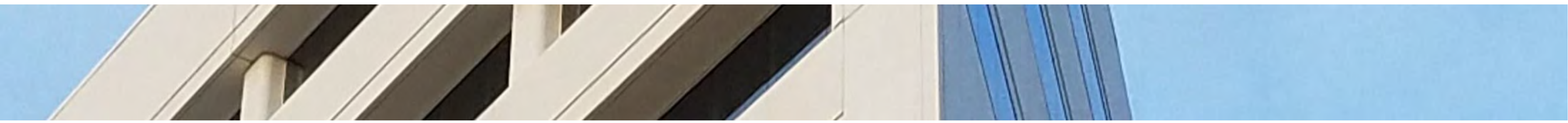
WILSHIRE ASSOCIATES

Wilshire Consulting

Retirement Board of Allegheny County

Quarterly Executive Summary

December 31, 2019



CAPITAL MARKET UPDATE

Wilshire Consulting

YOU'RE INVITED!

38th Annual Client Conference

Sunday, April 5th – Tuesday, April 7th

The Ritz-Carlton
Marina del Rey, California

Designed to review the current market environment, propose thought-leading investment strategies, and provide networking opportunities for our clients.

Wilshire Consulting

MARKET COMMENTARY

U.S. Equity

The U.S. stock market was up 9.1% for the fourth quarter of 2019 and 31.0% for the full year. This marks the strongest year for U.S. equities since 2013. In December, the U.S. and China agreed to terms on a “Phase One” trade deal that is reported to reduce U.S. tariffs and increase Chinese purchases of some U.S. products.

The year 2019 was a sensational year for investing. U.S. equities were as strong as they have been in six years – while international equities also produced double-digit returns. U.S. core bonds were even more remarkable with returns not seen since 2002. Of course, the important question is what can we expect from here? The curve is no longer inverted so there is some reward for taking duration risk. The equity risk premium is higher than what is typical but the absolute equity forecast is still quite depressed.

Non-U.S. Equity

News out of Britain is mixed with notable economic weakness in the manufacturing and services sectors. However, consumer sentiment surveys are improving after a fourth-quarter election resulted in strong support for a pro-Brexit government. Japan experienced its fourth consecutive quarter of expansion during 2019, while also beating forecasts. China benefitted from good news on the trade front although the country’s economic growth has cooled to near 30-year lows.

Fixed Income

The U.S. Treasury yield curve fell in the short portion of the curve but rose across intermediate and long-term maturities. The FOMC decreased its overnight rate by 0.25% at the October meeting. The committee members are nearly unanimous about not changing rates at all during 2020.

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DECEMBER 2019 ASSET CLASS ASSUMPTIONS

	EQUITY						FIXED INCOME						REAL ASSETS					
													Real Estate					
	US Stock	Dev ex-US Stock	Emg Stock	Global ex-US Stock	Global Stock	Private Equity	Cash	Core Bond	LT Core Bond	TIPS	High Yield	Dev ex-US Bond (Hdg)	US RES	Global RES	Private RE	Cmdty	Real Assets	US CPI
COMPOUND RETURN (%)	5.75	6.25	6.25	6.50	6.20	7.95	1.85	2.85	3.25	2.15	4.30	1.05	5.00	5.20	6.60	3.60	5.90	1.75
ARITHMETIC RETURN (%)	7.05	7.70	9.20	8.10	7.55	11.30	1.85	3.00	3.70	2.35	4.75	1.10	6.35	6.35	7.50	4.65	6.25	1.75
EXPECTED RISK (%)	17.00	18.00	26.00	18.95	17.10	28.00	1.25	5.15	9.85	6.00	10.00	3.50	17.00	15.80	14.00	15.00	8.75	1.75
CASH YIELD (%)	1.75	3.25	2.50	3.05	2.30	0.00	1.85	3.10	4.30	2.45	7.80	1.70	3.70	3.70	2.55	1.85	2.50	0.00
CORRELATIONS																		
US Stock	1.00																	
Dev ex-US Stock (USD)	0.81	1.00																
Emerging Mkt Stock	0.74	0.74	1.00															
Global ex-US Stock	0.83	0.96	0.87	1.00														
Global Stock	0.95	0.92	0.83	0.94	1.00													
Private Equity	0.74	0.64	0.62	0.67	0.74	1.00												
Cash Equivalents	-0.05	-0.09	-0.05	-0.08	-0.07	0.00	1.00											
Core Bond	0.28	0.13	0.00	0.09	0.20	0.31	0.19	1.00										
LT Core Bond	0.31	0.16	0.01	0.12	0.23	0.32	0.11	0.93	1.00									
TIPS	-0.05	0.00	0.15	0.05	0.00	-0.03	0.20	0.60	0.47	1.00								
High Yield Bond	0.54	0.39	0.49	0.45	0.51	0.34	-0.10	0.25	0.32	0.05	1.00							
Dev ex-US Bond (Hdg)	0.16	0.25	-0.01	0.18	0.18	0.26	0.10	0.67	0.66	0.39	0.26	1.00						
US RE Securities	0.59	0.47	0.44	0.49	0.56	0.50	-0.05	0.17	0.23	0.10	0.56	0.05	1.00					
Global RE Securities	0.65	0.59	0.56	0.62	0.66	0.58	-0.05	0.17	0.22	0.11	0.62	0.03	0.94	1.00				
Private Real Estate	0.54	0.44	0.44	0.47	0.52	0.51	-0.05	0.19	0.25	0.09	0.57	0.05	0.78	0.76	1.00			
Commodities	0.25	0.34	0.39	0.38	0.32	0.27	0.00	-0.02	-0.02	0.25	0.29	-0.10	0.25	0.28	0.25	1.00		
Real Assets	0.42	0.43	0.50	0.48	0.47	0.43	0.01	0.24	0.25	0.41	0.53	0.06	0.65	0.69	0.69	0.59	1.00	
Inflation (CPI)	-0.10	-0.15	-0.13	-0.15	-0.13	-0.10	0.10	-0.12	-0.12	0.15	-0.08	-0.08	0.05	0.03	0.05	0.44	0.26	1.00

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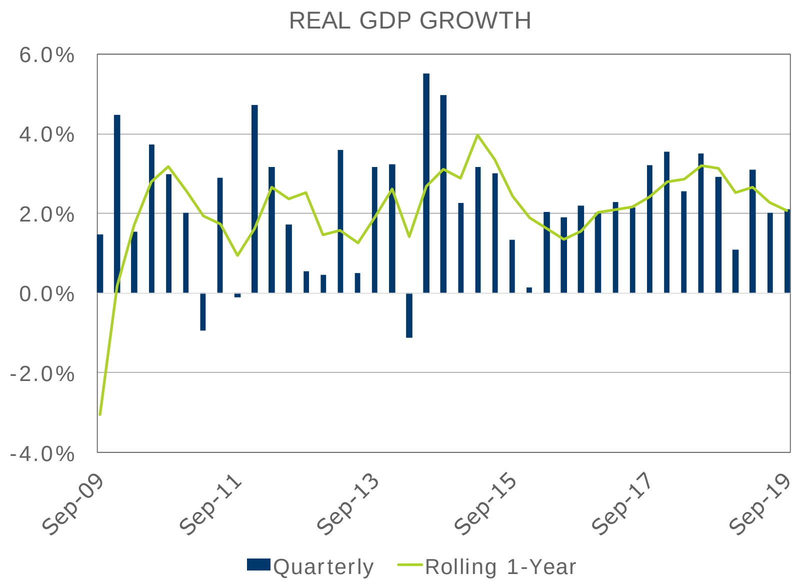
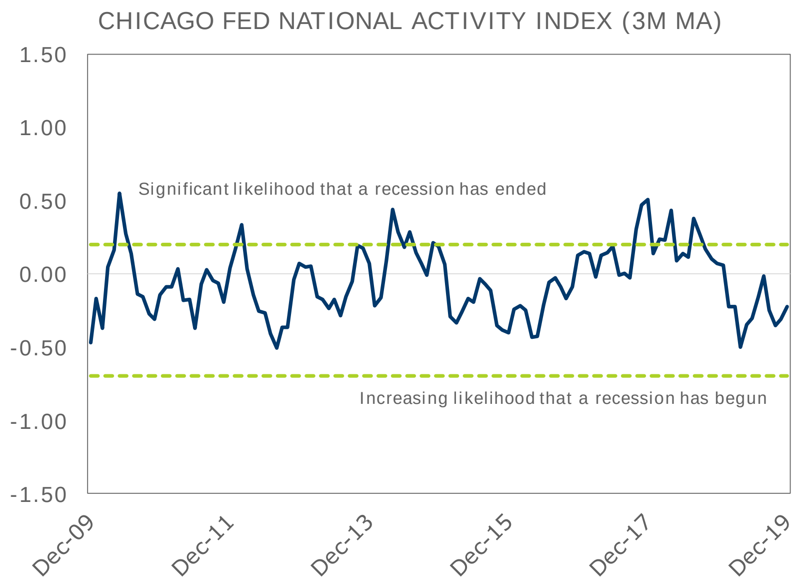
ECONOMIC GROWTH





Data source: Bloomberg

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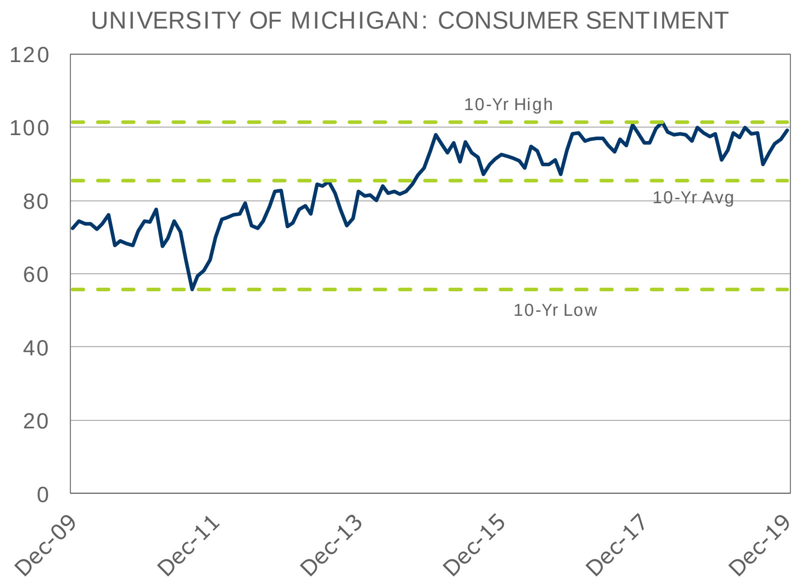
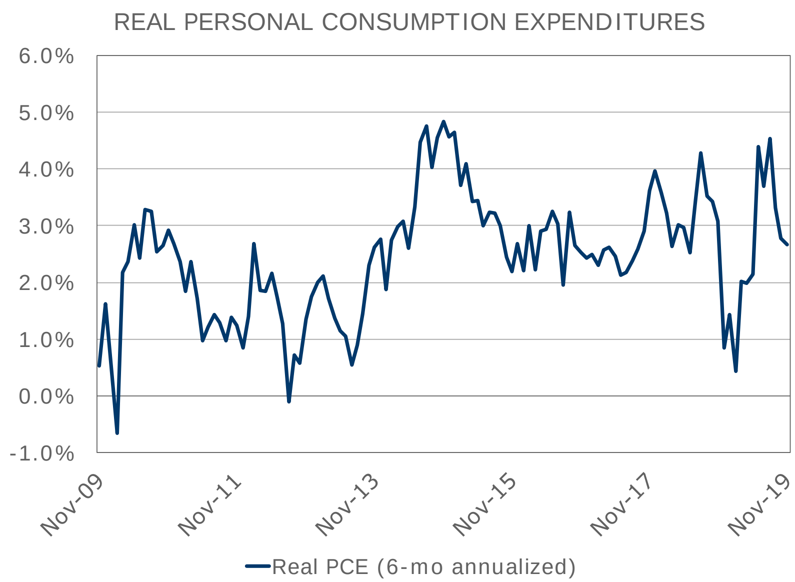
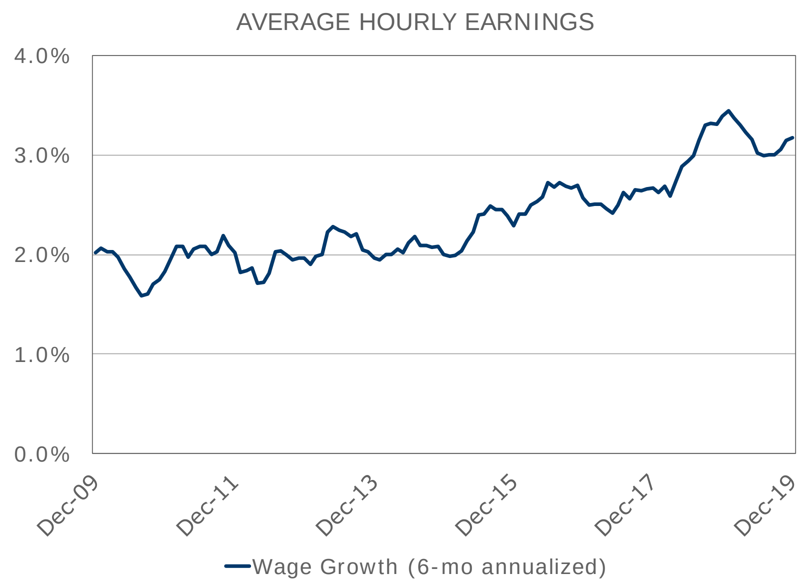
CONSUMER ACTIVITY







Data source: Bloomberg

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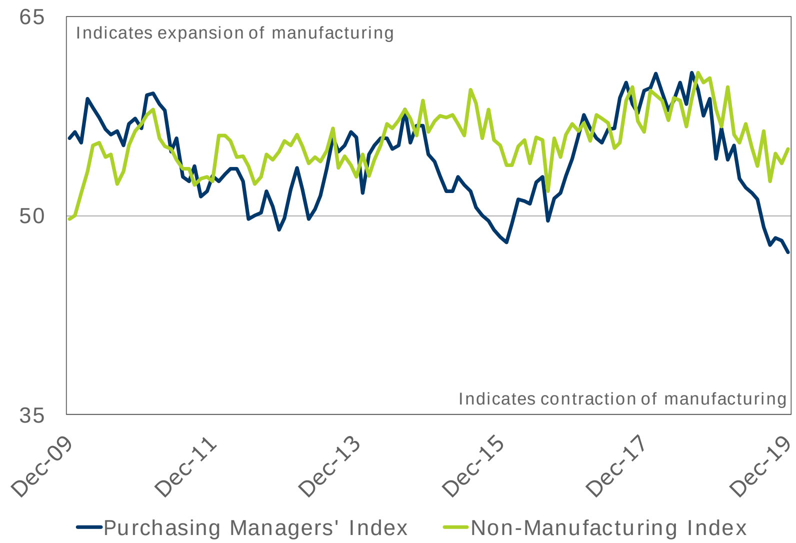
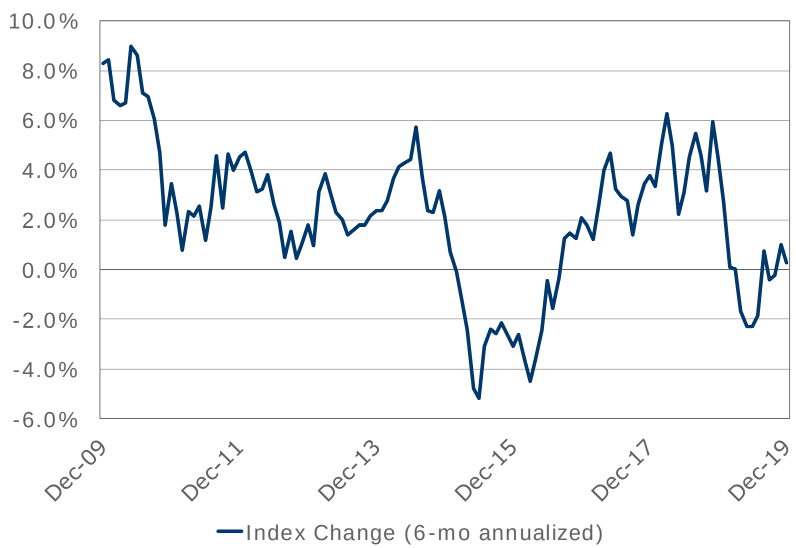
BUSINESS ACTIVITY

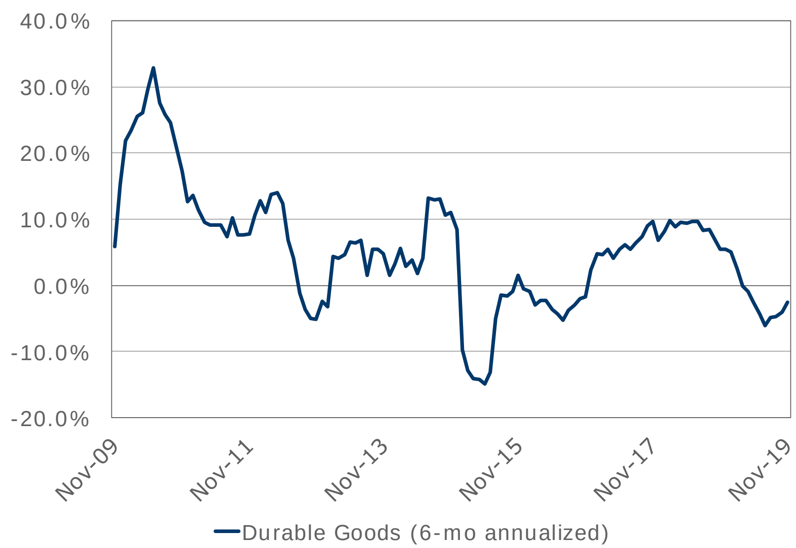
ISM REPORT ON BUSINESS



INDUSTRIAL PRODUCTION INDEX



DURABLE GOODS NEW ORDERS



Data source: Bloomberg

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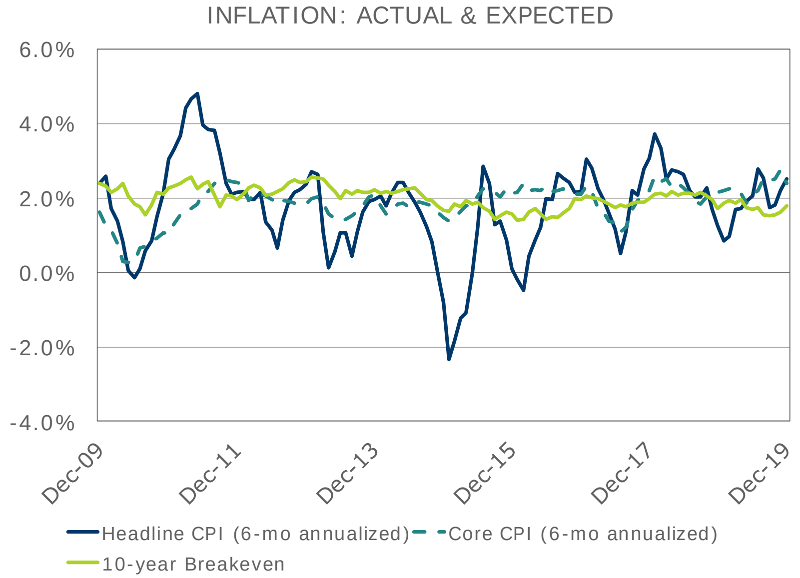
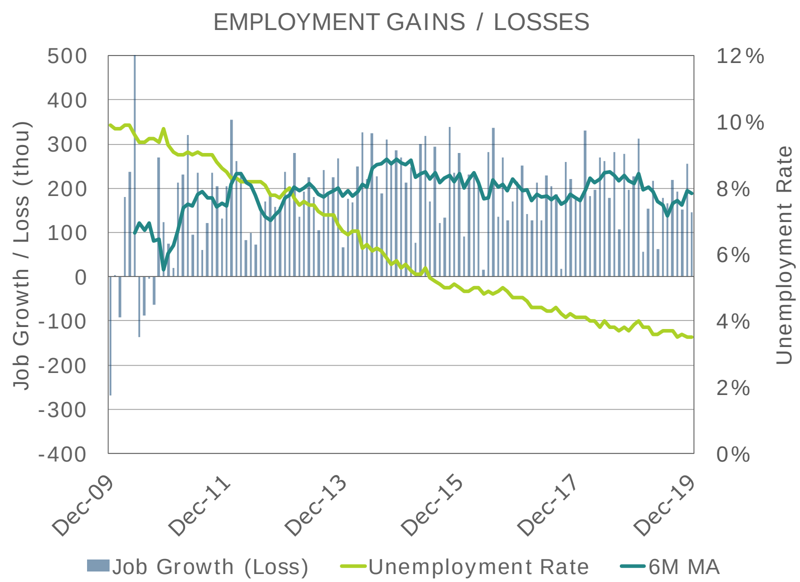
INFLATION AND EMPLOYMENT





Data source: Bloomberg

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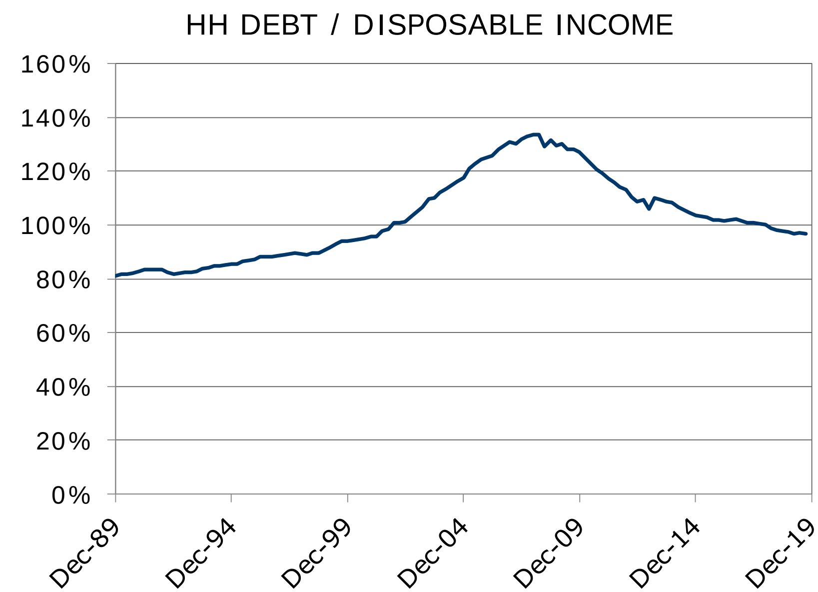
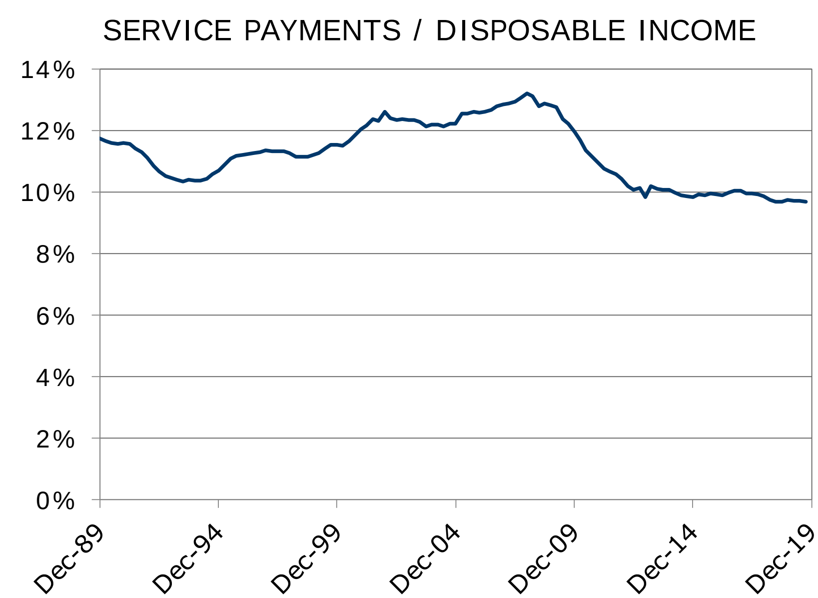
HOUSEHOLD DEBT

- Consumers continue to improve their outstanding debt conditions, now holding less debt than their disposable personal income



- Service payments – the amount necessary to pay interest and principal on outstanding debt – are as low as they have been in decades, again as a percent of disposable income

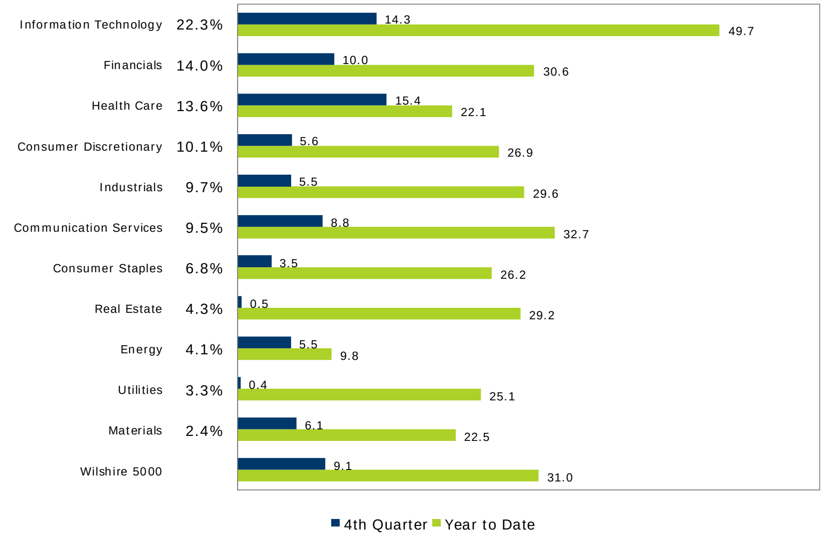


Data sources: Federal Reserve

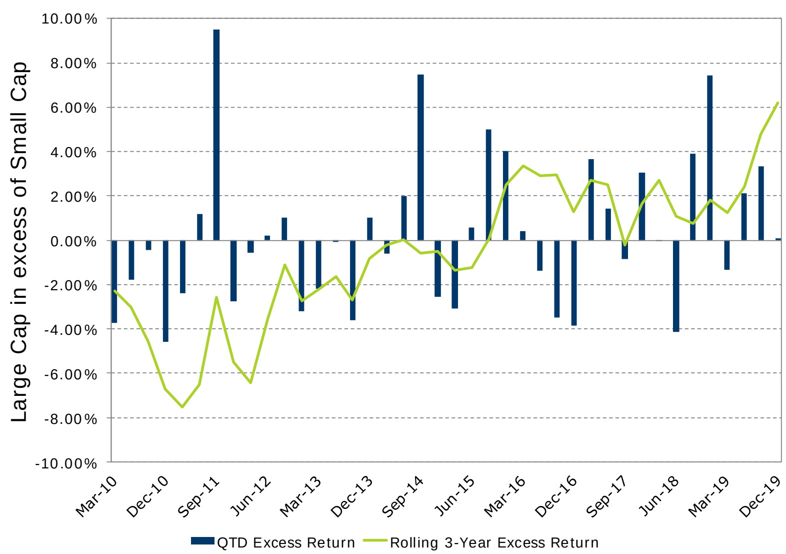
U.S. EQUITY MARKET

AS OF DEC 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
WILSHIRE 5000 INDEX	9.1	31.0	31.0	14.5	11.4	13.4
WILSHIRE U.S. LARGE CAP	9.1	31.5	31.5	15.2	11.7	13.5
WILSHIRE U.S. SMALL CAP	9.0	26.2	26.2	8.5	8.3	12.6
WILSHIRE U.S. LARGE GROWTH	11.2	35.8	35.8	18.7	13.5	14.5
WILSHIRE U.S. LARGE VALUE	7.1	27.7	27.7	11.8	9.9	12.6
WILSHIRE U.S. SMALL GROWTH	10.1	29.5	29.5	11.8	9.1	13.3
WILSHIRE U.S. SMALL VALUE	8.0	23.1	23.1	5.2	7.3	11.7
WILSHIRE REIT INDEX	-1.1	25.8	25.8	7.6	6.9	11.9
MSCI USA MIN. VOL. INDEX	2.9	27.1	27.1	14.9	11.8	13.5
FTSE RAFI U.S. 1000 INDEX	8.3	28.0	28.0	11.0	9.4	12.9

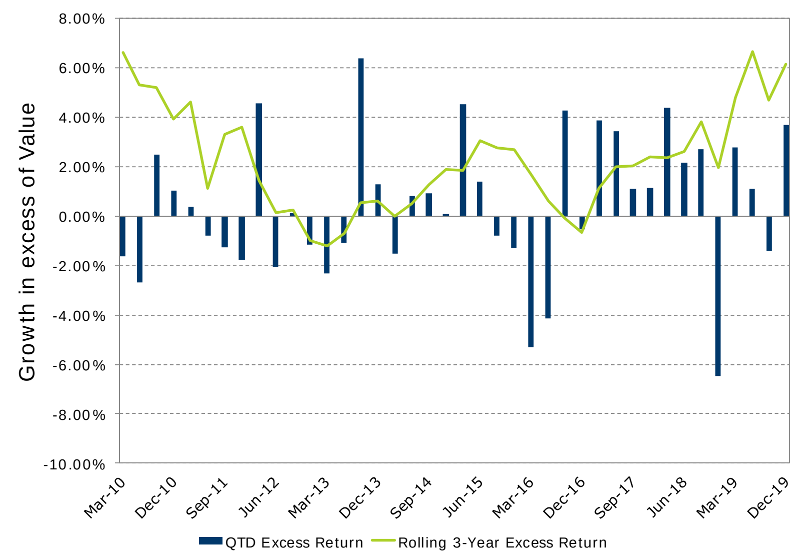
WILSHIRE 5000 SECTOR WEIGHT & RETURN (%)



LARGE CAP VS SMALL CAP



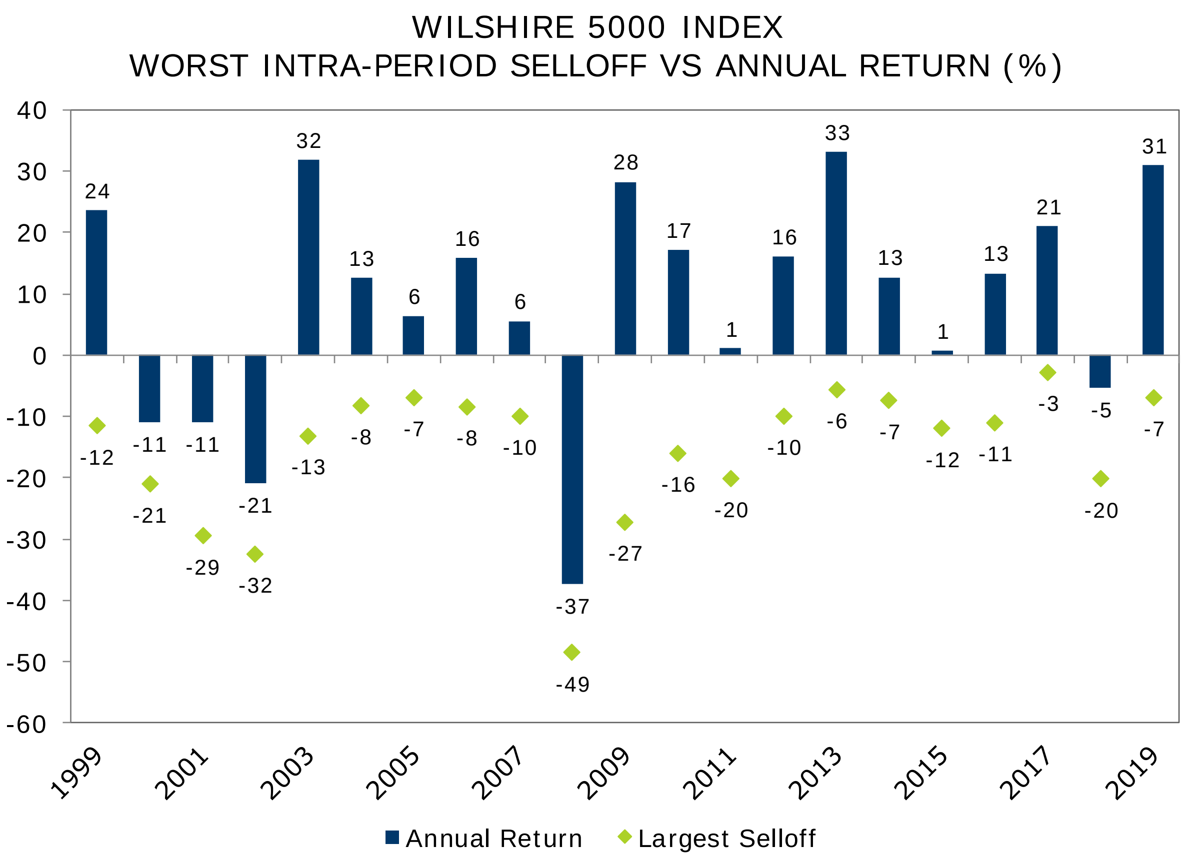
GROWTH VS VALUE



Data sources: Wilshire Compass, Wilshire Atlas

ANNUAL RETURNS

- Last year was the strongest year for equities since 2013
- Worst sell-off last year was relatively mild compared to the past 20 years



Data sources: Wilshire Associates

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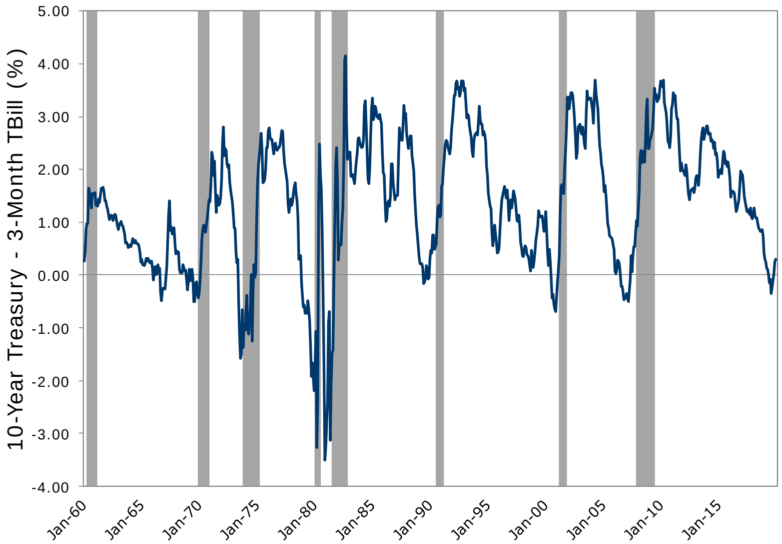
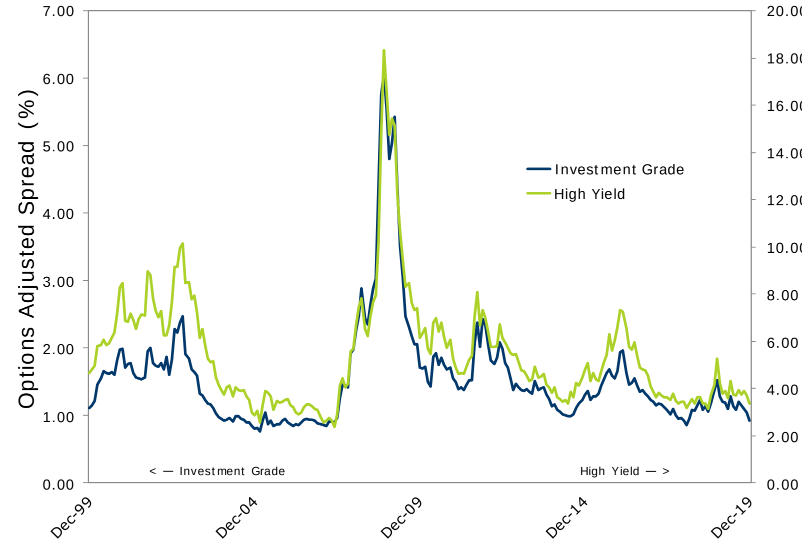
RISK MONITOR

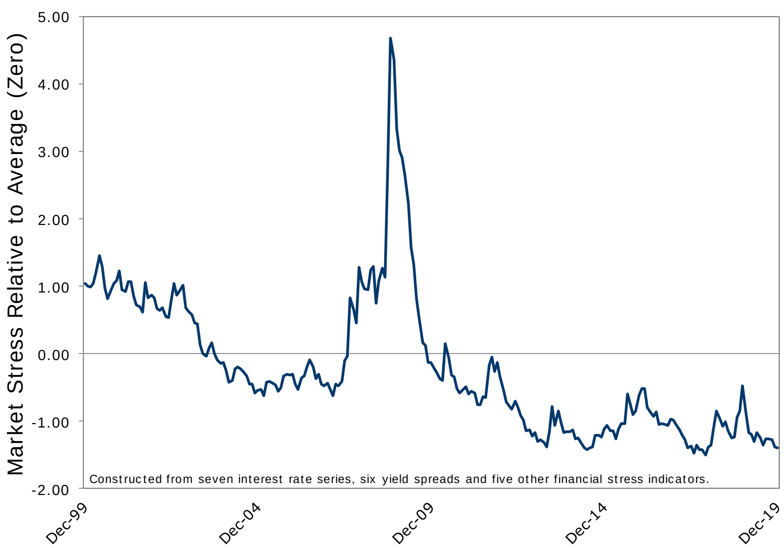
YIELD CURVE SLOPE VS RECESSIONS (IN GRAY)



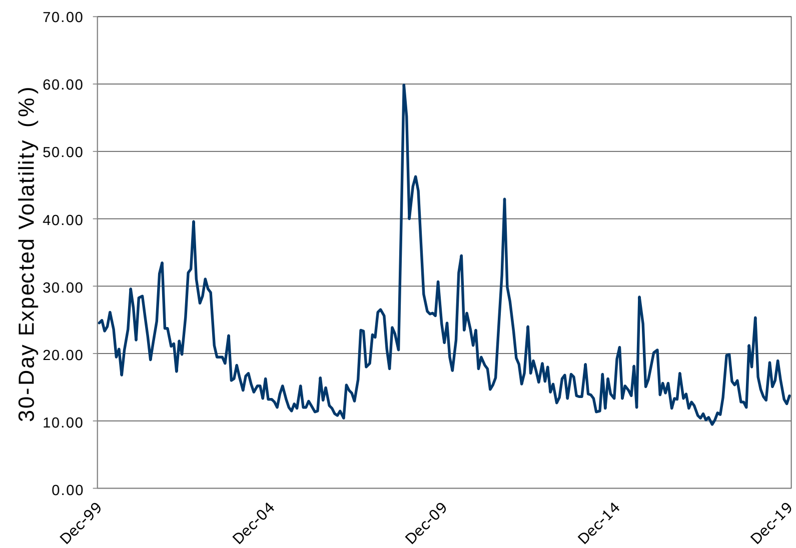
BLOOMBERG BARCLAYS CREDIT INDEXES



ST. LOUIS FED FINANCIAL STRESS INDEX



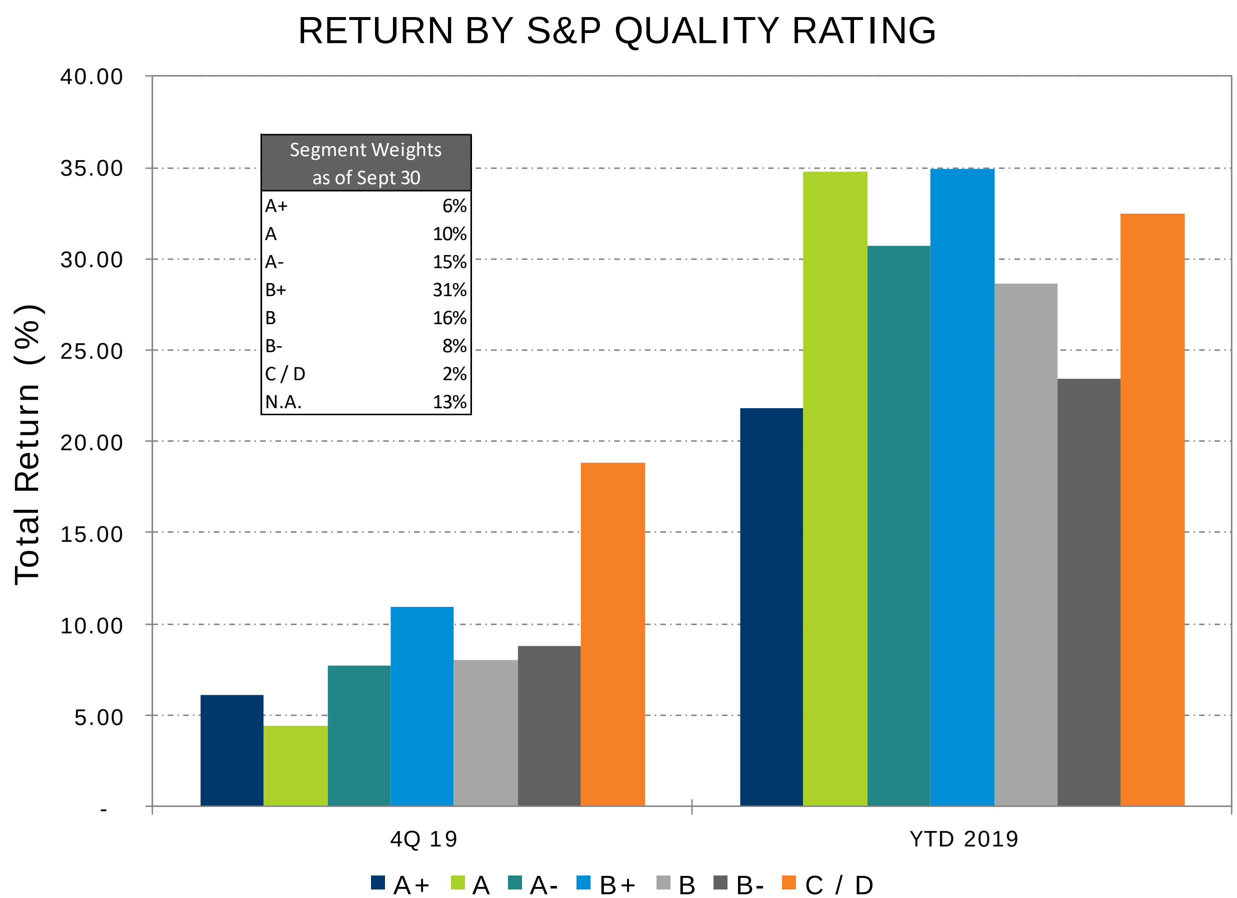
CBOE VOLATILITY INDEX



Data sources: Federal Reserve, Bloomberg Barclays

RETURNS BY QUALITY SEGMENT

Higher quality names trailed for the fourth quarter but were strong for the year



Data sources: Wilshire Atlas

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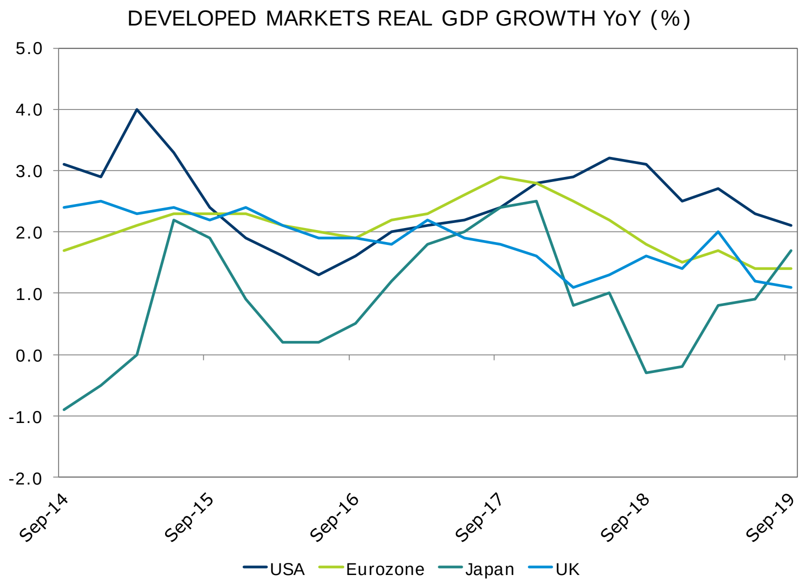
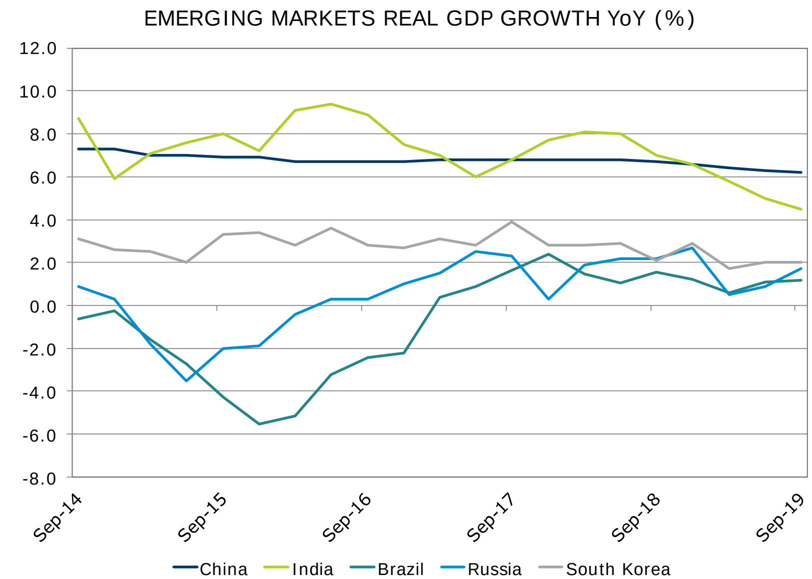
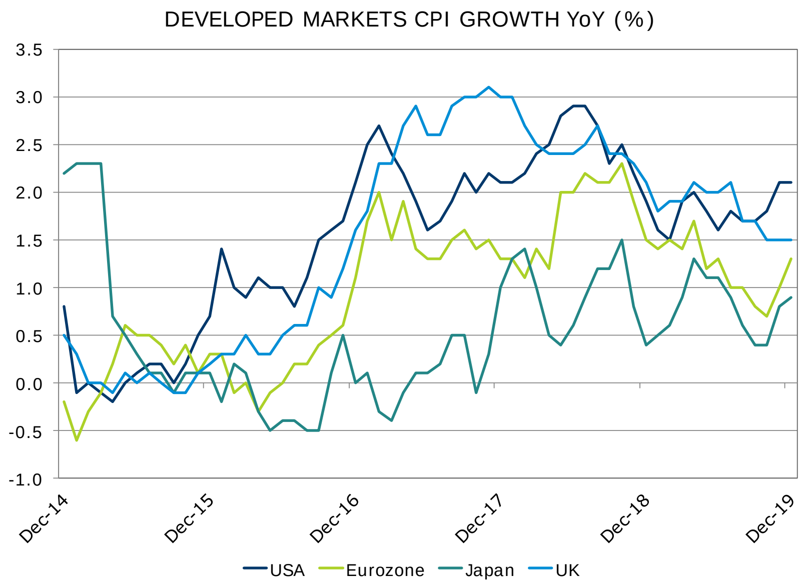
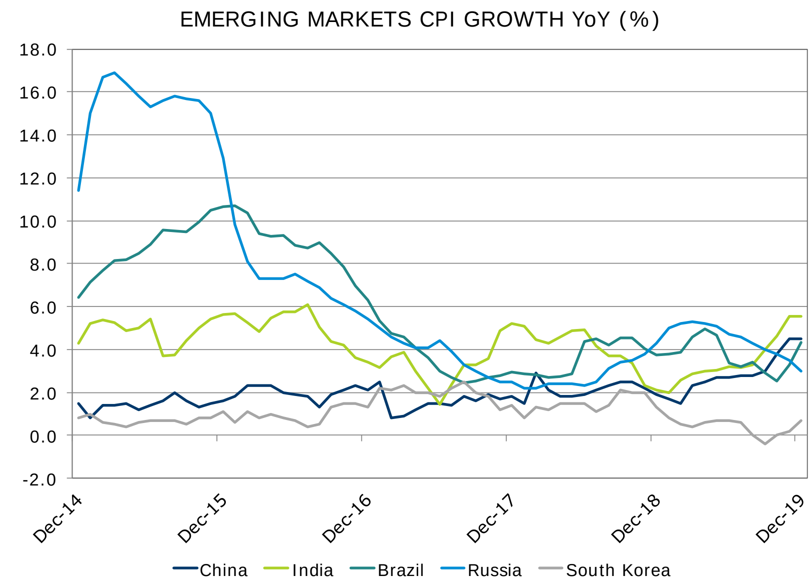
NON-U.S. GROWTH AND INFLATION







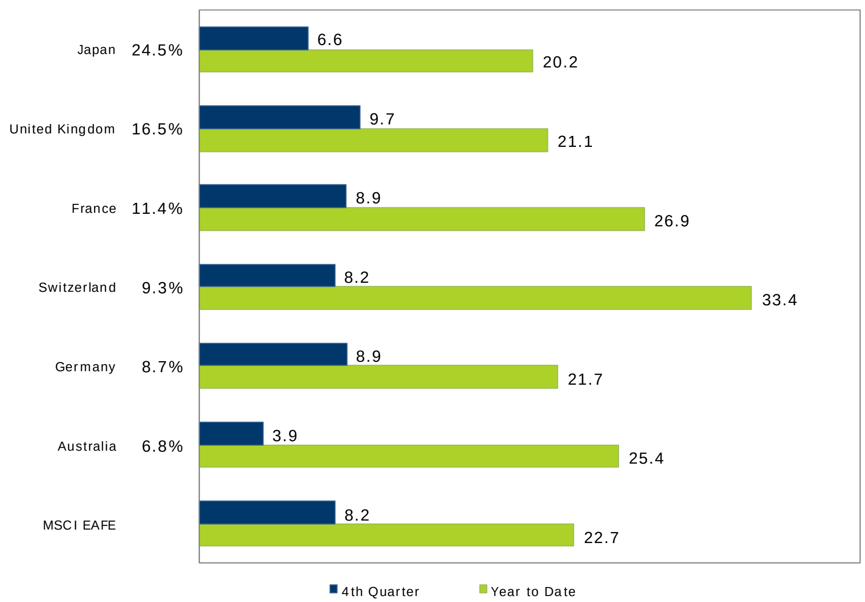


Data sources: Bloomberg

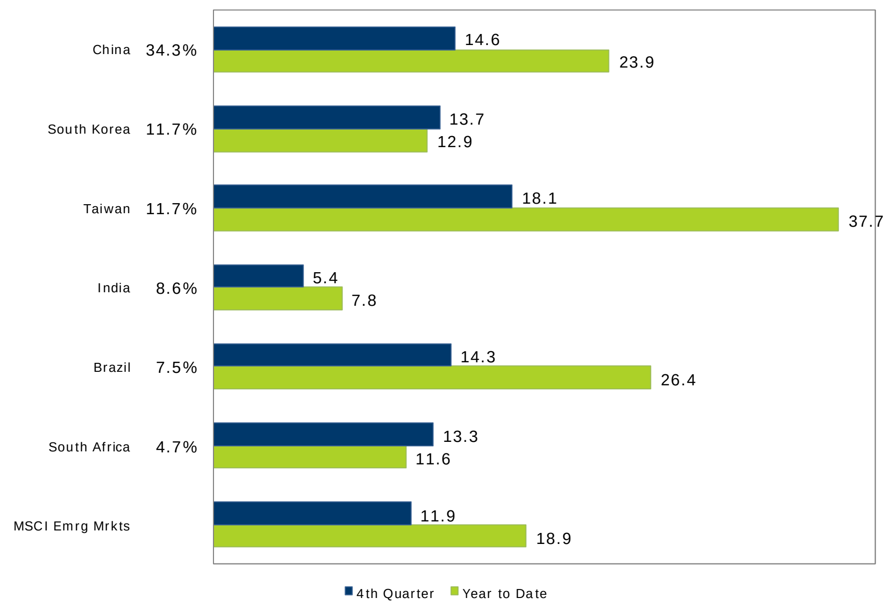
NON-U.S. EQUITY MARKET

AS OF DEC 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI EX-US ($G)	9.0	22.1	22.1	10.4	6.0	5.4
MSCI EAFE ($G)	8.2	22.7	22.7	10.1	6.2	6.0
MSCI EMERGING MARKETS ($G)	11.9	18.9	18.9	12.0	6.0	4.0
MSCI FRONTIER MARKETS ($G)	6.6	18.3	18.3	9.5	3.1	5.7
MSCI ACWI EX-US GROWTH ($G)	9.6	27.8	27.8	13.3	7.7	6.6
MSCI ACWI EX-US VALUE ($G)	8.3	16.5	16.5	7.5	4.3	4.2
MSCI ACWI EX-US SMALL ($G)	11.1	22.9	22.9	10.1	7.5	7.4
MSCI ACWI MINIMUM VOLATILITY	3.1	21.8	21.8	12.7	9.9	10.9
MSCI EAFE MINIMUM VOLATILITY	4.5	17.4	17.4	10.8	7.7	8.1
FTSE RAFI DEVELOPED EX-US	8.2	18.8	18.8	8.5	5.5	5.2
MSCI EAFE LC (G)	5.2	22.3	22.3	8.2	7.2	7.7

MSCI EAFE: LARGEST COUNTRIES & RETURN (USD)



MSCI EM: LARGEST COUNTRIES & RETURN (USD)



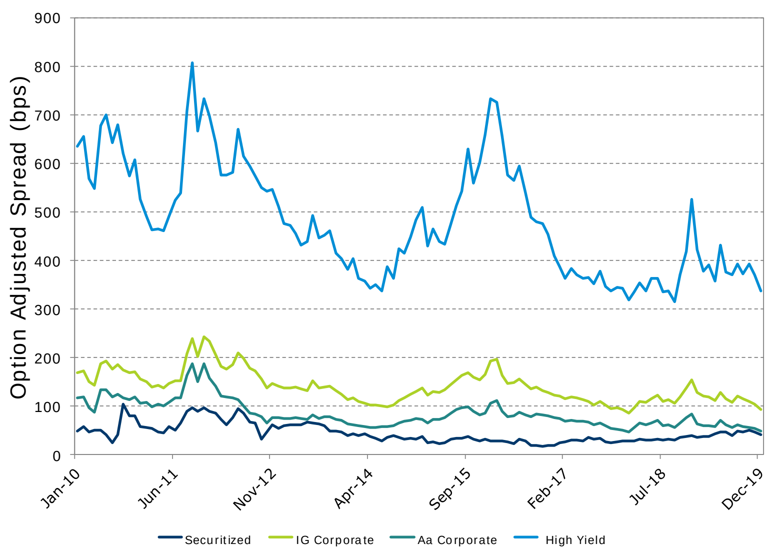
Data sources: Wilshire Compass

U.S. FIXED INCOME

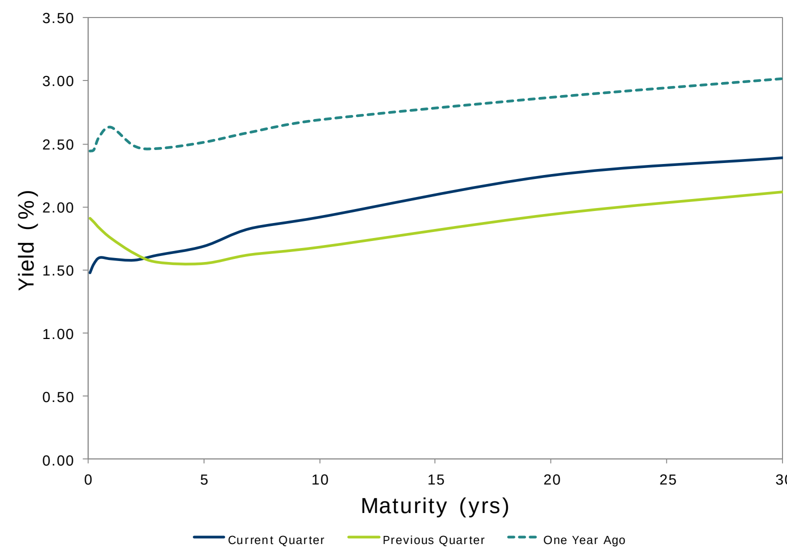
AS OF DEC 31, 2019	YTM	DURATION	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS AGGREGATE	2.3	5.9	0.2	8.7	8.7	4.0	3.1	3.7
BLOOMBERG BARCLAYS TREASURY	1.8	6.5	-0.8	6.9	6.9	3.3	2.4	3.1
BLOOMBERG BARCLAYS GOV'T-REL.	2.4	5.9	0.2	9.0	9.0	4.4	3.1	3.5
BLOOMBERG BARCLAYS SECURITIZED	2.5	3.3	0.6	6.4	6.4	3.3	2.6	3.3
BLOOMBERG BARCLAYS CORPORATE	2.9	7.9	1.2	14.5	14.5	5.9	4.6	5.5
BLOOMBERG BARCLAYS LT G/C	3.1	15.8	-1.1	19.6	19.6	8.1	5.4	7.6
BLOOMBERG BARCLAYS LT TREASURY	2.3	18.1	-4.1	14.8	14.8	7.0	4.1	7.0
BLOOMBERG BARCLAYS LT GOV't-REL.	3.6	12.7	-0.1	18.7	18.7	8.8	5.6	7.7
BLOOMBERG BARCLAYS LT CORP.	3.6	14.5	1.3	23.9	23.9	8.8	6.4	8.0
BLOOMBERG BARCLAYS U.S. TIPS *	1.9	7.6	0.8	8.4	8.4	3.3	2.6	3.4
BLOOMBERG BARCLAYS HIGH YIELD	6.0	3.0	2.6	14.3	14.3	6.4	6.1	7.6
TREASURY BILLS	1.6	0.25	0.5	2.3	2.3	1.7	1.1	0.6

* Yield and Duration statistics are for a proxy index based on similar maturity, the Bloomberg Barclays U.S. Treasury 7-10 Year Index

BLOOMBERG BARCLAYS FIXED INCOME INDEXES



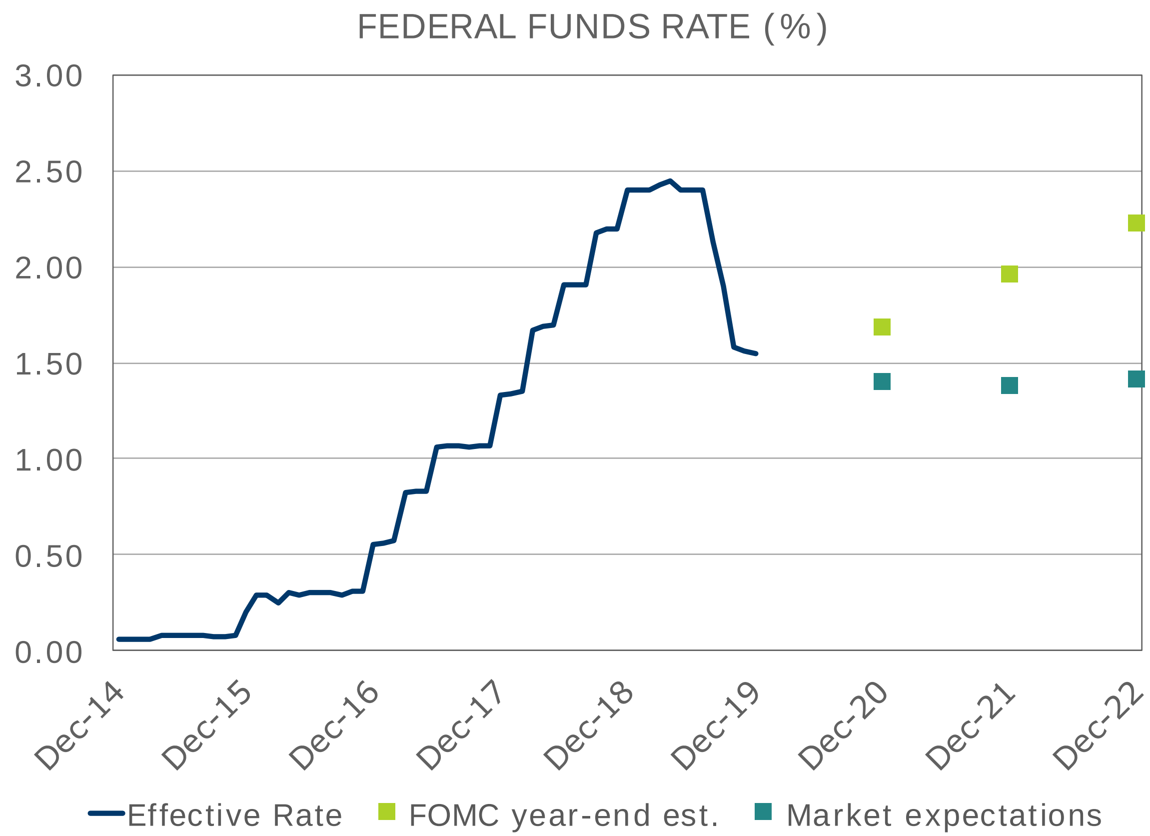
TREASURY YIELD CURVE



Data sources: Wilshire Compass, Bloomberg Barclays, U.S. Treasury

SHORT-TERM RATES

- Federal Reserve decreased their short-term rate 3 times during the second half of 2019
- Markets aren't expecting the overnight rate to move at all during the next few years

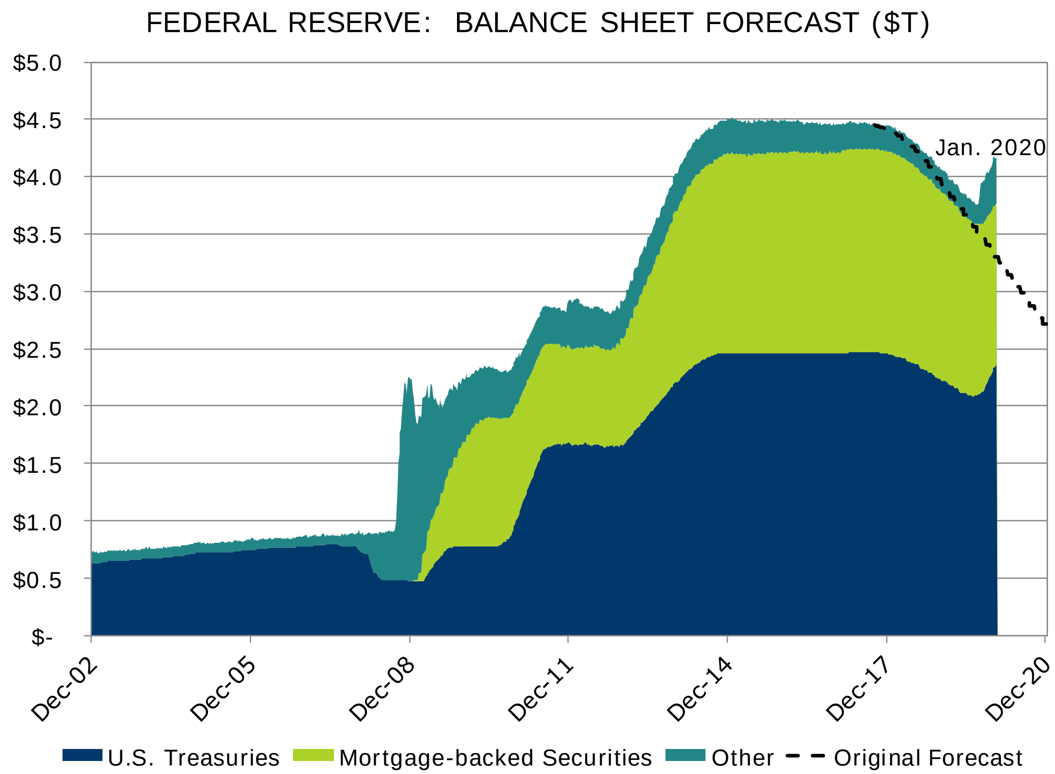


Data sources: Federal Reserve, Bloomberg

Wilshire Consulting

FED BALANCE SHEET

- Federal Reserve began their balance sheet normalization program during October 2017; targeting $10B in reductions per month while increasing to $50B per month in Q4 2018
- Began buying Treasury bills in September to address a liquidity shortage in the repo market
- Fed stated purchases will continue “at least into the second quarter,” potentially reversing their previous balance sheet contraction efforts



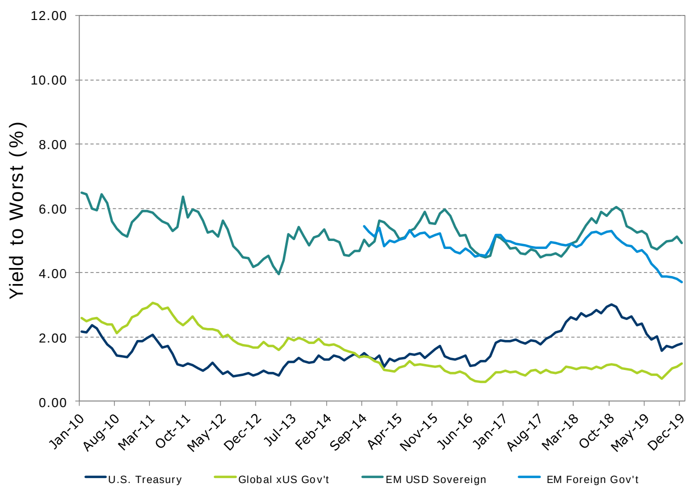
Data sources: Federal Reserve

NON-U.S. FIXED INCOME

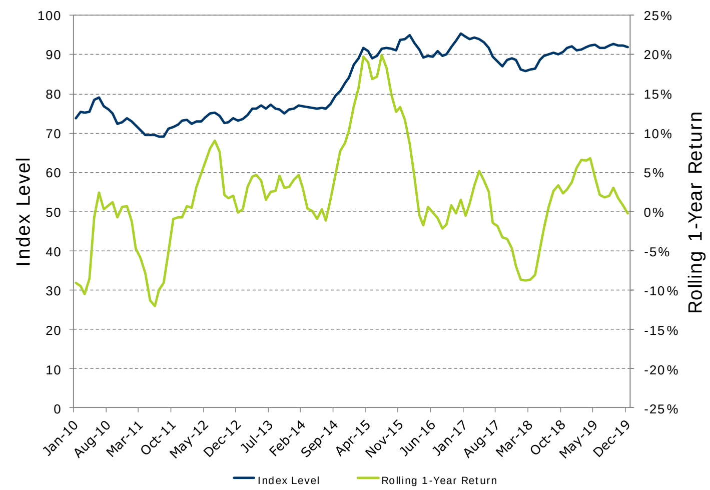
AS OF DEC 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
DEVELOPED MARKETS						
BLMBRG BRCLYS GLBL AGGREGATE xUS	0.7	5.1	5.1	4.4	1.6	1.5
BLMBRG BRCLYS GLBL AGGREGATE xUS *	-1.1	7.6	7.6	4.4	3.9	4.3
BLMBRG BRCLYS GLOBAL INF LNKD xUS	-0.6	7.8	7.8	4.6	1.8	3.2
BLMBRG BRCLYS GLOBAL INF LNKD xUS *	-5.2	8.0	8.0	4.2	5.3	5.8
EMERGING MARKETS (HARD CURRENCY)						
BLMBRG BRCLYS EM USD AGGREGATE	2.1	13.1	13.1	6.1	5.8	6.6
EMERGING MARKETS (FOREIGN CURRENCY)						
BLMBRG BRCLYS EM LOCAL CURR. GOV'T	4.0	9.5	9.5	6.5	2.8	3.4
BLMBRG BRCLYS EM LOCAL CURR. GOV'T *	0.5	8.5	8.5	4.9	3.6	3.7
EURO vs. DOLLAR	3.0	-1.8	-1.8	2.1	-1.5	-2.4
YEN vs. DOLLAR	-0.6	1.0	1.0	2.4	2.0	-1.5
POUND vs. DOLLAR	7.5	4.0	4.0	2.4	-3.2	-2.0

* Returns are reported in terms of local market investors, which removes currency effects.

BLOOMBERG BARCLAYS FIXED INCOME INDEXES



U.S. DOLLAR INDEX: MAJOR CURRENCIES

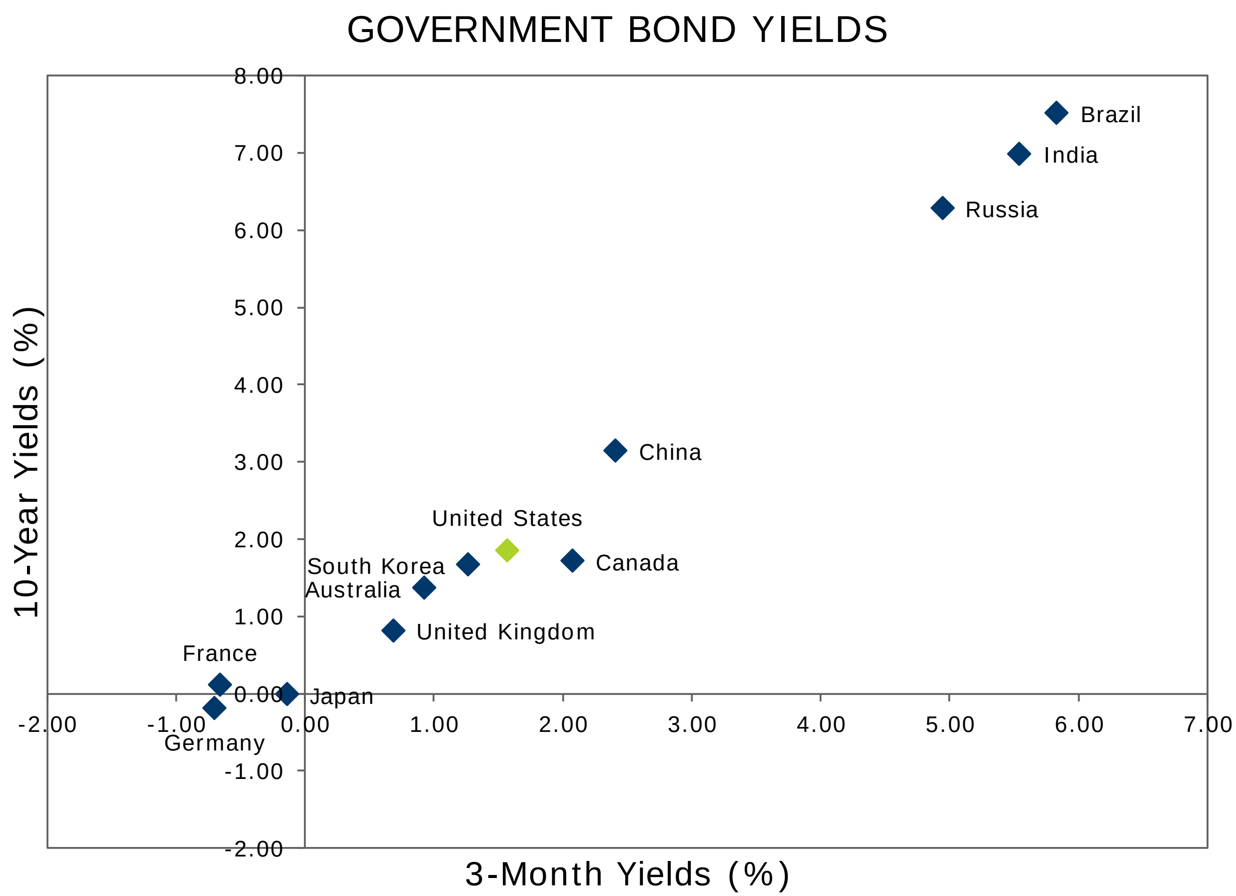


Data sources: Wilshire Compass, Bloomberg Barclays, Federal Reserve Bank of St. Louis

Wilshire Consulting

GLOBAL INTEREST RATES

Much of Europe and Japan exhibit negative rates; Long rates are up, however, in those same regions during the past six months

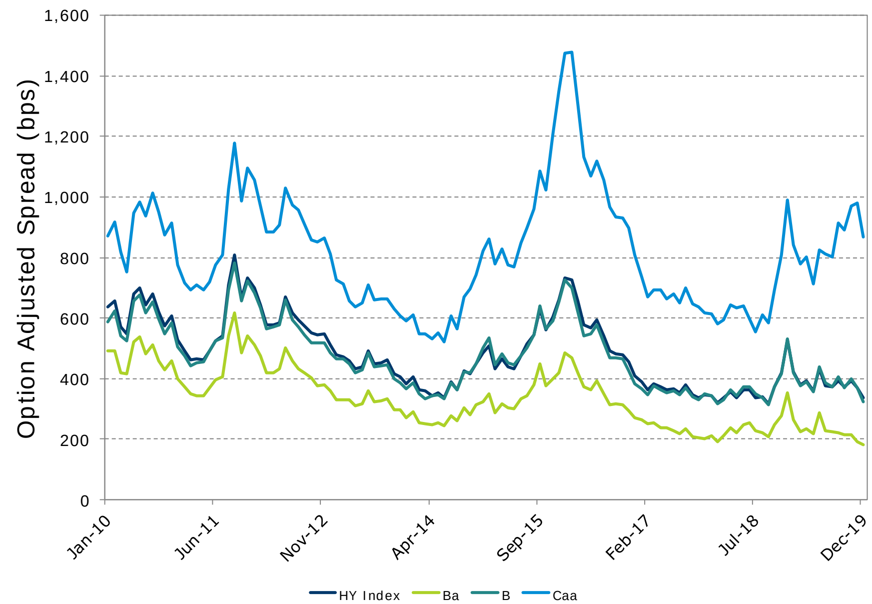


Data sources: Bloomberg

Wilshire Consulting

HIGH YIELD BOND MARKET

AS OF DEC 31, 2019		YTW	QTR	YTD	1 YR	3 YR	5 YR
BLOOMBERG BARCLAYS HIGH YIELD		5.2	2.6	14.3	14.3	6.4	6.1
S&P LSTA LEVERAGE LOAN INDEX		0.0	0.0	8.2	8.2	3.6	3.7
HIGH YIELD QUALITY DISTRIBUTION	WEIGHT						
Ba U.S. HIGH YIELD	47.7%	3.6	2.5	15.5	15.5	6.6	6.2
B U.S. HIGH YIELD	38.8%	5.1	2.6	14.8	14.8	6.5	5.9
Caa U.S. HIGH YIELD	12.5%	10.4	3.7	9.5	9.5	5.1	6.1
Ca to D U.S. HIGH YIELD	0.7%	21.0	-7.3	-0.3	-0.3	3.9	-2.1
Non-Rated U.S. HIGH YIELD	0.3%	6.6	1.9	6.3	6.3	5.5	-0.1



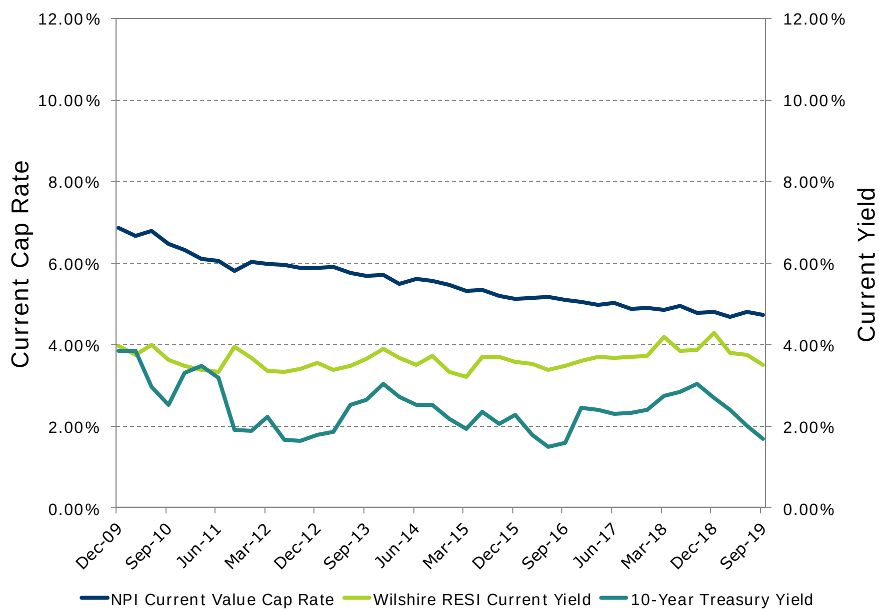
Data sources: Wilshire Compass, Bloomberg Barclays

Wilshire Consulting

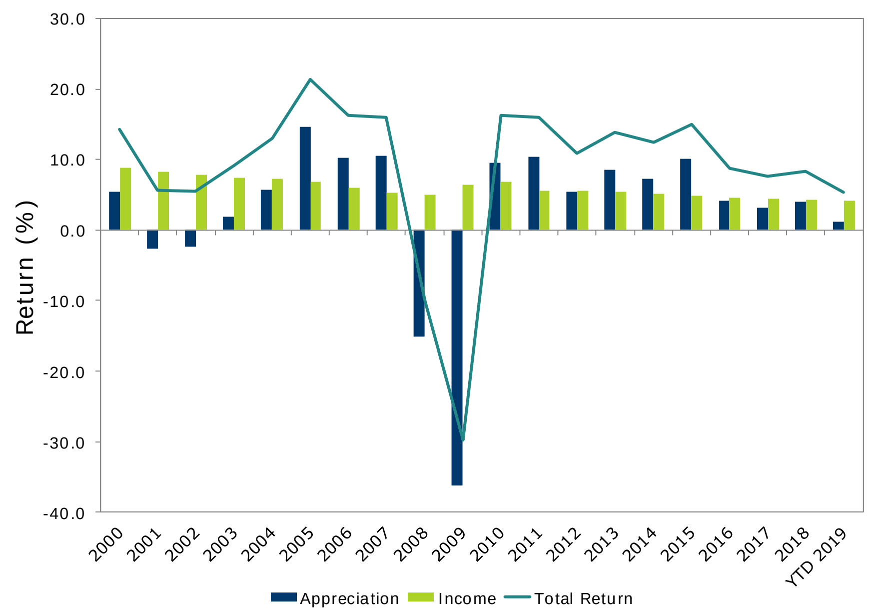
REAL ASSETS

AS OF DEC 31, 2019	QTR	YTD	1 YR	3 YR	5 YR	10 YR
BLOOMBERG BARCLAYS U.S. TIPS	0.8	8.4	8.4	3.3	2.6	3.4
BLOOMBERG COMMODITY INDEX	4.4	7.7	7.7	-0.9	-3.9	-4.7
WILSHIRE GLOBAL RESI INDEX	1.2	24.2	24.2	9.0	6.8	10.5
NCREIF ODCE FUND INDEX	1.5	5.4	5.4	7.1	9.0	11.4
ALERIAN MLP INDEX (OIL & GAS)	-4.1	6.6	6.6	-4.4	-7.0	4.2

REAL ESTATE VALUATION



NCREIF ODCE FUND INDEX RETURN



Data sources: Wilshire Compass, National Council of Real Estate Investment Fiduciaries

Wilshire Wilshire Consulting

ASSET CLASS PERFORMANCE

ASSET CLASS RETURNS - BEST TO WORST

2014	2015	2016	2017	2018	2019 YTD
REITs 31.8%	REITs 4.2%	MLPs 18.3%	Emrg Mrkts 37.7%	T-Bills 1.9%	U.S. Equity 31.0%
U.S. Equity 12.7%	U.S. Equity 0.7%	High Yield 17.1%	Developed 25.6%	Core Bond 0.0%	REITs 25.8%
Core Bond 6.0%	Core Bond 0.6%	U.S. Equity 13.4%	U.S. Equity 21.0%	U.S. TIPS -1.3%	Developed 22.7%
MLPs 4.8%	T-Bills 0.1%	Commodities 11.8%	High Yield 7.5%	High Yield -2.1%	Emrg Mrkts 18.9%
U.S. TIPS 3.6%	Developed -0.4%	Emrg Mrkts 11.6%	REITs 4.2%	REITs -4.8%	High Yield 14.3%
High Yield 2.5%	U.S. TIPS -1.4%	REITs 7.2%	Core Bond 3.6%	U.S. Equity -5.3%	Core Bond 8.7%
T-Bills 0.0%	High Yield -4.5%	U.S. TIPS 4.7%	U.S. TIPS 3.0%	Commodities -11.2%	U.S. TIPS 8.4%
Emrg Mrkts -1.8%	Emrg Mrkts -14.6%	Core Bond 2.6%	Commodities 1.7%	MLPs -12.4%	Commodities 7.7%
Developed -4.5%	Commodities -24.7%	Developed 1.5%	T-Bills 0.8%	Developed -13.4%	MLPs 6.6%
Commodities -17.0%	MLPs -32.6%	T-Bills 0.3%	MLPs -6.5%	Emrg Mrkts -14.2%	T-Bills 2.3%

ANNUALIZED 5-YEAR AS OF 12/2019
U.S. Equity 11.4%
REITs 6.9%
Developed 6.2%
High Yield 6.1%
Emrg Mrkts 6.0%
Core Bond 3.1%
U.S. TIPS 2.6%
T-Bills 1.1%
Commodities -3.9%
MLPs -7.0%

Data sources: Wilshire Compass

Note: Developed asset class is developed equity markets ex-U.S., ex-Canada

TOTAL FUND

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MONTHLY SUMMARY

Actual Allocation vs. Policy Allocation

As of December 31, 2019

Asset Class	Market Value ($000)	Actual Allocation	Policy Target	Variance	Allowable Range[4]	Dollar Variance ($000)
U.S. Equity	170,713	17.7%	16.5%	1.2%	13.0 - 20.0%	11,536
Non-U.S. Equity	173,393	18.0%	16.5%	1.5%	13.0 - 20.0%	14,216
Global Equity	1,239	0.1%	0.0%	0.1%		1,239
Total Public Equity[1]	**345,345**	**35.8%**	**33.0%**	**2.8%**	**26.0 40.0%**	**26,992**
Private Equity Funds	167,977	17.4%	20.0%	-2.6%	15.0 - 25.0%	(24,964)
Life Settlement Investments	28,681	3.0%	0.0%	3.0%		28,681
Total Private Equity	**196,658**	**20.4%**	**20.0%**	**0.4%**	**15.0 - 25.0%**	**3,717**
Core Fixed Income[2]	93,756	9.7%	12.5%	-2.8%	10.0 - 15.0%	(26,832)
High Yield	114,479	11.9%	12.0%	-0.1%	10.0 - 14.0%	(1,286)
Total Fixed Income	**208,235**	**21.6%**	**24.5%**	**-2.9%**	**20.0 - 29.0%**	**(28,118)**
Real Estate[3]	111,539	11.6%	12.5%	-0.9%	10.0 - 15.0%	(9,049)
Total Private Real Assets	**111,539**	**11.6%**	**12.5%**	**-0.9%**	**10.0 - 15.0%**	**(9,049)**
TIPS	49,265	5.1%	5.0%	0.1%	4.0 - 6.0%	1,030
MLP's	41,801	4.3%	5.0%	-0.7%	4.0 - 6.0%	(6,434)
Total Public Real Assets	**91,066**	**9.4%**	**10.0%**	**-0.6%**	**8.0 - 12.0%**	**(5,405)**
Hedge Funds	**3,828**	**0.4%**	**0.0%**	**0.4%**		3,828
Cash	**8,037**	**0.8%**	**0.0%**	**0.8%**	**0.0 - 2.0%**	**8,037**
Total Assets	**964,707**	**100.0%**	**100.0%**			

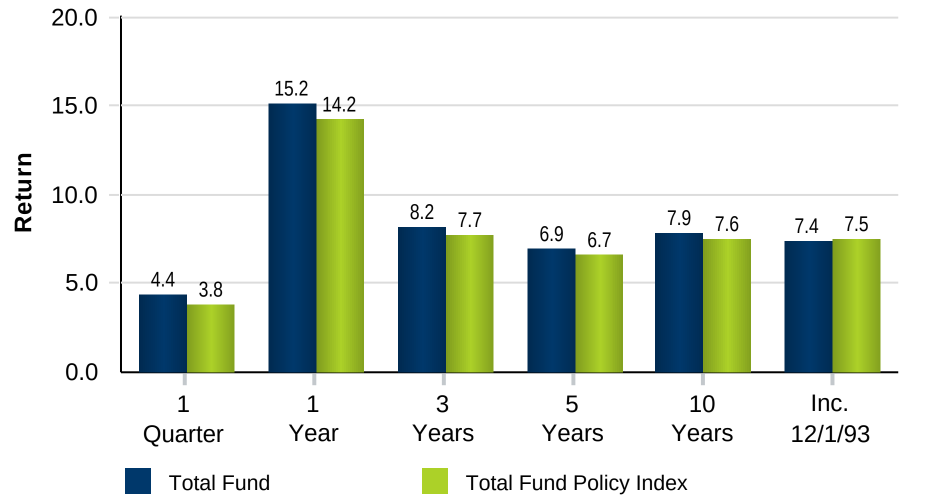
[1]Uninvested private equity capital will remain invested in public equity and will not be considered to be outside of allowable range
[2]Core Fixed Income includes Israel Bond investments
[3]Real Estate includes ERECT Fund investment
[4]These ranges are preliminary pending the ratification of the updated IPS

