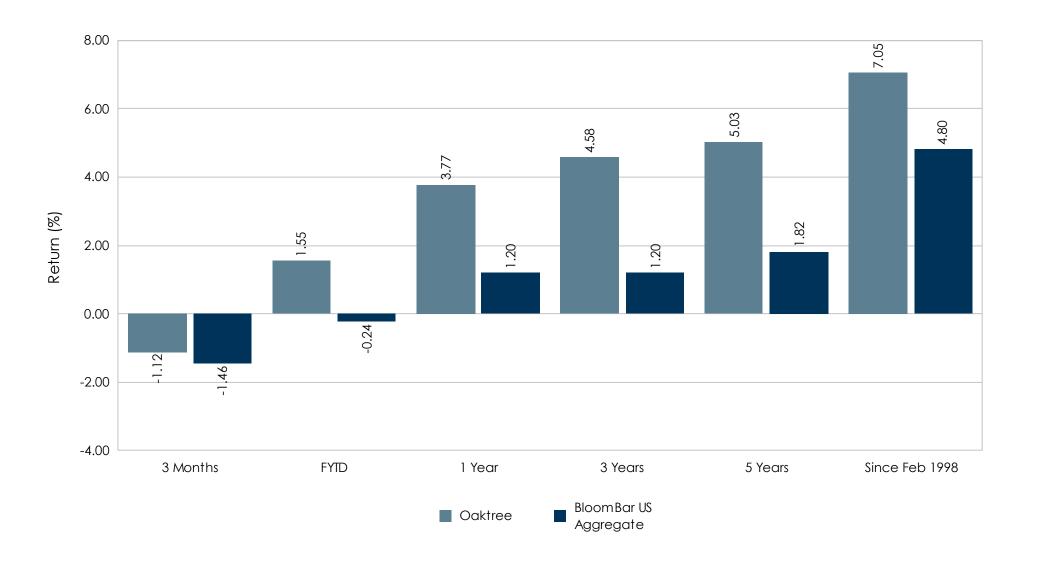
10 Year Return Histogram



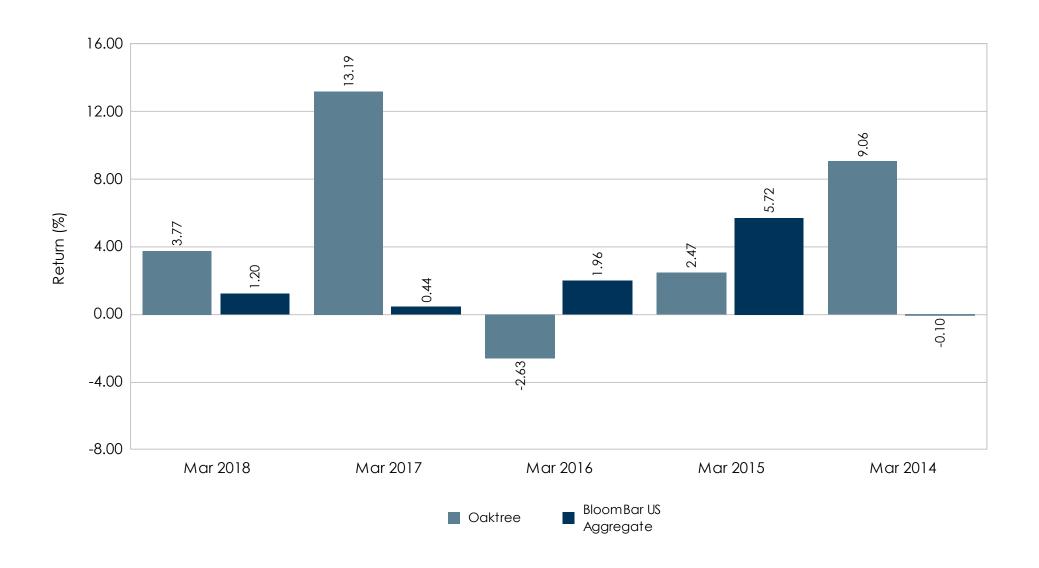
10 Year Return Analysis

	Oaktree	BloomBar US Aggregate
Number of Months	120	120
Highest Monthly Return (%)	7.58	3.73
Lowest Monthly Return (%)	-14.86	-2.37
Number of Positive Months	84	77
Number of Negative Months	36	43
% of Positive Months	70.00	64.17

For the Periods Ending March 31, 2018



For the One Year Periods Ending March

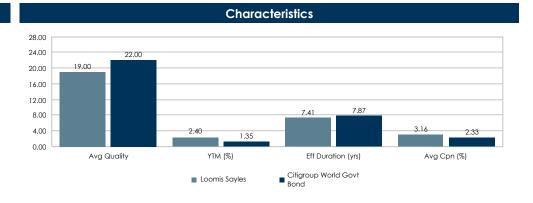


Loomis Sayles

For the Periods Ending March 31, 2018

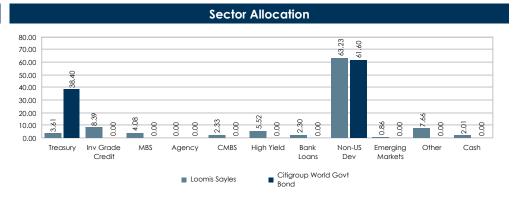
Account Description

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

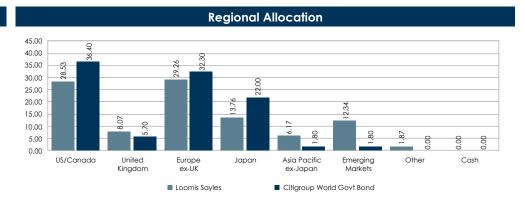


Performance Goals

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



Pollar Growth Summary (\$000s) FYTD 1 Year Beginning Market Value 94,897 91,927 Net Additions -237 -312 Return on Investment 6,282 9,326 Ending Market Value 100,941 100,941

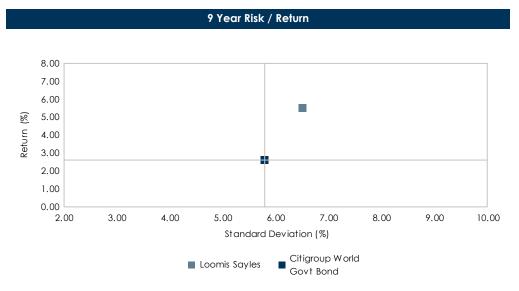


Characteristic and allocation charts represents data of the Loomis World Bond NH Trust (Non-Mutual Commingled).

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

Loomis Sayles

For the Periods Ending March 31, 2018



	Loomis Sayles	Citigroup World Govt Bond
Return (%)	5.51	2.63
Standard Deviation (%)	6.50	5.79
Sharpe Ratio	0.82	0.42

Benchmark Relative Statistics			
Beta	1.03		
R Squared (%)	84.09		
Alpha (%)	2.77		
Tracking Error (%)	2.60		
Batting Average (%)	68.52		
Up Capture (%)	127.30		
Down Capture (%)	92.26		

9 Year Portfolio Statistics



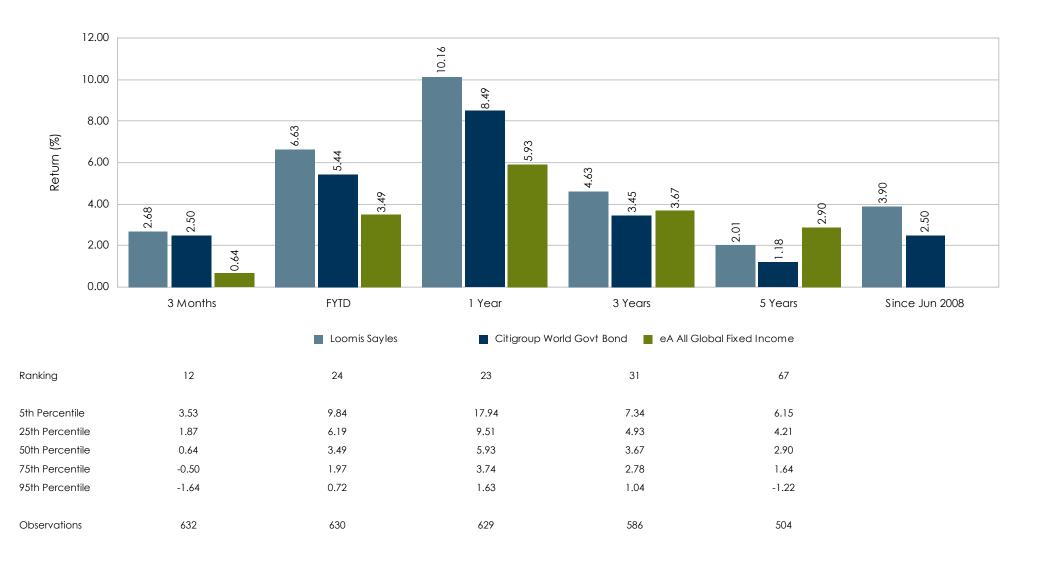


9 Year Return Analysis

	Loomis Sayles	Citigroup World Govt Bond
Number of Months	108	108
Highest Monthly Return (%)	6.12	3.69
Lowest Monthly Return (%)	-4.95	-5.03
Number of Positive Months	70	63
Number of Negative Months	38	45
% of Positive Months	64.81	58.33

Loomis Sayles

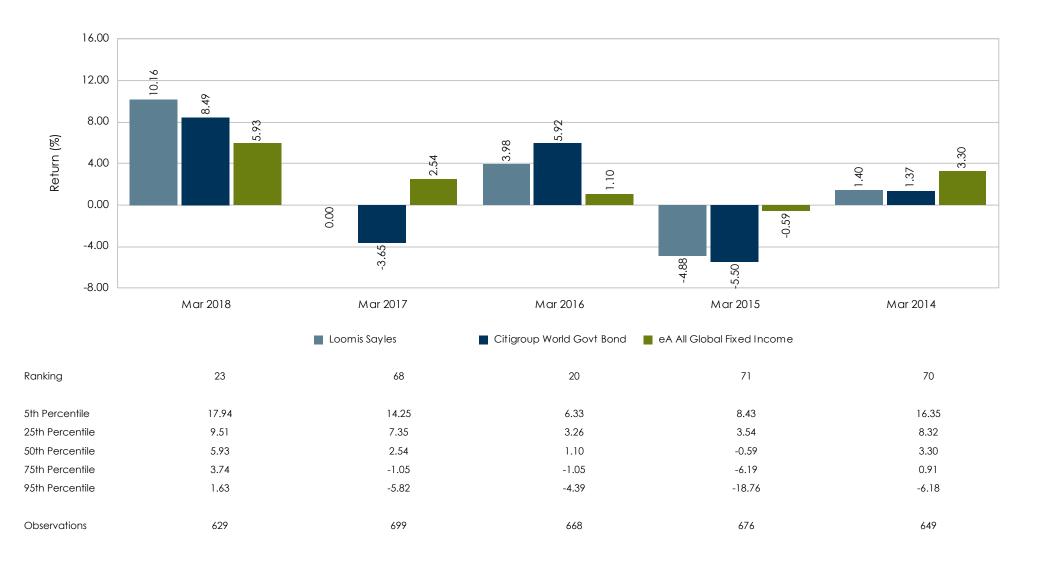
For the Periods Ending March 31, 2018



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

For the Period Ending March 31, 2018

Summary of Cash Flows for 6 Months

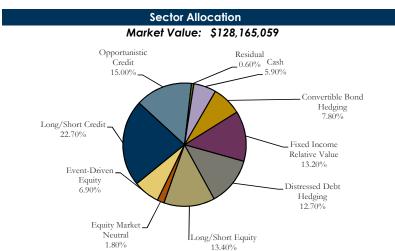
Cash Outflows	Cash Inflows	Net Cash Flows
-8,124,696	1,245,556	-6,879,140

Summary of Portfolio Inception to Date

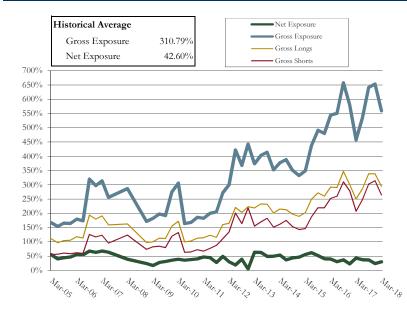
community of Formonio meephorn to bare								
	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Sep-16	60,000,000	28,882,292	31,820,986	2,862,619	28,781,082	31,643,701	1.10x
Mezzanine	Jan-17	20,000,000	12,882,292	7,142,008	1,151,943	13,142,807	14,294,750	1.11x
Newstone Capital Partners III	Jan-17	20,000,000	12,882,292	7,142,008	1,151,943	13,142,807	14,294,750	1.11x
Other	Sep-16	40,000,000	16,000,000	24,678,978	1,710,676	15,638,275	17,348,951	1.08x
LBC Credit Partners Fund IV	Sep-16	40,000,000	16,000,000	24,678,978	1,710,676	15,638,275	17,348,951	1.08x

PAAMCO

For the Periods Ending March 31, 2018



Historical Net & Gross Exposure



Characteristic data provided by manager.