Total Fund Summary

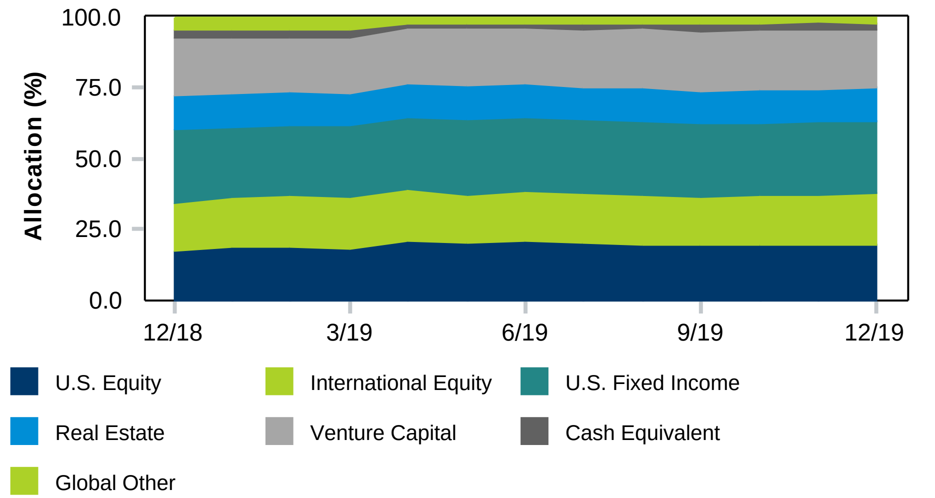
Total Fund

Periods Ended December 31, 2019

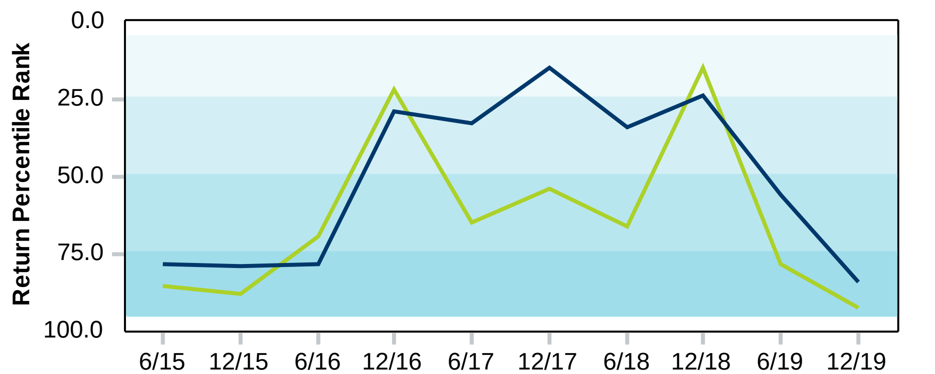
Comparative Performance



Historical Asset Allocation by Segment

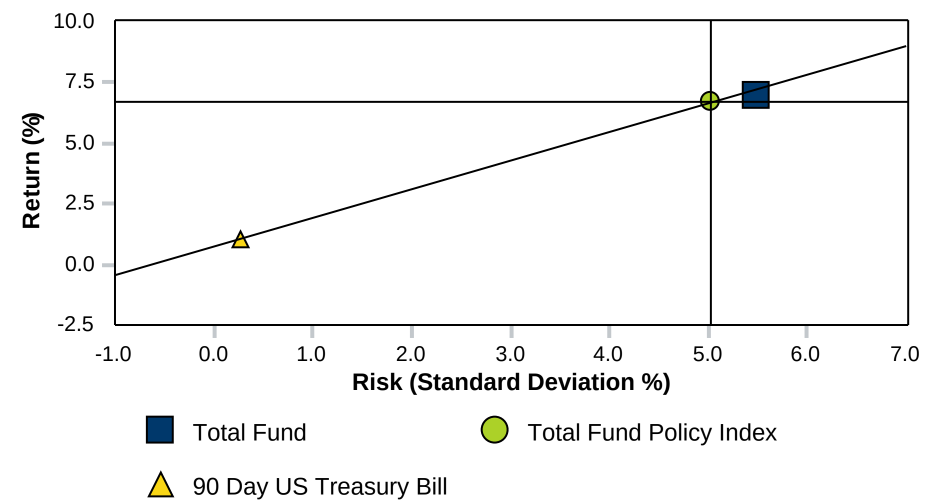


Rolling Percentile Rank: All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Total Fund	10	2 (20%)	3 (30%)	1 (10%)	4 (40%)
Benchmark	10	2 (20%)	0 (0%)	4 (40%)	4 (40%)

Risk and Return 01/1/15 - 12/31/19



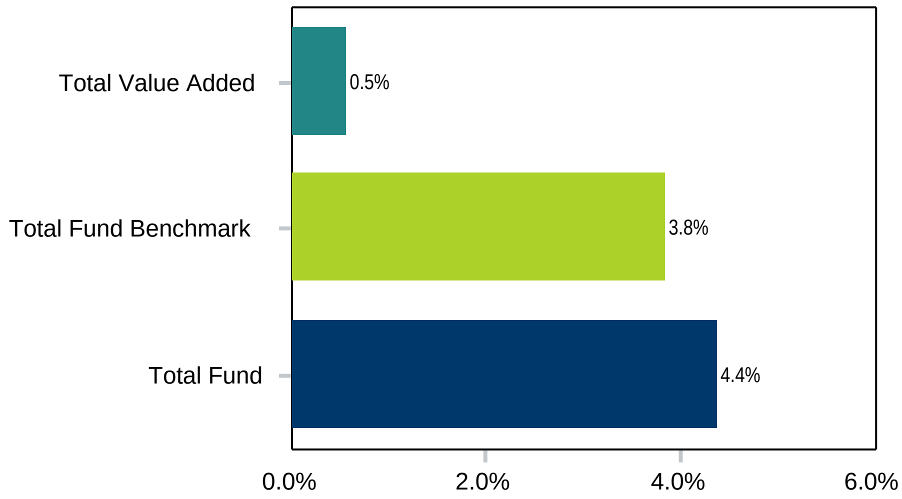
Wilshire Consulting

Total Fund Attribution

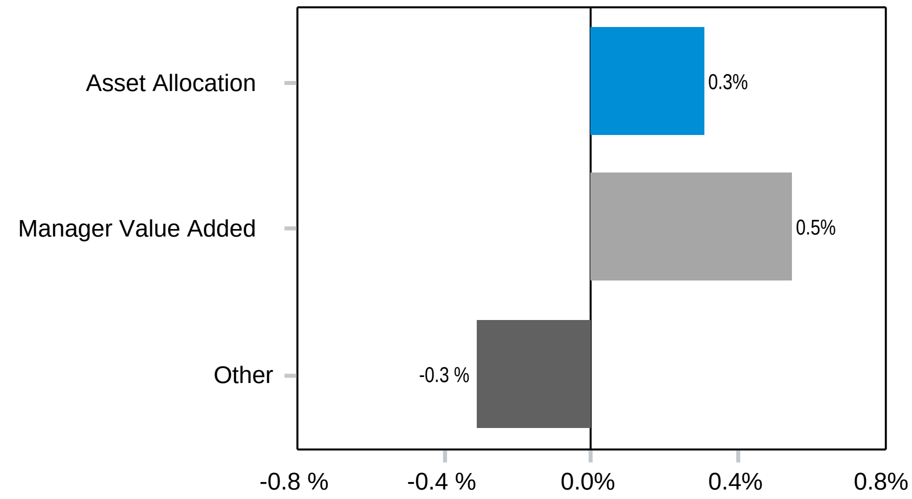
Total Fund

Periods Ended 1 Quarter Ending December 31, 2019

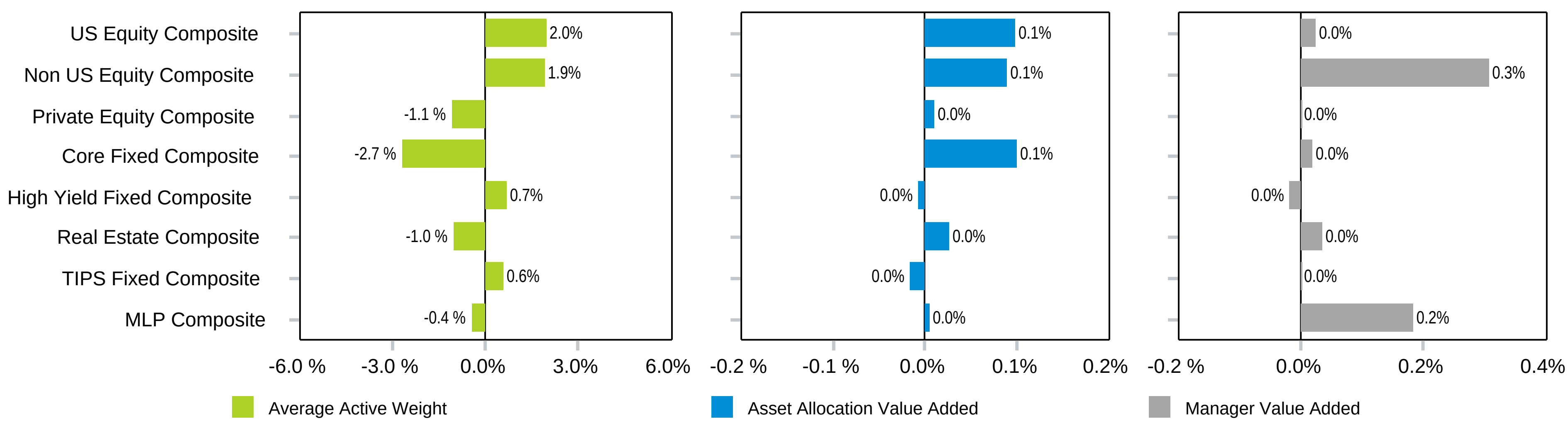
Total Fund Performance



Total Value Added:0.5%



Total Asset Allocation:0.3% | Asset Allocation Value Added:0.3% | Total Manager Value Added:0.5%

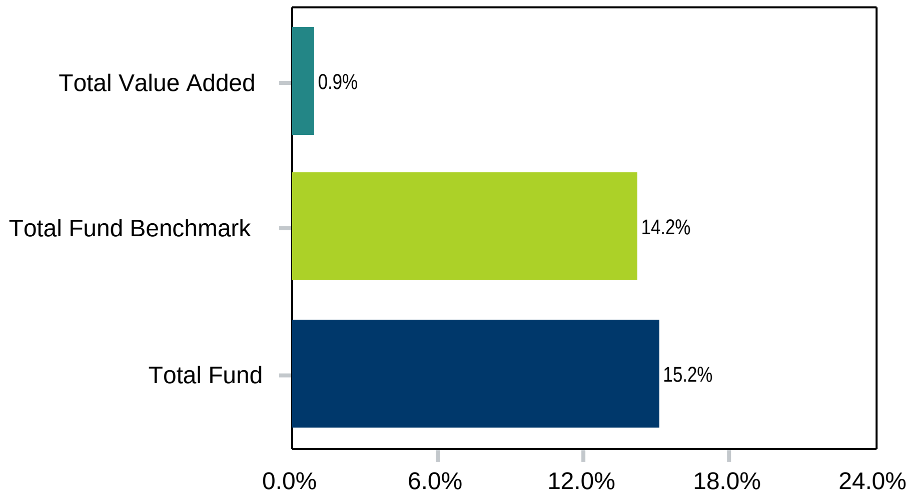


Total Fund Attribution

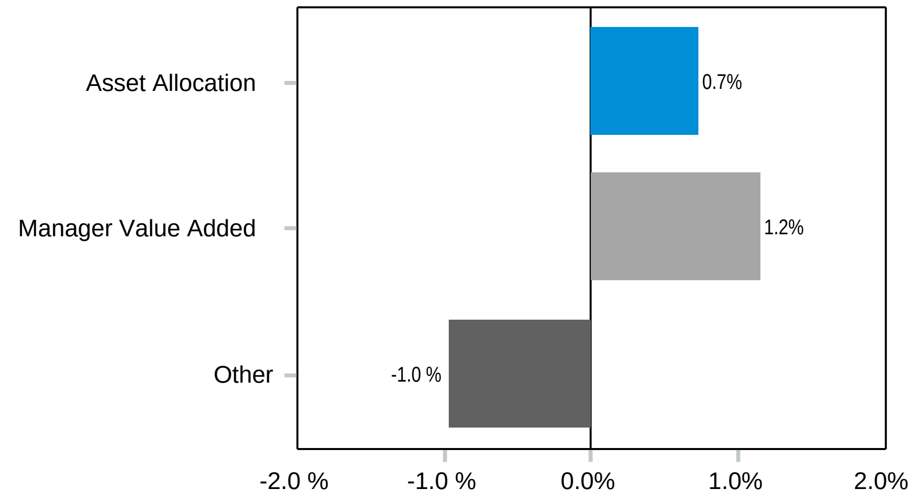
Total Fund

Periods Ended 1 Year Ending December 31, 2019

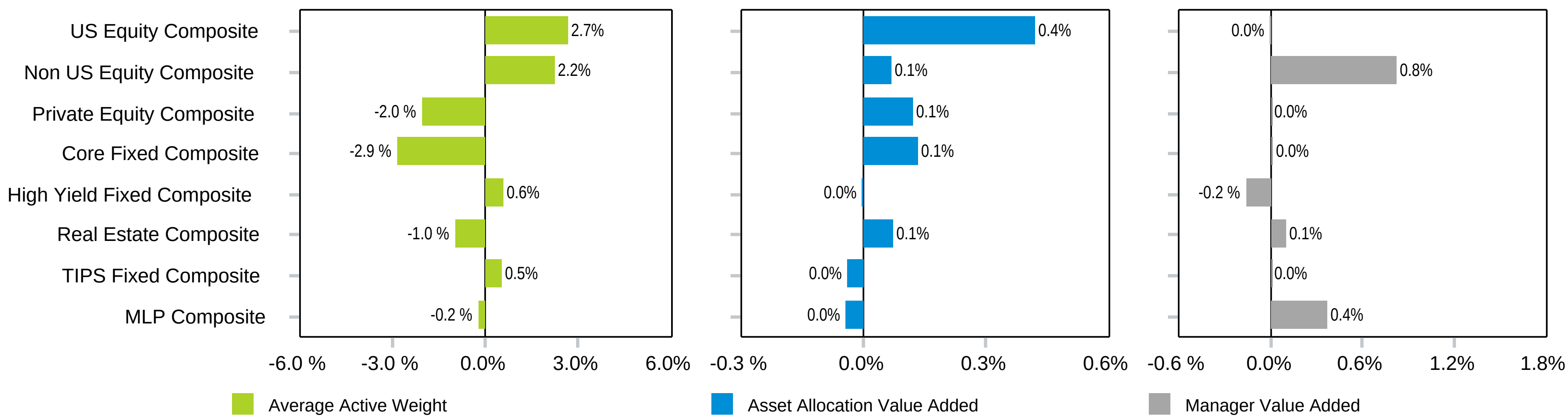
Total Fund Performance



Total Value Added:0.9%



Total Asset Allocation:0.7% | **Asset Allocation Value Added:0.7%** | **Total Manager Value Added:1.2%**



Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
US Equity Composite	**9.21**	**30.98**	**14.13**	**10.82**	**12.96**	**9.05**	**11/1/1993**	**170,712,554**	**17.70**
Wilshire 5000 Total Market TR Index	9.08	31.02	14.52	11.38	13.42	9.74			
Value Added	0.13	-0.04	-0.39	-0.56	-0.46	-0.69			
Non US Equity Composite	**10.66**	**26.23**	**10.91**	**7.14**	**5.93**	**5.28**	**2/1/2001**	**173,392,727**	**17.97**
Non US Equity Policy Index	9.20	21.63	9.84	5.71	5.07	4.31			
Value Added	1.46	4.60	1.07	1.43	0.86	0.97			
Global Equity Composite	**9.08**	**19.58**	**8.63**	**5.56**		**5.61**	**12/1/2014**	**1,239,192**	**0.13**
MSCI AC World Index (Net)	8.95	26.60	12.44	8.41		7.85			
Value Added	0.13	-7.02	-3.81	-2.85		-2.24			
Core Fixed Composite	**0.37**	**8.92**	**3.88**	**3.05**	**3.77**	**6.99**	**1/1/1983**	**86,384,559**	**8.95**
Blmbg. Barc. U.S. Aggregate	0.18	8.72	4.03	3.05	3.75	7.06			
Value Added	0.19	0.20	-0.15	0.00	0.02	-0.07			
High Yield Fixed Composite	**2.69**	**12.81**	**4.99**	**4.48**	**6.44**	**7.02**	**4/1/2008**	**114,479,483**	**11.87**
FTSE High Yield Market Capped Index	2.85	14.05	6.06	5.78	7.20	7.55			
Value Added	-0.16	-1.24	-1.07	-1.30	-0.76	-0.53			
TIPS Fixed Composite	**0.79**	**8.43**	**3.34**	**2.59**	**3.31**	**3.20**	**4/1/2008**	**49,265,121**	**5.11**
Blmbg. Barc. U.S. TIPS	0.79	8.43	3.32	2.62	3.36	3.15			
Value Added	0.00	0.00	0.02	-0.03	-0.05	0.05			
ERECT Composite	**0.97**	**7.09**	**8.50**	**8.15**		**7.32**	**9/1/2010**	**9,757,314**	**1.01**
Real Estate Composite	**1.57**	**5.22**	**8.94**	**9.18**	**11.61**	**8.88**	**4/1/2003**	**101,781,586**	**10.55**
NCREIF Fund Index-ODCE (VW) (Net)	1.27	4.39	6.13	7.98	10.39	7.13			
Value Added	0.30	0.83	2.81	1.20	1.22	1.75			

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Private Equity Composite	**2.57**	**7.67**	**8.93**	**10.38**	**11.31**	**6.68**	**4/1/2003**	**167,976,915**	**17.41**
Private Equity Policy Index	2.57	7.67	8.93	10.38	11.31	6.68			
Value Added	0.00	0.00	0.00	0.00	0.00	0.00			
Hedge Fund Composite	**4.41**	**8.53**	**-3.82**	**-0.42**		**1.38**	**2/1/2011**	**3,827,594**	**0.40**
90 Day T-Bill Index + 3%	1.20	5.34	4.71	4.08		3.63			
Value Added	3.21	3.19	-8.53	-4.50		-2.25			
Life Settlement Composite	**-1.99**	**-1.47**	**-3.58**	**-4.80**	**6.87**	**7.62**	**9/1/2009**	**28,681,151**	**2.97**
Israel Bonds and Cash							**3/1/1999**	**15,408,022**	**1.60**
MLP Composite	**-0.04**	**14.54**				**-3.13**	**2/1/2018**	**41,801,478**	**4.33**
Alerian MLP Index	-4.08	6.56				-6.32			
Value Added	4.04	7.98				3.19			
Total Fund	**4.38**	**15.16**	**8.24**	**6.93**	**7.92**	**7.44**	**12/1/1993**	**964,707,696**	**100.00**
Total Fund Policy Index	3.83	14.24	7.72	6.68	7.58	7.52			
Value Added	0.55	0.92	0.52	0.25	0.34	-0.08			

Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
SSgA S&P 500 Index	**9.06**	**31.54**	**15.29**	**11.73**	**13.58**	**8.56**	**11/1/2007**	**94,638,600**	**9.81**
S&P 500	9.07	31.49	15.27	11.70	13.56	8.52			
Value Added	-0.01	0.05	0.02	0.03	0.02	0.04			
Fragasso Large Core (EMWO)	**7.71**	**31.87**	**15.12**	**10.38**		**13.01**	**9/1/2012**	**6,387,565**	**0.66**
S&P 500	9.07	31.49	15.27	11.70		14.36			
Value Added	-1.36	0.38	-0.15	-1.32		-1.35			
Twin Capital Enhanced Equity	**9.37**	**30.24**	**13.72**	**10.94**	**13.17**	**9.16**	**1/1/2006**	**31,050,612**	**3.22**
S&P 500	9.07	31.49	15.27	11.70	13.56	9.30			
Value Added	0.30	-1.25	-1.55	-0.76	-0.39	-0.14			
Earnest Small Value	**7.46**	**28.89**	**9.93**	**9.59**	**12.48**	**13.91**	**6/1/2009**	**14,293,343**	**1.48**
Russell 2000 Value Index	8.49	22.39	4.77	6.99	10.56	12.44			
Value Added	-1.03	6.50	5.16	2.60	1.92	1.47			
Emerald Advisors Small Cap	**11.21**	**29.23**	**13.45**	**10.62**	**14.83**	**10.85**	**11/1/2004**	**13,839,351**	**1.43**
Russell 2000 Growth Index	11.39	28.48	12.49	9.34	13.01	9.54			
Value Added	-0.18	0.75	0.96	1.28	1.82	1.31			
Emerald Advisors All Cap (EMWO)	**14.55**	**38.03**	**19.75**			**14.36**	**10/1/2015**	**3,593,804**	**0.37**
Russell 3000 Growth Index	10.67	35.85	19.89			17.46			
Value Added	3.88	2.18	-0.14			-3.10			
Ethos (EMWO)	**8.05**	**33.89**	**16.37**			**15.37**	**8/1/2016**	**1,462,800**	**0.15**
S&P 500	9.07	31.49	15.27			14.60			
Value Added	-1.02	2.40	1.10			0.77			
CIM Small Cap (EMWO)	**8.94**	**29.19**	**7.49**	**6.55**		**6.46**	**1/1/2014**	**4,846,748**	**0.50**
Russell 2000 Index	9.94	25.53	8.59	8.23		7.67			
Value Added	-1.00	3.66	-1.10	-1.68		-1.21			

Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Cookson Peirce (EMWO)	**6.00**	**19.24**				**19.24**	**1/1/2019**	**599,730**	**0.06**
Russell 3000 Index	9.10	31.02				31.02			
Value Added	-3.10	-11.78				-11.78			
US Equity Composite	**9.21**	**30.98**	**14.13**	**10.82**	**12.96**	**9.05**	**11/1/1993**	**170,712,554**	**17.70**
Wilshire 5000 Total Market TR Index	9.08	31.02	14.52	11.38	13.42	9.74			
Value Added	0.13	-0.04	-0.39	-0.56	-0.46	-0.69			
SSgA ACWI ex US	**8.29**	**23.42**	**9.80**			**4.37**	**5/1/2015**	**34,976,771**	**3.63**
MSCI AC World ex USA (Net)	8.92	21.51	9.87			4.03			
Value Added	-0.63	1.91	-0.07			0.34			
Baillie Gifford Intl Equity	**12.15**	**32.23**	**14.15**	**9.24**	**8.34**	**9.49**	**8/1/2009**	**70,166,337**	**7.27**
MSCI AC World ex USA (Net)	8.92	21.51	9.87	5.51	4.97	6.01			
Value Added	3.23	10.72	4.28	3.73	3.37	3.48			
FIAM Select International Equity	**8.92**	**24.24**	**9.68**	**5.07**	**4.86**	**4.59**	**2/1/2001**	**34,917,214**	**3.62**
FIAM Policy Index	8.92	21.51	9.87	5.51	4.97	4.26			
Value Added	0.00	2.73	-0.19	-0.44	-0.11	0.33			
Segal, Bryant & Hamill	**11.95**	**18.21**	**6.30**			**5.02**	**5/1/2015**	**33,332,405**	**3.46**
MSCI EAFE Small Cap (Net)	11.52	24.96	10.92			7.22			
Value Added	0.43	-6.75	-4.62			-2.20			
Non US Equity Composite	**10.66**	**26.23**	**10.91**	**7.14**	**5.93**	**5.28**	**2/1/2001**	**173,392,727**	**17.97**
Non US Equity Policy Index	9.20	21.63	9.84	5.71	5.07	4.31			
Value Added	1.46	4.60	1.07	1.43	0.86	0.97			

Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Columbus Macro (EMWO)	**9.08**	**19.58**	**8.63**	**5.56**		**5.61**	**12/1/2014**	**1,239,192**	**0.13**
MSCI AC World Index (Net)	8.95	26.60	12.44	8.41		7.85			
Value Added	0.13	-7.02	-3.81	-2.85		-2.24			
Global Equity Composite	**9.08**	**19.58**	**8.63**	**5.56**		**5.61**	**12/1/2014**	**1,239,192**	**0.13**
MSCI AC World Index (Net)	8.95	26.60	12.44	8.41		7.85			
Value Added	0.13	-7.02	-3.81	-2.85		-2.24			
C S McKee	**0.19**	**9.18**	**4.27**	**3.39**	**4.14**	**7.42**	**1/1/1983**	**32,132,349**	**3.33**
Blmbg. Barc. U.S. Aggregate	0.18	8.72	4.03	3.05	3.75	7.06			
Value Added	0.01	0.46	0.24	0.34	0.39	0.36			
Federated	**0.48**	**10.15**	**4.46**	**3.48**	**4.18**	**4.92**	**9/1/2006**	**27,322,110**	**2.83**
Blmbg. Barc. U.S. Aggregate	0.18	8.72	4.03	3.05	3.75	4.33			
Value Added	0.30	1.43	0.43	0.43	0.43	0.59			
CIM Investment Mgmt	**0.31**	**6.11**	**2.66**	**1.90**	**2.53**	**3.33**	**11/1/2005**	**13,096,581**	**1.36**
Blmbg. Barc. Intermed. U.S. Government/Credit	0.37	6.80	3.24	2.57	3.05	3.76			
Value Added	-0.06	-0.69	-0.58	-0.67	-0.52	-0.43			
StoneRidge Partners (EMWO)	**0.25**	**5.02**	**2.80**			**2.51**	**8/1/2015**	**6,628,893**	**0.69**
StoneRidge Policy Index	0.59	7.78	3.62			3.02			
Value Added	-0.34	-2.76	-0.82			-0.51			
Gridiron Capital Fixed Income (EMWO)	**1.53**	**15.16**				**4.22**	**2/1/2017**	**4,524,657**	**0.47**
Blmbg. Barc. U.S. Aggregate	0.18	8.72				4.08			
Value Added	1.35	6.44				0.14			

Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
FNB (EMWO)	**0.24**	**7.47**				**2.75**	**7/1/2017**	**2,679,970**	**0.28**
Blmbg. Barc. U.S. Intermediate Aggregate	0.47	6.67				3.26			
Value Added	-0.23	0.80				-0.51			
Core Fixed Composite	**0.37**	**8.92**	**3.88**	**3.05**	**3.77**	**6.99**	**1/1/1983**	**86,384,559**	**8.95**
Blmbg. Barc. U.S. Aggregate	0.18	8.72	4.03	3.05	3.75	7.06			
Value Added	0.19	0.20	-0.15	0.00	0.02	-0.07			
Oaktree High Yield	**2.19**	**10.71**	**3.97**	**4.14**	**6.05**	**6.62**	**4/1/2008**	**62,050,974**	**6.43**
FTSE High Yield Market Capped Index	2.85	14.05	6.06	5.78	7.20	7.55			
Value Added	-0.66	-3.34	-2.09	-1.64	-1.15	-0.93			
Federated High Yield	**3.49**	**16.30**				**5.92**	**7/1/2017**	**49,156,380**	**5.10**
Blmbg. Barc. U.S. High Yield - 2% Issuer Cap	2.61	14.32				5.63			
Value Added	0.88	1.98				0.29			
Sound Point	**0.32**	**3.31**	**3.81**	**4.23**		**4.28**	**8/1/2013**	**3,272,129**	**0.34**
CSFB Leveraged Loan	1.68	8.17	4.48	4.54		4.19			
Value Added	-1.36	-4.86	-0.67	-0.31		0.09			
High Yield Fixed Composite	**2.69**	**12.81**	**4.99**	**4.48**	**6.44**	**7.02**	**4/1/2008**	**114,479,483**	**11.87**
FTSE High Yield Market Capped Index	2.85	14.05	6.06	5.78	7.20	7.55			
Value Added	-0.16	-1.24	-1.07	-1.30	-0.76	-0.53			
MCM TIPS	**0.79**	**8.43**	**3.34**			**3.50**	**12/1/2016**	**49,265,121**	**5.11**
Blmbg. Barc. U.S. TIPS	0.79	8.43	3.32			3.19			
Value Added	0.00	0.00	0.02			0.31			

Wilshire Consulting

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
TIPS Fixed Composite	**0.79**	**8.43**	**3.34**	**2.59**	**3.31**	**3.20**	**4/1/2008**	**49,265,121**	**5.11**
Blmbg. Barc. U.S. TIPS	0.79	8.43	3.32	2.62	3.36	3.15			
Value Added	0.00	0.00	0.02	-0.03	-0.05	0.05			
ERECT Fund II	**0.97**	**7.09**	**8.50**	**8.15**	**8.73**	**7.19**	**6/1/2005**	**9,757,314**	**1.01**
CPI - All Urban Consumers (SA)	0.84	2.29	2.11	1.82	1.75	2.00			
Value Added	0.13	4.80	6.39	6.33	6.98	5.19			
ERECT Composite	**0.97**	**7.09**	**8.50**	**8.15**		**7.32**	**9/1/2010**	**9,757,314**	**1.01**
Morgan Stanley	**1.53**	**6.17**	**7.62**	**9.30**	**12.08**	**8.78**	**4/1/2003**	**72,187,088**	**7.48**
NCREIF Fund Index-ODCE (VW) (Net)	1.27	4.39	6.13	7.98	10.39	7.13			
Value Added	0.26	1.78	1.49	1.32	1.69	1.65			
Oaktree Real Estate	**0.81**	**2.14**	**5.57**	**6.63**		**6.21**	**8/1/2013**	**7,317,123**	**0.76**
Washington Alliance (EMWO)	**3.11**	**3.96**	**16.49**	**16.45**		**13.50**	**8/1/2013**	**12,070,967**	**1.25**
Siguler Guff Distressed RE	**0.53**	**2.69**	**13.75**	**8.68**		**8.10**	**3/1/2014**	**10,206,408**	**1.06**
Real Estate Composite	**1.57**	**5.22**	**8.94**	**9.18**	**11.61**	**8.88**	**4/1/2003**	**101,781,586**	**10.55**
NCREIF Fund Index-ODCE (VW) (Net)	1.27	4.39	6.13	7.98	10.39	7.13			
Value Added	0.30	0.83	2.81	1.20	1.22	1.75			
Private Equity Composite	**2.57**	**7.67**	**8.93**	**10.38**	**11.31**	**6.68**	**4/1/2003**	**167,976,915**	**17.41**
Private Equity Policy Index	2.57	7.67	8.93	10.38	11.31	6.68			
Value Added	0.00	0.00	0.00	0.00	0.00	0.00			

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
Gridiron Capital (EMWO)	**5.70**	**10.24**	**2.15**	**2.46**		**2.26**	**8/1/2013**	**2,791,430**	**0.29**
HFRI FoF Composite Lagged	0.91	4.82	3.61	2.09		2.94			
Value Added	4.79	5.42	-1.46	0.37		-0.68			
Maplewood (EMWO)	**1.08**					**3.62**	**3/1/2019**	**1,036,165**	**0.11**
HFRX Macro Index	-0.20					6.08			
Value Added	1.28					-2.46			
Hedge Fund Composite	**4.41**	**8.53**	**-3.82**	**-0.42**		**1.38**	**2/1/2011**	**3,827,594**	**0.40**
90 Day T-Bill Index + 3%	1.20	5.34	4.71	4.08		3.63			
Value Added	3.21	3.19	-8.53	-4.50		-2.25			
Salient MLP Fund	**1.19**	**16.05**				**0.07**	**1/1/2018**	**18,013,938**	**1.87**
Alerian MLP Index	-4.08	6.56				-3.40			
Value Added	5.27	9.49				3.47			
Harvest MLP Fund	**-0.95**	**13.42**				**-3.91**	**2/1/2018**	**23,787,539**	**2.47**
Alerian MLP Index	-4.08	6.56				-6.32			
Value Added	3.13	6.86				2.41			
MLP Composite	**-0.04**	**14.54**				**-3.13**	**2/1/2018**	**41,801,478**	**4.33**
Alerian MLP Index	-4.08	6.56				-6.32			
Value Added	4.04	7.98				3.19			

PERFORMANCE SUMMARY

Investment Performance and Market Values

Periods Ended December 31, 2019

	Performance (%) net of fees							Allocation	
	1 Quarter	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	Market Value $	%
CCA Green	**-6.26**	**-6.81**	**-7.71**	**-8.91**	**4.66**	**5.42**	**10/1/2009**	**12,216,471**	**1.27**
CCA Blue	**-2.91**	**-8.43**	**-7.05**	**-6.05**		**-4.78**	**1/1/2013**	**2,696,665**	**0.28**
CCA Black	**3.02**	**4.67**	**4.41**	**6.48**		**6.48**	**1/1/2015**	**8,437,606**	**0.87**
CCA Longevity Fund VI LP	**1.24**	**6.61**				**6.61**	**1/1/2019**	**5,330,409**	**0.55**
Life Settlement Composite	**-1.99**	**-1.47**	**-3.58**	**-4.80**	**6.87**	**7.60**	**10/1/2009**	**28,681,151**	**2.97**
Israel Bonds	**1.24**	**2.90**	**1.98**	**2.21**		**2.95**	**1/1/2012**	**7,371,197**	**0.76**
Cash Account	**0.46**	**2.30**	**1.68**	**1.09**		**0.76**	**1/1/2012**	**8,036,825**	**0.83**
Total Fund	**4.38**	**15.16**	**8.24**	**6.93**	**7.92**	**7.44**	**12/1/1993**	**964,707,696**	**100.00**
Total Fund Policy Index	3.83	14.24	7.72	6.68	7.58	7.52			
Value Added	0.55	0.92	0.52	0.25	0.34	-0.08			

Historical Hybrid Composition

Retirement Board of Allegheny County

Periods Ended December 31, 2019

Policy Index	Weight (%)
Jan-1979	
Russell 3000 Index	65.00
Blmbg. Barc. U.S. Aggregate	35.00
Mar-2007	
Wilshire 5000 Total Market TR Index	45.00
Blmbg. Barc. U.S. Aggregate	25.00
Private Equity Composite	5.00
MSCI EAFE Index (Net)	10.00
Bloomberg Commodity Index Total Return	5.00
90 Day US Treasury Bill	5.00
NCREIF Fund Index-ODCE (VW) (Net)	5.00
Sep-2008	
Wilshire 5000 Total Market TR Index	45.00
Blmbg. Barc. U.S. Aggregate	25.00
Private Equity Composite	5.00
MSCI AC World ex USA (Net)	10.00
Bloomberg Commodity Index Total Return	5.00
90 Day US Treasury Bill	5.00
NCREIF Fund Index-ODCE (VW) (Net)	5.00

Policy Index	Weight (%)
Dec-2008	
Wilshire 5000 Total Market TR Index	35.00
Blmbg. Barc. U.S. Aggregate	20.00
Private Equity Composite	5.00
MSCI AC World ex USA (Net)	15.00
Bloomberg Commodity Index Total Return	5.00
90 Day US Treasury Bill	2.50
NCREIF Fund Index-ODCE (VW) (Net)	7.50
Blmbg. Barc. U.S. TIPS	5.00
FTSE High Yield Market Capped Index	5.00
Sep-2009	
Wilshire 5000 Total Market TR Index	30.00
Blmbg. Barc. U.S. Aggregate	15.00
Private Equity Composite	5.00
MSCI AC World ex USA (Net)	20.00
Bloomberg Commodity Index Total Return	2.50
NCREIF Fund Index-ODCE (VW) (Net)	10.00
Blmbg. Barc. U.S. TIPS	7.50
FTSE High Yield Market Capped Index	10.00
Jun-2010	
Wilshire 5000 Total Market TR Index	20.00
Blmbg. Barc. U.S. Aggregate	14.00
Private Equity Composite	10.00
MSCI AC World ex USA (Net)	25.00
Bloomberg Commodity Index Total Return	5.00
NCREIF Fund Index-ODCE (VW) (Net)	10.00
Blmbg. Barc. U.S. TIPS	6.00
FTSE High Yield Market Capped Index	10.00

Historical Hybrid Composition

Retirement Board of Allegheny County

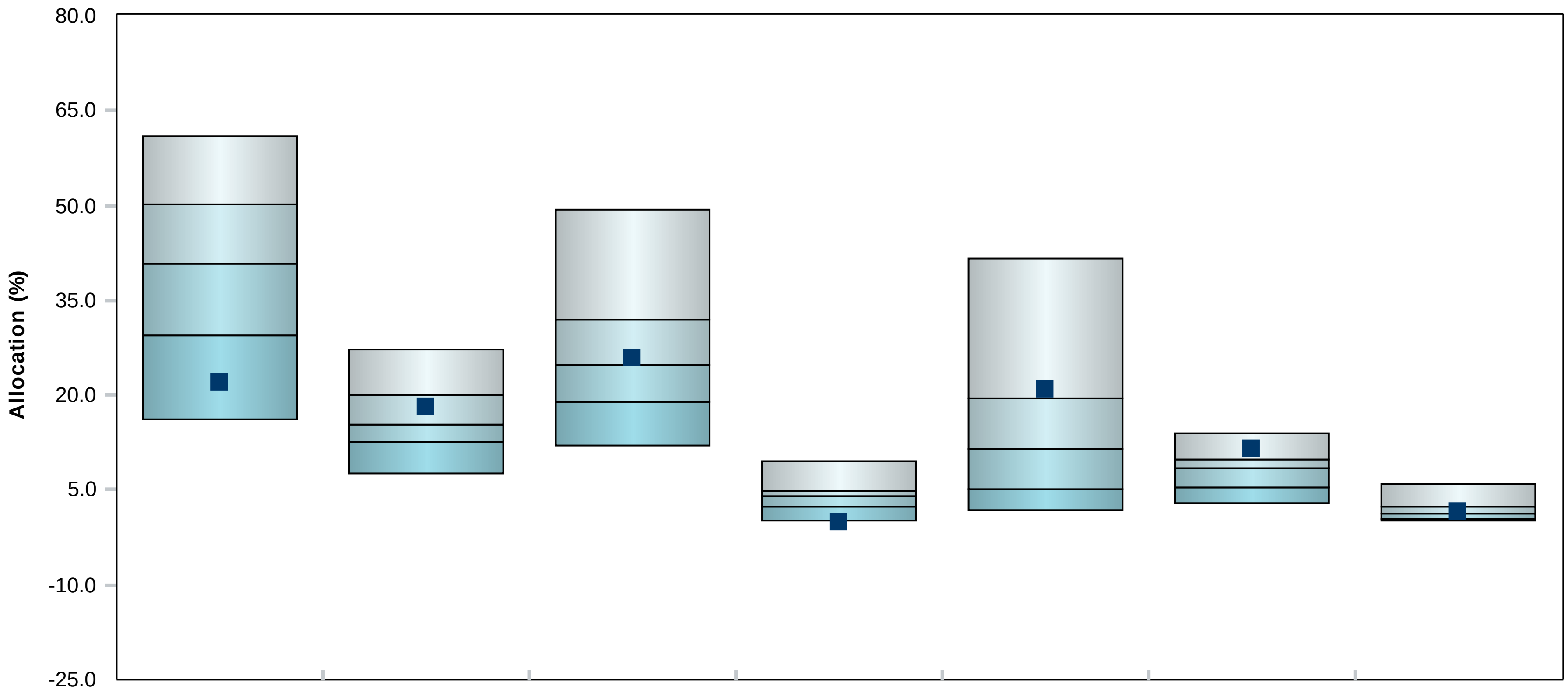
Periods Ended December 31, 2019

Policy Index	Weight (%)
Mar-2013	
Wilshire 5000 Total Market TR Index	16.10
Blmbg. Barc. U.S. Aggregate	10.00
Private Equity Composite	20.00
MSCI AC World ex USA (Net)	18.90
Bloomberg Commodity Index Total Return	8.00
NCREIF Fund Index-ODCE (VW) (Net)	10.00
Blmbg. Barc. U.S. TIPS	5.00
FTSE High Yield Market Capped Index	12.00
Apr-2016	
Wilshire 5000 Total Market TR Index	15.00
Blmbg. Barc. U.S. Aggregate	10.00
Private Equity Composite	22.50
MSCI AC World ex USA (Net)	15.00
Bloomberg Commodity Index Total Return	2.50
NCREIF Fund Index-ODCE (VW) (Net)	10.00
Blmbg. Barc. U.S. TIPS	8.00
FTSE High Yield Market Capped Index	12.00
Alerian MLP Index	5.00
Jan-2019	
Wilshire 5000 Total Market TR Index	16.50
Blmbg. Barc. U.S. Aggregate	12.50
Private Equity Composite	20.00
MSCI AC World ex USA (Net)	16.50
NCREIF Fund Index-ODCE (VW) (Net)	12.50
Blmbg. Barc. U.S. TIPS	5.00
FTSE High Yield Market Capped Index	12.00
Alerian MLP Index	5.00

Plan Sponsor TF Asset Allocation

Total Fund vs All Public Plans-Total Fund

Periods Ended December 31, 2019



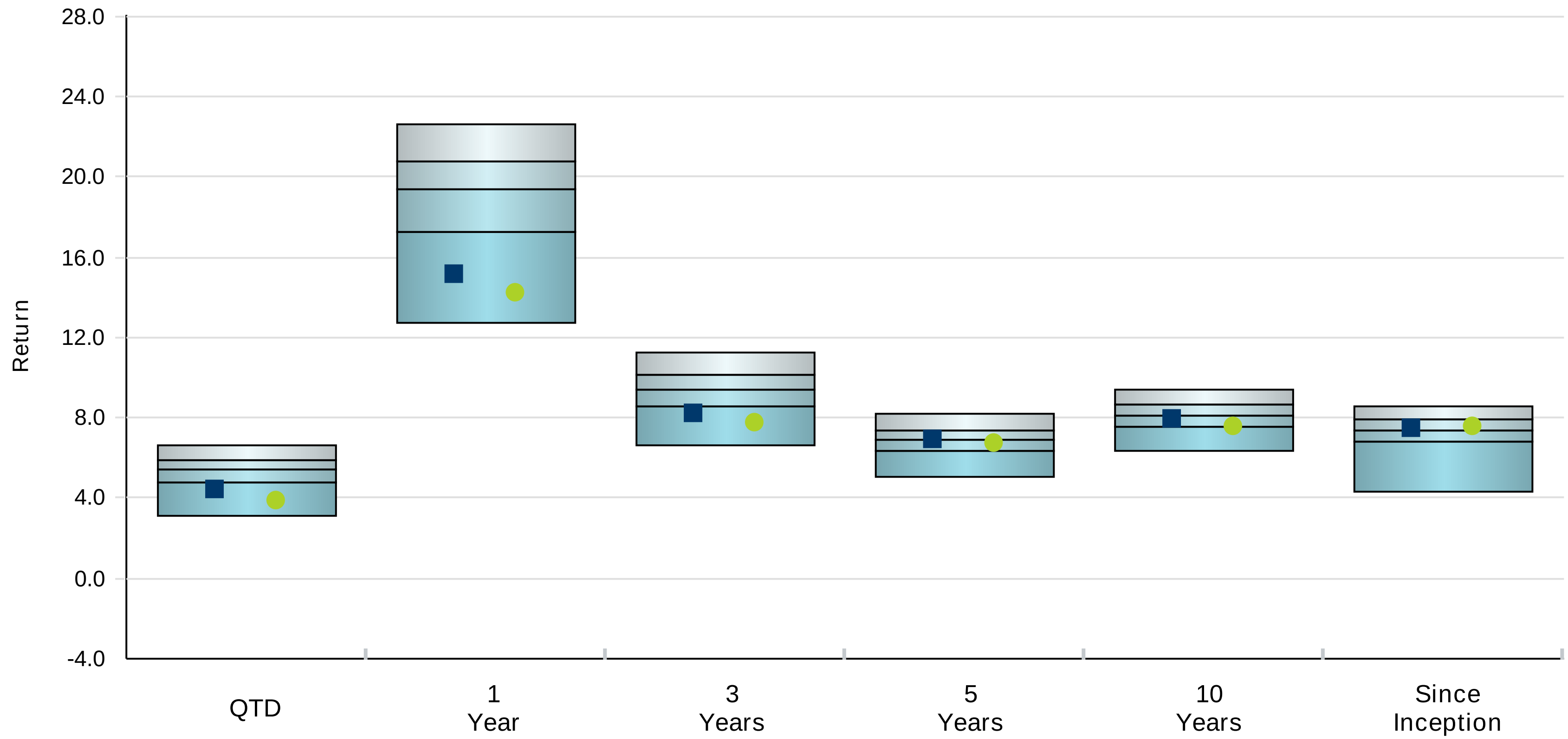
	US Equity	Intl. Equity	US Fixed Income	Intl. Fixed Income	Alternative Inv.	Real Estate	Cash
Total Fund	22.03	18.10	25.93	0.00	20.74	11.56	1.64
5th Percentile	61.05	27.21	49.34	9.65	41.47	13.95	6.03
1st Quartile	50.04	20.02	31.92	4.77	19.59	9.87	2.39
Median	40.88	15.24	24.80	3.94	11.34	8.57	1.36
3rd Quartile	29.50	12.53	18.95	2.42	5.05	5.36	0.54
95th Percentile	16.20	7.51	12.15	0.08	1.74	2.86	0.07
Population	656	607	598	204	200	331	424

Wilshire Consulting

Plan Sponsor Peer Group Analysis

Total Fund vs All Public Plans-Total Fund

Periods Ended December 31, 2019



	QTD	1 Year	3 Years	5 Years	10 Years	Since Inception
■ Total Fund	4.38 (85)	15.16 (90)	8.24 (84)	6.93 (49)	7.92 (58)	7.44 (48)
● Total Fund Policy Index	3.83 (92)	14.24 (94)	7.72 (92)	6.68 (62)	7.58 (75)	7.52 (44)
5th Percentile	6.62	22.59	11.26	8.22	9.44	8.58
1st Quartile	5.86	20.78	10.12	7.37	8.64	7.96
Median	5.39	19.38	9.44	6.90	8.09	7.40
3rd Quartile	4.81	17.31	8.57	6.40	7.56	6.86
95th Percentile	3.12	12.76	6.65	5.06	6.33	4.31
Population	671	665	637	584	485	96

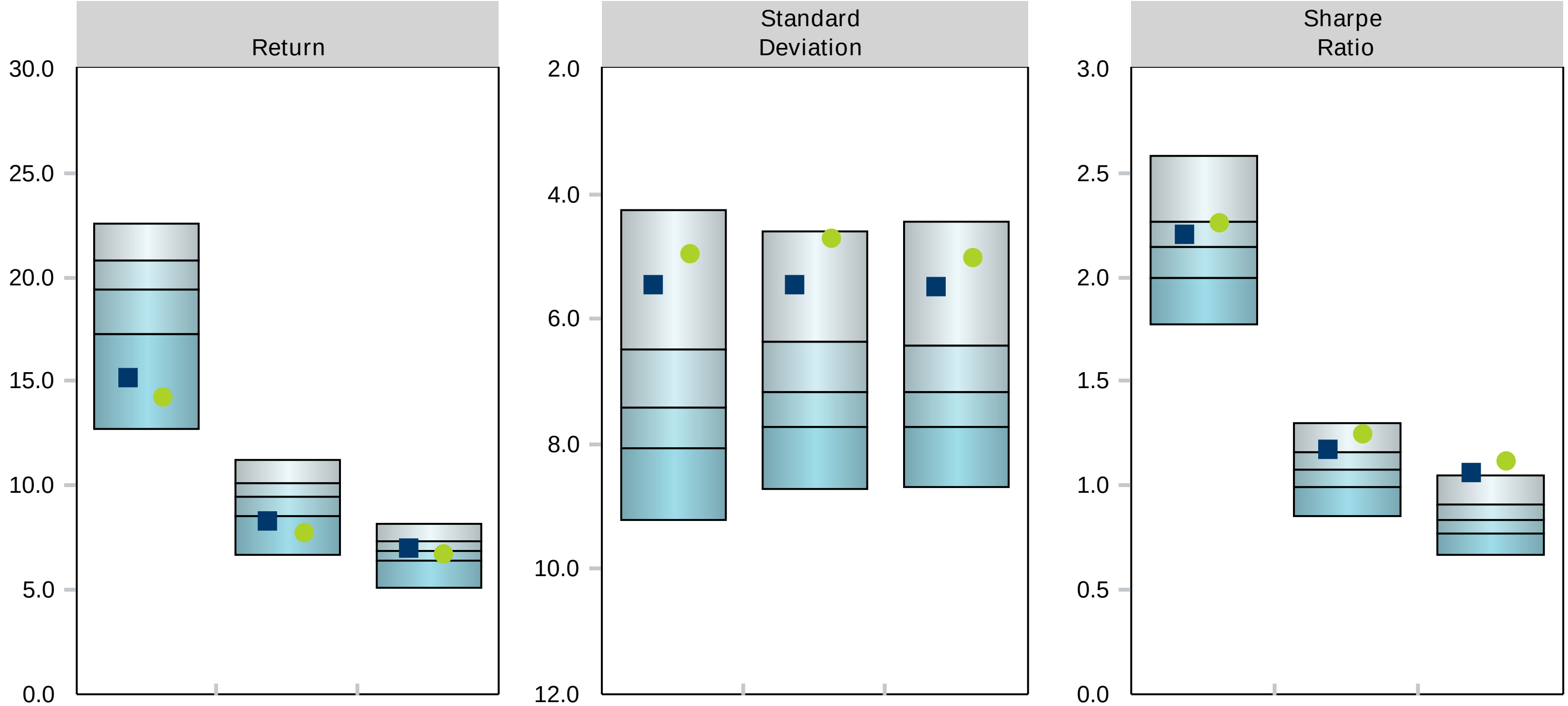
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Wilshire Consulting

Plan Sponsor Peer Group Analysis-Multi Statistics

Total Fund

Periods Ended December 31, 2019



	Return			Standard Deviation			Sharpe Ratio		
	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years	1 Year	3 Years	5 Years
■ Total Fund	15.16 (90)	8.24 (84)	6.93 (49)	5.48 (10)	5.46 (9)	5.49 (8)	2.20 (37)	1.17 (24)	1.06 (5)
● Total Fund Policy Index	14.24 (94)	7.72 (92)	6.68 (62)	4.98 (7)	4.73 (5)	5.02 (7)	2.25 (27)	1.25 (10)	1.11 (2)
5th Percentile	22.59	11.26	8.22	4.26	4.61	4.43	2.58	1.30	1.05
1st Quartile	20.78	10.12	7.37	6.48	6.36	6.42	2.27	1.16	0.91
Median	19.38	9.44	6.90	7.42	7.16	7.16	2.14	1.08	0.84
3rd Quartile	17.31	8.57	6.40	8.07	7.74	7.71	2.00	1.00	0.77
95th Percentile	12.76	6.65	5.06	9.22	8.73	8.70	1.77	0.85	0.66
Population	665	637	584	665	637	584	665	637	584

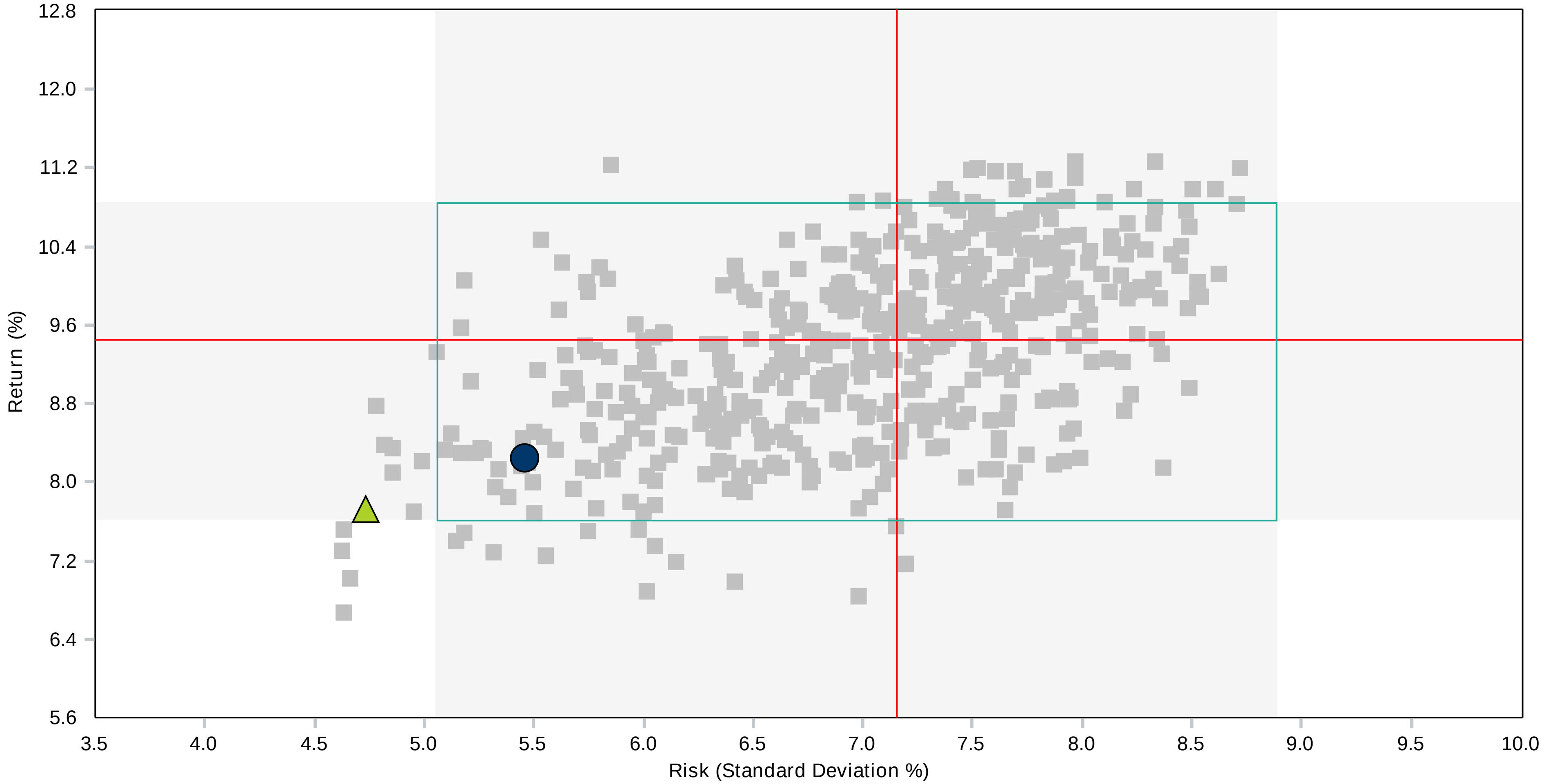
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Wilshire Consulting

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended January 1, 2017 To December 31, 2019



	Return	Standard Deviation
Total Fund	8.24	5.46
Total Fund Policy Index	7.72	4.73
Median	9.44	7.16

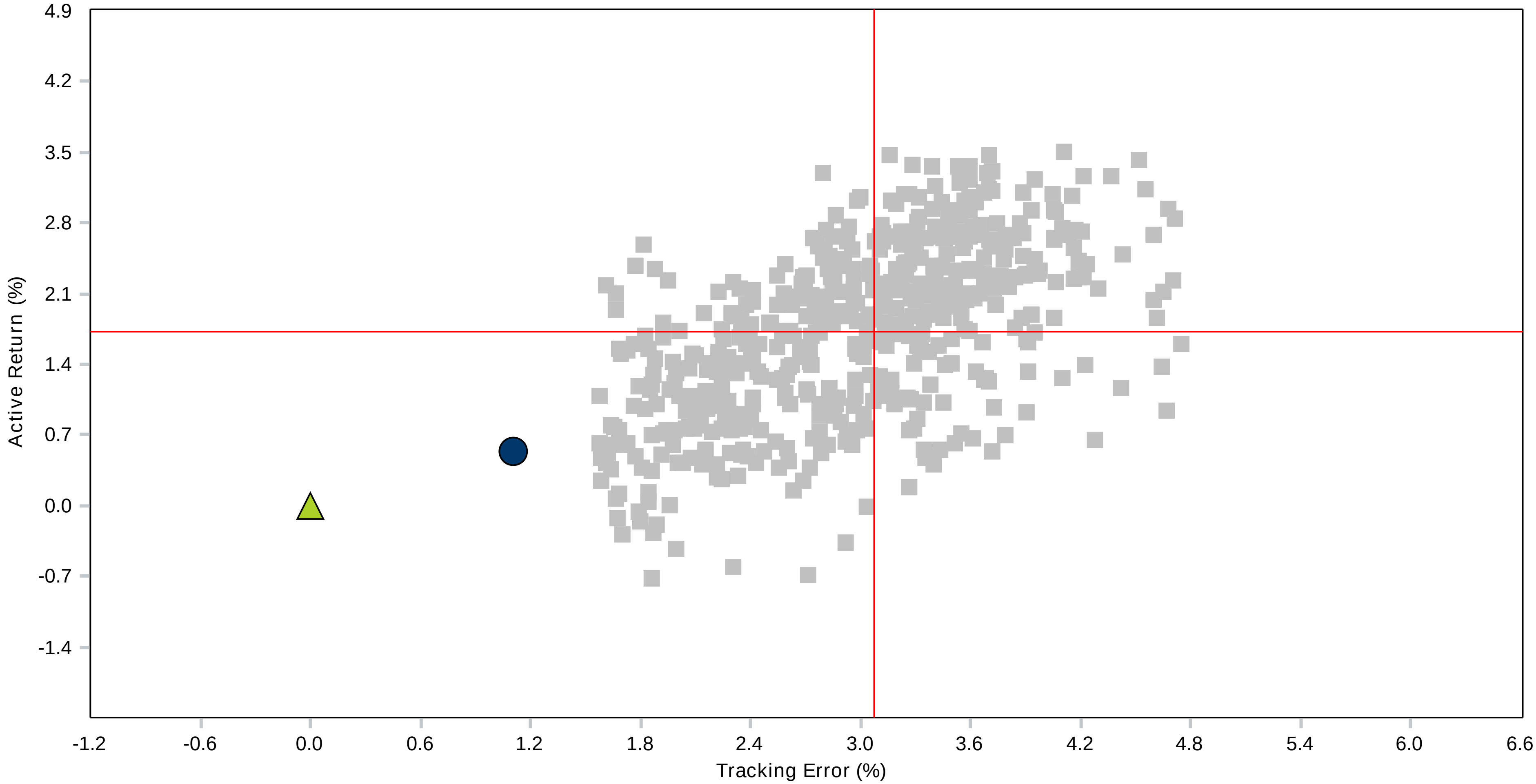
Calculation based on monthly periodicity.

Wilshire Consulting

Plan Sponsor Scattergram

Total Fund vs All Public Plans-Total Fund

Periods Ended January 1, 2017 To December 31, 2019



	Active Return	Tracking Error
Total Fund	0.53	1.11
Total Fund Policy Index	0.00	0.00
Median	1.73	3.07

Calculation based on monthly periodicity.

Wilshire Consulting

Cash Flow Summary

Total Fund

1 Quarter Ending December 31, 2019

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Total Fund	**935,000,434**	**35,141,202**	**-45,691,782**	**-712,871**	**-455,258**	**41,425,971**	**964,707,696**
Total Fund x Private Equity							
US Equity Composite	**158,146,853**			**-102,617**	**-11**	**14,668,329**	**170,712,554**
SSgA S&P 500 Index	86,774,603			-5,156		7,869,153	94,638,600
Twin Capital Enhanced Equity	30,190,725			-27,383		2,887,271	31,050,612
Earnest Small Value	13,300,600			-30,477		1,023,219	14,293,343
Emerald Advisors Small Cap	12,444,519			-24,156		1,418,988	13,839,351
Fragasso Large Core (EMWO)	5,930,525			-9,202	-11	466,253	6,387,565
CIM Small Cap (EMWO)	4,449,065					397,682	4,846,748
Emerald Advisors All Cap (EMWO)	3,137,187			-4,815		461,432	3,593,804
Ethos (EMWO)	1,353,863					108,938	1,462,800
Cookson Peirce (EMWO)	565,767			-1,429		35,392	599,730
Non US Equity Composite	**156,694,930**	**33,761,806**	**-33,761,806**	**-81,670**		**16,779,467**	**173,392,727**
Baillie Gifford Intl Equity	62,563,707					7,602,630	70,166,337
FIAM Select International Equity	32,056,353			-25,769		2,886,630	34,917,214
Segal, Bryant & Hamill	29,775,221			-47,910		3,605,094	33,332,405
SSgA ACWI ex US	32,299,649	33,761,806	-33,761,806	-7,991		2,685,112	34,976,771
Global Equity Composite	**1,136,084**			**-2,001**		**105,110**	**1,239,192**
Columbus Macro (EMWO)	1,136,084			-2,001		105,110	1,239,192
Fixed Income Composite							
Core Fixed Composite	**86,063,095**			**-70,324**		**391,788**	**86,384,559**
C S McKee	32,072,633			-18,442		78,157	32,132,349
CIM Investment Mgmt	13,055,479			-19,986		61,088	13,096,581
Federated	27,192,624			-18,801		148,286	27,322,110
StoneRidge Partners (EMWO)	6,612,559			-3,623		19,958	6,628,893
Gridiron Capital Fixed Income (EMWO)	4,456,297			-7,152		75,512	4,524,657
FNB (EMWO)	2,673,502			-2,319		8,787	2,679,970
High Yield Fixed Composite	**111,554,930**	**1,379,396**	**-1,454,976**	**-59,163**		**3,059,297**	**114,479,483**
Federated High Yield	47,574,622	1,379,396	-1,454,976	-59,163		1,716,502	49,156,380

Wilshire Consulting

Cash Flow Summary

Total Fund

1 Quarter Ending December 31, 2019

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Oaktree High Yield	60,718,489					1,332,485	62,050,974
Sound Point	3,261,819					10,310	3,272,129
TIPS Fixed Composite	**48,878,914**			**-6,107**		**392,314**	**49,265,121**
MCM TIPS	48,878,914			-6,107		392,314	49,265,121
ERECT Composite	**9,663,362**					**93,952**	**9,757,314**
ERECT Fund II	9,663,362					93,952	9,757,314
Real Estate Composite	**101,243,617**			**-63,679**	**-69,629**	**1,639,523**	**101,781,586**
Morgan Stanley	71,100,854					1,086,234	72,187,088
Oaktree Real Estate	7,760,148			-30,532	-62,986	92,794	7,317,123
Siguler Guff Distressed RE	10,349,570			-33,147	-6,643	87,085	10,206,408
Washington Alliance (EMWO)	12,033,045					373,410	12,070,967
MLP Composite	**41,816,562**			**-79,544**		**64,459**	**41,801,478**
Harvest MLP Fund	24,014,508			-45,857		-181,111	23,787,539
Salient MLP Fund	17,802,055			-33,687		245,570	18,013,938
Life Settlement Composite	**29,482,288**			**-15,625**		**-565,829**	**28,681,151**
CCA Black	8,406,954					250,335	8,437,606
CCA Blue	2,777,570					-80,905	2,696,665
CCA Green	13,032,499					-816,028	12,216,471
CCA Longevity Fund VI LP	5,265,265			-15,625		80,769	5,330,409
Israel Bonds and Cash	**21,052,247**		**-10,475,000**		**-904**	**142,758**	**15,408,022**
Cash Account	13,770,990		-10,475,000		-904	52,818	8,036,825
Israel Bonds	7,281,256					89,941	7,371,197
Hedge Fund Composite	**3,666,099**			**-4,868**		**166,363**	**3,827,594**
Gridiron Capital (EMWO)	**2,641,000**			**-4,868**		**155,297**	**2,791,430**
Gridiron Capital Multi-Asset (EMWO)	2,641,000			-4,868		155,297	2,791,430
Maplewood (EMWO)	1,025,099					11,066	1,036,165
Private Equity Composite	**165,601,453**			**-227,273**	**-384,713**	**4,488,440**	**167,976,915**
Accolade V	3,485,981					291,926	3,777,907
Accolade Partners VI	715,872					-12,651	1,080,096

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Cash Flow Summary

Total Fund

1 Quarter Ending December 31, 2019

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
Adams Street 2003	1,548,765					40,033	1,588,798
Adams Street 2008 Global	6,517,301			-13,212		-114,658	5,906,903
Adams Street 2009 Global	3,917,455			-7,988		-37,356	3,613,152
Auldbrass Spec Opps II	1,153,219					655	587,388
Birchmere Ventures	233,652			-3,351	-305	-125	229,871
BlackRock Multi-Alternative Opps	753,692			-3,796		19,043	864,371
Blackstone	815,806			-7,008		32,386	798,011
Blackstone Tac Op II	1,866,874			-14,976	-16,089	58,069	1,781,982
Blackstone Tac Op III	806,953					-19,734	787,219
Commonfund Venture Partners XII	756,858					-11,213	970,645
Constitution	1,861,175			-11,250	-4,690	20,394	1,398,433
Crestline Opportunity Fund III	3,305,854			-15,123	-4,490	123,116	3,523,184
Crestline Recovery II	632,250			-1,107	-3,825	-17,477	587,684
DCM Fund IV	2,426,323			-17,412	-2,249	34,722	2,445,871
Draper Triangle	359,928				-1,617		358,311
Draper Triangle III	10,598,047			-51,908	-59	-979,675	10,105,500
Emerald Advisors Fin Srv I	583,827					-22,201	861,626
Entrust	2,363,998			-6,448		-261,314	1,744,485
Entrust Special Opps IV	2,070,221					114,951	2,347,176
Five Points III	1,740,817					1	1,894,453
Goldman Sachs	862,097			-2,474	-2,943	-11,804	844,876
Greenspring	2,408,073					121,254	2,529,327
Greenspring Early Stage I LP	1,030,335					25,426	1,295,761
Greenspring III	4,581,381					22,063	4,603,444
Greenspring IV	3,090,915					281,556	3,372,471
Greenspring Sec I	1,759,360					314,667	2,056,527
Greenspring Sec II	2,639,054					-34,109	2,604,945
Greenspring V	2,363,650					-41,736	2,681,914
iNetworks	11,795,291			-9,051	-180,484	87,249	11,693,005

Wilshire Consulting

Cash Flow Summary

Total Fund

1 Quarter Ending December 31, 2019

	Begin Value	Contributions	Distributions	Fees	Expenses	Capital Apprec./ Deprec.	End Value
iNetworks II	2,776,136				-107,370		3,077,891
INOF II	5,489,235					25,917	5,815,152
Ironside III	7,762,689			-10,567	-7,284	1,101,243	5,807,806
Ironside IV	3,518,210			-3,750	-1,566	205,259	3,718,153
Ironside Opportunities Fund	2,285,165				-10,433	103,150	2,377,882
JMI Equity Fund IX-A	359,386			-9,130		37,620	618,876
Mellon PAM Fund V	3,549,082			-6,250		679,297	4,222,129
Mesirow Partners Fund IV	7,192,663			-21,906		-55,259	6,605,498
North Haven Capital Partners	2,486,184					158,855	2,645,039
North Haven Senior Loan Fund	1,275,460			-5,002	-10,508	16,413	1,440,993
Permal Capital Mgmt	689,531			-5,565		-12,743	671,223
Pharos Capital	3,213,332					43,136	3,289,218
PLSG Accelerator Fund	241,032					-917	240,115
ValStone Partners IV	13,240						13,240
ValStone Partners V	22,541,822					404,657	22,782,806
ValStone Partners VI	10,790,510					143,404	11,758,656
Valstone Senior Living	12,372,753				-30,801	1,614,950	13,956,902

US EQUITY

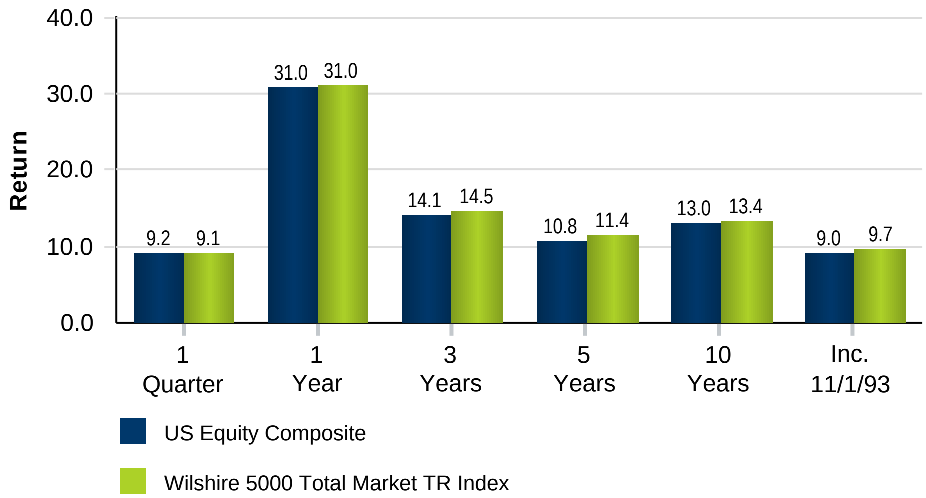
Wilshire Consulting

Composite Performance Summary

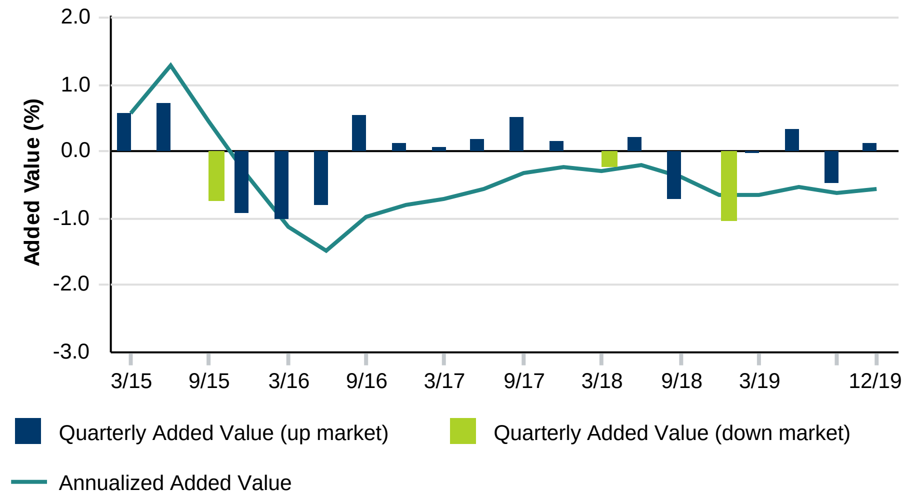
US Equity Composite

Periods Ended December 31, 2019

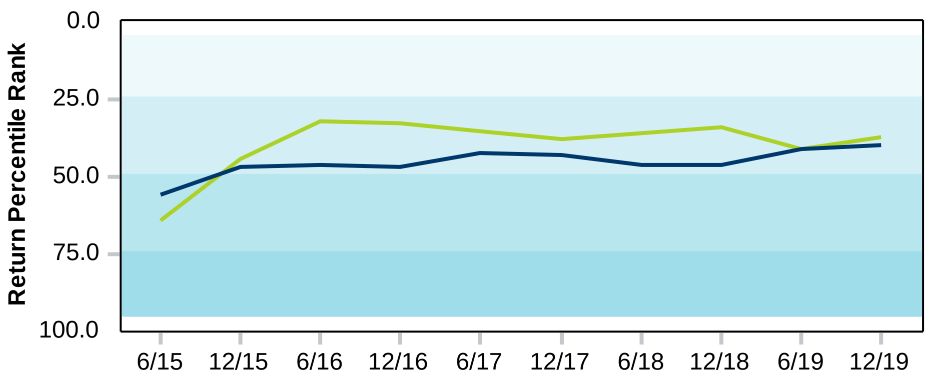
Comparative Performance



Added Value History

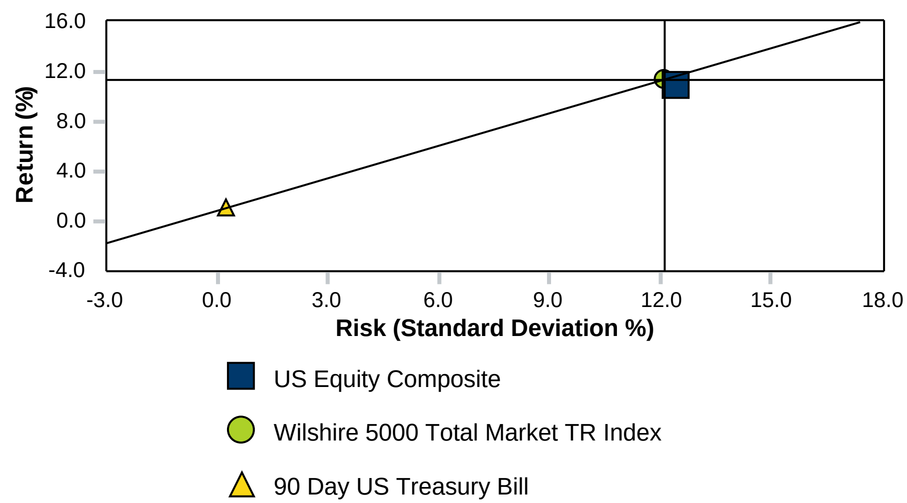


Rolling Percentile Rank: IM U.S. Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
US Equity Composite	10	0 (0%)	9 (90%)	1 (10%)	0 (0%)
Benchmark	10	0 (0%)	9 (90%)	1 (10%)	0 (0%)

Risk and Return 01/1/15 - 12/31/19



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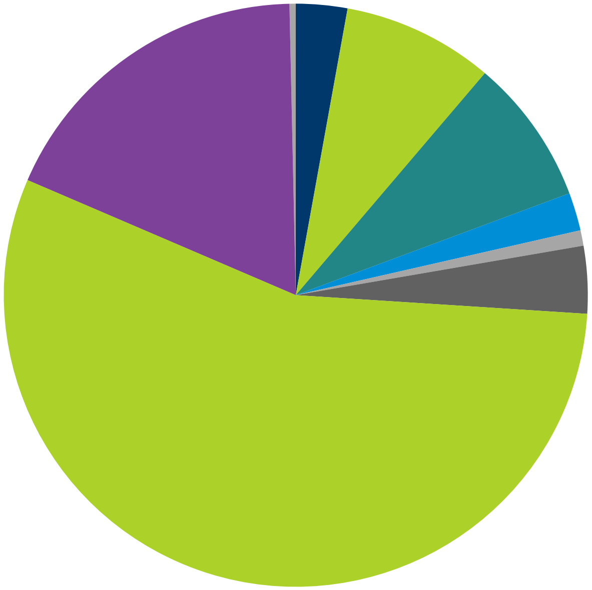
Asset Allocation By Manager

US Equity Composite

Periods Ended December 31, 2019

Dec-2019 : 170,712,554

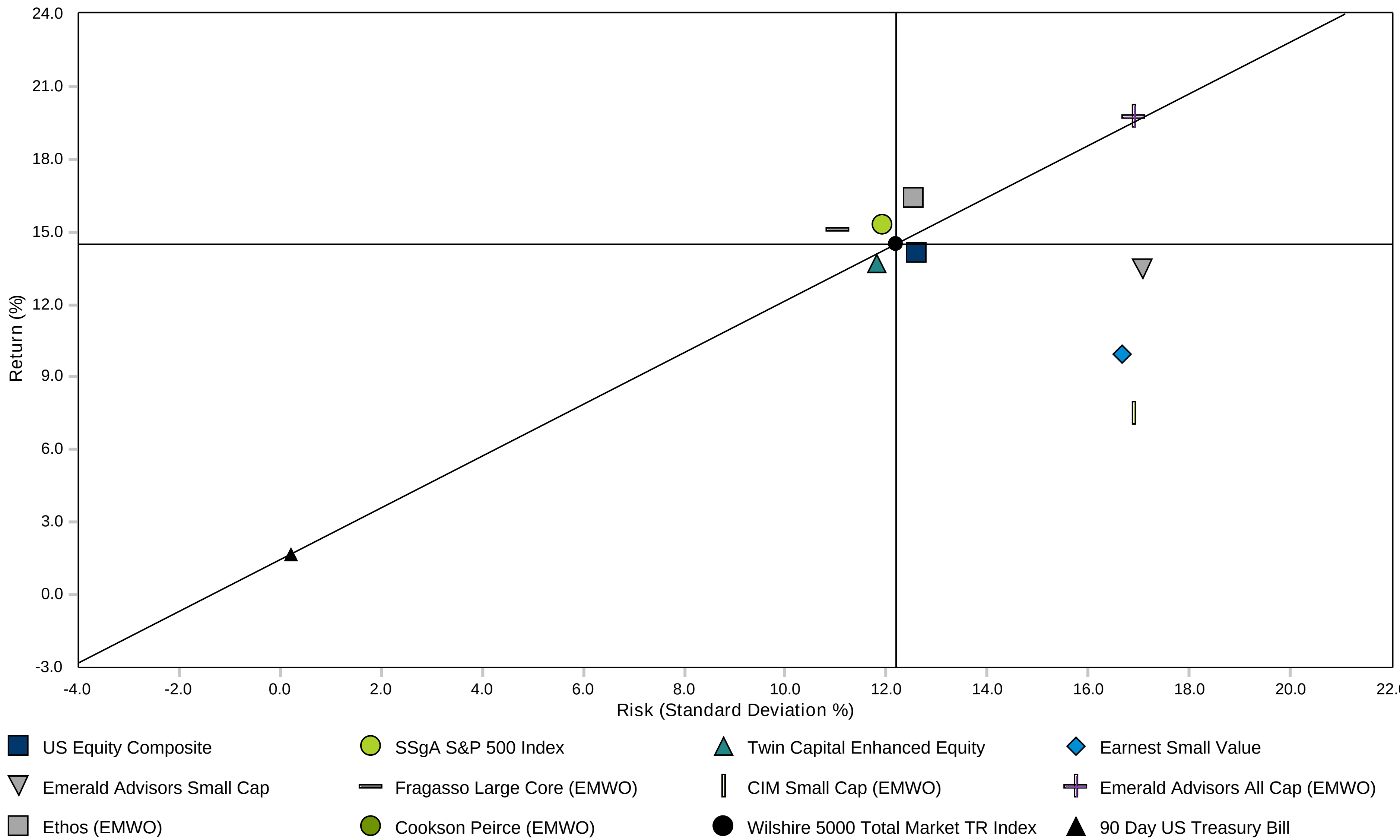


	Market Value $	Allocation (%)
CIM Small Cap (EMWO)	4,846,748	2.8
Earnest Small Value	14,293,343	8.4
Emerald Advisors Small Cap	13,839,351	8.1
Emerald Advisors All Cap (EMWO)	3,593,804	2.1
Ethos (EMWO)	1,462,800	0.9
Fragasso Large Core (EMWO)	6,387,565	3.7
SSgA S&P 500 Index	94,638,600	55.4
Twin Capital Enhanced Equity	31,050,612	18.2
Cookson Peirce (EMWO)	599,730	0.4

Risk vs. Return

US Equity Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

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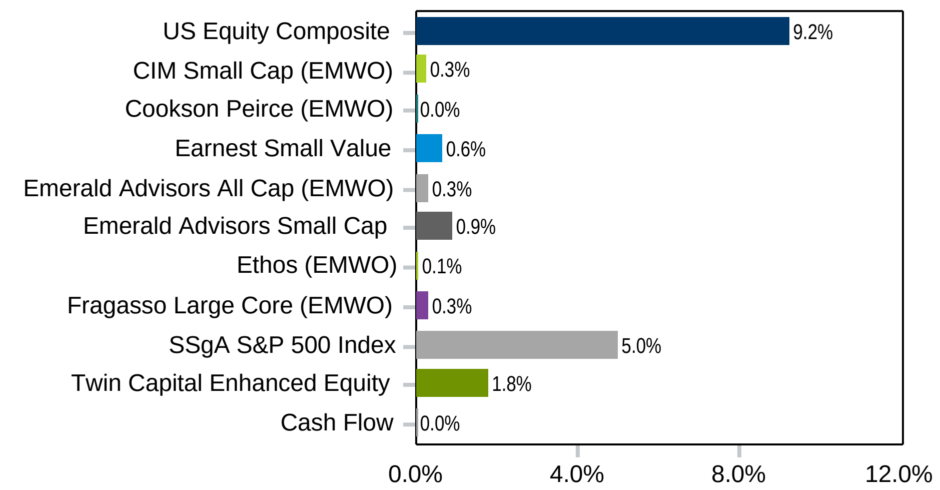
Return and Risk Contribution

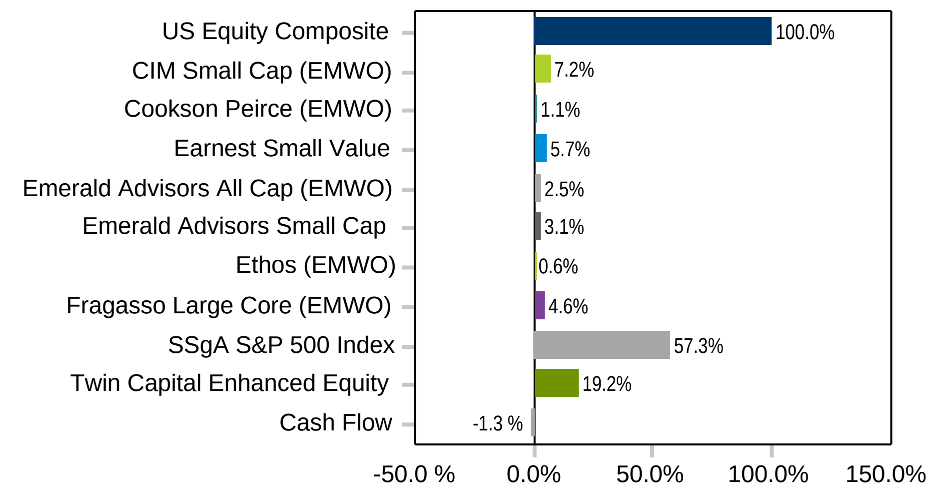
US Equity Composite

Periods Ended December 31, 2019

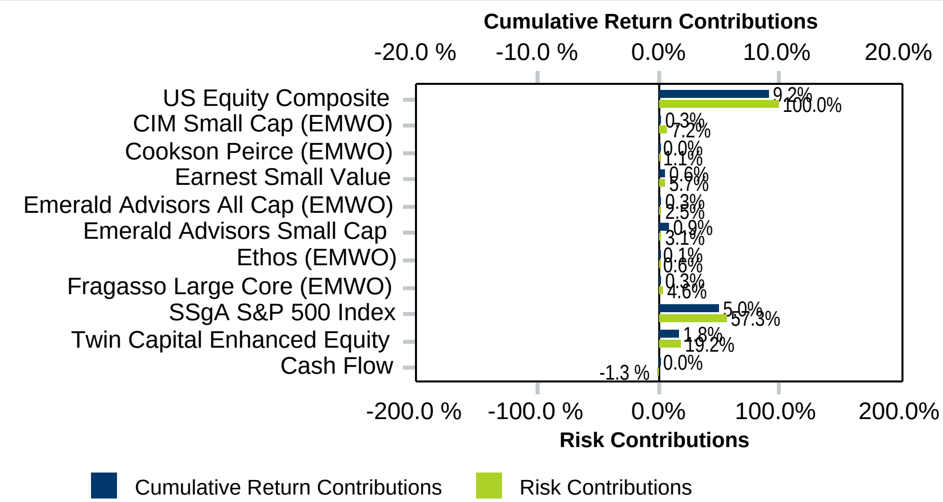
Cumulative Return Contributions



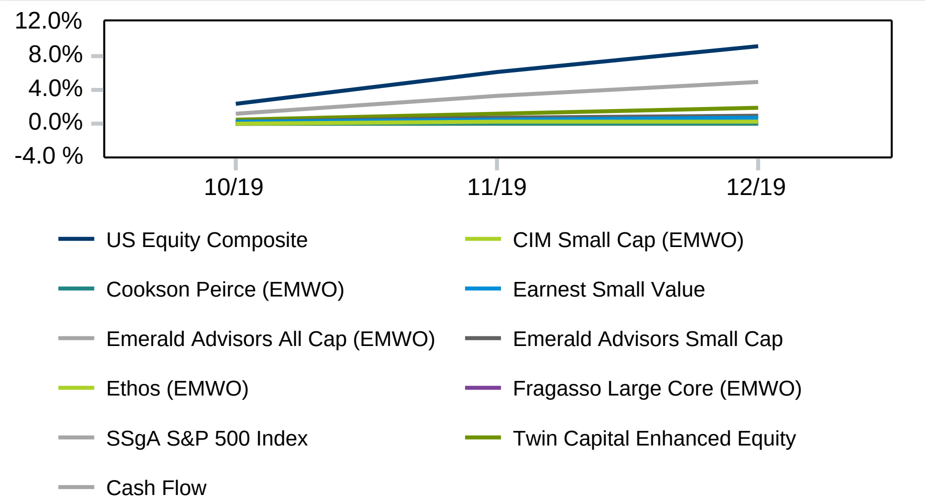
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

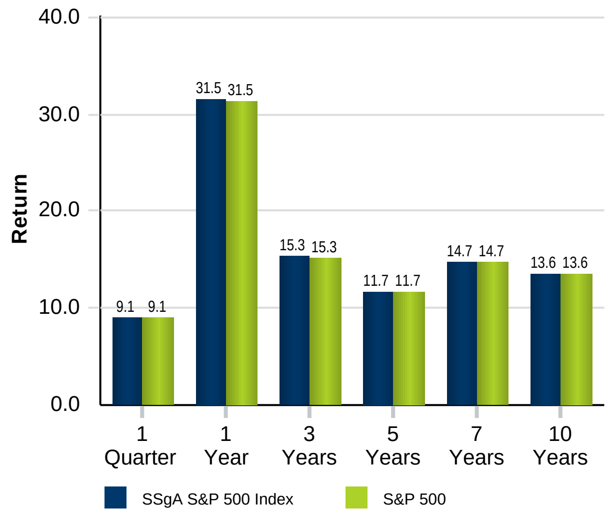


Performance Summary

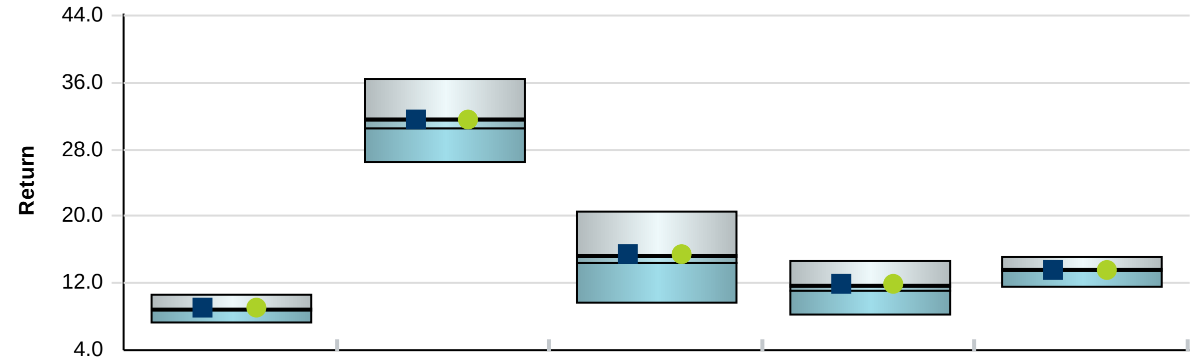
SSgA S&P 500 Index

Periods Ended December 31, 2019

Comparative Performance

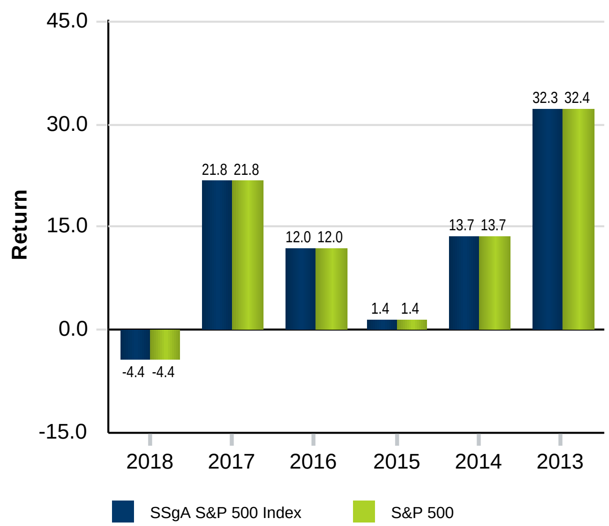


Peer Group Analysis: IM U.S. Large Cap Index Equity (SA+CF)

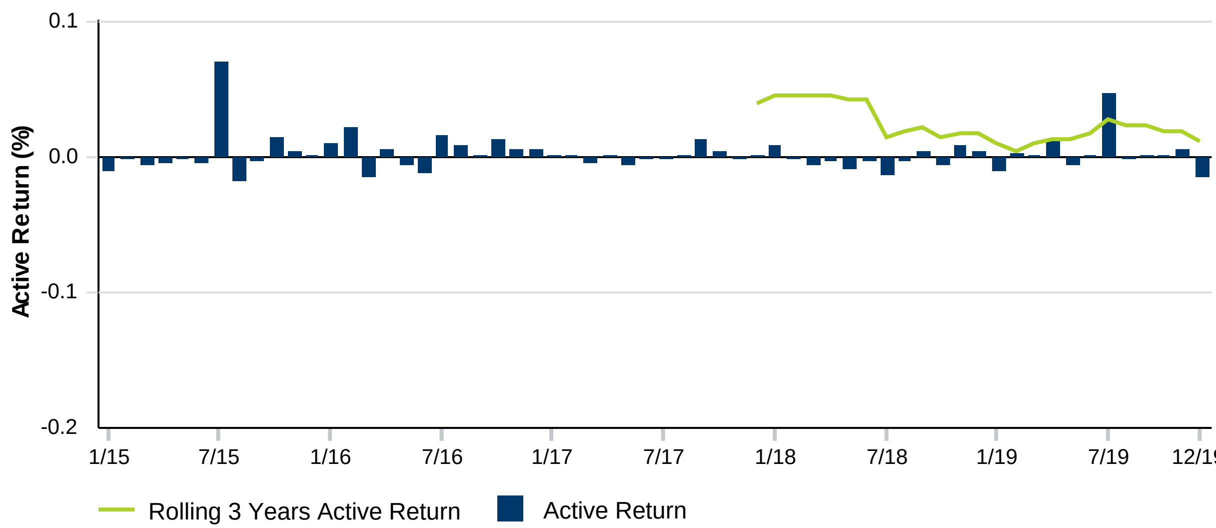


	Quarter	1 Year	3 Years	5 Years	10 Years
■ Fund	9.06 (39)	31.54 (27)	15.29 (28)	11.73 (24)	13.58 (32)
● Benchmark	9.07 (33)	31.49 (34)	15.27 (30)	11.70 (31)	13.56 (36)
Median	9.04	31.41	15.03	11.47	13.51

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

SSgA S&P 500 Index

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	SSgA S&P 500 Index	S&P 500
Maximum Return	8.00	8.01
Minimum Return	-6.36	-6.35
Return	31.54	31.49
Cumulative Return	31.54	31.49
Active Return	0.04	0.00
Excess Return	26.23	26.19

Risk Summary Statistics

	SSgA S&P 500 Index	S&P 500
Upside Risk	3.84	3.84
Downside Risk	6.56	6.55
Beta	1.00	1.00

Risk/Return Summary Statistics

	SSgA S&P 500 Index	S&P 500
Standard Deviation	12.34	12.34
Alpha	0.04	0.00
Active Return/Risk	0.00	0.00
Tracking Error	0.05	0.00
Information Ratio	0.83	
Sharpe Ratio	2.12	2.12

Correlation Statistics

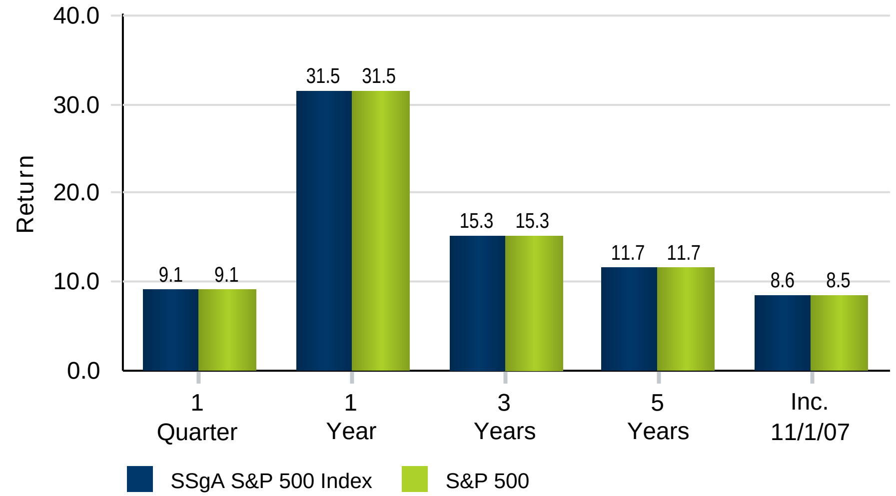
	SSgA S&P 500 Index	S&P 500
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

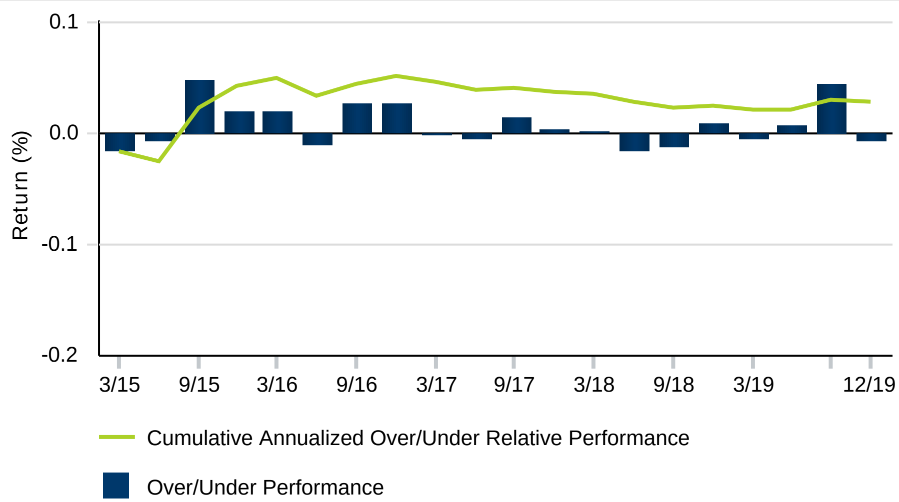
SSgA S&P 500 Index vs IM U.S. Large Cap Index Equity (SA+CF)

Periods Ended December 31, 2019

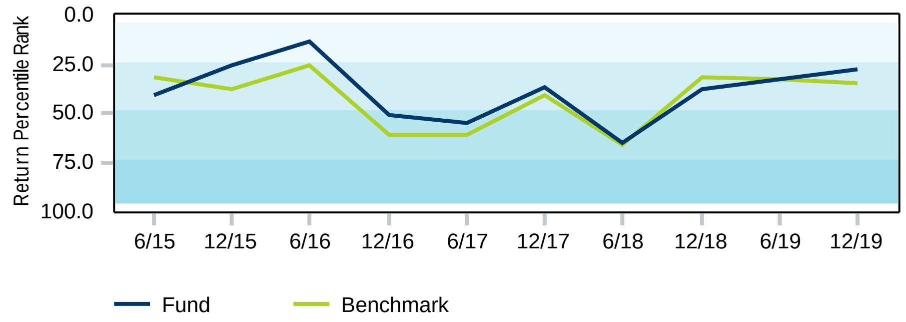
Comparative Performance



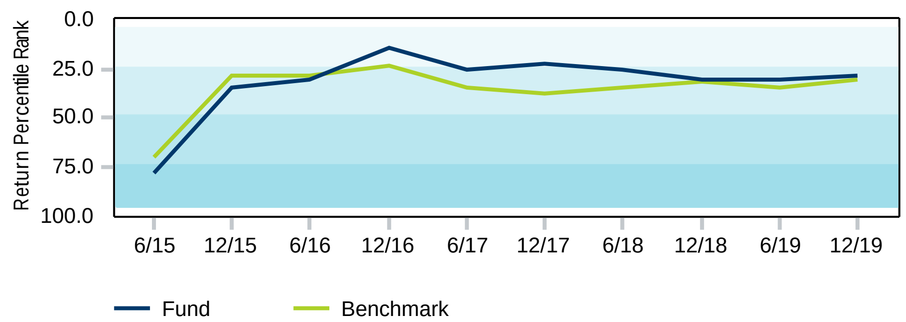
Relative Performance



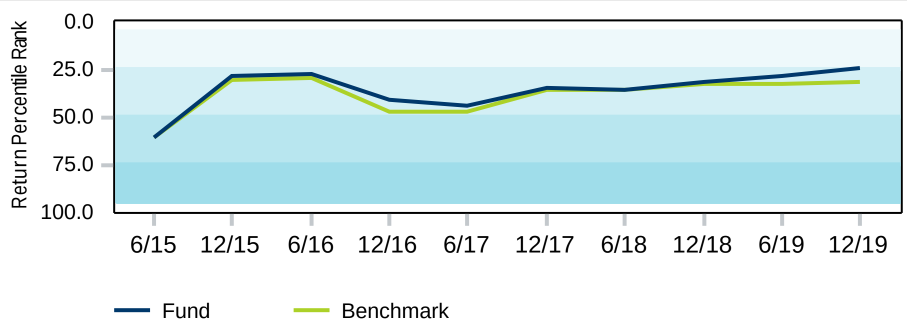
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



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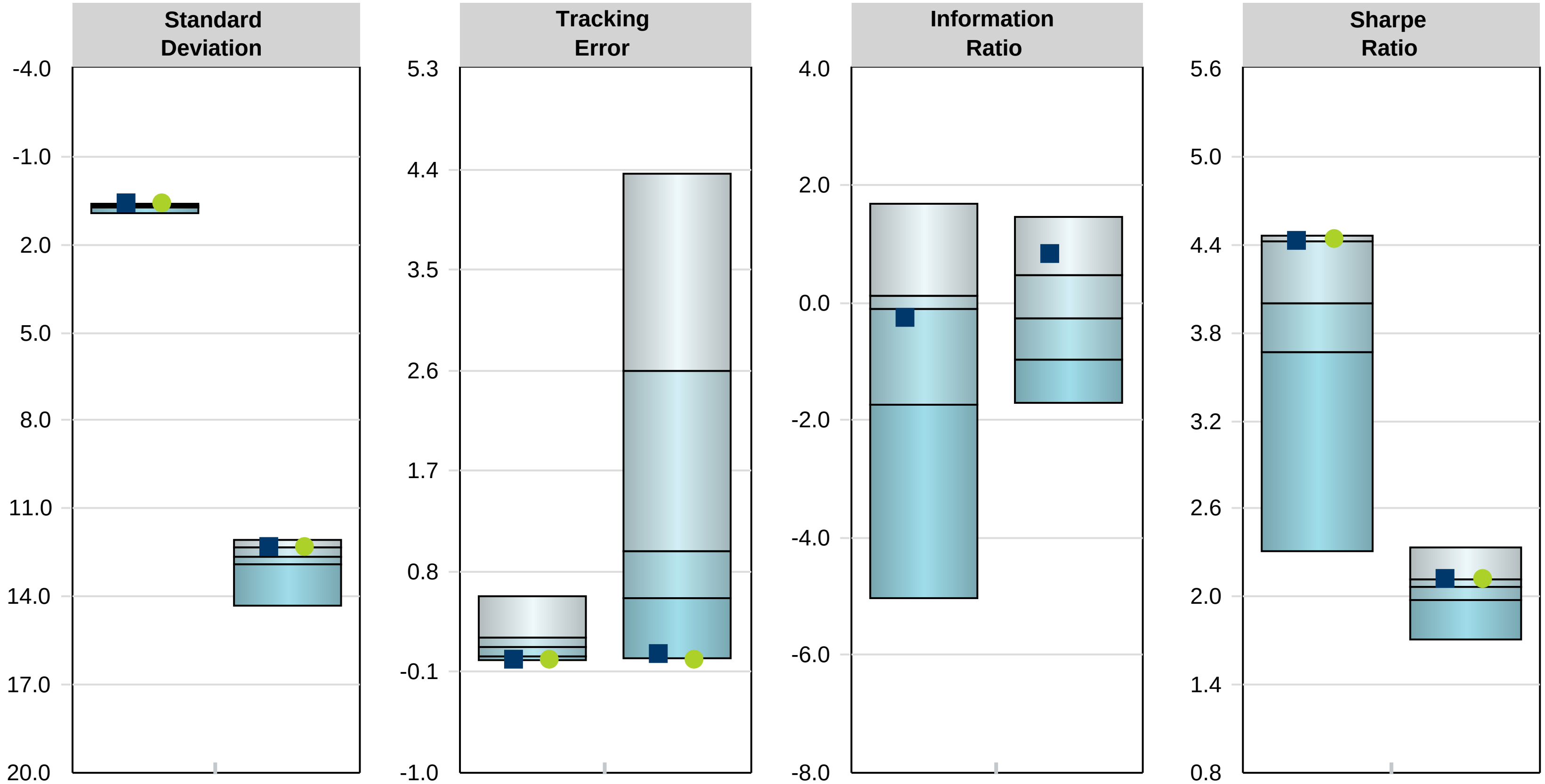
Peer Group Analysis - Multi Statistics

SSgA S&P 500 Index

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ SSgA S&P 500 Index	0.60 (20)	12.34 (20)	0.01 (85)	0.05 (85)	-0.26 (58)	0.83 (22)	4.42 (23)	2.12 (24)
● S&P 500	0.60 (15)	12.34 (22)	0.00 (100)	0.00 (100)			4.43 (12)	2.12 (32)
5th Percentile	0.60	12.07	0.57	4.36	1.69	1.47	4.45	2.33
1st Quartile	0.61	12.34	0.20	2.60	0.12	0.49	4.42	2.12
Median	0.68	12.66	0.12	0.98	-0.09	-0.25	4.00	2.07
3rd Quartile	0.72	12.90	0.04	0.56	-1.73	-0.94	3.66	1.97
95th Percentile	0.92	14.28	0.00	0.02	-5.03	-1.68	2.31	1.71

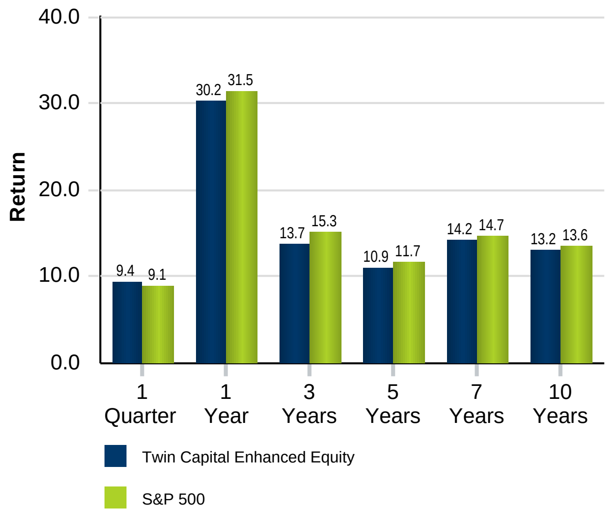
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

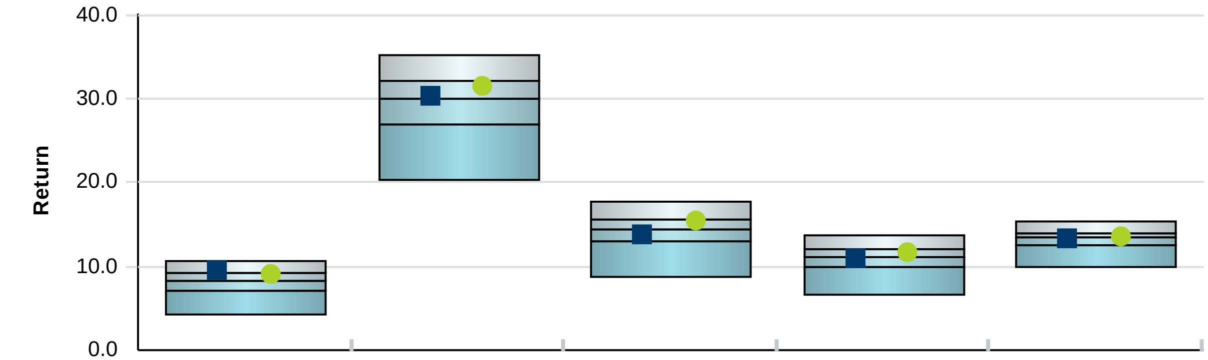
Twin Capital Enhanced Equity

Periods Ended December 31, 2019

Comparative Performance

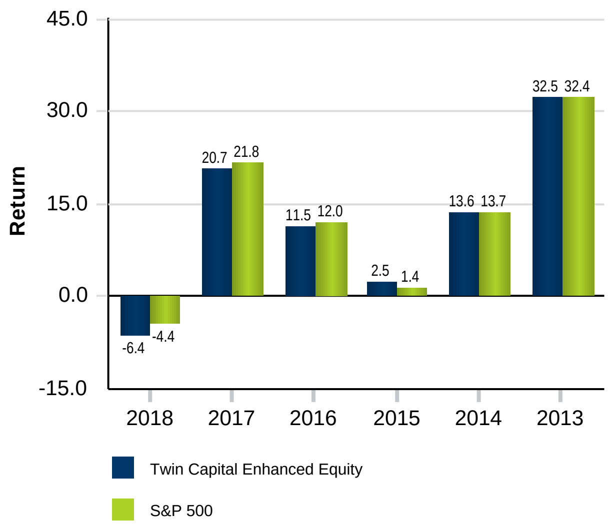


Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)

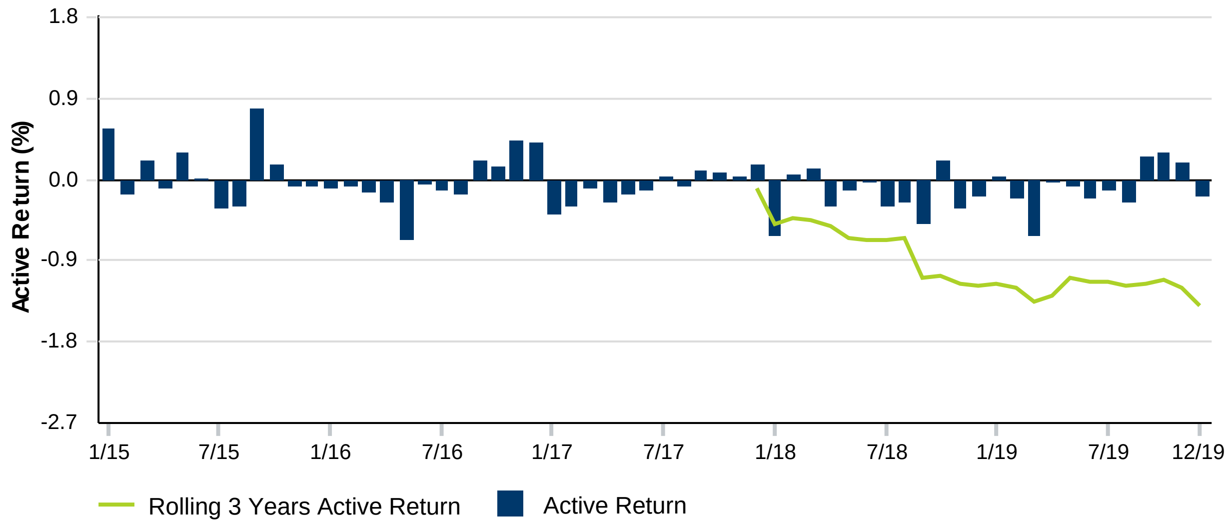


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	9.37 (24)	30.24 (47)	13.72 (63)	10.94 (57)	13.17 (62)
Benchmark	9.07 (31)	31.49 (35)	15.27 (32)	11.70 (35)	13.56 (42)
Median	8.20	29.96	14.32	11.17	13.39

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Twin Capital Enhanced Equity

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Twin Capital Enhanced Equity	S&P 500
Maximum Return	8.04	8.01
Minimum Return	-6.43	-6.35
Return	30.24	31.49
Cumulative Return	30.24	31.49
Active Return	-0.96	0.00
Excess Return	25.23	26.19

Risk Summary Statistics

	Twin Capital Enhanced Equity	S&P 500
Upside Risk	3.80	3.84
Downside Risk	6.69	6.55
Beta	1.01	1.00

Risk/Return Summary Statistics

	Twin Capital Enhanced Equity	S&P 500
Standard Deviation	12.44	12.34
Alpha	-1.12	0.00
Active Return/Risk	-0.08	0.00
Tracking Error	0.85	0.00
Information Ratio	-1.14	
Sharpe Ratio	2.02	2.12

Correlation Statistics

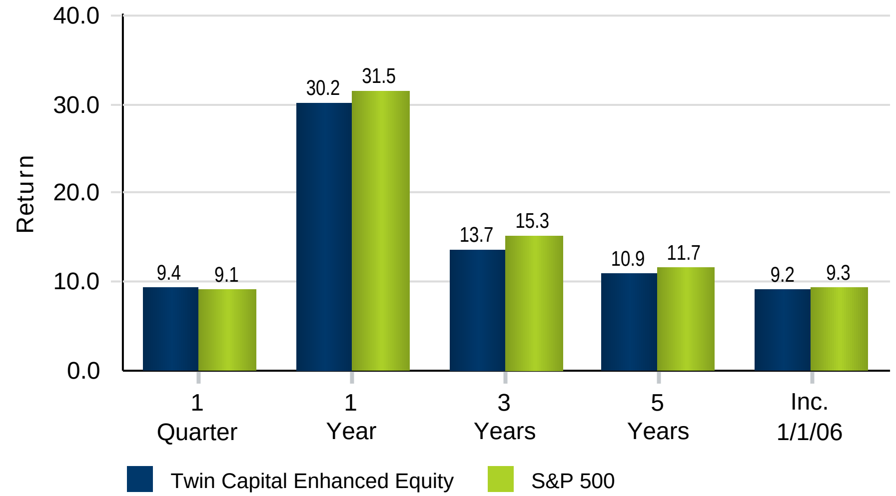
	Twin Capital Enhanced Equity	S&P 500
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

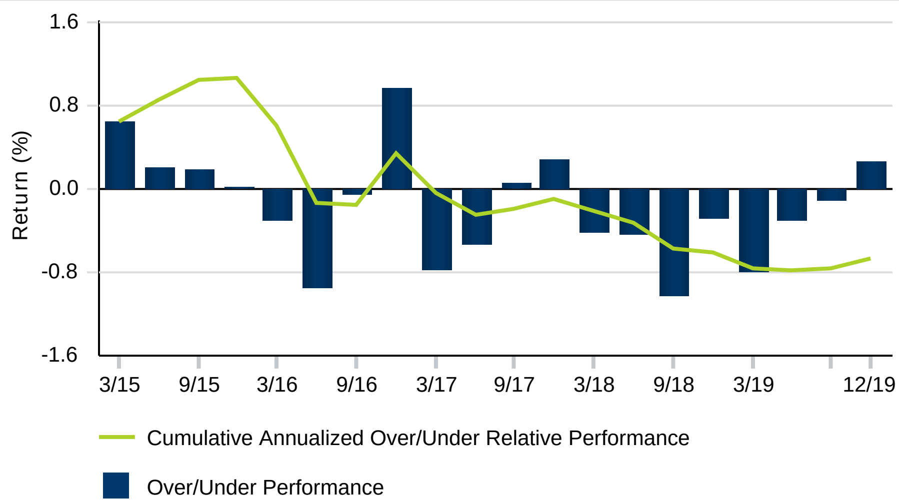
Twin Capital Enhanced Equity vs IM U.S. Large Cap Core Equity (SA+CF)

Periods Ended December 31, 2019

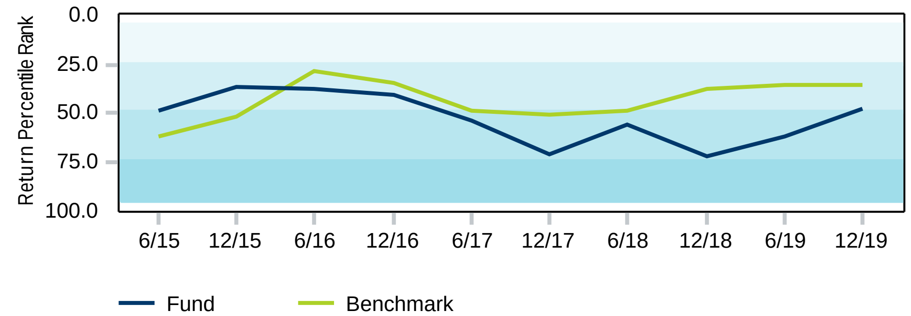
Comparative Performance



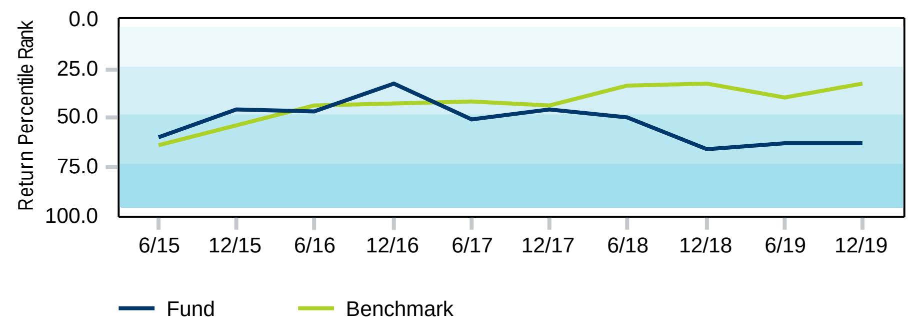
Relative Performance



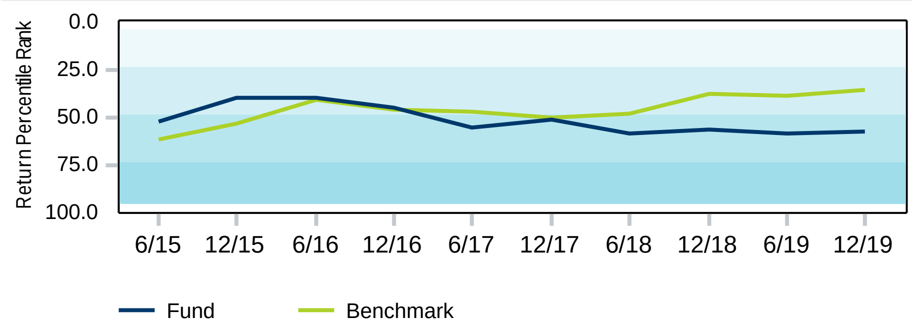
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

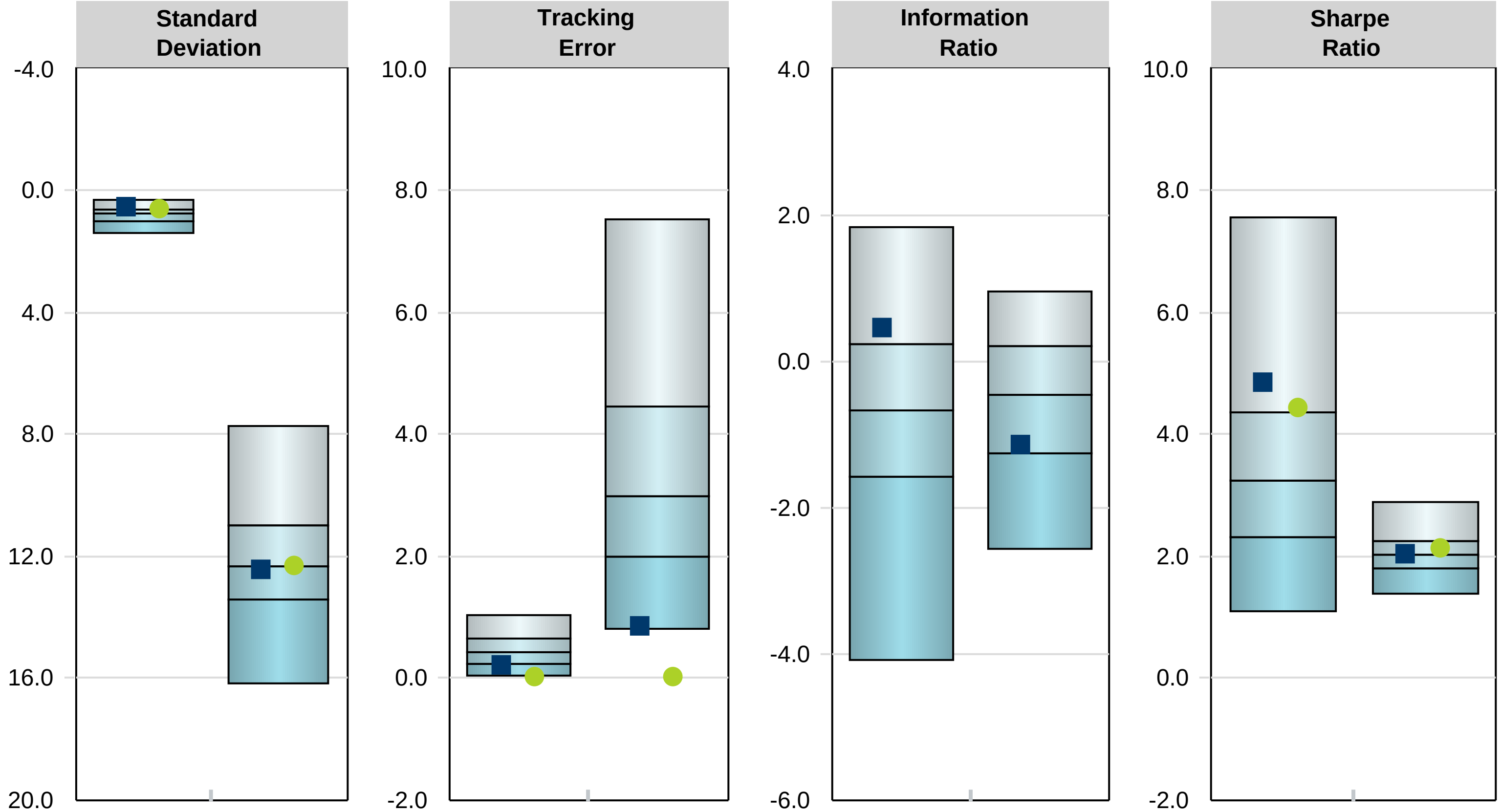


Wilshire Consulting

Peer Group Analysis - Multi Statistics

Twin Capital Enhanced Equity

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Twin Capital Enhanced Equity	0.57 (23)	12.44 (53)	0.21 (80)	0.85 (95)	0.46 (20)	-1.14 (73)	4.85 (19)	2.02 (51)
● S&P 500	0.60 (28)	12.34 (50)	0.00 (100)	0.00 (100)			4.43 (23)	2.12 (37)
5th Percentile	0.30	7.72	1.04	7.53	1.84	0.95	7.58	2.90
1st Quartile	0.59	10.97	0.66	4.47	0.24	0.23	4.38	2.26
Median	0.74	12.34	0.42	3.00	-0.66	-0.46	3.24	2.03
3rd Quartile	0.98	13.41	0.23	1.99	-1.57	-1.24	2.33	1.79
95th Percentile	1.37	16.14	0.06	0.83	-4.07	-2.55	1.09	1.38

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

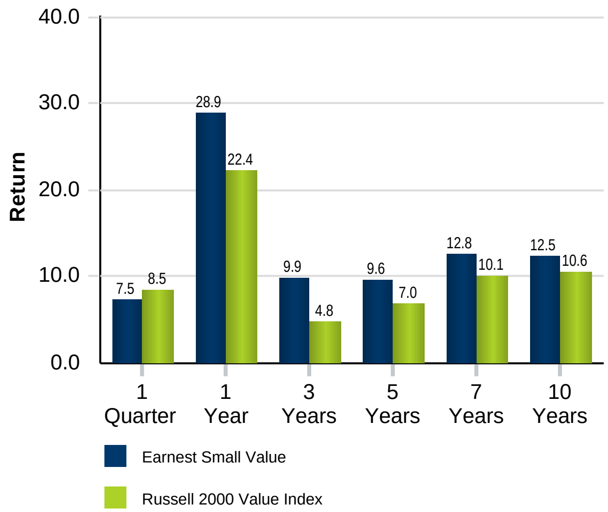
Wilshire Consulting

Performance Summary

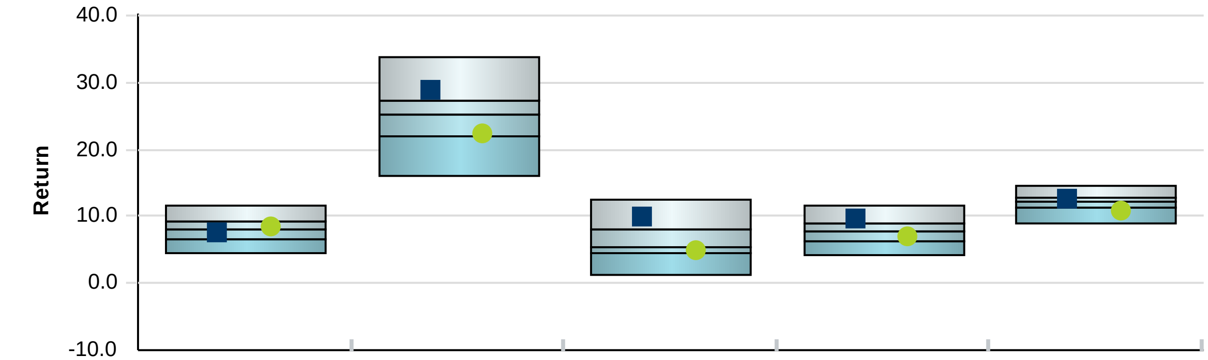
Earnest Small Value

Periods Ended December 31, 2019

Comparative Performance

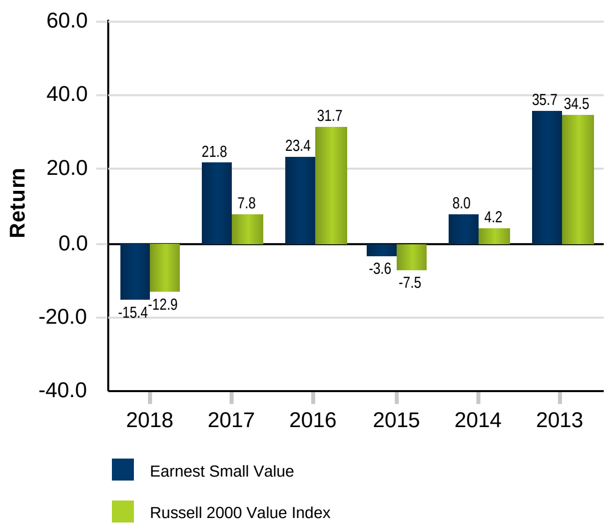


Peer Group Analysis: IM U.S. Small Cap Value Equity (SA+CF)

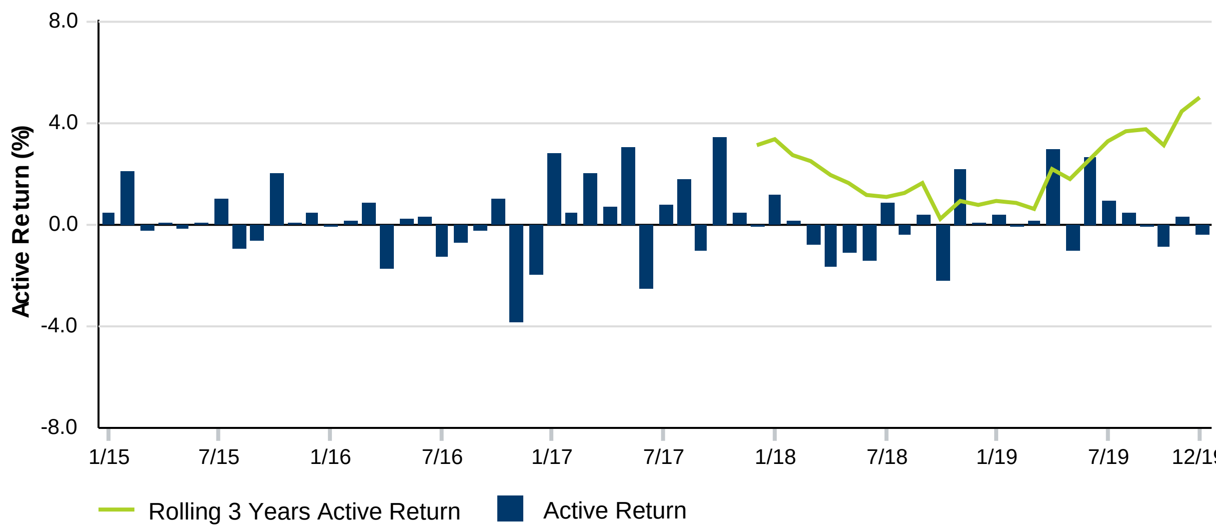


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	7.46 (59)	28.89 (16)	9.93 (13)	9.59 (17)	12.48 (35)
Benchmark	8.49 (38)	22.39 (74)	4.77 (67)	6.99 (61)	10.56 (85)
Median	7.96	25.07	5.48	7.66	12.08

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Earnest Small Value

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics	Earnest Small Value	Russell 2000 Value Index
Maximum Return	11.37	10.94
Minimum Return	-9.18	-8.17
Return	28.89	22.39
Cumulative Return	28.89	22.39
Active Return	5.60	0.00
Excess Return	25.25	19.65

Risk Summary Statistics	Earnest Small Value	Russell 2000 Value Index
Upside Risk	5.15	4.47
Downside Risk	10.86	10.30
Beta	1.08	1.00

Risk/Return Summary Statistics	Earnest Small Value	Russell 2000 Value Index
Standard Deviation	19.31	17.49
Alpha	3.87	0.00
Active Return/Risk	0.29	0.00
Tracking Error	4.09	0.00
Information Ratio	1.37	
Sharpe Ratio	1.31	1.12

Correlation Statistics	Earnest Small Value	Russell 2000 Value Index
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

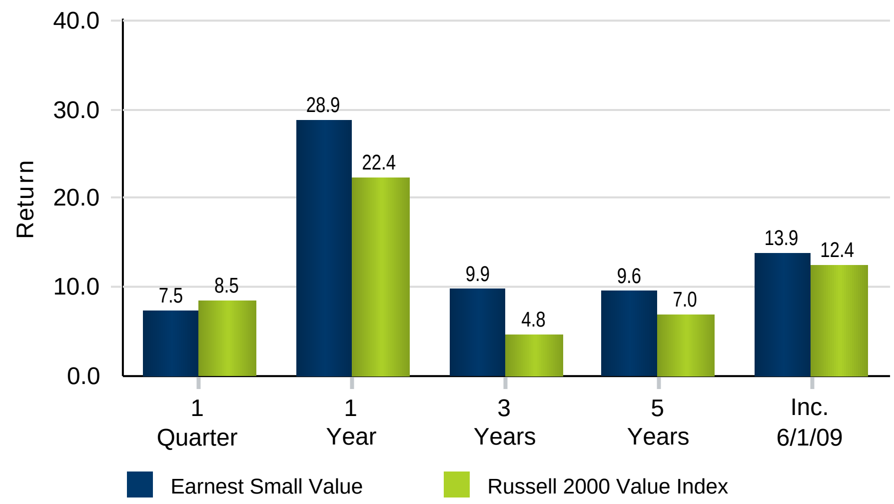
Wilshire Consulting

Manager Summary

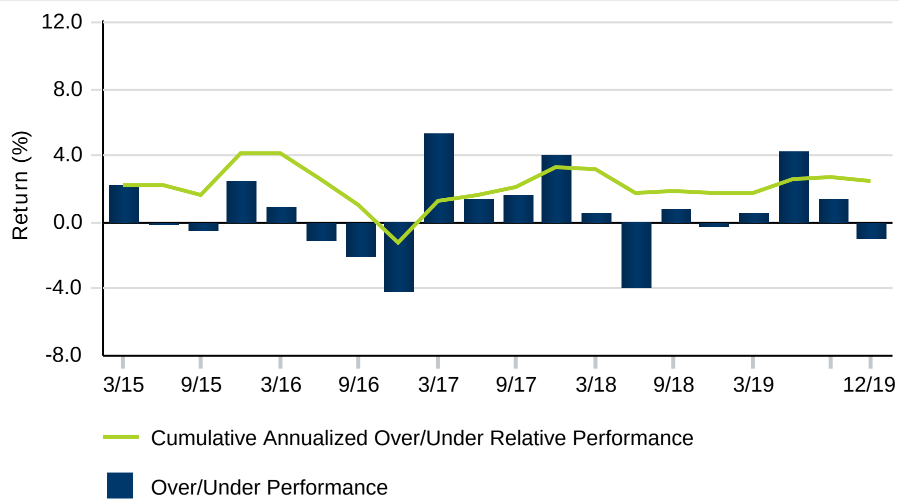
Earnest Small Value vs IM U.S. Small Cap Value Equity (SA+CF)

Periods Ended December 31, 2019

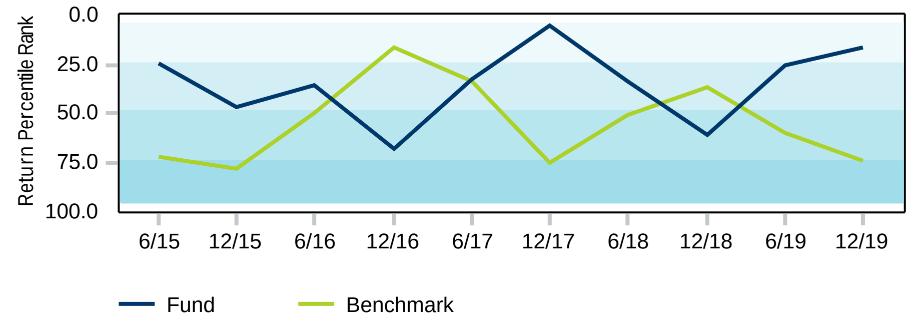
Comparative Performance



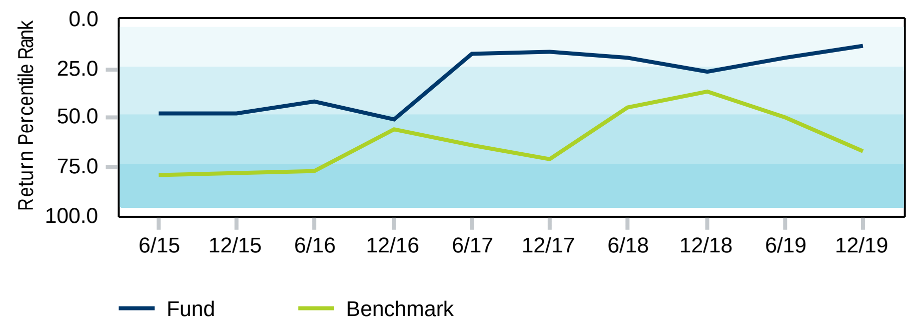
Relative Performance



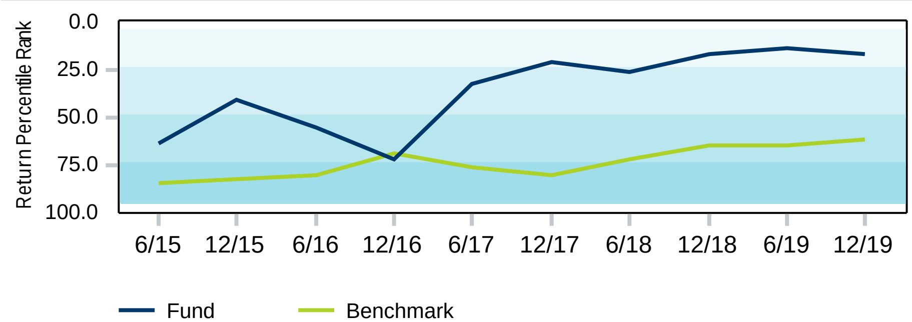
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



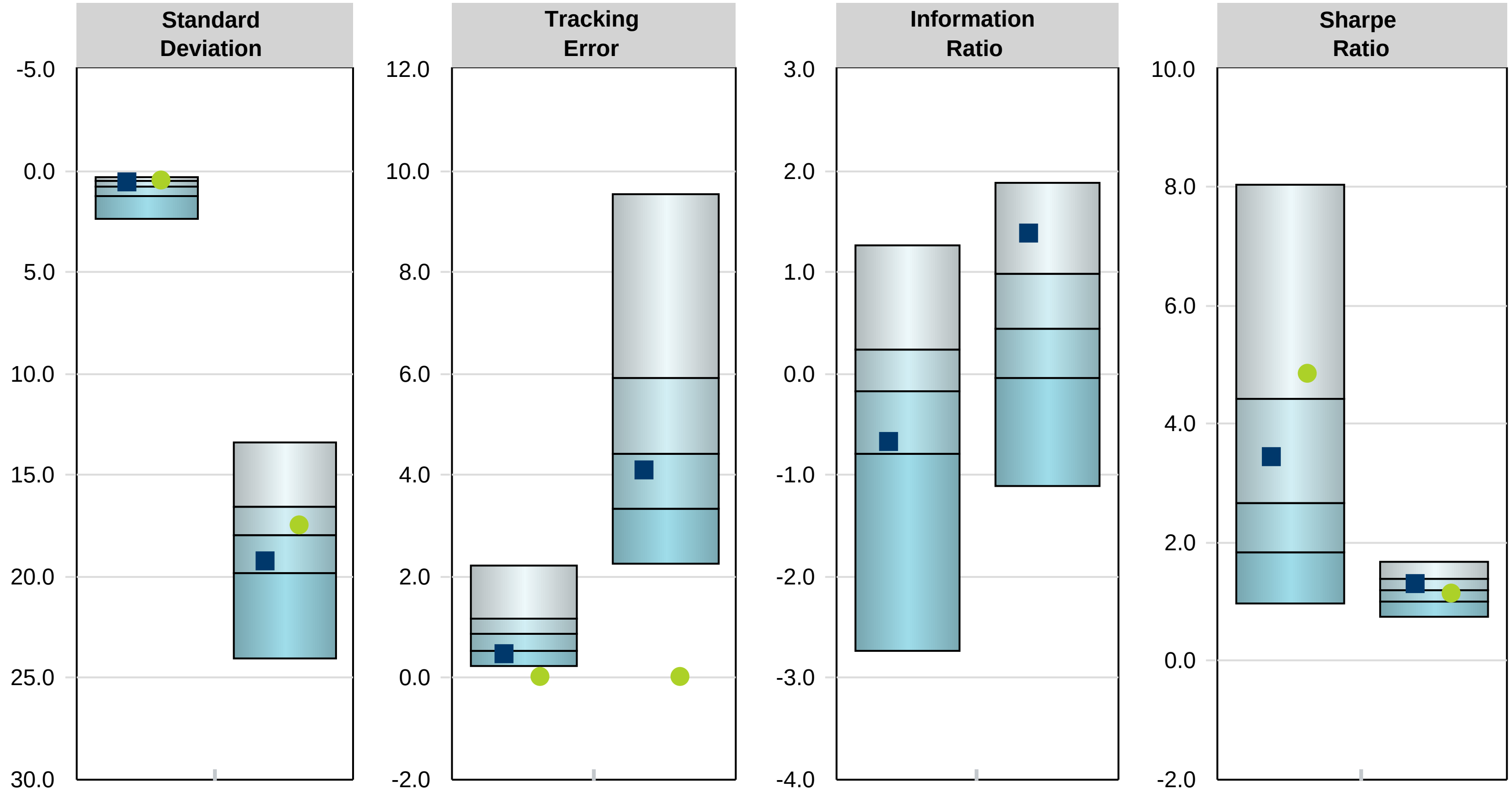
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Earnest Small Value

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Earnest Small Value	0.64 (36)	19.31 (69)	0.47 (80)	4.09 (57)	-0.69 (70)	1.37 (15)	3.45 (39)	1.31 (34)
● Russell 2000 Value Index	0.53 (24)	17.49 (36)	0.00 (100)	0.00 (100)			4.86 (24)	1.12 (64)
5th Percentile	0.29	13.36	2.24	9.53	1.26	1.88	8.05	1.69
1st Quartile	0.53	16.54	1.17	5.91	0.24	0.99	4.42	1.39
Median	0.82	18.00	0.89	4.42	-0.17	0.44	2.66	1.21
3rd Quartile	1.22	19.78	0.54	3.33	-0.80	-0.05	1.85	1.01
95th Percentile	2.41	24.01	0.24	2.27	-2.74	-1.10	0.97	0.75

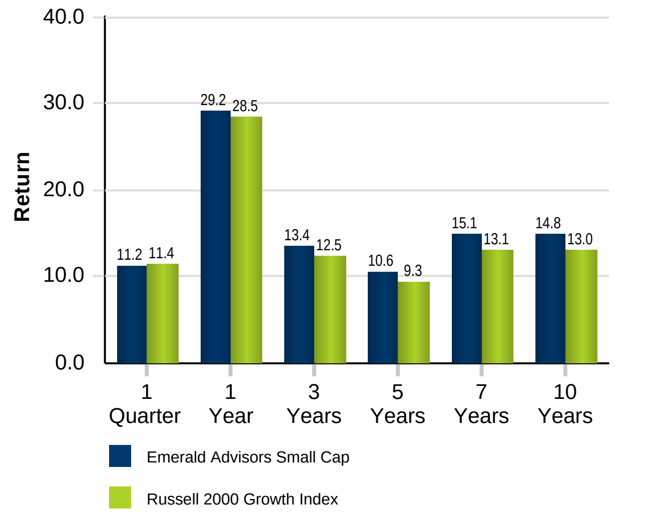
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

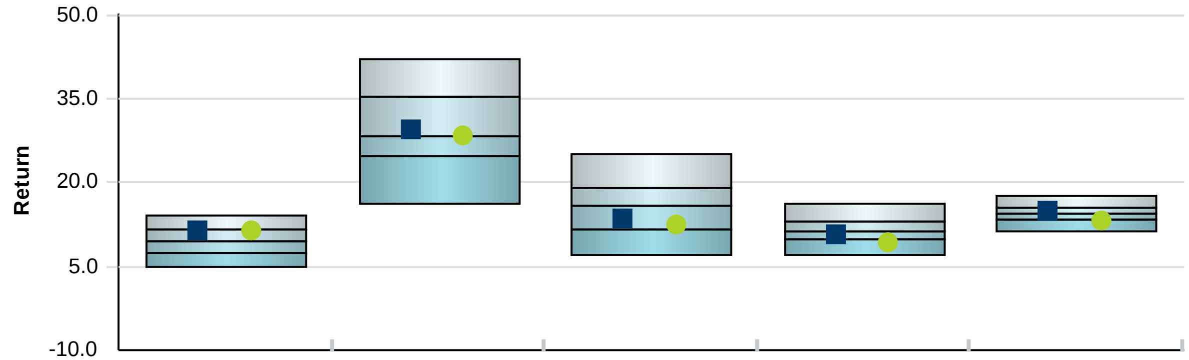
Emerald Advisors Small Cap

Periods Ended December 31, 2019

Comparative Performance

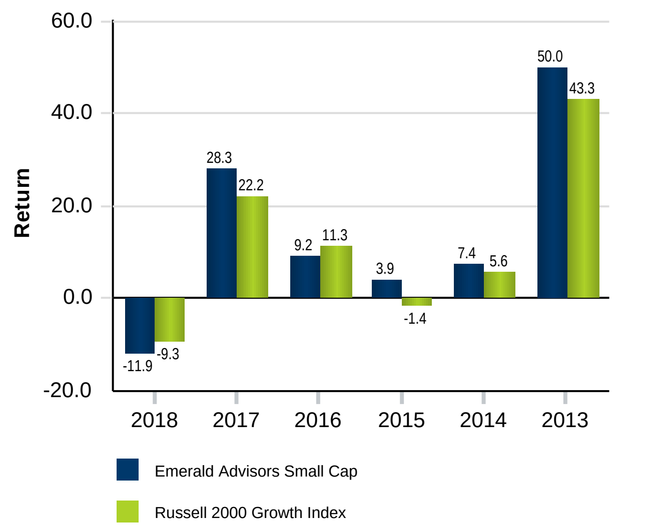


Peer Group Analysis: IM U.S. Small Cap Growth Equity (SA+CF)

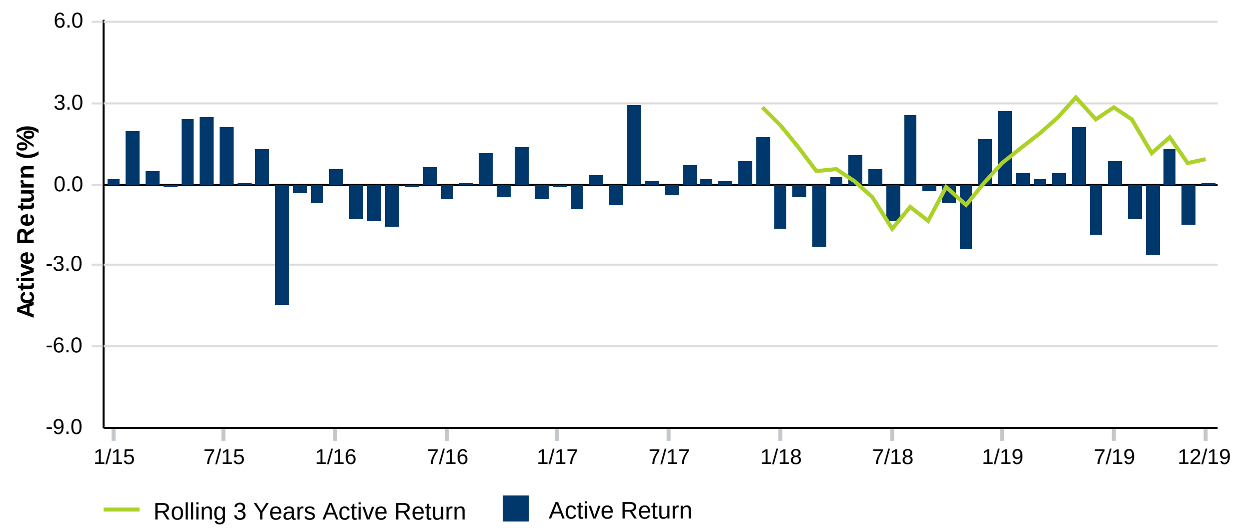


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	11.21 (31)	29.23 (47)	13.45 (65)	10.62 (62)	14.83 (43)
Benchmark	11.39 (27)	28.48 (50)	12.49 (71)	9.34 (79)	13.01 (80)
Median	9.36	28.42	15.80	11.48	14.43

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Emerald Advisors Small Cap

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Emerald Advisors Small Cap	Russell 2000 Growth Index
Maximum Return	14.21	11.55
Minimum Return	-5.58	-7.42
Return	29.23	28.48
Cumulative Return	29.23	28.48
Active Return	0.76	0.00
Excess Return	25.35	24.59

Risk Summary Statistics

	Emerald Advisors Small Cap	Russell 2000 Growth Index
Upside Risk	5.33	4.94
Downside Risk	8.49	8.73
Beta	1.02	1.00

Risk/Return Summary Statistics

	Emerald Advisors Small Cap	Russell 2000 Growth Index
Standard Deviation	18.68	17.57
Alpha	0.24	0.00
Active Return/Risk	0.04	0.00
Tracking Error	5.32	0.00
Information Ratio	0.14	
Sharpe Ratio	1.36	1.40

Correlation Statistics

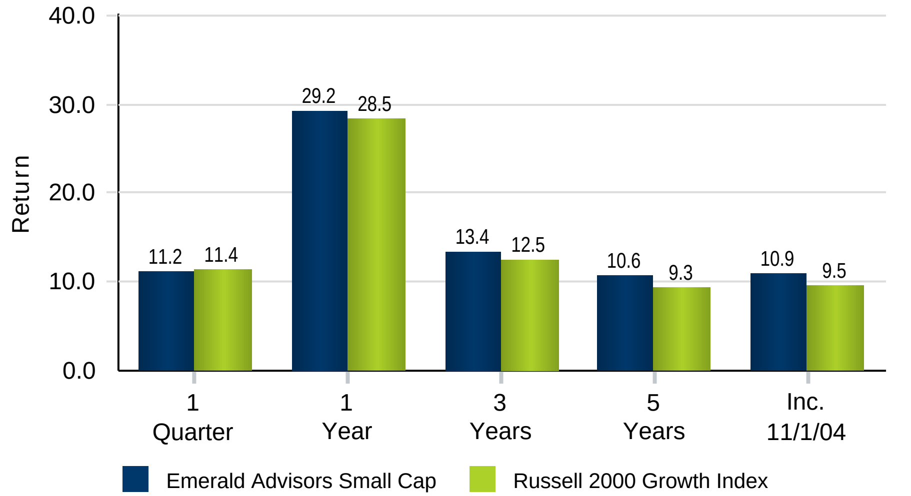
	Emerald Advisors Small Cap	Russell 2000 Growth Index
R-Squared	0.92	1.00
Actual Correlation	0.96	1.00

Manager Summary

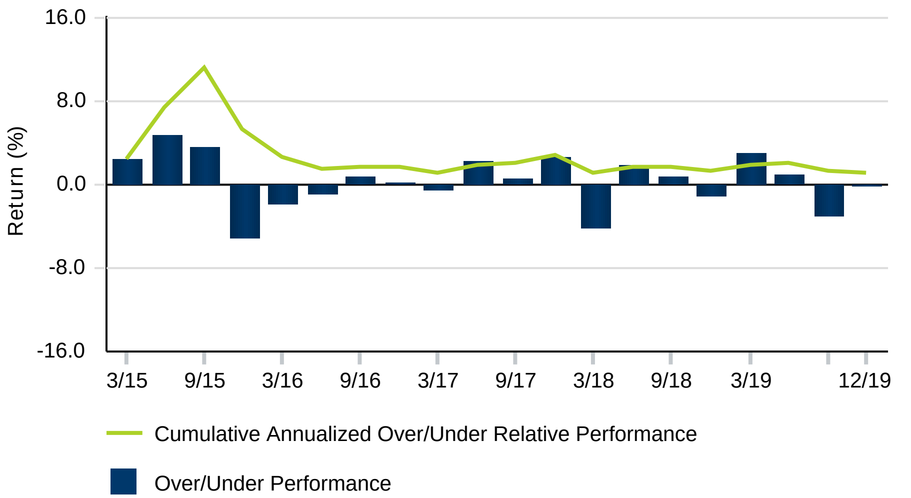
Emerald Advisors Small Cap vs IM U.S. Small Cap Growth Equity (SA+CF)

Periods Ended December 31, 2019

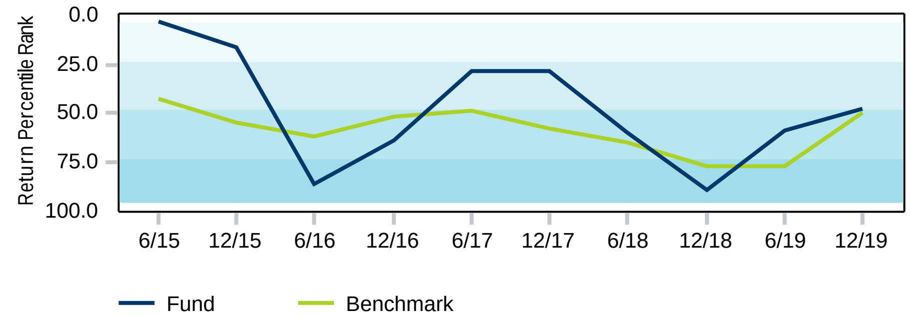
Comparative Performance



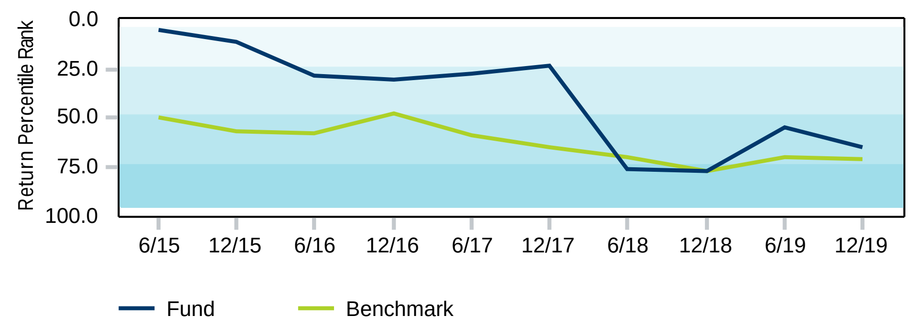
Relative Performance



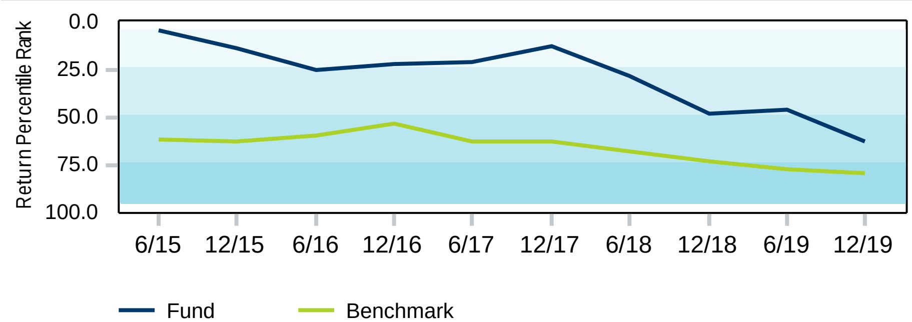
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



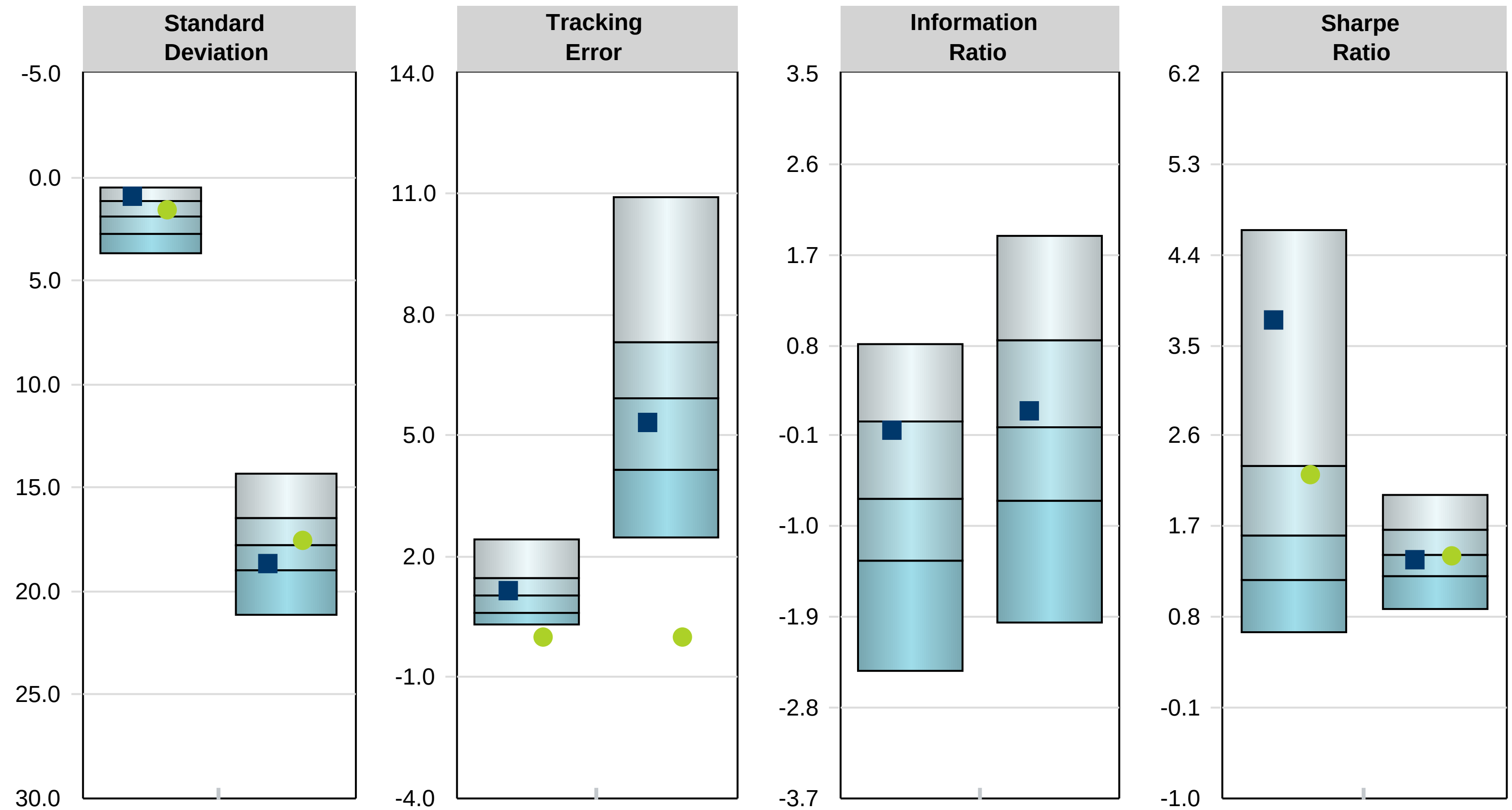
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Emerald Advisors Small Cap

Periods Ended December 31, 2019



	Std Dev QTD	Std Dev YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Emerald Advisors Small Cap	0.93 (17)	18.68 (68)	1.15 (47)	5.32 (61)	-0.06 (32)	0.14 (46)	3.74 (9)	1.36 (59)
● Russell 2000 Growth Index	1.58 (41)	17.57 (47)	0.00 (100)	0.00 (100)			2.20 (28)	1.40 (53)
5th Percentile	0.55	14.34	2.45	10.94	0.81	1.88	4.65	2.02
1st Quartile	1.16	16.49	1.48	7.32	0.05	0.85	2.30	1.67
Median	1.92	17.73	1.06	5.94	-0.72	-0.01	1.61	1.42
3rd Quartile	2.71	19.02	0.62	4.18	-1.33	-0.74	1.16	1.21
95th Percentile	3.72	21.09	0.30	2.50	-2.44	-1.94	0.66	0.88

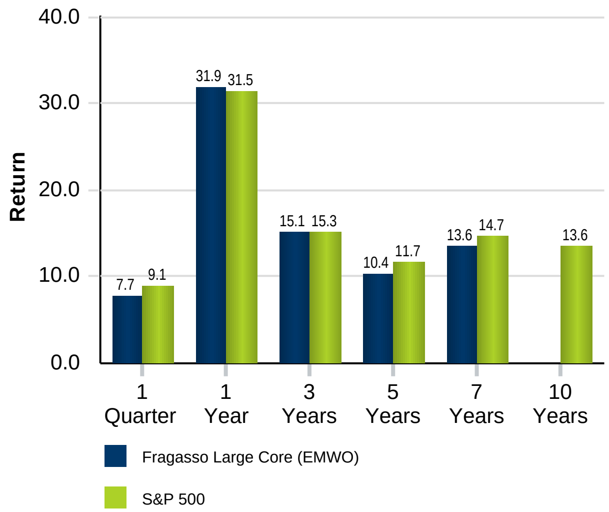
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

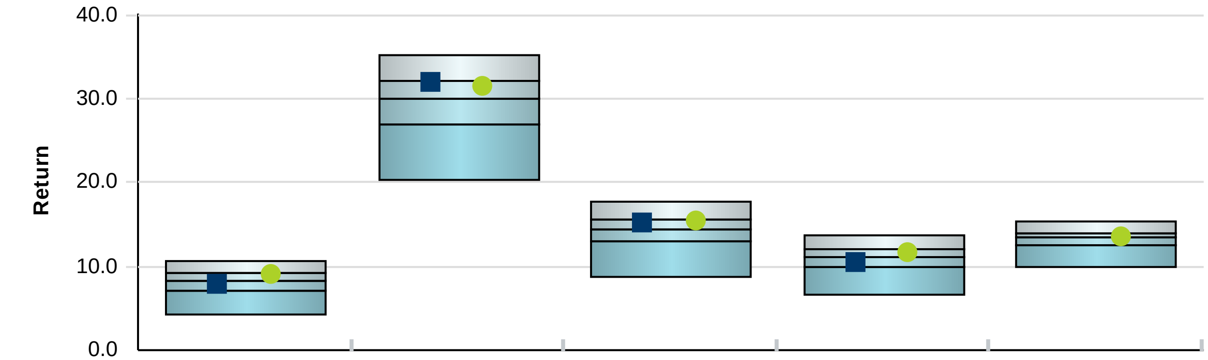
Fragasso Large Core (EMWO)

Periods Ended December 31, 2019

Comparative Performance

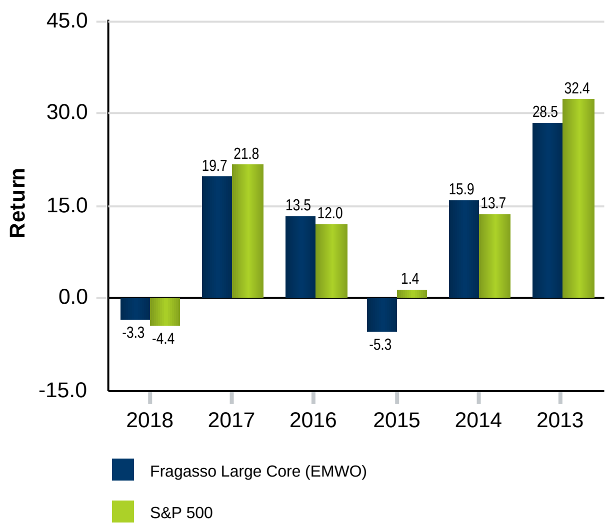


Peer Group Analysis: IM U.S. Large Cap Core Equity (SA+CF)

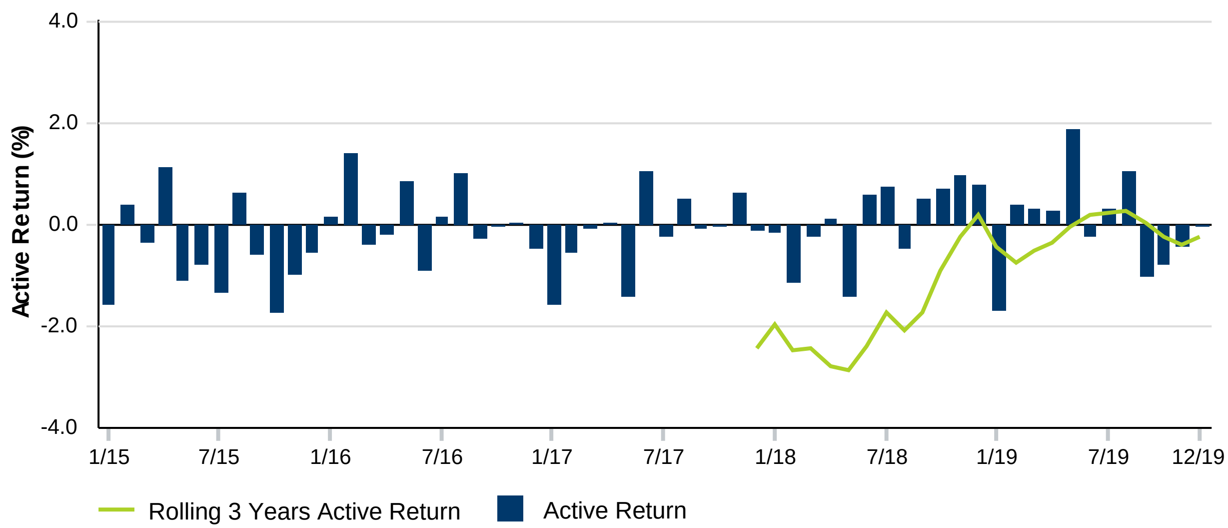


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	7.71 (69)	31.87 (30)	15.12 (36)	10.38 (68)	
Benchmark	9.07 (31)	31.49 (35)	15.27 (32)	11.70 (35)	13.56 (42)
Median	8.20	29.96	14.32	11.17	13.39

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Fragasso Large Core (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Fragasso Large Core (EMWO)	S&P 500
Maximum Return	6.81	8.01
Minimum Return	-4.48	-6.35
Return	31.87	31.49
Cumulative Return	31.87	31.49
Active Return	0.04	0.00
Excess Return	26.23	26.19

Risk Summary Statistics

	Fragasso Large Core (EMWO)	S&P 500
Upside Risk	3.51	3.84
Downside Risk	4.51	6.55
Beta	0.80	1.00

Risk/Return Summary Statistics

	Fragasso Large Core (EMWO)	S&P 500
Standard Deviation	10.02	12.34
Alpha	5.96	0.00
Active Return/Risk	0.00	0.00
Tracking Error	3.15	0.00
Information Ratio	0.01	
Sharpe Ratio	2.61	2.12

Correlation Statistics

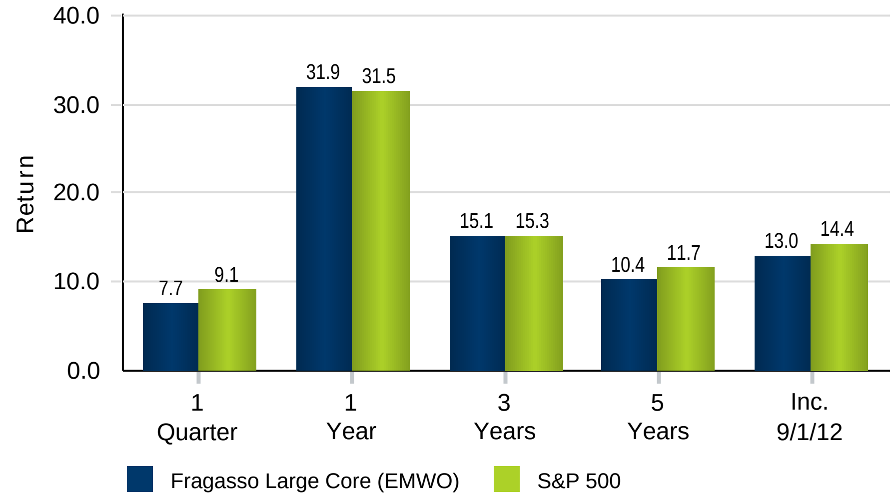
	Fragasso Large Core (EMWO)	S&P 500
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

Manager Summary

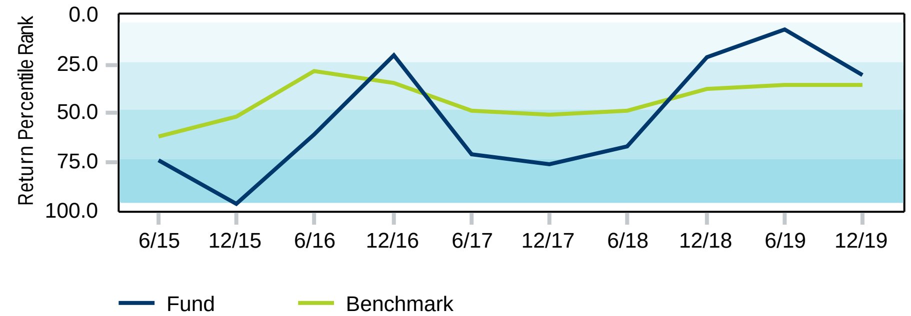
Fragasso Large Core (EMWO) vs IM U.S. Large Cap Core Equity (SA+CF)

Periods Ended December 31, 2019

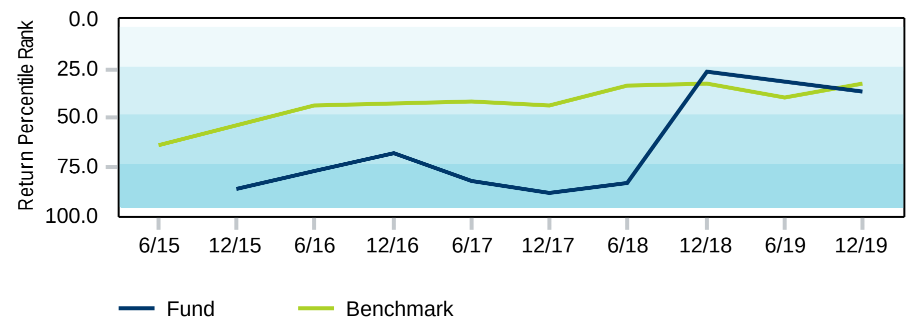
Comparative Performance



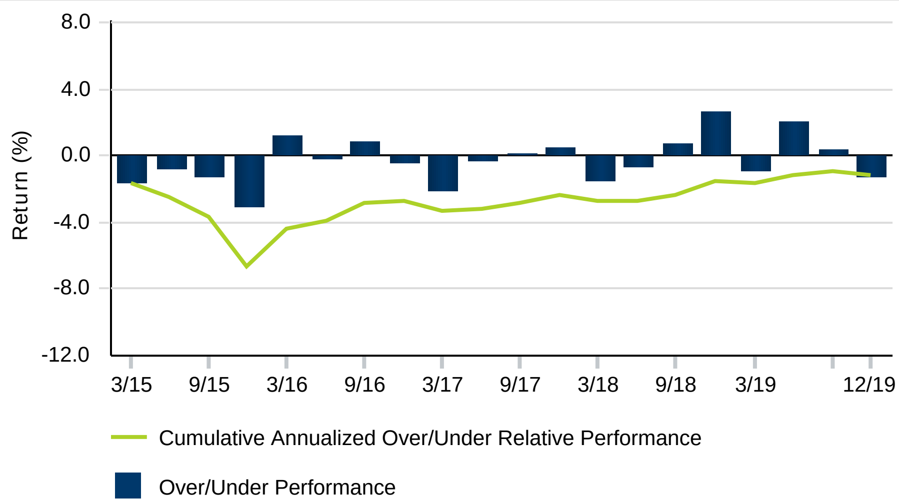
1 Year Rolling Percentile Ranking



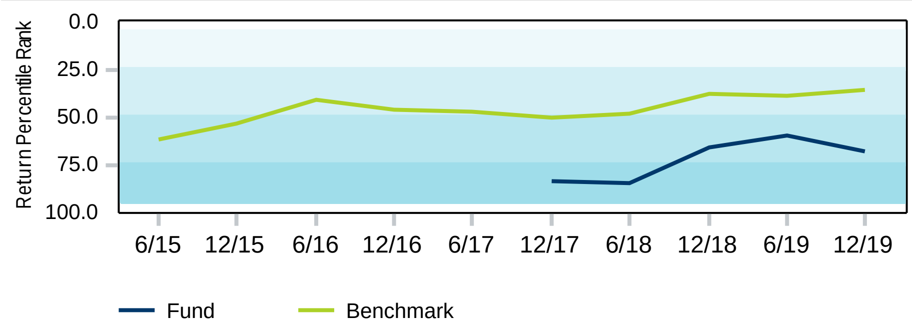
3 Year Rolling Percentile Ranking



Relative Performance



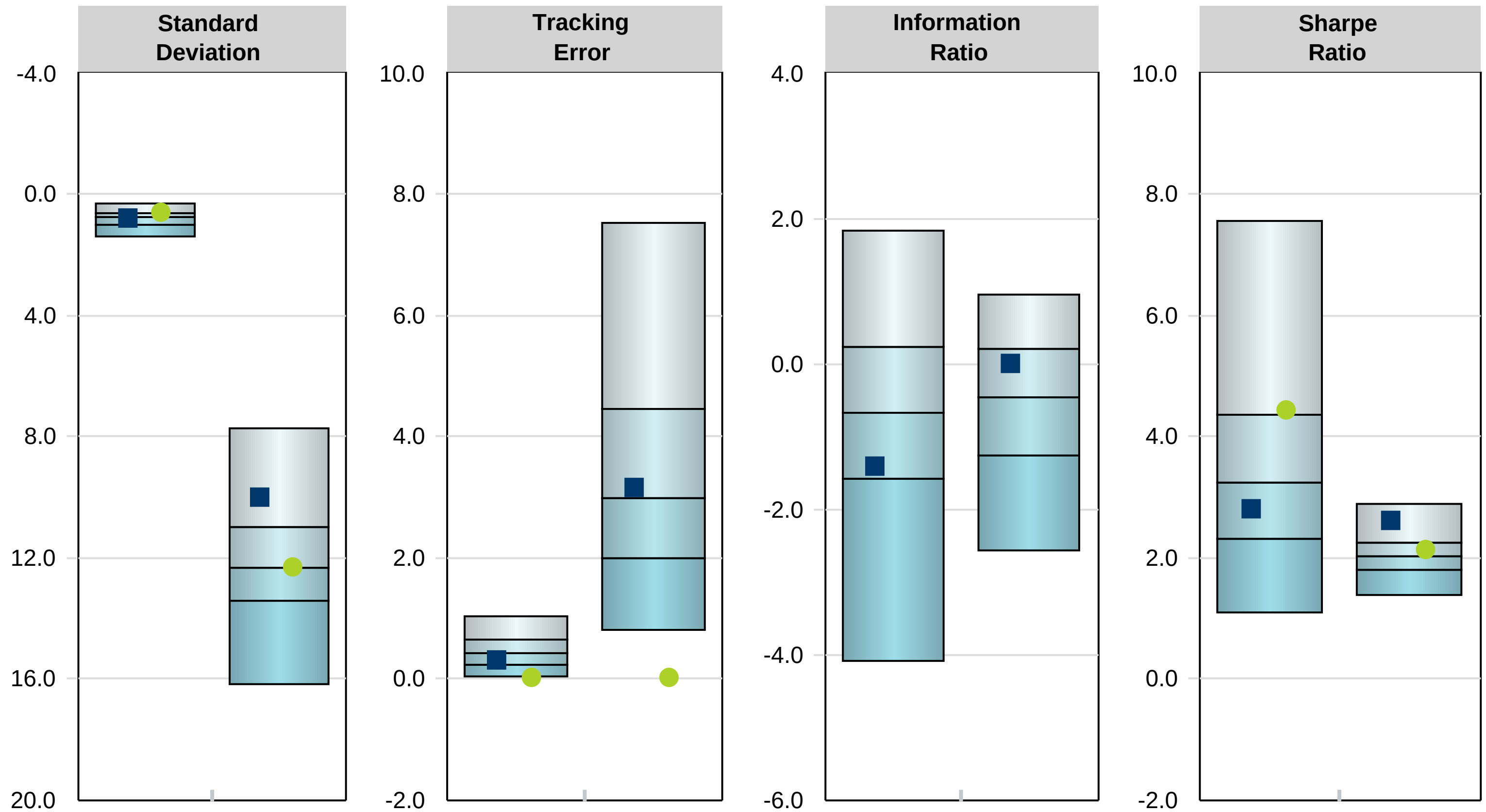
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Fragasso Large Core (EMWO)

Periods Ended December 31, 2019



	QTD	YTD	QTD	YTD	QTD	YTD	QTD	YTD
■ Fragasso Large Core (EMWO)	0.81 (59)	10.02 (15)	0.30 (64)	3.15 (46)	-1.41 (72)	0.01 (35)	2.81 (59)	2.61 (10)
● S&P 500	0.60 (28)	12.34 (50)	0.00 (100)	0.00 (100)			4.43 (23)	2.12 (37)
5th Percentile	0.30	7.72	1.04	7.53	1.84	0.95	7.58	2.90
1st Quartile	0.59	10.97	0.66	4.47	0.24	0.23	4.38	2.26
Median	0.74	12.34	0.42	3.00	-0.66	-0.46	3.24	2.03
3rd Quartile	0.98	13.41	0.23	1.99	-1.57	-1.24	2.33	1.79
95th Percentile	1.37	16.14	0.06	0.83	-4.07	-2.55	1.09	1.38

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

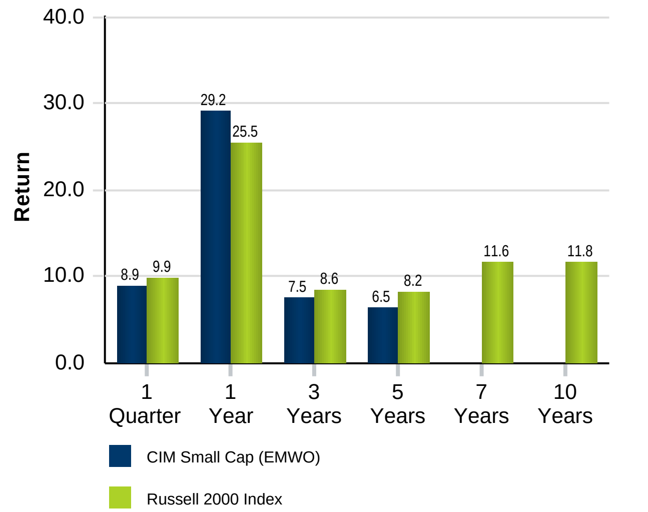
Wilshire Consulting

Performance Summary

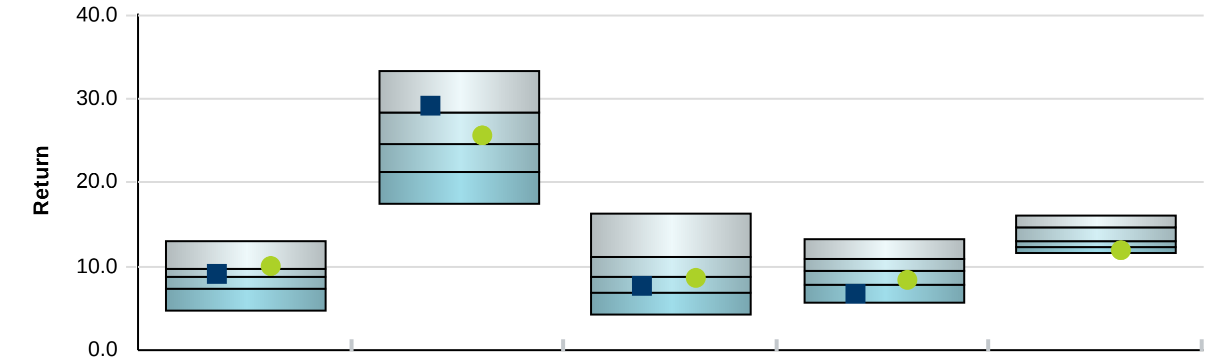
CIM Small Cap (EMWO)