Strategy

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

Objectives and Constraints

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

Exposure

Net Exposure: 30.40%Gross Exposure: 559.80%

PAAMCO

For the Periods Ending March 31, 2018

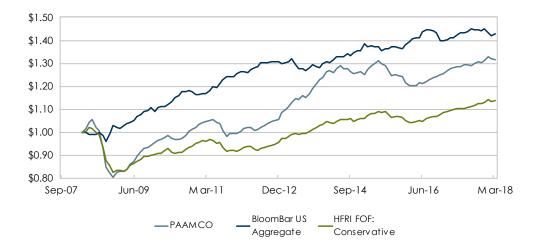


BloomBar US HFRI FOF: Conservative **PAAMCO** Aggregate 2.77 3.63 1.28 Return (%) 3.27 4.08 Standard Deviation (%) 5.66 **Sharpe Ratio** 0.44 1.03 0.25

10 Year Portfolio Statistics

Benchmark Relative Statistics			
Beta	0.00	1.30	
R Squared (%)	0.00	87.79	
Alpha (%)	2.93	1.14	
Tracking Error (%)	6.54	2.33	
Batting Average (%)	59.17	61.67	
Up Capture (%)	39.13	136.74	
Down Capture (%)	-8.38	109.86	

10 Year Growth of a Dollar

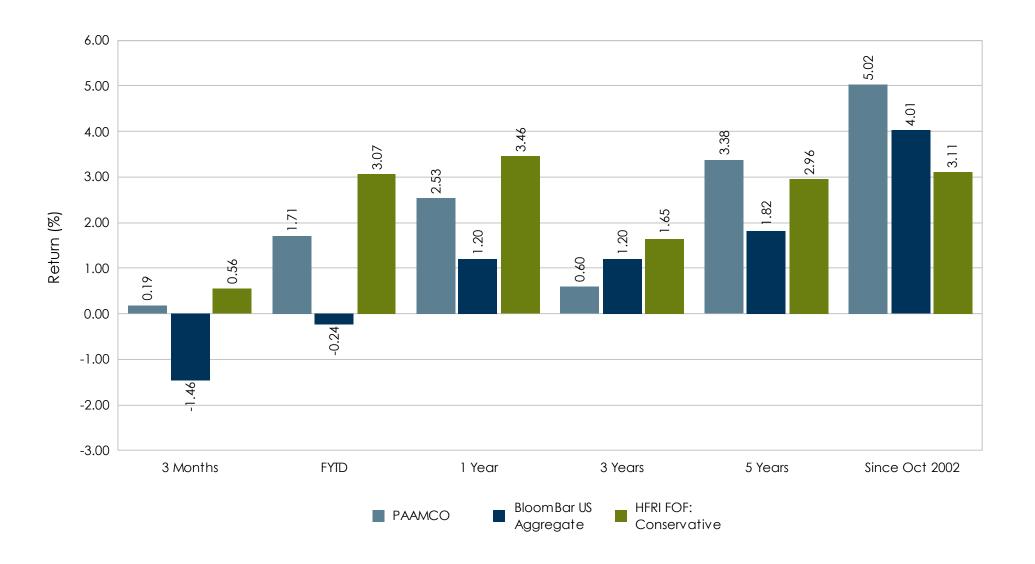


10 Year Return Analysis

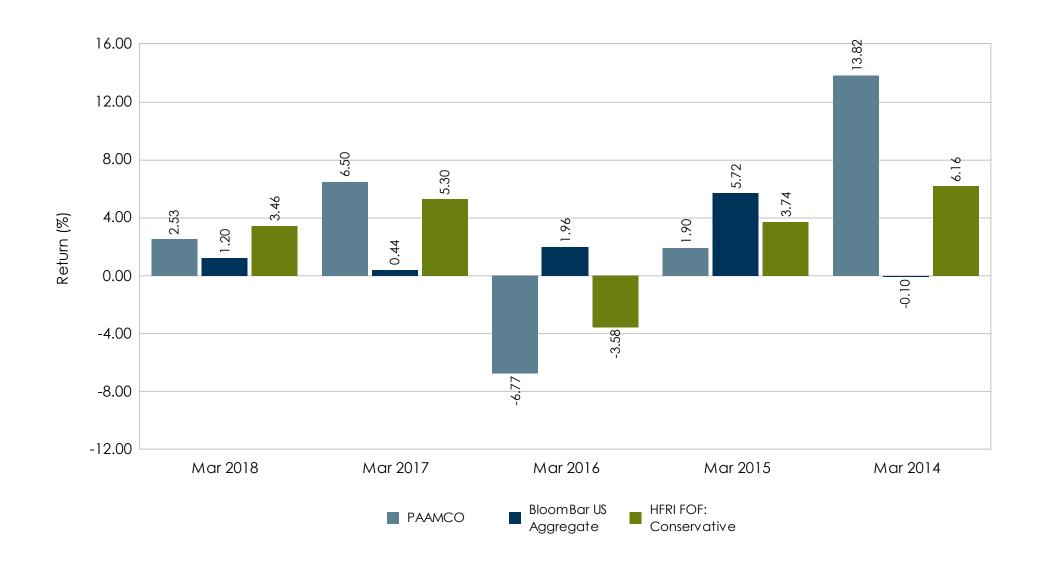
	PAAMCO	BloomBar US Aggregate	HFRI FOF: Conservative
Number of Months	120	120	120
Highest Monthly Return (%)	2.84	3.73	2.42
Lowest Monthly Return (%)	-9.06	-2.37	-5.91
Number of Positive Months	81	77	82
Number of Negative Months	39	43	38
% of Positive Months	67.50	64.17	68.33

PAAMCO

For the Periods Ending March 31, 2018



PAAMCOFor the One Year Periods Ending March

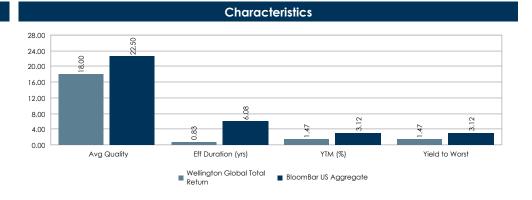


Wellington Global Total Return

For the Periods Ending March 31, 2018

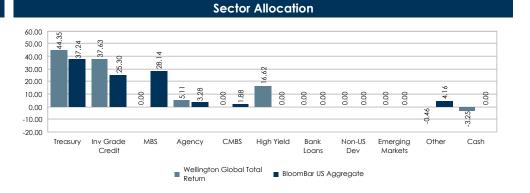
Account Description

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

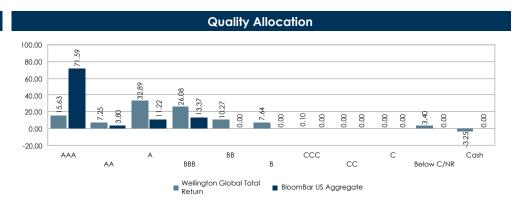


Performance Goals

- 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 59,877 59,778 Net Additions -113 -163 Return on Investment 2,071 2,220 Ending Market Value 61,835 61,835