Periods Ended December 31, 2019

Comparative Performance

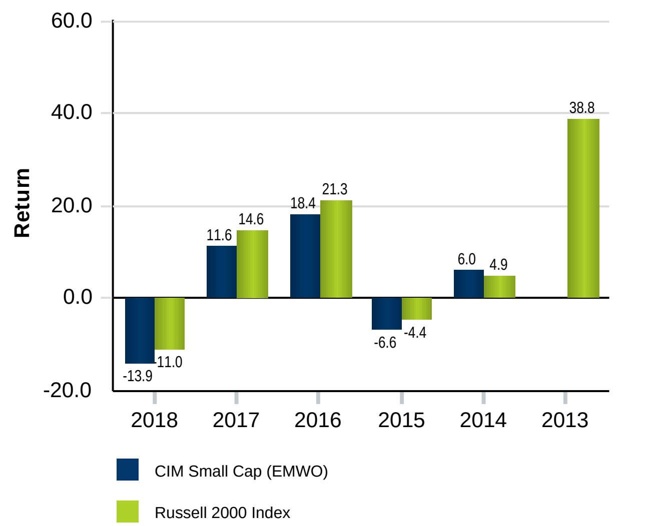


Peer Group Analysis: IM U.S. Small Cap Core Equity (SA+CF)

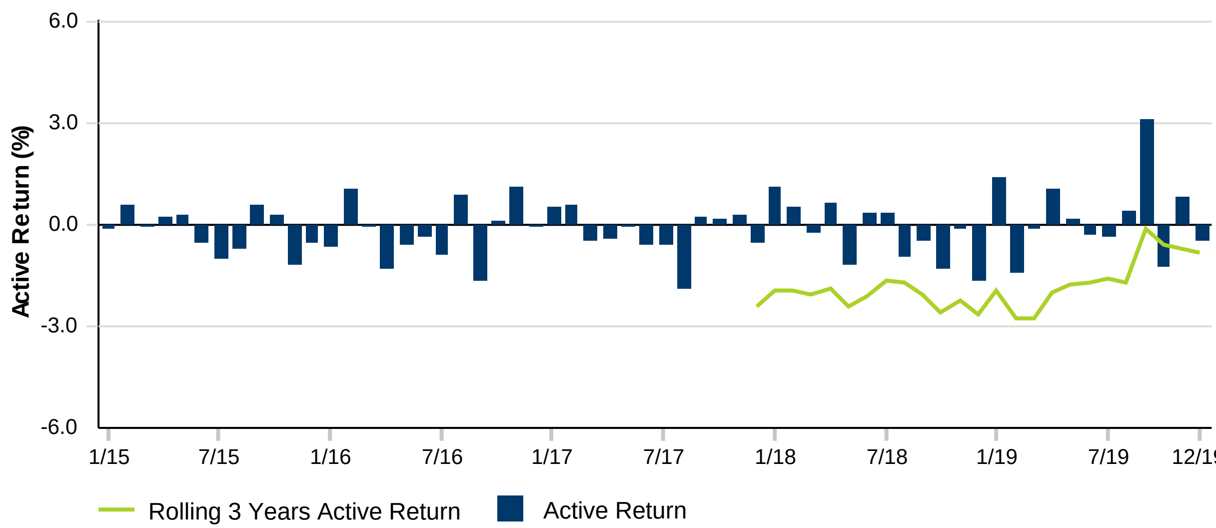


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	8.94 (44)	29.19 (22)	7.49 (67)	6.55 (91)	
Benchmark	9.94 (22)	25.53 (49)	8.59 (56)	8.23 (69)	11.83 (88)
Median	8.67	24.72	8.81	9.42	13.04

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

CIM Small Cap (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	CIM Small Cap (EMWO)	Russell 2000 Index
Maximum Return	12.67	11.25
Minimum Return	-7.61	-7.78
Return	29.19	25.53
Cumulative Return	29.19	25.53
Active Return	3.06	0.00
Excess Return	25.20	22.14

Risk Summary Statistics

	CIM Small Cap (EMWO)	Russell 2000 Index
Upside Risk	4.99	4.58
Downside Risk	9.11	9.45
Beta	1.02	1.00

Risk/Return Summary Statistics

	CIM Small Cap (EMWO)	Russell 2000 Index
Standard Deviation	17.88	17.08
Alpha	2.62	0.00
Active Return/Risk	0.17	0.00
Tracking Error	4.09	0.00
Information Ratio	0.75	
Sharpe Ratio	1.41	1.29

Correlation Statistics

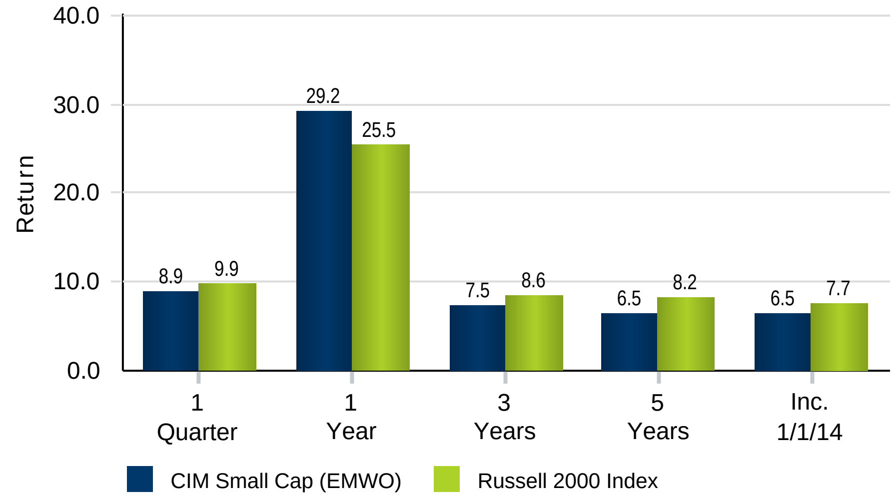
	CIM Small Cap (EMWO)	Russell 2000 Index
R-Squared	0.95	1.00
Actual Correlation	0.97	1.00

Manager Summary

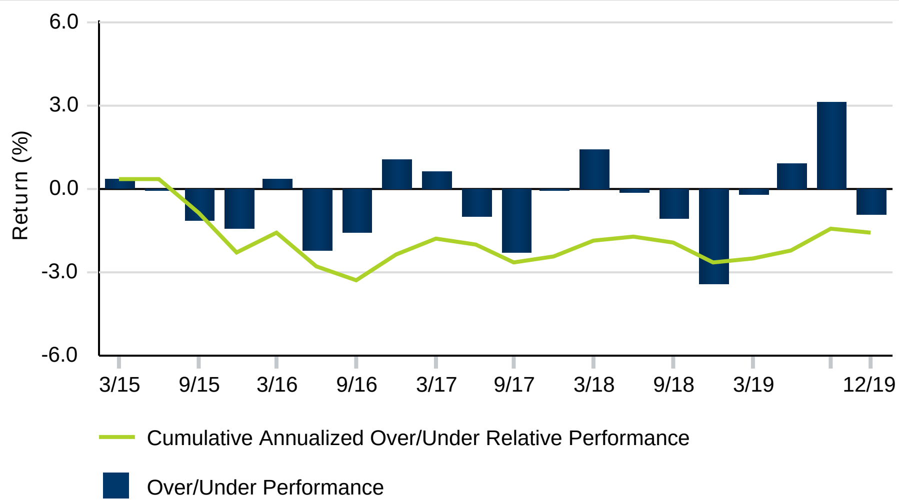
CIM Small Cap (EMWO) vs IM U.S. Small Cap Core Equity (SA+CF)

Periods Ended December 31, 2019

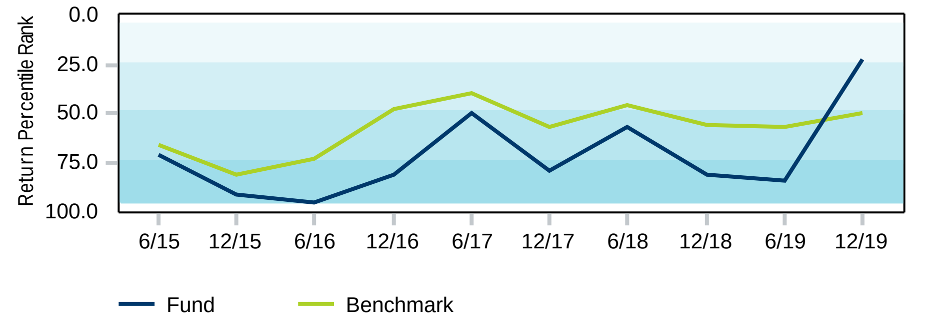
Comparative Performance



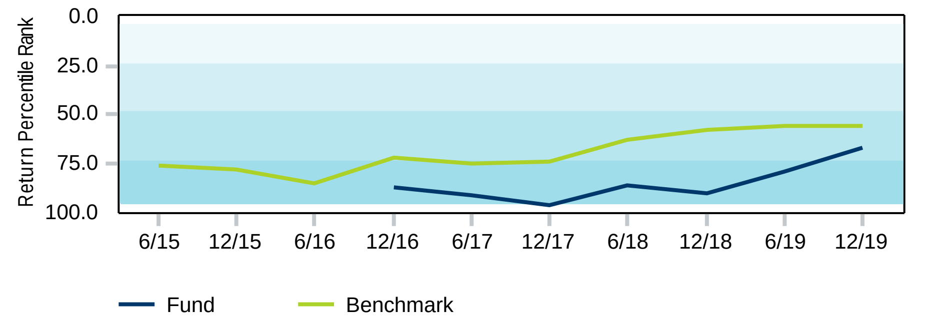
Relative Performance



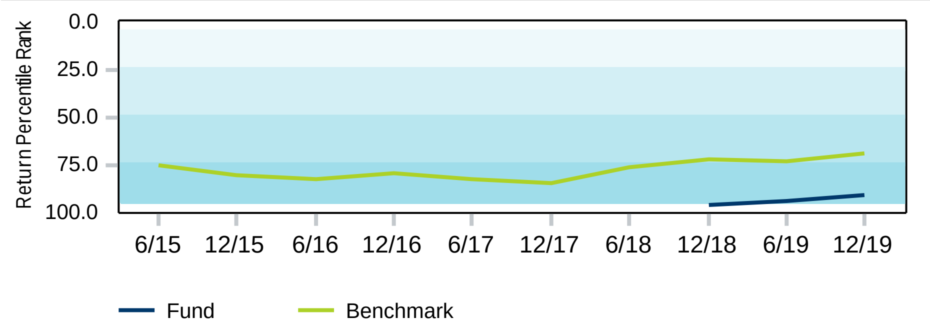
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



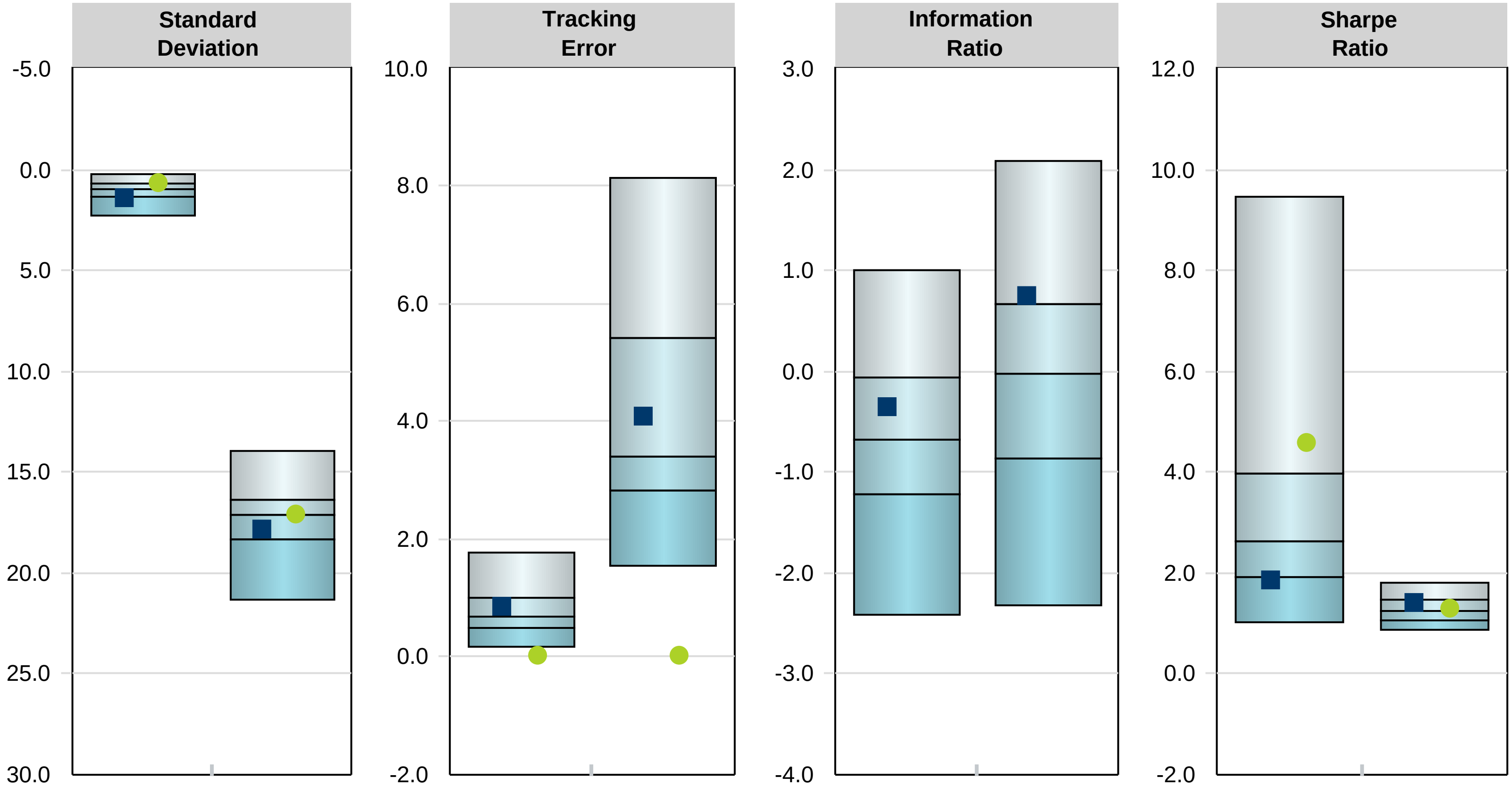
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

CIM Small Cap (EMWO)

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
CIM Small Cap (EMWO)	1.48 (77)	17.88 (66)	0.84 (41)	4.09 (41)	-0.37 (42)	0.75 (21)	1.83 (78)	1.41 (30)
Russell 2000 Index	0.65 (23)	17.08 (45)	0.00 (100)	0.00 (100)			4.55 (22)	1.29 (46)
5th Percentile	0.24	13.99	1.78	8.14	1.00	2.08	9.45	1.80
1st Quartile	0.67	16.36	1.00	5.41	-0.06	0.67	3.98	1.47
Median	1.01	17.15	0.69	3.40	-0.68	-0.02	2.65	1.26
3rd Quartile	1.36	18.34	0.49	2.85	-1.23	-0.87	1.91	1.04
95th Percentile	2.25	21.34	0.17	1.55	-2.41	-2.31	1.01	0.89

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

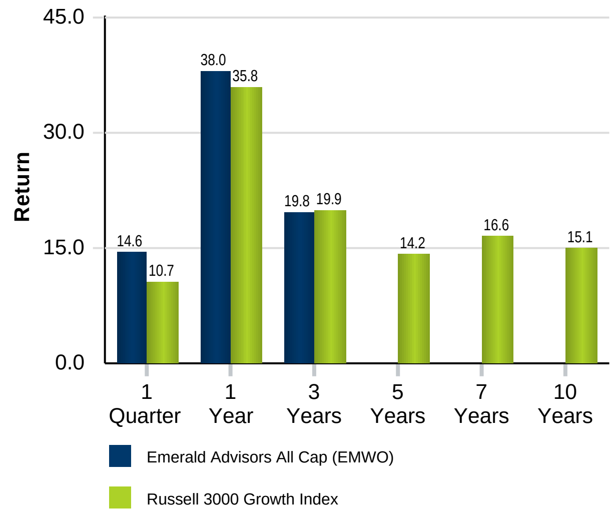
Wilshire Consulting

Performance Summary

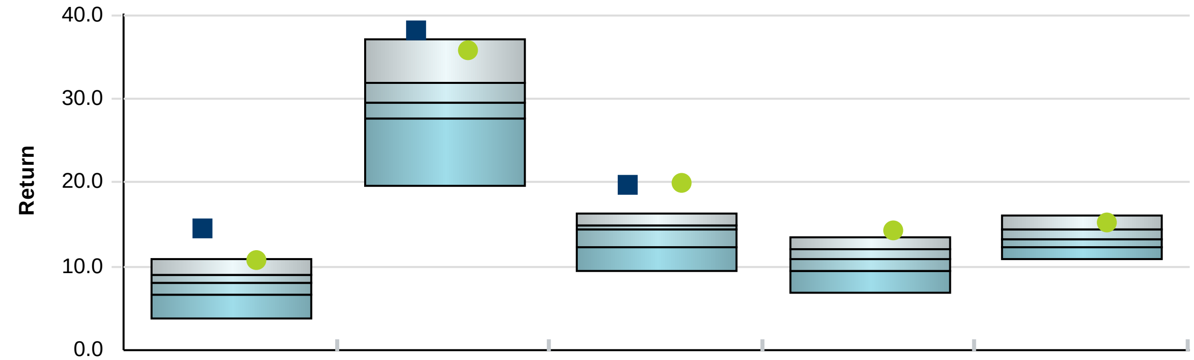
Emerald Advisors All Cap (EMWO)

Periods Ended December 31, 2019

Comparative Performance

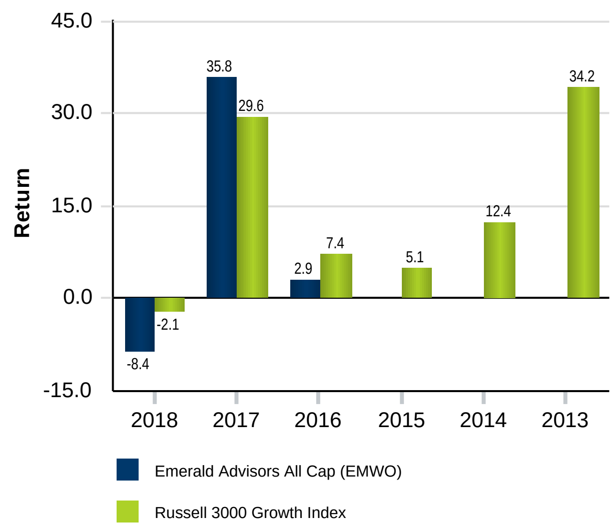


Peer Group Analysis: IM U.S. All Cap Core Equity (SA+CF)

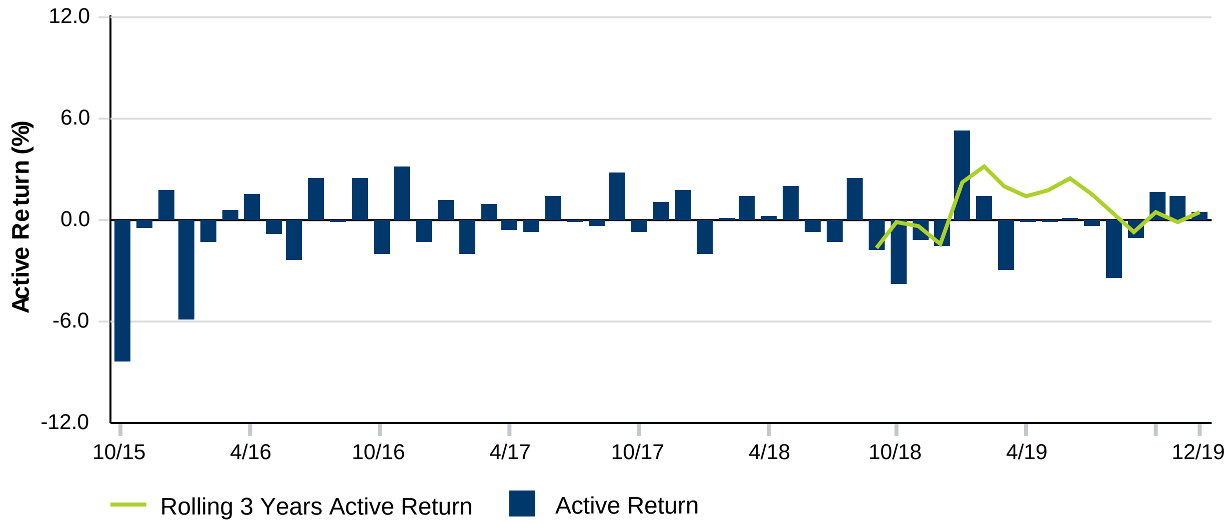


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	14.55 (1)	38.03 (3)	19.75 (1)		
Benchmark	10.67 (6)	35.85 (8)	19.89 (1)	14.23 (4)	15.05 (15)
Median	8.12	29.67	14.46	10.80	13.22

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Emerald Advisors All Cap (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Emerald Advisors All Cap (EMWO)	Russell 3000 Growth Index
Maximum Return	14.47	9.18
Minimum Return	-6.45	-6.40
Return	38.03	35.85
Cumulative Return	38.03	35.85
Active Return	2.42	0.00
Excess Return	32.05	29.63

Risk Summary Statistics

	Emerald Advisors All Cap (EMWO)	Russell 3000 Growth Index
Upside Risk	5.59	4.23
Downside Risk	7.89	6.47
Beta	1.32	1.00

Risk/Return Summary Statistics

	Emerald Advisors All Cap (EMWO)	Russell 3000 Growth Index
Standard Deviation	18.40	13.10
Alpha	-7.62	0.00
Active Return/Risk	0.13	0.00
Tracking Error	7.48	0.00
Information Ratio	0.32	
Sharpe Ratio	1.74	2.26

Correlation Statistics

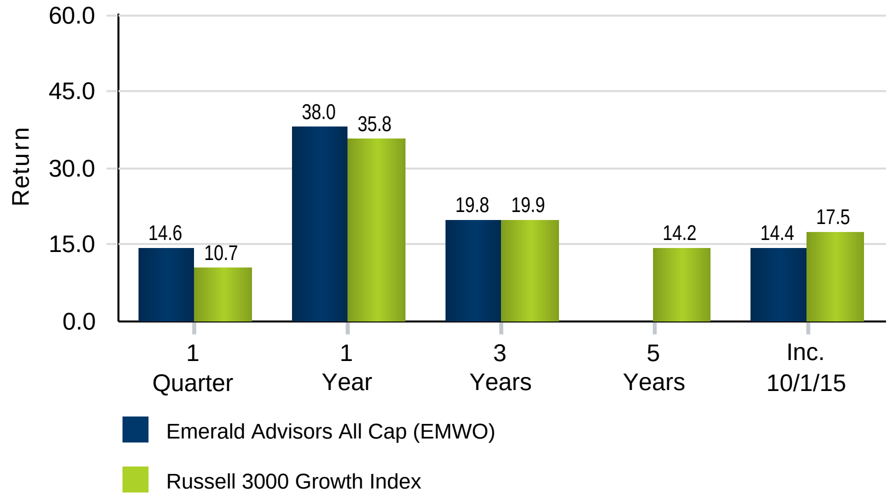
	Emerald Advisors All Cap (EMWO)	Russell 3000 Growth Index
R-Squared	0.89	1.00
Actual Correlation	0.94	1.00

Manager Summary

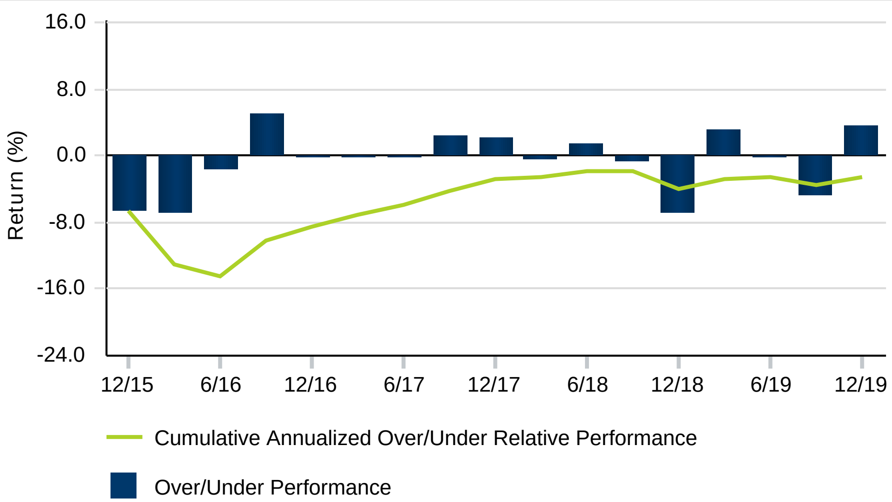
Emerald Advisors All Cap (EMWO) vs IM U.S. All Cap Core Equity (SA+CF)

Periods Ended December 31, 2019

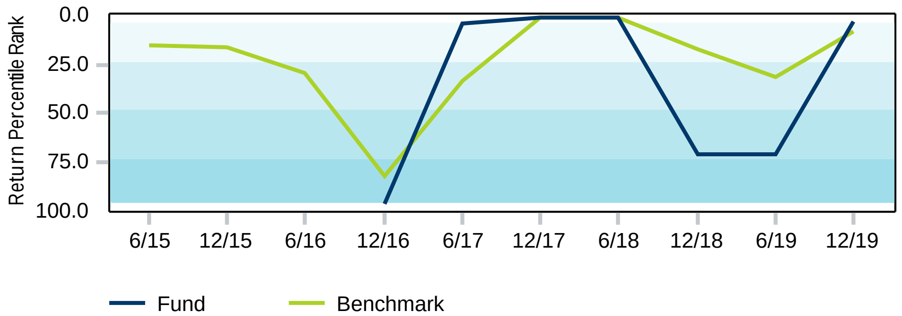
Comparative Performance



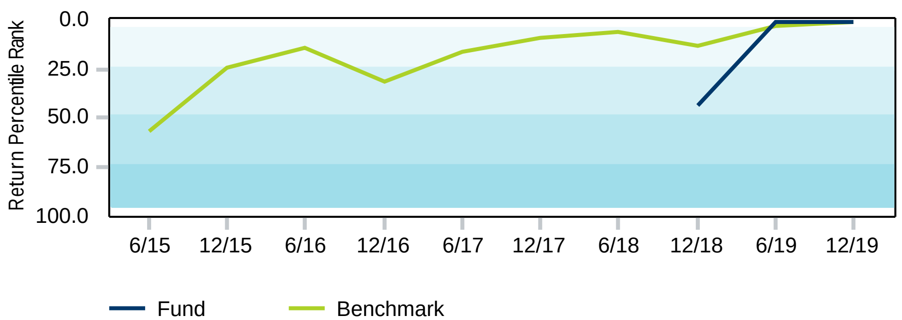
Relative Performance



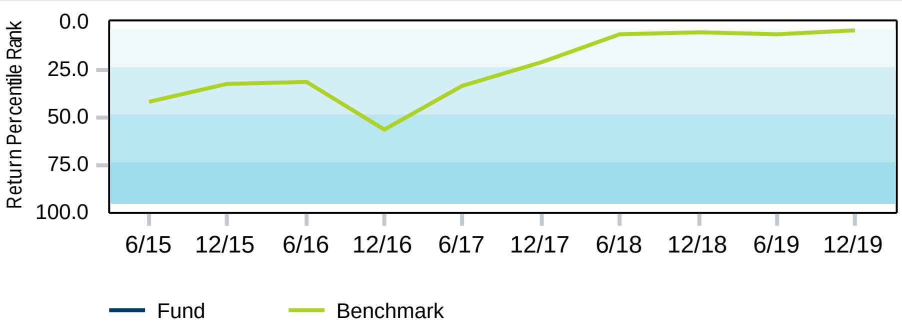
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



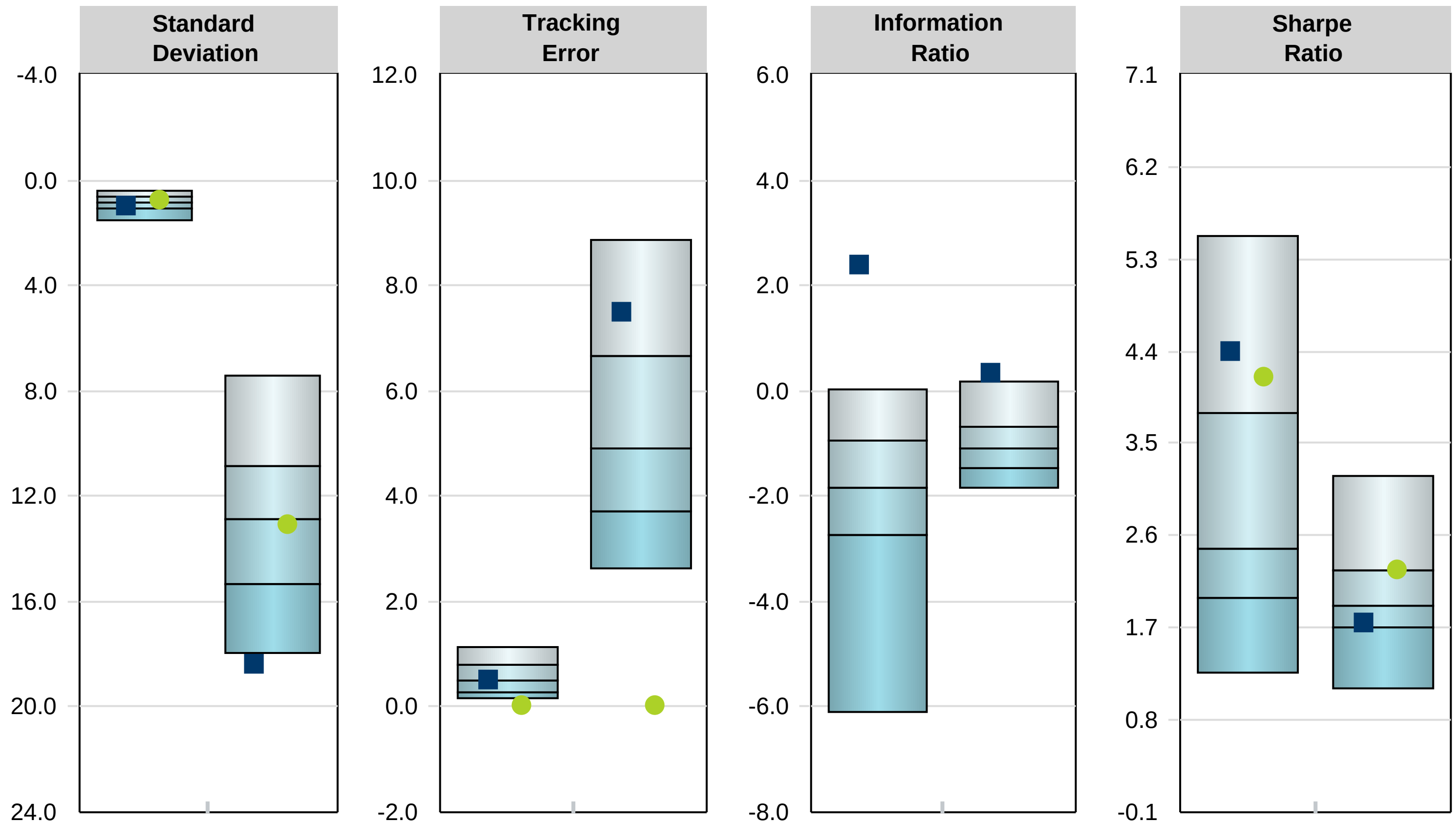
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Emerald Advisors All Cap (EMWO)

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Emerald Advisors All Cap (EMWO)	1.01 (66)	18.40 (97)	0.50 (49)	7.48 (11)	2.40 (1)	0.32 (2)	4.38 (13)	1.74 (68)
● Russell 3000 Growth Index	0.77 (46)	13.10 (53)	0.00 (100)	0.00 (100)			4.14 (15)	2.26 (26)
5th Percentile	0.40	7.44	1.13	8.86	0.03	0.18	5.52	3.19
1st Quartile	0.65	10.83	0.79	6.65	-0.94	-0.68	3.80	2.26
Median	0.82	12.90	0.49	4.91	-1.85	-1.08	2.48	1.92
3rd Quartile	1.08	15.31	0.28	3.71	-2.72	-1.45	1.99	1.70
95th Percentile	1.52	17.93	0.15	2.62	-6.11	-1.85	1.27	1.11

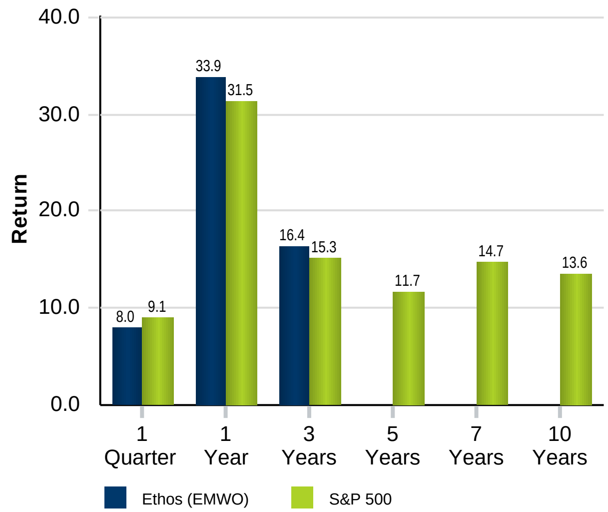
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

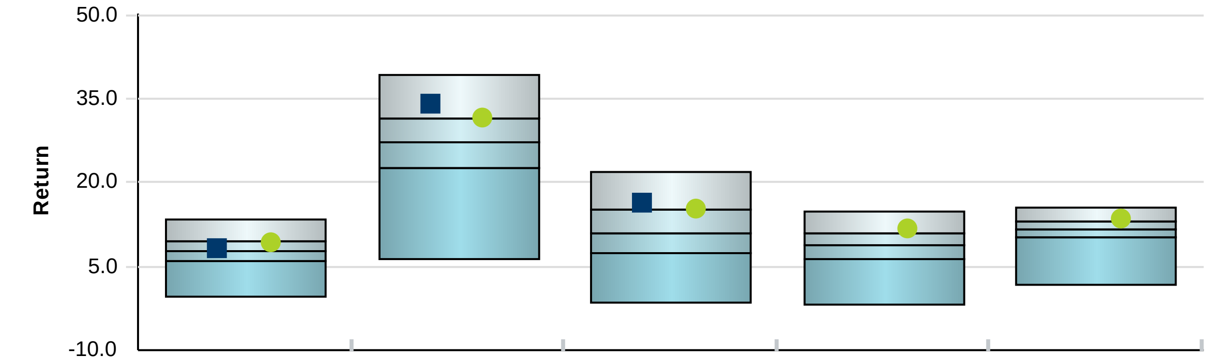
Ethos (EMWO)

Periods Ended December 31, 2019

Comparative Performance

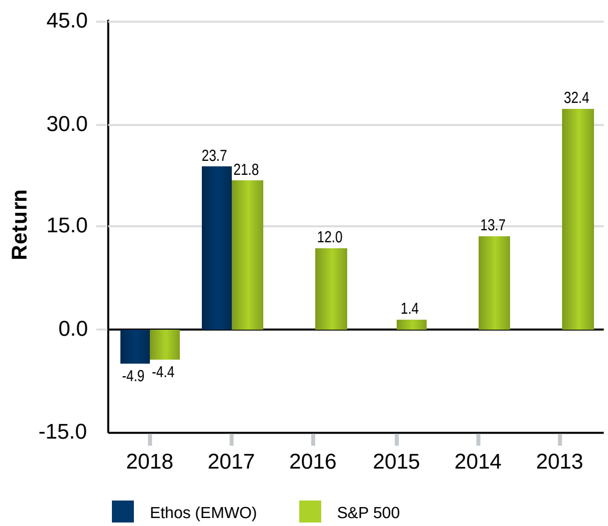


Peer Group Analysis: IM U.S. Equity (MF)

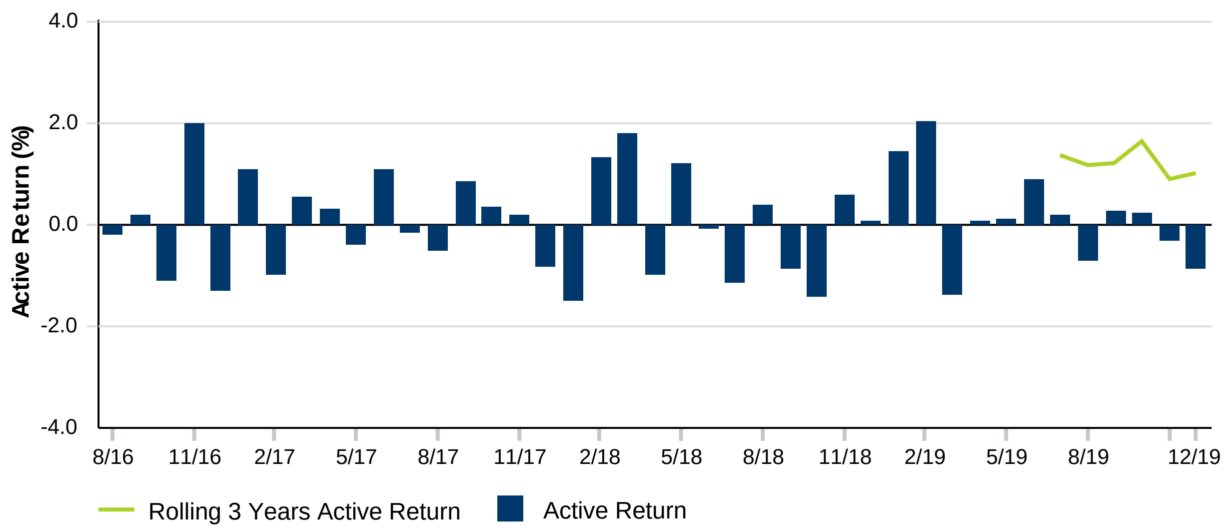


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	8.05 (48)	33.89 (17)	16.37 (21)		
Benchmark	9.07 (32)	31.49 (26)	15.27 (25)	11.70 (18)	13.56 (20)
Median	7.91	27.35	11.00	8.69	11.74

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Ethos (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Ethos (EMWO)	S&P 500
Maximum Return	9.48	8.01
Minimum Return	-6.23	-6.35
Return	33.89	31.49
Cumulative Return	33.89	31.49
Active Return	2.05	0.00
Excess Return	28.24	26.19

Risk Summary Statistics

	Ethos (EMWO)	S&P 500
Upside Risk	4.34	3.84
Downside Risk	6.63	6.55
Beta	1.10	1.00

Risk/Return Summary Statistics

	Ethos (EMWO)	S&P 500
Standard Deviation	13.89	12.34
Alpha	-0.80	0.00
Active Return/Risk	0.15	0.00
Tracking Error	3.18	0.00
Information Ratio	0.64	
Sharpe Ratio	2.03	2.12

Correlation Statistics

	Ethos (EMWO)	S&P 500
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

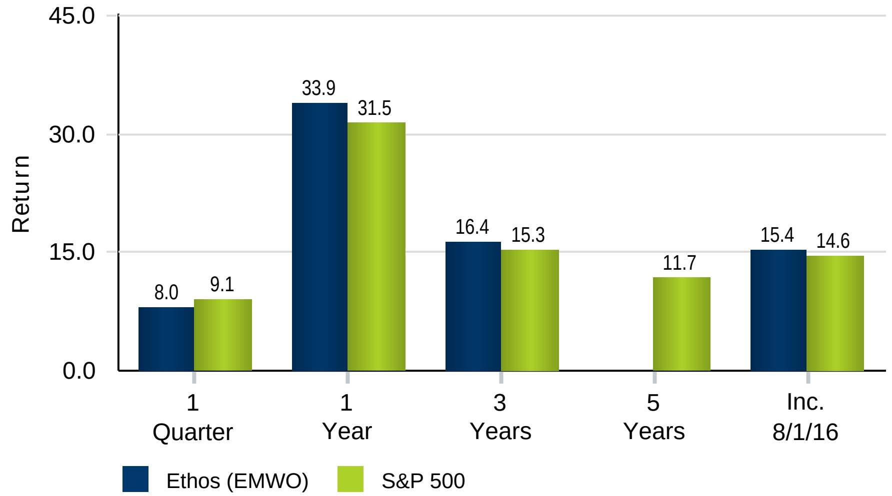
Wilshire Consulting

Manager Summary

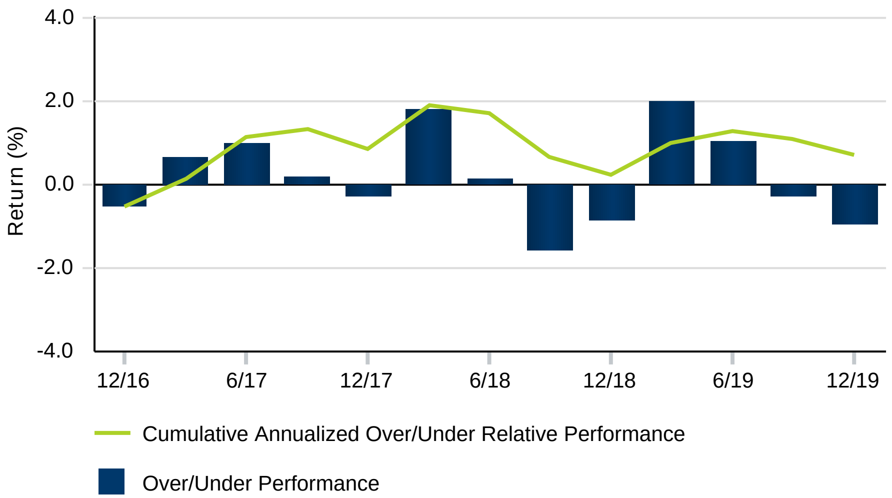
Ethos (EMWO) vs IM U.S. Equity (MF)

Periods Ended December 31, 2019

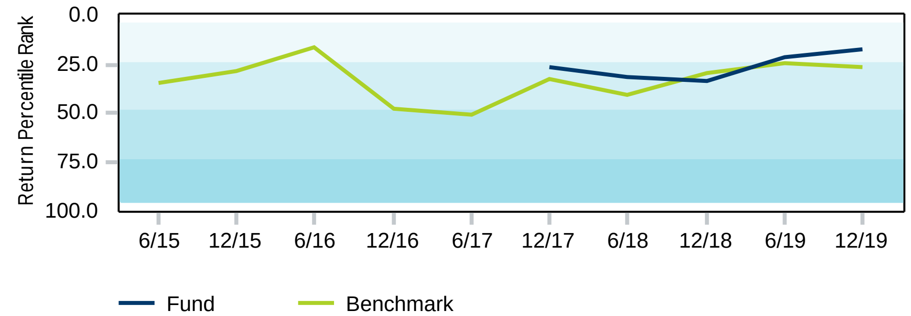
Comparative Performance



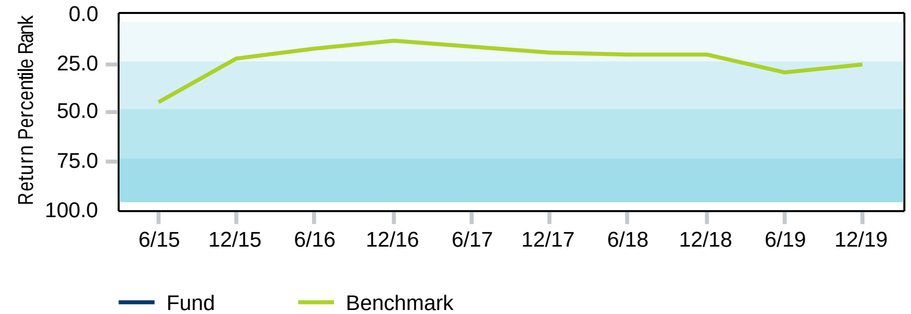
Relative Performance



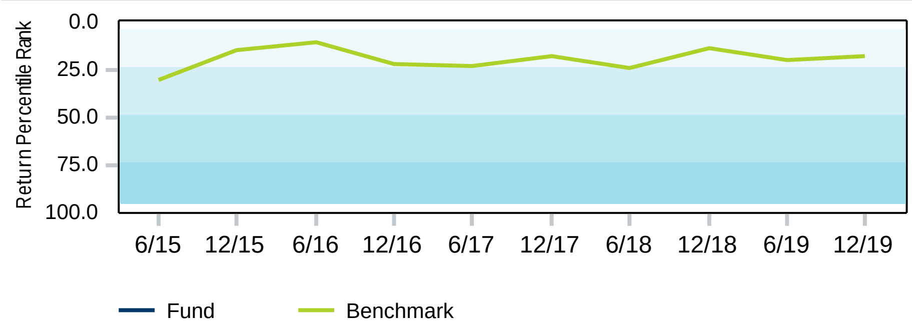
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

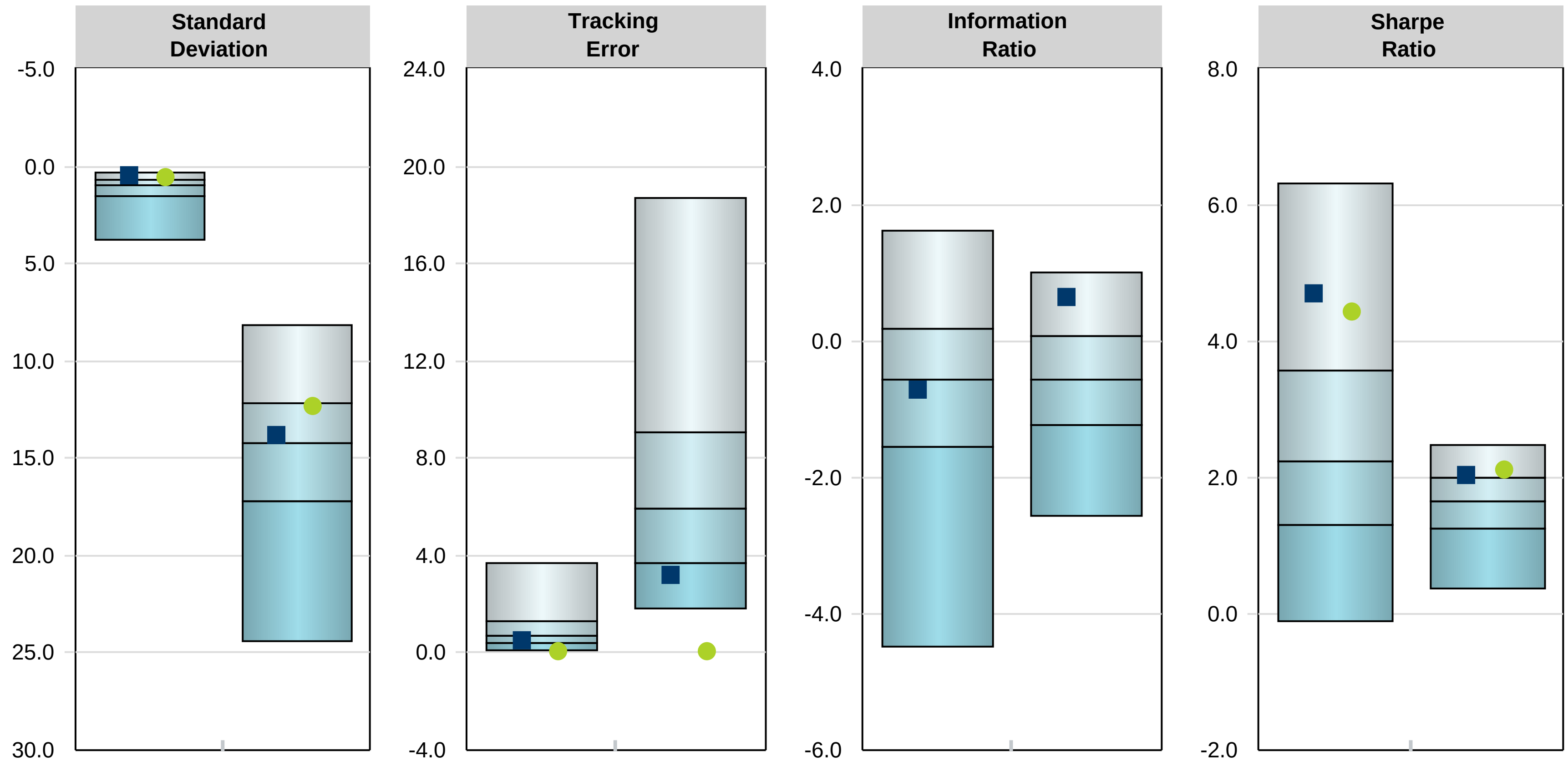


Wilshire Consulting

Peer Group Analysis - Multi Statistics

Ethos (EMWO)

Periods Ended December 31, 2019



	SD QTD	SD YTD	TE QTD	TE YTD	IR QTD	IR YTD	Sharpe QTD	Sharpe YTD
Ethos (EMWO)	0.51 (10)	13.89 (46)	0.45 (69)	3.18 (82)	-0.72 (55)	0.64 (11)	4.69 (12)	2.03 (24)
S&P 500	0.60 (17)	12.34 (27)	0.00 (100)	0.00 (100)			4.43 (15)	2.12 (18)
5th Percentile	0.35	8.20	3.70	18.70	1.63	1.01	6.32	2.49
1st Quartile	0.68	12.18	1.29	9.03	0.18	0.08	3.58	2.01
Median	1.00	14.22	0.72	5.90	-0.57	-0.57	2.23	1.66
3rd Quartile	1.51	17.23	0.39	3.68	-1.55	-1.24	1.31	1.26
95th Percentile	3.81	24.40	0.13	1.83	-4.48	-2.55	-0.11	0.38

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Wilshire Consulting

Summary Statistics

Cookson Peirce (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Cookson Peirce (EMWO)	Russell 3000 Index
Maximum Return	6.21	8.58
Minimum Return	-4.85	-6.47
Return	19.24	31.02
Cumulative Return	19.24	31.02
Active Return	-9.73	0.00
Excess Return	16.16	25.89

Risk Summary Statistics

	Cookson Peirce (EMWO)	Russell 3000 Index
Upside Risk	3.26	3.94
Downside Risk	6.20	6.78
Beta	0.80	1.00

Risk/Return Summary Statistics

	Cookson Peirce (EMWO)	Russell 3000 Index
Standard Deviation	11.75	12.89
Alpha	-4.11	0.00
Active Return/Risk	-0.83	0.00
Tracking Error	6.10	0.00
Information Ratio	-1.59	
Sharpe Ratio	1.37	2.00

Correlation Statistics

	Cookson Peirce (EMWO)	Russell 3000 Index
R-Squared	0.78	1.00
Actual Correlation	0.88	1.00

NON US EQUITY

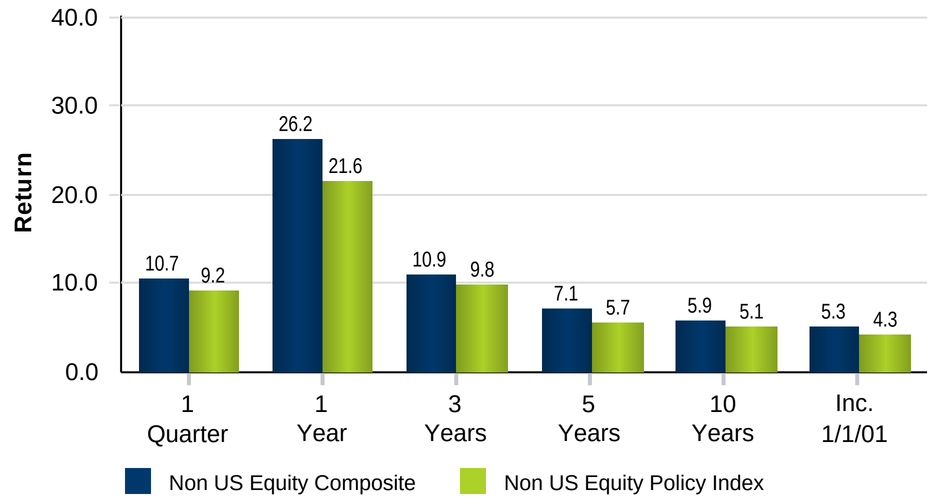
Wilshire Consulting

Composite Performance Summary

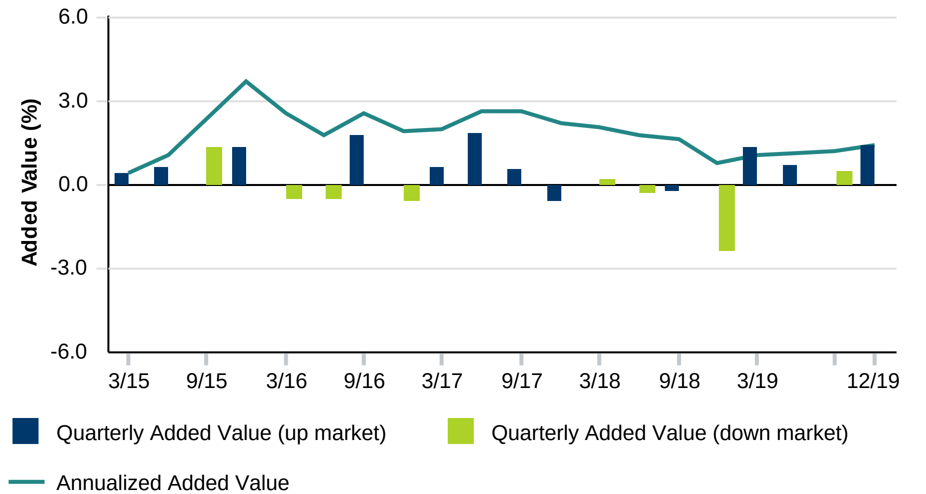
Non US Equity Composite

Periods Ended December 31, 2019

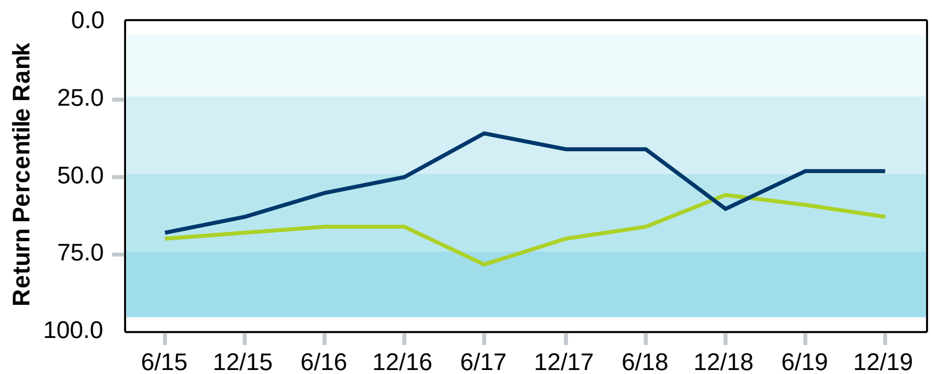
Comparative Performance



Added Value History

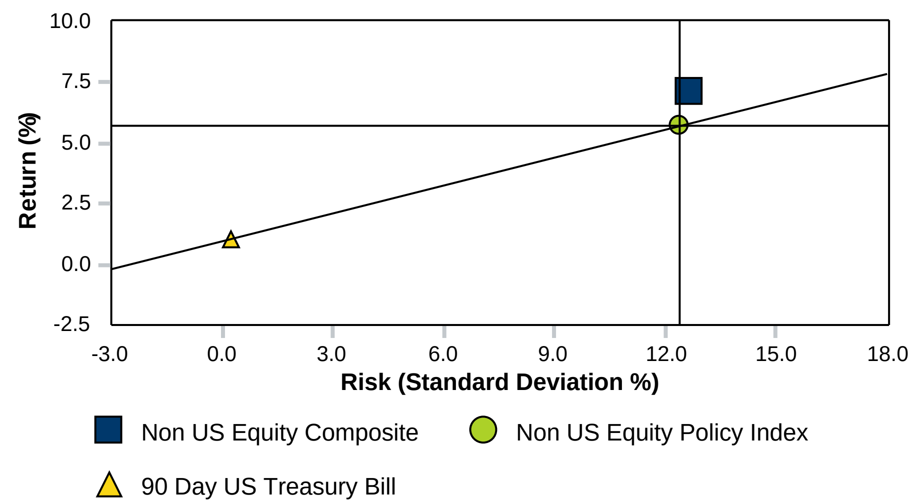


Rolling Percentile Rank: IM International Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Non US Equity Composite	10	0 (0%)	6 (60%)	4 (40%)	0 (0%)
Benchmark	10	0 (0%)	0 (0%)	9 (90%)	1 (10%)

Risk and Return 01/1/15 - 12/31/19

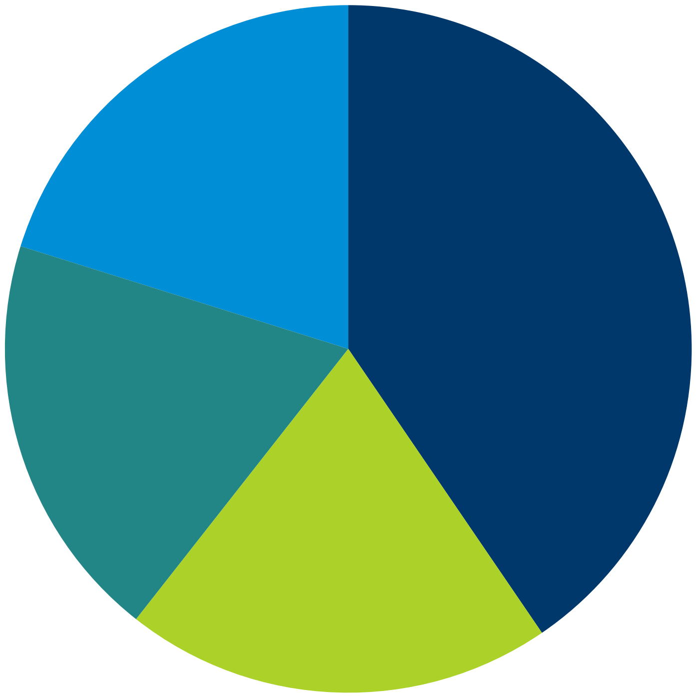


Asset Allocation By Manager

Non US Equity Composite

Periods Ended December 31, 2019

Dec-2019 : 173,392,727

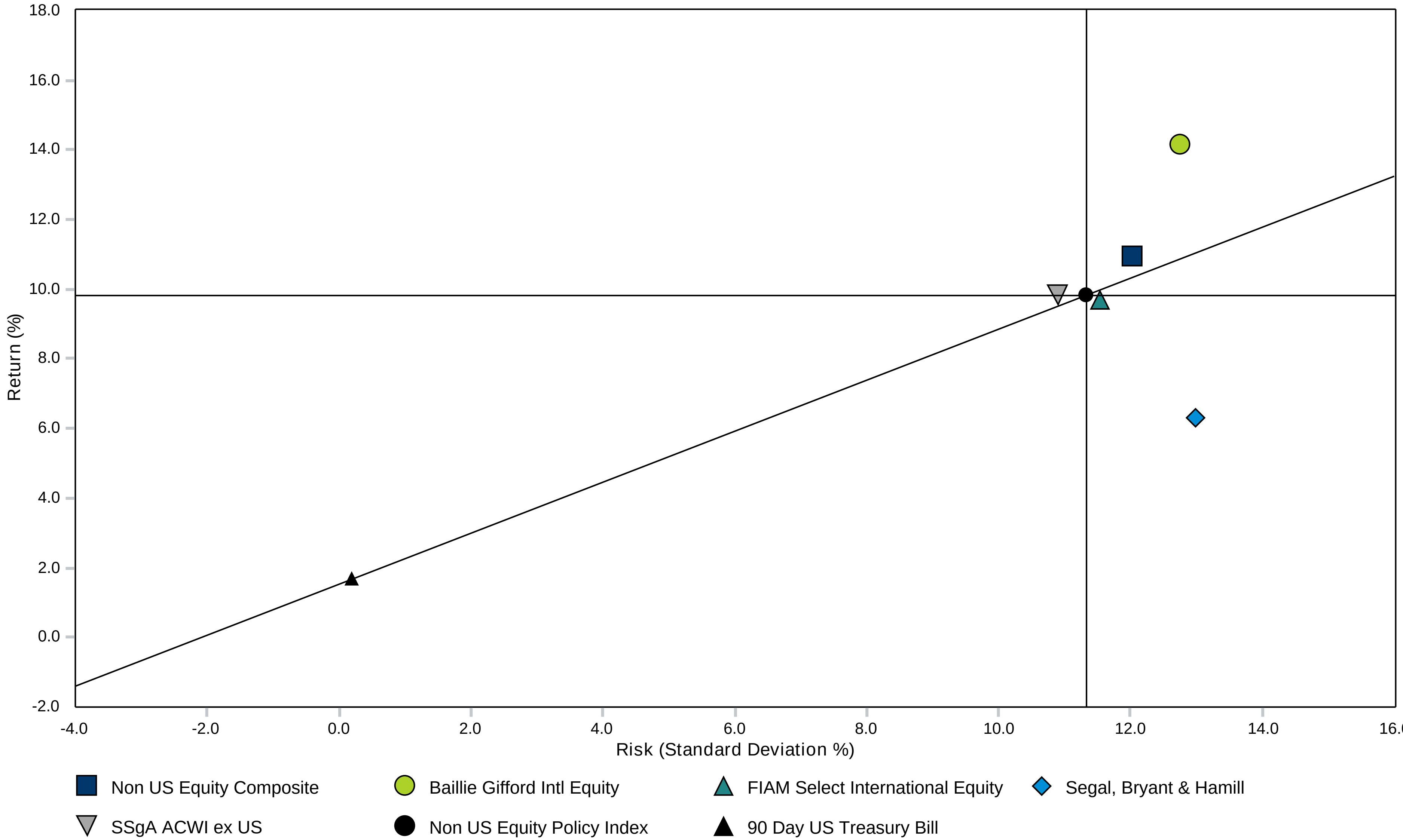


	Market Value $	Allocation (%)
Baillie Gifford Intl Equity	70,166,337	40.5
FIAM Select International Equity	34,917,214	20.1
Segal, Bryant & Hamill	33,332,405	19.2
SSgA ACWI ex US	34,976,771	20.2

Risk vs. Return

Non US Equity Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

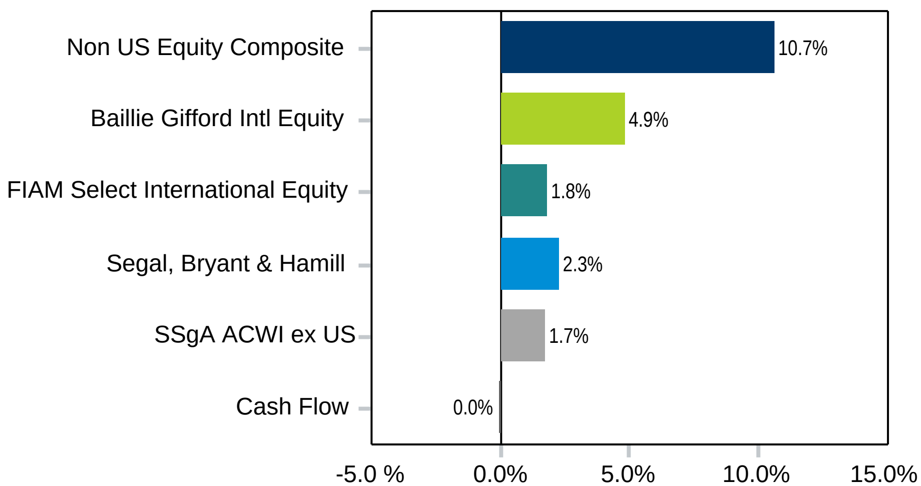
Wilshire Consulting

Return and Risk Contribution

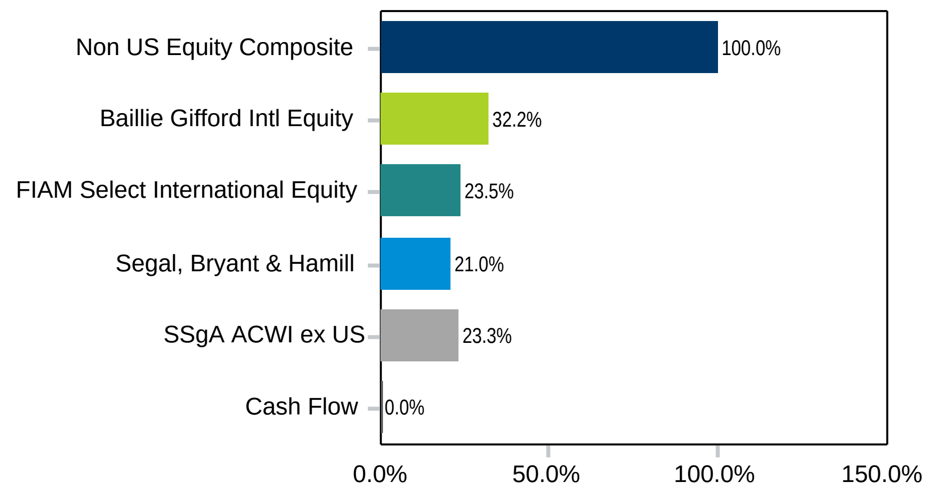
Non US Equity Composite

Periods Ended December 31, 2019

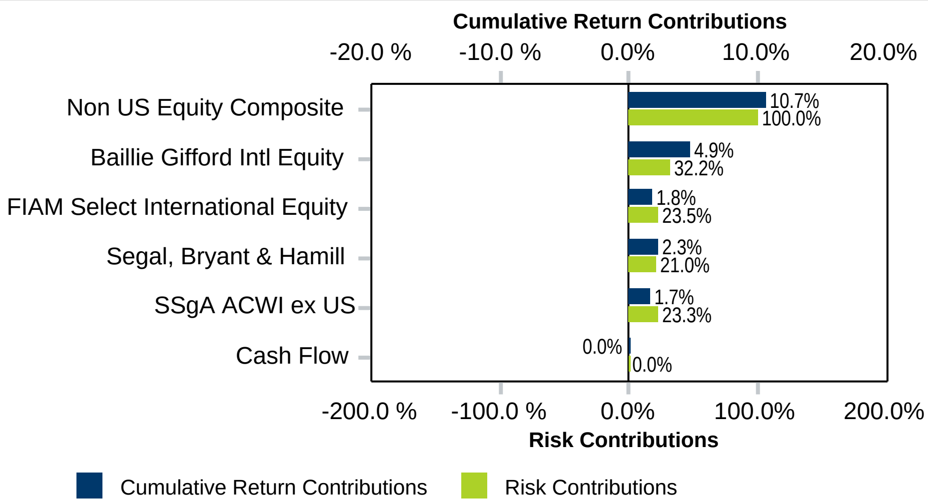
Cumulative Return Contributions



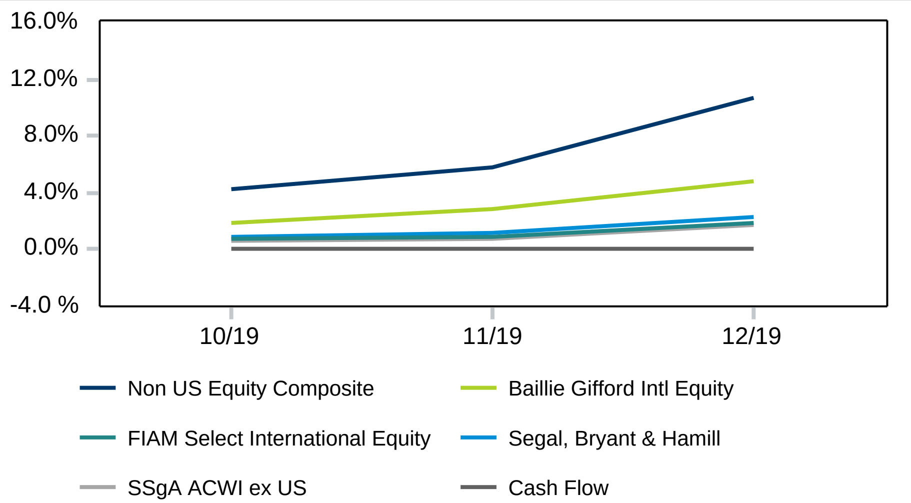
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History



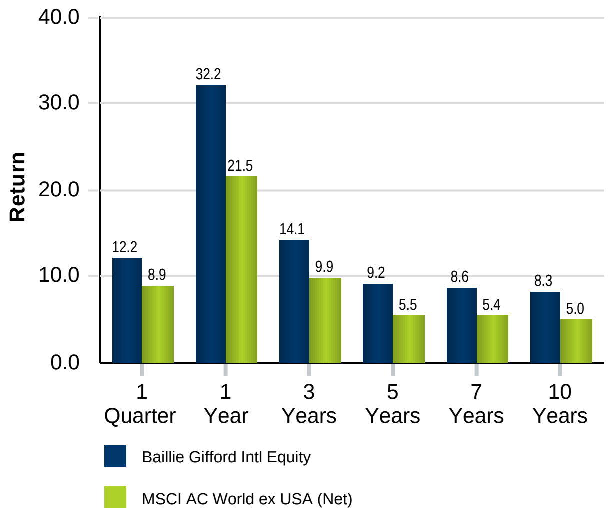
Wilshire Consulting

Performance Summary

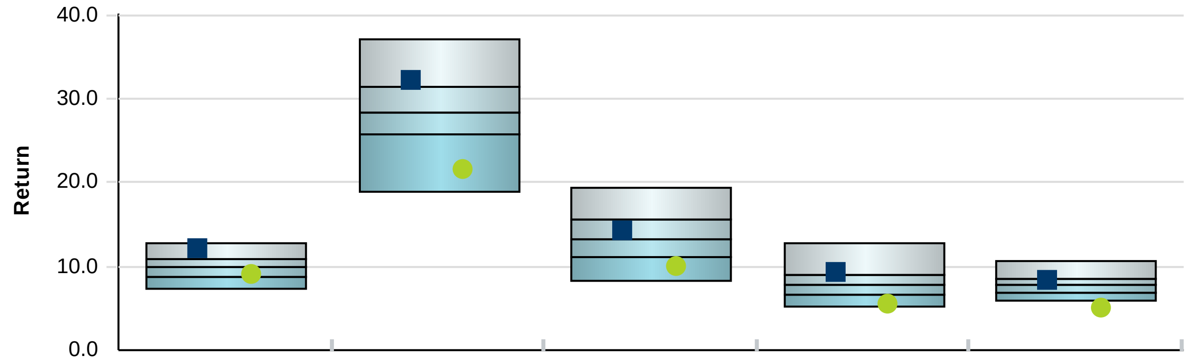
Baillie Gifford Intl Equity

Periods Ended December 31, 2019

Comparative Performance

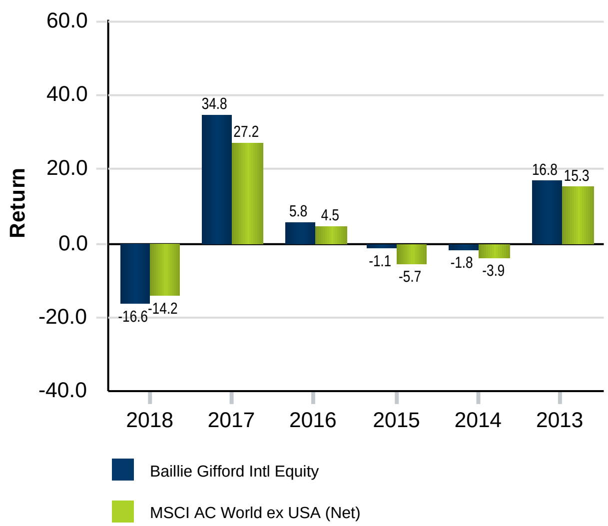


Peer Group Analysis: IM International Large Cap Growth Equity (SA+CF)

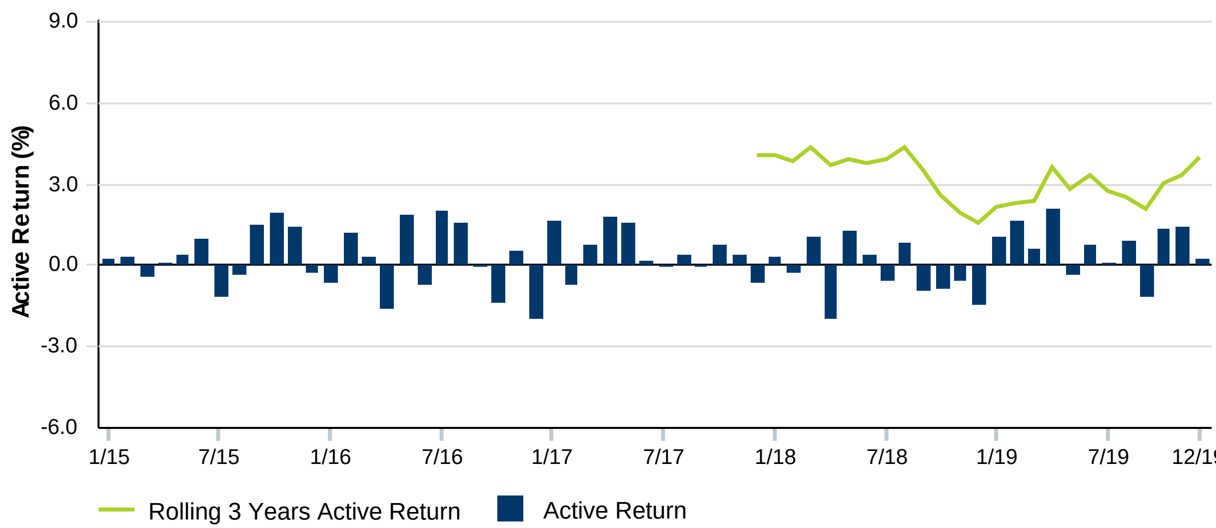


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	12.15 (14)	32.23 (20)	14.15 (35)	9.24 (24)	8.34 (31)
Benchmark	8.92 (69)	21.51 (88)	9.87 (85)	5.51 (93)	4.97 (100)
Median	9.90	28.29	13.20	7.75	7.74

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Baillie Gifford Intl Equity

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Baillie Gifford Intl Equity	MSCI AC World ex USA (Net)
Maximum Return	8.65	7.56
Minimum Return	-5.73	-5.37
Return	32.23	21.51
Cumulative Return	32.23	21.51
Active Return	8.76	0.00
Excess Return	26.88	18.12

Risk Summary Statistics

	Baillie Gifford Intl Equity	MSCI AC World ex USA (Net)
Upside Risk	4.18	3.45
Downside Risk	6.21	6.31
Beta	1.07	1.00

Risk/Return Summary Statistics

	Baillie Gifford Intl Equity	MSCI AC World ex USA (Net)
Standard Deviation	13.31	12.17
Alpha	7.63	0.00
Active Return/Risk	0.66	0.00
Tracking Error	3.00	0.00
Information Ratio	2.92	
Sharpe Ratio	2.02	1.49

Correlation Statistics

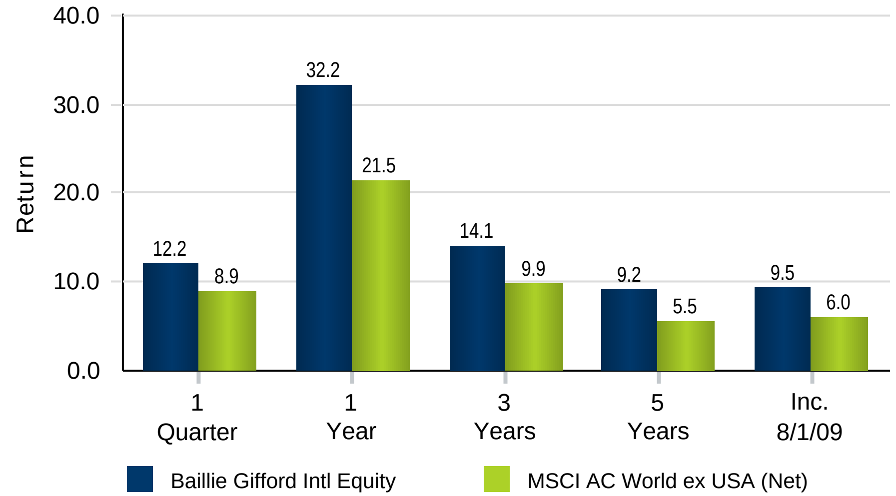
	Baillie Gifford Intl Equity	MSCI AC World ex USA (Net)
R-Squared	0.95	1.00
Actual Correlation	0.98	1.00

Manager Summary

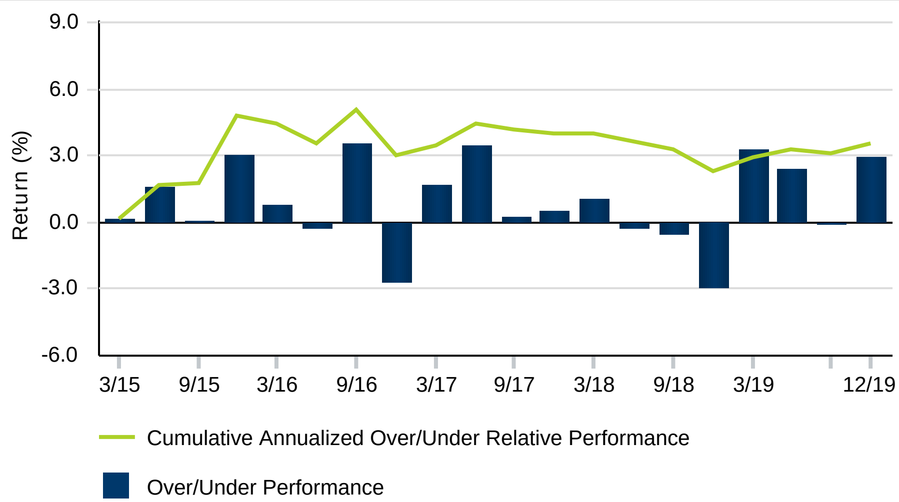
Baillie Gifford Intl Equity vs IM International Large Cap Growth Equity (SA+CF)

Periods Ended December 31, 2019

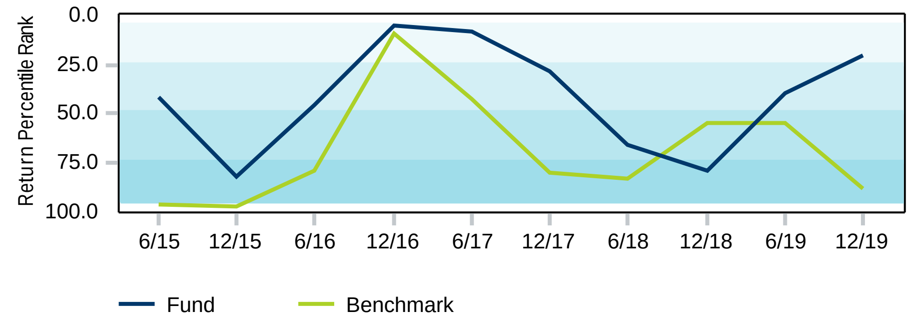
Comparative Performance



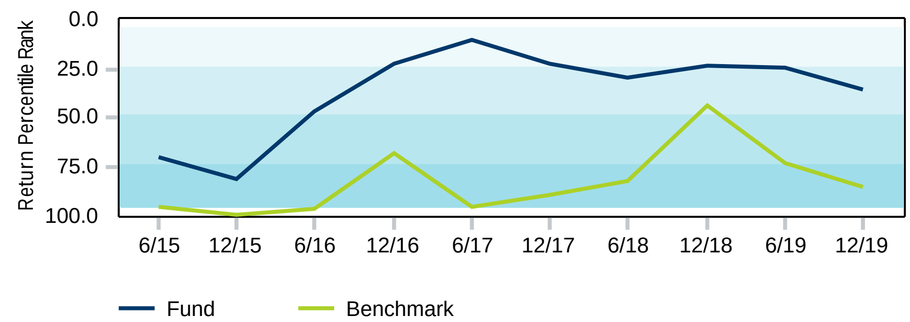
Relative Performance



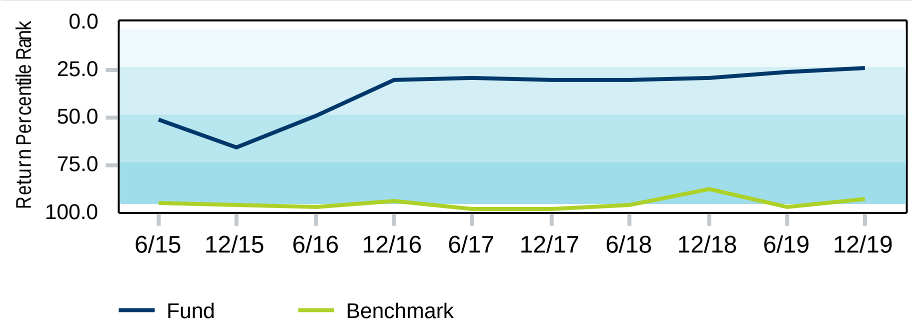
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



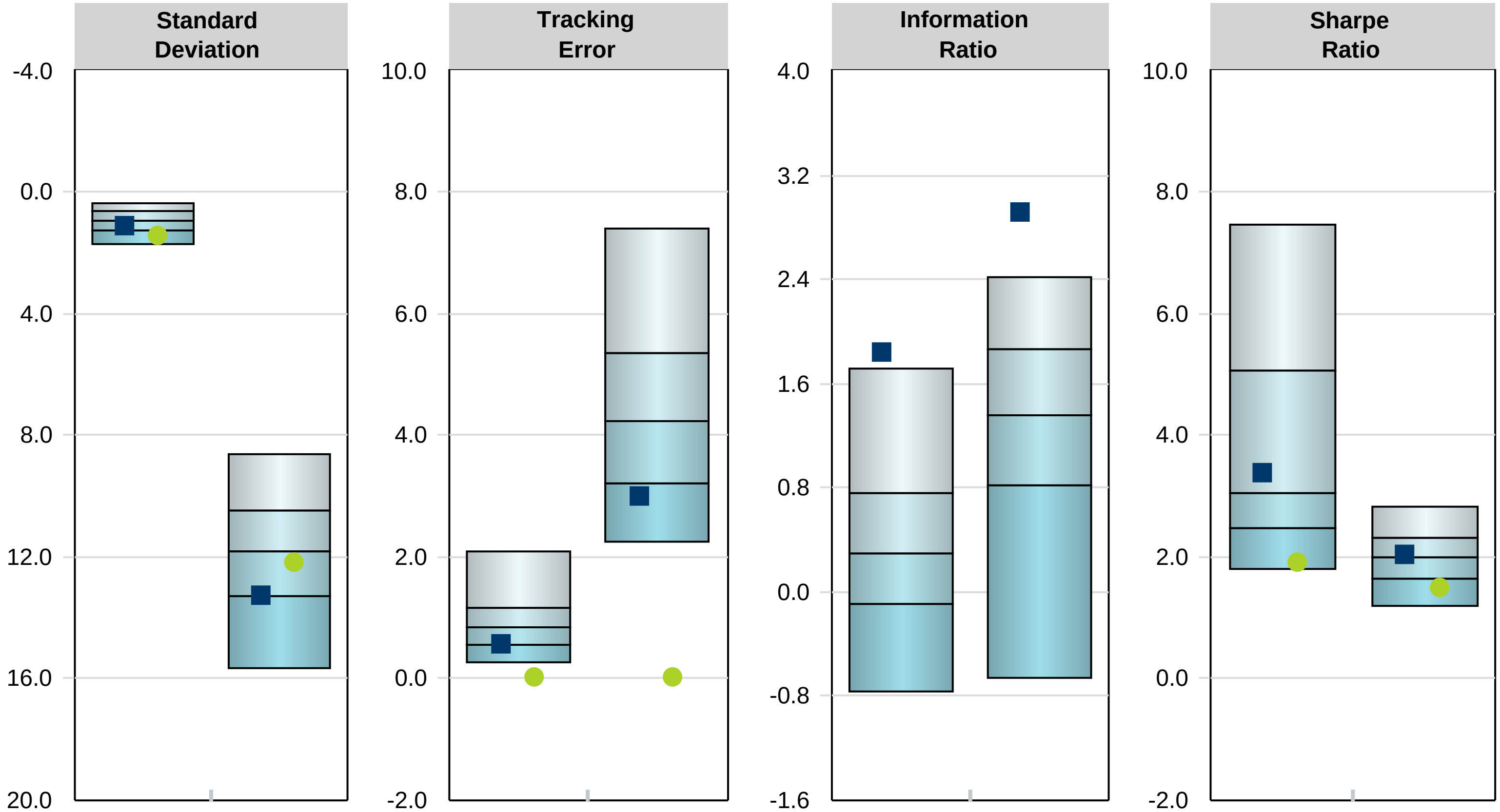
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Baillie Gifford Intl Equity