Wellington Global Total Return

For the Periods Ending March 31, 2018



Wellington Global LIBOR Total Return 3 Month Return (%) 3.72 1.36 Standard Deviation (%) 3.31 0.06 Sharpe Ratio 0.81 5.15

Benchmark Relative Statistics			
7.27			
1.85			
-5.97			
3.31			
50.00			
272.75			
	7.27 1.85 -5.97 3.31 50.00		

1 Year Portfolio Statistics

1 Year Growth of a Dollar

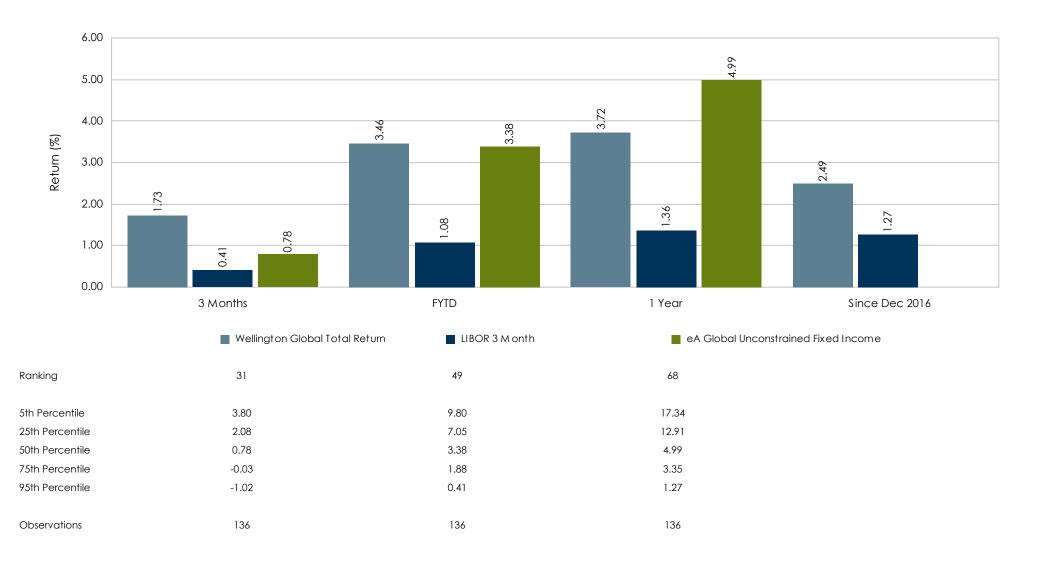


1 Year Return Analysis

	Wellington Global Total Return	LIBOR 3 Month
Number of Months	12	12
Highest Monthly Return (%)	2.45	0.15
Lowest Monthly Return (%)	-0.87	0.08
Number of Positive Months	6	12
Number of Negative Months	6	0
% of Positive Months	50.00	100.00

Wellington Global Total Return

For the Periods Ending March 31, 2018



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.

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Oklahoma Police Pension & Retirement System

Real Assets Manager Performance

JP Morgan Strategic Property

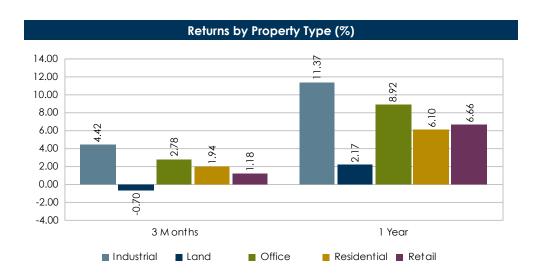
For the Periods Ending March 31, 2018

Account Description

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

Performance Goals

Outperform the NFI ODCE Net.





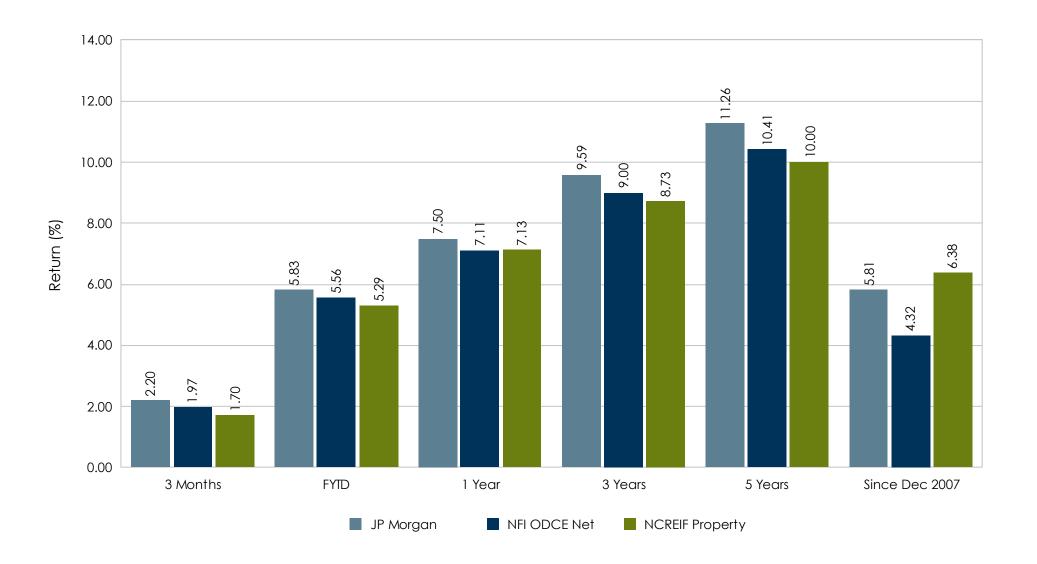
Fund Information	
Gross Market Value	\$41,624,542,320
■ Net Market Value	\$31,811,366,400
Cash Balance of Fund	\$1,374,941,230
# of Properties	159
# of Participants	422