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Baillie Gifford Intl Equity	1.13 (68)	13.31 (75)	0.55 (76)	3.00 (80)	1.83 (5)	2.92 (2)	3.38 (44)	2.02 (48)
● MSCI AC World ex USA (Net)	1.47 (85)	12.17 (52)	0.00 (100)	0.00 (100)			1.89 (91)	1.49 (90)
5th Percentile	0.36	8.63	2.11	7.39	1.71	2.42	7.48	2.82
1st Quartile	0.64	10.47	1.18	5.35	0.76	1.87	5.06	2.33
Median	0.94	11.82	0.86	4.25	0.29	1.35	3.05	2.00
3rd Quartile	1.26	13.31	0.55	3.22	-0.09	0.81	2.47	1.65
95th Percentile	1.71	15.64	0.27	2.25	-0.76	-0.67	1.80	1.19

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

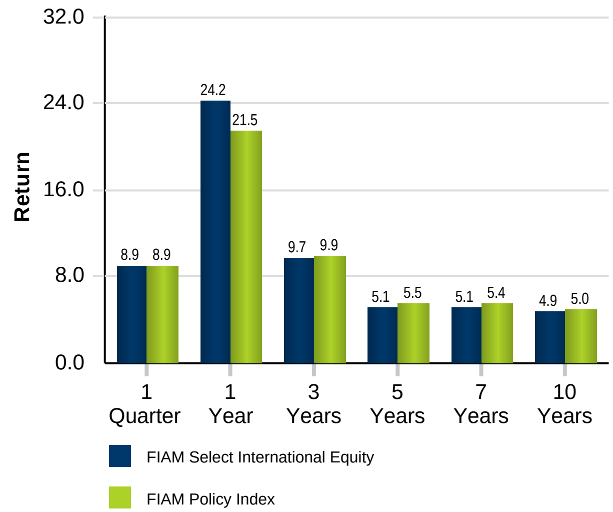
Wilshire Consulting

Performance Summary

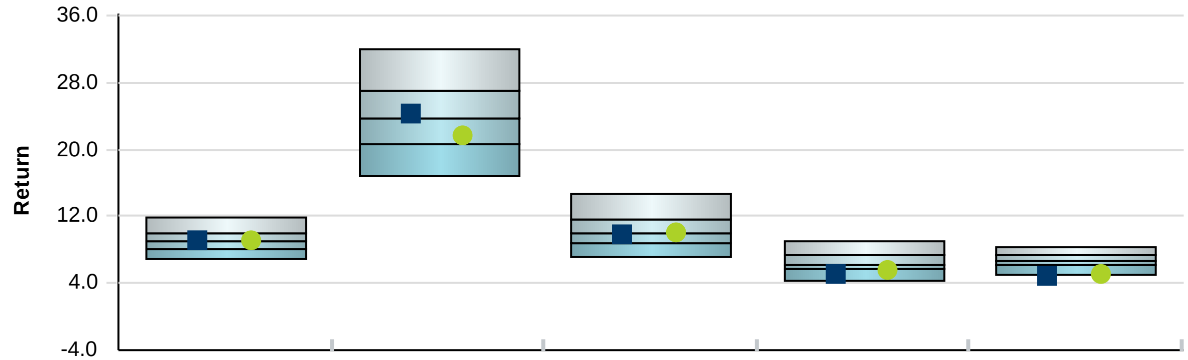
FIAM Select International Equity

Periods Ended December 31, 2019

Comparative Performance

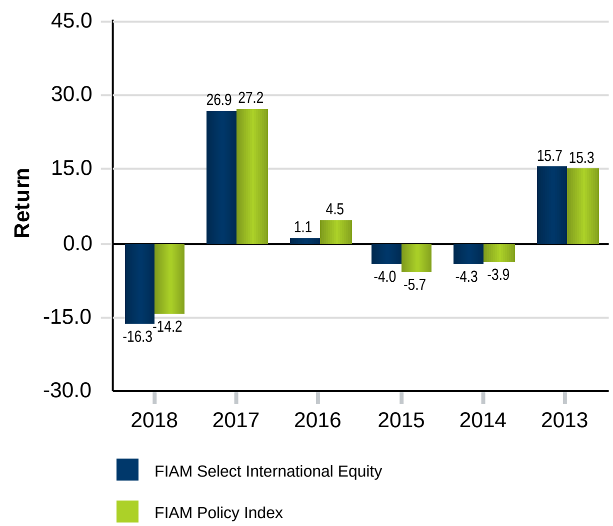


Peer Group Analysis: IM International Large Cap Core Equity (SA+CF)

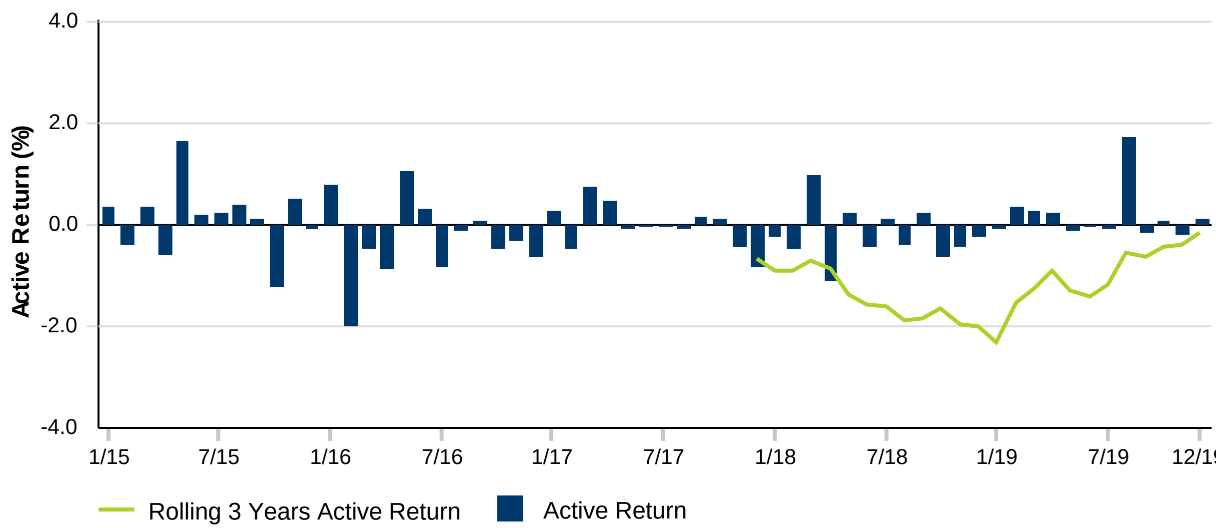


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	8.92 (53)	24.24 (44)	9.68 (55)	5.07 (89)	4.86 (96)
Benchmark	8.92 (53)	21.51 (70)	9.87 (52)	5.51 (78)	4.97 (95)
Median	9.06	23.73	9.88	6.16	6.70

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

FIAM Select International Equity

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	FIAM Select International Equity	FIAM Policy Index
Maximum Return	7.50	7.56
Minimum Return	-5.48	-5.37
Return	24.24	21.51
Cumulative Return	24.24	21.51
Active Return	2.20	0.00
Excess Return	20.32	18.12

Risk Summary Statistics

	FIAM Select International Equity	FIAM Policy Index
Upside Risk	3.48	3.45
Downside Risk	5.78	6.31
Beta	0.95	1.00

Risk/Return Summary Statistics

	FIAM Select International Equity	FIAM Policy Index
Standard Deviation	11.68	12.17
Alpha	3.25	0.00
Active Return/Risk	0.19	0.00
Tracking Error	1.73	0.00
Information Ratio	1.27	
Sharpe Ratio	1.74	1.49

Correlation Statistics

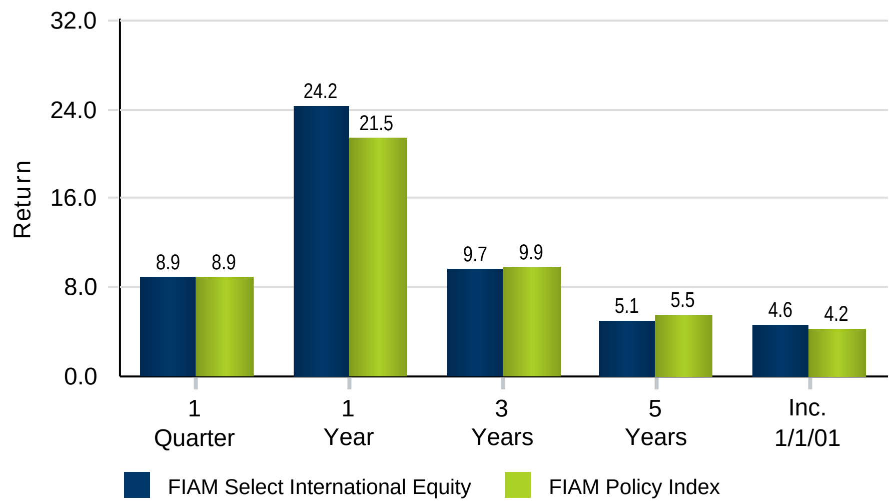
	FIAM Select International Equity	FIAM Policy Index
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

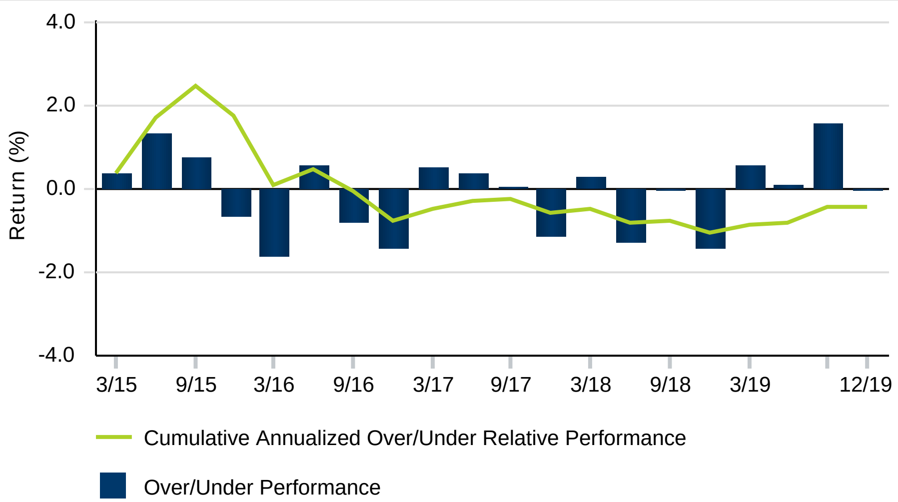
FIAM Select International Equity vs IM International Large Cap Core Equity (SA+CF)

Periods Ended December 31, 2019

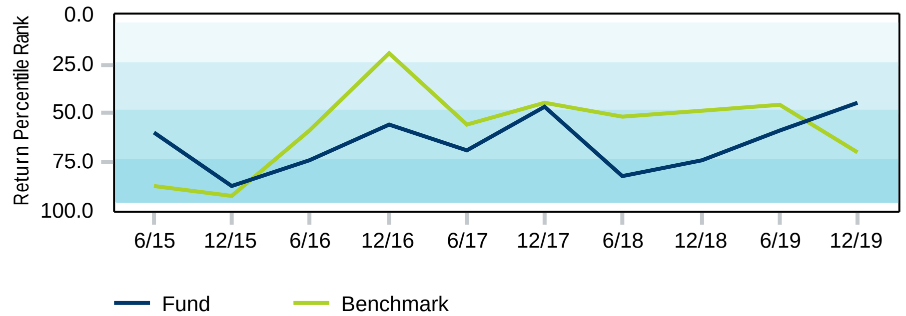
Comparative Performance



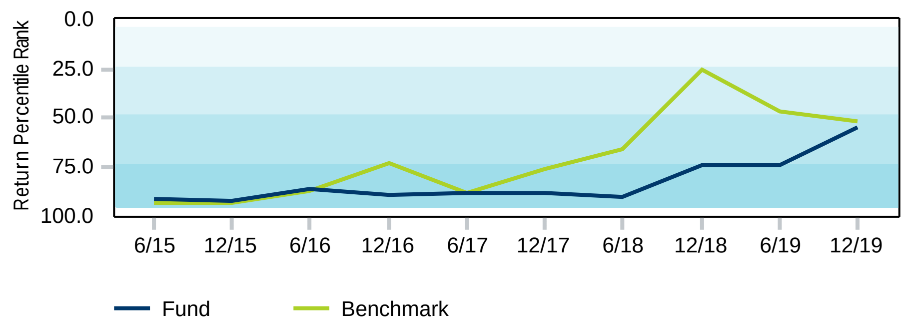
Relative Performance



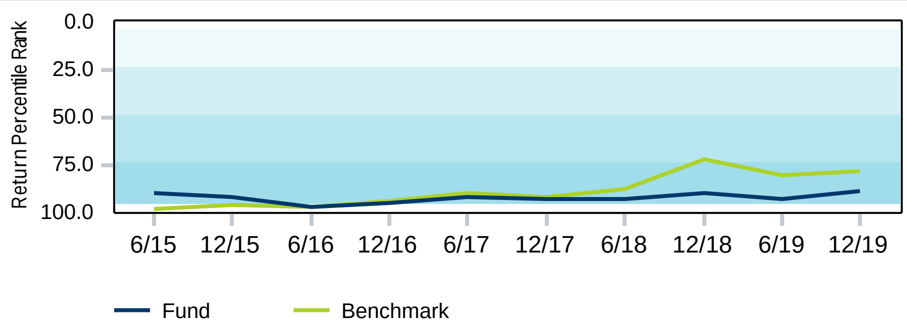
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

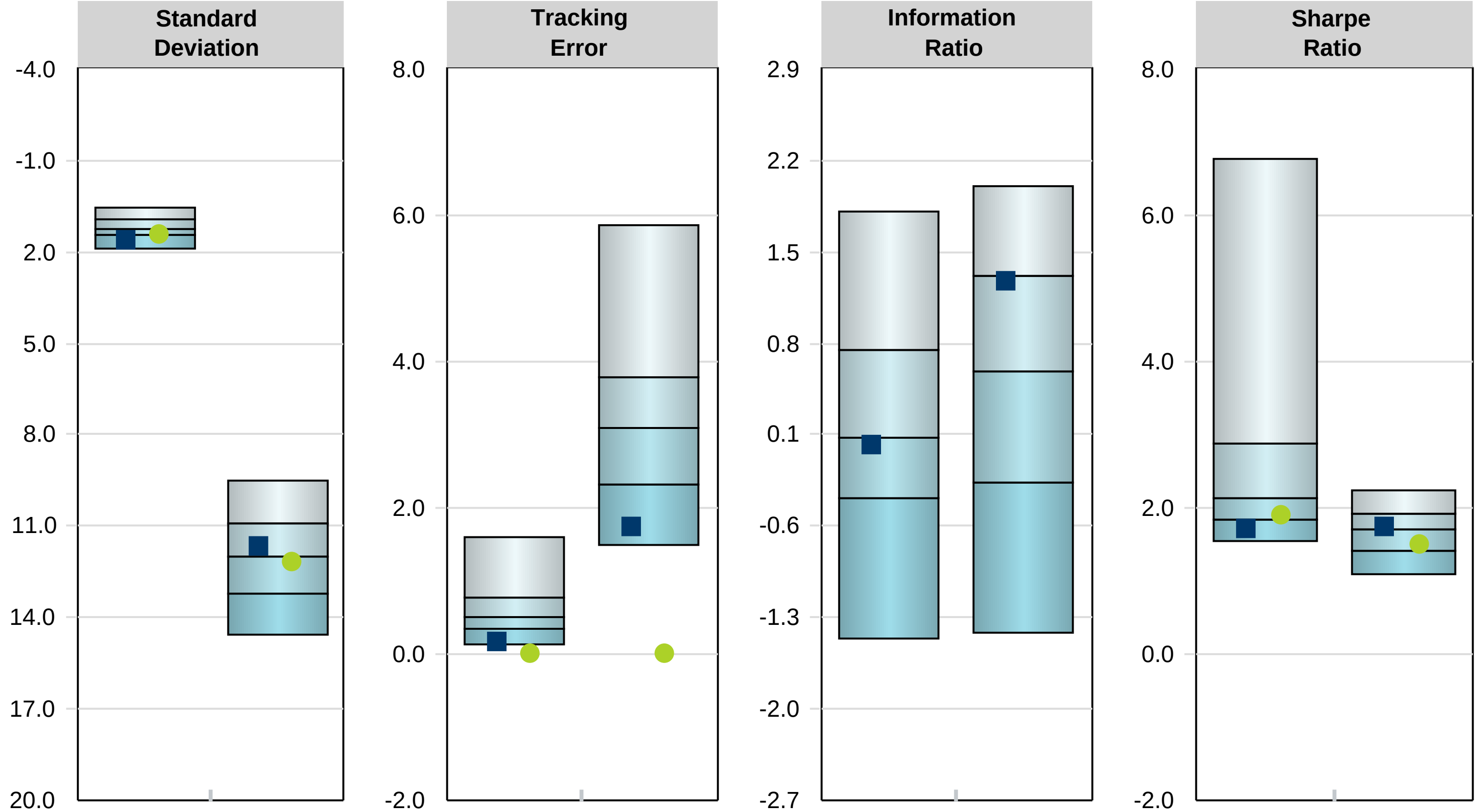


Wilshire Consulting

Peer Group Analysis - Multi Statistics

FIAM Select International Equity

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ FIAM Select International Equity	1.61 (87)	11.68 (45)	0.15 (94)	1.73 (92)	0.02 (52)	1.27 (28)	1.72 (83)	1.74 (46)
● FIAM Policy Index	1.47 (78)	12.17 (54)	0.00 (100)	0.00 (100)			1.89 (74)	1.49 (71)
5th Percentile	0.57	9.52	1.61	5.86	1.81	2.00	6.78	2.23
1st Quartile	0.96	10.91	0.76	3.78	0.74	1.32	2.87	1.91
Median	1.24	12.02	0.51	3.09	0.07	0.58	2.14	1.70
3rd Quartile	1.45	13.20	0.36	2.31	-0.38	-0.26	1.85	1.42
95th Percentile	1.91	14.54	0.13	1.50	-1.46	-1.42	1.54	1.09

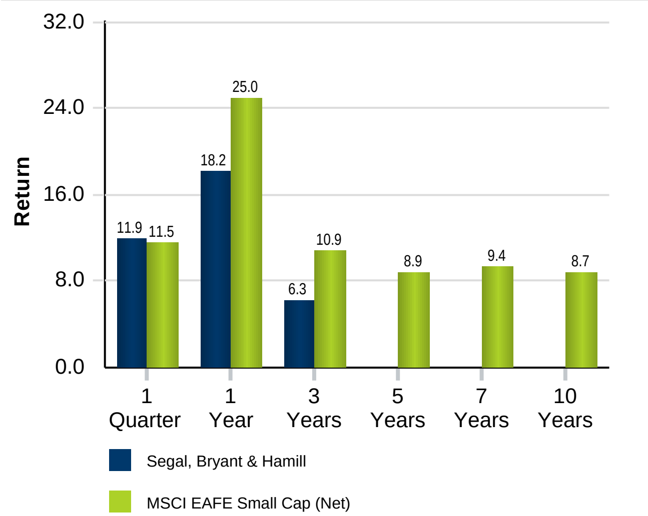
Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

Performance Summary

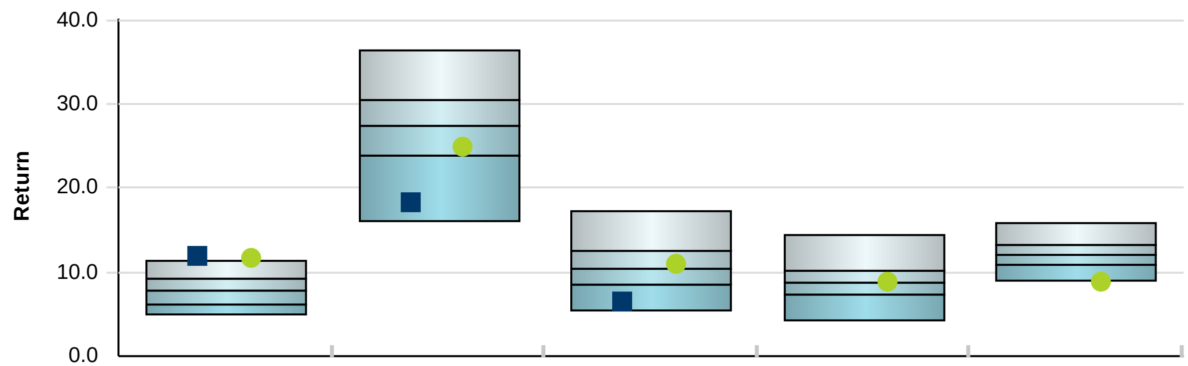
Segal, Bryant & Hamill

Periods Ended December 31, 2019

Comparative Performance

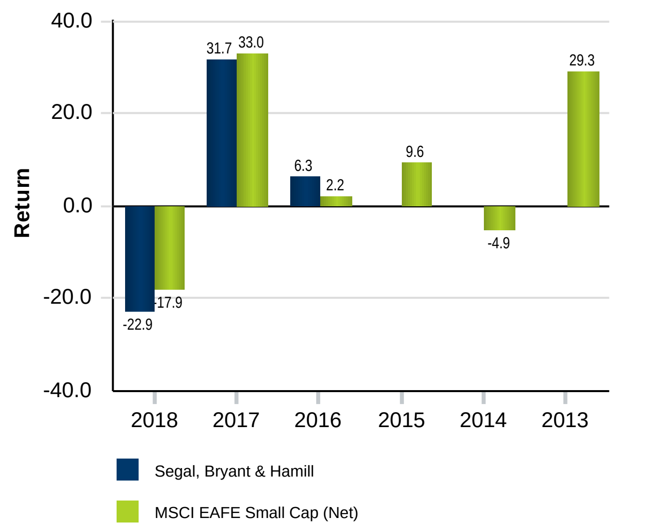


Peer Group Analysis: IM U.S. All Cap Value Equity (SA+CF)

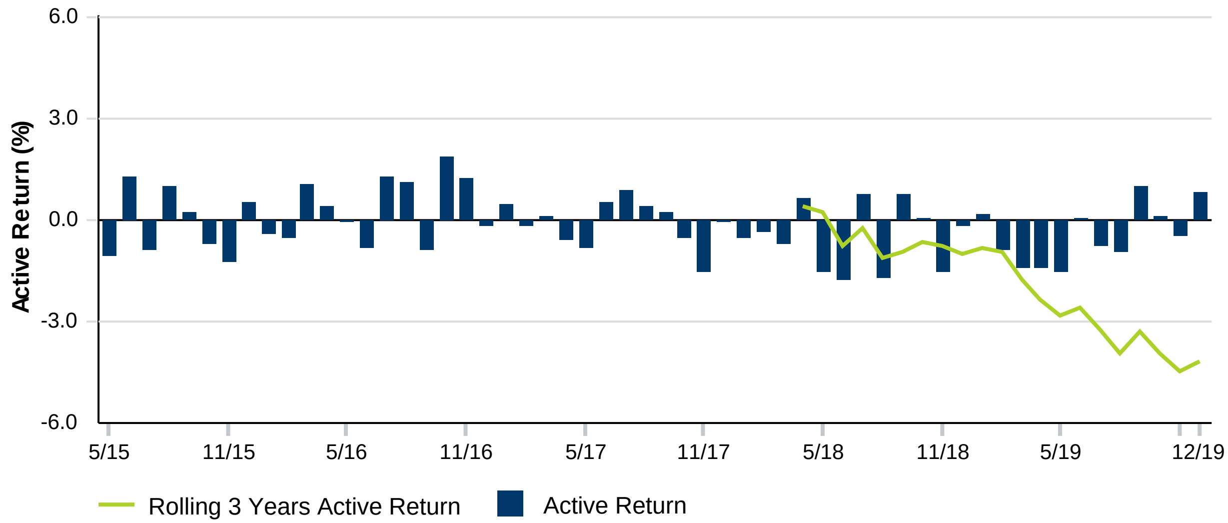


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	11.95 (3)	18.21 (95)	6.30 (92)		
Benchmark	11.52 (4)	24.96 (70)	10.92 (39)	8.85 (49)	8.74 (96)
Median	7.74	27.51	10.43	8.81	12.08

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Segal, Bryant & Hamill

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Segal, Bryant & Hamill	MSCI EAFE Small Cap (Net)
Maximum Return	8.26	8.06
Minimum Return	-6.84	-5.29
Return	18.21	24.96
Cumulative Return	18.21	24.96
Active Return	-5.38	0.00
Excess Return	15.55	20.93

Risk Summary Statistics

	Segal, Bryant & Hamill	MSCI EAFE Small Cap (Net)
Upside Risk	3.61	3.53
Downside Risk	7.89	5.88
Beta	1.16	1.00

Risk/Return Summary Statistics

	Segal, Bryant & Hamill	MSCI EAFE Small Cap (Net)
Standard Deviation	13.87	11.80
Alpha	-8.74	0.00
Active Return/Risk	-0.39	0.00
Tracking Error	2.88	0.00
Information Ratio	-1.87	
Sharpe Ratio	1.12	1.77

Correlation Statistics

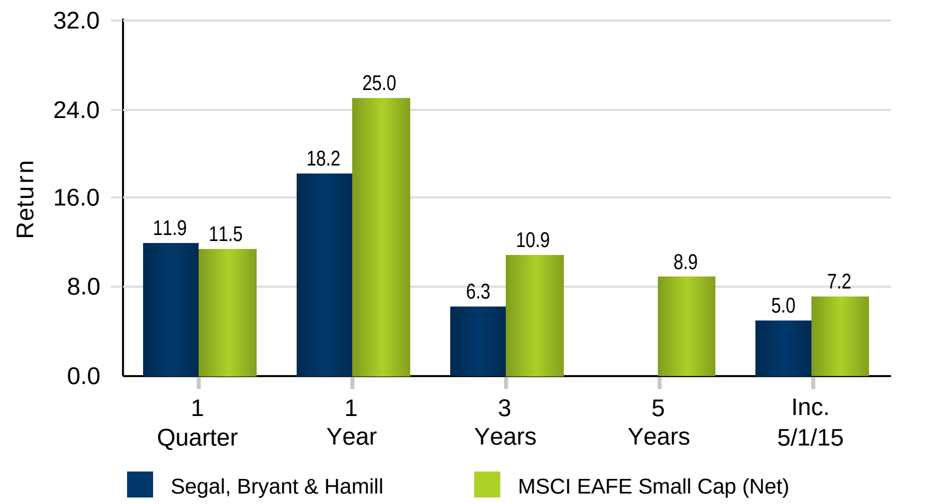
	Segal, Bryant & Hamill	MSCI EAFE Small Cap (Net)
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

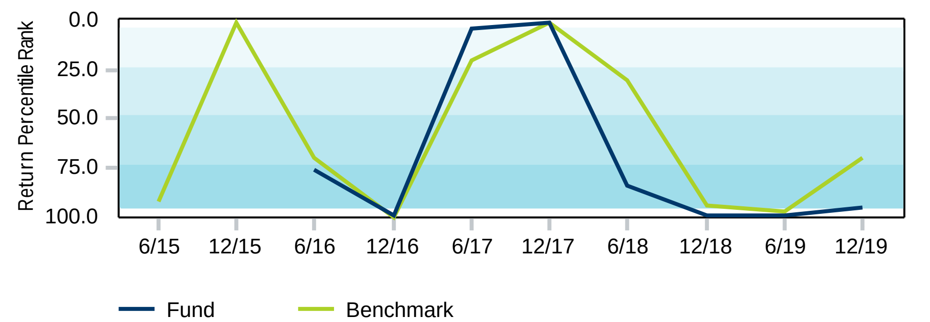
Segal, Bryant & Hamill vs IM U.S. All Cap Value Equity (SA+CF)

Periods Ended December 31, 2019

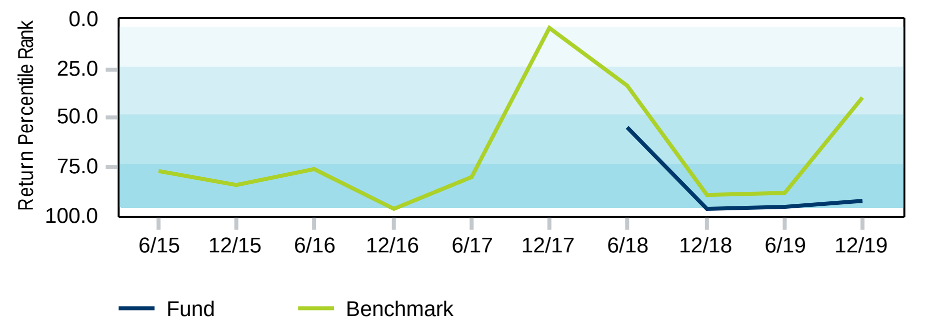
Comparative Performance



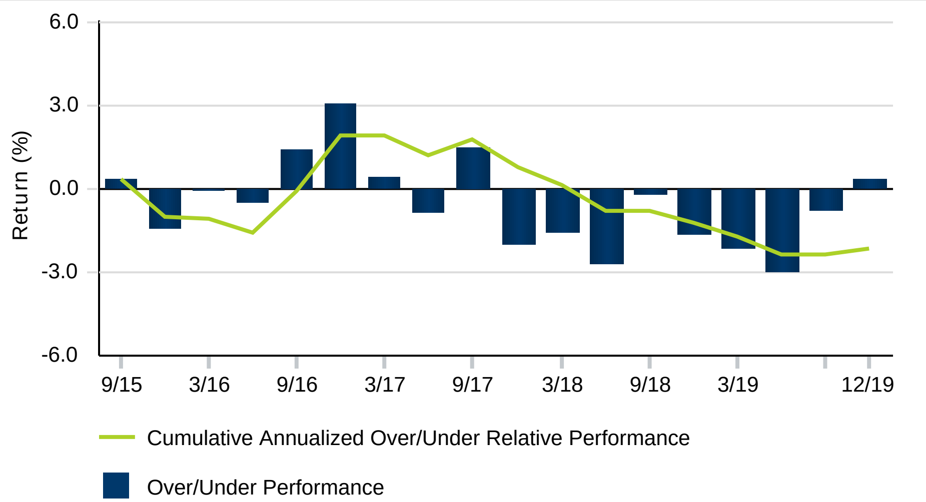
1 Year Rolling Percentile Ranking



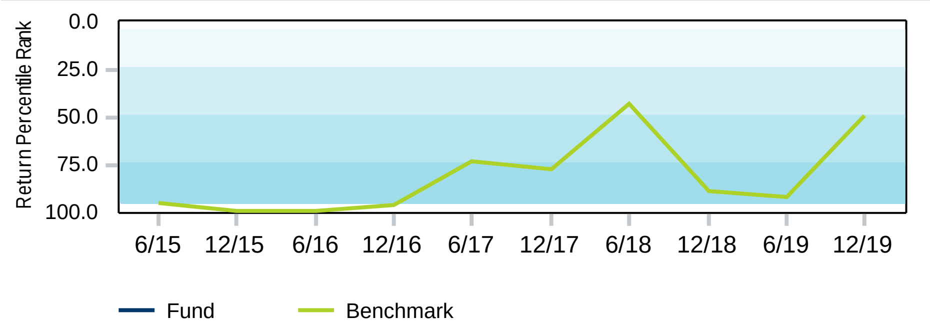
3 Year Rolling Percentile Ranking



Relative Performance



5 Year Rolling Percentile Ranking

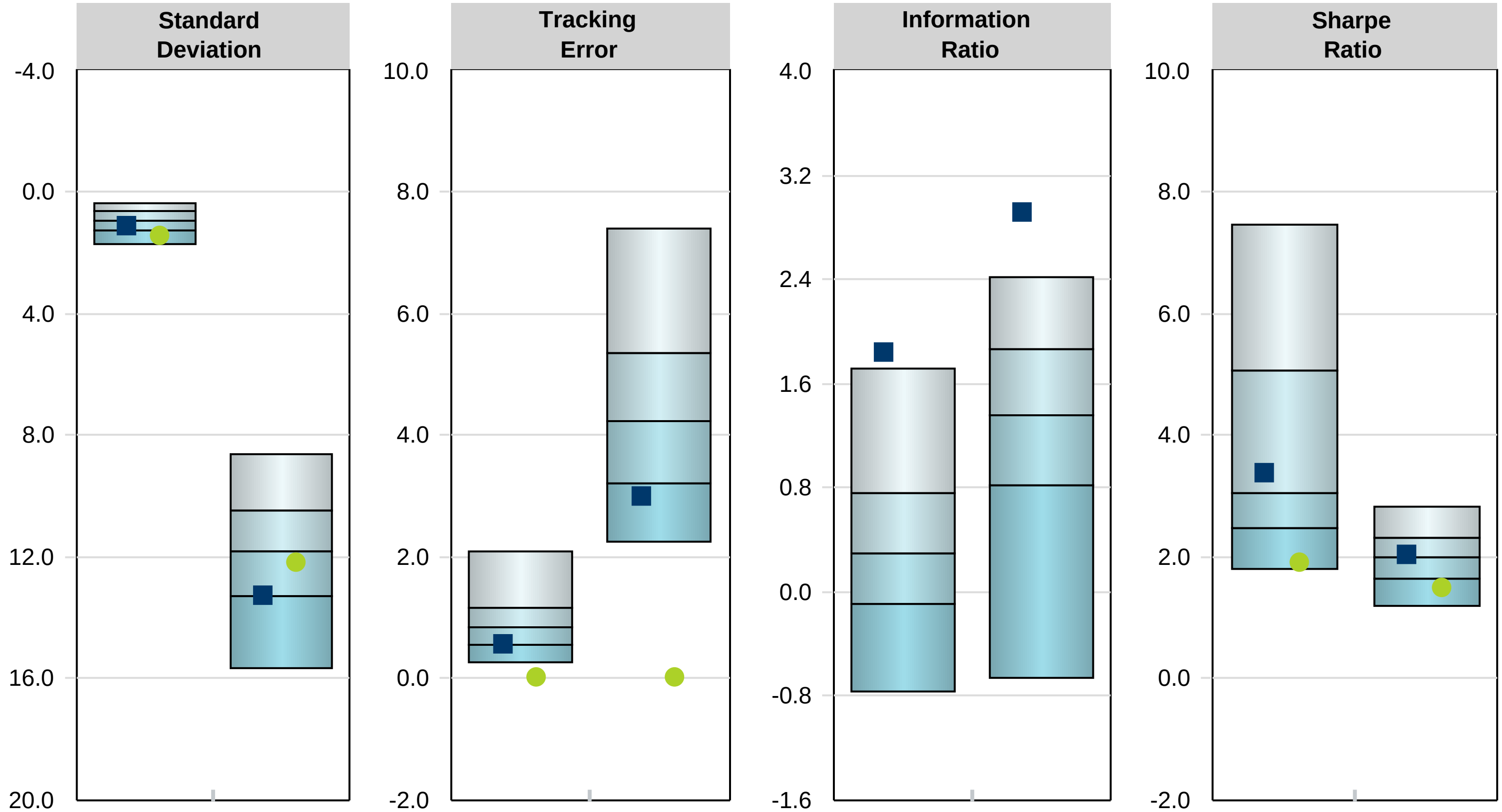


Wilshire Consulting

Peer Group Analysis - Multi Statistics

Baillie Gifford Intl Equity

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Baillie Gifford Intl Equity	1.13 (68)	13.31 (75)	0.55 (76)	3.00 (80)	1.83 (5)	2.92 (2)	3.38 (44)	2.02 (48)
● MSCI AC World ex USA (Net)	1.47 (85)	12.17 (52)	0.00 (100)	0.00 (100)			1.89 (91)	1.49 (90)
5th Percentile	0.36	8.63	2.11	7.39	1.71	2.42	7.48	2.82
1st Quartile	0.64	10.47	1.18	5.35	0.76	1.87	5.06	2.33
Median	0.94	11.82	0.86	4.25	0.29	1.35	3.05	2.00
3rd Quartile	1.26	13.31	0.55	3.22	-0.09	0.81	2.47	1.65
95th Percentile	1.71	15.64	0.27	2.25	-0.76	-0.67	1.80	1.19

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

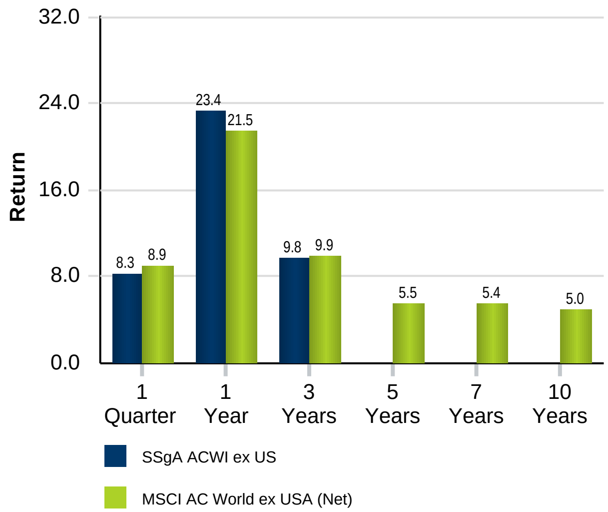
Wilshire Consulting

Performance Summary

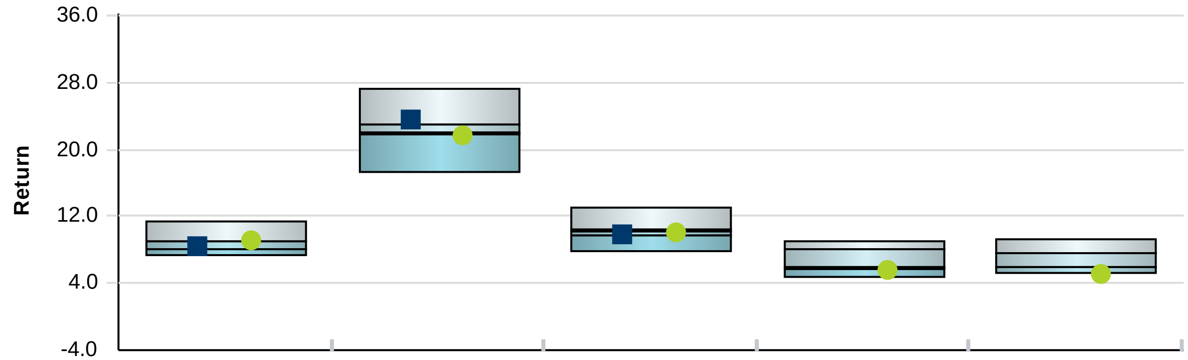
SSgA ACWI ex US

Periods Ended December 31, 2019

Comparative Performance

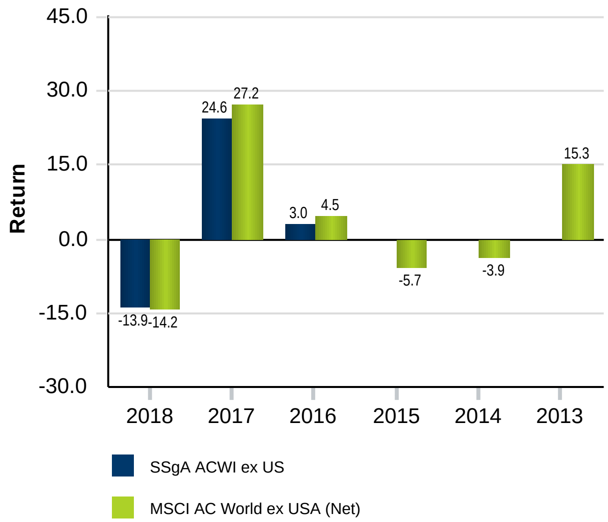


Peer Group Analysis: IM Enhanced and Indexed International Equity (SA+CF)

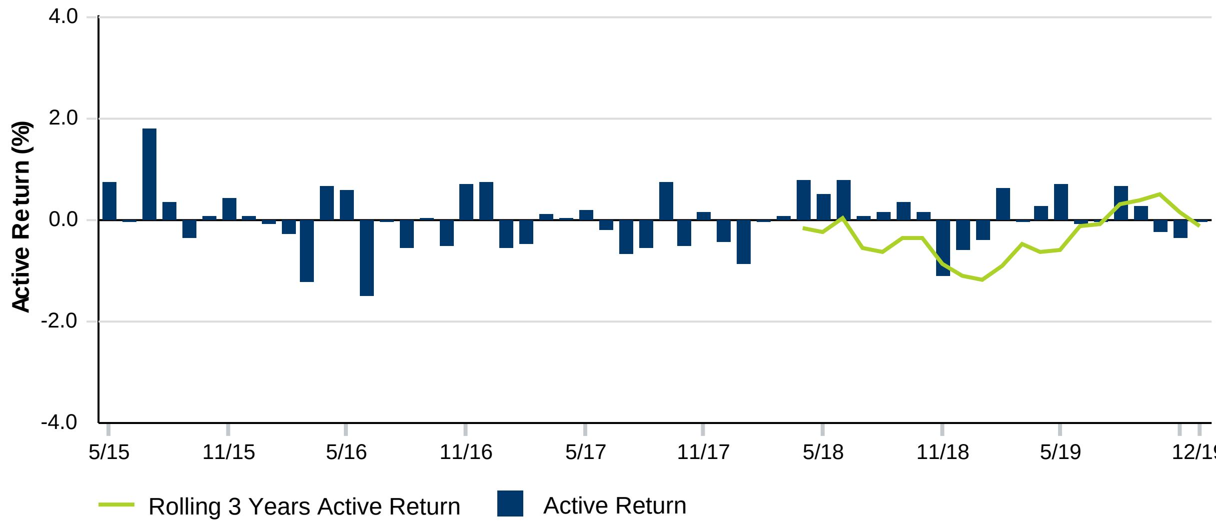


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	8.29 (64)	23.42 (23)	9.80 (74)		
Benchmark	8.92 (52)	21.51 (78)	9.87 (71)	5.51 (89)	4.97 (98)
Median	8.93	21.99	10.14	6.00	5.88

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

SSgA ACWI ex US

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	SSgA ACWI ex US	MSCI AC World ex USA (Net)
Maximum Return	7.15	7.56
Minimum Return	-4.65	-5.37
Return	23.42	21.51
Cumulative Return	23.42	21.51
Active Return	1.48	0.00
Excess Return	19.61	18.12

Risk Summary Statistics

	SSgA ACWI ex US	MSCI AC World ex USA (Net)
Upside Risk	3.41	3.45
Downside Risk	5.39	6.31
Beta	0.93	1.00

Risk/Return Summary Statistics

	SSgA ACWI ex US	MSCI AC World ex USA (Net)
Standard Deviation	11.35	12.17
Alpha	2.96	0.00
Active Return/Risk	0.13	0.00
Tracking Error	1.29	0.00
Information Ratio	1.15	
Sharpe Ratio	1.72	1.49

Correlation Statistics

	SSgA ACWI ex US	MSCI AC World ex USA (Net)
R-Squared	0.99	1.00
Actual Correlation	1.00	1.00

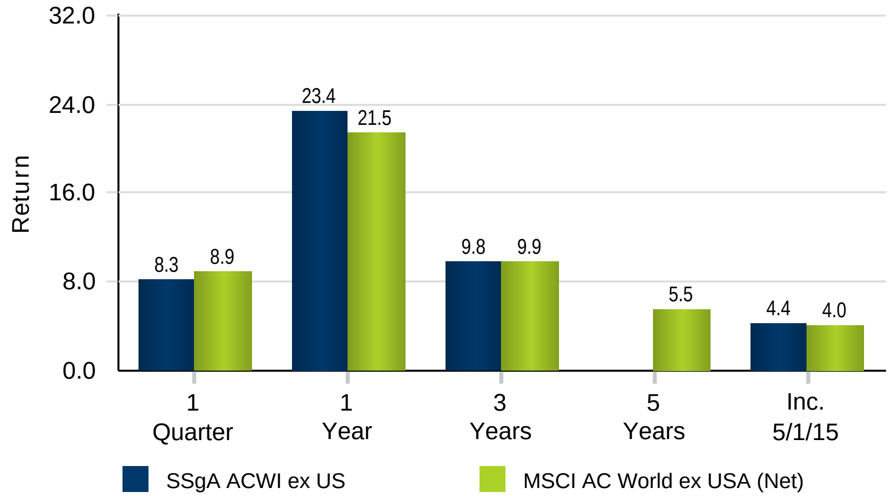
Wilshire Consulting

Manager Summary

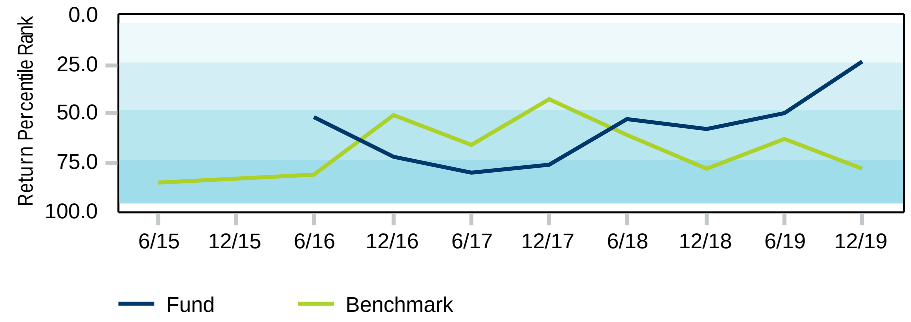
SSgA ACWI ex US vs IM Enhanced and Indexed International Equity (SA+CF)

Periods Ended December 31, 2019

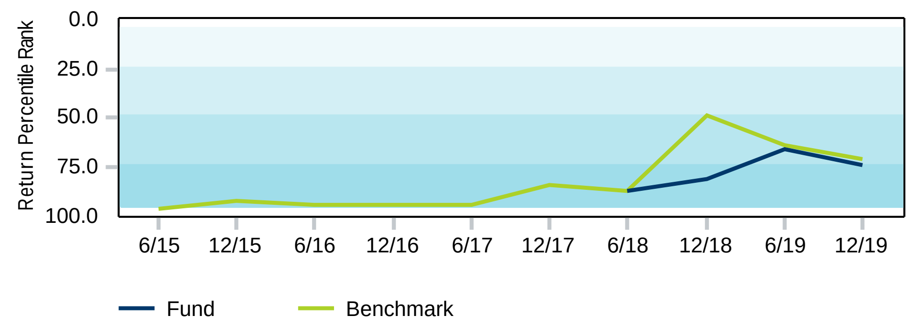
Comparative Performance



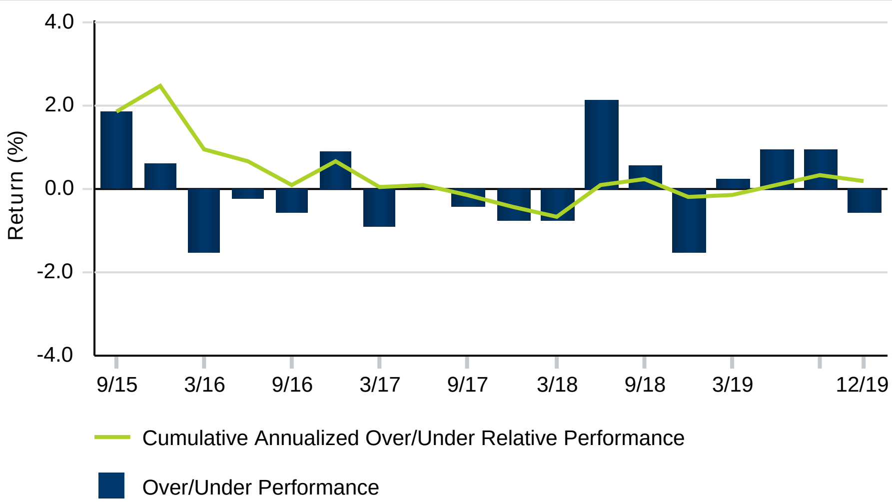
1 Year Rolling Percentile Ranking



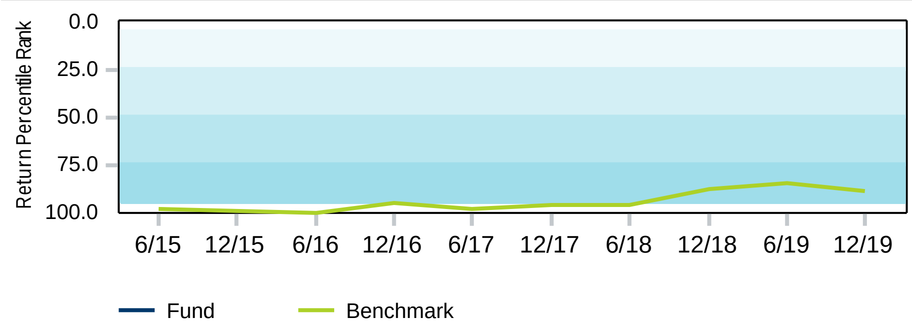
3 Year Rolling Percentile Ranking



Relative Performance



5 Year Rolling Percentile Ranking

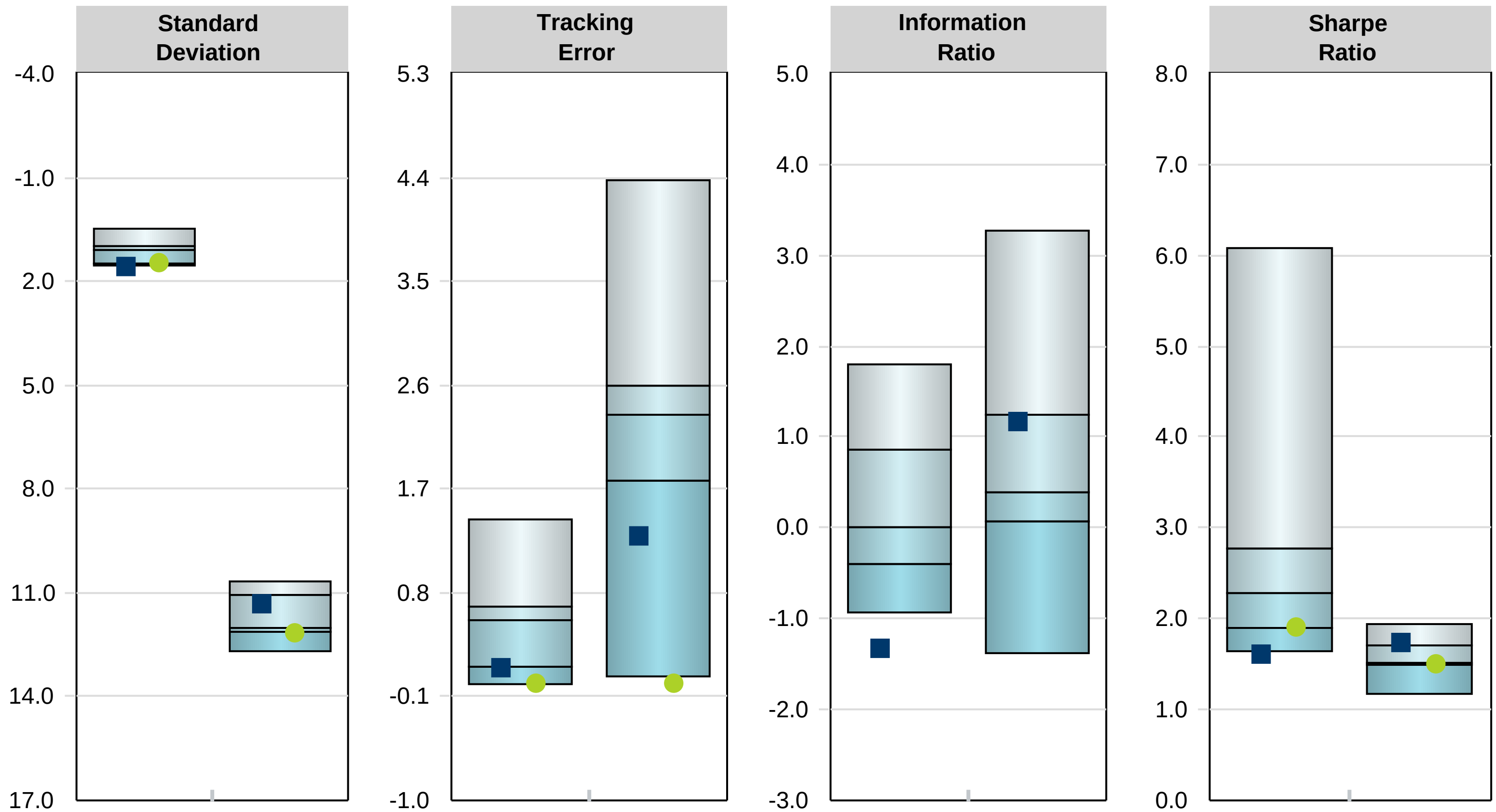


Wilshire Consulting

Peer Group Analysis - Multi Statistics

SSgA ACWI ex US

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ SSgA ACWI ex US	1.60 (96)	11.35 (33)	0.15 (76)	1.29 (79)	-1.34 (98)	1.15 (29)	1.60 (98)	1.72 (25)
● MSCI AC World ex USA (Net)	1.47 (80)	12.17 (77)	0.00 (100)	0.00 (100)			1.89 (85)	1.49 (73)
5th Percentile	0.45	10.70	1.43	4.38	1.80	3.26	6.08	1.94
1st Quartile	0.99	11.05	0.69	2.60	0.86	1.24	2.78	1.72
Median	1.12	12.02	0.56	2.35	0.00	0.38	2.29	1.52
3rd Quartile	1.46	12.15	0.16	1.77	-0.40	0.06	1.90	1.48
95th Percentile	1.56	12.72	0.00	0.08	-0.93	-1.38	1.63	1.18

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

GLOBAL EQUITY

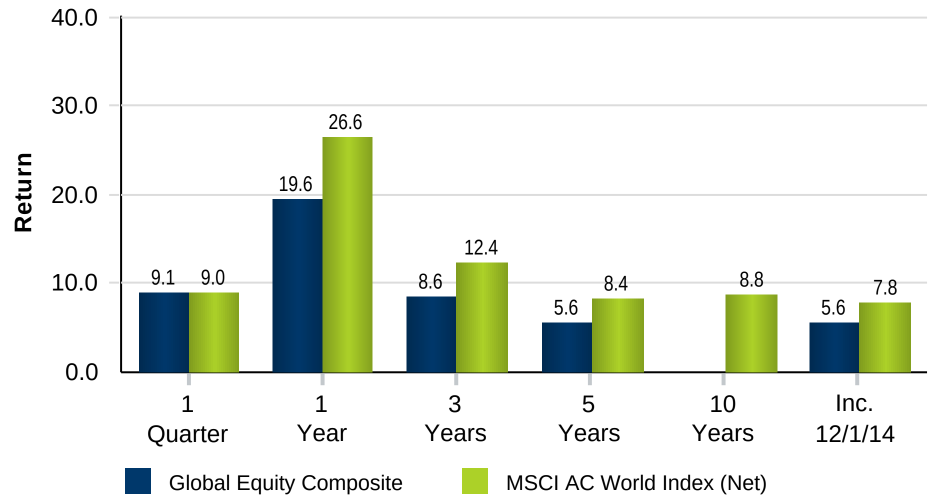
Wilshire Consulting

Composite Performance Summary

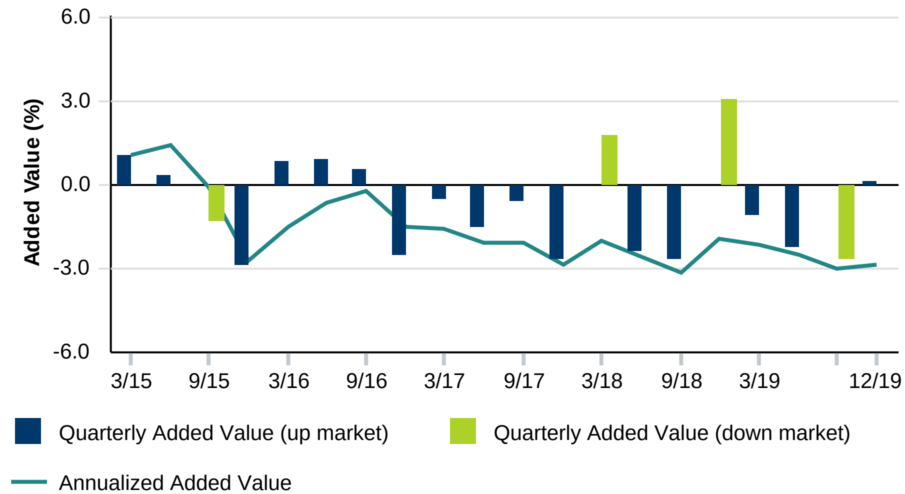
Global Equity Composite

Periods Ended December 31, 2019

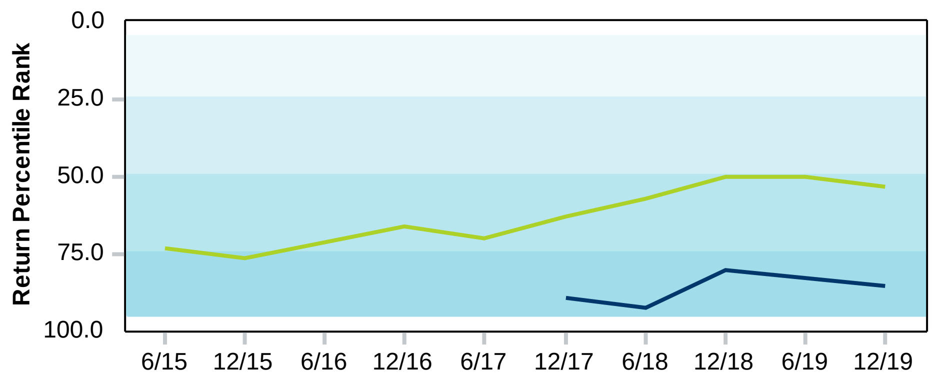
Comparative Performance



Added Value History

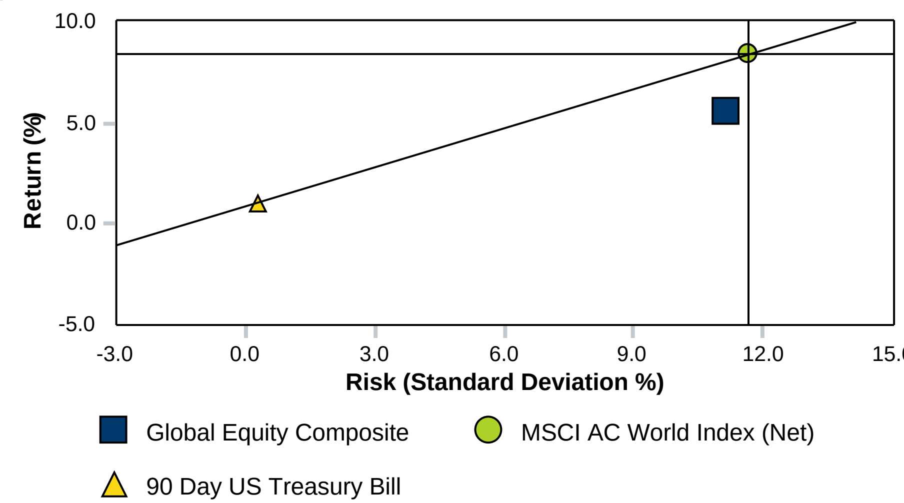


Rolling Percentile Rank: IM Global Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Global Equity Composite	5	0 (0%)	0 (0%)	0 (0%)	5 (100%
Benchmark	10	0 (0%)	2 (20%)	7 (70%)	1 (10%)

Risk and Return 01/1/15 - 12/31/19

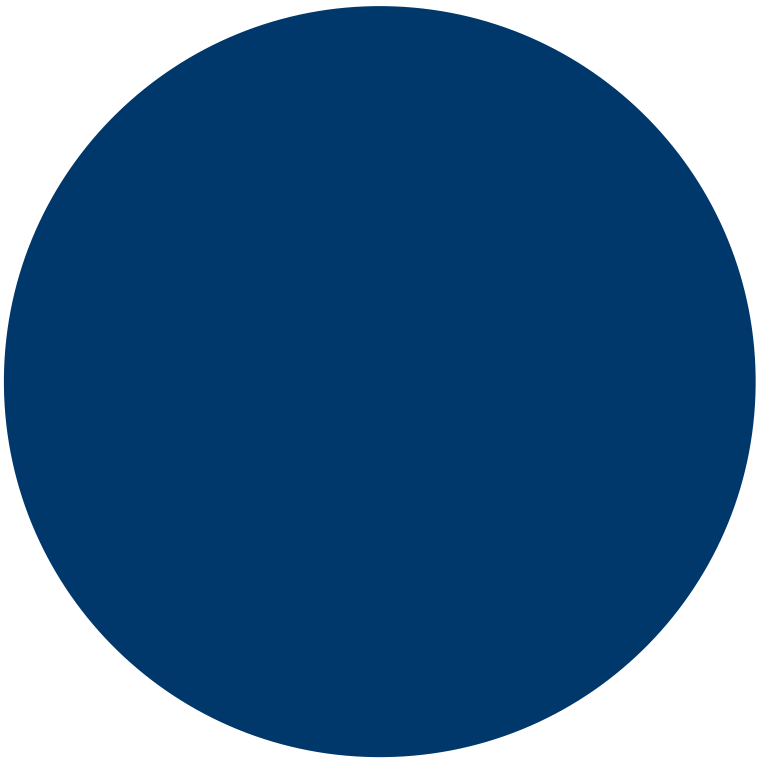


Asset Allocation By Manager

Global Equity Composite

Periods Ended December 31, 2019

Dec-2019 : 1,239,192

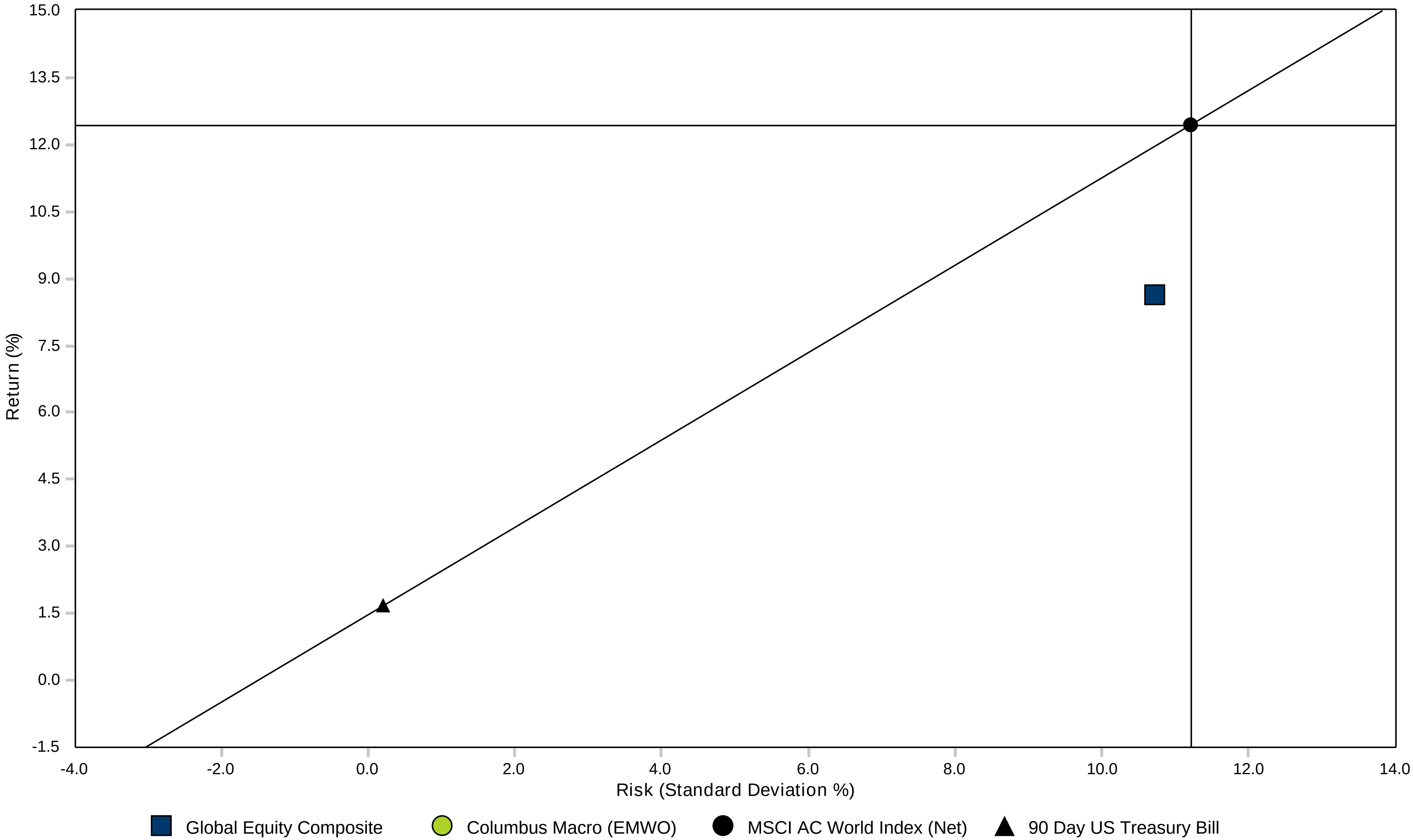


	Market Value $	Allocation (%)
Columbus Macro (EMWO)	1,239,192	100.0

Risk vs. Return

Global Equity Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

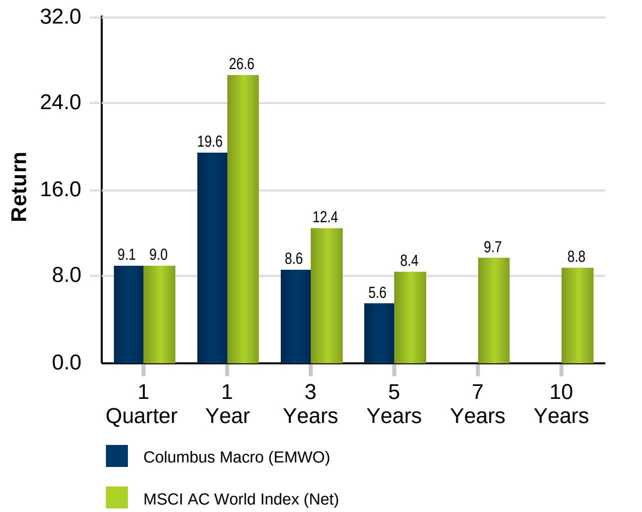
Wilshire Consulting

Performance Summary

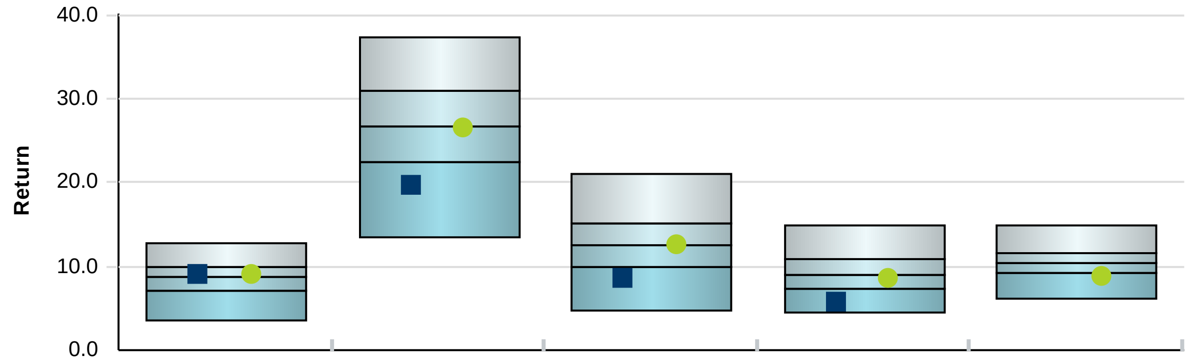
Columbus Macro (EMWO)

Periods Ended December 31, 2019

Comparative Performance

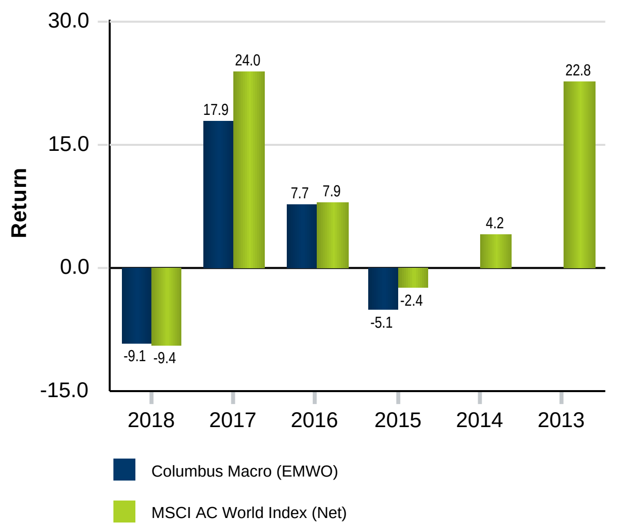


Peer Group Analysis: IM Global Equity (SA+CF)

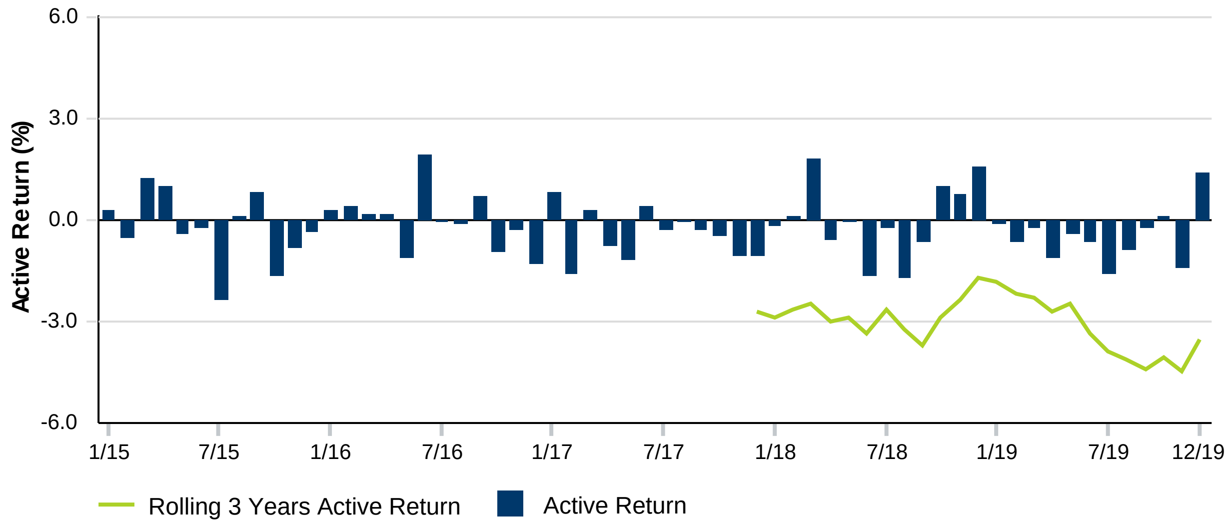


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	9.08 (43)	19.58 (87)	8.63 (85)	5.56 (90)	
Benchmark	8.95 (45)	26.60 (52)	12.44 (53)	8.41 (59)	8.79 (81)
Median	8.66	26.78	12.61	8.88	10.37

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Columbus Macro (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Columbus Macro (EMWO)	MSCI AC World Index (Net)
Maximum Return	7.78	7.90
Minimum Return	-6.37	-5.93
Return	19.58	26.60
Cumulative Return	19.58	26.60
Active Return	-5.70	0.00
Excess Return	16.59	22.29

Risk Summary Statistics

	Columbus Macro (EMWO)	MSCI AC World Index (Net)
Upside Risk	3.45	3.60
Downside Risk	7.26	6.39
Beta	1.04	1.00

Risk/Return Summary Statistics

	Columbus Macro (EMWO)	MSCI AC World Index (Net)
Standard Deviation	12.88	12.10
Alpha	-6.56	0.00
Active Return/Risk	-0.44	0.00
Tracking Error	2.64	0.00
Information Ratio	-2.16	
Sharpe Ratio	1.29	1.84

Correlation Statistics

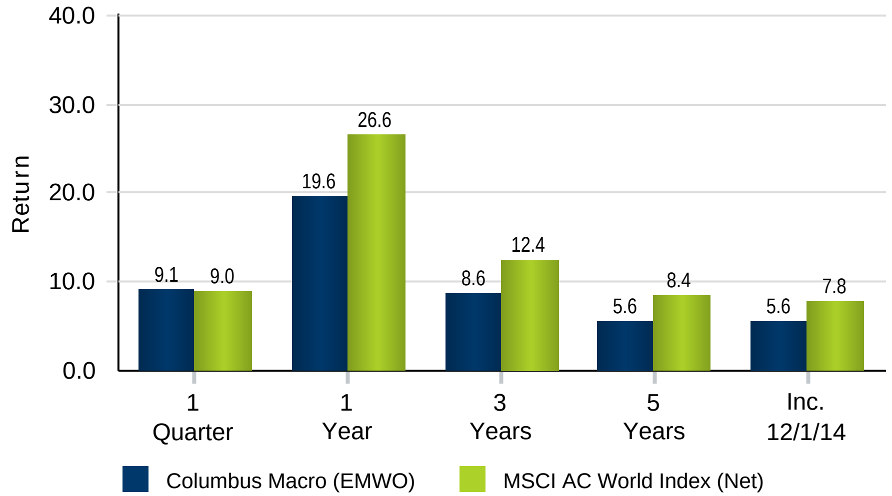
	Columbus Macro (EMWO)	MSCI AC World Index (Net)
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

Manager Summary

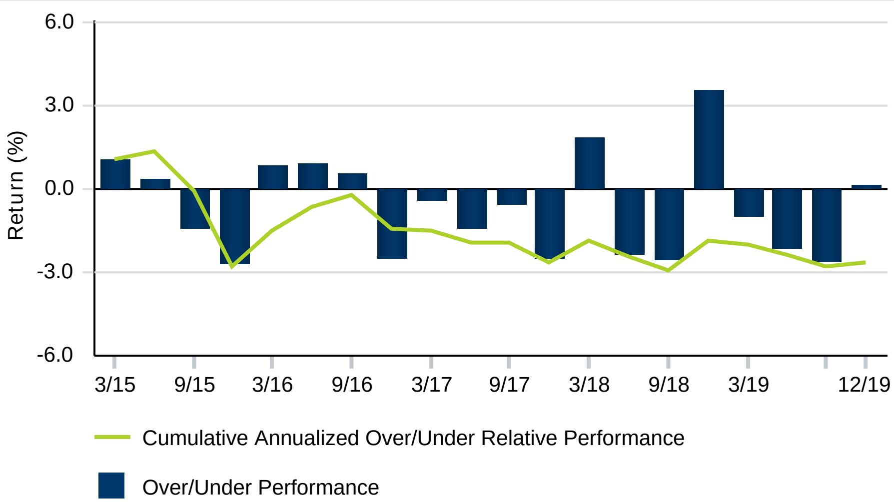
Columbus Macro (EMWO) vs IM Global Equity (SA+CF)

Periods Ended December 31, 2019

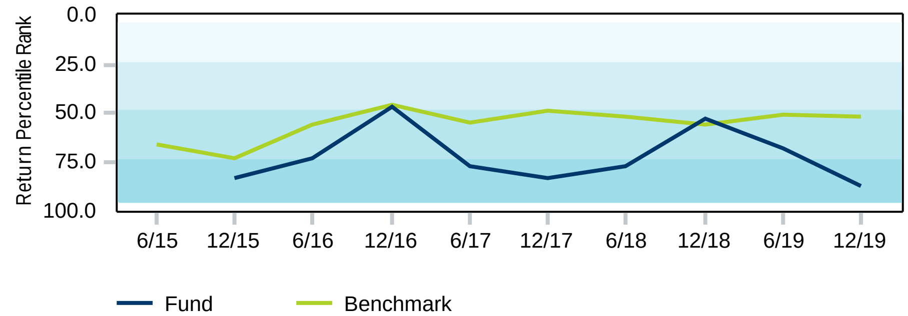
Comparative Performance



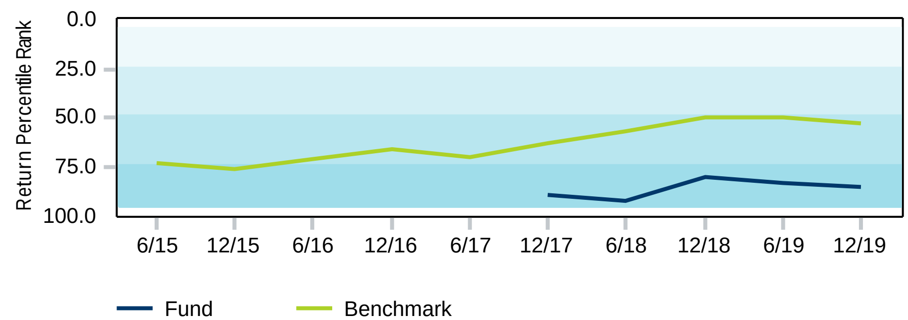
Relative Performance



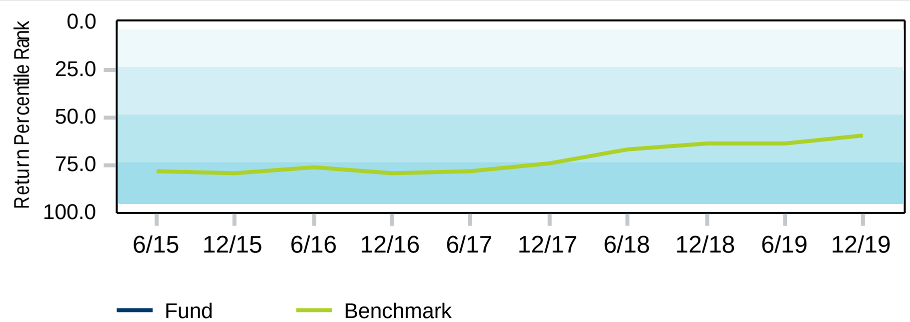
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

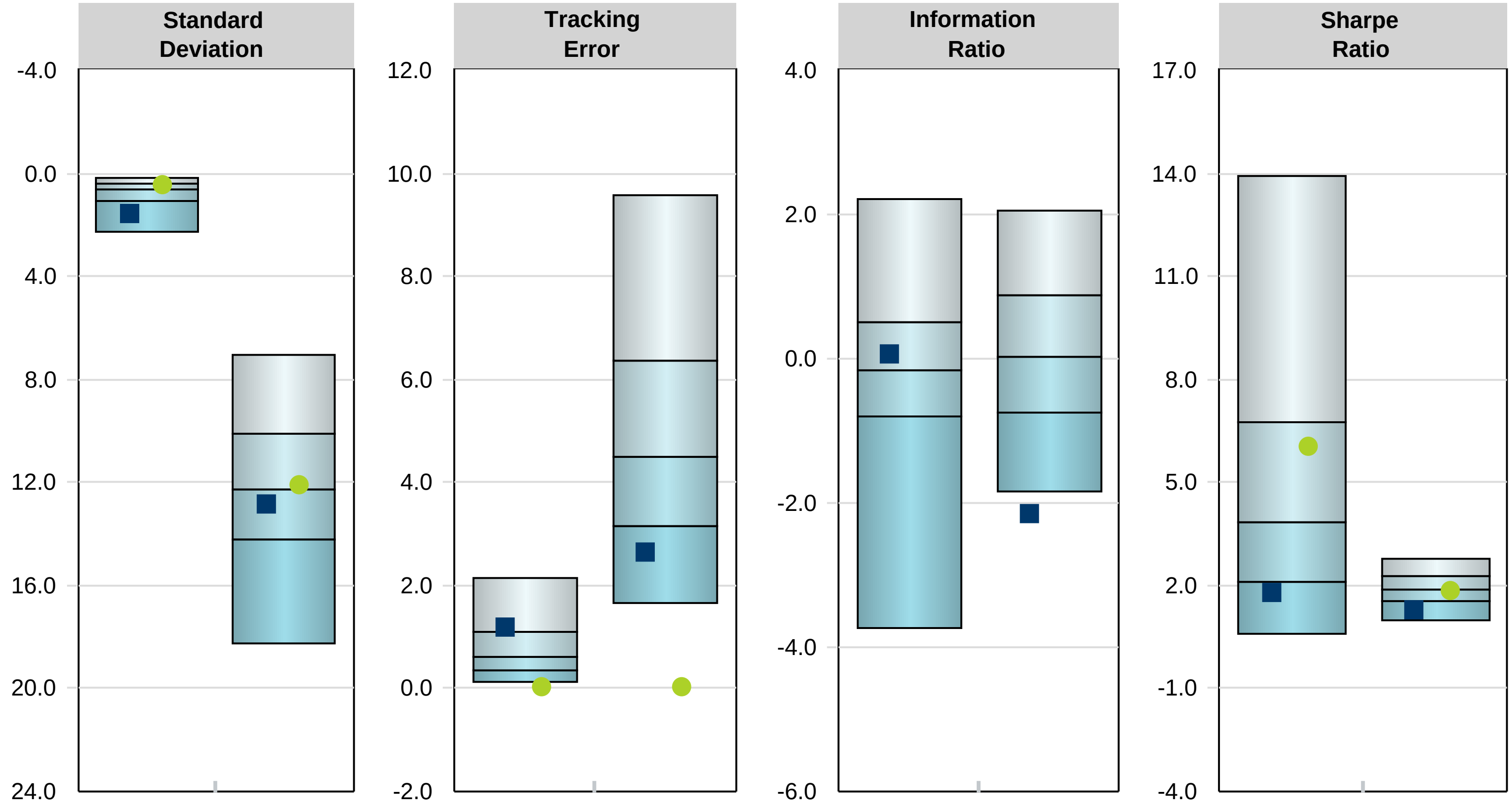


Wilshire Consulting

Peer Group Analysis - Multi Statistics

Columbus Macro (EMWO)

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Columbus Macro (EMWO)	1.60 (87)	12.88 (59)	1.16 (23)	2.64 (84)	0.04 (43)	-2.16 (97)	1.75 (81)	1.29 (88)
● MSCI AC World Index (Net)	0.46 (30)	12.10 (48)	0.00 (100)	0.00 (100)			6.02 (30)	1.84 (55)
5th Percentile	0.20	7.03	2.14	9.59	2.21	2.04	13.94	2.80
1st Quartile	0.40	10.10	1.09	6.37	0.50	0.88	6.73	2.25
Median	0.67	12.26	0.61	4.51	-0.15	0.04	3.84	1.89
3rd Quartile	1.09	14.20	0.36	3.17	-0.81	-0.74	2.13	1.52
95th Percentile	2.28	18.26	0.13	1.65	-3.72	-1.85	0.61	0.96

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

CORE FIXED INCOME

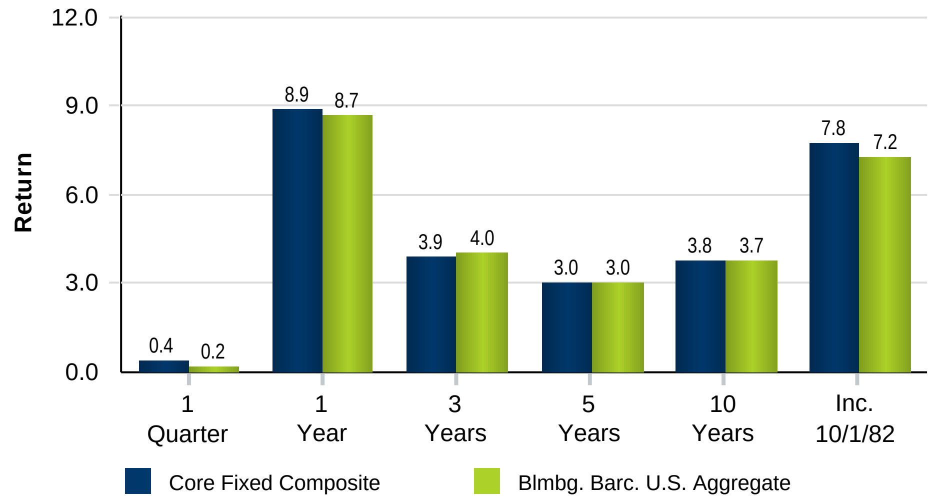
Wilshire Consulting

Composite Performance Summary

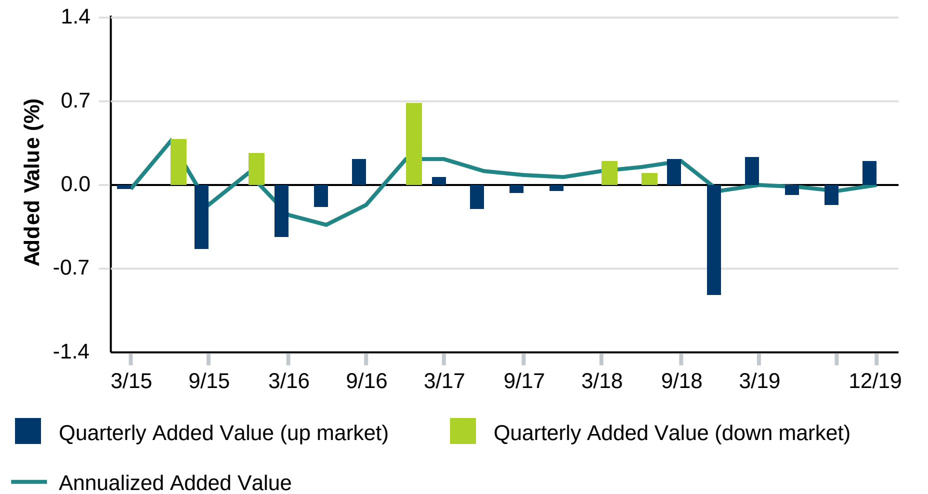
Core Fixed Composite

Periods Ended December 31, 2019

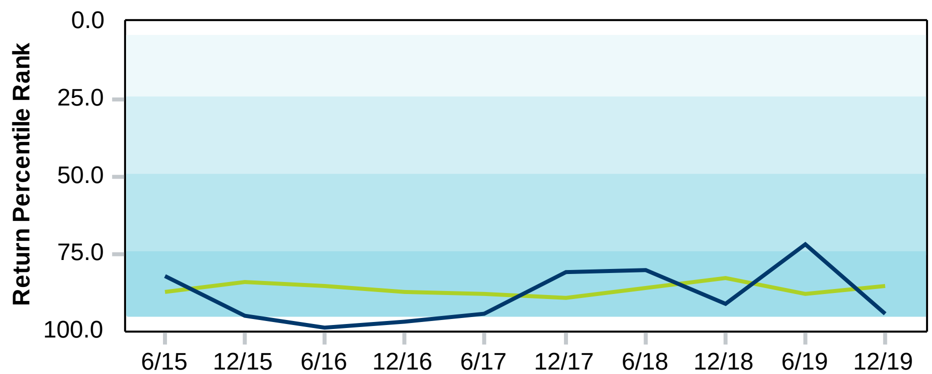
Comparative Performance



Added Value History

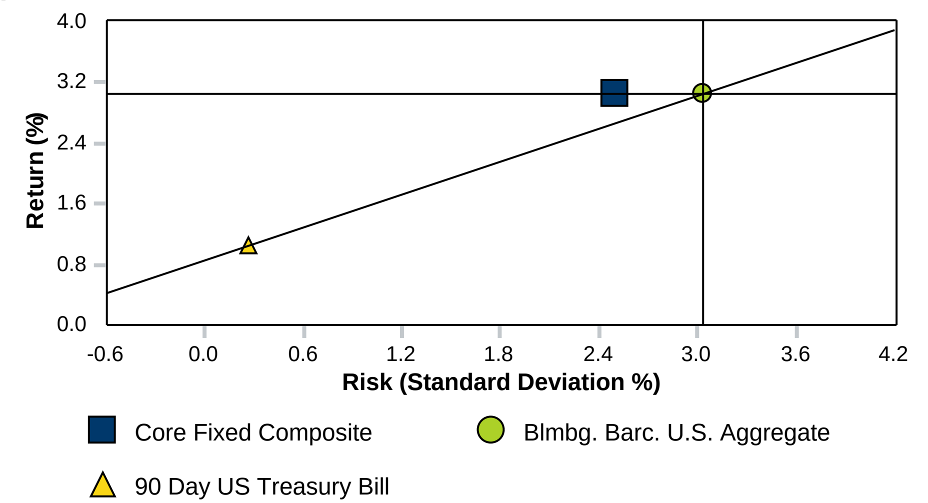


Rolling Percentile Rank: IM U.S. Broad Market Core Fixed Income (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Core Fixed Composite	10	0 (0%)	0 (0%)	1 (10%)	9 (90%)
Benchmark	10	0 (0%)	0 (0%)	0 (0%)	10 (100%

Risk and Return 01/1/15 - 12/31/19

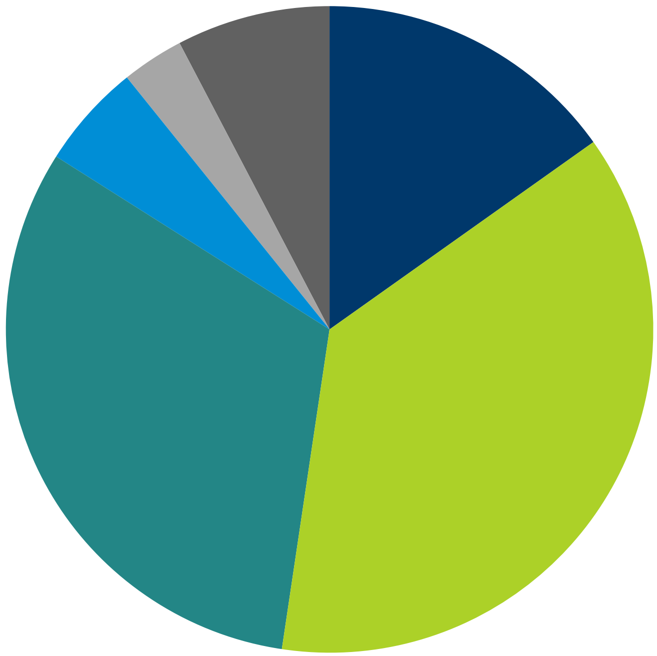


Asset Allocation By Manager

Core Fixed Composite

Periods Ended December 31, 2019

Dec-2019 : 86,384,559



	Market Value $	Allocation (%)
CIM Investment Mgmt	13,096,581	15.2
C S McKee	32,132,349	37.2
Federated	27,322,110	31.6
Gridiron Capital Fixed Income (EMWO)	4,524,657	5.2
FNB (EMWO)	2,679,970	3.1
StoneRidge Partners (EMWO)	6,628,893	7.7

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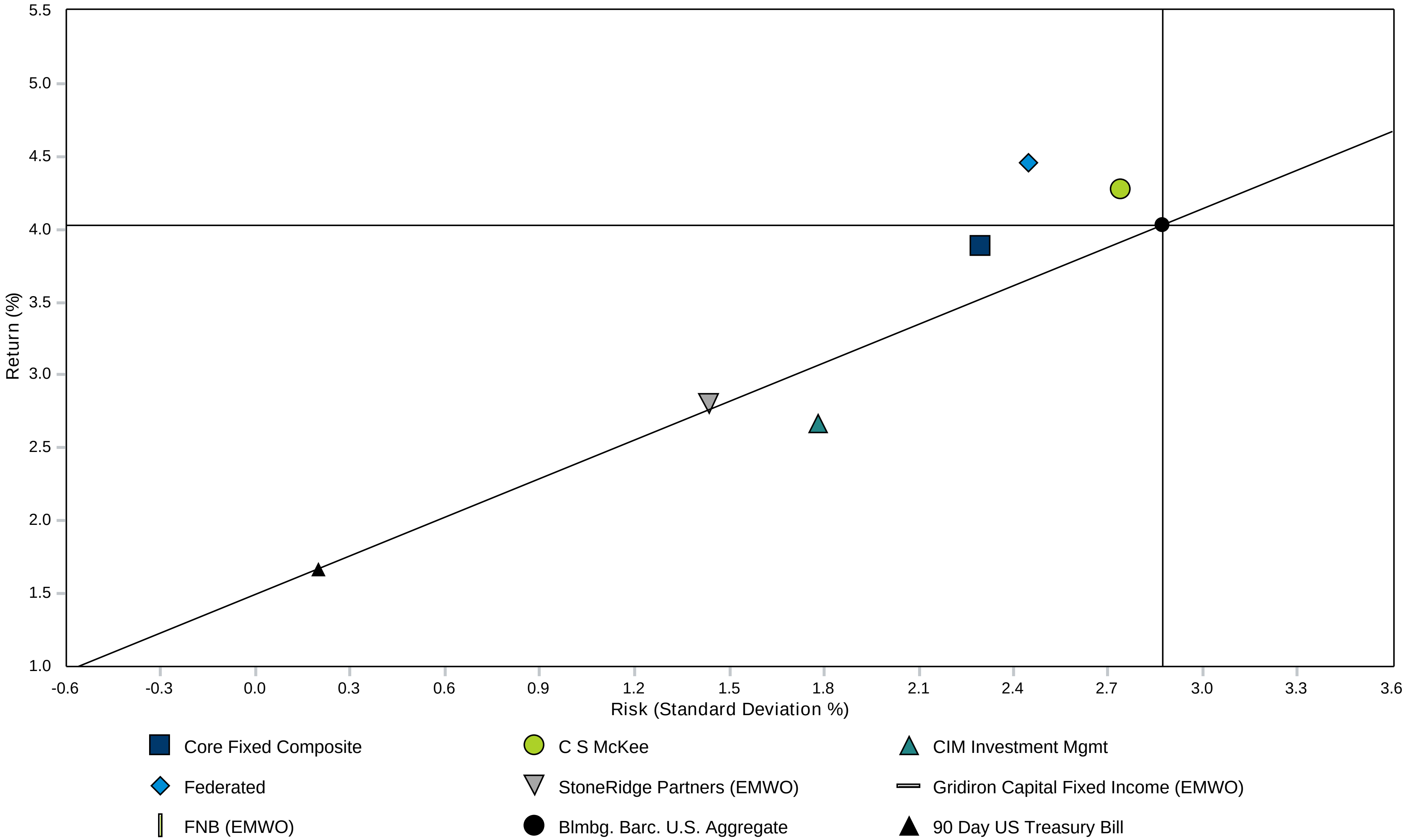
Risk vs. Return

Core Fixed Composite

Periods Ended 3 Years Ending December 31, 2019



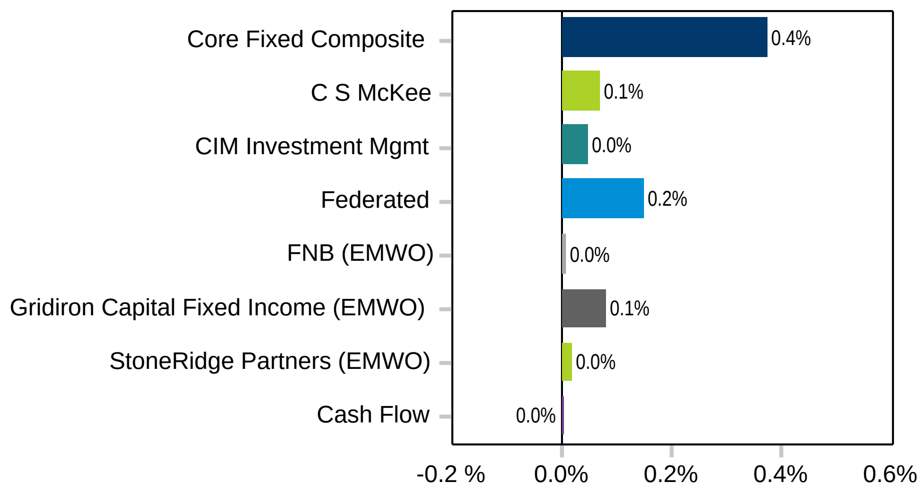
Calculation based on monthly periodicity.