100%

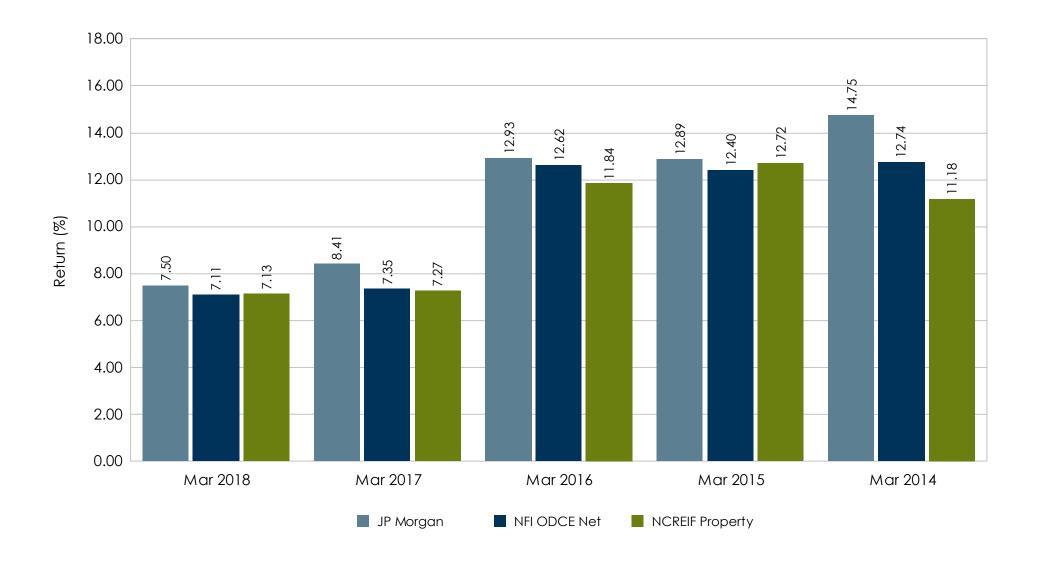
JP Morgan Strategic Property

For the Periods Ending March 31, 2018



JP Morgan Strategic Property

For the One Year Periods Ending March



Blackstone Property Partners

For the Periods Ending March 31, 2018

Account Description

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

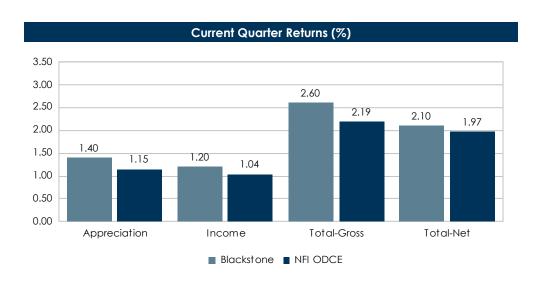
■ Ending Market Value \$39,475,010

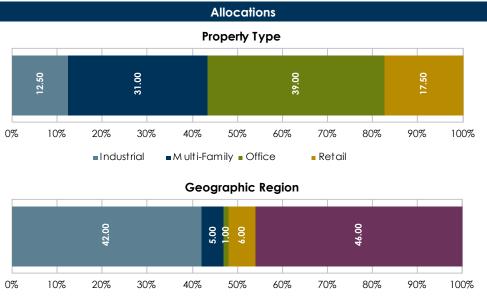
Account Information

Fund Inforn	nation
■ Net Market Value	\$7,400,000,000
# of Properties	24

Performance Goals

Outperform the NFI ODCE Net and NCREIF Property.