Return and Risk Contribution

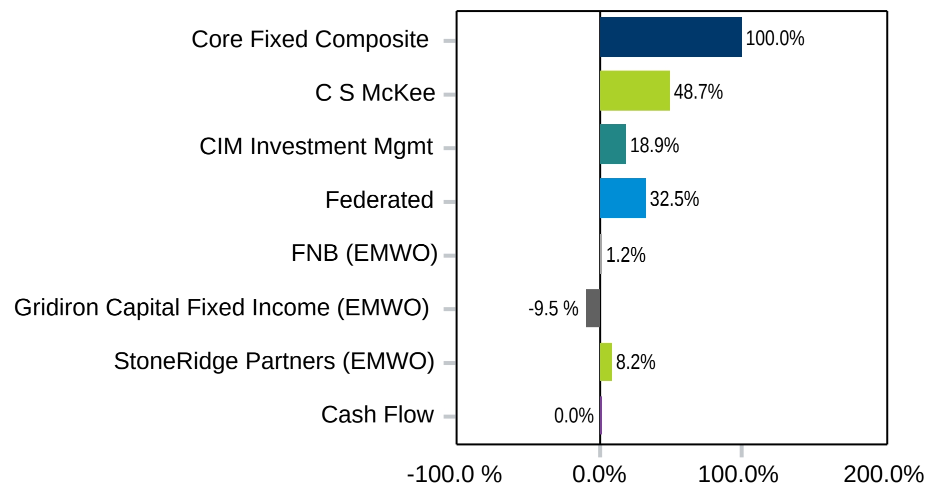
Core Fixed Composite

Periods Ended December 31, 2019

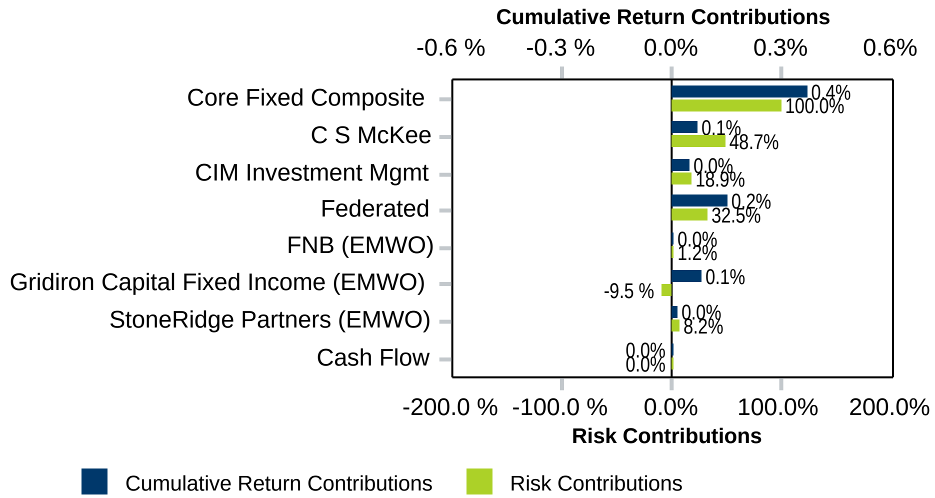
Cumulative Return Contributions



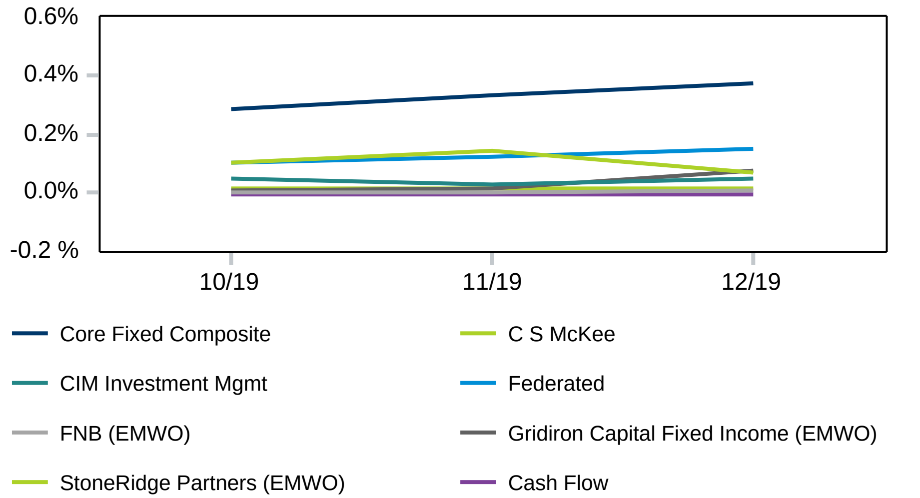
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

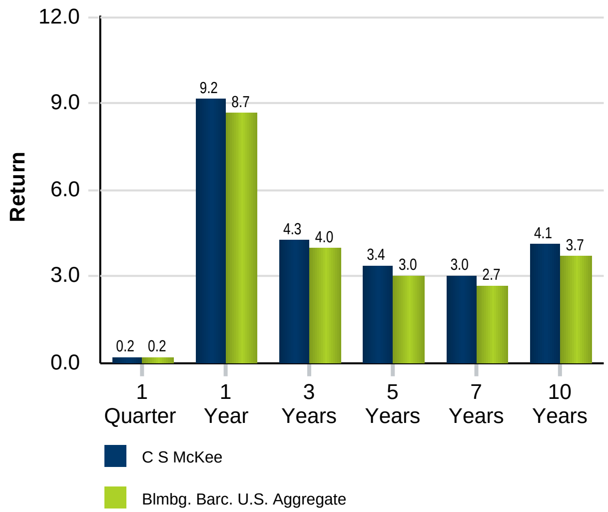


Performance Summary

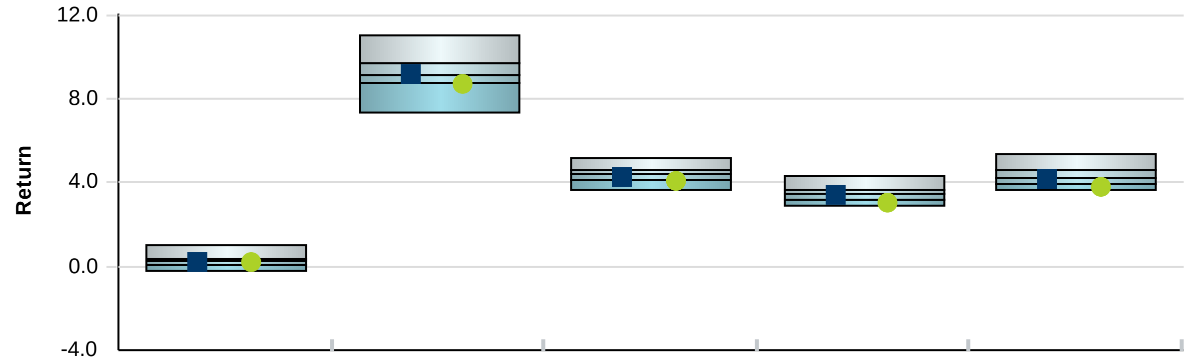
C S McKee

Periods Ended December 31, 2019

Comparative Performance

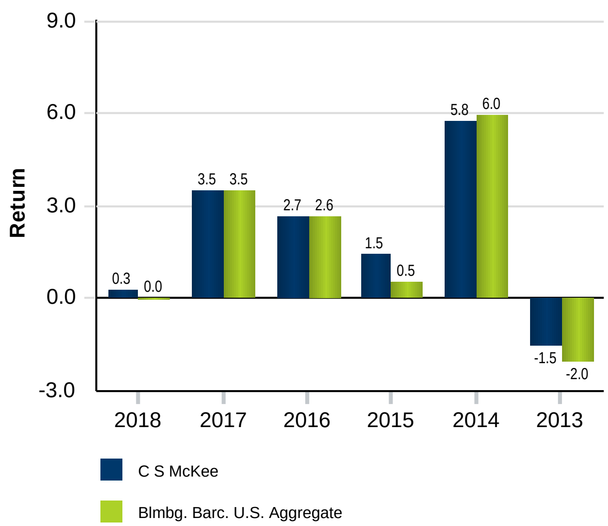


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

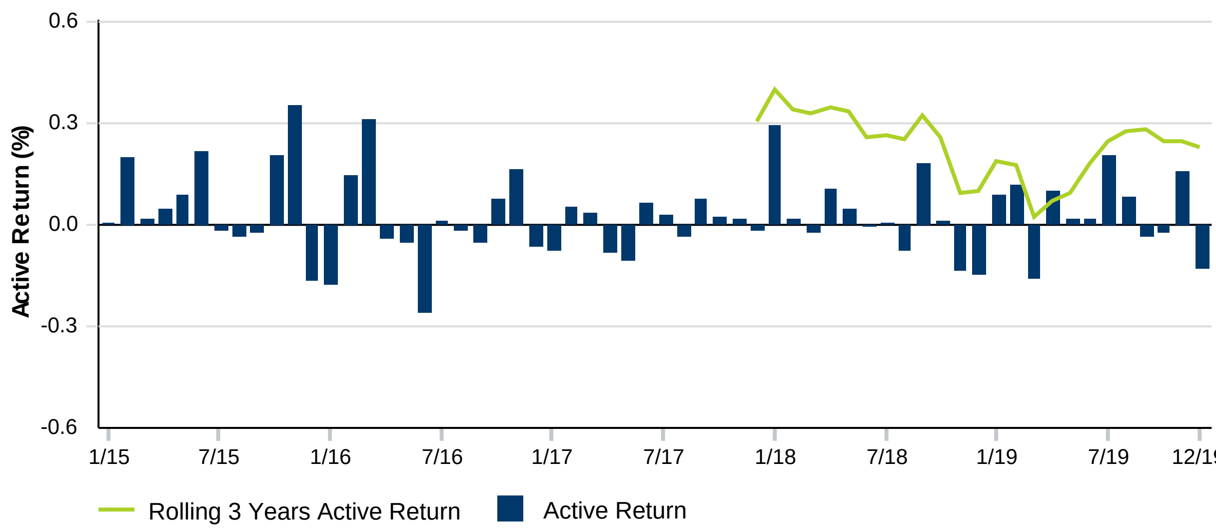


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.19 (55)	9.18 (51)	4.27 (61)	3.39 (56)	4.14 (60)
Benchmark	0.18 (57)	8.72 (77)	4.03 (85)	3.05 (89)	3.75 (91)
Median	0.22	9.20	4.40	3.46	4.27

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

C S McKee

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	C S McKee	Blmbg. Barc. U.S. Aggregate
Maximum Return	2.67	2.59
Minimum Return	-0.57	-0.53
Return	9.18	8.72
Cumulative Return	9.18	8.72
Active Return	0.43	0.00
Excess Return	6.61	6.18

Risk Summary Statistics

	C S McKee	Blmbg. Barc. U.S. Aggregate
Upside Risk	1.18	1.17
Downside Risk	0.60	0.54
Beta	0.98	1.00

Risk/Return Summary Statistics

	C S McKee	Blmbg. Barc. U.S. Aggregate
Standard Deviation	3.24	3.28
Alpha	0.60	0.00
Active Return/Risk	0.13	0.00
Tracking Error	0.37	0.00
Information Ratio	1.17	
Sharpe Ratio	2.09	1.93

Correlation Statistics

	C S McKee	Blmbg. Barc. U.S. Aggregate
R-Squared	0.99	1.00
Actual Correlation	0.99	1.00

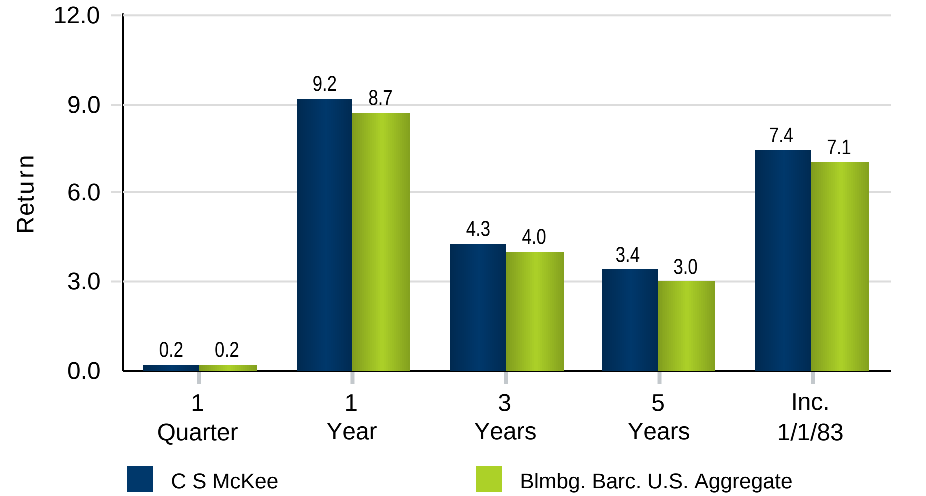
Wilshire Consulting

Manager Summary

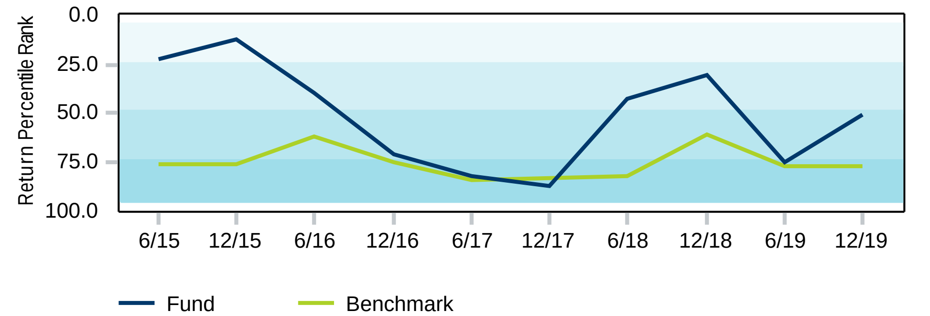
C S McKee vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended December 31, 2019

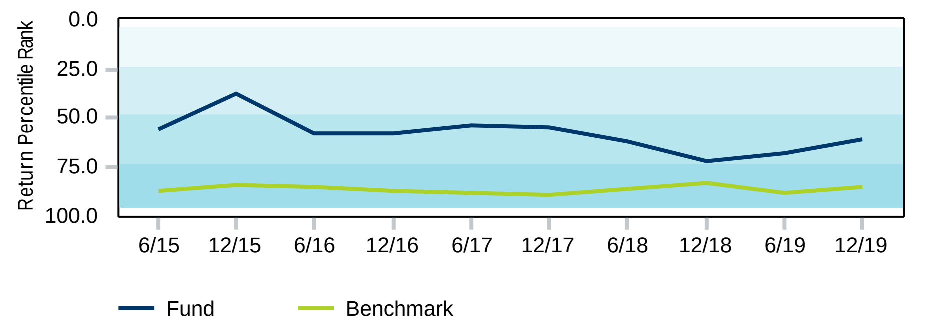
Comparative Performance



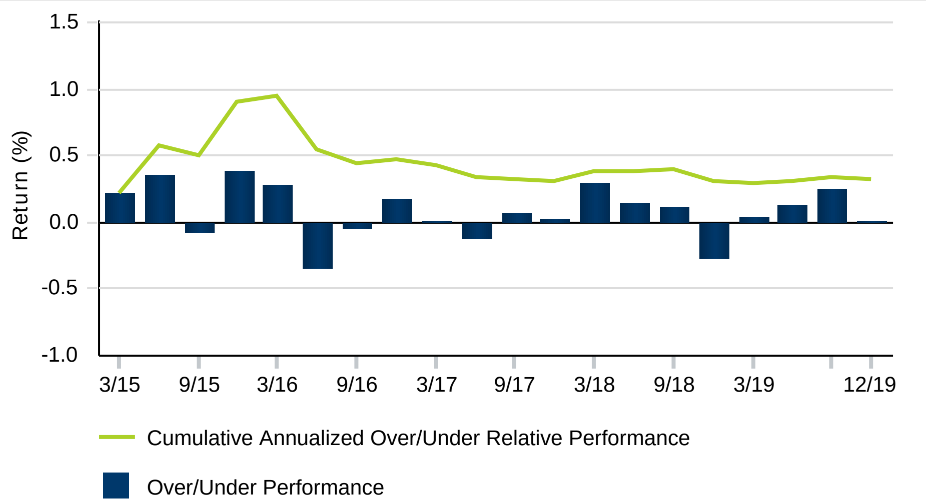
1 Year Rolling Percentile Ranking



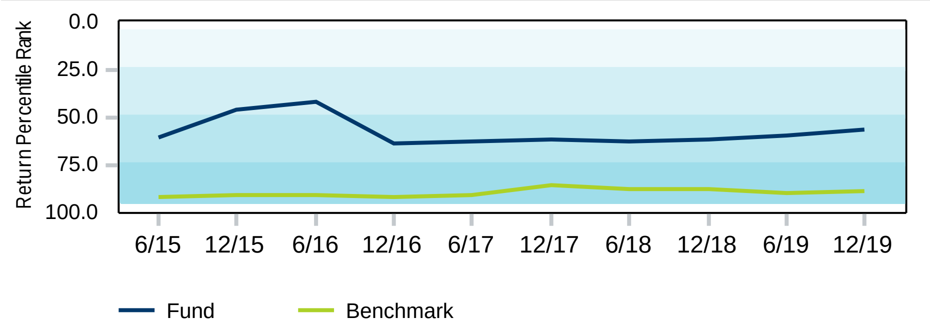
3 Year Rolling Percentile Ranking



Relative Performance



5 Year Rolling Percentile Ranking



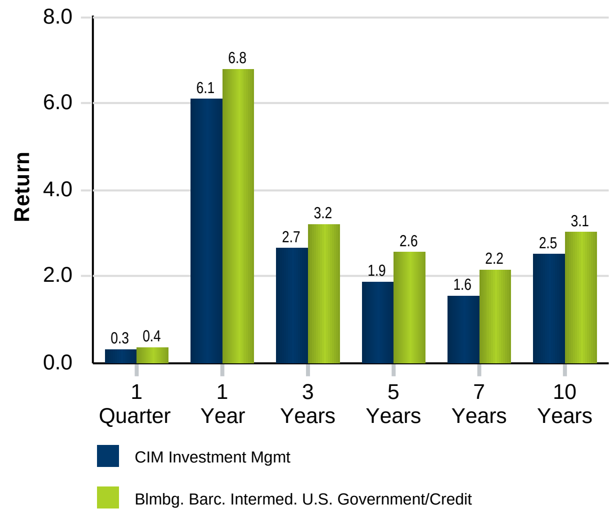
Wilshire Consulting

Performance Summary

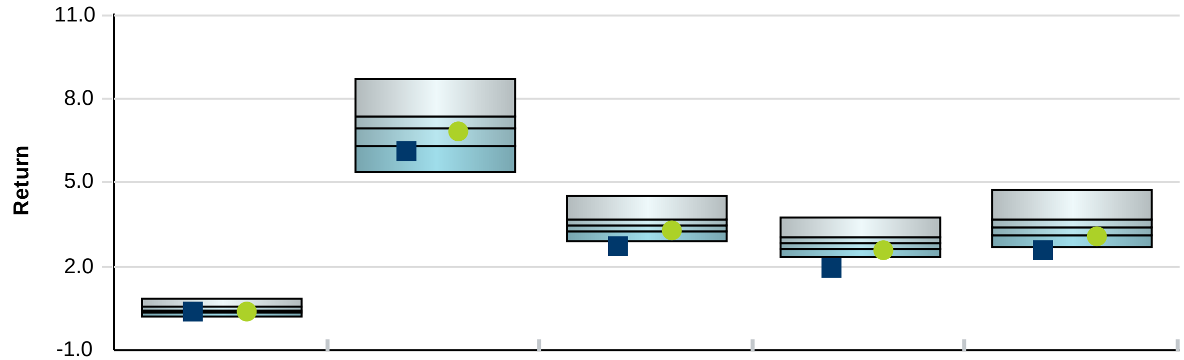
CIM Investment Mgmt

Periods Ended December 31, 2019

Comparative Performance

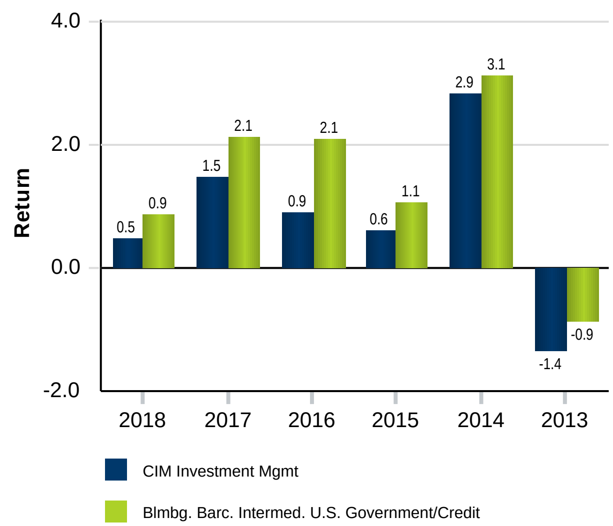


Peer Group Analysis: IM U.S. Intermediate Duration (SA+CF)

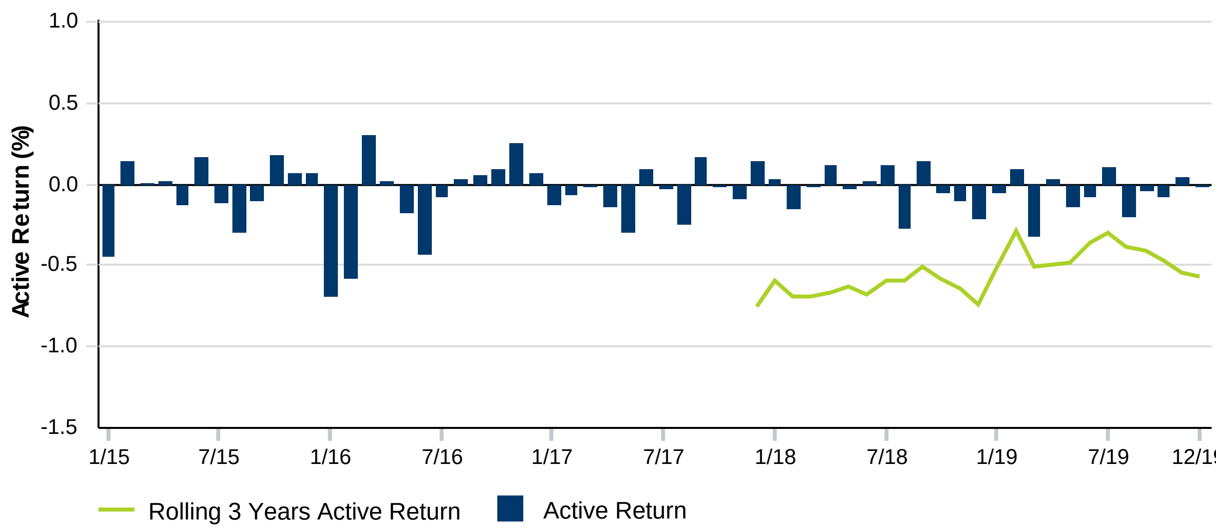


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.31 (80)	6.11 (80)	2.66 (98)	1.90 (100)	2.53 (98)
Benchmark	0.37 (69)	6.80 (59)	3.24 (77)	2.57 (83)	3.05 (84)
Median	0.44	6.93	3.45	2.83	3.40

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

CIM Investment Mgmt

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	CIM Investment Mgmt	Blmbg. Barc. Intermed. U.S. Government/Credit
Maximum Return	1.57	1.77
Minimum Return	-0.40	-0.36
Return	6.11	6.80
Cumulative Return	6.11	6.80
Active Return	-0.66	0.00
Excess Return	3.71	4.37

Risk Summary Statistics

	CIM Investment Mgmt	Blmbg. Barc. Intermed. U.S. Government/Credit
Upside Risk	0.75	0.86
Downside Risk	0.41	0.39
Beta	0.86	1.00

Risk/Return Summary Statistics

	CIM Investment Mgmt	Blmbg. Barc. Intermed. U.S. Government/Credit
Standard Deviation	1.98	2.30
Alpha	0.30	0.00
Active Return/Risk	-0.33	0.00
Tracking Error	0.42	0.00
Information Ratio	-1.58	
Sharpe Ratio	1.95	1.97

Correlation Statistics

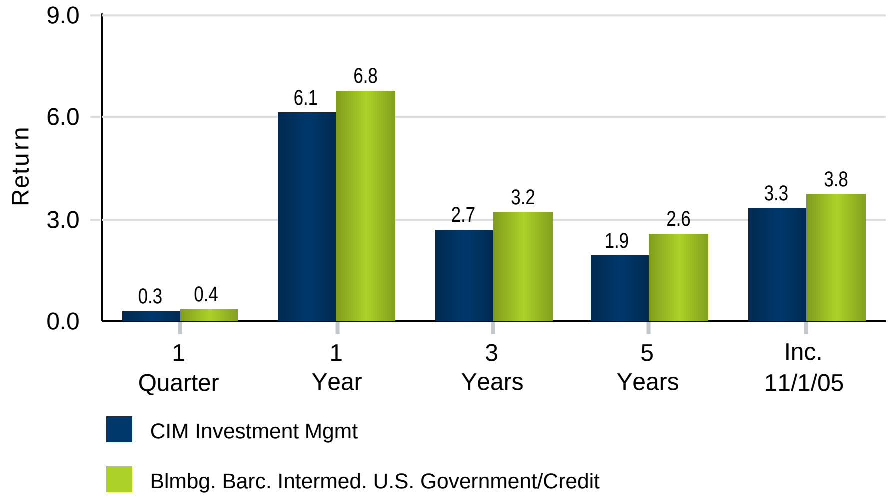
	CIM Investment Mgmt	Blmbg. Barc. Intermed. U.S. Government/Credit
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

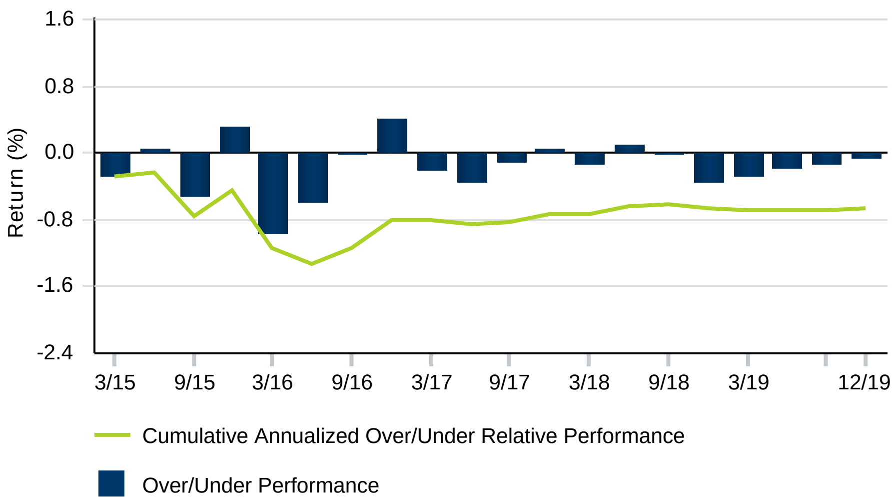
CIM Investment Mgmt vs IM U.S. Intermediate Duration (SA+CF)

Periods Ended December 31, 2019

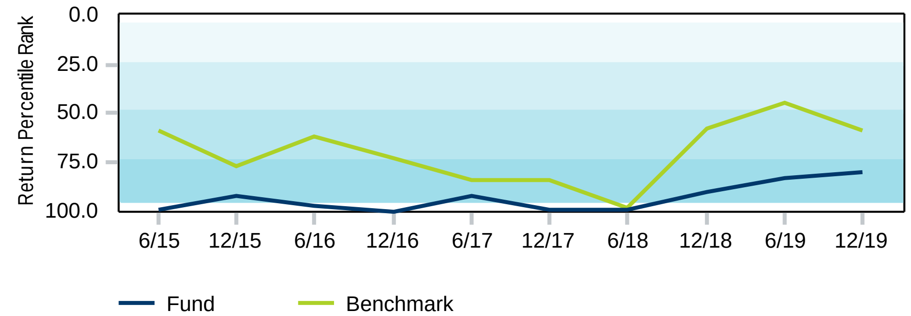
Comparative Performance



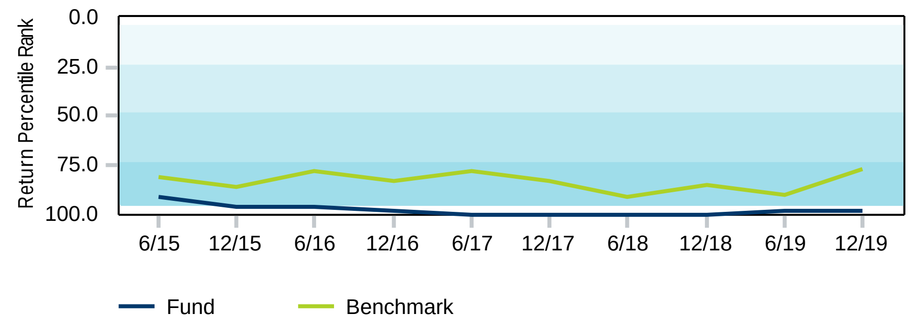
Relative Performance



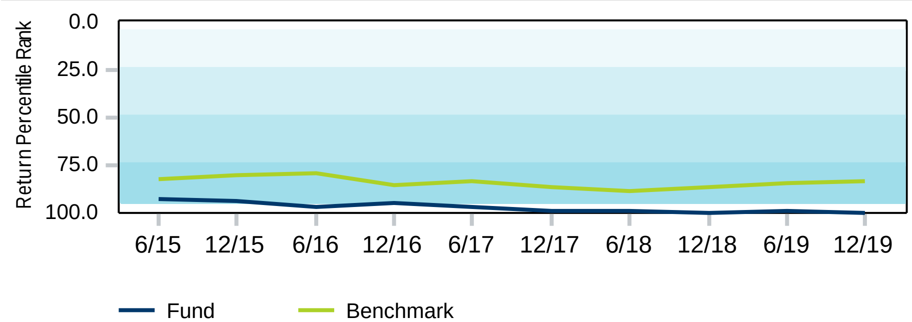
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



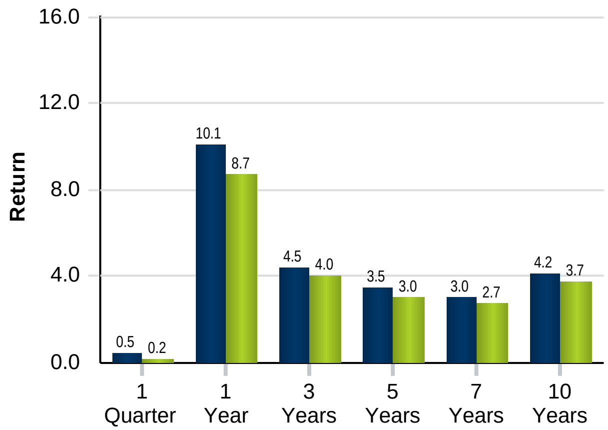
Wilshire Consulting

Performance Summary

Federated

Periods Ended December 31, 2019

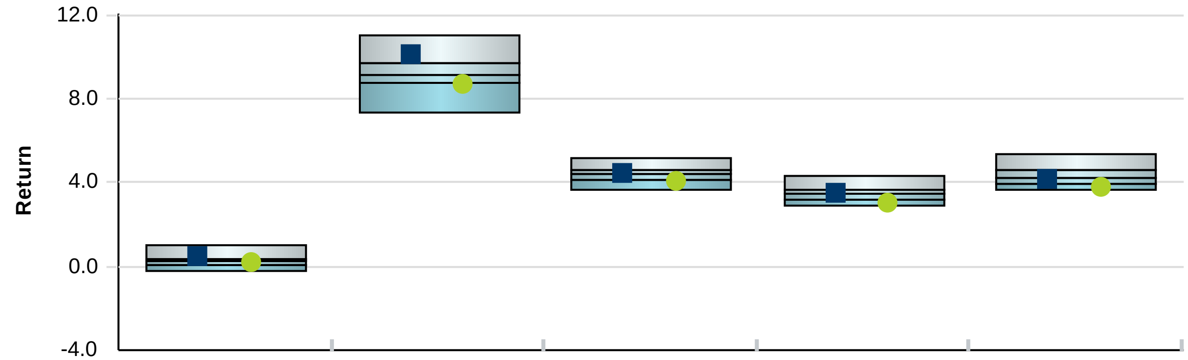
Comparative Performance



Federated

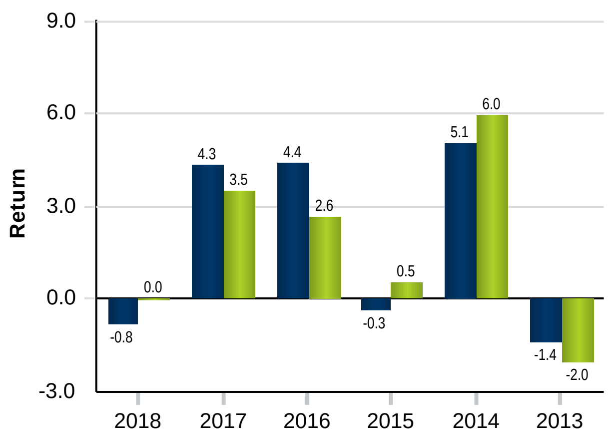
Blmbg. Barc. U.S. Aggregate

Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)



	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.48 (15)	10.15 (10)	4.46 (47)	3.48 (47)	4.18 (57)
Benchmark	0.18 (57)	8.72 (77)	4.03 (85)	3.05 (89)	3.75 (91)
Median	0.22	9.20	4.40	3.46	4.27

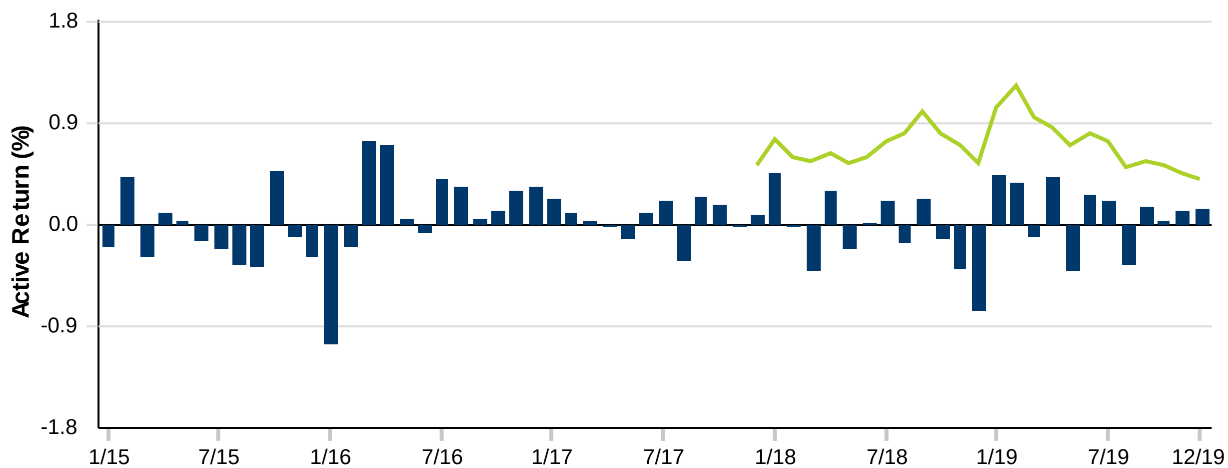
Comparative Performance



Federated

Blmbg. Barc. U.S. Aggregate

Rolling 3 Years Performance



Rolling 3 Years Active Return   Active Return

Wilshire Consulting

Summary Statistics

Federated

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Federated	Blmbg. Barc. U.S. Aggregate
Maximum Return	2.24	2.59
Minimum Return	-0.37	-0.53
Return	10.15	8.72
Cumulative Return	10.15	8.72
Active Return	1.30	0.00
Excess Return	7.49	6.18

Risk Summary Statistics

	Federated	Blmbg. Barc. U.S. Aggregate
Upside Risk	1.13	1.17
Downside Risk	0.37	0.54
Beta	0.81	1.00

Risk/Return Summary Statistics

	Federated	Blmbg. Barc. U.S. Aggregate
Standard Deviation	2.75	3.28
Alpha	2.93	0.00
Active Return/Risk	0.47	0.00
Tracking Error	0.92	0.00
Information Ratio	1.41	
Sharpe Ratio	2.80	1.93

Correlation Statistics

	Federated	Blmbg. Barc. U.S. Aggregate
R-Squared	0.94	1.00
Actual Correlation	0.97	1.00

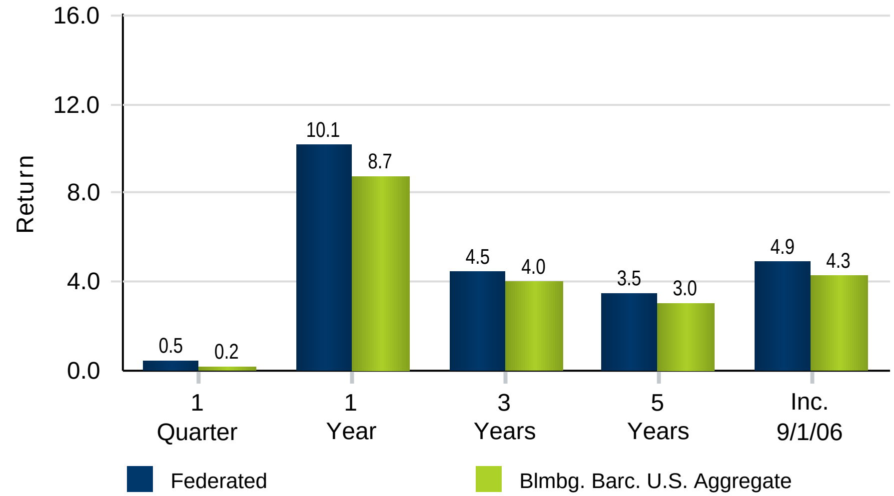
Wilshire Consulting

Manager Summary

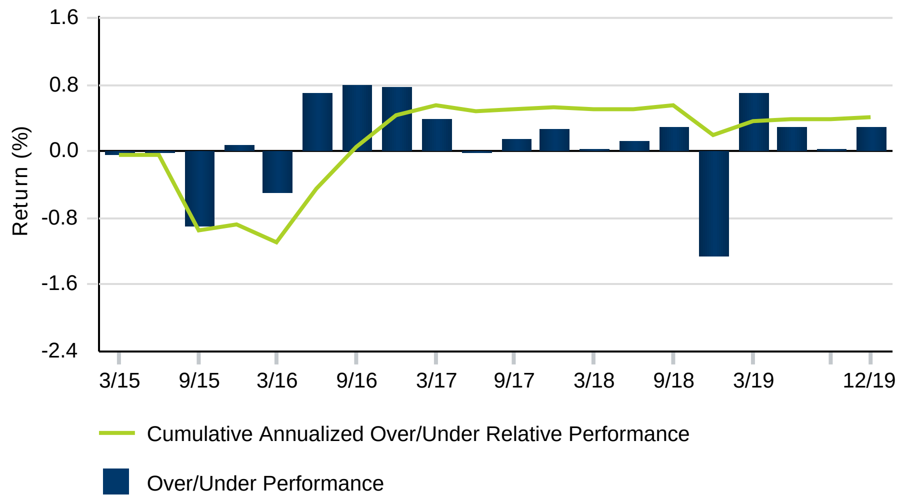
Federated vs IM U.S. Broad Market Core Fixed Income (SA+CF)

Periods Ended December 31, 2019

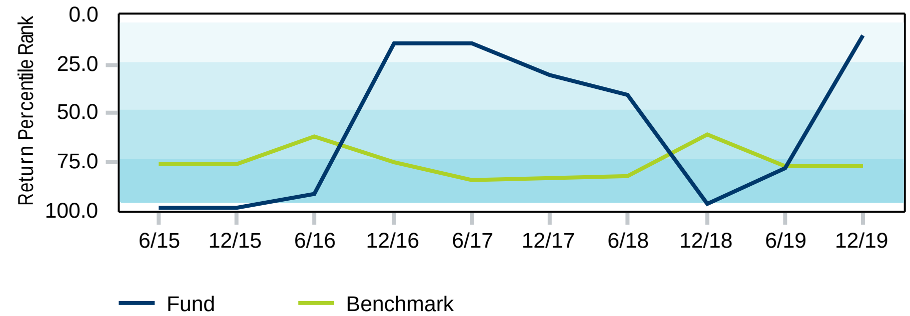
Comparative Performance



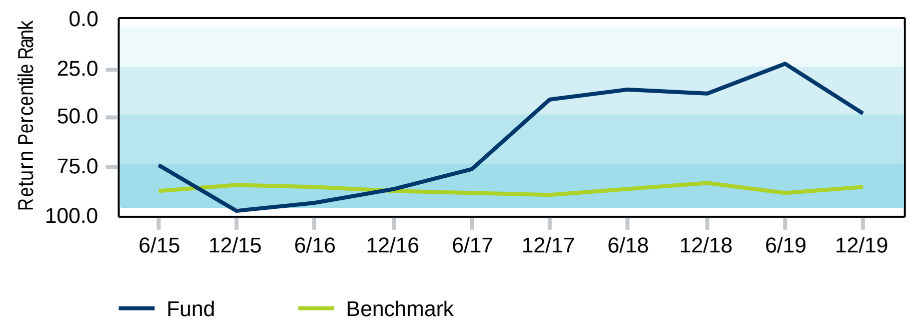
Relative Performance



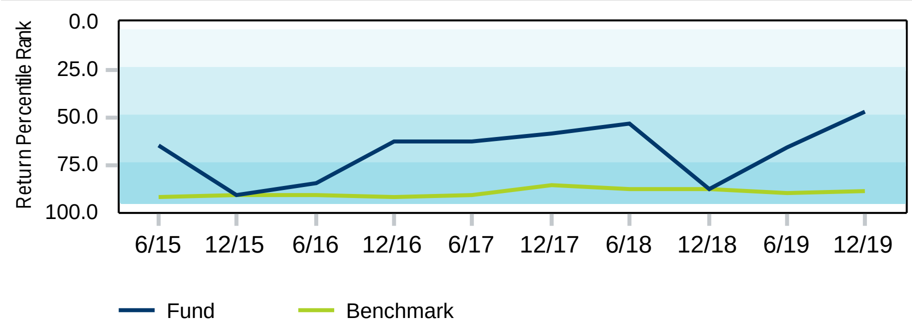
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

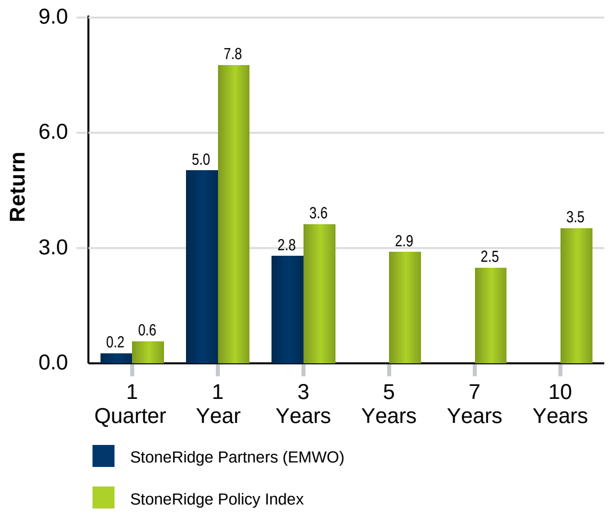


Performance Summary

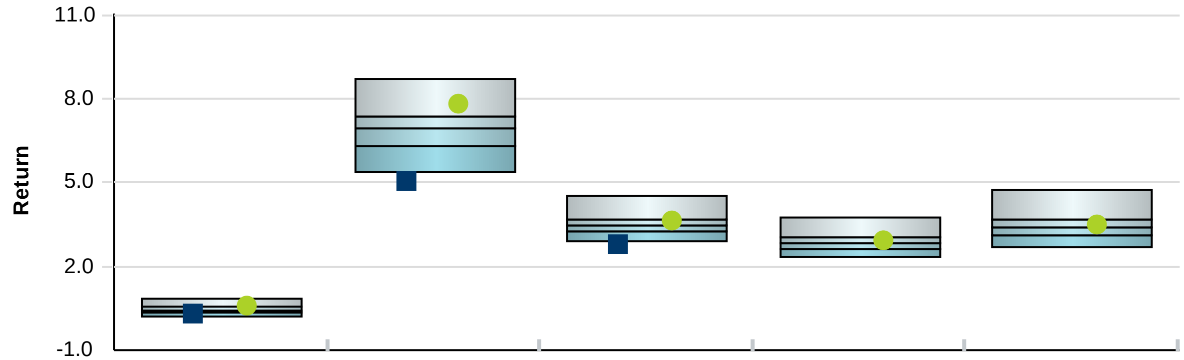
StoneRidge Partners (EMWO)

Periods Ended December 31, 2019

Comparative Performance

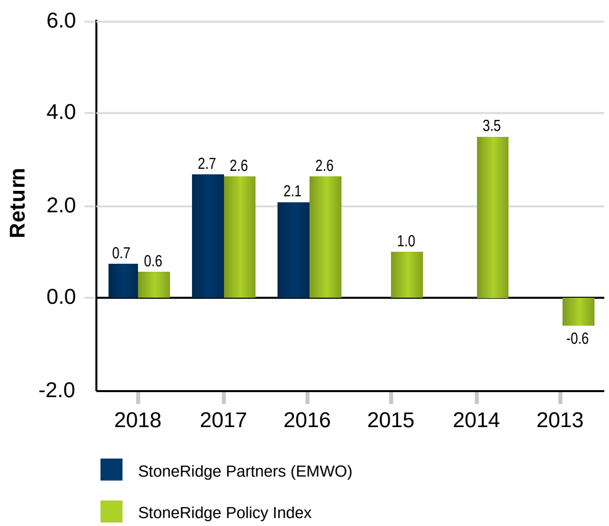


Peer Group Analysis: IM U.S. Intermediate Duration (SA+CF)

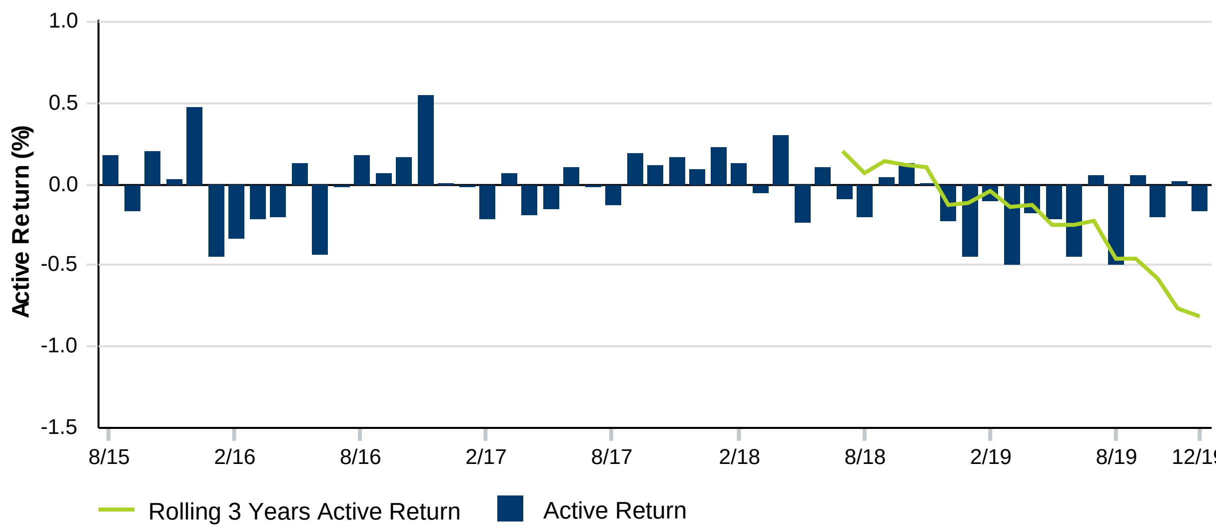


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.25 (90)	5.02 (96)	2.80 (97)		
Benchmark	0.59 (24)	7.78 (15)	3.62 (32)	2.90 (45)	3.50 (41)
Median	0.44	6.93	3.45	2.83	3.40

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

StoneRidge Partners (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	StoneRidge Partners (EMWO)	StoneRidge Policy Index
Maximum Return	1.26	1.76
Minimum Return	-0.26	-0.32
Return	5.02	7.78
Cumulative Return	5.02	7.78
Active Return	-2.61	0.00
Excess Return	2.67	5.28

Risk Summary Statistics

	StoneRidge Partners (EMWO)	StoneRidge Policy Index
Upside Risk	0.62	0.90
Downside Risk	0.27	0.33
Beta	0.72	1.00

Risk/Return Summary Statistics

	StoneRidge Partners (EMWO)	StoneRidge Policy Index
Standard Deviation	1.64	2.26
Alpha	-0.47	0.00
Active Return/Risk	-1.59	0.00
Tracking Error	0.69	0.00
Information Ratio	-3.79	
Sharpe Ratio	1.71	2.42

Correlation Statistics

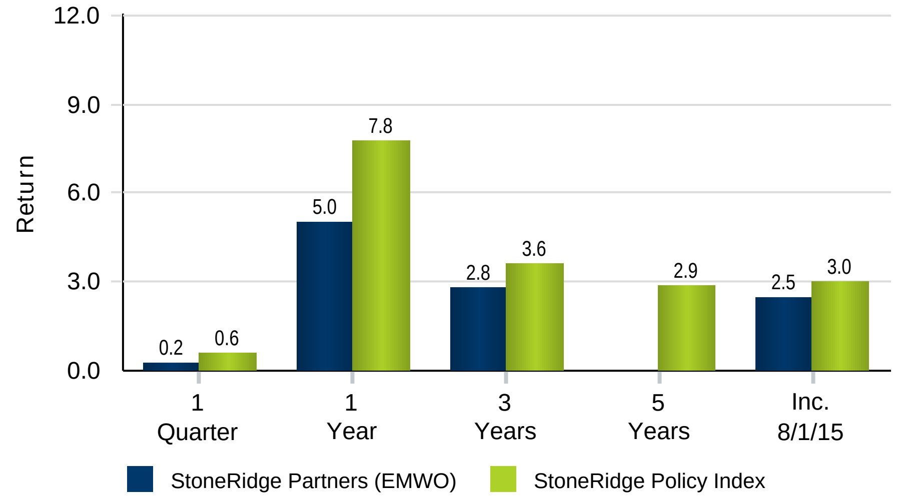
	StoneRidge Partners (EMWO)	StoneRidge Policy Index
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

Manager Summary

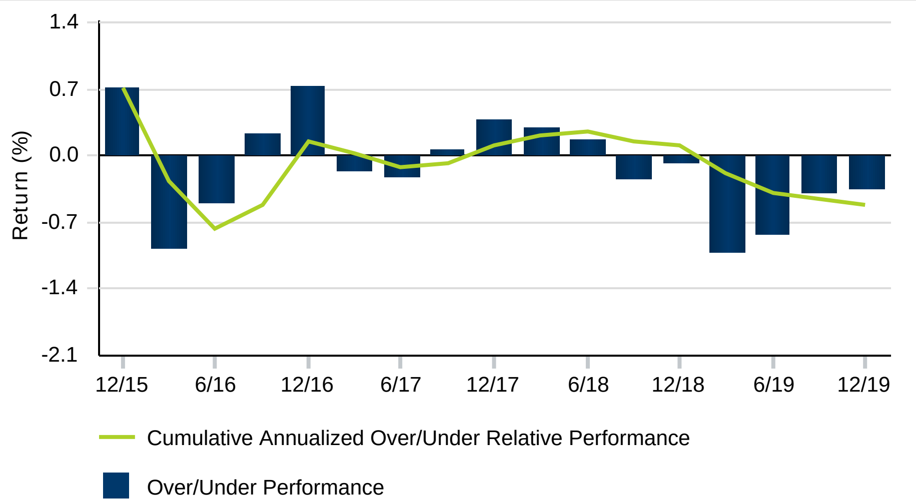
StoneRidge Partners (EMWO) vs IM U.S. Intermediate Duration (SA+CF)

Periods Ended December 31, 2019

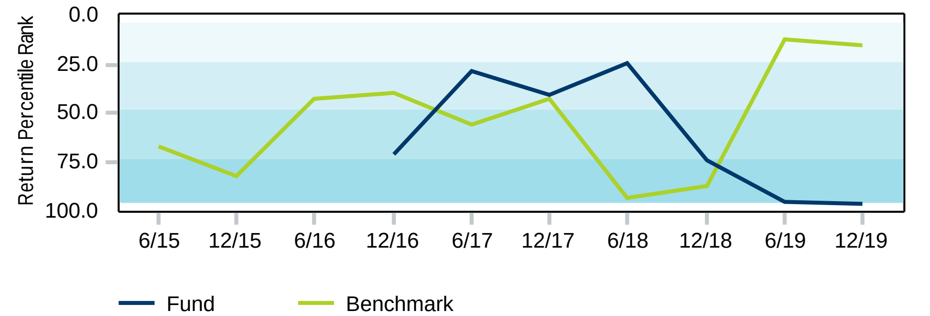
Comparative Performance



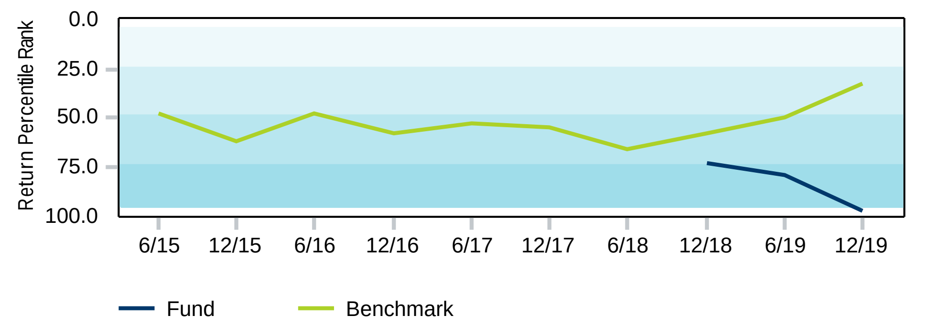
Relative Performance



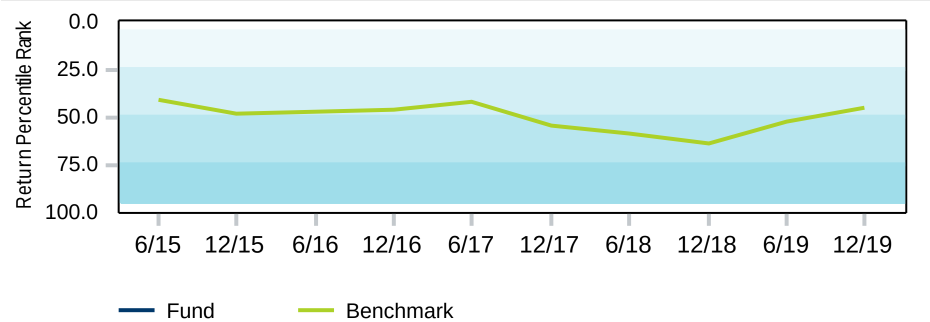
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

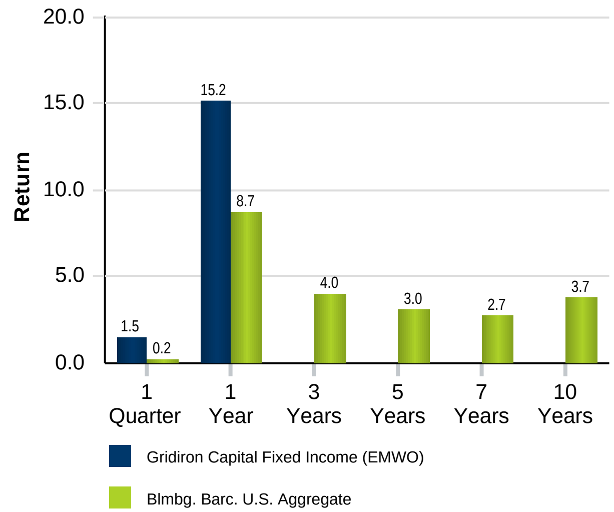


Performance Summary

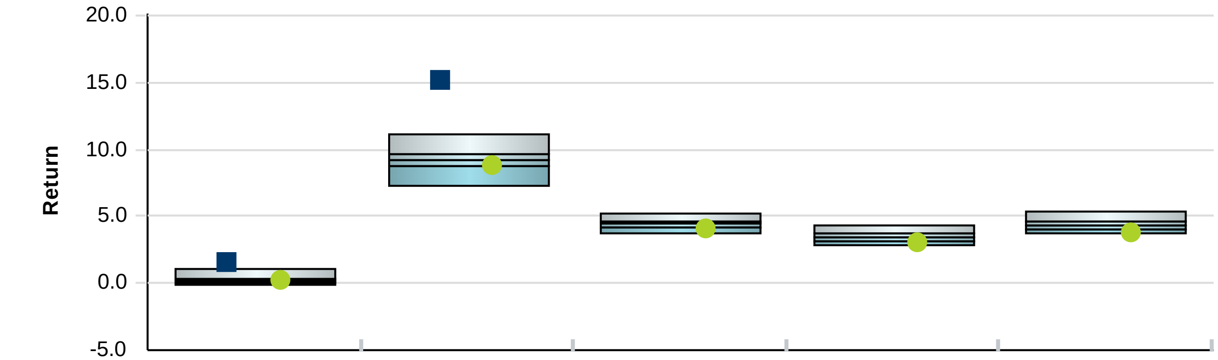
Gridiron Capital Fixed Income (EMWO)

Periods Ended December 31, 2019

Comparative Performance

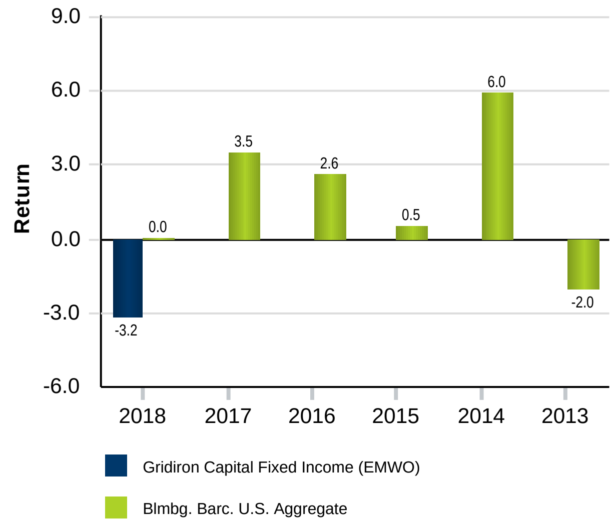


Peer Group Analysis: IM U.S. Broad Market Core Fixed Income (SA+CF)

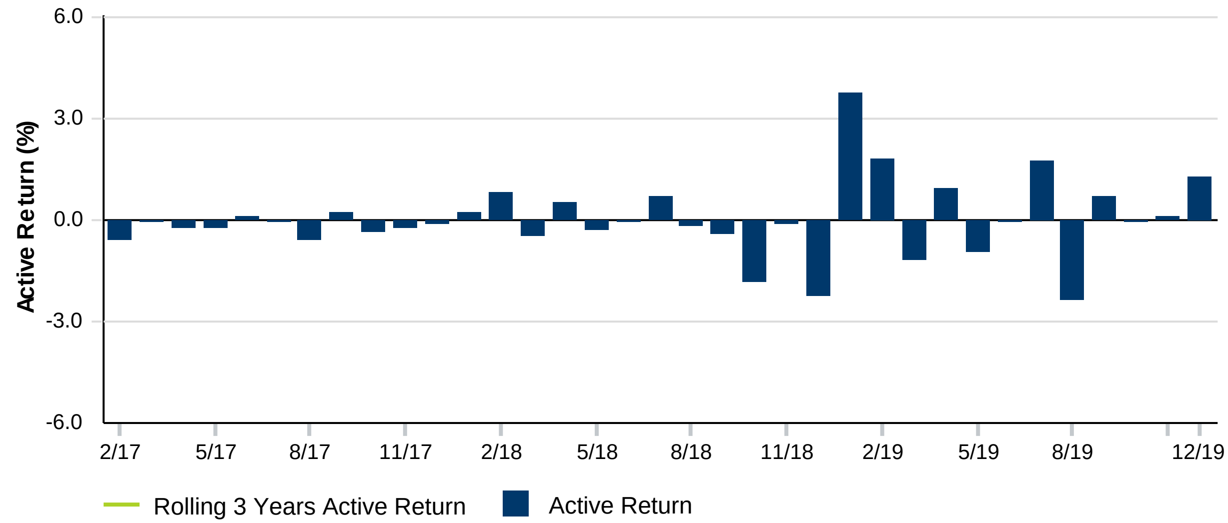


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	1.53 (2)	15.16 (1)			
Benchmark	0.18 (57)	8.72 (77)	4.03 (85)	3.05 (89)	3.75 (91)
Median	0.22	9.20	4.40	3.46	4.27

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Gridiron Capital Fixed Income (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Gridiron Capital Fixed Income (EMWO)	Blmbg. Barc. U.S. Aggregate
Maximum Return	4.84	2.59
Minimum Return	0.10	-0.53
Return	15.16	8.72
Cumulative Return	15.16	8.72
Active Return	5.85	0.00
Excess Return	12.04	6.18

Risk Summary Statistics

	Gridiron Capital Fixed Income (EMWO)	Blmbg. Barc. U.S. Aggregate
Upside Risk	5.98	1.17
Downside Risk	0.00	0.54
Beta	0.03	1.00

Risk/Return Summary Statistics

	Gridiron Capital Fixed Income (EMWO)	Blmbg. Barc. U.S. Aggregate
Standard Deviation	4.33	3.28
Alpha	14.97	0.00
Active Return/Risk	1.35	0.00
Tracking Error	5.37	0.00
Information Ratio	1.09	
Sharpe Ratio	2.79	1.93

Correlation Statistics

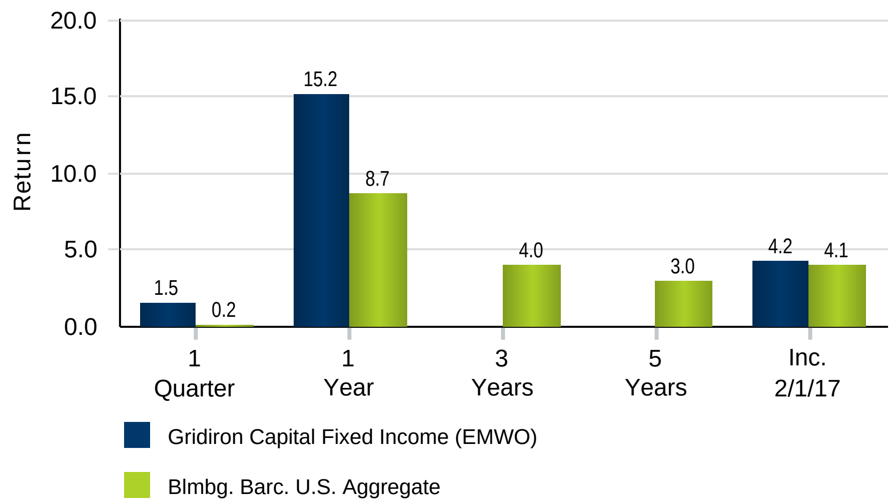
	Gridiron Capital Fixed Income (EMWO)	Blmbg. Barc. U.S. Aggregate
R-Squared	0.00	1.00
Actual Correlation	0.02	1.00

Manager Summary

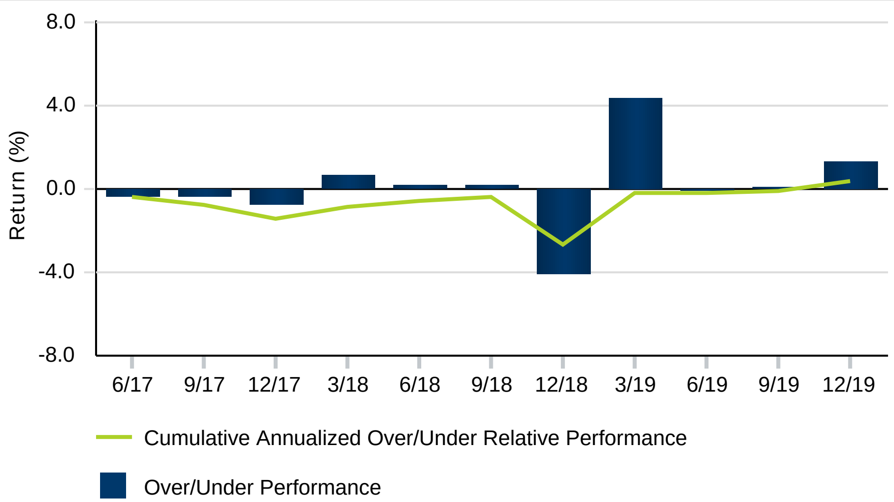
Gridiron Capital Fixed Income (EMWO) vs IM U.S. Broad Market Core Fixed Income

Periods Ended December 31, 2019

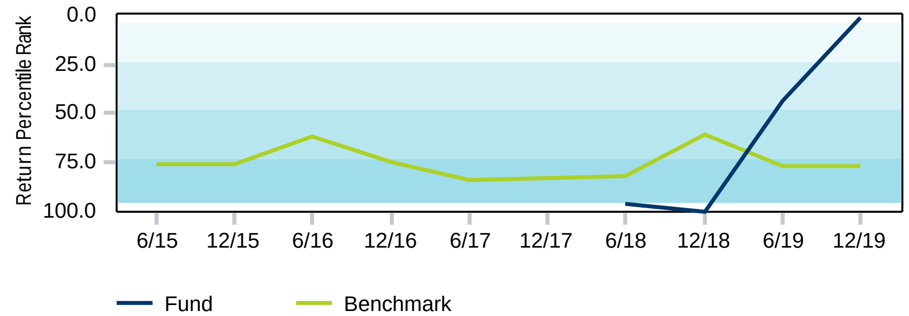
Comparative Performance



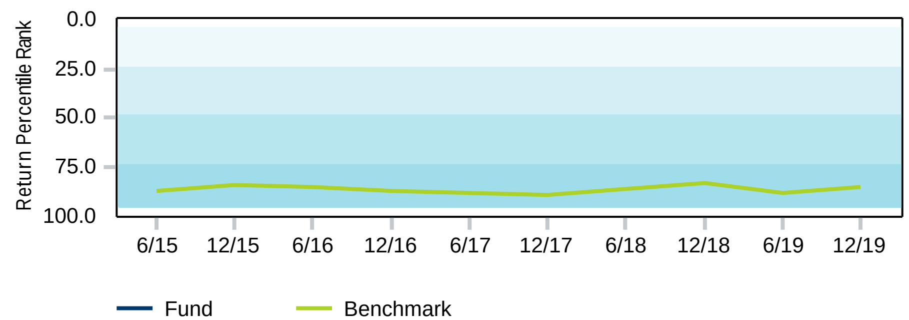
Relative Performance



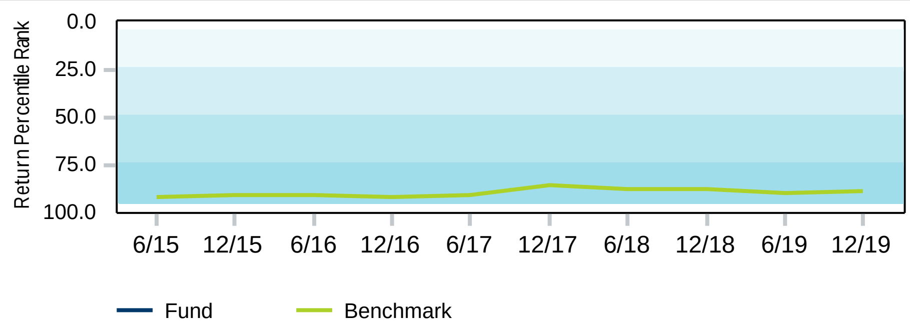
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



Summary Statistics

FNB (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	FNB (EMWO)	Blmbg. Barc. U.S. Intermediate Aggregate
Maximum Return	1.58	1.49
Minimum Return	-0.08	-0.23
Return	7.47	6.67
Cumulative Return	7.47	6.67
Active Return	0.76	0.00
Excess Return	5.00	4.24

Risk Summary Statistics

	FNB (EMWO)	Blmbg. Barc. U.S. Intermediate Aggregate
Upside Risk	0.88	0.80
Downside Risk	0.10	0.24
Beta	1.02	1.00

Risk/Return Summary Statistics

	FNB (EMWO)	Blmbg. Barc. U.S. Intermediate Aggregate
Standard Deviation	2.22	2.06
Alpha	0.62	0.00
Active Return/Risk	0.34	0.00
Tracking Error	0.70	0.00
Information Ratio	1.09	
Sharpe Ratio	2.33	2.14

Correlation Statistics

	FNB (EMWO)	Blmbg. Barc. U.S. Intermediate Aggregate
R-Squared	0.90	1.00
Actual Correlation	0.95	1.00

HIGH YIELD

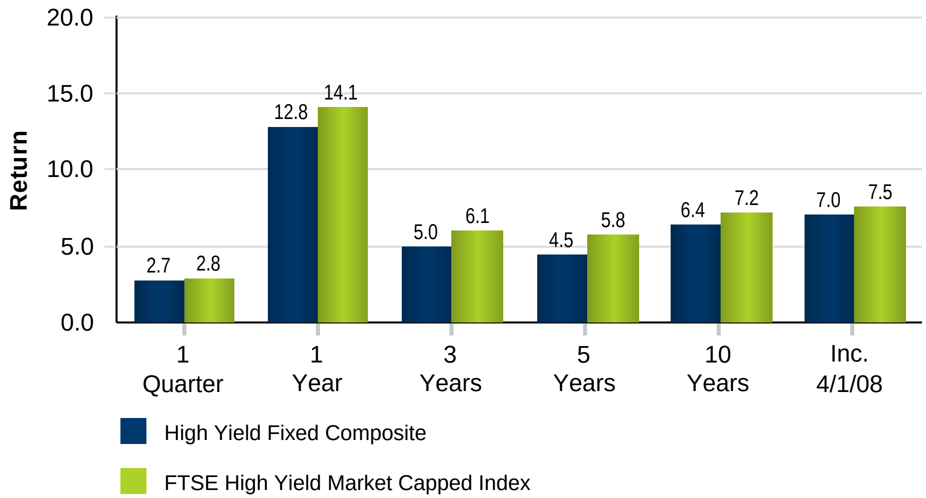
Wilshire Consulting

Composite Performance Summary

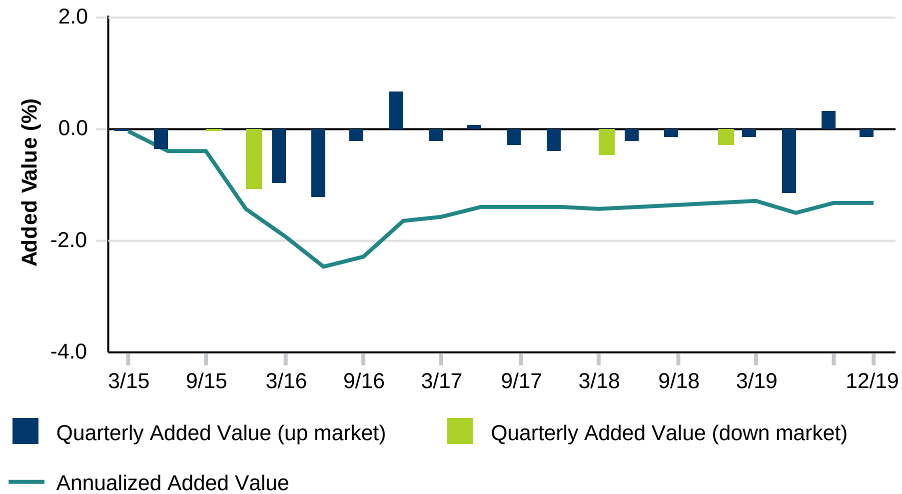
High Yield Fixed Composite

Periods Ended December 31, 2019

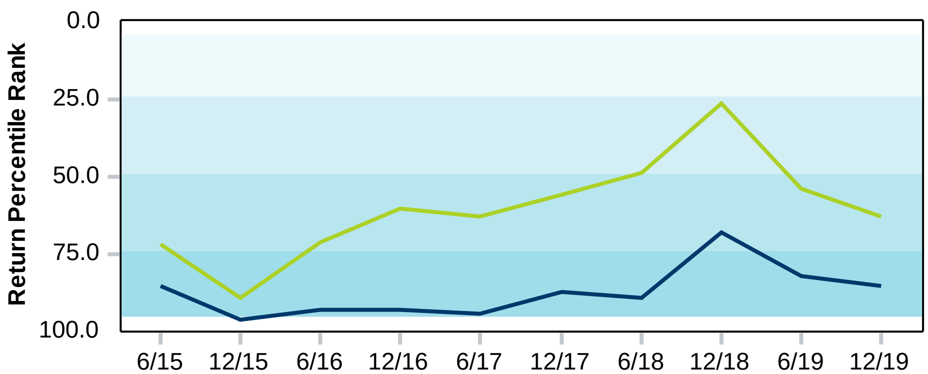
Comparative Performance



Added Value History

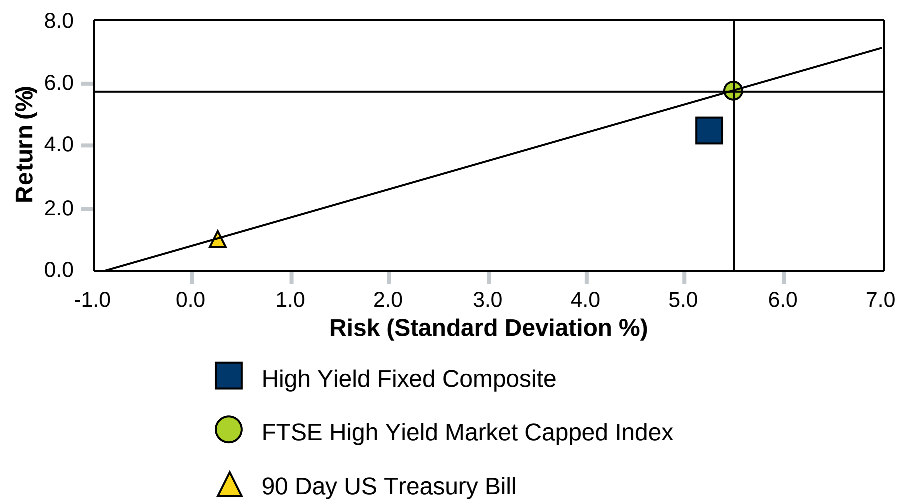


Rolling Percentile Rank: IM U.S. High Yield Bonds (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
High Yield Fixed Composite	10	0 (0%)	0 (0%)	1 (10%)	9 (90%)
Benchmark	10	0 (0%)	2 (20%)	7 (70%)	1 (10%)

Risk and Return 01/1/15 - 12/31/19

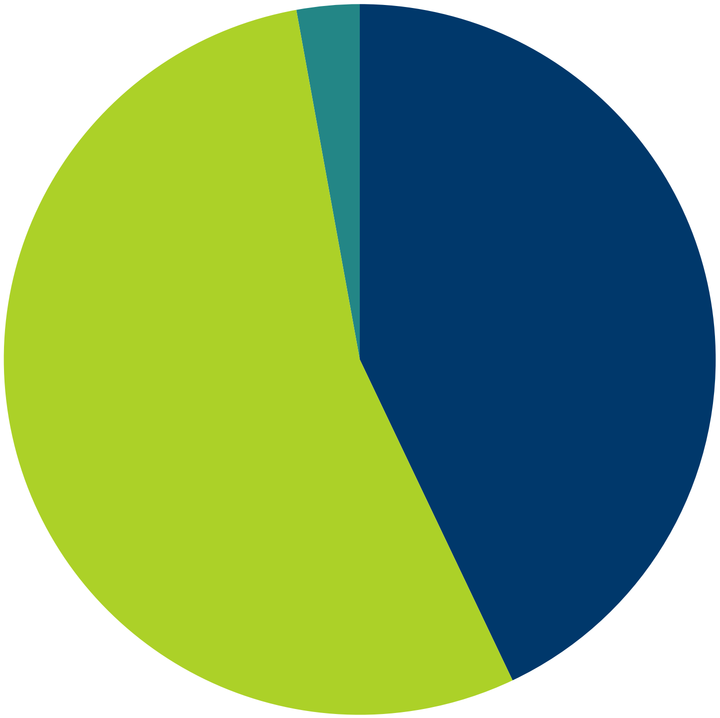


Asset Allocation By Manager

High Yield Fixed Composite

Periods Ended December 31, 2019

Dec-2019 : 114,479,483



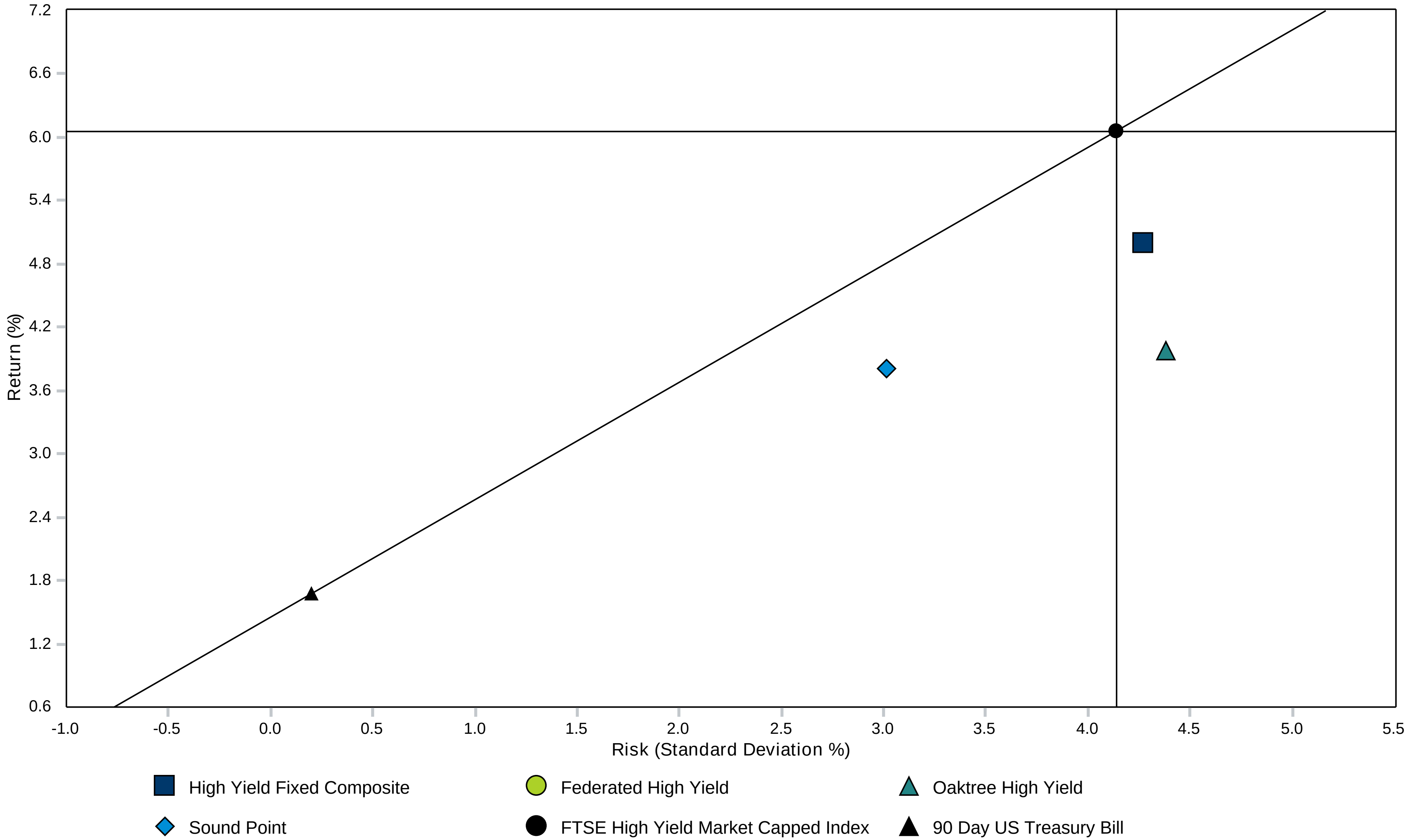
	Market Value $	Allocation (%)
Federated High Yield	49,156,380	42.9
Oaktree High Yield	62,050,974	54.2
Sound Point	3,272,129	2.9

Wilshire Consulting

Risk vs. Return

High Yield Fixed Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

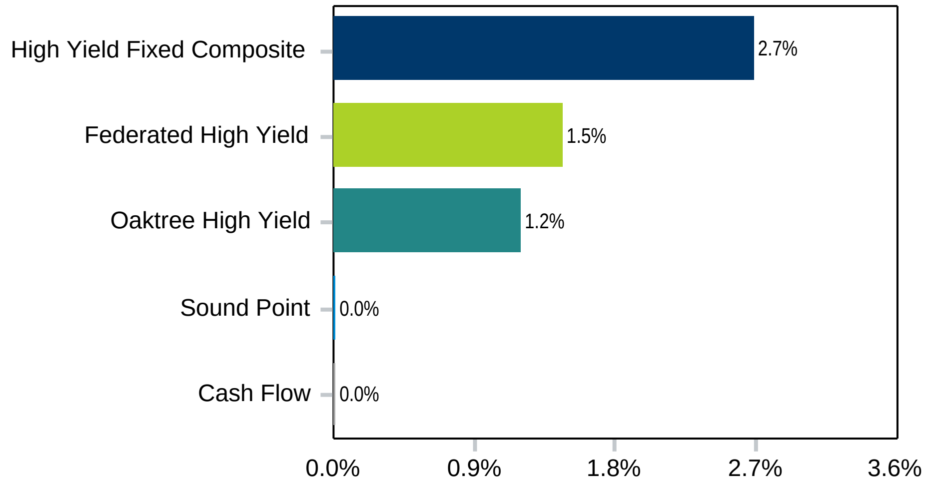
Wilshire Consulting

Return and Risk Contribution

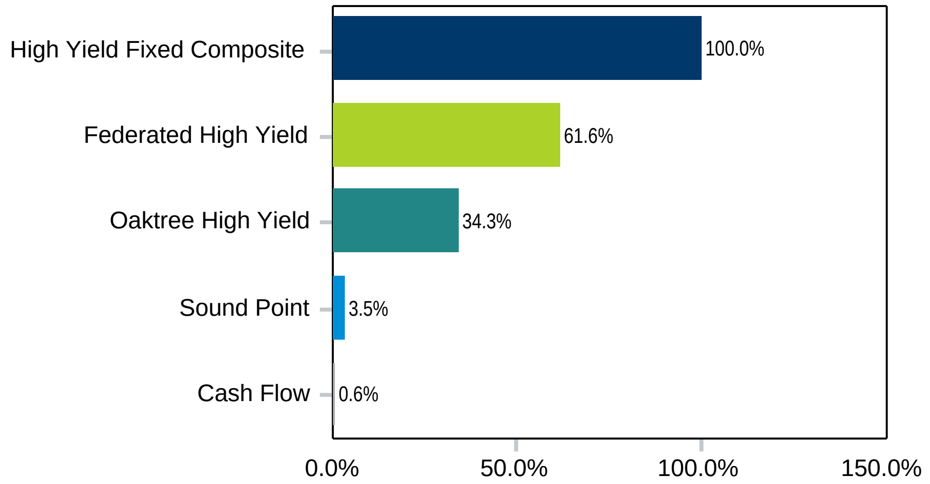
High Yield Fixed Composite

Periods Ended December 31, 2019

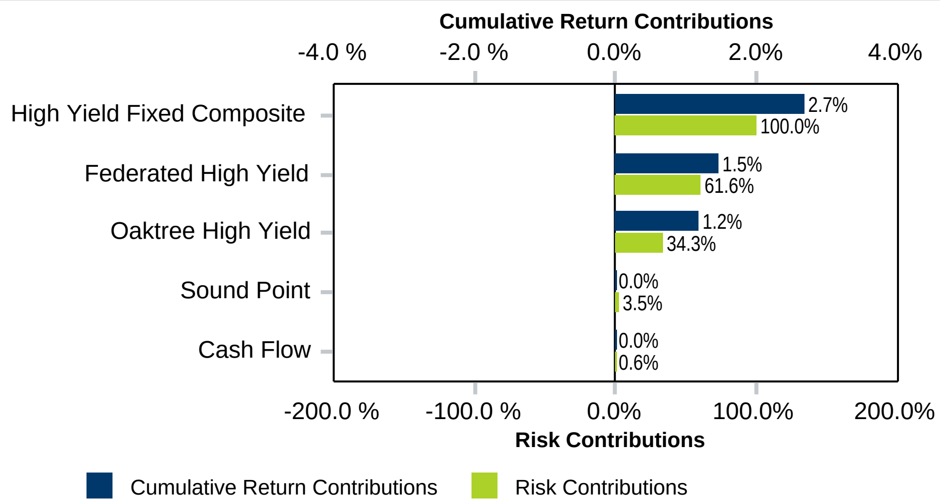
Cumulative Return Contributions



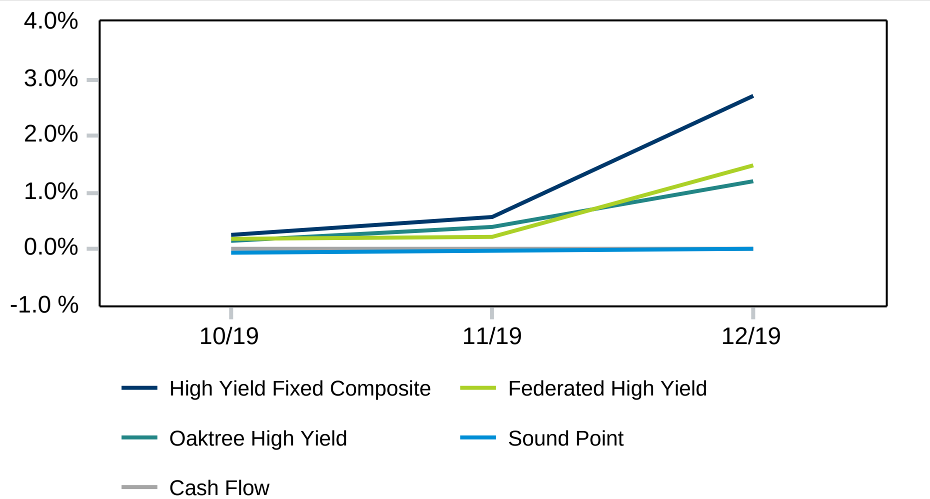
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History



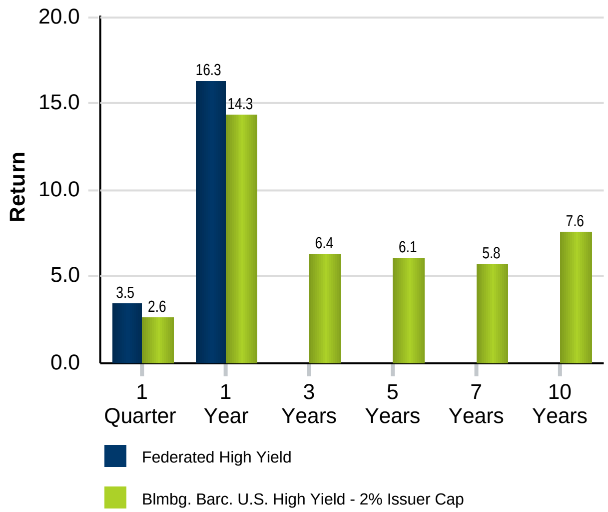
Wilshire Consulting

Performance Summary

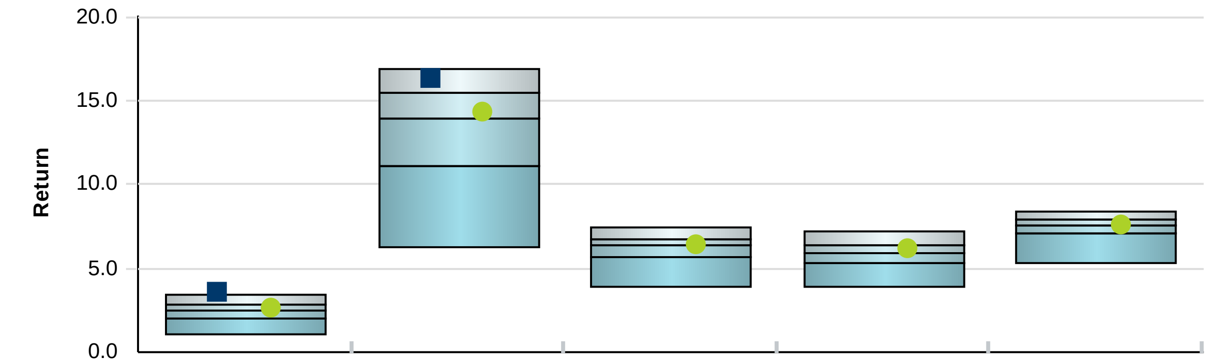
Federated High Yield

Periods Ended December 31, 2019

Comparative Performance

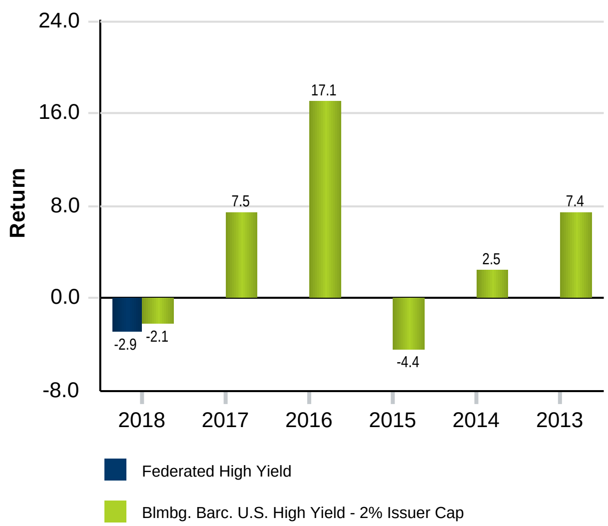


Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)

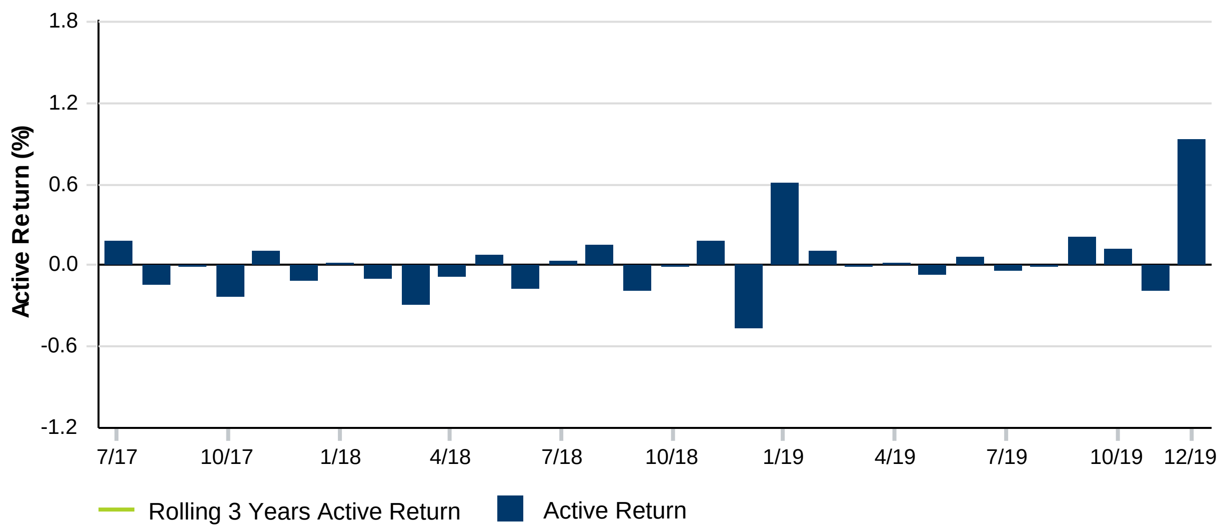


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	3.49 (4)	16.30 (11)			
Benchmark	2.61 (41)	14.32 (47)	6.36 (48)	6.14 (40)	7.55 (52)
Median	2.51	14.01	6.33	5.96	7.61

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Federated High Yield

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Federated High Yield	Blmbg. Barc. U.S. High Yield - 2% Issuer Cap
Maximum Return	5.13	4.52
Minimum Return	-1.25	-1.19
Return	16.30	14.32
Cumulative Return	16.30	14.32
Active Return	1.77	0.00
Excess Return	13.08	11.31

Risk Summary Statistics

	Federated High Yield	Blmbg. Barc. U.S. High Yield - 2% Issuer Cap
Upside Risk	1.99	1.73
Downside Risk	1.25	1.19
Beta	1.14	1.00

Risk/Return Summary Statistics

	Federated High Yield	Blmbg. Barc. U.S. High Yield - 2% Issuer Cap
Standard Deviation	5.42	4.71
Alpha	-0.11	0.00
Active Return/Risk	0.33	0.00
Tracking Error	1.04	0.00
Information Ratio	1.69	
Sharpe Ratio	2.41	2.40

Correlation Statistics

	Federated High Yield	Blmbg. Barc. U.S. High Yield - 2% Issuer Cap
R-Squared	0.98	1.00
Actual Correlation	0.99	1.00

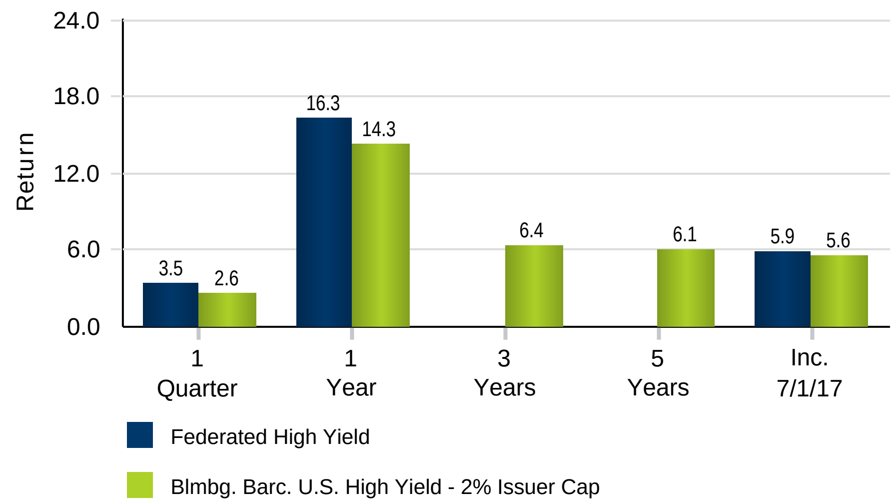
Wilshire Consulting

Manager Summary

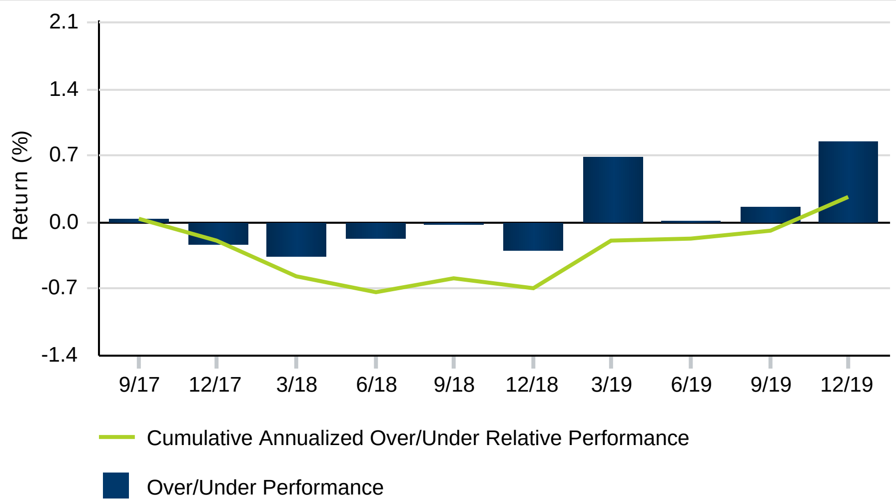
Federated High Yield vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended December 31, 2019

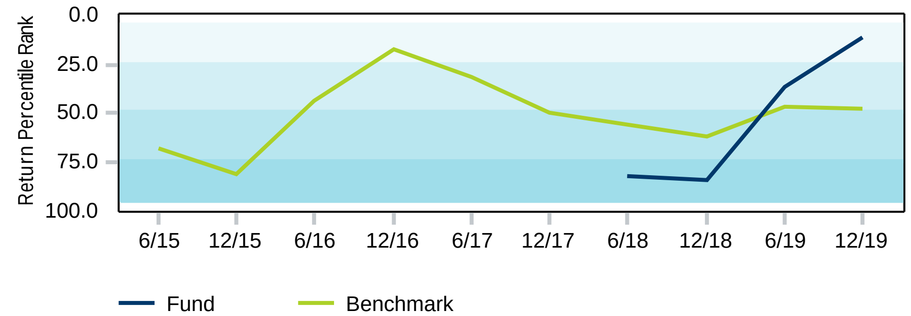
Comparative Performance



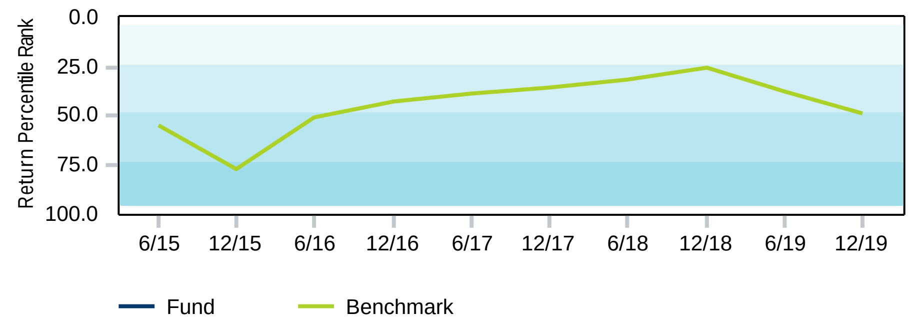
Relative Performance



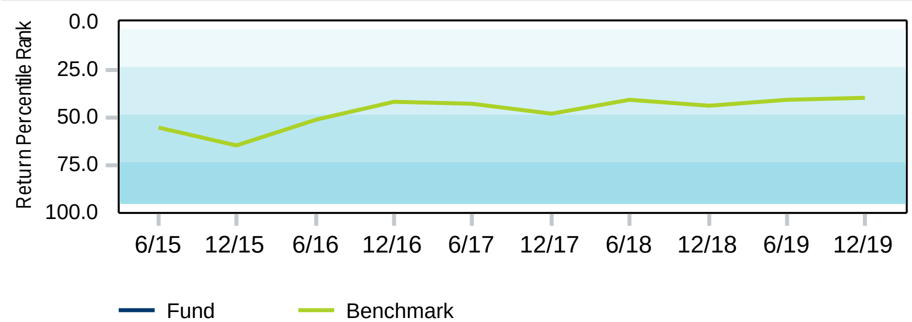
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



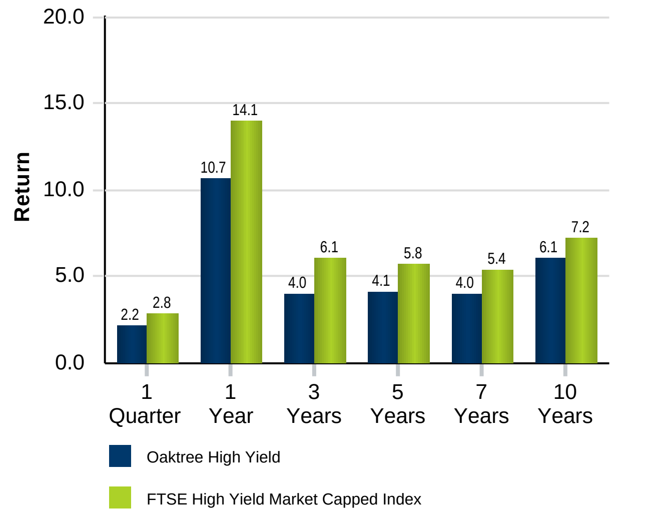
Wilshire Consulting

Performance Summary

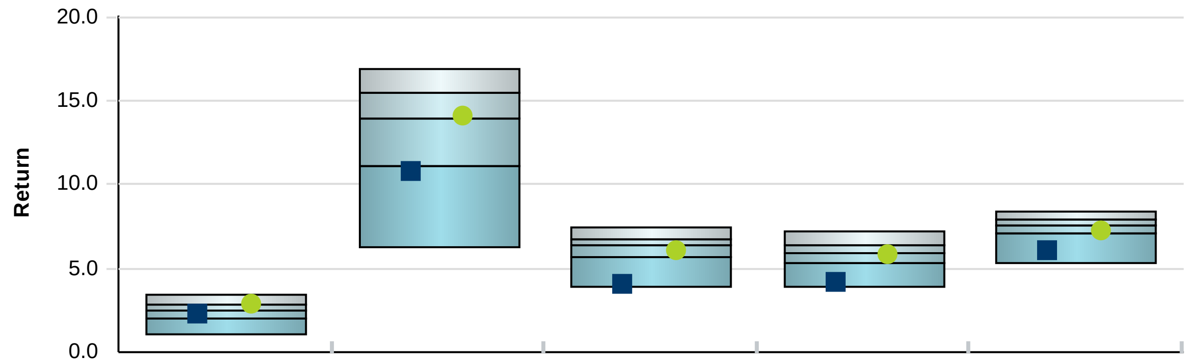
Oaktree High Yield

Periods Ended December 31, 2019

Comparative Performance

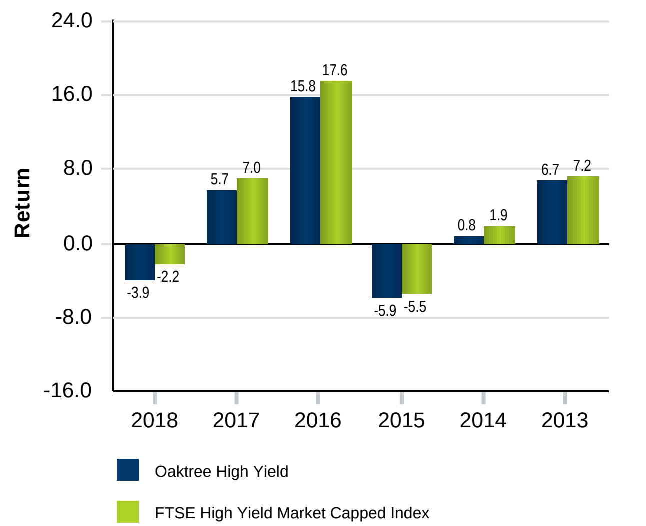


Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)

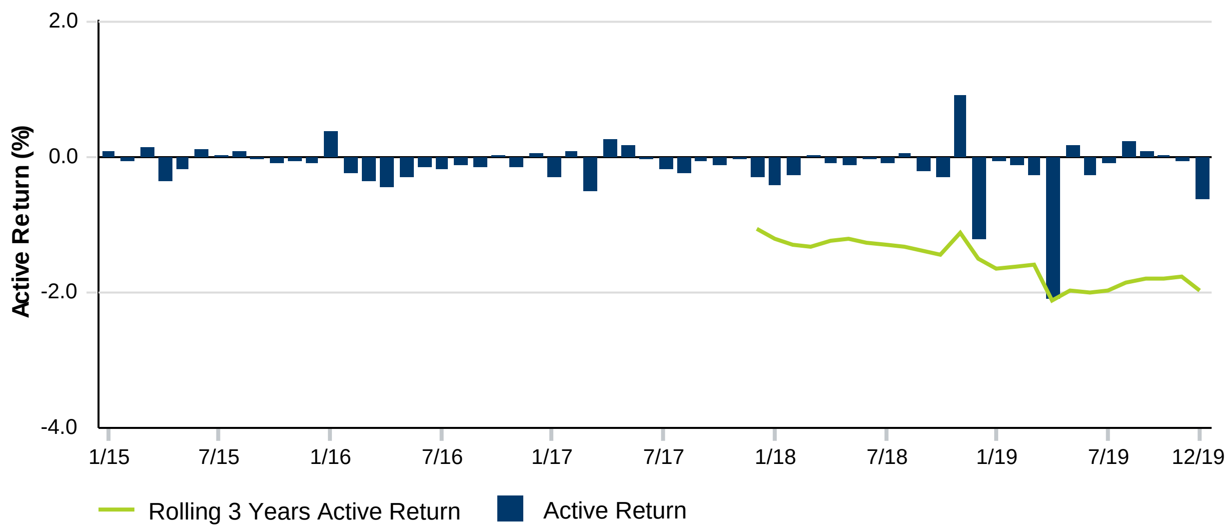


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	2.19 (66)	10.71 (77)	3.97 (95)	4.14 (93)	6.05 (91)
Benchmark	2.85 (27)	14.05 (50)	6.06 (63)	5.78 (57)	7.20 (72)
Median	2.51	14.01	6.33	5.96	7.61

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Oaktree High Yield

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Oaktree High Yield	FTSE High Yield Market Capped Index
Maximum Return	4.63	4.68
Minimum Return	-1.19	-1.38
Return	10.71	14.05
Cumulative Return	10.71	14.05
Active Return	-3.00	0.00
Excess Return	8.08	11.09

Risk Summary Statistics

	Oaktree High Yield	FTSE High Yield Market Capped Index
Upside Risk	1.62	1.78
Downside Risk	1.40	1.38
Beta	0.91	1.00

Risk/Return Summary Statistics

	Oaktree High Yield	FTSE High Yield Market Capped Index
Standard Deviation	4.96	4.99
Alpha	-1.77	0.00
Active Return/Risk	-0.61	0.00
Tracking Error	2.06	0.00
Information Ratio	-1.46	
Sharpe Ratio	1.63	2.22

Correlation Statistics

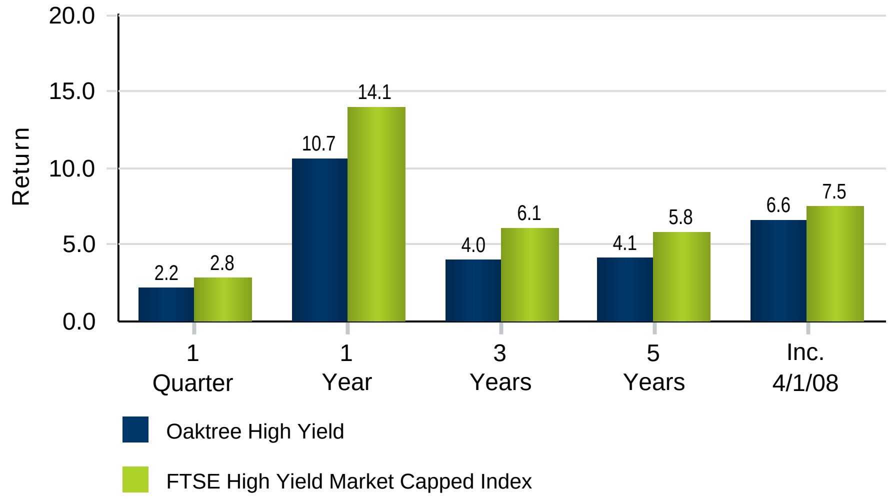
	Oaktree High Yield	FTSE High Yield Market Capped Index
R-Squared	0.84	1.00
Actual Correlation	0.91	1.00

Manager Summary

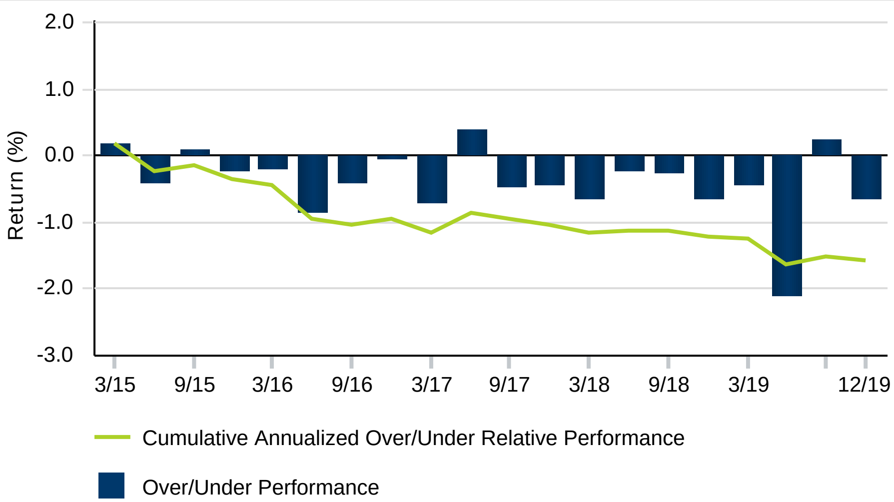
Oaktree High Yield vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended December 31, 2019

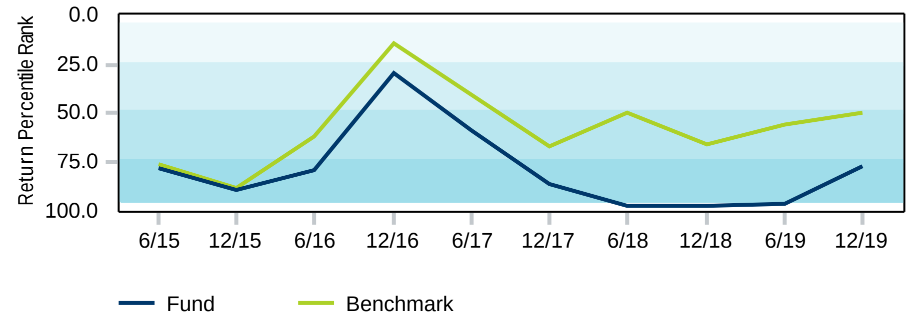
Comparative Performance



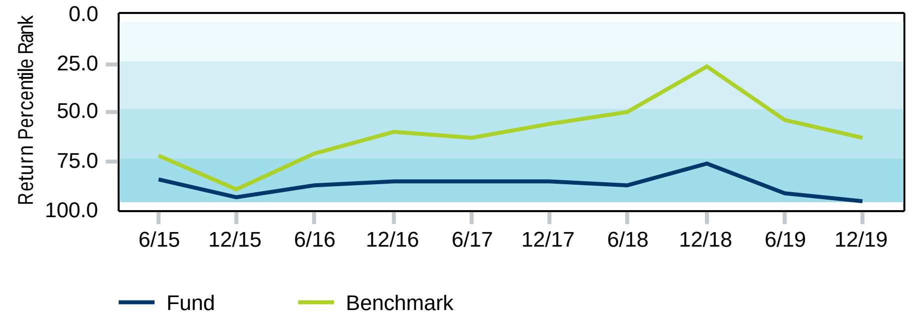
Relative Performance



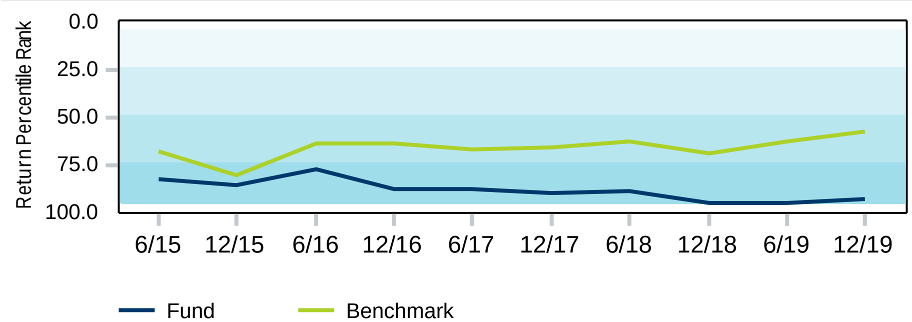
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



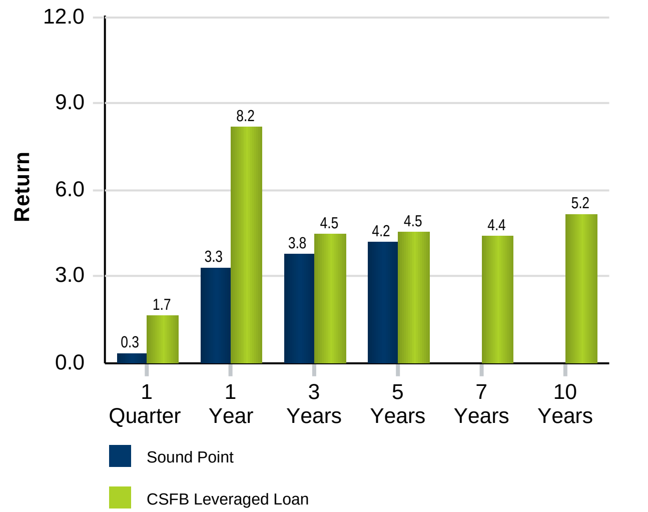
Wilshire Consulting

Performance Summary

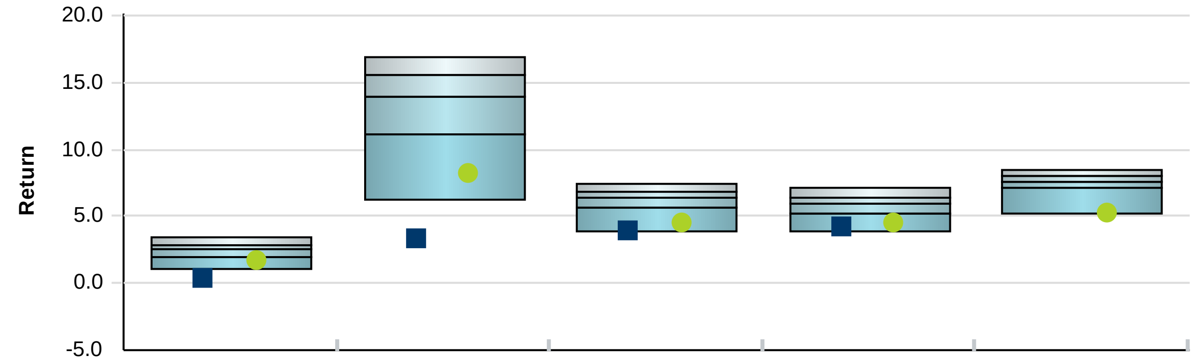
Sound Point

Periods Ended December 31, 2019

Comparative Performance

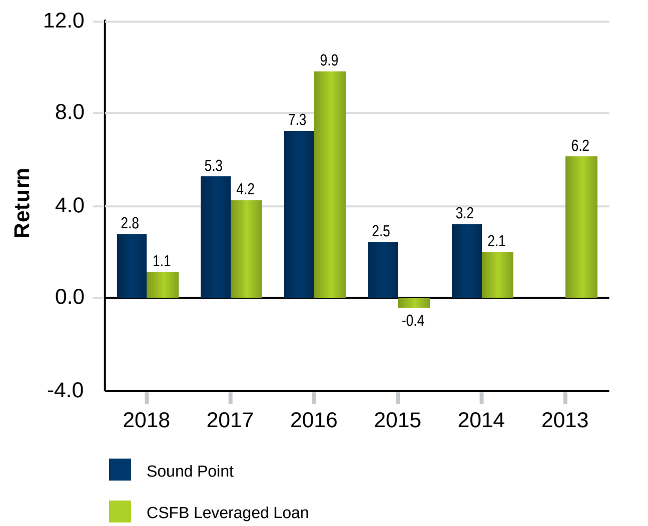


Peer Group Analysis: IM U.S. High Yield Bonds (SA+CF)

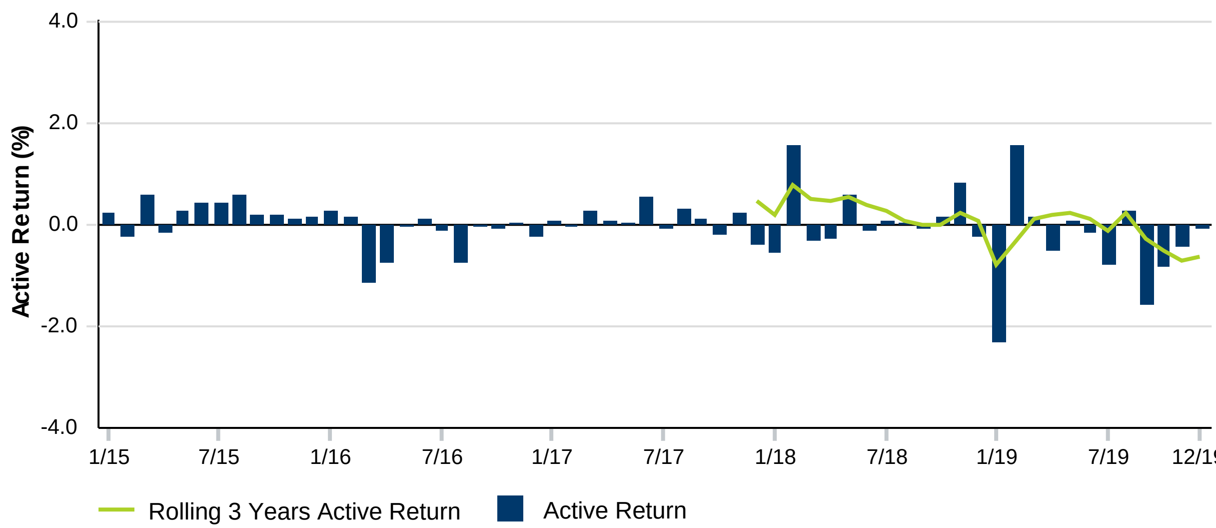


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.32 (100)	3.31 (99)	3.81 (96)	4.23 (93)	
Benchmark	1.68 (83)	8.17 (88)	4.48 (93)	4.54 (88)	5.18 (96)
Median	2.51	14.01	6.33	5.96	7.61

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Sound Point

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Sound Point	CSFB Leveraged Loan
Maximum Return	3.14	2.30
Minimum Return	-1.32	-0.49
Return	3.31	8.17
Cumulative Return	3.31	8.17
Active Return	-4.59	0.00
Excess Return	1.08	5.67

Risk Summary Statistics

	Sound Point	CSFB Leveraged Loan
Upside Risk	1.06	1.08
Downside Risk	1.75	0.62
Beta	0.78	1.00

Risk/Return Summary Statistics

	Sound Point	CSFB Leveraged Loan
Standard Deviation	3.94	3.03
Alpha	-2.82	0.00
Active Return/Risk	-1.17	0.00
Tracking Error	3.22	0.00
Information Ratio	-1.43	
Sharpe Ratio	0.27	1.85

Correlation Statistics

	Sound Point	CSFB Leveraged Loan
R-Squared	0.36	1.00
Actual Correlation	0.60	1.00

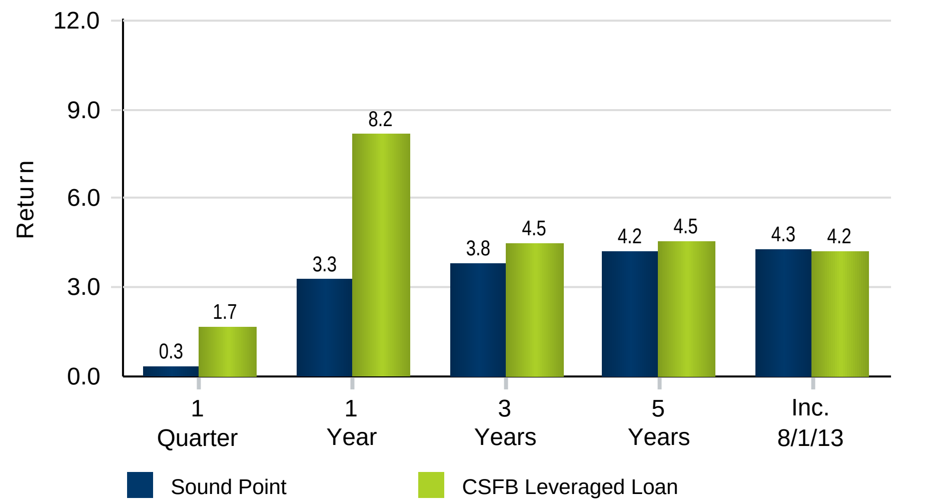
Wilshire Consulting

Manager Summary

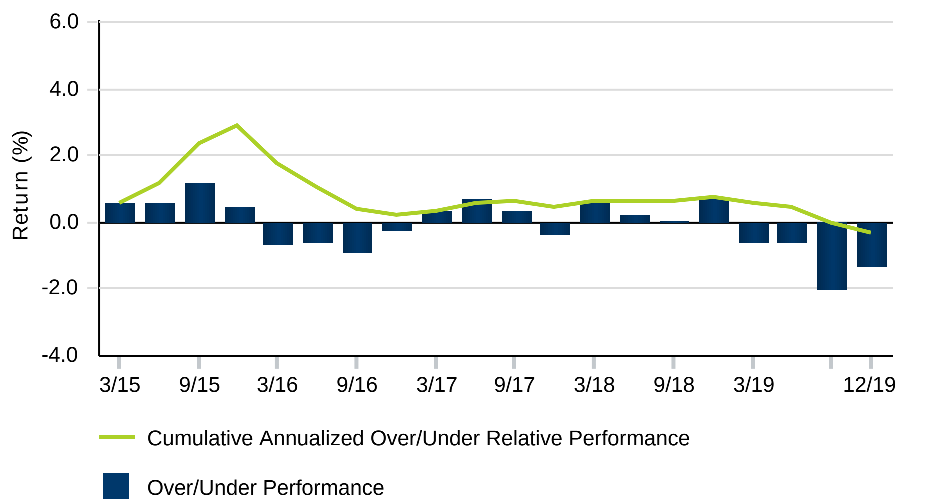
Sound Point vs IM U.S. High Yield Bonds (SA+CF)

Periods Ended December 31, 2019

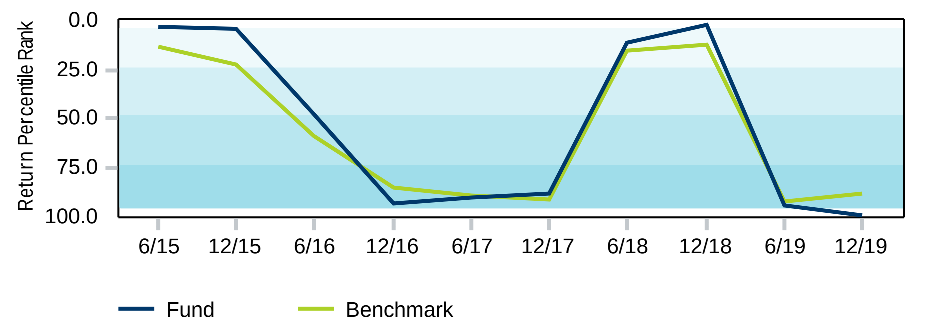
Comparative Performance



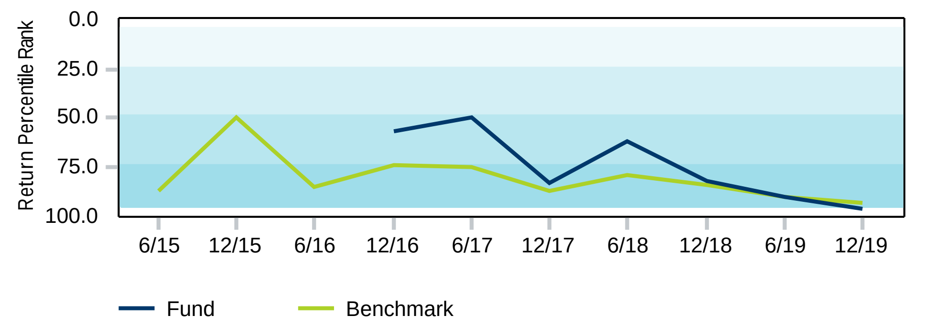
Relative Performance



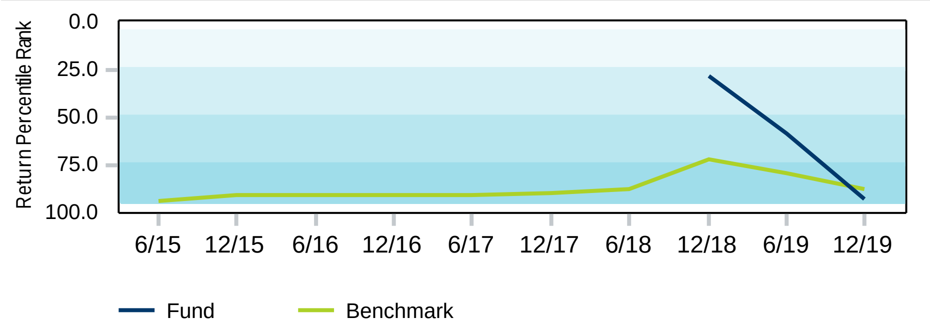
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



TIPS

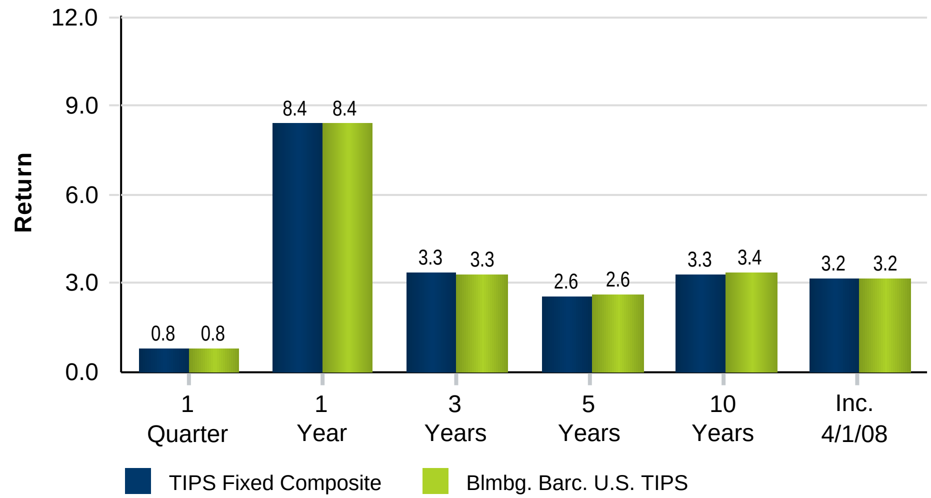
Wilshire Consulting

Composite Performance Summary

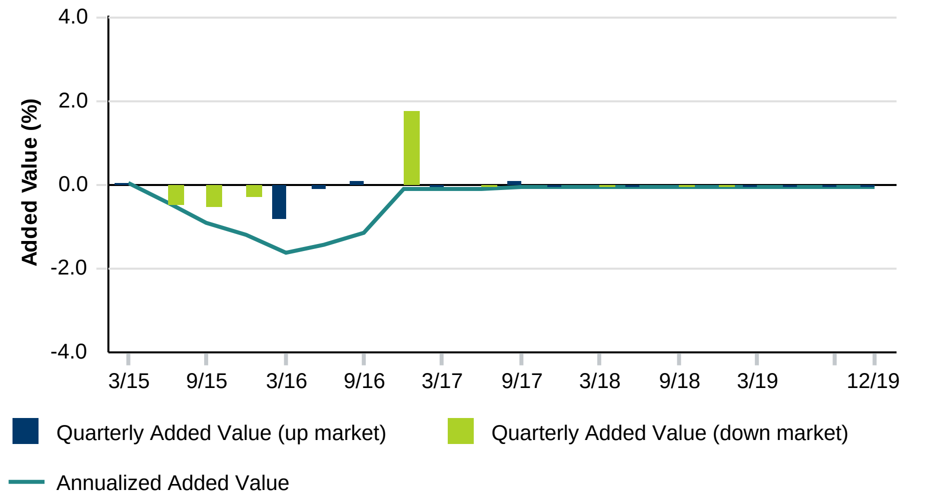
TIPS Fixed Composite

Periods Ended December 31, 2019

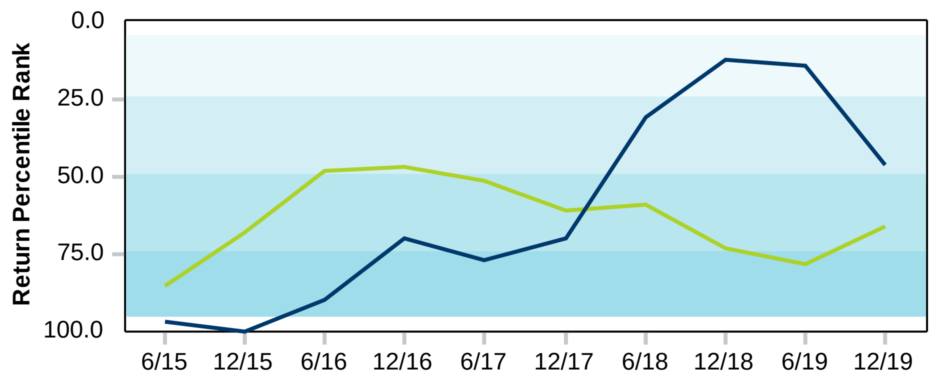
Comparative Performance



Added Value History

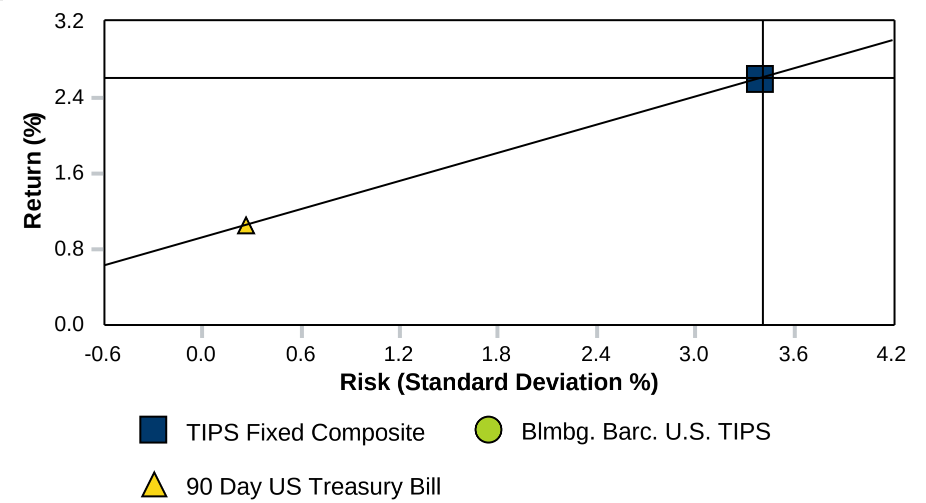


Rolling Percentile Rank: IM U.S. TIPS (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
TIPS Fixed Composite	10	2 (20%)	2 (20%)	2 (20%)	4 (40%)
Benchmark	10	0 (0%)	2 (20%)	6 (60%)	2 (20%)

Risk and Return 01/1/15 - 12/31/19

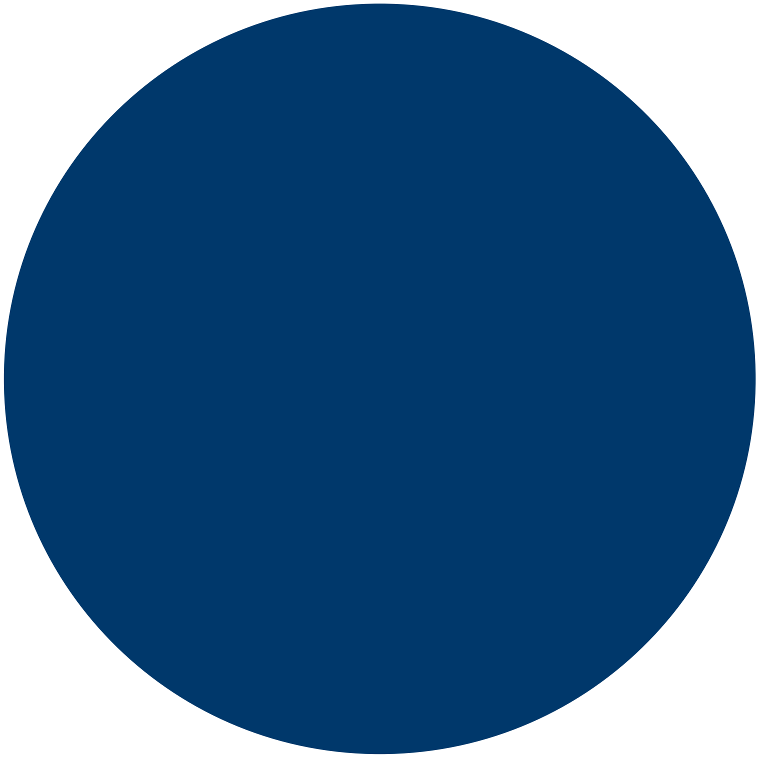


Asset Allocation By Manager

TIPS Fixed Composite

Periods Ended December 31, 2019

Dec-2019 : 49,265,121

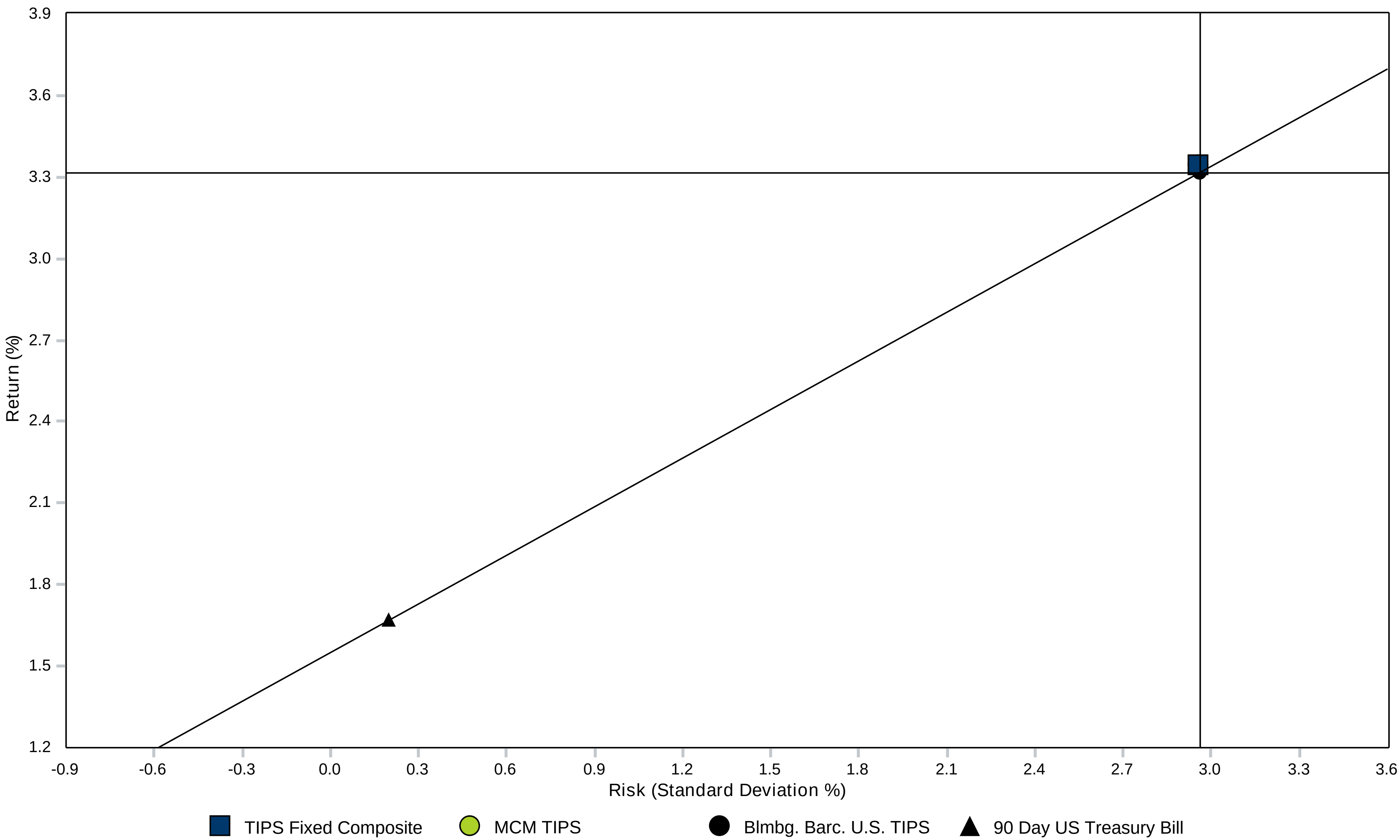


	Market Value $	Allocation (%)
MCM TIPS	49,265,121	100.0

Risk vs. Return

TIPS Fixed Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

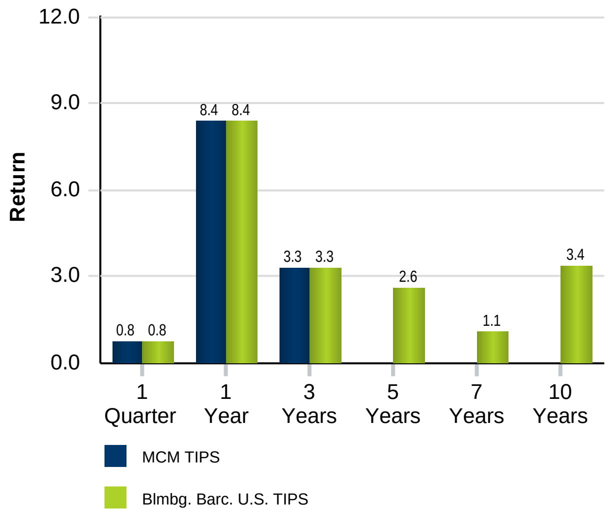
Wilshire Consulting

Performance Summary

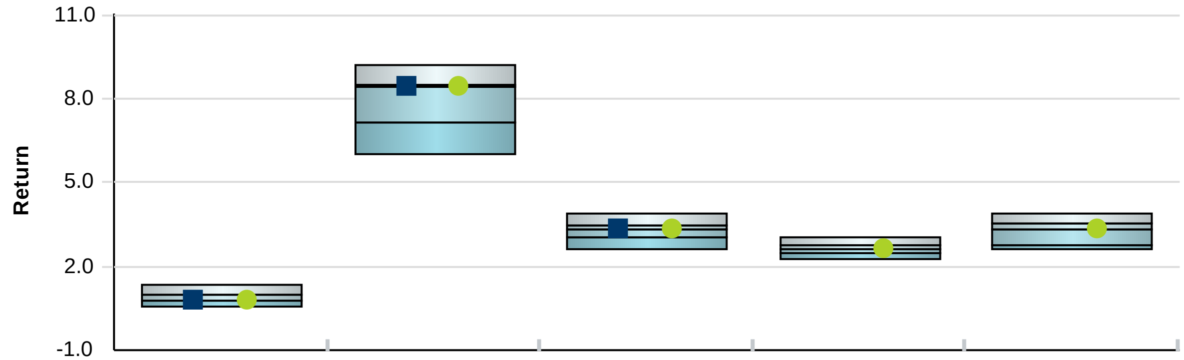
MCM TIPS

Periods Ended December 31, 2019

Comparative Performance

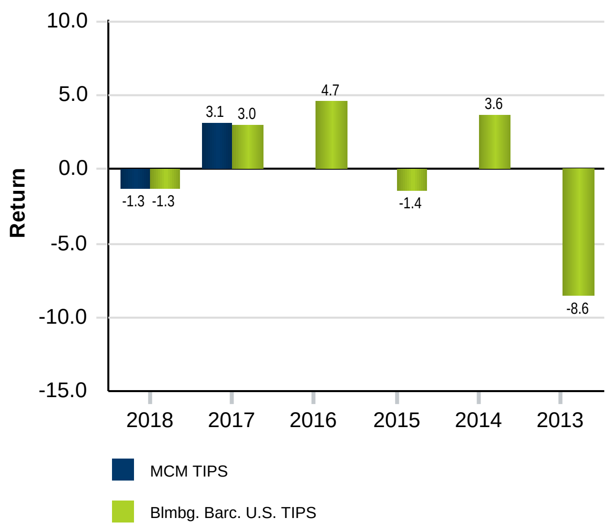


Peer Group Analysis: IM U.S. TIPS (SA+CF)

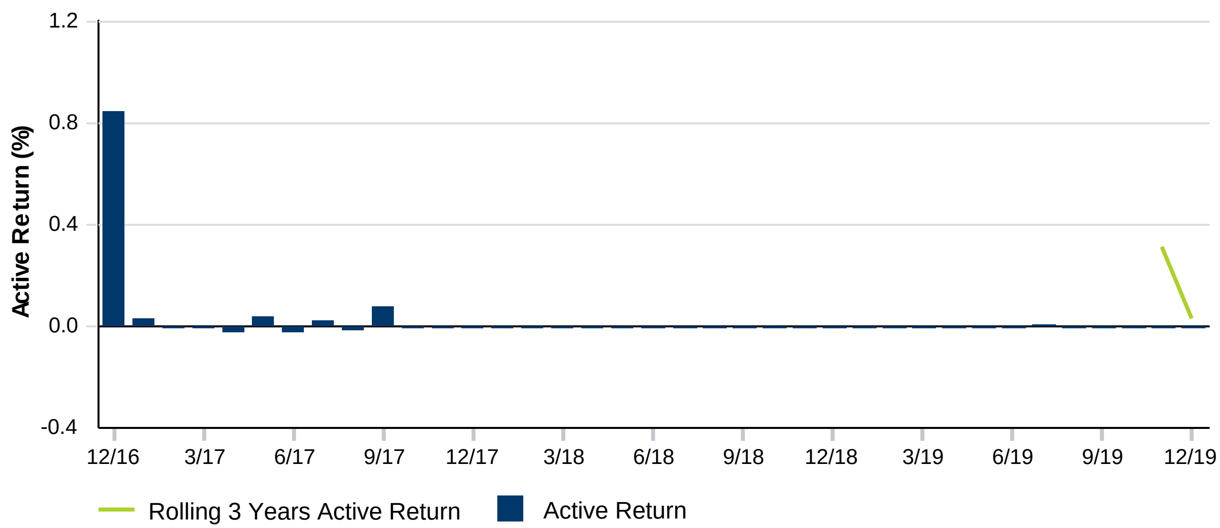


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	0.79 (56)	8.43 (53)	3.34 (46)		
Benchmark	0.79 (57)	8.43 (53)	3.32 (66)	2.62 (63)	3.36 (50)
Median	0.80	8.43	3.34	2.62	3.36

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

MCM TIPS

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	MCM TIPS	Blmbg. Barc. U.S. TIPS
Maximum Return	2.38	2.38
Minimum Return	-1.36	-1.36
Return	8.43	8.43
Cumulative Return	8.43	8.43
Active Return	0.00	0.00
Excess Return	5.92	5.92

Risk Summary Statistics

	MCM TIPS	Blmbg. Barc. U.S. TIPS
Upside Risk	1.11	1.11
Downside Risk	1.36	1.36
Beta	1.00	1.00

Risk/Return Summary Statistics

	MCM TIPS	Blmbg. Barc. U.S. TIPS
Standard Deviation	3.33	3.33
Alpha	0.00	0.00
Active Return/Risk	0.00	0.00
Tracking Error	0.00	0.00
Information Ratio	0.29	
Sharpe Ratio	1.81	1.81

Correlation Statistics

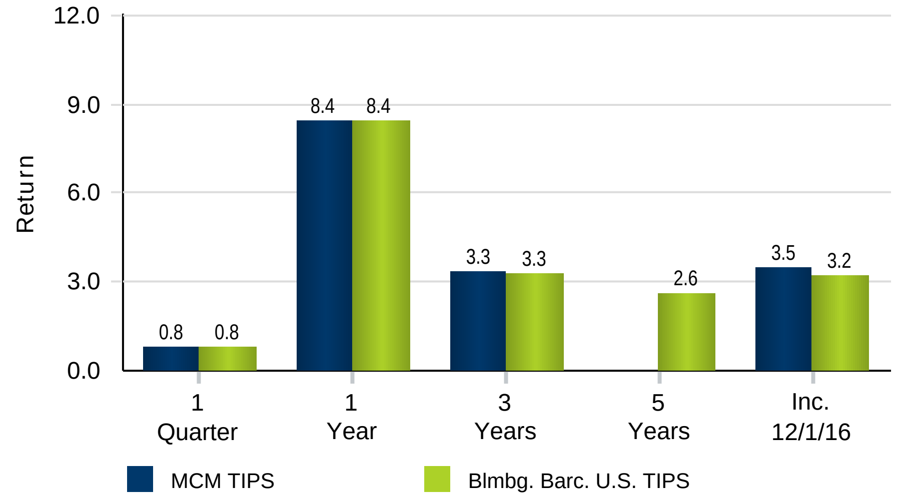
	MCM TIPS	Blmbg. Barc. U.S. TIPS
R-Squared	1.00	1.00
Actual Correlation	1.00	1.00

Manager Summary

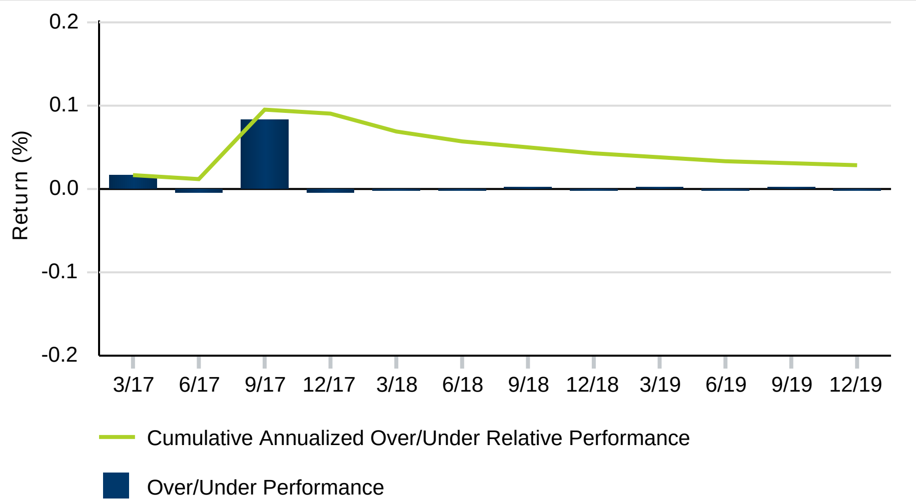
MCM TIPS vs IM U.S. TIPS (SA+CF)

Periods Ended December 31, 2019

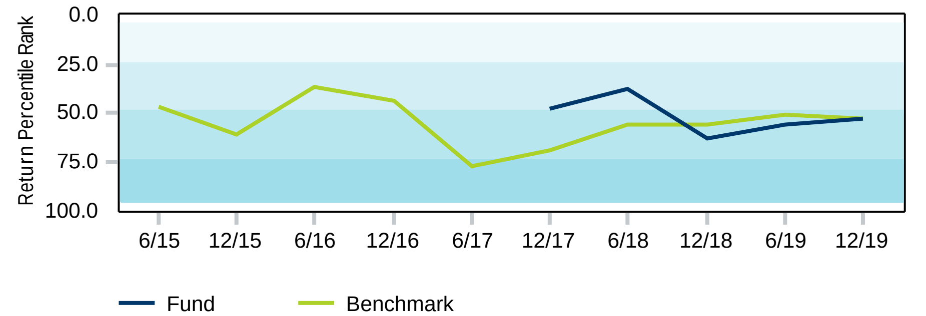
Comparative Performance



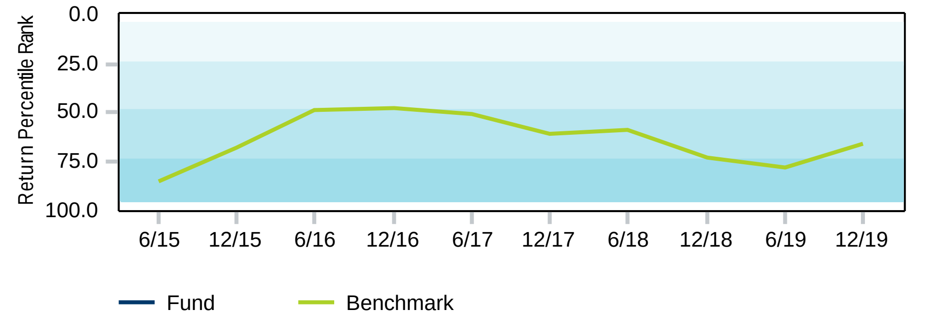
Relative Performance



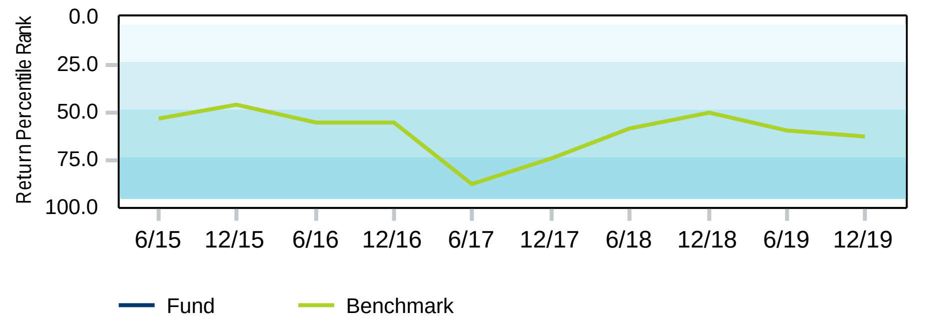
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking



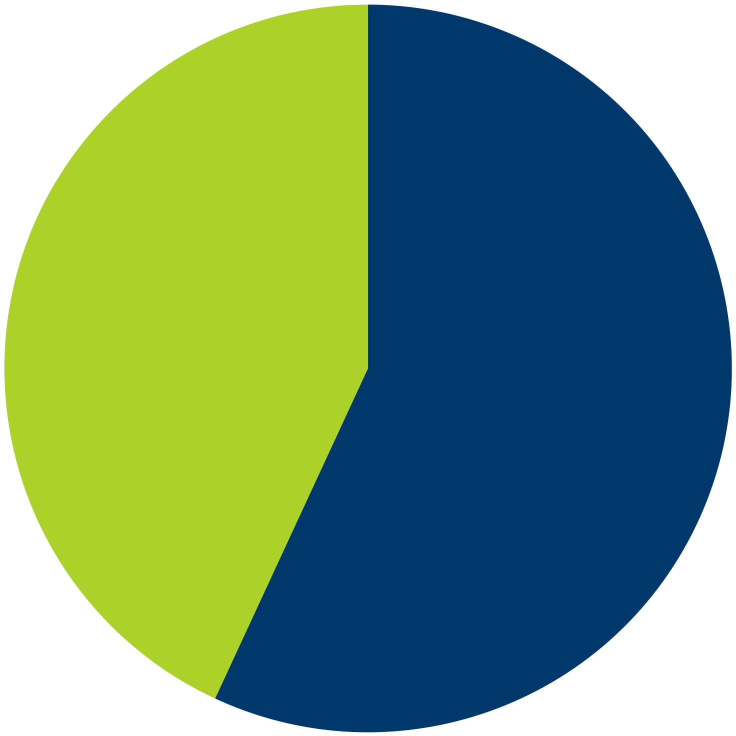
MLP

Asset Allocation By Manager

MLP Composite

Periods Ended December 31, 2019

Dec-2019 : 41,801,478



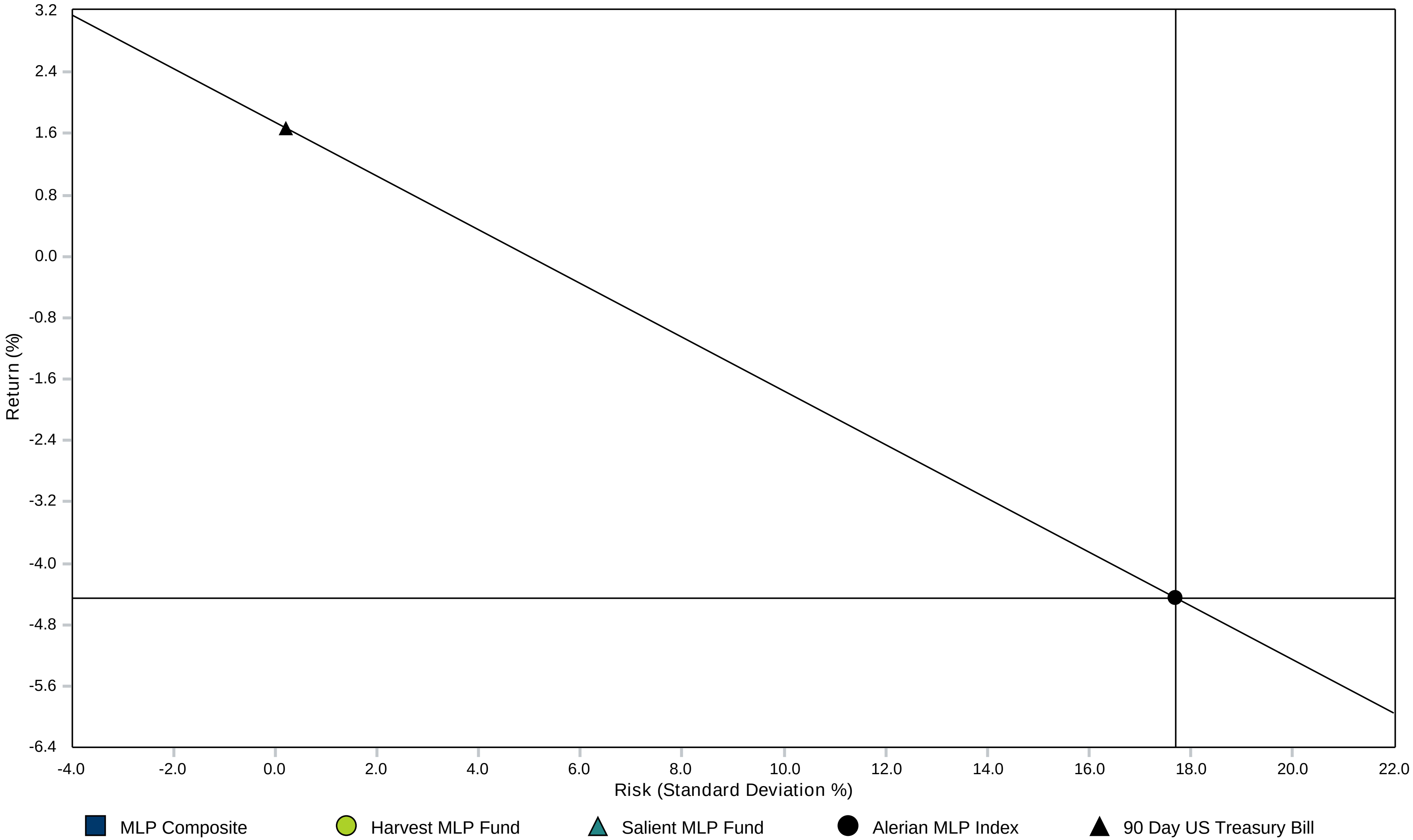
	Market Value $	Allocation (%)
Harvest MLP Fund	23,787,539	56.9
Salient MLP Fund	18,013,938	43.1

Wilshire Consulting

Risk vs. Return

MLP Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

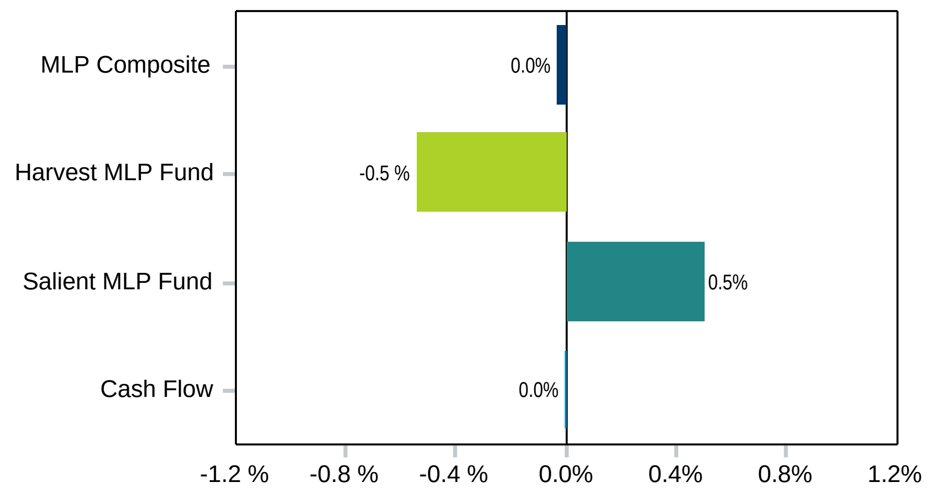
Wilshire Consulting

Return and Risk Contribution

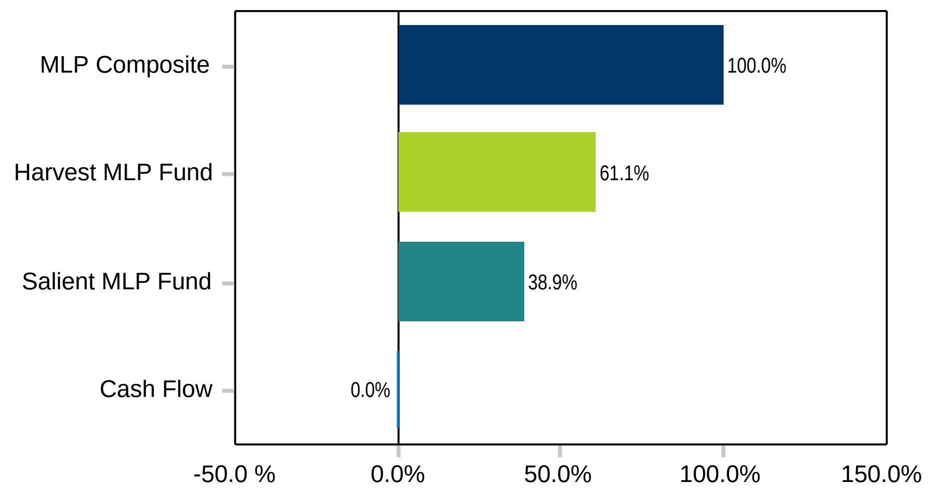
MLP Composite

Periods Ended December 31, 2019

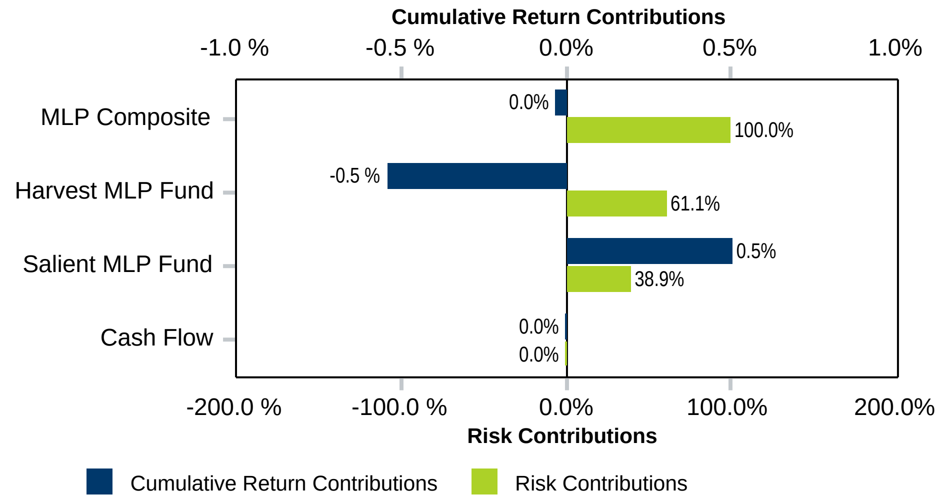
Cumulative Return Contributions



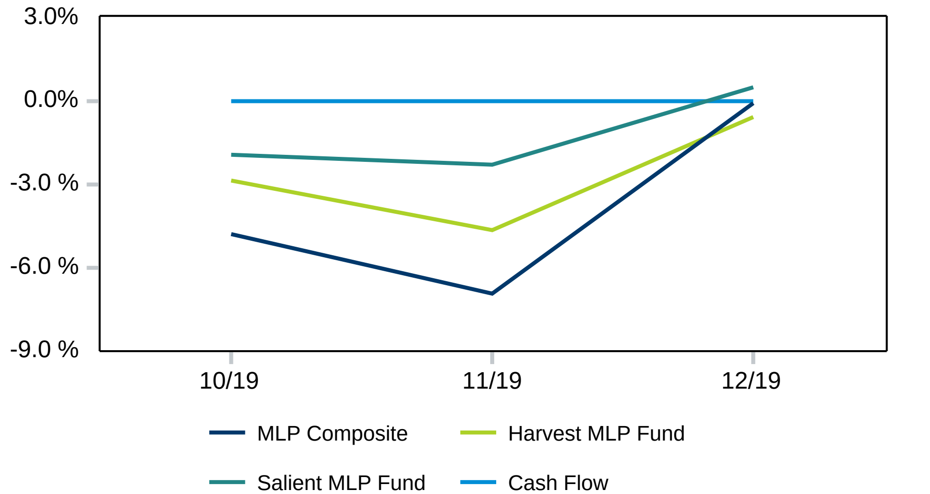
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History