South

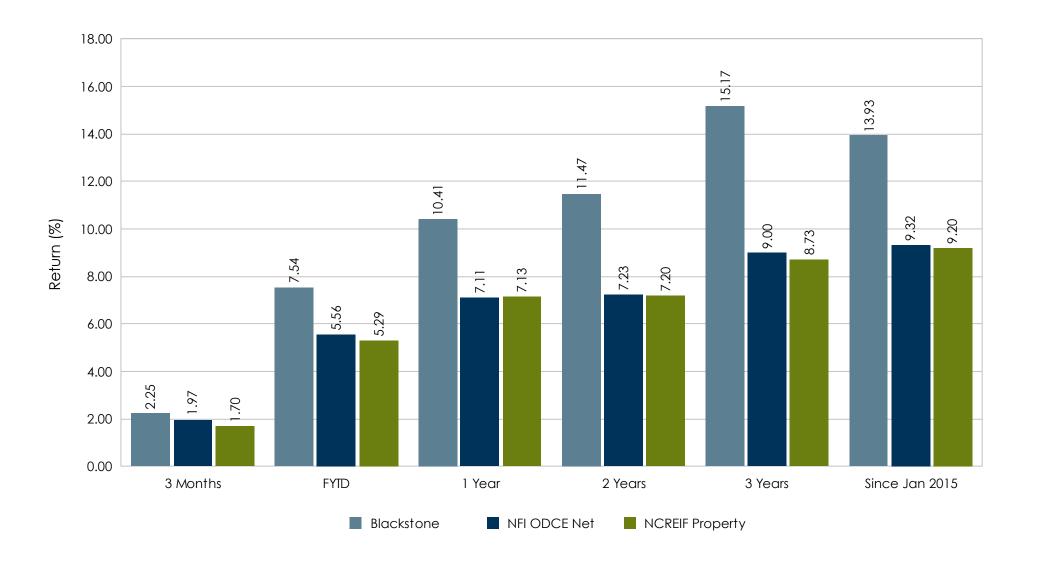
West

■ Midwest ■ North

East

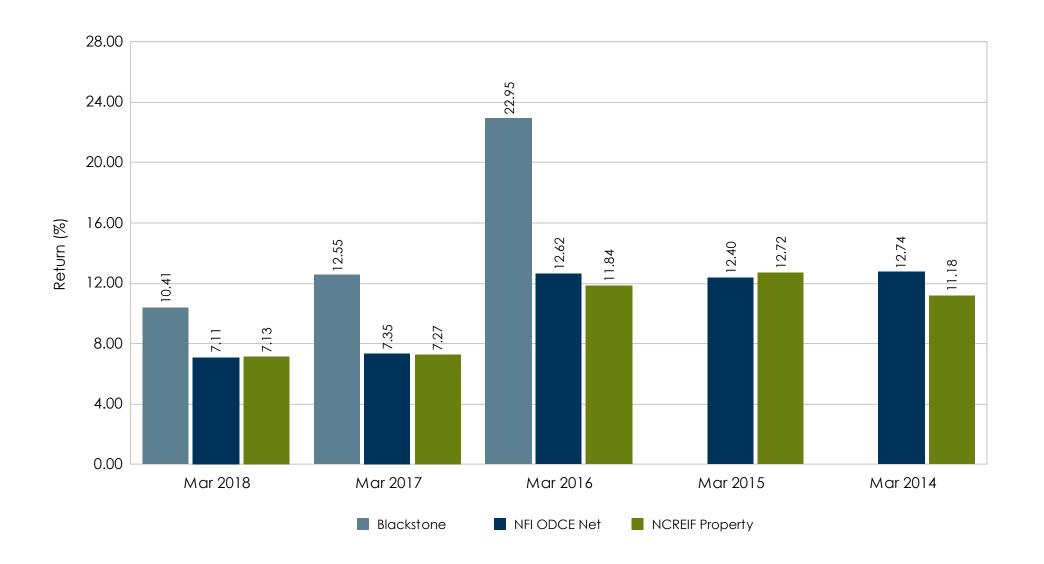
Blackstone Property Partners

For the Periods Ending March 31, 2018



Blackstone Property Partners

For the One Year Periods Ending March



Private Real Estate

For the Period Ending March 31, 2018

Summary of Cash Flows for 6 Months

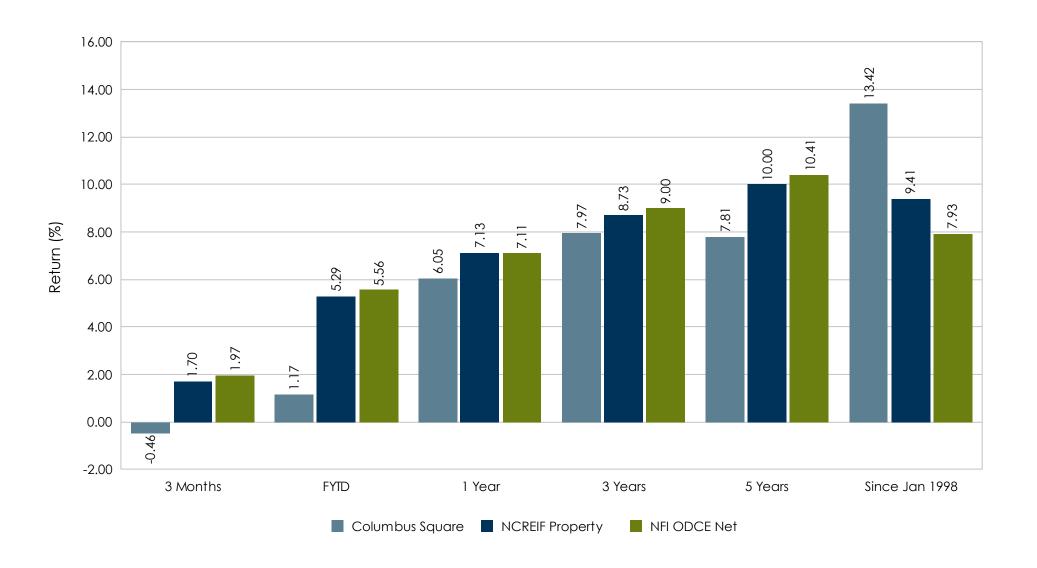
Cash Outflows	Cash Inflows	Net Cash Flows
-7,245,245	9,869,340	2,624,095

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	Jul-11	92,500,000	77,338,803	25,304,219	48,915,138	53,024,582	101,939,720	1.32x
Real Estate	Jul-11	92,500,000	77,338,803	25,304,219	48,915,138	53,024,582	101,939,720	1.32x
Siguler Guff Dist. Real Estate Opp.	Jul-11	10,000,000	8,608,587	1,650,773	7,870,931	6,751,463	14,622,394	1.70x
TA Associates Realty X	Nov-12	20,000,000	20,000,000	-	16,299,085	13,112,880	29,411,965	1.47x
Cerberus Real Estate Fund III	May-13	20,000,000	25,185,319	3,552,375	19,205,945	14,062,321	33,268,266	1.32x
Hall Capital Fund III	Feb-14	7,500,000	6,959,483	540,517	1,812,591	5,736,530	7,549,121	1.08x
Siguler Guff Dist. Real Estate Opp. II	Nov-14	10,000,000	8,037,577	1,962,423	1,915,045	7,625,331	9,540,376	1.19x
Cerberus Institutional Real Estate Partners 4	Jun-16	15,000,000	7,347,838	8,798,130	1,811,541	4,536,058	6,347,599	0.86x
Siguler Guff Dist. Real Estate Opp. II B	May-17	10,000,000	1,199,999	8,800,001	-	1,199,999	1,199,999	1.00x

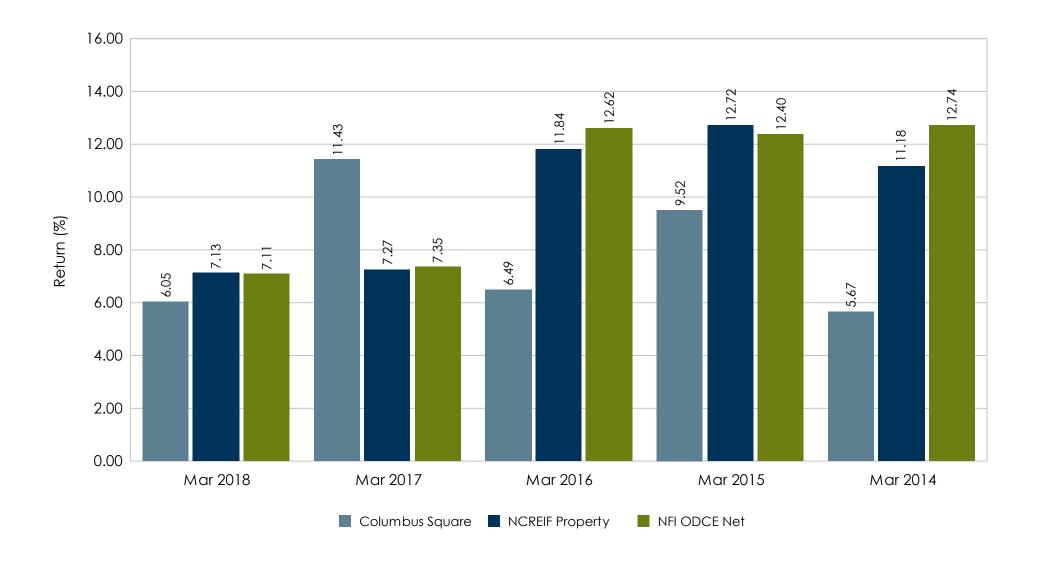
Columbus Square

For the Periods Ending March 31, 2018



Columbus Square

For the One Year Periods Ending March



Mount Lucas Peak Partners

For the Periods Ending March 31, 2018

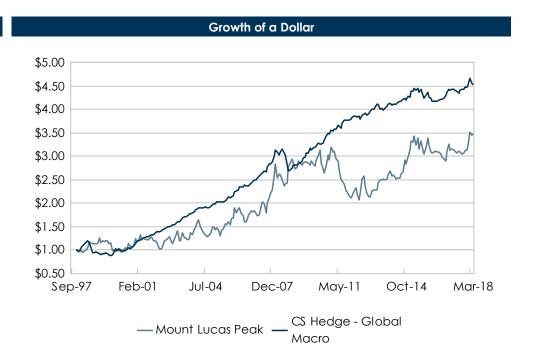
Account Description

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

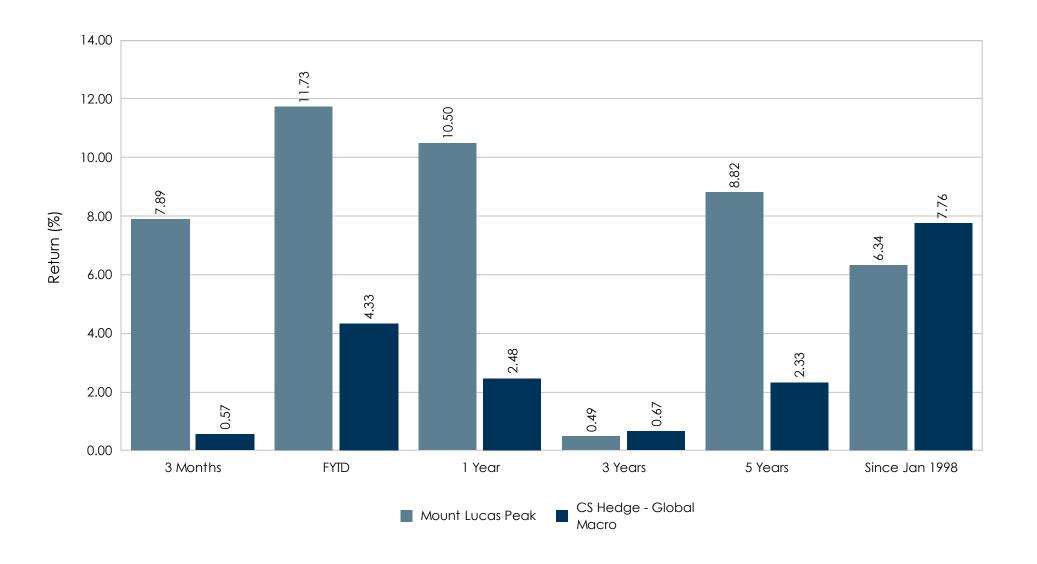
• (Outpertorm the	e CS Hedge - Global Macro.
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Dollar Gro	owth Summary (\$000s)	
	FYTD	1 Year
Beginning Market Value	29,564	29,969
Net Additions	-253	-329
Return on Investment	3,448	3,119
Ending Market Value	32,760	32,760



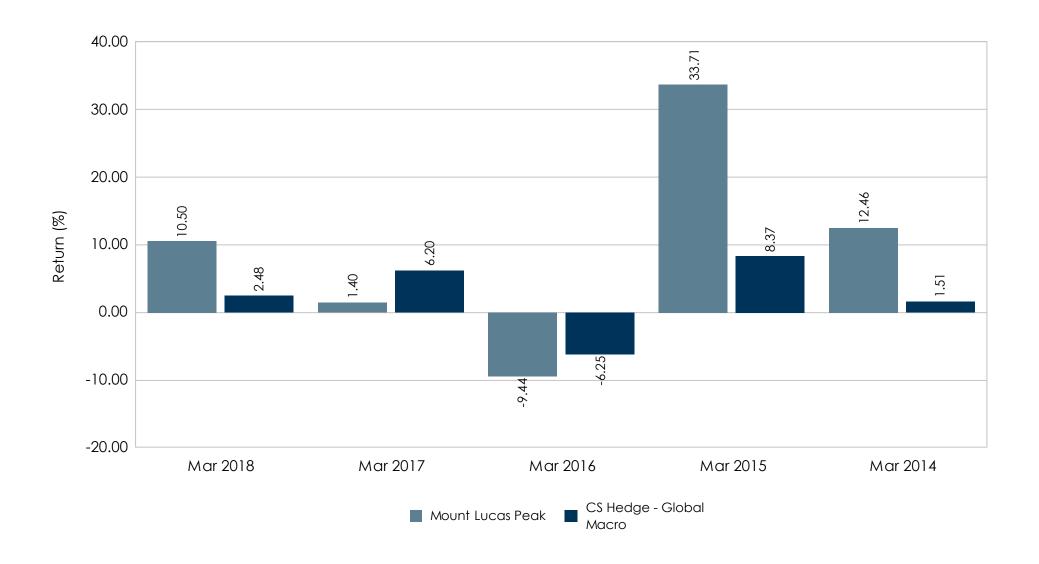
Mount Lucas Peak Partners

For the Periods Ending March 31, 2018



Mount Lucas Peak Partners

For the One Year Periods Ending March



Gresham Tap Fund

For the Periods Ending March 31, 2018

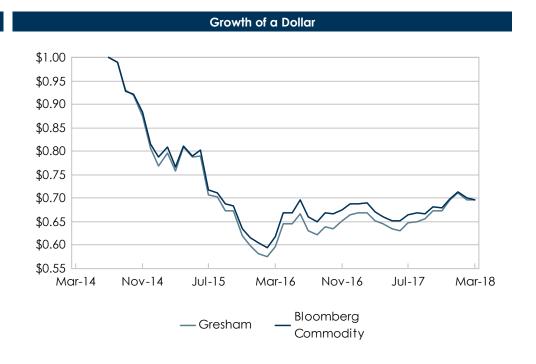
Account Description

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	47,297	48,845				
Net Additions	0	0				
Return on Investment	4,850	3,302				
Ending Market Value	52,148	52,148				