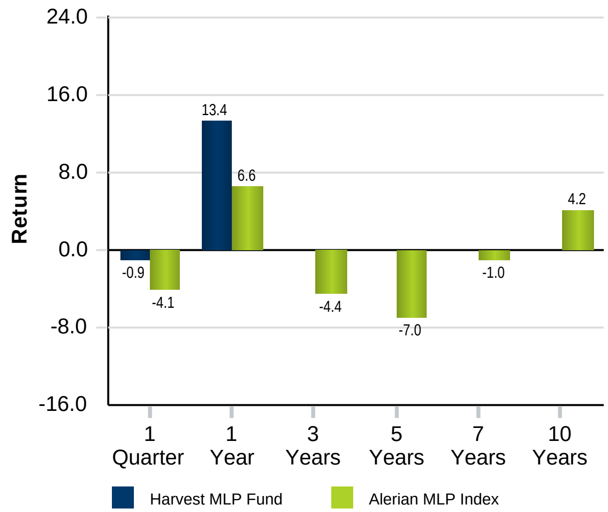
Wilshire Consulting

Performance Summary

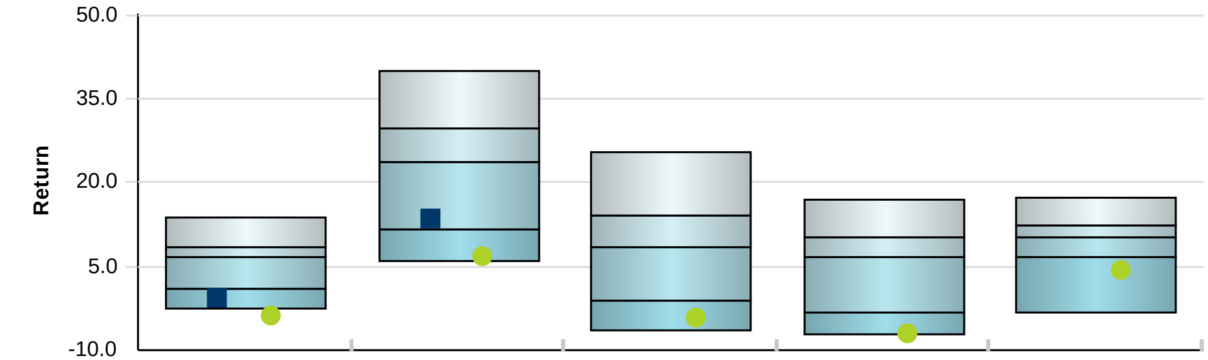
Harvest MLP Fund

Periods Ended December 31, 2019

Comparative Performance

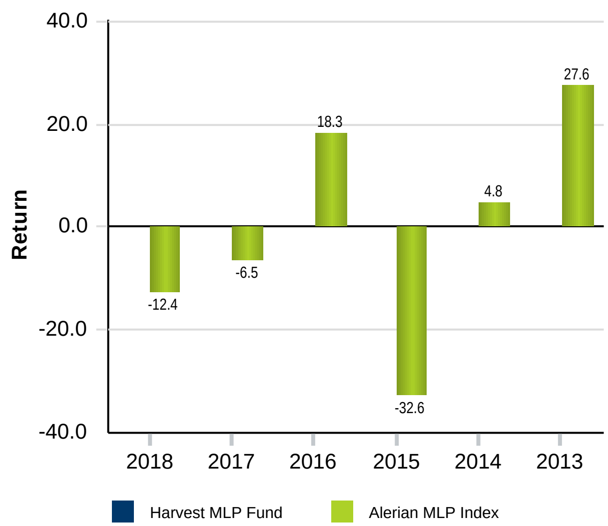


Peer Group Analysis: IM U.S. Other Equity (SA+CF)

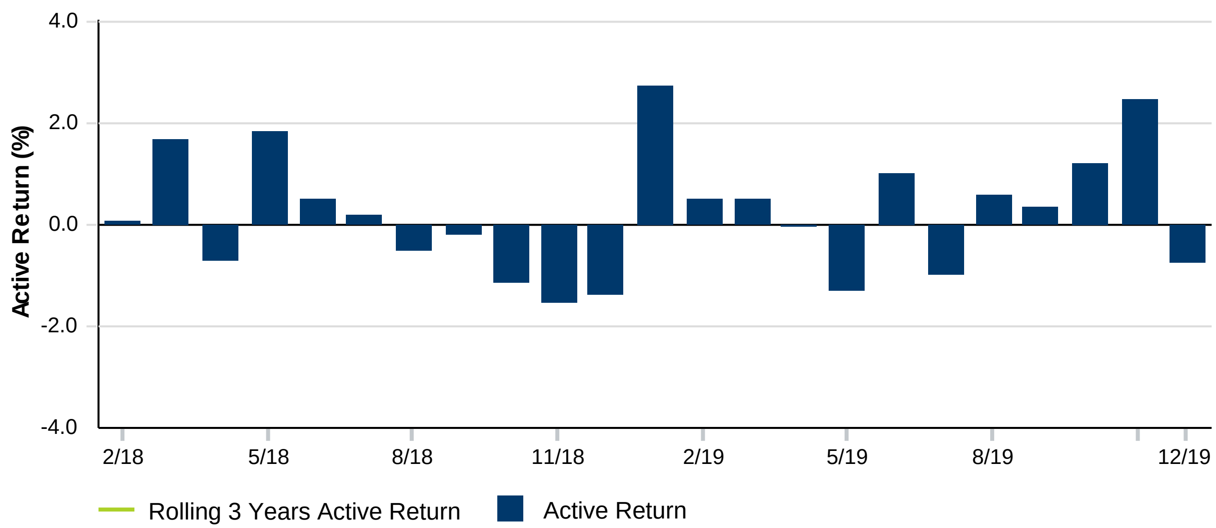


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	-0.95 (87)	13.42 (73)			
Benchmark	-4.08 (100)	6.56 (94)	-4.45 (89)	-7.00 (93)	4.19 (89)
Median	6.56	23.74	8.39	6.69	10.34

Comparative Performance



Rolling 3 Years Performance



Wilshire Consulting

Summary Statistics

Harvest MLP Fund

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Harvest MLP Fund	Alerian MLP Index
Maximum Return	15.39	12.64
Minimum Return	-4.98	-6.22
Return	13.42	6.56
Cumulative Return	13.42	6.56
Active Return	6.38	0.00
Excess Return	12.20	5.82

Risk Summary Statistics

	Harvest MLP Fund	Alerian MLP Index
Upside Risk	5.23	4.58
Downside Risk	8.30	10.26
Beta	1.02	1.00

Risk/Return Summary Statistics

	Harvest MLP Fund	Alerian MLP Index
Standard Deviation	19.48	18.75
Alpha	6.44	0.00
Active Return/Risk	0.33	0.00
Tracking Error	4.14	0.00
Information Ratio	1.54	
Sharpe Ratio	0.63	0.31

Correlation Statistics

	Harvest MLP Fund	Alerian MLP Index
R-Squared	0.96	1.00
Actual Correlation	0.98	1.00

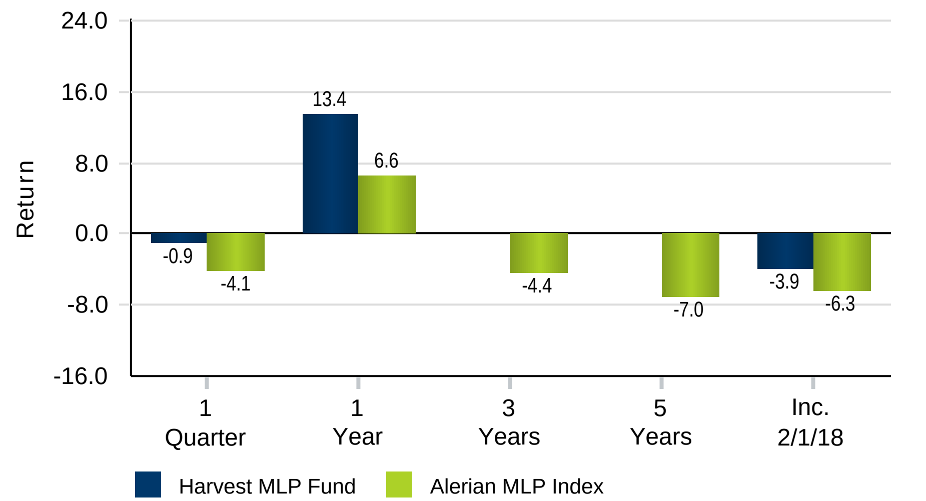
Wilshire Consulting

Manager Summary

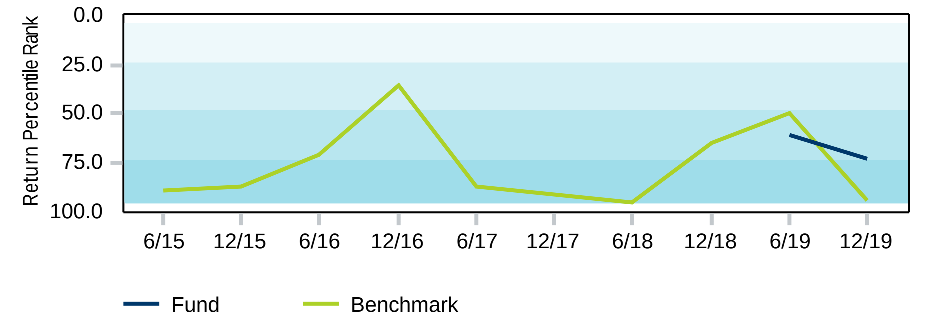
Harvest MLP Fund vs IM U.S. Other Equity (SA+CF)

Periods Ended December 31, 2019

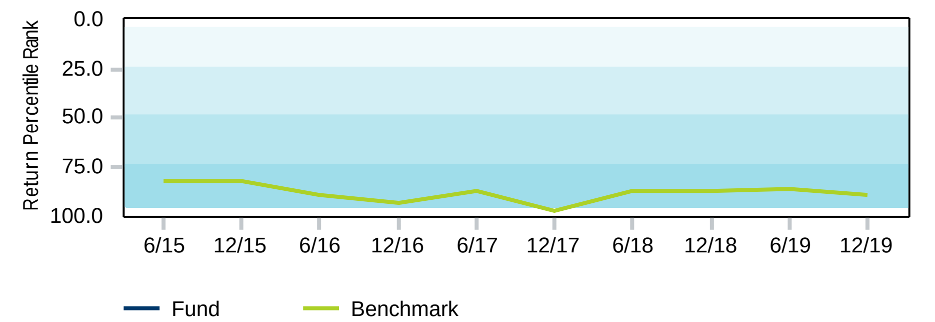
Comparative Performance



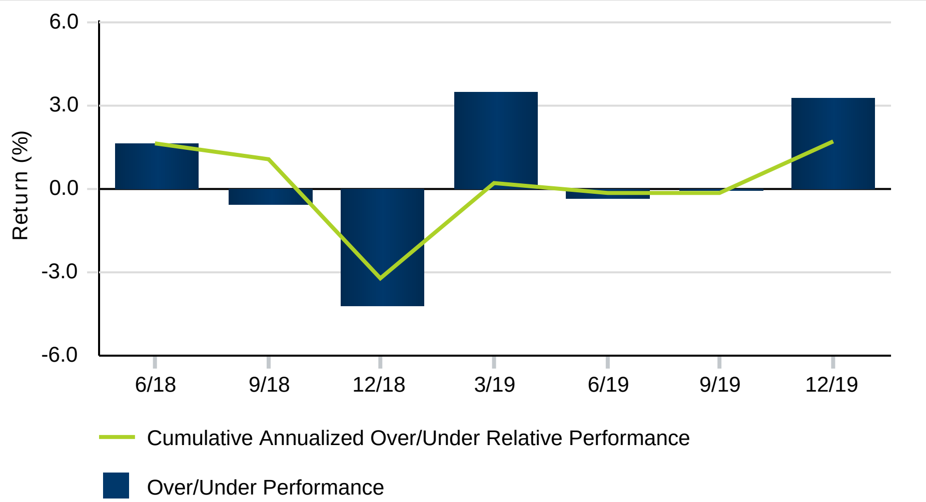
1 Year Rolling Percentile Ranking



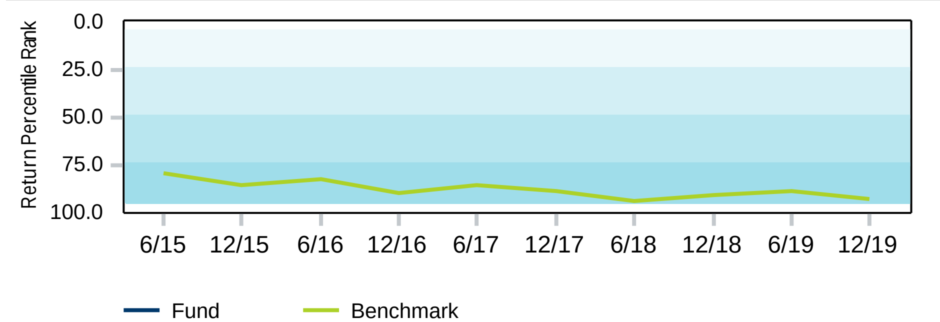
3 Year Rolling Percentile Ranking



Relative Performance



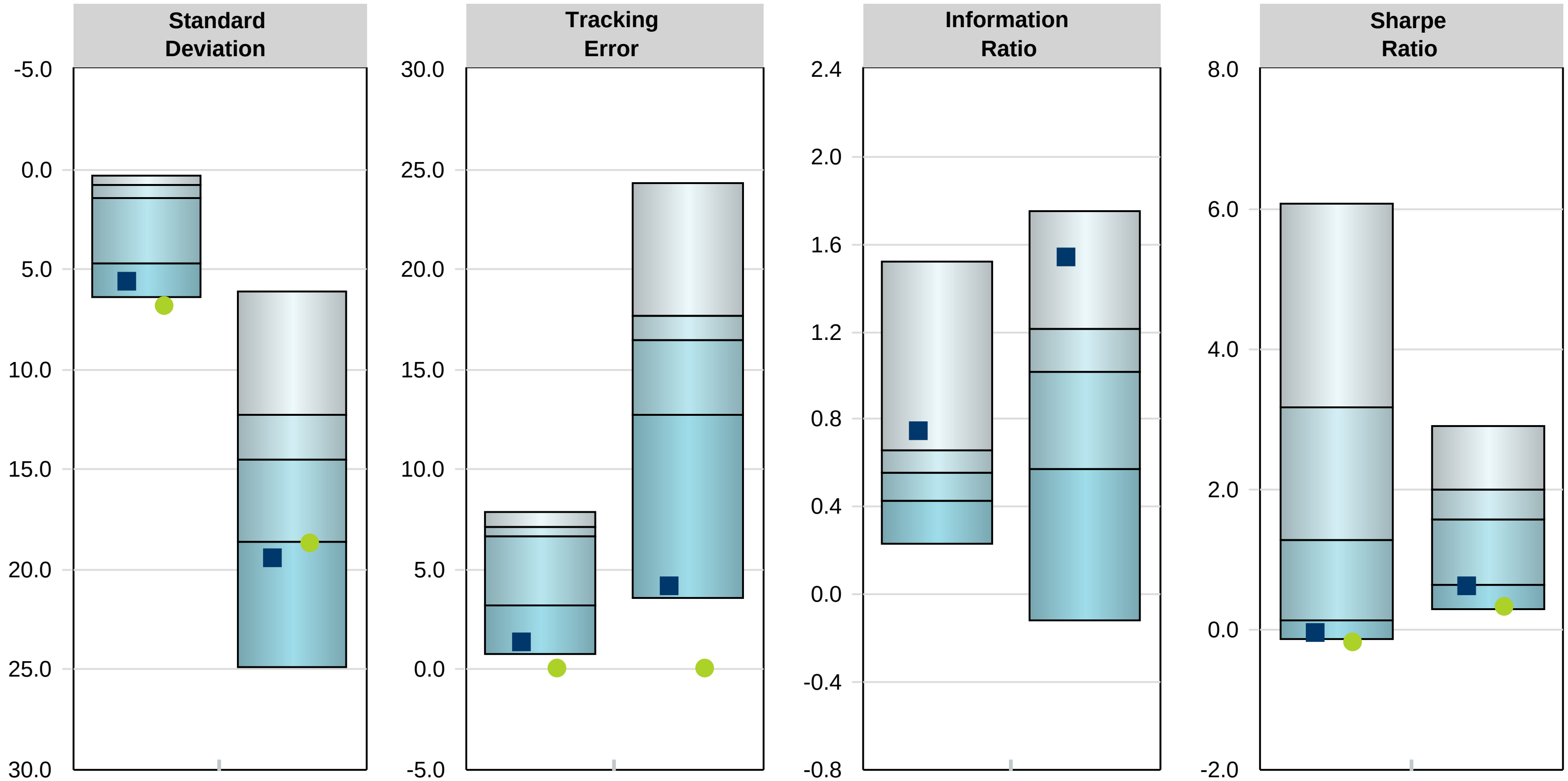
5 Year Rolling Percentile Ranking



Peer Group Analysis - Multi Statistics

Harvest MLP Fund

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Harvest MLP Fund	5.66 (83)	19.48 (84)	1.33 (90)	4.14 (90)	0.74 (21)	1.54 (10)	-0.06 (86)	0.63 (77)
● Alerian MLP Index	6.84 (96)	18.75 (75)	0.00 (100)	0.00 (100)			-0.19 (97)	0.31 (95)
5th Percentile	0.33	6.15	7.92	24.29	1.52	1.75	6.09	2.89
1st Quartile	0.76	12.25	7.11	17.66	0.66	1.21	3.18	2.00
Median	1.44	14.49	6.66	16.50	0.56	1.01	1.29	1.56
3rd Quartile	4.75	18.61	3.24	12.72	0.43	0.57	0.14	0.64
95th Percentile	6.37	24.84	0.78	3.59	0.23	-0.11	-0.15	0.30

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

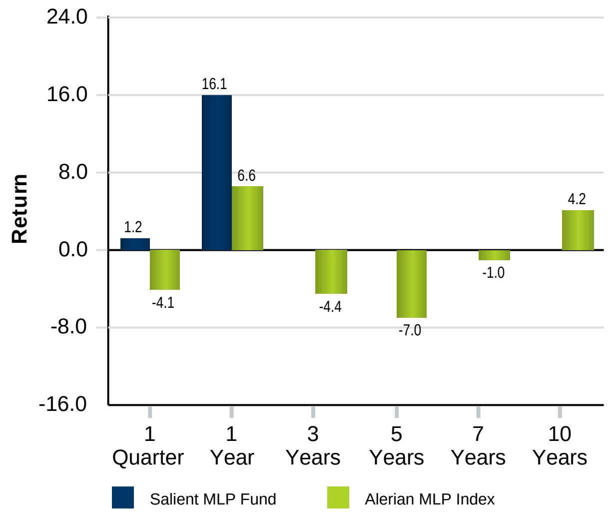
Wilshire Consulting

Performance Summary

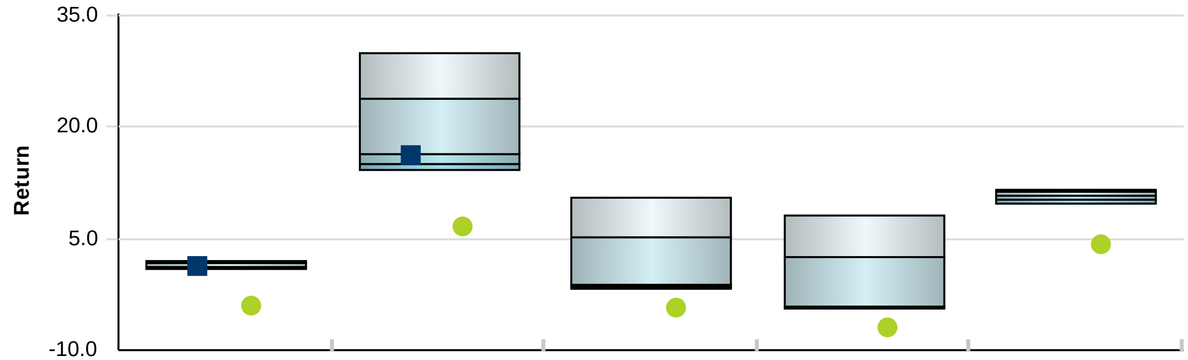
Salient MLP Fund

Periods Ended December 31, 2019

Comparative Performance

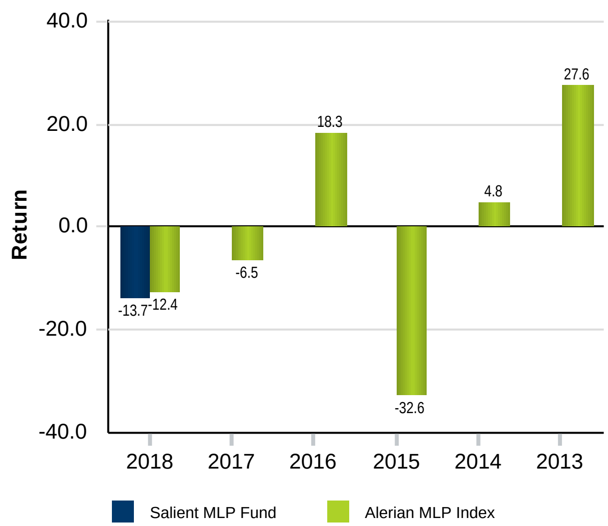


Peer Group Analysis: IM U.S. Other Equity (MA)

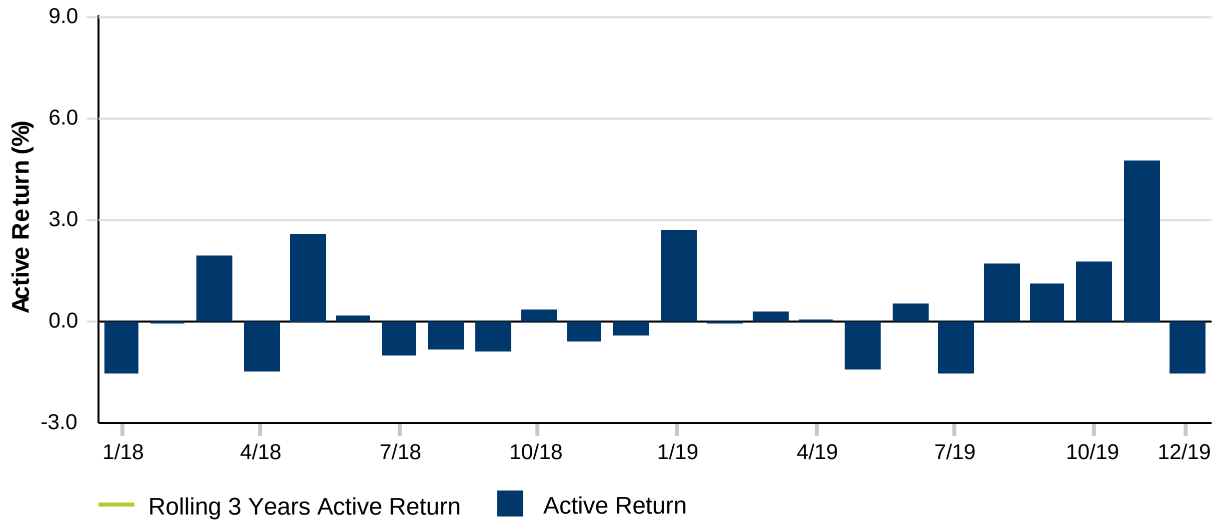


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	1.19 (61)	16.05 (57)			
Benchmark	-4.08 (100)	6.56 (100)	-4.45 (100)	-7.00 (100)	4.19 (100)
Median	1.27	16.36	-1.29	-4.15	10.73

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Salient MLP Fund

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Salient MLP Fund	Alerian MLP Index
Maximum Return	15.34	12.64
Minimum Return	-4.45	-6.22
Return	16.05	6.56
Cumulative Return	16.05	6.56
Active Return	8.49	0.00
Excess Return	14.30	5.82

Risk Summary Statistics

	Salient MLP Fund	Alerian MLP Index
Upside Risk	5.09	4.58
Downside Risk	6.80	10.26
Beta	0.92	1.00

Risk/Return Summary Statistics

	Salient MLP Fund	Alerian MLP Index
Standard Deviation	18.29	18.75
Alpha	9.51	0.00
Active Return/Risk	0.46	0.00
Tracking Error	6.18	0.00
Information Ratio	1.37	
Sharpe Ratio	0.78	0.31

Correlation Statistics

	Salient MLP Fund	Alerian MLP Index
R-Squared	0.89	1.00
Actual Correlation	0.94	1.00

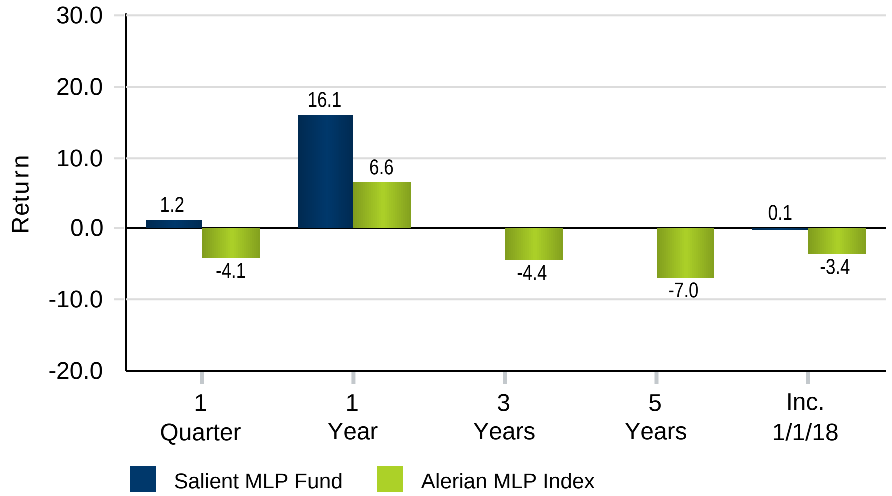
Wilshire Consulting

Manager Summary

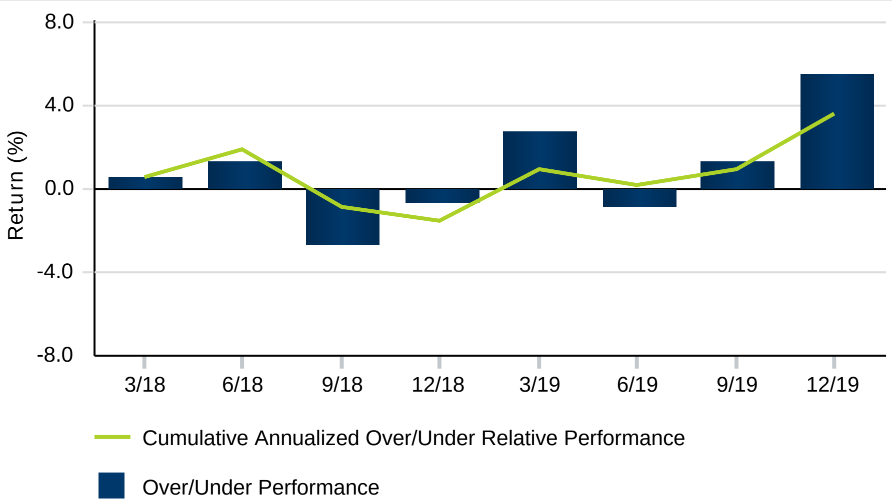
Salient MLP Fund vs IM U.S. Other Equity (MA)

Periods Ended December 31, 2019

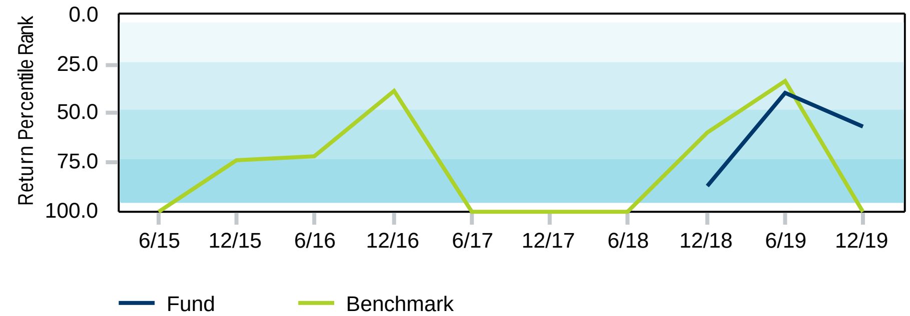
Comparative Performance



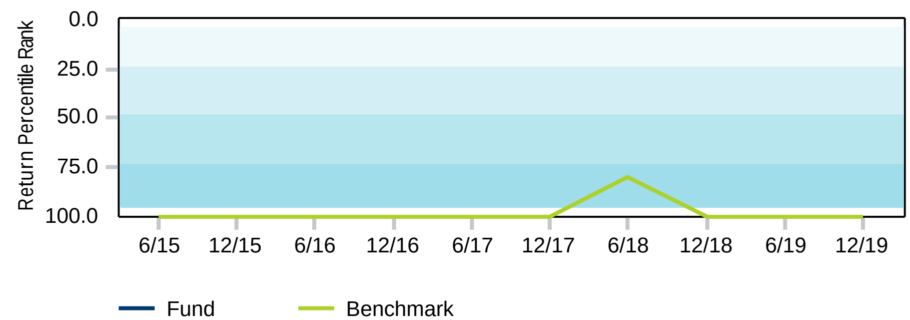
Relative Performance



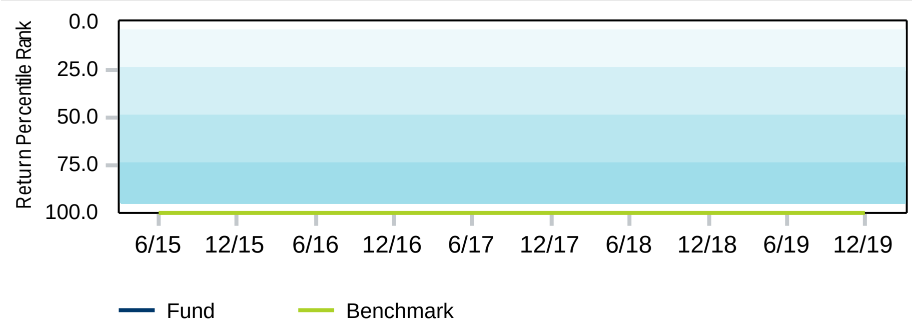
1 Year Rolling Percentile Ranking



3 Year Rolling Percentile Ranking



5 Year Rolling Percentile Ranking

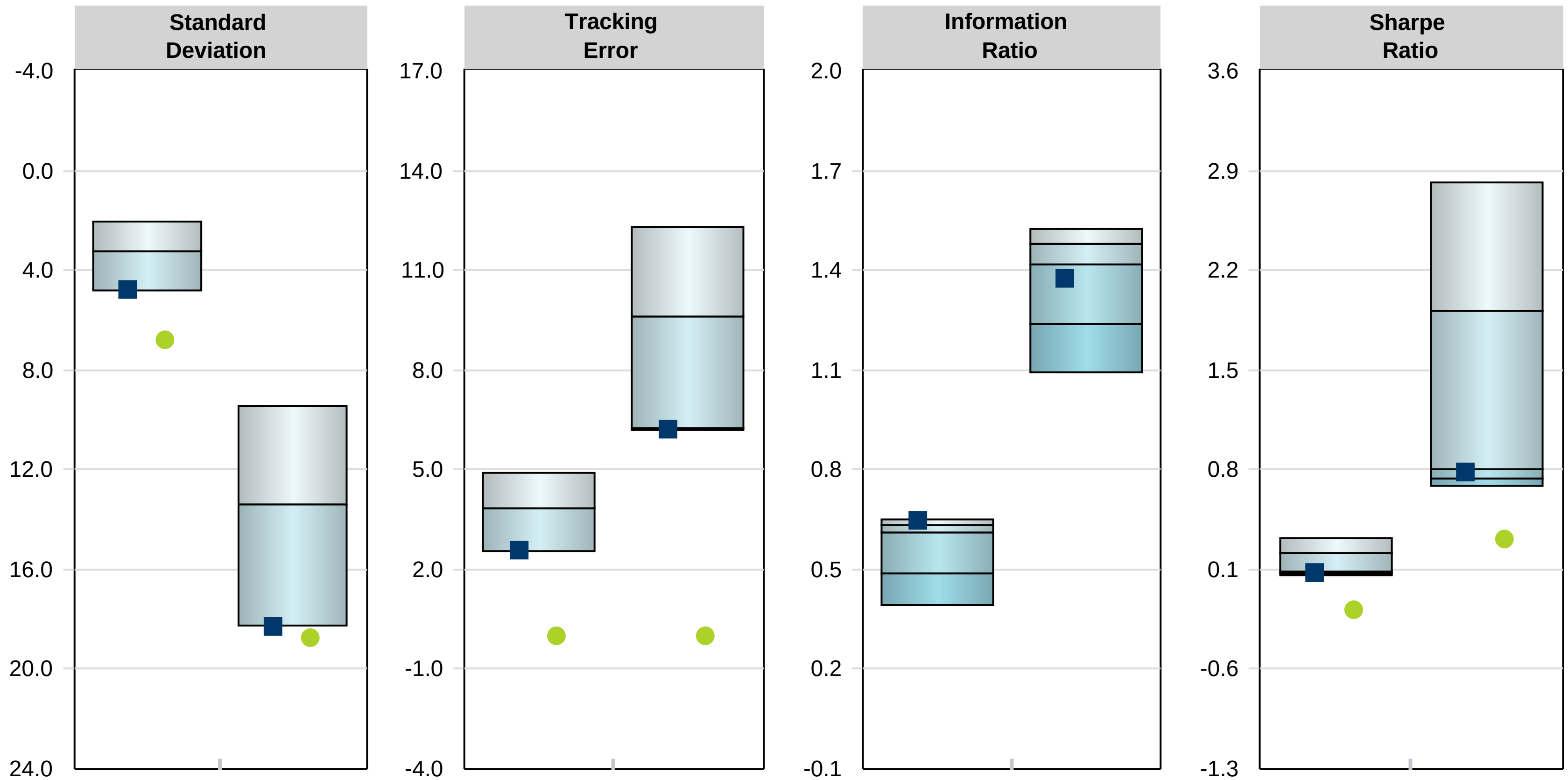


Wilshire Consulting

Peer Group Analysis - Multi Statistics

Salient MLP Fund

Periods Ended December 31, 2019



	Standard Deviation QTD	Standard Deviation YTD	Tracking Error QTD	Tracking Error YTD	Information Ratio QTD	Information Ratio YTD	Sharpe Ratio QTD	Sharpe Ratio YTD
■ Salient MLP Fund	4.79 (95)	18.29 (100)	2.57 (82)	6.18 (96)	0.64 (10)	1.37 (57)	0.07 (61)	0.78 (57)
● Alerian MLP Index	6.84 (100)	18.75 (100)	0.00 (100)	0.00 (100)			-0.19 (100)	0.31 (100)
5th Percentile	2.03	9.47	4.88	12.27	0.65	1.52	0.32	2.81
1st Quartile	3.25	13.36	3.86	9.59	0.63	1.48	0.21	1.92
Median	4.78	18.24	2.58	6.23	0.61	1.42	0.08	0.80
3rd Quartile	4.78	18.25	2.57	6.20	0.49	1.24	0.07	0.74
95th Percentile	4.79	18.26	2.57	6.18	0.39	1.09	0.06	0.69

Parentheses contain percentile rankings.
Calculation based on monthly periodicity.

REAL ESTATE

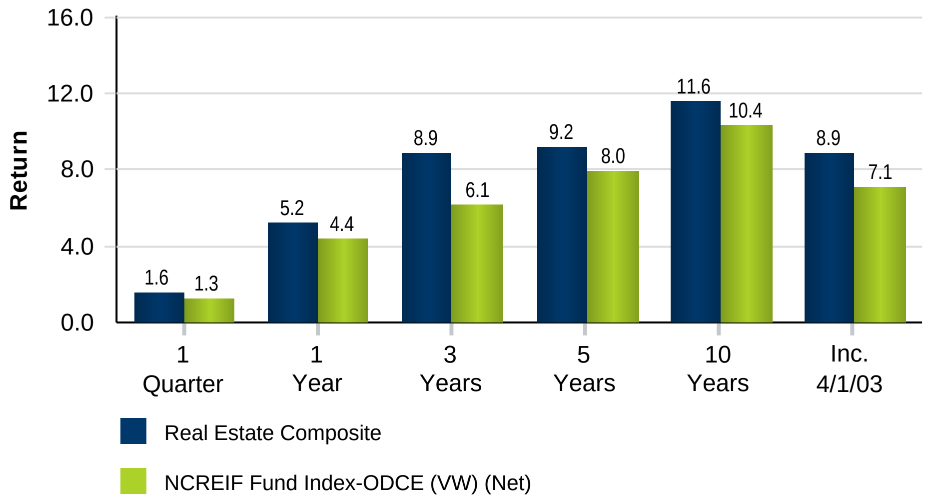
Wilshire Consulting

Composite Performance Summary

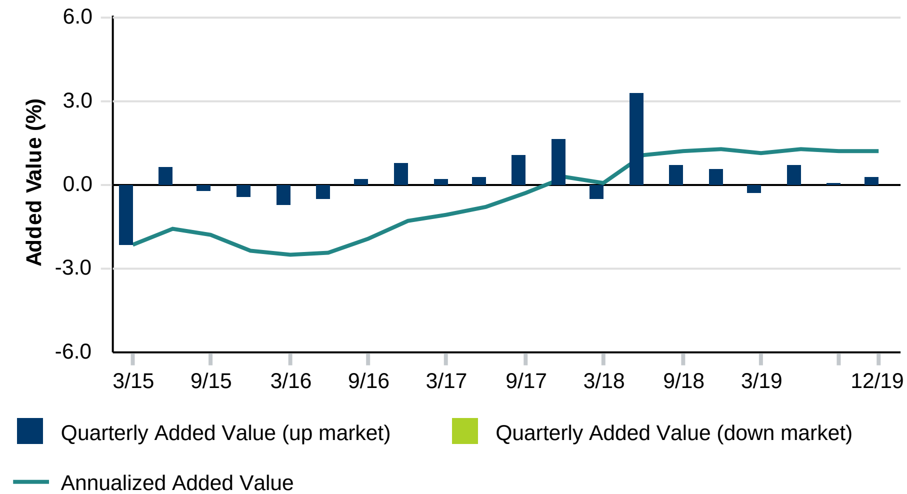
Real Estate Composite

Periods Ended December 31, 2019

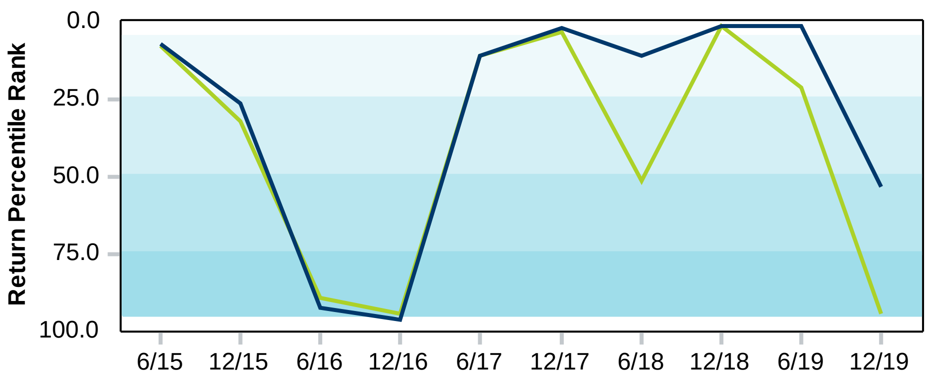
Comparative Performance



Added Value History

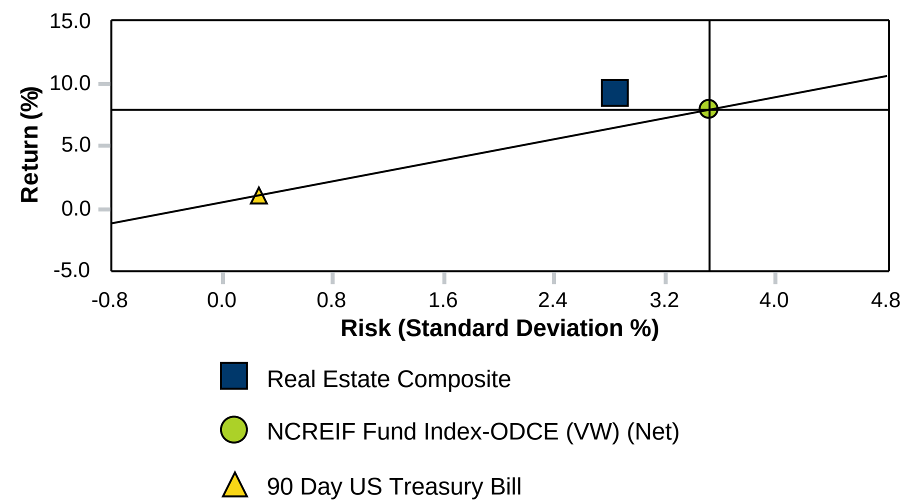


Rolling Percentile Rank: IM U.S. REIT (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Real Estate Composite	10	6 (60%)	1 (10%)	1 (10%)	2 (20%)
Benchmark	10	5 (50%)	1 (10%)	1 (10%)	3 (30%)

Risk and Return 01/1/15 - 12/31/19



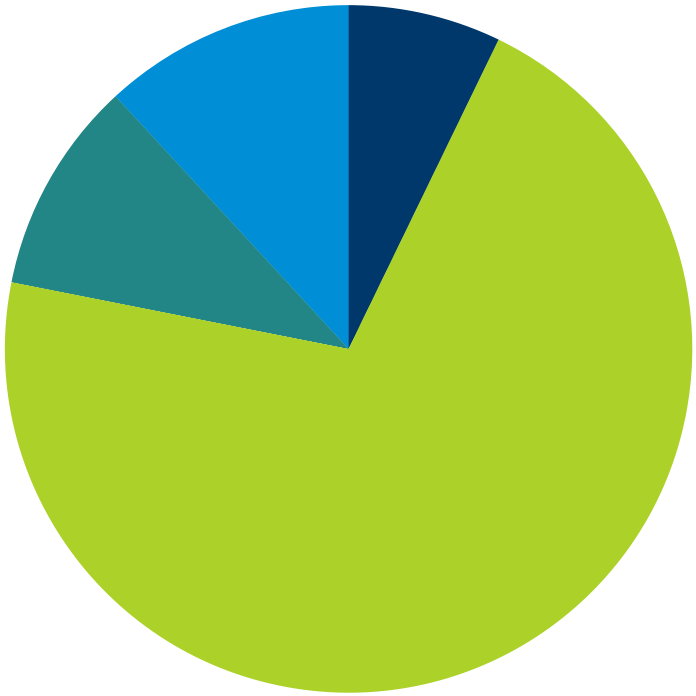
Wilshire Consulting

Asset Allocation By Manager

Real Estate Composite

Periods Ended December 31, 2019

Dec-2019 : 101,781,586



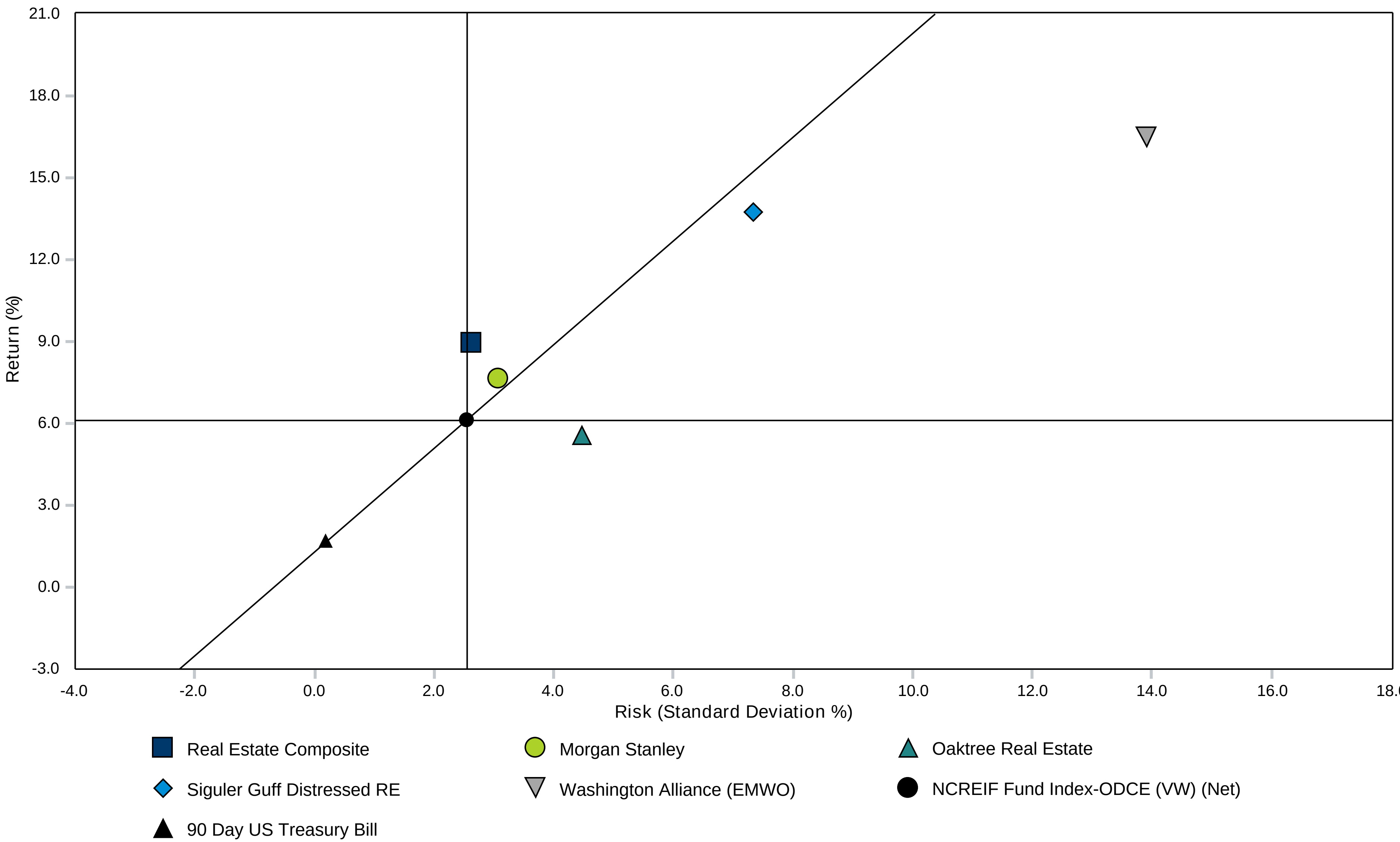
	Market Value $	Allocation (%)
Oaktree Real Estate	7,317,123	7.2
Morgan Stanley	72,187,088	70.9
Siguler Guff Distressed RE	10,206,408	10.0
Washington Alliance (EMWO)	12,070,967	11.9

Wilshire Consulting

Risk vs. Return

Real Estate Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

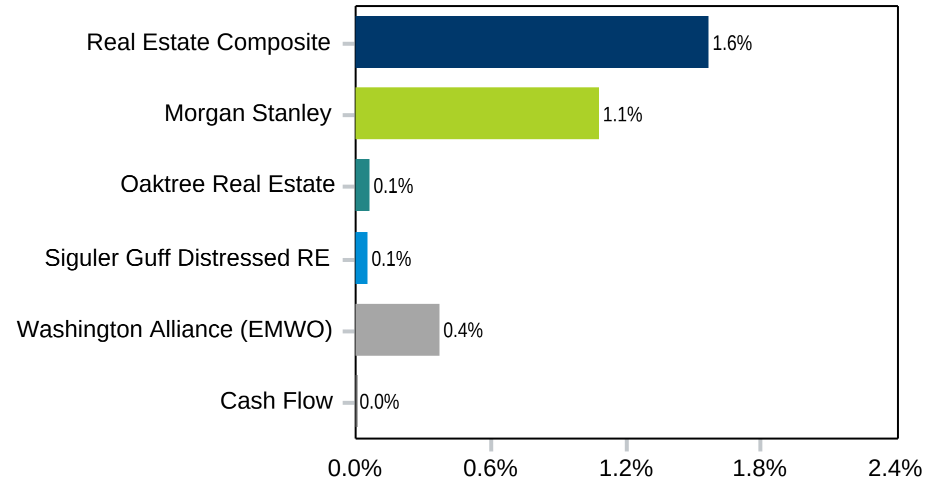
Wilshire Consulting

Return and Risk Contribution

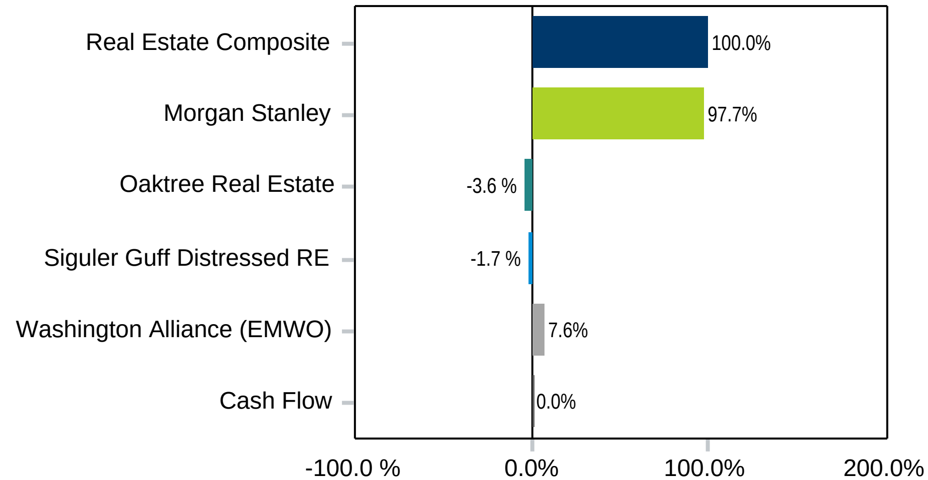
Real Estate Composite

Periods Ended December 31, 2019

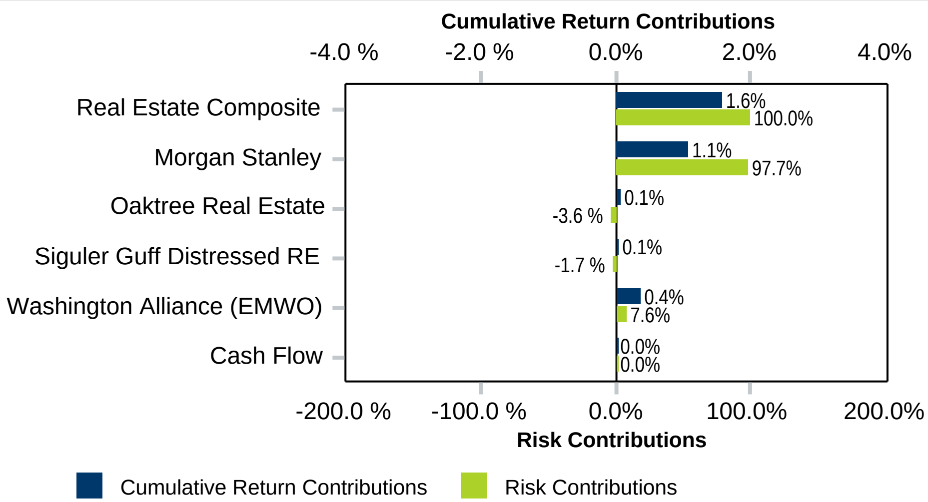
Cumulative Return Contributions



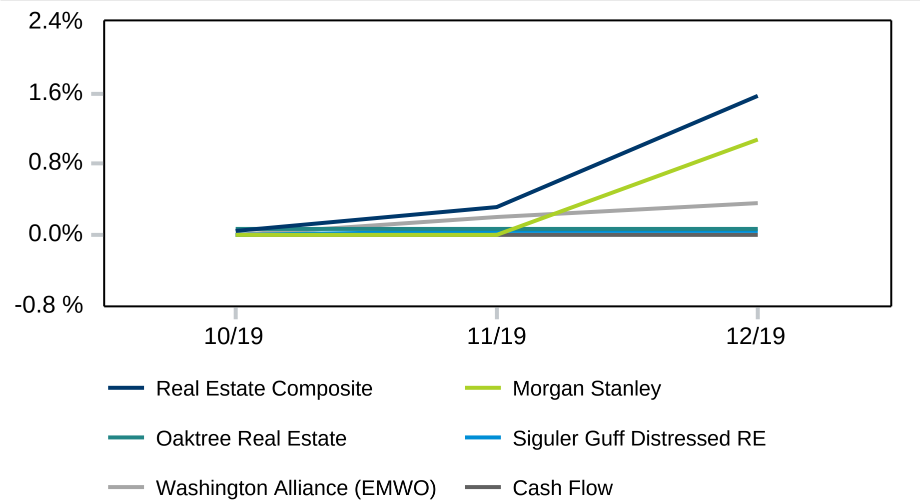
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History

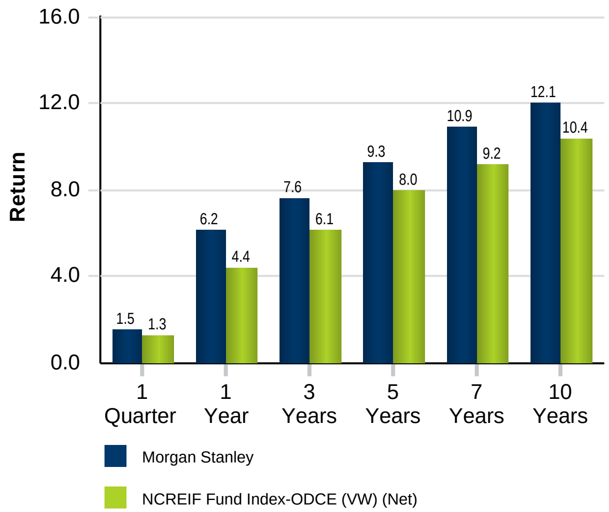


Performance Summary

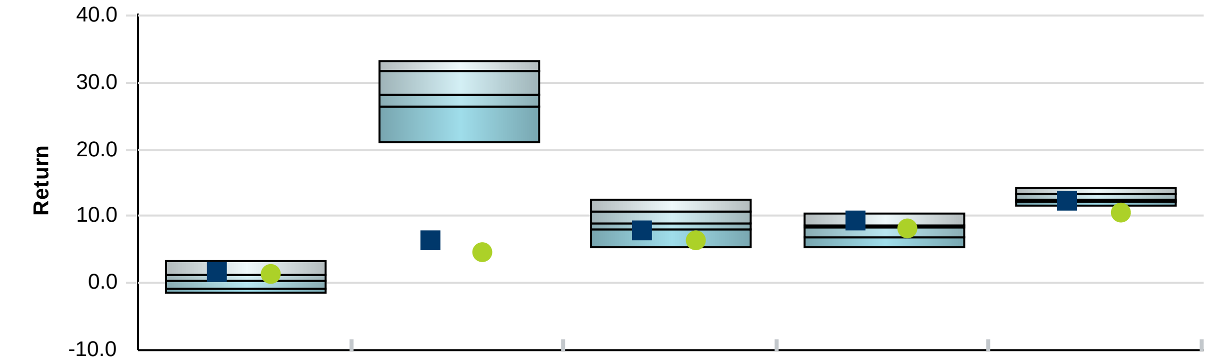
Morgan Stanley

Periods Ended December 31, 2019

Comparative Performance

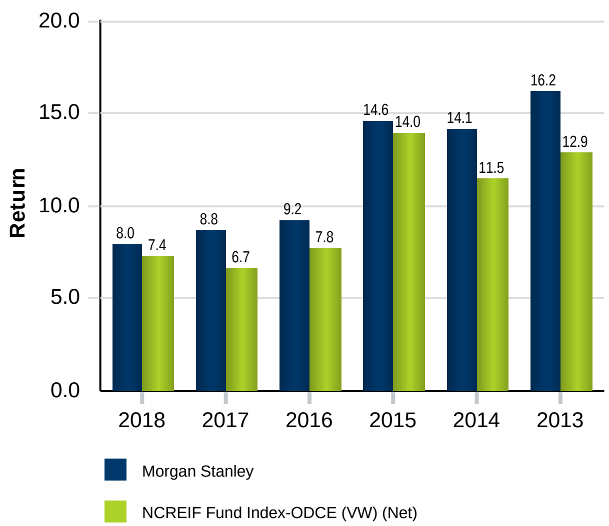


Peer Group Analysis: IM U.S. REIT (SA+CF)

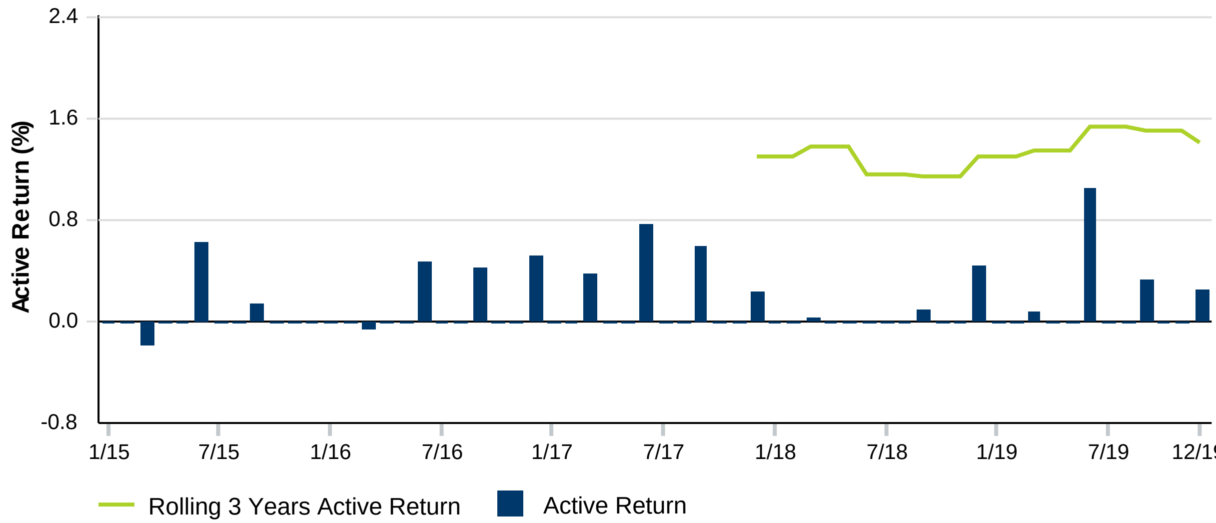


	Quarter	1 Year	3 Years	5 Years	10 Years
Fund	1.53 (14)	6.17 (100)	7.62 (79)	9.30 (18)	12.08 (76)
Benchmark	1.27 (26)	4.39 (100)	6.13 (94)	7.98 (54)	10.39 (99)
Median	0.23	28.25	8.97	8.28	12.54

Comparative Performance



Rolling 3 Years Performance



Summary Statistics

Morgan Stanley

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Morgan Stanley	NCREIF Fund Index-ODCE (VW) (Net)
Maximum Return	1.82	1.27
Minimum Return	0.00	0.00
Return	6.17	4.39
Cumulative Return	6.17	4.39
Active Return	1.71	0.00
Excess Return	3.77	2.06

Risk Summary Statistics

	Morgan Stanley	NCREIF Fund Index-ODCE (VW) (Net)
Upside Risk	3.04	2.19
Downside Risk	0.00	0.00
Beta	1.30	1.00

Risk/Return Summary Statistics

	Morgan Stanley	NCREIF Fund Index-ODCE (VW) (Net)
Standard Deviation	2.49	1.80
Alpha	0.43	0.00
Active Return/Risk	0.69	0.00
Tracking Error	1.02	0.00
Information Ratio	1.68	
Sharpe Ratio	1.52	1.14

Correlation Statistics

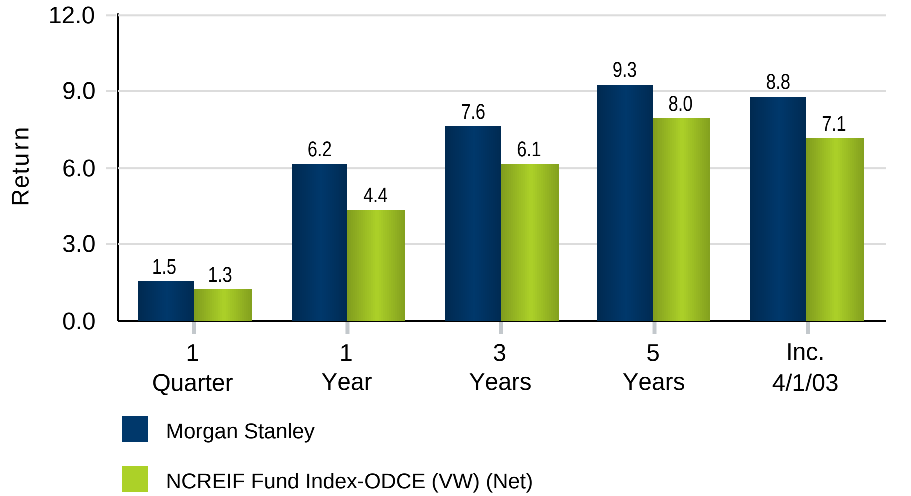
	Morgan Stanley	NCREIF Fund Index-ODCE (VW) (Net)
R-Squared	0.88	1.00
Actual Correlation	0.94	1.00

Manager Summary

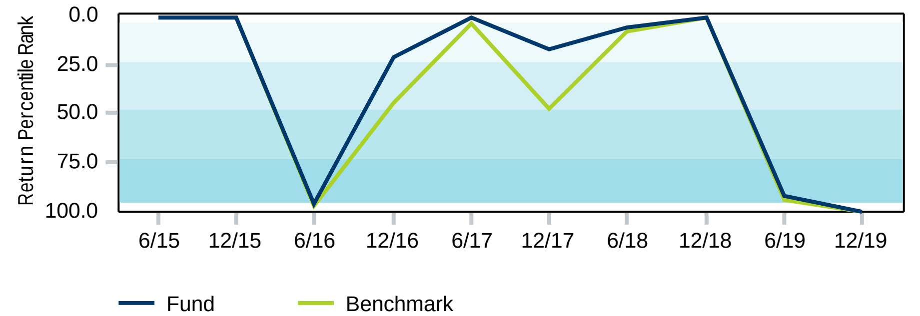
Morgan Stanley vs IM U.S. REIT (SA+CF)

Periods Ended December 31, 2019

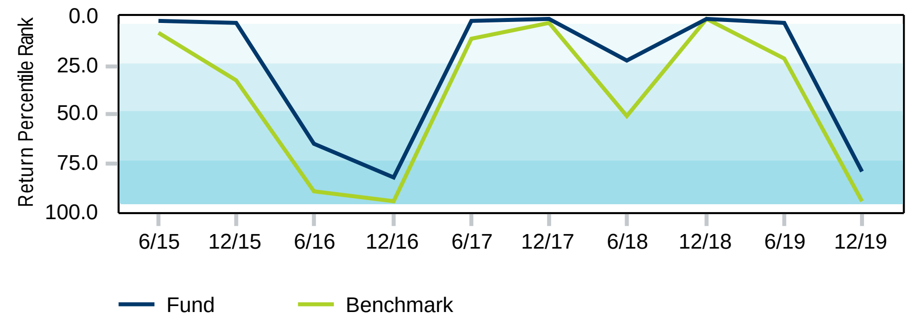
Comparative Performance



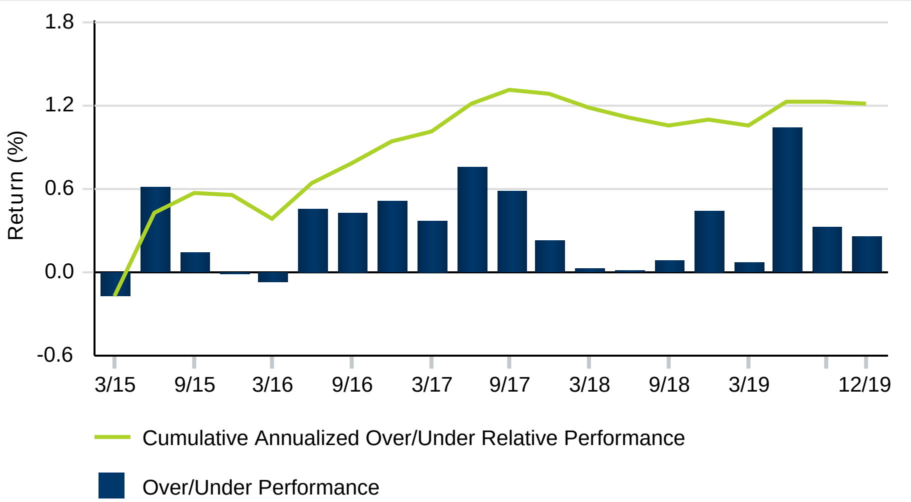
1 Year Rolling Percentile Ranking



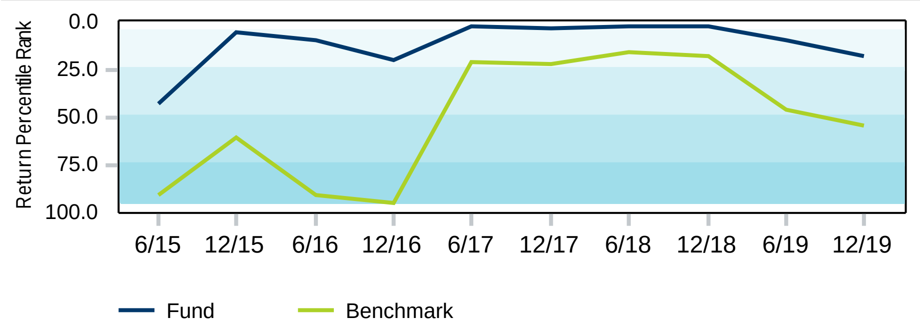
3 Year Rolling Percentile Ranking



Relative Performance



5 Year Rolling Percentile Ranking



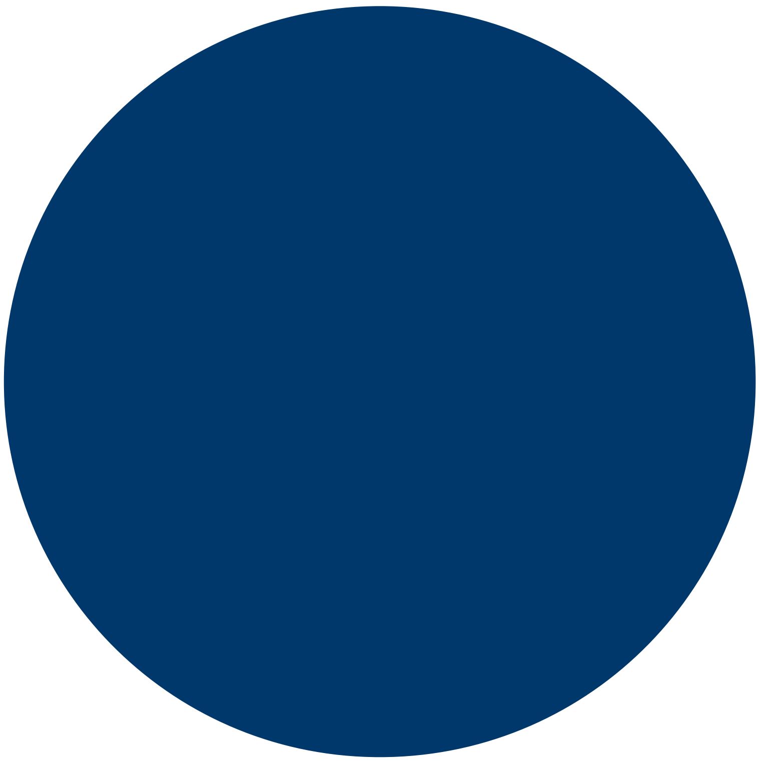
ERECT

Asset Allocation By Manager

ERECT Composite

Periods Ended December 31, 2019

Dec-2019 : 9,757,314



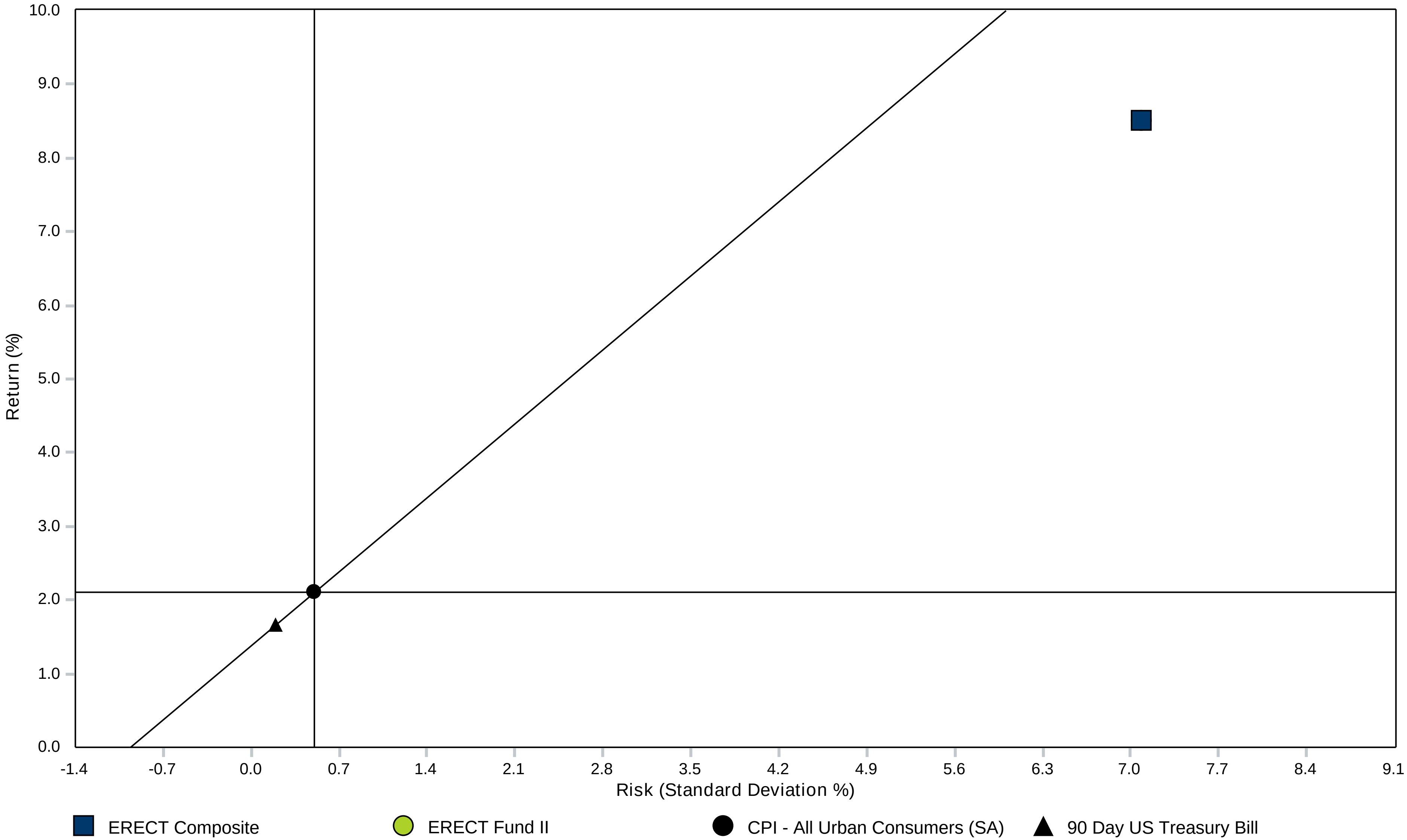
	Market Value $	Allocation (%)
ERECT Fund II	9,757,314	100.0

Wilshire Consulting

Risk vs. Return

ERECT Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

Wilshire Consulting

Summary Statistics

ERECT Fund II

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	ERECT Fund II	CPI - All Urban Consumers (SA)
Maximum Return	4.06	0.41
Minimum Return	-0.24	-0.02
Return	7.09	2.29
Cumulative Return	7.09	2.29
Active Return	4.69	0.00
Excess Return	4.70	0.01

Risk Summary Statistics

	ERECT Fund II	CPI - All Urban Consumers (SA)
Upside Risk	1.36	0.24
Downside Risk	0.24	0.02
Beta	2.49	1.00

Risk/Return Summary Statistics

	ERECT Fund II	CPI - All Urban Consumers (SA)
Standard Deviation	4.26	0.49
Alpha	1.34	0.00
Active Return/Risk	1.10	0.00
Tracking Error	4.15	0.00
Information Ratio	1.13	
Sharpe Ratio	1.11	0.01

Correlation Statistics

	ERECT Fund II	CPI - All Urban Consumers (SA)
R-Squared	0.08	1.00
Actual Correlation	0.29	1.00

HEDGE FUND

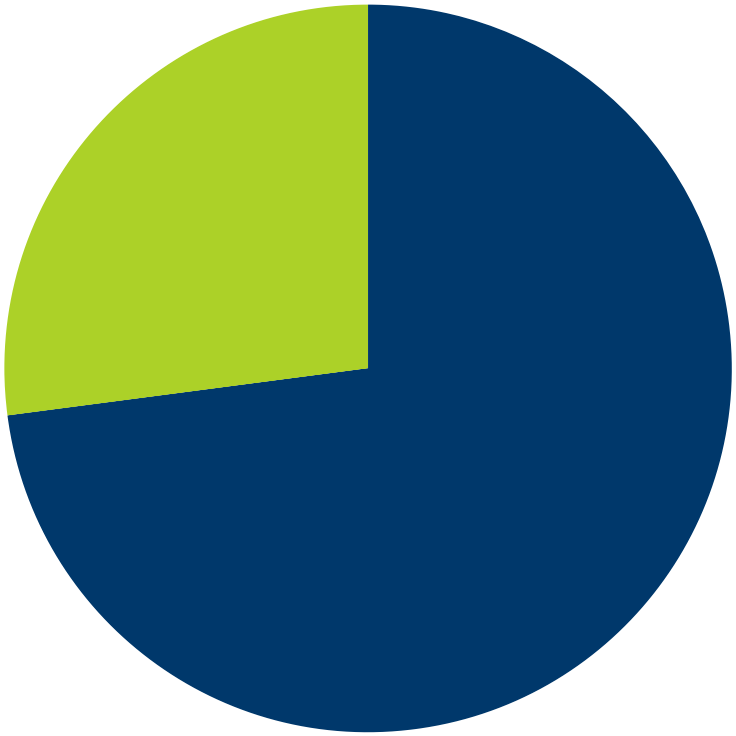
Wilshire Consulting

Asset Allocation By Manager

Hedge Fund Composite

Periods Ended December 31, 2019

Dec-2019 : 3,827,594

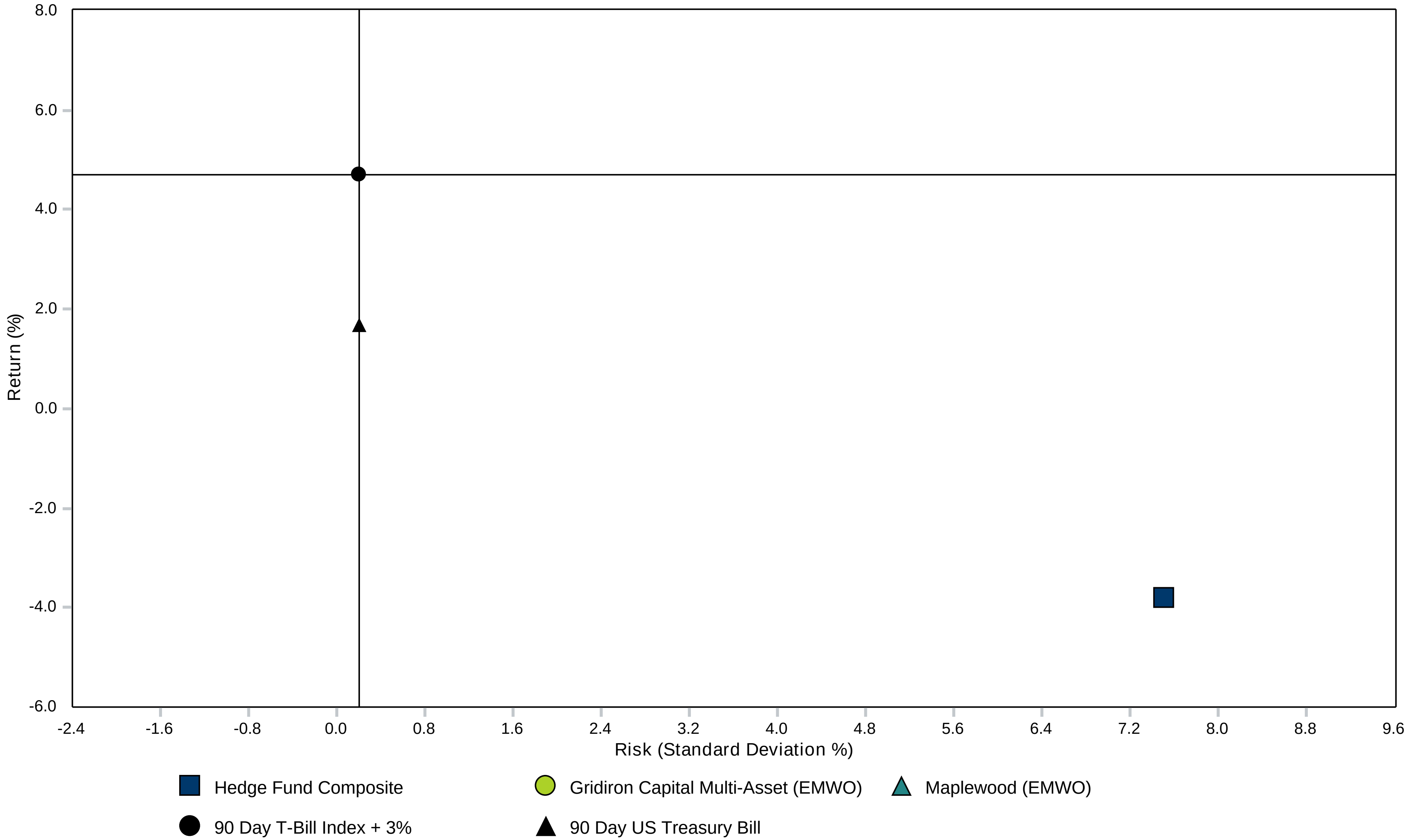


	Market Value $	Allocation (%)
Gridiron Capital Multi-Asset (EMWO)	2,791,430	72.9
Maplewood (EMWO)	1,036,165	27.1

Risk vs. Return

Hedge Fund Composite

Periods Ended 3 Years Ending December 31, 2019



Calculation based on monthly periodicity.

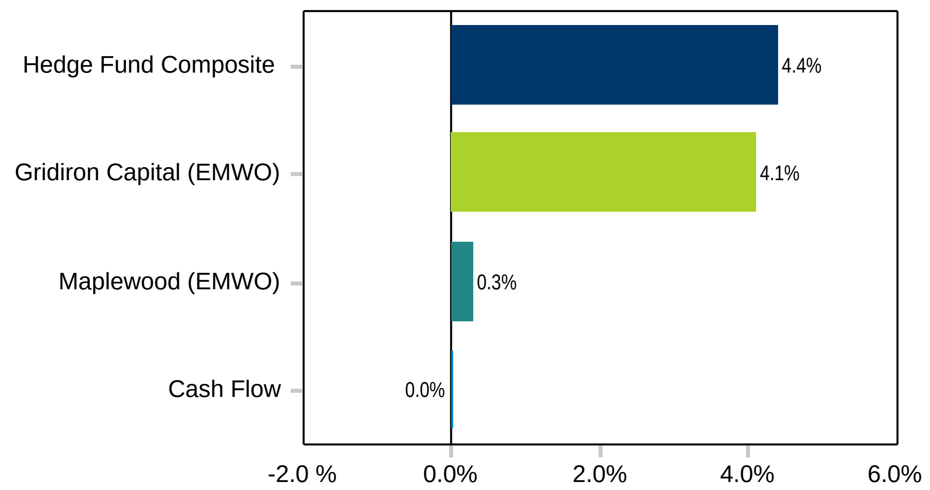
Wilshire Consulting

Return and Risk Contribution

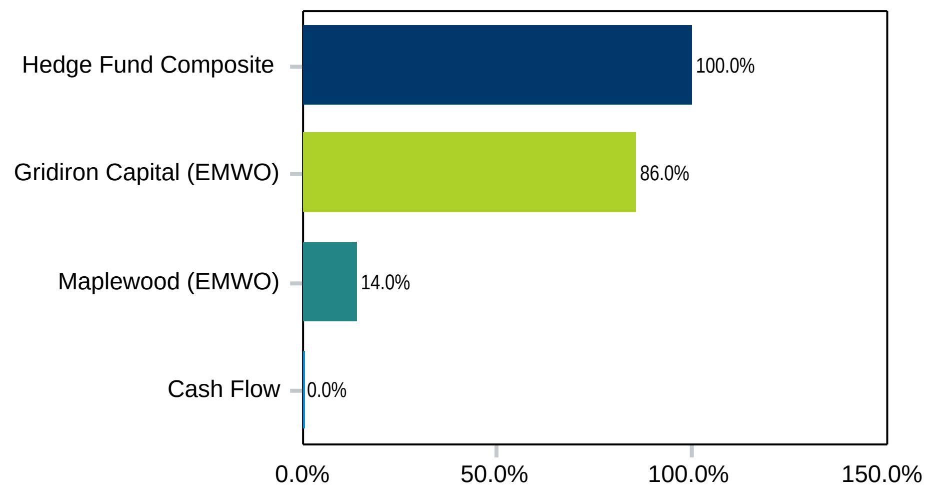
Hedge Fund Composite

Periods Ended December 31, 2019

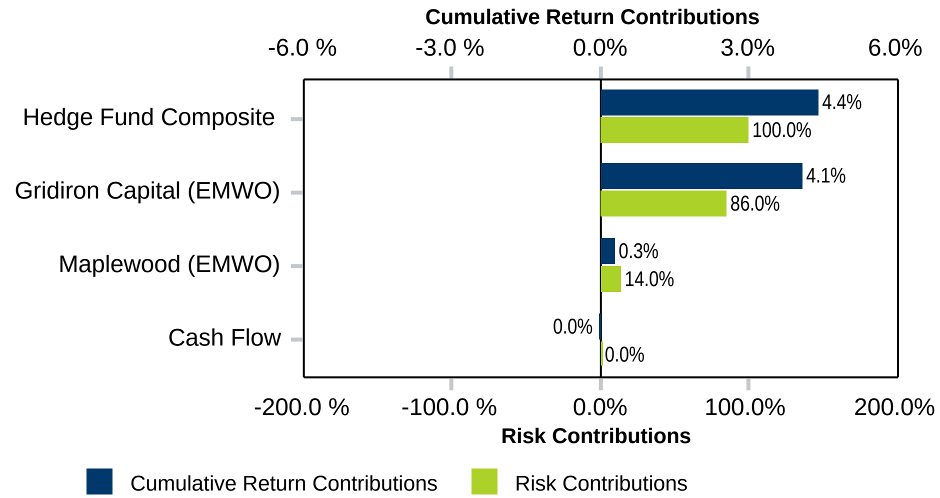
Cumulative Return Contributions



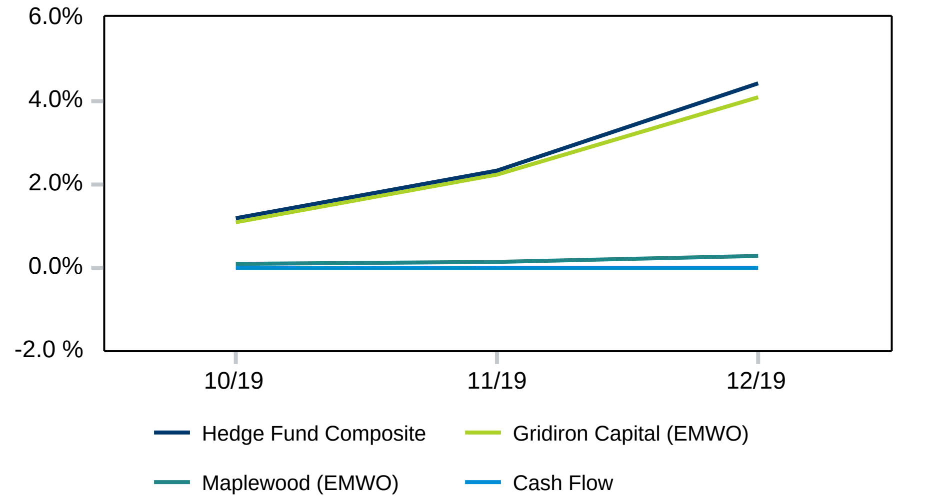
Risk Contributions



Cumulative Return and Risk Contributions



Cumulative Return Contributions History



Wilshire Consulting

Summary Statistics

Gridiron Capital (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Gridiron Capital (EMWO)	HFRI FoF Composite Lagged
Maximum Return	2.85	2.56
Minimum Return	-1.97	-1.65
Return	10.24	4.82
Cumulative Return	10.24	4.82
Active Return	5.10	0.00
Excess Return	7.64	2.54

Risk Summary Statistics

	Gridiron Capital (EMWO)	HFRI FoF Composite Lagged
Upside Risk	1.45	1.03
Downside Risk	2.14	2.11
Beta	-0.25	1.00

Risk/Return Summary Statistics

	Gridiron Capital (EMWO)	HFRI FoF Composite Lagged
Standard Deviation	4.66	3.92
Alpha	11.70	0.00
Active Return/Risk	1.10	0.00
Tracking Error	6.70	0.00
Information Ratio	0.76	
Sharpe Ratio	1.62	0.65

Correlation Statistics

	Gridiron Capital (EMWO)	HFRI FoF Composite Lagged
R-Squared	0.05	1.00
Actual Correlation	-0.21	1.00

Wilshire Consulting

Summary Statistics

Maplewood (EMWO)

Periods Ended 1 Year Ending December 31, 2019

Return Summary Statistics

	Maplewood (EMWO)	HFRX Macro Index
Maximum Return		2.58
Minimum Return		-1.91
Return		4.84
Cumulative Return		4.84
Active Return		0.00
Excess Return		2.59

Risk Summary Statistics

	Maplewood (EMWO)	HFRX Macro Index
Upside Risk		1.14
Downside Risk		2.62
Beta		1.00

Risk/Return Summary Statistics

	Maplewood (EMWO)	HFRX Macro Index
Standard Deviation		4.54
Alpha		0.00
Active Return/Risk		0.00
Tracking Error		0.00
Information Ratio		
Sharpe Ratio		0.57

Correlation Statistics

	Maplewood (EMWO)	HFRX Macro Index
R-Squared		1.00
Actual Correlation		1.00