Gresham TAP Fund

Attribution Analysis and Bloomberg Commodity Comparison

For the Periods Ending March 31, 2018

		Portfolio We	Portfolio Weights (%)		QTD ROI (%)		ROI DIFF		YTD ROI (%)		DIFF
		<u>TAP</u>	Bloomberg	<u>TAP</u>	<u>Bloomberg</u>	<u>Abs</u>	<u>Est. Wgtd</u>	<u>TAP</u>	<u>Bloomberg</u>	<u>Abs</u>	Est. Wgtd
Total Gross Return		100.03	100.00	6.11	4.39		1.73	4.70	0.75		3.95
AGRICULTURE		16.70	24.09	8.12	7.10	1.02	-0.40	8.12	7.10	1.02	-0.40
	Corn	4.13	6.74	8.27	8.30	-0.03	-0.21	8.27	8.30	-0.03	-0.21
	Soybean	5.83	6.38	8.32	7.46	0.86	0.00	8.32	7.46	0.86	0.00
	Wheat (CBOT)	1.99	3.40	2.93	2.81	0.12	-0.04	2.93	2.81	0.12	-0.04
	Wheat (KC)	0.75	1.39	5.99	6.02	-0.04	-0.04	5.99	6.02	-0.04	-0.04
	Wheat (MGE)	0.22		-7.81		-7.81	-0.02	-7.81		-7.81	-0.02
	Soybean Meal	2.77	3.60	20.72	20.24	0.48	-0.16	20.72	20.24	0.48	-0.16
	Soybean Oil	1.02	2.58	-4.49	-4.76	0.27	0.06	-4.49	-4.76	0.27	0.06
ENERGY		36.92	31.20	3.99	1.37	2.62	1.01	3.99	1.37	2.62	1.01
	Crude Oil	10.57	7.70	8.49	8.40	0.09	0.23	8.49	8.40	0.09	0.23
	Brent Crude	10.08	7.78	4.95	4.99	-0.04	0.13	4.95	4.99	-0.04	0.13
	Heating Oil	2.47	3.61	1.55	-0.71	2.25	0.06	1.55	-0.71	2.25	0.06
	Gas Oil	3.35		3.00		3.00	0.14	3.00		3.00	0.14
	Natural Gas	6.41	7.94	-2.78	-7.19	4.41	0.40	-2.78	-7.19	4.41	0.40
	Unleaded Gas (RBOB)	4.04	4.17	1.45	0.49	0.96	0.04	1.45	0.49	0.96	0.04
INDUSTRIAL METALS		18.02	16.66	-7.18	-6.59	-0.58	-0.17	-7.18	-6.59	-0.58	-0.17
	Aluminum	4.68	4.07	-12.16	-12.37	0.20	-0.07	-12.16	-12.37	0.20	-0.07
	Copper (LME)	5.93		-7.78		-7.78	-0.46	-7.78		-7.78	-0.46
	Copper (NY)	2.40	6.67	-8.82	-8.91	0.08	0.45	-8.82	-8.91	0.08	0.45
	Nickel	1.62	2.91	3.71	3.79	-0.08	-0.07	3.71	3.79	-0.08	-0.07
	Zinc	2.42	3.01	-1.14	-1.21	0.07	0.00	-1.14	-1.21	0.07	0.00
	Lead	0.97		-3.80		-3.80	-0.03	-3.80		-3.80	-0.03
LIVESTOCK		7.91	5.90	-9.39	-10.38	0.99	-0.22	-9.39	-10.38	0.99	-0.22
	Live Cattle	5.11	3.69	-9.78	-10.76	0.98	-0.18	-9.78	-10.76	0.98	-0.18
	Lean Hogs	1.46	2.21	-9.09	-11.07	1.98	0.06	-9.09	-11.07	1.98	0.06
PRECIOUS METALS	Feeder Cattle	1.34 14.11	15.37	-6.96 -1.15	 -0.91	-6.96 -0.23	-0.10 0.00	-6.96 -1.15	-0.91	-6.96 -0.23	-0.10 0.00
I KECIOUS METALS	Gold	10.43	11.93	0.57	0.56	0.01	0.00	0.57	0.56	0.01	0.00
	Silver	2.47	3.44	-5.61	-5.59	-0.02	0.04	-5.61	-5.59	-0.02	0.04
	Platinum	0.66		-1.08		-1.08	0.00	-1.08		-1.08	0.00
	Palladium	0.55		-10.47		-10.47	-0.06	-10.47		-10.47	-0.06
FOODS & FIBERS		6.37	6.78	-4.48	-10.45	5.97	0.43	-4.48	-10.45	5.97	0.43
	Cotton	1.45	1.51	3.34	2.20	1.14	0.02	3.34	2.20	1.14	0.02
	Sugar	1.98	2.88	-17.82	-18.19	0.37	0.18	-17.82	-18.19	0.37	0.18
	White Sugar	0.21		-8.41	 7.0/	-8.41	-0.02	-8.41	 7.07	-8.41	-0.02
	Coffee Coffee (Robusta)	1.60 0.35	2.38	-8.13 1.97	-7.96 	-0.16 1.97	0.06	-8.13 1.97	-7.96 	-0.16 1.97	0.06
	Coree (Robusta)	0.35		32.93		32.93	0.01 0.20	32.93		32.93	0.01 0.20
	CUCUU	0.78		32.93		32.93	0.20	32.93		3∠.93	0.20

Data provided by manager.

⁻A composite weighted return is shown for Wheat, Crude Oil, Heating Oil and Copper. Wheat (KC), Brent Crude, Gas Oil, Copper (NY) and Cocoa were added to TAP's portfolio in the middle of January 2008. Wheat (MGE) was added to TAP's portfolio in the middle of January 2010.

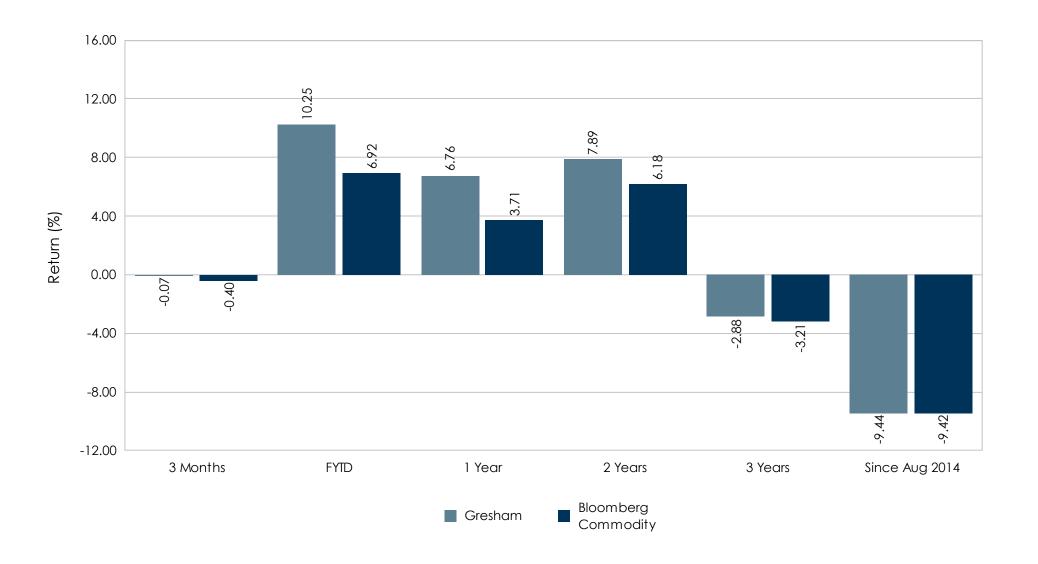
⁻MTD ROI % and YTD ROI% columns show TAP and Bloomberg individual commodity returns.

^{-&#}x27;Abs' is the absolute difference in ROI between TAP and Bloomberg for each commodity. 'Est. Wgtd' is the portfolio effect (TAP's return x TAP's period avg. wgt. - Bloomberg's return x Bloomberg's period avg. wgt.). 'Average Weights' is calculated using month-end weights.

⁻All returns are estimates. Total Gross Return is gross of fees and includes cash returns. All indicated TAP returns are net of commissions and gross of management fees.

Gresham Tap Fund

For the Periods Ending March 31, 2018



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	BB		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	B1	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		
Ba1	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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